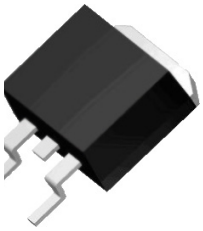
Power Resistor

RoHS Compliant



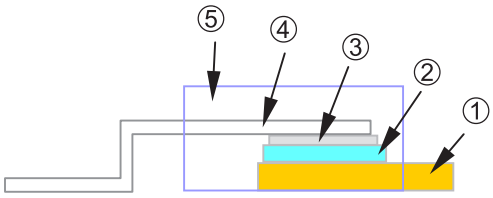
Features

- 35 watts at 25°C case temperature
- TO-263 style power package for surface mounted resistor
- Molded case for protection
- Resistor is electrically isolated from metal tab

Applications

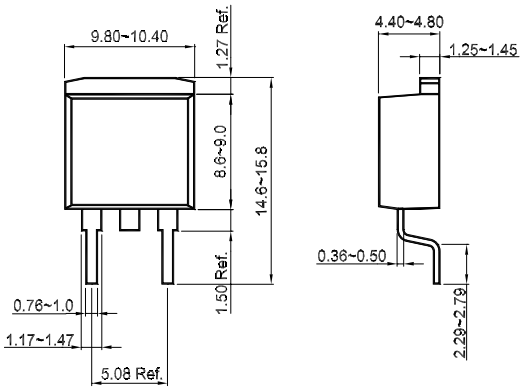
- Switching Power Supplies
- Snubbers Circuits
- Automated Machine Controller
- RF Power Amplifiers
- Low Energy Pulse Loading
- UPS
- Voltage Regulation
- Bleeder Resistors

Construction



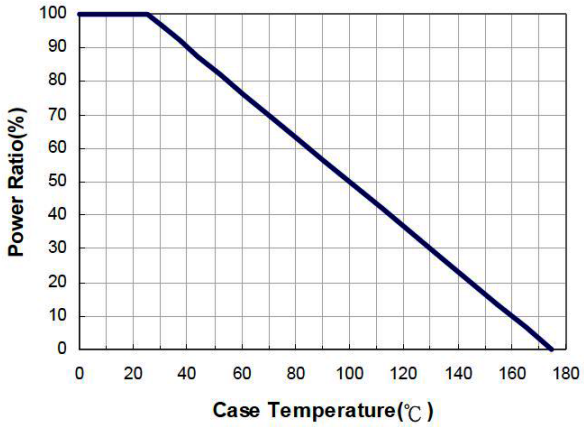
1	Flange
2	Alumina Substrate
3	Resistor Layer
4	Lead
5	Molding

Dimensions



Dimensions : Millimetres

Derating Curve



Electrical Characteristics Specifications

Item / Type	Resistance Range				TCR (PPM/°C)
	±0.5%	±1%	±5%	±10%	
MCSTR35			0.5Ω – 0.91Ω		No Specified
		1Ω – 2.7Ω			±100 ±300
		3Ω -10Ω			±100 ±200
	>10Ω –100kΩ				±50 ±100 ±200

Operating Voltage : 500V Max.
Dielectric Strength : 2000V AC
Insulation Resistance : 10GΩ min.
Working Temperature Range : -55°C to +175°C
Resistance Value : < 1Ω is available

