

CUSTOMER \_\_\_\_\_

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

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

SGTE PART NO. \_\_\_\_\_ GPDC1010-100M03 \_\_\_\_\_

SAMPLE NO. S10091001 REVISION NO. A DATE 10-Sep-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.szgte.com>

# 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**

9/10

9/10

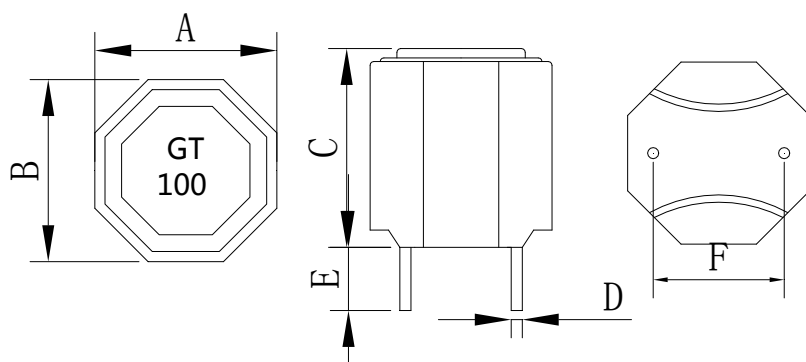
9/10

# SPECIFICATION

**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	10-Sep-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M03	S10091001	1-8

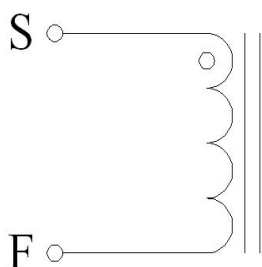
## External Dimensions Unit (mm)



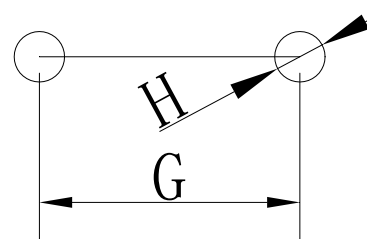
A	10.0± 0.5 (mm)
B	10.0± 0.5 (mm)
C	10.5Max (mm)
D	0.6± 0.1 (mm)
E	3.4± 0.5 (mm)
F	5.0± 0.5 (mm)
G	5.0± 0.5(mm)
H	0.8 (ref)

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	10-Sep-10	
Gan Tong Part NO.	Sample NO.	Revision No.	Page
GPDC1010-100M03	S10091001	A	2-8

## Electrical Characteristic

Item	L0A	DCR	I rms	I sat
Specification	10.0uH	25mΩ	5Amps	7Amps
Tolerance	±20%	Max	$\Delta T \leq 40^{\circ}\text{C}$	$L \geq 65\%$
1	10.20	18.25	15.0°C	86.2%
2	10.19	18.33		
3	10.60	18.27		
4	10.12	18.28		
5	9.91	18.30		
6	10.27	18.27		
7	10.30	18.50		
8	10.34	18.32		
9	10.24	18.61		
10	10.32	18.40		
$\bar{X}$	10.25	18.35		
$\sigma$	0.17	0.11		

## External Dimensions

Item	A	B	C	D	E	F
Specification	10.0	10.0	10.0	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	10.17	10.09	8.96	0.60	3.58	5.29
2	10.07	10.06	8.84	0.62	3.57	5.17
3	10.09	10.08	8.85	0.58	3.51	5.17
4	10.11	10.11	8.75	0.59	3.60	5.13
5	10.12	10.10	8.90	0.62	3.63	5.14
6	10.11	10.10	8.91	0.58	3.56	5.14
7	10.13	10.12	8.99	0.59	3.60	5.13
8	10.12	10.11	8.74	0.59	3.48	5.17
9	10.11	10.11	8.89	0.57	3.49	5.18
10	10.11	10.08	8.92	0.58	3.48	5.14
$\bar{X}$	10.11	10.10	8.88	0.59	3.55	5.17
$\sigma$	0.03	0.02	0.04	0.02	0.03	0.04

Inductance measured at 100KHz/1Vrms.

