

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDA0808-4R7M02 _____

SAMPLE NO. S12021602 REVISION NO. A DATE 16-Feb-12

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

**RoHS
COMPLIANT**

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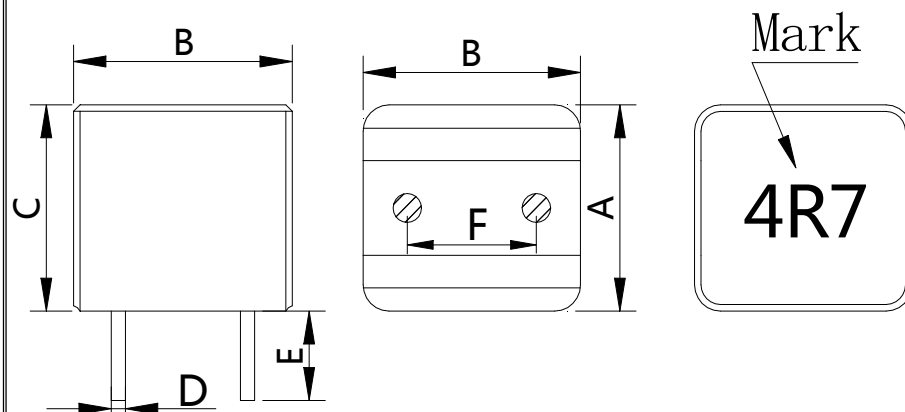
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SPECIFICATION

**RoHS
COMPLIANT**

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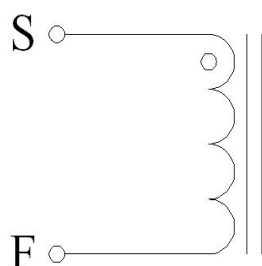
External Dimensions Unit (mm)



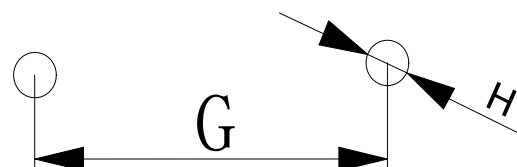
A	8.2± 0.5 (mm)
B	8.2± 0.5 (mm)
C	8.0Max (mm)
D	0.55± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5(mm)
G	5.0± 0.5(mm)
H	0.75 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	4.7uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma/11300
DCR	mΩ	17.5mΩ (Max)		Chroma/16502
I rms	Amps	6A	100KHz/1V	LCR Meter Agilent/4284A+42841A or Chroma/11300+3302+1320+1320S
I sat	Amps	14A	100KHz/1V	

- 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

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	4.7uH	17.5mΩ	6Amps	14Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	4.445	13.45	16.1°C	77.4%
2	4.405	13.33		
3	4.437	13.28		
4	4.463	13.35		
5	4.453	13.32		
6	4.378	13.31		
7	4.411	13.38		
8	4.429	13.42		
9	4.359	13.44		
10	4.331	13.37		
\bar{X}	6.060	13.37		
σ	0.033	0.05		

External Dimensions

Item	A	B	C	D	E	F
Specification	8.2	8.2	8.0	0.55	3.4	5.0
Tolerance	±0.5 (mm)	±0.5 (mm)	Max	±0.1 (mm)	±0.5 (mm)	±0.4(mm)
1	8.44	8.44	7.85	0.55	3.57	5.10
2	8.42	8.43	7.92	0.54	3.53	5.13
3	8.43	8.42	7.86	0.54	3.47	5.17
4	8.47	8.45	7.94	0.55	3.52	5.08
5	8.46	8.42	7.86	0.54	3.54	5.14
6	8.43	8.44	7.82	0.55	3.44	5.11
7	8.43	8.42	7.83	0.53	3.46	5.10
8	8.45	8.43	7.89	0.55	3.53	5.12
9	8.42	8.45	7.81	0.54	3.48	5.14
10	8.44	8.43	7.93	0.55	3.47	5.12
\bar{X}	8.44	8.43	7.87	0.54	3.50	5.12
σ	0.02	0.01	0.04	0.01	0.04	0.02

