Shielded SMD Power Inductors

RoHS Compliant

Features

- With magnetically shielded against radiation
- Designed for the higher current requirements of portable computers.
- LCP plastic base

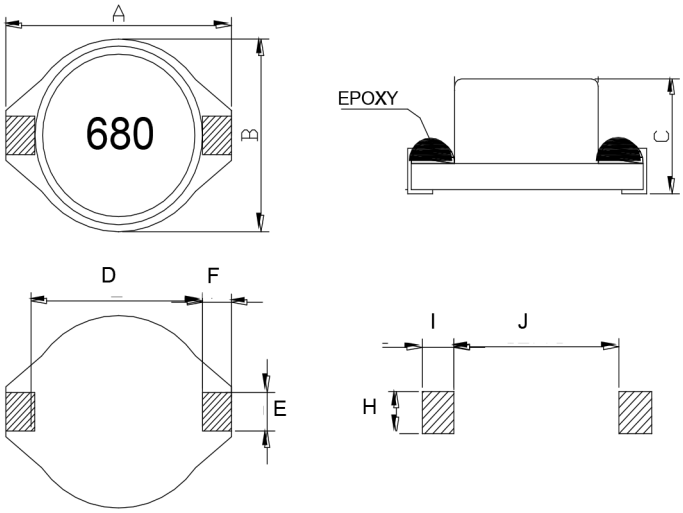
Applications

- Portable Telephones
- Personal Computers
- Other Various Electronic Appliances
- DC/DC Converters, etc.

Characteristics

- Saturation Rated Current (I sat / IDC): The DC current when the inductance becomes 10%(1608 becomes 30%) lower than its initial value. (Ta=25°C)
- Temperature Rise Current (I rms): The actual current when temperature of coil becomes Δ 40°C. (Ta=25°C)
- Operating temperature range: -40°C125°C

