

Normal Mode for Signal Line, Through-Hole Type, SBT Series

Overview

The KEMET SBT coils are normal mode chokes with a wide variety of characteristics. These through-hole toroidal coils are designed with our proprietary ferrite cores and are suitable for noise countermeasure in DC signal line circuits.

Applications

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

Benefits

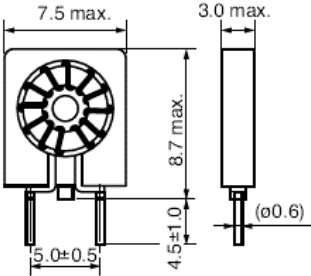
- Proprietary Nickel-Zinc (Ni-Zn) ferrite core
- Operating temperature range from -25°C to +75°C
- RoHS Compliant



Part Number System

| SBT-02 | 08 | T |
|--------|---|---|
| Series | Inductance Code (μH) | Packaging Type |
| SBT-02 | 08 = 8 μH 10 = 10 μH 40 = 40 μH 60 = 60 μH | Blank = Bulk T = Tape & Reel TF = Flat taping |

Dimensions – Millimeters

| Part Number | Dimensions - Millimeters |
|-------------|---|
| SBT-02** |  |

Environmental Compliance

All KEMET DC line filters are RoHS Compliant.



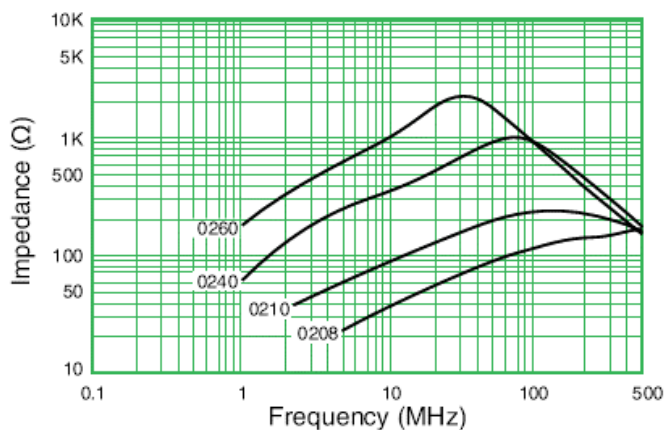
Performance Characteristics

| Item | Performance Characteristics |
|----------------------------------|--|
| Rated Voltage | 50 VDC |
| Rated Current | 500 mA |
| Rated Inductance Range | 8 – 60 μ H |
| Inductance Measurement Condition | 1 kHz, 70 mA |
| Inductance Tolerance | \pm 35% & \pm 50% |
| Rated DC Resistance Range | 20 – 50 m Ω maximum |
| Operating Temperature | -25°C to +70°C (not including self-temperature rise) |

Table 1 – Ratings & Part Number Reference

| Part Number | Rated Voltage DC (V) | Rated Current (mA) | Inductance (μH) | DC Resistance/Line (m Ω) Maximum | Weight (g) |
|-------------|----------------------|--------------------|------------------------------|--|------------|
| SBT-0208 | 50 | 500 | 8 \pm 50% | 20 | 0.24 |
| SBT-0208T | 50 | 500 | 8 \pm 50% | 20 | 0.24 |
| SBT-0208TF | 50 | 500 | 8 \pm 50% | 20 | 0.24 |
| SBT-0210 | 50 | 500 | 10 \pm 50% | 20 | 0.24 |
| SBT-0210T | 50 | 500 | 10 \pm 50% | 20 | 0.24 |
| SBT-0210TF | 50 | 500 | 10 \pm 50% | 20 | 0.24 |
| SBT-0240 | 50 | 500 | 40 \pm 35% | 34 | 0.24 |
| SBT-0240T | 50 | 500 | 40 \pm 35% | 34 | 0.24 |
| SBT-0240TF | 50 | 500 | 40 \pm 35% | 34 | 0.24 |
| SBT-0260 | 50 | 500 | 60 \pm 35% | 50 | 0.26 |
| SBT-0260T | 50 | 500 | 60 \pm 35% | 50 | 0.26 |
| SBT-0260TF | 50 | 500 | 60 \pm 35% | 50 | 0.26 |

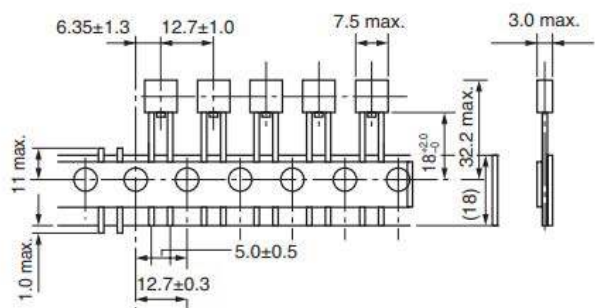
Frequency Characteristics



Packaging

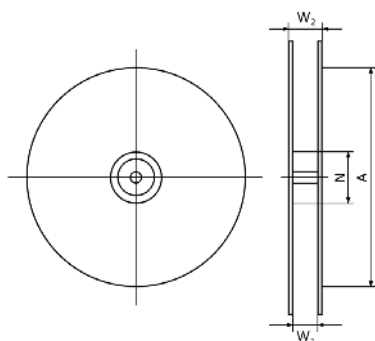
| Part Type | Packaging Type | Pieces per Package | Pieces per Box |
|------------|----------------|--------------------|----------------|
| SBT-02** | Bulk | 100 | 18,000 |
| SBT-02**T | Tape & Reel | 2,000 | 12,000 |
| SBT-02**TF | Flat taping | 1,000 | 10,000 |

Taping Specifications



Reel Specifications

Reel Dimensions - Millimeters



| A | N | W_1 +1.0, -0.0 | W_2 Maximum |
|-------|-------|---------------------|------------------|
| 360.0 | 140.0 | 44.0 | 50.2 |

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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