

ECN/PCN No.: M1168

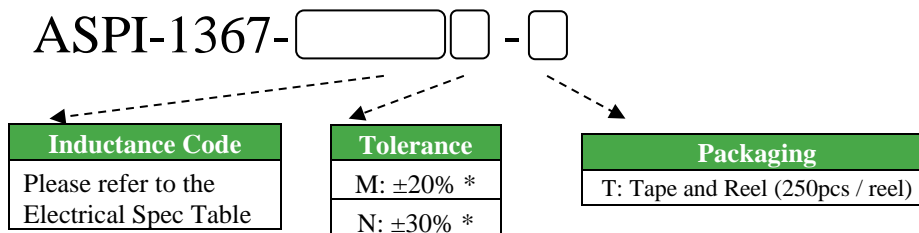
For Manufacturer			
Product Description: Shielded SMD Chip Power Inductor	Abracon Part Number / Part Series: ASPI-1367 series		<input checked="" type="checkbox"/> Series
			<input type="checkbox"/> Part Number
Affected Revision: F	New Revision: G	Application:	<input type="checkbox"/> Safety
			<input checked="" type="checkbox"/> Non-Safety

Prior to Change:

1.0 Key Electrical Specifications

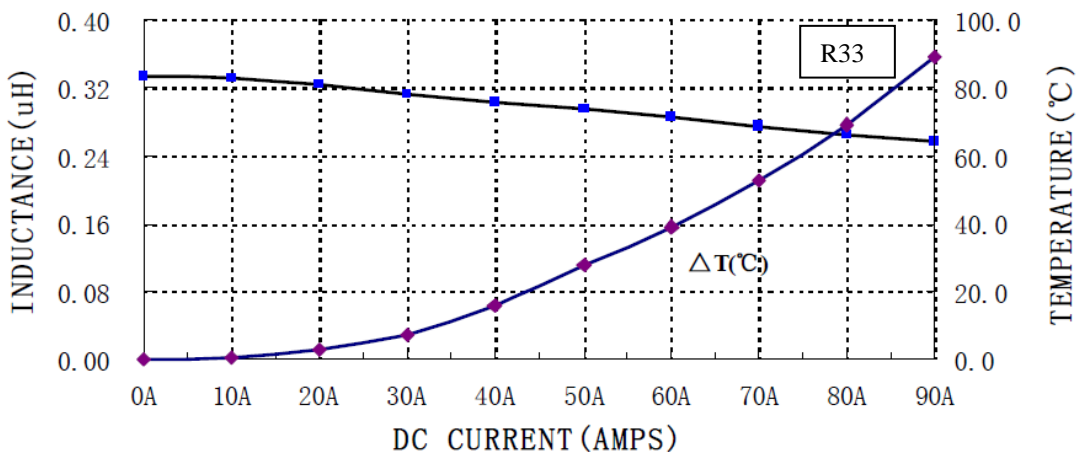
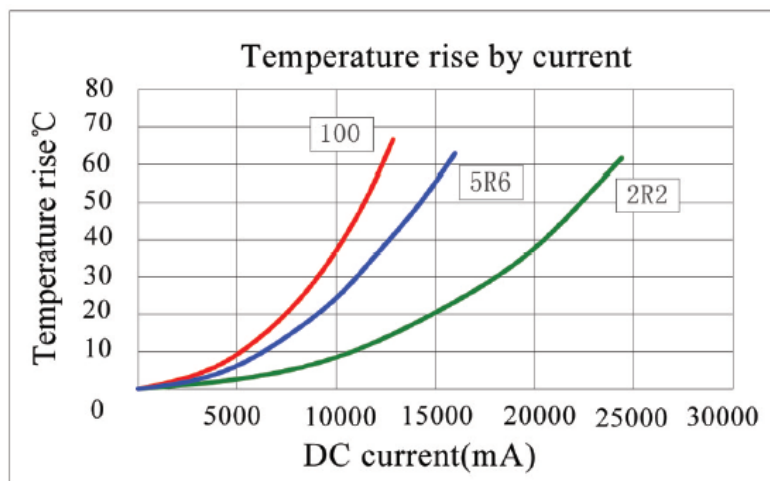
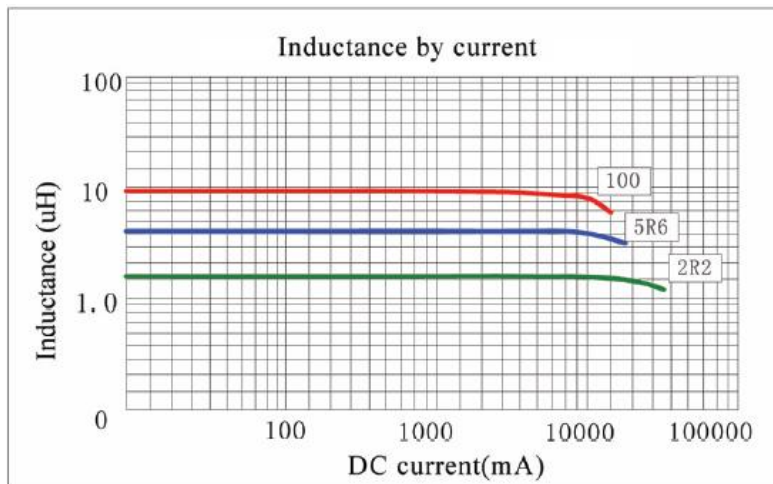
Part Number ASPI-1367-	L (μ H)	Tolerance (M, N)	R _{DC} (m Ω)	R _{DC} (m Ω)	I _{sat} (A)	I _{rms} (A)
			Typ	Max		
R10	0.1	N	0.25	0.5	80.0	60.0
R33	0.33	M	0.6	0.8	65.0	46.0
2R2	2.2	M	3.8	4.2	33.0	20.0
3R3	3.3	M	5.5	6.8	29.0	15.0
4R7	4.7	M	9.5	11.2	25.0	13.5
5R6	5.6	M	10.5	11.5	24.0	12.0
6R8	6.8	M	13.5	14.9	16.5	11.5
8R2	8.2	M	15.2	16.6	16.0	10.5
100	10	M	17.0	18.5	15.5	10.0

