

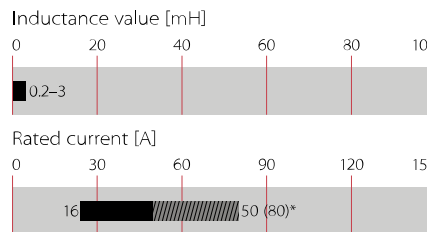
# Current-compensated Chokes



- Rated currents from 16 to 50 A
- Up to 600 VAC or 1000 VDC
- 2- and 3-wire configurations
- Horizontal and vertical PCB mounting types
- Ruggedized saturation and thermal behavior
- Open construction for forced and convection cooling
- Straightforward pin-out for easy PCB design



### Performance indicators



## Technical specifications

<b>Maximum continuous operating voltage</b>	600 VAC/1000 VDC
<b>Rated currents</b>	16 to 50 A @ 60°C max. convection cooling
<b>High potential test voltage winding-to-winding</b>	2500 VAC, 60 sec, guaranteed, 2 sec factory test
<b>Temperature range (operation and storage)</b>	-40°C to +125°C (40/125/21)
<b>Flammability corresponding to</b>	UL 94 V-0
<b>Cooling</b>	convection/forced cooling
<b>MTBF @ 40°C/230 V (Mil-HB-217F)</b>	>5,000,000 hours

### Approvals

### ROHS

RB common-mode chokes are mainly used to filter EMI noise on AC power lines up to 600 VAC but they are as well applicable in DC power lines of photovoltaic installations or similar applications up to 1000 VDC. EMI noise of electronic equipment can go to the power lines and disturb the proper function of other devices like TV sets or radios. Thus noise generated by the equipment from switched power electronics or by high slew rates of controllers needs to be filtered. RB common-mode chokes are used to suppress EMI noise in PCB integrated filter designs with line bypass capacitors or in combination with single phase filters for extra low leakage filter designs.

### Features and benefits

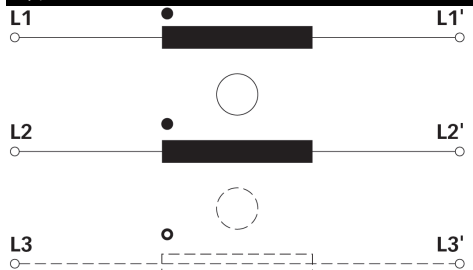
- Cost-effective PCB designs for up to 80 A with forced cooling \*
- Compact size and light weight
- Low magnetic leakage flux
- Excellent winding insulation
- Standardized foot print
- Broad range of inductance ratings
- Custom-specific versions on request

\* See Application Note for forced cooling

### Typical applications

- AC and DC filtering for midsize power range drives, photovoltaic inverters, fast chargers, charging stations, UPS and switch mode power supplies
- Filter with low leakage current noise or improved immunity against grid disturbances
- Electronic devices, automation
- Converters

