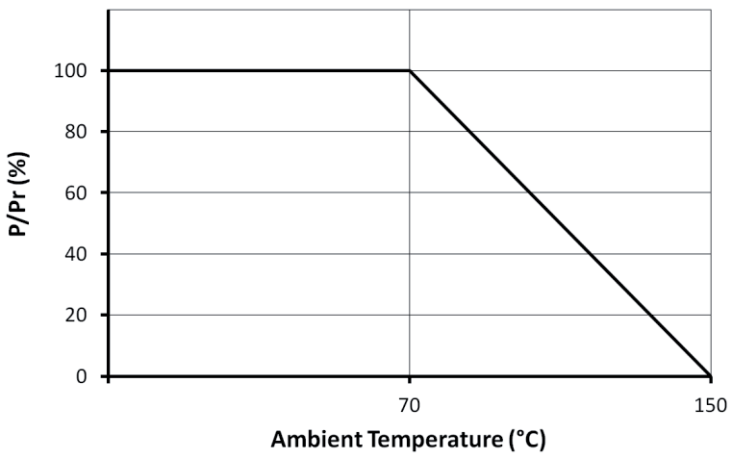
# Manufacturing Capabilities Data

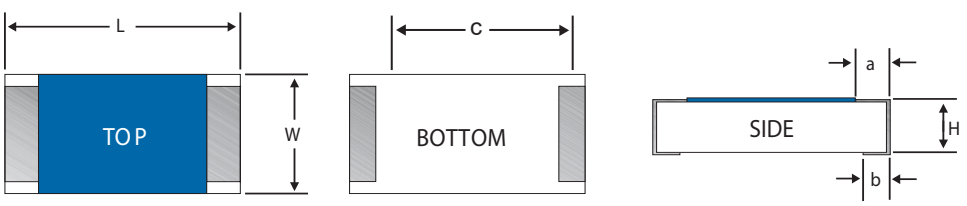
| TCR ppm/°C | Tolerance % | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | W0402 | | | W0603 | | | W0805 | | | W1206 | | |
| | 0.02 | 0.05 | 0.1-5 | 0.02 | 0.05 | 0.1-5 | 0.02 | 0.05 | 0.1-5 | 0.02 | 0.05 | 0.1-5 |
| 10 | 100Ω-16kΩ | | 100Ω-16kΩ[1] | 100Ω-50kΩ | | 100Ω-50kΩ[1] | 100Ω-100kΩ | | 100Ω-125kΩ[3] | 100Ω-400kΩ | | 100Ω-400kΩ[1] |
| 15 | 50Ω-16kΩ | | 50Ω-16kΩ[1] | 50Ω-50kΩ | | 50Ω-50kΩ[1] | 50Ω-100kΩ | | 50Ω-125kΩ[3] | 50Ω-400kΩ | | 50Ω-400kΩ[1] |
| 25 | 50Ω-16kΩ | 10Ω-24kΩ | 10Ω-30kΩ[2] | 50Ω-50kΩ | 10Ω-75kΩ | 10Ω-100kΩ[1] | 50Ω-100kΩ | 10Ω-180kΩ | 10Ω-267kΩ[1] | 50Ω-400kΩ | 10Ω-650kΩ | 10Ω-1MΩ[1] |
| 50, 100 | | | 7.5Ω-30kΩ[2] | | | 5Ω-100kΩ[1] | | | 5Ω-267kΩ[1] | | | 5Ω-1MΩ[1] |

Notes
1. For Pb-free, unscreened PFC chips see separate PFC Commercial Series datasheet
2. For Pb-free, unscreened PFC chips at values ≥15R see separate PFC Commercial Series datasheet
3. For Pb-free, unscreened PFC chips at values ≤100K see separate PFC Commercial Series datasheet

## Power Derating Curve




# Physical Data




| Model | L | W | H | a | b | c (min.) |
|---|---|---|---|---|---|---|
| W0402 | 0.04 ±0.002 (1.02 ±0.05) | 0.021 ±0.002 (0.53 ±0.05) | 0.012 ±0.003 (0.3 ±0.08) | 0.008 ±0.002 (0.2 ±0.05) | 0.01 ±0.002 (0.25 ±0.05) | 0.017 (0.43) |
| W0603 | 0.063 ±0.004 (1.6 ±0.1) | 0.031 ±0.004 (0.79 ±0.1) | 0.02 ±0.006 (0.51 ±0.15) | 0.012 ±0.005 (0.3 ±0.13) | 0.015 ±0.005 (0.38 ±0.13) | 0.03 (0.76) |
| W0805 | 0.081 ±0.005 (2.06 ±0.13) | 0.05 ±0.005 (1.27 ±0.13) | 0.02 ±0.006 (0.51 ±0.15) | 0.015 ±0.008 (0.38 ±0.2) | 0.016 ±0.008 (0.41 ±0.2) | 0.046 (1.17) |
| W1206 | 0.126 ±0.006 (3.2 ±0.15) | 0.063 ±0.005 (1.6 ±0.13) | 0.024 ±0.004 (0.61 ±0.1) | 0.025 ±0.01 (0.64 ±0.25) | 0.025 ±0.01 (0.64 ±0.25) | 0.085 (2.16) |

# 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.

See separate MIL-CHIP datasheet.

