AC Line Filters

Common Mode SCR Coils, Standard Series

Overview

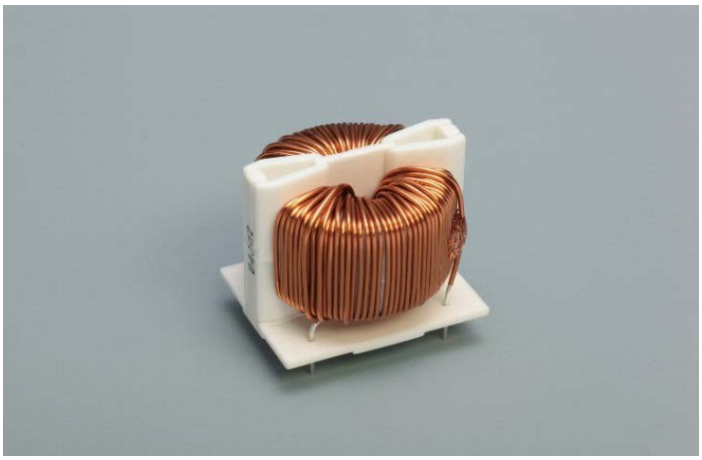
The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap



Part Number System

SCR-	020-	0R55	A	250	J	
Series	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SCR	xxx = xx.x A Examples: 050 = 5.0 A	R = Decimal point Examples: 0R55 = 0.55 mm 1R4 = 1.4 mm	A = Single	xxx = xx.xmH Examples: 015 = 1.5 mH 100 = 10 mH Note: With exceptions, see Table 1 for details.	J = Vertical type JH = Horizontal type	Blank P

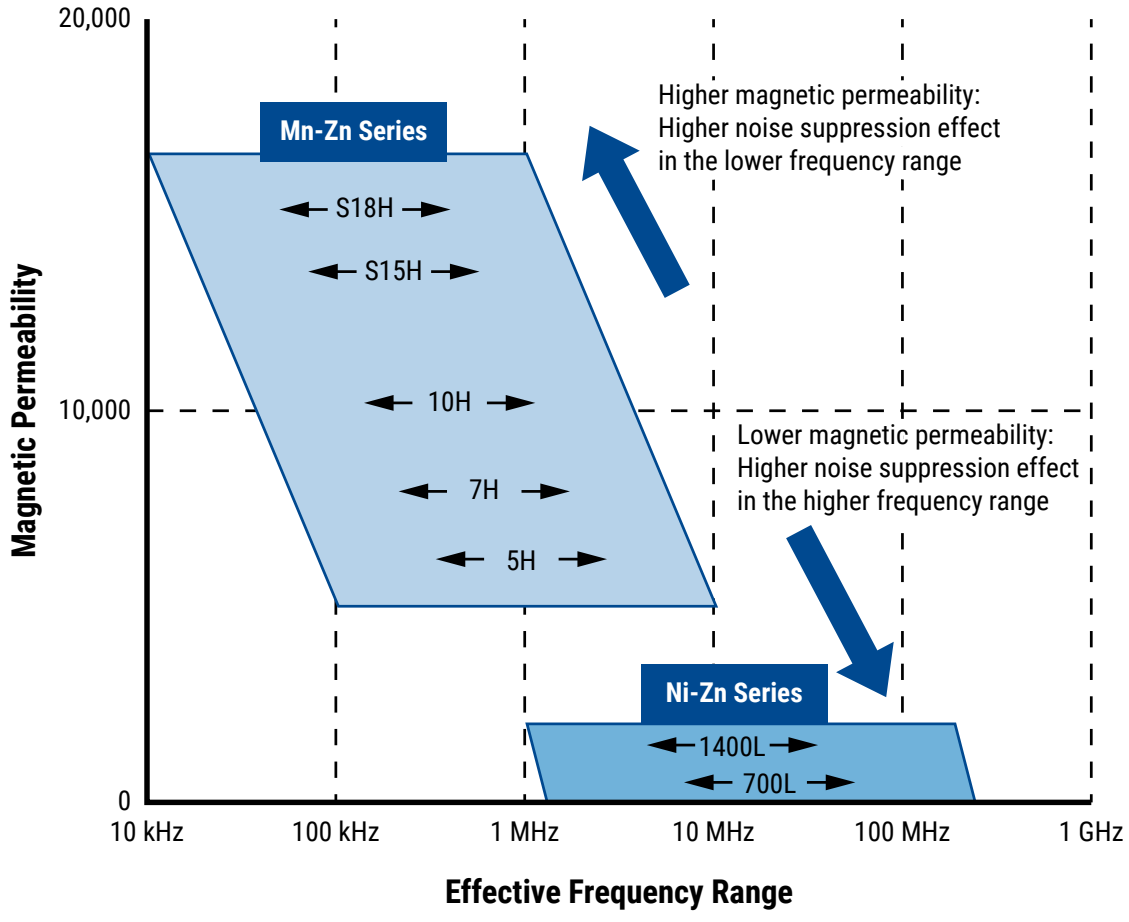
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

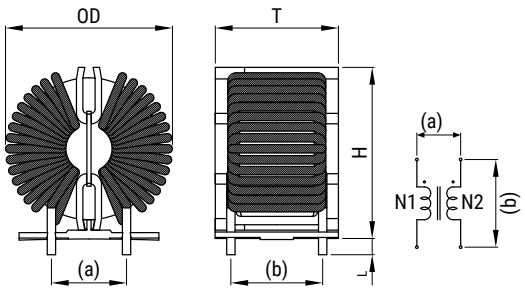
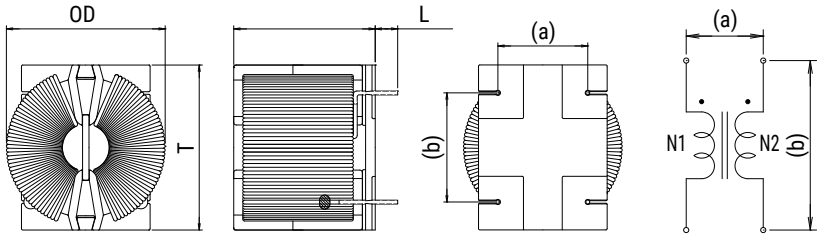


Figure 2



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR-020-0R55A250J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-020-0R55A250JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-030-0R6A170J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-030-0R6A170JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-040-0R8A100J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-040-0R8A100JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-050-0R9A070J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-050-0R9A070JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-060-0R9A040J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-060-0R9A040JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-070-1R0A030J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-070-1R0A030JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-080-1R1A020J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-080-1R1A020JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-090-1R2A015J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-090-1R2A015JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-100-1R2A010J	29.0	23.0	29.0	4.0±1.0	18.0	16.0	Fig. 1
SCR-100-1R2A010JH	29.0	27.0	23.0	4.0±1.0	14.0	17.0	Fig. 2
SCR-150-1R4A006J-P	29.5	23.0	28.5	4.0±1.0	18.0	16.0	Fig. 1

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

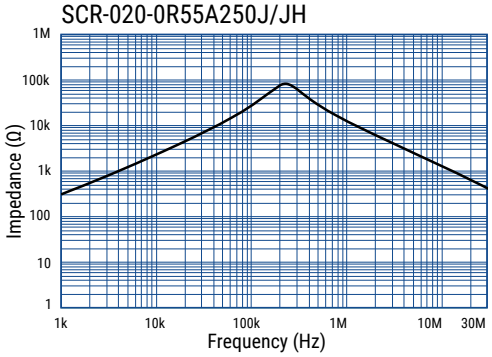
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	2 – 15 A
Rated Inductance Range	0.6 - 25 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

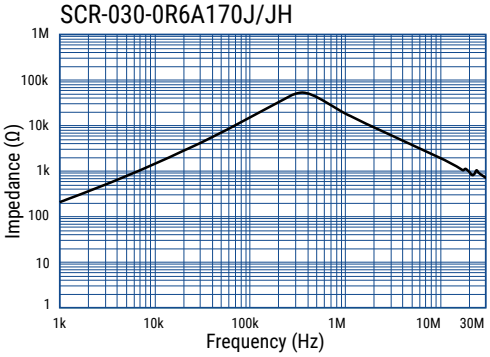
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR-020-0R55A250J	2	25.0	200.0	55	0.55	23
SCR-020-0R55A250JH	2	25.0	200.0	55	0.55	23
SCR-030-0R6A170J	3	15.0	138.0	70	0.60	23
SCR-030-0R6A170JH	3	15.0	138.0	70	0.60	23
SCR-040-0R8A100J	4	10.0	66.0	62	0.80	27
SCR-040-0R8A100JH	4	10.0	66.0	62	0.80	27
SCR-050-0R9A070J	5	7.0	47.0	70	0.90	27
SCR-050-0R9A070JH	5	7.0	47.0	70	0.90	27
SCR-060-0R9A040J	6	4.0	32.6	65	0.90	24
SCR-060-0R9A040JH	6	4.0	32.6	65	0.90	24
SCR-070-1R0A030J	7	3.0	23.0	60	1.00	25
SCR-070-1R0A030JH	7	3.0	23.0	60	1.00	25
SCR-080-1R1A020J	8	2.0	15.9	55	1.10	25
SCR-080-1R1A020JH	8	2.0	15.9	55	1.10	25
SCR-090-1R2A015J	9	1.5	11.9	55	1.20	25
SCR-090-1R2A015JH	9	1.5	11.9	55	1.20	25
SCR-100-1R2A010J	10	1.0	9.6	55	1.20	25
SCR-100-1R2A010JH	10	1.0	9.6	55	1.20	25
SCR-150-1R4A006J-P	15	0.6	5.3	58	1.40	22.9

Frequency Characteristics

SCR-020-0R55A250J/JH



SCR-030-0R6A170J/JH



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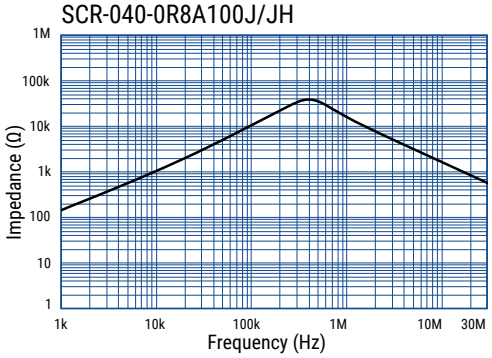

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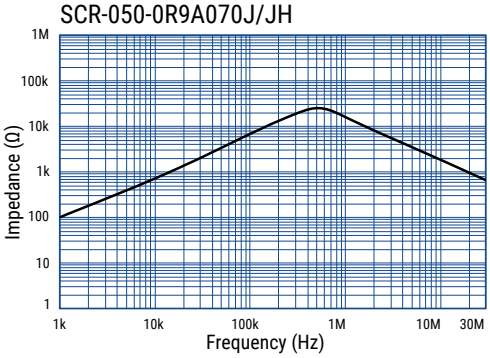
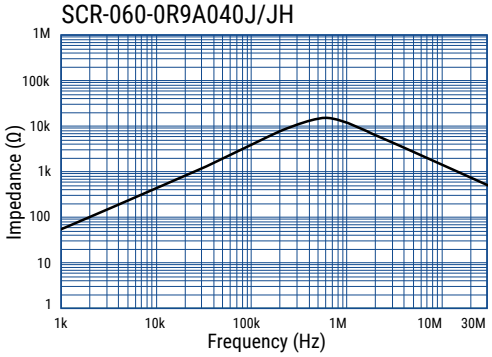
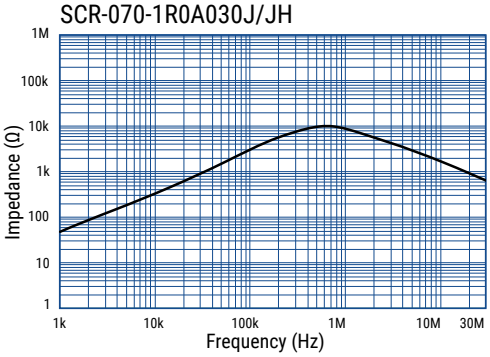


SCR-060-0R9A040J/JH



SCR-070-1R0A030J/JH



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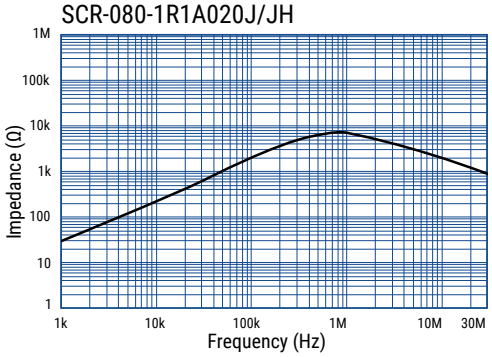
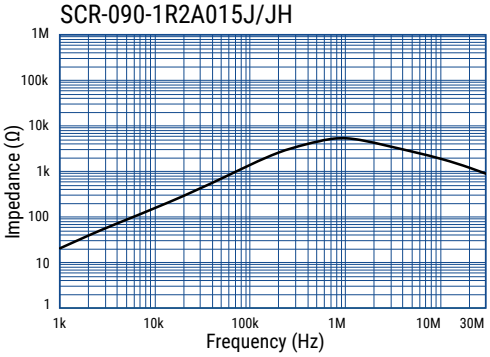
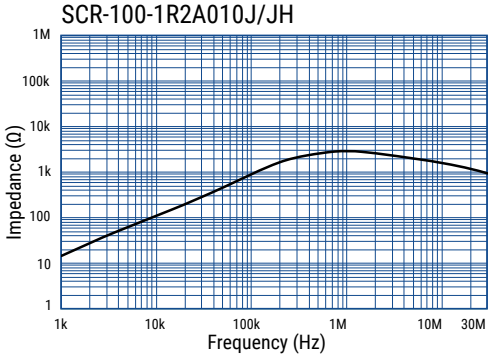


SCR-090-1R2A015J/JH

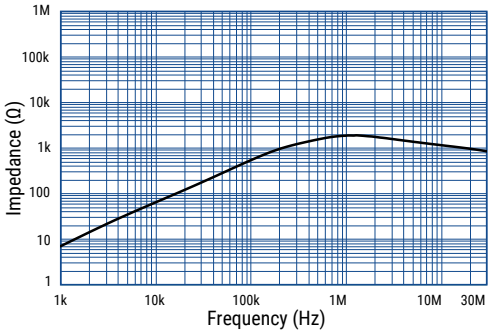


Frequency Characteristics cont.

SCR-100-1R2A010J/JH



SCR-150-1R4A006J-P



Packaging

Type	Packaging Type	Pieces Per Box
SCR-J	Tray	240
SCR-JH		200

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SCR Coils, 38 Series

Overview

The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Industrial equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap

Part Number System

SCR	38-	150-	1R7	A	050	JH	
Series	Dimension Code (See Dimensions)	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SCR	38 38B	xxx = xx.x A Examples: 150 = 15.0 A	R = Decimal point Examples: 1R7 = 1.7 mm	A = Single B = Double	xxx = xx.xmH Examples: 050 = 5.0 mH Note: With exceptions, see Table 1 for details.	J = Vertical type JH = Horizontal type	Blank BK

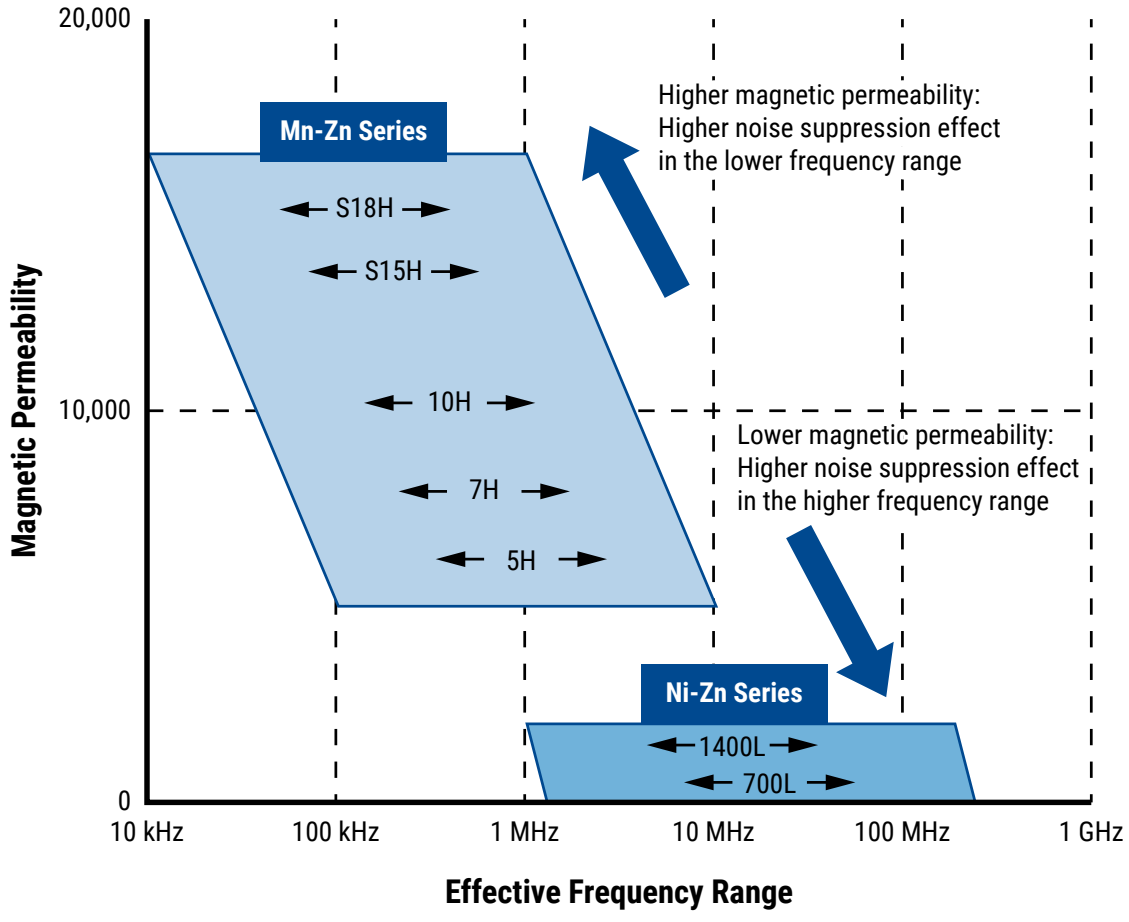
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

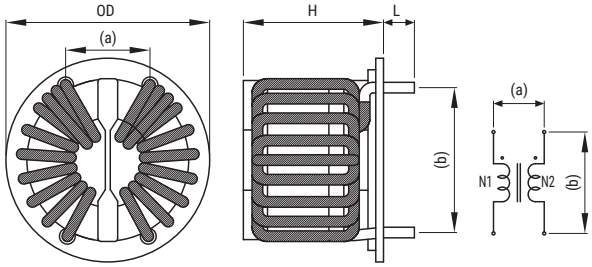


Figure 2

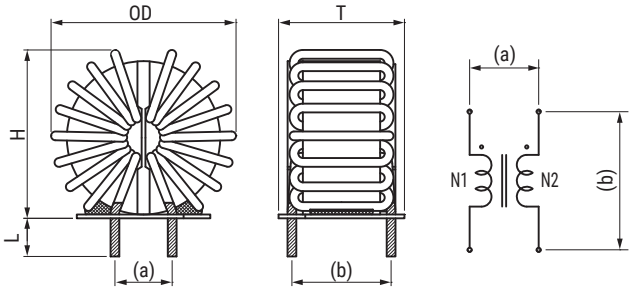


Figure 3

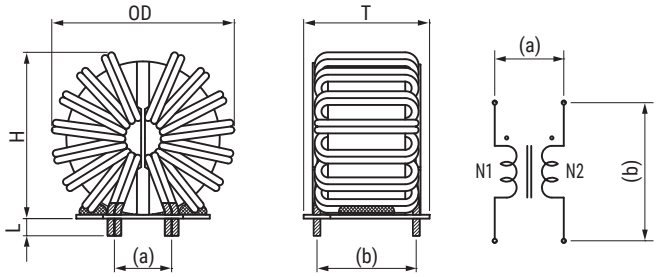


Figure 4

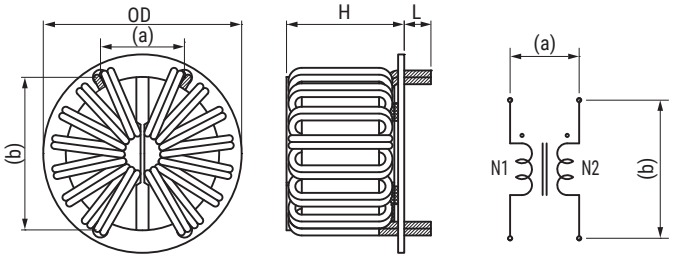
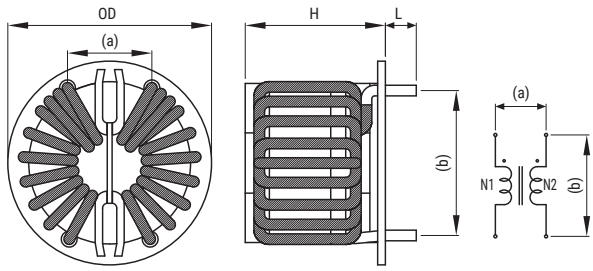


Figure 5



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR38-150-1R7A050JH	51.0	-	34.0	5.0±2.0	26.0	30.0	Fig. 1
SCR38-200-2R3A010J	53.0	35.0	51.0	10.0±5.0	15.0	26.0	Fig. 2
SCR38-350-1R8B008J	53.0	35.0	51.0	4.5±1.0	15.0	26.0	Fig. 3
SCR38-350-1R8B008JH	53.5	-	31.5	7.0±3.0	22.0	40.0	Fig. 4
SCR38B-200-2R3A010JH	55.0	-	35.0	4.0±1.0	26.0	35.0	Fig. 5
SCR38B-350-1R8B008JH-BK	54.5	-	32.5	7.0±3.0	22.0	40.0	Fig. 5

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

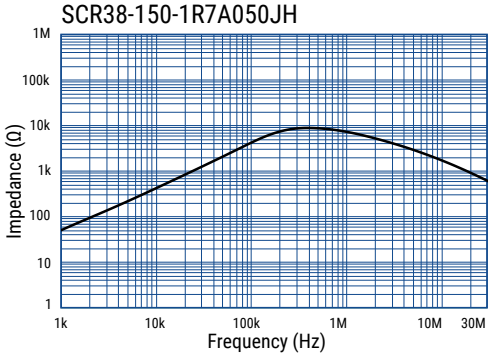
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC and 500 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	15 – 35 A
Rated Inductance Range	0.85 – 5.00 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

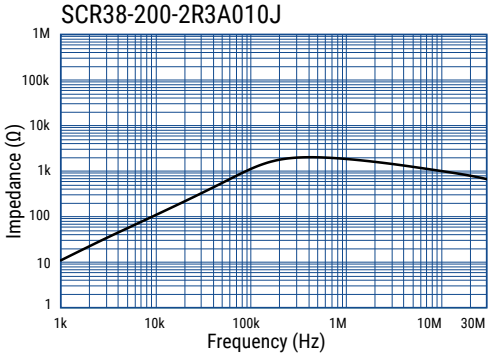
Part Number	Rated Voltage AC/DC (V)	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR38-150-1R7A050JH	250	15	5.00	11.5	64	1.7	110.0
SCR38-200-2R3A010J	250	20	1.00	3.5	55	2.3	110.0
SCR38-350-1R8B008J	250	35	0.85	2.6	65	1.8 x 2 Parallel	120.0
SCR38-350-1R8B008JH	250	35	0.85	2.5	65	1.8 x 2 Parallel	120.0
SCR38B-200-2R3A010JH	500	20	1.00	3.4	45	2.3	113.1
SCR38B-350-1R8B008JH-BK	500	35	0.85	2.7	68	1.8 x 2 Parallel	118.4

Frequency Characteristics

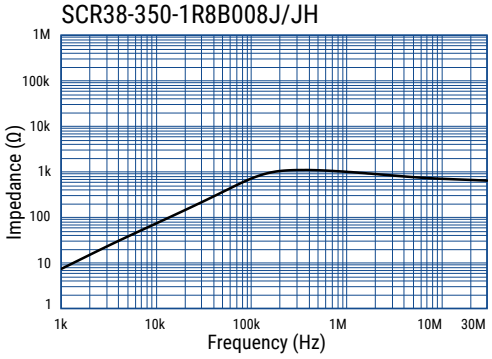
SCR38-150-1R7A050JH



SCR38-200-2R3A010J



SCR38-350-1R8B008J/JH



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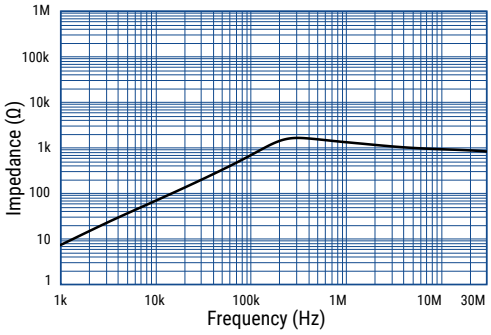
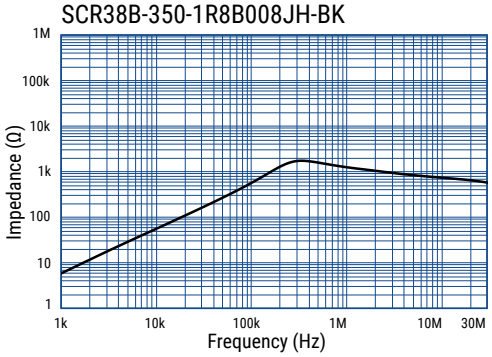


SCR38B-350-1R8B008JH-BK



Packaging

Type	Packaging Type	Pieces Per Box
SCR38-J	Tray	75
SCR38-JH		48
SCR38B-350-1R8B008JH-BK		

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SCR Coils, 47 Series

Overview

The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Industrial equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap

Part Number System

SCR	47-	350-	1R6	C	016	J	
Series	Dimension Code (See Dimensions)	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SCR	47 47B	xxx = xx.x A Examples: 350 = 35.0 A	R = Decimal point Examples: 1R6 = 1.6 mm	C = Triple	xxx = xx.xmH Examples: 016 = 1.6 mH	J = Vertical type JH = Horizontal type	Blank D

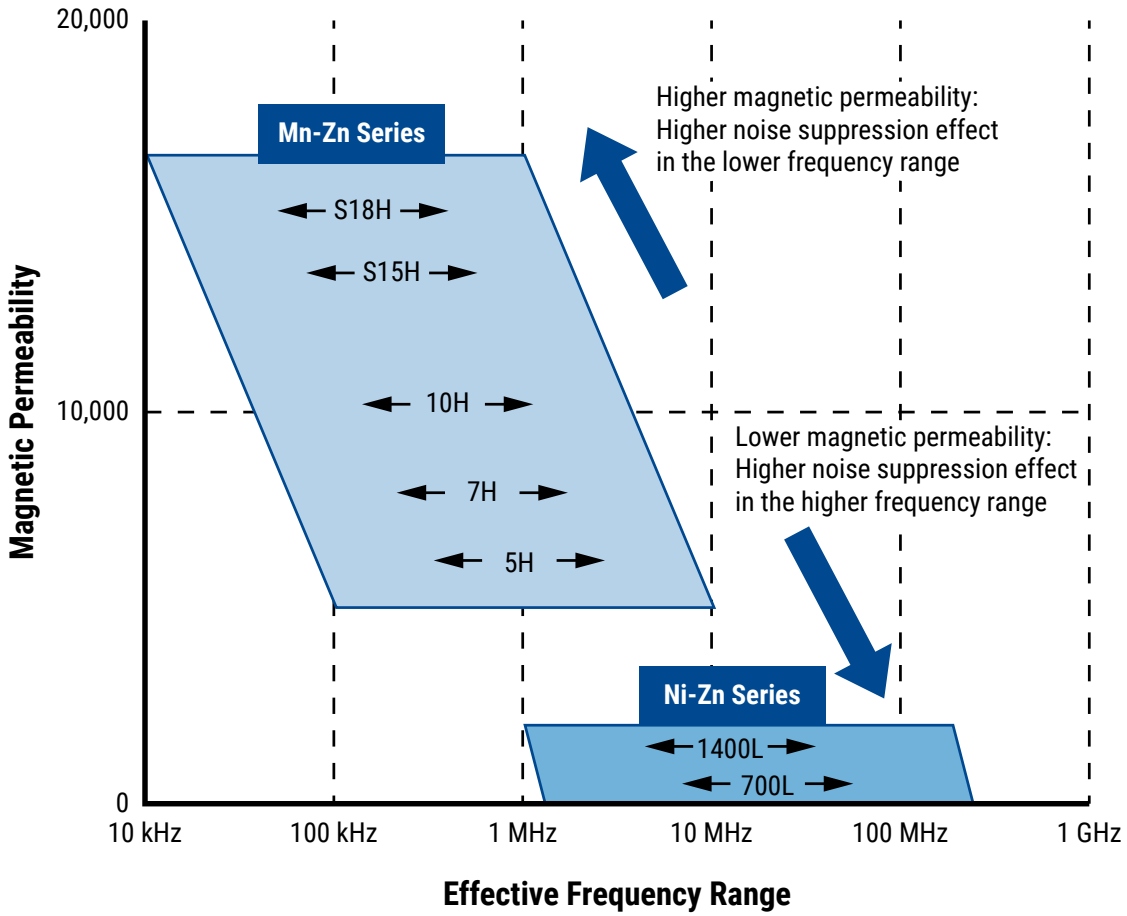
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band.
Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band.
A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

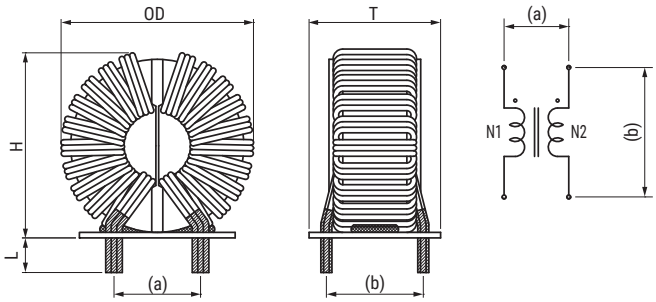


Figure 2

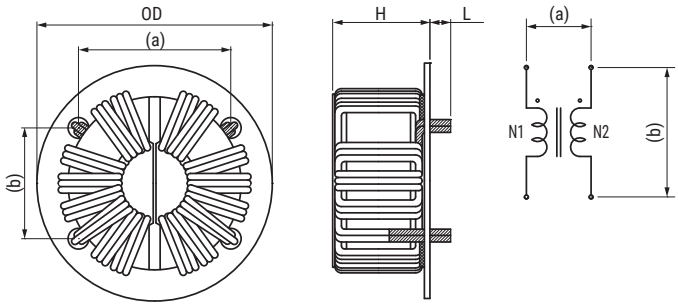
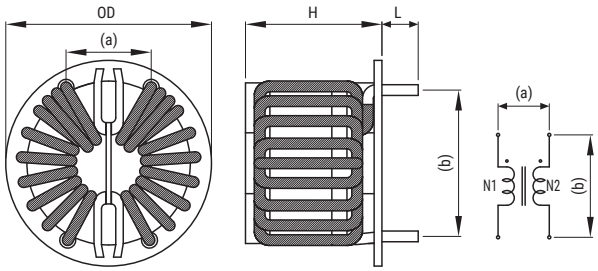


Figure 3



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR47-350-1R6C016J	61.0	39.0	59.0	10.0±5.0	25.0	28.0	Fig. 1
SCR47-400-1R9C008JH	70.0	-	38.0	6.0±2.0	44.0	32.0	Fig. 2
SCR47B-350-1R6C016JH-D	70.0	-	38.0	4.5±1.5	44.0	32.0	Fig. 3
SCR47B-400-1R8C010JH	70.0	-	38.0	5.0±1.5	44.0	32.0	Fig. 3

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

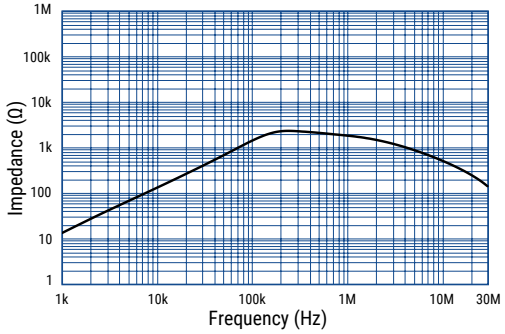
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	35 – 40 A
Rated Inductance Range	0.8 – 1.6 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

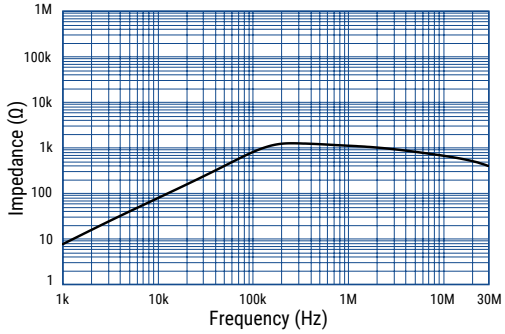
Part Number	Rated Voltage AC/DC (V)	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR47-350-1R6C016J	250	35	1.6	3.5	70	1.6 x 3 Parallel	200
SCR47-400-1R9C008JH	250	40	0.8	1.8	50	1.9 x 3 Parallel	230
SCR47B-350-1R6C016JH-D	500	35	1.6	3.5	75	1.6 x 3 Parallel	210
SCR47B-400-1R8C010JH	500	40	1.0	2.1	75	1.8 x 3 Parallel	210

Frequency Characteristics

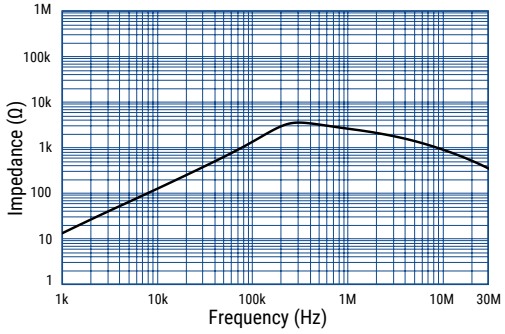
SCR47-350-1R6C016J



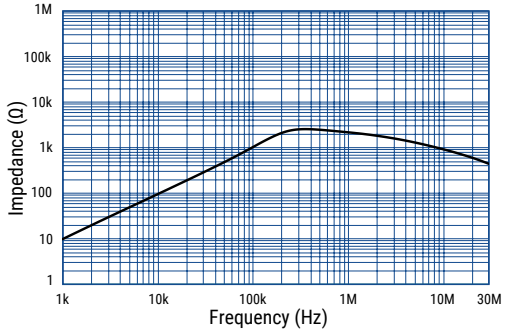
SCR47-400-1R9C008JH



SCR47B-350-1R6C016JH-D



SCR47B-400-1R8C010JH



Packaging

Type	Packaging Type	Pieces Per Box
SCR47-J	Tray	36
SCR47-JH		
SCR47B-350-1R6C016JH-D		

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SC Coils, Standard Series

Overview

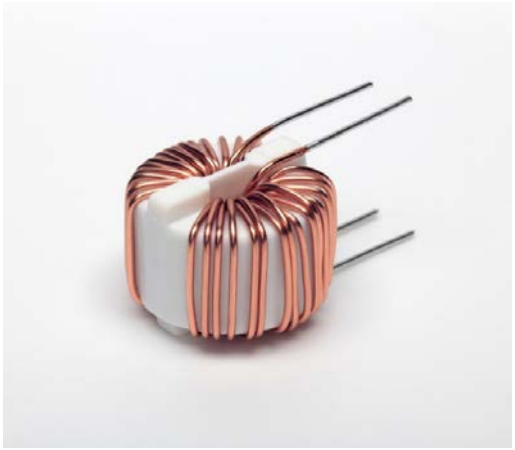
The KEMET SC coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 5H, 7H and 10H ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C or +120°C
- UL 94 V–2 or V–0 flame retardant rated cap



Part Number System

SC-		10-		200	
Series	Dimension Code (See Dimensions)	Rated Current (A)	Thermal Class	Inductance (mH) Minimum	Internal Control Code
SC	Blank 22	0x = x A x0 = x0 A xx = xx A Examples: 02 = 2 A 10 = 10 A 15 = 15 A Note: With exceptions, see Table 1 for details.	Blank E = Class E Note: With exceptions, see Table 1 for details.	x00 = x mH xx00 = xx mH xx0 = x.xmH Example: 200 = 2 mH 1100 = 11 mH 620 = 6.2 mH Note: With exceptions, see Table 1 for details.	Blank A B H V

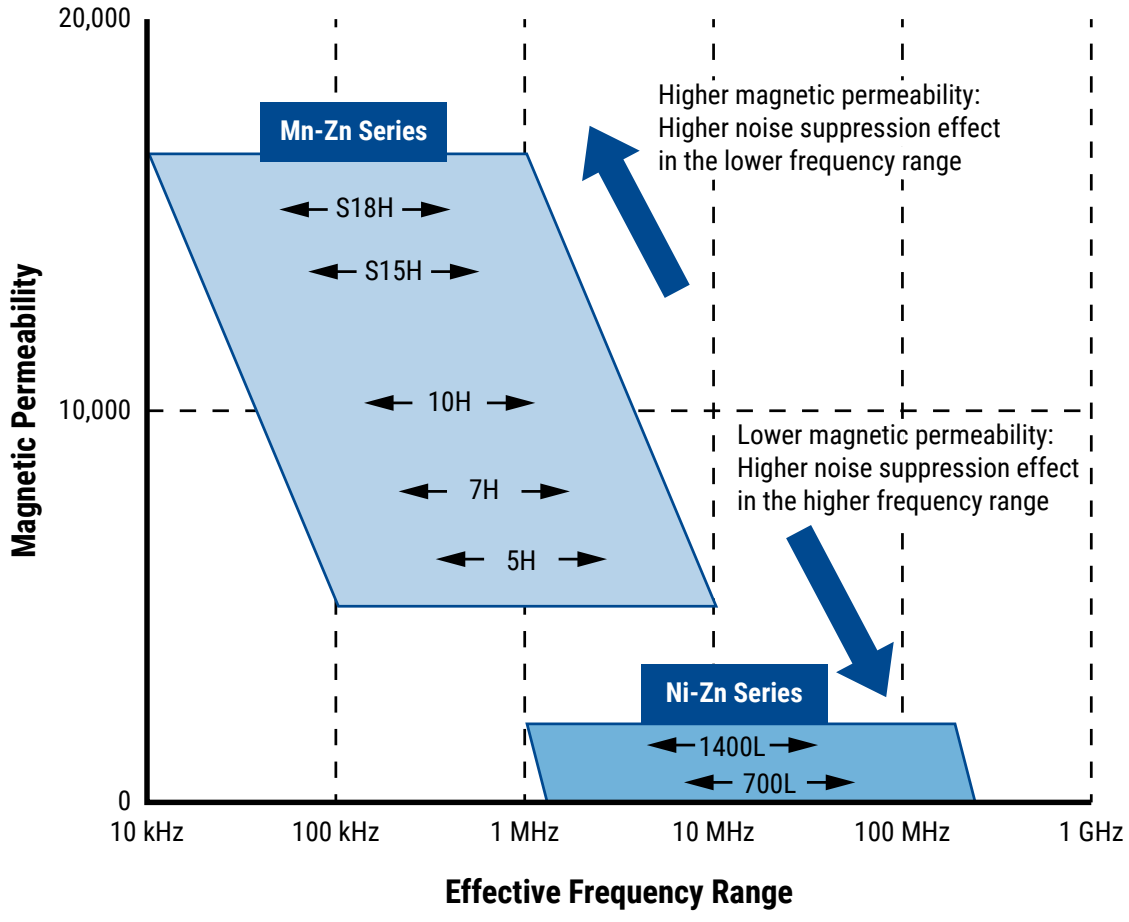
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

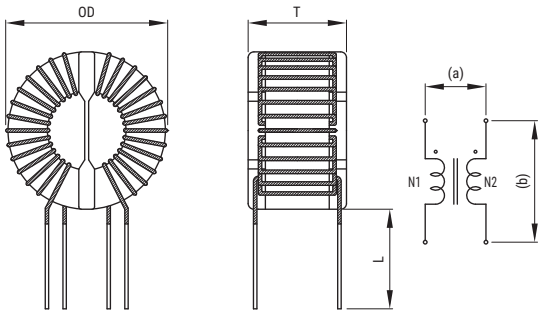
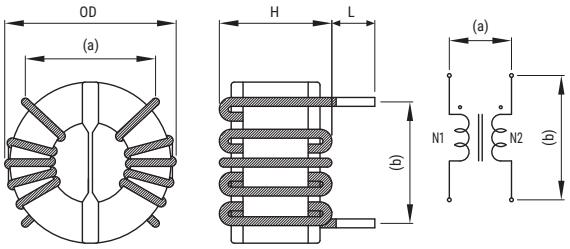


Figure 2



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SC-02-101	23.0	13.0	-	15.0±2.0	6	11	Fig. 1
SC-02-100	23.0	18.5	-	15.0±2.0	6	17	Fig. 1
SC-02-200	23.0	18.5	-	15.0±2.0	6	17	Fig. 1
SC-02-300	27.0	20.0	-	15.0±2.0	6	17	Fig. 1
SC-02-500	27.0	20.0	-	15.0±2.0	6	17	Fig. 1
SC-02-E620H	27.0	-	20.0	15.0±2.0	15	15	Fig. 2
SC-02-800	34.0	23.0	-	15.0±2.0	7	20	Fig. 1
SC-02-090	26.0	14.5	-	15.0±2.0	6	13	Fig. 1
SC-03-E900	23.5	20.0	-	15.0±2.0	5	15	Fig. 1
SC-04-200	25.0	19.0	-	15.0±2.0	8	16	Fig. 1
SC-04-500	29.0	21.0	-	15.0±2.0	10	19	Fig. 1
SC-05-500	34.0	23.0	-	15.0±2.0	7	21	Fig. 1
SC-05-503	34.0	-	23.0	15.0±2.0	20	20	Fig. 2
SC-05-800	34.0	23.0	-	15.0±2.0	7	21	Fig. 1
SC-05-803	34.0	-	23.0	15.0±2.0	22	21	Fig. 2
SC-04-1600	34.0	23.0	-	15.0±2.0	8	22	Fig. 1
SC-04-E2000	34.0	23.0	-	15.0±2.0	18	18	Fig. 1
SC22-04-95H	30.0	-	19.0	4.0±1.0	10	20	Fig. 2
SC-05-E06H	25.0	-	13.0	5.0±1.0	15	15	Fig. 2
SC-05-100	25.0	18.5	-	15.0±2.0	6	17	Fig. 1
SC-05-103	25.0	-	18.5	15.0±2.0	15	15	Fig. 2
SC-05-200	32.0	22.0	-	15.0±2.0	7	21	Fig. 1
SC-05-203	32.0	-	22.0	15.0±2.0	22	21	Fig. 2
SC-05-300	32.0	22.0	-	15.0±2.0	8	22	Fig. 1
SC-05-1100	34.0	24.0	-	15.0±2.0	6	21	Fig. 1
SC-05-1503	34.0	23.0	-	15.0±2.0	6.5	19	Fig. 1
SC-06-101	25.0	-	19.0	8.0±2.0	10	19	Fig. 2
SC-06-E200H	25.0	-	19.0	8.0±2.0	10	19	Fig. 2
SC-06-900	34.0	24.0	-	15.0±2.0	8	22	Fig. 1
SC-07-030V	25.0	20.0	-	15.0±2.0	10	15	Fig. 1
SC-07-100	25.0	19.0	-	15.0±2.0	10	19	Fig. 1
SC-07-E300A	34.0	-	23.0	4.5±1.0	22	21	Fig. 2
SC-07-650	35.0	23.0	-	15.0±2.0	7	21	Fig. 1
SC22-08-100	30.0	-	19.0	5.0±2.0	14	22	Fig. 2
SC-08-100	35.0	-	23.0	15.0±2.0	22	21	Fig. 2

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Dimensions – Millimeters cont.

