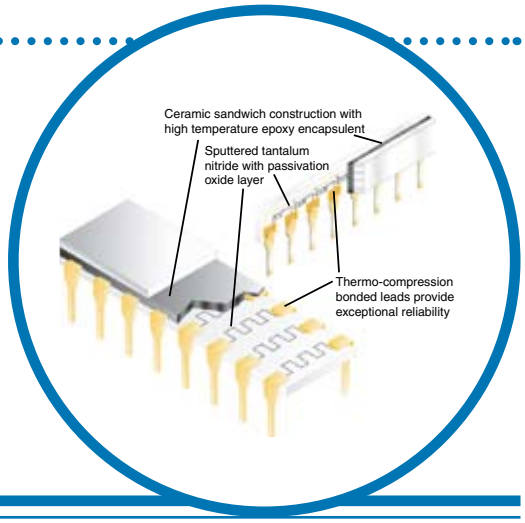
TaNFilm® High Temperature DIP and SIP Networks

1900HT / 4700HT Series

- **Inherent reliability**
- **Custom configurations available**
- **Bonded leads not susceptible to solder reflow problems**
- **Absolute tolerence to ±0.1% - ratio accuracy to ±0.05%**
- **Absolute TCR to ±25 ppm/°C - ratio tracking to ±5ppm/°C**



The IRC 1900 Series is the ultimate combination of precision performance, reliability, and long term stability in a low profile, TaNFilm® DIP package. Rugged welded lead construction combined with the inherent passivation characteristics of tantalum nitride insure superior ongoing performance over the installed life of the part.

Visit our website to view a graphical demonstration of IRC's TaNFilm® reliability and performance features.

Electrical Data

Schematic	Resistance Range (Ω)	Absolute Tolerance	Optional Ratio Tolerance	Absolute TCR (ppm/°C)	Tracking TCR (ppm/°C)	Military Characteristic	Element Power (mW)
A Commercial	10 - 49.9	F, G, J	F, G	±50; ±100; ±300	±20	N/A	200
	50.0 - 199	F, G, J	D, F, G	±25; ±50; ±100; ±300	±10		
	200 - 999	B, D, F, G, J	A, B, D, F, G	±25; ±50; ±100; ±300	±5		
	1.0K - 400K	B, D, F, G, J	A, B, D, F, G	±15; ±25; ±50; ±100; ±300	±5		
A Military	50 - 100K	B, D, F, G, J	N/A	N/A	N/A	H, K, M	
B Commercial	50 - 149	B, D, F, G, J	B, D, F, G	±300; ±100	±50	N/A	100
	150 - 249	B, D, F, G, J	B, D, F, G	±300; ±100; ±50	±20		
	250 - 999	B, D, F, G, J	B, D, F, G	±25; ±50; ±100; ±300	±5		
	1.0K - 200K	B, D, F, G, J	B, D, F, G	±15; ±25; ±50; ±100; ±300	±5		
B Military	50 - 70K	B, D, F, G, J	N/A	N/A	N/A	H, K, M	

Package Specification Data

Schematic	Package Power (W)		Voltage Rating	Temperature Range	Substrate	Lead Finish	Noise
	14-pin	16-pin					
A	1.4	1.6	$\sqrt{PxR}$ not to exceed 100V	-55°C to +150°C	99.6% Alumina	Gold Plate (60/40 Sn/Pb available)	<-30dB
B	1.3	1.5					

