

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION _____ SMD POWER INDUCTOR _____

SGTE PART NO. _____ GPSR0750-330MS _____

SAMPLE NO. S10062205 REVISION NO. A DATE 22-Jun-10

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

SGTE 感通科技

深圳感通科技有限公司（大陸工廠）

GANTONG TECHNOLOGY (SHENZHEN) CO., LTD.

深圳市平湖街道平湖村萬福路 26 號

No.26 Wan fu Road, Ping hu Village. Ping hu town, Shenzhen City.

Tel: 0755-28457600

Fax: 0755-28452952

感通科技有限公司（台灣辦事處）

臺北縣汐止市新台 5 路一段 77 號 10 樓之 7

10F~7, NO.77, Sec.1, Hsin Tai 5 Road, Shi-chi City, Taipei.

Tel: 886-2-8698-2341

Fax: 886-2-8698-2342

納美科技股份有限公司（香港辦事處）

LAPEE TECHNOLOGY LIMITED

香港九龍尖沙嘴加連威老道嘉蘭圍 5-11 號利時商業大廈 17 樓 1713 室

Room 1713 17/F, Rise Commercial Bldg5-11 Granville Cri cuit, Granville Rd, TSim Sha Tsui., Kln

Tel: 852-25301111

Fax: 852-25371111

<http://www.szgte.com>

SPECIFICATION

**RoHS
COMPLIANT**

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APPROVED BY

CHECKED BY

DRAWING BY

Jesse

6/22

Gary

6/22

Lily

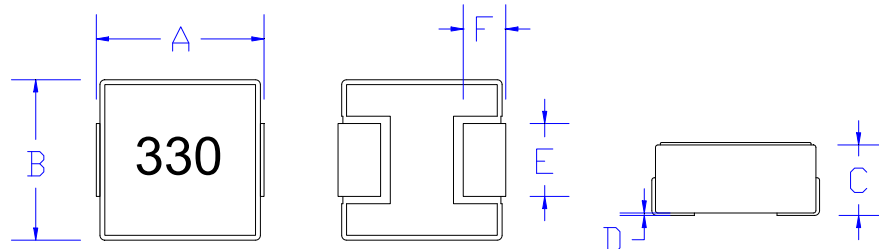
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SPECIFICATION

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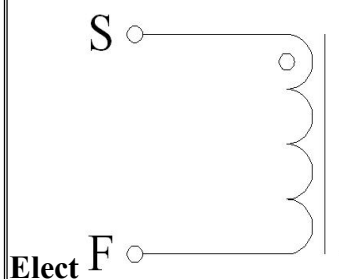
External Dimensions Unit (mm)



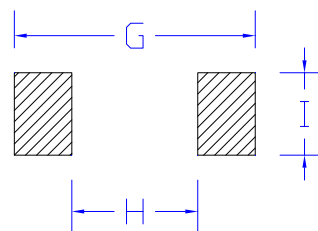
A	7.2±0.3
B	6.6±0.3
C	5.0 MAX
D	≤0.15
E	3.0±0.3
F	1.6±0.3
G	8.4 REF
H	3.7 REF
I	3.5 REF

Coating: uncolored

Connection



Recommended Land Pattern



Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	33uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	237mΩ (Max)		Chroma /16502
I rms	Amps	2A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	4A	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	33uH	237m Ω	2Amps	4Amps
Tolerance	$\pm 20\%$	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	33.59	197.47	11.5 $^{\circ}\text{C}$	77.8%
2	33.23	196.25		
3	33.61	196.11		
4	33.57	195.96		
5	35.64	199.27		
6	32.47	197.79		
7	33.18	197.86		
8	34.67	197.85		
9	31.81	197.78		
10	35.39	197.13		
\bar{X}	33.72	197.35		
σ	1.15	0.97		

External Dimensions

Item	A	B	C	D	E	F
Specification	7.2	6.6	5.0		3.0	1.6
Tolerance	± 0.3	± 0.3	MAX	≤ 0.15	± 0.3	± 0.3
1	7.32	6.76	3.89	0.10	3.05	1.47
2	7.35	6.73	3.78	0.05	2.98	1.67
3	7.31	6.77	3.81	0.08	3.01	1.58
4	7.36	6.75	3.92	0.09	3.03	1.45
5	7.34	6.72	3.86	0.07	2.99	1.54
6	7.30	6.74	3.79	0.11	3.04	1.63
7	7.33	6.75	3.87	0.06	3.00	1.56
8	7.38	6.73	3.83	0.09	3.07	1.73
9	7.35	6.74	3.90	0.07	3.05	1.61
10	7.37	6.71	3.88	0.08	3.01	1.53
\bar{X}	7.34	6.74	3.85	0.08	3.02	1.58
σ	0.02	0.02	0.05	0.02	0.03	0.08

