

## WIREWOUND COMMON MODE CHOKE size TDLW25

### 1. Features

- High common mode impedance at high frequency effects excellent noise suppression performance.
- 20Ω~2200Ω are optional for different noise level and signal frequency

### 2. Applications

- USB2.0 line for personal computers and peripheral
- LVDS, panel line for liquid display panels, graphics card, etc.
- USB3.0 line or HDMI 2.0 for personal computers and peripheral

TDLW 25 SN 301 S 2 L  
A B C D E F G

A: Type

C: Characteristic

E: Circuit characteristics

F: Number of line : 2 is 2-Line  
4 is 4-Line

B: External Dimensions

D: Impedance Value

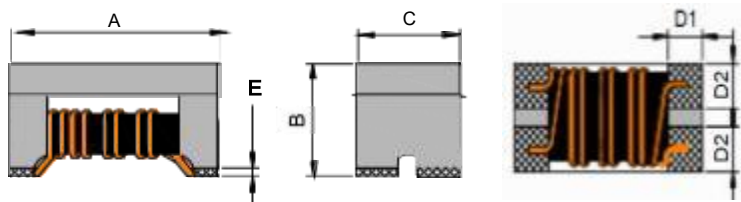
G: Packaging : K ; 330mm

L ; 180mm

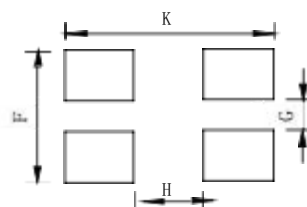
D ; Paper tape



### SHAPES AND DIMENSIONS (Unit:mm)



### Recommended Land Pattern



| TYPE   | A         | B        | C         | D1   | D2       | E        | F       | G        | H        | K        |
|--------|-----------|----------|-----------|------|----------|----------|---------|----------|----------|----------|
| TDLW05 | 1.25±0.2  | 0.8±0.1  | 1.0±0.2   | 0.33 | 0.36 Ref | 0.10 Max | 1.0 Ref | 0.30 Ref | 0.50 Ref | 1.55 Ref |
| TDLW1N | 1.60±0.15 | 1.0±0.15 | 0.85±0.15 | 0.3  | 0.30 Ref | 0.2 Max  | 0.9 Ref | 0.3 Ref  | 0.6 Ref  | 1.6 Ref  |
| TDLW21 | 2.0±0.2   | 1.2±0.2  | 1.2±0.2   | 0.42 | 0.45 Ref | 0.17 Max | 1.2 Ref | 0.4 Ref  | 0.8 Ref  | 2.6 Ref  |
| TDLW25 | 2.50±0.20 | 1.2±0.2  | 2.0±0.2   | 0.47 | 0.60 Ref | 0.20 Max | 1.6 Ref | 0.3 Ref  | 1.2 Ref  | 4.0 Ref  |
| TDLW31 | 3.2±0.2   | 2.0±0.2  | 1.6±0.2   | 0.7  | 0.6 Ref  | 0.22 Max | 1.6 Ref | 0.4 Ref  | 1.6 Ref  | 3.7 Ref  |
| TDLW32 | 3.2±0.2   | 2.2±0.2  | 2.5±0.2   | 0.7  | 0.85 Ref | 0.3 Max  | 3.5 Ref | 0.6 Ref  | 1.6 Ref  | 4.4 Ref  |
| TDLW43 | 4.5±0.2   | 2.8±0.2  | 3.2±0.2   | 0.8  | 1.1 Ref  | 0.5 Max  | 3.2 Ref | 1.0 Ref  | 2.7 Ref  | 5.1 Ref  |
| TDLW5B | 4.8±0.2   | 2.5      | 5.0±0.2   | 1.9  | 1.2 Ref  | 0.3 Max  | 3.5 Ref | 0.8 Ref  | 1.2 Ref  | 5.0 Ref  |
| TDLW7B | 7.0±0.5   | 3.8      | 6.0±0.5   | 2.0  | 1.5 Ref  | 0.3 Max  | 5.0 Ref | 1.5 Ref  | 3.0 Ref  | 8.0 Ref  |

