

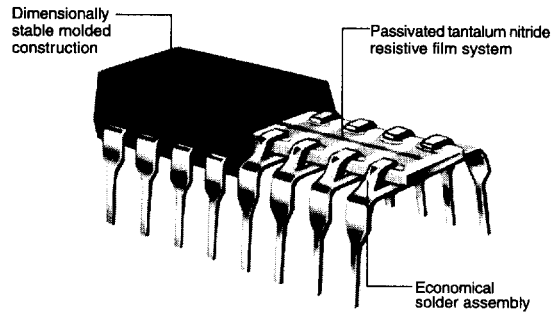
TANFILM® RESISTOR NETWORK PRECISION MOLDED DIP

ISO-9001
Registered



M900 SERIES

- Absolute tolerance to $\pm 0.05\%$
- Absolute TCR to $\pm 15 \text{ ppm}/^\circ\text{C}$
- Superior TCR tracking to $\pm 5 \text{ ppm}/^\circ\text{C}$
- Ratios available to 0.05%
- Custom circuit schematics available



Molded TanFilm® resistor networks are designed for use in applications requiring a high degree of reliability, stability, tight tolerance, close TCR tracking, and low noise. The molded construction provides excellent dimensional stability for automatic insertion. Our continuous feed, high vacuum sputtering process insures uniform properties from network to network. Precise state-of-the-art laser trimming enables us to easily zero in the tightest ratios. Passivated tantalum nitride resistor film ensures performance far superior to military specifications and provides excellent environmental protection.

The versatile nature of our photoetch process makes it possible to supply virtually any circuit configuration needed to meet special customer requirements. Custom circuit designs can be easily achieved with a modest set up charge. Military screening available on all units.

*Custom Circuits and special testing available.
Contact factory for any special features required.*

SPECIFICATIONS

Resistance Ranges (Ω)	M959, M989 & M999	M954, M987 & M998
		10 to 400K
Standard Resistance Ratio and Tolerance ($\pm\%$)	0.1, 0.25, 0.5, 1 (0.05 available)	
Temperature Coefficient ($\text{ppm}/^\circ\text{C}$)	$\pm 15, \pm 25, \pm 50, \pm 100, \pm 300$	
TCR Tracking	$\pm 5 \text{ ppm}/^\circ\text{C}$, except schematic B below 500Ω ($\pm 20 \text{ ppm}/^\circ\text{C}$)	
Temperature Range	-55°C to $+150^\circ\text{C}$	
Noise Level	Less than -30 db	
Substrate Material	99.5% pure alumina ceramic	
Construction	Molded epoxy	

Power Rating @ 70°C (watts)	Model	Resistor	Network
	M954	0.1	0.7
	M987	0.1	1.3
	M998	0.1	1.0
	M959	0.2	0.8
	M989	0.2	1.4
	M999	0.2	1.6

