

CUSTOMER \_\_\_\_\_

CUSTOMER'S P/N \_\_\_\_\_

DESCRIPTION \_\_\_\_\_ POWER INDUCTOR \_\_\_\_\_

SGTE PART NO. \_\_\_\_\_ GPDC1111-4R7M \_\_\_\_\_

SAMPLE NO. S09061402 REVISION NO. A DATE 14-Jun-09

## SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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## INDEX

### COVER PAGE

- SHAPE & DIMENSION.....1-8
  
- ELECTRICAL CHARACTERISTICS AND EXTERNAL  
TEST REPORT.....2-8
  
- ELECTRICAL CHARACTERISTICS.....3-8
  
- ELECTRICAL CHARACTERISTICS.....4-8
  
- ELECTRICAL CHARACTERISTICS.....5-8
  
- PACKING FOR SPECIFICATION.....6-8
  
- GENERAL CHARACTERISTICS.....7-8
  
- THE CONDITION OF REFLOW.....8-8

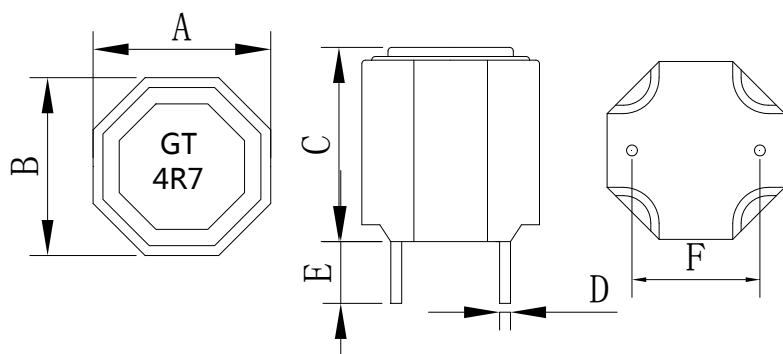
APPROVED BY	CHECKED BY	DRAWING BY
		<b>Lisa</b>  6/14

# SPECIFICATION

**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	14-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1111-4R7M	S09061402	1-8

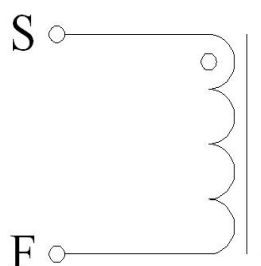
## External Dimensions Unit (mm)



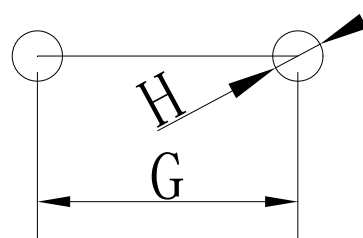
A	11.5± 0.5 (mm)
B	11.5± 0.5 (mm)
C	12.5Max (mm)
D	1.0± 0.1 (mm)
E	3.4± 0.5 (mm)
F	6.5± 0.5 (mm)
G	7.5± 0.5(mm)
H	1.4 (ref)

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	7.5mΩ (Max)		Chroma /16502
I rms	Amps	7A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	14A	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  
COMPLIANT**

Customers Part Number	Item Name	Date	
	Power Inductor	14-Jun-09	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDC1111-4R7M	S09061402	A	2-8

## Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	4.7uH	7.5mΩ	7Amps	14Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	4.64	5.81	6.1°C	87.6%
2	4.73	5.76		
3	4.74	5.78		
4	4.70	5.76		
5	4.65	5.80		
6	7.67	5.79		
7	4.72	5.74		
8	4.68	5.81		
9	4.70	5.79		
10	4.74	5.78		
$\bar{X}$	4.997	5.78		
$\sigma$	0.89	0.02		

## External Dimensions

Item	A	B	C	D	E	F
Specification	11.5	11.5	12.5	1.0	3.4	6.5
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	11.63	11.65	11.29	1.00	3.64	6.50
2	11.61	11.62	11.41	0.97	3.42	6.67
3	11.63	11.64	11.11	0.98	3.54	6.68
4	11.63	11.66	11.27	0.98	3.56	6.83
5	11.61	11.63	11.27	0.99	3.48	6.71
6	11.61	11.62	11.34	0.97	3.47	6.86
7	11.63	11.66	11.43	0.99	3.46	6.60
8	11.65	11.64	11.17	0.97	3.52	6.56
9	11.62	11.62	11.17	0.96	3.40	6.61
10	11.63	11.64	11.32	1.00	3.49	6.72
$\bar{X}$	11.63	11.64	11.28	0.98	3.50	6.67
$\sigma$	0.01	0.01	0.10	0.01	0.07	0.11

Inductance measured at 100KHz/1Vrms.

