

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDA1010-100M _____

SAMPLE NO.: S12020702 REVISION NO. A DATE 7-Feb-12

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

**RoHS
COMPLIANT**

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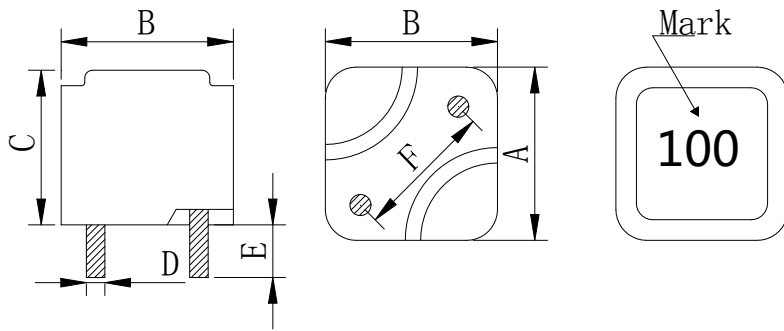
APPROVED BY	CHECKED BY	DRAWING BY
Jesse 2/7	Tony 2/7	you 2/7

SPECIFICATION

**RoHS
COMPLIANT**

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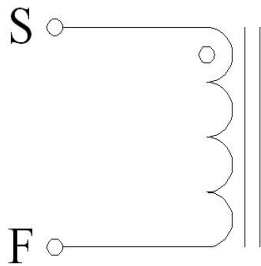
External Dimensions Unit (mm)



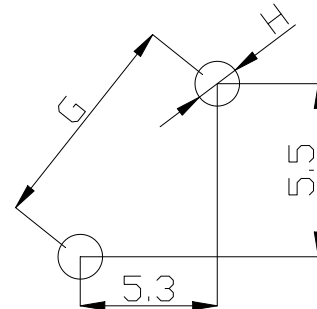
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	11.0Max (mm)
D	0.7± 0.1 (mm)
E	3.4± 0.5 (mm)
F	7.5± 0.5 (mm)
G	7.5± 0.5(mm)
H	1.2 (ref)

Coating: Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	10. 0uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	19mΩ (Max)		Chroma /16502
I rms	Amps	8A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	13A	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
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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	10.0uH	19mΩ	8Amps	13Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	9.701	14.14	18.1°C	78.5%
2	9.814	14.09		
3	9.925	14.23		
4	9.743	14.24		
5	9.834	14.47		
6	9.652	14.38		
7	9.724	14.52		
8	9.863	14.46		
9	9.774	14.37		
10	9.456	14.19		
\bar{X}	9.749	14.31		
σ	0.08	0.14		

External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	11.0	0.7	3.4	7.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	10.23	10.22	9.27	0.67	3.42	7.68
2	10.22	10.21	9.60	0.66	3.39	7.88
3	10.20	10.19	9.05	0.68	3.54	7.79
4	10.23	10.23	9.47	0.67	3.47	7.82
5	10.21	10.19	9.32	0.69	3.51	7.70
6	10.19	10.24	9.54	0.68	3.42	7.74
7	10.20	10.22	9.42	0.67	3.50	7.69
8	10.23	10.21	9.32	0.69	3.44	7.81
9	10.21	10.20	9.46	0.68	3.46	7.83
10	10.20	10.22	9.44	0.67	3.45	7.74
\bar{X}	10.21	10.21	9.39	0.68	3.46	7.77
σ	0.01	0.02	0.16	0.01	0.04	0.06

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

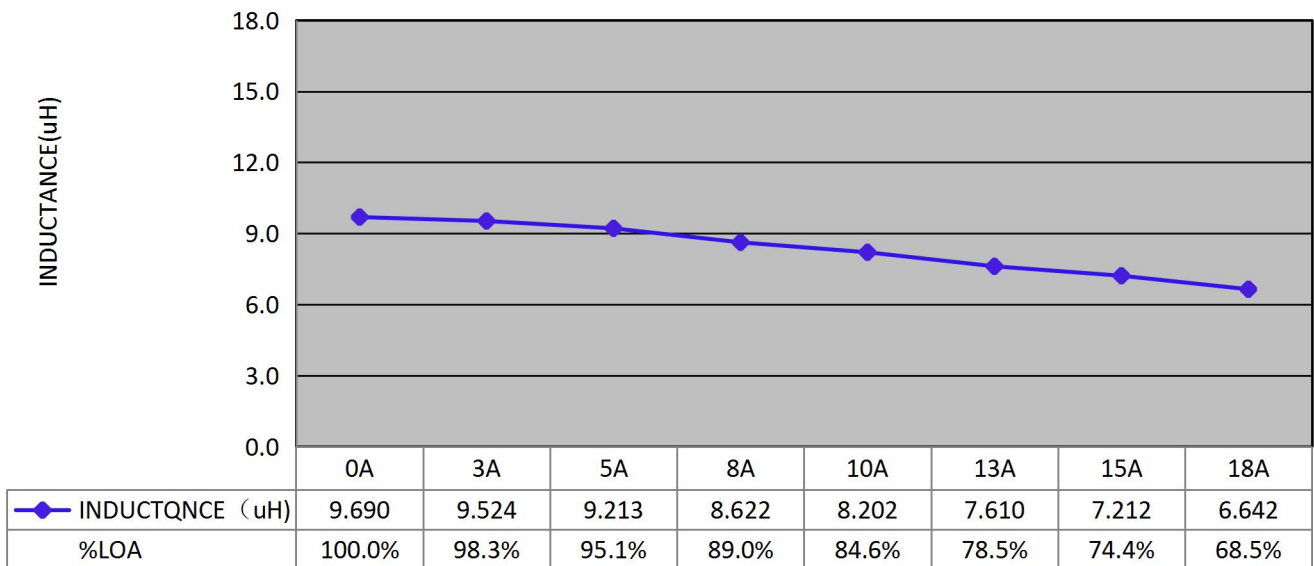
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Inductance VS DC current

IDC	L	%LOA				
0A	9.69	100.0%				
3A	9.52	98.3%				
5A	9.21	95.1%				
8A	8.62	89.0%				
10A	8.20	84.6%				
13A	7.61	78.5%				
15A	7.21	74.4%				
18A	6.64	68.5%				

CONDITION: 100KHz/1Vrms



ELECTRICAL CHARACTERISTICS

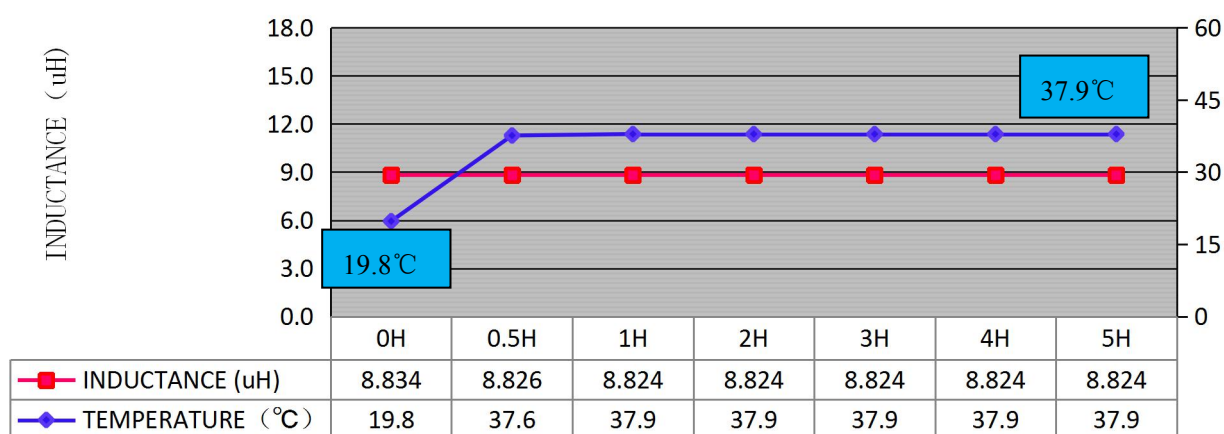
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DC current VS Temperature

Time	L (μH)	T ($^{\circ}\text{C}$)	$\Delta\text{T} (^{\circ}\text{C})$			
0H	8.83	19.8				
0.5H	8.83	37.6	17.8			
1H	8.82	37.9	18.1			
2H	8.82	37.9	18.1			
3H	8.82	37.9	18.1			
4H	8.82	37.9	18.1			
5H	8.82	37.9	18.1			

