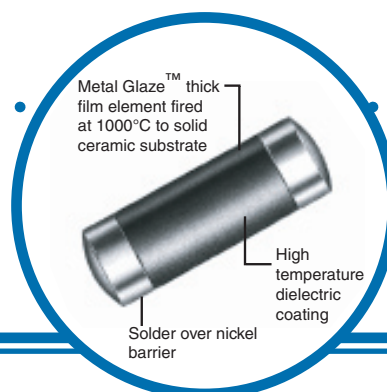


Metal Glaze™ Surface Mount Precision Power Chip



PPC Series

- Surge tolerant
- Up to 1000 volts
- Tight TCR - 25 ppm/°C
- Tolerance down to ±0.1%



Electrical Data

Size Code	Industry Footprint	IRC Type	Power Rating at 70°C (W)	Working Voltage	Resistance Range (ohms)	Tolerance (±%)	Qty / Reel (7")	Qty / Reel (13")
B	1206	PPC1/8	1/8 W	200	100 - 10K	0.1% (B) 0.25% (C) 0.5% (D)	2500	10000
D	2010	PPC1/2	1/2 W	300	100 - 10K		1500	5000
F	2512	PPC1	1 W	350	100 - 10K		N/A	5000
H	3610	PPC2	2W 1.33W	500	100 - 10K		N/A	1500

Environmental Data

Characteristics	Maximum Change	Test Method
Temperature Coefficient	As specified	MIL-R-55342E Par 4.7.9 (-55°C + 125°C)
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	±0.5% + 0.01 ohm	MIL-R-55342E Par 4.7.5 2.5 x $\sqrt{\quad}$ for 5 seconds
High Temperature Exposure	±0.5% + 0.01 ohm	MIL-R-55342E Par 4.7.6 (+150°C for 100 hours)
Resistance to Bonding	±0.25% + 0.01 ohm	MIL-R-55342E Par 4.7.7 (Reflow soldered to board at 260°C for 10 seconds)
Exposure	95% minimum coverage	MIL-STD-202, Method 208 (245°C for 5 seconds)
Solderability	±0.5% + 0.01 ohm	MIL-R-55342E Par 4.7.8 (10 cycles, total 240 hours)
Moisture Resistance	±0.5% + 0.01 ohm	MIL-R-55342E Par 4.7.10 (2000 hours at 70°C intermittent)
Life Test	±1% + 0.01 ohm	1200 gram push from underside of mounted chip for 60 seconds
Terminal Adhesion Strength	±1% + 0.01 ohm no mechanical damage	Chip mounted in center of 90mm long board, deflected 1mm so as to exert pull on chip contacts for 5 seconds

General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

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A subsidiary of
TT electronics plc

Metal Glaze™ Surface Mount Precision Power Chip



Physical Data

Size Code	Industry Footprint	Actual Size			
			Dimensions (Inches and (mm))		
			L	W	C
B	1206		0.128 ± 0.007 (3.25 ± 0.18)	0.057 ± 0.006 (1.45 ± 0.15)	0.020 ± 0.010 (0.51 ± 0.25)
D	2010		0.200 ± 0.010 (5.08 ± 0.25)	0.079 ± 0.006 (2.01 ± 0.15)	0.030 ± 0.010 (0.761 ± 0.25)
F	2512		0.251 ± 0.010 (6.38 ± 0.25)	0.079 ± 0.006 (2.01 ± 0.15)	0.040 ± 0.010 (1.02 ± 0.25)
H	3610		0.367 ± 0.010 (9.32 ± 0.25)	0.105 ± 0.006 (2.67 ± 0.15)	0.050 ± 0.010 (1.27 ± 0.25)

Recommended Solder Pad Dimensions (Reflow):

To ensure excellent solderability performance, IRC recommends the following pad design. This design will provide a large repeatable solder fillet to the PPC resistor on reflow processes and will provide maximum heat transfer to the PC board in high power applications. By placing the PPC on the solder paste while the paste is in the "tacky" state, the PPC will be held in position until solder reflow begins. The pad design then uses the surface tension of the molten solder to pull the component to the center of the solder pad. The placement of a via rising above the board level directly beneath the PPC is not recommended.

