



FEATURES

- RoHS compliant
- Up to 2.1A I_{DC}
- 2.2μH to 220μH
- Optional integral EMI shield
- Low R_{DC}
- 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.

2300 Series

Bobbin Wound Surface Mount Inductors

SELECTION GUIDE (UNSHIELDED TYPES)

| Order Code | Inductance (1kHz, 100mV _{AC}) | Inductance Range (1kHz, 100mV _{AC}) | DC Current ¹ | DC Resistance | Recommended Alternative |
|------------|--|--|----------------------------|------------------|----------------------------|
| | Nom. | Min. - Max. | Max. | Max. | |
| | μH | μH | A | Ω | |
| NRND | | | | | |
| 232R2C | 2.2 | 1.7 - 2.8 | 2.10 | 0.040 | 84222C |
| 233R3C | 3.3 | 2.3 - 3.9 | 1.80 | 0.058 | 29332C |
| 234R7C | 4.7 | 3.6 - 6.0 | 1.48 | 0.068 | 84472C |
| 236R8C | 6.8 | 5.1 - 8.6 | 1.22 | 0.102 | 84682C |
| 23100C | 10 | 7.6 - 12.7 | 1.02 | 0.138 | 84103C |
| 23150C | 15 | 11.3 - 18.9 | 0.86 | 0.210 | 84153C |
| 23220C | 22 | 16.8 - 28.1 | 0.74 | 0.361 | 29223C |
| 23330C | 33 | 24.6 - 41.0 | 0.64 | 0.497 | 84333C |
| 23470C | 47 | 34.6 - 57.6 | 0.55 | 0.683 | 29473C |
| 23680C | 68 | 51.0 - 85.0 | 0.49 | 1.051 | 29683C |
| 23101C | 100 | 74.2 - 124 | 0.43 | 1.281 | 29104C |

SELECTION GUIDE (SHIELDED TYPES)

| Order Code | Inductance (1kHz, 100mV _{AC}) | Inductance Range (1kHz, 100mV _{AC}) | DC Current ¹ | DC Resistance | Recommended Alternative |
|------------|--|--|----------------------------|------------------|----------------------------|
| | Nom. | Min. - Max. | Max. | Max. | |
| | μH | μH | A | Ω | |
| NRND | | | | | |
| 23S2R2C | 2.2 | 1.8 - 3.0 | 2.10 | 0.025 | 29222C |
| 23S3R3C | 3.3 | 2.7 - 4.5 | 1.80 | 0.031 | 29332C |
| 23S4R7C | 4.7 | 3.8 - 6.4 | 1.60 | 0.044 | 29472C |
| 23S6R8C | 6.8 | 5.2 - 8.6 | 1.40 | 0.064 | 29682C |
| 23S100C | 10 | 7.5 - 12.6 | 1.18 | 0.087 | 29103C |
| 23S120C | 12 | 9.4 - 15.6 | 1.08 | 0.107 | 29153C |
| 23S150C | 15 | 11.4 - 19.0 | 0.96 | 0.131 | 29153C |
| 23S180C | 18 | 13.6 - 22.6 | 0.88 | 0.143 | 29153C |
| 23S220C | 22 | 16.0 - 26.7 | 0.80 | 0.175 | 29223C |
| 23S270C | 27 | 20.0 - 33.3 | 0.72 | 0.218 | 29223C |
| 23S330C | 33 | 24.4 - 40.7 | 0.65 | 0.241 | 29333C |
| 23S390C | 39 | 29.3 - 48.8 | 0.60 | 0.370 | 29333C |
| 23S470C | 47 | 34.6 - 57.7 | 0.54 | 0.460 | 29473C |
| 23S560C | 56 | 42.4 - 70.6 | 0.50 | 0.509 | 29473C |
| 23S680C | 68 | 50.9 - 84.9 | 0.45 | 0.641 | 29683C |
| 23S101C | 100 | 75.8 - 126 | 0.37 | 0.782 | 29104C |
| 23S151C | 150 | 112 - 187 | 0.30 | 1.190 | 29154C |
| 23S221C | 220 | 167 - 279 | 0.25 | 2.280 | 29224C |