### Typical electrical schematic



### RB Series

Selection table	convection cooling nominal current @ 60°C [A]	*forced cooling 3 m/s nominal current @ 60°C [A]	Inductance Ln @ 25°C [mH/path]	Inductance Ls @ 25°C [μH/path]	Resistance R @ 25°C [mΩ/path]	Choke [size]	Ø Pin D [mm]	Length Pin L [mm]	Weight [g]
RB 6122-16-1M0	16	25	1.00	6.3	4.8	1	2.0 ±0.1	4.5 ±0.5	130
RB 6122-25-0M6	25	39	0.64	4.0	2.7	1	2.4 ±0.1	4.5 ±0.5	135
RB 6122-36-0M5	36	53	0.45	3.6	1.5	2	2.2 ±0.1	4.5 ±0.5	180
RB 6122-50-0M3	50	80	0.25	1.8	0.9	2	2.5 ±0.1	5.0 ±0.5	172
RB 6522-16-1M0	16	25	1.00	6.2	4.6	3	2.0 ±0.1	4.5 ±0.5	132
RB 6522-25-0M6	25	39	0.64	3.9	2.6	3	2.4 ±0.1	4.5 ±0.5	126
RB 6522-36-0M5	36	53	0.45	3.6	1.5	4	2.2 ±0.1	4.5 ±0.5	180
RB 6522-50-0M3	50	80	0.25	2.0	0.9	4	2.5 ±0.1	5.0 ±0.5	175
RB 8522-16-3M0	16	25	3.00	22.2	8.4	4	2.0 ±0.1	4.5 ±0.5	172
RB 8522-25-2M0	25	39	2.00	13.6	4.2	5	2.6 ±0.1	5.0 ±0.5	268
RB 8522-36-1M5	36	53	1.50	12.8	3.0	6	2.2 ±0.1	4.5 ±0.5	440
RB 8522-50-0M8	50	83	0.75	6.5	1.7	6	2.5 ±0.1	5.0 ±0.5	430
RB 6132-16-0M8	16	26.5	0.80	5.8	4.6	7	2.0 ±0.1	4.5 ±0.5	162
RB 6132-25-0M5	25	41	0.47	3.3	2.4	7	2.5 ±0.1	5.0 ±0.5	175
RB 6132-36-0M4	36	60	0.42	2.9	1.4	8	2.2 ±0.1	4.5 ±0.5	278
RB 6132-50-0M2	50	80	0.18	1.9	0.9	8	2.5 ±0.1	5.0 ±0.5	765
RB 6532-16-0M8	16	26.5	0.80	6.9	4.7	9	2.0 ±0.1	4.5 ±0.5	165
RB 6532-25-0M5	25	41	0.47	3.6	2.4	9	2.5 ±0.1	5.0 ±0.5	180
RB 6532-36-0M4	36	60	0.42	4.2	1.5	10	2.2 ±0.1	4.5 ±0.5	280
RB 6532-50-0M2	50	81	0.18	1.5	0.8	10	2.5 ±0.1	5.0 ±0.5	168
RB 8532-16-1M3	16	27	1.30	9.1	5.7	9	2.0 ±0.1	4.5 ±0.5	167
RB 8532-25-0M9	25	41	0.94	6.7	3.0	11	2.0 ±0.1	5.0 ±0.5	282
RB 8532-36-0M8	36	58	0.83	7.3	2.3	12	2.4 ±0.1	4.5 ±0.5	478
RB 8532-50-0M3	50	82	0.33	3.1	1.2	12	2.2 ±0.1	5.0 ±0.5	442

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: ±15% @ 25°C

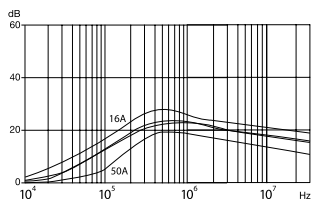
Electrical characteristics @ 25°C: ±2°C

\* typical current for forced cooling with 3 m/s. Due to the possible turbulences and degradation of the air stream within an equipment please consider thermal validation.

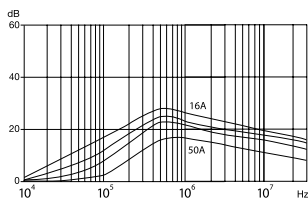
### Typical choke attenuation/resonance frequency characteristics

Per CISPR 17; 50 Ω/50 Ω asym

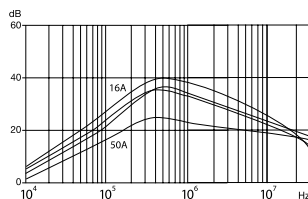
RB 6122, RB 6522



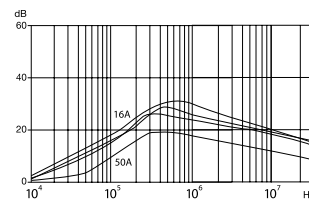
RB 6132, RB 6532



RB 8522



RB 8532



**Product selector**

RB xxxx-xx-xmX

- Inductance value (e.g. 9M6 = 9.6 mH)
- Nominal input current [A] (convection cooling)
- Terminal type ( 2 for PCB pin)

