

## Overview

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

## Applications

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

## Benefits

- Proprietary 10H ferrite material and equivalents
- Suitable for  $\geq 150$  kHz range
- Wide variety of sizes and specifications
- Operating temperature range from  $-25^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$
- UL 94 V-0 flame retardant rated bobbin



## Part Number System

SU	7	VC-	02	120
Series	Core Size Code	Core Orientation	Rated Current (A)	Inductance (mH) Minimum
SU	7	VC = Vertical	0x = 0.x A xx = x.x A  Examples: 02 = 0.2 A 10 = 1.0 A	xx0 = xx.0 mH 0xx = x.x mH 00x = 0.x0 mH  Examples: 120 = 12.0 mH 011 = 1.1 mH 003 = 0.3 mH  Note: 002 = 0.25 mH 004 = 0.35mH

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

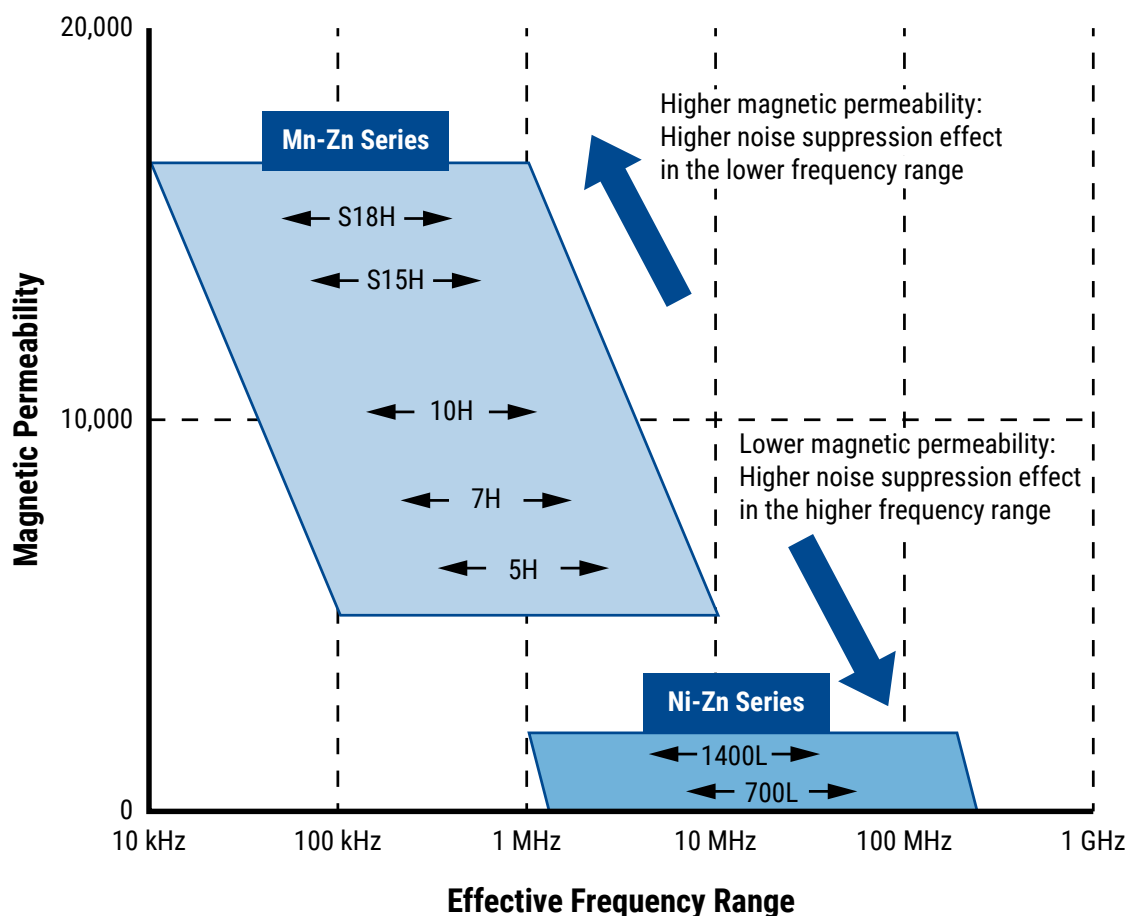
## Magnetic Permeability of Ferrite Material

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

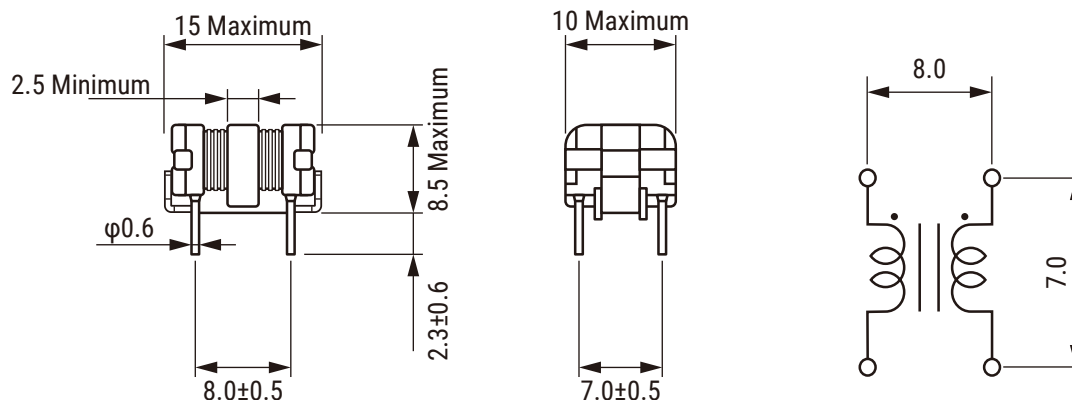
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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

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



## Dimensions – Millimeters



## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



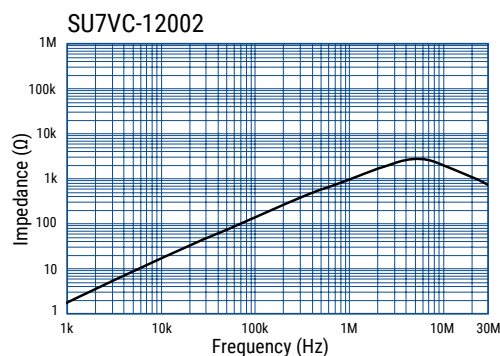
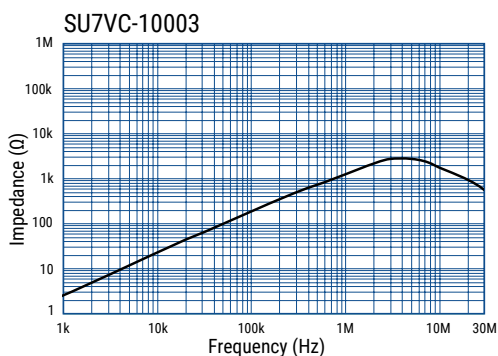
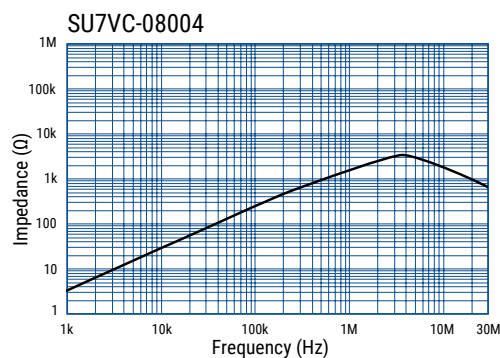
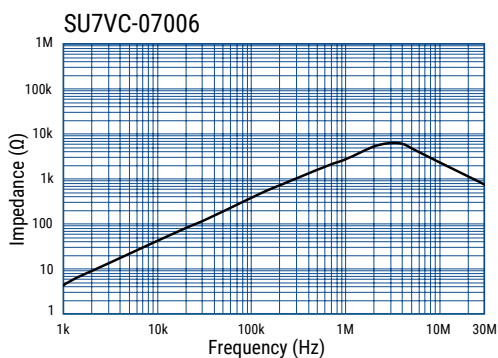
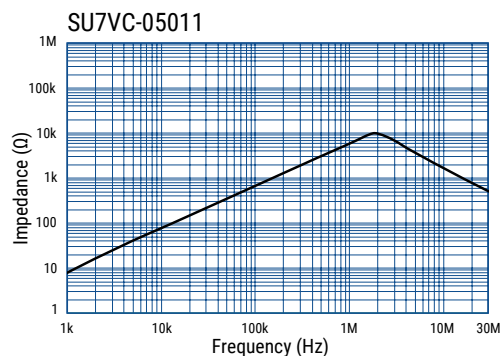
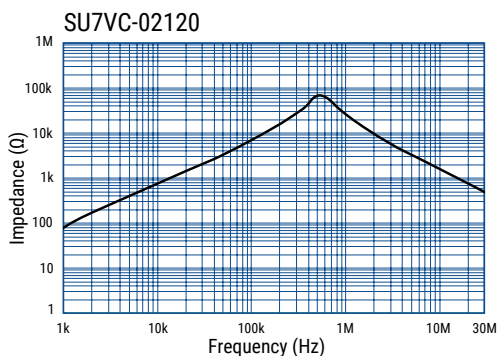
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	125 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 M $\Omega$ at 500 VDC (between lines)
Rated Current Range	0.2 – 1.2 A
Rated Inductance Range	0.25 – 12.00 mH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)

**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU7VC-02120	0.2	12.00	6.50	55	2 Lot No.	1.7
SU7VC-05011	0.5	1.10	0.84	45	3 Lot No.	1.6
SU7VC-07006	0.7	0.60	0.36	45	4 Lot No.	1.7
SU7VC-08004	0.8	0.35	0.22	45	5 Lot No.	1.7
SU7VC-10003	1.0	0.30	0.20	50	6 Lot No.	1.7
SU7VC-12002	1.2	0.25	0.16	55	9 Lot No.	1.7

**Frequency Characteristics**



## Packaging

Type	Packaging Type	Pieces Per Box
SU7VC	Tray	1,800

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## 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.

