

DATA SHEET

RM6S

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

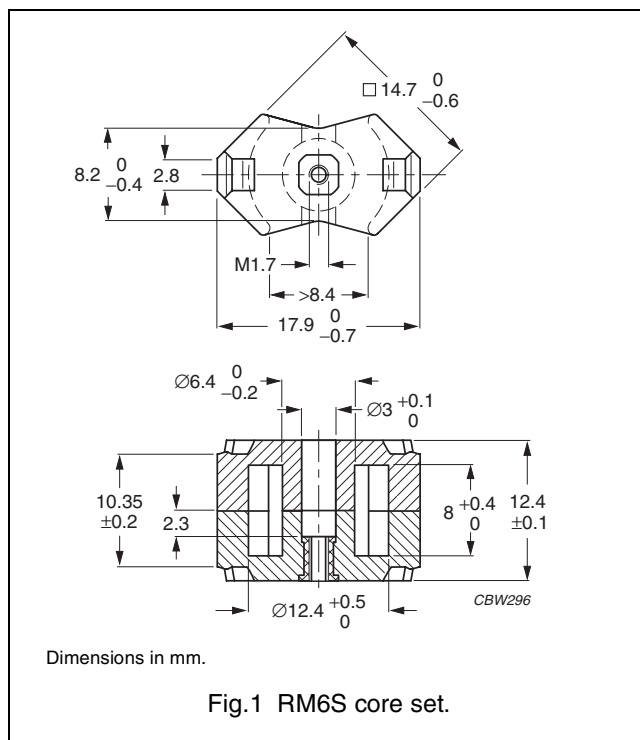
Supersedes data of September 2004

2008 Sep 01

CORE SETS

Effective core parameters

SYMBOL	PARAMETER	VALUE	UNIT
$\Sigma(l/A)$	core factor (C1)	0.863	mm ⁻¹
V_e	effective volume	840	mm ³
l_e	effective length	27.3	mm
A_e	effective area	31.0	mm ²
A_{min}	minimum area	23.8	mm ²
m	mass of set	≈ 5.1	g



Core sets for filter applications

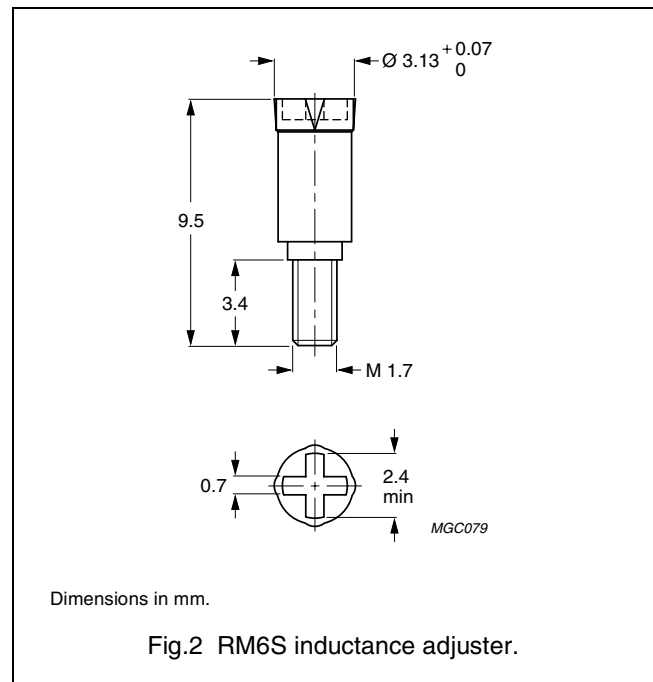
Clamping force for A_L measurements, 40 ±20 N.