2 = 2-wire choke  
3 = 3-wire choke

1 = Horizontal  
5 = Vertical

8 = high inductance series  
6 = low inductance series

Schaffner standard ring-core choke series RB

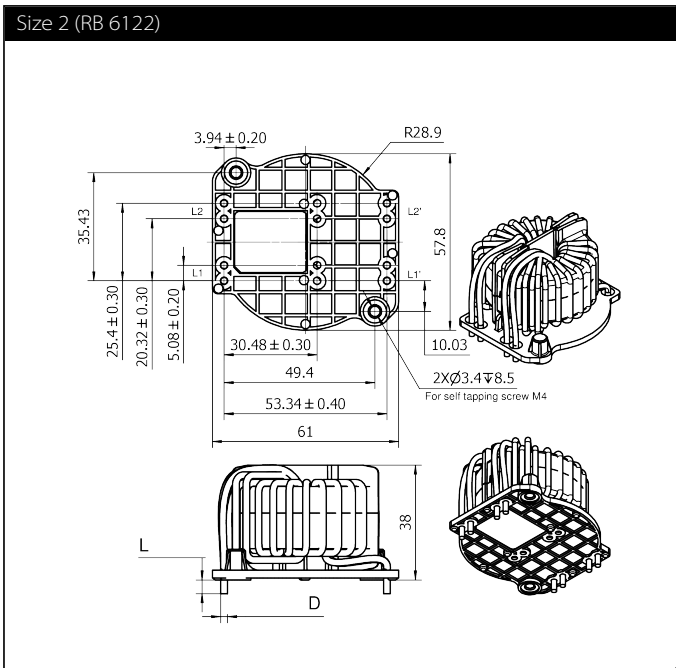
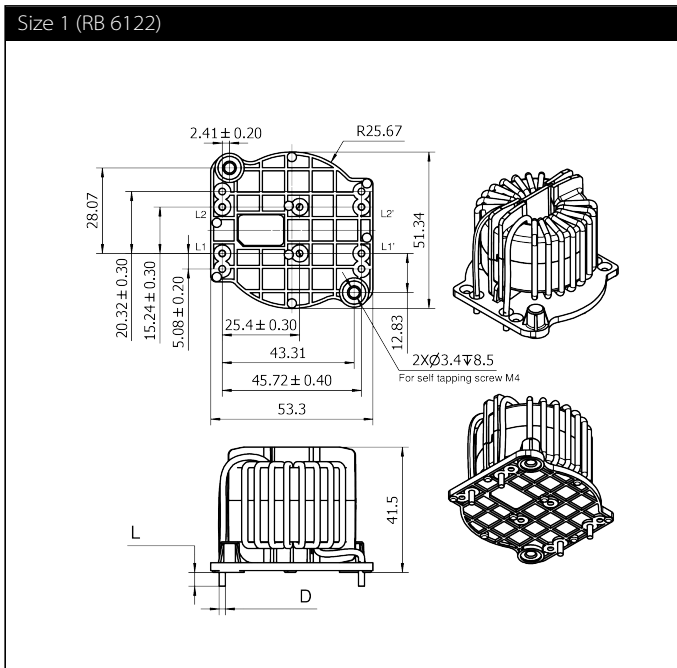
Examples:

RB 8532-16-1M3: Vertical 3-wire high inductance choke with PCB pins, for 16 A, with 1.3 mH

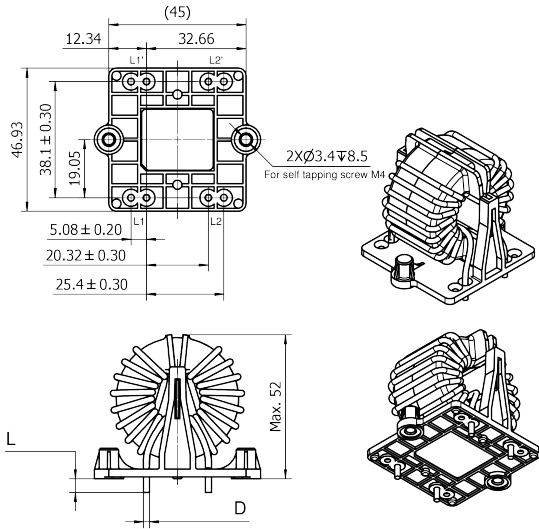
RB 6122-50-0M3: Horizontal 2-wire low inductance choke with PCB pins, for 50 A, with 0.3 mH

