

# MA3V175D, MA3V176D (MA175WA, MA176WA)

Silicon epitaxial planar type

For switching circuits

## ■ Features

- Short reverse recovery time  $t_{rr}$
- Small terminal capacitance,  $C_t$

## ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter                                     |          | Symbol    | Rating      | Unit |
|-----------------------------------------------|----------|-----------|-------------|------|
| Reverse voltage<br>(DC)                       | MA3V175D | $V_R$     | 40          | V    |
|                                               | MA3V176D |           | 80          |      |
| Peak reverse<br>voltage                       | MA3V175D | $V_{RM}$  | 40          | V    |
|                                               | MA3V176D |           | 80          |      |
| Forward current<br>(DC)                       | Single   | $I_F$     | 100         | mA   |
|                                               | Double   |           | 150         |      |
| Peak forward<br>current                       | Single   | $I_{FM}$  | 225         | mA   |
|                                               | Double   |           | 340         |      |
| Non-repetitive peak<br>forward surge current* | Single   | $I_{FSM}$ | 500         | mA   |
|                                               | Double   |           | 750         |      |
| Junction temperature                          |          | $T_j$     | 150         | °C   |
| Storage temperature                           |          | $T_{stg}$ | −55 to +150 | °C   |

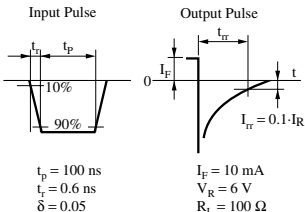
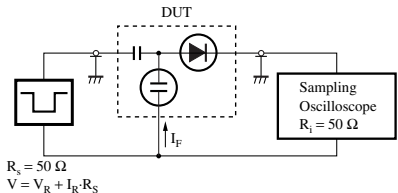
Note) \* :  $t = 1 \text{ s}$

## ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

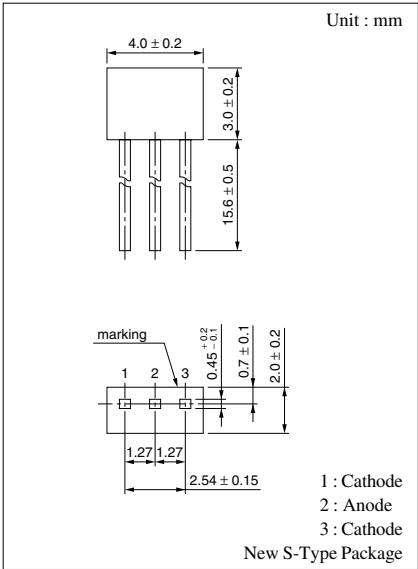
| Parameter              | Symbol   | Conditions | Min | Typ | Max | Unit          |
|------------------------|----------|------------|-----|-----|-----|---------------|
| Reverse current (DC)   | MA3V175D | $I_R$      |     |     | 0.1 | $\mu\text{A}$ |
|                        | MA3V176D |            |     |     | 0.1 |               |
| Forward voltage (DC)   |          | $V_F$      |     |     | 1.2 | V             |
| Reverse voltage (DC)   | MA3V175D | $V_R$      | 40  |     |     | V             |
|                        | MA3V176D |            |     |     |     |               |
| Terminal capacitance   |          | $C_t$      |     |     | 4   | pF            |
| Reverse recovery time* |          | $t_{rr}$   |     |     | 10  | ns            |

