

CUSTOMER \_\_\_\_\_

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

DESCRIPTION SMD Power Inductor

SGTE PART NO. GPSR-AP1365-150MS

SAMPLE NO. S18060601 REVISION NO. A1 DATE 2020/10/14

## 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

|                           |
|---------------------------|
| <b>RoHS<br/>COMPLIANT</b> |
|---------------------------|

|                       |                    |              |    |
|-----------------------|--------------------|--------------|----|
| Customers Part Number | Item Name          | Date         |    |
|                       | SMD Power Inductor | 2020/10/14   |    |
| Gan Tong Part NO.     | Sample NO.         | Revision No. | A1 |
| GPSR-AP1365-150MS     | S18060601          | Pages        | 6  |

| Version | Change history   | Before the change | After the change | Release date |
|---------|------------------|-------------------|------------------|--------------|
| A0      | NEW              | —                 | —                | 2018/7/13    |
| A1      | 修改产品E尺寸. 取消印周期字样 | 原E尺寸5.8 mm        | 修改为4.0 mm        | 2020/10/14   |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |
|         |                  |                   |                  |              |

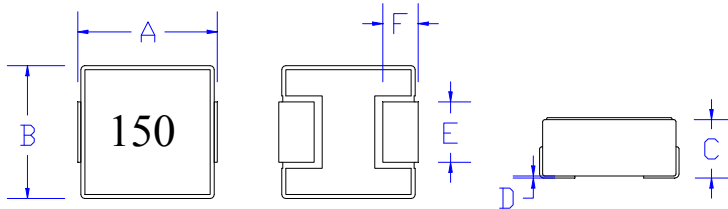
|                 |                   |                    |
|-----------------|-------------------|--------------------|
| <b>DRAWN BY</b> | <b>CHECKED BY</b> | <b>APPROVED BY</b> |
|                 |                   |                    |

# SPECIFICATION

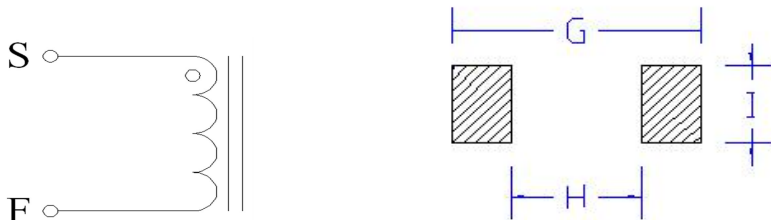
**RoHS  
COMPLIANT**

|                       |                    |              |     |
|-----------------------|--------------------|--------------|-----|
| Customers Part Number | Item Name          | Date         |     |
|                       | SMD Power Inductor | 2020/10/14   |     |
| Gan Tong Part NO.     | Sample NO.         | Revision No. | A1  |
| GPSR-AP1365-150MS     | S18060601          | Page         | 1-5 |

## MECHANICAL & DIMENSIONS



|   |           |
|---|-----------|
| A | 13.45±0.5 |
| B | 12.6±0.3  |
| C | 6.5 Max   |
| D | ≤0.2      |
| E | 4.0±0.5   |
| F | 2.3±0.5   |
| G | 14.5 REF  |
| H | 8.0 REF   |
| I | 5.0 REF   |



Recommended Land Pattern

## ELECTRICAL REQUIREMENTS:

| PARAMETER        | SPECIFICATION | CONDITION | TEST INSTRUMENTS                 |
|------------------|---------------|-----------|----------------------------------|
| L                | 15± 20% uH    | 100KHz/1V | ■LCR Agilent4284A / Chroma 11300 |
| DCR              | 33 max mΩ     | @ 25°C    | ■CH16502 IMPEDANCE METER         |
| I-sat            | 12.0 A mps    | ≧ 65%L0A  | ■A4284A+A42841A LCR METER        |
| I <sub>rms</sub> | 7.0 A mps     | ΔT ≤40°C  | ■Chroma /11300+3302+1320+1320S   |

- I<sub>rms</sub>: Current that causes a 40°C temperature rise from 25°C ambient.
- I<sub>sat</sub>: 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.

