

Chokes for Data and Signal Lines
B82793C0*/K0*
Double Chokes
B82793S0*/L0*
SMD
Rated voltage 42 VAC/80 VDC
Rated current 400 to 2500 mA
Rated inductance 5 μ H to 4,7 mH

Construction

- Current-compensated ring core choke with ferrite core
- Bifilar winding (B82793C0*/K0*)
- Sector winding (B82793S0*/L0*)

Features

- High rated currents
- Reduced component height
- Case flame-retardant as per UL 94 V-0
- Suitable for reflow soldering

Applications

- B82793C0*/K0*:
Suppression of asymmetrical interference coupled in on lines, whereas data signals up to some MHz can pass unaffectedly.
- B82793S0*/L0*:
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

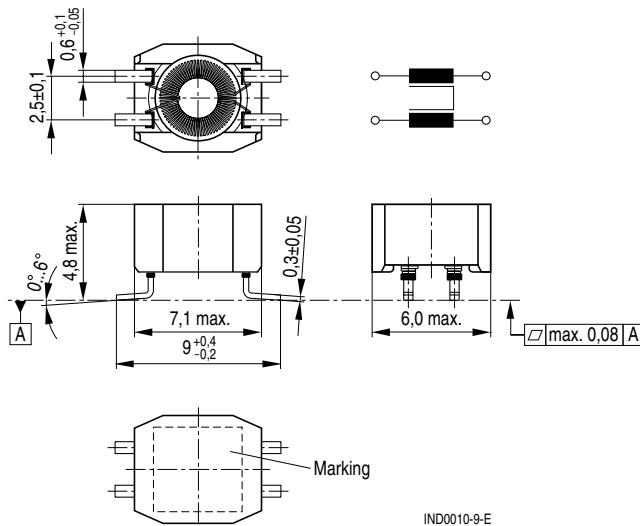
Marking

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

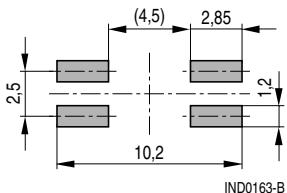
Delivery mode

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


IND0010-9-E

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 Measuring frequency at $L \leq 1 \text{ mH} = 100 \text{ kHz}, 0,1 \text{ mA}$ $L > 1 \text{ mH} = 10 \text{ kHz}, 0,1 \text{ mA}$ (specified per winding)
Inductance tolerance	$L \leq 0,47 \text{ mH}: \pm 30 \%$ $L > 0,47 \text{ mH}: -30/+ 50 \%$
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 $L \leq 11 \mu\text{H} = 1 \text{ MHz}, 5 \text{ mA}$ $L > 11 \mu\text{H} = 100 \text{ kHz}, 5 \text{ mA}$
DC resistance R_{typ}	Typical values, measured at 20 °C ambient temperature
Solderability	$(215 \pm 3) \text{ }^{\circ}\text{C}, (3 \pm 0,3) \text{ s}$ wetting of soldering area $\geq 95 \%$ in accordance with IEC 60068-2-58
Climatic category	40/125/56 (−40 °C/+125 °C/56 days damp heat test) in accordance with IEC 60068-1
Weight	Approx. 0,25 g

Characteristics and ordering codes

L_R mH	$L_{S, \text{typ}}$ nH	I_R ¹⁾ mA	R_{typ} mΩ	V_T VDC, 2 s	Ordering code
0,005	50	1200	100	250	B82793C0502N201
0,006	50	2500	22	250	B82793K0602N201
0,006	400	2500	22	250	B82793L0602N201
0,011	50	800	120	250	B82793C0113N201
0,025	1500	800	130	250	B82793S0253N201
0,051	2000	800	160	250	B82793S0513N201
0,470	200	700	200	750	B82793C0474N215
1,0	250	700	200	750	B82793C0105N265
2,2	250	500	400	750	B82793C0225N265
4,7	300	400	550	750	B82793C0475N265

