

APPROVAL SHEET

WLPN303015.E Series SMD Shielded Power Inductor



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

Features

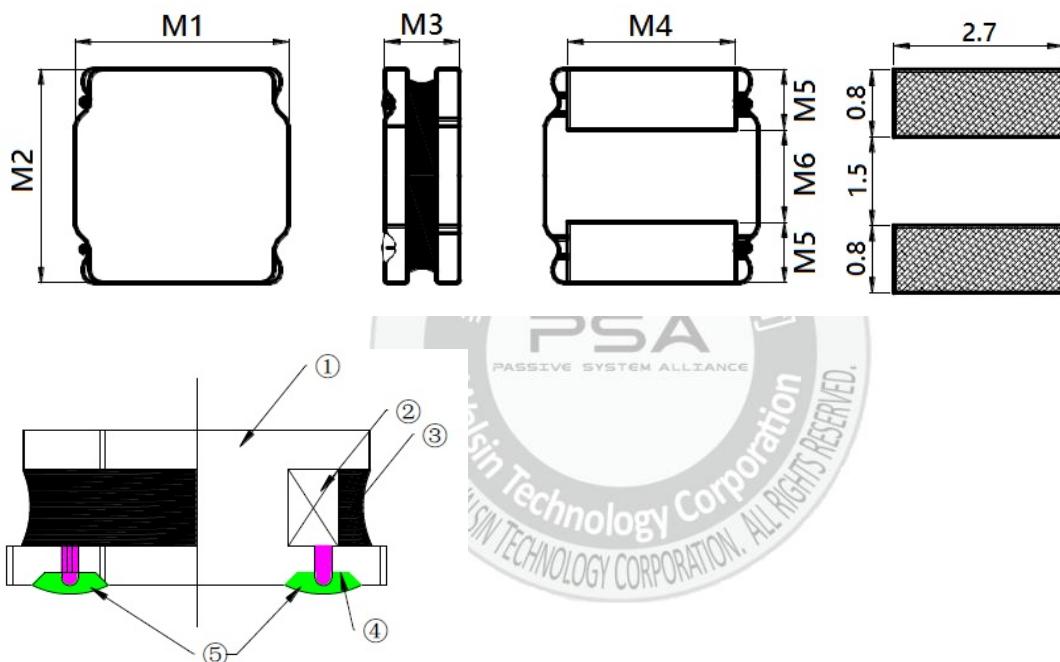
1. Close magnetic loop with magnetic resin shielded.
2. Low profile, High inductance.

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



MATERIAL LIST

NO	PARTS	MATERIAL
1	DRUM CORE	Ni-Zn FERRITE CORE
2	WIRE	POLYURETHANE ENAMELED COPPER WIRE
3	ADHESIVE	EPOXY RESIN MAGNETIC POWDER
4	PLATING ELECTRODES	PLATING: Ag 10-20 um Ni 1-3 um Sn 3-7 um
5	OUTER ELECTRODES	TOP SURFACE SOLDER COATING Sn99%、Ag0.3%、Cu0.7%

