
**NOTES:**

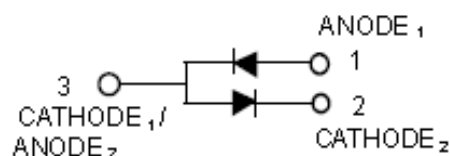
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.

| DIM | INCHES |        | MILLIMETERS |       |
|-----|--------|--------|-------------|-------|
|     | MIN    | MAX    | MIN         | MAX   |
| A   | 0.1102 | 0.1197 | 2.80        | 3.04  |
| B   | 0.0472 | 0.0551 | 1.20        | 1.40  |
| C   | 0.0350 | 0.0440 | 0.89        | 1.11  |
| D   | 0.0150 | 0.0200 | 0.37        | 0.50  |
| G   | 0.0701 | 0.0807 | 1.78        | 2.04  |
| H   | 0.0005 | 0.0040 | 0.013       | 0.100 |
| J   | 0.0034 | 0.0070 | 0.085       | 0.177 |
| K   | 0.0140 | 0.0285 | 0.35        | 0.69  |
| L   | 0.0350 | 0.0401 | 0.89        | 1.02  |
| S   | 0.0830 | 0.1039 | 2.10        | 2.64  |
| V   | 0.0177 | 0.0236 | 0.45        | 0.60  |

- PIN 1. BASE  
2. EMITTER  
3. COLLECTOR

**Ultra High Speed Switching Application**

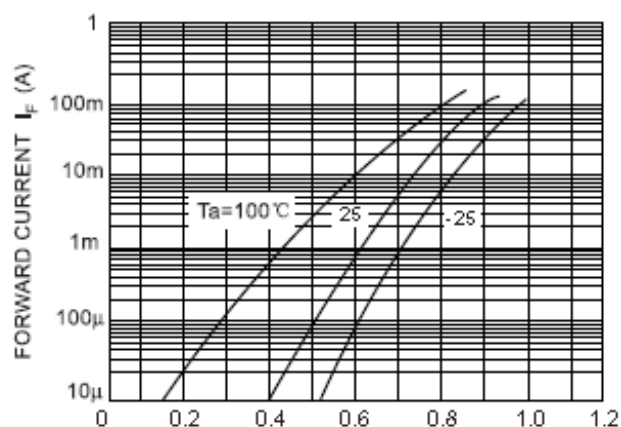
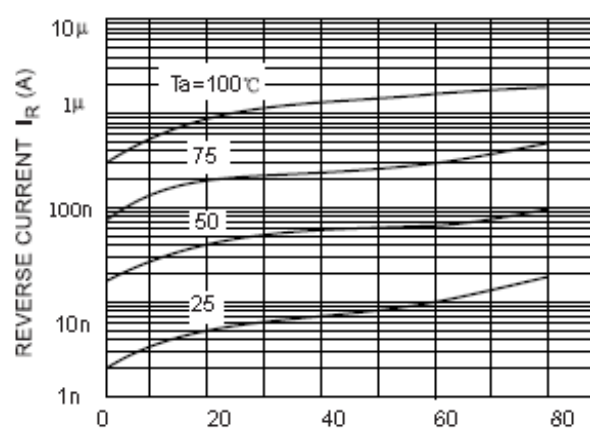
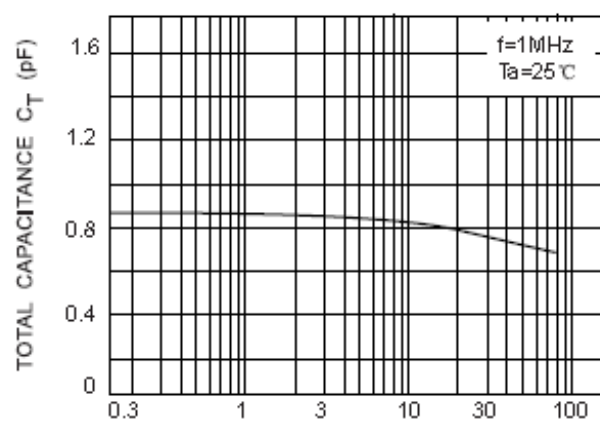
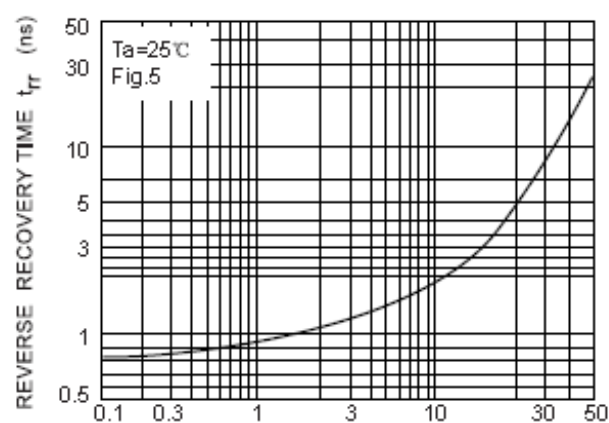
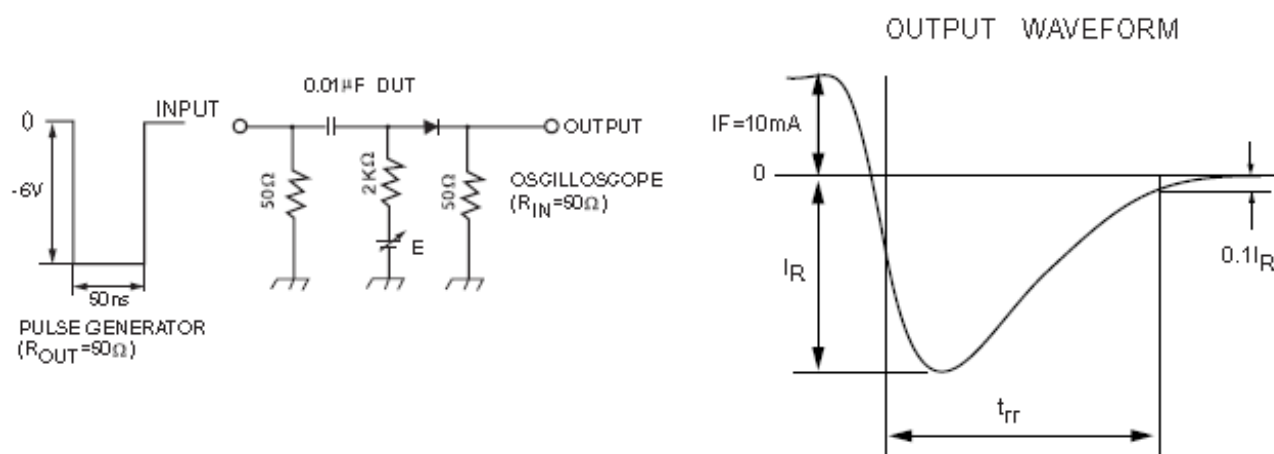
- Low forward voltage :  $V_{F(3)} = 0.9V$  (typ.)
- Fast reverse recovery time :  $t_{rr} = 1.6ns$  (typ.)
- Small total capacitance :  $C_T = 0.9pF$  (typ.)
- Pb-Free package is available
- We declare that the material of product compliance with RoHS requirements


