

MA3D691

Silicon planar type

For high-frequency rectification

■ Features

- Low forward rise voltage V_F
- Fast reverse recovery time t_{rr}
- TO-220D (Full-pack package) with high dielectric breakdown voltage > 5.0 kV
- Easy-to-mount, caused by its V cut lead end

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

| Parameter | Symbol | Rating | Unit |
|--|-------------|-------------|------------------|
| Repetitive peak reverse voltage | V_{RRM} | 200 | V |
| Non-repetitive peak reverse surge voltage | V_{RSM} | 200 | V |
| Average forward current | $I_{F(AV)}$ | 10 | A |
| Non-repetitive peak forward surge current* | I_{FSM} | 70 | A |
| Junction temperature | T_j | -40 to +150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -40 to +150 | $^\circ\text{C}$ |

Note) * : Half sine-wave; 10 ms/cycle

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

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---------------------------------|---------------|--|-----|-----|------|---------------------------|
| Repetitive peak reverse current | I_{RRM1} | $V_{RRM} = 200$ V, $T_C = 25^\circ\text{C}$ | | | 100 | μA |
| | I_{RRM2} | $V_{RRM} = 200$ V, $T_j = 150^\circ\text{C}$ | | | 10 | mA |
| Forward voltage (DC) | V_F | $I_F = 10$ A, $T_C = 25^\circ\text{C}$ | | | 1.00 | V |
| Reverse recovery time* | t_{rr} | $I_F = 1$ A, $I_R = 1$ A | | | 100 | ns |
| Thermal resistance | $R_{th(j-c)}$ | | | | 3 | $^\circ\text{C}/\text{W}$ |
| | $R_{th(j-a)}$ | | | | 63 | $^\circ\text{C}/\text{W}$ |

Note) 1. Rated input/output frequency: 10 MHz

2. Tightening torque-max. 8 kg \times cm

3. *: t_{rr} measuring circuit



