semiconductors :: product :: Fast Recovery Rectifiers

## Product: Fast Recovery Rectifiers

Fast Recovery Rectifiers are devices used in applications where commutation times around $150 \div 500$ ns are required. Switching Power Supplies, Electronic Ballast, Small Household Appliances are some of the typical end uses.

Manufactured using HYPERECTIFIER© Glass Passivated technology, we offer these devices housed either in leaded packages or SMD.

| Product | Family | $\mathrm{I}_{\mathrm{F}(\mathrm{AV})}(\mathrm{A})$ | $\mathrm{I}_{\mathrm{FSM}}(\mathrm{A})$ | $\mathrm{V}_{\mathrm{RRM}}(\mathrm{V})$ | $\mathrm{V}_{\mathrm{F}}(\mathrm{V})$ | $\mathrm{T}_{\mathrm{RR}}(\mathrm{ns})$ | OUTLINE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | ---: |
| RGP301 | $\mathrm{RGP30}$ | 3.0 | 125 | 600 | 1.3 | 250 | DO201-AD |

3 Amp. Glass Passivated Fast Recovery Rectifier

| Dimensions in mm. | DO-201 AD <br> (Plastic) | Voltage <br> 50 to 1000 V . |
| :--- | :--- | :--- | :--- |
| 3.0 A. at $55^{\circ} \mathrm{C}$. |  |  |

Maximum Ratings, according to IEC publication No. 134

|  |  | $\begin{gathered} \hline \text { RGP } \\ 30 \mathrm{~A} \end{gathered}$ | $\begin{gathered} \text { RGP } \\ \text { 30B } \end{gathered}$ | $\begin{gathered} \text { RGP } \\ \text { 30D } \end{gathered}$ | $\begin{array}{\|c\|} \hline \text { RGP } \\ \text { 30G } \end{array}$ | $\begin{array}{\|c\|} \hline \text { RGP } \\ \text { 30J } \end{array}$ | $\begin{gathered} \text { RGP } \\ \text { 30K } \end{gathered}$ | $\begin{aligned} & \text { RGP } \\ & \text { 30M } \end{aligned}$ | $\begin{aligned} & \hline \text { RGP } \\ & \text { 30MIT } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathrm{V}_{\text {RRM }}$ | Peak recurrent reverse voltage (V) | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1000 |
| $\mathrm{I}_{\text {F(AV) }}$ | Forward current at Tamb $=55^{\circ} \mathrm{C}$ | 3 A |  |  |  |  |  |  |  |
| $\mathrm{I}_{\text {FRM }}$ | Recurrent peak forward current | 30 A |  |  |  |  |  |  |  |
| $\mathrm{I}_{\text {FSM }}$ | 8.3 ms . peak forward surge current Jedec Method) | 125 A |  |  |  |  |  |  |  |
| $\mathrm{t}_{\mathrm{rr}}$ | Max. reverse recovery $I_{\mathrm{F}}=0.5 \mathrm{~A}$ <br> time from $\mathrm{I}_{\mathrm{R}}=1 \mathrm{~A}$ <br>  $\mathrm{I}_{\mathrm{RR}}=0.25 \mathrm{~A}$ | 150 ns |  |  |  | 250 ns | 500 ns |  | 300 ns |
| $\mathrm{T}_{\mathrm{j}}$ | Operating temperature range | -65 to $+175^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |
| $\mathrm{T}_{\text {stg }}$ | Storage temperature range | -65 to $+175^{\circ} \mathrm{C}$ |  |  |  |  |  |  |  |
| $\mathrm{E}_{\text {RSM }}$ | Maximum non repetitive peak reverse avalanche energy. $\mathrm{I}_{\mathrm{R}}=1 \mathrm{~A} ; \mathrm{T}_{\mathrm{J}}=25^{\circ} \mathrm{C}$ | 20 mJ |  |  |  |  |  |  |  |

Electrical Characteristics at Tamb $=25^{\circ} \mathrm{C}$

| $\mathrm{V}_{\mathrm{F}}$ | Max. forward voltage drop at $\mathrm{I}_{\mathrm{F}}=3 \mathrm{~A}$ | 1.3V |
| :---: | :---: | :---: |
| $\mathrm{I}_{\mathrm{R}}$ | $\begin{array}{ll}\text { Max. reverse current at } \mathrm{V}_{\text {RRM }} & \begin{array}{l}\text { at } 25^{\circ} \mathrm{C} \\ \text { at } 125{ }^{\circ} \mathrm{C}\end{array}\end{array}$ | $\begin{array}{r} 5 \mu \mathrm{~A} \\ 100 \mu \mathrm{~A} \end{array}$ |
| $\mathrm{R}_{\text {thija }}$ | Thermal resistance ( $\mathrm{I}=10 \mathrm{~mm}$.$) ) \begin{gathered}\text { Max. } \\ \text { Typ. }\end{gathered}$ | $\begin{aligned} & 30^{\circ} \mathrm{C} / \mathrm{W} \\ & 15^{\circ} \mathrm{C} / \mathrm{W} \\ & \hline \end{aligned}$ |

