

Shielded SMD Chip Power Inductor



ASPI-1367



14.0 x 12.9 x 6.7mm
RoHS/RoHS Compliant

Features

- 100%lead (Pb) free.
- Lowest DCR/ μ H, in this package size.
- Frequency range up to 5.0 MHz
- Handles high transient current spikes without saturation
- Ultra low buzz noise, due to composite construction

Applications

- PDA/notebook/desktop/server applications
- Low profile, high current power supply
- Battery powered devices
- DC/DC converter for Field Programmable Gate Array (FPGA)

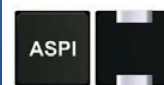
Electrical Specifications

Operating Temperature:	-40°C to +125°C
Storage Temperature:	Less than +40°C, 70% RH

Part Number ASPI-1367-	L	Tolerance	R _{DC} (m Ω)	R _{DC} (m Ω)	I _{sat}	I _{rms}	Lead Type*
	(μ H)	(M)	Typ	Max	(A)	(A)	
R15	0.15	M	0.49	0.60	118.0	55.0	NLF
R22	0.22	M	0.47	0.60	112.0	53.0	NLF
R33	0.33	M	0.65	0.80	68.0	46.0	NLF
R47	0.47	M	0.90	1.20	63.0	41.0	NLF
R56	0.56	M	1.05	1.20	58.0	37.0	NLF
R68	0.68	M	1.25	1.50	55.0	35.0	NLF
1R0	1.00	M	1.70	2.30	48.0	30.0	NLF
1R5	1.50	M	2.50	3.00	45.0	27.0	NLF
2R2	2.20	M	3.80	4.00	37.0	22.0	LF
3R3	3.30	M	5.70	6.80	30.0	18.0	LF
4R7	4.70	M	7.00	8.40	28.0	13.5	LF
5R6	5.60	M	8.50	10.0	23.0	12.5	LF
6R8	6.80	M	9.50	11.5	18.0	11.5	LF
8R2	8.20	M	12.0	15.5	16.0	10.5	LF
100	10.0	M	13.2	16.5	15.5	10.0	LF
150	15.0	M	23.2	28	13.0	9.0	LF
220	22.0	M	32.5	37	12.0	9.0	LF
330	33.0	M	48	58	11.0	8.0	LF
470	47.0	M	76	90	9.5	6.5	LF
680	68.0	M	110	130	7.8	4.8	LF
101	100	M	145	165	5.5	4.2	LF

*Lead Type: NLF=Non-Leadframe, LF=Leadframe

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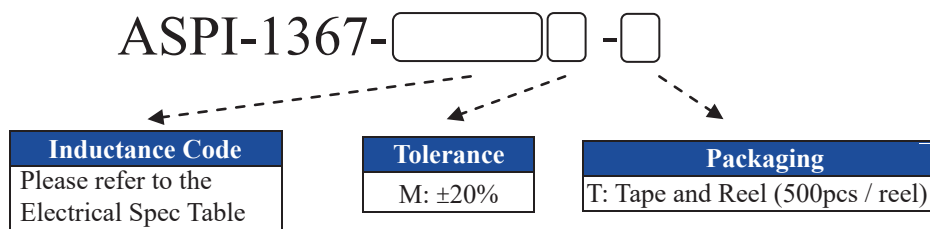


