

APPROVAL SHEET

WLPN303015 Series SMD Shielded Power Inductors



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

Features

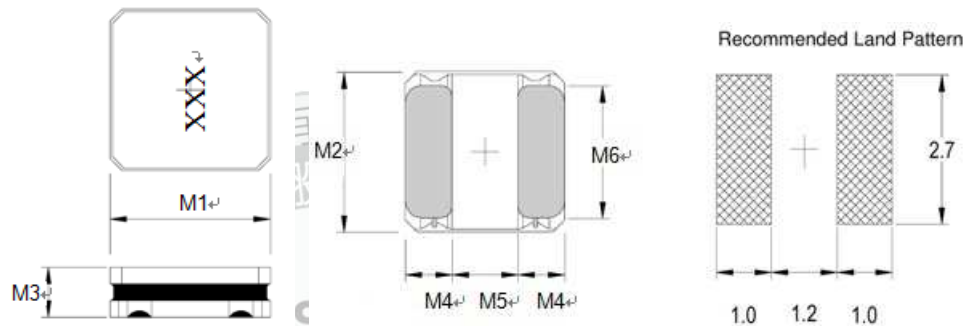
1. Close magnetic loop with magnetic resin shielded.
2. Low profile, High inductance.

Applications

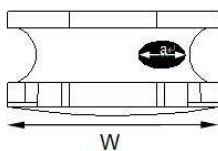
1. General propose power inductor in DC power system.
2. Inductor in DC/DC converter.
3. Low profile for portable and wearable device.
4. LC filter in Audio D class Amplifier.

Shape and Dimension

Unit: mm



※Void appearance tolerance limit



$a \leq W/3$ Good
 $a > W/3$ NG

Package Size	M1	M2	M3	M4	M5	M6
WLPN303015	3.0±0.1	3.0±0.1	1.5 MAX.	0.9±0.2	1.2±0.2	2.7 TYP.

Ordering Information

WL	PN	3030	15	N	1R0	P	B
Product Code	Series	Dimensions	Thickness	Tolerance	Value	Packing Code	
WL: Inductor	SMD Shielded Power Inductors	3.0 * 3.0 mm	1.5 mm	M: ± 20% N: ± 30%	1R0 = 1.0uH 100 = 10.0uH	P=7" Reeled (Embossed tape)	B:STD

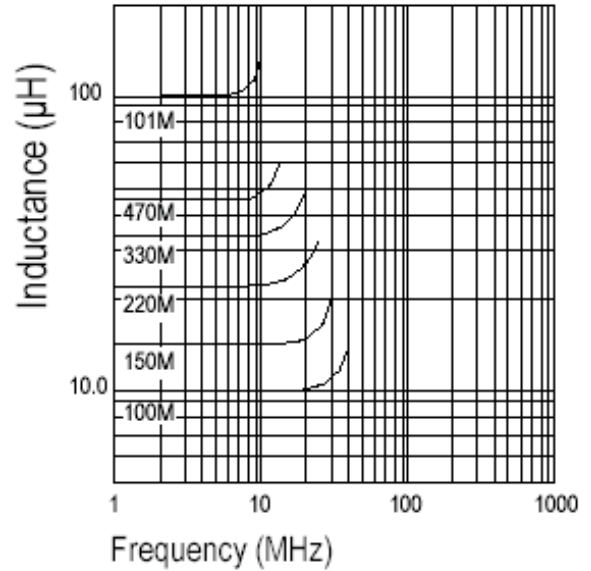
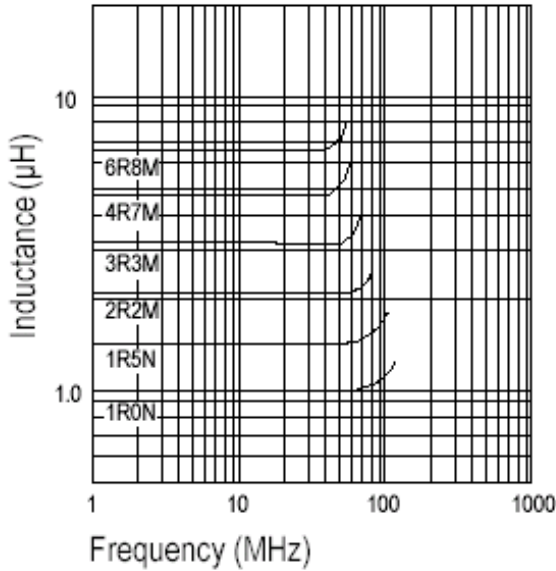
Electrical Characteristics

