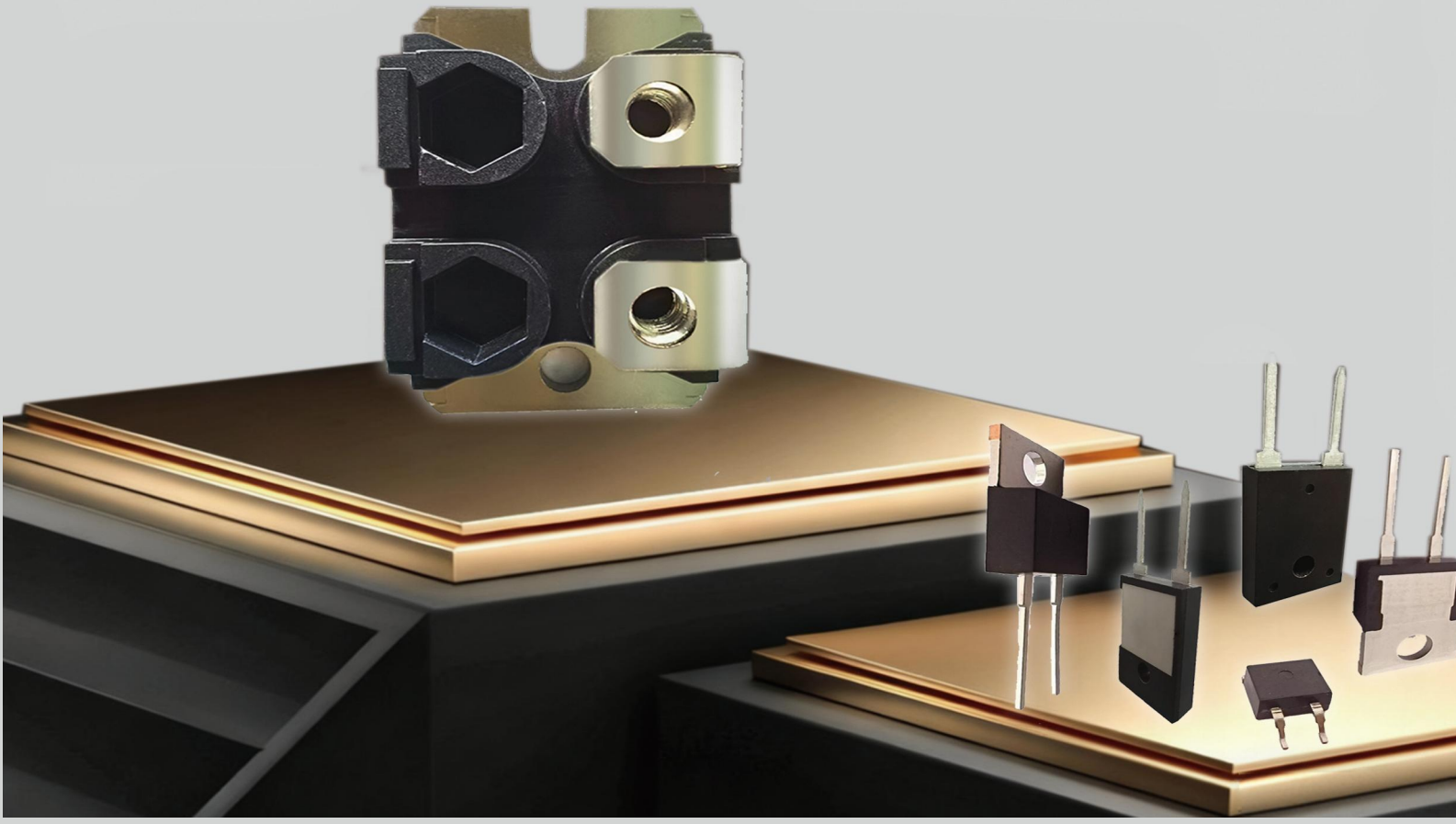
瑙德电子

Funde

厚积薄发，膜塑精工，阻动未来

ACCUMULATE STRENGTH FOR EXPLOSIVE GROWTH, MASTER PRECISION MOLDING, PAVE THE WAY FOR THE FUTURE.



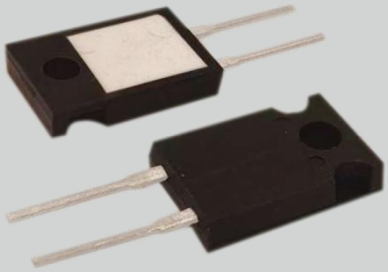
Yiwu Funde E-commerce Trading Firm is a company specializing in the R&D and sales of high-power thick-film resistors. We possess a professional R&D team comprising one PhD and several bachelor's degree holders, capable of providing tailored R&D services based on customer requirements. Through authorized manufacturing partnerships and years of development and refinement, we have grown into a leading domestic distributor of resistor components, particularly in the high-power thick-film resistor sector. Our product portfolio comprehensively covers all series from medium to high power ratings.

Our products feature high stability, precision, and reliability, finding extensive applications in new energy vehicles, wind power generation, rail transit, variable frequency drives, medical equipment, and electric drive/control systems. We maintain long-term, close partnerships with renowned domestic enterprises such as Siemens, State Grid, BYD, and CRRC.

We prioritize technological innovation and R&D investment to continuously enhance product competitiveness. Our R&D team closely monitors industry trends and maintains close collaboration with customers to drive technological advancement and innovation. Simultaneously, we strictly implement international quality management systems, having obtained ISO9001 certification to ensure high quality throughout product design, production, and sales processes.

We adhere to a quality-first, customer-centric philosophy, placing customer satisfaction at the core of our operations. We relentlessly strive to improve product quality and service excellence.

