

ULTRA PRECISION CHIP RESISTORS

BLU SERIES



Term. W
is Pb-free
and RoHS
compliant

- Industry's widest range of precision chip resistors!
- Tolerance to $\pm 0.01\%$, TCR to 5 ppm/°C

CUSTOM OPTIONS

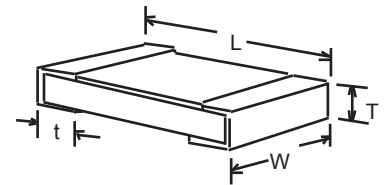
- Option P: Pulse resistant design
- Option ER: Burn-In for Hi-Rel applications
- Option V: +200° operating temperature
- Option A: Marking of resis. code in 3 or 4 digits (not available on BLU0201 or BLU0402)
- Matched sets and TC's to 2ppm available (limited range)

'Blu-Chip' performance at an economical price!

RCD's expertise in the field of ultra-precision resistors since 1973, combined with the latest in automated chip resistor production equipment, enables precision chip resistors at prices comparable to lower grade devices. The BLU-chip design features excellent stability levels. Intermediate and extended-range values are available on custom basis. Popular values are available from stock.



RESISTORS • CAPACITORS • COILS • DELAY LINES



RCD Type	Power @ 70°C	Max. Working Voltage*	TCR ² (PPM/°C)	Standard Resistance Range ¹					Dimensions			
				0.01%	.02%, .05%	0.1%, 0.25%	0.5%, 1%		L	W	T	t
BLU0201	.05W	15V	10, 15	N/A	N/A	100Ω - 10K	100Ω - 10K		.020±.004 [.5 ± .1]	.01±.002 [.25 ± .05]	.014±.004 [.35 ± .1]	.01±.005 [.25 ± .12]
			25, 50	N/A	N/A	100Ω - 10K	33Ω - 22K					
			100	N/A	N/A	100Ω - 10K	10Ω - 22K					
BLU0402	.062W	25V	5	50Ω - 2K	50Ω - 2K	51Ω - 2K	50Ω - 2K		.040±.004 [1.0 ± .1]	.020±.002 [.5 ± .05]	.014±.004 [.35 ± .1]	.01±.005 [.25 ± .12]
			10, 15	50Ω - 12K	50Ω - 12K	51Ω - 12K	25Ω - 12K					
			25	50Ω - 12K	50Ω - 12K	10Ω - 100K	10Ω - 100K					
			50, 100	50Ω - 12K	50Ω - 12K	10Ω - 100K	10Ω - 1M					
BLU0603	.1W	75V	5	50Ω - 8K	50Ω - 8K	50Ω - 8K	50Ω - 8K		.063±.008 [1.6 ± .2]	.031±.006 [.8 ± .15]	.018±.006 [.45 ± .15]	.012±.008 [.3 ± .2]
			10, 15	25Ω - 100K	25Ω - 100K	10Ω - 402K	25Ω - 100K					
			25	25Ω - 100K	4.7Ω - 150K	4.7Ω - 402K	2Ω - 402K					
			50, 100	25Ω - 100K	4.7Ω - 150K	4.7Ω - 402K	2Ω - 1M					
BLU0805	.125W	100V	5	50Ω - 16K	50Ω - 16K	50Ω - 16K	50Ω - 16K		.079±.006 [2.0 ± .15]	.050±.006 [1.25 ± .15]	.018±.006 [.45 ± .15]	.014±.008 [.35 ± .2]
			10, 15	25Ω - 200K	25Ω - 200K	10Ω - 499K	25Ω - 200K					
			25, 50, 100	25Ω - 200K	4.7Ω - 500K	4.7Ω - 1M	1Ω - 1M					
			5	50Ω - 30K	50Ω - 30K	50Ω - 30K	50Ω - 30K					
BLU1206	.25W	150V	10, 15	25Ω - 500K	25Ω - 500K	10Ω - 1M	25Ω - 500K		.126±.006 [3.2 ± .15]	.063±.006 [1.6 ± .15]	.020±.006 [.50 ± .15]	.020±.010 [.51 ± .25]
			25, 50, 100	25Ω - 500K	4.7Ω - 1M	4.7Ω - 1M	1Ω - 2M					
			5	50Ω - 30K	50Ω - 30K	50Ω - 30K	50Ω - 30K					
			10, 15	25Ω - 500K	25Ω - 500K	10Ω - 1M	25Ω - 500K					
BLU1210	.33W	150V	5, 10	100Ω - 30K	100Ω - 330K	100Ω - 330K	100Ω - 330K		.126±.006 [3.2 ± .15]	.098±.008 [2.5 ± .2]	.024±.008 [.61 ± .2]	.020±.010 [.51 ± .25]
			25	51Ω - 500K	51Ω - 2M	51Ω - 2M	51Ω - 2M					
			50, 100	51Ω - 500K	51Ω - 2M	51Ω - 2M	10Ω - 4.7M					
			5	50Ω - 30K	50Ω - 30K	50Ω - 30K	50Ω - 30K					
BLU2010	.5W	150V	10, 15	25Ω - 500K	25Ω - 500K	10Ω - 1M	25Ω - 500K		.197±.008 [5 ± .2]	.098±.008 [2.5 ± .2]	.024±.008 [.61 ± .2]	.024±.008 [.61 ± .2]
			25, 50, 100	25Ω - 500K	4.7Ω - 1M	4.7Ω - 1M	1Ω - 2M					
			5	50Ω - 50K	50Ω - 50K	50Ω - 50K	50Ω - 50K					
			10, 15	25Ω - 500K	25Ω - 500K	10Ω - 1M	25Ω - 500K					
BLU2512	1W	200V	25, 50, 100	25Ω - 500K	4.7Ω - 1M	4.7Ω - 1M	1Ω - 2M		.248±.008 [6.3 ± .2]	.126±.008 [3.2 ± .2]	.024±.008 [.61 ± .2]	.024±.008 [.61 ± .2]

