

## 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

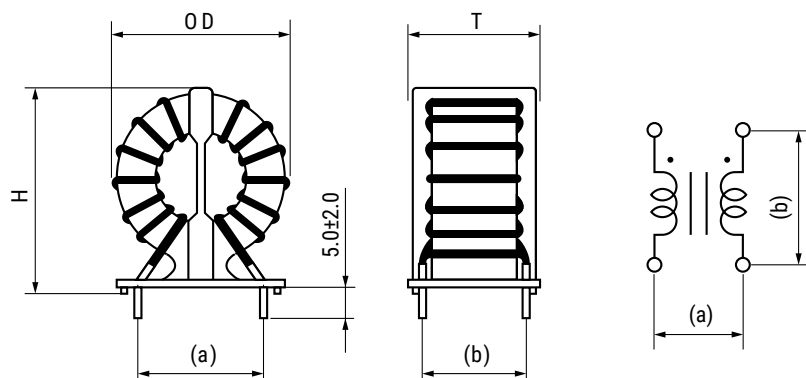
- Wide variety of sizes and specifications
- Inductances up to 8 mH
- Rated Currents up to 18 A
- DC Resistances as low as 7 mΩ



## 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 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 Number            | Rated Current AC (A) | Inductance (mH) Minimum | DC Resistance/Line (mΩ) Maximum | Temperature Rise (K) Maximum | Finished Dimensions (mm) |             |             |    |    | Wire Diameter (mm) | Weight (g) Approximate |
|------------------------|----------------------|-------------------------|---------------------------------|------------------------------|--------------------------|-------------|-------------|----|----|--------------------|------------------------|
|                        |                      |                         |                                 |                              | OD (Maximum)             | T (Maximum) | H (Maximum) | a  | b  |                    |                        |
| SC-02-10J <sup>1</sup> | 2                    | 1                       | 100                             | 40                           | 25                       | 20          | 27          | 10 | 15 | 0.6                | 15                     |
| SC-02-20J <sup>1</sup> | 2                    | 2                       | 110                             | 40                           | 25                       | 20          | 27          | 10 | 15 | 0.6                | 15                     |
| SC-02-30J <sup>1</sup> | 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-10-30J <sup>1</sup> | 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-15-05J <sup>1</sup> | 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                     |

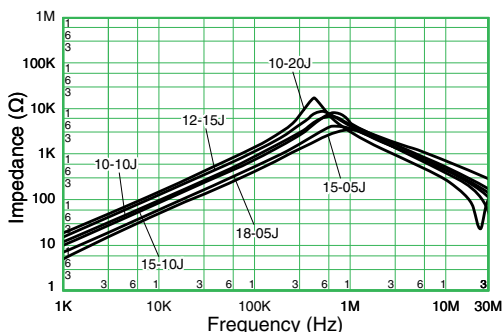
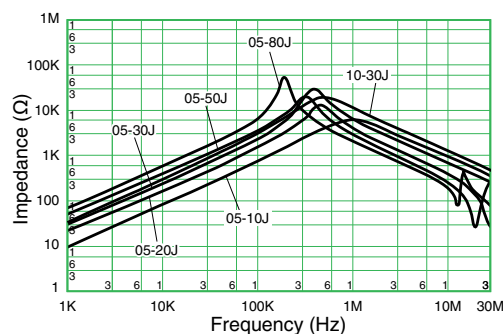
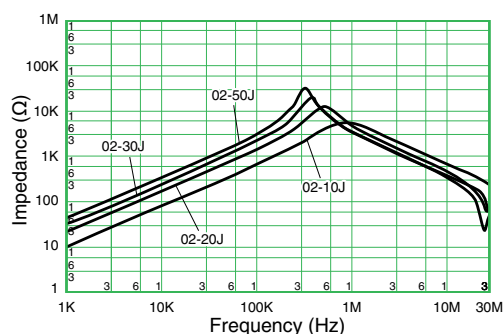
<sup>1</sup> Thermal Class E (120°C)

<sup>2</sup> Thermal Class A (105°C)

## Specifications

| Item                             | SC-J                                                                                                       |
|----------------------------------|------------------------------------------------------------------------------------------------------------|
| Rated Voltage                    | 250 VAC/VDC                                                                                                |
| Withstanding Voltage             | 2,400 V (2 seconds, between lines)                                                                         |
| Insulation Resistance            | > 100 MΩ at 500 VDC (between lines)                                                                        |
| Thermal Class                    | A (105°C) or E (120°C), see Table 1 footnotes                                                              |
| Operating Temperature Range      | -25°C to T<br>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.

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