

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDC0808-100M _____

SAMPLE NO.: S11030901 REVISION NO. A DATE 09-Mar-11

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

RoHS
COMPLIANT

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3/9

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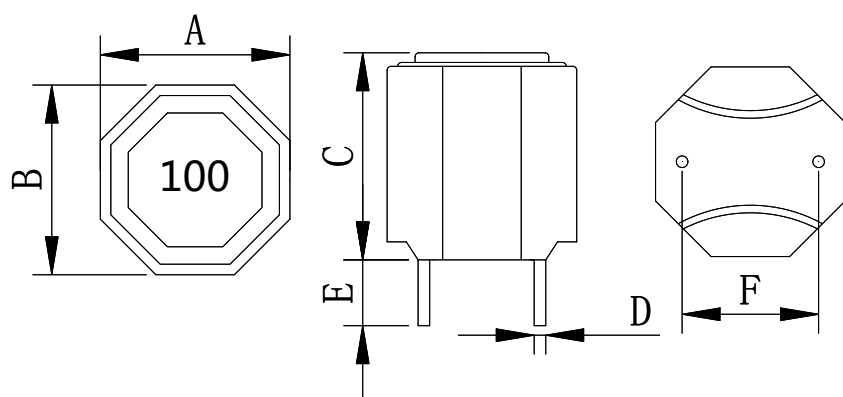
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SPECIFICATION

**RoHS
COMPLIANT**

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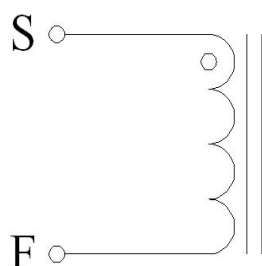
External Dimensions Unit (mm)



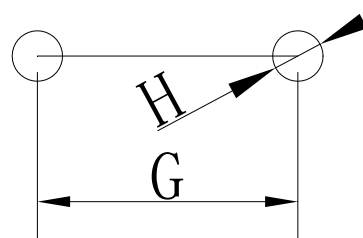
A	8.5± 0.5 (mm)
B	8.5± 0.5 (mm)
C	8.0Max (mm)
D	0.5± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5 (mm)
G	5.0± 0.5(mm)
H	0.9 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	10.0uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	32.0mΩ (Max)		Chroma /16502
I rms	Amps	3A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	6A	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	10.0 uH	32.0mΩ	3Amps	6Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	10.33	24.54	7.9°C	80.8%
2	10.31	24.52		
3	10.39	24.42		
4	10.16	24.53		
5	10.00	24.36		
6	10.08	24.86		
7	9.90	24.97		
8	10.23	24.60		
9	9.89	24.72		
10	10.24	24.47		
\bar{X}	10.15	24.60		
σ	0.17	0.18		

External Dimensions

Item	A	B	C	D	E	F
Specification	8.5	8.5	8.0	0.5	3.4	5.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	8.61	8.59	6.80	0.49	3.47	5.15
2	8.58	8.60	6.80	0.53	3.51	5.14
3	8.61	8.60	6.89	0.50	3.43	4.95
4	8.59	8.59	6.81	0.49	3.49	5.01
5	8.58	8.60	6.82	0.48	3.50	5.02
6	8.61	8.58	6.83	0.52	3.53	5.11
7	8.59	8.59	6.79	0.48	3.45	5.15
8	8.58	8.58	6.92	0.51	3.48	5.22
9	8.60	8.60	6.72	0.50	3.57	5.17
10	8.59	8.59	6.75	0.51	3.46	5.21
\bar{X}	8.59	8.59	6.81	0.50	3.49	5.11
σ	0.01	0.01	0.06	0.02	0.04	0.09

