APPROVAL SHEET

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WLPN303015 Series
SMD Shielded Power Inductors

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Features

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

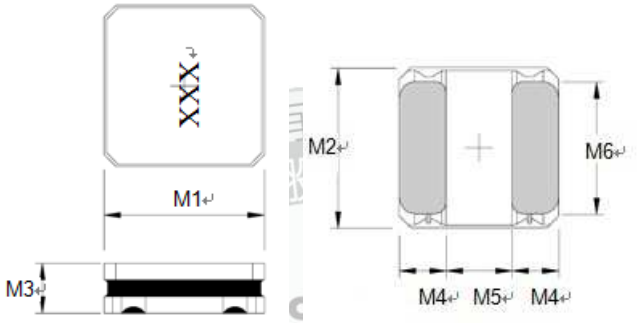
Applications

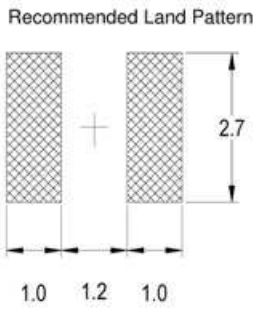
1. General propose power inductor in DC power system.
2. Inductor in DC/DC converter.
3. Low profile for portable and wearable device.
4. LC filter in Audio D class Amplifier.

Shape and Dimension

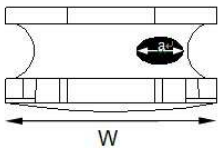
Unit: mm







※Void appearance tolerance limit



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

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Electrical Characteristics

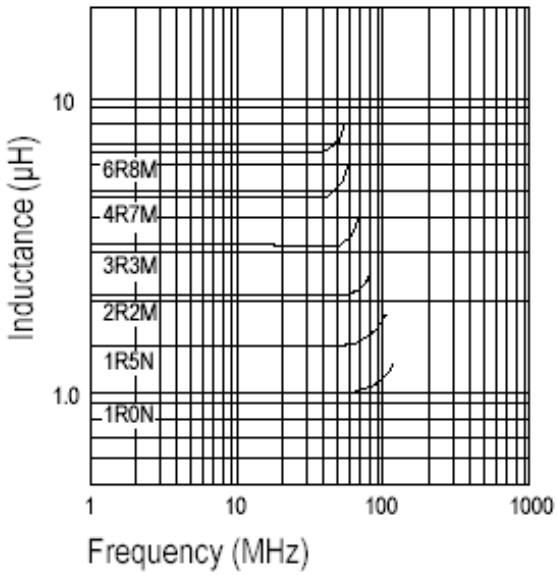
WLPN303015 Series	Marking	L (uH)	Inductance Tolerance	Test Freq (MHz)	DCR (Ω)MAX.	Irms (A)	Isat (A)
WLPN303015N1R0PB	1R0	1.0	±30%	1	0.048	2.10	2.10
WLPN303015N1R5PB	1R5	1.5	±30%	1	0.066	1.90	1.80
WLPN303015M2R2PB	2R2	2.2	±20%	1	0.072	1.60	1.48
WLPN303015M2R7PB	2R7	2.7	±20%	1	0.097	1.43	1.52
WLPN303015M3R3PB	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

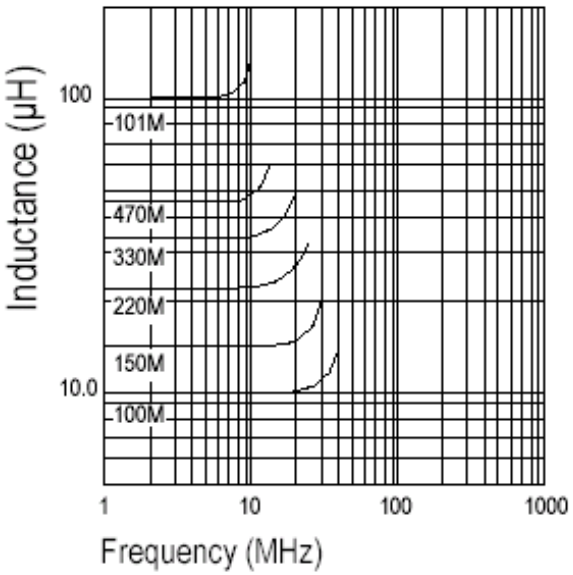
1. Test Frequency:1MHz ,1V
2. Test Equipment:
L:CHROMA-3302+1320. or equivalent.
RDC:CH16502BC or equivalent.
3. Isat : Based on inductance decrease 30% Max.(at 20℃)
4. Irms : Base on temperature increase 40% Max.(at 20℃)
5. Operating temperature range:-25℃ to +120℃(Include self-temperature rise)
6.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

