AC Line Filters

Common Mode SSR Coils, 10V/H Series, High Impedance Type

Overview

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

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- Large inductance due to non-divided bobbin
- Compact size, low profile, and lightweight
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSR	10	V-	04	910
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSR	10	H = Horizontal, bobbin without sectional winding structure V = Vertical, bobbin without sectional winding structure	0x = 0.x A xx = x.x A Examples: 04 = 0.4 A 13 = 1.3 A	xxx = xx.x mH 0xx = x.x mH Examples: 910 = 91.0 mH 016 = 1.6 mH

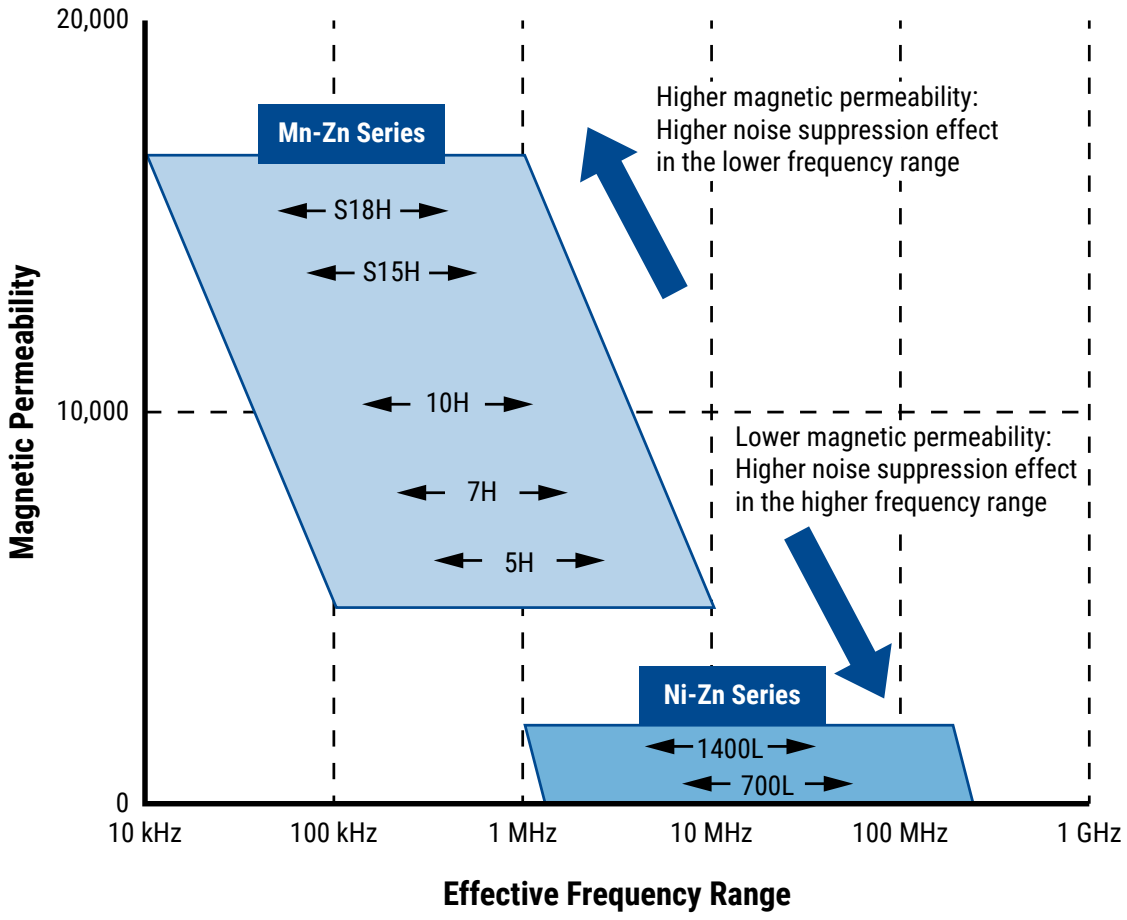
Magnetic Permeability of Ferrite Material

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.

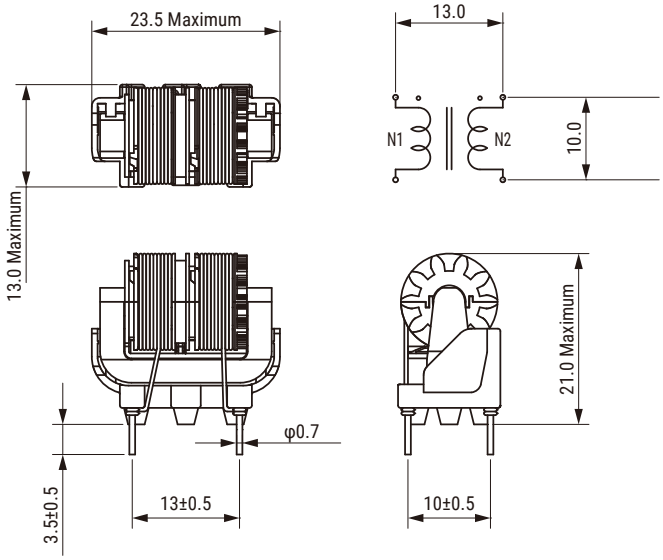
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

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

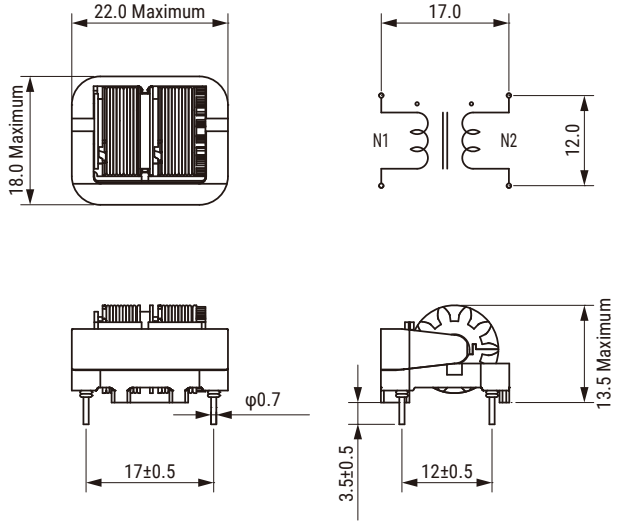


Dimensions – Millimeters

● SSR10V



● SSR10H



Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.

Performance Characteristics

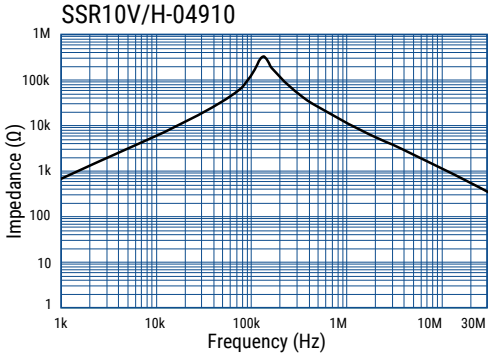
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.4 – 3.0 A
Rated Inductance Range	1.6 – 91.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSR10H-04910	0.4	91.0	2.80	55	0.20	9
SSR10V-04910	0.4	91.0	2.80	55	0.20	9
SSR10H-05595	0.5	59.5	1.70	55	0.23	9
SSR10V-05595	0.5	59.5	1.70	55	0.23	9
SSR10H-06475	0.6	47.5	1.30	55	0.25	9
SSR10V-06475	0.6	47.5	1.30	55	0.25	9
SSR10H-07330	0.7	33.0	0.90	55	0.28	9
SSR10V-07330	0.7	33.0	0.90	55	0.28	9
SSR10H-08220	0.8	22.0	0.65	55	0.30	9
SSR10V-08220	0.8	22.0	0.65	55	0.30	9
SSR10H-10170	1.0	17.0	0.48	55	0.32	9
SSR10V-10170	1.0	17.0	0.48	55	0.32	9
SSR10H-11140	1.1	14.0	0.37	55	0.35	9
SSR10V-11140	1.1	14.0	0.37	55	0.35	9
SSR10H-13097	1.3	9.7	0.27	55	0.37	9
SSR10V-13097	1.3	9.7	0.27	55	0.37	9
SSR10H-14140	1.4	14.0	0.40	80	0.35	9
SSR10H-17058	1.7	5.8	0.18	60	0.40	9
SSR10V-17058	1.7	5.8	0.18	60	0.40	9
SSR10V-21038	2.1	3.8	0.15	65	0.40	9
SSR10H-22034	2.2	3.4	0.11	60	0.45	9
SSR10V-22034	2.2	3.4	0.11	60	0.45	9
SSR10H-30016	3.0	1.6	0.06	65	0.50	9
SSR10V-30016	3.0	1.6	0.06	65	0.50	9

Frequency Characteristics

SSR10V/H-04910



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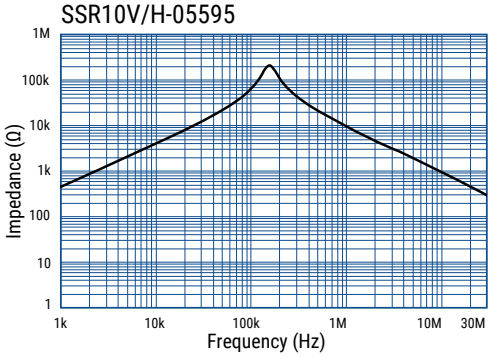

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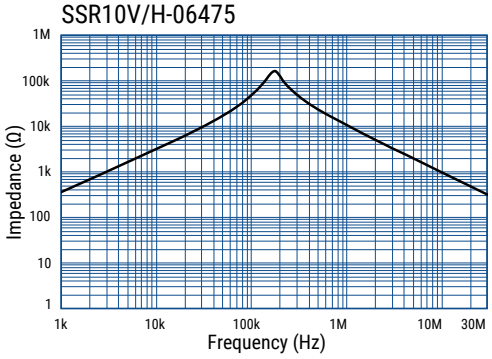

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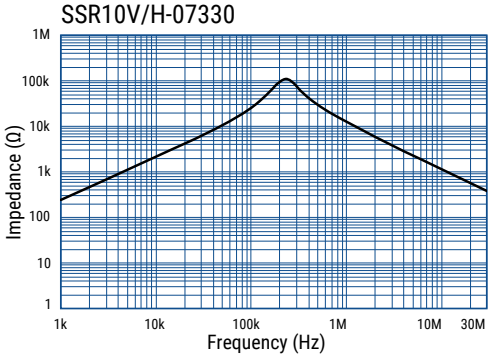

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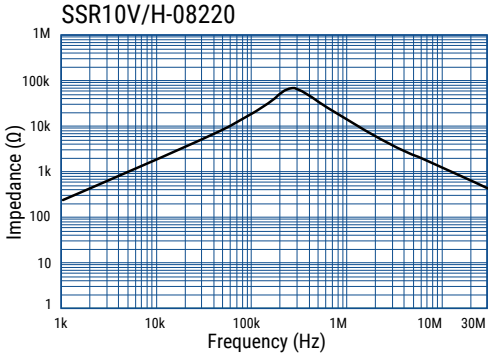

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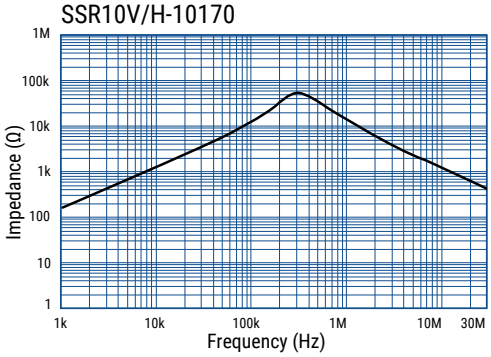

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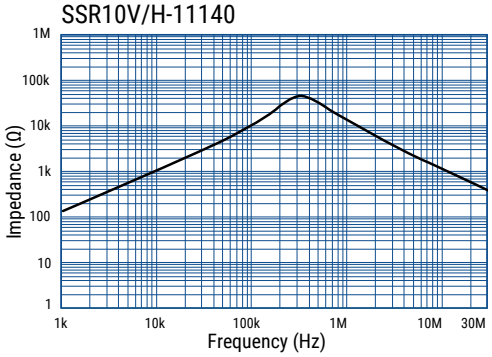

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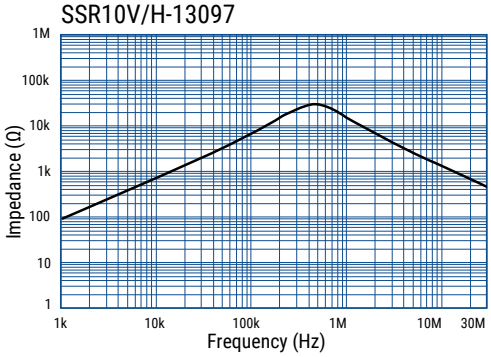
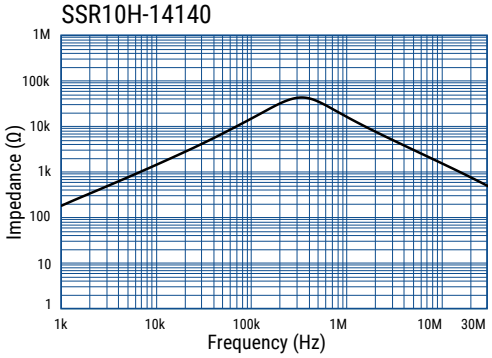


Frequency Characteristics cont.

SSR10H-14140



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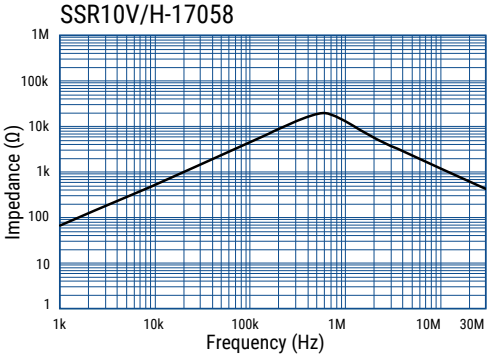

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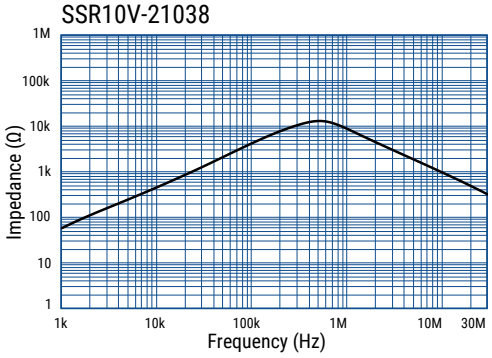

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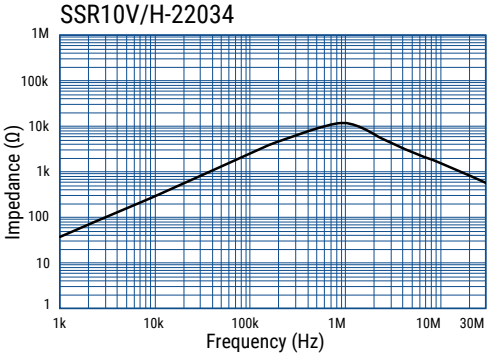

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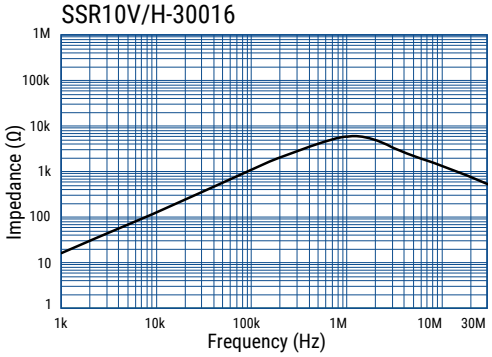

Packaging

Type	Packaging Type	Pieces Per Box
SSR10H	Tray	300
SSR10V		600

AC Line Filters

Common Mode SSR Coils, 10VS/HS Series, Wide Range Impedance Type

Overview

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

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance in wide frequency range due to divided bobbin
- Compact size, low profile, and lightweight
- Operating temperature range from −40°C to +120°C
- UL 94 V-0 flame retardant rated base and bobbin

Part Number System

SSR	10	VS-	04	745
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSR	10	HS = Horizontal, bobbin with sectional winding structure VS = Vertical, bobbin with sectional winding structure	0x = 0.x A xx = x.x A Examples: 04 = 0.4 A 13 = 1.3 A	xxx = xx.x mH 0xx = x.x mH Examples: 745 = 74.5 mH 013 = 1.3 mH

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.

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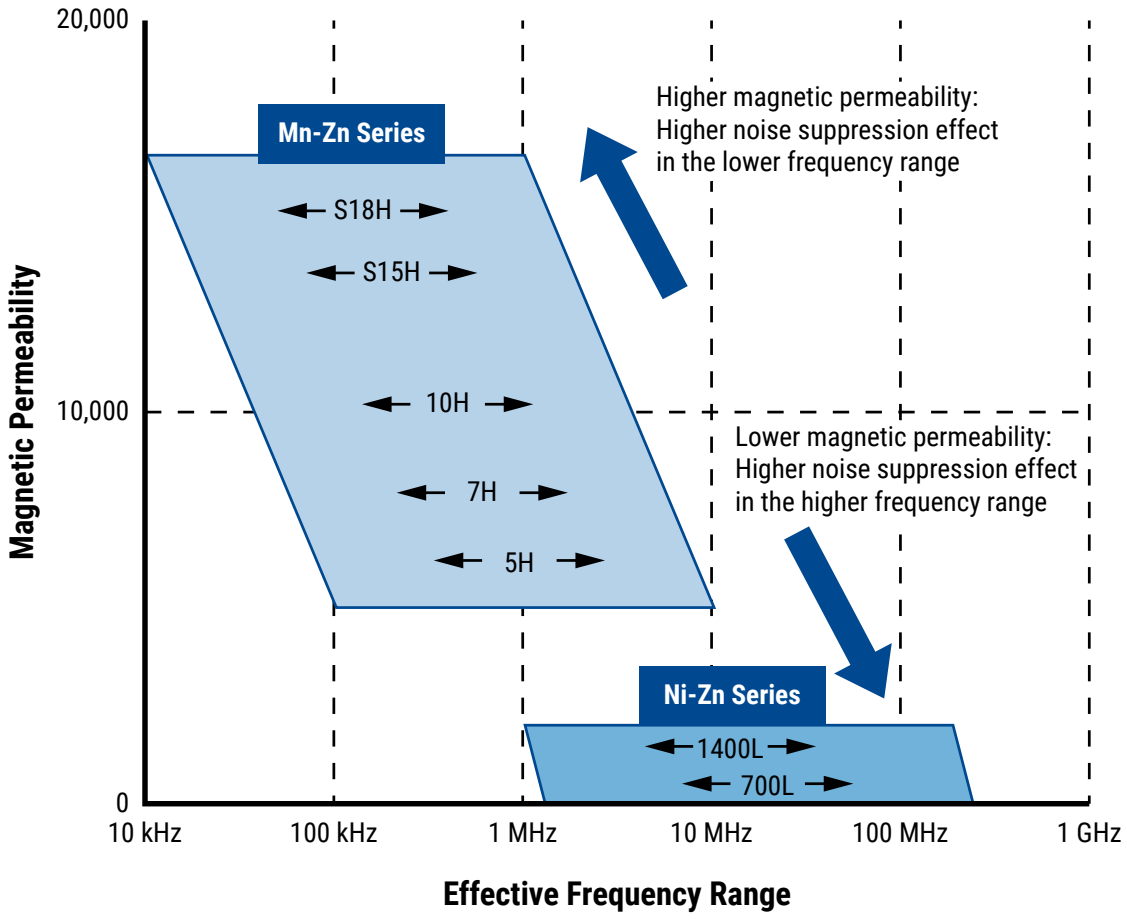
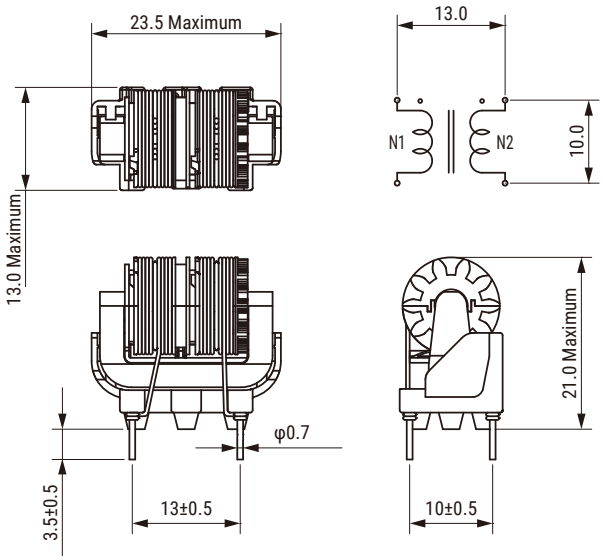
Other materials can also be available on request.

