

Low Profile Shielded SMD Chip Power Inductor



ASPI-2515 series



2.5 x 2.0 x 1.5mm
RoHS/RoHS II Compliant
MSL Level: 1

Features

- Small size and low profile: 1.5mm
- Small DCR and high rated current
- High reliability to mechanical stress
- Magnetically shielded by magnetic powder molding
- Suitable for RoHS reflow profile

Applications

- Mobile phones
- MP3 & 4 and other portable communication equipment
- Digital cameras

Electrical Specifications

Operating Temperature & Humidity:	-40°C to +125°C (Including self generated heat)
Storage Temperature & Humidity:	-10°C to +40°C, 70% RH

Part Number	Inductance	Inductance Tolerance	DC Resistance		Saturation Current	Temperature Rise Current	Self-Resonant Frequency
			Max	Typ			
Units	μH	%	mΩ	mΩ	A	A	MHz
Symbol	L	M, N	DCR		Isat	Irms	SRF
ASPI-2515-R16	0.16	M	22	18	6.50	4.05	380
ASPI-2515-R24	0.24	M	22	18	4.00	4.05	260
ASPI-2515-R33	0.33	M	29	24	4.00	3.35	230
ASPI-2515-R47	0.47	M	36	30	3.70	3.00	170
ASPI-2515-R68	0.68	M	42	35	3.20	2.50	150
ASPI-2515-1R0	1.0	M	44	37	1.70	2.20	85
ASPI-2515-1R2	1.2	M	78	65	2.20	1.95	75
ASPI-2515-1R5	1.5	M	78	65	2.00	1.95	75
ASPI-2515-2R2	2.2	M	96	80	1.80	1.80	55
ASPI-2515-3R3	3.3	M	144	120	1.15	1.40	43
ASPI-2515-4R7	4.7	M	210	175	1.10	1.12	36
ASPI-2515-6R8	6.8	M	360	300	0.80	0.95	25
ASPI-2515-100	10.0	M	522	435	0.70	0.87	21
ASPI-2515-150	15	M	1000	830	0.65	0.57	18
ASPI-2515-180	18	M	1000	830	0.50	0.57	14
ASPI-2515-220	22	M	1090	910	0.45	0.54	11
ASPI-2515-330	33	M	1840	1530	0.35	0.42	7.5
ASPI-2515-470	47	M	2220	1850	0.25	0.30	8.9
ASPI-2515-680	68	M	3000	2500	0.30	0.28	8
ASPI-2515-101	100	M	5400	4500	0.22	0.21	6

Test Conditions

1. Inductance is measured with a WK3260B LCR meter or equivalent.
2. RDC is measured with a HIOKI 3540 or equivalent.(or equivalent).
3. Isat : Based on inductance change ($\Delta L/L_0 : \leq -30\%$)
4. Irms : Based on temperature rise ($\Delta T : 40^\circ\text{C TYP.}$)
5. Test Freq: 1MHz, 1Vrms



5101 Hidden Creek Ln Spicewood TX 78669
Phone: 512-371-6159 | Fax: 512-351-8858
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MSL Level: 1

Part Number Identification

ASPI-2515- -

Inductance Code

Please refer to the
Electrical Spec Table

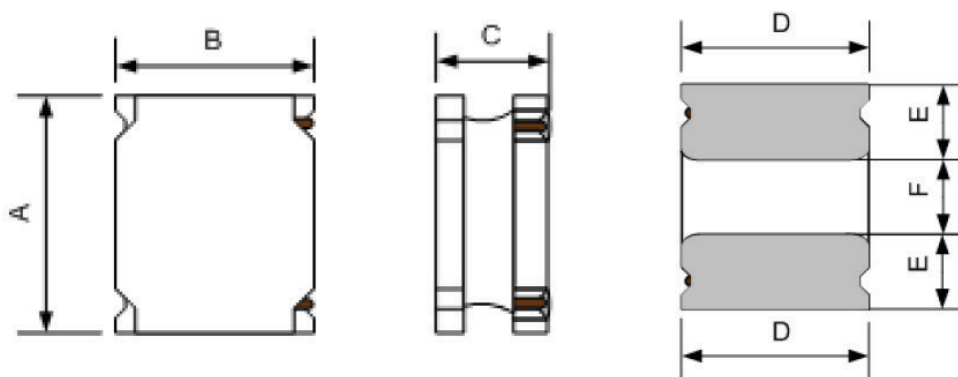
Tolerance

M: $\pm 20\%^*$

Packaging

T2: Tape and Reel (2kpcs / reel)

