

2000W - 5kV INSULATION  
 WATER COOLING,  
 CHASSIS MOUNTING,  
 NON-INDUCTIVE,  
 HIGH POWER RESISTORS

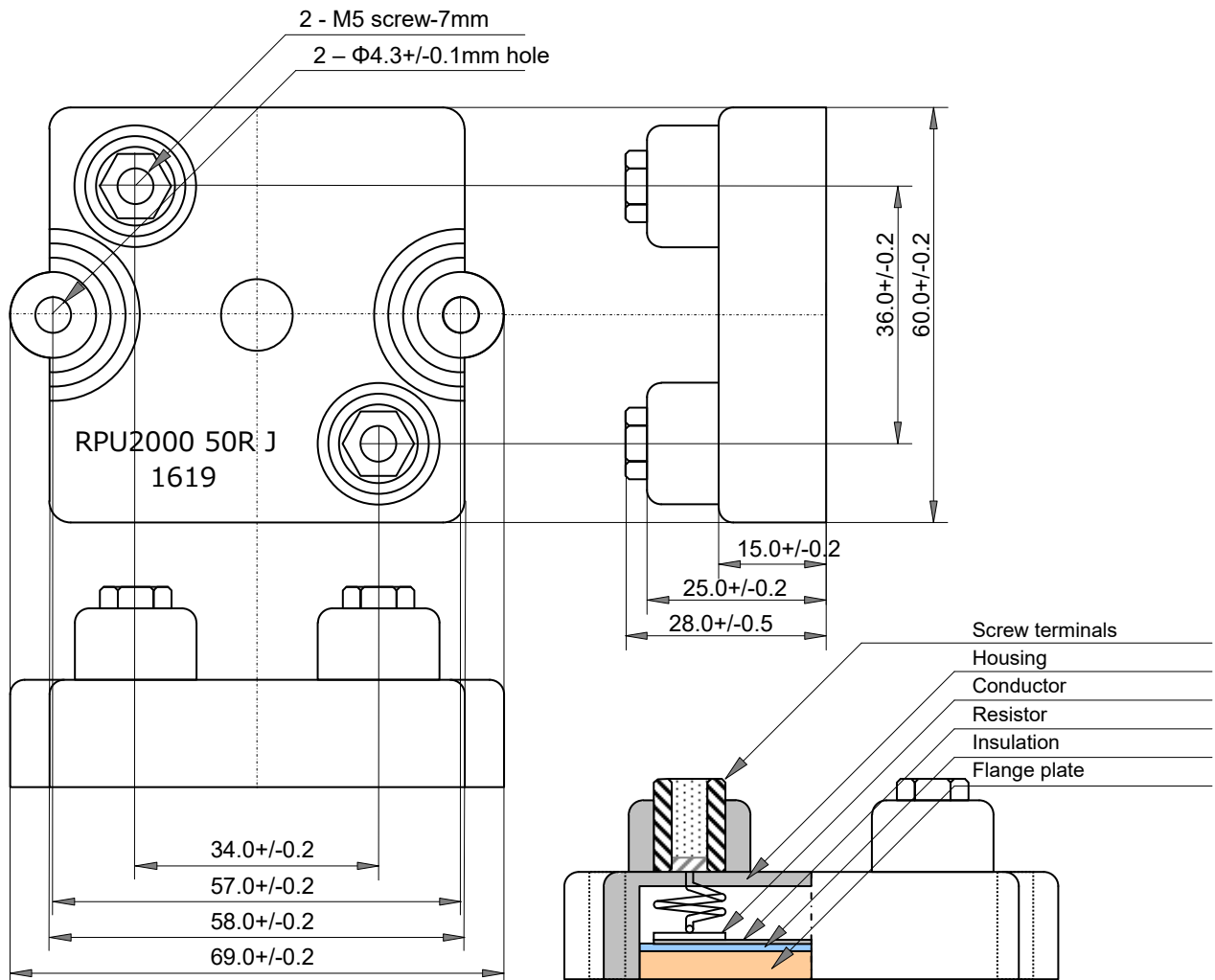
RPU2000



Features and Applications

Low profile flat type, 2000W (theoretical) high power resistor.  
 5kV insulation voltage and starting voltage of 5kV - 50kHz for partial discharge typical.  
 Higher density packing, vibration-proof, insulation withstand voltage and perfect heat dissipation possible.  
 Applications include harmonic filter resistors, snubber resistors, surge protection, breeder resistor, dummy load, dumping resistor for heavy duty power electronics, power supplies, pulse generators, high frequency amplifiers, theater audio equipment, etc.  
 This resistor can be applied 2kW when the flange temperature is fixed between -55 ° C and + 65 ° C. However, it is extremely difficult to maintain the flange temperature at + 65 ° C by water cooling, liquid cooling, etc.. Please be aware that the rated power 2000 W is theoretical value.

Dimensions and Structure (mm)



2000W RPU2000  
CHASSIS MOUNTING NON-INDUCTIVE HIGH POWER RESISTORS

Ordering Information

Type RPU2000	TCR	Resistance 101	Tolerance J	Code Z00	Note
RPU2000	---	101	J (5%)	Z00	RoHS, Box Package
		E24+ (*)			

(\*) Standard resistance value, E24+

1.0	1.1	1.2	1.3	1.5	1.6	1.8	2.0	2.2	2.4	2.5	2.7	3.0	3.3
3.6	3.9	4.0	4.3	4.7	5.0	5.1	5.6	6.2	6.8	7.5	8.0	8.2	9.1

Specifications and Performances

Items	Performances	Conditions
Rated Power	2000 W	At flange temperature -55°C to +65°C, theoretical
Short-time Overload	2400 W	5 seconds with heat sink
Heat Resistance	0.055 °C/W	From resistor to flange
