

## Overview

Ferrite power inductors are useful in various fields and suitable for DC/DC converters and noise filters.

## Applications

Typical applications include LED lighting, xDSL modems, copying machines, flat TVs, smart meters and power supplies.

## Benefits

- Drum core construction
- Nickel-Zinc (NiZn) ferrite core
- Magnetic non-shield type
- Operating temperature range of up to +105°C
- RoHS Compliant



## Ordering Information

| SBC    | 1–                                   | 101–                                                                                   | 571                                                                                    |
|--------|--------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Series | Core Size                            | Inductance Code (µH)                                                                   | Rate Current Code (mA)                                                                 |
| SBC    | 1<br>2<br>3<br>4<br>6<br>7<br>8<br>9 | First two digits represent significant figures. Third digit specifies number of zeros. | First two digits represent significant figures. Third digit specifies number of zeros. |

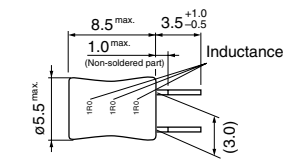
The presence of an external tube may not be indicated on the surface of sample products.

## Dimensions – Millimeters

### SBC1 Series

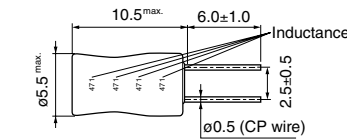
| Model        | Lead Diameter |
|--------------|---------------|
| SBC1-1R0-312 | 0.30          |
| SBC1-2R2-272 | 0.30          |
| SBC1-3R3-232 | 0.30          |
| SBC1-100-172 | 0.30          |
| SBC1-101-571 | 0.50          |
| SBC1-681-251 | 0.50          |
| SBC1-102-211 | 0.50          |

[Soft leads]



\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

[Hard leads]

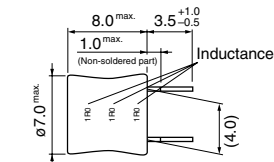


\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

### SBC2 Series

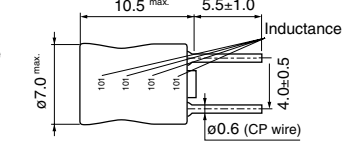
| Model        | Lead Diameter |
|--------------|---------------|
| SBC2-1R0-612 | 0.60          |
| SBC2-3R3-352 | 0.45          |
| SBC2-6R8-242 | 0.40          |
| SBC2-100-212 | 0.40          |
| SBC2-220-132 | 0.32          |
| SBC2-470-951 | 0.28          |
| SBC2-101-671 | 0.60          |
| SBC2-102-181 | 0.60          |

[Soft leads]



\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

[Hard leads]

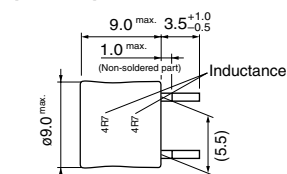


\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

### SBC3 Series

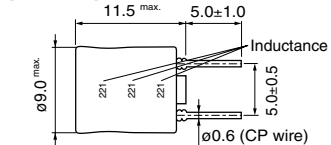
| Model        | Lead Diameter |
|--------------|---------------|
| SBC3-4R7-422 | 0.60          |
| SBC3-100-362 | 0.60          |
| SBC3-470-142 | 0.40          |
| SBC3-680-112 | 0.35          |
| SBC3-101-961 | 0.32          |
| SBC3-221-681 | 0.60          |
| SBC3-331-551 | 0.60          |
| SBC3-471-491 | 0.60          |
| SBC3-102-281 | 0.60          |
| SBC3-152-251 | 0.60          |

[Soft leads]



\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

[Hard leads]



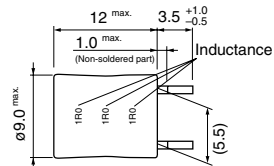
\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

## Dimensions – Millimeters cont'd

### SBC4 Series

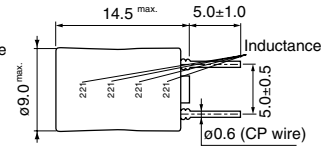
| Model        | Lead Diameter |
|--------------|---------------|
| SBC4-1R0-742 | 0.80          |
| SBC4-2R7-662 | 0.80          |
| SBC4-3R3-642 | 0.80          |
| SBC4-4R7-582 | 0.70          |
| SBC4-6R8-452 | 0.60          |
| SBC4-100-292 | 0.50          |
| SBC4-150-232 | 0.45          |
| SBC4-220-202 | 0.45          |
| SBC4-470-162 | 0.45          |
| SBC4-680-122 | 0.35          |
| SBC4-101-102 | 0.32          |
| SBC4-151-861 | 0.32          |
| SBC4-221-721 | 0.60          |
| SBC4-471-491 | 0.60          |
| SBC4-103-111 | 0.60          |

