# 1. Part No. Expression

# <u>SLT 353229201 N 4A</u>

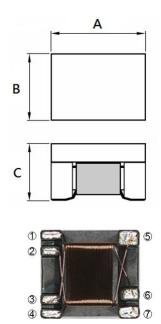
- (a)
- (b)
- (c) (d) (e)
- (a) Series Code

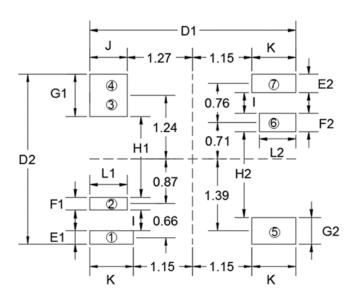
(d) Material Code

(b) Dimension Code

- (e) Control Code
- (c) Inductance Code

# 2. Configuration & Dimensions (Unit: mm)





Recommended PCB Layout

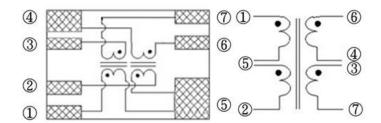
Note: PC board should be designed so that products can prevent damage from mechanical stress when warping the board.

Products shall be positioned in the sideway direction against the mechanical stress to prevent failure.

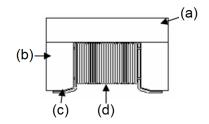
А	В	С	D1	E1	F1
3.50±0.20	3.20±0.20	2.90 Max	4.00 Ref	0.26 Ref	0.25 Ref
G1	H1	I	J	К	L1
0.82 Ref	1.57 Ref	0.40 Ref	0.73 Ref	0.85 Ref	0.73 Ref
D2	E2	F2	G2	H2	L2
0.33 Ref	0.36 Ref	0.36 Ref	0.52 Ref	1.66 Ref	0.71 Ref



## 3. Schematic



# 4. Material List



- (a) Upper Plate
- (b) Core
- (c) Termination
- (d) Wire

# 5. General Specifications

(a) Operating Temp.: -40°C to +85°C (including self-temperature rise)

(b) Storage Temp.: -40°C to +85°C (on board)

(c) Humidity Range: 85±2% RH

(d) Hi- Pot Resistance Test: 1500 VAC for 1 minute

(e) Storage Condition (Component in its packaging)

i) Temperature: Less than 40°Cii) Humidity: Less than 60% RH

## 6. Electrical Characteristics

Part Number	Inductance (uH) Min ①to② or ③-④short ⑥to⑦	Test Frequency	Insertion loss (dB) Max 1-100MHz	Cp Capacitance (pF) Max 3to6	Turns Ratio ①to②:④-⑤
SLT353229201N4A	200	0.1V/100KHz	-1.0	35	1:1



# 7. Soldering Specification

Mildly activated rosin fluxes are preferred. Our terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

## 7-1. IR Soldering Reflow

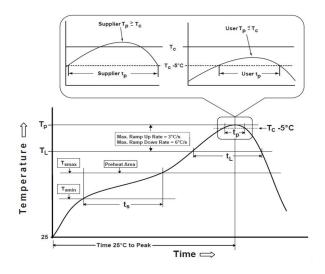
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

## 7-2. Iron Reflow

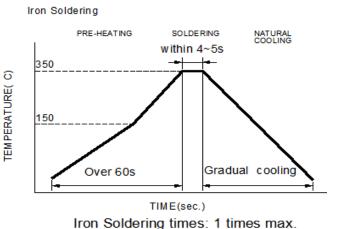
Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended (Figure 2).

#### Note:

- (a) Preheat circuit and products to 150°C.
- (b) 355°C tip temperature (Max.)
- (c) Never contact the ceramic with the iron tip
- (d) 1.0mm tip diameter (Max.)
- (e) Use a 20 watt soldering iron with tip diameter of 1.0mm
- (f) Limit soldering time to 4~5 sec.



