

# DATA SHEET

## **RM7/I** RM cores and accessories

Product specification  
File under Magnetic Products, MA01

1997 Nov 21

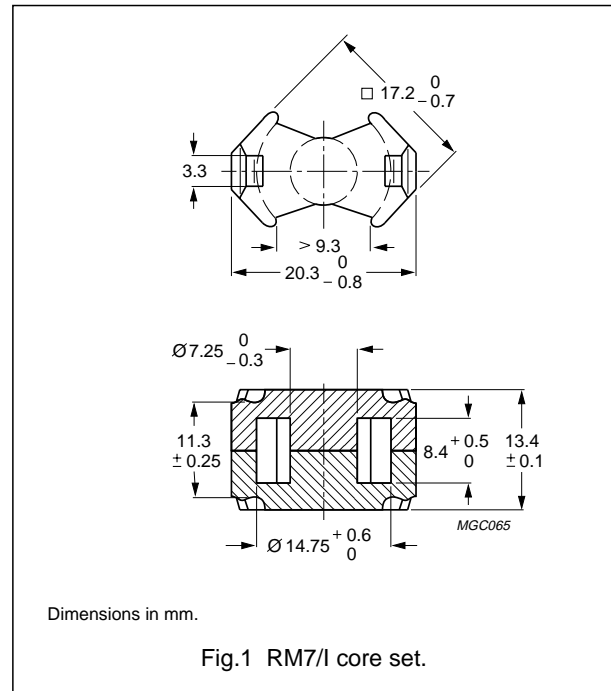
## RM cores and accessories

## RM7/I

## CORE SETS

## Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.680	$\text{mm}^{-1}$
$V_e$	effective volume	1325	$\text{mm}^3$
$l_e$	effective length	30.0	mm
$A_e$	effective area	44.1	$\text{mm}^2$
$A_{\min}$	minimum area	39.6	$\text{mm}^2$
m	mass of set	$\approx 7.7$	g



## Core sets for general purpose transformers and power applications

Clamping force  $40 \pm 20$  N.

GRADE	$A_L$ (nH)	$\mu_e$	AIR GAP ( $\mu\text{m}$ )	TYPE NUMBER
3B8 <sup>sup</sup>	$160 \pm 3\%$	$\approx 89$	$\approx 400$	RM7/I-3B8-A160
	$250 \pm 3\%$	$\approx 139$	$\approx 200$	RM7/I-3B8-A250
	$3000 \pm 25\%$	$\approx 1670$	$\approx 0$	RM7/I-3B8
3C85 <sup>sup</sup>	$100 \pm 3\%$	$\approx 56$	$\approx 800$	RM7/I-3C85-A100
	$160 \pm 3\%$	$\approx 89$	$\approx 400$	RM7/I-3C85-A160
	$250 \pm 3\%$	$\approx 139$	$\approx 200$	RM7/I-3C85-A250
	$2700 \pm 25\%$	$\approx 1500$	$\approx 0$	RM7/I-3C85
3C90 <sup>sup</sup>	$2700 \pm 25\%$	$\approx 1500$	$\approx 0$	RM7/I-3C90
3F3 <sup>sup</sup>	$100 \pm 3\%$	$\approx 56$	$\approx 800$	RM7/I-3F3-A100
	$160 \pm 3\%$	$\approx 89$	$\approx 400$	RM7/I-3F3-A160
	$250 \pm 3\%$	$\approx 139$	$\approx 200$	RM7/I-3F3-A250
	$2500 \pm 25\%$	$\approx 1390$	$\approx 0$	RM7/I-3F3

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## Core sets of high permeability grades

Clamping force  $25 \pm 10$  N.

GRADE	$A_L$ (nH)	$\mu_e$	TYPE NUMBER
3E1 <sup>sup</sup>	$4750 \pm 25\%$	$\approx 2570$	RM7/I-3E1
3E4 <sup>sup</sup>	$6600 +40/-30\%$	$\approx 3590$	RM7/I-3E4
3E5 <sup>sup</sup>	$10000 +40/-30\%$	$\approx 5370$	RM7/I-3E5