[Soft leads]



\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

[Hard leads]

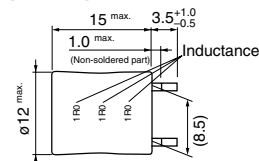


\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

### SBC6 Series

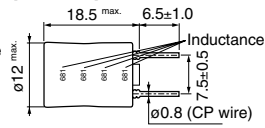
| Model        | Lead Diameter |
|--------------|---------------|
| SBC6-1R0-962 | 1.20          |
| SBC6-1R5-942 | 1.20          |
| SBC6-2R7-872 | 1.20          |
| SBC6-3R3-852 | 1.20          |
| SBC6-4R7-802 | 1.20          |
| SBC6-6R8-662 | 1.00          |
| SBC6-100-462 | 0.80          |
| SBC6-150-382 | 0.70          |
| SBC6-220-302 | 0.60          |
| SBC6-330-272 | 0.60          |
| SBC6-470-232 | 0.60          |
| SBC6-680-222 | 0.60          |
| SBC6-101-172 | 0.55          |
| SBC6-151-122 | 0.45          |
| SBC6-221-112 | 0.40          |
| SBC6-331-871 | 0.40          |
| SBC6-471-701 | 0.35          |
| SBC6-681-631 | 0.80          |
| SBC6-102-561 | 0.80          |
| SBC6-472-241 | 0.80          |
| SBC6-682-181 | 0.80          |
| SBC6-103-161 | 0.80          |

[Soft leads]



\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

[Hard leads]



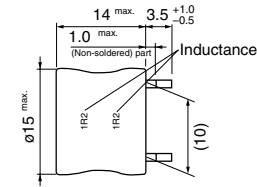
\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

## Dimensions – Millimeters cont'd

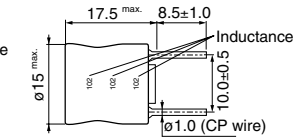
### SBC7 Series

| Model        | Lead Diameter |
|--------------|---------------|
| SBC7-220-432 | 0.90          |
| SBC7-680-222 | 0.60          |
| SBC7-101-192 | 0.60          |
| SBC7-221-132 | 0.50          |
| SBC7-102-541 | 1.00          |

[Soft leads]



[Hard leads]



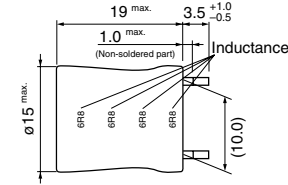
\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

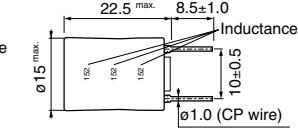
### SBC8 Series

| Model        | Lead Diameter |
|--------------|---------------|
| SBC8-6R8-862 | 1.20          |
| SBC8-100-692 | 1.00          |
| SBC8-220-492 | 0.90          |
| SBC8-330-452 | 0.90          |
| SBC8-470-372 | 0.90          |
| SBC8-680-322 | 0.80          |
| SBC8-101-242 | 0.70          |
| SBC8-151-202 | 0.60          |
| SBC8-221-182 | 0.60          |
| SBC8-331-142 | 0.55          |
| SBC8-681-102 | 0.45          |
| SBC8-102-761 | 0.40          |

[Soft leads]



[Hard leads]



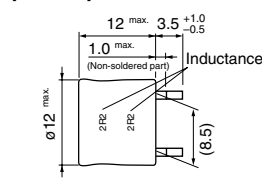
\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

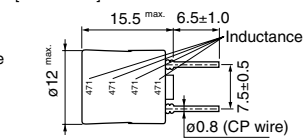
### SBC9 Series

| Model        | Lead Diameter |
|--------------|---------------|
| SBC9-1R0-982 | 1.20          |
| SBC9-6R8-492 | 0.70          |
| SBC9-100-422 | 0.70          |
| SBC9-220-312 | 0.70          |
| SBC9-331-671 | 0.32          |
| SBC9-681-551 | 0.80          |

[Soft leads]



[Hard leads]



\*Lead pitch is a reference value at the root end.  
\*Integrated soft/hard lead structure.

\*Lead pitch is a value at the root end.  
\*With phenolic resin base.

