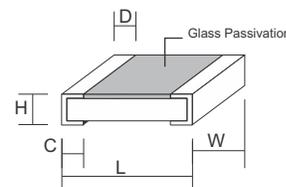


INTRODUCTION

RFE International, Inc. offers a wide range of chip resistors to meet your application requirements. They are made with metal glazed thick film on a high purity ceramic substrate which is overcoated for stability and protection. These resistors are suitable for all applications (automotive, lighting, power, etc).

- Lower & Higher values see additional RM Series
- Anti-Sulfur Thick Film see RMS Series
- High Power Thick Film see RMH Series
- Anti-Sulfur High Power see RMP Series
- Thin Film see RMT Series
- Fusible Resistors see RMF Series
- Thick Film Array Chip see RCN Series
- Metal Array Low-Resistance see LR Series

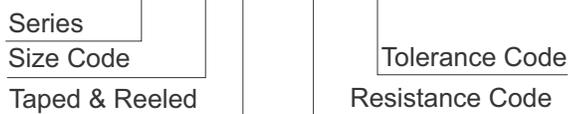
DIMENSIONS



Size Code	Max. Dimension (mm)				
	L	W	H	C	D
RMQ06 (0603)	1.60 ± 0.20	0.80 ± 0.15	0.40 ± 0.10	0.20 ± 0.10	0.20 ± 0.10
RMQ10 (0805)	2.00 ± 0.20	1.25 ± 0.15	0.50 ± 0.15	0.30 ± 0.15	0.40 ± 0.15
RMQ12 (1206)	3.05 ± 0.10	1.60 ± 0.20	0.55 ± 0.15	0.40 ± 0.20	0.50 ± 0.20
RMQ50 (2010)	5.00 ± 0.20	2.50 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20
RMQ1W (2512)	6.30 ± 0.20	3.20 ± 0.20	0.55 ± 0.10	0.60 ± 0.20	0.60 ± 0.20

PART NUMBER EXAMPLE

RMQ 10 R - 10K - J



RESISTANCE CODE

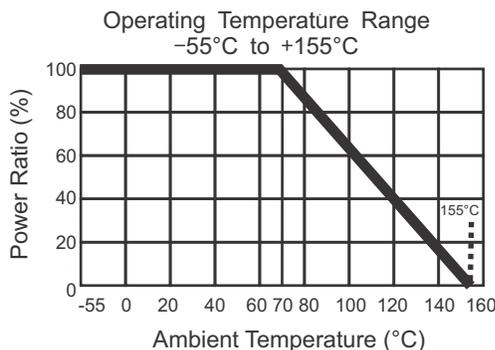
Ohms	100K	1M	10M	100M
Code	100K	1M0	10M	100M

ELECTRICAL CHARACTERISTICS & RESISTANCE RANGE

TYPE	Rated Power at 70°C	Max Working Voltage	Max Overload Voltage	T.C.R. (PPM/°C)	Resistance Range (Ω) F (± 1%)	Resistance Range (Ω) J (± 5%)
RMQ06 (0603)	0.10 W	200V	400V	± 200	--	100K ~ 22M
				± 100	100K ~ 10M	--
RMQ10 (0805)	0.125 W	400V	800V	± 200	--	100K ~ 22M
				± 100	100K ~ 10M	--
RMQ12 (1206)	0.25 W	800V	1600V	± 200	11M ~ 22M	100K ~ 100M
				± 100	100K ~ 10M	--
RMQ50 (2010)	0.50W	2000V	3000V	± 200	11M ~ 22M	100K ~ 100M
				± 100	100K ~ 10M	--
RMQ1W (2512)	1.0W	3000V	4000V	± 200	11M ~ 22M	100K ~ 100M
				± 100	100K ~ 10M	--

PERFORMANCE CHARACTERISTICS

Power Derating Curve



Power rating or current rating is in the case based on continuous full-load at ambient temperature of 70°C. For operation at ambient temperature in excess of 70°C, the load should be derated in accordance with figure of derating Curve.

■ **Voltage Rating or Current Rating**

Resistance Range: $\geq 1\Omega$

Rated Voltage: The resistor shall have a DC continuous working voltage or a RMS AC continuous working voltage at commercial-line frequency and wave form corresponding to the power rating, as determined formula as follows:

$$E = \sqrt{P \times R}$$

E = Rated Voltage (V)
P = Power Rating (W)
R = Nominal Resistance (Ω)

■ **Operation and Storage Temperature**

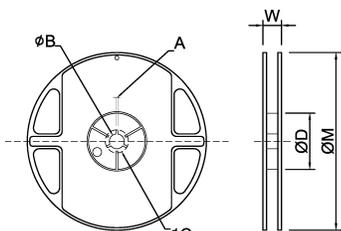
TYPE	MIN	MAX
Operation temperature	-55°C	70°C
Storage temperature	20°C	30°C
Storage humidity	30%	70°C

