CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION SMD POWER INDUCTOR

SGTE PART NO. GPSV1365-100MS01

SAMPLE NO. S21102902 REVISION NO. A1 DATE 29-Oct.-21

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

RoHS COMPLIANT

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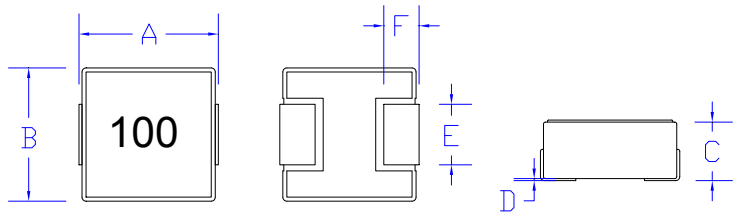
APPROVED BY	CHECKED BY	DRAWING BY
田一	王康	黄荣英

SPECIFICATION

RoHS COMPLIANT

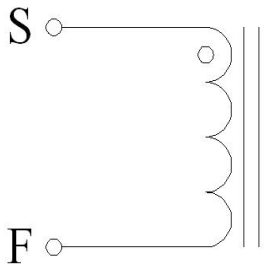
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External Dimensions Unit (mm)

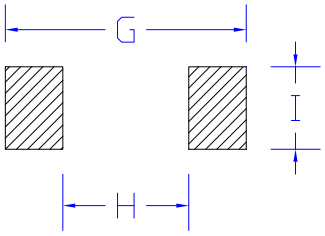


A	13.45±0.5
B	12.6±0.2
C	6.5 Max
D	≤0.2
E	5.8±0.5
F	2.3±0.5
G	14.5REF
H	8.0 REF
I	5.0REF

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	10uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	20mΩ(Max)		Chroma /16502
I rms	Amps	10A	100KHz/1V	LCR Meter Agilent/4284A+42841A or Chroma /11300+3302+1320+1320S
I sat	Amps	16A	100KHz/1V	

·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.

·All test Data is referenced to 25℃ ambient.

·Operating Temperature Range: -25℃ to +125℃

TEST REPORT

RoHS COMPLIANT

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	10uH	20mΩ	10Amps	16Amps
Tolerance	±20%	Max	△T≦40℃	L≧65%
1	9.111	15.76	28.6℃	79.7%
2	9.041	15.66		
3	9.267	15.12		
4	9.420	15.42		
5	9.677	15.63		
6	9.156	14.98		
7	9.291	15.32		
8	9.289	15.05		
9	9.417	15.72		
10	9.316	15.69		
$\bar{X}$	9.299	15.44		
σ	0.17	0.28		

External Dimensions

Item	A	B	C	D	E	F
Specification	13.45	12.6	6.5		5.8	2.3
Tolerance	±0.5	±0.2	Max	≤0.2	±0.5	±0.5
1	13.38	12.54	6.37	0.12	5.80	2.09
2	13.37	12.53	6.32	0.10	5.81	2.10
3	13.36	12.53	6.35	0.15	5.80	2.10
4	13.39	12.56	6.39	0.13	5.80	2.12
5	13.38	12.54	6.42	0.11	5.81	2.17
6	13.37	12.54	6.33	0.11	5.80	2.20

7	13. 41	12. 53	6. 39	0. 13	5. 80	2. 09
8	13. 42	12. 54	6. 41	0. 12	5. 80	2. 18
9	13. 38	12. 54	6. 32	0. 15	5. 80	2. 27
10	13. 47	12. 57	6. 38	0. 14	5. 80	2. 15
$\bar{X}$	13. 39	12. 54	6. 37	0. 13	5. 80	2. 15
σ	0. 03	0. 01	0. 03	0. 02	0. 01	0. 06

