

# SHIELDED POWER INDUCTOR

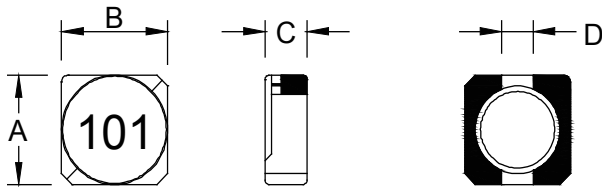
## TL- 4D18 Series



### Features:

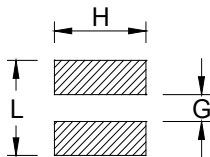
- Low profile very effective in space-conscious applications.
- Low resistance and high energy storage.

### Dimensions:



Series	A	B	C	D
TL-4D18	5.0MAX	5.0MAX	2.0MAX	1.5REF

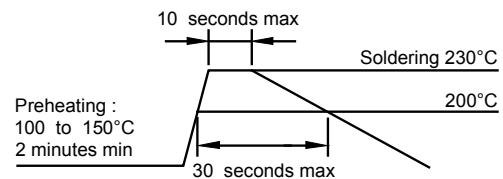
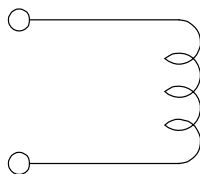
Units : mm



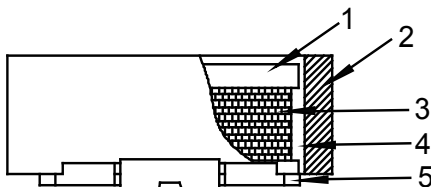
L	G	H
5.3	1.5	5.3

### Recommended PC Board Pattern

### Schematic



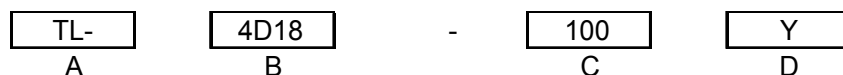
RECOMMENDED SOLDERING CONDITIONS  
REFLOW SOLDERINGS



1	CORE	FERRITE CORE(DR TYPE)
2	CORE	FERRITE CORE(RI TYPE)
3	GLUE	G500
4	WIRE	ENAMELLED COPPER WIRE
5	CLIP	SM212-032ET2N



### Part Numbering



A: Series

B: Dimension

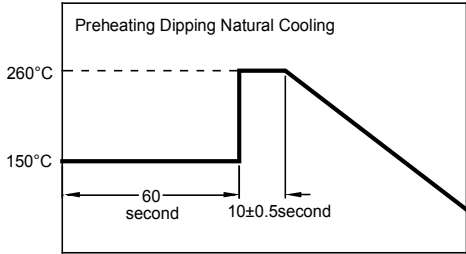
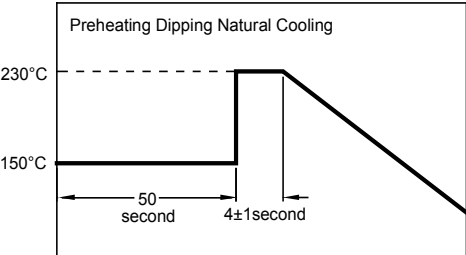
C: Inductance      100=10  $\mu$ H

