

Leadless Line Chokes, SF Coil

SF-M Series

TDK SF-M Series prevents EMI in the 5 volt power supply lines of digital systems. In response to market demands for smaller, lighter, and more highly integrated electronic devices, TDK has incorporated its successful SF coil into this compact surface mount assembly. The SF-M Power Supply Line EMI Choke features wound-coil construction, with a compressed powdered metal core, and a heat-hardened resin package. These devices are available with standardized inductance values and large current ratings.

FEATURES

- Highly effective in blocking pulsating EMI.
- Low magnetic flux leakage due to a closed magnetic circuit.
- Highly reliable because of transfer-molded construction.

APPLICATIONS

- Information system devices:
floppy disk drives, hard disk drives
- Automobile electronics:
ECMs, electronic instrumentation
- Power supplies:
switching power supplies, DC to DC converters

PRODUCT IDENTIFICATION

SF-M 05 20 □
(1) (2) (3) (4)

(1) Series name

(2) Inductance value

R8	0.8 μ H
05	5 μ H
10	8 μ H

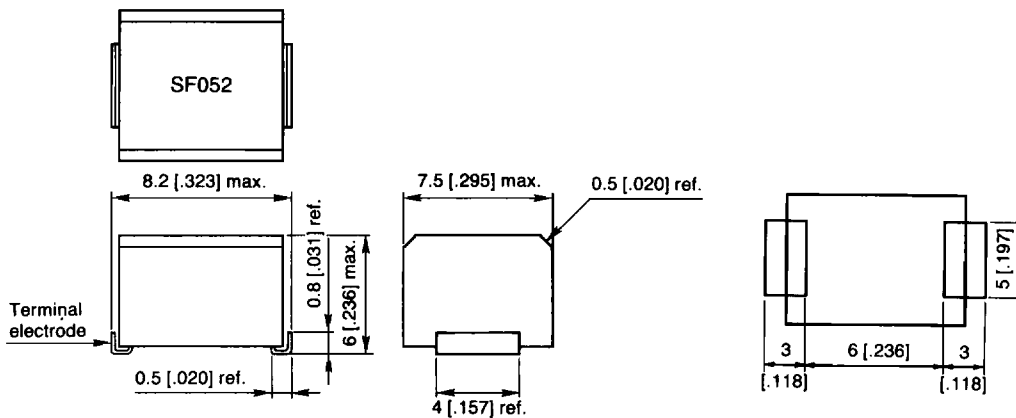
(3) Rated current

20	2A
10	1A

(4) Packaging style

T	Taping (reel)
Non-marking	Bulk

SHAPES AND DIMENSIONS/RECOMMENDED PC BOARD PATTERN



Dimensions in mm [inches]

ELECTRICAL CHARACTERISTICS

Part No.	Rated current (A dc)	Inductance (μ H) min.	DC resistance (m Ω) max.
SF-MR820	2	0.8	20
SF-M0520	2	5	40
SF-M1010	1	8	100

- Test equipment: YHP 4261A LCR METER, 1kHz
- Operating temperature range: -20 to +85°C

