

DATA SHEET

RM14/ILP

RM, RM/I, RM/ILP cores and accessories

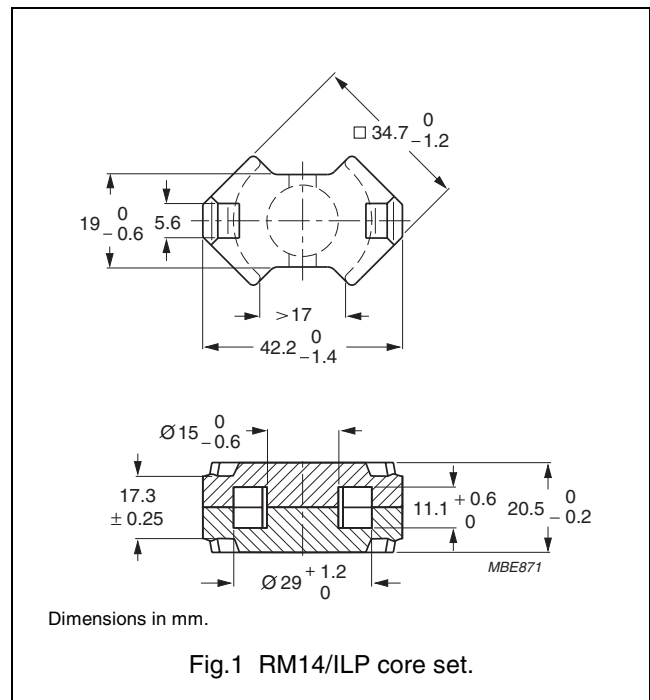
Supersedes data of September 2004

2008 Sep 01

CORE SETS

Effective core parameters

| SYMBOL | PARAMETER | VALUE | UNIT |
|---------------|------------------|-------|------------------|
| $\Sigma(l/A)$ | core factor (C1) | 0.250 | mm ⁻¹ |
| V_e | effective volume | 10230 | mm ³ |
| l_e | effective length | 50.9 | mm |
| A_e | effective area | 201 | mm ² |
| A_{min} | minimum area | 168 | mm ² |
| m | mass of set | ≈ 55 | g |



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 |
|---|------------------|---------|------------------------------|---------------|
| 3C90 | 8400 $\pm 25\%$ | ≈ 1690 | ≈ 0 | RM14/ILP-3C90 |
| 3C94 | 8400 $\pm 25\%$ | ≈ 1690 | ≈ 0 | RM14/ILP-3C94 |
| 3C95 des | 10140 $\pm 25\%$ | ≈ 2040 | ≈ 0 | RM14/ILP-3C95 |
| 3C96 des | 7700 $\pm 25\%$ | ≈ 1550 | ≈ 0 | RM14/ILP-3C96 |
| 3F3 | 7700 $\pm 25\%$ | ≈ 1550 | ≈ 0 | RM14/ILP-3F3 |
| 3F35 prot | 5800 $\pm 25\%$ | ≈ 1150 | ≈ 0 | RM14/ILP-3F35 |
| 3F4 des | 4200 $\pm 25\%$ | ≈ 850 | ≈ 0 | RM14/ILP-3F4 |

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 | f = 25 kHz; B̂ = 200 mT; T = 100 °C | f = 100 kHz; B̂ = 100 mT; T = 100 °C | f = 100 kHz; B̂ = 200 mT; T = 25 °C | f = 100 kHz; B̂ = 200 mT; T = 100 °C | f = 400 kHz; B̂ = 50 mT; T = 100 °C |
| 3C90 | ≥315 | ≤ 1.3 | ≤ 1.4 | – | – | – |
| 3C94 | ≥315 | – | ≤ 1.1 | – | ≤ 5.5 | – |
| 3C95 | ≥315 | – | – | ≤ 6.44 | ≤ 6.14 | – |
| 3C96 | ≥340 | – | ≤ 0.82 | – | ≤ 4.4 | ≤ 1.9 |
| 3F3 | ≥300 | – | ≤ 1.2 | – | – | ≤ 2.0 |
| 3F35 | ≥300 | – | – | – | – | – |
| 3F4 | ≥250 | – | – | – | – | – |

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 | f = 500 kHz; B̂ = 50 mT; T = 100 °C | f = 500 kHz; B̂ = 100 mT; T = 100 °C | f = 1 MHz; B̂ = 30 mT; T = 100 °C | f = 3 MHz; B̂ = 10 mT; T = 100 °C |
| 3C90 | ≥315 | – | – | – | – |
| 3C94 | ≥315 | – | – | – | – |
| 3C95 | ≥315 | – | – | – | – |
| 3C96 | ≥340 | ≤ 3.8 | – | – | – |
| 3F3 | ≥300 | – | – | – | – |
| 3F35 | ≥300 | ≤ 1.4 | ≤ 11 | – | – |
| 3F4 | ≥250 | – | – | ≤ 3.0 | ≤ 4.9 |

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 |
|------------------|---|--|
| Prototype |  | These are products that have been made as development samples for the purposes of technical evaluation only. The data for these types is provisional and is subject to change. |
| Design-in |  | 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 |  | 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. |