



## Solid State Devices, Inc.

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### Designer's Data Sheet

#### FEATURES:

- Low-Level Gate Characteristics
- $I_{GT} = 200 \mu A$  (Max) @ 25°C
- Low Holding Current  $I_H = 1 \text{ mA}$  (Max) @ 25°C
- Anode Common to Case
- Hermetically Sealed
- TX, TXV, S-Level Screening Available. Consult Factory

**SFS2510 thru SFS2540**

**25 AMPS**  
**100 — 400 VOLTS**  
**FAST SWITCHING**  
**SILICON CONTROLLED**  
**RECTIFIER**



**TO-48**

| <b>MAXIMUM RATINGS</b> ( $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED, $R_{\theta GK} = 1 \text{ K } \Omega$ ) |                          | <b>Symbol</b>      | <b>Value</b> | <b>Units</b> |
|-------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------|--------------|--------------|
| <b>Peak Repetitive Reverse Voltage and DC Blocking Voltage</b>                                                    | SFS2510                  | $V_{DRM}$          | 100          | <b>Volts</b> |
|                                                                                                                   | SFS2520                  |                    | 200          |              |
|                                                                                                                   | SFS2525                  | $V_{RRM}$          | 250          |              |
|                                                                                                                   | SFS2530                  |                    | 300          |              |
|                                                                                                                   | SFS2540                  |                    | 400          |              |
| <b>Non-Repetitive Peak Reverse Blocking Voltage</b><br>( $t \leq 5.0 \text{ ms}$ )                                | SFS2510                  | $V_{RSM}$          | 150          | <b>Volts</b> |
|                                                                                                                   | SFS2520                  |                    | 300          |              |
|                                                                                                                   | SFS2525                  |                    | 350          |              |
|                                                                                                                   | SFS2530                  |                    | 400          |              |
|                                                                                                                   | SFS2540                  |                    | 500          |              |
| <b>RMS On-State Current</b><br>(All Conduction Angles)                                                            |                          | $I_T (\text{RMS})$ | 35           | <b>Amps</b>  |
| <b>Average On-State Current</b>                                                                                   | $T_C = 50^\circ\text{C}$ | $I_T (\text{AV})$  | 25           | <b>Amps</b>  |
| <b>Peak Non-Repetitive Surge Current</b><br>(One Cycle, 60 Hz, $T_J = 120^\circ\text{C}$ , $t = 8.3 \text{ ms}$ ) |                          | $I_{TSM}$          | 210          | <b>Amps</b>  |
| <b>Peak Gate Power</b>                                                                                            |                          | $P_{GM}$           | 60           | <b>Watts</b> |
| <b>Average Gate Power</b>                                                                                         |                          | $P_G (\text{AV})$  | 1.0          | <b>Watts</b> |
| <b>Peak Gate Current</b>                                                                                          |                          | $I_{GM}$           | 10           | <b>Amps</b>  |
| <b>Peak Gate Voltage</b>                                                                                          |                          | $V_{GM}$           | 15           | <b>Volts</b> |
| <b>Operating Junction Temperature Range</b>                                                                       |                          | $T_J$              | -65 to +135  | <b>°C</b>    |
| <b>Storage Temperature Range</b>                                                                                  |                          | $T_{stg}$          | -65 to +150  | <b>°C</b>    |
| <b>Thermal Resistance, Junction to Case</b>                                                                       |                          | $R_{\theta JC}$    | 1.45         | <b>°C/W</b>  |



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