



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

SSR24C60CTJ & SSR24C60CAJ Series

24 Amp Schottky Silicon Carbide Centertap Rectifier 600 Volts

DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SSR24C CT J

Screening ^{2/}
 — = Not Screened
 TV = TX Level
 TXV = TXV Level
 S = S Level

Package J = TO-257

Configuration CT = Common Cathode
 CA = Common Anode

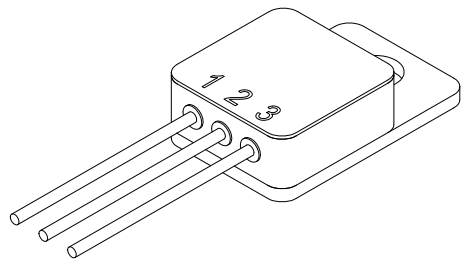
Voltage 30 = 300 V 40 = 400 V
 50 = 500 V 60 = 600 V

- 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, 24A
 - Hermetically Sealed, Isolated Packaging
 - TX, TXV, and S Level screening available

Maximum Ratings ^{3/}		Symbol	Value	Units
Peak Repetitive and Peak Surge Reverse Voltage	SSR24C30	V_{RRM} V_{RSM}	300	Volts
	SSR24C40		400	
	SSR24C50		500	
	SSR24C60		600	
Average Rectified Forward Current (Resistive Load, 60 Hz, Sine Wave)	Per Leg Total	I_o	12	Amps
			24	
Non Repetitive Peak Surge Current (8.3 ms Pulse, Non-repetitive Half Sine Wave, per leg)		I_{FSM}	50	Amps
Power Dissipation ($T_c = 25^\circ\text{C}$)		P_D	120	Watts
Operating & Storage Temperature ^{4/}		Top & Tstg	-55 to +250	°C
Maximum Thermal Resistance Junction to Case		$R_{\theta JC}$	3	°C/W

- NOTES:**
- 1/ For ordering information, price, operating curves, and availability – contact factory.
 - 2/ Screening based on MIL-PRF-19500. Screening flows available on request.
 - 3/ All Electrical Characteristics @ 25°C Unless Otherwise Specified.
 - 4/ If high temp operation is desired (>175°C) consult factory for soldering consideration.

TO-257 (J)





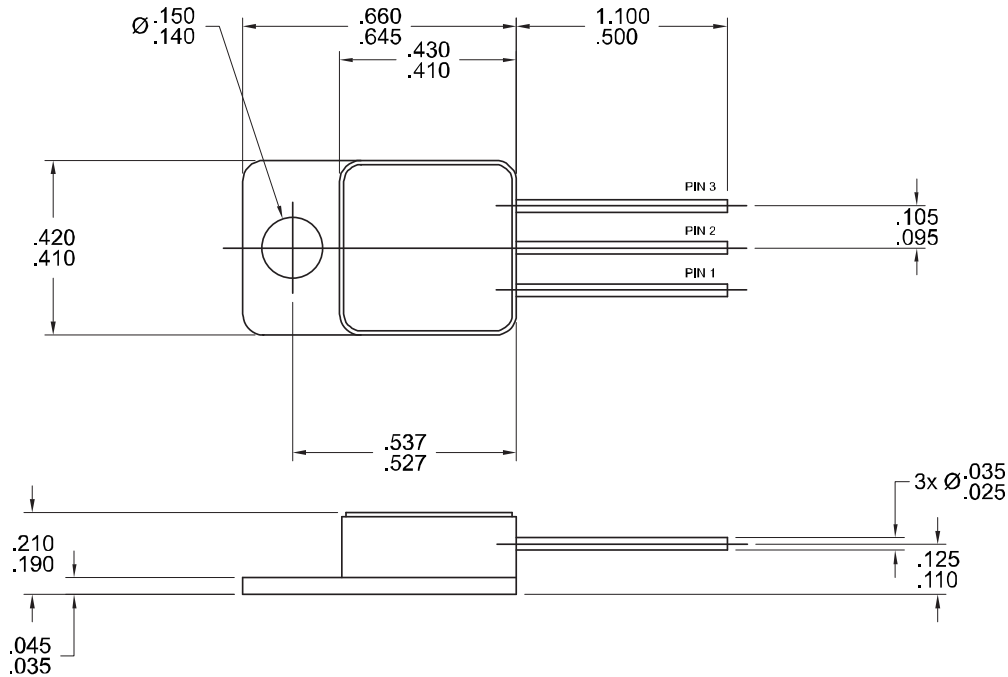
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**SSR24C60CTJ &
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Electrical Characteristic (Per Leg)		Symbol	Min	Typ	Max	Units
Instantaneous Forward Voltage Drop ($T_J = 25^\circ\text{C}$, 300 μsec pulse)	$I_F = 6\text{A}$	V_{F1}	—	1.20	1.40	Volts
	$I_F = 12\text{A}$			1.50	1.75	
Instantaneous Forward Voltage Drop ($T_J = 150^\circ\text{C}$, 300 μsec pulse)	$I_F = 6\text{A}$	V_{F2}	—	1.35	1.60	Volts
	$I_F = 12\text{A}$			1.85	2.25	
Instantaneous Forward Voltage Drop ($T_J = -55^\circ\text{C}$, 300 μsec pulse)	$I_F = 6\text{A}$	V_{F3}	—	1.27	1.45	Volts
	$I_F = 12\text{A}$			1.50	1.75	
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 25^\circ\text{C}$, 300 μsec pulse)		I_{R1}	—	1	200	μA
Reverse Leakage Current ($V_R = \text{Rated } V_R$, $T_J = 150^\circ\text{C}$, 300 μsec pulse)		I_{R2}	—	5	1000	μA
Junction Capacitance ($V_R = 10\text{ Vdc}$, $T_C = 25^\circ\text{C}$, $f=1\text{MHz}$)		C_J	—	280	—	pF
Total Capacitive Charge ($V_R = 10\text{ Vdc}$, $I_F = 12\text{A}$, $di/dt \geq 200\text{A}/\mu\text{s}$, $T_J = 25^\circ\text{C}$)		Q_C	—	35	—	nC

