

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDA1010-R80M01 _____

SAMPLE NO.: S11022501 REVISION NO. A DATE 25-Feb-11

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

**RoHS
COMPLIANT**

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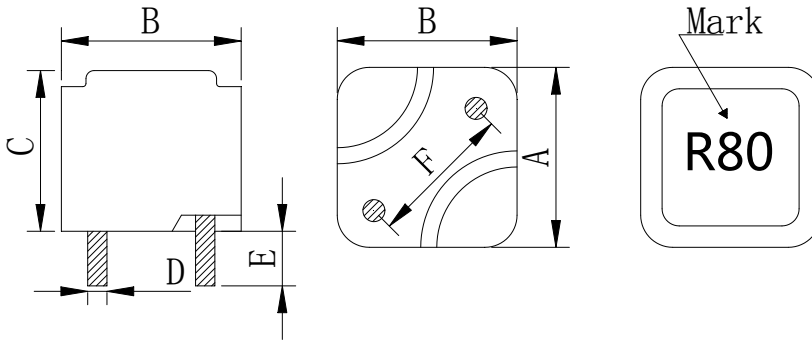
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SPECIFICATION

**RoHS
COMPLIANT**

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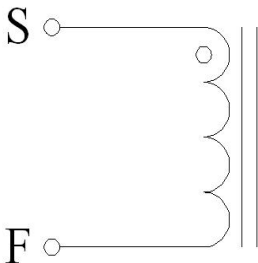
External Dimensions Unit (mm)



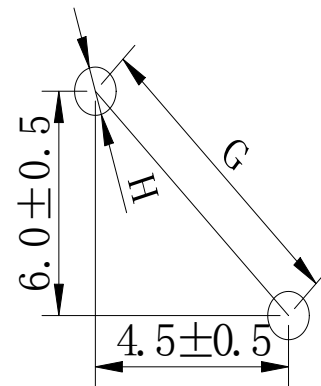
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	10.0Max (mm)
D	1.4± 0.1 (mm)
E	3.4± 0.5 (mm)
F	7.5± 0.5 (mm)
G	7.5± 0.5(mm)
H	1.8 (ref)

Coating: Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	0. 8uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	1.3mΩ (Max)		Chroma /16502
I rms	Amps	35A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	45A	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	L0A	DCR	I rms	I sat
Specification	0.8uH	1.3mΩ	35Amps	45Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	0.737	0.93	15.8°C	76.7%
2	0.735	0.87		
3	0.713	0.89		
4	0.729	0.94		
5	0.716	0.92		
6	0.752	0.89		
7	0.737	0.90		
8	0.721	0.93		
9	0.694	0.92		
10	0.758	0.94		
\bar{X}	0.729	0.91		
σ	0.02	0.02		

External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	10.0	1.4	3.4	7.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	10.19	10.19	9.45	1.39	3.63	7.48
2	10.18	10.20	9.52	1.37	3.72	7.49
3	10.22	10.20	9.39	1.41	3.59	7.57
4	10.19	10.21	9.43	1.38	3.60	7.52
5	10.17	10.22	9.53	1.40	3.53	7.58
6	10.21	10.22	9.42	1.42	3.70	7.59
7	10.18	10.19	9.39	1.39	3.63	7.48
8	10.22	10.19	9.56	1.38	3.65	7.50
9	10.20	10.18	9.27	1.38	3.61	7.52
10	10.21	10.21	9.40	1.40	3.57	7.55
\bar{X}	10.20	10.20	9.44	1.39	3.62	7.53
σ	0.02	0.01	0.08	0.01	0.05	0.04

