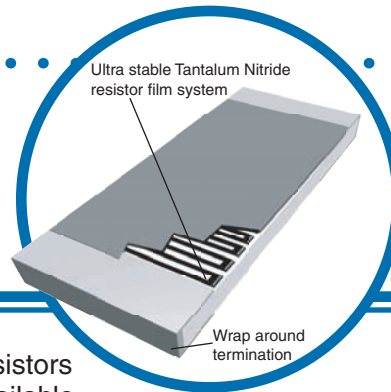


Gold Terminations Precision Thin Film Chip Resistors



PFC Gold Series

- Wire, ribbon, or epoxy bondable gold plated terminations
- Available in 0402, 0603, 0805, 1206, 1505, 2010 and 2512 chip sizes
- Tested for COTS applications
- Absolute TCR to $\pm 10\text{ppm}/^\circ\text{C}$
- Mil screening available



IRC now delivers the same high performance TaNFilm® chip resistors with wire, ribbon, and epoxy bondable gold plated terminations. Available in industry standard chip sizes ranging from 0402 to 2512, the PFC-Gold series provide the performance and precision necessary in a bonded circuit environment.

Using the same manufacturing line as the PFC Military Series, IRC's PFC-Gold chip resistors maintain the same superior environmental performance. Specially selected materials and processes insure initial precision is maintained in the harshest operating environment. For your bondable, precision chip resistor needs, specify IRC's PFC-Gold series resistors.

Electrical Data

Model	Power Rating (70°C)	Max Voltage Rating ($\leq \sqrt{P \times R}$)	Temperature Range	ESD Sensitivity	Noise	Termination	Substrate
W0402	50mW	75V	-65°C to +150°C	2KV to 4KV (HBM)	<-25dB	20KÅ minimum plated gold	99.5% Alumina
W0603	100mW	75V					
W0805	250mW	100V					
W1206	333mW	200V					
W1505	350mW	100V					
W2010	800mW	175V					
W2512	1.0W	200V					

Environmental Data

Environmental Test MIL-PRF-55342	Maximum ΔR per Characteristic E	Performance	
		Typical	Maximum
Thermal Shock	$\pm 0.10\%$	$\pm 0.02\%$	$\pm 0.10\%$
Low Temperature Operation	$\pm 0.10\%$	$\pm 0.01\%$	$\pm 0.05\%$
Short Time Overload	$\pm 0.10\%$	$\pm 0.01\%$	$\pm 0.05\%$
High Temperature Exposure	$\pm 0.10\%$	$\pm 0.03\%$	$\pm 0.10\%$
Effects of Solder	$\pm 0.20\%$	$\pm 0.01\%$	$\pm 0.10\%$
Moisture Resistance	$\pm 0.20\%$	$\pm 0.03\%$	$\pm 0.10\%$
Life	$\pm 0.50\%$	$\pm 0.03\%$	$\pm 0.10\%$

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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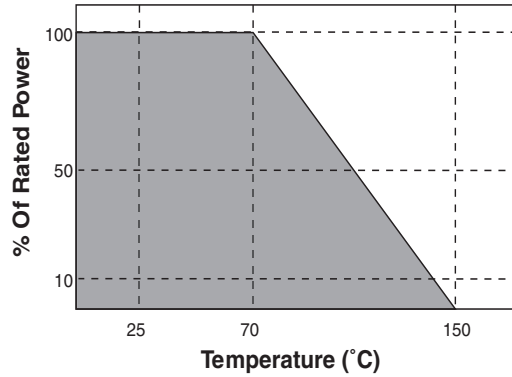
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PFC-Gold Series Issue January 2009 Sheet 1 of 4

Gold Terminations Precision Thin Film Chip Resistors



Power Derating Curve



Manufacturing Capabilities Data (Commercial Product Only)

W0402	±5%, ±2%, ±1%, ±0.5%, ±0.1%							Absolute Tolerance	
	50Ω						30K	Resistance Range	
	±25, ±50 and ±100ppm/°C							Absolute TCR	
W0603	±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%, ±0.02%							Resistance Range	
	±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%								
	±5%, ±2%, ±1%, ±0.5%, ±0.1%								
W0805	5Ω	10Ω	50Ω	100Ω	200Ω	50KΩ	75KΩ	100KΩ	Resistance Range
W1206	5Ω	10Ω	50Ω	100Ω	200Ω	100KΩ	180KΩ	267KΩ	
						400KΩ	650KΩ	1.0MΩ	
	±50 or ±100 ppm/°C							Absolute TCR	
	±25 ppm/°C								
	±15 ppm/°C								
	±10 ppm/°C								
W1505	±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%, ±0.02%							Resistance Range	
	±5%, ±2%, ±1%, ±0.5%, ±0.1%								
	±5%, ±2%, ±1%, ±0.5%								
W2010	5Ω	10Ω	50Ω				400KΩ	650KΩ	1.0MΩ
W2512	5Ω	10Ω	50Ω				400KΩ	650KΩ	1.0MΩ
	±50 or ±100 ppm/°C							Absolute TCR	
	±25 ppm/°C								

