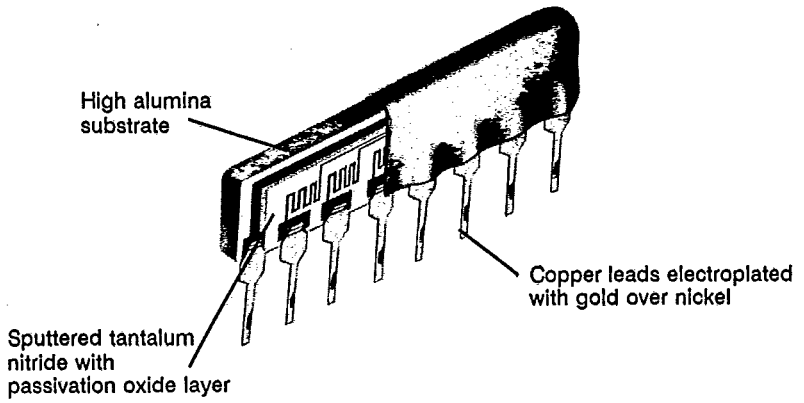
IRC

TANFILM CONFORMALLY COATED

SIP NETWORKS

- High precision
- Low profile
- High component density
- Superior TCR tracking
- 3 standard sizes
- Proven reliability
- Custom pin counts available



Where precision as well as long term reliability and stability are required in a small amount of space, the conformally coated SIP is the answer. This low profile SIP resistor network exhibits all the outstanding performance characteristics inherent in TaNFilm products.

Our TaNFilm manufacturing process of sputtering Tantalum Nitride on to ceramic substrates ensures uniform temperature characteristics of all the resistors in the networks. The resistance film is then passivated to improve its stability and to make is virtually impervious to environmental elements.

When you need high precision and ultimate reliability in a limited space, the TaNFilm SIP is the solution. The conformally coated SIP network can be tailored to meet special circuit configurations with multiple resistance values.

SPECIFICATIONS:

Resistance Range:
Schematic C: 49.9 Ω to 100KΩ
Schematic F: 20Ω to 100KΩ
Schematic G: 20Ω to 200KΩ
Higher & lower resistance values available

Standard Resistance Tolerance:
±.1%, ±.25%, ±.5%, ±1%, ±2%
(.02% available)

Temperature Coefficient:
±25 ppm/°C, ±50 ppm/°C and ±100 ppm/°C

TCR Tracking: 5 ppm/°C, (except Schematic C below 500Ω 20 ppm/°C) 2 ppm/°C available

Temperature Range;
-55°C to +150°C

Noise: Less than -30 dB

Power Rating @ 70°C

Schematic	Wattage			
		Network		
	Resistor	6 Pin	8 Pin	10Pin
C, F	.12	.60	.84	1.08
G	.12	.36	.48	0.60

Lead Material: Gold plated copper

Substrate Material: 99.5% pure alumina ceramic

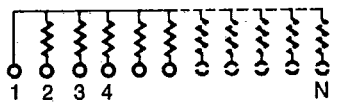
Construction:
Epoxy conformal coating

Custom circuits and special testing available

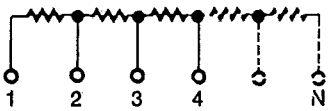
Contact factory for any special features required

STANDARD CIRCUITS:

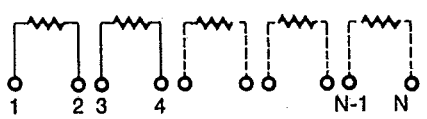
Schematic "C"



Schematic "F"



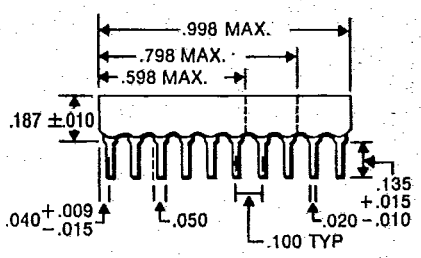
Schematic "G"



CONFORMAL COATED SIP PERFORMANCE DATA:

Test Per MIL-R-83401	MIL-R-83401 Limits (ΔR%)			TaNFilm Test Data (ΔR%)	
	M	K	H	Maximum	Typical
Thermal Shock and Power Conditioning	.70	.70	.50	.10	.02
Low Temperature Operation	.50	.25	.10	.10	.02
Short Time Overload	.50	.25	.10	.05	.02
Terminal Strength	.25	.25	.25	.10	.02
Resistance to Soldering Heat	.25	.25	.10	.10	.02
Moisture Resistance	.50	.50	.40	.10	.02
Shock	.25	.25	.25	.10	.02
Vibration	.25	.25	.25	.10	.02
Life	2.0	.50	.50	.10	.02
High Temperature Exposure	1.0	.50	.20	.10	.02
Low Temperature Storage	.50	.25	.10	.10	.02
25°C Double Load	2.0	.50	.50	.05	.02

DIMENSIONS - INCHES:



HOW TO ORDER

Sample Part No.	Model	Characteristic	Resistance	Absolute Tolerance Code	Ratio Tolerance to R_1
Model	4981	03	1001	B	(if specified)

4901 9-resistor, 10 pin SIP, one common lead (Schematic C)
4981 7-resistor, 8 pin SIP, one common lead (Schematic C)
4961 5-resistor, 6 pin SIP, one common lead (Schematic C)
4908 9-resistor, 10 pin SIP, series resistors (Schematic F)
4988 7-resistor, 8 pin SIP, series resistors (Schematic F)
4968 5-resistor, 6 pin SIP, series resistors (Schematic F)
4909 5-resistor, 10 pin SIP, isolated (Schematic G)
4989 4-resistor, 8 pin SIP, isolated (Schematic G)
4969 3-resistor, 6 pin SIP, isoltaed (Schematic G)

Characteristic

Code	Classification	TCR (ppm/°C)
01	Commercial Grade	±100
02	Commercial Grade	±50
03	Commercial Grade	±25
04	Military Screening	±300
05	Military Screening	±100
06	Military Screening	±50
07	Military Screening	±25

Resistance

Standard MIL resistance code

Example:
1001 = 1000Ω

Absolute/Ratio Tolerance Code

Standard MIL tolerance code

A ±.05%
B ±.1%
C ±.25%
D ±.50%
F ±1.0%
G ±2.0%
T ±.01%
Q ±.02%