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ELECTRICAL CURVE

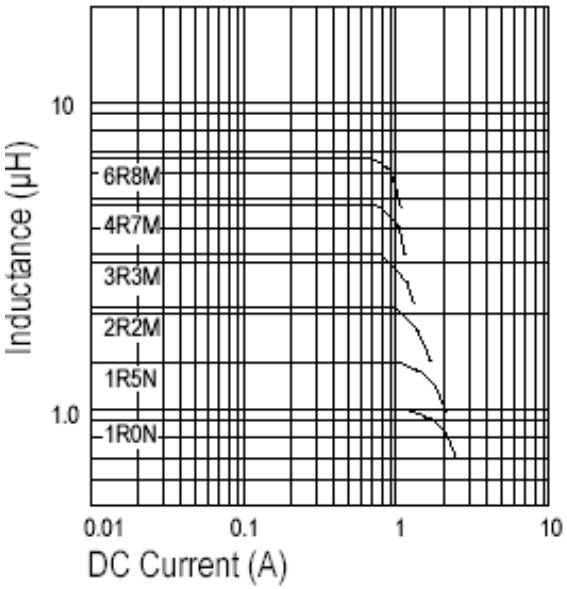
L vs Frequency

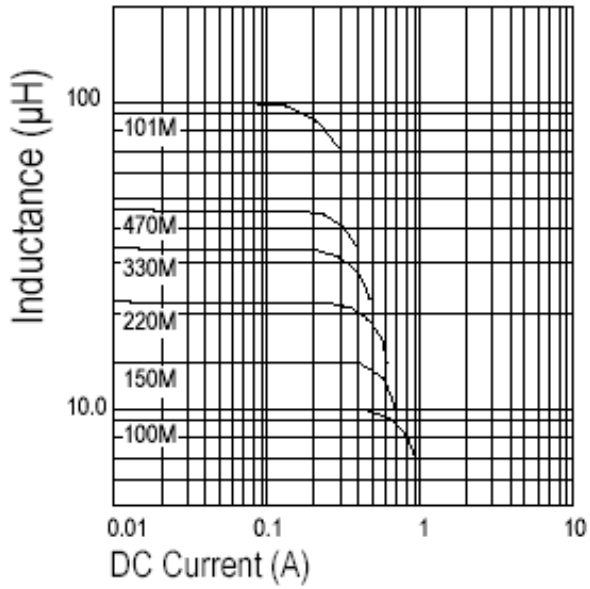




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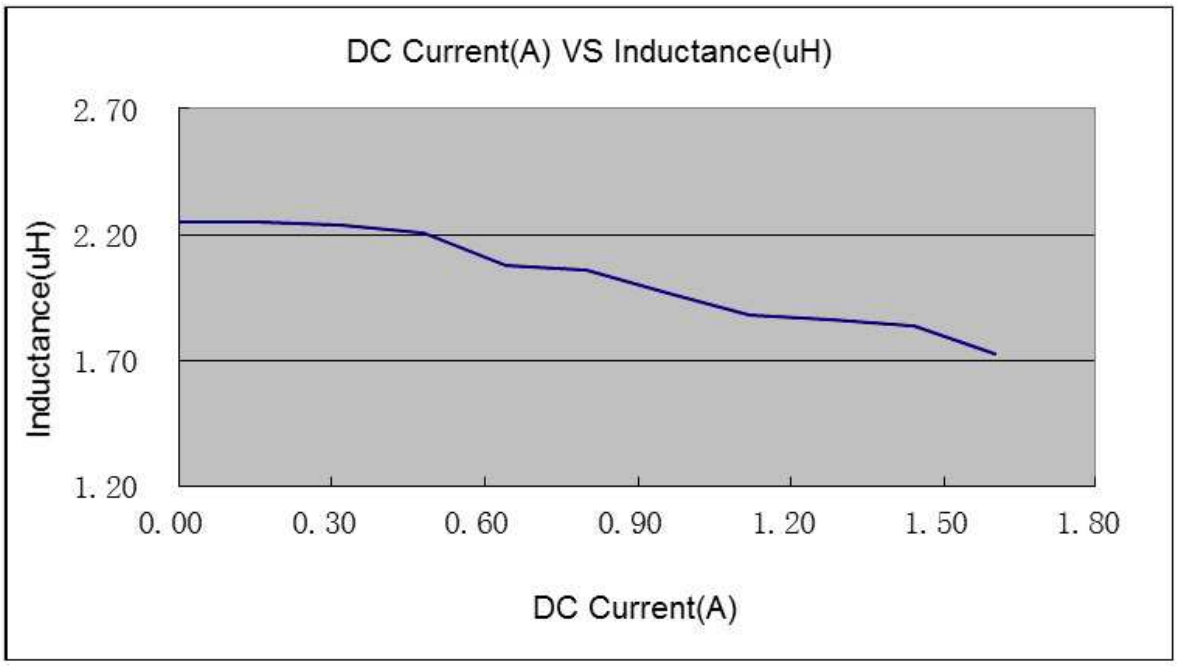
L vs Current