## Overview

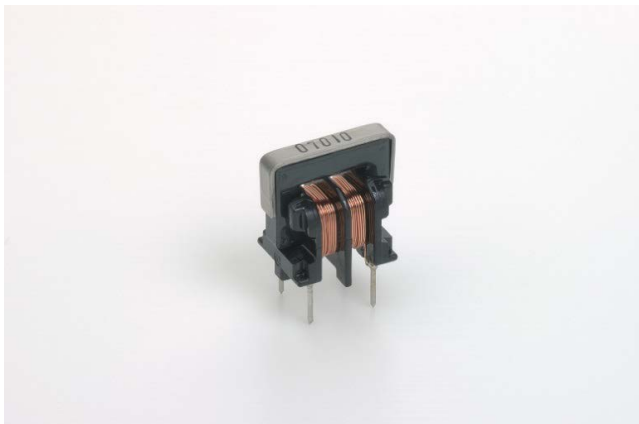
The KEMET SU coils are common mode chokes with a wide variety of characteristics. These gear type coils are designed with our proprietary ferrite UU cores and are useful in various noise countermeasure fields.

## Applications

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

## Benefits

- Proprietary 5H and 7H ferrite material and equivalents
- Suitable for  $\geq 150$  kHz range
- Wide variety of sizes and specifications
- Operating temperature range from  $-25^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$
- UL 94 V-0 flame retardant rated bobbin



## Part Number System

SU	9	V-	R	02	140
Series	Core Size Code	Core Orientation	Core Type	Rated Current (A)	Inductance (mH) Minimum
SU	9	H = Horizontal V = Vertical	Blank = Standard R = High permeability	0x = 0.x A xx = x.x A  Examples: 02 = 0.2 A 10 = 1.0 A	xx0 = xx.0 mH 0xx = x.x mH 00x = 0.x mH  Examples: 140 = 14.0 mH 020 = 2.0 mH 005 = 0.5 mH

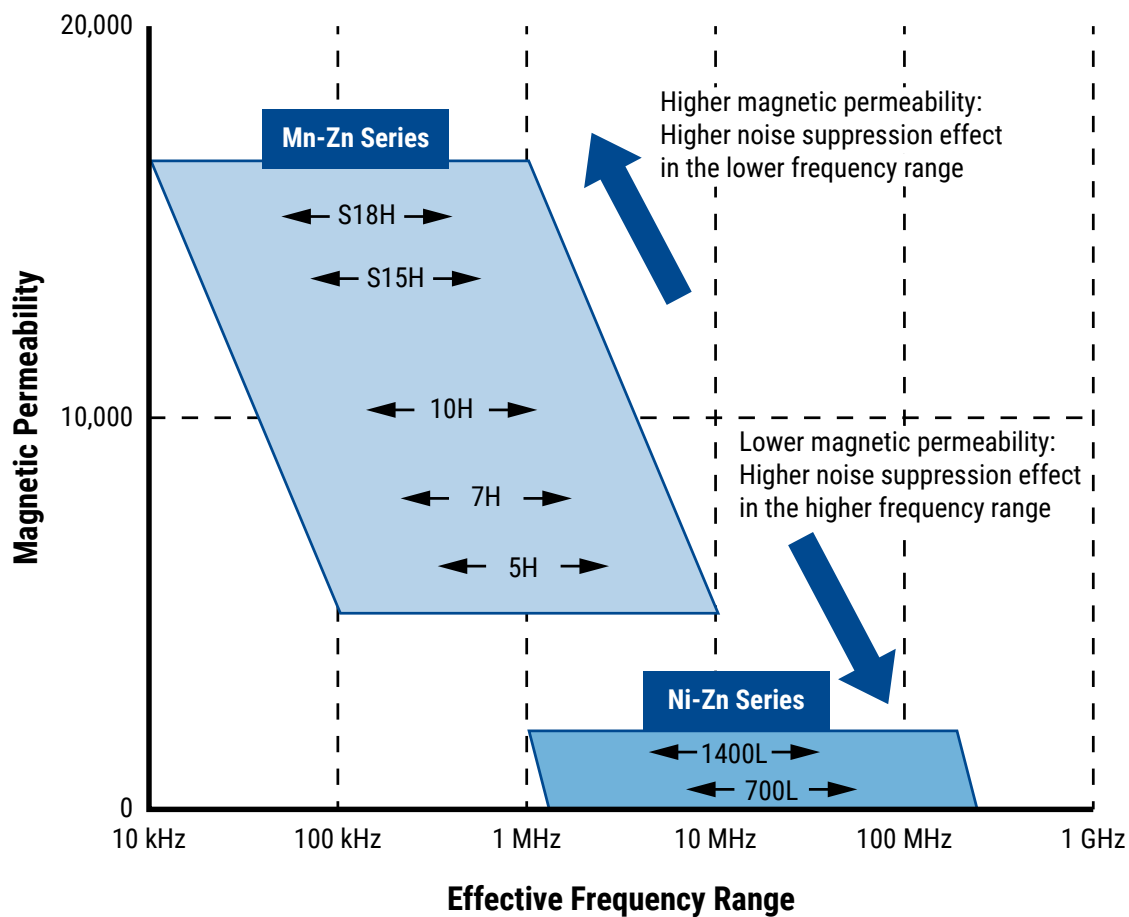
## Magnetic Permeability of Ferrite Material

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

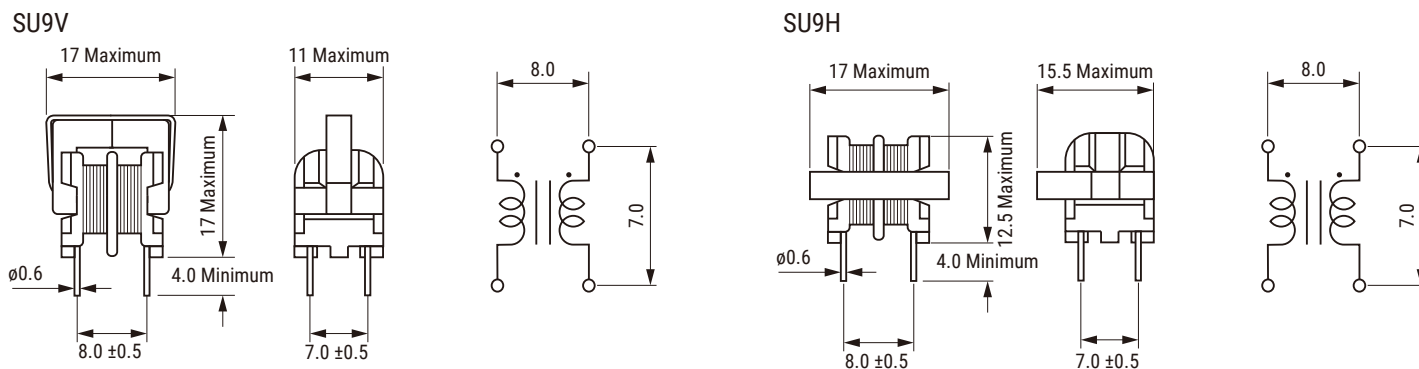
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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



## Dimensions – Millimeters



## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



## Performance Characteristics

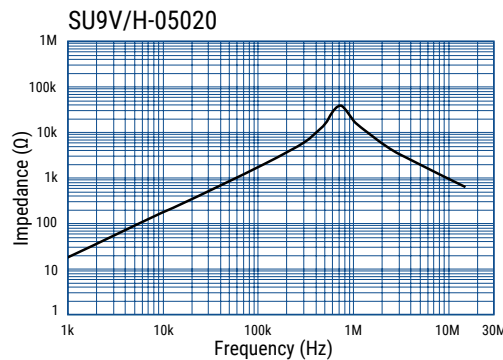
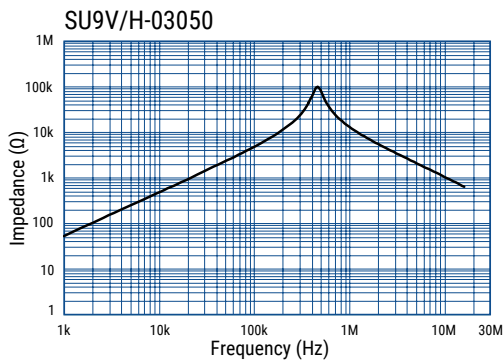
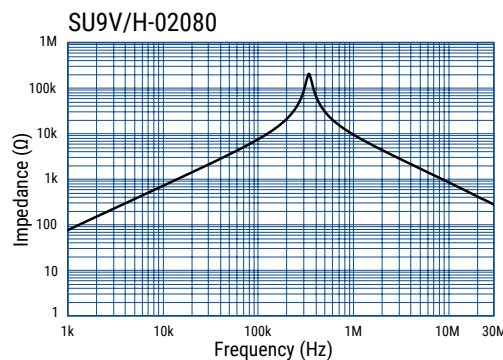
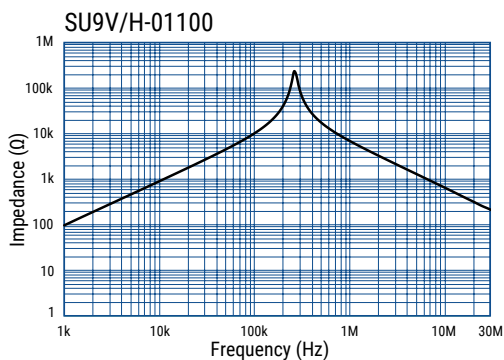
Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 M $\Omega$ at 500 VDC (between lines)
Rated Current Range	0.1 – 1.0 A
Rated Inductance Range	0.5 – 18.0 mH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)



