

Metal thin film resistor networks

RM series

AEC-Q200 Compliant

Features

- Ultra accuracy: relative resistance tolerance +/-0.01%, relative TCR +/-1ppm/°C
- Ultra reliability: 10,000 hours of 85°C/85RH test or 10,000 of 155°C high temperature exposure test causes less than +/-0.1% resistance drift

Applications

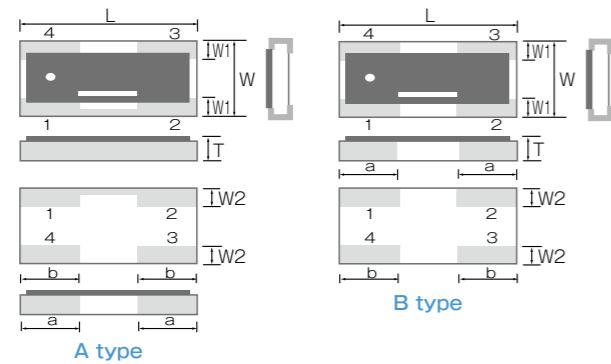
- Applications that require a precise relative resistance ratio such as voltage dividers, and gain-setting circuits for amplifiers.



Specifications

*All products are made to order.

Dimensions



Dimension (inch)	RM2012 (0805)	RM3216 (1206)
L	2.00±0.20	3.20±0.20
W	1.25±0.20	1.60±0.20
W1	0.40±0.20	0.40±0.25
W2	0.35±0.20	0.40±0.20
a	0.50±0.20	1.00±0.25
b	0.60±0.20	1.00±0.20
T	0.40±0.10	0.40±0.10

(unit : mm)

Electrical characteristics

Series name	RM2012	RM3216
Rated power	High power application 0.05W/Element, 0.1W/Package	0.063W/Element, 0.125W/Package
Resistance range (Ω)	100 ~ < 300	300 ~ 100kΩ
Absolute resistance tolerance (%)	±0.05 (w) ±0.1 (B) ±0.5 (D)	— — —
Relative resistance tolerance (%)	±0.01 (L) ±0.02 (P) ±0.05 (W)	Resistance ratio=1 Resistance ratio≤10 Resistance ratio≤100
Absolute TCR (ppm/°C)	±10 (N) ±25 (P)	— —
Relative TCR (ppm/°C)	±1 (X) ±2 (W) ±5 (V)	Resistance ratio=1 1<Resistance ratio≤3 Resistance ratio>3
Maximum voltage / element	25V	50V
Operating temperature	-55°C ~ 155°C	-55°C ~ 155°C
Packaging	1,000pcs 5,000pcs	Code10 Code50

* Relative resistance tolerance is defined as the ratio of the actual R2/R1 against the specified R2/R1 as expressed:

$$\left[\frac{\text{actual } R2/R1}{\text{specified } R2/R1} - 1 \right] \times 100$$

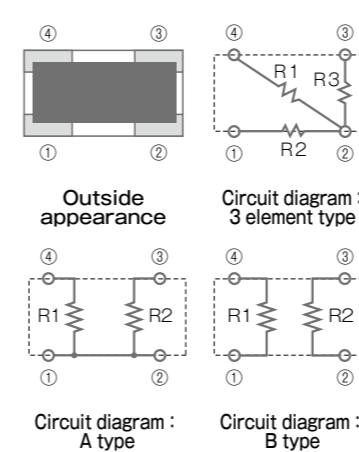
* Relative TCR is defined as: (TCR of R2)-(TCR of R1)

Standard resistance value pairings

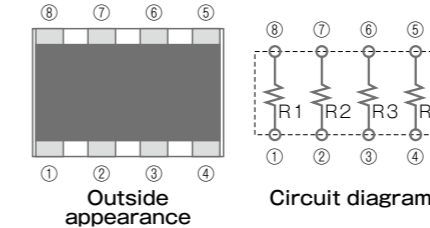
Ratio	R1 (Ω)	R2 (Ω)	Ratio	R1 (Ω)	R2 (Ω)	Ratio	R1 (Ω)	R2 (Ω)	Ratio	R1 (Ω)	R2 (Ω)	Ratio	R1 (Ω)	R2 (Ω)
1 : 1	1k	1k	1 : 3	1k	3k	1 : 5	1k	5k	1 : 9	1k	9k	1 : 20	1k	20k
	10k	10k		10k	30k		2k	10k		10k	90k		2k	40k
	100k	100k		100k	300k		10k	50k		1k	10k		5k	100k
1 : 2	1k	2k	1 : 4	1k	4k	1 : 6	1k	6k	1 : 10	2k	20k	1 : 25	1k	25k
	10k	20k		10k	40k		10k	60k		10k	100k		2k	50k
	100k	200k		100k	400k		10k	100k		10k	100k		2k	50k