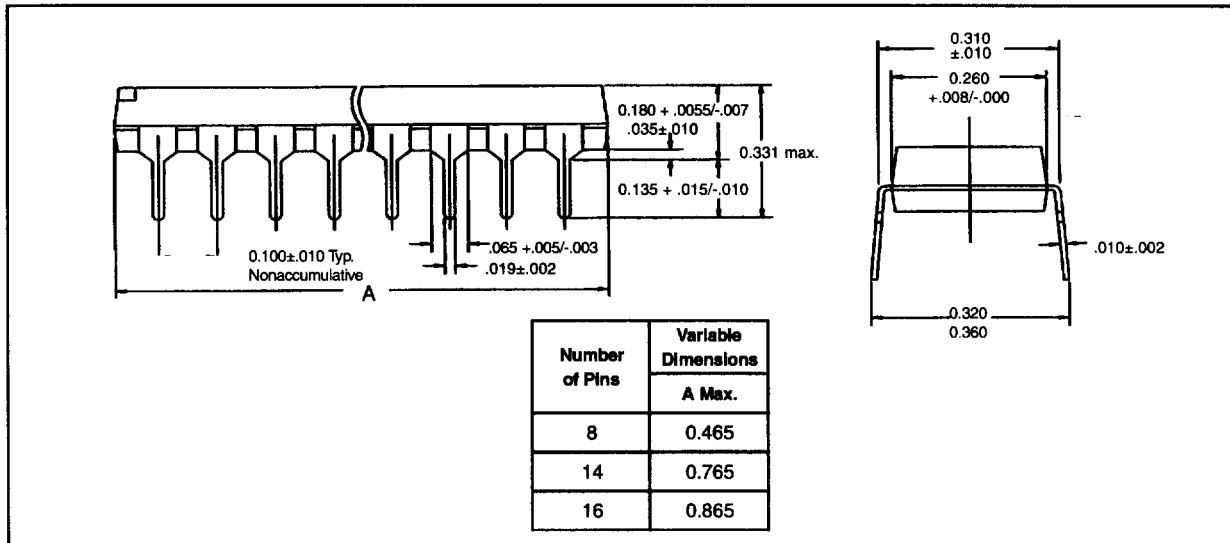
PERFORMANCE DATA

Test Per MIL-PRF-83401	MIL-PRF-83401 Limits ($\Delta R\%$)			TanFilm Test Data ($\Delta R\%$)	
	M	K	H	Max	Typical
Thermal Shock and Power Conditioning	0.7	0.7	0.5	0.1	0.02
Low Temperature Operation	0.5	0.25	0.1	0.1	0.02
Short Term Overload	0.5	0.25	0.1	0.05	0.02
Terminal Strength	0.25	0.25	0.25	0.1	0.02
Resistance to Solder Heat	0.25	0.25	0.1	0.1	0.02
Moisture Resistance	0.5	0.5	0.4	0.1	0.02
Shock	0.25	0.25	0.25	0.1	0.02
Vibration	0.25	0.25	0.25	0.1	0.02
Life	2.0	0.5	0.5	0.1	0.02
High Temperature Exposure	1.0	0.5	0.2	0.1	0.02
Low Temperature Storage	0.5	0.25	0.1	0.1	0.02
25°C Double Load	2.0	0.5	0.5	0.05	0.02

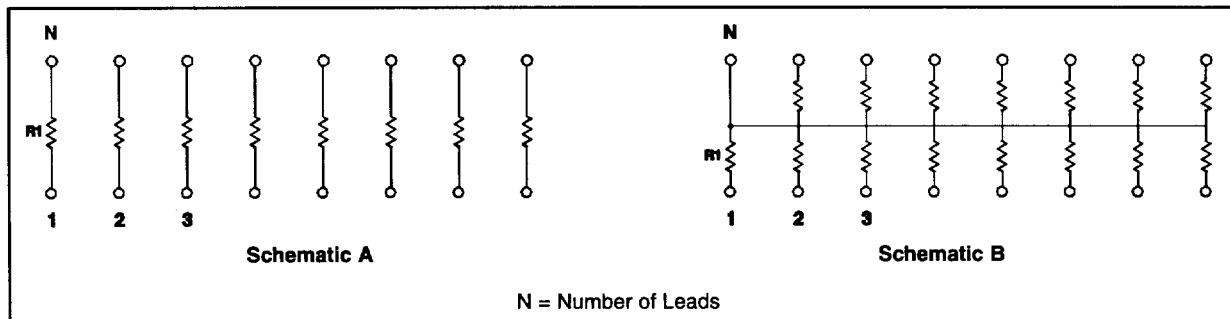
ADVANCED FILM DIVISION

4222 South Staples Street • Corpus Christi, Texas 78411 • Tel: 361-992-7900 • Fax: 361-992-3377 • www.ircct.com

M900 DIMENSIONS (Inches)



SCHEMATICS



HOW TO ORDER

Sample Part No. **DPB M989 02 1001 B X**

Family _____

Model _____

M959: 4 resistor, 8 pin DIP, straight thru
Schematic A

M954: 7 resistor, 8 pin DIP, one common lead
Schematic B

M989: 7 resistor, 14 pin DIP, straight thru
Schematic A

M987: 13 resistor, 14 pin DIP, one common lead
Schematic B

M999: 8 resistor, 16 pin DIP, straight thru
Schematic A

M998: 15 resistor, 16 pin DIP, one common lead
Schematic B

Ratio Tolerance to R_1
(if specified)

Absolute Tolerance Code

Absolute/Ratio Tolerance Code

A=±0.05%; B=±0.1%; C=±0.25%;
D=±0.5%; F=±1.0%; G=±2.0%;

Resistance

Standard MIL resistance code.
Example: 1001 = 1000 ohms

TCR Code (ppm/°C):

01 = ±100; 02 = ±50; 03 = ±25