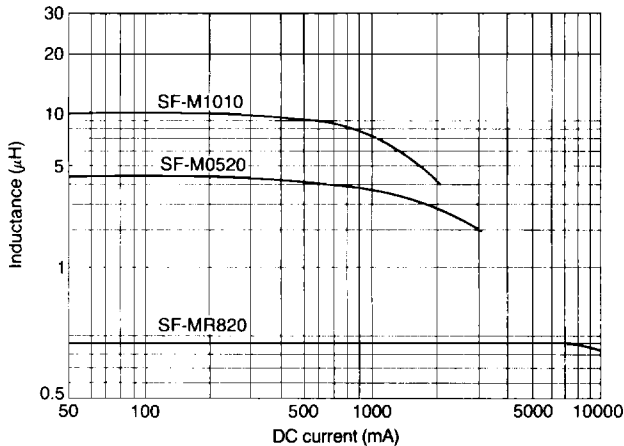


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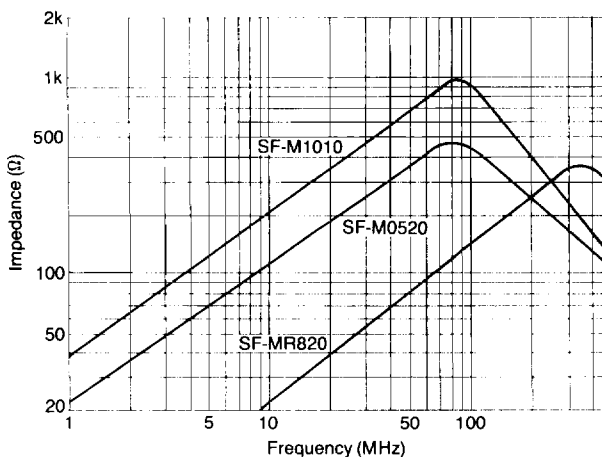
SF-M Series

TYPICAL ELECTRICAL CHARACTERISTICS

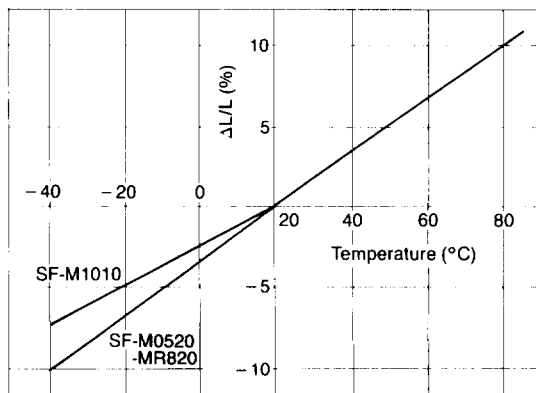
INDUCTANCE CHANGE vs. DC SUPERPOSITION CHARACTERISTICS



IMPEDANCE vs. FREQUENCY CHARACTERISTICS



INDUCTANCE vs. TEMPERATURE CHARACTERISTICS



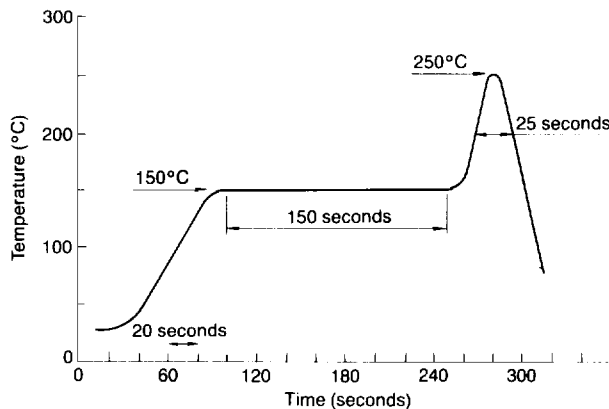
RELIABILITY AND TEST CONDITIONS

Item	Test conditions
High temperature resistance	Withstands 500 hours exposure to 100°C
Humidity resistance	Withstands 500 hours exposure to 90 to 95%RH at 40°C
Thermal shock	Withstands 50 cycles of the following temperature changes. - 40°C 20 to 35°C + 100°C 30 minutes 15 minutes 30 minutes
Vibration	Withstands a 10 minutes-sweep from 8 to 200Hz with an amplitude of 2mm [.079 inches] acceleration: 2.5G in each of the X, Y and Z axes, for a total duration of 2 hours.
Tensile terminal strength	Withstands a 1kg pull for 10 seconds.



RECOMMENDED SOLDERING CONDITION

REFLOW SOLDERING



PACKAGINGS

PACKAGING QUANTITIES

Taping	1000 pieces/reel
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TAPE DIMENSIONS

