



Chokes for data and signal lines

B82789*N

I core choke, EIA 1812

SMD

Rated voltage 42 VAC/80 VDC
Rated current 150 to 300 mA
Rated inductance 11 to 100 μ H



Construction

- Current-compensated double choke with ferrite I core
- Bifilar winding (B82789C0...)
- Sector winding (B82789S0...)

Features

- Suitable for reflow soldering
- For gold-plated terminals conductive adhesion possible

Function

- B82789C0:
Suppression of asymmetrical interference coupled in on lines, whereas data signals up to some MHz can pass unaffectedly
- B82789S0:
Suppression of asymmetrical (by L_R) and symmetrical interference (by L_S) coupled in on lines. The high-frequency portions of the symmetrical data signal are decreased so far that EMC problems can be significantly reduced

Applications

- Automotive applications, e.g. CAN bus
- Industrial automation
- Telecommunications

Terminals

Two versions: Gold plated and lead-free tinned

Marking

Marking on component:

Manufacturer, bifilar or sector winding (coded), L value (in nH), date of manufacture (coded)

Minimum data on reel:

Manufacturer, part number, ordering code, L value (in nH), quantity, date of packing

Delivery mode

12-mm blister tape, reel packing (330-mm \varnothing reel), packing unit: 2500 pcs.

Taping to IEC 60286-3. For details on taping and packing refer to data book "Chokes and Inductors", page 302.



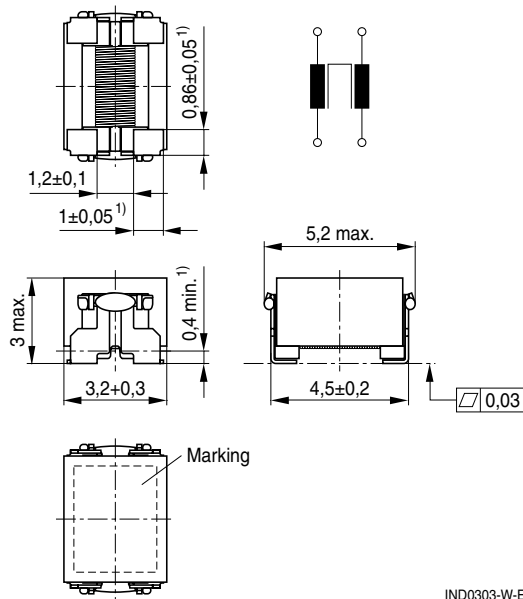
Chokes for data and signal lines

B82789*N

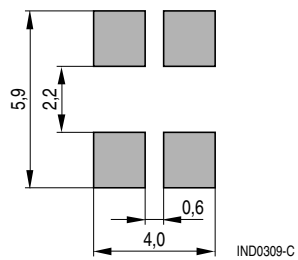
I core choke, EIA 1812

SMD

Dimensional drawing



Layout recommendation



1) Soldering area



Chokes for data and signal lines

B82789*N

I core choke, EIA 1812



Technical data and measuring conditions

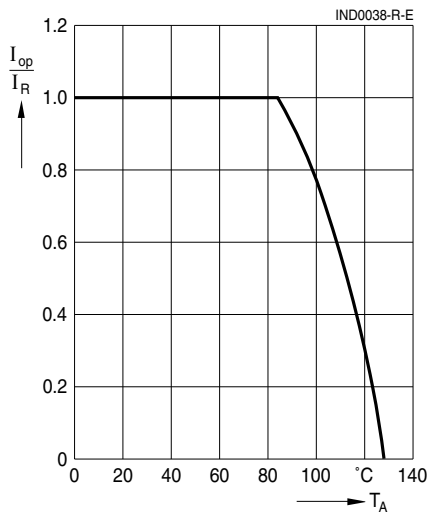
Rated voltage V_R	42 VAC (50/60 Hz) 80 VDC
Rated current I_R	Referred to 50 Hz and 85 °C ambient temperature
Rated inductance L_R	Measured with HP 4284A at 100 kHz and 0.1 mA
Inductance tolerance	-30/+50%
Inductance decrease $\Delta L/L_0$	<10% at DC magnetic bias with I_R
Stray inductance L_S	Measured with HP 4284A at 100 kHz and 5 mA
DC resistance R_{max}	Measured at 20 °C ambient temperature
Solderability (IEC 60068-2-58)	(235 ± 3) °C, (2 ± 0,3) s Wetting of soldering area ≥95%
Climatic category (IEC 60068-1)	55/125/56 (-55 °C/+125 °C/56 days damp heat test)
Weight	Approx. 0.16 g

Characteristics and ordering codes

L_R μH	L_S, typ μH	I_R mA	R_{max} mΩ	V_{test} VDC, 2 s	Ordering code	
					gold-plated terminals	tinned terminals
11	0.06	300	250	250	B82789C0113N001	B82789C0113N002
22	0.10	250	580	250	B82789C0223N001	B82789C0223N002
22	3.0	250	580	250	B82789S0223N001	B82789S0223N002
51	0.10	250	550	250	B82789C0513N001	B82789C0513N002
100	0.25	150	1500	250	B82789C0104N001	B82789C0104N002

