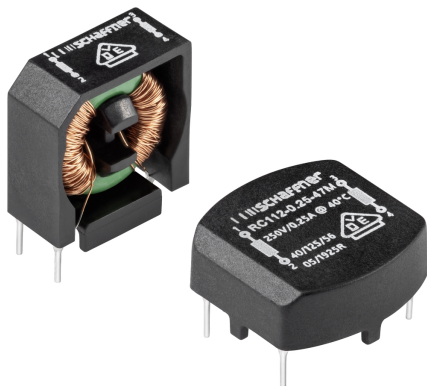


Current-compensated Chokes



- Rated currents from 0.25 to 0.7 A

- DC to 400 Hz frequency

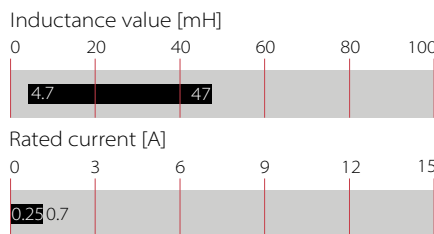
- 100 kHz to 3 MHz common-mode resonance frequency

- Dual-choke configurations

- Multiple PCB-mounting options



Performance indicators



Technical specifications

| | |
|--|---|
| Rated operating voltage | 250 VAC |
| Operating frequency | DC to 400 Hz |
| Rated currents | 0.25 to 0.7 A @ rated ambient temperature |
| Rated inductance | 4.7 to 47 mH |
| Stray inductance | Typically 1% of L_N |
| Inductance reduction (DC bias with IN) | Less than 10% (25°C) |
| High potential test voltage winding-to-winding @ 25°C | 1500 VAC, 60 sec, guaranteed 1500 VAC, 2 sec, factory test |
| winding-to-housing @ 25°C | 4000 VAC, 60 sec, guaranteed |
| Surge current @ 10 msec | 20 x I_N @ 25°C |
| Temperature range (operation and storage) | -40°C to 125°C (40/125/56) acc. IEC 60068-1 |
| Flammability corresponding to | UL 94V-0 |
| Design corresponding to | IEC/EN 60938-2 |
| MTBF @ Rated amb. Temp./Voltage (Mil-HB-217F) | > 5,000,000 hours |

Approvals



RC chokes are attenuating common-mode or asymmetric (P/N → E) interference signals, by being connected in series with the phase and neutral lines of an AC powerline input. Symmetrical components of the noise are also attenuated by the leakage inductance (stray inductance) of the windings. These chokes are typically used in conjunction with suppression capacitors.

Features and benefits

- High saturation resistance and excellent thermal behavior

- Through hole pin connections

- Dual-choke configuration

- Small compact design

- Multiple housing options

- Custom-specific versions are available on request

- Environmental friendly open design

Typical applications

- Switch-mode power applications

- DC/DC converters

- Suppressing common-mode interference levels

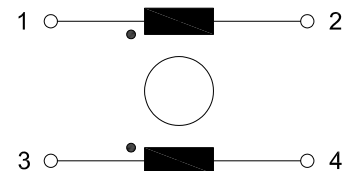
- EMI input filters

- For suppression-equipment with no earth connection, e.g. medical

- Phase-angle control circuits in combination with saturating chokes

- Consumer electronics, EDP, test equipment, electronic ballasts in lamps etc.

