## MA3SD29F

## Silicon epitaxial planar type

For super high speed switching circuits

■ Features

- Low forward voltage $\mathrm{V}_{\mathrm{F}}:<0.42 \mathrm{~V}\left(\mathrm{at}_{\mathrm{F}}=100 \mathrm{~mA}\right)$
- Optimum for high-frequency rectification
- Short reverse recovery time $\mathrm{t}_{\mathrm{r}}$

Absolute Maximum Ratings $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$

| Parameter |  | Symbol | Rating | Unit |
| :---: | :---: | :---: | :---: | :---: |
| Reverse voltage |  | $\mathrm{V}_{\mathrm{R}}$ | 30 | V |
| Repetitive peak reverse voltage |  | $\mathrm{V}_{\text {RRM }}$ | 30 | V |
| Forward current (Average) | Single | $\mathrm{I}_{\mathrm{F}(\mathrm{AV})}$ | 100 | mA |
|  | Series |  | 75 |  |
| Peak forward current | Single | $\mathrm{I}_{\mathrm{FM}}$ | 200 | mA |
|  | Series |  | 150 |  |
| Non-repetitive peak forward surge current * |  | $\mathrm{I}_{\text {FSM }}$ | 1 | A |
| Junction temperature |  | $\mathrm{T}_{\mathrm{j}}$ | 125 | ${ }^{\circ} \mathrm{C}$ |
| Storage temperature |  | $\mathrm{T}_{\text {stg }}$ | -55 to +125 | ${ }^{\circ} \mathrm{C}$ |

Note) *: 50 Hz sine wave 1 cycle (Non-repetitive peak current)


Marking Symbol: M5R

## Internal Connection



Electrical Characteristics $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C} \pm 3^{\circ} \mathrm{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Forward voltage | $\mathrm{V}_{\mathrm{Fl}}$ | $\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}$ |  | 0.25 | 0.29 | V |
|  | $\mathrm{V}_{\mathrm{F} 2}$ | $\mathrm{I}_{\mathrm{F}}=100 \mathrm{~mA}$ |  | 0.39 | 0.42 |  |
| Reverse current | $\mathrm{I}_{\mathrm{R} 1}$ | $\mathrm{V}_{\mathrm{R}}=10 \mathrm{~V}$ |  |  | 25 | $\mu \mathrm{A}$ |
|  | $\mathrm{I}_{\mathrm{R} 2}$ | $\mathrm{V}_{\mathrm{R}}=30 \mathrm{~V}$ |  |  | 120 |  |
| Terminal capacitance | $\mathrm{C}_{\mathrm{t}}$ | $\mathrm{V}_{\mathrm{R}}=0 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 11 |  | pF |
| Reverse recovery time * | $t_{\pi}$ | $\begin{aligned} & \mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{R}}=100 \mathrm{~mA}, \mathrm{I}_{\mathrm{rr}}=10 \mathrm{~mA}, \\ & \mathrm{R}_{\mathrm{L}}=100 \Omega \end{aligned}$ |  | 1 |  | ns |

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. Absolute frequency of input and output is 250 MHz
3. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
4. $*: \mathrm{t}_{\mathrm{rr}}$ measurement circuit

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