

**5009**

CUSTOMER \_\_\_\_\_

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

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

SGTE PART NO. \_\_\_\_\_ GPDC1010-100M02 \_\_\_\_\_

SAMPLE NO. S10083001 REVISION NO. A DATE 30-Aug-10

## 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.

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, NO.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.sgte.cn>

# 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

**Jesse**

**Tony**

**Lily**

8/30

8/30

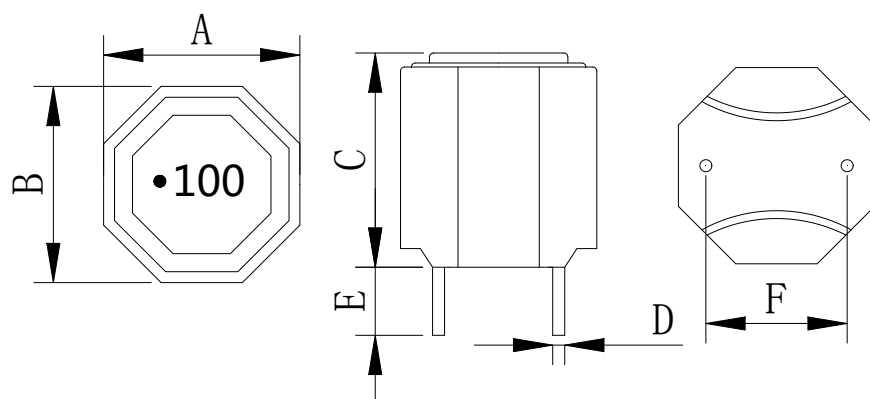
8/30

# SPECIFICATION

**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	30-Aug-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M02	S10083001	1-8

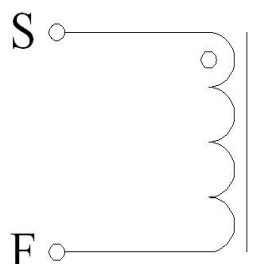
## External Dimensions Unit (mm)



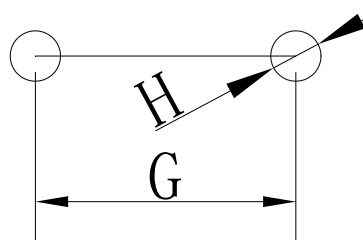
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	10.0Max (mm)
D	0.6± 0.1 (mm)
E	3.4± 0.5 (mm)
F	6.0± 0.5 (mm)
G	6.0± 0.5(mm)
H	1.0 (ref)

Coating:Black

## Connection



## Recommended Land Pattern



## Electrical Specification

Measurement Item	Unit Tolerance	Specification	Test Frequency	Test Instrument
L	uH (±20%)	10.0uH ±20%	100KHz/1V	LCR Meter Agilent/4284A or Chroma /11300
DCR	mΩ	25mΩ (Max)		Chroma /16502
I rms	Amps	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	30-Aug-10	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDC1010-100M02	S10083001	A	2-8

## Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	10.0uH	25m $\Omega$	5Amps	7Amps
Tolerance	$\pm 20\%$	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	10.83	18.45	15.5 $^{\circ}\text{C}$	87.5%
2	10.59	18.52		
3	10.53	18.38		
4	10.43	18.29		
5	10.53	18.60		
6	10.37	18.54		
7	10.43	18.50		
8	10.30	18.47		
9	10.29	18.53		
10	10.43	18.45		
$\bar{X}$	10.473	18.47		
$\sigma$	0.15	0.08		

## External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	10.0	0.6	3.4	6.0
Tolerance	$\pm 0.5$ (mm)	$\pm 0.5$ (mm)	Max (mm)	$\pm 0.1$ (mm)	$\pm 0.5$ (mm)	$\pm 0.5$ (mm)
1	10.23	10.21	8.76	0.58	3.43	6.07
2	10.31	10.25	8.61	0.59	3.44	6.08
3	10.32	10.25	8.72	0.57	3.54	6.09
4	10.32	10.25	9.19	0.58	3.36	6.09
5	10.21	10.22	8.89	0.59	3.37	6.07
6	10.31	10.22	8.70	0.59	3.46	6.09
7	10.23	10.21	8.65	0.59	3.44	6.08
8	10.25	10.20	8.73	0.58	3.43	6.09
9	10.28	10.23	8.82	0.59	3.42	6.07
10	10.30	10.25	8.76	0.58	3.47	6.07
$\bar{X}$	10.28	10.23	8.78	0.58	3.44	6.08
$\sigma$	0.04	0.02	0.04	0.01	0.05	0.01

Inductance measured at 100KHz/1Vrms.

