APPROVAL SHEET

WLSN054D Series
SMD Unshielded Power Inductors

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

Features

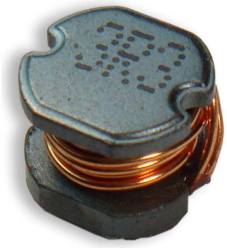
1. Unshielded power inductor.
2. Wide inductance range.

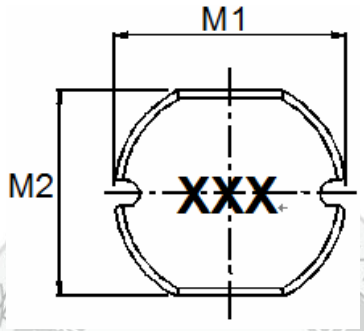
Applications

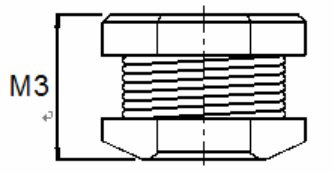
1. Inductor in DC/DC converter.
2. Use in STB、PDA、Notebook.

Shape and Dimension

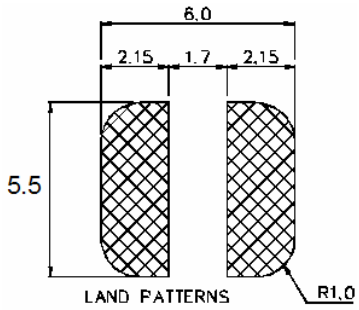
Unit: mm







	DIM.	TOL.
M1	5.8	±0.3
M2	5.2	±0.3
M3	4.5	±0.35



Recommended Patterns

Ordering Information

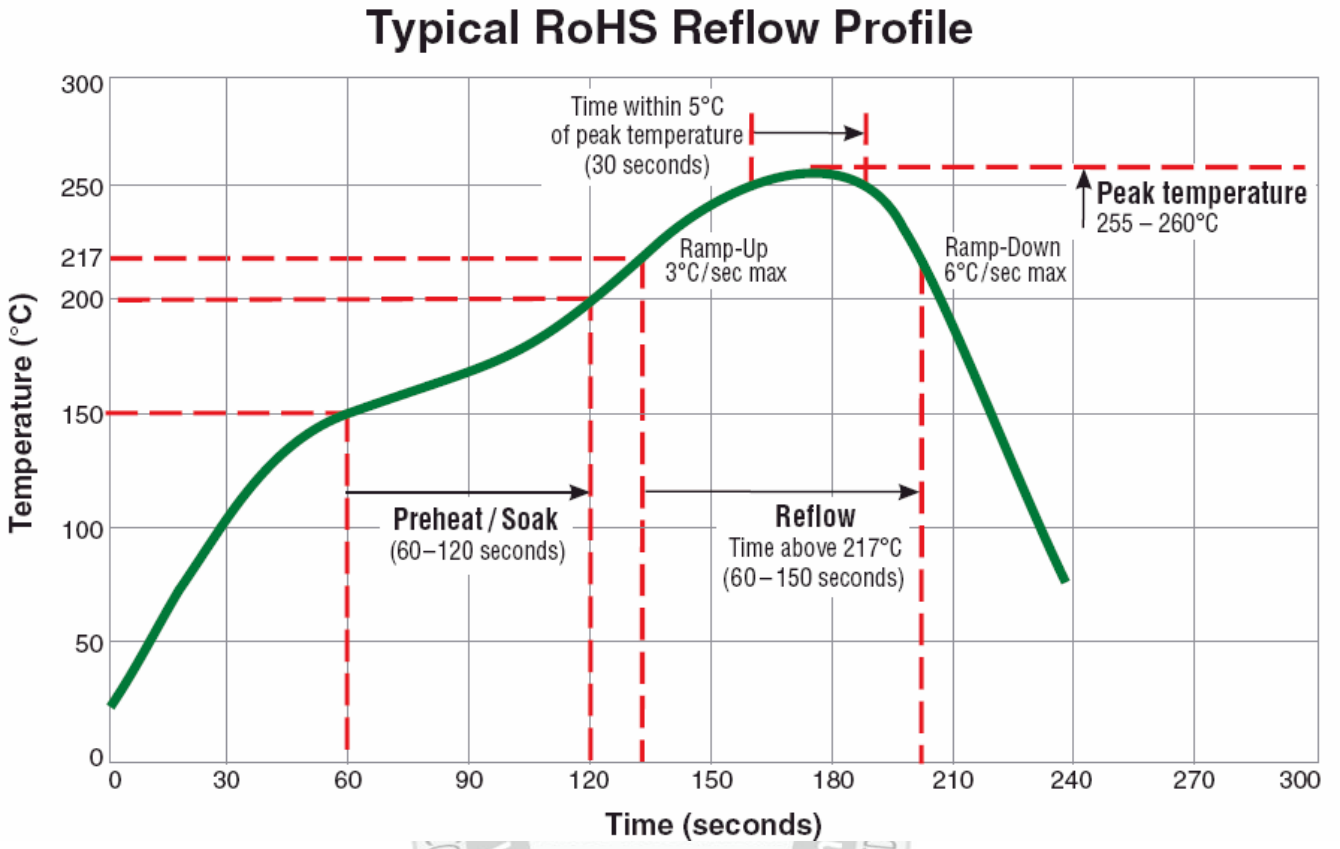
WL	SN	054D	Z0	M	1R0	L	B
Product Code WL: Inductor	**Series** SMD Unshielded Power Inductors	**Dimensions** 5.8 * 5.2 mm	**Series extension** Z0:STD	**Tolerance** M: ± 20% L : ± 15% K : ± 10%	**Value** 1R0 = 1.0uH 100 = 10.0uH	**Packing Code** L=13" Reeled (Embossed tape)	B:STD

