

CUSTOMER 5001

CUSTOMER'S P/N _____

DESCRIPTION POWER INDUCTOR

GAN TONG PART NO. GPDA1312-R47M

SAMPLE NO. S09041001 REVISION NO. A DATE 10-Apr-09

SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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SPECIFICATION

**RoHS
COMPLIANT**

INDEX

COVER PAGE

- SHAPE & DIMENSION.....1-6
- ELECTRICAL CHARACTERISTICS AND EXTERNAL TEST REPORT.....2-6
- ELECTRICAL CHARACTERISTICS.....3-6
- PACKING FOR SPECIFICATION.....4-6
- GENERAL CHARACTERISTICS.....5-6
- THE CONDITION OF REFLOW.....6-6

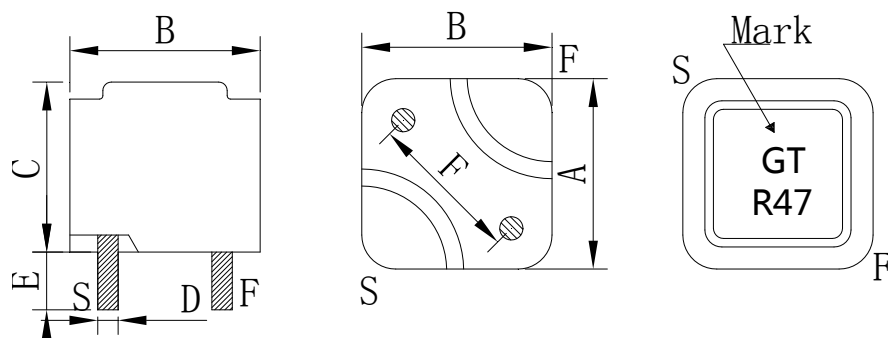
APPROVED BY	CHECKED BY	DRAWING BY
		<p style="text-align: center;">Lisa</p> <p style="text-align: right;">4/10</p>

SPECIFICATION

**RoHS
COMPLIANT**

Customers Part Number	Item Name	Date	
	Power Inductor	10-Apr-09	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDA1312-R47M	S09041001	A	1-6

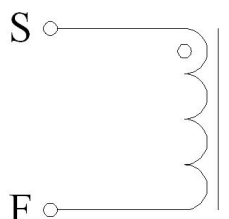
External Dimensions Unit (mm)



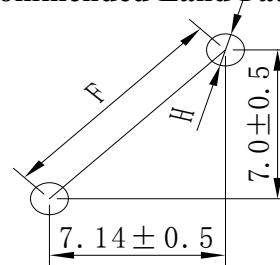
A	12.20± 0.5 (mm)
B	13.20± 0.5 (mm)
C	10Max (mm)
D	1.7± 0.1 (mm)
E	3.4± 0.5 (mm)
F	10.0± 0.5 (mm)
G	10.0± 0.5 (mm)
H	2.1 (ref)

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/11300 or Zentech /16502
DCR	m Ω (Max)	0.85m Ω (Max)		Zentech/ 16502
I rms	Amps	40A	100KHz/1V	LCR Meter Agilent/11300
I sat	Amps	60A	100KHz/1V	or Zentech /11300

- 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

RoHS
COMPLIANT

Customers Part Number	Item Name	Date	
	Power Inductor	10-Apr-09	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDA1312-R47M	S09041001	A	2-6

Electrical Characteristic

Item	L0	DCR	I rms	I sat
Specification	0.47uH	0.85mΩ	40Amps	60Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	0.48	0.68	36.8°C	80.8%
2	0.50	0.70		
3	0.48	0.68		
4	0.48	0.68		
5	0.49	0.68		
6	0.48	0.67		
7	0.48	0.68		
8	0.49	0.68		
9	0.48	0.68		
10	0.48	0.67		
\bar{X}	0.48	0.68		
σ	0.01	0.01		

