

Overview

The KEMET SSHB coils are dual mode chokes with a wide variety of characteristics. These hybrid coils combine the two functions of normal mode countermeasure and common mode noise suppression in just one coil. Reducing the number of required products ensures cost savings and space efficiency. Our proprietary core materials provide optimized solutions for high-temperature requirements (standard type) or for high permeability needs (R type). In addition, the specially developed shape is efficient with normal noise suppression.

Applications

- LED lighting
- Audio-visual equipment
- Office automation equipment
- Power supplies

Benefits

- Proprietary 5HT and 10H ferrite materials and equivalents
- Optimization of magnetic circuit and material
- One coil to suppress both common and normal noise
- Large inductance due to non-divided bobbin
- High permeability for R type
- Operating temperature range from -40°C to $+130^{\circ}\text{C}$ for standard type
- Operating temperature range from -40°C to $+120^{\circ}\text{C}$ for R type
- Low leakage magnetic flux to outside
- Compact size and low height
- UL 94 V-0 flame retardant rated base and bobbin



Part Number System

SSHB	10	H-	R	04	760
Series	Core Size Code	Core Orientation and Bobbin Type	Core Type	Rated Current (A)	Inductance (mH) Minimum
SSHB	10	H = Horizontal, bobbin without sectional winding structure	Blank = Standard R = High permeability	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xx0 = xx mH xxx = xx.x mH 0xx = x.x mH Examples: 760 = 76 mH 284 = 28.4 mH 088 = 8.8 mH

Magnetic Permeability of Ferrite Material

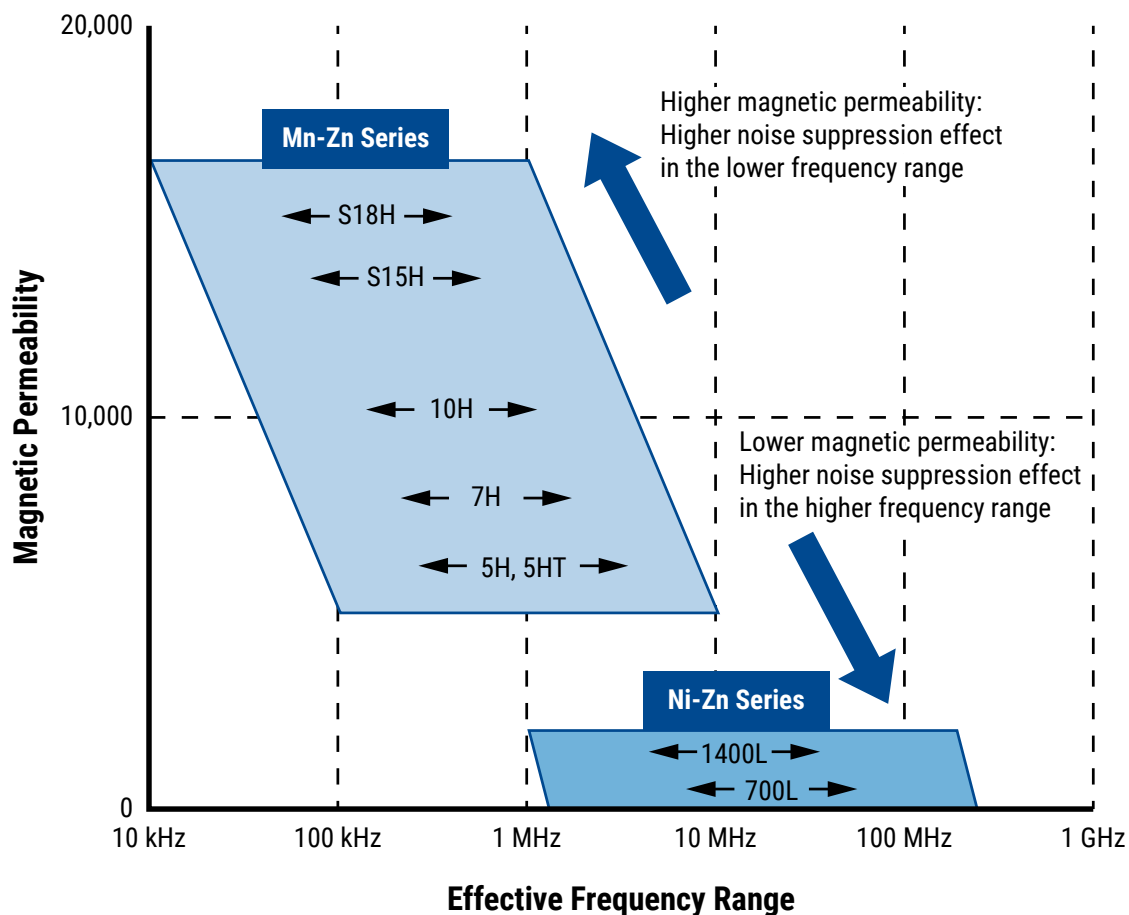
In order to achieve efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the 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. It should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 5H, 5HT, 1400L, and 700L are KEMET’s proprietary ferrite material names. Other materials are available upon request.

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



Core Structure



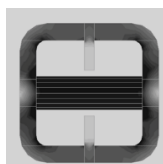
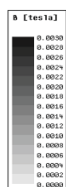
Conventional



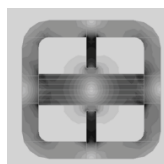
Original New Core Shape

This original shape structure allows for optimized composite characteristics of common mode and normal mode noise countermeasures.

Magnetic Flux Density



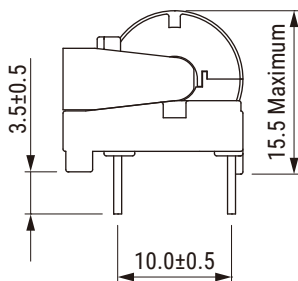
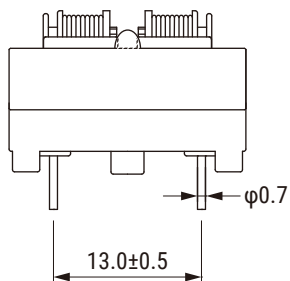
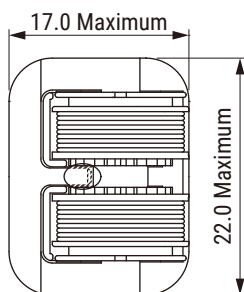
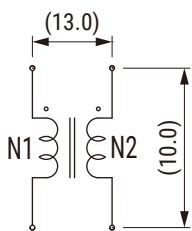
Common Mode



Normal Mode

- > Increased efficiency on normal mode inductance
- > Material solution for specific requirements
 - ✓ Standard type for high temperature needs
 - ✓ R type for high permeability needs
- > Low leakage magnetic flux to outside

Dimensions – Millimeters



Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.



Performance Characteristics

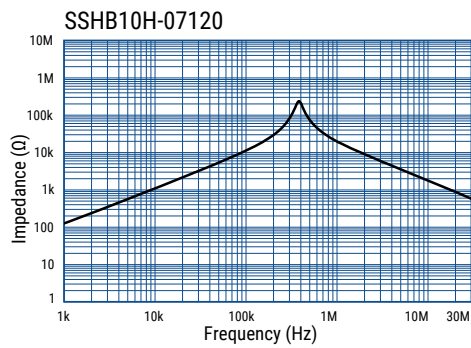
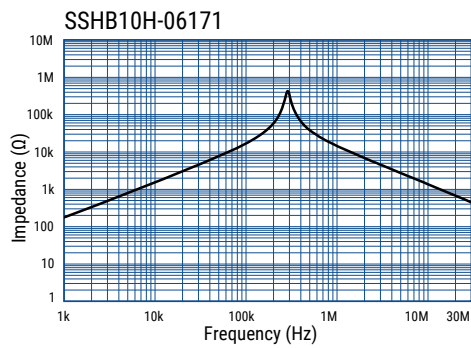
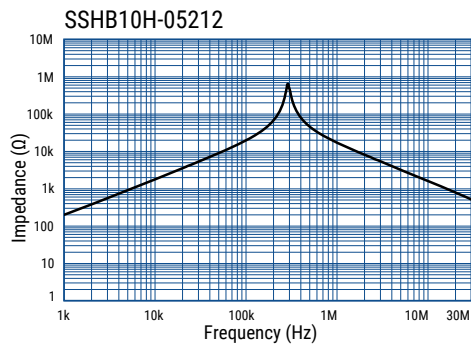
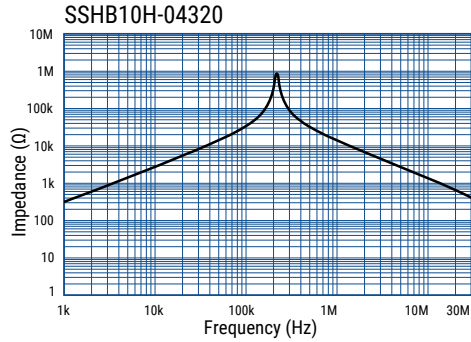
Item	Performance Characteristics
Rated Voltage	250 VAC 320 VAC (IEC60664 -1)
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.4 – 3.0 A
Rated Inductance Range	0.7 – 76.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C) RR Type) and B (130°C)
Operating Temperature Range	-40°C to +120°C (include self temperature rise) (R Type) and -40°C to +130°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

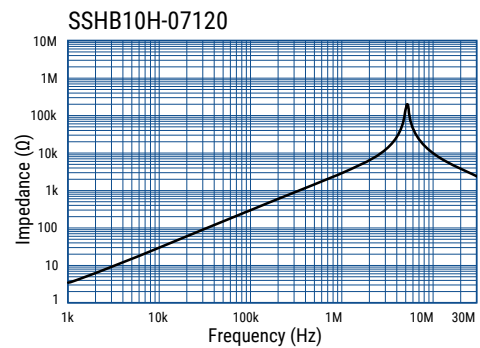
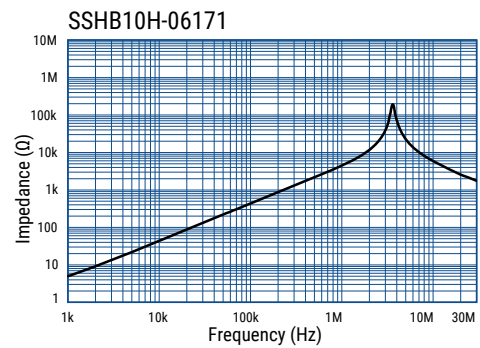
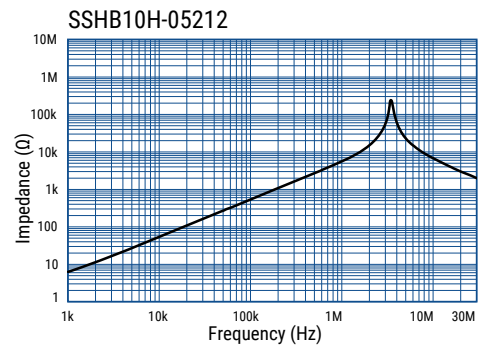
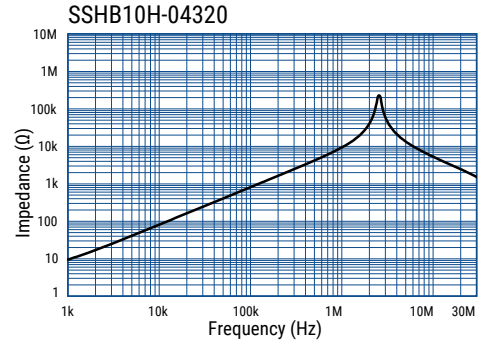
Part Number	Rated Current (A)	Inductance (Common) (mH) Minimum	Inductance (Normal) (μH) Typical	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SSHB10H-04320	0.4	32.0	1,156	2.70	60	04 Lot No.	10
SSHB10H-05212	0.5	21.2	762	1.70	55	05 Lot No.	10
SSHB10H-06171	0.6	17.1	615	1.30	60	06 Lot No.	10
SSHB10H-07120	0.7	12.0	433	0.90	55	07 Lot No.	10
SSHB10H-08082	0.8	8.2	296	0.64	50	08 Lot No.	10
SSHB10H-10064	1.0	6.4	231	0.48	65	10 Lot No.	10
SSHB10H-11054	1.1	5.4	196	0.39	55	11 Lot No.	10
SSHB10H-13037	1.3	3.7	135	0.28	55	13 Lot No.	10
SSHB10H-17023	1.7	2.3	85	0.19	60	17 Lot No.	10
SSHB10H-22014	2.2	1.4	52	0.12	60	22 Lot No.	10
SSHB10H-30007	3.0	0.7	27	0.07	70	30 Lot No.	10
SSHB10H-R04760	0.4	76.0	1,156	2.70	60	R04 Lot No.	10
SSHB10H-R05500	0.5	50.0	762	1.70	55	R05 Lot No.	10
SSHB10H-R06400	0.6	40.0	615	1.30	60	R06 Lot No.	10
SSHB10H-R07284	0.7	28.4	433	0.90	55	R07 Lot No.	10
SSHB10H-R08194	0.8	19.4	296	0.64	50	R08 Lot No.	10
SSHB10H-R10151	1.0	15.1	231	0.48	65	R10 Lot No.	10
SSHB10H-R11128	1.1	12.8	196	0.39	55	R11 Lot No.	10
SSHB10H-R13088	1.3	8.8	135	0.28	55	R13 Lot No.	10
SSHB10H-R17055	1.7	5.5	85	0.19	60	R17 Lot No.	10
SSHB10H-R22034	2.2	3.4	52	0.12	60	R22 Lot No.	10
SSHB10H-R30017	3.0	1.7	27	0.07	70	R30 Lot No.	10

Frequency Characteristics

Common mode

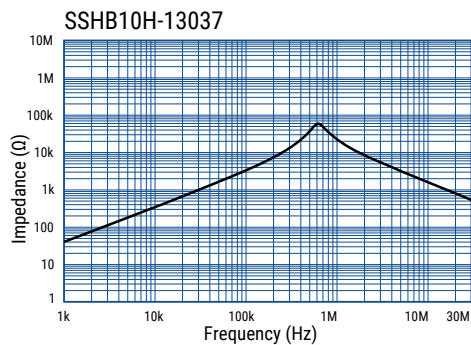
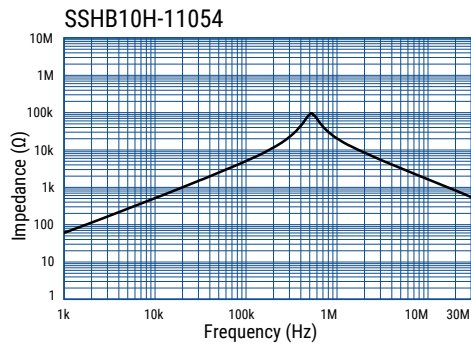
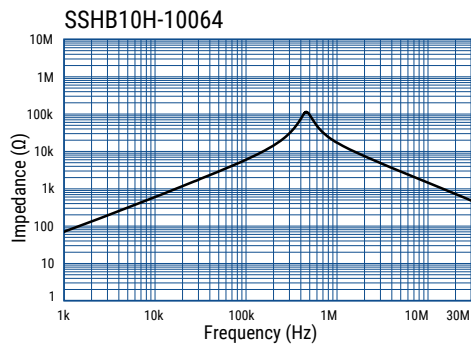
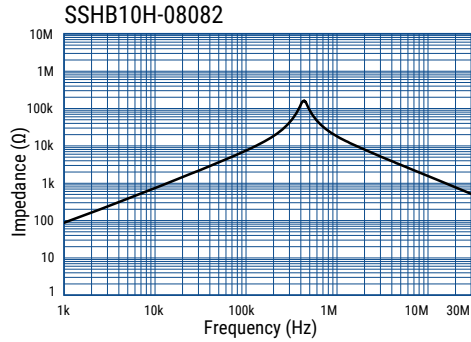


Normal mode

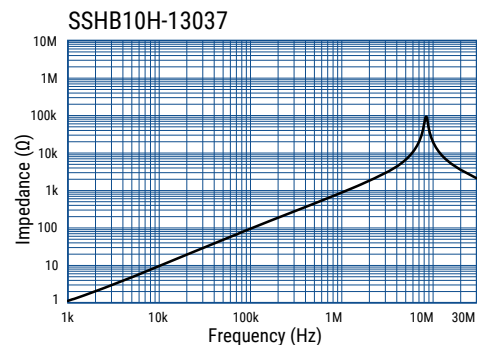
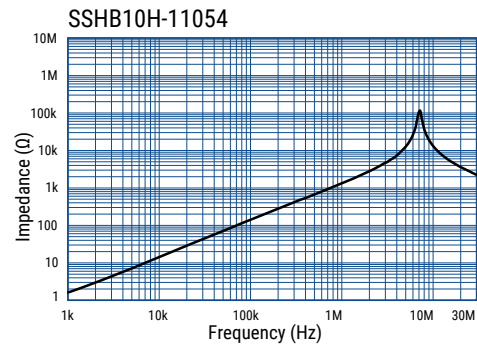
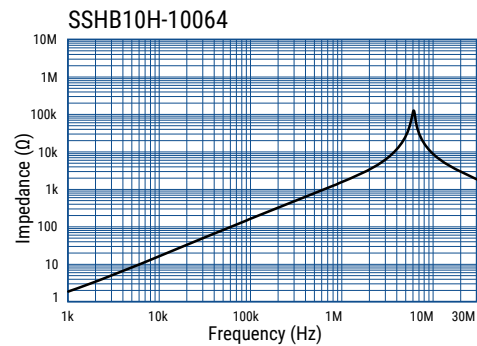
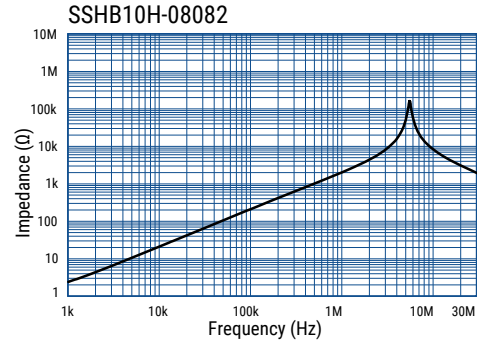


Frequency Characteristics cont.

