



### FEATURES

- RoHS compliant
- Up to 2.1A I<sub>DC</sub>
- 2.2μH to 220μH
- Optional integral EMI shield
- Low R<sub>DC</sub>
- Surface mount
- Compact size
- Tape and reel packaging
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

### DESCRIPTION

The 2300 series is a range of bobbin-wound, surface-mount inductors designed for use in switching power supply, and power line filter circuits. The parts are suitable for any application requiring a high saturation current in a miniature surface-mount footprint. Where EMI is a critical factor, the devices are available with an integral ferrite EMI shield.

### SELECTION GUIDE (UNSHIELDED TYPES)

| Order Code    | Inductance<br>(1 kHz, 100mV <sub>AC</sub> ) | Inductance Range<br>(1 kHz, 100mV <sub>AC</sub> ) | DC<br>Current <sup>1</sup> | DC<br>Resistance |
|---------------|---------------------------------------------|---------------------------------------------------|----------------------------|------------------|
|               | Nom.                                        | Min. - Max.                                       | Max.                       | Max.             |
|               | μH                                          | μH                                                | A                          | Ω                |
| <b>232R2C</b> | 2.2                                         | 1.7 - 2.8                                         | 2.10                       | 0.040            |
| <b>233R3C</b> | 3.3                                         | 2.3 - 3.9                                         | 1.80                       | 0.058            |
| <b>234R7C</b> | 4.7                                         | 3.6 - 6.0                                         | 1.48                       | 0.068            |
| <b>236R8C</b> | 6.8                                         | 5.1 - 8.6                                         | 1.22                       | 0.102            |
| <b>23100C</b> | 10                                          | 7.6 - 12.7                                        | 1.02                       | 0.138            |
| <b>23150C</b> | 15                                          | 11.3 - 18.9                                       | 0.86                       | 0.210            |
| <b>23220C</b> | 22                                          | 16.8 - 28.1                                       | 0.74                       | 0.361            |
| <b>23330C</b> | 33                                          | 24.6 - 41.0                                       | 0.64                       | 0.497            |
| <b>23470C</b> | 47                                          | 34.6 - 57.6                                       | 0.55                       | 0.683            |
| <b>23680C</b> | 68                                          | 51.0 - 85.0                                       | 0.49                       | 1.051            |
| <b>23101C</b> | 100                                         | 74.2 - 124                                        | 0.43                       | 1.281            |

### SELECTION GUIDE (SHIELDED TYPES)

| Order Code     | Inductance<br>(1 kHz, 100mV <sub>AC</sub> ) | Inductance Range<br>(1 kHz, 100mV <sub>AC</sub> ) | DC<br>Current <sup>1</sup> | DC<br>Resistance |
|----------------|---------------------------------------------|---------------------------------------------------|----------------------------|------------------|
|                | Nom.                                        | Min. - Max.                                       | Max.                       | Max.             |
|                | μH                                          | μH                                                | A                          | Ω                |
| <b>23S2R2C</b> | 2.2                                         | 1.8 - 3.0                                         | 2.10                       | 0.025            |
| <b>23S3R3C</b> | 3.3                                         | 2.7 - 4.5                                         | 1.80                       | 0.031            |
| <b>23S4R7C</b> | 4.7                                         | 3.8 - 6.4                                         | 1.60                       | 0.044            |
| <b>23S6R8C</b> | 6.8                                         | 5.2 - 8.6                                         | 1.40                       | 0.064            |
| <b>23S100C</b> | 10                                          | 7.5 - 12.6                                        | 1.18                       | 0.087            |
| <b>23S120C</b> | 12                                          | 9.4 - 15.6                                        | 1.08                       | 0.107            |
| <b>23S150C</b> | 15                                          | 11.4 - 19.0                                       | 0.96                       | 0.131            |
| <b>23S180C</b> | 18                                          | 13.6 - 22.6                                       | 0.88                       | 0.143            |
| <b>23S220C</b> | 22                                          | 16.0 - 26.7                                       | 0.80                       | 0.175            |
| <b>23S270C</b> | 27                                          | 20.0 - 33.3                                       | 0.72                       | 0.218            |
| <b>23S330C</b> | 33                                          | 24.4 - 40.7                                       | 0.65                       | 0.241            |
| <b>23S390C</b> | 39                                          | 29.3 - 48.8                                       | 0.60                       | 0.370            |
| <b>23S470C</b> | 47                                          | 34.6 - 57.7                                       | 0.54                       | 0.460            |
| <b>23S560C</b> | 56                                          | 42.4 - 70.6                                       | 0.50                       | 0.509            |
| <b>23S680C</b> | 68                                          | 50.9 - 84.9                                       | 0.45                       | 0.641            |
| <b>23S101C</b> | 100                                         | 75.8 - 126                                        | 0.37                       | 0.782            |
| <b>23S151C</b> | 150                                         | 112 - 187                                         | 0.30                       | 1.190            |
| <b>23S221C</b> | 220                                         | 167 - 279                                         | 0.25                       | 2.280            |

