

## FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

## TYPICAL APPLICATIONS

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

## MECHANICAL DATA

- **Package:** DO-214AA (SMB)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

## MAXIMUM RATINGS (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT | GR2A     | GR2B | GR2D | GR2G | GR2J | GR2K | GR2M |
|---|------------------|------|----------|------|------|------|------|------|------|
| Device marking code   |                  |      | GR2A     | GR2B | GR2D | GR2G | GR2J | GR2K | GR2M |
| Repetitive peak reverse voltage   | VRRM             | V    | 50       | 100  | 200  | 400  | 600  | 800  | 1000 |
| Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)           | I <sub>O</sub>   | A    | 2.0      |      |      |      |      |      |      |
| Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T <sub>a</sub> =25°C | I <sub>FSM</sub> | A    | 50       |      |      |      |      |      |      |
| Storage temperature   | T <sub>stg</sub> | °C   | -55~+150 |      |      |      |      |      |      |
| Junction temperature  | T <sub>j</sub>   | °C   | -55~+150 |      |      |      |      |      |      |

## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER  | SYMBOL           | UNIT | TEST CONDITIONS   | GR2A | GR2B | GR2D | GR2G | GR2J | GR2K | GR2M |
|--|------------------|------|---|------|------|------|------|------|------|------|
| Maximum instantaneous forward voltage drop per diode                         | V <sub>F</sub>   | V    | I <sub>FM</sub> =2.0A   | 1.3  |      |      |      |      |      |      |
| Maximum reverse recovery time  | t <sub>r</sub>   | ns   | I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A | 150  |      |      | 250  |      | 500  |      |
| Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM | I <sub>RRM</sub> | µA   | T <sub>a</sub> =25°C  | 5.0  |      |      |      |      |      |      |
|  |                  |      | T <sub>a</sub> =125°C   | 100  |      |      |      |      |      |      |

## THERMAL CHARACTERISTICS (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                  | SYMBOL            | UNIT | GR2A             | GR2B | GR2D | GR2G | GR2J | GR2K | GR2M |
|----------------------------|-------------------|------|------------------|------|------|------|------|------|------|
| Typical Thermal resistance | R <sub>θJ-A</sub> | °C/W | 60 <sup>1)</sup> |      |      |      |      |      |      |
|                            | R <sub>θJ-L</sub> |      | 20 <sup>1)</sup> |      |      |      |      |      |      |

