

DATA SHEET

RM5/I RM cores and accessories

Product specification
Supersedes data of January 1999
File under Ferrite Ceramics, MA01

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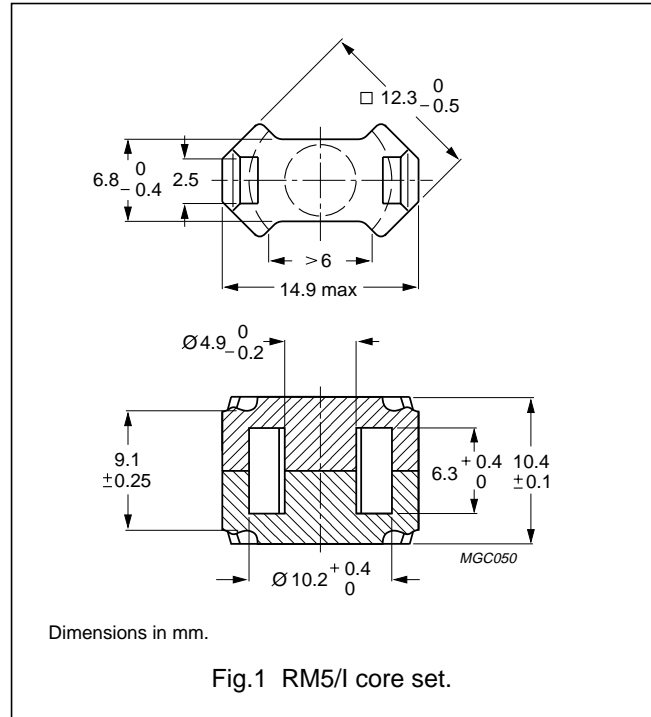
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CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(I/A)$	core factor (C1)	0.935	mm ⁻¹
V_e	effective volume	574	mm ³
l_e	effective length	23.2	mm
A_e	effective area	24.8	mm ²
A_{min}	minimum area	18.1	mm ²
m	mass of set	≈3.3	g



Core sets for general purpose

Clamping force for A_L measurements, 12 ± 5 N.

GRADE	A (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3C90	63 ± 3%	≈47	≈640	RM5/I-3C90-A63
	100 ± 3%	≈74	≈300	RM5/I-3C90-A100
	160 ± 3%	≈119	≈200	RM5/I-3C90-A160
	250 ± 3%	≈186	≈130	RM5/I-3C90-A250
	315 ± 5%	≈234	≈100	RM5/I-3C90-A315
	2000 ± 25%	≈1490	≈0	RM5/I-3C90
3C94 <small>des</small>	63 ± 3%	≈47	≈640	RM5/I-3C94-A63
	100 ± 3%	≈74	≈300	RM5/I-3C94-A100
	160 ± 3%	≈119	≈200	RM5/I-3C94-A160
	250 ± 3%	≈186	≈130	RM5/I-3C94-A250
	315 ± 5%	≈234	≈100	RM5/I-3C94-A315
	2000 ± 25%	≈1490	≈0	RM5/I-3C94
3C96 <small>prot</small>	1800 ± 25%	≈1340	≈0	RM5/I-3C96
3F3	63 ± 3%	≈47	≈640	RM5/I-3F3-A63
	100 ± 3%	≈74	≈300	RM5/I-3F3-A100
	160 ± 3%	≈119	≈200	RM5/I-3F3-A160
	250 ± 3%	≈186	≈130	RM5/I-3F3-A250
	315 ± 5%	≈234	≈100	RM5/I-3F3-A315
	1700 ± 25%	≈1270	≈0	RM5/I-3F3

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GRADE	A (nH)	μ_e	AIR GAP (μm)	TYPE NUMBER
3F35 ^{prot}	1 400 \pm 25%	\approx 1050	\approx 0	RM5/I-3F35
3F4 ^{des}	100 \pm 3%	\approx 74	\approx 300	RM5/I-3F4-A100
	160 \pm 3%	\approx 119	\approx 200	RM5/I-3F4-A160
	250 \pm 3%	\approx 186	\approx 130	RM5/I-3F4-A250
	1 000 \pm 25%	\approx 750	\approx 0	RM5/I-3F4

Core sets of high permeability grades

Clamping force for A_L measurements, 12 \pm 5 N.

