

APPROVAL SHEET

WLPM505030 Series SMD Molded Power Inductor



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

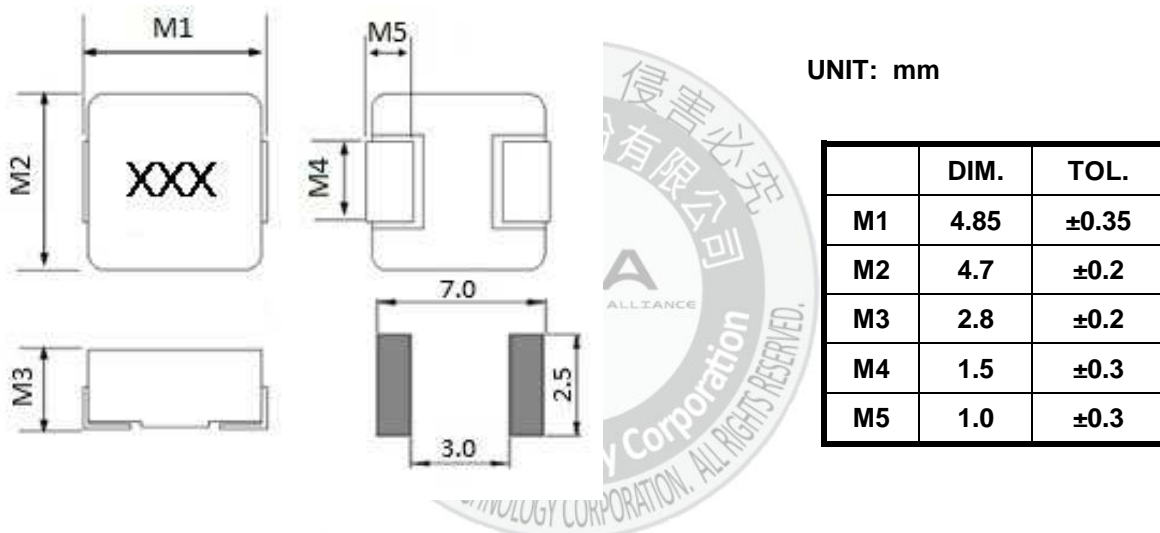
Features

1. Shielded construction.
2. Ultra low buzz noise.
3. Low DCR/ μ H.
4. Handles high transient current spikes without saturation.
5. Encapsulated body offers improved environmental protection and moisture resistance.
6. Higher dielectric withstanding voltage.
7. Corrosion resistant package.
8. RoHS Compliance.

Applications

1. PDA/Notebook/Desktop/Server applications high current and low profile power supplier
2. High current POL converters.
3. Battery powered devices.

SHAPE and DIMENSION



Recommend Pattern

MARKING AND DATE CODE

Marking ex:1.0uH \rightarrow 1R0



Ordering Information

WL	PM	5050	30	M	R10	L	C
Product Code	Series	Dimensions	Thickness	Tolerance	Value	Packing Code	
WL: Inductor	SMD molded power inductor.	4.4 * 4.0mm	3.0 mm	M: ± 20%	1R0=1.0uH 100=10.0uH	L=13" Reeled (Embossed tape)	Internal code

Electrical Characteristics

Walsin Part Number	L(uH)	Tolerance	Test Frequency (KHz),1V	RDC Maximum (mΩ)		Rated Current Typical (A)	I sat Typical (A)
				TYP.	MAX		
WLPM505030M1R5LC	1.5	M	100	20.0	25.0	6.0	10.0
WLPM505030M3R3LC	3.3	M	100	32.0	38.0	5.0	7.0

TEST INSTRUMENT: CHROMA 16502、Zentech1320+Zentech3305

- (1). Test Freq : 100KHz , 1V
- (2). All test data is referenced to 25°C ambient.
- (3). Operating Temperature Range -25°C to +125°C.
- (4). Storage Temperature Range: -20°C~+40°C (<60% R.H.).
- (5). Rated Current: DC current(A)that will cause an approximate ΔT of 40°C.
- (6). I sat: DC current(A)that will cause Lo to drop approximately 30%.
- (7). The part temperature(ambient +temp rise)should not exceed 125°C under worst case operating conditions.
- (8). Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature Part temperature should be verified.
- (9).MSL: Level 1

