

APPROVAL SHEET



WLSS127P Series
Shielded SMD Power Inductors

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

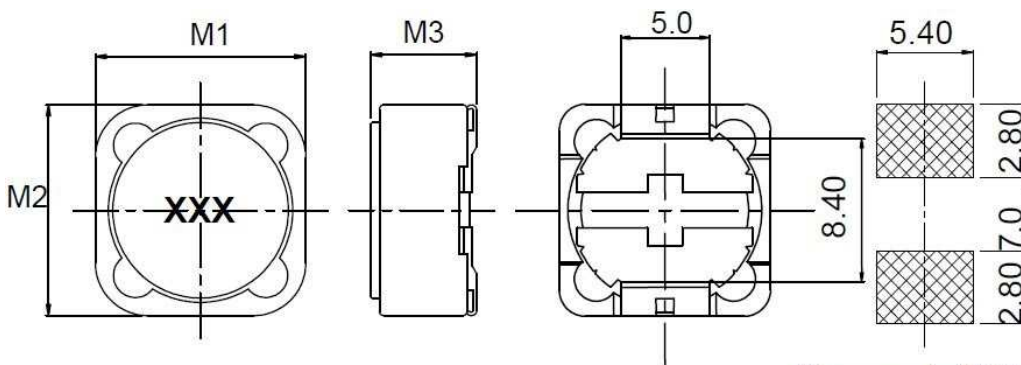
Features

1. Shielded 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 | 12.0 | ±0.3 |
| M2 | 12.0 | ±0.3 |
| M3 | 8.0 | MAX. |

Recommended Patterns

Ordering Information

| WL | SS | 127P | Z0 | N | 1R2 | L | B |
|---------------------|---------------------------------------|-------------------|-------------------------|---------------------|--|---------------------------------|-------|
| Product Code | Series | Dimensions | Series extension | Tolerance | Value | Packing Code | |
| WL: Inductor | Shielded SMD Power Inductors | 12 * 12 mm | Z0:STD | N: SPEC M: ± 20% | 1R2 = 1.2uH 100 = 10.0uH 101=100uH 102=1000uH | L=13" Reeled (Embossed tape) | B:STD |

Electrical Characteristics

| WLSS127P Series | Marking | L (uH) | Inductance Tolerance | Test Freq (KHz) | DCR (Ω) MAX. | Rated Current (A) |
|------------------|---------|--------|----------------------|-----------------|--------------|-------------------|
| WLSS127PZ0N1R2LB | 1R2 | 1.2 | +40%-20% | 100 | 0.007 | 9.8 |
| WLSS127PZ0N2R4LB | 2R4 | 2.4 | +40%-20% | 100 | 0.0115 | 8 |
| WLSS127PZ0N3R5LB | 3R5 | 3.5 | +40%-20% | 100 | 0.0135 | 7.5 |
| WLSS127PZ0N4R7LB | 4R7 | 4.7 | +40%-20% | 100 | 0.0158 | 6.8 |
| WLSS127PZ0N6R1LB | 6R1 | 6.1 | +40%-20% | 100 | 0.0176 | 6.6 |
| WLSS127PZ0N7R6LB | 7R6 | 7.6 | +40%-20% | 100 | 0.02 | 5.9 |
| WLSS127PZ0M100LB | 100 | 10 | ±20% | 1 | 0.0216 | 5.4 |
| WLSS127PZ0M120LB | 120 | 12 | ±20% | 1 | 0.0243 | 4.9 |
| WLSS127PZ0M150LB | 150 | 15 | ±20% | 1 | 0.027 | 4.5 |
| WLSS127PZ0M180LB | 180 | 18 | ±20% | 1 | 0.0392 | 3.9 |
| WLSS127PZ0M220LB | 220 | 22 | ±20% | 1 | 0.0432 | 3.6 |
| WLSS127PZ0M270LB | 270 | 27 | ±20% | 1 | 0.0459 | 3.4 |
| WLSS127PZ0M330LB | 330 | 33 | ±20% | 1 | 0.0648 | 3 |
| WLSS127PZ0M390LB | 390 | 39 | ±20% | 1 | 0.0729 | 2.75 |
| WLSS127PZ0M470LB | 470 | 47 | ±20% | 1 | 0.1 | 2.5 |
| WLSS127PZ0M560LB | 560 | 56 | ±20% | 1 | 0.11 | 2.35 |
| WLSS127PZ0M680LB | 680 | 68 | ±20% | 1 | 0.14 | 2.1 |
| WLSS127PZ0M820LB | 820 | 82 | ±20% | 1 | 0.16 | 1.95 |
| WLSS127PZ0M101LB | 101 | 100 | ±20% | 1 | 0.22 | 1.7 |
| WLSS127PZ0M121LB | 121 | 120 | ±20% | 1 | 0.25 | 1.6 |
| WLSS127PZ0M151LB | 151 | 150 | ±20% | 1 | 0.28 | 1.42 |
| WLSS127PZ0M181LB | 181 | 180 | ±20% | 1 | 0.35 | 1.3 |
| WLSS127PZ0M221LB | 221 | 220 | ±20% | 1 | 0.39 | 1.16 |
| WLSS127PZ0M271LB | 271 | 270 | ±20% | 1 | 0.56 | 1.06 |
| WLSS127PZ0M331LB | 331 | 330 | ±20% | 1 | 0.64 | 0.95 |
| WLSS127PZ0M391LB | 391 | 390 | ±20% | 1 | 0.7 | 0.88 |
| WLSS127PZ0M471LB | 471 | 470 | ±20% | 1 | 0.98 | 0.79 |
| WLSS127PZ0M561LB | 561 | 560 | ±20% | 1 | 1.07 | 0.73 |
| WLSS127PZ0M681LB | 681 | 680 | ±20% | 1 | 1.46 | 0.67 |
| WLSS127PZ0M821LB | 821 | 820 | ±20% | 1 | 1.64 | 0.6 |
| WLSS127PZ0M102LB | 102 | 1000 | ±20% | 1 | 1.82 | 0.55 |

