

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDC0808-4R7M _____

SAMPLE NO.: S12112202 REVISION NO. A1 DATE 22-Nov-12

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

**RoHS
COMPLIANT**

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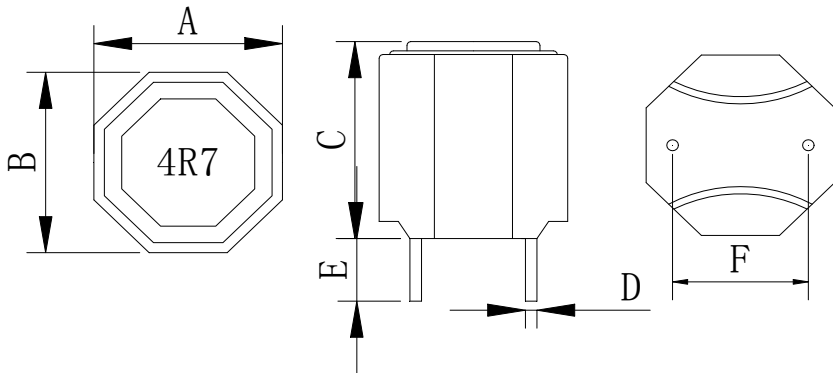
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SPECIFICATION

**RoHS
COMPLIANT**

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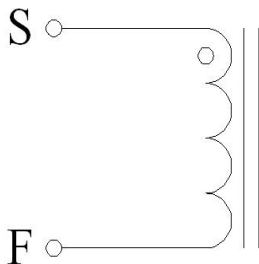
External Dimensions Unit (mm)



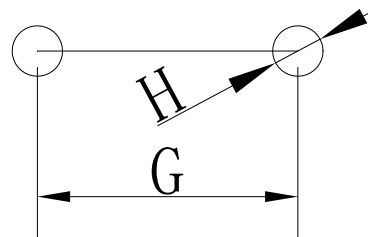
A	8.5± 0.5 (mm)
B	8.5± 0.5 (mm)
C	8.5 MAX (mm)
D	0.65± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5 (mm)
G	5.0± 0.5(mm)
H	0.85 (ref)

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	15.0mΩ (Max)		Chroma /16502
I rms	Amps	10A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	18A	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

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	4.7 uH	15.0mΩ	10Amps	18Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	4.120	11.83	30.0°C	82.5%
2	4.598	11.37		
3	4.577	11.34		
4	4.621	11.55		
5	4.639	11.31		
6	4.383	11.57		
7	4.654	11.50		
8	4.504	11.54		
9	4.423	11.75		
10	4.364	11.52		
\bar{X}	4.488	11.53		
σ	0.16	0.16		

External Dimensions

Item	A	B	C	D	E	F
Specification	8.5	8.5	8.5	0.65	3.4	5.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	MAX (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	8.53	8.54	7.45	0.60	3.40	5.24
2	8.54	8.59	7.55	0.58	3.44	5.16
3	8.57	8.55	7.49	0.59	3.41	5.19
4	8.57	8.54	7.42	0.57	3.43	5.03
5	8.56	8.55	7.52	0.61	3.39	5.09
6	8.61	8.60	7.58	0.60	3.38	5.11
7	8.61	8.59	7.54	0.58	3.46	5.08
8	8.56	8.56	7.48	0.61	3.40	5.12
9	8.60	8.60	7.46	0.57	3.49	5.13
10	8.59	8.59	7.53	0.59	3.45	5.10
\bar{X}	8.57	8.57	7.50	0.59	3.43	5.13
σ	0.03	0.02	0.05	0.01	0.03	0.06

