



Chokes for Data and Signal Lines

B82799

CAN Bus Choke, EIA 1812



Rated voltage 42 Vac/80 Vdc
Rated current 100 to 300 mA
Rated inductance 11 to 470 μ H



Construction

- Current-compensated ring core double choke with ferrite core
- Bifilar winding (B82799-C...)
- Sector winding (B82799-S...)

Features

- High performance
- Case flame-retardant as per UL 94 V-0
- Suitable for reflow soldering and conductive adhesion
- Operation up to 150°C (for $L_R < 500 \mu$ H)

Applications

- B82799-C:
Suppression of asymmetrical interference coupled in on lines, whereas data signals up to some MHz can pass unaffectedly
- B82799-S:
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

Terminals

Gold plated

Marking

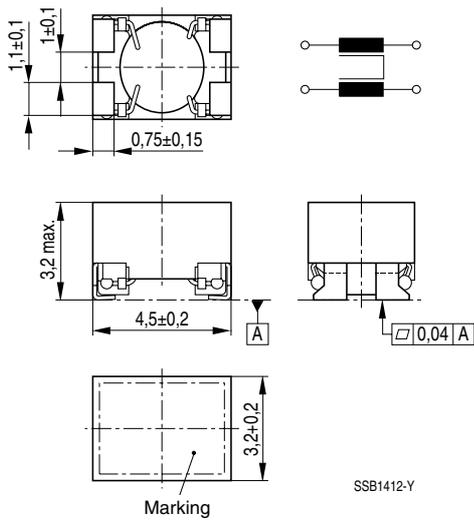
Manufacturer, inductance value (coded), date code

Delivery mode

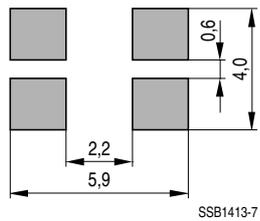
Blister tape, reel packing.
For details on taping, packing and packing units see data book 2000 "Chokes and Inductors", page 302.



Dimensional drawing



Layout recommendation





General technical data

Rated voltage V_R	42 Vac (50/60 Hz) 80 Vdc
Rated current I_R	referred to 50 Hz and 60 °C ambient temperature
Rated current I_R for high temperature applications	min. 100 mA referred to 50 Hz and 150 °C ambient temperature
Rated inductance L_R	measured with HP 4275A at 100 kHz and 0,1 mA
Inductance tolerance	$\pm 30\%$ for $L_R \leq 51 \mu\text{H}$ $-30/+50\%$ for $L_R > 51 \mu\text{H}$
Inductance decrease $\Delta L/L_0$	$< 10\%$ at dc magnetic bias with I_R
Stray inductance L_S	measured with HP 4275A; measuring frequency at $L_R \leq 11 \mu\text{H} = 1 \text{ MHz}, 5 \text{ mA}$ $L_R > 11 \mu\text{H} = 100 \text{ kHz}, 5 \text{ mA}$
DC resistance R_{typ}	measured at 20 °C ambient temperature
Solderability	(235 \pm 3) °C, (2 \pm 0,3) s wetting of soldering area $\geq 95\%$ in accordance with IEC 60068-2-58
Climatic category	55/150/56 (-55 °C/+150 °C/56 days damp heat test) in accordance with EN 60068-1
Weight	Approx. 0,1 g

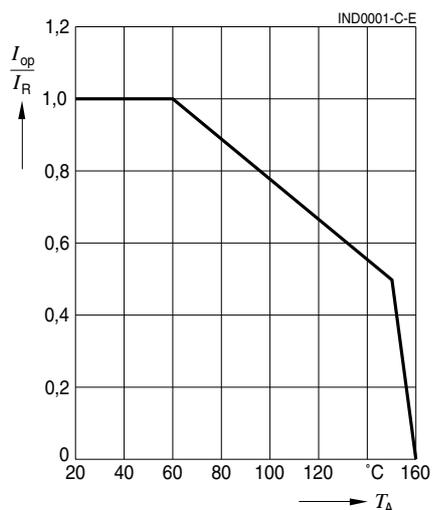
Characteristics and ordering codes

$L_R^{1)}$ μH	L_S, typ μH	I_R mA	R_{typ} m Ω	V_T Vdc, 2 s	Ordering code
11	0,045	300	160	250	B82799C0113N001
22	1,30	250	220	250	B82799S0223N001
33	1,80	200	270	250	B82799S0333N001
51	2,70	200	310	250	B82799S0513N001
100	0,15	300	180	750	B82799C0104N001
220	0,20	200	250	750	B82799C0224N001
470	0,35	200	410	750	B82799C0474N001

1) Types up to 2200 μH upon request.



