CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION POWER INDUCTOR

SGTE PART NO. GPDC0808-6R8M02

SAMPLE NO.: S14082001 REVISION NO. A DATE 2014-08-20

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

SGTE 感通科技

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SPECIFICATION

RoHS COMPLIANT

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

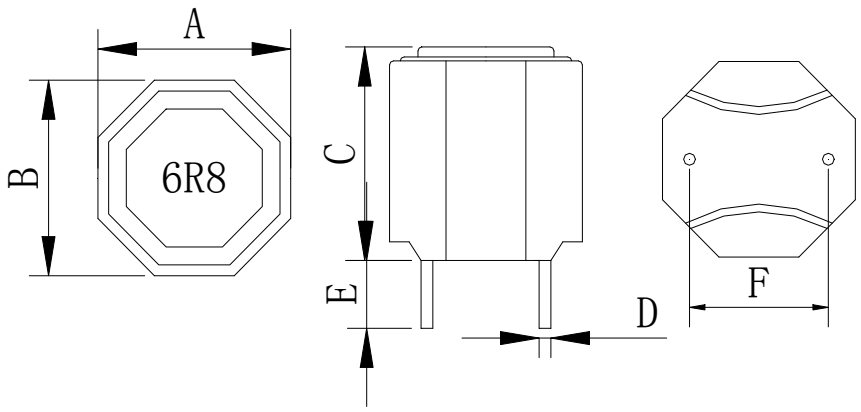
APPROVED BY	CHECKED BY	DRAWING BY
Tianyi 08/20	Liu 08/20	Li 08/20

SPECIFICATION

RoHS COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	2014-08-20
Gan Tong Part NO.	Sample NO.	Page
GPDC0808-6R8M02	S14082001	1-8

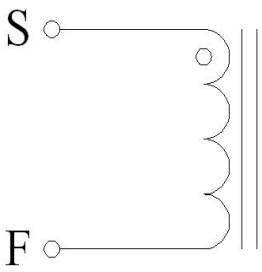
External Dimensions Unit (mm)



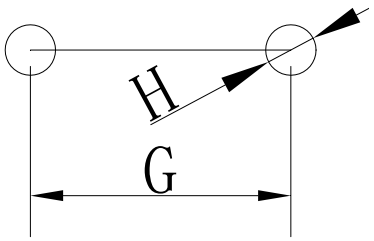
A	8.5± 0.5 (mm)
B	8.5± 0.5 (mm)
C	12Max (mm)
D	0.6± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5 (mm)
G	5.0± 0.5(mm)
H	0.9 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	6.8uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	24.0mΩ (Max)		Chroma /16502
I rms	Amps	5.5A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	8A	100KHz/1V	or Chroma /11300+3302+1320+1320S

- I rms: Current that causes a 40℃ temperature rise from 25℃ ambient.
- I sat: DC current at which the inductance drops 35% from it's value without current.
- All test Data is referenced to 25℃ ambient.
- Operating Temperature Range: -25℃ to +125℃

TEST REPORT

RoHS COMPLIANT

Customers Part Number	Item Name	Date	
	Power Inductor	2014-08-20	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDC0808-6R8M02	S14082001	A	2-8

Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	6.8 uH	24.0mΩ	5.5Amps	8Amps
Tolerance	±20%	Max	△T≦40℃	L≧65%
1	6. 71	16. 24	12.3℃	77. 2%
2	6. 69	16. 27		
3	6. 72	16. 32		
4	6. 74	16. 27		
5	6. 63	16. 33		
6	7. 07	16. 18		
7	6. 71	16. 25		
8	6. 73	16. 24		
9	6. 71	16. 34		
10	6. 68	16. 37		
$\bar{X}$	6. 74	16. 28		
σ	0. 12	0. 05		

External Dimensions

Item	A	B	C	D	E	F
Specification	8.5	8.5	12	0.6	3.4	5.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	8.67	8.63	8.87	0.54	3.21	5.22
2	8.63	8.59	8.90	0.58	3.22	5.16
3	8.68	8.67	8.90	0.57	3.23	5.23
4	8.67	8.66	8.91	0.58	3.24	5.18
5	8.69	8.69	8.94	0.56	3.23	5.24
6	8.61	8.61	8.91	0.57	3.21	5.29
7	8.62	8.62	8.88	0.58	3.23	5.25
8	8.68	8.68	8.87	0.57	3.24	5.24
9	8.67	8.67	8.86	0.56	3.26	5.23
10	8.63	8.63	8.87	0.54	3.25	5.22
$\bar{X}$	8.66	10.14	8.89	0.57	3.23	5.23
σ	0.03	0.03	0.02	0.01	0.02	0.03

