

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION POWER INDUCTOR

SGTE PART NO. GPDC1111-220M04

SAMPLE NO. S12021302 REVISION NO. A DATE 13-Feb-12

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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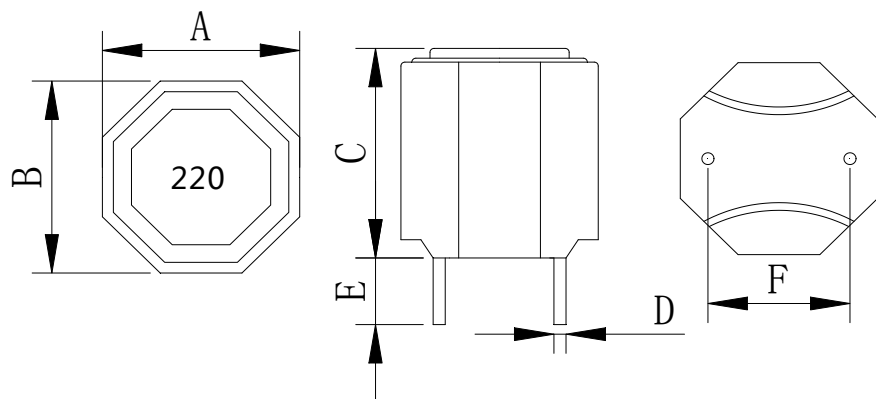
APPROVED BY	CHECKED BY	DRAWING BY
Jesse 2/13	Tony 2/13	Hu 2/13

SPECIFICATION

**RoHS
COMPLIANT**

Customers Part Number	Item Name	Date
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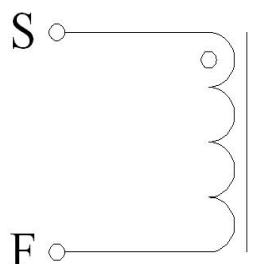
External Dimensions Unit (mm)



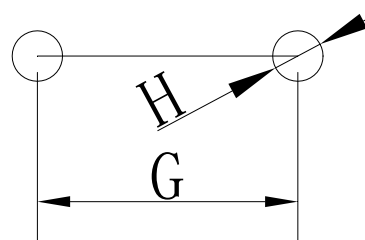
A	11.0± 0.5 (mm)
B	11.0± 0.5 (mm)
C	12.0Max (mm)
D	0.7± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5 (mm)
G	5.0 (ref)
H	1.1 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	22uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	30mΩ (Max)		Chroma /16502
I rms	Amps	6A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	9A	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

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	22uH	30mΩ	6Amps	9Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	20.91	23.04	29.5°C	82.2%
2	20.86	23.32		
3	20.99	23.18		
4	20.80	23.24		
5	20.65	23.25		
6	20.69	23.12		
7	20.68	23.14		
8	20.07	23.17		
9	21.27	23.22		
10	20.98	23.15		
\bar{X}	20.79	23.18		
σ	0.31	0.07		

External Dimensions

Item	A	B	C	D	E	F
Specification	11.0	11.0	12.0	0.7	3.4	5.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	11.13	11.11	10.77	0.72	3.45	5.34
2	11.13	11.14	10.74	0.69	3.59	5.27
3	11.14	11.13	10.55	0.71	3.60	5.44
4	11.14	11.12	10.77	0.69	3.46	5.41
5	11.16	11.15	10.71	0.70	3.38	5.49
6	11.17	11.15	10.65	0.67	3.55	5.36
7	11.16	11.15	10.87	0.70	3.56	5.21
8	11.15	11.15	11.10	0.70	3.47	5.36
9	11.17	11.13	10.65	0.71	3.56	5.41
10	11.20	11.17	10.63	0.71	3.46	5.25
\bar{X}	11.16	11.14	10.74	0.70	3.51	5.35
σ	0.02	0.01	0.15	0.01	0.07	0.08