GRADE	A_L (nH)	μ_e	TOTAL AIR GAP (μm)	TYPE NUMBER (WITH NUT)	TYPE NUMBER (WITHOUT NUT)
3D3 ^{sup}	63 ±3%	≈ 44	≈ 850	RM6S-3D3-E63/N	RM6S-3D3-E63
	100 ±3%	≈ 70	≈ 460	RM6S-3D3-E100/N	RM6S-3D3-E100
	160 ±3%	≈ 112	≈ 250	RM6S-3D3-A160/N	RM6S-3D3-A160
	950 ±25%	≈ 670	≈ 0	—	RM6S-3D3
3H3 ^{sup}	160 ±3%	≈ 112	≈ 280	RM6S-3H3-A160/N	RM6S-3H3-A160
	250 ±3%	≈ 175	≈ 160	RM6S-3H3-A250/N	RM6S-3H3-A250
	315 ±3%	≈ 221	≈ 120	RM6S-3H3-A315/N	RM6S-3H3-A315
	400 ±3%	≈ 280	≈ 90	RM6S-3H3-A400/N	RM6S-3H3-A400
	2100 ±25%	≈ 1470	≈ 0	—	RM6S-3H3

INDUCTANCE ADJUSTERS

General data

PARAMETER	SPECIFICATION
Material of head and thread	polypropylene (PP), glass fibre reinforced
Maximum operating temperature	125 °C



Inductance adjuster selection chart ^{sup} (applies to all types)

GRADE	A _L (nH)	TYPES FOR LOW ADJUSTMENT	ΔL/L ⁽¹⁾ %	TYPES FOR MEDIUM ADJUSTMENT	ΔL/L ⁽¹⁾ %	TYPES FOR HIGH ADJUSTMENT	ΔL/L ⁽¹⁾ %
3H3	40	–	–	–	–	ADJ-RM6-GREEN	20
	63	–	–	ADJ-RM6-GREEN	14	ADJ-RM6-RED	22
	100	ADJ-RM6-GREEN	10	ADJ-RM6-RED	16	–	–
	160	ADJ-RM6-GREEN	6	ADJ-RM6-RED	11	ADJ-RM6-WHITE	19
	200	ADJ-RM6-RED	9	ADJ-RM6-WHITE	15	ADJ-RM6-VIOLET	19
	250	ADJ-RM6-WHITE	12	ADJ-RM6-VIOLET	14	ADJ-RM6-BROWN	20
	315	ADJ-RM6-WHITE	9	ADJ-RM6-BROWN	15	ADJ-RM6-BLACK	23
	400	ADJ-RM6-VIOLET	8	ADJ-RM6-BLACK	16	ADJ-RM6-GREY	26
	630	ADJ-RM6-BLACK	9	ADJ-RM6-GREY	15	–	–
	1000	ADJ-RM6-BLACK	5	ADJ-RM6-GREY	9	–	–
3D3	1250	–	–	ADJ-RM6-GREY	5	–	–
	40	–	–	–	–	ADJ-RM6-GREEN	19
	63	–	–	ADJ-RM6-GREEN	14	ADJ-RM6-RED	22
	100	ADJ-RM6-GREEN	9	ADJ-RM6-RED	15	ADJ-RM6-WHITE	27
	160	ADJ-RM6-RED	9	ADJ-RM6-WHITE	16	–	–

