

**EFD 15/8/5****Core****B66413**

- 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)**

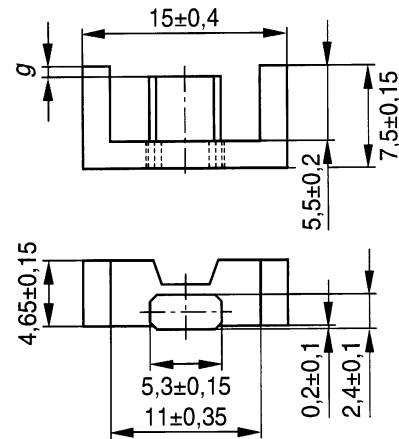
$$\Sigma/A = 2,27 \text{ mm}^{-1}$$

$$l_e = 34 \text{ mm}$$

$$A_e = 15 \text{ mm}^2$$

$$A_{\min} = 12,2 \text{ mm}^2$$

$$V_e = 510 \text{ mm}^3$$

**Approx. weight 2,8 g/set**

FEK0417-2

**Ungapped**

Material	$A_L$ value nH	$\mu_e$	$A_{L1\min}$ 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	$\mu_e$	$g$ approx. mm	Ordering code
N87	100 ± 10 %	180	0,17	B66413-U100-K187
	160 ± 15 %	288	0,08	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:  $K1, K2: 0,10 \text{ mm} < s < 1,00 \text{ mm}$   
 $K3, K4: 30 \text{ nH} < A_L < 280 \text{ nH}$

**Coil former**

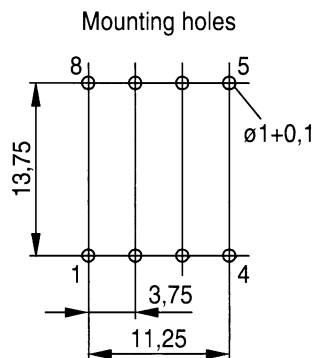
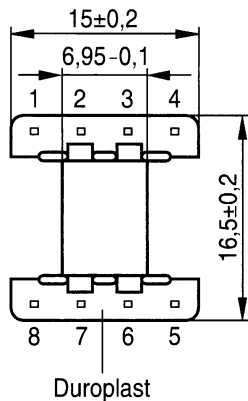
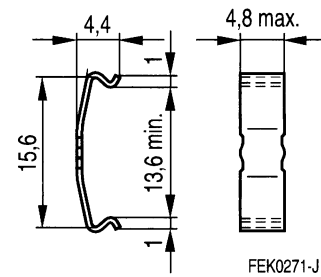
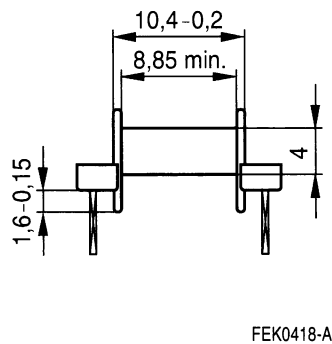
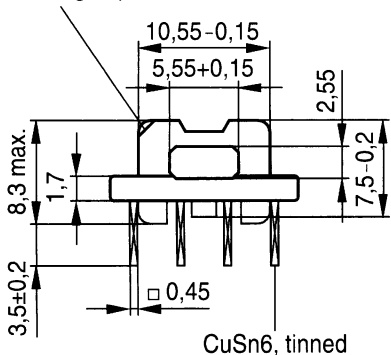
Material: GFR thermosetting plastic; UL 94 V-0, insulation class to IEC 60085:  
 B66414-B: F  $\triangleq$  max. operating temperature 155 °C; color code green  
 B66414-W: H  $\triangleq$  max. operating temperature 180 °C; color code black

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	$A_N$ mm <sup>2</sup>	$l_N$ mm	$A_R$ value $\mu\Omega$	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**

**Marking of pin 1**



**SMD coil former with J terminals**

Material: GFR liquid crystal polymer (UL 94 V-0, insulation class to IEC 60085: F  $\geq$  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**

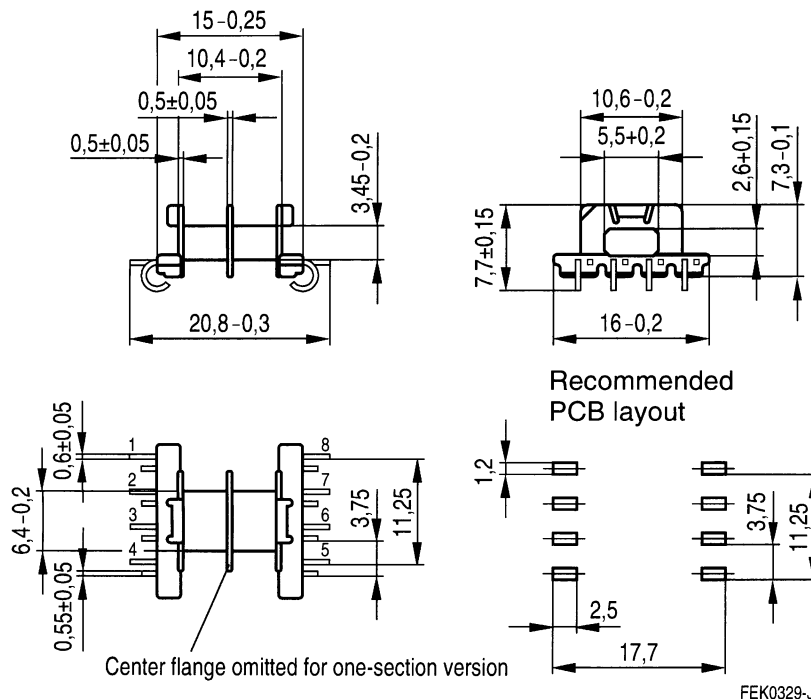
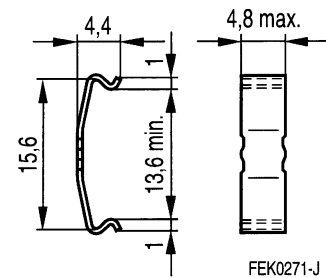
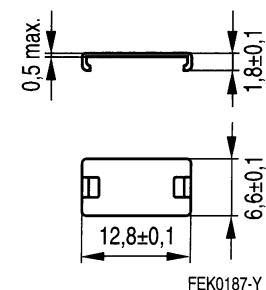
Material: Stainless spring steel (0,25 mm)

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	$A_N$ mm <sup>2</sup>	$l_N$ mm	$A_R$ value $\mu\Omega$	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**

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