External Dimensions

Item	A	B	C	D	E	F
Specification	12.20	13.20	10.0	1.70	3.40	10.00
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	12.30	13.28	8.26	1.73	3.54	10.04
2	12.34	13.32	8.27	1.70	3.56	10.06
3	12.31	13.29	8.32	1.74	3.57	10.11
4	12.34	13.32	8.34	1.72	3.55	10.09
5	12.32	13.30	8.28	1.72	3.53	10.10
6	12.34	13.33	8.29	1.73	3.56	10.12
7	12.32	13.28	8.27	1.74	3.57	10.11
8	12.30	13.29	8.30	1.72	3.54	10.09
9	12.33	13.31	8.32	1.73	3.56	10.10
10	12.28	13.29	8.33	1.70	3.53	10.11
\bar{X}	12.32	13.30	8.30	1.72	3.55	10.09
σ	0.02	0.02	0.03	0.01	0.01	0.02

Inductance measured at 100KHz/1Vrms.

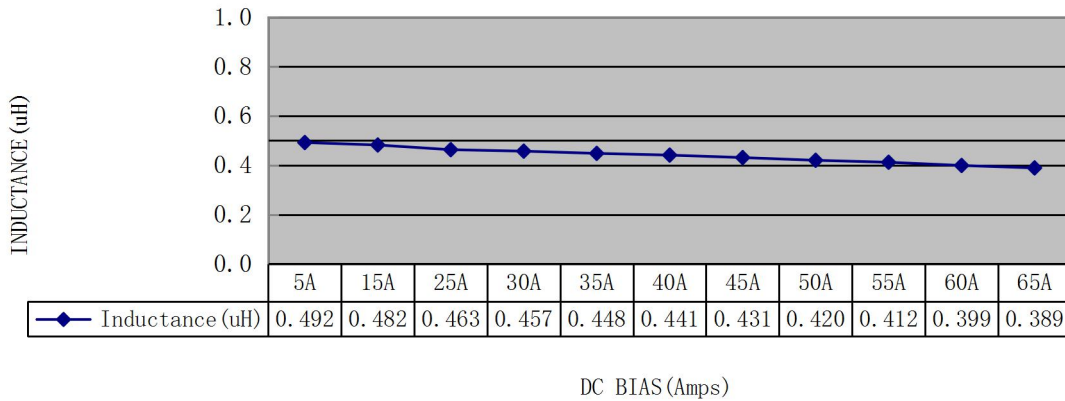
Electrical specifications at 25°C. Humidity 60±10%

ELECTRICAL CHARACTERISTICS

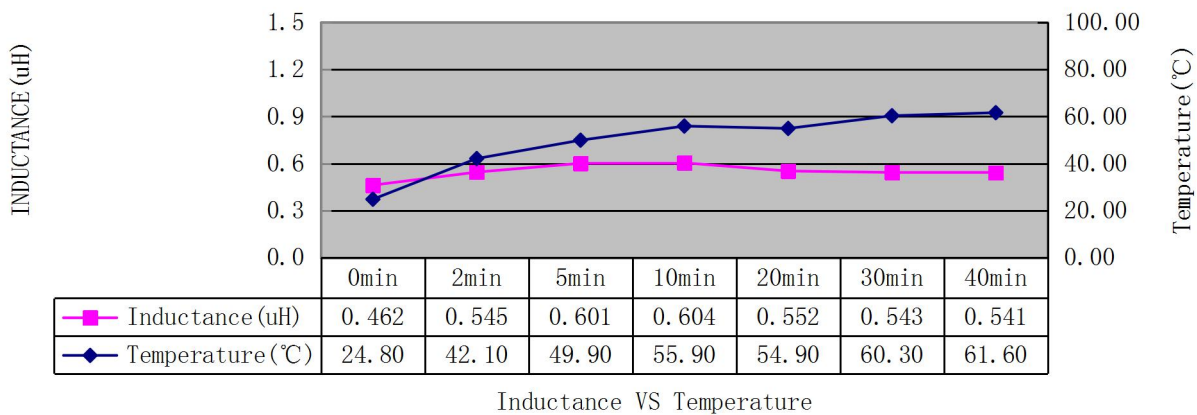
**RoHS
COMPLIANT**

Customers Part Number	Item Name	Date	
	Power Inductor	10-Apr-09	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDA1312-R47M	S09041001	A	3-6