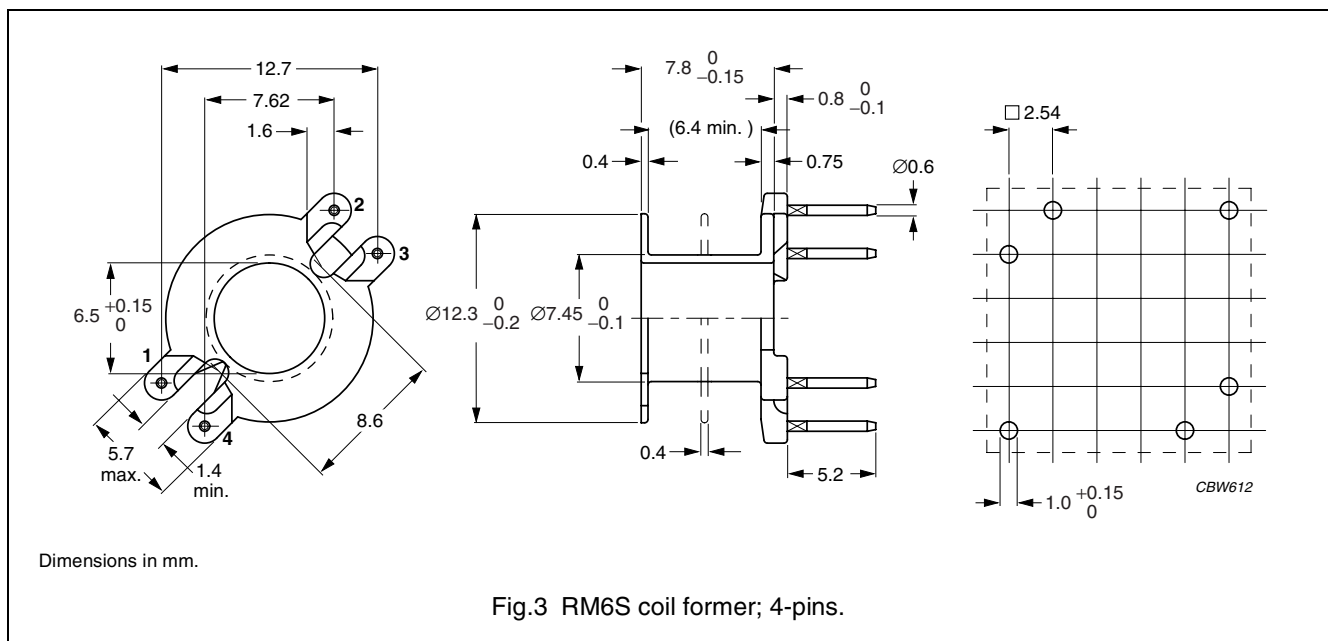
Note

1. Maximum adjustment range.

COIL FORMERS

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

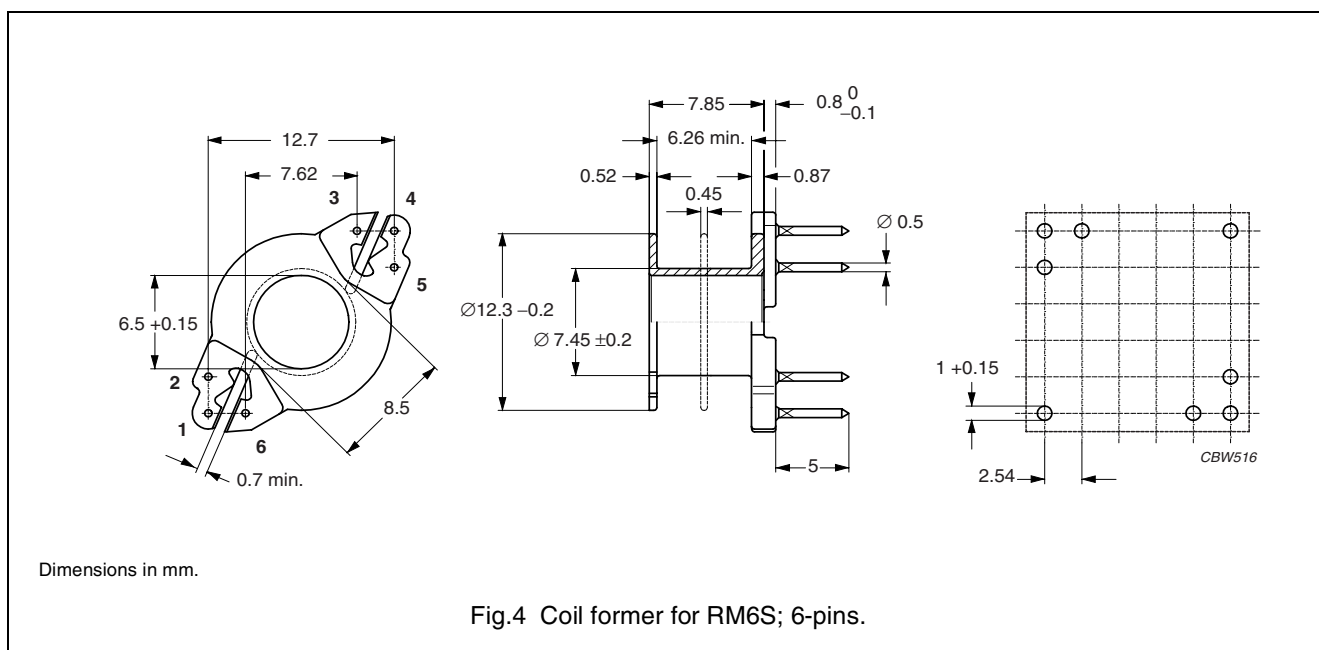


Winding data and area product for 4-pins RM6S coil former

NUMBER OF SECTIONS	NUMBER OF PINS	PIN POSITIONS USED	WINDING AREA (mm ²)	WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	4	all	15	6.4	30	465	CSV-RM6S/R-1S-4P
2	4	all	2 x 7.0	2 x 3.0	30	2 x 217	CSV-RM6S/R-2S-4P

General data

PARAMETER	SPECIFICATION
