CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION POWER INDUCTOR

SGTE PART NO. GPDB1312-150M

SAMPLE NO. S09092501 REVISION NO. A DATE 25-Sep-09

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

GAN TONG

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SPECIFICATION

RoHS COMPLIANT

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APPROVED BY	CHECKED BY	DRAWING BY
Jesse 9/25	Gary 9/25	Lisa 9/25

SPECIFICATION

RoHS COMPLIANT

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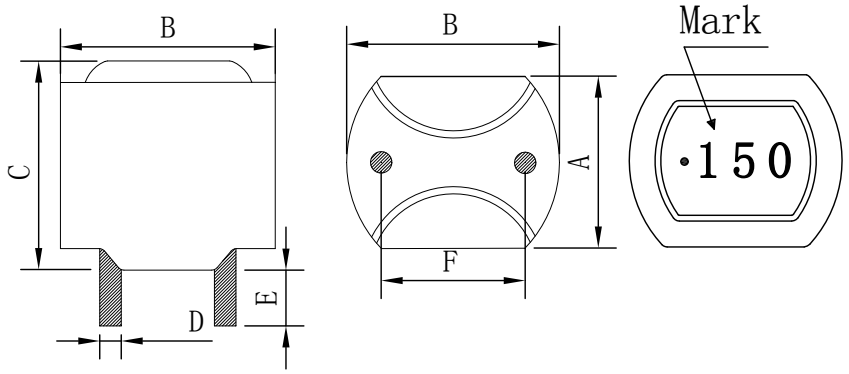
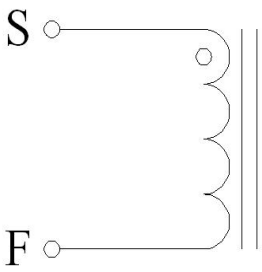
External Dimensions Unit (mm)



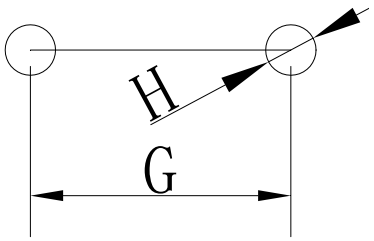
A	12.4± 0.5 (mm)
B	13.4± 0.5 (mm)
C	16.5 Max (mm)
D	0.8± 0.1 (mm)
E	3.4± 0.5 (mm)
F	7.5± 0.5 (mm)
G	7.5 (ref)
H	1.2 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	15uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	20mΩ(Max)		Chroma /16502
I rms	Amps	9A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	12A	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	15uH	20mΩ	9Amps	12Amps
Tolerance	±20%	Max	△T≦40℃	L≧65%
1	14.17	13.75	37.8℃	90.8%
2	14.28	13.72		
3	14.23	13.74		
4	14.56	13.71		
5	14.10	13.70		
6	14.19	13.75		
7	14.22	13.74		
8	14.30	13.72		
9	14.56	13.71		
10	14.55	13.76		
$\bar{X}$	14.32	13.73		
σ	0.17	0.02		

External Dimensions

Item	A	B	C	D	E	F
Specification	12.40	13.40	16.5	0.8	3.4	7.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	12.22	13.22	15.40	0.77	3.41	7.78
2	12.19	13.20	15.39	0.76	3.39	7.69
3	12.22	13.23	15.47	0.77	3.45	7.75
4	12.18	13.21	15.48	0.78	3.30	7.76
5	12.21	13.22	15.50	0.79	3.38	7.72
6	12.22	13.23	15.39	0.77	3.38	7.73
7	12.17	13.24	15.41	0.77	3.39	7.69
8	12.18	13.19	15.38	0.76	3.36	7.68
9	12.22	13.22	15.29	0.76	3.39	7.70
10	12.20	13.19	15.30	0.78	3.40	7.72
$\bar{X}$	12.20	13.22	15.40	0.77	3.39	7.72
σ	0.02	0.02	0.07	0.01	0.04	0.03

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

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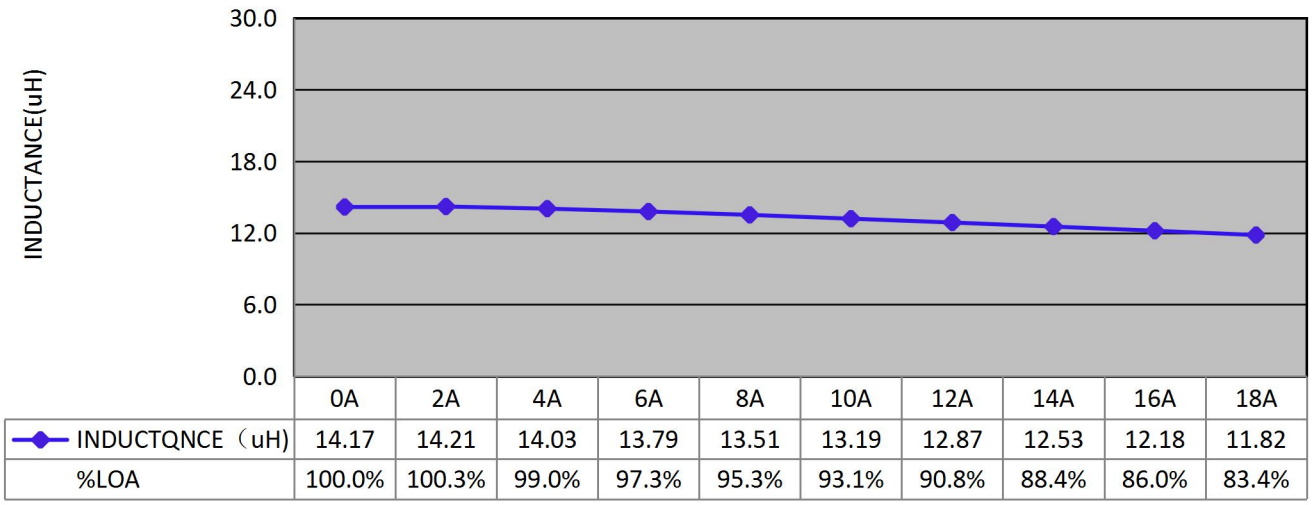
Inductance VS DC current

IDC	L	%LOA				
0A	14.17	100%				
2A	14.21	100.3%				
4A	14.03	99.0%				
6A	13.79	97.3%				
8A	13.51	95.3%				
10A	13.19	93.1%				
12A	12.87	90.8%				
14A	12.53	88.4%				
16A	12.18	86.0%				
18A	11.82	83.4%				

CONDITION:100KHZ/1.0Vrms AMBIENT: 20℃,69.8%



	0A	2A	4A	6A	8A	10A	12A	14A	16A	18A
INDUCTQNCE（uH)	14.17	14.21	14.03	13.79	13.51	13.19	12.87	12.53	12.18	11.82
%LOA	100.0%	100.3%	99.0%	97.3%	95.3%	93.1%	90.8%	88.4%	86.0%	83.4%

DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

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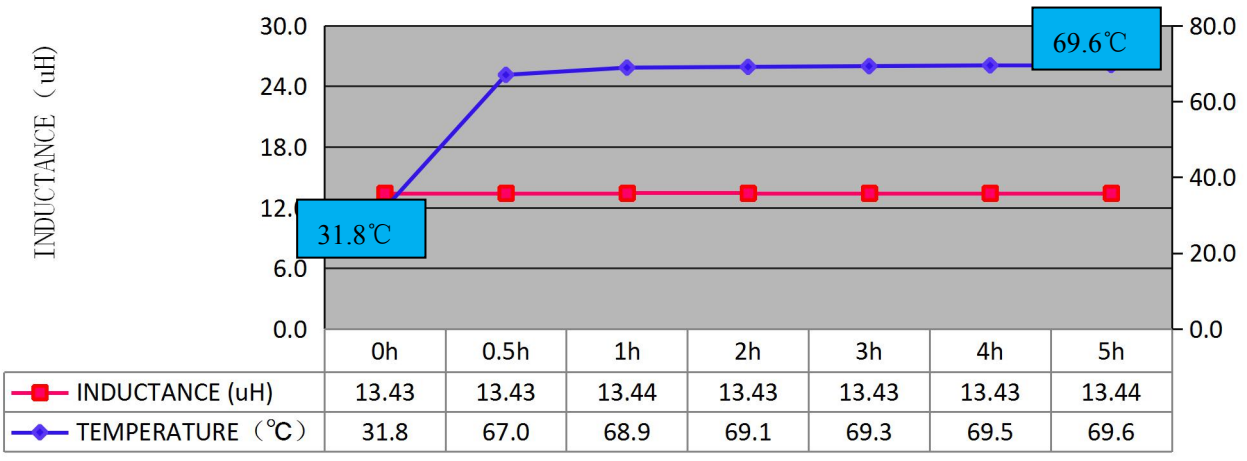
DC current VS Temperature

Time	L (μH)	T (℃)	△T(℃)			
0H	13.43	31.8				
0.5H	13.43	67.0	35.2			
1H	13.44	68.9	37.1			
2H	13.43	69.1	37.3			
3H	13.43	69.3	37.5			
4H	13.43	69.5	37.7			
5H	13.43	69.6	37.8			

CONDITION: Load 9A AMBIENT: 20℃,69.8%



Inductance VS Temperature

ELECTRICAL CHARACTERISTICS

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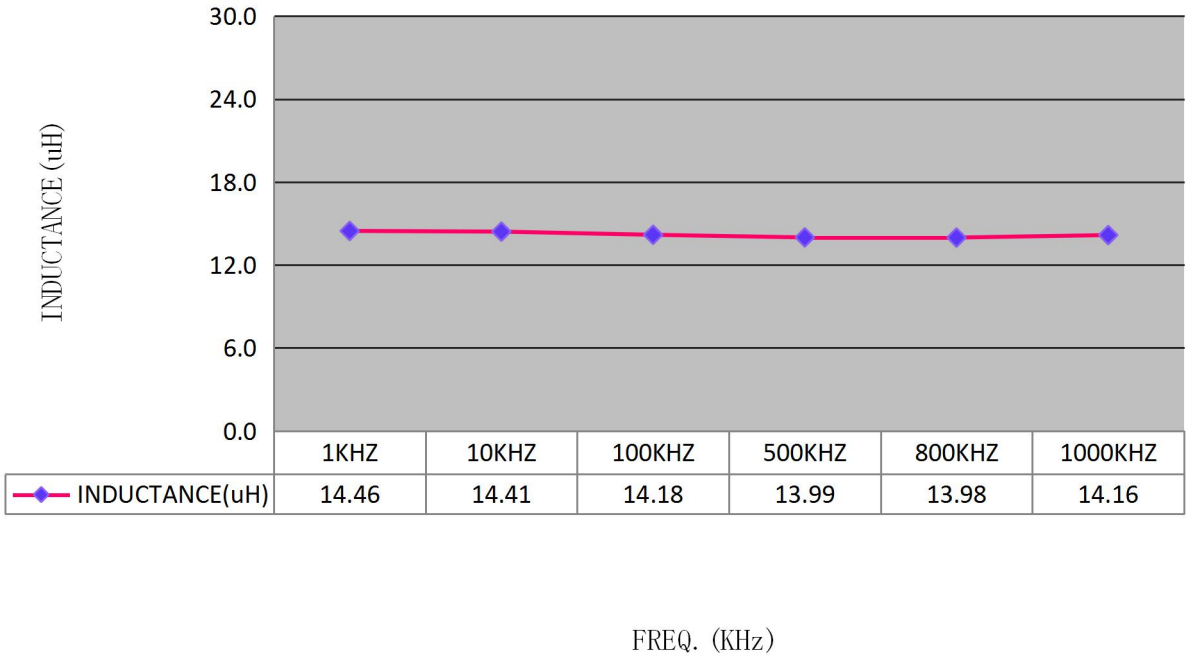
Inductance VS Frequency