CONDITTON: Load 8A



Inductance VS Temperature

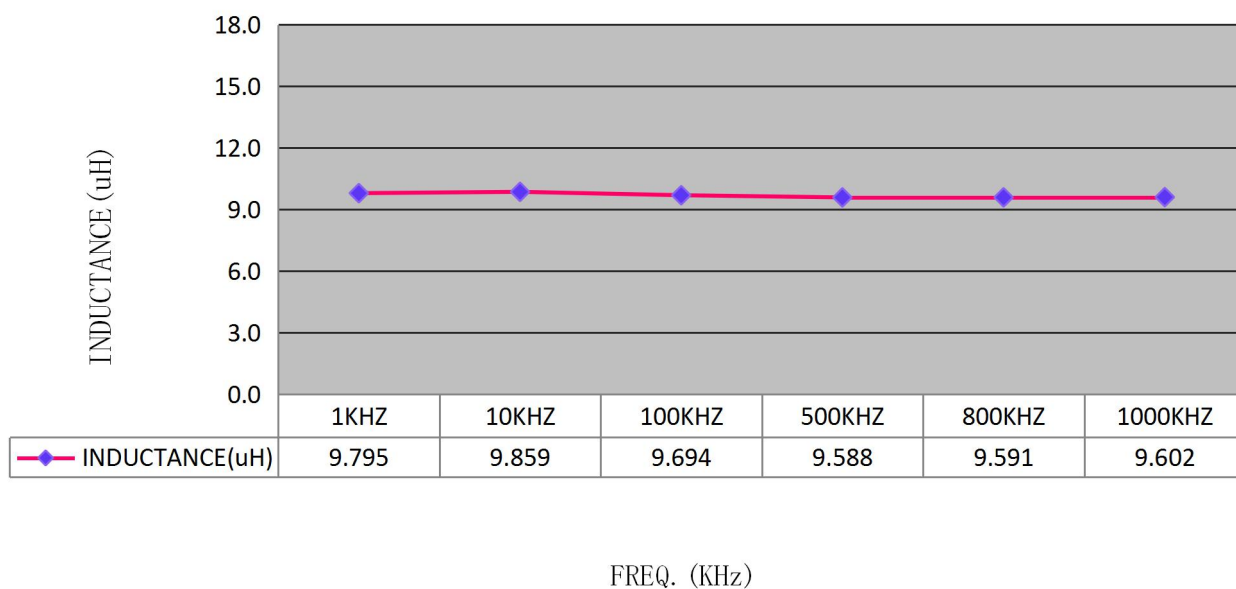
ELECTRICAL CHARACTERISTICS

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Inductance VS Frequency

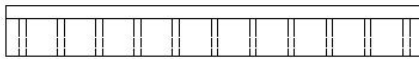
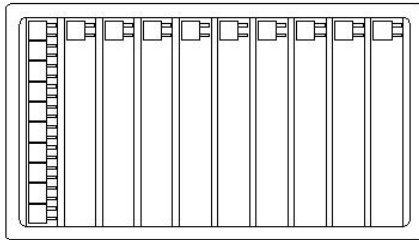
FREQ.	L (μH)					
1KHZ	9.795					
10KHZ	9.859					
100KHZ	9.694					
500KHZ	9.588					
800KHZ	9.591					
1000KHZ	9.602					



PACKING FOR SPECIFICATION

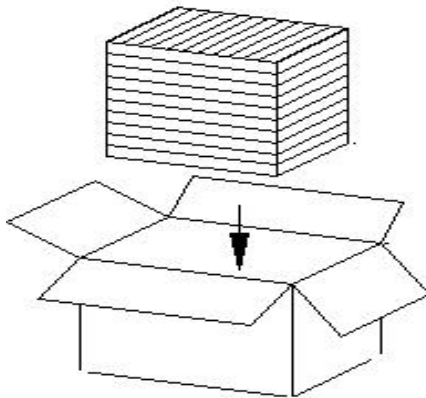
**RoHS
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PET Size : 215*148 *16 (C) mm

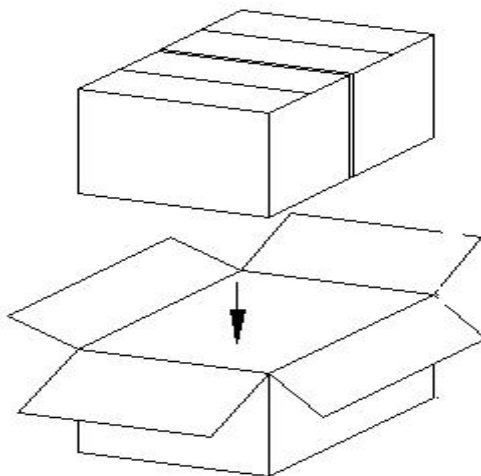
Quantity : 110PCS/PET



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: 4to24hrs 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: 4to24hrs 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: 4to24hrs of recovery under the standard condition after the removal from test chamber.</p>