Common mode

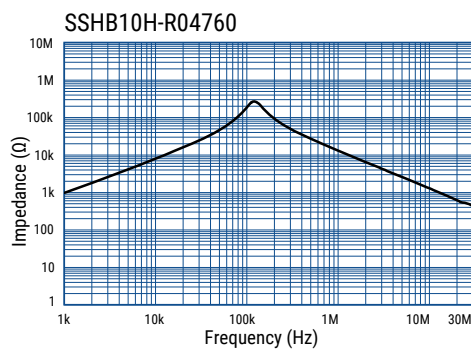
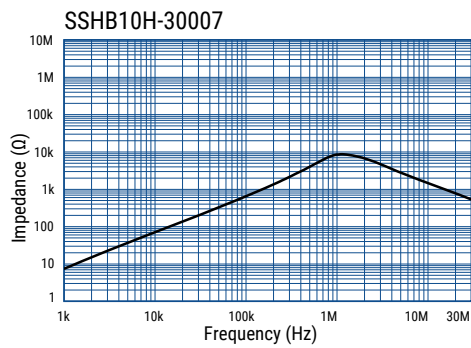
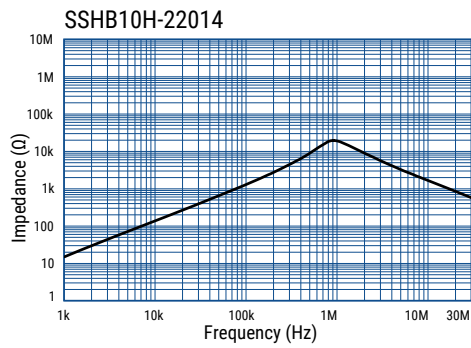
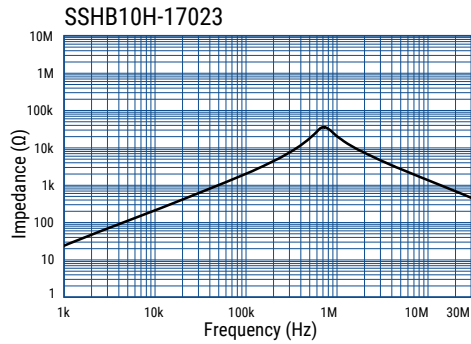


Normal mode

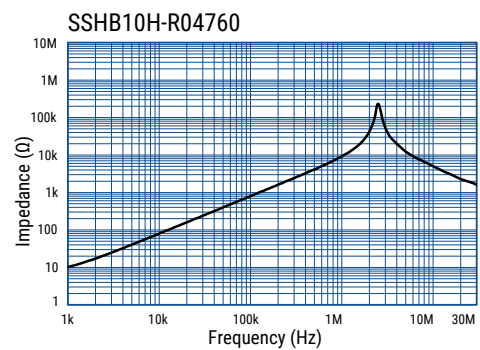
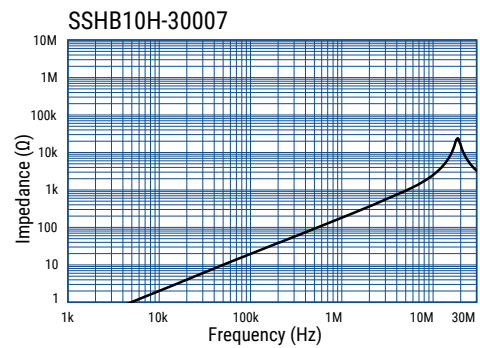
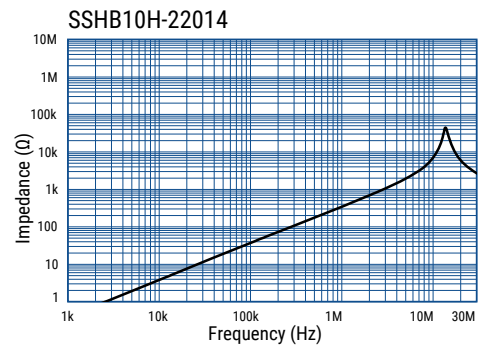
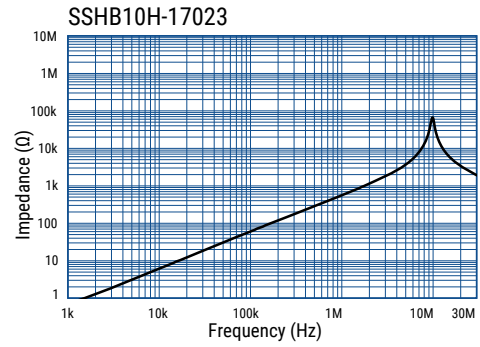


Frequency Characteristics cont.

Common mode

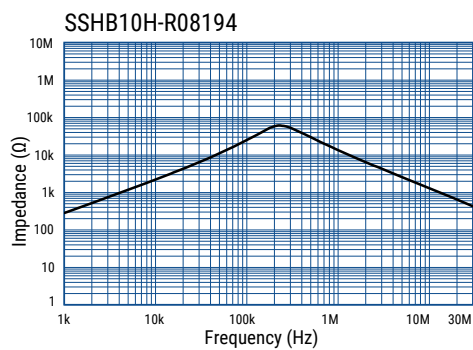
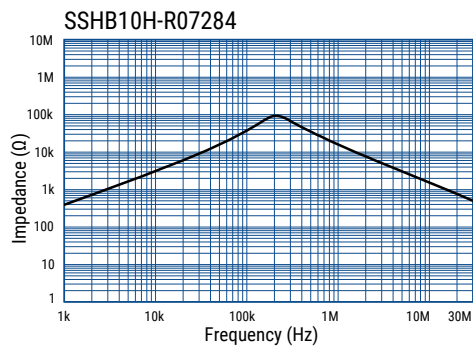
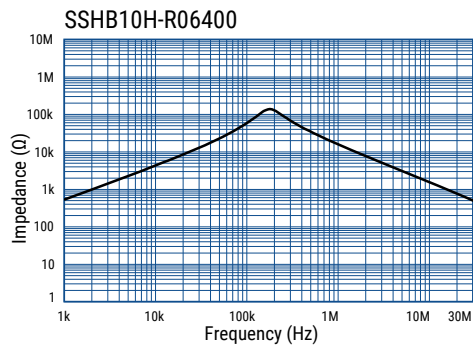
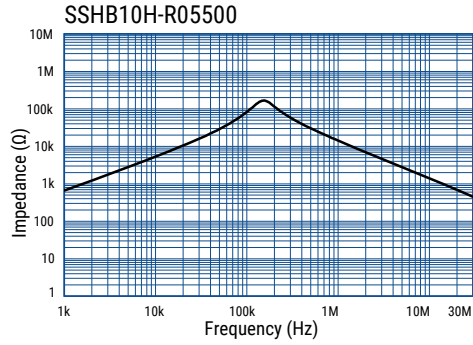


Normal mode

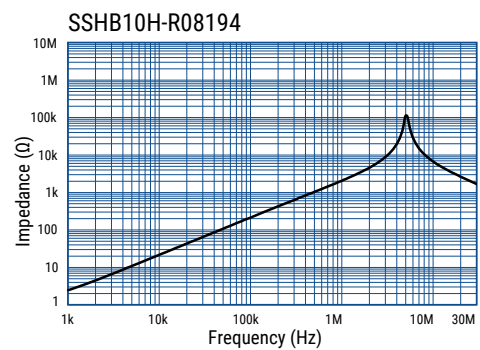
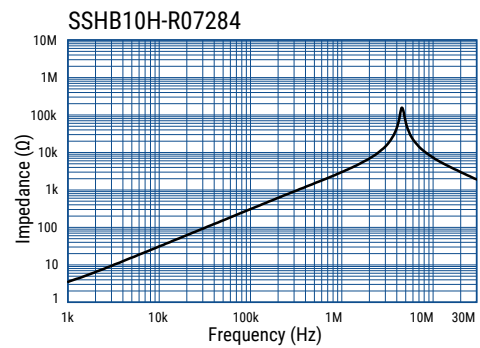
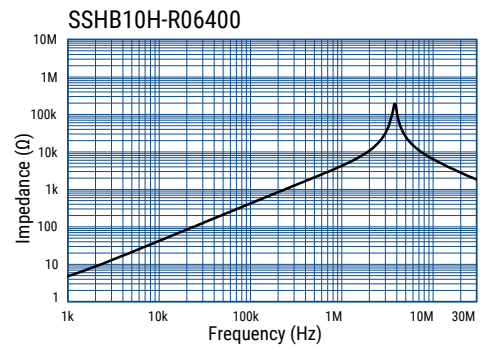
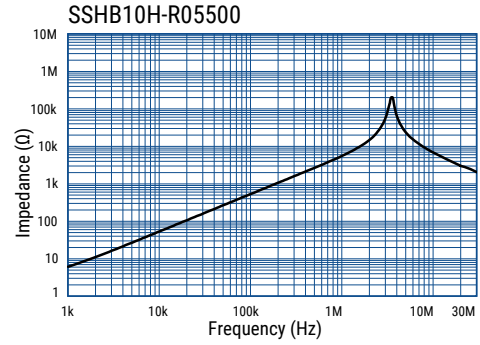


Frequency Characteristics cont.

Common mode

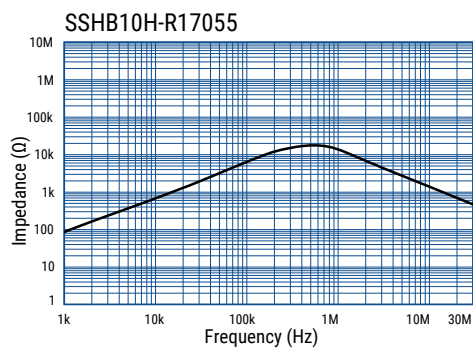
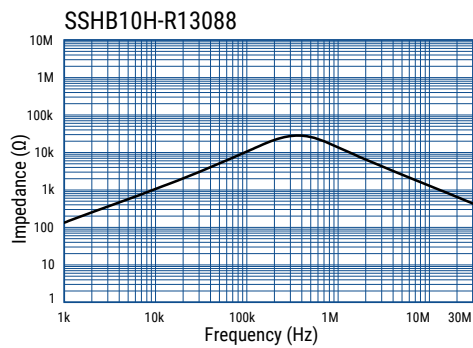
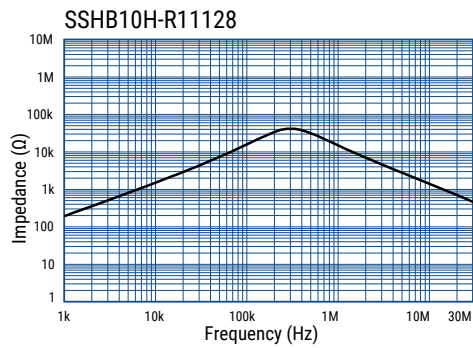
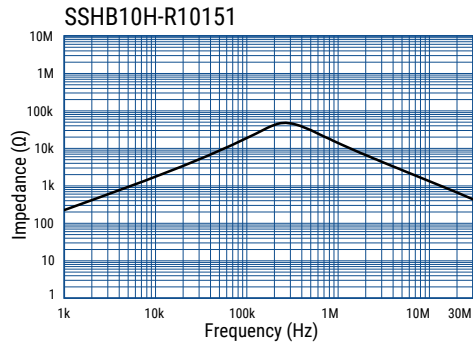


Normal mode

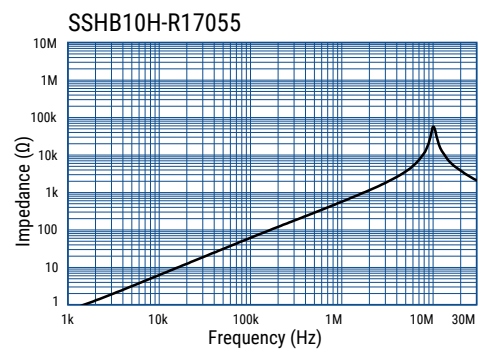
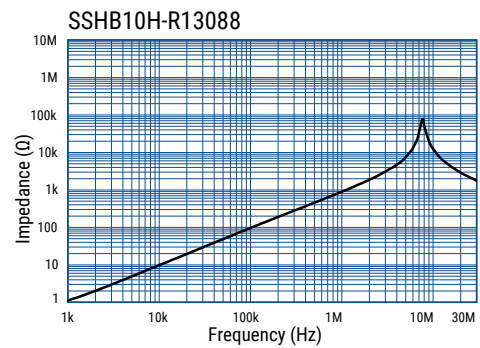
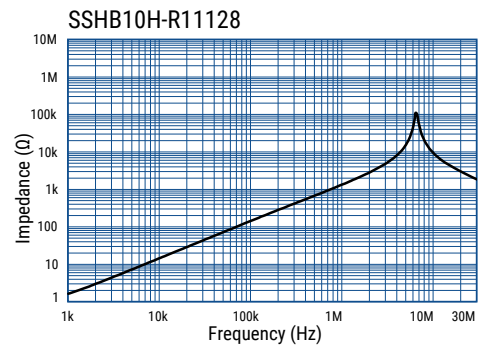
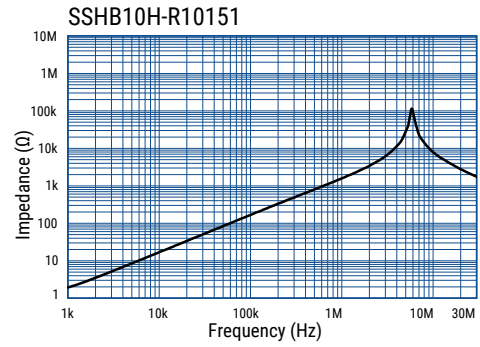


Frequency Characteristics cont.

Common mode

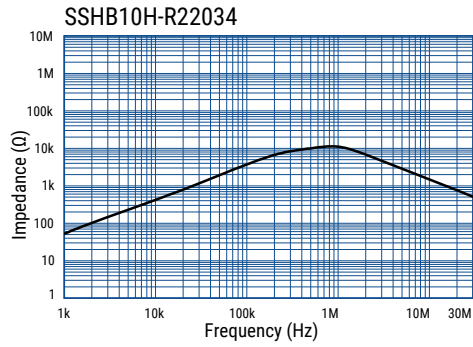


Normal mode

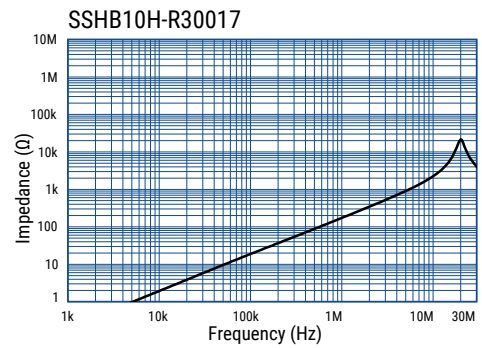
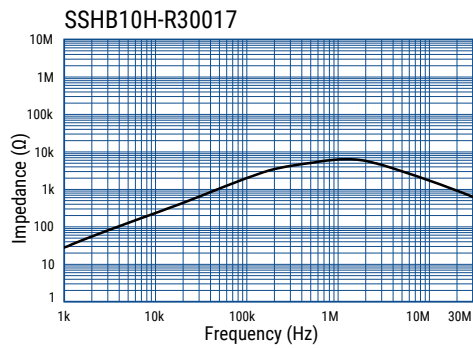
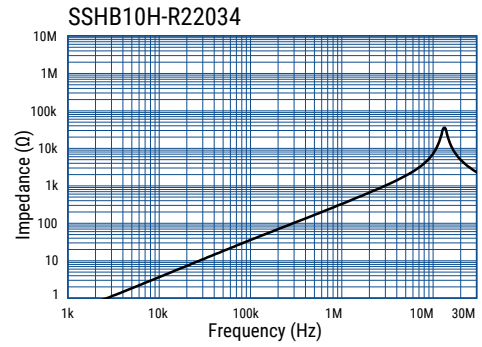


Frequency Characteristics cont.

