

# Common Mode SCR-XV Coils, Automotive Grade

## Overview

The KEMET SCR-XV coils are common mode chokes with a wide variety of characteristics for automotive & harsh environment industrial application. These toroidal coils are designed with our proprietary high permeability ferrite S15H cores and are useful in various noise countermeasure fields.

## Applications

- On board charger for EV/PHEV
- Wireless charging systems with 85 kHz
- Medium power drives for steering, air conditioning and mild hybrid 48 V systems
- High voltage automotive and harsh environment industrial EMI filtering

## Benefits

- Proprietary S15H ferrite material
- High rated voltage up to 1,000 V AC/DC
- Operating temperature range from -40°C to +120°C
- High permeability
- High impedance
- UL 94 V-0 flame retardant rated base and cap
- AEC-Q200 qualified

SCR\*\*XV-JV



SCR\*\*XV-JH



## Part Number System

| SCR    | 19XV-                              | 080-                                                          |                                                                                          | 1R0                                                                | A                        | 011                                                                                 | JV                                         |
|--------|------------------------------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------|--------------------------------------------|
| Series | Dimension Code<br>(See Dimensions) | Rated Current<br>(A)                                          | Phase                                                                                    | Wire Diameter<br>(mm)                                              | Windings                 | Number of Turns                                                                     | Terminal Base Type                         |
| SCR    | 19XV<br>25XV<br>29XV<br>39XV       | xxx- = xx.x A<br><br>Examples:<br>080 = 8.0 A<br>200 = 20.0 A | Blank = Single-phase<br>S = Three-phase<br>Y = Four-phase<br>Z = Four-phase<br>asymetric | R = Decimal point<br><br>Examples:<br>1R0 = 1.0 mm<br>2R4 = 2.4 mm | A = Single<br>B = Double | 00x = x turns<br>0xx = xx turns<br><br>Examples:<br>005 = 5 turns<br>011 = 11 turns | JV = Vertical type<br>JH = Horizontal type |

## Magnetic Permeability of Ferrite Material

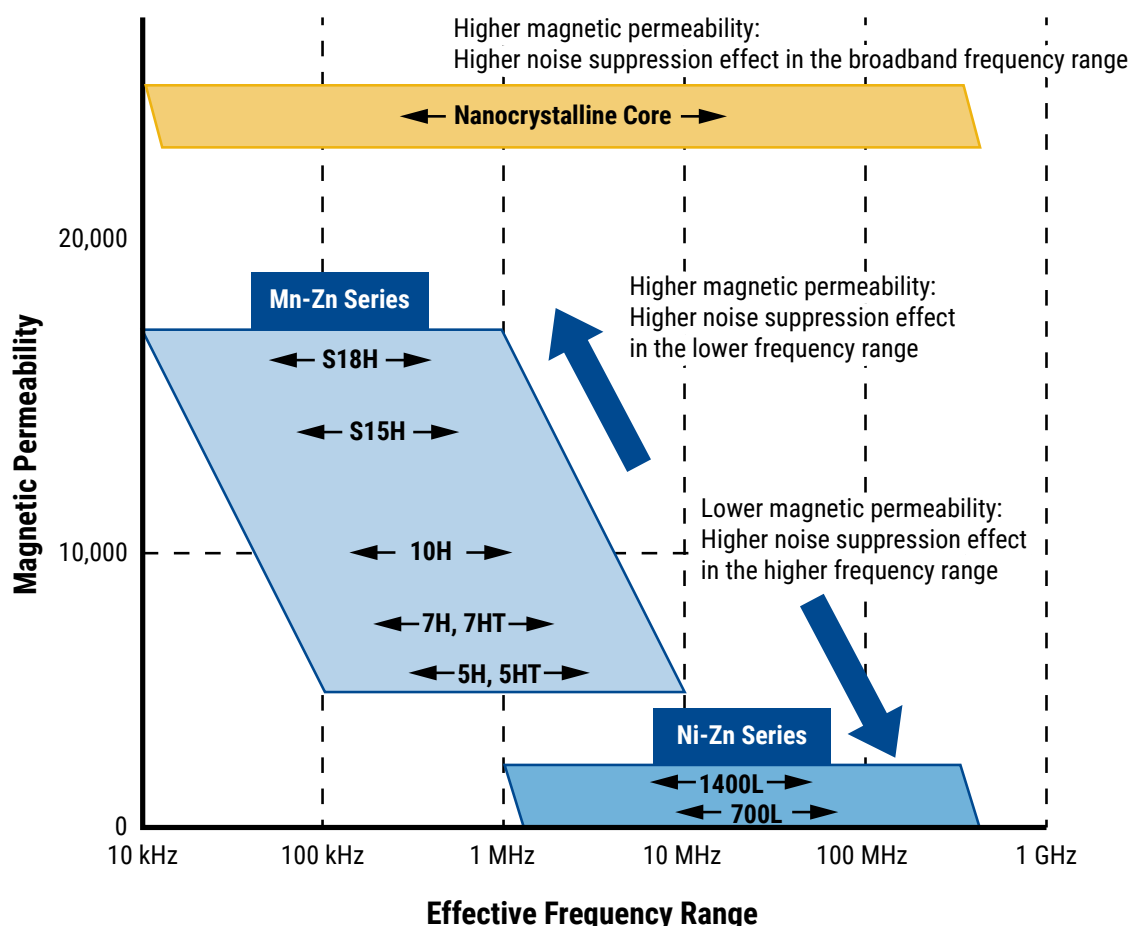
In order to achieve most efficient noise reduction, it is important to select the material according to the target frequency band. Depending on its magnetic permeability, a particular ferrite material will be effective in a certain frequency band. A schematic representation of the relationship between the magnetic permeability of each material and the corresponding effective band range is shown in Figure 1.

Materials with higher magnetic permeability are effective in the lower frequency range, while those with lower magnetic permeability are effective in the higher frequency range. Thus, Mn-Zn products are mainly used for reducing conduction noise, while Ni-Zn products are commonly used for radiation noise countermeasures.

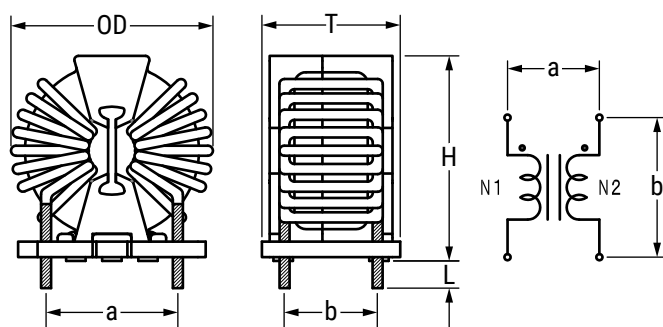
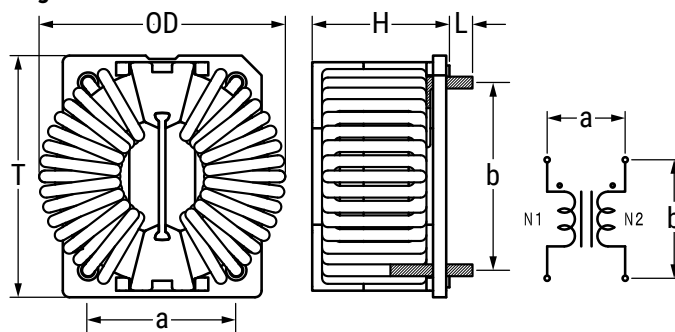
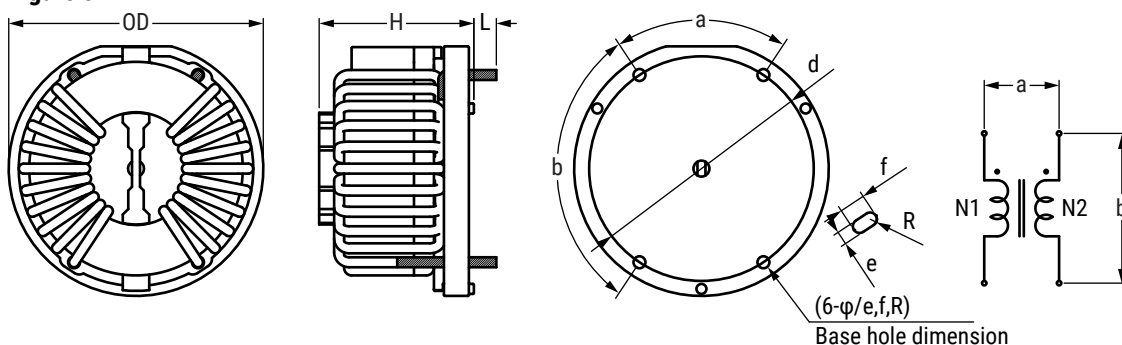
The effective frequency range varies depending on core shape, size and number of windings. This frequency dependence of the magnetic permeability as shown in the figure serves for reference purposes only and it should be tested on the actual device to determine its effectiveness.

