CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION POWER INDUCTOR

SGTE PART NO. GPDB1312-220M01

SAMPLE NO.: S10090203 REVISION NO. A DATE 02-Sep-10

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

深圳感通科技有限公司（大陸工廠）

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納美科技股份有限公司（香港辦事處）

LAPEE TECHNOLOGY LIMITED

香港九龍尖沙嘴加連威老道嘉蘭圍 5-11 號利時商業大廈 17 樓 1713 室

Room 1713 17/F, Rise Commercial Bldg5-11 Granville Cri cuit, Granville Rd, TSim Sha Tsui., Kln

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SPECIFICATION

RoHS COMPLIANT

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APPROVED BY	CHECKED BY	DRAWING BY
Jesse 9/2	Tony 9/2	Lily 9/2

SPECIFICATION

RoHS COMPLIANT

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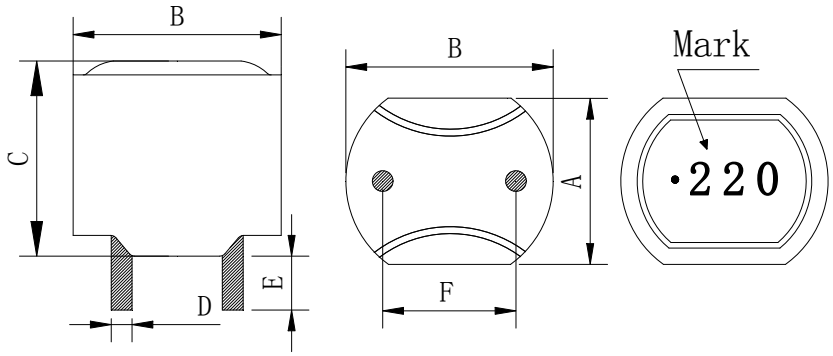
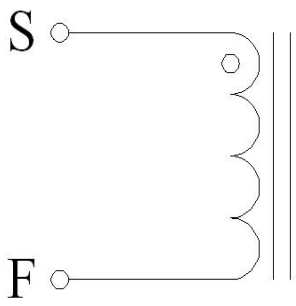
External Dimensions Unit (mm)



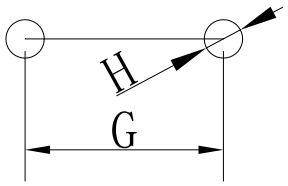
A	12.4± 0.5 (mm)
B	13.4± 0.5 (mm)
C	16.0± 0.5 (mm)
D	0.8± 0.1 (mm)
E	3.4± 0.5 (mm)
F	7.5± 0.5 (mm)
G	7.5± 0.5(mm)
H	1.0 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	22uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	21.7mΩ（Max）		Chroma /16502
I rms	Amps	8A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	11A	100KHz/1V	or Chroma /11300+3302+1320+1320S

- I rms: Current that causes a 40℃ temperature rise from 25℃ ambient.
- I sat: DC current at which the inductance drops 35% from it's value without current.
- All test Data is referenced to 25℃ ambient.
- Operating Temperature Range: -25℃ to +125℃

TEST REPORT

RoHS COMPLIANT

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	22uH	21.7mΩ	8Amps	11Amps
Tolerance	±20%	Max	△T≦40℃	L≧65%
1	19.54	16.77	24.5℃	87.4%
2	19.43	16.82		
3	19.25	16.69		
4	19.50	16.65		
5	20.03	16.70		
6	21.34	16.75		
7	22.42	16.78		
8	19.87	16.80		
9	19.39	16.68		
10	20.12	16.74		
$\bar{X}$	20.09	16.74		
σ	0.97	0.05		

External Dimensions

Item	A	B	C	D	E	F
Specification	12.4	13.4	16.0	0.8	3.4	7.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	± 0.5 (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	12.58	13.57	16.01	0.81	3.52	7.46
2	12.60	13.51	15.96	0.80	3.51	7.50
3	12.51	13.53	16.05	0.82	3.47	7.44
4	12.59	13.50	15.87	0.81	3.46	7.47
5	12.56	13.51	16.01	0.80	3.60	7.52
6	12.61	13.54	16.00	0.79	3.64	7.45
7	12.57	13.50	15.92	0.83	3.59	7.50
8	12.55	13.56	15.98	0.78	3.57	7.54
9	12.59	13.58	16.02	0.80	3.49	7.51
10	12.56	13.55	15.95	0.82	3.53	7.53
$\bar{X}$	12.57	13.54	15.98	0.81	3.54	7.49
σ	0.02	0.03	0.04	0.02	0.03	0.04

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25±5℃. Humidity 60±10%

ELECTRICAL CHARACTERISTICS

RoHS COMPLIANT

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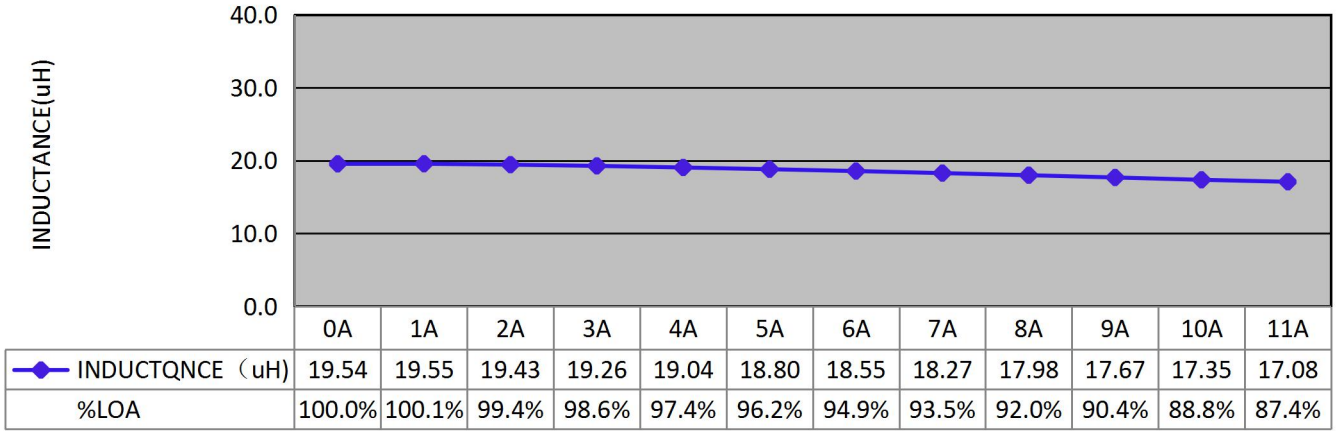
Inductance VS DC current

IDC	L	%LOA				
0A	19.54	100.0%				
1A	19.55	100.1%				
2A	19.43	99.4%				
3A	19.26	98.6%				
4A	19.04	97.4%				
5A	18.80	96.2%				
6A	18.55	94.9%				
7A	18.27	93.5%				
8A	17.98	92.0%				
9A	17.67	90.4%				
10A	17.35	88.8%				
11A	17.08	87.4%				

CONDITION:100KHz/1Vrms AMBIENT: 20℃,69.8%



DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

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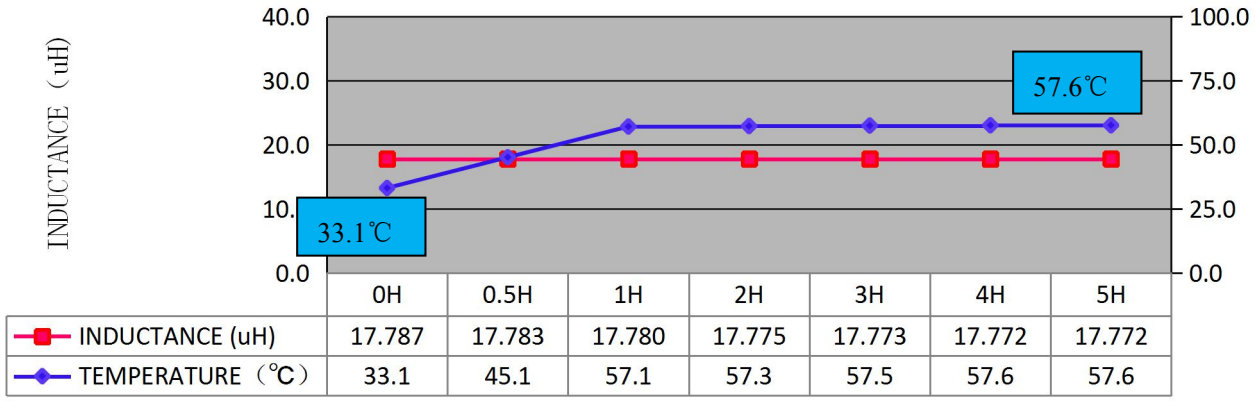
DC current VS Temperature