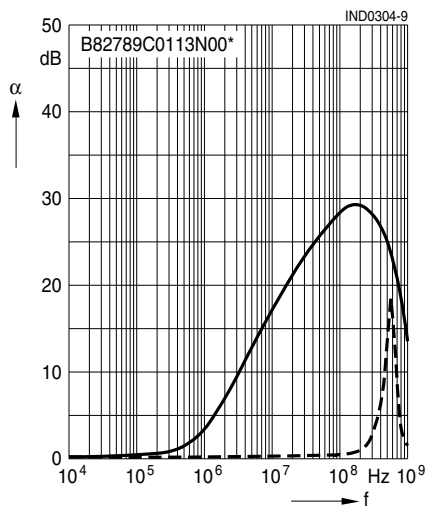


Current derating I_{op}/I_R
versus ambient temperature $T_A = 85\text{ °C}$



Insertion loss α_e (typical values at $Z = 50\ \Omega$)
— asymmetrical, all branches in parallel (common mode)
- - - symmetrical (differential mode)

$L_R = 11\ \mu\text{H}$



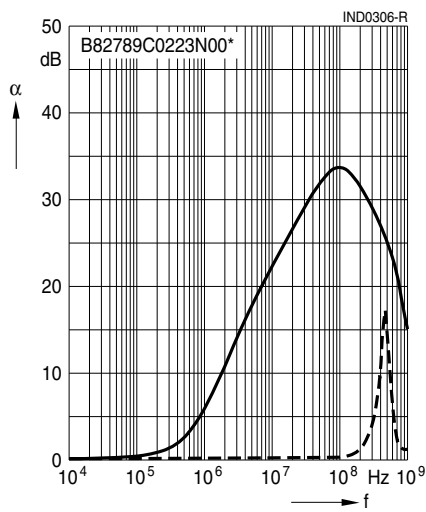


Insertion loss α_e (typical values at $Z = 50 \Omega$)

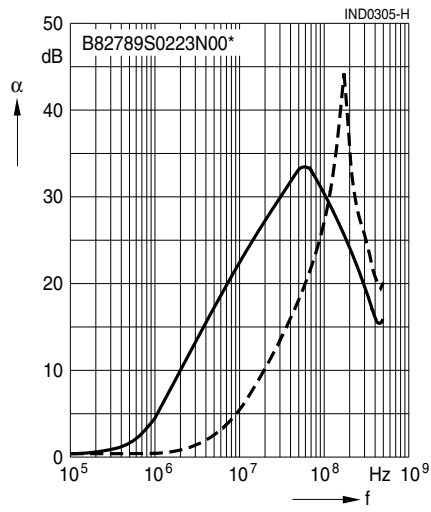
———— asymmetrical, all branches in parallel (common mode)

- - - - - symmetrical (differential mode)

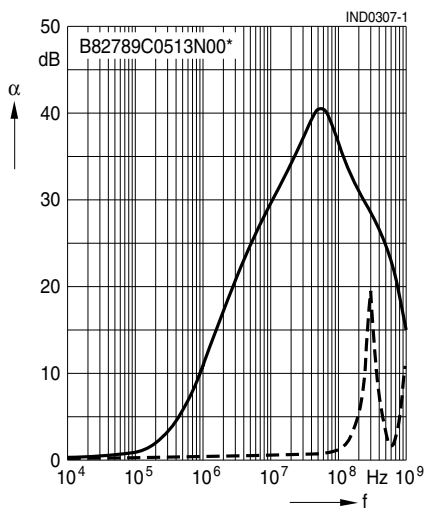
$L_R = 22 \mu\text{H}$ (bifilar winding)



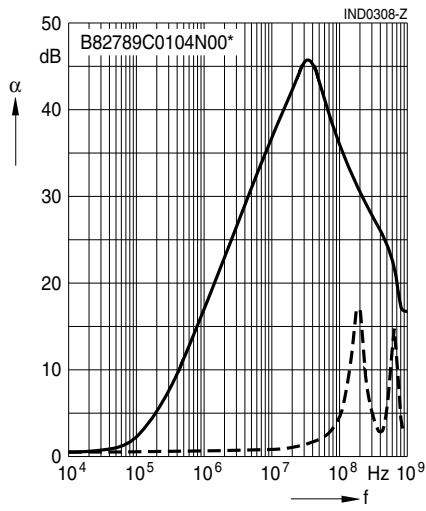
$L_R = 22 \mu\text{H}$ (sector winding)



$L_R = 51 \mu\text{H}$



$L_R = 100 \mu\text{H}$





Chokes for data and signal lines

B82789*N

I core choke, EIA 1812



Published by EPCOS AG

Corporate Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

☎ ++49 89 636 09, FAX (0 89) 636-2 26 89

© EPCOS AG 2004. Reproduction, publication and dissemination of this brochure and the information contained therein without EPCOS' prior express consent is prohibited.

Purchase orders are subject to the General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry recommended by the ZVEI (German Electrical and Electronic Manufacturers' Association), unless otherwise agreed.

This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

Due to technical requirements components may contain dangerous substances. For information on the type in question please also contact one of our Sales Offices.