## Electrical Properties:

| PartNo.          | Common Mode Impedance ( $\Omega$ ) | Test Frequency (MHz) | DCR ( $\Omega$ ) Max | Max. Rated Current (mA) | Rated Voltage (Vdc) | Insulation Resistance (M $\Omega$ ) Min. |
|------------------|------------------------------------|----------------------|----------------------|-------------------------|---------------------|------------------------------------------|
| TDLW25 SN301 S2L | 300 $\pm$ 25%                      | 100                  | 0.25                 | 400                     | 50                  | 10                                       |
| TDLW25 SN471 S2L | 470 $\pm$ 25%                      | 100                  | 0.30                 | 350                     | 50                  | 10                                       |
| TDLW25 SN601 S2L | 600 $\pm$ 25%                      | 100                  | 0.38                 | 330                     | 50                  | 10                                       |
| TDLW25 SN102 S2L | 1000 $\pm$ 25%                     | 100                  | 0.50                 | 240                     | 50                  | 10                                       |

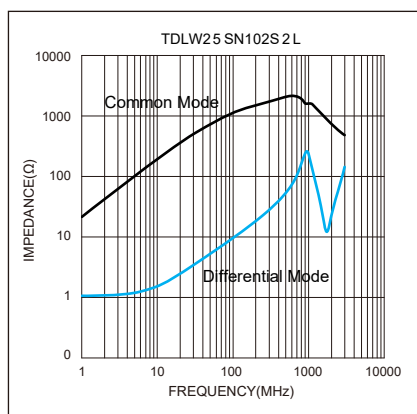
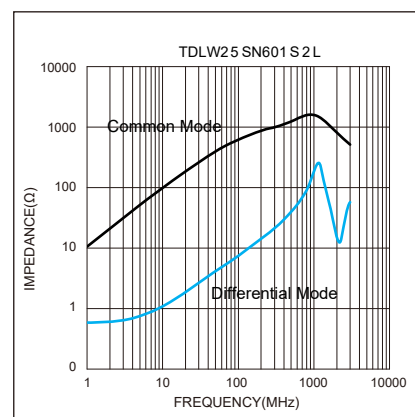
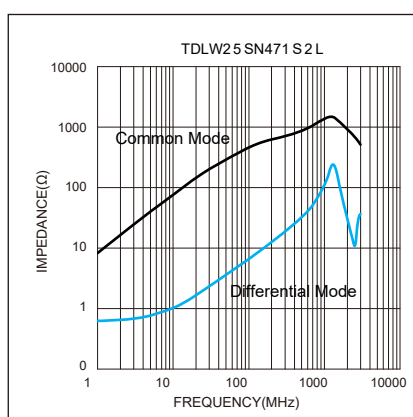
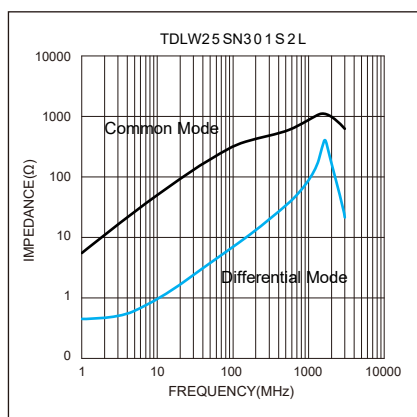
■ All data is tested based on 25°C ambient temperature.

1 Inductance measure condition at 100KHz, 0.1V.

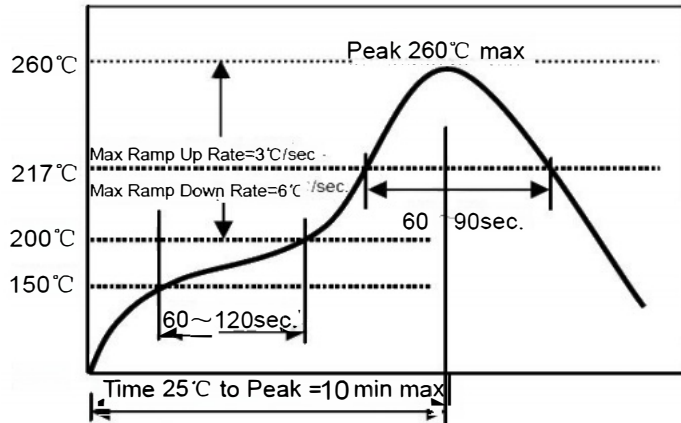
2 Impedance measure condition at 100MHz, 0.5V.