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

# ELECTRICAL CHARACTERISTICS

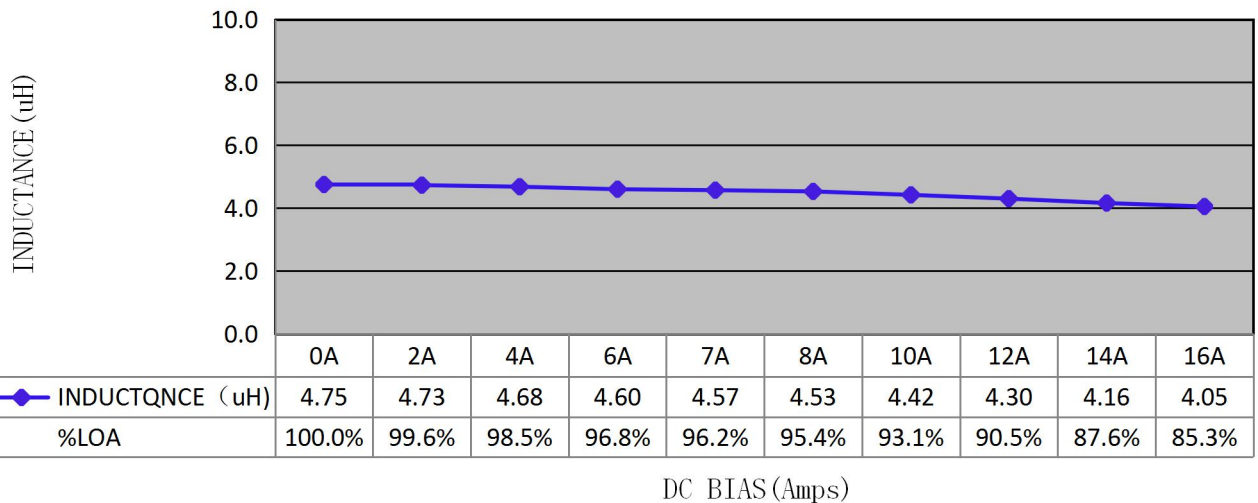
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	14-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1111-4R7M	S09061402	3-8

## Inductance VS DC current

IDC	L	%LOA				
0A	4.75	100%				
2A	4.73	99.6%				
4A	4.68	98.5%				
6A	4.60	96.8%				
7A	4.57	96.2%				
8A	4.53	95.4%				
10A	4.42	93.1%				
12A	4.30	90.5%				
14A	4.16	87.6%				
16A	4.05	85.3%				

CONDITTON: 100KHZ/1.0Vrms



# ELECTRICAL CHARACTERISTICS

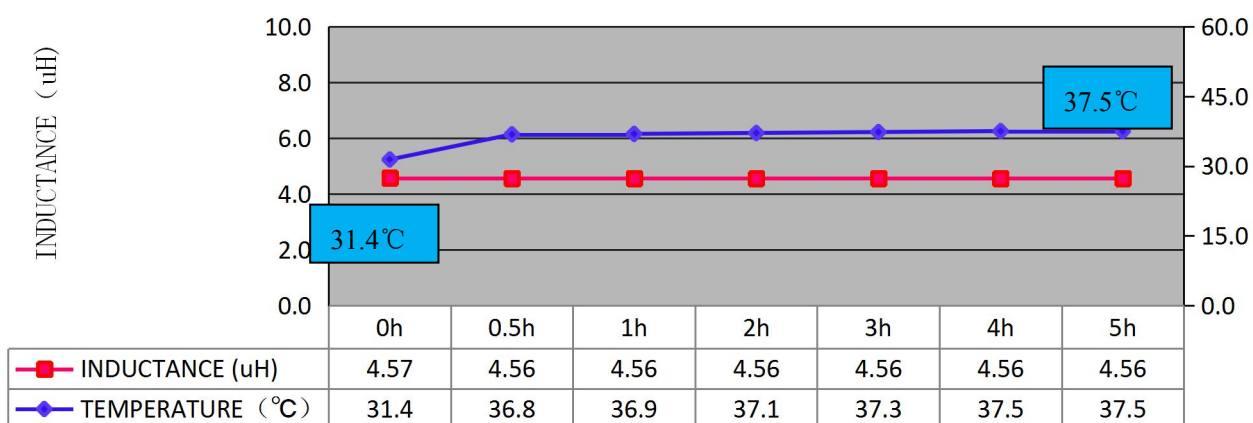
RoHS  
COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	14-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1111-4R7M	S09061402	4-8

## DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0h	4.57	31.4				
0.5h	4.56	36.8	5.4			
1h	4.56	36.9	5.5			
2h	4.56	37.1	5.7			
3h	4.56	37.3	5.9			
4h	4.56	37.5	6.1			
5h	4.56	37.5	6.1			

CONDITTON: Load 7A



Inductance VS Temperature

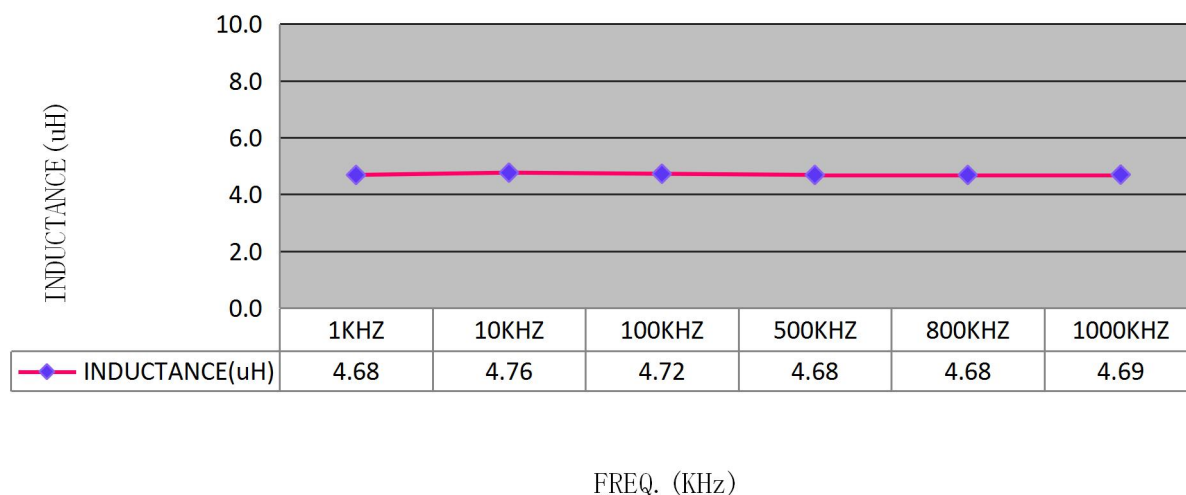
# ELECTRICAL CHARACTERISTICS

RoHS  
COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	14-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1111-4R7M	S09061402	5-8

## Inductance VS Frequency

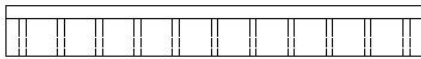
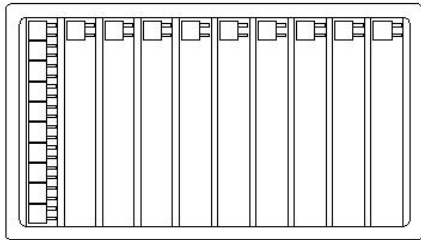
FREQ.	L (μH)					
1KHZ	4.68					
10KHZ	4.76					
100KHZ	4.72					
500KHZ	4.68					
800KHZ	4.68					
1000KHZ	4.69					



