

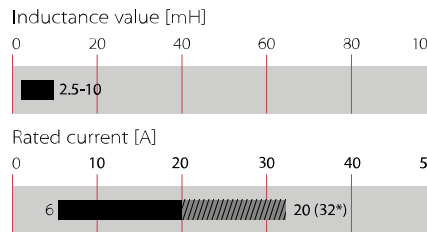
Current-compensated Chokes



- Rated currents from 6 to 20 A
- Up to 600 VAC and 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

Maximum continuous operating voltage	600 VAC (3-line) and 300 VAC/425 VDC (2-line)
Operating frequency	dc to 400 Hz
Rated currents	6 to 20 A @ 60°C max. convection cooling
High potential test voltage winding-to-winding @ 25°C	2500 VAC, 60 sec, guaranteed, 2 sec factory test
Temperature range (operation and storage)	-40°C to +100°C (40/100/56)
Flammability corresponding to	UL 94 V-0
Cooling	convection/forced cooling
MTBF @ 40°C/230 V (Mil-HB-217F)	>5,000,000 hours

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

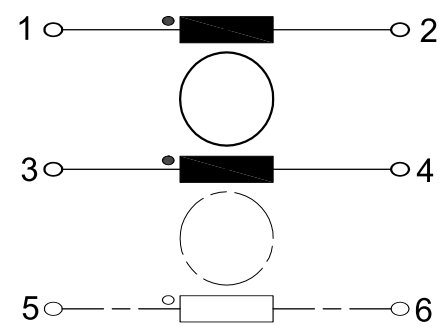
- Cost-effective PCB designs for up to 32 A with forced cooling *
- Compact size and light weight
- Low magnetic leakage flux
- Excellent winding insulation
- Standardized foot print
- Broad range of inductance ratings
- Custom-specific versions on request

* See [RB 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 and (industrial) LED lighting
- Communication devices
- Medical and laboratory Equipment
- Converters

Typical electrical schematic **



** 2-line chokes (2x Ln), 3-line chokes (3x Ln)

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
RT8132-6-6M0		6	9.5	6	18	27	7	1.1	80
RT8132-8-4M8		8	12.5	4.8	14.9	17	7	1.3	90
RT8132-10-4M0		10	16	4	16	15	8	1.5	110
RT8132-12-3M6		12	19	3.6	14.4	12	8	1.6	120
RT8132-16-3M0		16	27	3	12	8	9	1.8	170
RT8132-20-2M5		20	32	2.5	10	7	9	2.1	190
RT8532-6-6M0		6	9.5	6	18	27	10	1.1	90
RT8532-8-4M8		8	12.5	4.8	13.9	17	10	1.3	90
RT8532-10-4M0		10	16	4	16	15	11	1.5	110
RT8532-12-3M6		12	19	3.6	15.1	12	11	1.6	120
RT8532-16-3M0		16	27	3	13.8	8	12	1.8	160
RT8532-20-2M5		20	32	2.5	10.8	7	12	2.1	190

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

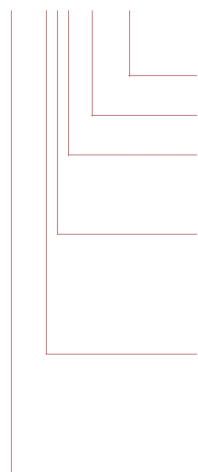
* typical current for forced cooling with 3 m/s. Due to the possible turbulences and degradation of the air stream within an equipment please consider thermal validation.

** 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

Examples: RT8532-16-3M0: Vertical 3-line choke for 16 A, with 3 mH ; RT8122-20-3M0: Horizontal 2-line choke for 20 A, with 3 mH

