



EMC/EMI Chokes RD series

Current-compensated Chokes



- Rated currents from 6 to 64A
- Up to 600VAC or 850VDC
- DC to 400Hz frequencies
- Dual, triple and quad-choke configurations

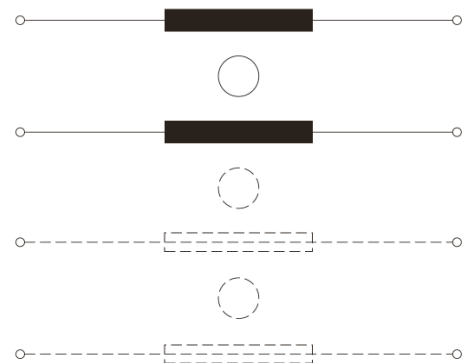
Approvals

ROHS

Technical specifications

| | |
|--|--------------------------------------|
| Flammability corresponding to: | UL 94V-0 (insulation tubes UL 94V-2) |
| High potential test voltage: | |
| Maximum continuous operating voltage: | 600VAC/850VDC @ 40°C |
| MTBF @ 40°C/230V (Mil-HB-217F): | > 5,000,000 hours |
| Operating frequency: | dc to 400Hz |
| Rated currents: | 6 to 64 A @ 40°C max. |
| Surge current @ 10msec: | 20 x I _{nominal} @ 25°C |
| Temperature range (operation and storage): | -25°C to +110°C (25/110/21) |
| winding-to-housing: | 4000VAC, 60 sec, guaranteed |
| winding-to-winding: | 2500VAC, 60 sec, guaranteed |
| | 2500V, 50Hz, 2 sec, factory test |

Typical electrical schematic



RD 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 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 or wire connections.
- Dual, triple and quad-choke configuration.
- Up to 64A quad configuration.
- Multiple housing options.
- Custom-specific versions are available on request.

Typical applications

- Phase-angle control circuits in combination with saturating chokes
- EMI input filters
- For suppressing equipment with no earth connection
- Suppressing high interference levels

