Murata Power Solutions

3000B Series

Surface Mount Power Inductor



FEATURES

- Low-profile surface-mount design
- Inductance range from 85nH to 220nH
- Rated current up to 78A_{pk}
- Materials meet UL94V-0
- Custom inductance values available
- RoHS compliant
- J-STD-020 D.1 reflow

PRODUCT OVERVIEW

The 3000B series are a range of high-current, surface-mount bead inductors, suited to a variety of applications. The products are designed for noise suppression in high-frequency, high-current switching power supplies, DC-DC converters, DC-AC inverters and VRMs.

SELECTION GUIDE

Order Code	Inductance (1MHz, 0.1V)		I_{DC}[3]	I_{SAT} (Typ.)[4]		DC Resistance	
	±20%	Typ. @ I_{DC}	Typ.	25°C	100°C	Typ.	Max.
	nH	nH	A	A	A	mΩ	mΩ
30850BC	85	84	37	78	71	0.29	0.42
30101BC	100	102	37	66	58	0.29	0.42
30121BC	114	112	37	59	50	0.29	0.42
30151BC	154	143	37	43	38	0.29	0.42
30221BC	200	169	29	32	29	0.29	0.42

ABSOLUTE MAXIMUM RATINGS

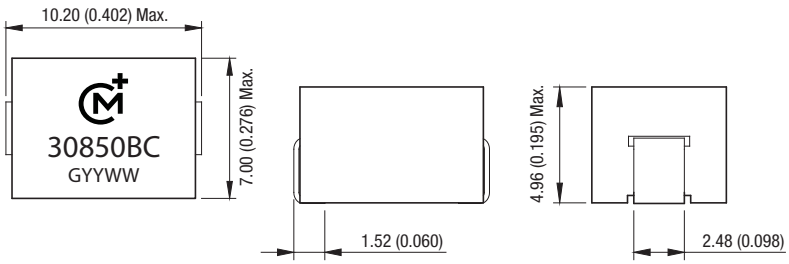
Operating temperature range	-40°C to +130°C
Storage temperature range	-40°C to +155°C

SOLDERING INFORMATION[1]

Peak reflow solder temperature	245°C
Pin finish	SAC305
Moisture sensitivity level[2]	1

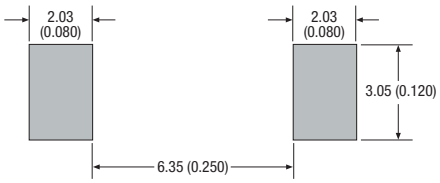
Mechanical Dimensions

Mechanical Dimensions



Weight Typ. = 1.35g

Recommended Pad Layout



Unless otherwise stated, all dimensions in mm (inches) ± 0.25 (0.010).

All specifications typical at T_A=25°C

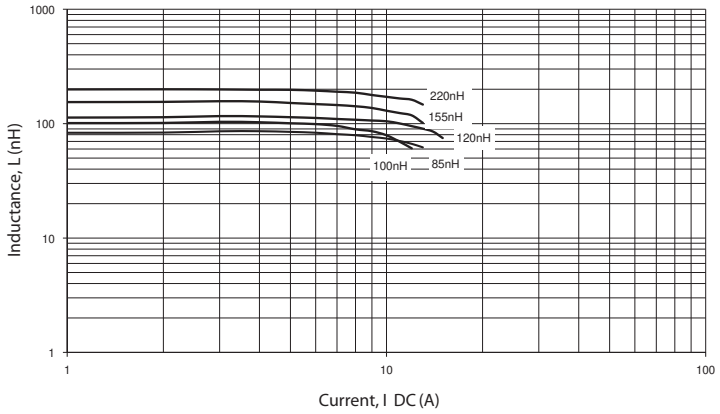
1 For further information, please visit www.murata-ps.com/rohs
2 Representative samples of the product were subjected to the conditioning described in IPC/JEDEC J-STD-020D and passed electrical testing, package coplanarity and visual inspection which revealed no external cracks or changes in package body flatness.
3 I_{DC} is the value at which the inductance falls to 80% of its nominal value or when its temperature reaches 40°C, which ever is sooner.
4 I_{SAT} is the value at which the inductance falls to 80% of its nominal value.