Gold Terminations Precision Thin Film Chip Resistors



Manufacturing Capabilities Data (MIL Screened Only)

W0402	50Ω	30K	±5%, ±2%, ±1%, ±0.5%, ±0.1%	Absolute Tolerance
			Resistance Range	
			±25, ±50 and ±100ppm/°C	Absolute TCR

W0603 W0805 W1206	5Ω	10Ω	50Ω	100Ω	50KΩ	59KΩ	±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%, ±0.02%	Resistance Range
							±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%	
							±5%, ±2%, ±1%, ±0.5%, ±0.1%	
							±5%, ±2%, ±1%, ±0.5%, ±0.1%	
							±50 or ±100 ppm/°C	Absolute TCR
							±25 ppm/°C	
							±15 ppm/°C	
							±10 ppm/°C	
							±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%, ±0.02%	Resistance Range
							±5%, ±2%, ±1%, ±0.5%, ±0.1%	
							±5%, ±2%, ±1%, ±0.5%	
							±50 or ±100 ppm/°C	
							±25 ppm/°C	Absolute TCR

W1505 W2010 W2512	5Ω	10Ω	50Ω	125KΩ	400KΩ	400KΩ	±5%, ±2%, ±1%, ±0.5%, ±0.1%, ±0.05%, ±0.02%	Resistance Range
							±5%, ±2%, ±1%, ±0.5%, ±0.1%	
							±5%, ±2%, ±1%, ±0.5%	
							±50 or ±100 ppm/°C	
							±25 ppm/°C	Absolute TCR

Gold Terminations Precision Thin Film Chip Resistors



Physical Data

	L	W	H	a	b
W0402	0.040" ±0.002	0.021" ±0.002	0.012" ±0.003	0.008" ±0.002	0.010" ±0.002
W0603	0.063" ±0.004	0.031" ±0.004	0.020" ±0.004	0.012" ±0.005	0.015" ±0.005
W0805	0.081" ±0.005	0.050" ±0.005	0.020" ±0.006	0.015" ±0.008	0.016" ±0.008
W1206	0.126" ±0.006	0.063" ±0.005	0.024" ±0.004	0.025" ±0.010	0.025" ±0.010
W1505	0.155" ±0.007	0.050" ±0.005	0.024" ±0.004	0.020" ±0.010	0.020" ±0.010
W2010	0.203" ±0.007	0.103" ±0.005	0.024" ±0.004	0.020" ±0.008	0.020" ±0.008
W2512	0.255" ±0.007	0.124" ±0.005	0.024" ±0.004	0.020" ±0.008	0.020" ±0.008

Mil Screened Precision Chip Resistors

IRC's PFC chip resistors are available with Mil screening. These chips are manufactured on the same production line as our Mil-qualified chip resistors and screened in accordance with MIL-PRF-55342. These chips are identified with IRC's ordering information and not with Mil marking.

Commercial Ordering Data

Prefix **PFC** - **W1206** **RJ** - **01** - **1001** - **B**

Model
W0402; W0603; W0805; W1206;
W1505; W2010; W2512

Termination
RJ = Gold plated

TCR Code
01 = ±100ppm/°C; 02 = ±50ppm/°C; 03 = ±25ppm/°C;
11 = ±15ppm/°C; 12 = ±10ppm/°C

Resistance Code
4-Digit resistance code.
Ex: 10R0 = 10Ω; 1000 = 100Ω;
1001 = 1000Ω; 1002 = 10KΩ

Tolerance Code
J = ±5%; G = ±2%; F = ±1%; D = ±0.5%;
B = ±0.1%; A = ±0.05%; Q = ±0.02%

For additional information or to discuss your specific requirements, please contact our Applications Team using the contact details below.

Mil Screened Ordering Data*

Prefix **PFC** - **W1206** **RJ** - **04** - **1001** - **B**

Model
W0402; W0603; W0805; W1206;
W1505; W2010; W2512

Termination
RJ = Gold plated

Mil-Screened TCR Code
04 = ±300ppm/°C; 05 = ±100ppm/°C; 06 = ±50ppm/°C;
07 = ±25ppm/°C; 14 = ±20ppm/°C; 15 = ±15ppm/°C;
16 = ±10ppm/°C

Resistance Code
4-Digit resistance code.
Ex: 10R0 = 10Ω; 1000 = 100Ω;
1001 = 1000Ω; 1002 = 10KΩ

Tolerance Code
J = ±5%; G = ±2%; F = ±1%; D = ±0.5%;
B = ±0.1%; A = ±0.05%; Q = ±0.02%

*Please refer to our PFC Military datasheet to order parts qualified to MIL-PRF-55342.