Standard circuits

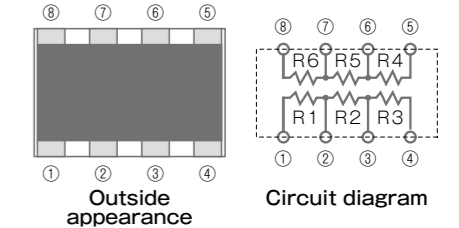
2012/3216Size



3216Size 4 element type (array, network with different resistance values)

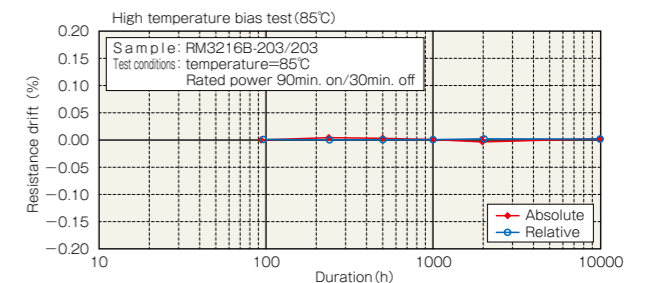
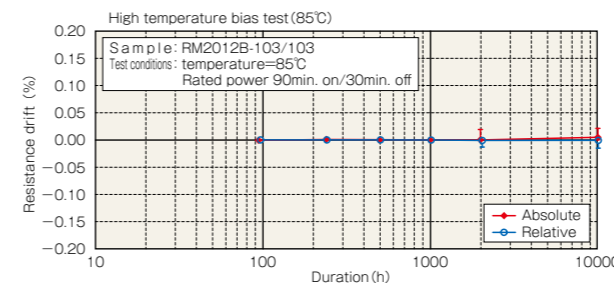


3216Size 6 element type

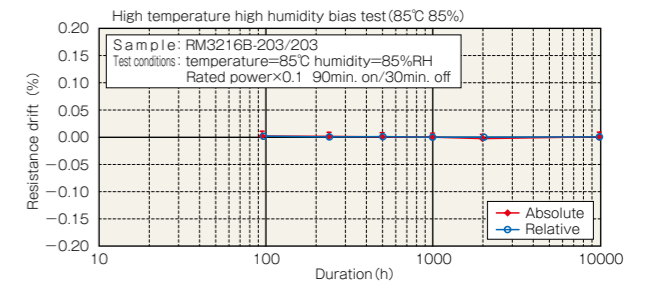
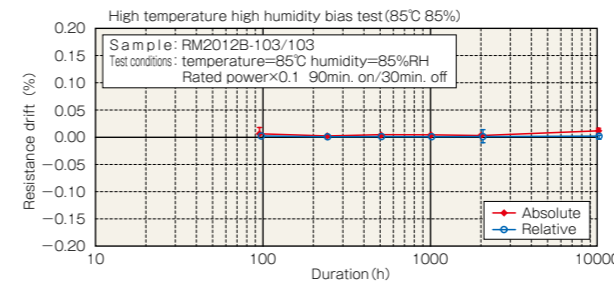


10000 hour reliability test data

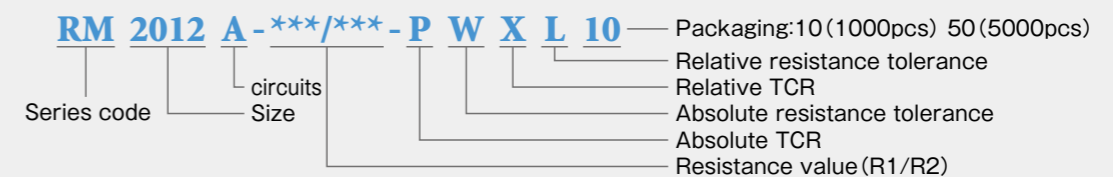
Life test



High temperature high humidity bias test



Part numbering system



Please contact us for specific custom requirements for resistance values, resistance ratios, number of elements, circuitry and any others.

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