GRADE	A_L (nH)	μ_e	TYPE NUMBER
3E1 ^{sup}	3 150 \pm 25%	\approx 2350	RM5/I-3E1
3E4 ^{sup}	4 500 +40/-30%	\approx 3350	RM5/I-3E4
3E27	4 975 \pm 25%	\approx 3700	RM5/I-3E27
3E5	6 700 +40/-30%	\approx 4980	RM5/I-3E5
3E6	8 500 +40/-30%	\approx 6300	RM5/I-3E6

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 320	\leq 0.07	\leq 0.08	–	–
3C94	\geq 320	–	\leq 0.055	\approx 0.25	\leq 0.12
3C96	\geq 320	–	\approx 0.04	\approx 0.18	\approx 0.09
3F3	\geq 315	–	\leq 0.08	–	\leq 0.11
3F35	\geq 300	–	–	–	\approx 0.06
3F4	\geq 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; \hat{B} = 50 mT; T = 100 °C	f = 500 kHz; \hat{B} = 100 mT; T = 100 °C	f = 1 MHz; \hat{B} = 30 mT; T = 100 °C	f = 3 MHz; \hat{B} = 10 mT; T = 100 °C
3C90	\geq 320	–	–	–	–
3C94	\geq 320	–	–	–	–
3C96	\geq 320	–	–	–	–
3F3	\geq 315	–	–	–	–
3F35	\geq 300	\approx 0.09	\approx 0.7	–	–
3F4	\geq 250	–	–	\leq 0.11	\leq 0.20

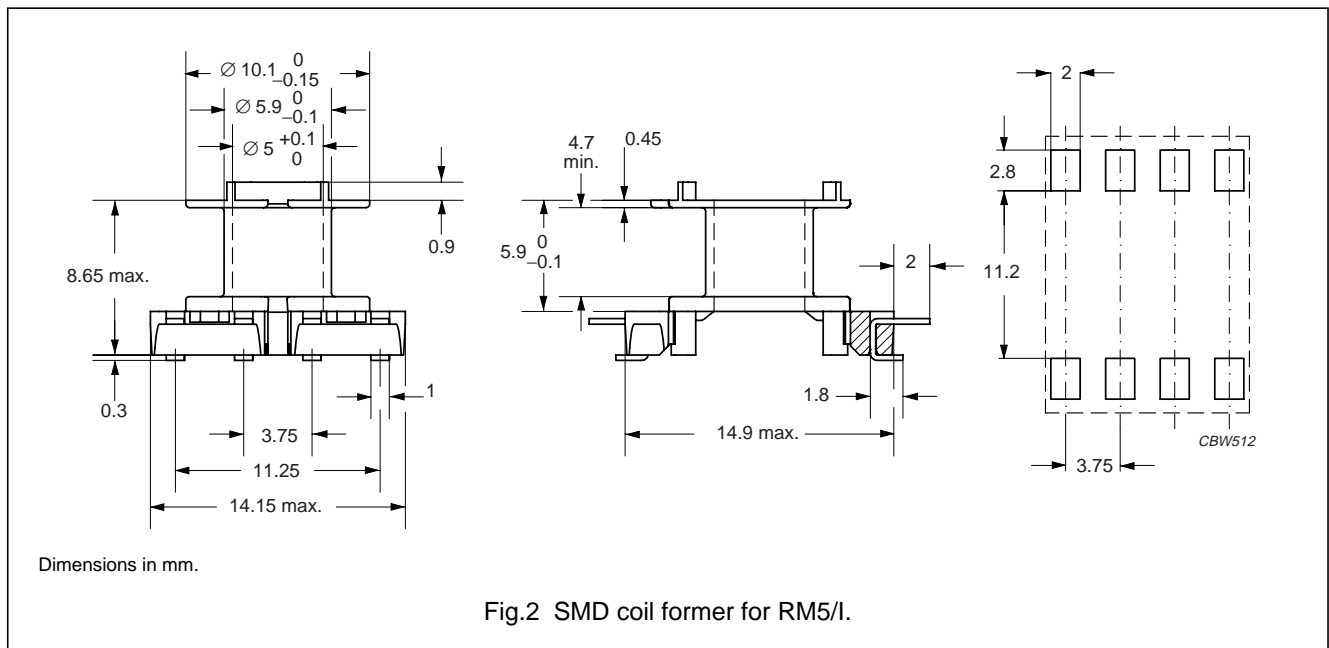
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COIL FORMERS

