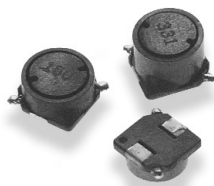


**Type 3638 Series**



The 3638 series of shielded inductors are available in three different packages. Excellent solderability and high heat resistance, together with Tyco Sigma, quality and reliability make these products suitable for a wide range of electronic equipment applications.

**Key Features**

- Available in 3 different packages
- Up to 3A
- Low RDC
- Tape and Reeled
- High heat resistance
- Excellent reliability
- Ferrite Core

**Type 3638 Series**

**Electrical Characteristics - 3638A Series**

| Inductance Code | Inductance (µH) | Test Freq. (Hz) | R.D.C. (Ω) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) |
|-----------------|-----------------|-----------------|-----------------|----------------------|----------------------|
| 1R0             | 1.0±20%         | 1K              | 0.016           | 3.80                 | 3.00                 |
| 1R5             | 1.5±20%         | 1K              | 0.020           | 3.20                 | 250                  |
| 2R2             | 2.2±20%         | 1K              | 0.032           | 3.00                 | 220                  |
| 3R3             | 3.3±20%         | 1K              | 0.044           | 1.92                 | 1.55                 |
| 4R7             | 4.7±20%         | 1K              | 0.050           | 1.80                 | 1.35                 |
| 6R8             | 6.8±20%         | 1K              | 0.070           | 1.45                 | 1.20                 |
| 100             | 10.0±20%        | 1K              | 0.105           | 1.20                 | 1.00                 |
| 150             | 15.0±20%        | 1K              | 0.140           | 1.00                 | 0.80                 |
| 220             | 22.0±20%        | 1K              | 0.220           | 0.80                 | 0.65                 |
| 330             | 33.0±20%        | 1K              | 0.280           | 0.65                 | 0.55                 |
| 470             | 47.0±20%        | 1K              | 0.380           | 0.55                 | 0.48                 |
| 680             | 68.0±20%        | 1K              | 0.600           | 0.45                 | 0.38                 |
| 101             | 100.0±20%       | 1K              | 0.840           | 0.38                 | 0.31                 |
| 151             | 150.0±20%       | 1K              | 1.200           | 0.30                 | 0.26                 |
| 221             | 220.0±20%       | 1K              | 1.700           | 0.25                 | 0.22                 |
| 331             | 330.0±20%       | 1K              | 2.450           | 0.20                 | 0.17                 |
| 471             | 470.0±20%       | 1K              | 3.600           | 0.17                 | 0.14                 |
| 681             | 680.0±20%       | 1K              | 5.400           | 0.13                 | 0.11                 |
| 102             | 1000.0±20%      | 1K              | 8.200           | 0.11                 | 0.09                 |

**Environmental Characteristics - 3638A Series**

|                 |                                       |
|-----------------|---------------------------------------|
| Storage Temp:   | -40°C to +125°C                       |
| Operating Temp: | -40°C to +105°C (Temp. rise included) |

**Electrical Characteristics - 3638B Series**

| Inductance Code | Inductance (µH) | Q Ref. | Test Freq. (MHz) | S.R.F. (MHz) Typ. | R.D.C. (Ω) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) |
|-----------------|-----------------|--------|------------------|-------------------|-----------------|----------------------|----------------------|
| 3R3             | 3.3±20%         | 16     | 7.96             | 55.0              | 0.027           | 2.40                 | 2.20                 |
| 4R7             | 4.7±20%         | 16     | 7.96             | 43.0              | 0.042           | 2.00                 | 2.00                 |
| 6R8             | 6.8±20%         | 17     | 7.96             | 37.0              | 0.054           | 1.60                 | 1.80                 |
| 100             | 10.0±20%        | 25     | 2.52             | 35.0              | 0.068           | 1.40                 | 1.60                 |
| 150             | 15.0±20%        | 22     | 2.52             | 32.0              | 0.095           | 1.10                 | 1.20                 |
| 220             | 22.0±20%        | 20     | 2.52             | 29.0              | 0.135           | 0.96                 | 1.05                 |
| 330             | 33.0±20%        | 23     | 2.52             | 20.0              | 0.200           | 0.76                 | 0.86                 |
| 470             | 47.0±20%        | 26     | 2.52             | 18.0              | 0.270           | 0.67                 | 0.70                 |
| 680             | 68.0±20%        | 22     | 2.52             | 16.0              | 0.380           | 0.60                 | 0.67                 |
| 101             | 100.0±20%       | 28     | 0.796            | 12.0              | 0.540           | 0.45                 | 0.50                 |
| 151             | 150.0±20%       | 35     | 0.796            | 10.0              | 0.800           | 0.37                 | 0.38                 |
| 221             | 220.0±20%       | 47     | 0.796            | 7.5               | 1.300           | 0.30                 | 0.32                 |
| 331             | 330.0±20%       | 46     | 0.796            | 6.1               | 1.900           | 0.22                 | 0.24                 |
| 471             | 470.0±20%       | 34     | 0.796            | 5.1               | 2.400           | 0.20                 | 0.20                 |
| 681             | 680.0±20%       | 58     | 0.796            | 3.8               | 3.750           | 0.16                 | 0.15                 |
| 102             | 1000.0±20%      | 120    | 0.252            | 3.1               | 5.400           | 0.15                 | 0.14                 |