TO220 Package RTP30 Thick-Film Resistor

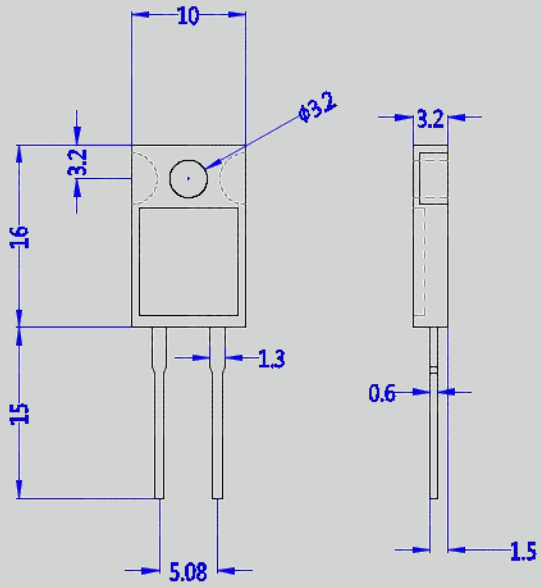


- The RTP30 thick-film non-inductive power resistor, also known as a TO220-packaged high-power resistor, utilizes the TO220 package form factor—a common through-hole package type for high-power transistors, medium-to-small-scale integrated circuits, and power resistors.
- The RTP30 resistor is rated at 30W. It is used in power supply input stages,low-energy pulse loads, RF power amplifier terminating resistors,voltage rectifiers,buffer circuits,UPS systems, and similar applications.

Technical Specifications

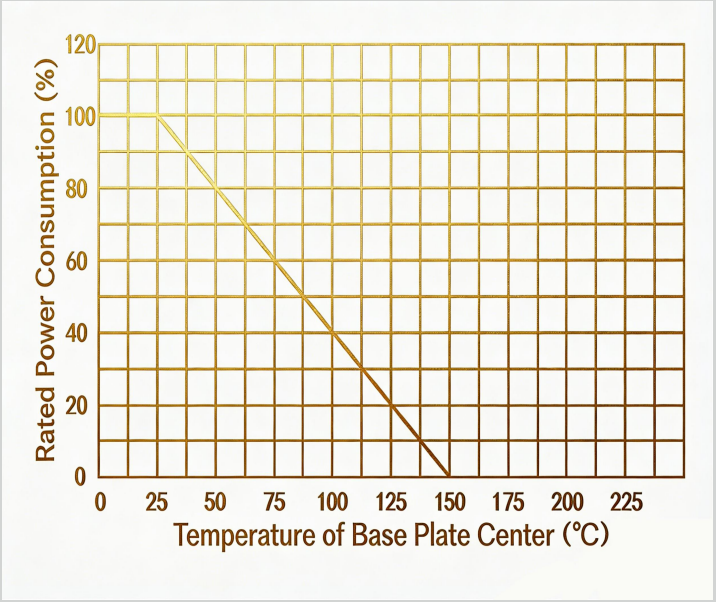
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
30W	⩾10GΩ	500VDC	Tin-plated copper wire	2000VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω— 1MΩ	-55℃— +170℃	±0.5% ±5%	±100 ppm/℃	M3/ 0.9mN

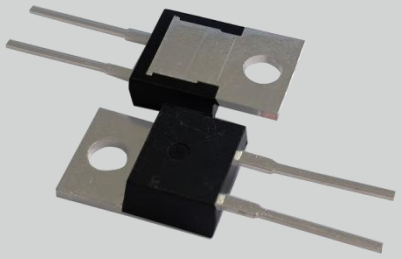


Performance

Test Item	Perf Req	Test Standard
Overload	ΔR≤±0.25%R	1.5P rated power not exceeding 1.5Umax, 5s
Lifetime	ΔR≤±1%R	2000h at rated power Steady-State Humidity and Heat
Steady-state humid heat	ΔR≤±0.25%R	MIL-Std-202,Method 103, Condition D
Thermal shock	ΔR≤±0.3%R	-65 to 155° C, 5 cycles
High-frequency vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D
Lead strength	ΔR≤±0.2%R	MIL-Std-202, Method 211, Condition A



TO220 Package RTP35 Thick-Film Resistor

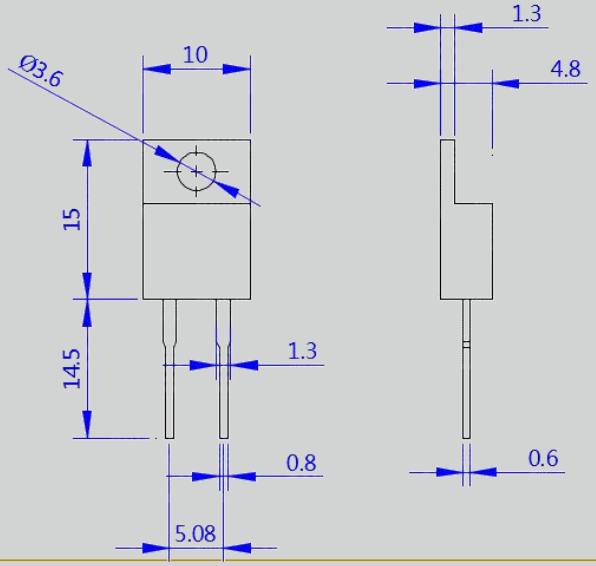


- The RTP35 thick-film non-inductive power resistor, also known as a TO220-packaged high-power resistor, utilizes the TO220 package form factor—a common through-hole package type for high-power transistors, medium-to-small-scale integrated circuits, and power resistors.
- The RTP35 resistor is rated at 35W and features a bottom-mounted heat sink flange design for superior thermal dissipation. It is typically designed for current sensing, energy absorption and dissipation, RC snubbers, high-speed switching, and high-frequency transmission circuits. It is also commonly used in voltage regulation, constant power loads, and low-energy pulse loads. Applications span industries such as industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switching power