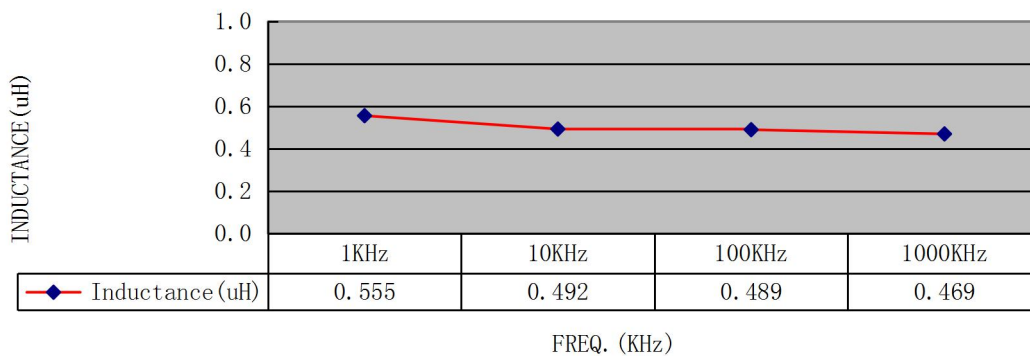
Inductance VS DC current



Inductance VS Temperature



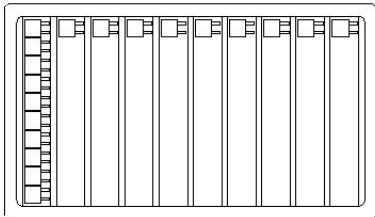
Inductance VS Frequency



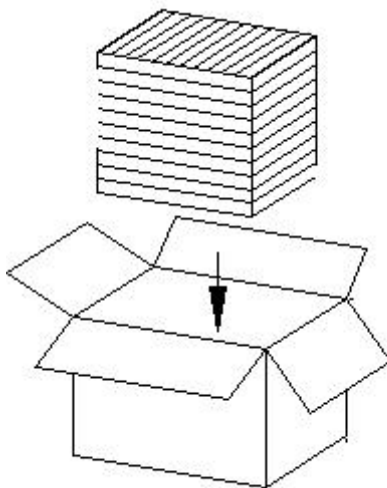
PACKING FOR SPECIFICATION

**RoHS
COMPLIANT**

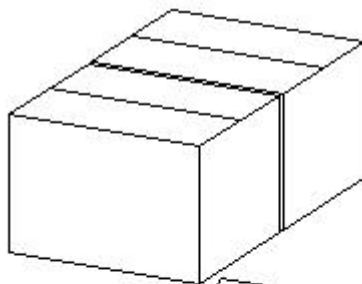
Customers Part Number	Item Name	Date	
	Power Inductor	10-Apr-09	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDA1312-R47M	S09041001	A	4-6



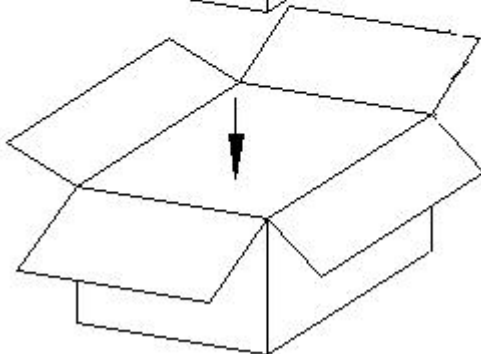
PET Size : 214.5*148.5*16 mm
Quantity : 100PCS/PET