# SPECIFICATION

**RoHS  
COMPLIANT**

|                       |                    |              |     |
|-----------------------|--------------------|--------------|-----|
| Customers Part Number | Item Name          | Date         |     |
|                       | SMD Power Inductor | 2020/10/14   |     |
| Gan Tong Part NO.     | Sample NO.         | Revision No. | A1  |
| GPSR-AP1365-150MS     | S18060601          | Page         | 2-5 |

### Electrical Characteristic :

| PARAMETER     | L         | DCR    | I-sat   | Irms     |
|---------------|-----------|--------|---------|----------|
| UNIT          | uH        | mΩ     | A mps   | A mps    |
| SPECIFICATION | 15± 20%   | 33 max | 12.0    | 7.0      |
| CONDITION     | 100KHz/1V | @ 25°C | ≧65%L0A | ΔT ≧40°C |
| 1             | 14.30     | 24.80  | 74.8%   | 33.5°C   |
| 2             | 13.60     | 24.70  |         |          |
| 3             | 14.10     | 24.20  |         |          |
| 4             | 13.70     | 25.40  |         |          |
| 5             | 14.30     | 25.00  |         |          |
| 6             |           |        |         |          |
| 7             |           |        |         |          |
| 8             |           |        |         |          |
| 9             |           |        |         |          |
| 10            |           |        |         |          |
| MEAN          | 14.00     | 24.8   |         |          |
| R             | 0.70      | 1.20   |         |          |

### External Dimensions:

| NO   | A         | B        | C       | D    | E       | F       |
|------|-----------|----------|---------|------|---------|---------|
|      | 13.45±0.5 | 12.6±0.3 | 6.5 Max | ≤0.2 | 4.0±0.5 | 2.3±0.5 |
| 1    | 13.70     | 12.55    | 6.34    | 0.08 | 4.03    | 2.30    |
| 2    | 13.70     | 12.55    | 6.32    | 0.09 | 0.02    | 2.30    |
| 3    | 13.62     | 12.52    | 6.40    | 0.09 | 4.03    | 2.32    |
| 4    | 13.74     | 12.60    | 6.39    | 0.09 | 4.03    | 2.31    |
| 5    | 13.72     | 12.52    | 6.33    | 0.10 | 4.04    | 2.30    |
| 6    |           |          |         |      |         |         |
| MEAN | 13.70     | 12.55    | 6.36    | 0.09 | 3.23    | 2.31    |
| R    | 0.12      | 0.08     | 0.08    | 0.02 | 4.02    | 0.02    |

Inductance measured at 100KHz/1Vrms..

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

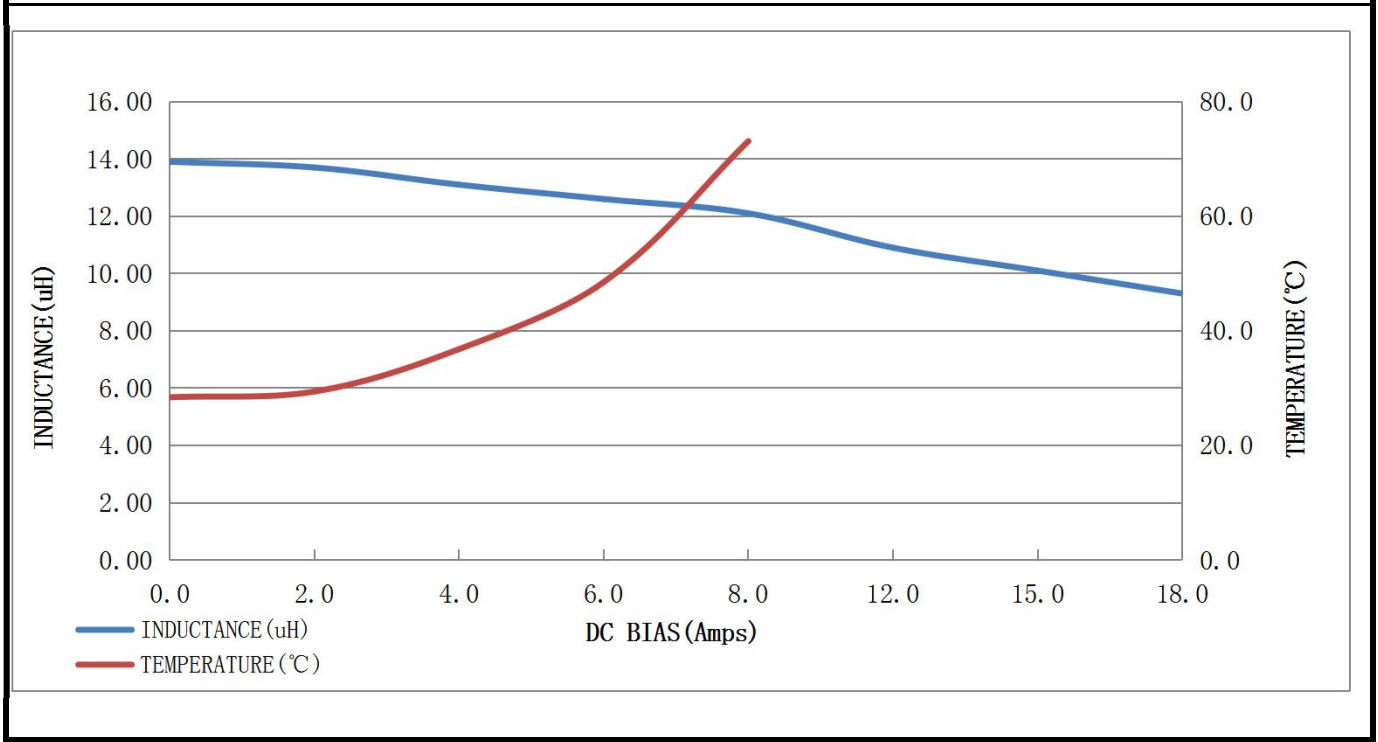
# SPECIFICATION

**RoHS  
COMPLIANT**

|                       |                    |              |     |
|-----------------------|--------------------|--------------|-----|
| Customers Part Number | Item Name          | Date         |     |
|                       | SMD Power Inductor | 2020/10/14   |     |
| Gan Tong Part NO.     | Sample NO.         | Revision No. | A1  |
| GPSR-AP1365-150MS     | S18060601          | Page         | 3-5 |

## INDUCTANCE (uH) / TEMPERATURE RISE(°C) VS DC BIAS (Amps)

| IDC    | L(uH) | L/LoA (%) | T(°C) | ΔT(°C) |  |  |
|--------|-------|-----------|-------|--------|--|--|
| 0.0 A  | 13.90 | 100.00%   | 28.4  | 0.0    |  |  |
| 2.0 A  | 13.70 | 98.56%    | 29.4  | 1.0    |  |  |
| 4.0 A  | 13.10 | 94.24%    | 36.8  | 8.4    |  |  |
| 6.0 A  | 12.60 | 90.65%    | 48.5  | 20.1   |  |  |
| 8.0 A  | 12.10 | 87.05%    | 73.1  | 44.7   |  |  |
| 12.0 A | 10.90 | 78.42%    |       |        |  |  |
| 15.0 A | 10.10 | 72.66%    |       |        |  |  |
| 18.0 A | 9.30  | 66.91%    |       |        |  |  |
|        |       |           |       |        |  |  |