Technical Specifications

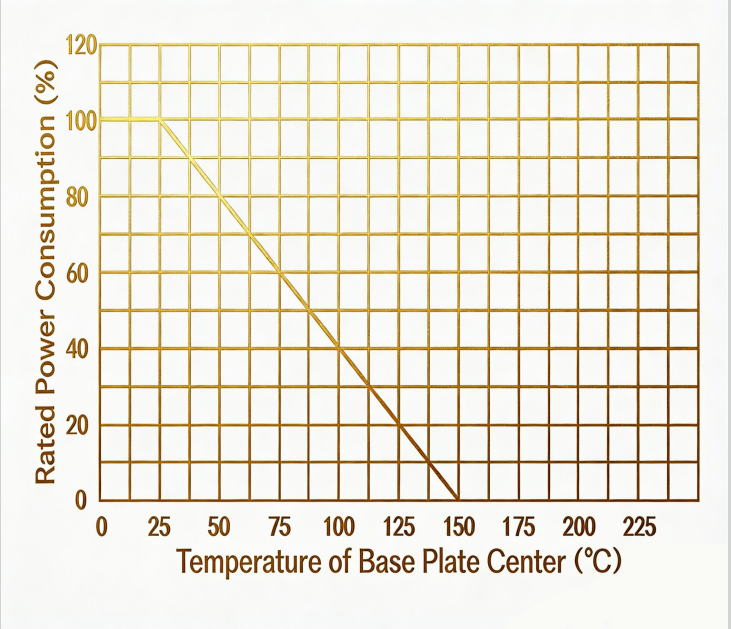
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
35W	⩾10GΩ	500VDC	Tin-plated copper wire	2000VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω—1MΩ	-55℃ +170℃	±0.5% ±5%	±100 ppm/℃	M3 maximum 0.9Nm

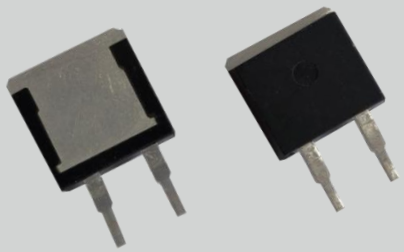


Performance

Test Item	Perf Req	Test Standard
Overload	ΔR≤±0.25%R	1.5P rated power not exceeding 1.5Umax, 5s
Lifetime	ΔR≤±1%R	2000h at rated power Steady-State Humidity and Heat
Steady-state humid heat	ΔR≤±0.25%R	MIL-Std-202,Method 103, Condition D
Thermal shock	ΔR≤±0.3%R	-65 to 155 ° C, 5 cycles
High-frequency vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D
Lead strength	ΔR≤±0.2%R	MIL-Std-202, Method 211, Condition A



TO263 Package RTP35T Thick-Film Resistor

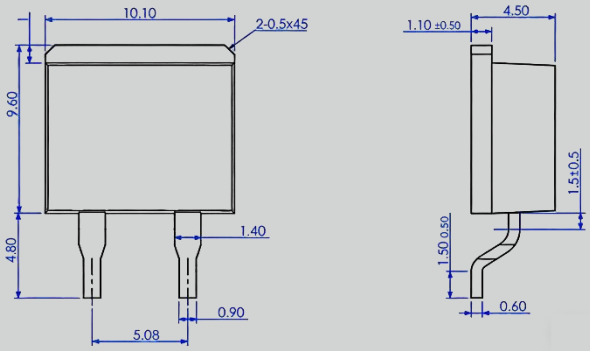


- The RTP35T thick-film non-inductive power resistor, also known as a TO263-packaged high-power resistor, utilizes the TO263 package form—a common SMT surface-mount package type for high-power transistors, medium-to-small-scale integrated circuits, and power resistors.
- The RTP35T resistor is rated at 35W and features a bottom-mounted heat sink flange design for superior thermal dissipation. It is typically designed for current sensing, energy absorption and dissipation, RC snubbers, high-speed switching, and high-frequency transmission circuits. It is also commonly used in voltage regulation, constant power loads, and low-energy pulse loads. Applications span industries such as industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switching power supplies.

Technical Specifications

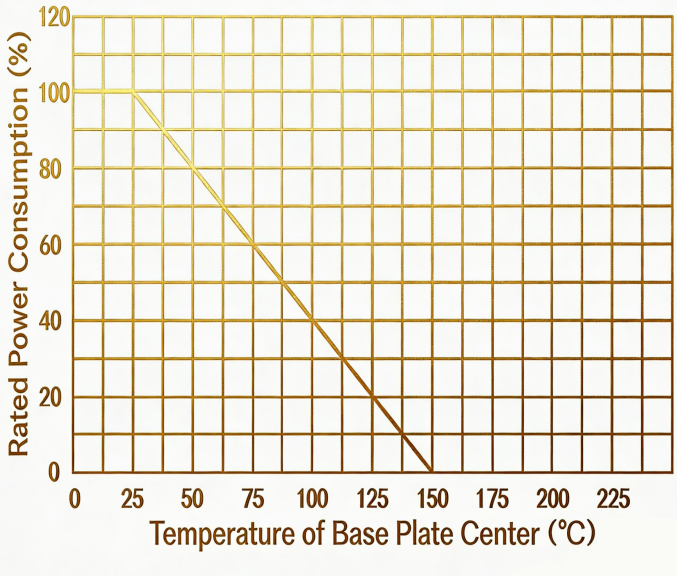
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
35W	⩾10GΩ	500VDC	Tin-plated copper wire	2000VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω—1MΩ	-55℃ +170℃	±0.5% ±5%	±100 ppm/℃	M3 maximum 0.9Nm

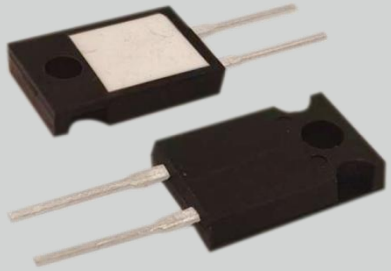


Performance

Test Item	Perf Req	Test Standard
Overload	ΔR≤±0.25%R	1.5P rated power not exceeding 1.5Umax, 5s
Lifetime	ΔR≤±1%R	2000h at rated power Steady-State Humidity and Heat
Steady-state humid heat	ΔR≤±0.25%R	MIL-Std-202,Method 103, Condition D
Thermal shock	ΔR≤±0.3%R	-65 to 155 ° C, 5 cycles
High-frequency vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D
Lead strength	ΔR≤±0.2%R	MIL-Std-202, Method 211, Condition A