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



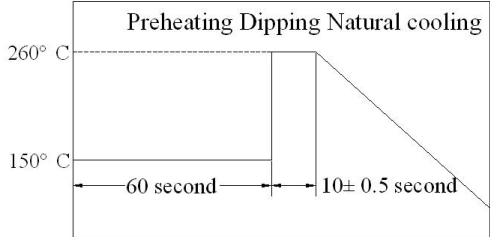
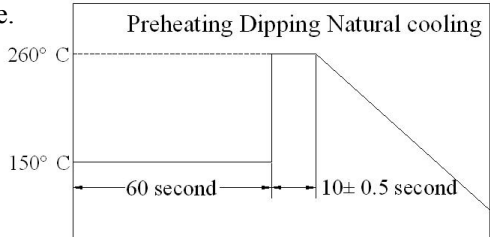
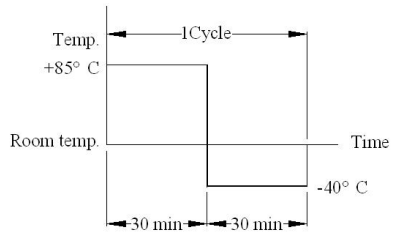
Big box Size : 328*251*175mm
Quantity : 2 Small box/Big box
1 Big box/2000PCS



GENERAL CHARACTERISTICS

Gan Tong Part NO.: GPDA1312-R47M

PAGE : 5-6

Item	Performance	Test Condition
Mechanical Performance Test		
Solder ability Test	<p>More than 90% of terminal electrode should be covered with solder.</p> <p>After fluxing, component shall be dipped in a melted solder bath at $260\pm 5^{\circ}\text{C}$ for 10 seconds</p>	
Solder Heat Resistance	<p>Components should have not evidence of electrical and mechanical damage.</p> <p>Inductance: within $\pm 20\%$ of initial value.</p> <p>Preheat: 150°C 60 seconds</p> <p>Solder: (SnCu0.7)</p> <p>Solder Temperature: $260\pm 5^{\circ}\text{C}$</p> <p>Flux: Rosin.</p> <p>Dip time: 10 ± 0.5 seconds</p>	
Low temperature storage test	<p>1. Appearance: No damage.</p> <p>2. Inductance: within $\pm 20\%$ of initial value.</p> <p>3. No disconnection or short circuit.</p>	<p>Temperature: $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Time: 500 ± 12 Hours</p> <p>Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.</p>
High temperature storage test		<p>Temperature: $85^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Time: 500 ± 2 Hours</p> <p>Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.</p>
Thermal Shock Test (Temperature cycle)		<p>$-40\pm 5^{\circ}\text{C}$ for 30 Minutes. $+85\pm 5^{\circ}\text{C}$ for 30 Minutes.</p> <p>Total: 10 Cycles</p> 
Humidity load life test		<p>Temperature: $40\pm 5^{\circ}\text{C}$ Humidity: 90-95%</p> <p>Time: 500 ± 12 Hours Load: Allowed DC current</p> <p>Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.</p>

