

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

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

Tel: 852-25301111

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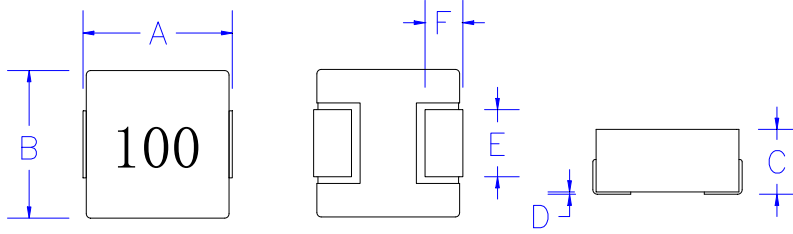
<http://www.sgte.cn>

SPECIFICATION

**RoHS
COMPLIANT**

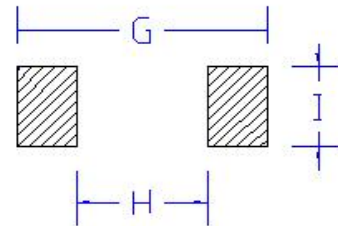
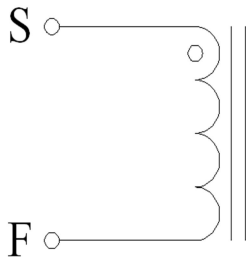
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	SMD Power Inductor	2021/1/23	
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MECHANICAL & DIMENSIONS



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
DCR	20 max mΩ	@ 25°C	■ CH16502 IMPEDANCE METER
I-sat	17.0 A mps	≧65%L0A	■ A4284A+A42841A LCR METER
I rms	7.0 A mps	ΔT ≦ 40°C	■ 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.
 · Operating temperature range: 25°C to 125°C.
 · Shenzhen Gan Tong Technology Co., Ltd
 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°C	≧ 65%LOA	ΔT ≧ 40°C
1	10.92	15.09	74.8%	33.5°C
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
 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
 Inductance measured at 100KHz/1Vrms.
 Electrical specifications at (25±5°C, Humidity 60±10%)

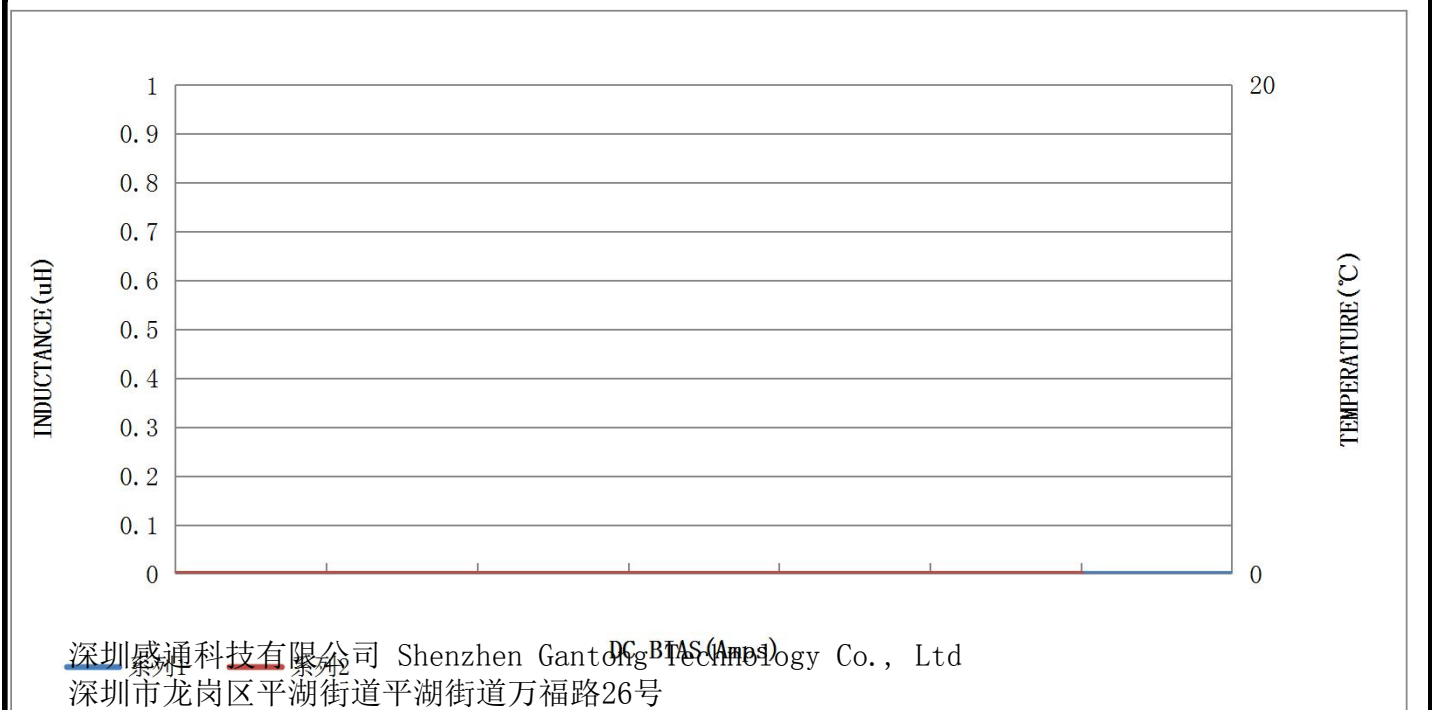
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INDUCTANCE (uH) / TEMPERATURE RISE(°C) VS DC BIAS (Amps)