TO200 Flannel Base Plate Flat RTP50

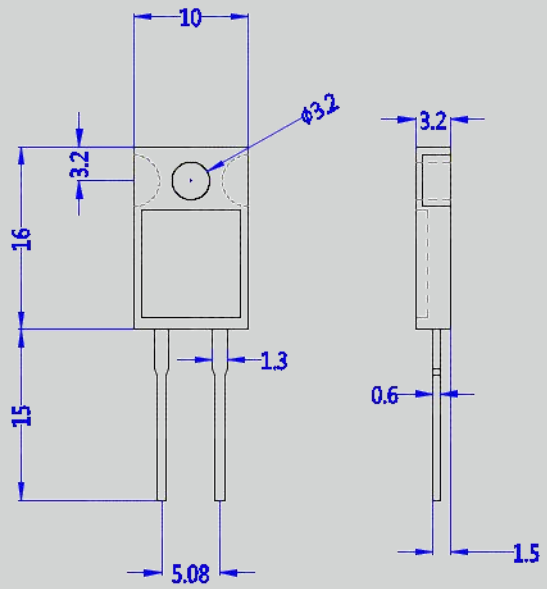


- The RTP50 thick-film non-inductive power resistor, also known as a TO220-packaged high-power resistor, utilizes the TO220 package—a common through-hole package form for high-power transistors, medium-to-small-scale integrated circuits, and power resistors.
- The RTP50 resistor is rated at 50W and features a bottom-mounted heat sink flange design for superior thermal dissipation. It is suitable for power supply input terminals, low-energy pulse loads, RF power amplifier terminating resistors, voltage rectifiers, buffer circuits, and UPS systems.

Technical Specifications

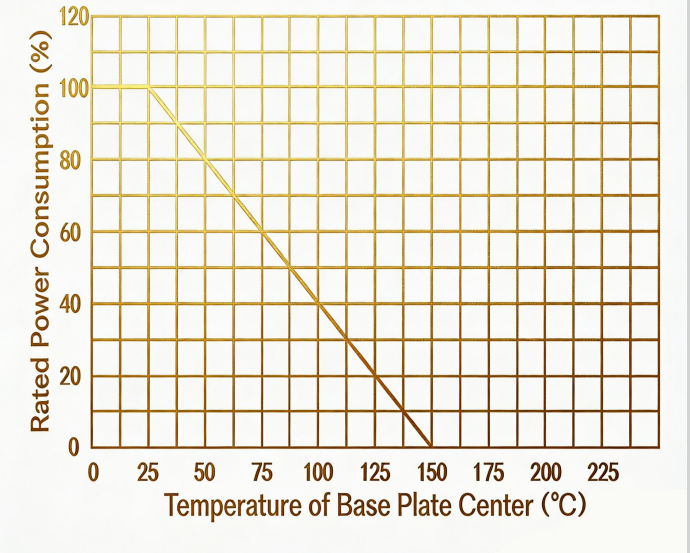
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
50W	⩾10GΩ	450VDC	Tin-plated copper wire	1500VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω	-55℃	±0.5%	25℃	M3 maximum 0.9Nm
1MΩ	+150℃	±5%	105℃	

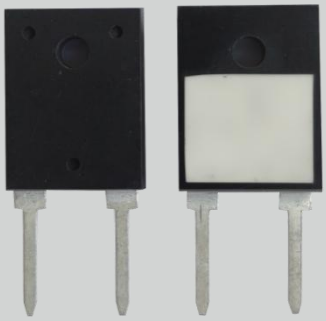


Performance

Test Item	Perf Req	Test Standard
Overload	ΔR≤±0.25%R	1.5P rated power not exceeding 1.5Umax, 5s
Lifetime	ΔR≤±1%R	2000h at rated power Steady-State Humidity and Heat
Steady-state humid heat	ΔR≤±0.25%R	MIL-Std-202,Method 103, Condition D
Thermal shock	ΔR≤±0.3%R	-65 to 155° C, 5 cycles
High-frequency vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D
Lead strength	ΔR≤±0.2%R	MIL-Std-202, Method 211, Condition A



T0247 Package RTP100 Thick Film Resistor

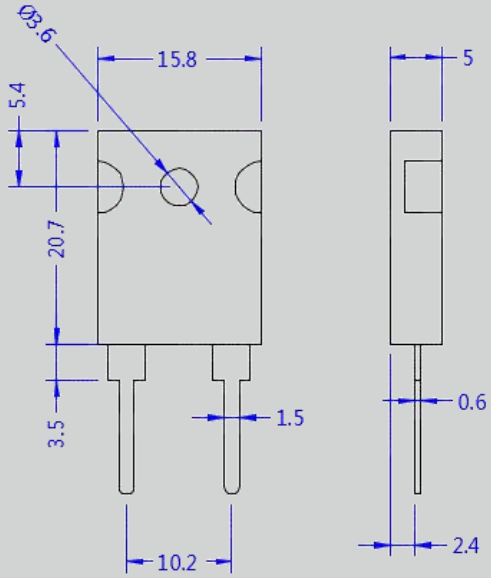


- The RTP100 thick-film non-inductive power resistor, also known as a TO247-packaged high-power resistor, utilizes the TO247 package—a common through-hole package form for high-power transistors, medium-to-small-scale integrated circuits, and power resistors
- The RTP100 resistor is rated at 100W and is used in power supply input stages, CRT power loads and discharge resistors, low-energy pulse loads, voltage rectifiers, buffer circuits, and UPS systems