a. Tolerance : N:SPEC ,M : ±20%

b. Operating Temp : -25°C to +105°C.

c. Inductance measured using the HP4284A LCR meter, CHROMA1320 & 3302 & 16502

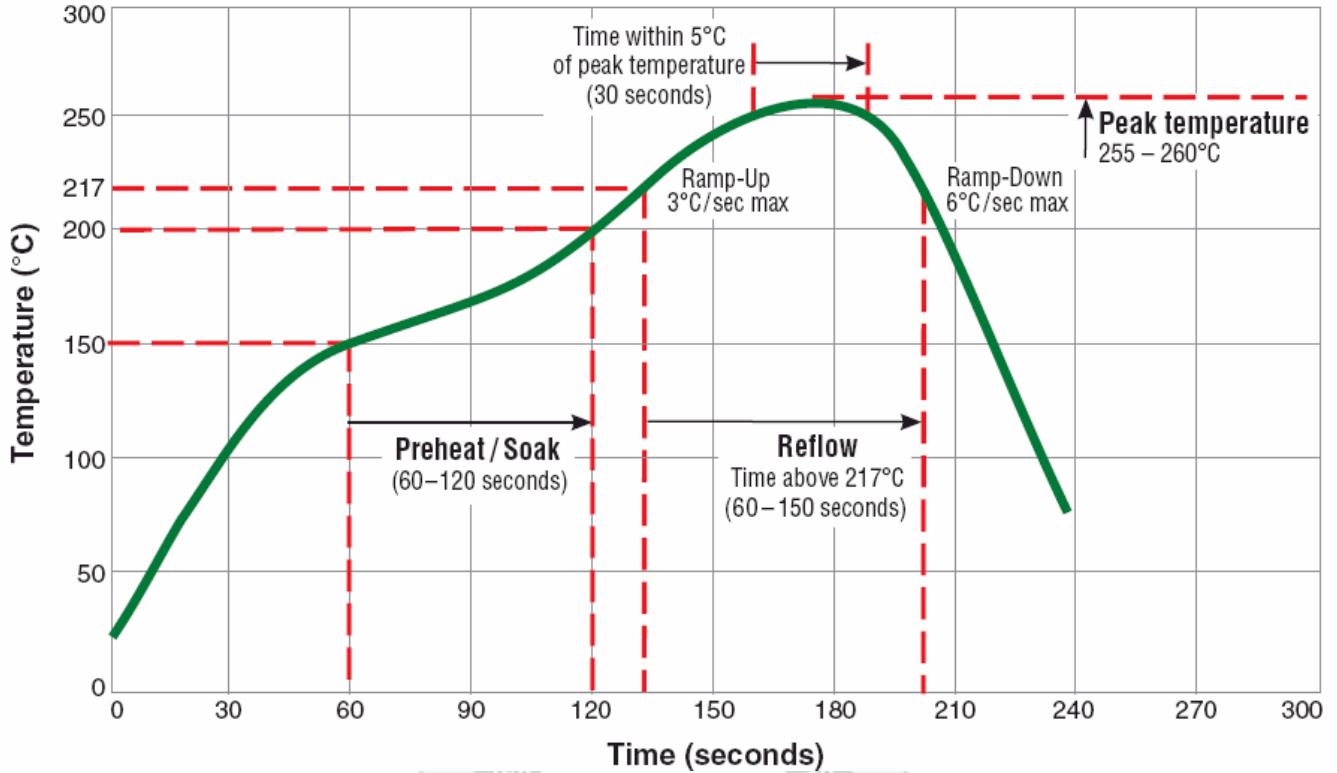
d. DCR measured using the 502BC milli-ohm meter.

e. Inductance drops no more than 25% of initial value at rated current, temperature rises $\Delta t < 40^\circ\text{C}$.

