

# 23330C Datasheet



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DiGi Electronics Part Number	23330C-DG
Manufacturer	<a href="#">Murata Power Solutions</a>
Manufacturer Product Number	23330C
Description	FIXED IND 33UH 640MA 497MOHM SMD
Detailed Description	33 $\mu$ H Unshielded Wirewound Inductor 640 mA 497 mOhm Max Nonstandard



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## Purchase and inquiry

Manufacturer Product Number:

23330C

Series:

2300

Type:

Wirewound

Inductance:

33  $\mu$ H

Current Rating (Amps):

640 mA

Shielding:

Unshielded

Q @ Freq:

-

Ratings:

-

Inductance Frequency - Test:

1 kHz

Package / Case:

Nonstandard

Size / Dimension:

0.177" L x 0.157" W (4.50mm x 4.00mm)

Base Product Number:

23

Manufacturer:

Murata Power Solutions

Product Status:

Active

Material - Core:

-

Tolerance:

-

Current - Saturation (Isat):

-

DC Resistance (DCR):

497mOhm Max

Frequency - Self Resonant:

-

Operating Temperature:

-40°C ~ 85°C

Mounting Type:

Surface Mount

Supplier Device Package:

-

Height - Seated (Max):

0.126" (3.20mm)

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8504.50.4000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



## 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 (1kHz, 100mV <sub>AC</sub> )	Inductance Range (1kHz, 100mV <sub>AC</sub> )	DC Current <sup>1</sup>	DC 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 (1kHz, 100mV <sub>AC</sub> )	Inductance Range (1kHz, 100mV <sub>AC</sub> )	DC Current <sup>1</sup>	DC 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

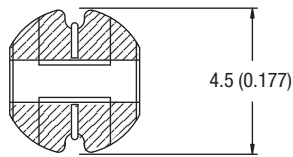
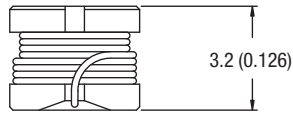
- 1 The maximum DC current is the value at which the inductance falls to 75% of its nominal value or when its temperature rise reaches 40°C, whichever is sooner.
- 2 For further information, please visit [www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)



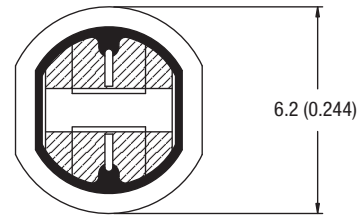
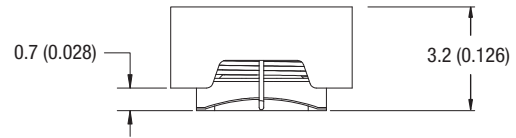
For full details go to  
[www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)

**MECHANICAL DIMENSIONS**

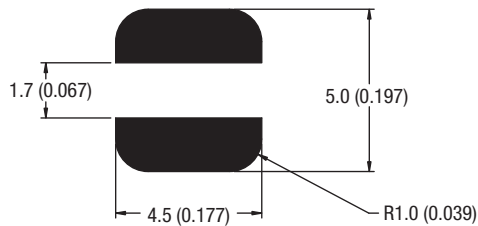
**UNSHIELDED TYPES**



**SHIELDED TYPES**



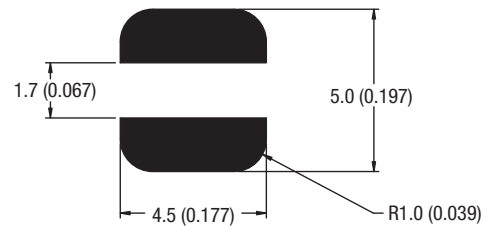
**RECOMMENDED FOOTPRINT**



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

Package Weight 0.20g Typ.