Common mode



Normal mode



Packaging

Type	Packaging Type	Pieces Per Box
SSHB10H	Tray	300

Dual Mode SSHB Coils, 10HS Series, Wide Range Impedance Type

Overview

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

Benefits

- Proprietary 5HT and 10H ferrite materials and equivalents
- Optimization of magnetic circuit and material
- One coil to suppress both common and normal noise
- High impedance in wide frequency range due to divided bobbin
- High permeability for R type
- Operating temperature range from -40°C to $+130^{\circ}\text{C}$ for standard type
- Operating temperature range from -40°C to $+120^{\circ}\text{C}$ for R type
- Low leakage magnetic flux to outside
- Compact size and low height
- UL 94 V-0 flame retardant rated base and bobbin



Part Number System

SSHB	10	HS-	R	04	620
Series	Core Size Code	Core Orientation and Bobbin Type	Core Type	Rated Current (A)	Inductance (mH) Minimum
SSHB	10	HS = Horizontal, bobbin with sectional winding structure	Blank = Standard R = High permeability	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 13 = 1.3 A	xx0 = xx mH xxx = xx.x mH 0xx = x.x mH Examples: 620 = 62 mH 122 = 12.2 mH 071 = 7.1 mH

Magnetic Permeability of Ferrite Material

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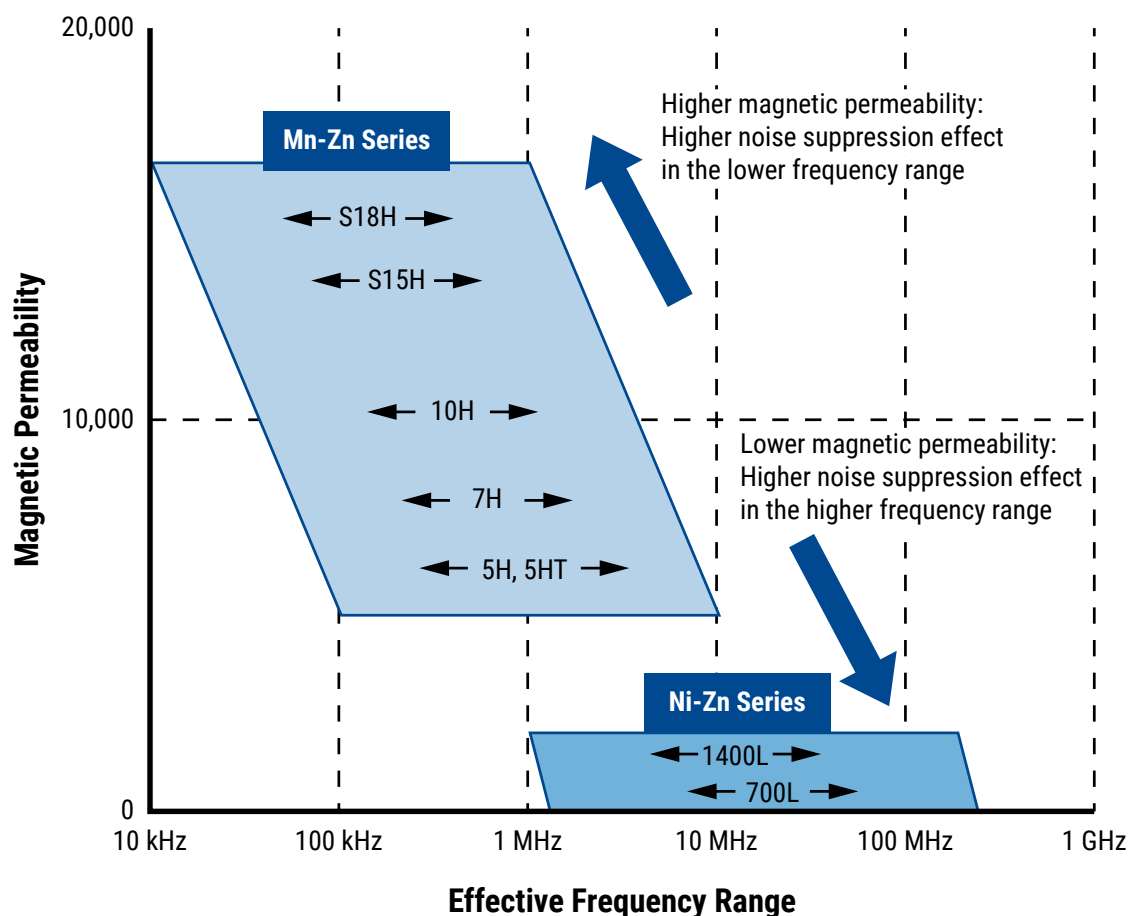
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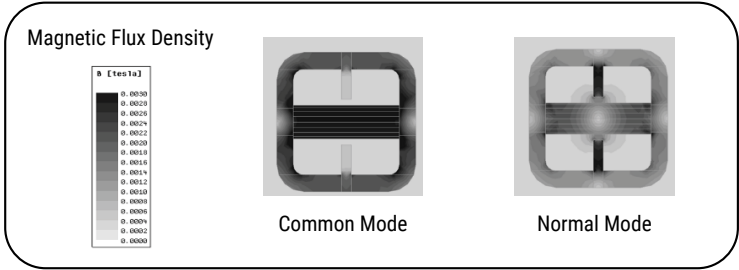


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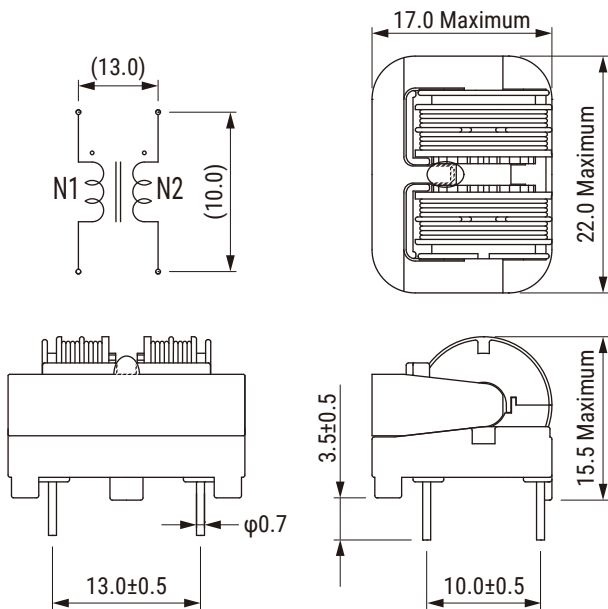
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Environmental Compliance

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Performance Characteristics

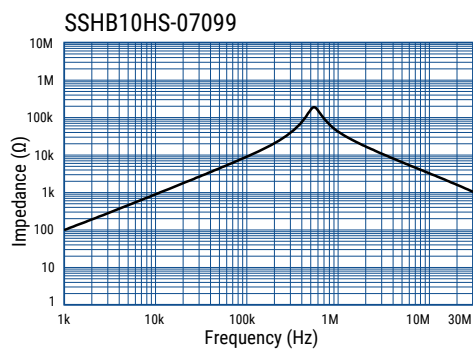
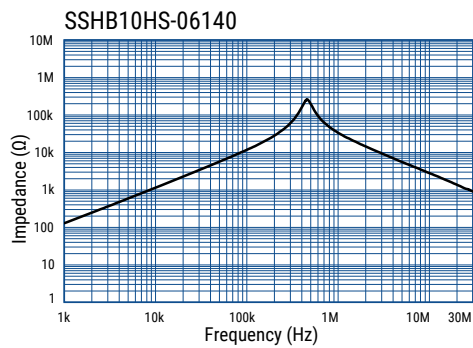
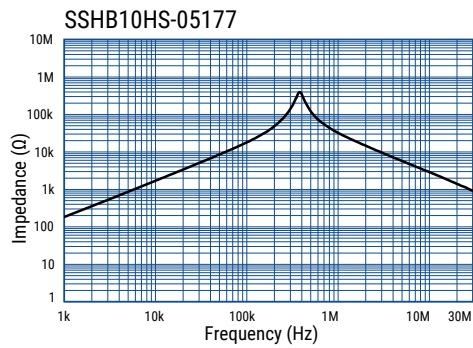
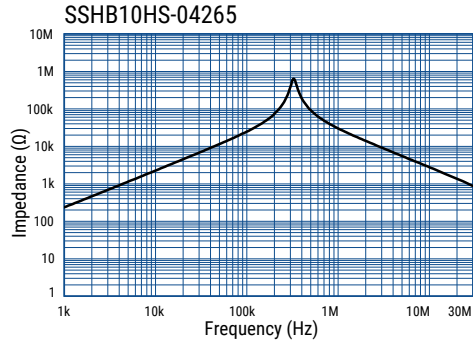
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Inductance Measurement Condition	10 kHz
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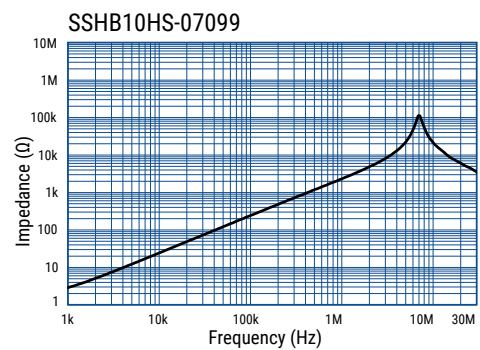
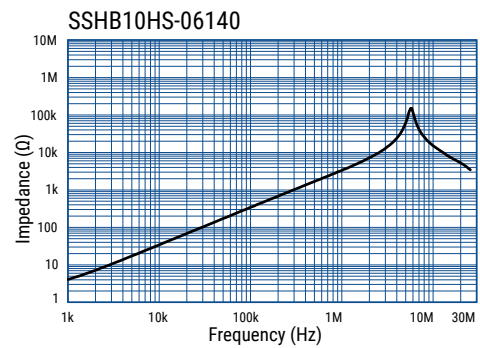
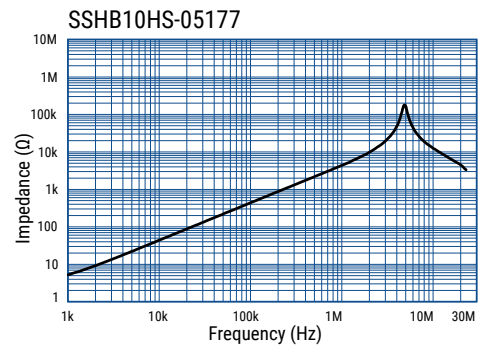
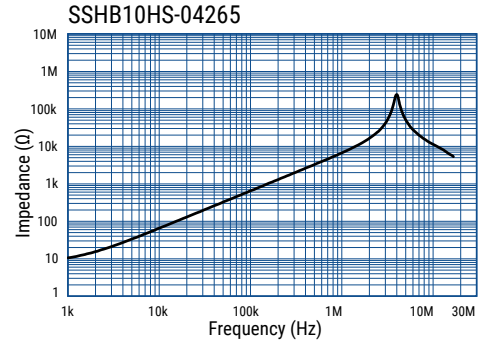
Part Number	Rated Current (A)	Inductance (Common) (mH) Minimum	Inductance (Normal) (μH) Typical	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SSHB10HS-04265	0.4	26.5	949	2.45	50	04 Lot No.	10
SSHB10HS-05177	0.5	17.7	615	1.55	50	05 Lot No.	10
SSHB10HS-06140	0.6	14.0	484	1.17	50	06 Lot No.	10
SSHB10HS-07099	0.7	9.9	339	0.81	50	07 Lot No.	10
SSHB10HS-08068	0.8	6.8	231	0.58	50	08 Lot No.	10
SSHB10HS-10051	1.0	5.1	185	0.43	55	10 Lot No.	10
SSHB10HS-11043	1.1	4.3	135	0.35	50	11 Lot No.	10
SSHB10HS-13030	1.3	3.0	100	0.25	50	13 Lot No.	10
SSHB10HS-17019	1.7	1.9	64	0.17	50	17 Lot No.	10
SSHB10HS-22011	2.2	1.1	41	0.11	55	22 Lot No.	10
SSHB10HS-30006	3.0	0.6	23	0.06	60	30 Lot No.	10
SSHB10HS-R04620	0.4	62.0	949	2.45	50	R04 Lot No.	10
SSHB10HS-R05415	0.5	41.5	615	1.55	50	R05 Lot No.	10
SSHB10HS-R06330	0.6	33.0	484	1.17	50	R06 Lot No.	10
SSHB10HS-R07230	0.7	23.0	339	0.81	50	R07 Lot No.	10
SSHB10HS-R08160	0.8	16.0	231	0.58	50	R08 Lot No.	10
SSHB10HS-R10122	1.0	12.2	185	0.43	55	R10 Lot No.	10
SSHB10HS-R11100	1.1	10.0	135	0.35	50	R11 Lot No.	10
SSHB10HS-R13071	1.3	7.1	100	0.25	50	R13 Lot No.	10
SSHB10HS-R17046	1.7	4.6	64	0.17	50	R17 Lot No.	10
SSHB10HS-R22027	2.2	2.7	41	0.11	55	R22 Lot No.	10
SSHB10HS-R30015	3.0	1.5	23	0.06	60	R30 Lot No.	10

Frequency Characteristics

Common mode

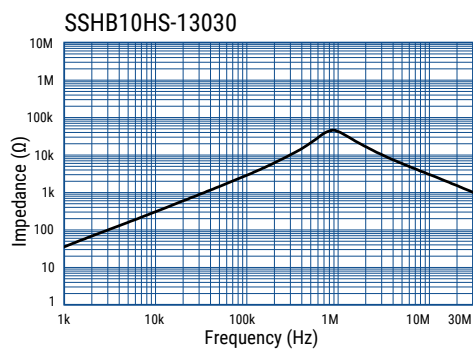
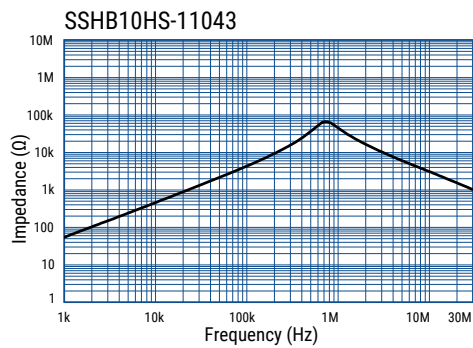
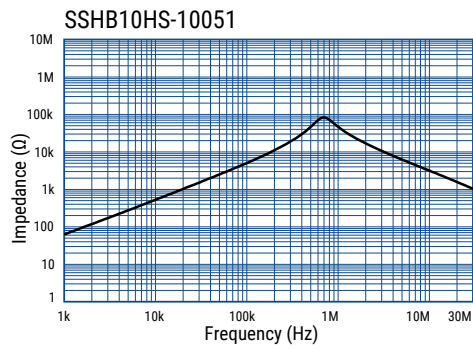
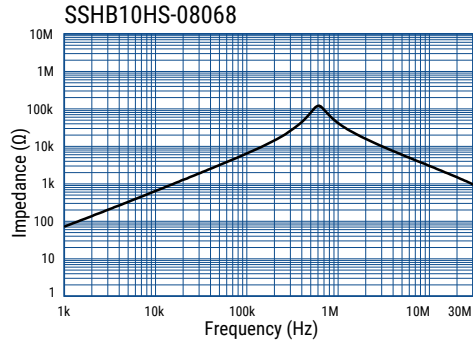


Normal mode

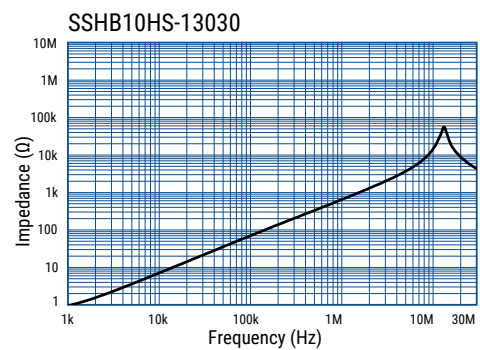
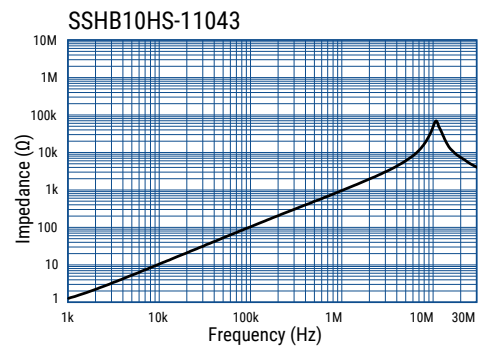
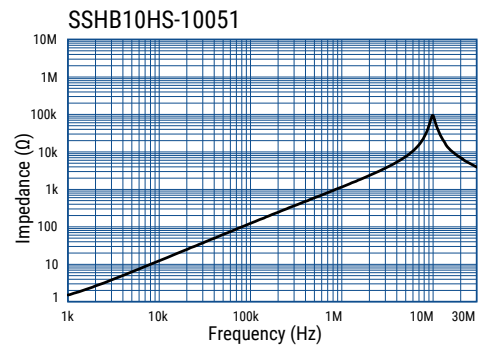
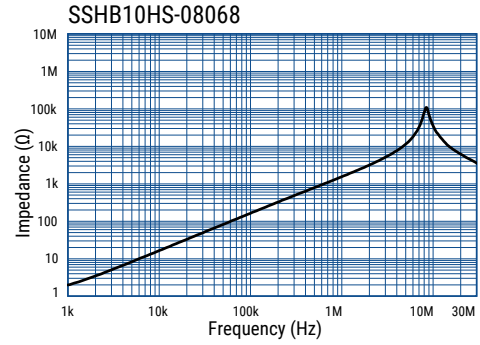


Frequency Characteristics cont.

Common mode

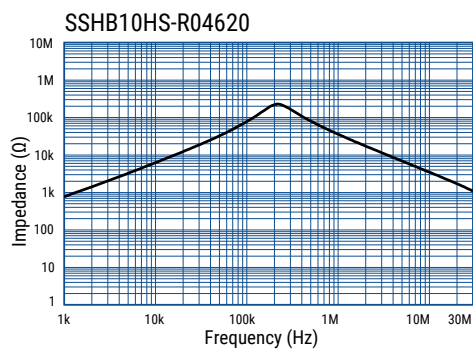
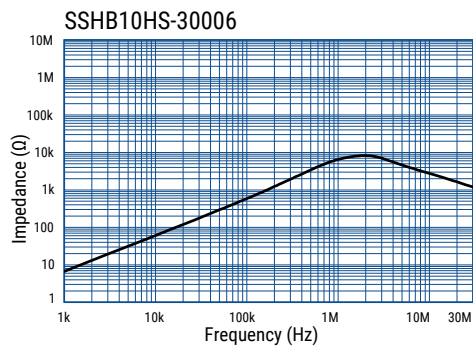
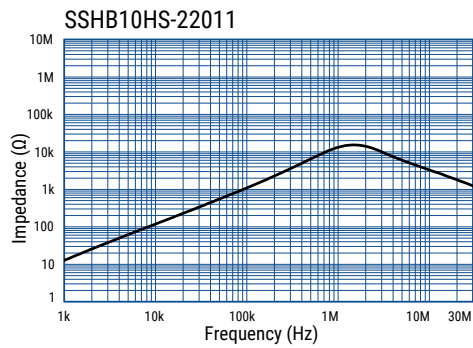
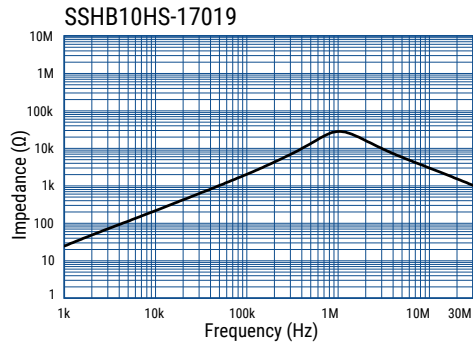


Normal mode

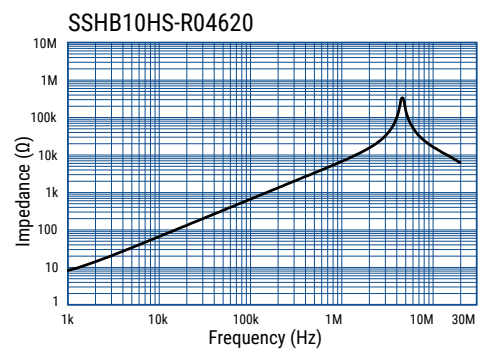
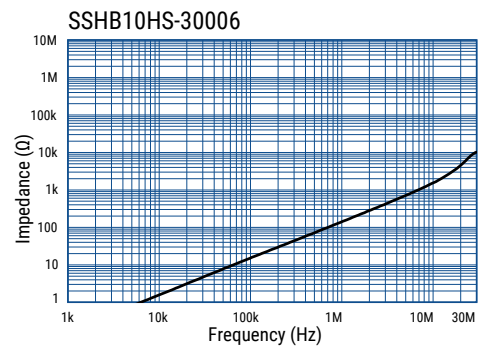
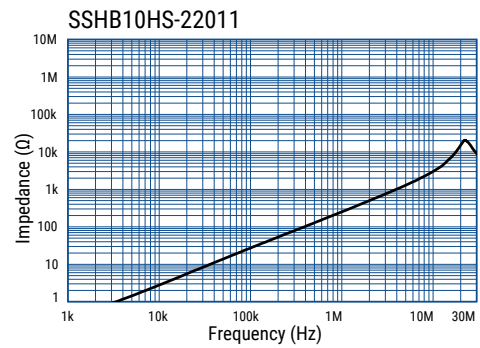
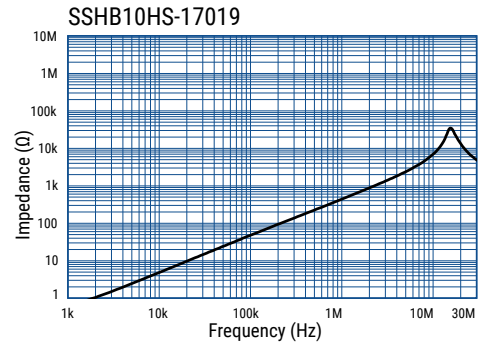


Frequency Characteristics cont.