Electrical specifications at 25 $^{\circ}\text{C}$ . Humidity 60 $\pm 10\%$

# ELECTRICAL CHARACTERISTICS

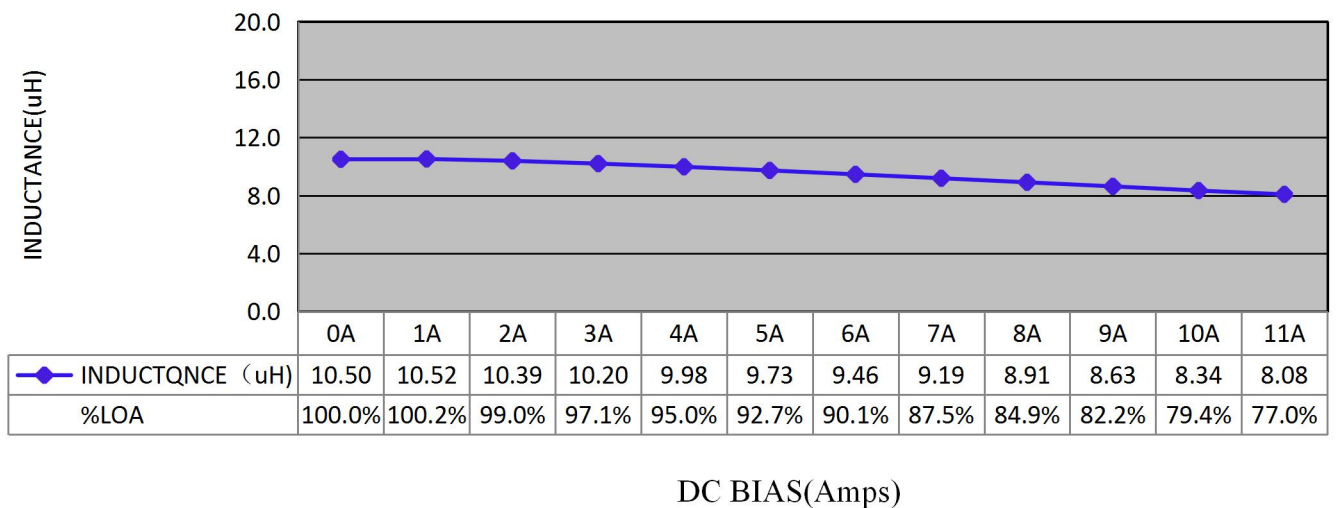
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	30-Aug-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M02	S10083001	3-8

## Inductance VS DC current

IDC	L	%LOA				
0A	10.50	100%				
1A	10.52	100.2%				
2A	10.39	99.0%				
3A	10.20	97.1%				
4A	9.98	95.0%				
5A	9.73	92.7%				
6A	9.46	90.1%				
7A	9.19	87.5%				
8A	8.91	84.9%				
9A	8.63	82.2%				
10A	8.34	79.4%				
11A	8.08	77.0%				

CONDITTON: 100KHZ/1.0Vrms



# ELECTRICAL CHARACTERISTICS

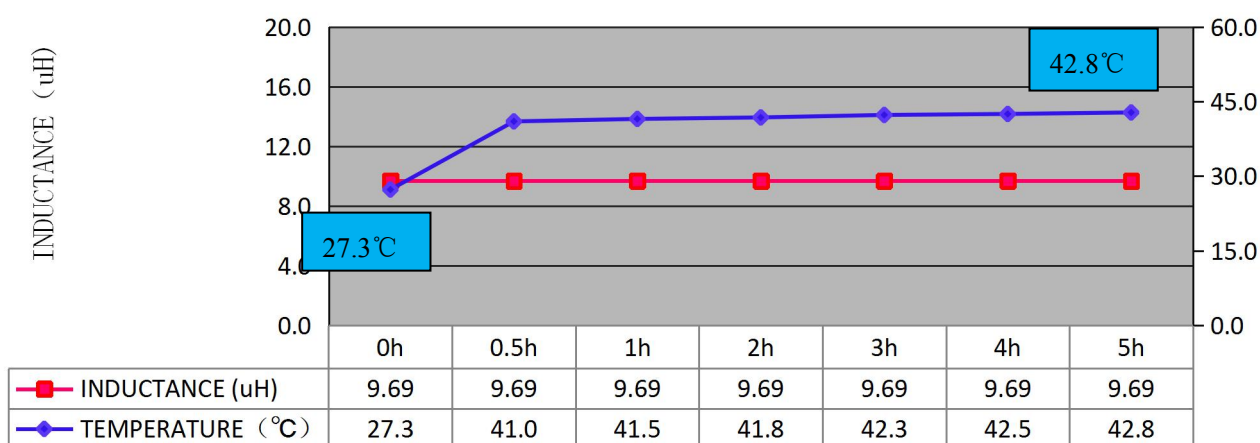
RoHS  
COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	30-Aug-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M02	S10083001	4-8

