EPCOS

Chokes for data and signal lines

Double chokes

Series/Type: **B82790**
Date: December 2006

SMD

Rated voltage 42/80 V AC/DC
Rated current 200 to 1000 mA
Rated inductance 5 µH to 4.7 mH

Construction

- Current-compensated ring core choke with ferrite core
- Bifilar winding (B82790C0*)
- Sector winding (B82790S0*)

Features

- Case flame-retardant as per UL 94 V-0
- Suitable for reflow soldering

Special types for conductive adhesion
and ambient temperatures up to 150 °C on request

Applications

- B82790C0*:
  Suppression of asymmetrical interference coupled in on lines, whereas data signals up to some MHz can pass unaffectedly
- B82790S0*:
  Suppression of asymmetrical and symmetrical interference 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

- Lead-free tinned

Marking

Manufacturer, ordering code (short form),
date of manufacture, coded (year, day of week, calender week)

Delivery mode

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

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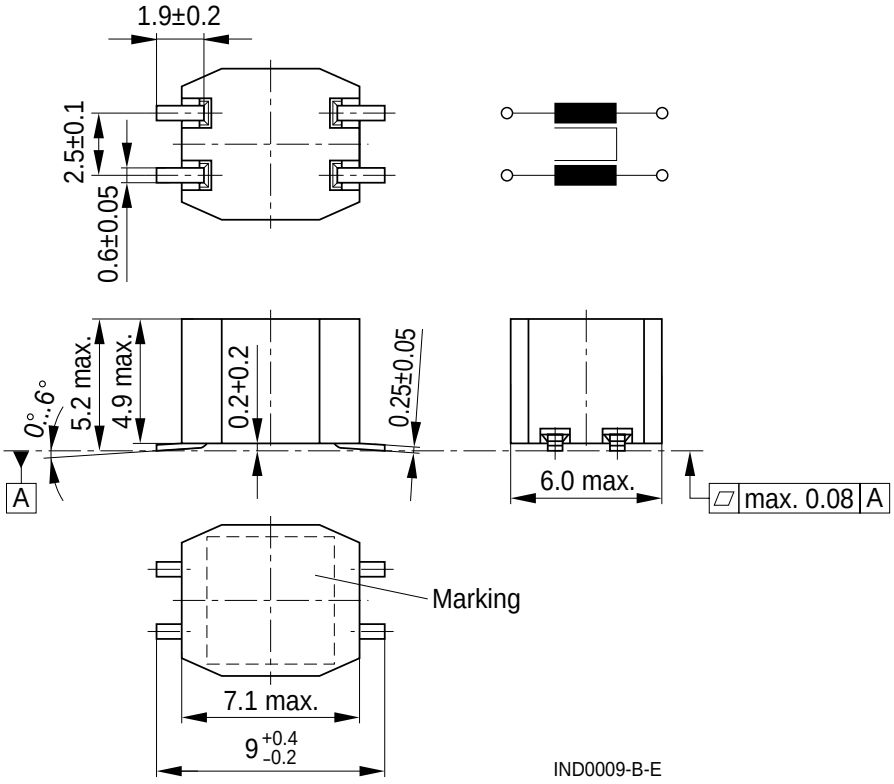
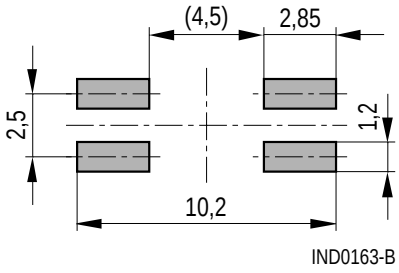
Dimensional drawing



Layout recommendation



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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 60 °C ambient temperature
Rated inductance L_R	Measured with HP 4275A at L ≤ 1 mH = 100 kHz, 0.1 mA L > 1 mH = 10 kHz, 0.1 mA (specified per winding)
Inductance tolerance	L ≤ 0.47 mH: ± 30 % L > 0.47 mH: – 30/+ 50 %
Inductance decrease $\Delta L/L_0$	< 10% at dc magnetic bias with I_R
Stray inductance L_{stray}	Measured with HP 4275A. Measuring frequency at L ≤ 11 µH = 1 MHz, 5 mA L > 11 µH = 100 kHz, 5 mA
DC resistance R_{typ}	Typical values, measured at 20 °C ambient temperature
Solderability	(215 ± 3) °C, (3 ± 0,3) s wetting of soldering area ≥ 95 % to IEC 60068-2-58
Climatic category	40/125/56 (–40 °C/+125 °C/56 days damp heat test) to IEC 60068-1
Weight	Approx. 0.3 g