S18H, S15H, 10H, 7H, 7HT, 5H, 5HT, 1400L, and 700L are KEMET's proprietary ferrite material names. Other materials are available upon request.

**Figure 1 - Relationship between the magnetic permeability of each material and its effective frequency range**



## Dimensions – Millimeters

**Figure 1**

**Figure 2**

**Figure 3**


| Part Name             | Dimensions<br>(mm) |                |                |           | Pin Pitch <sup>1</sup><br>(Reference) |      |   |      |     |     |      |      | Figure |
|-----------------------|--------------------|----------------|----------------|-----------|---------------------------------------|------|---|------|-----|-----|------|------|--------|
|                       | OD<br>(Maximum)    | T<br>(Maximum) | H<br>(Maximum) | L         | a                                     | b    | c | d    | φ   | e   | f    | R    |        |
| SCR19-JV              | 27.0 / 28.0        | 18.4           | 27.5           | 3.50 ±0.5 | 17.0                                  | 12.0 | - | -    | -   | -   | -    | -    | Fig. 1 |
| SCR25-JV              | 34.0 / 35.5 / 37.5 | 26.0           | 33.5           | 3.50 ±0.5 | 20.5                                  | 18.5 | - | -    | -   | -   | -    | -    | Fig. 1 |
| SCR29-JV              | 39.0 / 40.5 / 41.5 | 21.4           | 37.7           | 3.50 ±0.5 | 22.5                                  | 13.5 | - | -    | -   | -   | -    | -    | Fig. 1 |
| SCR19-JH              | 27.0 / 28.0        | 27.0           | 18.9           | 3.50 ±0.5 | 17.0                                  | 19.0 | - | -    | -   | -   | -    | -    | Fig. 2 |
| SCR25-JH              | 34.0 / 35.5 / 37.5 | 33.0           | 26.5           | 3.50 ±0.5 | 20.5                                  | 24.5 | - | -    | -   | -   | -    | -    | Fig. 2 |
| SCR29-JH              | 39.0 / 40.5 / 41.5 | 37.2           | 21.9           | 3.50 ±0.5 | 22.5                                  | 28.5 | - | -    | -   | -   | -    | -    | Fig. 2 |
| SCR39XV-100-1R5A028JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 1.7 | -   | -    | -    | Fig. 3 |
| SCR39XV-120-1R6A024JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.1 | -   | -    | -    | Fig. 3 |
| SCR39XV-130-1R7A022JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.1 | -   | -    | -    | Fig. 3 |
| SCR39XV-140-1R8A019JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.1 | -   | -    | -    | Fig. 3 |
| SCR39XV-160-1R9A017JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.4 | -   | -    | -    | Fig. 3 |
| SCR39XV-180-2R0A015JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.4 | -   | -    | -    | Fig. 3 |
| SCR39XV-190-2R1A014JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.4 | -   | -    | -    | Fig. 3 |
| SCR39XV-200-2R2A013JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.7 | -   | -    | -    | Fig. 3 |
| SCR39XV-220-2R3A012JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.7 | -   | -    | -    | Fig. 3 |
| SCR39XV-240-2R4A011JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | 2.7 | -   | -    | -    | Fig. 3 |
| SCR39XV-310-1R9B007JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | -   | 2.4 | 4.65 | 1.20 | Fig. 3 |
| SCR39XV-320-2R0B006JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | -   | 2.4 | 4.65 | 1.20 | Fig. 3 |
| SCR39XV-400-2R2B005JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | -   | 2.7 | 5.25 | 1.35 | Fig. 3 |
| SCR39XV-420-2R4B004JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | 67°                                   | 113° | - | 45.0 | -   | 2.7 | 5.25 | 1.35 | Fig. 3 |

<sup>1</sup> Pin pitch listed above for reference only. Values not guaranteed.

## Dimensions – Millimeters cont.

Figure 4

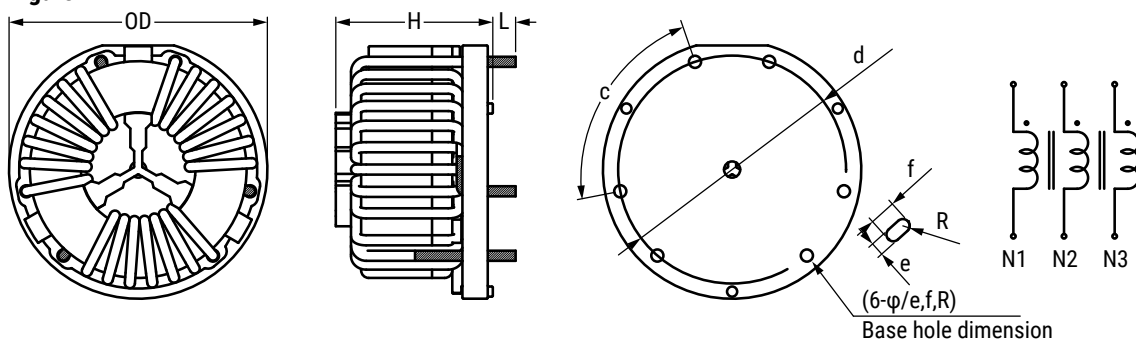
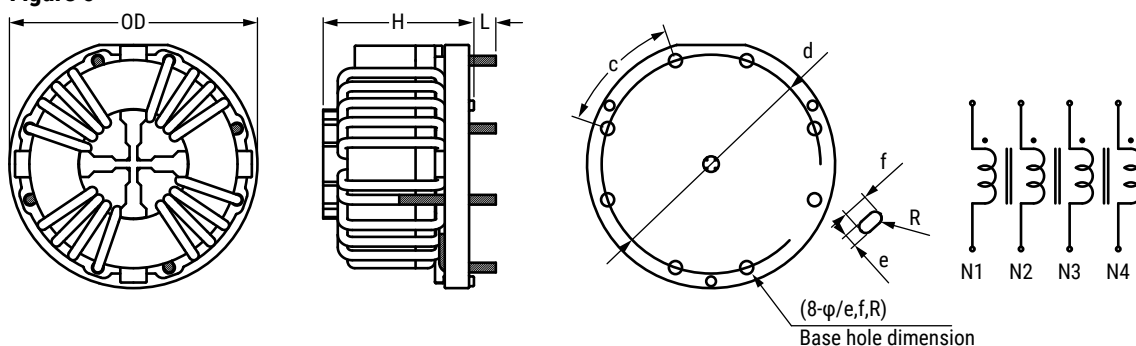