Technical Specifications

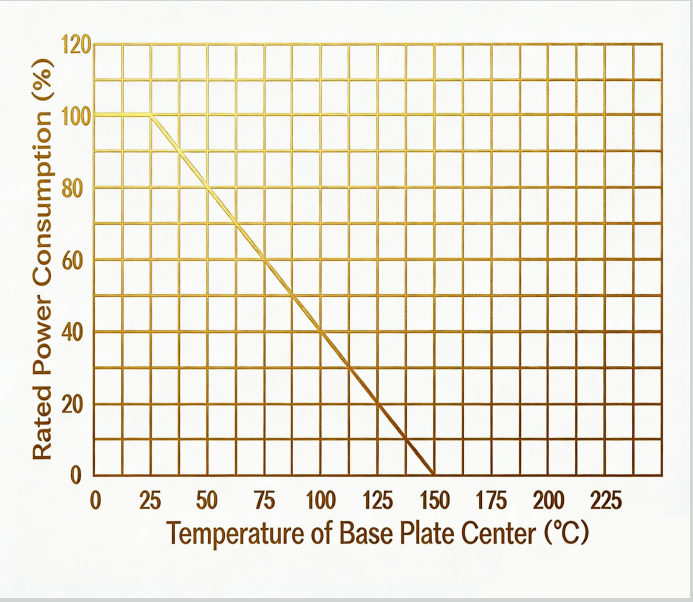
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
100W	⩾10GΩ	700VDC	Tin-plated copper wire	2000VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω	-55℃	±0.5%	±100	M3 maximum 0.9Nm
1MΩ	+170℃	±5%	Ppm/℃	



Performance

Test Item	Perf Req	Test Standard
Overload	ΔR≤±0.25%R	1.5P rated power not exceeding 1.5Umax, 5s
Lifetime	ΔR≤±1%R	2000h at rated power Steady-State Humidity and Heat
Steady-state humid heat	ΔR≤±0.25%R	MIL-Std-202,Method 103, Condition D
Thermal shock	ΔR≤±0.3%R	-65 to 155° C, 5 cycles
High-frequency vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D
Lead strength	ΔR≤±0.2%R	MIL-Std-202, Method 211, Condition A



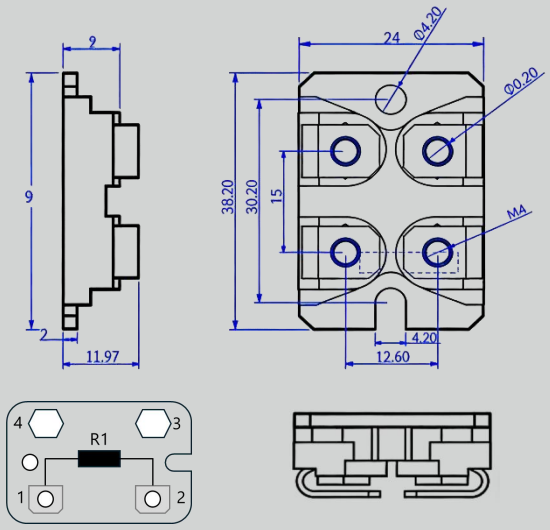
SOT227 Flanged Base RTP200 Thick Film Resistor

- The RTP200 thick-film non-inductive power resistor, also known as the SOT227-packaged high-power resistor, utilizes the SOT227 package—an internally insulated, four-terminal power semiconductor package. It employs SMD/SMT mounting and features standard threaded holes in the base for easy mounting on heat sinks
- The RTP200 resistor is rated at 200W and features a bottom-mounted heat sink flange design for excellent thermal dissipation. Typically designed for current sensing, energy absorption and dissipation, RC snubbers, high-speed switching, and high-frequency transmission circuits. Also commonly used in voltage regulation, constant power loads, and low-energy pulse loads. Applications span industries such as industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switch-mode power supplies in end products.

Technical Specifications

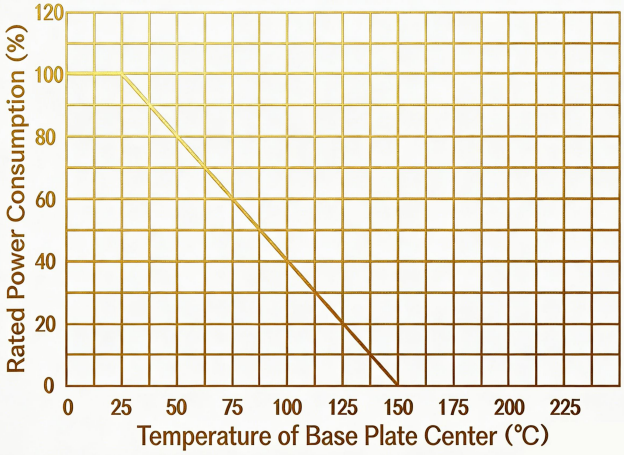
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
200W	⩾10GΩ	700VDC	Tin-plated copper wire	1500VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω	-55℃	±0.5%	±100	M4 screw 1.5Nm
1MΩ	+170℃	±5%	ppm/℃	

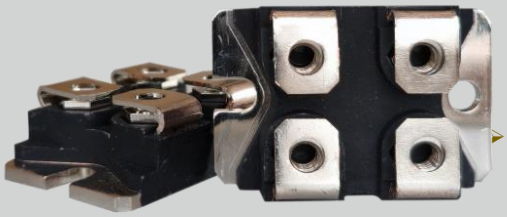


Performance

Test Item	Perf Req	Test Standard
Power Durability	ΔR≤±1R%	Rated power 1000h, baseplate temperature ≤ 85℃
Humidity Resistance	ΔR≤±0.25R%	MIL-Std-202, Method 106
Thermal Shock	ΔR≤±1R%	MIL-Std-202, Method 103, Condition D
Thermal Shock	ΔR≤±0.3R%	-65° C to 155° C, 5 cycles
High-Frequency Vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D



