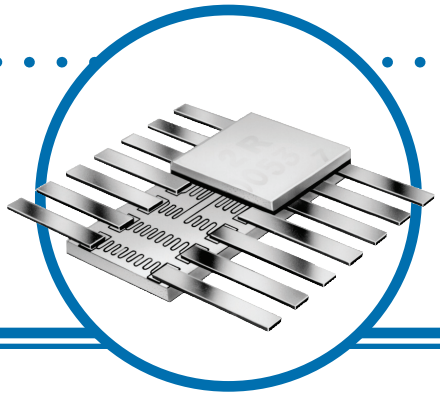
Space Flight Surface Mount Flat Packs Resistor Networks

8900 Space Series

- 100% screened to NASA EEE-INST-002 Level 1
- Gold to gold bonded lead construction - no internal solder connections or wire bonds
- Excellent passive solution for space flight hardware
- Self Passivating TaNFilm® element with superior moisture performance



The 8900 Space Series features our TaNFilm® Flat Pack Network superior moisture performance of tantalum nitride resistor film system. Rugged, welded lead construction eliminates fragile wire bond construction and provides superior surface mount reliability. These parts are screened per MIL-PRF-83401 then upgraded to the stringent screening requirements for NASA space flight requirements.

Electrical Data

Package	Range	Available Absolute Tolerances	Available Ratio Tolerance (reference R1)	Available Absolute TCR (ppm/°C)	Tracking TCR (reference to R1) (ppm/°C)	MIL-PRF-83401 Ratings	
						Voltage (not to exceed $\sqrt{P \times R}$)	Element Power Rating 70°C
Isolated Schematic	20Ω - 99Ω	F G J	F G J	±100	±10	50V	50mW
	100Ω - 121KΩ	B F G J	A B F G	±25, ±50, ±100	±5		
Bussed Schematic	20Ω - 499Ω	F G J	F G J	±100	±20	50V	25mW
	500.0Ω - 100KΩ	B F G J	A B F G	±25, ±50, ±100	±5		

Screening Data

Series Type	Precap per MIL-STD-883	Optional Precap Source Verification	Screening per MIL-PRF-83401	Addition Screening IAW EEE-INST-002 Level 1				
				Serialized	Thermal Shock 25 Cycles	Power Conditioning 100 Hours	Optional Final Source Inspection	Marking P/N
89xxSQ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	89xxSQ -xx-yyyyzz

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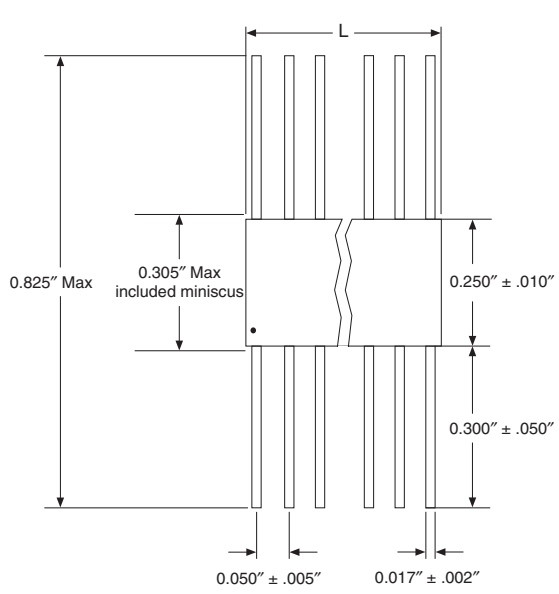
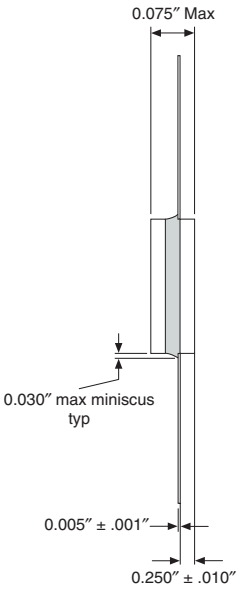
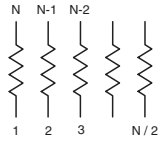
Environmental Data

Environnmental Test MIL-PRF-83401	Maximum ΔR per Characteristic H	Performance	
		Typical	Maximum
Thermal Shock and Power Conditioning	±0.50%	±0.02%	±0.10%
Low Temperature Operation	±0.10%	±0.01%	±0.01%
Short Time Overload	±0.10%	±0.01%	±0.05%
High Temperature Exposure	±0.20%	±0.03%	±0.10%
Effects of Solder	±0.10%	±0.02%	±0.10%
Moisture Resistance	±0.40%	±0.03%	±0.10%
Life	±0.50%	±0.03%	±0.10%

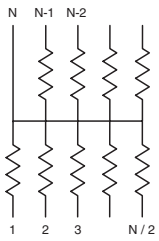
Physical and Schematic Data







Isolated Schematic A



Bussed Schematic B

# of leads	Dimension L
14	0.375″ ± .010″
16	0.390″ ± .020″

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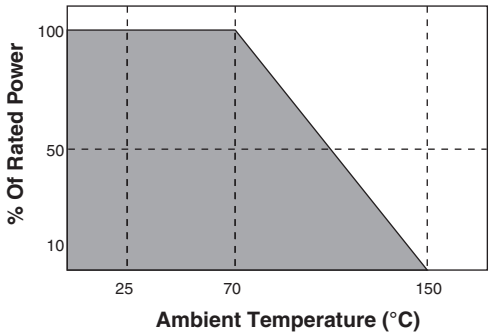
Power Derating Curve



Ordering Data

Prefix FP - 8989 SQ - 05 - 1001 - B B - 1

Model
8987 = 14-pin bussed schematic B
8989 = 14-pin isolated schematic A
8998 = 16-pin bussed schematic B
8999 = 16-pin isolated schematic A

Special Screening Indicator
SQ = EEE-INST-002 Level 1

TCR Code
04 = ±300ppm/°C; 05 = ±100ppm/°C; 06 = ±50ppm/°C
07 = ±25ppm/°C

Resistance Code
4-Digit resistance code. Ex: 1002 = 10KΩ; 50R0 = 50Ω

Absolute Tolerance Code
J = ±5%; G = ±2%; F = ±1%; B = ±0.1%

Optional R1 Ratio Tolerance Code
G = ±2%; F = ±1%; D = ±0.5%; B = ±0.1%; A = ±0.05%

Terminal Finish Option
0 = gold plating; 1 = 60/40 Sn/Pb hot solder dip

For additional information or to discuss your specific requirements, please contact our Applications Team using the contact details below.

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