THE DATASHEET OF

SN16-300

Differential Mode SN Coils, Standard Series

Overview

The KEMET SN coils are normal mode choke coils with a wide variety of characteristics. These coils are designed with our proprietary Fe dust cores and are useful in various noise countermeasure fields.

Applications

- Home appliances
- Power supplies

Benefits

- Proprietary Fe dust core material
- Excellent for normal mode noise countermeasures
- Large core loss
- Wide variety of sizes and specifications
- Operating temperature range from −40°C to +105°C

Part Number System

SN	10-		300	
Series	Dimension Code (See Dimensions)		Specification Code (See Table 1)	Core Orientation
SN	3 5 8S 8D 10 10P 12 12HP	12P 13 14 14P 16 16P 20P	3 digits or 4 digits Examples: 3 digits: 300, 400, etc. 4 digits: 1700, 5501, etc.	Blank = Vertical H = Horizontal

Dimensions – Millimeters

Figure 1

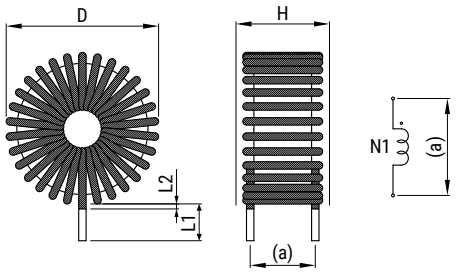


Figure 2

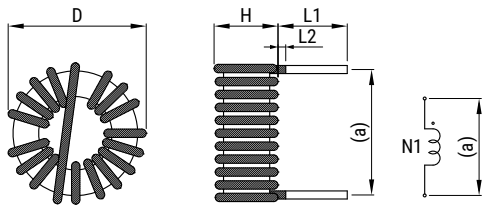
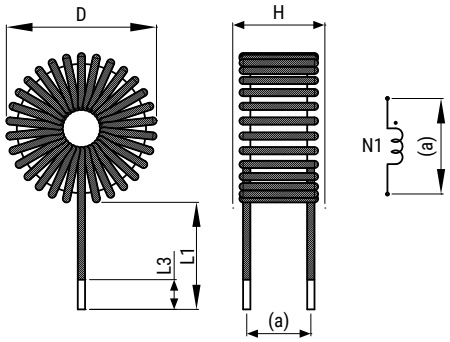


Figure 3



Part Number	Dimensions (mm)					Pin Pitch[1] (Reference)	Figure
	D (Maximum)	H (Maximum)	L1	L2 (Maximum)	L3 (Maximum)	a	
SN3-300	8.5	5.5	20.0±2.0	2.0	–	5.0	Fig. 1
SN5-700	13.0	8.0	20.0±2.0	1.5	–	6.0	Fig. 1
SN3-200	8.5	5.5	20.0±2.0	1.5	–	5.0	Fig. 1
SN5-5501	13.0	7.0	20.0±2.0	1.6	–	7.0	Fig. 1
SN5-1700	14.0	8.0	20.0±2.0	1.5	–	6.0	Fig. 1
SN5-300	13.0	7.0	20.0±2.0	1.5	–	6.0	Fig. 1
SN5-400	13.0	8.0	20.0±2.0	1.5	–	6.0	Fig. 1
SN8S-300	16.0	8.0	20.0±2.0	1.5	–	8.0	Fig. 1
SN8S-400	16.0	8.0	20.0±2.0	1.5	–	8.0	Fig. 1
SN8S-500	16.0	9.0	20.0±2.0	1.5	–	8.5	Fig. 1
SN8D-300	16.0	11.0	20.0±2.0	1.5	–	9.5	Fig. 1
SN8D-400	16.0	11.0	20.0±2.0	1.5	–	10.0	Fig. 1
SN8D-500	17.0	13.0	20.0±2.0	1.5	–	10.5	Fig. 1
SN10P-800	22.0	12.0	10.0±2.0	1.5	–	10.0	Fig. 1
SN3-100	8.8	5.5	10.0±2.0	1.5	–	5.5	Fig. 1
SN10-300	21.0	11.0	20.0±2.0	1.5	–	9.0	Fig. 1
SN10-400	21.0	11.0	20.0±2.0	1.5	–	9.0	Fig. 1
SN10-500	21.0	12.0	20.0±2.0	1.5	–	10.0	Fig. 1
SN14P-770H	34.0	18.7	6.5±2.0	1.5	–	30.0	Fig. 2
SN8S-130	18.0	9.0	20.0±2.0	–	6 ±1	7.0	Fig. 3

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

Dimensions – Millimeters cont.