Recommended Solder Pad Dimensions (Reflow):

Size Code	Industry Footprint						
		Dimensions (Inches and mm))					
		A	B	C	D	E	F
B	1206	0.076 (1.93)	0.093 (2.36)	0.058 (1.47)	0.098 (2.49)	0.032 (0.81)	0.211 (5.36)
D	2010	0.111 (2.82)	0.126 (3.20)	0.096 (2.44)	0.152 (3.86)	0.040 (1.02)	0.318 (8.08)
F	2512	0.121 (3.07)	0.126 (3.20)	0.127 (3.23)	0.183 (4.65)	0.040 (1.02)	0.369 (9.37)
H	3610	0.170 (4.32)	0.160 (4.06)	0.213 (5.41)	0.273 (6.93)	0.044 (1.12)	0.553 (14.05)

Metal Glaze™ Surface Mount Precision Power Chip

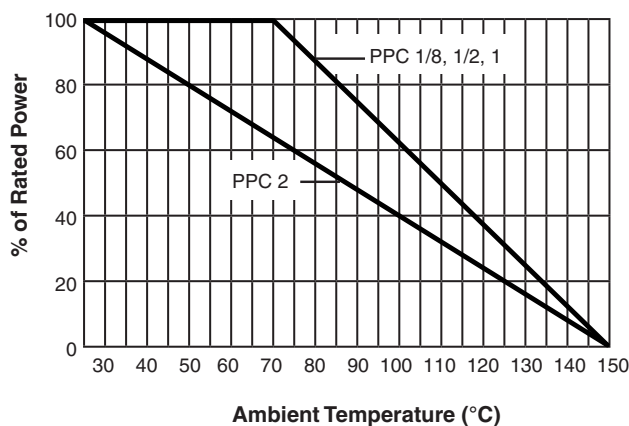


Standard Reel Packaging Per EIA-481

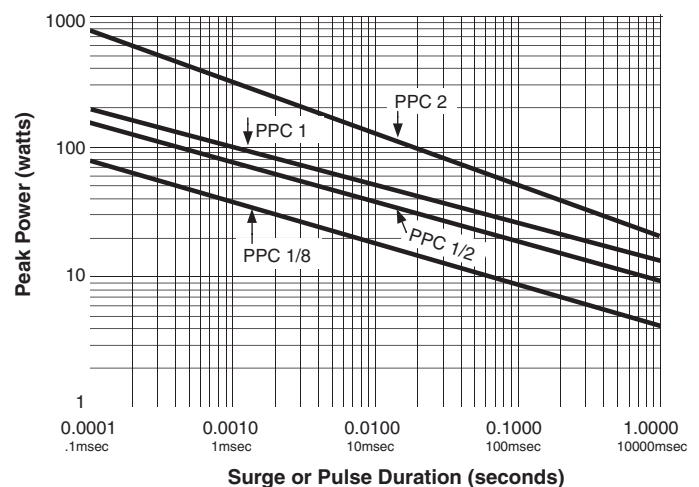
Size Code	Industry Footprint	Reel Diameter*	Quantity Per Reel	Carrier Tape Width	Component Pitch
B	1206	7", 13"	2,500 max., 10,000 max.	8mm	4mm
D	2010	7", 13"	1,500 max., 5,000 max.	12mm	4mm
F	2512	13"	5,000 max.	12mm	4mm
H	3610	7"	1,500 max.	24mm	4mm

* The 13" reel is considered standard and will be supplied unless otherwise specified.

Power Derating Curve



Repetitive Surge Curve



Ordering Data

Specify type, resistance, tolerance, RoHS-Compliance and packaging.
This example is for a Surface Mount Precision Power Chip.

Sample Part No. **PPC1 25** **1001** **F** **LF** **13**

IRC Type
PPC 1/8, 1/2, 1, 2

Resistance Value (EIA 4-digit code).....
(≥100Ω - First 3 significant digits plus 4th digit multiplier)
Example: 100Ω = 1000; 1000Ω = 1001
(>100Ω - "R" is used to designate decimal)
Example: 10Ω = 10R0; 0.25Ω = R250

Tolerance (EIA format)
B = ±0.1%, C = ±0.25%, D = ±0.5%

RoHS Indicator
LF indicates RoHS compliance
Blank designates 60% Sn / 40% Pb Solder

Packaging
(BLK = Bulk, 7 = 7" Reel, 13 = 13" Reel)

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