WLPN303015 Series	Marking	L (uH)	Inductance Tolerance	Test Freq (MHz)	DCR (Ω)MAX.	Irms (A)	Isat (A)
WLPN303015N1R0PB	1R0	1.0	±30%	1	0.048	2.10	2.10
WLPN303015N1R5PB	1R5	1.5	±30%	1	0.066	1.90	1.80
WLPN303015M2R2PB	2R2	2.2	±20%	1	0.072	1.60	1.48
WLPN303015M2R7PB	2R7	2.7	±20%	1	0.097	1.43	1.52
WLPN303015M3R3PB	3R3	3.3	±20%	1	0.112	1.45	1.21
WLPN303015M3R6PB	3R6	3.6	±20%	1	0.136	1.20	1.28
WLPN303015M4R7PB	4R7	4.7	±20%	1	0.136	1.25	1.08
WLPN303015M5R1PB	5R1	5.1	±20%	1	0.162	1.09	1.08
WLPN303015M6R2PB	6R2	6.2	±20%	1	0.253	0.86	1.00
WLPN303015M6R8PB	6R8	6.8	±20%	1	0.211	0.90	0.90
WLPN303015M100PB	100	10	±20%	1	0.276	0.87	0.75
WLPN303015M120PB	120	12	±20%	1	0.416	0.68	0.70
WLPN303015M150PB	150	15	±20%	1	0.422	0.65	0.58
WLPN303015M180PB	180	18	±20%	1	0.559	0.59	0.56
WLPN303015M220PB	220	22	±20%	1	0.622	0.55	0.47
WLPN303015M330PB	330	33	±20%	1	0.959	0.45	0.39
WLPN303015M390PB	390	39	±20%	1	1.294	0.39	0.41
WLPN303015M430PB	430	43	±20%	1	1.378	0.37	0.37
WLPN303015M470PB	470	47	±20%	1	1.406	0.40	0.32
WLPN303015M560PB	560	56	±20%	1	1.664	0.34	0.33
WLPN303015M680PB	680	68	±20%	1	3.51	0.23	0.28
WLPN303015M101PB	101	100	±20%	1	2.920	0.25	0.23

