



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, Ca 90638
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SPA555 Series

**20A / 1000 - 1200V
 SiC SCHOTTKY
 SINGLE PHASE BRIDGE**

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SPA555

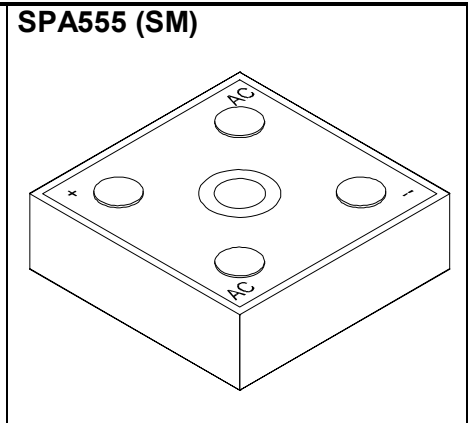
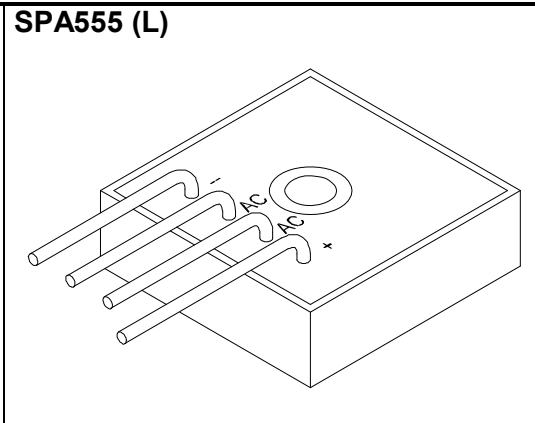
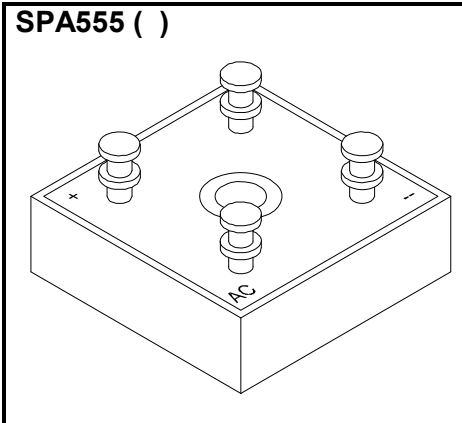
Screening^{2/} = Not screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Terminals^{3/} = Turret Terminals
 L = Copper Leads
 SM = Surface Mount

Voltage M = 1000 V
 N = 1200 V

- Features:**
- 1200V Silicon Carbide Schottky Rectifier
 - Average Output Current 20 Amps
 - No Reverse Recovery
 - No Forward Recovery
 - No Switching Time Change over Temperature
 - Small Package Size (1.25 x 1.25 x 0.350")
 - Cases with Aluminum Heatsink are Available. Consult Factory
 - TX and TXV & S Level Screening Available^{2/}

Maximum Ratings		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SPA555M	V_{RRM}	1000	Volts
	SPA555N	V_{RSM} V_R	1200	
Average Rectified Forward Current ^{4/} (Resistive Load, 60 Hz Sine Wave, $T_C = 55^\circ C$)		I_O	20	Amps
Peak Surge Current ^{5/} (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ C$)		I_{FSM}	26	Amps
Operating & Storage Temperature		T_{op} & T_{stg}	-55 to +150	$^\circ C$
Junction Temperature		T_J	-55 to +200	$^\circ C$
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	1.5	$^\circ C/W$



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

DATA SHEET #: RA0038D

DOC



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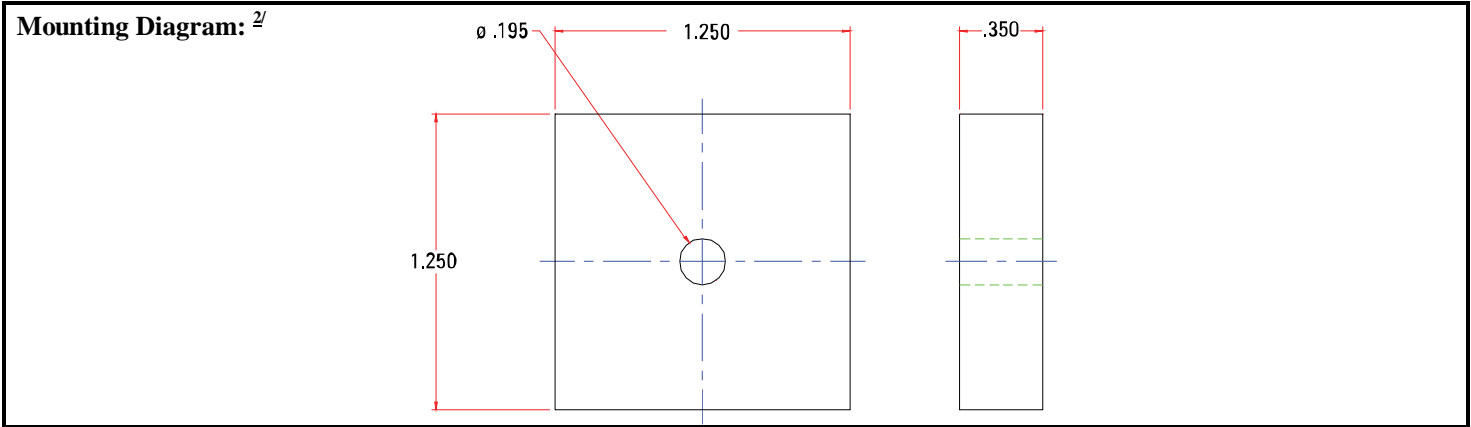
SPA555 Series

Electrical Characteristic ^{6/}	Symbol	Min	Typ	Max	Units	
Instantaneous Forward Voltage Drop (T _A =25°C, 300 - 500 μsec pulse)	I _F = 2.0 A	V _{F1}	—	1.20	1.30	V _{DC}
	I _F = 5.0 A	V _{F2}	—	1.50	1.75	
	I _F = 10 A	V _{F3}	—	2.10	2.50	
Instantaneous Forward Voltage Drop (300 - 500 μsec pulse)	T _A = -55°C, I _F = 5 A	V _{F4}	—	1.35	1.50	V _{DC}
	T _A = 150 °C, I _F = 5 A	V _{F5}	—	2.30	2.80	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300 μsec pulse minimum)	I _{R1}	—	20	250	μA	
Reverse Leakage Current (Rated V _R , T _A = 150°C, 300 μsec pulse minimum)	I _{R2}	—	100	1000	μA	
Junction Capacitance (V _R = 10V, f = 1MHz, T _A = 25°C)	C _J	—	280	320	pF	

NOTES:

- * Pulse Test: Pulse Width = 300 μsec, Duty Cycle = 2%
- 1/ For Ordering Information, Price, and Availability Contact Factory.
- 2/ Screening Based on MIL-PRF-19500. Screening Flows Available on Request.
- 3/ For Package Outlines Contact Factory.
- 4/ Derate Linearly at 0.28A/°C for T_C > 55°C.
- 5/ Electrical Characteristic per Leg
- 6/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

Available Part Numbers:
 SPA555M; SPA555ML; SPA555MSM
 SPA555N; SPA555NL; SPA555NSM



Terminal Details

<p>SPA555 (SM)</p> <p>Terminals are spaced at .650" square</p>	<p>SPA555 (L)</p> <p>*Cathode Lead: .750 MIN</p> <p>Leads are spaced at .250"</p>	<p>SPA555 ()</p> <p>Terminals are spaced at .650" square</p>
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