



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638-5223
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SSR50C60CT Series

**50 Amp
 SCHOTTKY SILICON CARBIDE
 CENTERTAP RECTIFIER
 600 Volts**

Designer's Data Sheet

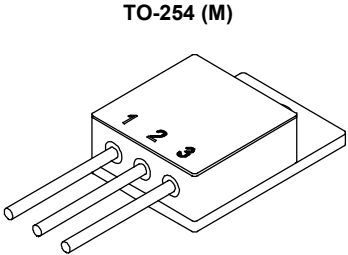
Part Number / Ordering Information ^{1/}

SSR50C

┌─── Screening^{2/} ── = Not Screened
 ├── TX = TX Level
 ├── TXV = TXV
 └── S = S Level
 ┌─── Package
 └── M = TO-254
 ┌─── Configuration
 └── CT = Centertap
 ┌─── Voltage 50 = 500 V
 └── 60 = 600 V

- FEATURES:**
- World's Smallest Hermetic SiC Centertap Rectifier
 - High Voltage, 600V
 - Very High Operating Temperature, 250°C
 - No Recovery Time (tfr or trr)
 - High Current Operation, 50A
 - Hermetically Sealed, Isolated Power Package
 - TX, TXV, and Space Level Screening Available - Consult Factory
 - Lead Forming Available – Consult Factory

MAXIMUM RATINGS ^{3/}		Symbol	Value	Units
Peak Repetitive Reverse and Peak Surge Reverse Voltage	SSR50C50 SSR50C60	V_{RRM} V_{RSM}	500 600	Volts
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	Per Leg Total	I_O	25 50	Amps
Non Repetitive Peak Surge Current (8.3 ms Pulse, Half Sine Wave)	Per Leg	I_{FSM}	100	Amps
Power Dissipation ($T_C = 25^\circ\text{C}$)		P_D	120	Watts
Operating & Storage Temperature ^{4/}		$T_{OP} \ \& \ T_{stg}$	-55 to +250	°C
Maximum Thermal Resistance	Junction to Ambient Junction to Case	$R_{\theta JC}$	1.9	°C/W





Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638-5223
 Phone: (562) 404-4474 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

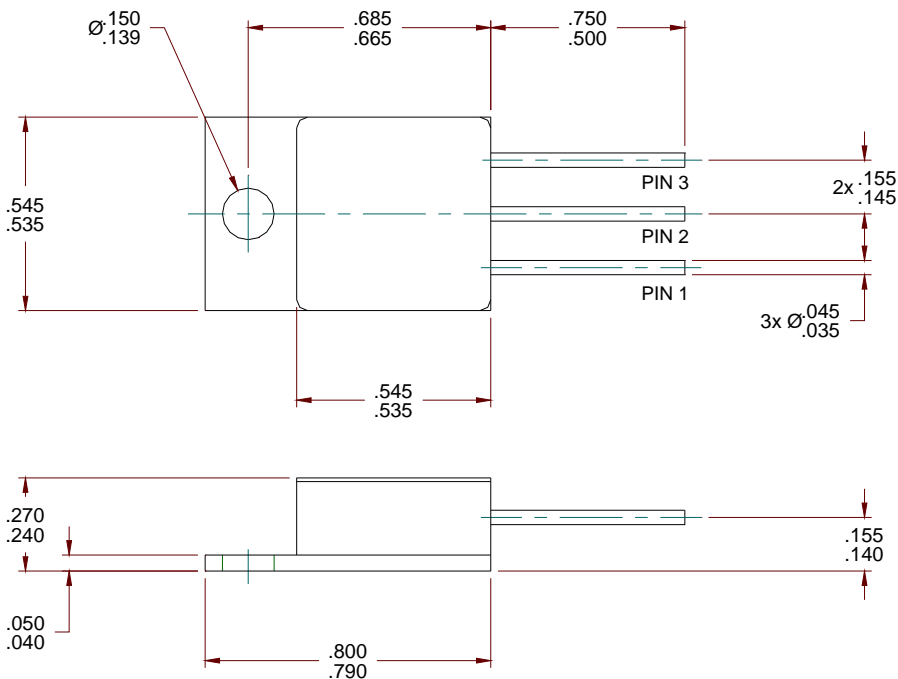
SSR50C60CT Series

ELECTRICAL CHARACTERISTICS ^{3/}	Symbol	Min	Typ	Max	Units	
Instantaneous Forward Voltage Drop (T _J =25°C, 300μsec pulse)	I _F = 12 A I _F = 25 A	V _{F1}	—	1.25 1.60	1.40 1.90	Volts
Instantaneous Forward Voltage Drop (T _J =150°C, 300μsec pulse)	I _F = 12 A I _F = 25 A	V _{F2}	—	1.30 1.70	1.50 2.00	Volts
Instantaneous Forward Voltage Drop (T _J =-55°C, 300μsec pulse)	I _F = 12 A I _F = 25 A	V _{F3}	—	1.25 1.50	1.40 1.90	Volts
Reverse Leakage Current (V _R = Rated V _R , T _J = 25°C, 300 μsec pulse)		I _{R1}	—	20	250	μA
Reverse Leakage Current (V _R = Rated V _R , T _J = 150°C, 300 μsec pulse)		I _{R2}	—	50	1000	μA
Junction Capacitance (V _R = 10V _{dc} , f = 1MHz, T _C = 25°C)		C _J	—	400	—	pF
Total Capacitive Charge (V _R = 400V _{dc} , I _F =5A, di/dt=200A/μs, T _J =150 °C)		Q _C	—	50	—	nC

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
- 4/ If High temp operation is desired (>175°C), c onslt factory for soldering consideration.

Available Part Numbers: SSR50C50CTM, SSR50C60CTM



PIN ASSIGNMENT			
Package	Pin 1	Pin 2	Pin 3
TO-254	Anode	Cathode	Anode