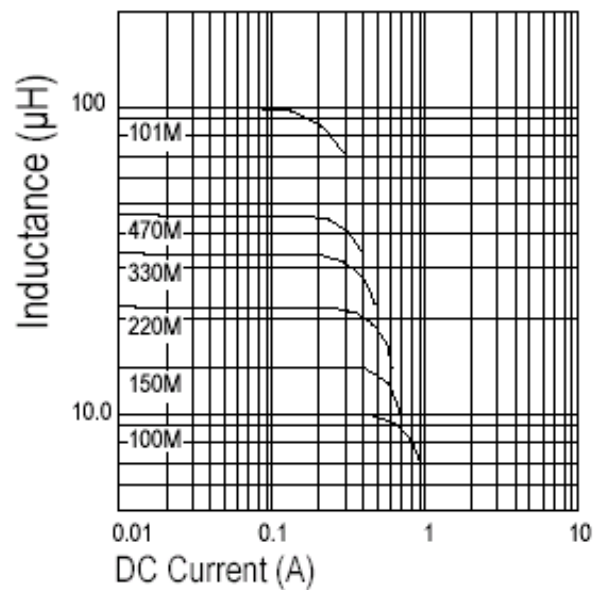
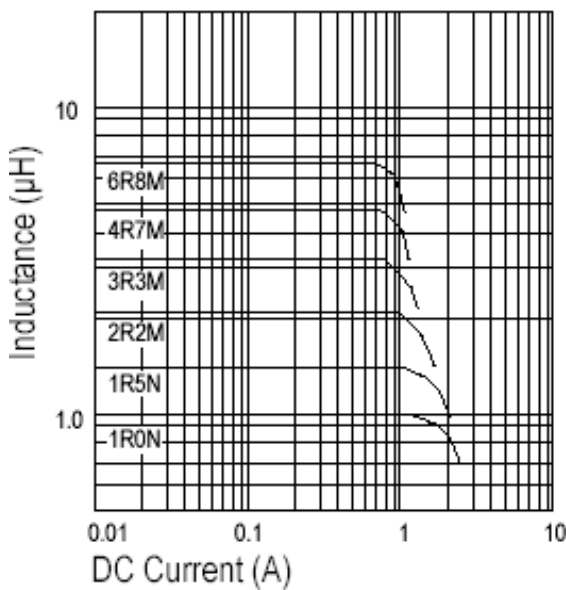
1. Test Frequency:1MHz ,1V
2. Test Equipment:
L:CHROMA-3302+1320. or equivalent.
RDC:CH16502BC or equivalent.
3. Isat : Based on inductance decrease 30% Max.(at 20℃)
4. Irms : Base on temperature increase 40% Max.(at 20℃)
5. Operating temperature range:-25℃ to +120℃(Include self-temperature rise)
6. Storage temperature: -40℃ to +85℃
7. MSL:LEVEL 1