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25 $^{\circ}\text{C}$. Humidity 60 \pm 10%

ELECTRICAL CHARACTERISTICS

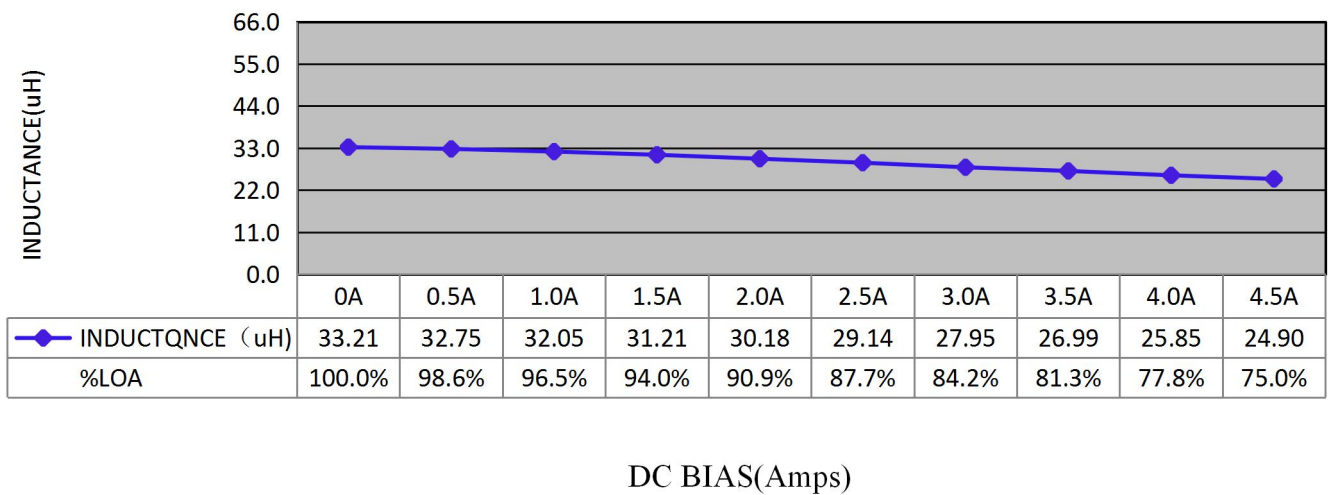
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Inductance VS DC current

IDC	L	%LOA				
0A	33.21	100.0%				
0.5A	32.75	98.6%				
1.0A	32.05	96.5%				
1.5A	31.21	94.0%				
2.0A	30.18	90.9%				
2.5A	29.14	87.7%				
3.0A	27.95	84.2%				
3.5A	26.99	81.3%				
4.0A	25.85	77.8%				
4.5A	24.90	75.0%				

CONDITTON: 100KHz/1.0Vrms



ELECTRICAL CHARACTERISTICS

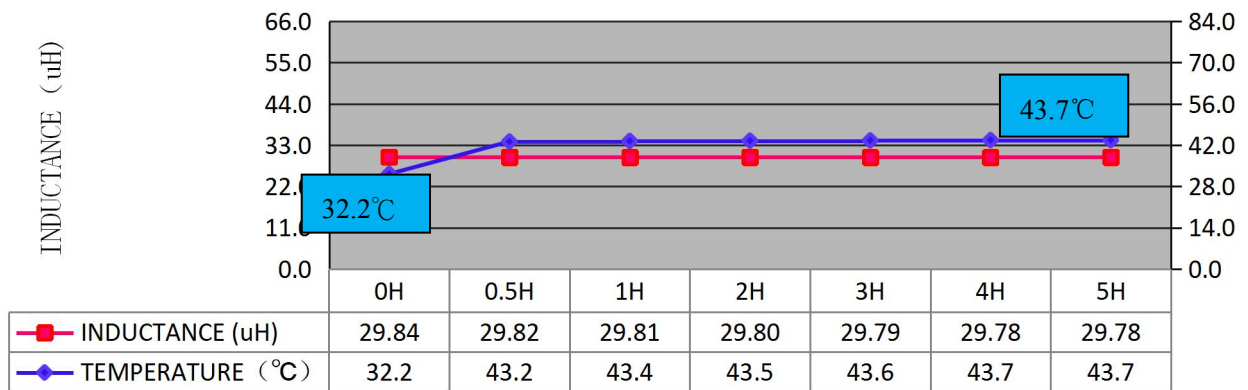
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DC current VS Temperature