Typical electrical schematic



Choke selection table

| Choke | Current (I_N) [A] | @ ambient temperature* [°C] | Inductance (L_N) [mH] | Stray Inductance (L_s) [mH] | Resistance (R_{DC}) [mOhm] | Pin 1-2** (Pin 3-4) [mm] | Pin 1-3 [mm] | Height [mm] | Weight (g) |
|-----------------|-----------------------------|-----------------------------------|---------------------------------|---------------------------------------|--------------------------------------|--------------------------------|-----------------|----------------|---------------|
| RC 112-0.25-47M | 0.25 | 40 | 47.0 | 0.6 | 2400 | 10 | 15 | 8 | 3 |
| RC 112-0.3-30M | 0.3 | 40 | 30.0 | 0.5 | 2200 | 10 | 15 | 8 | 3 |
| RC 112-0.35-22M | 0.35 | 40 | 22.0 | 0.4 | 1900 | 10 | 15 | 8 | 3 |
| RC 112-0.4-15M | 0.4 | 40 | 15.0 | 0.25 | 1350 | 10 | 15 | 8 | 3 |
| RC 112-0.5-10M | 0.5 | 40 | 10.0 | 0.17 | 1000 | 10 | 15 | 8 | 3 |
| RC 112-0.6-6M8 | 0.6 | 40 | 6.8 | 0.12 | 630 | 10 | 15 | 8 | 3 |
| RC 112-0.7-4M7 | 0.7 | 40 | 4.7 | 0.075 | 440 | 10 | 15 | 8 | 3 |
| RC 212-0.25-47M | 0.25 | 40 | 47.0 | 0.6 | 2400 | 5.08 (2.54) | 12.7 | 17.6 | 3 |
| RC 212-0.3-30M | 0.3 | 40 | 30.0 | 0.5 | 2200 | 5.08 (2.54) | 12.7 | 17.6 | 3 |
| RC 212-0.35-22M | 0.35 | 40 | 22.0 | 0.4 | 1900 | 5.08 (2.54) | 12.7 | 17.6 | 3 |
| RC 212-0.4-15M | 0.4 | 40 | 15.0 | 0.25 | 1350 | 5.08 (2.54) | 12.7 | 17.6 | 3 |
| RC 212-0.5-10M | 0.5 | 40 | 10.0 | 0.17 | 1000 | 5.08 (2.54) | 12.7 | 17.6 | 3 |
| RC 212-0.6-6M8 | 0.6 | 40 | 6.8 | 0.12 | 630 | 5.08 (2.54) | 12.7 | 17.6 | 3 |
| RC 212-0.7-4M7 | 0.7 | 40 | 4.7 | 0.075 | 440 | 5.08 (2.54) | 12.7 | 17.6 | 3 |

Test conditions: Measuring frequency: 10 kHz; 50 mV; Inductance tolerance: +50%, -30%; Resistance tolerance: ±15% @ 25°C; Electrical characteristics @ 25°C: ±2°C

* rated ambient temperature according to approval. For other ambient temperature please make use of derating graph below

** Values in brackets show an optional pin out distance between pin 3 and 4, only available for vertical version

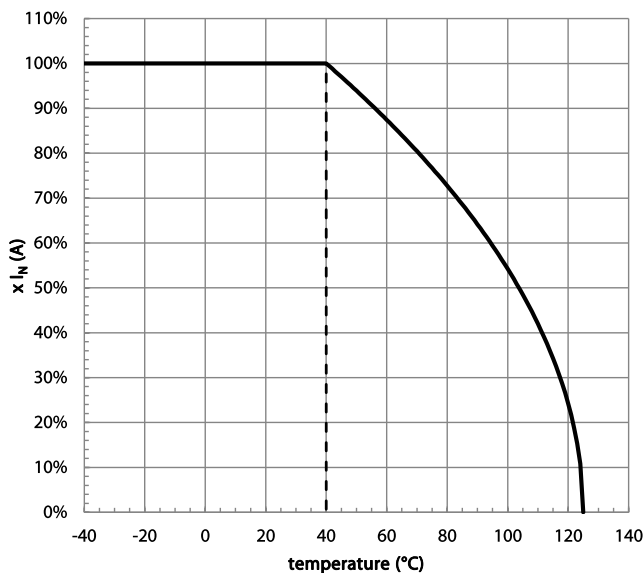
Product selector

RC **YYY-II-LML**

- _____ Rated Inductivity L_N (mH)
- _____ Rated Current I_N (A)
- _____ Size 12
- _____ Orientation (1 = horizontal; 2 = vertical)
- _____ Familyname