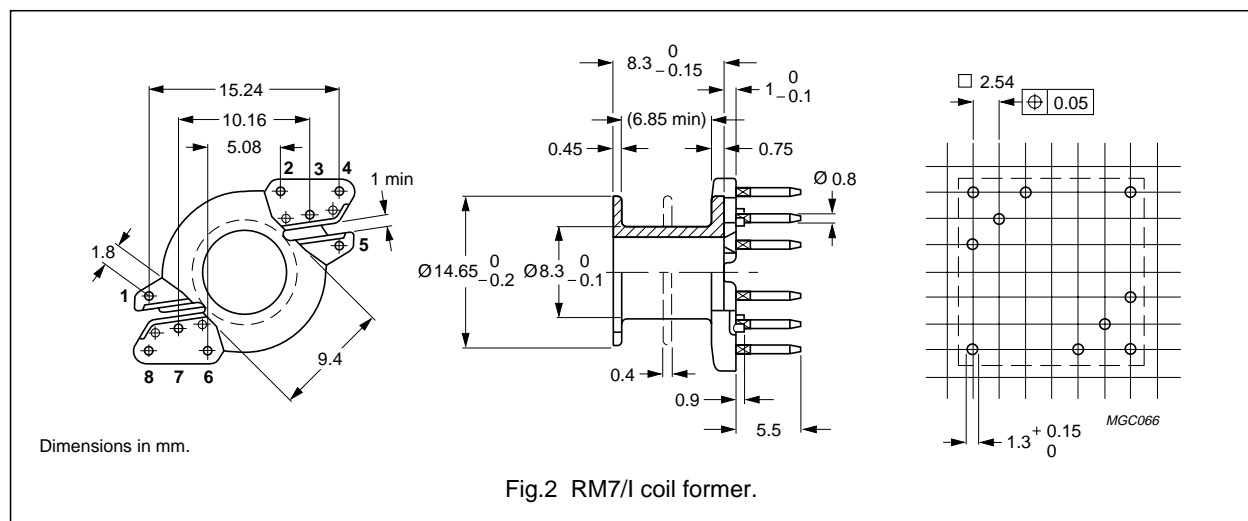
## Properties of core sets under power conditions

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 = 400 kHz; $\hat{B} = 50$ mT; T = 100 °C
3B8	$\geq 315$	$\leq 0.40$	–	–
3C85	$\geq 315$	$\leq 0.20$	$\leq 0.24$	–
3C90	$\geq 315$	$\leq 0.15$	$\leq 0.15$	–
3F3	$\geq 315$	–	$\leq 0.15$	$\leq 0.25$

## COIL FORMER

## General data

PARAMETER	SPECIFICATION
Coil former material	phenolformaldehyde (PF), glass-reinforced, flame retardant in accordance with UL 94V-0; UL file number E167521(M)
Pin material	copper-tin alloy (CuSn), tin-lead alloy (SnPb) plated
Maximum operating temperature	180 °C, IEC 85 class H
Resistance to soldering heat	"IEC 68-2-20", Part 2, Test Tb, method 1B, 350 °C, 3.5 s
Solderability	"IEC 68-2-20", Part 2, Test Ta, method 1



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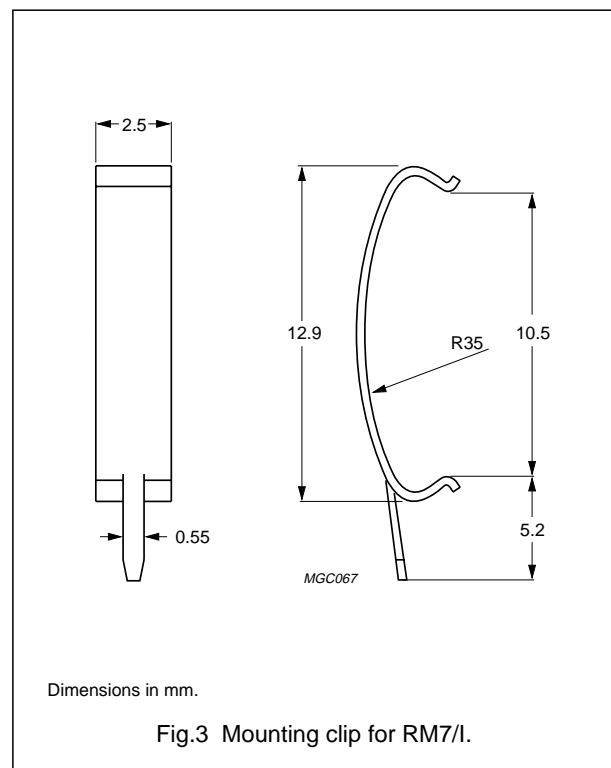
## Winding data for RM7/I coil former

NUMBER OF SECTIONS	NUMBER OF PINS	PIN POSITIONS USED	AVERAGE LENGTH OF TURN (mm)	WINDING AREA (mm <sup>2</sup> )	WINDING WIDTH (mm)	TYPE NUMBER
1	4	1, 2, 5, 6	35	21	6.85	CSV-RM7-1S-4P
1	8	all	35	21	6.85	CSV-RM7-1S-8P
2	8	all	35	2 × 9.8	2 × 3.2	CSV-RM7-2S-8P

## MOUNTING PARTS

## General data

ITEM	SPECIFICATION
Clamping force	≈20 N
Clip material	steel
Clip plating	tin-lead alloy (SnPb)
Solderability	"IEC 68-2-20", Part 2, Test Ta, method 1
Type number	CLI/P-RM7



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**DEFINITIONS**

<b>Data sheet status</b>	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
<b>Application information</b>	
Where application information is given, it is advisory and does not form part of the specification.	

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