Figure 1

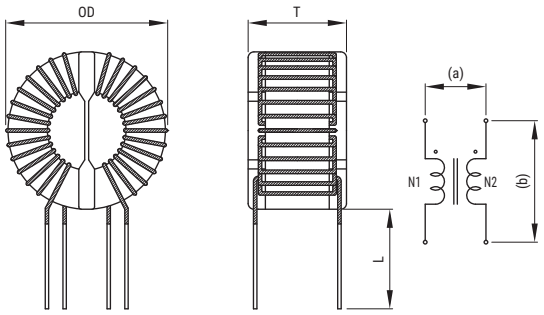
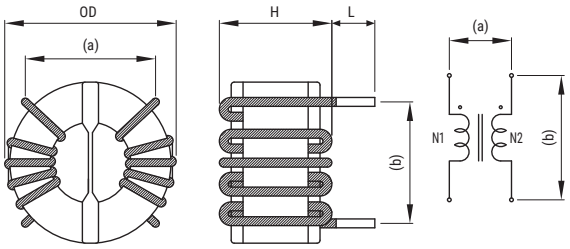


Figure 2



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SC22-08-170	30.0	-	19.0	5.0±2.0	14	22	Fig. 2
SC-08-170H	34.0	-	23.0	4.5±2.0	22	21	Fig. 2
SC-08-200B	34.0	22.0	-	15.0±2.0	6	19	Fig. 1
SC22-08-260	30.0	-	21.0	10.0±2.0	15	20	Fig. 2
SC-08-440	35.0	23.0	-	15.0±2.0	7	21	Fig. 1
SC-08-700	50.0	30.0	-	15.0±2.0	10	22	Fig. 1
SC-08-1000	50.0	28.0	-	20.0±2.0	10	22	Fig. 1
SC-08-E1000	50.0	28.0	-	20.0±2.0	10	20	Fig. 1
SC-09-1400	49.0	-	40.0	15.0±2.0	35	35	Fig. 2
SC-10-100	34.0	-	24.0	15.0±2.0	22	21	Fig. 2
SC-10-200	47.0	-	27.0	15.0±2.0	30	30	Fig. 2
SC-10-E200H	34.0	-	24.0	5.0±2.0	21	21	Fig. 2
SC-10-340	48.0	29.0	-	30.0±2.0	10	22	Fig. 1
SC-10-500	49.0	-	27.0	15.0±2.0	35	35	Fig. 2
SC-10-1000	57.0	-	30.0	15.0±2.0	20	55	Fig. 2
SC-12-300	49.0	-	28.0	15.0±2.0	35	35	Fig. 2
SC-15-01H	26.0	-	13.5	10.0±2.0	10	20	Fig. 2
SC-15-100	49.0	-	27.0	15.0±2.0	35	35	Fig. 2
SC-15-E110H	36.0	-	25.0	5.0±2.0	22	21	Fig. 2
SC-15-201	49.0	30.0	-	15.0±2.0	10	22	Fig. 1
SC-15-200	50.0	-	28.0	15.0±2.0	35	35	Fig. 2
SC-15-230	50.0	-	30.0	15.0±2.0	35	35	Fig. 2
SC-15-E350	50.0	28.0	-	15.0±2.0	10	20	Fig. 1
SC-15-E350H	50.0	-	28.0	15.0±2.0	20	40	Fig. 2
SC-18-100	34.0	-	23.0	15.0±2.0	22	21	Fig. 2
SC-18-180	50.0	-	30.0	15.0±2.0	35	35	Fig. 2
SC-18-290	40.0	-	28.0	5.0±2.0	17	33	Fig. 2
SC-20-100	60.0	-	30.0	15.0±2.0	40	40	Fig. 2
SC-20-104	52.0	-	31.0	15.0±2.0	20	40	Fig. 2
SC-20-201	49.0	30.0	-	15.0±2.0	10	22	Fig. 1
SC-20-300	63.0	-	35.0	15.0±2.0	20	50	Fig. 2
SC-20-400	63.0	-	35.0	15.0±2.0	20	50	Fig. 2
SC-30-050H	55.0	-	30.0	15.0±2.0	42	18	Fig. 2
SC-30-100	62.0	-	35.0	15.0±2.0	55	20	Fig. 2
SC-30-E100	63.0	-	35.0	4.5±2.5	55	20	Fig. 2

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 V (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	2 – 30 A
Rated Inductance Range	0.067 – 20.3 mH minimum
Inductance Measurement Condition	1 kHz, 10 kHz, 16 kHz, and 100 kHz
Thermal Class	A (105°C) and E (120°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise) and −40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-02-101	2.0	1.000 [4]	110.0	40	0.60	A (105°C)	15.0
SC-02-100	2.0	1.000 [4]	100.0	40	0.60	A (105°C)	15.0
SC-02-200	2.0	2.000 [4]	110.0	40	0.60	A (105°C)	15.0
SC-02-300	2.0	3.000 [4]	100.0	40	0.60	A (105°C)	16.0
SC-02-500	2.0	5.000 [4]	100.0	45	0.60	A (105°C)	20.0
SC-02-E620H	2.0	6.200 [1]	180.0	40	0.55	E (120°C)	18.5
SC-02-800	2.0	8.000 [4]	150.0	40	0.60	A (105°C)	25.0
SC-02-090	2.0	9.400 [2]	100.0	40	0.65	E (120°C)	14.2
SC-03-E900	3.0	9.000 [2]	130.0	70	0.60	E (120°C)	19.0
SC-04-200	4.0	2.000 [4]	55.0	50	0.70	A (105°C)	17.5
SC-04-500	4.0	5.000 [2]	70.0	50	0.70	A (105°C)	19.0
SC-05-500	4.0	5.000 [4]	80.0	50	0.80	A (105°C)	30.0
SC-05-503	4.0	5.000 [4]	80.0	50	0.80	A (105°C)	32.7
SC-05-800	4.0	8.000 [4]	85.0	60	0.80	A (105°C)	40.0
SC-05-803	4.0	8.000 [4]	90.0	60	0.80	A (105°C)	35.7
Part Number	**Rated Current (A)**	**Inductance (mH) Minimum**	**DC Resistance/Line (mΩ) Maximum**	**Temperature Rise (K) Maximum**	**Wire Diameter (mm)**	**Thermal Class**	**Weight (g) Approximate**

[1] Inductance Measurement Condition : 1 kHz
[2] Inductance Measurement Condition : 10 kHz
[3] Inductance Measurement Condition : 16 kHz
[4] Inductance Measurement Condition : 100 kHz

Table 1 – Ratings & Part Number Reference (cont.)

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-04-1600	4.0	16.000 [1]	85.0	55	0.80	A (105°C)	39.8
SC-04-E2000	4.0	20.300 [2]	150.0	75	0.80	E (120°C)	45.0
SC22-04-95H	4.3	9.450 [2]	80.0	86	0.75	E (120°C)	31.8
SC-05-E06H	5.0	0.600 [2]	17.5	35	0.85	E (120°C)	10.3
SC-05-100	5.0	1.000 [4]	50.0	40	0.80	A (105°C)	20.0
SC-05-103	5.0	1.000 [4]	50.0	40	0.80	A (105°C)	17.3
SC-05-200	5.0	2.000 [4]	70.0	40	0.80	A (105°C)	25.0
SC-05-203	5.0	2.000 [4]	70.0	40	0.80	A (105°C)	31.2
SC-05-300	5.0	3.000 [4]	55.0	55	0.80	A (105°C)	32.8
SC-05-1100	5.0	11.000 [2]	55.0	50	1.00	E (120°C)	46.7
SC-05-1503	5.0	10.500 [3]	100.0	55	0.90	A (105°C)	41.0
SC-06-101	6.0	1.000 [4]	27.0	40	0.90	E (120°C)	19.3
SC-06-E200H	6.0	2.000 [2]	27.0	40	0.90	E (120°C)	20.1
SC-06-900	6.0	9.000 [1]	60.0	55	1.00	A (105°C)	44.0
SC-07-030V	7.0	0.360 [4]	14.0	30	1.10	E (120°C)	18.9
SC-07-100	7.0	0.650 [4]	14.0	45	1.10	A (105°C)	20.0
SC-07-E300A	7.0	3.000 [4]	45.0	70	1.00	E (120°C)	40.0
SC-07-650	7.0	6.500 [1]	40.0	55	1.10	A (105°C)	45.3
SC22-08-100	8.0	1.000 [2]	20.0	50	1.20	E (120°C)	27.3
SC-08-100	8.0	1.000 [4]	25.0	50	1.20	A (105°C)	40.5
SC22-08-170	8.0	1.700 [2]	20.0	50	1.20	E (120°C)	28.2
SC-08-170H	8.0	1.700 [2]	20.0	45	1.20	A (105°C)	36.3
SC-08-200B	8.0	2.000 [4]	70.0	40	1.20	A (105°C)	43.1
SC22-08-260	8.0	2.600 [1]	30.0	60	1.00	E (120°C)	25.7
SC-08-440	8.0	4.400 [1]	25.0	50	1.20	A (105°C)	44.2
SC-08-700	8.0	7.000 [1]	40.0	55	1.30	A (105°C)	103.6
SC-08-1000	8.0	10.000 [4]	70.0	50	1.20	A (105°C)	104.5
SC-08-E1000	8.0	10.000 [4]	70.0	50	1.20	E (120°C)	108.7
SC-09-1400	9.0	14.000 [1]	53.0	65	1.30	A (105°C)	170.1
SC-10-100	10.0	1.000 [4]	20.0	40	1.30	A (105°C)	40.0
SC-10-200	10.0	2.000 [4]	28.0	40	1.30	A (105°C)	80.0
SC-10-E200H	10.0	2.000 [2]	20.0	45	1.30	E (120°C)	42.5
SC-10-340	10.0	3.400 [4]	32.0	50	1.40	A (105°C)	105.7
SC-10-500	10.0	5.000 [4]	25.0	55	1.50	A (105°C)	110.1
SC-10-1000	10.0	10.000 [4]	35.0	50	1.50	A (105°C)	177.3
SC-12-300	12.0	3.000 [4]	18.0	45	1.60	A (105°C)	103.8
SC-15-01H	15.0	0.067 [2]	2.0	25	1.40	E (120°C)	10.0
SC-15-100	15.0	1.000 [4]	12.0	40	1.80	A (105°C)	100.0
SC-15-E110H	15.0	1.100 [2]	16.5	100	1.30	E (120°C)	41.5
SC-15-201	15.0	2.000 [4]	12.0	50	1.80	E (120°C)	109.3
SC-15-200	15.0	2.000 [4]	12.0	45	1.80	A (105°C)	110.0
SC-15-230	15.0	2.300 [4]	13.0	55	1.80	A (105°C)	114.4
SC-15-E350	15.0	3.500 [4]	20.0	80	1.60	E (120°C)	110.5
SC-15-E350H	15.0	3.500 [4]	20.0	80	1.60	E (120°C)	111.3
SC-18-100	18.0	0.700 [4]	20.0	50	1.70	A (105°C)	45.2
SC-18-180	18.0	1.800 [1]	11.0	75	1.90	A (105°C)	110.4
SC-18-290	18.0	2.900 [4]	25.0	115	1.40	E (120°C)	77.5
SC-20-100	20.0	1.000 [4]	8.0	45	2.30	A (105°C)	135.0
SC-20-104	20.0	1.000 [4]	8.0	50	2.00	A (105°C)	103.3
SC-20-201	20.0	2.000 [2]	10.0	75	1.90	E (120°C)	108.5
SC-20-300	20.0	3.000 [4]	13.0	50	2.30	A (105°C)	202.0
SC-20-400	20.0	4.000 [1]	13.0	55	2.30	A (105°C)	205.0
SC-30-050H	30.0	0.500 [2]	3.0	40	1.80 x 2 Parallel	A (105°C)	103.0
SC-30-100	30.0	1.000 [4]	6.0	40	2.60	A (105°C)	190.0
SC-30-E100	30.0	1.000 [4]	6.0	60	2.60	E (120°C)	200.0
Part Number	**Rated Current (A)**	**Inductance (mH) Minimum**	**DC Resistance/Line (mΩ) Maximum**	**Temperature Rise (K) Maximum**	**Wire Diameter (mm)**	**Thermal Class**	**Weight (g) Approximate**

[1] Inductance Measurement Condition : 1 kHz

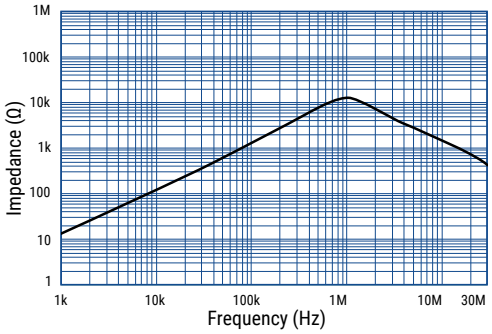
[2] Inductance Measurement Condition : 10 kHz

[3] Inductance Measurement Condition : 16 kHz

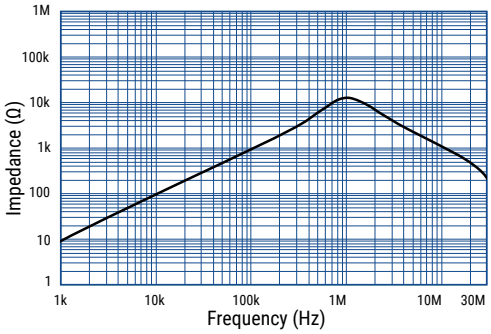
[4] Inductance Measurement Condition : 100 kHz

Frequency Characteristics

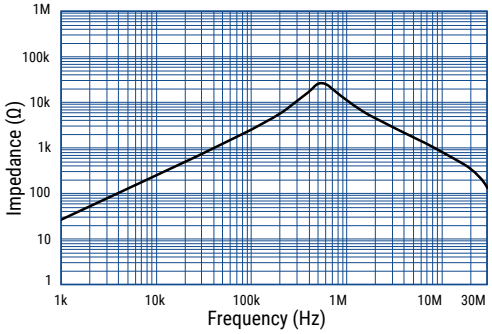
SC-02-101



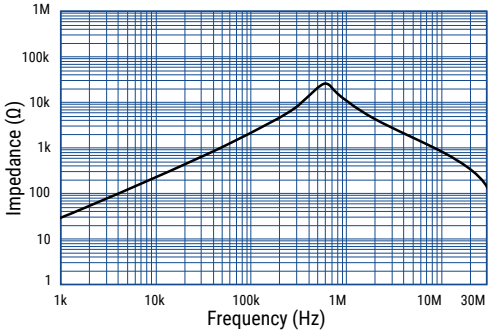
SC-02-100



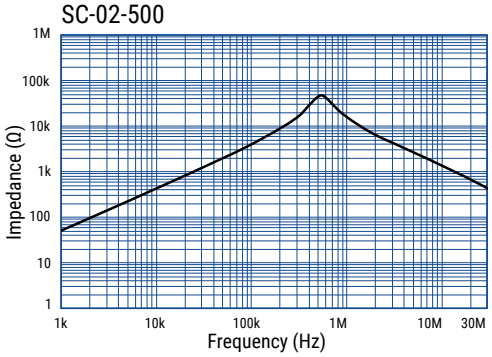
SC-02-200



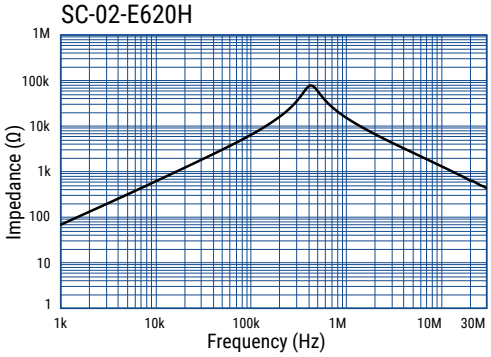
SC-02-300



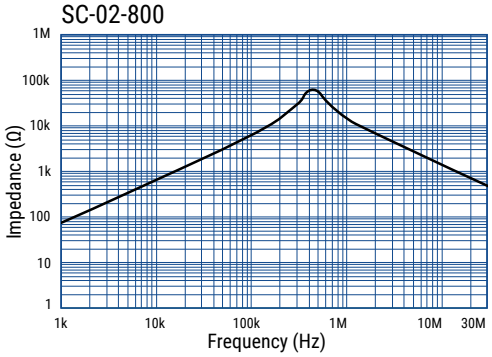
SC-02-500



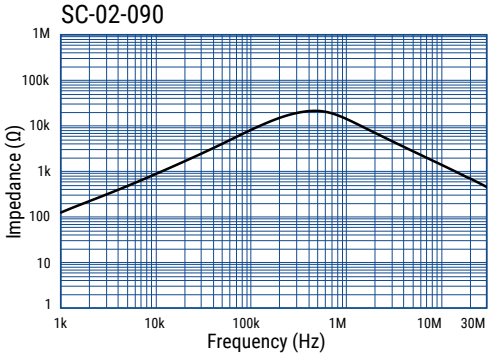
SC-02-E620H



SC-02-800

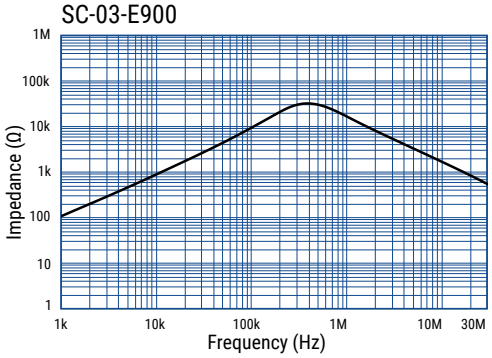


SC-02-090

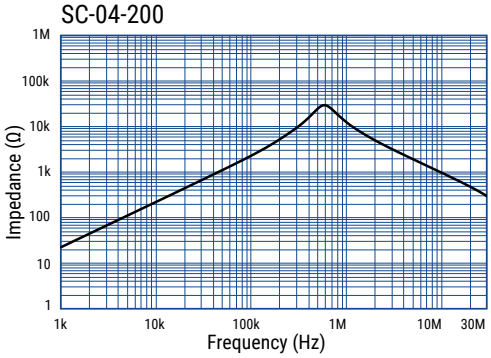


Frequency Characteristics cont.

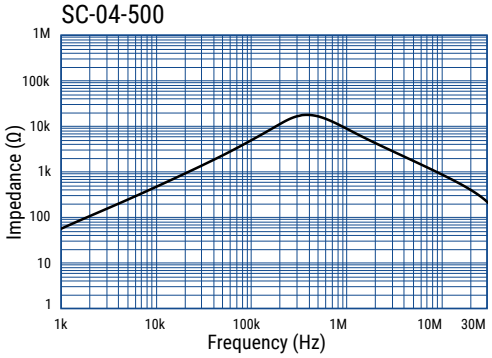
SC-03-E900



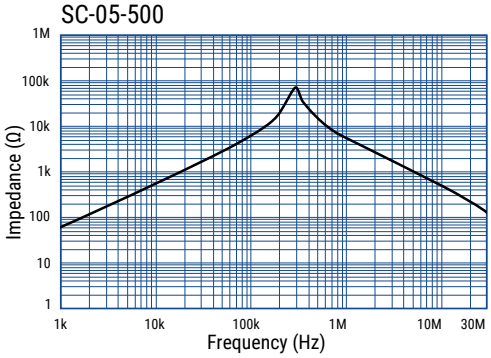
SC-04-200



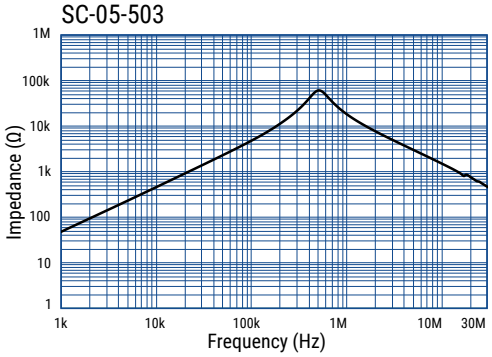
SC-04-500



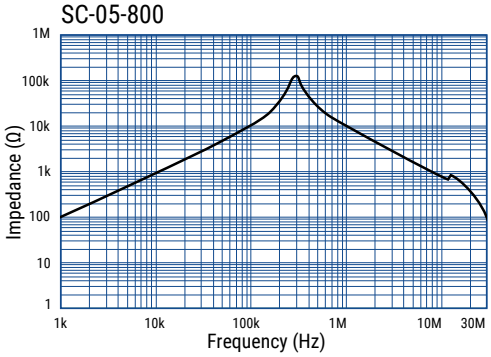
SC-05-500



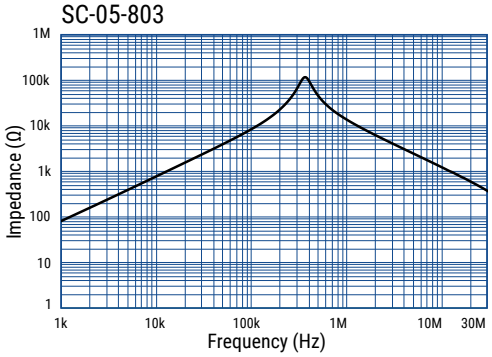
SC-05-503



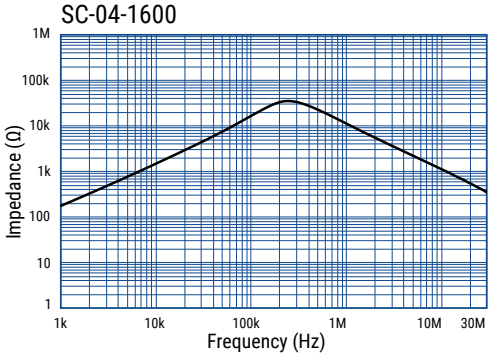
SC-05-800



SC-05-803

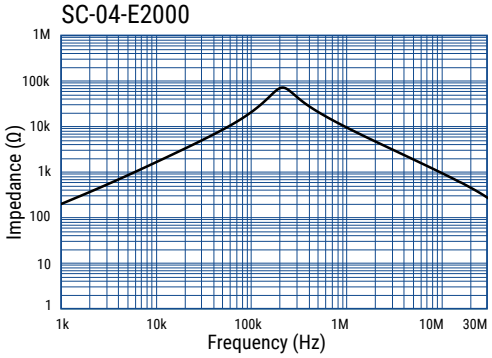


SC-04-1600

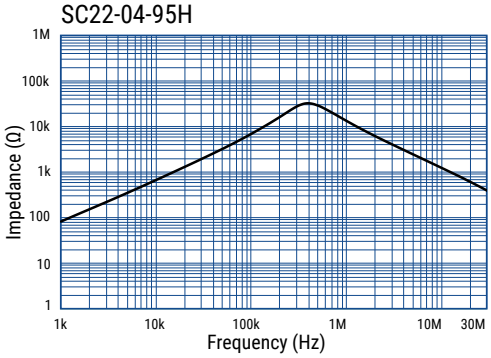


Frequency Characteristics cont.

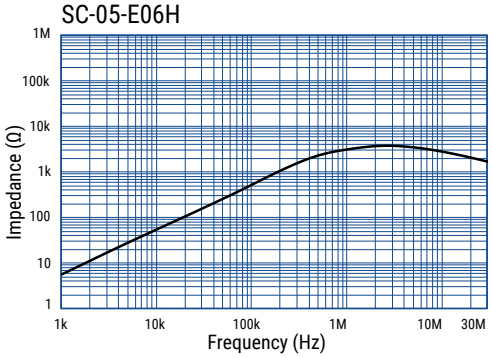
SC-04-E2000



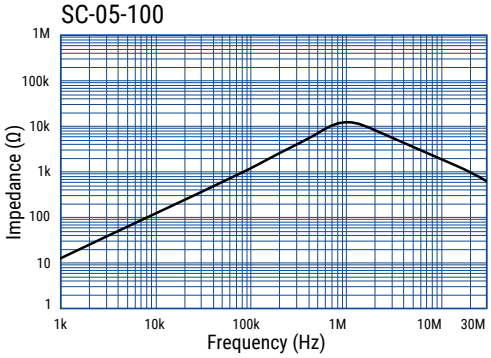
SC22-04-95H



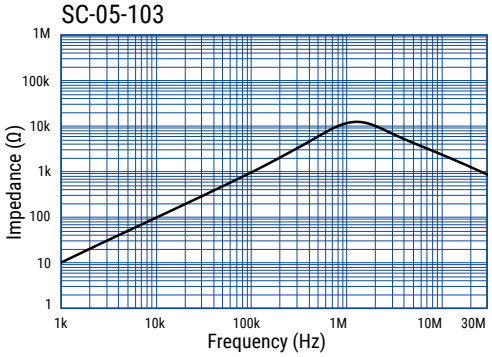
SC-05-E06H



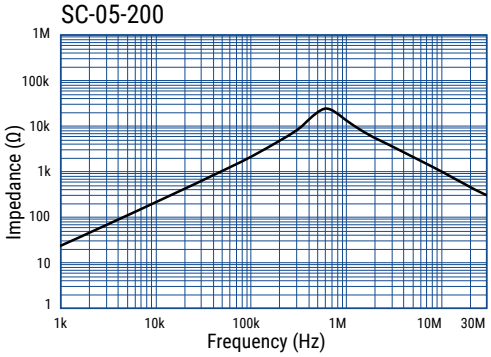
SC-05-100



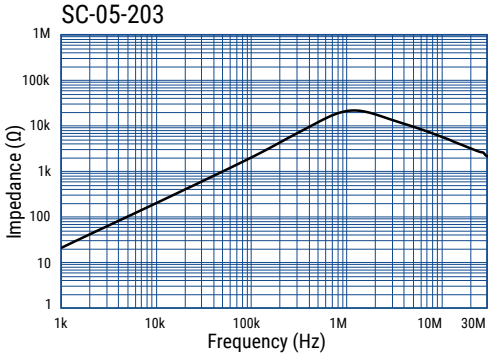
SC-05-103



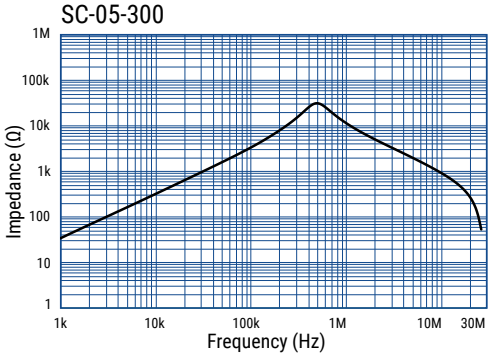
SC-05-200



SC-05-203

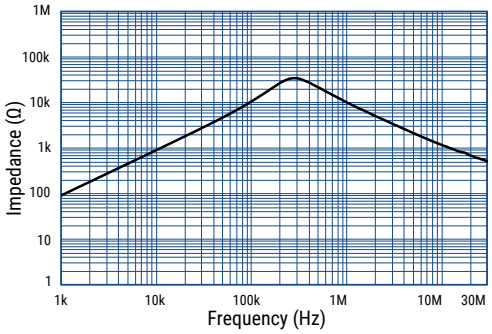


SC-05-300

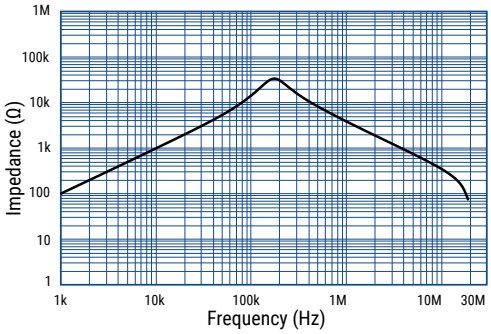


Frequency Characteristics cont.

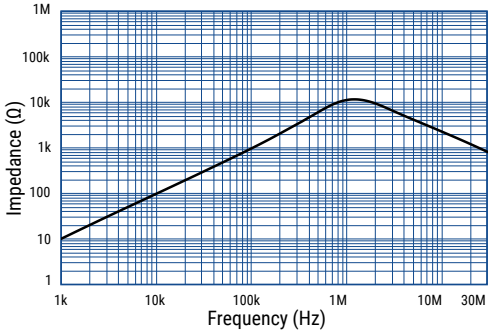
SC-05-1100



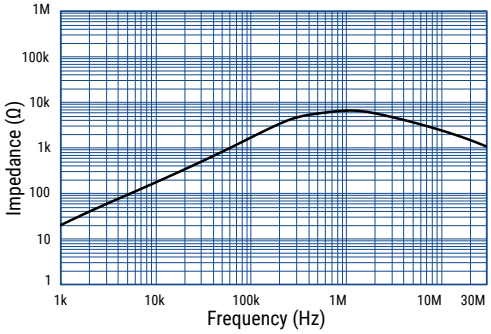
SC-05-1503



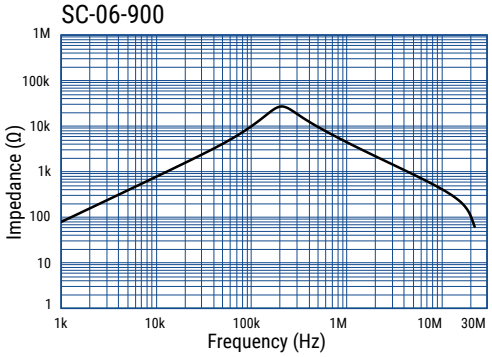
SC-06-101



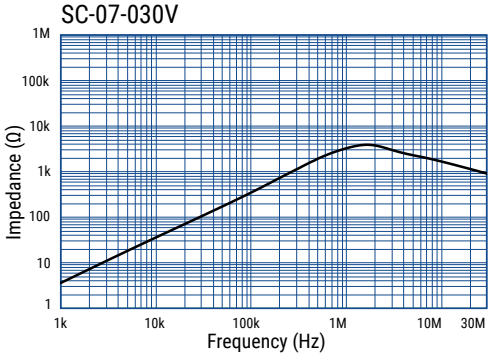
SC-06-E200H



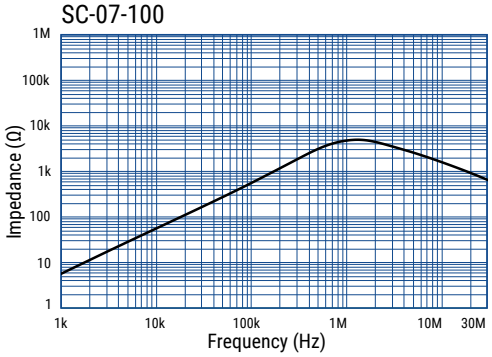
SC-06-900



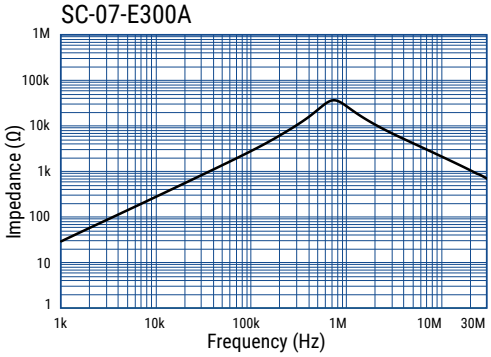
SC-07-030V



SC-07-100

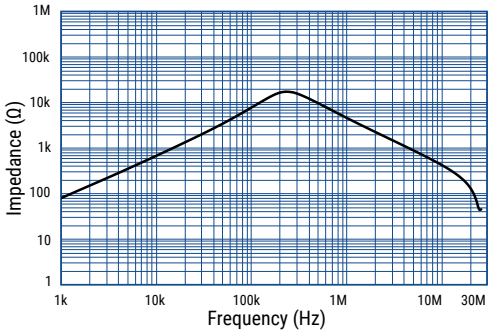


SC-07-E300A

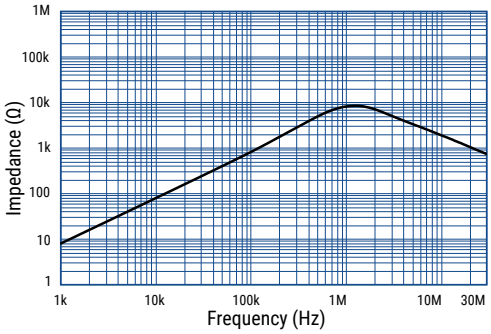


Frequency Characteristics cont.

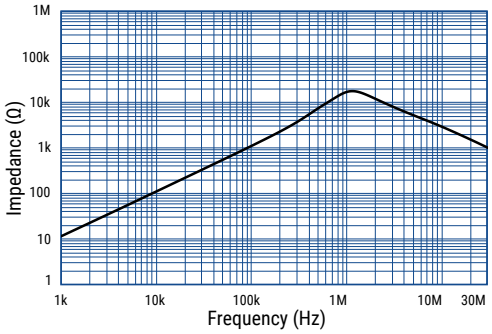
SC-07-650



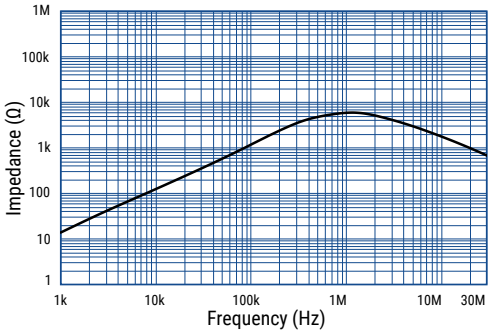
SC22-08-100



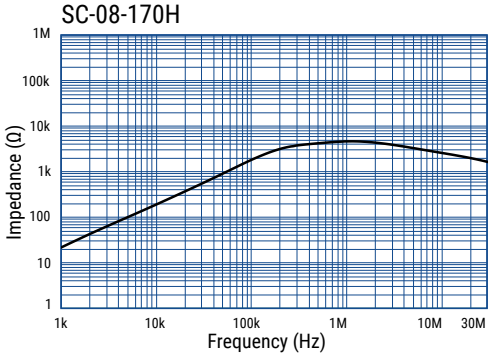
SC-08-100



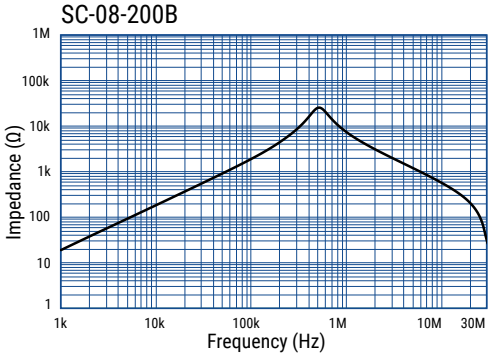
SC22-08-170



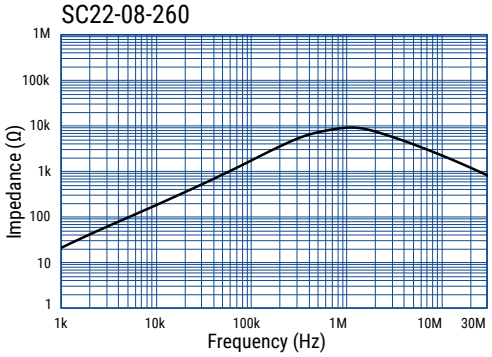
SC-08-170H



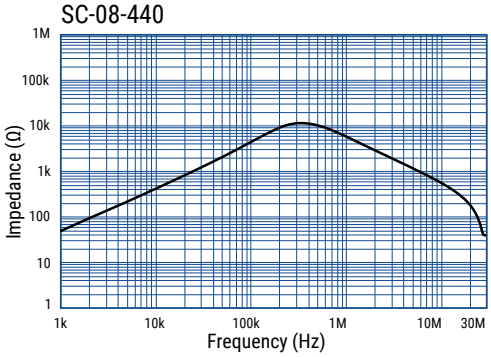
SC-08-200B



SC22-08-260

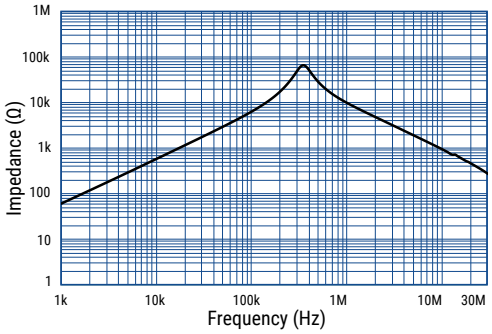


SC-08-440

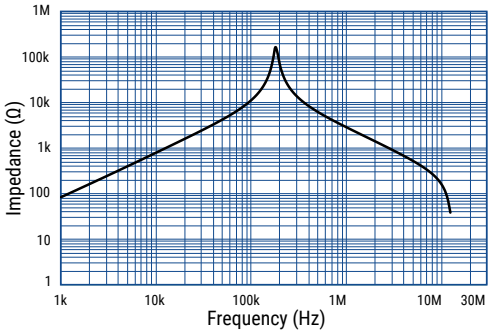


Frequency Characteristics cont.

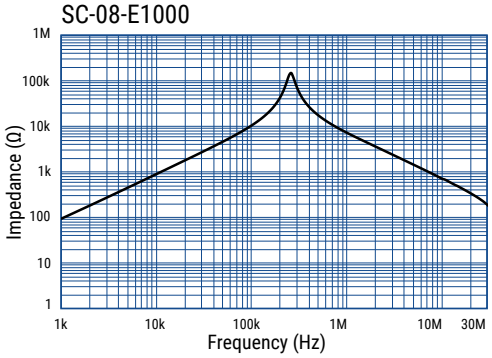
SC-08-700



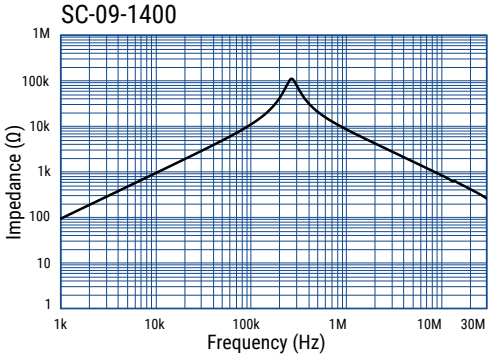
SC-08-1000



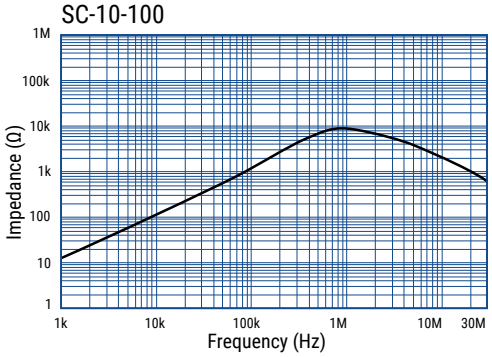
SC-08-E1000



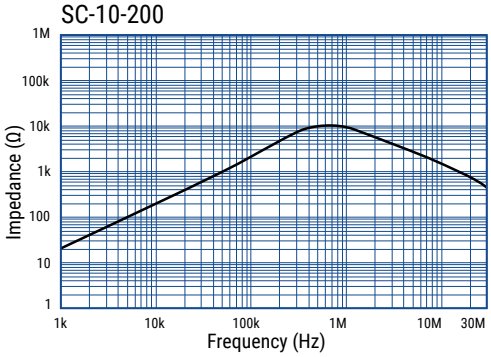
SC-09-1400



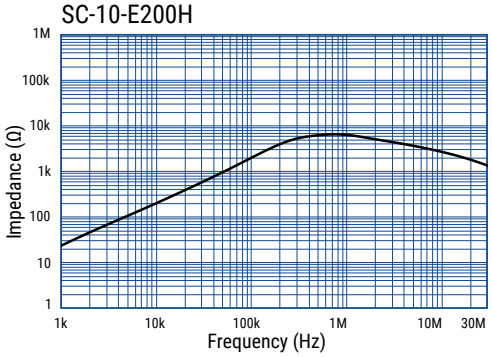
SC-10-100



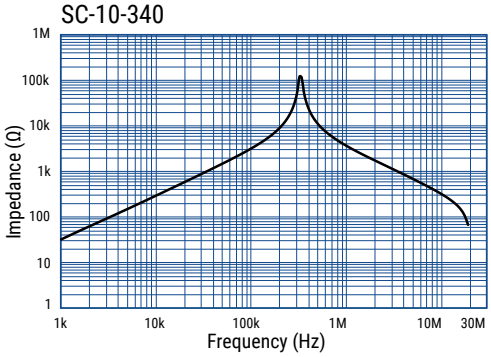
SC-10-200



SC-10-E200H

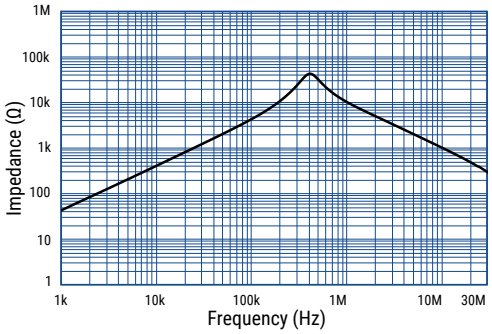


SC-10-340

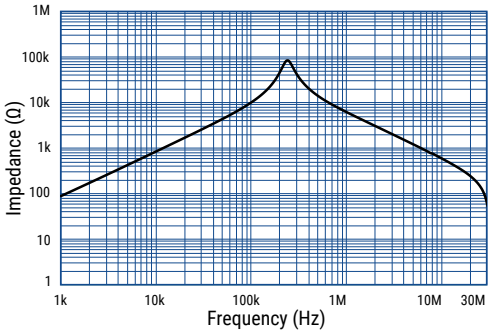


Frequency Characteristics cont.

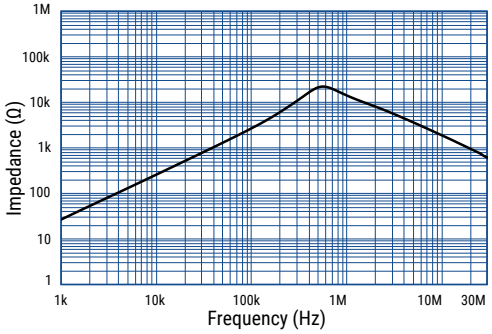
SC-10-500



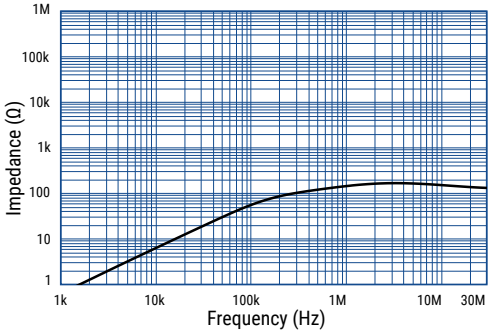
SC-10-1000



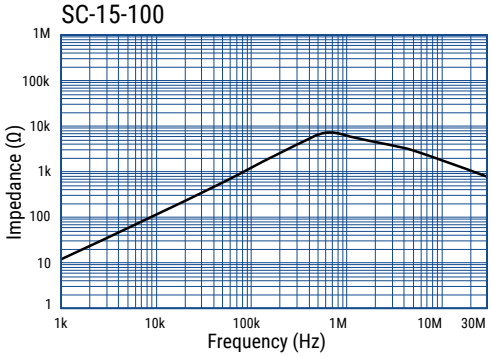
SC-12-300



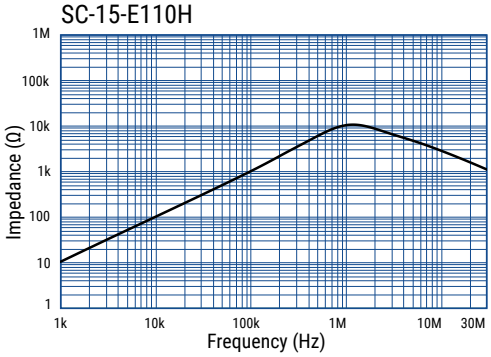
SC-15-01H



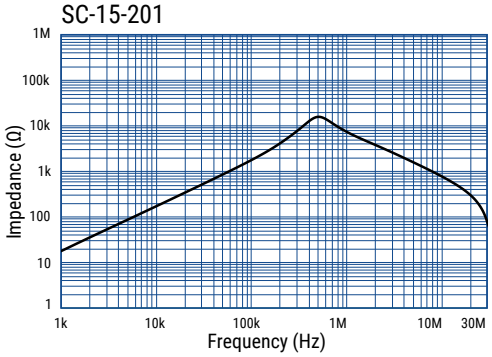
SC-15-100



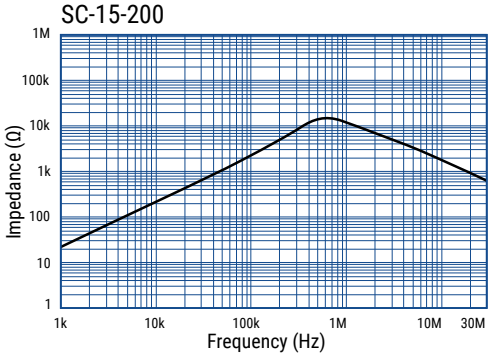
SC-15-E110H



SC-15-201

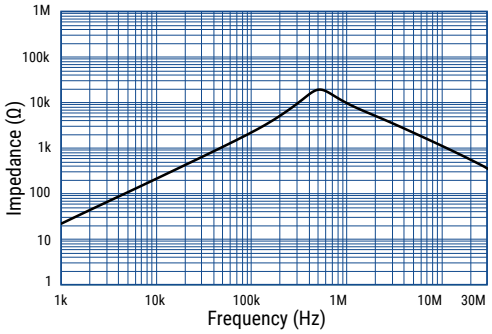


SC-15-200

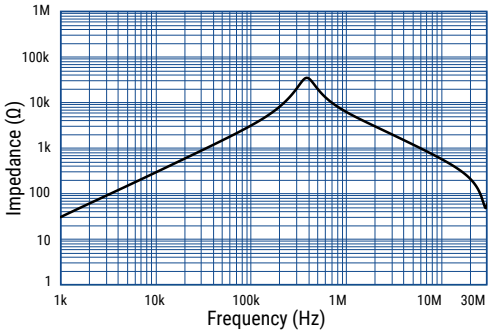


Frequency Characteristics cont.