Figure 5

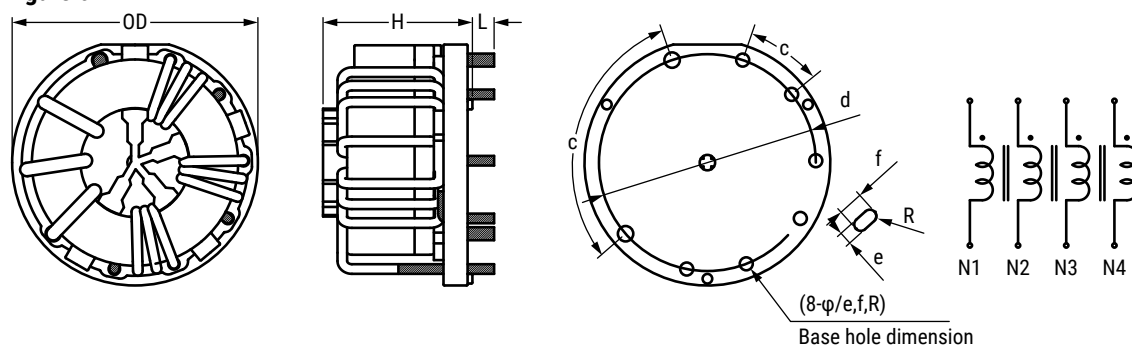


| Part Name              | Dimensions (mm) |             |             |           | Pin Pitch <sup>1</sup> (Reference) |   |     |      |     |     |      |      | Figure |
|------------------------|-----------------|-------------|-------------|-----------|------------------------------------|---|-----|------|-----|-----|------|------|--------|
|                        | OD (Maximum)    | T (Maximum) | H (Maximum) | L         | a                                  | b | c   | d    | φ   | e   | f    | R    |        |
| SCR39XV-120-S1R5A017JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 1.7 | -   | -    | -    | Fig. 4 |
| SCR39XV-140-S1R6A014JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 2.1 | -   | -    | -    | Fig. 4 |
| SCR39XV-150-S1R7A011JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 2.1 | -   | -    | -    | Fig. 4 |
| SCR39XV-190-S1R9A009JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 2.4 | -   | -    | -    | Fig. 4 |
| SCR39XV-210-S2R0A008JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 2.4 | -   | -    | -    | Fig. 4 |
| SCR39XV-230-S2R2A007JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 2.7 | -   | -    | -    | Fig. 4 |
| SCR39XV-280-S2R4A006JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | 2.7 | -   | -    | -    | Fig. 4 |
| SCR39XV-400-S2R2B003JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 82° | 45.0 | -   | 2.7 | 5.25 | 1.35 | Fig. 4 |
| SCR39XV-110-Y1R4A008JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 52° | 45.0 | 1.7 | -   | -    | -    | Fig. 5 |
| SCR39XV-140-Y1R6A007JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 52° | 45.0 | 2.1 | -   | -    | -    | Fig. 5 |
| SCR39XV-170-Y1R8A006JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 52° | 45.0 | 2.1 | -   | -    | -    | Fig. 5 |
| SCR39XV-230-Y2R2A005JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 52° | 45.0 | 2.7 | -   | -    | -    | Fig. 5 |
| SCR39XV-290-Y2R4A004JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 52° | 45.0 | 2.7 | -   | -    | -    | Fig. 5 |
| SCR39XV-400-Y2R0B003JH | 53.0            | -           | 33.0        | 4.50 ±0.5 | -                                  | - | 52° | 45.0 | -   | 2.4 | 4.65 | 1.20 | Fig. 5 |

<sup>1</sup> Pin pitch listed above for reference only. Values not guaranteed.

## Dimensions – Millimeters cont.

Figure 6



| Part Name              | Dimensions<br>(mm) |                |                |           | Pin Pitch <sup>1</sup><br>(Reference) |   |          |      |         |     |     |      | Figure |
|------------------------|--------------------|----------------|----------------|-----------|---------------------------------------|---|----------|------|---------|-----|-----|------|--------|
|                        | OD<br>(Maximum)    | T<br>(Maximum) | H<br>(Maximum) | L         | a                                     | b | c        | d    | φ       | e   | f   | R    |        |
| SCR39XV-200-Z2R1A012JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | 2.4/1.4 | -   | -   | -    | Fig. 6 |
| SCR39XV-240-Z2R3A010JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | 2.7/1.7 | -   | -   | -    | Fig. 6 |
| SCR39XV-270-Z2R4A009JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | 2.7/1.7 | -   | -   | -    | Fig. 6 |
| SCR39XV-310-Z1R8B008JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | -1.7    | 2.1 | 4.1 | 1.05 | Fig. 6 |
| SCR39XV-350-Z1R9B007JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | -2.1    | 2.4 | 4.7 | 1.20 | Fig. 6 |
| SCR39XV-440-Z2R0B005JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | -2.1    | 2.4 | 4.7 | 1.20 | Fig. 6 |
| SCR39XV-500-Z2R4B004JH | 53.0               | -              | 33.0           | 4.50 ±0.5 | -                                     | - | 112°/32° | 45.0 | -2.4    | 2.7 | 5.3 | 1.35 | Fig. 6 |

<sup>1</sup> Pin pitch listed above for reference only. Values not guaranteed.

## Environmental Compliance

All KEMET AC line filters are RoHS Compliant.



## Performance Characteristics

| Item                             | Performance Characteristics                     |
|----------------------------------|-------------------------------------------------|
| Rated Voltage                    | 1,000 VAC/VDC                                   |
| Withstanding Voltage             | 2,400 VAC (2 seconds, between lines)            |
| Insulation Resistance            | > 100 MΩ at 1,000 VDC (between lines)           |
| Rated Current Range              | 5 – 50 A                                        |
| Rated Inductance Range           | 0.056 – 11.8 mH ±35%                            |
| Inductance Measurement Condition | 100 kHz                                         |
| Thermal Class                    | E (120°C)                                       |
| Operating Temperature Range      | –40°C to +120°C (include self temperature rise) |

### Table 1 – Ratings & Part Number Reference

| Part Number           | Rated Voltage<br>AC/DC (V) | Rated Current<br>(A) | Inductance <sup>1</sup><br>(mH) ±35% | DC Resistance/<br>Line (mΩ) ±13% | Temperature<br>Rise (K)<br>Maximum | Wire<br>Diameter<br>(mm) | Weight (g)<br>Approximate | OD<br>(mm) |
|-----------------------|----------------------------|----------------------|--------------------------------------|----------------------------------|------------------------------------|--------------------------|---------------------------|------------|
| SCR19XV-080-1R0A011JV | 1,000                      | 8                    | 0.750 <sup>1</sup>                   | 8.700 <sup>2</sup>               | 55                                 | 1.0                      | 15.9                      | 27.0       |
| SCR19XV-100-1R1A009JV | 1,000                      | 10                   | 0.500 <sup>1</sup>                   | 6.030 <sup>2</sup>               | 45                                 | 1.1                      | 16.1                      | 27.0       |
| SCR19XV-120-1R2A007JV | 1,000                      | 12                   | 0.300 <sup>1</sup>                   | 3.990 <sup>2</sup>               | 50                                 | 1.2                      | 15.8                      | 27.0       |
| SCR19XV-150-1R3A006JV | 1,000                      | 15                   | 0.220 <sup>1</sup>                   | 2.910 <sup>2</sup>               | 50                                 | 1.3                      | 15.8                      | 27.0       |
| SCR19XV-190-1R5A005JV | 1,000                      | 19                   | 0.160 <sup>1</sup>                   | 1.890 <sup>2</sup>               | 50                                 | 1.5                      | 16.6                      | 28.0       |
| SCR19XV-220-1R6A004JV | 1,000                      | 22                   | 0.100 <sup>1</sup>                   | 1.380 <sup>2</sup>               | 50                                 | 1.6                      | 16.1                      | 28.0       |
| SCR19XV-300-1R9A003JV | 1,000                      | 30                   | 0.056 <sup>1</sup>                   | 0.747 <sup>2</sup>               | 55                                 | 1.9                      | 16.8                      | 28.0       |
| SCR19XV-080-1R0A011JH | 1,000                      | 8                    | 0.750 <sup>1</sup>                   | 8.980 <sup>2</sup>               | 55                                 | 1.0                      | 16.4                      | 27.0       |
| SCR19XV-100-1R1A009JH | 1,000                      | 10                   | 0.500 <sup>1</sup>                   | 6.230 <sup>2</sup>               | 45                                 | 1.1                      | 16.6                      | 27.0       |
| SCR19XV-120-1R2A007JH | 1,000                      | 12                   | 0.300 <sup>1</sup>                   | 4.190 <sup>2</sup>               | 50                                 | 1.2                      | 16.3                      | 27.0       |
| SCR19XV-150-1R3A006JH | 1,000                      | 15                   | 0.220 <sup>1</sup>                   | 3.010 <sup>2</sup>               | 50                                 | 1.3                      | 16.2                      | 27.0       |
| SCR19XV-190-1R5A005JH | 1,000                      | 19                   | 0.160 <sup>1</sup>                   | 1.950 <sup>2</sup>               | 50                                 | 1.5                      | 17.1                      | 28.0       |
| SCR19XV-220-1R6A004JH | 1,000                      | 22                   | 0.100 <sup>1</sup>                   | 1.430 <sup>2</sup>               | 50                                 | 1.6                      | 16.7                      | 28.0       |
| SCR19XV-300-1R9A003JH | 1,000                      | 30                   | 0.056 <sup>1</sup>                   | 0.767 <sup>2</sup>               | 55                                 | 1.9                      | 17.6                      | 28.0       |
| SCR25XV-050-1R0A027JV | 1,000                      | 5                    | 8.900 <sup>1</sup>                   | 30.590 <sup>2</sup>              | 45                                 | 1.0                      | 46.7                      | 34.0       |
| SCR25XV-070-1R1A022JV | 1,000                      | 7                    | 5.900 <sup>1</sup>                   | 20.830 <sup>2</sup>              | 55                                 | 1.1                      | 47.0                      | 34.0       |
| SCR25XV-080-1R2A018JV | 1,000                      | 8                    | 4.000 <sup>1</sup>                   | 14.410 <sup>2</sup>              | 50                                 | 1.2                      | 47.0                      | 34.0       |
| SCR25XV-100-1R3A016JV | 1,000                      | 10                   | 3.100 <sup>1</sup>                   | 10.910 <sup>2</sup>              | 55                                 | 1.3                      | 47.6                      | 35.5       |
| SCR25XV-110-1R4A013JV | 1,000                      | 11                   | 2.100 <sup>1</sup>                   | 7.720 <sup>2</sup>               | 50                                 | 1.4                      | 46.8                      | 35.5       |
| SCR25XV-130-1R5A012JV | 1,000                      | 13                   | 1.770 <sup>1</sup>                   | 6.330 <sup>2</sup>               | 55                                 | 1.5                      | 48.5                      | 35.5       |
| SCR25XV-150-1R6A010JV | 1,000                      | 15                   | 1.230 <sup>1</sup>                   | 4.620 <sup>2</sup>               | 50                                 | 1.6                      | 47.4                      | 35.5       |
| SCR25XV-170-1R7A009JV | 1,000                      | 17                   | 1.000 <sup>1</sup>                   | 3.710 <sup>2</sup>               | 55                                 | 1.7                      | 47.9                      | 35.5       |
| SCR25XV-190-1R8A008JV | 1,000                      | 19                   | 0.780 <sup>1</sup>                   | 2.980 <sup>2</sup>               | 55                                 | 1.8                      | 47.7                      | 35.5       |
| SCR25XV-220-1R9A007JV | 1,000                      | 22                   | 0.600 <sup>1</sup>                   | 2.350 <sup>2</sup>               | 55                                 | 1.9                      | 47.6                      | 37.5       |
| SCR25XV-240-2R0A006JV | 1,000                      | 24                   | 0.440 <sup>1</sup>                   | 1.840 <sup>2</sup>               | 55                                 | 2.0                      | 46.5                      | 37.5       |
| SCR25XV-280-2R1A005JV | 1,000                      | 28                   | 0.310 <sup>1</sup>                   | 1.390 <sup>2</sup>               | 55                                 | 2.1                      | 45.5                      | 37.5       |
| SCR25XV-310-2R3A004JV | 1,000                      | 31                   | 0.197 <sup>1</sup>                   | 0.950 <sup>2</sup>               | 50                                 | 2.3                      | 45.2                      | 37.5       |
| SCR25XV-350-2R4A003JV | 1,000                      | 35                   | 0.110 <sup>1</sup>                   | 0.650 <sup>2</sup>               | 50                                 | 2.4                      | 42.2                      | 37.5       |
| Part Number           | Rated Voltage<br>AC/DC (V) | Rated Current<br>(A) | Inductance <sup>1</sup><br>(mH) ±35% | DC Resistance/<br>Line (mΩ) ±13% | Temperature Rise<br>(K) Maximum    | Wire<br>Diameter<br>(mm) | Weight (g)<br>Approximate | OD<br>(mm) |

