

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)

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

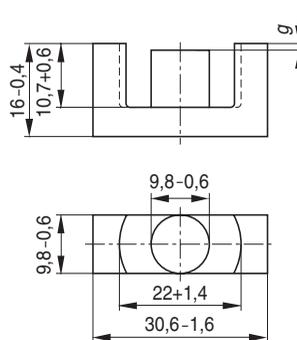
$$l_e = 70,4 \text{ mm}$$

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

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

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

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

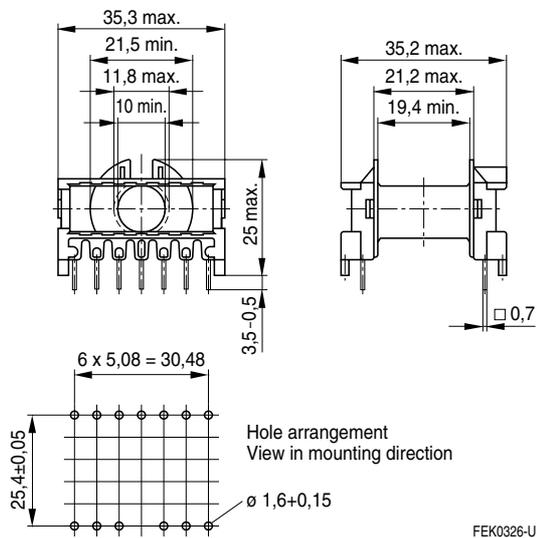
Winding: see databook 2001, chapter *Processing Notes*, page 158

Yoke Material: Stainless spring steel (0.4 mm)

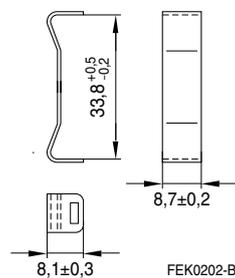
| Sections | A _N mm ² | l _N mm | A _R value μΩ | Pins | Ordering code |
|------------------------------------------------|-----------------------------------|----------------------|----------------------------|------|---------------------------------------------------------------------|
| 1 | 97 | 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

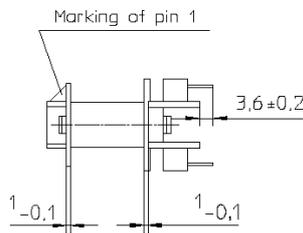
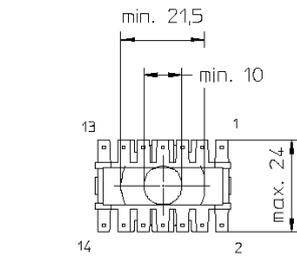
Winding: see databook 2001, chapter *Processing Notes*, page 158

Yoke Material: Stainless spring steel (0.4 mm)

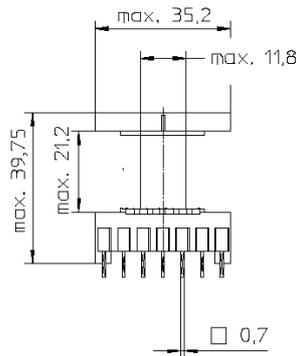
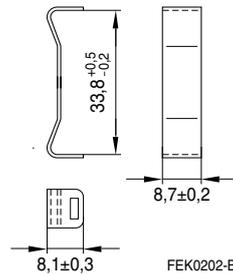
| Sections | A _N (mm ²) | I _N (mm) | A _R value (μΩ) | Pins | Ordering code |
|------------------------------------------------|-----------------------------------|---------------------|---------------------------|------|--------------------------------------------------|
| 1 | 97 | 52.8 | 18.7 | 14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

1) Molded-in pins

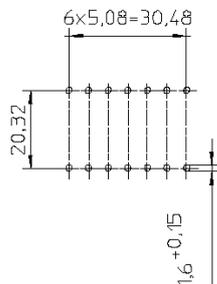
Coil former



Yoke



Hole arrangement
View in mounting direction



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