

**0002**

CUSTOMER \_\_\_\_\_

CUSTOMER'S P/N \_\_\_\_\_

DESCRIPTION \_\_\_\_\_ POWER INDUCTOR \_\_\_\_\_

SGTE PART NO. \_\_\_\_\_ GPDC1010-150MT \_\_\_\_\_

SAMPLE NO. S09051801 REVISION NO. B DATE 11-Jun-09

## SPECIFICATION FOR APPROVAL

FULLY APPROVED	REVISE APPROVED

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# SPECIFICATION

**RoHS  
COMPLIANT**

## INDEX

### COVER PAGE

- SHAPE & DIMENSION.....1-8
  
- ELECTRICAL CHARACTERISTICS AND EXTERNAL  
TEST REPORT.....2-8
  
- ELECTRICAL CHARACTERISTICS.....3-8
  
- ELECTRICAL CHARACTERISTICS.....4-8
  
- ELECTRICAL CHARACTERISTICS.....5-8
  
- PACKING FOR SPECIFICATION.....6-8
  
- GENERAL CHARACTERISTICS.....7-8
  
- THE CONDITION OF REFLOW.....8-8

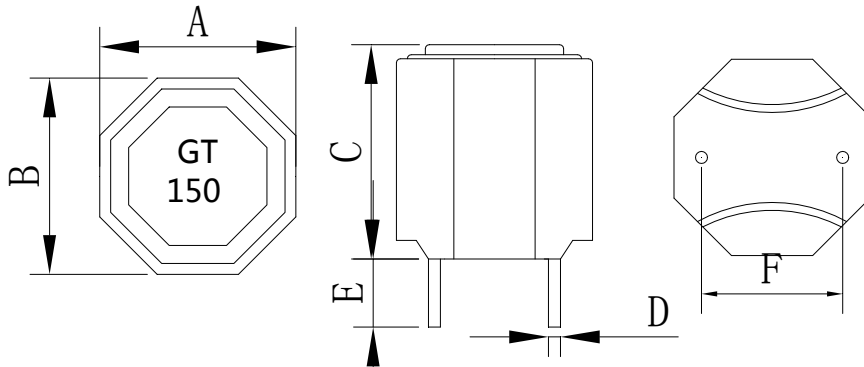
APPROVED BY	CHECKED BY	DRAWING BY
<b>Jesse</b>  6/11		<b>Lisa</b>  6/11

# SPECIFICATION

**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	11-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-150MT	S09051801	1-8

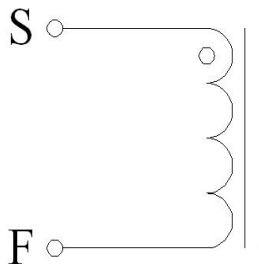
## External Dimensions Unit (mm)



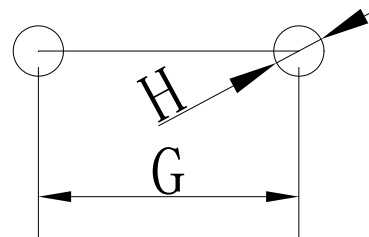
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	11.0Max (mm)
D	0.6± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5 (mm)
G	5.0± 0.5(mm)
H	1.0 (ref)

Coating:Black

## Connection



## Recommended Land Pattern



## Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	15.0uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	35mΩ (Max)		Chroma /16502
I rms	Amps	4.5A	100KHz/1V	LCR Meter Agilent/4284A+42841A
I sat	Amps	7A	100KHz/1V	or 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.
- 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	11-Jun-09	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDC1010-150MT	S09051801	B	2-8

## Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	15.0uH	35mΩ	4.5Amps	7Amps
Tolerance	±20%	Max	ΔT ≤ 40°C	L ≥ 65%
1	15.60	27.11	9.7°C	84.7%
2	15.90	26.98		
3	15.87	26.95		
4	15.80	26.67		
5	15.77	26.85		
6	15.91	26.73		
7	15.85	26.57		
8	15.60	26.51		
9	15.71	26.58		
10	15.80	26.71		
$\bar{X}$	15.781	26.77		
σ	0.11	0.19		

