



Solid State Devices, Inc.

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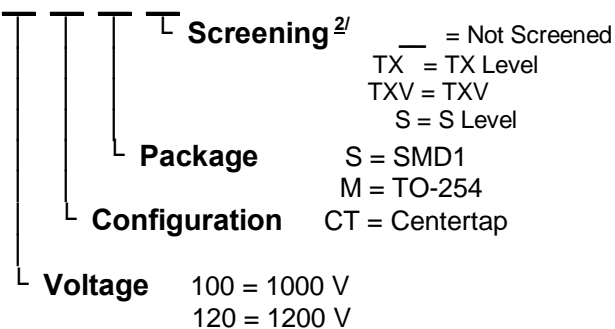
SSR20C Series

20 A / 1200 V Schottky Silicon Carbide Centertap Rectifier

Designer's Data Sheet

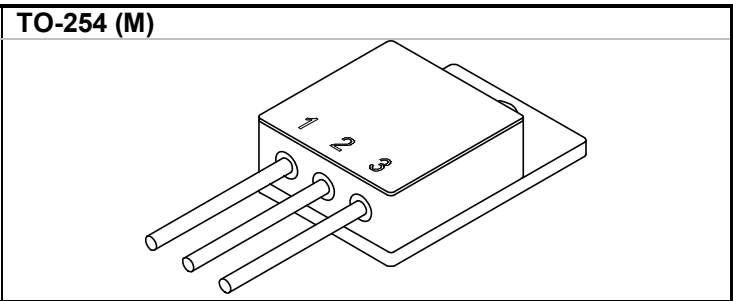
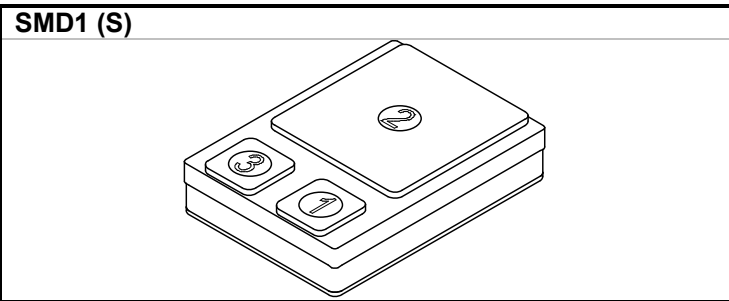
Part Number / Ordering Information ^{1/}

SSR20C



- FEATURES:**
- 1200 Volt Silicon Carbide Schottky Rectifier
 - Average Output Current 20 Amps
 - No Reverse Recovery
 - No Forward Recovery
 - No Switching Time Change Over Temperature
 - Small Package Size
 - TX, TXV, and Space Level Screening Available. Consult Factory.

MAXIMUM RATINGS ^{3/}		Symbol	Value	Units
Peak Repetitive and Peak Reverse Voltage	SSR20C100CT SSR20C120CT	V_{RRM} V_R	1000 1200	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	Per Leg Total	I_O	10 20	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)		I_{FSM}	120	Amps
Operating & Storage Temperature		T_{OP} & T_{stg}	-55 to +250	$^\circ\text{C}$
Junction Temperature		T_J	-55 to +250	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case)		$R_{\theta JC}$	1.0	$^\circ\text{C/W}$



NOTES:

- * Pulse Test: Pulse Width = 300 μsec , Duty Cycle = 2%
- ^{1/} For Ordering Information, Price, and Availability Contact Factory.
- ^{2/} Screened to MIL-PRF-19500.
- ^{3/} Unless Otherwise Specified, All Electrical Characteristics @25 $^\circ\text{C}$