Common mode

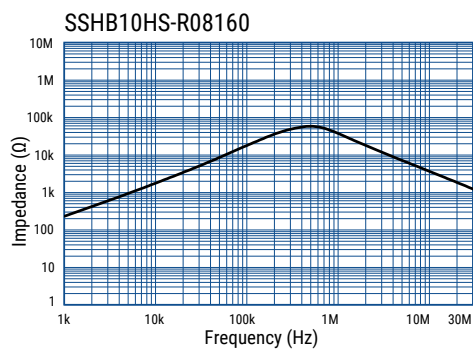
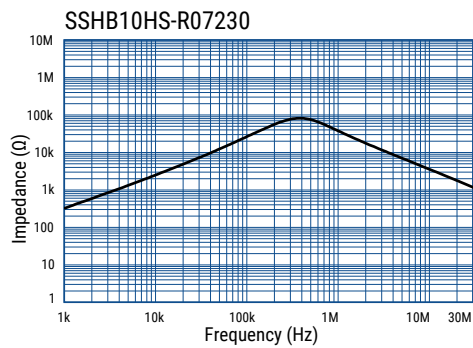
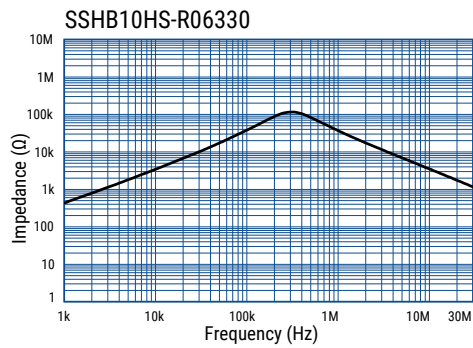
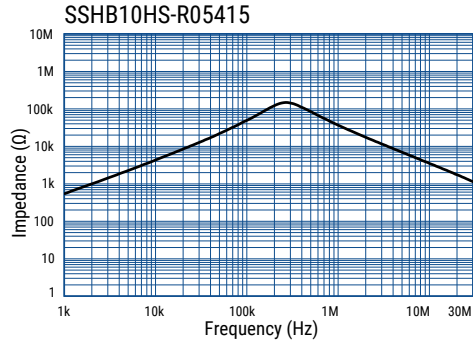


Normal mode

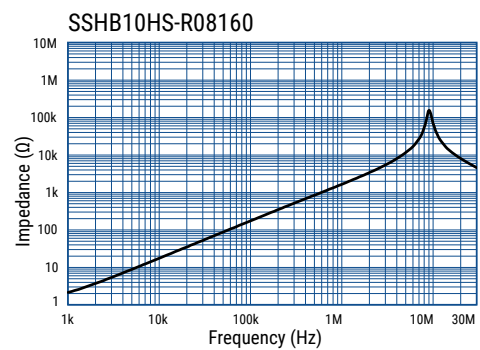
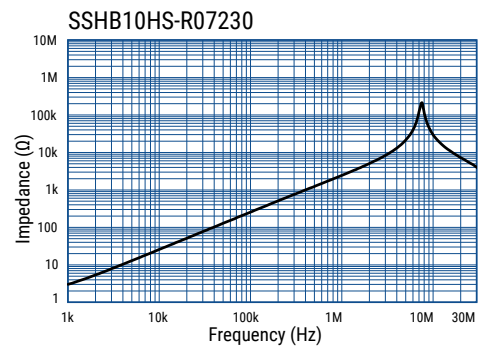
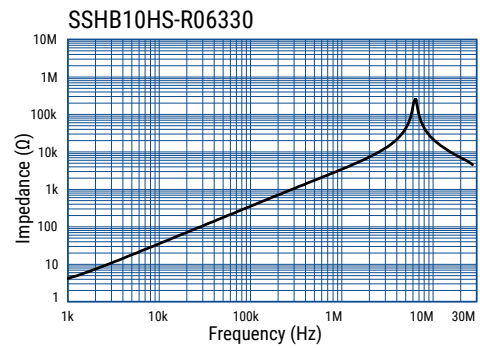
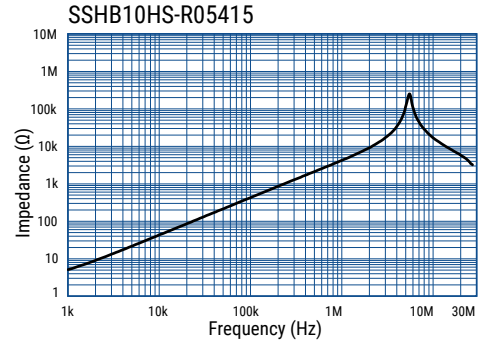


Frequency Characteristics cont.

Common mode

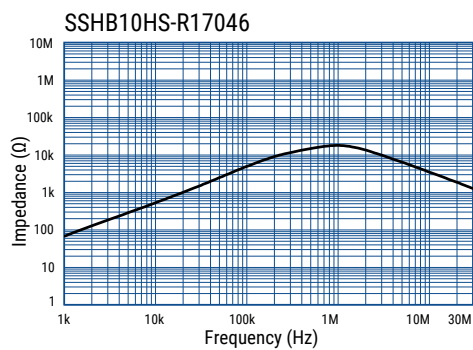
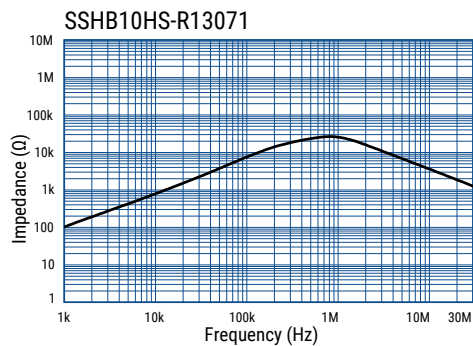
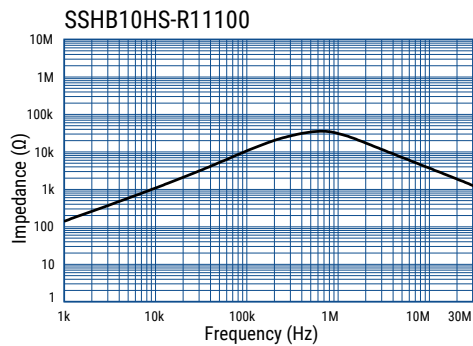
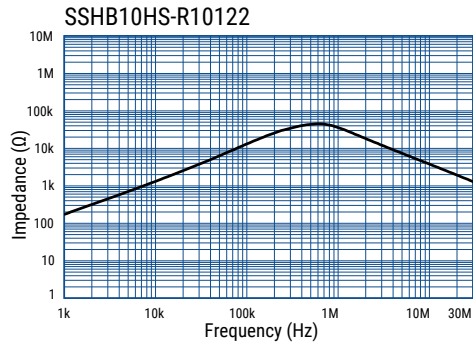


Normal mode

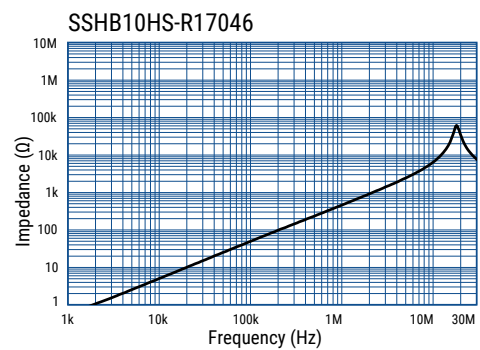
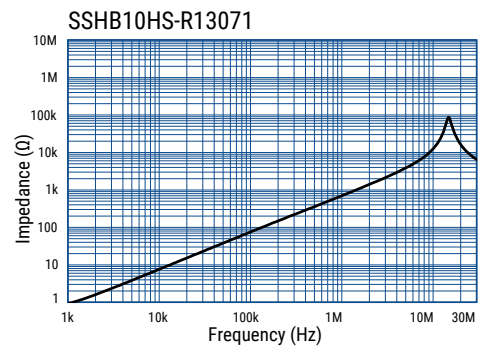
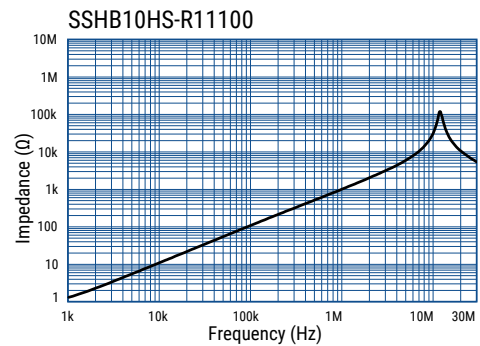
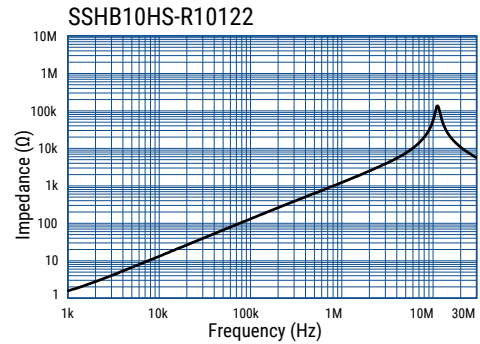


Frequency Characteristics cont.

Common mode

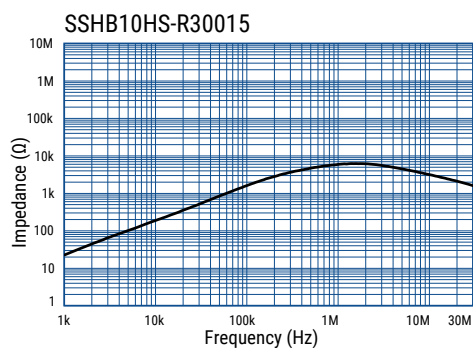
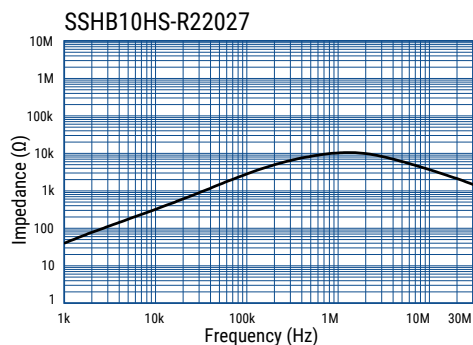


Normal mode

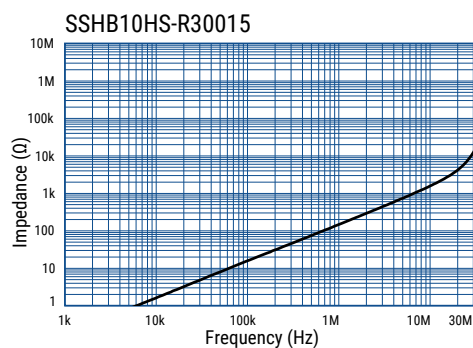
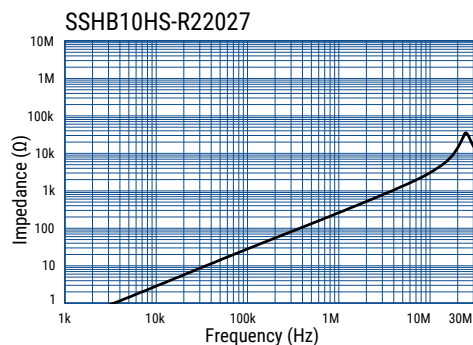


Frequency Characteristics cont.

Common mode



Normal mode



Packaging

Type	Packaging Type	Pieces Per Box
SSHB10HS	Tray	300

Overview

The KEMET SSHB coils are dual mode chokes with a wide variety of characteristics. These hybrid coils combine the two functions of normal mode countermeasure and common mode noise suppression in just one coil. Reducing the number of required products ensures cost savings and space efficiency. Our proprietary core materials provide optimized solutions for high-temperature requirements (standard type) or for high permeability needs (R type). In addition, the specially developed shape is efficient with normal noise suppression.

Applications

- LED lighting
- Audio-visual equipment
- Office automation equipment
- Power supplies

Benefits

- Proprietary 5HT and 10H ferrite materials and equivalents
- Optimization of magnetic circuit and material
- One coil to suppress both common and normal noise
- Large inductance due to non-divided bobbin
- High permeability for R type
- Operating temperature range from -40°C to $+130^{\circ}\text{C}$ for standard type
- Operating temperature range from -40°C to $+120^{\circ}\text{C}$ for R type
- Low leakage magnetic flux to outside
- UL 94 V-0 flame retardant rated base and bobbin



Part Number System

SSHB	21	H-	R	03	1580
Series	Core Size Code	Core Orientation and Bobbin Type	Core Type	Rated Current (A)	Inductance (mH) Minimum
SSHB	21	H = Horizontal, bobbin without sectional winding structure	Blank = Standard R = High permeability	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 15 = 1.5 A	xxxx = xxx.x mH xxx = xx.x 0xx = x.x mH Examples: 1580 = 158.0 mH 825 = 82.5 mH 024 = 2.4 mH

Magnetic Permeability of Ferrite Material

In order to achieve efficient noise reduction, it is important to select the material according to the target frequency band.

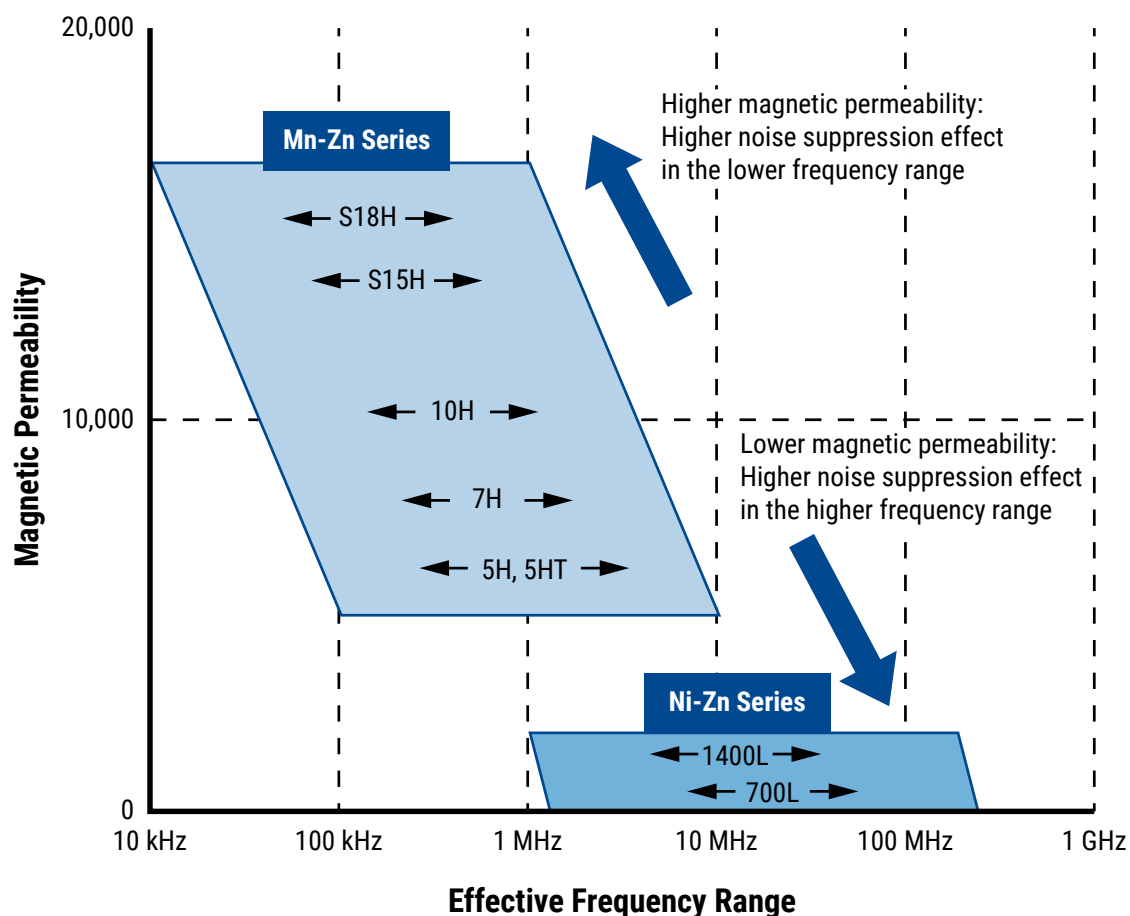
Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1.

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, 5HT, 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



Core Structure



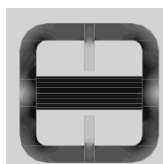
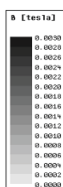
Conventional



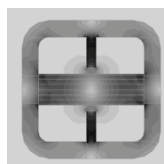
Original New Core Shape

This original shape structure allows for optimized composite characteristics of common mode and normal mode noise countermeasures.