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

# ELECTRICAL CHARACTERISTICS

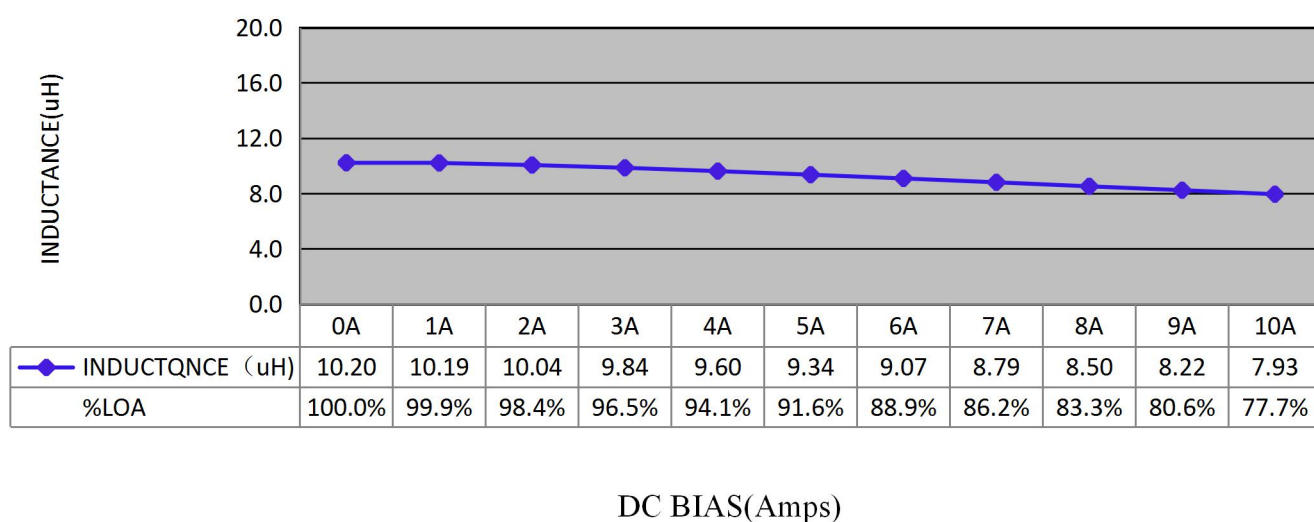
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	10-Sep-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M03	S10091001	3-8

## Inductance VS DC current

IDC	L	%LOA				
0A	10.20	100.0%				
1A	10.19	99.9%				
2A	10.04	98.4%				
3A	9.84	96.5%				
4A	9.60	94.1%				
5A	9.34	91.6%				
6A	9.07	88.9%				
7A	8.79	86.2%				
8A	8.50	83.3%				
9A	8.22	80.6%				
10A	7.93	77.7%				

CONDITION: 100KHZ/1.0V<sub>rms</sub> AMBIENT: 20°C, 69.8%



DC BIAS(Amps)

# ELECTRICAL CHARACTERISTICS

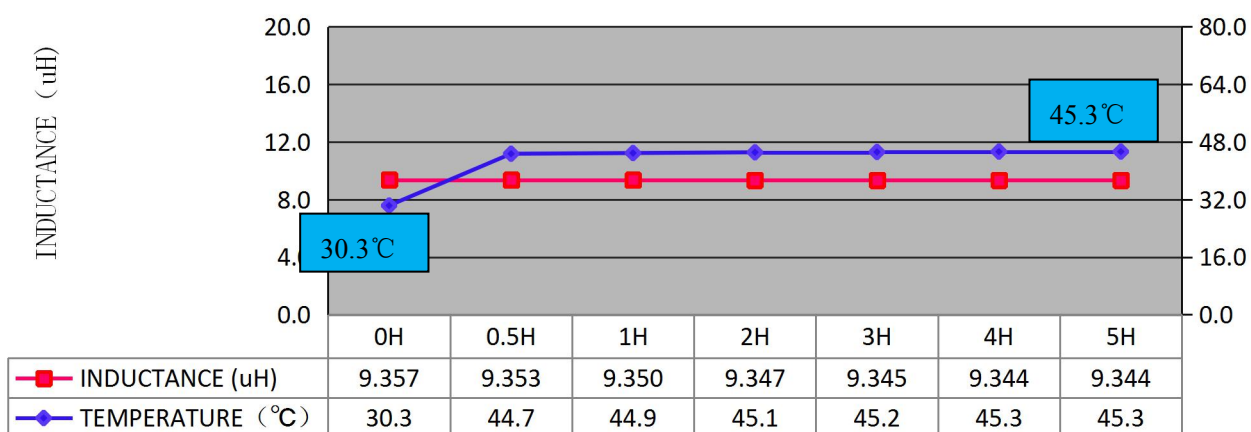
RoHS  
COMPLIANT

Customers Part Number	Item Name	Date
	Power Inductor	10-Sep-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M03	S10091001	4-8

## DC current VS Temperature

Time	L ( $\mu$ H )	T ( $^{\circ}$ C )	$\Delta$ T( $^{\circ}$ C )			
0h	9.357	30.3				
0.5h	9.353	44.7	14.4			
1h	9.350	44.9	14.6			
2h	9.347	45.1	14.8			
3h	9.345	45.2	14.9			
4h	9.344	45.3	15.0			
5h	9.344	45.3	15.0			