※MSL : LEVEL 1

TYPICAL RoHS REFLOW PROFILE

Typical RoHS Reflow Profile



RELIABILITY PERFORMANCE

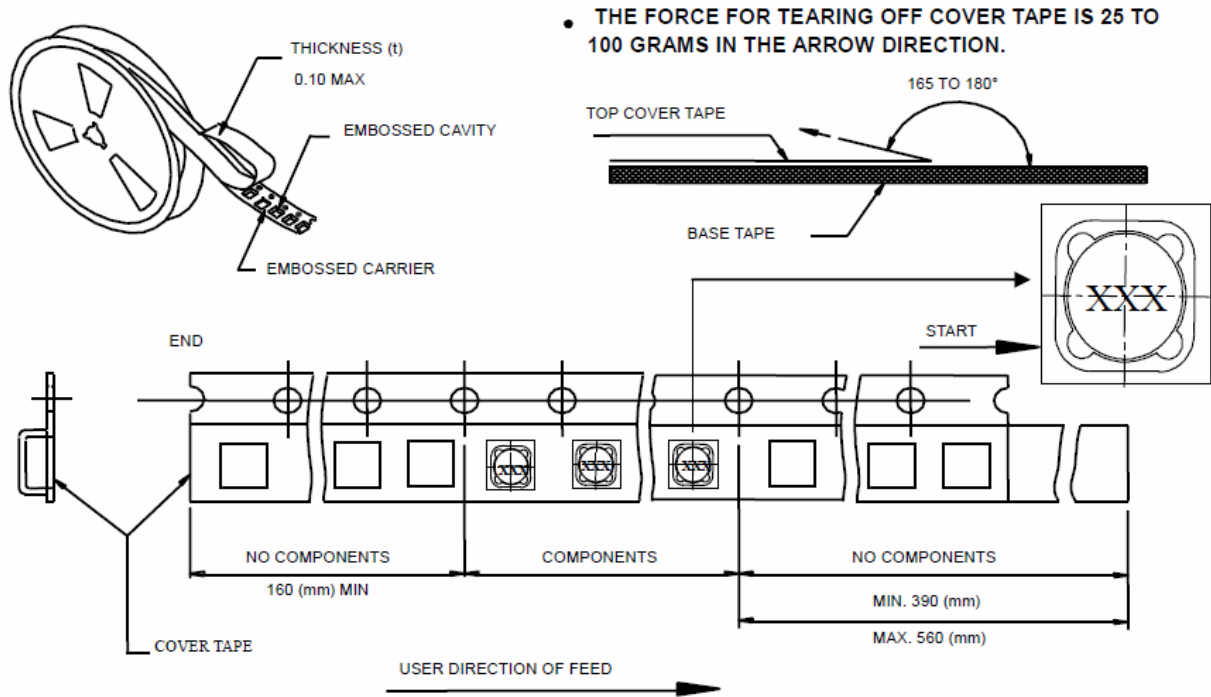
Reliability Experiment For Electrical

| 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 |

Tape & Reel Packaging Dimensions:

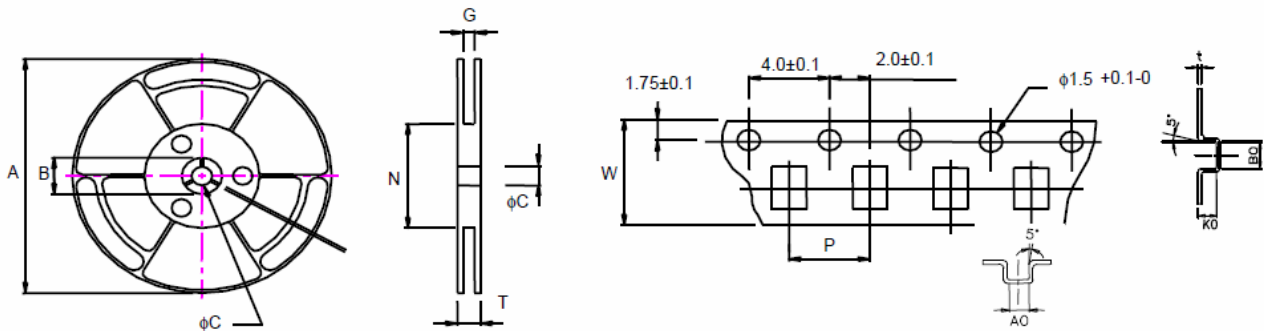


● THE FORCE FOR TEARING OFF COVER TAPE IS 25 TO 100 GRAMS IN THE ARROW DIRECTION.

■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)



Unit : mm

| | A | B | C | G | N | P | T | W | t | A0 | B0 | K0 |
|------|-----|------|------|--------|------|------|------|------|-------|-----|------|------|
| DIM. | 340 | 20.2 | 13.0 | 24.5 | 100 | 16.0 | 30.5 | 24.0 | 0.35 | 340 | 20.2 | 13.0 |
| TOL. | MAX | MIN | ±0.5 | +1.5-0 | ±0.3 | ±1.0 | MAX | ±0.3 | ±0.05 | MAX | MIN | ±0.5 |

Quantity per reel : 500 pcs