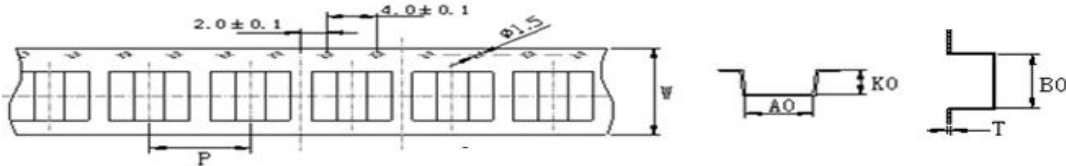


# SPECIFICATION

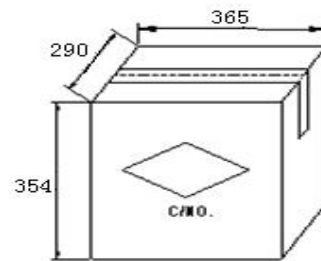
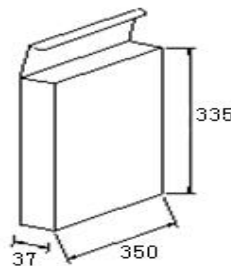
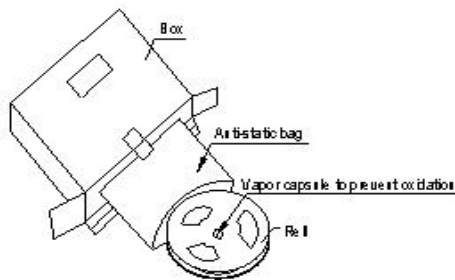
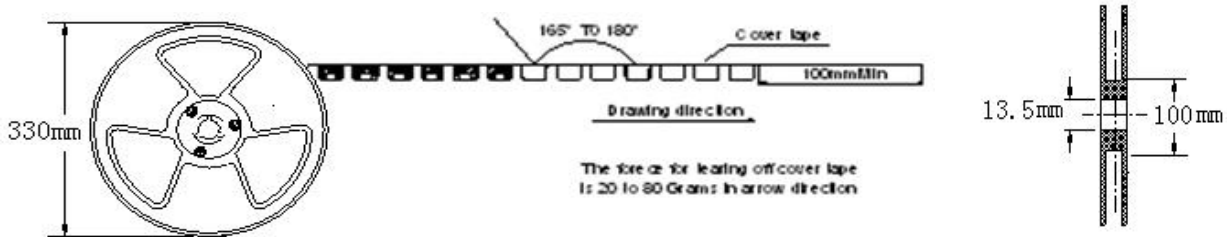
**RoHS  
COMPLIANT**

|                       |                    |              |     |
|-----------------------|--------------------|--------------|-----|
| Customers Part Number | Item Name          | Date         |     |
|                       | SMD Power Inductor | 2020/10/14   |     |
| Gan Tong Part NO.     | Sample NO.         | Revision No. | A1  |
| GPSR-AP1365-150MS     | S18060601          | Page         | 4-5 |

## PACKAGING



| A0   | B0   | K0  | T   | P  | W  | Unit |
|------|------|-----|-----|----|----|------|
| 13.0 | 14.5 | 6.9 | 0.4 | 16 | 24 | mm   |



## Packaging Quantity

| Inner Carton   |               | Outer Carton        |          |             |          | Unit: mm |
|----------------|---------------|---------------------|----------|-------------|----------|----------|
| Reel size      | Quantity/Reel | Inside the box size | Quantity | Carton size | Quantity |          |
| $\text{Ø} 330$ | 500pcs        | 350*335*37          | 500pcs   | 365*345*290 | 3000pcs  |          |

## Storage

1. Temperature and humidity conditions: Less than 40°C and 70% RH.
2. Recommended products should be used within 6 months form the time of delivery.
3. The packaging material should be kept where no chlorine or sulfur exists in the air.

## Transportation

1. Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
2. The use of tweezers or vacuum pick up is strongly recommended for individual components.
3. Bulk handling should ensure that abrasion and mechanical shock are minimized.

