

# Low Profile Shielded SMD Chip Power Inductor



## ASPI-2512 Series

Request Samples



Check Inventory



2.5 x 2.0 x 1.2 mm  
RoHS/RoHS II Compliant  
MSL Level = 1

### Features

- Small size and low profile: 1.2mm
- 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

Part Number	Inductance	Inductance Tolerance	DCR		Saturation Current	Temperature Rise Current
Units	$\mu\text{H}$	%	$\text{m}\Omega \pm 20\%$		A	A
Symbol	L	M, N	Max	Typ	Isat	Irms
ASPI-2512-R47	0.47	N	0.061	0.047	3.82	2.15
ASPI-2512-R68	0.68	N	0.074	0.057	3.28	1.95
ASPI-2512-1R0	1.0	N	0.090	0.069	2.59	1.93
ASPI-2512-1R2	1.2	N	0.129	0.099	2.38	1.46
ASPI-2512-1R5	1.5	N	0.147	0.113	2.24	1.40
ASPI-2512-2R2	2.2	M	0.216	0.166	1.85	1.15
ASPI-2512-2R7	2.7	M	0.239	0.184	1.72	1.09
ASPI-2512-3R3	3.3	M	0.264	0.203	1.61	1.04
ASPI-2512-3R6	3.6	M	0.348	0.268	1.46	0.90
ASPI-2512-4R3	4.3	M	0.377	0.290	1.37	0.87
ASPI-2512-4R7	4.7	M	0.377	0.290	1.12	0.84
ASPI-2512-5R1	5.1	M	0.500	0.385	1.23	0.75
ASPI-2512-5R6	5.6	M	0.538	0.414	1.11	0.73
ASPI-2512-6R2	6.2	M	0.542	0.417	1.03	0.73
ASPI-2512-6R8	6.8	M	0.581	0.447	0.98	0.69
ASPI-2512-7R5	7.5	M	0.611	0.470	0.97	0.68
ASPI-2512-8R2	8.2	M	0.658	0.506	0.98	0.65
ASPI-2512-9R1	9.1	M	0.690	0.531	0.91	0.62
ASPI-2512-100	10.0	M	0.690	0.531	0.79	0.62
ASPI-2512-120	12.0	M	1.075	0.827	0.78	0.51
ASPI-2512-150	15.0	M	1.591	1.224	0.68	0.42
ASPI-2512-220	22.0	M	1.976	1.520	0.53	0.38

### Test Conditions

1. Inductance is measured in HP-4285A Precision LCR Meter.
2. RDC is measured in DU-5011 milli ohm meter.(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: 100KHz, 1Vrms

**Operating Temperature:  $-25^\circ\text{C} \sim +120^\circ\text{C}$  (including self-heating)**

**Storage Temperature:  $-10^\circ\text{C} \sim +40^\circ\text{C}$  (in original packaging)**



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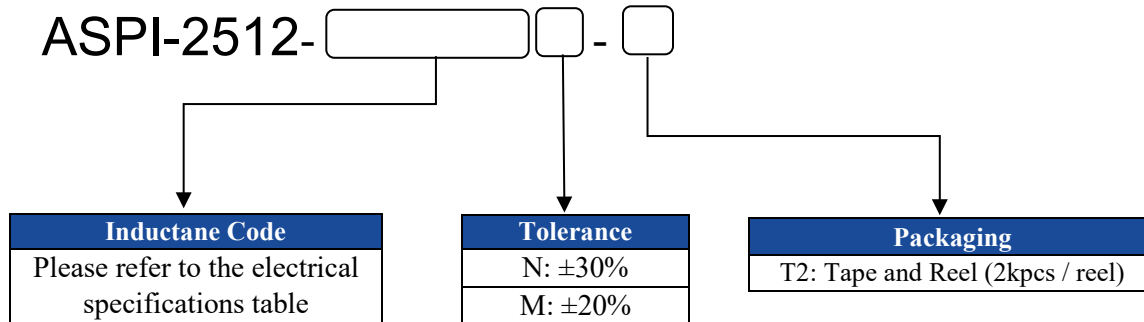


