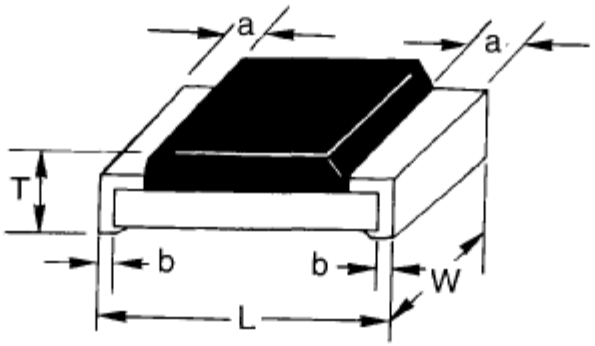
THICK FILM CHIP RESISTOR

On a high grade ceramic body (aluminium oxide) a metal glaze layer is screened. Depending on the composition of the metal glaze different resistance values can be obtained. On both ends a contact is made in such a way that optimum solderability is guaranteed. This is achieved by applying three layers. The resistive layer is covered with a protective coat.

Features:

1. Miniature size can compact P.C. Board.
2. 8mm tape carrier packaging available for automatic surface mounting.
3. Excellent mechanical strength and electrical stability.
4. Reduce assembly costs.

DIMENSIONS



Style	Dimensions: mm				
	L	W	a	b	T
RMC-02 0201	0.6 ± 0.08	0.3 ± 0.03	0.13 ± 0.08	0.15 ± 0.08	0.23 ± 0.03
RMC-04 0402	1.00 ± 0.10	0.50 ± 0.05	0.20 ± 0.10	0.25 ± 0.10	0.35 ± 0.05
RMC-06 0603	1.60 ± 0.10	0.80 ± 0.10	0.30 ± 0.20	0.30 ± 0.20	0.45 ± 0.05
RMC-10 0805	2.00 ± 0.10	1.25 ± 0.10	0.40 ± 0.20	0.40 ± 0.20	0.50 ± 0.05
RMC-18 1206	3.10 ± 0.10	1.60 ± 0.10	0.50 ± 0.25	0.50 ± 0.25	0.55 ± 0.05
RMC-20 1210	3.10 ± 0.10	2.60 ± 0.10	0.50 ± 0.25	0.50 ± 0.20	0.55 ± 0.05
RMC-22 2010	5.00 ± 0.10	2.50 ± 0.10	0.60 ± 0.25	0.50 ± 0.20	0.55 ± 0.05
RMC-24 2512	6.35 ± 0.10	3.20 ± 0.10	0.60 ± 0.25	0.50 ± 0.20	0.55 ± 0.05