General data SMD coil former

PARAMETER	SPECIFICATION
Coil former material	phenolformaldehyde (PF), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E41429 (M)
Solder pad material	copper-clad steel, 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 RM5/I coil former (SMD)

NUMBER OF SECTIONS	NUMBER OF SOLDER PADS	WINDING AREA (mm ²)	WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	TYPE NUMBER
1	8	9.5	4.7	24.9	CSV5-RM5-1S-8P

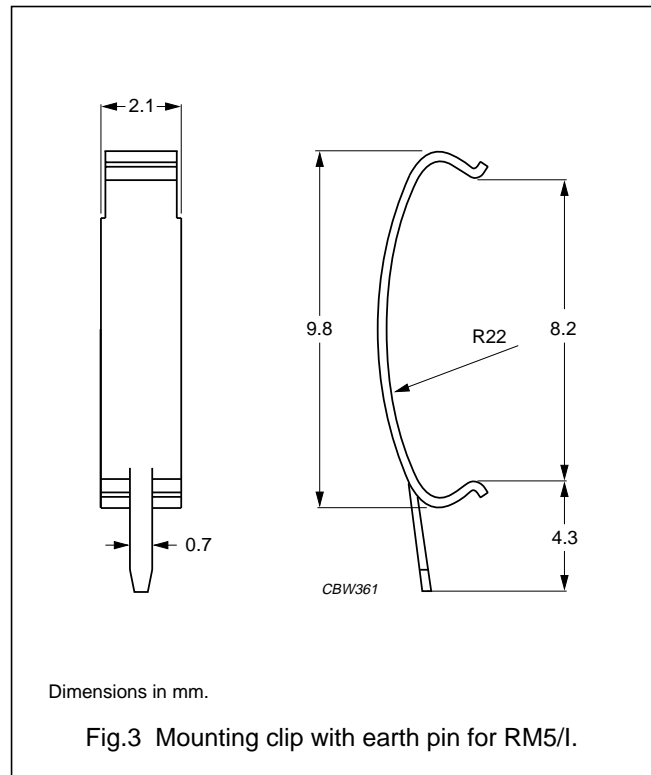
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MOUNTING PARTS

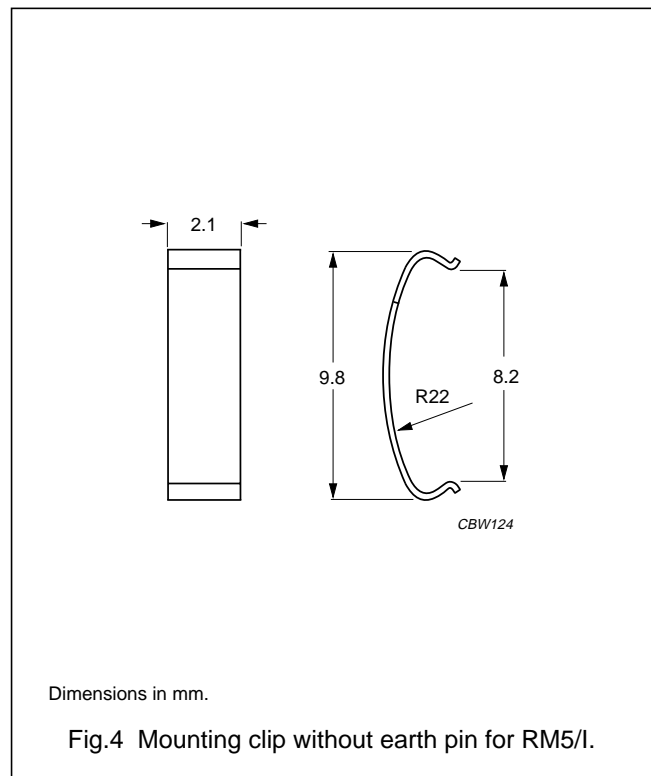
General data mounting clip with earth pin

ITEM	SPECIFICATION
Clamping force	≈6 N
Clip material	stainless steel (CrNi)
Clip plating	tin-lead alloy (SnPb)
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1
Type number	CLI/P-RM4/5/I



General data mounting clip without earth pin

ITEM	SPECIFICATION
Clamping force	≈5 N
Clip material	stainless steel (CrNi)
Type number	CLI-RM4/5/I



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DATA SHEET STATUS	PRODUCT STATUS	DEFINITIONS
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