SOT227 Flanged Base Plate RTP200 Thick Film Dual Resistor

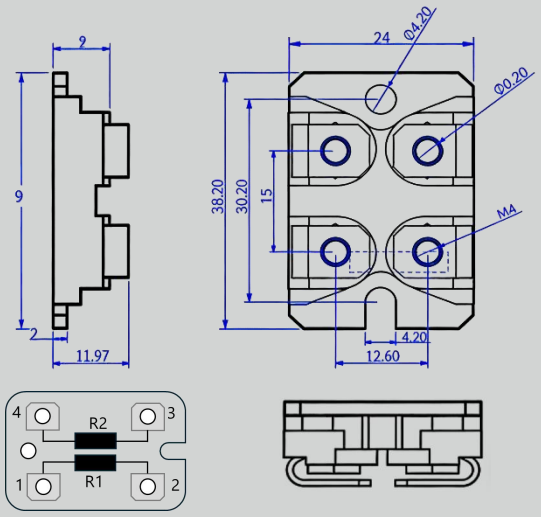


- The RTP200 thick-film non-inductive power resistor, also known as the SOT227-packaged high-power resistor, utilizes the SOT227 package—an internally insulated, four-terminal power semiconductor package. It employs SMD/SMT mounting and features standard threaded holes in the base for easy mounting on heat sinks.
- The RTP200 resistor is rated at 200W and features a bottom-mounted heat sink flange design for excellent thermal dissipation. Typically designed for current sensing, energy absorption and dissipation, RC snubbers, high-speed switching, and high-frequency transmission circuits. Also commonly used in voltage regulation, constant power loads, and low-energy pulse loads. Applications span industries such as industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switch-mode power supplies in end products.

Technical Specifications

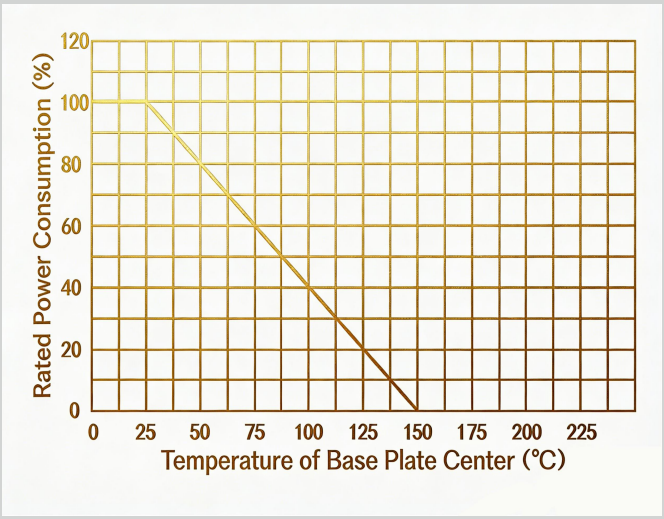
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
200W	⩾10GΩ	700VDC	Tin-plated copper wire	2000VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω	-55℃	±0.5%	±100	M4 screw 1.5Nm
1MΩ	+170℃	±5%	ppm/℃	



Performance

Test Item	Perf Req	Test Standard
Power Durability	ΔR≤±1R%	Rated power 1000h, baseplate temperature ≤ 85℃
Humidity Resistance	ΔR≤±0.25R%	MIL-Std-202, Method 106
Thermal Shock	ΔR≤±1R%	MIL-Std-202, Method 103, Condition D
Thermal Shock	ΔR≤±0.3R%	-65° C to 155° C, 5 cycles
High-Frequency Vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D



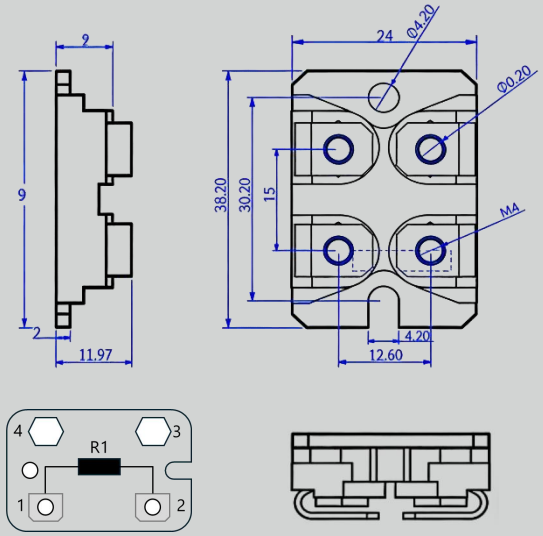
SOT227 Leaded Flanged Base RTP200 Thick-Film Resistor

- The RTP200 thick-film non-inductive power resistor, also known as the SOT227-packaged high-power resistor, utilizes the SOT227 package—an internally insulated, four-terminal power semiconductor package. It employs SMD/SMT mounting with pre-embedded resistor leads for easy mounting on heat sinks.
- The RTP200 resistor is rated at 200W and features a bottom-mounted heat sink flange design for excellent heat dissipation.Typically designed for current sensing, energy absorption and discharge, RC snubbers, high-speed switching, and high-frequency transmission circuits..Also commonly used in voltage regulation, constant power loads,and low-energy pulse loads. Applications span industries such as industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switch-mode power supplies in end products.

Technical Specifications

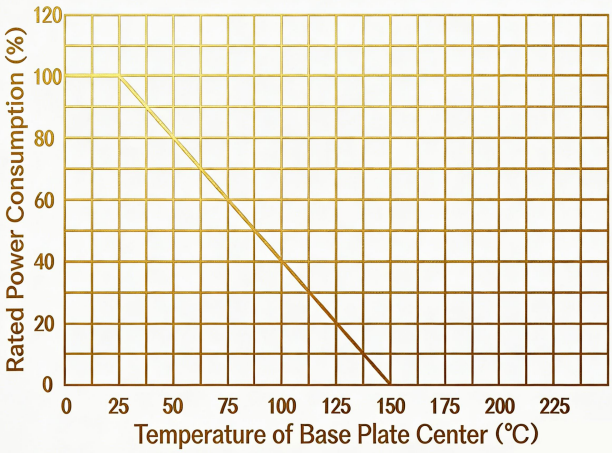
Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
200W	⩾10GΩ	700VDC	Tin-plated copper wire	2000VAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω	-55℃	±0.5%	±100	M4 screw 1.5Nm
1MΩ	+170℃	±5%	ppm/℃	

