

**Overview**

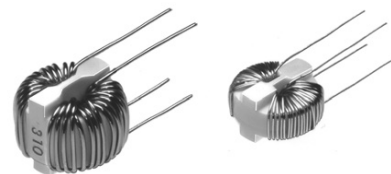
The KEMET SC Coils, SC-G/GS Small Type AC line filters are offered in a wide variety of sizes and specifications.

**Applications**

- Consumer Electronics
- Common mode choke

**Benefits**

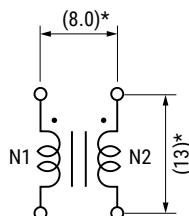
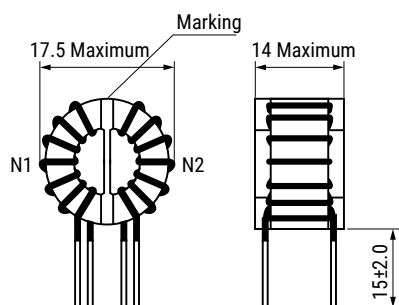
- Wide variety of sizes and specifications
- Inductances up to 2.0 mH
- Rated Currents up to 20 A
- DC Resistances as low as 8 mΩ

**Part Number System**

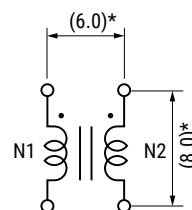
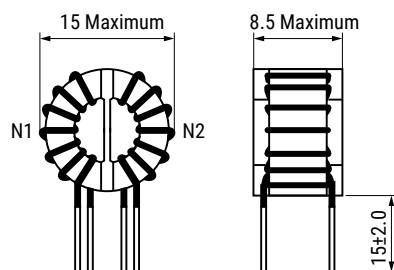
| SC-    | 01-                         | E                              | 150                                                                                                                                                                          | G                  |
|--------|-----------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Series | Rated Current (A)           | Thermal Class                  | Minimum Inductance (mH)                                                                                                                                                      | Terminal Base Type |
| SC-    | 0x- = x A (e.g., 02- = 2 A) | Blank = Class A<br>E = Class E | 0x = 0.x mH (e.g., 06 = 0.6 mH)<br>x0 = x.0 mH (e.g., 20 = 2.0 mH)<br>x00 = x0.0 mH (e.g., 100 = 10.0 mH)<br>xx0 = xx.0 mH (e.g., 150 = 15.0 mH)<br>Note: Code 121 = 12.0 mH | G<br>GS            |

## Dimensions – Millimeters

### SC-G



### SC-GS



\*Pin pitch values are for reference only. Values are not guaranteed.

## Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.



