## Designer's Data Sheet

## FEATURES:

- Extremely Low Forward Voltage Drop
- Hermetically Sealed
- Guard Ring for Overvoltage Protection
- Eutectic Die Attach
- $150^{\circ} \mathrm{C}$ Operating Junction Temperature
- TX, TXV and Space Level Screening Available

| Maximum Ratings | SYMBOL | VALUE | UNITS |
| :---: | :---: | :---: | :---: |
| Peak Repetitive Reverse and DC Blocking Voltage | VRRM <br> $\mathbf{V}_{\mathbf{R W M}}$ $\mathbf{V}_{\mathbf{R}}$ | 45 | Volts |
| Average Total Rectified Forward Current (Resistive Load, 60 Hz , Sine Wave, $\mathrm{T}_{\mathrm{C}}=25^{\circ} \mathrm{C}$ | Io | $8^{1 /}$ | Amps |
| Peak Surge Current ${ }^{2 /}$ ( 8.3 ms Pulse, Half Sine Wave Superimposed on Io, allow junction to reach equilibrium between pulses, $\mathrm{T}_{\mathrm{C}}=25^{\circ} \mathrm{C}$ ) | IFSM | 80 | Amps |
| Operating and Storage Temperature | $\begin{gathered} \mathbf{T}_{\text {OP }} \\ \mathbf{T}_{\text {STG }} \end{gathered}$ | $\begin{gathered} -65 \text { TO +165 } \\ -65 \text { TO +200 } \end{gathered}$ | ${ }^{\circ} \mathrm{C}$ |
| Maximum Thermal Resistance ${ }^{3 /}$ Junction to Case | $\mathbf{R}_{\theta \mathbf{J C}}$ | 7.0 | ${ }^{\circ} \mathrm{C} / \mathrm{W}$ |

## Notes:

1/ 4 Amps per leg; 8 Amps total output.
2/ Per leg. Each leg surged independantely from the other leg.
3/ Both legs tied together.
SSR0845CA/5

| Electrical Characteristics (per leg) |  | SYMBOL | MAXIMUM | UNITS |
| :---: | :---: | :---: | :---: | :---: |
| Instantaneous Forward Voltage Drop ${ }^{1 /}$ ( $\mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}, 300-500 \mu \mathrm{~s}$ Pulse) | $\begin{aligned} & \mathrm{I}_{\mathrm{F}}=1 \mathrm{~A}_{\mathrm{DC}} \\ & \mathrm{I}_{\mathrm{F}}=2 \mathrm{~A}_{\mathrm{DC}} \\ & \mathrm{I}_{\mathrm{F}}=4 \mathrm{~A}_{\mathrm{DC}} \end{aligned}$ | $\begin{aligned} & \mathbf{V}_{\mathbf{F 1}} \\ & \mathbf{V}_{\mathbf{F} 2} \\ & \mathbf{V}_{\mathrm{F} 3} \end{aligned}$ | $\begin{aligned} & 0.48 \\ & 0.56 \\ & 0.68 \end{aligned}$ | $V_{\text {DC }}$ |
| Instantaneous Forward Voltage Drop $\left(\mathrm{I}_{\mathrm{F}}=2 \mathrm{~A}_{\mathrm{DC}}, \mathrm{T}_{\mathrm{A}}=-55^{\circ} \mathrm{C}, 300-500 \mu \mathrm{~s}\right.$ Pulse $)$ |  | $\mathbf{V F 4}^{\text {4 }}$ | 0.63 | $\mathbf{V}_{\text {DC }}$ |
| Reverse Leakage Current (Rated $\mathrm{V}_{\mathrm{R}}, \mathrm{T}_{\mathrm{A}}=25^{\circ} \mathrm{C}, 300 \mu \mathrm{~s}$ min Pulse) |  | $\mathbf{I}_{\mathbf{R} 1}$ | 100 | $\mu \mathrm{A}$ |
| Reverse Leakage Current (Rated $\mathrm{V}_{\mathrm{R}}, \mathrm{T}_{\mathrm{A}}=100^{\circ} \mathrm{C}, 300 \mu \mathrm{~s}$ min Pulse) |  | $\mathbf{I}_{\mathbf{R} 2}$ | 5 | 1mA |
| Junction Capacitance $\left(\mathrm{V}_{\mathrm{R}}=10 \mathrm{~V}_{\mathrm{DC}}, \mathrm{~T}_{\mathrm{A}}=25^{\circ} \mathrm{C}, \mathrm{f}=1 \mathrm{MHz}\right)$ |  | $\mathrm{C}_{\mathbf{J}}$ | 350 | pF |

CASE OUTLINE: JEDEC TO-5

## PIN OUT:

PIN 1: CATHODE
PIN 2: CATHODE
PIN 3: ANODE
CASE: ANODE


## APPLICATION NOTES:

1/ VF as measured between Pins 1 and 2 within .100 from the case, and Pin 3 directly at the case.

