Shielded Molding SMD Power Inductors

multicomp PRO

RoHS Compliant

Features

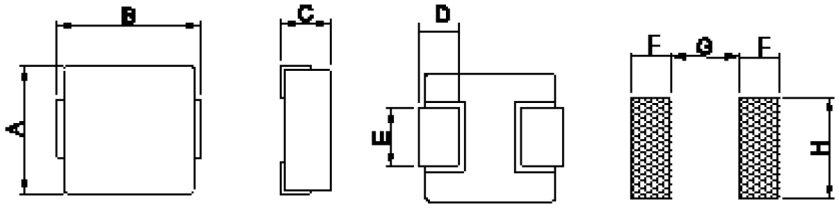
- Large current adaptable
- Footprint compatible with most standard
- Lower temperature rise at large current
- Low profile, low DCR
- Available on tape and reel for auto surface mounting

Applications

- Laptop / Desktop / Notebook Computers
- Terminals / Portable Servers / Workstation
- DC/DC Converter in Distributed Power Systems or VRM Applications
- Thin Type On-board Power Supply Module for Exchanger

Characteristics

- Saturation Rated Current would cause inductance to drop approximately 25%(0402 drop approximately 30%)
- Temperature Rise Current would cause an approximately Δ T of 40°C
- All test data is referred to 25°C ambient

