

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDA1010-2R2M01 _____

SAMPLE NO.: S11090902 REVISION NO. A DATE 9-Sep-11

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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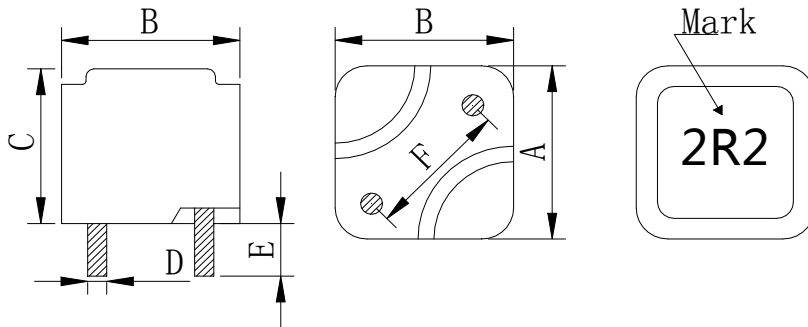
APPROVED BY	CHECKED BY	DRAWING BY
Jesse 9/9	Tony 9/9	you 9/9

SPECIFICATION

**RoHS
COMPLIANT**

Customers Part Number	Item Name	Date
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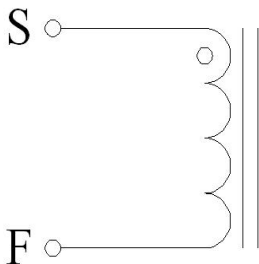
External Dimensions Unit (mm)



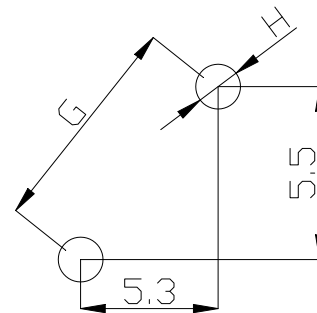
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	10.0Max (mm)
D	1.0± 0.1 (mm)
E	3.4± 0.5 (mm)
F	7.5± 0.5 (mm)
G	7.5± 0.5(mm)
H	1.2 (ref)

Coating: Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	2. 2uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	6.0mΩ (Max)		Chroma /16502
I rms	Amps	20A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	32A	100KHz/1V	or Chroma /11300+3302+1320+1320S

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

TEST REPORT

**RoHS
COMPLIANT**

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Electrical Characteristic

Item	LOA	DCR	I rms	I sat
Specification	2.2uH	6.0mΩ	20Amps	32Amps
Tolerance	±20%	Max	ΔT ≤ 40°C	L ≥ 65%
1	2.11	3.45	17.1°C	82.0%
2	2.01	3.42		
3	1.92	3.34		
4	2.20	3.36		
5	2.25	3.38		
6	2.15	3.40		
7	2.15	3.48		
8	2.22	3.41		
9	2.03	3.37		
10	2.14	3.50		
\bar{X}	2.12	3.41		
σ	0.10	0.05		

External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	10.0	1.0	3.4	7.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	10.17	10.19	8.61	0.95	3.42	7.48
2	10.11	10.12	8.63	0.95	3.42	7.51
3	10.15	10.10	8.49	0.95	3.38	7.44
4	10.14	10.16	8.46	0.95	3.40	7.48
5	10.10	10.11	8.59	0.96	3.39	7.35
6	10.13	10.14	8.60	0.95	3.41	7.53
7	10.11	10.16	8.69	0.95	3.40	7.54
8	10.09	10.13	8.49	0.95	3.42	7.46
9	10.10	10.12	8.61	0.97	3.39	7.52
10	10.14	10.14	8.56	0.95	3.40	7.44
\bar{X}	10.12	10.14	8.57	0.95	3.40	7.48
σ	0.02	0.03	0.07	0.01	0.01	0.05