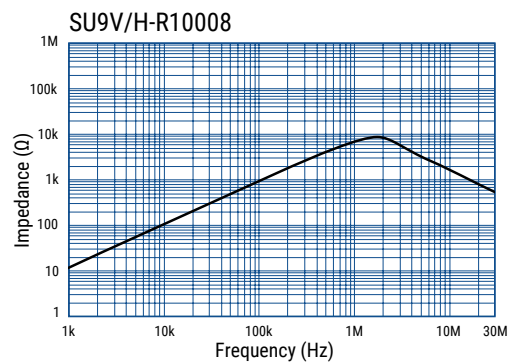
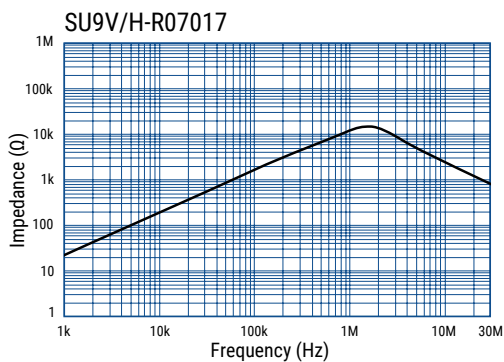
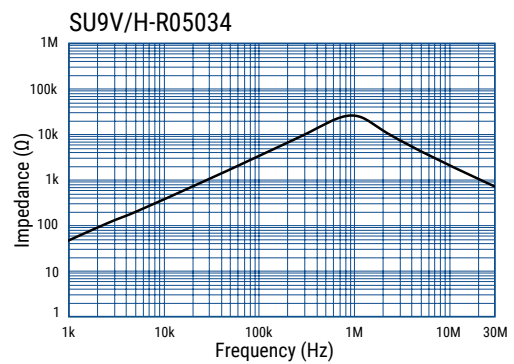
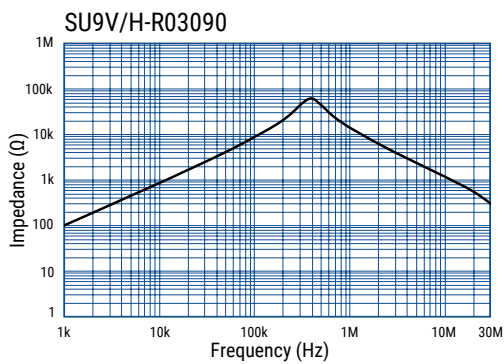
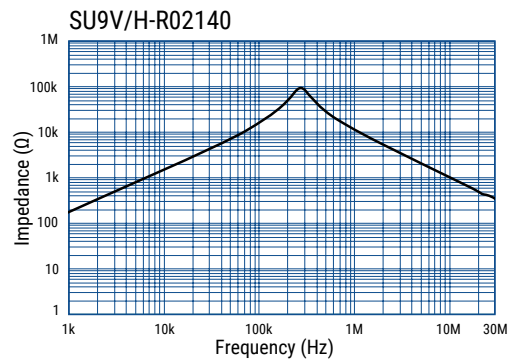
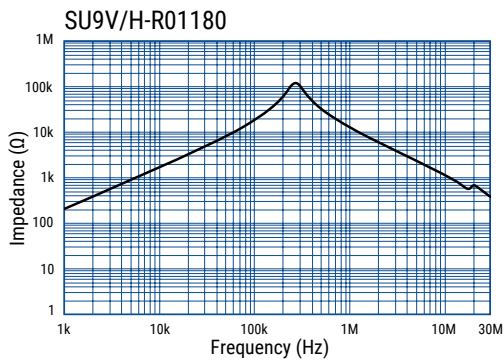
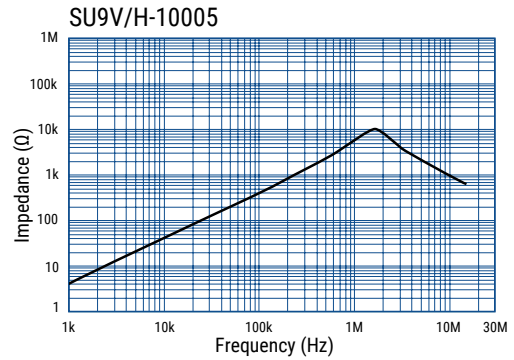
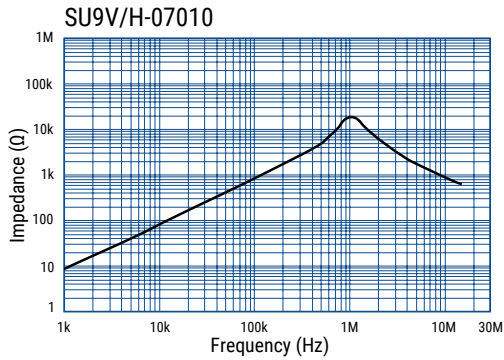
**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU9H-01100	0.1	10.0	8.0	40	01100	3.0
SU9V-01100	0.1	10.0	8.0	40	01100	3.0
SU9H-02080	0.2	8.0	6.0	40	02080	3.2
SU9V-02080	0.2	8.0	6.0	40	02080	3.2
SU9H-03050	0.3	5.0	3.0	40	03050	3.4
SU9V-03050	0.3	5.0	3.0	40	03050	3.4
SU9H-05020	0.5	2.0	1.0	40	05020	3.5
SU9V-05020	0.5	2.0	1.0	40	05020	3.5
SU9H-07010	0.7	1.0	0.6	40	07010	3.5
SU9V-07010	0.7	1.0	0.6	40	07010	3.5
SU9H-10005	1.0	0.5	0.3	40	10005	3.4
SU9V-10005	1.0	0.5	0.3	40	10005	3.4
SU9H-R01180	0.1	18.0	8.0	40	R 01180	3.0
SU9V-R01180	0.1	18.0	8.0	40	R 01180	3.0
SU9H-R02140	0.2	14.0	6.0	40	R 02140	3.2
SU9V-R02140	0.2	14.0	6.0	40	R 02140	3.2
SU9H-R03090	0.3	9.0	3.0	40	R 03090	3.4
SU9V-R03090	0.3	9.0	3.0	40	R 03090	3.4
SU9H-R05034	0.5	3.4	1.0	40	R 05034	3.5
SU9V-R05034	0.5	3.4	1.0	40	R 05034	3.5
SU9H-R07017	0.7	1.7	0.6	40	R 07017	3.5
SU9V-R07017	0.7	1.7	0.6	40	R 07017	3.5
SU9H-R10008	1.0	0.8	0.3	40	R 10008	3.4
SU9V-R10008	1.0	0.8	0.3	40	R 10008	3.4

**Frequency Characteristics**



## Frequency Characteristics cont.



## Packaging

Type	Packaging Type	Pieces Per Box
SU9H	Tray	1,000
SU9V		

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- UL 94 V-0 flame retardant rated bobbin



## Part Number System

SU	9	VF-	02	100
Series	Core Size Code	Core Orientation	Rated Current (A)	Inductance (mH) Minimum
SU	9	HF = Horizontal VF = Vertical	0x = 0.x A  Example: 02 = 0.2 A	xx0 = xx.0 mH 0xx = x.x mH  Examples: 100 = 10.0 mH 060 = 6.0 mH

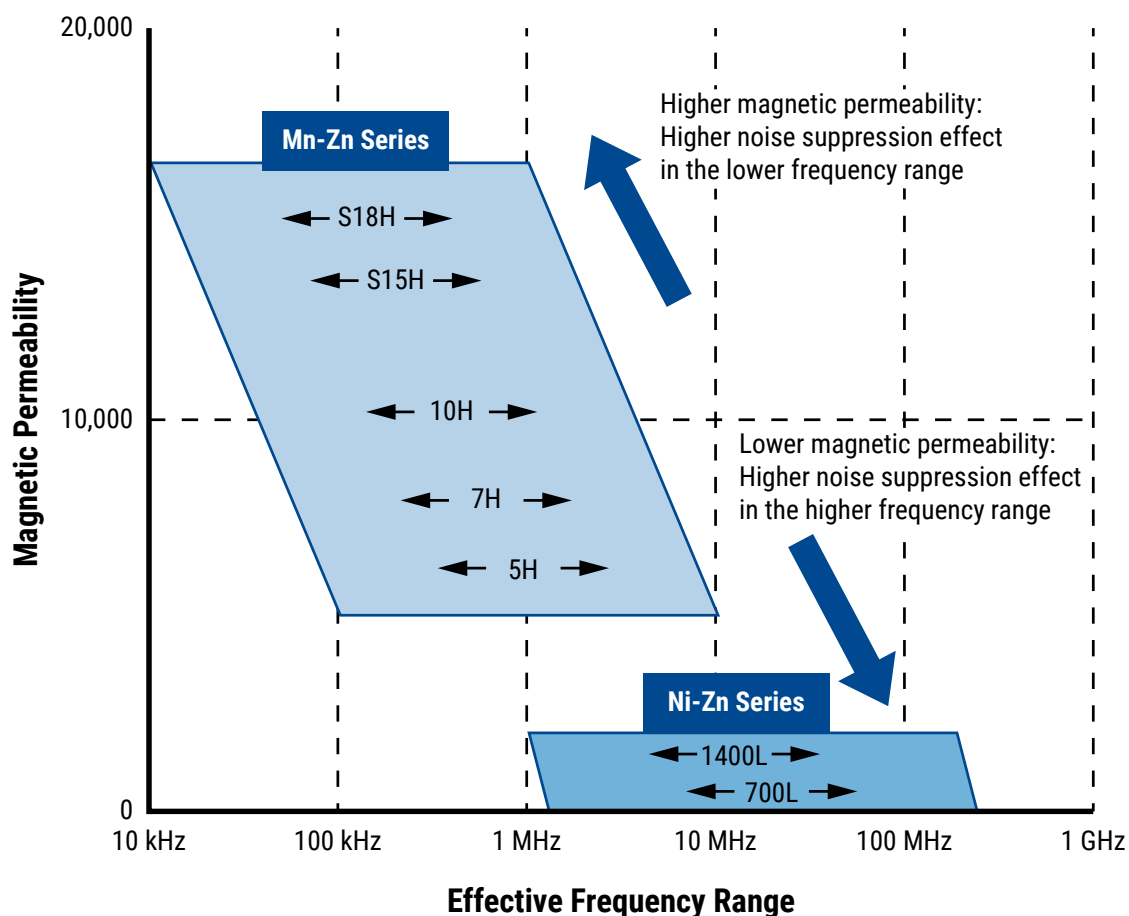
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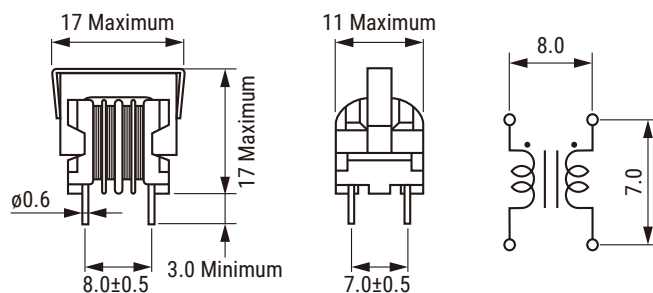
S18H, S15H, 10H, 7H, 5H, 1400L and 700L are KEMET’s proprietary ferrite material names. Other materials can also be available on request.

