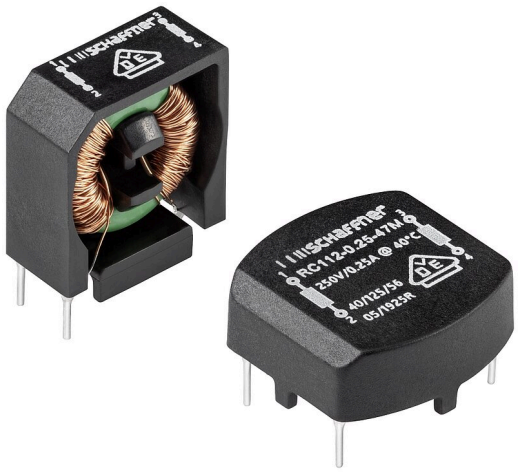
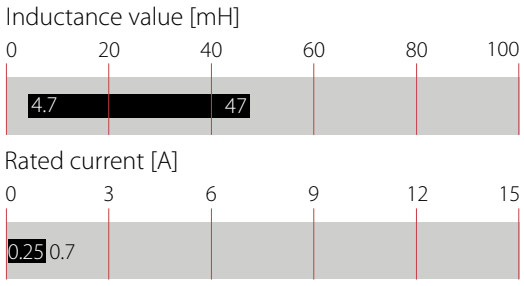
Current-compensated Chokes



- 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



Approvals & Compliances

RoHS

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
- HVAC, typically in EMI input filter for ventilation
- LED driver circuit
- 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.
- Applicable for low frequency signaling effective from 10kHz to 30MHz

Technical Specifications

Nominal operating voltage	250 VAC
Rated currents	0.25 to 0.7 A @ 40°C
Operating frequency	DC to 400 Hz
Rated inductance	4.7 to 47 MILLIHENRY 4.7 to 47 mH
Stray inductance	Typically 1% of L_N
Inductance reduction (DC bias with IN)	Less than 10% (25°C)
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 (Mil-HB-217F)	>5,000,000 h @ 40°C/230 V

Choke Selection Table

Choke	Buy	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)
RC112-0.25-47M		0.25	40	47.0	0.6	2400	10	15	8	3
RC112-0.3-30M		0.3	40	30.0	0.5	2200	10	15	8	3
RC112-0.35-22M		0.35	40	22.0	0.4	1900	10	15	8	3
RC112-0.4-15M		0.4	40	15.0	0.25	1350	10	15	8	3
RC112-0.5-10M		0.5	40	10.0	0.17	1000	10	15	8	3
RC112-0.6-6M8		0.6	40	6.8	0.12	630	10	15	8	3
RC112-0.7-4M7		0.7	40	4.7	0.075	440	10	15	8	3
RC212-0.25-47M		0.25	40	47.0	0.6	2400	5.08 (2.54)	12.7	17.6	3
RC212-0.3-30M		0.3	40	30.0	0.5	2200	5.08 (2.54)	12.7	17.6	3
RC212-0.35-22M		0.35	40	22.0	0.4	1900	5.08 (2.54)	12.7	17.6	3
RC212-0.4-15M		0.4	40	15.0	0.25	1350	5.08 (2.54)	12.7	17.6	3
RC212-0.5-10M		0.5	40	10.0	0.17	1000	5.08 (2.54)	12.7	17.6	3
RC212-0.6-6M8		0.6	40	6.8	0.12	630	5.08 (2.54)	12.7	17.6	3
RC212-0.7-4M7		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 temperatures, please make use of the derating graph below.

