

# APPROVAL SHEET

## WLSN075D Series Unshielded SMD Power Inductors



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

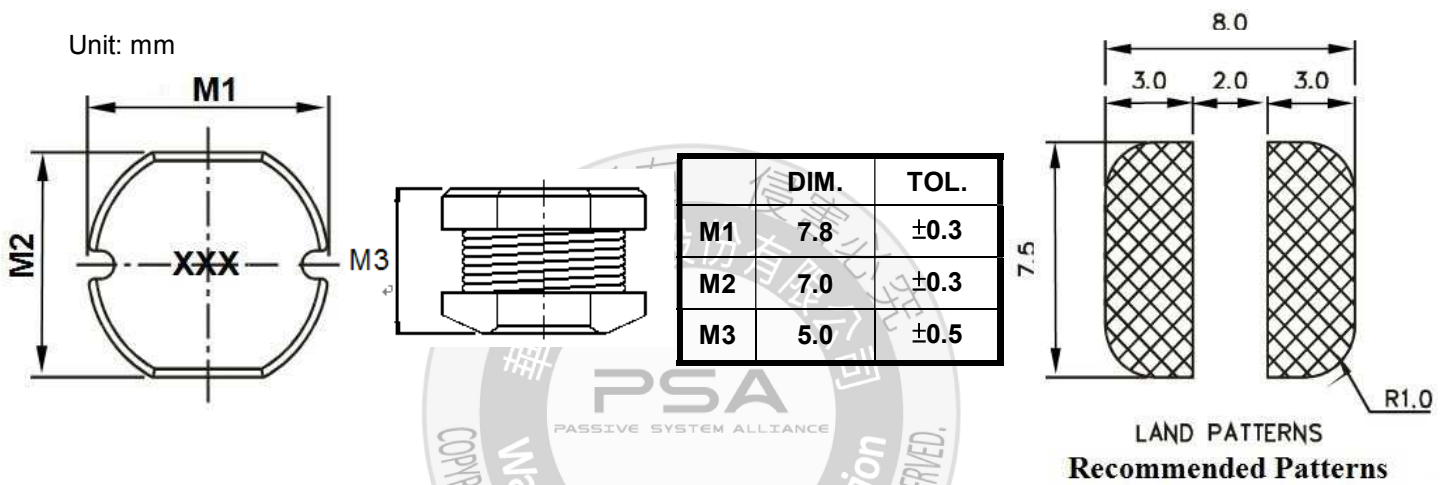
## Features

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

## Applications

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

## Shape and Dimension



## Ordering Information

| WL                  | SN                                      | 075D              | Z0                      | M                | 1R0  | L                               | B     |
|---------------------|---|-------------------|-------------------------|------------------|--|---------------------------------|-------|
| <b>Product Code</b> | <b>Series</b>                           | <b>Dimensions</b> | <b>Series extension</b> | <b>Tolerance</b> | <b>Value</b>   | <b>Packing Code</b>             |       |
| WL:<br>Inductor     | Unshielded<br>SMD<br>Power<br>Inductors | 7.8 * 7.0 mm      | Z0:STD                  | K : ± 10%        | 6R8 = 6.8uH<br>100 = 10.0uH<br>101 = 100uH<br>302 = 3000uH | L=13" Reeled<br>(Embossed tape) | B:STD |