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



Dimensions – Millimeters

● SSR10VS



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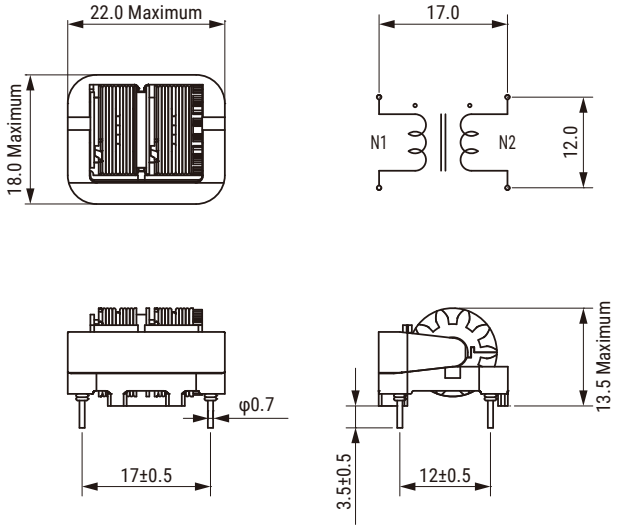


Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.

Performance Characteristics

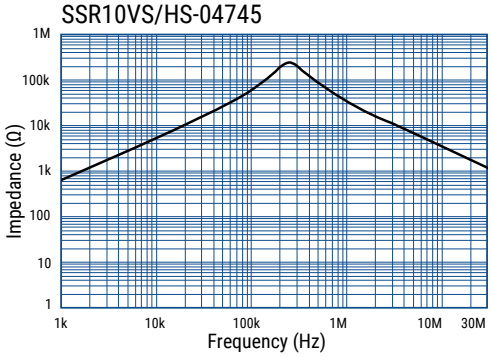
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.4 – 3.0 A
Rated Inductance Range	1.3 – 74.5 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSR10HS-04745	0.4	74.5	2.50	50	0.20	9
SSR10VS-04745	0.4	74.5	2.50	50	0.20	9
SSR10HS-05495	0.5	49.5	1.60	50	0.23	9
SSR10VS-05495	0.5	49.5	1.60	50	0.23	9
SSR10HS-06385	0.6	38.5	1.20	50	0.25	9
SSR10VS-06385	0.6	38.5	1.20	50	0.25	9
SSR10HS-07265	0.7	26.5	0.85	50	0.28	9
SSR10VS-07265	0.7	26.5	0.85	50	0.28	9
SSR10HS-08180	0.8	18.0	0.60	50	0.30	9
SSR10VS-08180	0.8	18.0	0.60	50	0.30	9
SSR10HS-10135	1.0	13.5	0.43	50	0.32	9
SSR10VS-10135	1.0	13.5	0.43	50	0.32	9
SSR10HS-11110	1.1	11.0	0.33	50	0.35	9
SSR10VS-11110	1.1	11.0	0.33	50	0.35	9
SSR10HS-13075	1.3	7.5	0.24	50	0.37	9
SSR10VS-13075	1.3	7.5	0.24	50	0.37	9
SSR10HS-17048	1.7	4.8	0.17	55	0.40	9
SSR10VS-17048	1.7	4.8	0.17	55	0.40	9
SSR10HS-22026	2.2	2.6	0.10	55	0.45	9
SSR10VS-22026	2.2	2.6	0.10	55	0.45	9
SSR10HS-30013	3.0	1.3	0.06	60	0.50	9
SSR10VS-30013	3.0	1.3	0.06	60	0.50	9

Frequency Characteristics

SSR10VS/HS-04745



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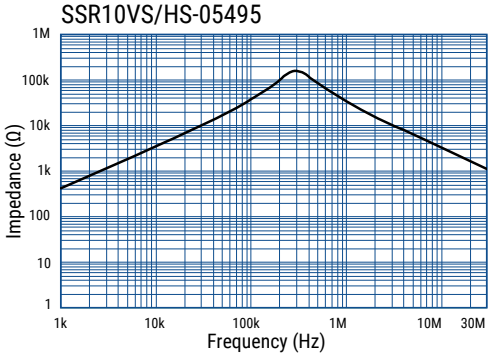
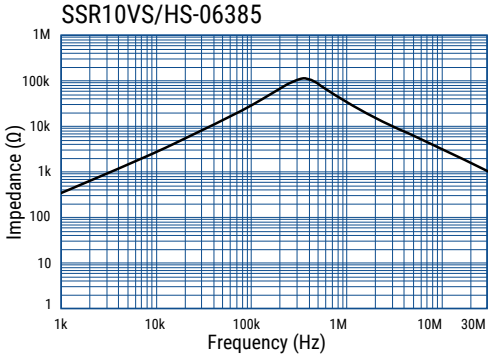
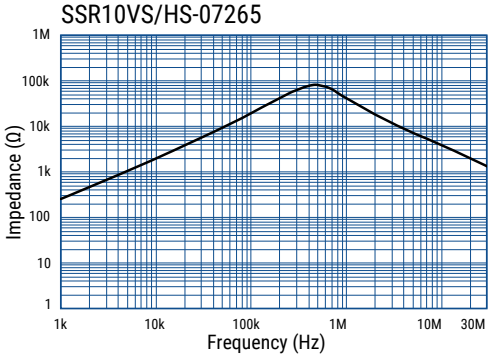


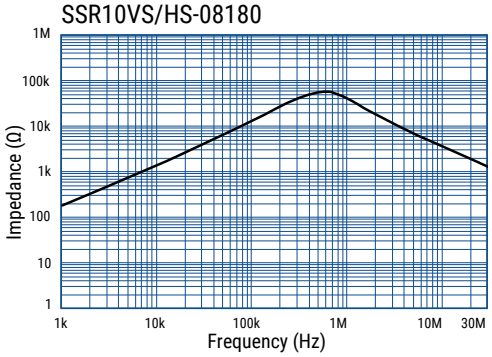
SSR10VS/HS-06385



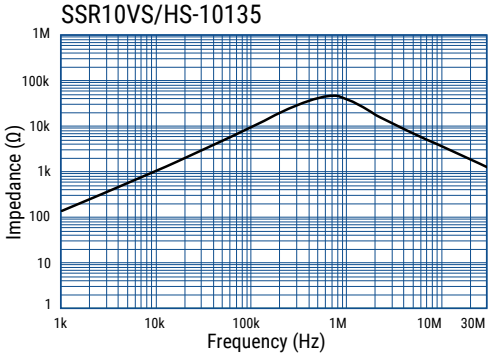
SSR10VS/HS-07265



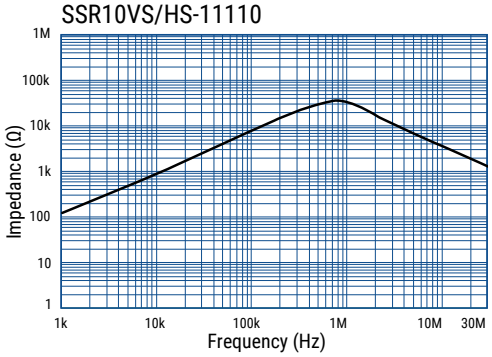
SSR10VS/HS-08180



SSR10VS/HS-10135



SSR10VS/HS-11110



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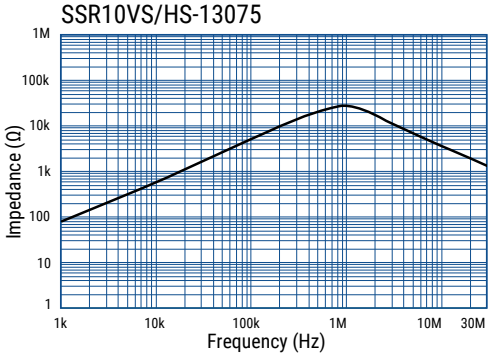
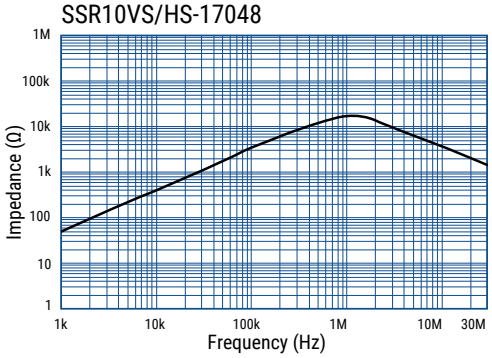


Frequency Characteristics cont.

SSR10VS/HS-17048



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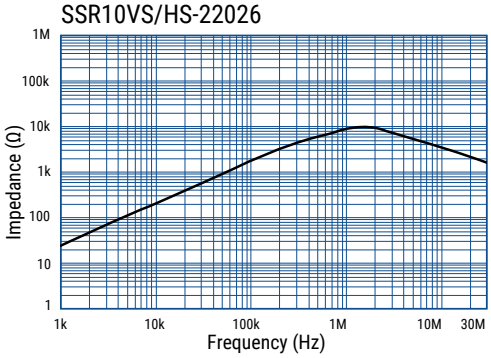
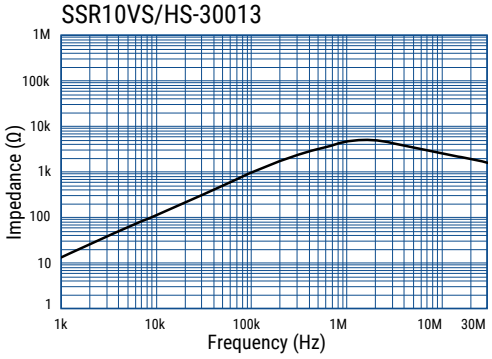


SSR10VS/HS-30013



Packaging

Type	Packaging Type	Pieces Per Box
SSR10HS	Tray	300
SSR10VS		600

AC Line Filters

Common Mode SSR Coils 21NV/NH Series, High Impedance Type

Overview

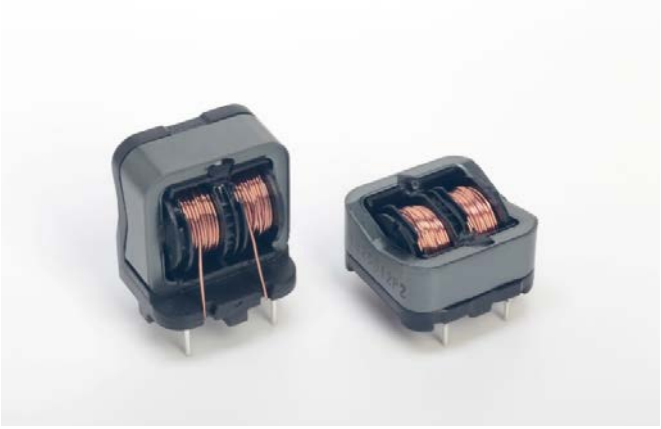
The KEMET SSR coils are common mode chokes with a wide variety of characteristics. These gear type coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- Large inductance due to non-divided bobbin
- Compact size, low profile, and lightweight
- Operating temperature range from −40°C to +120°C
- UL 94 V-0 flame retardant rated base and bobbin



Part Number System

SSR	21N	V-	03	1810
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSR	21N	H = Horizontal, bobbin without sectional winding structure V = Vertical, bobbin without sectional winding structure	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xxx0 = xxx mH xxx = xx.x mH Examples: 1810 = 181 mH 064 = 6.4 mH

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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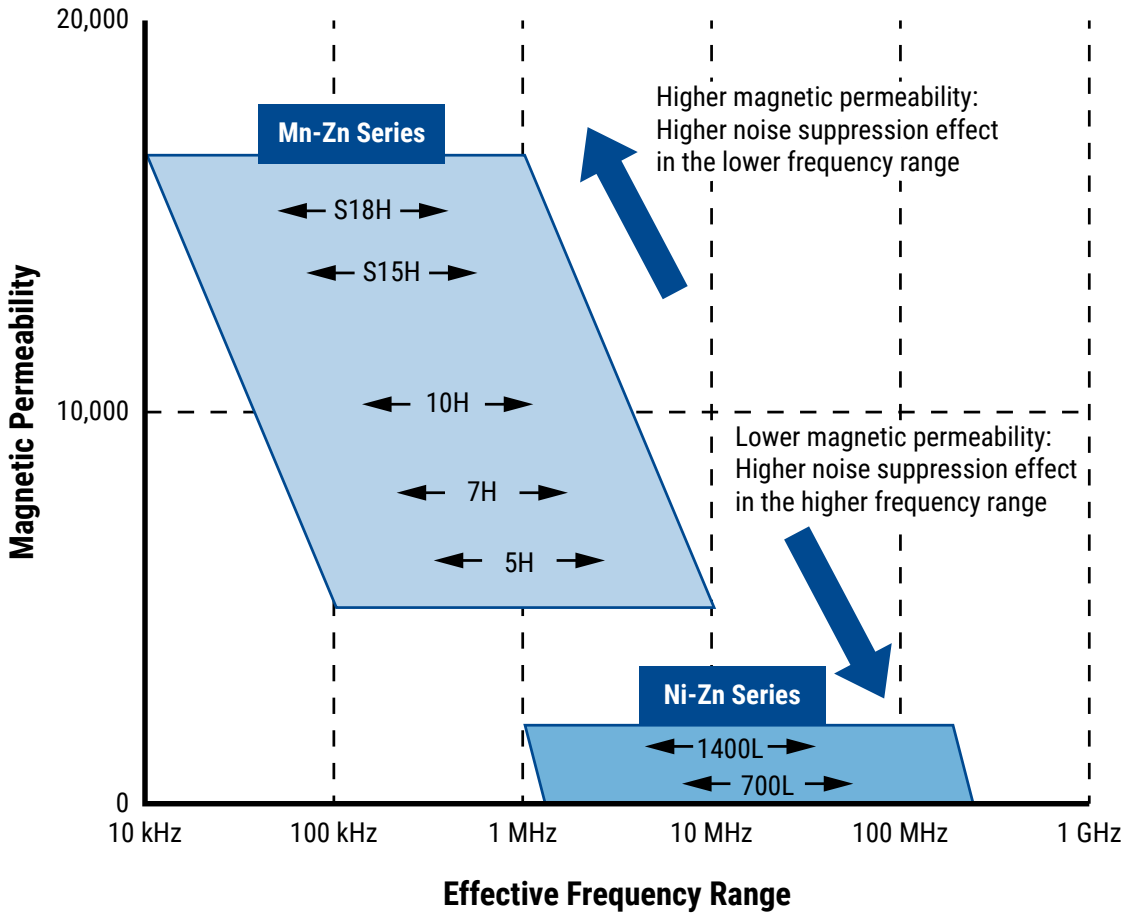
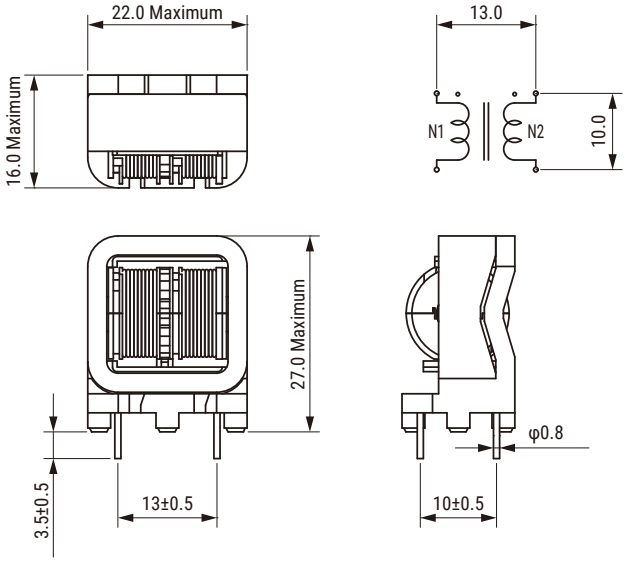
Other materials can also be available on request.

