

# DATA SHEET

**U46/40/28**

U, I cores and accessories

New data

2008 Sep 01

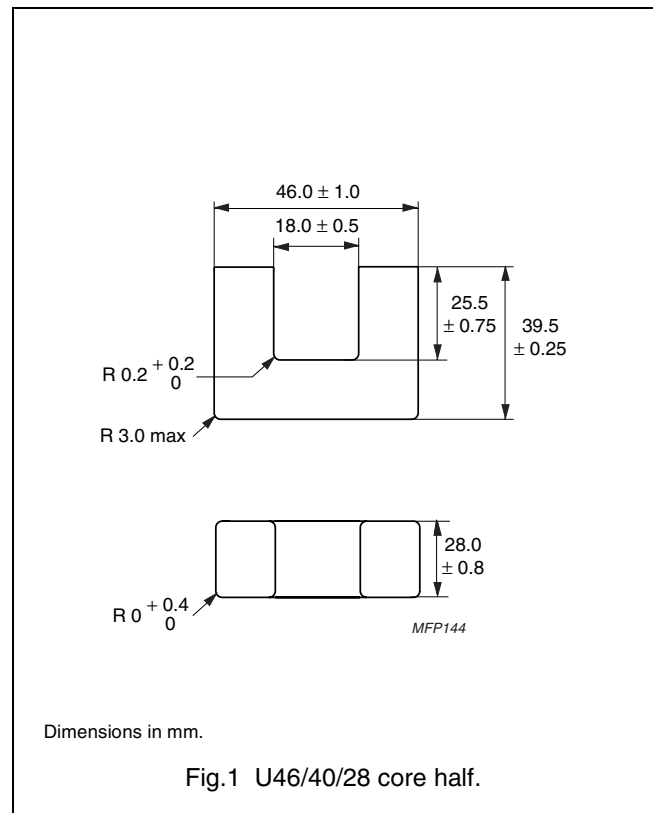


**FERROXCUBE**  
A YAGEO COMPANY

**U CORES**

**Effective core parameters**

| SYMBOL        | PARAMETER         | VALUE | UNIT             |
|---------------|-------------------|-------|------------------|
| $\Sigma(l/A)$ | core factor (C1)  | 0.464 | mm <sup>-1</sup> |
| $V_e$         | effective volume  | 71300 | mm <sup>3</sup>  |
| $l_e$         | effective length  | 182   | mm               |
| $A_e$         | effective area    | 392   | mm <sup>2</sup>  |
| $A_{min}$     | minimum area      | 392   | mm <sup>2</sup>  |
| m             | mass of core half | ≈ 182 | g                |



**Core halves**

$A_L$  measured on a combination of 2 U cores.

| GRADE | $A_L$ (nH)  | $\mu_e$ | TYPE NUMBER    |
|-------|-------------|---------|----------------|
| 3C90  | 6000 ± 25 % | ≈ 2215  | U46/40/28-3C90 |
| 3F3   | 5100 ± 25 % | ≈ 1880  | U46/40/28-3F3  |

Cores can be gapped on request in one leg.

**Properties of core sets under power conditions**

| GRADE | B (mT) at                                 | CORE LOSS (W) at                           |  |   |
|-------|---|--|--|---|
|       | H = 250 A/m;<br>f = 25 kHz;<br>T = 100 °C | f = 100 kHz;<br>B̂ = 100 mT;<br>T = 100 °C | f = 100 kHz;<br>B̂ = 200 mT;<br>T = 100 °C | f = 400 kHz;<br>B̂ = 50 mT;<br>T = 100 °C |
| 3C90  | ≥ 320                                     | ≤ 9.6                                      | ≤ 45                                       | –   |
| 3F3   | ≥ 320                                     | ≤ 9.6                                      | –  | ≤ 45                                      |

**DATA SHEET STATUS DEFINITIONS**

| DATA SHEET STATUS         | PRODUCT STATUS | DEFINITIONS  |
|---------------------------|----------------|--|
| Preliminary specification | Development    | This data sheet contains preliminary data. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product.     |
| Product specification     | Production     | This data sheet contains final specifications. Ferroxcube reserves the right to make changes at any time without notice in order to improve design and supply the best possible product. |

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**PRODUCT STATUS DEFINITIONS**

| STATUS           | INDICATION  | DEFINITION   |
|------------------|---|--|
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| <b>Design-in</b> |  | These products are recommended for new designs.  |
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