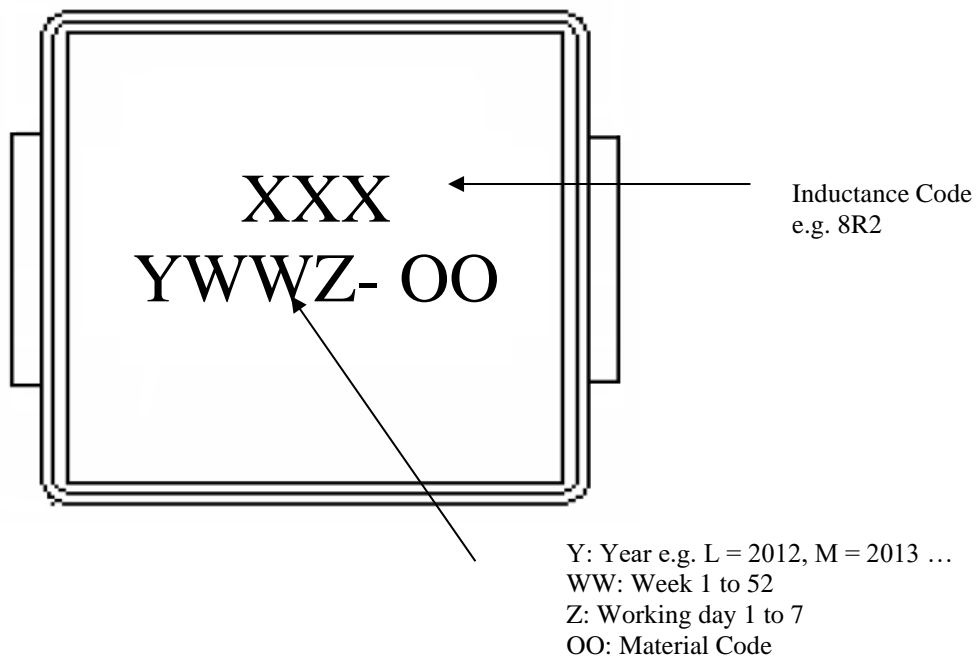
2.0 Part Number Identification



*N for 0.1 μ H
*M for 0.33~10 μ H

4.0 Inductance and Temperature Curve

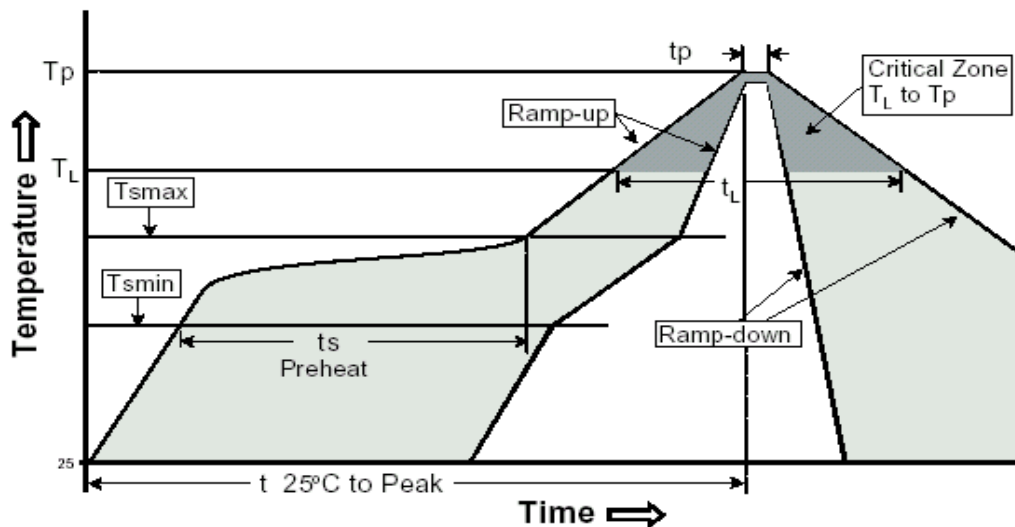


5.0 Marking

6.0 Mechanical Dimensions

A	B	C	D	E	F
12.9 max.	14.0 max.	6.7 max.	4.0±0.5 for L≤1.5uH 3.0±0.5 for L=2.2uH 4.7±0.3 for L>2.2uH	8.4 ref.	2.0±0.5

Recommended Land Pattern

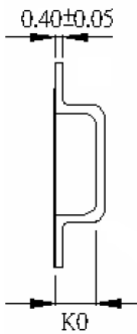
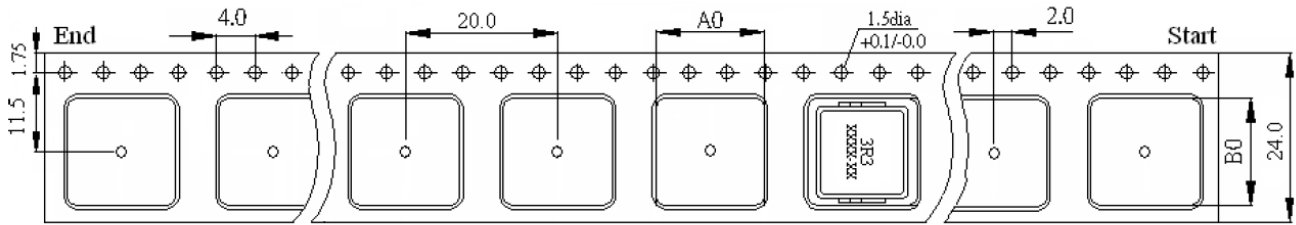
G	H	I
14.5	5.0	8.0

7.1 Reflow Profile


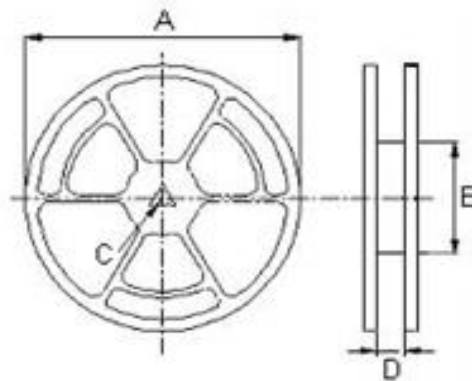
Profile Feature	Assembly
Average Ramp-Up Rate ($T_{s_{max}}$ to T_p)	3°C /second max.
Preheat -Temperature Min ($T_{s_{min}}$) -Temperature Max ($T_{s_{max}}$) -Time ($t_{s_{min}}$ to $t_{s_{max}}$)	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak/Classification Temperature (T_p)	245 +0°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-Down Rate	6°C/seconds max
Time 25°C to Peak Temperature	8 minutes max.

