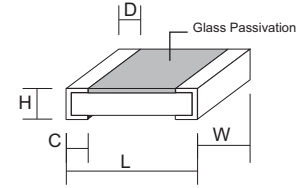


INTRODUCTION

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.

- Standard Series See 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
RMV06 (0603)	1.60±0.20	0.80±0.15	0.40±0.10	0.20±0.10	0.20±0.10
RMV10 (0805)	2.00±0.20	1.25±0.15	0.50±0.15	0.30±0.15	0.40±0.15
RMV12 (1206)	3.05±0.10	1.60±0.20	0.55±0.15	0.40±0.20	0.50±0.20
RMV25 (1210)	3.05±0.10	2.50±0.20	0.55±0.15	0.50±0.20	0.50±0.20
RMV1W (2010)	5.00±0.20	2.50±0.20	0.55±0.10	0.60±0.20	0.60±0.20
RMV2W (2512)	6.30±0.20	3.20±0.20	0.55±0.10	0.60±0.20	0.60±0.20

PART NUMBER EXAMPLE

RMV 10 R - 10K - J Q



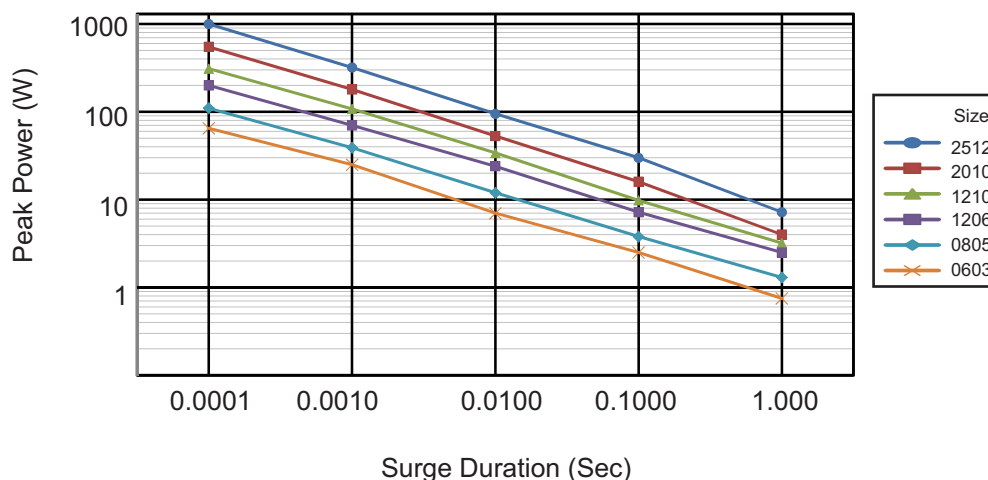
RESISTANCE CODE

Ohms	1.0	100	1.5K	15K	1.0 Meg
Code	1R0	100R	1K5	15K	1M0

ELECTRICAL CHARACTERISTICS & RESISTANCE RANGE

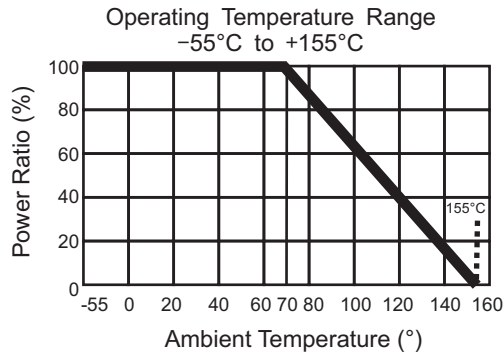
Code	Size	Rated Power at 70°C	Max. Working Voltage	Max. Overload Voltage	T.C.R. (PPM/°C)	Resistance Range		
						D (±0.5%)	F (±1%)	J (±5%)
RMV06	(0603)	0.10W	50V	100V	±200	-	-	1Ω ~ 9.9Ω
RMV10	(0805)	0.25W	150V	300V	±100	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ
RMV12	(1206)	0.50W	200V	400V	±100	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ
RMV25	(1210)	0.50W	200V	400V	±100	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ
RMV1W	(2010)	1.0W	200V	400V	±100	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ
RMV2W	(2512)	2.0W	300V	600V	±100	10Ω ~ 1MΩ	10Ω ~ 1MΩ	10Ω ~ 1MΩ

