

# APPROVAL SHEET

## **WLPN606045 Series Shielded SMD Power Inductors**

\*Contents in this sheet are subject to change without prior notice.

**Features**

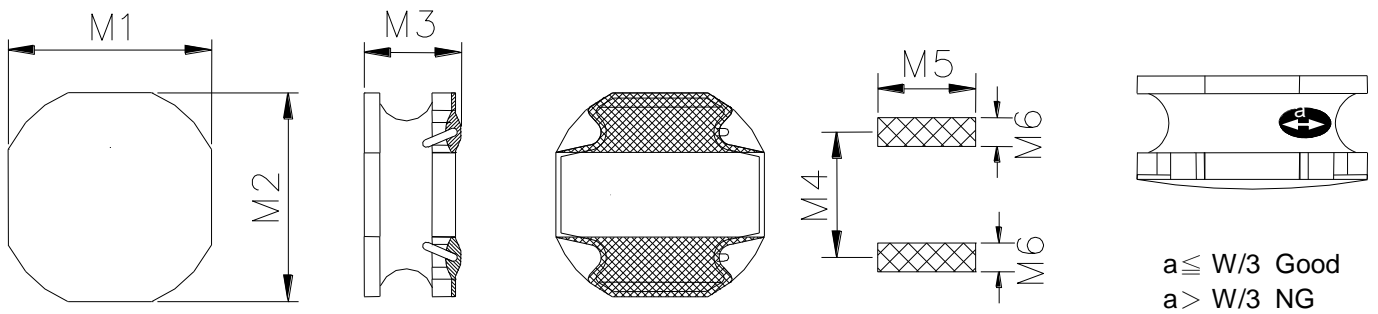
1. Close magnetic loop with magnetic resin shielded.
2. Low profile, High inductance.

**Applications**

1. General propose power inductor in DC power system.
2. Inductor in DC/DC converter.
3. Low profile for portable and wearable device.
4. LC filter in Audio D class Amplifier.

**Shape and Dimension**

Unit: mm



ITEM	M1	M2	M3	M4	M5	M6
DIM.	6.0	5.9	4.5	4.7	5.7	1.6
TOL.	±0.2	±0.2	MAX.	-	-	-

**Ordering Information**

WL	PN	6060	45	N	1R5	L	B
<b>Product Code</b> WL: Inductor	<b>Series</b> Shielded SMD Power Inductors	<b>Dimensions</b> 6.0 * 6.0 mm	<b>Thickness</b> 4.5 mm	<b>Tolerance</b> M: ± 20% N : ± 30%	<b>Value</b> 1R5 = 1.5uH 150 = 15uH. 101=100uH	<b>Packing Code</b> L=13" Reeled (Embossed Tape)	<b>B:STD</b>