THE CONDITION OF REFLOW

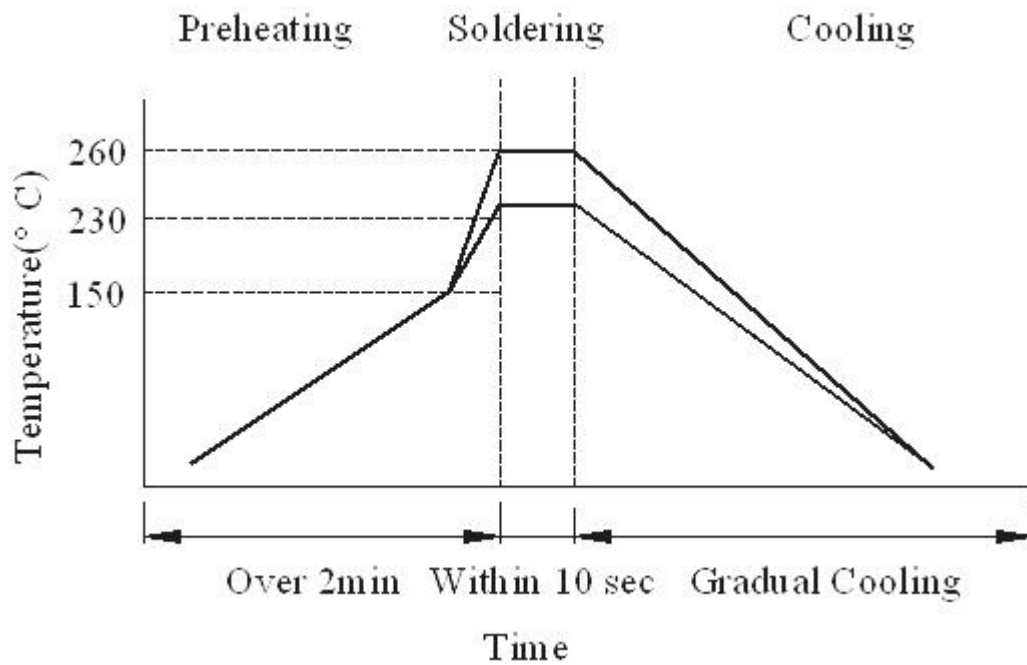
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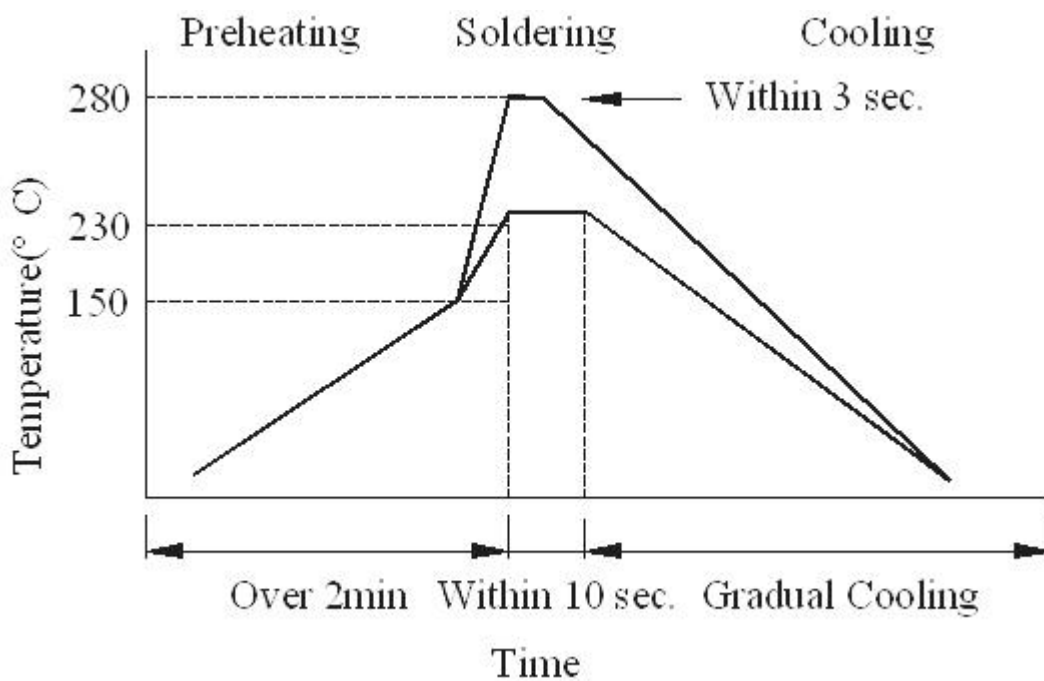
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Wave Soldering



Hand soldering



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