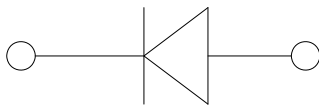
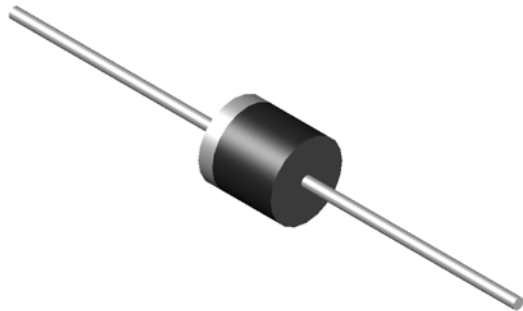


## General Purpose Rectifier



### Features

- High efficiency
- High current capability
- High reliability
- High surge current capability
- Low power loss
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

### Mechanical Data

- **Package:** R-6  
Molding compound meets UL 94 V-0 flammability rating, -
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes cathode end

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                                                  | SYMBOL           | UNIT             | P6A05G     | P6A1G | P6A2G | P6A4G | P6A6G | P6A8G | P6A10G |
|--------------------------------------------------------------------------------------------|------------------|------------------|------------|-------|-------|-------|-------|-------|--------|
| Device marking code                                                                        |                  |                  | P6A05G     | P6A1G | P6A2G | P6A4G | P6A6G | P6A8G | P6A10G |
| Maximum Repetitive Peak Reverse Voltage                                                    | VRRM             | V                | 50         | 100   | 200   | 400   | 600   | 800   | 1000   |
| Maximum RMS Voltage                                                                        | VRMS             | V                | 35         | 70    | 140   | 280   | 420   | 560   | 700    |
| Maximum DC blocking Voltage                                                                | VDC              | V                | 50         | 100   | 200   | 400   | 600   | 800   | 1000   |
| Average Forward Current<br>@60Hz sine wave, Resistance load, Ta =75°C                      | IF(AV)           | A                | 6.0        |       |       |       |       |       |        |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, Tj=25°C           | IFSM             | A                | 200        |       |       |       |       |       |        |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, Tj=25°C              |                  |                  | 400        |       |       |       |       |       |        |
| Current squared time<br>@1ms≤t≤8.3ms Tj=25°C, Rating of per diode                          | I <sup>2</sup> t | A <sup>2</sup> s | 166        |       |       |       |       |       |        |
| Typical junction capacitance<br>@Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | Cj               | pF               | 45         |       |       |       |       |       |        |
| Storage Temperature                                                                        | Tstg             | °C               | -55 ~ +150 |       |       |       |       |       |        |
| Junction Temperature                                                                       | Tj               | °C               | -55 ~ +150 |       |       |       |       |       |        |

### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                                                         | SYMBOL | UNIT | TEST CONDITIONS | P6A05G | P6A1G | P6A2G | P6A4G | P6A6G | P6A8G | P6A10G |
|-------------------------------------------------------------------|--------|------|-----------------|--------|-------|-------|-------|-------|-------|--------|
| Maximum instantaneous forward voltage drop per diode              | VF     | V    | IFM=6.0A        | 1.1    |       |       |       |       |       |        |
| Maximum DC reverse current at rated DC blocking voltage per diode | IR     | μA   | Tj=25°C         | 2.5    |       |       |       |       |       |        |
|                                                                   |        |      | Tj=125°C        | 100    |       |       |       |       |       |        |

# P6A05G THRU P6A10G

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                  | SYMBOL           | UNIT | P6A05G | P6A1G | P6A2G | P6A4G | P6A6G | P6A8G | P6A10G |
|----------------------------|------------------|------|--------|-------|-------|-------|-------|-------|--------|
| Typical Thermal Resistance | R <sub>θJA</sub> | °C/W | 12     |       |       |       |       |       |        |

## ■ Ordering Information (Example)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g)   | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| P6A05G~P6A10G | D1           | Approximate 1.95 | 500                  | 500                     | 5000                       | Tape          |
| P6A05G~P6A10G | C1           | Approximate 1.95 | 100                  | 100                     | 5000                       | Bulk          |

