

5025

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ POWER INDUCTOR _____

SGTE PART NO. _____ GPDC1010-330M _____

SAMPLE NO. S09070203 REVISION NO. A DATE 3-Jul-09

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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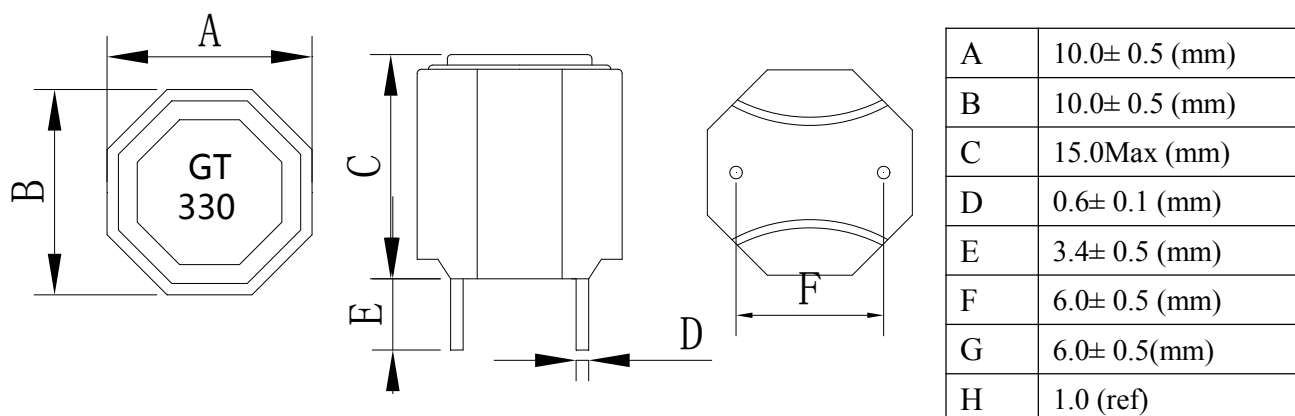
APPROVED BY	CHECKED BY	DRAWING BY
		Lisa 7/2

SPECIFICATION

**RoHS
COMPLIANT**

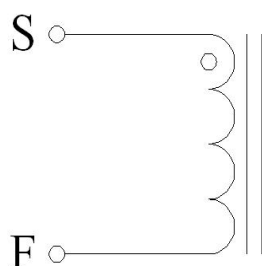
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External Dimensions Unit (mm)

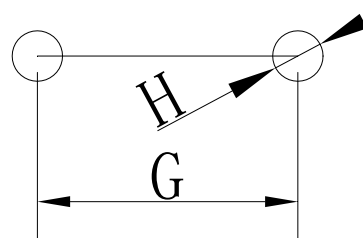


Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	33.0uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	57.0mΩ (Max)		Chroma /16502
I rms	Amps	3A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	5A	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	33.0uH	57.0mΩ	3Amps	5Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	32.39	44.74	14.7°C	83.6%
2	32.69	45.16		
3	33.09	45.01		
4	33.00	44.72		
5	32.94	44.50		
6	32.45	44.69		
7	32.69	44.47		
8	33.12	45.12		
9	33.14	44.39		
10	32.79	44.65		
\bar{X}	32.83	44.75		
σ	0.26	0.26		

External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	15	0.6	3.4	6.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	10.13	10.17	13.87	0.61	3.54	6.09
2	10.21	10.16	13.92	0.58	3.49	6.04
3	10.16	10.13	13.83	0.59	3.51	6.13
4	10.19	10.08	13.79	0.59	3.64	6.24
5	10.08	10.15	13.85	0.6	3.54	6.17
6	10.15	10.14	13.74	0.58	3.44	6.10
7	10.15	10.14	13.99	0.58	3.56	6.05
8	10.18	10.16	14.02	0.59	3.57	6.14
9	10.16	10.21	13.85	0.61	3.47	6.17
10	10.17	10.24	13.79	0.60	3.36	6.30
\bar{X}	10.16	10.16	13.87	0.59	3.51	6.14
σ	0.03	0.04	0.08	0.01	0.07	0.08

Inductance measured at 100KHz/1Vrms.