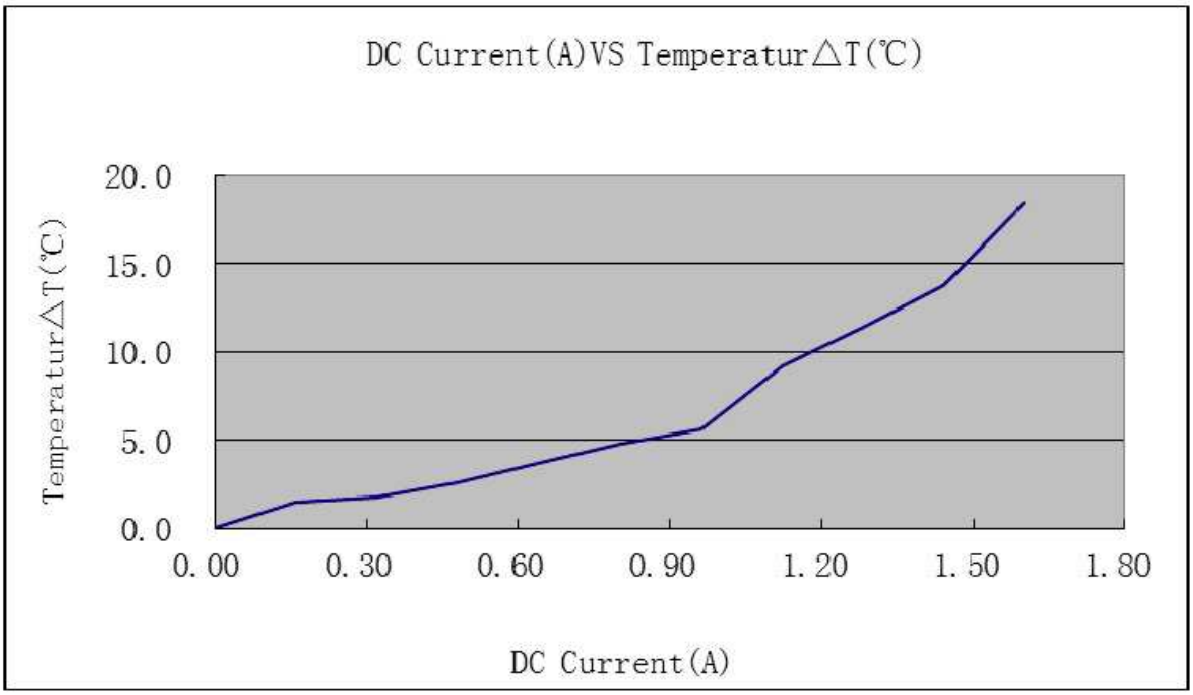




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