## Electrical Characteristics

| WLSN075D Series  | Marking | L (uH) | Inductance Tolerance | Test Freq (KHz) | DCR (Ω) MAX. | Rated Current (A) |
|------------------|---------|--------|----------------------|-----------------|--------------|-------------------|
| WLSN075DZ0K6R8LB | 6R8     | 6.8    | ± 10%                | 100             | 0.058        | 3.0               |
| WLSN075DZ0K8R2LB | 8R2     | 8.2    | ± 10%                | 100             | 0.06         | 2.4               |
| WLSN075DZ0K100LB | 100     | 10     | ± 10%                | 100             | 0.07         | 2.30              |
| WLSN075DZ0K120LB | 120     | 12     | ± 10%                | 100             | 0.08         | 2.00              |
| WLSN075DZ0K150LB | 150     | 15     | ± 10%                | 100             | 0.09         | 1.80              |
| WLSN075DZ0K180LB | 180     | 18     | ± 10%                | 100             | 0.10         | 1.60              |
| WLSN075DZ0K220LB | 220     | 22     | ± 10%                | 100             | 0.11         | 1.50              |
| WLSN075DZ0K270LB | 270     | 27     | ± 10%                | 100             | 0.12         | 1.30              |
| WLSN075DZ0K330LB | 330     | 33     | ± 10%                | 100             | 0.13         | 1.20              |
| WLSN075DZ0K390LB | 390     | 39     | ± 10%                | 100             | 0.16         | 1.10              |
| WLSN075DZ0K470LB | 470     | 47     | ± 10%                | 100             | 0.18         | 1.10              |
| WLSN075DZ0K560LB | 560     | 56     | ± 10%                | 100             | 0.24         | 0.94              |
| WLSN075DZ0K680LB | 680     | 68     | ± 10%                | 100             | 0.28         | 0.85              |
| WLSN075DZ0K820LB | 820     | 82     | ± 10%                | 100             | 0.37         | 0.78              |
| WLSN075DZ0K101LB | 101     | 100    | ± 10%                | 10              | 0.43         | 0.72              |
| WLSN075DZ0K121LB | 121     | 120    | ± 10%                | 10              | 0.47         | 0.66              |
| WLSN075DZ0K151LB | 151     | 150    | ± 10%                | 10              | 0.64         | 0.58              |
| WLSN075DZ0K181LB | 181     | 180    | ± 10%                | 10              | 0.71         | 0.51              |
| WLSN075DZ0K221LB | 221     | 220    | ± 10%                | 10              | 0.96         | 0.49              |
| WLSN075DZ0K271LB | 271     | 270    | ± 10%                | 10              | 1.11         | 0.42              |
| WLSN075DZ0K331LB | 331     | 330    | ± 10%                | 10              | 1.26         | 0.40              |
| WLSN075DZ0K391LB | 391     | 390    | ± 10%                | 10              | 1.77         | 0.36              |
| WLSN075DZ0K471LB | 471     | 470    | ± 10%                | 10              | 1.96         | 0.34              |
| WLSN075DZ0K681LB | 681     | 680    | ± 10%                | 10              | 2.5          | 0.30              |
| WLSN075DZ0K821LB | 821     | 820    | ± 10%                | 10              | 2.77         | 0.35              |
| WLSN075DZ0K202LB | 222     | 2200   | ± 10%                | 1               | 7.2          | 0.15              |
| WLSN075DZ0K302LB | 302     | 3000   | ± 10%                | 1               | 10.0         | 0.12              |
| WLSN075DZ0K472LB | 472     | 4700   | ± 10%                | 1               | 21.0         | 0.08              |

Tolerance : K : ±10%

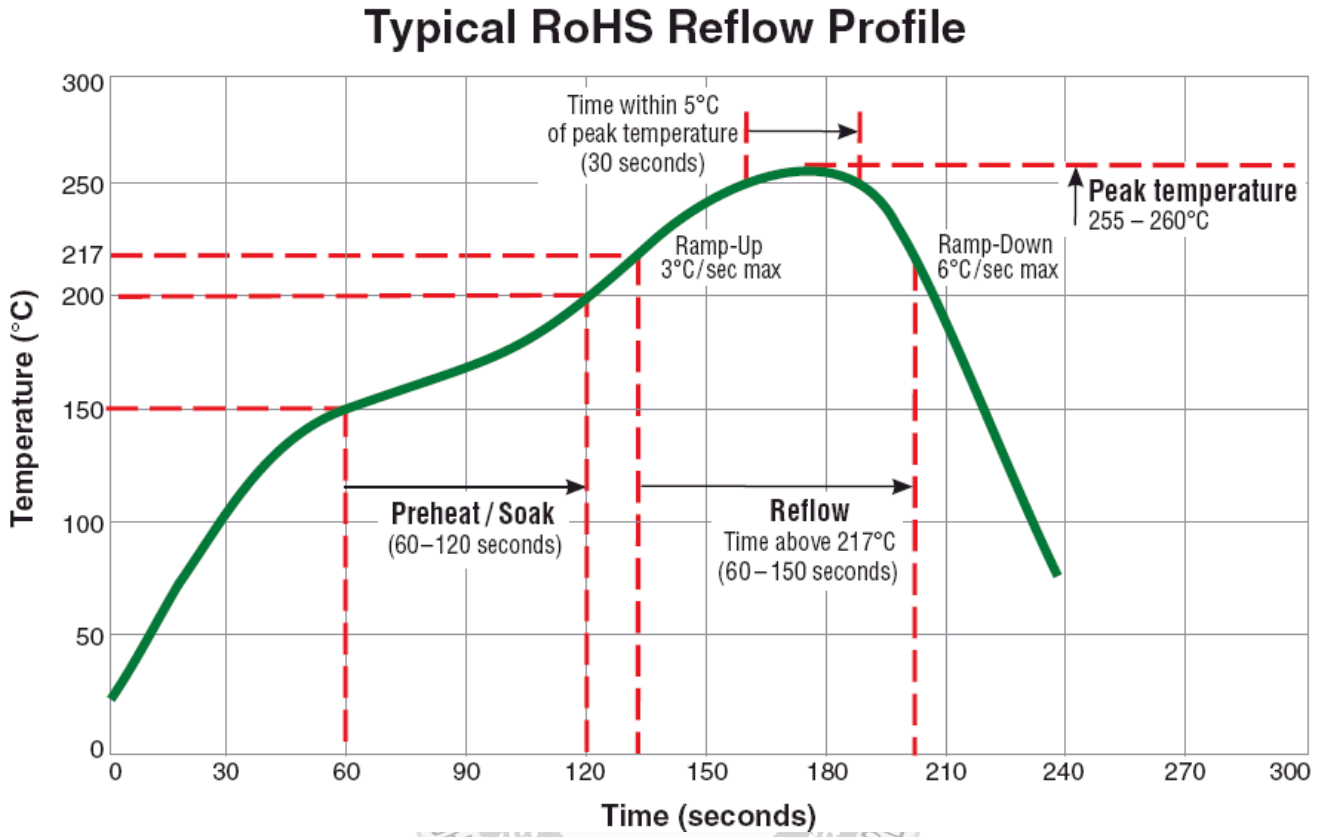
TEST INSTRUMENT: HP4284A & Chroma3302, 1320, 16052.

