INTRON

RADIAL PRECISION RESISTORS (EPOXY COATED)



INTRON precision thin film resistors are made by vacuum depositing a controlled film of NiCr on high purity alumina substrate. The resistors are formed using high resolution photolithography. The values are micro trimmed to the exact value with a tolerance of 0.05%. The TCR and tolerance is obtained by process capability and does not rely on a selection process. Resistor sets matched to precise tolerance and TCR can be given.

SPECIFICATIONS:

РНОТО	TYPE	POWER	LEAD	MAXIMUM	DECICTOR	DIMENSIONS IN MM (max.)					
		$@ 70^{\circ}C$	INCH	VOLTAGE	RANGE	L	В	D	Е	F	d
0.5% 15	LSCA	1/6W	0.1	300V	10Ω to 330K	5.2	7.5	2.3	2.54	10.0	0.5

DIMENSIONS:



APPLICATIONS:

Precision weighing scales, Temperature and Chart recorders, Calibration equipment, Testing and measuring equipment, High Precision amplifiers, Current Sensing, High end Audio equipment, etc.

FEATURES:

- High Precision: ± 0.05%, ± 0.1%, ± 0.2%, ± 0.5%, ± 1%
- Low Temperature Co-efficient: ± 5, ± 10, ± 15, ± 25 ppm/°C (tested between 25°, 75° & 125°C)
- Wide Resistance Range:10 ohm to 1M ohm with any odd value possible.
- Radial lead design: Lead pitch of 0.1", 0.2", 0.4" Lead frame design available on request.
- Wattage: 1/6W, 1/4W, 1/2W @ 70°C.

MARKING:

The resistors are marked with value, tolerance and tcr for easy identification.

Any customer code can be printed on the resistor depending on the space.

PERFORMANCE:

Parameters	Specifications	Test Conditions
Operating Temperature Range		
Insulation Resistance		300 Volts, 1 minute
Temperature Cycling		-55°C 30min, +125°C 30min, 5 cycles
Damp Heat		40°C, 90-95%RH, DC 0.1W, 1,000hours
Short Time Overload		2.5 times the Rated Voltage for 5 seconds
Load Life		Rated Power at 70°C, 90min ON, 30min OFF, 1000hours
Soldering Heat		350°C, 3seconds
Moisture Resistance		+65°C to -10°C, 90-100% RH, Rated Voltage, 10 cycles (240 hours)
Solderability		235 °C, 2 seconds
Solvent		IPA test
Noise		
Shelf Life Stability		One year at 25°C

ORDERING INFORMATION:

1/4 W	SAA	10K	0.1 %	10 ppm/°C
Wattage	Туре	Value	Tolerance	TCR

STANDARD TESTING PROCEDURE :

For 100% of the resistors:

- 1. Short time Overload in which 2.5 times the rated voltage (6.25 x rated power) is applied for 5 seconds.
- 2. Rated Wattage in which the rated voltage is dissipated in the resistor for 24 hours.
- 3. TCR measurement done at 25°C, 75°C and 125°C.
- 4. Resistance tolerance measured on 7 $^{1\!/_{\!2}}$ DMM at 25°C.
- 5. Visual and Mechanical inspection.

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POWER DERATING CURVE:



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