



**Rated voltage** 42 Vac/80 Vdc  
**Rated current** 100 to 300 mA  
**Rated inductance** 11 to 470  $\mu$ 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

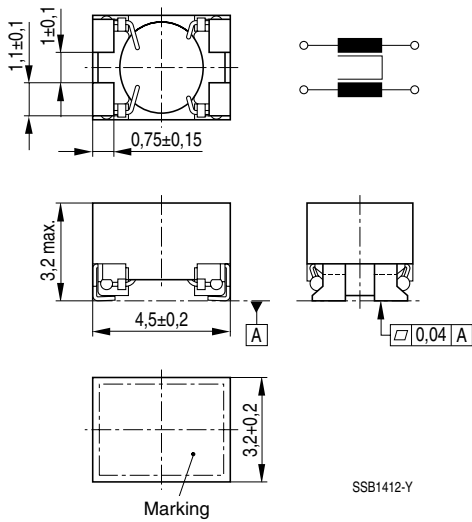
#### Marking

Manufacturer, inductance value (coded),  
date code

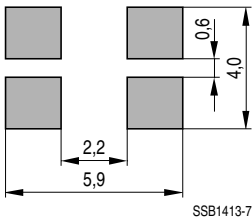
#### Delivery mode

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

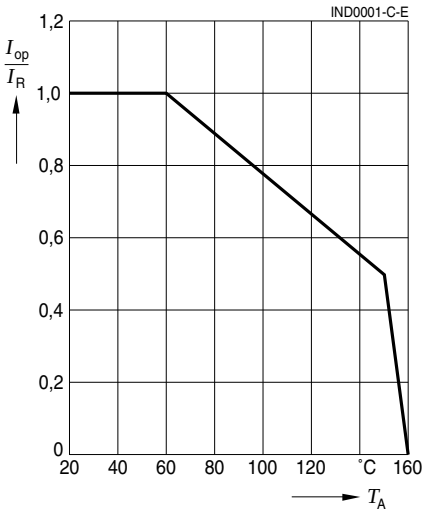
|                                                       |                                                                                                                                                       |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------------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

## Characteristics and ordering codes

| $L_R^{1)}$<br>$\mu\text{H}$ | $L_{S, typ}$<br>$\mu\text{H}$ | $I_R$<br>mA | $R_{typ}$<br>m $\Omega$ | $V_T$<br>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  $\mu\text{H}$  upon request.

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



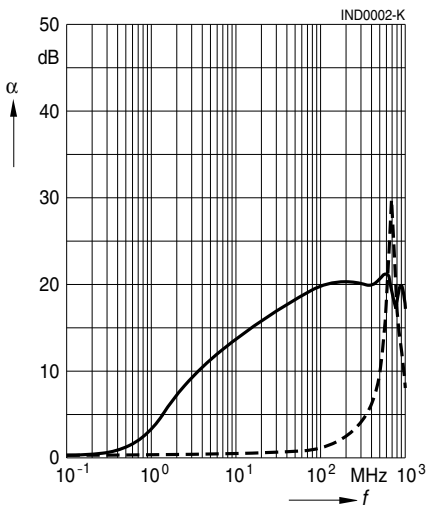
Rated temperature  $T_R = 60\text{ °C}$

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

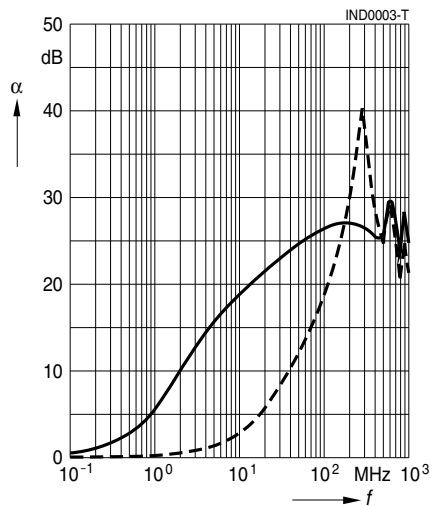
— asymmetrical, all branches in parallel (common mode)