SURGE PERFORMANCE CURVE



■ **PERFORMANCE CHARACTERISTICS**

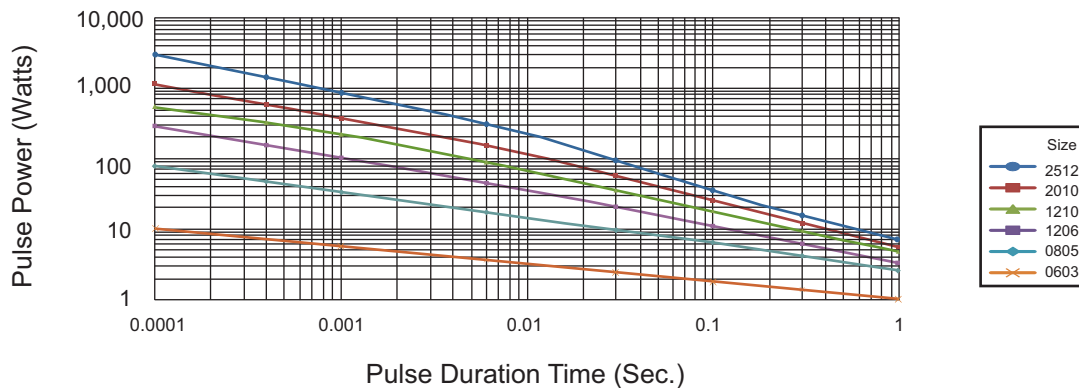
Power Derating Curve



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.

■ **CONTINUOUS PULSE POWER CURVE (TYPICAL)**

The typical continuous load numbers were obtained by repetitive application of rectangular pulses. The pulse period was set to the rated power rating of the resistor 70°C. The acceptance level was 1% from initial value.



■ **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:

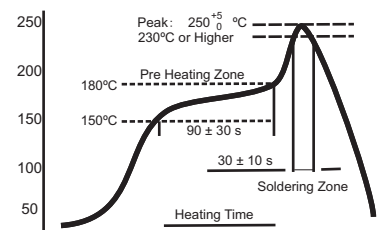
$$E = \sqrt{P \times R}$$

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

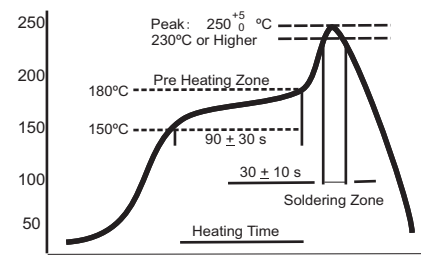
■ **Operation and Storage Temperature**

Type	Min	Max
Operation Temperature	-55°C	70°C
Storage Temperature	20°C	30°C
Storage Humidity	30%	70°C