<sup>1</sup> Inductance Measurement Condition : 100 kHz

<sup>2</sup> DC Resistance/Line specification : ±13%

<sup>3</sup> DC Resistance/Line specification : ±23%

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

| Part Number           | Rated Voltage<br>AC/DC (V) | Rated Current<br>(A) | Inductance <sup>1</sup><br>(mH) ±35% | DC Resistance/<br>Line (mΩ) ±13% | Temperature<br>Rise (K)<br>Maximum | Wire<br>Diameter<br>(mm) | Weight (g)<br>Approximate | OD<br>(mm) |
|-----------------------|----------------------------|----------------------|--------------------------------------|----------------------------------|------------------------------------|--------------------------|---------------------------|------------|
| SCR25XV-050-1R0A027JH | 1,000                      | 5                    | 8.900 <sup>1</sup>                   | 32.600 <sup>2</sup>              | 45                                 | 1.0                      | 47.1                      | 34.0       |
| SCR25XV-070-1R1A022JH | 1,000                      | 7                    | 5.900 <sup>1</sup>                   | 21.350 <sup>2</sup>              | 55                                 | 1.1                      | 47.1                      | 34.0       |
| SCR25XV-080-1R2A018JH | 1,000                      | 8                    | 4.000 <sup>1</sup>                   | 14.700 <sup>2</sup>              | 50                                 | 1.2                      | 47.3                      | 34.0       |
| SCR25XV-100-1R3A016JH | 1,000                      | 10                   | 3.100 <sup>1</sup>                   | 11.100 <sup>2</sup>              | 55                                 | 1.3                      | 48.1                      | 35.5       |
| SCR25XV-110-1R4A013JH | 1,000                      | 11                   | 2.100 <sup>1</sup>                   | 7.890 <sup>2</sup>               | 50                                 | 1.4                      | 47.3                      | 35.5       |
| SCR25XV-130-1R5A012JH | 1,000                      | 13                   | 1.770 <sup>1</sup>                   | 6.430 <sup>2</sup>               | 55                                 | 1.5                      | 49.0                      | 35.5       |
| SCR25XV-150-1R6A010JH | 1,000                      | 15                   | 1.230 <sup>1</sup>                   | 4.740 <sup>2</sup>               | 50                                 | 1.6                      | 47.9                      | 35.5       |
| SCR25XV-170-1R7A009JH | 1,000                      | 17                   | 1.000 <sup>1</sup>                   | 3.830 <sup>2</sup>               | 55                                 | 1.7                      | 48.8                      | 35.5       |
| SCR25XV-190-1R8A008JH | 1,000                      | 19                   | 0.780 <sup>1</sup>                   | 3.070 <sup>2</sup>               | 55                                 | 1.8                      | 48.7                      | 35.5       |
| SCR25XV-220-1R9A007JH | 1,000                      | 22                   | 0.600 <sup>1</sup>                   | 2.450 <sup>2</sup>               | 55                                 | 1.9                      | 48.6                      | 37.5       |
| SCR25XV-240-2R0A006JH | 1,000                      | 24                   | 0.440 <sup>1</sup>                   | 1.920 <sup>2</sup>               | 55                                 | 2.0                      | 48.1                      | 37.5       |
| SCR25XV-280-2R1A005JH | 1,000                      | 28                   | 0.310 <sup>1</sup>                   | 1.440 <sup>2</sup>               | 55                                 | 2.1                      | 46.2                      | 37.5       |
| SCR25XV-310-2R3A004JH | 1,000                      | 31                   | 0.197 <sup>1</sup>                   | 1.000 <sup>2</sup>               | 50                                 | 2.3                      | 46.2                      | 37.5       |
| SCR25XV-350-2R4A003JH | 1,000                      | 35                   | 0.110 <sup>1</sup>                   | 0.700 <sup>2</sup>               | 50                                 | 2.4                      | 43.5                      | 37.5       |
| SCR29XV-050-1R0A044JV | 1,000                      | 5                    | 11.800 <sup>1</sup>                  | 40.300 <sup>2</sup>              | 55                                 | 1.0                      | 44.7                      | 39.0       |
| SCR29XV-060-1R1A036JV | 1,000                      | 6                    | 7.900 <sup>1</sup>                   | 27.200 <sup>2</sup>              | 55                                 | 1.1                      | 45.0                      | 39.0       |
| SCR29XV-070-1R2A030JV | 1,000                      | 7                    | 5.500 <sup>1</sup>                   | 19.200 <sup>2</sup>              | 50                                 | 1.2                      | 45.1                      | 39.0       |
| SCR29XV-080-1R3A026JV | 1,000                      | 8                    | 4.150 <sup>1</sup>                   | 14.200 <sup>2</sup>              | 45                                 | 1.3                      | 45.4                      | 39.0       |
| SCR29XV-090-1R4A022JV | 1,000                      | 9                    | 2.950 <sup>1</sup>                   | 10.200 <sup>2</sup>              | 40                                 | 1.4                      | 45.6                      | 39.0       |
| SCR29XV-110-1R5A019JV | 1,000                      | 11                   | 2.200 <sup>1</sup>                   | 8.000 <sup>2</sup>               | 45                                 | 1.5                      | 45.8                      | 40.5       |
| SCR29XV-120-1R6A017JV | 1,000                      | 12                   | 1.760 <sup>1</sup>                   | 6.430 <sup>2</sup>               | 40                                 | 1.6                      | 46.3                      | 40.5       |
| SCR29XV-150-1R7A015JV | 1,000                      | 15                   | 1.370 <sup>1</sup>                   | 5.040 <sup>2</sup>               | 55                                 | 1.7                      | 46.7                      | 40.5       |
| SCR29XV-180-1R8A013JV | 1,000                      | 18                   | 1.040 <sup>1</sup>                   | 3.990 <sup>2</sup>               | 60                                 | 1.8                      | 46.4                      | 40.5       |
| SCR29XV-190-1R9A012JV | 1,000                      | 19                   | 0.880 <sup>1</sup>                   | 3.280 <sup>2</sup>               | 55                                 | 1.9                      | 47.5                      | 41.5       |
| SCR29XV-200-2R0A011JV | 1,000                      | 20                   | 0.740 <sup>1</sup>                   | 2.730 <sup>2</sup>               | 50                                 | 2.0                      | 48.4                      | 41.5       |
| SCR29XV-210-2R1A010JV | 1,000                      | 21                   | 0.610 <sup>1</sup>                   | 2.300 <sup>2</sup>               | 45                                 | 2.1                      | 49.1                      | 41.5       |
| SCR29XV-250-2R2A008JV | 1,000                      | 25                   | 0.390 <sup>1</sup>                   | 1.680 <sup>2</sup>               | 50                                 | 2.2                      | 45.1                      | 41.5       |
| SCR29XV-270-2R3A006JV | 1,000                      | 27                   | 0.220 <sup>1</sup>                   | 1.190 <sup>2</sup>               | 45                                 | 2.3                      | 41.1                      | 41.5       |
| SCR29XV-300-2R4A005JV | 1,000                      | 30                   | 0.153 <sup>1</sup>                   | 0.930 <sup>2</sup>               | 45                                 | 2.4                      | 39.8                      | 41.5       |
| SCR29XV-050-1R0A044JH | 1,000                      | 5                    | 11.800 <sup>1</sup>                  | 39.900 <sup>2</sup>              | 55                                 | 1.0                      | 45.4                      | 39.0       |
| SCR29XV-060-1R1A036JH | 1,000                      | 6                    | 7.900 <sup>1</sup>                   | 27.400 <sup>2</sup>              | 55                                 | 1.1                      | 46.2                      | 39.0       |
| SCR29XV-070-1R2A030JH | 1,000                      | 7                    | 5.500 <sup>1</sup>                   | 19.200 <sup>2</sup>              | 50                                 | 1.2                      | 46.1                      | 39.0       |
| SCR29XV-080-1R3A026JH | 1,000                      | 8                    | 4.150 <sup>1</sup>                   | 14.200 <sup>2</sup>              | 45                                 | 1.3                      | 46.8                      | 39.0       |
| SCR29XV-090-1R4A022JH | 1,000                      | 9                    | 2.950 <sup>1</sup>                   | 10.600 <sup>2</sup>              | 40                                 | 1.4                      | 46.8                      | 39.0       |
| SCR29XV-110-1R5A019JH | 1,000                      | 11                   | 2.200 <sup>1</sup>                   | 8.070 <sup>2</sup>               | 45                                 | 1.5                      | 47.2                      | 40.5       |
| SCR29XV-120-1R6A017JH | 1,000                      | 12                   | 1.760 <sup>1</sup>                   | 6.450 <sup>2</sup>               | 40                                 | 1.6                      | 47.6                      | 40.5       |
| SCR29XV-150-1R7A015JH | 1,000                      | 15                   | 1.370 <sup>1</sup>                   | 5.140 <sup>2</sup>               | 55                                 | 1.7                      | 48.0                      | 40.5       |
| SCR29XV-180-1R8A013JH | 1,000                      | 18                   | 1.040 <sup>1</sup>                   | 4.100 <sup>2</sup>               | 60                                 | 1.8                      | 47.6                      | 40.5       |
| SCR29XV-190-1R9A012JH | 1,000                      | 19                   | 0.880 <sup>1</sup>                   | 3.350 <sup>2</sup>               | 55                                 | 1.9                      | 48.9                      | 41.5       |
| SCR29XV-200-2R0A011JH | 1,000                      | 20                   | 0.740 <sup>1</sup>                   | 2.840 <sup>2</sup>               | 50                                 | 2.0                      | 49.6                      | 41.5       |
| SCR29XV-210-2R1A010JH | 1,000                      | 21                   | 0.610 <sup>1</sup>                   | 2.330 <sup>2</sup>               | 45                                 | 2.1                      | 50.0                      | 41.5       |
| SCR29XV-250-2R2A008JH | 1,000                      | 25                   | 0.390 <sup>1</sup>                   | 1.680 <sup>2</sup>               | 50                                 | 2.2                      | 46.2                      | 41.5       |
| SCR29XV-270-2R3A006JH | 1,000                      | 27                   | 0.220 <sup>1</sup>                   | 1.180 <sup>2</sup>               | 45                                 | 2.3                      | 42.1                      | 41.5       |
| SCR29XV-300-2R4A005JH | 1,000                      | 30                   | 0.153 <sup>1</sup>                   | 0.920 <sup>2</sup>               | 45                                 | 2.4                      | 40.9                      | 41.5       |
| Part Number           | Rated Voltage<br>AC/DC (V) | Rated Current<br>(A) | Inductance <sup>1</sup><br>(mH) ±35% | DC Resistance/<br>Line (mΩ) ±13% | Temperature Rise<br>(K) Maximum    | Wire<br>Diameter<br>(mm) | Weight (g)<br>Approximate | OD<br>(mm) |