General Note

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

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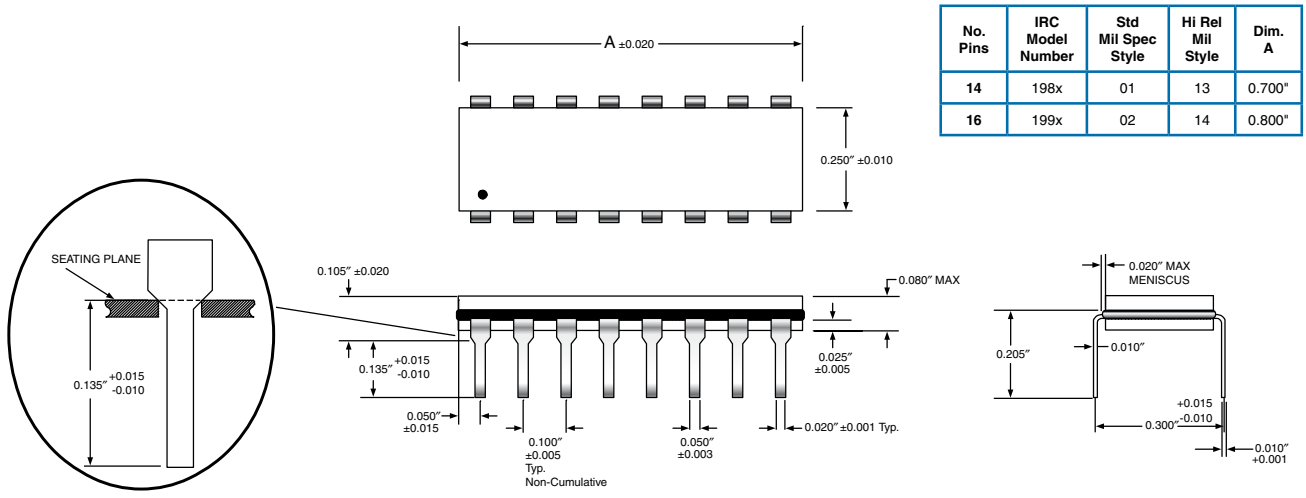
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Environmental Data

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	0.10	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

Physical Data

No. Pins	IRC Model Number	Std Mil Spec Style	Hi Rel Mil Style	Dim. A
14	198x	01	13	0.700"
16	199x	02	14	0.800"



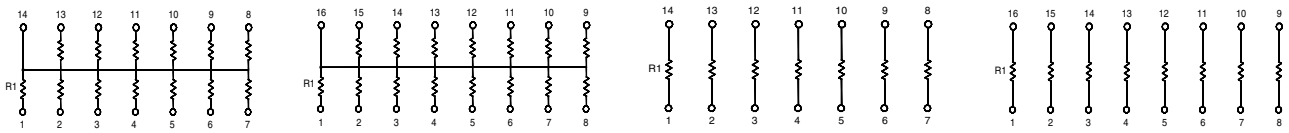
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Schematic Data



Model 1987
RZ010, RZ130
Schematic B

Model 1998
RZ020, RZ140
Schematic B

Model 1989
RZ010, RZ130
Schematic A

Model 1999
RZ020, RZ140
Schematic A

Commercial Ordering Data

Prefix DIP | 1999 | 03 | 1001 | B | F

Model
1987 = 14-pin DIP, schematic B, gold terminations
1987SD = 14-pin DIP, schematic B, 60/40 Sn/Pb terminations
1989 = 14-pin DIP, schematic A, gold terminations
1989SD = 14-pin DIP, schematic A, 60/40 Sn/Pb terminations

1998 = 16-pin DIP, schematic B, gold terminations
1998SD = 16-pin DIP, schematic B, 60/40 Sn/Pb terminations
1999 = 16-pin DIP, schematic A, gold terminations
1999SD = 16-pin DIP, schematic A, 60/40 Sn/Pb terminations

Absolute TCR
01 = ±100ppm/°C; 02 = ±50ppm/°C; 03 = ±25ppm/°C; 11 = ±15ppm/°C

Resistance
Standard 4-digit MIL resistance code
Example: 1001 = 1000Ω; 50R0=50Ω

Absolute Tolerance
J = ±5%; G = ±2%; F = ±1.0%; D = ±0.5%; B = ±0.1%

Optional Ratio Tolerance to R_1
F = ±1.0%; D = ±0.5%; C = ±0.25%; B = ±0.1%; A = ±0.05%

Custom schematics and screening available.
Screening available for non-QPL values and tolerances. Contact factory for ordering information.

MIL Screened Ordering Data (MIL-PRF-83401)

Prefix M83401 | 01 | K | 1001 | F | A

Specification Sheet
01 = 14-pin DIP
02 = 16-pin DIP
13 = 14-pin HI REL DIP
14 = 16-pin HI REL DIP

Characteristic
M, K, H

Resistance
Standard 4-digit MIL resistance code
Example: 1001 = 1000Ω; 50R0=50Ω

Absolute Tolerance
J = ±5%; G = ±2%; F = ±1.0%; D = ±0.5%; B = ±0.1%

Schematic
A = Isolated; B = Bussed Schematic

Standard lead termination is gold plate.
Contact factory for optional 60/40 Sn/Pb solder dip finish.

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www.bitechnologies.com www.irctt.com www.welwyn-tt.com

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