Distribution inventory

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

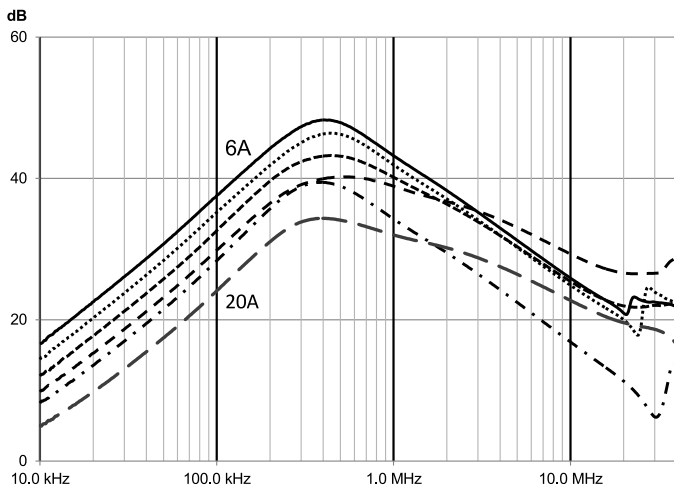
<https://products.schaffner.com/stock>



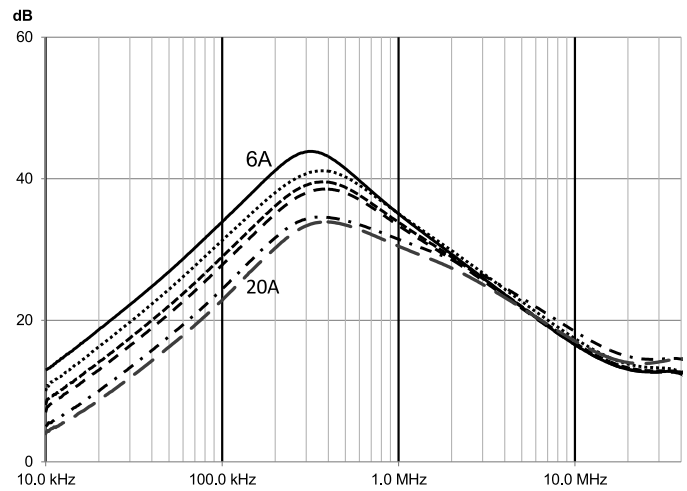
Typical choke attenuation/resonance frequency characteristics