■ **TEST PROCEDURES & REQUIREMENTS**

Test Item	Test Method	Procedure	Requirements
Temperature Coefficient of Resistance (T.C.R)	JIS C 5201-1 Clause 4.8	-55°C ~ +155°C, 20°C is the reference temperature	Refer to Ratings
Short Time Overload	JIS C 5201-1 Clause 4.13	General: 2 times working voltage or Max. Overload Voltage for 5 sec.	$\pm(1.0\%+0.1\Omega)$
IR Reflow	Sony SS-00254		$\pm(1.0\%+0.05\Omega)$
Solderability	IEC 60115-1	260 \pm 5°C for 30 seconds	> 95% Coverage
Soldering Heat	JIS C 5201-1 Clause 4.18	260 \pm 5°C for 10 seconds	$\pm(1.0\%+0.01\Omega)$
Temperature Cycling	JIS C 5201-1 Clause 4.19	-55°C to +155 C, 5 cycles	$\pm(1.0\% + 0.10\Omega)$
Electric Iron	Sony SS-00254-5	Preheating Temperature: 350 \pm 5 °C Electric Iron Preheating Time: 3+1/-0 sec.	$\pm 1: \pm(1.0\%+0.05\Omega)$ $\pm 5: \pm(1.0\%+0.05\Omega)$
Resistance to Solvent	JIS C 5201-1 Clause 4.29	The Tested Resistor to be immersed into isopropyl alcohol of 20 ~ 25°C for 60secs. Then the resistor is left in the room for 48hrs.	$\pm 1: \pm(0.5\%+0.05\Omega)$ $\pm 5: \pm(0.5\%+0.05\Omega)$
Load Life in Humidity	JIS C 5201-1 Clause 4.24	40 + 2°C, 90 ~ 95% R.H. or Max. working Voltage for 1,000hrs with 1.5hrs "ON" and 0.5hr "OFF"	$\pm(5.0\% + 0.01\Omega)$
Load Life (Endurance)	JIS C 5201-1 Clause 4.25	70 + 2°C, or Max. working Voltage for 1,000hrs with 1.5hrs "ON" and 0.5hr "OFF"	$\pm(5.0\% + 0.1\Omega)$
Insulation Resistance	JIS C 5201-1 Clause 4.6	Max Overload Voltage for 1 min.	$\geq 1,000M\Omega$

■ **PACKAGE & DIMENSION (mm)**

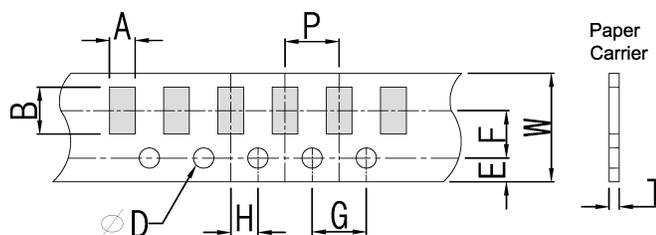
Unit:mm



Size	Package Q'ty		A	φB	φC	φD	W	φM
RMQ06 (0603)	7"	5K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	60 ± 1.0	11.5 ± 2.0	178 ± 2.0
RMQ10 (0805)	10"	10K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	100 ± 1.0	11.5 ± 2.0	254 ± 2.0
RMQ12 (1206)	13"	20K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	100 ± 1.0	11.5 ± 2.0	330 ± 2.0
RMQ50 (2010)	7"	4K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	60 ± 1.0	16.0 ± 2.0	178 ± 2.0
	10"	8K/Reel	2.0 ± 0.8	13.0 ± 1.0	21 ± 1.0	100 ± 1.0	20 Max	254 ± 2.0
RMQ1W (2512)	7"	4K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	60 ± 1.0	16.0 ± 2.0	178 ± 2.0
	13"	16K/Reel	2.0 ± 0.5	13.5 ± 1.0	21 ± 1.0	100 ± 1.0	20 Max	330 ± 2.0

■ **TAPING SPECIFICATION**

Paper Type
(P= 2.0 ± 0.1)



Unit:mm

Size	A	B	W	E	F	G	H	T	φD
RMQ06 (0603)	1.05 ± 0.20	1.80 ± 0.20	8.0 ± 0.20	1.75 ± 0.10	3.5 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.60 ± 0.10	1.50 ± 0.10
RMQ10 (0805)	1.55 ± 0.20	2.30 ± 0.20	8.0 ± 0.20	1.75 ± 0.10	3.5 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.75 ± 0.10	1.50 ± 0.10
RMQ12 (1206)	1.90 ± 0.20	3.50 ± 0.20	8.0 ± 0.20	1.75 ± 0.10	3.5 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.75 ± 0.10	1.50 ± 0.10
RMQ50 (2010)	2.80 ± 0.20	5.50 ± 0.20	12.0 ± 0.30	1.75 ± 0.10	8.5 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.75 ± 0.10	1.50 ± 0.10
RMQ1W (2512)	3.50 ± 0.20	6.70 ± 0.20	12.0 ± 0.30	1.75 ± 0.10	8.5 ± 0.05	4.0 ± 0.10	2.0 ± 0.05	0.75 ± 0.10	1.50 ± 0.10

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