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

ELECTRICAL CHARACTERISTICS

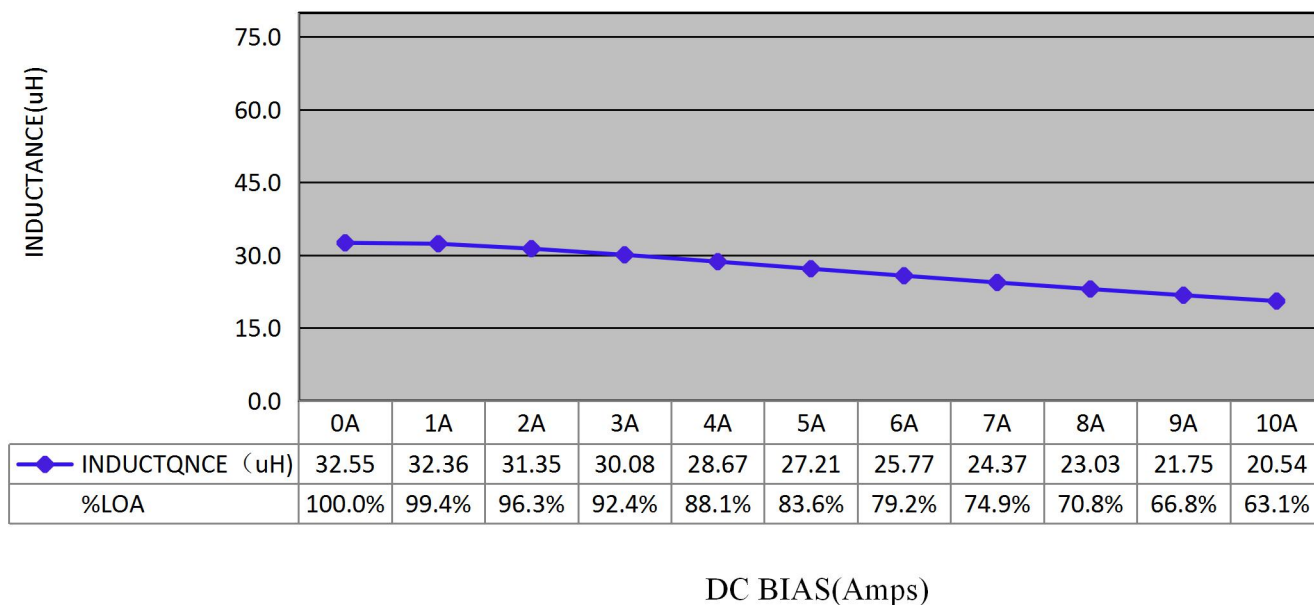
**RoHS
COMPLIANT**

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Inductance VS DC current

IDC	L	%LOA				
0A	32.55	100%				
1A	32.36	99.4%				
2A	31.35	96.3%				
3A	30.08	92.4%				
4A	28.67	88.1%				
5A	27.21	83.6%				
6A	25.77	79.2%				
7A	24.37	74.9%				
8A	23.03	70.8%				
9A	21.75	66.8%				
10A	20.54	63.1%				

