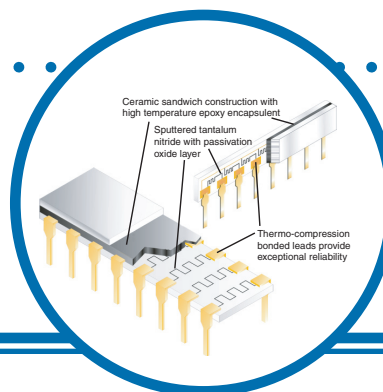


TaNFilm® High Temperature DIP and SIP Networks

1900HT / 4700HT SERIES

- Inherent reliability
- Custom configurations available
- Bonded leads not susceptible to solder reflow problems
- Absolute tolerance to $\pm 0.1\%$ - ratio accuracy to $\pm 0.05\%$
- Absolute TCR to $\pm 25 \text{ ppm}/^\circ\text{C}$ - ratio tracking to $\pm 5 \text{ ppm}/^\circ\text{C}$



The IRC 1900HT and 4700HT Series is the ultimate combination of precision performance, reliability, and long term stability in a low profile, TaNFilm® DIP and SIP packages. The rugged welded lead construction combined with the inherent passivation characteristics of tantalum nitride film insure superior continuous performance in high temperature applications over the installed life of the part.

Electrical Data

Package Type	Size	Schematic	Ohmic Range	Package Power	Element Power	Rated Voltage (not to exceed rated power)	Temperature Range
DIP	14	Isolated Schematic A	100Ω to 100KΩ	1.12W	0.08W	100V	-55°C to +200°C
		Bussed Schematic B	1.00KΩ to 50KΩ				
	16	Isolated Schematic A	100Ω to 100KΩ	1.28W			
		Bussed Schematic B	1.00KΩ to 50KΩ				
SIP	6	Isolated Schematic G	50Ω to 50KΩ	0.24W	0.08W	50V	
		Bussed Schematic C	2.00KΩ to 25KΩ				
	8	Isolated Schematic G	50Ω to 50KΩ	0.32W			
		Bussed Schematic C	2.00KΩ to 25KΩ				

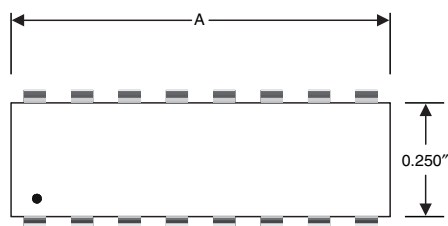
General Note

IRC reserves the right to make changes in product specification without notice or liability.
All information is subject to IRC's own data and is considered accurate at time of going to print.

TaNFilm® High Temperature DIP and SIP Networks

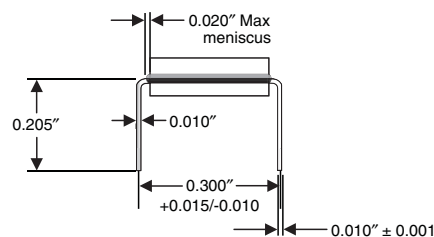
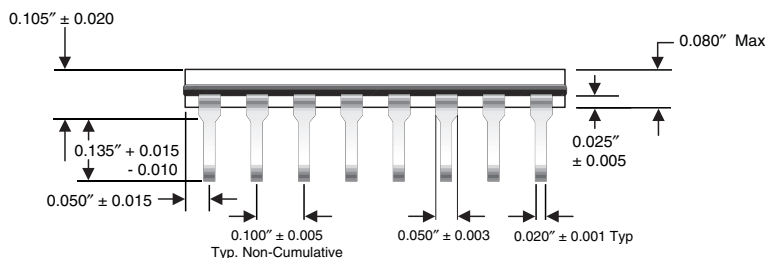
Physical Data

1900HT DIP Series

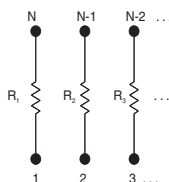


# OF LEADS	DIM A
14	0.700" $\pm$ 0.020
16	0.800" $\pm$ 0.020

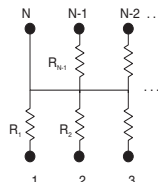
LEAD MATERIAL:
CDA 110 COPPER ½ HARD (EIP)
PLATED 30-50 μ IN. NICKEL
25 μ IN MINIMUM GOLD



