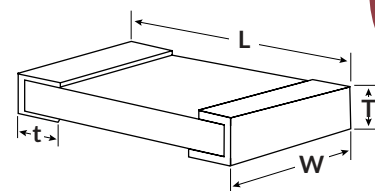
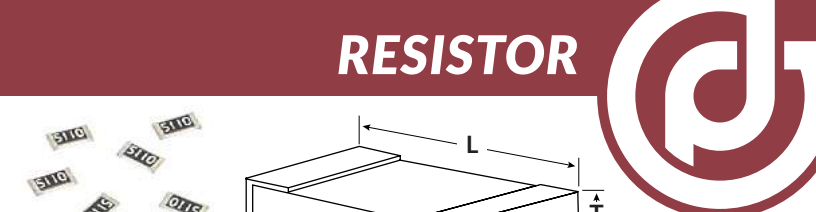


ULTRA PRECISION CHIP RESISTORS BLU SERIES



FEATURES

- ▶ Industry's widest range of precision chip resistors!
- ▶ Tolerance to $\pm 0.010\%$, TCR to 1 ppm/ $^{\circ}\text{C}$

CUSTOM OPTIONS

- ▶ **Opt. B:** Increased Power and Voltage
- ▶ **Opt. P:** Pulse resistant design
- ▶ **Opt. ER:** Burn-In for Hi-Rel applications
- ▶ **Opt. V:** +200 $^{\circ}\text{C}$ 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!

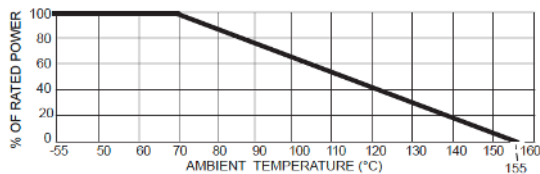
The BLU-Chip design features excellent stability levels. Intermediate and extended-range values are available on a custom basis. Popular values are available from stock. Mil-spec screening available.