Per CISPR 17; 50 Ω/50 Ω asym

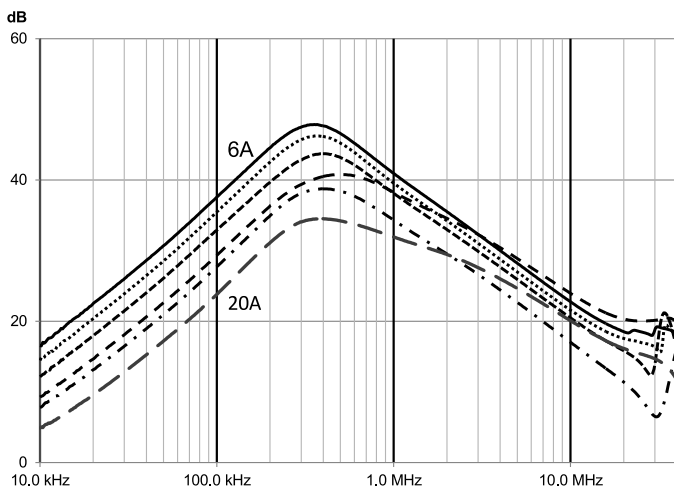
RT 8122



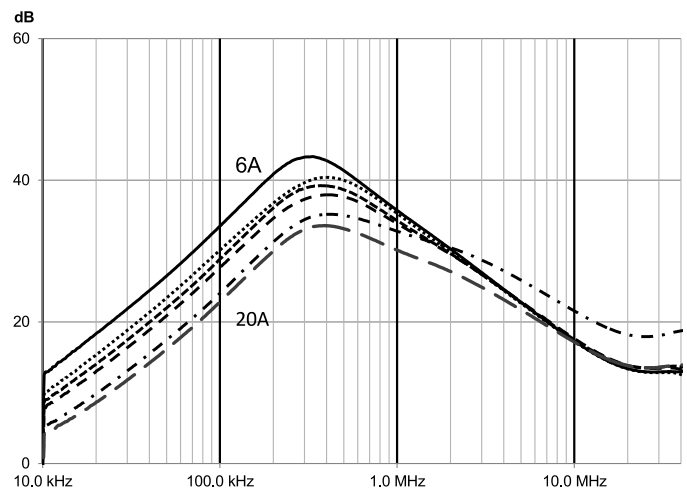
RT 8132



RT 8522

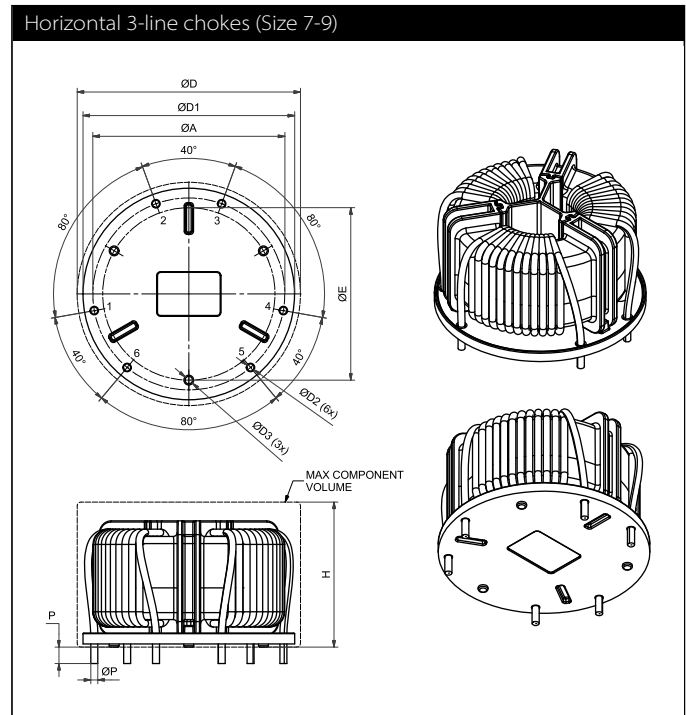
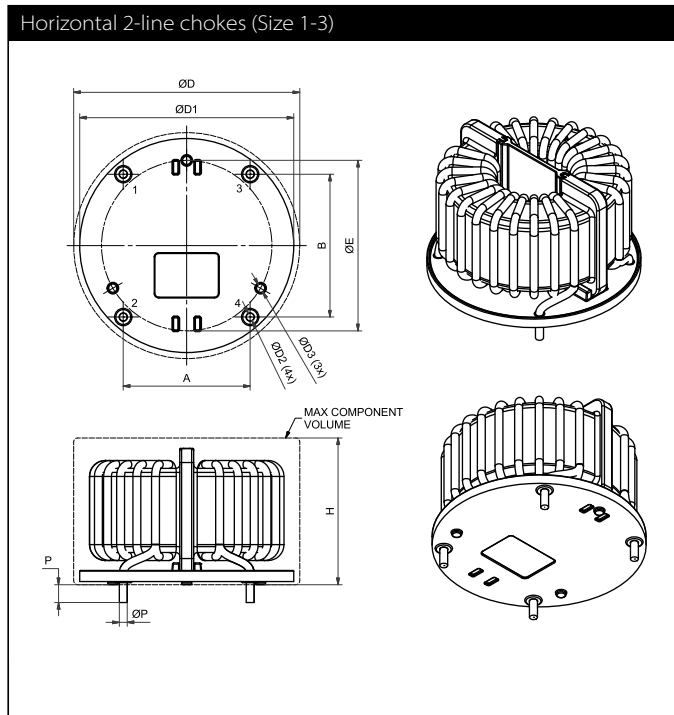


RT 8532



Mechanical data: Horizontal chokes (2-line and 3-line)

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



Dimensions

	A	B	ØD (max)	H (max)	ØD1	ØD2	ØD3	ØE
	(±0.5)	(±0.5)			(±0.5)			
Size1 (RT8122-6-10M0, RT8122-8-8M0, RT8122-10-6M0)	21	25	45	34	42	1.5	2.5	36
Size2 (RT8122-12-5M0, RT8122-16-4M0)	26	30	51	33	48	1.9	2.5	40
Size3 (RT8122-20-3M0)	32	36	57	37	54	2.1	2.5	43
	ØA		ØD (max)	H (max)	ØD1	ØD2		
	(±0.5)				(±0.5)			
Size 7 (RT8132-6-6M0, RT8132-8-4M8)	38	-	46	34	43	1.4	2.5	35
Size 8 (RT8132-10-4M0, RT8132-12-3M6)	44	-	51	33	48	1.7	2.5	40
Size 9 (RT8132-16-3M0, RT8132-20-2M5)	49	-	57	37	54	2.3	2.5	44