### ABSOLUTE MAXIMUM RATINGS

|                                      |                |
|--------------------------------------|----------------|
| Operating free air temperature range | -40°C to 85°C  |
| Storage temperature range            | -40°C to 125°C |

### SOLDERING INFORMATION<sup>2</sup>

|                         |                |
|-------------------------|----------------|
| Peak reflow temperature | 250°C          |
| Pin finish              | Hot dipped tin |

Specifications typical at T<sub>a</sub> = 25°C

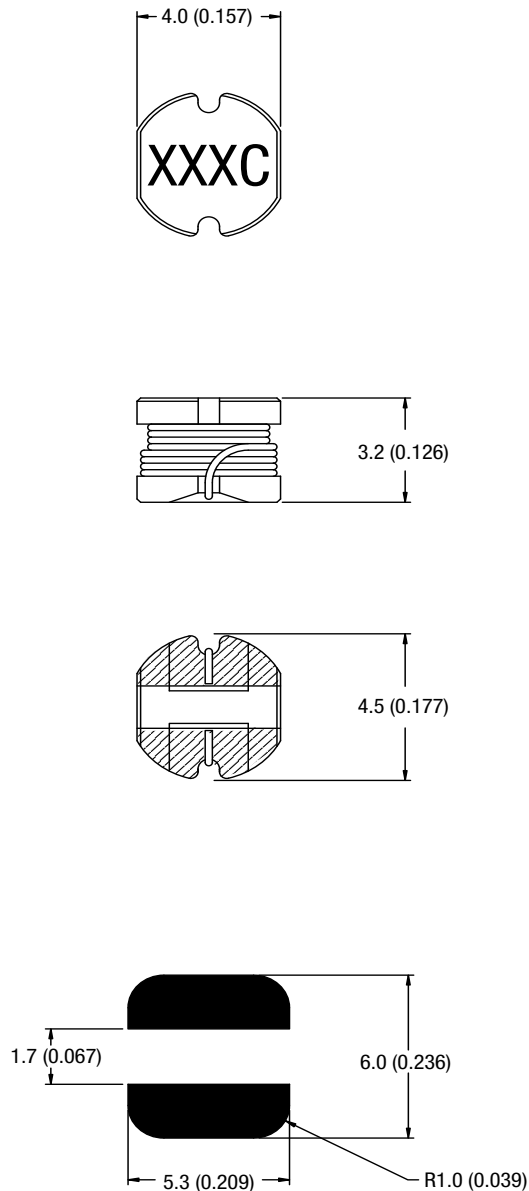
- 1 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit [www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)



For full details go to  
[www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)