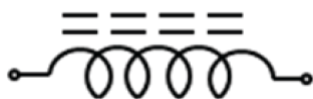
Mechanical Information



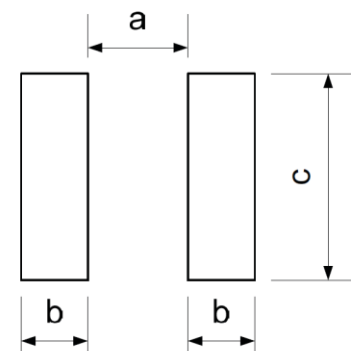
A	B	C	D	E	F	a Typ.	b Typ.	c Typ.
2.5 ± 0.2	2.0 ± 0.2	1.2 Max	2.00 ± 0.2	0.8 ± 0.2	0.8 ± 0.2	0.8	0.85	2.0

Recommended Land Pattern

Circuit Schematic



No Polarity



Dimensions: mm

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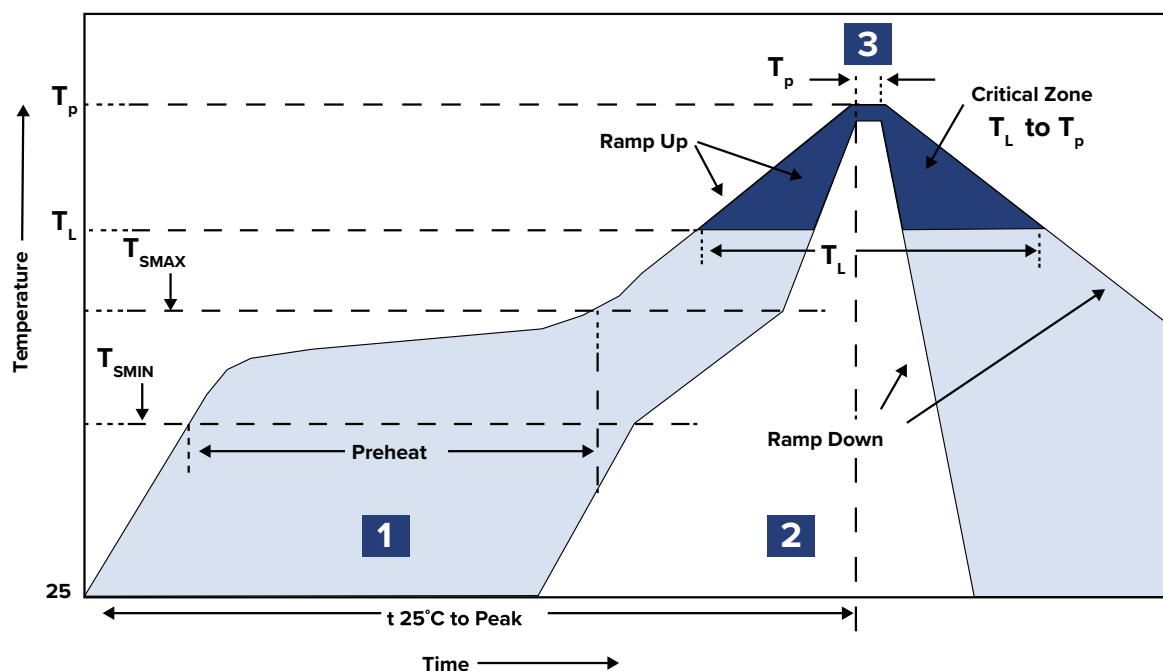


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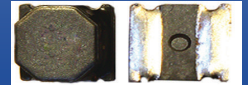
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Reflow Profile



Zone	Description	Temperature	Time
1	Preheat / Soak	$T_{SMIN} \sim T_{SMAX}$ $150^{\circ}\text{C} \sim 180^{\circ}\text{C}$	60 ~ 100 sec.
2	Reflow	T_L 200°C	20 sec.
3	Peak heat	T_P 260°C	10 sec. MAX