Time	L（μH）	T（℃）	△T(℃)			
0H	17.787	33.1				
0.5H	17.783	45.1	12.0			
1H	17.780	57.1	24.0			
2H	17.775	57.3	24.2			
3H	17.773	57.5	24.4			
4H	17.772	57.6	24.5			
5H	17.772	57.6	24.5			

CONDITION: Load 8A AMBIENT: 20℃,69.8%



Inductance VS Temperature

ELECTRICAL CHARACTERISTICS

RoHS COMPLIANT

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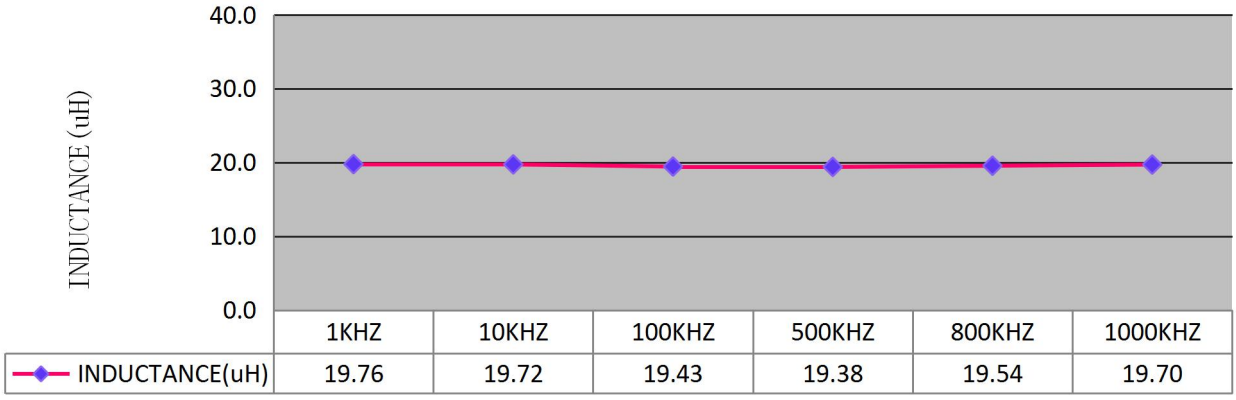
Inductance VS Frequency

FREQ.	L（μH）					
1KHZ	19.76					
10KHZ	19.72					
100KHZ	19.43					
500KHZ	19.38					
800KHZ	19.54					
1000KHZ	19.70					

AMBIENT: 20℃, 69.8%



FREQ. (KHz)

PACKING FOR SPECIFICATION

RoHS COMPLIANT

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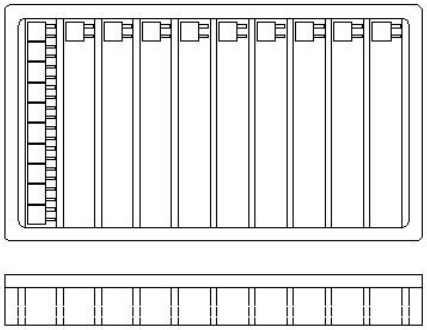
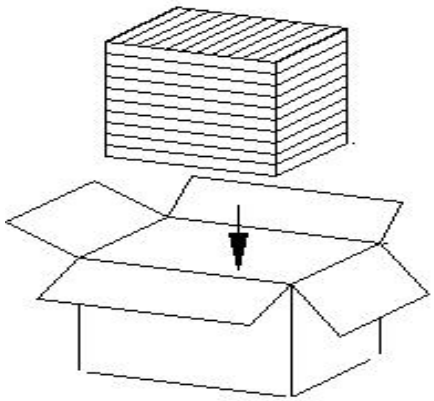
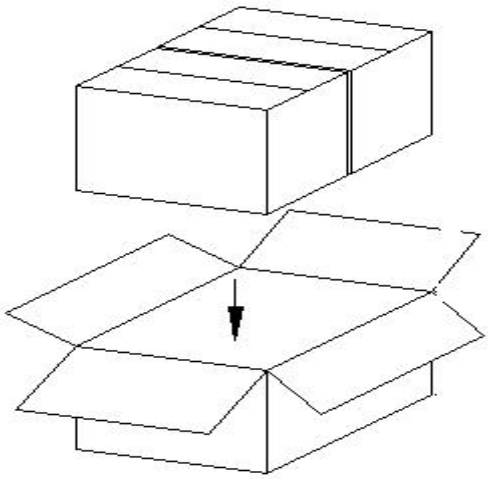


PET Size : 175*159*19mm
Quantity : 50PCS/PET

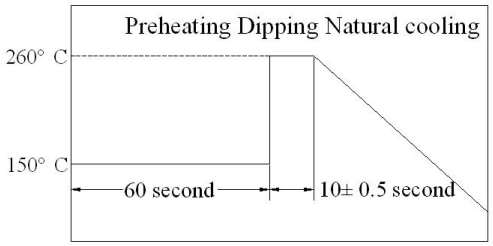
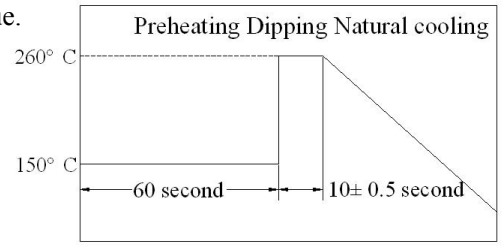
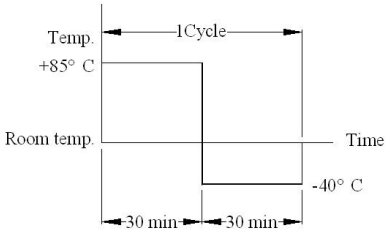


Small box Size : 324*178*114 mm
Quantity : 10PET/Small box
1Small box/500PCS



Big box Size : 386*338*132mm
Quantity : 2 Small box/Big box
1 Big box/1000PCS

GENERAL CHARACTERISTICS

Gan Tong Part NO.: GPDB1312-220M01		PAGE : 7-8
Item	**Performance**	**Test Condition**
Mechanical Performance Test		
Solder ability Test	More than 90% of terminal electrode should be covered with solder. After fluxing, component shall be dipped in a melted solder bath at 260±5℃ for 10 seconds 	
Solder Heat Resistance	Components should have not evidence of electrical and mechanical damage. Inductance: within±20% of initial value. Preheat：150℃ 60 seconds Solder：(SnCu0.7) Solder Temperature：260±5℃ Flux： Rosin. Dip time：10±0.5 seconds 	
Low temperature storage test	1. Appearance: No damage. 2. Inductance: within±20% of initial value. 3.No disconnection or short circuit.	Temperature:- 40℃±5℃ Time: 500±12 Hours Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.
High temperature storage test		Temperature: 85℃±5℃ Time: 500±2 Hours Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.
Thermal Shock Test (Temperature cycle)		-40±5℃ for 30 Minutes. +85±5℃ for 30 Minutes. Total: 10 Cycles 
Humidity load life test		Temperature: 40±5℃ Humidity.: 90-95% Time: 500±12 Hours Load: Allowed DC current Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.

