

ECN/PCN No.: M1191

For Manufacturer			
Product Description: SMD Shielded Power Inductor	Abracon Part Number / Part Series: ASPI-1306S	<input type="checkbox"/> Documentation only <input checked="" type="checkbox"/> ECN <input type="checkbox"/> EOL	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number(s)
Affected Revision: D	New Revision: E	Application: <input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety	

Prior to Change:

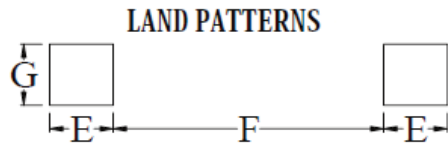
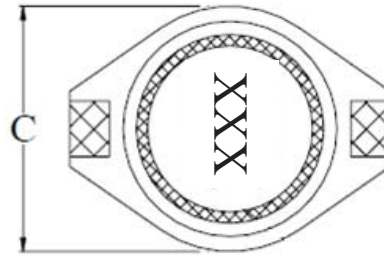
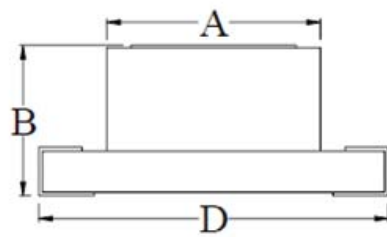
1.0 Key Electrical Specifications

PART NUMBER	INDUCTANCE (uH) ±20%	DCR (Ω) max	Isat (A) max	Irms (A) max
ASPI-1306S-100M	10	0.0400	8.00	3.90
ASPI-1306S-150M	15	0.0480	7.00	3.40
ASPI-1306S-220M	22	0.0590	6.00	3.10
ASPI-1306S-330M	33	0.0750	5.00	2.80
ASPI-1306S-470M	47	0.0970	4.00	2.40
ASPI-1306S-680M	68	0.1380	3.00	2.00
ASPI-1306S-101M	100	0.2070	2.40	1.70
ASPI-1306S-151M	150	0.2930	2.10	1.30
ASPI-1306S-221M	220	0.4700	1.90	1.10
ASPI-1306S-331M	330	0.7800	1.10	0.86
ASPI-1306S-471M	470	0.9750	0.90	0.60
ASPI-1306S-681M	680	1.4000	0.96	0.64
ASPI-1306S-102M	1000	2.0100	0.80	0.53

1.1 Test Conditions

Inductance: 100kHz, 0.1V
 Isat: $\Delta L/L$ (initial) \geq -10%
 Irms: $\Delta T \leq 40^\circ\text{C}$

