

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDA0808-4R7M03 _____

SAMPLE NO. S13120201 REVISION NO. A DATE 02-Dec-13

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

RoHS
COMPLIANT

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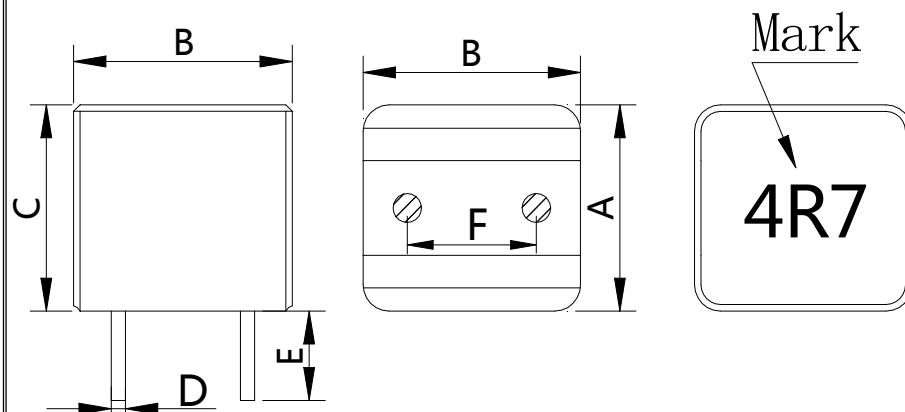
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SPECIFICATION

**RoHS
COMPLIANT**

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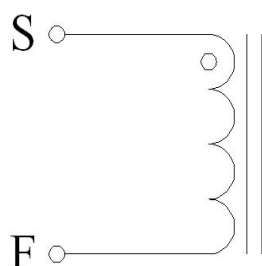
External Dimensions Unit (mm)



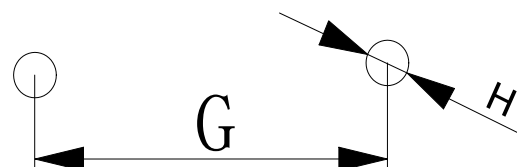
A	8.2± 0.5 (mm)
B	8.2± 0.5 (mm)
C	7.5± 0.5 (mm)
D	0.6± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5(mm)
G	5.0± 0.5(mm)
H	0.75 (ref)

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	14.1mΩ (Max)		Chroma/16502
I rms	Amps	8A	100KHz/1V	LCR Meter Agilent/4284A+42841A or Chroma/11300+3302+1320+1320S
I sat	Amps	12A	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	14.1mΩ	8Amps	12Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	4.69	10.74	28.7°C	78.5%
2	4.70	10.76		
3	4.72	10.81		
4	4.64	10.83		
5	4.75	10.79		
6	4.72	10.73		
7	4.81	10.71		
8	4.73	10.76		
9	4.66	10.81		
10	4.71	10.84		
\bar{X}	4.71	10.78		
σ	0.04	0.04		

External Dimensions

Item	A	B	C	D	E	F
Specification	8.2	8.2	7.5	0.6	3.4	5.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	± 0.5 (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.4(mm)
1	8.32	8.33	7.55	0.56	3.53	5.04
2	8.36	8.34	7.43	0.54	3.50	5.06
3	8.32	8.35	7.36	0.55	3.54	5.09
4	8.35	8.37	7.39	0.57	3.57	5.08
5	8.31	8.34	7.40	0.53	3.51	5.10
6	8.32	8.36	7.44	0.56	3.49	5.07
7	8.36	8.33	7.35	0.55	3.59	5.05
8	8.34	8.35	7.48	0.57	3.56	5.07
9	8.32	8.36	7.34	0.54	3.58	5.05
10	8.31	8.33	7.37	0.55	3.55	5.09
\bar{X}	8.33	8.35	7.41	0.55	3.54	5.07
σ	0.02	0.01	0.06	0.01	0.03	0.02

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

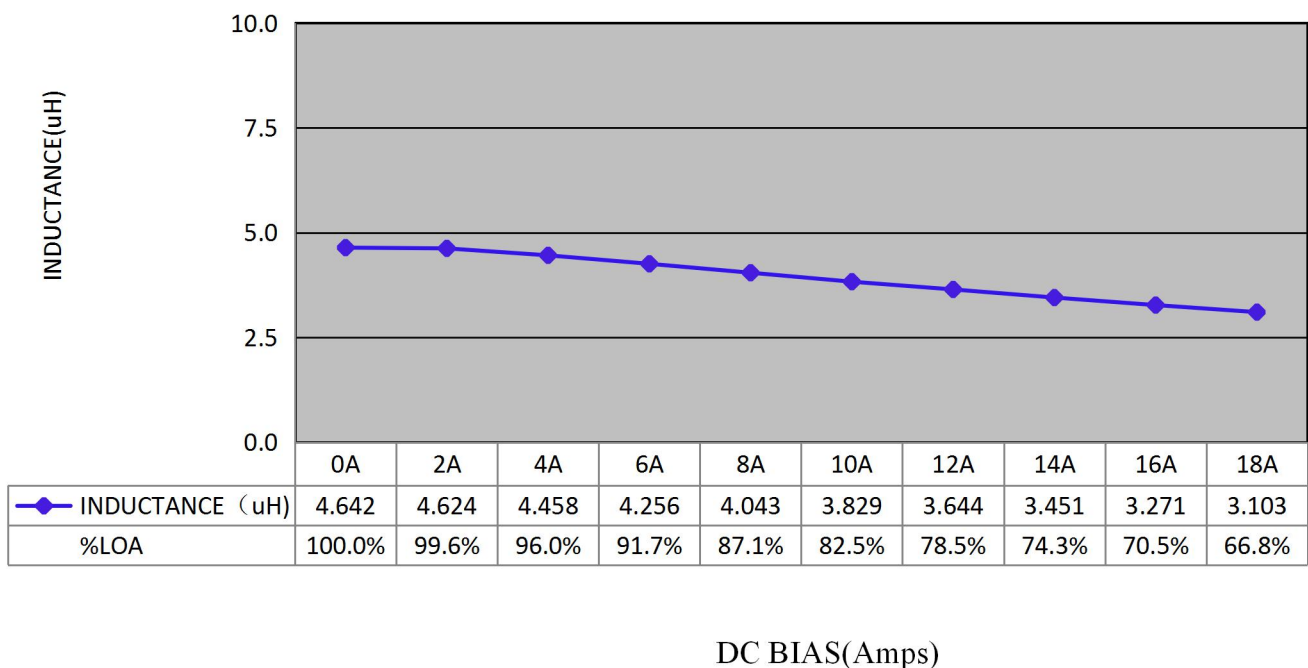
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Inductance VS DC current

IDC	L	%LOA				
0A	4.64	100.0%				
2A	4.62	99.6%				
4A	4.46	96.0%				
6A	4.26	91.7%				
8A	4.04	87.1%				
10A	3.83	82.5%				
12A	3.64	78.5%				
14A	3.45	74.3%				
16A	3.27	70.5%				
18A	3.10	66.8%				

CONDITION: 100KHZ/1.0Vrms



DC BIAS(Amps)