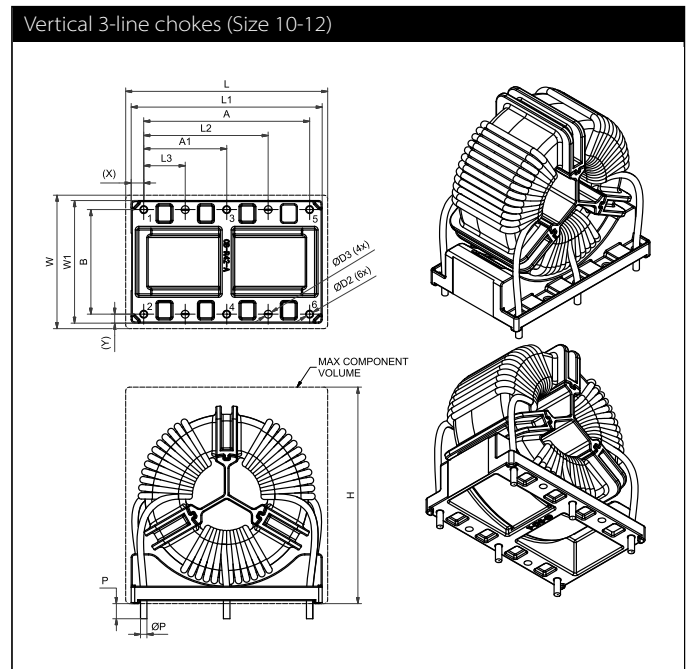
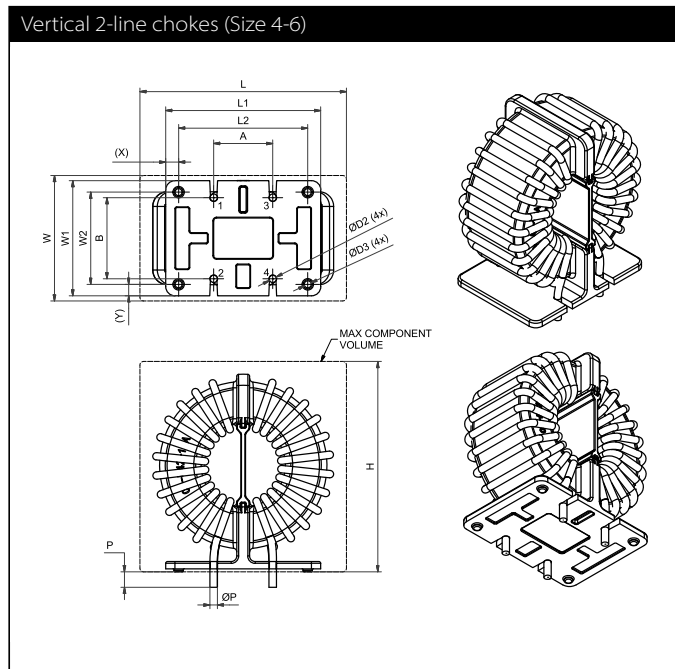
Pin material: Copper (base), Sn (final plating typical thickness 0.15 mm; composition: Sn-1.2Ag-4Cu or SN-3Cu-0.25Ni)

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

Mechanical data: Vertical chokes (2-line and 3-line)