5.0 Mechanical Dimensions

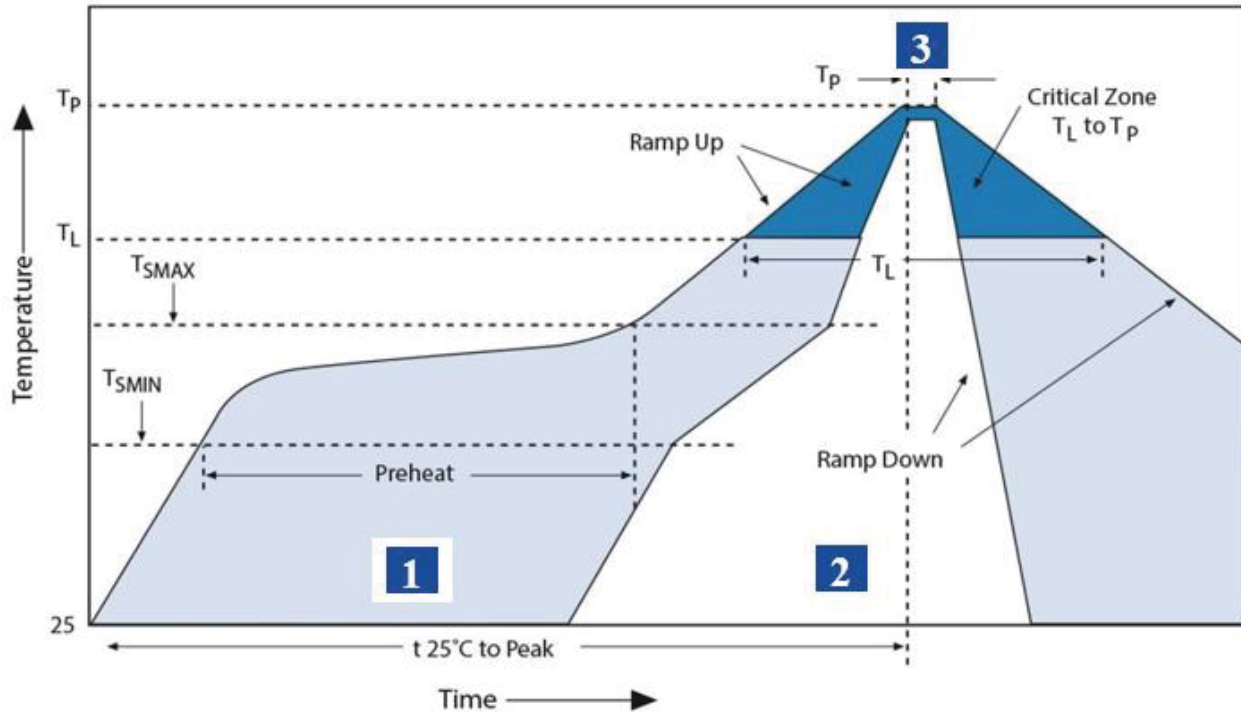


	DIM.	TOL.
A	12.7	±0.2
B	7.62	Max.
C	15.24	Max.
D	18.54	Max.
E	2.92	REF.
F	12.45	REF.
G	2.79	REF.

Dimension: mm

5.1 Materials

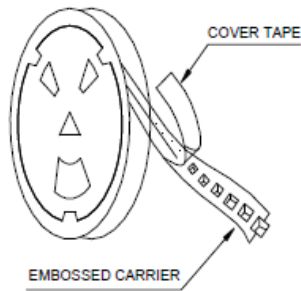
No	Part Name	Material
1	Core	Fe ₂ O ₃
		NiO
		CuO
		MgO
		ZnO
		MnO ₂
2	Enamelled Wire	Copper
		Modified Polyester Resin
3	Base	Copper
		Iron
		Zinc
		Tin
4	SN	COF
		PURE Tin PLATING

6.1 Reflow Profile


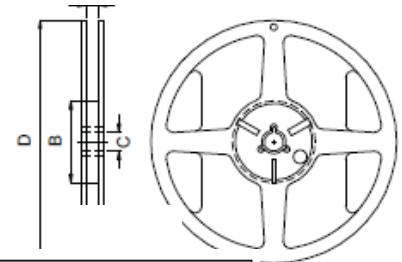
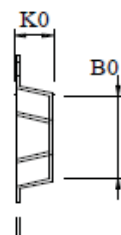
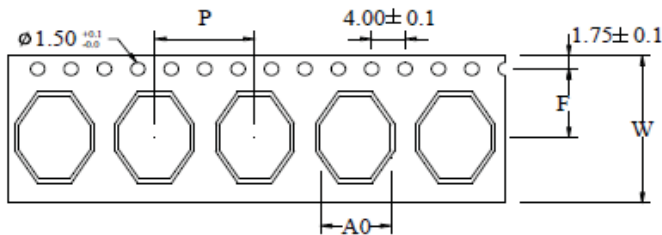
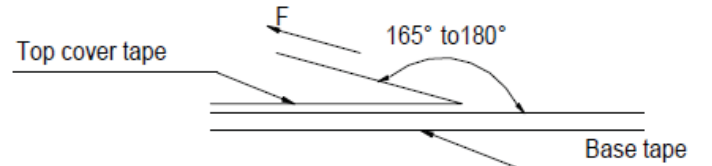
Zone	Description	Temperature	Times
1	Preheat	T_{SMAX} 120°C~180°C	50~150 sec.
2	Reflow	T_L 217°C	90 sec.
3	Peak heat	T_P 245°C~250°C	10~30 sec. MAX