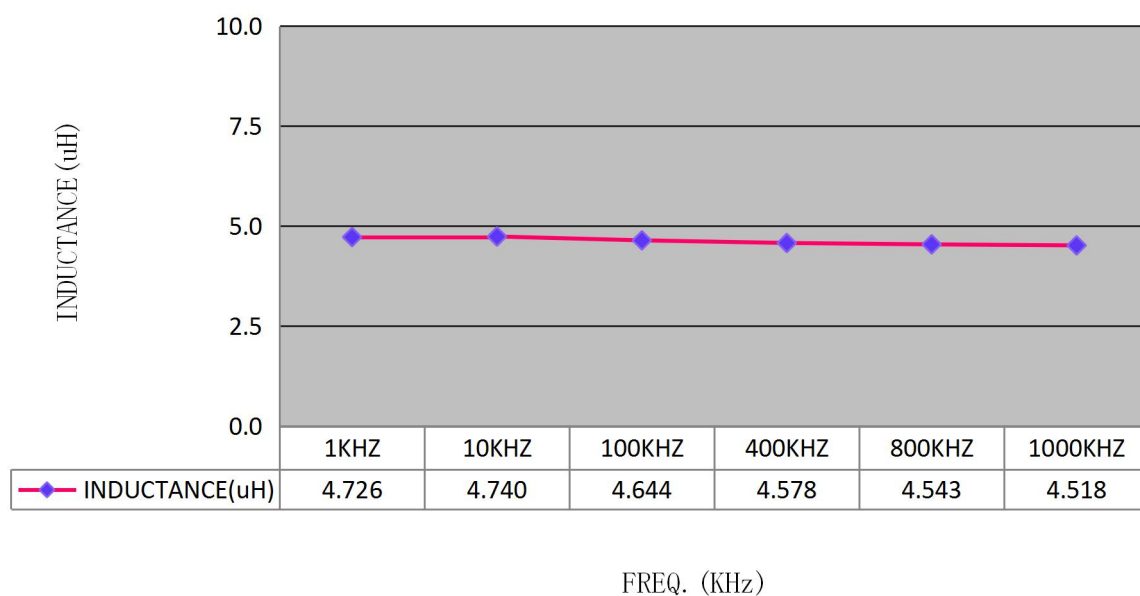
ELECTRICAL CHARACTERISTICS

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Inductance VS Frequency

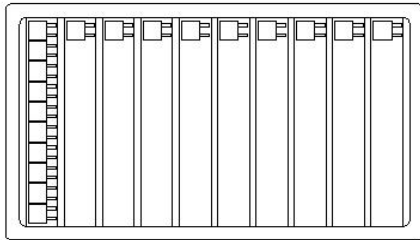
FREQ.	L (μ H)					
1KHZ	4.73					
10KHZ	4.74					
100KHZ	4.64					
500KHZ	4.58					
800KHZ	4.54					
1000KHZ	4.52					



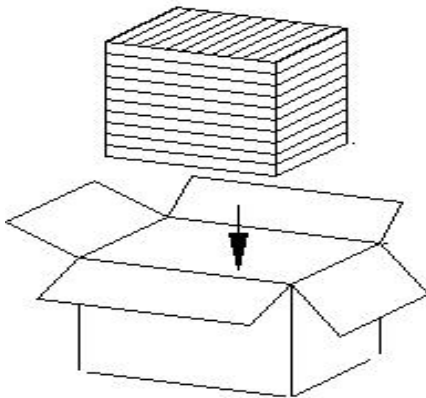
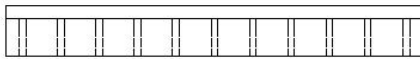
PACKING FOR SPECIFICATION

**RoHS
COMPLIANT**

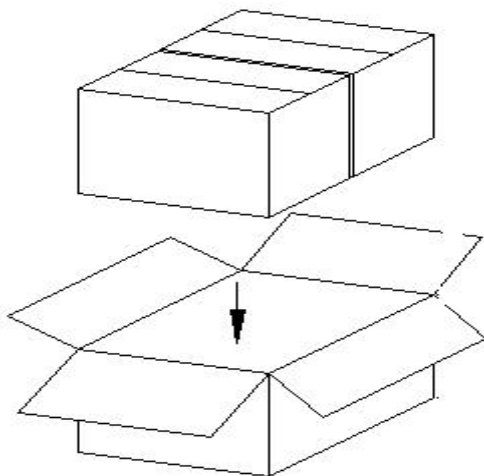
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PET Size : 215*148 *16(B)mm
Quantity : 150PCS/PET



Small box Size : 238*156*165 mm
Quantity : 10PET/Small box
1 Small 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>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>1. Appearance: No damage.</p> <p>2. Inductance: within $\pm 20\%$ of initial value.</p> <p>3.No disconnection or short circuit.</p>	<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