<sup>1</sup> Inductance Measurement Condition : 100 kHz

<sup>2</sup> DC Resistance/Line specification : ±13%

<sup>3</sup> DC Resistance/Line specification : ±23%

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

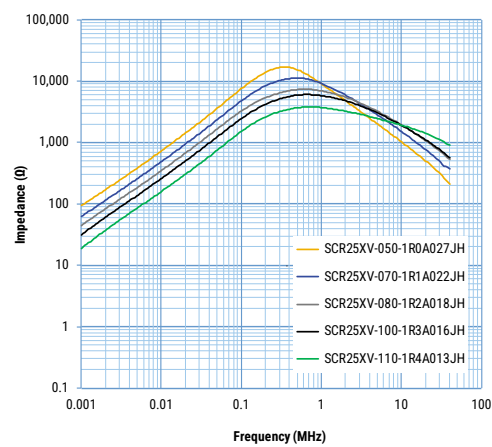
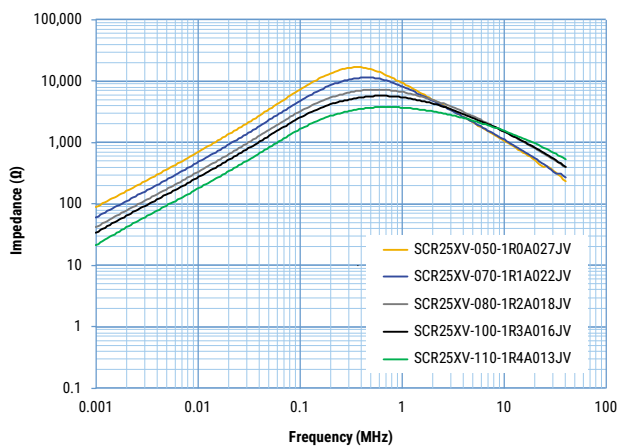
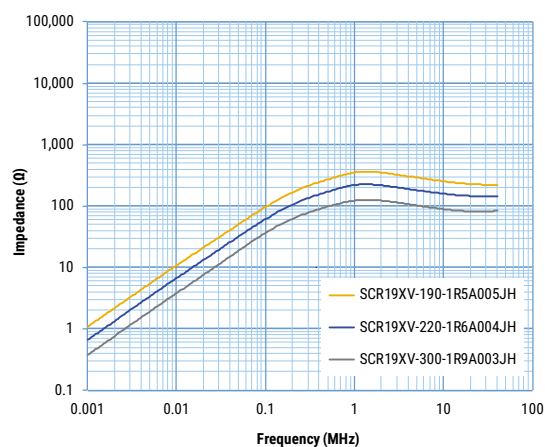
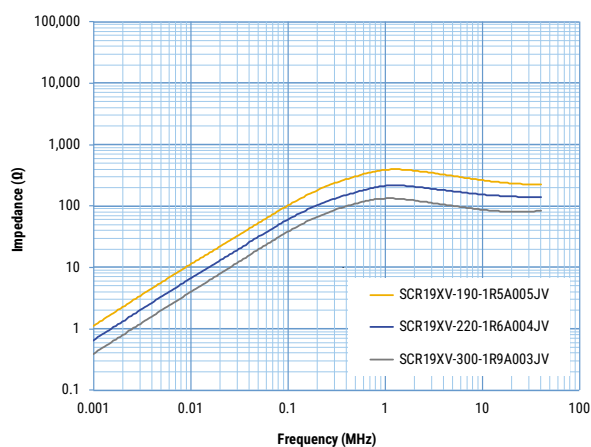
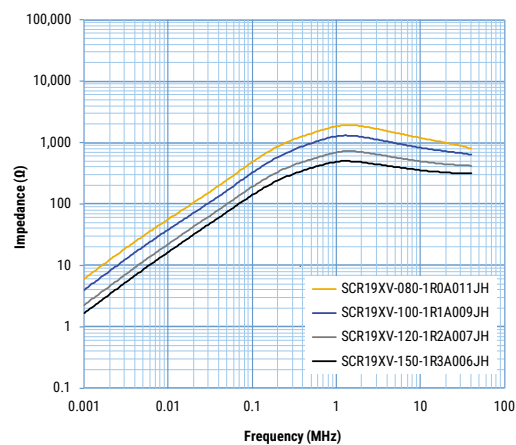
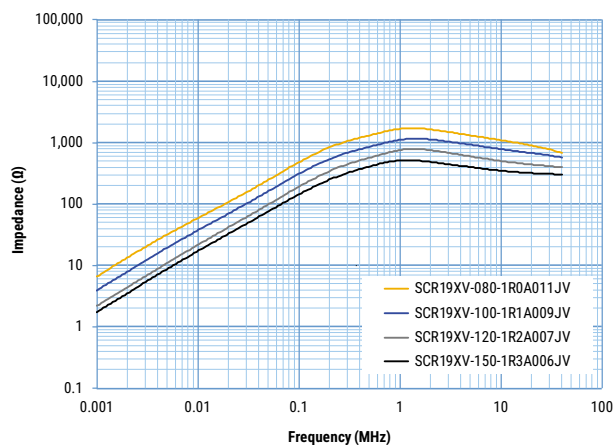
| Part Number            | Rated Voltage<br>AC/DC (V) | Rated Current<br>(A) | Inductance <sup>1</sup><br>(mH) ±35% | DC Resistance/<br>Line (mΩ) ±13% | Temperature<br>Rise (K)<br>Maximum | Wire<br>Diameter<br>(mm) | Weight (g)<br>Approximate | OD<br>(mm) |
|------------------------|----------------------------|----------------------|--------------------------------------|----------------------------------|------------------------------------|--------------------------|---------------------------|------------|
| SCR39XV-100-1R5A028JH  | 1,000                      | 10                   | 10.300 <sup>1</sup>                  | 17.910 <sup>2</sup>              | 50                                 | 1.5                      | 122.2                     | 53.0       |
| SCR39XV-120-1R6A024JH  | 1,000                      | 12                   | 7.600 <sup>1</sup>                   | 13.600 <sup>2</sup>              | 60                                 | 1.6                      | 121.2                     | 53.0       |
| SCR39XV-130-1R7A022JH  | 1,000                      | 13                   | 6.400 <sup>1</sup>                   | 11.100 <sup>2</sup>              | 60                                 | 1.7                      | 124.2                     | 53.0       |
| SCR39XV-140-1R8A019JH  | 1,000                      | 14                   | 4.800 <sup>1</sup>                   | 8.660 <sup>2</sup>               | 55                                 | 1.8                      | 122.1                     | 53.0       |
| SCR39XV-160-1R9A017JH  | 1,000                      | 16                   | 3.800 <sup>1</sup>                   | 7.120 <sup>2</sup>               | 55                                 | 1.9                      | 123.1                     | 53.0       |
| SCR39XV-180-2R0A015JH  | 1,000                      | 18                   | 3.000 <sup>1</sup>                   | 5.980 <sup>2</sup>               | 60                                 | 2.0                      | 122.1                     | 53.0       |
| SCR39XV-190-2R1A014JH  | 1,000                      | 19                   | 2.600 <sup>1</sup>                   | 5.030 <sup>2</sup>               | 50                                 | 2.1                      | 124.9                     | 53.0       |
| SCR39XV-200-2R2A013JH  | 1,000                      | 20                   | 2.230 <sup>1</sup>                   | 4.280 <sup>2</sup>               | 65                                 | 2.2                      | 126.8                     | 53.0       |
| SCR39XV-220-2R3A012JH  | 1,000                      | 22                   | 1.900 <sup>1</sup>                   | 3.580 <sup>2</sup>               | 50                                 | 2.3                      | 127.0                     | 53.0       |
| SCR39XV-240-2R4A011JH  | 1,000                      | 24                   | 1.600 <sup>1</sup>                   | 3.040 <sup>2</sup>               | 60                                 | 2.4                      | 128.0                     | 53.0       |
| SCR39XV-310-1R9B007JH  | 1,000                      | 31                   | 0.640 <sup>1</sup>                   | 1.480 <sup>3</sup>               | 55                                 | 1.9 x 2 Parallel         | 114.4                     | 53.0       |
| SCR39XV-320-2R0B006JH  | 1,000                      | 32                   | 0.470 <sup>1</sup>                   | 1.130 <sup>3</sup>               | 50                                 | 2.0 x 2 Parallel         | 112.1                     | 53.0       |
| SCR39XV-400-2R2B005JH  | 1,000                      | 40                   | 0.330 <sup>1</sup>                   | 0.780 <sup>3</sup>               | 60                                 | 2.2 x 2 Parallel         | 114.7                     | 53.0       |
| SCR39XV-420-2R4B004JH  | 1,000                      | 42                   | 0.210 <sup>1</sup>                   | 0.530 <sup>3</sup>               | 60                                 | 2.4 x 2 Parallel         | 114.3                     | 53.0       |
| SCR39XV-120-S1R5A017JH | 1,000                      | 12                   | 3.800 <sup>1</sup>                   | 10.600 <sup>2</sup>              | 55                                 | 1.5                      | 116.9                     | 53.0       |
| SCR39XV-140-S1R6A014JH | 1,000                      | 14                   | 2.600 <sup>1</sup>                   | 7.870 <sup>2</sup>               | 50                                 | 1.6                      | 115.3                     | 53.0       |