8.0 Packing

T= tape and reel (250pcs/reel)



A ₀	B ₀	K ₀
13.2	13.9	7.0



A	B	C	D
330	100	13.5	24

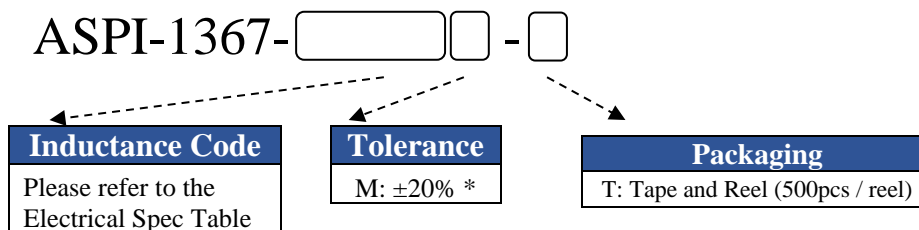
After Change:

1.0 Key Electrical Specifications

Part Number ASPI-1367-	L (μ H)	Tolerance (M)	R _{DC} (m Ω)		I _{sat} (A)	I _{rms} (A)	Lead Type*
			Typ	Max			
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

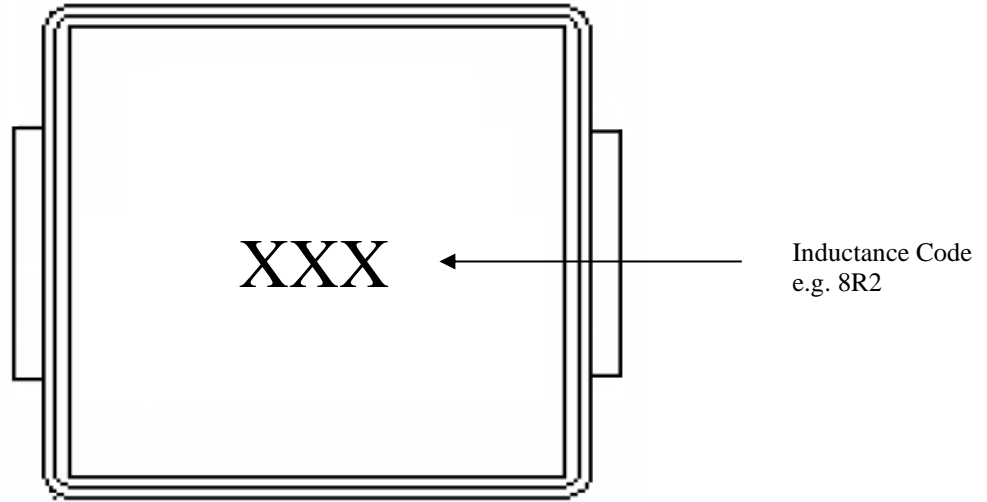
*Lead Type: NLF= Non-Leadframe, LF = Leadframe

3.0 Part Number Identification

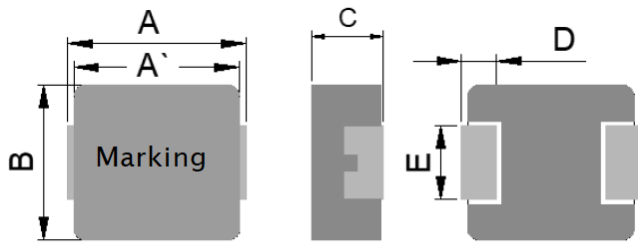


Rev F Section 4.0 Removed due to added parts creating space issues. Graphs can be released upon request.

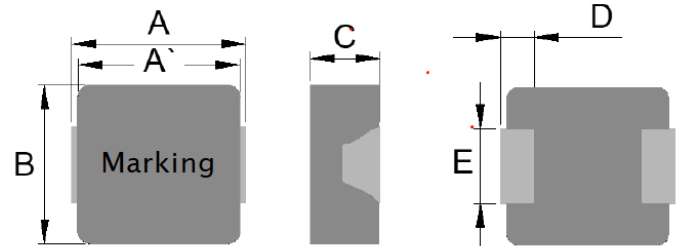
4.0 Marking



5.0 Mechanical Dimensions



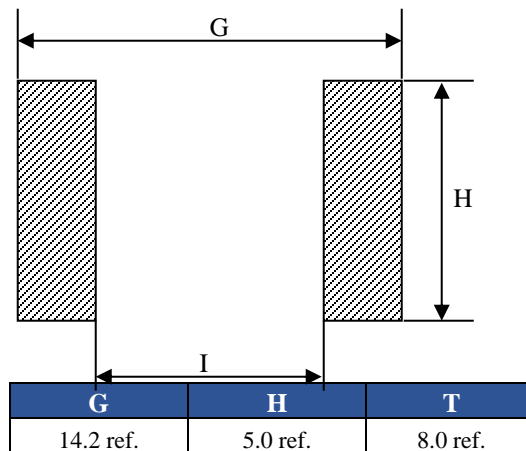
Type: Leadframe (LF)