Choke selection table

| Choke | Nominal current @ 40°C | Inductance L | Resistance R | Choke configuration | Input/Output connections | | Pin footprint connections | Weight |
|-----------------|---------------------------|-----------------|-----------------|------------------------|-----------------------------|-----------|------------------------------|--------|
| | | | | | [A] | [mH/path] | | |
| RD 5122-6-9m6 | 6 | 9.6 | 52.55 | 2 | -02 | | Ø1 | 160 |
| RD 5122-10-6m0 | 10 | 6 | 24.25 | 2 | -02 | | Ø1.3 | 160 |
| RD 5122-16-2m0 | 16 | 2 | 9.5 | 2 | -02 | | Ø1.6 | 160 |
| RD 5132-6-5m0 | 6 | 5 | 38 | 3 | -02 | | Ø1 | 160 |
| RD 5132-10-3m0 | 10 | 3 | 17.6 | 3 | -02 | | Ø1.3 | 160 |
| RD 5132-16-1m0 | 16 | 1 | 6.9 | 3 | -02 | | Ø1.6 | 160 |
| RD 6127-6-15m0 | 6 | 15 | 66.65 | 2 | -07 | | Ø1 | 235 |
| RD 6127-10-9m0 | 10 | 9 | 25.9 | 2 | -07 | | Ø1.5 | 235 |
| RD 6127-16-3m0 | 16 | 3 | 10.9 | 2 | -07 | | Ø1.8 | 235 |
| RD 6137-6-7m5 | 6 | 7.5 | 49 | 3 | -07 | | Ø1 | 235 |
| RD 6137-10-4m5 | 10 | 4.5 | 18.35 | 3 | -07 | | Ø1.5 | 235 |
| RD 6137-16-1m5 | 16 | 1.5 | 8.3 | 3 | -07 | | Ø1.8 | 235 |
| RD 7127-6-25m0 | 6 | 25 | 84.2 | 2 | -07 | | Ø1 | 320 |
| RD 7127-10-14m0 | 10 | 14 | 33.5 | 2 | -07 | | Ø1.4 | 350 |
| RD 7127-16-5m7 | 16 | 5.7 | 14.1 | 2 | -07 | | Ø1.8 | 370 |
| RD 7127-25-2m8 | 25 | 2.8 | 6.4 | 2 | -07 | | Ø2.4 | 400 |
| RD 7127-36-1m0 | 36 | 1 | 3.3 | 2 | -07 | | Ø2.7 | 380 |
| RD 7137-6-12m0 | 6 | 12 | 60.6 | 3 | -07 | | Ø1 | 340 |
| RD 7137-10-6m6 | 10 | 6.6 | 21.9 | 3 | -07 | | Ø1.5 | 380 |
| RD 7137-16-2m8 | 16 | 2.8 | 10.7 | 3 | -07 | | Ø1.8 | 380 |
| RD 7137-25-1m3 | 25 | 1.3 | 4.45 | 3 | -07 | | Ø2.5 | 440 |
| RD 7137-36-0m5 | 36 | 0.5 | 2.75 | 3 | -07 | | Ø2.7 | 400 |
| RD 7147-6-6m0 | 6 | 6 | 45.1 | 4 | -07 | | Ø1 | 320 |
| RD 7147-10-3m5 | 10 | 3.5 | 19.1 | 4 | -07 | | Ø1.4 | 370 |
| RD 7147-16-1m5 | 16 | 1.5 | 8.5 | 4 | -07 | | Ø1.8 | 390 |
| RD 7147-25-0m7 | 25 | 0.7 | 3.65 | 4 | -07 | | Ø2.4 | 430 |
| RD 7147-36-0m2 | 36 | 0.2 | 2.3 | 4 | -07 | | Ø2.5 | 400 |
| RD 8127-16-12m0 | 16 | 12 | 20.05 | 2 | -07 | | Ø2 | 590 |
| RD 8127-25-5m0 | 25 | 5 | 8.45 | 2 | -07 | | Ø2.4 | 630 |
| RD 8127-36-3m0 | 36 | 3 | 4.55 | 2 | -07 | | 1.5 x 4.5 | 690 |
| RD 8127-50-1m0 | 50 | 1 | 2.5 | 2 | -07 | | 1.7 x 5 | 640 |
| RD 8127-64-0m8 | 64 | 0.8 | 1.6 | 2 | -07 | | 2.5 x 5 | 710 |
| RD 8137-16-5m0 | 16 | 5 | 11.6 | 3 | -07 | | Ø2 | 630 |
| RD 8137-25-2m5 | 25 | 2.5 | 6.4 | 3 | -07 | | Ø2.4 | 650 |
| RD 8137-36-1m5 | 36 | 1.5 | 3.65 | 3 | -07 | | 1.5 x 4.5 | 720 |
| RD 8137-50-0m6 | 50 | 0.6 | 2.15 | 3 | -07 | | 1.7 x 5 | 700 |
| RD 8137-64-0m5 | 64 | 0.5 | 1.35 | 3 | -07 | | 2.5 x 5 | 780 |
| RD 8147-16-3m0 | 16 | 3 | 9.25 | 4 | -07 | | Ø2 | 650 |
| RD 8147-25-1m3 | 25 | 1.3 | 5.05 | 4 | -07 | | Ø2.4 | 650 |
| RD 8147-36-0m8 | 36 | 0.8 | 3 | 4 | -07 | | 1.5 x 4.5 | 760 |
| RD 8147-50-0m3 | 50 | 0.3 | 1.75 | 4 | -07 | | 1.7 x 5 | 740 |
| RD 8147-64-0m2 | 64 | 0.2 | 1.1 | 4 | -07 | | 2.5 x 5 | 820 |

Test conditions:

Measuring frequency: 1kHz; 500µA > 0.16mH > 1.6mH; 50µA > 1.6mH < 160mH

Inductance tolerance: +50%, -30%

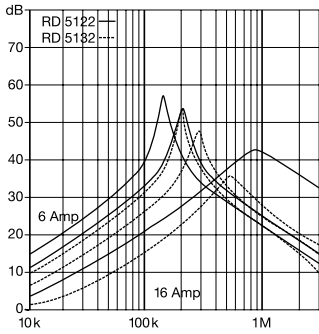
Resistance tolerance: max. ±15% @ 25°C; 200m, 100mA