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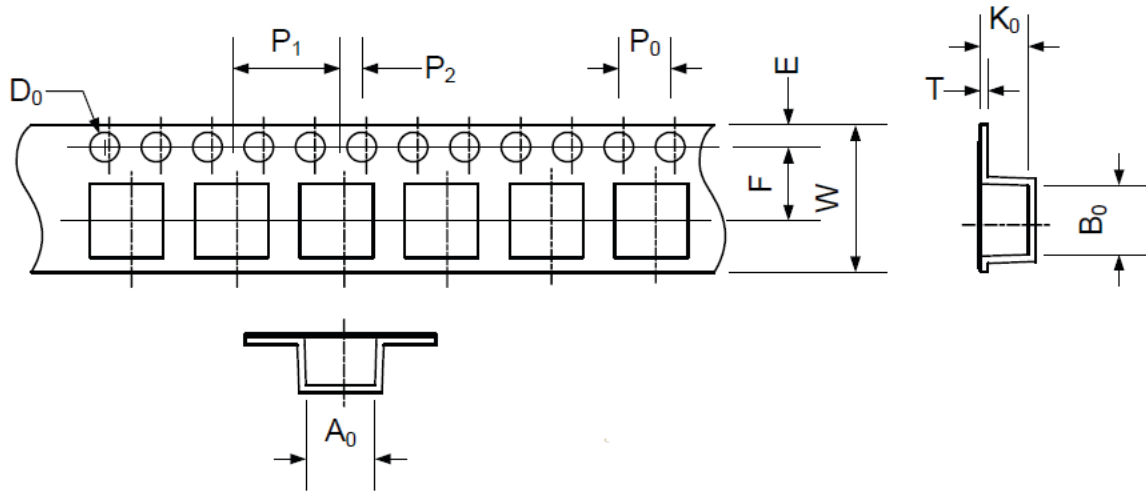


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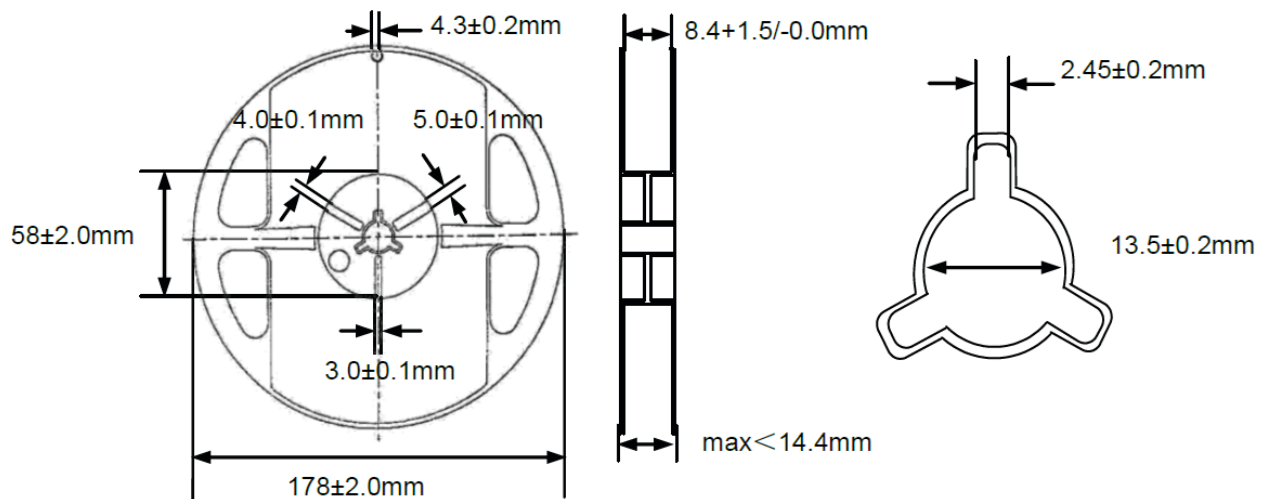
2.5 x 2.0 x 1.5mm
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Packaging



A_0	B_0	W	E	F	P_0	P_1	P_2	D_0	T	K_0
2.45 ± 0.05	2.75 ± 0.05	8.0 ± 0.3	1.75 ± 0.1	3.5 ± 0.05	4.0 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	1.5 $+0.1/-0.0$	0.25 ± 0.03	1.55 ± 0.05

Dimensions: mm



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