**MARKING: C3**

| Maximum Ratings (T <sub>A</sub> =25°C unless otherwise specified) |                  |          |      |
|-------------------------------------------------------------------|------------------|----------|------|
| Parameter                                                         | Symbol           | Limit    | Unit |
| Maximum (peak) reverse voltage                                    | V <sub>RM</sub>  | 85       | V    |
| Reverse voltage                                                   | V <sub>R</sub>   | 80       | V    |
| Maximum (peak) forward current                                    | I <sub>FM</sub>  | 300*     | mA   |
| Average forward current                                           | I <sub>O</sub>   | 100*     | mA   |
| Surge current (10ms)                                              | I <sub>FSM</sub> | 2*       | A    |
| Power Dissipation                                                 | P <sub>D</sub>   | 150      | mW   |
| Junction Temperature                                              | T <sub>J</sub>   | 125      | °C   |
| Operating/ Storage Temperature Range                              | T <sub>STG</sub> | -55~+125 | °C   |

\* : Unit rating. Total rating = Unit rating × 0.7.

| Electrical Characteristics (T <sub>A</sub> =25°C unless otherwise specified) |                   |                               |      |      |      |      |
|------------------------------------------------------------------------------|-------------------|-------------------------------|------|------|------|------|
| Parameter                                                                    | Symbol            | Test conditions               | Min. | Typ. | Max. | Unit |
| Forward Voltage                                                              | V <sub>F(1)</sub> | I <sub>F</sub> = 1mA          | —    | 0.6  | —    | V    |
|                                                                              | V <sub>F(2)</sub> | I <sub>F</sub> = 10mA         | —    | 0.72 | —    |      |
|                                                                              | V <sub>F(3)</sub> | I <sub>F</sub> = 100mA        | —    | 0.9  | 1.2  |      |
| Reverse Voltage Leakage Current                                              | I <sub>R(1)</sub> | V <sub>R</sub> =30V           | —    | —    | 0.1  | μA   |
|                                                                              | I <sub>R(2)</sub> | V <sub>R</sub> =80V           | —    | —    | 0.5  |      |
| Total capacitance                                                            | C <sub>T</sub>    | V <sub>R</sub> =0V, f=1MHz    | —    | 0.9  | 3    | pF   |
| Reveres Recovery Time                                                        | t <sub>rr</sub>   | I <sub>F</sub> =10mA (Fig. 5) | —    | 1.6  | 4    | ns   |

**Electrical characteristic curves**

 Fig.1 FORWARD VOLTAGE  $V_F$ (V)

 Fig.2 REVERSE VOLTAGE  $V_R$ (V)

 Fig.3 REVERSE VOLTAGE  $V_R$ (V)

 Fig.4 FORWARD CURRENT  $I_F$ (mA)

 Fig.5 Reverse recovery time ( $t_{rr}$ ) test circuit