

DATA SHEET

RM7/I

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

Supersedes data of September 2004

2008 Sep 01

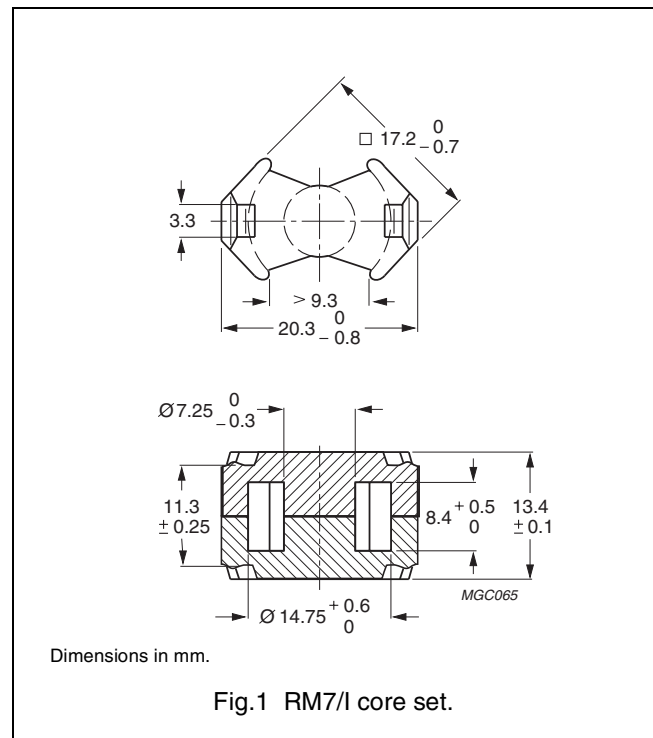


FERROXCUBE
A YAGEO COMPANY

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.680	mm ⁻¹
V_e	effective volume	1325	mm ³
l_e	effective length	30.0	mm
A_e	effective area	44.1	mm ²
A_{min}	minimum area	39.6	mm ²
m	mass of set	≈ 7.5	g



Core sets for general purpose transformers and power applications

Clamping force for A_L measurements 40 ±20 N.

GRADE	A_L (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90 ^{sup}	100 ±3%	≈ 54	≈ 730	RM7/I-3C90-A100
	160 ±3%	≈ 87	≈ 410	RM7/I-3C90-A160
	250 ±3%	≈ 135	≈ 240	RM7/I-3C90-A250
	3000 ±25%	≈ 1620	≈ 0	RM7/I-3C90
3F3 ^{sup}	100 ±3%	≈ 54	≈ 730	RM7/I-3F3-A100
	160 ±3%	≈ 87	≈ 410	RM7/I-3F3-A160
	250 ±3%	≈ 135	≈ 240	RM7/I-3F3-A250
	2500 ±25%	≈ 1350	≈ 0	RM7/I-3F3

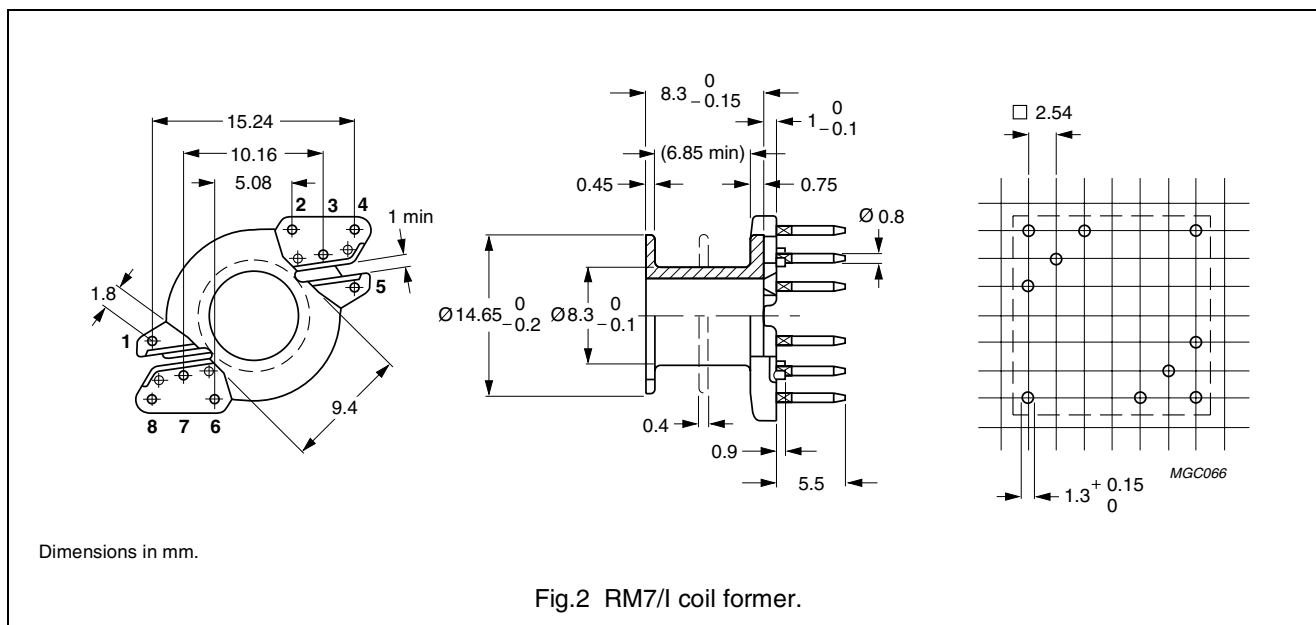
Properties of core sets under power conditions

