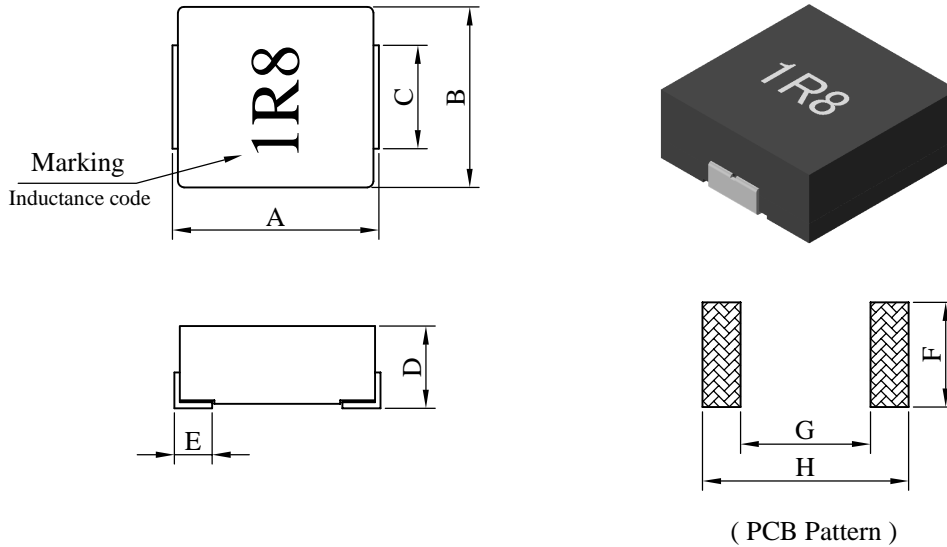


SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.		HP1004□□□□L□-□□□	
		REV.	20160324-D	PAGE	1

I . Configuration and dimensions :



Unit : m/m

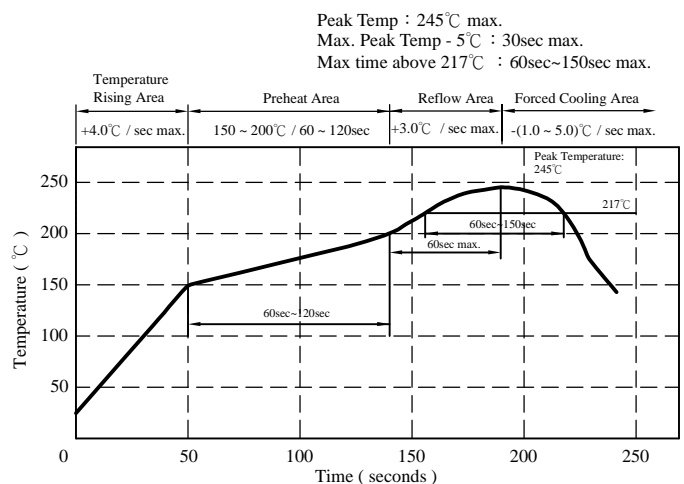
A	B	C	D	E	F	G	H
11.3 ±0.40	10.5 ±0.30	3.50 ±0.30	4.00 max.	1.70 ±0.50	4.50 typ.	6.00 typ.	13.00 typ.

II . Description :

- a . Powder molding construction.
- b . Magnetically shielded.
- c . Enamelled copper wire : H class
- d . Product weight : 2.55g (ref.)
- e . Moisture sensitivity Level 3
- f . Products comply with RoHS' requirements
- g . Halogen free available

III . General specification :

- a . Storage temp. : -55°C ----+125°C
- b . Operating temp. : -55°C ----+125°C
(Temp. rise included)
- c . Resistance to solder heat : 245°C .10 secs.



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SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	HP1004□□□□L□-□□□		
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IV . Electrical characteristics :

DWG No.	Inductance L (μ H)	Isat(A) typ.	Irms(A) typ.	RDC ($m\Omega$)	
				max.	typ.
HP10041R8ML□-□□□	1.80 \pm 20%	16.0	17.0	5.0	4.5
HP10042R0ML□-□□□	2.00 \pm 20%	14.0	16.0	6.0	5.2
HP10044R7ML□-□□□	4.70 \pm 20%	7.6	10.0	14.5	13.0
HP10046R8ML□-□□□	6.80 \pm 20%	7.5	9.0	19.5	17.5
HP1004100ML□-□□□	10.00 \pm 20%	7.0	8.0	30.5	28.0
HP1004150ML□-□□□	15.00 \pm 20%	6.0	6.0	41.5	37.5
HP1004220ML□-□□□	22.00 \pm 20%	4.5	5.0	66.0	60.5
HP1004470ML□-□□□	47.00 \pm 20%	3.0	3.0	190.0	175.0
HP1004101ML□-□□□	100.00 \pm 20%	2.0	2.5	270.0	250.0

- 1). □ : Packaging information : □ Code
- 2). "-□□□" : Reference code
- 3). Measured frequency of inductance is 100 kHz / 0.25V
- 4). Isat base on inductance drop 20% typ. of L value at 20°C
- 5). Irms base on temp. rise 40°C typ.

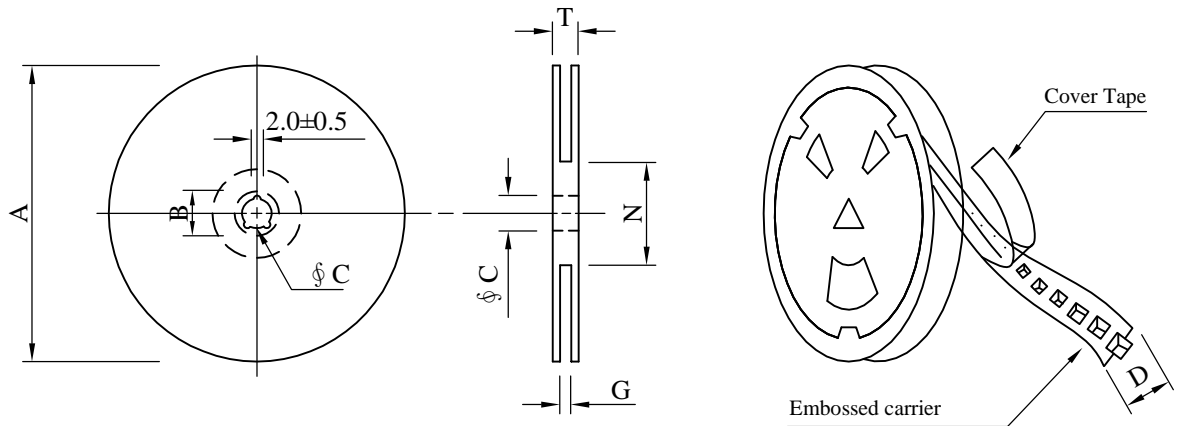
SPECIFICATION FOR APPROVAL

REF. :

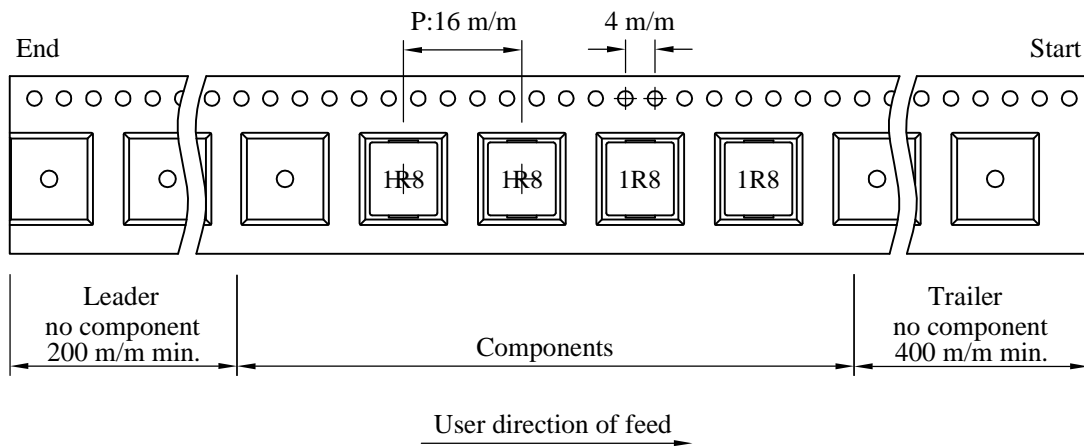
PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.		HP1004□□□□L□-□□□	
		REV.	20160324-D	PAGE	3

