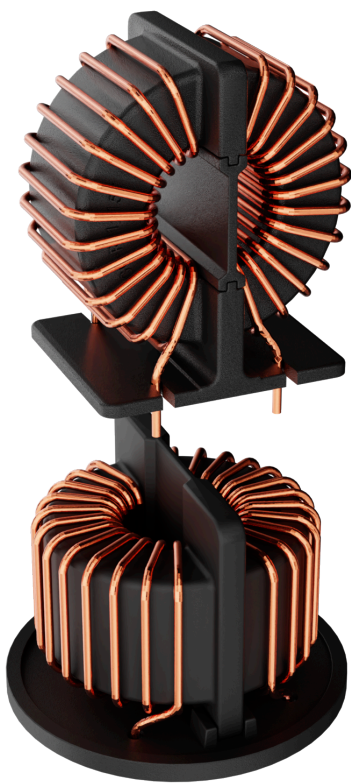


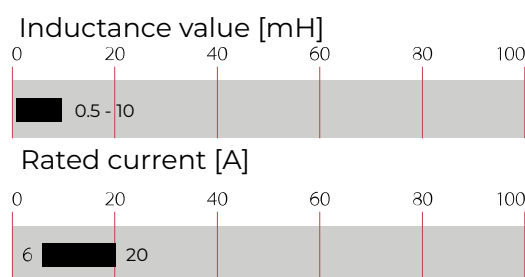
Current-compensated Chokes



- Rated currents from 6 to 20 A
- Up to 600 VAC and VDC
- 2-wire configuration
- 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

Rated currents	6 to 20 A @ 60°C
Operating frequency	DC to 400 Hz
Creepage and clearance distances	Creepage & Clearance (2-line): ≥ 3.5 mm (Coil - Coil) / ≥ 3.0 mm (Coil-Core)
High potential test voltage	3 kV DC 3s (coil to coil) Repetition with max. 80% of the HV test voltage
Rated inductance	0.5 to 10 mH (2-line)
Operating voltage	300 VAC/425 VDC (2-line)
Overvoltage category	III (acc. IEC 60664-1)
Pollution degree	PD2 (acc. IEC60664-1)
Stray inductance	Max. 1% of rated inductance (@ 100 kHz 1 V, 0 A)
Temperature range (operation and storage)	-40°C to +100°C
Climatic category	40/100/56 (acc. IEC 60068-1) (6 to 20 A)
Altitude	2000 m, current and voltage derating above
Flammability corresponding to	UL 94 V0
Vibration and shock	3M4 (according IEC 60721-3-3)
Design corresponding to	UL/IEC 60938-1/-2
MTBF (Mil-HB-217F)	>2,000,000 h @ 60°C/300 V

Approvals & Compliances

RoHS

RT common-mode chokes are mainly used to filter EMI noise on AC power lines up to 600 VAC. EMI noise of electronic equipment can go to the power lines and disturb the proper function of other devices like communication devices or control logic of robotics. Thus noise generated by the equipment from switched power electronics or by high slew rates of controllers needs to be filtered. RT 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.

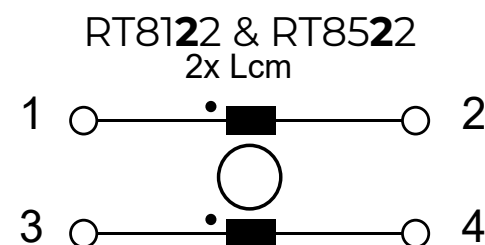
Features and Benefits

- Cost-effective PCB designs for up to 20 A
- 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













Typical Applications

- AC and DC filtering for midsize power range drives, photovoltaic inverters, fast chargers, EV charging stations, UPS and switch mode power supplies
- Filter with low leakage current noise or improved immunity against grid disturbances
- Electronic devices, automation and (industrial) LED lighting
- Communication devices
- Medical and laboratory equipment
- Converters