CONDITTON: 100KHZ/1.0Vrms



ELECTRICAL CHARACTERISTICS

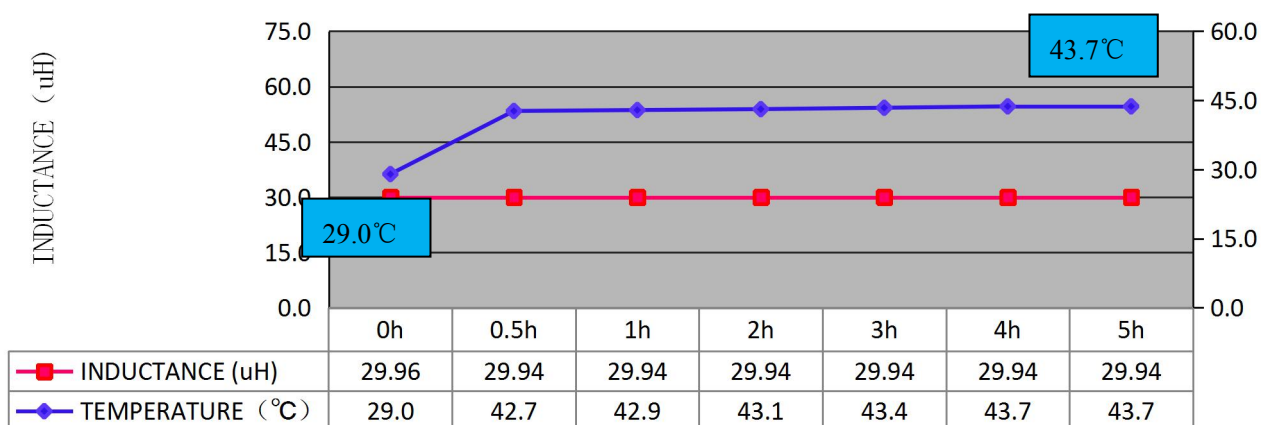
**RoHS
COMPLIANT**

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DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0h	29.96	29.0				
0.5h	29.94	42.7	13.7			
1h	29.94	42.9	13.9			
2h	29.94	43.1	14.1			
3h	29.94	43.4	14.4			
4h	29.94	43.7	14.7			
5h	29.94	43.7	14.7			

CONDITTON: Load 3A



Inductance VS Temperature

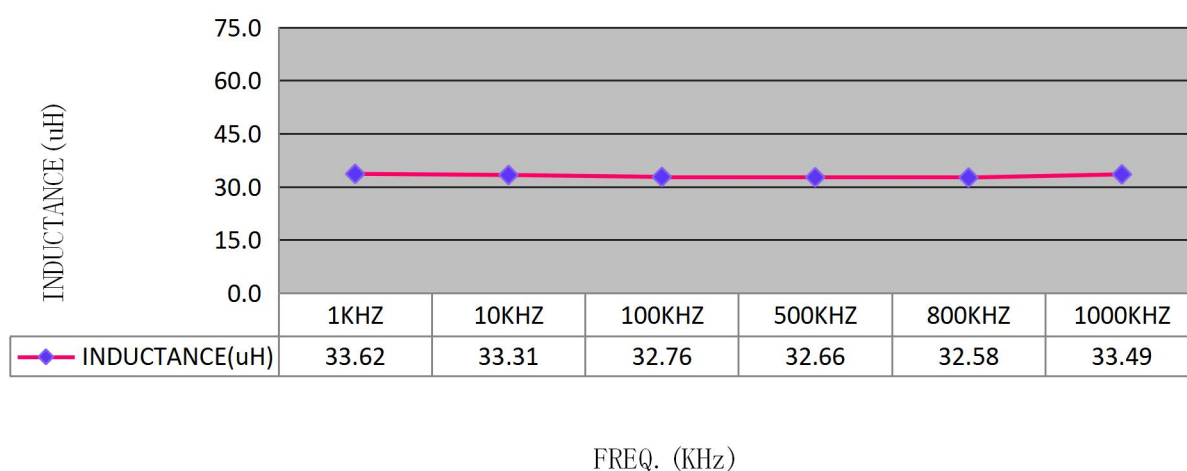
ELECTRICAL CHARACTERISTICS

**RoHS
COMPLIANT**

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Inductance VS Frequency

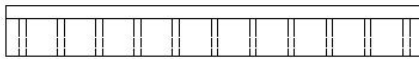
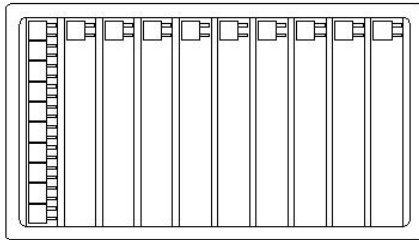
FREQ.	L (μH)					
1KHZ	33.62					
10KHZ	33.31					
100KHZ	32.76					
500KHZ	32.66					
800KHZ	32.58					
1000KHZ	33.49					



PACKING FOR SPECIFICATION

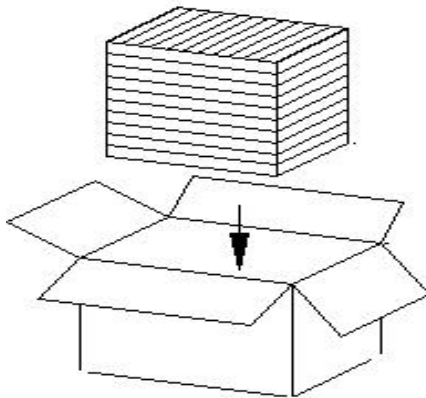
**RoHS
COMPLIANT**

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PET Size : 215*148 *16 (D) mm