| SCR39XV-150-S1R7A011JH | 1,000                      | 15                   | 1.600 <sup>1</sup>                   | 5.450 <sup>2</sup>               | 50                                 | 1.7                      | 110.7                     | 53.0       |
| SCR39XV-190-S1R9A009JH | 1,000                      | 19                   | 1.070 <sup>1</sup>                   | 3.690 <sup>2</sup>               | 60                                 | 1.9                      | 112.9                     | 53.0       |
| SCR39XV-210-S2R0A008JH | 1,000                      | 21                   | 0.840 <sup>1</sup>                   | 3.000 <sup>2</sup>               | 60                                 | 2.0                      | 113.0                     | 53.0       |
| SCR39XV-230-S2R2A007JH | 1,000                      | 23                   | 0.640 <sup>1</sup>                   | 2.230 <sup>2</sup>               | 55                                 | 2.2                      | 117.3                     | 53.0       |
| SCR39XV-280-S2R4A006JH | 1,000                      | 28                   | 0.470 <sup>1</sup>                   | 1.610 <sup>2</sup>               | 55                                 | 2.4                      | 119.0                     | 53.0       |
| SCR39XV-400-S2R2B003JH | 1,000                      | 40                   | 0.118 <sup>1</sup>                   | 0.400 <sup>3</sup>               | 45                                 | 2.2 x 2 Parallel         | 112.8                     | 53.0       |
| SCR39XV-110-Y1R4A008JH | 1,000                      | 11                   | 0.840 <sup>1</sup>                   | 5.870 <sup>2</sup>               | 60                                 | 1.4                      | 100.5                     | 53.0       |
| SCR39XV-140-Y1R6A007JH | 1,000                      | 14                   | 0.640 <sup>1</sup>                   | 4.040 <sup>2</sup>               | 60                                 | 1.6                      | 105.4                     | 53.0       |
| SCR39XV-170-Y1R8A006JH | 1,000                      | 17                   | 0.470 <sup>1</sup>                   | 2.830 <sup>2</sup>               | 60                                 | 1.8                      | 109.8                     | 53.0       |
| SCR39XV-230-Y2R2A005JH | 1,000                      | 23                   | 0.330 <sup>1</sup>                   | 1.610 <sup>2</sup>               | 55                                 | 2.2                      | 120.9                     | 53.0       |
| SCR39XV-290-Y2R4A004JH | 1,000                      | 29                   | 0.210 <sup>1</sup>                   | 1.100 <sup>2</sup>               | 55                                 | 2.4                      | 120.4                     | 53.0       |
| SCR39XV-400-Y2R0B003JH | 1,000                      | 40                   | 0.118 <sup>1</sup>                   | 0.530 <sup>2</sup>               | 55                                 | 2.0 x 2 Parallel         | 123.2                     | 53.0       |
| SCR39XV-200-Z2R1A012JH | 1,000                      | 20                   | 1.900 <sup>1</sup>                   | 4.140 <sup>2</sup>               | 50                                 | 2.1/1.2                  | 117.7                     | 53.0       |
| SCR39XV-240-Z2R3A010JH | 1,000                      | 24                   | 1.310 <sup>1</sup>                   | 2.960 <sup>2</sup>               | 55                                 | 2.3/1.3                  | 118.1                     | 53.0       |
| SCR39XV-270-Z2R4A009JH | 1,000                      | 27                   | 1.060 <sup>1</sup>                   | 2.440 <sup>2</sup>               | 60                                 | 2.4/1.4                  | 119.5                     | 53.0       |
| SCR39XV-310-Z1R8B008JH | 1,000                      | 31                   | 0.840 <sup>1</sup>                   | 1.840 <sup>3</sup>               | 60                                 | 1.8 x 2 Parallel/1.5     | 119.7                     | 53.0       |
| SCR39XV-350-Z1R9B007JH | 1,000                      | 35                   | 0.640 <sup>1</sup>                   | 1.420 <sup>3</sup>               | 55                                 | 1.9 x 2 Parallel/1.6     | 120.2                     | 53.0       |
| SCR39XV-440-Z2R0B005JH | 1,000                      | 44                   | 0.330 <sup>1</sup>                   | 0.950 <sup>3</sup>               | 65                                 | 2.0 x 2 Parallel/1.7     | 111.1                     | 53.0       |
| SCR39XV-500-Z2R4B004JH | 1,000                      | 50                   | 0.210 <sup>1</sup>                   | 0.510 <sup>3</sup>               | 60                                 | 2.4 x 2 Parallel/2.0     | 117.8                     | 53.0       |
| Part Number            | Rated Voltage<br>AC/DC (V) | Rated Current<br>(A) | Inductance <sup>1</sup><br>(mH) ±35% | DC Resistance/<br>Line (mΩ) ±13% | Temperature Rise<br>(K) Maximum    | Wire<br>Diameter<br>(mm) | Weight (g)<br>Approximate | OD<br>(mm) |