Reflow times: 3 times Max
Figure 1: IR Soldering Reflow



Soldering iron method: 350±5°C Max

Figure 2: Iron soldering temperature profiles



Table (1.1) Reflow Profiles

Profile Type:	Pb-Free Assembly
Preheat	
-Temperature Min (T <sub>smin</sub> )	150°C
-Temperature Max (T <sub>smax</sub> )	200°C
-Time $(t_s)$ from $(T_{smin}$ to $T_{smax})$	60-120seconds
Ramp-up rate (T <sub>L</sub> to T <sub>p</sub> )	3°C /second max.
Liquids temperature (T <sub>L</sub> )	217°C
Time (t <sub>L</sub> ) maintained above T <sub>L</sub>	60-150 seconds
Classification temperature (T <sub>c</sub> )	See Table (1.2)
Time (t <sub>p</sub> ) at Tc- 5°C (Tp should be equal to or less than Tc.)	*< 30 seconds
Ramp-down rate $(T_p \text{ to } T_L)$	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

**Tp**: maximum peak package body temperature, **Tc**: the classification temperature.

For user (customer) **Tp** should be equal to or less than **Tc**.

Table (1.2) Package Thickness/Volume and Classification Temperature (T<sub>c</sub>)

	Package	Volume mm <sup>3</sup>	Volume mm <sup>3</sup>	Volume
	Thickness	<350	350-2000	mm³ >2000
PB-Free	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
Assembly	≥2.5mm	250°C	245°C	245°C

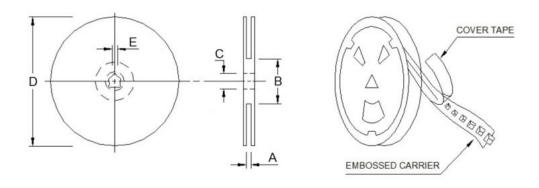
Reflow is referred to standard IPC/JEDEC J-STD-020E.

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<sup>\*</sup>Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.

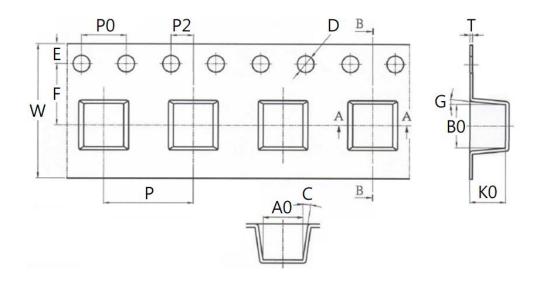
# 8. Packaging Information

# 8-1. Reel Dimension (Unit: mm)



Туре	А	В	С	D	E
13"x12mm	12.5 Ref	100.0 Ref	13.0 Ref	330.0 Ref	2.0 Ref

# 8-2. Tape Dimension (Unit: mm)



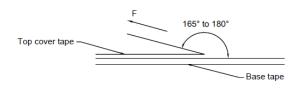
Р	P0	P2	В0	A0	K0	D
8.00±0.10	4.00±0.10	2.00±0.05	3.90±0.10	3.55±0.10	3.20±0.10	1.05+0.10/-0.00
Е	F	W	Т	С	G	-
1.75±0.10	5.50±0.05	12.00±0.10	0.30±0.05	8°	5°	-



## 8-3. Packaging Quantity (Unit: Pcs)

Chip/ Reel	2,000	
Inner Box	4,000	
Carton Box	32,000	

## 8-4. Tearing Off Force



The force for tearing off cover tape is according to the follow table, in the arrow direction under the following conditions.

(Referenced ANSI/EIA-481-D-2008 of 4.11 standard)

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed (mm/min)
5~35	45~85	860~1060	300±10

Tape Size	8 mm	12 to 56 mm	72 mm or Wider
Tearing Off Force (grams)	10~100	10~130	10~150

# **Application Notice**

#### Storage Conditions

To maintain the solderability of terminal electrodes:

- (a) Recommended products should be used within 12 months from the time of delivery.
- (b) The packaging material should be kept where no chlorine or sulfur exists in the air.

#### 2. Transportation

- (a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- (b) Vacuum pick up is strongly recommended for individual components.
- (c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