*Maximum working voltage determined by $E = \sqrt{PR}$, E should not exceed value listed. Increased voltage ratings available. ¹Extended range available, consult factory. ²TC measured 25°-100°C

TYPICAL PERFORMANCE CHARACTERISTICS

Requirements	Characteristics (5-25ppm)*	Test Method
Short Time Overload, 5 Sec.	$\pm 0.1\% \Delta R$	Rated W x 2.5, nte 2x Max..Voltage
Resistance to Solder Heat	$\pm 0.05\% \Delta R$	260 $\pm 5^\circ\text{C}$, 3 seconds
High Temperature Exposure	$\pm 0.1\% \Delta R$	100 hours @ +125°C
Thermal Shock	$\pm 0.1\% \Delta R$	-55°C to +125°C, 0.5 hrs, 5 cycles
Moisture Resistance	$\pm 0.2\% \Delta R$	Mil-STD-202 M103 95% RH 1000hrs
Load Life (1000 hours)	$\pm 0.1\%$ ($\pm .25\%$ 10,000 hrs)	Mil-PRF-55342G 4.8.11.1 ceramic
Solderability	95% (Min.)	MIL-Std-202, Method 208
Shelf Life	100 ppm/year (Max.)	Room Temp. & Humidity, No-Load
Dielectric Withstand Voltage	250V (100V 0402 & 0603)	60 Seconds, terminal to ceramic

* The typical ΔR of chips with 50-100ppm TC is double that of chips with 5 to 25ppm TC

P/N DESIGNATION: BLU1206 - 1002 - B T 25 W

RCD Type _____

Options: P, ER, A (leave blank if standard)

4-Digit Resistance Code: 3 signif. digits & multiplier (10R0=10Ω, 1000=100Ω, 1001=1KΩ)

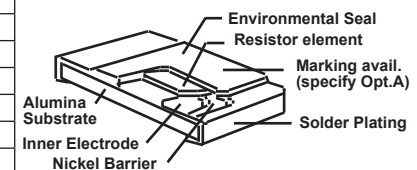
Tolerance Code: F=1%, D=0.5%, C=0.25%, B=0.1%, A=0.05% Q=0.02%, T=0.01%

Packaging: B = Bulk, T = Tape & Reel

TC: 5=5ppm, 10=10ppm, 15=15ppm, 25=25ppm, 50=50ppm, 101=100ppm

Termination: W = Lead-free (std), Q = Tin/Lead (leave blank if both acceptable)

CONSTRUCTION



To ensure utmost reliability, care should be taken to avoid potential sources of ionic contamination.

DERATING CURVE

Resistors may be operated up to full rated power with consideration of mounting density, pad geometry, PCB material, and ambient temperature.