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25°C. Humidity 60±10%

ELECTRICAL CHARACTERISTICS

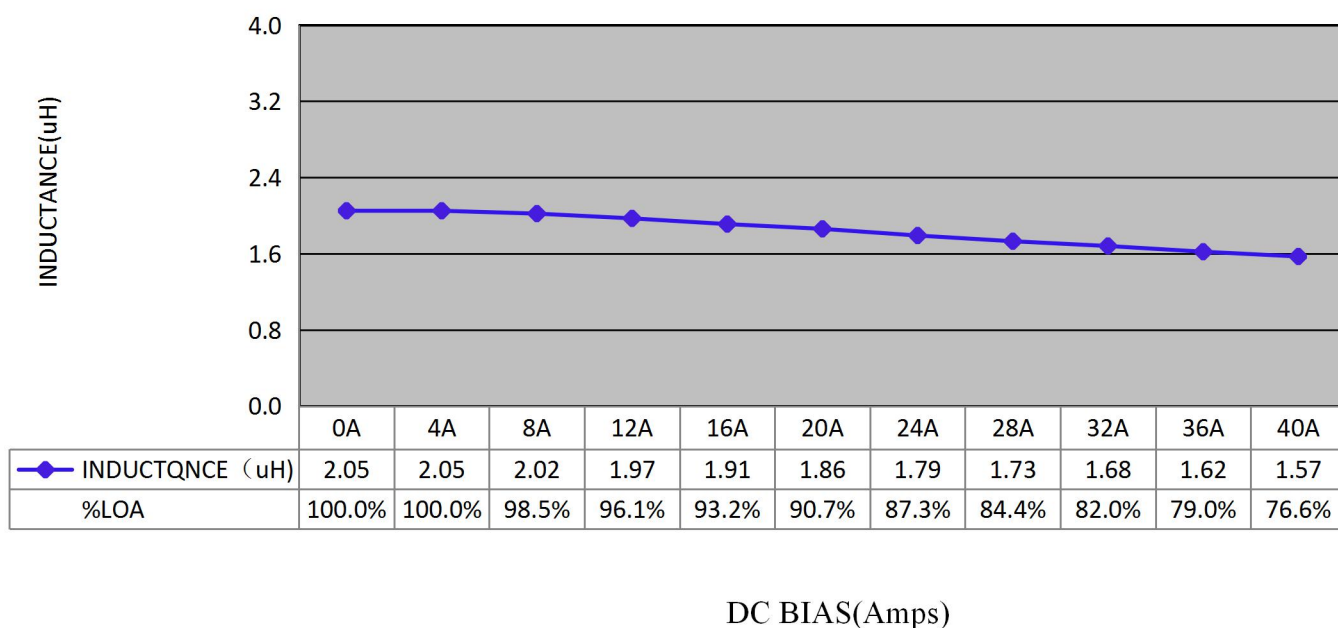
**RoHS
COMPLIANT**

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Inductance VS DC current

IDC	L	%LOA				
0A	2.05	100.0%				
4A	2.05	100.0%				
8A	2.02	98.5%				
12A	1.97	96.1%				
16A	1.91	93.2%				
20A	1.86	90.7%				
24A	1.79	87.3%				
28A	1.73	84.4%				
32A	1.68	82.0%				
36A	1.62	79.0%				
40A	1.57	76.6%				