## External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	11.0	0.6	3.4	5.0
Tolerance	± 0.5 (mm)	± 0.5 (mm)	Max (mm)	± 0.1 (mm)	± 0.5 (mm)	± 0.5 (mm)
1	10.37	10.37	9.38	0.65	3.42	5.07
2	10.42	10.36	9.42	0.66	3.51	5.17
3	10.35	10.35	9.25	0.62	3.48	5.15
4	10.30	10.32	9.34	0.61	3.47	5.10
5	10.31	10.34	9.29	0.60	3.50	5.19
6	10.34	10.31	9.40	0.62	3.52	5.09
7	10.32	10.30	9.39	0.61	3.49	5.18
8	10.35	10.35	9.34	0.64	3.44	5.14
9	10.36	10.42	9.42	0.65	3.47	5.22
10	10.37	10.37	9.35	0.63	3.50	5.21
$\bar{X}$	10.35	10.35	9.36	0.63	3.48	5.15
σ	0.03	0.03	0.05	0.02	0.03	0.05

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25±5°C. Humidity 60±10%

# ELECTRICAL CHARACTERISTICS

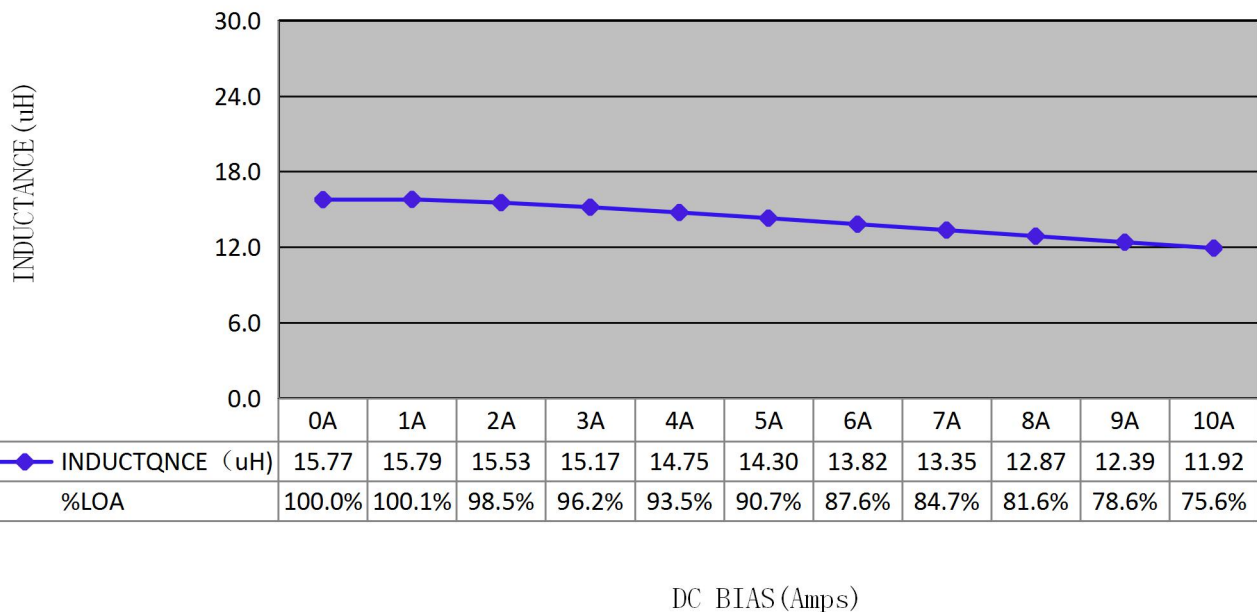
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	11-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-150MT	S09051801	3-8

