# Alpha Electronics

# Precision Thin Film Resistor (Conformally Coated)



### TCR, RESISTANCE RANGE, TOLERANCE, **RATED POWER** TCR (ppm/°C) Resistance Resistance Rated -25°C to +125°C\* Туре Range Tolerance Power (W) (Ω) (%)\* at 70°C ±0.05 (A) ±0.1 (B) ±0.5 (D) TLA 100K to 5M 0.125 ±1 (F) 0±10 (C) ±0.02 (Q) 0±5 (X) ±0.05 (A) TLC 200K to 10M ±0.1 (B) 0.25 ±0.5 (D) ±1 (F)

\* Symbols in parentheses are for type number composition.

# POWER DERATING CURVE

## FREQUENCY CHARACTERISTICS



PERFORMANCE			
Parameters	Test Condition	ALPHA Specification	ALPHA Typical Test Data
Max. Rated Operating Temperature Working Temperature Range Maximum Working Voltage		70°C –25°C to +155°C TLA = 250V, TLC = 300V	
Temperature Cycling Overload	-25°C/30 min., Room Temperature/5 min., +55°C/30 min., 5 cycles Rated Voltage × 2.5, 5 sec.	±0.05% ±0.05%	±0.01% ±0.0025%
Solderability Resistance to Solvents	235°C, 2 sec. Isopropyl Alcohol	over 75% coverage no damage	
Low Temperature Storage Terminal Strength	–25°C, No Load, 2 hrs. 0.908 kg (2 pounds), 10 sec.	±0.05% ±0.05%	±0.0025% ±0.0025%
Dielectric Withstanding Voltage Insulation Resistance Resistance to Soldering Heat Moisture Resistance	Atmospheric: AC 300V, 1 min. DC 100V, 1 min. 350°C, 3 sec. +65°C to –10°C, 90% RH to 98% RH, Rated Voltage, 10 cycles (240 hrs.)	±0.03% over 10,000 MΩ ±0.03% ±0.1%	±0.0025% over 10,000 MΩ ±0.01% ±0.05%
Life (Rated Load)	70°C, Rated Power, 1.5 hrs. – ON, 0.5 hr. – OFF, 1,000 hrs.	±0.1%	±0.01%
Storage Life	15°C to 35°C,15% RH to 75% RH, No Load, 10,000 hrs.	±0.02%	±0.01%
High Temperature Exposure	155°C, No Load, 1,000 hrs.	±0.05%	±0.02%
Current Noise		–25 dB	–35 dB