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25±5℃. Humidity 60±10%

ELECTRICAL CHARACTERISTICS

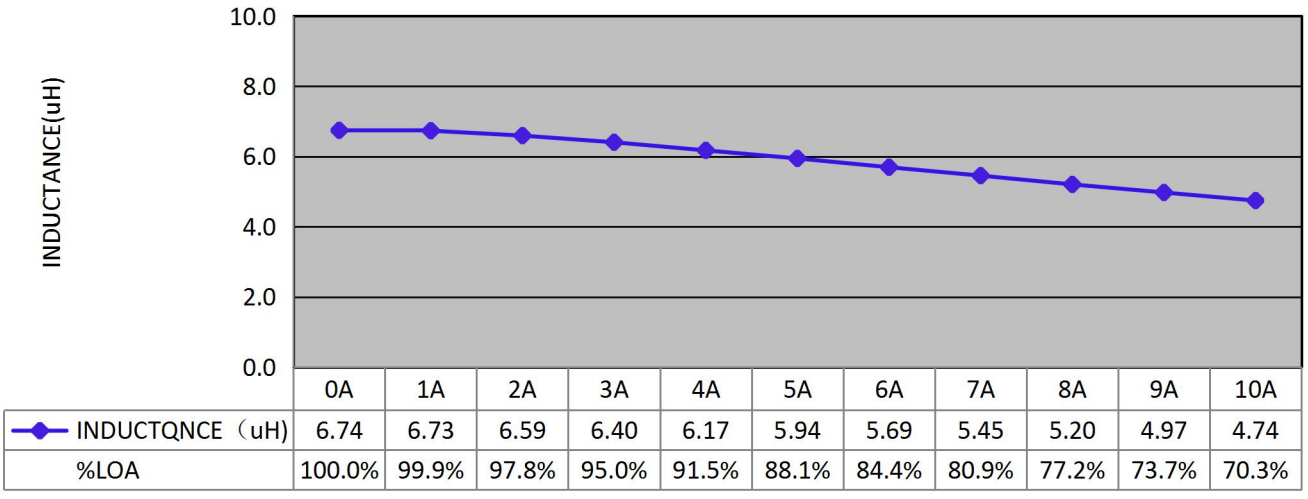
RoHS COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	2014-08-20
Gan Tong Part NO.	Sample NO.	Page
GPDC0808-6R8M02	S14082001	3-8

Inductance VS DC current

IDC	L	%LOA				
0A	6.74	100.0%				
1A	6.73	99.9%				
2A	6.59	97.8%				
3A	6.40	95.0%				
4A	6.17	91.5%				
5A	5.94	88.1%				
6A	5.69	84.4%				
7A	5.45	80.9%				
8A	5.20	77.2%				
9A	4.97	73.7%				
10A	4.74	70.3%				

CONDITION:100KHZ/1.0Vrms AMBIENT: 20℃,69.8%



	0A	1A	2A	3A	4A	5A	6A	7A	8A	9A	10A
INDUCTQNCE（uH)	6.74	6.73	6.59	6.40	6.17	5.94	5.69	5.45	5.20	4.97	4.74
%LOA	100.0%	99.9%	97.8%	95.0%	91.5%	88.1%	84.4%	80.9%	77.2%	73.7%	70.3%

DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

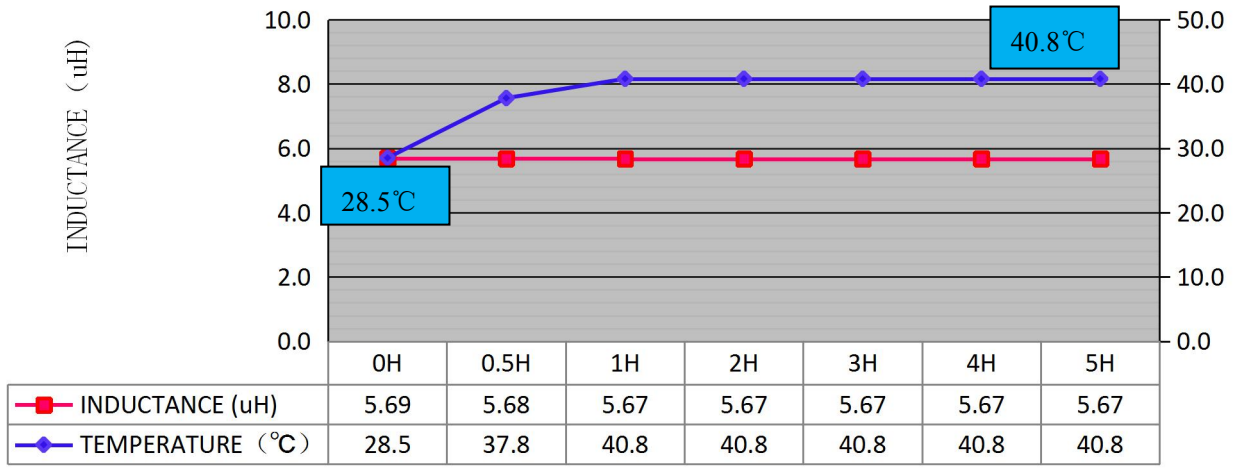
RoHS COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	2014-08-20
Gan Tong Part NO.	Sample NO.	Page
GPDC0808-6R8M02	S14082001	4-8