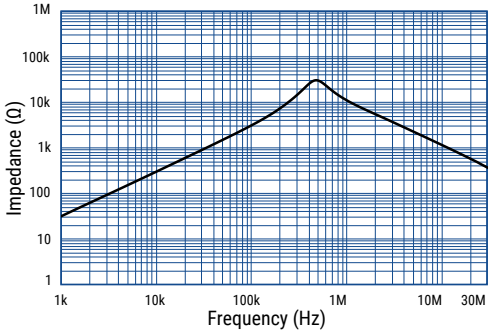
SC-15-230



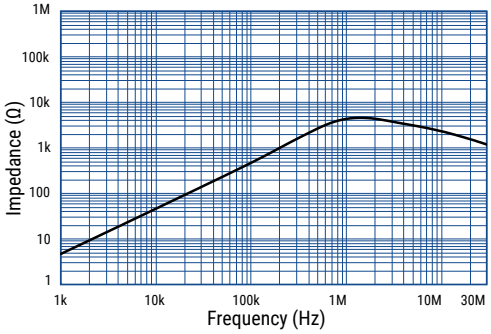
SC-15-E350



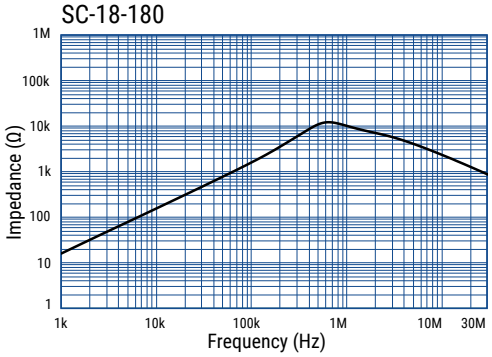
SC-15-E350H



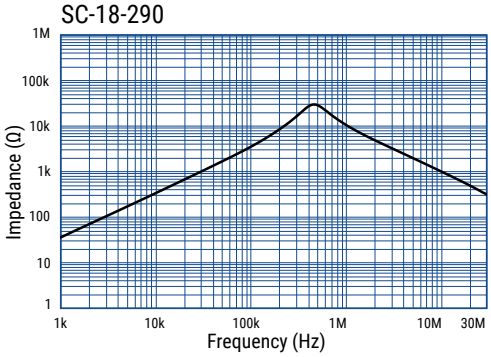
SC-18-100



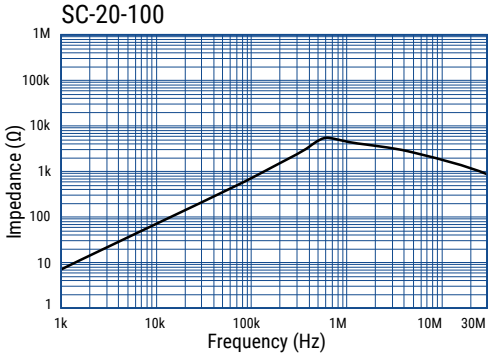
SC-18-180



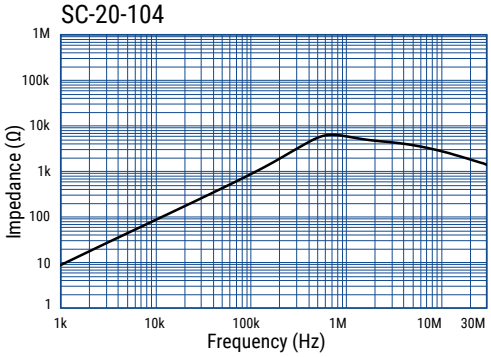
SC-18-290



SC-20-100

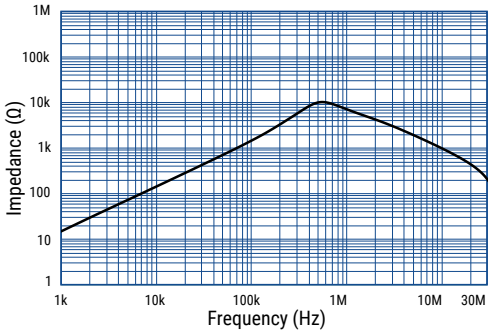


SC-20-104

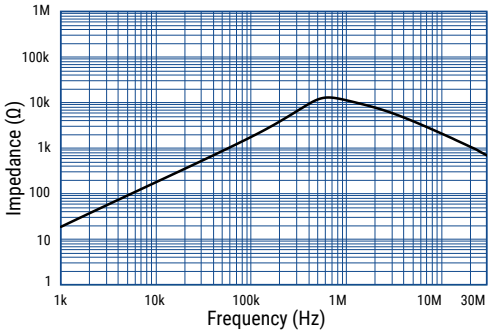


Frequency Characteristics cont.

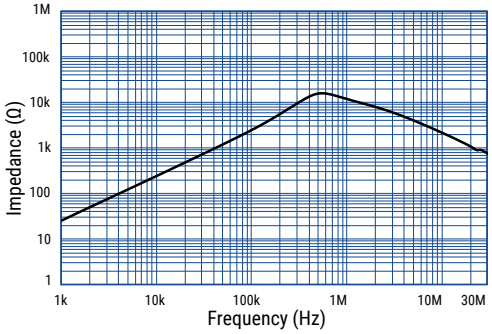
SC-20-201



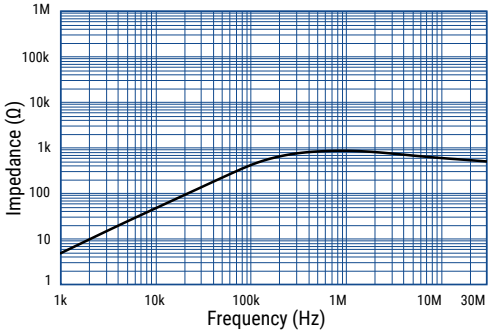
SC-20-300



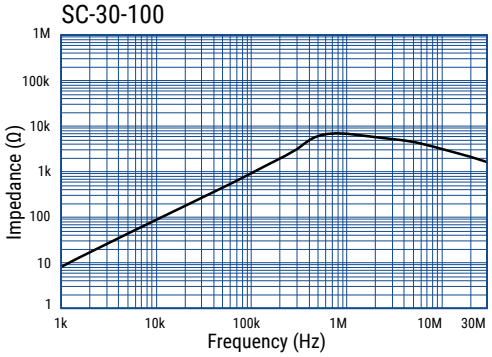
SC-20-400



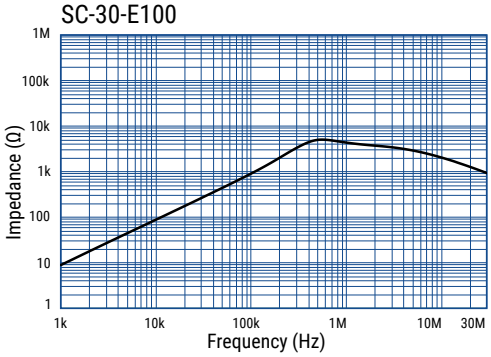
SC-30-050H



SC-30-100



SC-30-E100



Packaging

Type	Packaging Type	Pieces Per Box
SC-02-101	Tray	360
SC-02-100		300
SC-02-200		300
SC-02-300		
SC-02-500		
SC-02-E620H		500
SC-02-800		200
SC-02-090		360
SC-03-E900		300
SC-04-200		
SC-04-500		
SC-05-500		200
SC-05-503		
SC-05-800		
SC-05-803		
SC-04-1600		
SC-04-E2000		100
SC22-04-95H		200
SC-05-E06H		
SC-05-100		300
SC-05-103		500
SC-05-200		200
SC-05-203		
SC-05-300		
SC-05-1100		120
SC-05-1503		200
SC-06-101		500
SC-06-E200H		
SC-06-900		200
SC-07-030V		300
SC-07-100		
SC-07-E300A		200
SC-07-650		
SC22-08-100		250
SC-08-100		200

Type	Packaging Type	Pieces Per Box
SC22-08-170	Tray	250
SC-08-170H		150
SC-08-200B		200
SC22-08-260		500
SC-08-440		200
SC-08-700		60
SC-08-1000		
SC-08-E1000		
SC-09-1400		40
SC-10-100		200
SC-10-200		90
SC-10-E200H		150
SC-10-340		60
SC-10-500		90
SC-10-1000		60
SC-12-300		90
SC-15-01H		300
SC-15-100		90
SC-15-E110H		150
SC-15-201		60
SC-15-200		90
SC-15-230		
SC-15-E350		60
SC-15-E350H		90
SC-18-100		160
SC-18-180		90
SC-18-290		200
SC-20-100		60
SC-20-104		90
SC-20-201		60
SC-20-300		
SC-20-400		
SC-30-050H		90
SC-30-100		60
SC-30-E100		

Handling Precautions

Precautions for product storage

AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values

The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

AC Line Filters

Common Mode SC Coils, SC-J Series, Terminal Base Type

Overview

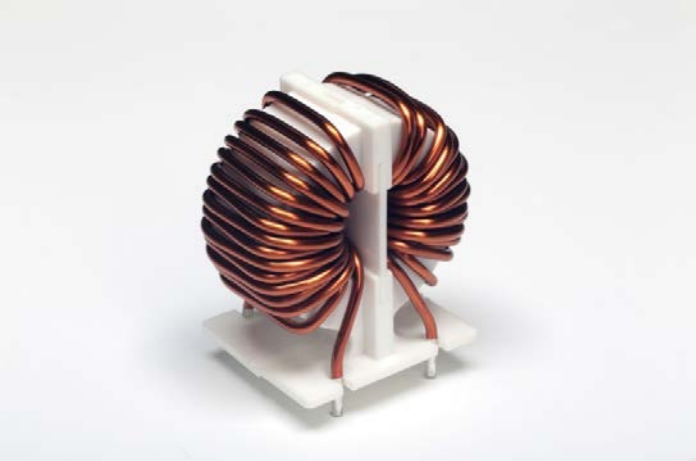
The KEMET SC-J coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 5H, 7H and 10H ferrite materials and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C or +120°C
- UL94 V–0 flame retardant rated base and cap



Part Number System

SC-		10-		20	J	
Series	Dimension Code (See Dimensions)	Rated Current (A)	Thermal Class	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SC	Blank 22	0x = x A x0 = x0 A xx = xx A Examples: 02 = 2 A 10 = 10 A 15 = 15 A Note: With exceptions, see Table 1 for details.	Blank E = Class E Note: With exceptions, see Table 1 for details.	x0 = x mH xx = x.x mH 0x = 0.x mH xxx = xx.x mH Examples: 20 = 2 mH 15 = 1.5 mH 05 = 0.5 mH 115 = 11.5 mH Note: With exceptions, see Table 1 for details.	J	Blank A B M MI N P

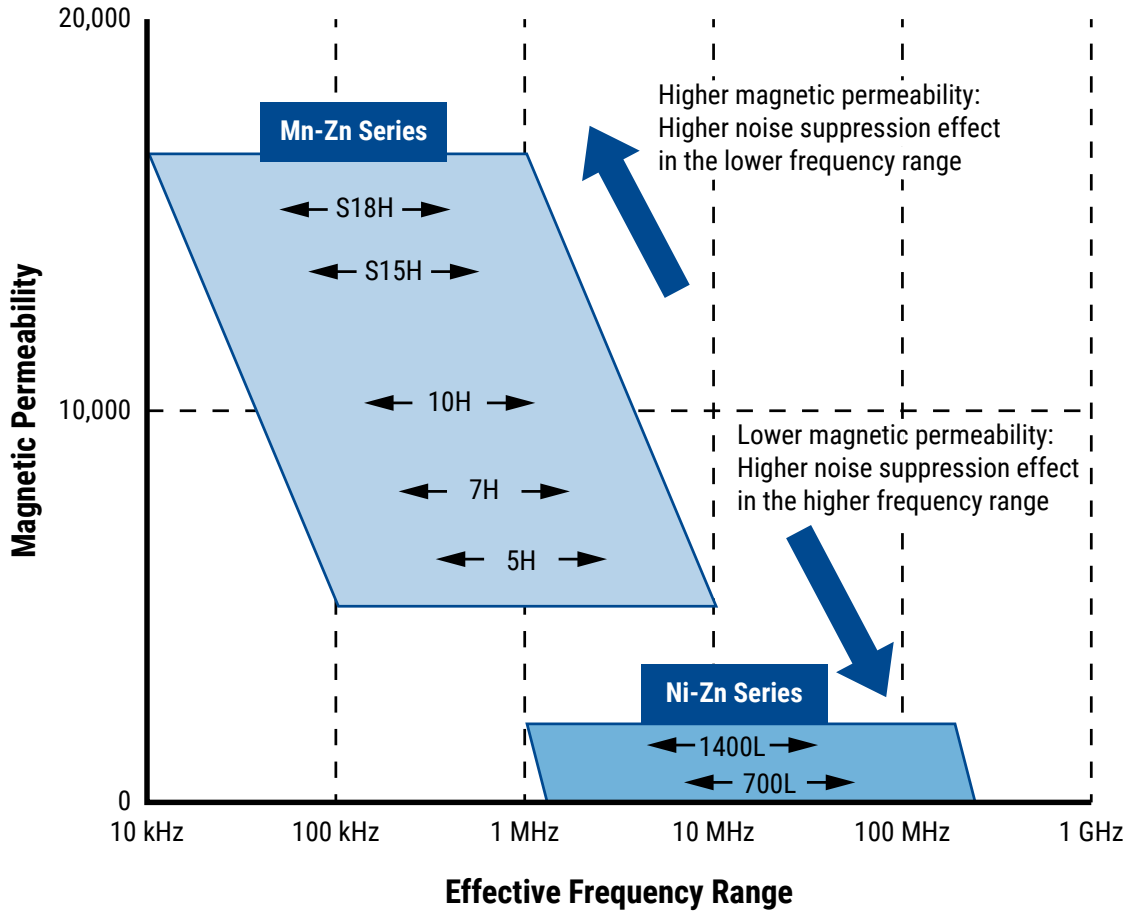
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

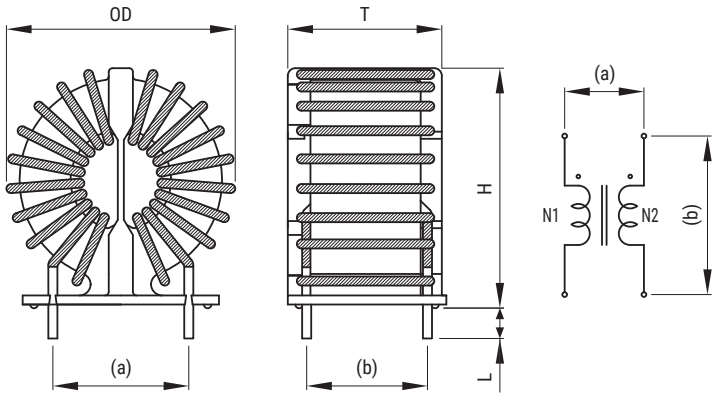
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



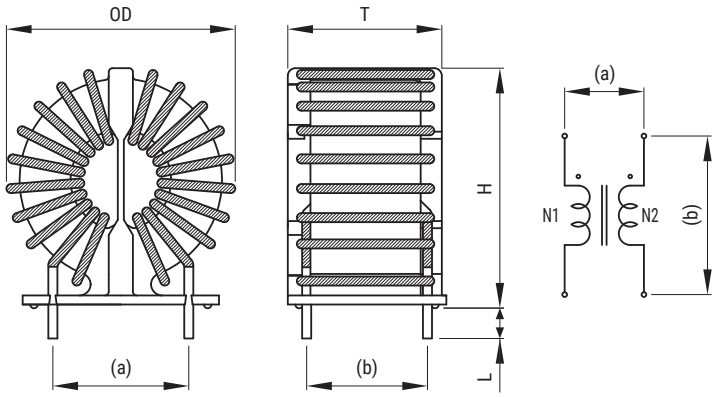
Dimensions – Millimeters



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)	
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b
SC-02-10J	25.0	20.0	27.0	5.00±2.0	10	15
SC-02-20J	25.0	20.0	27.0	5.00±2.0	10	15
SC-02-30J	25.0	20.0	27.0	5.00±2.0	10	15
SC-02-50J	25.0	20.0	27.0	5.00±2.0	10	15
SC-02-70J	25.0	20.0	27.0	5.00±2.0	10	15
SC-02-100J	25.0	20.0	27.0	5.00±2.0	10	15
SC-02-E115J	25.0	15.4	27.5	3.50±1.0	13	11
SC-02-E120J	24.0	16.0	25.0	3.50±1.5	13	11
SC-02-300J	33.0	23.0	33.0	7.00±2.0	18	16
SC22-025-290J	30.0	20.0	29.0	5.00±2.0	10	15
SC-03-28J	25.0	20.0	27.0	5.00±2.0	10	15
SC-03-30J	25.0	20.0	27.0	5.00±2.0	10	15
SC-03-55J	25.0	20.0	27.0	5.00±2.0	10	15
SC-03-67J	24.0	20.0	26.0	5.00±1.0	10	15
SC-03-85J	25.0	20.0	27.0	5.00±2.0	10	15
SC-04-20JN	25.0	20.0	27.0	5.00±2.0	10	15
SC-05-50J	34.0	23.0	33.0	5.00±2.0	18	16
SC-05-80J	34.0	23.0	33.0	5.00±2.0	18	16
SC22-04-100J	30.0	22.0	32.0	3.50±1.0	18	16
SC-04-200J	34.0	23.0	33.0	5.00±2.0	18	16
SC-04-E17J	23.5	19.4	24.0	3.30±1.0	20	16.5
SC-04-E50J	23.5	19.4	24.0	3.30±1.0	20	16.5
SC-05-06J	25.0	20.0	27.0	10.00±2.0	10	15
SC-05-10J	25.0	20.0	27.0	5.00±2.0	10	15
SC-05-15J	25.0	20.0	27.0	3.40±1.0	22	19
SC-05-21J	34.0	23.0	33.0	5.00±2.0	18	16
SC-05-20J	34.0	23.0	33.0	5.00±2.0	18	16
SC-05-27J	25.0	20.0	27.0	5.00±2.0	10	15
SC-05-30J	34.0	23.0	33.0	5.00±2.0	18	16
SC22-05-30J	28.0	18.5	29.0	5.00±2.0	10	15
SC22-05-70J	28.0	18.5	29.0	5.00±2.0	10	15
SC-05-100J	34.0	23.0	33.0	5.00±2.0	18	16
SC-06-10J-B	25.0	20.0	27.0	4.50±1.0	10	15
SC-06-35J	34.0	24.0	33.0	3.50±1.0	12	17
SC-06-40J	35.0	25.0	33.0	5.00±1.0	18	16
SC-06-60J	34.0	25.0	33.0	5.00±2.0	18	16
SC22-06-60J	29.5	20.5	29.5	5.00±2.0	10	15
SC-07-10J	34.0	23.0	33.0	5.00±1.5	18	16
SC-07-30JM	33.0	23.0	33.0	3.75±1.0	18	16
SC-07-42J	34.0	24.0	33.0	4.50±1.0	18	16

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Dimensions – Millimeters cont.



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)	
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b
SC-07-70J	35.0	25.0	35.0	5.00±2.0	18	16
SC-07-90J	34.0	23.0	33.0	5.00±2.0	18	16
SC-07-50J	34.0	24.0	33.0	4.10±1.5	18	16
SC-08-E075J	25.0	16.0	25.5	3.50±1.0	19.5	11
SC-08-20J	34.0	23.0	33.0	7.00±2.0	12	17
SC-08-30J	34.0	23.0	33.0	5.00±2.0	18	16
SC-08-44J	35.0	23.0	33.0	5.00±2.0	18	16
SC-08-100JM	41.0	32.0	40.0	3.50±1.0	18	16
SC-10-E035J	25.0	16.0	24.0	4.00±1.5	19.5	11
SC-10-10J	34.0	23.0	33.0	5.00±2.0	12	17
SC-10-14J	34.0	24.0	33.0	5.00±2.0	12	17
SC-10-15J-MI	34.0	23.0	34.0	3.75±1.0	12	17
SC-10-18J	34.0	24.0	33.0	7.00±2.0	18	16
SC-10-20J	42.0	29.0	44.0	5.00±2.0	18	22
SC-10-30J	34.0	24.0	33.0	5.00±2.0	18	16
SC-10-E55J	44.0	30.0	44.0	5.00±2.0	18	22
SC-11-16J	35.0	23.0	33.0	5.00±2.0	18	16
SC-11-20J	35.0	23.0	33.0	5.00±2.0	18	16
SC-12-E035J	25.0	16.0	25.5	4.00±1.5	19.5	11
SC-12-15J	42.0	29.0	44.0	5.00±2.0	18	22
SC-14-12J	34.0	24.0	33.0	5.00±2.0	18	16
SC-15-02J	34.0	23.0	33.0	5.00±2.0	18	16
SC-15-05J	34.0	23.0	33.0	5.00±2.0	18	16
SC-15-07J	36.0	25.0	35.0	5.00±2.0	18	16
SC-15-09J	36.0	25.0	35.0	5.00±2.0	18	16
SC-15-10J	44.0	30.0	44.0	5.00±2.0	18	22
SC-15-12J-MI	35.0	25.0	35.0	3.75±1.0	18	16
SC-15-E37J	44.0	30.0	44.0	5.00±2.0	18	22
SC-18-05J	44.0	30.0	44.0	5.00±2.0	18	22
SC-18-10J	35.0	24.0	33.0	5.00±2.0	18	16
SC-18-085J	36.0	25.0	35.0	5.00±2.0	18	16
SC-18-095J	36.0	25.0	35.0	5.00±2.0	18	16
SC-18-E12J	50.0	31.0	50.0	4.10±1.0	40	25
SC-18-E15J	44.0	30.0	44.0	5.00±2.0	18	12
SC-18-25J	44.0	30.0	44.0	4.50±1.0	18	22
SC-20-01J-A	35.0	24.0	34.0	4.50±1.0	18	16
SC-20-03J	35.0	24.0	34.0	4.50±1.0	18	16
SC-20-05J-P	36.0	25.0	35.0	5.00±2.0	18	16
SC-20-E085JM	46.0	32.0	46.0	5.00±2.0	18	22
SC-20-E18J	50.0	31.0	53.0	5.00±2.0	40	25

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 V (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	2 – 20 A
Rated Inductance Range	0.15 – 30 mH minimum
Inductance Measurement Condition	1 kHz, 10 kHz, 16kHz, and 100 kHz
Thermal Class	A (105°C) and E (120°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise) and −40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-02-10J	2.0	1.0000 [4]	100.0	40.0	0.60	E (120°C)	15.0
SC-02-20J	2.0	2.0000 [4]	110.0	40.0	0.60	E (120°C)	15.0
SC-02-30J	2.0	3.0000 [4]	110.0	40.0	0.60	E (120°C)	16.0
SC-02-50J	2.0	5.0000 [4]	120.0	40.0	0.60	E (120°C)	20.0
SC-02-70J	2.0	7.0000 [1]	110.0	40.0	0.60	E (120°C)	18.2
SC-02-100J	2.0	10.0000 [4]	220.0	55.0	0.50	E (120°C)	18.0
SC-02-E115J	2.0	11.5000 [2]	155.0	55.0	0.50	E (120°C)	13.0
SC-02-E120J	2.0	12.0000 [2]	180.0	70.0	0.55	E (120°C)	13.0
SC-02-300J	2.0	30.0000 [1]	300.0	45.0	0.60	E (120°C)	36.9
SC22-025-290J	2.5	29.0000 [2]	250.0	65.0	0.60	E (120°C)	31.4
Part Number	**Rated Current (A)**	**Inductance (mH) Minimum**	**DC Resistance/Line (mΩ) Maximum**	**Temperature Rise (K) Maximum**	**Wire Diameter (mm)**	**Thermal Class**	**Weight (g) Approximate**

[1] Inductance Measurement Condition: 1 kHz

[2] Inductance Measurement Condition: 10 kHz

[3] Inductance Measurement Condition: 16 kHz

[4] Inductance Measurement Condition: 100 kHz

Table 1 – Ratings & Part Number Reference cont.

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-03-28J	3.0	2.8000 [2]	55.0	40.0	0.70	E (120°C)	18.7
SC-03-30J	3.0	3.0000 [4]	110.0	50.0	0.65	E (120°C)	19.6
SC-03-55J	3.0	5.5000 [4]	110.0	60.0	0.65	E (120°C)	22.0
SC-03-67J	3.0	6.7000 [4]	105.0	65.0	0.65	E (120°C)	21.0
SC-03-85J	3.0	8.5000 [2]	110.0	60.0	0.65	E (120°C)	22.0
SC-04-20JN	4.0	2.0000 [4]	50.0	50.0	0.80	E (120°C)	20.4
SC-05-50J	4.0	5.0000 [4]	80.0	60.0	0.80	E (120°C)	32.0
SC-05-80J	4.0	8.0000 [4]	90.0	60.0	0.80	E (120°C)	42.0
SC22-04-100J	4.0	10.0000 [2]	71.0	50.5	0.80	E (120°C)	30.0
SC-04-200J	4.0	20.3000 [1]	150.0	55.0	0.80	E (120°C)	43.2
SC-04-E17J	4.3	1.7850 [2]	31.8	45.0	0.70	E (120°C)	16.5
SC-04-E50J	4.3	5.1800 [2]	56.4	70.0	0.70	E (120°C)	19.2
SC-05-06J	5.0	0.6000 [4]	27.0	40.0	0.80	E (120°C)	16.7
SC-05-10J	5.0	1.0000 [4]	50.0	40.0	0.80	E (120°C)	20.0
SC-05-15J	5.0	1.5000 [4]	40.0	45.0	0.80	E (120°C)	18.7
SC-05-20J	5.0	2.0000 [4]	70.0	40.0	0.80	E (120°C)	25.0
SC-05-21J	5.0	2.0000 [4]	40.0	35.0	1.00	E (120°C)	38.6
SC-05-27J	5.0	2.7000 [1]	40.0	57.0	0.80	E (120°C)	19.4
SC-05-30J	5.0	3.0000 [4]	70.0	55.0	0.80	E (120°C)	30.0
SC22-05-30J	5.0	3.0000 [2]	50.0	50.0	0.80	E (120°C)	30.6
SC22-05-70J	5.0	7.0000 [2]	60.0	75.0	0.80	E (120°C)	31.9
SC-05-100J	5.0	10.5000 [3]	100.0	55.0	0.90	E (120°C)	40.8
SC-06-10J-B	6.0	1.0000 [1]	30.0	45.0	0.85	E (120°C)	18.9
SC-06-35J	6.0	3.5000 [2]	50.0	51.0	1.00	E (120°C)	40.0
SC-06-40J	6.0	4.0000 [1]	40.0	50.0	1.10	E (120°C)	47.9
SC-06-60J	6.0	6.0000 [2]	60.0	70.0	1.00	E (120°C)	44.1
SC22-06-60J	6.0	6.0000 [2]	46.0	83.0	0.90	E (120°C)	29.0
SC-07-10J	7.0	1.0000 [4]	24.0	45.0	1.00	E (120°C)	34.3
SC-07-30JM	7.0	3.0000 [2]	39.0	50.0	1.00	E (120°C)	43.0
SC-07-42J	7.0	4.2000 [4]	42.0	65.0	1.10	E (120°C)	45.2
SC-07-70J	7.0	7.0000 [1]	40.0	65.0	1.10	E (120°C)	45.0
SC-07-90J	7.0	9.0000 [2]	50.0	85.0	1.00	E (120°C)	45.8
SC-07-50J	7.3	5.0000 [2]	27.0	55.0	1.20	E (120°C)	53.0
SC-08-E075J	8.0	0.7500 [2]	12.7	55.0	0.90	E (120°C)	16.4
SC-08-20J	8.0	2.0000 [4]	50.0	45.0	1.20	E (120°C)	45.6
Part Number	**Rated Current (A)**	**Inductance (mH) Minimum**	**DC Resistance/Line (mΩ) Maximum**	**Temperature Rise (K) Maximum**	**Wire Diameter (mm)**	**Thermal Class**	**Weight (g) Approximate**

[1] Inductance Measurement Condition: 1 kHz

[2] Inductance Measurement Condition: 10 kHz

[3] Inductance Measurement Condition: 16 kHz

[4] Inductance Measurement Condition: 100 kHz

Table 1 – Ratings & Part Number Reference cont.

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-08-30J	8.0	3.0000 [4]	54.0	55.0	1.00	E (120°C)	40.9
SC-08-44J	8.0	4.4000 [4]	25.0	50.0	1.20	E (120°C)	46.1
SC-08-100JM	8.0	13.0000 [4]	50.0	70.0	1.30	E (120°C)	93.0
SC-10-E035J	10.0	0.3500 [2]	8.0	46.0	1.00	E (120°C)	11.0
SC-10-10J	10.0	1.0000 [4]	20.0	40.0	1.30	A (105°C)	42.0
SC-10-14J	10.0	1.4000 [4]	18.0	65.0	1.30	E (120°C)	43.9
SC-10-15J-MI	10.0	1.5000 [4]	15.7	65.0	1.30	E (120°C)	45.0
SC-10-18J	10.0	1.6000 [1]	20.0	55.0	1.30	E (120°C)	45.2
SC-10-20J	10.0	2.0000 [4]	22.0	50.0	1.40	A (105°C)	70.0
SC-10-30J	10.0	3.0000 [4]	30.0	75.0	1.20	E (120°C)	65.0
SC-10-E55J	10.0	5.5000 [2]	24.0	70.0	1.40	E (120°C)	82.0
SC-11-16J	11.0	1.6000 [2]	13.0	45.0	1.20	E (120°C)	35.0
SC-11-20J	11.0	2.0000 [2]	14.0	50.0	1.40	E (120°C)	44.1
SC-12-E035J	12.0	0.3500 [2]	8.0	60.0	1.10	E (120°C)	11.0
SC-12-15J	12.0	1.5000 [4]	18.0	50.0	1.50	A (105°C)	70.0
SC-14-12J	14.0	1.2000 [2]	12.2	55.0	1.50	E (120°C)	45.0
SC-15-02J	15.0	0.2000 [4]	6.0	45.0	1.60	E (120°C)	43.0
SC-15-05J	15.0	0.5000 [4]	8.0	60.0	1.50	E (120°C)	40.0
SC-15-07J	15.0	0.7020 [4]	10.0	60.0	1.60	E (120°C)	46.4
SC-15-09J	15.0	0.9000 [4]	20.0	65.0	1.50	E (120°C)	45.5
SC-15-10J	15.0	1.0000 [4]	12.0	55.0	1.70	A (105°C)	75.0
SC-15-12J-MI	15.0	1.2000 [2]	6.2	60.0	1.60	E (120°C)	45.2
SC-15-E37J	15.0	3.7000 [2]	16.0	92.0	1.50	E (120°C)	82.4
SC-18-05J	18.0	0.5000 [4]	7.0	50.0	1.80	A (105°C)	60.0
SC-18-085J	18.0	0.8500 [2]	6.0	75.0	1.60	E (120°C)	45.0
SC-18-095J	18.0	0.9500 [2]	5.5	56.0	1.70	E (120°C)	45.0
SC-18-E12J	18.0	1.2000 [2]	9.0	65.0	1.70	E (120°C)	110.0
SC-18-E15J	18.0	1.5000 [2]	8.0	60.0	1.70	E (120°C)	80.0
SC-18-25J	18.0	2.5000 [2]	10.0	60.0	1.70	E (120°C)	77.0
SC-20-01J-A	20.0	0.1500 [1]	4.0	50.0	1.80	E (120°C)	39.6
SC-20-03J	20.0	0.3000 [1]	4.0	50.0	1.80	E (120°C)	39.4
SC-20-05J-P	20.0	0.4875 [4]	3.6	60.0	1.80	E (120°C)	44.2
SC-18-10J	20.0	0.7000 [4]	20.0	72.0	1.70	E (120°C)	45.4
SC-20-E085JM	20.0	1.2000 [2]	6.0	46.0	2.10	E (120°C)	90.0
SC-20-E18J	20.0	1.8000 [2]	6.8	65.0	2.00	E (120°C)	115.0
Part Number	**Rated Current (A)**	**Inductance (mH) Minimum**	**DC Resistance/Line (mΩ) Maximum**	**Temperature Rise (K) Maximum**	**Wire Diameter (mm)**	**Thermal Class**	**Weight (g) Approximate**

[1] Inductance Measurement Condition: 1 kHz

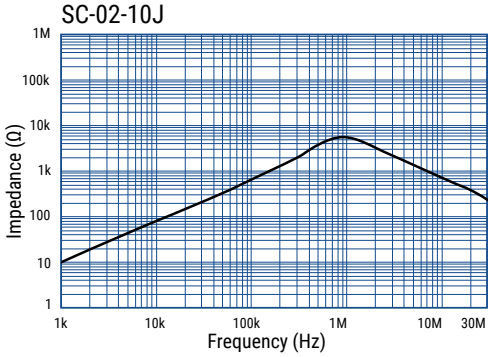
[2] Inductance Measurement Condition: 10 kHz

[3] Inductance Measurement Condition: 16 kHz

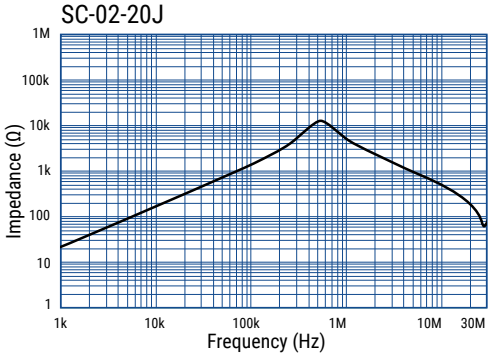
[4] Inductance Measurement Condition: 100 kHz

Frequency Characteristics

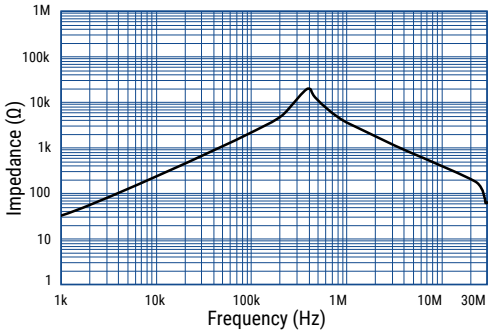
SC-02-10J



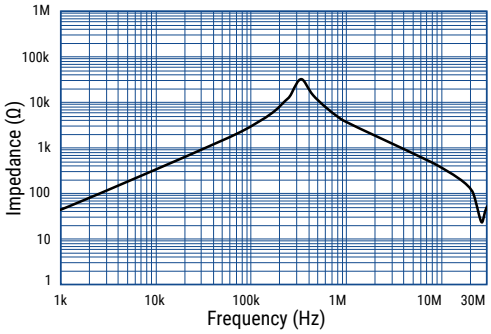
SC-02-20J



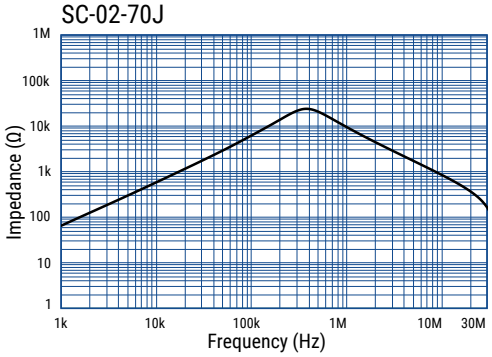
SC-02-30J



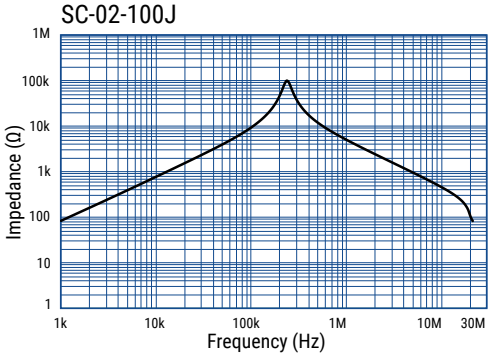
SC-02-50J



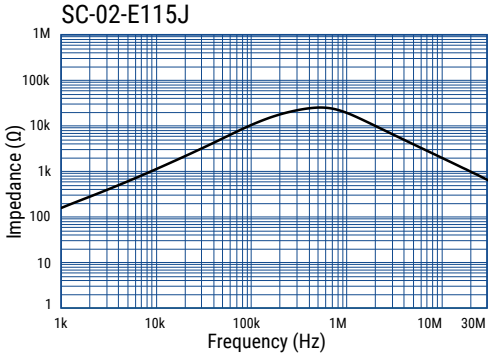
SC-02-70J



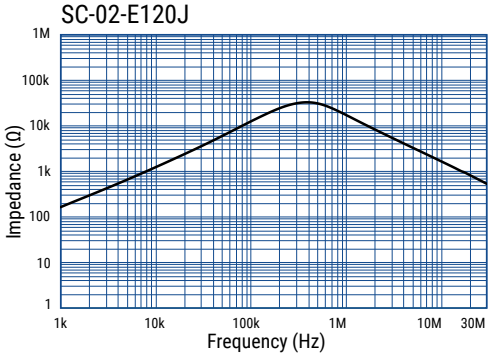
SC-02-100J



SC-02-E115J

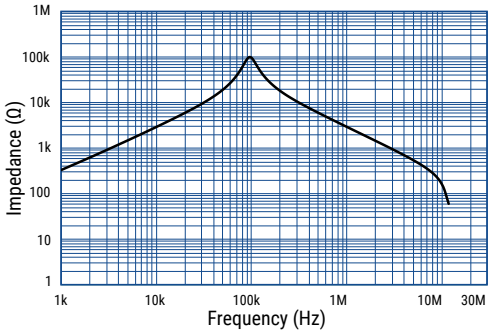


SC-02-E120J

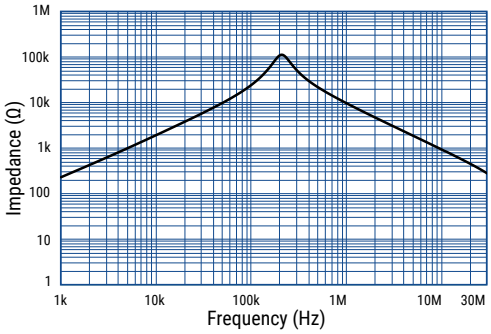


Frequency Characteristics cont.

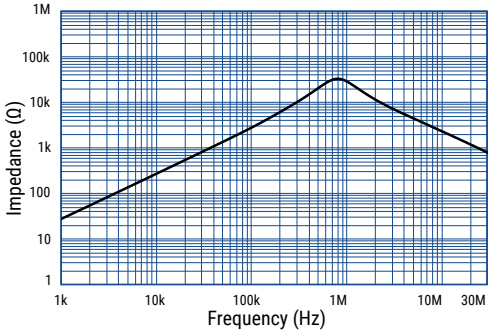
SC-02-300J



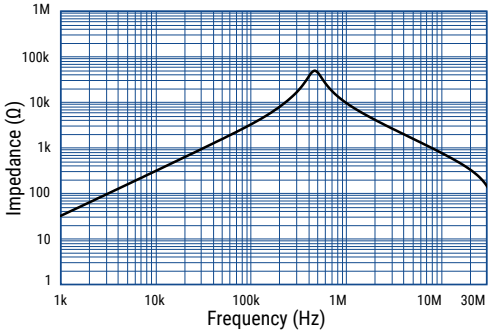
SC22-025-290J



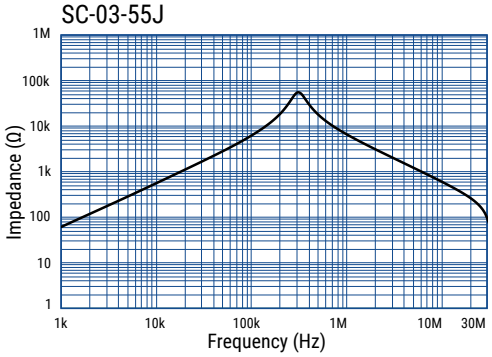
SC-03-28J



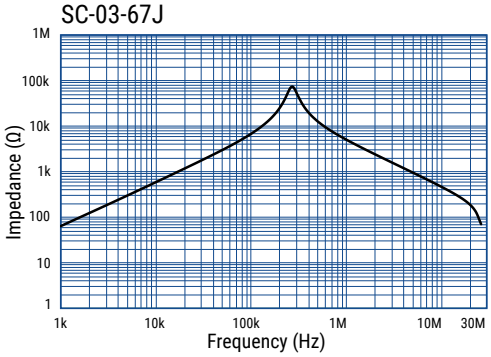
SC-03-30J



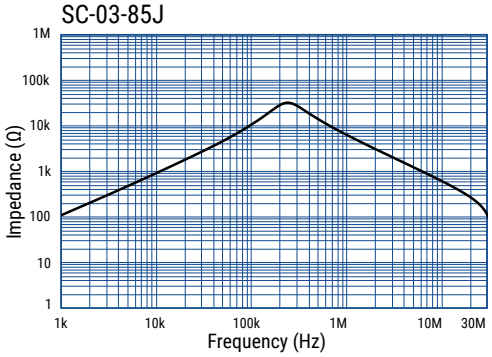
SC-03-55J



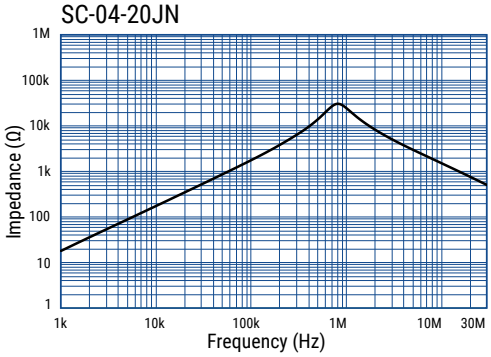
SC-03-67J



SC-03-85J

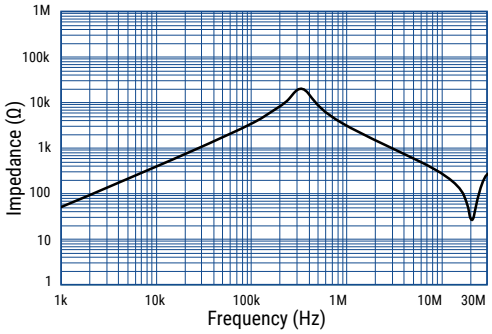


SC-04-20JN

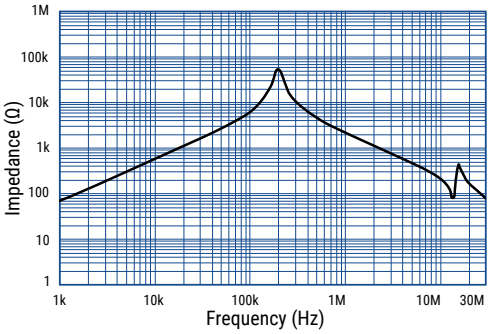


Frequency Characteristics cont.

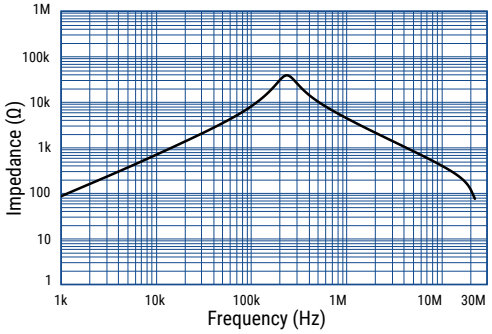
SC-05-50J



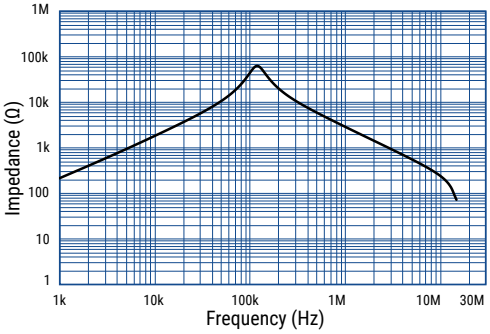
SC-05-80J



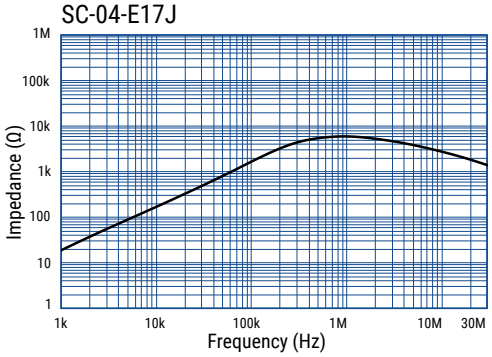
SC22-04-100J



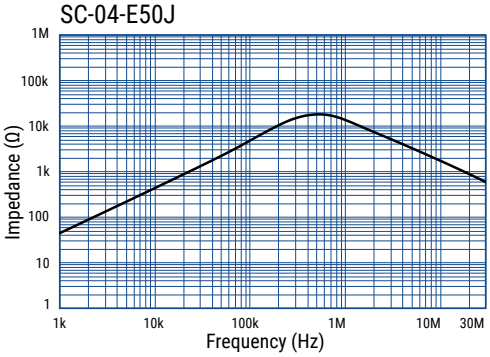
SC-04-200J



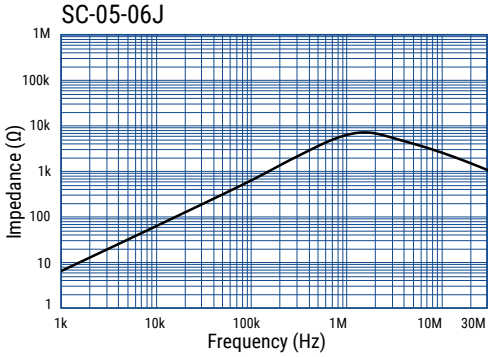
SC-04-E17J



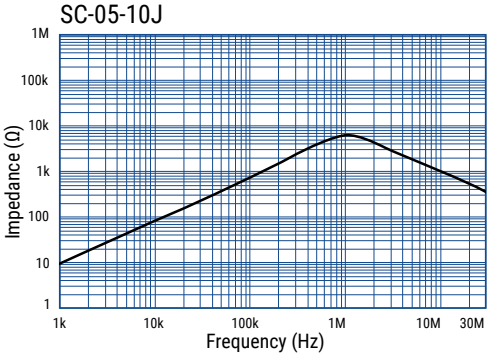
SC-04-E50J



SC-05-06J

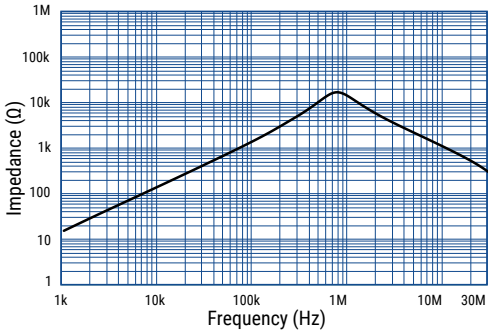


SC-05-10J

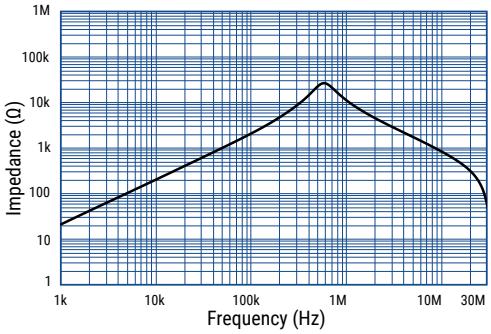


Frequency Characteristics cont.

