

# APPROVAL SHEET

## WLSN073D Series SMD Unshielded Power Inductor



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

## Features

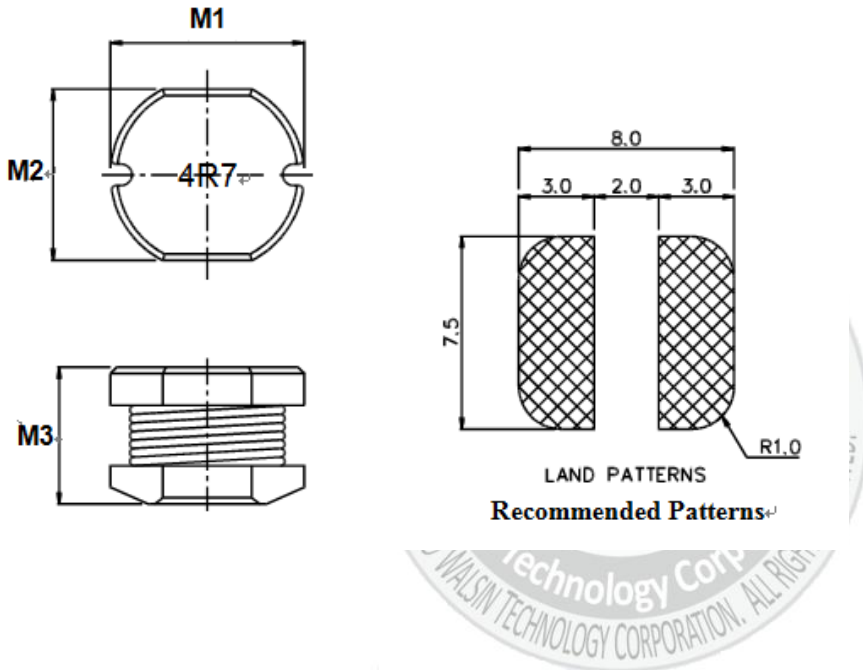
1. Unshielded power inductor.
2. Wide inductance range.

## Applications

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

## Shape and Dimension

Unit: mm



|    | DIM. | TOL. |
|----|------|------|
| M1 | 7.8  | ±0.3 |
| M2 | 7.0  | ±0.3 |
| M3 | 3.5  | ±0.5 |

## Ordering Information

| WL              | SN                                      | 073D         | Z0               | M                     | 1R0                         | L                               | B     |
|-----------------|---|--------------|------------------|-----------------------|-----------------------------|---------------------------------|-------|
| Product Code    | Series                                  | Dimensions   | Series extension | Tolerance             | Value                       | Packing Code                    |       |
| WL:<br>Inductor | SMD<br>Unshielded<br>Power<br>Inductors | 7.8 * 7.0 mm | Z0:STD           | M: ± 20%<br>K : ± 10% | 100 = 10.0uH<br>101 = 100uH | L=13" Reeled<br>(Embossed tape) | B:STD |

