

Current-compensated Chokes

EMC/EMI Chokes RD series



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



Approvals

ROHS

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 64 A quad configuration.
- | Multiple housing options.
- | Custom-specific versions are available on request.

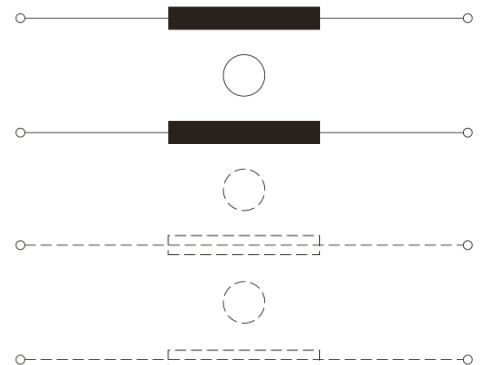
Typical applications

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

Technical specifications

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

Typical electrical schematic



Choke selection table

Choke	Nominal current @ 40 °C [A]	Inductance L [mH/path]	Resistance R [m Ω/path]	Choke configuration [Qty]	Input/Output connections		Pin footprint connections [mm]	Weight [g]
RD5122-6-9m6	6	9.6	52.55	2	-02		Ø 1	160
RD5122-10-6m0	10	6	24.25	2	-02		Ø 1.3	160
RD5122-16-2m0	16	2	9.5	2	-02		Ø 1.6	160
RD5132-6-5m0	6	5	38	3	-02		Ø 1	160
RD5132-10-3m0	10	3	17.6	3	-02		Ø 1.3	160
RD5132-16-1m0	16	1	6.9	3	-02		Ø 1.6	160
RD6127-6-15m0	6	15	66.65	2		-07	Ø 1	235
RD6127-10-9m0	10	9	25.9	2		-07	Ø 1.5	235
RD6127-16-3m0	16	3	10.9	2		-07	Ø 1.8	235
RD6137-6-7m5	6	7.5	49	3		-07	Ø 1	235
RD6137-10-4m5	10	4.5	18.35	3		-07	Ø 1.5	235
RD6137-16-1m5	16	1.5	8.3	3		-07	Ø 1.8	235
RD7127-6-25m0	6	25	84.2	2		-07	Ø 1	320
RD7127-10-14m0	10	14	33.5	2		-07	Ø 1.4	350
RD7127-16-5m7	16	5.7	14.1	2		-07	Ø 1.8	370
RD7127-25-2m8	25	2.8	6.4	2		-07	Ø 2.4	400
RD7127-36-1m0	36	1	3.3	2		-07	Ø 2.7	380
RD7137-6-12m0	6	12	60.6	3		-07	Ø 1	340
RD7137-10-6m6	10	6.6	21.9	3		-07	Ø 1.5	380
RD7137-16-2m8	16	2.8	10.7	3		-07	Ø 1.8	380
RD7137-25-1m3	25	1.3	4.45	3		-07	Ø 2.5	440
RD7137-36-0m5	36	0.5	2.75	3		-07	Ø 2.7	400
RD7147-6-6m0	6	6	45.1	4		-07	Ø 1	320
RD7147-10-3m5	10	3.5	19.1	4		-07	Ø 1.4	370
RD7147-16-1m5	16	1.5	8.5	4		-07	Ø 1.8	390
RD7147-25-0m7	25	0.7	3.65	4		-07	Ø 2.4	430
RD7147-36-0m2	36	0.2	2.3	4		-07	Ø 2.5	400
RD8127-16-12m0	16	12	20.05	2		-07	Ø 2	590
RD8127-25-5m0	25	5	8.45	2		-07	Ø 2.4	630
RD8127-36-3m0	36	3	4.55	2		-07	1.5 x 4.5	690
RD8127-50-1m0	50	1	2.5	2		-07	1.7 x 5	640
RD8127-64-0m8	64	0.8	1.6	2		-07	2.5 x 5	710
RD8137-16-5m0	16	5	11.6	3		-07	Ø 2	630
RD8137-25-2m5	25	2.5	6.4	3		-07	Ø 2.4	650
RD8137-36-1m5	36	1.5	3.65	3		-07	1.5 x 4.5	720
RD8137-50-0m6	50	0.6	2.15	3		-07	1.7 x 5	700
RD8137-64-0m5	64	0.5	1.35	3		-07	2.5 x 5	780
RD8147-16-3m0	16	3	9.25	4		-07	Ø 2	650
RD8147-25-1m3	25	1.3	5.05	4		-07	Ø 2.4	650
RD8147-36-0m8	36	0.8	3	4		-07	1.5 x 4.5	760
RD8147-50-0m3	50	0.3	1.75	4		-07	1.7 x 5	740
RD8147-64-0m2	64	0.2	1.1	4		-07	2.5 x 5	820

Test conditions:

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

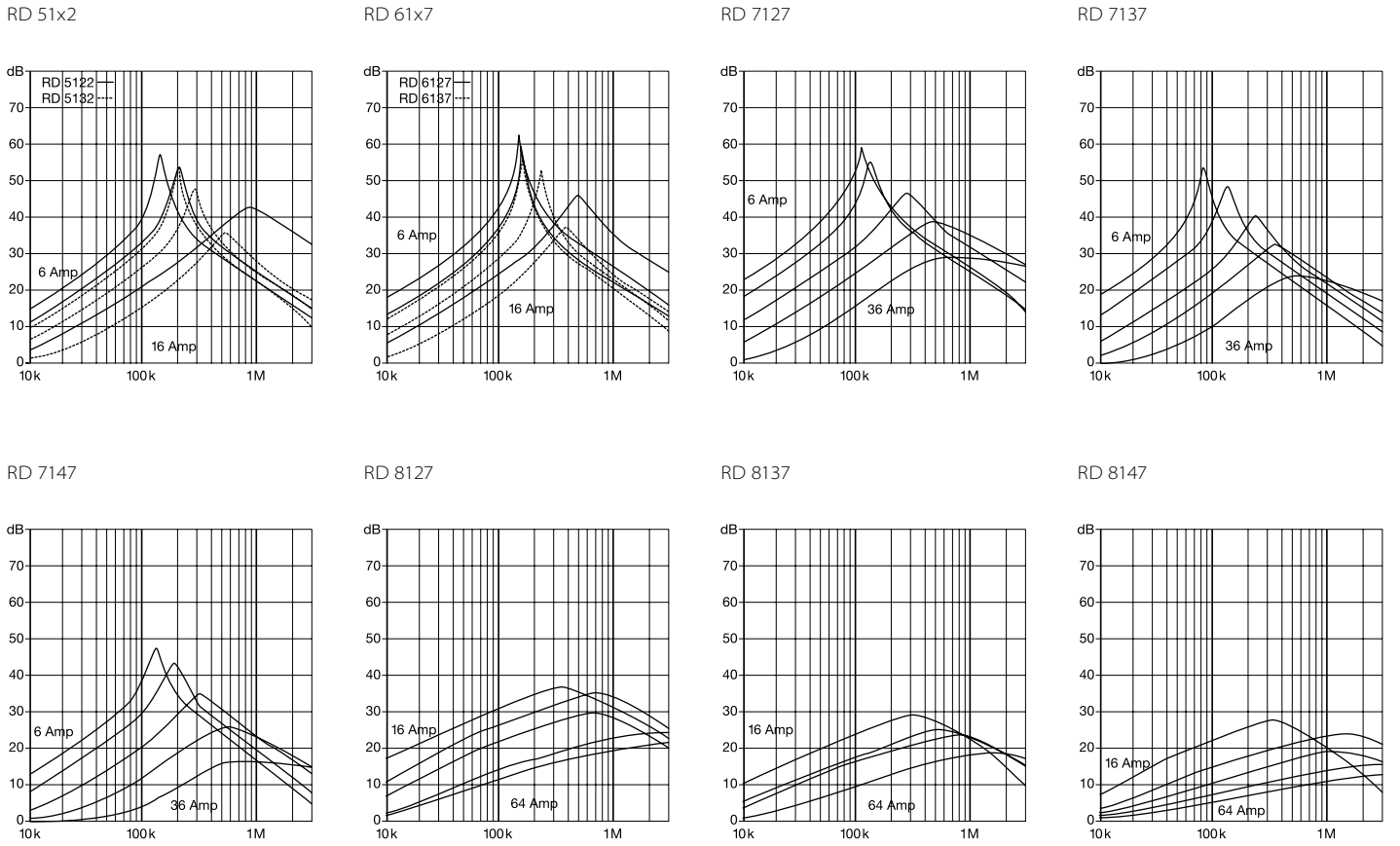
Inductance tolerance: +50%, -30%

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

Electrical characteristics @ 25 °C: ±2 °C

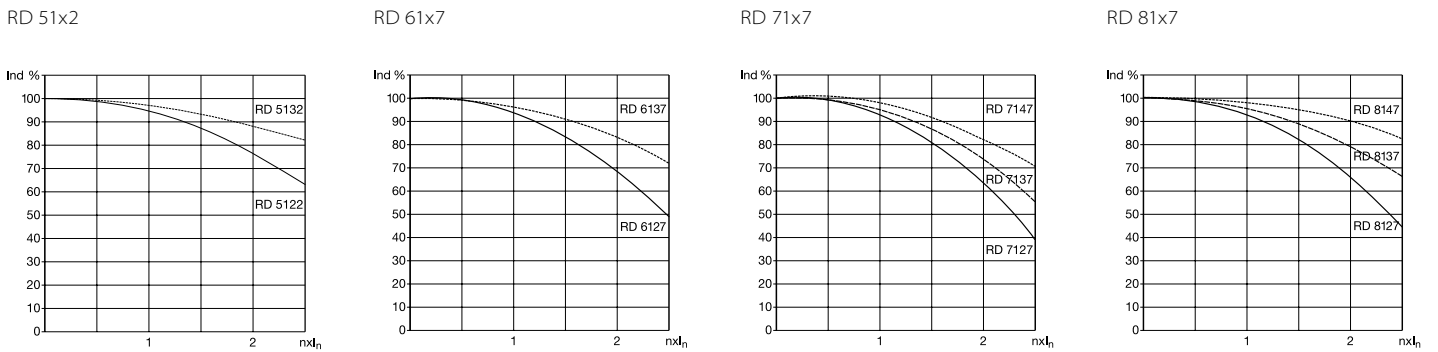
Typical choke attenuation/resonance frequency characteristics