**Table 1 – Ratings & Part Number Reference**

| Part Number  | Inductance L (μH) at 10 kHz, 1 mA | DC Resistance (Ω) Maximum | Rated Current (A) ΔT = 20°C | Current (Reference Value) (A) |                    | Terminal  |          |
|--------------|-----------------------------------|---------------------------|-----------------------------|-------------------------------|--------------------|-----------|----------|
|              |                                   |                           |                             | ΔT = 40°C                     | L Change Rate -10% | Soft Lead | Pin Lead |
| SBC1-1R0-312 | 1.0±20%                           | 0.03                      | 3.10                        | 4.30                          | 5.20               | •         |          |
| SBC1-2R2-272 | 2.2±20%                           | 0.04                      | 2.70                        | 3.70                          | 3.20               | •         |          |
| SBC1-3R3-232 | 3.3±20%                           | 0.04                      | 2.30                        | 3.20                          | 2.70               | •         |          |
| SBC1-100-172 | 10±20%                            | 0.08                      | 1.70                        | 2.30                          | 1.50               | •         |          |
| SBC1-101-571 | 100±10%                           | 0.65                      | 0.57                        | 0.79                          | 0.47               |           | •        |
| SBC1-681-251 | 680±10%                           | 3.40                      | 0.25                        | 0.35                          | 0.18               |           | •        |
| SBC1-102-211 | 1,000±10%                         | 4.90                      | 0.21                        | 0.29                          | 0.14               |           | •        |
| SBC2-1R0-612 | 1.0±20%                           | 0.01                      | 6.10                        | 8.50                          | 6.40               | •         |          |
| SBC2-3R3-352 | 3.3±20%                           | 0.03                      | 3.50                        | 4.90                          | 4.00               | •         |          |
| SBC2-6R8-242 | 6.8±20%                           | 0.05                      | 2.40                        | 3.30                          | 2.70               | •         |          |
| SBC2-100-212 | 10±20%                            | 0.06                      | 2.10                        | 2.90                          | 2.10               | •         |          |
| SBC2-220-132 | 22±20%                            | 0.11                      | 1.30                        | 1.80                          | 1.40               | •         |          |
| SBC2-470-951 | 47±10%                            | 0.21                      | 0.95                        | 1.30                          | 1.00               | •         |          |
| SBC2-101-671 | 100±10%                           | 0.41                      | 0.67                        | 0.93                          | 0.68               |           | •        |
| SBC2-102-181 | 1,000±10%                         | 4.00                      | 0.18                        | 0.25                          | 0.21               |           | •        |
| SBC3-4R7-422 | 4.7±20%                           | 0.02                      | 4.20                        | 5.80                          | 4.60               | •         |          |
| SBC3-100-362 | 10±20%                            | 0.03                      | 3.60                        | 5.00                          | 3.00               | •         |          |
| SBC3-470-142 | 47±10%                            | 0.12                      | 1.40                        | 1.90                          | 1.40               | •         |          |
| SBC3-680-112 | 68±10%                            | 0.19                      | 1.10                        | 1.50                          | 1.20               | •         |          |
| SBC3-101-961 | 100±10%                           | 0.26                      | 0.96                        | 1.30                          | 1.00               | •         |          |
| SBC3-221-681 | 220±10%                           | 0.49                      | 0.68                        | 0.95                          | 0.67               |           | •        |
| SBC3-331-551 | 330±10%                           | 0.72                      | 0.55                        | 0.77                          | 0.53               |           | •        |
| SBC3-471-491 | 470±10%                           | 1.02                      | 0.49                        | 0.68                          | 0.46               |           | •        |
| SBC3-102-281 | 1,000±10%                         | 2.37                      | 0.28                        | 0.39                          | 0.31               |           | •        |
| SBC3-152-251 | 1,500±10%                         | 3.64                      | 0.25                        | 0.35                          | 0.26               |           | •        |
| SBC4-1R0-742 | 1.0±20%                           | 0.01                      | 7.40                        | 10.30                         | 14.90              | •         |          |
| SBC4-2R7-662 | 2.7±20%                           | 0.02                      | 6.60                        | 9.20                          | 9.60               | •         |          |
| SBC4-3R3-642 | 3.3±20%                           | 0.02                      | 6.40                        | 8.90                          | 8.60               | •         |          |