**Mechanical data: 1-phase / DC chokes**

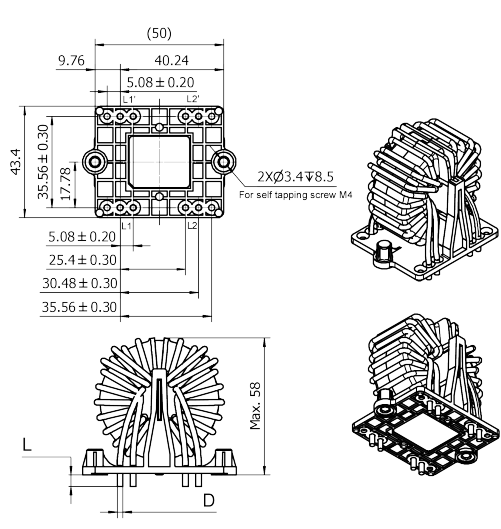
All dimensions in mm



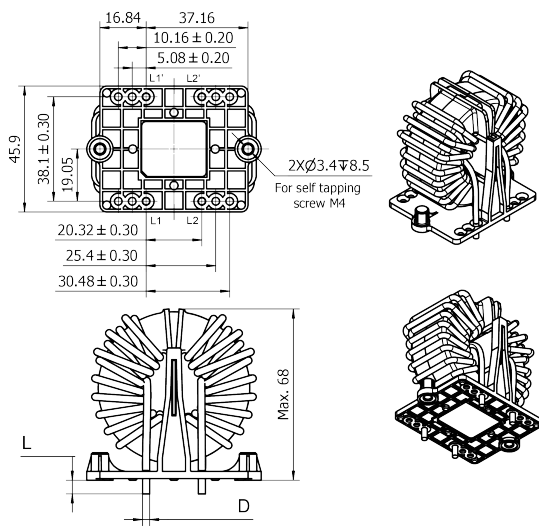
Size 3 (RB 6522)



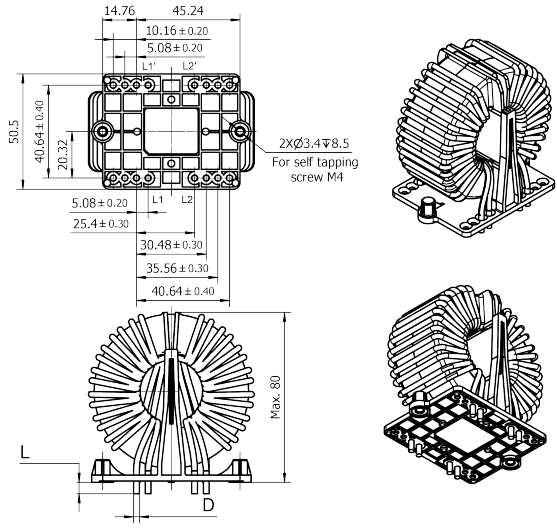
Size 4 (RB 6522/RB 8522)



Size 5 (RB 8522)