Figure 1

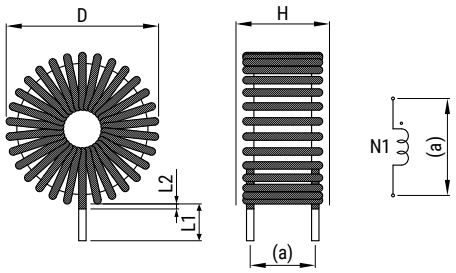


Figure 2

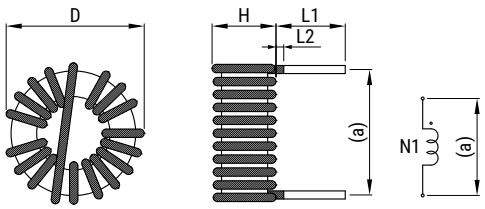
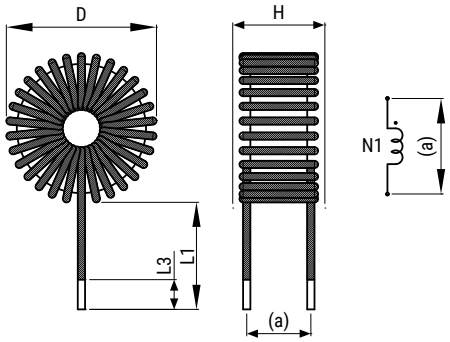


Figure 3



Part Number	Dimensions (mm)					Pin Pitch[1] (Reference)	Figure
	D (Maximum)	H (Maximum)	L1	L2 (Maximum)	L3 (Maximum)	a	
SN12-300	25.0	12.0	20.0±2.0	1.5	–	10.0	Fig. 1
SN12-400	25.0	12.0	20.0±2.0	1.5	–	11.0	Fig. 1
SN12-500	26.0	12.0	20.0±2.0	1.5	–	12.0	Fig. 1
SN12P-500	26.0	13.0	20.0±2.0	1.5	–	12.0	Fig. 1
SN14-400	35.0	20.0	20.0±2.0	1.5	–	15.0	Fig. 1
SN12-6501	26.0	13.0	20.0±2.0	1.5	–	9.0	Fig. 1
SN12-800	28.0	15.0	20.0±2.0	2.0	–	10.0	Fig. 1
SN14-700	35.0	20.0	20.0±2.0	3.0	–	15.0	Fig. 1
SN13-300	30.0	17.0	20.0±2.0	1.5	–	16.0	Fig. 1
SN13-400	30.0	18.0	20.0±2.0	1.5	–	16.0	Fig. 1
SN13-500	31.0	18.0	20.0±2.0	1.5	–	16.5	Fig. 1
SN16-300	34.0	19.0	20.0±2.0	1.5	–	15.0	Fig. 1
SN16-400	35.0	19.0	20.0±2.0	1.5	–	15.0	Fig. 1
SN16-500	35.0	21.0	20.0±2.0	1.5	–	16.5	Fig. 1
SN16P-130	36.0	19.0	15.0±2.0	1.5	–	15.5	Fig. 1
SN12HP-2201	26.0	16.0	4.0±1.0	1.5	–	10.0	Fig. 1
SN20P-240	42.0	22.0	20.0±2.0	1.5	–	18.0	Fig. 1
SN20P-120H	45.0	38.0	5.0±1.5	1.5	–	38.0	Fig. 2

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

Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.

Performance Characteristics

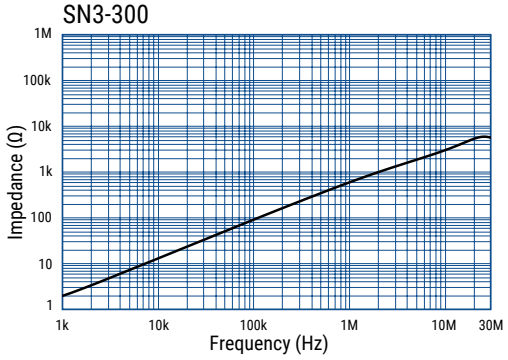
Item	Performance Characteristics
Rated Current Range	1 – 20 A
Rated Inductance Range	2.5 – 550 µH minimum
Inductance Measurement Condition	100 kHz
Wire Type	1 PVF, 1 UEW, and 1 PEW
Thermal Class	A (105°C)
Operating Temperature Range	–40°C to +105°C (include self temperature rise)