Electrical Characteristics

WLSN054D Series	Marking	L (uH)	Inductance Tolerance	Test Freq (KHz)	DCR (Ω) MAX.	Rated Current (A)
WLSN054DZ0M1R0LB	1R0	1.0	± 20%	100	0.015	4.00
WLSN054DZ0M1R9LB	1R9	1.9	± 20%	100	0.039	3.00
WLSN054DZ0M2R2LB	2R2	2.2	± 20%	100	0.020	4.00
WLSN054DZ0M3R3LB	3R3	3.3	± 20%	100	0.021	3.00
WLSN054DZ0M4R7LB	4R7	4.7	± 20%	100	0.028	2.00
WLSN054DZ0M6R8LB	6R8	6.8	± 20%	100	0.042	2.00
WLSN054DZ0M100LB	100	10	± 20%	100	0.10	1.44
WLSN054DZ0M120LB	120	12	± 20%	100	0.12	1.40
WLSN054DZ0M150LB	150	15	± 20%	100	0.14	1.30
WLSN054DZ0M180LB	180	18	± 20%	100	0.15	1.23
WLSN054DZ0M220LB	220	22	± 20%	100	0.18	1.11
WLSN054DZ0M270LB	270	27	± 20%	100	0.20	0.97
WLSN054DZ0L330LB	330	33	± 15%	100	0.23	0.88
WLSN054DZ0L390LB	390	39	± 15%	100	0.32	0.80
WLSN054DZ0L470LB	470	47	±15%	100	0.37	0.72
WLSN054DZ0K560LB	560	56	± 10%	100	0.42	0.68
WLSN054DZ0K680LB	680	68	± 10%	100	0.46	0.61
WLSN054DZ0K820LB	820	82	± 10%	100	0.60	0.58
WLSN054DZ0K101LB	101	100	± 10%	10	0.70	0.52
WLSN054DZ0K121LB	121	120	± 10%	10	0.93	0.48
WLSN054DZ0K151LB	151	150	± 10%	10	1.10	0.40
WLSN054DZ0K181LB	181	180	± 10%	10	1.38	0.38
WLSN054DZ0K221LB	221	220	± 10%	10	1.57	0.35
WLSN054DZ0K271LB	271	270	± 10%	10	1.85	0.30

a. Tolerance：M:±20%, L:±15%, K:±10%
b. Operating Temp：-25℃ to +105℃.
c. Inductance measured using the HP4284A LCR meter,CHROMA1320 & 3302 & 16502
d. DCR measured using the 502BC milli-ohm meter.
e. Inductance drops no more than 10% of initial value at rated current, temperature rises △t< 40℃.
※MSL：LEVEL 1