ABSOLUTE MAXIMUM RATINGS

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

SOLDERING INFORMATION²

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

Specifications typical at T_A = 25°C

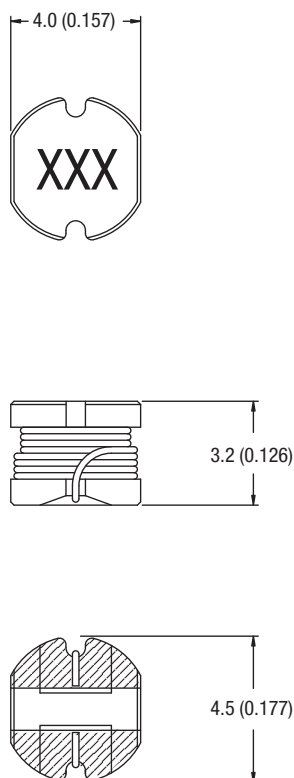
- The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- For further information, please visit www.murata.com/en-global/products/power/rohs



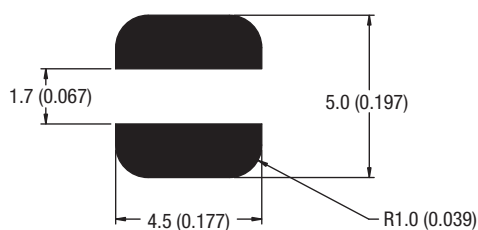
For full details go to
www.murata-ps.com/rohs

MECHANICAL DIMENSIONS

UNSHIELDED TYPES



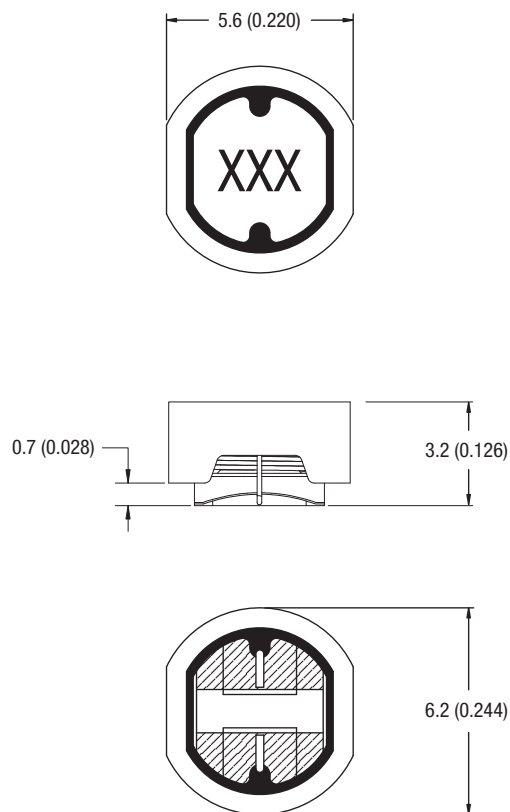
RECOMMENDED FOOTPRINT



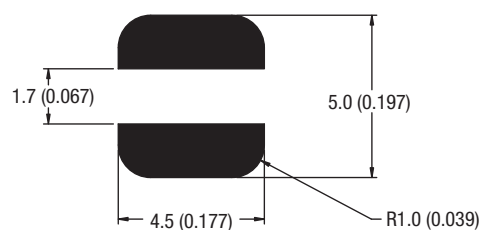
Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
Hatching represents solder pads.

Package Weight 0.20g Typ.