Coil former material	unsaturated polyester (UP), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E61040 (M)
Solder pad 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 RM6S coil former

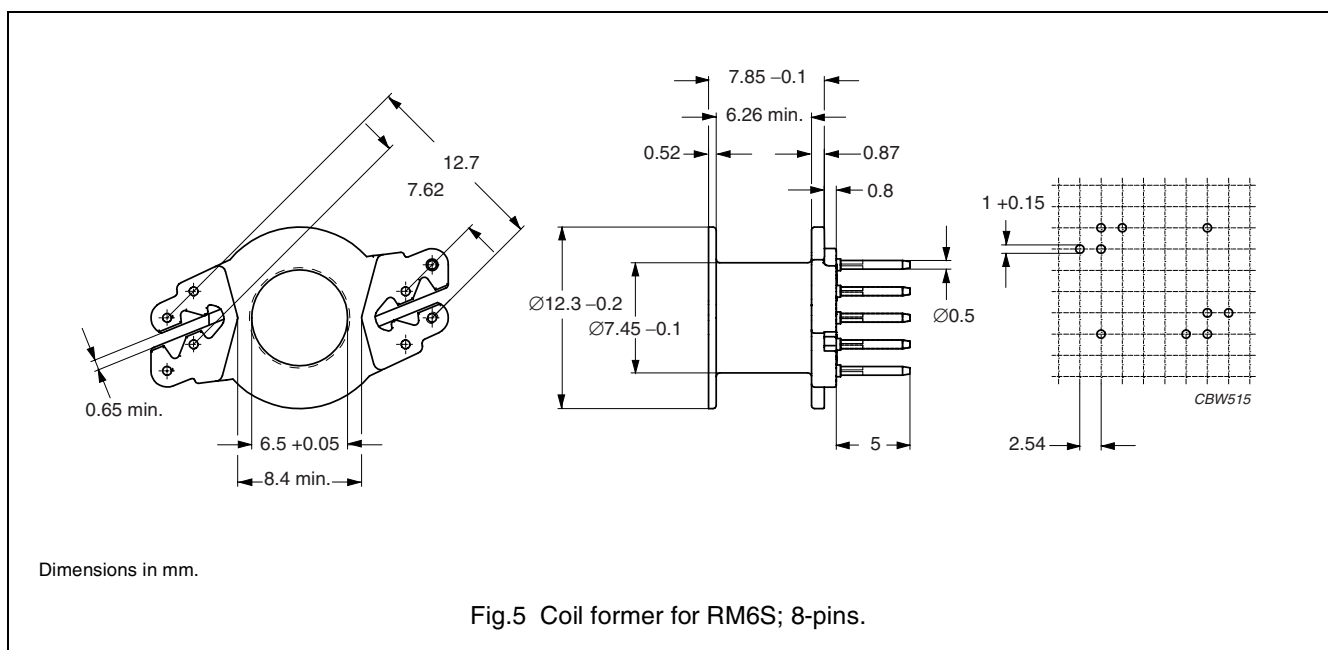
NUMBER OF SECTIONS	NUMBER OF PINS	PIN POSITIONS USED	WINDING AREA (mm ²)	WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	6	all	15.0	6.3	30.0	465	CSV-RM6S-1S-6P-G ⁽¹⁾
1	5	1, 2, 3, 5, 6	15.0	6.3	30.0	465	CSV-RM6S-1S-5P-G ⁽¹⁾
1	4	2, 3, 5, 6	15.0	6.3	30.0	465	CSV-RM6S-1S-4P-G ⁽¹⁾
2	6	all	2 x 7.0	2 x 3	30.0	2 x 217	CSV-RM6S-2S-6P-G ⁽¹⁾