FREQ.	L（μH）					
1KHZ	14.46					
10KHZ	14.41					
100KHZ	14.18					
500KHZ	13.99					
800KHZ	13.98					
1000KHZ	14.16					

AMBIENT: 20℃, 69.8%



PACKING FOR SPECIFICATION

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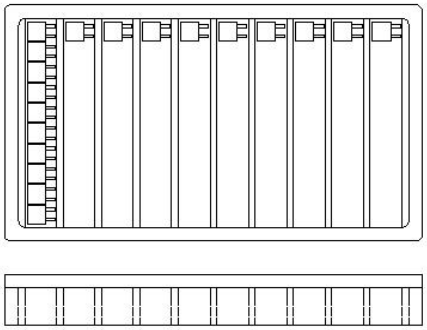
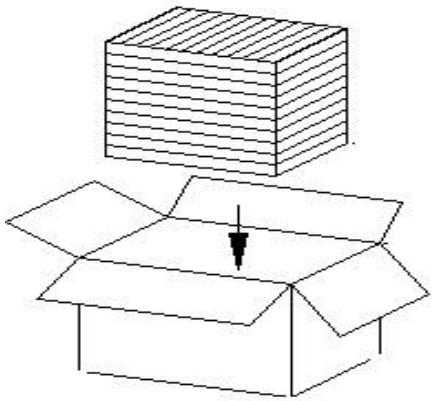
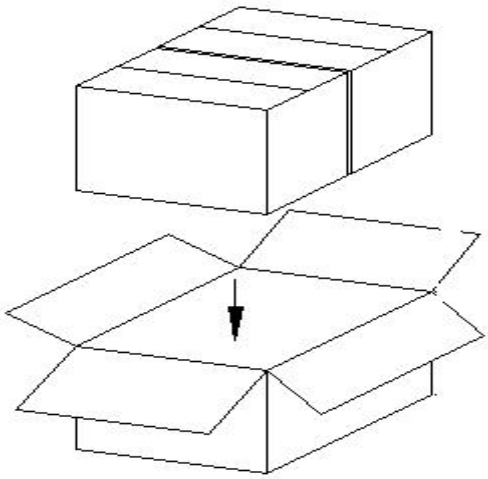


PET Size : 175*159*19mm
Quantity : 50PCS/PET

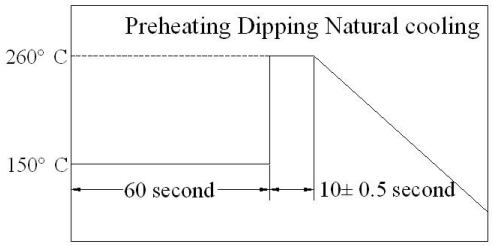
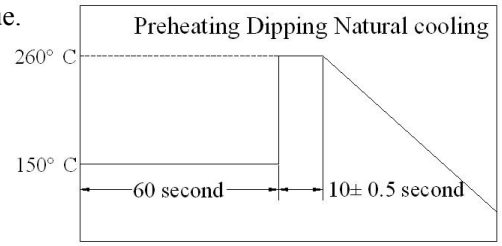
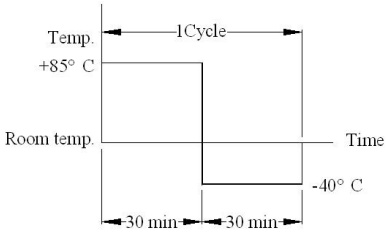