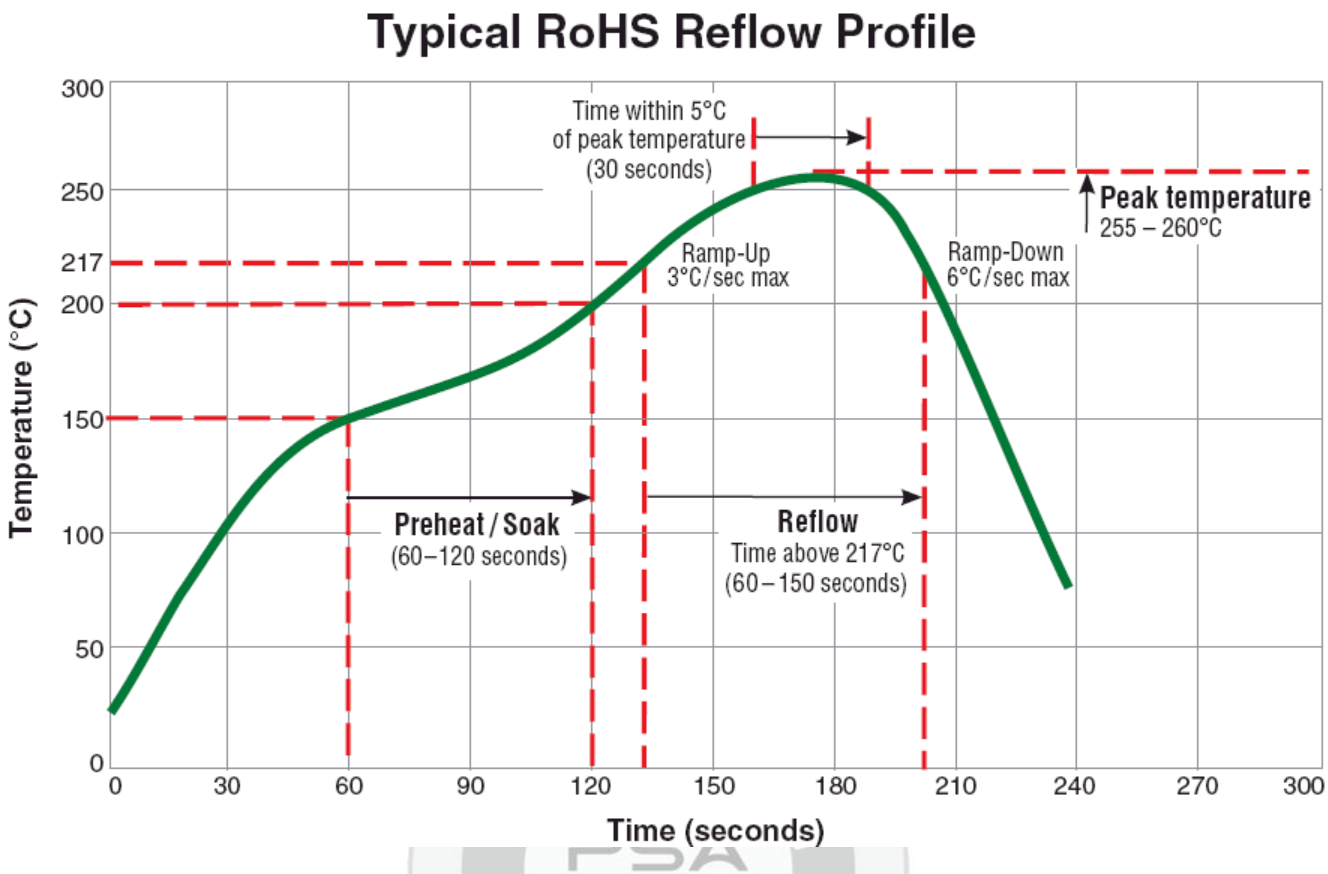
TEMPERATURE VS DC CURRENT