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

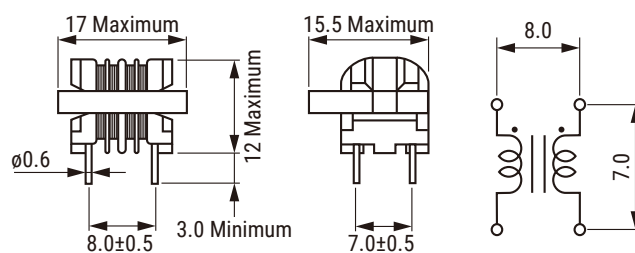


## Dimensions – Millimeters

SU9VF



SU9HF



## Environmental Compliance

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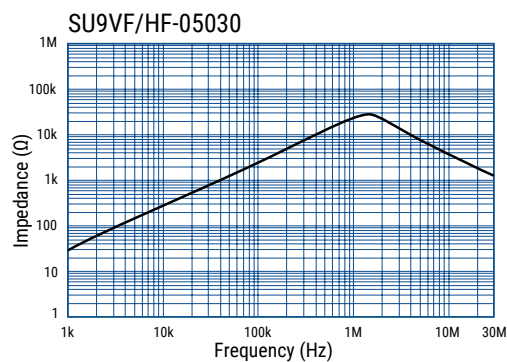
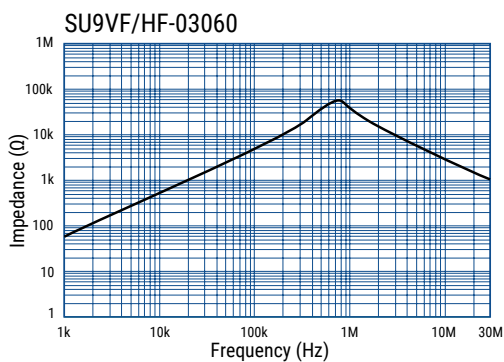
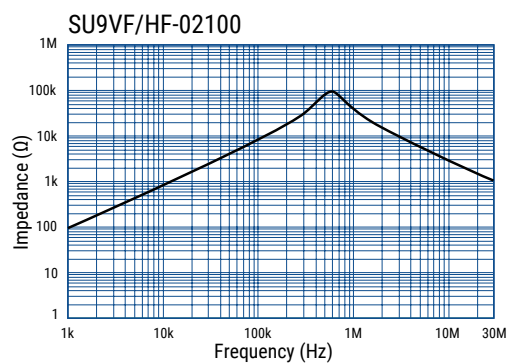
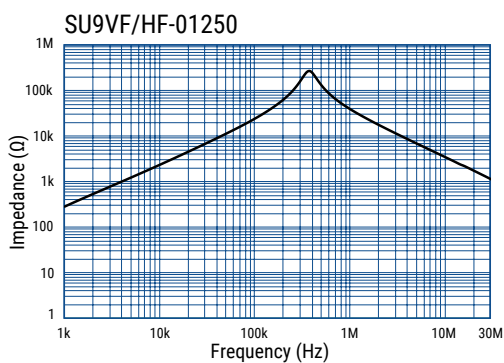
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.1 – 0.7 A
Rated Inductance Range	1.5 – 25.0 mH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)

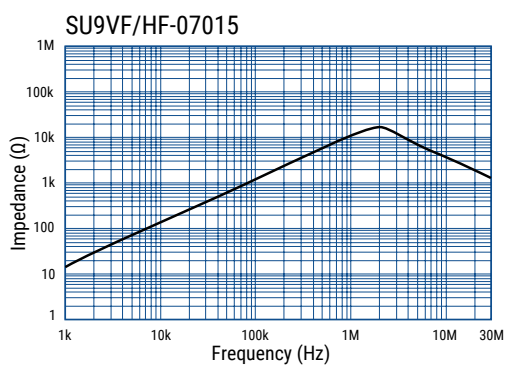
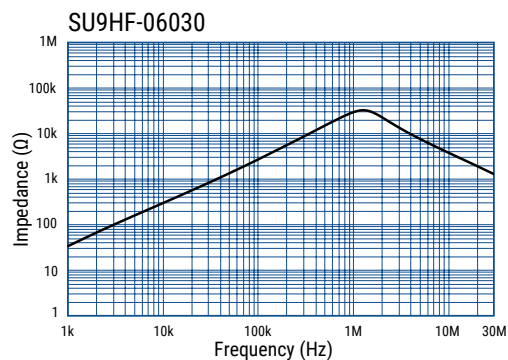
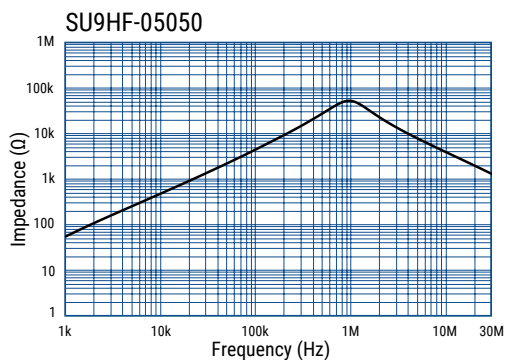
**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU9HF-01250	0.1	25.0	9.00	40	01250	3.2
SU9VF-01250	0.1	25.0	9.00	40	01 Lot No.	3.2
SU9HF-02100	0.2	10.0	4.00	40	02100	3.1
SU9VF-02100	0.2	10.0	4.00	40	02100	3.1
SU9HF-03060	0.3	6.0	2.00	40	03060	3.2
SU9VF-03060	0.3	6.0	2.00	40	03060	3.2
SU9HF-05030	0.5	3.0	1.00	45	05030	3.2
SU9VF-05030	0.5	3.0	1.00	45	05030	3.2
SU9HF-05050	0.5	5.0	1.30	50	05050	3.4
SU9HF-06030	0.6	3.0	0.82	40	06030	3.7
SU9HF-07015	0.7	1.5	0.44	40	07015	3.3
SU9VF-07015	0.7	1.5	0.44	40	07015	3.3

**Frequency Characteristics**



## Frequency Characteristics cont.



## Packaging

Type	Packaging Type	Pieces Per Box
SU9HF	Tray	1,000
SU9VF		



## Overview

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

## Applications

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

## Benefits

- Proprietary 10H ferrite material and equivalents
- Suitable for  $\geq 150$  kHz range
- Wide variety of sizes and specifications
- Operating temperature range from  $-25^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$
- UL 94 V-0 flame retardant rated bobbin



## Part Number System

<b>SU</b>	<b>10</b>	<b>VFC-</b>	<b>R</b>	<b>03</b>	<b>370</b>
Series	Core Size Code	Core Orientation	Core Type	Rated Current (A)	Inductance (mH) Minimum
SU	10	VFC = Vertical	Blank = Standard R = High permeability	0x = 0.x A xx = x.x A  Examples: 03 = 0.3 A 15 = 1.5 A	xx0 = xx mH 0xx = x.x mH  Examples: 370 = 37 mH 025 = 2.5 mH

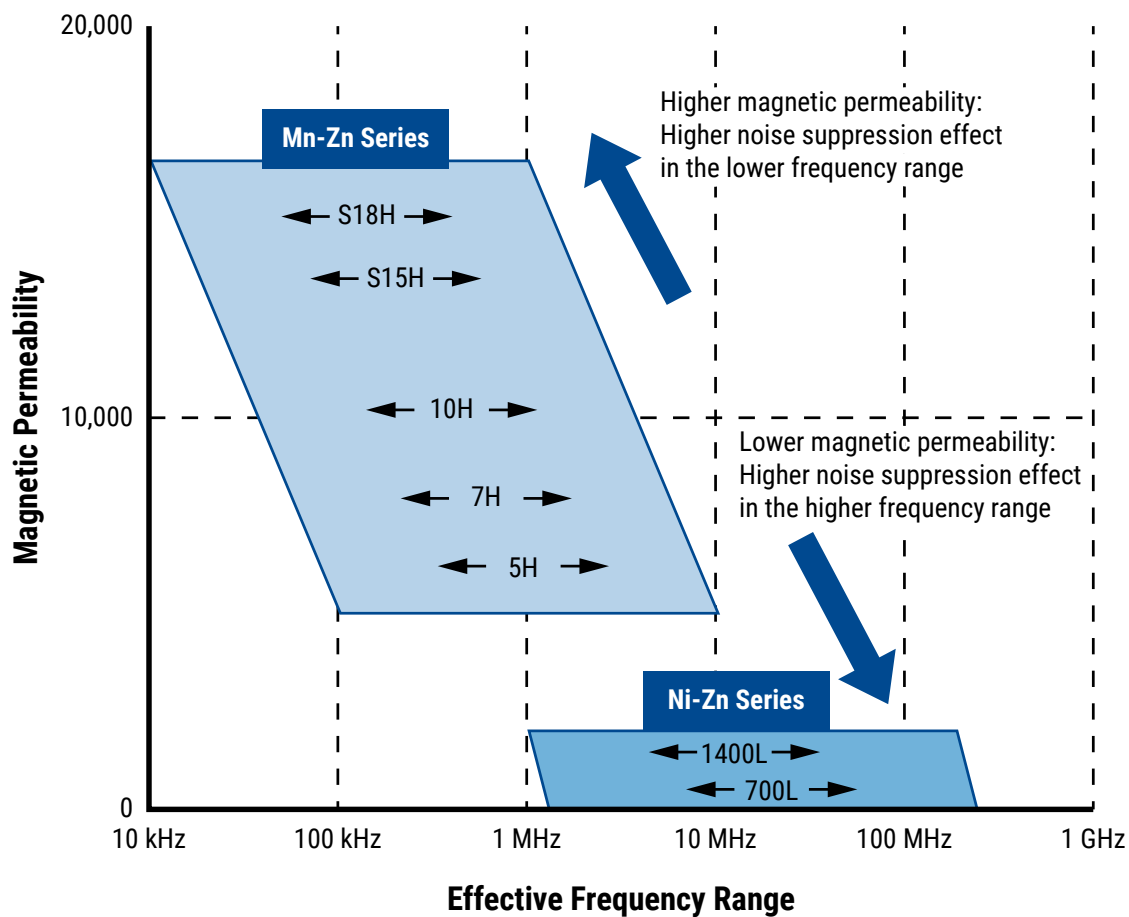
## Magnetic Permeability of Ferrite Material

