5001

CUSTOMER _____

CUSTOMER'S P/N _____

DESCRIPTION POWER INDUCTOR

SGTE PART NO. GPDA1111-R47MT

SAMPLE NO. S09092401 REVISION NO. A DATE 24-Sep-09

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

GAN TONG

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, N0.77, 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
		Lisa

SPECIFICATION

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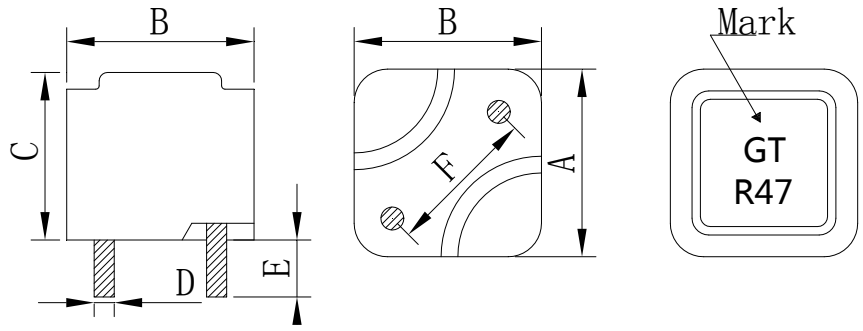
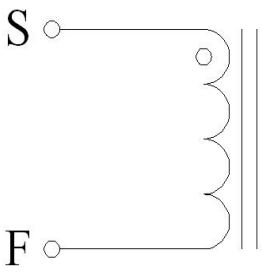
External Dimensions Unit (mm)



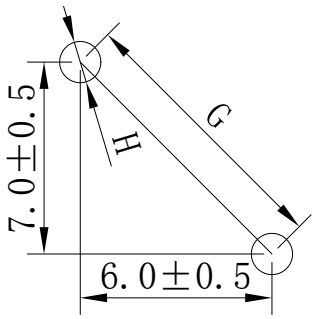
A	11.0± 0.5 (mm)
B	11.0± 0.5 (mm)
C	9.0Max (mm)
D	1.5± 0.1 (mm)
E	3.4± 0.5 (mm)
F	9.2± 0.5 (mm)
G	9.2± 0.5 (mm)
H	1.9 (ref)

Coating:Black

Connection



Recommended Land Pattern



Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	0.47uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	0.85mΩ(Max)		Chroma /16502
I rms	Amps	35A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	45A	100KHz/1V	or Chroma /11300+3302+1320+1320S

- 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

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Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	0.47uH	0.85mΩ	35Amps	45Amps
Tolerance	±20%	Max	△T≦40℃	L≧65%
1	0.490	0.64	32℃	78.6%
2	0.494	0.66		
3	0.486	0.67		
4	0.488	0.65		
5	0.492	0.66		
6	0.497	0.66		
7	0.491	0.68		
8	0.479	0.69		
9	0.490	0.67		
10	0.497	0.69		
$\bar{X}$	0.490	0.67		
σ	0.01	0.02		

External Dimensions

Item	A	B	C	D	E	F
Specification	11.0	11.0	9.0	1.5	3.4	9.2
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	11.09	11.14	7.65	1.52	3.47	9.21
2	11.06	11.11	7.70	1.55	3.59	9.19
3	11.08	11.09	7.81	1.53	3.49	9.21
4	11.07	11.11	7.55	1.50	3.51	9.18
5	11.08	11.05	7.39	1.52	3.47	9.25
6	11.10	11.08	7.71	1.54	3.48	9.27
7	11.09	11.09	7.66	1.54	3.45	9.15
8	11.07	11.09	7.57	1.52	3.49	9.15
9	11.08	11.07	7.61	1.50	3.47	9.19
10	11.10	11.06	7.55	1.53	3.41	9.21
$\bar{X}$	11.08	11.09	7.62	1.53	3.48	9.20
σ	0.01	0.03	0.11	0.02	0.04	0.04

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25℃. Humidity 60±10%

ELECTRICAL CHARACTERISTICS

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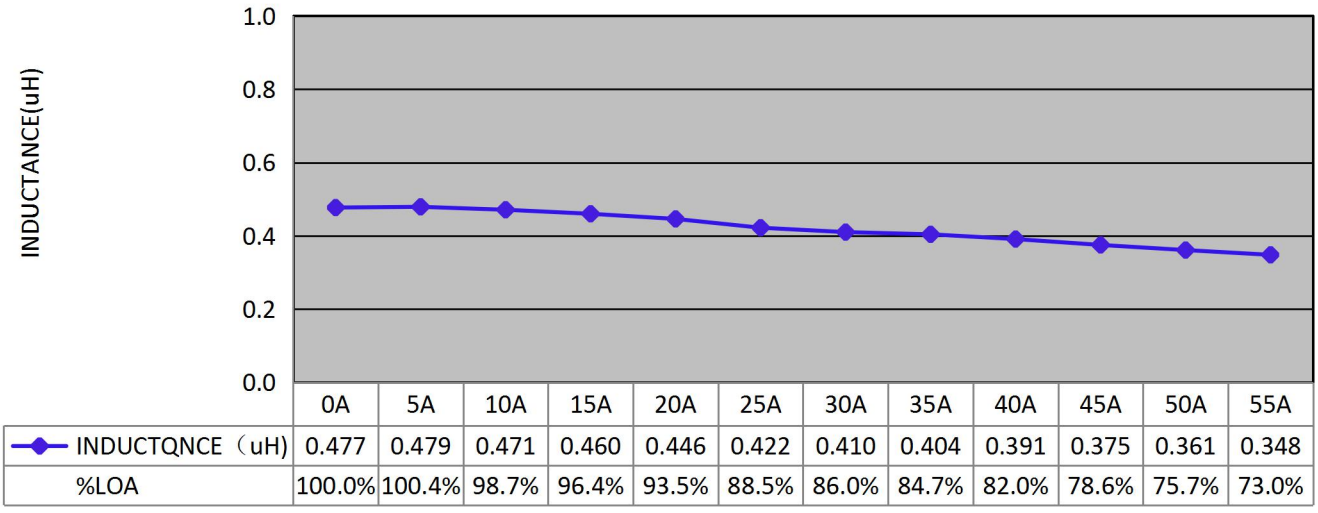
Inductance VS DC current

IDC	L	%LOA				
0A	0.477	100%				
5A	0.479	100.4%				
10A	0.471	98.7%				
15A	0.460	96.4%				
20A	0.446	93.5%				
25A	0.422	88.5%				
30A	0.410	86.0%				
35A	0.404	84.7%				
40A	0.391	82.0%				
45A	0.375	78.6%				
50A	0.361	75.7%				
55A	0.348	73.0%				

CONDITTON:100KHZ/1.0Vrms



	0A	5A	10A	15A	20A	25A	30A	35A	40A	45A	50A	55A
INDUCTQNCE（uH)	0.477	0.479	0.471	0.460	0.446	0.422	0.410	0.404	0.391	0.375	0.361	0.348
%LOA	100.0%	100.4%	98.7%	96.4%	93.5%	88.5%	86.0%	84.7%	82.0%	78.6%	75.7%	73.0%

DC BIAS(Amps)

ELECTRICAL CHARACTERISTICS

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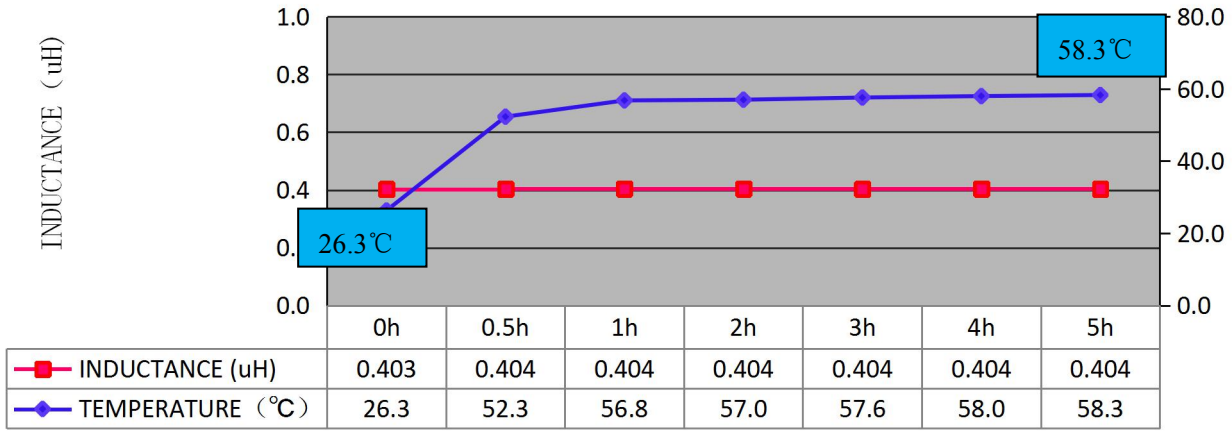
DC current VS Temperature