CONDITION: Load 5A AMBIENT: 20 $^{\circ}$ C, 69.8%



Inductance VS Temperature

# ELECTRICAL CHARACTERISTICS

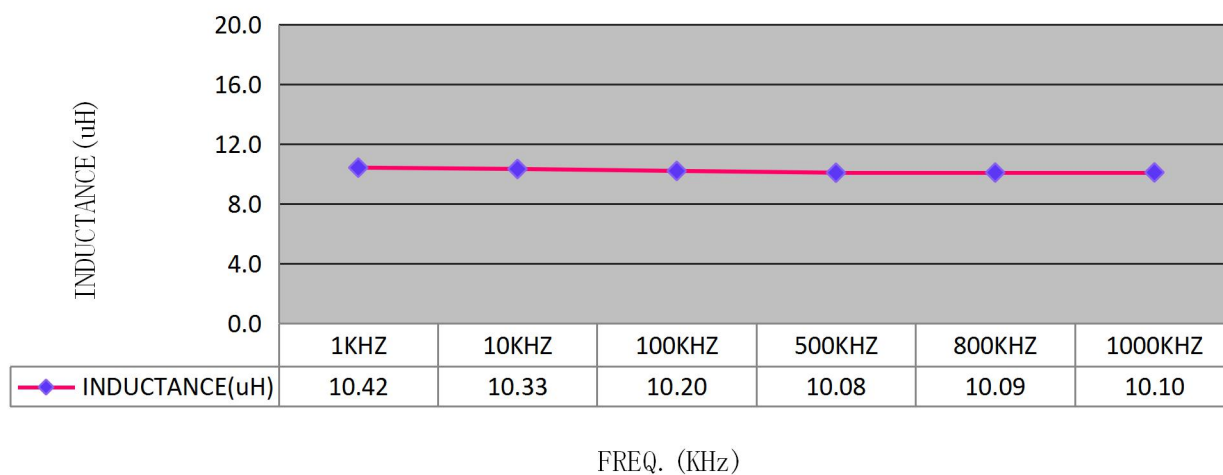
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	10-Sep-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M03	S10091001	5-8

## Inductance VS Frequency

FREQ.	L ( $\mu$ H )					
1KHZ	10.42					
10KHZ	10.33					
100KHZ	10.20					
500KHZ	10.08					
800KHZ	10.09					
1000KHZ	10.10					

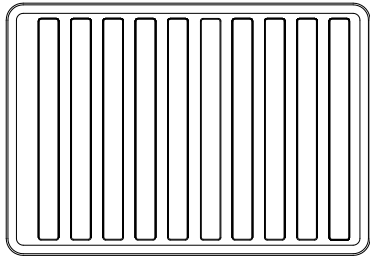
AMBIENT: 20°C, 69.8%



# PACKING FOR SPECIFICATION

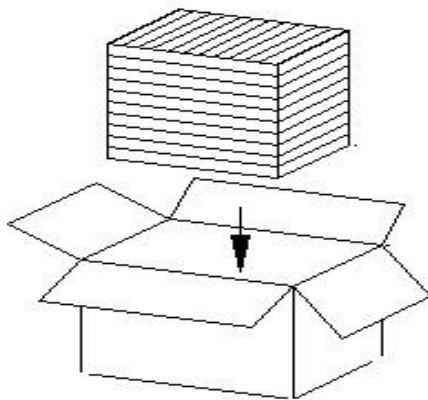
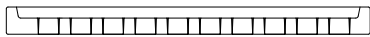
**RoHS  
COMPLIANT**

Customers Part Number	Item Name	Date
	Power Inductor	10-Sep-10
Gan Tong Part NO.	Sample NO.	Page
GPDC1010-100M03	S10091001	6-8