7.0 Packing

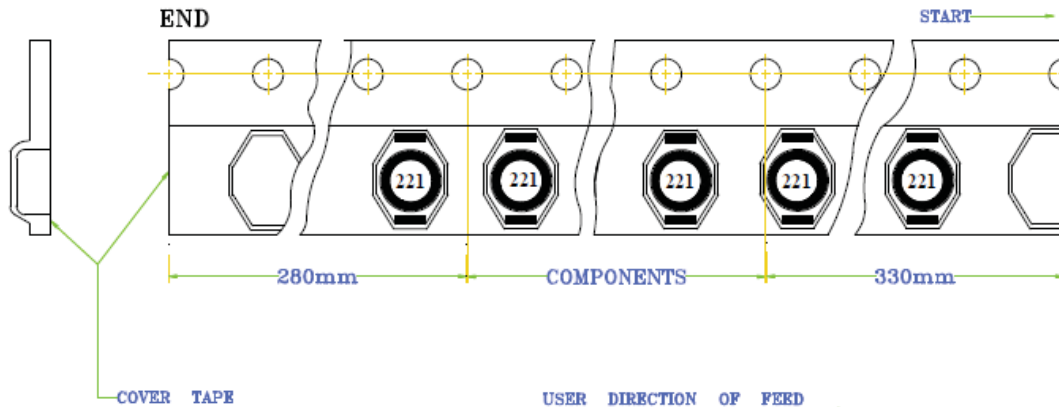
T: 250pcs / reel



★The force for tearing off cover tape is 10 to 130 grams in the arrow direction under the following conditions.



CARRIER TAPE / SIZE (mm)							REEL 13"×32mm			
A0	B0	K0	P	W	F	t	A	B	C	D
15.7 ± 0.1	19 ± 0.1	7.6 ± 0.1	20 ± 0.1	32 ± 0.3	14.2 ± 0.1	0.4 ± 0.05	32.5 ± 0.2	100 ± 0.5	13.2 ± 0.3	330 ± 1.0



Dimension: mm

After Change:

1.0 Key Electrical Specifications

Part Number	Inductance (uH) ±20%	DCR (Ω) max	Isat (A) max	Irms (A) max	Q	SRF (MHz) Ref.
ASPI-1306S-100M	10	0.040	8.00	3.90	30.0	8.0
ASPI-1306S-150M	15	0.048	7.00	3.40	20.0	7.0
ASPI-1306S-220M	22	0.059	6.00	3.10	18.0	6.0
ASPI-1306S-330M	33	0.075	5.00	2.80	14.0	5.0
ASPI-1306S-470M	47	0.097	4.00	2.40	10.0	4.0
ASPI-1306S-680M	68	0.138	3.00	2.00	9.0	3.0
ASPI-1306S-101M	100	0.207	2.40	1.70	7.0	2.4
ASPI-1306S-151M	150	0.293	2.10	1.30	6.0	2.1
ASPI-1306S-221M	220	0.470	1.90	1.10	5.0	1.9
ASPI-1306S-331M	330	0.780	1.10	0.86	4.0	1.1
ASPI-1306S-471M	470	1.08	0.90	0.73	3.0	1.1
ASPI-1306S-681M	680	1.40	0.96	0.64	2.5	0.96
ASPI-1306S-102M	1000	2.01	0.80	0.53	2.0	0.80

