Power Resistor for Mounting onto a Heatsink
Thick Film Technology

FEATURES

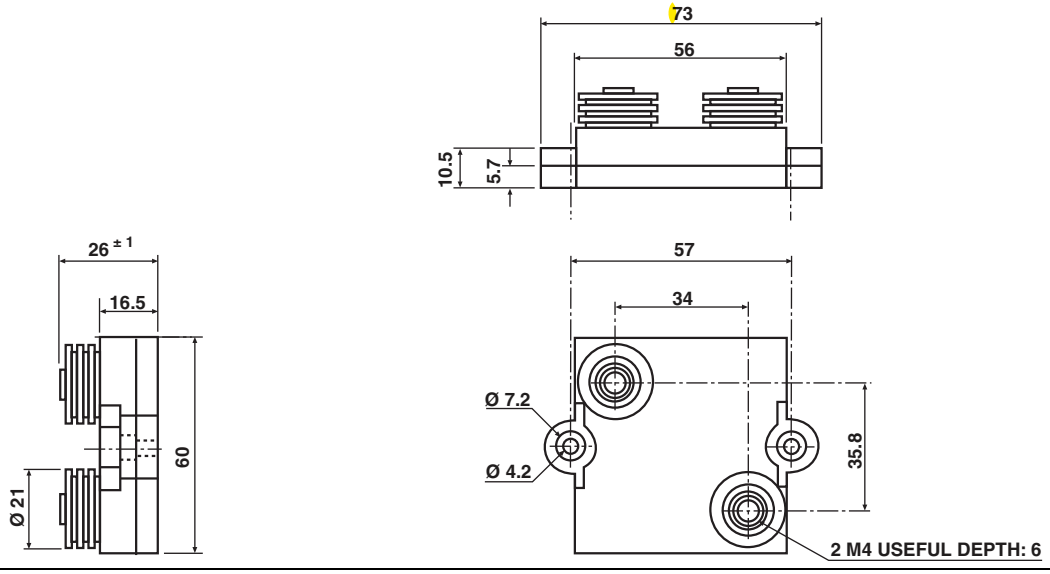
- High power rating: 250 W
- High overload capability up to 4 times nominal power (see energy curve)
- Easy mounting
- Low thermal radiation of the case
- Compliant to RoHS directive 2002/95/EC

RoHS COMPLIANT

Developed for specific applications such as railroad electrical traction, this series can bear short overloads as high as fifteen times the nominal power. Designed to be mounted onto a heatsink, these power resistors exhibit remarkable characteristics.

DIMENSIONS in millimeters

RPS 250D



Note
• Tolerance unless stated: ± 0.2 mm

MECHANICAL SPECIFICATIONS

Mechanical Protection	Insulated case
Substrate	Alumina onto aluminum base
Resistive Element	Cermet
End Connections	Screws M4, (M5 on request)
Tightening Torque on Connections	2 Nm
Weight	170 g ± 10 %

ENVIRONMENTAL SPECIFICATIONS

Thermal Resistance	$R_{TH\ (j-c)}$ 0.22 °C/W
Temperature Range	- 55 °C + 125 °C
Climatic Category	55/125/56

ELECTRICAL SPECIFICATIONS

Resistance Range	0.24 Ω to 1 MΩ E24 series
Tolerance	± 1 % to ± 10 %
Power Rating chassis mounted **250 W** **1000 W**	 at 50 °C continuous at 25 °C for 10 s
Temperature Coefficient **Standard**	 ± 250 ppm/°C < 1 ± 150 ppm/°C > 1
Limiting Element Voltage U_L	5 kV_{RMS}
Dielectric Strength **MIL STD 202 (301), 1 min, 10 mA max.**	L connections 7 kV_{RMS} H connections 12 kV_{RMS}
Insulation Resistance	> 10^6 MΩ
Inductance	< 50 nH
Capacitance Resistor/ Ground	< 40 pF < 120 pF

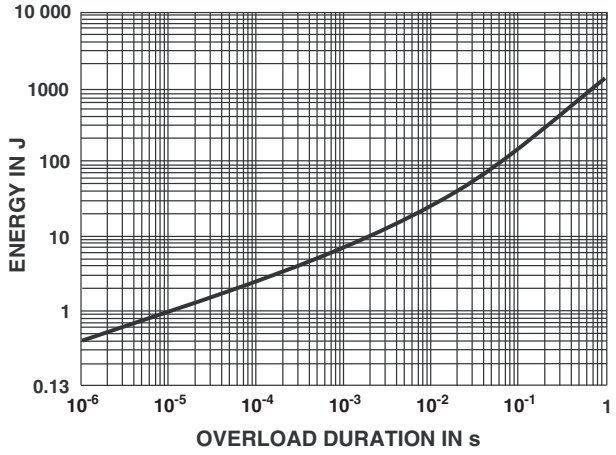
OVERLOADS

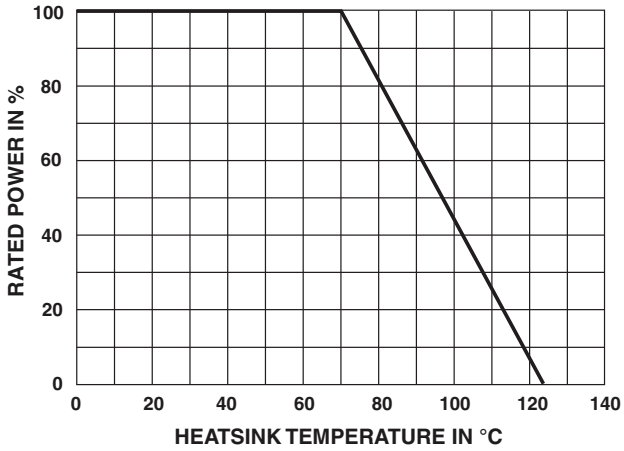
In any case the applied voltage must be lower than 2.5 U_n. $U_{max.} < 2.5\ U_n < 12\ 500$ V.
Short time overload: 4 P_n/10 s
Accidental overload: The values indicated on the graph below are applicable to resistors in air or mounted onto a heatsink.

POWER RATING

The temperature of the heatsink should be maintained in the limit specified.
To improve the thermal conductivity, surfaces in contact should be coated with a silicone grease.

ENERGY CURVE





MARKING

Series, style, ohmic value (in Ω), tolerance in %, manufacturing date, Vishay Sfernice trademark

PACKAGING

Box of 15 units

GLOBAL PART NUMBER INFORMATION

R	P	S	0	2	5	0	D	L	2	R	2	0	J	B	Z	A	3

GLOBAL MODEL	STYLE	DIELECTRIC	OHMIC VALUE	TOLERANCE	PACKAGING	TYPE
RPS250	**D** = Diagonal connections **A** = Straight connections	**H** = Dielectric strength 12 kV **L** = Dielectric strength 7 kV	The first three digits are significant figures and the last digit specifies the number of zeros to follow. R designates decimal point. **2R20** = 2.20 Ω **48R7** = 48.7 Ω **47R0** = 47 Ω **1001** = 1 kΩ **4R70** = 4.7 Ω **R240** = 0.24 Ω	**F** = 1 % **G** = 2 % **J** = 5 % **K** = 10 %	**B** = Box, 15 pcs **N** = Box, 15 pcs N/A (1 to 14 pcs by box)	Standard RPS250A = **Blank** Standard RPS250D = **ZA3** Special = **Blank** (for RPS250D) or as applicable = **ZAx**