Resistance Range	0.5 Ω to 1 MΩ	
Nominal Resistance	E24+	Additionally, 2.0 and 5.0.
TCR	+/-100 ppm/K (A)	At 1.0m-1Mohm, +/-200ppm/°C at <1.0ohm, for -55 to +155 °C
Tolerance	+/- 5% (J)	
Operation Temp.	-55 to +175 °C	At resistor element surface
Max. Applied Voltage	5000V or $E = \sqrt{P \cdot R}$	P shows rated power (W), R resistance value (ohm), E voltage (V)
Insulation Voltage	5,000 V - 50 Hz	60 seconds between terminals and flange. Leak current below 0.5mA
Partial Discharge Voltage	5,000 V - 50 kHz	Typical starting voltage, zero count
Capacitance	73 pF	Resistor terminal - flange
Inductance	108 nH	Resistor terminal - Terminal
Capacitance	25 pF	Resistor terminal - Terminal
Creeping distance	42 mm	
Air distance	14 mm	
Insulation Resistance	Over 10 G ohm	Between terminals and flange., DC 1000V
Vibration	$\Delta R$ +/-0.25 %	
Flammability	UL94V-0	For resistor body
Storage Temperature	-55 °C - 70 °C	
Torque, mounting screw	1.8 Nm	
Torque, Terminals	2.0Nm	
Weight	160 grams	

Reliability

Temperature Cycle	+/- (0.20% + 0.01Ω)	JIS C 60068-2-14
Load Life	+/- (0.40% + 0.01Ω)	1000 hours
High Temp / Humidity Storage	+/- (0.25% + 0.01Ω)	JIS C 60068-2-78
High Temperature Storage	+/- (0.40% + 0.01Ω)	JIS C 60068-2-2
Low Temp Storage	+/- (0.40% + 0.01Ω)	JIS C 60068-2-1
High Temp Load	+/- (0.40% + 0.01Ω)	70°C, DC0.1W, 1000 h, 90min ON / 30 off
High Temp / High Humidity Load	+/- (0.25% + 0.01Ω)	40°C, 95%RH, DC0.1W, 1000 h, 90min ON / 30 off
Short Time Overload	+/- (0.25% + 0.01Ω)	1.1 x Rated Power, 5 seconds
Vibration	+/- (0.25% + 0.01Ω)	IEC60068-2-6, displacement 0.75mm or acceleration 100m/sec <sup>2</sup> , 10Hz-54Hz sweep, 10 cycles X-Y-Z direction.