14.0 x 12.9 x 6.7mm
RoHS/RoHS Compliant

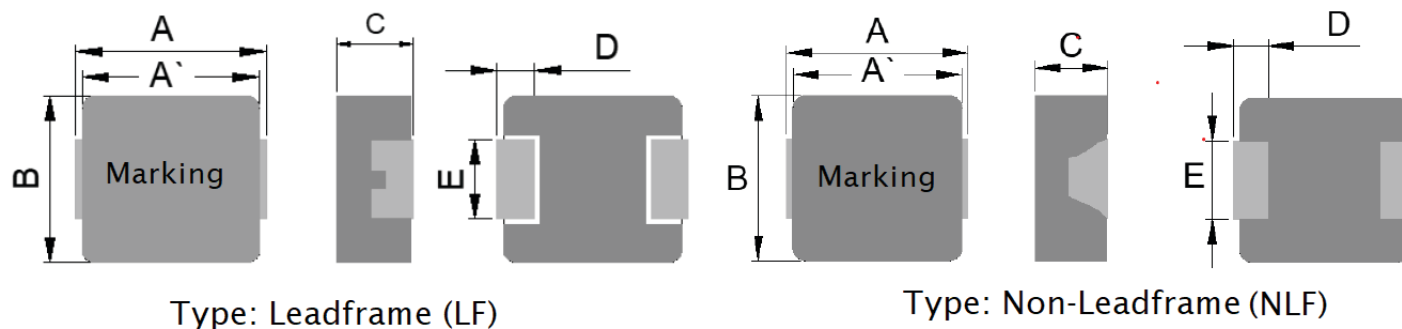
Test Conditions

1. Inductance tested at 200kHz, 0.25V, 0A; Tolerance $M=\pm 20\%$
2. All test data is in reference to 25°C ambient.
3. Isat will cause the inductance value to drop approximately 30%
4. Irms will cause an approximate ΔT of 40°C
5. The part temperature (ambient + temp. rise) should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature. Part temperature should be verified in the end application.
6. Please contact Abracon for the availability of other inductance values.

Part Number Identification



Mechanical Information



A	A'	B	C	D	E
13.5 ± 0.5	12.5 ± 0.3	12.50 ± 0.50	6.20 ± 0.30	2.30 ± 0.3	4.70 ± 0.3

Dimensions: mm



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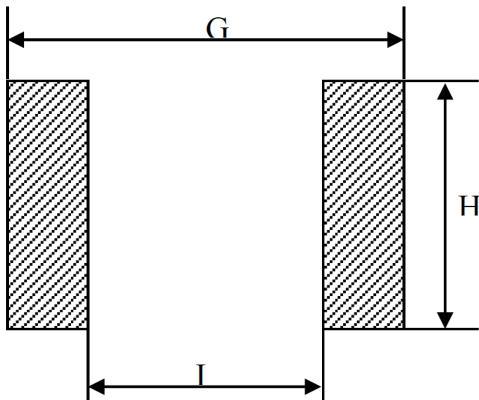
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Mechanical Dimensions Cont.

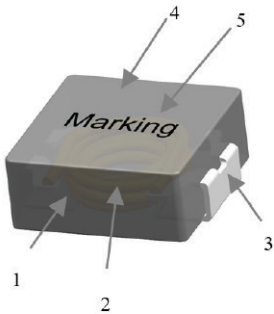
Recommended Land Pattern



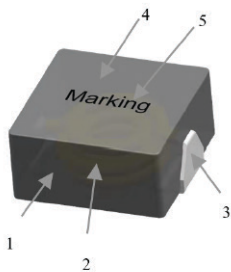
G	H	T
14.2 ref.	5.0 ref.	8.0 ref.

Dimensions: mm

Composition and Materials



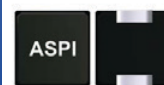
Type: Leadframe



Type: Non-Leadframe

#	Material
1	Core
2	Wire
3	Leadframe: Clip
	Non-Leadframe: Solder Tab
4	Paint
5	Ink

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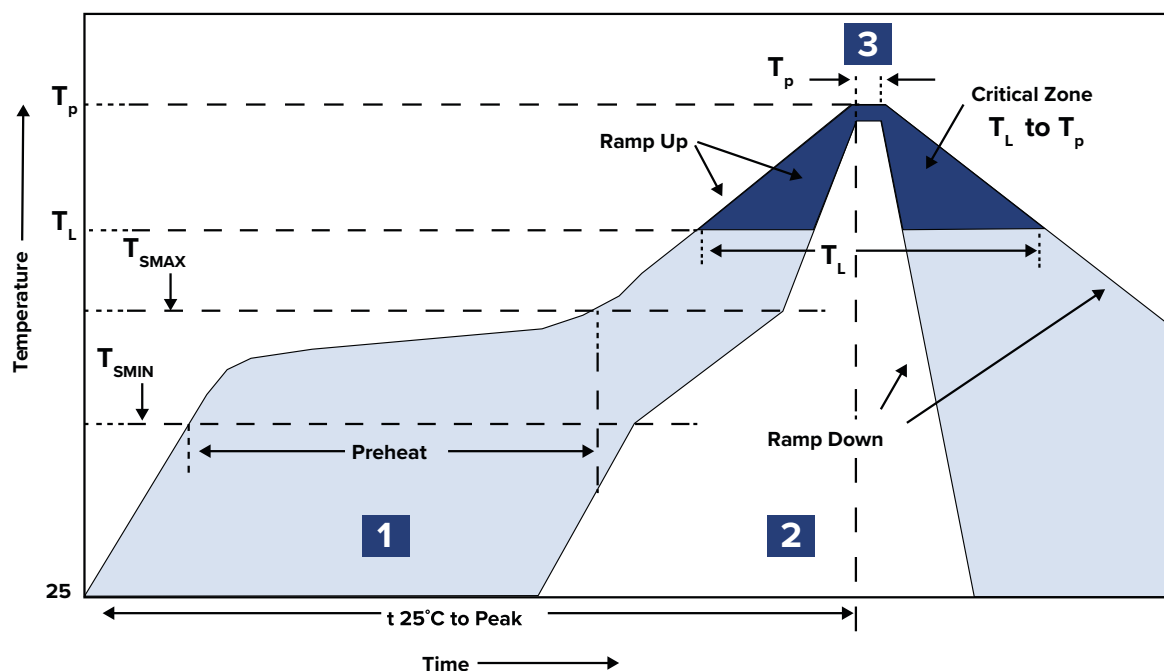