Note) 1. Rated input/output frequency: 100 MHz

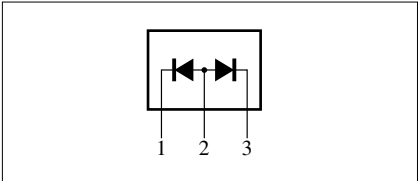
2. \* :  $t_{rr}$  measuring circuit

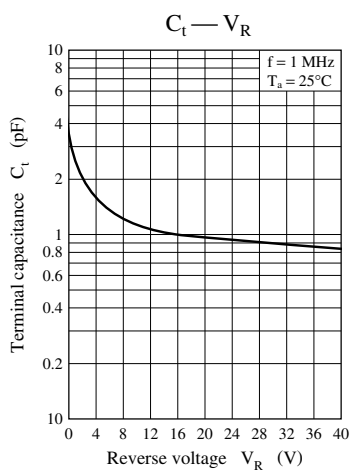
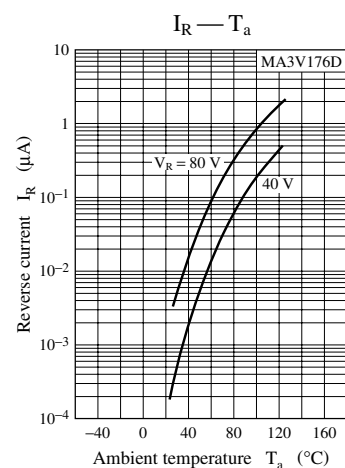
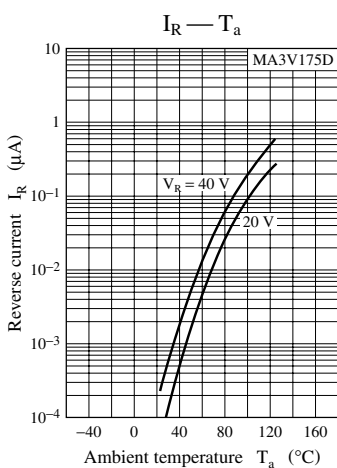
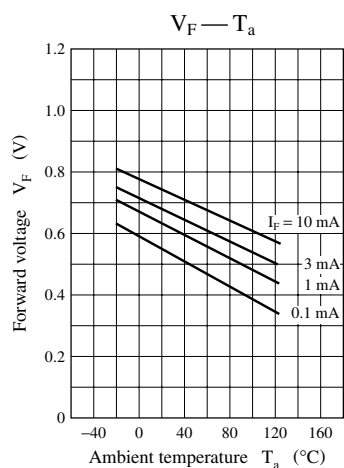
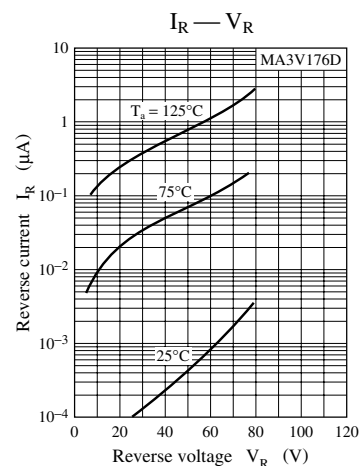
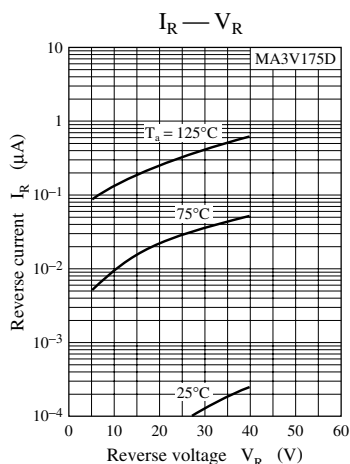
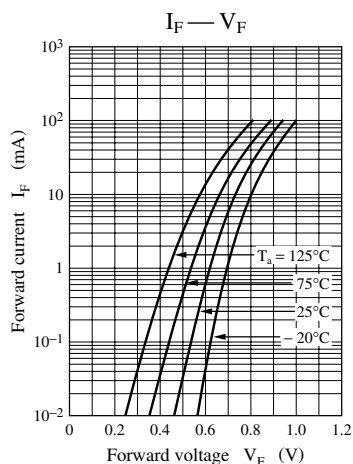


Note) The part numbers in the parenthesis show conventional part number.



## Internal Connection





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