## Inductance VS DC current

IDC	L	%LOA				
0A	15.77	100%				
1A	15.79	100.1%				
2A	15.53	98.5%				
3A	15.17	96.2%				
4A	14.75	93.5%				
5A	14.30	90.7%				
6A	13.82	87.6%				
7A	13.35	84.7%				
8A	12.87	81.6%				
9A	12.39	78.6%				
10A	11.92	75.6%				

CONDITION: 100KHZ/1.0Vrms AMBIENT: 20°C, 69.8%



# ELECTRICAL CHARACTERISTICS

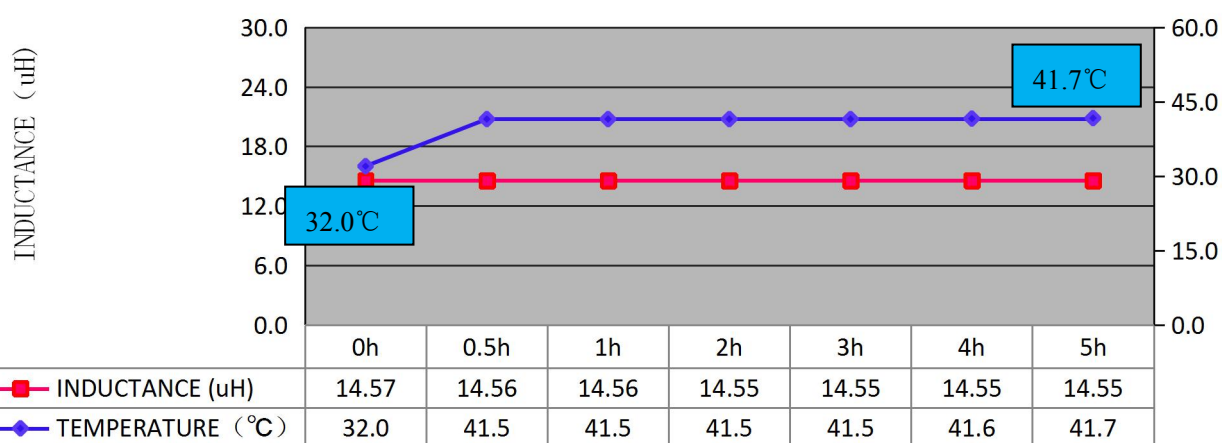
RoHS  
COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	11-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-150MT	S09051801	4-8

## DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0h	14.57	32.0				
0.5h	14.56	41.5	9.5			
1h	14.56	41.5	9.5			
2h	14.55	41.5	9.5			
3h	14.55	41.5	9.5			
4h	14.55	41.6	9.6			
5h	14.55	41.7	9.7			

CONDITION: Load 4.5A AMBIENT: 20°C, 69.8%



Inductance VS Temperature

# ELECTRICAL CHARACTERISTICS

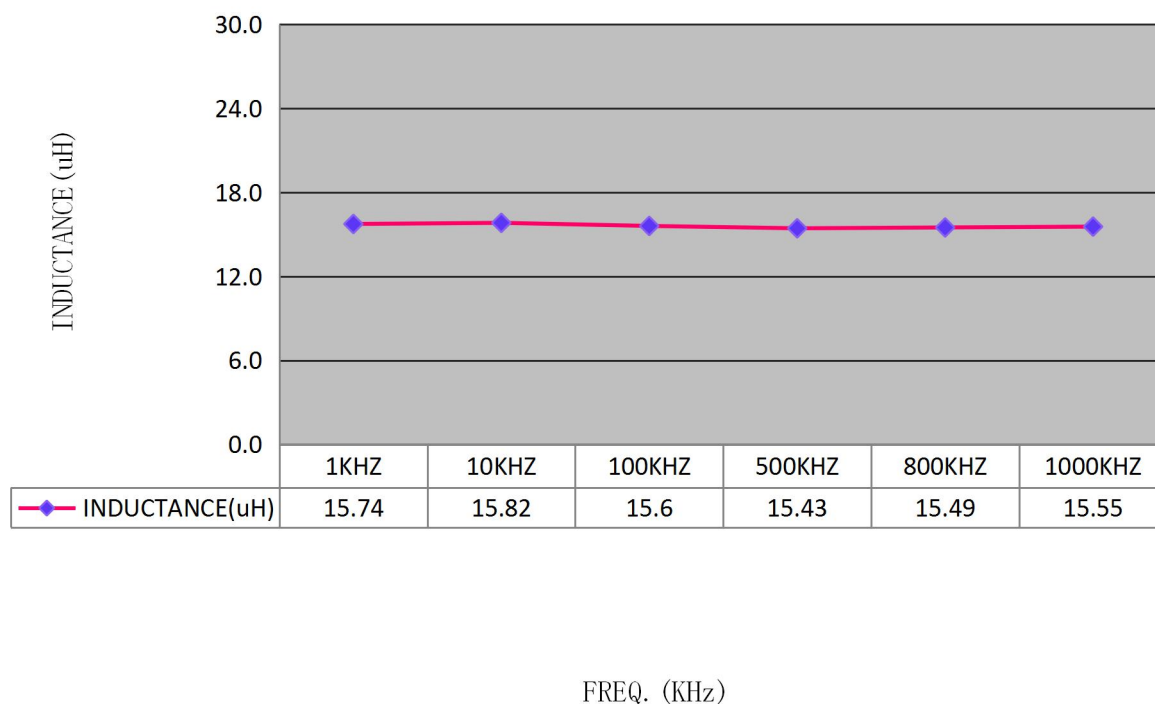
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	11-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-150MT	S09051801	5-8

## Inductance VS Frequency

FREQ.	L (μH)					
1KHZ	15.74					
10KHZ	15.82					
100KHZ	15.60					
500KHZ	15.43					
800KHZ	15.49					
1000KHZ	15.55					

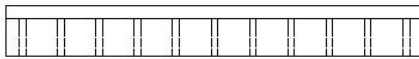
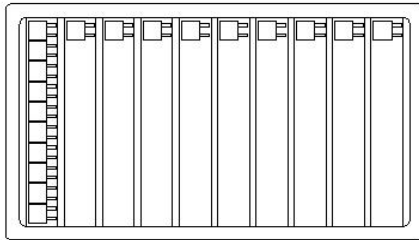
AMBIENT: 20°C, 69.8%



# PACKING FOR SPECIFICATION

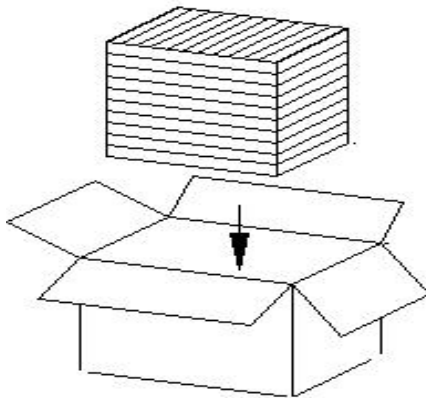
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	11-Jun-09
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-150MT	S09051801	6-8