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

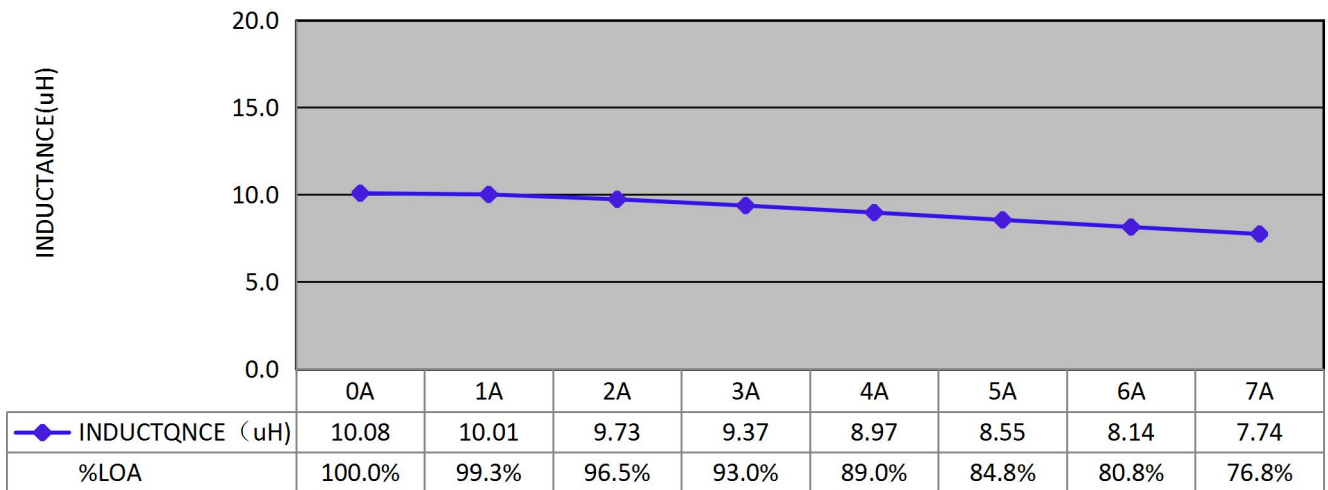
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Inductance VS DC current

IDC	L	%LOA				
0A	10.08	100.0%				
1A	10.01	99.3%				
2A	9.73	96.5%				
3A	9.37	93.0%				
4A	8.97	89.0%				
5A	8.55	84.8%				
6A	8.14	80.8%				
7A	7.74	76.8%				

CONDITTON: 100KHZ/1.0Vrms



DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

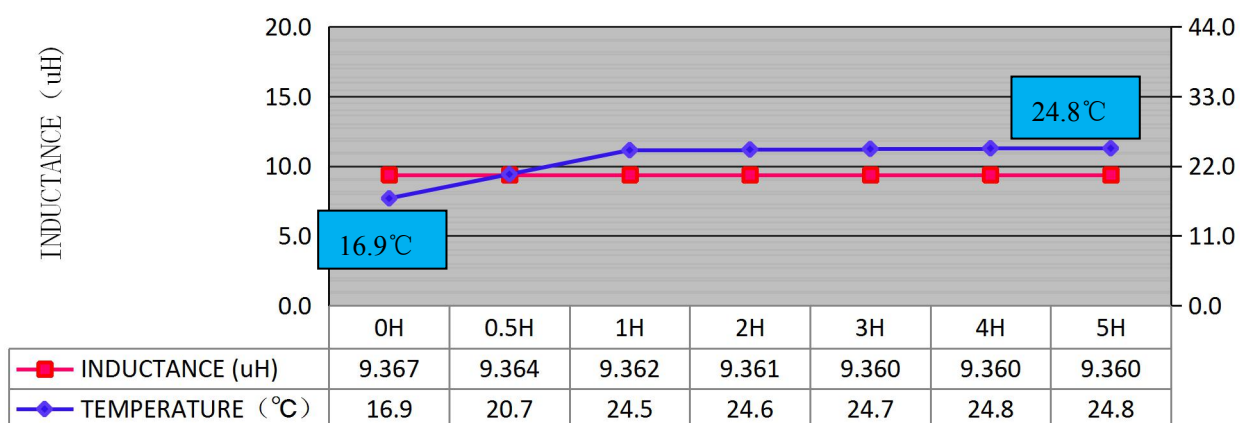
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DC current VS Temperature