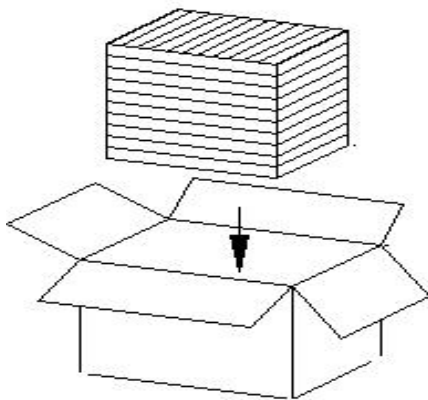
# PACKING FOR SPECIFICATION

**RoHS  
COMPLIANT**

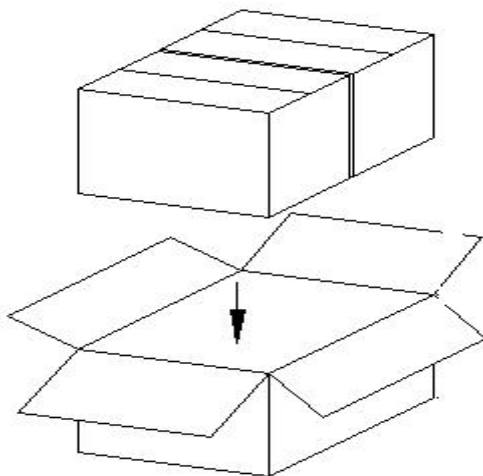
Customers Part Number	Item Name	Date
	Power Inductor	14-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1111-4R7M	S09061402	6-8



PET Size : 214.5\*148.5 \*16mm  
Quantity : 110PCS/PET



Small box Size : 238\*156\*165 mm  
Quantity : 10PET/Small box  
1Small box/1100PCS



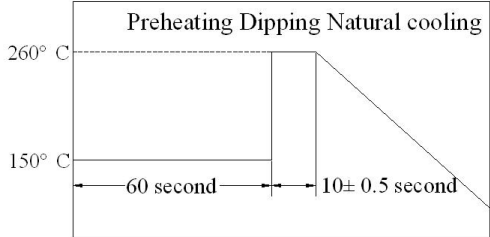
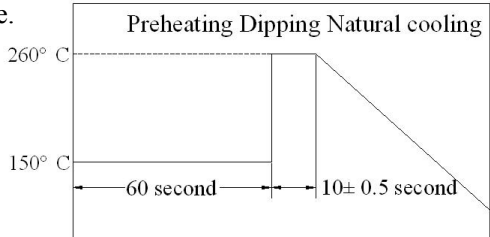
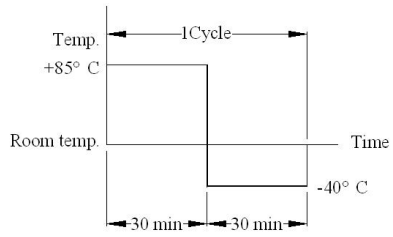
Big box Size : 328\*251\*175 mm  
Quantity : 2 Small box/Big box  
1 Big box/2200PCS



# GENERAL CHARACTERISTICS

Gan Tong Part NO.: GPDC1111-4R7M

PAGE : 7-8

Item	Performance	Test Condition
<b>Mechanical Performance Test</b>		
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: $150^{\circ}\text{C}$ 60 seconds Solder: (SnCu0.7) Solder Temperature: $260\pm 5^{\circ}\text{C}$ Flux: Rosin. Dip time: $10\pm 0.5$ 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: $500\pm 12$ 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: $500\pm 2$ 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: $500\pm 12$ Hours Load: Allowed DC current Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.