IDC	L(uH)	L/LoA (%)	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%				

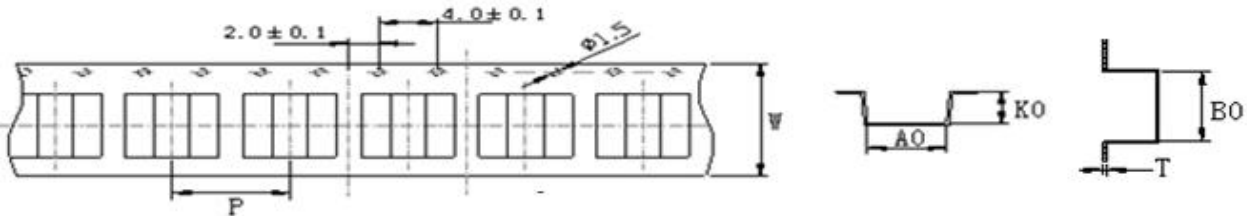


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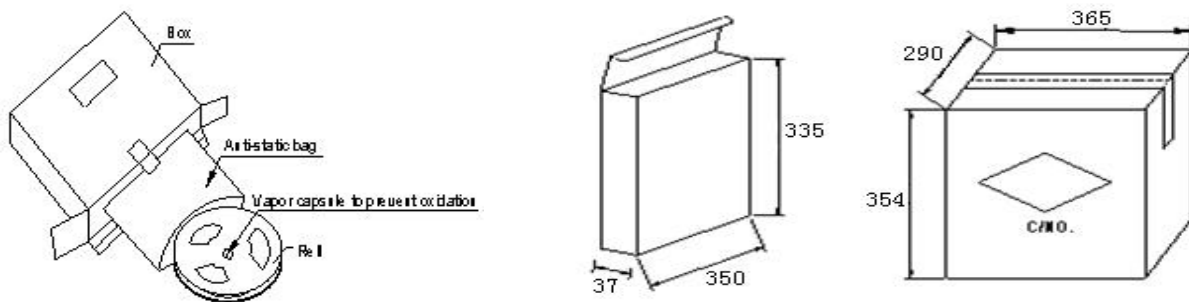
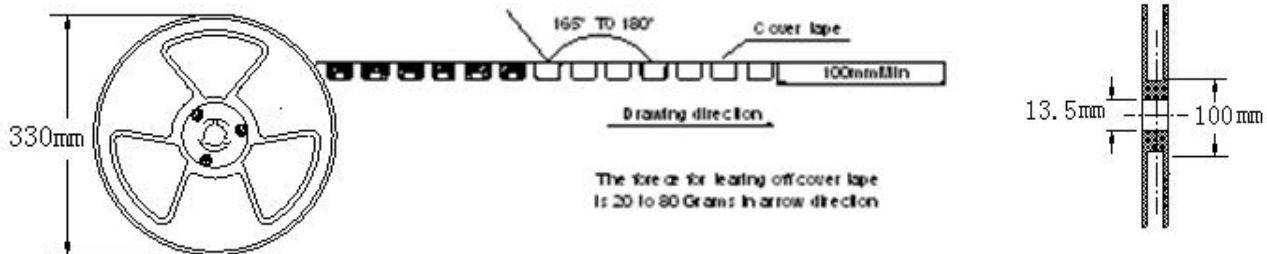
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PACKAGING



A0	B0	K0	T	P	W	Unit
13.0	14.5	6.9	0.4	16	24	mm



Packaging Quantity

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

Storage

1. Temperature and humidity conditions: Less than 40°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.

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SOLDERING CONDITIONS

Figure 1. Re-flow Soldering

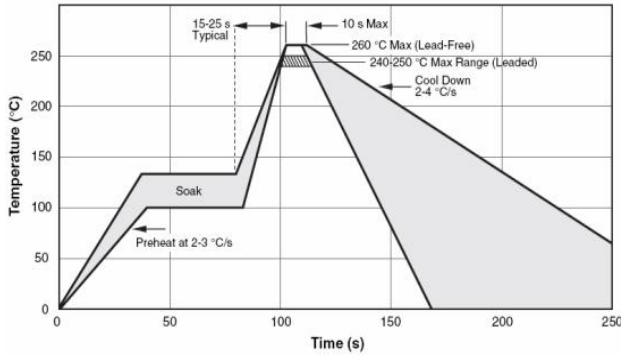
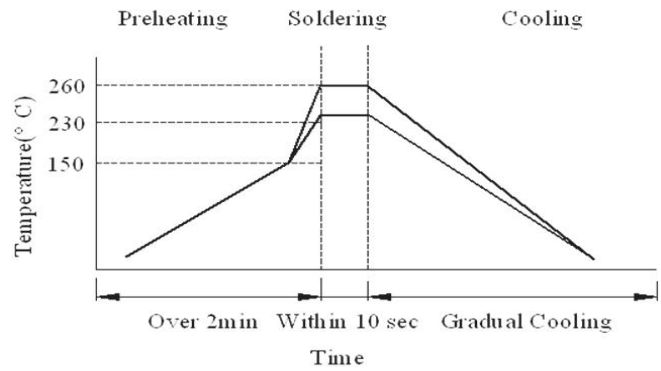


Figure 2. Wave Soldering



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															
Solderability	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" style="margin-left: auto; margin-right: auto;"> <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 ($10 \sim 55 \sim 10\text{Hz}$) with 1.52mm P-P Amplitudes.															

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