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TYPICAL RoHS REFLOW PROFILE



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RELIABILITY PERFORMANCE

Reliability Experiment For Electrical

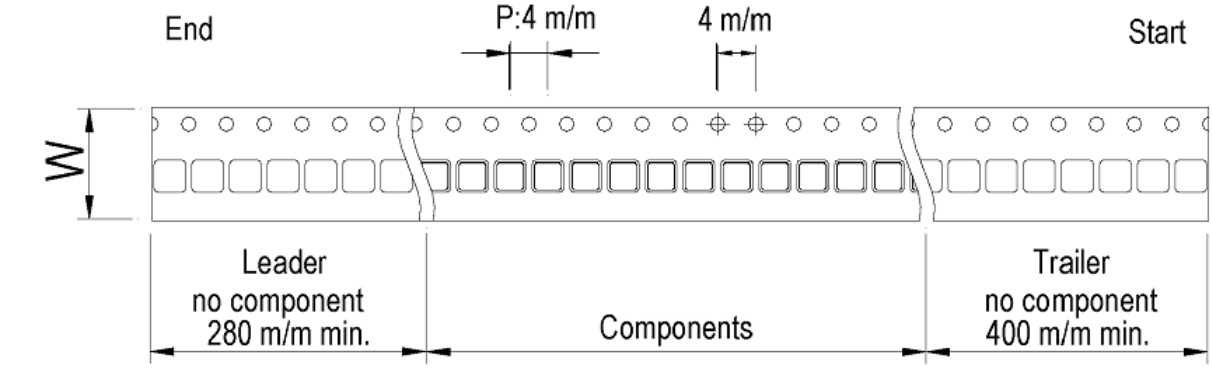
Test Item	Test Condition	Standard Source
Humidity Test	+40℃± 2℃, humidity of 90% ± 5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Temperature: +125℃±2℃ 2.Test time: 48±2hrs	IEC 68-2 Test Condition B
Low Temperature Test	1.Temperature: -40℃±2℃ 2.Test time: 48±2hrs	IEC 68-2 Test Condition A
Thermal Shock	+125℃±5℃ (30 minutes) ~ -40 ± 5℃ (30 minutes), temperature switch time: 5 minutes (total 50 cycles).	MIL-STD-202G Method 107G Test Condition B-2
Life Test	+70℃±5℃ (250Hours)	MIL-STD-202G Method 108A Test Condition B

Reliability Experiment For Physical

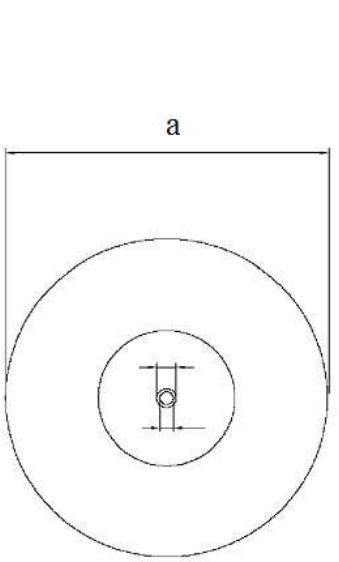
Test Item	Test Condition	Standard Source
Vibration Test	10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).	MIL-STD-202G Method 201A
Solder Heat Resistance Test	IR/convection reflow:Peak Temp 250±5℃ for 5Sec in air, Through 2 Cycle. Temperature Ramp:+1~4℃/sec; Above1 83℃, must keep 90 s - 120 s	MIL-STD-202G Method 210F Test Condition (Reflow)
Solder Ability Test	Soak in 245 ℃ solder pot of 3Sec, PAD must have 95% above coverage.	J-STD-003B

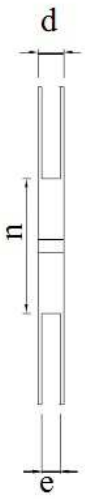
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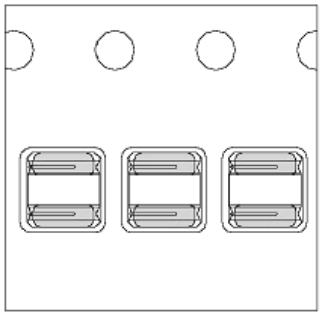
Tape & Reel Packaging Dimensions:



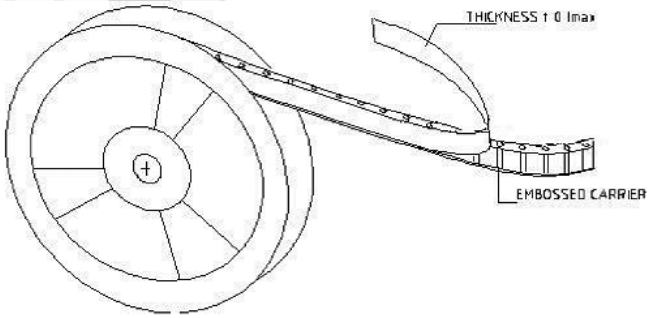
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Bottom View



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

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