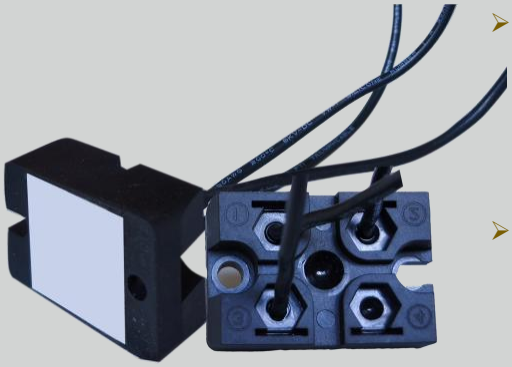


Performance

Test Item	Perf Req	Test Standard
Power Durability	ΔR≤±1R%	Rated power 1000h, baseplate temperature ≤ 85℃
Humidity Resistance	ΔR≤±0.25R%	MIL-Std-202, Method 106
Thermal Shock	ΔR≤±1R%	MIL-Std-202, Method 103, Condition D
Thermal Shock	ΔR≤±0.3R%	-65° C to 155° C, 5 cycles
High-Frequency Vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D



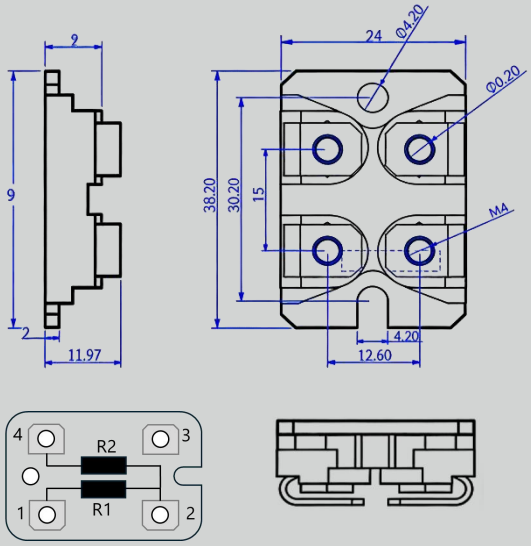
SOT227 Leaded RTP200 Thick Film Leaded Dual Resistor



- The RTP200 thick-film non-inductive power resistor, also known as the SOT227-packaged high-power resistor, utilizes the SOT227 package—an internally insulated, four-terminal power semiconductor package. It employs SMD/SMT mounting with pre-embedded resistor leads for easy mounting on heat sinks.
- The RTP200 resistor is rated at 200W and features a bottom-mounted heat sink flange design for excellent thermal dissipation. Typically designed for current sensing, energy absorption and dissipation, RC snubbing, high-speed switching, and high-frequency transmission circuits. Also commonly used in voltage regulation, constant power loads, and low-energy pulse loads.

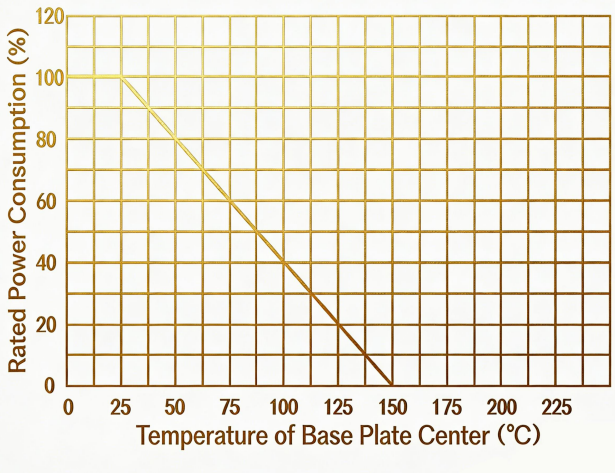
Technical Specifications

Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
200W	⩾10GΩ	700VDC	Tin-plated copper wire	2000VAC
Resistance range	**Operating Temperature**	**Optional precision**	**TC**	**Installation torque**
0.1Ω 1MΩ	-55℃ +170℃	±0.5% ±5%	±100 ppm/℃	M4 through hole 1.5Nm

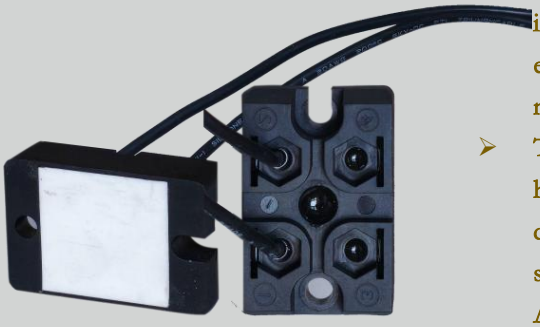


Performance

Test Item	Perf Req	Test Standard
Power Durability	ΔR≤±1R%	Rated power 1000h, baseplate temperature ≤ 85℃
Humidity Resistance	ΔR≤±0.25R%	MIL-Std-202, Method 106
Thermal Shock	ΔR≤±1R%	MIL-Std-202, Method 103, Condition D
Thermal Shock	ΔR≤±0.3R%	-65° C to 155° C, 5 cycles
High-Frequency Vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D



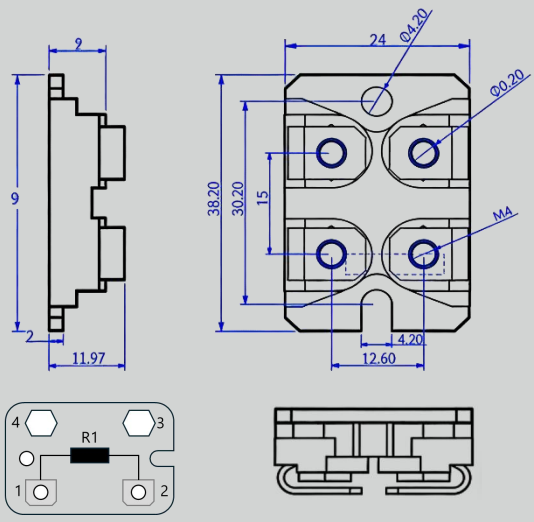
SOT227 Leaded RTP200 Thick Film Leaded Resistor



- The RTP200 thick-film non-inductive power resistor, also known as the SOT227-packaged high-power resistor, utilizes the SOT227 package—an internally insulated, four-terminal power semiconductor package. It employs SMD/SMT mounting with pre-embedded resistor leads for easy mounting on heat sinks.
- The RTP200 resistor is rated at 200W and features a bottom-mounted heat sink flange design for superior thermal dissipation. Typically designed for current sensing, energy absorption and dissipation, RC snubbers, high-speed switching, and high-frequency transmission circuits. Also commonly used in voltage regulation, constant power loads, and low-energy pulse loads. Applications span industries including industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switch-mode power supplies in end products.

