



## FEATURES

- RoHS compliant
- 0.47mH to 4.7mH
- Surface mount
- Up to 0.7A I<sub>DC</sub>
- UL94 V-0 package materials
- Compact size
- J-STD-020C reflow
- Backward compatible with Sn/Pb soldering systems

## PRODUCT OVERVIEW

The 5000 series is a range of surface-mount common mode chokes designed to attenuate up to 100MHz common mode noise where line filtering is required, such as low current switching power supplies and telecom applications.

# 5000 Series

## Surface Mount Common Mode Chokes

### SELECTION GUIDE

| Order Code | Inductance, L <sup>1</sup><br>(0.1V @ 100kHz) |           | Leakage Inductance, L <sub>L</sub><br>(0.1V @ 100kHz) |      | DC Resistance, R <sup>1</sup> | Current Rating <sup>3</sup><br>(series connection) | Isolation <sup>4</sup> |
|------------|-----------------------------------------------|-----------|-------------------------------------------------------|------|-------------------------------|----------------------------------------------------|------------------------|
|            | Nom.                                          | Tolerance | Typ.                                                  | Max. | Max.                          |                                                    |                        |
|            | mH                                            | %         | μH                                                    | μH   | Ω                             | mA <sub>DC</sub>                                   | V <sub>rms</sub>       |
| 50474C     | 0.47                                          | +50%/-30% | 0.2                                                   | 0.40 | 0.30                          | 700                                                | 500                    |
| 50105C     | 1.00                                          |           | 0.2                                                   | 0.40 | 0.30                          | 700                                                |                        |
| 50225C     | 2.20                                          |           | 0.25                                                  | 0.60 | 0.40                          | 500                                                |                        |
| 50475C     | 4.70                                          |           | 0.4                                                   | 0.80 | 0.70                          | 400                                                |                        |

### 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                              | Pure tin dip |
| Moisture sensitivity level <sup>5</sup> | 1            |

All specifications typical at T<sub>A</sub>=25°C

1 Measured between pins 1-4 or 2-3.

2 For further information, please visit [www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)

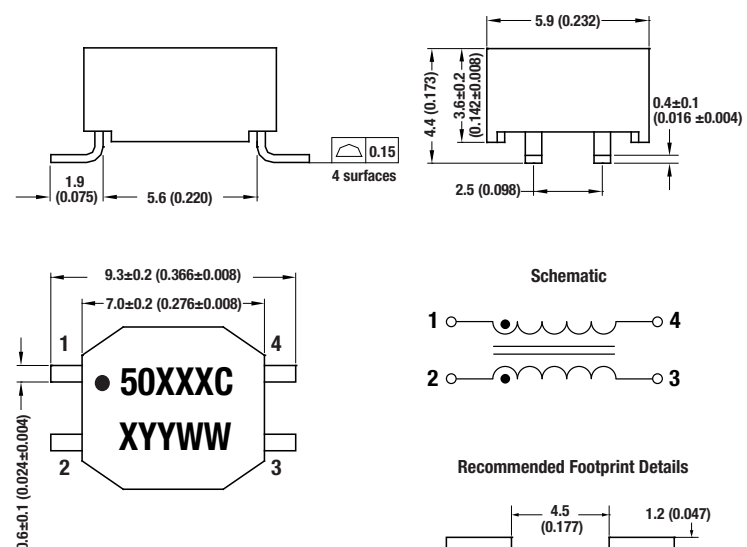
3 The maximum DC current occurs when its temperature rise reaches 40°C.

4 Flash tested for 1 second.

5 Representative samples of the product were subjected to the conditioning described in IPC/JEDEC J-STD-020C and passed electrical testing, package coplanarity and visual inspection which revealed no external cracks or changes in package body flatness.