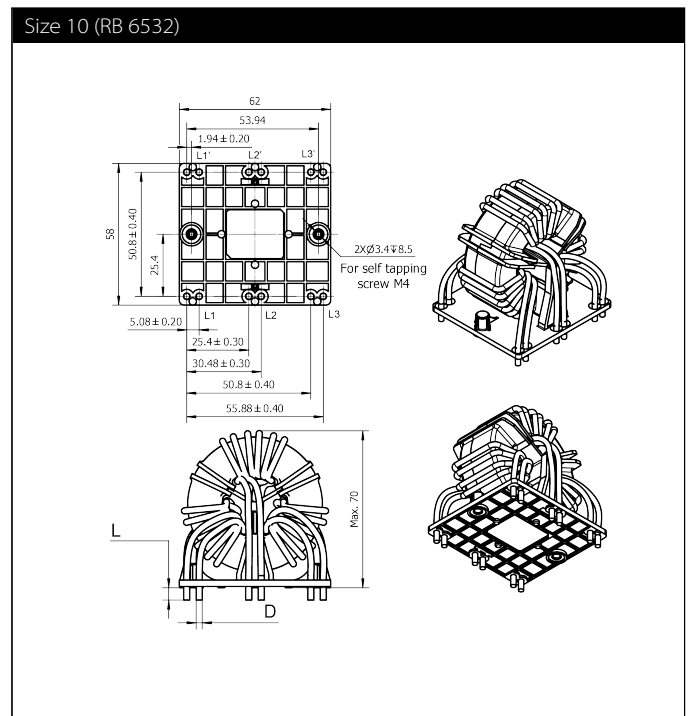
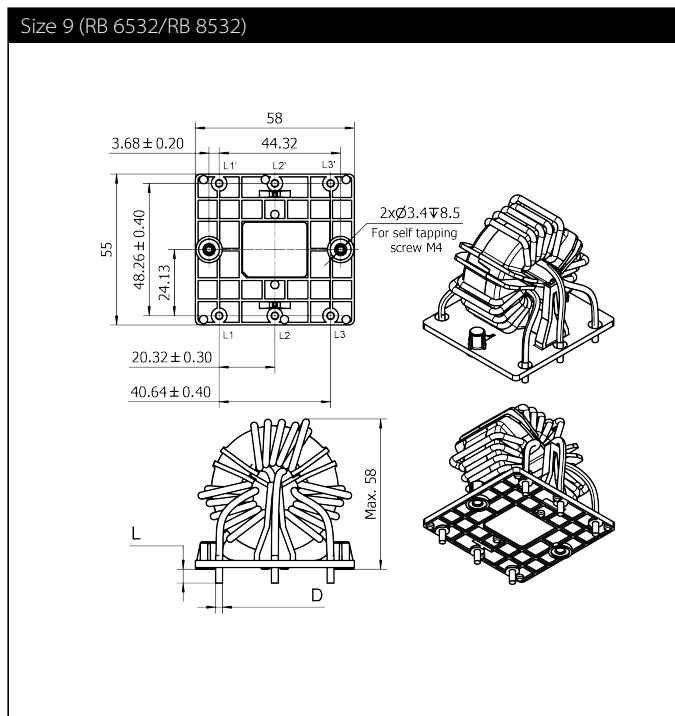
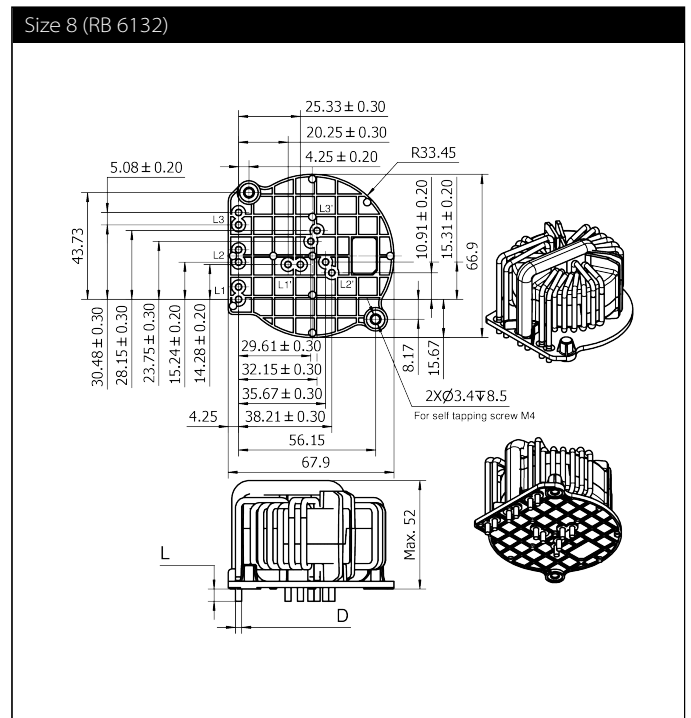
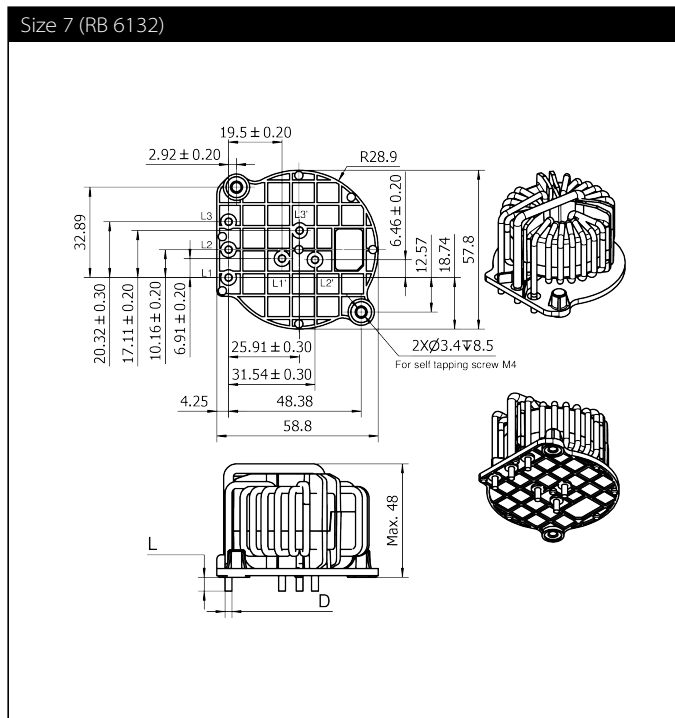