Ordering Information

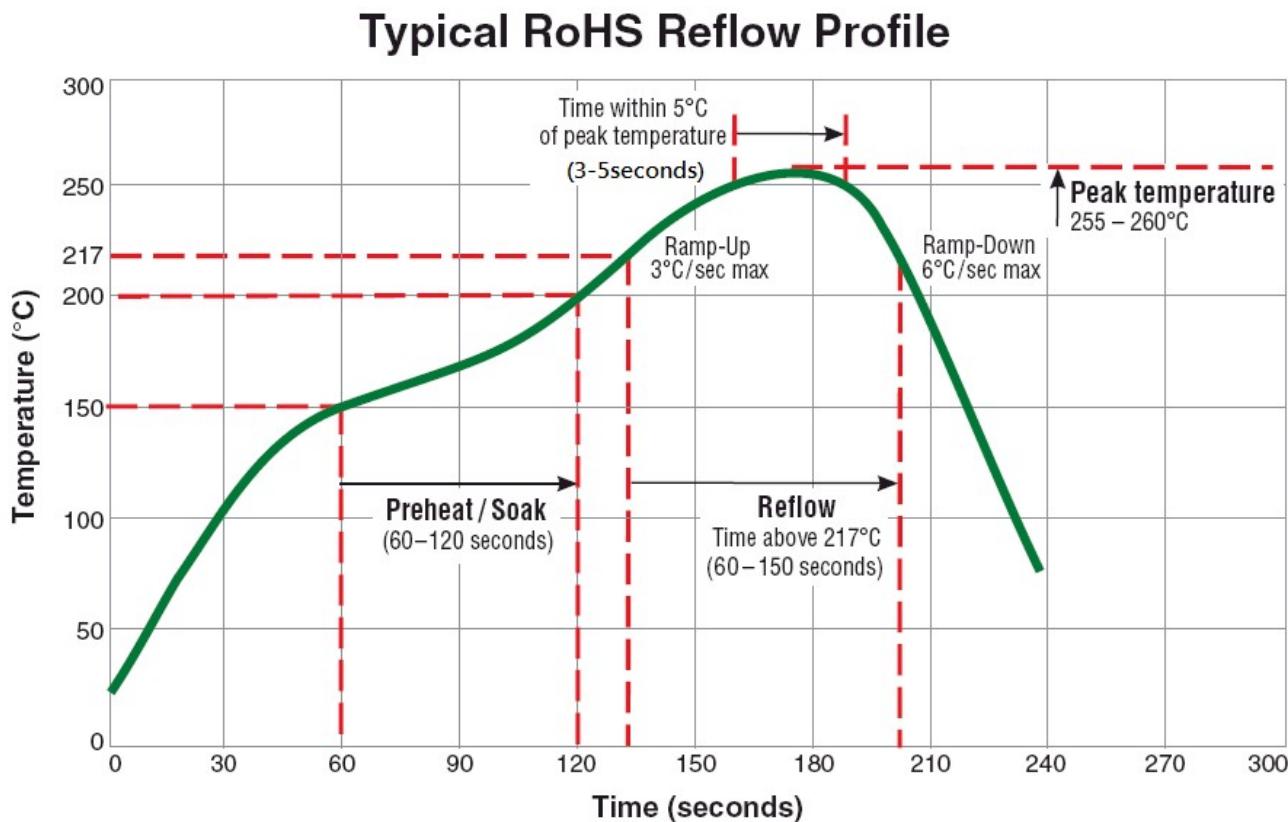
WL	PN	3030	15	N	1R0	P	E
Product Code	Series	Dimensions	Thickness	Tolerance	Value	Packing Code	
WL: Inductor	SMD Shielded Power Inductors	3.0 * 3.0 mm	1.5 mm	M: $\pm 20\%$ N: $\pm 30\%$	1R0 = 1.0uH 100 = 10.0uH	P=7" Reeled (Embossed tape)	E:STD

Electrical Characteristics

WLPN303015 Series	Marking	L (uH)	Inductance Tolerance	Test Freq (KHz)	DCR (Ω)MAX.	Irms (A)	Isat (A)
WLPN303015N1R0PE	1R0	1.0	$\pm 30\%$	100	0.030	2.10	2.10
WLPN303015N1R5PE	1R5	1.5	$\pm 30\%$	100	0.038	1.82	1.80
WLPN303015M2R2PE	2R2	2.2	$\pm 20\%$	100	0.058	1.50	1.48
WLPN303015M3R3PE	3R3	3.3	$\pm 20\%$	100	0.078	1.23	1.21
WLPN303015M4R7PE	4R7	4.7	$\pm 20\%$	100	0.120	1.04	1.02
WLPN303015M6R8PE	6R8	6.8	$\pm 20\%$	100	0.160	0.88	0.87
WLPN303015M100PE	100	10	$\pm 20\%$	100	0.222	0.71	0.70
WLPN303015M220PE	220	22	$\pm 20\%$	100	0.520	0.47	0.47
WLPN303015M101PE	101	100	$\pm 20\%$	100	2.300	0.25	0.23

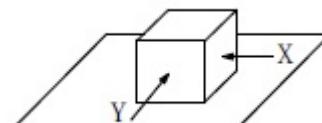
1. TOLERANCE : M: $\pm 20\%$ 、N: $\pm 30\%$
2. INDUCTANCE : @100KHz,0.25V
3. TEST MACHINE : HIOKI3532-50 OR EQUIVALENT
4. DC RESISTANCE : HIOKI 3540 OR EQUIVALENT
5. ISat / Irms : HP4284+42841A OR EQUIVALENT
6. OPERATING TEMPERATURE : -40°C ~ +125°C.
7. INDUCTANCE DROPS NO MORE THAN 30% OF INITIAL VALUE AT ISAT.
8. TEMPERATURE RISES : $\Delta t < 40^\circ\text{C}$ AT IRMS
9. MSL : LEVEL 1.

TYPICAL RoHS REFLOW PROFILE

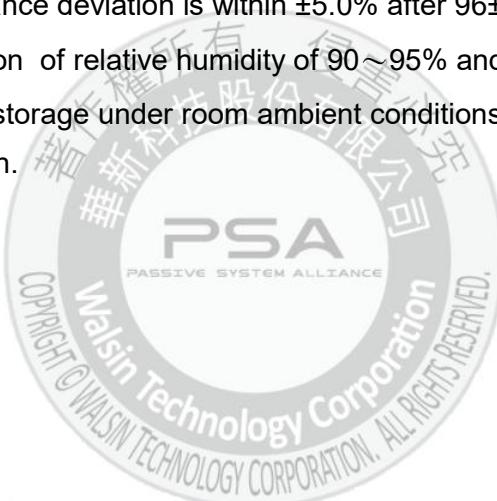


RELIABILITY PERFORMANCE

1. Storage Temperature range : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
2. Operating temperature range : $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including coil's self temperature rise)
3. External appearance : No external defects can be found in the visual inspection.
4. Electrode strength : No electrode detachment should be found when the device is pushed in two directions of X and Y with the force of 10.0N for 10 ± 2 seconds after soldering between copper plate and the electrodes. (Refer to figure at right)