Typical electrical schematic



RT Series

Selection table	Buy	Convection Cooling nominal Current @ 60°C [A]	*Forced cooling 3 m/s nominal Current @ 60°C [A]	Inductance Ln @ 25°C 100kHz [mH/path]	**Typ. Inductance Ls @ 25°C 100kHz [µH/path]	Resistance R @ 25°C [mΩ/path]	Choke [size]	***Ø Pin ±0.1 ØP [mm]	Weight [g]
RT8122-6-10M0		6	9.5	10	30	33	1	1.1	80
RT8122-8-8M0		8	12.5	8	24.8	21	1	1.3	80
RT8122-10-6M0		10	16	6	19.2	16	1	1.4	80
RT8122-12-5M0		12	19	5	20.5	14	2	1.5	100
RT8122-16-4M0		16	27	4	17.6	10	2	1.8	110
RT8122-20-3M0		20	32	3	13.5	7	3	2	160
RT8522-6-10M0		6	9.5	10	31.5	33	4	1.1	70
RT8522-8-8M0		8	12.5	8	24	21	4	1.3	80
RT8522-10-6M0		10	16	6	19.2	16	4	1.4	80
RT8522-12-5M0		12	19	5	23	14	5	1.5	90
RT8522-16-4M0		16	27	4	18.8	10	5	1.8	110
RT8522-20-3M0		20	32	3	13.5	7	6	2.0	150

Test conditions: Inductance tolerance: +50%, –30%; Resistance tolerance: +15% @ 25°C; Electrical characteristics @ 25°C: ±2°C

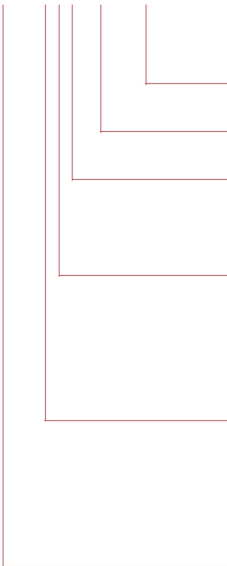
* typical current for forced cooling with 3 m/s. Due to the possible turbulences and degradation of the air stream within an equipment please consider thermal validation.

** typical stray inductance, max is 0.1% of Ln

*** Length of pin (Dimension P) is always 5.5 mm ± 1

Product selector

RT 8xxx-xx-xmx



- Inductance value (e.g. 9M6 = 9.6 mH)
- Nominal input current [A] (convection cooling)
- Terminal type (2 for PCB pin)
- 2 = 2-line choke
- 3 = 3-line choke
- 1 = Horizontal
- 5 = Vertical
- Schaffner standard ring-core choke series RT



Distribution Inventory

Up-to-date inventory levels for global distributors is available at

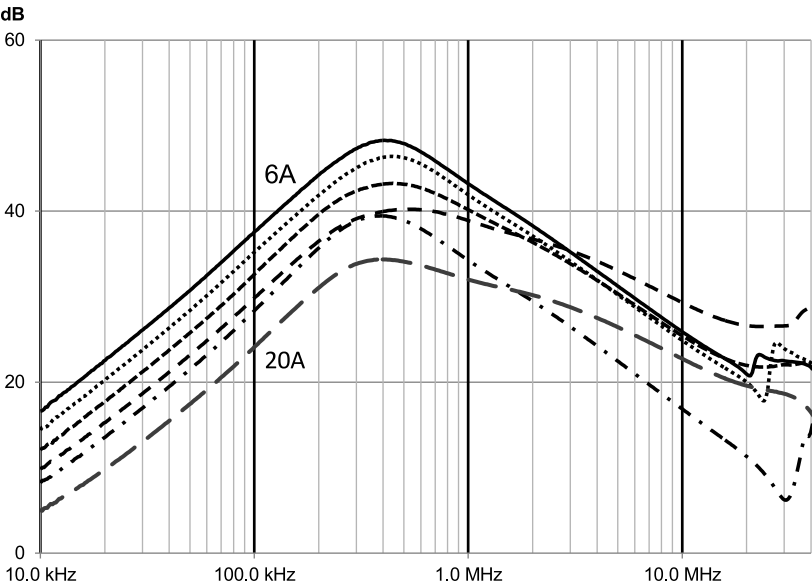
<https://products.schaffner.com/stock>

Examples: RT8522-16-3M0: Vertical 2-line choke for 16 A, with 3 mH ; RT8122-20-3M0: Horizontal 2-line choke for 20 A, with 3 mH

