## MA6S718

## Silicon epitaxial planar type

## For switching circuits

## Features

- Small S-mini type 6-pin package
- Non connected three elements incorporated in one package, allowing high-density mounting
- Flat lead type package, resulting in promotion of the actual mounting ratio and solderability with a high-speed mounter
- Optimum for low-voltage rectification because of its low forward rise voltage $\left(\mathrm{V}_{\mathrm{F}}\right)$
- Optimum for high-frequency rectification because of its short reverse recovery time ( $\mathrm{t}_{\mathrm{rr}}$ )
- Absolute Maximum Ratings $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Rating | Unit |
| :--- | :---: | :---: | :---: |
| Reverse voltage (DC) | $\mathrm{V}_{\mathrm{R}}$ | 30 | V |
| Peak reverse voltage | $\mathrm{V}_{\mathrm{RM}}$ | 30 | V |
| Peak forward current $^{*}$ | $\mathrm{I}_{\mathrm{FM}}$ | 150 | mA |
| Forward current (DC) |  |  |  |
| Junction temperature $^{\mathrm{F}}$ | $\mathrm{I}_{\mathrm{F}}$ | 30 | mA |
| Storage temperature | $\mathrm{T}_{\mathrm{j}}$ | 125 | ${ }^{\circ} \mathrm{C}$ |

Note) * : Value in per diode
Electrical Characteristics $\mathrm{T}_{\mathrm{a}}=25^{\circ} \mathrm{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
| :--- | :---: | :--- | :---: | :---: | :---: | :---: |
| Reverse current (DC) | $\mathrm{I}_{\mathrm{R}}$ | $\mathrm{V}_{\mathrm{R}}=30 \mathrm{~V}$ |  |  | 1 | $\mu \mathrm{~A}$ |
| Forward voltage (DC) | $\mathrm{V}_{\mathrm{F} 1}$ | $\mathrm{I}_{\mathrm{F}}=1 \mathrm{~mA}$ |  |  | 0.4 | V |
|  | $\mathrm{~V}_{\mathrm{F} 2}$ | $\mathrm{I}_{\mathrm{F}}=30 \mathrm{~mA}$ |  | 1 | V |  |
| Terminal capacitance | $\mathrm{C}_{\mathrm{t}}$ | $\mathrm{V}_{\mathrm{R}}=1 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |  | 1.5 |  | pF |
| Reverse recovery time $^{*}$ | $\mathrm{t}_{\mathrm{rr}}$ | $\mathrm{I}_{\mathrm{F}}=\mathrm{I}_{\mathrm{R}}=10 \mathrm{~mA}$ <br> $\mathrm{I}_{\mathrm{rr}}=1 \mathrm{~mA}, \mathrm{R}_{\mathrm{L}}=100 \Omega$ | 1 |  | ns |  |
| Detection efficiency | $\eta$ | $\mathrm{V}_{\mathrm{in}}=3 \mathrm{~V}_{\text {(peak) }}, \mathrm{f}=30 \mathrm{MHz}$ <br> $\mathrm{R}_{\mathrm{L}}=3.9 \mathrm{k} \Omega, \mathrm{C}_{\mathrm{L}}=10 \mathrm{pF}$ |  | 65 |  | $\%$ |

Note) 1. Schottky barrier diode 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
2. Rated input/output frequency: 2000 MHz
3. *: $\mathrm{t}_{\mathrm{rr}}$ measuring instrument


$\mathrm{t}_{\mathrm{p}}=2 \mu \mathrm{~s}$
$\mathrm{t}_{\mathrm{r}}=0.35 \mathrm{~ns}$
$\stackrel{\mathrm{r}}{\delta}=0.05$

Output Pulse

$\mathrm{I}_{\mathrm{F}}=10 \mathrm{~mA}$
$\mathrm{I}_{\mathrm{R}}=10 \mathrm{~mA}$
$\mathrm{R}_{\mathrm{L}}=100 \Omega$

