# DATA SHEET

## PQ50/50
PQ cores and accessories

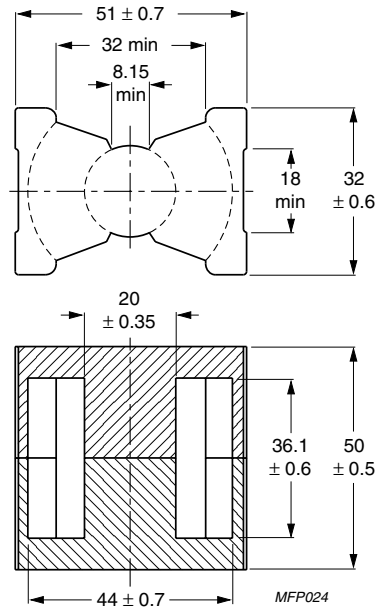
Supersedes data of September 2004 2008 Sep 01

FERROXCUBE
A YAGEO COMPANY

## CORE SETS

### Effective core parameters

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $\Sigma(l/A)$ | core factor (C1) | 0.345 | $mm^{-1}$ |
| $V_e$ | effective volume | 37100 | $mm^3$ |
| $l_e$ | effective length | 113 | mm |
| $A_e$ | effective area | 328 | $mm^2$ |
| $A_{min}$ | minimum area | 314 | $mm^2$ |
| m | mass of set | ≈ 195 | g |




Dimensions in mm.

Fig.1 PQ50/50 core set.

### Core sets for general purpose transformers and power applications

Clamping force for $A_L$ measurements, 80 ± 20 N.

| GRADE | $A_L$ (nH) | $\mu_e$ | AIR GAP (μm) | TYPE NUMBER |
|---|---|---|---|---|
| 3C91 des | 9200 ± 25 % | ≈ 2530 | ≈ 0 | PQ50/50-3C91 |
| 3C94 | 7400 ± 25 % | ≈ 2030 | ≈ 0 | PQ50/50-3C94 |
| 3C95 des | 9200 ± 25 % | ≈ 2530 | ≈ 0 | PQ50/50-3C95 |
| 3C96 des | 6300 ± 25 % | ≈ 1730 | ≈ 0 | PQ50/50-3C96 |

### Properties of core sets under power conditions

| GRADE | B (mT) at | CORE LOSS (W) at | | | |
|---|---|---|---|---|---|
| | H = 250 A/m; f = 10 kHz; T = 100 °C | f = 100 kHz; $\hat{B}$ = 100 mT; T = 100 °C | f = 100 kHz; $\hat{B}$ = 200 mT; T = 25 °C | f = 100 kHz; $\hat{B}$ = 200 mT; T = 100 °C | f = 500 kHz; $\hat{B}$ = 50 mT; T = 100 °C |
| 3C91 | ≥ 320 | ≤ 2.9[1] | – | ≤ 18[1] | – |
| 3C94 | ≥ 320 | ≤ 3.8 | – | ≤ 23 | – |
| 3C95 | ≥ 320 | – | ≤ 23.4 | ≤ 22.3 | – |
| 3C96 | ≥ 340 | ≤ 2.9 | – | ≤ 18 | ≤ 14 |

**Note**

1. Measured at 60 °C.

**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. |
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| STATUS | INDICATION | DEFINITION |
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