Common Mode for Power Line, Through-Hole Type, SHO Series

Overview

The KEMET SHO coils are common mode chokes with a wide variety of characteristics. These through-hole toroidal coils are suitable for noise countermeasure in DC power line circuits.

Applications

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

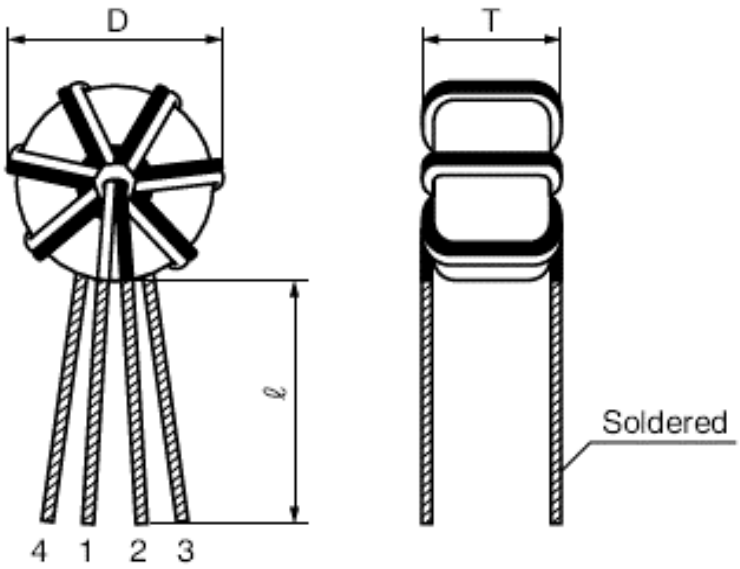
Benefits

- Nickel-Zinc (Ni-Zn) ferrite core
- Operating temperature range from −25°C to +70°C (except SHO-303: −25°C to +75°C and SHO-402 and SHO-501: −25°C to +80°C)
- RoHS Compliant

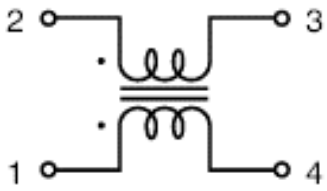
Part Number System

SHO-	10	1
Series	Core Size	Internal Management Code
SHO-	10 = 7.6 mm 20 = 7.6 mm 30 = 7.6 mm 40 = 5.4 mm 50 = 4.5 mm	1 2 3

Dimensions – Millimeters



Circuit Diagram



Part Number	Dimensions - Millimeters		
	D Maximum	T Maximum	ℓ
SHO-101	11.0	7.5	10 ±3
SHO-102	11.0	7.5	10 ±3
SHO-301	11.0	7.5	10 ±3
SHO-302	11.0	7.5	10 ±3
SHO-303	11.0	8.0	10 ±3
SHO-402	7.5	5.0	4 ±2
SHO-501	6.2	3.4	4 ±2

Environmental Compliance

All KEMET DC line filters are RoHS Compliant.

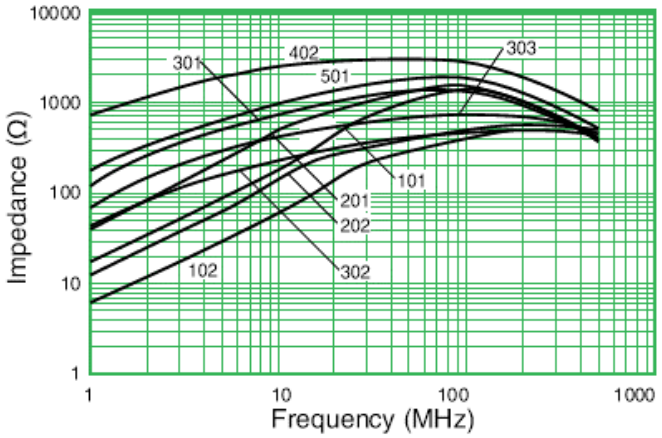
Performance Characteristics

Item	Performance Characteristics
Rated Voltage	50 VDC
Rated Current Range	0.8 – 4.0 A
Rated Inductance Range	0.6 – 99.0 µH minimum
Inductance Measurement Condition	100 kHz, 1 mA
Rated DC Resistance Range	8 – 120 mΩ maximum
Operating Temperature Range	SHO-101, SHO-102, SHO-301 and SHO-302: –25°C to +70°C (not including self-temperature rise) SHO-303: –25°C to +75°C (not including self-temperature rise) SHO-402 and SHO-501: –25°C to +80°C (not including self-temperature rise)

Table 1 – Ratings & Part Number Reference

Part Number	Rated Voltage DC (V)	Rated Current (A)	Inductance (µH) Minimum	DC Resistance/Line (mΩ) Maximum	Core Color	Weight (g)
SHO-101	50	4.0	2.0	15.5	Blue	1.16
SHO-102	50	4.0	0.6	10.0	Blue	1.05
SHO-301	50	4.0	12.0	15.5	Green	1.16
SHO-302	50	4.0	3.9	10.0	Green	1.05
SHO-303	50	5.0	6.0	8.0	Green	1.24
SHO-402	50	0.8	99.0	120.0	Gray	0.37
SHO-501	50	0.8	17.5	105.0	Green	0.20

Frequency Characteristics



Packaging

Part Type	Packaging Type	Pieces per Box
SHO-***	Bulk	6,000

Handling Precautions

Precautions for product storage
DC 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. Do not store near strong magnetic fields, as this might magnetize the product.

For optimized solderability, DC line filter stock should be used promptly, preferably within six 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, check and evaluate the value of the core temperature rise under actual operating conditions.

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