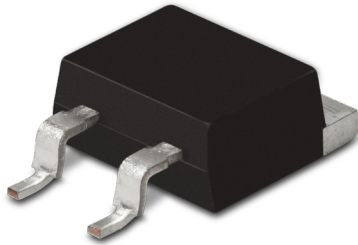


Data Sheet for Precision Resistors

Power Resistor (thin film)

Series M35



- Power rating up to 35 Watt (with heat-sink)
- Resistance range from 0,01Ω..51kΩ
- Resistance tolerance ±1%
- TCR up to ±50ppm/°C
- TO-263 housing (D-PAK)
- Low inductance (<10nH)
- Reflow solderable at 260°C / 20 sec.

Electrical Specification

Resistance range	0,01Ω..51kΩ
Resistance tolerance	±1%..±5%
Power rating @ 25°C (0W @ +175°C)	35 W with heat-sink 2 W without heat-sink
Max. working voltage	500V
TCR-rate	±50ppm/°C @ R ≥ 10Ω ±100ppm/°C @ 0,1Ω ≤ R <10Ω ±250ppm/°C @ R < 0,1Ω
Working temperature range (max.)	-55..+175°C

Mechanical Specification

Resistance technology / material	Thin film
Housing material	Epoxy moulded
Design	TO-263
Connections	Cooper tinned

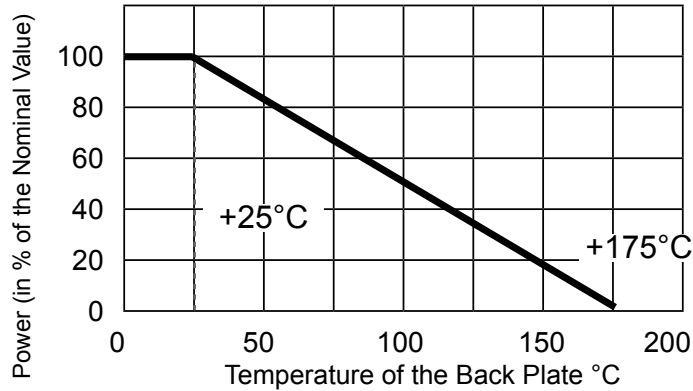
Parameters	Test Conditions	Specification ΔR
Load life	90 min on, 30 min off, 1000h @25°C	±1%
Moisture resistance	90..95% RH, 0,1W, 1000h @ 40°C	±1%
Thermal shock	-55°C 30 min., +155°C 30min. 5 Zyklen	±0,25%
Resistance to soldering heat	350°C±5°C, 3 Sekunden	±0,1%
Vibration	IEC60068-2-6	±0,25%
Dielectric strength: 2000 VAC		
Inductance: 8,4 nH		
Isolation resistance: >1 GΩ		
Thermal resistance: 3,3K/W		

Data Sheet for Precision Resistors

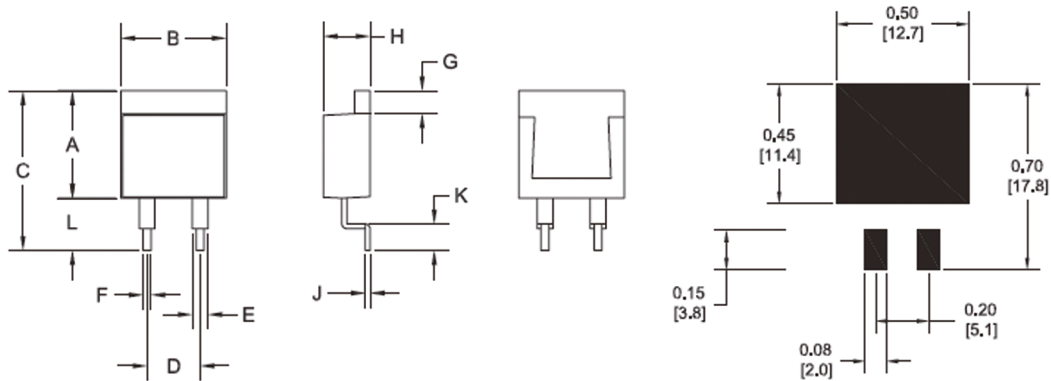
Power Resistor (thin film)

Series M35

Power Derating Curve



Technical Drawing



	A	B	C	D	E	F	G	H	J	K	L
Dimension in mm	10,3 ±0,2	10,1 ±0,2	15,3 ±1,0	5,08 ±0,1	1,5 ±0,05	0,75 ±0,05	2,2 ±0,2	4,5 ±0,2	0,5 ±0,05	2,5 ±0,5	5,0 ±1,0

Power Rating Notes:

The M35 series resistors have to be combined with a correctly dimensioned heat-sink. The internal temperature of the resistor should not exceed 175°C.

Formula for the calculation of an appropriate heat-sink:

$$R_{OH} = \frac{T_{max} - (P \times R_{OR}) - T_U}{P}$$

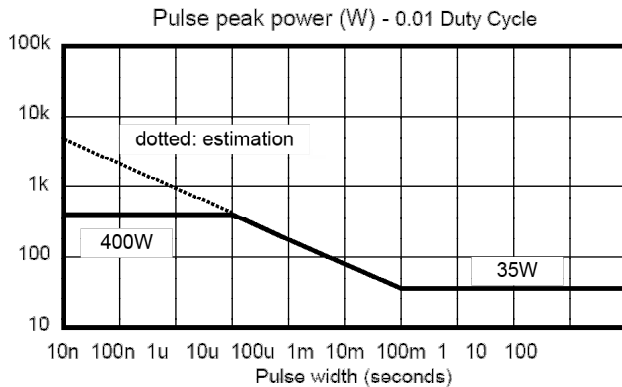
R_{OH}	Thermal Resistance of the Heat-Sink(°C/W)
R_{OR}	Thermal Resistance of the Resistor (°C/W)
T_{max}	Maximum Temperature of the Resistor
T_U	Ambient Temperature of the Heat-Sink (°C)
P	Power applied to the Resistor (W)

Data Sheet for Precision Resistors

Power Resistor (thin film)

Series M35

Pulse Energy Durability



Load life test will be necessary in actual equipment.

Order code

Description

Selection: standard=black/bold, possible options=grey/cursive

Series:

M35

Resistance tolerance:

±1% @R ≥ 0,1 Ω

±5 @R < 0,1 Ω

W1%

W5%

Temperature coefficient:

±50ppm/°C @ R ≥ 10Ω

±100ppm/°C @ 0,1Ω ≤ R <10Ω

±250ppm/°C @ R < 0,1Ω

TK50

TK100

TK250

Resistance value - please choose:

From 0,01Ω to ≤ 51kΩ

xxxkxxx

Order Example	Series	Resistance tolerance	Temperature coefficient	Resistance value
Choice	M35	±1%	50ppm/°C	10,1kΩ
Code	M35	W1%	TK50	10k100

Packaging	Quantity	Reel Dimensions
M35	500	Outer Diameter:330 mm, Inner Diameter: 100 mm, Tape Width: 23,9 mm (min.), 27,4 (max.)