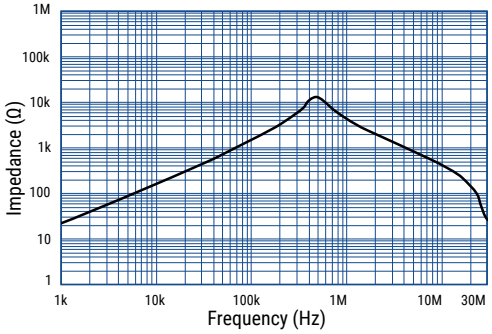
SC-05-15J



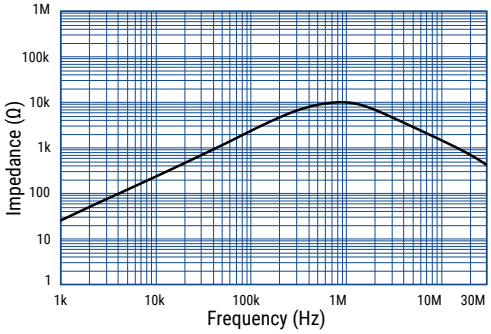
SC-05-21J



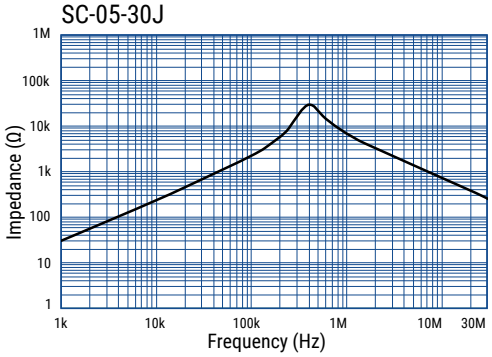
SC-05-20J



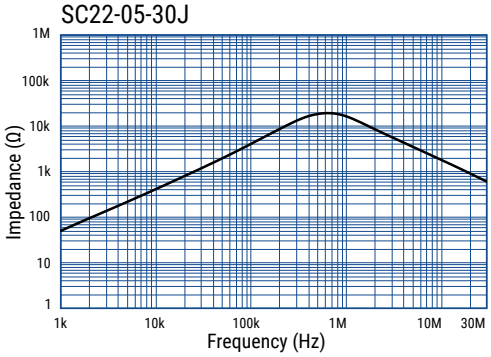
SC-05-27J



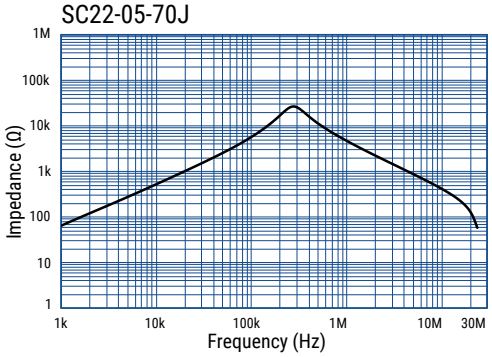
SC-05-30J



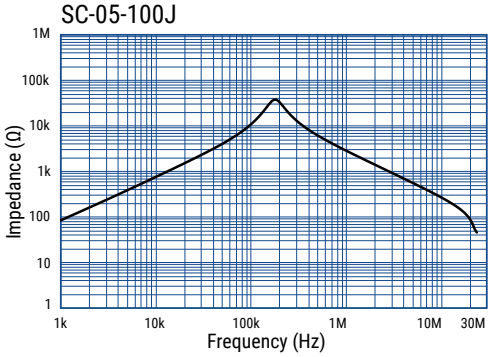
SC22-05-30J



SC22-05-70J

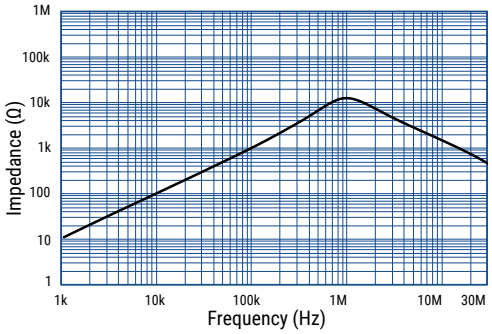


SC-05-100J

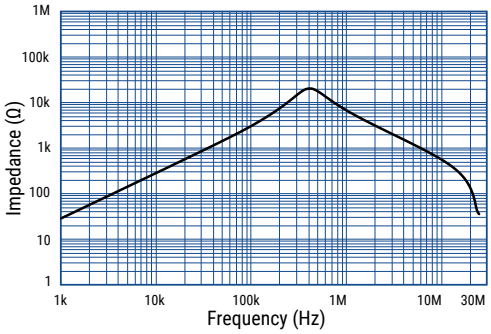


Frequency Characteristics cont.

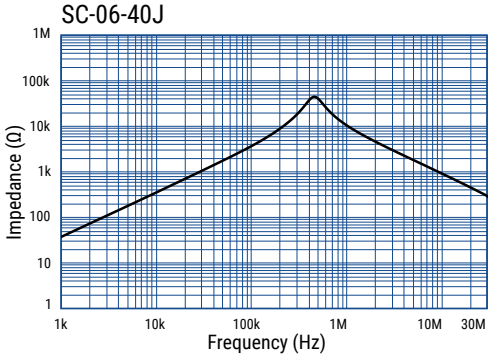
SC-06-10J-B



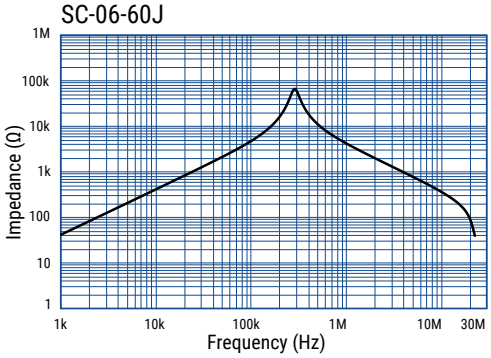
SC-06-35J



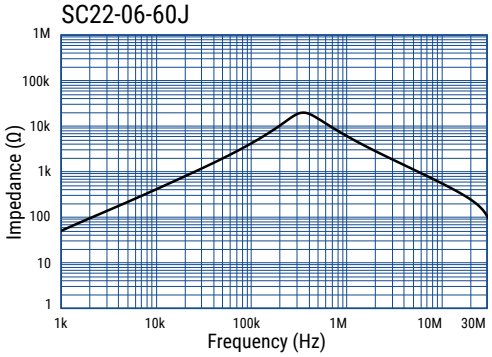
SC-06-40J



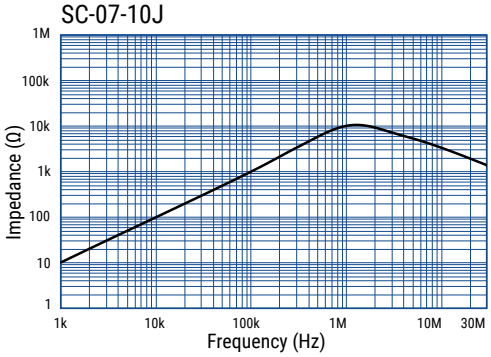
SC-06-60J



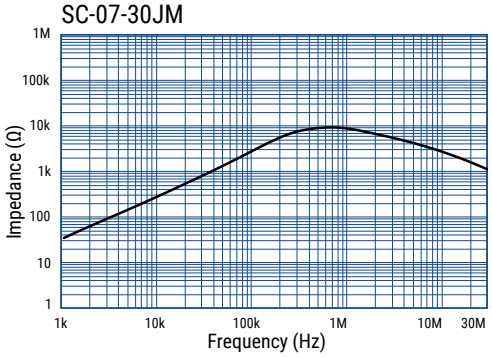
SC22-06-60J



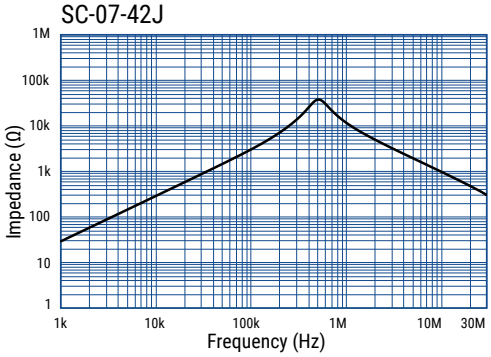
SC-07-10J



SC-07-30JM

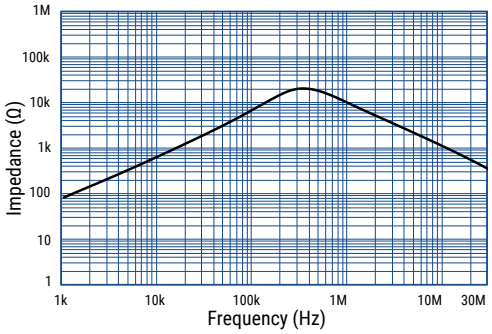


SC-07-42J

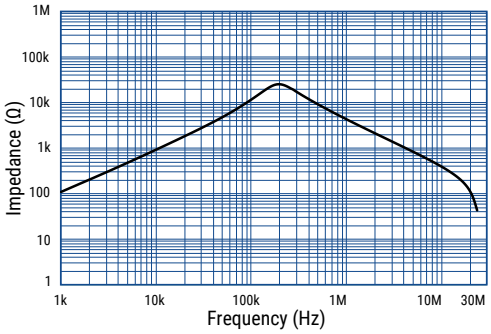


Frequency Characteristics cont.

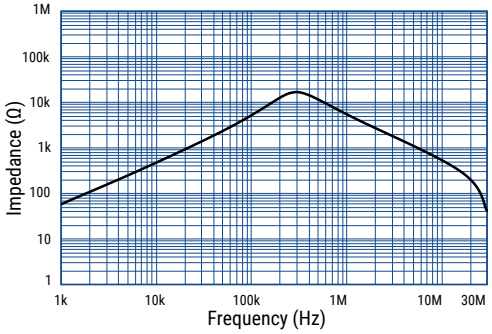
SC-07-70J



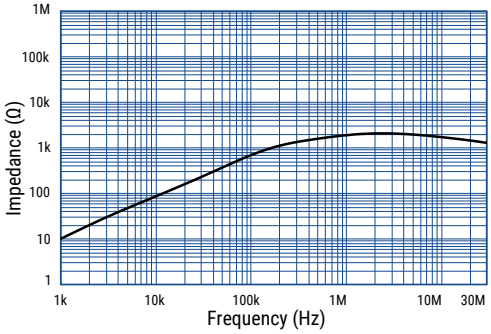
SC-07-90J



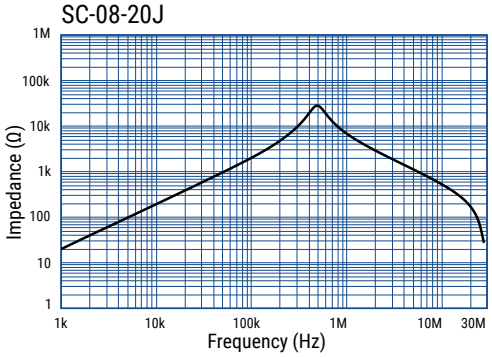
SC-07-50J



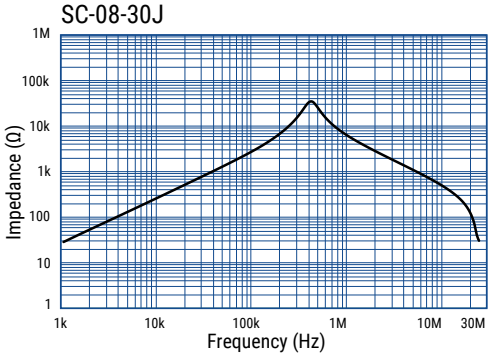
SC-08-E075J



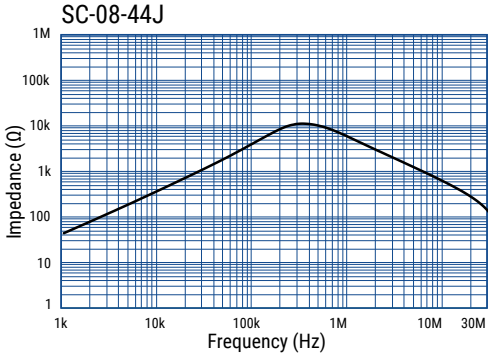
SC-08-20J



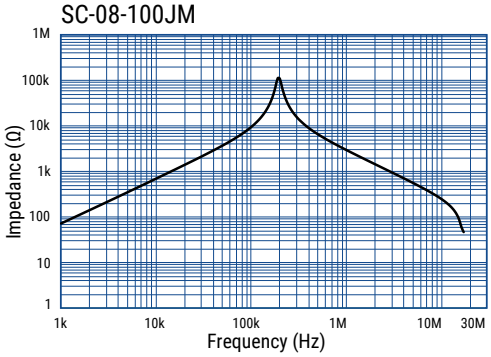
SC-08-30J



SC-08-44J

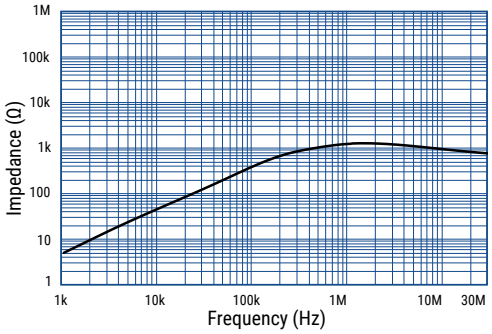


SC-08-100JM

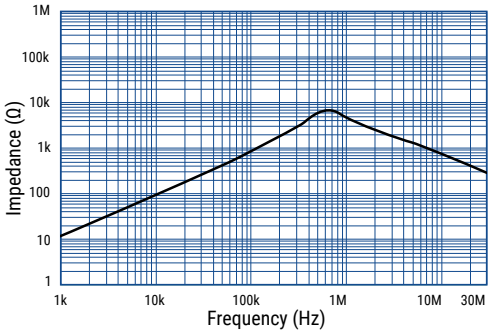


Frequency Characteristics cont.

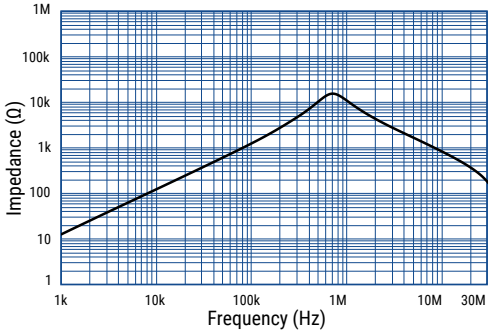
SC-10-E035J



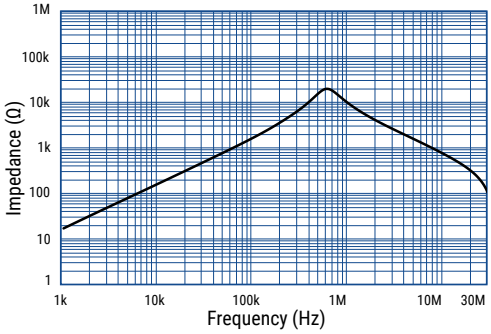
SC-10-10J



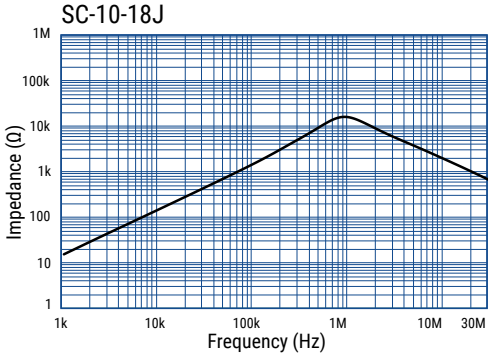
SC-10-14J



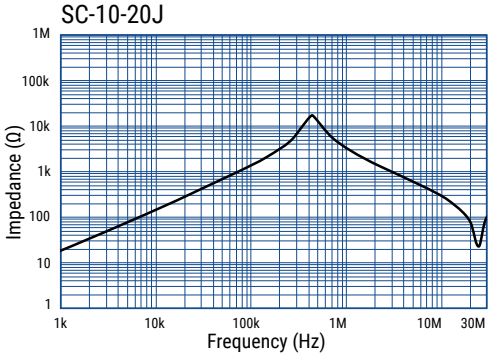
SC-10-15J-MI



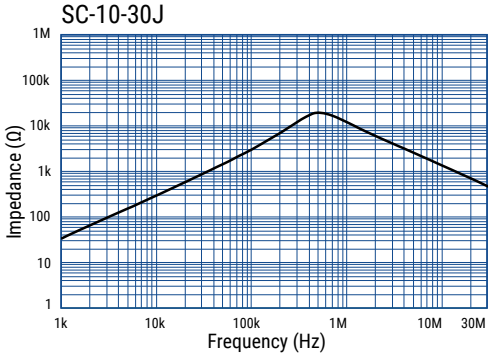
SC-10-18J



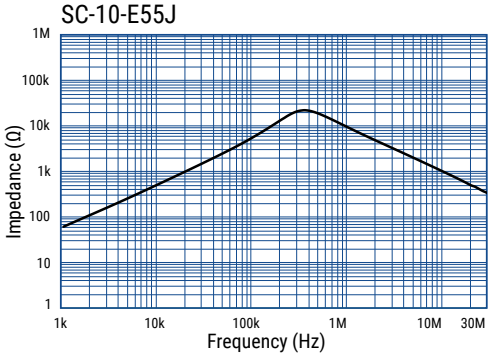
SC-10-20J



SC-10-30J

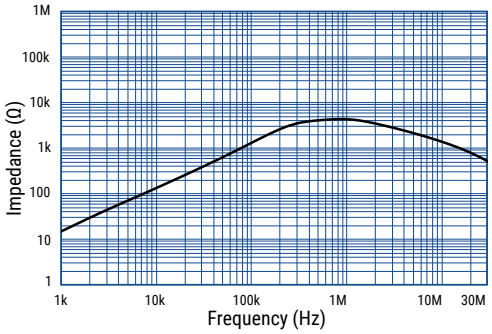


SC-10-E55J

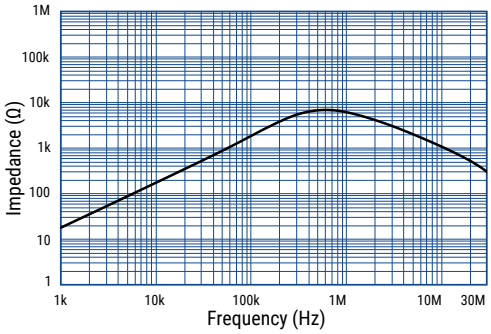


Frequency Characteristics cont.

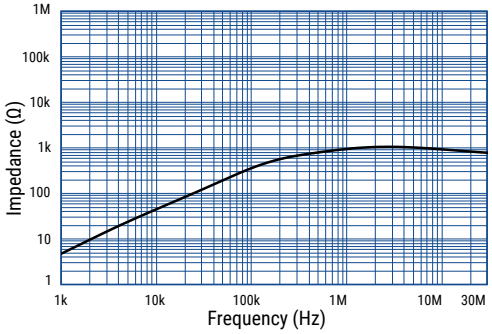
SC-11-16J



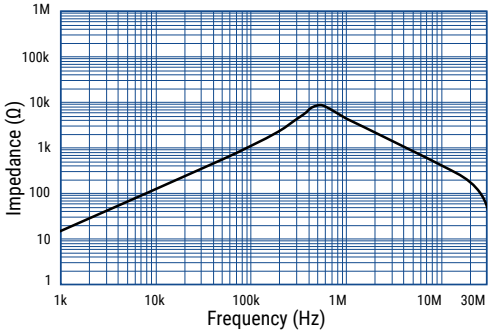
SC-11-20J



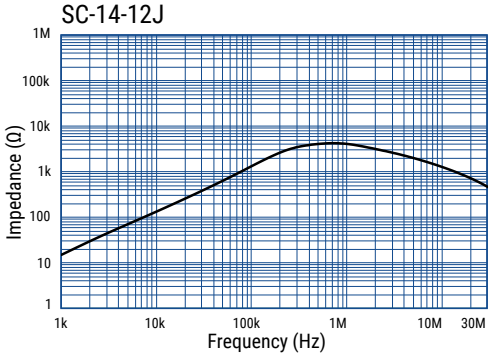
SC-12-E035J



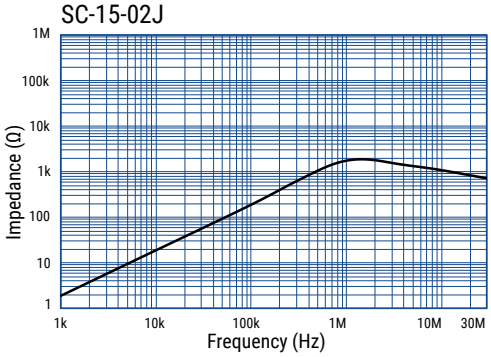
SC-12-15J



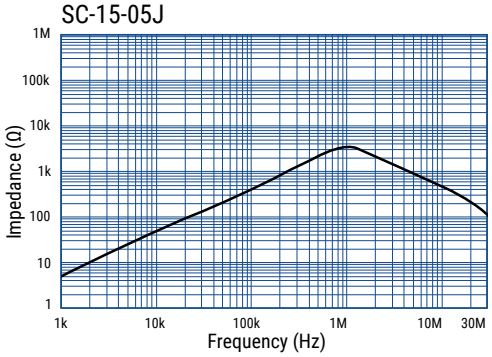
SC-14-12J



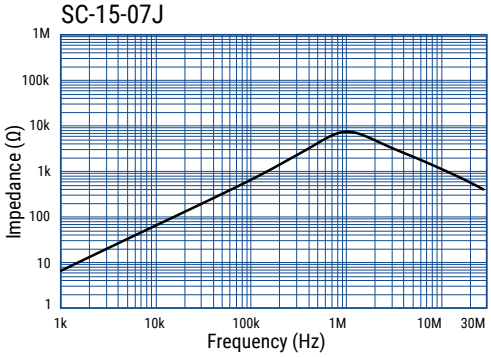
SC-15-02J



SC-15-05J

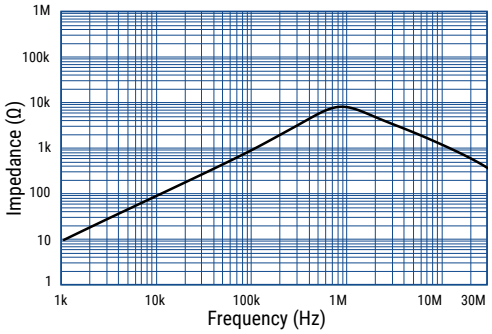


SC-15-07J

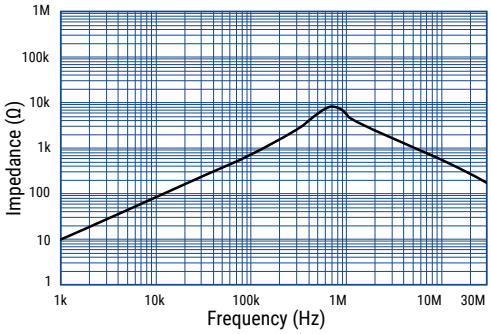


Frequency Characteristics cont.

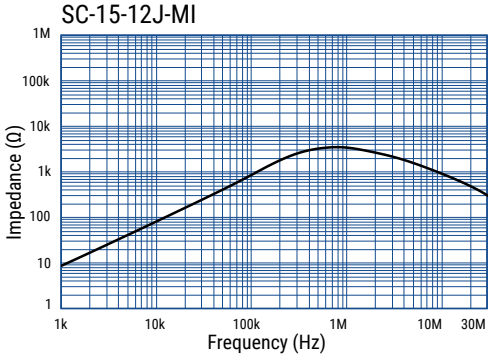
SC-15-09J



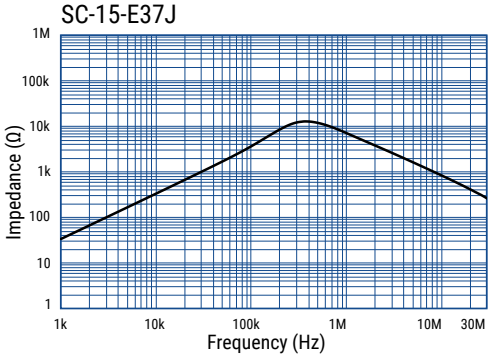
SC-15-10J



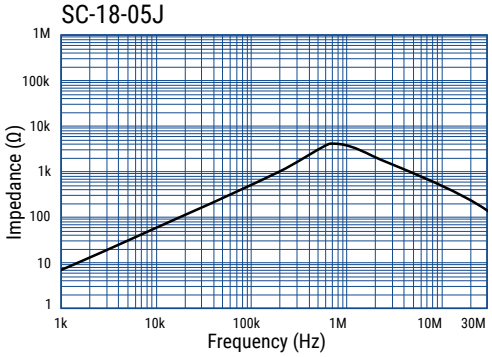
SC-15-12J-MI



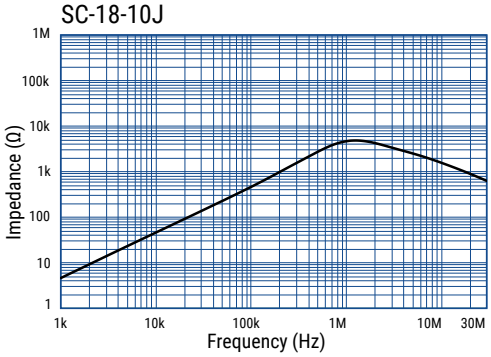
SC-15-E37J



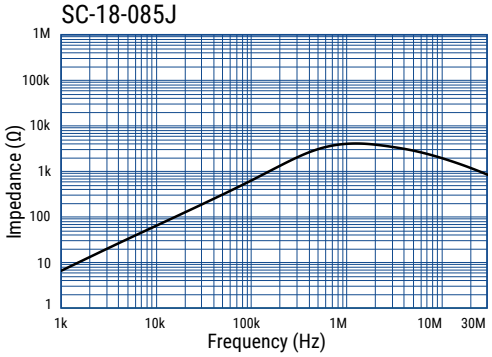
SC-18-05J



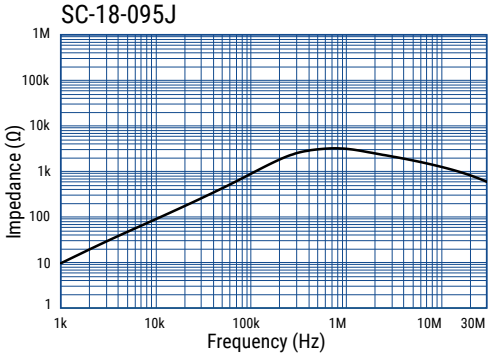
SC-18-10J



SC-18-085J

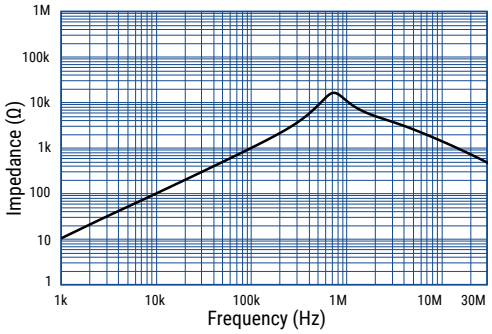


SC-18-095J

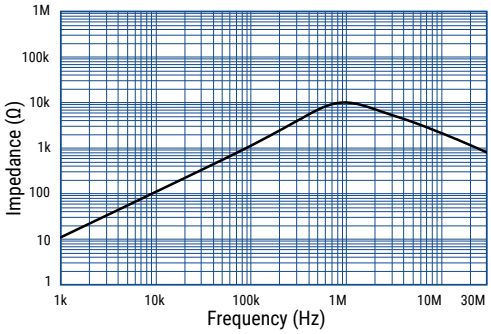


Frequency Characteristics cont.

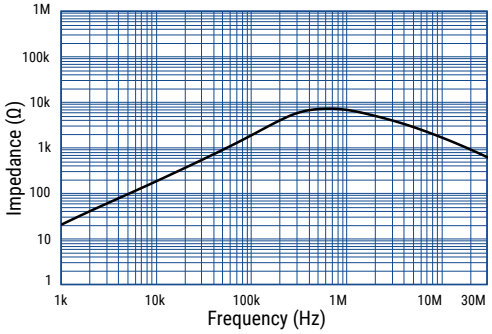
SC-18-E12J



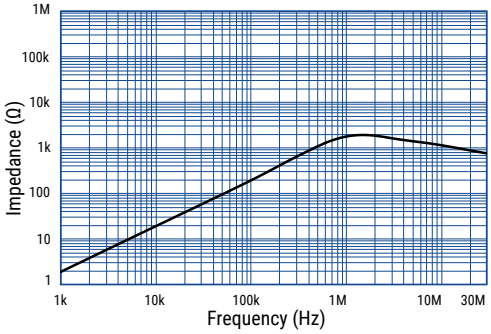
SC-18-E15J



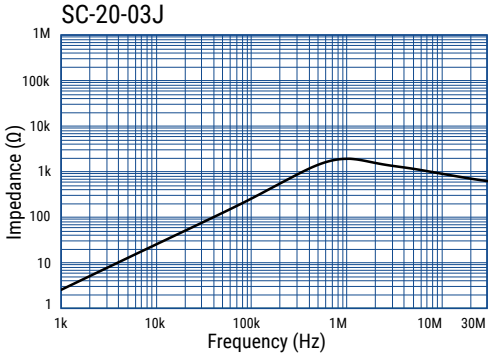
SC-18-25J



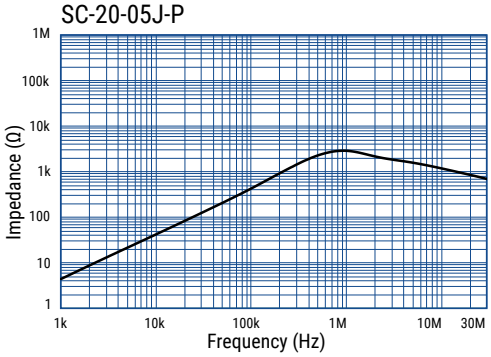
SC-20-01J-A



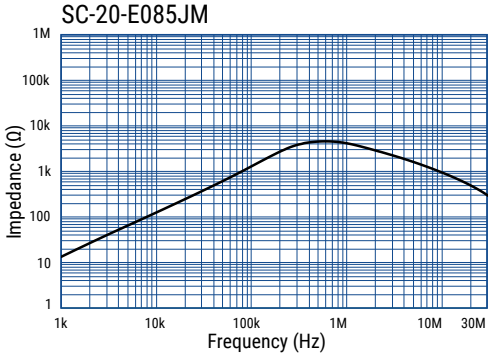
SC-20-03J



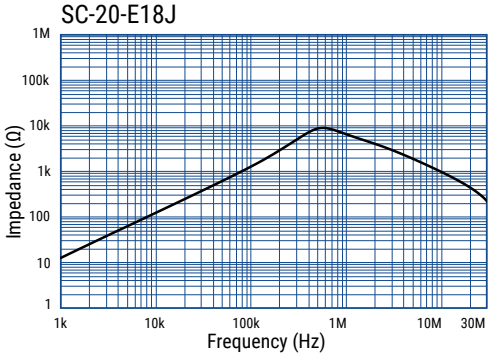
SC-20-05J-P



SC-20-E085JM



SC-20-E18J



Packaging

Type	Packaging Type	Pieces Per Box
SC-02-10J	Tray	400
SC-02-20J		
SC-02-30J		
SC-02-50J		
SC-02-70J		
SC-02-100J		
SC-02-E115J		
SC-02-E120J		150
SC-02-300J		200
SC22-025-290J		
SC-03-28J		400
SC-03-30J		
SC-03-55J		
SC-03-67J		
SC-03-85J		
SC-04-20JN		
SC-05-50J		200
SC-05-80J		
SC22-04-100J		
SC-04-200J		
SC-04-E17J		360
SC-04-E50J		
SC-05-06J		400
SC-05-10J		
SC-05-15J		200
SC-05-21J		
SC-05-20J		
SC-05-27J		400
SC-05-30J		200
SC22-05-30J		
SC22-05-70J		150
SC-05-100J		180
SC-06-10J-B		400
SC-06-35J		180
SC-06-40J		200
SC-06-60J		
SC22-06-60J		150
SC-07-10J		200
SC-07-30JM		180
SC-07-42J		200

Type	Packaging Type	Pieces Per Box
SC-07-70J	Tray	200
SC-07-90J		
SC-07-50J		
SC-08-E075J		150
SC-08-20J		200
SC-08-30J		
SC-08-44J		
SC-08-100JM		160
SC-10-E035J		150
SC-10-10J		200
SC-10-14J		
SC-10-15J-MI		180
SC-10-18J		200
SC-10-20J		160
SC-10-30J		200
SC-10-E55J		160
SC-11-16J		200
SC-11-20J		
SC-12-E035J		150
SC-12-15J		160
SC-14-12J		200
SC-15-02J		
SC-15-05J		
SC-15-07J		
SC-15-09J		
SC-15-10J		160
SC-15-12J-MI		180
SC-15-E37J		75
SC-18-05J		160
SC-18-10J		200
SC-18-085J		180
SC-18-095J		200
SC-18-E12J		45
SC-18-E15J		60
SC-18-25J		160
SC-20-01J-A		200
SC-20-03J		
SC-20-05J-P		180
SC-20-E085JM		60
SC-20-E18J		

AC Line Filters

Common Mode SC Coils, SC-GJ Series, Terminal Base Type

Overview

The KEMET SC-GJ coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 5H and 10H ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap

Part Number System

SC-	02-	30	GJ
Series	Rated Current (A)	Inductance (mH) Minimum	Terminal Base Type
SC	0x = x A Example: 02 = 2 A	x0 = x.0 mH 0x = 0.x mH Examples: 30 = 3.0 mH 06 = 0.6 mH Note: With exceptions, see Table 1 for details.	GJ

Magnetic Permeability of Ferrite Material

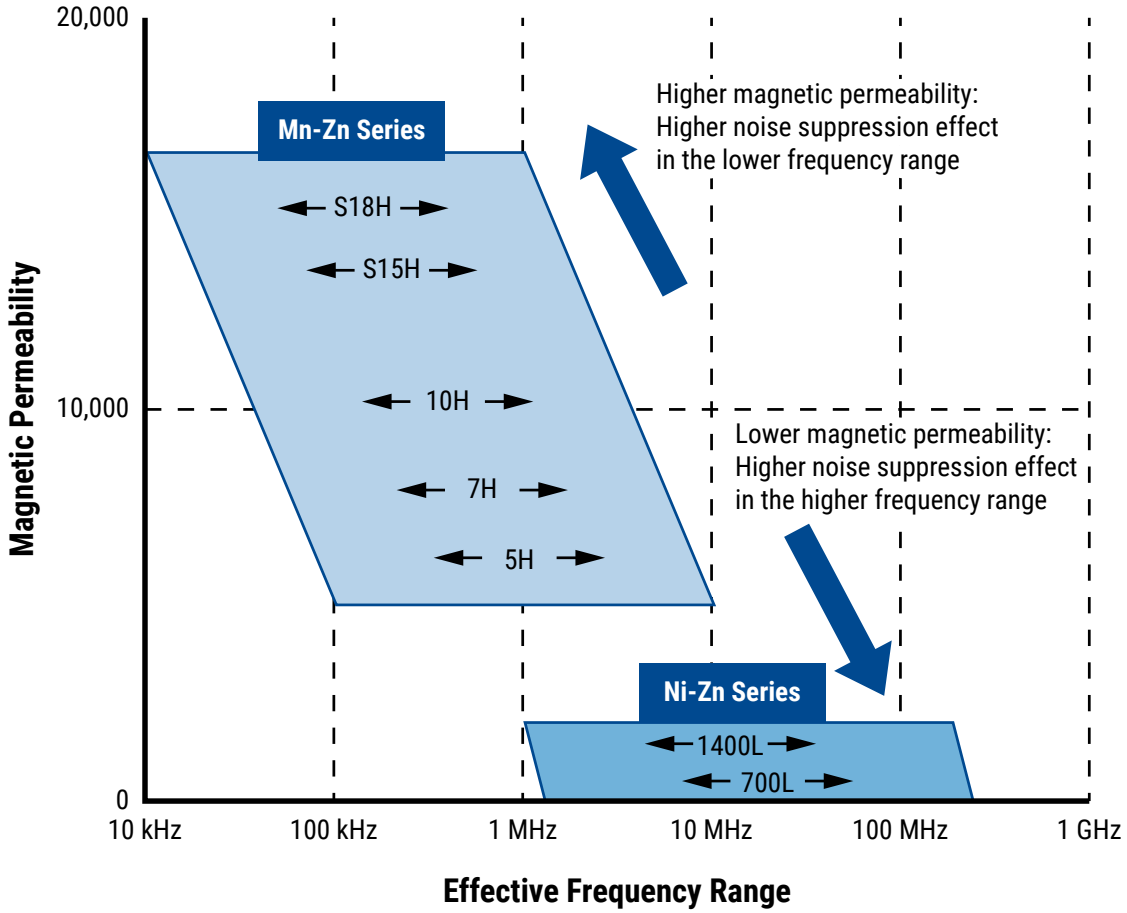
In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1.

Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

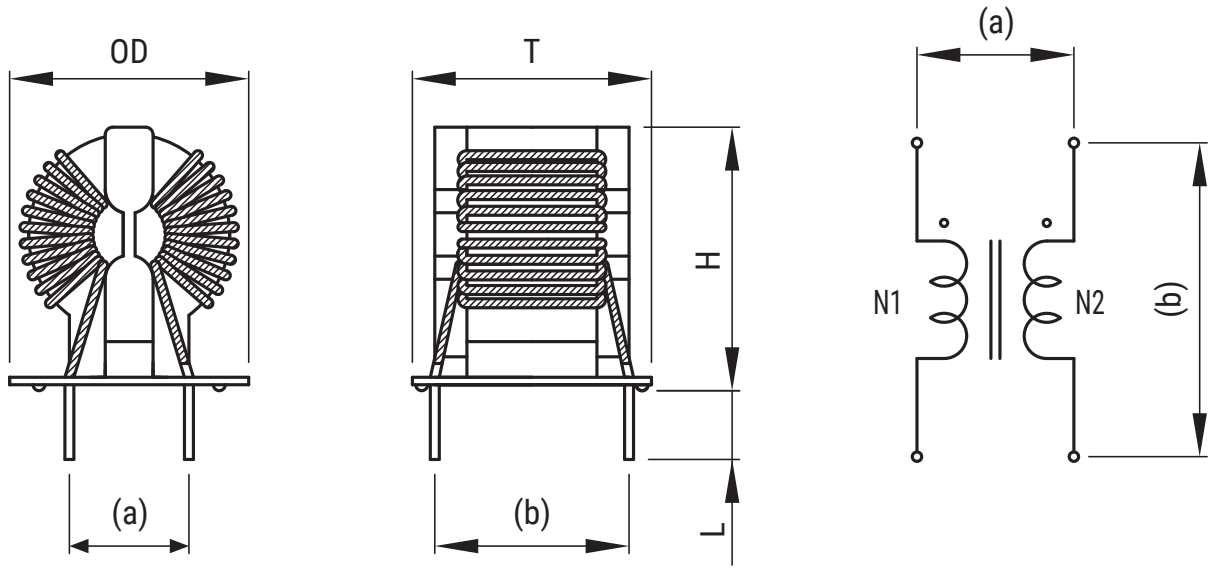
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)	
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b
SC-02-05GJ	17.5	17.5	19.5	3.5±1.0	8	13
SC-02-20GJ	17.5	17.0	20.0	5.0±2.0	8	13
SC-02-30GJ	17.5	17.0	20.0	5.0±2.0	8	13
SC-03-06GJ	17.5	17.0	20.0	5.0±2.0	8	13
SC-03-10GJ	17.5	17.0	20.0	5.0±2.0	8	13
SC-07-04GJ	18.0	17.0	20.0	5.0±2.0	8	13

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

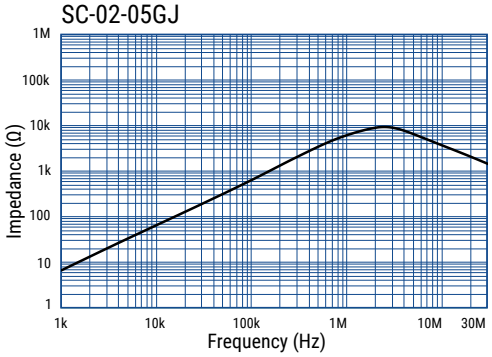
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	2 – 7 A
Rated Inductance Range	0.36 – 3.0 mH minimum
Inductance Measurement Condition	100 kHz
Thermal Class	E (120°C)
Operating Temperature Range	−40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

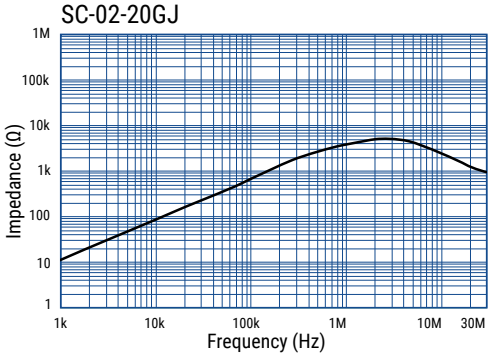
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Marking	Weight (g) Approximate
SC-02-05GJ	2	0.515	58	30	0.50	Lot No.	5.6
SC-02-20GJ	2	2.000	80	40	0.50	220	9.0
SC-02-30GJ	2	3.000	100	40	0.50	230	10.0
SC-03-06GJ	3	0.600	35	40	0.60	306	8.0
SC-03-10GJ	3	1.000	40	40	0.60	310	9.0
SC-07-04GJ	7	0.360	14	40	0.85	704	6.5

Frequency Characteristics

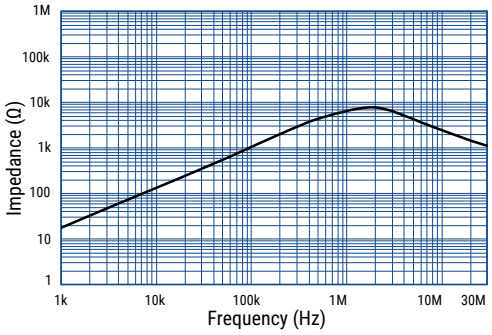
SC-02-05GJ



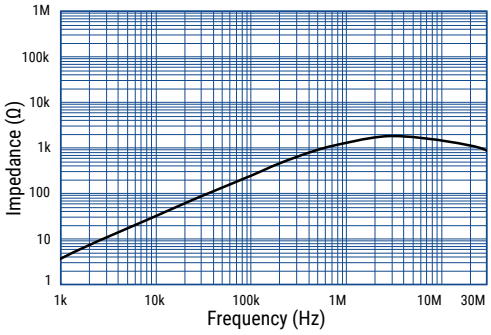
SC-02-20GJ



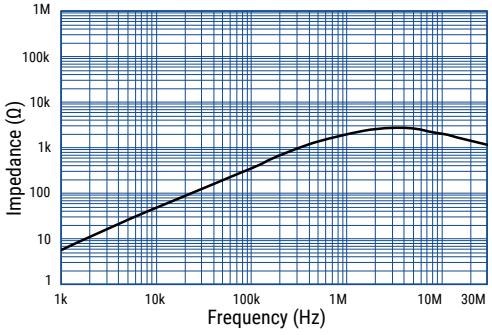
SC-02-30GJ



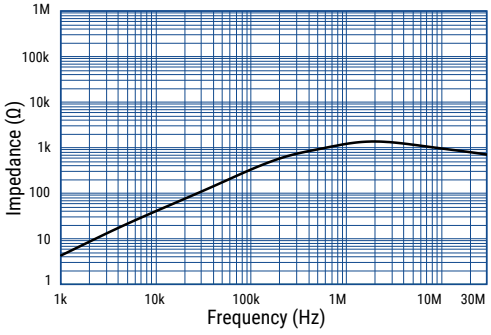
SC-03-06GJ



SC-03-10GJ



SC-07-04GJ



AC Line Filters

Common Mode SC Coils, SC-JV Series, Terminal Base Type

Overview

The KEMET SC-JV coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 10H ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Excellent for noise countermeasure
- Operating temperature range from −40°C to +105°C
- UL 94 V–0 flame retardant rated base and cap
- TÜV approved

Part Number System

SC-	02-	300	JV
Series	Rated Current (A)	Inductance (mH) Minimum	Terminal Base Type
SC	0x = x A Example: 02 = 2 A	100 = 15 mH +50%, −30% 200 = 29 mH +50%, −30% 300 = 44 mH +50%, −30%	JV