RELIABILITY PERFORMANCE

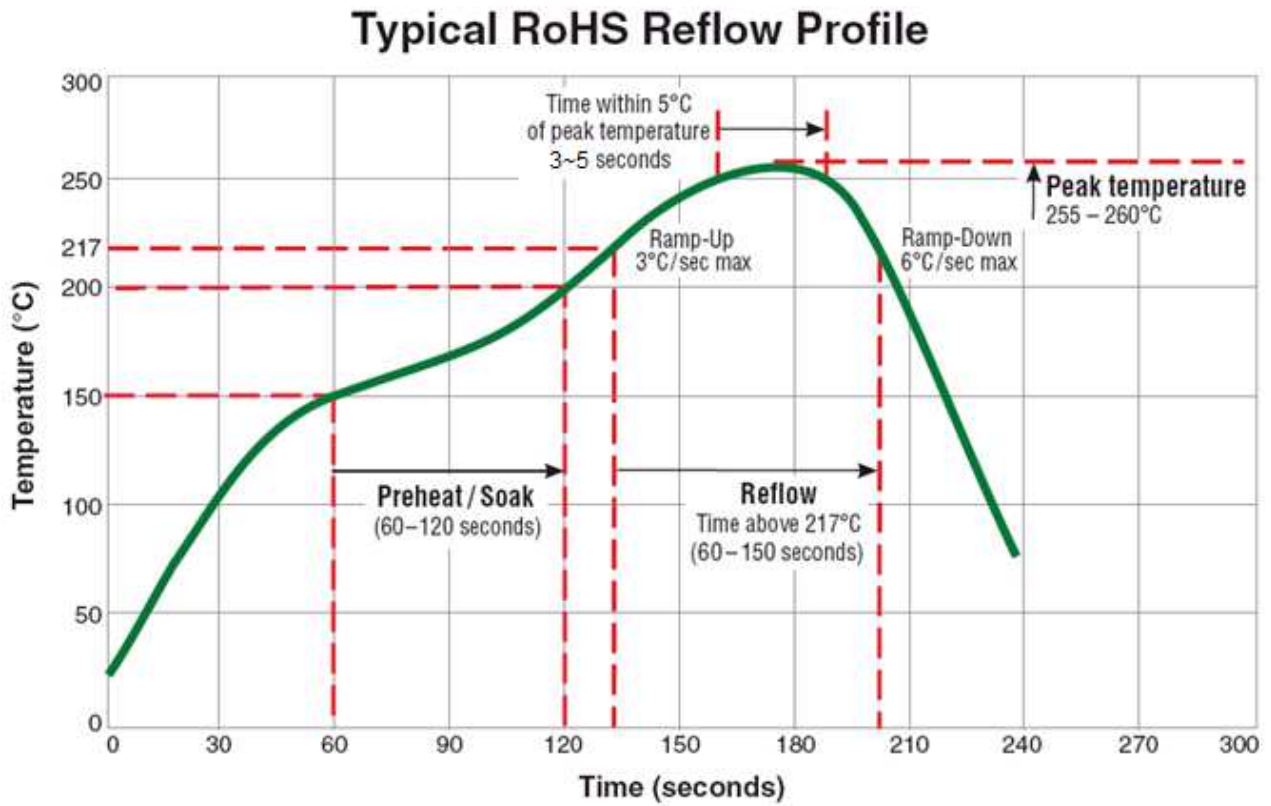
Reliability Experiment For Electrical

Test Item	Accept criteria	Test Condition	Standard Source
Humidity Test	1.Change from an initial value L:within±5% 2.no visible damage.	+40°C ± 2°C, humidity of 90% ±5% (total 96 hours).	MIL-STD-202G Method 103B Test Condition B
High Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: +125°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition B
Low Temperature Test	1.Change from an initial value L:within±5% 2.no visible damage.	1.Temperature: -25°C±2°C. 2.Test time: 48±2hrs.	IEC 68-2 Test Condition A
Thermal Shock	1.Change from an initial value L:within±5% 2.no visible damage.	+125°C±5°C (30 minutes) ~ -55±5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles) Wind speeds 10m/sec.	Reference MIL-STD-202G Method 107G Test Condition A-2
Life Test	1.Change from an initial value L:within±5% 2.no visible damage.	+70°C±5°C (250Hours).	Reference MIL-STD-202G Method 108A Test Condition B