## DC current VS Temperature

Time	L (μH)	T (°C)	ΔT(°C)			
0h	9.69	27.3				
0.5h	9.69	41.0	13.7			
1h	9.69	41.5	14.2			
2h	9.69	41.8	14.5			
3h	9.69	42.3	15.0			
4h	9.69	42.5	15.2			
5h	9.69	42.8	15.5			

CONDITTON: Load 5A



Inductance VS Temperature

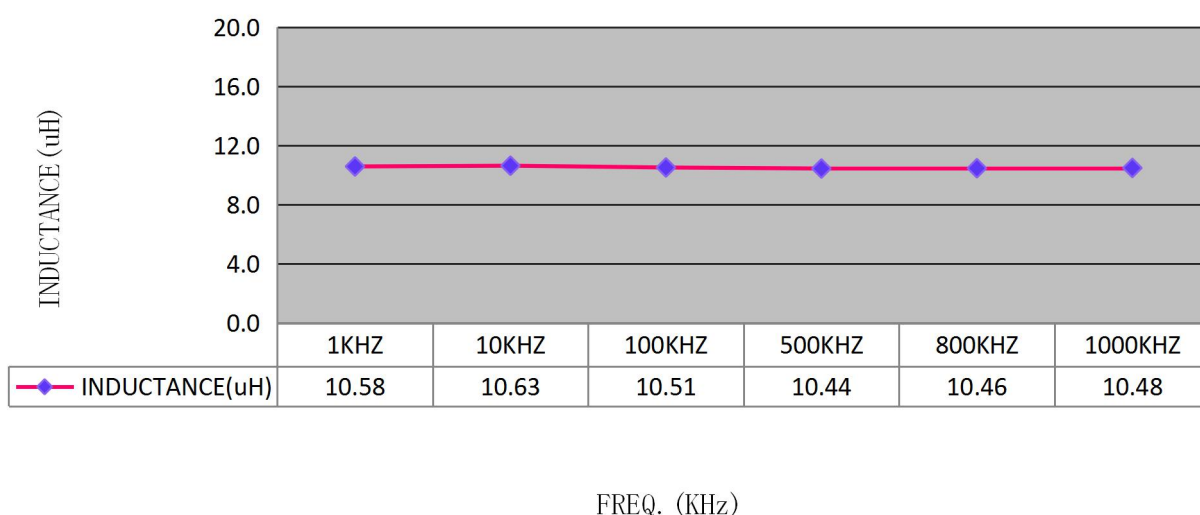
# ELECTRICAL CHARACTERISTICS

**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	30-Aug-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M02	S10083001	5-8

## Inductance VS Frequency

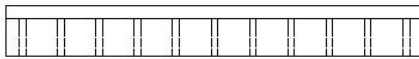
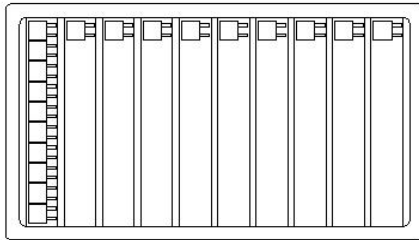
FREQ.	L (μH)					
1KHZ	10.58					
10KHZ	10.63					
100KHZ	10.51					
500KHZ	10.44					
800KHZ	10.46					
1000KHZ	10.48					



# PACKING FOR SPECIFICATION

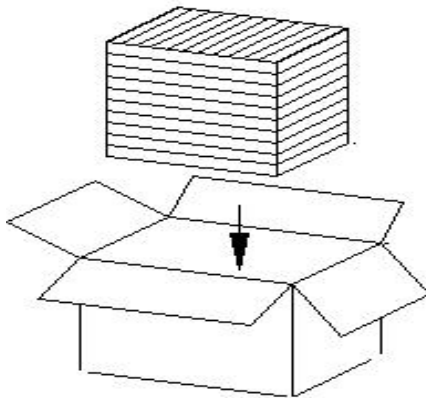
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	30-Aug-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M02	S10083001	6-8