Schematic A



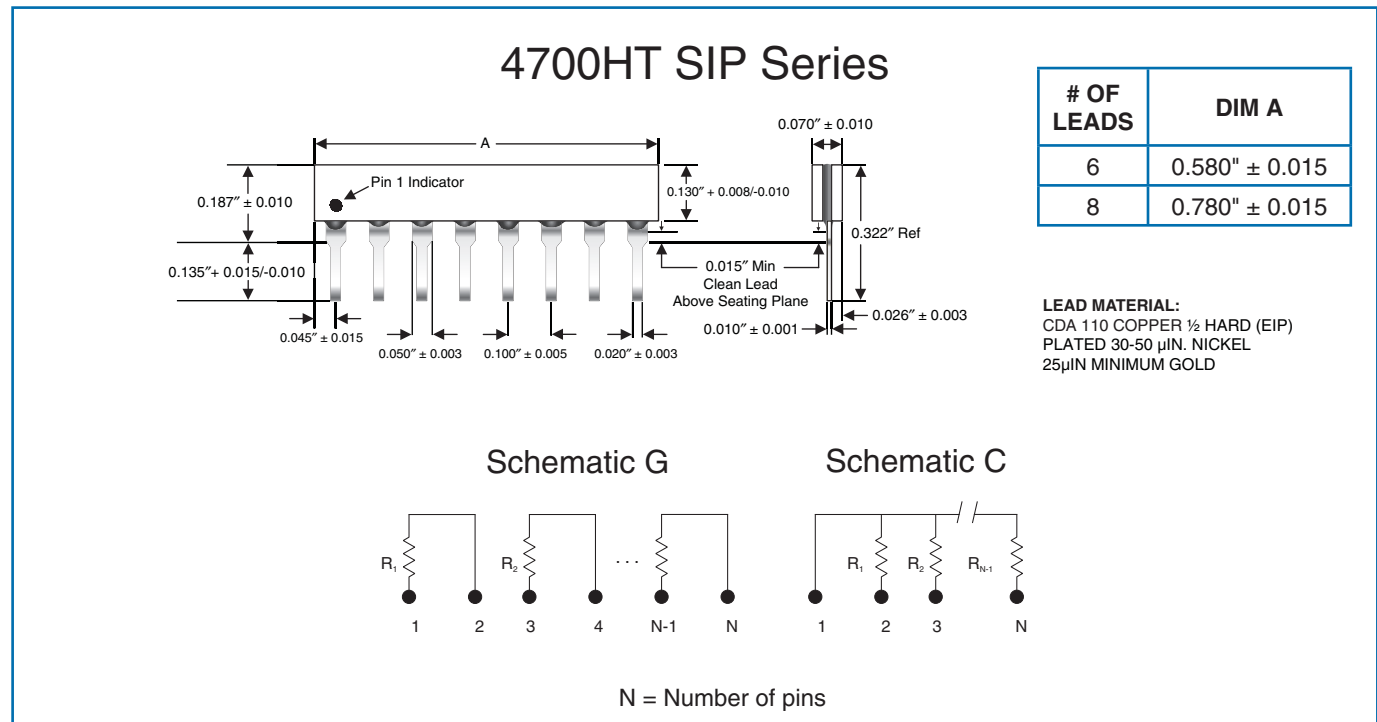
Schematic B



N = Number of pins

TaNFilm® High Temperature DIP and SIP Networks

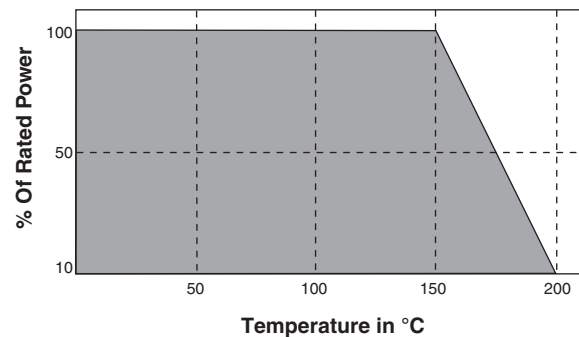
Physical Data (continued)



Environmental Data

Environmental Test MIL-PRF-55342	Performance	
	Typical	Maximum
Thermal Shock	±0.02%	±0.10%
Short Time Overload	±0.02%	±0.05%
High Temperature Exposure	±0.03%	±0.10%
Effects of Solder	±0.01%	±0.10%
Moisture Resistance	±0.03%	±0.10%
Life (1000 hours, 200°C, no load)	±0.08%	±1.0%
Life (1000 hours, 150°C, rated power)	±0.02%	±0.05%

Power Derating Curve



Ordering Data

Package Prefix **SIP - 4789HT - 03 - 1001 F B**

DIP = 1900HT Series; SIP = 4700HT SIP Series

Model

1987HT = 14-pin DIP bussed schematic B
1989HT = 14-pin DIP isolated schematic A
1998HT = 16-pin DIP bussed schematic B
1999HT = 16-pin DIP isolated schematic A

4761HT = 6-pin SIP bussed schematic C
4769HT = 6-pin SIP isolated schematic G
4781HT = 8-pin SIP bussed schematic C
4789HT = 8-pin SIP isolated schematic G

Optional Ratio Tolerance to R₁

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

Absolute Tolerance

Standard MIL tolerance code
J = ±5%; G = ±2%; F=±1.0%; D=±0.5%; C = ±0.25%; B = ±0.1%

Resistance

Standard MIL resistance code.
Example: 1001 = 1000 Ω; 50R0 = 50Ω

Absolute TCR

01 = ±100ppm/°C; 02 = ±50ppm/°C; 03 = ±25ppm/°C