Sample kit available: Ordering code B82793X001

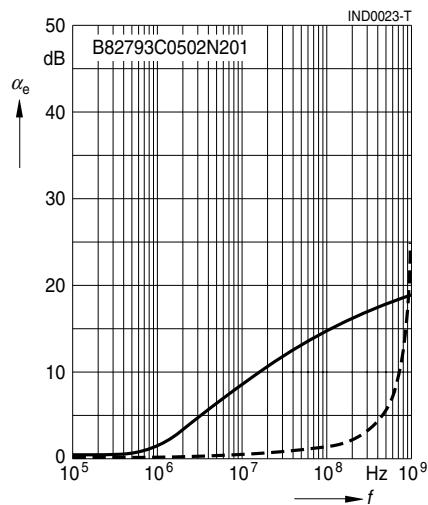
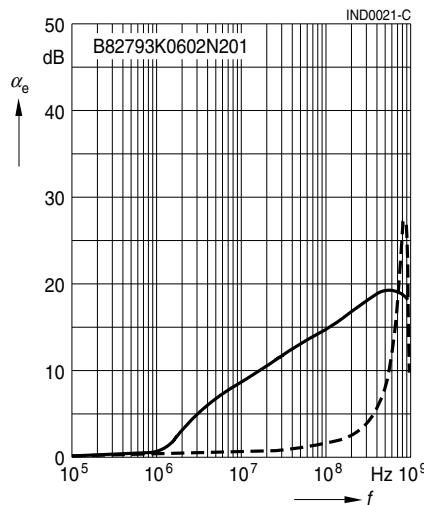
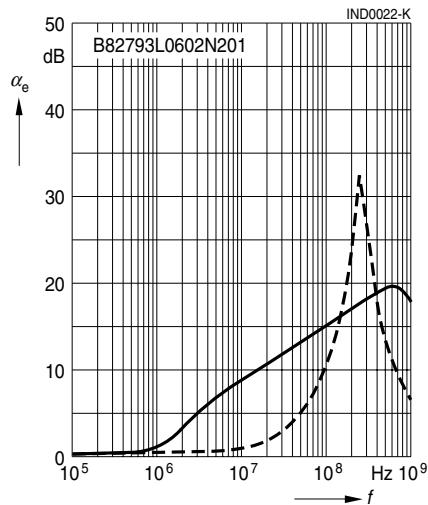
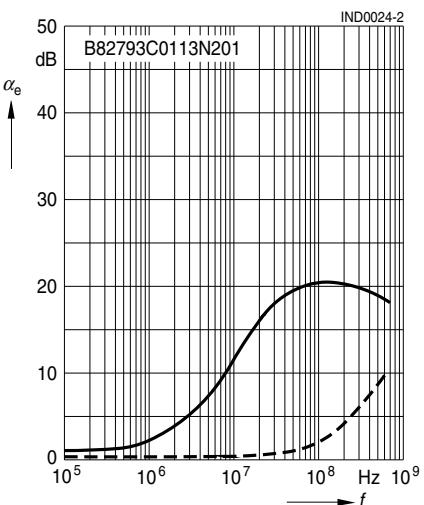
¹⁾ Types with higher rated current upon request.

