

CUSTOMER _____

CUSTOMER' S P/N _____

DESCRIPTION SMD Power Inductor

SGTE PART NO. GPSV-AP1365-100MS

SAMPLE NO. S21012201 REVISION NO. A0 DATE 2021/1/23

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.

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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

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<http://www.sgte.cn>

**RoHS
COMPLIANT**

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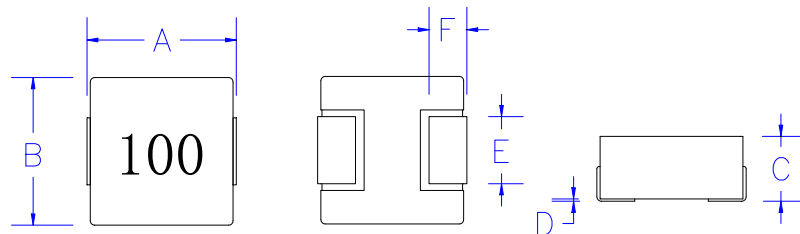
DRAWN BY	CHECKED BY	APPROVED BY
深圳感通科技有限公司 Shenzhen Gantong Technology Co., Ltd 深圳市龙岗区平湖街道平湖街道万福路 26 号 No. 26. Wanfu Road, Pinghu Street, Longgang District, Shenzhen Tel: (0755) 28457600 Fax: (0755) 28457610		

SPECIFICATION

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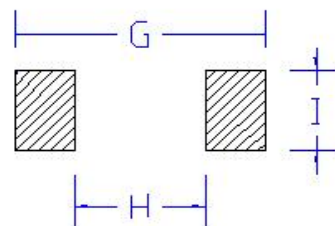
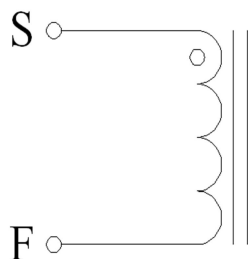
Customers Part Number	Item Name	Date	
	SMD Power Inductor	2021/1/23	
Gan Tong Part NO.	Sample NO.	Revision No.	A0
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MECHANICAL & DIMENSIONS



A	13.45±0.5
B	12.6±0.3
C	6.5 Max
D	≤0.2
E	5.8±0.3
F	2.2±0.5
G	14.5 REF
H	8.0 REF
I	6.5 REF

Recommended Land Pattern



ELECTRICAL REQUIREMENTS:

PARAMETER	SPECIFICATION	CONDITION	TEST INSTRUMENTS
L	10± 20% uH	100KHz/1V	■ LCR Agilent4284A / Chroma 11300 ■ CH16502 IMPEDANCE METER ■ A4284A+A42841A LCR METER ■ Chroma /11300+3302+1320+1320S
DCR	20 max mΩ	@ 25℃	
I-sat	17.0 A mps	≧65%L0A	
Irms	7.0 A mps	ΔT ≤40℃	

- 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.
- Shenzhen Gan Tong Technology Co., Ltd
- Shenzhen Longgang District Pinghu Street Pinghu Street Wanfu Road 26 No. 26.
- Operating Temperature Range: -40℃ to 125℃.
- No. 26. Wanfu Road, Pinghu Street, Longgang District, Shenzhen
- Tel: (0755) 28457600 Fax: (0755) 28457610

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Electrical Characteristic :

PARAMETER	L	DCR	I-sat	Irms	
UNIT	uH	mΩ	A mps	A mps	
SPECIFICATION	10± 20%	20 max	17.0	7.0	
CONDITION	100KHz/1V	@ 25℃	≥ 65%L0A	ΔT ≤ 40℃	
1	10.92	15.09	74.8%	33.5℃	
2	10.75	15.33			
3	10.83	14.99			
4	10.91	15.37			
5	10.80	14.97			
6	10.59	14.96			
7	10.57	14.92			
8	10.50	14.80			
9	10.90	14.83			
10	10.59	14.89			
MEAN	10.74	15.02			
R	0.42	0.57			

External Dimensions:

NO	A	B	C	D	E	F		
	13.45±0.5	12.6±0.3	6.5 Max	≤0.2	5.8±0.3	2.2±0.5		
1	13.70	12.55	6.33	0.15	5.82	2.61		
2	13.71	12.52	6.15	0.18	5.82	2.27		
3	13.62	12.53	6.19	0.13	5.82	2.49		
4	13.59	12.51	6.24	0.15	5.82	2.58		
5	13.70	12.53	6.31	0.16	5.82	2.69		
6	13.65	12.54	6.13	0.18	5.82	2.68		
7	13.65	12.51	6.16	0.16	5.82	2.69		
8	13.72	12.52	6.27	0.17	5.82	2.69		
9	13.59	12.53	6.38	0.18	5.82	2.67		
10	13.63	12.55	6.12	0.13	5.82	2.68		
MEAN	13.66	12.53	6.23	0.16	5.82	2.61		
R	0.13	0.04	0.26	0.05	0.00	0.42		