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25℃. Humidity 60±10%

ELECTRICAL CHARACTERISTICS

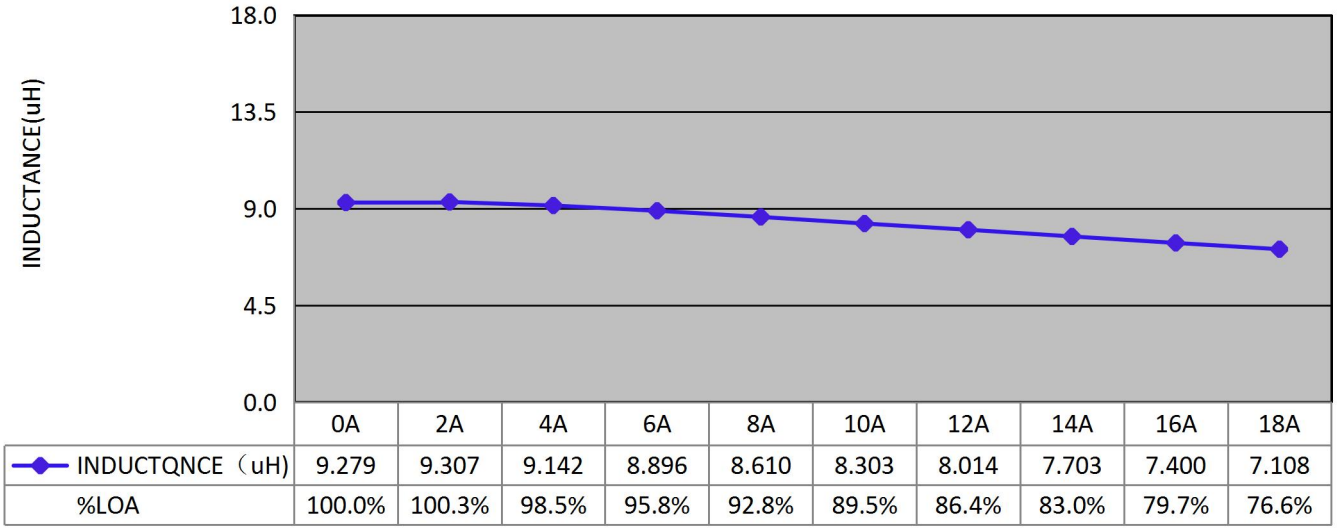
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Inductance VS DC current

IDC	L	%LOA				
0A	9.279	100.0%				
2A	9.307	100.3%				
4A	9.142	98.5%				
6A	8.896	95.8%				
8A	8.610	92.8%				
10A	8.303	89.5%				
12A	8.014	86.4%				
14A	7.703	83.0%				
16A	7.400	79.7%				
18A	7.108	76.6%				

CONDITTON:100KHz/1.0Vrms



DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

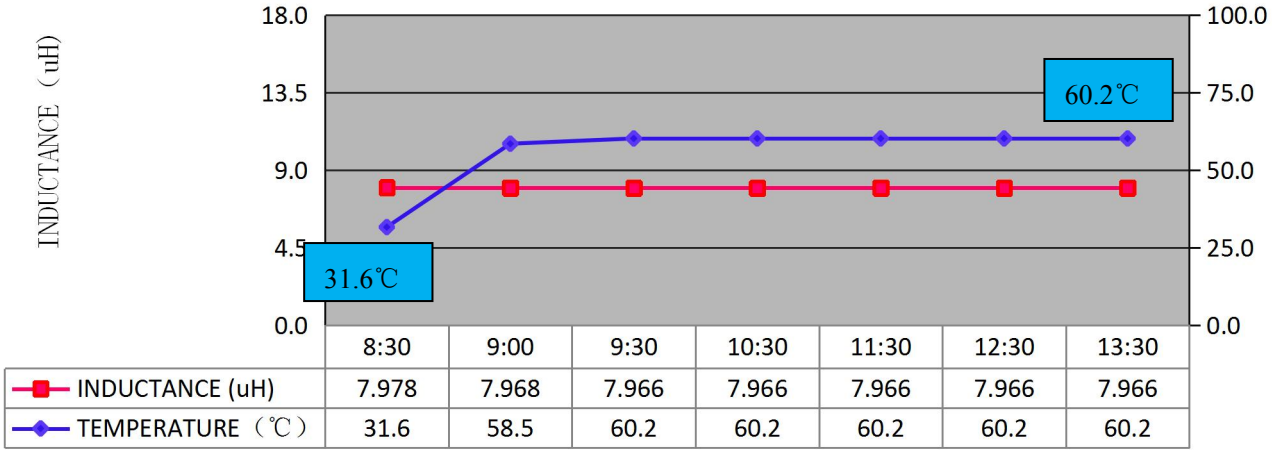
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DC current VS Temperature

Time	L（μH）	T（℃）	△T(℃)			
08:30	7.978	31.6				
09:00	7.968	58.5	26.9			
09:30	7.966	60.2	28.6			
10:30	7.966	60.2	28.6			
11:30	7.966	60.2	28.6			
12:30	7.966	60.2	28.6			
13:30	7.966	60.2	28.6			