Current derating I_{op}/I_R
versus ambient temperature T_A



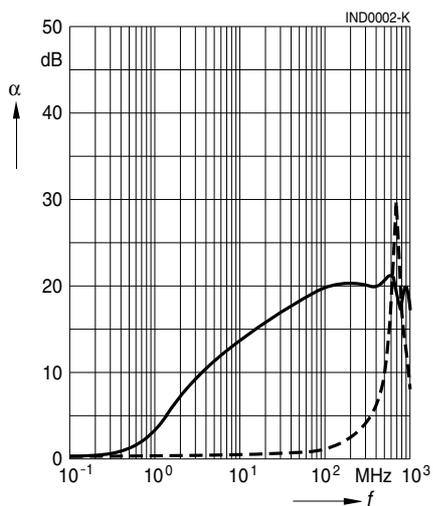
Rated temperature $T_R = 60\text{ °C}$

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

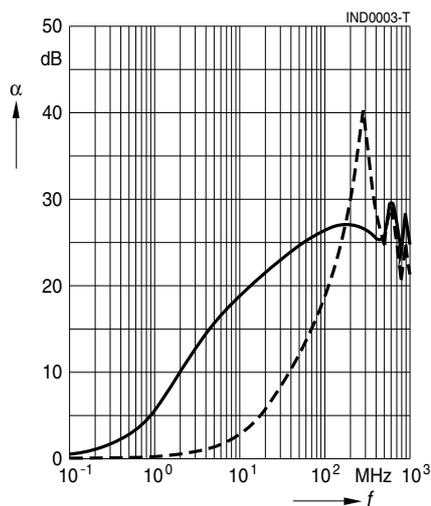
———— asymmetrical, all branches in parallel (common mode)

- - - - - symmetrical (differential mode)

B82799C0113N001



B82799S0223N001



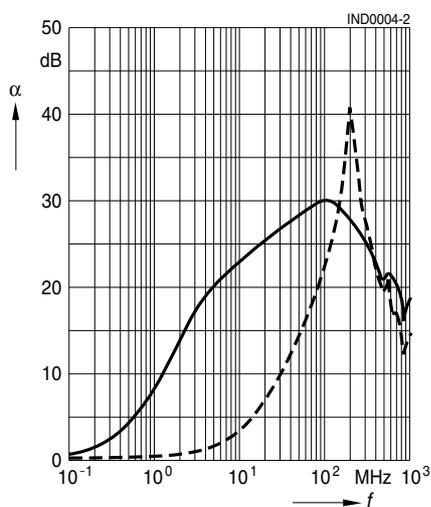


Insertion loss α_e (typical values at $Z = 50 \Omega$)

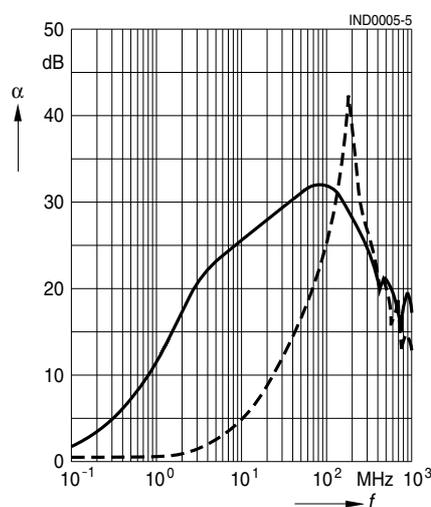
———— asymmetrical, all branches in parallel (common mode)

- - - - - symmetrical (differential mode)

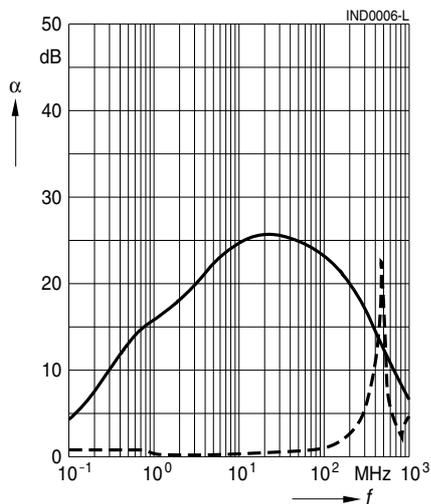
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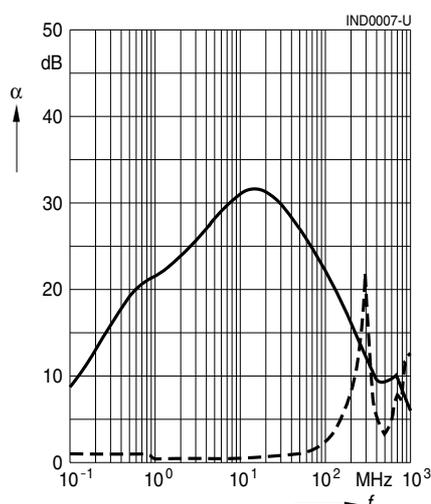
B82799S0513N001



B82799C0104N001



B82799C0224N001



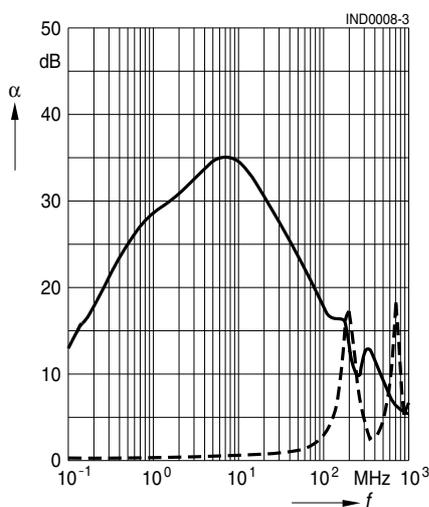


Insertion loss α_e (typical values at $Z = 50 \Omega$)

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

- - - - - symmetrical (differential mode)

B82799C0474N001



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