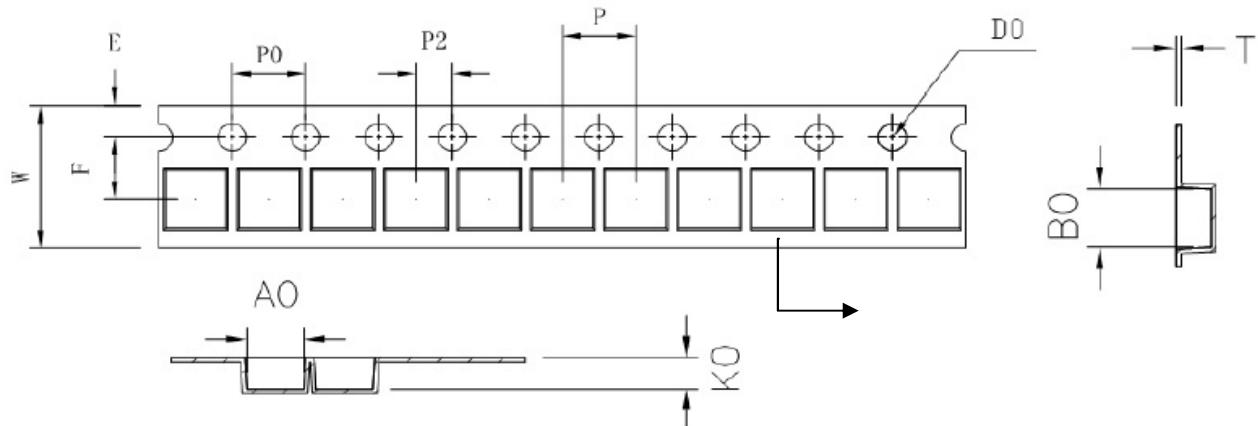


5. Vibration test : Inductance deviation is within $\pm 10.0\%$ after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is $10\sim 55\sim 10\text{Hz}$ and the amplitude of 1 minute cycle is 1.5mm PP .
6. Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90\sim 95\%$ and temperature of $60\pm 2^{\circ}\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.



Tape & Reel Packaging Dimensions:

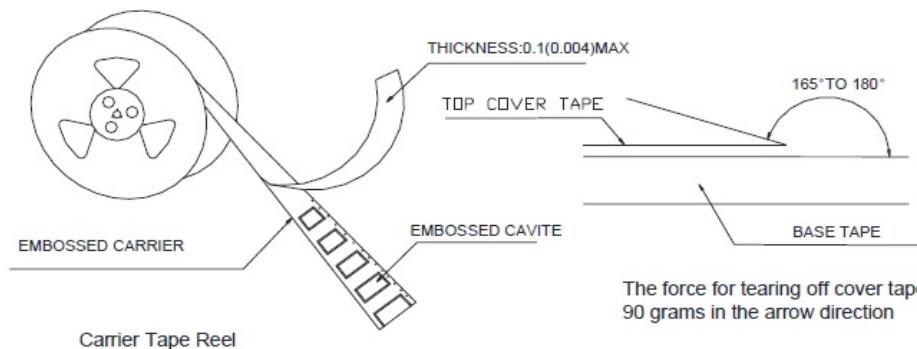
1. OUTER PACKING
2 KPCS/REEL;20 KPCS/INNER BOX;80 KPCS/OUTER BOX
2. CARRIER TAPE DIMENSIONS



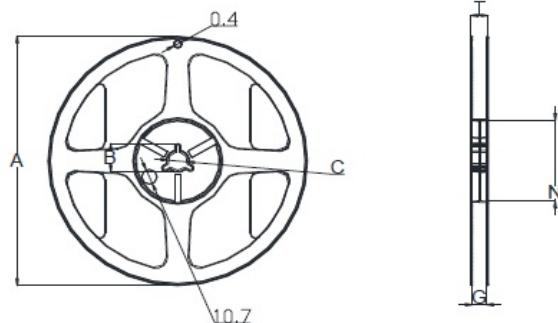
UNIT : mm

ITEM	W	P	F	E	D0	P0	P2	T	A0	B0	K0
DIM	8.00	4.00	3.50	1.75	1.50	4.00	2.00	0.25	3.3	3.3	1.9
TOLE	± 0.3	± 0.1	± 0.05	± 0.1	$+0.1$	± 0.1	± 0.05				

3. CARRIER REEL DIMENSIONS



Carrier Tape Reel



UNIT : mm

Type	A	B	C	G	N	T
8mm	178	20.7 ± 0.8	13 ± 0.4	9	60	10.8