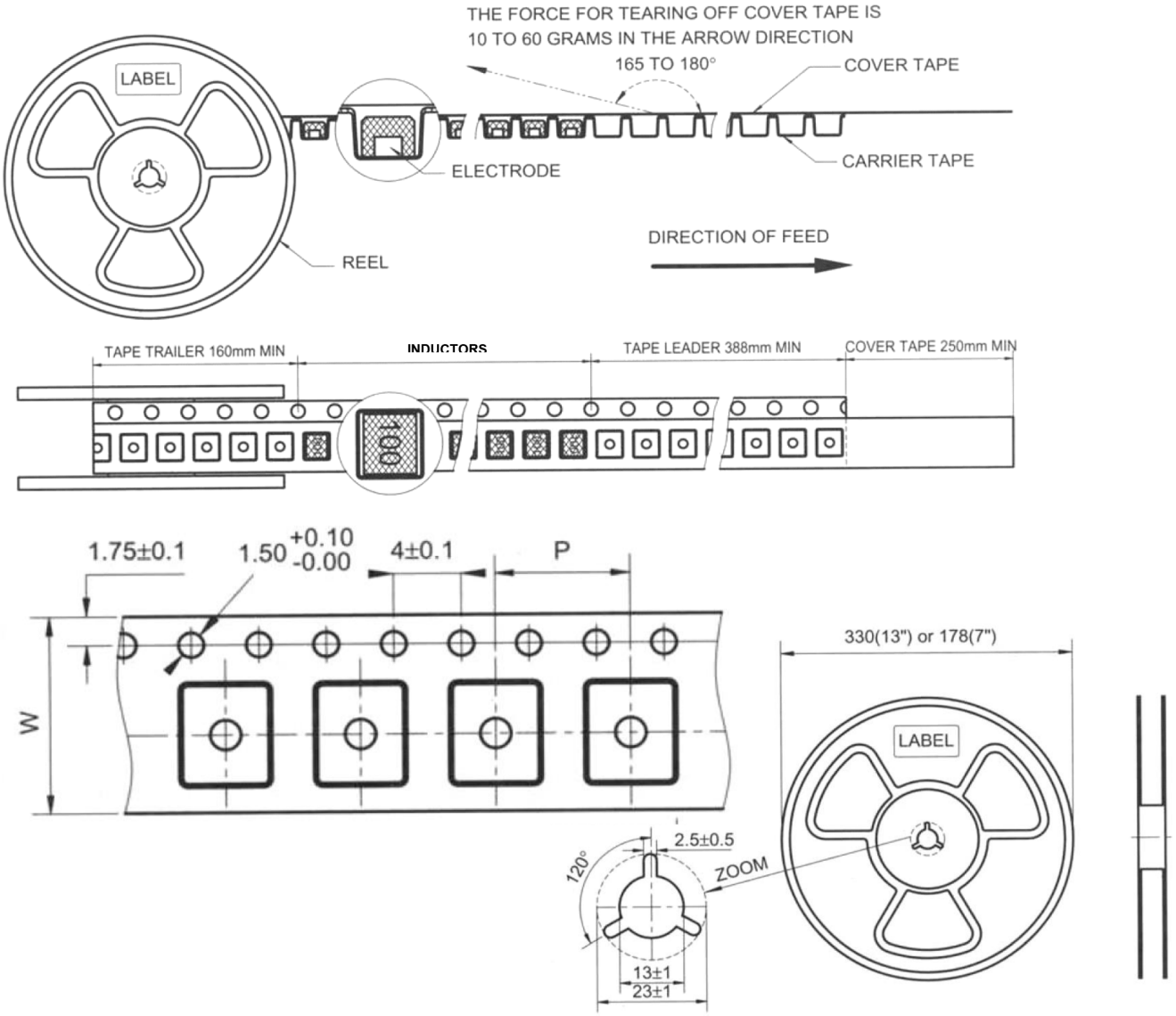


Dimensions

Unit: mm

Case Code	A	B	C max.	D	E	F	G	H
0420	4.1±0.5	4.5±0.5	2.1	0.8±0.5	2±0.5	1.5	2.5	2.2
0530	5.0±0.5	5.5±0.5	3	1.2±0.5	2±0.5	2	3	2.5
0630	6.8 max	7.6 max	3	1.6±0.5	2.9±0.5	2.5	3.7	3.5

Tape and Reel specifications



Unit: mm

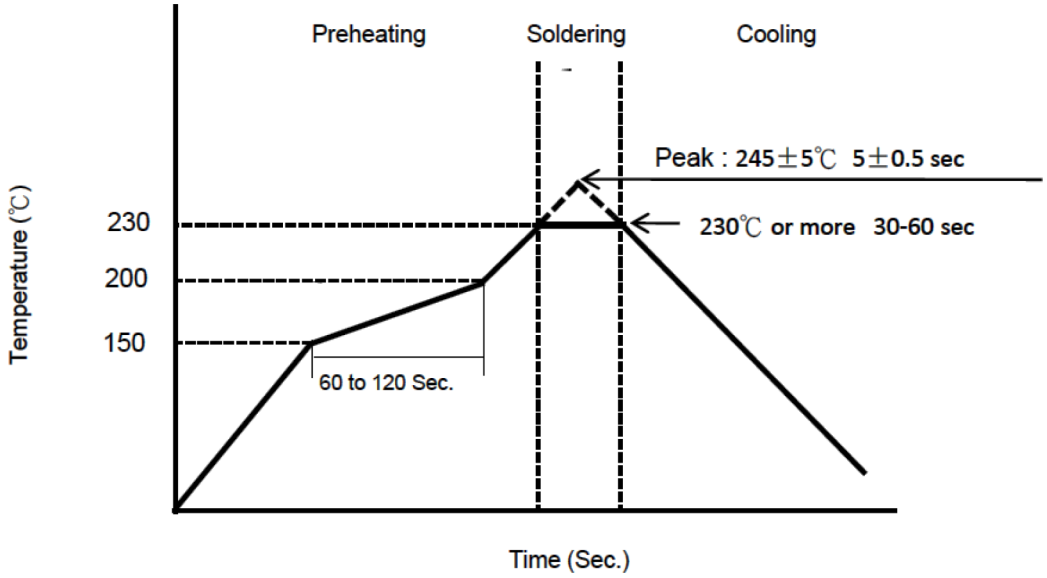
Case Code	Tape size		Parts Per Reel
	W	P	13″
0420	12	8	3500
0530	12	8	2500
0630	16	12	1500

General Characteristics

Operating temperature range:: -40°C to 125°C

Item	Requirement	Test Method		
Solderability	More than 90% of the terminal electrode should be covered with solder	230±5°C for 4±1 seconds		
Solder Heat Resistance	Inductance within±20% of initial value No disconnection or short circuit The appearance shall not break	260±5°C for 10±1 seconds		
Heat Resistance		Temperature: 125±5°C Time: 500 hours Tested after 2 hour at room temperature		
Cold Resistance		Temperature: -40±5°C Time: 500 hours Tested after 2 hour at room temperature		
Thermal Shock		One cycle:		
		Step	Temperature(°C)	Time (min.)
		1	-40±5°C	30
		2	Room temperature	3
		3	125±5°C	30
		4	Room temperature	3
Humidity Resistance		Temperature: 40±2°C, 90~95% relative humidity Time: 500 hours Tested after 2 hour at room temperature		
Vibration Test	Inductance within±5% of initial value The appearance shall not break	After vibration for 1 hour, in each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P amplitudes		

The condition of reflow (recommendation):



Electrical Characteristics

Operating temperature range:: -40°C to 125°C

Part No	Case Code	Inductance (µH)	Tolerance	Test Condition	DCR (mΩ) max.	Saturation Current (A) Max.	Temperature Rise Current (A) Max.
MP002761	0420	1	20%	100kHz, 0.25V	27	7	4.5
MP002762		1.5			46	6	4
MP002763		2.2			58	5	3
MP002764	0530	0.22			4.52	21	15.5
MP002765		0.47			7.04	16	12.2
MP002766		1.5			20.7	11	7.2
MP002767		2.2			29.2	10	5.8
MP002768		4.7			77.5	8.2	3.5
MP002769	0630	2.2			20	14	8
MP002770		4.7			40	10	5.5
MP002771		6.8			60	8	4.5
MP002772		10			105	7	3