深圳感通科技有限公司 Shenzhen Gantong Technology Co., Ltd

Inductance measured at 100KHz/1Vrms.. 深圳市龙岗区平湖街道平湖街道万福路26号

No. 26, Wanfu Road, Pinghu Street, Longgang District, Shenzhen

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

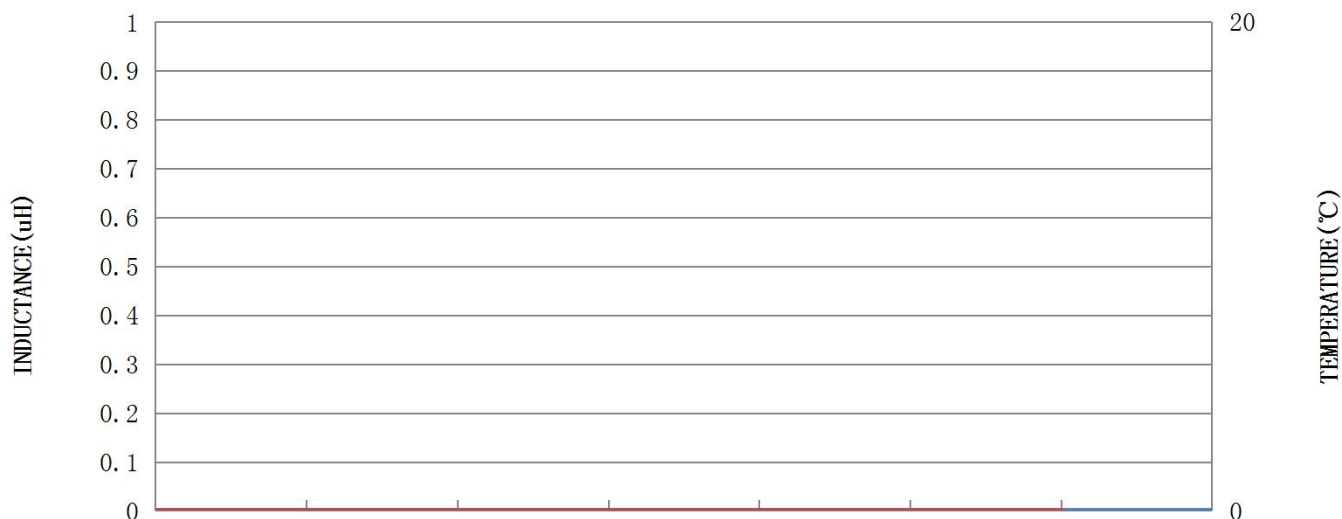
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INDUCTANCE (uH) / TEMPERATURE RISE(°C) VS DC BIAS (Amps)

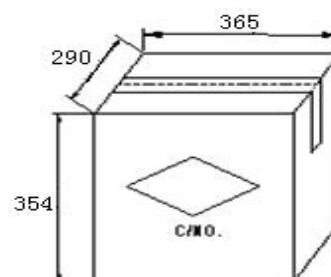
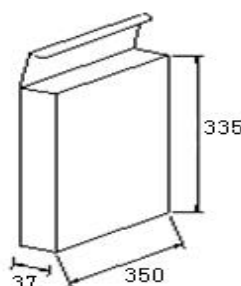
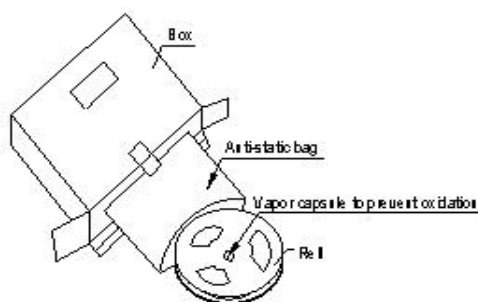
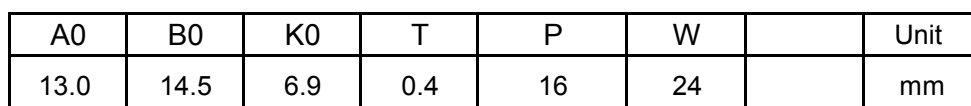
IDC	L(uH)	L/L0A (%)	T(°C)	ΔT(°C)		
0.0 A	9.90	100.00%	28.4	0.0		
2.0 A	9.60	96.97%	35.4	7.0		
4.0 A	9.30	93.94%	44.8	16.4		
6.0 A	8.90	89.90%	55.5	27.1		
8.0 A	8.50	85.86%	69.1	40.7		
12.0 A	8.00	80.81%	88.0	59.6		
15.0 A	7.60	76.77%	105.0	76.6		
18.0 A	6.91	69.80%				