Table 1 – Ratings & Part Number Reference

Part Number	Rated Current (A)	Inductance (µH) Minimum	DC Resistance/ Line (mΩ) Maximum	Temperature Rise (K) Maximum	Wire Diameter (mm)	Weight (g) Approximate
SN3-300	0.5	20.0	0.150	45	0.30	0.8
SN5-700	0.9	140.0	0.250	25	0.35	2.6
SN3-200	1.0	10.0	0.045	15	0.40	0.8
SN5-5501	1.0	80.0	0.200	45	0.40	2.6
SN5-1700	2.0	12.0	0.048	45	0.55	2.4
SN5-300	2.0	25.0	0.042	18	0.55	2.6
SN5-400	2.0	48.0	0.058	22	0.55	3.0
SN8S-300	2.0	26.0	0.042	19	0.60	4.1
SN8S-400	2.0	46.0	0.052	20	0.60	4.5
SN8S-500	2.0	72.0	0.068	23	0.60	4.9
SN8D-300	2.0	45.0	0.052	20	0.60	6.1
SN8D-400	2.0	80.0	0.072	24	0.60	6.8
SN8D-500	2.0	125.0	0.100	27	0.60	7.3
SN10P-800	2.5	297.0	0.190	50	0.60	12.5
SN3-100	3.0	2.5	0.025	45	0.45	0.7
SN10-300	3.0	40.0	0.035	18	0.80	10.2
SN10-400	3.0	72.0	0.042	20	0.80	10.8
SN10-500	3.0	110.0	0.052	26	0.80	11.8
SN14P-770H	3.0	550.0	0.085	35	1.00	54.0
SN8S-130	5.0	4.0	0.012	40	1.10	10.6
SN12-300	5.0	36.0	0.02	30	1.00	14.4
SN12-400	5.0	64.0	0.032	32	1.00	15.8
SN12-500	5.0	100.0	0.040	34	1.00	18.2
SN12P-500	5.0	100.0	0.040	40	1.00	19.5
SN14-400	5.0	120.0	0.045	40	1.20	48.4
SN12-6501	5.0	170.0	0.060	55	1.00	21.0
SN12-800	5.0	250.0	0.060	45	1.00	23.7
SN14-700	5.0	450.0	0.120	60	1.00	51.4
SN13-300	6.0	51.0	0.023	28	1.20	31.1
SN13-400	6.0	92.0	0.030	33	1.20	35.1
SN13-500	6.0	143.0	0.036	38	1.20	38.2
SN16-300	8.0	60.0	0.021	21	1.50	39.0
SN16-400	8.0	108.0	0.027	24	1.50	44.4
SN16-500	8.0	168.0	0.031	36	1.50	51.2
SN16P-130	10.0	10.0	0.005	45	1.80	35.8
SN12HP-2201	10.0	20.0	0.013	50	1.40	22.4
SN20P-240	20.0	40.0	0.010	55	2.00	70.0
SN20P-120H	20.0	120.0	0.018	65	2.10	153.7

Frequency Characteristics

SN3-300



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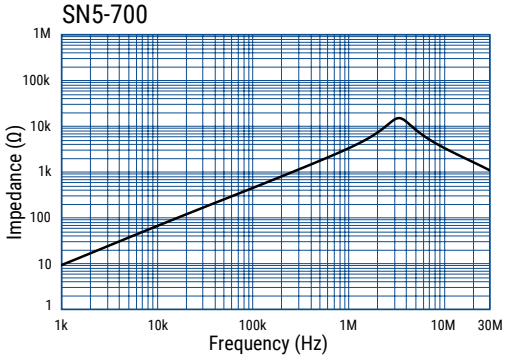

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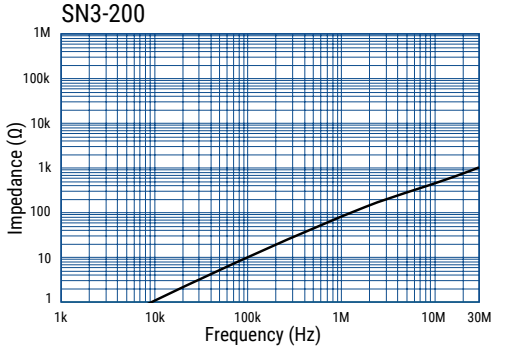

