

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/}

1N3909

Screening ^{2/} ___ = Not Screened

TX = TX Level

TXV = TXV Level

S = S Level

Pin Configuration ___ = Normal (Cathode to Stud)
(See Table 1) R = Reverse (Anode to Stud)

Family/Voltage 1N3909 = 50V

1N3910 = 100V

1N3911 = 200V

1N3912 = 300V

1N3913 = 400V

1N3909

Thru

1N3913

30A, 200nsec, 50-400 V

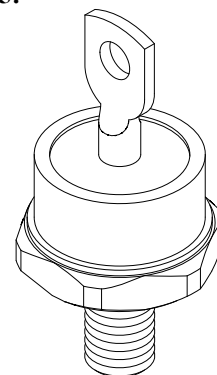
Fast Recovery Rectifier

Features:

- **Fast Recovery: 200nsec Maximum (100nsec typ.)** ^{3/}
- **Low Reverse Leakage Current**
- **Single Chip Construction**
- **PIV to 400V, Higher Voltages Available**
- **Hermetically Sealed Isolated Package**
- **High Surge Rating**
- **TX, TXV, and S-Level Screening Available** ^{2/}

Maximum Ratings ^{4/}	Symbol	Value	Units
Peak Repetitive Reverse Voltage	1N3909	50	Volts
	1N3910	100	
	1N3911	200	
	1N3912	300	
	1N3913	400	
Average Rectified Forward Current (Resistive Load, 60 Hz Sine Wave, T _A = 25 °C)	I_O	30	Amps
Peak Surge Current (8.3 ms Pulse, Half Sine Wave, T _A = 25 °C, per leg)	I_{FSM}	300	Amps
Operating & Storage Temperature	T_{OP}	-55 to +150	°C
	T_{STG}	-65 to +175	
Maximum Total Thermal Resistance Junction to Case	R_{θJC}	1.2	°C/W

DO-5:



Notes:

1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

2/ Screened to MIL-PRF-19500.

3/ Recovery Conditions: I_F = 500 mA, I_R = 1 Amp, I_{RR} = 250 mA.

4/ Unless Otherwise Specified, All Maximum Ratings/Electrical Characteristics @25°C.

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

DATA SHEET #: RC0114A

DOC



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

1N3909

Thru

1N3913

Electrical Characteristics (per leg) ^{4/}		Symbol	Max	Units
Maximum Instantaneous Forward Voltage Drop (Pulsed)	$I_F = 30A, T_A = 25^\circ C$	V_{F1}	1.40	V_{DC}
	$I_F = 30A, T_A = -55^\circ C$	V_{F2}	1.50	
Maximum Reverse Leakage Current (Rated V_R Minimum)	$T_A = 25^\circ C$	I_{R1}	80	μA
	$T_A = 100^\circ C$	I_{R2}	10	mA
Maximum Reverse Recovery Time ($I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$)		t_{RR}	200	nsec
Typical Junction Capacitance ($V_R = 10V_{DC}$, $T_A = 25^\circ C$, $f = 1\text{MHz}$)		C_J	200	pF

Notes:

1/ For ordering information, Price, Operating Curves, and Availability- Contact Factory.

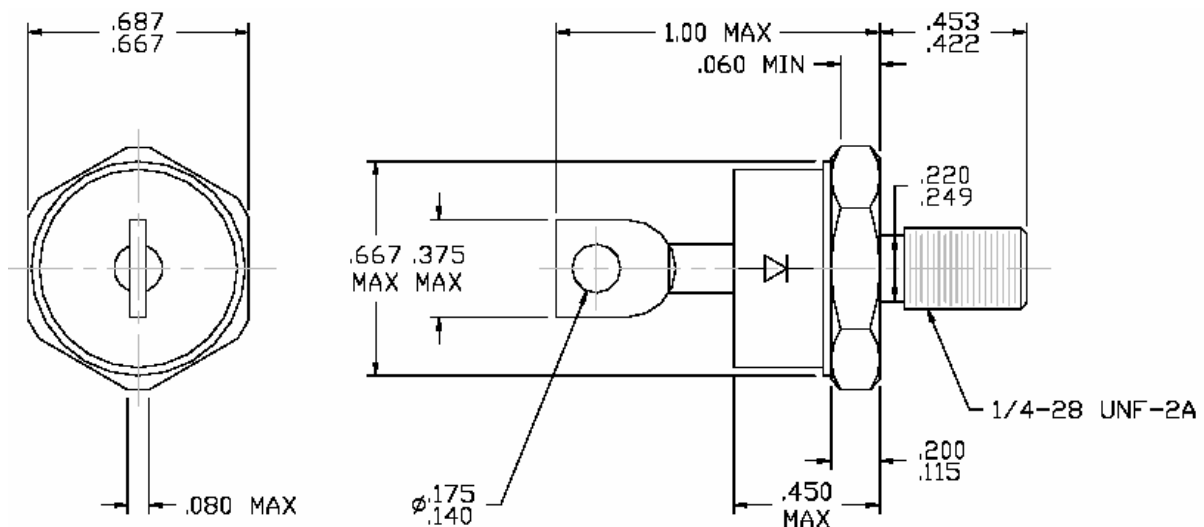
2/ Screened to MIL-PRF-19500.

3/ Recovery Conditions: $I_F = 500\text{ mA}$, $I_R = 1\text{ Amp}$, $I_{RR} = 250\text{ mA}$.

4/ Unless Specified Otherwise, All Maximum Ratings/Electrical Characteristics are @25°C.

Table 1- PIN ASSIGNMENT			
Code	Configuration	Terminal	Stud
—	Normal	Anode	Cathode
R	Reverse	Cathode	Anode

DO-5 Outline (Normal Pin Configuration Shown):



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

DATA SHEET #: RC0114A

DOC