** Values in brackets show the pin-out distance between pin 3 and 4. Symmetrical pin-out on request.

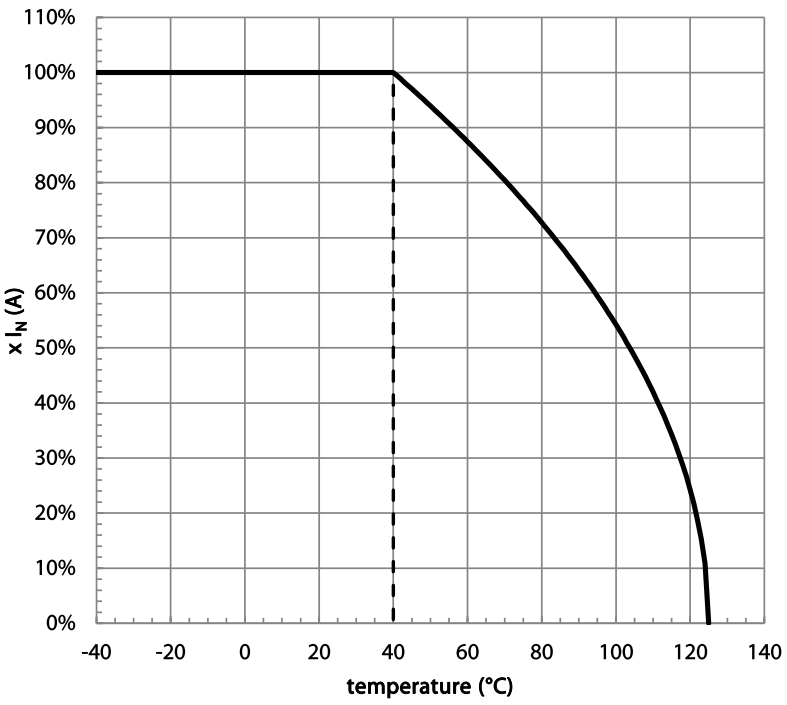
Product selector

RC XYY-II-LML

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

Thermal Derating

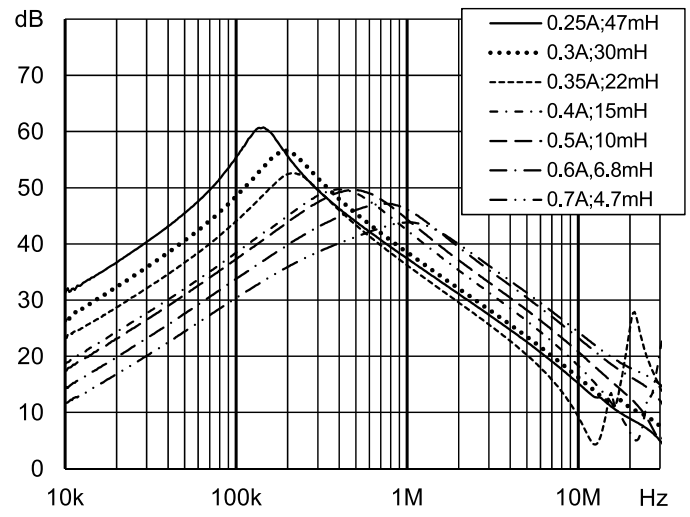
If higher ambient temperatures than the specified apply, the nominal current needs to be reduced according to the graph below.



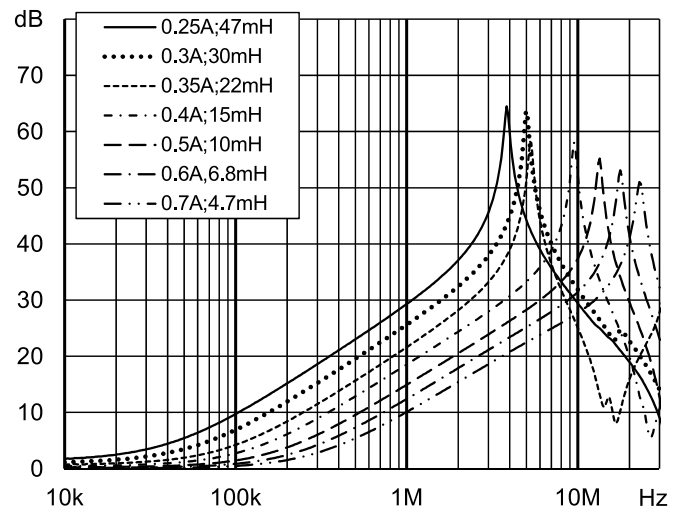
Typical Attenuation/Resonance Frequency Characteristics

Per CISPR 17; 50 Ω/50 Ω

RC112, RC212 common mode

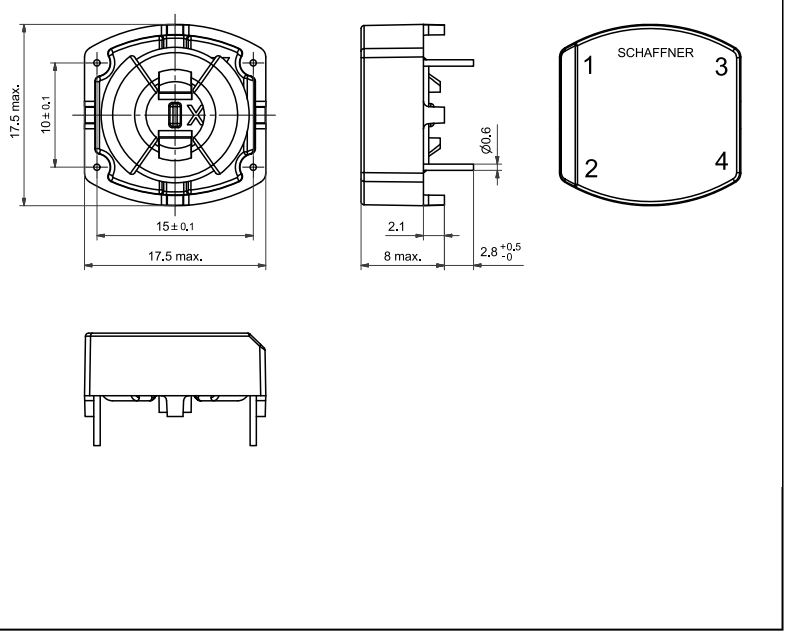


RC112, RC212 differential mode

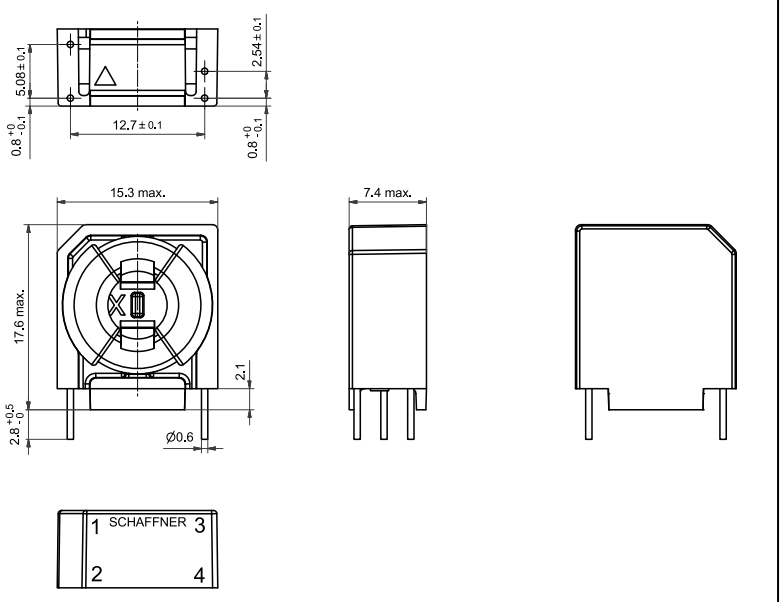


Mechanical Data

RC112



RC212



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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