PET Size : 215\*148 \*16 (D) mm

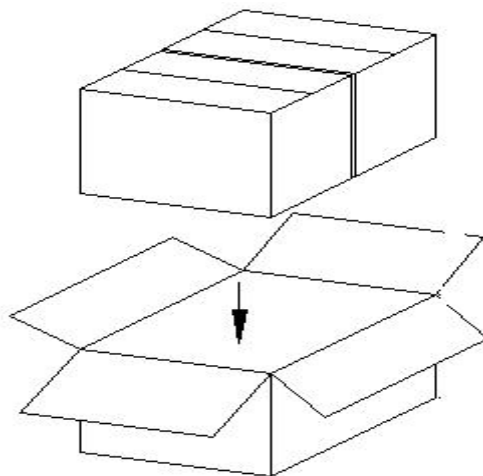
Quantity : 130PCS/PET



Small box Size : 238\*156\*165 mm

Quantity : 10PET/Small box

1Small box/1300PCS



Big box Size : 328\*251\*175 mm

Quantity : 2 Small box/Big box

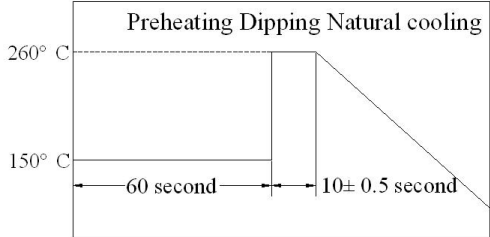
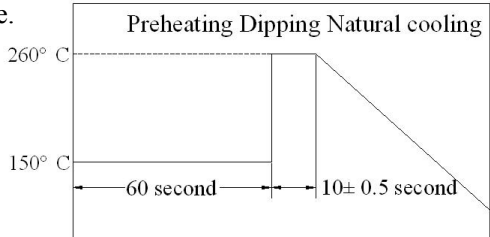
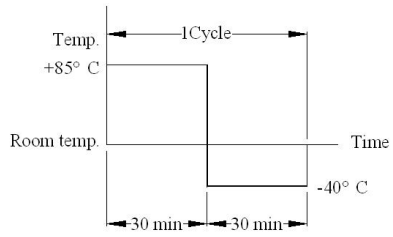
1 Big box/2600PCS



# GENERAL CHARACTERISTICS

Gan Tong Part NO.: GPDC1010-150MT

PAGE : 7-8

Item	Performance	Test Condition
<b>Mechanical Performance Test</b>		
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 $260\pm 5^{\circ}\text{C}$ for 10 seconds	
Solder Heat Resistance	Components should have not evidence of electrical and mechanical damage. Inductance: within $\pm 20\%$ of initial value. Preheat: $150^{\circ}\text{C}$ 60 seconds Solder: (SnCu0.7) Solder Temperature: $260\pm 5^{\circ}\text{C}$ Flux: Rosin. Dip time: $10\pm 0.5$ seconds	
Low temperature storage test	1. Appearance: No damage. 2. Inductance: within $\pm 20\%$ of initial value. 3. No disconnection or short circuit.	Temperature: $-40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time: $500 \pm 12$ Hours Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.
High temperature storage test		Temperature: $85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Time: $500 \pm 2$ Hours Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.
Thermal Shock Test (Temperature cycle)		$-40 \pm 5^{\circ}\text{C}$ for 30 Minutes. $+85 \pm 5^{\circ}\text{C}$ for 30 Minutes. Total: 10 Cycles 
Humidity load life test		Temperature: $40 \pm 5^{\circ}\text{C}$ Humidity: 90-95% Time: $500 \pm 12$ Hours Load: Allowed DC current Recovery: 4 to 24 hours of recovery under the standard condition after the removal from test chamber.

