

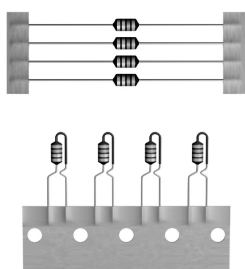
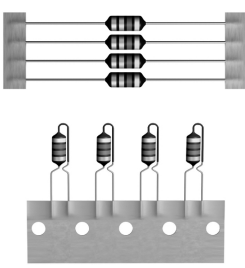
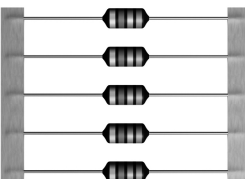
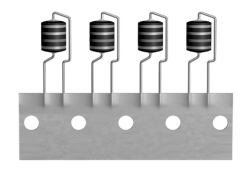
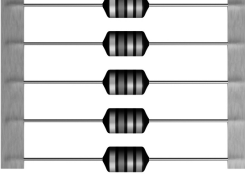


Inductors

RF chokes
Selection guide, General

Date: October 2008

RF chokes
Selection guide

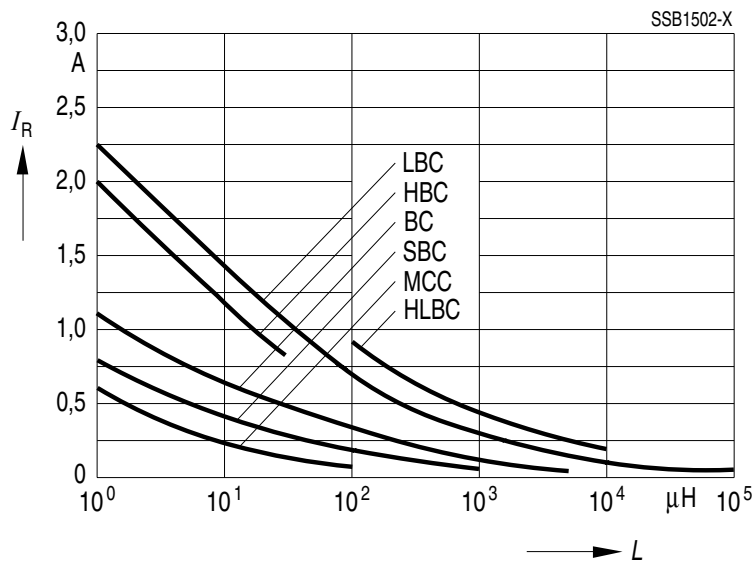
	Series	L_R	I_R	Dimensions $\varnothing \times l$ (max.) mm	Min. lead spacing (mm)		Type
		μH	mA		axial	radial	
	MCC	0.1 ... 100	85 ... 1120	3.3 × 7.0	10 —	— 5	B78108T B78148T
	SBC	1.0 ... 1000	55 ... 725	3.0 × 6.8	10 —	— 5	B82141A B82141B
	BC	1.0 ... 4700	55 ... 1200	4.0 × 9.2	12.5 —	— 5	B78108S B78148S
	HBC	1.0 ... 27	850 ... 2000	4.0 × 9.2	12.5 —	— 5	B82143A B82143B
	LBC	1.0 ... 100 000	20 ... 2200	5.2 × 12.0	15	—	B82144A
	LBC	1.0 ... 100 000	20 ... 2500	6.5 × 9.2	—	5	B82144B
	HLBC	100 ... 10 000	110 ... 860	6.5 × 12.0	15	—	B82145A

HLBC chokes with diameters 7.5 and 8.5 mm for higher rated currents available on request.

General

EPCOS RF chokes are lacquered EMI suppression chokes with wire leads. Outstanding characteristics are excellent RF and temperature properties and saturation behavior.

Six series are available – each in four different sizes. The following diagram shows the rated currents as a function of the inductance value for each series.



Typical applications

RF chokes are required for low and high frequency decoupling of signal and control circuits, for filtering supply voltages, in other filters and for all other uses in which electromagnetic compatibility (EMC) needs to be ensured

Fields of application:

- Entertainment electronics
- Automotive electronics
- Household appliances
- Lighting technology
- Telecommunications
- Industrial electronics

Integration in mains power lines

Lacquered RF chokes are considered to be non-insulated elements (test voltage of 100 V) in the sense of the VDE and EN standards. For applications where insulation is not necessary, however, they can be integrated into power supply lines without any problem.

RF chokes

General

Color coding of the inductance value

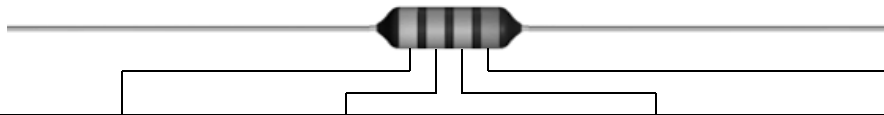
The inductance value and tolerance are encoded by means of colored bands in accordance with IEC 60062. The basic unit is μH .

