

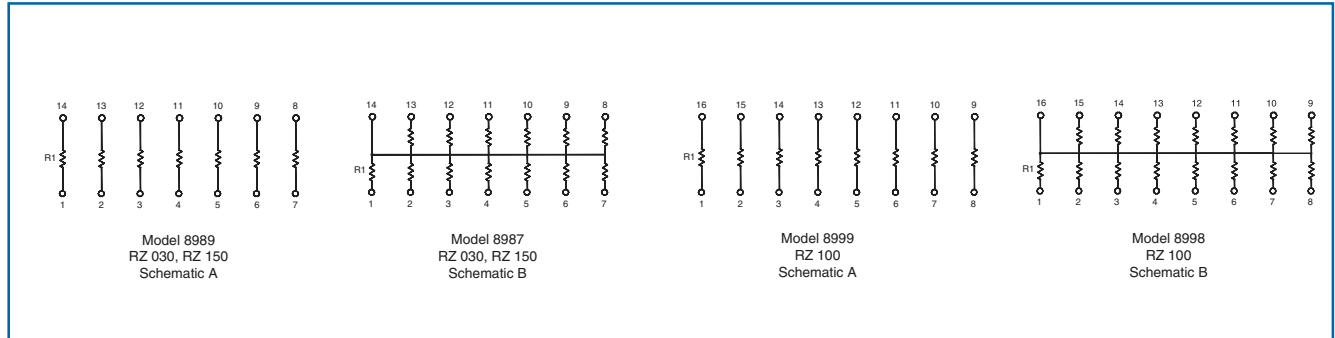
MIL-PRF-83401 Qualification Data

Specification	Size	Schematic	Resistance Range (Ω)	Absolute Tolerance (%)	Characteristic
MIL-PRF-83401/03 MIL-PRF-83401/15	14-Pin	A, B	20 - 121K	F, G, J	K, M
			100 - 100K	B, D, F, G, J	H, K, M
MIL-PRF-83401/10	16-Pin	A, B	100 - 100K	B, D, F, G, J	H, K, M

Package Specification Data (MIL and Commercial)

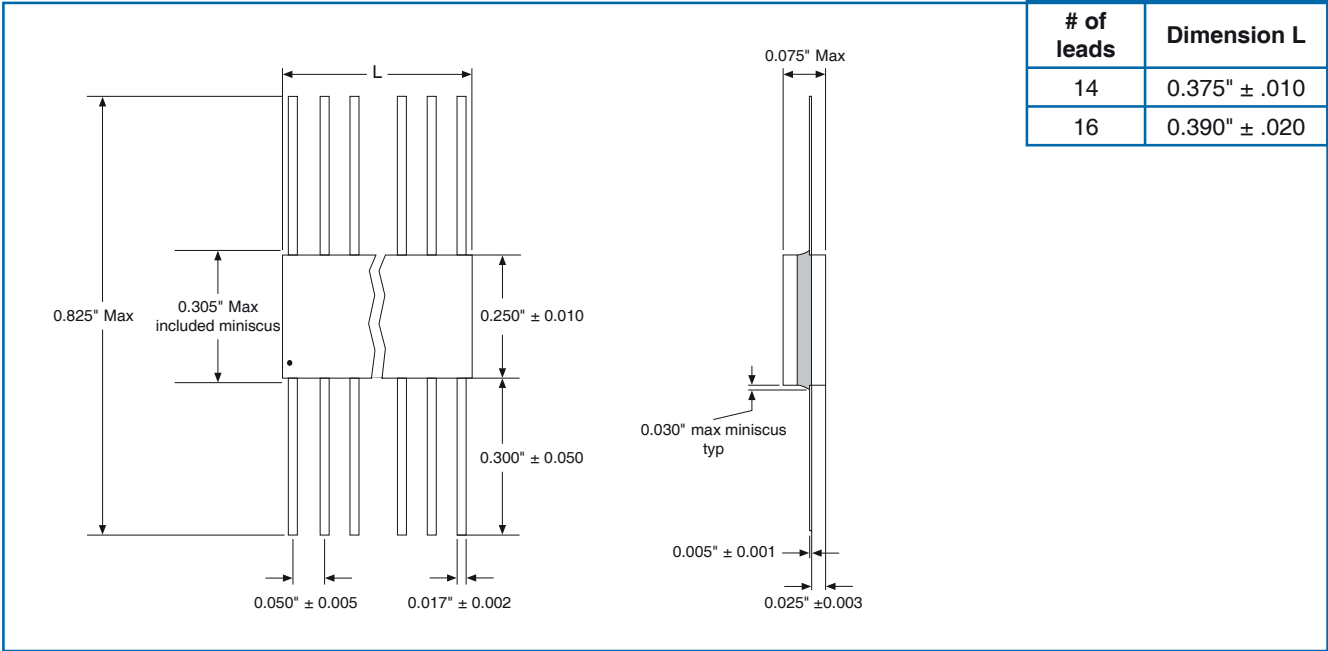
Schematic	Package Power (mW)		Power Derating	Voltage Rating	Temperature Range	Substrate	Lead Finish	Noise
	14-pin	16-pin						
A	350	400	100% from 0°C to 70°C derated linearly to 0% at 125°C	$\sqrt{PxR}$ not to exceed 50V	-65°C to +125°C	99.6% Alumina	Gold Plate (60/40 Sn/Pb available)	<-30dB
B	325	375						

