

**SEMTECH**

**STANDARD RECOVERY  
1 PHASE FULL WAVE  
BRIDGE RECTIFIERS**

**SCBAR05 SCBAR1  
SCBAR2 SCBAR4  
SCBAR6 SCBAR8  
SCBAR10**

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## STANDARD RECOVERY, HIGH CURRENT 1-PHASE FULL WAVE BRIDGE RECTIFIER ASSEMBLIES

## QUICK REFERENCE DATA

- Low forward voltage drop
- Low reverse leakage current
- Aluminium case
- Low thermal impedance
- Insulated electrical connections

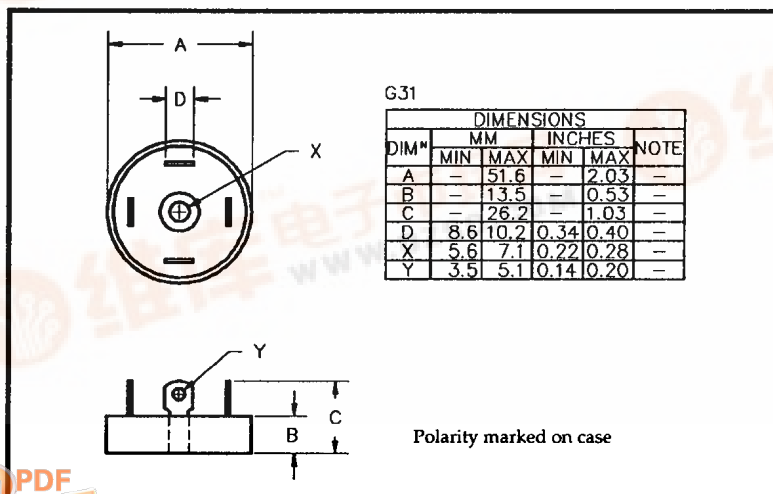
- $V_R = 50V - 1000V$
- $I_F = 53A$
- $I_R = 6.0 \mu A$
- $t_{rr} = 2.0 \mu S$

## ABSOLUTE MAXIMUM RATINGS

| Device Type | Working Reverse Voltage $V_{RWM}$ | Average Rectified Current $I_{F(AV)}$ |         |         |                         |        |         | 1 Cycle Surge Current |         |
|-------------|-----------------------------------|---------------------------------------|---------|---------|-------------------------|--------|---------|-----------------------|---------|
|             |                                   | (@ case temperature)                  |         |         | (@ ambient temperature) |        |         | $I_{FSM} t_p = 8.3mS$ |         |
|             |                                   | @ 55°C                                | @ 100°C | @ 125°C | @ 25°C                  | @ 55°C | @ 100°C | @ 25°C                | @ 100°C |
|             | Volts                             | Amps                                  | Amps    | Amps    | Amps                    | Amps   | Amps    | Amps                  | Amps    |
| SCBAR05     | 50                                |                                       |         |         |                         |        |         |                       |         |
| SCBAR1      | 100                               |                                       |         |         |                         |        |         |                       |         |
| SCBAR2      | 200                               |                                       |         |         |                         |        |         |                       |         |
| SCBAR4      | 400                               | 53                                    | 35      | 25      | 9.5                     | 7.0    | 4.5     | 375                   | 250     |
| SCBAR6      | 600                               |                                       |         |         |                         |        |         |                       |         |
| SCBAR8      | 800                               |                                       |         |         |                         |        |         |                       |         |
| SCBAR10     | 1000                              |                                       |         |         |                         |        |         |                       |         |

$$R_{\theta JC} = 0.7^{\circ}C/W$$

## MECHANICAL



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### ELECTRICAL CHARACTERISTICS

| Device Type                                                          | Maximum Reverse Leakage Current<br>$I_R$ @ $V_{RWM}$ |         | Maximum Forward Voltage<br>$V_F$ @ 9A/leg | Reverse Recovery Time <sup>1</sup><br>$t_{rr}$ @ 25°C | Maximum operating & storage temp. range.<br>$T_{OP}$ $T_{STG}$ |
|----------------------------------------------------------------------|------------------------------------------------------|---------|-------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------|
|                                                                      | @ 25°C                                               | @ 100°C |                                           |                                                       |                                                                |
|                                                                      | μA                                                   | μA      | Volts                                     | μS                                                    | °C                                                             |
| SCBAR05<br>SCBAR1<br>SCBAR2<br>SCBAR4<br>SCBAR6<br>SCBAR8<br>SCBAR10 | 6.0                                                  | 240     | 1.0                                       | 2.0                                                   | -55 to +150                                                    |

<sup>1</sup> Measured on discrete devices prior to assembly

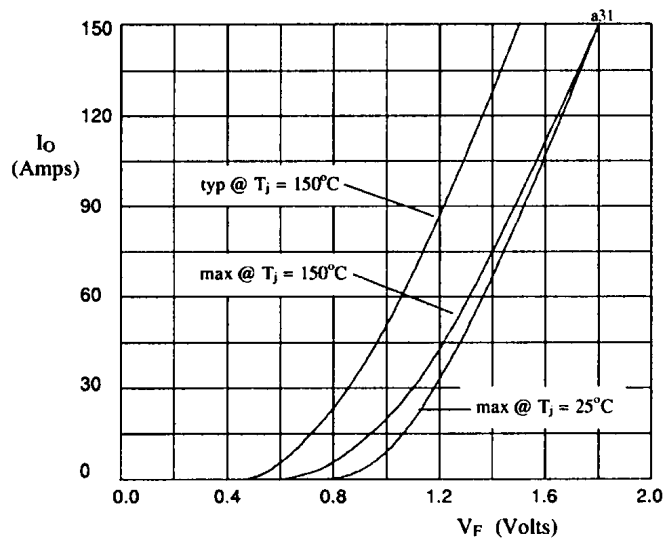


Fig 1. Forward voltage drop against output current per leg.

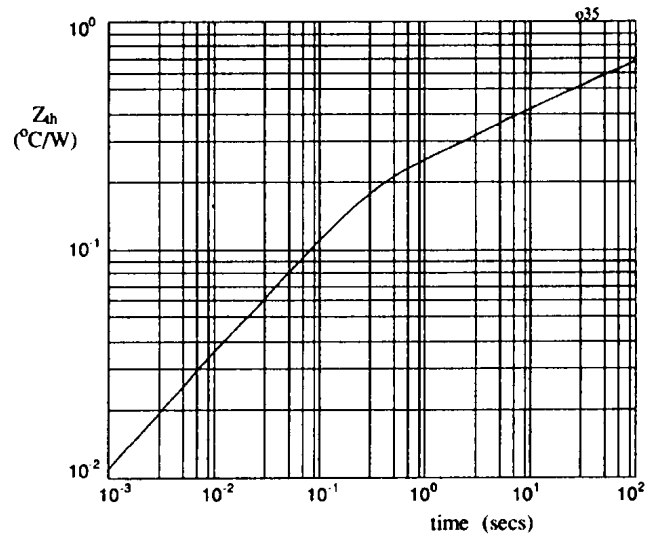


Fig 2. Transient thermal impedance characteristic per leg