Note

1. Also available with post-inserted pins.

General data

PARAMETER	SPECIFICATION
Coil former material	unsaturated polyester (UP), glass-reinforced, flame retardant in accordance with "UL 94V-0"; UL file number E61040 (M)
Solder pad material	copper-clad steel, 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



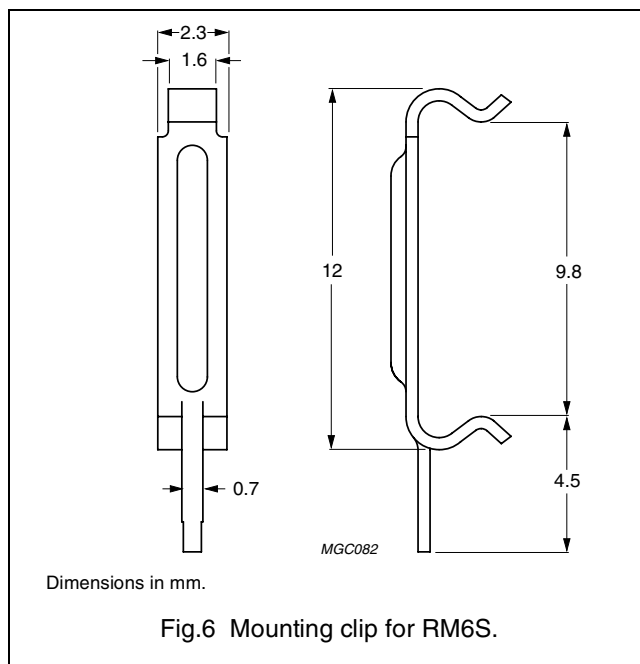
Winding data and area product for RM6S coil former

NUMBER OF SECTIONS	NUMBER OF PINS	WINDING AREA (mm ²)	WINDING WIDTH (mm)	AVERAGE LENGTH OF TURN (mm)	AREA PRODUCT Ae x Aw (mm ⁴)	TYPE NUMBER
1	8	14.5	6.26	30.7	450	CSV-RM6S-1S-8P

MOUNTING PARTS

General data

ITEM	SPECIFICATION
Clamping force	≈20 N
Clip material	steel
Clip plating	silver (Ag)
Solderability	"IEC 60068-2-20", Part 2, Test Ta, method 1
Type number	CLI/P-RM6






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.

DISCLAIMER

Life support applications — These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Ferroxcube customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Ferroxcube for any damages resulting from such application.

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.