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

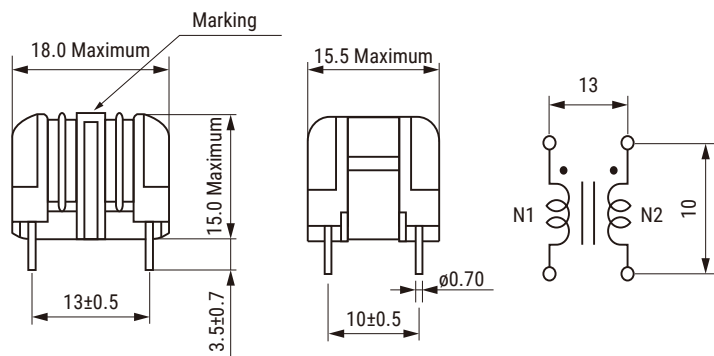
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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

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



## Dimensions – Millimeters



## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



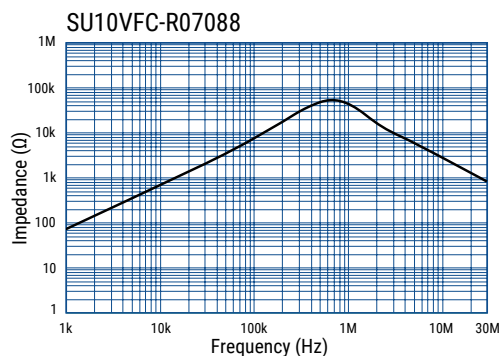
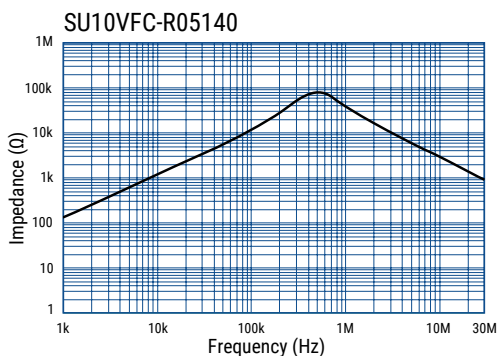
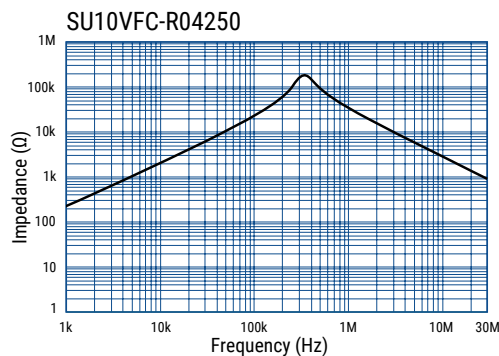
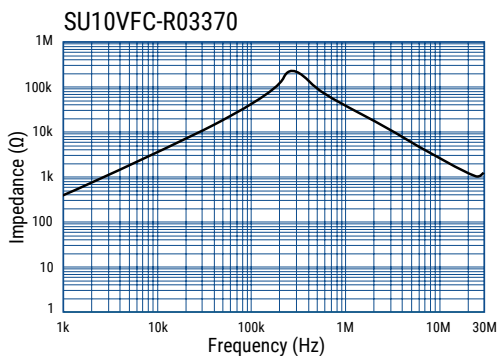
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.3 – 2.0 A
Rated Inductance Range	1 – 37 mH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)

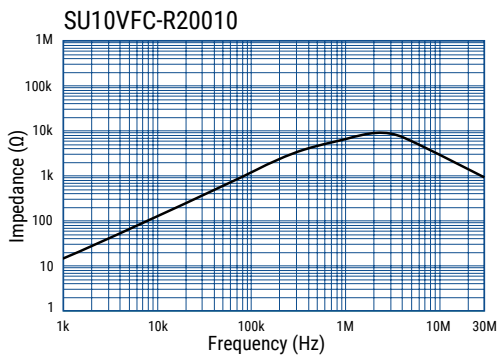
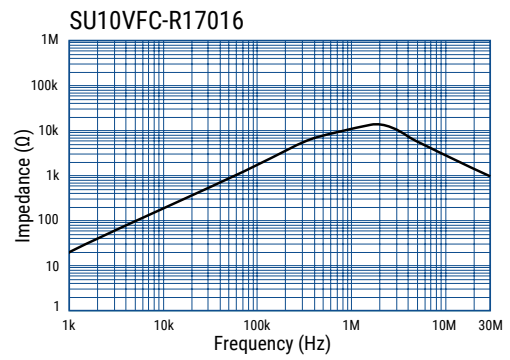
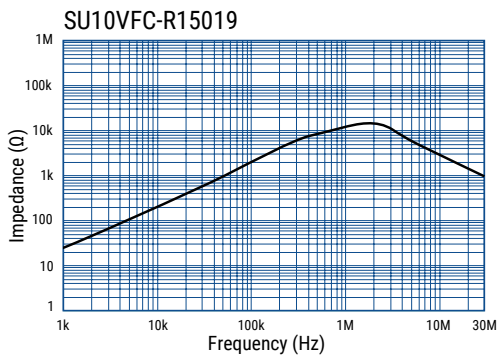
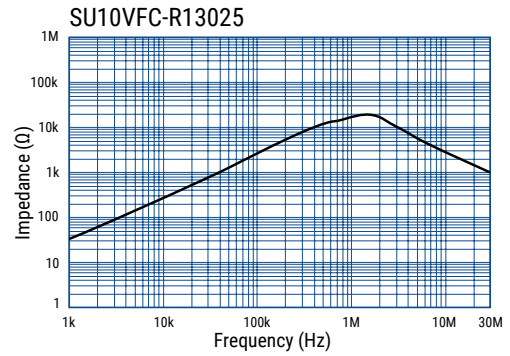
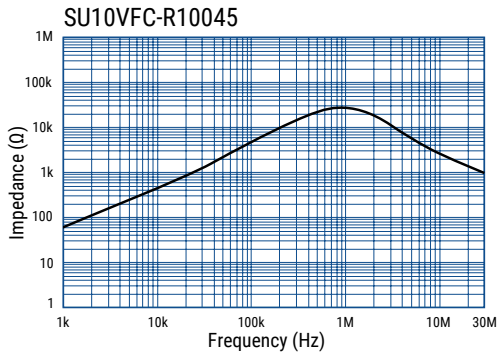
**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (mH) Minimum	DC Resistance/Line ( $\Omega$ ) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU10VFC-R03370	0.3	37.0	4.20	45	R03 Lot No.	6.5
SU10VFC-R04250	0.4	25.0	2.80	45	R04 Lot No.	6.5
SU10VFC-R05140	0.5	14.0	1.60	45	R05 Lot No.	6.4
SU10VFC-R07088	0.7	8.8	1.10	50	R07 Lot No.	6.3
SU10VFC-R10045	1.0	4.5	0.55	50	R10 Lot No.	6.4
SU10VFC-R13025	1.3	2.5	0.30	50	R13 Lot No.	6.6
SU10VFC-R15019	1.5	1.9	0.24	50	R15 Lot No.	6.5
SU10VFC-R17016	1.7	1.6	0.21	55	R17 Lot No.	6.2
SU10VFC-R20010	2.0	1.0	0.15	55	R20 Lot No.	6.2

**Frequency Characteristics**



## Frequency Characteristics cont.



## Packaging

Type	Packaging Type	Pieces Per Box
SU10VFC-R	Tray	700

## 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.

# Common Mode SU Coils, 9VD/9HD Series, High Frequency Type

## Overview

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

## Applications

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

## Benefits

- Proprietary 700L ferrite material and equivalents
- High frequency
- Wide variety of sizes and specifications
- Operating temperature range from -25°C to +120°C
- UL 94 V-0 flame retardant rated bobbin



## Part Number System

SU	9	VD-	07	030
Series	Core Size Code	Core Orientation	Rated Current (A)	Inductance (μH) Minimum
SU	9	HD = Horizontal VD = Vertical	0x = 0.x A xx = x.x A  Example: 07 = 0.7 A 25 = 2.5 A	0xx = xx μH  Example: 030 = 30 μH  Note: With exceptions, see Table 1 for details.