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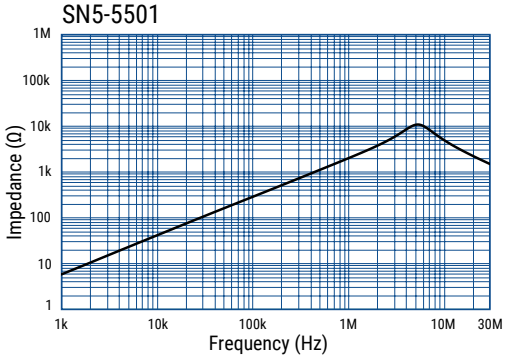

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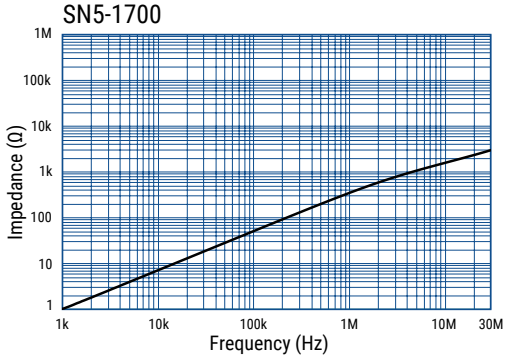

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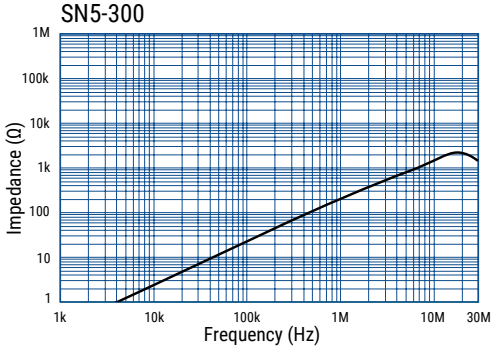

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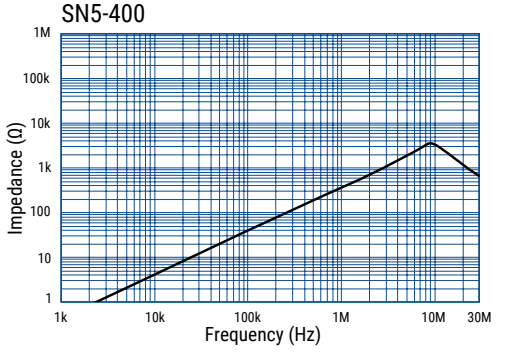

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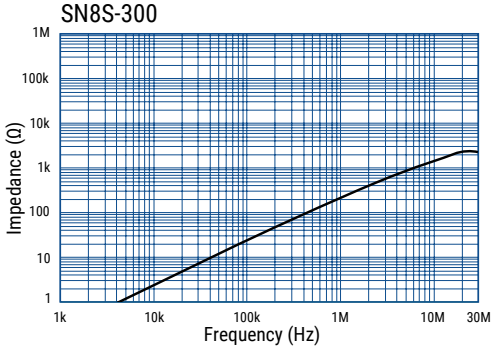

Frequency Characteristics cont.

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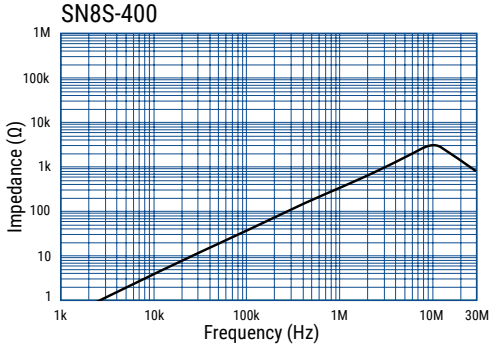

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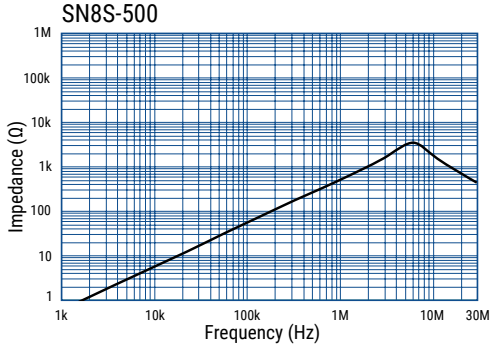