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PACKAGING



						Unit: mm
Inner Carton		Quter Carton				
Reel size	Quantity/Reel	Inside the box size	Quantity	Carton size	Quantity	
φ 330	500pcs	350*335*37	500pcs	365*345*290	3000pcs	

3. The packaging material should be kept where no chlorine or sulfur exists in the air.

3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

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SOLDRING CONDITIONS

Figure 1. Re-flow Soldering

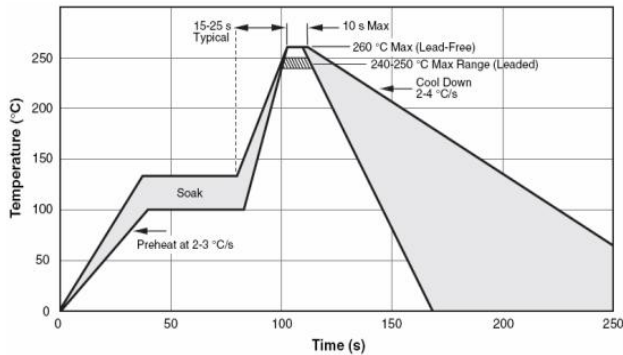
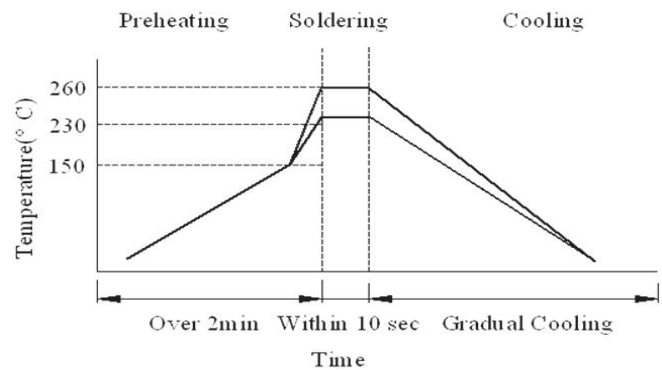


Figure 2. Wave Soldering



Soldering Iron: temperature $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$, dwell time shall be less than 3 sec.

Reliability and Testing Conditions/Surface Mount Type Power Inductors

Item	Specification	Conditions															
Solderbility	More than 90% of the terminal electrode should be covered with solder.																
Solder Heat Resistance	Inductance within $\pm 20\%$ of initial value and appearance shall not break.																
Heat resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 500 ± 12 hours in $145 \pm 5^{\circ}\text{C}$ and 2 hour drying under normal condition.															
Cold resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 500 ± 12 hours in $-40 \pm 2^{\circ}\text{C}$ and 2 hour drying under normal condition.															
Thermal shock	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 10 cycles of following condition. <table border="1"> <thead> <tr> <th>Step</th><th>Temperature ($^{\circ}\text{C}$)</th><th>Times (min.)</th></tr> </thead> <tbody> <tr> <td>1</td><td>-40 ± 2</td><td>30</td></tr> <tr> <td>2</td><td>Room Temperature</td><td>Within 3</td></tr> <tr> <td>3</td><td>145 ± 5</td><td>30</td></tr> <tr> <td>4</td><td>Room Temperature</td><td>Within 3</td></tr> </tbody> </table>	Step	Temperature ($^{\circ}\text{C}$)	Times (min.)	1	-40 ± 2	30	2	Room Temperature	Within 3	3	145 ± 5	30	4	Room Temperature	Within 3
Step	Temperature ($^{\circ}\text{C}$)	Times (min.)															
1	-40 ± 2	30															
2	Room Temperature	Within 3															
3	145 ± 5	30															
4	Room Temperature	Within 3															
Humidity Resistance	Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break.	After 500 ± 12 hours in $40 \pm 2^{\circ}\text{C}$ and 90 to 95% humidity, and 2 hour drying under normal condition.															
Vibration Test	Inductance within $\pm 20\%$ of initial value and appearance shall not break.	After vibration for 1hour, In each of three orientations at sweep vibration (10~55~10Hz) with 1.52mm P-P Amplitudes.															

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