

# MA2B150, MA2B161, MA2B162, MA2B162A

Silicon epitaxial planar type

For switching circuits

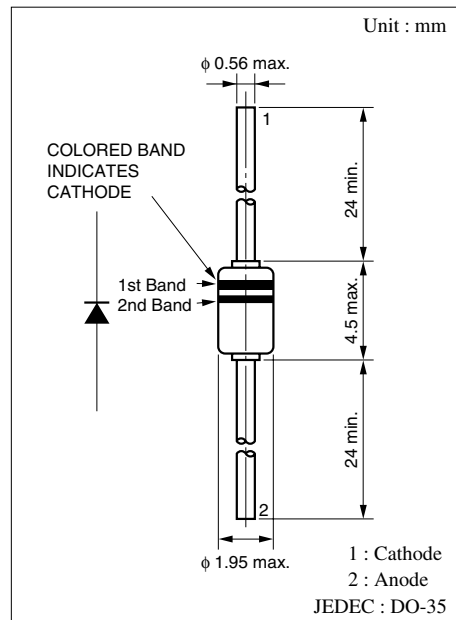
■ Features

- 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)                       | MA2B150     | $V_R$ 35     | V                |
|  | MA2B161     | 50           |                  |
|  | MA2B162     | 75           |                  |
|  | MA2B162A    | 120          |                  |
| Repetitive peak reverse voltage            | MA2B150     | $V_{RRM}$ 35 | V                |
|  | MA2B161     | 50           |                  |
|  | MA2B162     | 75           |                  |
|  | MA2B162A    | 120          |                  |
| Average forward current                    | $I_{F(AV)}$ | 100          | mA               |
| Repetitive peak forward current            | $I_{FRM}$   | 225          | mA               |
| Non-repetitive peak forward surge current* | $I_{FSM}$   | 500          | mA               |
| Junction temperature                       | $T_j$       | 200          | $^\circ\text{C}$ |
| Storage temperature                        | $T_{stg}$   | -55 to +150  | $^\circ\text{C}$ |

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



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

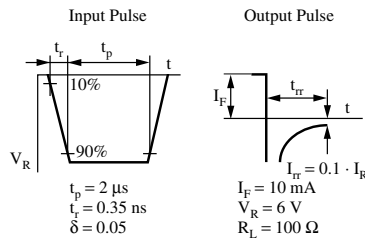
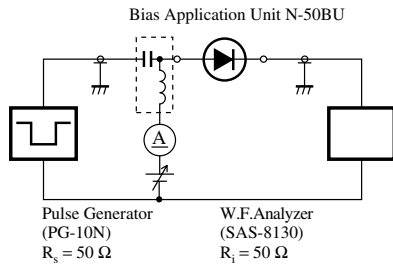
| Parameter              | Symbol  | Conditions                                    | Min   | Typ   | Max   | Unit          |    |
|------------------------|---|---|---|-------|-------|---------------|----|
| Reverse current (DC)   | MA2B150                                       | $V_R = 15 \text{ V}$                          |   |       | 0.025 | $\mu\text{A}$ |    |
|                        |   | $V_R = 30 \text{ V}$                          |   |       | 0.1   |               |    |
|                        | MA2B161                                       | $V_R = 15 \text{ V}$                          |   |       | 0.025 |               |    |
|                        |   | $V_R = 50 \text{ V}$                          |   |       | 5     |               |    |
|                        | MA2B162                                       | $V_R = 20 \text{ V}$                          |   | 0.012 | 0.025 |               |    |
|                        |   | $V_R = 75 \text{ V}$                          |   |       | 5     |               |    |
|                        | MA2B162A                                      | $V_R = 20 \text{ V}$                          |   | 0.012 | 0.025 |               |    |
|                        |   | $V_R = 120 \text{ V}$                         |   |       | 5     |               |    |
|                        | MA2B150                                       | $V_R = 35 \text{ V}, T_a = 150^\circ\text{C}$ |   |       | 100   |               |    |
|                        | MA2B161                                       | $V_R = 50 \text{ V}, T_a = 150^\circ\text{C}$ |   |       | 100   |               |    |
| MA2B162                | $V_R = 75 \text{ V}, T_a = 150^\circ\text{C}$ |   | 50  | 100   |       |               |    |
| MA2B162A               | $V_R = 75 \text{ V}, T_a = 150^\circ\text{C}$ |   | 50  | 100   |       |               |    |
| Forward voltage (DC)   | $V_F$   | $I_F = 100 \text{ mA}$                        |   | 0.95  | 1.2   | V             |    |
| Reverse voltage (DC)   | MA2B150                                       | $V_R$   | $I_R = 5 \mu\text{A}$   | 35    |       | V             |    |
| Terminal capacitance   |   | $C_t$   | $V_R = 0 \text{ V}, f = 1 \text{ MHz}$  |       | 0.9   | 2             | pF |
| Reverse recovery time* | MA2B150                                       | $t_{rr}$                                      | $I_F = 10 \text{ mA}, V_R = 1 \text{ V}, R_L = 100 \Omega$<br>Measure when $I_{tr} = 0.1 \cdot I_R$ |       | 10    | ns            |    |
|                        | MA2B161/162/162A                              |   |   |       | 2.2   |               | 4  |

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

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

■ Cathode Indication

| Type No. | MA2B150  | MA2B161 | MA2B162 | MA2B162A |       |
|----------|----------|---------|---------|----------|-------|
| Color    | 1st Band | White   | Green   | Violet   | Black |
|          | 2nd Band | —       | —       | —        | Black |



$t_{tr}$  measuring circuit