Type: Non-Leadframe (NLF)

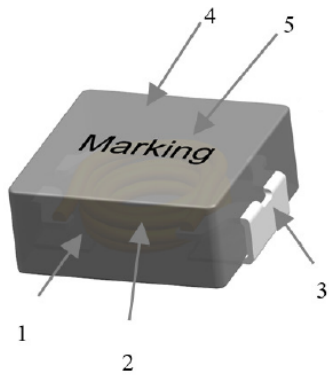
A	A'	B	C	D	E
13.5 ±0.5	12.5 ±0.3	12.50 ±0.50	6.20 ±0.30	2.30 ±0.3	4.70 ±0.3

Recommended Land Pattern

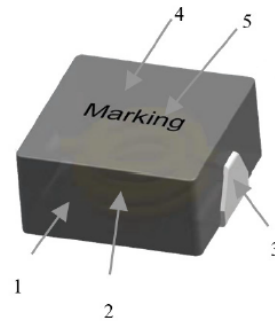


Dimension: mm

6.0 Composition and Materials
(add this section)



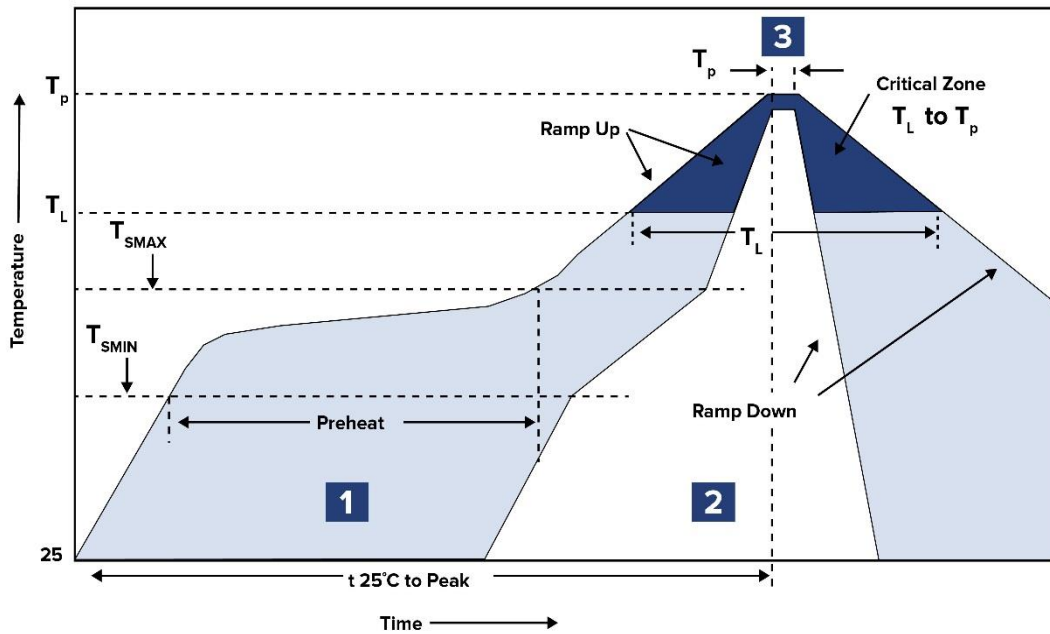
Type: Leadframe



Type: Non-Leadframe

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

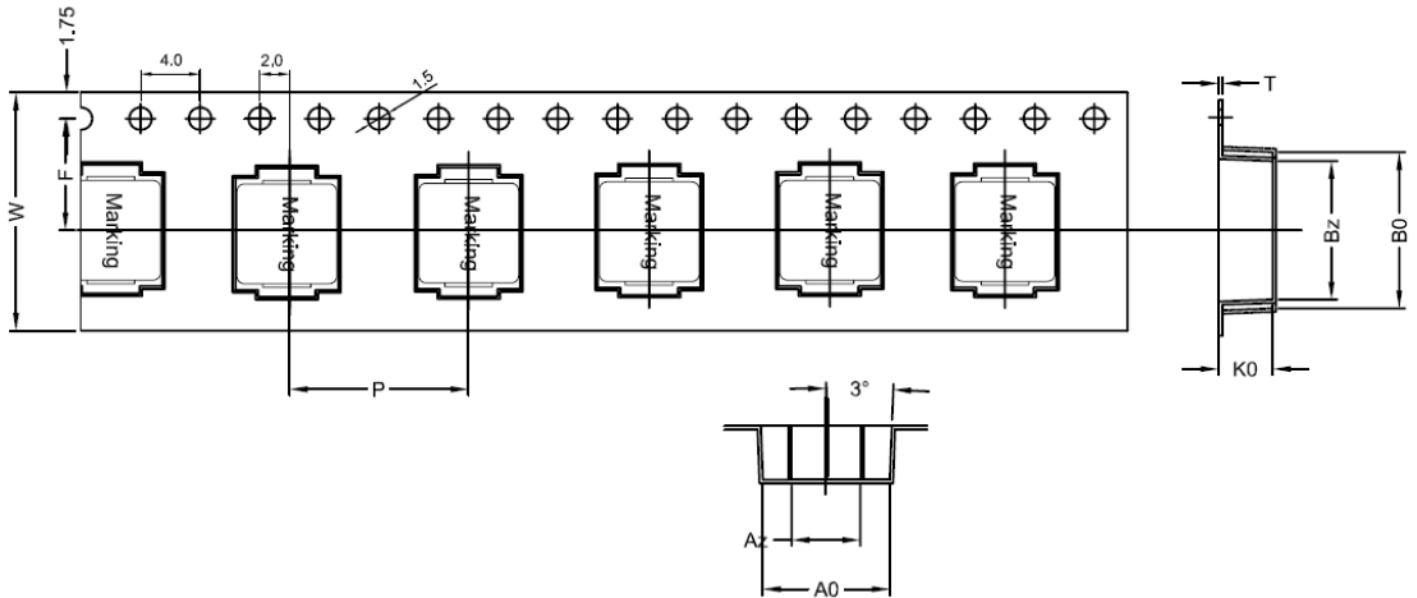
8.0 Reflow Profile



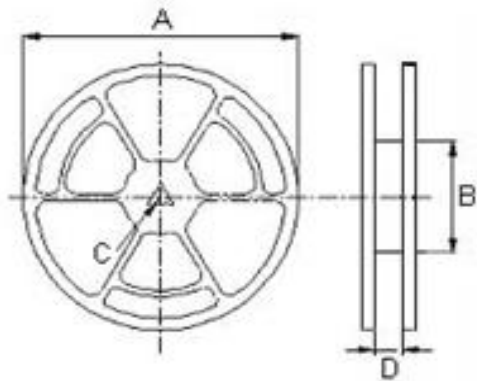
Zone	Description	Temperature	Times
1	Preheat	T _{SMIN} ~ T _{SMAX} 150°C ~ 200°C	60 ~ 180 sec.
2	Reflow	T _L 217°C	60 ~ 150 sec.
3	Peak heat	T _P 260°C	10 sec. MAX

9.0 Packing

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

Cause/Reason for Change:

General specification update. Updated solder profile graphics. Included more detail about package types.

Added the following part number:

- ASPI-1367-R15M-T
- ASPI-1367-R22M-T
- ASPI-1367-R47M-T
- ASPI-1367-R56M-T
- ASPI-1367-R68M-T
- ASPI-1367-1R0M-T
- ASPI-1367-1R5M-T
- ASPI-1367-150M-T
- ASPI-1367-220M-T
- ASPI-1367-330M-T
- ASPI-1367-470M-T
- ASPI-1367-680M-T
- ASPI-1367-101M-T

Discontinued:

- ASPI-1367-R10M-T

Change Plan

Effective Date: 5/5/2020	Additional Remarks:
------------------------------------	----------------------------

Change Declaration:
Updates do not negatively affect the products performance, form, fit or function.

Issued Date: 5/5/2020	Issued By: <i>Gerald Capwell</i>	Issued Department: Engineering
---------------------------------	--	--

Approval: <i>Syed Raza</i> Engineering VP	Approval: <i>Reuben Quintanilla</i> Quality Director	Approval: <i>Ying Huang</i> Purchasing Director
--	---	--

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:
 Approved Not accepted
Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.

Customer Part Number:	Customer Project:
------------------------------	--------------------------

Company Name:	Company Representative:	Representative Signature:
----------------------	--------------------------------	----------------------------------

Customer Remarks: