



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SPA612 Series

**150 A / 600 V
 THREE PHASE BRIDGE
 RECTIFIER ASSEMBLY**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SPA612

┌───┐ **Screening ^{2/}**
 │ ┌───┐ = Not Screened
 │ │ TX = TX Level
 │ │ TXV = TXV Level
 │ │ S = S Level
 │ └───┐ **Recovery Time**
 │ ─── = Standard Recovery
 └───┬───┘ **Voltage/Family**
 C = 400 V
 D = 500 V
 E = 600 V

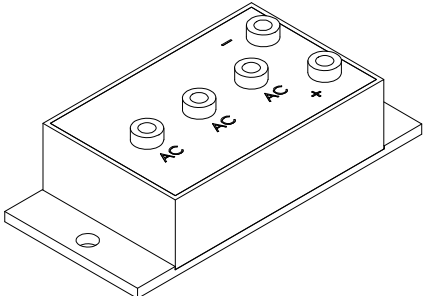
- Features:**
- Average Output Current 150 Amps
 - High temperature operation
 - Anodized Aluminum Base
 - High Power density 40 W / sq in
 - TX, TXV & S Level Screening Available
 - Standard, Fast, & Hyper Fast Versions Available. Contact Factory.
 - Higher Voltage Versions Available. Contact Factory.

Maximum Ratings ^{3/}		Symbol	Value	Units
Peak Inverse Voltage	SPA612C	PIV	400	Volts
	SPA612D		500	
	SPA612E		600	
Average Rectified Output Current (T _C = Case Temperature)	T _C = 55°C	I_{O1}	150	Amps
	T _C = 100°C	I_{O2}	100	
	T _C = 130°C	I_{O3}	60	
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _C = 25°C)		I_{FSM}	1000	Amps
Operating & Storage Temperature		T_{op} & T_{stg}	-65 to 150	°C
Maximum Thermal Resistance, Junction to Case		R_{θJC}	0.4	°C/W

Notes:

- ^{1/} For Ordering Information, Price, and Availability Contact Factory.
^{2/} Screened to MIL-PRF-19500.
^{3/} Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @25°C.

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Electrical Characteristic ^{3/}		Symbol	Min	Typ	Max	Units
Maximum Forward Voltage Per Leg (T _A = 25°C, pulsed)	I _F = 150 A	V _{F1}	-	1.08	1.50	Volts
	I _F = 100 A	V _{F2}	-	1.02	1.30	
	I _F = 60 A	V _{F2}	-	0.96	1.05	
Maximum Forward Voltage Per Leg (T _A = 125°C, pulsed)	I _F = 150 A	V _{F1}	-	0.98	1.20	Volts
	I _F = 100 A	V _{F2}	-	0.93	1.10	
	I _F = 60 A	V _{F2}	-	0.85	0.95	
Reverse Leakage Current (Rated PIV, T _A = 25°C)		I _{R1}	-	5	50	μA
Reverse Leakage Current (Rated PIV,)	T _A = 100°C	I _{R2}	-	50	500	μA
	T _A = 125°C	I _{R3}	-	125	1000	
Isolation Resistance	1500V	R _{ISO}	100	---	---	MΩ
Reverse Recovery Time (I _F = 500 mA, I _R = 1 A, I _{RR} = 250 mA T _A = 25°C (Measured on discrete rectifiers prior to assembly)		trr	—	2.5	5.0	us

SPA612 Package Outline:

