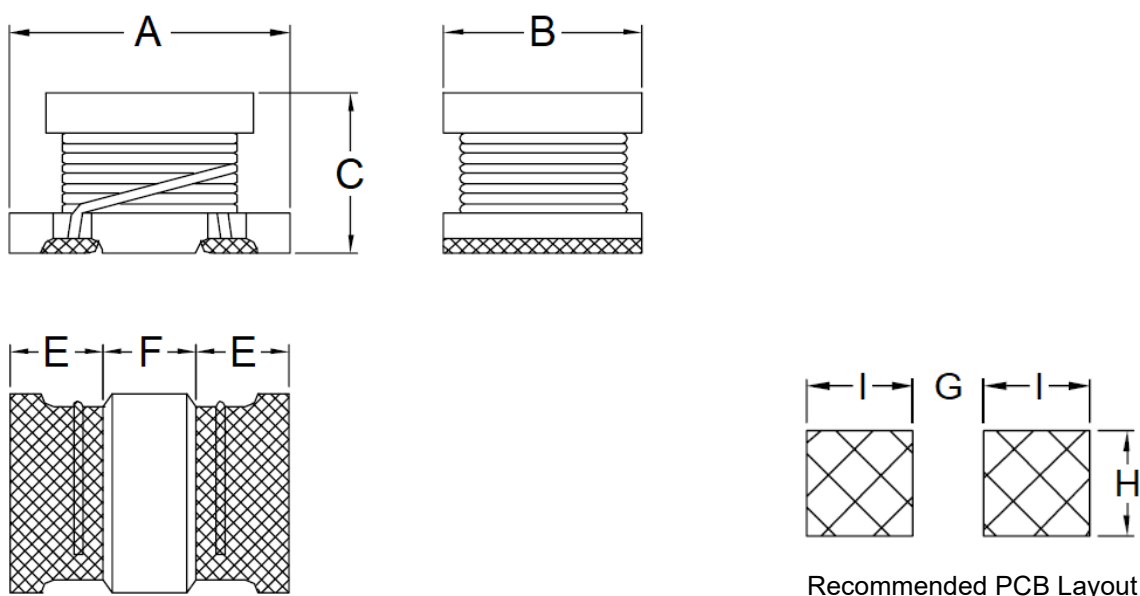


1. Part No. Expression

S D I 3 2 2 5 2 0 1 R 0 M F
 (a) (b) (c) (d) (e)

- (a) Series Code (d) Tolerance Code
 (b) Dimension Code (e) Packaging Code
 (c) Inductance Code

2. Configuration & Dimensions (Unit: mm)

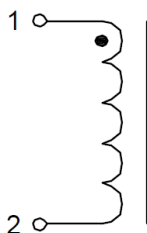


Note: The above PCB layout reference only.

A	B	C	E	F	G	H	I
3.2±0.3	2.5±0.2	2.0±0.3	0.7 Min	0.7 Min	1.0 Ref	2.0 Ref	1.5 Ref

NOTE: Specifications subject to change without notice. Please check our website for latest information.

3. Schematic



4. General Specifications

- (a) Operating Temp.: - 30°C to + 105°C (including self-temperature rise)
- (b) All test data referenced to 25°C ambient.
- (c) Storage Condition (Component in its packaging)
 - i) Temperature: -10°C to +40°C
 - ii) Humidity: Less than 60% RH

5. Electrical Characteristics

Part Number	Inductance (μ H) @0A	Tolerance	Test Frequency (Hz)	Q Min	Test Frequency (Hz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
SDI322520-1R0□F	1.0	M	1M	20	1M	100.0	0.5	445
SDI322520-1R2□F	1.2	M	1M	20	1M	100.0	0.6	425
SDI322520-1R5□F	1.5	M, K	1M	20	1M	75.0	0.6	400
SDI322520-1R8□F	1.8	M, K	1M	20	1M	60.0	0.7	390
SDI322520-2R2□F	2.2	M, K	1M	20	1M	50.0	0.8	370
SDI322520-2R7□F	2.7	M, K	1M	20	1M	43.0	0.9	320
SDI322520-3R3□F	3.3	M, K	1M	20	1M	38.0	1.0	300
SDI322520-3R9□F	3.9	M, K	1M	20	1M	35.0	1.1	290

Note:

Tolerance Code: J=±5%, K=±10%, M=±20%

NOTE: Specifications subject to change without notice. Please check our website for latest information.