## Electrical Characteristics

| WLSN073D Series  | Marking | L (uH) | Inductance Tolerance | Test Freq (KHz) | DCR ( $\Omega$ ) MAX. | Rated Current (A) |
|------------------|---------|--------|----------------------|-----------------|-----------------------|-------------------|
| WLSN073DZ0M100LB | 100     | 10     | $\pm 20\%$           | 100             | 0.0803                | 1.44              |
| WLSN073DZ0M120LB | 120     | 12     | $\pm 20\%$           | 100             | 0.0897                | 1.39              |
| WLSN073DZ0M150LB | 150     | 15     | $\pm 20\%$           | 100             | 0.104                 | 1.24              |
| WLSN073DZ0M180LB | 180     | 18     | $\pm 20\%$           | 100             | 0.111                 | 1.12              |
| WLSN073DZ0M220LB | 220     | 22     | $\pm 20\%$           | 100             | 0.129                 | 1.07              |
| WLSN073DZ0M270LB | 270     | 27     | $\pm 20\%$           | 100             | 0.153                 | 0.94              |
| WLSN073DZ0M330LB | 330     | 33     | $\pm 20\%$           | 100             | 0.170                 | 0.85              |
| WLSN073DZ0M390LB | 390     | 39     | $\pm 20\%$           | 100             | 0.217                 | 0.74              |
| WLSN073DZ0M470LB | 470     | 47     | $\pm 20\%$           | 100             | 0.252                 | 0.68              |
| WLSN073DZ0K560LB | 560     | 56     | $\pm 10\%$           | 100             | 0.282                 | 0.64              |
| WLSN073DZ0K680LB | 680     | 68     | $\pm 10\%$           | 100             | 0.332                 | 0.59              |
| WLSN073DZ0K820LB | 820     | 82     | $\pm 10\%$           | 100             | 0.406                 | 0.54              |
| WLSN073DZ0K101LB | 101     | 100    | $\pm 10\%$           | 10              | 0.481                 | 0.51              |
| WLSN073DZ0K121LB | 121     | 120    | $\pm 10\%$           | 10              | 0.536                 | 0.49              |
| WLSN073DZ0K151LB | 151     | 150    | $\pm 10\%$           | 10              | 0.755                 | 0.40              |
| WLSN073DZ0K181LB | 181     | 180    | $\pm 10\%$           | 10              | 1.022                 | 0.36              |
| WLSN073DZ0K221LB | 221     | 220    | $\pm 10\%$           | 10              | 1.200                 | 0.31              |
| WLSN073DZ0K271LB | 271     | 270    | $\pm 10\%$           | 10              | 1.306                 | 0.29              |
| WLSN073DZ0K331LB | 331     | 330    | $\pm 10\%$           | 10              | 1.495                 | 0.28              |

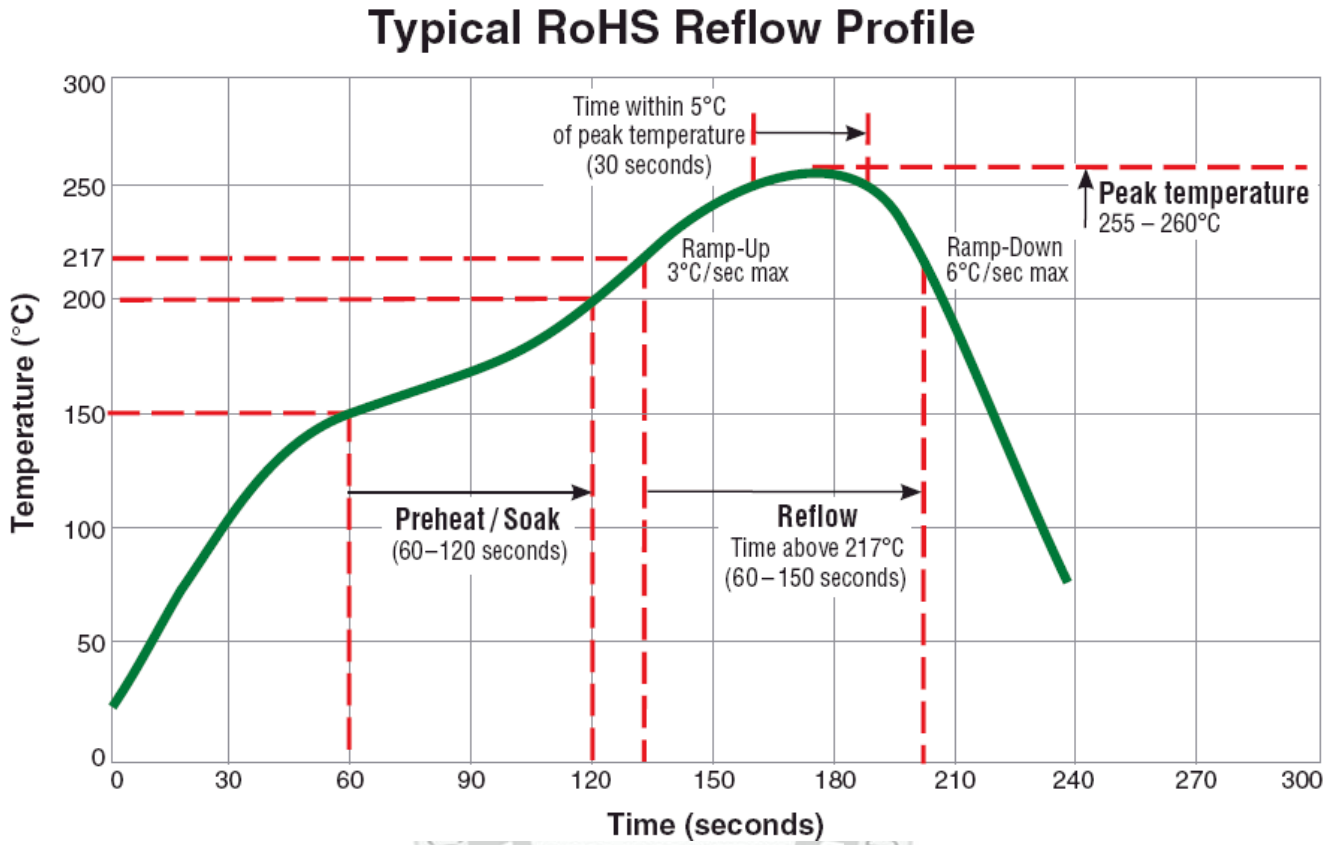
TOLERANCE : M: $\pm 20\%$ , L: $\pm 15\%$ , K: $\pm 10\%$

TEST INSTRUMENT: HP4285A/ Chroma 3302,1320.16502

\* \* Inductance drops no more than 20% at rated current applied or temperature rises  $\Delta t \leq 40^\circ\text{C}$

\* MSL:LEVEL 1

## TYPICAL RoHS REFLOW PROFILE



## RELIABILITY PERFORMANCE

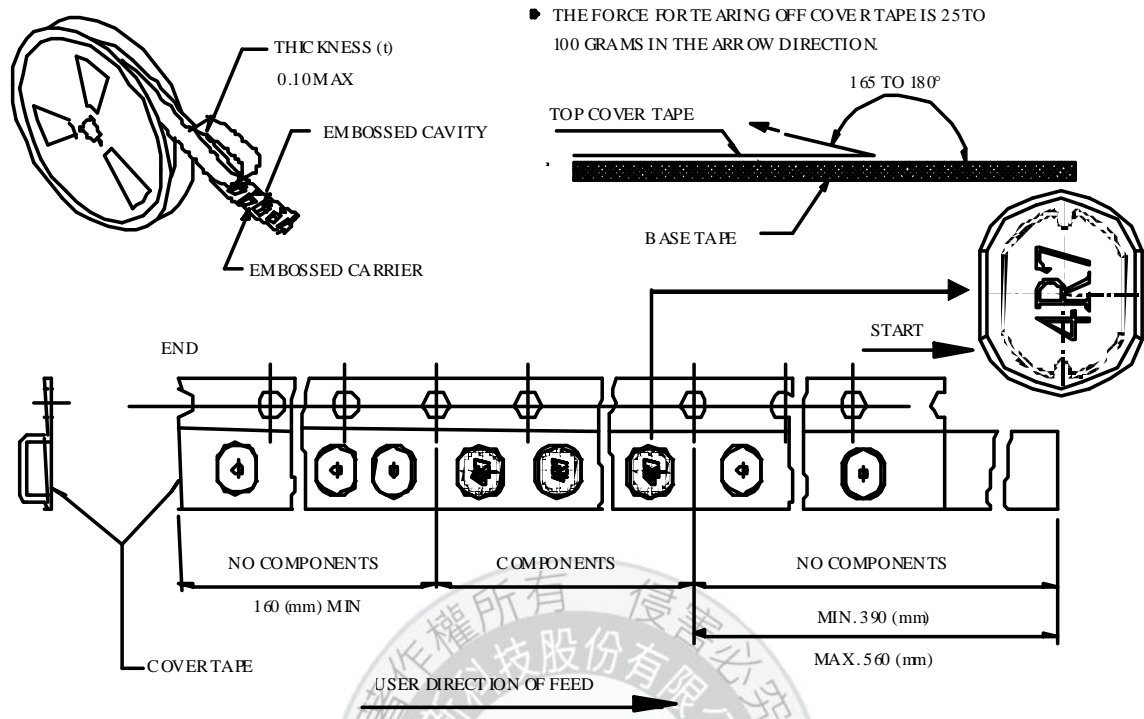
### Reliability Experiment For Electrical