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

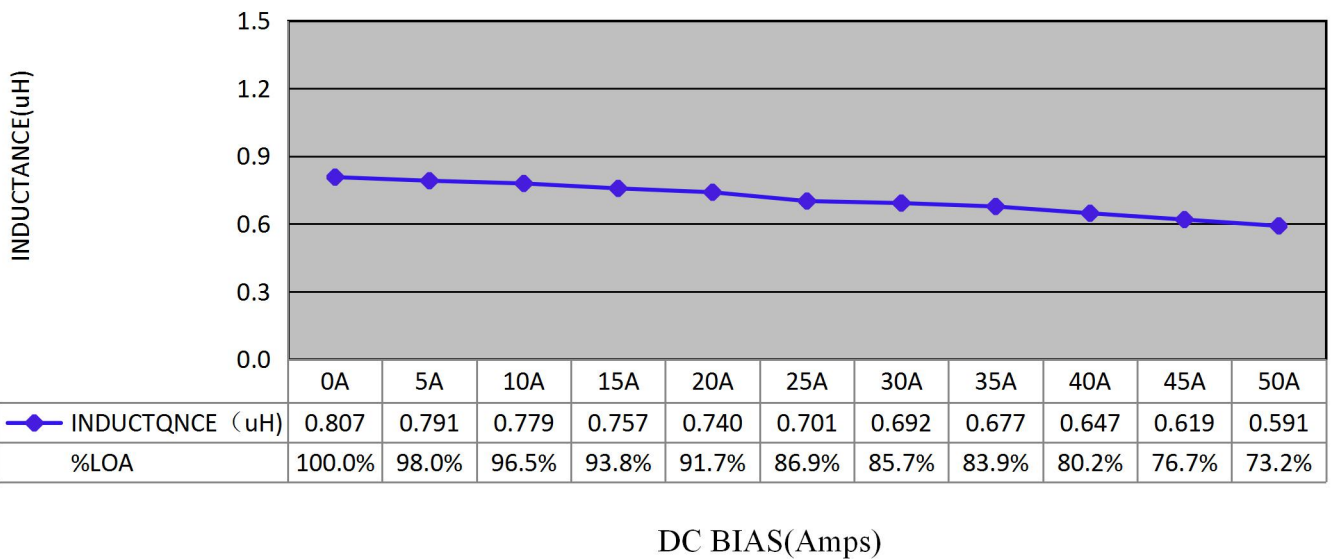
**RoHS
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Inductance VS DC current

IDC	L	%LOA				
0A	0.807	100.0%				
5A	0.791	98.0%				
10A	0.779	96.5%				
15A	0.757	93.8%				
20A	0.740	91.7%				
25A	0.701	86.9%				
30A	0.692	85.7%				
35A	0.677	83.9%				
40A	0.647	80.2%				
45A	0.619	76.7%				
50A	0.591	73.2%				

CONDITTON: 100KHz/1Vrms



ELECTRICAL CHARACTERISTICS

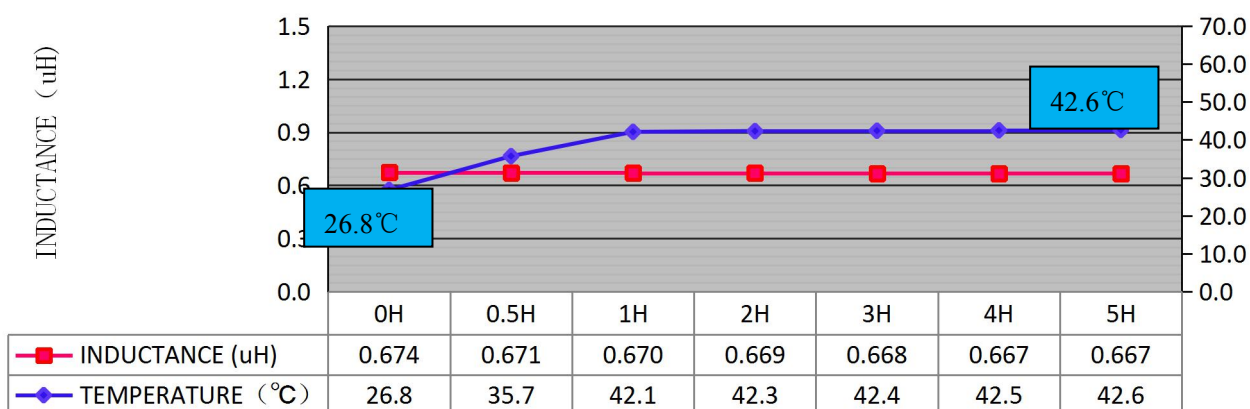
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DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0H	0.674	26.8				
0.5H	0.671	35.7	8.9			
1H	0.670	42.1	15.3			
2H	0.669	42.3	15.5			
3H	0.668	42.4	15.6			
4H	0.667	42.5	15.7			
5H	0.667	42.6	15.8			