Part Number	Inductance (μH) @0A	Tolerance	Test Frequency (Hz)	Q Min	Test Frequency (Hz)	SRF (MHz) Min	DCR (Ω) Max	IDC (mA) Max
SDI322520-4R7□F	4.7	M, K	1M	20	1M	31.0	1.2	270
SDI322520-5R6□F	5.6	M, K	1M	20	1M	28.0	1.3	250
SDI322520-6R8□F	6.8	M, K	1M	20	1M	25.0	1.5	240
SDI322520-8R2□F	8.2	M, K	1M	20	1M	23.0	1.6	225
SDI322520-100□F	10.0	K, J	1M	35	1M	20.0	1.8	190
SDI322520-120□F	12.0	K, J	1M	35	1M	18.0	2.0	180
SDI322520-150□F	15.0	K, J	1M	35	1M	16.0	2.2	170
SDI322520-180□F	18.0	K, J	1M	35	1M	15.0	2.5	165
SDI322520-220□F	22.0	K, J	1M	35	1M	14.0	2.8	150
SDI322520-270□F	27.0	K, J	1M	35	1M	13.0	3.1	125
SDI322520-330□F	33.0	K, J	1M	40	1M	12.0	3.5	115
SDI322520-390□F	39.0	K, J	1M	40	1M	11.0	3.9	110
SDI322520-470□F	47.0	K, J	1M	40	1M	11.0	4.3	100
SDI322520-560□F	56.0	K, J	1M	40	1M	10.0	4.9	85
SDI322520-680□F	68.0	K, J	1M	40	1M	9.0	5.5	80
SDI322520-820□F	82.0	K, J	1M	40	1M	8.5	6.2	70
SDI322520-101□F	100.0	K, J	1M	40	796K	8.0	7.0	70
SDI322520-121□F	120.0	K, J	1M	40	796K	7.5	8.0	75
SDI322520-151□F	150.0	K, J	1M	40	796K	7.0	9.3	70
SDI322520-181□F	180.0	K, J	1M	40	796K	6.0	10.2	65
SDI322520-221□F	220.0	K, J	1M	40	796K	5.5	11.8	65
SDI322520-271□F	270.0	K, J	1M	40	796K	5.0	12.5	65
SDI322520-331□F	330.0	K, J	1M	40	796K	5.0	13.0	65
SDI322520-391□F	390.0	K, J	1M	50	796K	5.0	22.0	50
SDI322520-471□F	470.0	K, J	1K	50	796K	5.0	25.0	45
SDI322520-561□F	560.0	K, J	1K	50	796K	5.0 (Ref)	28.0	40

Note:

Tolerance Code: J=±5%, K=±10%, M=±20%

NOTE: Specifications subject to change without notice. Please check our website for latest information.



6. 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.

6-1. IR Soldering Reflow

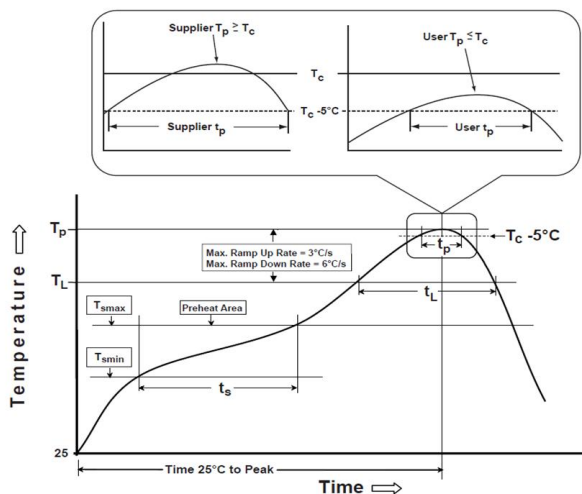
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

6-2. 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).

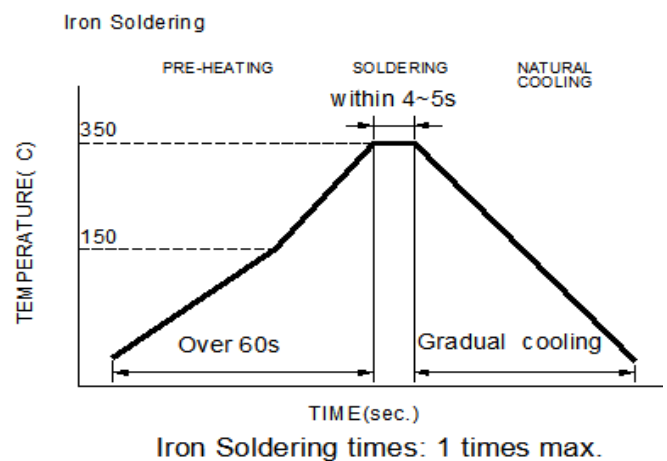
Note:

- Preheat circuit and products to 150°C.
- 355°C tip temperature (Max.)
- Never contact the ceramic with the iron tip
- 1.0mm tip diameter (Max.)
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- 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

NOTE: Specifications subject to change without notice. Please check our website for latest information.