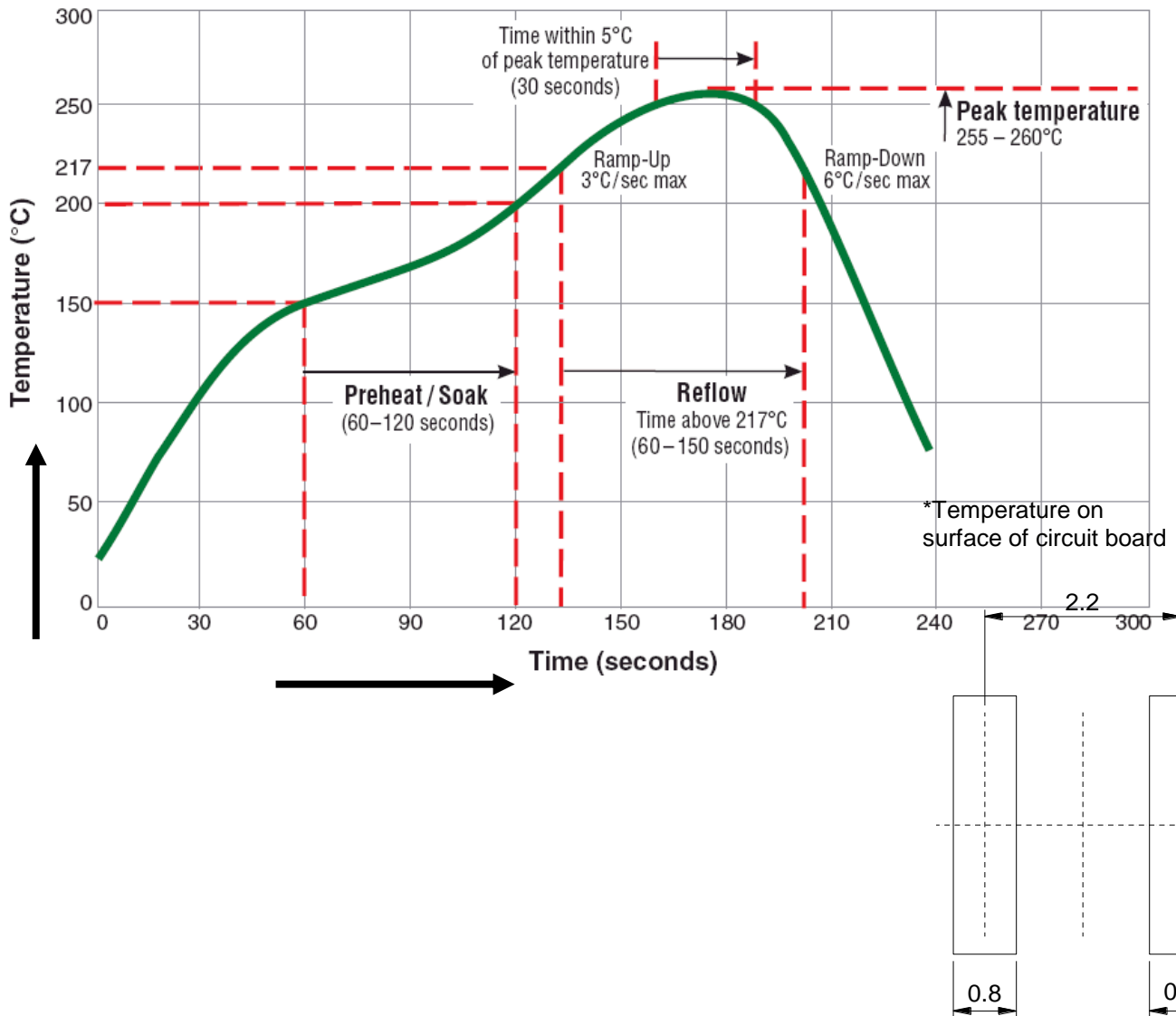
## Electrical Characteristics

WLPN606045 Series	MARK	L (uH)	Inductance Tolerance	Test Freq (KHz)1V	DCR (mΩ)	I <sub>rms</sub> (A)	I <sub>sat</sub> (A)
WLPN606045□1R0LB	1R0	1.0	N	100	18.2	6.00	8.50
WLPN606045□1R3LB	1R3	1.3	N	100	20.8	5.20	8.00
WLPN606045□1R5LB	1R5	1.5	N	100	23.4	5.00	8.00
WLPN606045□1R8LB	1R8	1.8	N	100	23.4	5.00	7.00
WLPN606045□2R3LB	2R3	2.3	N	100	27.3	4.50	6.00
WLPN606045□3R0LB	3R0	3.0	N	100	31.2	4.00	5.00
WLPN606045□4R5LB	4R5	4.5	M	100	40.3	3.70	4.00
WLPN606045□6R3LB	6R3	6.3	M	100	49.4	3.50	3.80
WLPN606045□100LB	100	10.0	M	100	61.1	2.80	3.00
WLPN606045□150LB	150	15.0	M	100	100.1	2.30	2.30
WLPN606045□220LB	220	22.0	M	100	149.5	1.70	1.90
WLPN606045□330LB	330	33.0	M	100	188.5	1.50	1.50
WLPN606045□470LB	470	47.0	M	100	286.0	1.30	1.30
WLPN606045□680LB	680	68.0	M	100	429.0	1.00	1.00
WLPN606045□820LB	820	82.0	M	100	533.0	0.90	0.90
WLPN606045□101LB	101	100.0	M	100	650.0	0.80	0.80

