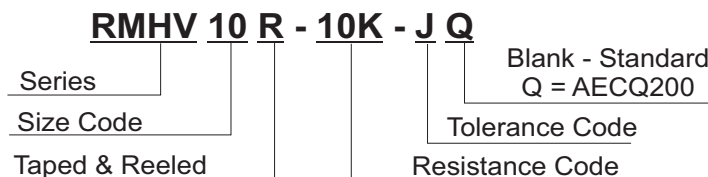


INTRODUCTION

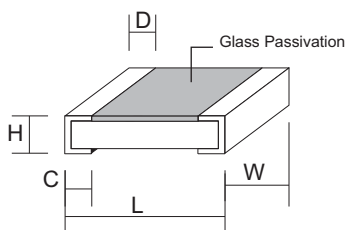
RFE International, Inc. offers a wide range of chip resistors to meet your application requirements. They are made with metal glazed thick film on a high purity ceramic substrate which is overcoated for stability and protection.

- Standard Series See RM Series
- Anti-Sulfur Thick Film see RMS Series
- High Power Thick Film see RMH Series
- Anti-Sulfur see RMV 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

PART NUMBER EXAMPLE



DIMENSIONS



Size Code	Max. Dimension (mm)				
	L	W	H	C	D
RMHV06 (0603)	1.60±0.20	0.80±0.15	0.40±0.10	0.20±0.10	0.20±0.10
RMHV10 (0805)	2.00±0.20	1.25±0.15	0.50±0.15	0.30±0.15	0.40±0.15
RMHV12 (1206)	3.05±0.10	1.60±0.20	0.55±0.15	0.40±0.20	0.50±0.20

RESISTANCE CODE

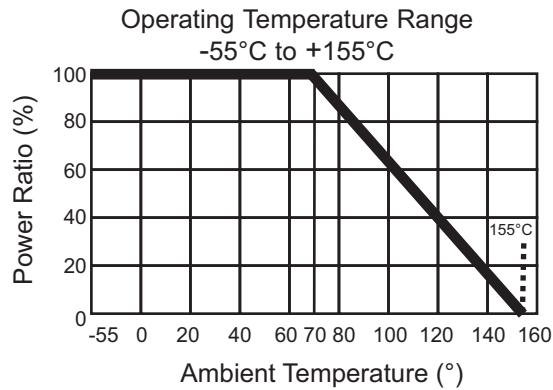
Ohms	1.0	100	1.5K	15K	1.0 Meg
Code	1R0	100R	1K5	15K	1M0

ELECTRICAL CHARACTERISTICS & RESISTANCE RANGE

Code	Size	Rated Power at 70°C	Max. Working Voltage	Max. Overload Voltage	T.C.R. (PPM/°C)	Resistance Range	
						F (±1%)	J (±5%)
RMHV06	(0603)	1/3 W	75V	125V	±100	10Ω ~ 1MΩ	---
					±200	1Ω ~ 9.76Ω	1Ω ~ 1MΩ
RMHV10	(0805)	1/2 W	200V	300V	±100	10Ω ~ 1MΩ	---
					±150	1Ω ~ 9.76Ω	---
					±200	---	1Ω ~ 1MΩ
RMHV12	(1206)	3/4 W	250V	500V	±100	1Ω ~ 1MΩ	---
					±200	---	1Ω ~ 1MΩ

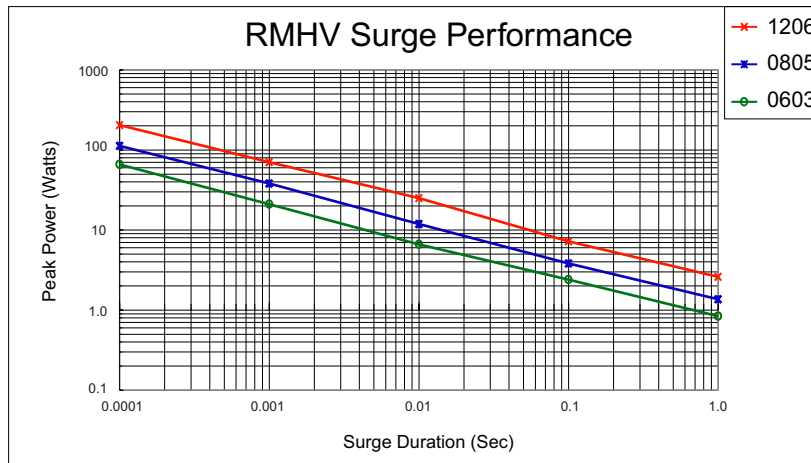
■ **PERORMANCE CHARACTERISTICS**

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.