Time	L (μ H)	T ($^{\circ}$ C)	Δ T($^{\circ}$ C)			
0H	29.84	32.2				
0.5H	29.82	43.2	11.0			
1H	29.81	43.4	11.2			
2H	29.80	43.5	11.3			
3H	29.79	43.6	11.4			
4H	29.78	43.7	11.5			
5H	29.78	43.7	11.5			

CONDITTON: Load 2A



Inductance VS Temperature

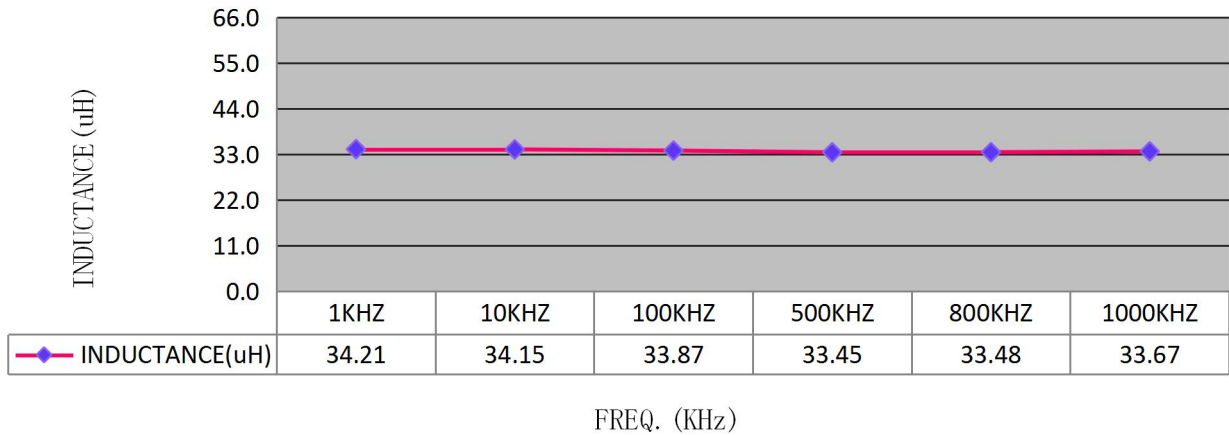
ELECTRICAL CHARACTERISTICS

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Inductance VS Frequency

FREQ.	L (μ H)					
1KHZ	34.21					
10KHZ	34.15					
100KHZ	33.87					
500KHZ	33.45					
800KHZ	33.48					
1000KHZ	33.67					

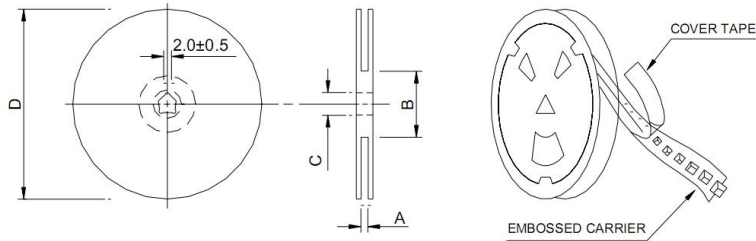


PACKING FOR SPECIFICATION

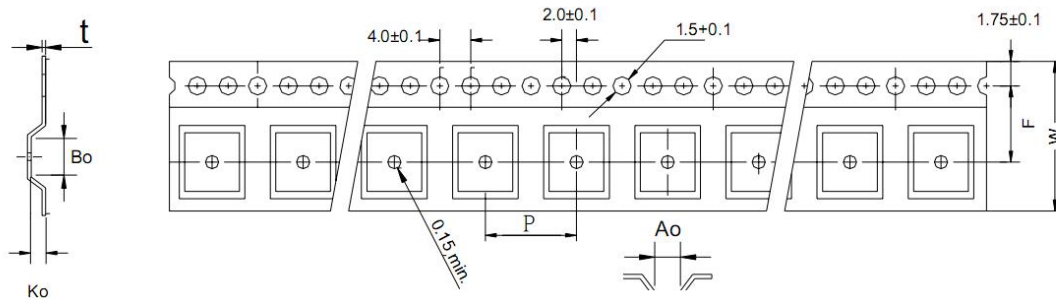
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Packaging Information:



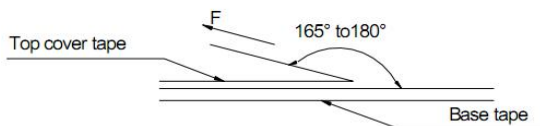
TYPE	A(mm)	B(mm)	C(mm)	D(mm)
13' '*16mm	16.0±0.5	100±2	13.5±0.5	330



TYPE	A	B	C	W	P
GPSR0750	1000	16	330	16	12

Tearing Off Force

The force for tearing off cover tape is 15 to 60 grams in the arrow direction under the following conditions.



Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed mm/min
5~35	45~85	860~1060	300

Application Notice

Storage Conditions

To maintain the solderability of terminal electrodes:

1. Temperature and humidity conditions: Less than 30°C and 70% RH.
2. Recommended products should be used within 6 months from the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

Transportation

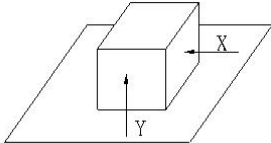
1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

GENGRAL CHARACTERISTICS

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.STORAGE TEMPERATURE :	25°C~30°C HUMIDITY 45~85% RH
2.OPERATING TEMPERATURE RANGE :	-30°C ~+125°C (CONTAIN HEATING COIL)
3.EXTERNAL APPEARANCE :	NO EXTERNAL DEFECTS CAN BE FOUND IN THE VISUAL INSPECTION.
4. TERMINAL STRENGTH :	NO TERMINAL DETACHMENT SHOULD BE FOUND WHEN THE DEVICE IS PUSHED IN TWO DIRECTIONS OF X AND Y WITH THE FORCE OF 10.0N FOR 10±2 SECONDS AFTER SOLDERING BETWEEN COPPER PLATE AND THE TERMINALS.(REFER TO FIGURE AT RIGHT) 
5.HEAT ENDURANCE TEST :	REFER TO <u>Recommended Soldering Temperature Graph</u> . (AT PAGE 2) .
6.INSULATING RESISTANCE :	THE INSULATION RESISTANCE SHOULD BE OVER 100MΩ WHEN D.C.100V IS APPLIED TO THE WINDING –CORE. MEANWHILE NO STRUCTURE AND ELECTRIC DEFECTS SHOULD BE FOUND FOR 1 MINUTE.
7. TEMPERATURE FEATURE :	INDUCTANCE COEFFICIENT IS $(0\sim 2000)\times 10^{-6}(-25\sim +85^{\circ}\text{C})$
8. HUMIDITY TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0% AND NO STRUCTURE AND ELECTRIC DEFECTS CAN BE FOUND AFTER 96 HOURS TEST UNDER THE CONDITION OF RELATIVE HUMIDITY OF 90~95% AND TEMPERATURE OF 40±2°C. AND 1 HOUR STORAGE UNDER ROOM AMBIENT CONDITIONS AFTER THE DEVICE IS WIPED WITH DRY CLOTH.
9. VIBRATION TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0% AFTER 1 HOUR SWEEPING VIBRATION IN EACH THREE DIRECTIONS. NAMELY, FREQUENCY IS 10~55~10Hz AND THE AMPLITUDE OF 1MINUTE CYCLE IS 1.5mm PP.
10.SHOCK TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0% AFTER THE TEST WITH GOM-BLOCK SHOCK TESTING MACHINE, ONCE IN EACH OF THE THREE PERPENDICULAR AXIS DIRECTIONS. THE SHOCK ACCELERATION IS 981m/s ² .