GRADE	B (mT) at	CORE LOSS (W) at		
	H = 250 A/m; f = 25 kHz; T = 100 °C	f = 25 kHz; B = 200 mT; T = 100 °C	f = 100 kHz; B = 100 mT; T = 100 °C	f = 400 kHz; B = 50 mT; T = 100 °C
3C90	≥320	≤ 0.16	≤ 0.17	—
3F3	≥315	—	≤ 0.15	≤ 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 (Sn) plated
Maximum operating temperature	180 °C, "IEC 60085", class H
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



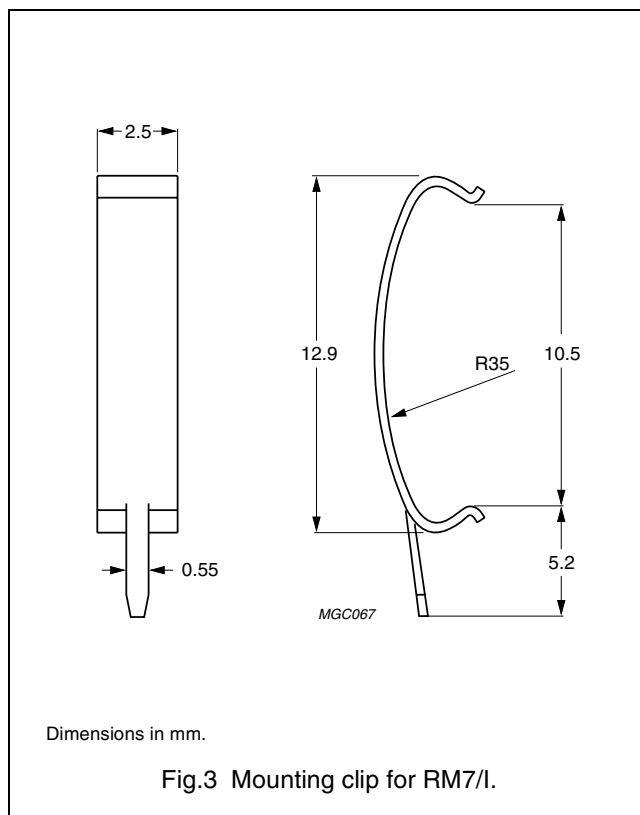
Winding data and area product for RM7/I coil former

NUMBER OF SECTIONS	NUMBER OF PINS	PIN POSITIONS USED	AVERAGE LENGTH OF TURN (mm)	WINDING AREA (mm ²)	WINDING WIDTH (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	4	1, 2, 5, 6	35	21	6.85	926	CSV-RM7-1S-4P
1	8	all	35	21	6.85	926	CSV-RM7-1S-8P
2	8	all	35	2 x 9.8	2 x 3.2	2 x 432	CSV-RM7-2S-8P
1	5	1, 2, 4, 5, 8	35	21	6.85	926	CSV-RM7-1S-5P
2	5	1, 2, 4, 5, 8	35	2 x 9.8	2 x 3.2	2 x 432	CSV-RM7-2S-5P

