# Type SBC (Square Ceramic) Series

## Key Features

- Up to 17 Watts
- Fusible Styles
- Vertical or Axial
- Non Flammable
- Special Solvent Resistance
- Customer Specials Invited
- Widely Available from Distribution



This range of Power Wirewound Resistors are wound on continuous glass fibre elements or have a ceramic core depending on resistance value. The element is housed in a ceramic case and sealed with an inorganic silica filler. Their construction gives a resistor with high insulation resistance and low surface temperature, capable of withstanding high overload currents. These resistors are ideally suited to a variety of applications within industrial and commercial environments, where performance and reliability are of prime importance. Applications include fan force ovens, cooker hoods, power supplies and triac based speed controls. Custom Design Variants in value and style are welcomed.

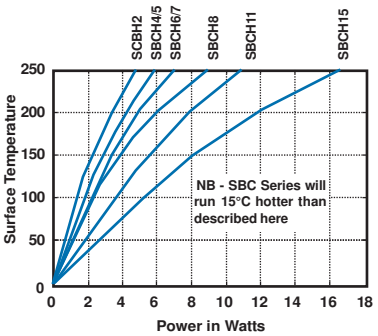
## Characteristics - Electrical

| | |
|---|---|
| **Resistance Values:** | Series E24 5% E12 10% (see tables for value limits per style) |
| **Resistance Tolerance:** | ±5% ±10% |
| **Maximum Continuous Voltage:** | √P x R |
| **Load Life:** | ΔR <±3% 1000 hours at 70°C |
| **Power Rating:** | See Surface Temperature Curve (below) |

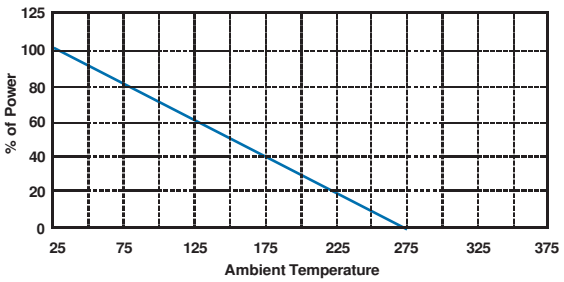
## Characteristics - Environmental and Mechanical

| | |
|---|---|
| **Temperature Coefficient of Resistance:** | 200ppm/°C (400ppm/°C below 18R) |
| **Resistance to Solder Heat:** | ΔR < 0.2% (350°C for 2.5 seconds) |
| **Voltage Coefficient of Resistance:** | Negligible |
| **Operating Temperature Range:** | -55°C to +350°C |
| **Load Stability:** | ΔR < 5% (full load at 70°C for 1000 hours) |
| **Long Term Damp Heat:** | ΔR < 0.2% (21 days at 40°C for 93% humidity) |
| **Shelf Life:** | ΔR < 1.0% (per 12 months) |
| **Insulation Resistance:** | > 10000M |
| **Dielectric Strength:** | 2000V RMS |
| **Lead Material:** | Steel - Solder coat |
| **Marking:** | Legend mark, Manufacturer name, type, ohmic value and tolerance. |

## Surface Temperature Rise Curve




## Derating Curve






Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are standard equivalents.

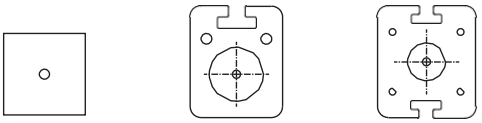
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## Type SBC - SBCH (Axial Power Resistor)

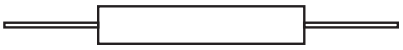
We offer three ceramic profiles for the main wattage sizes.
The holes and flutes shown in the ceramic are purely for mounting purposes.
Blockage of the holes will not affect the performance of the resistors.
The suffix for each style is as follows:-

**SBC Standard** **SBCH 4/5/6/7** **SBCH 8/11/15**



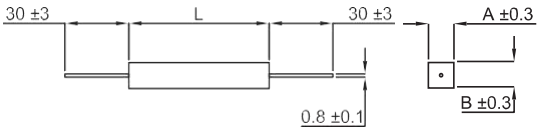
## Type SBCHE (For Vertical Mounting)

We offer SBCHE Styles with one lengthened lead for vertical mounting. See additional hardware on last page.



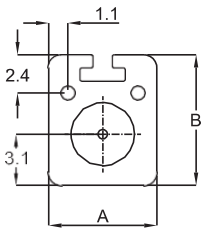
One Lead Length 20mm longer than case length. Supplied with one longer lead wrapped back in flute in ceramic.

## Type SBC - (No Flutes in Ceramic)

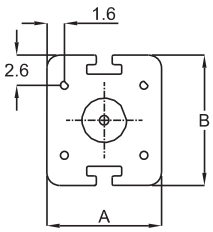



| Model | Power Max | Ohmic Values Min | Ohmic Values Max | Dimensions A | Dimensions B | Dimensions L | Weight Grams |
|---|---|---|---|---|---|---|---|
| SBC-2 | 4 W | R20 | 6K8 | 6.4 | 6.4 | 20 | 2.3 |
| SBC-4 | 5 W | R30 | 10K | 6.4 | 6.4 | 25 | 2.9 |
| SBC-6 | 7 W | R47 | 22K | 6.4 | 6.4 | 38 | 4.2 |
| SBC-8 | 9 W | 1R0 | 8K2 | 9 | 9 | 38 | 7.4 |
| SBC-11 | 11 W | 1R0 | 22K | 9 | 9 | 50 | 10.8 |
| SBC-15 | 17 W | 1R0 | 22K | 9 | 9 | 75 | 15.3 |