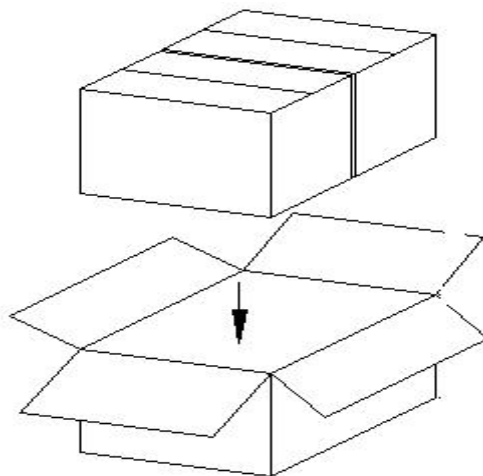
Quantity : 130PCS/PET



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

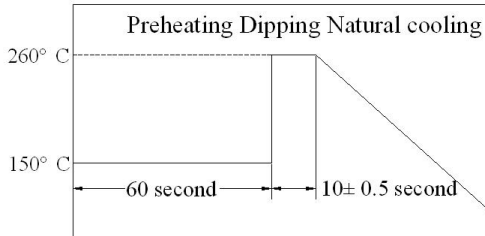
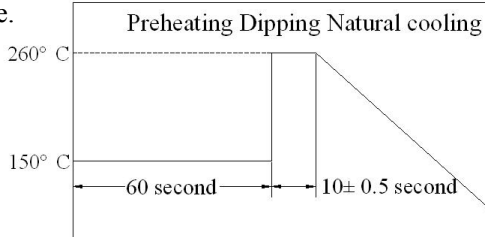
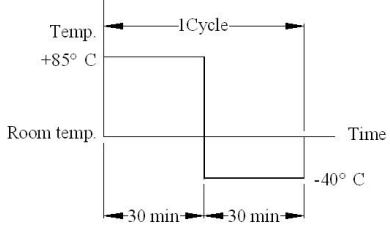
1 Big box/2600PCS

GENERAL CHARACTERISTICS

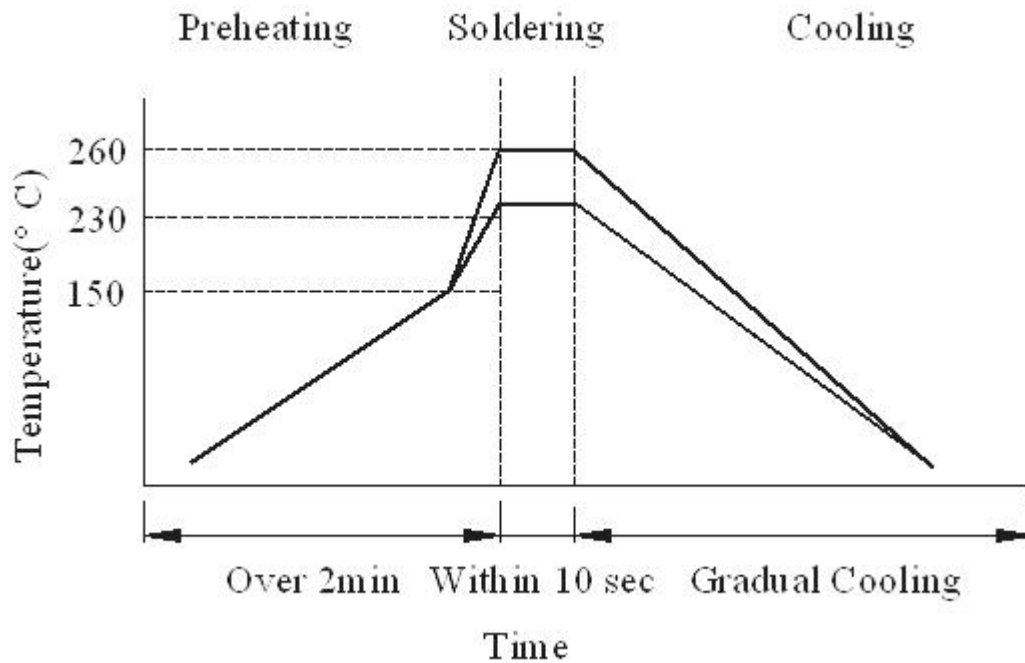
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Item	Performance	Test Condition
Mechanical Performance Test		
Solder ability Test	More than 90% of terminal electrode should be covered with solder. After fluxing, component shall be dipped in a melted solder bath at $260\pm 5^{\circ}\text{C}$ for 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.

Wave Soldering



Hand soldering