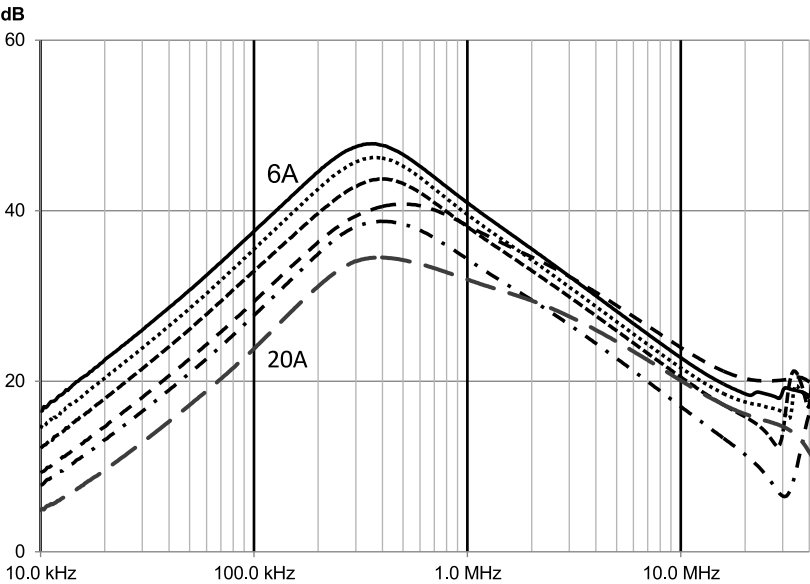
Typical Choke Attenuation/Resonance Frequency Characteristics