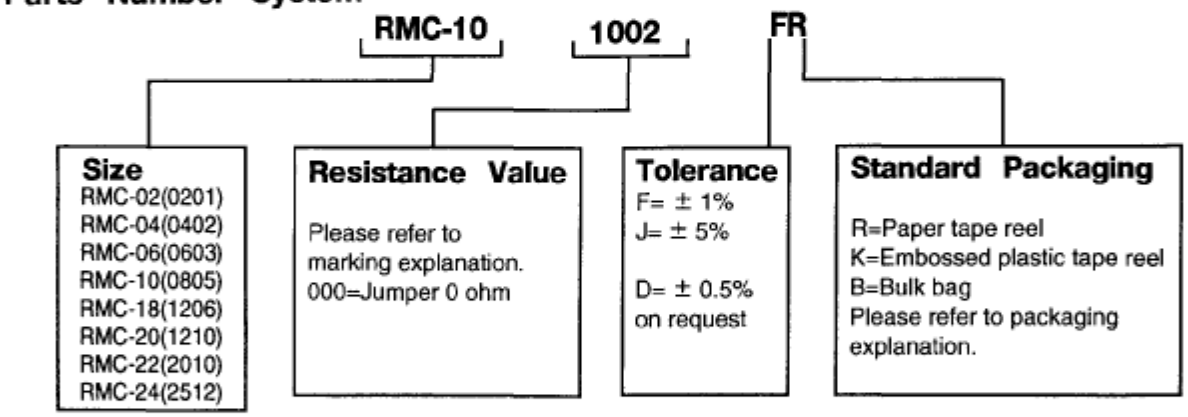
General Specification

Style	RMC-02 0201	RMC-04 0402	RMC-06 0603	RMC-10 0805	RMC-18 1206	RMC-20 1210	RMC-22 2010	RMC-24 2512
Power Rating @ 70°C	1/20W	1/16W	1/10W	1/8W	1/4W	1/3W	3/4W	1W
Operating Temp. Range Derated to 0 Load at	− 55°C to + 125°C + 125°C							
Maximum Working Voltage Maximum Overload Voltage	15V 30V	25V 50V	50V 100V	150V 300V	200V 400V	200V 400V	200V 400V	200V 400V
Resistance Range 1%, E-96 5%, E-24 Zero Ohm jumper < 0.05 Ω	 10 Ω ~1M Ω 10 Ω ~1M Ω	 10 Ω ~1M Ω 2 Ω ~5.6M Ω	 10 Ω ~1M Ω 1 Ω ~10M Ω	 10 Ω ~1M Ω 1 Ω ~10M Ω	 10 Ω ~1M Ω 1 Ω ~10M Ω	 10 Ω ~1M Ω 1 Ω ~10M Ω	 10 Ω ~1M Ω 1 Ω ~10M Ω	 10 Ω ~1M Ω 1 Ω ~10M Ω
TCR ± 100ppm/°C			10 Ω ~1M Ω					
TCR ± 200ppm/°C	10 Ω ~1M Ω	10 Ω ~1M Ω	1Ω~10Ω>1MΩ					
TCR ± 400ppm/°C		1 Ω ~1M Ω						

Characteristics

PERFORMANCE TEST	TEST METHOD	1% TOLERANCE	5% TOLERANCE
Temperature Coefficient (by Type)	MIL-STD-202F, Method 304 − 55°C to + 125°C	± 100 ppm/°C	± 200 ppm/°C
Thermal Shock	MIL-STD-202F, Method 107 5 cycles, − 55°C to + 125°C	± (0.5% + 0.05 Ω)	± (1.0% + 0.05 Ω)
Low Temperature Operation	MIL-R-55342D, Para.4.7.4 On hour at − 65°C followed by 45 minutes RCWV	± (0.5% + 0.05 Ω)	± (1.0% + 0.05 Ω)
Short Time Overload	MIL-R-55342D, Para.4.7.5 2.5 times RCWV for 5 seconds	± (1.0% + 0.05 Ω)	± (2.0% + 0.05 Ω)
High Temperature	MIL-R-55342D, Para.4.7.6 125°C fo 100 hours	± (1.0% + 0.05 Ω)	± (2.0% + 0.1 Ω)
Resistance to Soldering Heat	MIL-R-55342D, Para.4.7.7 Soldered to test board at 260°C for 10 seconds	± (0.5% + 0.05 Ω)	± (1.0% + 0.05 Ω)
Moisture Resistance	MIL-STD-202F, Method 106 10 cycles. Total 240 hours	± (0.5% + 0.05 Ω)	± (2.0% + 0.05 Ω)
Life	MILSTD-202F, Method 108A 100 hours at 70°C RWV intermittent	± (1.0% + 0.05 Ω)	± (3.0% + 0.1 Ω)
Solderability	MIL-STD-202F, Method 208 230°C for 5 seconds	95%min. coverage	95%min. coverage
Bending Strength	Unit mounted in center 208 90mm board length, deflected 5mm in either direction for 10 seconds	± (1.0% + 0.05 Ω)	± (1.0% + 0.05 Ω)

Parts Number System



Marking

RMC-06(0603)
RMC-10(0805)
RMC-18(1206)
RMC-20(1210)
RMC-22(2010)
RMC-24(2512)

5% marking
Value=10K Ω

RMC-10(0805)
RMC-18(1206)
RMC-20(1210)
RMC-22(2010)
RMC-24(2512)

1% marking
Value=10K Ω

RMC-06(0603)
EIA-96
marking

1% marking
Value=12.4K Ω

RMC-04(0402)
RMC-02(0201)

NO marking

Marking Explanation

- 5% tolerance: 3 digits, first two digits are significant figure, third digit is number of zeros. Letter R is decimal point.
- 1% tolerance: 4 digits, first three digits are significant figure, Letter R is decimal point.
- 0603%: EIA-96 marking (see page14)
- 0201 and 0402 no marking

- Paper tape 7" reel
  RMC-02/04: 10,000pcs
  RMC-06/010/18/20: 5,000pcs
- Plastic tape per 7" reel
  RMC-22/24: 4000pcs
- Bulk bag: 5,000 per plastic bag, 2 bags per box.
- Standard packaging is 8mm tape reel per EIA481.