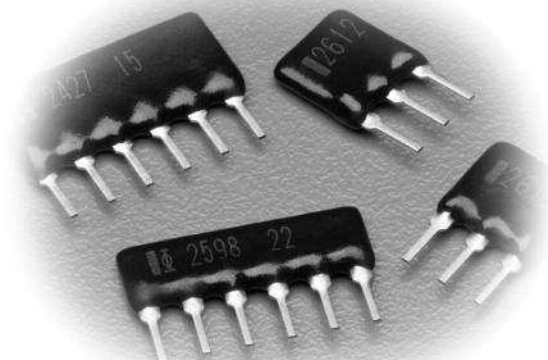
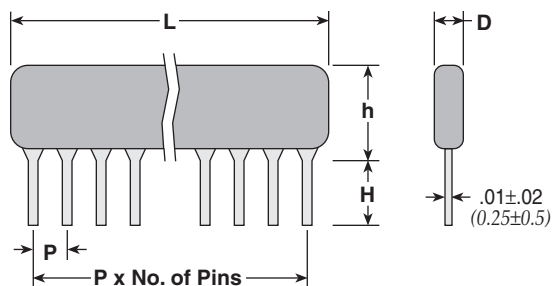




features

- Custom design network
- Ultra-precision performance for precision analog circuits
- Tolerance to $\pm 0.1\%$, matching to 0.05%
- T.C.R. to $\pm 25\text{ppm}/^\circ\text{C}$, tracking to $2\text{ppm}/^\circ\text{C}$
- Marking: Black body color with laser marking
- Products with lead-free terminations meet EU RoHS requirements. EU RoHS regulation is not intended for Pb-glass contained in electrode, resistor element and glass.

dimensions and construction



Type	Dimensions inches (mm)				
	L (max.)	D (max.)	P	H	h (max.)
MRPL03	.335 (8.5)	.098 (2.5)	.100 $\pm$.008 (2.54 $\pm$ 0.2)	.118 $\pm$.02 (3.0 $\pm$ 0.5)	.256 (6.5)
MRPA03					.335 (8.5)

ordering information

New Part #	MRP	L03	E	A	D	103/103	B	A
Type	Type	Size	T.C.R. (ppm/ $^\circ\text{C}$)	T.C.R. Tracking	Termination Material	Resistance Value	Tolerance	Tolerance Ratio
		L03 A03	E: ± 25 C: ± 50	A: 2 Y: 5 T: 10	D: SnAgCu	3 significant figures/ 3 significant figures	B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1.0\%$	E: 0.025% A: 0.05% B: 0.1% C: 0.25% D: 0.5%

custom circuit ordering information

New Part #	MRP	KxxxxD
Type	Type	Custom Code
		Factory will assign

applications and ratings

Ratings

Type	Power Rating (mW)		Absolute T.C.R.	T.C.R. Tracking	Resistance Range*	Resistance Tolerance	Maximum Working Voltage	Maximum Overload Voltage	Rated Ambient Temperature	Operating Temperature Range
	Element	Package								
MRPL03	100	200	E: ± 25 C: ± 50	A: 2 (R1/R2 ≤ 10) Y: 5 T: 10	50-100k Ω	B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1\%$	100V	200V	+70 $^\circ\text{C}$	-55 $^\circ\text{C}$ to +125 $^\circ\text{C}$
MRPA03										

* Resistance combination for R1, R2 is standardized to 200/20k, 1k/1k, 1k/2k, 1k/4k, 1k/9k, 1k/10k, 1k/20k, 10k/10k, 10k/100k, 50k/50k, 100k/100k. Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use.

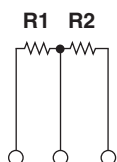
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applications and ratings (continued)

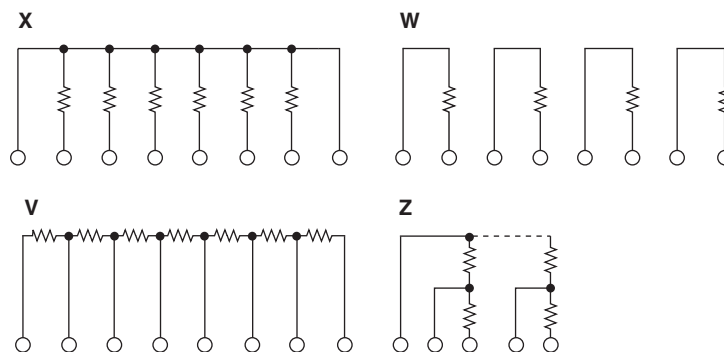
Resistance Range

		Resistance Ratio Tolerance				
		E: 0.025%	A: 0.025%	B: 0.1%	C: 0.25%	D: 0.5%
Absolute Resistance Tolerance	B: $\pm 0.1\%$	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	—	—
	C: $\pm 0.25\%$	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	—
	D: $\pm 0.5\%$	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω
	F: $\pm 1\%$	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω	50 Ω - 100k Ω
R1/R2 Relative Resistance Ratio		100 max.	100 max.	150 max.	150 max.	150 max.

standard circuit schematic



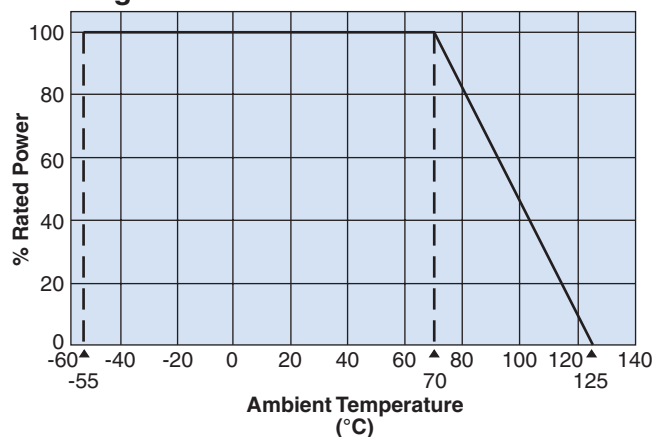
custom circuit schematics



(Examples only. Contact factory for other custom layout requests.)

environmental applications

Derating Curve



Performance Characteristics

Parameter	Requirement	Test Method
Resistance	Within specified tolerance	25°C
T.C.R.	Within specified T.C.R.	+25°C/+65°C
Overload (Short Time)	$\pm 0.05\%$	Rated voltage x 2.5 or max. overload voltage, whichever is lower, 5 seconds
Resistance to Soldering Heat	$\pm 0.1\%$	+350°C $\pm$ 10°C, 3.5 $\pm$ 0.5 seconds
Rapid Change of Temperature	$\pm 0.1\%$	-55 $\pm$ 0/-5°C (30 min.), +125 $\pm$ 3/-0°C (30 min.) 5 cycles
Moisture Resistance	$\pm 0.1\%$	40°C $\pm$ 2°C, 90 - 95% RH, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Endurance at 70°C	$\pm 0.1\%$	70°C $\pm$ 2°C, 1000 hours, 1.5 hr ON, 0.5 hr OFF cycle
Resistance to Solvents	No abnormality in outer coating and markings	Soaking in 2-propanol of +20°C ~ +25°C for 180 seconds $\pm$ 10 seconds
Insulation Resistance	10,000M Ω or above	500V (d.c.) for 1 minute between terminals and coatings
Withstanding Voltage	$\pm 0.5\%$	500V (a.c.) for 1 minute between terminals and coatings