# THE CONDITION OF REFLOW

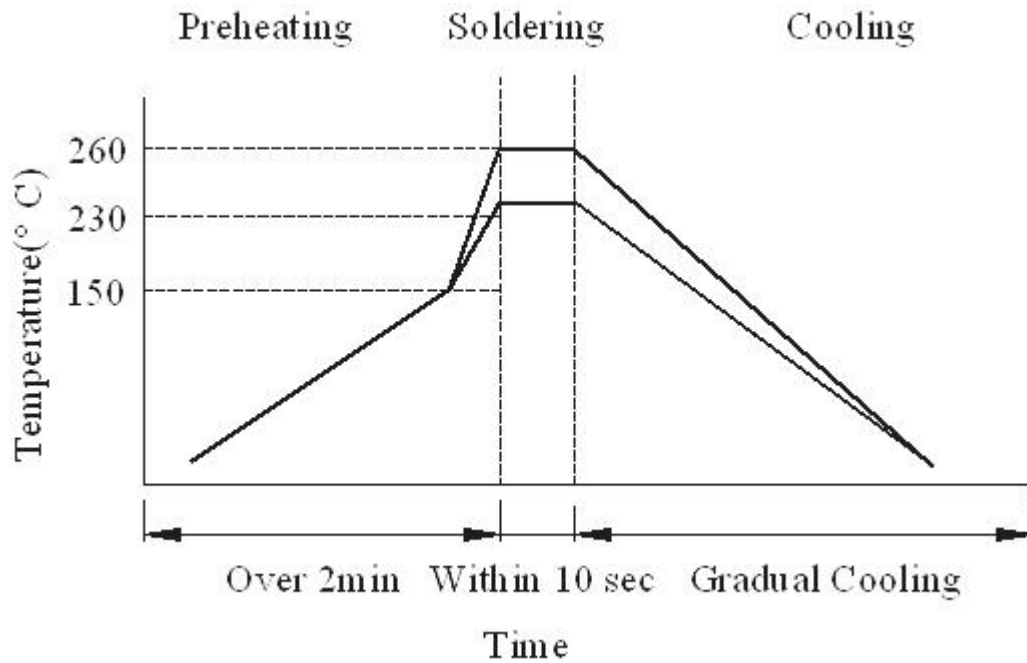
RoHS  
COMPLIANT

Gan Tong Part NO. : GPDC1111-4R7M

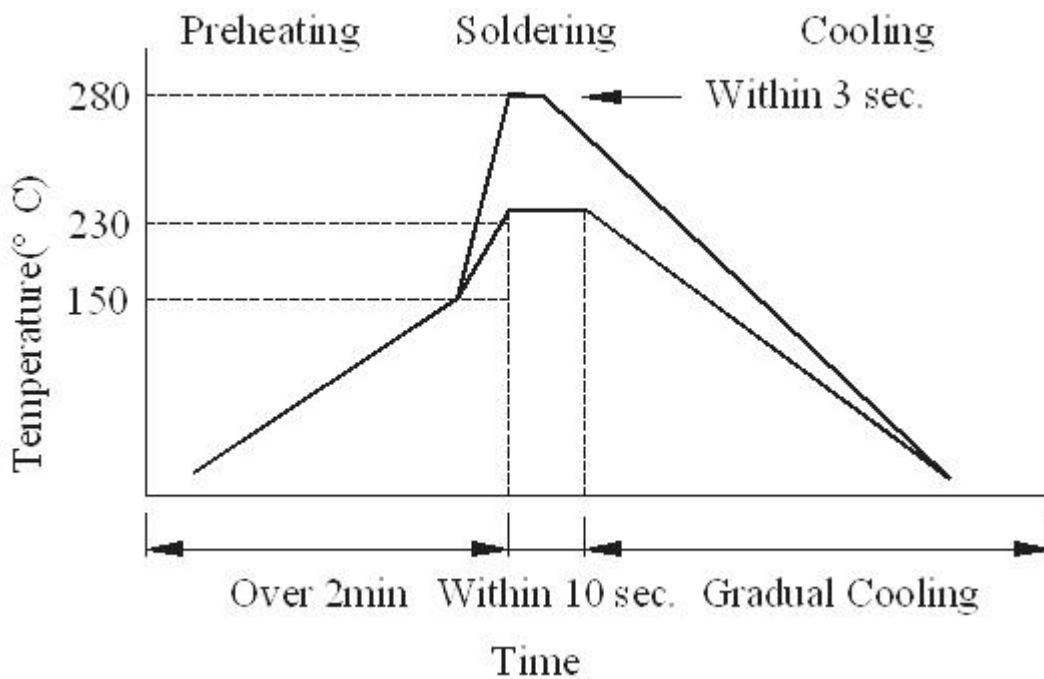
PAGE :

8-8

## Wave Soldering



## Hand soldering



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