**RECOMMENDED FOOTPRINT**

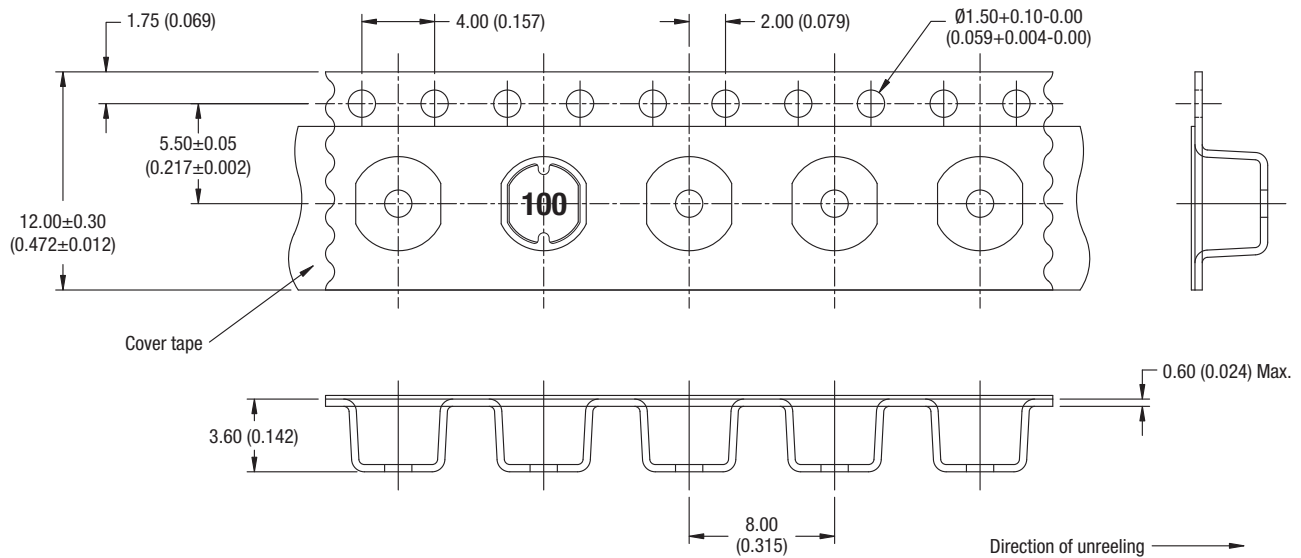


Unless otherwise stated all dimensions in mm (inches)  $\pm 0.25$  (0.01).  
Hatching represents solder pads.

Package Weight 0.34g Typ.