Magnetic Flux Density



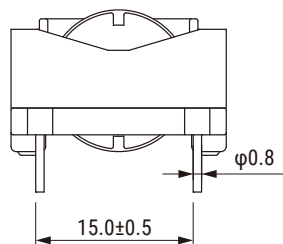
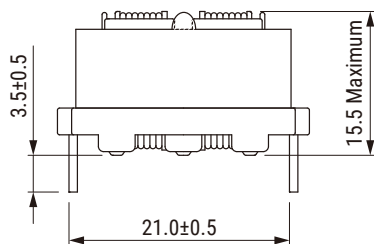
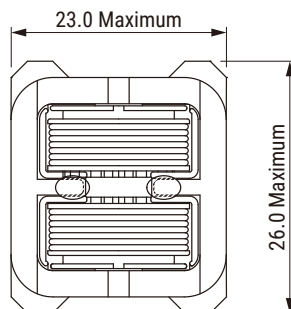
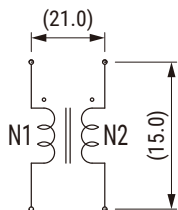
Common Mode



Normal Mode

- > Increased efficiency on normal mode inductance
- > Material solution for specific requirements
 - ✓ Standard type for high temperature needs
 - ✓ R type for high permeability needs
- > Low leakage magnetic flux to outside

Dimensions – Millimeters



Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.



Performance Characteristics

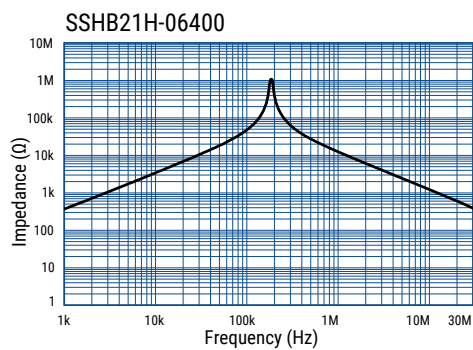
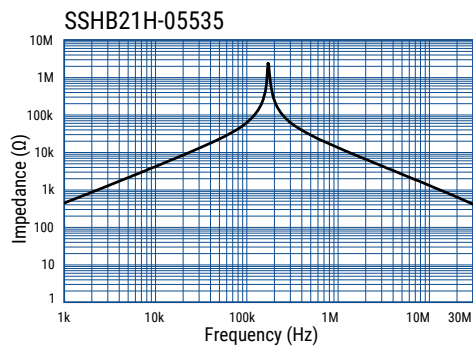
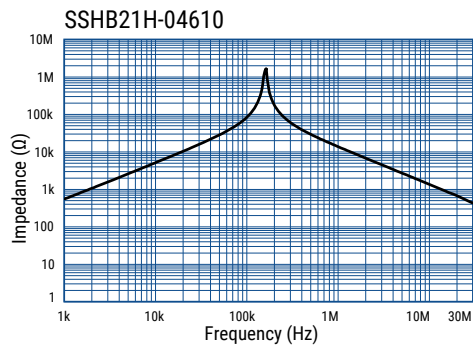
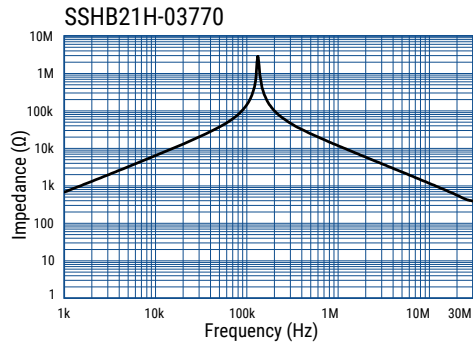
Item	Performance Characteristics
Rated Voltage	250 VAC 320 VAC (IEC60664 -1)
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 3.0 A
Rated Inductance Range	2.4 – 158.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C) (R Type) and B (130°C)
Operating Temperature Range	-40°C to +120°C (include self temperature rise) (R Type) and -40°C to +130°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

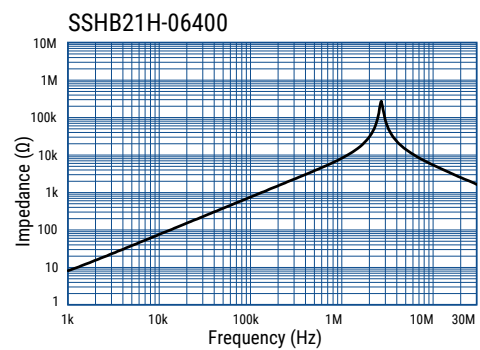
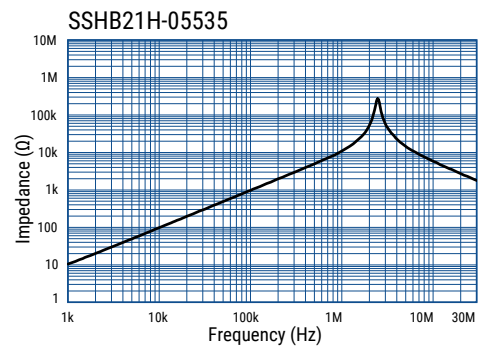
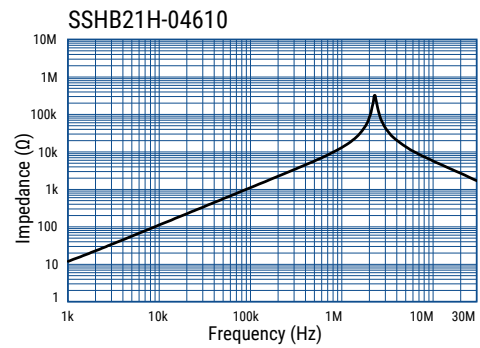
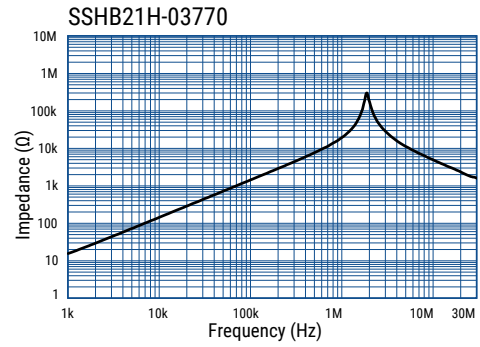
Part Number	Rated Current (A)	Inductance (Common) (mH) Minimum	Inductance (Normal) (μH) Typical	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SSHB21H-03770	0.3	77.0	2,155	3.20	40	03 Lot No.	14
SSHB21H-04610	0.4	61.0	1,702	2.25	45	04 Lot No.	14
SSHB21H-05535	0.5	53.5	1,496	2.10	60	05 Lot No.	14
SSHB21H-06400	0.6	40.0	1,124	1.50	60	06 Lot No.	14
SSHB21H-07340	0.7	34.0	958	1.16	60	07 Lot No.	14
SSHB21H-08262	0.8	26.2	733	0.88	60	08 Lot No.	14
SSHB21H-10184	1.0	18.4	515	0.64	65	10 Lot No.	14
SSHB21H-12145	1.2	14.5	405	0.49	70	12 Lot No.	14
SSHB21H-15080	1.5	8.0	224	0.31	70	15 Lot No.	14
SSHB21H-18054	1.8	5.4	153	0.22	65	18 Lot No.	14
SSHB21H-20046	2.0	4.6	129	0.17	65	20 Lot No.	14
SSHB21H-25027	2.5	2.7	77	0.10	60	25 Lot No.	14
SSHB21H-30024	3.0	2.4	68	0.08	65	30 Lot No.	14
SSHB21H-R031580	0.3	158.0	2,155	3.20	40	R03 Lot No.	14
SSHB21H-R041250	0.4	125.0	1,702	2.25	45	R04 Lot No.	14
SSHB21H-R051100	0.5	110.0	1,496	2.10	60	R05 Lot No.	14
SSHB21H-R06825	0.6	82.5	1,124	1.50	60	R06 Lot No.	14
SSHB21H-R07700	0.7	70.0	958	1.16	60	R07 Lot No.	14
SSHB21H-R08540	0.8	54.0	733	0.88	60	R08 Lot No.	14
SSHB21H-R10377	1.0	37.7	515	0.64	65	R10 Lot No.	14
SSHB21H-R12296	1.2	29.6	405	0.49	70	R12 Lot No.	14
SSHB21H-R15164	1.5	16.4	224	0.31	70	R15 Lot No.	14
SSHB21H-R18112	1.8	11.2	153	0.22	65	R18 Lot No.	14
SSHB21H-R20094	2.0	9.4	129	0.17	65	R20 Lot No.	14
SSHB21H-R25056	2.5	5.6	77	0.10	60	R25 Lot No.	14
SSHB21H-R30050	3.0	5.0	68	0.08	65	R30 Lot No.	14

Frequency Characteristics

Common mode

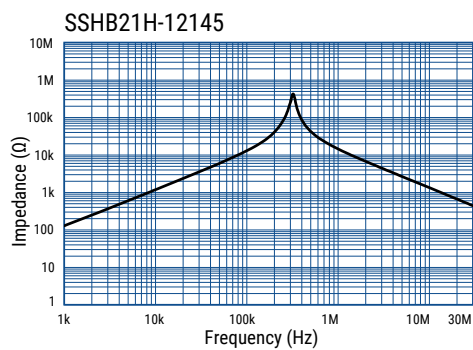
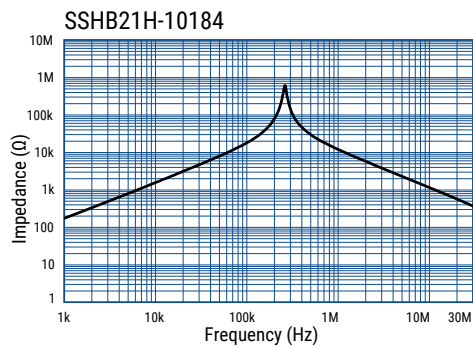
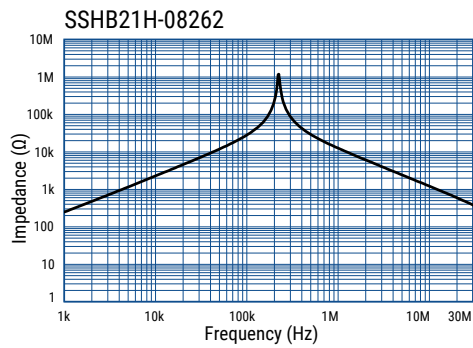
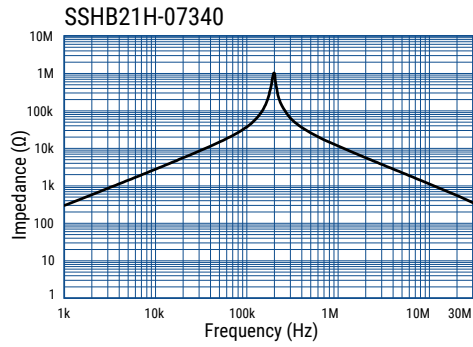


Normal mode

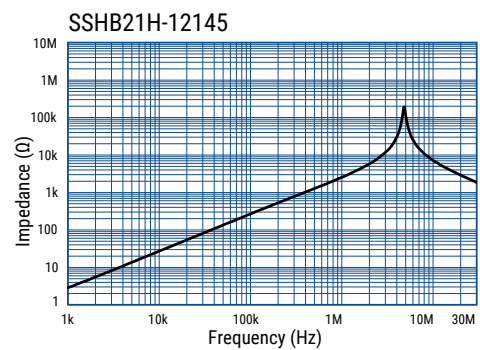
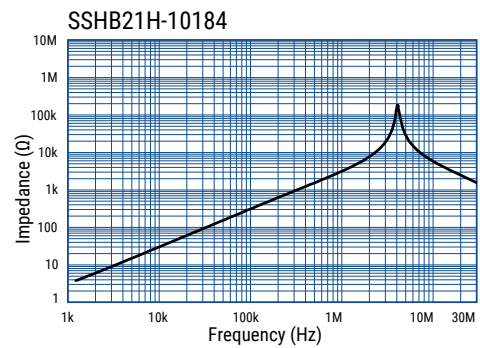
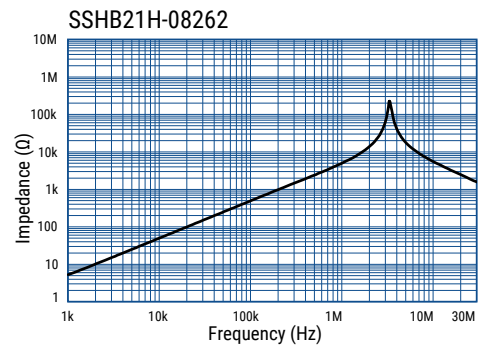
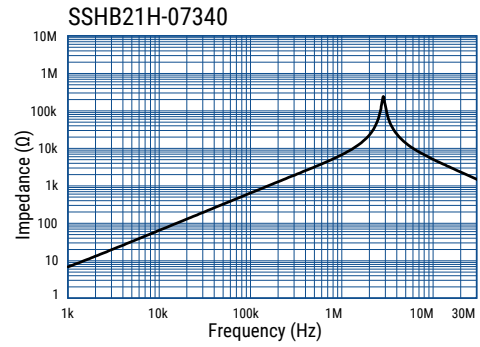


Frequency Characteristics cont.

Common mode

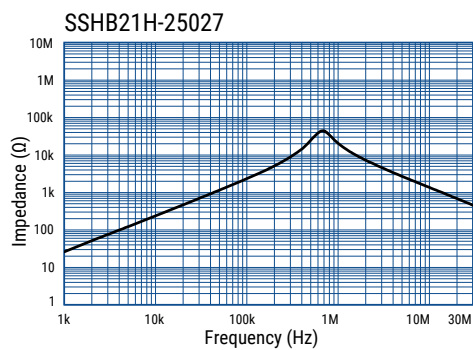
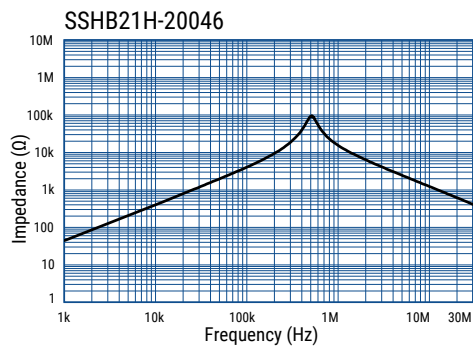
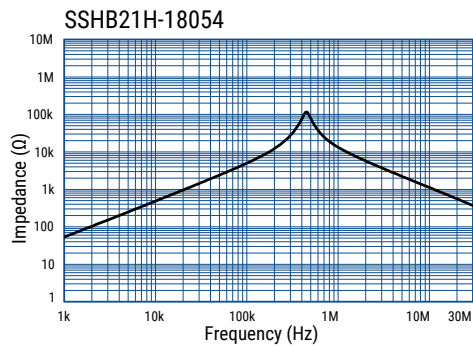
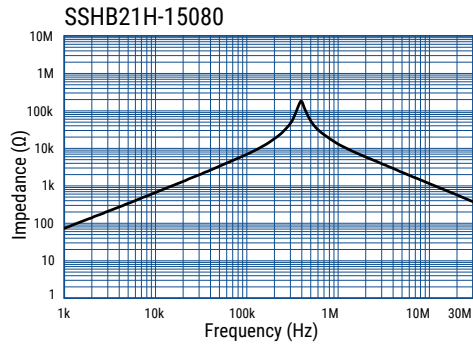


Normal mode

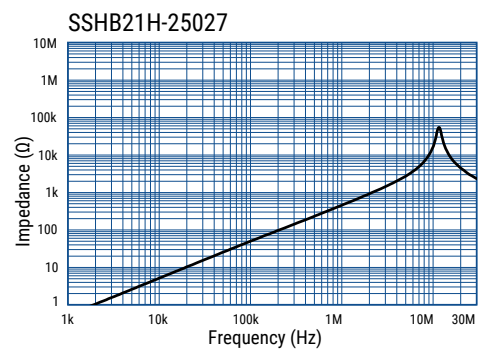
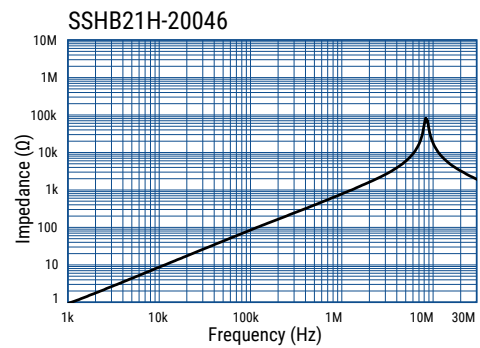
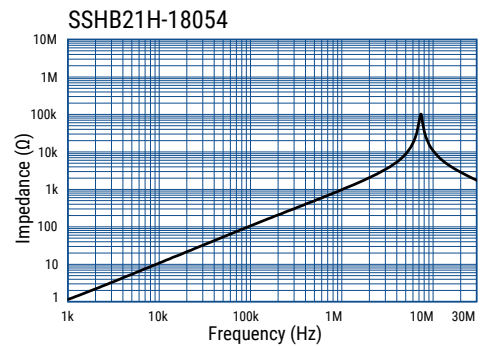
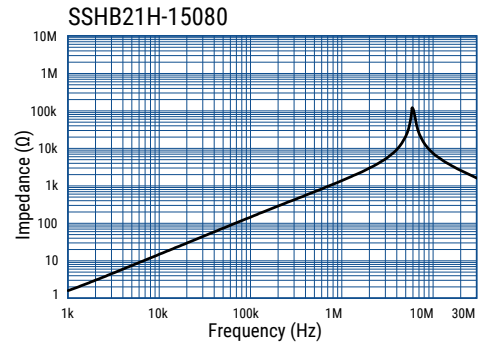


Frequency Characteristics cont.