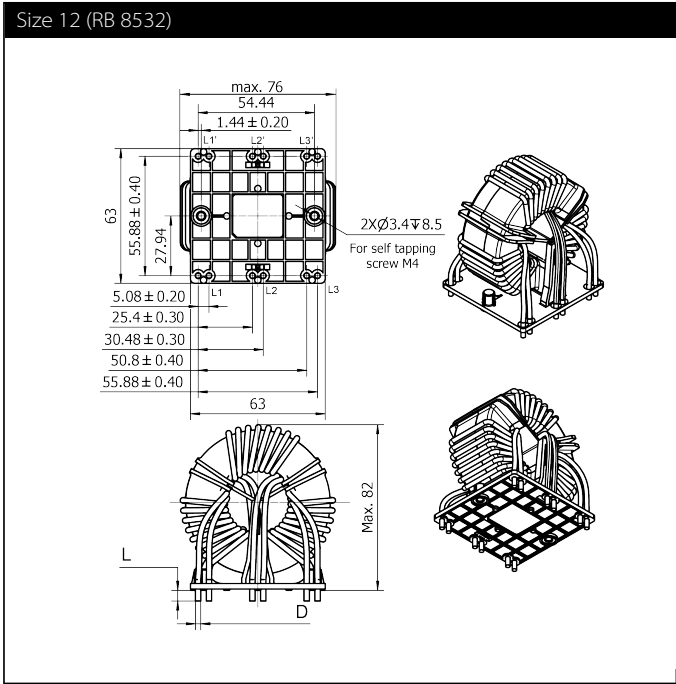
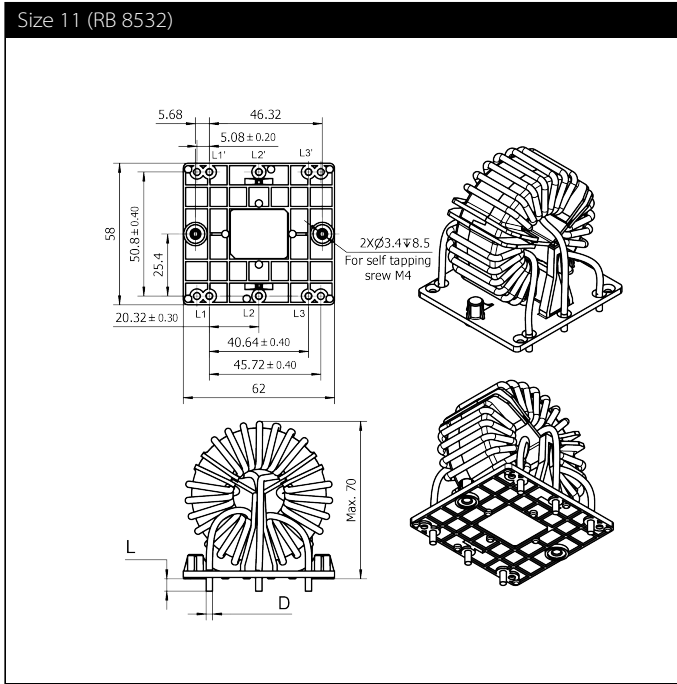
Size 6 (RB 8522)



### Mechanical data: 3-phase chokes

All dimensions in mm







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