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

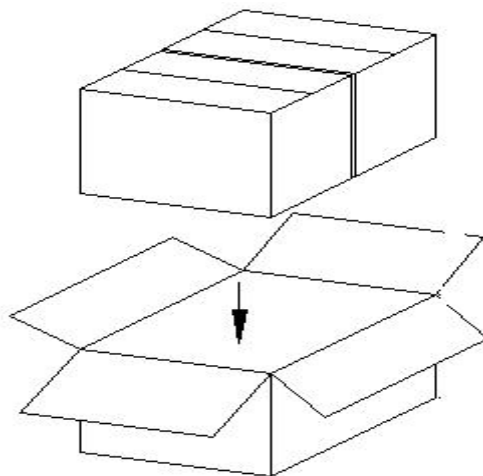
Quantity : 130PCS/PET



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.: GPDC1010-100M02

PAGE : 7-8

Item	Performance	Test Condition
<b>Mechanical Performance Test</b>		
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 <math>260\pm 5^{\circ}\text{C}</math> for 10 seconds</p>	
Solder Heat Resistance	<p>Components should have not evidence of electrical and mechanical damage.</p> <p>Inductance: within <math>\pm 20\%</math> of initial value.</p> <p>Preheat: <math>150^{\circ}\text{C}</math> 60 seconds</p> <p>Solder: (SnCu0.7)</p> <p>Solder Temperature: <math>260\pm 5^{\circ}\text{C}</math></p> <p>Flux: Rosin.</p> <p>Dip time: <math>10\pm 0.5</math> seconds</p>	
Low temperature storage test	<p>1. Appearance: No damage.</p> <p>2. Inductance: within <math>\pm 20\%</math> of initial value.</p> <p>3. No disconnection or short circuit.</p>	<p>Temperature: <math>-40^{\circ}\text{C}\pm 5^{\circ}\text{C}</math> Time: <math>500\pm 12</math> Hours</p> <p>Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.</p>
High temperature storage test		<p>Temperature: <math>85^{\circ}\text{C}\pm 5^{\circ}\text{C}</math> Time: <math>500\pm 2</math> Hours</p> <p>Recovery: 4to24hrs of recovery under the standard condition after the removal from test chamber.</p>
Thermal Shock Test (Temperature cycle)		<p><math>-40\pm 5^{\circ}\text{C}</math> for 30 Minutes. <math>+85\pm 5^{\circ}\text{C}</math> for 30 Minutes.</p> <p>Total: 10 Cycles</p>
Humidity load life test		<p>Temperature: <math>40\pm 5^{\circ}\text{C}</math> Humidity: 90-95%</p> <p>Time: <math>500\pm 12</math> 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