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

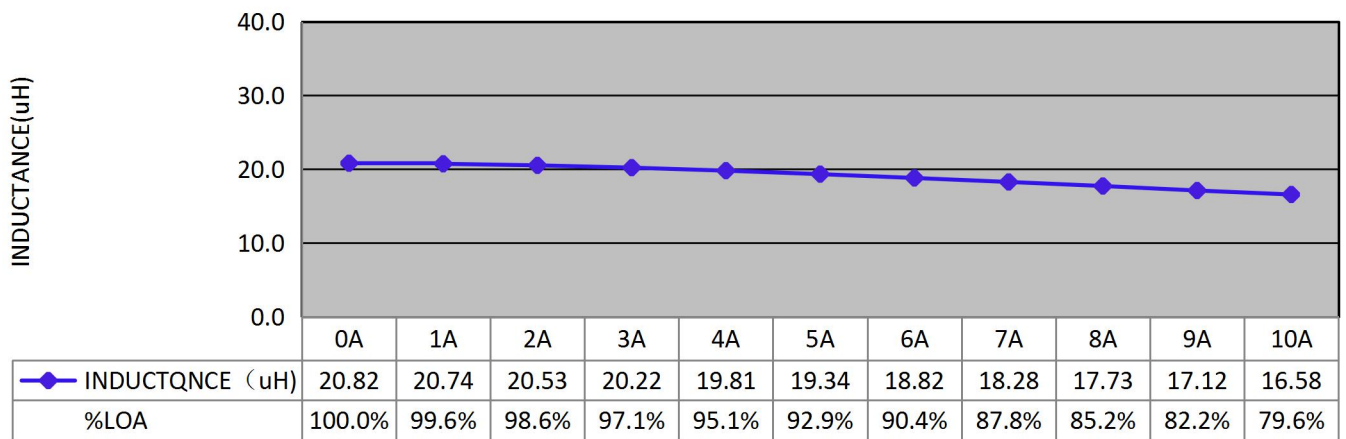
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COMPLIANT**

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Inductance VS DC current

IDC	L	%LOA				
0A	20.82	100.0%				
1A	20.74	99.6%				
2A	20.53	98.6%				
3A	20.22	97.1%				
4A	19.81	95.1%				
5A	19.34	92.9%				
6A	18.82	90.4%				
7A	18.28	87.8%				
8A	17.73	85.2%				
9A	17.12	82.2%				
10A	16.58	79.6%				

CONDITTON: 100KHZ/1.0Vrms



ELECTRICAL CHARACTERISTICS

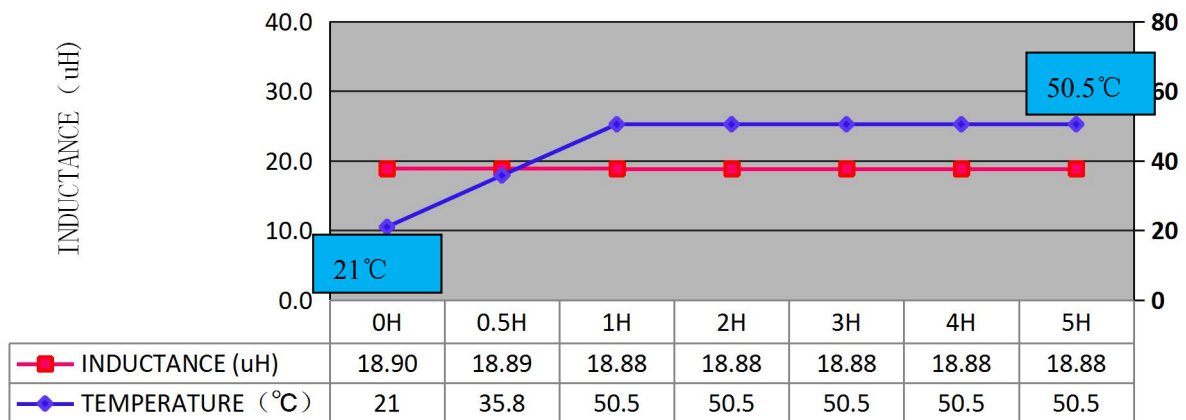
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DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0h	18.90	21.0				
0.5h	18.89	35.8	14.8			
1h	18.88	50.5	29.5			
2h	18.88	50.5	29.5			
3h	18.88	50.5	29.5			
4h	18.88	50.5	29.5			
5h	18.88	50.5	29.5			