Schematic Data



8900 Series

Physical Data



Environmental Data

Test per MIL-PRF-83401	MIL-PRF-83401 Limits (ΔR%)				TaNFilm® Test Data (ΔR%)	
	M	K	H	V	Max	Typical
Thermal Shock and Power Conditioning	0.7	0.7	0.5	0.25	0.1	0.02
Low Temperature Operation	0.5	0.25	0.1	0.1	0.1	0.01
Short Term Overload	0.5	0.25	0.1	0.1	0.05	0.01
Terminal Strength	0.25	0.25	0.25	0.1	0.1	0.01
Resistance to Solder Heat	0.25	0.25	0.1	0.2	0.1	0.02
Moisture Resistance	0.5	0.5	0.4	0.25	0.1	0.03
Shock	0.25	0.25	0.25	0.25	0.1	0.03
Vibration	0.25	0.25	0.25	0.1	0.1	0.03
Life	2.0	0.5	0.5	0.1	0.1	0.03
High Temperature Exposure	1.0	0.5	0.2	0.1	0.1	0.03
Low Temperature Storage	0.5	0.25	0.1	0.1	0.1	0.02
25°C Double Load	2.0	0.5	0.5	0.1	0.05	0.03

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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8900 Series

Commercial and MIL-Screened (Non-QPL) Ordering Data

Prefix	FP	8999	03	1001	B	F
Model						
8987 = 14-pin Flat Pack, schematic B, gold terminations 8987SD = 14-pin Flat Pack, schematic B, 60/40 Sn/Pb terminations 8987HR = 14-pin HI-REL Flat Pack, schematic B, gold terminations 8989 = 14-pin Flat Pack, schematic A, gold terminations 8989SD = 14-pin Flat Pack, schematic A, 60/40 Sn/Pb terminations 8989HR = 14-pin HI-REL Flat Pack, schematic A, gold terminations 8998 = 16-pin Flat Pack, schematic B, gold terminations 8998SD = 16-pin Flat Pack, schematic B, 60/40 Sn/Pb terminations 8998HR = 16-pin HI-REL Flat Pack, schematic B, gold terminations 8999 = 16-pin Flat Pack, schematic A, gold terminations 8999SD = 16-pin Flat Pack, schematic A, 60/40 Sn/Pb terminations 8999HR = 16-pin HI-REL Flat Pack, schematic A, gold terminations						
Absolute TCR						
Commercial Screening	01 = $\pm 100\text{ppm}/^{\circ}\text{C}$; 02 = $\pm 50\text{ppm}/^{\circ}\text{C}$; 03 = $\pm 25\text{ppm}/^{\circ}\text{C}$; 11 = $\pm 15\text{ppm}/^{\circ}\text{C}$					
MIL-PRF-83401 Group A Screening	04 = $\pm 300\text{ppm}/^{\circ}\text{C}$ Characteristic M; 05 = $\pm 100\text{ppm}/^{\circ}\text{C}$ Characteristic K 06 = $\pm 50\text{ppm}/^{\circ}\text{C}$ Characteristic H; 07 = $\pm 25\text{ppm}/^{\circ}\text{C}$ Characteristic H					
Resistance						
Standard 4-digit MIL resistance code Example: 1001 = 1000 Ω ; 50R0=50 Ω						
Absolute Tolerance	J = $\pm 5\%$; G = $\pm 2\%$; F = $\pm 1.0\%$; D = $\pm 0.5\%$; B = $\pm 0.1\%$					
Optional Ratio Tolerance to R ₁	F = $\pm 1.0\%$; D = $\pm 0.5\%$; C = $\pm 0.25\%$; B = $\pm 0.1\%$; A = $\pm 0.05\%$; Q = $\pm 0.02\%$; T = $\pm 0.01\%$					
Notes	HI-REL models include a precap inspection and thermo-compression bonded leads. TCR codes 01, 02, 03, and 11 are not available on HI-REL models. Custom schematics and screening available. Contact factory for ordering information.					

MIL-PRF-83401 Ordering Data

Prefix	M83401	03	K	1001	F	A					
Specification Sheet											
03 = 14-pin Flat Pack = RZ030 10 = 16-pin Flat Pack = RZ100 15 = 14-pin HI REL Flat Pack = RZ150											
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 hot solder dip finish.											

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