DC current VS Temperature

Time	L（μH）	T（℃）	△T(℃)			
0H	5.69	28.5				
0.5H	5.68	37.8	9.3			
1H	5.67	40.8	12.3			
2H	5.67	40.8	12.3			
3H	5.67	40.8	12.3			
4H	5.67	40.8	12.3			
5H	5.67	40.8	12.3			

CONDITION: Load 5.5A AMBIENT: 20℃,69.8%



Inductance VS Temperature

ELECTRICAL CHARACTERISTICS

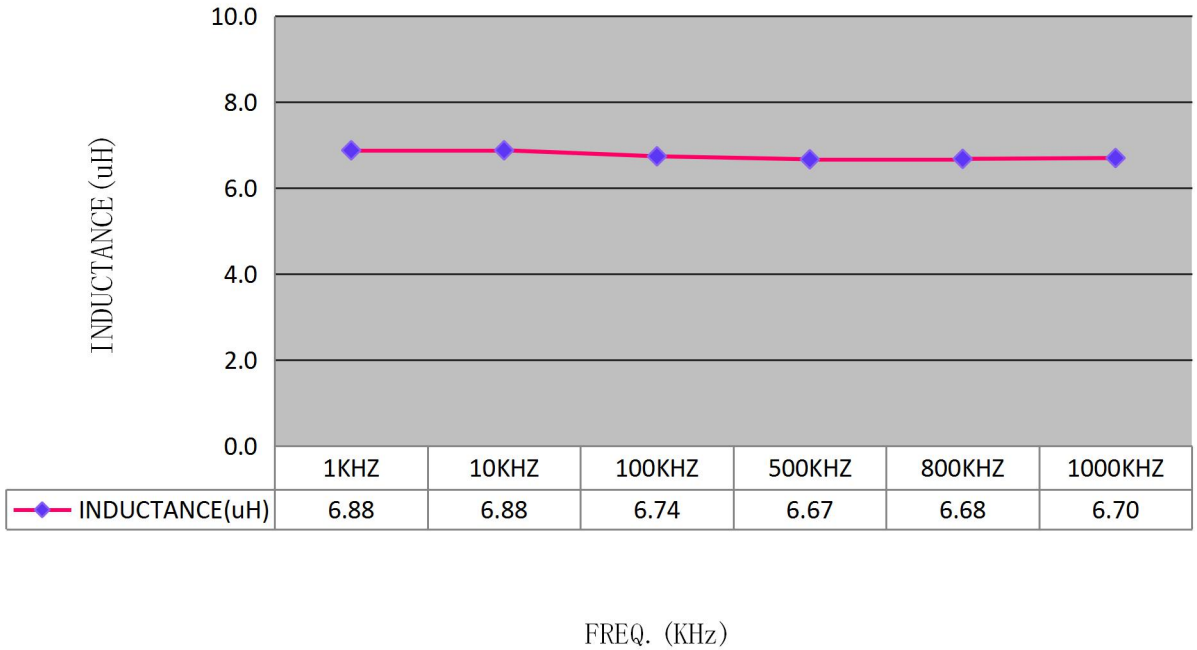
RoHS COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	2014-08-20
Gan Tong Part NO.	Sample NO.	Page
GPDC0808-6R8M02	S14082001	5-8