# Ordering Procedure

This product has two valid part numbers:

**European (Welwyn) Part Number: W1206R-01-1K0AI** (1206, 100ppm/°C, 1 kilohm ±0.05%, Pb-free)

| W | 1 | 2 | 0 | 6 | R | | - | 0 | 1 | - | 1 | K | 0 | A | I | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | 2 | | | 3 | | 4 | | | | 5 | | | 6 | 7 | |

| 1 Type | 2 Size | 3 Option | 4 TCR | 5 Value | 6 Tolerance | 7 Termination & Packing | |
|---|---|---|---|---|---|---|---|
| W=PFC | 0402 | R=Standard | -12 = ±10ppm/°C | E24 = 3/4 characters<br>E96 = 3/4 characters<br>R = ohms<br>K = kilohms<br>M = megohms | Q = ±0.02% | I = Pb-free, Standard pack | |
| | 0603 | AS=Anti-sulfur | -11 = ±15ppm/°C | | A = ±0.05% | PB = SnPb finish, Standard pack | |
| | 0805 | | Blank = ±25ppm/°C | | B = ±0.1% | All sizes | 1000/reel |
| | 1206 | | -02 = ±50ppm/°C | | D = ±0.5% | | |
| | | | -01 = ±100ppm/°C | | F = ±1% | | |
| | | | | | G = ±2% | | |
| | | | | | J = ±5% | | |

**USA (IRC) Commercial Part Number: PFC-W1206LF-01-1001-A** (1206, 100ppm/°C, 1 kilohm ±0.05%, Pb-free)

| P | F | C | - | W | 1 | 2 | 0 | 6 | L | F | | | - | 0 | 1 | - | 1 | 0 | 0 | 1 | - | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 2 | | | | | 3 | | | | 4 | | | | 5 | | | | 6 | |

| 1 Family | 2 Model | 3 Termination | 4 TCR | 5 Value | 6 Tolerance | Packing | |
|---|---|---|---|---|---|---|---|
| PFC | W0402 | R = SnPb (60/40) | 12 = ±10ppm/°C | 3 digits + multiplier | Q = ±0.02% | All sizes | 1000/reel |
| | W0603 | LF = Pb-free (100%Sn) | 11 = ±15ppm/°C | R = ohms for values <100 ohms | A = ±0.05% | | |
| | W0805 | ASLF = Anti-sulfur & Pb-free (100%Sn) | 03 = ±25ppm/°C | | B = ±0.1% | | |
| | W1206 | | 02 = ±50ppm/°C | | D = ±0.5% | | |
| | | | 01 = ±100ppm/°C | | F = ±1% | | |
| | | | | | G = ±2% | | |
| | | | | | J = ±5% | | |

**USA (IRC) Mil Screened Part Number*: PFC-W1206R-05-1001-B** (1206, 100ppm/°C, 1 kilohm ±0.1%,)

| P | F | C | - | W | 1 | 2 | 0 | 6 | R | - | 0 | 5 | - | 1 | 0 | 0 | 1 | - | B |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 2 | | | | | 3 | | 4 | | | 5 | | | | | 6 |

| 1 Family | 2 Model | 3 Termination | 4 TCR | 5 Value | 6 Tolerance | Packing | |
|---|---|---|---|---|---|---|---|
| PFC | W0402 | R = SnPb (60/40) | 16 = ±10ppm/°C | 3 digits + multiplier | B = ±0.1% | All sizes | 1000/reel |
| | W0603 | | 15 = ±15ppm/°C | R = ohms for values <100 ohms | D = ±0.5% | | |
| | W0805 | | 14 = ±20ppm/°C | | F = ±1% | | |
| | W1206 | | 07 = ±25ppm/°C | | G = ±2% | | |
| | | | 06 = ±50ppm/°C | | J = ±5% | | |
| | | | 05 = ±100ppm/°C | | | | |
| | | | 04 = ±300ppm/°C | | | | |

* Please refer to the MIL-CHIP datasheet to order parts qualified to MIL-PRF-55342.