Common Mode Choke – *STF0805 Series*

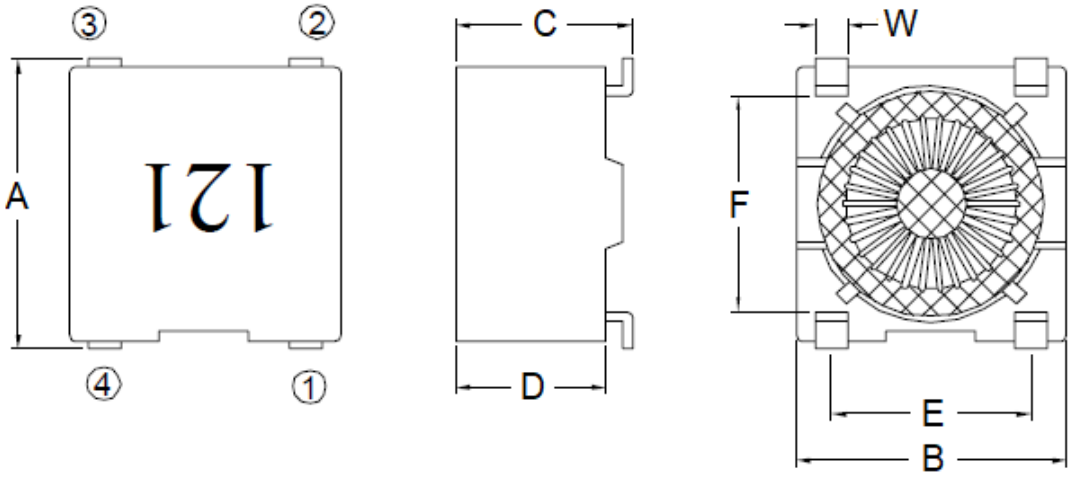
1. Part No. Expression

S T F 0 8 0 5 1 2 1 Y Z F

(a) (b) (c) (d) (e) (f)

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

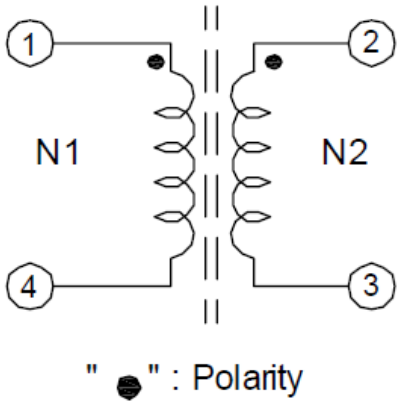
2. Configuration & Dimensions (Unit: mm)



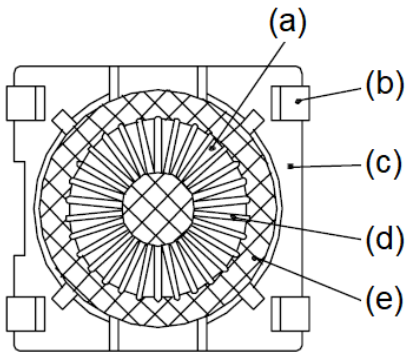
A	B	C	D	E	F	W
8.80±0.50	8.50±0.50	5.50±0.50	4.70±0.20	6.22±0.30	6.45±0.30	1.0 Typ

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

3. Schematic



4. Material List



(a) Core
(b) Wire
(c) Base
(d) Adhesive
(e) Ink

5. General Specifications

(a) Operating Temp.: - 40°C to +125°C (including self-temperature rise)
(b) Resistance to solder heat: 260°C. 10secs
(c) Heat Rated Current (Irms) will cause the coil temperature rise ΔT of 45°C Max.
(d) Storage Condition (Component in its packaging)
    i) Temperature: -10°C to 40°C
    ii) Humidity: Less than 60% RH

