

# APPROVAL SHEET

## WLPM545230 Series SMD Molded Power Inductor



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

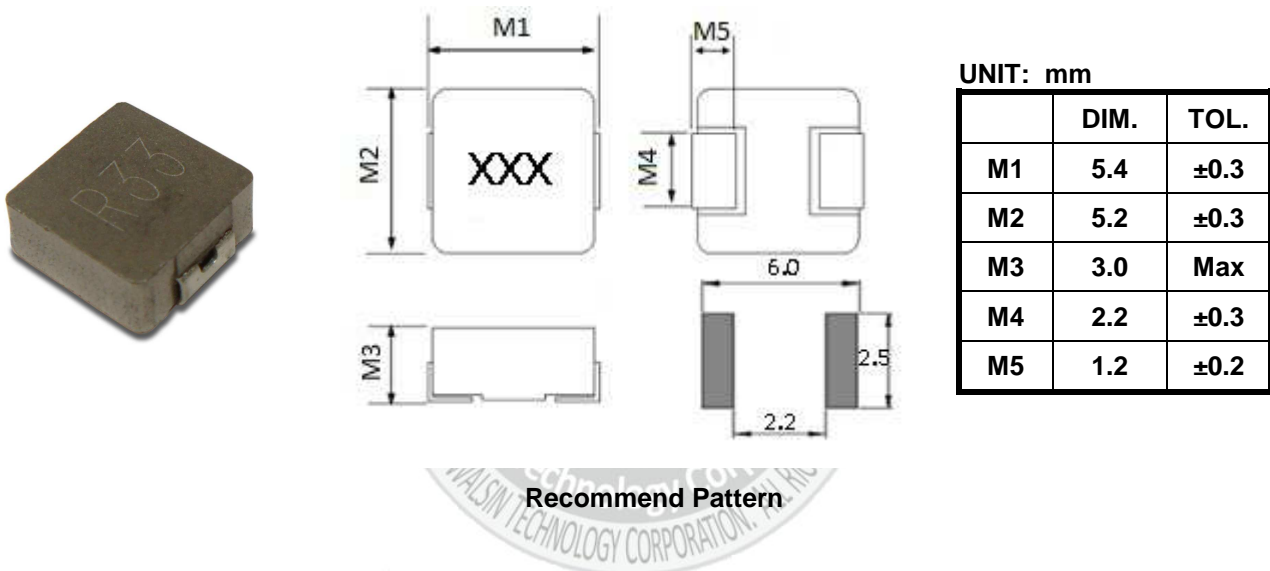
## FEATURES

1. Shielded construction.
2. Ultra low buzz noise.
3. Low DCR/ $\mu$ 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



## MARKING AND DATE CODE

Marking ex:2.2uH  $\rightarrow$  2R2



## Ordering Information

WL	PM	5452	30	M	R20	L	C
<b>Product Code</b>	<b>Series</b>	<b>Dimensions</b>	<b>Thickness</b>	<b>Tolerance</b>	<b>Value</b>	<b>Packing Code</b>	
WL: Inductor	SMD Molded power inductor.	5.4* 5.2mm	3.0mm	M: ± 20%	R20=0.20uH 1R0=1uH 100=10uH	L=13" Reeled	Internal code

## Electrical Characteristics

### ● WLPM545230\*LC series

Walsin Part Number	L(uH)	Tolerance	Measuring Frequency (kHz),0.5V	RDC Maximum (mΩ)		Rated Current Typical (A)	I sat Typical (A)
				TYP.	MAX.		
WLPM545230MR20LC	0.20	± 20%	100	3.5	3.9	18.0	14.5
WLPM545230MR47LC	0.47	± 20%	100	7.4	8.5	13.5	12.0
WLPM545230MR68LC	0.68	± 20%	100	11.0	12.0	8.5	14.0
WLPM545230M1R0LC	1.0	± 20%	100	13.0	14.0	7.0	11.0
WLPM545230M1R2LC	1.2	± 20%	100	15.0	16.0	6.5	11.0
WLPM545230M1R5LC	1.5	± 20%	100	20.0	25.0	6.0	8.5
WLPM545230M2R2LC	2.2	± 20%	100	25.0	29.0	5.5	7.5
WLPM545230M3R3LC	3.3	± 20%	100	32.0	38.0	5.0	6.0
WLPM545230M4R7LC	4.7	± 20%	100	50.0	60.0	3.5	5.0
WLPM545230M5R6LC	5.6	± 20%	100	70.0	82.0	3.2	4.2
WLPM545230M6R8LC	6.8	± 20%	100	75.0	90.0	3.0	4.0
WLPM545230M100LC	10.0	± 20%	100	110.0	125.0	2.5	3.5

