



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.



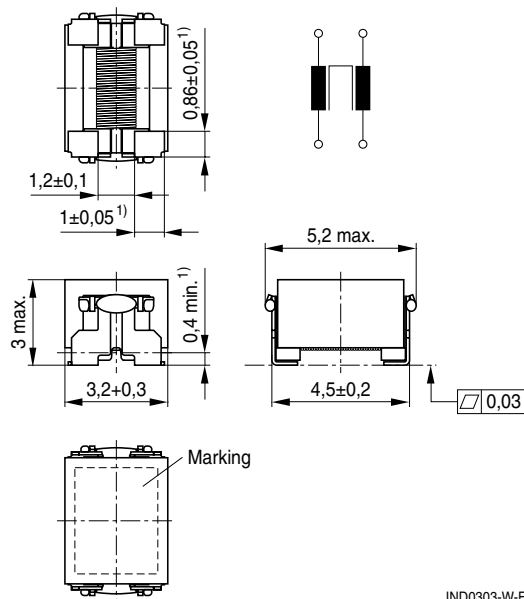
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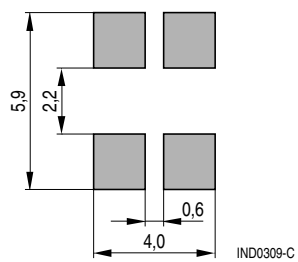
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Dimensional drawing



Layout recommendation



1) Soldering area



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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



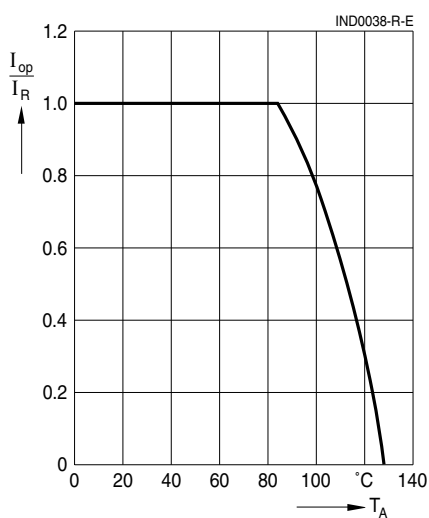
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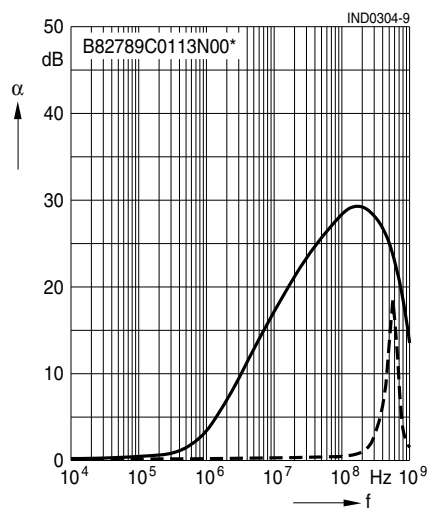
Current derating I_{op}/I_R
versus ambient temperature $T_A = 85\text{ °C}$



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

- asymmetrical, all branches in parallel (common mode)
- - - symmetrical (differential mode)

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





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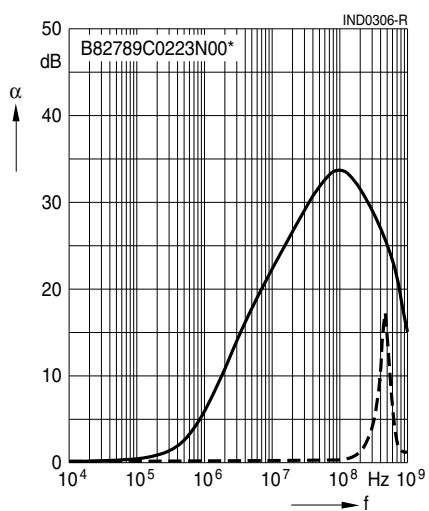


Insertion loss α_e (typical values at $Z = 50 \Omega$)

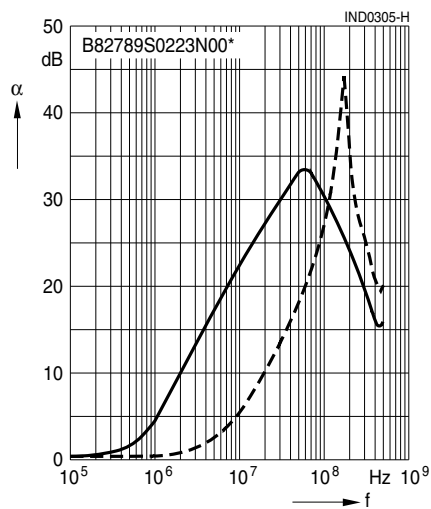
— asymmetrical, all branches in parallel (common mode)

- - - symmetrical (differential mode)

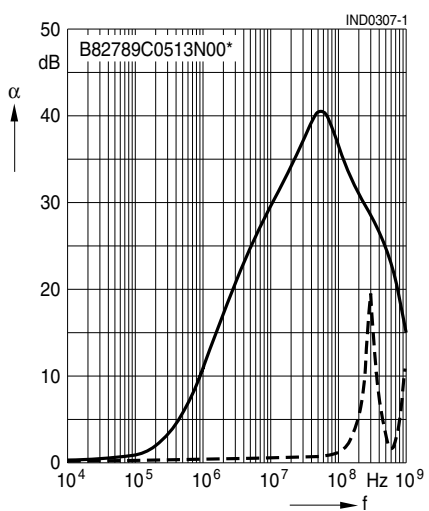
$L_R = 22 \mu\text{H}$ (bifilar winding)



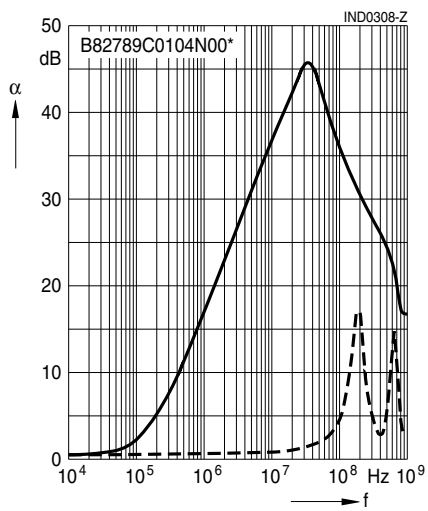
$L_R = 22 \mu\text{H}$ (sector winding)



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



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





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