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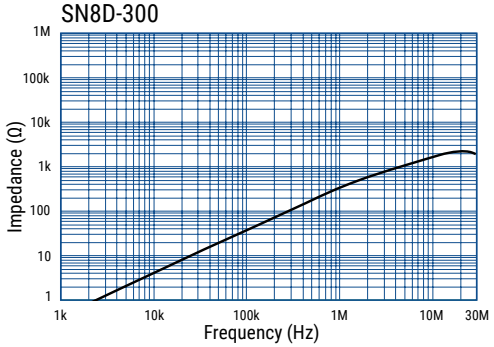

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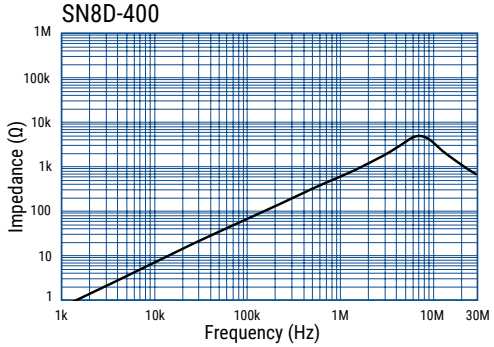

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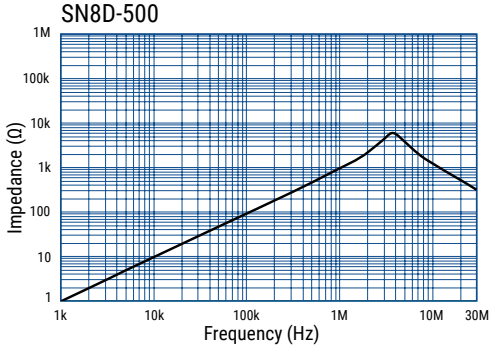

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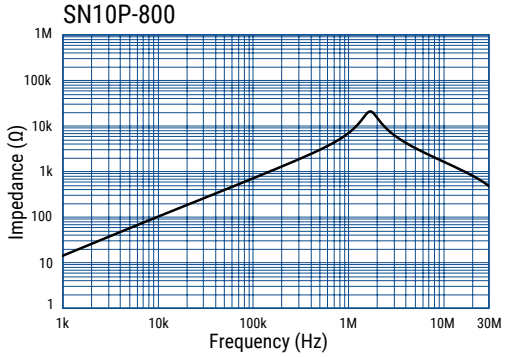

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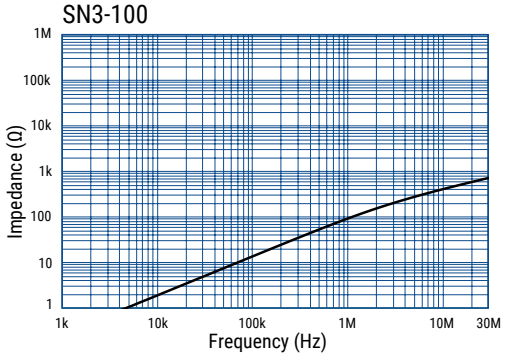

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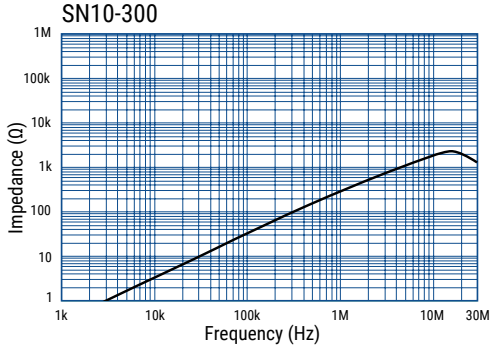

Frequency Characteristics cont.

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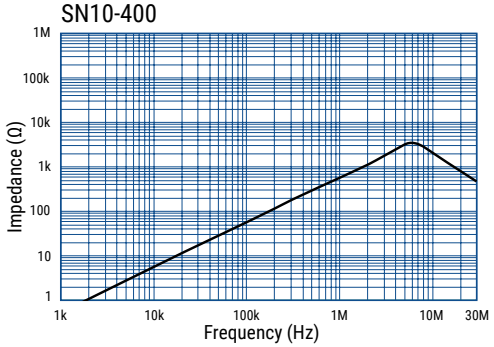

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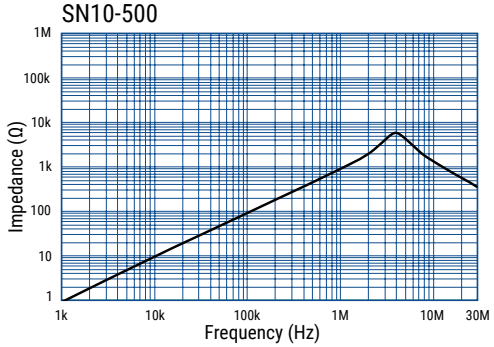