All dimensions in mm; 1 inch = 25.4 mm

Tolerances according: ISO 2768-m/EN 22768-m



Dimensions

	A	A1	B	L	W	H	L1	L2	L3	W1	W2	ØD2	ØD3	X	Y
	(±0.5)	(±0.5)	(±0.5)	(max)	(max)	(max)	(±0.5)	(±0.5)		(±0.5)	(±0.5)				
Size 4 (RT8522-6-10M0, RT8522-8-8M0, RT 8522-10-6M0)	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
Size 10 (RT8532-6-6M0, RT8532-8-4M8)	36	18	24	44	32	47	41	27	9	29	-	1.4	1.4	2.5	2.5
Size 11 (RT8532-10-4M0, RT8532-12-3M6)	38	19	24	49	34	53	46	28.5	9.5	31	-	1.7	1.7	4	3.5
Size 12 (RT8532-16-3M0, RT8532-20-2M5)	46	23	29	56	37	60	53	34.5	11.5	34	-	2.2	2.2	3.5	2.5

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.



Headquarters, global innovation and development

Switzerland

Schaffner Group

Industrie Nord
Nordstrasse 11e
4542 Luterbach
T +41 32 681 66 26
info@schaffner.com



Sales and application centers

China

Schaffner EMC Ltd. Shanghai

T20-3 C, No 565 Chuangye Road,
Pudong district
201201 Shanghai
T +86 21 3813 9500
cschina@schaffner.com
www.schaffner.com.cn

Finland

Schaffner Oy

Sauvonrinne 19 H
08500 Lohja
T +358 10 567 2855
finlandsales@schaffner.com

France

Schaffner EMC S.A.S.

16-20 Rue Louis Rameau
95875 Bezons
T +33 1 34 34 30 60
F +33 1 39 47 02 28
francesales@schaffner.com

Germany

Schaffner Deutschland GmbH

Schoemperlenstrasse 12B
76185 Karlsruhe
T +49 721 56910
F +49 721 569110
germanysales@schaffner.com

India

Schaffner India Pvt. Ltd

REGUS WORLD TRADE CENTRE
WTC, 22nd Floor Unit No 2238, Brigade
Gateway Campus, 26/1, Dr. Rajkumar Road
Malleshwaram (W)
560055 Bangalore
T +91 80 67935355
indiasales@schaffner.com

Italy

Schaffner EMC S.r.l.

Via Ticino, 30
20900 Monza (MB)
T +39 039 21 41 070
italysales@schaffner.com

Japan

Schaffner EMC K.K.

Taiju-Seimei Sangenjaya Bldg.
1-32-12, Kamiyama, Setagaya-ku
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
www.schaffner.jp

Singapore

Schaffner EMC Pte Ltd.

#05-09, Kg Ubi Ind. Estate
408705 Singapore
T +65 6377 3283
F +65 6377 3281
singaporesales@schaffner.com

Spain

Schaffner EMC España

Calle Caléndula 93, Miniparc III, Edificio E
El Soto de Moraleja, Alcobendas
28109 Madrid
T +34 917 912 900
F +34 917 912 901
spainsales@schaffner.com

Sweden

Schaffner EMC AB

Östermalmstorg 1
114 42 Stockholm
T +46 8 5050 2425
swedensales@schaffner.com
www.schaffner.com

Switzerland

Schaffner EMV AG

Industrie Nord
Nordstrasse 11e
4542 Luterbach
T +41 32 681 66 88
T +41 32 681 66 26
switzerlandsales@schaffner.com

Taiwan R.O.C.

Schaffner EMV Ltd.

20 Floor-2, No 97, Section 1, XinTai 5th Road
22175 XiZhi District New Taipei City 22175
T +886 2 2697 5500
F +886 2 2697 5533
taiwansales@schaffner.com
www.schaffner.com.tw

Thailand

Schaffner EMC Co. Ltd.

Northern Region Industrial Estate
67 Moo 4 Tambon Ban Klang
Amphur Muangng P.O. Box 14
51000 Lamphun
T +66 53 58 11 04
F +66 53 58 10 19
thailandsales@schaffner.com

United Kingdom

Schaffner Ltd.

1, Oakmede Place
Binfield
RG42 4JF Berkshire
T +44 118 9770070
F +44 118 9792969
uksales@schaffner.com

USA

Schaffner EMC Inc.

52 Mayfield Avenue
Edison, New Jersey
T +1 732 225 9533
F +1 732 225 4789
usasales@schaffner.com
www.schaffnerusa.com

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