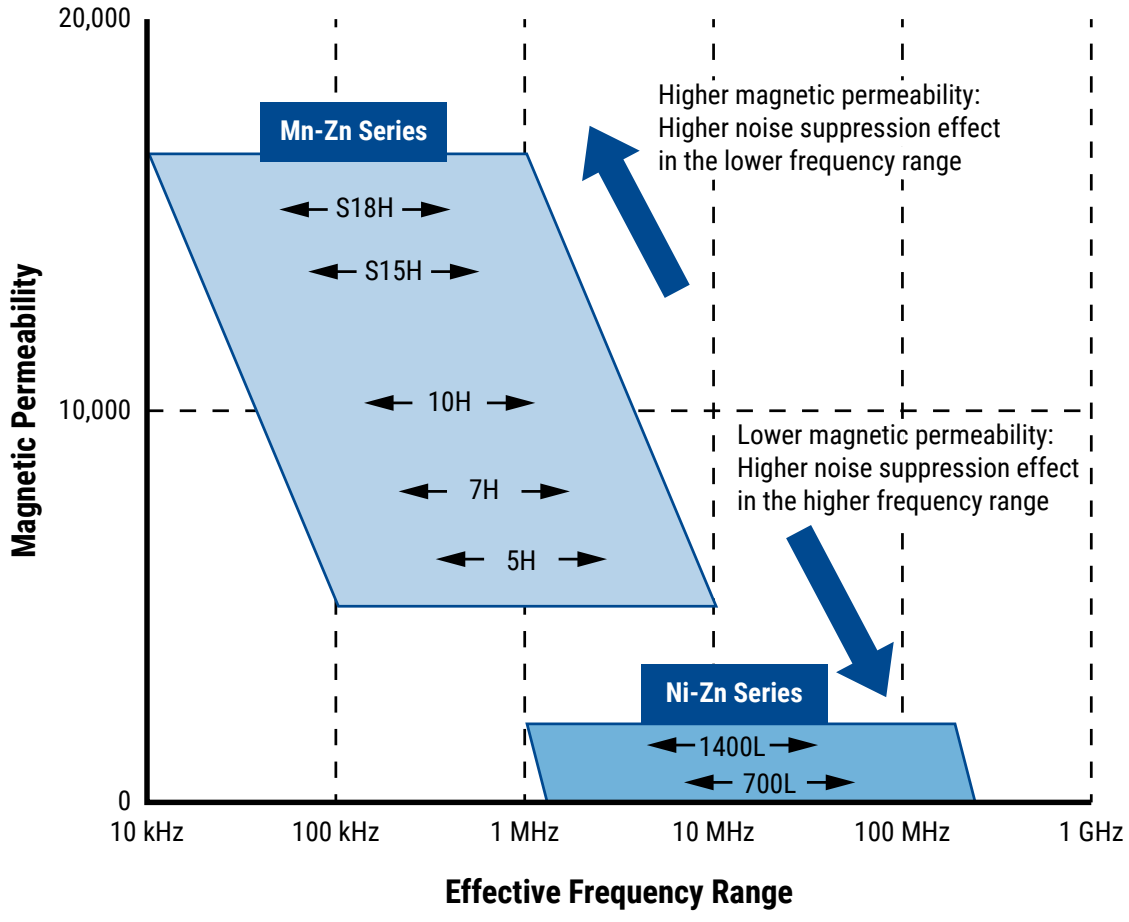
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

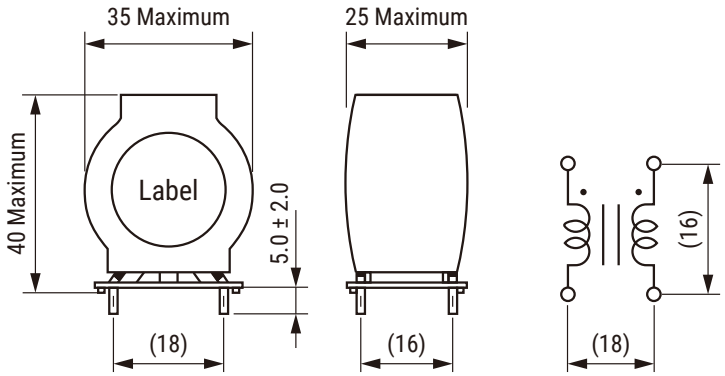
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters



Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

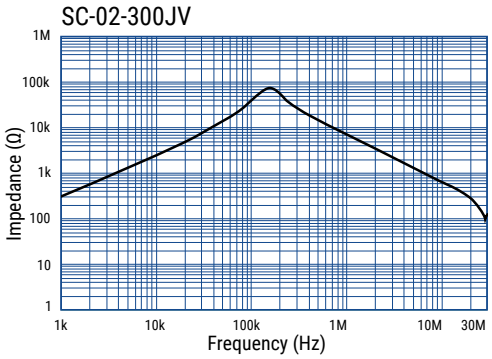
Performance Characteristics

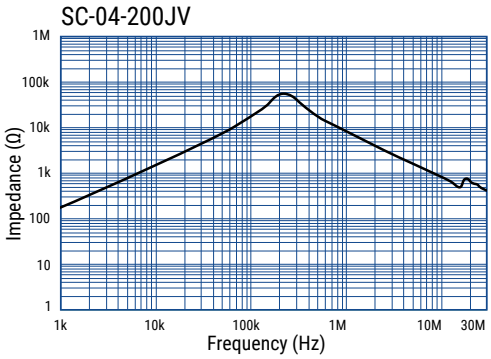
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 50 MΩ at 500 VDC (between lines, from line to tube)
Rated Current Range	2 – 5 A
Rated Inductance Range	15 – 44 mH
Inductance Tolerance	+50%, -30%
Inductance Measurement Condition	16 kHz
Thermal Class	A (105°C)
Operating Temperature Range	-40°C to +105°C (include self temperature rise)
Approvals	TÜV

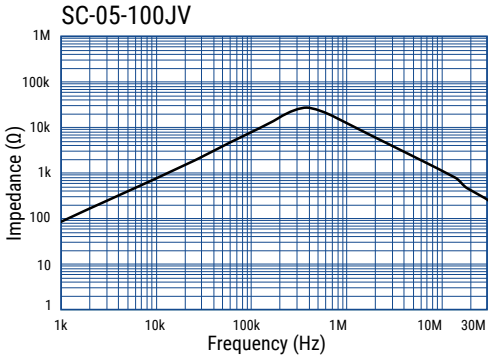
Table 1 – Ratings & Part Number Reference

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SC-02-300JV	2	44 +50%, –30%	300	45	0.6	45
SC-04-200JV	4	29 +50%, –30%	150	55	0.8	45
SC-05-100JV	5	15 +50%, –30%	100	55	0.9	45

Frequency Characteristics







Packaging

Type	Packaging Type	Pieces Per Box
SC-JV	Tray	160

AC Line Filters

Common Mode SC Coils, SC-JS Series, Terminal Base Type

Overview

The KEMET SC-JS coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 5H ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C
- UL 94 V–2 flame retardant rated base and cap

Part Number System

SC-	02-	20	JS
Series	Rated Current (A)	Inductance (mH) Minimum	Terminal Base Type
SC	0x = x A Example: 02 = 2 A	x0 = x mH xx = x.x mH 0x = 0.x mH Examples: 20 = 2 mH 15 = 1.5 mH 08 = 0.8 mH Note: With exceptions, see Table 1 for details.	JS

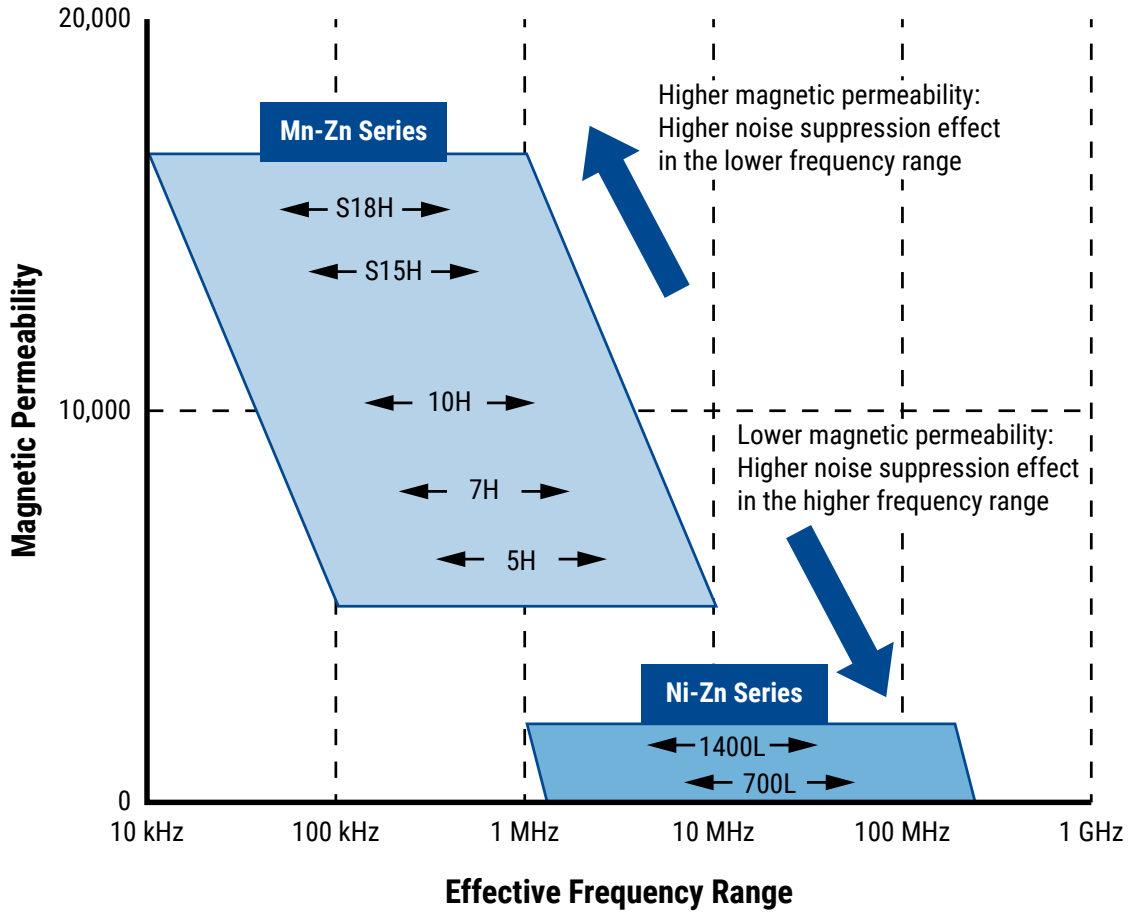
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

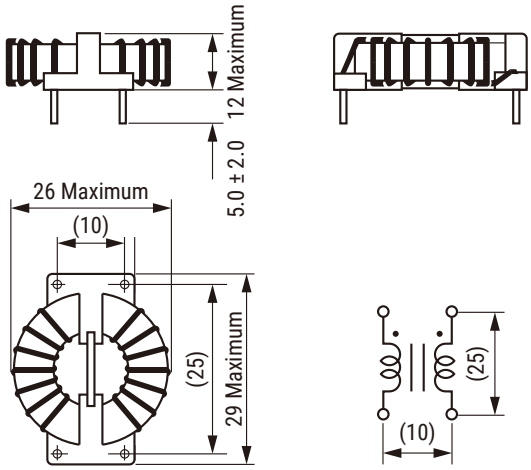
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters



Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

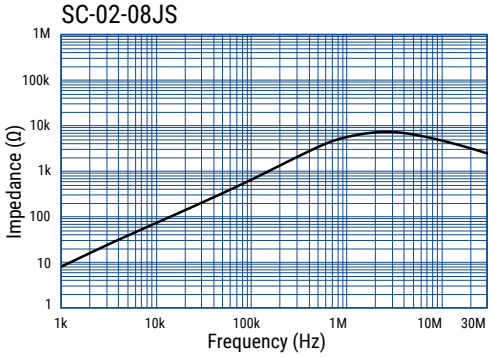
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines, from line to tube)
Rated Current Range	2 – 6 A
Rated Inductance Range	0.45 – 2.0 mH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	A (105°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

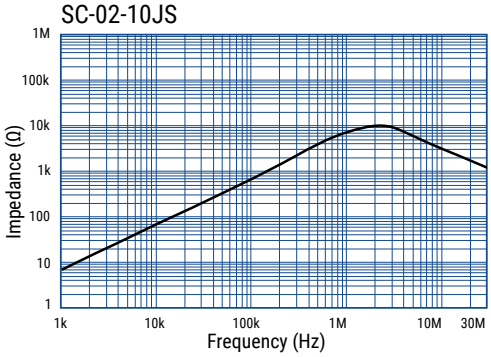
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SC-02-08JS	2	0.80	80	40	0.5	8.2
SC-02-10JS	2	1.00	100	40	0.5	8.0
SC-02-15JS	2	1.50	120	40	0.5	8.5
SC-02-20JS	2	2.00	120	40	0.5	9.0
SC-03-04JS	3	0.45	40	40	0.6	8.4
SC-03-08JS	3	0.80	60	40	0.6	9.0
SC-03-10JS	3	1.00	80	40	0.6	9.0
SC-06-10JS	6	1.00	50	40	0.7	10.8

Frequency Characteristics

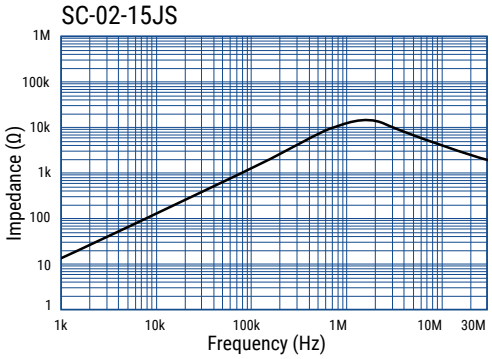
SC-02-08JS



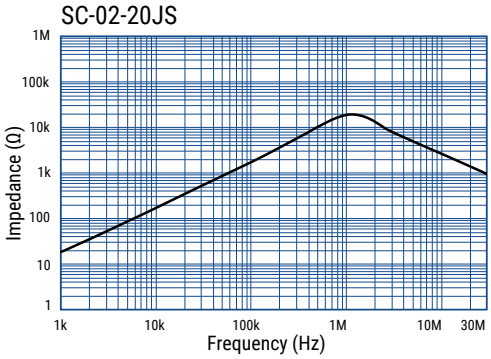
SC-02-10JS



SC-02-15JS

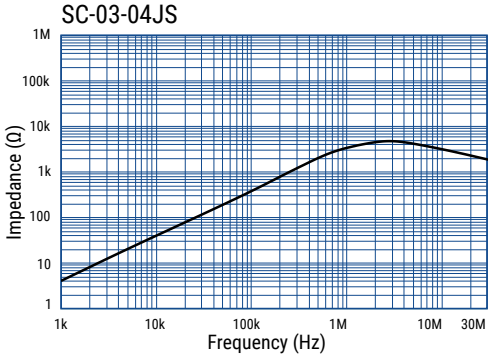


SC-02-20JS

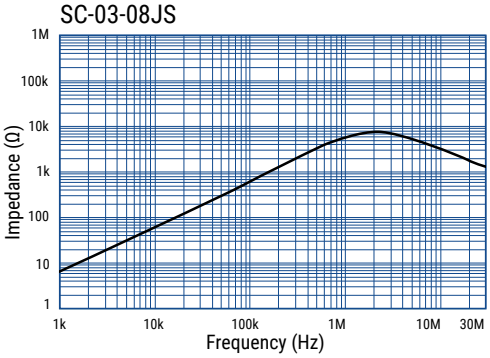


Frequency Characteristics cont.

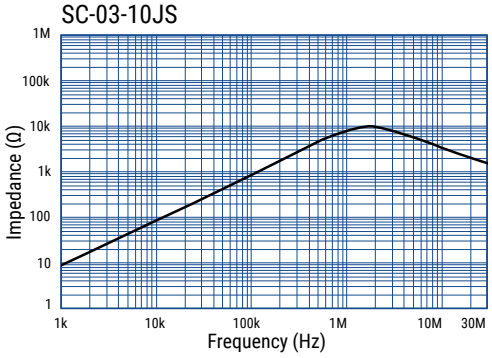
SC-03-04JS



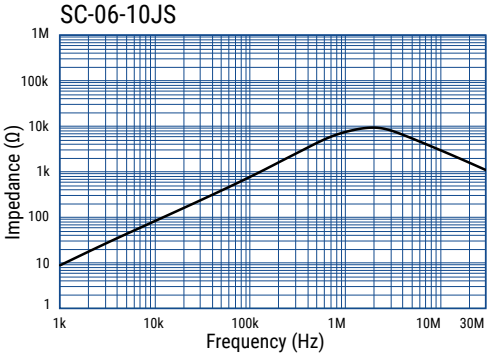
SC-03-08JS



SC-03-10JS



SC-06-10JS



Packaging

Type	Packaging Type	Pieces Per Box
SC-JS	Tray	400

Common Mode SC Coils, SC-JH Series, Terminal Base Type

Overview

The KEMET SC-JH coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 5H, 7H, 10H, and 700L ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- High frequency (700L)
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C or +120°C
- UL 94 V–2 or V–0 flame retardant rated base and cap

Part Number System

SC-		10-		20	JH	
Series	Dimension Code (See Dimensions)	Rated Current (A)	Thermal Class	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SC	Blank 22	x0 = x0 A xx = xx A Examples: 10 = 10 A 15 = 15 A	Blank E = Class E Note: With exceptions, see Table 1 for details.	x0 = x mH xx = x.x mH xxx = x.xx mH Examples: 20 = 2 mH 15 = 1.5 mH 200 = 2.00 mH Note: With exceptions, see Table 1 for details.	JH Note: JR is the same terminal base type as JH	Blank P

Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1.

Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

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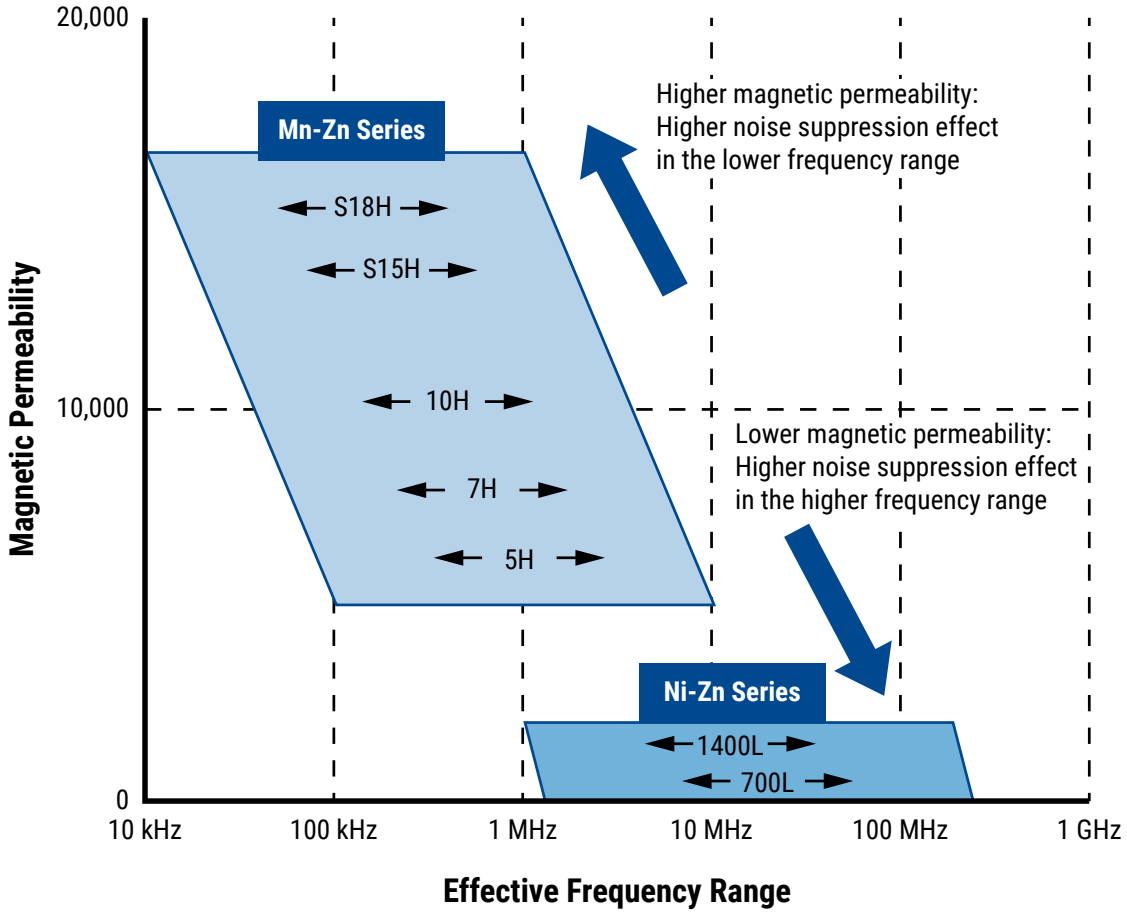
Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

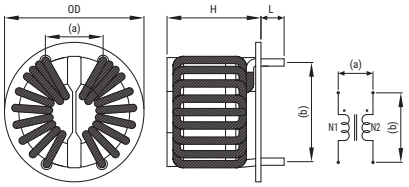


Figure 2

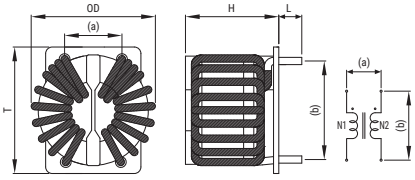


Figure 3

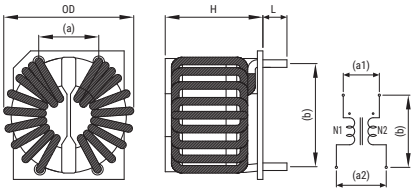


Figure 4

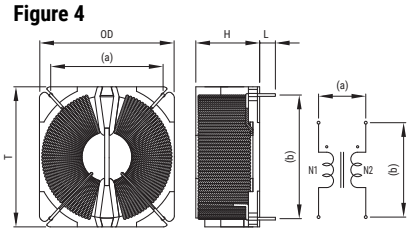


Figure 5

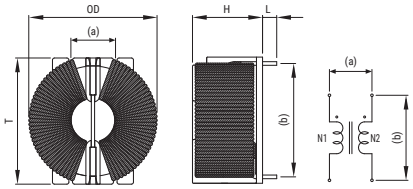


Figure 6

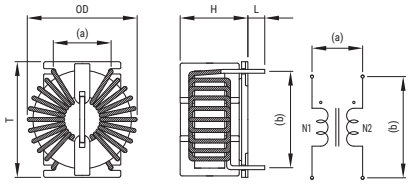
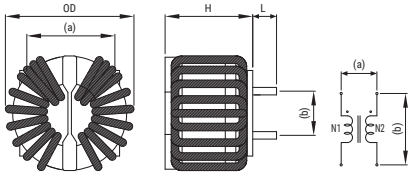


Figure 7



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SC-030-E110JH-P	31.0	32.0	15.0	3.5±1.0	25	27.5	Fig. 4
SC-030-E150JH-P	31.0	32.0	14.5	3.5±1.0	25	27.5	Fig. 4
SC-040-E063JH-P	31.0	32.0	15.0	3.5±1.0	25	27.5	Fig. 4
SC-040-E092JH-P	31.0	32.0	15.0	3.5±1.0	25	27.5	Fig. 4
SC22-05-30JH	29.0	31.0	23.0	5.0±2.0	14	22	Fig. 2
SC-05-E45JH	25.0	23.0	21.0	3.5±1.0	a1:10, a2:14	19	Fig. 3
SC-05-492JH	34.0	32.5	18.0	3.5±1.0	11	28	Fig. 5
SC22-05-70JH	28.0	-	19.5	5.0±2.0	20	14	Fig. 7
SC-05-700JH	34.0	33.0	18.0	3.5±1.0	11	28	Fig. 5
SC-05-812JH	34.0	32.5	18.0	3.5±1.0	11	28	Fig. 5
SC-06-182JH	35.0	32.5	18.0	3.5±1.0	11	28	Fig. 5
SC-06-E200JH	25.0	25.0	20.5	3.5±1.0	10	19	Fig. 2
SC-06-382JH	35.0	32.5	18.0	3.5±1.0	11	28	Fig. 5
SC-06-462JH	35.0	32.5	18.0	3.5±1.0	11	28	Fig. 5
SC22-06-70JH	28.0	-	19.5	5.0±2.0	20	14	Fig. 7
SC-07-E030JH-P	24.0	24.5	15.0	3.5±1.0	12	20	Fig. 6
SC-07-276JH	35.0	32.5	18.0	3.5±1.0	11	28	Fig. 5
SC-07-E042JH	34.0	-	27.0	4.5±1.0	11	28	Fig. 1
SC-09-E075JH	24.0	24.5	15.0	3.5±1.0	12	20	Fig. 6
SC-09-209JH	34.0	32.0	18.5	3.5±1.0	11	28	Fig. 5

Dimensions – Millimeters cont.

Figure 1

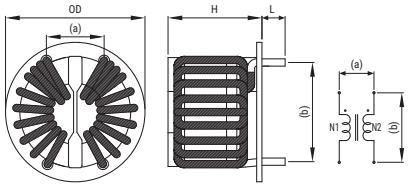


Figure 2

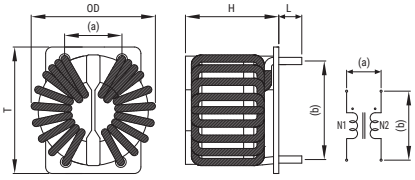


Figure 3

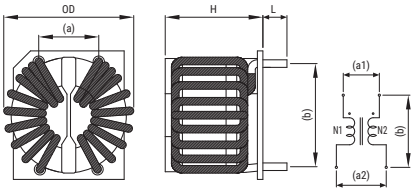


Figure 4

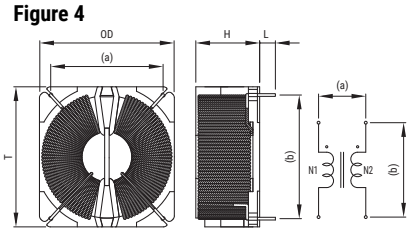


Figure 5

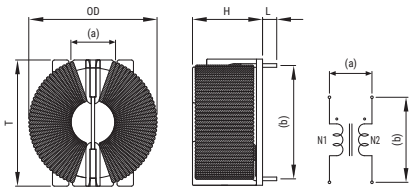


Figure 6

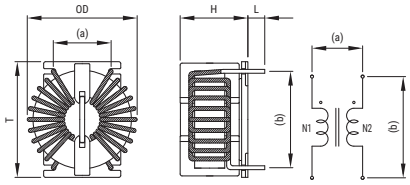
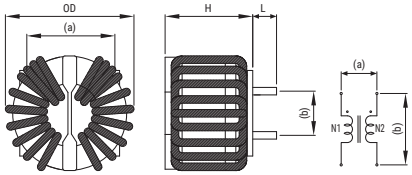


Figure 7



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SC-10-20JH	42.0	41.0	30.0	5.0±2.0	17	30	Fig. 2
SC-10-55JH	51.0	-	34.0	5.0±2.0	26	30	Fig. 1
SC-10-E80JH	53.0	-	35.0	4.5±1.5	26	30	Fig. 1
SC-12-15JH	42.0	41.0	30.0	5.0±2.0	17	30	Fig. 2
SC-12-100JH	65.0	-	40.0	5.0±2.0	35	44	Fig. 1
SC-14-15JH	42.0	41.0	28.0	5.0±2.0	17	30	Fig. 2
SC-15-05JH	44.0	41.0	32.0	5.0±2.0	17	30	Fig. 2
SC-15-10JH	44.0	41.0	32.0	5.0±2.0	17	30	Fig. 2
SC-15-12JH	44.0	41.0	32.0	5.0±2.0	17	30	Fig. 2
SC-15-20JH	51.0	-	34.0	5.0±2.0	26	30	Fig. 1
SC-15-35JH	51.0	-	34.0	5.0±2.0	15	35	Fig. 1
SC-15-E50JH	42.0	41.0	30.0	5.0±2.0	17	30	Fig. 2
SC-17-E27JH	44.0	41.0	32.0	5.0±1.0	17	30	Fig. 2
SC-18-15JH	51.0	-	34.0	5.0±2.0	26	30	Fig. 1
SC-18-E15JH	51.0	-	34.0	5.0±2.0	26	30	Fig. 1
SC-20-10JH	51.0	-	34.0	5.0±2.0	15	35	Fig. 1
SC-20-10JR	51.0	-	34.0	5.0±2.0	15	35	Fig. 1
SC-20-20JH	51.0	-	34.0	5.0±2.0	26	30	Fig. 1
SC-20-E20JH	51.0	-	34.0	5.0±2.0	26	30	Fig. 1
SC-30-12JH	65.0	-	40.0	4.6±1.5	55	20	Fig. 1

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 V (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	3 – 30 A
Rated Inductance Range	0.03 – 15 mH minimum
Inductance Measurement Condition	1 kHz, 10 kHz, and 100 kHz
Thermal Class	A (105°C) and E (120°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise) and −40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-030-E110JH-P	3	10.99 [3]	42.0	60	0.70	E (120°C)	26.5
SC-030-E150JH-P	3	15.00 [2]	160.0	80	0.60	E (120°C)	22.0
SC-040-E063JH-P	4	6.30 [2]	58.8	56	0.80	E (120°C)	25.0
SC-040-E092JH-P	4	9.17 [2]	79.2	67	0.75	E (120°C)	26.5
SC22-05-30JH	5	3.00 [2]	60.0	60	0.80	E (120°C)	23.4
SC-05-E45JH	5	4.50 [3]	50.0	85	0.70	E (120°C)	19.0
SC-05-492JH	5	4.90 [2]	45.0	65	0.90	E (120°C)	30.0
SC22-05-70JH	5	7.00 [2]	60.0	85	0.80	E (120°C)	27.0
SC-05-700JH	5	7.00 [2]	55.0	75	0.90	E (120°C)	29.7
SC-05-812JH	5	8.10 [2]	65.0	75	0.90	E (120°C)	34.0
SC-06-182JH	6	1.80 [2]	30.0	40	1.10	E (120°C)	26.0
SC-06-E200JH	6	2.00 [2]	21.5	55	0.90	E (120°C)	19.0
SC-06-382JH	6	3.80 [2]	40.0	65	1.00	E (120°C)	29.0
SC-06-462JH	6	4.60 [2]	45.0	110	1.00	E (120°C)	31.0
SC22-06-70JH	6	7.00 [2]	70.0	75	0.90	E (120°C)	21.1
SC-07-E030JH-P	7	0.03 [3]	20.0	60	0.80	E (120°C)	15.0
SC-07-276JH	7	2.76 [2]	24.0	65	1.10	E (120°C)	32.0
SC-07-E042JH	7	4.20 [3]	42.0	65	1.10	E (120°C)	53.0
SC-09-E075JH	9	0.75 [2]	9.0	60	1.10	E (120°C)	13.0
SC-09-209JH	9	2.09 [2]	17.4	74	1.20	E (120°C)	31.0
SC-10-20JH	10	2.00 [3]	22.0	45	1.40	A (105°C)	72.0
SC-10-55JH	10	5.50 [1]	30.0	65	1.40	A (105°C)	112.3
SC-10-E80JH	10	8.00 [2]	40.0	75	1.40	E (120°C)	118.8
SC-12-15JH	12	1.50 [3]	18.0	45	1.50	A (105°C)	71.0
SC-12-100JH	12	10.00 [3]	32.0	78	1.60	A (105°C)	190.0
SC-14-15JH	14	1.50 [3]	14.0	55	1.60	A (105°C)	78.6
SC-15-05JH	15	0.50 [3]	8.0	40	1.70	A (105°C)	65.3
SC-15-10JH	15	1.00 [3]	12.0	50	1.70	A (105°C)	73.0
SC-15-12JH	15	1.20 [2]	12.0	55	1.70	A (105°C)	73.0
SC-15-20JH	15	2.00 [3]	12.0	45	1.80	A (105°C)	115.0
SC-15-35JH	15	3.50 [1]	20.0	80	1.60	A (105°C)	114.3
SC-15-E50JH	15	5.20 [2]	19.3	85	1.50	E (120°C)	83.8
SC-17-E27JH	17	2.75 [3]	14.0	110	1.60	E (120°C)	83.1
SC-18-15JH	18	1.50 [3]	10.0	55	1.90	A (105°C)	117.0
SC-18-E15JH	18	1.50 [3]	10.0	55	1.90	E (120°C)	114.0
SC-20-10JH	20	1.00 [3]	8.0	50	2.00	A (105°C)	110.0
SC-20-10JR	20	1.00 [3]	8.0	50	2.00	A (105°C)	109.0
SC-20-20JH	20	2.00 [3]	10.0	80	1.90	A (105°C)	114.1
SC-20-E20JH	20	2.00 [3]	10.0	80	1.90	E (120°C)	119.4
SC-30-12JH	30	1.20 [3]	6.0	40	2.60	A (105°C)	188.0

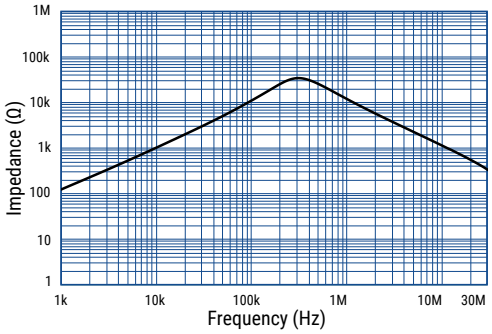
[1] *Inductance Measurement Condition: 1 kHz*

[2] *Inductance Measurement Condition: 10 kHz*

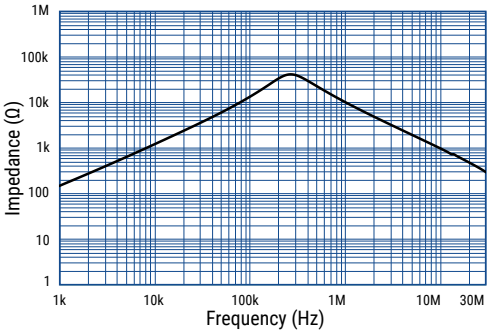
[3] *Inductance Measurement Condition: 100 kHz*

Frequency Characteristics

SC-030-E110JH-P



SC-030-E150JH-P



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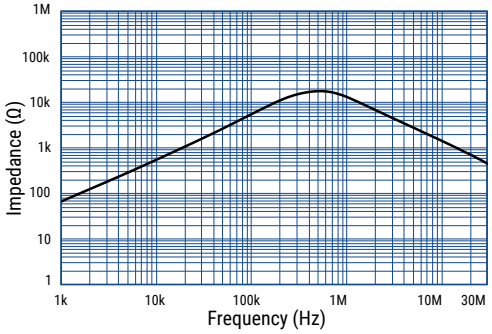

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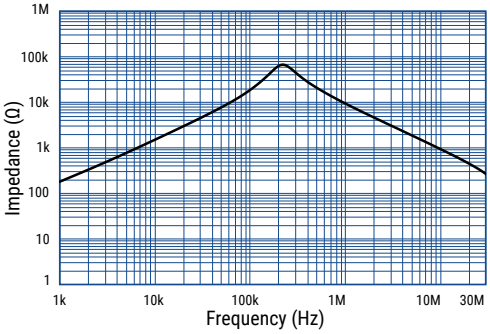
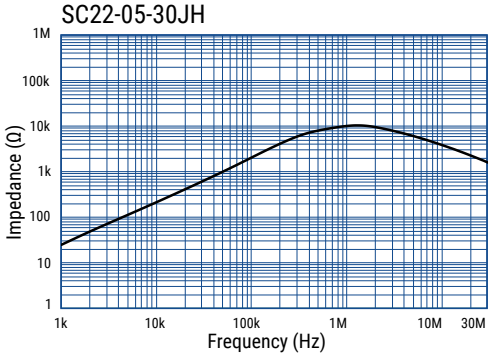


SC22-05-30JH



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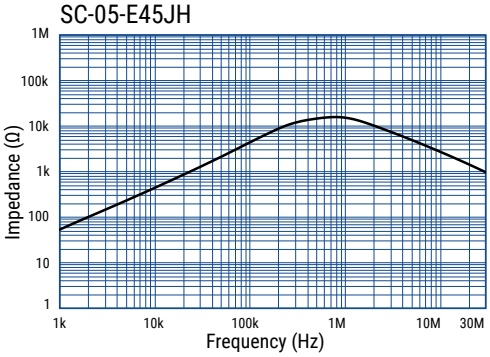

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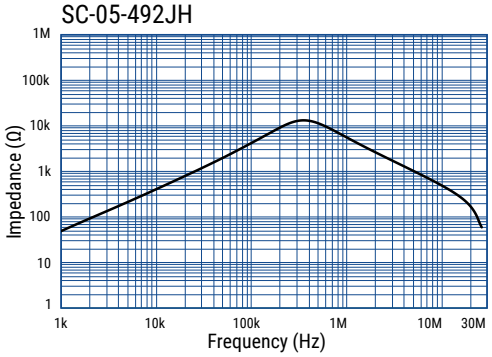
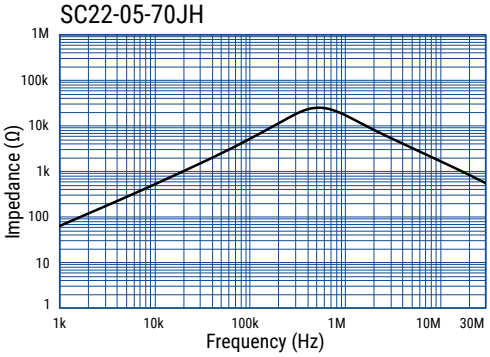
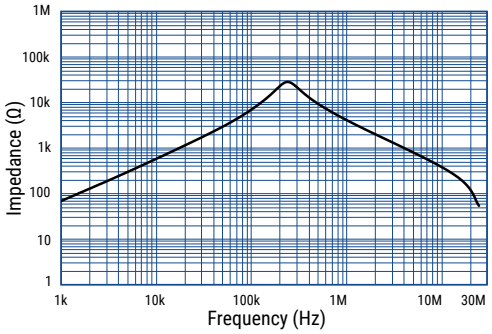


SC22-05-70JH

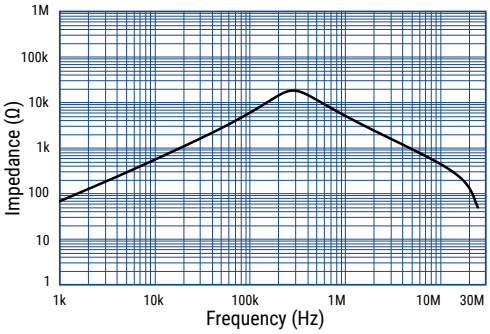


Frequency Characteristics cont.

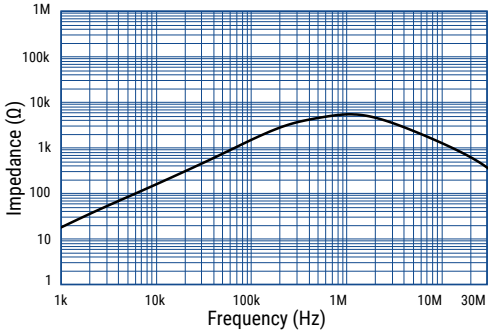
SC-05-700JH



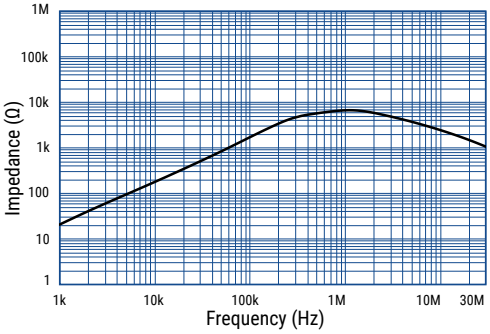
SC-05-812JH



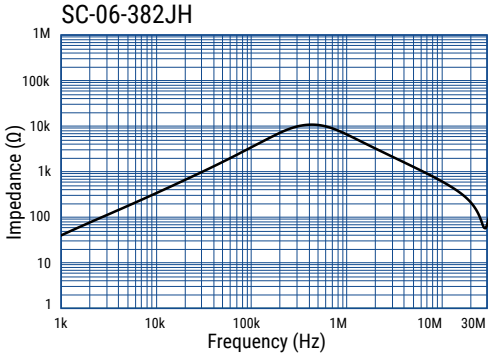
SC-06-182JH



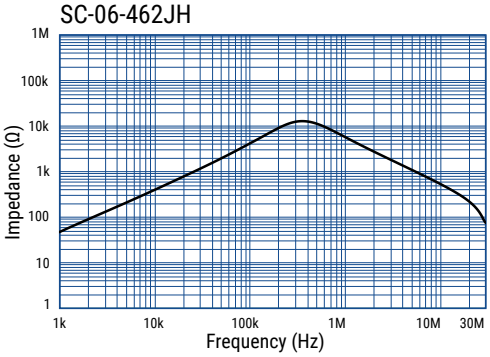
SC-06-E200JH



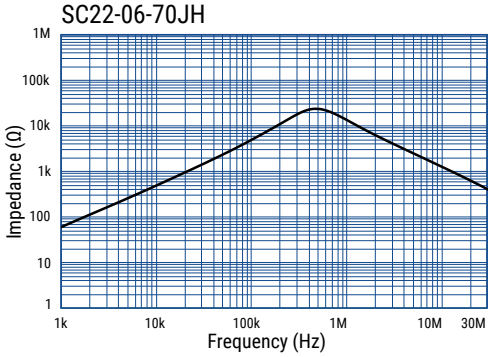
SC-06-382JH



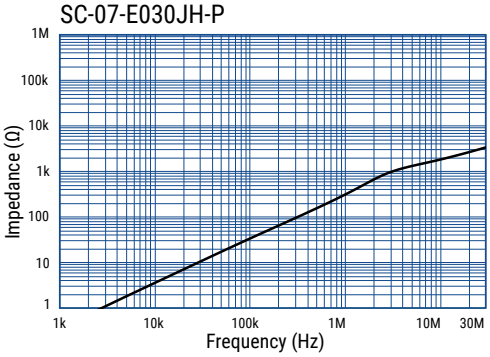
SC-06-462JH



SC22-06-70JH

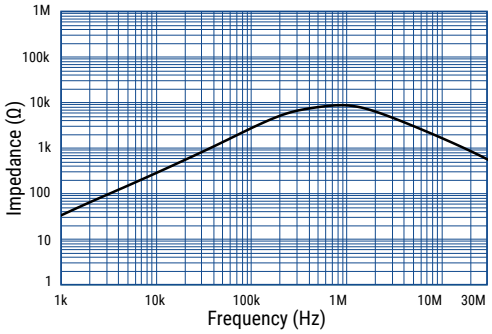


SC-07-E030JH-P

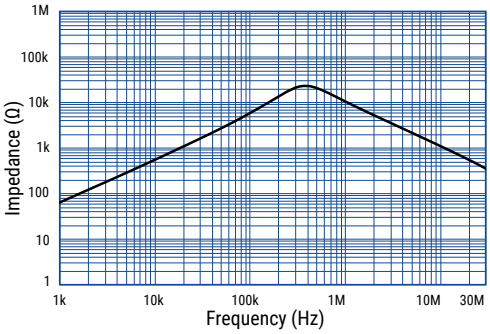


Frequency Characteristics cont.

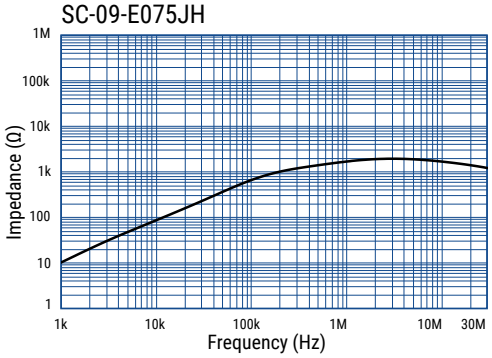
SC-07-276JH



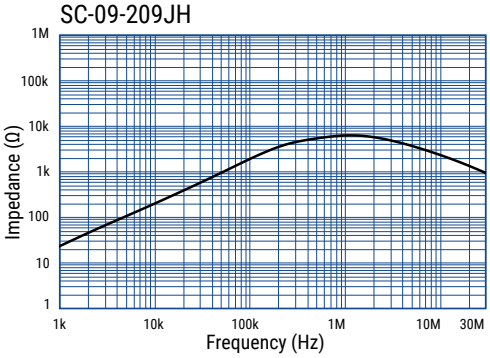
SC-07-E042JH



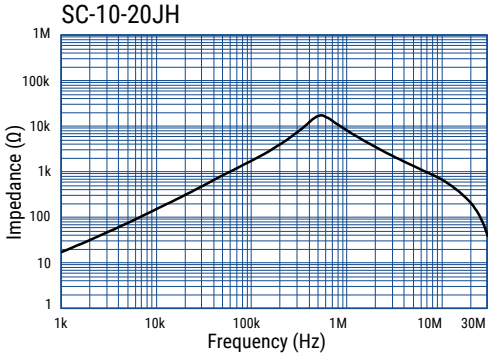
SC-09-E075JH



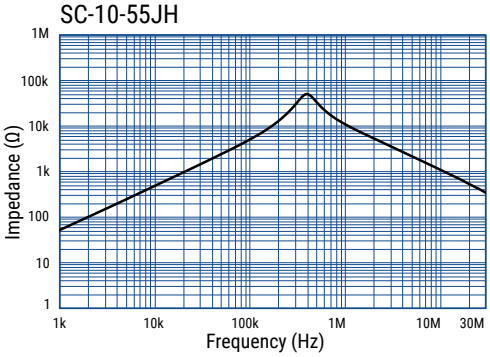
SC-09-209JH



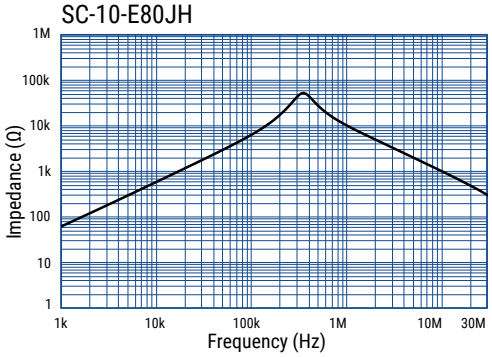
SC-10-20JH



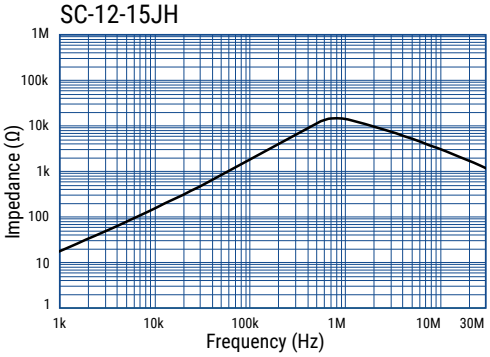
SC-10-55JH



SC-10-E80JH

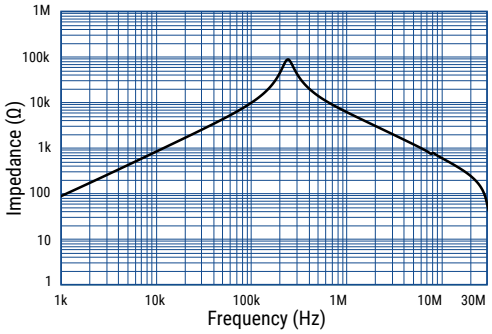


SC-12-15JH

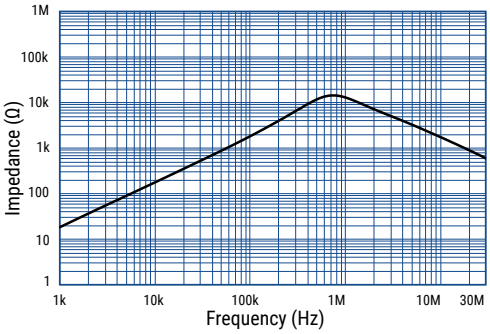


Frequency Characteristics cont.