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

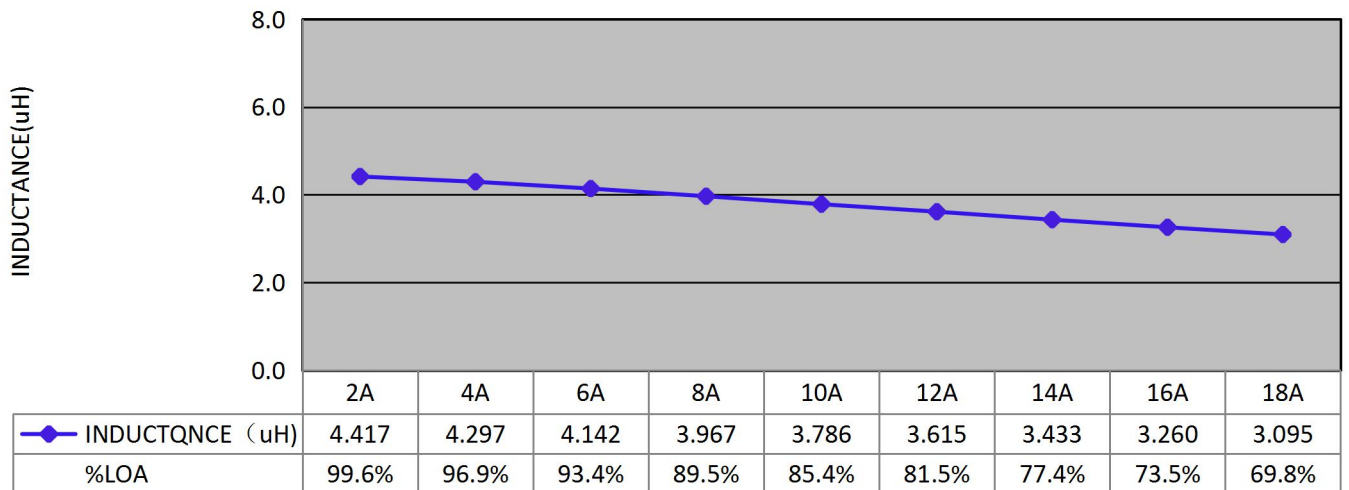
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Inductance VS DC current

IDC	L	%LOA				
0A	4.433	100.0%				
2A	4.417	99.6%				
4A	4.297	96.9%				
6A	4.142	93.4%				
8A	3.967	89.5%				
10A	3.786	85.4%				
12A	3.615	81.5%				
14A	3.433	77.4%				
16A	3.260	73.5%				
18A	3.095	69.8%				

CONDITION: 100KHZ/1.0Vrms



ELECTRICAL CHARACTERISTICS

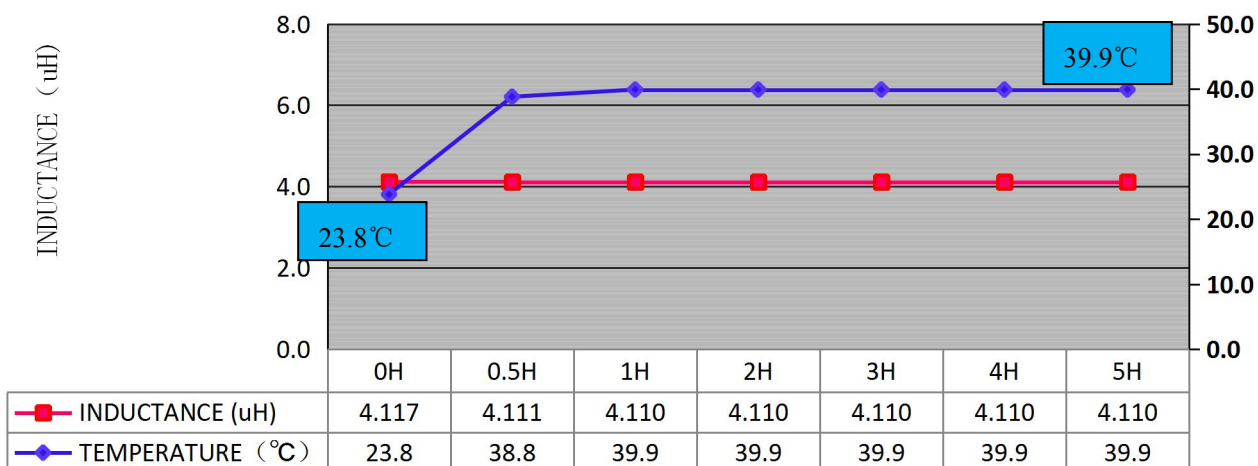
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DC current VS Temperature