CONDITTON: Load 6A



Inductance VS Temperature

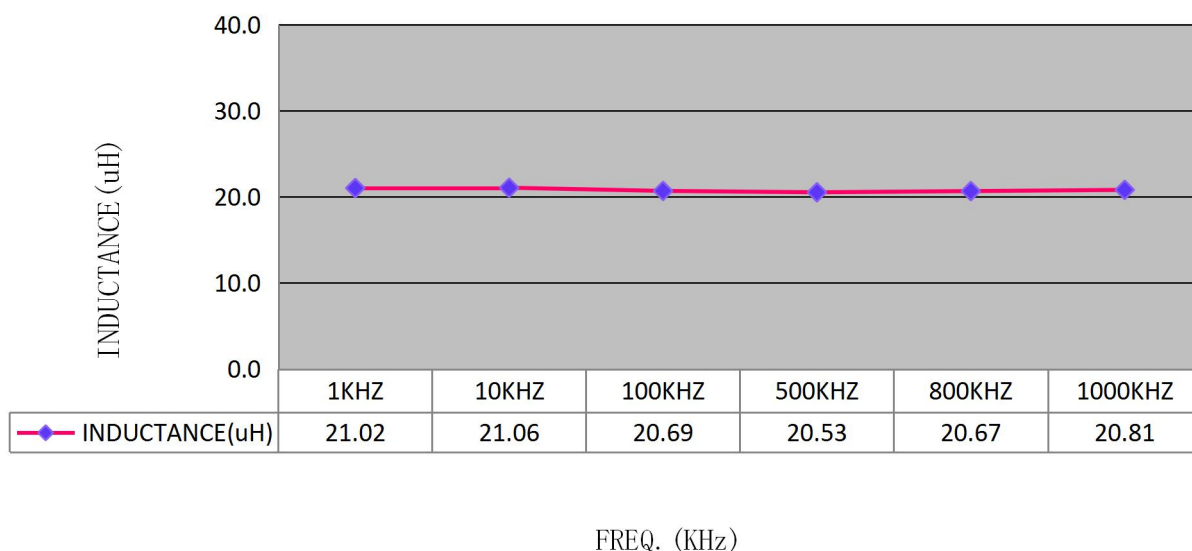
ELECTRICAL CHARACTERISTICS

RoHS
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Inductance VS Frequency

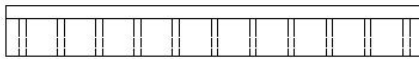
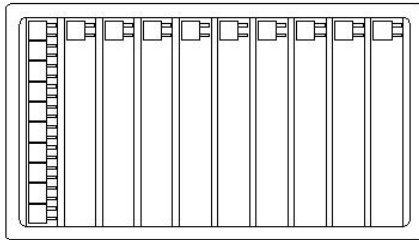
FREQ.	L (μ H)					
1KHZ	21.02					
10KHZ	21.06					
100KHZ	20.69					
500KHZ	20.53					
800KHZ	20.67					
1000KHZ	20.81					