CONDITTON: Load 35A



Inductance VS Temperature

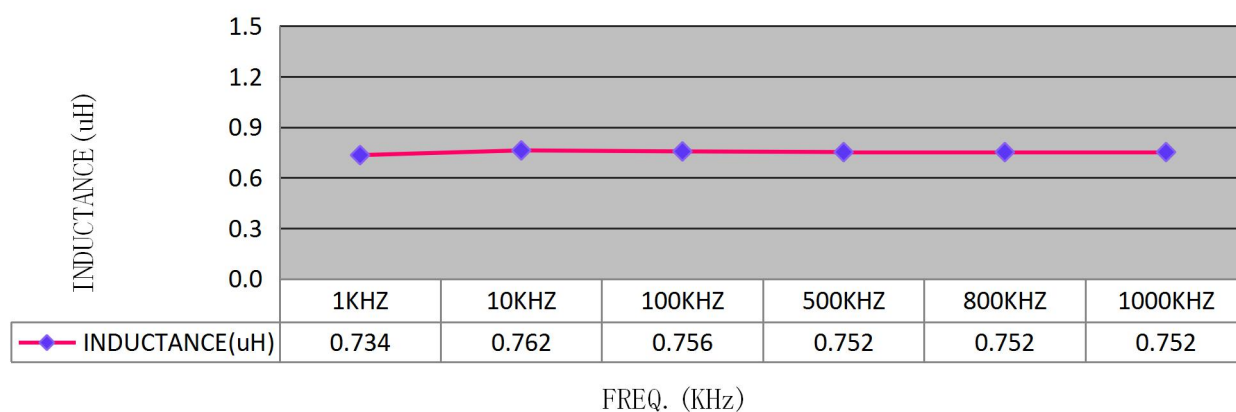
ELECTRICAL CHARACTERISTICS

**RoHS
COMPLIANT**

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Inductance VS Frequency

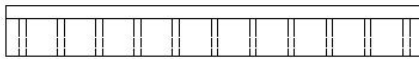
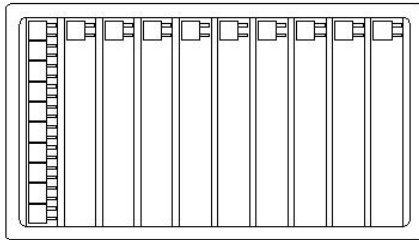
FREQ.	L (μ H)					
1KHZ	0.734					
10KHZ	0.762					
100KHZ	0.756					
500KHZ	0.752					
800KHZ	0.752					
1000KHZ	0.752					



PACKING FOR SPECIFICATION

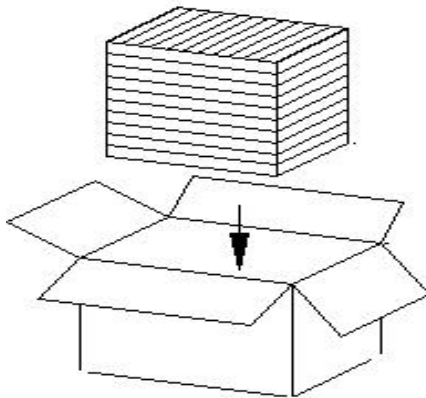
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PET Size : 215*148 *16 (C) mm

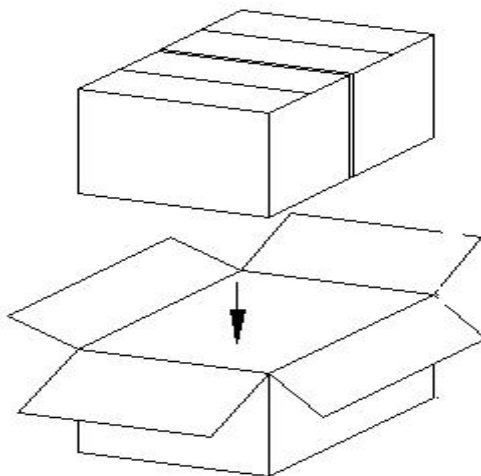
Quantity : 110PCS/PET



Small box Size : 238*156*165 mm

Quantity : 10PET/Small box

1Small box/1100PCS



Big box Size : 328*251*175 mm

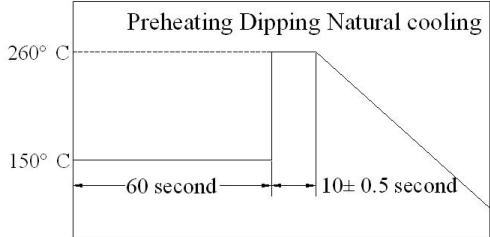
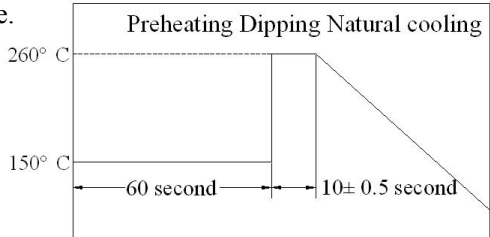
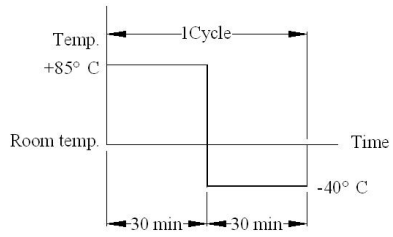
Quantity : 2 Small box/Big box

