

CBR Series

High Temperature
Bondable Thick Film Chip Resistors



- Resistances from 100hms to 1TOhms
- AgPd Termination for face-down assembly
- Gold Termination for face-up assembly
- Power Rating 0.05 to 0.25Watt
- Resistance Tolerances to $\pm 5\%$
- TCR's to ± 50 ppm/ $^{\circ}\text{C}$
- Non-Magnetic
- Special HT version to 300 $^{\circ}\text{C}^*$



SPECIFICATIONS

Type	0402	0603	0805	1206
Power Rating (W) ¹	0.05	0.10	0.125	0.25
Working Voltage (VAC)	60	150	200	400
Resistance Range (Ω)	Tolerances Available (%) Temperature Coefficients Available (\pm ppm/ $^{\circ}\text{C}$) ² (lower TCR upon request) Voltage Coefficients Available (\pm ppm/V)			
10R - 10M	5% to 20% TCR100 / 250	5% to 20% TCR50 / 100	5% to 20% TCR50 / 100	5% to 20% TCR50 / 100
>10M - 100M	5% to 20% TCR100 / 250 500 ppm/V	5% to 20% TCR50 / 100 500 ppm/V	5% to 20% TCR50 / 100 500 ppm/V	5% to 20% TCR50 / 100 250 ppm/V
>100M - 1G	10% to 30% TCR500 / 1000 1000 ppm/V	5% to 20% TCR250 / 500 1000 ppm/V	5% to 20% TCR250 / 500 1000 ppm/V	5% to 20% TCR100 / 250 250 ppm/V
>1G - 10G	10% to 30% TCR2000 2000 ppm/V	5% to 20% TCR500 / 1000 2000 ppm/V	5% to 20% TCR500 / 1000 2000 ppm/V	5% to 20% TCR250 / 500 500 ppm/V
>10G - 100G	10% to 30% TCR2000 5000 ppm/V	10% to 30% TCR2000 / 3000 5000 ppm/V	10% to 30% TCR2000 / 3000 5000 ppm/V	5% to 20% TCR500 / 1000 2000 ppm/V
>100G - 1T	-	20% to 50% TCR3000 10000 ppm/V	10% to 30% TCR3000 10000 ppm/V	10% to 30% TCR2000 5000 ppm/V

TCR in ppm/ $^{\circ}\text{C}$; +25 $^{\circ}\text{C}$ to +125 $^{\circ}\text{C}$

TCR below standard TCR (highest value) and values >100G; +25 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$

VCR: typical values, all negative, not for all TCR values available

¹ W @ 70 $^{\circ}\text{C}$ / 0W @ 155 $^{\circ}\text{C}$

² 50 PPM : +25 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$

Specification	Value
Temperature Range	-55 $^{\circ}\text{C}$ to +155 $^{\circ}\text{C}$ -55 $^{\circ}\text{C}$ to +300 $^{\circ}\text{C}^*$ (HT Version)
Climactic Category	55 / 155 / 56

*Customer responsible for suitable high temperature connections

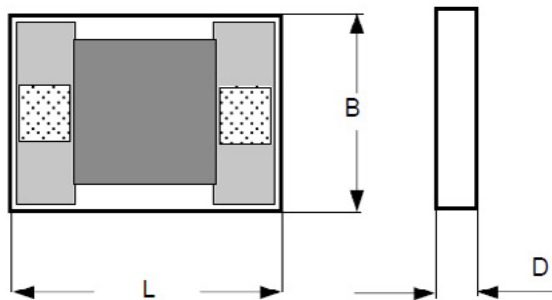
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SPECIFICATIONS (continued)

Long Term Stability	Max ΔR			
	<10M	10M - 1G	1G - 10G	$\geq 10G$
Storage 125°C / 1000h	< 0.5%	< 1%	< 2%	< 5%
Max. Voltage / 1000h	< 0.5%	< 0.5%	< 1%	< 2%
Short term overload	< 0.25%	-	-	-



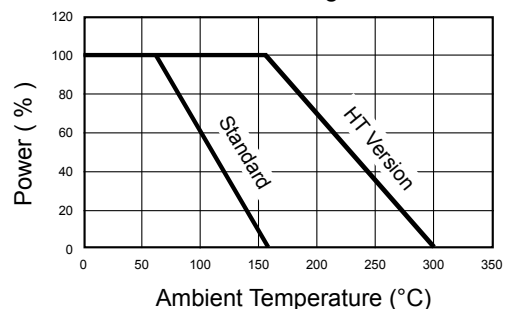
Type (larger sizes upon request)	Dimensions			
	L	B	D	Minimum Bondpad Size
CBR 0402	0.041 ± 0.002 [1.04 ± 0.05]	0.020 ± 0.002 [0.50 ± 0.05]	0.012 $\pm 0.006 / -0.002$ [0.3 $\pm 0.15 / -0.05$]	0.006 x 0.006 [0.15 x 0.15]
CBR 0603	0.060 $\pm 0.006 / -0.002$ [1.5 $\pm 0.15 / -0.05$]	0.030 $\pm 0.006 / -0.002$ [0.8 $\pm 0.15 / -0.05$]	0.016 $\pm 0.006 / -0.002$ [0.4 $\pm 0.15 / -0.05$]	0.008 x 0.008 [0.20 x 0.20]
CBR 0805	0.080 $\pm 0.006 / -0.002$ [2.0 $\pm 0.15 / -0.05$]	0.050 $\pm 0.006 / -0.002$ [1.25 $\pm 0.15 / -0.05$]	0.016 $\pm 0.006 / -0.002$ [0.4 $\pm 0.15 / -0.05$]	0.010 x 0.010 [0.25 x 0.25]
CBR 1206	0.126 $\pm 0.006 / -0.002$ [3.2 $\pm 0.15 / -0.05$]	0.060 $\pm 0.008 / -0.002$ [1.5 $\pm 0.2 / -0.05$]	0.016 $\pm 0.006 / -0.002$ [0.4 $\pm 0.15 / -0.05$]	0.012 x 0.012 [0.30 x 0.30]

Packaging:

Bulk or Blister tape to IEC 60286-3 (not 0402)

Tape width 8mm / Reel Diameter 180 or 330mm
Minimum quantity Bulk / 100 pieces per value
Minimum quantity Tape & Reel / 1000 pieces per value
Waffle Pack (for 0402, other sizes depending on volume)

Power Derating Curve



Ordering Information

Part Description: Part Type - Resistance - Tolerance - TCR - Packaging - Termination

Example: CBR 0603 1 Ohm 5% 100ppm Tape Gold

(Note: Without specification of TCR, Packaging, or Termination, the default is highest TCR, bulk packaging, and AgPd termination)