# **SC Coils, SC-J Terminal Base Type**



## **Overview**

The KEMET SC Coils, SC-J Terminal Base Type AC line filters are offered in a wide variety of sizes and specifications.

# **Applications**

- · Consumer Electronics
- · Common mode choke

## **Benefits**

- · Wide variety of sizes and specifications
- Inductances up to 8 mH
- · Rated Currents up to 18 A
- DC Resistances as low as 7 m $\Omega$

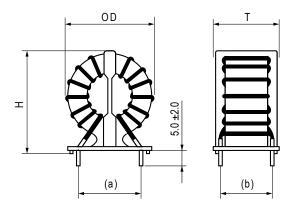


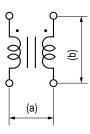
# **Part Number System**

| SC-    | 10-  | 20  | J                  |
|--------|--|---|--------------------|
| Series | Rated Current (A)  | Minimum Inductance (mH)   | Terminal Base Type |
| SC-    | 0x- = x A (e.g., 02- = 2 A)<br>x0- = x0 A (e.g., 10- = 10 A)<br>xx- = xx A (e.g., 15- = 15 A)<br>Note: Code 05 can equal 5 A as well<br>as 4 A | x0 = x mH (e.g., 20 = 2 mH)<br>xx = x.x mH (e.g., 15 = 1.5 mH)<br>0x = 0.x mH (e.g., 05 = 0.5 mH) | J                  |



## **Dimensions – Millimeters**





# **Environmental Compliance**

All KEMET AC Line Filters are RoHS Compliant.



RoHS Compliant

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

| Part                   | Rated<br>Current | Inductance (mH) | DC<br>Resistance/                   | Finished Dimensions (mm) |                 |                |                | Wire<br>Diameter | Weight (g) |      |             |
|------------------------|------------------|-----------------|-------------------------------------|--------------------------|-----------------|----------------|----------------|------------------|------------|------|-------------|
| Number                 | AC (A)           | Minimum         | Line (mΩ) Maximum  Rise (K) Maximum | Maximum                  | OD<br>(Maximum) | T<br>(Maximum) | H<br>(Maximum) | а                | b          | (mm) | Approximate |
| SC-02-10J <sup>1</sup> | 2                | 1               | 100                                 | 40                       | 25              | 20             | 27             | 10               | 15         | 0.6  | 15          |
| SC-02-20J1             | 2                | 2               | 110                                 | 40                       | 25              | 20             | 27             | 10               | 15         | 0.6  | 15          |
| SC-02-30J1             | 2                | 3               | 110                                 | 40                       | 25              | 20             | 27             | 10               | 15         | 0.6  | 16          |
| SC-02-50J <sup>1</sup> | 2                | 5               | 120                                 | 40                       | 25              | 20             | 27             | 10               | 15         | 0.6  | 20          |
| SC-05-10J <sup>1</sup> | 5                | 1               | 50                                  | 40                       | 25              | 20             | 27             | 10               | 15         | 0.8  | 20          |
| SC-05-20J <sup>1</sup> | 5                | 2               | 70                                  | 40                       | 34              | 23             | 33             | 18               | 16         | 0.8  | 25          |
| SC-05-30J <sup>1</sup> | 5                | 3               | 70                                  | 55                       | 34              | 23             | 33             | 18               | 16         | 0.8  | 30          |
| SC-05-50J <sup>1</sup> | 4                | 5               | 80                                  | 60                       | 34              | 23             | 33             | 18               | 16         | 0.8  | 32          |
| SC-05-80J <sup>1</sup> | 4                | 8               | 90                                  | 60                       | 34              | 23             | 33             | 18               | 16         | 0.8  | 42          |
| SC-10-10J <sup>2</sup> | 10               | 1               | 20                                  | 40                       | 34              | 23             | 33             | 12               | 17         | 1.3  | 42          |
| SC-10-20J <sup>2</sup> | 10               | 2               | 22                                  | 50                       | 42              | 29             | 44             | 18               | 22         | 1.4  | 70          |
| SC-10-30J1             | 10               | 3               | 30                                  | 75                       | 34              | 24             | 33             | 18               | 16         | 1.2  | 65          |
| SC-12-15J <sup>2</sup> | 12               | 1.5             | 18                                  | 50                       | 42              | 29             | 44             | 18               | 22         | 1.5  | 70          |
| SC-15-05J1             | 15               | 0.5             | 8                                   | 60                       | 34              | 23             | 33             | 18               | 16         | 1.5  | 40          |
| SC-15-10J <sup>2</sup> | 15               | 1               | 12                                  | 55                       | 44              | 30             | 44             | 18               | 22         | 1.7  | 75          |
| SC-18-05J <sup>2</sup> | 18               | 0.5             | 7                                   | 50                       | 44              | 30             | 44             | 18               | 22         | 1.8  | 60          |

<sup>&</sup>lt;sup>1</sup> Thermal Class E (120°C)

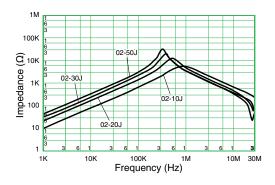
<sup>&</sup>lt;sup>2</sup> Thermal Class A (105°C)

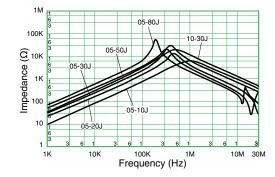


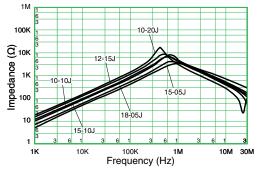
# **Specifications**

| Item                             | SC-J  |  |  |  |  |
|----------------------------------|---|--|--|--|--|
| Rated Voltage                    | 250 VAC/VDC   |  |  |  |  |
| Withstanding Voltage             | 2400 V (2 seconds, between lines)   |  |  |  |  |
| Insulation Resistance            | > 100 MΩ @ 500 VDC (between lines)  |  |  |  |  |
| Thermal Class                    | A (105°C) or E (120°C), see Table 1 footnotes   |  |  |  |  |
| Operating Temperature Range      | -25°C to T T = 105 - temperature rise (Thermal Class A)<br>T = 120 - temperature rise (Thermal Class E) |  |  |  |  |
| Inductance Measurement Condition | 100 kHz, 1 mA, KC547  |  |  |  |  |

# **Frequency Characteristics**







## **Notes on Use**

#### **Shelf Life**

• Use within 6 months. If the product is used after a storage period of 6 months or longer, confirm its solderability before use.

#### **Storage Condition**

- Avoid storage in high temperature and high humidity environment, as such condition may deteriorate the solderability of external electrode.
- Avoid storage in atmosphere containing toxic gases or acid (e.g., sulphur and chlorine), as such gas may deteriorate the solderability of external electrode.
- · Avoid storage near strong magnetic field, as such condition may magnetize the product.



# **KEMET Corporation World Headquarters**

2835 KEMET Way Simpsonville, SC 29681

Mailing Address: P.O. Box 5928 Greenville, SC 29606

www.kemet.com Tel: 864-963-6300 Fax: 864-963-6521

## **Corporate Offices**

Fort Lauderdale, FL Tel: 954-766-2800

#### **North America**

#### Southeast

Lake Mary, FL Tel: 407-855-8886

#### **Northeast**

Wilmington, MA Tel: 978-658-1663

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