1 Big box/2200PCS

GENERAL CHARACTERISTICS

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

THE CONDITION OF REFLOW

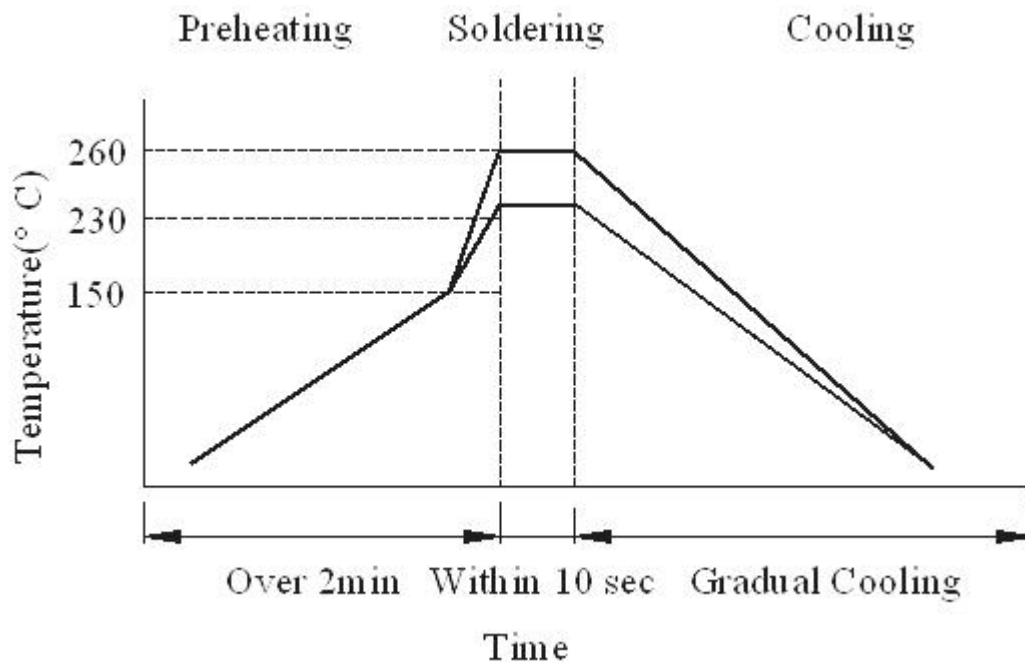
RoHS
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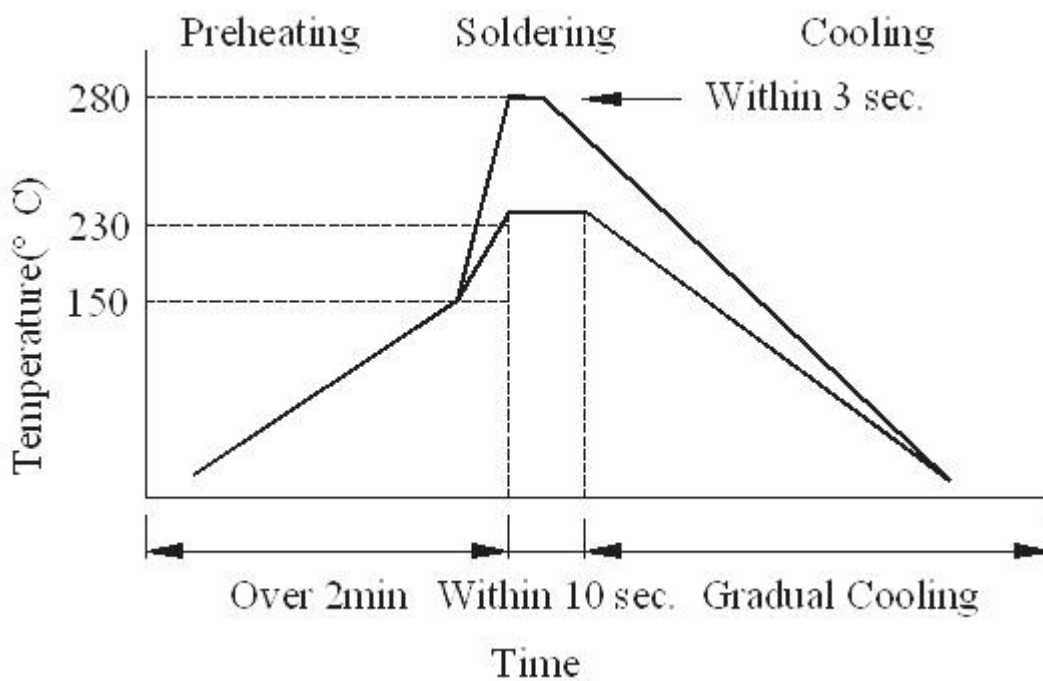
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Wave Soldering



Hand soldering



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