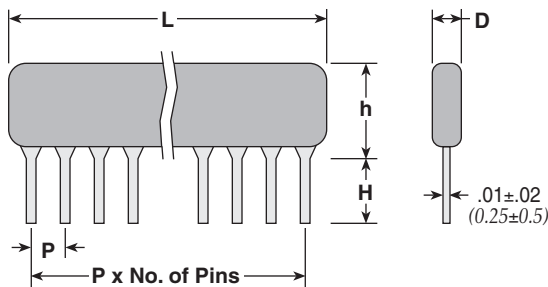


features

- 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 white marking
- Products with lead-free terminations meet EU RoHS requirements

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	Size	T.C.R. (ppm/ $^\circ$ 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	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 \leq 10) Y: 5 T: 10	50-100k	B: $\pm 0.1\%$ C: $\pm 0.25\%$ D: $\pm 0.5\%$ F: $\pm 1\%$	100V	200V	+70 $^\circ$ C	-55 $^\circ$ C to +125 $^\circ$ C
MRPA03										

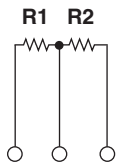
* Resistance combination for R1, R2 is standardized to 200/20k, 1k/1k, 1k/2k, 1k/4k, 1k/9k, 1k/10k, 1k/20k, 10k/10k, 10k/100k, 50k/50k, 100k/100k
Specifications given herein may be changed at any time without prior notice. Please confirm technical specifications before you order and/or use. 11/14/08

applications and ratings (continued)

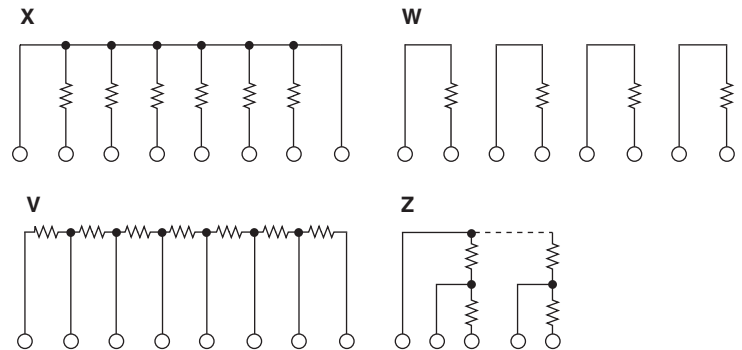
Resistance Range

		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



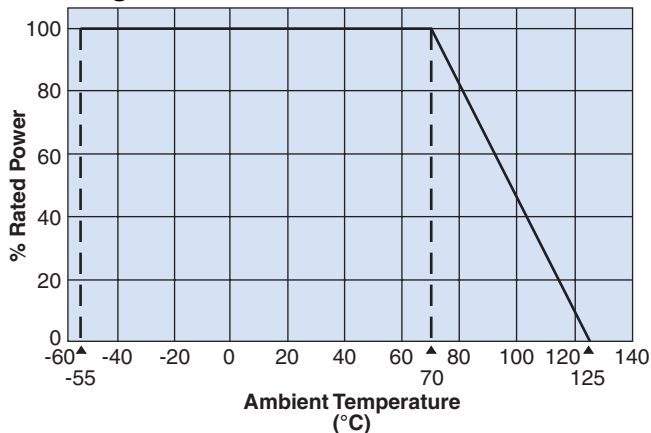
custom circuit schematics



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

environmental applications

Derating Curve



SOP Package



* Contact factory for SOP requests

Performance Characteristics

Parameter	Requirement	Test Method
Rapid Change of Temperature	$\pm(0.1\% + 0.05\Omega)$	-55°C/30 min., room temp./2-3 min., +125°C/30 min., room temp./2-3 min., 5 cycles
Short Time Overload	$\pm(0.05\% + 0.05\Omega)$	Rated voltage x 2.5 or max. overload voltage, whichever is less, 5 seconds
Dielectric Withstanding Voltage		AC 500V for 1 minute
Resistance to Solder Heat	$\pm(0.1\% + 0.05\Omega)$	+350°C for 3.5 seconds
Insulation Resistance	$\geq 10,000M\Omega$	DC 500V for 1 minute
Solvent Resistance	No abnormality	2-propanol, +20°C to +25°C for 180 seconds
Moisture Resistance	$\pm(0.1\% + 0.05\Omega)$	40°C, 90 - 95% RH, 1000 hours, rated voltage DC, 1.5 hr ON, 0.5 hr OFF cycle
Load Life		70°C, 1000 hours, rated voltage DC, 1.5 hr ON, 0.5 hr OFF cycle