ELECTRICAL CURVE

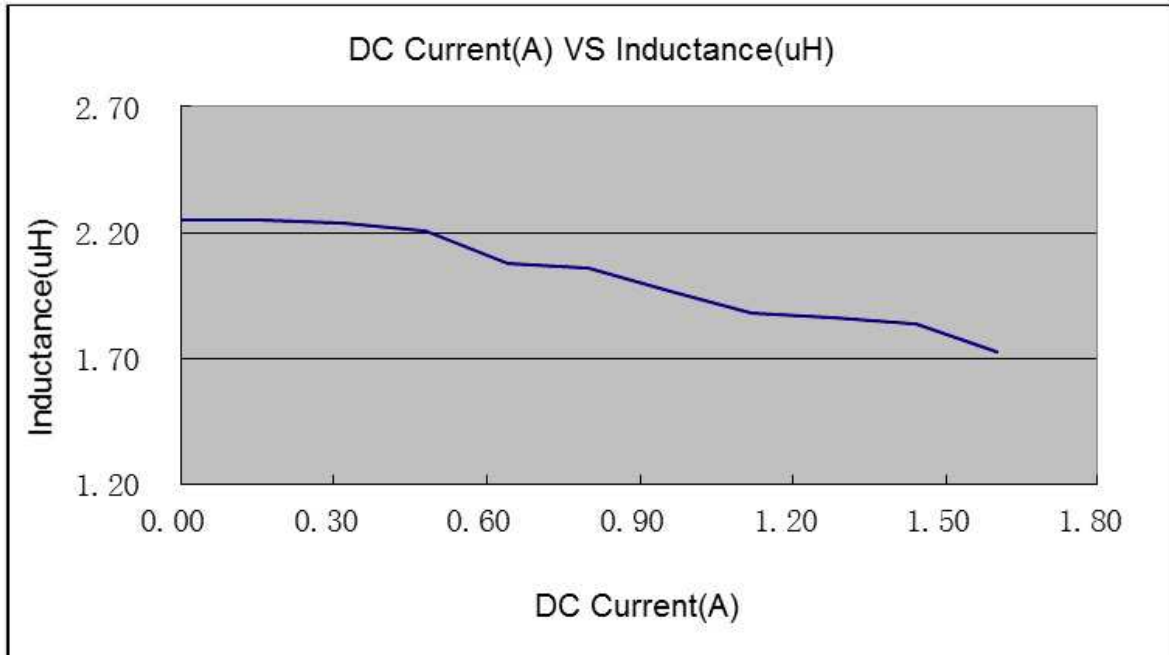
L vs Frequency



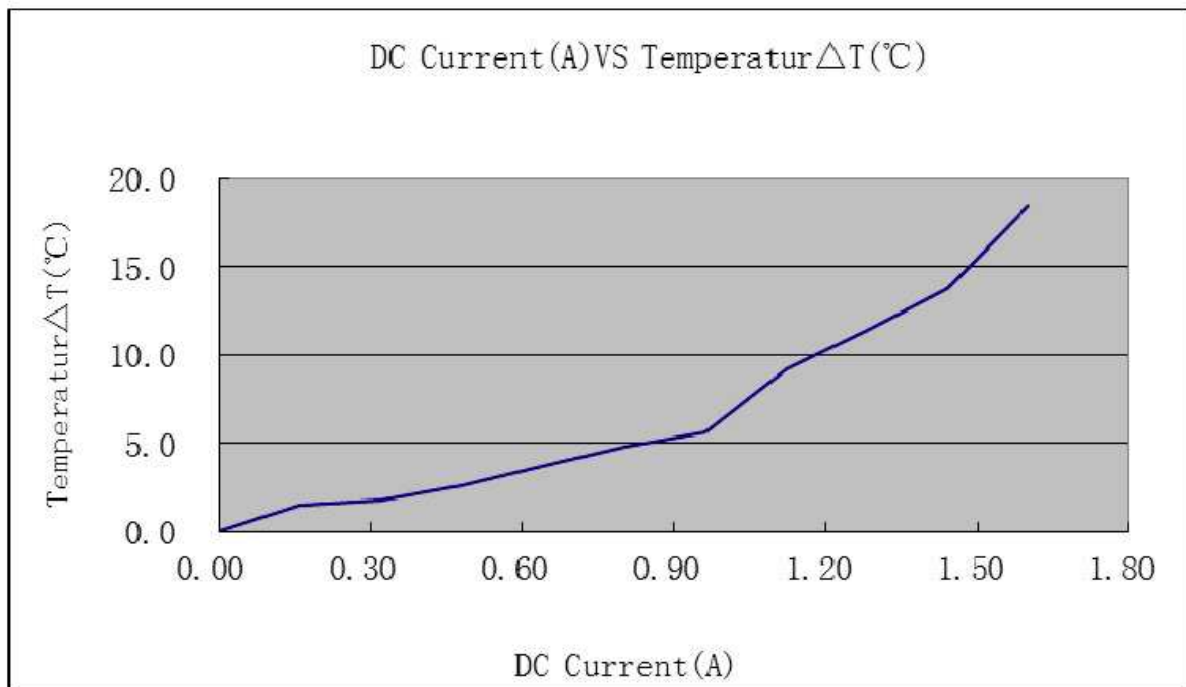
L vs Current



TEMPERATURE VS DC CURRENT

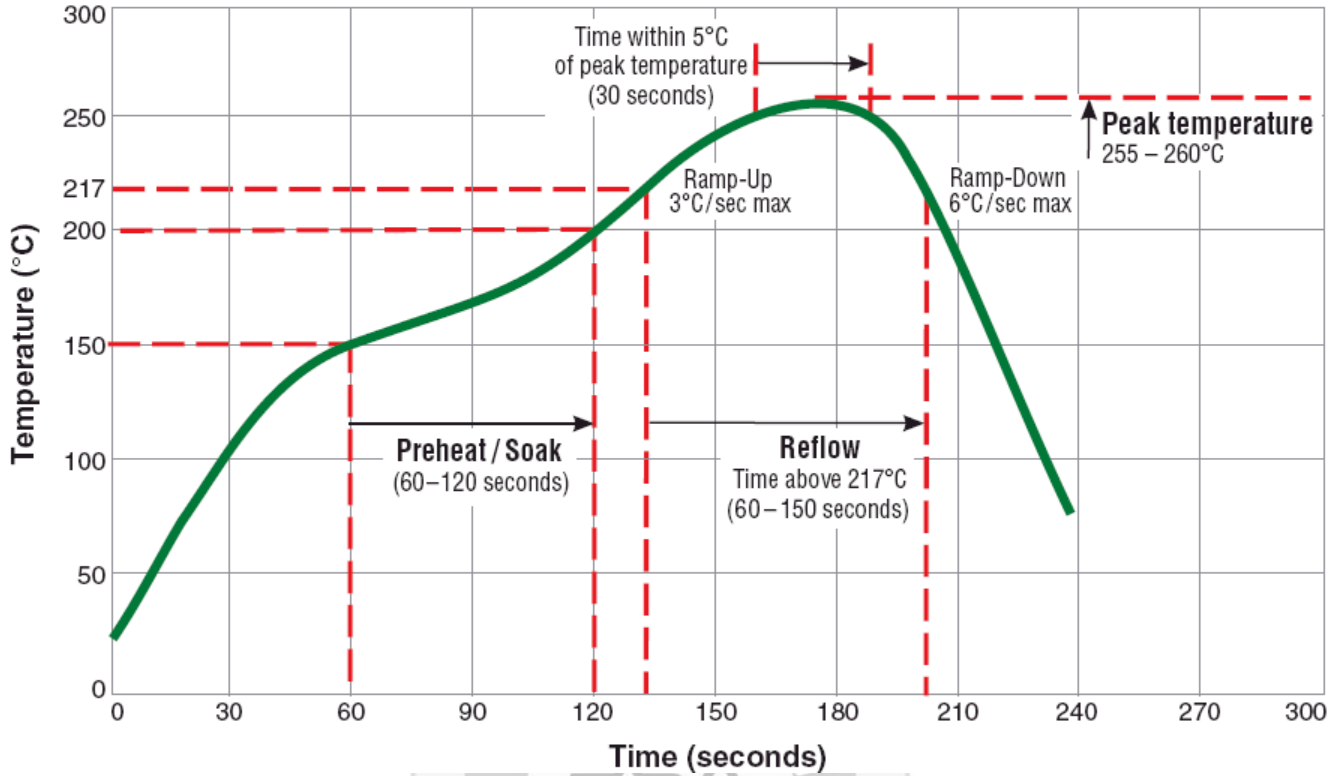


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TYPICAL RoHS REFLOW PROFILE

Typical RoHS Reflow Profile



RELIABILITY PERFORMANCE

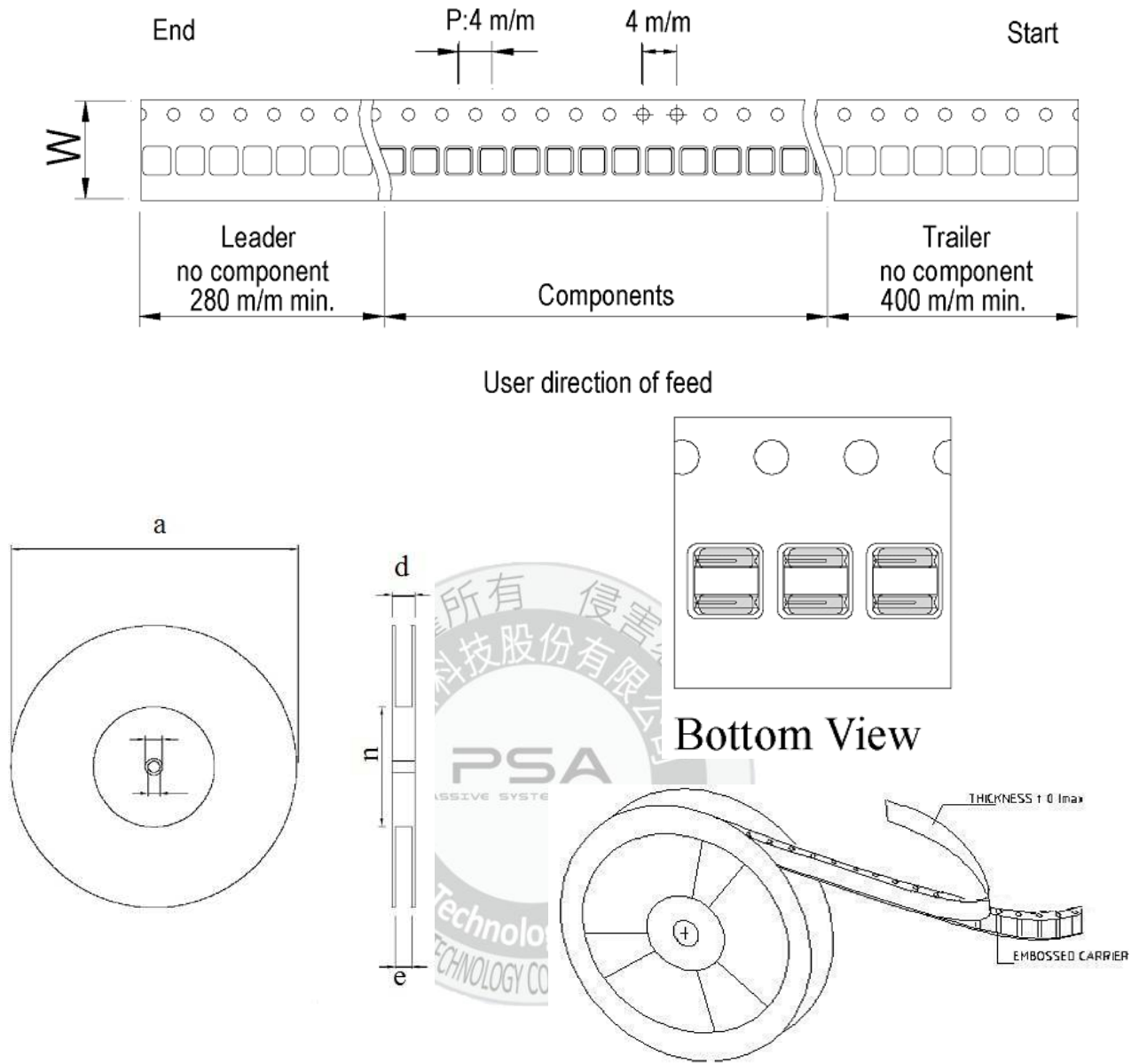
Reliability Experiment For Electrical

Test Item	Test Condition	Standard Source