TYPICAL RoHS REFLOW PROFILE



RELIABILITY PERFORMANCE

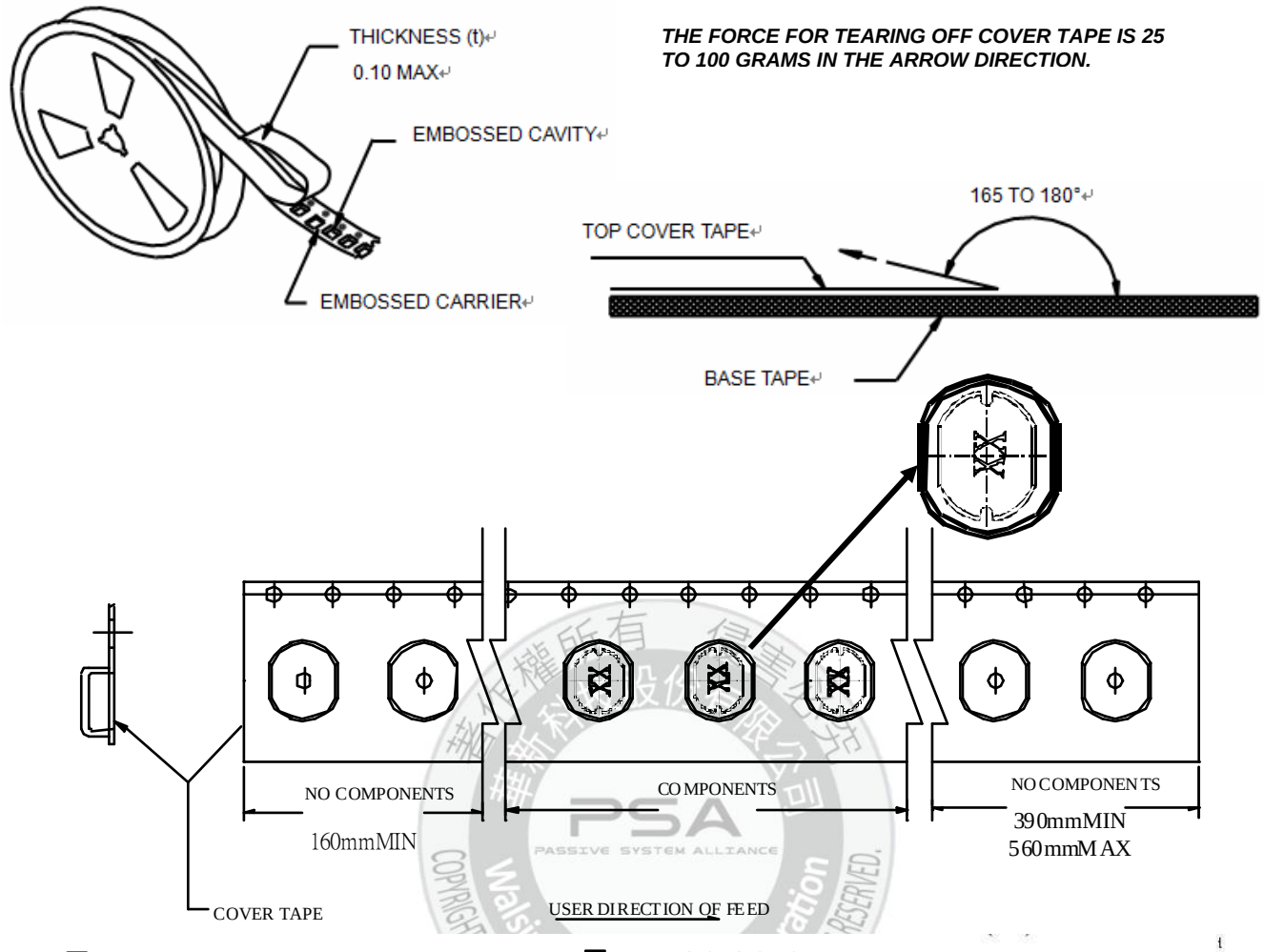
Reliability Experiment For Electrical

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

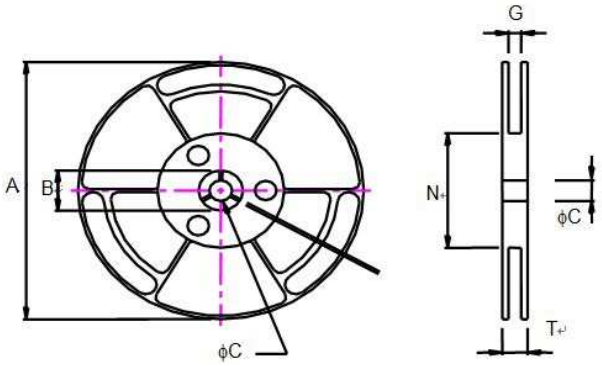
Reliability Experiment For Physical

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

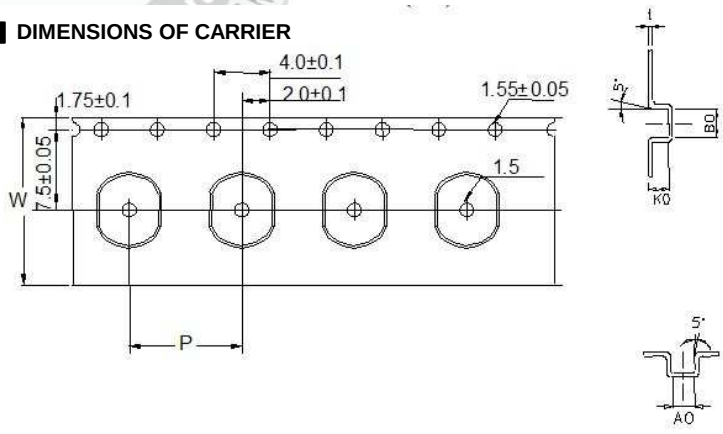
Tape & Reel Packaging Dimensions:



■ **CARRIER TAPE**



■ **DIMENSIONS OF CARRIER**



	A	B	C	G	N	P	T	W	t	A0	B0	K0
DIM.	360	21.0	13.0	12.4	80	12	18.4	12.0	0.35	5.4	6.3	5.0
TOL.	MAX	±0.8	+0.5-0.2	+2.0-0	MIN.	±0.1	MAX	±0.3	±0.05	±0.1	±0.1	±0.1

Quantity per reel：1K pcs