# SPECIFICATION

**RoHS  
COMPLIANT**

|                       |                    |              |     |
|-----------------------|--------------------|--------------|-----|
| Customers Part Number | Item Name          | Date         |     |
|                       | SMD Power Inductor | 2020/10/14   |     |
| Gan Tong Part NO.     | Sample NO.         | Revision No. | A1  |
| GPSR-AP1365-150MS     | S18060601          | Page         | 5-5 |

## SOLDRING CONDITIONS

Figure 1. Re-flow Soldering

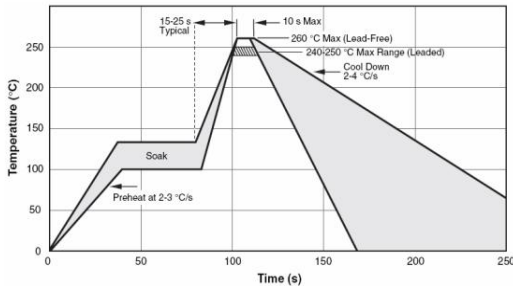
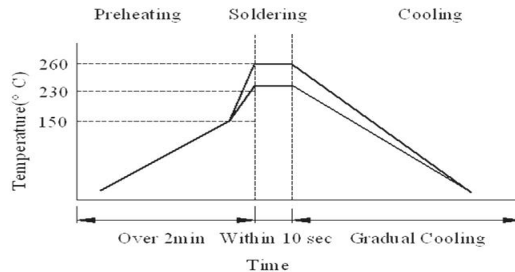


Figure 2. Wave Soldering



Soldering Iron: temperature  $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$ , dwell time shall be less than 3 sec.

## Reliability and Testing Conditions/Surface Mount Type Power Inductors

| Item                   | Specification                                                                                                 | Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
|------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------|--------------|---|-------------|----|---|------------------|----------|---|-------------|----|---|------------------|----------|
| Solderability          | More than 90% of the terminal electrode should be covered with solder.                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| Solder Heat Resistance | Inductance within $\pm 20\%$ of initial value and appearance shall not break.                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| Heat resistance        | Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break. | After $500 \pm 12$ hours in $145 \pm 5^{\circ}\text{C}$ and 2 hour drying under normal condition.                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| Cold resistance        | Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break. | After $500 \pm 12$ hours in $-40 \pm 2^{\circ}\text{C}$ and 2 hour drying under normal condition.                                                                                                                                                                                                                                                                                                                                                                                                                                |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| Thermal shock          | Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break. | After 10 cycles of following condition. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Step</th> <th>Temperature (<math>^{\circ}\text{C}</math>)</th> <th>Times (min.)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><math>-40 \pm 2</math></td> <td>30</td> </tr> <tr> <td>2</td> <td>Room Temperature</td> <td>Within 3</td> </tr> <tr> <td>3</td> <td><math>145 \pm 5</math></td> <td>30</td> </tr> <tr> <td>4</td> <td>Room Temperature</td> <td>Within 3</td> </tr> </tbody> </table> | Step | Temperature ( $^{\circ}\text{C}$ ) | Times (min.) | 1 | $-40 \pm 2$ | 30 | 2 | Room Temperature | Within 3 | 3 | $145 \pm 5$ | 30 | 4 | Room Temperature | Within 3 |
| Step                   | Temperature ( $^{\circ}\text{C}$ )                                                                            | Times (min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| 1                      | $-40 \pm 2$                                                                                                   | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| 2                      | Room Temperature                                                                                              | Within 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| 3                      | $145 \pm 5$                                                                                                   | 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| 4                      | Room Temperature                                                                                              | Within 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| Humidity Resistance    | Inductance within $\pm 20\%$ of initial value. No disconnection or short circuit. Appearance shall not break. | After $500 \pm 12$ hours in $40 \pm 2^{\circ}\text{C}$ and 90 to 95% humidity, and 2 hour drying under normal condition.                                                                                                                                                                                                                                                                                                                                                                                                         |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |
| * Vibration Test       | Inductance within $\pm 20\%$ of initial value and appearance shall not break.                                 | After vibration for 1 hour, In each of three orientations at sweep vibration ( $10 \sim 55 \sim 10\text{Hz}$ ) with 1.52mm P-P Amplitudes.                                                                                                                                                                                                                                                                                                                                                                                       |      |                                    |              |   |             |    |   |                  |          |   |             |    |   |                  |          |

## 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](#)