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

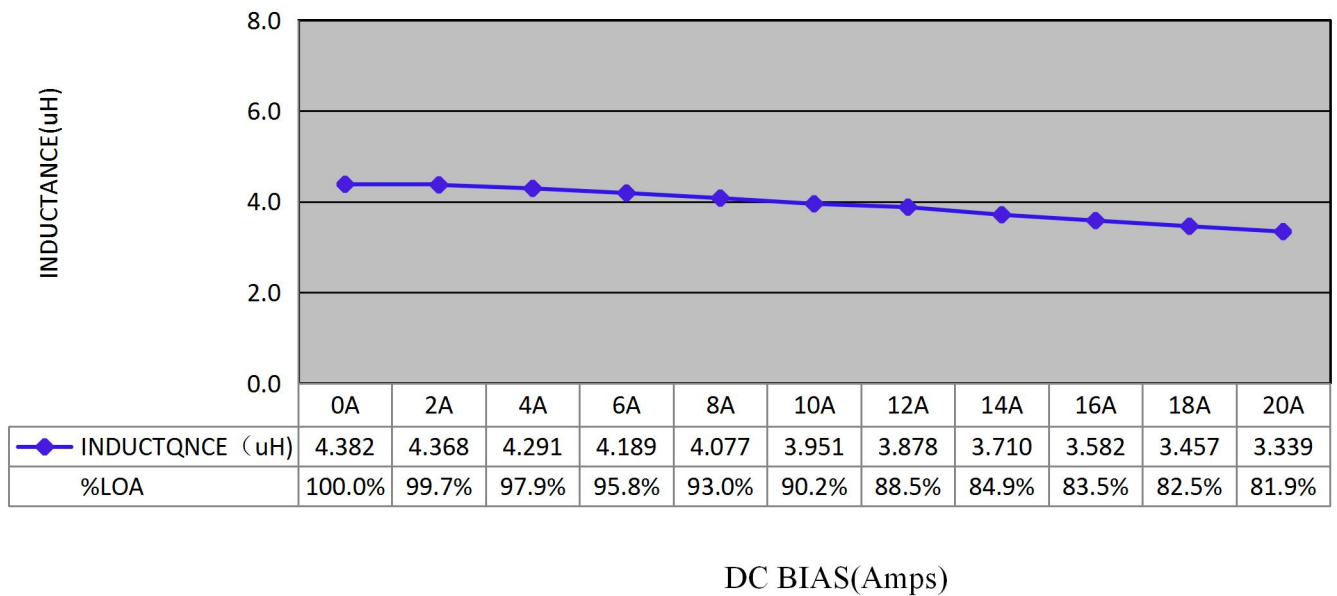
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Inductance VS DC current

IDC	L	%LOA				
0A	4.382	100.0%				
2A	4.368	99.7%				
4A	4.291	97.9%				
6A	4.189	95.8%				
8A	4.077	93.0%				
10A	3.951	90.2%				
12A	3.878	88.5%				
14A	3.710	84.9%				
16A	3.582	83.5%				
18A	3.457	82.5%				
20A	3.339	81.9%				

CONDITTON: 100KHZ/1.0Vrms



DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

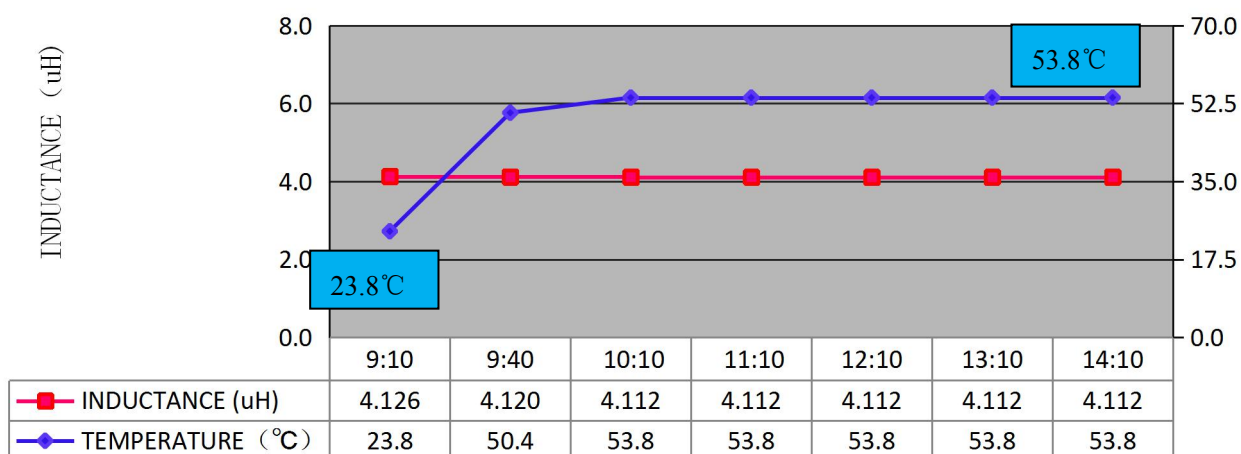
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DC current VS Temperature