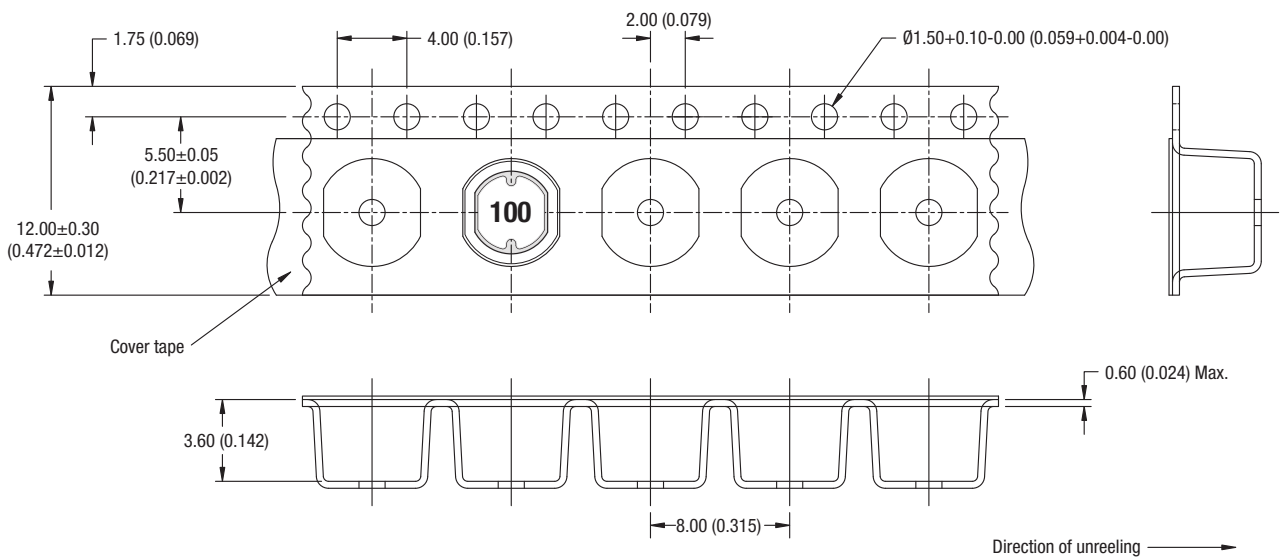
## TAPE &amp; REEL SPECIFICATIONS

## TAPE OUTLINE DIMENSIONS - UNSHIELDED PARTS



All dimensions in mm (inches)

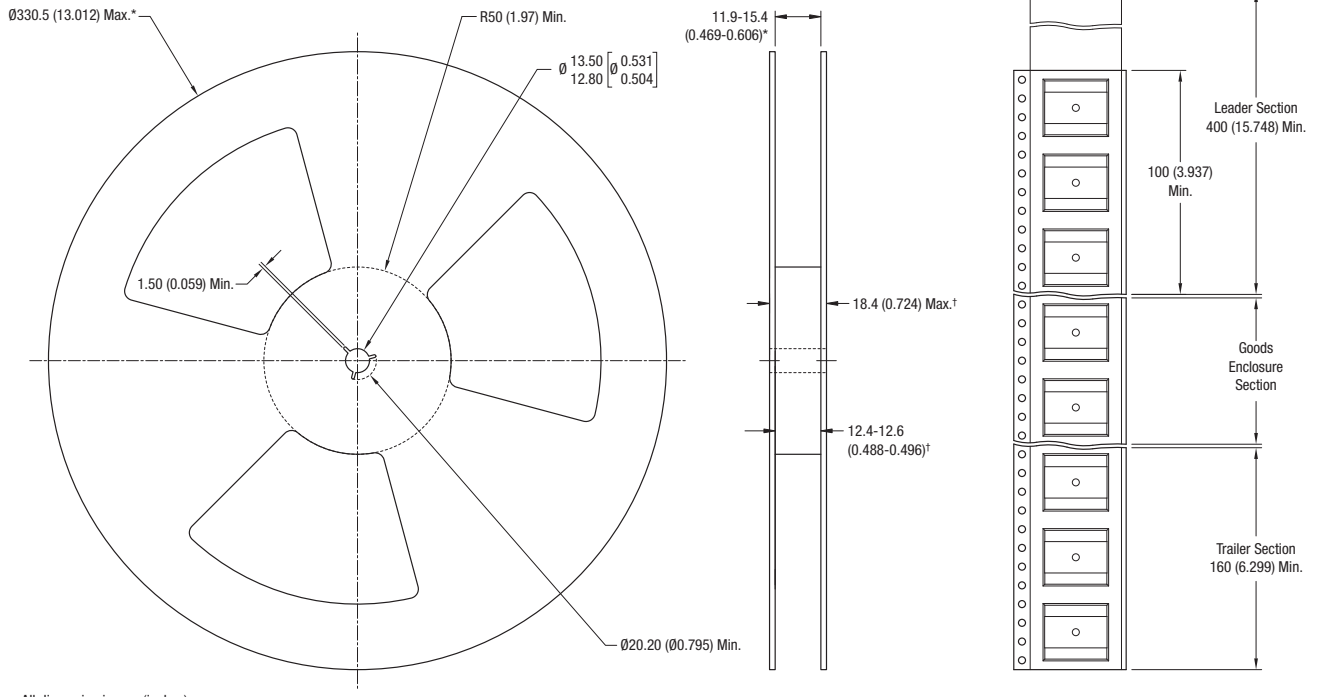
## TAPE OUTLINE DIMENSIONS - SHIELDED PARTS



All dimensions in mm (inches)

**TAPE & REEL SPECIFICATIONS (Continued)**

**REEL OUTLINE DIMENSIONS**



All dimension in mm (inches)  
 \* Includes flange distortion at outer edge  
 † Measured at hub

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- Disaster prevention / crime prevention equipment
- Data Processing equipment

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