Unshielded SMD Power Inductors

RoHS Compliant

Features

- The miniature chip inductors is wound on a special ferrite core.
- Low DC resistance.

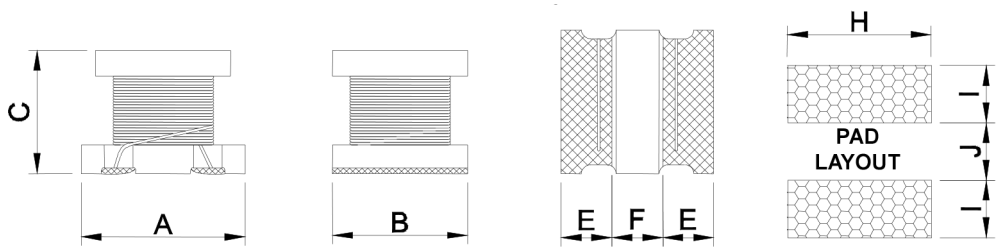
Applications

- Pagers, Cordless Phone
- High Frequency Communication Products
- Personal Computers
- Disk Drives And Computer Peripherals
- DC Power Supply Circuits

Characteristics

- Rated DC Current: The current when the inductance becomes 10% lower than its initial value or the current when the temperature of coil increases Δ T20°C. The smaller one is defined as Rated DC Current. (Ta=25°C)
- Operating temperature range: -40° to 125°C

Case Code- 322515 / 322520

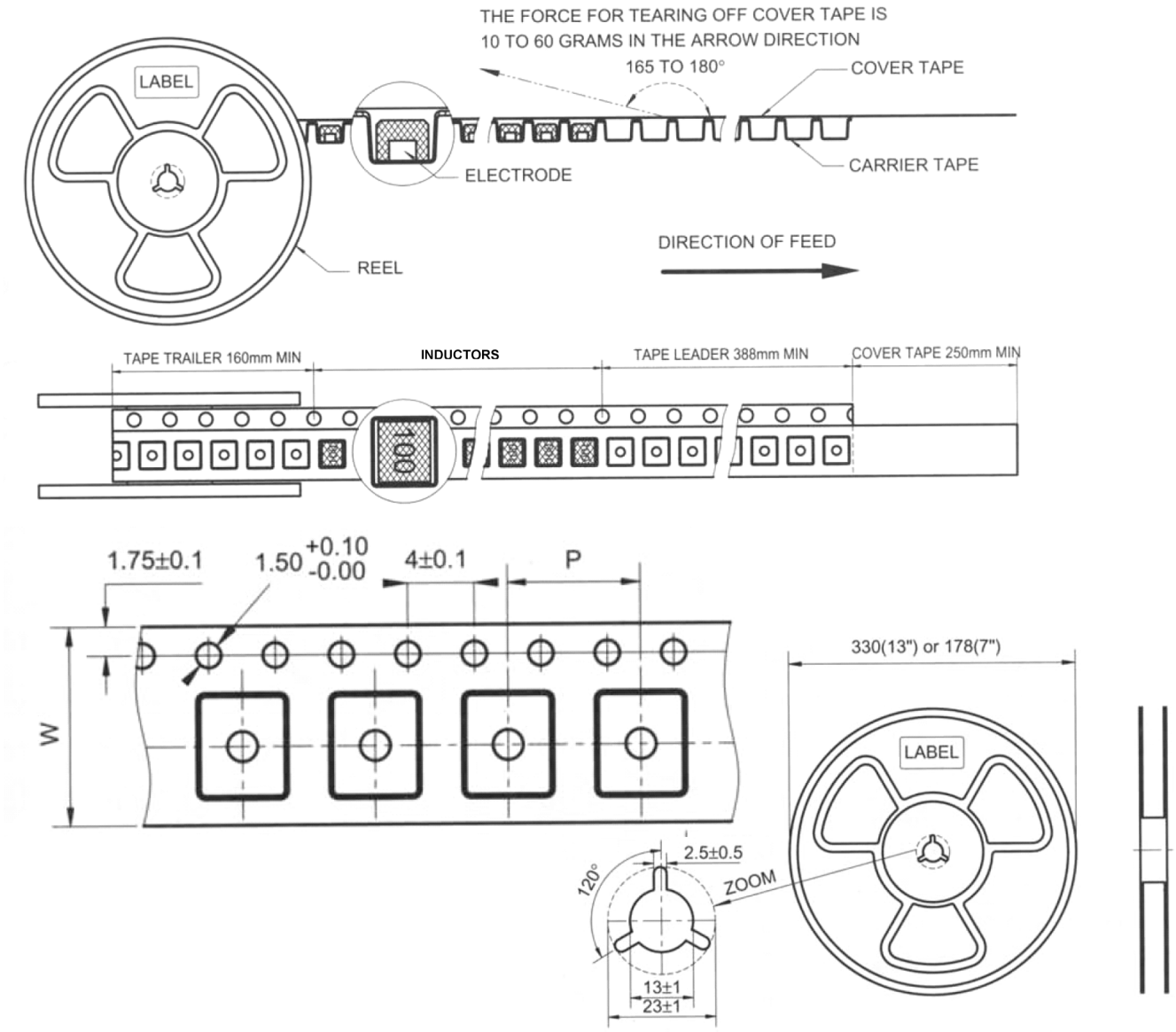


Dimensions

Unit: mm

Case Code	A	B	C	E	F	H	I	J
322515	3.2±0.3	2.5±0.2	1.55±0.3	1.05±0.3	1.05±0.3	2	1.5	1
322520			2±0.3	0.7min.	0.7min.			

Tape and Reel specifications



Unit: mm

Case Code	Tape size		Parts Per Reel
	W	P	7″
322515	8	4	2000
322520	12	8	1000

SMD 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
Solderability 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.

Electrical Characteristics

Part No	Case Code	L (µH)	Tolerance	Test Condition	DCR (Ω) max.	IDC (A) max.	SRF (MHz) min.
MP002782	322515	4.7	20%	1MHz, 0.1V	0.195	0.65	43
MP002783		10	10%		0.42	0.45	26
MP002784	322520	100			7	0.08	-
MP002785		220			11.8	0.065	-
MP002786		470		1kHz, 0.1V	25	0.045	-

The condition of reflow (recommendation)