Common mode

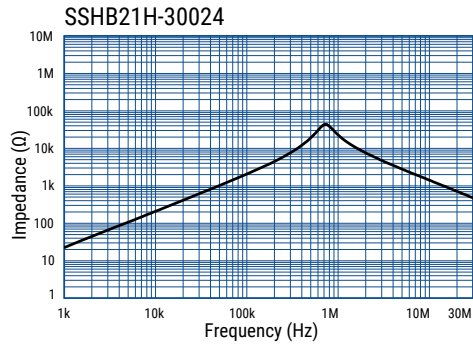


Normal mode

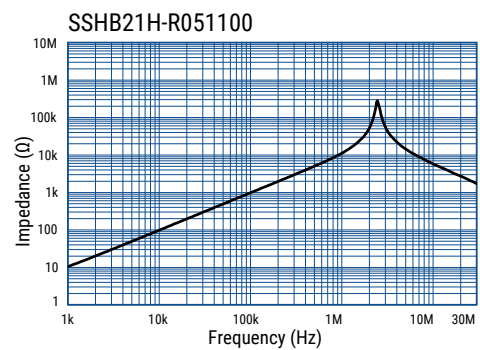
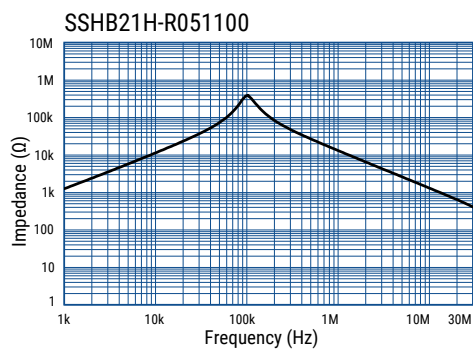
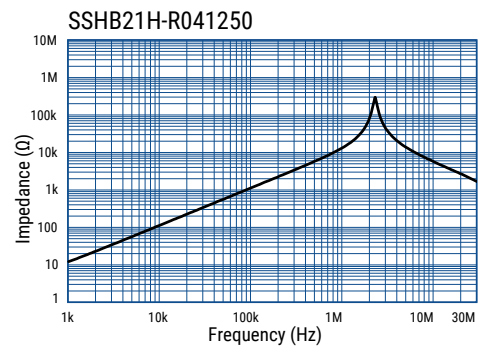
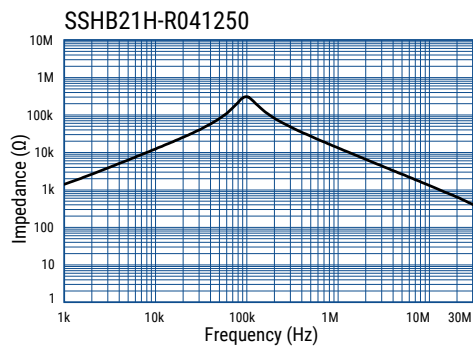
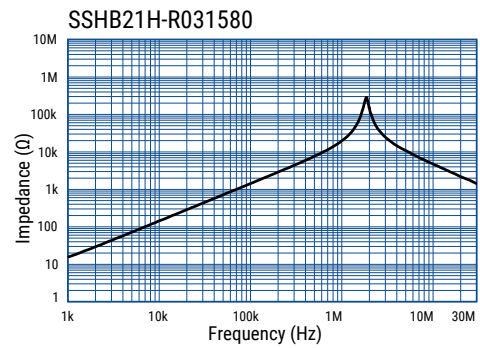
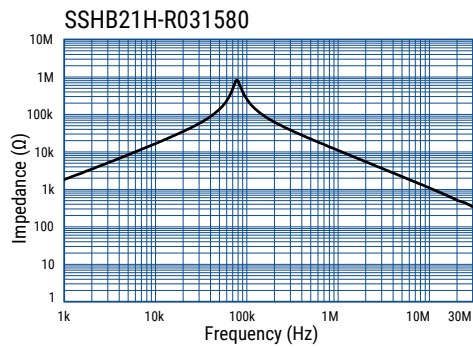
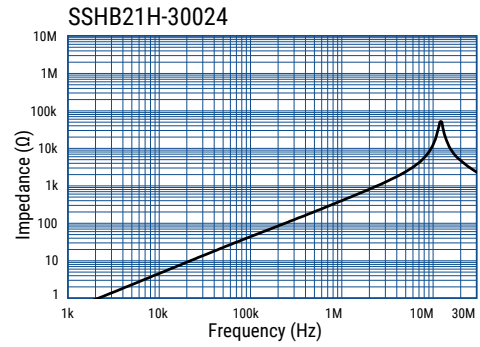


Frequency Characteristics cont.

Common mode

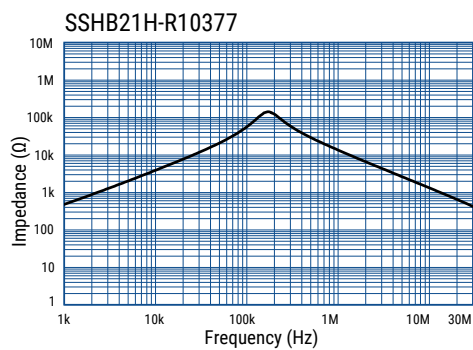
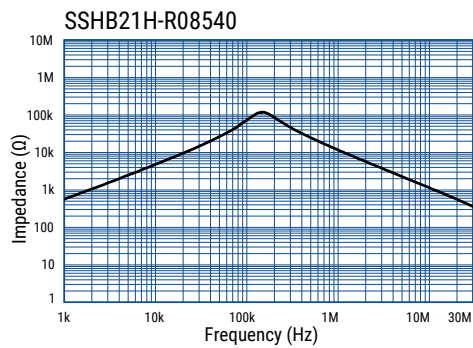
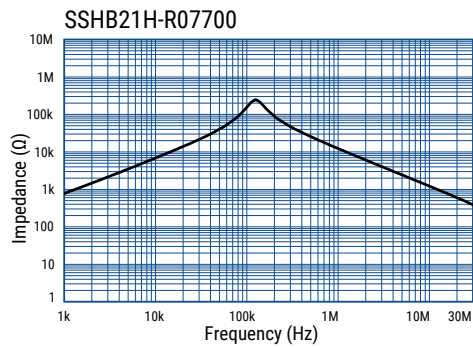
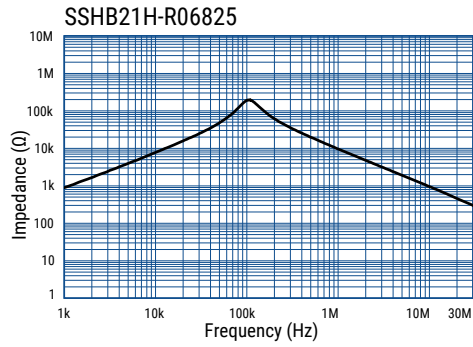


Normal mode

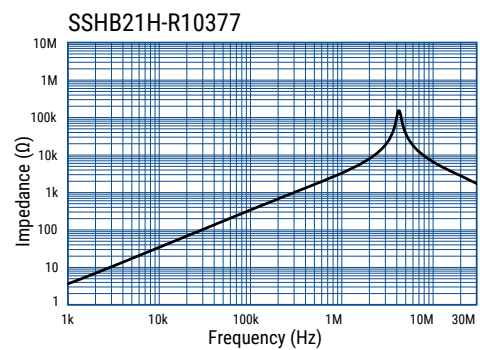
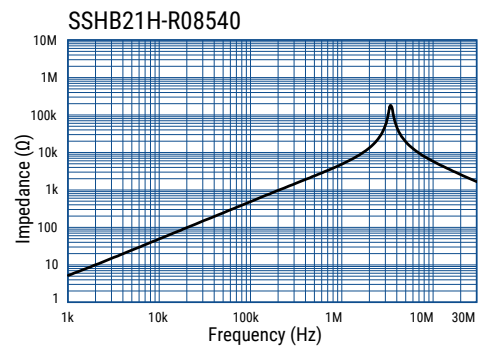
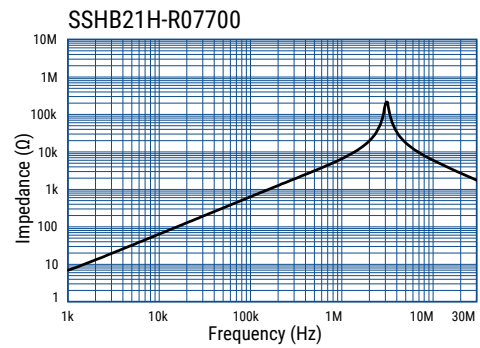
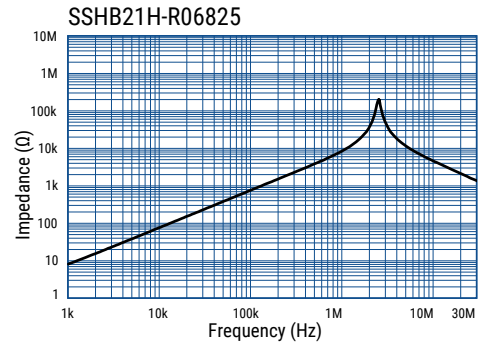


Frequency Characteristics cont.

Common mode

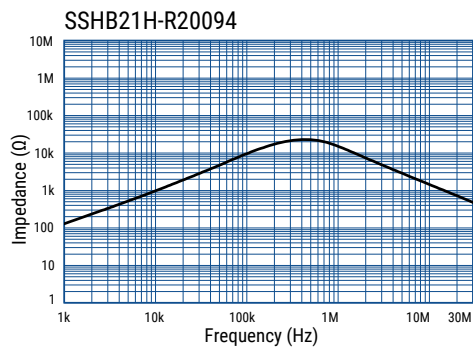
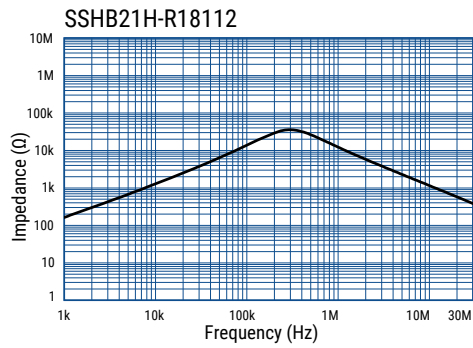
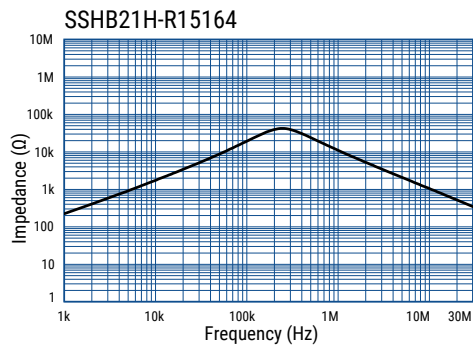
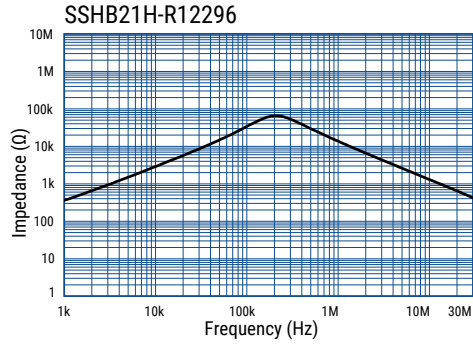


Normal mode

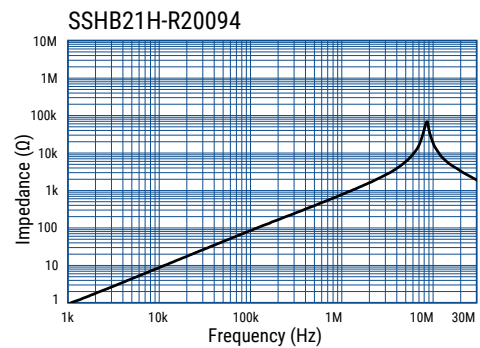
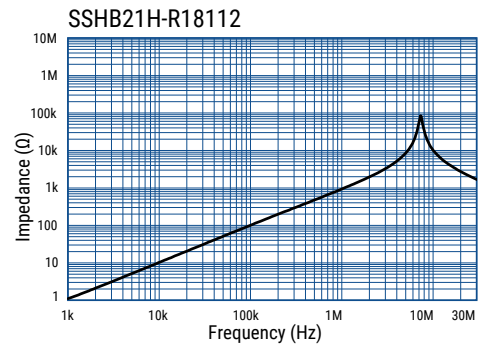
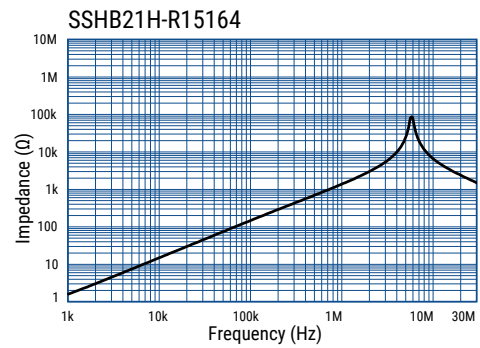
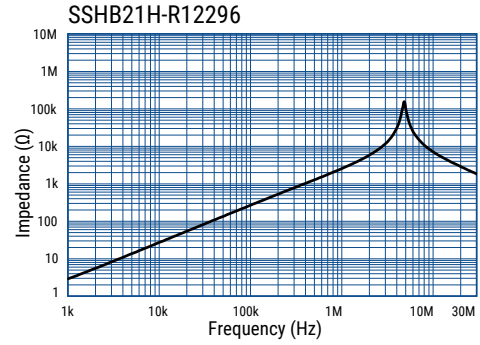


Frequency Characteristics cont.

Common mode

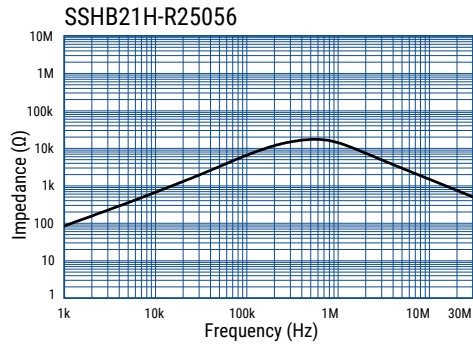


Normal mode

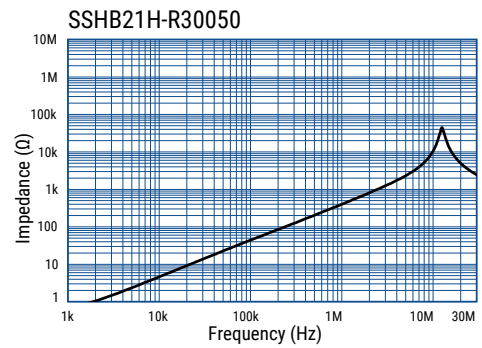
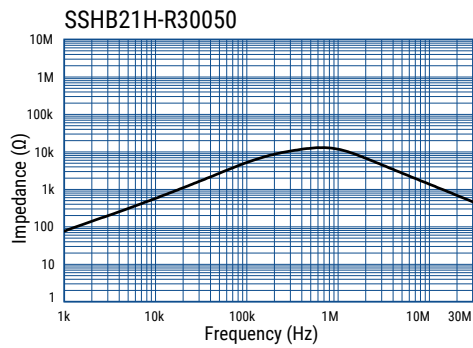
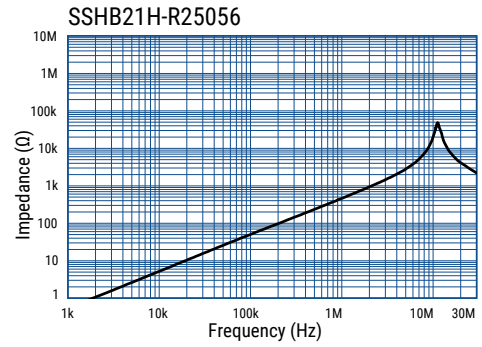


Frequency Characteristics cont.

Common mode



Normal mode



Packaging

Type	Packaging Type	Pieces Per Box
SSHB21H	Tray	360

Dual Mode SSHB Coils, 21HS Series, Wide Range Impedance Type

Overview

The KEMET SSHB coils are dual mode chokes with a wide variety of characteristics. These hybrid coils combine the two functions of normal mode countermeasure and common mode noise suppression in just one coil. Reducing the number of required products ensures cost savings and space efficiency. Our proprietary core materials provide optimized solutions for high-temperature requirements (standard type) or for high permeability needs (R type). In addition, the specially developed shape is efficient with normal noise suppression.

Applications

- LED lighting
- Audio-visual equipment
- Office automation equipment
- Power supplies

Benefits

- Proprietary 5HT and 10H ferrite materials and equivalents
- Optimization of magnetic circuit and material
- One coil to suppress both common and normal noise
- High impedance in wide frequency range due to divided bobbin
- High permeability for R type
- Operating temperature range from -40°C to $+130^{\circ}\text{C}$ for standard type
- Operating temperature range from -40°C to $+120^{\circ}\text{C}$ for R type
- Low leakage magnetic flux to outside
- UL 94 V-0 flame retardant rated base and bobbin



Part Number System

SSHB	21	HS-	R	03	1350
Series	Core Size Code	Core Orientation and Bobbin Type	Core Type	Rated Current (A)	Inductance (mH) Minimum
SSHB	21	HS = Horizontal, bobbin with sectional winding structure	Blank = Standard R = High permeability	0x = 0.x A xx = x.x A Examples: 03 = 0.3 A 15 = 1.5 A	xxxx = xxx.x mH xxx = xx.x 0xx = x.x mH Examples: 1350 = 135.0 mH 656 = 65.6 mH 064 = 6.4 mH

Magnetic Permeability of Ferrite Material

In order to achieve 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.

