

ETD 59/31/22

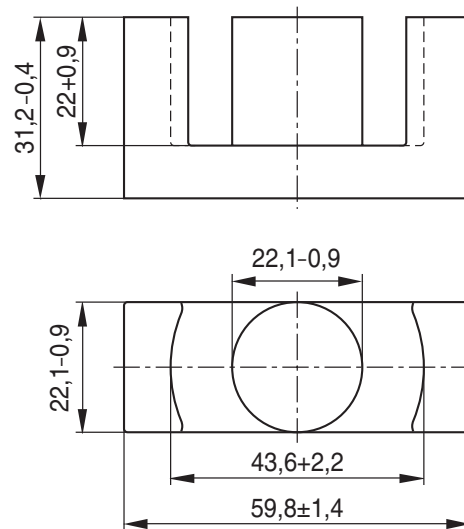
Core

B66397

- 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)

$$\begin{aligned}\Sigma/A &= 0,38 \text{ mm}^{-1} \\ l_e &= 139 \text{ mm} \\ A_e &= 368 \text{ mm}^2 \\ A_{\min} &= 368 \text{ mm}^2 \\ V_e &= 51\,200 \text{ mm}^3\end{aligned}$$

Approx. weight 260 g/set

FEK0066-5

Ungapped

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

Gapped

| Material | g mm | A_L value approx. nH | μ_e | Ordering code ** = 27 (N27) = 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 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: $K1, K2: 0,10 \text{ mm} < s < 3,50 \text{ mm}$
 $K3, K4: 170 \text{ nH} < A_L < 1660 \text{ nH}$

Coil former

Material: GFR polyterephthalate, UL 94 V-0, insulation class to IEC 60085:
 B66398A: F \triangleq max. operating temperature 155 °C, color code black (Pocan B4235; [E 41613 (M)]; Bayer)
 B66398W: H \triangleq max. operating temperature 180 °C, color code black (Rynite FR530; [E 69578 (M)]; E I DUPONT DE NEMOURS & CO INC)

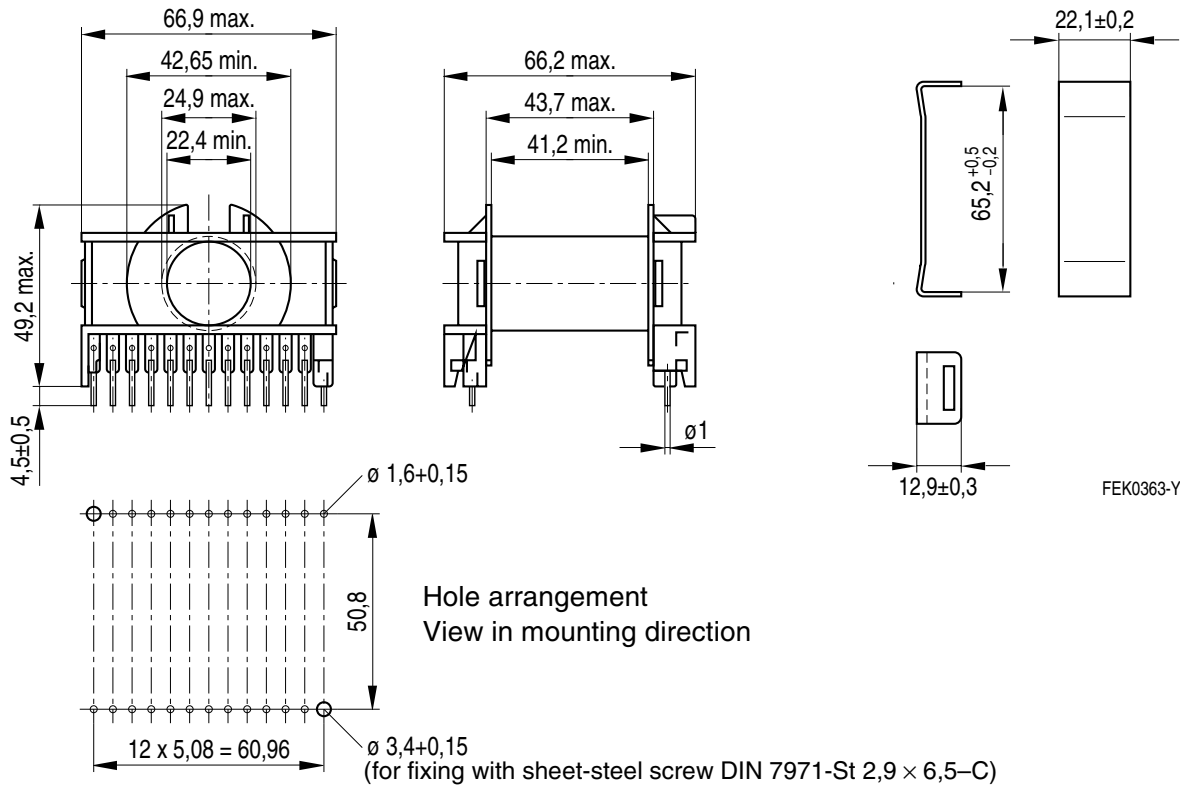
Solderability: to IEC 60068-2-20, test Ta, method 1 (aging 3): 235 °C, 2 s
 Resistance to soldering heat: to IEC 60068-2-20, test Tb, method 1B: 350 °C, 3.5 s
 Winding: see data book 2001, chapter *Processing Notes*, page 158

Yoke Material: Stainless spring steel (0.4 mm)

| Coil former | | | | | Ordering code |
|--|-----------------------|----------|-------------------------|------|------------------------------------|
| Sections | A_N mm ² | l_N mm | A_R value $\mu\Omega$ | Pins | |
| 1 | 365.6 | 106.1 | 10 | 24 | B66398A1024T001 B66398W1024T001 |
| Yoke (ordering code per piece, 2 are required) | | | | | B66398A2000 |

Coil former

Yoke



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