Per CISPR 17; 50 Ω/50 Ω asym

RT 8122

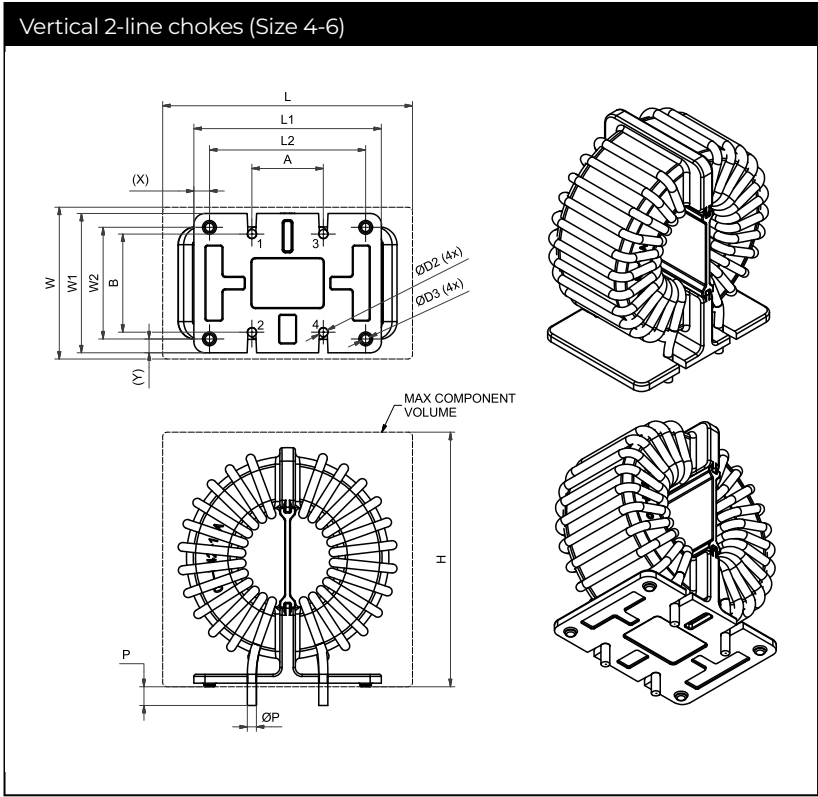
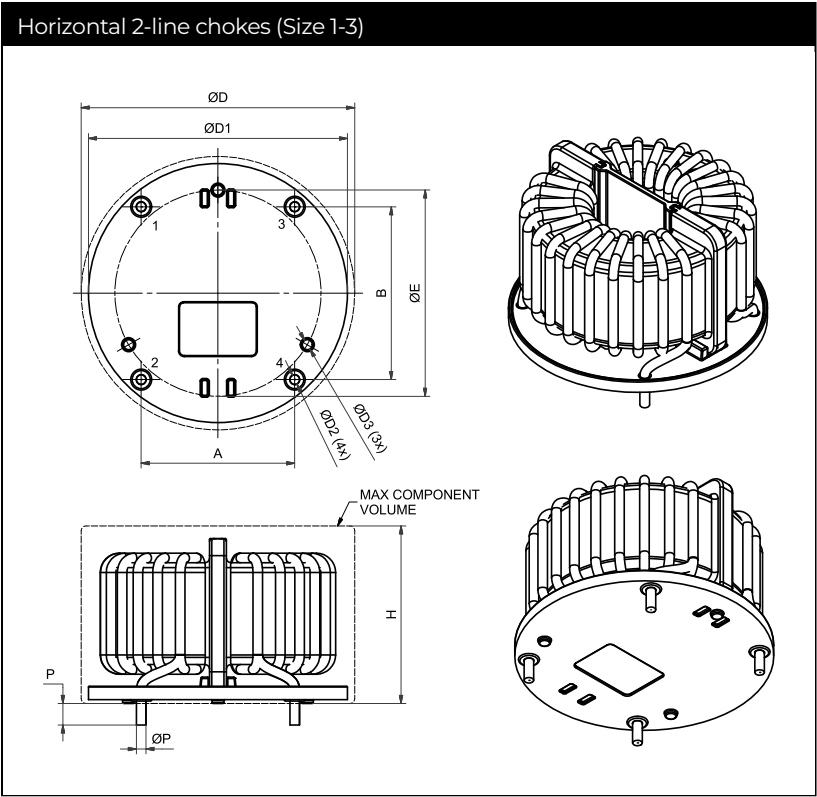


RT 8522



Mechanical Data: Horizontal Chokes And Vertical Chokes

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



Dimensions

Horizontal Chokes	A (±0.5)	B (±0.5)	ØD (max)	H (max)	ØD1 (±0.5)	ØD2	ØD3	ØE
Size 1 (RT8122-6-10M0, RT8122-8-8M0, RT8122-10-6M0)	21	25	45	34	42	1.5	2.5	36
Size 2 (RT8122-12-5M0, RT8122-16-4M0)	26	30	51	33	48	1.9	2.5	40
Size 3 (RT8122-20-3M0)	32	36	57	37	54	2.1	2.5	43

Vertical Chokes	A (±0.5)	A1 (±0.5)	B (±0.5)	L (max)	W (max)	H (max)	L1 (±0.5)	L2 (±0.5)	L3	W1 (±0.5)	W2 (±0.5)	ØD2	ØD3	X	Y
Size 4 (RT8522-6-10M0, RT8522-8-8M0, RT8522-10-6M0)	16	-	20	43	32	44	32	26	-	27.8	22	1.5	2.5	3	2.9
Size 5 (RT8522-12-5M0, RT8522-16-4M0)	16	-	22	50	32	52	39	33	-	27	23	1.9	2.5	3	2
Size 6 (RT8522-20-3M0)	16	-	22	56	32	57	42	35	-	31.2	25	2.1	2.5	3.5	3.1

Pin material: Copper (base), Sn (final plating typical thickness 0.15 mm; composition: Sn-1.2AG-4Cu or SN-3Cu-0.25Ni)

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

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