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

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

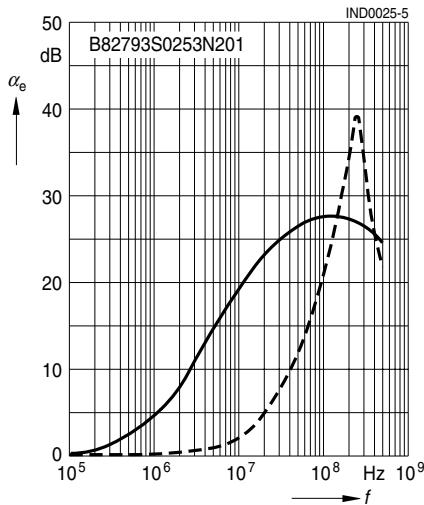
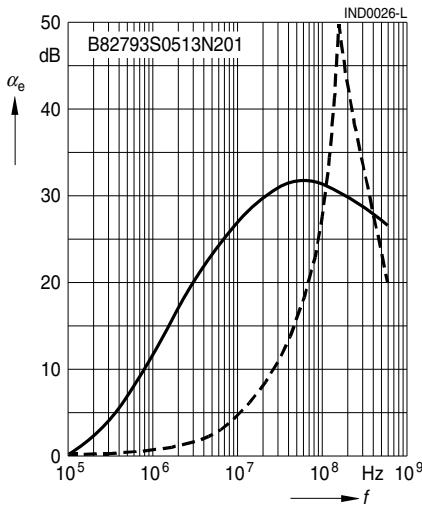
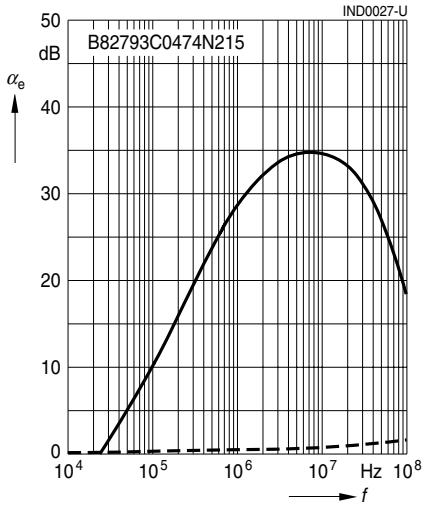
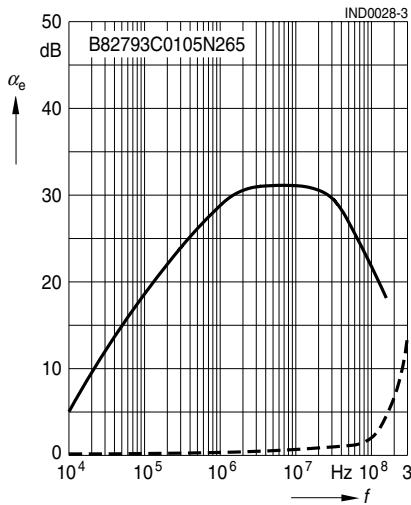
- - - - - symmetrical (differential mode)

 $L_R = 0,005 \text{ mH}$

 $L_R = 0,006 \text{ mH} (\text{low } L_S)$

 $L_R = 0,006 \text{ mH} (\text{high } L_S)$

 $L_R = 0,011 \text{ mH}$


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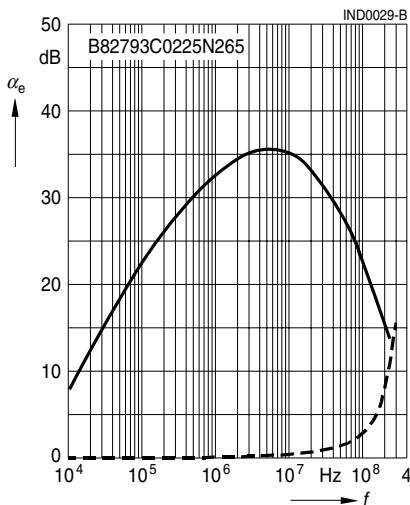
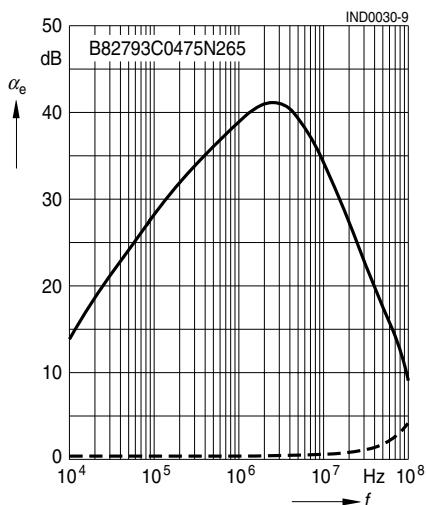
Insertion loss α_e (typical values at $Z = 50 \Omega$)

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

 $L_R = 0,025 \text{ mH}$

 $L_R = 0,051 \text{ mH}$

 $L_R = 0,47 \text{ mH}$

 $L_R = 1,0 \text{ mH}$


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

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

 $L_R = 2,2 \text{ mH}$

 $L_R = 4,7 \text{ mH}$

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

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