Characteristics and ordering codes

L_R mH	$L_{stray, typ}$ nH	I_R mA	R_{typ} mΩ	V_T VDC, 2 s	Ordering code[1)]
0.005	50	1000	100	250	B82790C0502N201
0.011	50	500	120	250	B82790C0113N201
0.025	150	500	130	250	B82790C0253N201
0.025	1500	500	130	250	B82790S0253N201
0.051	200	500	160	250	B82790C0513N201
0.051	2000	500	160	250	B82790S0513N201
0.470	200	500	200	750	B82790C0474N215
1.0	250	500	200	750	B82790C0105N240
2.2	250	400	400	750	B82790C0225N265
4.7	300	200	550	750	B82790C0475N265

1) Special types for conductive adhesion and ambient temperatures of up to 150 °C upon request.

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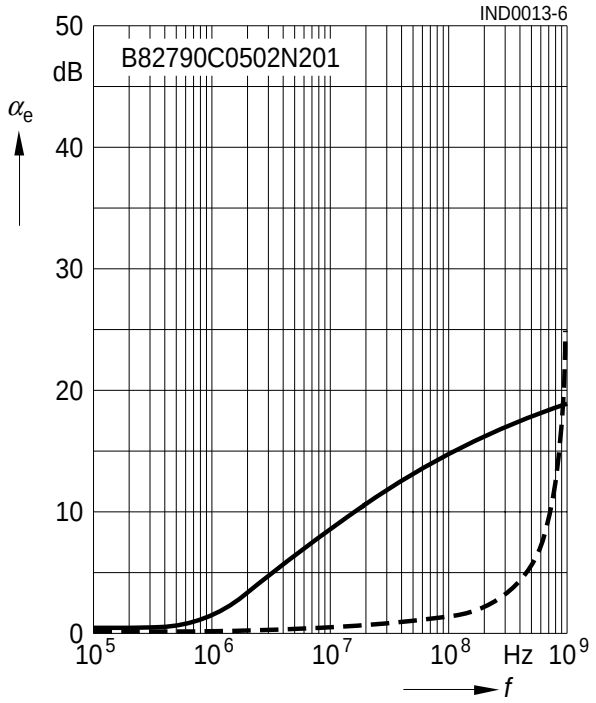
Insertion loss α_e (typical values at Z = 50 Ω)

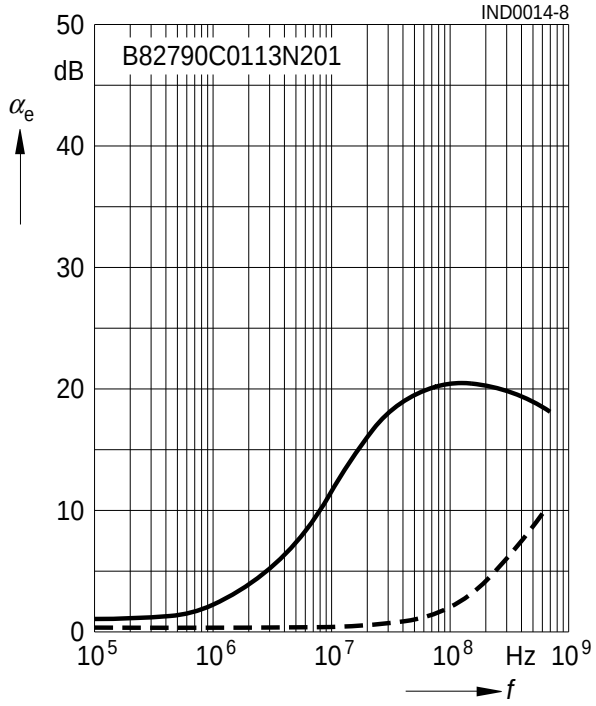
——— asymmetrical, all branches in parallel (common mode)