D: Tolerance      M=  $\pm$ 20%, Y=  $\pm$ 30%

### Electrical Specifications(25°C)

Part Number	Inductance ( $\mu$ H)	Test Frequency (Hz)	DCR(20°C) ( $\Omega$ )MAX	Rated Current (A)MAX
TL-4D18-1R0Y	1.0 $\pm$ 30%	@100K,0.1V	0.045	1.72
TL-4D18-2R2Y	2.2 $\pm$ 30%	@100K,0.1V	0.075	1.32
TL-4D18-2R7Y	2.7 $\pm$ 30%	@100K,0.1V	0.105	1.28
TL-4D18-3R3Y	3.3 $\pm$ 30%	@100K,0.1V	0.110	1.04
TL-4D18-3R9Y	3.9 $\pm$ 30%	@100K,0.1V	0.155	0.88
TL-4D18-4R7Y	4.7 $\pm$ 30%	@100K,0.1V	0.162	0.84
TL-4D18-5R6Y	5.6 $\pm$ 30%	@100K,0.1V	0.170	0.80
TL-4D18-6R8Y	6.8 $\pm$ 30%	@100K,0.1V	0.200	0.76
TL-4D18-8R2Y	8.2 $\pm$ 30%	@100K,0.1V	0.245	0.68
TL-4D18-100Y	10 $\pm$ 30%	@100K,0.1V	0.200	0.61
TL-4D18-120Y	12 $\pm$ 30%	@100K,0.1V	0.210	0.56
TL-4D18-150Y	15 $\pm$ 30%	@100K,0.1V	0.240	0.50
TL-4D18-180Y	18 $\pm$ 30%	@100K,0.1V	0.338	0.48
TL-4D18-220Y	22 $\pm$ 30%	@100K,0.1V	0.397	0.41
TL-4D18-270Y	27 $\pm$ 30%	@100K,0.1V	0.441	0.35
TL-4D18-330Y	33 $\pm$ 30%	@100K,0.1V	0.694	0.32
TL-4D18-390Y	39 $\pm$ 30%	@100K,0.1V	0.709	0.30
TL-4D18-470Y	47 $\pm$ 30%	@100K,0.1V	0.922	0.28
TL-4D18-560Y	56 $\pm$ 30%	@100K,0.1V	1.080	0.26
TL-4D18-680Y	68 $\pm$ 30%	@100K,0.1V	1.300	0.24
TL-4D18-820Y	82 $\pm$ 30%	@100K,0.1V	1.550	0.22
TL-4D18-101Y	100 $\pm$ 30%	@100K,0.1V	1.730	0.20

