

0034

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDA1010-2R2M _____

SAMPLE NO. S10112904 REVISION NO. A DATE 29-Nov-10

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

**RoHS
COMPLIANT**

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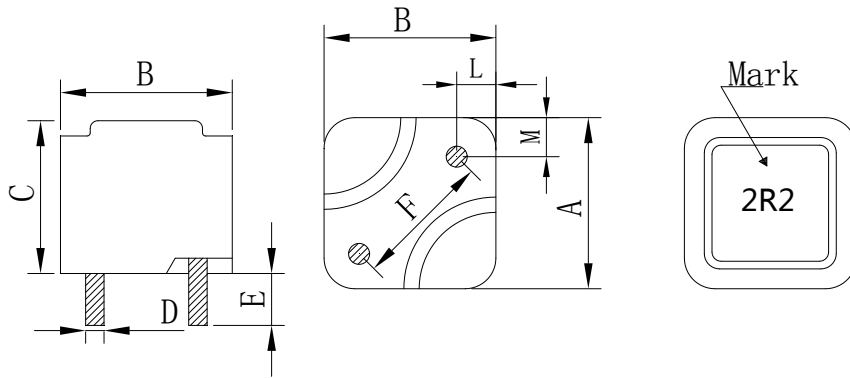
APPROVED BY	CHECKED BY	DRAWING BY
Jesse 11/29	Tony 11/29	Lily 11/29

SPECIFICATION

**RoHS
COMPLIANT**

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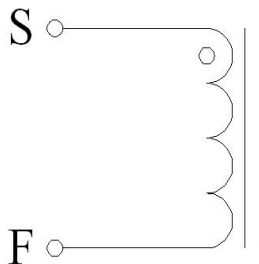
External Dimensions Unit (mm)



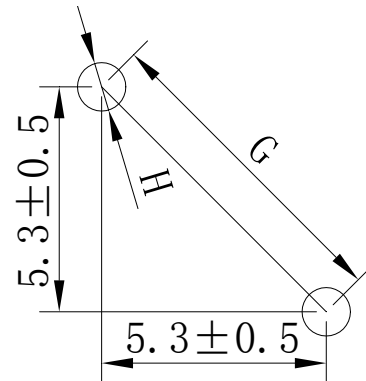
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	12.0Max (mm)
D	1.2± 0.1 (mm)
E	3.5± 0.5 (mm)
F	7.5± 0.5 (mm)
G	7.5± 0.5(mm)
H	1.6 (ref)
L	2.4± 0.3(mm)
M	2.4± 0.3(mm)

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 (±20%)	2.5mΩ ±20%		Chroma /16502
I rms	Amps	15A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	20A	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 20% 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	2.2uH	2.5mΩ	15Amps	20Amps
Tolerance	±20%	±20%	ΔT ≤ 40°C	L ≥ 80%
1	2.341	2.64	12.2°C	85.7%
2	2.358	2.67		
3	2.376	2.64		
4	2.344	2.7		
5	2.289	2.65		
6	2.365	2.67		
7	2.371	2.72		
8	2.332	2.64		
9	2.381	2.68		
10	2.296	2.66		
\bar{X}	2.345	2.67		
σ	0.03	0.03		

External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	12.0	1.2	3.5	7.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	10.07	10.12	10.13	1.22	3.52	7.72
2	10.09	10.12	10.14	1.24	3.49	7.80
3	10.11	10.13	10.26	1.24	3.58	7.84
4	10.12	10.09	10.11	1.23	3.57	7.79
5	10.13	10.12	10.37	1.20	3.46	7.85
6	10.10	10.14	10.42	1.22	3.57	7.84
7	10.12	10.09	10.51	1.23	3.55	7.77
8	10.13	10.11	10.28	1.24	3.54	7.86
9	10.10	10.12	10.37	1.25	3.47	7.80
10	10.10	10.14	10.44	1.21	3.51	7.82
\bar{X}	10.11	10.12	10.30	1.23	3.53	7.81
σ	0.02	0.02	0.13	0.01	0.04	0.04

