

# DATA SHEET

## **RM12/I** RM cores and accessories

Product specification  
Supersedes data of November 1997  
File under Ferrite Ceramics, MA01

1999 Dec 23

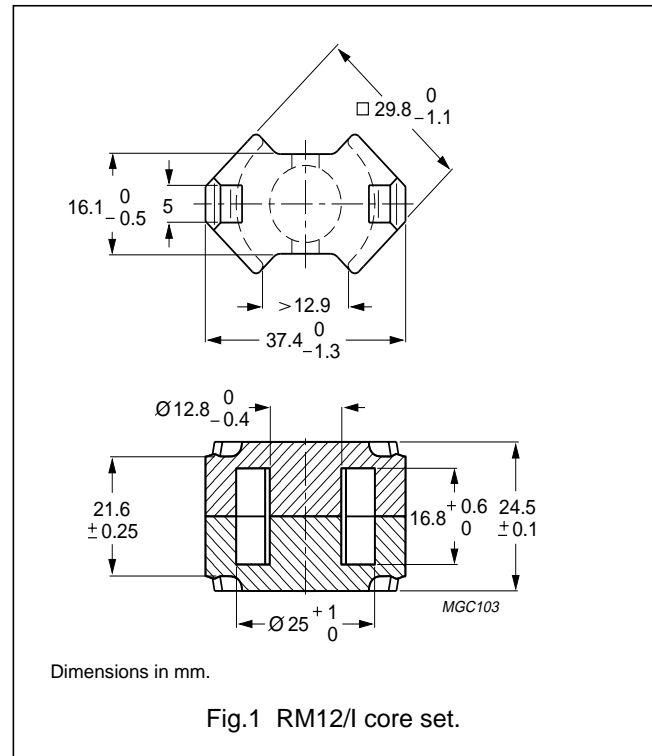
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CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	0.388	mm <sup>-1</sup>
$V_e$	effective volume	8340	mm <sup>3</sup>
$l_e$	effective length	56.6	mm
$A_e$	effective area	146	mm <sup>2</sup>
$A_{min}$	minimum area	125	mm <sup>2</sup>
m	mass of set	≈45	g



Core sets for general purpose transformers and power applications

Clamping force for  $A_L$  measurements, 70 ±20 N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP (μm)	TYPE NUMBER
3C90	160 ±3%	≈49	≈1400	RM12/I-3C90-A160
	250 ±3%	≈77	≈800	RM12/I-3C90-A250
	315 ±5%	≈97	≈550	RM12/I-3C90-A315
	400 ±5%	≈123	≈450	RM12/I-3C90-A400
	630 ±5%	≈196	≈300	RM12/I-3C90-A630
	6200 ±25%	≈1910	≈0	RM12/I-3C90
3C94 <small>des</small>	160 ±3%	≈49	≈1400	RM12/I-3C94-A160
	250 ±3%	≈77	≈800	RM12/I-3C94-A250
	315 ±5%	≈97	≈550	RM12/I-3C94-A315
	400 ±5%	≈123	≈450	RM12/I-3C94-A400
	630 ±5%	≈196	≈300	RM12/I-3C94-A630
	6200 ±25%	≈1910	≈0	RM12/I-3C94
3C96 <small>prot</small>	5500 ±25%	≈1510	≈0	RM12/I-3C96

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GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3F3	160 $\pm 3\%$	$\approx 49$	$\approx 1400$	RM12/I-3F3-A160
	250 $\pm 3\%$	$\approx 77$	$\approx 800$	RM12/I-3F3-A250
	315 $\pm 5\%$	$\approx 97$	$\approx 550$	RM12/I-3F3-A315
	400 $\pm 5\%$	$\approx 123$	$\approx 450$	RM12/I-3F3-A400
	630 $\pm 5\%$	$\approx 196$	$\approx 300$	RM12/I-3F3-A630
	5050 $\pm 25\%$	$\approx 1560$	$\approx 0$	RM12/I-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	f = 25 kHz; $\hat{B} = 200$ mT; T = 100 °C	f = 100 kHz; $\hat{B} = 100$ mT; T = 100 °C	f = 100 kHz; $\hat{B} = 200$ mT; T = 100 °C	f = 400 kHz; $\hat{B} = 50$ mT; T = 100 °C
3C90	$\geq 315$	$\leq 1.00$	$\leq 1.06$	–	–
3C94	$\geq 315$	–	$\leq 0.8$	$\approx 3.5$	$\approx 1.8$
3C96	$\geq 320$	–	$\approx 0.55$	$\approx 2.5$	$\approx 1.3$
3F3	$\geq 315$	–	$\leq 0.92$	–	$\leq 1.60$