## Type SBCH - (Flutes in Ceramic)




SBCH - 4, 5, 6

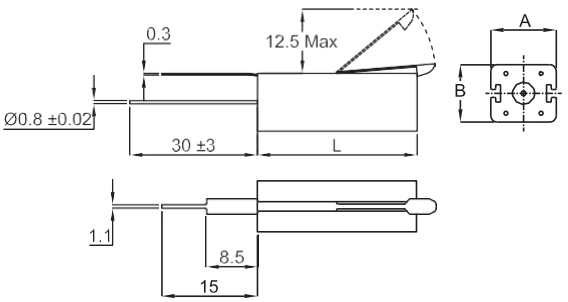



SBCH - 7, 8, 11, 15

| Model | Power Max | Ohmic Values Min | Ohmic Values Max | Dimensions A | Dimensions B | Dimensions L | Weight Grams |
|---|---|---|---|---|---|---|---|
| SBCH-4 | 4 W | R20 | 6K8 | 7 | 8 | 20 | 2.2 |
| SBCH-5 | 5 W | R30 | 10K | 7 | 8 | 25 | 3.5 |
| SBCH-6 | 7 W | R47 | 22K | 7 | 8 | 38 | 5.0 |
| SBCH-7 | 7 W | R33 | 10K | 9 | 10 | 25 | 6.0 |
| SBCH-8 | 9 W | 1R0 | 8K2 | 9 | 10 | 38 | 8.0 |
| SBCH-11 | 11 W | 1R0 | 22K | 9 | 10 | 50 | 10.0 |
| SBCH-15 | 17 W | 1R0 | 22K | 9 | 10 | 75 | 15.0 |

L = Length of Ceramic Section

## Type SBCLF - (Externally Fused Style)




| Model | Power Max | Ohmic Values Min | Ohmic Values Max | Dimensions A | Dimensions B | Dimensions L |
|---|---|---|---|---|---|---|
| SBCLF-4 | 4 W | 2R2 | 2K2 | 10 | 9 | 25 |
| SBCLF-5 | 5.5 W | 2R2 | 5K6 | 10 | 9 | 38 |
| SBCLF-7 | 7 W | 3R3 | 8K2 | 10 | 9 | 50 |
| SBCLF-10 | 10 W | 4R7 | 12K | 10 | 9 | 75 |

N.B. Solder for fuse is SnPb 60:40

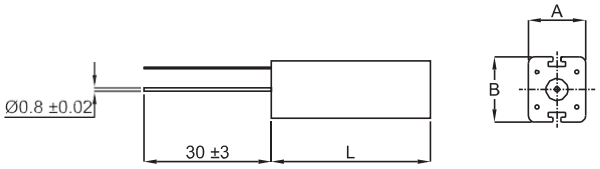


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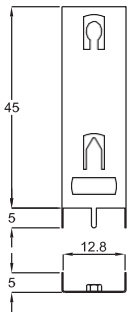
## Type SBCV - (Vertical Mount Style)




| Model | Power Max | Ohmic Values | | Dimensions | | |
|---|---|---|---|---|---|---|
| | | Min | Max | A | B | L |
| **SBCV-6** | 7 W | R47 | 22K | 9 | 10 | 25 |
| **SBCV-8** | 9 W | 1R0 | 8K2 | 9 | 10 | 38 |
| **SBCV-11** | 11 W | 1R0 | 22K | 9 | 10 | 50 |
| **SBCV-15** | 17 W | 1R0 | 22K | 9 | 10 | 75 |

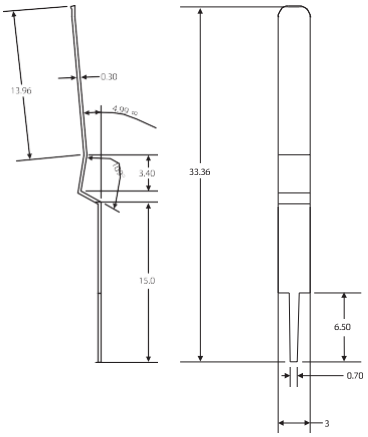
Lead drawn through hole in ceramic

## Accessories




This device is used with models SBCV.

**Order LC1 Support.**




These can be used with SBCH/SBCV models.

**Order BCV Support Pillar.**

## How to Order

| SBCH | 6 | 1K0 | J |
|---|---|---|---|
| **Common Part** | **Size** | **Resistance Value** | **Tolerance** |
| SBCH - Axial<br>SBCV - Vertical<br>SBCLF - Vertical Fusible<br>SBCHE - Axial / Vertical One Long Lead | See Relevant Table | 0.2 Ohm (200 milli Ohms) R20<br>1 Ohm (1000 milli Ohms) 1R0<br>1K Ohm (1000 Ohms) 1K0 | J - ±5%<br>K - ±10% |

N.B. All resistors are supplied with arklone proof seal

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## TE Connectivity:

2377783-2 RH73H2A40MKTN SBCHE154R7K 1-962915-1 141991-2 2005330-1 2834055-1 MPT100C18RF 3430B2F51RTDF 2-292161-3 936348-1 CPF0402B37K4E1 1743455-2 175977-2 2380312-2 3631B101LL CRGCQ2010J3K3 1-794222-0 1969656-1 3-1393225-0 ROX05SJ18R SMW73R0JT 1903112-2 2310537-1 917696-1 SBCHE64R7K 1393431-1 650075-000 TE50BR39J U5254-000005-030PA