



Solid State Devices, Inc.

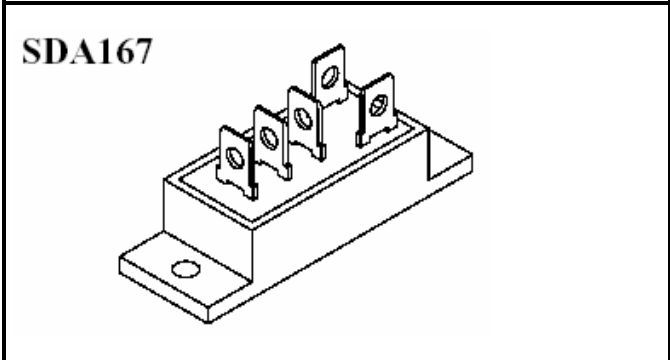
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**SDA167UF
Series**

**25 AMPS
400 – 800 VOLTS
THREE PHASE
BRIDGE RECTIFIER ASSEMBLY**

Designer's Data Sheet

- FEATURES:**
- PIV 400 - 800 Volts
 - Average Output Current 25 Amps
 - Low Reverse Leakage Current
 - Constructed with Void-Free, Hermetically Sealed Discretes
 - Aluminum Case for Maximum Thermal Conductivity
 - Electrically Insulated Aluminum Case
 - Available in Standard and Fast Recovery Versions. Consult Factory.
 - TX, TXV, and Space Level Screening Available. Consult Factory.



MAXIMUM RATINGS		Symbol	Value	Unit
Peak Repetitive Reverse Voltage and DC Blocking Voltage	SDA167DUF	V_{RRM}	400	Volts
	SDA167EUF	V_{RWM}	600	
	SDA167FUF	V_R	800	
Average Rectified Forward Current ^{1/, 2/} (Resistive Load, 60 Hz, Sine Wave, $T_C = 25^\circ C$)		I_o	25	Amps
Peak Surge Current ^{1/} ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)		I_{FSM}	150	Amps
Operating and Storage Temperature (Maximum Junction Temperature)		T_{OP} & T_{stg} T_J	-65 to +150 175	°C
Maximum Thermal Resistance ^{1/} (Junction to Case)		$R_{\theta JC}$	1.5	°C/W

Available Part Numbers: ^{4/}
 SDA167DUF, SDA167DUFT
 SDA167EUF, SDA167EUFT
 SDA167FUF, SDA167FUFT
 SDA167RDUF, SDA167RDUFT
 SDA167REUF, SDA167REUFT
 SDR167RFUF, SDA167RFUFT

Part Number / Ordering Information

SDA167 E UF- $\overline{\text{T}}$ $\overline{\text{L}}$ Terminal: ^{3/} $\overline{\text{—}}$ = Blade
 $\overline{\text{T}}$ = Turret
 $\overline{\text{L}}$ Finish: ^{2/} $\overline{\text{—}}$ = Anodized Case
 $\overline{\text{N}}$ = Ni Plated Case

Voltage: D = 400 V
 E = 600 V
 F = 800 V

Polarity: $\overline{\text{—}}$ = Normal
 R = Reverse



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ELECTRICAL CHARACTERISTICS ^{5/} (per leg)		Symbol	Min	Max	Unit
Peak Reverse Voltage ($I_R = 100 \mu A$)	SDA167DUF SDA167EUF SDA167FUF	BVR	420 620 820		Volts
Instantaneous Forward Voltage Drop ($I_F = 3 A$, 300 - 500 μs Pulse)	D, E F	V_{F1}		1.35 1.50	Volts
Reverse Leakage Current (Rated V_R , 300 μs pulse minimum)		I_{R1}		10	μA
Reverse Leakage Current (Rated V_R , $T_A = 100^\circ C$, 300 μs pulse minimum)		I_{R2}		750	μA
Reverse Recovery Time ($I_F = 0.5 A$ $I_R = 1.0 A$ $I_{RR} = 0.25 A$)		t_{rr}		50	nsec
Insulation Resistance ($V = 1500 V$)		R_{INS}	100		MΩ

NOTES:

* Pulse Test: Pulse Width = 300 μ sec, Duty Cycle = 2%

1/ Rating Applies to the Total Bridge.

2/ Derating Linearly at 0.263 A/ $^\circ C$ for $T_C > 55^\circ C$.

3/ Package Outline: Document

Blade Terminal 70-0157-S167

Turret Terminal 70-0157-S167-1

4/ For Package Outline and Part Availability Contact Factory.

5/ All Electrical Characteristics @25 $^\circ C$, Unless Otherwise Specified.