Time	L (μ H)	T ($^{\circ}$ C)	Δ T($^{\circ}$ C)			
0h	9.367	16.9				
0.5h	9.364	20.7	3.8			
1h	9.362	24.5	7.6			
2h	9.361	24.6	7.7			
3h	9.360	24.7	7.8			
4h	9.360	24.8	7.9			
5h	9.360	24.8	7.9			

CONDITTON: Load 3A



Inductance VS Temperature

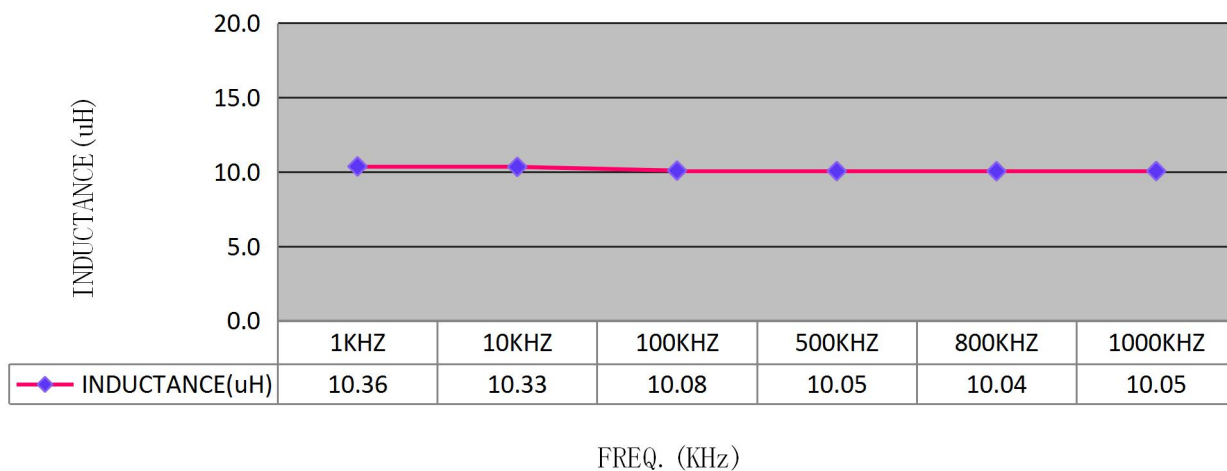
ELECTRICAL CHARACTERISTICS

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Inductance VS Frequency

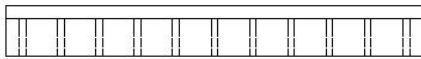
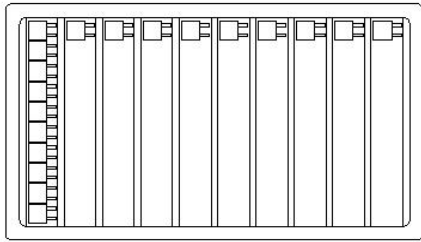
FREQ.	L (μ H)					
1KHZ	10.36					
10KHZ	10.33					
100KHZ	10.08					
500KHZ	10.05					
800KHZ	10.04					
1000KHZ	10.05					



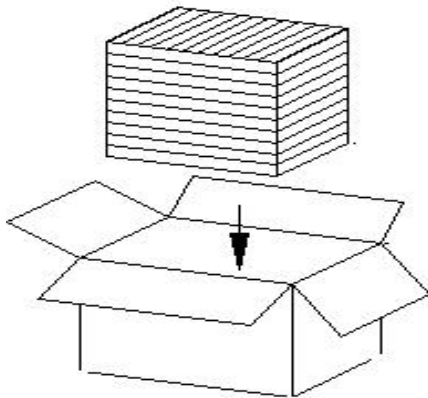
PACKING FOR SPECIFICATION

**RoHS
COMPLIANT**

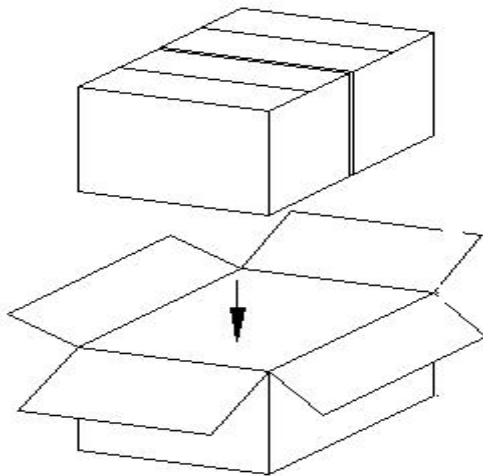
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PET Size : 215*148*16(D)mm
Quantity : 160PCS/PET



