**SOLID STATE DEVICES, INC.**
14830 Valley View Blvd * La Mirada, Ca 90638
Phone: (562) 404-7855 * Fax: (562) 404-1773

# SDA167HC Series

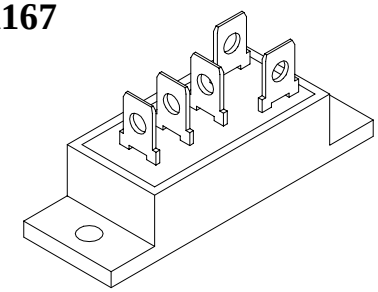
## Designer's Data Sheet

## 33A / 600 - 1000V THREE PHASE BRIDGE RECTIFIER ASSEMBLY

**FEATURES:**

- **Up to 1000 V Blocking Voltage**
- **Average Output Current 33 Amps**
- **Low Reverse Leakage Current**
- **Constructed with Void-free, Hermetically Sealed Discretes**
- **Aluminum Case for Maximum Thermal Conductivity**
- **Electrically Insulated Aluminum Case**
- **TX and TXV Level Screening Available**
- **Standard and Fast Recovery Versions Available. Consult Factory.**

**SDA167**



| Maximum Ratings | | SYMBOL | VALUE | UNITS |
|---|---|---|---|---|
| **Peak Repetitive Reverse and DC Blocking Voltage** | **SDA167HCEUF**<br>**SDA167HCFUF**<br>**SDA167HCGUF** | **$V_{RRM}$**<br>**$V_{RWM}$**<br>**$V_R$** | 600<br>800<br>1000 | **Volts** |
| **Average Rectified Forward Current** [1/, 2/] (Resistive load, 60Hz, Sine Wave, $T_C$ = 55ºC) | | **Io** | 33 | **Amps** |
| **Peak Surge Current** [1/] (8.3 ms Pulse, Half Sine Wave, $T_A$ = 25ºC) | | **$I_{FSM}$** | 250 | **Amps** |
| **Operating and Storage Temperature**<br>**Maximum Junction Temperature** | | **$T_{OP}$ & Tstg**<br>**$T_J$** | -65 TO +150<br>175 | **ºC** |
| **Maximum Thermal Resistance** [1/]<br>Junction to Case | | $\theta_{JC}$ | 0.85 | **ºC/W** |

**Available Part Numbers:** [4/]
**SDA167HCEUF, SDA167HCEUFT**
**SDA167HCFUF, SDA167HCFUFT**
**SDA167HCGUF, SDA167HCGUFT**
**SDA167HREUF, SDA167HREUFT**
**SDA167HRFUF, SDA167HRFUFT**
**SDA167HRGUF, SDA167HRGUFT**

**Part Number /Ordering Information**

**SDA167H C E UF- _ _**

- **Terminal:** [3/] _ = Lug, T = Turret
- **Finish:** _ = Anodized Case, N = Ni Plated Case
- **Voltage:** E = 600V, F = 800V, G = 1000V
- **Polarity:** C = Normal, R = Reverse

**NOTE:** All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.

**DATA SHEET # : RA0018B**

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| **Electrical Characteristics** [5/] (per leg) | | SYMBOL | MIN | MAX | UNITS |
|---|---|---|---|---|---|
| **Peak Reverse Voltage** ($I_R$ = 100µA) | **SDA167HCEUF** | **BVR** | 620 | - | **Vdc** |
| | **SDA167HCFUF** | | 820 | - | |
| | **SDA167HCGUF** | | 1020 | - | |
| **Instantaneous Forward Voltage Drop** (300 - 500µsec pulse) | $I_F$ = 3A | **$V_{F1}$** | - | 1.42 | **Vdc** |
| | $I_F$ = 9A | **$V_{F2}$** | - | 1.80 | |
| **Reverse Leakage Current** (Rated $V_R$, 300µs pulse minimum ) | | **$I_{R1}$** | - | 20 | **µA** |
| **Reverse Leakage Current** (Rated $V_R$, $T_A$ = 100°C, 300µs pulse minimum ) | | **$I_{R2}$** | - | 750 | **µA** |
| **Reverse Recovery Time** ($I_F$ = 0.5A, $I_R$ = 1.0A, $I_{RR}$ = 0.25A) | | **$t_{RR}$** | - | 70 | **nsec** |
| **Isolation Resistance** (All Terminals in Common to Case) (V = 1500V) | | **$R_{ISO}$** | 100 | - | **MΩ** |

**NOTES:**

1/ Rating Applies to the Total Bridge

2/ Derate Linerly at 0.35A/°C for $T_C$ > 55°C.

3/ Other Termination available. Contact Factory

4/ For Package Outline and Part Availability Contact Factory.

5/ All Electrical Characteristics @25°C, Unless Otherwise Specified.

| **Package Outline** | |
|---|---|
| **Part Number** | **Document** |
| SDA167HCEUF | 70-0157-S167 |
| SDA167HCFUF | 70-0157-S167 |
| SDA167HCGUF | 70-0157-S167 |
| SDA167HREUF | 70-0157-S167 |
| SDA167HRFUF | 70-0157-S167 |
| SDA167HRGUF | 70-0157-S167 |
| SDA167HCEUFT | 70-0157-S167-1 |
| SDA167HCFUFT | 70-0157-S167-1 |
| SDA167HCGUFT | 70-0157-S167-1 |
| SDA167HREUFT | 70-0157-S167-1 |
| SDA167HRFUFT | 70-0157-S167-1 |
| SDA167HRGUFT | 70-0157-S167-1 |