<sup>1</sup> Inductance Measurement Condition : 100 kHz

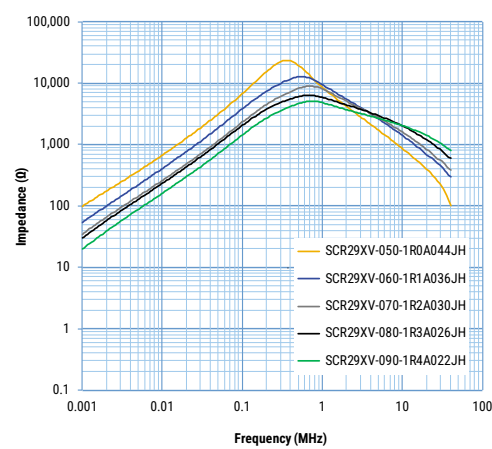
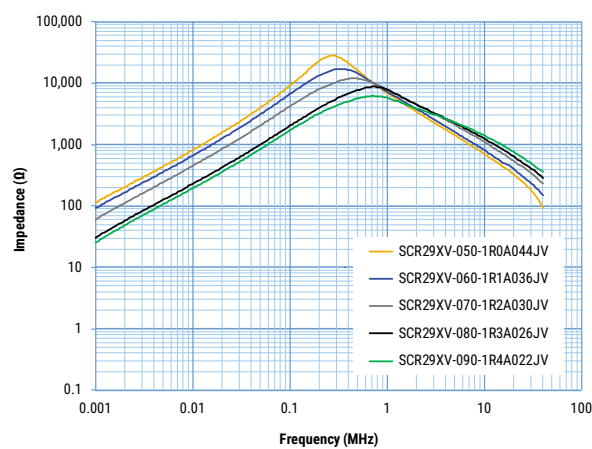
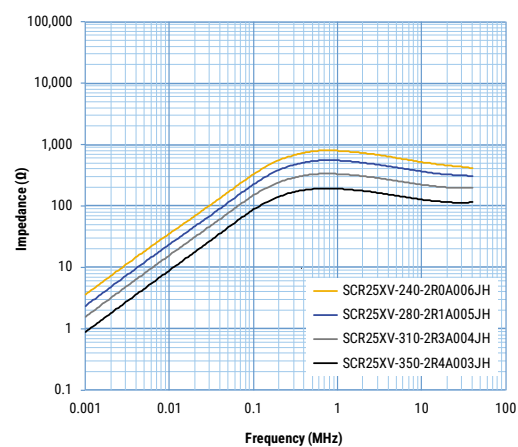
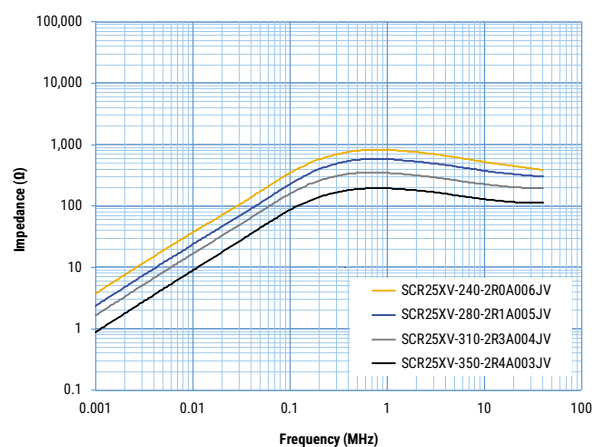
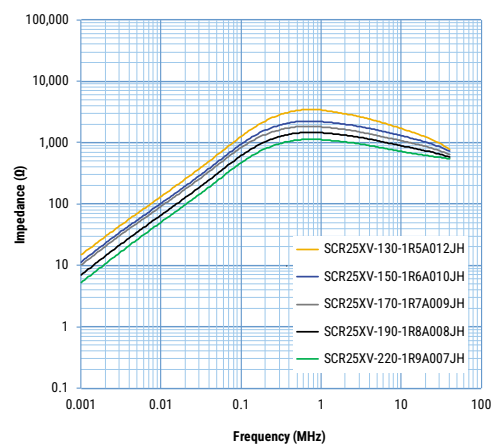
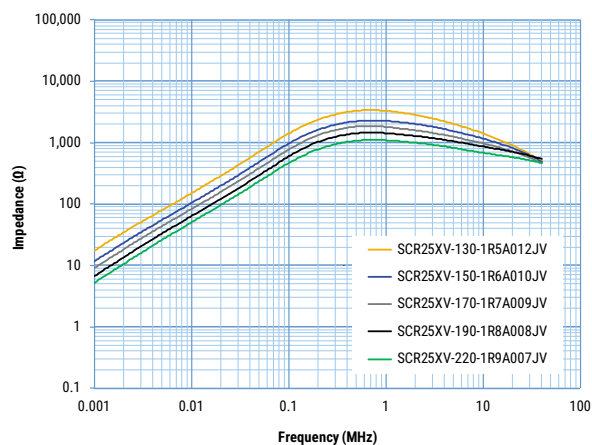
<sup>2</sup> DC Resistance/Line specification : ±13%

<sup>3</sup> DC Resistance/Line specification : ±23%

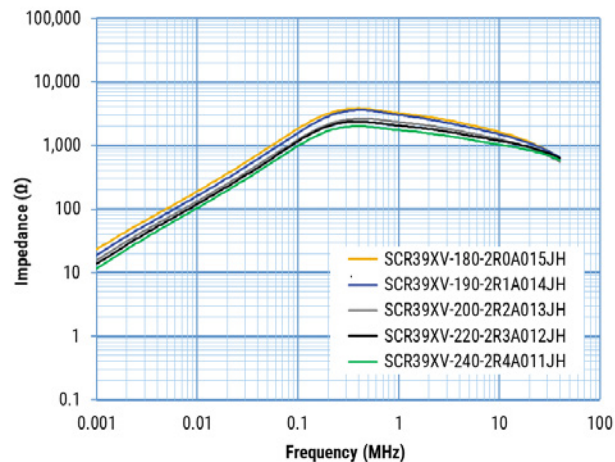
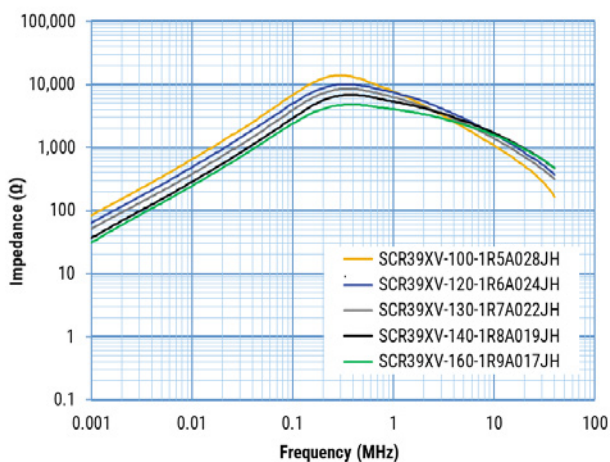
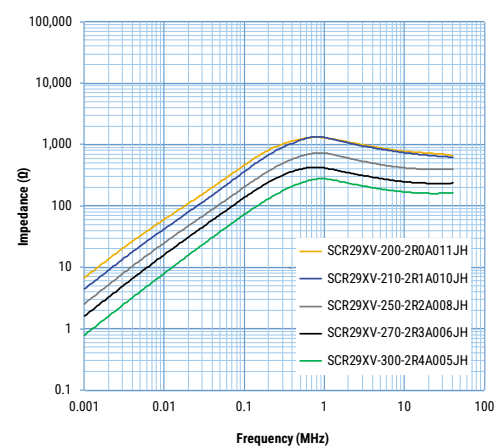
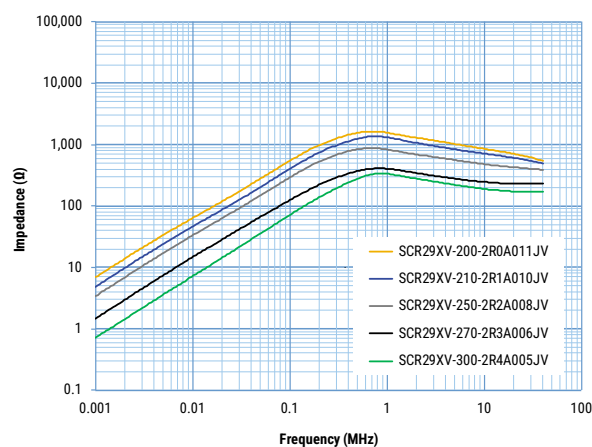
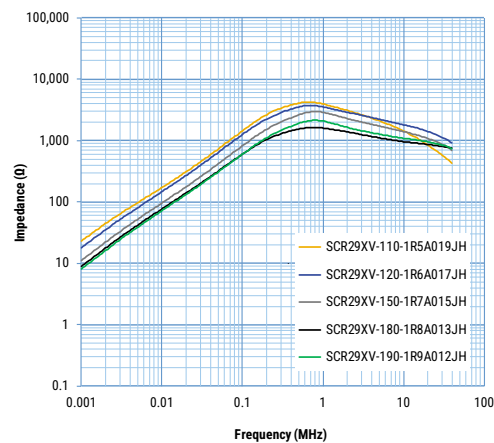
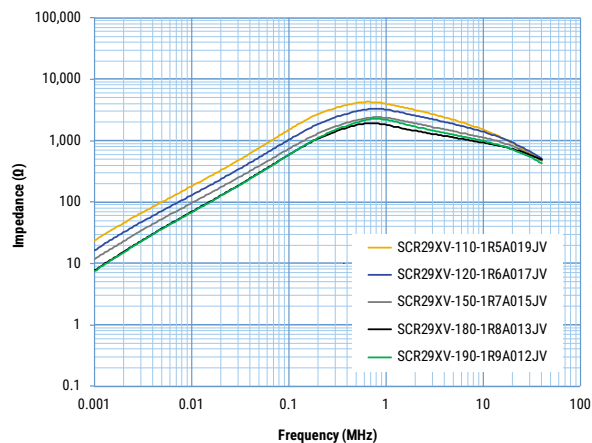
## Frequency Characteristics



