FPA600 600W Thick Film Heatsink Resistors

GD RECTIFIERS
The Custom Power Specialist

600 Watt resistor designed for various applications including power transmission, traction, variable speed drives, power supplies, robotics, motor control and power control devices. Suitable for liquid or air cooled heat sink systems

- Power Dissipation 600 watts at max 70°C bottom case temp
- Value Range R5 to 1M
- Tolerance Options ±5% or ±10%
- TCR Options ±150ppm/°C
- Maximum Voltage 5000Vdc
- Dielectric Strength 12000Vdc
- Special Features Partial discharge 4Kvrms <10 pc up to 7kV. Please consult with company regarding application areas. Vibration proof. Very low inductance
  RoHS Compliant.

Characteristics

Power rating	600W at 70°C effective ambient	Partial discharge	4kV rms. <10pC
Resistance range	R5 to 1M	Voltage proof test	7kV rms.
Tolerance	± 10% (K) - ± 5% (J) Std	Typical inductance	<100nH measured at 100kHz
Temperature coefficient	± 100ppm / °C (25°C - 100°C)	Parallel capacitance	40pF
Maximum working voltage	5kV rms	Capacitance / mass	100pF
Working temperature range	-55°C to +150°C	Short term overload	1kW - 10 sec.
Dielectric strength	6kV/50Hz test time 10sec.	Thermal resistance	Rth 0.115°C/W
Creepage distance	40mm	Mounting screw / max. torque	M4, normal / 1.8Nm
		Contacts / max. torque	M5, normal / 2Nm

Specifications

Short time overload	1,000W / 10 sec 0.4%
Humidity 56 days / 40°C / Steady state 95%	ΔR ±0.25%
Temperature -55 / +125 / 5 cycling cycles	ΔR ±0.20%
Shock 40g / 4,000 times	ΔR ±0.25%
Vibrations 2-500Hz / 10g	ΔR ±0.25%
Load life Pn 30 min. on / 1,000cyl 30 min. off	ΔR ±0.40%

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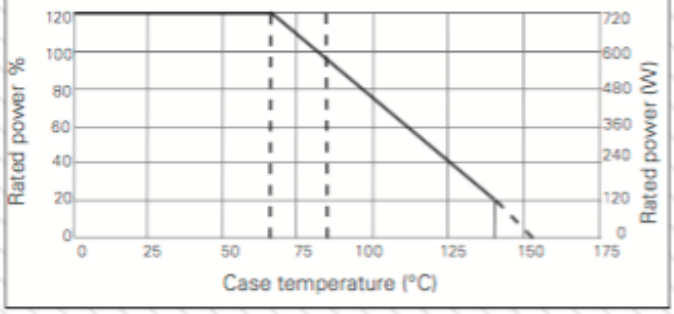
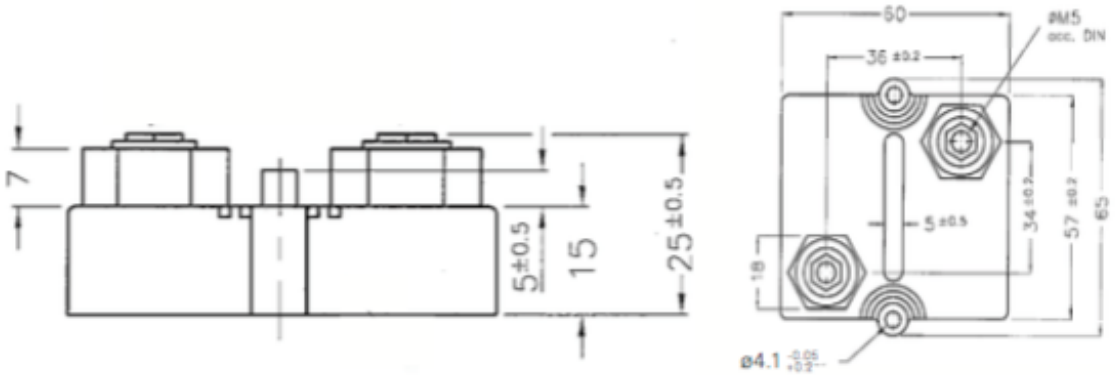
Derating Curve



Ordering Procedure

Standard resistor: Specify series, watts, ohmic value, tolerance code. e.g FPA600 10R J

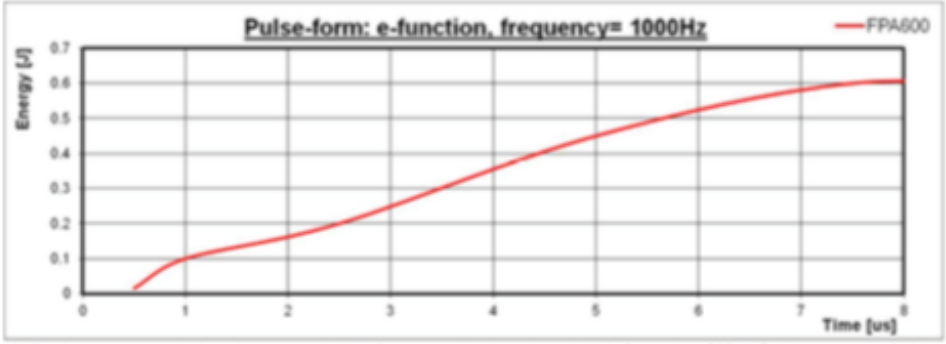
Dimensions (mm)



Other terminal dimensions available, contact ARCOL for more information

Pulse Rating

For pulse duration >7.5 µS and, maximum allowed voltage levels, the maximum peak energy of 0.6J is limited by the average power rating of 600W. For pulse duration times <7.5 µS it has not been possible to reliably establish maximum energy failure point, although it is known that the pulse capability is higher than the curve shown in the graph below.



Whilst these parts are designed to operate in high frequency circuits, where dv/dt is faster than 250V/µS, it is recommended that the resistor is tested under worst case application conditions to ensure that unknown attribute of the application waveform are completely accounted for.