Time	L (μ H)	T ($^{\circ}$ C)	Δ T($^{\circ}$ C)			
9:10	4.126	23.8				
9:40	4.120	50.4	26.6			
10:10	4.112	53.8	30.0			
11:10	4.112	53.8	30.0			
12:10	4.112	53.8	30.0			
13:10	4.112	53.8	30.0			
14:10	4.112	53.8	30.0			

CONDITTON: Load 10A



Inductance VS Temperature

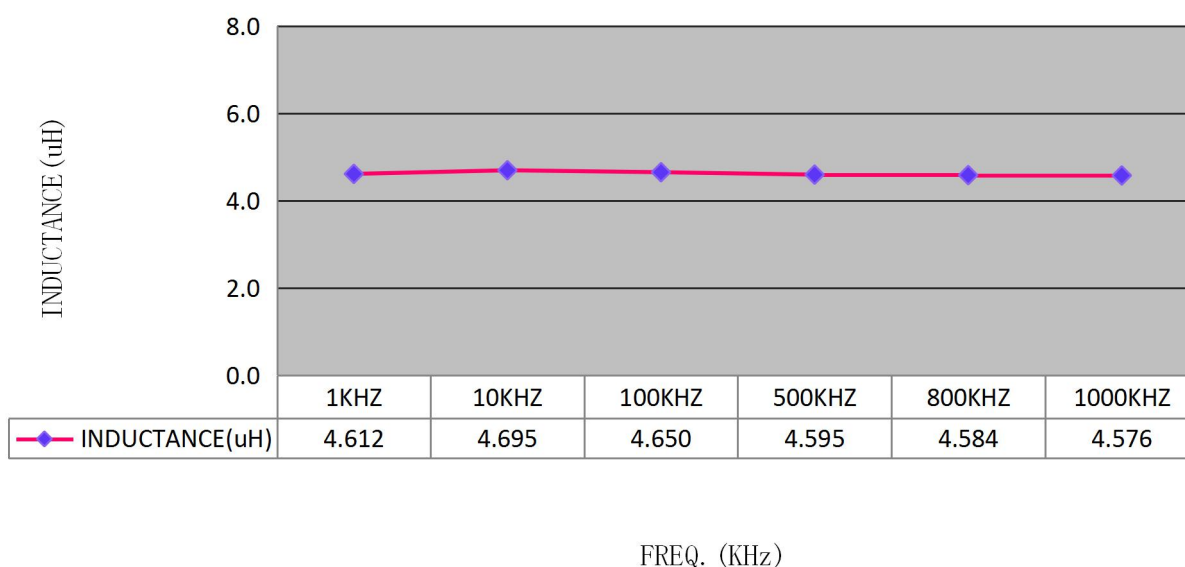
ELECTRICAL CHARACTERISTICS

**RoHS
COMPLIANT**

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Inductance VS Frequency

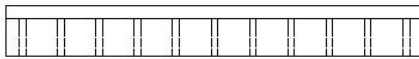
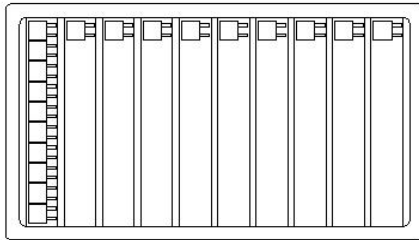
FREQ.	L (μ H)					
1KHZ	4.612					
10KHZ	4.695					
100KHZ	4.650					
500KHZ	4.595					
800KHZ	4.584					
1000KHZ	4.576					