Time	L (μ H)	T ($^{\circ}$ C)	Δ T($^{\circ}$ C)			
0H	4.117	23.8				
0.5H	4.111	38.8	15.0			
1H	4.110	39.9	16.1			
2H	4.110	39.9	16.1			
3H	4.110	39.9	16.1			
4H	4.110	39.9	16.1			
5H	4.110	39.9	16.1			

CONDITION: Load 6A



Inductance VS Temperature

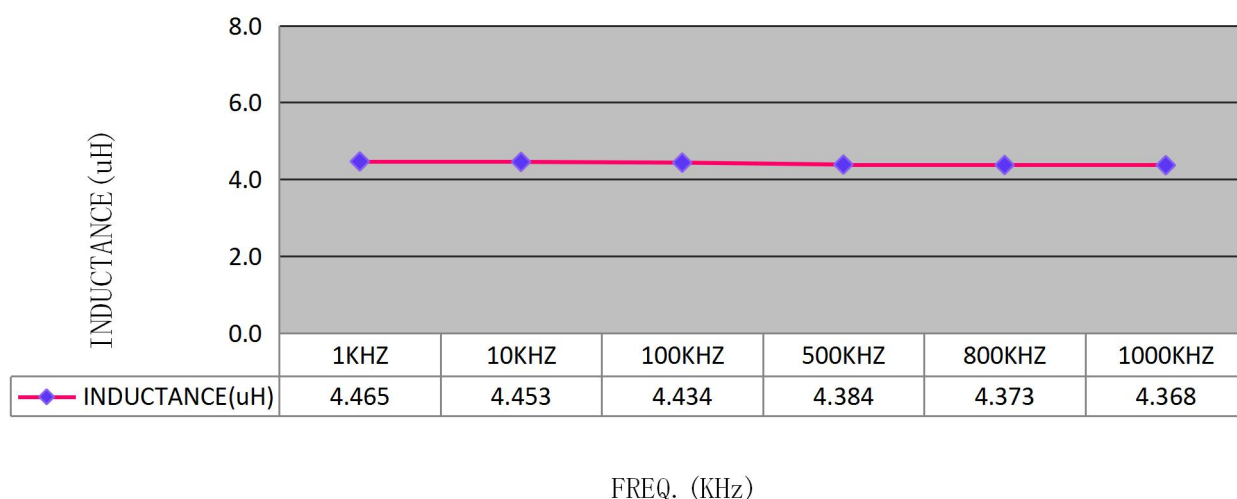
ELECTRICAL CHARACTERISTICS

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Inductance VS Frequency

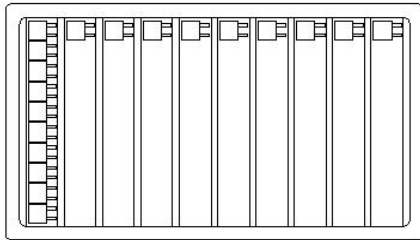
FREQ.	L (μ H)					
1KHZ	4.465					
10KHZ	4.453					
100KHZ	4.434					
500KHZ	4.384					
800KHZ	4.373					
1000KHZ	4.368					