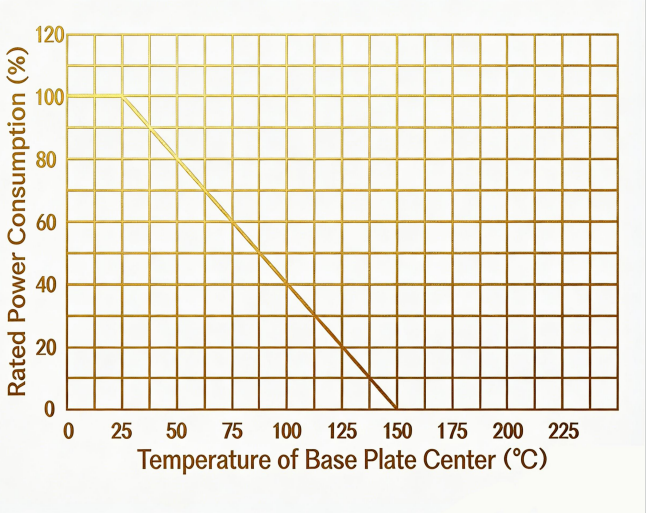
Technical Specifications

Rated Power	Insulation Resistance	Maximum voltage	Output terminal	Insulation Withstand Voltage
200W	⩾10GΩ	700VDC	Tin-plated copper wire	2900VAC
Resistance range	**Operating Temperature**	**Optional precision**	**TC**	**Installation torque**
0.1Ω 1MΩ	-55℃ +170℃	±0.5% ±5%	±100 ppm/℃	M4 through hole 1.5Nm



Performance

Test Item	Perf Req	Test Standard
Power Durability	ΔR≤±1R%	Rated power 1000h, baseplate temperature ≤ 85℃
Humidity Resistance	ΔR≤±0.25R%	MIL-Std-202, Method 106
Thermal Shock	ΔR≤±1R%	MIL-Std-202, Method 103, Condition D
Thermal Shock	ΔR≤±0.3R%	-65° C to 155° C, 5 cycles
High-Frequency Vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D



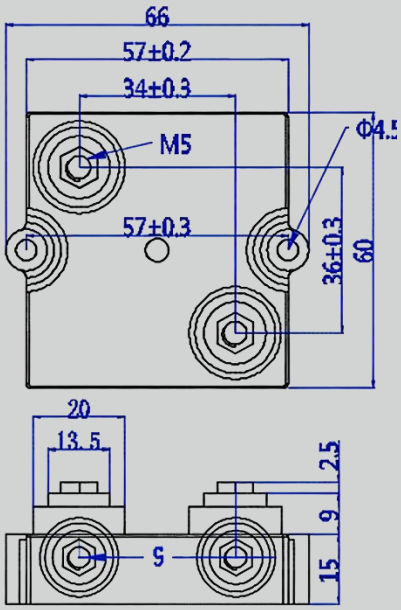
RTP800 Thick Film Wirewound Resistor

- The RTP800 thick-film non-inductive power resistor adopts an IGBT-style package, withstanding high-power operating conditions. Customizable power ratings range from 250W to 800W, and water-cooled custom designs are available.
- The RTP800 resistor is rated at 800W. It is typically designed for energy absorption and dissipation, RC snubbers, high-speed switching, and high-frequency transmission circuits. It is also commonly used in voltage regulation, constant power loads, and low-energy pulse loads. Applications span industries such as industrial lasers, welding equipment, test equipment, instrumentation, UPS systems, automotive, and switch-mode power supplies in end products.。

Technical Specifications

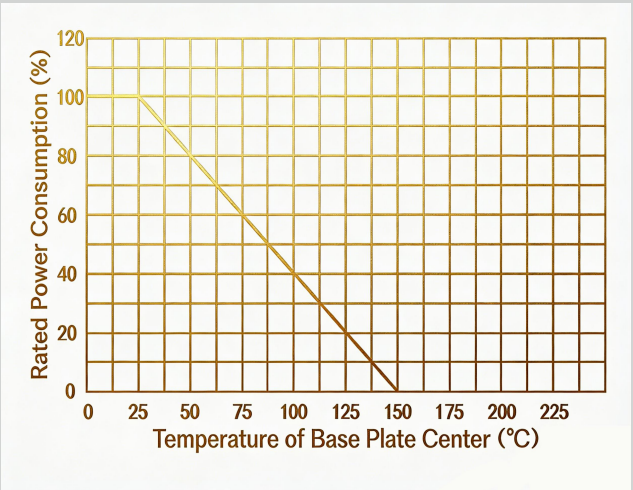
Rated Power	Insulation Resistance	Maximum voltage	Inductance	Insulation Withstand Voltage
800W	⩾10GΩ	5kVDC	＜60nH	12kVAC

Resistance range	Operating Temperature	Optional precision	TC	Installation torque
0.1Ω	-55℃	±0.5%	±150	M5 screw 2Nm
1MΩ	+150℃	±5%	ppm/℃	



Performance

Test Item	Perf Req	Test Standard
Power endurance	ΔR≤±0.4R%	Rated power: 1000 hours Base plate temperature: 85° C
Moisture resistance	ΔR≤±0.25R%	MIL-Std-202, Method 106
Temperature cycling	ΔR≤±0.2R%	MIL-Std-202, Method 103, Condition D
High-frequency vibration	ΔR≤±0.2%R	MIL-Std-202, Method 204, Condition D



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