Inductance VS Frequency

FREQ.	L（μH）					
1KHZ	6.88					
10KHZ	6.88					
100KHZ	6.74					
500KHZ	6.67					
800KHZ	6.68					
1000KHZ	6.70					

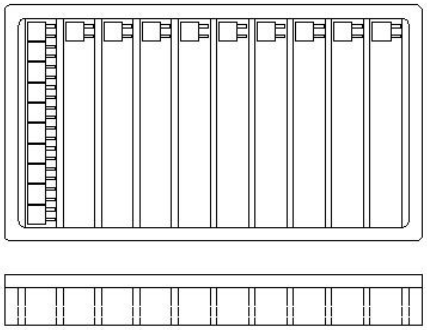
AMBIENT: 20℃, 69.8%



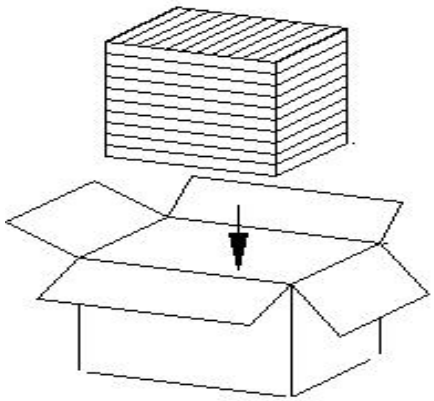
PACKING FOR SPECIFICATION

RoHS COMPLIANT

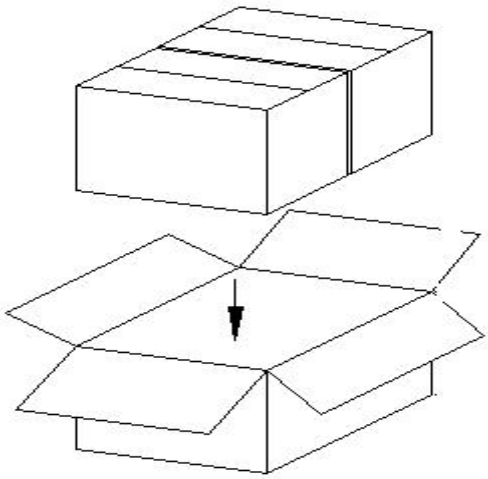
Customers Part Number	Item Name	Date
	Power Inductor	2014-08-20
Gan Tong Part NO.	Sample NO.	Page
GPDC0808-6R8M02	S14082001	6-8



PET Size : 215*148*16(D)mm
Quantity : 160PCS/PET

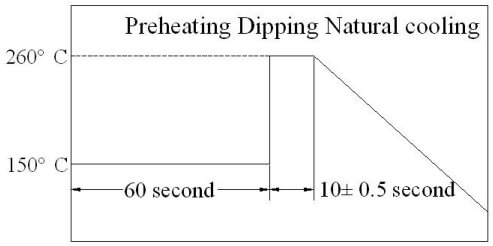
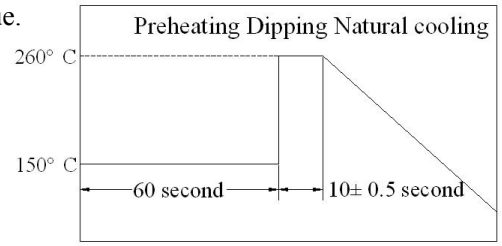
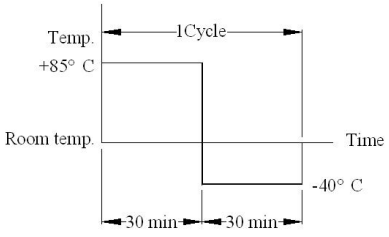