\* Operating Temp : -25°C to +105°C.

\* Inductance drops no more than 10% at rated current applied or temperature rises  $\Delta t \leq 40^\circ\text{C}$

\* MSL : LEVEL 1

## TYPICAL RoHS REFLOW PROFILE

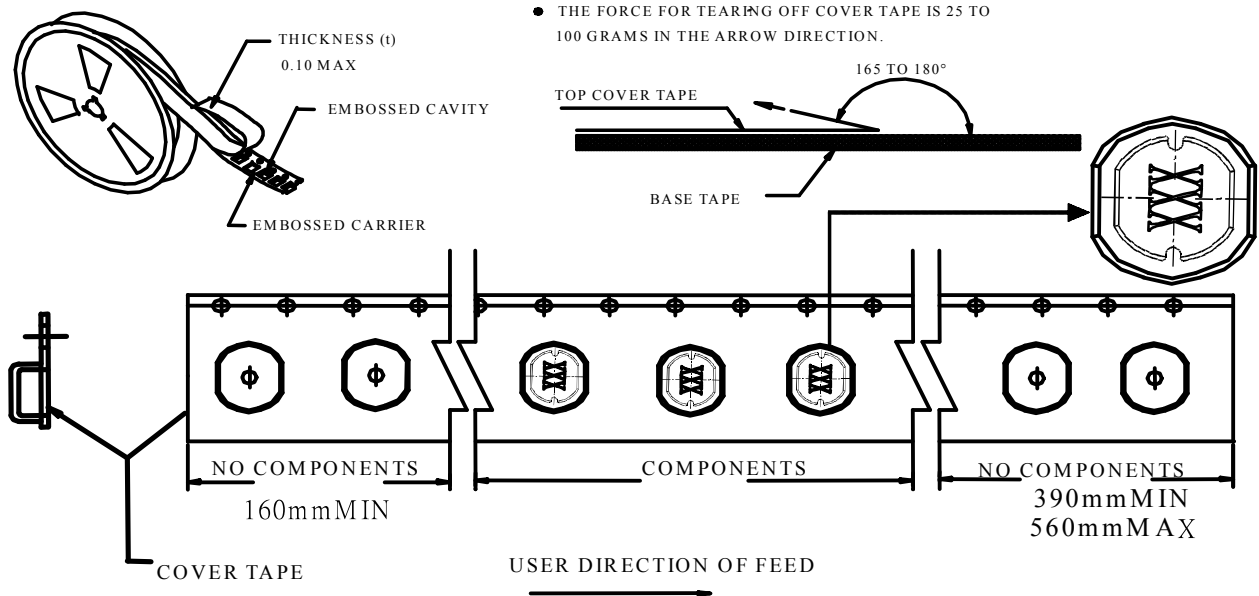


**Mechanical Performance /Environmental Test Performance Specifications:**

| No. | Item                        | Test condition   | Requirements  |
|-----|-----------------------------|--|---|
| 1   | Salt Spray Test             | Chamber temperature 35°C, the concentration of salt spray 5% (Total 24 hours).   | MIL-STD-202G<br>Method 101E<br>Test Condition C                                 |
| 2   | Humidity Test               | +40°C± 2°C, humidity of 90% ± 5% (total 96 hours).   | MIL-STD-202G<br>Method 103B<br>Test Condition B                                 |
| 3   | High Temperature Storage    | 1. Temperature: 125, 100, 85, 70, 55, 40, 30°C.<br>2. Test time: 2, 16, 72, 96 hours.  | IEC 68-2<br>Test Condition B  |
| 4   | Low Temperature Storage     | 1. Temperature: -40, -25, -10.<br>2. Test time: 2, 16, 72, 96 hours.   | IEC 68-2<br>Test Condition A  |
| 5   | Thermal Shock               | +125°C±5°C (30 minutes) ~ -40 ± 5°C (30 minutes), temperature switch time: 5 minutes (total 50 cycles).  | MIL-STD-202G<br>Method 107G<br>Test Condition B-2                               |
| 6   | Life Test                   | +100°C±2°C (1000Hour)  | MIL-STD-202G<br>Method 108A<br>Test Condition D                                 |