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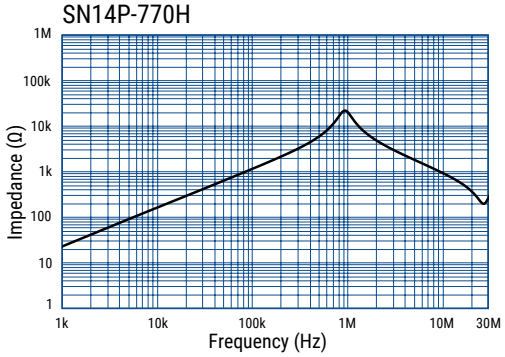

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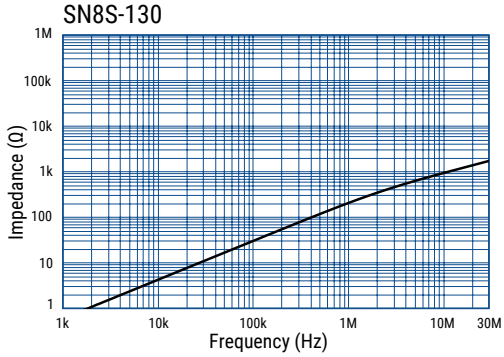

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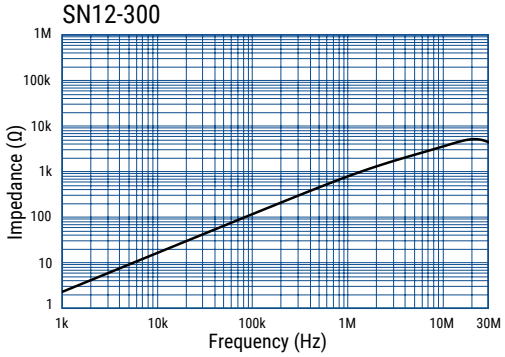

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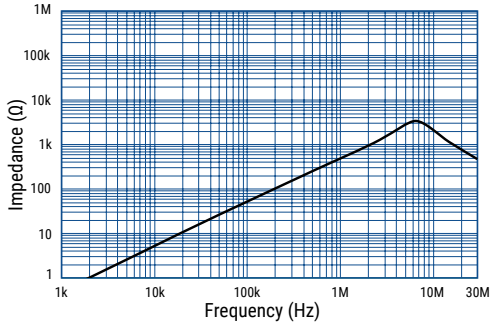

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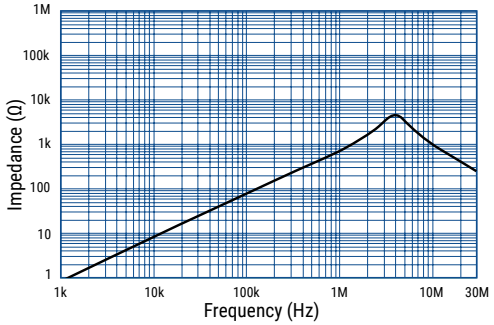

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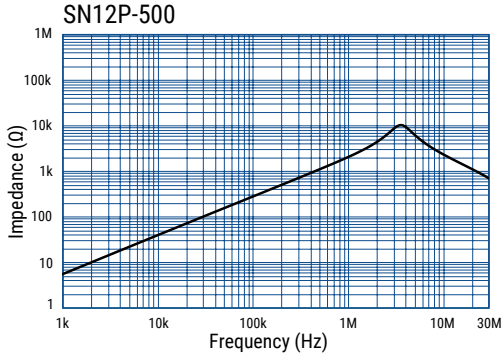
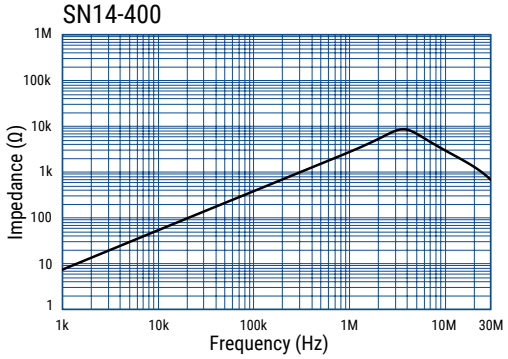


Frequency Characteristics cont.