Small box Size : 328*178*114 mm
Quantity : 10PET/Small box
1Small box/500PCS



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

GENERAL CHARACTERISTICS

Gan Tong Part NO.: GPDB1312-150M		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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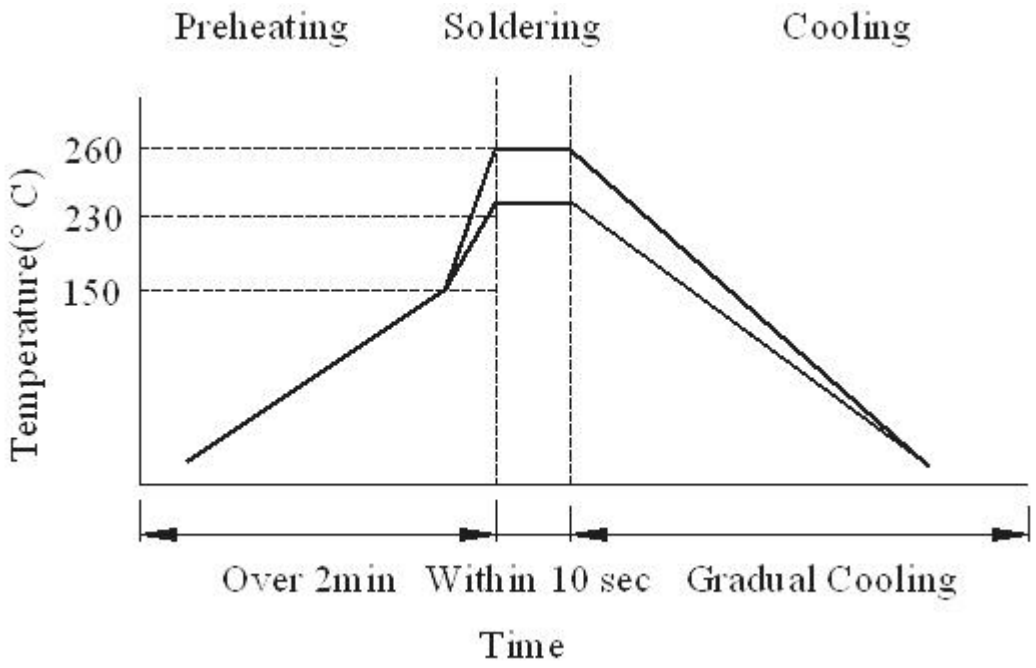
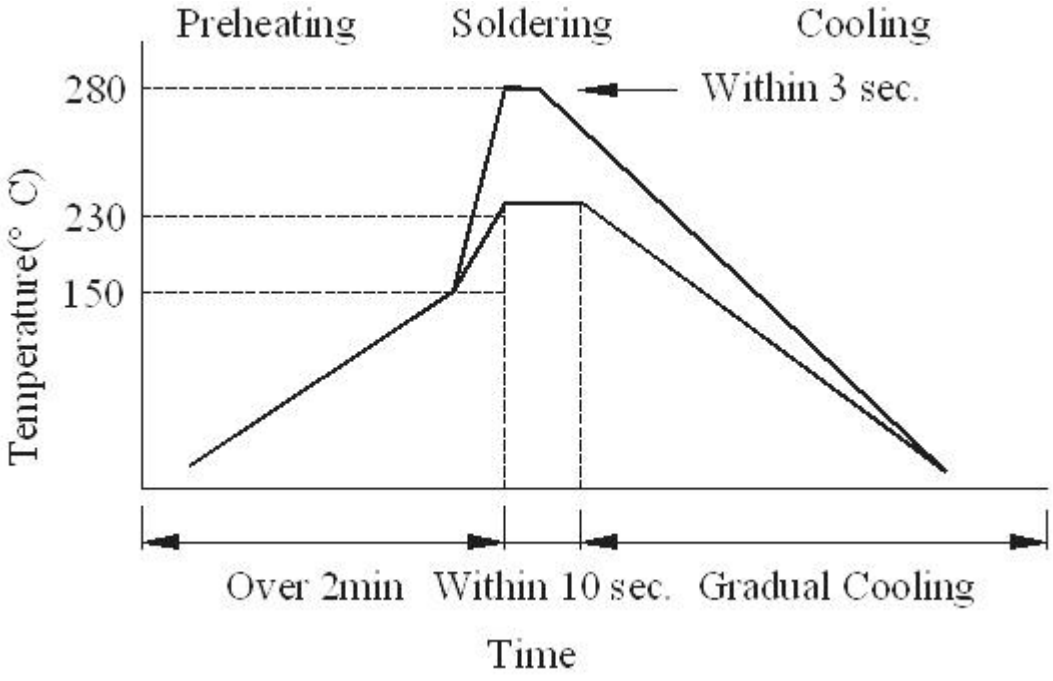
Wave Soldering



Hand soldering



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