FrelTec GmbH

Mathildenstr. 10A
82319 Starnberg
Germany

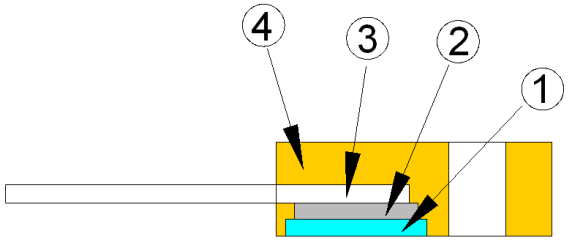
TO-247 Power Resistor

SPECIFICATION

Part Number

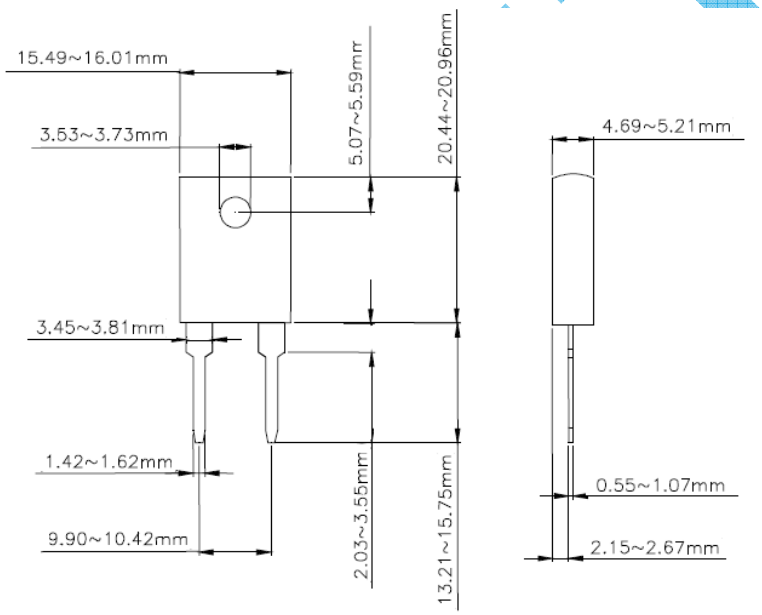
0A1		1001*		J*		T247		YRD		E*		1*
Type		Value		Tolerance		Package		Packing		TCR		Power Rating
0A1 : TO-247 Power Resistors		The last digit is the multiplier		K : ±10%		T247: TO-247		Y35: Tube 35pcs		E : ±50ppm/°C		1: 100W
		which denotes the number of zero following		J : ±5%						F : ±100ppm/°C		
		0000=0Ohm		F : ±1%								
				D: ±0,5%						G : ±200ppm/°C		
		Example:								H : ±300ppm/°C		
		97R6= 97,6Ohm								0 : Not specified		
		9760 = 976Ohm										
		1001 = 1kOhm										
		E24-Series is first digit “0”										

Construction



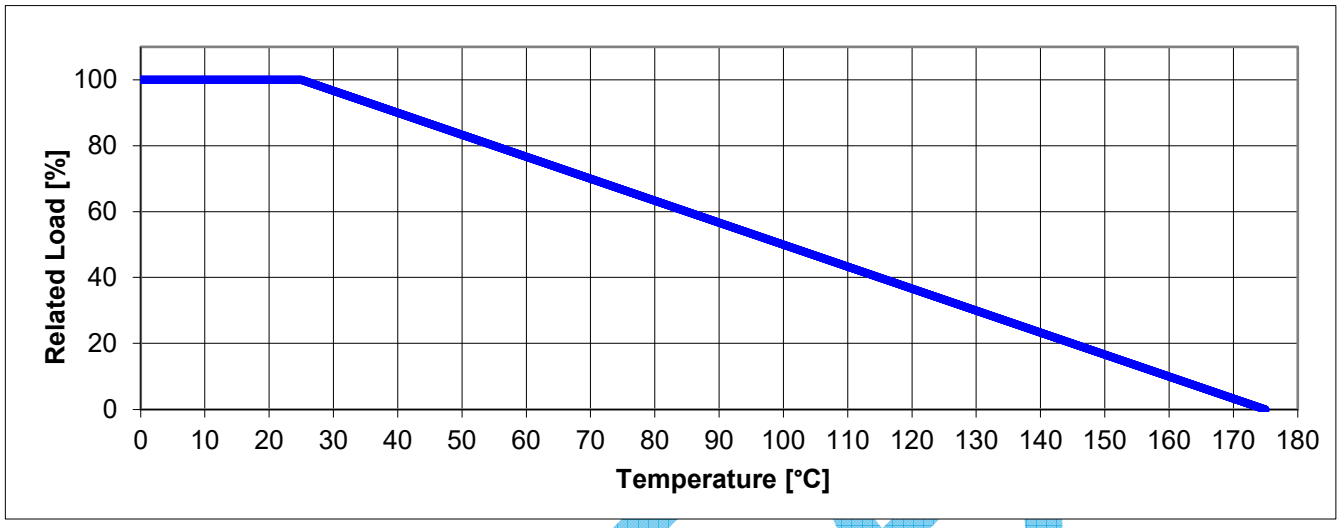
①	Alumina Substrate	③	Lead
②	Resistor Layer	④	Molding

Dimensions



Power Derating Curve

Operated in ambient temperatures above 25°C, power rating must be derated in accordance with the curve below. Operating temperature -65°C to +175°C



Electrical Characteristics Specification

Type	Temperature Coefficient [TCR; ppm/°C]	Resistance Range [Ω]			
		D(±1%)	F(±1%)	J(±5%)	K(±10%)
0A1	Not specified	-	-	0,05 Ω ~ 0,1 Ω	
				≥0,1 Ω ~ 1 Ω	
	±100 ±200 ±300	-	≥1Ω ~ 5Ω		
	±100 ±200 ±300	≥ 5Ω ~ 10Ω			
	±50 ±100 ±200	≥ 10Ω ~ 100kΩ			

Operating Voltage: 700V Max.
Dielectric Strength: 1800V AC
Insulation Resistance: 10GΩ min.

Stock period

The Temperature condition must be controlled at 25± 3 °C, the R.H. must be controlled at less than 80%. The stock can maintain quality level in 12 month.

Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	Referenced to 25°C, ΔR taken at +105°C
Load Life	ΔR±1,0%	Rated power, 2.000 hours
Solderability	90% min. coverage	245±5°C for 3 seconds
Momentary Overload	ΔR±0,5%	1,5 times rated power and V (dc) ≦ 1,5V Max. for 5 seconds
Dielectric strength	ΔR±0,15%	1800V AC, 60 sec.
Moisture resistance	ΔR±0,5%	-10°C ~+65°C, RH>90% cycle 240 hours
Thermal Shock	ΔR±0,5%	-65°C ~150°C 100 cycles
Terminal Strength	ΔR±0,2%	(Pull Test) 2,4N
Vibration, High Frequency	ΔR±0,4%	20g peak

Lead material: Tinned copper
Maximum torque: 0,9 Nm
When in free air at 25°C, the TR100 is rated for 3,5W
The case temperature is to be used for the definition of the applied power limit
The case temperature measurement must be made with a thermocouple contacting the center of the component mounted on the designed heat sink
Thermal grease should be applied properly

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Mathildenstr. 10A; 82319 Starnberg; Germany

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