CONDITTON: 100KHz/1Vrms



ELECTRICAL CHARACTERISTICS

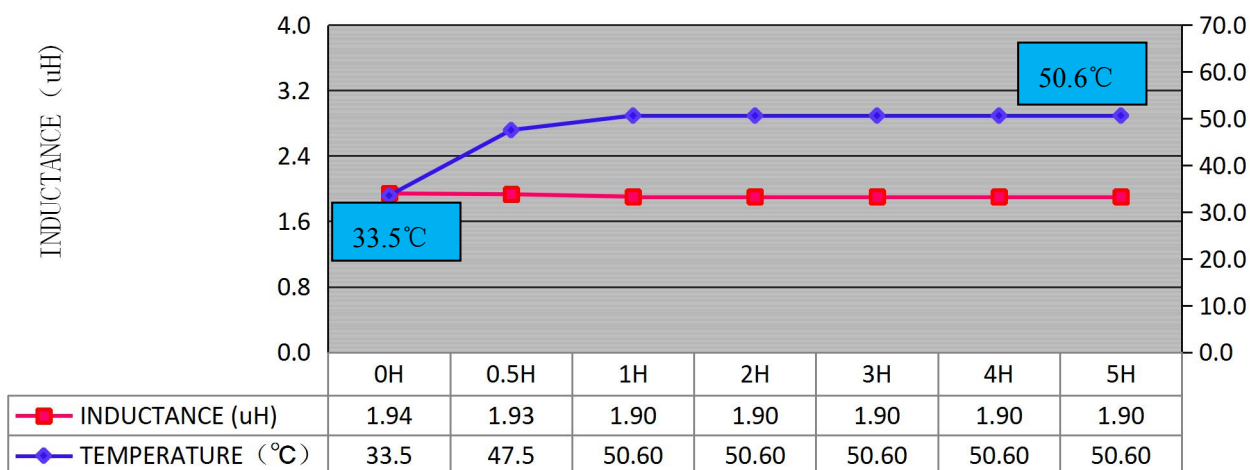
RoHS
COMPLIANT

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DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0H	1.94	33.5				
0.5H	1.93	47.5	14.0			
1H	1.90	50.6	17.1			
2H	1.90	50.6	17.1			
3H	1.90	50.6	17.1			
4H	1.90	50.6	17.1			
5H	1.90	50.6	17.1			

CONDITTON: Load 20A



Inductance VS Temperature

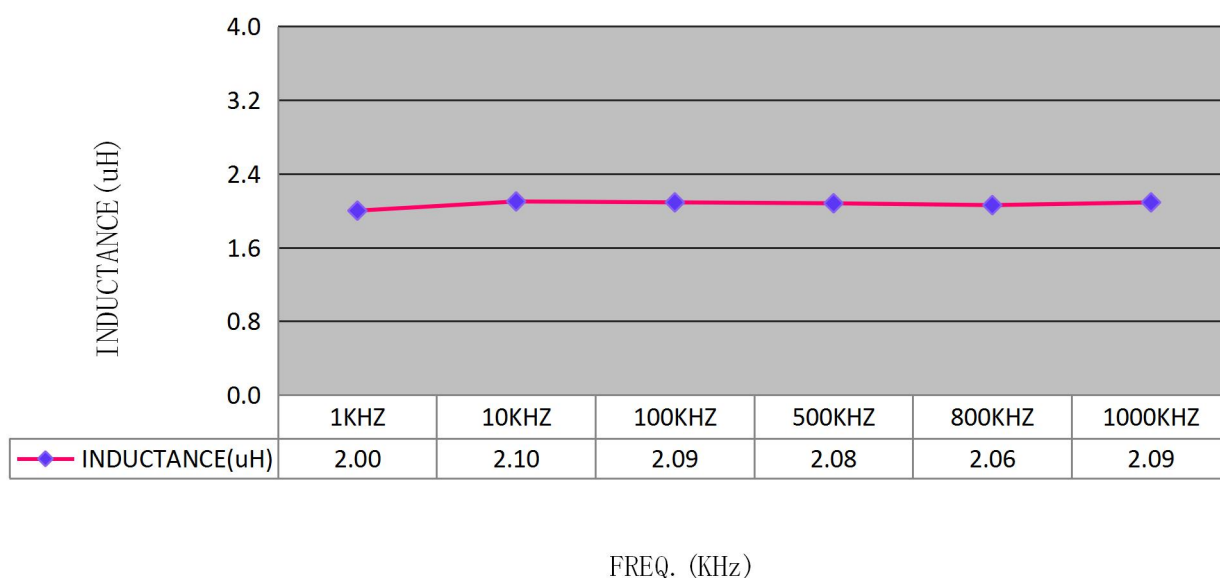
ELECTRICAL CHARACTERISTICS

RoHS
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Inductance VS Frequency