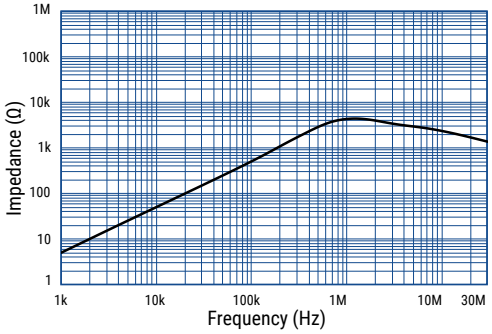
SC-12-100JH



SC-14-15JH



SC-15-05JH



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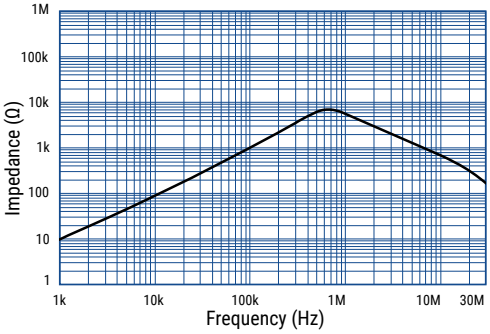

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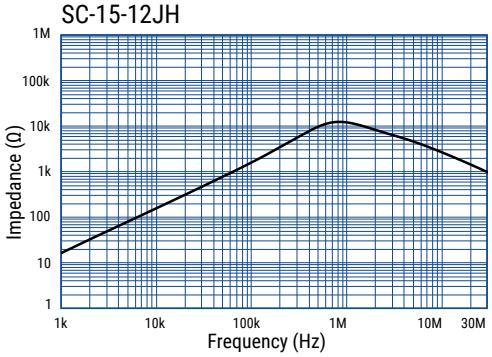
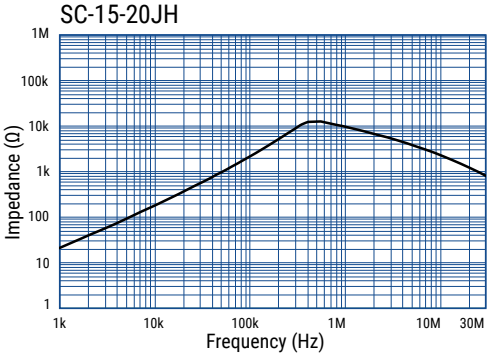
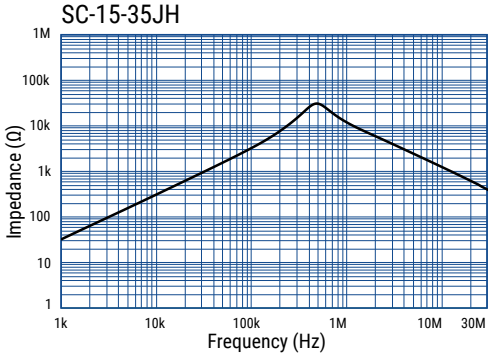


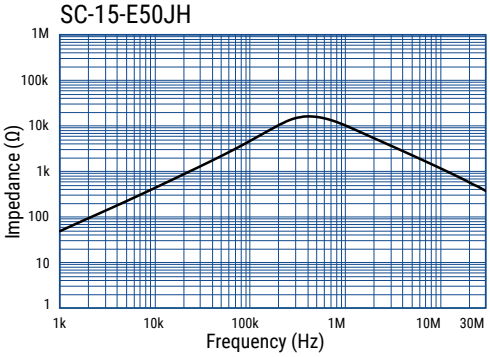
SC-15-20JH



SC-15-35JH



SC-15-E50JH



Frequency Characteristics cont.

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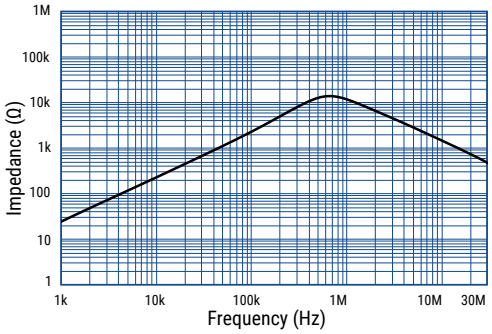

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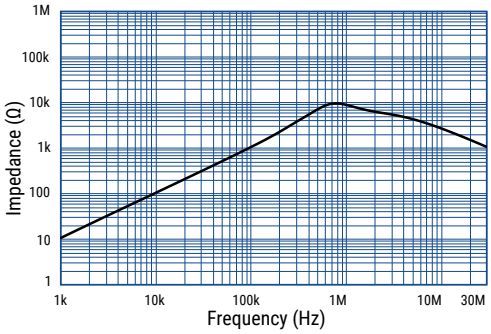

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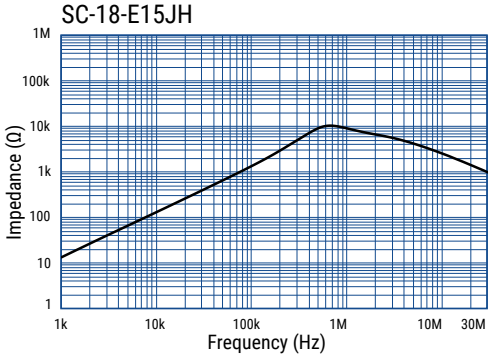

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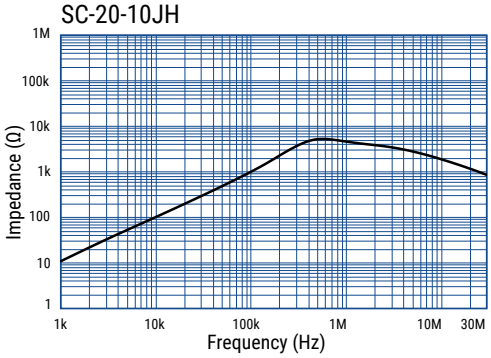

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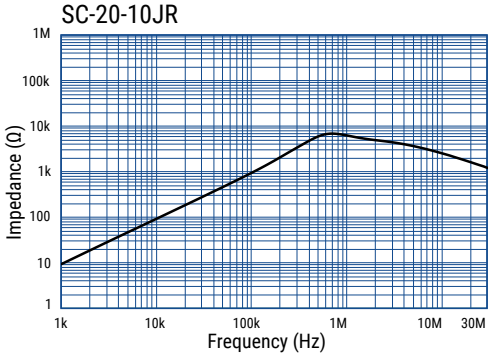

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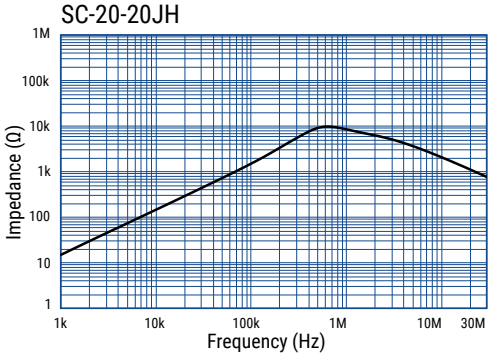

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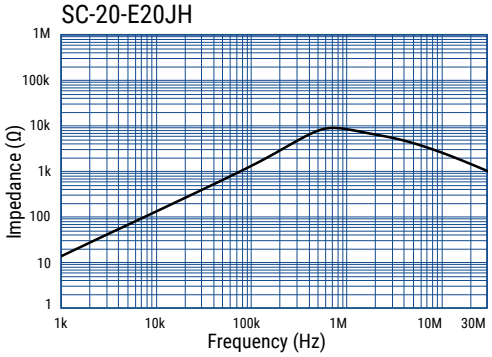
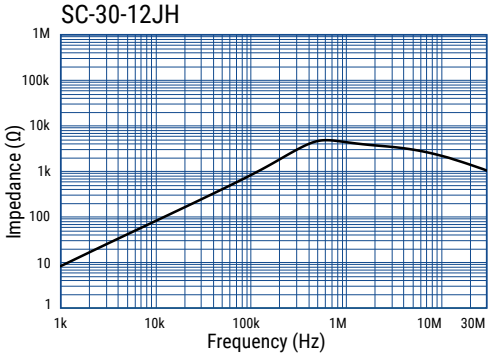


SC-30-12JH



Packaging

Type	Packaging Type	Pieces Per Box
SC-030-E110JH-P	Tray	180
SC-030-E150JH-P		
SC-040-E063JH-P		
SC-040-E092JH-P		
SC22-05-30JH		250
SC-05-E45JH		200
SC-05-492JH		180
SC22-05-70JH		200
SC-05-700JH		180
SC-05-812JH		
SC-06-182JH		
SC-06-E200JH		200
SC-06-382JH		180
SC-06-462JH		
SC22-06-70JH		250
SC-07-E030JH-P		
SC-07-276JH		180
SC-07-E042JH		150
SC-09-E075JH		250
SC-09-209JH		180

Type	Packaging Type	Pieces Per Box
SC-10-20JH	Tray	100
SC-10-55JH		
SC-10-E80JH		
SC-12-15JH		
SC-12-100JH		45
SC-14-15JH		100
SC-15-05JH		
SC-15-10JH		
SC-15-12JH		
SC-15-20JH		
SC-15-35JH		
SC-15-E50JH		
SC-17-E27JH		
SC-18-15JH		
SC-18-E15JH		
SC-20-10JH		
SC-20-10JR		
SC-20-20JH		
SC-20-E20JH		48
SC-30-12JH		60

Handling Precautions

Precautions for product storage

AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values

The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SC Coils, SC-G/GS Series, Small Type

Overview

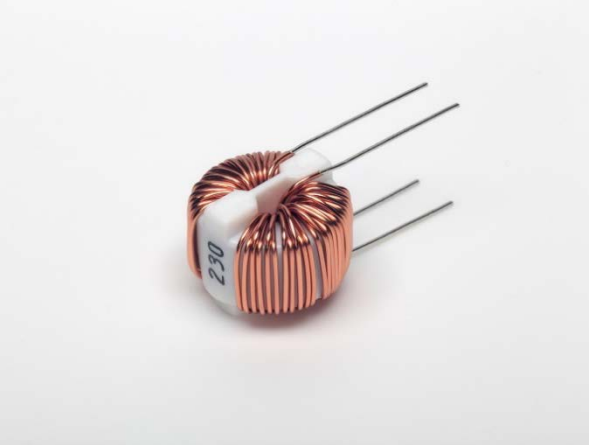
The KEMET SC-G/GS coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 10H ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C or +120°C
- UL 94 V–2 or V–0 flame retardant rated cap



Part Number System

SC-	01-		06	G
Series	Rated Current (A)	Thermal Class	Inductance (mH) Minimum	Dimension Code (See Dimensions)
SC	0x = x A Example: 02 = 2 A	Blank = Class A E = Class E	0x = 0.x mH x0 = x.0 mH Examples: 06 = 0.6 mH 20 = 2.0 mH Note: With exceptions, see Table 1 for details.	G GS

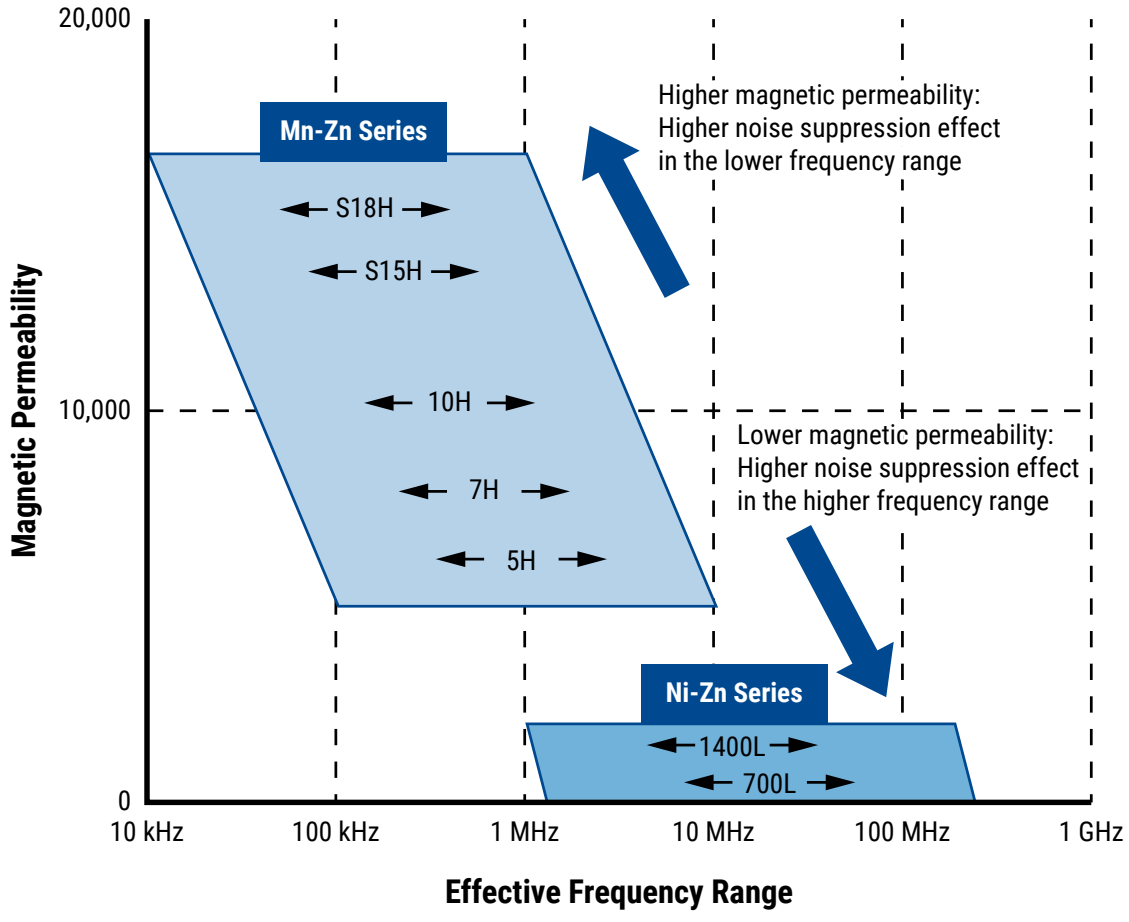
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

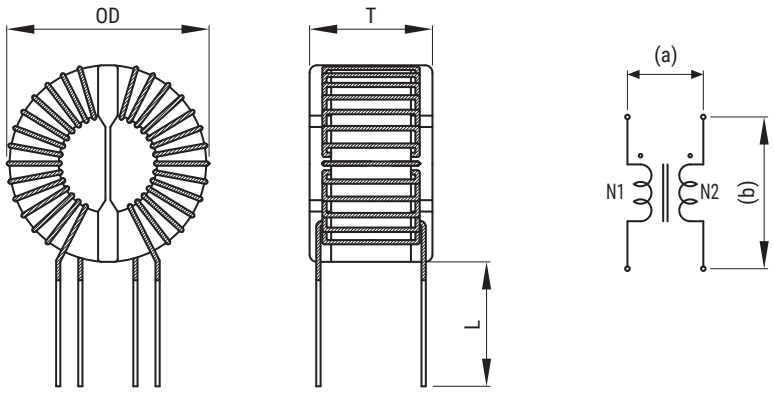
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters



Part Name	Dimensions (mm)			Pin Pitch[1] (Reference)	
	OD (Maximum)	T (Maximum)	L	a	b
SC-01-06G	17.5	14.0	15±2.0	8	13
SC-01-10G	17.5	14.0	15±2.0	8	13
SC-01-20G	17.5	14.0	15±2.0	8	13
SC-01-30G	17.5	14.0	15±2.0	8	13
SC-01-50G	17.5	14.0	15±2.0	8	13
SC-01-80G	17.5	14.0	15±2.0	8	13
SC-01-E50G	17.5	14.0	15±2.0	6	10
SC-02-06G	17.5	14.0	15±2.0	8	13
SC-02-10G	17.5	14.0	15±2.0	8	13
SC-02-20G	17.5	14.0	15±2.0	8	13
SC-02-30G	17.5	14.0	15±2.0	8	13
SC-03-06G	17.5	14.0	15±2.0	8	13
SC-03-10G	17.5	14.0	15±2.0	8	13
SC-03-E016G	17.5	14.0	15±2.0	10	11
SC-06-01G	17.0	14.0	8±1.5	6	10
SC-01-10GS	15.0	8.5	15±2.0	6	8
SC-01-20GS	15.0	8.5	15±2.0	6	8
SC-02-10GS	15.0	8.5	15±2.0	6	8
SC-03-05GS	15.0	8.5	15±2.0	6	8

**Pin pitch values are for reference only. Values are not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2, 400 V (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	1 – 6 A
Rated Inductance Range	0.105 – 8.0 mH minimum
Inductance Measurement Condition	1 kHz, 10 kHz, and 100 kHz
Thermal Class	A (105°C) and E (120°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise) and −40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

Part Number	Rated Current AC (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Marking	Thermal Class	Weight (g) Approximate
SC-01-06G	1	0.6000 [3]	60.00	40.0	0.40	106	A (105°C)	5.0
SC-01-10G	1	1.0000 [3]	70.00	40.0	0.40	110	A (105°C)	5.0
SC-01-20G	1	2.0000 [3]	100.00	40.0	0.40	120	A (105°C)	5.0
SC-01-30G	1	3.0000 [3]	120.00	40.0	0.40	130	A (105°C)	6.0
SC-01-50G	1	5.0000 [3]	150.00	40.0	0.40	150	A (105°C)	7.0
SC-01-80G	1	8.0000 [3]	300.00	40.0	0.35	180	A (105°C)	6.0
SC-01-E50G	1	5.0000 [1]	150.00	40.0	0.40	150	E (120°C)	4.9
SC-01-E100G	**1**	**10.0000**	**350.00**	**40.0**	**0.35**	**100**	**E (120°C)**	**6.0**
SC-01-E121G	**1**	**12.0000**	**400.00**	**40.0**	**0.35**	**121**	**E (120°C)**	**6.0**
SC-01-E150G	**1**	**15.0000**	**450.00**	**40.0**	**0.35**	**–**	**E (120°C)**	**6.0**
SC-02-06G	2	0.6000 [3]	50.00	40.0	0.50	206	A (105°C)	6.0
SC-02-10G	2	1.0000 [3]	50.00	40.0	0.50	210	A (105°C)	7.0
SC-02-20G	2	2.0000 [3]	70.00	40.0	0.50	220	A (105°C)	8.0
SC-02-30G	2	3.0000 [3]	85.00	40.0	0.50	230	A (105°C)	9.0
SC-03-06G	3	0.6000 [3]	30.00	40.0	0.60	306	A (105°C)	7.0
SC-03-10G	3	1.0000 [3]	35.00	40.0	0.60	310	A (105°C)	8.0
SC-03-E016G	3	0.1638 [2]	8.51	17.5	0.70	-	E (120°C)	4.5
SC-06-01G	6	0.1050 [1]	10.00	40.0	0.65	-	A (105°C)	3.8
SC-01-10GS	1	1.0000 [1]	130.00	40.0	0.30	–	A (105°C)	2.0
SC-01-20GS	1	2.0000 [1]	180.00	40.0	0.30	–	A (105°C)	2.0
SC-02-10GS	2	1.0000 [1]	80.00	40.0	0.40	–	A (105°C)	3.0
SC-03-05GS	3	0.5000 [1]	45.00	45.0	0.45	–	A (105°C)	3.0

Parts in bold are not for new design.

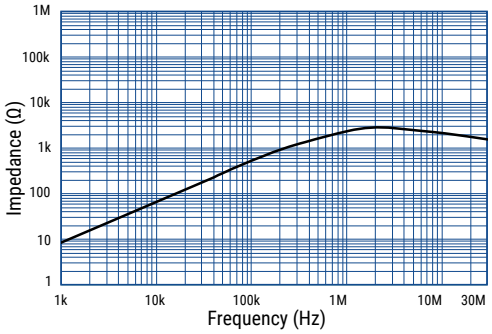
[1] Inductance Measurement Condition: 1 kHz

[2] Inductance Measurement Condition: 10 kHz

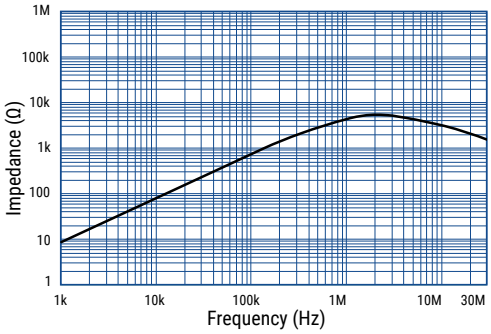
[3] Inductance Measurement Condition: 100 kHz

Frequency Characteristics

SC-01-06G



SC-01-10G



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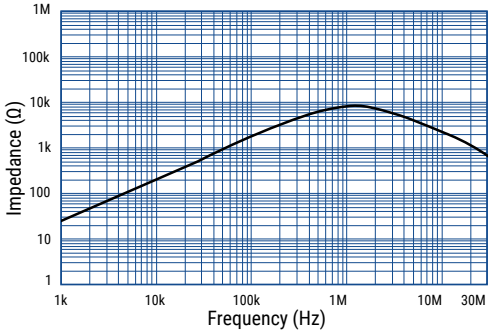

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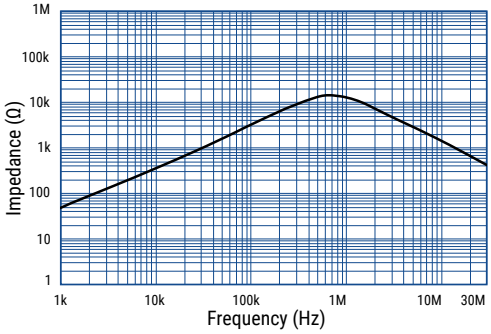
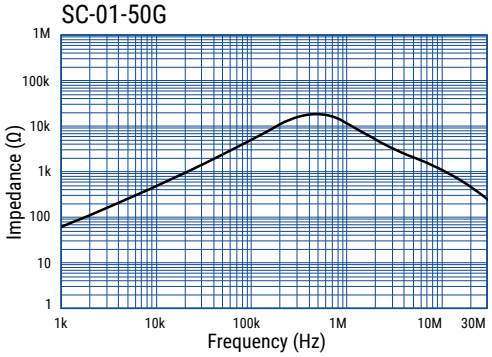
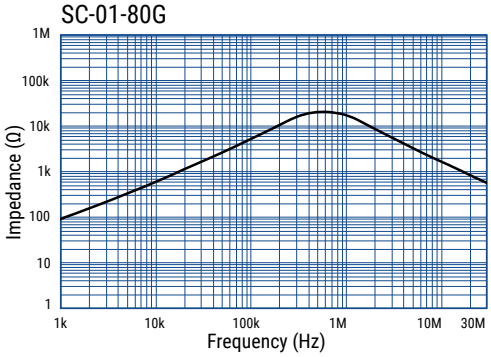


SC-01-50G



SC-01-80G



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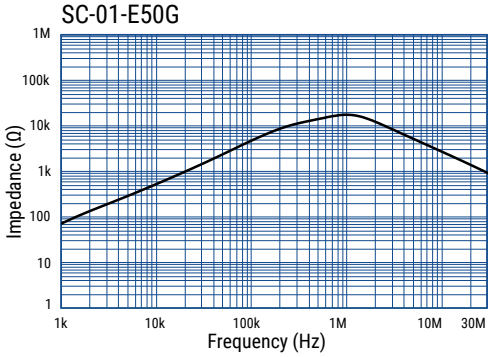
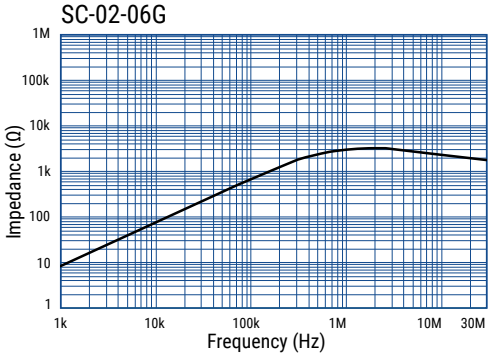
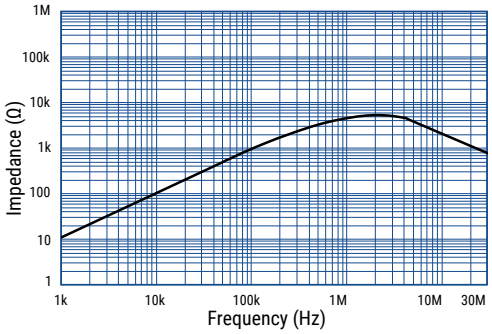


SC-02-06G



Frequency Characteristics cont.

SC-02-10G



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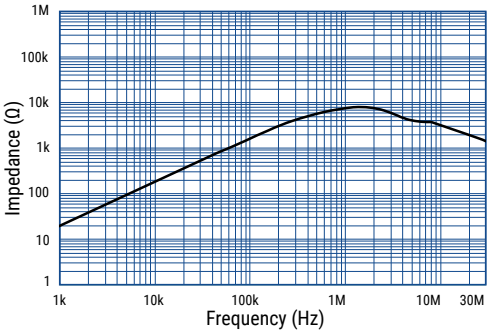
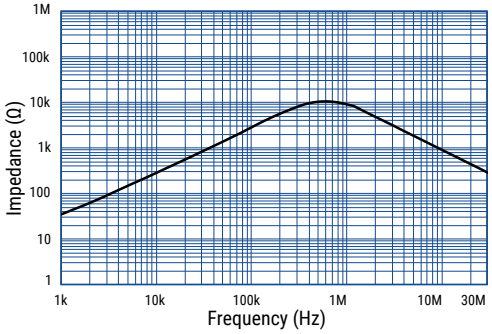
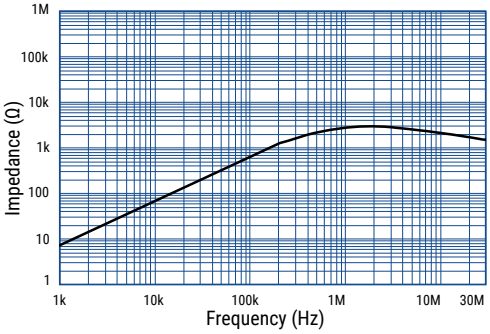


SC-02-30G



SC-03-06G



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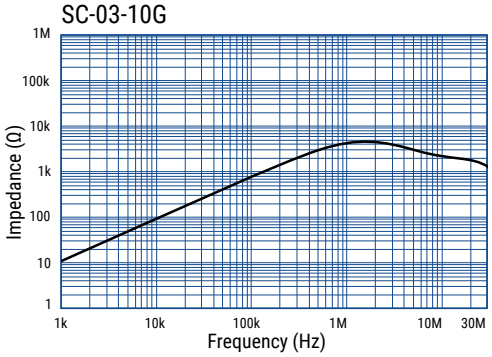
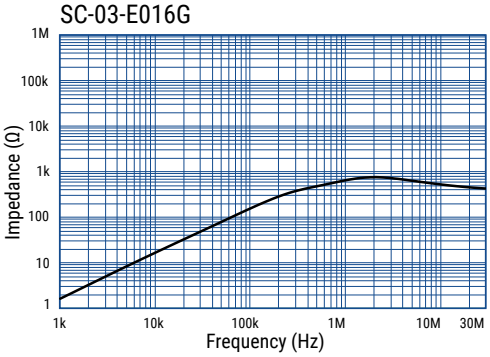
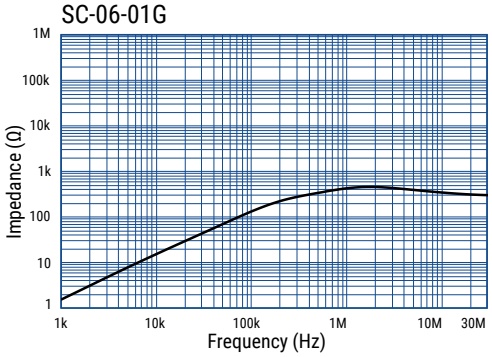


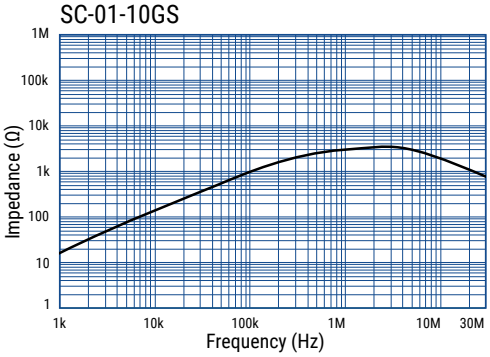
SC-03-E016G



SC-06-01G

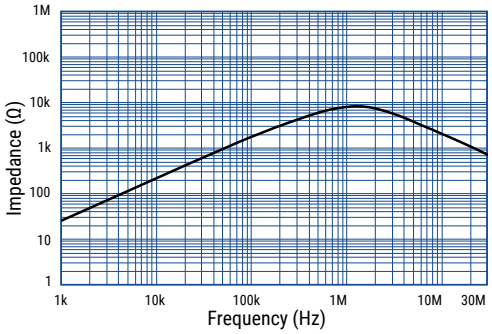


SC-01-10GS

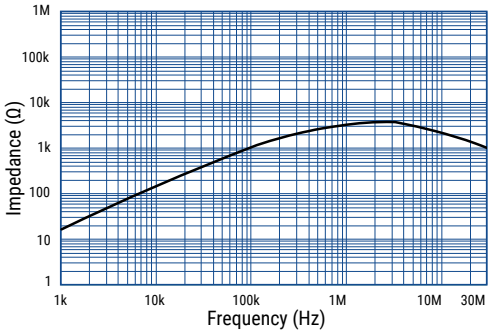


Frequency Characteristics cont.

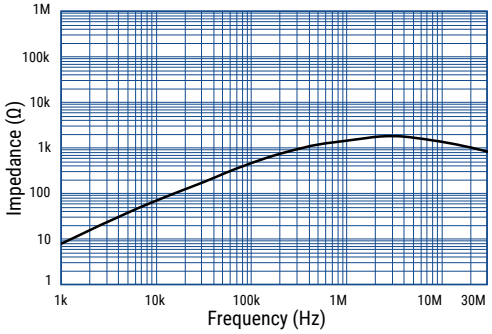
SC-01-20GS



SC-02-10GS



SC-03-05GS



AC Line Filters

Common Mode SC Coils, SC-D Series, High Frequency Type

Overview

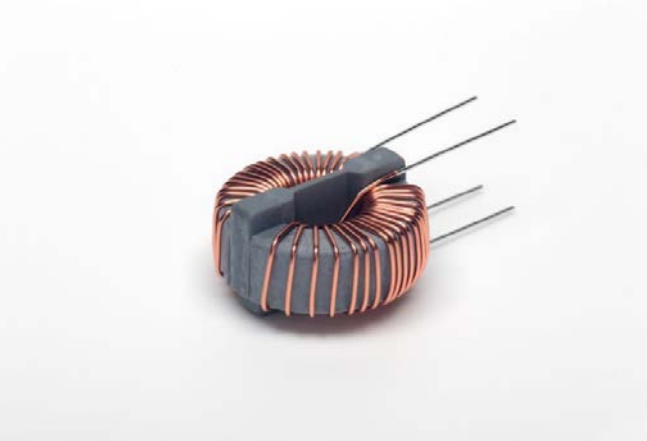
The KEMET SC-D coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 700L ferrite material and equivalents
- High frequency
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C or +120°C
- UL 94 V–2 or V–0 flame retardant rated cap



Part Number System

SC-	10-	D	050	
Series	Rated Current (A)	Core Type	Inductance (µH) Minimum	Core Orientation
SC	0x = x A xx = xx A Examples: 05 = 5 A 10 = 10 A	D = Ni-Zn ferrite, high frequency	xxx = xxx µH 0xx = xx µH Examples: 100 = 100 µH 060 = 60 µH Note: With exceptions, see Table 1 for details.	Blank = (≤ 7A) Vertical type (≥ 8A) Horizontal type H = Horizontal type Note: With exceptions, see Dimensions for details.

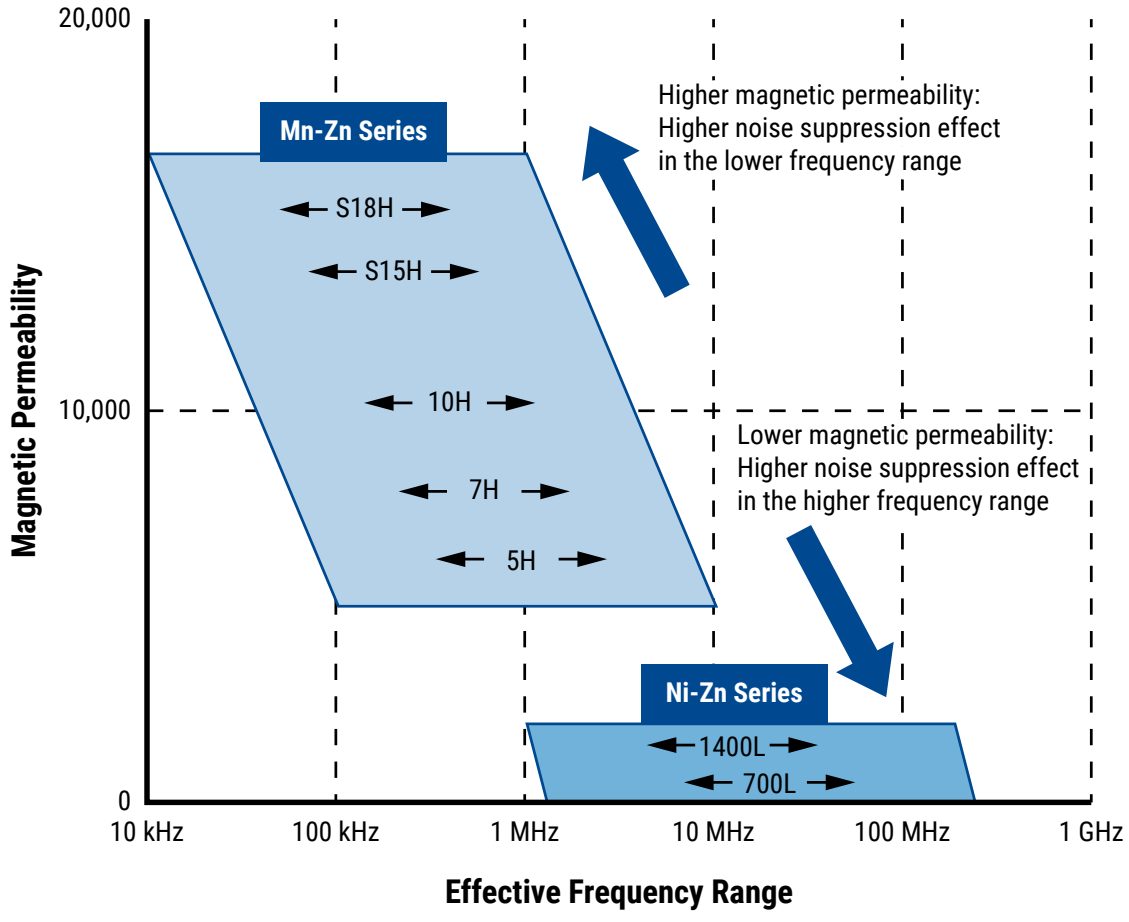
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

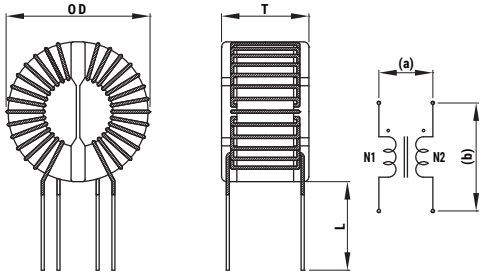


Figure 2

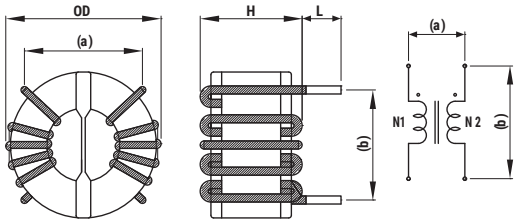
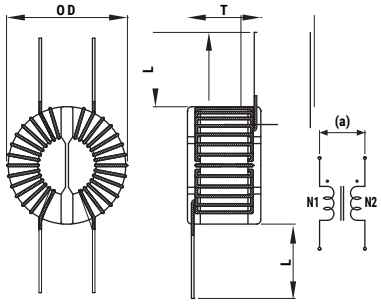


Figure 3



Part Number	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SC-02-D100	23.0	13.0	-	15±2.0	10	13	Fig. 1
SC-03-D050	23.0	13.0	-	15±2.0	10	13	Fig. 1
SC-04-D050	25.0	19.0	-	15±2.0	10	19	Fig. 1
SC-05-D0065	24.5	13.5	-	10±2.0	6	10	Fig. 1
SC-05-D030	25.0	19.0	-	15±2.0	10	19	Fig. 1
SC-05-D150H	48.0	-	25.0	15±2.0	15	40	Fig. 2
SC-07-D005	24.0	13.5	-	20±2.0	6	-	Fig. 3
SC-07-D060	25.0	20.0	-	15±2.0	12	17	Fig. 1
SC-08-D060	34.0	-	23.0	15±2.0	22	21	Fig. 2
SC-10-D020H	24.0	-	20.0	10±2.0	15	15	Fig. 2
SC-10-D050	34.0	-	23.0	15±2.0	22	21	Fig. 2
SC-15-D030	34.0	-	23.0	15±2.0	22	21	Fig. 2
SC-20-D010	34.0	-	23.0	15±2.0	22	21	Fig. 2
SC-30-D010	37.0	-	24.0	15±2.0	22	21	Fig. 2

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

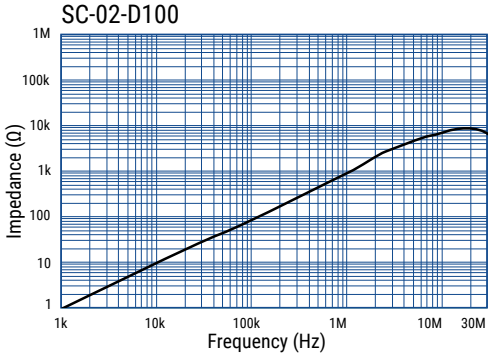
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 V (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	2 – 30 A
Rated Inductance Range	6.5 – 1,500 µH minimum
Inductance Measurement Condition	100 kHz
Thermal Class	A (105°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

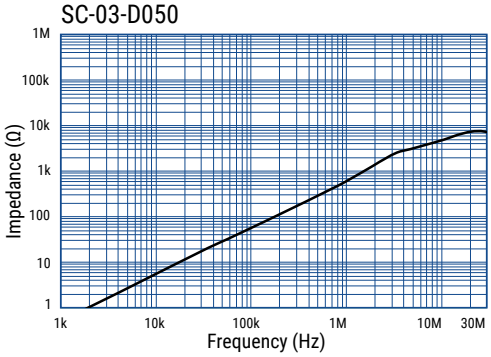
Part Number	Rated Current (A)	Inductance (µH) Minimum	DC Resistance/Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-02-D100	2	100.0	70.0	40	0.5	A (105°C)	7.0
SC-03-D050	3	50.0	40.0	40	0.6	A (105°C)	8.0
SC-04-D050	4	50.0	25.0	40	0.7	A (105°C)	14.0
SC-05-D0065	5	6.5	10.0	25	0.8	E (120°C)	7.5
SC-05-D030	5	30.0	20.0	40	0.8	A (105°C)	14.0
SC-05-D150H	5	1500.0	90.0	60	0.9	E (120°C)	89.2
SC-07-D005	7	45.0	20.0	60	0.8	A (105°C)	9.3
SC-07-D060	7	60.0	12.0	40	1.1	A (105°C)	19.9
SC-08-D060	8	60.0	30.0	45	1.0	A (105°C)	30.0
SC-10-D020H	10	20.0	6.5	40	1.2	A (105°C)	6.0
SC-10-D050	10	50.0	16.0	45	1.2	A (105°C)	34.0
SC-15-D030	15	30.0	12.0	50	1.4	A (105°C)	34.0
SC-20-D010	20	10.0	8.0	50	1.7	A (105°C)	33.0
SC-30-D010	30	10.0	1.8	40	2.3	A (105°C)	34.0

Frequency Characteristics

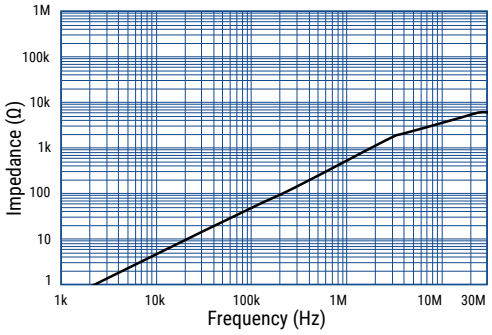
SC-02-D100



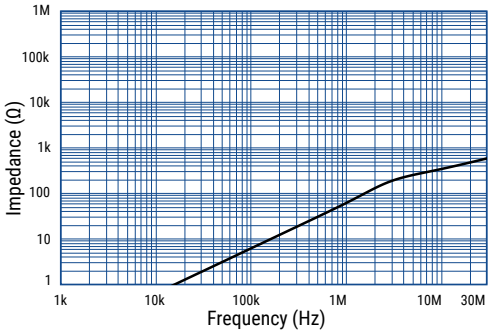
SC-03-D050



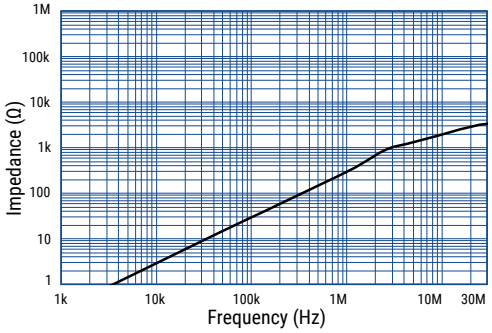
SC-04-D050



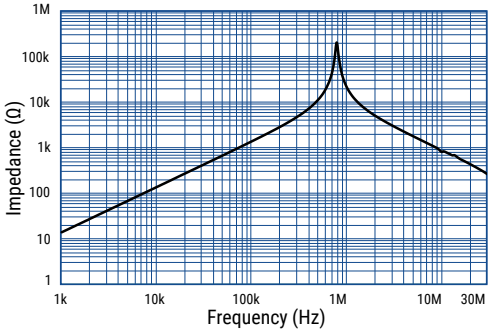
SC-05-D0065



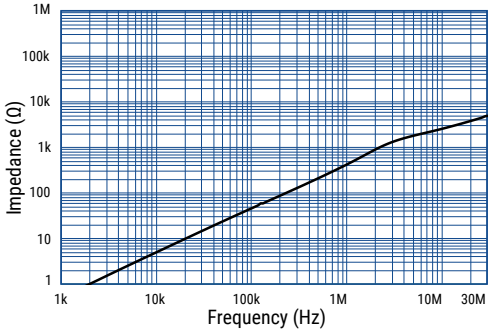
SC-05-D030



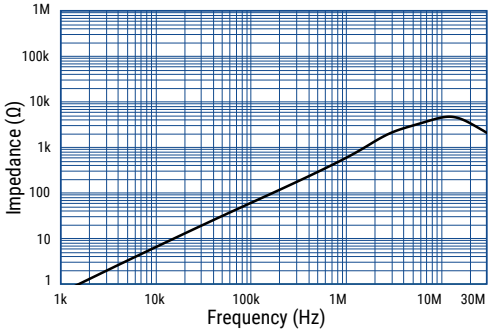
SC-05-D150H



SC-07-D005

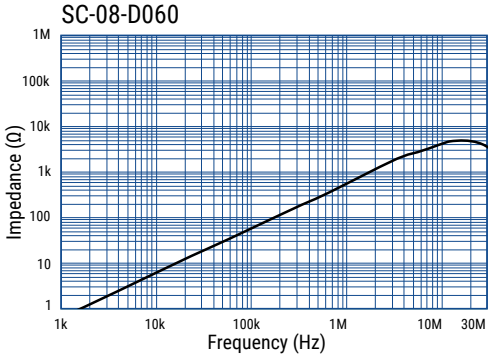


SC-07-D060

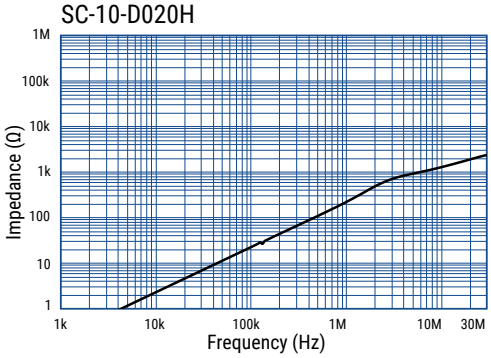


Frequency Characteristics cont.

