Solid State Devices, Inc.
14701 Firestone Blvd * La Mirada, Ca 90638
Phone: (562) 404-4474 * Fax: (562) 404-1773
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SPA555 Series

DESIGNER'S DATA SHEET

32 A / 1000 – 1200 V SiC SCHOTTKY SINGLE PHASE BRIDGE

Part Number / Ordering Information [1/]

SPA555 ___ ___ ___

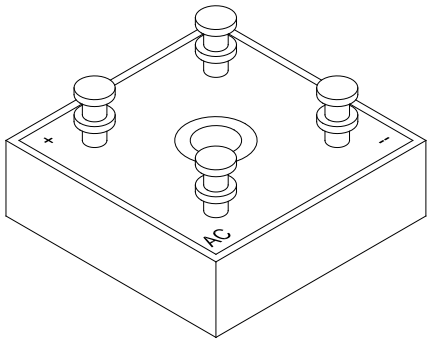
- **Screening**[2/] __ = Not Screened
  TX = TX Level
  TXV = TXV Level
  S = S Level
- **Terminals**[3/] = Turret Terminals
  L = Copper Leads
  SM = Surface Mount
- **Voltage** M = 1000 V
  N = 1200 V

Features:

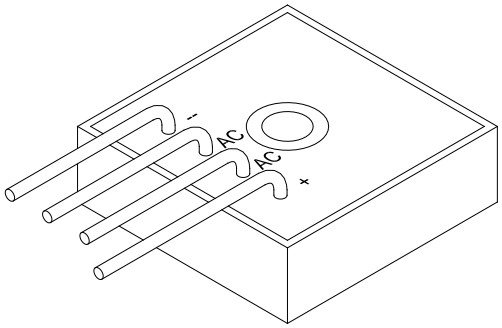
- **1200 V Silicon Carbide Schottky Rectifier**
- **Average Output Current 32 Amps**
- **No Reverse Recovery**
- **No Forward Recovery**
- **No Switching Time Change over Temperature**
- **Small Package Size (1.25 x 1.25 x 0.350")**
- **Cases with Aluminum Heatsink are Available. Consult Factory**
- **TX and TXV & S Level Screening Available**[2/]

Maximum Ratings		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	**SPA555M** **SPA555N**	V_{RRM} V_{RSM} V_R	1000 1200	**Volts**
Average Rectified Forward Current [4/] (Resistive Load, 60 Hz Sine Wave, T_C = 55°C)		I_O	32	**Amps**
Peak Surge Current [5/] (T_A = 25°C, t_P = 8.3 ms)		I_{FSM}	125	**Amps**
Operating & Storage Temperature		T_{op} & T_{stg}	-55 to +150	**ºC**
Junction Temperature		T_J	-55 to +200	**ºC**
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	1.5	**ºC/W**

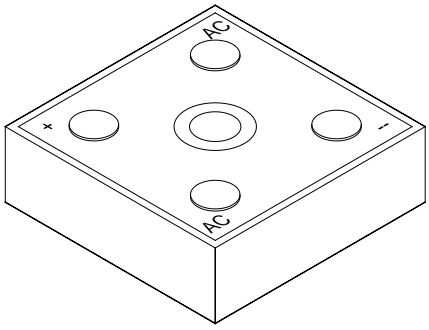
SPA555 ( )



SPA555 (L)



SPA555 (SM)



NOTE: All specifications are subject to change without notification. SCD's for these devices should be reviewed by SSDI prior to release.	**DATA SHEET #: RA0038F**	**DOC**

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Electrical Characteristic 6/		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T_A=25ºC, 300 - 500 µsec pulse)	I_F = 5.0 A I_F = 10 A I_F = 20 A	V_{F1} V_{F2} V_{F3}	— —	01.05 1.20 1.45	1.12 1.28 1.53	V_{DC}
Instantaneous Forward Voltage Drop (300 - 500 µsec pulse)	T_J= 100ºC, I_F = 10A T_J= 175 ºC, I_F = 10A	V_{F4} V_{F5}	— —	1.25 1.40	1.35 1.50	V_{DC}
Reverse Leakage Current (Rated V_R, T_A = 25ºC, 300 µsec pulse minimum)		I_{R1}	—	20	100	µA
Reverse Leakage Current (Rated V_R, T_J = 175ºC, 300 µsec pulse minimum)		I_{R2}	—	150	500	µA
Junction Capacitance (V_R = 10V, f = 1MHz, T_A = 25°C)		C_J	—	550	650	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/ºC for T_C > 55ºC.