### PACKAGE SPECIFICATIONS

#### Mechanical Dimensions



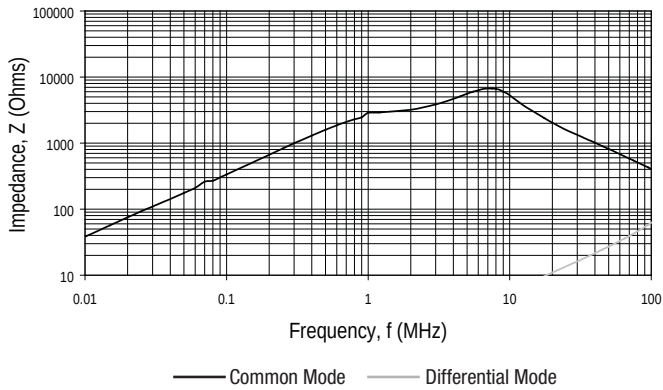
Unless otherwise stated, all dimensions in mm (inches) ±0.25 (0.010).  
Package weight 0.30g Typ.



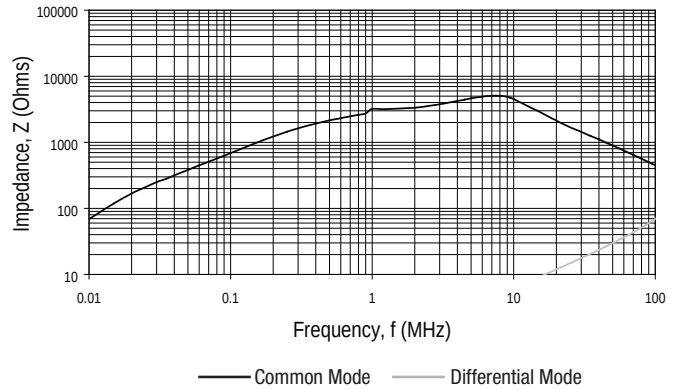
For full details go to  
[www.murata-ps.com/rohs](http://www.murata-ps.com/rohs)