Table (1.1) Reflow Profiles

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

T_p: maximum peak package body temperature, **T_c**: the classification temperature.

For user (customer) **T_p** should be equal to or less than **T_c**.

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

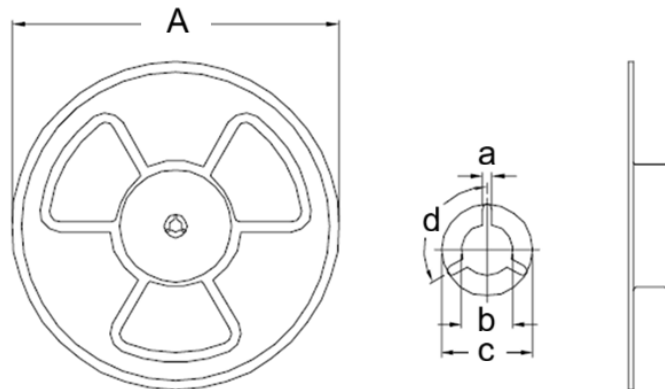
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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

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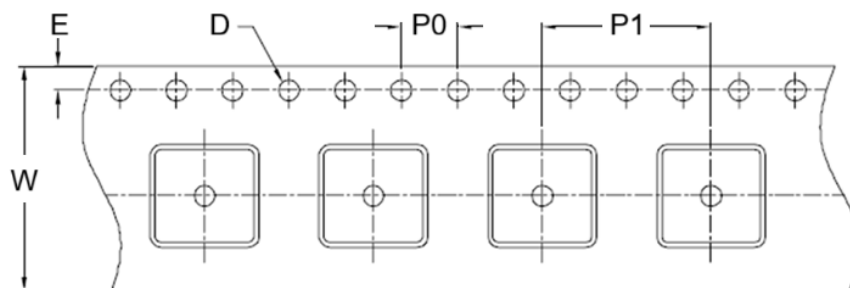
7. Packaging Information

7-1. Reel Dimension (Unit: mm)

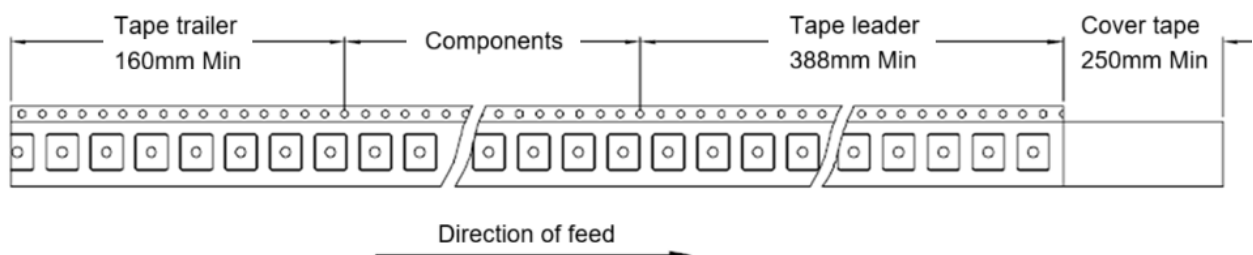


Type	A	a	b	c	d
7"x8mm	178.0 Ref	2.5 Ref	13.0 Ref	23.0 Ref	120°

7-2. Tape Dimension (Unit: mm)



W	E	D	P0	P1
8.00	1.75±0.10	1.50+0.10/-0.00	4.00±0.10	12.00

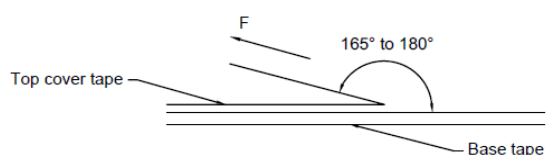


NOTE: Specifications subject to change without notice. Please check our website for latest information.

7-3. Packaging Quantity (Unit: Pcs)

Inner: Reel		Outer: Carton		
Qty (Pcs)	G.W. (Kg)	Qty (Pcs)	G.W. (Kg)	Size (cm)
2,000	0.18	120,000	15	45 x 38 x 21

7-4. 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

1. 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.

NOTE: Specifications subject to change without notice. Please check our website for latest information.