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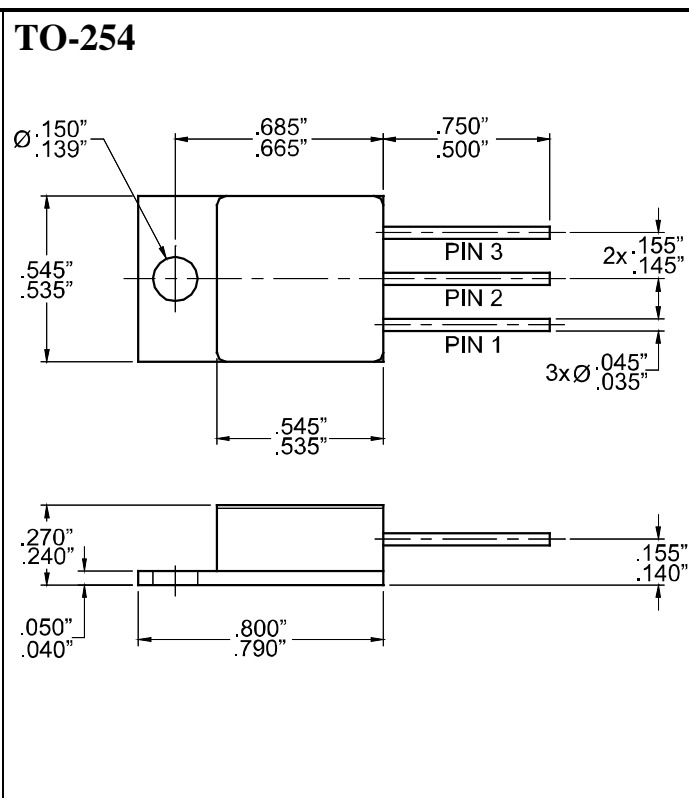
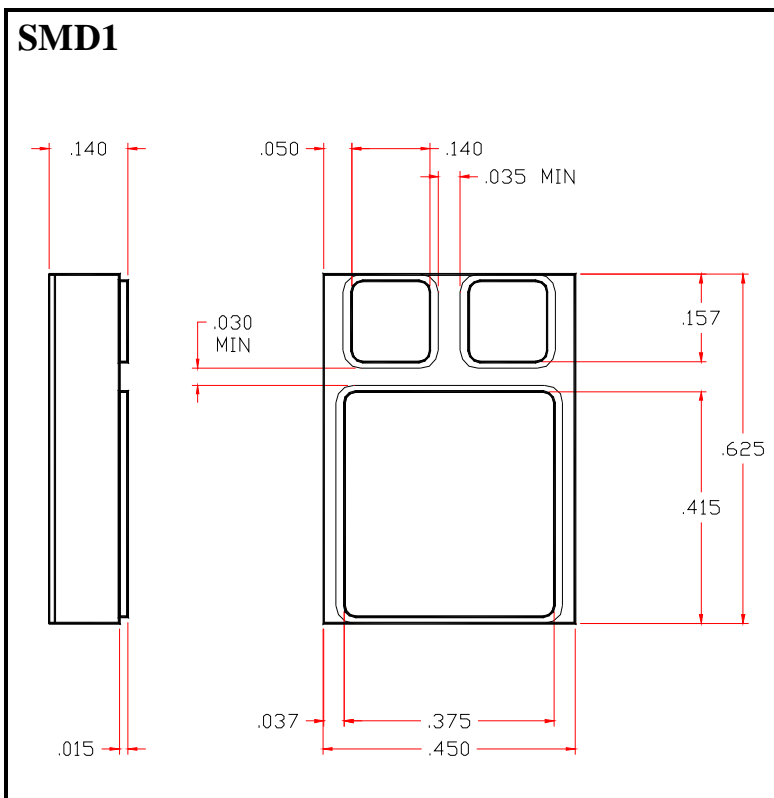
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SSR20C Series

ELECTRICAL CHARACTERISTICS (per leg) ^{3/}		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop (T _A =25°C, 300 - 500 μsec pulse)	I _F = 5.0 A	V _{F1}	—	1.25	1.4	V _{DC}
	I _F = 10 A	V _{F2}	—	1.65	1.75	
	I _F = 20 A	V _{F3}	—	2.10	2.50	
Instantaneous Forward Voltage Drop (300 - 500 μsec pulse)	T _A = -55°C, I _F = 10 A	V _{F4}	—	1.46	1.50	V _{DC}
	T _A = 150 °C, I _F = 10 A	V _{F5}	—	2.60	2.80	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300 μsec pulse minimum)		I _{R1}	—	40	500	μA
Reverse Leakage Current (Rated V _R , T _A = 150°C, 300 μsec pulse minimum)		I _{R2}	—	200	2000	μA
Junction Capacitance (V _R = 10V, f = 1MHz, T _A = 25°C)		C _J	—	550	650	pF



Available Part Numbers:
SSR20C100CTS
SSR20C120CTS
SSR20C100CTM
SSR20C120CTM

PIN ASSIGNMENT			
Package	Pin 1	Pin 2	Pin 3 (Tab)
SMD1 (S)	Anode 1	Anode 2	Cathode
TO-254 (M)	Anode 1	Anode 2	Cathode

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

DATA SHEET #: SH0049B

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