1.1 Test Conditions

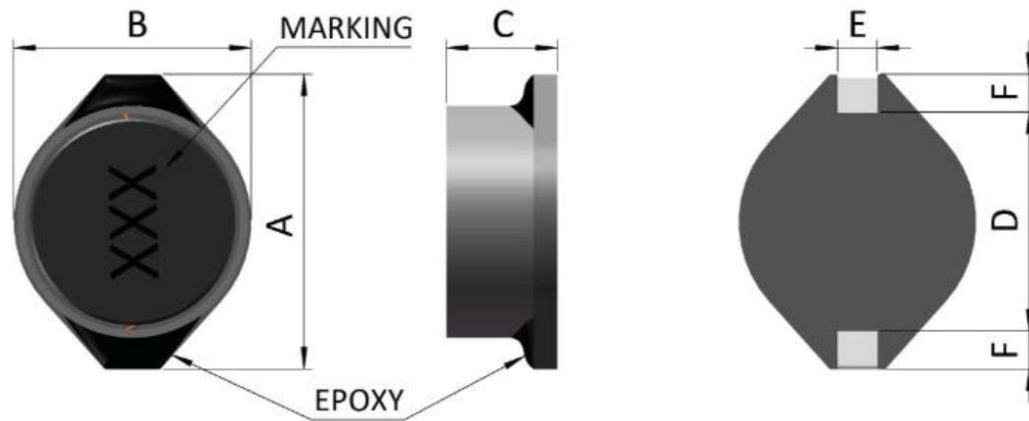
Inductance: 200kHz, 0.1V (10 μH – 15 μH)

Inductance: 100kHz, 0.1V (22 μH – 1000 μH)

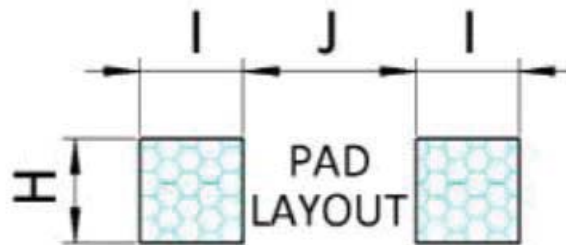
Isat: $\Delta L/L$ (initial) $\geq -10\%$

Irms: $\Delta T \leq 40^\circ\text{C}$

5.0 Mechanical Dimensions



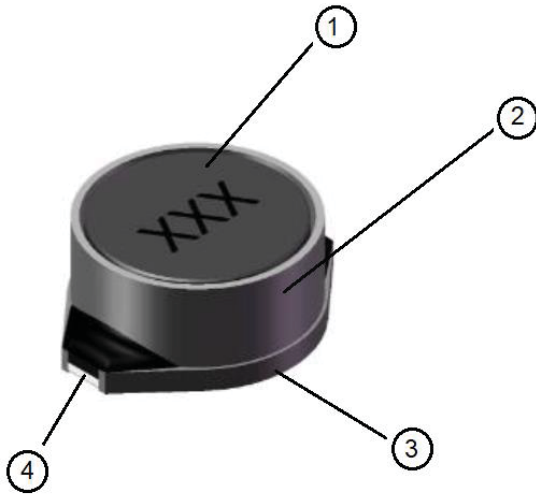
Part	A(max)	B(max)	C(max)	D	E	F
ASPI-1306S	18.54 ±0.15	15.24 ±0.15	7.62 ±0.15	12.7 ±0.15	2.54 ±0.15	2.54 ±0.15



Part	H	I	J
ASPI-1306S	2.79 ±0.15	2.92 ±0.15	12.45 ±0.15

Dimension: mm

5.1 Materials



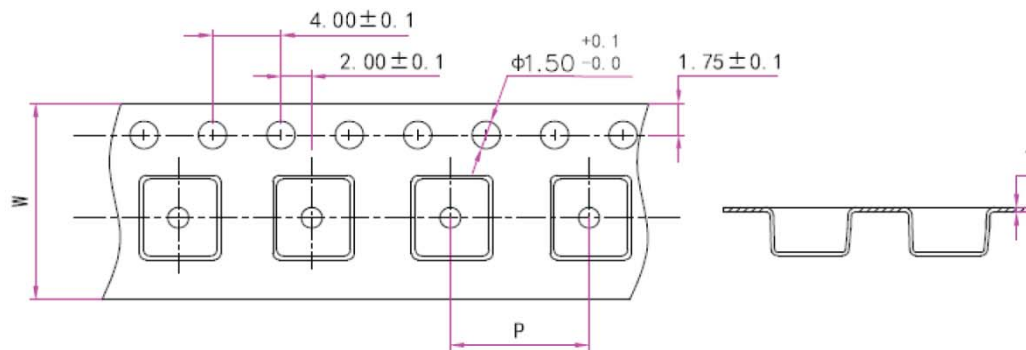
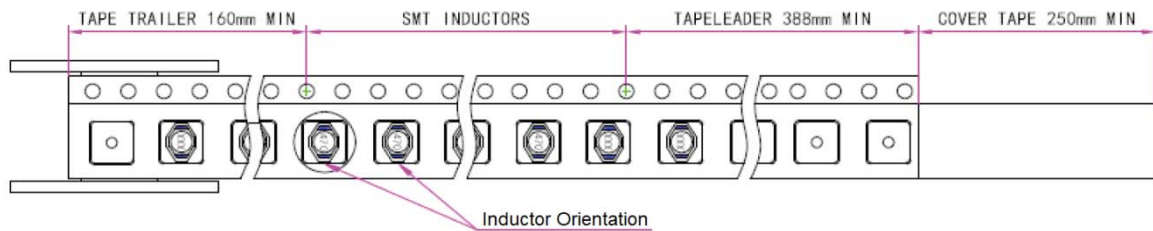
NO	Part Number	Material
1	Core	Fe2O3
		Mn3O4
		ZnO
		TMH 219 epoxy insulating powder (Black)
2	Wire	Copper
		Polyurethane Resin
3	Base	Aromatic polyester resin
		Class fiber
4	Sn	CU
		Sn
		Ni