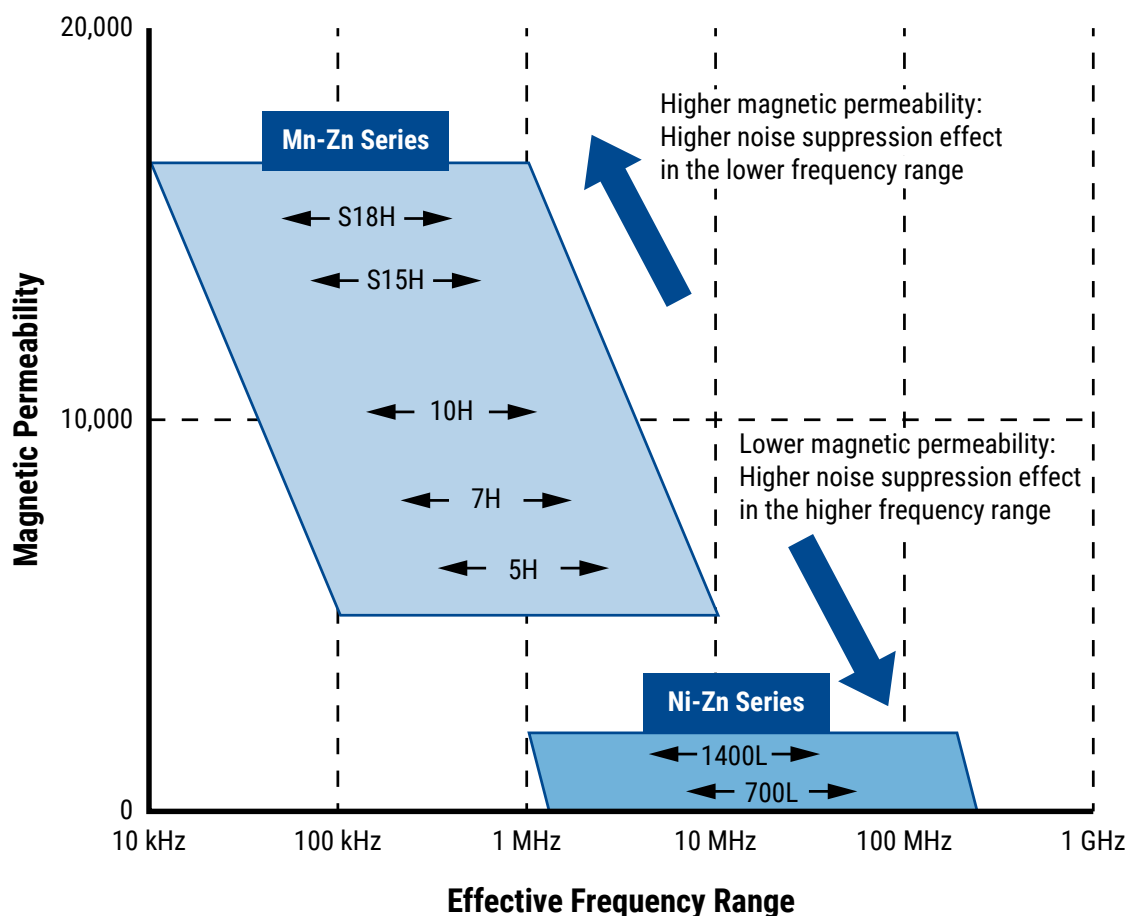
## Magnetic Permeability of Ferrite Material

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

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

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

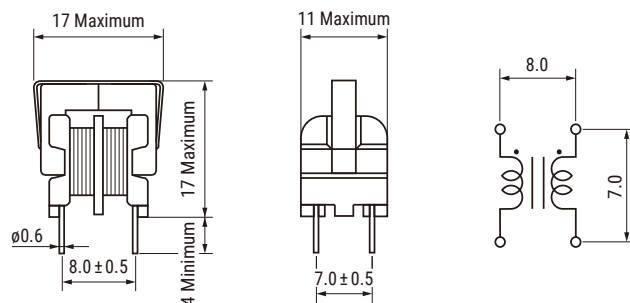
Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range



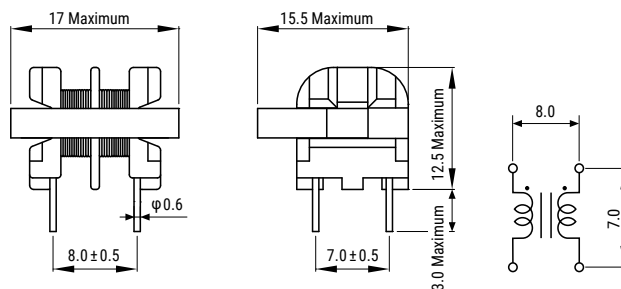


## Dimensions – Millimeters

SU9VD



SU9HD



## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



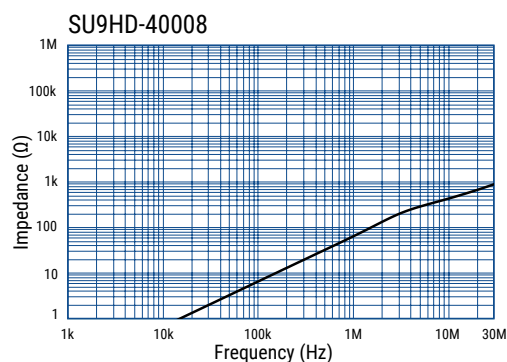
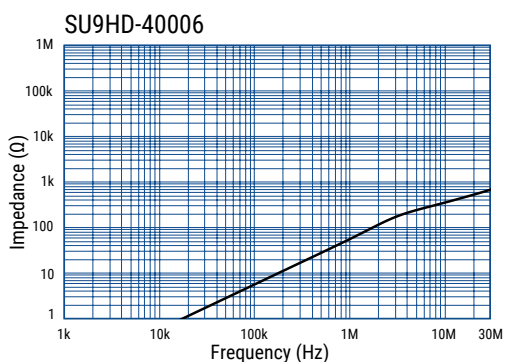
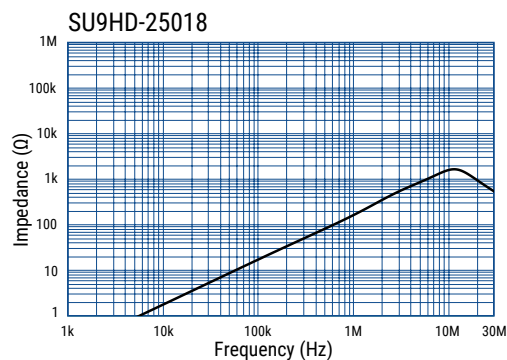
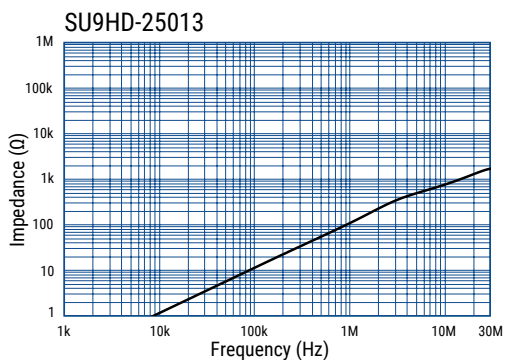
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	0.7 – 4 A
Rated Inductance Range	5.95 – 40 μH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)

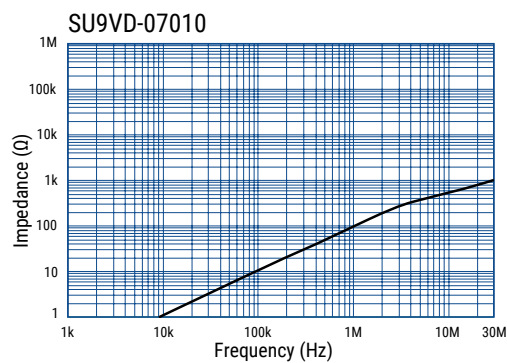
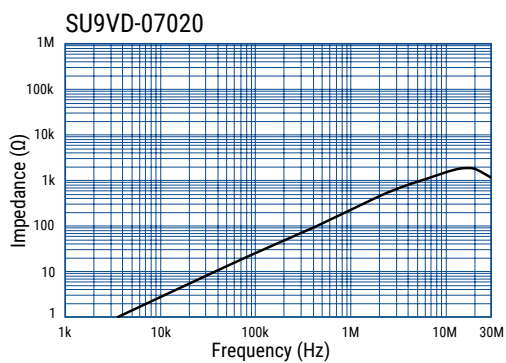
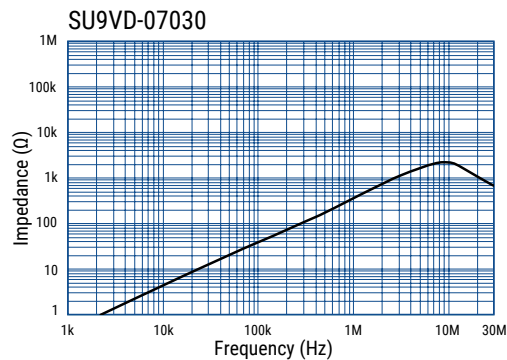
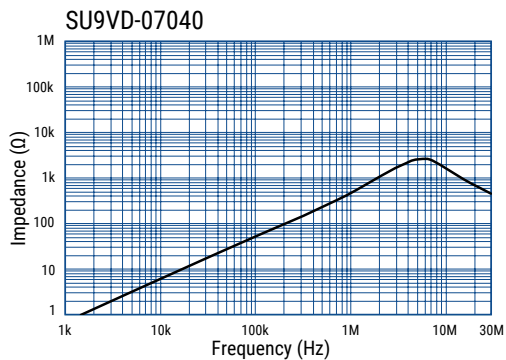
**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (μH) Minimum	DC Resistance/Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU9HD-25013	2.5	13.02	0.04200	40	2513 Lot No.	3.0
SU9HD-25018	2.5	17.99	0.05500	48	2518 Lot No.	3.0
SU9HD-40006	4.0	5.95	0.02750	62	406 Lot No.	2.9
SU9HD-40008	4.0	7.98	0.03125	70	408 Lot No.	2.9
SU9VD-07040	0.7	40.00	0.18000	45	D07040	2.9
SU9VD-07030	0.7	30.00	0.15000	45	D07030	2.9
SU9VD-07020	0.7	20.00	0.12000	45	D07020	2.8
SU9VD-07010	0.7	10.00	0.10000	45	D07010	2.7

**Frequency Characteristics**



## Frequency Characteristics cont.



## Packaging

Type	Packaging Type	Pieces Per Box
SU9VD	Tray	1,000
SU9HD		

# Common Mode SU Coils, 10VD Series, High Frequency Type

## Overview

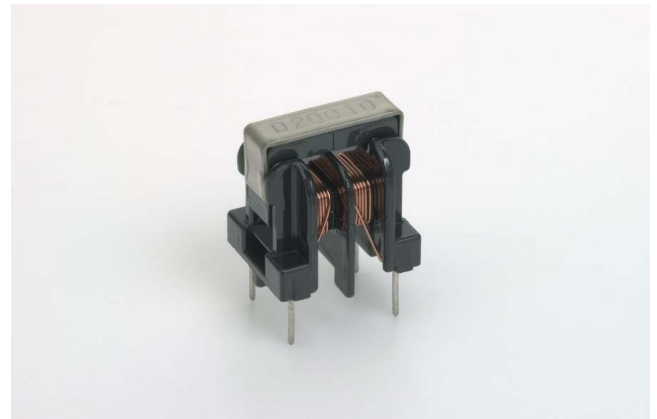
The KEMET SU coils are common mode chokes with a wide variety of characteristics. These gear type coils are designed with our proprietary ferrite UU cores and are useful in various noise countermeasure fields.

