

CBR Series

High Temperature
Bondable Thick Film Chip Resistors



- Resistances from 10Ohms 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 200 $^{\circ}\text{C}^*$



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% 100 / 250	5% to 20% 50 / 100	5% to 20% 50 / 100	5% to 20% 50 / 100
>10M - 100M	5% to 20% 100 / 250 500 ppm/V	5% to 20% 50 / 100 500 ppm/V	5% to 20% 50 / 100 500 ppm/V	5% to 20% 50 / 100 250 ppm/V
>100M - 1G	10% to 30% 500 1000 ppm/V	5% to 20% 250 / 500 500 ppm/V	5% to 20% 250 / 500 500 ppm/V	5% to 20% 100 / 250 250 ppm/V
>1G - 10G	10% to 30% 2000 2000 ppm/V	5% to 20% 500 / 1000 1000 ppm/V	5% to 20% 500 / 1000 1000 ppm/V	5% to 20% 250 / 500 500 ppm/V
>10G - 100G	10% to 30% 2000 / 3000 5000 ppm/V	10% to 30% 2000 / 3000 3000 ppm/V	10% to 30% 2000 / 3000 3000 ppm/V	5% to 20% 500 / 1000 1000 ppm/V
>100G - 1T	Upon Request	Upon Request	10% to 30% 3000 5000 ppm/V	10% to 30% 2000 2000 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

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

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

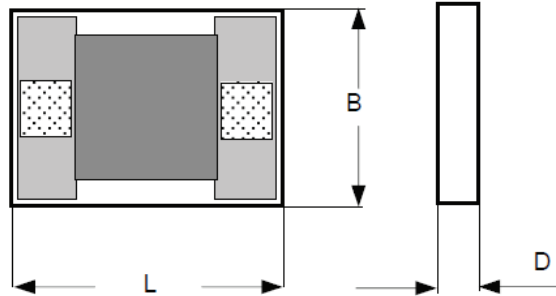
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SPECIFICATIONS (continued)

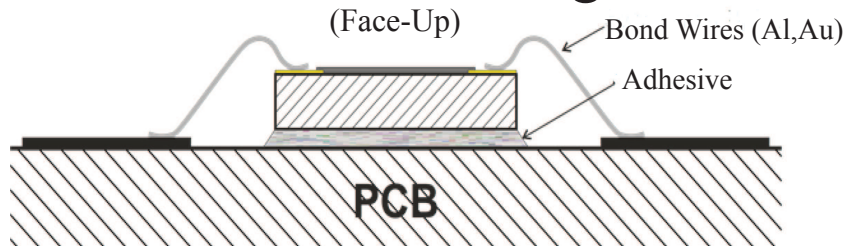
Specification	Value			
Temperature Range	-55°C to +155°C -55°C to +200°C* (HT Version)			
Climactic Category	55 / 155 / 56			
Long Term Stability	Max ΔR			
	<10M	10M - 1G	1G - 10G	$\geq 10G$
Storage 125°C / 1000h	< 0.5%	< 1%	< 2%	< 5%
Max. Voltage / 1000h	< 0.5%	< 0.5%	< 1%	< 2%
Short term overload (2,5x,5s)	< 0.25%	-	-	-



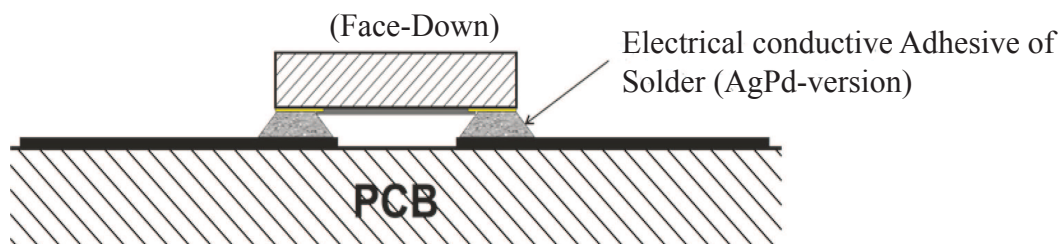
Type (larger sizes upon request)	Dimensions (mm)			
	L	B	D	Minimum Bondpad Size
CBR 0402	[0.95 +0.10 / -0.05]	[0.48 +0.10 / -0.05]	[0.28 +0.1 / -0.05]	[0.15 x 0.15]
CBR 0603	[1.5 +0.15 / -0.05]	[0.8 +0.15 / -0.05]	[0.4 +0.15 / -0.05]	[0.20 x 0.20]
CBR 0805	[2.0 +0.15 / -0.05]	[1.25 +0.15 / -0.05]	[0.4 +0.15 / -0.05]	[0.25 x 0.40]
CBR 1206	[3.2 +0.15 / -0.05]	[1.5 +0.2 / -0.05]	[0.4 +0.15 / -0.05]	[0.30 x 0.50]

Termination Assembly

Wire Bonding



Flip-Chip Bonding

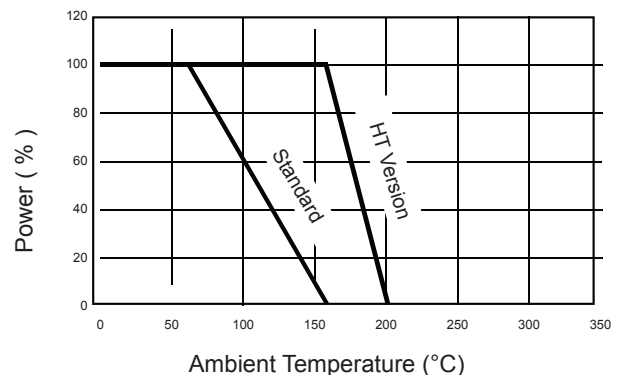


Packaging:

Bulk or Blistertape 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 - High Temp - Termination

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

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