Electrical characteristics @ 25°C: ±2°C

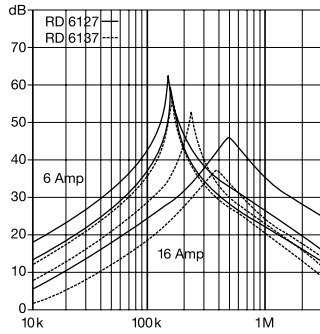
Typical choke attenuation/resonance frequency characteristics

Per CISPR 17; 50/50 asym

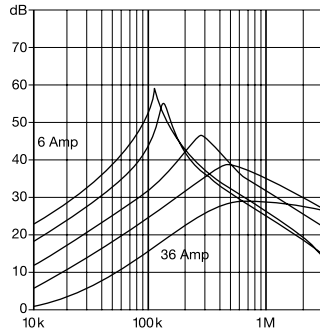
RD 51x2



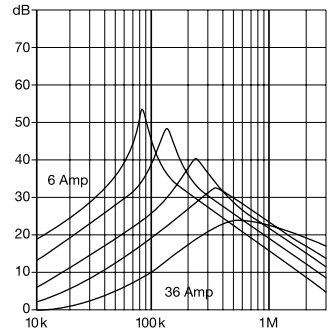
RD 61x7



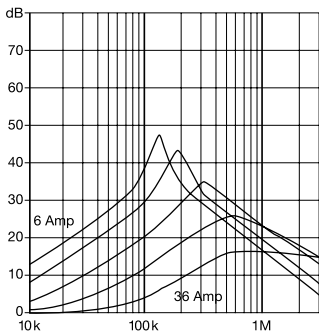
RD 7127



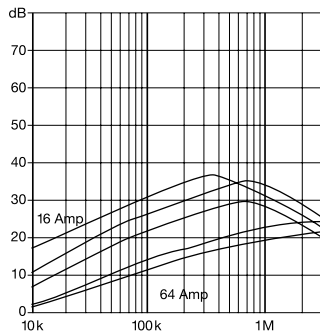
RD 7137



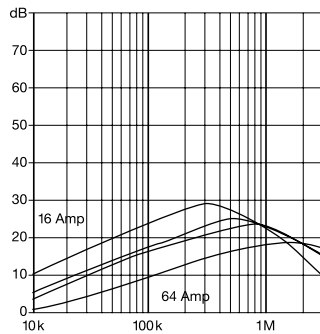
RD 7147



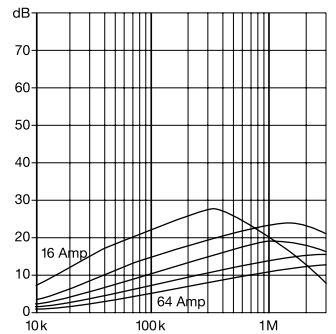
RD 8127



RD 8137



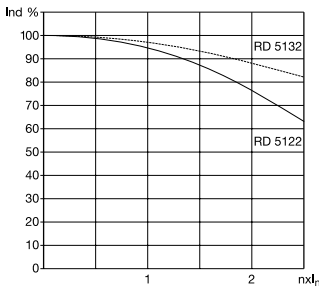
RD 8147



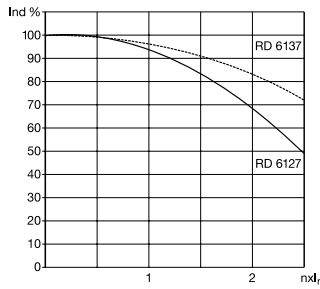
Typical saturation characteristics

Inductance (typical value in %) vs. nominal current (A DC)