Time	L（μH）	T（℃）	△T(℃)			
0h	0.403	26.3				
0.5h	0.404	52.3	26.0			
1h	0.404	56.8	30.5			
2h	0.404	57.0	30.7			
3h	0.404	57.6	31.3			
4h	0.404	58.0	31.7			
5h	0.404	58.3	32.0			

CONDITTON: Load 35A



Inductance VS Temperature

ELECTRICAL CHARACTERISTICS

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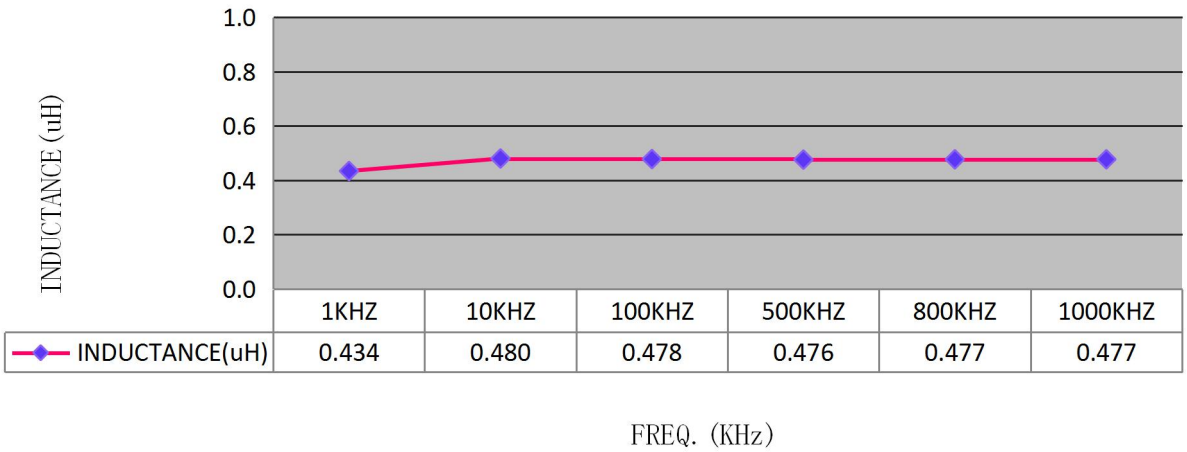
Inductance VS Frequency

FREQ.	L（μH）					
1KHZ	0.434					
10KHZ	0.480					
100KHZ	0.478					
500KHZ	0.476					
800KHZ	0.477					
1000KHZ	0.477					



PACKING FOR SPECIFICATION

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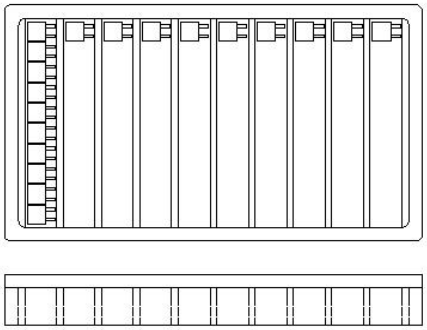
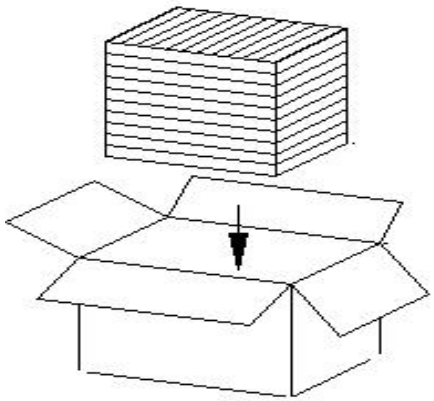
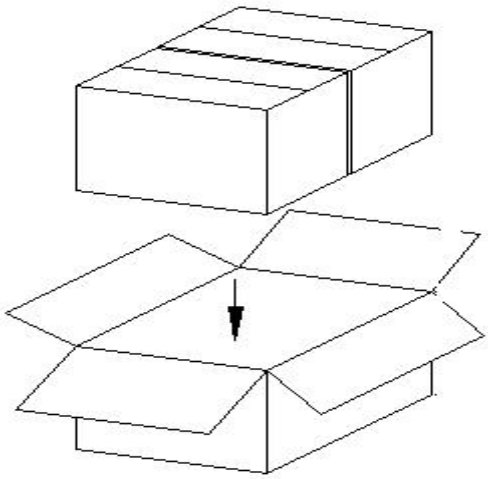


