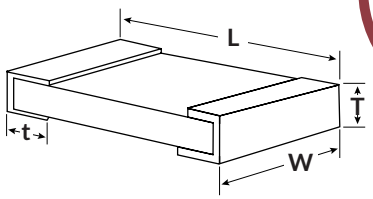
ULTRA PRECISION CHIP RESISTORS

BLU SERIES

RoHS Sn/Pb



FEATURES
- ► Industry's widest range of precision chip resistors!
- ► Tolerance to ±0.010%, TCR to 1 ppm/°C

CUSTOM OPTIONS
- ► ***Opt. B***: Increased Power and Voltage
- ► ***Opt. P***: Pulse resistant design
- ► ***Opt. ER***: Burn-In for Hi-Rel applications
- ► ***Opt. V***: +200°C Operating Temperature
- ► ***Opt. A***: Marking of resistance code in 3 or 4 digits (not available on BLU0201 or BLU0402)

'BLU-Chip' performance at an economical price!

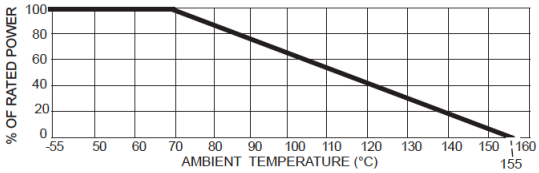
The BLU-Chip design features excellent stability levels. Intermediate and extended-range values are available on a custom basis. Popular values are available from stock. Mil-spec screening available.

RCD TYPE	POWER @ 70°C (W)	MAX WORKING VOLTAGE * (V)	TCR [2] (ppm/°C)	STANDARD RESISTANCE RANGE [1] ±0.010%, ±0.020%	±0.050%	±0.10%, ±0.25%	±0.50%, ±1.0%	DIMENSIONS In [mm] L	W	T	t
BLU0201	0.050	15	10, 15	N/A	N/A	100Ω - 10K	100Ω - 10K	0.020±0.040 [0.50±0.10]	0.010±0.002 [0.25±0.050]	0.014±0.004 [0.35±0.10]	0.010±0.005 [0.25±0.12]
			25, 50	N/A	N/A	50Ω - 75K	33Ω - 75K				
			100	N/A	N/A	50Ω - 75K	10Ω - 75K				
BLU0402	0.062	25	1, 2, 3	50Ω - 5K	50Ω - 5K	50Ω - 5K	50Ω - 5K	0.040±0.004 [1.0±0.10]	0.020±0.002 [0.50±0.050]	0.014±0.004 [0.35±0.10]	0.010±0.005 [0.25±0.12]
			5	50Ω - 20K	50Ω - 20K	50Ω - 20K	50Ω - 20K				
BLU0402B	0.100	50	10, 15	50Ω - 12K	50Ω - 12K	50Ω - 100K	25Ω - 100K				
			25, 50, 100	50Ω - 12K	50Ω - 12K	4Ω - 511K	4Ω - 511K				
BLU0603	0.100	75	1, 2, 3	25Ω - 15K	25Ω - 15K	25Ω - 15K	25Ω - 15K	0.063±0.008 [1.6±0.20]	0.031±0.006 [0.80±0.15]	0.018±0.006 [0.45±0.15]	0.012±.008 [0.30±0.20]
			5	25Ω - 60K	25Ω - 60K	25Ω - 60K	25Ω - 60K				
BLU0603B	0.167	100	10, 15	25Ω - 100K	4.7Ω - 330K	4.7Ω - 511K	4.7Ω - 511K				
			25, 50, 100	25Ω - 100K	4.7Ω - 330K	1Ω - 1M	1Ω - 1M				
BLU0805	0.125	100	1, 2, 3	25Ω - 30K	25Ω - 30K	25Ω - 30K	25Ω - 30K	0.079±0.006 [2.0±0.15]	0.050±0.006 [1.25±0.15]	0.018±0.006 [0.45±0.15]	0.014±0.008 [0.35±0.20]
			5	25Ω - 150K	25Ω - 150K	25Ω - 150K	25Ω - 150K				
BLU0805B	0.250	150	10, 15	25Ω - 200K	4.7Ω - 1M	4.7Ω - 1M	4.7Ω - 1M				
			25, 50, 100	25Ω - 200K	4.7Ω - 1M	1Ω - 2M	1Ω - 2M				
BLU1206	0.250	150	1, 2, 3	25Ω - 50K	25Ω - 50K	25Ω - 50K	25Ω - 50K	0.126±0.006 [3.2±0.15]	0.063±0.006 [1.60±0.15]	0.020±0.006 [0.50±0.15]	0.020±0.010 [0.51±0.25]
			5	25Ω - 300K	25Ω - 300K	25Ω - 300K	25Ω - 300K				
BLU1206B	0.330	200	10, 15	25Ω - 500K	4.7Ω - 1.5M	4.7Ω - 1.5M	4.7Ω - 1.5M				
			25, 50, 100	25Ω - 500K	4.7Ω - 1M	1Ω - 2.5M	1Ω - 2.5M				
BLU1210	0.330	150	1, 2, 3	25Ω - 50K	25Ω - 50K	25Ω - 50K	25Ω - 50K	0.126±0.006 [3.2±0.15]	0.098±0.008 [2.50±0.20]	0.024±0.008 [0.61±0.20]	0.020±0.010 [0.51±0.25]
			5	25Ω - 300K	25Ω - 300K	25Ω - 300K	25Ω - 300K				
			10, 15	25Ω - 500K	4.7Ω - 1M	4.7Ω - 1M	4.7Ω - 1M				
			25, 50, 100	25Ω - 500K	4.7Ω - 1M	1Ω - 2.5M	1Ω - 2.5M				
BLU2010	0.500	150	1, 2, 3	25Ω - 100K	25Ω - 100K	25Ω - 100K	25Ω - 100K	0.197±0.008 [5.0±0.20]	0.098±0.008 [2.50±0.20]	0.024±0.008 [0.61±0.20]	0.024±0.008 [0.61±0.20]
			5	25Ω - 300K	25Ω - 300K	25Ω - 300K	25Ω - 300K				
			10, 15	25Ω - 500K	4.7Ω - 1M	4.7Ω - 1M	4.7Ω - 1M				
			25, 50, 100	25Ω - 500K	4.7Ω - 1M	1Ω - 3M	1Ω - 3M				
BLU2512	1.0	200	1, 2, 3	25Ω - 100K	25Ω - 100K	25Ω - 100K	25Ω - 100K	0.248±0.008 [6.3±0.20]	0.126±0.008 [3.20±0.20]	0.024±0.008 [0.61±0.20]	0.024±0.008 [0.61±0.20]
			5	25Ω - 300K	25Ω - 300K	25Ω - 300K	25Ω - 300K				
			10, 15	25Ω - 500K	4.7Ω - 1M	4.7Ω - 1M	4.7Ω - 1M				
			25, 50, 100	25Ω - 500K	4.7Ω - 1M	1Ω - 3M	1Ω - 3M				

