

## S/R504 Series Silicon Power Rectifier

Catalog Number	Reverse	Peak Reverse Voltage
Standard	Reverse	
S50420*	R50420*	200
S50440*	R50440*	400
S50460*	R50460*	600
S50480*	R50480*	800
S504100*	R504100*	1000
S504120*	R504120*	1200
S504140*	R504140*	1400
S504160*	R504160*	1600

\*Add suffix "TS" to catalog number for Top Stud Device

- Glass to metal seal construction
- 5500 Amp surge current capability
- VRRM 200 to 1600 Volts
- Glass Passivated die
- Two case styles available
- Soft recovery

### Electrical Characteristics

Max average forward current  
 Max surge current  
 Max. I<sup>2</sup>t capability for fusing  
 Max peak forward voltage  
 Max peak reverse current  
 Max peak reverse current  
 Max recommended operating frequency

I<sub>F(AV)</sub> 300 Amps  
 I<sub>FSM</sub> 5500 Amps  
 I<sup>2</sup>t 125990A<sup>2</sup>S  
 V<sub>FM</sub> 1.25 Volts  
 I<sub>RRM</sub> 10mA  
 I<sub>RRM</sub> 75 uA  
 7.5 kHz

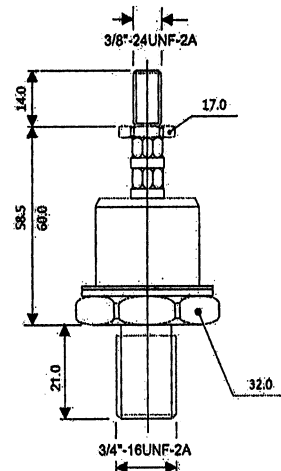
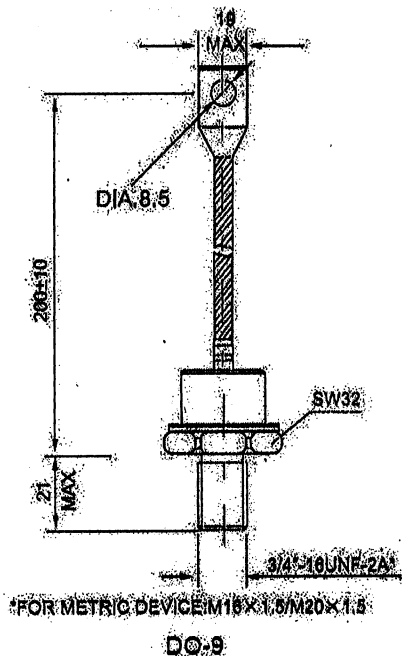
T<sub>C</sub> = 153°C, Half sine wave, R<sub>θJC</sub> = 0.15°C/W  
 8.3ms, half sine, T<sub>J</sub> = 200°C  
 less than 8.33ms  
 I<sub>F</sub> = 1000A: T<sub>C</sub> = 25°C  
 V<sub>RRM</sub>, T<sub>C</sub> = 150°C  
 V<sub>RRM</sub>, T<sub>C</sub> = 25°C

### Thermal and Mechanical Characteristics

Operating junction temp range  
 Storage temperature range  
 Maximum thermal resistance  
 Typical thermal resistance (greased)  
 Max mounting torque  
 Max top stud torque  
 Typical Weight

T<sub>J</sub>  
 T<sub>STG</sub>  
 R<sub>θJC</sub>  
 R<sub>θCS</sub>

-65°C to 200°C  
 -65°C to 200°C  
 0.15°C/W Junction to case  
 .08°C/W Case to sink  
 300-325 inch pounds  
 60-75 inch pounds  
 8.5 ounces (240 grams) typical



DO-9 Top screw type