Small box Size : 238*156*165 mm
Quantity : 10PET/Small box
1Small box/1600PCS



Big box Size : 328*251*175 mm
Quantity : 2 Small box/Big box
1 Big box/3200PCS

GENERAL CHARACTERISTICS

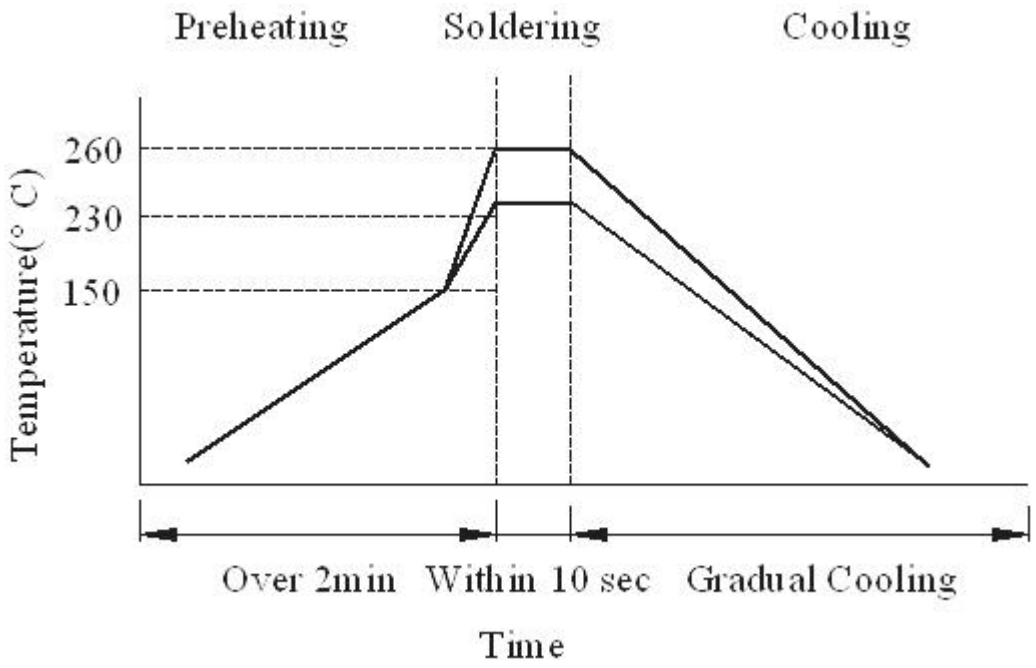
Gan Tong Part NO.: GPDC0808-6R8M02		PAGE : 7-8
Item	**Performance**	**Test Condition**
Mechanical Performance Test		
Solder ability Test	More than 90% of terminal electrode should be covered with solder. After fluxing, component shall be dipped in a melted solder bath at 260±5℃ for 10 seconds 	
Solder Heat Resistance	Components should have not evidence of electrical and mechanical damage. Inductance: within±20% of initial value. Preheat：150℃ 60 seconds Solder：(SnCu0.7) Solder Temperature：260±5℃ Flux： Rosin. Dip time：10±0.5 seconds 	
Low temperature storage test	1. Appearance: No damage. 2. Inductance: within±20% of initial value. 3.No disconnection or short circuit.	Temperature:- 40℃±5℃ Time: 500±12 Hours Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.
High temperature storage test		Temperature: 85℃±5℃ Time: 500±2 Hours Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.
Thermal Shock Test (Temperature cycle)		-40±5℃ for 30 Minutes. +85±5℃ for 30 Minutes. Total: 10 Cycles 
Humidity load life test		Temperature: 40±5℃ 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

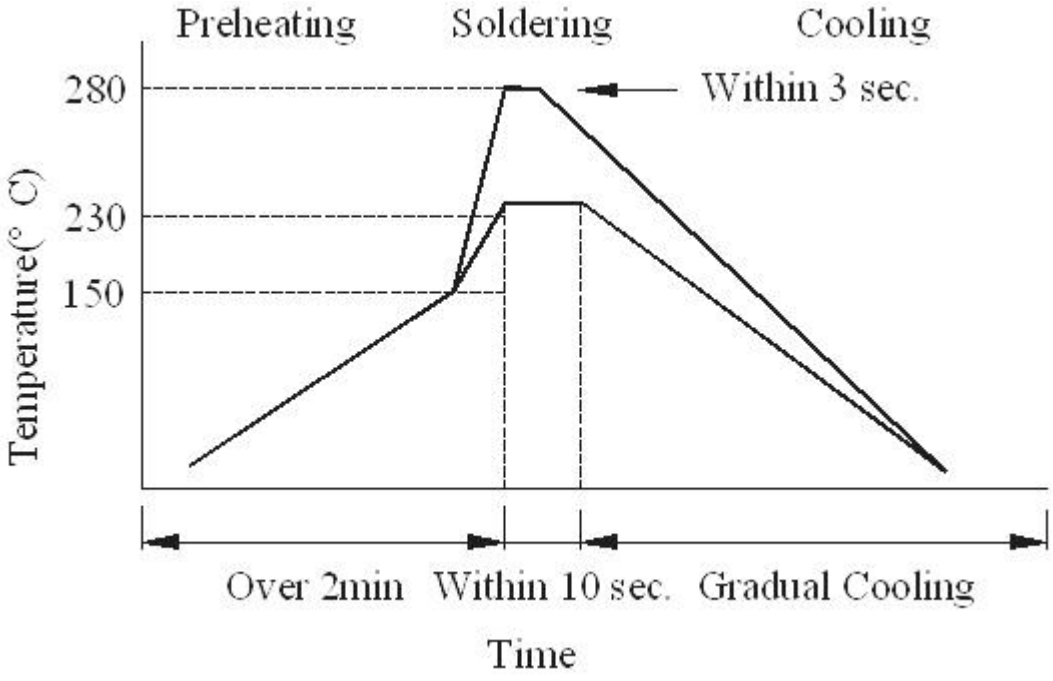
RoHS COMPLIANT

Gan Tong Part NO. : GPDC0808-6R8M02	PAGE : 8-8

Wave Soldering



Hand soldering



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