MOUNTING PARTS

General data

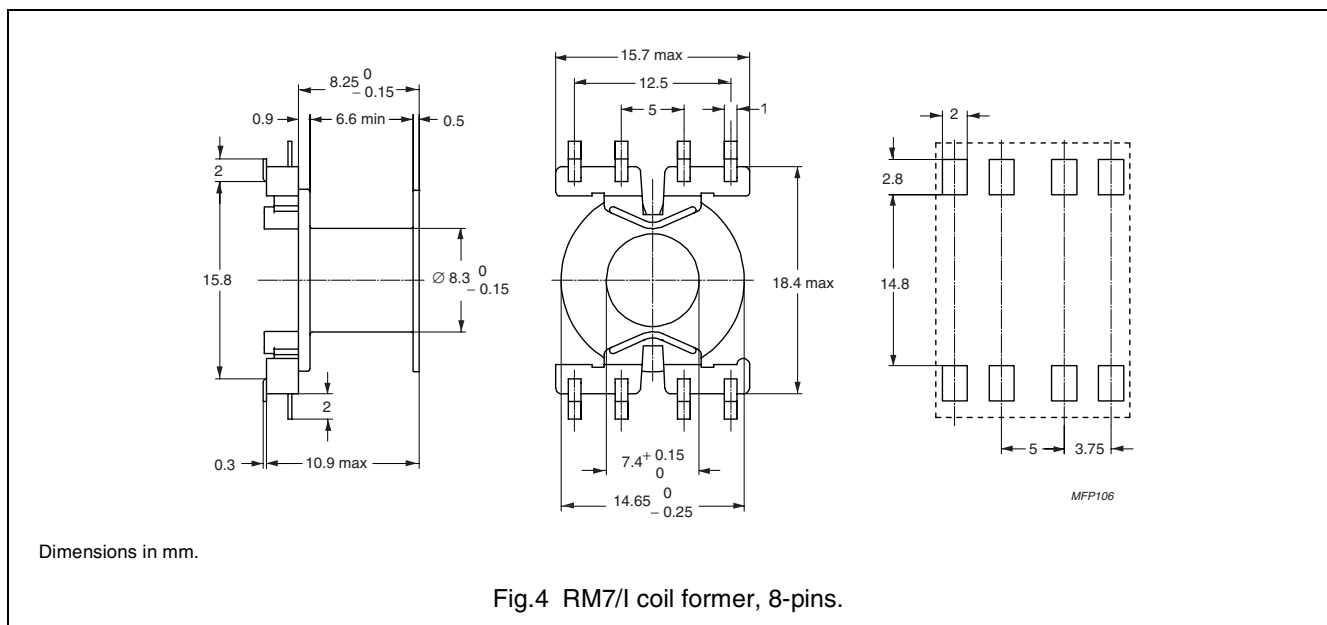
ITEM	SPECIFICATION
Clamping force	≈20 N
Clip material	steel
Clip plating	tin (Sn)
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1
Type number	CLI/P-RM7



COIL FORMER

General data

PARAMETER	SPECIFICATION
Coil former material	phenolformaldehyde (PF), glass-reinforced, flame retardant in accordance with UL 94V-0; UL file number E41429 (M)
Pin material	copper-tin alloy (CuSn), tin (Sn) 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



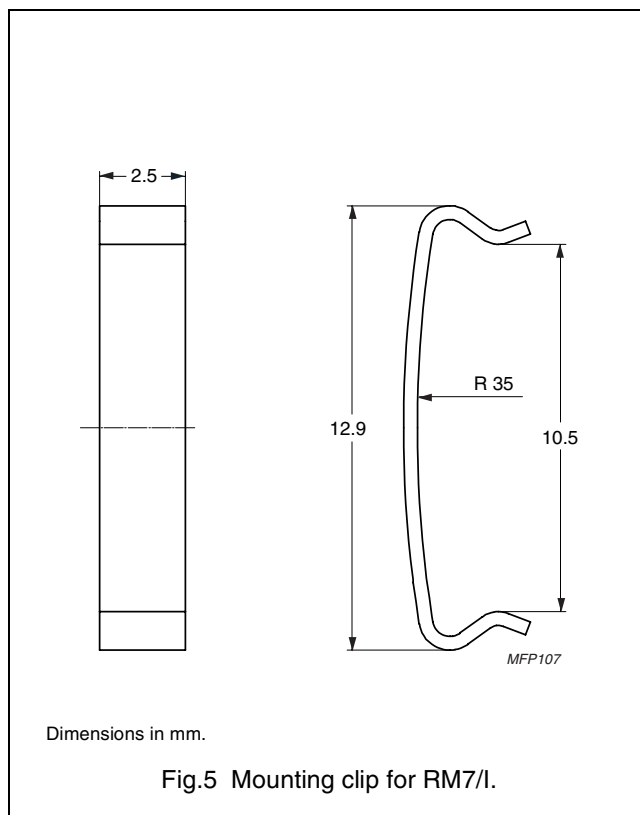
Winding data and area product for RM7/I coil former

NUMBER OF SECTIONS	NUMBER OF PINS	PIN POSITIONS USED	AVERAGE LENGTH OF TURN (mm)	WINDING AREA (mm ²)	WINDING WIDTH (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	8	all	35	20	6.6	882	CSV5-RM7-1S-8P-Z

MOUNTING PARTS

General data

ITEM	SPECIFICATION
Clamping force	≈20 N
Clip material	stainless steel (CrNi)
Type number	CLI-RM7






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.