CASE OUTLINE: TO-257



Available Part Numbers:

SSR24C30CTJ SSR24C40CTJ SSR24C50CTJ
 SSR24C60CTJ SSR24C30CAJ SSR24C40CAJ
 SSR24C50CAJ SSR24C60CAJ

PIN ASSIGNMENT

Configuration	Pin 1	Pin 2	Pin 3
CT	Anode	Cathode	Anode
CA	Cathode	Anode	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 #: RS0028E

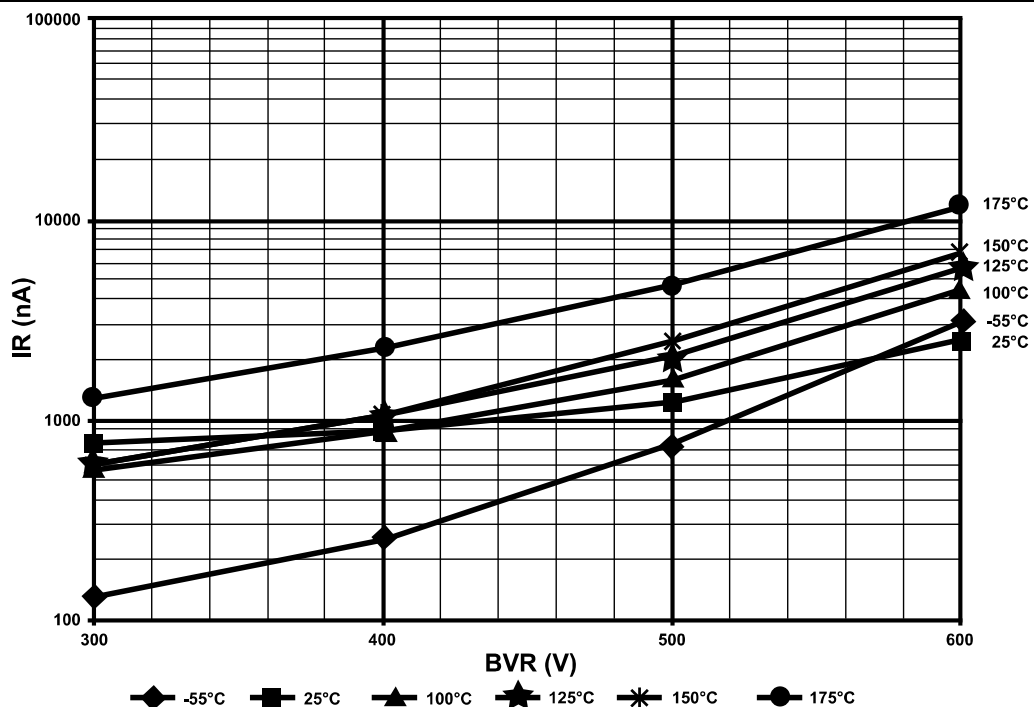
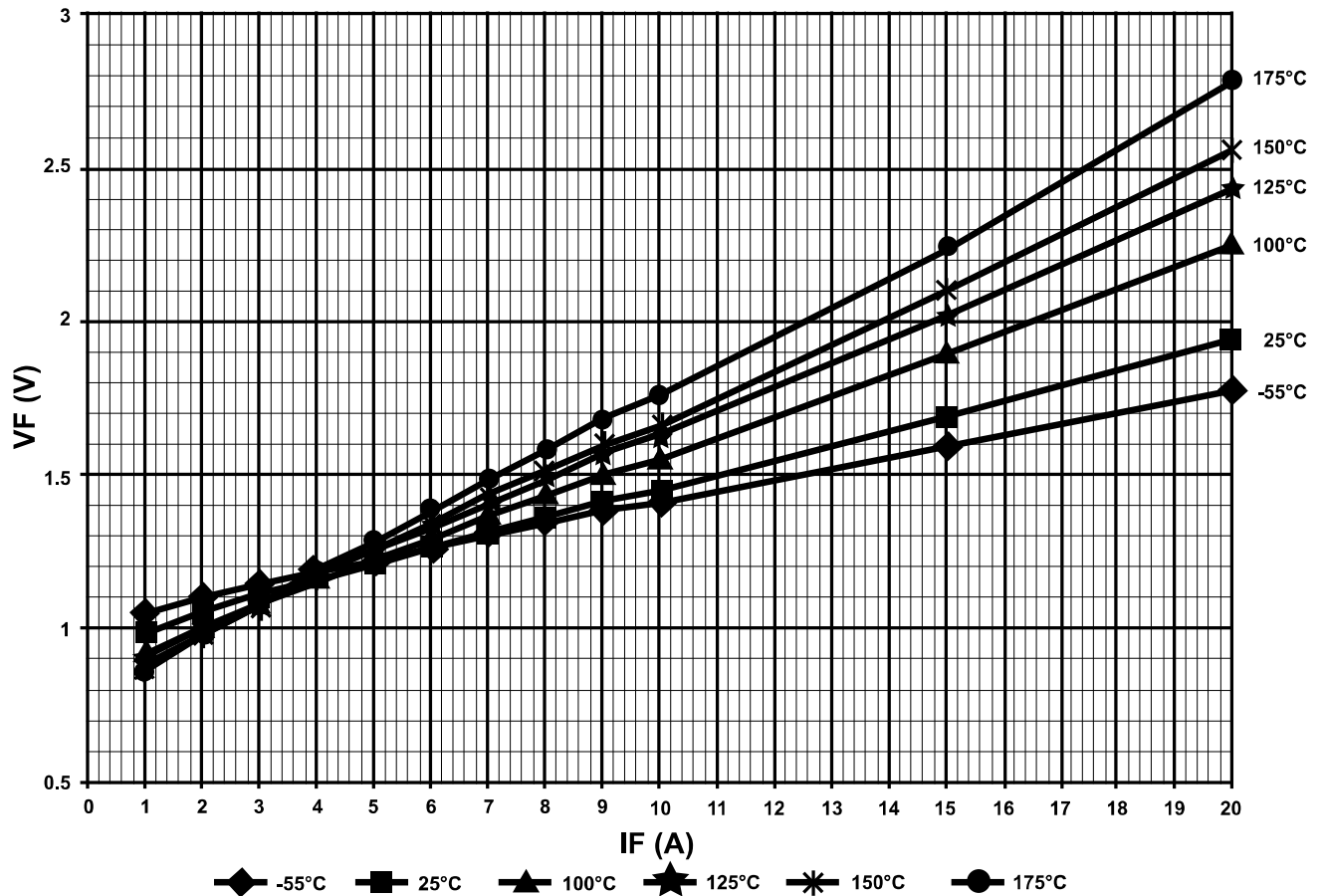
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