- - - - - - - symmetrical (differential mode)

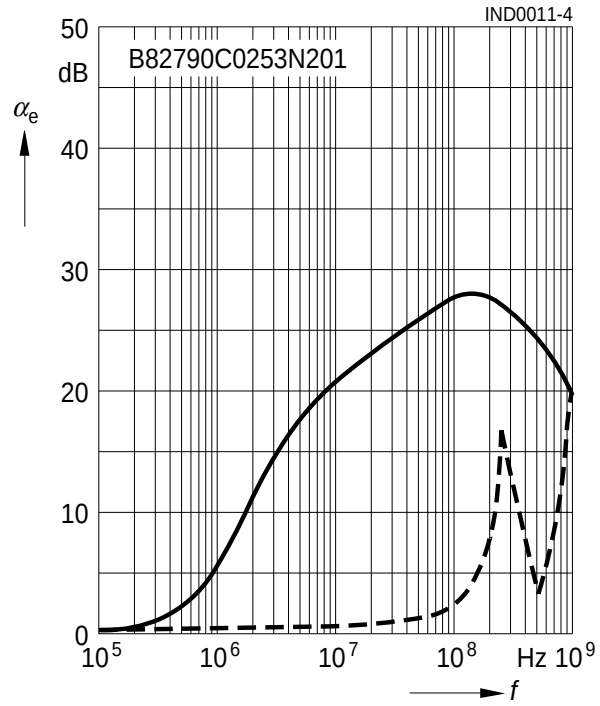
L_R = 0.005 mH



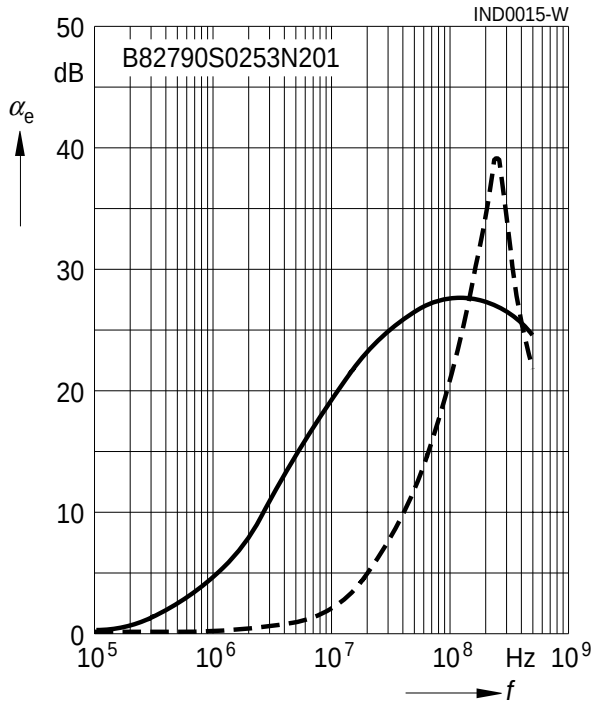
L_R = 0.011 mH



L_R = 0.025 mH (low L_{stray})



L_R = 0.025 mH (high L_{stray})