RoHS Compliant

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

| Part Number              | Rated Current<br>AC (A) | Inductance<br>(mH)<br>Minimum | DC<br>Resistance/<br>Line (mΩ)<br>Maximum | Temperature<br>Rise (K)<br>Maximum | Wire<br>Diameter<br>(mm) | Marking | Weight (g)<br>Approximate |
|--------------------------|-------------------------|-------------------------------|-------------------------------------------|------------------------------------|--------------------------|---------|---------------------------|
| SC-01-06G <sup>1</sup>   | 1                       | 0.6                           | 60                                        | 40                                 | 0.4                      | 106     | 5                         |
| SC-01-10G <sup>1</sup>   | 1                       | 1.0                           | 70                                        | 40                                 | 0.4                      | 110     | 5                         |
| SC-01-20G <sup>1</sup>   | 1                       | 2.0                           | 100                                       | 40                                 | 0.4                      | 120     | 5                         |
| SC-01-30G <sup>1</sup>   | 1                       | 3.0                           | 120                                       | 40                                 | 0.4                      | 130     | 6                         |
| SC-01-50G <sup>1</sup>   | 1                       | 5.0                           | 150                                       | 40                                 | 0.4                      | 150     | 7                         |
| SC-01-80G <sup>1</sup>   | 1                       | 8.0                           | 300                                       | 40                                 | 0.35                     | 180     | 6                         |
| SC-01-E100G <sup>2</sup> | 1                       | 10.0                          | 350                                       | 40                                 | 0.35                     | 100     | 6                         |
| SC-01-E121G <sup>2</sup> | 1                       | 12.0                          | 400                                       | 40                                 | 0.35                     | 121     | 6                         |
| SC-01-E150G <sup>2</sup> | 1                       | 15.0                          | 450                                       | 40                                 | 0.35                     | -       | 6                         |
| SC-02-06G <sup>1</sup>   | 2                       | 0.6                           | 50                                        | 40                                 | 0.5                      | 206     | 6                         |
| SC-02-10G <sup>1</sup>   | 2                       | 1.0                           | 50                                        | 40                                 | 0.5                      | 210     | 7                         |
| SC-02-20G <sup>1</sup>   | 2                       | 2.0                           | 70                                        | 40                                 | 0.5                      | 220     | 8                         |
| SC-02-30G <sup>1</sup>   | 2                       | 3.0                           | 85                                        | 40                                 | 0.5                      | 230     | 9                         |
| SC-03-06G <sup>1</sup>   | 3                       | 0.6                           | 30                                        | 40                                 | 0.6                      | 306     | 7                         |
| SC-03-10G <sup>1</sup>   | 3                       | 1.0                           | 35                                        | 40                                 | 0.6                      | 310     | 8                         |
| SC-01-10GS <sup>1</sup>  | 1                       | 1.0                           | 130                                       | 40                                 | 0.3                      | -       | 2                         |
| SC-01-20GS <sup>1</sup>  | 1                       | 2.0                           | 180                                       | 40                                 | 0.3                      | -       | 2                         |
| SC-02-10GS <sup>1</sup>  | 2                       | 1.0                           | 80                                        | 40                                 | 0.4                      | -       | 3                         |
| SC-03-05GS <sup>1</sup>  | 3                       | 0.5                           | 45                                        | 45                                 | 0.45                     | -       | 3                         |

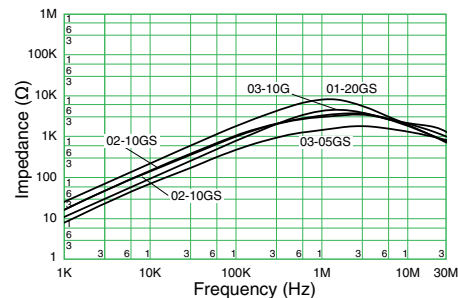
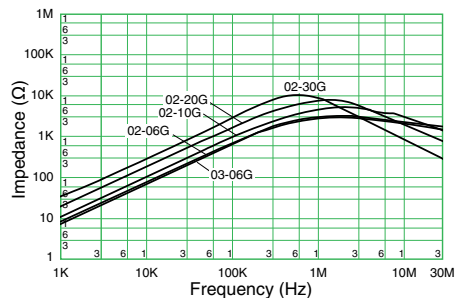
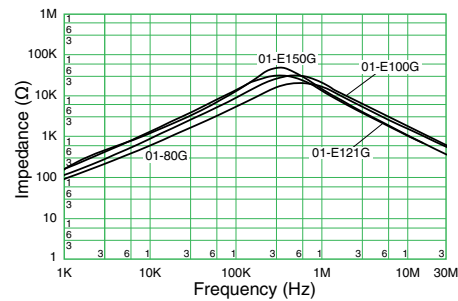
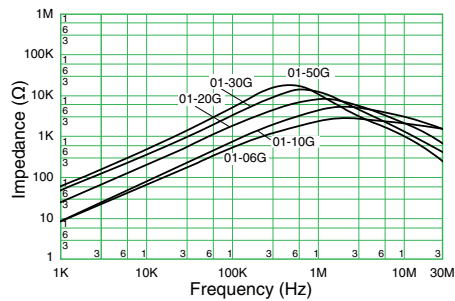
<sup>1</sup> Thermal Class A (105°C)

<sup>2</sup> Thermal Class E (120°C)

## Specifications

| Item                             | SC-G/GS                                                                                                             |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------|
| 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      T = 105 – temperature rise (Thermal Class A)<br>to T        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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