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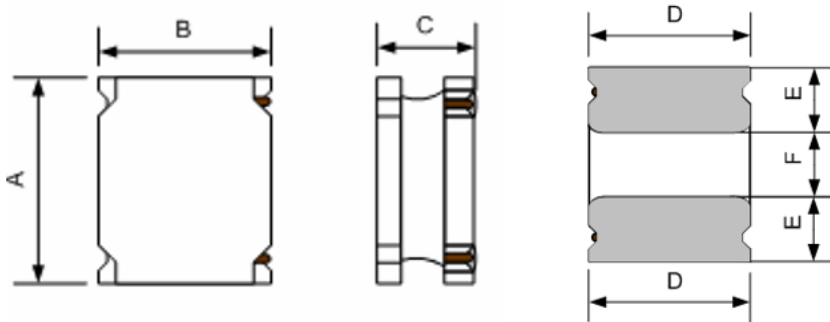


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 RoHS/RoHS II Compliant  
 MSL Level = 1

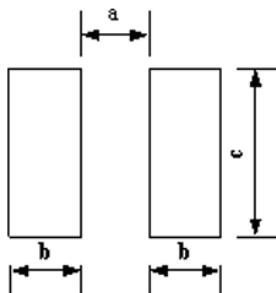
## Part Identification



## Mechanical Specifications



Series	A	B	C	D	E	F
ASPI-2512	2.5 $\pm$ 0.1	2.0 $\pm$ 0.1	1.2Max.	2.0 $\pm$ 0.2	0.80 $\pm$ 0.2	0.80 $\pm$ 0.2



Series	a	b	c
ASPI-2512	0.80 Typ	0.85 Typ	2.00 Typ

Recommended Land Pattern

Dimensions: mm



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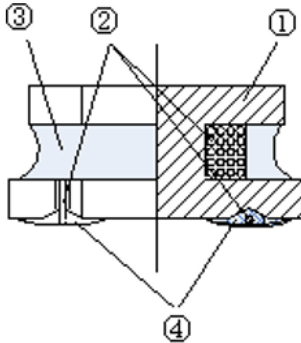


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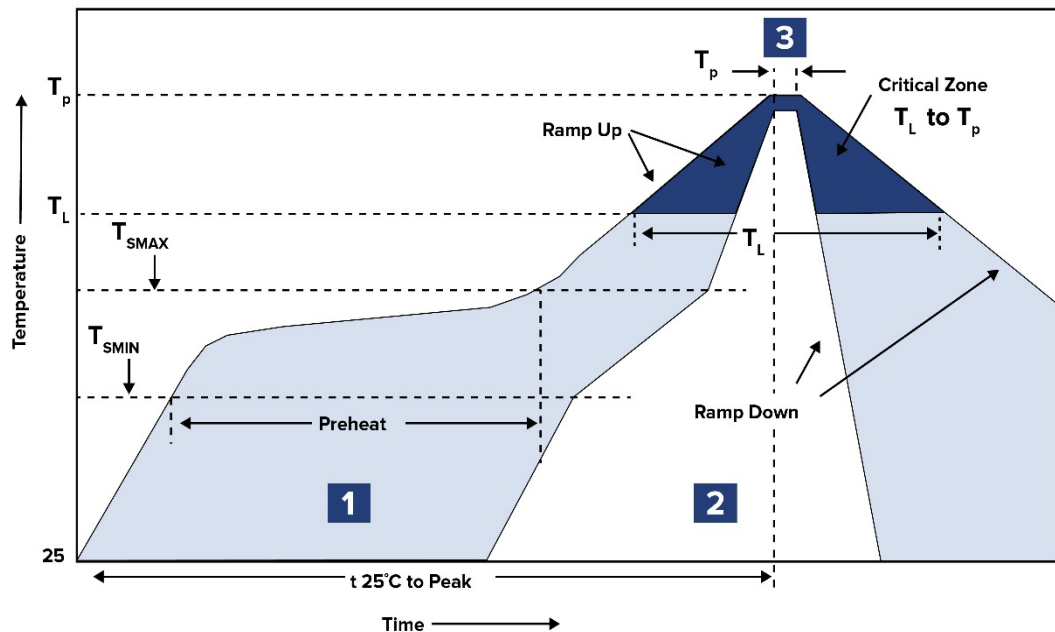
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## Materials



No.	Components	Material
1	Ferrite Core	Ni-Zn Ferrite
2	Wire	Polyurethane system enameled copper wire
3	Magnetic Glue	Epoxy resin and magnetic powder
4	Electrodes	AgNiSn or FeNiCu +Sn Alloy