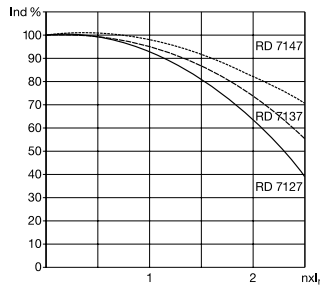
RD 51x2



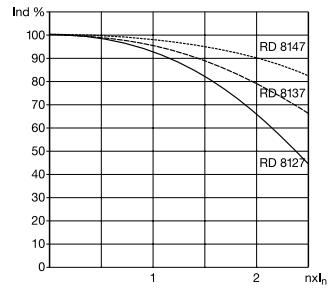
RD 61x7



RD 71x7

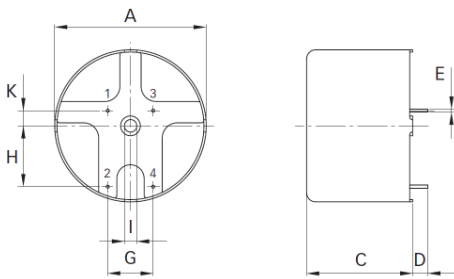


RD 81x7

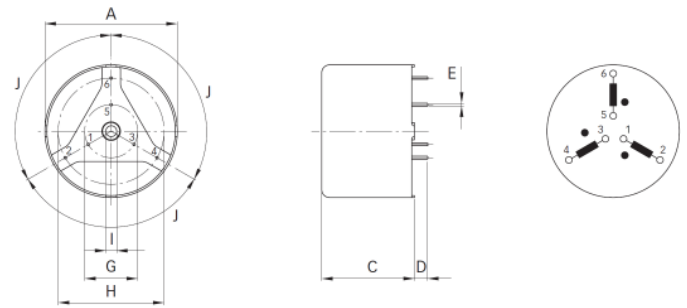


Mechanical data

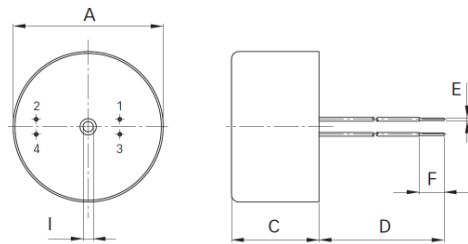
RD 5122



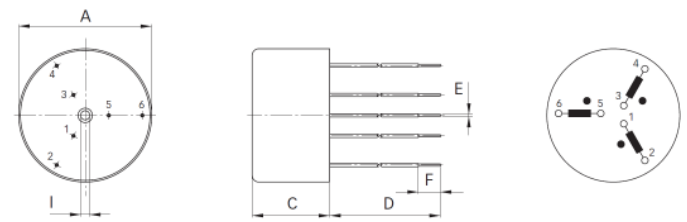
RD 5132



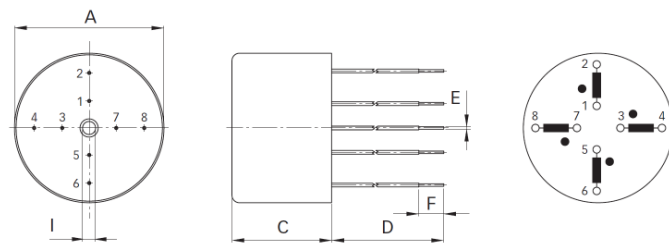
RD 6127, RD 7127, RD 8127



RD 6137, RD 7137, RD 8137



RD 7147, RD 8147



Dimensions

| | RD 5122 | RD 5132 | RD 6127 | RD 6137 | RD 7127 | RD 7137 | RD 7147 | RD 8127 | RD 8137 | RD 8147 | Tolerances |
|----------|---------------------------|-----------|-----------|-----------|---------|---------|---------|---------|---------|---------|------------|
| A | 50 | 50 | 60 | 60 | 70 | 70 | 70 | 80 | 80 | 80 | ±0.5 |
| C | 35 | 35 | 35 | 35 | 40 | 40 | 40 | 50 | 50 | 50 | ±0.5 |
| D | 5 ±0.5 | 5 ±0.5 | 150 | 150 | 150 | 150 | 150 | 200 | 200 | 200 | +5/-0 |
| E | see choke selection table | | | | | | | | | | |
| F | | | 10 | 10 | 10 | 10 | 10 | 20 | 20 | 20 | ±1 |
| G | 15 | 20 | | | | | | | | | ±0.3 |
| H | 20 | 40 ±0.4 | | | | | | | | | ±0.3 |
| I | 4.1 +3/-0 | 4.1 +3/-0 | 4.1 +3/-0 | 4.1 +3/-0 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | 6.1 | +6/-0 |
| J | | 120° | | | | | | | | | |
| K | 5 | | | | | | | | | | |

All dimensions in mm; 1 inch = 25.4mm
Tolerances according to: ISO 2768-m / EN 22768-m

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