

ULTRA PRECISION CHIP RESISTORS

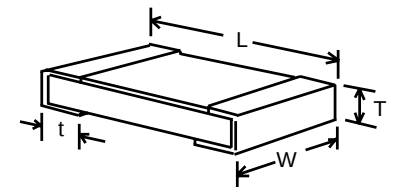
BLU SERIES



Term. W is
RoHS
compliant &
260°C
compatible



RESISTORS • CAPACITORS • COILS • DELAY LINES



- 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 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.

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

*Maximum working voltage determined by $E = \sqrt{PR}$, E should not exceed value listed. Increased voltage ratings available. ¹ Extended range available, consult factory.

TYPICAL PERFORMANCE CHARACTERISTICS

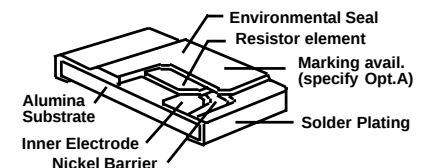
Requirements	Characteristics (5-25ppm)*	Test Method
Short Time Overload, 5 Sec.	$\pm 0.1\% \Delta R$	Rated W x 2.5, nte 2x Max. Voltage
Resistance to Solder Heat	$\pm 0.05\% \Delta R$	260 $\pm$ 5°C, 3 seconds
High Temperature Exposure	$\pm 0.1\% \Delta R$	100 hours @ +125°C
Thermal Shock	$\pm 0.1\% \Delta R$	-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)	$\pm 0.1\% (\pm .25\% 10,000 \text{ hrs})$	Rated W, Mil-PRF-55342 4.8.11.1
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 BLU
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, Q= Tin/Lead (leave blank if either is 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.