3 Rated current: the value of DC current when the temperature rise is  $\Delta T 40^{\circ}\text{C}$  ( $T_a = 25^{\circ}\text{C}$ ).

Special remind: Circuit design, component placement, PCB size and thickness, cooling system and etc. all will affect the product temperature. Please verify the product temperature in the final application.



## Reflow Profile for SMT Components



## Re-flowing Profile

Preheat condition: 150 ~ 200°C/60~120sec

Allowed time above 217°C: 80~90sec.

Max temp: 260°C

Max time at max temp: 5 sec.

Solder paste: Sn/3.0Ag/0.5Cu

Allowed Reflow time: 2x

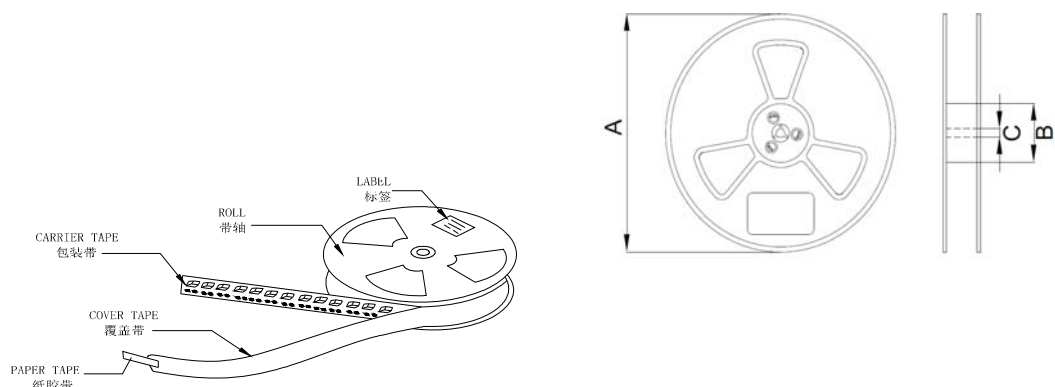
Reflow is reiened tostanda IPCJJEDECJSTD02OD.

- 1 . Storage temperature range (packaging conditions): -10°C~+40°C and RH 70% ( Max.)
- 2 . Operating temperature range : -40°C~105°C(Including self - temperature rise)
- 3 . Rated Current (Irms)

Irms is direct electric current as chip surface temperature rose just 20°C or 40°C against chip initial surface temperature (Ta)

Temperature rise: Rated Current < 1A  $\Delta T$  20°C

MaxRated Current  $\geq 1A \Delta T$  40°C Max



| ProductSerie | Quantity<br>Reel | InnerCartonQuantity |
|--------------|------------------|---------------------|
| TDLW25       | 2000PCS          | (2000×2)=4000pcs    |

| TYPE   | Reel Dimension (mm) |       |     | Quantity<br>( Pcs/Reel) |
|--------|---------------------|-------|-----|-------------------------|
|        | A                   | B     | C   |                         |
| TDLW0N | 178                 | 60    | 13  | 3000 pcs                |
| TDLW1N | 178                 | 60    | 13  | 3000 pcs                |
| TDLW21 | 178                 | 60    | 13  | 2000 pcs                |
| TDLW25 | 178                 | 60    | 13  | 2000 pcs                |
| TDLW31 | 178                 | 60    | 13  | 2000 pcs                |
| TDLW32 | 178                 | 10.75 | 2.3 | 3000 pcs                |
| TDLW43 | 178                 | 60    | 13  | 500 pcs                 |
| TDLW5B | 178                 | 60    | 13  | 300 pcs                 |
| TDLW7B | 330                 | 100   | 21  | 2000 pcs                |