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

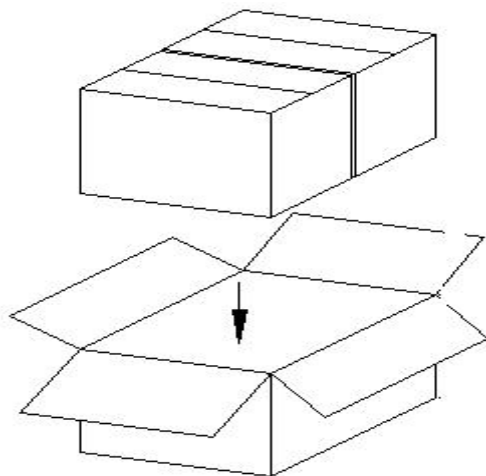
Quantity : 110PCS/PET



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

Quantity : 10PET/Small box

1 Small box/1100PCS



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

Quantity : 2 Small box/Big box

1 Big box/2200PCS



# GENERAL CHARACTERISTICS

Gan Tong Part NO.: GPDC1010-100M03

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

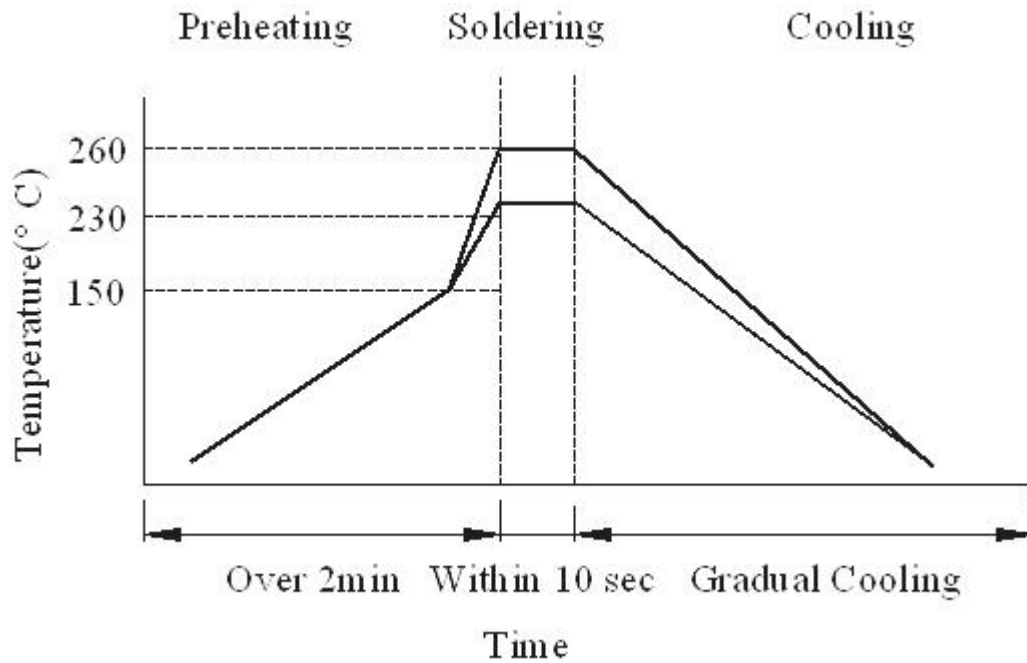
RoHS  
COMPLIANT

Gan Tong Part NO. : GPDC1010-100M03

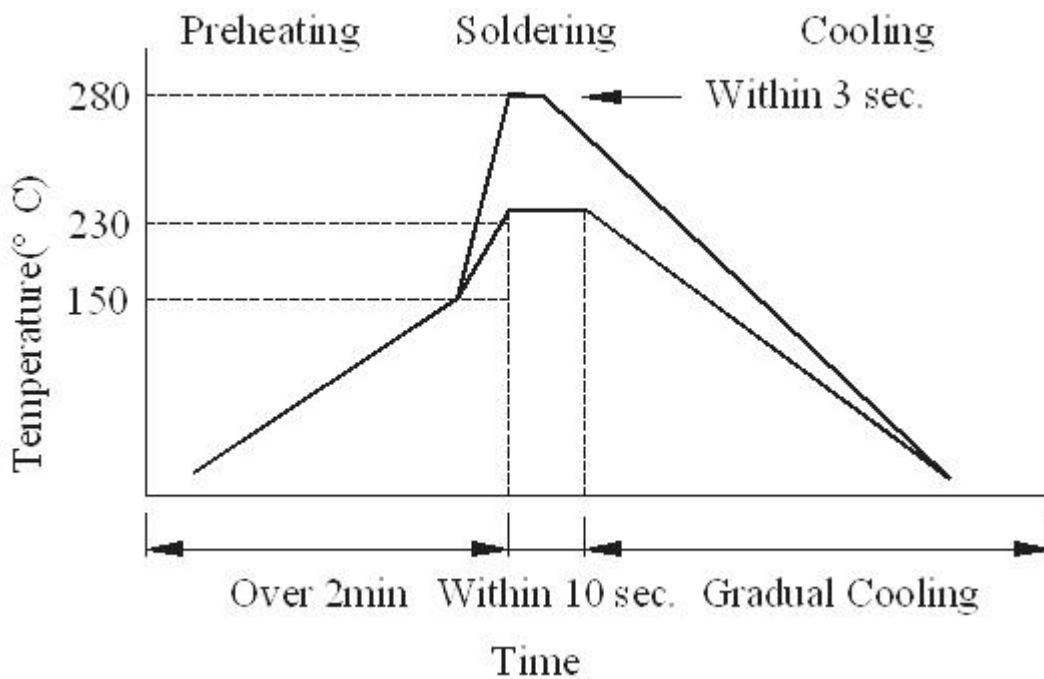
PAGE :

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](#)