**Type 3638 Series**

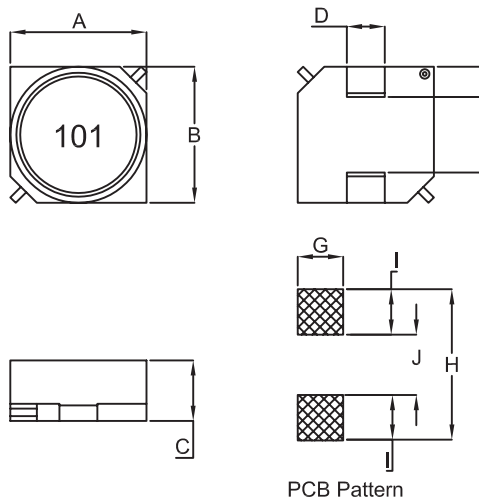
**Electrical Characteristics -  
3638C Series**

| Inductance Code | Inductance (µH) | Q Ref. | Test Freq. (MHz) | S.R.F. (MHz) Typ. | R.D.C. (Ω) Max. | I <sub>rms</sub> (A) | I <sub>sat</sub> (A) |
|-----------------|-----------------|--------|------------------|-------------------|-----------------|----------------------|----------------------|
| 100             | 10±20%          | 30     | 2.52             | 25                | 0.042           | 2.00                 | 1.70                 |
| 150             | 15±20%          | 31     | 2.52             | 24                | 0.062           | 1.60                 | 1.35                 |
| 220             | 22±20%          | 26     | 2.52             | 18                | 0.082           | 1.35                 | 1.10                 |
| 330             | 33±20%          | 25     | 2.52             | 12                | 0.115           | 1.15                 | 0.90                 |
| 470             | 47±20%          | 29     | 2.52             | 11                | 0.150           | 0.95                 | 0.78                 |
| 680             | 68±20%          | 22     | 2.52             | 10                | 0.210           | 0.77                 | 0.60                 |
| 101             | 100±20%         | 40     | 0.796            | 8                 | 0.300           | 0.65                 | 0.50                 |
| 151             | 150±20%         | 51     | 0.796            | 7                 | 0.480           | 0.53                 | 0.41                 |
| 221             | 220±20%         | 44     | 0.796            | 5                 | 0.700           | 0.45                 | 0.36                 |
| 331             | 330±20%         | 65     | 0.796            | 4                 | 0.730           | 0.40                 | 0.25                 |
| 471             | 470±20%         | 80     | 0.796            | 3                 | 1.100           | 0.32                 | 0.22                 |
| 681             | 680±20%         | 65     | 0.796            | 3                 | 1.600           | 0.27                 | 0.20                 |
| 102             | 1000±20%        | 90     | 0.252            | 3                 | 2.400           | 0.25                 | 0.15                 |

**Environmental Characteristics -  
B, C Series**

|                 |                 |
|-----------------|-----------------|
| Storage Temp:   | -40°C to +125°C |
| Operating Temp: | -25°C to +105°C |
| Temp Rise:      | 30°C Max.       |

**Dimensions  
A, B, C Series**



| Series | A                   | B                   | C                   | D                   | E        | F        | G        | H        | I        | J        |
|--------|---------------------|---------------------|---------------------|---------------------|----------|----------|----------|----------|----------|----------|
| 3638A  | 6.0 <sup>+0.3</sup> | 6.0 <sup>+0.3</sup> | 2.8 <sup>+0.3</sup> | 2.0 <sup>+0.3</sup> | 1.9 typ. | 2.2 ref. | 2.4 ref. | 6.7 ref. | 2.3 ref. | 2.1 ref. |
| 3638B  | 7.0 <sup>+0.3</sup> | 7.0 <sup>+0.3</sup> | 3.2 <sup>+0.3</sup> | 2.0 typ.            | 1.5 typ. | 4.0 typ. | 2.4 ref. | 7.8 ref. | 1.8 ref. | 4.2 ref. |
| 3638C  | 7.0 <sup>+0.3</sup> | 7.0 <sup>+0.3</sup> | 4.5 <sup>+0.3</sup> | 2.0 typ.            | 1.5 typ. | 4.0 typ. | 2.4 ref. | 7.8 ref. | 1.8 ref. | 4.2 ref. |

**Type 3638 Series**

**Reliability Test -  
A, B, C Series**

| Test Item                                   | Specification        | Test Condition  |
|---|----------------------|---|
| <b>Thermal Shock Test:<br/>(Temp Cycle)</b> | $\Delta L \leq 20\%$ | Room Temp. $\rightarrow$ $-25 \pm 2^\circ\text{C}$<br>15 minutes $\rightarrow$ 30 minutes<br><br>Room Temp. $\rightarrow$ $85 \pm 2^\circ\text{C}$<br>15 minutes $\rightarrow$ 30 minutes<br><br>Total: 50 cycles |
| <b>Humidity Resistance Test:</b>            | $\Delta L \leq 20\%$ | Temperature: $40 \pm 2^\circ\text{C}$<br>Humidity: 90 ~ 95%<br>Applied Current: Per spec.<br>Time: 500 hours  |
| <b>High Temp. Resistance Test:</b>          | $\Delta L \leq 20\%$ | Temperature: $105 \pm 2^\circ\text{C}$ ( $125 \pm 2^\circ\text{C}$ - A Series)<br>Applied Current: Per spec.<br>Time: 500 hours   |

**How to Order**

| 3638        | A         | 220                                    | M         |
|-------------|-----------|--|-----------|
| Common Part | Style     | Inductance                             | Tolerance |
| 3638        | A, B or C | See Relevant Table for Inductance Code | M - 20%   |