Shielded SMD Power Inductor

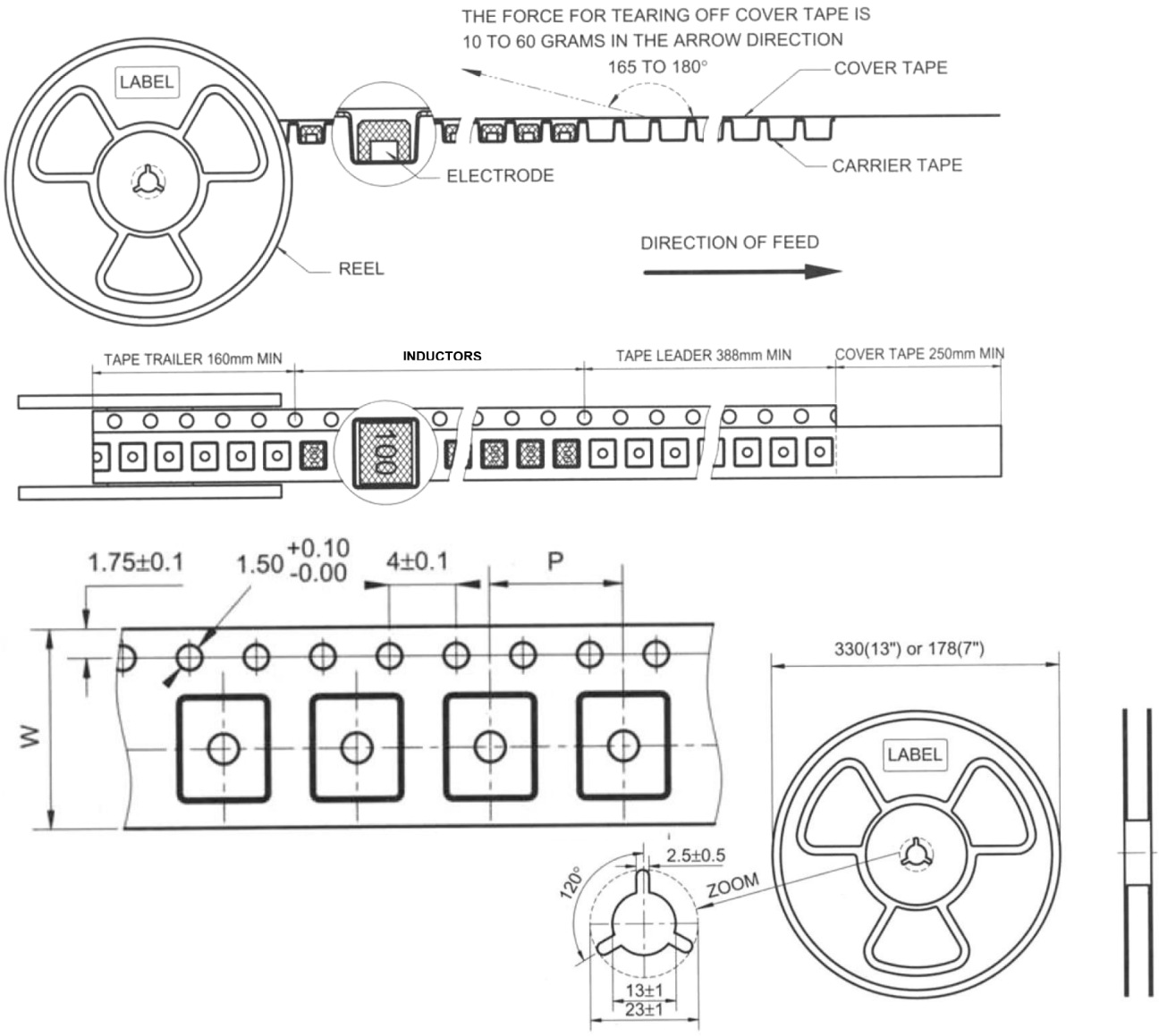


Dimensions

Unit: mm

Case Code	A max.	B max.	C max.	D	E	F	H	I	J
3316	12.95	9.4	5.21	7.62	2.54	2.54	2.79	2.92	7.37
5022	18.54	15.24	7.62	12.70	2.54	2.54	2.79	2.92	12.45

Tape and Reel specifications



Unit: mm

Case Code	Tape size		Parts Per Reel
	W	P	13"
3316	24	12	1000
5022	32	20	250

SMT Power Inductor Environmental Specifications

General

Items	Specifications
Shelf Storage conditions	Temperature range: 15°C to 28°C ; Humidity: <80% relative humidity. Recommended product should be used within one year from the time of delivery.

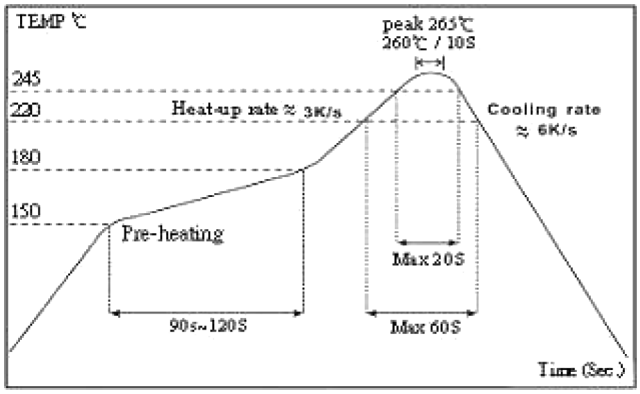
Environmental test

Test Items	Specifications	Test Conditions / Test Methods
High temperature Storage test	No case deformation or change in appearance. ΔL/L≤10%	Temperature 85±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature.
Low temperature Storage test		Temperature -25±2°C, Time: 48±2 hours, Tested after 1 hour at room temperature.
Humidity test		Temperature 40±2°C, 90% to 95% relative humidity Time: 96±2 hours Tested after 1 hour at room temperature.
Thermal shock test		First -25°C 30 minutes then 25°C 10 minutes last 85°C 30 minutes, as 1 cycle. Go through 5 cycles. Tested after 1 hour at room temperature.

Mechanical test

Test Items	Specifications	Test Conditions / Test Methods
Solder ability test	Terminal area must have 90% minimum solder coverage.	Product with Lead-free terminal: Dip pads in flux then dip in solder pot at 245±5°C for 3 seconds.
Resistance to Soldering Heat	No case deformation or change in appearance.	Flux should cover the whole of the sample before heating, then be preheated for about 2 minutes over temperature of 130°C to 150°C. Immersing to 260±5°C for 10 seconds.
Vibration test	No case deformation or change in appearance. ΔL/L≤10%	Apply frequency 10Hz to 55Hz. 1.5mm amplitude in each of perpendicular direction for 2 hours.
Shock resistance		Drop down with 981m/s^2 (100G) shock attitude upon a rubber block method shock testing machine, for 1 time. In each of three orientations.

The condition of reflow (recommendation)



Electrical Characteristics

Part No	Case Code	L (µH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.
MP002834	3316	10	20%	100kHz, 0.1V	0.101	2.4
MP002835		22			0.207	1.6
MP002836		100			1.11	0.8
MP002837		150			1.55	0.6
MP002838	5022	100			0.207	2.4
MP002839		150			0.293	2.1