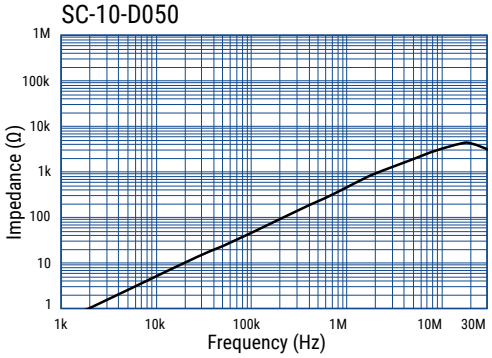
SC-08-D060



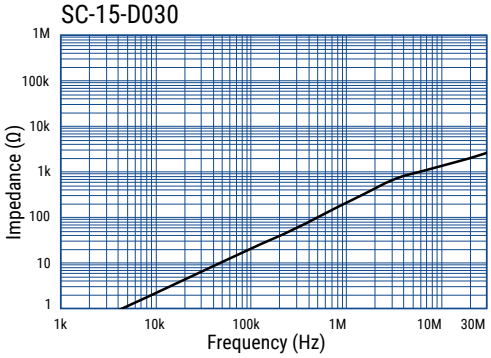
SC-10-D020H



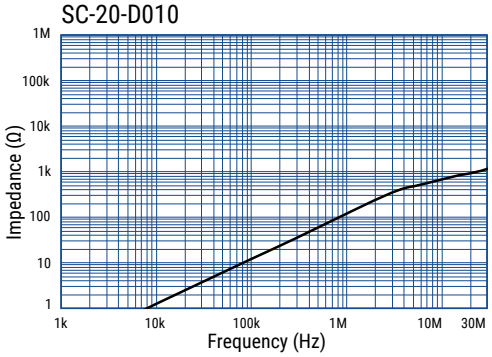
SC-10-D050



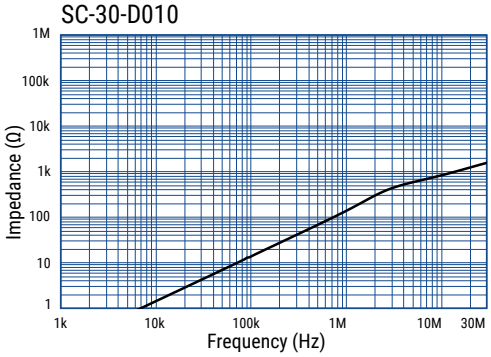
SC-15-D030



SC-20-D010



SC-30-D010



Packaging

Type	Packaging Type	Pieces Per Box
SC-02-D100	Tray	360
SC-03-D050		
SC-04-D050		300
SC-05-D0065		360
SC-05-D030		300
SC-05-D150H		90
SC-07-D005		360
SC-07-D060		300
SC-08-D060		200
SC-10-D020H		500
SC-10-D050		200
SC-15-D030		
SC-20-D010		
SC-30-D010		

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SCR Coils, 22 Series

Overview

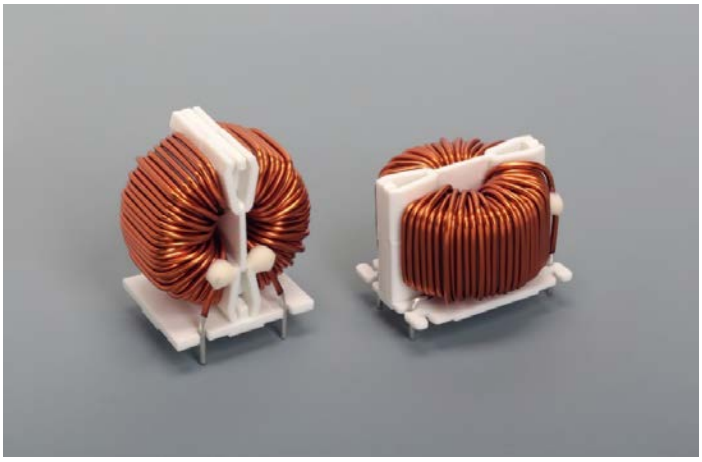
The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap



Part Number System

SCR	22-	050-	0R9	A	090	J
Series	Dimension Code (See Dimensions)	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type
SCR	22	xxx = xx.x A Examples: 050 = 5.0 A	R = Decimal point Examples: 0R9 = 0.9 mm 1R3 = 1.3 mm	A = Single	xxx = xx.xmH Examples: 015 = 1.5 mH 100 = 10 mH	J = Vertical type JH = Horizontal type

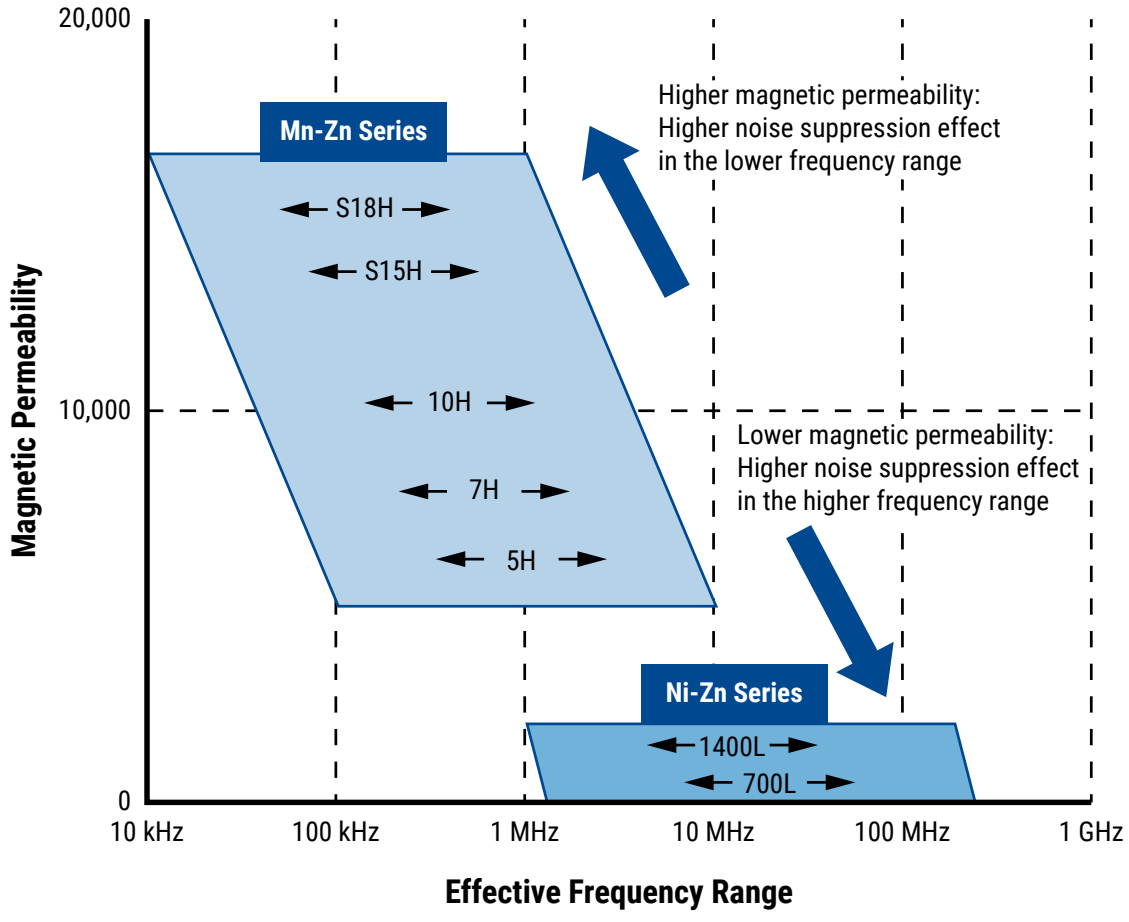
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

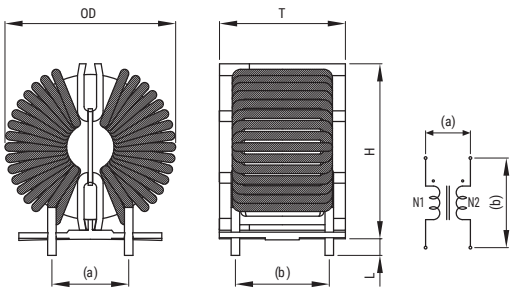
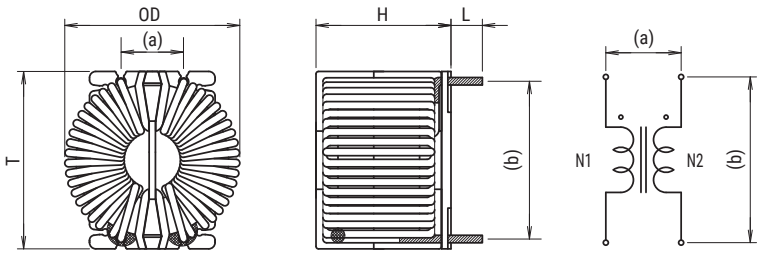


Figure 2



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR22-050-0R9A090J	30.5	23.0	31.5	4.0±1.3	18.0	16.0	Fig. 1
SCR22-050-0R9A100J	32.0	24.0	31.0	5.0±2.0	18.0	16.0	Fig. 1
SCR22-050-0R9A100JH	32.0	30.0	24.0	5.0±2.0	10.0	25.0	Fig. 2
SCR22-060-1R0A075J	32.0	24.0	31.0	5.0±2.0	14.0	18.0	Fig. 1
SCR22-060-1R0A075JH	32.0	30.0	24.0	5.0±2.0	10.0	25.0	Fig. 2
SCR22-100-1R3A015J	32.0	24.0	31.0	5.0±2.0	14.0	18.0	Fig. 1
SCR22-100-1R3A015JH	32.0	30.0	24.0	5.0±2.0	10.0	25.0	Fig. 2

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

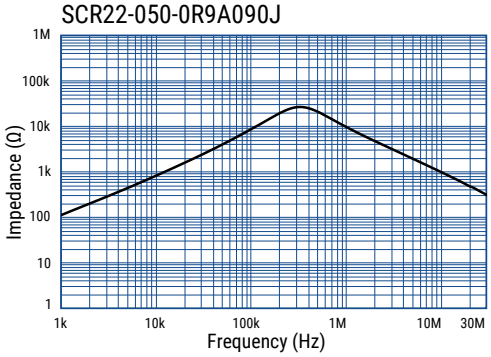
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	5 – 10 A
Rated Inductance Range	1.5 – 10.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	−40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

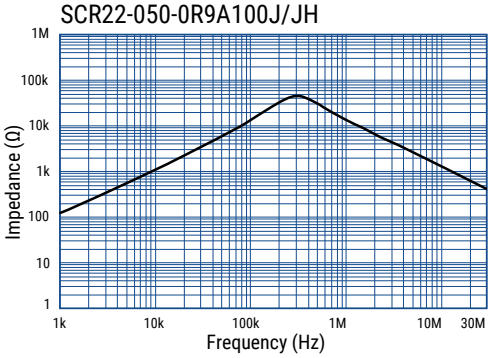
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR22-050-0R9A090J	5	9.0	55	70	0.9	33.7
SCR22-050-0R9A100J	5	10.0	60	65	0.9	34
SCR22-050-0R9A100JH	5	10.0	60	65	0.9	34
SCR22-060-1R0A075J	6	7.5	42	70	1.0	34
SCR22-060-1R0A075JH	6	7.5	42	70	1.0	34
SCR22-100-1R3A015J	10	1.5	12	65	1.3	33
SCR22-100-1R3A015JH	10	1.5	12	65	1.3	33

Frequency Characteristics

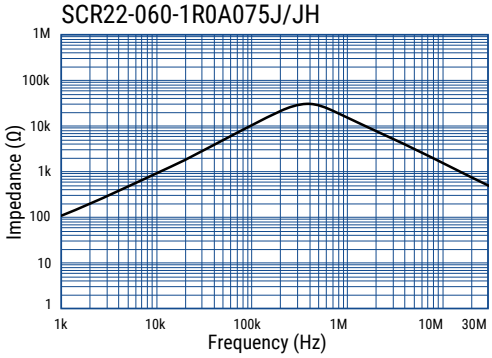
SCR22-050-0R9A090J



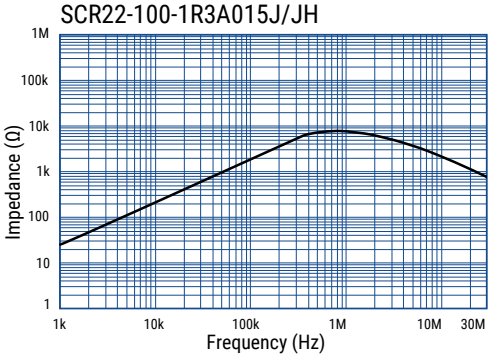
SCR22-050-0R9A100J/JH



SCR22-060-1R0A075J/JH



SCR22-100-1R3A015J/JH



Packaging

Type	Packaging Type	Pieces Per Box
SCR22-J	Tray	200
SCR22-JH		150

AC Line Filters

Common Mode SCR Coils, 25 Series

Overview

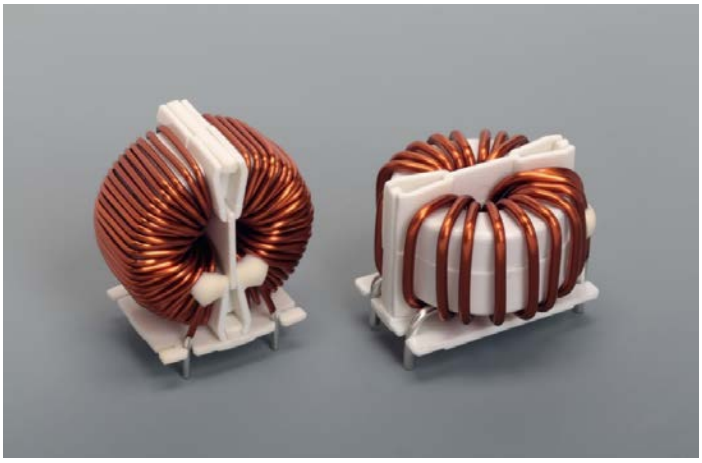
The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap



Part Number System

SCR	25-	070-	1R1	A	070	J
Series	Dimension Code (See Dimensions)	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type
SCR	25 25B	xxx = xx.x A Examples: 105 = 10.5 A	R = Decimal point Examples: 1R1 = 1.1 mm	A = Single	xxx = xx.x mH Examples: 070 = 7.0 mH	J = Vertical type JH = Horizontal type

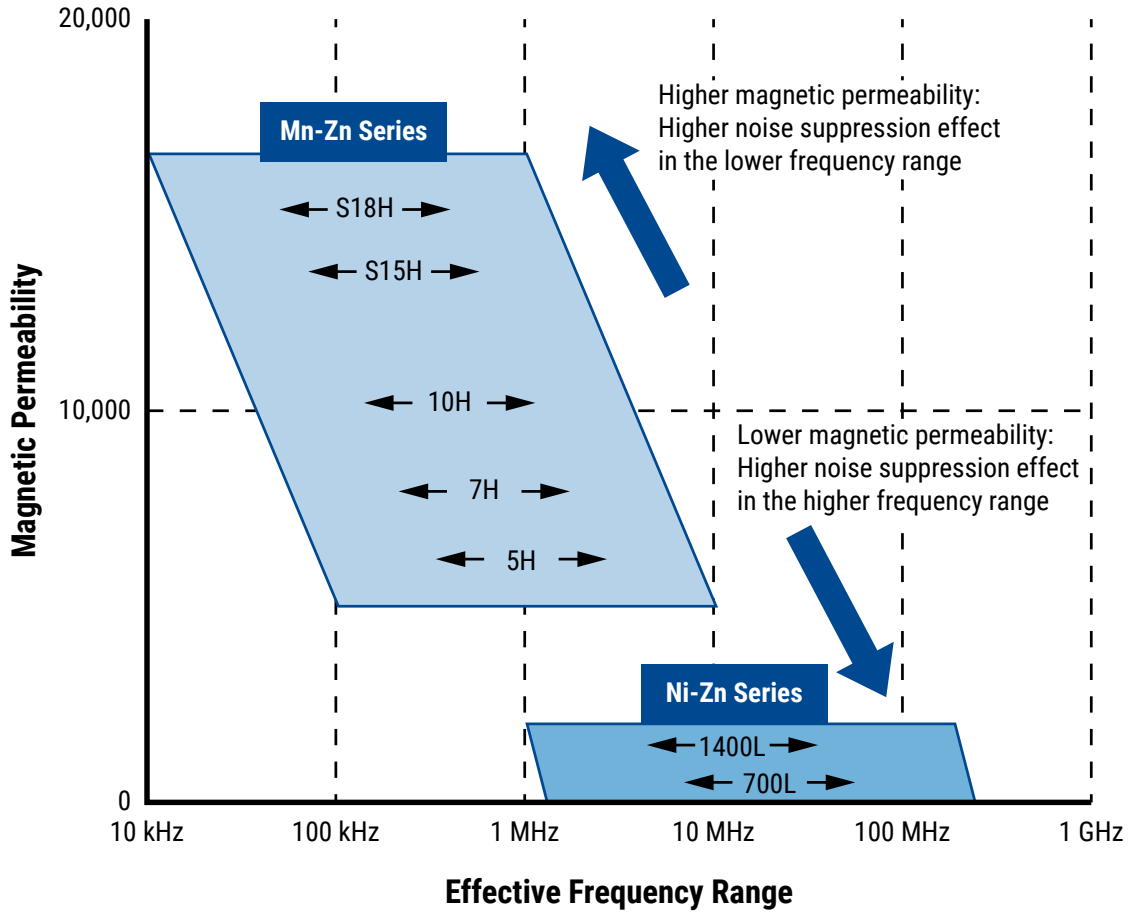
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

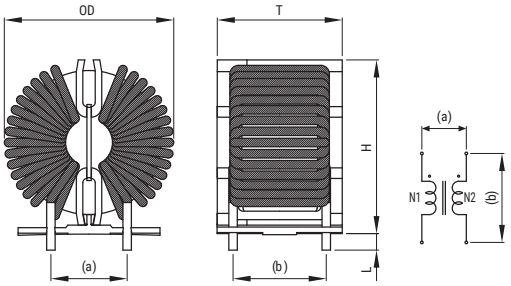
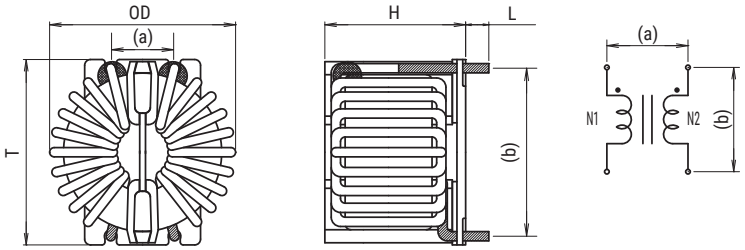


Figure 2



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR25-070-1R1A070J	35.0	26.0	35.0	4.0±1.0	14.0	18.0	Fig. 1
SCR25-200-1R7A008JH	35.0	33.0	26.0	5.0±2.0	11.0	29.0	Fig. 2
SCR25B-105-1R3A035JH	35.0	33.0	26.0	5.0±2.0	11.0	29.0	Fig. 2
SCR25B-150-1R4A024J	36.0	26.0	35.0	5.0±1.0	14.0	18.0	Fig. 1

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

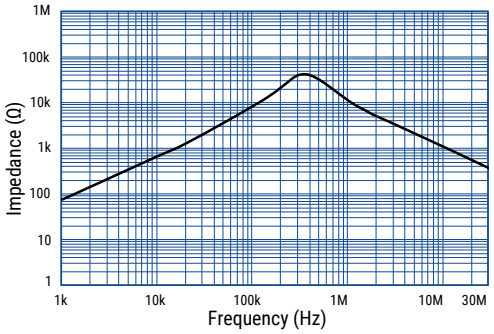
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC and 500 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	7 – 20 A
Rated Inductance Range	0.8 – 7.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

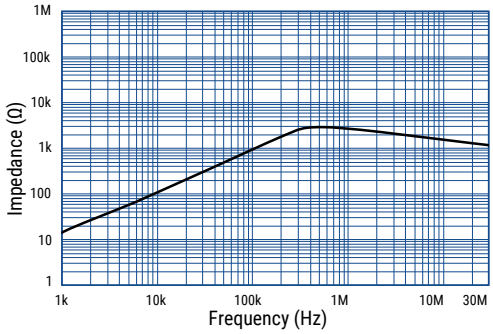
Part Number	Rated Voltage AC/DC (V)	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR25-070-1R1A070J	250	7.0	7.0	34.0	80	1.1	48
SCR25-200-1R7A008JH	250	20.0	0.8	4.7	66	1.7	45
SCR25B-105-1R3A035JH	500	10.5	3.5	17.0	70	1.3	49
SCR25B-150-1R4A024J	500	15.0	2.4	11.5	85	1.4	48

Frequency Characteristics

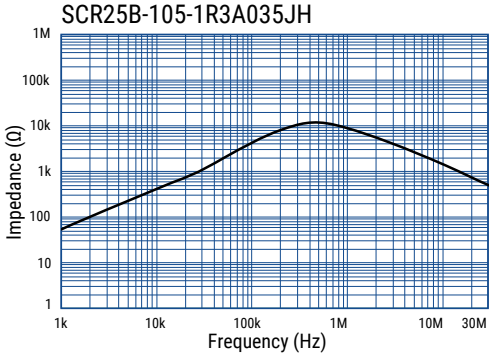
SCR25-070-1R1A070J



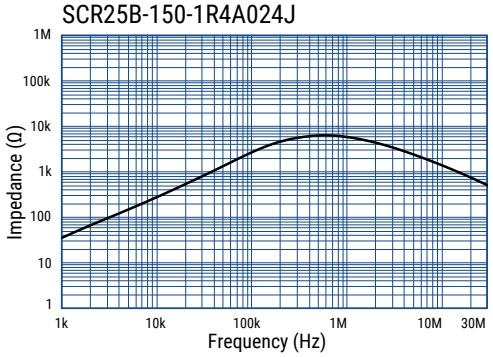
SCR25-200-1R7A008JH



SCR25B-105-1R3A035JH



SCR25B-150-1R4A024J



Packaging

Type	Packaging Type	Pieces Per Box
SCR25-J	Tray	180
SCR25-JH		140
SCR25B-150-1R4A024J		150

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SCR Coils, 31 Series

Overview

The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap

Part Number System

SCR	31B-	105-	1R4	A	055	JH
Series	Dimension Code (See Dimensions)	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type
SCR	31B	xxx = xx.x A Examples: 105 = 10.5 A	R = Decimal point Examples: 1R4 = 1.4 mm	A = Single	xxx = xx.xmH Examples: 055 = 5.5 mH	JH = Horizontal type

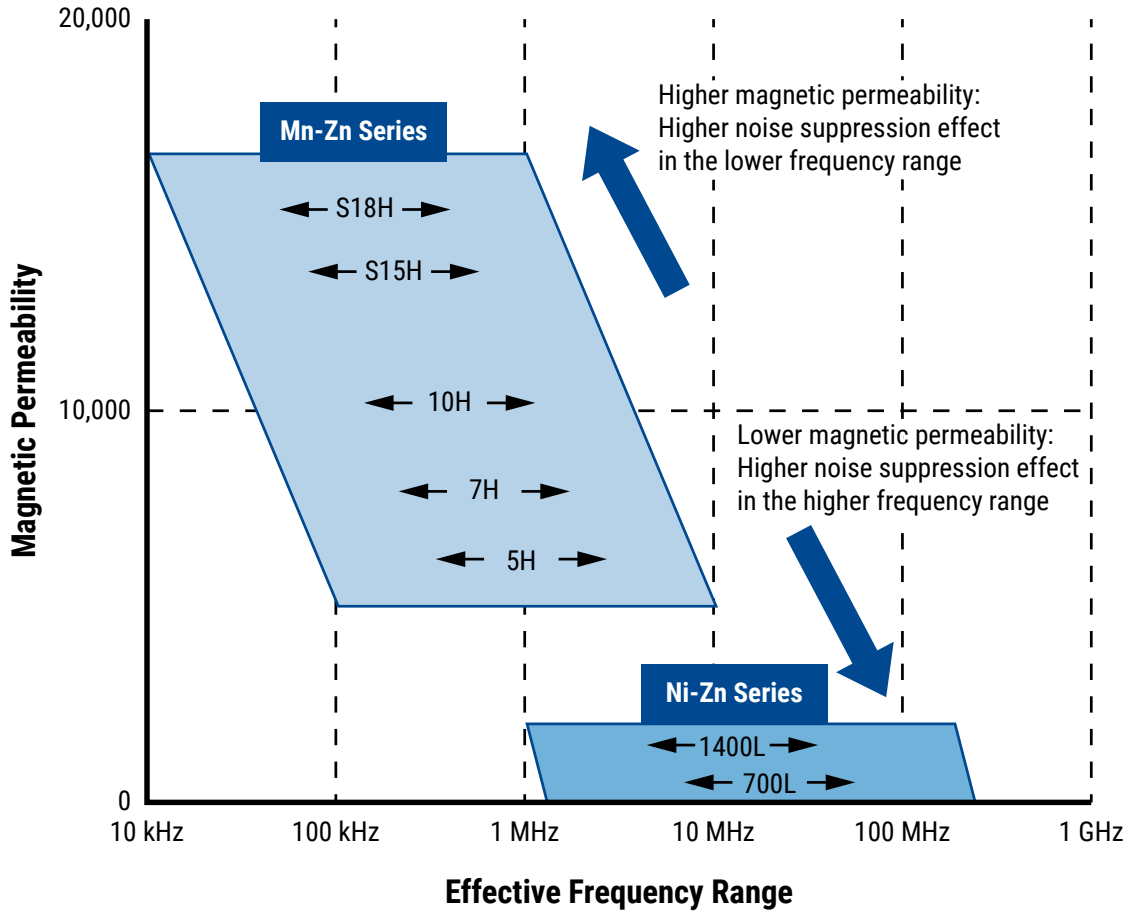
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band.Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

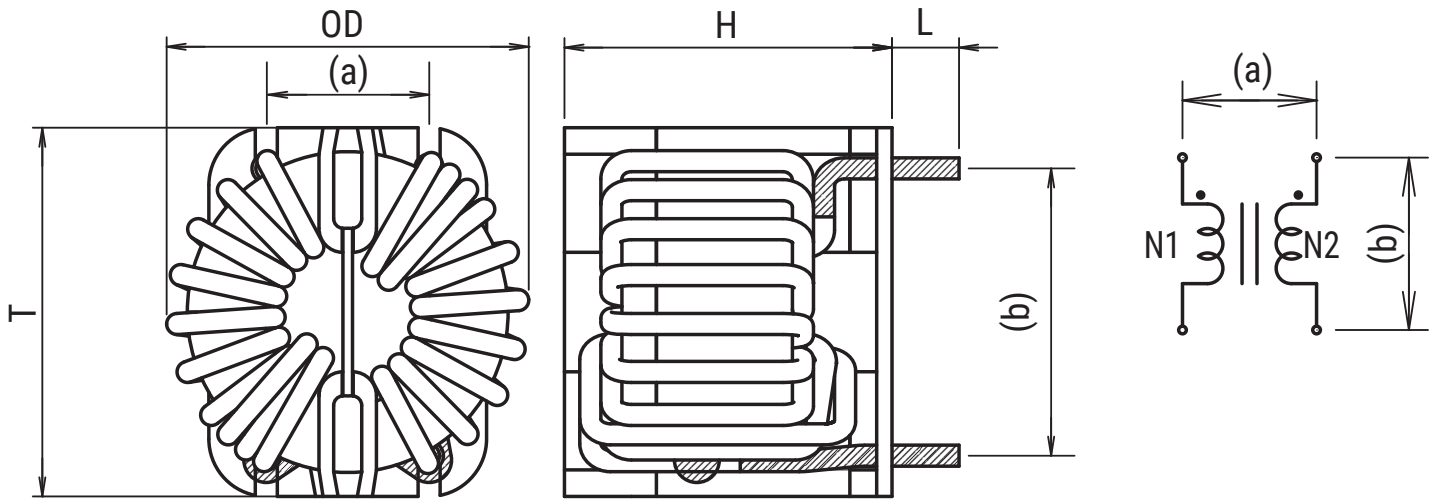
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR31B-105-1R4A055JH	48.0	42.0	35.0	4.0±1.0	17.0	30.0	Fig. 2
SCR31B-200-1R9A017JH	48.0	42.0	35.0	4.0±1.0	17.0	30.0	Fig. 1

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

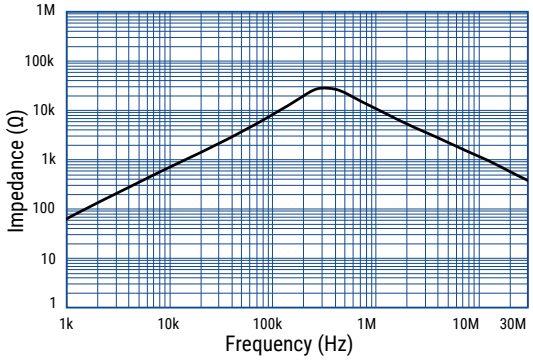
Item	Performance Characteristics
Rated Voltage	500 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	10.5 – 20.0 A
Rated Inductance Range	1.7 – 5.5 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–25°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

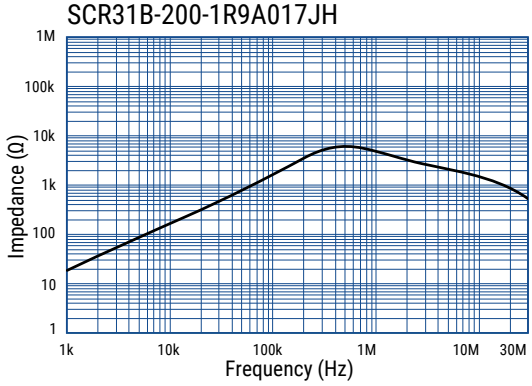
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR31B-105-1R4A055JH	10.5	5.5	22.0	80	1.4	84
SCR31B-200-1R9A017JH	20.0	1.7	6.3	79	1.9	87

Frequency Characteristics

SCR31B-105-1R4A055JH



SCR31B-200-1R9A017JH



Packaging

Type	Packaging Type	Pieces Per Box
SCR31-JH	Tray	80

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SCR Coils, Three-Phase Series

Overview

The KEMET SCR coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Industrial equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap

Part Number System

SCR	31-	010-	S	1R1	A	035	JH	
Series	Dimension Code (See Dimensions)	Rated Current (A)	Phase	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SCR	31 38C 47 47B	xxx = xx.x A Examples: 010 = 1.0 A 350 = 35.0 A	S = Three-phase	R = Decimal point Examples: 1R4 = 1.4 mm	A = Single B = Double	xxx = xx.xmH Examples: 015 = 1.5 mH	J = Vertical type JH = Horizontal type	Blank P

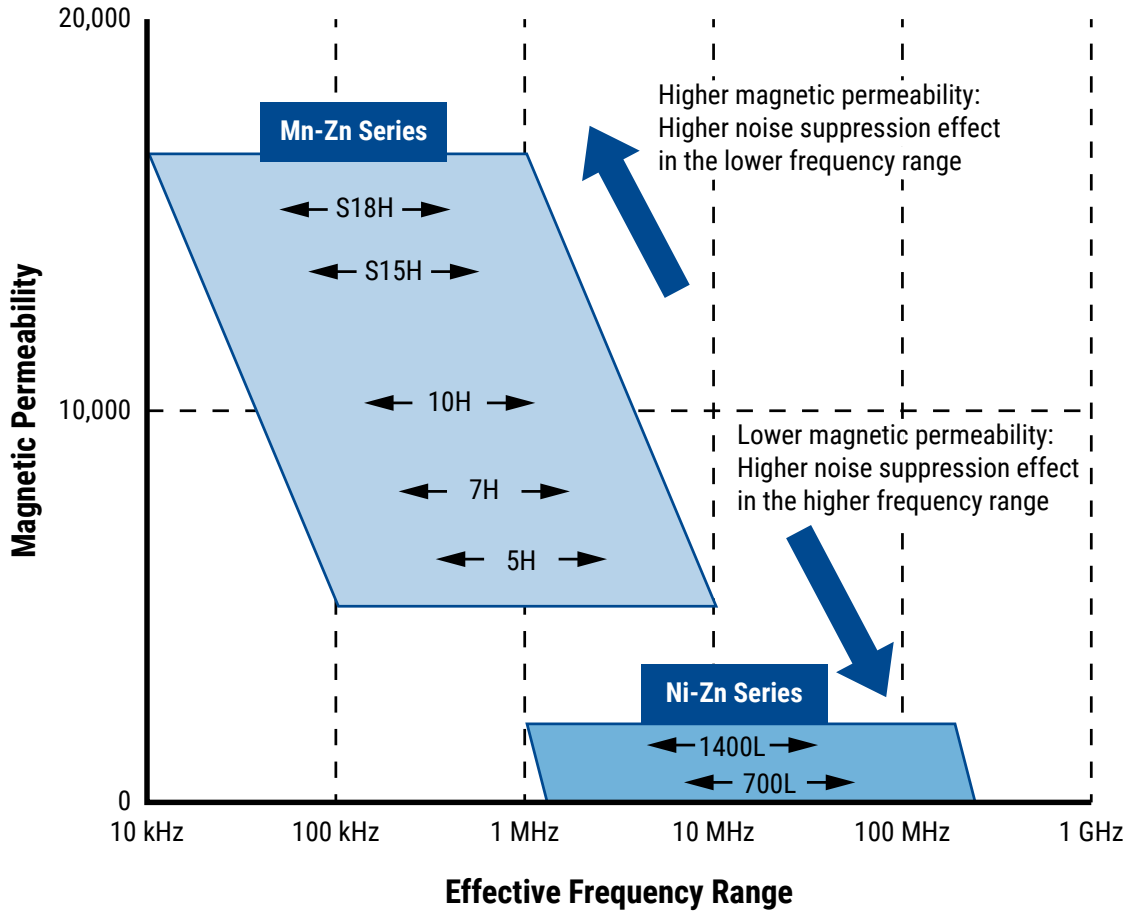
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

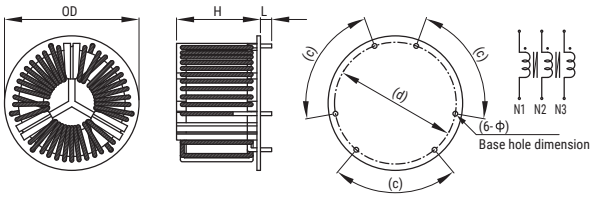


Figure 2

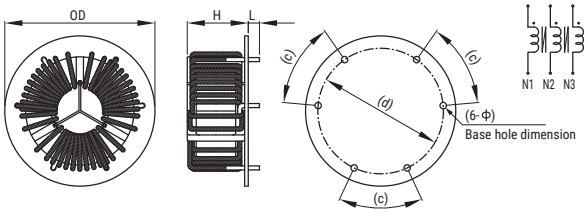


Figure 3

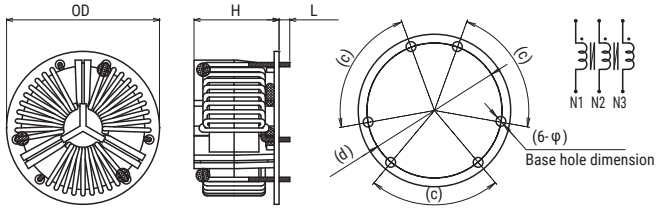


Figure 4

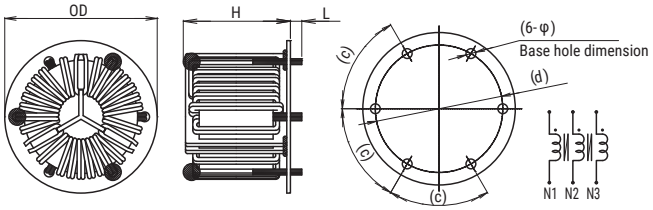
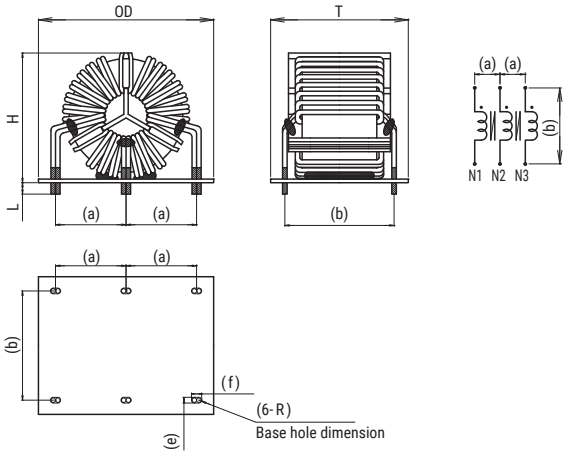


Figure 5



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)								Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	c	d	φ	e	f	R	
SCR31-010-S1R1A035JH	42.0	-	27.0	3.5±1.0	-	-	80°	38	1.5	-	-	-	Fig. 1
SCR47-140-S1R8A025JH-P	70.0	-	36.0	5.0±1.5	-	-	50°	56	2.0	-	-	-	Fig. 2
SCR47B-200-S2R0A025JH-P	70.0	-	48.0	5.0±1.5	-	-	86°	56	2.2	-	-	-	Fig. 1
SCR38C-130-S1R4A015JH	50.0	-	28.0	3.5±0.5	-	-	80°	44	3.0	-	-	-	Fig. 3
SCR47B-300-S1R7B020JH	70.0	-	50.0	5.0±2.0	-	-	60°	56	4.3	-	-	-	Fig. 4
SCR47B-350-S2R0B010J	80.0	62.0	65.0	5.0±2.0	31	48	-	-	-	2.5	4.5	1.25	Fig. 5

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC/VDC and 500 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	1 – 35 A
Rated Inductance Range	1.0 – 3.5 mH minimum
Inductance Measurement Condition	10 kHz and 100 kHz
Thermal Class	E (120°C)
Operating Temperature Range	−40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

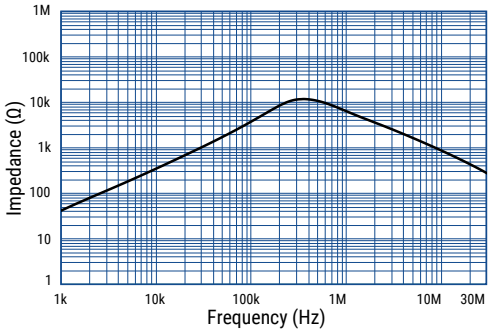
Part Number	Rated Voltage AC/DC (V)	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR31-010-S1R1A035JH	250	1	3.5 [2]	24.0	10	1.1	72
SCR47-140-S1R8A025JH-P	250	14	2.5 [1]	9.0	55	1.8	170
SCR47B-200-S2R0A025JH-P	250	20	2.5 [1]	7.8	60	2.0	300
SCR38C-130-S1R4A015JH	500	13	1.5 [1]	9.2	70	1.4	100
SCR47B-300-S1R7B020JH	500	30	2.0 [1]	4.8	87	1.7 x 2 Parallel	340
SCR47B-350-S2R0B010J	500	35	1.0 [1]	2.5	70	2.0 x 2 Parallel	340

[1] *Inductance Measurement Condition: 10 kHz*

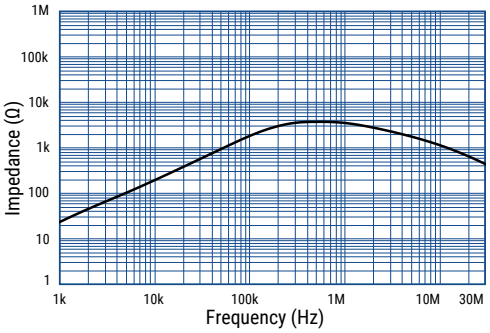
[2] *Inductance Measurement Condition: 100 kHz*

Frequency Characteristics

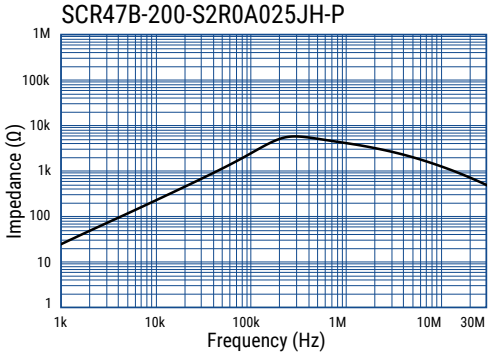
SCR31-010-S1R1A035JH



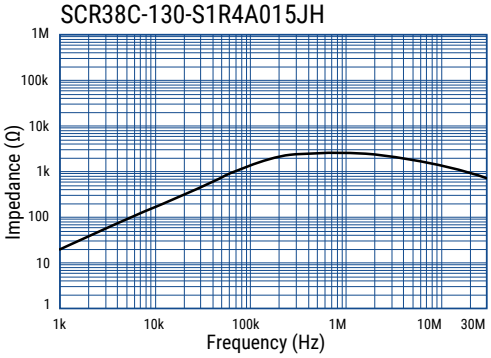
SCR47-140-S1R8A025JH-P



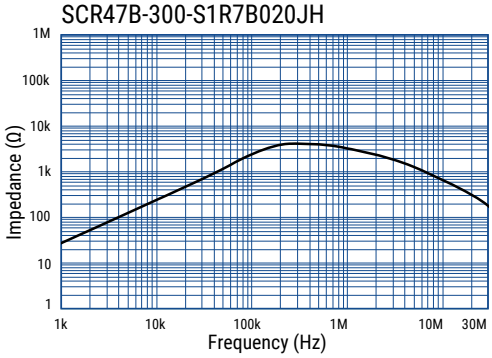
SCR47B-200-S2R0A025JH-P



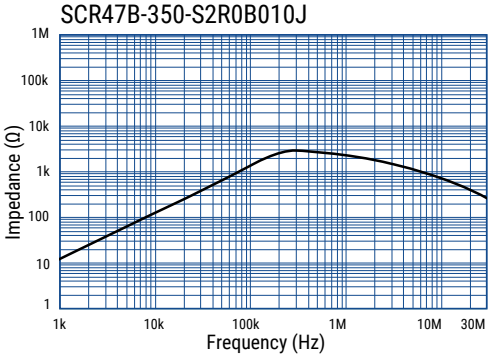
SCR38C-130-S1R4A015JH



SCR47B-300-S1R7B020JH



SCR47B-350-S2R0B010J



Packaging

Type	Packaging Type	Pieces Per Box
SCR31-010-S1R1A035JH	Tray	80
SCR47-140-S1R8A025JH-P		36
SCR47B-200-S2R0A025JH-P		27
SCR38C-130-S1R4A015JH		60
SCR47B-300-S1R7B020JH		27
SCR47B-350-S2R0B010J		18

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SC Coils, SC-D Series, Terminal Base Type

Overview

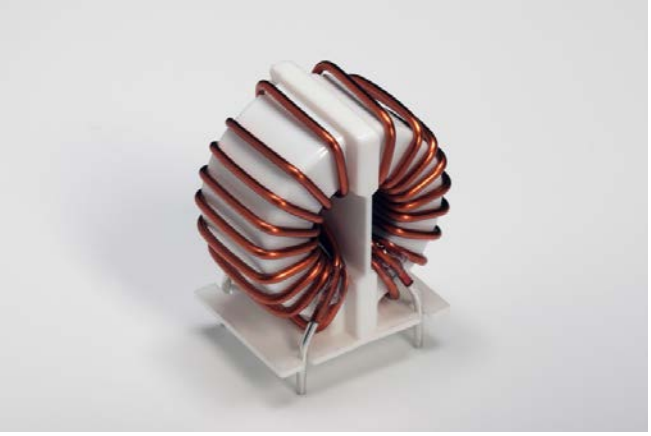
The KEMET SC-D-J/JH coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 700L ferrite material and equivalents
- High frequency
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C or +120°C
- UL 94 V–2 or V–0 flame retardant rated cap
- UL 94 V–0 flame retardant rated base



Part Number System

SC-	10-	D	05	J
Series	Rated Current (A)	Core Type	Inductance (µH) Minimum	Terminal Base Type
SC	0x = x A xx = xx A Examples: 05 = 5 A 10 = 10 A	D = Ni-Zn ferrite, high frequency	0x = x0 µH 0xx = xx µH Examples: 030 = 30 µH 05 = 50 µH	J = Vertical type JH = Horizontal type