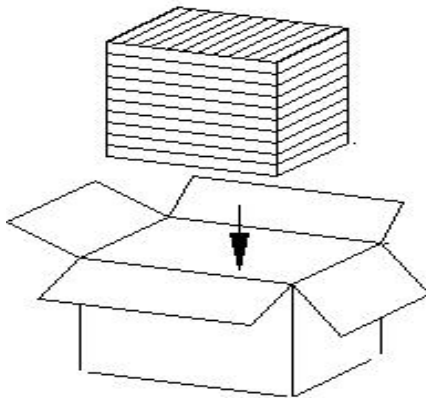
PACKING FOR SPECIFICATION

**RoHS
COMPLIANT**

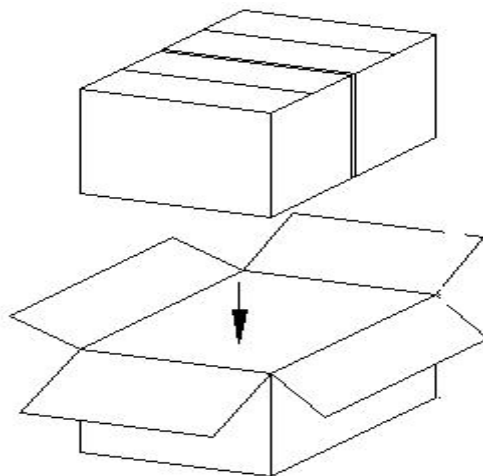
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PET Size : 215*148*16(C)mm
Quantity : 130PCS/PET



Small box Size : 238*156*165 mm
Quantity : 10PET/Small box
1Small box/1300PCS

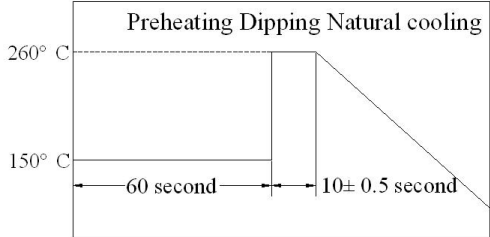
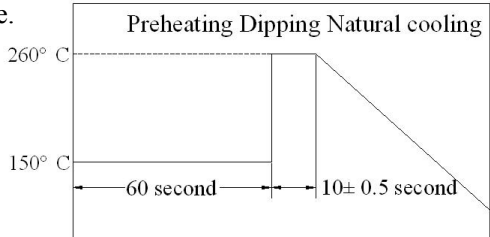
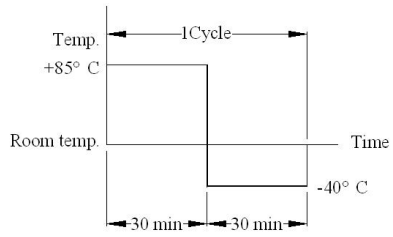


Big box Size : 328*251*175 mm
Quantity : 2 Small box/Big box
1 Big box/2600PCS

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: 4to24hrs 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: 4to24hrs 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: 4to24hrs of recovery under the standard condition after the removal from test chamber.

THE CONDITION OF REFLOW

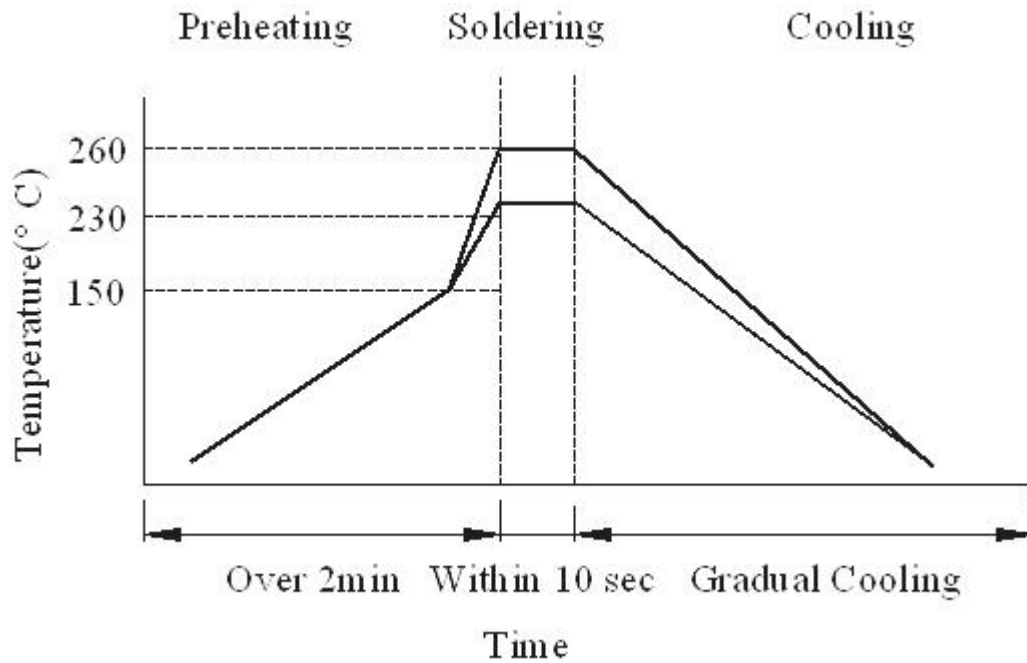
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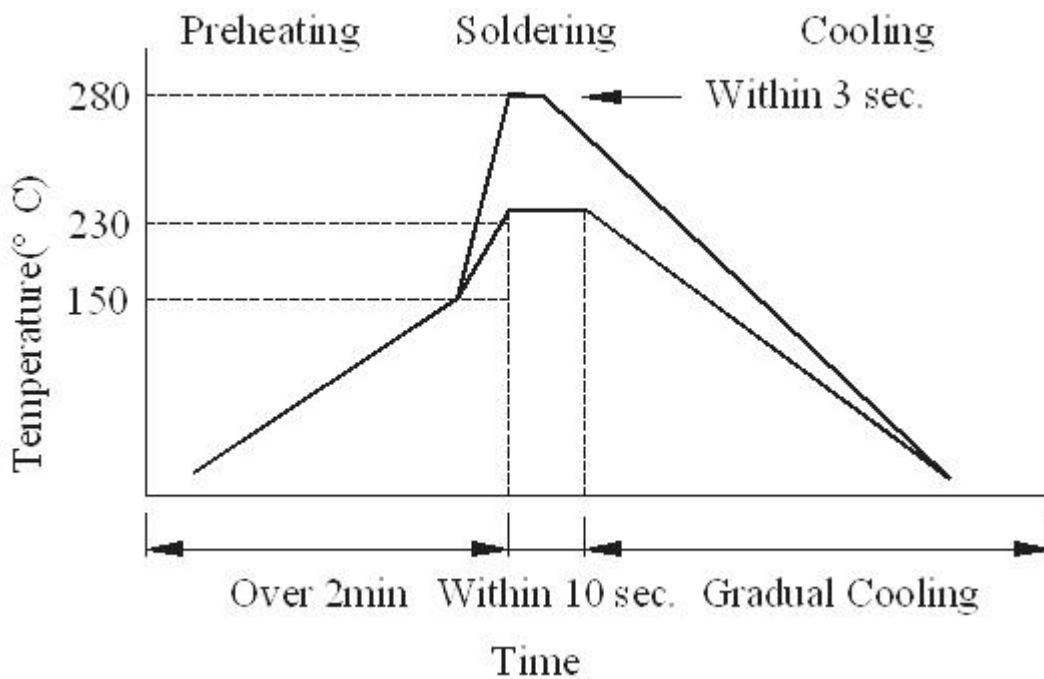
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Wave Soldering



Hand soldering



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