## IMPEDANCE IN COMMON MODE AND DIFFERENTIAL MODE VS FREQUENCY

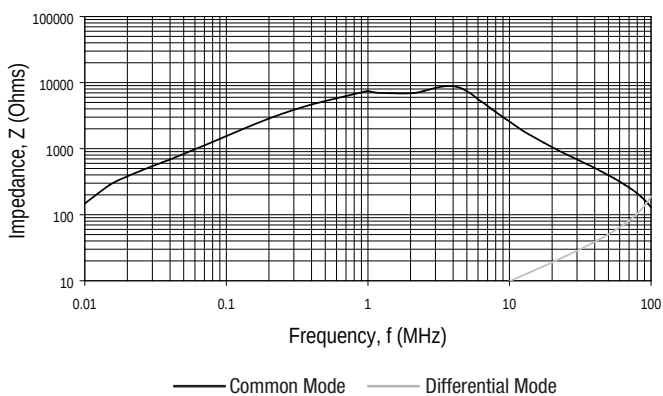
**50474C**



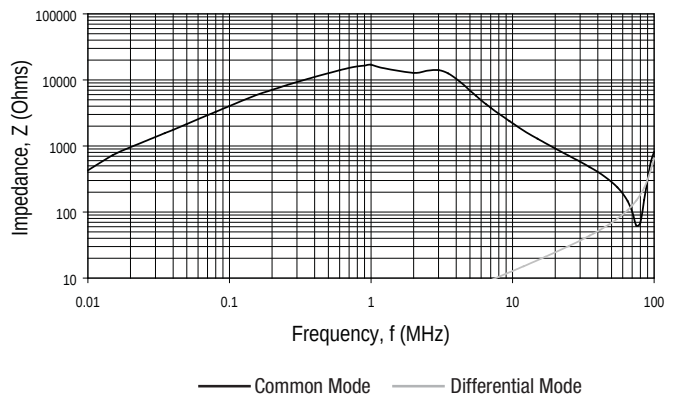
**50105C**



**50225C**

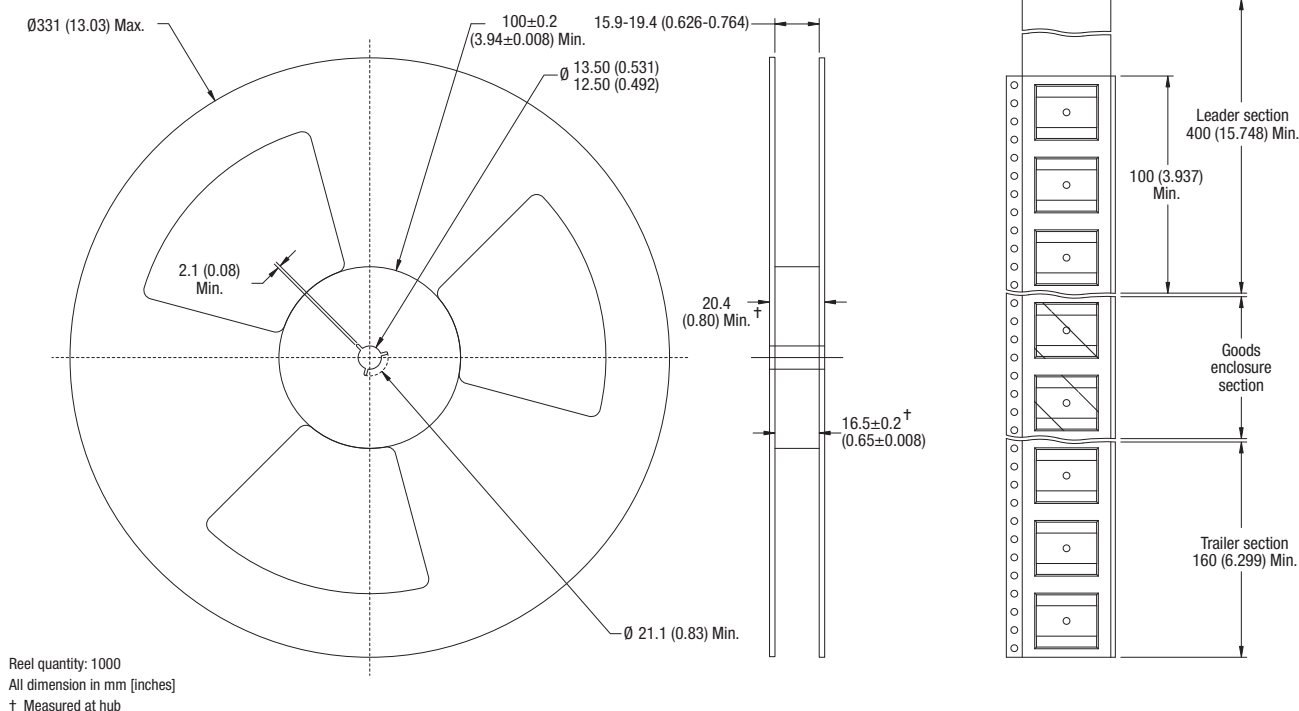


**50475C**

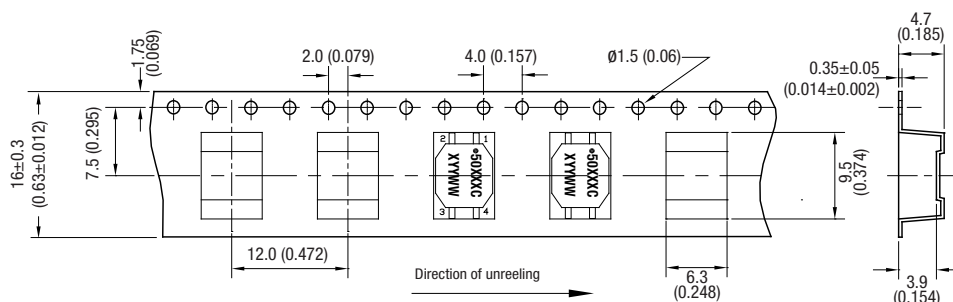


## PACKAGE SPECIFICATIONS

### Mechanical Dimensions



### Tape Outline Dimensions



Unless otherwise stated, all dimensions in mm (inches)  $\pm 0.1$  (0.004).

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