## Applications

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

## Benefits

- Proprietary 700L ferrite material and equivalents
- High frequency
- Wide variety of sizes and specifications
- Operating temperature range from  $-25^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$
- UL 94 V-0 flame retardant rated bobbin



## Part Number System

SU	10	VD-	10	020
Series	Core Size Code	Core Orientation	Rated Current (A)	Inductance ( $\mu\text{H}$ ) Minimum
SU	10	VD = Vertical	x0 = x.0 A  Example: 10 = 1.0 A	0xx = xx $\mu\text{H}$  Example: 020 = 20 $\mu\text{H}$

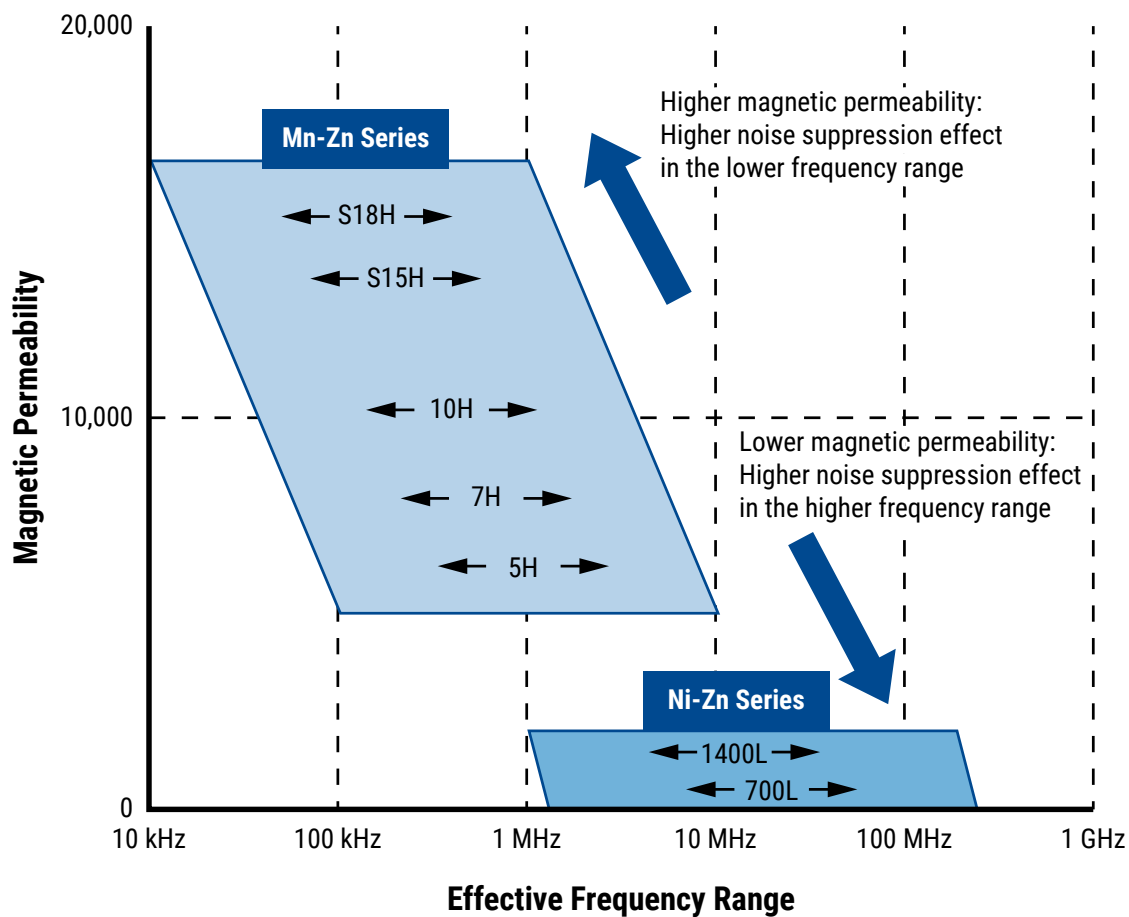
## Magnetic Permeability of Ferrite Material

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

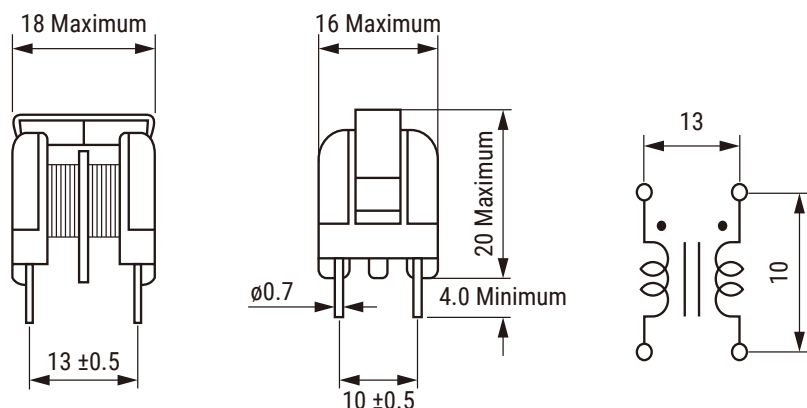
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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

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



## Dimensions – Millimeters



## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



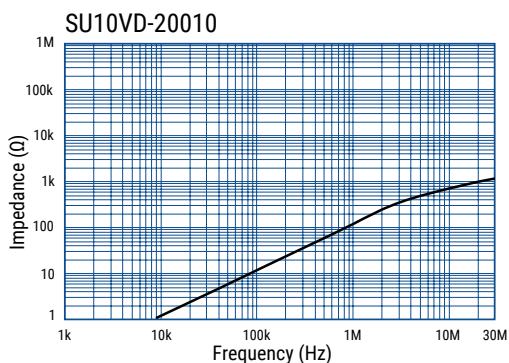
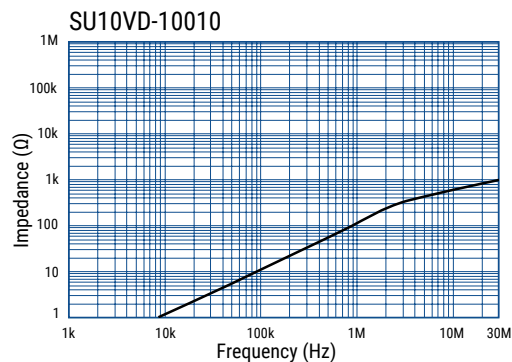
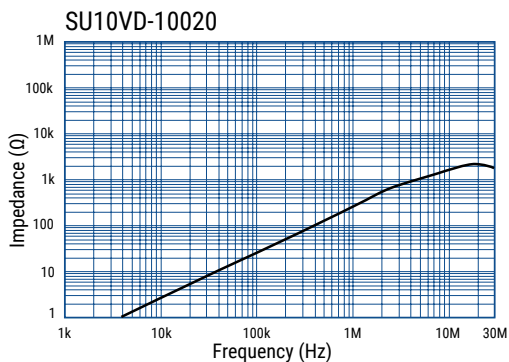
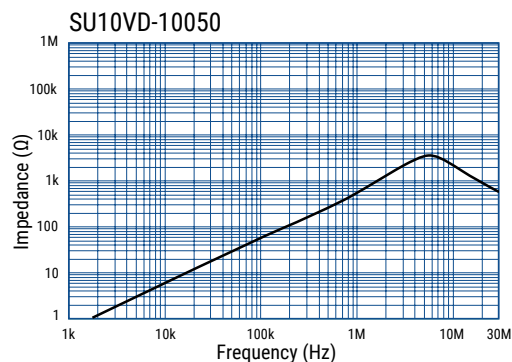
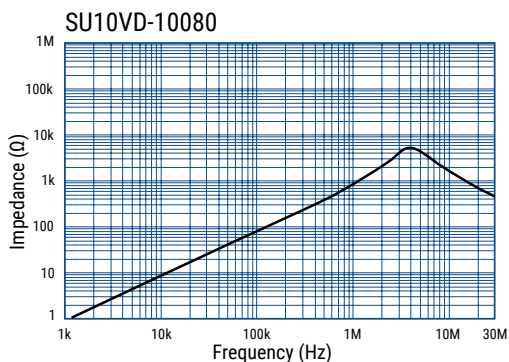
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	1 – 2 A
Rated Inductance Range	10 – 80 μH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)

**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (μH) Minimum	DC Resistance/Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU10VD-10080	1	80	0.20	45	D10080	5.6
SU10VD-10050	1	50	0.20	45	D10050	5.5
SU10VD-10020	1	20	0.12	45	D10020	5.5
SU10VD-10010	1	10	0.10	45	D10010	5.7
SU10VD-20010	2	10	0.10	45	D20010	5.4

**Frequency Characteristics**



## Packaging

Type	Packaging Type	Pieces Per Box
SU10VD	Tray	700

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## 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.