PET Size : 215*148 *16(C)mm
Quantity : 100PCS/PET



Small box Size : 238*156*165 mm
Quantity : 10PET/Small box
1Small box/1000PCS



Big box Size : 328*251*175 mm
Quantity : 2 Small box/Big box
1 Big box/2000PCS

GENERAL CHARACTERISTICS

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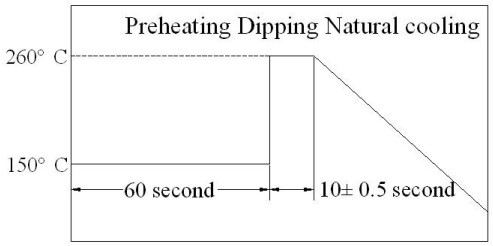
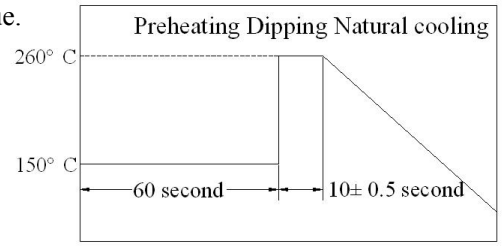
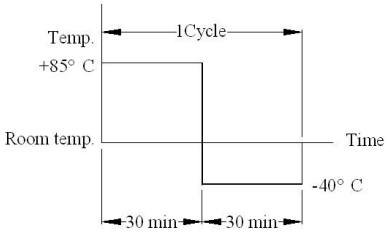
Item	**Performance**	**Test Condition**
Mechanical Performance Test		
Solder ability Test	More than 90% of terminal electrode should be covered with solder. After fluxing, component shall be dipped in a melted solder bath at 260±5℃ for 10 seconds 	
Solder Heat Resistance	Components should have not evidence of electrical and mechanical damage. Inductance: within±20% of initial value. Preheat：150℃ 60 seconds Solder：(SnCu0.7) Solder Temperature：260±5℃ Flux： Rosin. Dip time：10±0.5 seconds 	
Low temperature storage test	1. Appearance: No damage. 2. Inductance: within±20% of initial value. 3.No disconnection or short circuit.	Temperature:- 40℃±5℃ Time: 500±12 Hours Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.
High temperature storage test		Temperature: 85℃±5℃ Time: 500±2 Hours Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.
Thermal Shock Test (Temperature cycle)		-40±5℃ for 30 Minutes. +85±5℃ for 30 Minutes. Total: 10 Cycles 
Humidity load life test		Temperature: 40±5℃ 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.

THE CONDITION OF REFLOW

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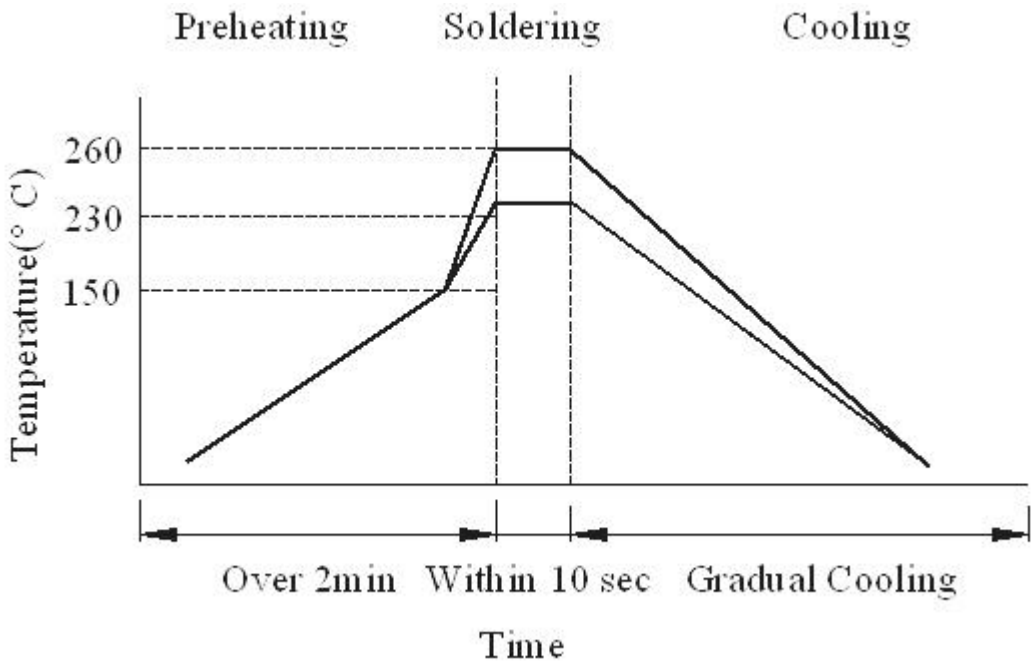
Wave Soldering



Hand soldering