1. Test Frequency: 100KHz, 1V
2. Test Equipment:  
 Inductance: Chroma3302+1320+16502 or equivalent.  
 SRF:HP-4291B or equivalent.  
 RDC:CH16502BC or equivalent.
3. I<sub>sat</sub>:Based on inductance decrease 30% Max.(at 20°C)
4. I<sub>rms</sub>:Based on temperature increase 40°C Max.(at 20°C)
5. Operating Temperature Range:-25°C to +120°C (Including self-temperature rise).
6. Storage Temp. Range : -40°C to +85°C.
7. MSL : Level 1.

Reflow Profile Chart (Reference):

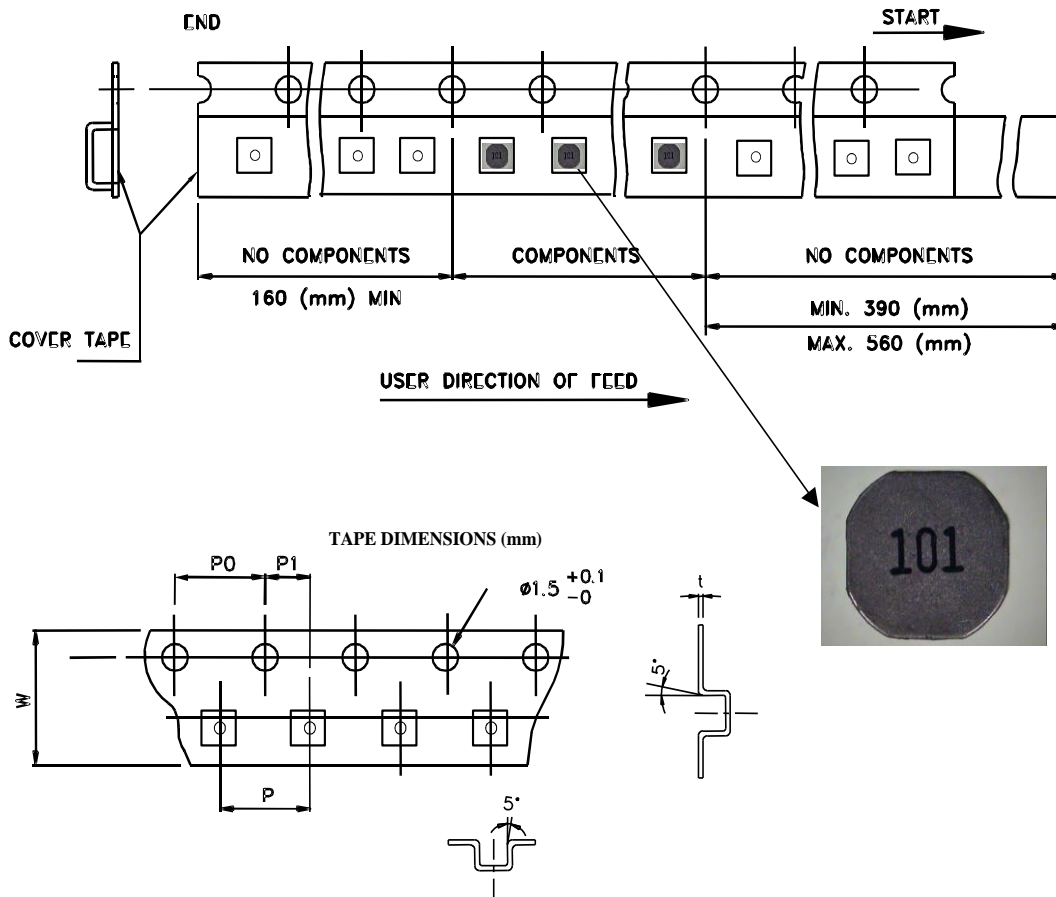
**Typical RoHS Reflow Profile**



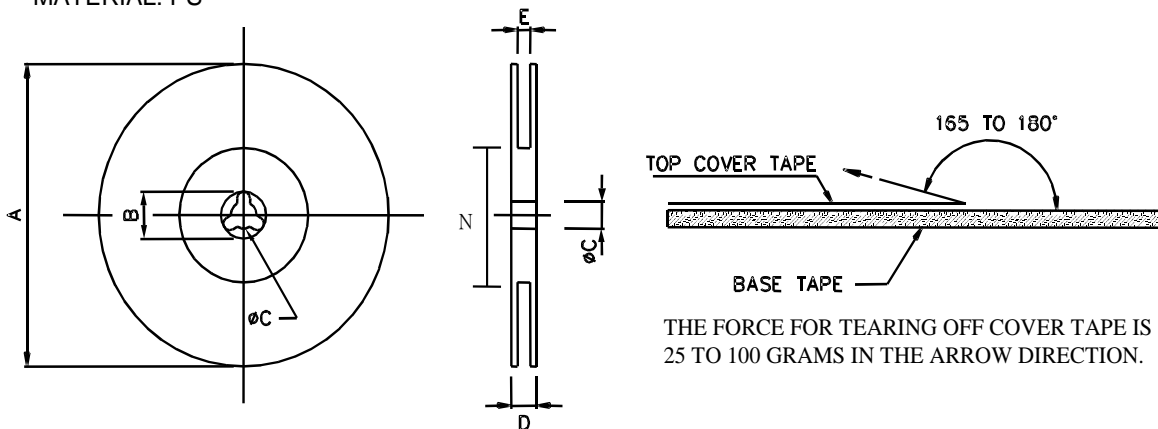
**Mechanical Performance /Environmental Test Performance Specifications:**

No.	Item	Test condition	Requirements
1	Salt Spray Test	Chamber temperature 35°C, the concentration of salt spray 5% (Total 24 hours).	MIL-STD-202G Method 101E Test Condition C
2	Humidity Test	+40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
3	High Temperature Storage	1. Temperature: 125, 100, 85, 70, 55, 40, 30°C. 2. Test time: 2, 16, 72, 96 hours.	IEC 68-2 Test Condition B
4	Low Temperature Storage	1. Temperature: -40, -25, -10. 2. Test time: 2, 16, 72, 96 hours.	IEC 68-2 Test Condition A
