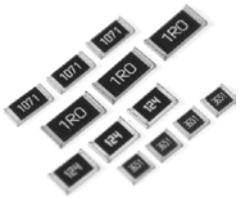
THICK FILM CHIP RESISTORS

(RMC SERIES)

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

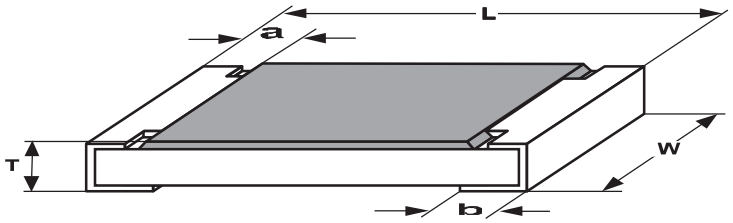
1. Miniature size for compact P.C. Board.
2. 8mm tape carrier packaging available for automatic surface mountir
3. Excellent mechanical strength and electrical stability.
4. Reduce assembly costs.



Options

- Option'NM': Non-magnetic copper plating on middle termination suitable for medical equipment, MRI industry and Automotive industry.
  Non-magnetic chip resistors pass 3000 gauss magnetic detection.

Dimensional Specifications



Style	Dimensions : mm				
	L	w	a	b	T
RMC-01 01005	0.40 ±0.02	0.20 ±0.02	0.1 ±0.03	0.1 ±0.03	0.13 ±0.02
RMC-02 0201	0.60 ±0.08	0.30 ±0.03	0.13 ±0.08	0.15 ±0.05	0.23 ±0.05
RMC-04 0402	1.00 ±0.10	0.50 ±0.005	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 ±.0.10
RMC-10 0805	2.00 ±0.10	1.25 ±0.10	0.35 ±0.20	0.40 ±0.20	0.50 ±0.10
RMC-18 1206	3.10 ±0.20	1.55±0.10	0.50 ±0.25	0.50±0.25	0.55 ±0.10
RMC-20 1210	3.10 ±0.20	2.60 ±0.15	0.50 ±0.25	0.50±0.20	0.55 ±0.10
RMC-22 2010	5.00 ±0.20	2.50 ±0.15	0.60 ±0.25	0.50±0.20	0.55 ±0.10
RMC-24 2512	6.35 ±0.20	3.20 ±0.15	0.60 ±0.25	0.50±0.20	0.55 ±0.10
RMC-26 1812	4.50 ±0.10	3.00 ±0.10	0.55 ±0.10	0.80 ±0.10	0.55 ±0.10
RMC-28 1218	3.10 ±0.10	4.60 ±0.10	0.45 ±0.10	0.40 ±0.10	0.55 ±0.10

RoHS compliant

CINETECH SYMBOL OF QUALITY

General Specification

Type	RMC-01 01005	RMC-02 0201	RMC-04 0402	RMC-06 0603	RMC-10 0805	RMC-18 1206	RMC-20 1210	RMC-22 2010	RMC-24 2512	RMC-26 1812	RMC-28 1218
Power Rating @70℃	1/32W	1/20W	1/16W	1/10W	1/8W	1/4W	1/2W	3/4W	1W	3/4W	1W
Operating temp. range	-55℃ to +155℃ 0204-1218										
	-55℃ to +125℃ 01005, 0201										
Max. Working Voltage	15V	15V	50V	75V	150V	200V	200V	200V	200V	200V	200V
Max. Overload Voltage	30V	30V	100V	150V	300V	400V	400V	400V	400V	400V	400V
Resistance Range											
1%, E-96	**10Ω~1MΩ**	**1Ω~3MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**
5%, E-24	**1Ω~1MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**	**1Ω~10MΩ**
TCR ±100ppm/℃			**10Ω~1MΩ**	10Ω~1MΩ							
TCR ±200ppm/℃	100Ω~1MΩ	10Ω~10MΩ	10Ω~100Ω 1MΩ~10MΩ	1Ω~10Ω, 1MΩ~20MΩ							
TCR ±300ppm/℃	10Ω~100Ω										
TCR ±400ppm/℃		1Ω~10Ω	1Ω~10Ω	20.5MΩ~100MΩ							

Jumper Type	RMC-02 0201	RMC-04 0402	RMC-06 0603	RMC-10 0805	RMC-18 1206	RMC-20 1210	RMC-22 2010	RMC-24 2512	RMC-26 1812	RMC-28 1218
Jumper Resistance Value	**50mΩ Max**									
Jumper Rated Current	0.5A	1A			2A					

Marking

5%marking
Value=10KΩ

RMC-06(0603) RMC-22(2010)
RMC-10(0805) RMC-24(2512)
RMC-18(1206) RMC-26(1812)
RMC-20(1210) RMC-28(1218)

1%marking
Value=10KΩ

RMC-10(0805) RMC-24(2512)
RMC-18(1206) RMC-26(1812)
RMC-20(1210) RMC-28(1218)
RMC-22(2010)

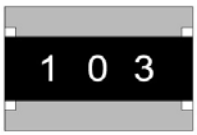
1%marking
Value=12.4KΩ

RMC-06(0603)
EIA-96 marking

No Marking

RMC-04(0402)
RMC-02(0201)
RMC-01(01005)

RMC-02(0201) RMC-20(1210)
RMC-04(0402) RMC-22(2010)
RMC-06(0603) RMC-24(2512)
RMC-10(0805) RMC-26(1812)
RMC-18(1206)



RMC-28(1218)

