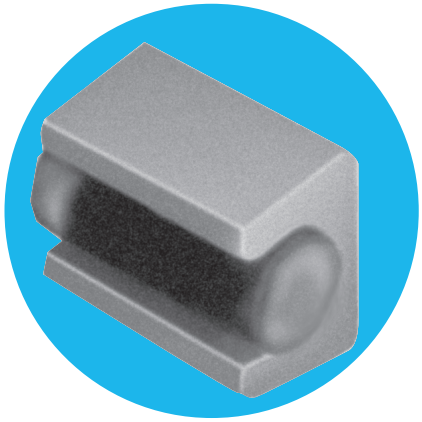
Resistors

Metal Glaze™ Power Pack Surface Mount High Power Density Ceramic Package



PPS-1 Series

- Low inductance
- 0.1Ω to 348KΩ range
- Superior surge handling capability
- 150°C maximum operating temperature
- 1 Watt performance - standard 2010 footprint
- Flameproof ceramic package provides superior temperature rise profile

NOT RECOMMENDED FOR NEW DESIGNS

All Pb-free parts comply with EU Directive 2011/65/EU (RoHS2)

Electrical Data

Size	Type	Maximum Power Rating	Working Voltage[1]	Maximum Voltage	Resistance Range (ohms)	Tolerance (±%)[2]	TCR (ppm/°C)[2]
2010	PPS-1	1W	350	700	0.1 to 0.99	1, 2, 5	100
					1.0 to 348K	1, 2, 5	50, 100

[1]Not to exceed ($\sqrt{P \times R}$). [2]Consult factory for tighter tolerances and TCRs.

Applications

The PPS-1 will dissipate 1 watt at 70°C on a 2010 footprint. The PPS-1 is recommended for applications where board real estate or component/board TCE mismatch is a major concern. It is also recommended in circuits where a standard 2010 resistor exhibits marginal or unacceptable performance due to high power density/surge handling demands.

Environmental Data

Characteristic	Maximum Change	Test Method
Thermal Shock	±(0.5% + 0.01 ohm)	MIL-R-55342E Par 4.7.3 (-65°C + 150°C, 5 cycles)
Low Temperature Operation	±(0.25% + 0.01 ohm)	MIL-R-55342E Par 4.7.4 (-65°C @ working voltage)
Short Time Overload	±(1.0% + 0.01 ohm)	MIL-R-55342E Par 4.7.5 (2.5 x (PxR)^{½}
High Temperature Exposure	±(0.5% + 0.01 ohm)	MIL-R-55342E Par 4.7.6 (+150°C for 100 hours)
Resistance to Bonding Exposure	±(0.25% + 0.01 ohm)	MIL-R-55342E Par 4.7.7 (Reflow soldered to board @ 260°C for 10 seconds)
Solderability	95% minimum coverage	MIL-STD-202, Method 208 (245°C for 5 seconds)
Moisture Resistance	±(0.5% + 0.01 ohm)	MIL-R-55342E Par 4.7.8 (10 cycles, total 240 hours)
Life Test	±(1.0% + 0.01 ohm)	MIL-R-55342E Par 4.7.10 (2000 hours @ 70°C intermittent)
Terminal Adhesion Strength	±(1% + 0.01 ohm)	1200 gram push from underside of mounted chip for 60 seconds
Resistance to Board Bending	±(1% + 0.01 ohm)	Chip mounted in center of 90mm long board, deflected 5mm so as to exert pull on chip contacts for 10 seconds

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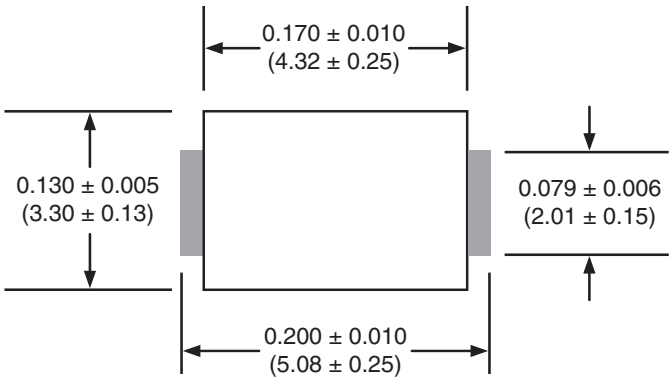
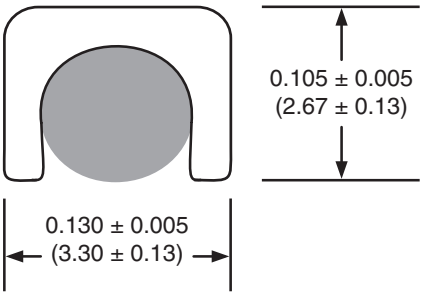
Physical Data (Inches and (mm))

Top View:



Side View:



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Ordering Procedure

This product has two valid part numbers:

European (Welwyn) Part Number: PPS1-100RFI (PPS1 with TCR ±100ppm/°C at 100 ohms ±1%, Pb-free)

P	P	S	1				-	1	0	0	R	F	I
1				2				3				4	5

1 Type	2 TCR (ppm/°C)	3 Value	4 Tolerance	5 Termination & Packing
PPS1	Omit for ±100	E24 = 3/4 characters E96 = 4/5 characters R = ohms K = kilohms	F = ±1%	I = Pb-free, Tape Pack
	-50 = ±50		G = ±2%	PB = SnPb, Tape Pack
			J = ±5%	500/reel

USA (IRC) Part Number: PPS11001000FLF (PPS1 with TCR ±100ppm/°C at 100 ohms ±1%, Pb-free)

P	P	S	1	1	0	0	1	0	0	0	F	L	F
1				2			3				4	5	

1 Type	2 TCR	3 Value	4 Tolerance	5 Termination & Packing
PPS1	50 = ±50	3 digits + multiplier	F = ±1%	Omit for SnPb
	100 = ±100	R = ohms for values <100 ohms	G = ±2%	LF = Pb-free
			J = ±5%	500/reel