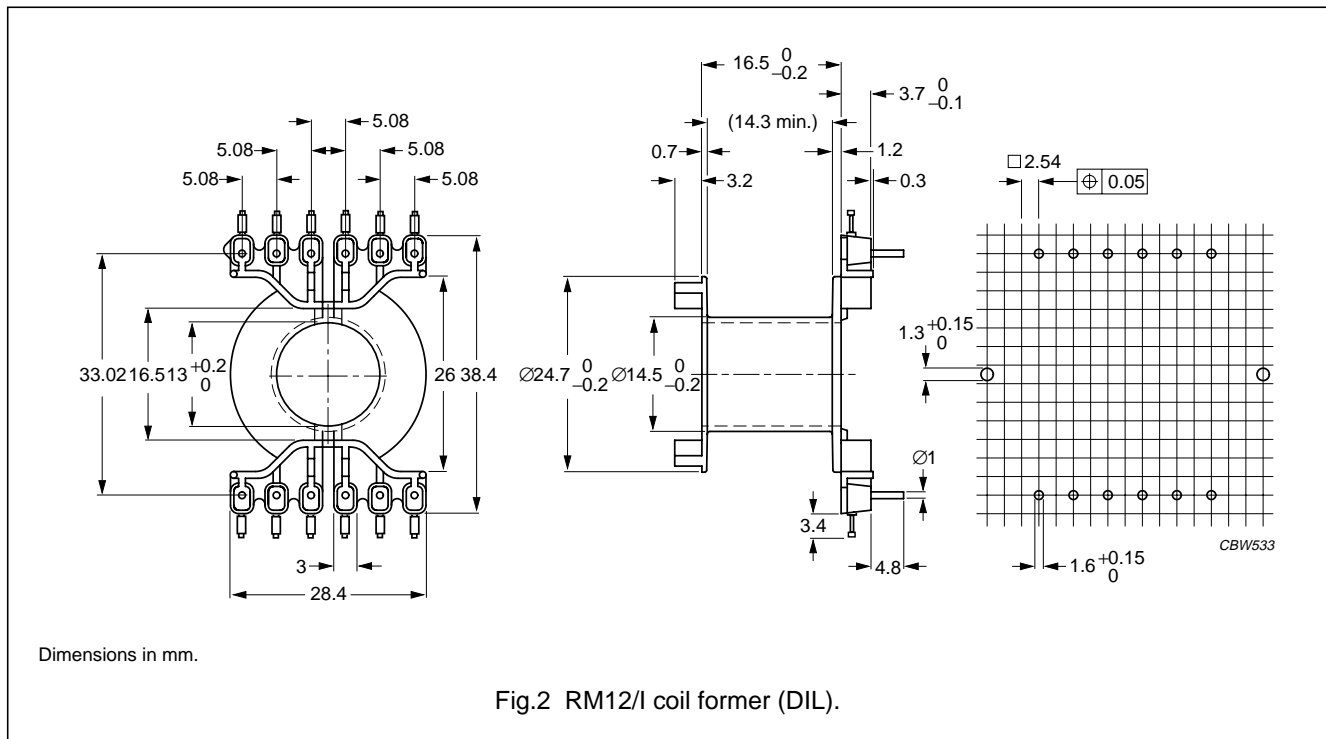
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COIL FORMER

General data

PARAMETER	SPECIFICATION
Coil former material	polybutyleneterephthalate (PBT), glass-reinforced, flame retardant in accordance with UL 94V-0; UL file number E45329(R)
Pin material	copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated
Maximum operating temperature	155 °C, IEC 60085 class F
Resistance to soldering heat	"IEC 60068-2-20", Part 2, Test Tb, method 1B, 350 °C, 3.5 s
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1



Winding data for RM12/I coil former (DIL)

NUMBER OF SECTIONS	AVERAGE LENGTH OF TURN (mm)	WINDING AREA (mm <sup>2</sup> )	WINDING WIDTH (mm)	TYPE NUMBER
1	61	75.0	14.3	CPV-RM12/I-1S-12PD

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**MOUNTING PARTS**

**General data**

ITEM	SPECIFICATION
Clamping force	≈35 N
Clip material	stainless steel
Clip plating	tin-lead alloy (SnPb)
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1
Type number	CLI/P-RM12/I