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Reflow Profile



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMIN} \sim T_{SMAX}$ $150^{\circ}\text{C} \sim 200^{\circ}\text{C}$	60 ~ 180 sec.
2	Reflow	T_L 217°C	60 ~ 150 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

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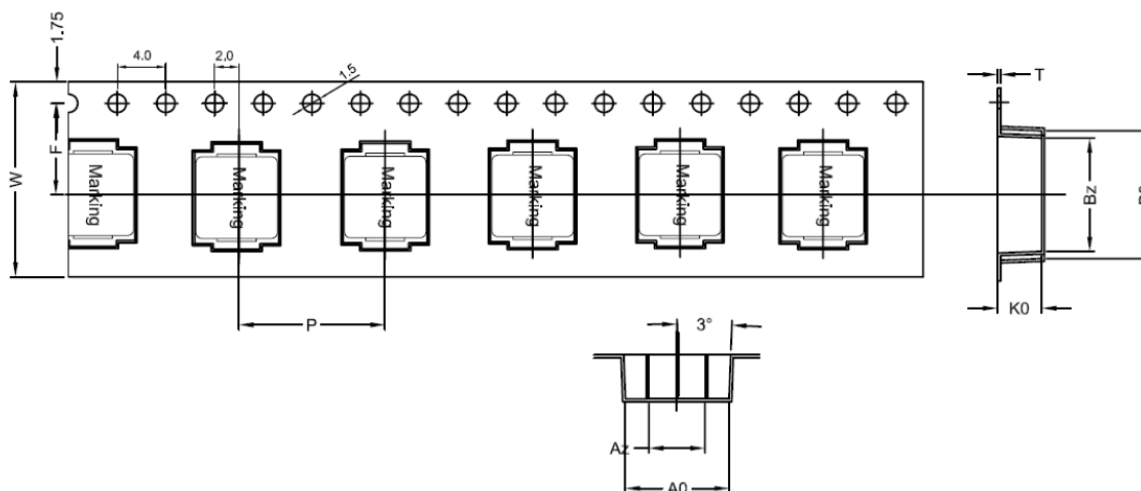
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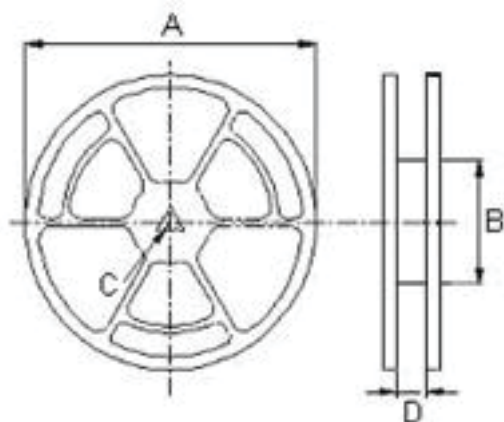
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Packaging

T= Tape and Reel (500pcs/reel)



B ₀	B _Z	A ₀	A _Z	K ₀	P	W	F	T
14.1±0.1	13.0±0.1	12.9±0.1	7.0±0.1	7.0±0.1	16.0±0.1	24±0.3	11.5±0.1	0.35±0.05



A	B	C	D
330	100 ±2	13.0 +0.5/-0.2	24.4 +2/-0

Dimensions: mm

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