

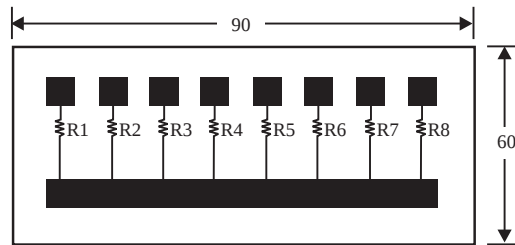


BUSSED RESISTOR NETWORK

California Micro Devices' resistor arrays are the hybrid equivalent to the bussed resistor networks available in surface-mount packages. The resistors are spaced on ten mil centers resulting in reduced real estate. These

chips are manufactured using advanced thin film processing techniques and are 100% electrically tested and visually inspected.

STANDARD NETWORK SCHEMATIC DIAGRAM



Formats

Die Size: 90±3 x 60±3 mils

Bonding Pads: 5x7 mils typical

ELECTRICAL SPECIFICATIONS

Parameter	Test Conditions		
TCR	-55°C to 125°C	±100ppm/C	Max
Operating Voltage	-55°C to 125°C	50Vdc	Max
Power Rating (per resistor)	@ 70°C (Derate linearly to 0@150°C)	50mw	Max
Thermal Shock	Method 107 MIL-STD-202F	±0.25%ΔR	Max
High Temperature Exposure	100Hrs @ 150°C Ambient	±0.25%ΔR	Max
Moisture	Method 106 MIL-STD-202F	±0.5%ΔR	Max
Life	Method 108 MIL-STD-202F (125°C/1000hr)	±0.5%ΔR	Max
Noise	Method 308 MIL-STD-202F	-35dB	Max
	≥250kΩ	-30dB	Max
Short Time Overload	MIL-R-83401	0.25%	Max
Insulation Resistance	@25°C	1 x 10 ¹² Ω	Min.

MECHANICAL SPECIFICATIONS

Substrate	Silicon 10 ±2 mils thick
Isolation Layer	SiO ₂ 10,000Å thick, min
Backing	Lapped (gold optional)
Metalization	Aluminum 10,000Å thick, min (15,000Å gold optional)
Passivation	Silicon Nitride

VALUES

8 resistors from 100Ω to 500KΩ

PACKAGING

Two inch square trays of 196 chips maximum is standard.

NOTES

1. Resistor pattern may vary from one value to another.

PART NUMBER DESIGNATION

NCC	5003	F	A	G	W	P
Series	Value	Tolerance	TCR	Bond Pads	Backing	Ratio Tolerance
	First 3 digits are significant value. Last digit represents number of zeros. R indicates decimal point.	D = ±0.5%	No Letter = ±100ppm	G = Gold	W = Gold	No Letter = 1%
		F = ±1%	A = ±50ppm	No Letter = Aluminum	L = Lapped	P = 0.5%
		G = ±2%	B = ±25ppm		No Letter = Either	
		J = ±5%				
		K = ±10%				
		M = ±20%				