| 7   | Vibration Test              | 10-55-10HZ, amplitude: 1.5mm, direction: X, Y, Z axes, each axis 2 hours (total 6 hours).  | MIL-STD-202G<br>Method 201A   |
| 8   | Solder Heat Resistance Test | DIP: Soak in 260°C solder pot, stay 10Sec<br>Reflow: Keep 250 ±5°C, 30 ±5Sec in air,<br>Temperature ramp: +1~4°C/sec; Above 183°C, must keep 90 s ~ 120 s. | MIL-STD-202G<br>Method 210F<br>Test Condition B(DIP)<br>Test Condition (Reflow) |
| 9   | Terminal Pull Strength Test | 1/2, 1, 2, 3, 5, 10 Pound, as products terminal feature.   | MIL-STD-202G<br>Method 211A<br>Test Condition A                                 |
| 10  | Solder Ability Test         | Soak in 245 °C solder pot of 3Sec, PAD must have 95% above coverage.   | J-STD-003B  |
| 11  | Terminal Push Strength Test | No special requirements: 5N thrust to maintain 10 Sec.   | JIS C5321:1997  |

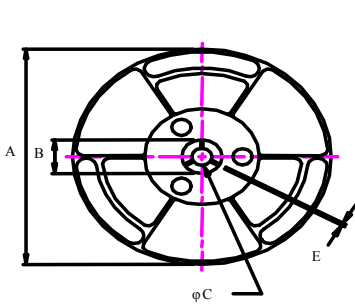
**Tape & Reel Packaging Dimensions:**

**PACKAGING SPECIFICATION FOR SMD COILS**

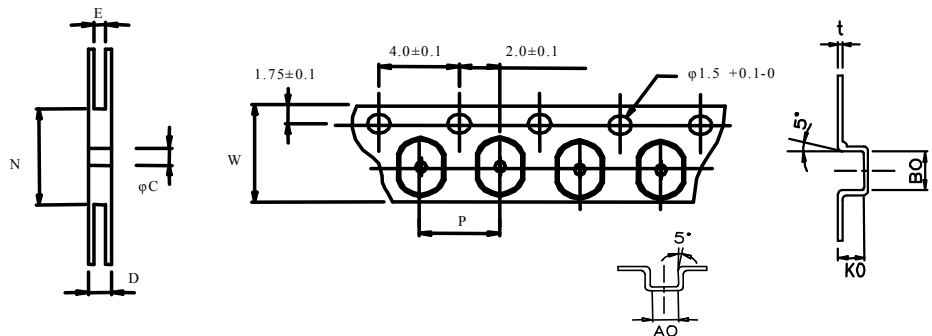


■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC



■ DIMENSIONS OF CARRIER TAPE (mm)



∴ 10 sprocket hole pitch cumulative tolerance ±0.20

UNIT : mm

|      | A   | B    | C   | E    | N    | P    | D    | W    | t    | AO   | BO   | KO   |
|------|-----|------|-----|------|------|------|------|------|------|------|------|------|
| DIM. | 340 | 21.0 | 13  | 16.4 | 80   | 12.0 | 22.4 | 16.0 | 0.30 | 7.2  | 8.1  | 5.5  |
| TOL. | MAX | 0.8  | 0.5 | 2.0  | MIN. | 0.10 | MAX. | 0.3  | 0.05 | 0.10 | 0.10 | 0.10 |

Quantity per reel : 1K pcs