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



Dimensions – Millimeters

● SSR21NV



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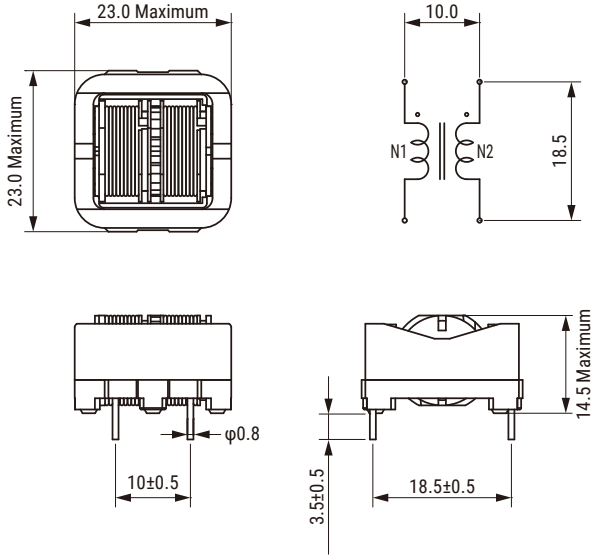


Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

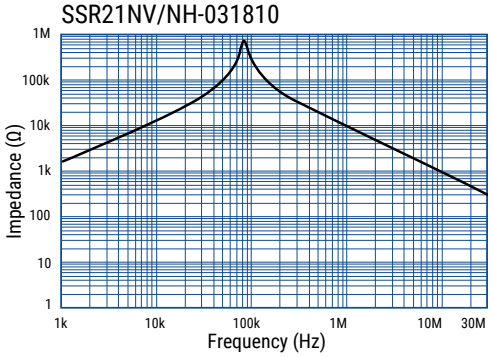
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 2.0 A
Rated Inductance Range	6.4 – 181.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSR21NH-031810	0.3	181.0	2.85	45	0.20	13.0
SSR21NV-031810	0.3	181.0	2.85	45	0.20	14.5
SSR21NH-041290	0.4	129.0	1.85	45	0.23	13.0
SSR21NV-041290	0.4	129.0	1.85	45	0.23	14.5
SSR21NH-05795	0.5	79.5	1.2	45	0.25	13.0
SSR21NV-05795	0.5	79.5	1.2	45	0.25	14.5
SSR21NH-06500	0.6	50.0	0.76	45	0.28	13.0
SSR21NV-06500	0.6	50.0	0.76	45	0.28	14.5
SSR21NH-07405	0.7	40.5	0.61	45	0.30	13.0
SSR21NV-07405	0.7	40.5	0.61	45	0.30	14.5
SSR21NH-08325	0.8	32.5	0.47	45	0.32	13.0
SSR21NV-08325	0.8	32.5	0.47	45	0.32	14.5
SSR21NH-10250	1.0	25.0	0.36	45	0.35	13.0
SSR21NV-10250	1.0	25.0	0.36	45	0.35	14.5
SSR21NH-12175	1.2	17.5	0.27	45	0.37	13.0
SSR21NV-12175	1.2	17.5	0.27	45	0.37	14.5
SSR21NH-13140	1.3	14.0	0.21	45	0.40	13.0
SSR21NV-13140	1.3	14.0	0.21	45	0.40	14.5
SSR21NH-15097	1.5	9.7	0.14	45	0.45	13.0
SSR21NV-15097	1.5	9.7	0.14	45	0.45	14.5
SSR21NH-20064	2.0	6.4	0.09	45	0.50	13.0
SSR21NV-20064	2.0	6.4	0.09	45	0.50	14.5

Frequency Characteristics

SSR21NV/NH-031810



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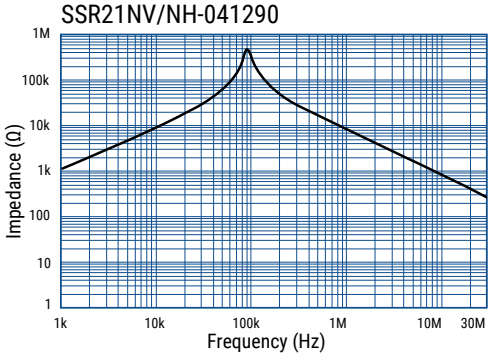

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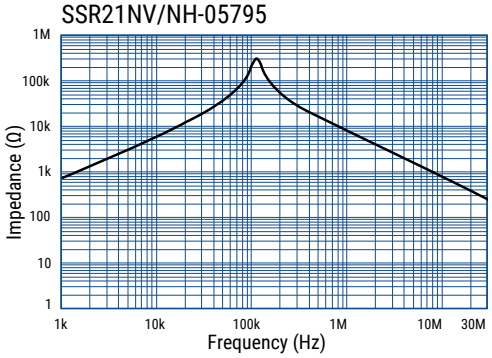

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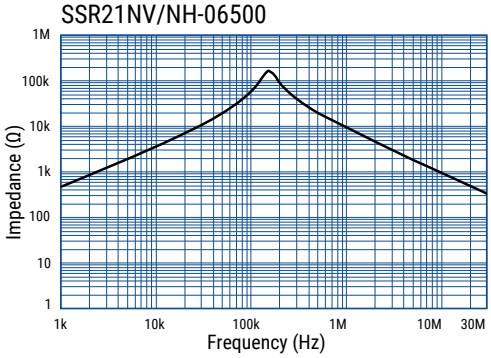

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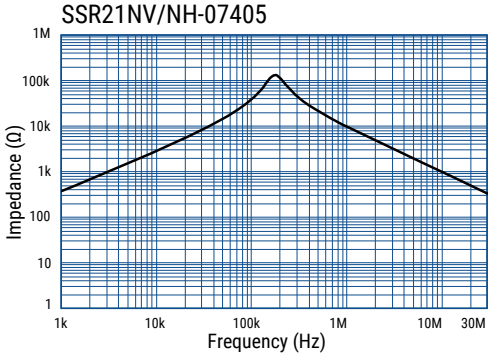

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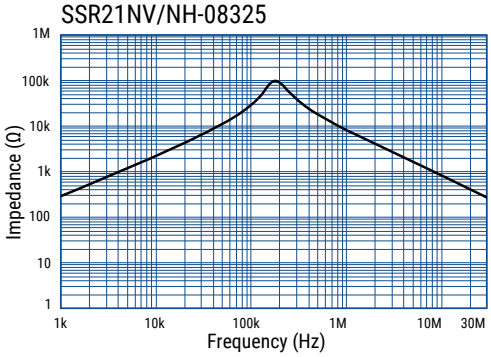

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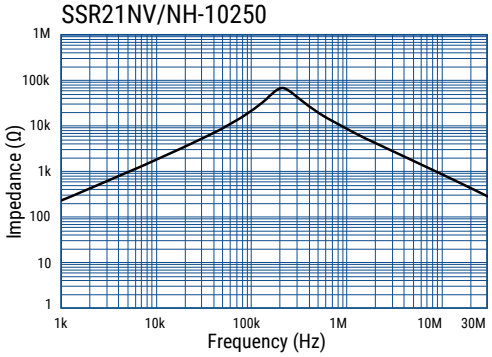

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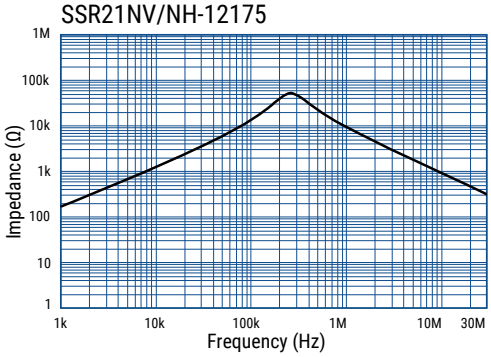
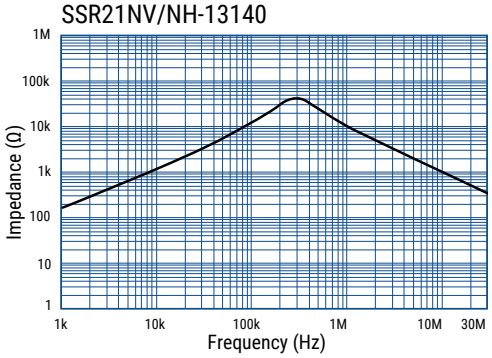


Frequency Characteristics cont.

SSR21NV/NH-13140



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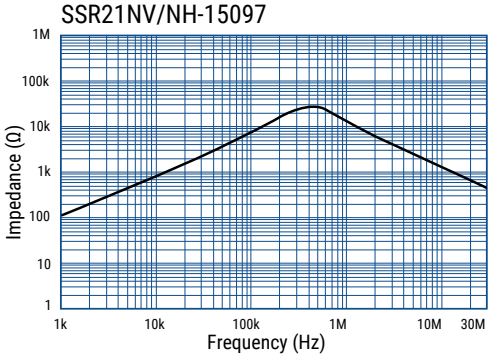

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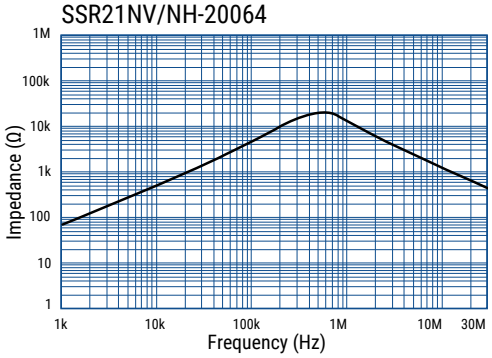


Packaging

Type	Packaging Type	Pieces Per Box
SSR21NH	Tray	420
SSR21NV		450

AC Line Filters

Common Mode SSR Coils, 21NVS/NHS Series, Wide Range Impedance Type

Overview

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

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- High impedance in wide frequency range due to divided bobbin
- Compact size, low profile, and lightweight
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSR	21N	VS-	03	1590
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSR	21N	HS = Horizontal, bobbin with sectional winding structure VS = Vertical, bobbin with sectional winding structure	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xxx0 = xxx mH xxx = xx.x mH Examples: 1590 = 159 mH 034 = 3.4 mH

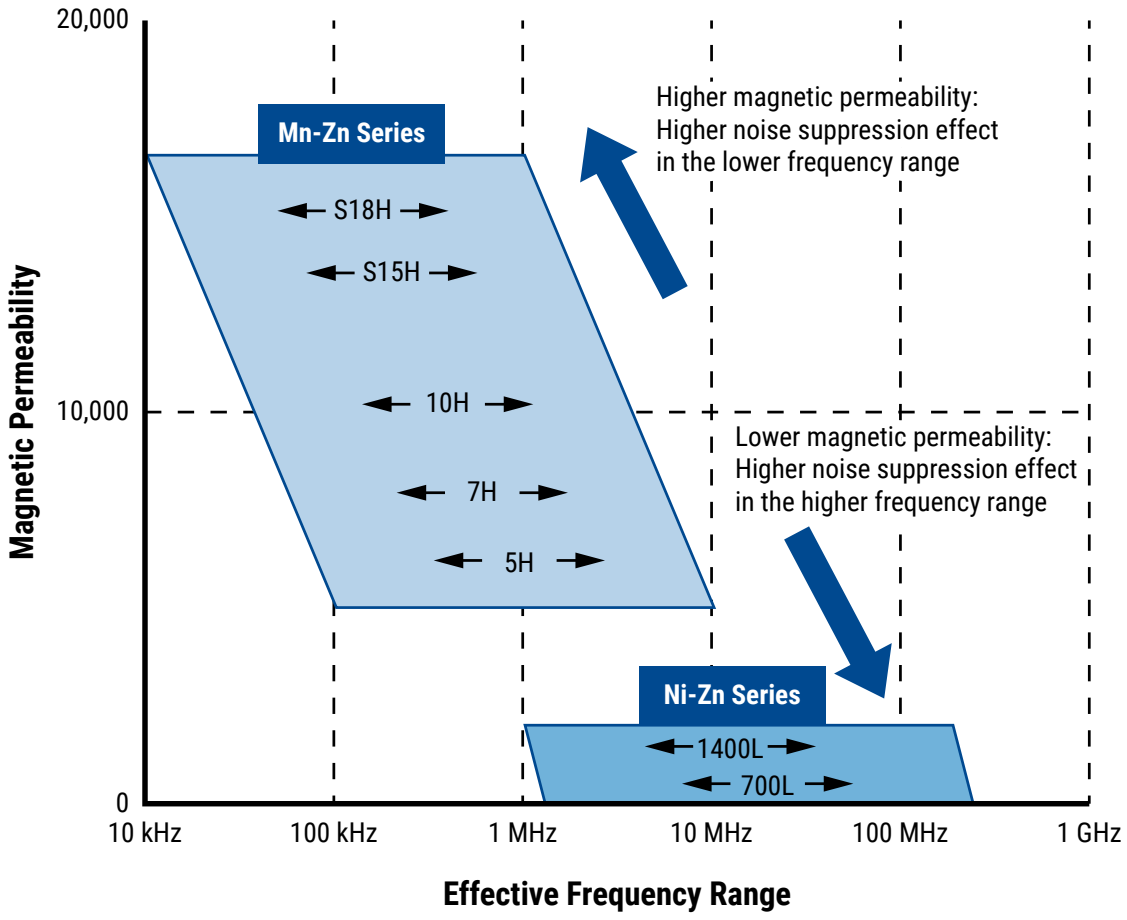
Magnetic Permeability of Ferrite Material

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.

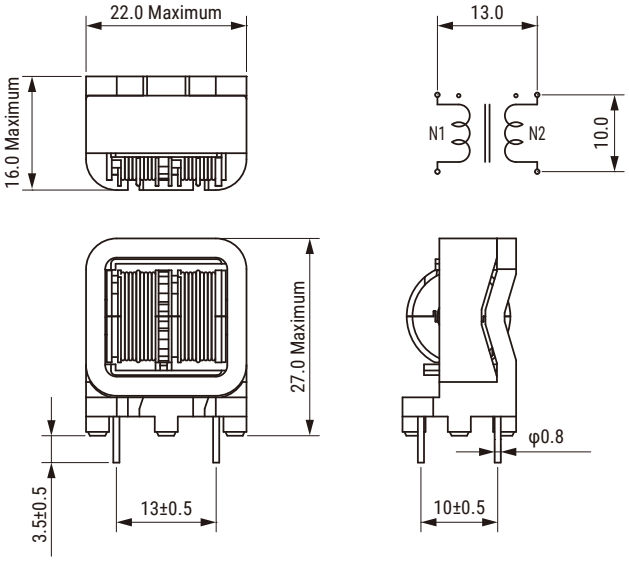
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

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



Dimensions – Millimeters

● SSR21NVS



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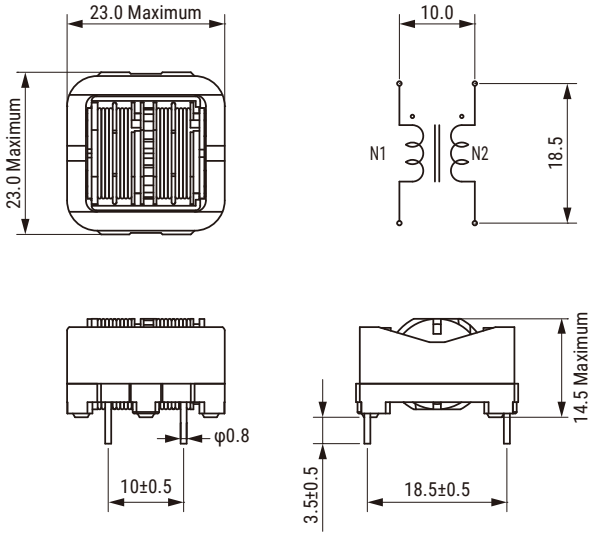


Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

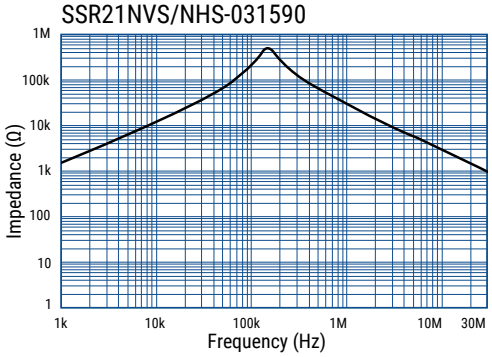
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current AC Range	0.3 – 2.0 A
Rated Inductance Range	3.4 – 159.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSR21NHS-031590	0.3	159.0	2.85	45	0.20	13.0
SSR21NVS-031590	0.3	159.0	2.85	45	0.20	14.5
SSR21NHS-041090	0.4	109.0	1.8	45	0.23	13.0
SSR21NVS-041090	0.4	109.0	1.8	45	0.23	14.5
SSR21NHS-05570	0.5	57.0	1.06	45	0.25	13.0
SSR21NVS-05570	0.5	57.0	1.06	45	0.25	14.5
SSR21NHS-06385	0.6	38.5	0.71	45	0.28	13.0
SSR21NVS-06385	0.6	38.5	0.71	45	0.28	14.5
SSR21NHS-07290	0.7	29.0	0.53	45	0.30	13.0
SSR21NVS-07290	0.7	29.0	0.53	45	0.30	14.5
SSR21NHS-08235	0.8	23.5	0.42	45	0.32	13.0
SSR21NVS-08235	0.8	23.5	0.42	45	0.32	14.5
SSR21NHS-10160	1.0	16.0	0.29	45	0.35	13.0
SSR21NVS-10160	1.0	16.0	0.29	45	0.35	14.5
SSR21NHS-12135	1.2	13.5	0.24	45	0.37	13.0
SSR21NVS-12135	1.2	13.5	0.24	45	0.37	14.5
SSR21NHS-13110	1.3	11.0	0.19	45	0.40	13.0
SSR21NVS-13110	1.3	11.0	0.19	45	0.40	14.5
SSR21NHS-15082	1.5	8.2	0.13	45	0.45	13.0
SSR21NVS-15082	1.5	8.2	0.13	45	0.45	14.5
SSR21NHS-20034	2.0	3.4	0.07	45	0.50	13.0
SSR21NVS-20034	2.0	3.4	0.07	45	0.50	14.5

Frequency Characteristics

SSR21NVS/NHS-031590



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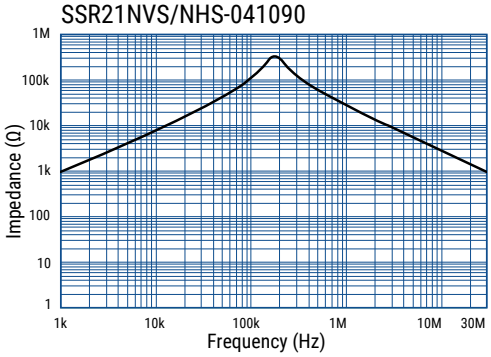

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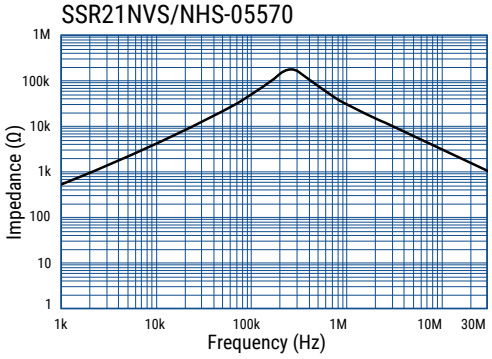

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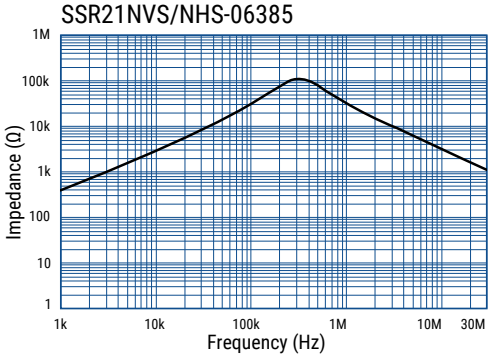