- - - - - symmetrical (differential mode)

B82799C0113N001



B82799S0223N001



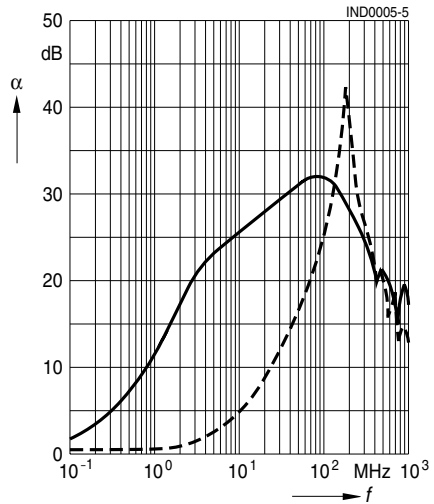
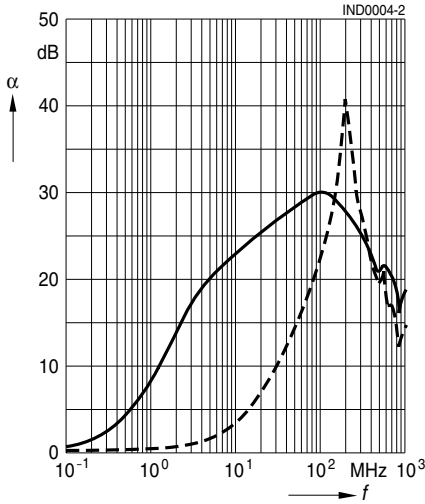
**Insertion loss  $\alpha_e$**  (typical values at  $Z = 50 \Omega$ )

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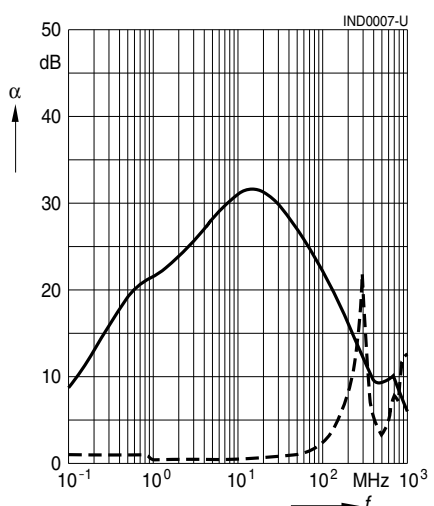
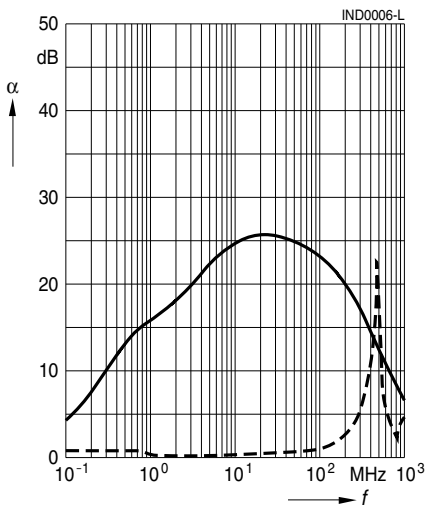
B82799S0333N001

B82799S0513N001



B82799C0104N001

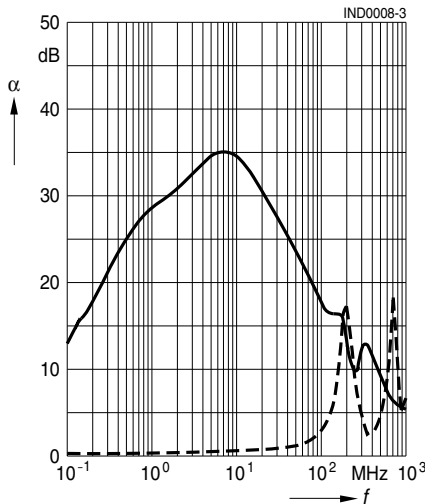
B82799C0224N001



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

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

B82799C0474N001



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