V . Packaging information :

(1) Configuration



※Carrier tape width : D



(2) Dimensions

Unit:m/m

Style	A	B	C	D	G	N	T
13 - 24	330	21±0.8	13±0.5	24	26 ⁺⁰	50 ⁻⁰	30.4

(3) Q'TY & G.W. Per package

Code	Inner : Reel			Outer : Carton		
	Q'TY (pcs)	G.W. (gw)	Style	Q'TY (pcs)	G.W. (Kg)	Size (cm)
B	900	2,500	13 - 24	3,600	11.0	38 x 37 x 22

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SPECIFICATION FOR APPROVAL

REF. :

PROD. NAME	Shielded SMD Power Inductor	ABC'S DWG NO.	HP1004□□□□L□-□□□		
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VI . Reliability test :

Item	Reference documents	Test Condition	Test Specification
1.High Temperature Exposure	MIL-STD-202 Method 108	1.Temperature: 125±2℃ 2.Time:96±2 hours.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
2.Temperature Cycling	JESD22-A 104	1.Temperature: -55℃ ~ +125℃ 2.Number of cycle:100 cycle 3.Dwell time:30 minutes	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
3.Biased Humidity Test	MIL-STD-202 Method 103	1.Temperature : 85±2 ℃ 2.Humidity: 85% RH. 3.Time:96±2 Hours	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
4.Operational Life	JESD22-A 108	1.Temperature: 125℃ (Temp. rise included) 2.Time:96±2 hours. 3.Rated current	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
5.External Visual	JESD22-B 101 & MIL-STD-883 Method 2009	Inspect product constructions, marking and workmanship.	1.No pollution on the surface of products. 2.Clear marking. 3.No crack.
6.Physical Dimensions	JESD22-B 100	Verify physical dimensions to the applicable product detail specification.	Per product specification standard
7.Resistance to solvents	MIL-STD-202 Method 215	Immerse into solvent for 3±0.5 minutes & brush 10 times for 3 cycles.	1.No body change in appearance. 2.No marking blurred. 3.Inductance shall not change more than ±20%.
8.Vibration Test	MIL-STD-202 Method 204	1.Frequency and Amplitued : 10-2000-10 Hz, 1.5 mm. 2.Direction:X, Y, Z 3.Test duration:2 hours for each direction, 6 hours in total.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
9.Resistance To Soldering Heat Test	MIL-STD-202 Method 210 & J-STD020D.1	1.Highest temperature : 245±5℃. 2.Time (temp. ≥ 217℃) : 60~150 Second. 3.IR reflow times : 3 times.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
10.Saturation Current	JIS C 6436 & User SPEC.	1.Applied rated current for 5 second. 2.Saturation current	Inductance shall not drop more than 20% typ.
11.Over load	JIS C 6436 & User SPEC.	1.Applied one and half rated current for a period of 5 minutes. 2.Rated current	No electrical or mechanical damage
12.Temperature Rise Current	JIS C 6436 & User SPEC.	1.Applied rated current for 10 minutes. 2.Temperature measure by digital surface thermometer. 3.Irms current	Surface temperature rise is less than 40℃ typ.
13.Solderability Test	J-STD-002 & JESD22-B 102	1.Baking in pre-testing : 150±5℃ / 16Hours±30 min. 2.Peak temperature : 240±5℃ 3.Time (temp. ≥ 217℃) : 60~150 second. 4.IR reflow times : 1 times.	More than 95% soldering coverage min on terminations.
14.Electrical Characteriazation	MIL-STD-202 Method 304 & User SPEC.	1.Operating temperature : -55℃~125℃ 2.Room temperature : 25℃.	1.No mechanical or electrical damage. 2.Inductance shall not change more than ±20%.
15.Drop	CNS-C6354 & GB/T 2423.8	1.Products shall be mounted on SPEC. PCB and dropped down from a height of 1m 2.Drop total time : 6 time (Every side of sample drop 2 time)	1. Adhesion on PCB shall be enough. 2. Product appearance shall not break. 3. No electrical damage.
16.Terminal Strength Test	IEC 60068-2-21	1.Apply push force to samples mounted on PCB. 2.Force of 1.8 kg for 60±1 seconds.	After test, inductors shall be no mechanical damage.

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