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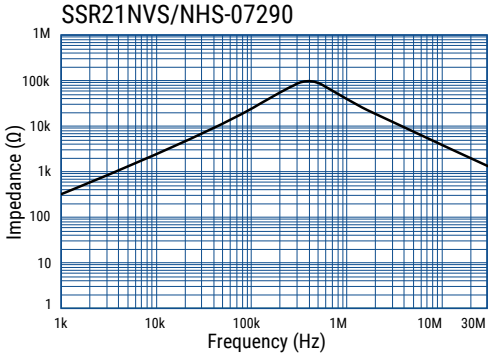

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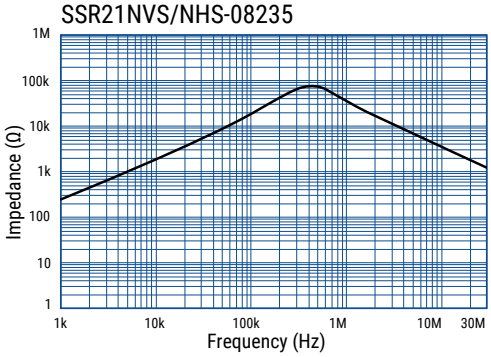

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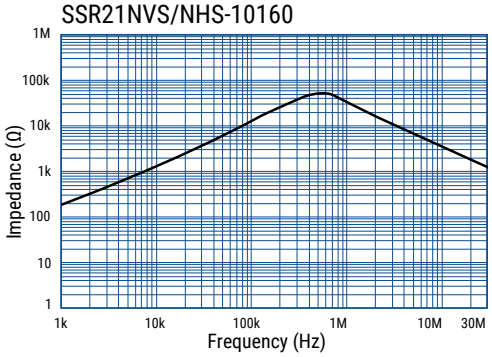
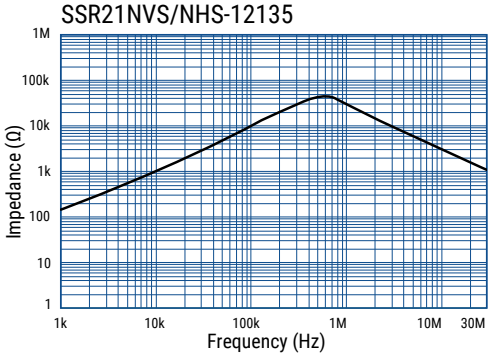
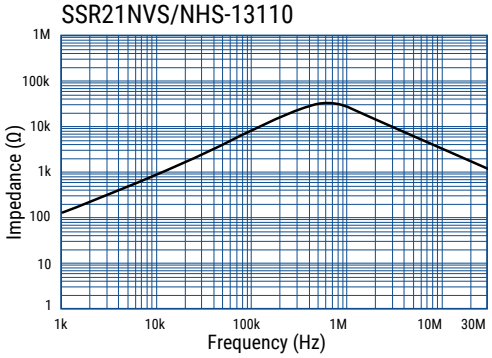


SSR21NVS/NHS-12135



Frequency Characteristics cont.

SSR21NVS/NHS-13110



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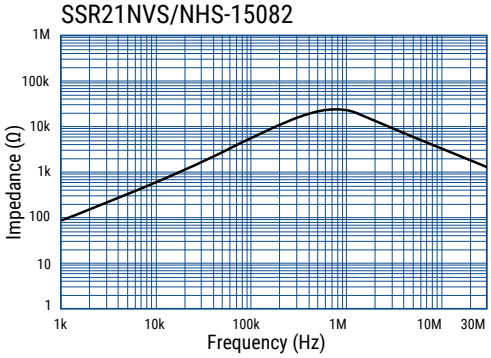

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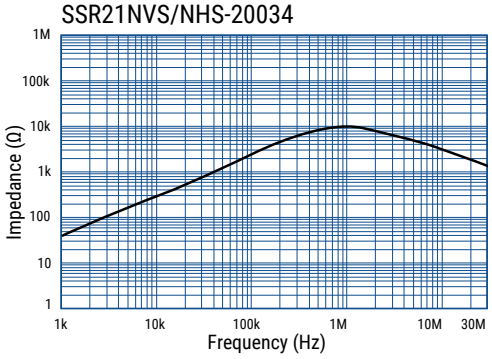


Packaging

Type	Packaging Type	Pieces Per Box
SSR21NHS	Tray	420
SSR21NVS		450

AC Line Filters

Common Mode SSR Coils, 21NV-M/NH-M Series, High Impedance Type

Overview

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

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- Higher performance due to additional windings
- Large inductance due to non-divided bobbin
- Compact size, low profile, and lightweight
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSR	21N	V-M	03	1900
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSR	21N	H-M = Horizontal, bobbin without sectional winding structure V-M = Vertical, bobbin without sectional winding structure	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xxx0 = xxx mH xxx = xx.x mH Examples: 1900 = 190 mH 064 = 6.4 mH

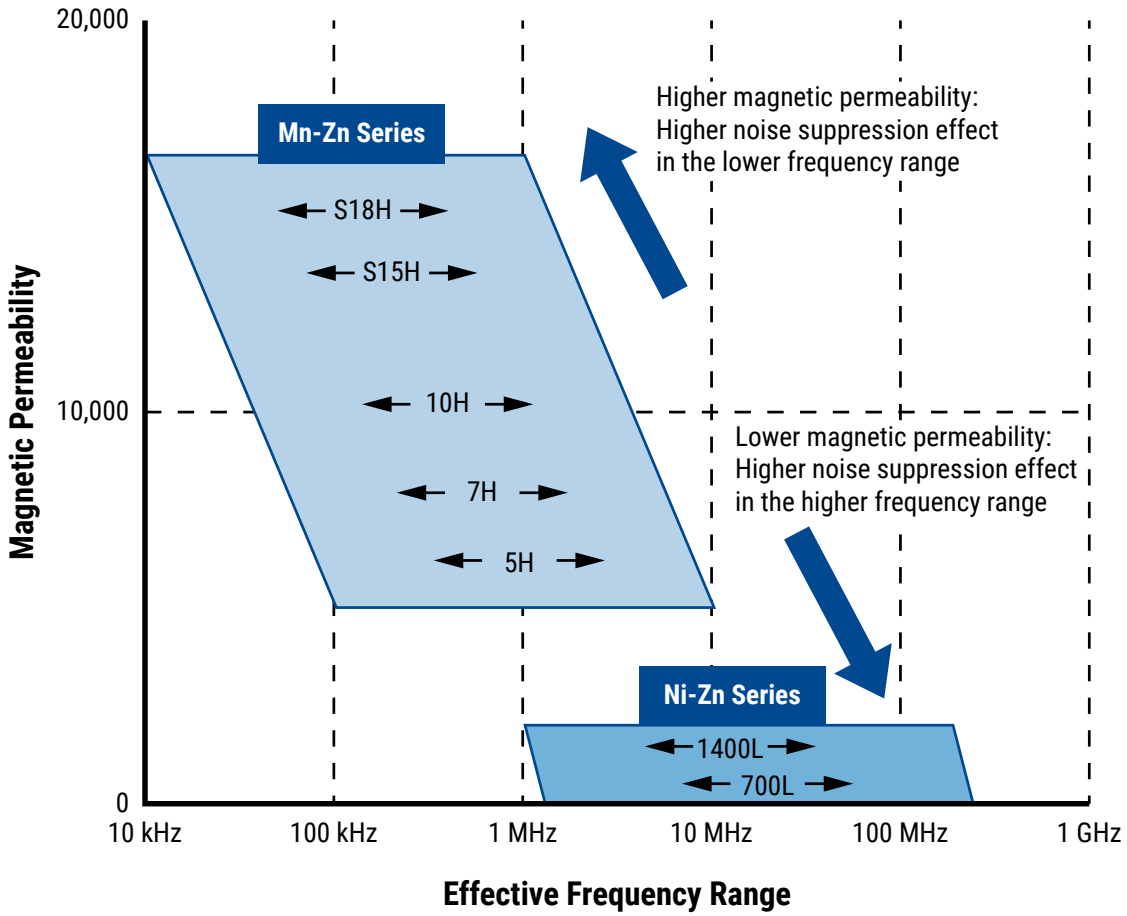
Magnetic Permeability of Ferrite Material

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.

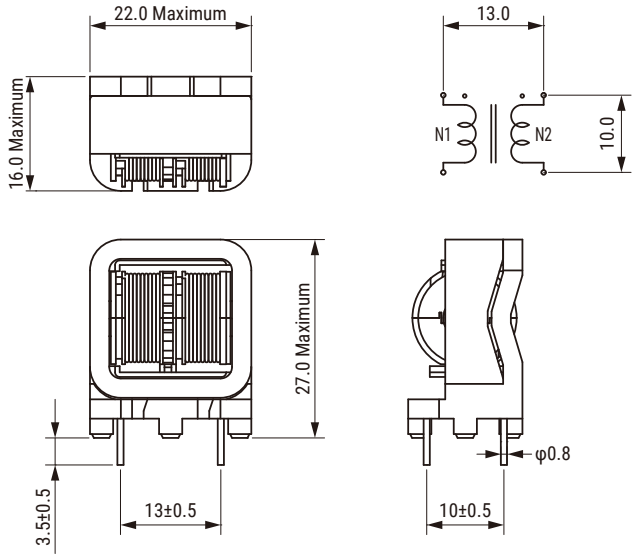
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

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



Dimensions – Millimeters

● SSR21NV-M



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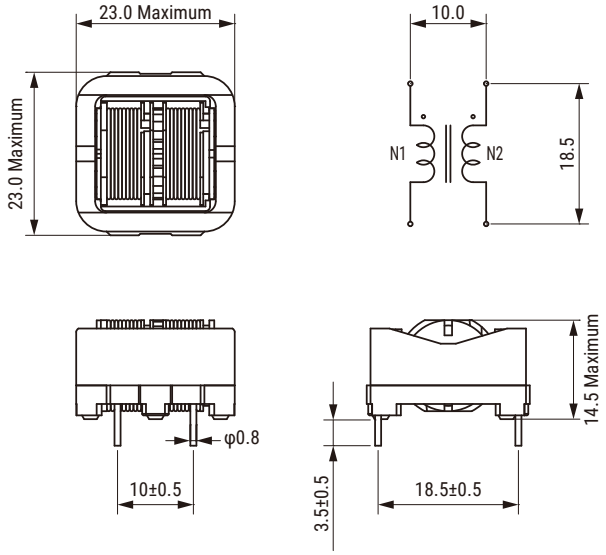


Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

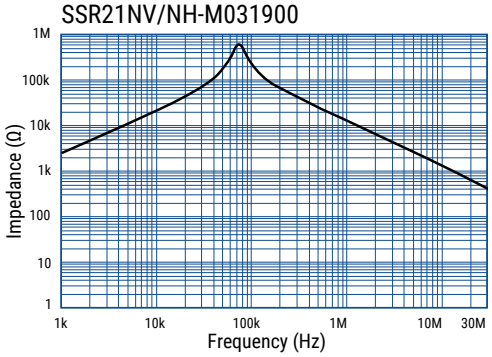
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current AC Range	0.3 – 3.5 A
Rated Inductance Range	4.7 – 190.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSR21NH-M031900	0.3	190.0	2.90	45	0.20	13.0
SSR21NV-M031900	0.3	190.0	2.90	45	0.20	14.5
SSR21NH-M041500	0.4	150.0	2.00	45	0.23	13.0
SSR21NV-M041500	0.4	150.0	2.00	45	0.23	14.5
SSR21NH-M051350	0.5	135.0	1.90	65	0.23	13.0
SSR21NV-M051350	0.5	135.0	1.90	65	0.23	14.5
SSR21NH-M061200	0.6	120.0	1.50	65	0.25	13.0
SSR21NV-M061200	0.6	120.0	1.50	65	0.25	14.5
SSR21NH-M07890	0.7	89.0	1.05	65	0.28	13.0
SSR21NV-M07890	0.7	89.0	1.05	65	0.28	14.5
SSR21NH-M08680	0.8	68.0	0.80	65	0.30	13.0
SSR21NV-M08680	0.8	68.0	0.80	65	0.30	14.5
SSR21NH-M10475	1.0	47.5	0.58	65	0.32	13.0
SSR21NV-M10475	1.0	47.5	0.58	65	0.32	14.5
SSR21NH-M12345	1.2	34.5	0.43	65	0.35	13.0
SSR21NV-M12345	1.2	34.5	0.43	65	0.35	14.5
SSR21NH-M15220	1.5	22.0	0.26	65	0.40	13.0
SSR21NV-M15220	1.5	22.0	0.26	65	0.40	14.5
SSR21NH-M18164	1.8	16.4	0.21	65	0.40	13.0
SSR21NV-M18164	1.8	16.4	0.21	65	0.40	14.5
SSR21NH-M20125	2.0	12.5	0.16	65	0.45	13.0
SSR21NV-M20125	2.0	12.5	0.16	65	0.45	14.5
SSR21NH-M25103	2.5	10.3	0.12	65	0.50	13.0
SSR21NV-M25103	2.5	10.3	0.12	65	0.50	14.5
SSR21NH-M30064	3.0	6.4	0.08	65	0.55	13.0
SSR21NV-M30064	3.0	6.4	0.08	65	0.55	14.5
SSR21NV-M35047	3.5	4.7	0.06	55	0.60	14.5

Frequency Characteristics

SSR21NV/NH-M031900



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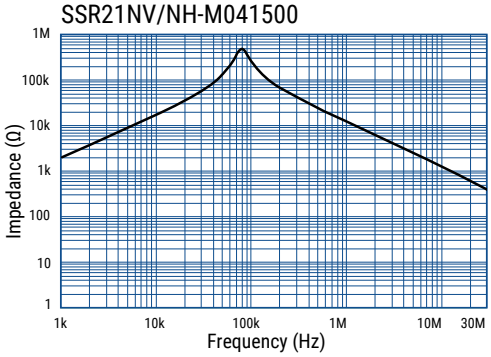

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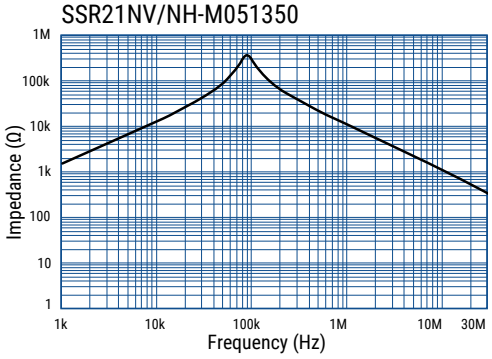

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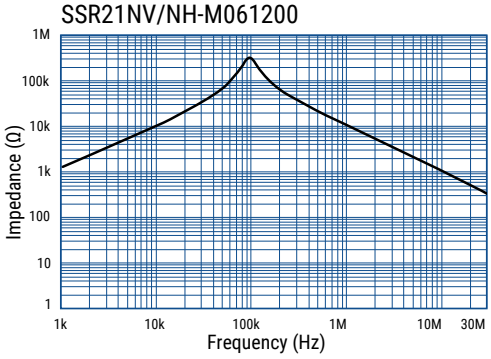

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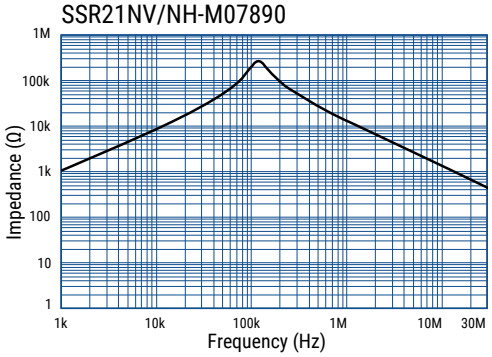

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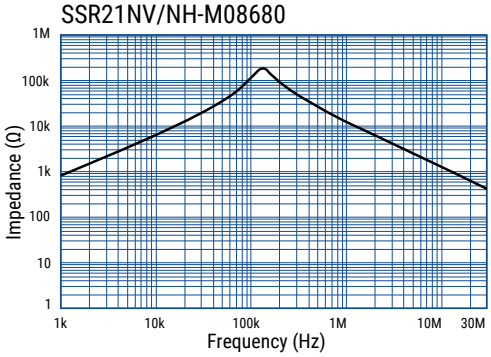

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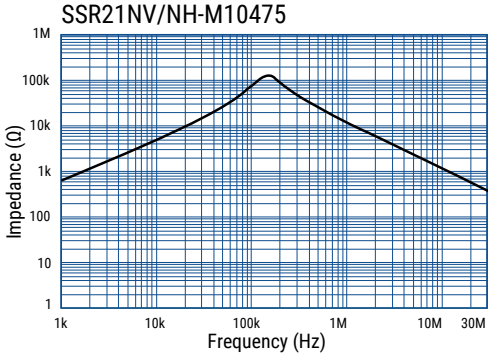
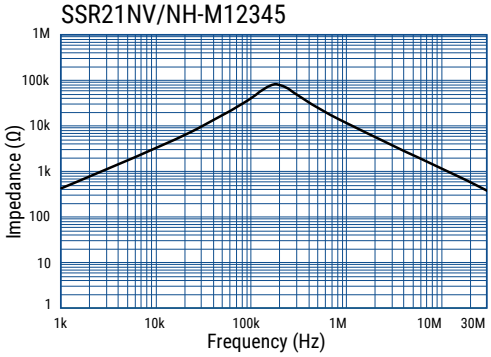
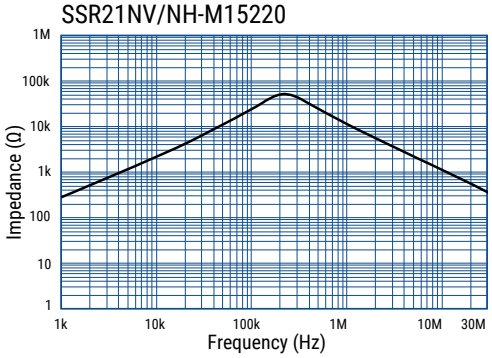


SSR21NV/NH-M12345



Frequency Characteristics cont.

SSR21NV/NH-M15220



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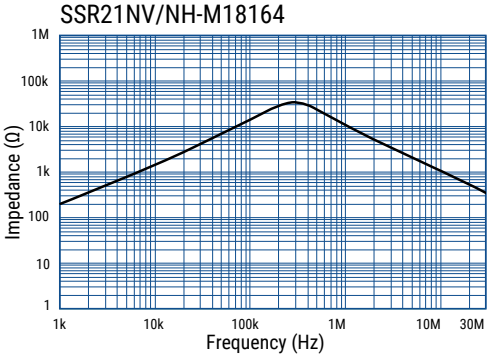

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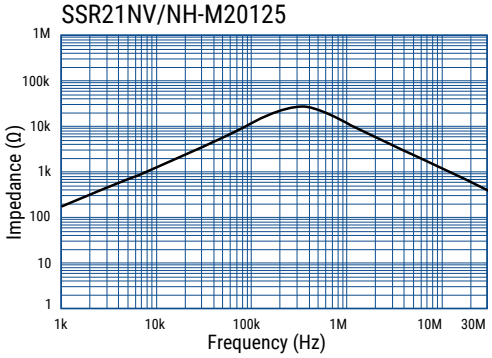

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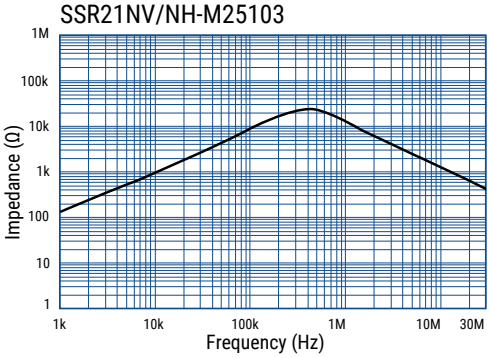
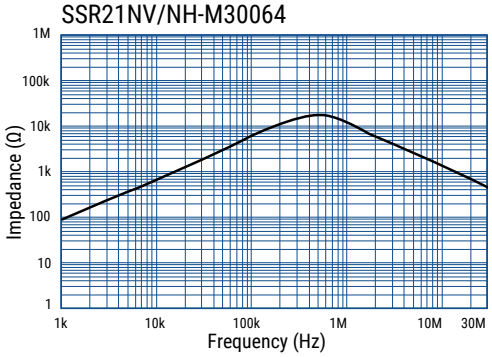
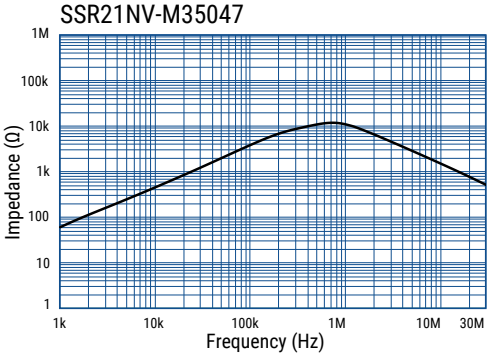


SSR21NV/NH-M30064



SSR21NV-M35047



Packaging

Type	Packaging Type	Pieces Per Box
SSR21NH-M	Tray	420
SSR21NV-M		450

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 SSR Coils, 21NVS-M/NHS-M Series, Wide Range Impedance Type

Overview

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

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S15H ferrite material
- High permeability
- Higher performance due additional windings
- High impedance in wide frequency range due to divided bobbin
- Compact size, low profile, and lightweight
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSR	21N	VS-M	03	1500
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSR	21N	HS-M = Horizontal, bobbin with sectional winding structure VS-M = Vertical, bobbin with sectional winding structure	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xxx0 = xxx mH xxx = xx.x mH Examples: 1500 = 150 mH 041 = 4.1 mH

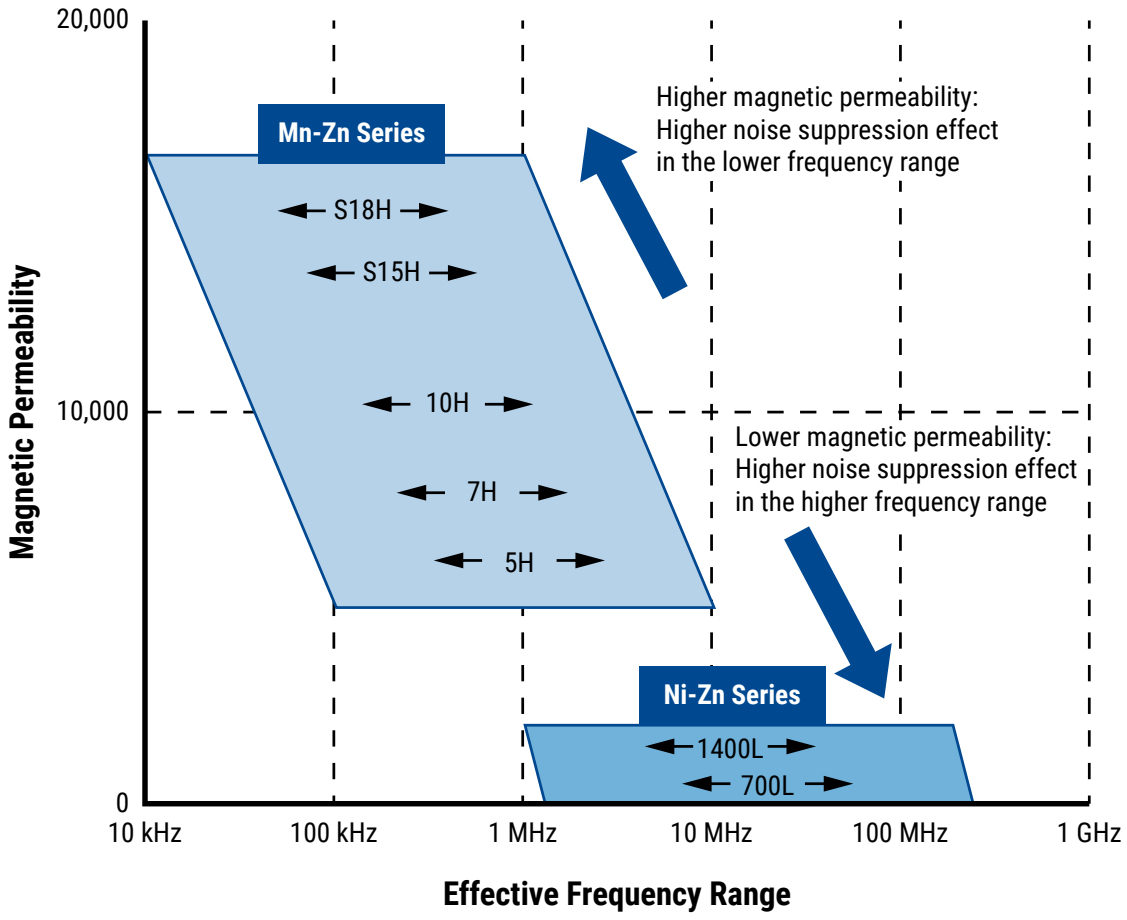
Magnetic Permeability of Ferrite Material

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.

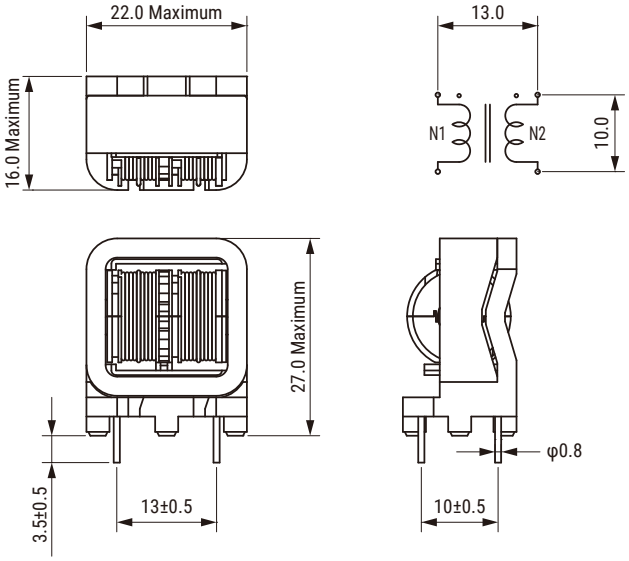
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

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

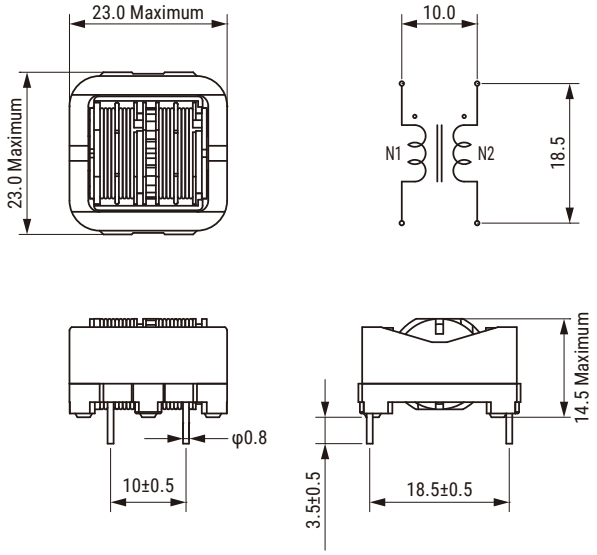


Dimensions – Millimeters

● SSR21NVS-M



● SSR21NHS-M



Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

Performance Characteristics

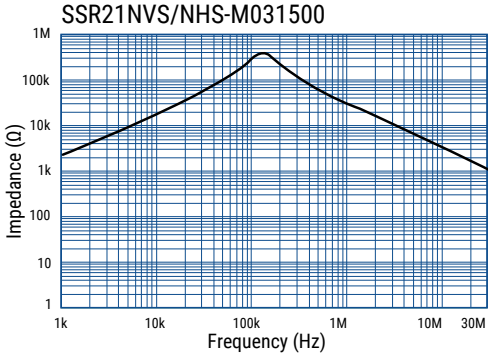
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 3.0 A
Rated Inductance Range	4.1 – 150.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSR21NHS-M031500	0.3	150.0	2.70	40	0.20	13.0
SSR21NVS-M031500	0.3	150.0	2.70	40	0.20	14.5
SSR21NHS-M041350	0.4	135.0	2.00	40	0.23	13.0
SSR21NVS-M041350	0.4	135.0	2.00	40	0.23	14.5
SSR21NHS-M051200	0.5	120.0	1.85	60	0.23	13.0
SSR21NVS-M051200	0.5	120.0	1.85	60	0.23	14.5
SSR21NHS-M06890	0.6	89.0	1.35	60	0.25	13.0
SSR21NVS-M06890	0.6	89.0	1.35	60	0.25	14.5
SSR21NHS-M07680	0.7	68.0	0.95	60	0.28	13.0
SSR21NVS-M07680	0.7	68.0	0.95	60	0.28	14.5
SSR21NHS-M08475	0.8	47.5	0.68	60	0.30	13.0
SSR21NVS-M08475	0.8	47.5	0.68	60	0.30	14.5
SSR21NHS-M10345	1.0	34.5	0.51	60	0.32	13.0
SSR21NVS-M10345	1.0	34.5	0.51	60	0.32	14.5
SSR21NHS-M12220	1.2	22.0	0.35	60	0.35	13.0
SSR21NVS-M12220	1.2	22.0	0.35	60	0.35	14.5
SSR21NHS-M15164	1.5	16.4	0.23	60	0.40	13.0
SSR21NVS-M15164	1.5	16.4	0.23	60	0.40	14.5
SSR21NHS-M18125	1.8	12.5	0.19	60	0.40	13.0
SSR21NVS-M18125	1.8	12.5	0.19	60	0.40	14.5
SSR21NHS-M20103	2.0	10.3	0.15	60	0.45	13.0
SSR21NVS-M20103	2.0	10.3	0.15	60	0.45	14.5
SSR21NHS-M25064	2.5	6.4	0.09	60	0.50	13.0
SSR21NVS-M25064	2.5	6.4	0.09	60	0.50	14.5
SSR21NHS-M30041	3.0	4.1	0.07	60	0.55	13.0
SSR21NVS-M30041	3.0	4.1	0.07	60	0.55	14.5

Frequency Characteristics

SSR21NVS/NHS-M031500



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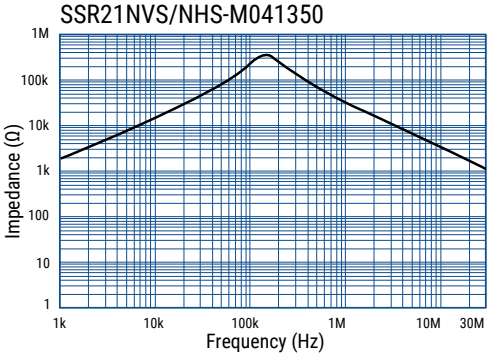

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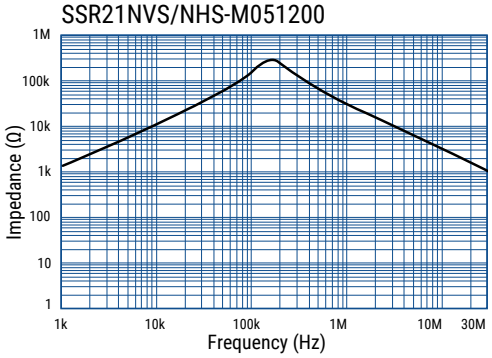

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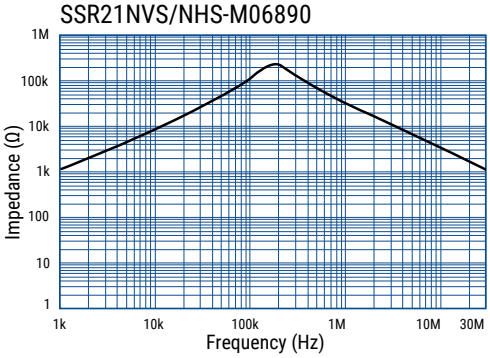

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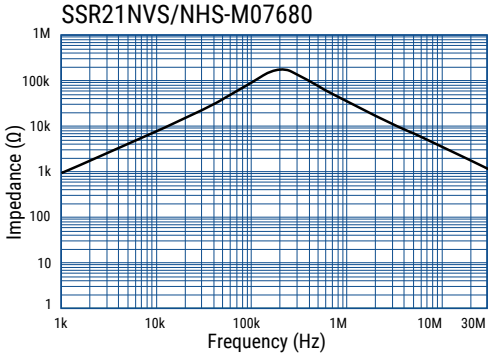

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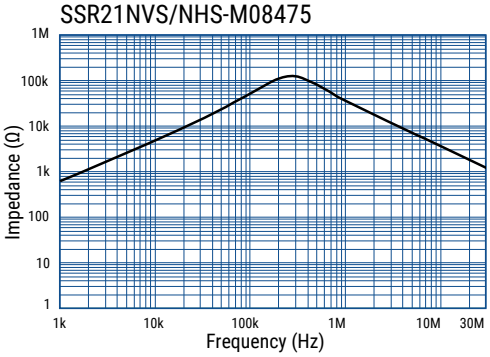

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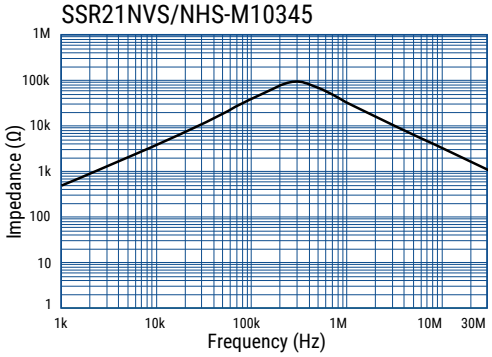

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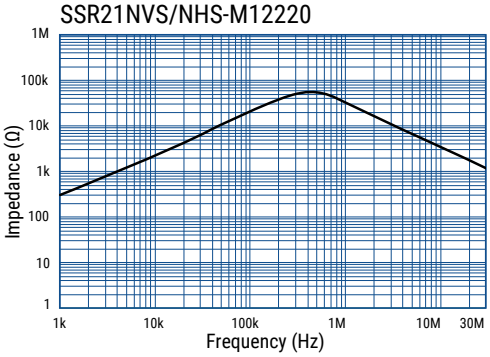
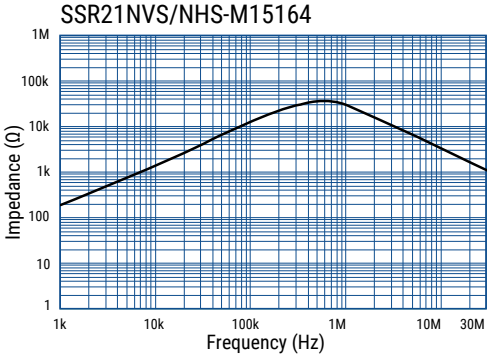


Frequency Characteristics cont.

SSR21NVS/NHS-M15164



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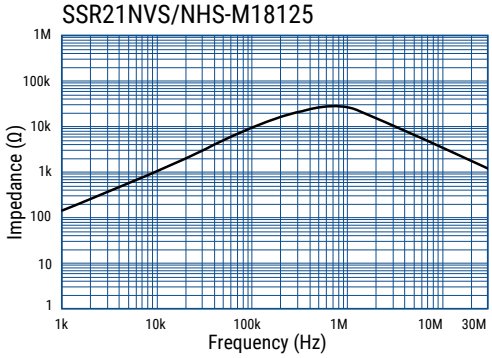

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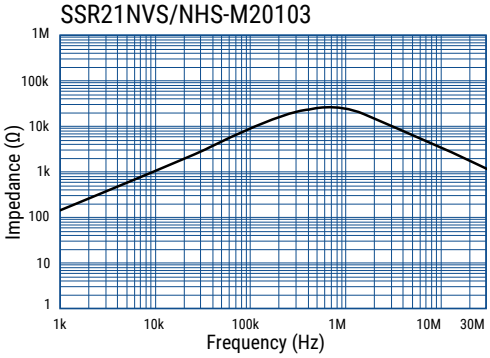

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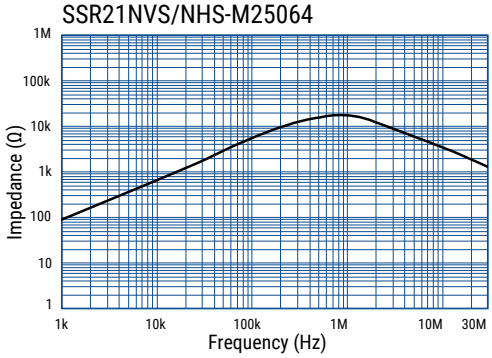

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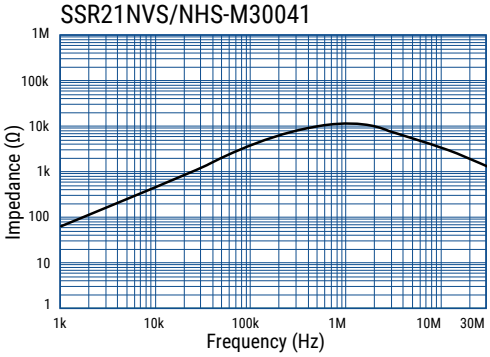


Packaging

Type	Packaging Type	Pieces Per Box
SSR21NHS-M	Tray	420
SSR21NVS-M		450

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 SSRH Coils, 7H-M Series, High Impedance Type

Overview

The KEMET SSRH7H-M coils are common mode chokes with a wide variety of characteristics. These low current and high inductance, gear type coils are designed with our proprietary high permeability ferrite S18H cores and are useful in various noise countermeasure fields.

The optimized core shape and product structure is ideal for demanding compact applications where space is of highest priority and where smaller is better.

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Compact power supplies

Benefits

- Proprietary S18H ferrite material
- High permeability
- Large inductance due to non-divided bobbin
- Small gear common mode choke for low current applications
- 12 mm height low profile
- Operating temperature range from −40°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSRH	7	H-M	03	1157
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSRH	7	H-M = Horizontal, bobbin without sectional winding structure	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xxxx = xxx.x mH xxx = xx.x 0xx = x.x mH Examples: 1157 = 115.7 mH 596 = 59.6 mH 029 = 2.9 mH

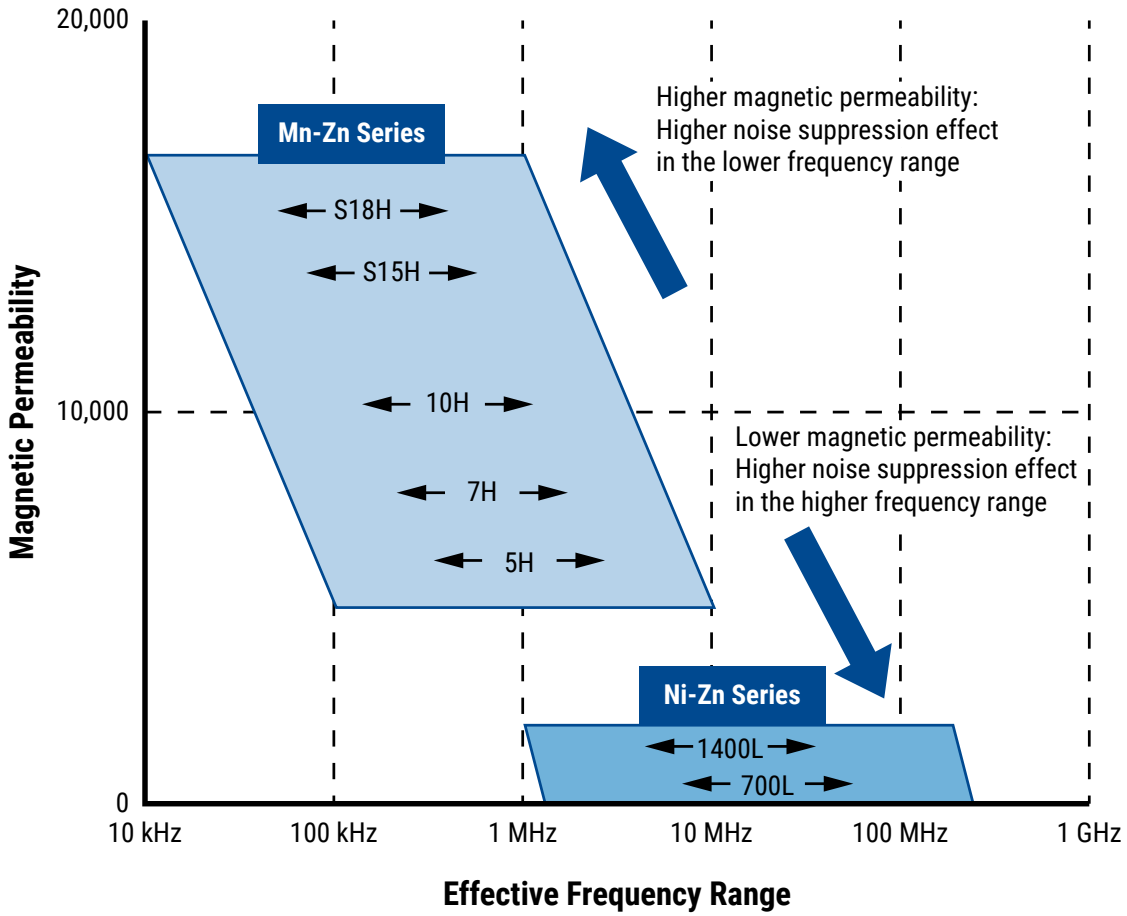
Magnetic Permeability of Ferrite Material

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.

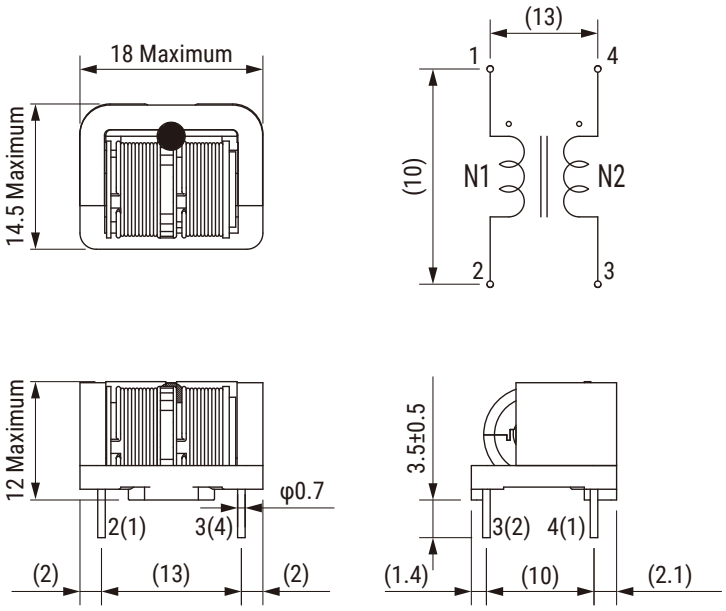
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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

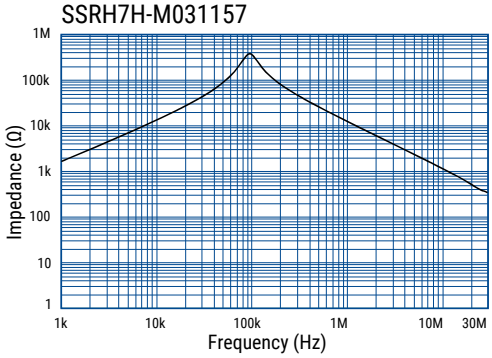
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 2.0 A
Rated Inductance Range	1.6 – 115.7 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	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 (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SSRH7H-M031157	0.3	115.7	3.57	55	M03 Lot No.	5.2
SSRH7H-M04596	0.4	59.6	2.02	55	M04 Lot No.	5.2
SSRH7H-M05408	0.5	40.8	1.36	55	M05 Lot No.	5.2
SSRH7H-M06237	0.6	23.7	0.78	55	M06 Lot No.	5.2
SSRH7H-M07196	0.7	19.6	0.71	55	M07 Lot No.	5.2
SSRH7H-M08169	0.8	16.9	0.56	55	M08 Lot No.	5.2
SSRH7H-M10108	1.0	10.8	0.36	55	M10 Lot No.	5.2
SSRH7H-M11081	1.1	8.1	0.27	55	M11 Lot No.	5.2
SSRH7H-M13064	1.3	6.4	0.21	55	M13 Lot No.	5.2
SSRH7H-M15043	1.5	4.3	0.14	55	M15Lot No.	5.2
SSRH7H-M17029	1.7	2.9	0.12	55	M17Lot No.	5.0
SSRH7H-M20016	2.0	1.6	0.09	55	M20 Lot No.	4.7

Frequency Characteristics

SSRH7H-M031157



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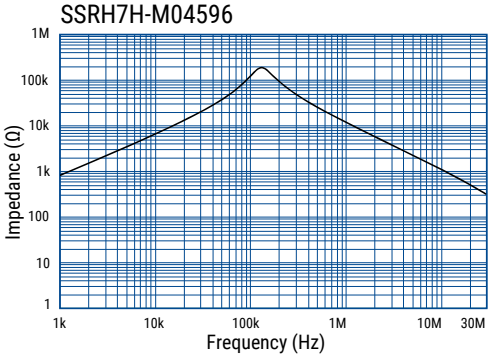

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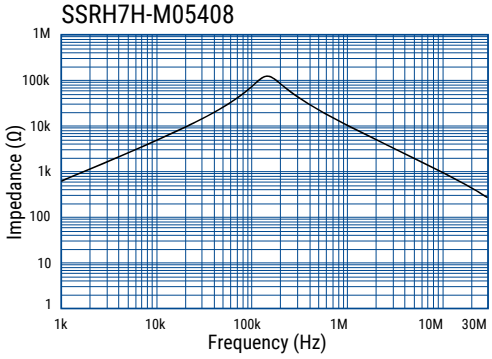
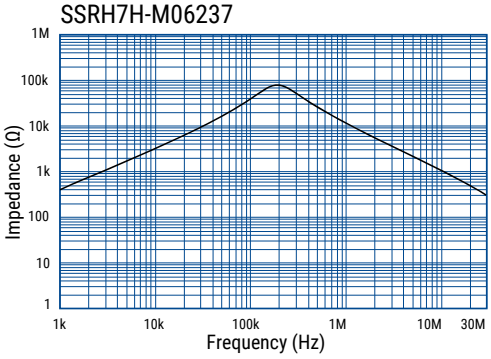
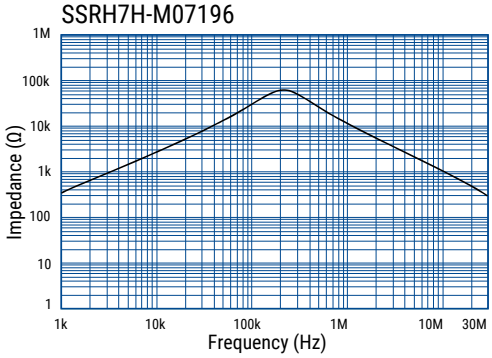


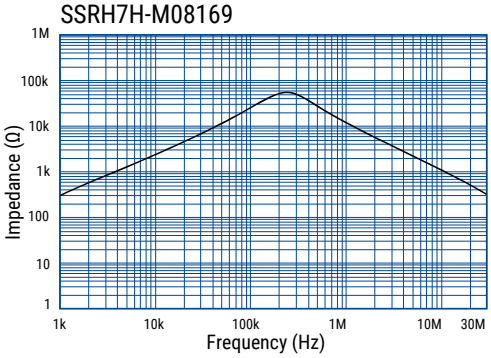
SSRH7H-M06237



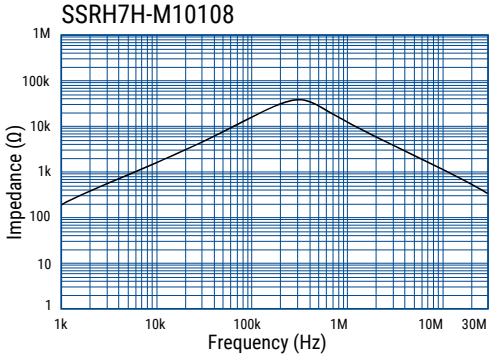
SSRH7H-M07196



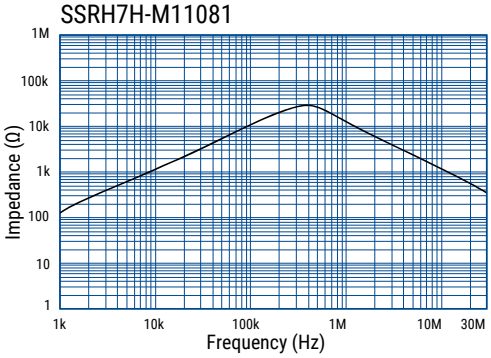
SSRH7H-M08169



SSRH7H-M10108

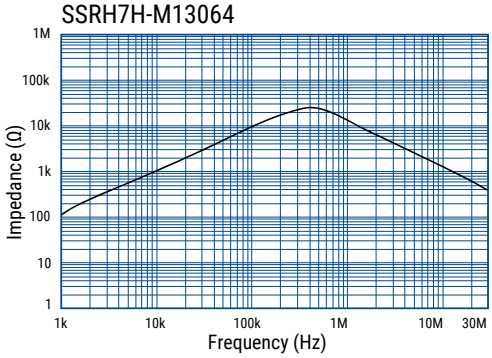


SSRH7H-M11081

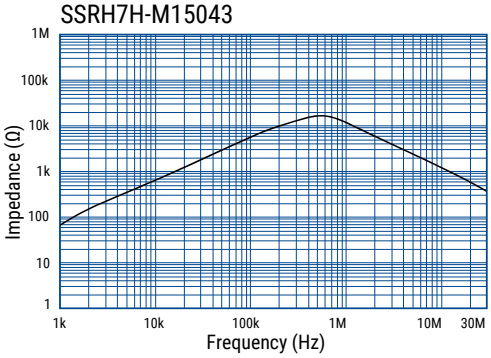


Frequency Characteristics cont.

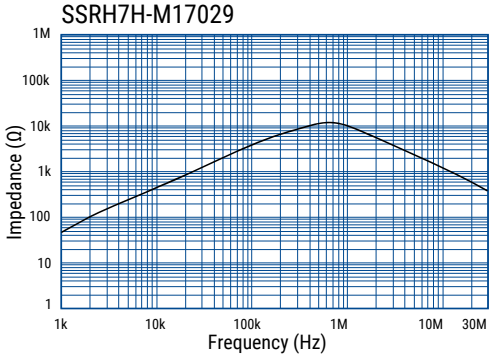
SSRH7H-M13064



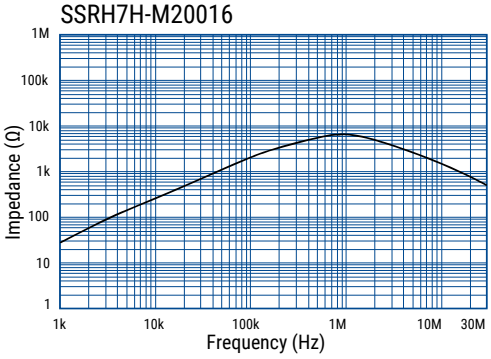
SSRH7H-M15043



SSRH7H-M17029



SSRH7H-M20016



Packaging

Type	Packaging Type	Pieces Per Box
SSRH7H-M	Tray	600

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 SSRH Coils, 7HS-M Series, Wide Range Impedance Type

Overview

The KEMET SSRH7H-M coils are common mode chokes with a wide variety of characteristics. These low current and high inductance, gear type coils are designed with our proprietary high permeability ferrite S18H cores and are useful in various noise countermeasure fields.

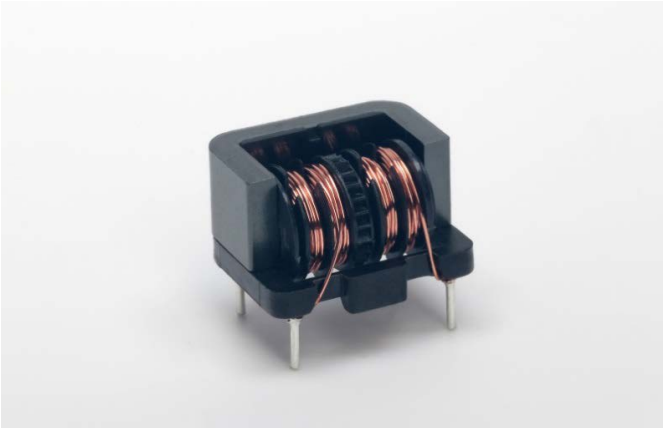
The optimized core shape and product structure is ideal for demanding compact applications where space is of highest priority and where smaller is better.

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Compact power supplies

Benefits

- Proprietary S18H ferrite material
- High permeability
- High impedance in wide frequency range due to divided bobbin
- Small gear common mode choke for low current applications
- 12mm height low profile
- Operating temperature range from −25°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin



Part Number System

SSRH	7	HS-M	03	925
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSRH	7	HS-M = Horizontal, bobbin with sectional winding structure	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xxx = xx.x 0xx = x.x mH Examples: 925 = 92.5 mH 023 = 2.3 mH

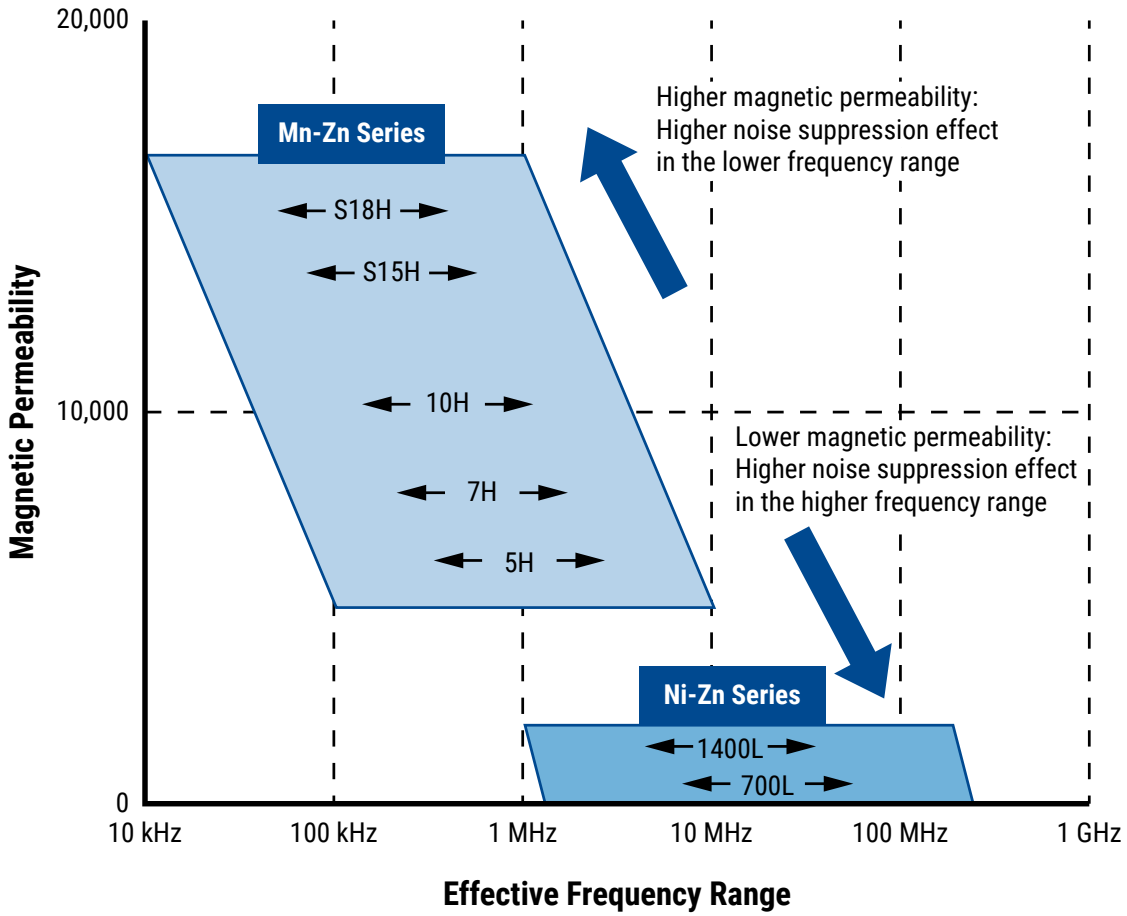
Magnetic Permeability of Ferrite Material

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.

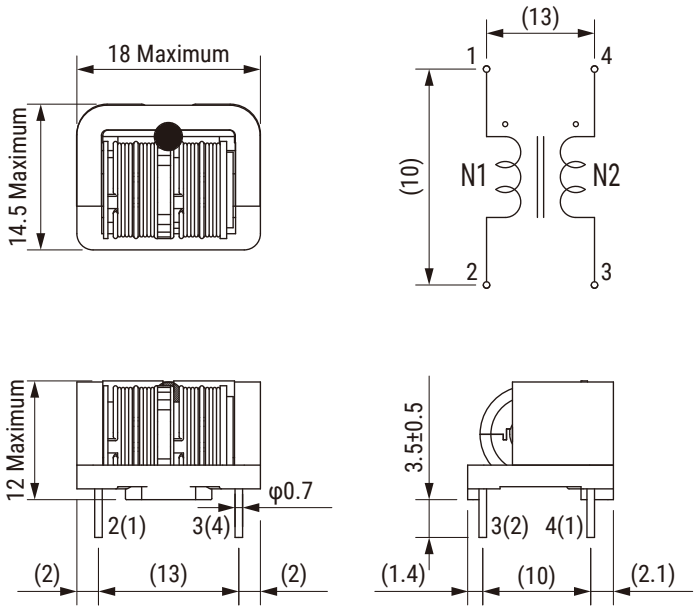
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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

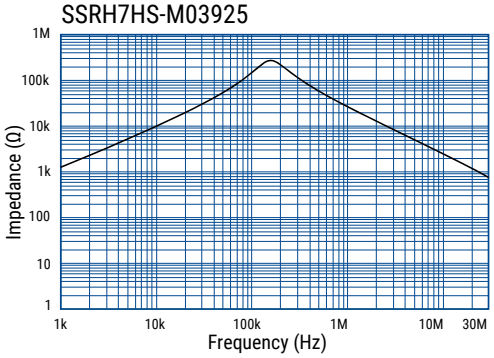
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 2.0 A
Rated Inductance Range	1.3 – 92.5 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–25°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

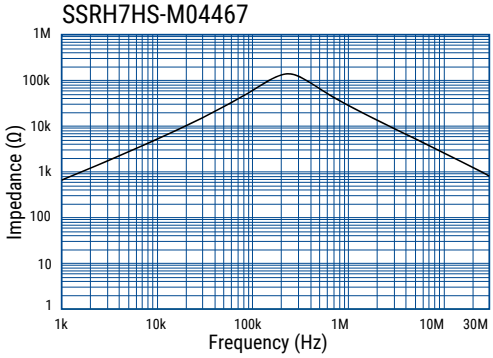
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SSRH7HS-M03925	0.3	92.5	3.18	50	M03 Lot No.	5.1
SSRH7HS-M04467	0.4	46.7	1.79	50	M04 Lot No.	5.1
SSRH7HS-M05324	0.5	32.4	1.21	50	M05 Lot No.	5.1
SSRH7HS-M06185	0.6	18.5	0.69	50	M06 Lot No.	5.1
SSRH7HS-M07154	0.7	15.4	0.63	50	M07 Lot No.	5.1
SSRH7HS-M08134	0.8	13.4	0.50	50	M08 Lot No.	5.1
SSRH7HS-M10084	1.0	8.4	0.32	50	M10 Lot No.	5.1
SSRH7HS-M11064	1.1	6.4	0.24	50	M11 Lot No.	5.1
SSRH7HS-M13046	1.3	4.6	0.18	50	M13 Lot No.	5.1
SSRH7HS-M15036	1.5	3.6	0.13	50	M15Lot No.	5.1
SSRH7HS-M17023	1.7	2.3	0.10	50	M17Lot No.	4.9
SSRH7HS-M20013	2.0	1.3	0.08	50	M20 Lot No.	4.7

Frequency Characteristics

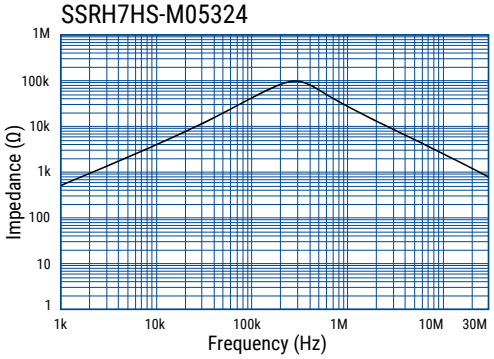
SSRH7HS-M03925



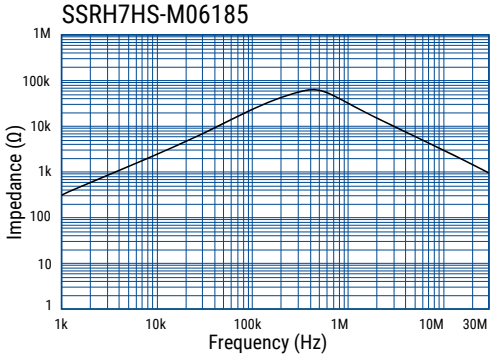
SSRH7HS-M04467



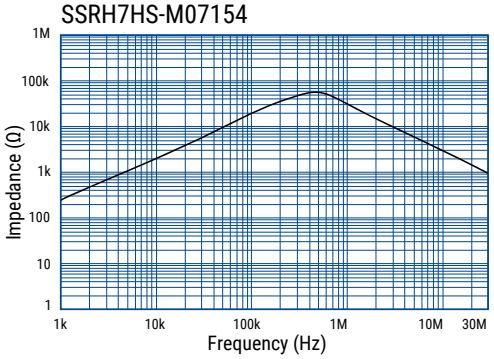
SSRH7HS-M05324



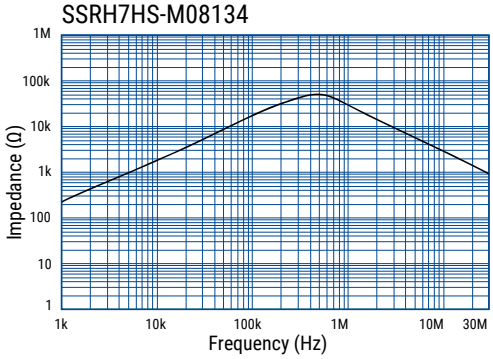
SSRH7HS-M06185



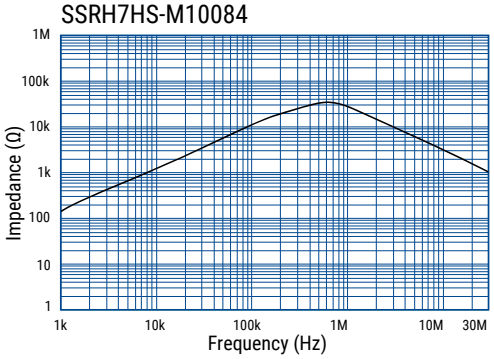
SSRH7HS-M07154



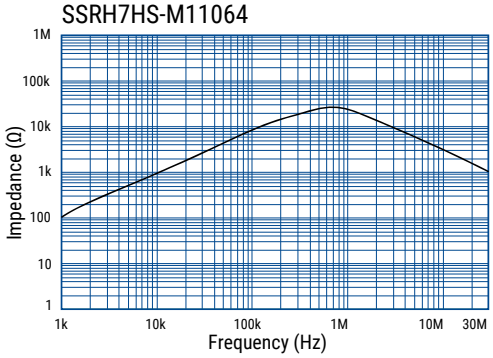
SSRH7HS-M08134



SSRH7HS-M10084

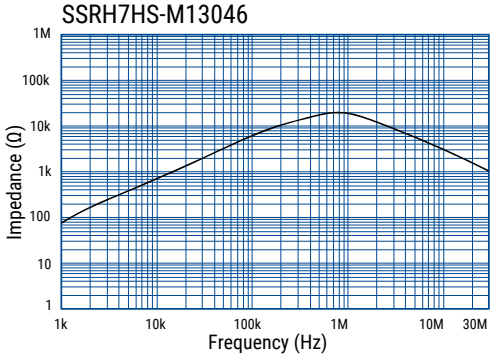


SSRH7HS-M11064

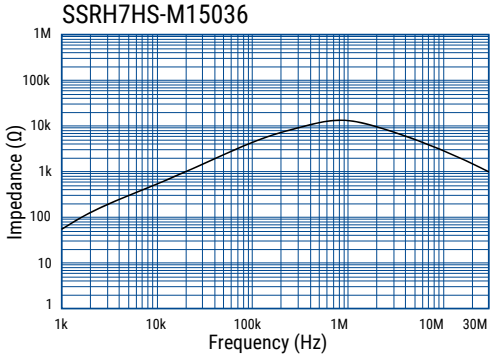


Frequency Characteristics cont.

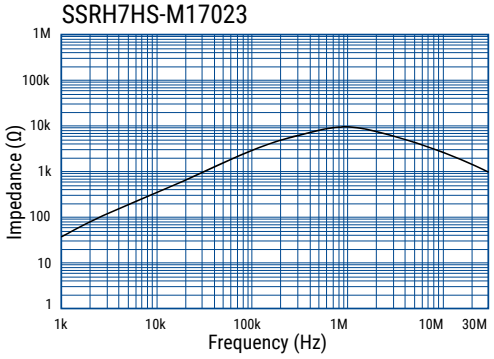
SSRH7HS-M13046



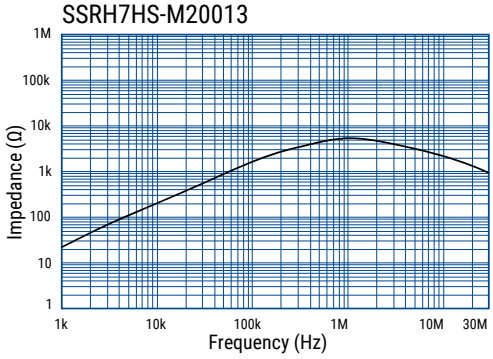
SSRH7HS-M15036



SSRH7HS-M17023



SSRH7HS-M20013



Packaging

Type	Packaging Type	Pieces Per Box
SSRH7HS-M	Tray	600

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 SSRH Coils, 24NV/NH Series, High Impedance Type

Overview

The KEMET SSRH24NV/NH coils are common mode chokes with a wide variety of characteristics. These gear type coils are designed with our proprietary high permeability ferrite S18H cores and are useful in various noise countermeasure fields.

The optimized core shape and product structure is ideal for demanding compact applications where large inductance is required.

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S18H ferrite material
- High permeability
- Large inductance due to non-divided bobbin
- Expanded current range up to 5A
- Compact size and lightweight
- Operating temperature range from −25°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSRH	24N	H-	12	655
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSRH	24N	H = Horizontal, bobbin without sectional winding structure V = Vertical, bobbin without sectional winding structure	xx = x.x A Example: 12 = 1.2 A	xxx = xx.x mH 0xx = x.x mH Example: 655 = 65.5 mH 041 = 4.1 mH

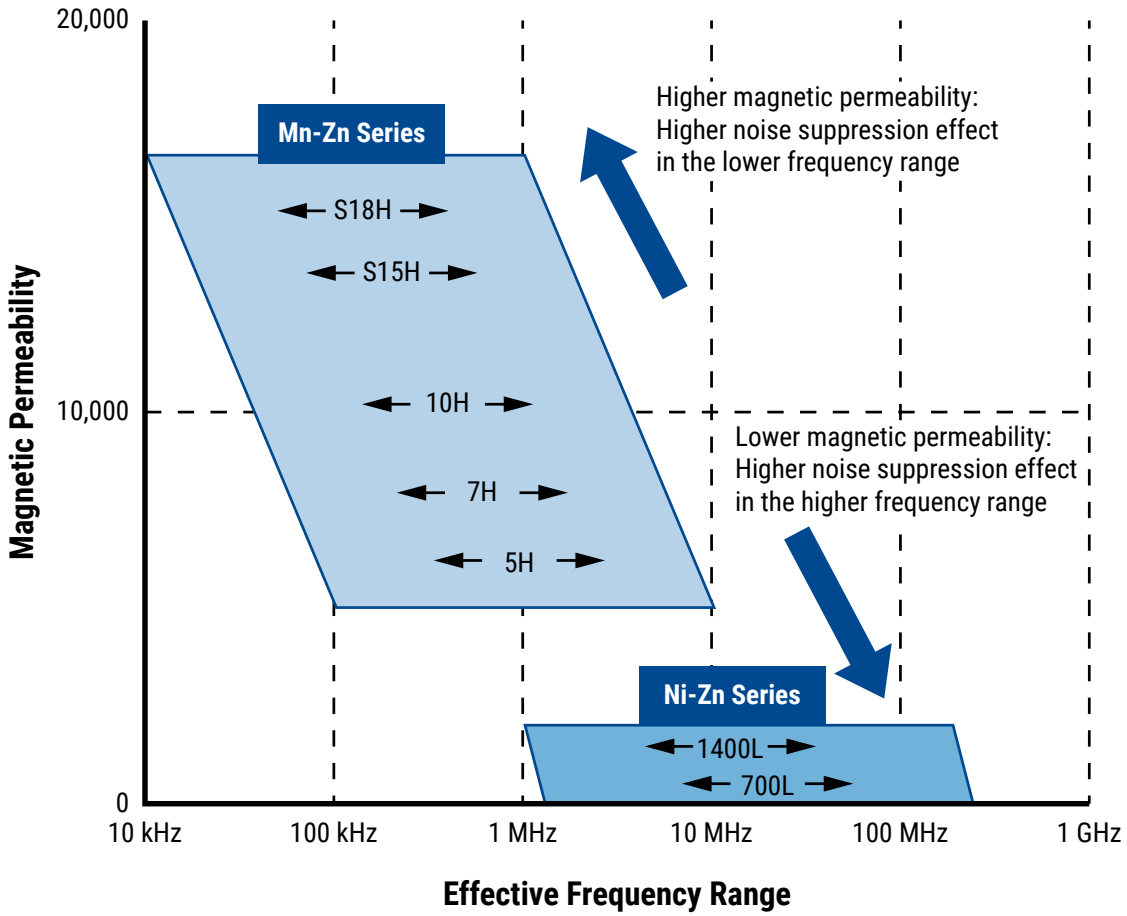
Magnetic Permeability of Ferrite Material

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.

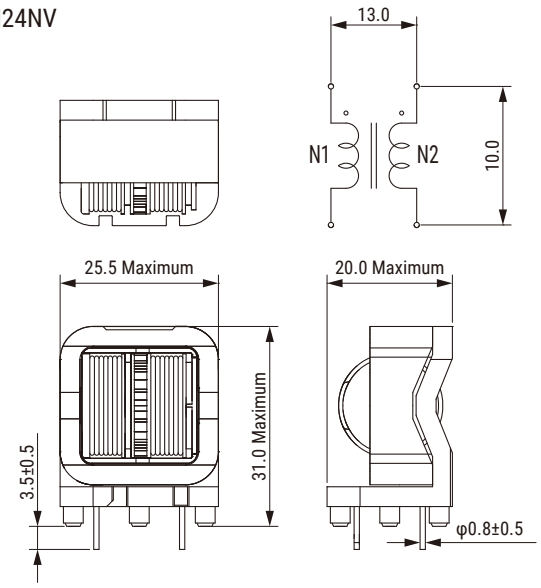
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

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

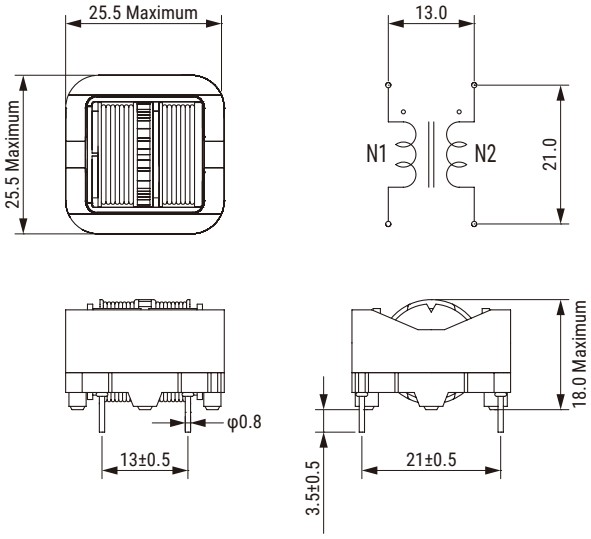


Dimensions – Millimeters

● SSRH24NV



● SSRH24NH



Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

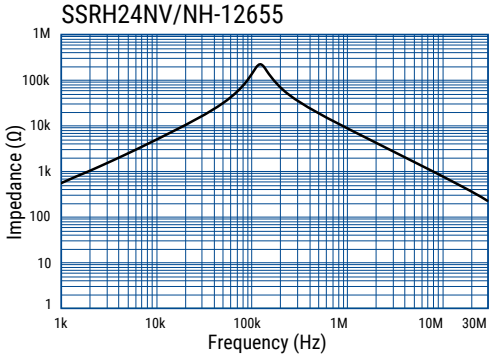
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	1.2 – 5.0 A
Rated Inductance Range	4.1 – 65.5 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–25°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

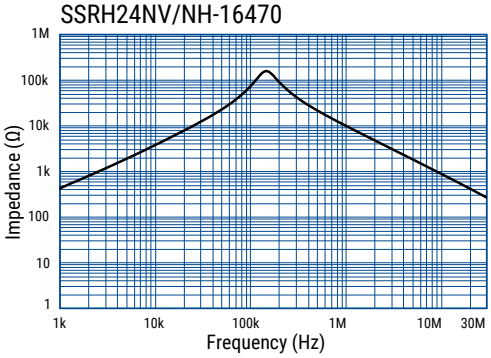
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSRH24NH-12655	1.2	65.5	0.475	65	0.40	22.5
SSRH24NV-12655	1.2	65.5	0.475	65	0.40	25.0
SSRH24NH-16470	1.6	47.0	0.327	65	0.45	22.5
SSRH24NV-16470	1.6	47.0	0.327	65	0.45	25.0
SSRH24NH-20310	2.0	31.0	0.214	65	0.50	22.5
SSRH24NV-20310	2.0	31.0	0.214	65	0.50	25.0
SSRH24NH-25205	2.5	20.5	0.145	65	0.55	22.5
SSRH24NV-25205	2.5	20.5	0.145	65	0.55	25.0
SSRH24NH-30145	3.0	14.5	0.102	65	0.60	22.5
SSRH24NV-30145	3.0	14.5	0.102	65	0.60	25.0
SSRH24NH-35086	3.5	8.6	0.078	65	0.60	22.5
SSRH24NV-35086	3.5	8.6	0.078	65	0.60	25.0
SSRH24NH-40069	4.0	6.9	0.057	65	0.65	22.5
SSRH24NV-40069	4.0	6.9	0.057	65	0.65	25.0
SSRH24NH-45059	4.5	5.9	0.048	65	0.70	22.5
SSRH24NV-45059	4.5	5.9	0.048	65	0.70	25.0
SSRH24NH-50041	5.0	4.1	0.035	65	0.75	22.5
SSRH24NV-50041	5.0	4.1	0.035	65	0.75	25.0