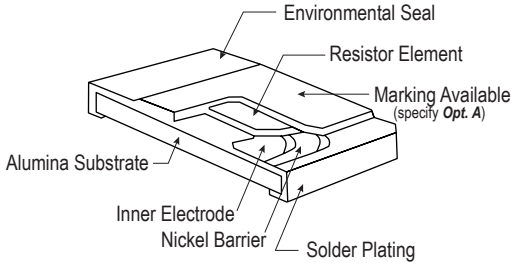
* Maximum working voltage determined by E = √PR, E should not exceed value listed. Increased voltage ratings available. [1] Extended range available, consult factory. [2] TC measured 25°C to 100°C.

DERATING CURVE

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



CONSTRUCTION



TYPICAL PERFORMANCE

REQUIREMENTS	CHARACTERISTICS (5 -25ppm) *	TEST METHOD
Short Time Overload (5 Sec)	±0.10% ΔR	Rated W x 2.5, nte 2x MAX voltage
Resistance to Solder Heat	±0.05% ΔR	260 ± 5°C, 3 seconds
High Temperature Exposure	±0.10% ΔR	100 hours @ +125°C
Thermal Shock	±0.10% ΔR	-55°C to +125°C, 0.50 hrs, 5 cycles
Moisture Resistance	±0.20% ΔR	MIL-STD-202, M103 95% RF 1,000 hrs
Load Life 1,000 hrs 10,000 hrs	±0.10% ±0.25%	Rated W, MIL-PRF-55342 4.8.11.1
Solderability	95% MIN	MIL-STD-202, Method 208
Shelf Life (ppm/year)	100 MAX	Room Temp & Humidity, No-Load
DWV Standard 0402 & 0603	250V 100V	60 second, terminal to ceramic

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

PART NUMBER DERIVATION

BLU 1206 ☐ - 1002 - B T 25 W

RCD Type: BLU
Chip Size: 0201 to 2512
Options: V, P, ER, B, A (leave blank if standard)
Resistance Code: 0.010% to 1%: 3 signif. digits & mult.
ex: R100 = 0.10Ω, 1R00 = 1Ω, 1000 = 100Ω, 1001 = 1KΩ
Tolerance: F = ±1%, D = ±0.50%, C = ±0.25%, B = ±0.10%, A = ±0.050%, Q = ±0.020%, T = ±0.010%
Packaging: B = Bulk, T = Tape & Reel
Optional TC: 1 = 1ppm, 2 = 2ppm, 3 = 3ppm, 5 = 5ppm, 10 = 10ppm, 15 = 15ppm, 25 = 25ppm, 50 = 50ppm, 101 = 100ppm (leave blank if standard)
Termination: W = RoHS (Standard), Q = Tin/Lead (leave blank if both are acceptable)