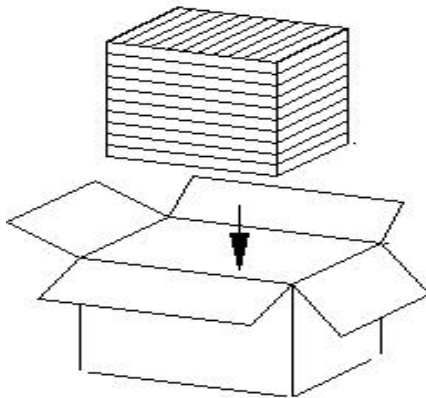
PACKING FOR SPECIFICATION

**RoHS
COMPLIANT**

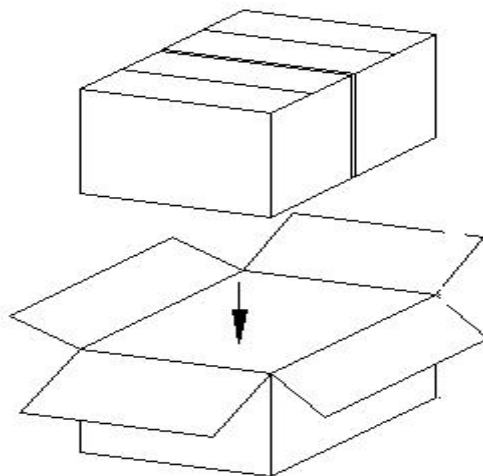
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PET Size : 214.5*148.5 *16mm
Quantity : 100PCS/PET



Small box Size : 238*156*165 mm
Quantity : 10PET/Small box
1 Small box/1000PCS

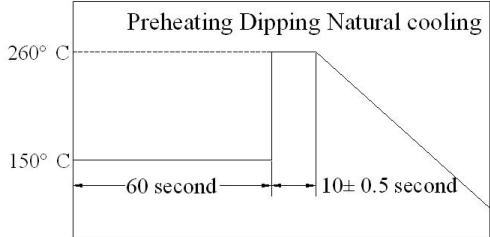
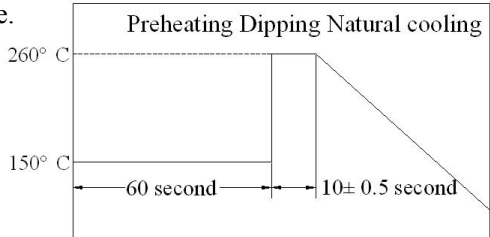
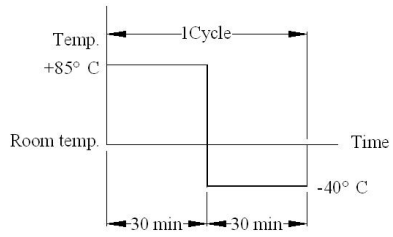


Big box Size : 328*251*175 mm
Quantity : 2 Small box/Big box
1 Big box/2000PCS

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. 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. 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</p>	
Low temperature storage test	<p>1. Appearance: No damage. 2. Inductance: within $\pm 20\%$ of initial value. 3. No disconnection or short circuit.</p>	<p>Temperature: $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time: 500 ± 12 Hours Recovery: 4 to 24 hours 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 Recovery: 4 to 24 hours 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. Total: 10 Cycles</p> 
Humidity load life test		<p>Temperature: $40 \pm 5^{\circ}\text{C}$ Humidity: 90-95% Time: 500 ± 12 Hours Load: Allowed DC current Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.</p>