RCD TYPE	POWER @ 70 $^{\circ}\text{C}$ (W)	MAX WORKING VOLTAGE * (V)	TCR ² (ppm/ $^{\circ}\text{C}$)	STANDARD RESISTANCE RANGE ¹				DIMENSIONS In [mm]			
				$\pm 0.010\%$, $\pm 0.020\%$	$\pm 0.050\%$	$\pm 0.10\%$, $\pm 0.25\%$	$\pm 0.50\%$, $\pm 1.0\%$	L	W	T	t
BLU0201	0.050	15	10, 15 25, 50 100	N/A N/A N/A	N/A N/A N/A	100 Ω - 10K 50 Ω - 75K 50 Ω - 75K	100 Ω - 10K 33 Ω - 75K 10 Ω - 75K	0.020 \pm 0.040 [0.50 \pm 0.10]	0.010 \pm 0.002 [0.25 \pm 0.050]	0.014 \pm 0.004 [0.35 \pm 0.10]	0.010 \pm 0.005 [0.25 \pm 0.12]
BLU0402	0.062	25	1, 2, 3 5	50 Ω - 5K 50 Ω - 20K	50 Ω - 5K 50 Ω - 20K	50 Ω - 5K 50 Ω - 20K	50 Ω - 5K 50 Ω - 20K	0.040 \pm 0.004 [1.0 \pm 0.10]	0.020 \pm 0.002 [0.50 \pm 0.050]	0.014 \pm 0.004 [0.35 \pm 0.10]	0.010 \pm 0.005 [0.25 \pm 0.12]
BLU0402B	0.100	50	10, 15 25, 50, 100	50 Ω - 12K 50 Ω - 12K	50 Ω - 12K 50 Ω - 12K	50 Ω - 100K 50 Ω - 12K	25 Ω - 100K 4 Ω - 511K				
BLU0603	0.100	75	1, 2, 3 5	25 Ω - 15K 25 Ω - 60K	25 Ω - 15K 25 Ω - 60K	25 Ω - 15K 25 Ω - 60K	25 Ω - 15K 25 Ω - 60K	0.063 \pm 0.008 [1.6 \pm 0.20]	0.031 \pm 0.006 [0.80 \pm 0.15]	0.018 \pm 0.006 [0.45 \pm 0.15]	0.012 \pm 0.008 [0.30 \pm 0.20]
BLU0603B	0.167	100	10, 15 25, 50, 100	25 Ω - 100K 25 Ω - 100K	4.7 Ω - 330K 4.7 Ω - 330K	4.7 Ω - 511K 1 Ω - 1M	4.7 Ω - 511K 1 Ω - 1M				
BLU0805	0.125	100	1, 2, 3 5	25 Ω - 30K 25 Ω - 150K	25 Ω - 30K 25 Ω - 150K	25 Ω - 30K 25 Ω - 150K	25 Ω - 30K 25 Ω - 150K	0.079 \pm 0.006 [2.0 \pm 0.15]	0.050 \pm 0.006 [1.25 \pm 0.15]	0.018 \pm 0.006 [0.45 \pm 0.15]	0.014 \pm 0.008 [0.35 \pm 0.20]
BLU0805B	0.250	150	10, 15 25, 50, 100	25 Ω - 200K 25 Ω - 200K	4.7 Ω - 1M 4.7 Ω - 1M	4.7 Ω - 1M 1 Ω - 2M	4.7 Ω - 1M 1 Ω - 2M				
BLU1206	0.250	150	1, 2, 3 5	25 Ω - 50K 25 Ω - 300K	25 Ω - 50K 25 Ω - 300K	25 Ω - 50K 25 Ω - 300K	25 Ω - 50K 25 Ω - 300K	0.126 \pm 0.006 [3.2 \pm 0.15]	0.063 \pm 0.006 [1.60 \pm 0.15]	0.020 \pm 0.006 [0.50 \pm 0.15]	0.020 \pm 0.010 [0.51 \pm 0.25]
BLU1206B	0.330	200	10, 15 25, 50, 100	25 Ω - 500K 25 Ω - 500K	4.7 Ω - 1.5M 4.7 Ω - 1M	4.7 Ω - 1.5M 1 Ω - 2.5M	4.7 Ω - 1.5M 1 Ω - 2.5M				
BLU1210	0.330	150	1, 2, 3 5	25 Ω - 50K 25 Ω - 300K	25 Ω - 50K 25 Ω - 300K	25 Ω - 50K 25 Ω - 300K	25 Ω - 50K 25 Ω - 300K	0.126 \pm 0.006 [3.2 \pm 0.15]	0.098 \pm 0.008 [2.50 \pm 0.20]	0.024 \pm 0.008 [0.61 \pm 0.20]	0.020 \pm 0.010 [0.51 \pm 0.25]
BLU1210B	0.330	150	10, 15 25, 50, 100	25 Ω - 500K 25 Ω - 500K	4.7 Ω - 1M 4.7 Ω - 1M	4.7 Ω - 1M 1 Ω - 2.5M	4.7 Ω - 1M 1 Ω - 2.5M				
BLU2010	0.500	150	1, 2, 3 5	25 Ω - 100K 25 Ω - 300K	25 Ω - 100K 25 Ω - 300K	25 Ω - 100K 25 Ω - 300K	25 Ω - 100K 25 Ω - 300K	0.197 \pm 0.008 [5.0 \pm 0.20]	0.098 \pm 0.008 [2.50 \pm 0.20]	0.024 \pm 0.008 [0.61 \pm 0.20]	0.024 \pm 0.008 [0.61 \pm 0.20]
BLU2010B	0.500	150	10, 15 25, 50, 100	25 Ω - 500K 25 Ω - 500K	4.7 Ω - 1M 4.7 Ω - 1M	4.7 Ω - 1M 1 Ω - 3M	4.7 Ω - 1M 1 Ω - 3M				
BLU2512	1.0	200	1, 2, 3 5	25 Ω - 100K 25 Ω - 300K	25 Ω - 100K 25 Ω - 300K	25 Ω - 100K 25 Ω - 300K	25 Ω - 100K 25 Ω - 300K	0.248 \pm 0.008 [6.3 \pm 0.20]	0.126 \pm 0.008 [3.20 \pm 0.20]	0.024 \pm 0.008 [0.61 \pm 0.20]	0.024 \pm 0.008 [0.61 \pm 0.20]
BLU2512B	1.0	200	10, 15 25, 50, 100	25 Ω - 500K 25 Ω - 500K	4.7 Ω - 1M 4.7 Ω - 1M	4.7 Ω - 1M 1 Ω - 3M	4.7 Ω - 1M 1 Ω - 3M				

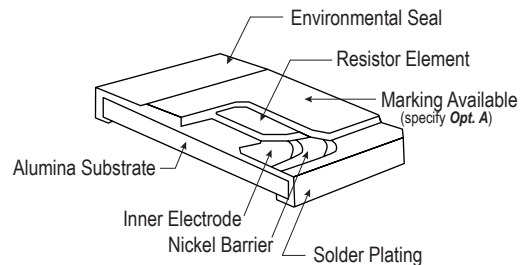
* Maximum working voltage determined by $E = \sqrt{PR}$, E should not exceed value listed. Increased voltage ratings available. ¹ Extended range available, consult factory. ² TC measured 25 $^{\circ}\text{C}$ to 100 $^{\circ}\text{C}$.

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)	$\pm 0.10\%$ ΔR	Rated W x 2.5, nte 2x MAX voltage
Resistance to Solder Heat	$\pm 0.05\%$ ΔR	260 \pm 5 $^{\circ}\text{C}$, 3 seconds
High Temperature Exposure	$\pm 0.10\%$ ΔR	100 hours @ +125 $^{\circ}\text{C}$
Thermal Shock	$\pm 0.10\%$ ΔR	-55 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$, 0.50 hrs, 5 cycles
Moisture Resistance	$\pm 0.20\%$ ΔR	MIL-STD-202, M103 95% RF 1,000 hrs
Load Life	1,000 hrs 10,000 hrs	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
DVV	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

