

1N3909 THRU 1N3913

30 AMPS

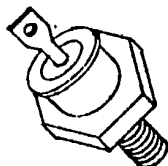
FAST RECOVERY RECTIFIER

50-400 VOLTS



14830 Valley View Avenue
La Mirada, California 90638
(213) 921-9660
TWX 910-583-4807
FAX 213-921-2396

CASE STYLE J (JEDEC DO-5)



FEATURES

- FAST RECOVERY 200 NSEC MAX
- PIV TO 400 VOLTS
- LOW REVERSE LEAKAGE
- HERMETICALLY SEALED
- SINGLE CHIP CONSTRUCTION
- HIGH SURGE RATING 300 AMPS
- LOW THERMAL RESISTANCE
- FOR REVERSE POLARITY ADD "R" TO PART NUMBER

MAXIMUM RATINGS

Rating		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Per Leg and DC Blocking Voltage Per Leg	1N3909 1N3910 1N3911 1N3912 1N3913	$V_{RM} (rep)$ V_R	50 100 200 300 400	Volts
RMS Reverse Voltage Per Leg	1N3909 1N3910 1N3911 1N3912 1N3913	V_r	35 70 140 210 280	Volts
Half Wave Rectified Forward Current, Averaged Over Full Cycle (Resistive Load, 60Hz, Sine Wave, $T_C = 55^\circ C$)		I_O	30	Amps
Peak Repetitive Forward Current ($T_C = 55^\circ C$, 8.3 ms Pulse, Allow Junction to Reach Equilibrium Between Pulses)		$I_{FM} (rep)$	90	Amps
Peak Surge Current ($T_C = 55^\circ C$, Superimposed on Rated Current at Rated Voltage, 8.3 ms Pulse)		$I_{FM} (surge)$	300	Amps
Operating and Storage Temperature		T_J, T_{stg}	-65 to +175	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.2	$^\circ C/W$

ELECTRICAL CHARACTERISTICS

SOLID STATE DEVICES INC T-03-19

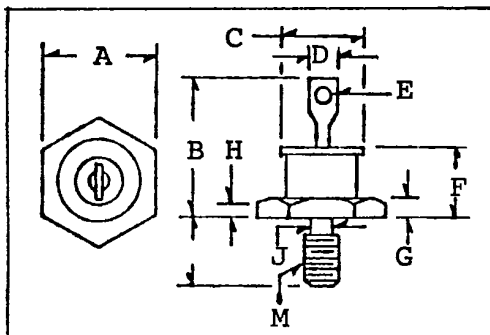
12E D 8366011 0001822 8

Characteristics	Symbol	Value	Unit
Max Full Cycle Forward Voltage Drop, Averaged Over Full Cycle, Per Leg (I_F (Max), 60 Hz Square Wave, $T_C = 55^\circ\text{C}$)	$V_{F(AV)}$	---	Vdc
Max Instantaneous Forward Drop Per Leg ($I_F = 30$ Adc, $T_C = 25^\circ\text{C}$, 300 μs Pulse) ($I_F = 93$ Adc, $T_C = 150^\circ\text{C}$, 300 μs Pulse)	V_F	1.4 1.5	Vdc
Max Full Cycle Reverse Leakage Current, Averaged Over Full Cycle, Per Leg (Rated V_R , 60Hz, Square Wave, $T_C = 100^\circ\text{C}$)	$I_{R(AV)}$	10	mA
Max Reverse Leakage Current Per Leg (Rated V_R , $T_C = 25^\circ\text{C}$)	I_R	80	μAdc
Max Junction Capacitance Per Leg ($V_R = 10$ V, $T_C = 25^\circ\text{C}$)	C_J	200	pf

REVERSE RECOVERY CHARACTERISTICS

Characteristics	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time ($I_F = 500\text{ma}$, $I_R = 1\text{A}$, $I_{RR} = 250\text{ma}$) ($I_F = 1.0$ Amp to $V_R = 30$ Vdc.)	t_{rr}	---	100	200	ns

PHYSICAL DIMENSIONS



KEY TO DIMENSIONS:

(Inches)

- A = .667 - .687
- B = 1.00 MAX.
- C = .667 MAX.
- D = .375 MAX.
- E = .140 - .175
- F = .450 MAX.
- G = .115 - .200
- H = .060 MIN.
- J = .220 - .249
- K = .422 - .453
- M = $\frac{1}{4}$ -28 UNF-2A
- N =

TYPICAL OPERATING CURVES

FIGURE 1 - FORWARD VOLTAGE

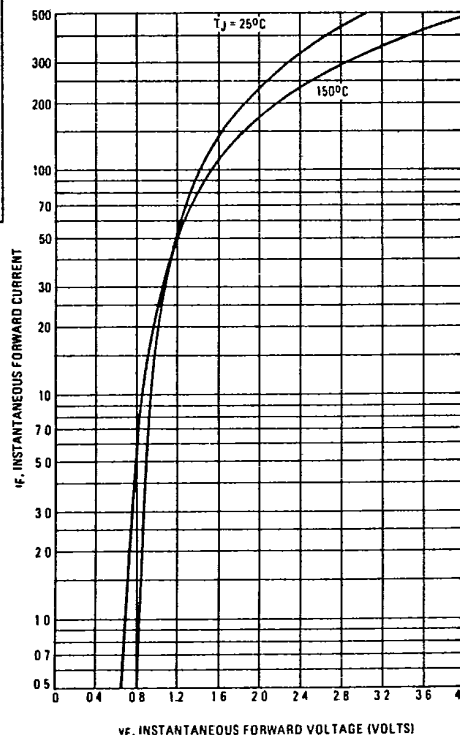
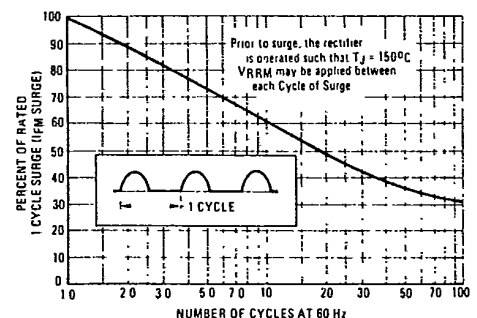


FIGURE 2 - MAXIMUM SURGE CAPABILITY



SSDI SOLID STATE DEVICES, INC.