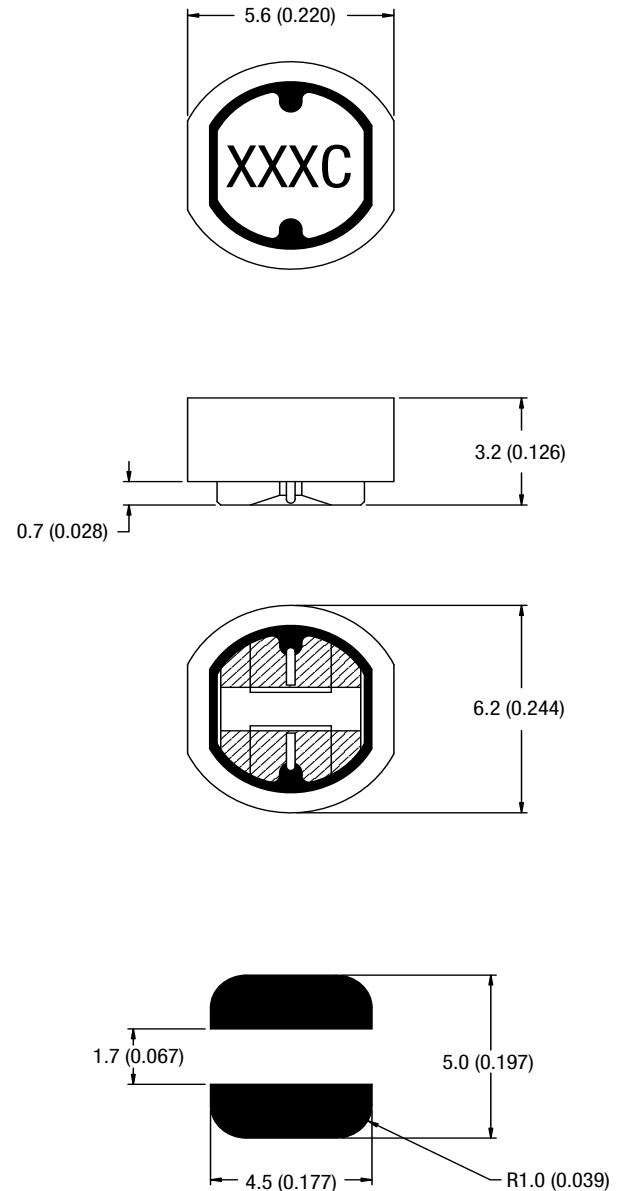
## MECHANICAL DIMENSIONS

### UNSHIELDED TYPES



Unless otherwise stated all dimensions in mm (inches)  $\pm 0.25$  (0.01).  
 Package Weight 0.20g Typ.  
 Hatching represents solder pads.

