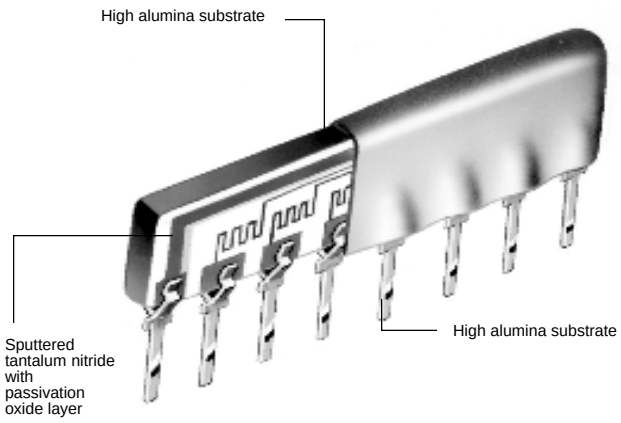
ISO-9001 Registered

ECONOMICAL TANFILM™ CONFORMALLY COATED SIP NETWORK

SIP SMXX SERIES

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



The solution to increasing precision resistor component density, economically, is IRC's commercial SMXX Series SIP Ultra Precision Resistor Network. This small footprint, conformally coated SIP features three (3) standard sizes (6, 8, 10 pin versions) and three (3) different circuits schematics and is only 0.250" high.

The real advantage of this package is the adaptation of our ultra stable Tantalum Nitride® resistor film system to an economical solder assembly to provide the ultimate in precision and economy.

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 make it virtually impervious to environmental elements.

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

SPECIFICATIONS:

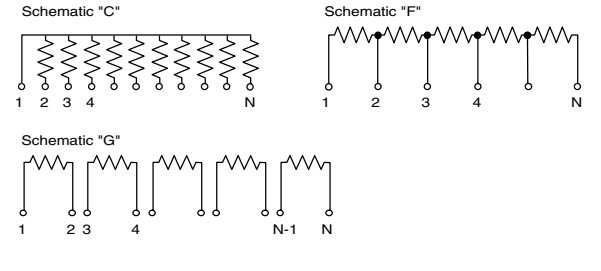
Resistance Range (ohms)		
Schematic C	49.9 to 250K	Higher and lower resistance values available
Schematic F	20 to 200K	
Schematic G	20 to 500K	
Temperature Coefficient (ppm/°C):	±25, ±50, ±100	
Standard Resistance Tolerance (±%):	0.1, 0.5, 1, 2	
TCR Tracking:	5 ppm/°C, (except Schematic C below 500 ohms 20 ppm/°C), 2 ppm/°C available	

Temperature Range:	-55°C to 125°C
Noise Level:	Less than -30 db
Lead Material:	CDA 194 solder coated
Substrate Material:	99.5% Pure alumina ceramic
Construction:	Epoxy conformal coated, solder assembly
Custom circuits and special testing available	

POWER RATING AT 70°C:

		Wattage		
		Network		
Schematic	**Resistor**	**6 Pin**	**8 Pin**	**10 Pin**
C, F	0.12	0.60	0.84	1.08
G	0.2	0.60	0.80	1.00

STANDARD CIRCUITS:

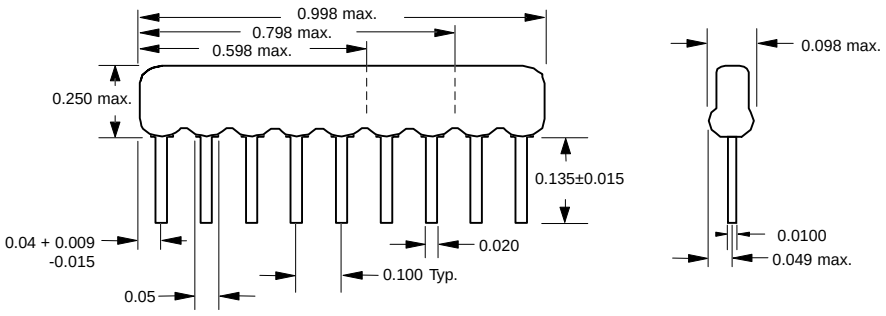


ISO-9001 Registered

SMXX ENVIRONMENTAL TESTING:

Test Per MIL-R-83401	MIL-R-83401 Limits (ΔR%)			TaNFilm™ Test Data (ΔR%)	
	M	K	H	Max.	Typical
Thermal Shock and Power Conditioning	0.70	0.70	0.50	0.25	0.05
Low Temperature Operation	0.50	0.25	0.10	0.10	0.05
Short Time Overload	0.50	0.25	0.10	0.10	0.05
Terminal Strength	0.25	0.25	0.10	0.10	0.05
Resistance to Soldering Heat	0.25	0.25	0.10	0.10	0.05
Moisture Resistance	0.50	0.50	0.40	0.20	0.05
Shock	0.25	0.25	0.25	0.20	0.05
Vibration	0.25	0.25	0.25	0.20	0.05
Life	2.0	0.50	0.50	0.25	0.05
High Temperature Exposure	1.0	0.50	0.20	0.10	0.05
Low Temperature Storage	0.50	0.25	0.10	0.10	0.05
25°C Double Load	2.0	0.50	0.50	0.10	0.05

DIMENSIONS (Inches):



HOW TO ORDER:

Sample Part No. **SM8 C 03 1001 B X**

Model
SM0C: 9 resistor, 10 pin SIP, one common lead (Schematic C)
SM8C: 7 resistor, 8 pin SIP, one common lead (Schematic C)
SM6C: 5 resistor, 6 pin SIP, one common lead (Schematic C)
SM0F: 9 resistor, 10 pin SIP, series resistors (Schematic F)
SM8F: 7 resistor, 8 pin SIP, series resistors (Schematic F)
SM6F: 5 resistor, 6 pin SIP, series resistors (Schematic F)
SM0G: 5 resistor, 10 pin SIP, isolated (Schematic G)
SM8G: 4 resistor, 8 pin SIP, isolated (Schematic G)
SM6G: 3 resistor, 6 pin SIP, isolated (Schematic G)

Schematic
Number of pins

Ratio Tolerance to R_1 (if specified)

Absolute Tolerance Code

Absolute/Ratio Tolerance Code
Standard MIL Tolerance Code

A=±0.05	F=±1%
B=±0.1%	G=±2%
C=±0.25	T=±0.01%
D=±0.5%	Q=±0.02%

Resistance
Standard MIL resistance code. Example: 1001 = 1000 ohms

Characteristic

Code	Classification	TCR (ppm/°C)
01	Commercial Grade	±100
02	Commercial Grade	±50
03	Commercial Grade	±25