- **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,
  Forth digit is number of zeros, Letter R is decimal point.
- **01005, 0201 and 0402 no marking**
- **0603% : EIA-96 marking**
- **Standard packaging is 8mm tape reel per EIA481**
- **Plastic tape 7" reel, RMC-22/24/26/28:4K/reel**
- **Paper tape 7"reel, RMC-01/02/04:10,000PCS, RMC-06/18/ 20: 5,000pcs**

RoHS compliant

CINETECH SYMBOL OF QUALITY

EIA-96 Marking

code	R Value	code	R Value	code	R Value	code	R Value	code	R Value	code	R Value	code	R Value	code	R Value
01	100	13	133	25	178	37	237	49	316	61	422	73	562	85	750
02	102	14	137	26	182	38	243	50	324	62	432	74	576	86	768
03	105	15	140	27	187	39	249	51	332	63	442	75	590	87	787
04	107	16	143	28	191	40	255	52	340	64	453	76	604	88	806
05	110	17	147	29	196	41	261	53	348	65	464	77	619	89	825
06	113	18	150	30	200	42	267	54	357	66	475	78	634	90	845
07	115	19	154	31	205	43	274	55	365	67	487	79	649	91	866
08	118	20	158	32	210	44	280	56	374	68	499	80	665	92	887
09	121	21	162	33	215	45	287	57	383	69	511	81	681	93	909
10	124	22	165	34	221	46	294	58	392	70	523	82	698	94	931
11	127	23	169	35	226	47	301	59	402	71	536	83	715	95	953
12	130	24	174	36	232	48	309	60	412	72	549	84	732	96	976

This table shows the first two digits for the three-digit EIA-96 part marking scheme. The third character is a letter multiplier:

$Y=10^{-2}$ $X=10^{-1}$ $A=10^{0}$ $B=10^{1}$ $C=10^{2}$ $D=10^{3}$ $E=10^{4}$ $F=10^{5}$

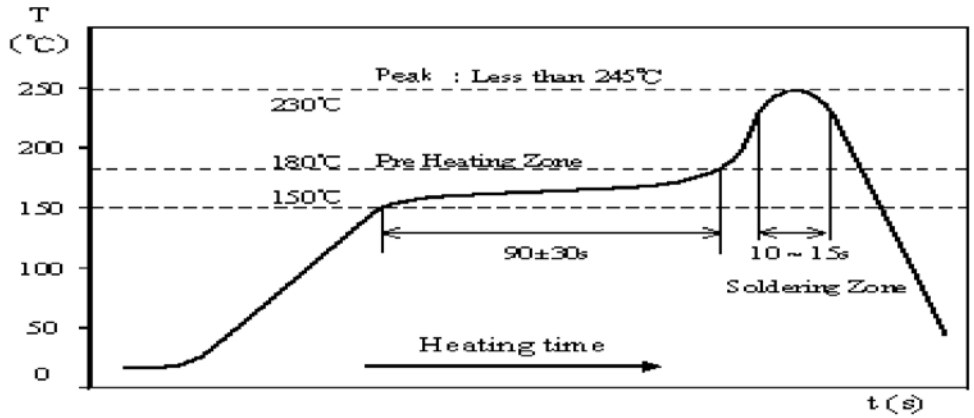
Characteristics

Performance test	test method	Test Limit ΔR	
		1%Tolerance	5%Tolerance
Thermal Shock	MIL-STD-202F,Method 107 5 cycles,-55˚C to +155˚C	±(0.5%+0.05Ω)	±(1.0%+0.05Ω) 0201, 01005 ±(3%+0.1Ω)
Short time Overload	MIL-R-55342D,Para.4.7.5 2.5 times RCWV for 5 seconds	±(1.0%+0.05Ω)	±(2.0%+0.05Ω) 0201, 01005 ±(3%+0.1Ω)
High Temperature	MIL-R-55342D,Para.4.7.6 125˚C to 100 hours	±(1.0%+0.05Ω)	±(2.0%+0.1Ω)
Resistance to Soldering Heat	MIL-R-55342D,Para.4.7.7 Soldered to test board at 260˚C for 10 seconds	±(0.5%+0.05Ω)	±(1.0%+0.05Ω) 0201, 01005 ±(3%+0.1Ω)
Moisture Resistance	MIL-STD-202F,Method 106 10 cycles. Total 240 hours	±(0.5%+0.05Ω)	±(2.0%+0.05Ω) 0201, 01005 ±(5%+0.1Ω)
Load Life	MIL-STD-202F,Method 108A 1000 hours at 70˚C RWV intermittent	±(1.0%+0.05Ω)	±(3.0%+0.1Ω) 0201, 01005 ±(5%+0.1Ω)
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 lenghth, deflected for 5 seconds	±(1.0%+0.05Ω)	±(1.0%+0.05Ω)
Temperature Coefficient (by Type)	MIL-STD-202F,Method 304 -55˚C to +125˚C	±100 ppm/˚C, ±200ppm/℃, ±300ppm/℃, ±400ppm/℃	

RoHS compliant

CINETECH SYMBOL OF QUALITY

Soldering Temp. Curve



IR Reflow Soldering

Parts Number System

RMC -	10 -	1002	F	R
TYPE	**SIZE**	**Resistance**	**Tolerance**	**Standard Packing**
THICK FILM CHIP RESISTOR	01=01005 02=0201 04=0402 06=0603 10=0805 18=1206 20=1210 22=2010 24=2512 26=1812 28=1218	Please refer to marking explanation. 000=Jumper 0 ohm	F= ±1% J = ±5% on request	R=Paper tape reel K=Embossed plastic tape reel Please refer to packaging explanation