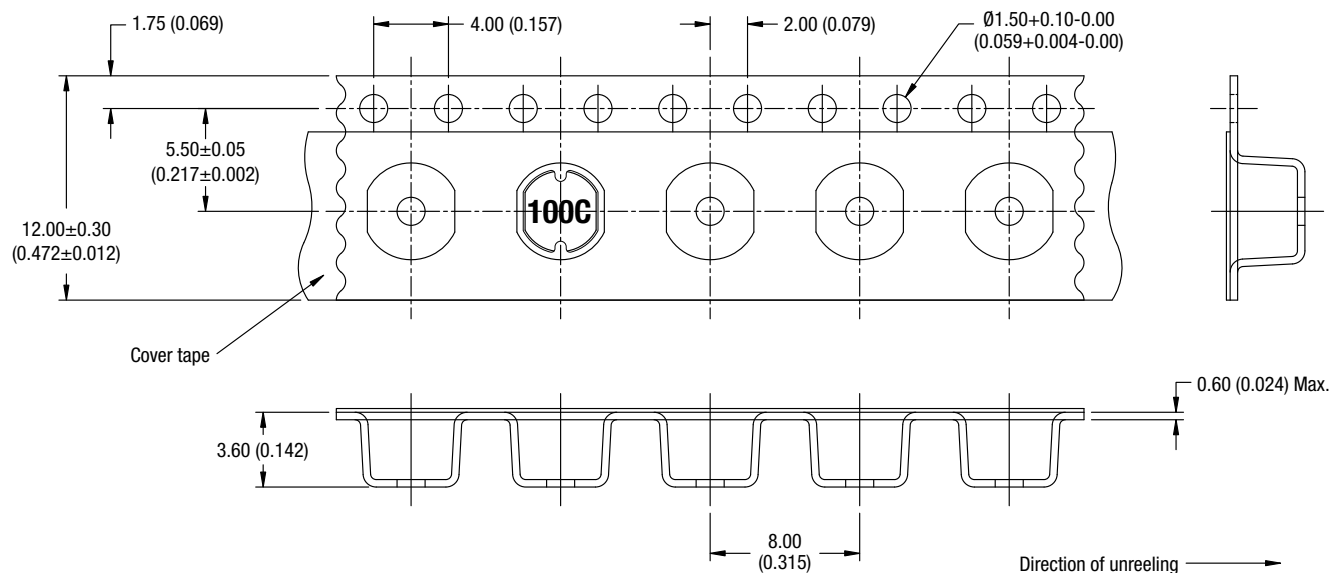
### SHIELDED TYPES



Unless otherwise stated all dimensions in mm (inches)  $\pm 0.25$  (0.01).  
 Package Weight 0.34g Typ.  
 Hatching represents solder pads.

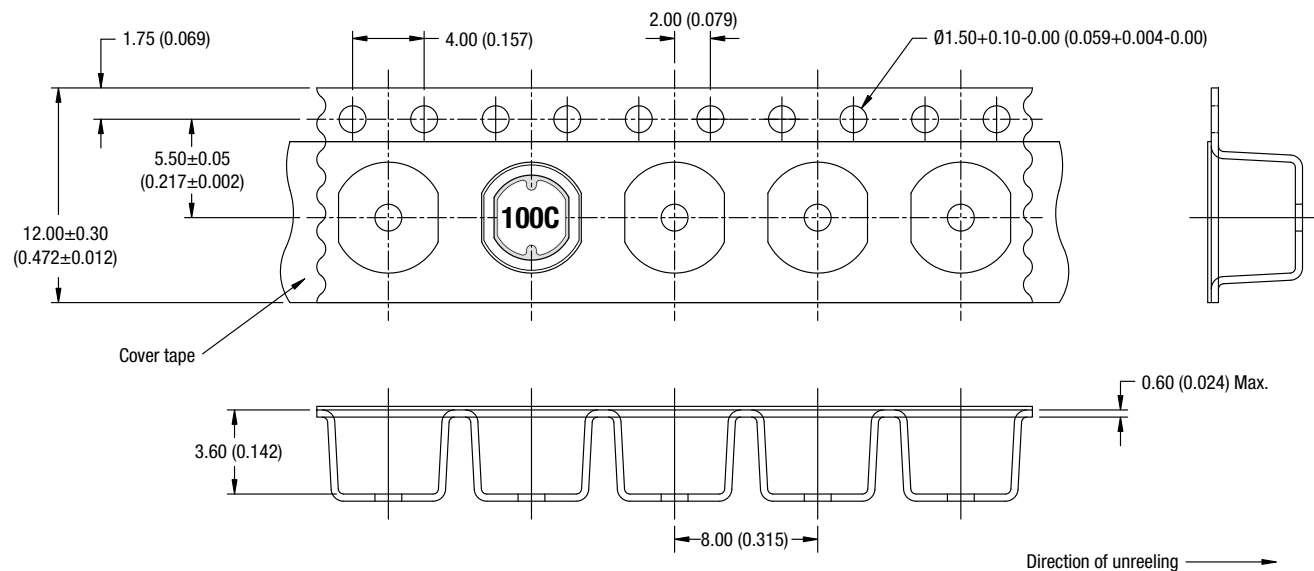
## TAPE & REEL SPECIFICATIONS

### TAPE OUTLINE DIMENSIONS - UNSHIELDED PARTS



All dimensions in mm (inches)

### TAPE OUTLINE DIMENSIONS - SHIELDED PARTS



All dimensions in mm (inches)

## TAPE & REEL SPECIFICATIONS

### REEL OUTLINE DIMENSIONS