Frequency Characteristics

SSRH24NV/NH-12655



SSRH24NV/NH-16470



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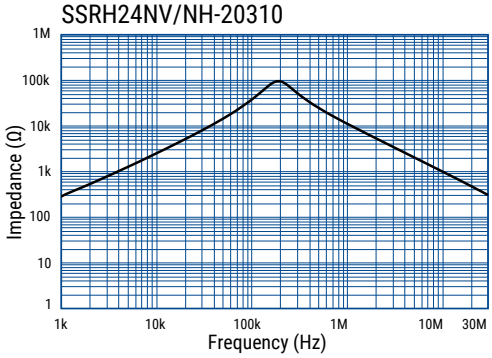
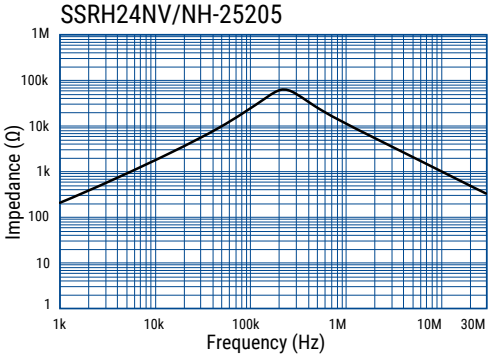


SSRH24NV/NH-25205



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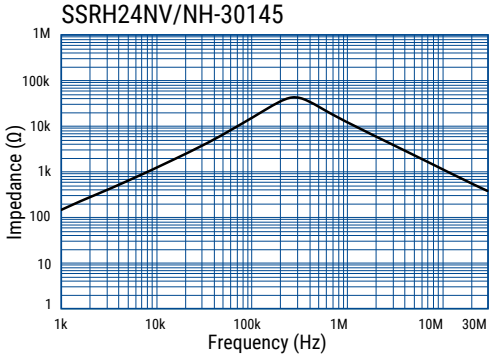

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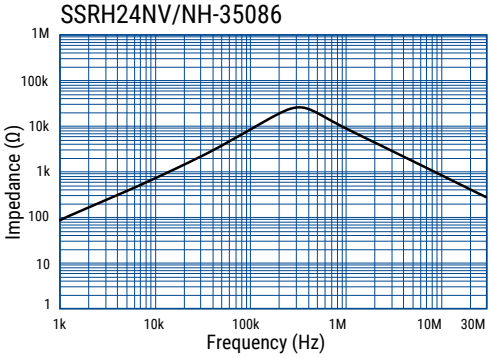

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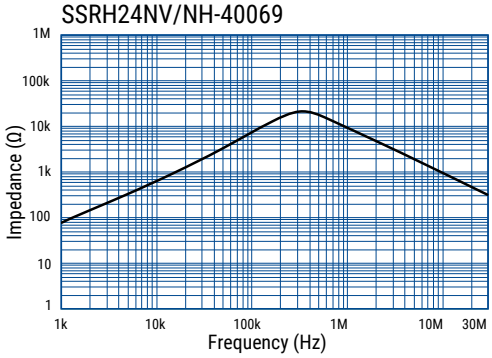

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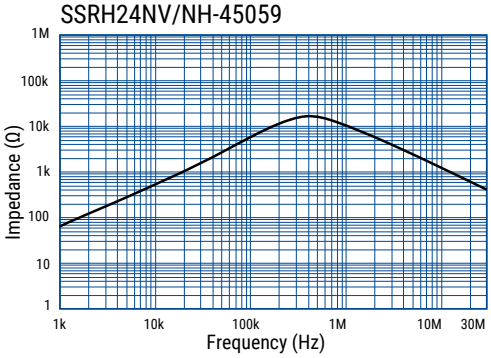
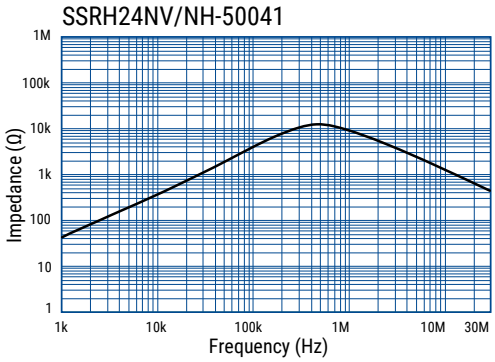


Frequency Characteristics cont.



Packaging

Type	Packaging Type	Pieces Per Box
SSRH24NH	Tray	300
SSRH24NV		240

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 SSRH Coils, 24NVS/NHS Series, Wide Range Impedance Type

Overview

The KEMET SSRH24NV/NH coils are common mode chokes with a wide variety of characteristics. These gear type coils are designed with our proprietary high permeability ferrite S18H cores and are useful in various noise countermeasure fields.

The optimized core shape and product structure is ideal for demanding compact applications where large inductance is required.

Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supplies

Benefits

- Proprietary S18H ferrite material
- High permeability
- High impedance in wide frequency range due to divided bobbin
- Expanded current range up to 5A
- Compact size and lightweight
- Operating temperature range from −25°C to +120°C
- UL 94 V–0 flame retardant rated base and bobbin

Part Number System

SSRH	24N	HS-	12	500
Series	Core Size Code	Core Orientation and Bobbin Type	Rated Current (A)	Inductance (mH) Minimum
SSRH	24N	HS = Horizontal, bobbin with sectional winding structure VS = Vertical, bobbin with sectional winding structure	xx = x.x A Example: 12 = 1.2 A	xxx = xx.x mH 0xx = x.x mH Example: 500 = 50.0 mH 026 = 2.6 mH

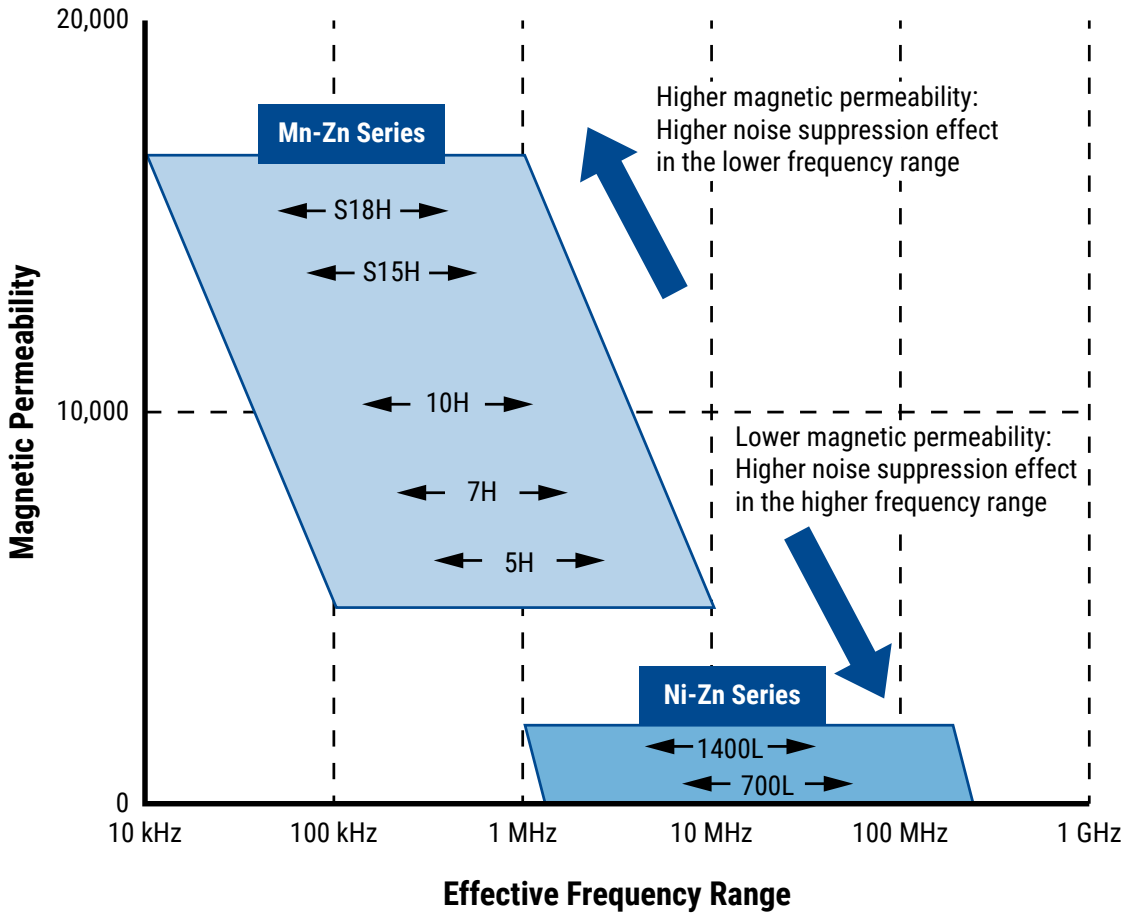
Magnetic Permeability of Ferrite Material

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.

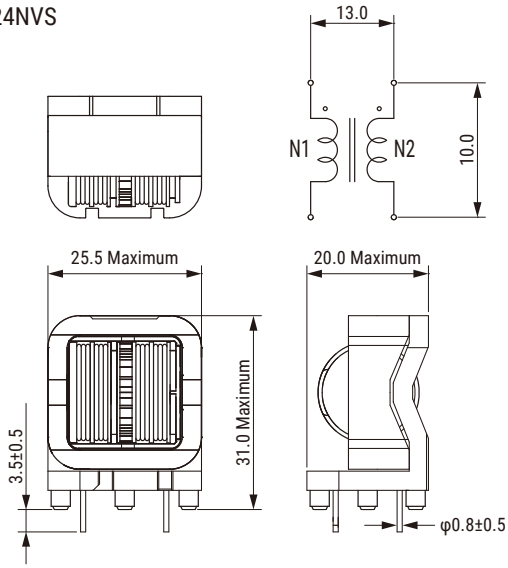
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET's proprietary ferrite material names.
Other materials can also be available on request.

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

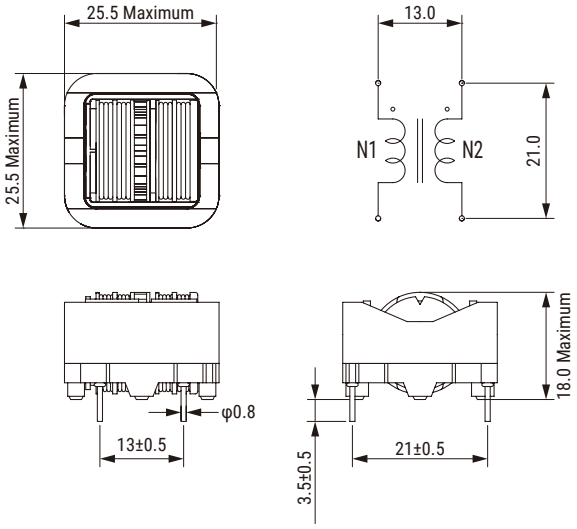


Dimensions – Millimeters

● SSRH24NVS



● SSRH24NHS



Environmental Compliance

All KEMET AC line filters are RoHS Compliant.

RoHS

Performance Characteristics

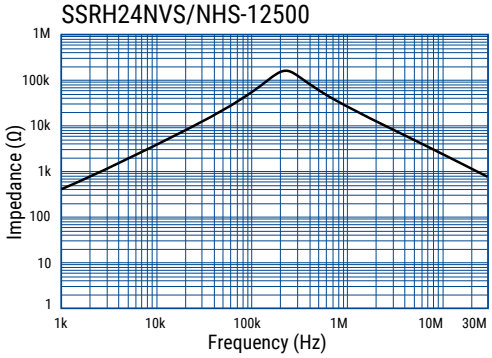
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	1.2 – 5.0 A
Rated Inductance Range	2.6 – 50.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C)
Operating Temperature Range	–25°C to +120°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

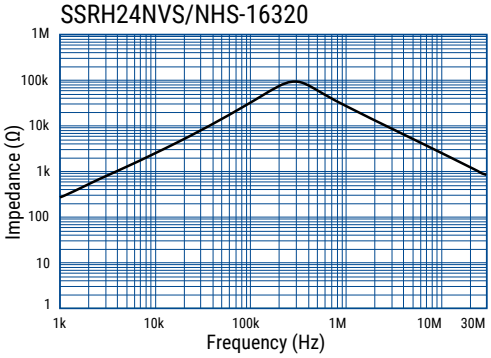
Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SSRH24NHS-12500	1.2	50.0	0.430	65	0.40	22.5
SSRH24NVS-12500	1.2	50.0	0.430	65	0.40	25.0
SSRH24NHS-16320	1.6	32.0	0.265	65	0.45	22.5
SSRH24NVS-16320	1.6	32.0	0.265	65	0.45	25.0
SSRH24NHS-20215	2.0	21.5	0.177	65	0.50	22.5
SSRH24NVS-20215	2.0	21.5	0.177	65	0.50	25.0
SSRH24NHS-25130	2.5	13.0	0.111	65	0.55	22.5
SSRH24NVS-25130	2.5	13.0	0.111	65	0.55	25.0
SSRH24NHS-30092	3.0	9.2	0.079	65	0.60	22.5
SSRH24NVS-30092	3.0	9.2	0.079	65	0.60	25.0
SSRH24NHS-35080	3.5	8.0	0.074	65	0.60	22.5
SSRH24NVS-35080	3.5	8.0	0.074	65	0.60	25.0
SSRH24NHS-40059	4.0	5.9	0.055	65	0.65	22.5
SSRH24NVS-40059	4.0	5.9	0.055	65	0.65	25.0
SSRH24NHS-45041	4.5	4.1	0.041	65	0.70	22.5
SSRH24NVS-45041	4.5	4.1	0.041	65	0.70	25.0
SSRH24NHS-50026	5.0	2.6	0.027	65	0.75	22.5
SSRH24NVS-50026	5.0	2.6	0.027	65	0.75	25.0

Frequency Characteristics

SSRH24NVS/NHS-12500



SSRH24NVS/NHS-16320



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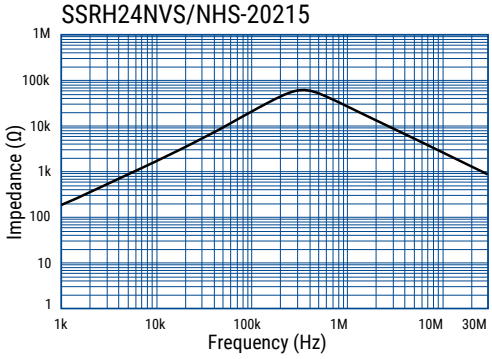

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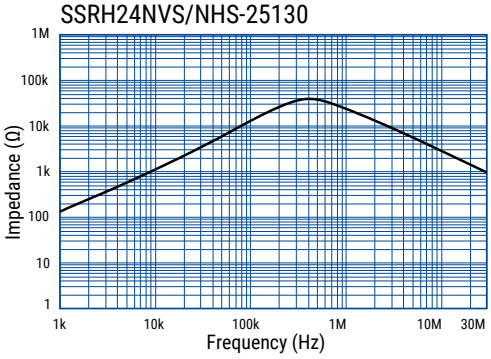

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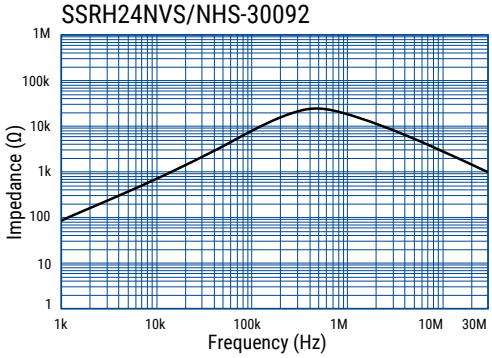

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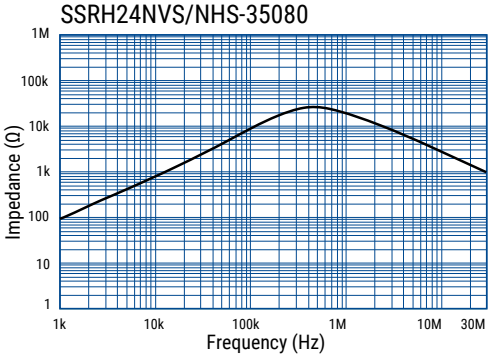

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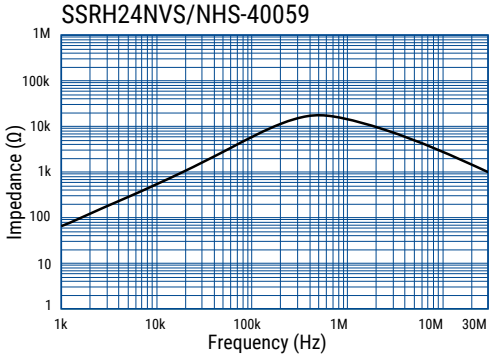

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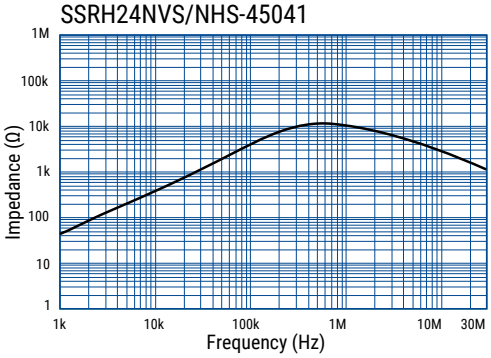
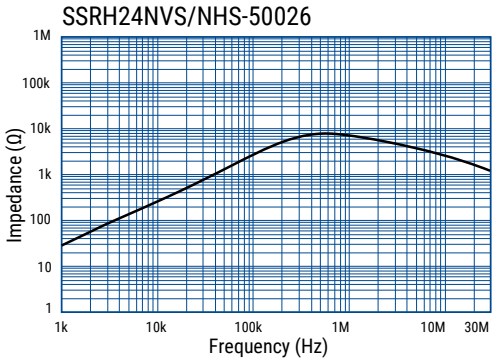


Frequency Characteristics cont.



Packaging

Type	Packaging Type	Pieces Per Box
SSRH24NHS	Tray	300
SSRH24NVS		240

Handling Precautions

Precautions for product storage

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