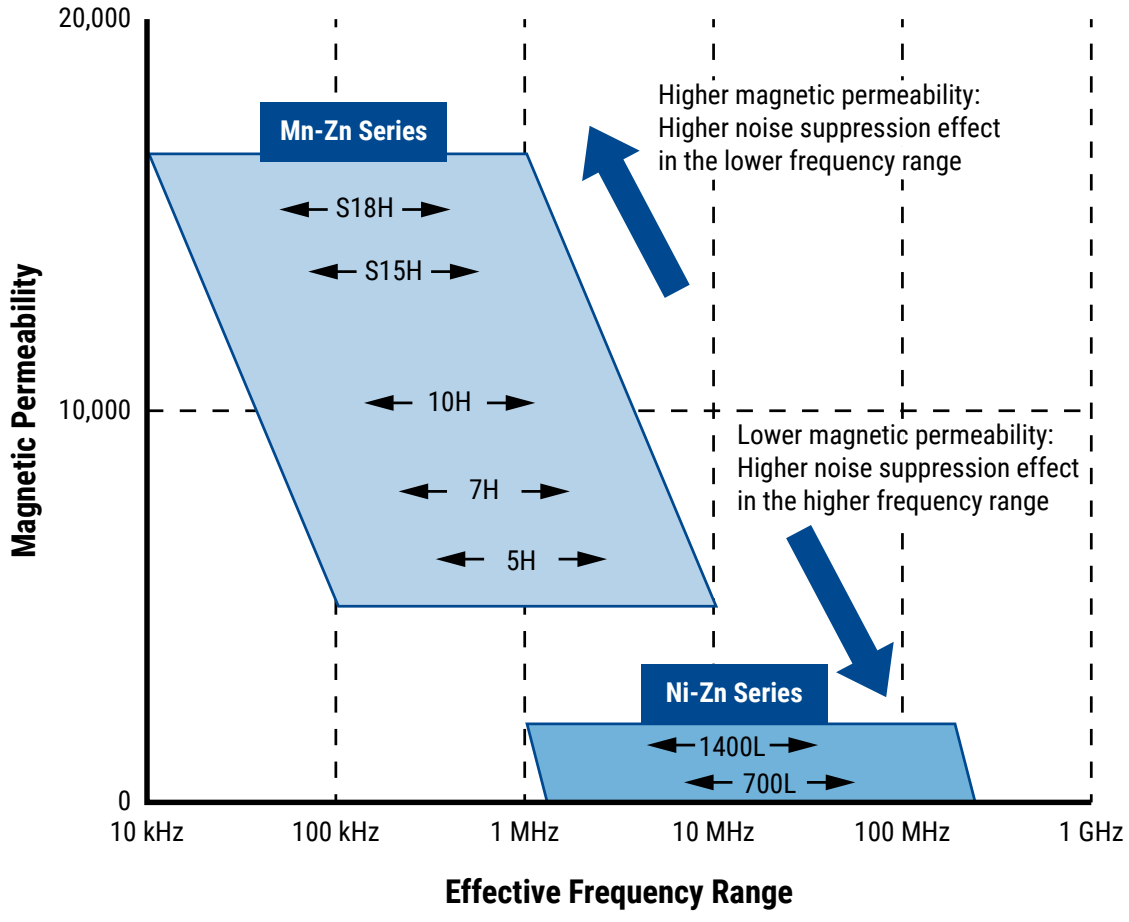
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

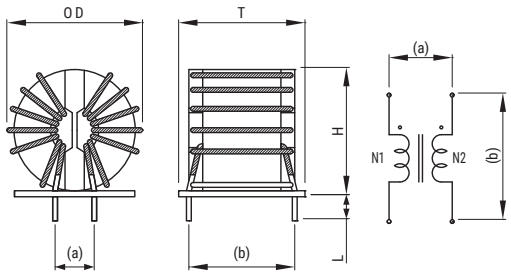


Figure 2

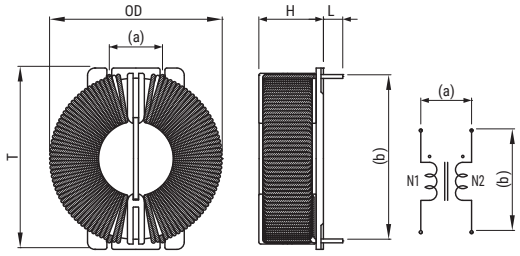


Figure 3

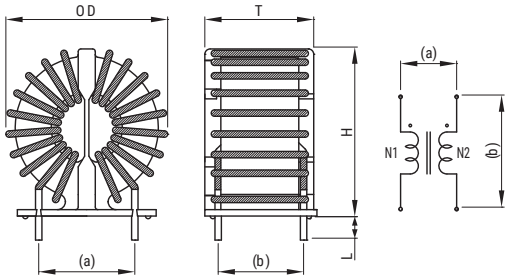
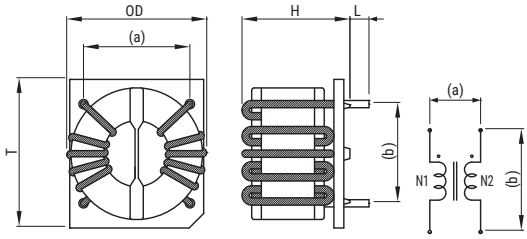


Figure 4



Part Number	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SC-05-D030J	25.0	21.0	25.0	3.5±1.0	6.5	17.6	Fig. 1
SC-09-D035JH	34.0	32.0	18.5	3.5±1.0	11.0	28.0	Fig. 2
SC-10-D05J	34.0	22.0	34.0	4.0±1.5	18.0	16.0	Fig. 3
SC-35-D010JH	38.0	34.0	31.5	4.8±1.7	18.0	22.0	Fig. 4

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

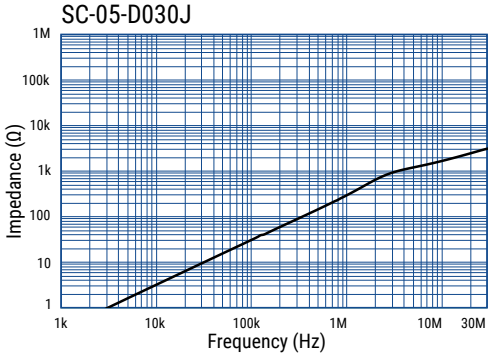
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	5 – 35 A
Rated Inductance Range	10 – 50 µH minimum
Inductance Measurement Condition	100 kHz
Thermal Class	A (105°C) and E (120°C)
Operating Temperature Range	−40°C to +105°C (include self temperature rise) and −40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

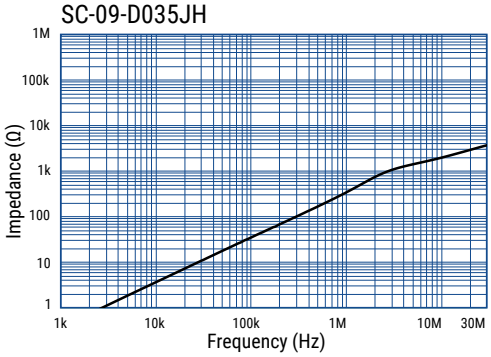
Part Number	Rated Current (A)	Inductance (µH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Thermal Class	Weight (g) Approximate
SC-05-D030J	5	30	20.0	40	0.8	A (105°C)	15.0
SC-09-D035JH	9	35	7.8	45	1.2	E (120°C)	23.0
SC-10-D05J	10	50	16.0	45	1.2	E (120°C)	34.0
SC-35-D010JH	35	10	1.8	65	2.3	E (120°C)	46.7

Frequency Characteristics

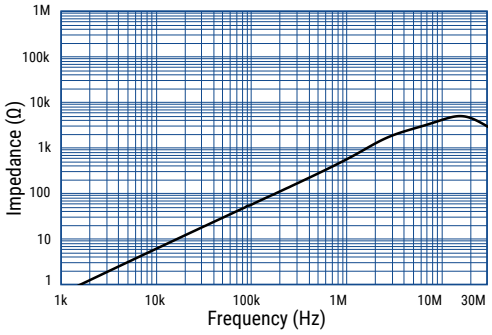
SC-05-D030J



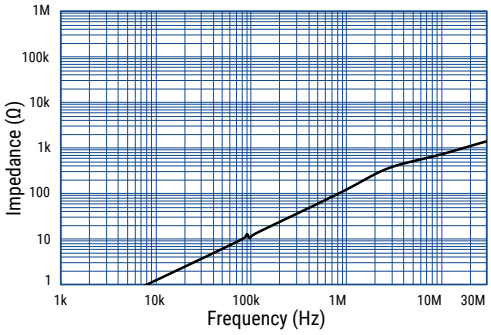
SC-09-D035JH



SC-10-D05J



SC-35-D010JH



Packaging

Type	Packaging Type	Pieces Per Box
SC-05-D030J	Tray	360
SC-09-D035JH		180
SC-10-D05J		
SC-35-D010JH		140

AC Line Filters

Common Mode SC Coils, SC-JKH Series, Terminal Fixing Cap Type

Overview

The KEMET SC-JKH coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 10H ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated cap

Part Number System

SC-	02-	E	120	JKH
Series	Rated Current (A)	Thermal Class	Inductance (mH) Minimum	Terminal Base Type
SC	0x = x A Examples: 02 = 2 A Note: With exceptions, see Table 1 for details.	E = Class E	xx = x.x mH xxx = xx.x mH Examples: 30 = 3.0 mH 120 = 12.0 mH Note: With exceptions, see Table 1 for details.	JKH

Magnetic Permeability of Ferrite Material

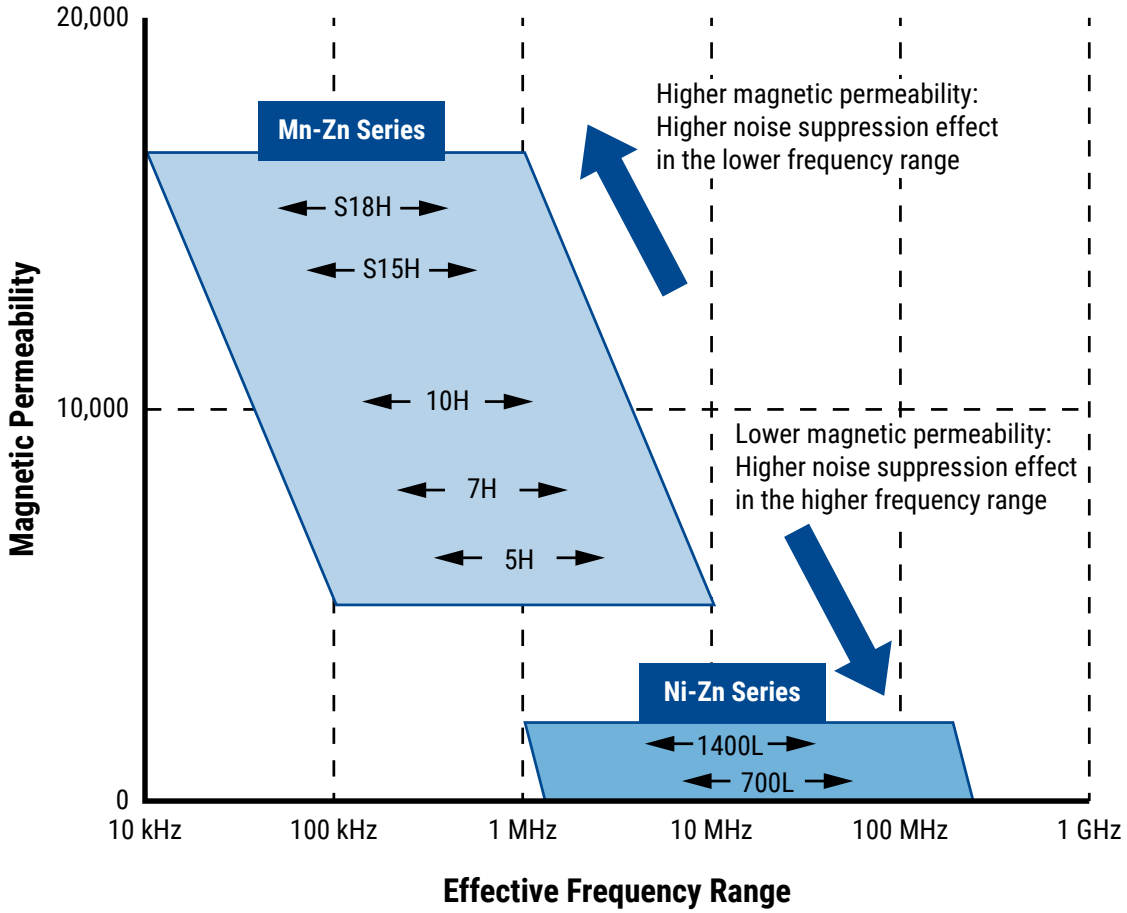
In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1.

Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

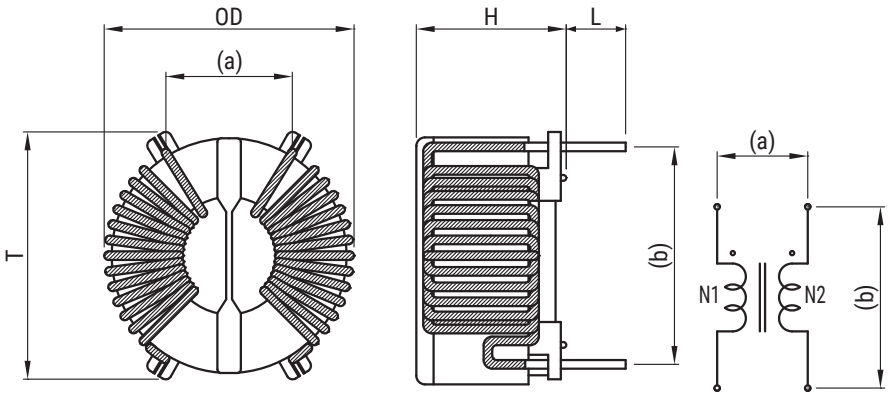
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names. Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)	
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b
SC-02-E120JKH	26.0	24.5	17.0	3.5±1.0	11.0	18.0
SC-02-E30JKH	17.0	17.0	14.5	3.6±1.0	8.0	13.0
SC-02-E50JKH	24.5	24.5	17.0	3.5±1.0	11.0	18.0
SC-02-E60JKH	24.5	24.5	17.0	3.5±1.0	11.0	18.0
SC-04-E120JKH	34.0	34.0	27.0	3.5±1.0	11.0	28.0
SC-04-E60JKH	34.0	34.0	17.0	3.5±1.0	11.0	28.0
SC-05-E100JKH	34.0	34.0	25.0	3.5±1.0	11.0	28.0
SC-05-E75JKH	32.0	34.0	18.0	3.5±1.0	11.0	28.0
SC-06-E42JKH	34.0	34.0	27.0	3.5±1.0	11.0	28.0
SC-06-E70JKH	34.0	34.0	27.0	3.5±1.0	11.0	28.0

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

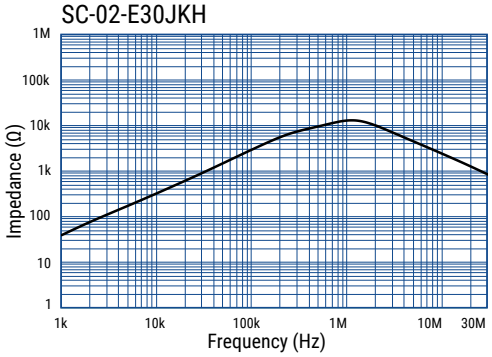
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	2 – 6 A
Rated Inductance Range	3 – 12 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	−40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

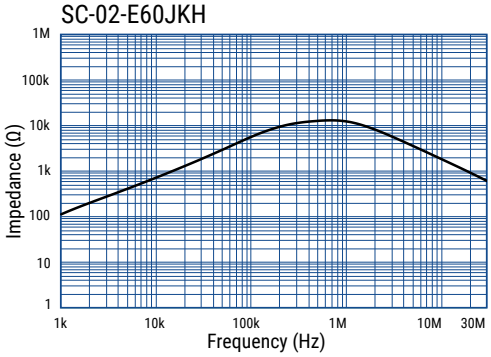
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SC-02-E30JKH	2.0	3.0	85.00	40	0.50	6.0
SC-02-E60JKH	2.0	6.0	100.00	40	0.65	13.0
SC-02-E120JKH	2.0	12.0	180.00	70	0.55	13.1
SC-02-E50JKH	2.7	5.4	55.00	40	0.75	13.9
SC-04-E60JKH	4.0	6.0	75.00	50	0.80	27.2
SC-04-E120JKH	4.0	12.0	75.00	40	0.95	48.2
SC-05-E75JKH	5.0	8.1	72.45	80	0.80	27.2
SC-05-E100JKH	5.0	10.0	65.00	50	1.00	47.5
SC-06-E42JKH	6.0	4.2	30.00	45	1.20	47.5
SC-06-E70JKH	6.0	7.0	4.50	65	1.10	50.0

Frequency Characteristics

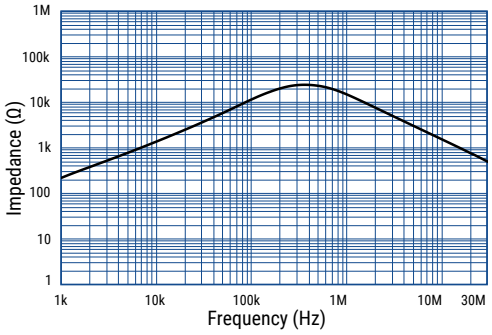
SC-02-E30JKH



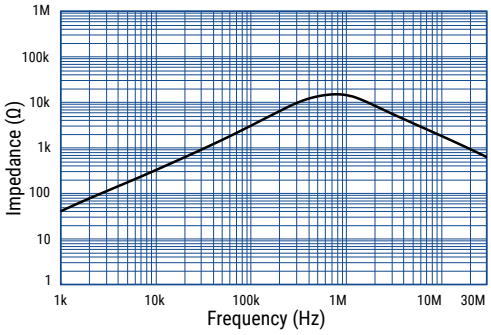
SC-02-E60JKH



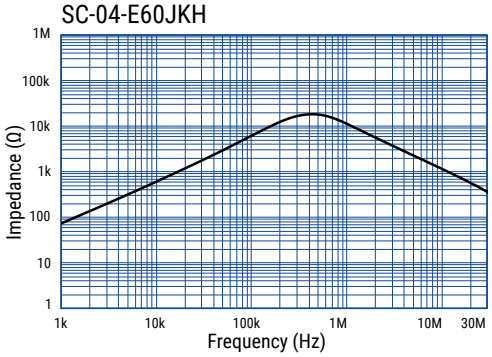
SC-02-E120JKH



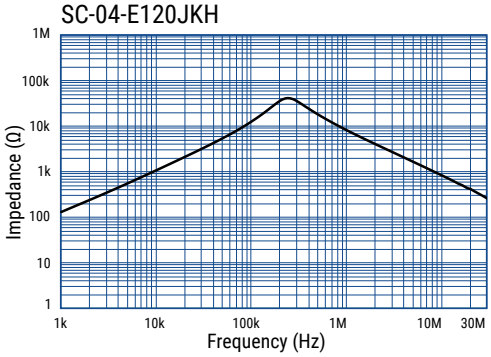
SC-02-E50JKH



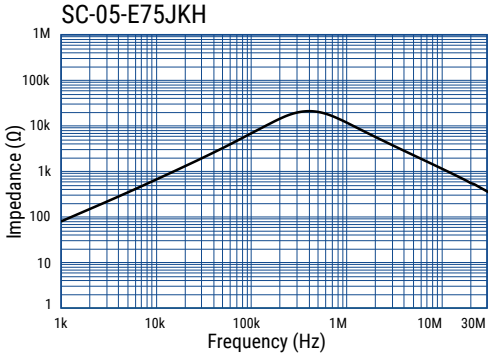
SC-04-E60JKH



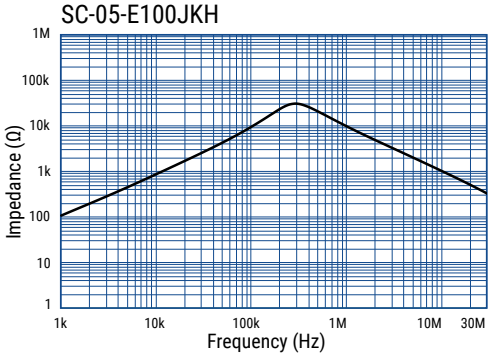
SC-04-E120JKH



SC-05-E75JKH

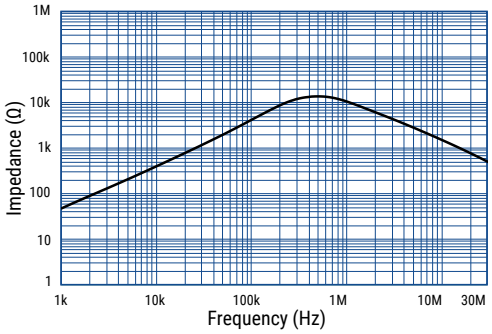


SC-05-E100JKH

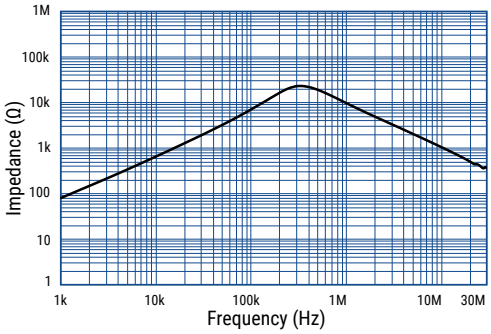


Frequency Characteristics cont.

SC-06-E42JKH



SC-06-E70JKH



Packaging

Type	Packaging Type	Pieces Per Box
SC-02-E30JKH	Tray	280
SC-02-E60JKH		320
SC-02-E120JKH		
SC-02-E50JKH		
SC-04-E60JKH		200
SC-04-E120JKH		150
SC-05-E75JKH		180
SC-05-E100JKH		150
SC-06-E42JKH		120
SC-06-E70JKH		150

Handling Precautions

Precautions for product storage

AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values

The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

AC Line Filters

Common Mode SC Coils, Three-phase Series

Overview

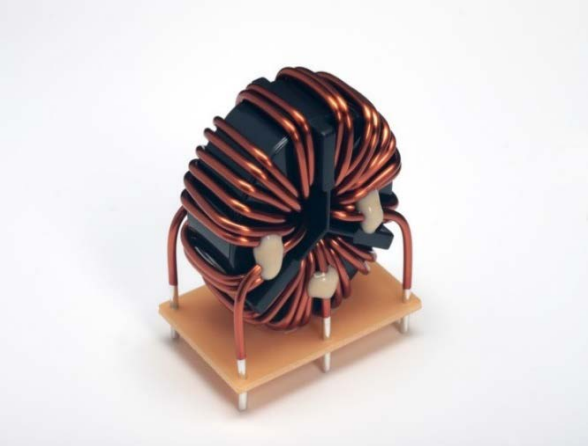
The KEMET SC coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary ferrite cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Industrial equipment
- Home appliances
- Power supplies

Benefits

- Proprietary 5H, 7H, 10H and 700L ferrite material and equivalents
- Suitable for ≥ 150 kHz range
- High frequency (700L)
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap



Part Number System

SC-	01-	S		07	J
Series	Rated Current (A)	Phase	Additional code	Inductance (mH) Minimum	Terminal Base Type
SC	0x = x A xx = xx A Examples: 01 = 1 A 10 = 10 A	S = Three-phase	Blank E = Class E D = Ni-Zn ferrite, high frequency Note: With exceptions, see Table 1 for details.	xx = x.x mH Examples: 07 = 0.7 mH 30 = 3.0 mH Note: With exceptions, see Table 1 for details.	J = Vertical type JH = Horizontal type

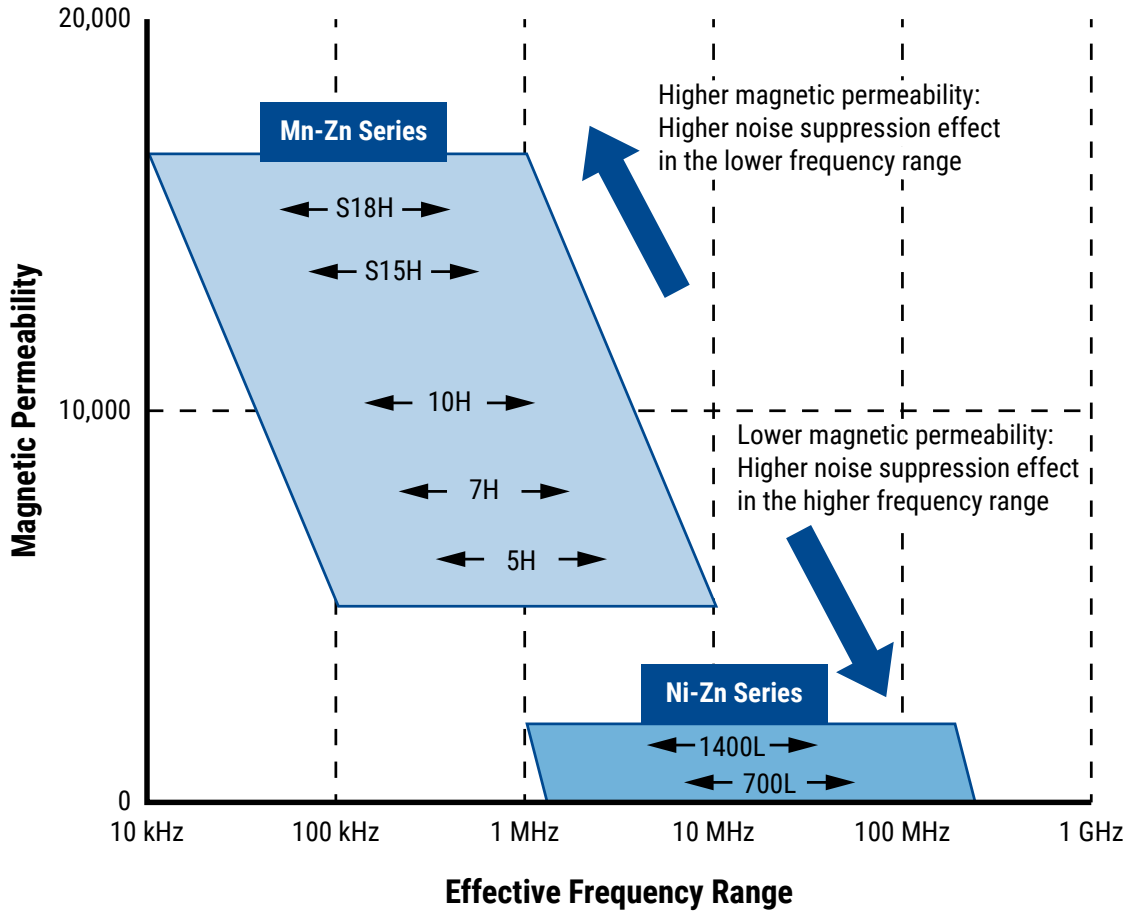
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

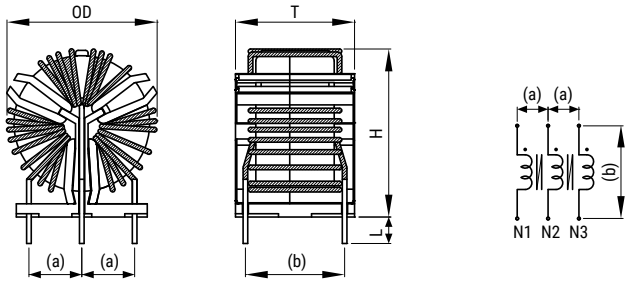


Figure 2

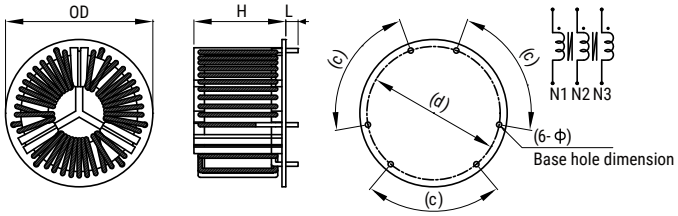


Figure 3

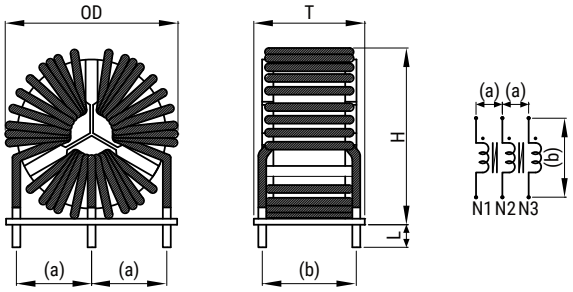
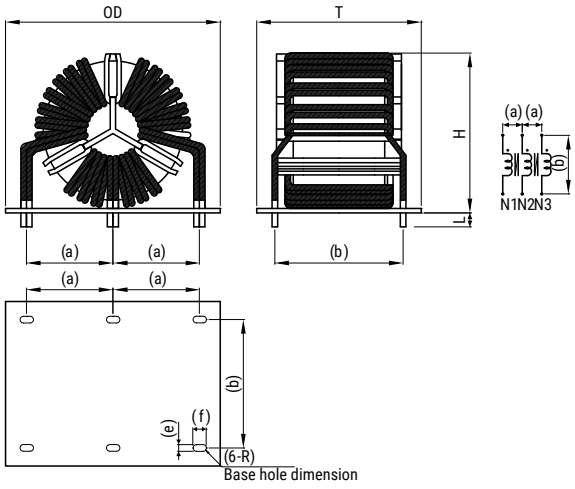


Figure 4



Part Name	Dimensions(mm)				Pin Pitch[1] (Reference)								Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	c	d	φ	e	f	R	
SC-01-S07J	24.5	22.0	27.5	3.8±1.0	8.0	15.0	-	-	-	-	-	-	Fig. 1
SC-10-S30JH	42.0	-	27.0	3.5±1.0	-	-	80°	38.0	1.5	-	-	-	Fig. 2
SC-20-SE10J	49.0	30.0	51.0	5.0±1.0	20.0	25.0	-	-	-	-	-	-	Fig. 3
SC-35-SD040J	80.0	62.0	65.0	5.0±2.0	31.0	48.0	-	-	-	2.4	4.4	1.2	Fig. 4
SC-07-S045JH	42.0	-	27.0	3.0±0.5	-	-	80°	38.0	1.5	-	-	-	Fig. 2
SC-10-S016JH	50.0	-	28.0	3.0±0.5	-	-	80°	44.0	3.0	-	-	-	Fig. 2
SC-26-S010JH	50.0	-	28.0	3.0±0.5	-	-	80°	44.0	3.0	-	-	-	Fig. 2

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC/VDC and 500 VAC/VDC
Withstanding Voltage[1]	2,400 VAC and 3,000 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	1 – 35 A
Rated Inductance Range	0.04 – 3 mH minimum
Inductance Measurement Condition	10 kHz and 100 kHz
Thermal Class	E (120°C)
Operating Temperature Range	−40°C to +120°C (include self temperature rise)

[1] 3,000 VAC : SC-07-S045JH,SC-10-S016JH,SC-26-S010JH

Table 1 – Ratings & Part Number Reference

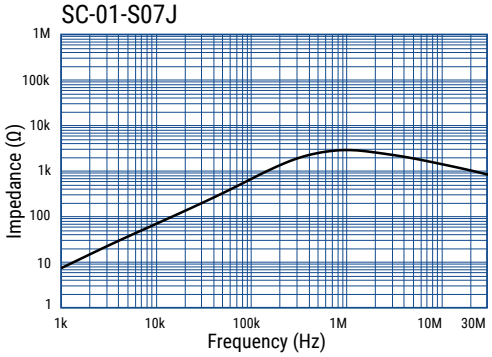
Part Number	Rated Voltage AC/DC (V)	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SC-01-S07J	250	1	0.7000 [1]	38.0	15	0.5	16.1
SC-10-S30JH	250	10	3.0000 [1]	25.0	120	1.1	72.0
SC-20-SE10J	250	20	0.9400 [1]	7.0	90	1.8	113.0
SC-35-SD040J	250	35	0.0400 [2]	2.0	55	2.0 x 2 Parallel	306.2
SC-07-S045JH	500	7	0.4410 [1]	13.0	25	1.2	65.0
SC-10-S016JH	500	10	0.1680 [1]	3.0	20	2.0	101.8
SC-26-S010JH	500	26	0.1015 [1]	1.5	40	2.3	101.0

[1] Inductance Measurement Condition: 10 kHz

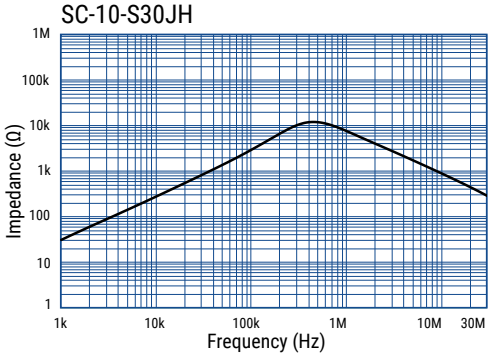
[2] Inductance Measurement Condition: 100 kHz

Frequency Characteristics

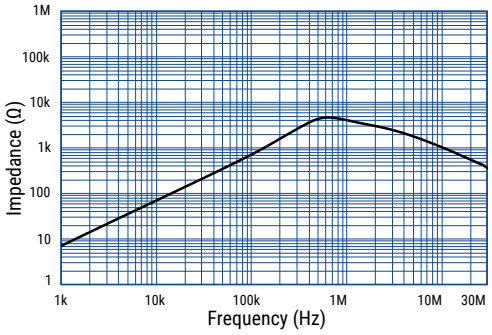
SC-01-S07J



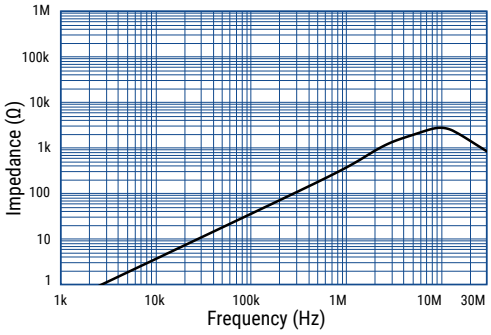
SC-10-S30JH



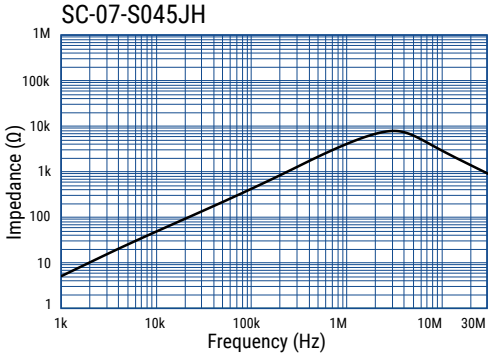
SC-20-SE10J



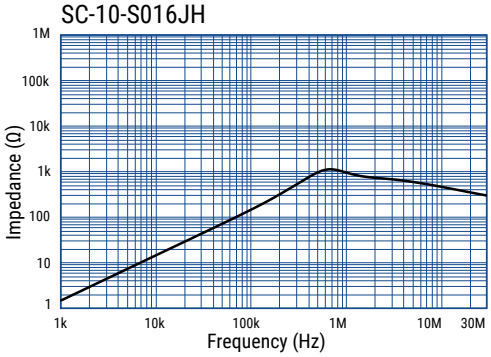
SC-35-SD040J



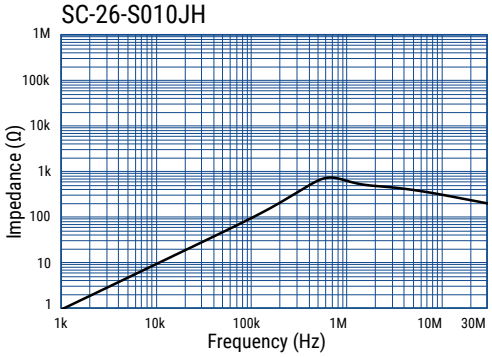
SC-07-S045JH



SC-10-S016JH



SC-26-S010JH



Packaging

Type	Packaging Type	Pieces Per Box
SC-01-S07J	Tray	200
SC-10-S30JH		80
SC-20-SE10J		60
SC-35-SD040J		18
SC-07-S045JH		80
SC-10-S016JH		60
SC-26-S010JH		

Handling Precautions

Precautions for product storage
AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values
The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.

AC Line Filters

Common Mode SCR-H Coils, SCR-H Series, High Impedance Type

Overview

The KEMET SCR-H coils are common mode chokes with a wide variety of characteristics. These toroidal coils are designed with our proprietary high permeability ferrite S18H cores and are useful in various noise countermeasure fields.

Applications

- Industrial equipment
- Home appliances
- Power supplies

Benefits

- Proprietary S18H ferrite material
- High permeability
- High impedance
- Space saving due to high permeability material
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and cap

Part Number System

SCR	31H-	225-	2R0	A	014	J	
Series	Dimension and Material Code (See Dimensions)	Rated Current (A)	Wire Diameter (mm)	Windings	Inductance (mH) Minimum	Terminal Base Type	Internal Control Code
SCR	31H 31HA Note:"H" means S18H use	xxx = xx.x A Examples: 045 = 4.5 A 225 = 22.5 A	R = Decimal point Examples: 0R8 = 0.8 mm 2R0 = 2.0 mm	A = Single	xxx = xx.xmH Examples: 014 = 1.4 mH Note: With exceptions, see Table 1 for details.	J = Vertical type JH = Horizontal type	Blank P

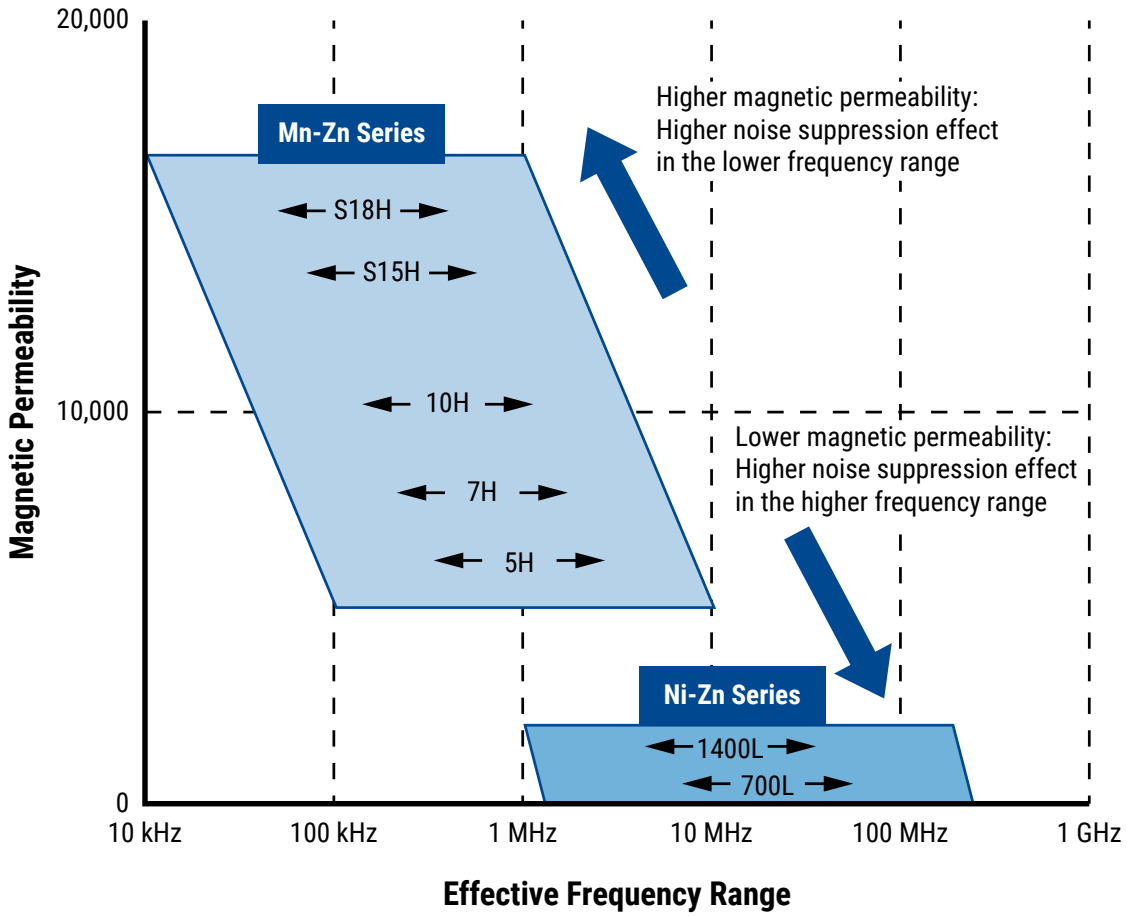
Magnetic Permeability of Ferrite Material

In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band.
Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band.
A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1. Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



Dimensions – Millimeters

Figure 1

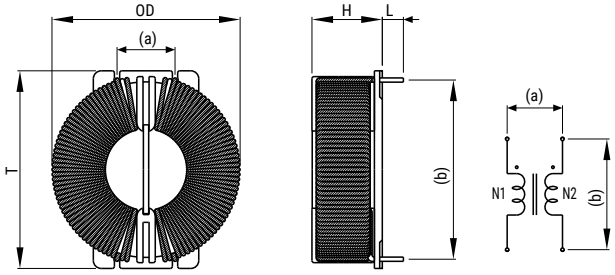


Figure 2

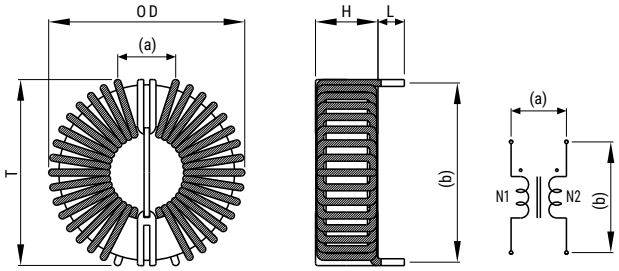
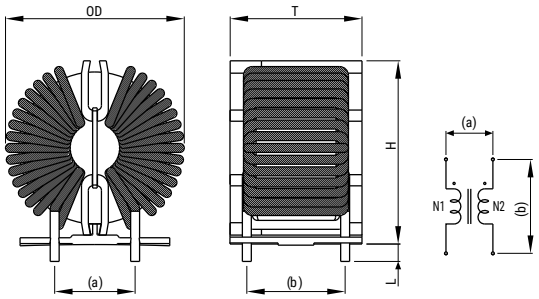


Figure 3



Part Name	Dimensions (mm)				Pin Pitch[1] (Reference)		Figure
	OD (Maximum)	T (Maximum)	H (Maximum)	L	a	b	
SCR31HA-045-0R8A080JH-P	37.5	38.5	15.0	4.0±1.0	11.0	34.0	Fig. 1
SCR31HA-070-1R1A039JH-P	37.5	38.5	16.5	4.0±1.0	11.0	34.0	Fig. 1
SCR31HA-120-1R3A012H	39.0	38.0	15.5	5.0±2.0	10.0	35.0	Fig. 2
SCR31H-225-2R0A014J	45.0	31.0	44.0	5.0±2.0	18.0	22.0	Fig. 3

[1] *Pin pitch listed above for reference only. Values not guaranteed.*

Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

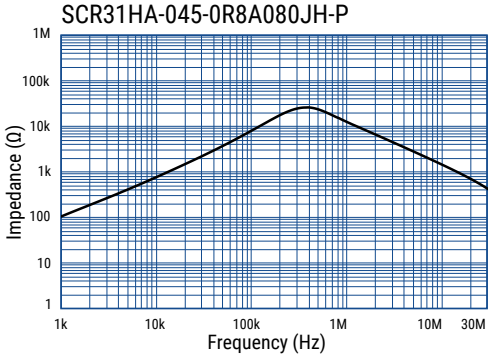
Item	Performance Characteristics
Rated Voltage	250 VAC/VDC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	4.5 – 22.5 A
Rated Inductance Range	1.2 – 8.05 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–40°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

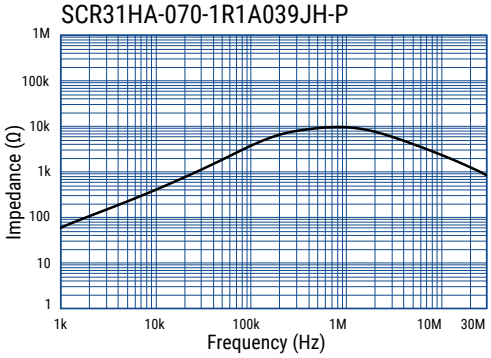
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SCR31HA-045-0R8A080JH-P	4.5	8.05	63.6	60	0.8	31.6
SCR31HA-070-1R1A039JH-P	7.0	3.85	24.0	54	1.1	37.0
SCR31HA-120-1R3A012H	12.0	1.20	9.6	60	1.3	31.6
SCR31H-225-2R0A014J	22.5	1.40	5.0	68	2.0	87.0

Frequency Characteristics

SCR31HA-045-0R8A080JH-P



SCR31HA-070-1R1A039JH-P



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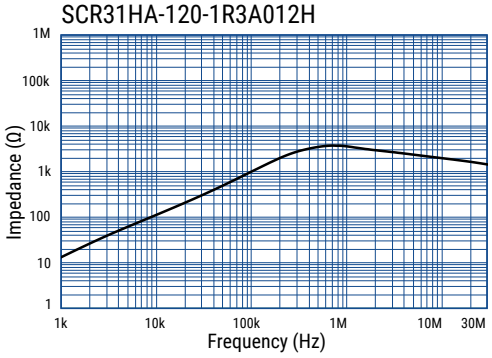
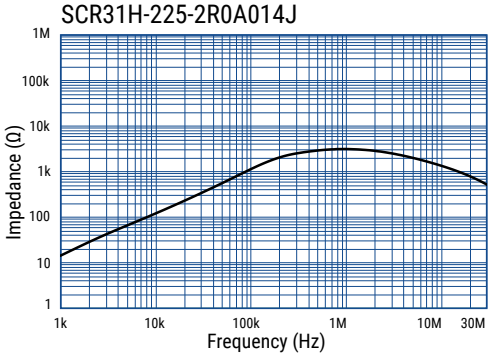


SCR31H-225-2R0A014J



Packaging

Type	Packaging Type	Pieces Per Box
SCR31HA-045-0R8A080JH-P	Tray	125
SCR31HA-070-1R1A039JH-P		
SCR31HA-120-1R3A012H		
SCR31H-225-2R0A014J		60

Handling Precautions

Precautions for product storage

AC Line Filters should be stored in normal working environments. While the chokes themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C and maximum storage humidity not exceed 70% relative humidity. Atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 months of receipt.

Product temperature rise values

The values listed for temperature rise are the result of self-heating in wires when the rated current (commercial frequency) is applied.

When using the product, check and evaluate the value of the core temperature rise under actual operating conditions.