TEST INSTRUMENT: CHROMA 16502 、Zentech1320+Zentech3305

- (1). Test Freq : 100KHz , 0.5V
- (2). All test data is referenced to 25°C ambient.
- (3). Operating Temperature Range -55°C to +125°C.
- (4). Rated Current: DC current(A)that will cause an approximate  $\Delta T$  of 40°C .
- (5). I sat: DC current(A)that will cause Lo to drop approximately 30%.
- (6). The part temperature(ambient +temp rise)should not exceed 125°C under worst case operating conditions. Circuit design, component placement, PWB trace size and thickness, airflow and other cooling provisions all affect the part temperature Part temperature should be verified

## RELIABILITY PERFORMANCE

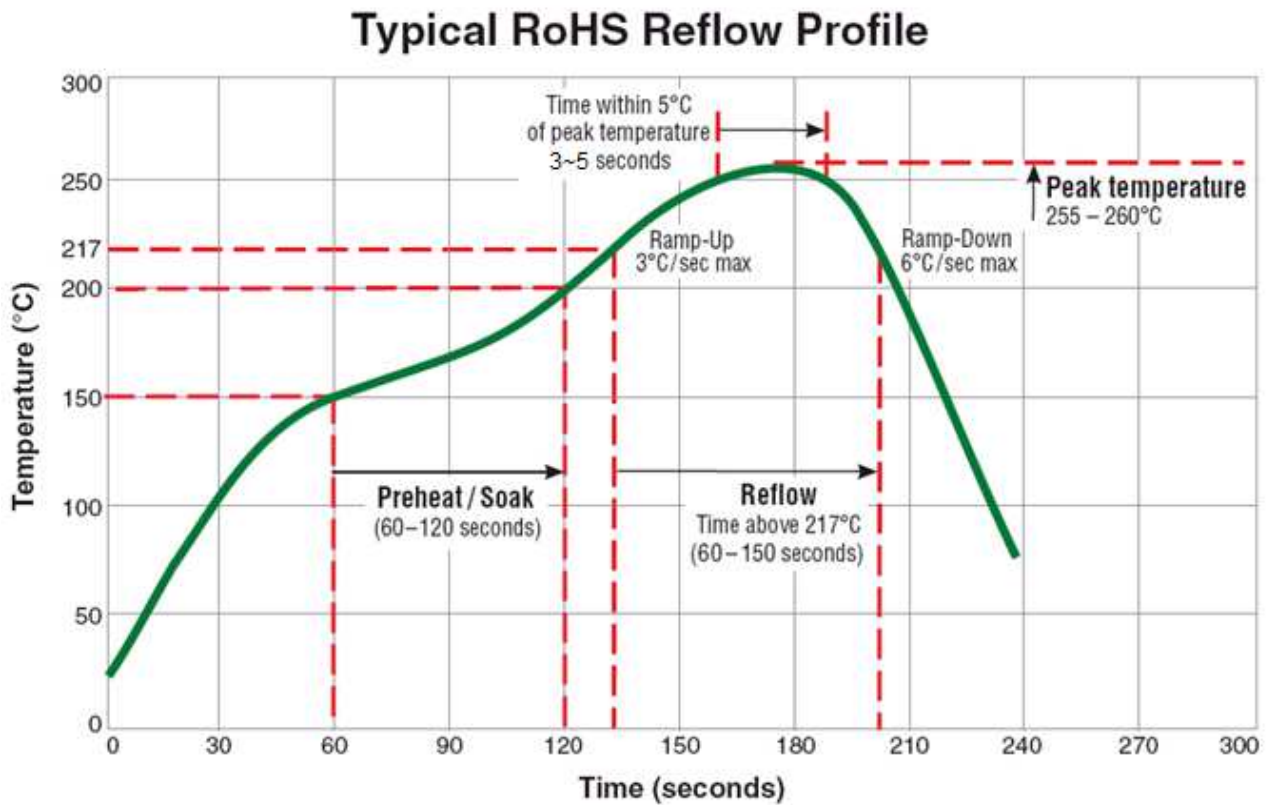
### Reliability Experiment For Electrical

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

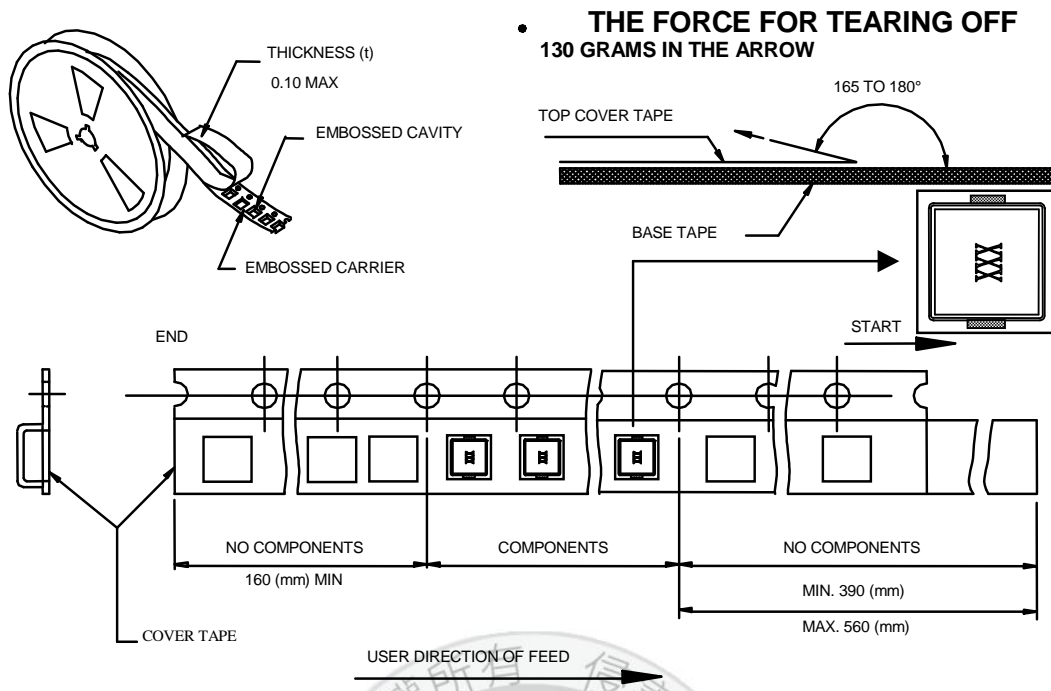
### Reliability Experiment For Physical

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

## TYPICAL RoHS REFLOW PROFILE

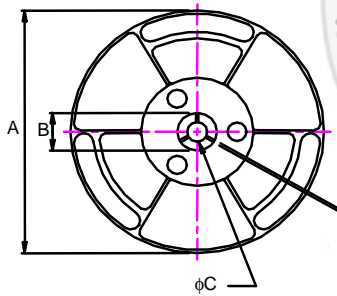


## Packaging

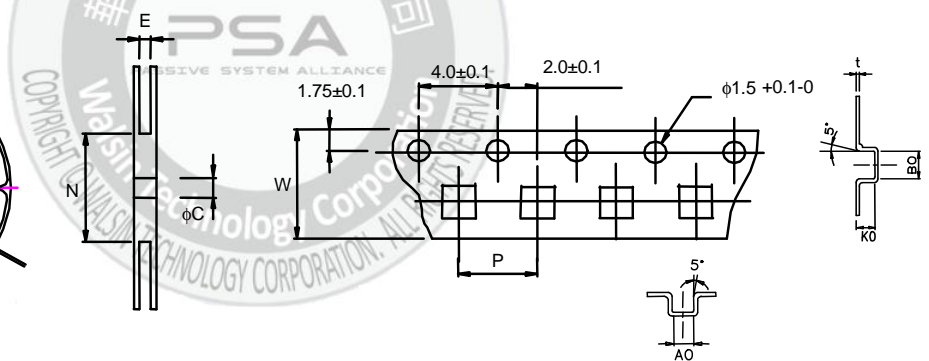


### CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



### DIMENSIONS OF CARRIER TAPE (mm)



※ 10 sprocket hole pitch cumulative tolerance  $\pm 0.20$

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.	$\pm 0.2$	$\pm 0.5$	$\pm 0.5$	$\pm 0.5$	MIN	$\pm 0.1$	$\pm 0.3$	$\pm 0.05$	$\pm 0.1$	$\pm 0.1$	$\pm 0.1$

Quantity per reel : 2K pcs