



Solid State Devices, Inc.

14830 Valley View Blvd * La Mirada, Ca 90638

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SDA253F Series

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SDA253 **D** **E** **—**

ç ç ë **Finish:** — = Chem Filmed Base
 ç ç N = Ni Plated Base
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 ç ç
 ç ç
 ç ë **Speed:** F = Fast (250 nsec max)
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 ë **Voltage:** D = 600 V
 E = 800 V
 F = 1000 V

50A /
400 – 800V

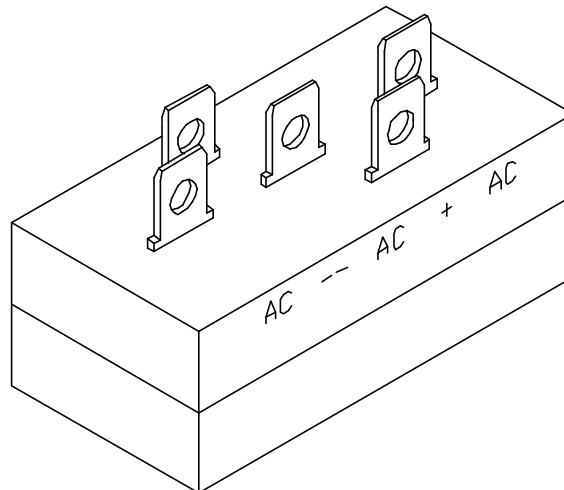
THREE PHASE BRIDGE RECTIFIER ASSEMBLY

Features:

- PIV: 400 – 600 Volts.
- Higher Blocking Voltage Available. Contact Factory.
- Average Output Current 25 Amps
- Low Reverse Leakage Current
- Constructed with Void-free, Hermetically Sealed Discretes
- Aluminum Base for Maximum Thermal Conductivity
- Small Package Size (2.00 x 1.00 x 0.750")
- TX and TXV & S Level Screening Available
- Ultra Fast Versions Available. Contact Factory.

Maximum Ratings		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SDA253DF	V_{RRM}	400	Volts
	SDA253EF	V_{RSM}	600	
	SDA253FF	V_R	800	
Average Rectified Forward Current ^{3/} (Resistive Load, 60 Hz Sine Wave)	$T_C = 55^\circ C$	I_o	50	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$, per leg)		I_{FSM}	300	Amps
Operating & Storage Temperature		$T_{op} \text{ \& } T_{stg}$	-65 to +150	$^\circ C$
Maximum Junction Temperature		T_J	-65 to +175	$^\circ C$
Maximum Thermal Resistance, Junction to Case		R_{qJC}	2.5	$^\circ C/W$

SDA253



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

DATA SHEET #: RA0049A

DOC



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SDA253F Series

Electrical Characteristic ^{4/}		Symbol	Min	Typ	Max	Units
Peak Reverse Voltage ($I_R = 100\mu A$)	SDA253DF	BV_R	420	—	—	Volts
	SDA253EF		620	—	—	
	SDA253FF		820	—	—	
Instantaneous Forward Voltage Drop ($I_F = 18A$, pulsed)		V_{F1}	—	—	1.25	Volts
Reverse Leakage Current (Rated V_R , pulsed)	$T_A = 25^\circ C$	I_{R1}	—	—	10	μA
	$T_A = 100^\circ C$	I_{R2}	—	—	150	
Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ A}$, $I_{RR} = 250\text{ mA}$)		t_{rr}	—	—	250	ns
Capacitance ($V_R = 10V$, $f = 1MHz$)		C	—	—	120	pF
Insulation Resistance ($V = 1500V$)		R_{ISO}	10	—	—	MW

NOTES:

^{1/} For Ordering Information, Price, and Availability Contact Factory.

^{2/} For Package Outlines Contact Factory.

^{3/} Derate Linearly at $0.416\text{ A}/^\circ C$ for $T_C > 55^\circ C$.

^{4/} Unless Otherwise Specified, All Electrical Characteristics @ $25^\circ C$.

AVAILABLE PART NUMBERS: ^{1/}

SDA253DF

SDA253EF

SDA253FF

Mounting Diagram: ^{2/}

(Height = 0.750")