THE CONDITION OF REFLOW

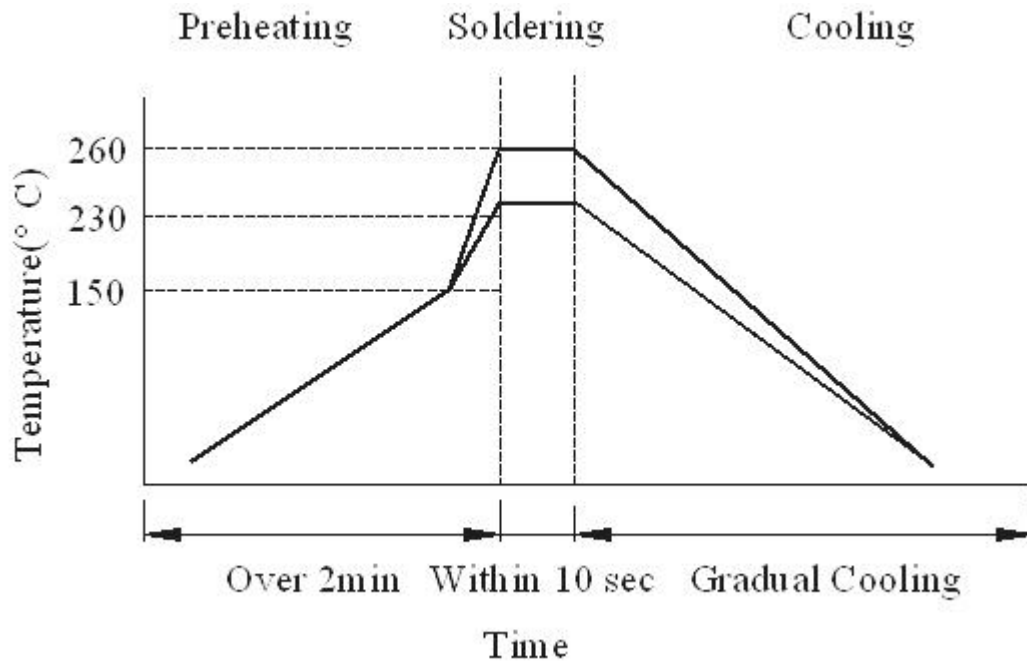
RoHS
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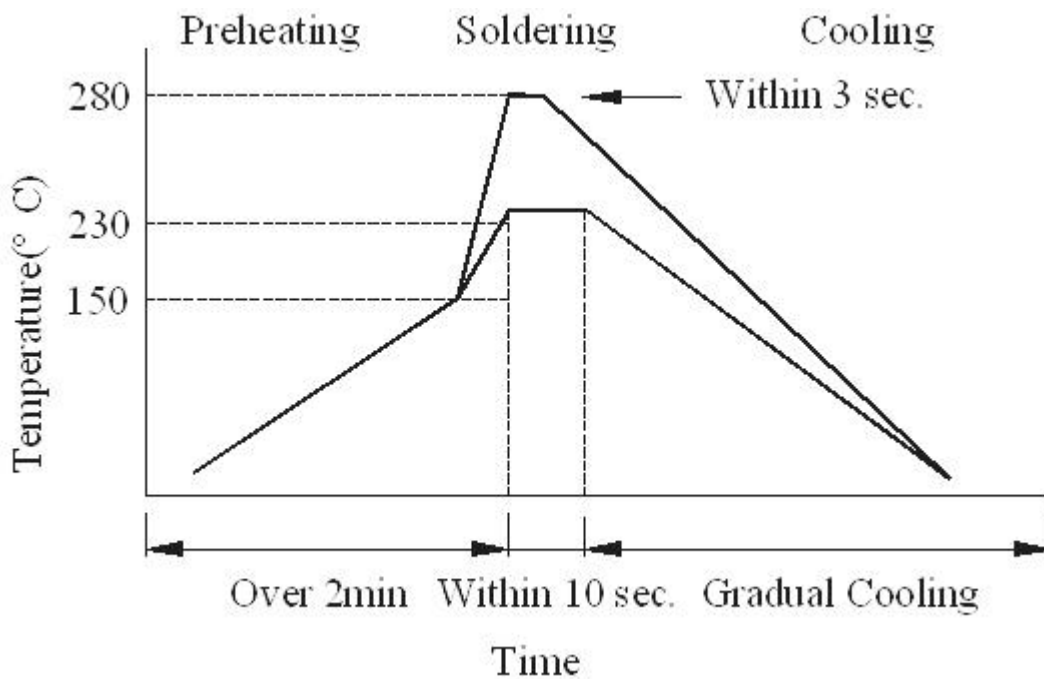
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Wave Soldering



Hand soldering



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