SHIELDED TYPES



RECOMMENDED FOOTPRINT

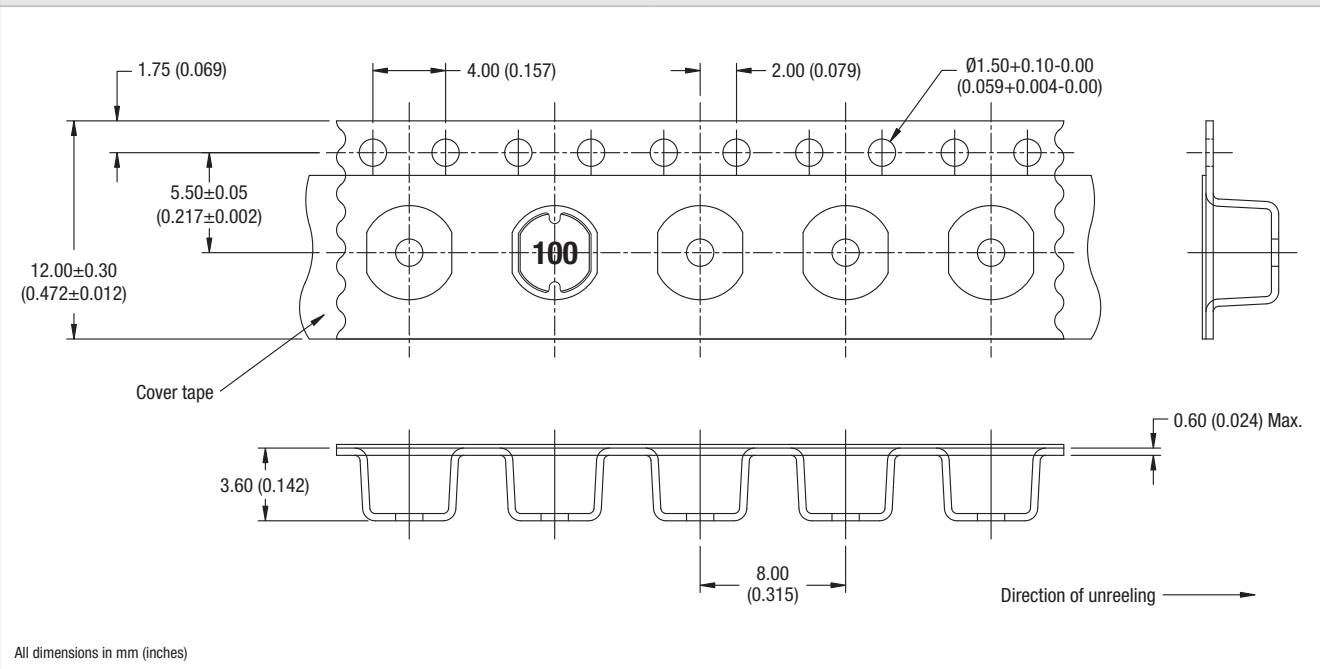


Unless otherwise stated all dimensions in mm (inches) ± 0.25 (0.01).
Hatching represents solder pads.

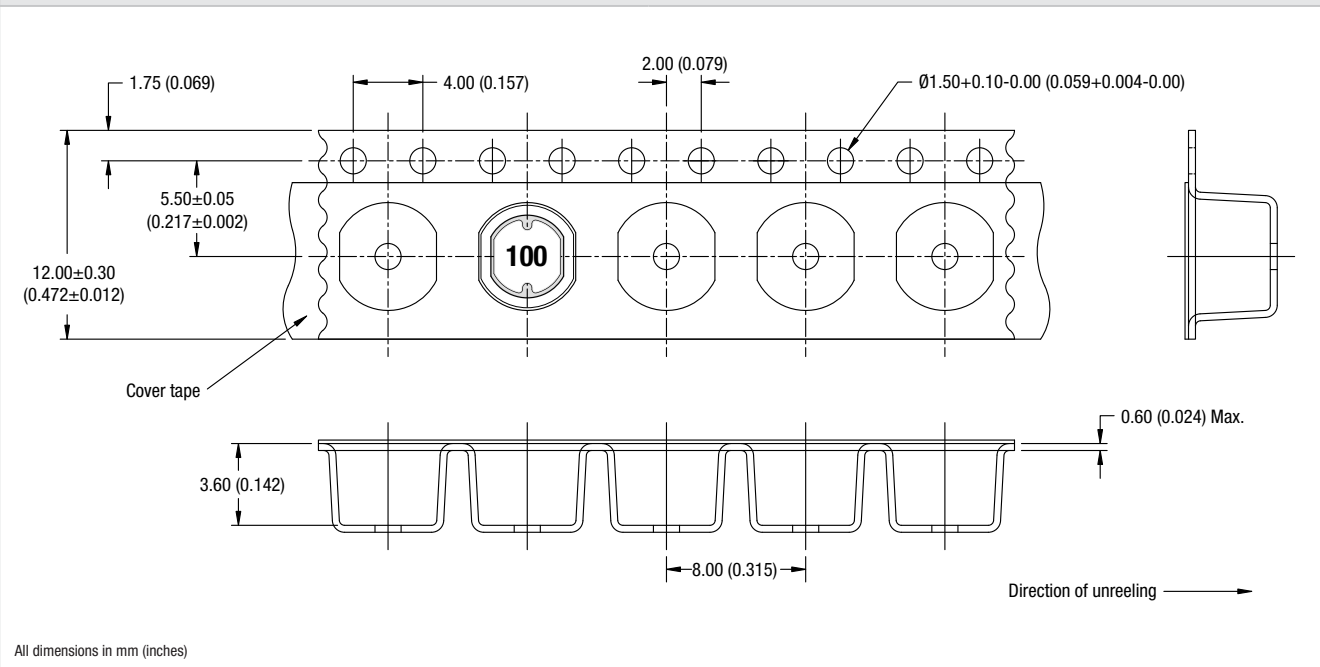
Package Weight 0.34g Typ.