1st band = 1st digit of inductance value

2nd band = 2nd digit of inductance value

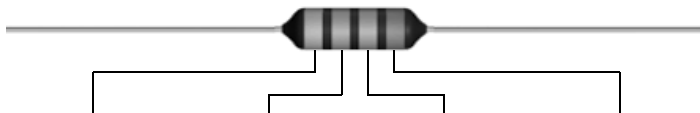
3rd band = multiplier, i.e. the power of ten, by which the first two digits have to be multiplied.

4th band = tolerance of the inductance value.



Color code	1 st band = 1 st digit	2 nd band = 2 nd digit	3 rd band = multiplier	4 th band = tolerance
Colorless	—	—	—	$\pm 20\%$ (M)
Silver	—	—	$\times 10^{-2} \mu\text{H} =$ 0.01 μH	$\pm 10\%$ (K)
Gold	—	—	$\times 10^{-1} \mu\text{H} =$ 0.1 μH	$\pm 5\%$ (J)
Black	—	0	$\times 10^0 \mu\text{H} =$ 1 μH	—
Brown	1	1	$\times 10^1 \mu\text{H} =$ 10 μH	
Red	2	2	$\times 10^2 \mu\text{H} =$ 100 μH	$\pm 2\%$ (G)
Orange	3	3	$\times 10^3 \mu\text{H} =$ 1000 μH	
Yellow	4	4	$\times 10^4 \mu\text{H} =$ 10000 μH	
Green	5	5	$\times 10^5 \mu\text{H} =$ 100000 μH	Special designs manufactured to customer specifications are identified by a white tolerance band.
Blue	6	6		
Violet	7	7		
Grey	8	8		
White	9	9		

Examples:



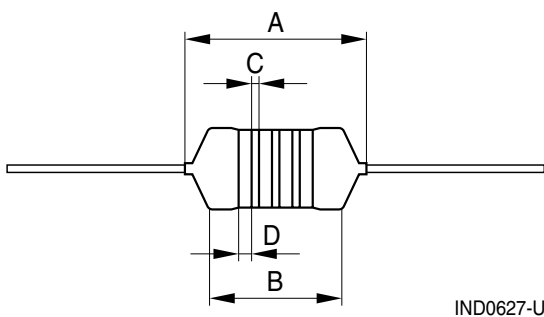
1 st band	2 nd band	3 rd band	4 th band	Decoding
Yellow 4	Violet 7	Gold $\times 0.1 \mu\text{H}$	Silver $\pm 10\%$	$= 47 \times 0.1 \mu\text{H} \pm 10\% = 4.7 \mu\text{H} \pm 10\%$
Brown 1	Green 5	Red $\times 100 \mu\text{H}$	Gold $\pm 5\%$	$= 15 \times 100 \mu\text{H} \pm 5\% = 1500 \mu\text{H} \pm 5\%$

RF chokes

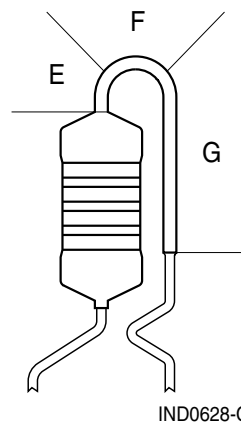
General

Information about the exterior of the RF choke

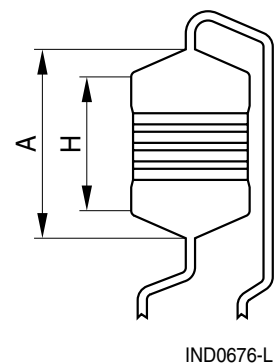
Code		
B	Minimum substrate lacquer range	Flange to flange
A	Maximum substrate lacquer range	Maximum lacquer coated length (acc. to type)
B	Minimum coating lacquer range	Flange to flange (B)
A	Maximum coating lacquer range	Maximum lacquer coated length (acc. to type)
	Substrate lacquer visible on the body	max. 1 mm ²
	Maximum height of lacquer bubble	0.3 mm, but < max. until body diameter
	Maximum size of crater (lacquer bubble)	SBC, MCC: diameter 1.5 mm BC, HBC, LBC, HLBC: diameter 2 mm
	Hole in the lacquer and glue-cone	max. 0.5 mm ²
	Visible wire (missing lacquer)	Max. length 1.5 mm, but it must be electrically insulated
	Visible wire contour under the lacquer coating	Allowable
B, H	Area of colour coding	Flange to flange
C, D	Minimum size of coding band	$D \geq 0.1$ mm, $C \geq 0.1$ mm (by different colours it is not necessary), circumference $\geq 270^\circ$
E, F, G	Maximum exfoliation size on the lead insulation lacquer in defined area	E: 0.5 mm ² ; F: it is not allowed; G: 0.75 mm ²



B78108S
B78108T
B82141A
B82143A
B82144A
B82145A



B78148S
B78148T
B82141B
B82143B



B82144B