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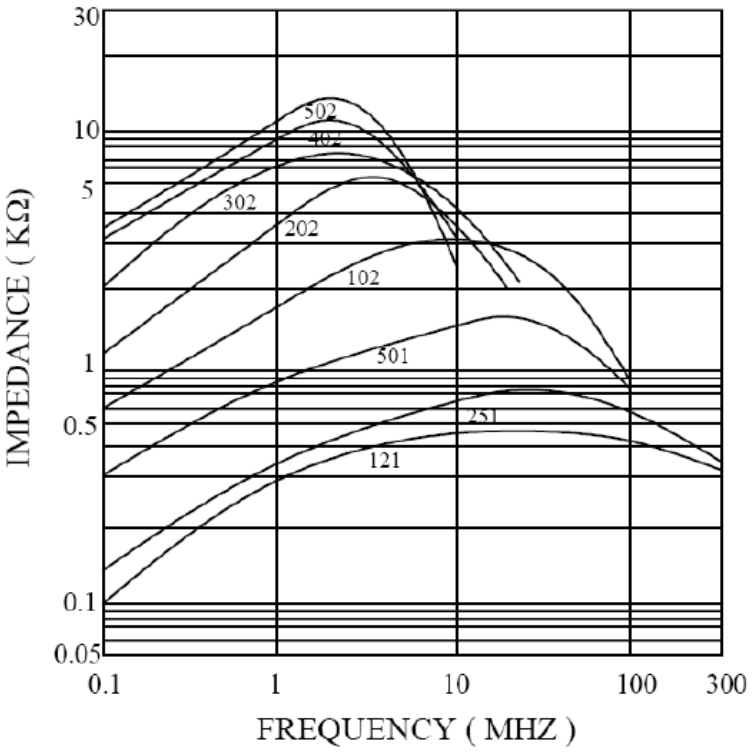
6. Electrical Characteristics

Part Number	Inductance L1, L2 (μH) ±40%	DCR N1, N2 (Ω) Max	Rated Current (A)	Impedance (Ω) Min	Frequency Range (MHz)
STF0805121YZF	120	0.025	1.40	200	10~200
STF0805251YZF	250	0.030	1.25	400	5~100
STF0805501YZF	500	0.060	0.90	800	2~50
STF0805102YZF	1000	0.180	0.50	1400	1~40
STF0805202YZF	2000	0.250	0.45	2000	0.5~15
STF0805302YZF	3000	0.300	0.40	3000	0.5~10
STF0805402YZF	4000	0.580	0.30	4000	0.5~5
STF0805502YZF	5000	0.630	0.25	5000	0.5~3

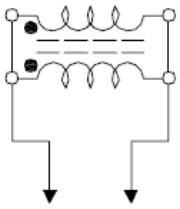
Note:

Hi- Pot Test (N1-N2) : 500Vac / 60HZ,3mA / 5S (1V/50KHZ)

7. Characteristics Curve



Measuring Circuit :



RF Impedance Analyzer

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

8. 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.

8-1. IR Soldering Reflow

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

8-2. 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.

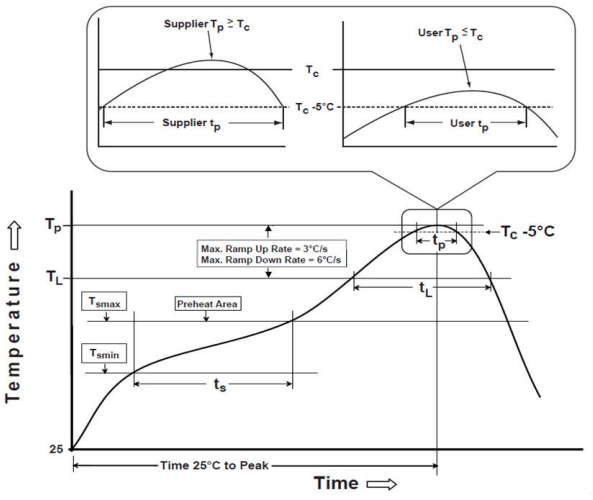
(b) 355°C tip temperature (Max.)

(c) Never contact the ceramic with the iron tip

(d) 1.0mm tip diameter (Max.)