SN14-400



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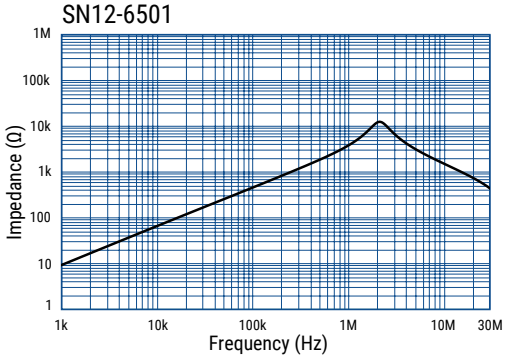

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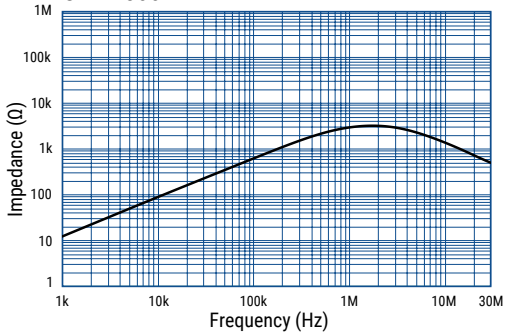

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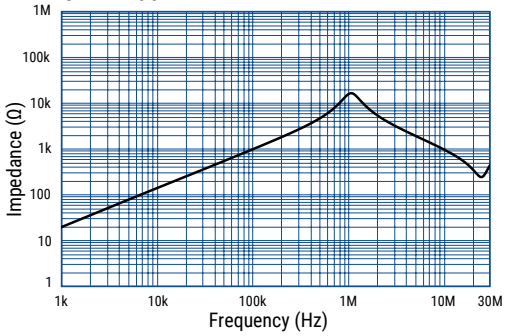

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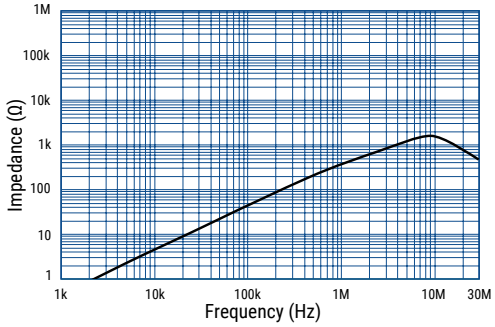

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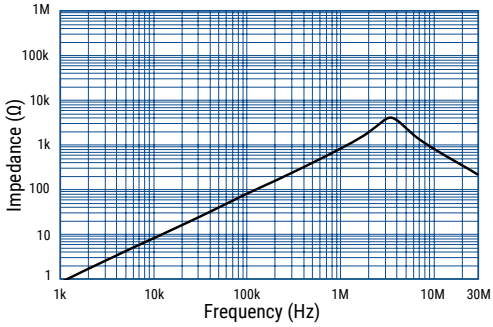

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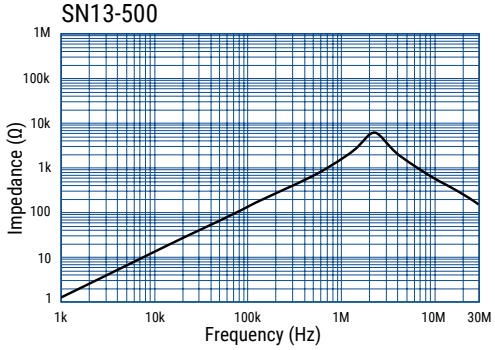

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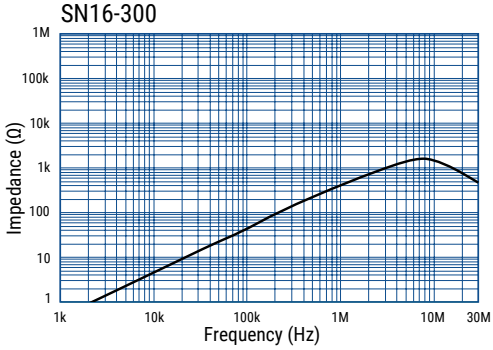
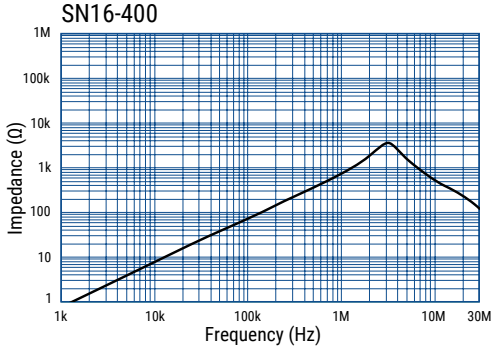
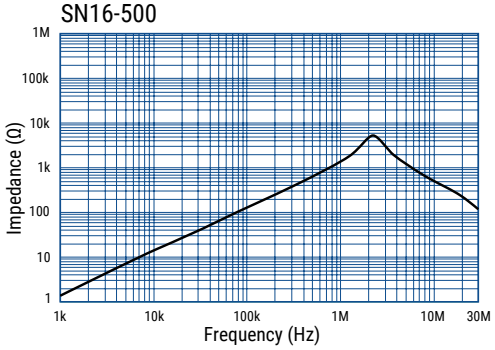


