



Solid State Devices, Inc.

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SSR2045CTJ

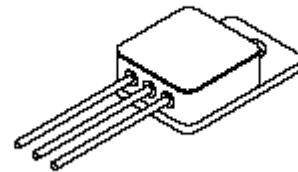
**20 AMPS
45 VOLTS
ISOLATED FLAT PACK
POSITIVE CENTER TAP
SCHOTTKY**

Designer's Data Sheet

FEATURES:

- Isolated Low Profile Package
- Guard Ring for Overvoltage Protection
- -65 °C to 175°C Operating and Storage Temperature
- Reverse Voltage to 45 Volts
- Low Reverse Leakage
- Hermetically Sealed
- Very Low Forward Voltage Drop
- Available in Common Anode (CAJ) and Doubler (DJ) Configuration
- Higher Voltages Available. Consult Factory.
- TX, TX-V, and S-Level Screening Available. Consult Factory.

TO-257(J)



MAXIMUM RATINGS	Symbol	Value	Units
Peak Repetitive Reverse Voltage (Per Leg) and DC Blocking Voltage (Per Leg)	V_{RRM} V_R	45	Volts
RMS Reverse Voltage (Per Leg)	V_r	32	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60 Hz, Sine Wave, $T_C=25^\circ C$)	I_O	20	Amps
Peak Repetitive Forward Current ($T_C=55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)	I_{FRM}	40	Amps
Peak Surge Current ($T_C=55^\circ C$, 8.3 ms Pulse, Superimposed on Rated Current at Rated Voltage)	I_{FSM}	200	Amps
Operating and Storage Temperature	T_J & T_{stg}	-65 to +175	°C

THERMAL CHARACTERISTICS	Symbol	Value	Units
Thermal Resistance, Junction to Case (Both legs tied together)	$R_{\theta JC}$	2.0	°C/W

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

DATA SHEET #: SH0044A

DOC



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ELECTRICAL CHARACTERISTICS	Symbol	Value	Unit
Max Instantaneous Forward Voltage Drop, per leg * ($T_A = 25^\circ\text{C}$)	V_F	$I_F = 3 \text{ Amps}$	0.50
		$I_F = 5 \text{ Amps}$	0.55
		$I_F = 10 \text{ Amps}$	0.65
Max Instantaneous Forward Voltage Drop, per leg * ($I_F = 5 \text{ Amps}, T_A = 100^\circ\text{C}$)	V_F	0.5	Volts
Max Reverse Leakage Current per leg * ($V_R = 45 \text{ V}, T_A = 100^\circ\text{C}$)	I_R	10	mA
Max Reverse Leakage Current, per leg * ($V_R = 45 \text{ V}, T_A = 25^\circ\text{C}$)	I_R	200	μA
Max Junction Capacitance, per leg ($V_R = 10 \text{ V}_{\text{DC}}, T_A = 25^\circ\text{C}$)	C_J	400	pF

NOTES:

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

1. Unless Otherwise Specified, All Electrical Characteristics @25 $^\circ\text{C}$

PACKAGE OUTLINE: TO-257 (J)

The drawing shows the mechanical dimensions of the TO-257 (J) package. Key dimensions include:

- Top diameter: $2 \times \phi .150$ (with $\phi .140$ for the hole)
- Top width: $.420$ (with $.410$ for the hole)
- Top height: $.537$ (with $.527$ for the hole)
- Bottom diameter: $3 \times \phi .035$ (with $\phi .025$ for the hole)
- Bottom width: $2 \times .105$ (with $.095$ for the hole)
- Bottom height: $.665$ (with $.645$ for the hole)
- Pin diameter: $.045$ (with $.035$ for the hole)
- Pin length: $.210$ (with $.190$ for the hole)
- Pin spacing: $.430$ (with $.410$ for the hole)
- Pin diameter (bottom): $.125$ (with $.115$ for the hole)

Pin configurations for different SSR types:

- SSR2045CTJ:** Common Cathode (Pin 2 is common, pins 1 and 3 are cathodes)
- SSR2045CAJ:** Common Anode (Pin 2 is common, pins 1 and 3 are anodes)
- SSR2045DJ:** Doubler (Pin 2 is common, pins 1 and 3 are anodes)

*For information on curves, contact the Factory Representative for Engineering Assistance.