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

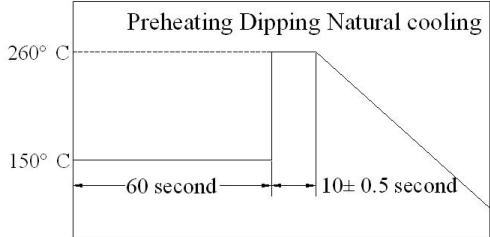
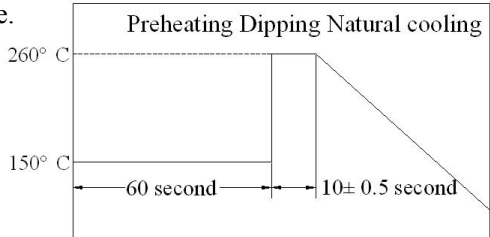
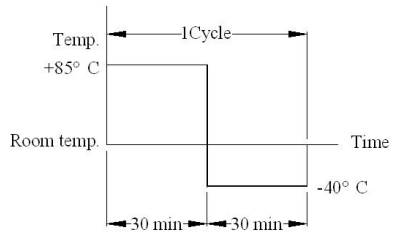


Big box Size : 328*251*175 mm
Quantity : 2 Small box/Big box
1 Big box/3200PCS

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

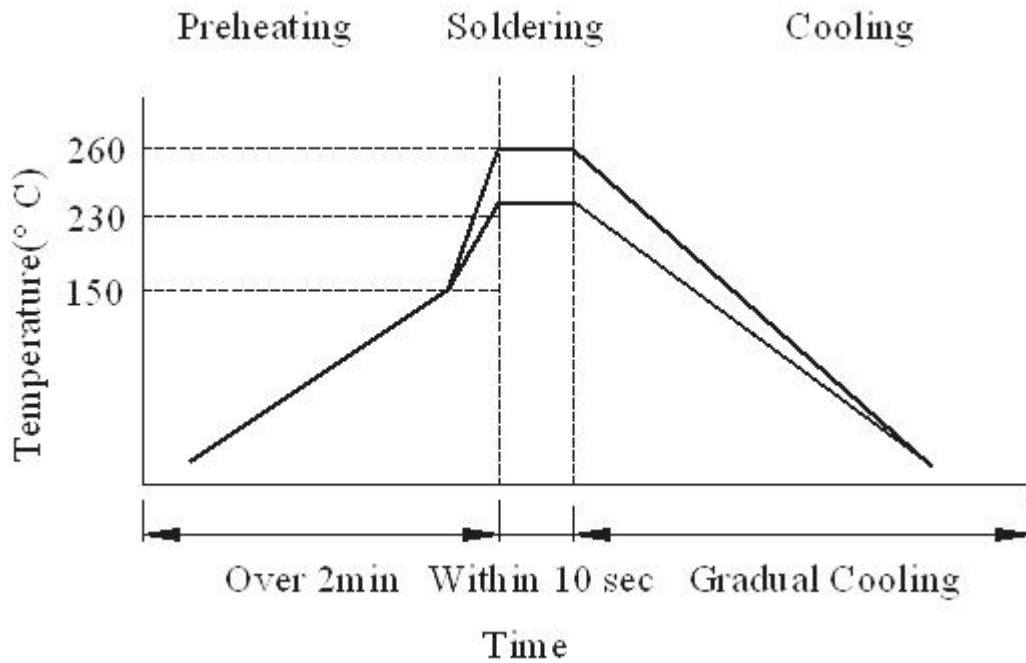
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Wave Soldering



Hand soldering