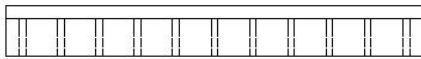
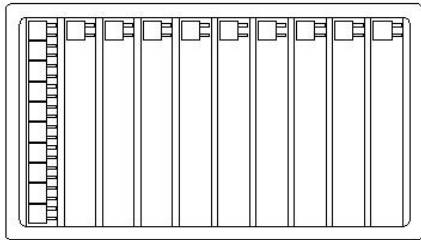
FREQ.	L (μH)					
1KHZ	2.00					
10KHZ	2.10					
100KHZ	2.09					
500KHZ	2.08					
800KHZ	2.06					
1000KHZ	2.09					



PACKING FOR SPECIFICATION

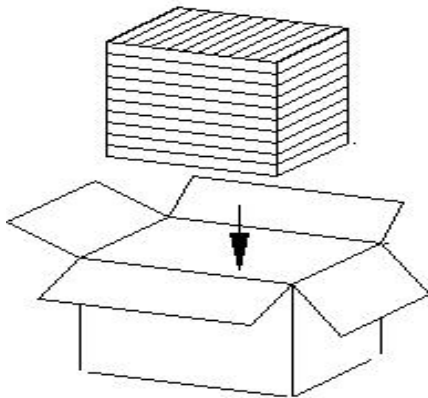
**RoHS
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PET Size : 215*148 *16 (C) mm

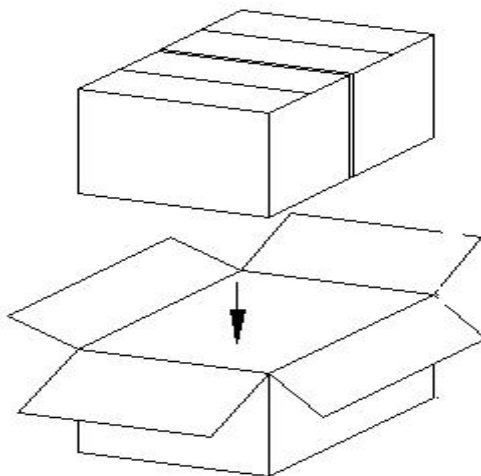
Quantity : 110PCS/PET



Small box Size : 238*156*165 mm

Quantity : 10PET/Small box

1Small box/1100PCS



Big box Size : 328*251*175 mm

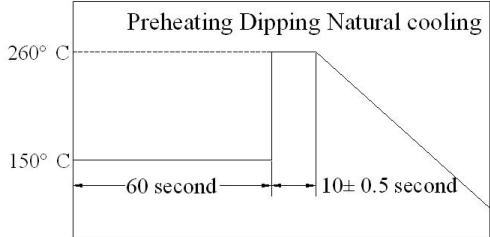
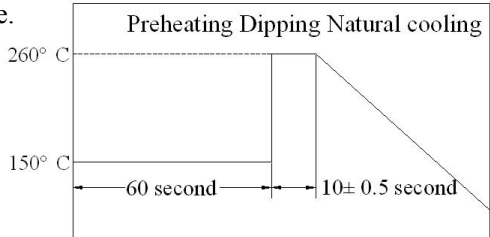
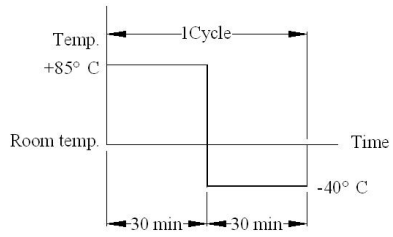
Quantity : 2 Small box/Big box

