

## Carbon Composition Resistors

### Type CBT Series

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The CBT series of resistors is constructed utilising solid carbon composition, which is the traditional medium for absorbing high energy pulses, in cases of high inrush current. These resistors have evolved over many years to have excellent pulse withstand capabilities, whilst remaining very stable. These improved characteristics have been achieved by prudent selection of materials of optimum physical properties and by advances in the manufacturing process.

#### Key Features

- Designed for Pulse Withstand
- Range of Resistance Tolerances
- Solid Carbon Composition
- Low Cost, High Performance
- Two Sizes Available
- Wide Range of Resistance Values
- Supplied Ammo Pack in boxes of 2000

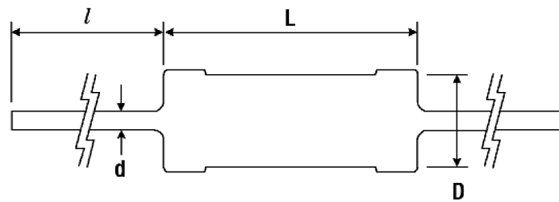
#### Characteristics - Electrical

	CBT25	CBT50
<b>Power at 70°C Ambient:</b>	0.25 Watts Derating to 0 at +125°C	0.5 Watts Derating to 0 at +125°C
<b>Maximum Voltage:</b>	250 Volts	350 Volts
<b>Resistance Range:</b>	1R0 - 5M6	1R0 - 22M
<b>Resistance Values:</b>	5% E24 Series 10% E12 Series	20% E6 Series
<b>Voltage Coefficient:</b>	± 0.035%/V	± 0.035%/V
<b>Limiting Element Voltage:</b>	250 Volts	350 Volts
<b>Maximum Overload Voltage:</b>	400 Volts	700 Volts
<b>Insulation Resistance:</b>	1000 M minimum	

#### Characteristics - Environmental

<b>Operating Temperature Range:</b>	-55°C to +125°C
<b>Temperature Cycles: (-55°C to +125°C, 5 cycles)</b>	ΔR/R ± 2%
<b>Load Life (1000 hours at 70°C):</b>	ΔR/R ± 10%
<b>Resistance to Solder Heat: (350°C for 3 seconds)</b>	ΔR/R ± 3%
<b>Short Time Overload: (2.5 x Rated Power for 5 seconds)</b>	ΔR/R ± 2%
<b>Humidity (40°C, 95%RH, 240 hrs):</b>	ΔR/R ± 3%

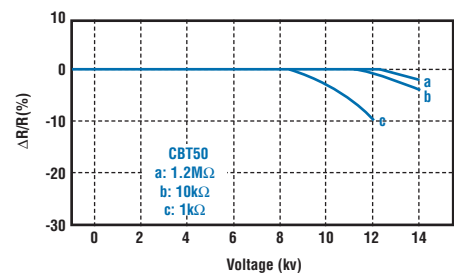
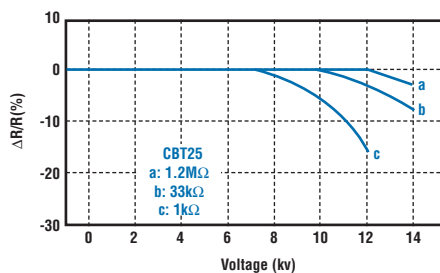
#### Dimensions-



Style	L	D	l	d
CBT25	6.3 ± 0.7	2.4 ± 0.1	27 min.	0.6
CBT50	9.5 ± 0.8	3.6 ± 0.2	25 min.	0.7

#### Pulse Withstand Characteristics

Charging and Discharging a 2000 pF Capacitor for 100 Cycles



#### How to Order

CBT	25	J	10K
<b>Common Part</b>	<b>Size</b>	<b>Tolerance</b>	<b>Resistance Value</b>
Carbon Composition Resistor	25 - 0.25W 50 - 0.5W	J - ±5% K - ±10% M - ±20%	1 ohm (1 ohm) 1R0 1K ohm (1000 ohms) 1K 100K ohm (100000 ohms) 100K 1M ohm (1000000 ohms) 1M