Per CISPR 17; 50 Ω/50 Ω asym

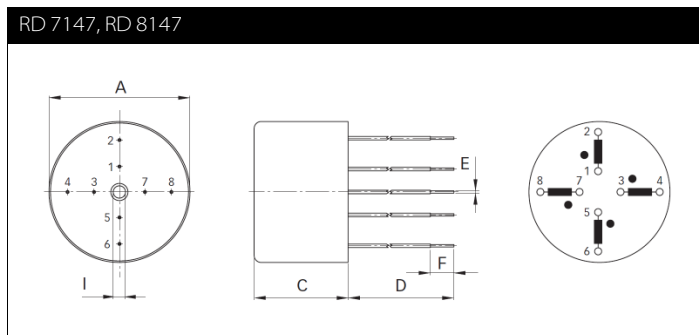
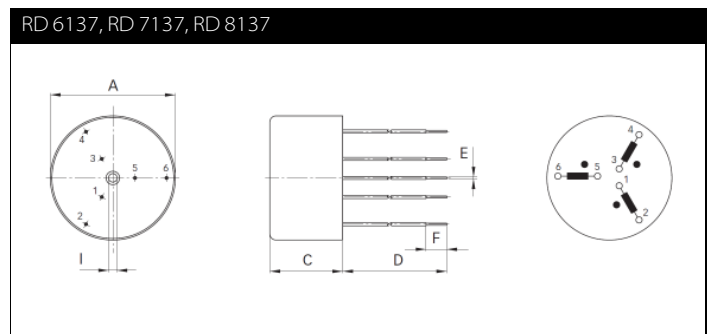
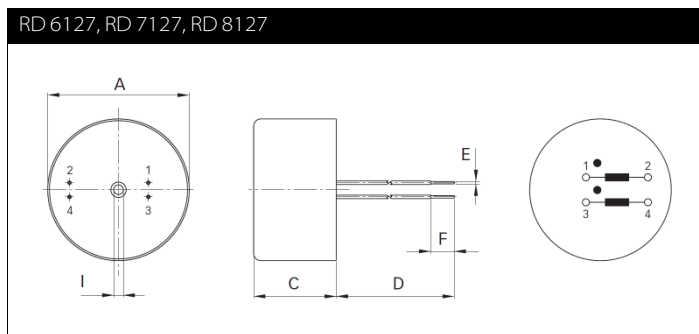
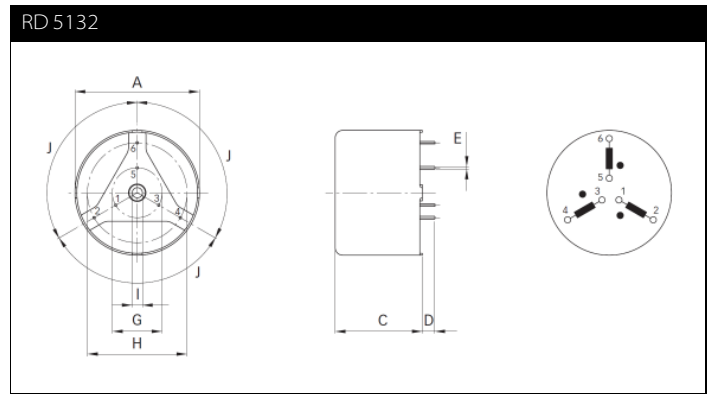
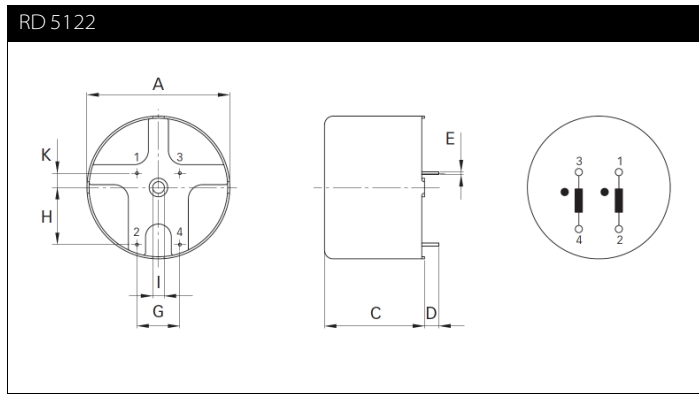


Typical saturation characteristics

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



Mechanical data



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 = 25.4 mm
Tolerances according to: ISO 2768-m / EN 22768-m

Please visit www.schaffner.com to find more details on filter connectors.



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