## Reflow Profile



Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 200°C	60 ~ 90 sec.
2	Reflow	$T_L$ 217°C	60 ~ 90 sec.
3	Peak heat	$T_P$ 260°C	5 sec. MAX

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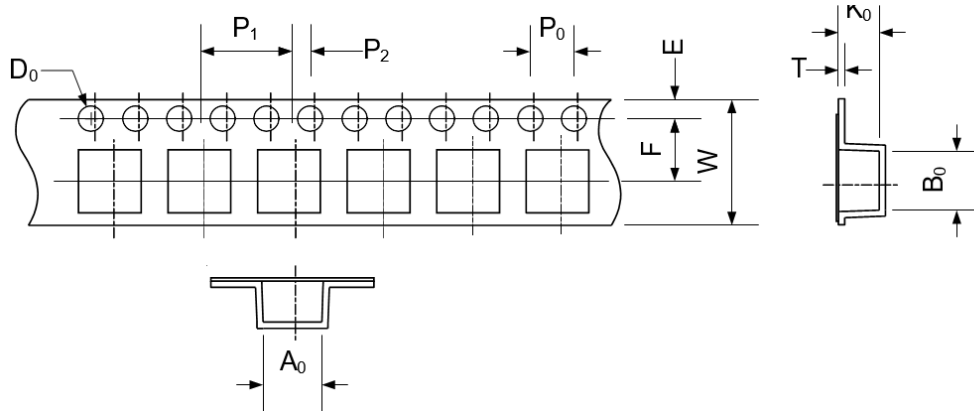
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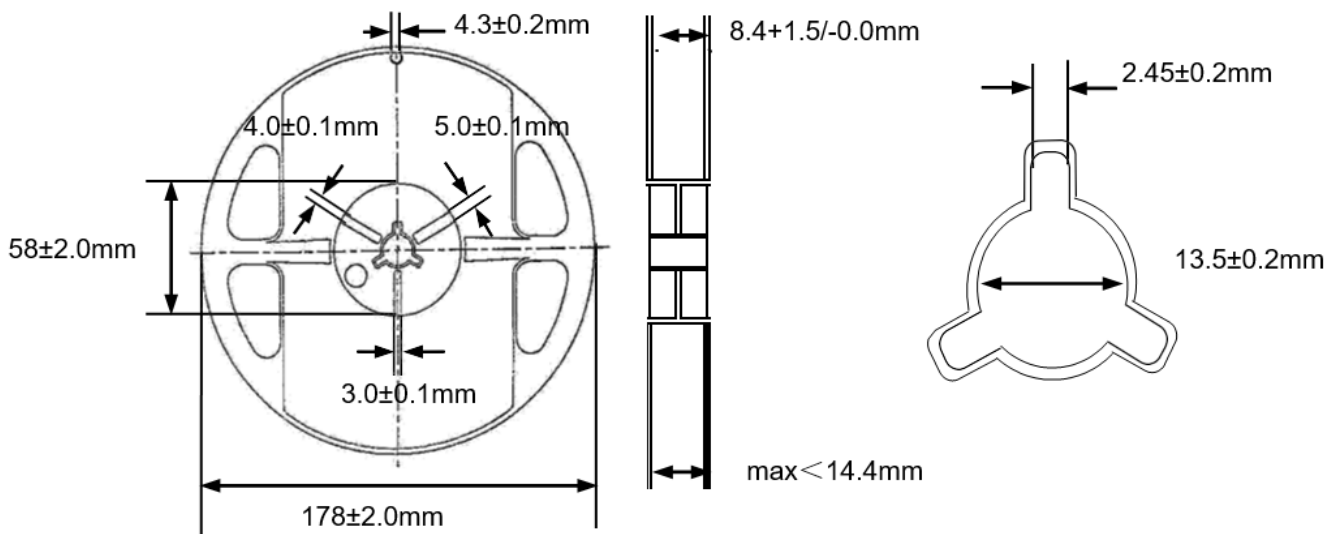
## Packaging

T2: 2,000pcs/Reel



A0	B0	W	E	F	P0	P1	P2	D0	T	K0
2.35±0.05	2.65±0.05	8±0.3	1.75±0.1	3.5±0.05	4.0±0.1	4.0±0.1	2.0±0.1	1.5+0.1/-0.0	0.25±0.03	1.4±0.1

Dimensions: mm



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