RoHS COMPLIANT

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

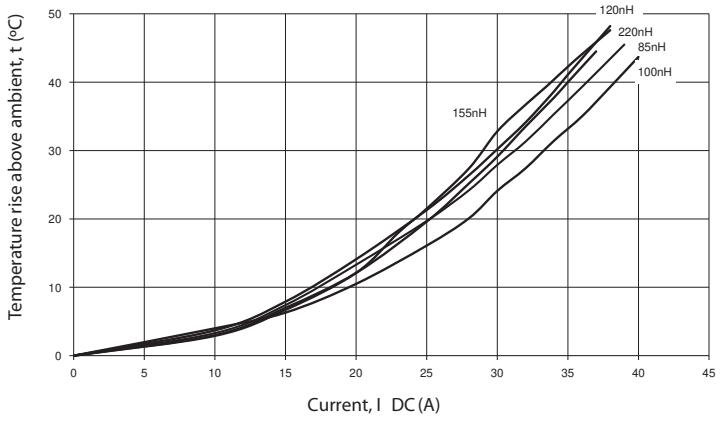
INDUCTANCE Vs CURRENT

3000B Series Inductance Vs Current



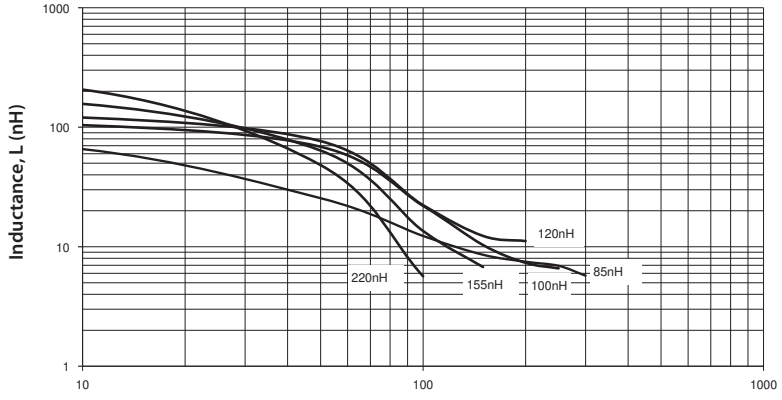
TEMPERATURE Vs CURRENT

3000B Temperature Vs Current



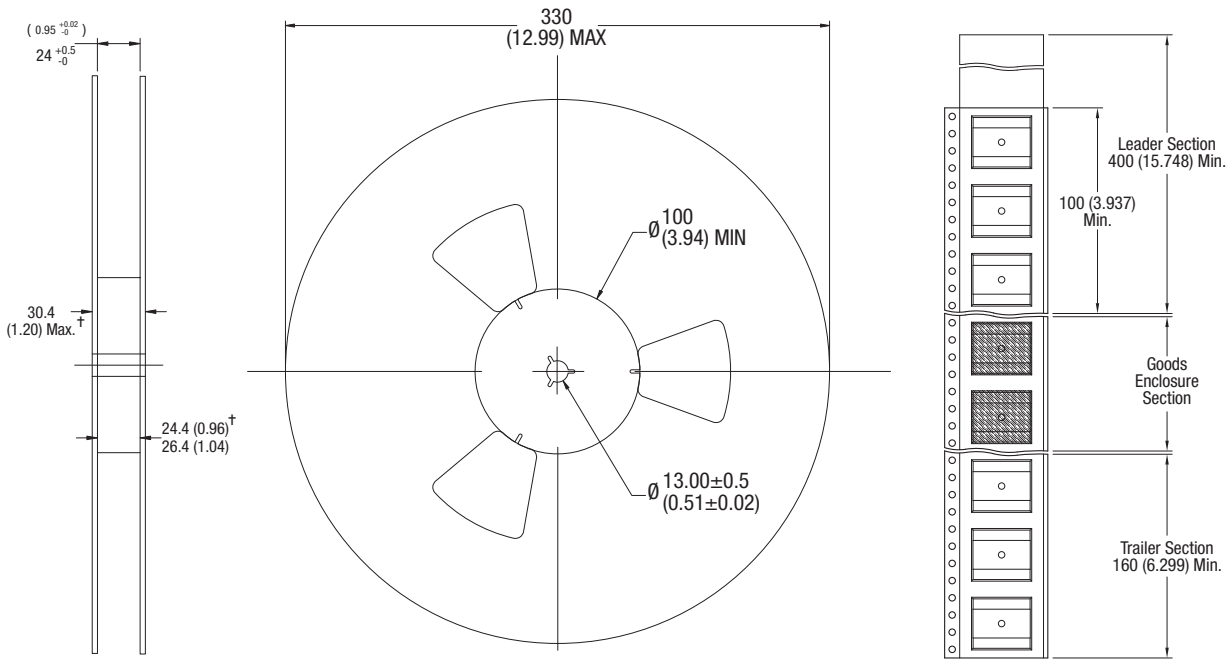
INDUCTANCE Vs FREQUENCY

3000B Series Inductance Vs Frequency

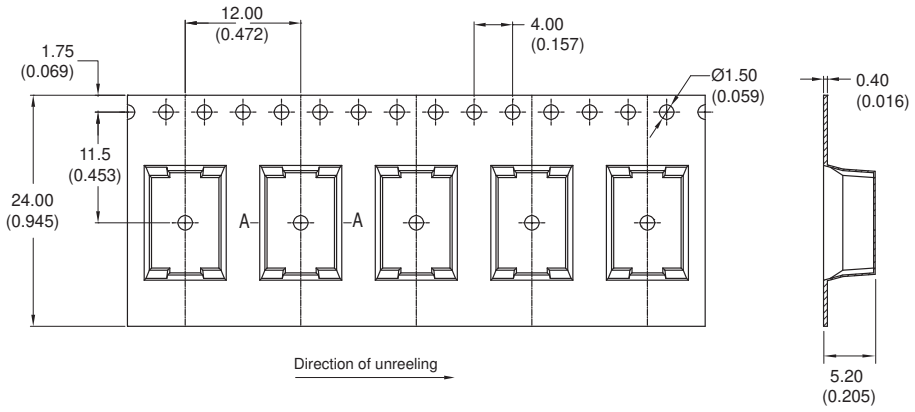


PACKAGE SPECIFICATIONS

Reel Dimensions



Reel Dimensions



Reel quantity: 1000

DISCLAIMER

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These applications include but are not limited to:

- Aircraft equipment
- Aerospace equipment
- Undersea equipment
- Power plant control equipment
- Medical equipment
- Transportation equipment (automobiles, trains, ships, etc.)
- Traffic signal equipment
- Disaster prevention / crime prevention equipment
- Data Processing equipment

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