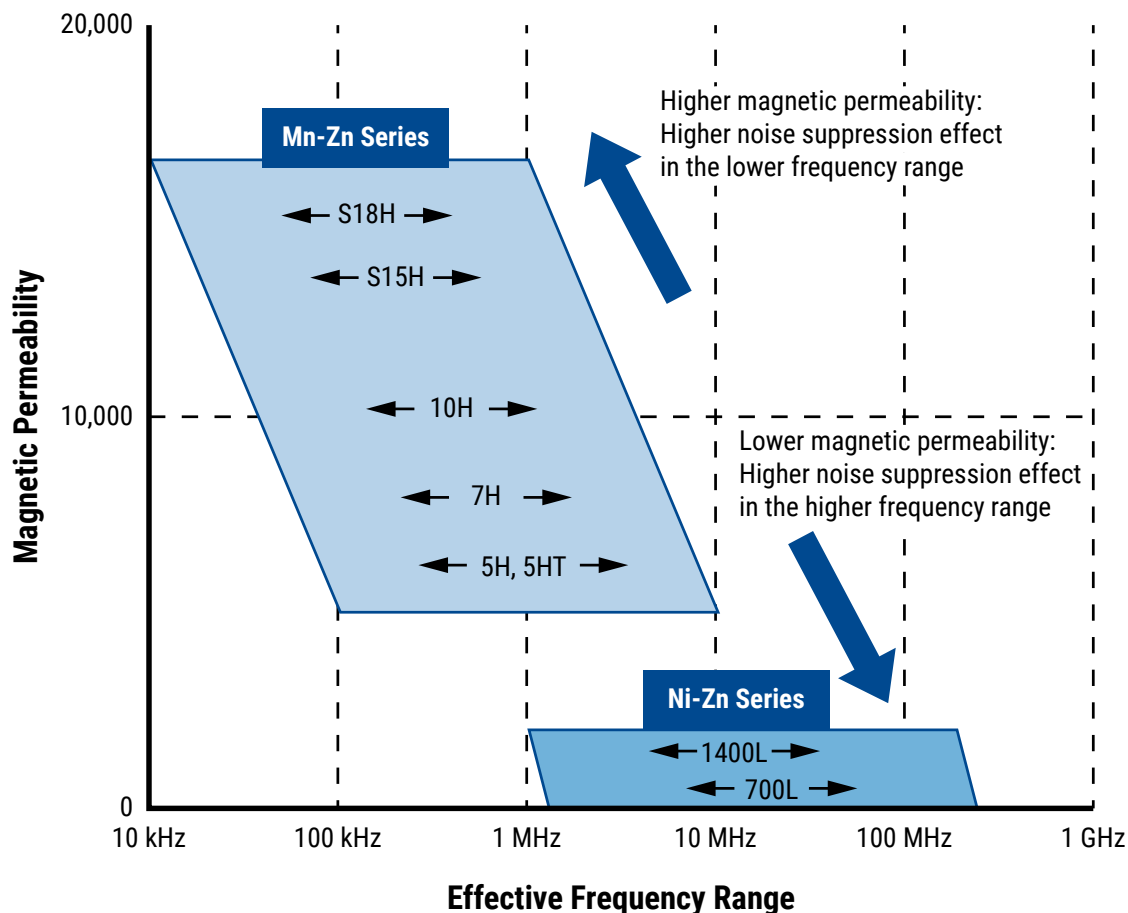
A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1.

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, 5HT, 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



Core Structure



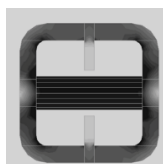
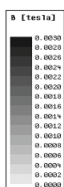
Conventional



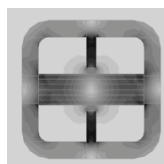
Original New Core Shape

This original shape structure allows for optimized composite characteristics of common mode and normal mode noise countermeasures.

Magnetic Flux Density



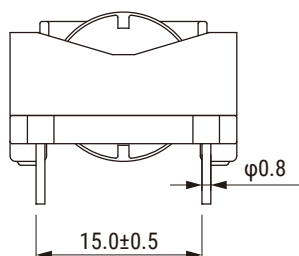
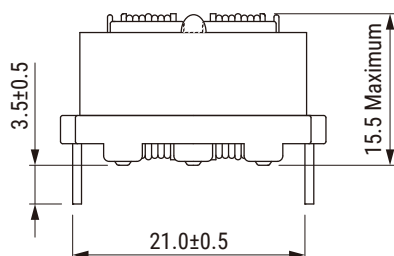
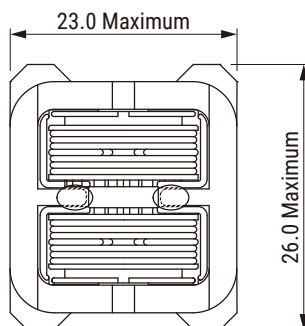
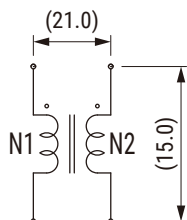
Common Mode



Normal Mode

- > Increased efficiency on normal mode inductance
- > Material solution for specific requirements
 - ✓ Standard type for high temperature needs
 - ✓ R type for high permeability needs
- > Low leakage magnetic flux to outside

Dimensions – Millimeters



Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.



Performance Characteristics

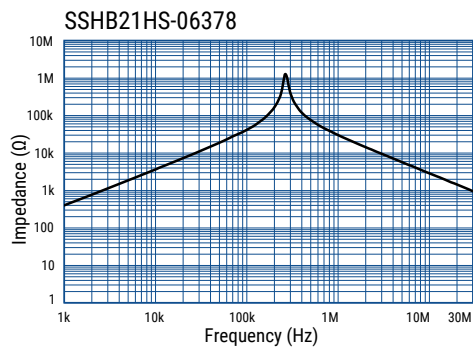
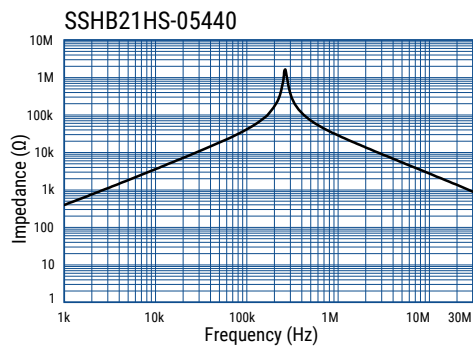
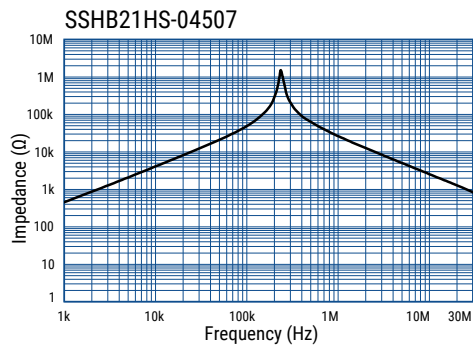
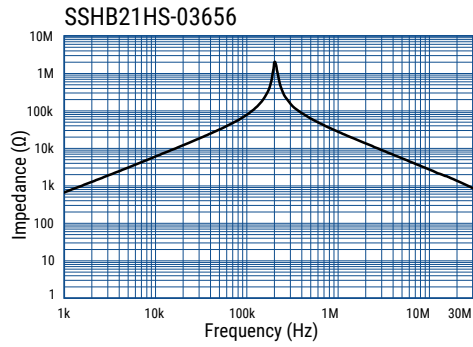
Item	Performance Characteristics
Rated Voltage	250 VAC 320 VAC (IEC60664 -1)
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 3.0 A
Rated Inductance Range	1.3 – 135.0 mH minimum
Inductance Measurement Condition	10 kHz
Thermal Class	E (120°C) (R Type) and B (130°C)
Operating Temperature Range	-40°C to +120°C (include self temperature rise) (R Type) and -40°C to +130°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

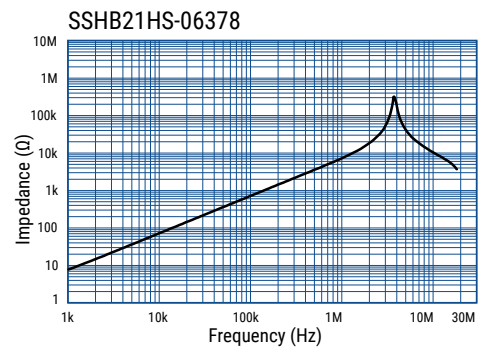
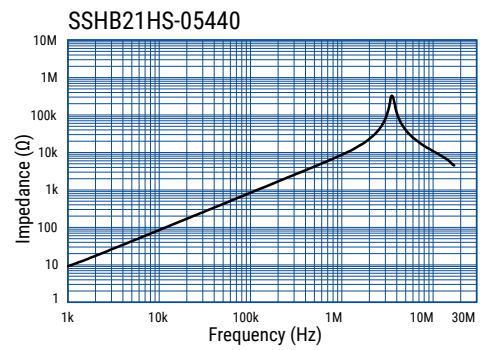
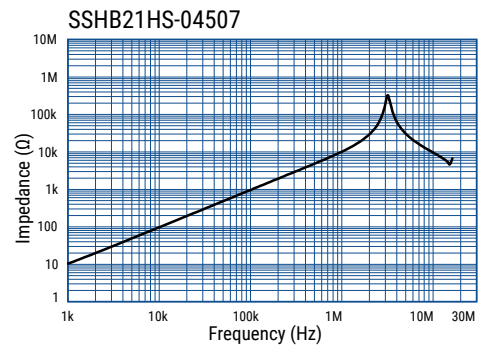
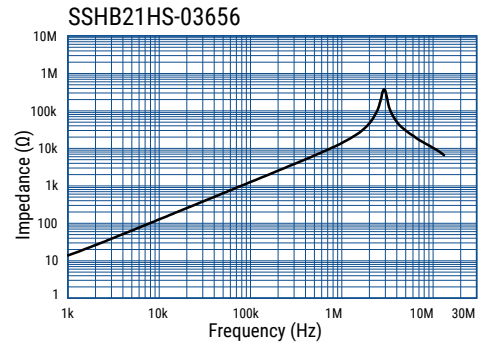
Part Number	Rated Current (A)	Inductance (Common) (mH) Minimum	Inductance (Normal) (μH) Typical	DC Resistance/ Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SSHB21HS-03656	0.3	65.6	1,832	2.95	40	03 Lot No.	14
SSHB21HS-04507	0.4	50.7	1,341	2.03	40	04 Lot No.	14
SSHB21HS-05440	0.5	44.0	1,230	1.88	55	05 Lot No.	14
SSHB21HS-06378	0.6	37.8	1,023	1.48	60	06 Lot No.	14
SSHB21HS-07267	0.7	26.7	665	1.03	55	07 Lot No.	14
SSHB21HS-08200	0.8	20.0	515	0.78	55	08 Lot No.	14
SSHB21HS-10145	1.0	14.5	384	0.57	65	10 Lot No.	14
SSHB21HS-12110	1.2	11.0	290	0.43	65	12 Lot No.	14
SSHB21HS-15064	1.5	6.4	180	0.28	65	15 Lot No.	14
SSHB21HS-18046	1.8	4.6	129	0.20	65	18 Lot No.	14
SSHB21HS-20034	2.0	3.4	96	0.14	55	20 Lot No.	14
SSHB21HS-25021	2.5	2.1	60	0.09	50	25 Lot No.	14
SSHB21HS-30013	3.0	1.3	38	0.06	45	30 Lot No.	14
SSHB21HS-R031350	0.3	135.0	1,832	2.95	40	R03 Lot No.	14
SSHB21HS-R041050	0.4	105.0	1,341	2.03	40	R04 Lot No.	14
SSHB21HS-R05910	0.5	91.0	1,230	1.88	55	R05 Lot No.	14
SSHB21HS-R06780	0.6	78.0	1,023	1.48	60	R06 Lot No.	14
SSHB21HS-R07550	0.7	55.0	665	1.03	55	R07 Lot No.	14
SSHB21HS-R08410	0.8	41.0	515	0.78	55	R08 Lot No.	14
SSHB21HS-R10300	1.0	30.0	384	0.57	65	R10 Lot No.	14
SSHB21HS-R12220	1.2	22.0	290	0.43	65	R12 Lot No.	14
SSHB21HS-R15130	1.5	13.0	180	0.28	65	R15 Lot No.	14
SSHB21HS-R18095	1.8	9.5	129	0.20	65	R18 Lot No.	14
SSHB21HS-R20071	2.0	7.1	96	0.14	55	R20 Lot No.	14
SSHB21HS-R25044	2.5	4.4	60	0.09	50	R25 Lot No.	14
SSHB21HS-R30028	3.0	2.8	38	0.06	45	R30 Lot No.	14

Frequency Characteristics

Common mode

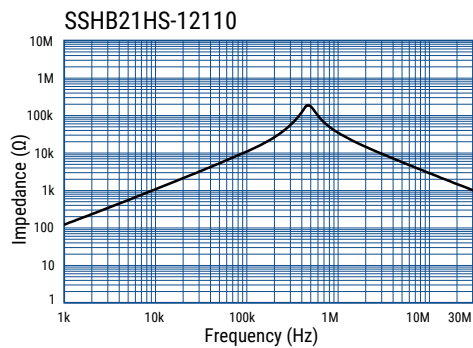
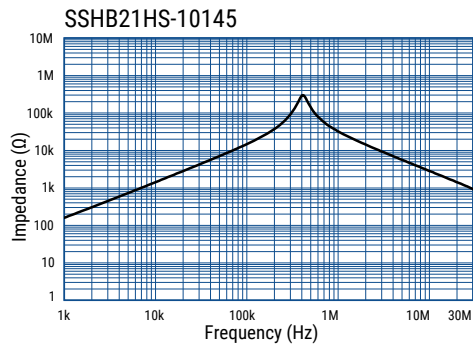
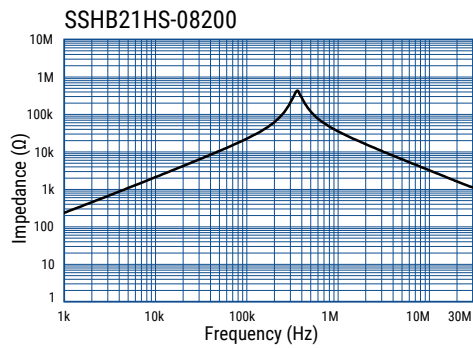
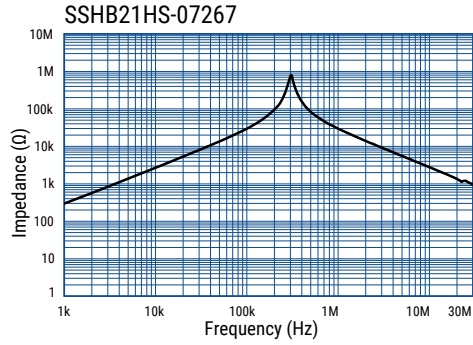


Normal mode

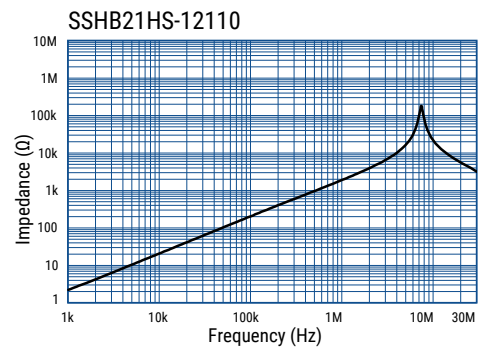
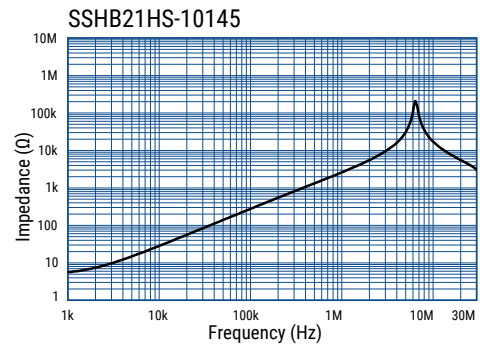
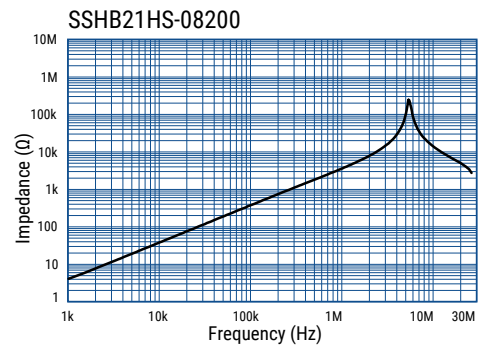
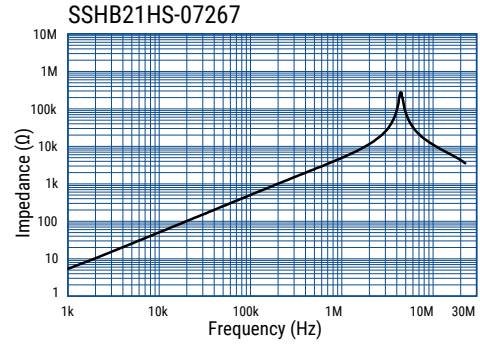


Frequency Characteristics cont.

Common mode

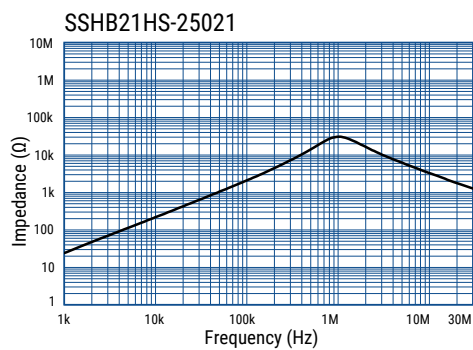
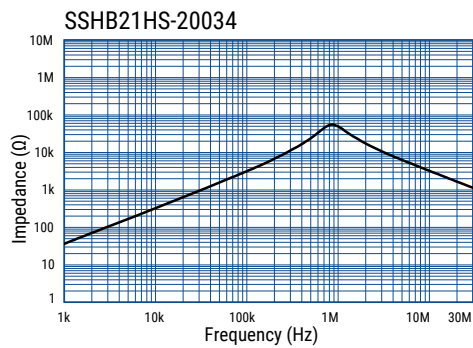
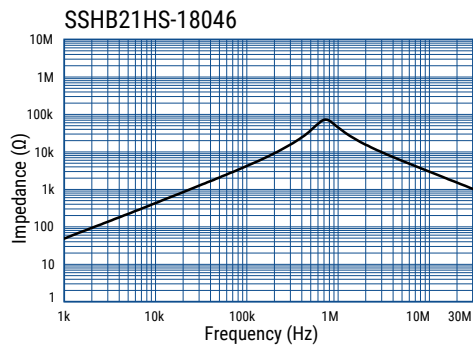
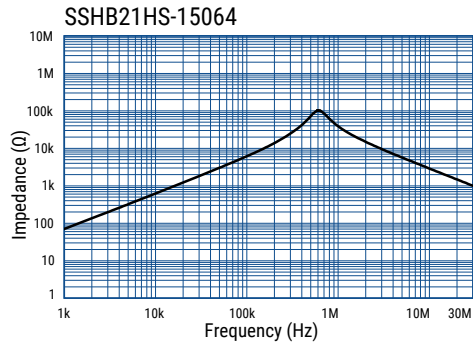


Normal mode

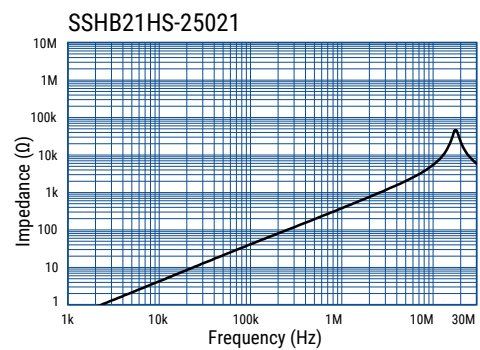
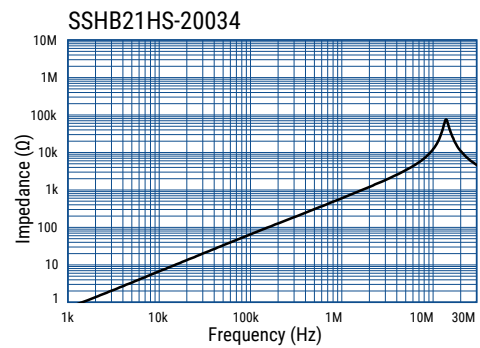
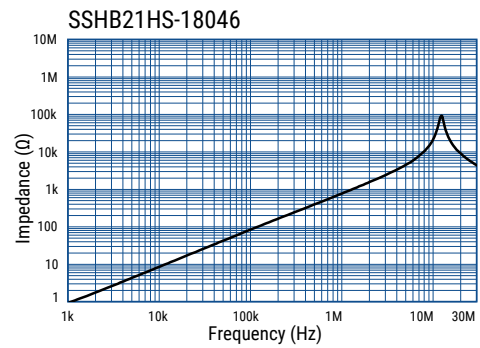
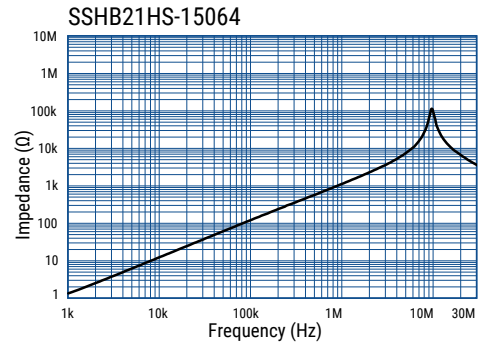


Frequency Characteristics cont.