## Reliability and Test Condition TL-4D18

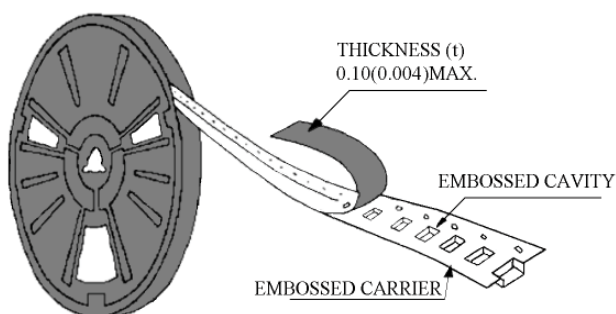
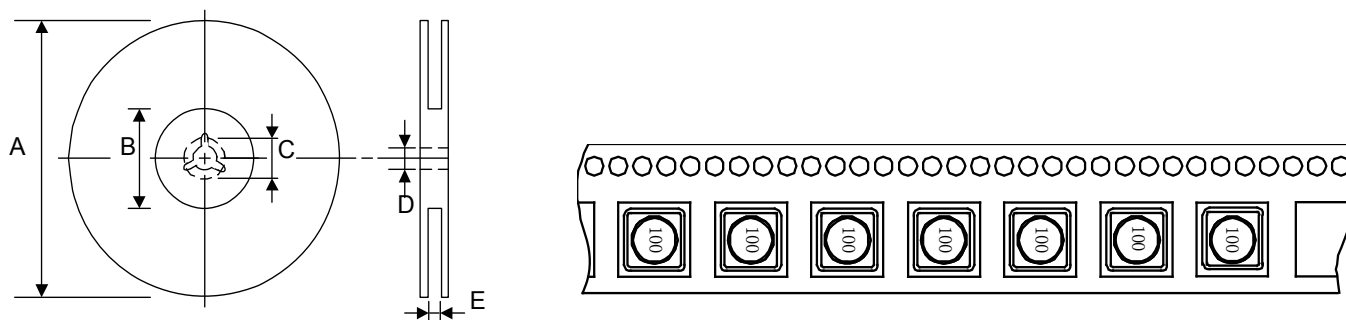
Item	Performance	Test Condition															
Operating Temperature	-20°C~+105°C																
Storage Temperature	-40°C~+85°C																
Rated Current	Base on temp.rise & $\Delta L/LOA=25\%$ typ																
Temperature Rise Test	40°C max.( $\Delta t$ )																
Solder Heat Rasistance	Appearance : No significant abnormality Inductance change : Within $\pm 20\%$	 Preheat: 150°C,60sec Solder:H63A Solder temperature:260±5°C Flux:rosin Dip time:10±0.5sec															
Solderability	More than 90% of the terminal electrode should be covered with solder	 Preheat: 125±25°C,60sec Solder:H63A Solder temperature:230±5°C Flux:rosin Dip time:4±1sec															
Thermal Shock	Appearance : no damage.Inductance : within $\pm 20\%$ of initial value <table border="1" data-bbox="760 1234 1182 1474"> <thead> <tr> <th>Phase</th> <th>Temperature(°C)</th> <th>Time(min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±2°C</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room Temp</td> <td>15</td> </tr> <tr> <td>3</td> <td>+85±2°C</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room Temp</td> <td>15</td> </tr> </tbody> </table> Measured:50 times	Phase	Temperature(°C)	Time(min)	1	-25±2°C	30±3	2	Room Temp	15	3	+85±2°C	30±3	4	Room Temp	15	For SSL Condition for 1 cycle Step1:-25±2°C 30±3 min Step2:Room temperature 15 min Step3:+85±5°C 30±3 min Step4:Room temperature 15 min Number of cycles:50
Phase	Temperature(°C)	Time(min)															
1	-25±2°C	30±3															
2	Room Temp	15															
3	+85±2°C	30±3															
4	Room Temp	15															
Humidity Resistance Test	Appearance : no damage. Inductance : within $\pm 20\%$ of initial value	Temperature:40±2°C. Applied current:rated current. Duration:500hrs. Humidity:90~95%															
High Temperature Resistance Test	Appearance : no damage. Inductance : within $\pm 20\%$ of initial value	Temperature:85±2°C. Applied current:rated current. Duration:500hrs.															

## Packaging

## TL- 4D18 Series

### Reel Dimensions

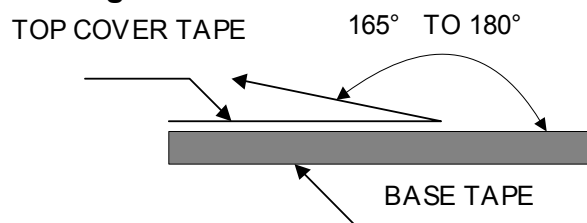
pe	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)
13 x 12 m	330	100±1	13±0.2	2.0±0.5	12.4±0.5



### Packaging Quantity

SSL	TL- 4D18
Inductors/Reel	4000
Carton	32000
Reel Style	13" x 12m

### Tearing Off Force



The force for tearing off cover tape is 15 to 60 grams in the direction of arrow under the following conditions.

Room Temp (°C)	Room Humidity (%)	Room atm (npa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

### Caution (Storage and Handling)

#### Storage Conditions:

To maintain the solderability of terminal electrodes the following caution must be exercised.

Temperature and humidity conditions: < 40°C and 70%.

Recommended products should be used within 6 months from the time of delivery.

The packaging material should be kept where no chlorine or sulfur exists in the air.

#### Handling:

Products should be handled with care to avoid damage or contamination from perspiration and skin oils.

The use of tweezers or vacuum pick up is strongly recommended for individual components.

Bulk handling should ensure that abrasion and mechanical shock are minimized.