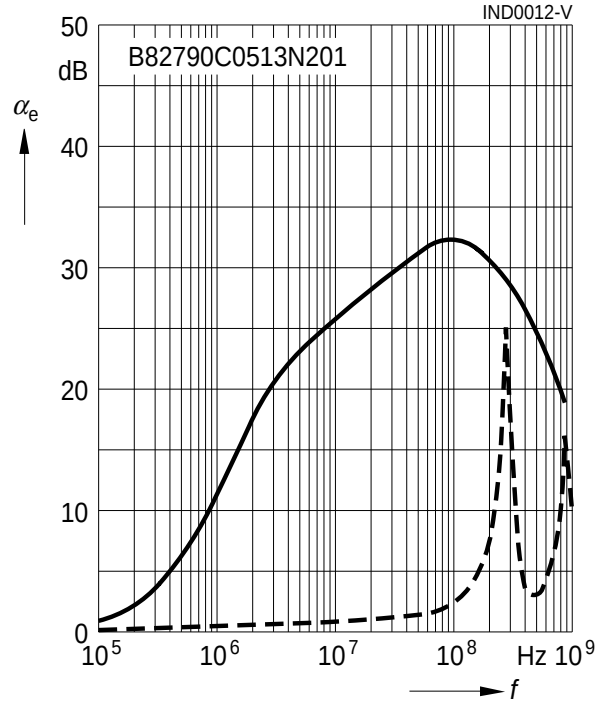
SMD

Insertion loss α_e (typical values at Z = 50 Ω)

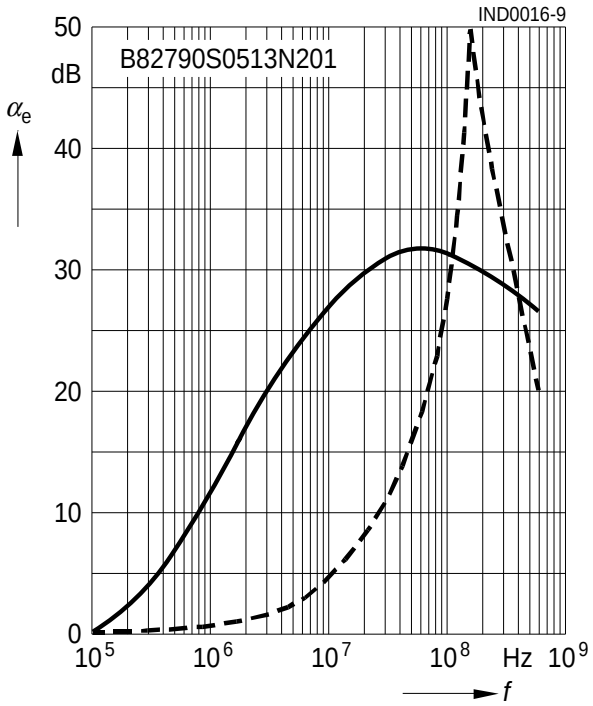
——— asymmetrical, all branches in parallel (common mode)

- - - - - - - symmetrical (differential mode)

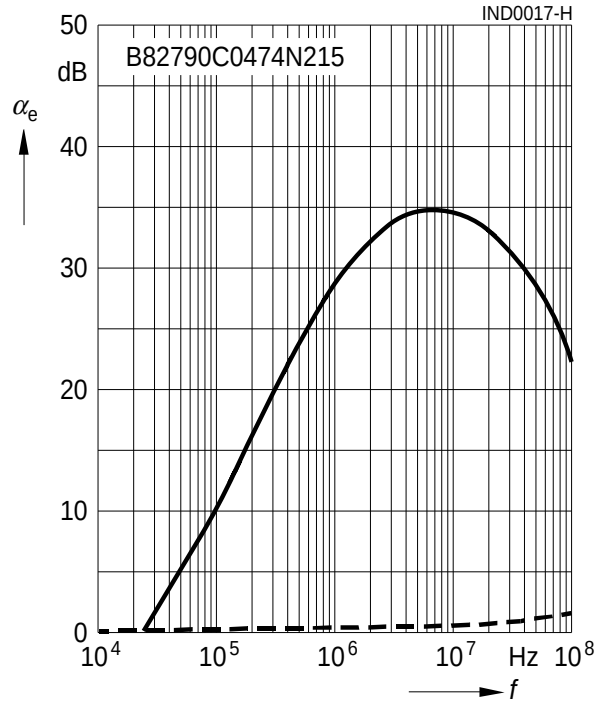
L_R = 0.051 mH (low L_S)