THE CONDITION OF REFLOW

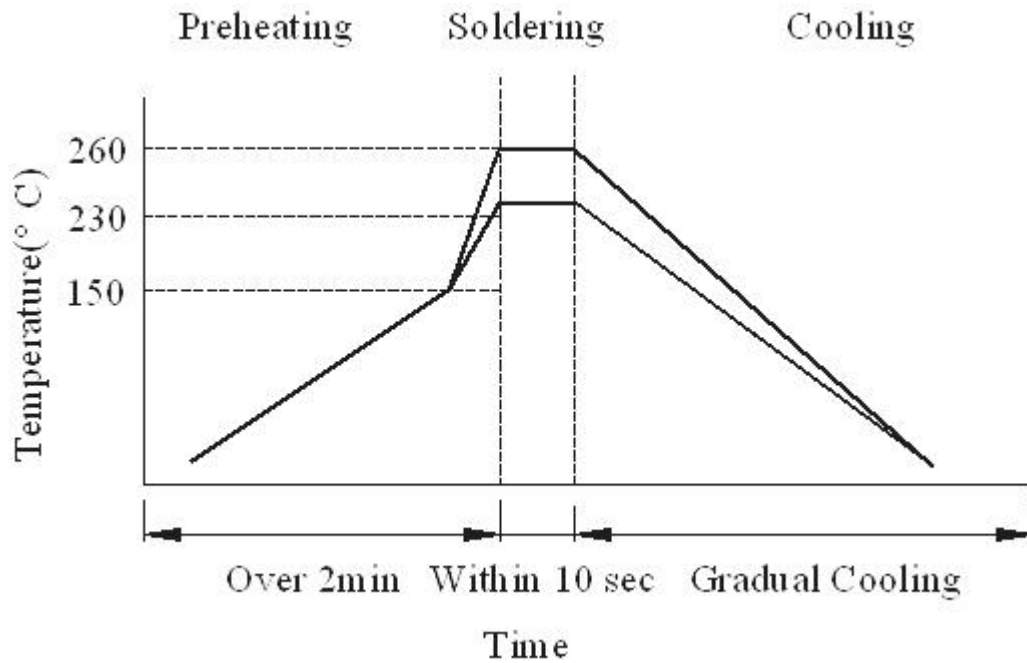
RoHS
COMPLIANT

Gan Tong Part NO. : GPDA1312-R47M

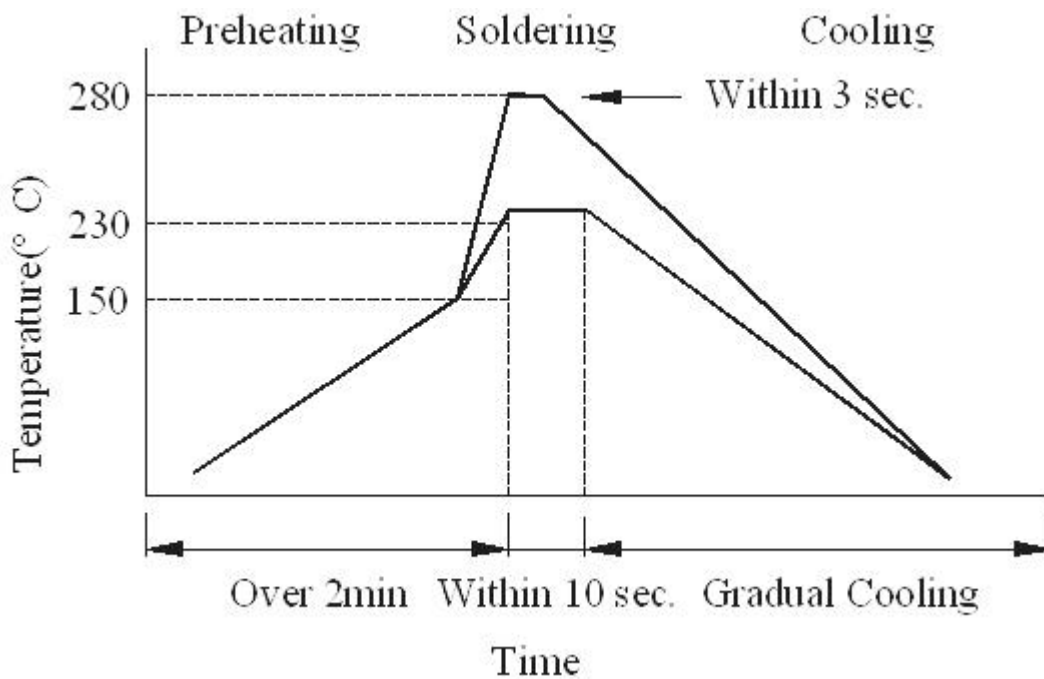
PAGE :

6-6

Wave Soldering



Hand soldering



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