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

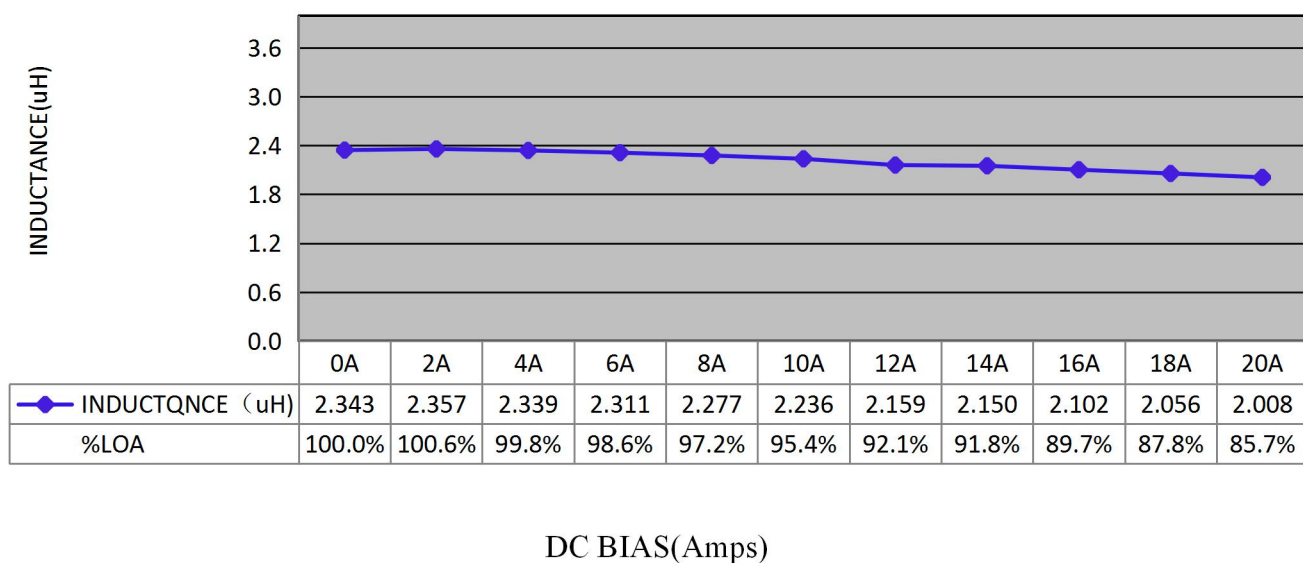
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Inductance VS DC current

IDC	L	%LOA				
0A	2.343	100.0%				
2A	2.357	100.6%				
4A	2.339	99.8%				
6A	2.331	98.6%				
8A	2.277	97.2%				
10A	2.236	95.4%				
12A	2.159	92.1%				
14A	2.150	91.8%				
16A	2.102	89.7%				
18A	2.056	87.8%				
20A	2.008	85.7%				

CONDITTON: 100KHZ/1.0Vrms



ELECTRICAL CHARACTERISTICS

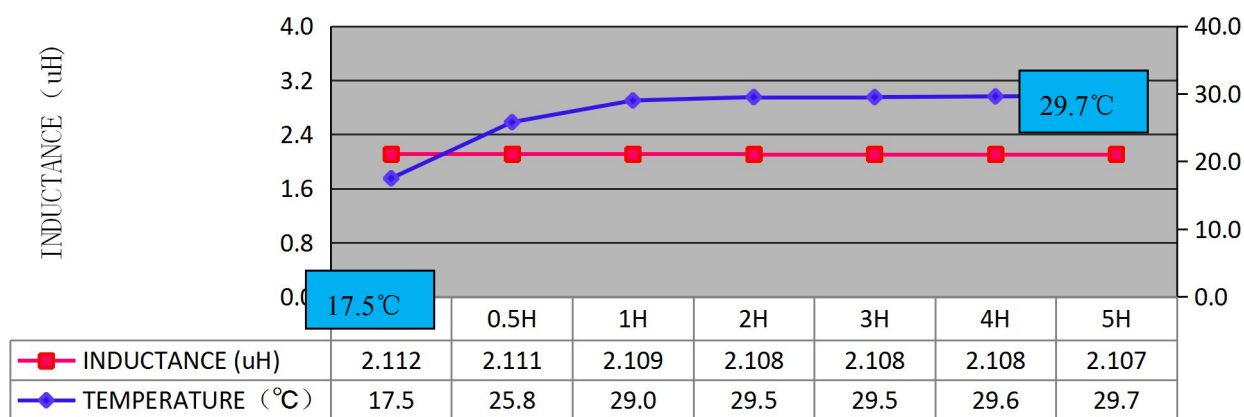
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DC current VS Temperature

Time	L (μ H)	T ($^{\circ}$ C)	Δ T($^{\circ}$ C)			
0h	2.112	17.5				
0.5h	2.111	25.8	8.3			
1h	2.109	29.0	11.5			
2h	2.108	29.5	12.0			
3h	2.108	29.5	12.0			
4h	2.108	29.6	12.1			
5h	2.107	29.7	12.2			

CONDITTON: Load 15A



Inductance VS Temperature

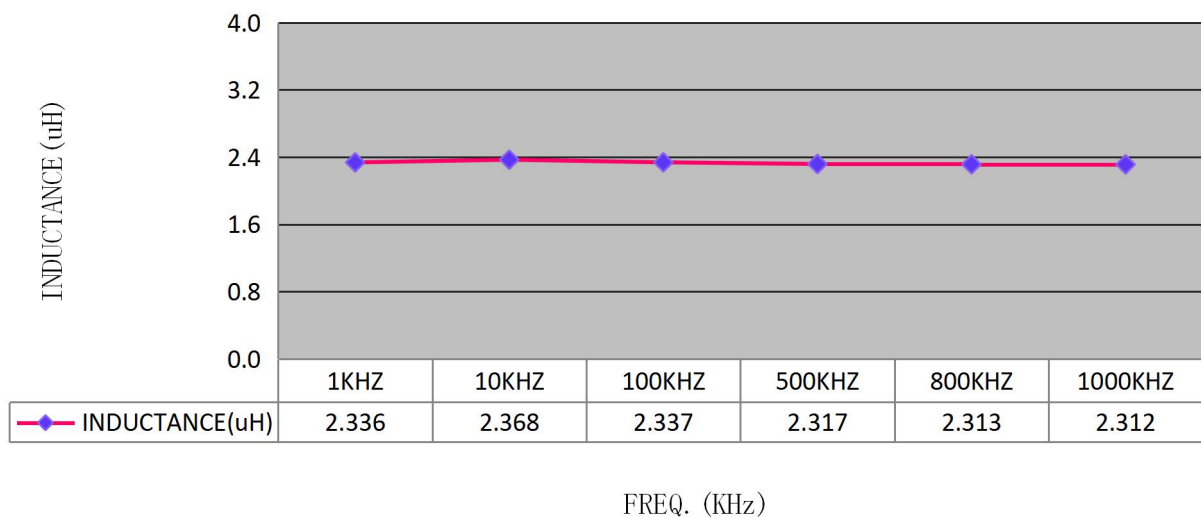
ELECTRICAL CHARACTERISTICS

**RoHS
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Inductance VS Frequency

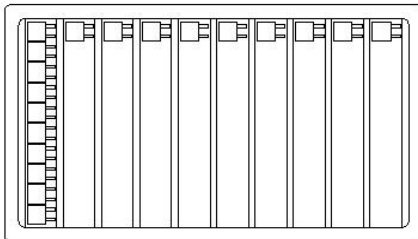
FREQ.	L (μH)					
1KHZ	2.336					
10KHZ	2.368					
100KHZ	2.337					
500KHZ	2.317					
800KHZ	2.313					
1000KHZ	2.312					



PACKING FOR SPECIFICATION

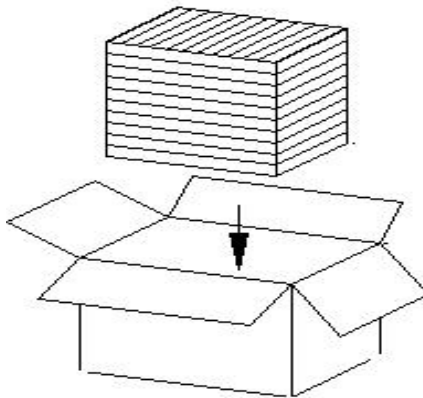
**RoHS
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PET Size : 215*148 *16 (C) mm