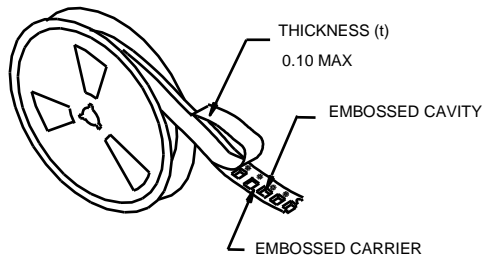
Reliability Experiment For Physical

Test Item	Accept criteria	Test Condition	Standard Source
Vibration Test	1.Change from an initial value L:within±5% 2.no visible damage.	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	1.no visible damage.	IR/convection reflow: Peak Temp 255°C~260°C for 3~5 Sec. in air, Through 2 Cycle. Temperature Ramp:+1~4°C/sec.; Above 217°C, must keep 90 s - 120 s.	Reference MIL-STD-202G Method 210F Test Condition K (Reflow)
Solder Ability Test	1. Lead must have 95% above coverage.	Soak in 245°C solder pot of 3~5 Sec.	Reference J-STD-002D

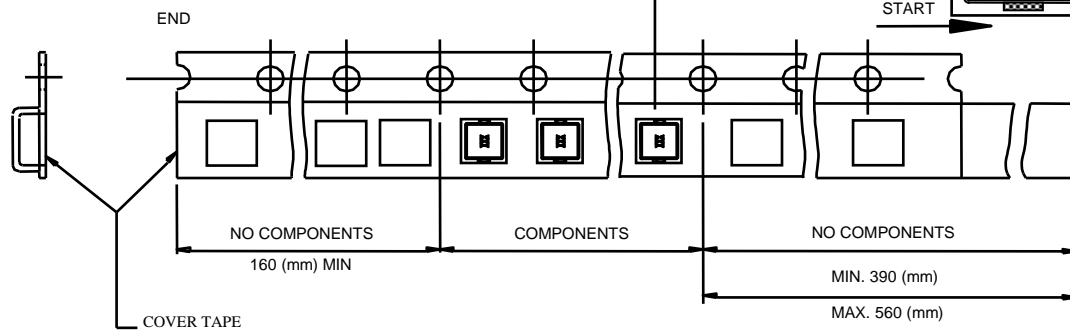
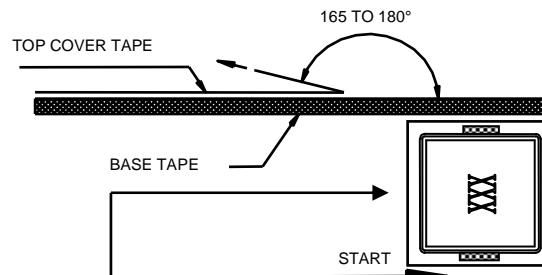
TYPICAL RoHS REFLOW PROFILE



Packaging



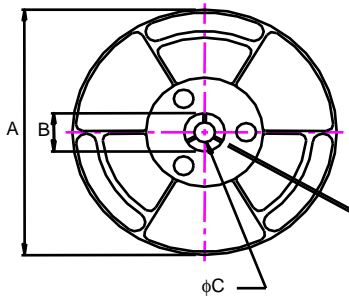
THE FORCE FOR TEARING OFF 130 GRAMS IN THE ARROW



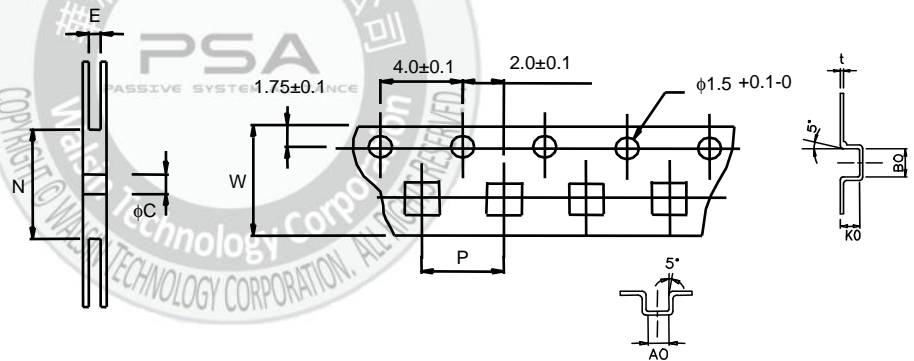
USER DIRECTION OF FEED

CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



DIMENSIONS OF CARRIER TAPE (mm)



※ 10 sprocket hole pitch cumulative tolerance ± 0.20

UNIT : mm

	A	B	C	E	N	P	W	t	A0	B0	K0
DIM.	330	25.0	13.0	12.5	100	8.0	12.0	0.4	5.7	5.9	3.6
TOL.	± 0.2	± 0.5	± 0.5	± 0.5	MIN	± 0.1	± 0.3	± 0.05	± 0.1	± 0.1	± 0.1

Quantity per reel : 2K pcs