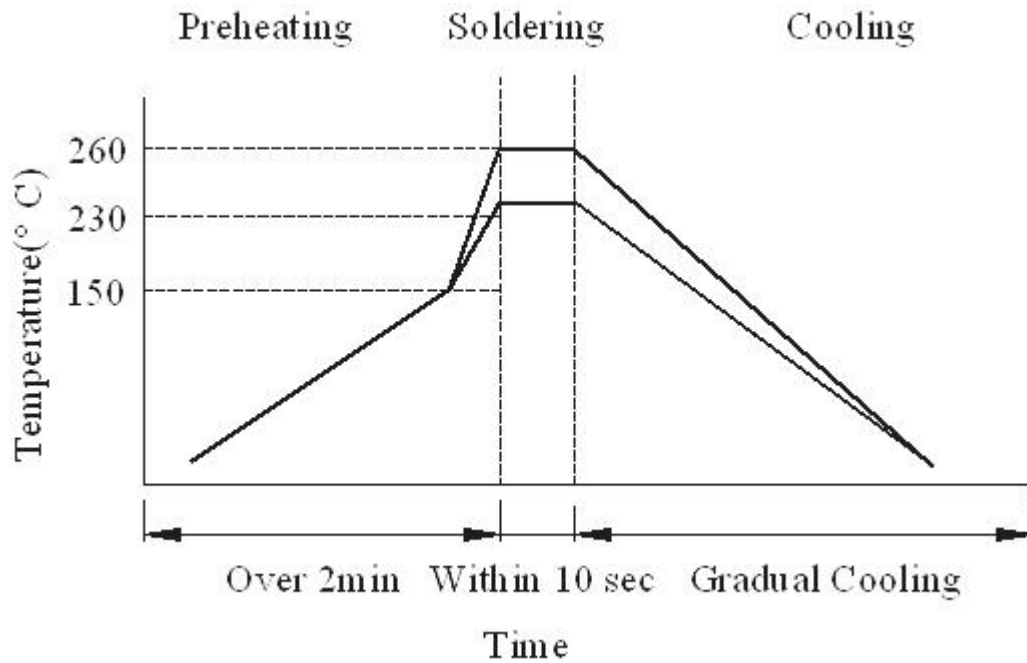
RoHS  
COMPLIANT

Gan Tong Part NO. : GPDC1010-100M02

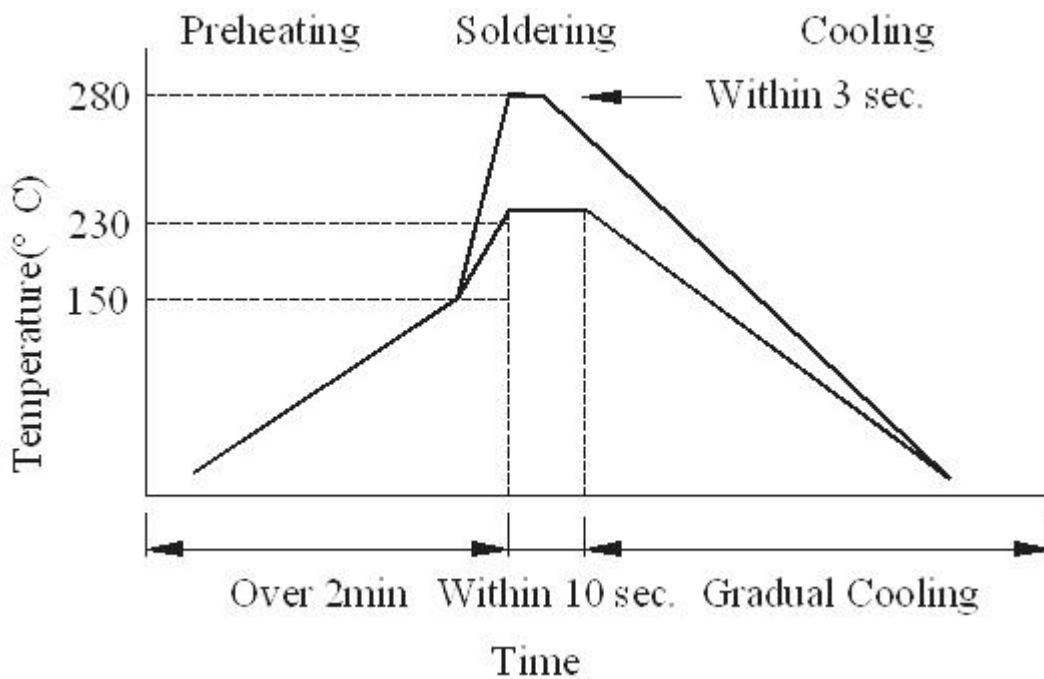
PAGE :

8-8

## Wave Soldering



## Hand soldering



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Fixed Inductors](#) category:*

*Click to view products by [Gantong](#) manufacturer:*

Other Similar products are found below :

[CR32NP-151KC](#) [CR32NP-180KC](#) [CR32NP-181KC](#) [CR32NP-1R5MC](#) [CR32NP-390KC](#) [CR32NP-3R9MC](#) [CR32NP-680KC](#) [CR32NP-820KC](#) [CR32NP-8R2MC](#) [CR43NP-390KC](#) [CR43NP-560KC](#) [CR43NP-680KC](#) [CR54NP-181KC](#) [CR54NP-470LC](#) [CR54NP-820KC](#) [CR54NP-8R5MC](#) [70F224AI](#) [MGDQ4-00004-P](#) [MHL1ECTTP18NJ](#) [MHQ1005P10NJ](#) [MHQ1005P1N0S](#) [MHQ1005P2N4S](#) [MHQ1005P3N6S](#) [MHQ1005P5N1S](#) [MHQ1005P8N2J](#) [PE-51506NL](#) [PE-53601NL](#) [PE-53602NL](#) [PE-53630NL](#) [PE-53824SNLT](#) [PE-92100NL](#) [PG0434.801NLT](#) [PG0936.113NLT](#) [9220-20](#) [9310-16](#) [PM06-2N7](#) [PM06-39NJ](#) [A01TK](#) [1206CS-471XJ](#) [HC2LP-R47-R](#) [HC2-R47-R](#) [HC3-2R2-R](#) [HCF1305-3R3-R](#) [1206CS-151XG](#) [RCH664NP-140L](#) [RCH664NP-4R7M](#) [RCH8011NP-221L](#) [RCP1317NP-332L](#) [RCP1317NP-391L](#) [RCR1010NP-470M](#)