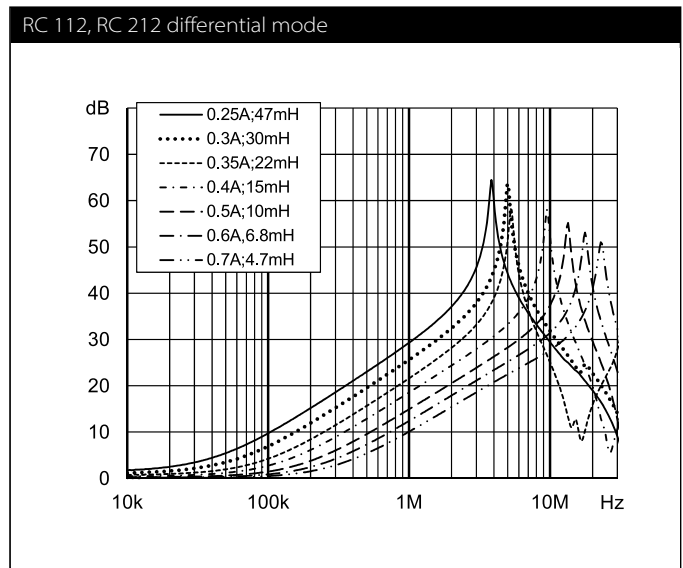
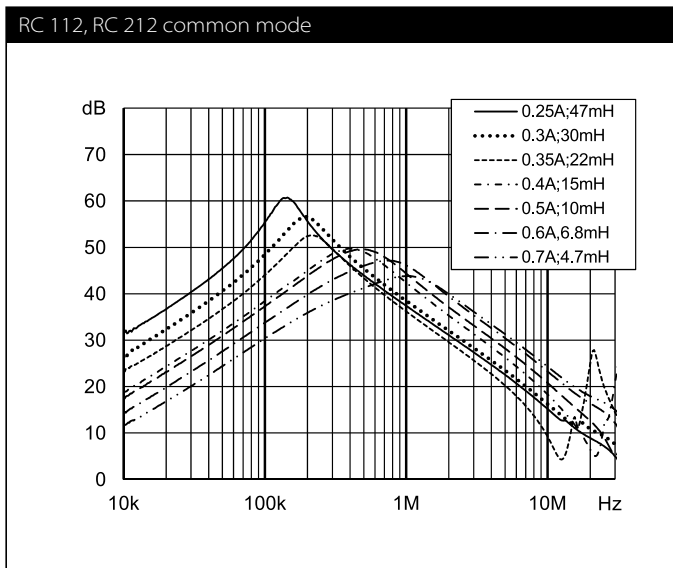
Thermal Derating

If higher ambient temperatures than the specified apply, the nominal current needs to be reduced according to the graph below.

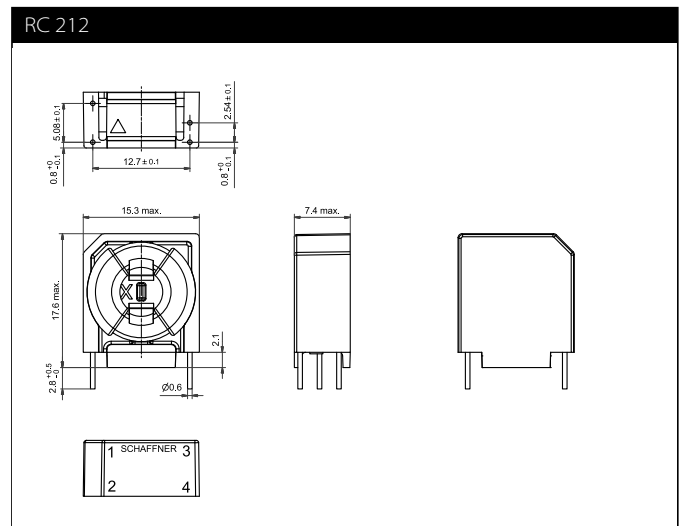
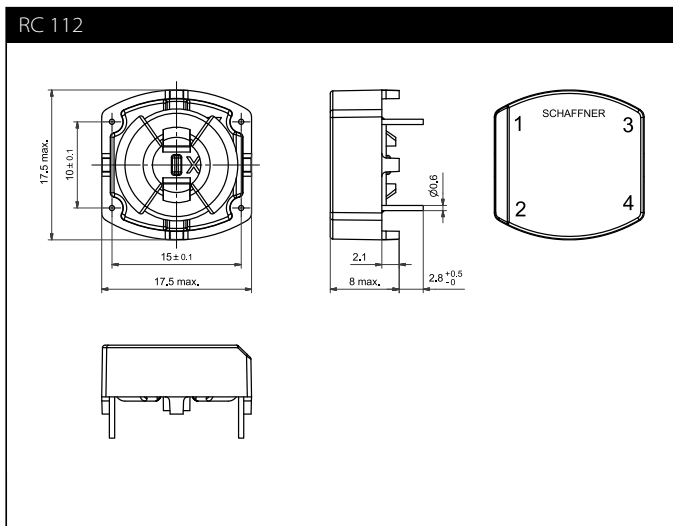


Typical attenuation/resonance frequency characteristics

Per CISPR 17; 50 Ω/50 Ω



Mechanical data



For dimensions [mm] without tolerances: ISO 2768-m/ EN 22768-m applies

Pin material: Steel (base), Cu (under plating), Sn (final plating 6µm)



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