## ■ Characteristics (Typical)

FIG.1: I<sub>o</sub>-T<sub>a</sub> Curve

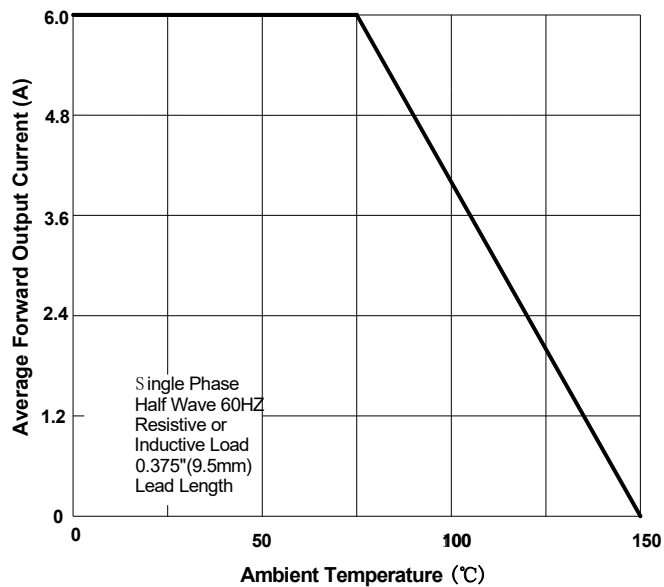


FIG.2: Forward Surge Current Capability

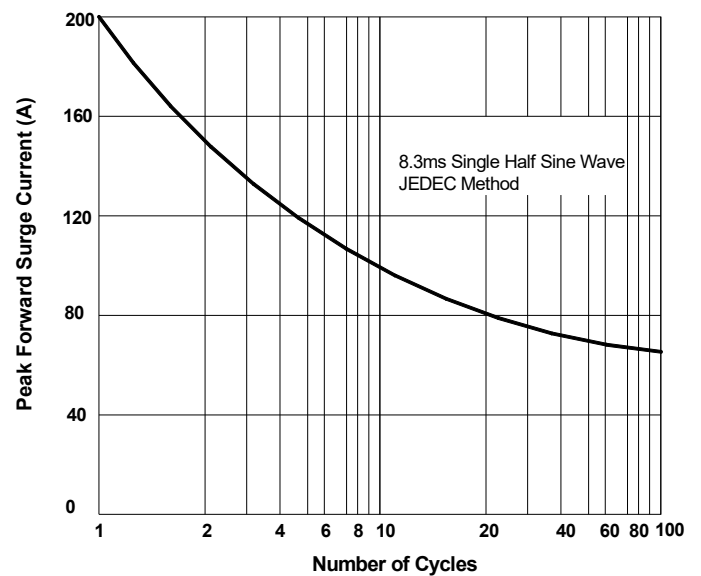


FIG.3: Forward Voltage

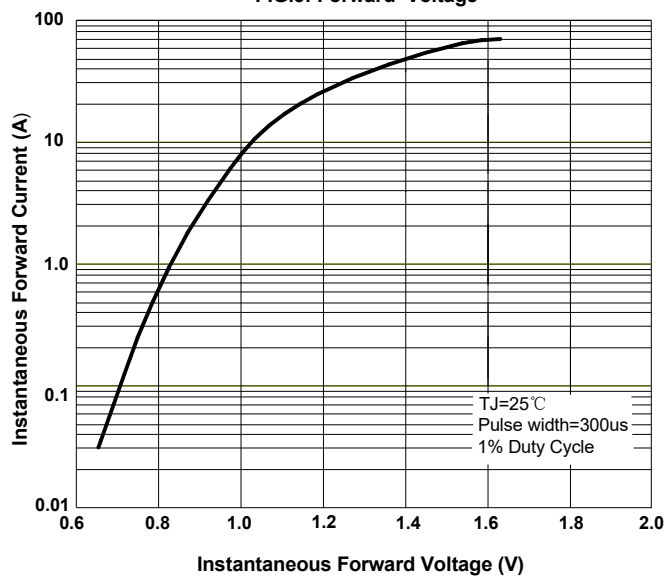
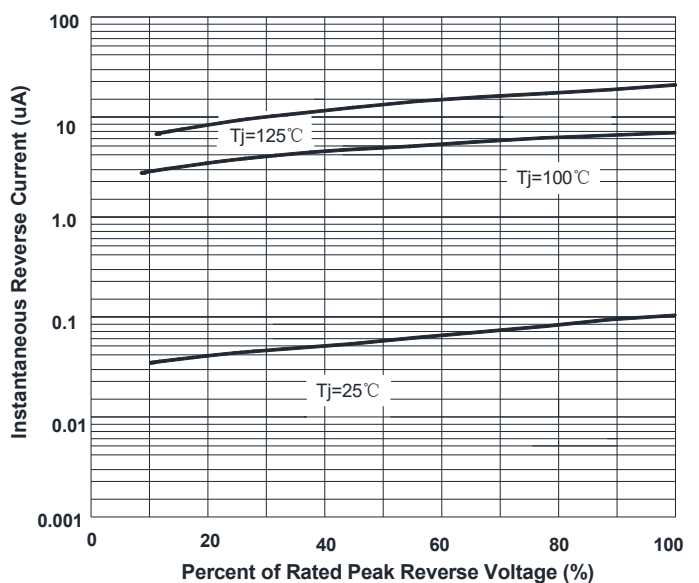
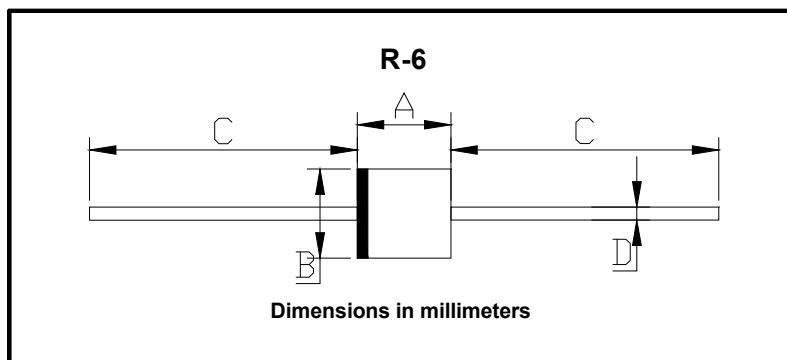


FIG.4: Typical Reverse Characteristics



■ Outline Dimensions



| <b>R-6</b> |      |      |
|------------|------|------|
| Dim        | Min  | Max  |
| A          | 8.60 | 9.10 |
| B          | 8.60 | 9.10 |
| C          | 25.4 | /    |
| D          | 1.20 | 1.32 |

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