THE CONDITION OF REFLOW

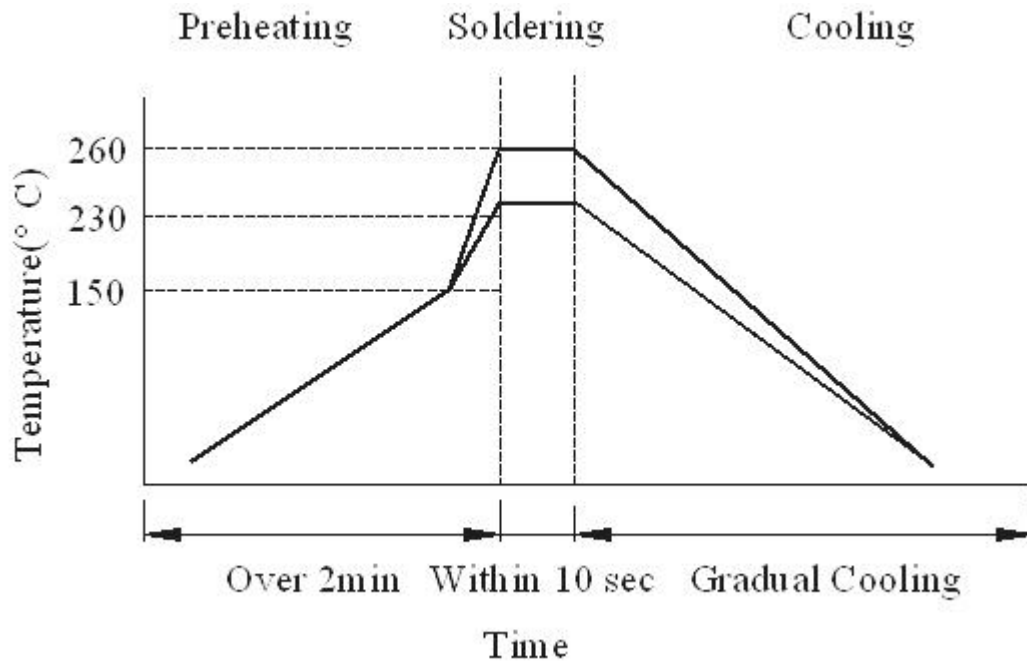
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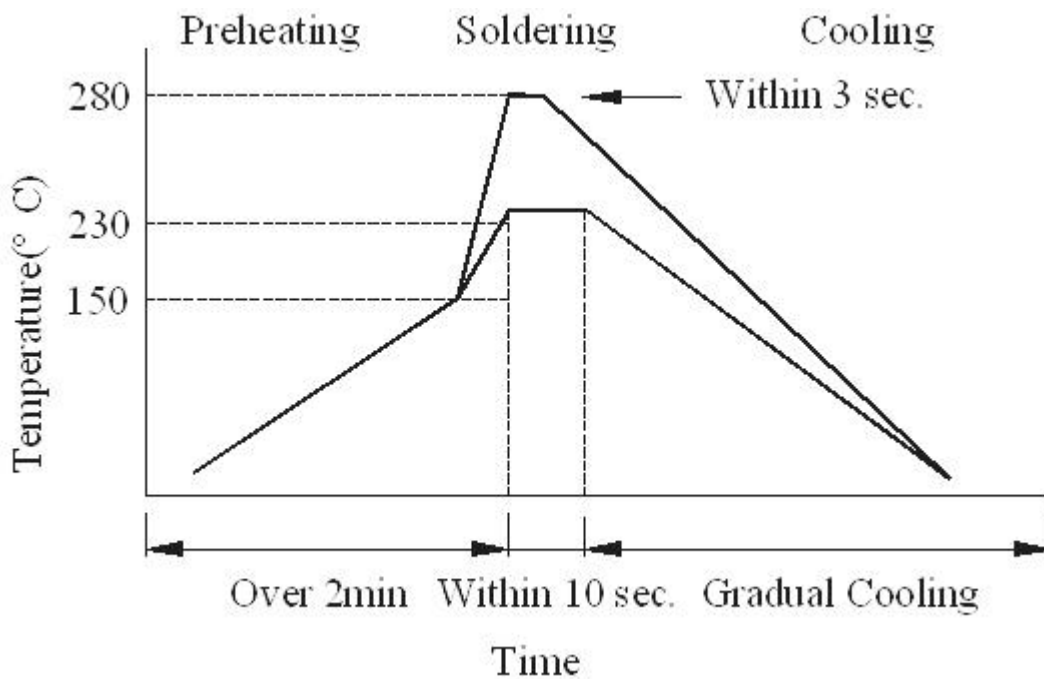
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Wave Soldering



Hand soldering



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