Frequency Characteristics cont.

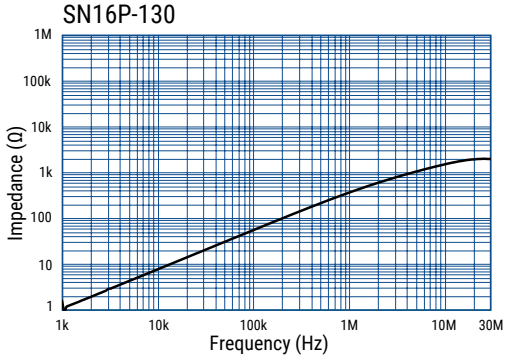
SN16-400



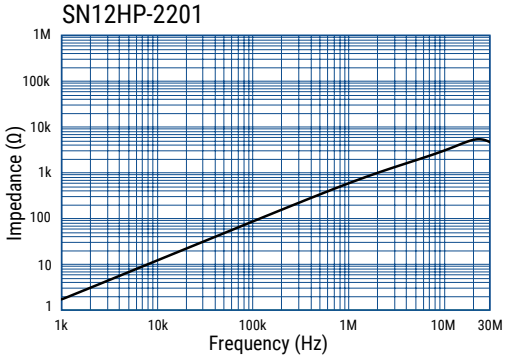
SN16-500



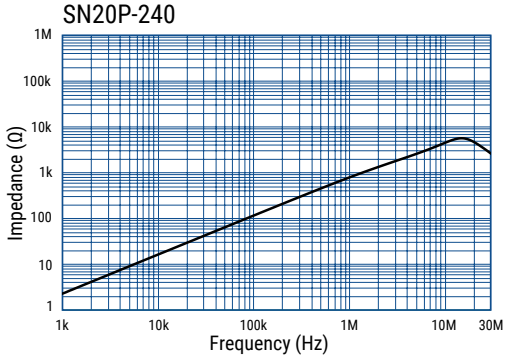
SN16P-130



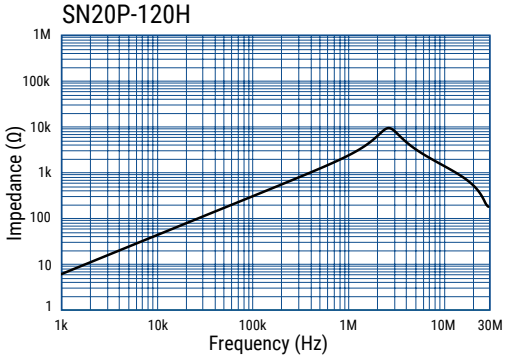
SN12HP-2201



SN20P-240



SN20P-120H



Packaging

Type	Packaging Type	Pieces Per Box
SN3-300	Bulk	6,000
SN5-700		4,800
SN3-200		6,000
SN5-5501		4,800
SN5-1700		
SN5-300		4,800
SN5-400		
SN8S-300		3,000
SN8S-400		
SN8S-500		
SN8D-300		1,800
SN8D-400		
SN8D-500		
SN10P-800	Tray	350
SN3-100	Bulk	6,000
SN10-300		1,000
SN10-400		
SN10-500		
SN14P-770H	Tray	150
SN8S-130		3,000
SN12-300		350
SN12-400		
SN12-500		
SN12P-500		
SN14-400		250
SN12-6501		350
SN12-800		
SN14-700		250
SN13-300		
SN13-400		
SN13-500		
SN16-300		
SN16-400		
SN16-500		
SN16P-130		
SN12HP-2201		350
SN20P-240		150
SN20P-120H		40

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.

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Although all product–related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

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