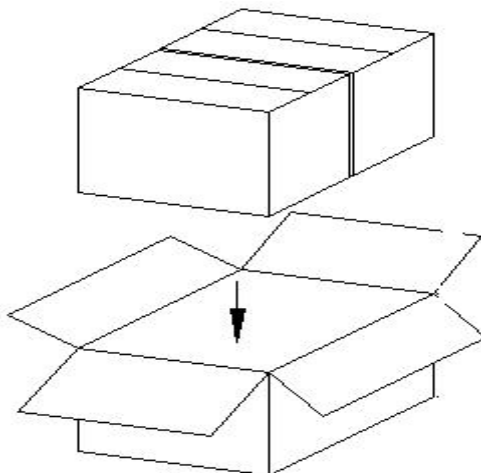
Quantity : 110PCS/PET



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

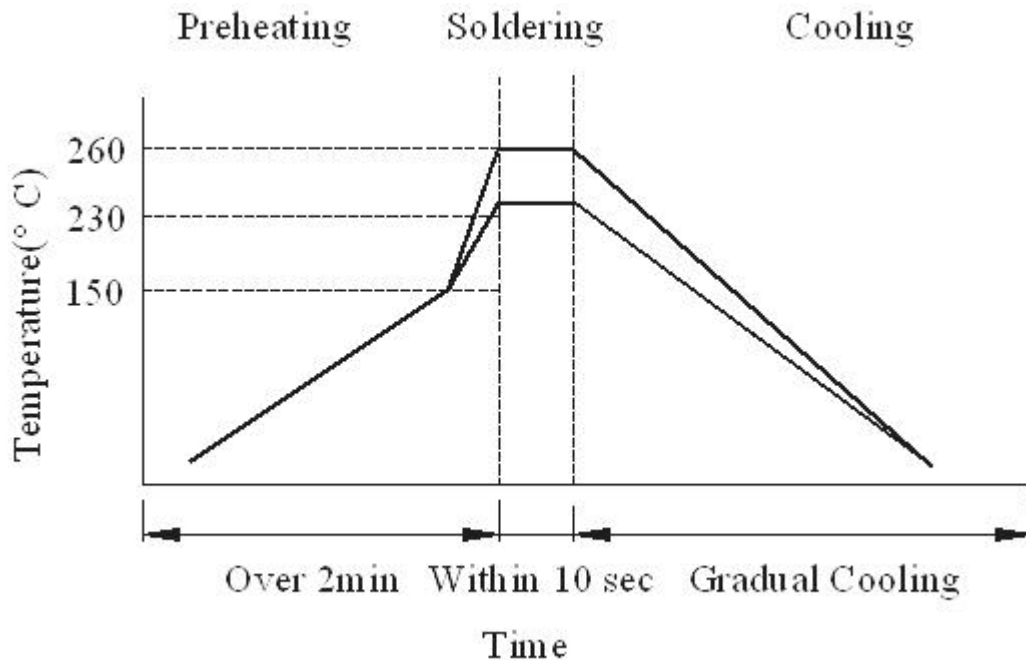
RoHS
COMPLIANT

Gan Tong Part NO. : GPDA1010-2R2M

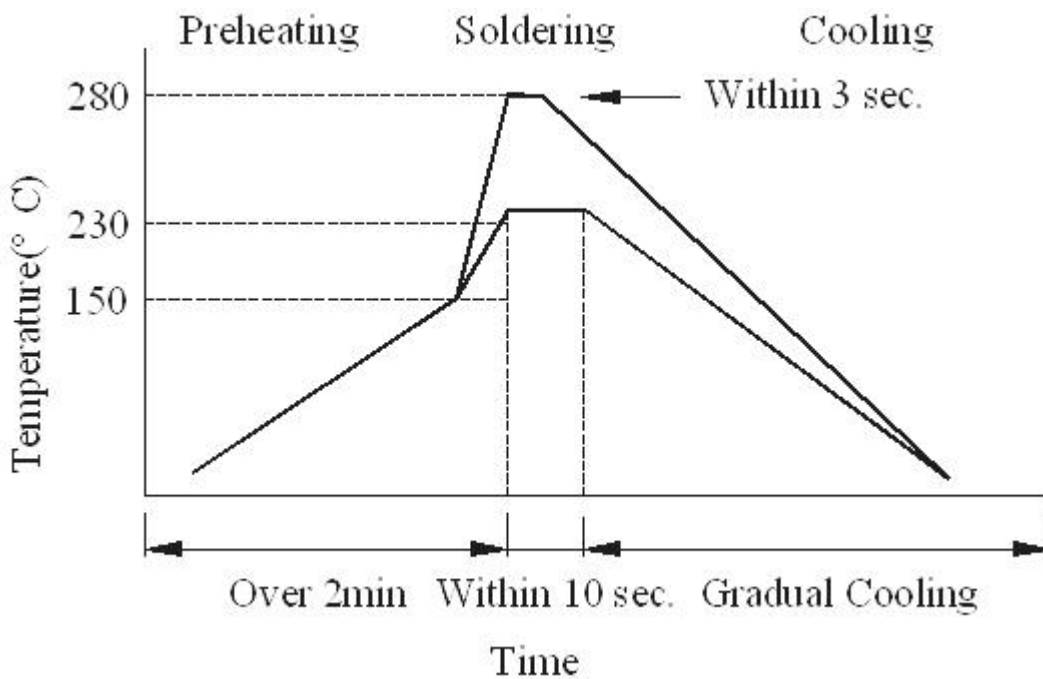
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Wave Soldering



Hand soldering



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