| Test Item             | Test Condition  | Standard Source                                   |
|-----------------------|---|---|
| Humidity Test         | +40°C ± 2°C, humidity of 90% ± 5% (total 96 hours).   | MIL-STD-202G<br>Method 103B<br>Test Condition B   |
| High Temperature Test | 1. Temperature: +125°C ± 2°C<br>2. Test time: 48 ± 2hrs   | IEC 68-2<br>Test Condition B                      |
| Low Temperature Test  | 1. Temperature: -40°C ± 2°C<br>2. Test time: 48 ± 2hrs  | IEC 68-2<br>Test Condition A                      |
| Thermal Shock         | +125°C ± 5°C (30 minutes) ~ -40 ± 5°C (30 minutes),<br>temperature switch time: 5 minutes (total 50<br>cycles). | MIL-STD-202G<br>Method 107G<br>Test Condition B-2 |
| Life Test             | +70°C ± 5°C (250Hours)  | MIL-STD-202G<br>Method 108A<br>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<br>axes, each axis 2 hours (total 6 hours).   | MIL-STD-202G<br>Method 201A                            |
| Solder Heat Resistance Test | IR/convection reflow: Peak Temp 250 ± 5°C for 5Sec<br>in air, Through 2 Cycle. Temperature<br>Ramp: +1~4°C/sec; Above 183°C, must keep 90 s<br>- 120 s | MIL-STD-202G<br>Method 210F<br>Test Condition (Reflow) |
| Solder Ability Test         | Soak in 245 °C solder pot of 3Sec, PAD must have<br>95% above coverage.  | J-STD-003B   |

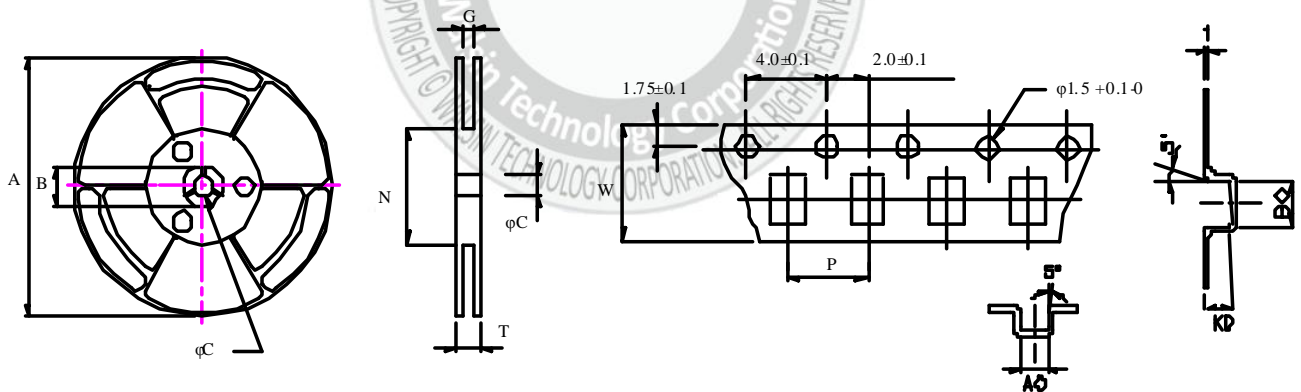
### Tape & Reel Packaging Dimensions:



■ CARRIER TAPE REELS (mm)

MATERIAL: PLASTIC

■ DIMENSIONS OF CARRIER TAPE (mm)



|      | A   | B    | C    | G    | N    | P     | T    | W    | t     | AO    | BO    | KO    |
|------|-----|------|------|------|------|-------|------|------|-------|-------|-------|-------|
| DIM. | 340 | 21.0 | 13   | 16.4 | 100  | 12.0  | 22.4 | 16.0 | 0.35  | 7.3   | 8.0   | 4.3   |
| TOL. | MAX | ±0.8 | ±0.5 | ±0.2 | MIN. | ±0.10 | MAX. | ±0.3 | ±0.05 | ±0.10 | ±0.10 | ±0.10 |

Quantity per reel : 1K pcs