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 circuit.

Applications

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

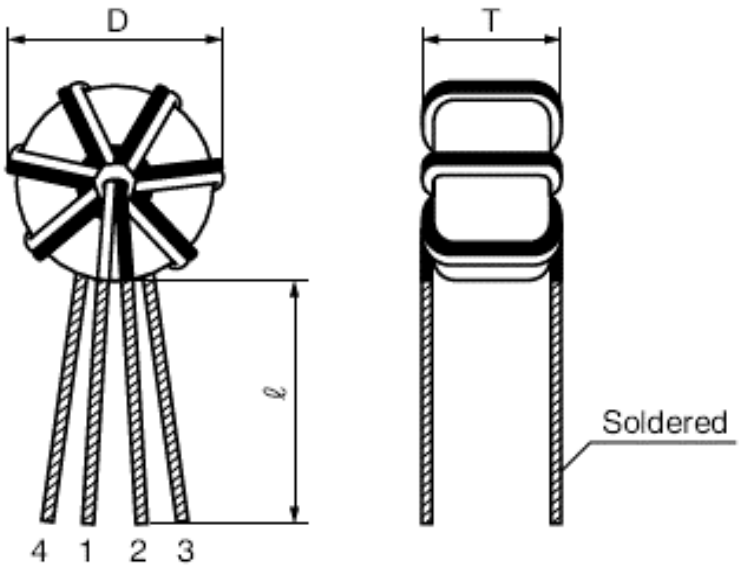
Benefits

- 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

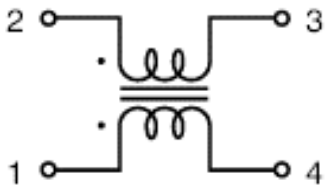
Part Number System

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.

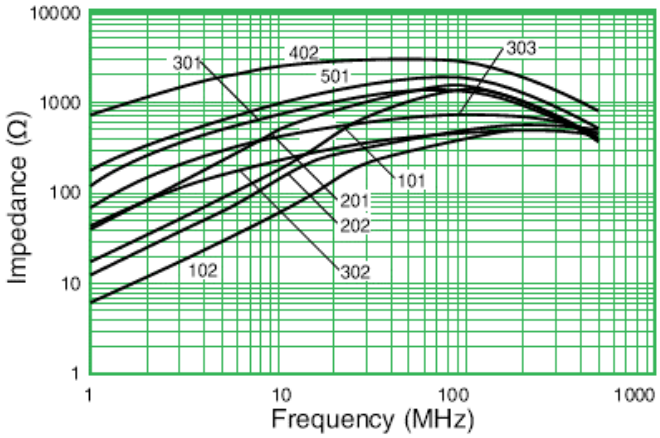
Performance Characteristics

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	Weight (g)
SHO-101	50	4.0	2.0	15.5	1.16
SHO-102	50	4.0	0.6	10.0	1.05
SHO-301	50	4.0	12.0	15.5	1.16
SHO-302	50	4.0	3.9	10.0	1.05
SHO-303	50	5.0	6.0	8.0	1.24
SHO-402	50	0.8	99.0	120.0	0.37
SHO-501	50	0.8	17.5	105.0	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 and atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Avoid also storage near strong magnetic fields as this might magnetiize the product.

For optimized solderability, DC Line Filters' stock should be used promptly, 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.

Check and evaluate the value of the core temperature rise under actual operating conditions when using.

Export Control

For customers in Japan
For products that are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

For customers outside Japan
DC Line Filters should not be used or sold for use in the development, production, stockpiling or utilization of any conventional weapons or mass-destructive weapons (nuclear weapons, chemical or biological weapons or missiles) or any other weapons.

KEMET Electronics Corporation Sales Offices

For a complete list of our global sales offices, please visit www.kemet.com/sales.

Disclaimer

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Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

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