

## Common Mode SSR Coils, 21HS Series, Wide Range Impedance Series

### Overview

The KEMET SSR21HS Series AC line filters are compact, low profile, and lightweight.

### Applications

- Audio-visual equipment
- Office automation equipment
- Digital appliances
- Power supply devices
- Common mode choke

### Benefits

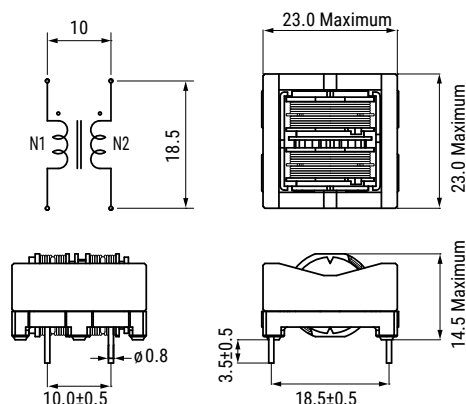
- High degree of characterization as a result of using industry's highest standard, high permeability core.
- Optimized design for compact size, low profile, and lightweight
- Non-split bobbin design for strong high frequency characteristics and broad bandwidth
- Inductances up to 135 mH
- Rated Currents up to 2.0 A
- DC Resistances as low as 0.1  $\Omega$



### Part Number System

| SSR    | 21             | HS-                                                      | 5                                                                     | 490                                                                                                                                             |
|--------|----------------|----------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Series | Core Size (mm) | Core Orientation and Bobbin Type                         | Rated Current AC (A)                                                  | Inductance (mH) Minimum                                                                                                                         |
| SSR    | 21 = 20.9 mm   | HS = Horizontal, bobbin with sectional winding structure | 0x = 0.x A<br>xx = x.x A<br><br>Examples:<br>05 = 0.5 A<br>10 = 1.0 A | xxx0 = xxx mH<br>xx0 = xx mH<br>xxx = xx.x mH<br>0xx = x.x mH<br><br>Examples:<br>1350 = 135 mH<br>930 = 93 mH<br>245 = 24.5 mH<br>095 = 9.5 mH |

## Dimensions – Millimeters



## Environmental Compliance

All KEMET AC Line Filters are RoHS Compliant.



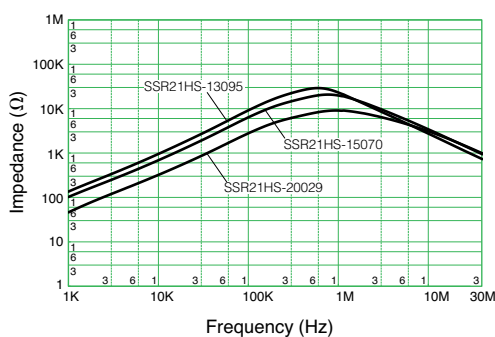
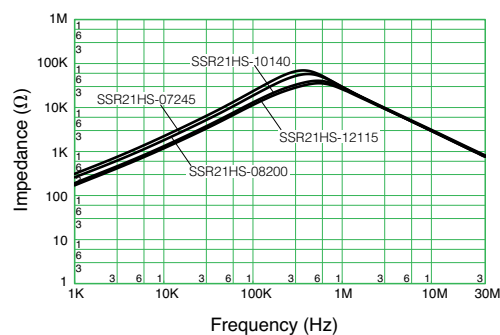
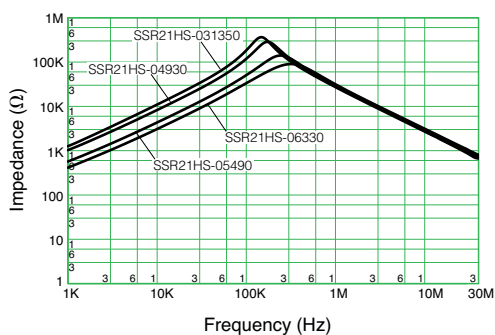
**Table 1 – Ratings & Part Number Reference**

| Part Number    | Rated Current<br>AC (A) | Inductance<br>(mH)<br>Minimum | DC Resistance/<br>Line ( $\Omega$ )<br>Maximum | Temperature<br>Rise (K)<br>Maximum | Wire Diameter<br>(mm) | Weight (g)<br>Approximate |
|----------------|-------------------------|-------------------------------|------------------------------------------------|------------------------------------|-----------------------|---------------------------|
| SSR21HS-031350 | 0.3                     | 135.0                         | 3.30                                           | 45                                 | 0.2                   | 14                        |
| SSR21HS-04930  | 0.4                     | 93.0                          | 2.10                                           | 45                                 | 0.2                   | 14                        |
| SSR21HS-05490  | 0.5                     | 49.0                          | 1.20                                           | 45                                 | 0.3                   | 14                        |
| SSR21HS-06330  | 0.6                     | 33.0                          | 0.83                                           | 45                                 | 0.3                   | 14                        |
| SSR21HS-07245  | 0.7                     | 24.5                          | 0.59                                           | 45                                 | 0.3                   | 14                        |
| SSR21HS-08200  | 0.8                     | 20.0                          | 0.48                                           | 45                                 | 0.3                   | 14                        |
| SSR21HS-10140  | 1.0                     | 14.0                          | 0.33                                           | 45                                 | 0.4                   | 14                        |
| SSR21HS-12115  | 1.2                     | 11.5                          | 0.27                                           | 45                                 | 0.4                   | 14                        |
| SSR21HS-13095  | 1.3                     | 9.5                           | 0.22                                           | 45                                 | 0.4                   | 14                        |
| SSR21HS-15070  | 1.5                     | 7.0                           | 0.15                                           | 45                                 | 0.5                   | 14                        |
| SSR21HS-20029  | 2.0                     | 2.9                           | 0.10                                           | 45                                 | 0.5                   | 14                        |

## Performance Characteristics

| Item                             | SSR21HS                                         |
|----------------------------------|-------------------------------------------------|
| Rated Voltage                    | 250 VAC                                         |
| Withstanding Voltage             | 2,400 VAC (2 seconds, between lines)            |
| Insulation Resistance            | > 100 MΩ at 500 VDC (between lines)             |
| Rated Current AC Range           | 0.3 – 2.0 A                                     |
| Rated Inductance Range           | 2.9 – 135.0 mH minimum                          |
| Inductance Measurement Condition | 10 kHz, 1 mA                                    |
| Thermal Class                    | E (120°C)                                       |
| Operating Temperature Range      | -25°C to +120°C (include self temperature rise) |

## Frequency Characteristics



## 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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## Export Control

### For customers in Japan

For products that are controlled items subject to the “Foreign Exchange and Foreign Trade Law” of Japan, the export license specified by the law is required for export.

### For customers outside Japan

AC line filters should not be used or sold for the use in the development, production, stockpiling, or utilization of any conventional weapons, mass-destruction weapons (nuclear, chemical, biological weapons, or missiles), or any other weapons.

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