

- 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)**

$$\Sigma l/A = 0,38 \text{ mm}^{-1}$$

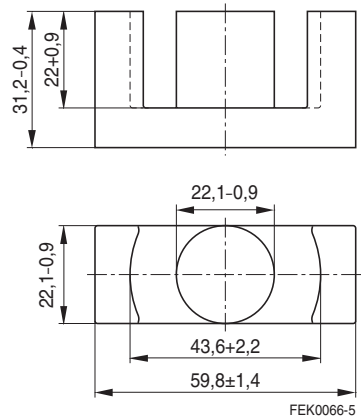
$$l_e = 139 \text{ mm}$$

$$A_e = 368 \text{ mm}^2$$

$$A_{\min} = 368 \text{ mm}^2$$

$$V_e = 51\,200 \text{ mm}^3$$

**Approx. weight** 260 g/set


**Ungapped**

| Material          | $A_L$ value<br>nH | $\mu_e$ | $A_{L1\min}$<br>nH | $P_V$<br>W/set                      | Ordering code |
|-------------------|-------------------|---------|--------------------|-------------------------------------|---------------|
| N27               | 5000 + 30/- 20 %  | 1500    | 4170               | < 9,62<br>(200 mT, 25 kHz, 100 °C)  | B66397-G-X127 |
| N87               | 5300 + 30/- 20 %  | 1590    | 4170               | < 5,20<br>(100 mT, 100 kHz, 100 °C) | B66397-G-X187 |
| N97 <sup>1)</sup> | 5500 + 30/- 20 %  | 1660    | 4170               | < 4,50<br>(100 mT, 100 kHz, 100 °C) | B66397-G-X197 |

**Gapped**

| Material | $g$<br>mm   | $A_L$ value<br>approx.<br>nH | $\mu_e$ | Ordering code<br>** = 27 (N27)<br>= 87 (N87) |
|----------|-------------|------------------------------|---------|----------------------------------------------|
| N27,     | 0,20 ± 0,02 | 1588                         | 476     | B66397-G200-X1**                             |
| N87      | 1,00 ± 0,05 | 508                          | 152     | B66397-G1000-X1**                            |
|          | 1,50 ± 0,05 | 381                          | 114     | B66397-G1500-X1**                            |
|          | 2,00 ± 0,05 | 311                          | 93      | B66397-G2000-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<br>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      | 508                                           | – 0,708      | 853                               | – 0,847      | 799           | – 0,865       |
| N87      | 508                                           | – 0,708      | 812                               | – 0,796      | 783           | – 0,873       |

Validity range:  $K1, K2$ : 0,10 mm <  $s$  < 3,50 mm  
 $K3, K4$ : 170 nH <  $A_L$  < 1660 nH

### Coil former

**Material:** GFR polyterephthalate, UL 94 V-0, insulation class to IEC 60085:  
B66398A:  $F \triangleq \text{max. operating temperature } 155\text{ }^{\circ}\text{C}$ , color code black  
(Pocan B4235; [E 41613 (M)]; Bayer)  
B66398W:  $H \triangleq \text{max. operating temperature } 180\text{ }^{\circ}\text{C}$ , 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):  $235\text{ }^{\circ}\text{C}$ , 2 s

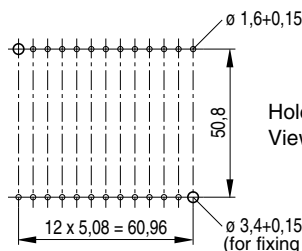
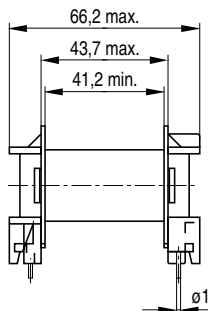
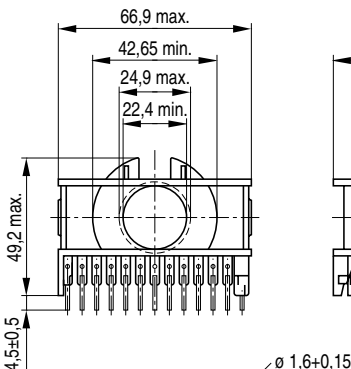
**Resistance to soldering heat:** to IEC 60068-2-20, test Tb, method 1B:  $350\text{ }^{\circ}\text{C}$ , 3.5 s

**Winding:** see data book 2001, chapter *Processing Notes*, page 158

**Yoke** Material: Stainless spring steel (0.4 mm)

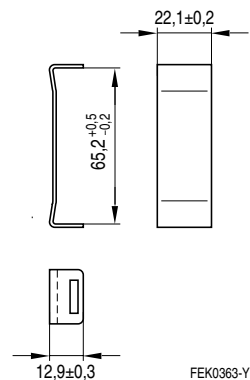
| Coil former                                    |                          |             |                            |      | Ordering code                      |
|------------------------------------------------|--------------------------|-------------|----------------------------|------|------------------------------------|
| Sections                                       | $A_N$<br>mm <sup>2</sup> | $I_N$<br>mm | $A_F$ value<br>$\mu\Omega$ | Pins |                                    |
| 1                                              | 365.6                    | 106.1       | 10                         | 24   | B66398A1024T001<br>B66398W1024T001 |
| Yoke (ordering code per piece, 2 are required) |                          |             |                            |      | B66398A2000                        |

### Coil former



Hole arrangement  
View in mounting direction

### Yoke



FEK0363-Y

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