CONDITTON: Load 10A



Inductance VS Temperature

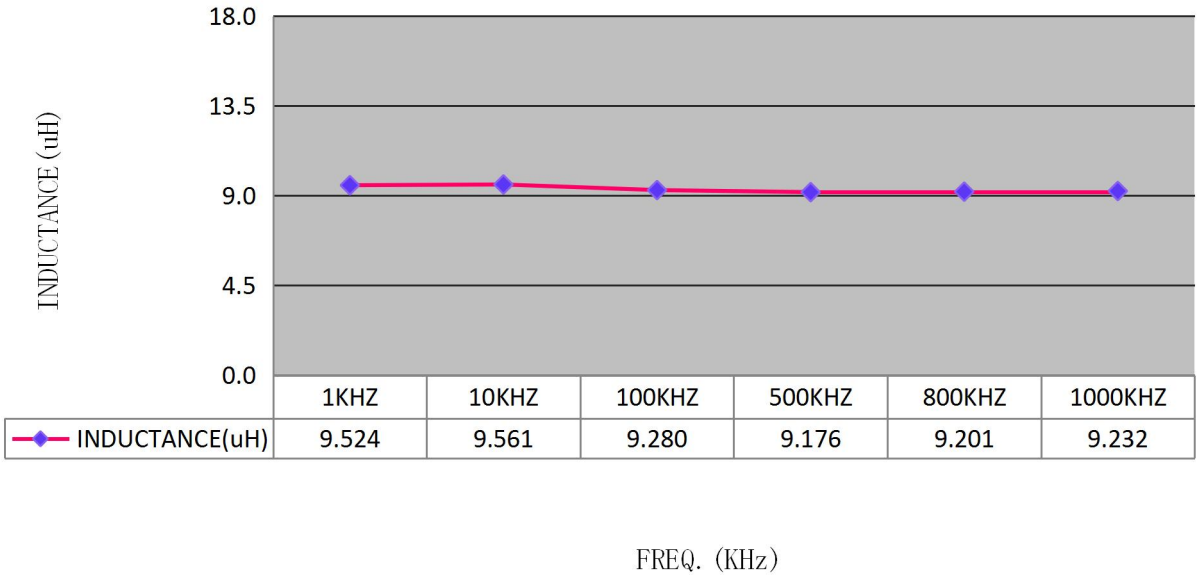
ELECTRICAL CHARACTERISTICS

RoHS COMPLIANT

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Inductance VS Frequency

FREQ.	L（μH）					
1KHZ	9.524					
10KHZ	9.561					
100KHZ	9.280					
500KHZ	9.176					
800KHZ	9.201					
1000KHZ	9.232					

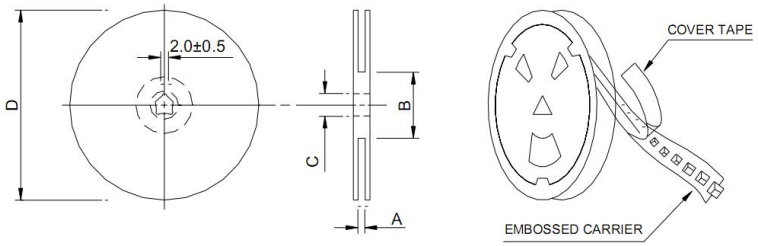


PACKING FOR SPECIFICATION

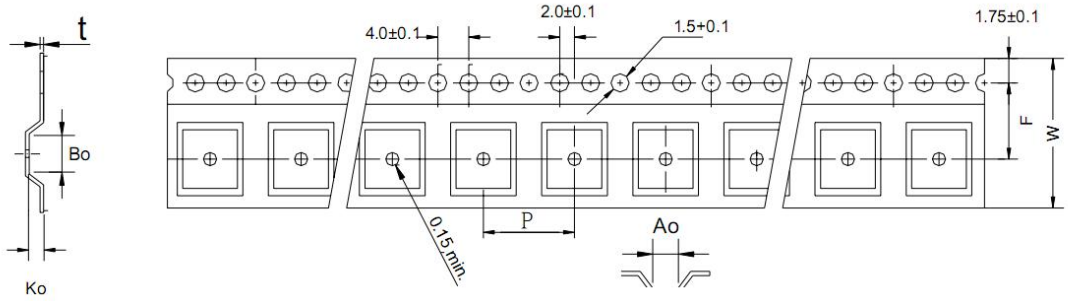
RoHS COMPLIANT

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Packaging Information:

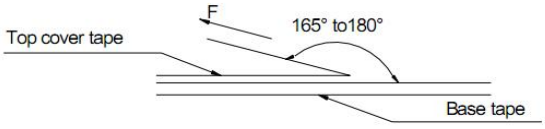


TYPE	A(mm)	B(mm)	C(mm)	D(mm)
13´´*24mm	24±0.5	100±2	13.5±0.5	330



TYPE	A	B	C	W	P
GPSR1365	500	24	330	24	20

Tearing Off Force

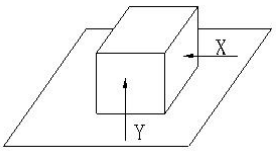


The force for tearing off cover tape is 15 to 60 grams in the arrow direction under the following conditions.

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

Application Notice

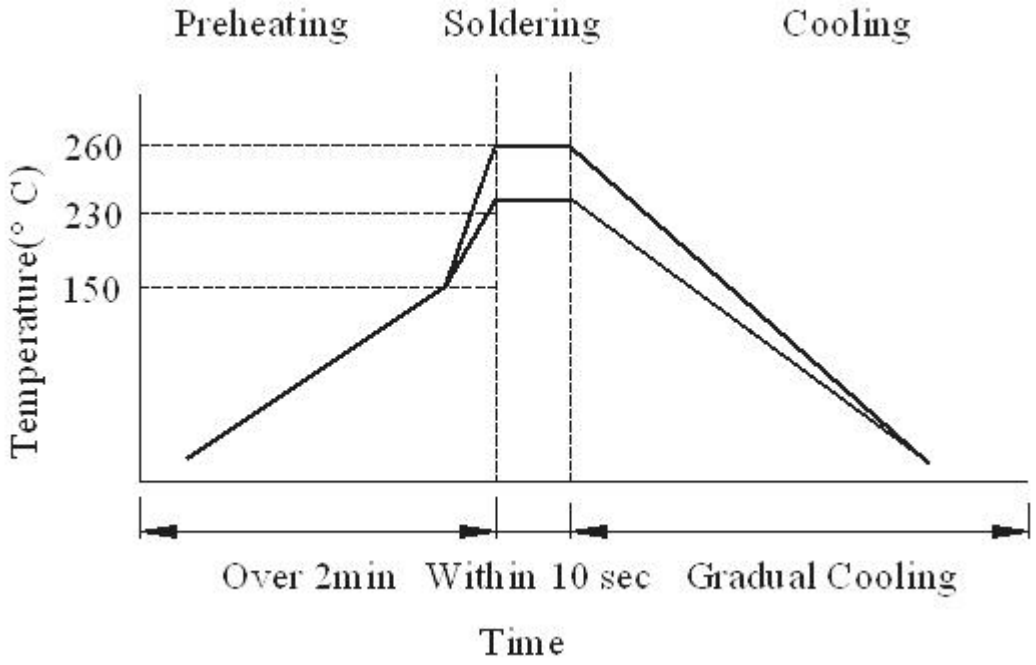
- Storage Conditions
  To maintain the solderability of terminal electrodes:
  1. Temperature and humidity conditions: Less than 30℃ and 70% RH.
  2. Recommended products should be used within 6 months form the time of delivery.
  3. The packaging material should be kept where no chlorine or sulfur exists 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.

.STORAGE TEMPERATURE：	25℃~30℃ HUMIDITY 45~85% RH
2.OPERATING TEMPERATURE RANGE :	-30℃ ~ +125℃(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 Recommended Soldering Temperature Graph.（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 ~ 2000)x10-6(-25 ~ +85℃)
8. HUMIDITY TEST :	INDUCTANCE DEVIATION IS WITHIN ±5.0% AND NO STRUCTURE AND ELECTRIC DEFECTS CAN BE FOUND AFTER 96 HOURS TEST UNDER THE CONDITIONOF RELATIVE HUMIDITY OF 90 ~ 95% AND TEMPERATURE OF 40±2℃. 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 ANDTHE 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/s2.

THE CONDITION OF REFLOW

RoHS COMPLIANT

Wave Soldering



Hand soldering

