

ETD 29/16/10
Core
B66358

- In accordance with IEC 61185
- For SMPS transformers with optimum weight/performance ratio at small volume
- ETD cores are supplied as single units

Magnetic characteristics (per set)

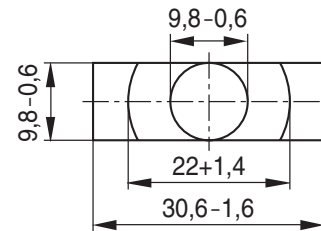
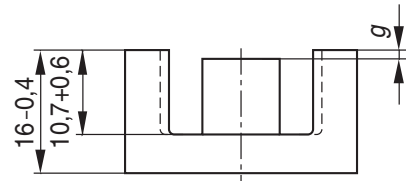
$$\Sigma/A = 0,93 \text{ mm}^{-1}$$

$$l_e = 70,4 \text{ mm}$$

$$A_e = 76 \text{ mm}^2$$

$$A_{\min} = 71 \text{ mm}^2$$

$$V_e = 5350 \text{ mm}^3$$

Approx. weight 28 g/set


FEK0044-8

Ungapped

Material	A_L value nH	μ_e	$A_{L1\min}$ nH	P_V W/set	Ordering code
N27	2000 + 30/- 20 %	1470	1700	< 1,04 (200 mT, 25 kHz, 100 °C)	B66358-G-X127
N87	2200 + 30/- 20 %	1610	1700	< 2,80 (200 mT, 100 kHz, 100 °C)	B66358-G-X187
N97 ¹⁾	2250 + 30/- 20 %	1670	1700	< 2,40 (200 mT, 100 kHz, 100 °C)	B66358-G-X197

Gapped

Material	g mm	A_L value approx. nH	μ_e	Ordering code ** = 27 (N27) = 87 (N87)
N27,	0,10 ± 0,02	621	457	B66358-G100-X1**
N87	0,20 ± 0,02	383	281	B66358-G200-X1**
	0,50 ± 0,05	201	148	B66358-G500-X1**
	1,00 ± 0,05	124	91	B66358-G1000-X1**

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

1) Preliminary data

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)
N27	124	– 0,7	195	– 0,847	181	– 0,865
N87	124	– 0,7	192	– 0,796	176	– 0,873

Validity range: $K1, K2: 0,10 \text{ mm} < s < 2,00 \text{ mm}$
 $K3, K4: 70 \text{ nH} < A_L < 680 \text{ nH}$

Coil former (magnetic axis horizontal)

Material: GFR polyterephthalate, UL 94 V-0, insulation class to IEC 60085:
 B66359A/B: F = max. operating temperature 155 °C, color code black
 (Valox 420SE0; [E 45329 (M)]; General Electric Plastics)
 B66359W:H = max. operating temperature 180 °C, color code black
 (Rynite FR530; [E 69578 (M)]; E I DUPONT DE NEMOURS & CO INC)

Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s

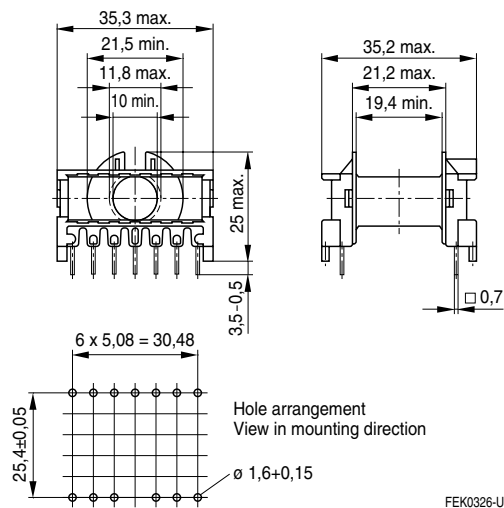
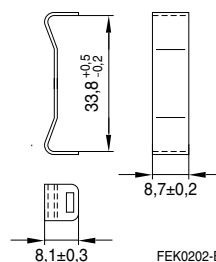
Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3.5 s

Winding: see databook 2001, chapter *Processing Notes*, page 158

Yoke Material: Stainless spring steel (0.4 mm)

Sections	A _N mm ²	l _N mm	A _R value μΩ	Pins	Ordering code
1	97	52.8	18.7	13	B66359A1013T001 ¹⁾ B66359B1013T001 B66359W1013T001
Yoke (ordering code per piece, 2 are required)					B66359A2000

1) Molded-in pins

Coil former

Yoke


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Coil former (magnetic axis vertical)

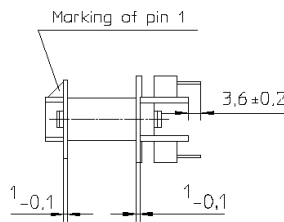
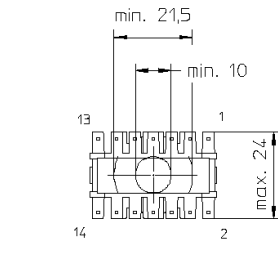
Material: GFR polyterephthalate, UL 94 V-0, insulation class to IEC 60085:
 B66359J: F = max. operating temperature 155 °C, color code black (Pocan B4235; [E 41613 (M)]; Bayer)
 B66359X: H = max. operating temperature 180 °C, color code black (Rynite FR530; [E 69578 (M)]; E I DUPONT DE NEMOURS & CO INC)
 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 databook 2001, chapter *Processing Notes*, page 158

Yoke Material: Stainless spring steel (0.4 mm)

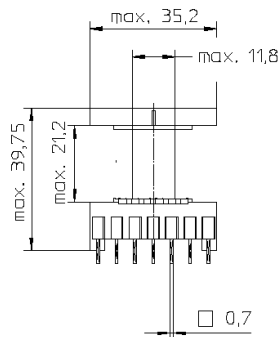
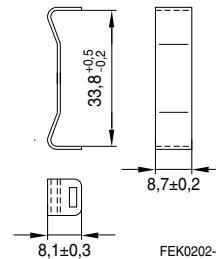
Sections	A _N (mm ²)	l _N (mm)	A _R value (μΩ)	Pins	Ordering code
1	97	52.8	18.7	14	B66359J1014T001 ¹⁾ B66359X1014T001
Yoke (ordering code per piece, 2 are required)					B66359A2000

1) Molded-in pins

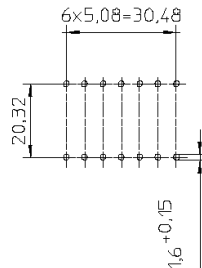
Coil former



Yoke



Hole arrangement
View in mounting direction



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Published by EPCOS AG

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