| SBC4-4R7-582 | 4.7±20%                           | 0.02                      | 5.80                        | 8.10                          | 7.10               | •         |          |
| SBC4-6R8-452 | 6.8±20%                           | 0.03                      | 4.50                        | 6.30                          | 5.60               | •         |          |
| SBC4-100-292 | 10±20%                            | 0.04                      | 2.90                        | 4.00                          | 4.60               | •         |          |
| SBC4-150-232 | 15±20%                            | 0.06                      | 2.30                        | 3.20                          | 4.00               | •         |          |
| SBC4-220-202 | 22±20%                            | 0.07                      | 2.00                        | 2.80                          | 3.20               | •         |          |
| SBC4-470-162 | 47±10%                            | 0.11                      | 1.60                        | 2.20                          | 2.10               | •         |          |
| SBC4-680-122 | 68±10%                            | 0.19                      | 1.20                        | 1.60                          | 1.80               | •         |          |
| SBC4-101-102 | 100±10%                           | 0.26                      | 1.00                        | 1.40                          | 1.50               | •         |          |
| SBC4-151-861 | 150±10%                           | 0.36                      | 0.86                        | 1.20                          | 1.20               | •         |          |
| SBC4-221-721 | 220±10%                           | 0.47                      | 0.72                        | 1.00                          | 1.00               |           | •        |
| SBC4-471-491 | 470±10%                           | 0.95                      | 0.49                        | 0.68                          | 0.68               |           | •        |
| SBC4-103-111 | 10,000±10%                        | 19.5                      | 0.11                        | 0.15                          | 0.14               |           | •        |
| SBC6-1R0-962 | 1.0±20%                           | 0.01                      | 9.60                        | 13.40                         | 37.70              | •         |          |
| SBC6-1R5-942 | 1.5±20%                           | 0.01                      | 9.40                        | 13.10                         | 30.90              | •         |          |
| SBC6-2R7-872 | 2.7±20%                           | 0.01                      | 8.70                        | 12.10                         | 22.60              | •         |          |
| SBC6-3R3-852 | 3.3±20%                           | 0.01                      | 8.50                        | 11.90                         | 20.00              | •         |          |
| SBC6-4R7-802 | 4.7±20%                           | 0.01                      | 8.00                        | 11.20                         | 16.10              | •         |          |
| SBC6-6R8-662 | 6.8±20%                           | 0.02                      | 6.60                        | 9.20                          | 13.60              | •         |          |
| SBC6-100-462 | 10±20%                            | 0.03                      | 4.60                        | 6.40                          | 10.90              | •         |          |
| SBC6-150-382 | 15±20%                            | 0.03                      | 3.80                        | 5.30                          | 9.10               | •         |          |
| SBC6-220-302 | 22±20%                            | 0.05                      | 3.00                        | 4.20                          | 7.50               | •         |          |
| SBC6-330-272 | 33±20%                            | 0.06                      | 2.70                        | 3.70                          | 6.10               | •         |          |
| SBC6-470-232 | 47±10%                            | 0.08                      | 2.30                        | 3.20                          | 5.00               | •         |          |
| SBC6-680-222 | 68±10%                            | 0.09                      | 2.20                        | 3.00                          | 4.10               | •         |          |
| SBC6-101-172 | 100±10%                           | 0.13                      | 1.70                        | 2.30                          | 3.50               | •         |          |
| SBC6-151-122 | 150±10%                           | 0.23                      | 1.20                        | 1.60                          | 2.80               | •         |          |
| SBC6-221-112 | 220±10%                           | 0.33                      | 1.10                        | 1.50                          | 2.30               | •         |          |
| SBC6-331-871 | 330±10%                           | 0.41                      | 0.87                        | 1.20                          | 1.90               | •         |          |
| SBC6-471-701 | 470±10%                           | 0.63                      | 0.70                        | 0.98                          | 1.60               | •         |          |
| SBC6-681-631 | 680±10%                           | 0.98                      | 0.63                        | 0.88                          | 1.30               |           | •        |
| Part Number  | Inductance L (μH) at 10 kHz, 1 mA | DC Resistance (Ω) Maximum | Rated Current (A) ΔT = 20°C | Current (Reference Value) (A) |                    | Terminal  |          |
|              |                                   |                           |                             | ΔT = 40°C                     | L Change Rate -10% | Soft Lead | Pin Lead |