Note:(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

**CHARACTERISTICS (Typical)**

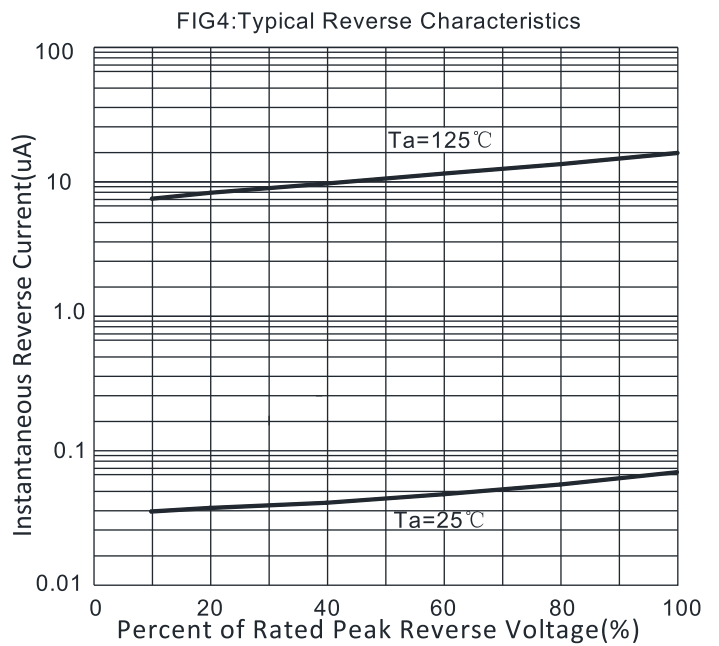
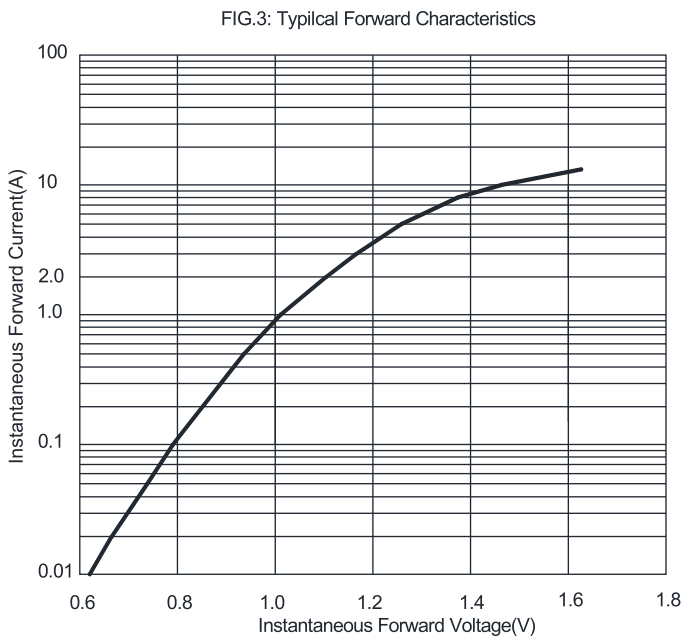
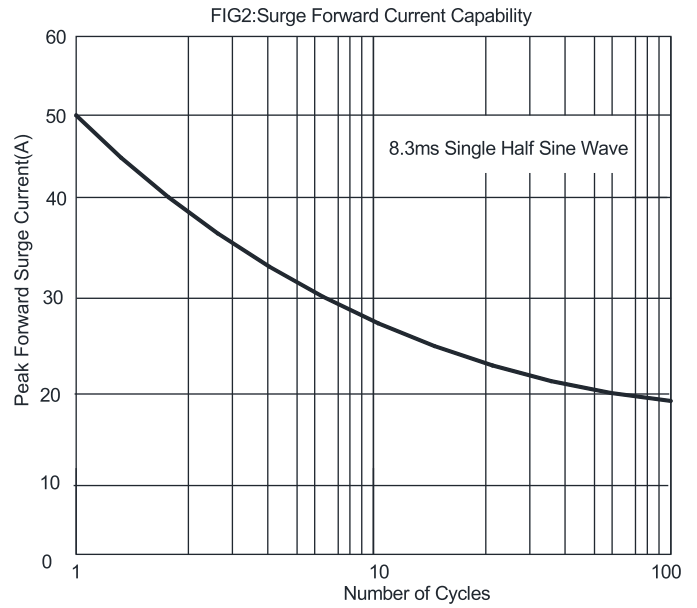
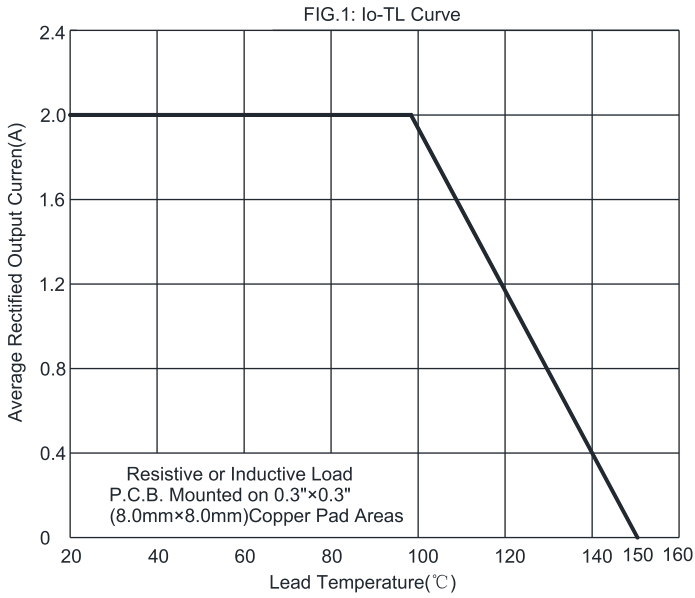
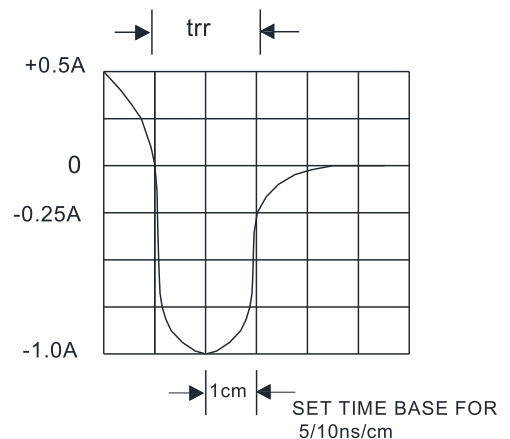
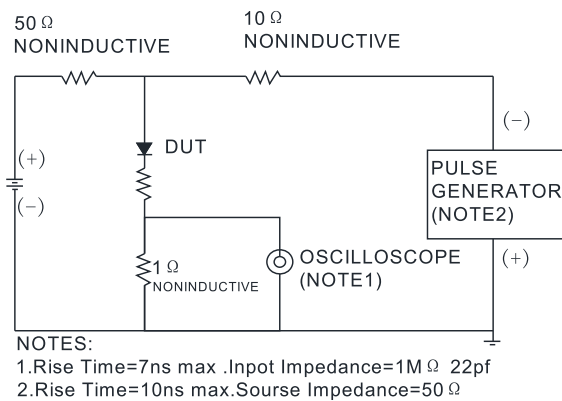