6.1 Reflow Profile

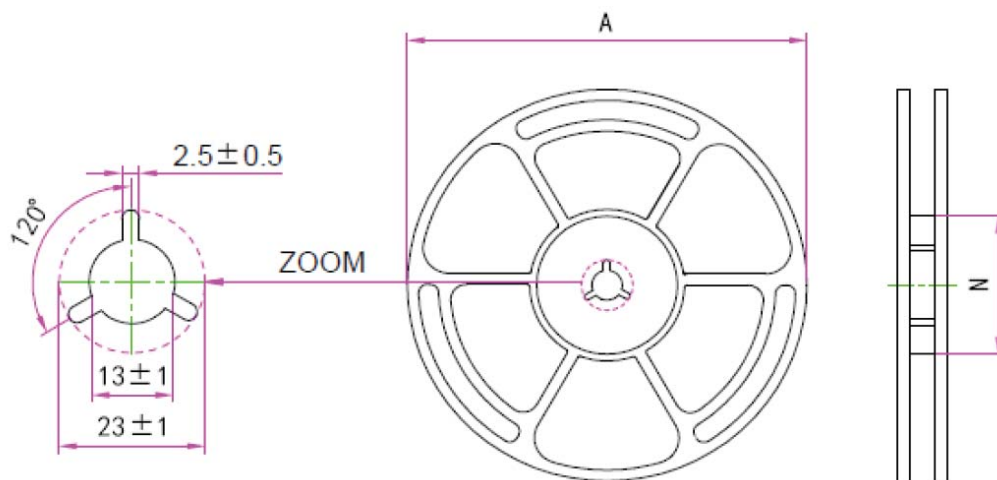
Zone	Description	Temperature	Times
1	Preheat	$T_{SMIN} \sim T_{SMAX}$ 150°C ~ 180°C	60 ~ 120 sec.
2	Reflow	T_L 230°C	40 sec.
3	Peak heat	T_P 250°C±5°C	10 sec. MAX

7.0 Packing

T: 250pcs / reel



W	P	T
32 ± 0.3	20 ± 0.1	0.35 ± 0.05



A	N
330	100

Dimensions mm

Cause/Reason for Change: Updating series parameters, adding Columns for additional information (Q and SRF).		
Change Plan		
Effective Date: 9/29/2020	Additional Remarks:	
Change Declaration: Changes described in this document have no negative impact on the products form, fit or function.		
Issued Date: 9/29/2020	Issued By:	Issued Department:
Approval:	Approval:	Approval:
For Abracon EOL only		
Last Time Buy (if applicable):	Alternate Part Number / Part Series:	
Additional Approval:	Additional Approval:	Additional Approval:
Customer Approval (If Applicable)		
Qualification Status: <div style="text-align: center;"> <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted </div> <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
Customer Part Number:	Customer Project:	
Company Name:	Company Representative:	Representative Signature:
Customer Remarks:		