THE CONDITION OF REFLOW

RoHS COMPLIANT

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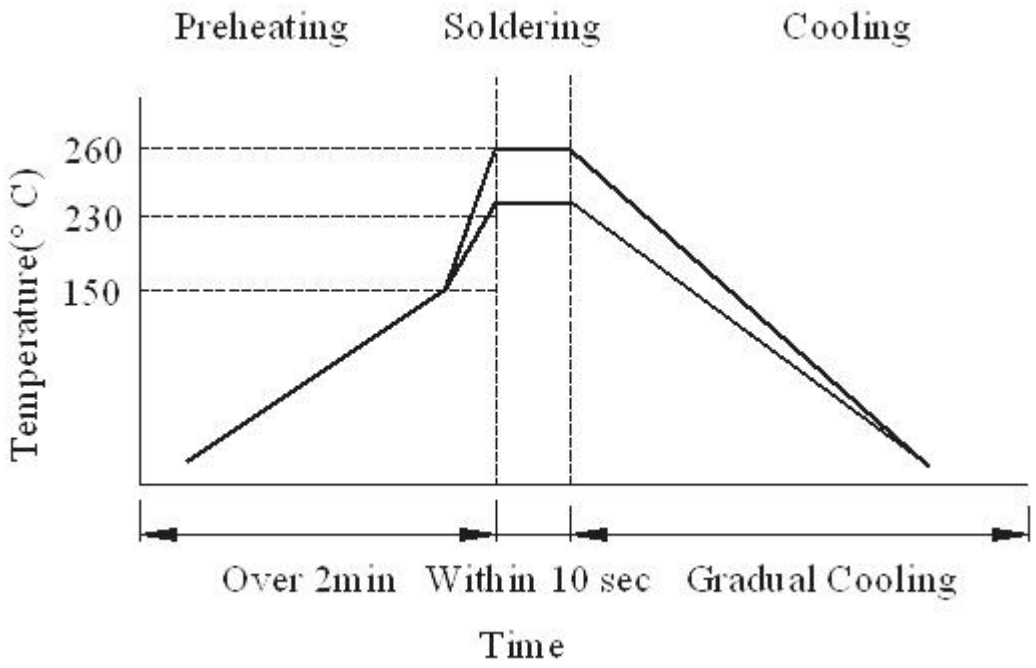
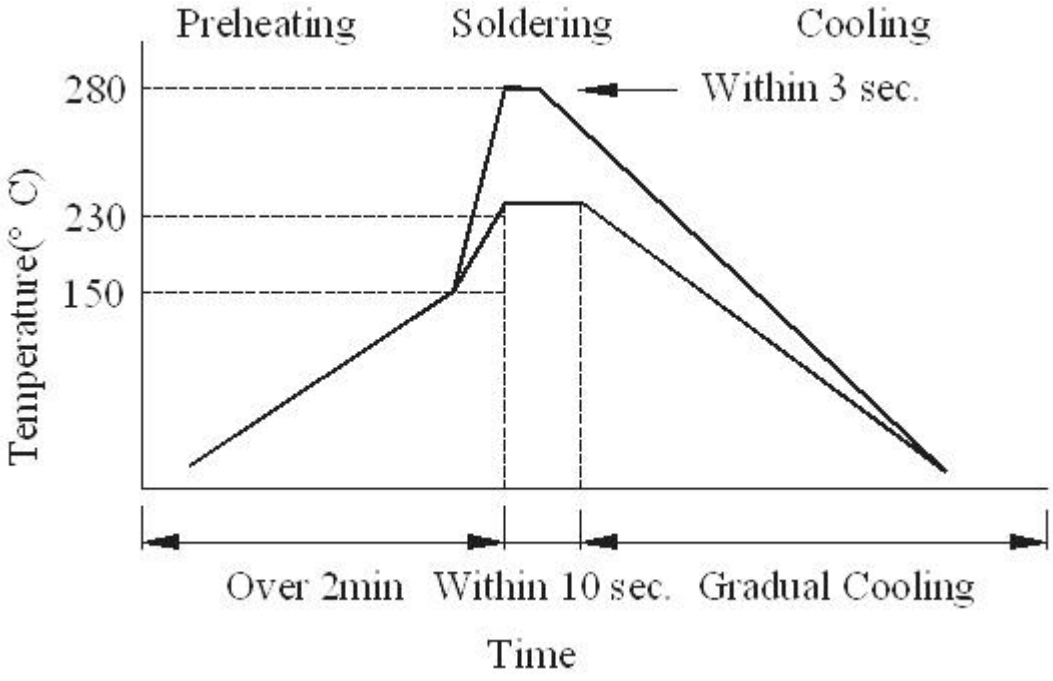
Wave Soldering



Hand soldering



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