Common mode

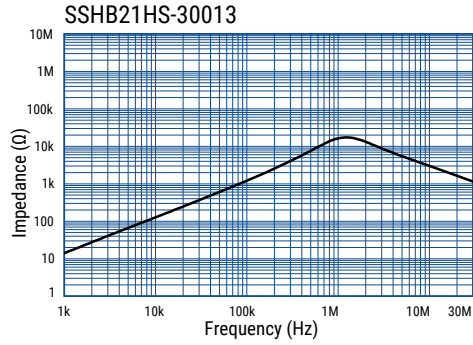


Normal mode

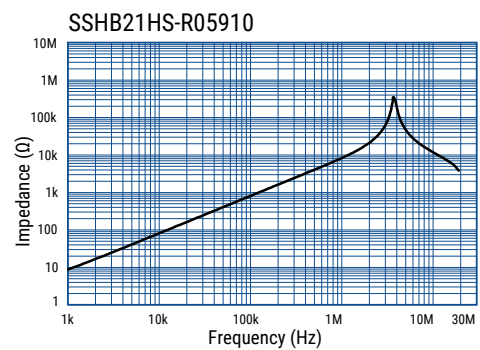
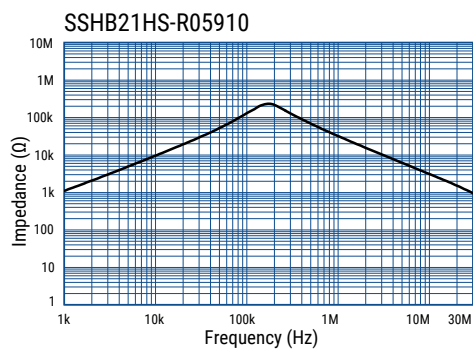
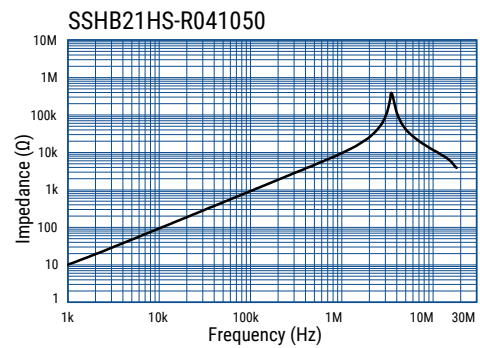
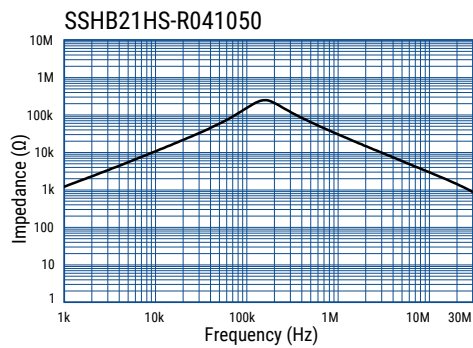
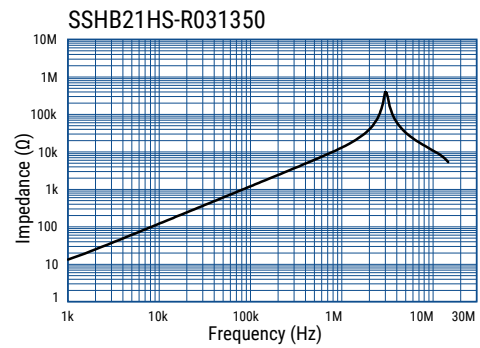
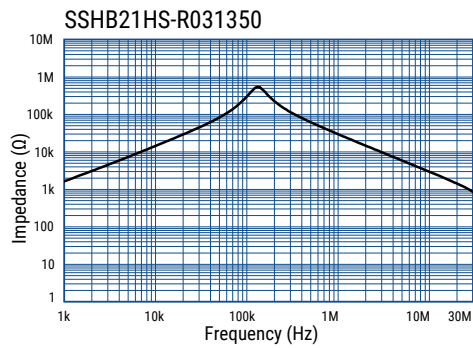
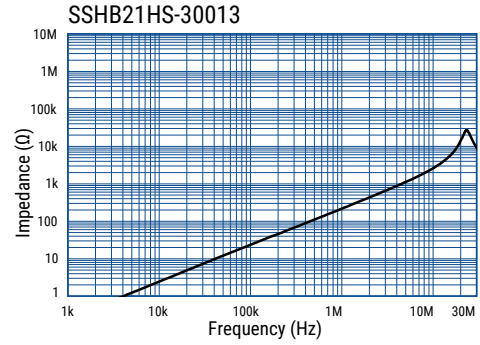


Frequency Characteristics cont.

Common mode

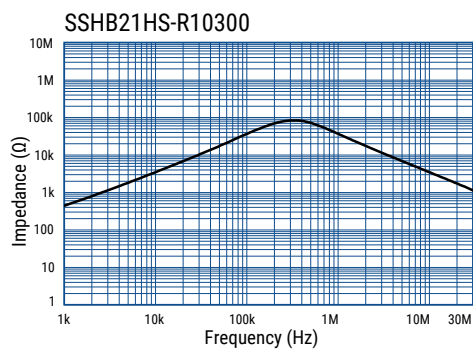
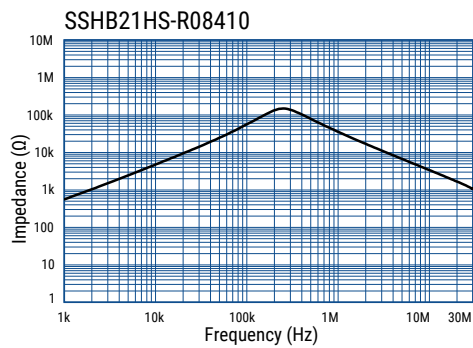
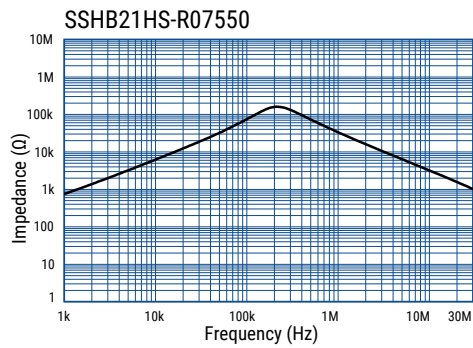
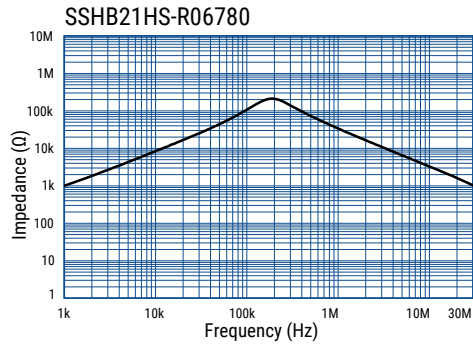


Normal mode

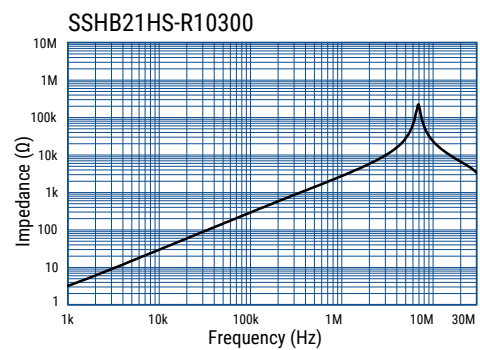
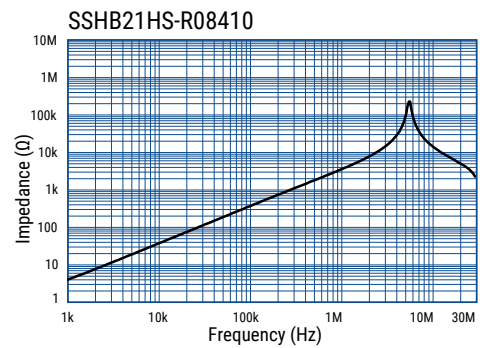
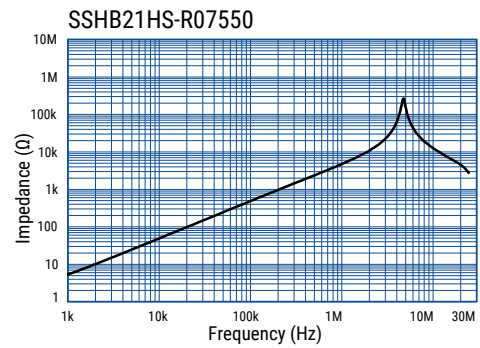
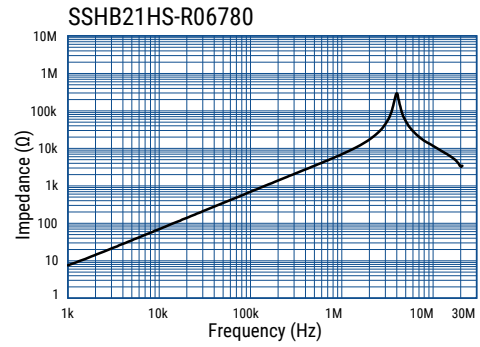


Frequency Characteristics cont.

Common mode

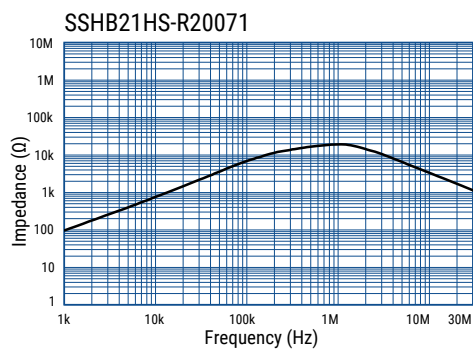
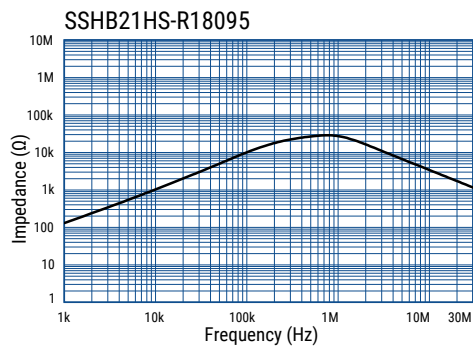
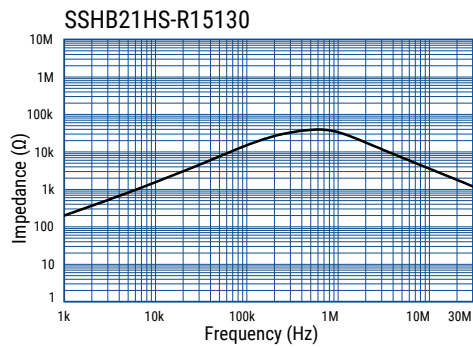
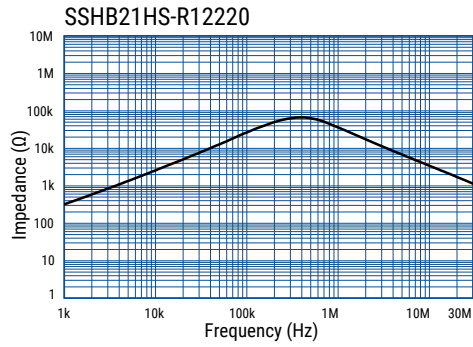


Normal mode

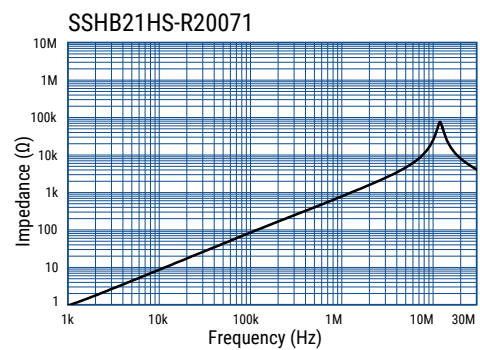
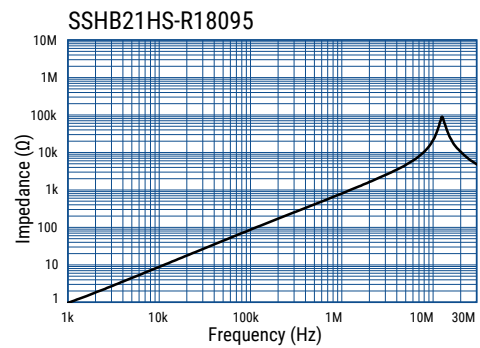
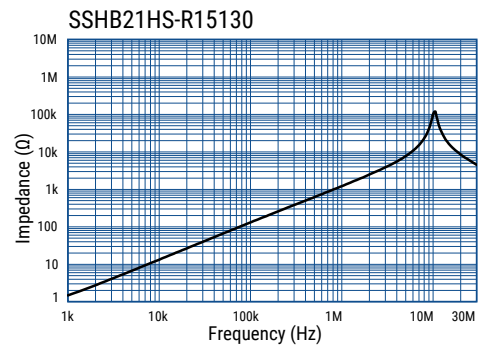
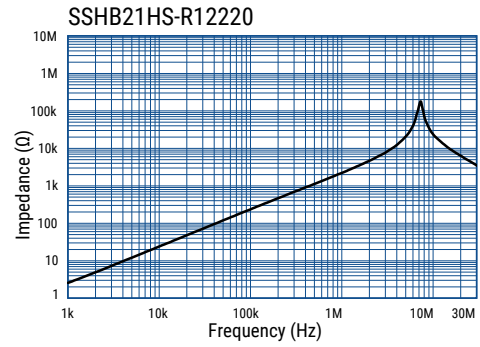


Frequency Characteristics cont.

Common mode

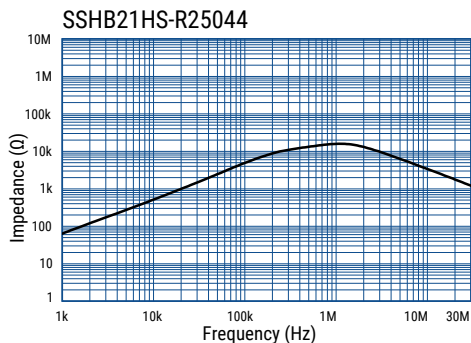


Normal mode

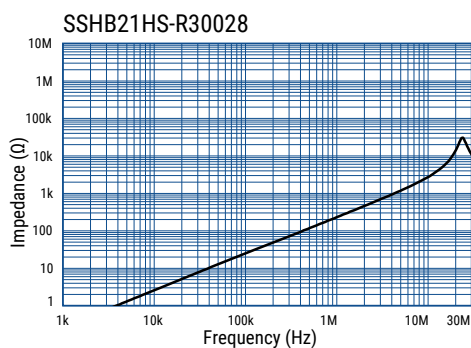
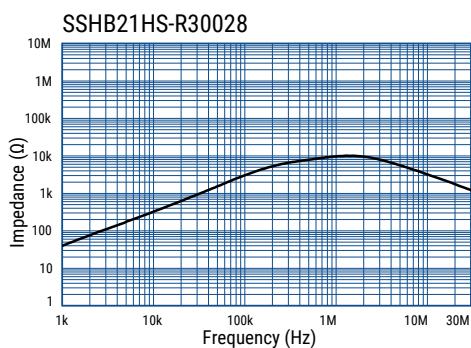
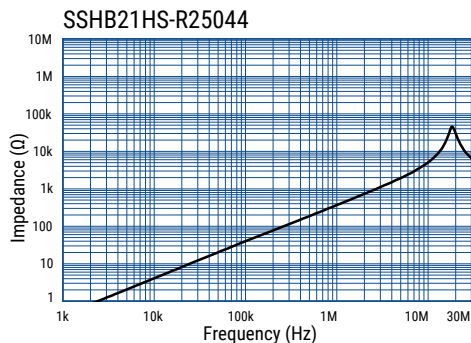


Frequency Characteristics cont.

Common mode



Normal mode



Packaging

Type	Packaging Type	Pieces Per Box
SSHB21HS	Tray	360

Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Россия +7(495)268-04-70

Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Курган (3522)50-90-47
Липецк (4742)52-20-81
Казахстан +7(7172)727-132

Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Ноябрьск (3496)41-32-12
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
Пермь (342)205-81-47
Киргизия +996(312)96-26-47

Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Саранск (8342)22-96-24
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Сургут (3462)77-98-35
Сыктывкар (8212)25-95-17
Тамбов (4752)50-40-97
Тверь (4822)63-31-35

Тольятти (8482)63-91-07
Томск (3822)98-41-53
Тула (4872)33-79-87
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Улан-Удэ (3012)59-97-51
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Чебоксары (8352)28-53-07
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
Ярославль (4852)69-52-93