

Precision Thin Film Chip Resistors



Manufacturing Capabilities Data

	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%, \pm 0.1\%$		Tolerance
W0402	50 Ω	30K Ω	Resistance Range
	$\pm 25, \pm 50$ or ± 100 ppm/ $^{\circ}$ C		TCR

	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%, \pm 0.1\%, \pm 0.05\%, \pm 0.02\%$								
	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%, \pm 0.1\%, \pm 0.05\%$								Tolerance
	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%, \pm 0.1\%$								
W0603	5 Ω	10 Ω	50 Ω	100 Ω	200 Ω	50K Ω	75K Ω	100K Ω	Resistance Range
W0805	5 Ω	10 Ω	50 Ω	100 Ω	200 Ω	100K Ω	180K Ω	267K Ω	
W1206	5 Ω	10 Ω	50 Ω	100 Ω	200 Ω	400K Ω	650K Ω	1.0M Ω	
	± 50 or ± 100 ppm/ $^{\circ}$ C								TCR
	± 25 ppm/ $^{\circ}$ C								
	± 15 ppm/ $^{\circ}$ C								
	± 10 ppm/ $^{\circ}$ C								

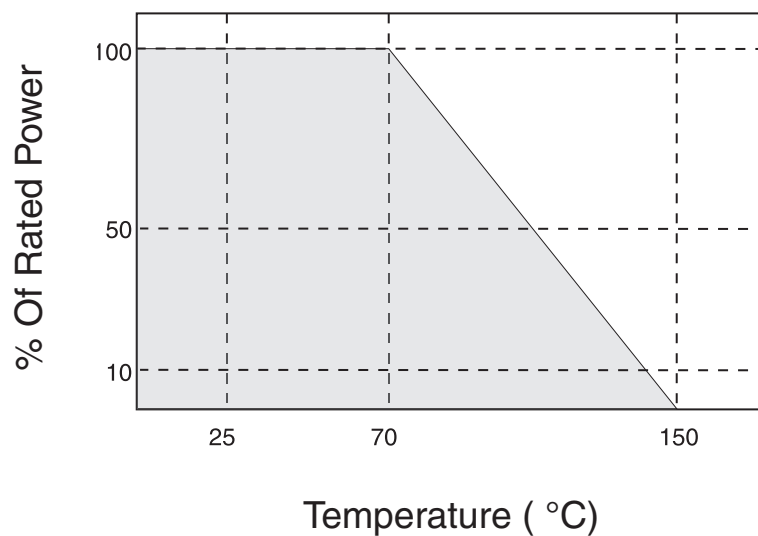
	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%, \pm 0.1\%, \pm 0.05\%, \pm 0.02\%$								
	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%, \pm 0.1\%$							Tolerance	
	$\pm 5\%, \pm 2\%, \pm 1\%, \pm 0.5\%$								
W1505	5 Ω	10 Ω	50 Ω			400K Ω	650K Ω	1.0M Ω	Resistance Range
W2010	5 Ω	10 Ω	50 Ω			400K Ω	650K Ω	1.0M Ω	
W2512	5 Ω	10 Ω	50 Ω			400K Ω	650K Ω	1.0M Ω	
	± 50 or ± 100 ppm/ $^{\circ}$ C							TCR	
	± 25 ppm/ $^{\circ}$ C								

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Environmental Data

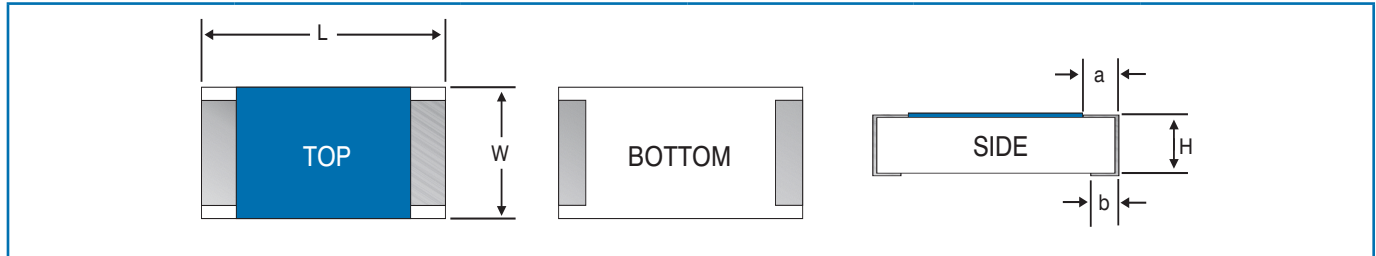
Environmental Test MIL-PRF-55342	Maximum ΔR per Characteristic E	Performance	
		Typical	Maximum
Thermal Shock	$\pm 0.10\%$	$\pm 0.02\%$	$\pm 0.10\%$
Low Temperature Operation	$\pm 0.10\%$	$\pm 0.01\%$	$\pm 0.05\%$
Short Time Overload	$\pm 0.10\%$	$\pm 0.01\%$	$\pm 0.05\%$
High Temperature Exposure	$\pm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

Power Derating Curve



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Physical Data



Model	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 R - 01 - 1001 - B

Model
W0402; 0603; W0805; W1206
W1505; W2010; W2512

Termination
R = 60/40 Sn/Pb plated solder
LF = 100% tin plated (Pb-free)

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 R - 04 - 1001 - B

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

Termination
R = 60/40 Sn/Pb plated solder

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 MIL-Chip Series datasheet to order parts qualified to MIL-PRF-55342.