Humidity Test	+40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1. Temperature: +125°C ± 2°C 2. Test time: 48 ± 2hrs	IEC 68-2 Test Condition B
Low Temperature Test	1. Temperature: -40°C ± 2°C 2. Test time: 48 ± 2hrs	IEC 68-2 Test Condition A
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
Life Test	+70°C ± 5°C (250Hours)	MIL-STD-202G Method 108A Test Condition B

Reliability Experiment For Physical

Test Item	Test Condition	Standard Source
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
Solder Heat Resistance Test	IR/convection reflow: Peak Temp 250 ± 5°C for 5Sec in air, Through 2 Cycle. Temperature Ramp: +1~4°C/sec; Above 183°C, must keep 90 s - 120 s	MIL-STD-202G Method 210F Test Condition (Reflow)
Solder Ability Test	Soak in 245 °C solder pot of 3Sec, PAD must have 95% above coverage.	J-STD-003B

Tape & Reel Packaging Dimensions:



Product Series	t	P1	P	P0	W	A0	B0	K0	a	b	c	d	e	n
WLPN303015	0.25 ±0.05	2.0 ±0.05	4.0 ±0.1	0.4 ±0.1	8.0 ±0.2	3.15 ±0.1	3.15 ±0.1	1.65 MAX.	178.0 ±2.0	21.0 ±0.8	13.0 ±0.8	12.5 MAX.	8.4 ±0.1	50 MIN.

Quantity per reel : 2K pcs