**Table 1 – Ratings & Part Number Reference cont'd**

| Part Number  | Inductance L (μH) at 10 kHz, 1 mA | DC Resistance (Ω) Maximum | Rated Current (A) ΔT = 20°C | Current (Reference Value) (A) |                    | Terminal  |          |
|--------------|-----------------------------------|---------------------------|-----------------------------|-------------------------------|--------------------|-----------|----------|
|              |                                   |                           |                             | ΔT = 40°C                     | L Change Rate -10% | Soft Lead | Pin Lead |
| SBC6-102-561 | 1,000±10%                         | 1.21                      | 0.56                        | 0.78                          | 1.10               |           | •        |
| SBC6-472-241 | 4,700±10%                         | 5.92                      | 0.24                        | 0.33                          | 0.50               |           | •        |
| SBC6-682-181 | 6,800±10%                         | 8.92                      | 0.18                        | 0.25                          | 0.42               |           | •        |
| SBC6-103-161 | 10,000±10%                        | 13.60                     | 0.16                        | 0.22                          | 0.35               |           | •        |
| SBC7-220-432 | 22±20%                            | 0.03                      | 4.30                        | 6.00                          | 7.80               | •         |          |
| SBC7-680-222 | 68±10%                            | 0.09                      | 2.20                        | 3.00                          | 4.50               | •         |          |
| SBC7-101-192 | 100±10%                           | 0.12                      | 1.90                        | 2.60                          | 3.60               | •         |          |
| SBC7-221-132 | 220±10%                           | 0.25                      | 1.30                        | 1.80                          | 2.40               | •         |          |
| SBC7-102-541 | 1,000±10%                         | 1.20                      | 0.54                        | 0.75                          | 1.10               |           | •        |
| SBC8-6R8-862 | 6.8±20%                           | 0.02                      | 8.60                        | 12.00                         | 13.90              | •         |          |
| SBC8-100-692 | 10±20%                            | 0.02                      | 6.90                        | 9.60                          | 11.80              | •         |          |
| SBC8-220-492 | 22±20%                            | 0.03                      | 4.90                        | 6.80                          | 7.80               | •         |          |
| SBC8-330-452 | 33±20%                            | 0.04                      | 4.50                        | 6.30                          | 6.50               | •         |          |
| SBC8-470-372 | 47±10%                            | 0.04                      | 3.70                        | 5.10                          | 5.40               | •         |          |
| SBC8-680-322 | 68±10%                            | 0.06                      | 3.20                        | 4.40                          | 4.30               | •         |          |
| SBC8-101-242 | 100±10%                           | 0.09                      | 2.40                        | 3.30                          | 3.50               | •         |          |
| SBC8-151-202 | 150±10%                           | 0.15                      | 2.00                        | 2.80                          | 3.00               | •         |          |
| SBC8-221-182 | 220±10%                           | 0.17                      | 1.80                        | 2.50                          | 2.40               | •         |          |
| SBC8-331-142 | 330±10%                           | 0.25                      | 1.40                        | 1.90                          | 2.00               | •         |          |
| SBC8-681-102 | 680±10%                           | 0.52                      | 1.00                        | 1.40                          | 1.30               | •         |          |
| SBC8-102-761 | 1,000±10%                         | 0.78                      | 0.76                        | 1.00                          | 1.10               | •         |          |
| SBC9-1R0-982 | 1.0±20%                           | 0.01                      | 9.80                        | 13.70                         | 31.10              | •         |          |
| SBC9-6R8-492 | 6.8±20%                           | 0.03                      | 4.90                        | 6.80                          | 12.10              | •         |          |
| SBC9-100-422 | 10±20%                            | 0.03                      | 4.20                        | 5.80                          | 9.60               | •         |          |
| SBC9-220-312 | 22±20%                            | 0.04                      | 3.10                        | 4.30                          | 6.20               | •         |          |
| SBC9-331-671 | 330±10%                           | 0.58                      | 0.67                        | 0.93                          | 1.60               | •         |          |
| SBC9-681-551 | 680±10%                           | 1.05                      | 0.55                        | 0.77                          | 1.10               |           | •        |
| Part Number  | Inductance L (μH) at 10 kHz, 1 mA | DC Resistance (Ω) Maximum | Rated Current (A) ΔT = 20°C | Current (Reference Value) (A) |                    | Terminal  |          |
|              |                                   |                           |                             | ΔT = 40°C                     | L Change Rate -10% | Soft Lead | Pin Lead |

## Packaging

| Series | Lead Type | Packaging Type | Pieces per Box |
|--------|-----------|----------------|----------------|
| SBC1   | All       | Bulk           | 10,000         |
| SBC2   | Soft Lead | Bulk           | 3,750          |
|        | Pin Lead  | Bulk           | 8,000          |
| SBC3   | All       | Bulk           | 4,000          |
| SBC4   | Soft Lead | Bulk           | 3,000          |
|        | Pin Lead  | Bulk           | 4,000          |
| SBC6   | Soft Lead | Bulk           | 1,600          |
|        | Pin Lead  | Bulk           | 2,000          |
| SBC7   | All       | Bulk           | 1,000          |
| SBC8   | Soft Lead | Bulk           | 900            |
|        | Pin Lead  | Bulk           | 1,000          |
| SBC9   | All       | Bulk           | 2,000          |

## KEMET Electronic Corporation Sales Offices

For a complete list of our global sales offices, please visit [www.kemet.com/sales](http://www.kemet.com/sales).

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### Disclaimer

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