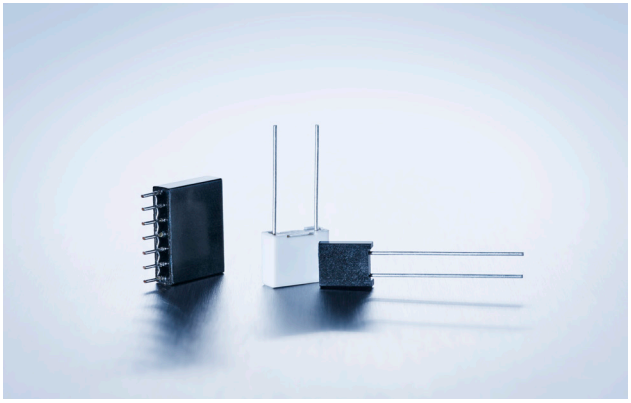
Series UPR / UPSC

Radial resistors, extremely precise

EBG RESISTORS

A Miba Group Company

The advantage of EBG´s metal film resistors is it´s particularly high precision in terms of ohmic value, TC and long-term stability.



Features

- High precision ohmic values
- Low temperature coefficient precision resistors
- Long-term stability
- Ohmic range 10 Ω to 5 MΩ
- Non-Inductive design
- ROHS compliant

Technical Specifications

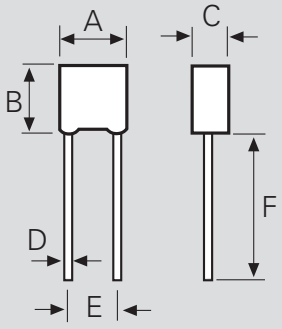
Resistance value	UPSC: 40 Ω ≤ 5 MΩ UPR: 10 Ω ≤ 5 MΩ
Resistance tolerance	±1 % standard tolerances to ± 0.01 % on special request
Temperature coefficient	±2 ppm/°C to ±25 ppm/°C
Long-term stability	better than ±0.05 % per 2,000 hours of operation
Std. operating temperature	-55°C to +85°C
TC temperature range	-10°C to +70°C (at +85°C ref. to +25°C)
Overload	6.25 times rated power for 5 seconds at voltage not to exceed 1.5 times maximum rated working voltage, ΔR less than 0.1 % + 0.01 Ω
Load life	2,000 hours at 125°C ΔR less than 0.5 % + 0.01 Ω
Moisture resistance	MIL-STD-202, method 106 ΔR less than 0.4 % + 0.01 Ω
Thermal shock	MIL-STD-202, method 107, Cond. B, ΔR less than 0.2 % + 0.01 Ω
Insulation resistance	> 10,000 MΩ at 250 V DC
Low temperature operation	ΔR less than 0.15 % + 0.01 Ω
Dielectric withstanding voltage	ΔR less than 0.15 % + 0.01 Ω
Vibration	ΔR less than 0.2 % + 0.01 Ω
Shock	ΔR less than 0.2 % + 0.01 Ω

Model no.	Temperature coefficient ppm/°C	Wattage +70°C	Max. working voltage	Dielect strength V DC
UPSC	± 2 to ± 25	0.20	300	500
UPR	± 2 to ± 25	0.20	250	400

Tests	Conditions	MIL-R-55182/9	Typical drifts
Power conditioning (108)	100 hours/rated power at +125°C 90'/30' cycle	-	± 0.02% combined test
Thermal shock (107)	5 cycles -65°C / +150°C	± 0.2 % + 0.01 Ω combined test	
Short time overload	6.25 times rated power / 5 sec.		
Low temperature storage and operation	1h stor. 45 min rated power at -65°C	± 0.15 % + 0.01 Ω	-
	24h stor. 45 min rated power at -65°C	-	+ 0.01 %
Terminal strength (211)	2lb pull test	± 0.2 % + 0.01 Ω	+ 0.01 %
Dielectric withstanding voltage (301)	300 V atmospheric 200 V / 100.000 ft.	± 0.15 % + 0.01 Ω	+ 0.01 %
Resist to soldering (210)	260°C / 5 sec.	± 0.1 % + 0.01 Ω	+ 0.01 %
Moisture resistance (106)	10 days	± 0.4 % + 0.01 Ω	+ 0.01 %
Shock	10 shocks 100g 6ms sawtooth	± 0.2 % + 0.01 Ω	+ 0.01 %
Vibration (204)	10 to 2000 Hz. 20g 8 hours	± 0.2 % + 0.01 Ω	+ 0.01 %
Load life (108)	2000 hours at rated power at +25°C, +85°C or +125°C	± 0.5 % + 0.01 Ω	+ 0.05 %
	10,000 hours at rated power at +125°C	± 2 % + 0.01 Ω	+ 0.2 %
Storage life	10,000 hours no load at room conditions	-	+ 0.005 %

Dimensions

Dimensions	Dimensions in millimeter (inches)	
	UPSC	**UPR**
A	7.50 ± .20 (.295 ± .008)	10.50 ± .30 (.413 ± .012)
B	8.50 ± .20 (.335 ± .008)	9.00 ± .30 (.354 ± .012)
C	2.50 ± .20 (.098 ± .008)	4.00 ± .30 (.157 ± .012)
D	0.63 ± .05 (.025 ± .002)	0.63 ± .05 (.025 ± .002)
E	3.81 ± .38 (.150 ± .015)	7.62 ± .38 (.300 ± .015)
F	25 ± 1 (.98 ± .04)	18 ± 5 (0.71 ± .196)



How to make an order

Model no._Ohmic Value_Tolerance-TC

For example:
UPR 120R 0.1% 2ppm or
UPSC 50R 0.1% 2ppm

The above spec. sheet features our standard products. For further options please contact our local EBG representative or contact us directly.