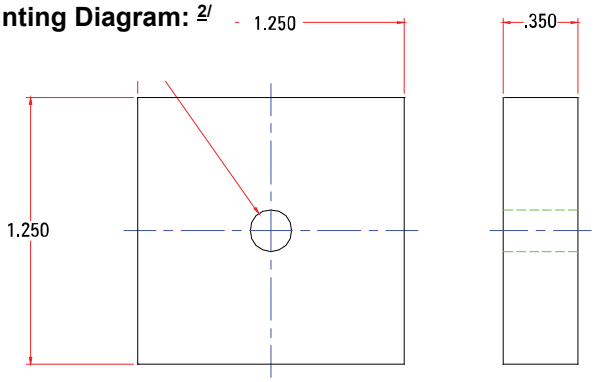
5/ Electrical Characteristic per Leg

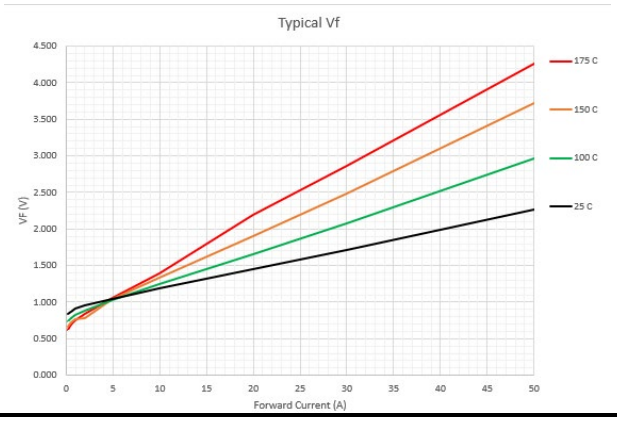
6/ Unless Otherwise Specified, All Electrical Characteristics @25ºC.

Available Part Numbers:

SPA555M; SPA555ML; SPA555MSM
SPA555N; SPA555NL; SPA555NSM

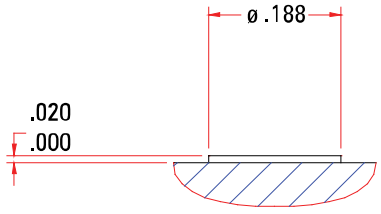
Mounting Diagram: 2/





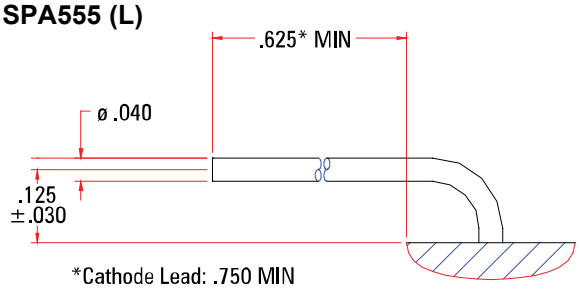
Terminal Details

SPA555 (SM)



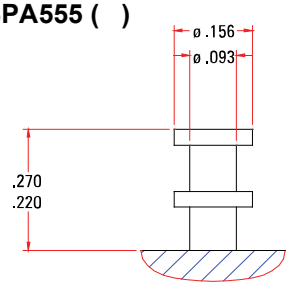
Terminals are spaced at .650" square

SPA555 (L)



Leads are spaced at .250"

SPA555 ( )



Terminals are spaced at .650" square

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