1 Big box/2200PCS

GENERAL CHARACTERISTICS

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Item	Performance	Test Condition
Mechanical Performance Test		
Solder ability Test	<p>More than 90% of terminal electrode should be covered with solder.</p> <p>After fluxing, component shall be dipped in a melted solder bath at $260\pm 5^{\circ}\text{C}$ for 10 seconds</p>	
Solder Heat Resistance	<p>Components should have not evidence of electrical and mechanical damage.</p> <p>Inductance: within $\pm 20\%$ of initial value.</p> <p>Preheat: 150°C 60 seconds</p> <p>Solder: (SnCu0.7)</p> <p>Solder Temperature: $260\pm 5^{\circ}\text{C}$</p> <p>Flux: Rosin.</p> <p>Dip time: 10 ± 0.5 seconds</p>	
Low temperature storage test	<p>1. Appearance: No damage.</p> <p>2. Inductance: within $\pm 20\%$ of initial value.</p> <p>3. No disconnection or short circuit.</p>	<p>Temperature: $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time: 500 ± 12 Hours</p> <p>Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.</p>
High temperature storage test		<p>Temperature: $85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time: 500 ± 2 Hours</p> <p>Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.</p>
Thermal Shock Test (Temperature cycle)		<p>$-40 \pm 5^{\circ}\text{C}$ for 30 Minutes. $+85 \pm 5^{\circ}\text{C}$ for 30 Minutes.</p> <p>Total: 10 Cycles</p> 
Humidity load life test		<p>Temperature: $40 \pm 5^{\circ}\text{C}$ Humidity: 90-95%</p> <p>Time: 500 ± 12 Hours Load: Allowed DC current</p> <p>Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.</p>

THE CONDITION OF REFLOW

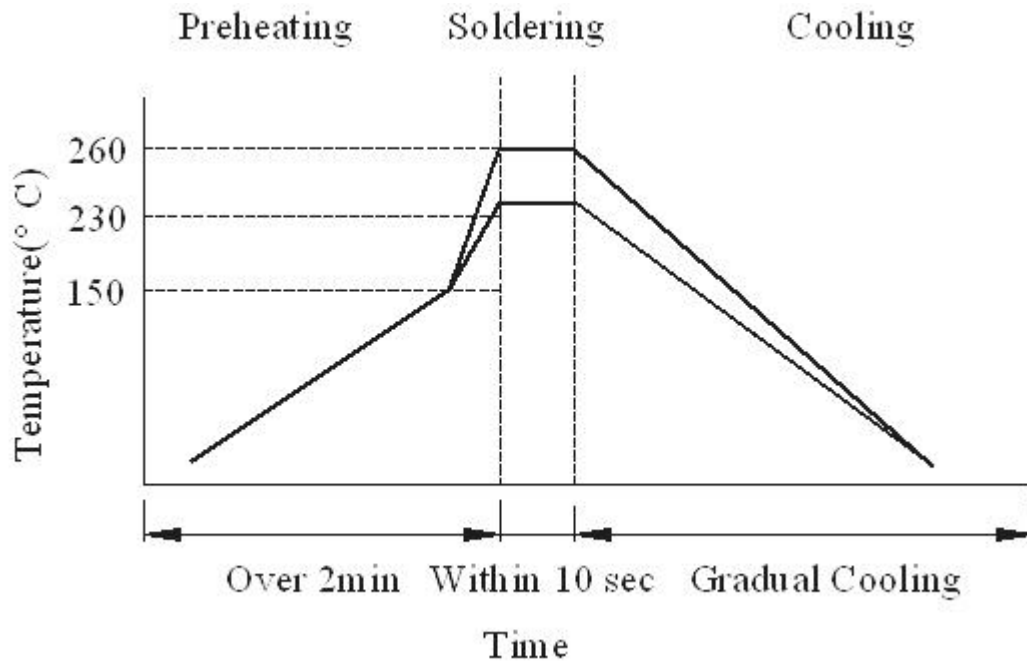
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Wave Soldering



Hand soldering