# THE CONDITION OF REFLOW

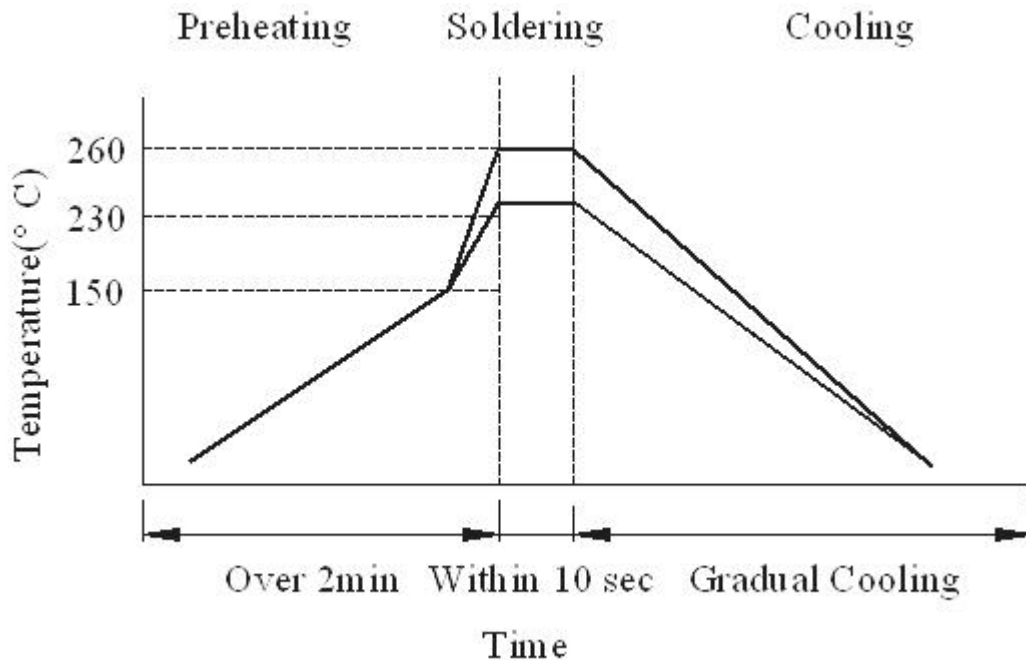
RoHS  
COMPLIANT

Gan Tong Part NO. : GPDC1010-150MT

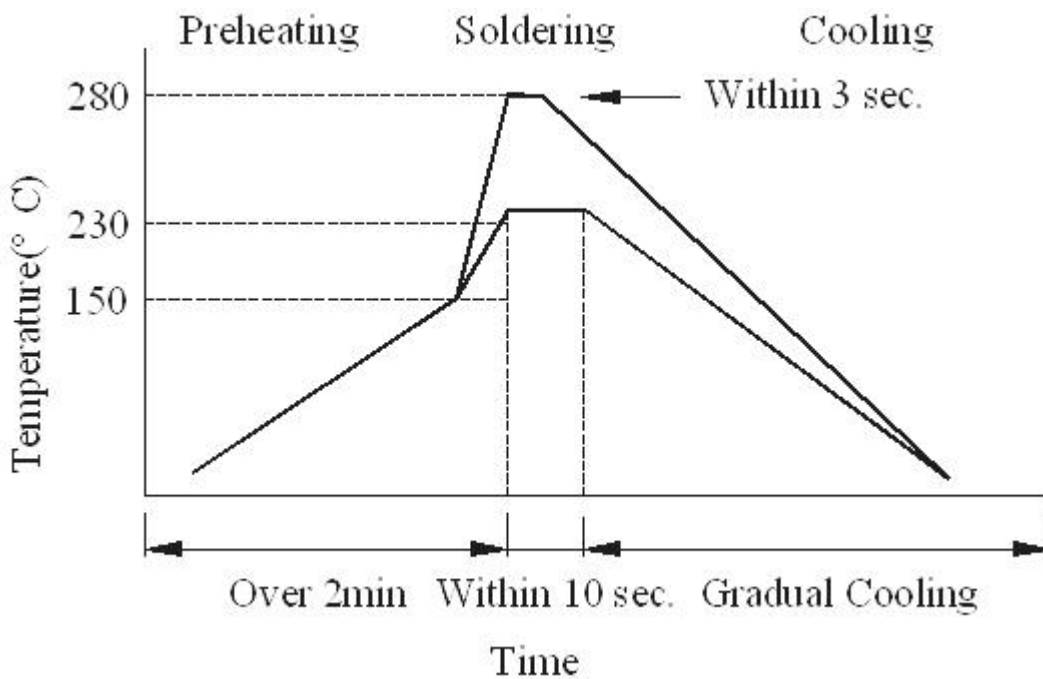
PAGE :

8-8

## Wave Soldering



## Hand soldering



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