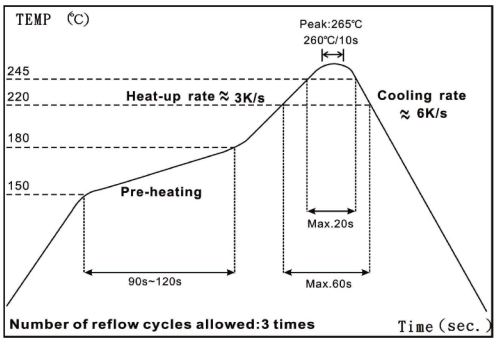
Environmental Characteristics

Item	Requirement	Test Method
Temperature Coefficient of Resistance (T.C.R.)	As Spec.	JIS-C-5201-1 4.8 IEC 60115-1 4.8 Referenced to 25°C, ΔR taken at +105°C
Short Time Overload	ΔR±0.3%	JIS-C-5201-1 4.13 IEC 60115-1 4.13 2 times rated power with applied voltage not to exceed 1.5 times maximum continuous operating voltage for 5 seconds
Load Life	ΔR±1.0%	JIS-C-5201-1 4.25 IEC 60115-1 4.25 2,000 hours at rated power
High Temperature Exposure	ΔR±0.25%	MIL-STD-202 method 108 at +175°C for 1000 hrs. Unpowered.
Temperature Cycling	ΔR±0.3%	JESD22 Method JA-104 -55°C~+175°C, 1000 cycles
Damp Heat with Load	ΔR±0.5%	JIS-C-5201-1 4.24 IEC 60115-1 4.24 40±2°C, 90~95% R.H., RCWV for 1000 hrs with 1.5 hrs “ON” and 0.5 hr “OFF”
Vibration, High Frequency	ΔR±0.2%	MIL-STD-202 Method 204 5 g’s for 20 min., 12 cycles each of 3 orientations, 10-2000 Hz
Resistance to Soldering Heat	ΔR±0.5%	JIS-C-5201-1 4.18 IEC 60115-1 4.18 260±5°C for 10 seconds

Item	Requirement	Test Method
Solderability	90% min. coverage	J-STD-002 245±5°C for 3 seconds
Terminal Strength	No broken	AEC-Q200-006 Force of 1.8kg for 60 seconds.

Lead Material: Tinned Copper
Maximum Torque: 0.9 N-m
When in Free Air at 25°C, the MCSTR35 is Rated for 2.5W
The Case Temperature is to be used for the Definition of the Applied Power Limit
RCWV(Rated Continuous Working Voltage)=√(P×R) or Max. Operating Voltage whichever is lower.

Soldering Condition

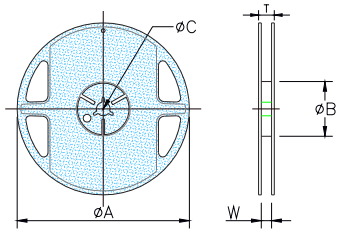


IR Reflow Soldering

(1) Time of IR reflow soldering at maximum temperature point 260°C: 10s
(2) Time of soldering iron at maximum temperature point 410°C: 5s

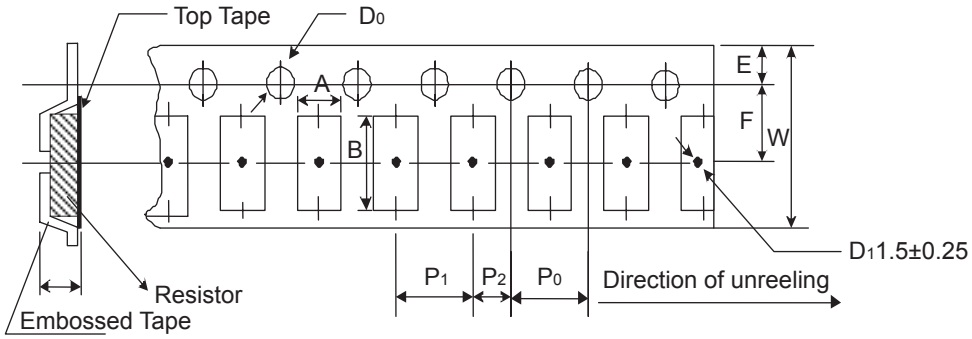
Packaging

Reel Specifications & Packaging Quantity



Type	Packaging Quantity	Tape Width	Reel Diameter	ΦA (mm)	ΦB (mm)	ΦC (mm)	W (mm)	T (mm)
MCSTR35	500 pcs	24mm	13 inch	330 ±1	100 ±0.5	13.5 ±0.3	25.4 ±0.5	30 ±0.5

Embossed Plastic Tape Specifications



Type	A (mm)	B (mm)	W (mm)	E (mm)	F (mm)	P_0 (mm)	P_1 (mm)	P_2 (mm)	D_0 (mm)	T (mm)
MCSTR	10.8 ±0.1	16.13 ±0.1	24 ±0.3	1.75 ±0.1	11.5 ±0.1	4 ±0.1	16 ±0.1	2 ±0.1	1.55 ±0.05	5.25 ±0.2

Part Number Explanation

MCSTR	35	J	B	G	2R70
Series Type	**Power** 35: 35 Watts	**Resistance Tolerance** D: ±0.5% F: ±1% J: ±5% K: ±10%	**Packaging Code** B: Bulk D: Tube T: Taping	**TCR (PPM/°C)** D: ±50 E: ±100 F: ±200 G: ±300 - : No Specified	**Resistance** R015: 0.015Ω R050: 0.05Ω