

MA3V175E, MA3V176E (MA175WK, MA176WK)

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 (DC) | MA3V175E | $V_R = 40$ | V |
| | MA3V176E | $V_R = 80$ | |
| Peak reverse voltage | MA3V175E | $V_{RM} = 40$ | V |
| | MA3V176E | $V_{RM} = 80$ | |
| Forward current (DC) | Single | $I_F = 100$ | mA |
| | Double | $I_F = 150$ | |
| Peak forward current | Single | $I_{FM} = 225$ | mA |
| | Double | $I_{FM} = 340$ | |
| Non-repetitive peak forward surge current* | Single | $I_{FSM} = 500$ | mA |
| | Double | $I_{FSM} = 750$ | |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

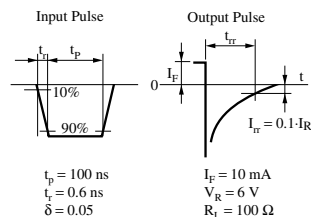
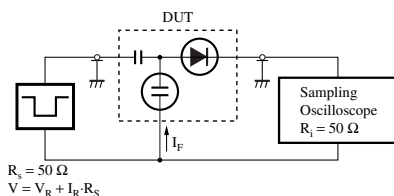
Note) * : $t = 1 \text{ s}$

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

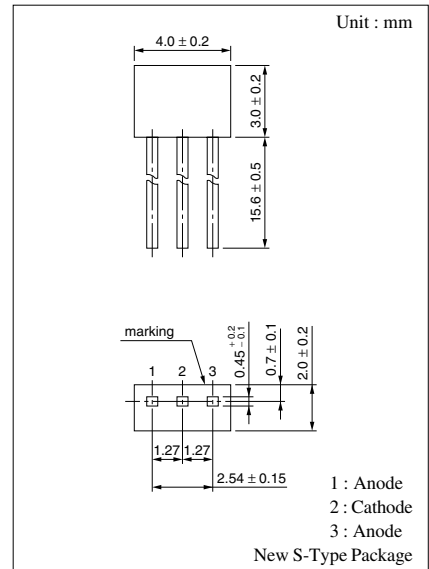
| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|------------------------|----------|--|-----|-----|-----|---------------|
| Reverse current (DC) | MA3V175E | $V_R = 35 \text{ V}$ | | | 0.1 | μA |
| | MA3V176E | $V_R = 75 \text{ V}$ | | | 0.1 | |
| Forward voltage (DC) | V_F | $I_F = 100 \text{ mA}$ | | | 1.2 | V |
| Reverse voltage (DC) | MA3V175E | $I_R = 100 \mu\text{A}$ | 40 | | | V |
| | MA3V176E | | 80 | | | |
| Terminal capacitance | C_t | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$ | | | 4 | pF |
| Reverse recovery time* | t_{rr} | $I_F = 10 \text{ mA}, V_R = 6 \text{ V}$ $I_{rr} = 0.1 \cdot I_R, R_L = 100 \Omega$ | | | 3 | ns |

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

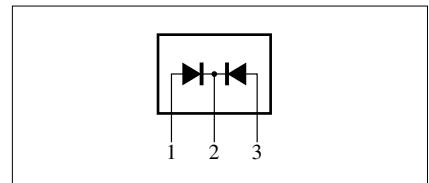
2. * : t_{rr} measuring circuit

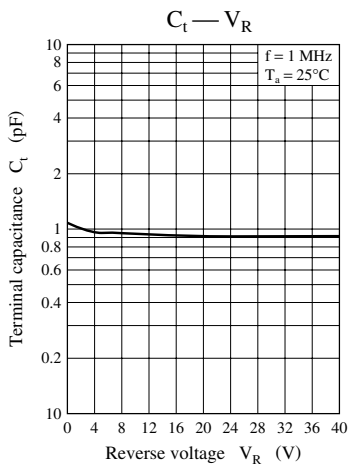
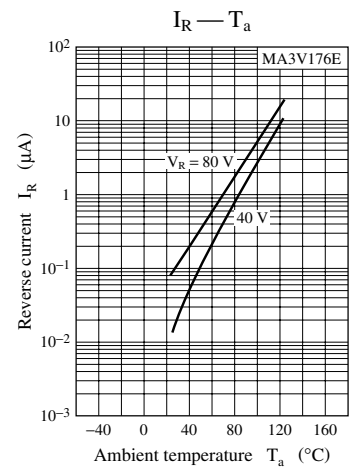
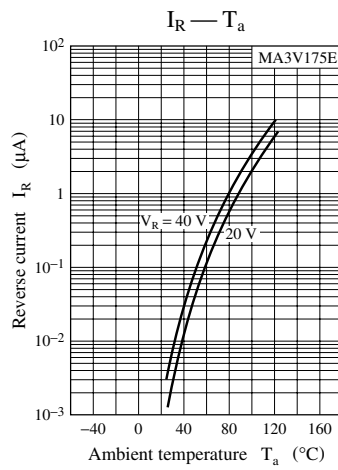
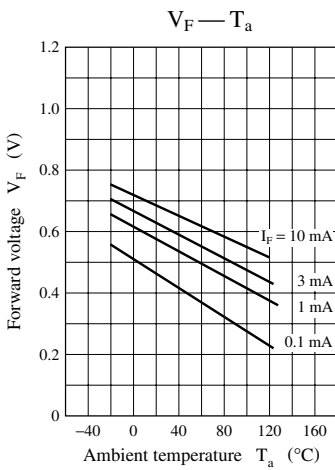
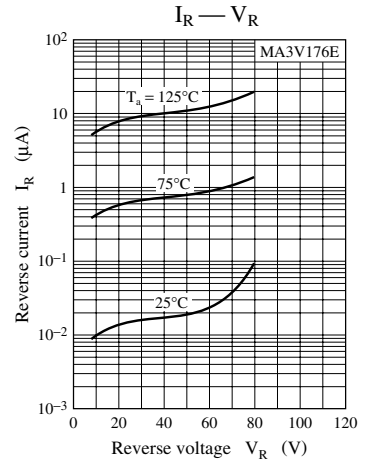
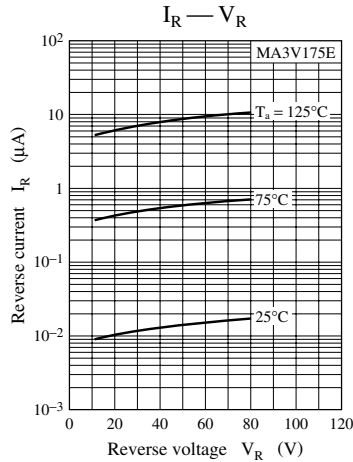
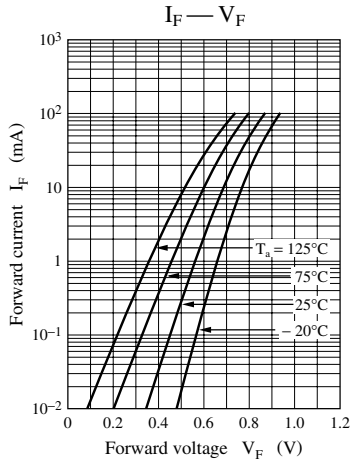


Note) The part numbers in the parenthesis show conventional part number.



Internal Connection





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