■ **SURGE PERFORMANCE 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)

■ PULSE LOAD DATA

Single Pulse Load, max

Size	0.000001 Sec	0.00001 Sec	0.0001 Sec	0.001 Sec	0.01 Sec	0.1 Sec	1 Sec
RMHV06 (0603)	--	90	45	15	4.5	2.25	0.4
RMHV10 (0805)	--	180	65	30	7.0	3.5	0.65
RMHV12 (1206)	875	350	100	45	20	4.5	1.2

Maximum pulse load, single pulse; $V \leq V$ max working. Permissible resistance change equivalent to 8000 h operation

This data is for reference only and represents typical performance. The actual performance may vary depending upon operating conditions, such as (but not limited to) temperature and application environment.

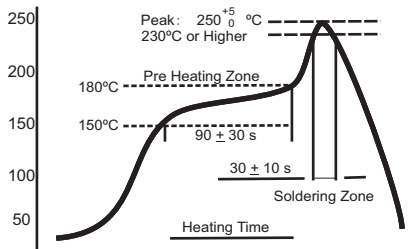
Continuous Pulse Load, max

Size	0.000001 Sec	0.00001 Sec	0.0001 Sec	0.001 Sec	0.01 Sec	0.1 Sec	1 Sec
RMHV06 (0603)	--	50	20	7	2.5	0.95	0.4
RMHV10 (0805)	--	100	40	10.5	5	1.5	0.55
RMHV12 (1206)	375	200	80	27	9	3	0.9

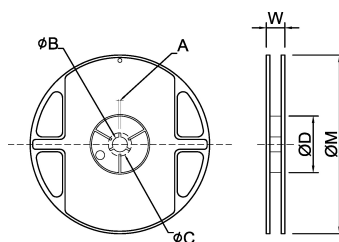
Maximum pulse load, continuous pulse; $P \leq P$ rated and $V \leq V$ max working. Permissible resistance change equivalent to 8000 h operation

This data is for reference only and represents typical performance. The actual performance may vary depending upon operating conditions, such as (but not limited to) temperature and application environment.

■ 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: $\Delta R \leq \pm(1.0\%+0.05\Omega)$ ±5: $\Delta R \leq \pm(2.0\%+0.1\Omega)$
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, a dwell at 150°C for 90 ± 30 s, and a Soldering Zone at 30 ± 10 s.</p>	±1: $\pm(1.0\%+0.05\Omega)$ ±5: $\pm(2.0\%+0.1\Omega)$
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: $\pm(0.5\%+0.05\Omega)$ ±5: $\pm(1.0\%+0.05\Omega)$
Temperature Cycling	JIS C 5201-1 Clause 4.19	-55°C ~ +155°C, 5 cycles	0.1% ' 0.5% ' 1% $\pm(0.5\%+0.05\Omega)$ 2% ' 5% $\pm(1.0\%+0.1\Omega)$
Electric Iron	Sony SS-00254-5	Preheating temperature: 350 ± 5°C Electric Iron preheating time: 3 +1/-0 sec.	±1: $\pm(0.5\%+0.05\Omega)$ ±5: $\pm(1.0\%+0.05\Omega)$
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: $\pm(0.5\%+0.05\Omega)$ ±5: $\pm(1.0\%+0.05\Omega)$
Load Life in Humidity	JIS C 5201-1 Clause 4.24	40 ± 2°C, 90~95% R.H. or Max. working voltage for 1000 hours with 1.5 hrs "ON" and 0.5hr "OFF".	0.1% ' 0.5% ' 1% $\pm(0.5\%+0.05\Omega)$ 2% ' 5% $\pm(3.0\%+0.1\Omega)$
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% $\pm(1.0\%+0.05\Omega)$ 2% ' 5% $\pm(3.0\%+0.1\Omega)$
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: $\pm(1.0\%+0.05\Omega)$ ±5: $\pm(1.0\%+0.05\Omega)$
Insulation Resistance	JIS C 5201-1 Clause 4.6	Max Overload Voltage for 1 min.	≥ 10G

■ PACKAGE & DIMENSION (mm)

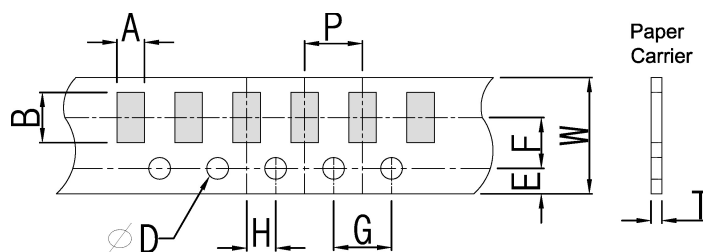


Unit:mm

Size	Package Qty		A	φB	φC	φD	W	φM
RMHV06 (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
RMHV10 (0805)	7"	5K/reel	2.0±0.5	13.5±1.0	21±1.0	100±1.0	11.5±2.0	254±2.0
RMHV12 (1206)	7"	5K/reel	2.0±0.5	13.5±1.0	21±1.0	100±1.0	11.5±2.0	330±2.0

■ TAPING SPECIFICATION

Paper Type
(P= 2.0 ± 0.1)



Unit:mm

Size	A	B	W	E	F	G	H	T	ØD
RMHV06(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
RMHV10(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
RMHV12(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