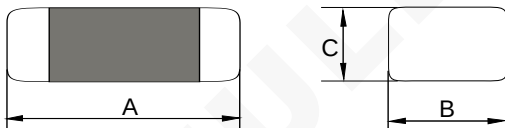
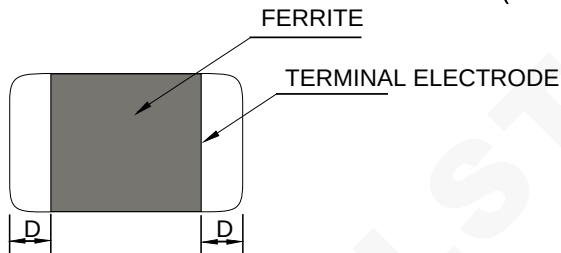
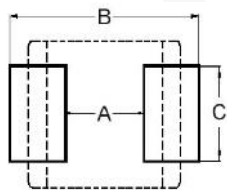


1. PHYSICAL CHARACTERISTICS(mm)

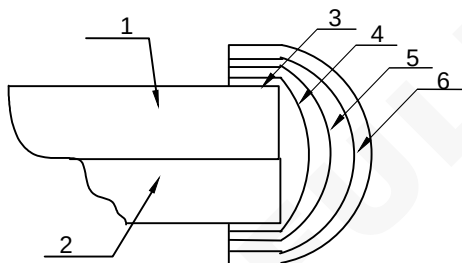
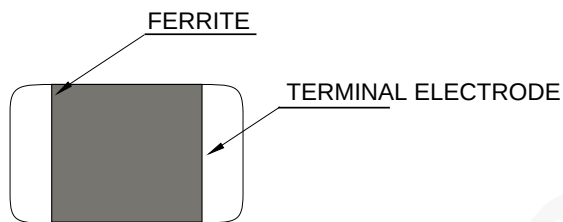


A=2.0±0.2 ; B=1.25±0.2 ; C=1.0Max. ; D=0.5±0.3



A=0.8~1.2Ref ; B=2.3~2.9Ref ; C=1.0~1.4Ref ;

2. BILL OF MATERIALS



3. ELECTRONICAL SPECIFICATIONS

Part No	Inductance (uH)	Test frequency (Hz)	SRF (MHz)Min	DC resistance (Ω) ±30%	Saturation current (Isat) (mA) Max.	Heat Rating current (Irms) (mA) Max.
SHFY100505T-222Y-N	1.0 ±20%	3M/0.2V	-	0.12	650	1200

● Isat for inductance drop 30% from its value without current

● I rms for a 40°C rise above temperature 20°C ambient

Test equipment

Impedance: HP4287A

RDC:TH2512B

SRF:Agilent/ E4991A

IDC : TH2838A+TH1778B

Test temperature range: +20°C typ.

Operating temperature range: -55°C ~+125°C

Storage temperature range: TMP0~25°C , RH20%~75%

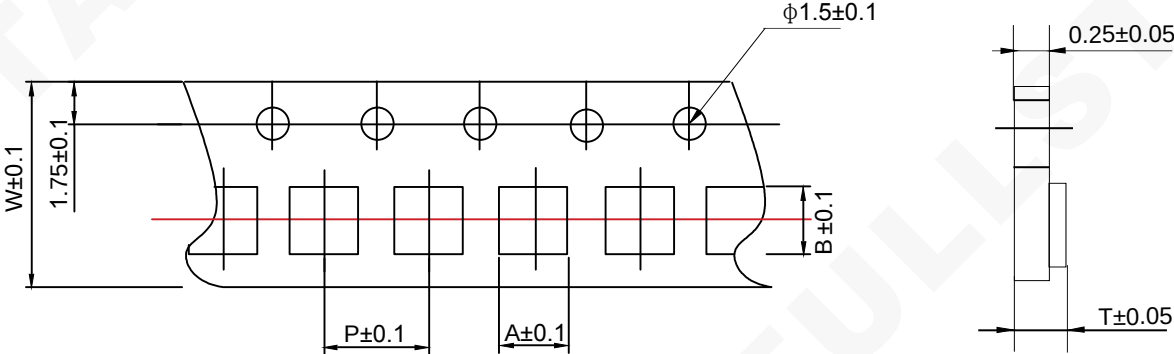
4. MATERIAL

NO	PART	MATERIAL
1	Ferrite substance	Nio-Cuo-Zno-Ferrite
2	Silver electrode	Ag
3	Silver electrode	Ag
4	Cu plating	Cu
5	Ni plating	Ni
6	Sn plating	Sn

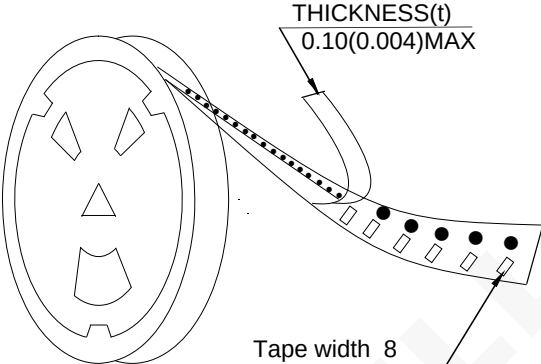
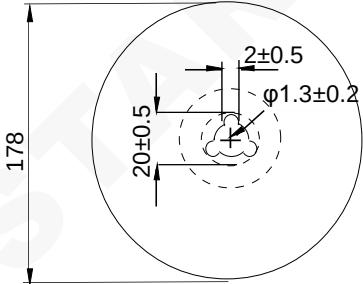
NAME	Power inductor		
CUSTOMER P/N	BKPB002012101R0MA2	Date	2023-1-30
FULLSTAR P/N	SMPB201210T-1R0M-B	Rev. A1	Page 1/4
Drawn. by :MingYue Ma	Checked. by :Zhi Xin Pu	Approve. by :Jie Sun	

Drawing changes	Rev.
	Rev.

1. TAPE SIZE(unit:mm)



Type	SIZE	A	B	W	P	T	CHIPS
SPBY	201210	1.5	2.3	8	4	1.3 0.95±0.10	3000
	201212	1.5	2.3	8	4	1.3	3000



NOTES:
Temp 20℃ 48%RH
RoHS Compliant

NAME	Power inductor		
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Drawing changes	Rev.	
	Rev.	

RELIABILITY TEST

*Electrical performance test		
Item	Specification	Test method
Temperature Coefficient	$\Delta L/L_0 \quad 20^{\circ}\text{C} \leq \pm 10\%$	After the test should be completed, the sample has stabilized at an ambient temperature of -55 to $+125^{\circ}\text{C}$, at this time the ratio of the product's L (ΔL) value to the original L value, suitable for a normal temperature and humidity should be normal It is $\Delta L/L_0 \quad 20^{\circ}\text{C} \leq \pm 10\%$.
Overload test	During the test no smoke,no peculiar,smell, no fire.	Apply 1.2 times as rated current for 5 minutes.
*Environmental characteristics		
Reflow soldering	No damage or problem	Temperature distribution reflow Pre-heat: $150-180^{\circ}\text{C}$, 120 sec Peak temperature: $250 \pm 5^{\circ}\text{C}$, 5sec Maintain temperature: $230 \pm 5^{\circ}\text{C}$, 30 ± 5 sec The graph illustrates the reflow soldering temperature profile. It starts with a preheating phase at 150°C for 120 seconds. The temperature then rises to 180°C and remains there for a short duration. It then rises to 230°C and remains there for 30 seconds. Finally, it reaches the peak temperature of $250 \pm 5^{\circ}\text{C}$ and remains there for 5 seconds before cooling down.

NOTES:
Temp 20°C 48%RH
RoHS Compliant

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CUSTOMER P/N	BKPB002012101R0MA2	Date	2023-1-30
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Drawn. by :MingYue Ma	Checked. by :Zhi Xin Pu	Approve. by :Jie Sun	

Drawing changes	Rev.	
	Rev.	

*Environmental characteristics		
Item	Specification	Test method
Solder ability	The electrodes shall be at least 90% covered with new solder coating	The soldering surface is immersed in the flux and then immersed in a 245±5°C tin furnace for 5 seconds.
Low Temperature Resistance	$\Delta L/L0 \leq \pm 10\%$, there should be no mechanical damage	The sample should be left at 96 ± 4 hours at a temperature of -55± 3 ° C and returned to completion within 1 hour of the normal temperature range.
High temperature Resistance	$\Delta L/L0 \leq \pm 10\%$, there should be no mechanical damage	The sample should be left for 96 ± 4 hours at a temperature of 125 ± 3 ° C. Tested after returning to the normal temperature range for 1 hour.
Humidity Resistance	$\Delta L/L0 \leq \pm 10\%$, there should be no mechanical damage	The sample should be left at 96 ± 4 hours, at a temperature of 40 ± 2 °C: and at a humidity (RH) of 90-95%. The test was resumed after 1 hour in the normal temperature range.
Temperature cycle	1. No visible mechanical damage. 2. The change in sense value is less than 10%. 3. The resistance value changes less than 5%	Maintain between -55°C and +125 °C for 15 min, transfer time ≤ 1 min, cycle times 5 times, recovery time: test within 24 h (recovery time at least 4 h)
Vibration	$\Delta L/L0 \leq \pm 10\%$, there should be no mechanical damage	Samples should be soldered to printed circuit boards When the vibration has amplitude and 1.5 mm The frequency is from 10-55Hz / 1 minute, and the repetition should be applied to 3 directions (X, Y, Z) for 2 hours each for 6 hours.

NOTES:
Temp 20℃ 48%RH
RoHS Compliant

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Drawn. by :MingYue Ma	Checked. by :Zhi Xin Pu	Approve. by :Jie Sun	

Drawing changes	Rev.	
	Rev.	