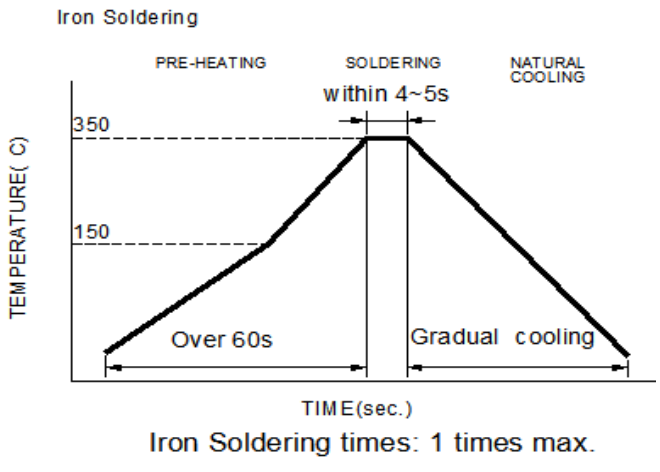
(e) Use a 20-watt soldering iron with tip diameter of 1.0mm

(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

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}) -Temperature Max (T_{smax}) -Time (t_s) from (T_{smin} to T_{smax})	 150°C 200°C 60-120seconds
Ramp-up rate ($T_L$to T_p)	3°C /second max.
Liquids temperature (T_L) Time (t_L) maintained above T_L	217°C 60-150 seconds
Classification temperature (T_c)	See Table (1.2)
Time (t_p) at Tc- 5°C (Tp should be equal to or less than Tc.)	*< 30 seconds
Ramp-down rate (T_p 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.**

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

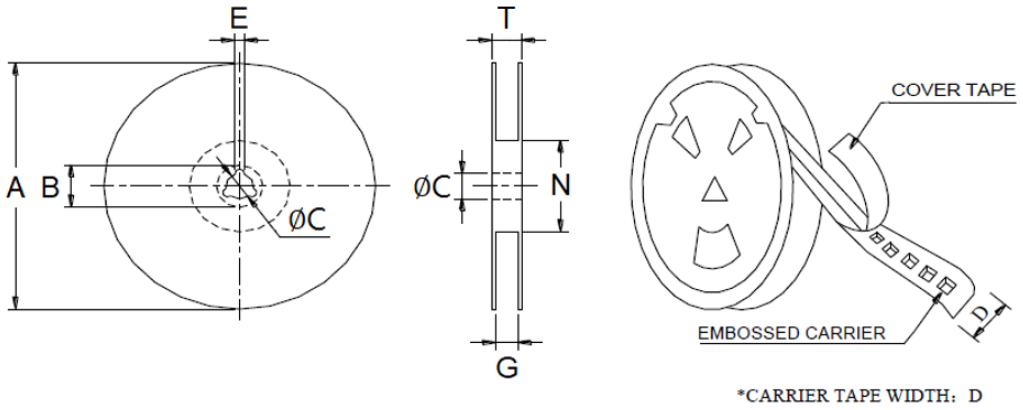
Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

	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.

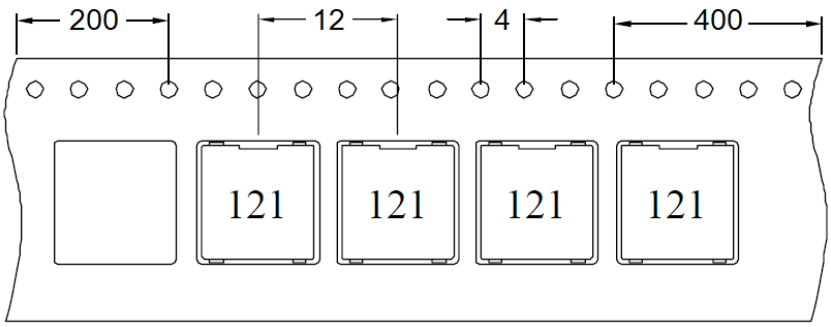
9. Packaging Information

9-1. Reel Dimension (Unit: mm)



Type	A	B	C	D	E	G	N	T
13”x24mm	330.0	21.0±0.8	13.0 Ref	24.0	2.0 Ref	26.0 Max	50.0 Min	30.4

9-2. Tape Dimension (Unit: mm)



9-3. Packaging Quantity (Unit: Pcs)

Reel			Carton		
QTY(PCS)	G.W.(gw)	STYLE	QTY(PCS)	G.W.(Kg)	STYLE(cm)
600	510	13-24	2400	5.6	38x36.5x21

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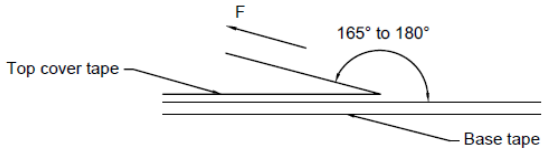
9-4. Tearing Off Force



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.