■ **Soldering Profile**

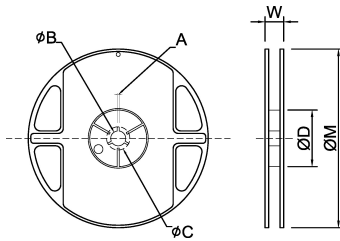


TEST PROCEDURES & REQUIREMENTS

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: 2.5 times RCWV or Max. Overload voltage for 5 seconds High Power: 2.5 times RCWV or Max. Overload voltage for 2 seconds	±1: ±(1.0%+0.05Ω) ±5: ±(2.0%+0.1Ω)
IR Reflow	Sony SS-00254	 <p>The graph shows a temperature profile for IR reflow. The y-axis is temperature in °C (50 to 250) and the x-axis is Heating Time. Key points include: Peak at 250 ± 5 °C (230°C or Higher); Pre Heating Zone at 180°C; Heating Time at 150°C for 90 ± 30 s; Soldering Zone at 30 ± 10 s.</p>	±1: ±(1.0%+0.05Ω) ±5: ±(2.0%+0.1Ω)
Leaching	Sony SS-00254-9	260 ± 5°C for 30 seconds	> 95% Coverage
Soldering Heat	JIS C 5201-1 Clause 4.18	260 ± 5°C for 10 seconds	±1: ±(0.5%+0.05Ω) ±5: ±(1.0%+0.05Ω)
Temperature Cycling	JIS C 5201-1 Clause 4.19	-55°C ~ +155°C, 5 cycles	0.1% ' 0.5% ' 1% ±(0.5%+0.05Ω) 2% ' 5% ±(1.0%+0.1Ω)
Electric Iron	Sony SS-00254-5	Preheating temperature: 350 ± 5°C Electric Iron preheating time: 3 +1/-0 sec.	±1: ±(0.5%+0.05Ω) ±5: ±(1.0%+0.05Ω)
Resistance to Solvent	JIS C 5201-1 Clause 4.29	The tested resistor be immersed into isopropyl alcohol of 20~25°C for 60 seconds. Then the resistor is left in the room for 48 hours.	±1: ±(0.5%+0.05Ω) ±5: ±(1.0%+0.05Ω)
Load Life in Humidity	JIS C 5201-1 Clause 4.24	40 ± 2°C, 90~95% R.H. or Max. working voltage for 1000 hours with 1.5 hrs "ON" and 0.5hr "OFF".	0.1% ' 0.5% ' 1% ±(0.5%+0.05Ω) 2% ' 5% ±(3.0%+0.1Ω)
Load Life (Endurance)	JIS C 5201-1 Clause 4.25	70 ± 2°C, or Max. working voltage for 1000 hours with 1.5 hrs "ON" and 0.5hr "OFF".	0.1% ' 0.5% ' 1% ±(1.0%+0.05Ω) 2% ' 5% ±(3.0%+0.1Ω)
Terminal Bending Strength	JIS C 5201-1 Clause 4.33	Bending once for 5 seconds D: RM Series 0402 ' 0603 ' 0805 = 5mm RM Series 1206 ' 1210 ' 1812 = 3mm RM Series 1218 ' 2010 ' 2512 ' 2030 = 2mm	±1: ±(1.0%+0.05Ω) ±5: ±(1.0%+0.05Ω)
Insulation Resistance	JIS C 5201-1 Clause 4.6	Max Overload Voltage for 1 min.	≥ 10G

PACKAGE & DIMENSION (mm)

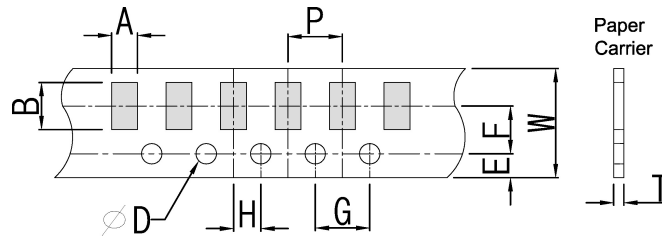
Unit:mm



Size	Package Qty	A	ϕB	ϕC	ϕD	W	ϕM
RMV06 (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
RMV10 (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
RMV12 (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
RMV25 (1210)	7" 5K/reel	2.0±0.5	13.5±1.0	21±1.0	60±1.0	11.5±2.0	178±2.0
RMV1W (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
RMV2W (2512)							

TAPING SPECIFICATION

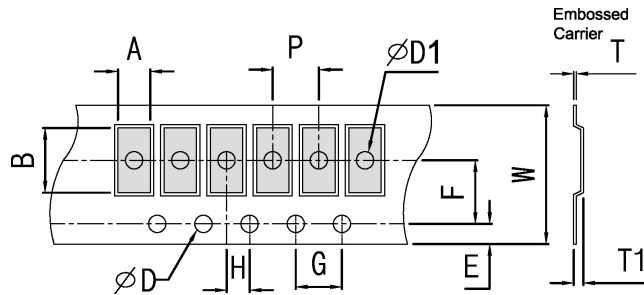
Paper Type
(P= 2.0 ± 0.1)



Unit:mm

Size	A	B	W	E	F	G	H	T	ϕD
RMV06(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
RMV10(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
RMV12(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
RMV25(1210)	2.85±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

Embossed Type
(P= 4.0 ± 0.1)
(2W.P= 8.0 ± 0.2)



Unit:mm

Size	A	B	W	E	F	G	H	T	ϕD	$\phi D1$	T1
RMV1W (2010)	2.80±0.20	5.60±0.20	12±0.10	1.75±0.10	5.5±0.05	4.0±0.10	2.0±0.05	0.23±0.10	1.50±0.10	1.50±0.10	0.85±0.15
RMV2W (2512)	3.30±0.20	4.60±0.20	12±0.10	1.75±0.10	5.5±0.05	4.0±0.10	2.0±0.05	0.23±0.10	1.50±0.10	1.50±0.10	0.85±0.15