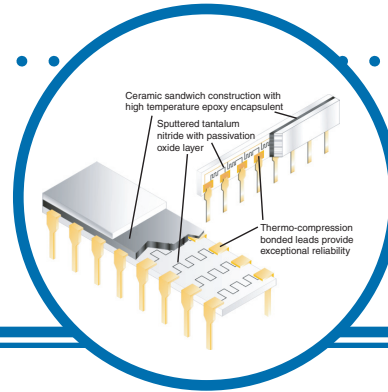


# TaNFilm® High Temperature DIP and SIP Networks

## 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				

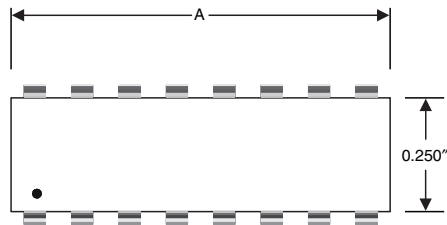
### General Note

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

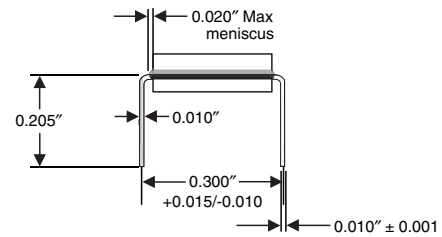
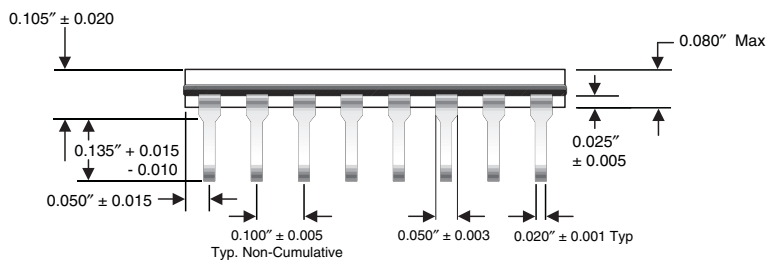
## Physical Data

### 1900HT DIP Series

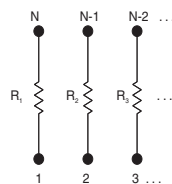


# OF LEADS	DIM A
14	0.700" ± 0.020
16	0.800" ± 0.020

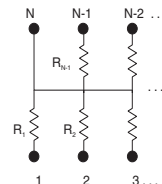
LEAD MATERIAL:  
CDA 110 COPPER ½ HARD (EIP)  
PLATED 30-50 μIN. NICKEL  
25μIN MINIMUM GOLD



### Schematic A



### Schematic B

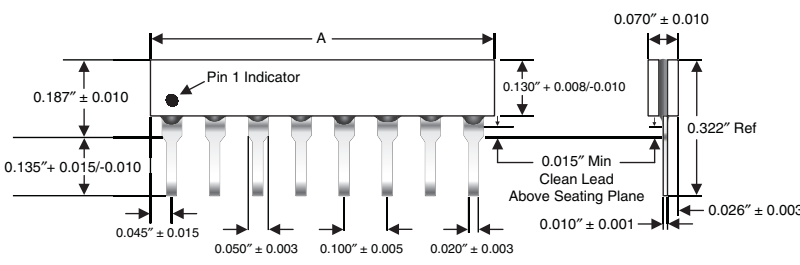


N = Number of pins

# TaNFilm<sup>®</sup> High Temperature DIP and SIP Networks

## Physical Data (continued)

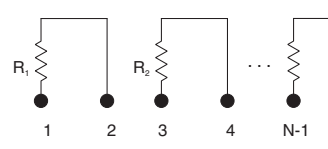
### 4700HT SIP Series



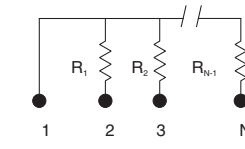
# OF LEADS	DIM A
6	0.580" ± 0.015
8	0.780" ± 0.015

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

Schematic G



Schematic C

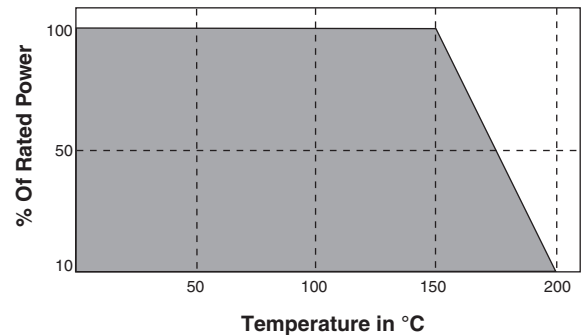


N = Number of pins

## 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 R<sub>1</sub>**

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