DATA SHEET

PQ35/35
PQ cores and accessories

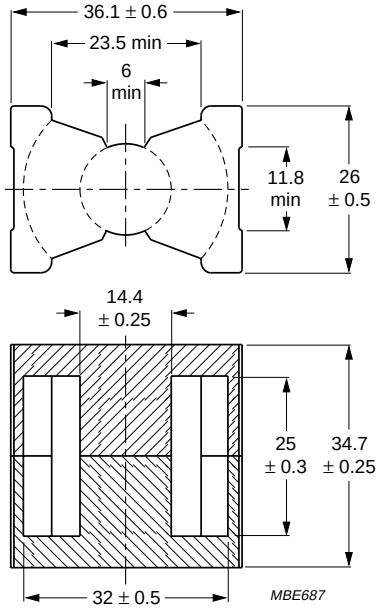
Supersedes data of February 2002 2004 Sep 01

FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.454	mm^{-1}
V_e	effective volume	16300	mm^3
l_e	effective length	86.1	mm
A_e	effective area	190	mm^2
A_{min}	minimum area	162	mm^2
m	mass of set	≈ 73	g



Dimensions in mm.

Fig.1 PQ35/35 core set.

Core sets for general purpose transformers and power applications

Clamping force for A_L measurements, 80 ±20 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C81	315 ±3%	≈ 114	≈ 920	PQ35/35-3C81-E315
	400 ±3%	≈ 144	≈ 690	PQ35/35-3C81-E400
	630 ±3%	≈ 227	≈ 400	PQ35/35-3C81-A630
	1000 ±3%	≈ 361	≈ 230	PQ35/35-3C81-A1000
	1600 ±5%	≈ 577	≈ 120	PQ35/35-3C81-A1600
	6000 ±25%	≈ 2160	≈ 0	PQ35/35-3C81
3C90	315 ±3%	≈ 114	≈ 920	PQ35/35-3C90-E315
	400 ±3%	≈ 144	≈ 690	PQ35/35-3C90-E400
	630 ±3%	≈ 227	≈ 400	PQ35/35-3C90-A630
	1000 ±3%	≈ 361	≈ 230	PQ35/35-3C90-A1000
	1600 ±5%	≈ 577	≈ 120	PQ35/35-3C90-A1600
	5200 ±25%	≈ 1880	≈ 0	PQ35/35-3C90
3C91 des	6000 ±25%	≈ 2160	≈ 0	PQ35/35-3C91
3C94	5200 ±25%	≈ 1880	≈ 0	PQ35/35-3C94
3C96 des	4700 ±25%	≈ 1700	≈ 0	PQ35/35-3C96

GRADE		A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3F3		315 ±3%	≈ 114	≈ 920	PQ35/35-3F3-E315
		400 ±3%	≈ 144	≈ 690	PQ35/35-3F3-E400
		630 ±3%	≈ 227	≈ 400	PQ35/35-3F3-A630
		1000 ±3%	≈ 361	≈ 230	PQ35/35-3F3-A1000
		1600 ±5%	≈ 577	≈ 120	PQ35/35-3F3-A1600
		4570 ±25%	≈ 1650	≈ 0	PQ35/35-3F3

Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	$\hat{B}$ = 200 mT; f = 25 kHz; T = 100 °C	$\hat{B}$ = 100 mT; f = 100 kHz; T = 100 °C	$\hat{B}$ = 200 mT; f = 100 kHz; T = 100 °C	$\hat{B}$ = 50 mT; f = 400 kHz; T = 100 °C
3C81	≥320	≤ 3.8	–	–	–
3C90	≥320	≤ 2.0	≤ 2.1	–	–
3C91	≥320	–	≤ 1.2[1]	≤ 8.0[1]	–
3C94	≥320	–	≤ 1.6	≤ 10	–
3C96	≥340	–	≤ 1.2	≤ 8.0	≤ 3.0
3F3	≥320	–	≤ 1.8	–	≤ 3.1

Properties of core sets under power conditions (continued)

GRADE	B (mT) at	CORE LOSS (W) at			
	H = 250 A/m; f = 25 kHz; T = 100 °C	$\hat{B}$ = 50 mT; f = 500 kHz; T = 100 °C	$\hat{B}$ = 100 mT; f = 500 kHz; T = 100 °C	$\hat{B}$ = 30 mT; f = 1 MHz; T = 100 °C	$\hat{B}$ = 10 mT; f = 3 MHz; T = 100 °C
3C81	≥320	–	–	–	–
3C90	≥320	–	–	–	–
3C91	≥320	–	–	–	–
3C94	≥320	–	–	–	–
3C96	≥340	≤ 6.1	–	–	–
3F3	≥320	–	–	–	–

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.
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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Design-in	des	These products are recommended for new designs.
Preferred		These products are recommended for use in current designs and are available via our sales channels.
Support	sup	These products are **not** recommended for new designs and may not be available through all of our sales channels. Customers are advised to check for availability.