5	Thermal Shock	+125°C ± 5°C (30 minutes) ~ -40 ± 5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles).	MIL-STD-202G Method 107G Test Condition B-2
6	Life Test	+100°C ± 2°C (1000Hour)	MIL-STD-202G Method 108A Test Condition D
7	Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
8	Solder Heat Resistance Test	DIP: Soak in 260°C solder pot, stay 10Sec Reflow: Keep 250 ± 5°C, 30 ± 5Sec in air, Temperature ramp: +1~4°C/sec; Above 183°C, must keep 90 s - 120 s.	MIL-STD-202G Method 210F Test Condition B(DIP) Test Condition (Reflow)
9	Terminal Pull Strength Test	1/2, 1, 2, 3, 5, 10 Pound, as products terminal feature.	MIL-STD-202G Method 211A Test Condition A
10	Solder Ability Test	Soak in 245 °C solder pot of 3Sec, PAD must have 95% above coverage.	J-STD-003B
11	Terminal Push Strength Test	No special requirements: 5N thrust to maintain 10 Sec.	JIS C5321:1997

**Tape & Reel Packaging Dimensions:**



CARRIER TAPE REELS  
MATERIAL: PS



Product Series	A	B	C	D	E	N	T	P1	P	P0	W
DIM.	330	21.0	13.0	21.5	16.5	100	0.40	2.0	12.0	4.0	16.0
TOL.	±3.0	± 0.8	±0.5	MAX	±0.1	MAX.	±0.1	±0.10	±0.10	±0.10	±0.30

Quantity per reel : 1.5K pcs