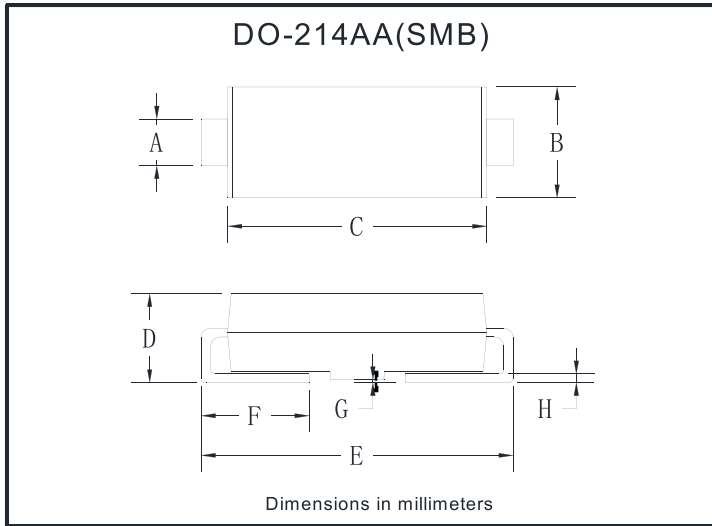
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## PACKAGING INFORMATION

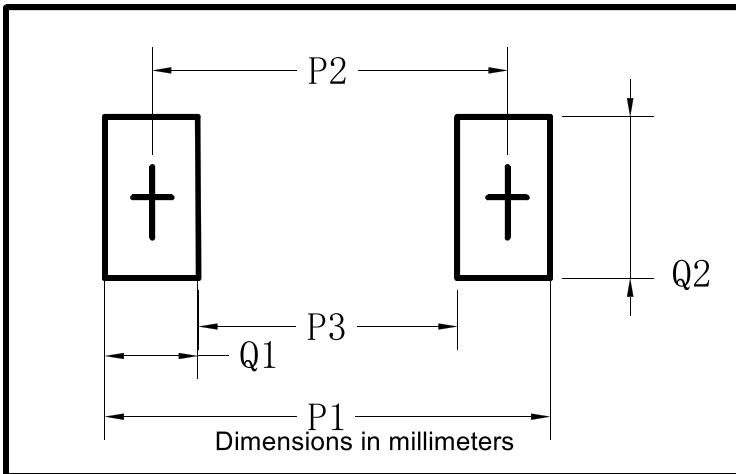
| PREFERRED P/N | PACKING CODE      | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|-------------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| GR2A-GR2M     | Omit for Standard | Approximate 0.096 | 3000                 | 6000                    | 48000                      | 13" reel      |
| GR2A-GR2M     | X07               | Approximate 0.096 | 750                  | 3000                    | 24000                      | 7" reel       |

## OUTLINE CHARACTERISTICS



| DO-214AA(SMB) |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 1.85 | 2.15 |
| B             | 3.30 | 3.94 |
| C             | 4.25 | 4.75 |
| D             | 1.99 | 2.61 |
| E             | 5.21 | 5.59 |
| F             | 0.90 | 1.41 |
| G             | 0.10 | 0.20 |
| H             | 0.15 | 0.31 |

## SUGGESTED PAD LAYOUT



| DO-214AA(SMB) |             |
|---------------|-------------|
| Dim           | Millimeters |
| P1            | 6.8         |
| P2            | 4.3         |
| P3            | 1.8         |
| Q1            | 2.5         |
| Q2            | 2.3         |