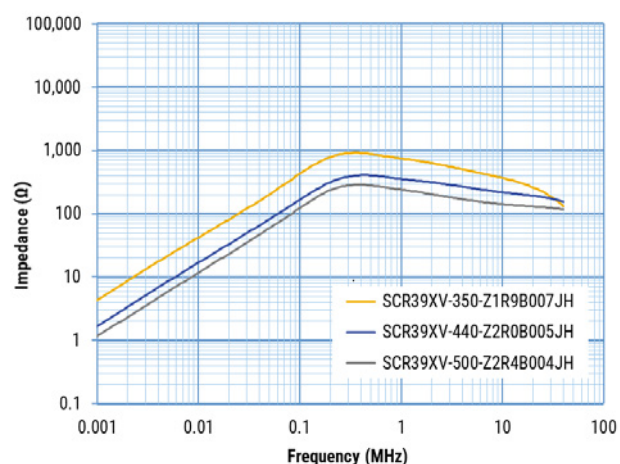
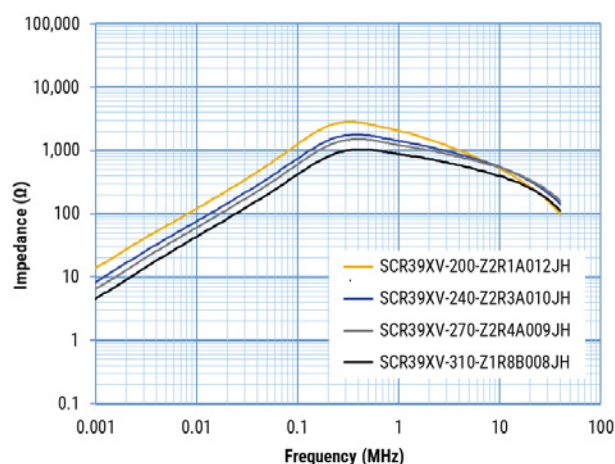
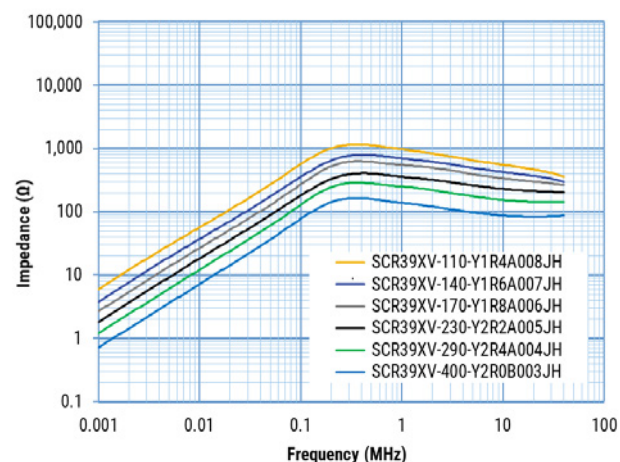
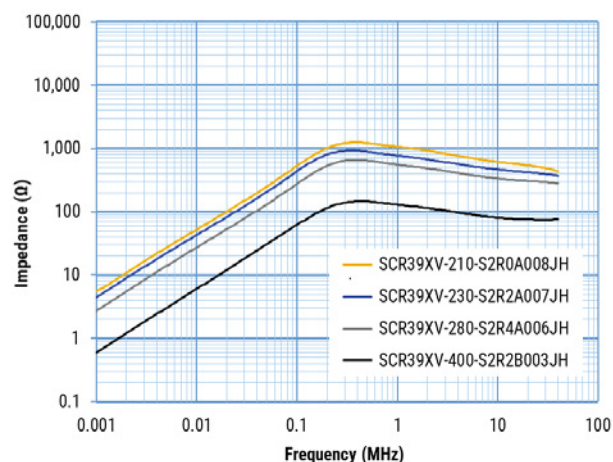
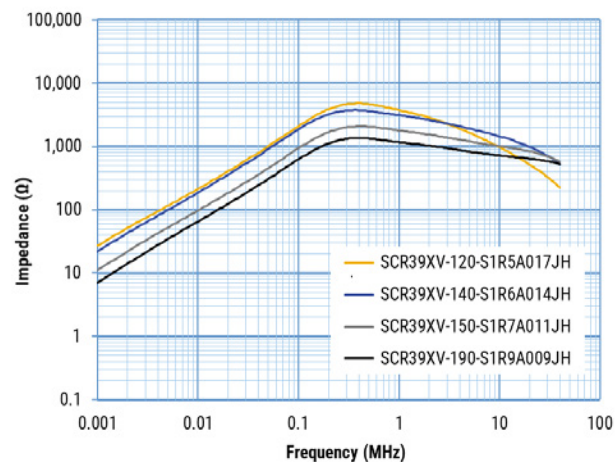
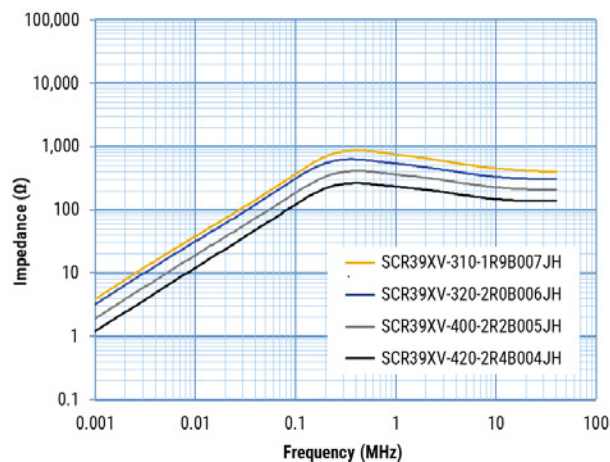
## Frequency Characteristics cont.



## Frequency Characteristics cont.



## Frequency Characteristics cont.



## Packaging

| Type       | Packaging Type | Pieces Per Box |
|------------|----------------|----------------|
| SCR19XV-JV | Tray           | 210            |
| SCR19XV-JH |                | 150            |
| SCR25XV-JV | Tray           | 140            |
| SCR25XV-JH |                | 120            |
| SCR29XV-JV | Tray           | 120            |
| SCR29XV-JH |                | 80             |
| SCR39XV-JH | Tray           | 48             |

## Handling Precautions

### Precautions for product storage

AC 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. Avoid storage near strong magnetic fields, as this might magnetize the product.

For optimized solderability, AC line filters stock should be used promptly and preferably within 6 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 the product, check and evaluate the value of the core temperature rise under actual operating conditions.

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