EPCOS

EFD/EV/DE Cores

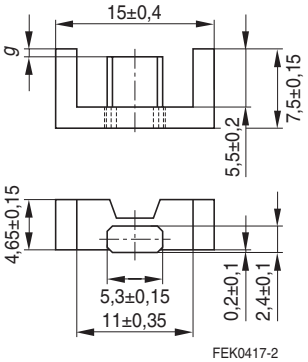
Series/Type: **EFD 15/8/5**

The following products presented in this data sheet are being withdrawn.

Ordering Code	Substitute Product	Date of Withdrawal	Deadline Last Orders	Last Shipments
B66414B6008T002		2003-08-08	2004-02-29	2004-08-31

For further information please contact your nearest EPCOS sales office, which will also support you in selecting a suitable substitute. The addresses of our worldwide sales network are presented at www.epcos.com/sales.

- E core with flattened, lower center leg for especially flat transformer design
- For DC/DC converters
- EFD cores are supplied as single units



Magnetic characteristics (per set)

$\Sigma l/A$ = 2,27 mm^{-1}
l_e = 34 mm
A_e = 15 mm^2
A_{min} = 12,2 mm^2
V_e = 510 mm^3

Approx. weight 2,8 g/set

Ungapped

Material	A_L value nH	μ_e	A_{L1min} nH	P_V W/set	Ordering code
N49	600 + 30/– 20 %	1080	330	< 0,11 (50 mT, 500 kHz, 100 °C)	B66413-G-X149
N87	780 + 30/– 20 %	1400	560	< 0,28 (200 mT, 100 kHz, 100 °C)	B66413-G-X187

Gapped

Material	A_L value nH	μ_e	g approx. mm	Ordering code
N87	100 ± 10 % 160 ± 15 %	180 288	0,17 0,08	B66413-U100-K187 B66413-U160-L187

The A_L value in the table applies to a core set comprising one ungapped core (dimension $g = 0$) and one gapped core (dimension $g > 0$).

Calculation factors (for formulas, see *"E cores: general information"*, page 382)

Material	Relationship between air gap – A_L value		Calculation of saturation current			
	K1 (25 °C)	*K2* (25 °C)	*K3* (25 °C)	*K4* (25 °C)	*K3* (100 °C)	*K4* (100 °C)
N87	29,7	– 0,676	44,2	– 0,796	33,2	– 0,873

Validity range: *K1*, *K2*: 0,10 mm < s < 1,00 mm
K3, *K4*: 30 nH < A_L < 280 nH

Coil former

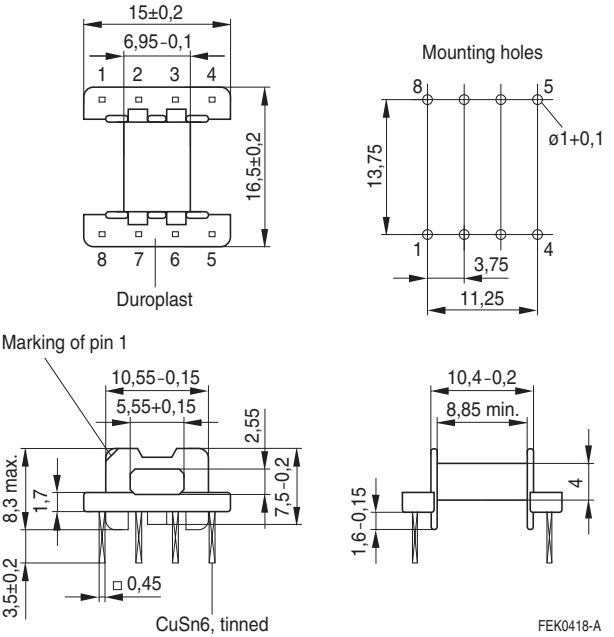
Material: GFR thermosetting plastic; UL 94 V-0, insulation class to IEC 60085:
B66414-B: F ≙ max.operating temperature 155 °C; color code green
B66414-W: H ≙ max.operating temperature 180 °C; color code black
Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s
Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3,5 s
Winding: see *"Processing Notes"*, page 157
Squared pins

Yoke

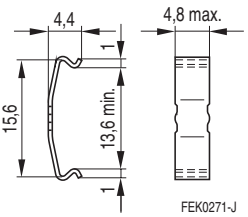
Material: Stainless spring steel (0,25 mm)

Coil former					Ordering code
Sections	A_N mm²	l_N mm	A_R value μΩ	Pins	
1	15,5	35,9	79,7	8	B66414-B1008-D1 B66414-W1008-D1
Yoke (ordering code per piece, 2 are required)					B66414-B2000

Coil former



Yoke



SMD

SMD coil former with J terminals

Material: GFR liquid crystal polymer (UL 94 V-0, insulation class to IEC 60085: F ≙ max. operating temperature 155 °C), color code black
Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 350 °C, 1 s
Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3,5 s
permissible soldering temperature for wire-wrap connection on coil former: 400 °C, 1 s
Winding: see *"Processing Notes"*, page 160

Yoke

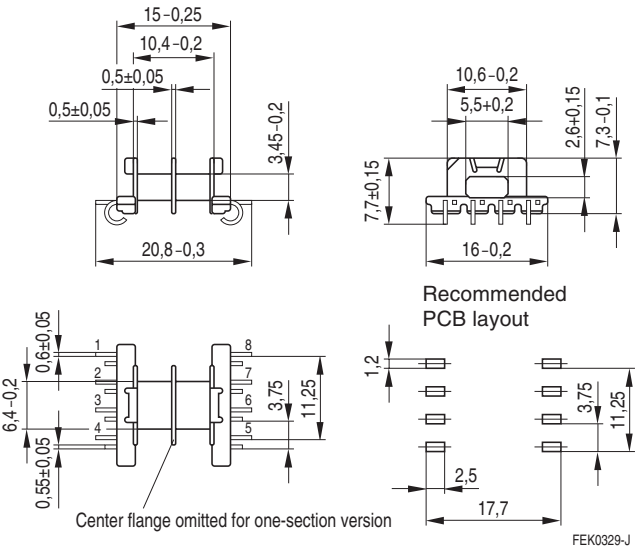
Material: Stainless spring steel (0,25 mm)
Mounting: Preferred assembly direction from the top

Cover plate

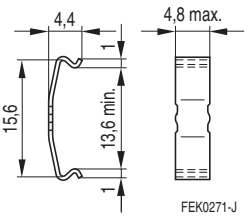
For marking and improved processing on assembly machines.
See under coil former for material and resistance to soldering heat.

Sections	A_N mm²	l_N mm	A_R value μΩ	Terminals	Ordering code
1	18,1	35,1	66,7	8	B66414-B6008-T1
2	17,1	35,1	70,5	8	B66414-B6008-T2
Yoke (ordering code per piece, 2 are required)					B66414-B2000
Cover plate					B66414-A7000

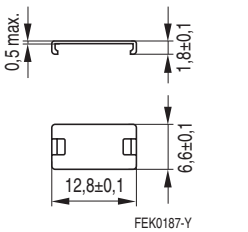
Coil former



Yoke



Cover plate



Herausgegeben von EPCOS AG
Marketing Kommunikation, Postfach 80 17 09, 81617 München, DEUTSCHLAND

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Diese Broschüre ersetzt die vorige Ausgabe.

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Published by EPCOS AG
Marketing Communications, P.O. Box 80 17 09, 81617 Munich, GERMANY

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This brochure replaces the previous edition.

For questions on technology, prices and delivery please contact the Sales Offices of EPCOS AG or the international Representatives.

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