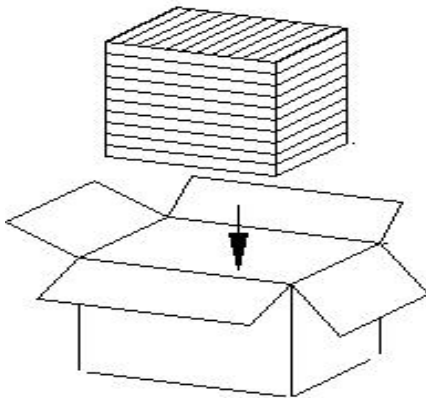
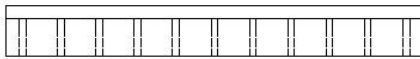
PACKING FOR SPECIFICATION

**RoHS
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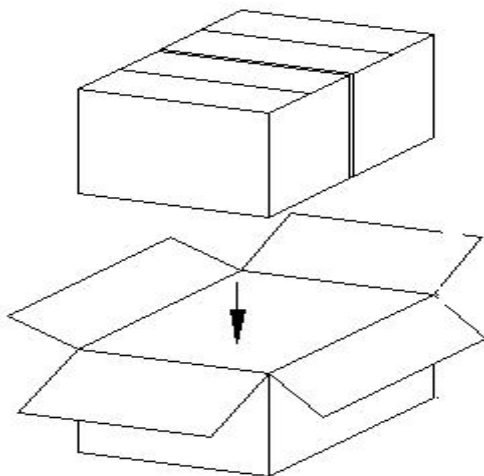
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PET Size : 215*148 *16(B)mm
Quantity : 150PCS/PET



Small box Size : 238*156*165 mm
Quantity : 10PET/Small box
1Small box/1500PCS



Big box Size : 328*251*175 mm
Quantity : 2 Small box/Big box
1 Big box/3000PCS

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

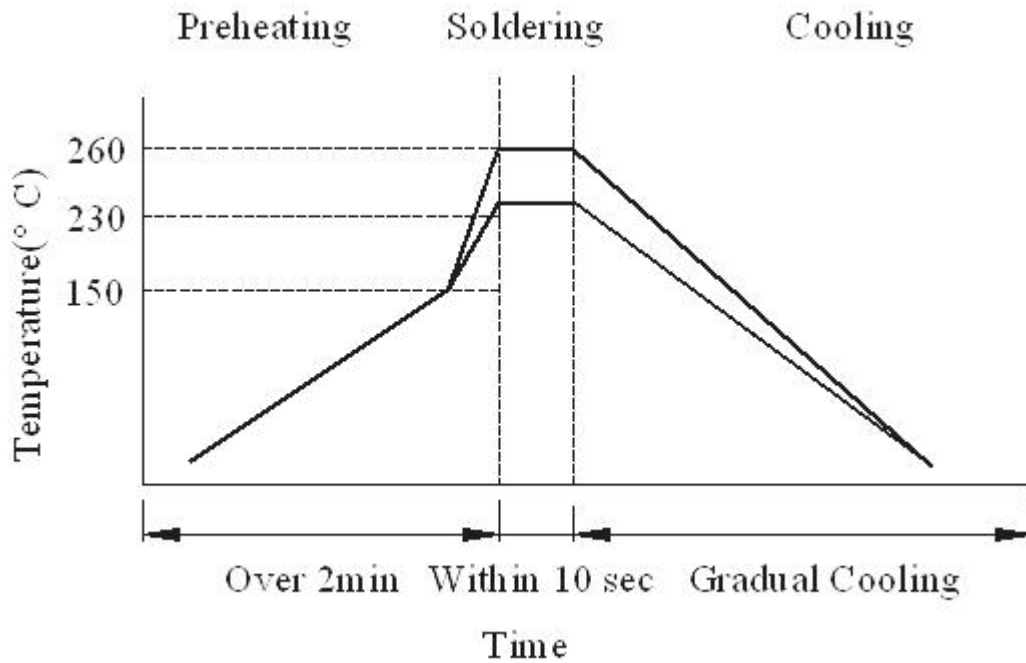
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Wave Soldering



Hand soldering