TAPE & REEL SPECIFICATIONS

TAPE OUTLINE DIMENSIONS - UNSHIELDED PARTS

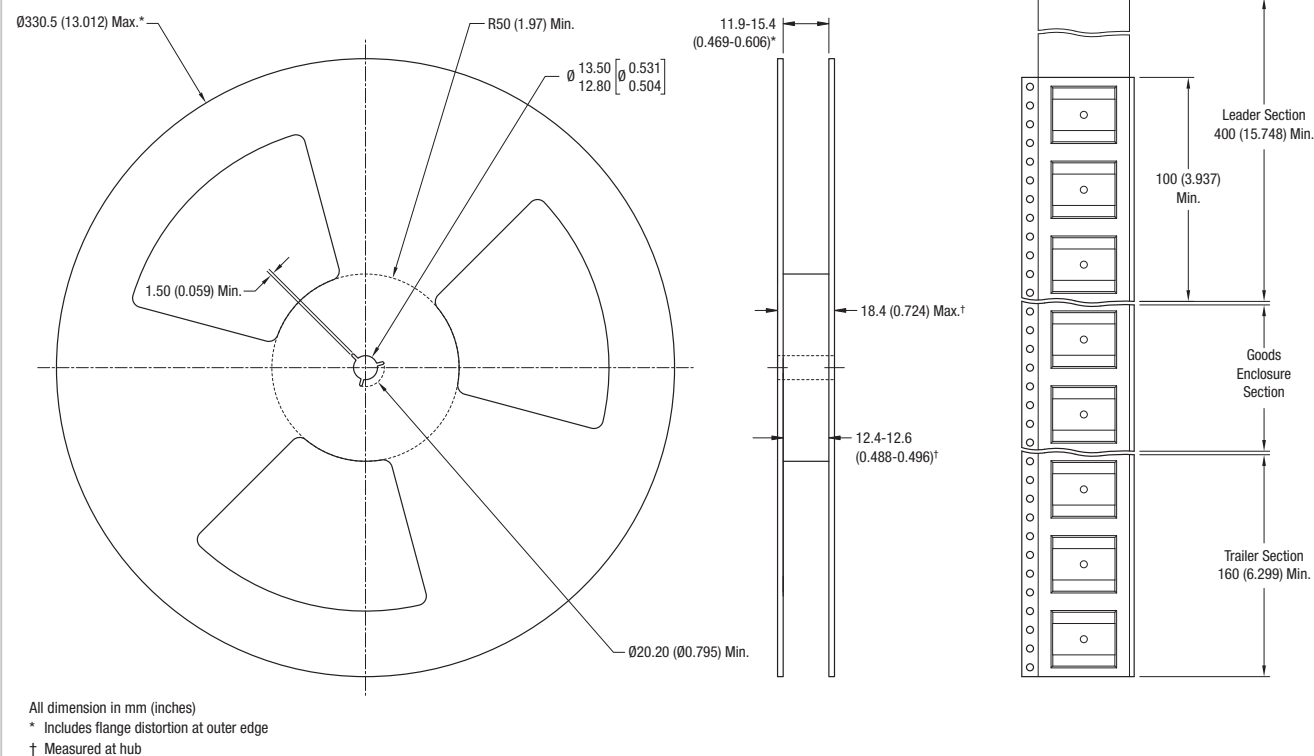


TAPE OUTLINE DIMENSIONS - SHIELDED PARTS



TAPE & REEL SPECIFICATIONS (Continued)

REEL OUTLINE DIMENSIONS



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