



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

Designer's Data Sheet

Part Number / Ordering Information ^{1/}

SSR10C

Screening ^{2/}

— = Not Screened
 TX = TX Level
 TXV = TXV Level
 S = S Level

Lead Bend Options

— = Straight Leads
 DB = Down Bend
 UB = Up Bend

Package

M = TO-254
 J = TO-257

Voltage

080 = 800 V
 100 = 1000 V
 120 = 1200 V

SSR10C120 Series

10 A / 1200 V

Schottky Silicon Carbide Rectifier

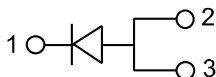
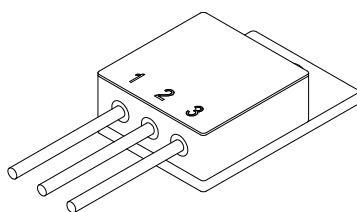
FEATURES:

- 1200 Volt Silicon Carbide Schottky Rectifier
- Average Output Current: 10 Amps
- No Reverse Recovery
- No Forward Recovery
- No Switching Time Change Over Temperature
- Small Package Size
- TO-257: 3.2 gr (typ); TO-254: 6.3 gr (typ)
- TX, TXV, and Space Level Screening Available. Consult Factory

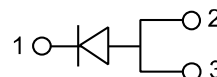
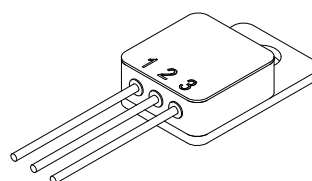
MAXIMUM RATINGS^{3/}

	Symbol	Value	Unit
Peak Repetitive and Peak Reverse Voltage	SSR10C080 SSR10C100 SSR10C120	V_{RRM} V_R	800 1000 1200
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	I_O	10	A
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, $T_A = 25^\circ\text{C}$)	I_{FSM}	60	A
Diode dV/dt Ruggedness ($V_R = 0 - 600\text{ V}$)	dV/dt	200	V/ns
Operating & Storage Temperature	$T_{OP} \text{ \& } T_{stg}$	-55 to +250	$^\circ\text{C}$
Junction Temperature	T_J	-55 to +250	$^\circ\text{C}$
Maximum Thermal Resistance (Junction to Case)	$R_{\theta JC}$	3.0	$^\circ\text{C/W}$

TO-254 (M)



TO-257 (J)



Notes:

^{1/} For ordering information, price, and availability, contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

^{3/} Unless otherwise specified, all electrical characteristics @25°C. For best results, connect anode pins together.

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

DATA SHEET #: SH0080B

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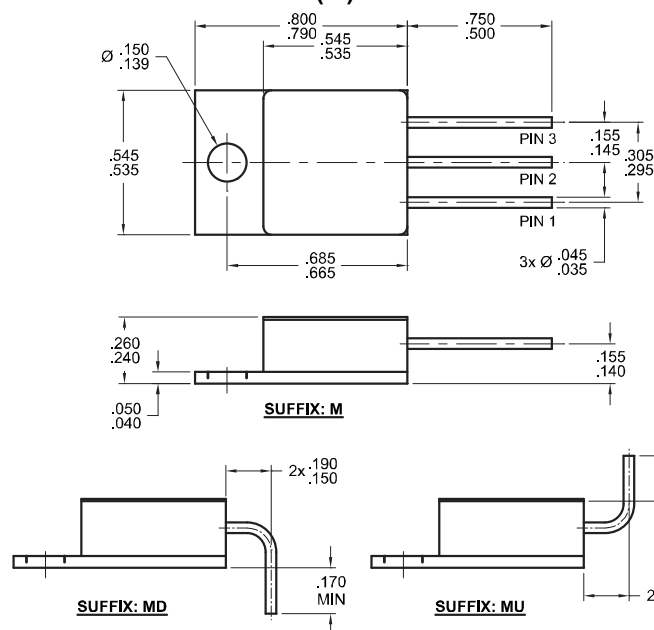
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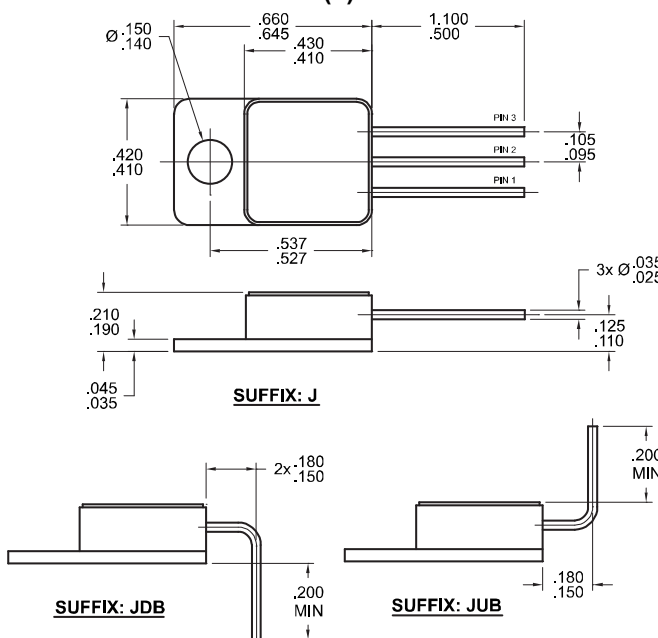
SSR10C120 Series

ELECTRICAL CHARACTERISTICS ^{3/}		Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage Drop (T _A =25°C, 300 - 500 µsec pulse)	I _F = 2.0 A	V _{F1}	—	1.06	1.20	V _{DC}
	I _F = 5.0 A	V _{F2}	—	1.25	1.50	
	I _F = 10 A	V _{F3}	—	1.53	1.80	
Instantaneous Forward Voltage Drop (300 - 500 µsec pulse)	T _A = -55°C, I _F = 5 A	V _{F4}	—	1.25	1.60	V _{DC}
	T _A = 150°C, I _F = 5 A	V _{F5}	—	1.45	1.80	
Reverse Leakage Current (Rated V _R , T _A = 25°C, 300 µsec pulse minimum)		I _{R1}	—	10	50	µA
Reverse Leakage Current (Rated V _R , T _A = 150°C, 300 µsec pulse minimum)		I _{R2}	—	15	250	µA
Junction Capacitance (V _R = 10V, f = 1MHz, T _A = 25°C)		C _J	—	375	450	pF

CASE OUTLINE: TO-254 (M)



CASE OUTLINE: TO-257 (J)



PIN ASSIGNMENT

Package	Pin 1	Pin 2	Pin 3
TO-254 (M)	Cathode	Anode	Anode
TO-257 (J)	Cathode	Anode	Anode

Available Part Numbers:

SSR10C080M, SSR10C080MDB, SSR10C080MUB
 SSR10C100M, SSR10C100MDB, SSR10C100MUB
 SSR10C120M, SSR10C120MDB, SSR10C120MUB
 SSR10C080J, SSR10C080JDB, SSR10C080JUB
 SSR10C100J, SSR10C100JDB, SSR10C100JUB
 SSR10C120J, SSR10C120JDB, SSR10C120JUB

Notes:

*Pulse Test: Pulse Width = 300 µsec, Duty Cycle = 2%

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