# Common Mode SU Coils, 16VD Series, High Frequency Type

## Overview

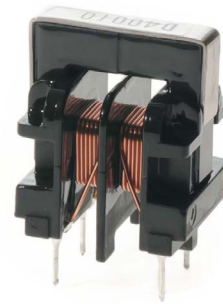
The KEMET SU coils are common mode chokes with a wide variety of characteristics. These gear type coils are designed with our proprietary ferrite UU cores and are useful in various noise countermeasure fields.

## Applications

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

## Benefits

- Proprietary 700L ferrite material and equivalents
- High frequency
- Wide variety of sizes and specifications
- Operating temperature range from  $-25^{\circ}\text{C}$  to  $+120^{\circ}\text{C}$
- UL 94 V-0 flame retardant rated bobbin



## Part Number System

SU	16	VD-	30	040
Series	Core Size Code	Core Orientation	Rated Current (A)	Inductance ( $\mu\text{H}$ ) Minimum
SU	16	VD = Vertical	x0 = x.0 A  Example: 30 = 3.0 A	0xx = xx $\mu\text{H}$  Example: 040 = 40 $\mu\text{H}$

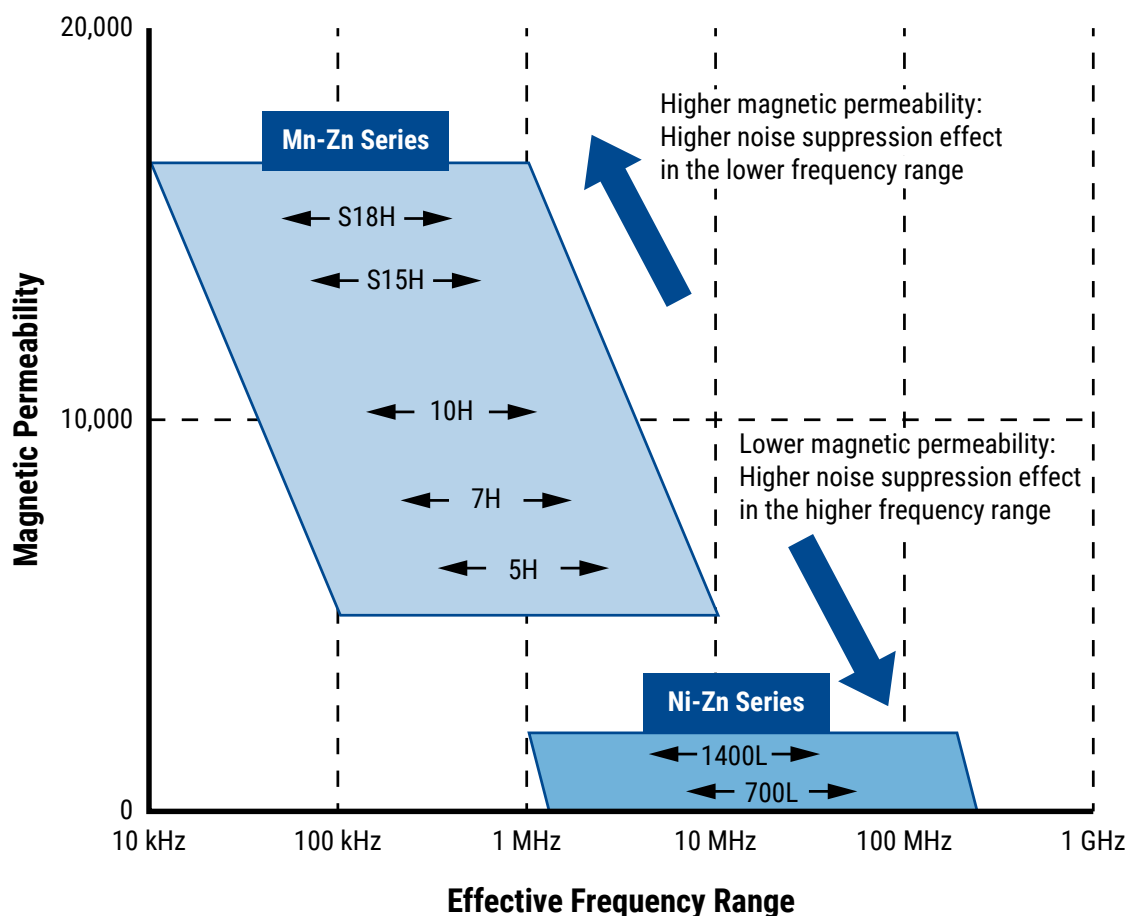
## Magnetic Permeability of Ferrite Material

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

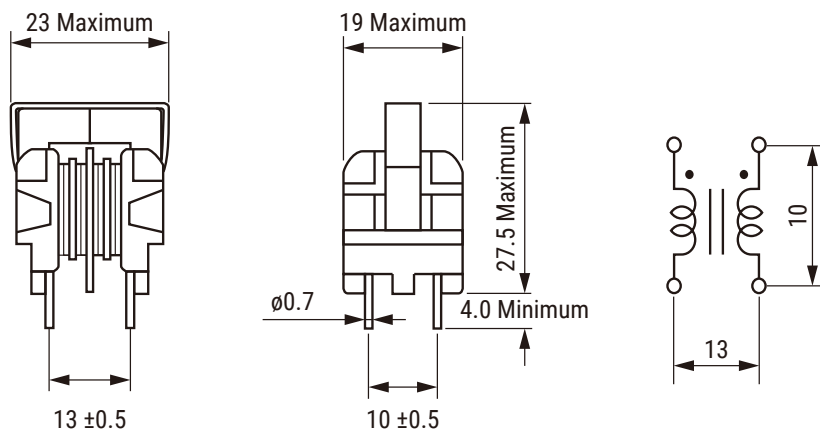
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

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

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



## Dimensions – Millimeters



## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



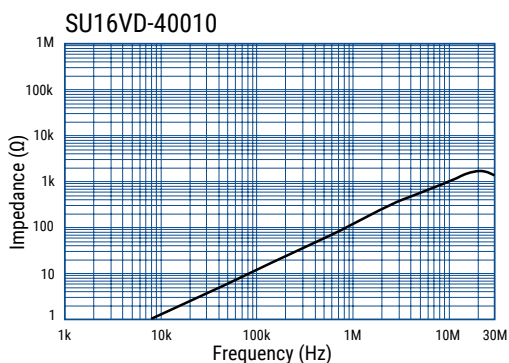
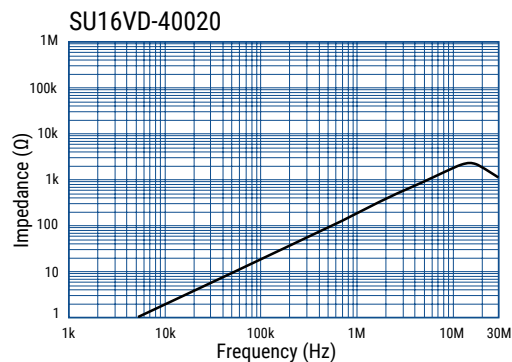
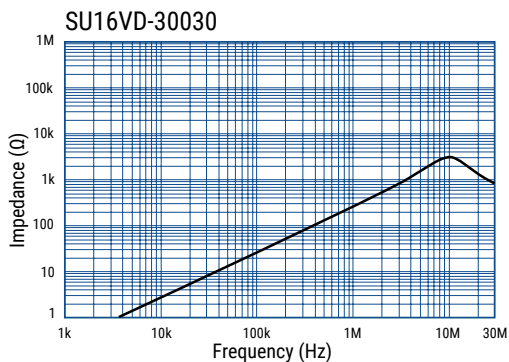
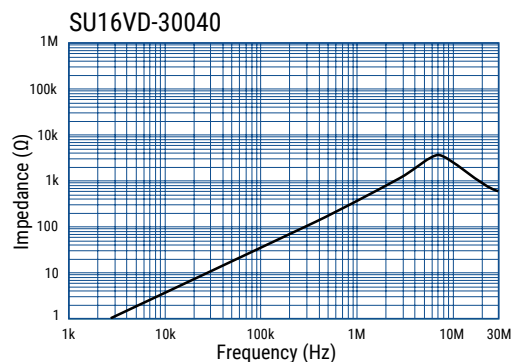
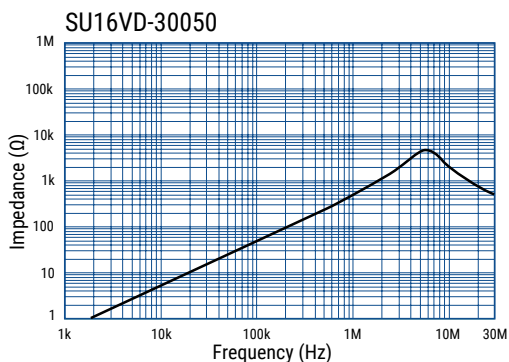
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 VAC
Withstanding Voltage	2,400 VAC (2 seconds, between lines)
Insulation Resistance	> 100 MΩ at 500 VDC (between lines)
Rated Current Range	3 – 4 A
Rated Inductance Range	10 – 50 μH minimum
Inductance Measurement Condition	1 kHz
Thermal Class	E (120°C)
Operating Temperature Range	-25°C to +120°C (include self temperature rise)

**Table 1 – Ratings & Part Number Reference**

Part Number	Rated Current (A)	Inductance (μH) Minimum	DC Resistance/Line (Ω) Maximum	Temperature Rise (K) Maximum	Marking	Weight (g) Approximate
SU16VD-30050	3	50	0.08	45	D30050	12.0
SU16VD-30040	3	40	0.07	45	D30040	11.9
SU16VD-30030	3	30	0.07	45	D30030	11.9
SU16VD-40020	4	20	0.05	45	D40020	11.8
SU16VD-40010	4	10	0.04	45	D40010	11.6

**Frequency Characteristics**



## Packaging

Type	Packaging Type	Pieces Per Box
SU16VD	Tray	600

## Handling Precautions

### Precautions for product storage

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

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

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

### Product temperature rise values

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

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

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  
 Брянск (4832)59-03-52  
 Владивосток (423)249-28-31  
 Владикавказ (8672)28-90-48  
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