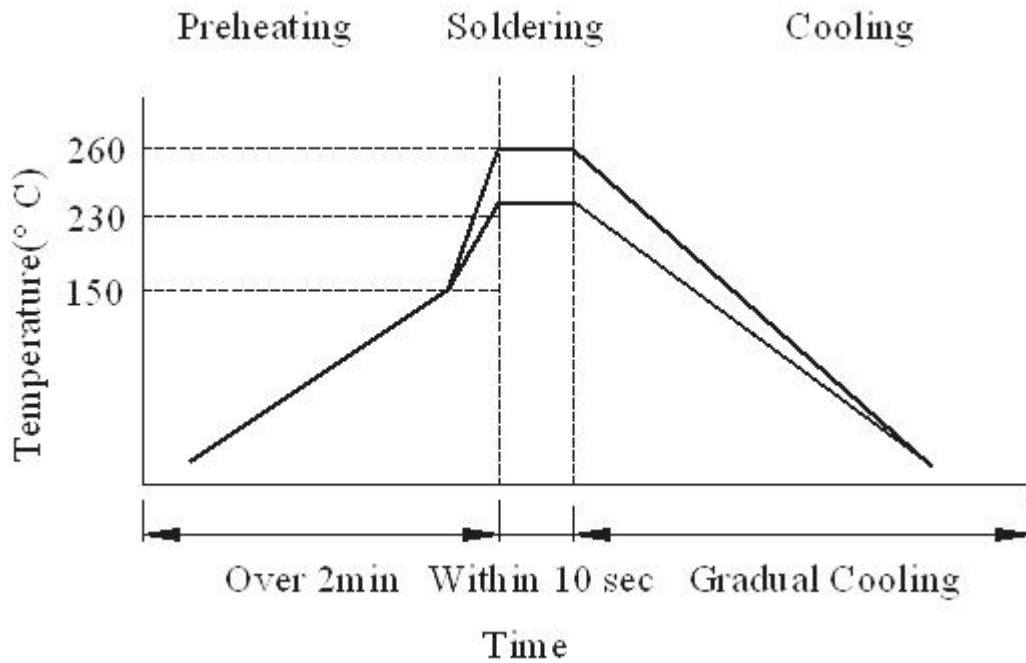
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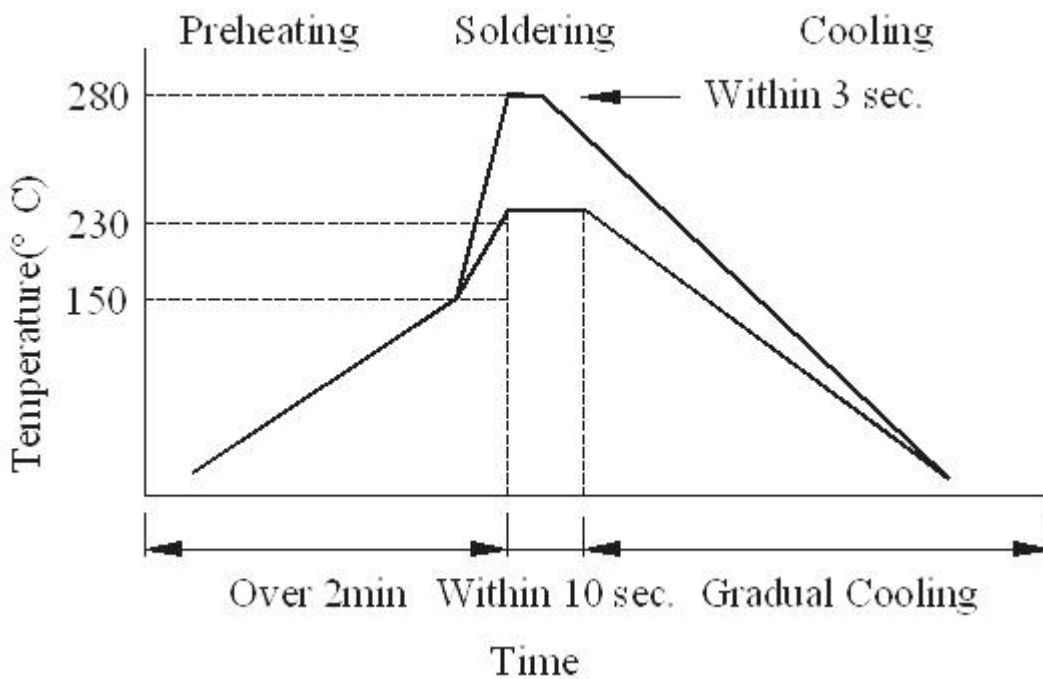
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Wave Soldering



Hand soldering



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