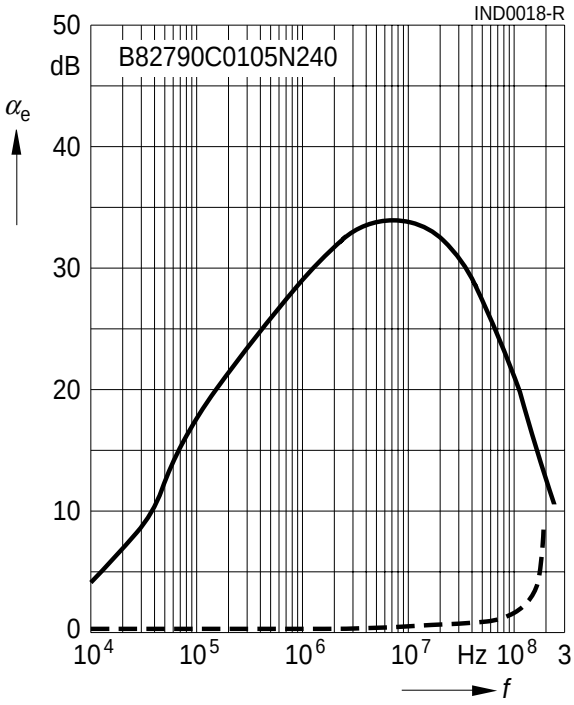
L_R = 0.051 mH (high L_S)



L_R = 0.47 mH



L_R = 1.0 mH

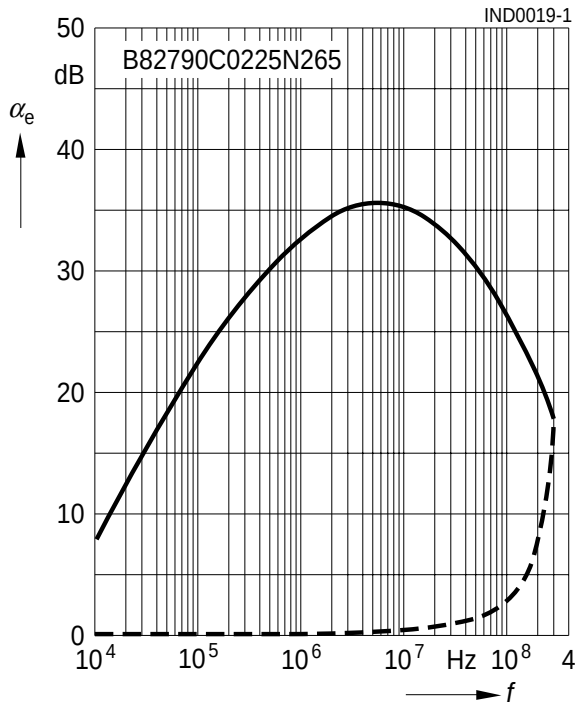


Insertion loss α_e (typical values at Z = 50 Ω)

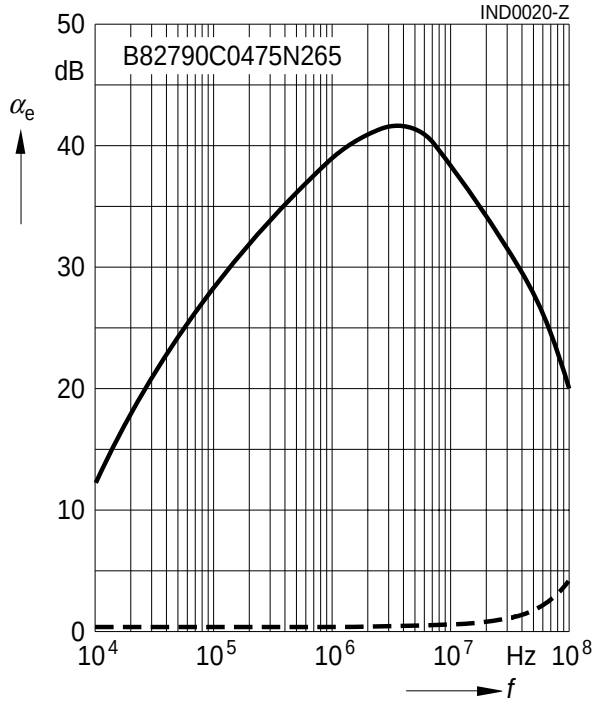
——— asymmetrical, all branches in parallel (common mode)

- - - - - - - symmetrical (differential mode)

L_R = 2.2 mH



L_R = 4.7 mH



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