

# 1N3909 thru 1N3913

## FAST RECOVERY POWER RECTIFIERS

50-600 VOLTS  
30 AMPERES

### \*MAXIMUM RATINGS

Rating	Symbol	1N3909	1N3910	1N3911	1N3912	1N3913	MR1396	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	300	400	600	Volts
Non-Repetitive Peak Reverse Voltage	V <sub>RSM</sub>	75	150	250	350	450	650	Volts
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	210	280	420	Volts
Average Rectified Forward Current (Single phase, resistive load, T <sub>C</sub> = 100°C)	I <sub>O</sub>	← 30 →						Amps
Non-Repetitive Peak Surge Current (surge applied at rated load conditions)	I <sub>FSM</sub>	← 300 →						Amp
Operating Junction Temperature Range	T <sub>J</sub>	← -65 to +150 →						°C
Storage Temperature Range	T <sub>stg</sub>	← -65 to +175 →						°C

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R <sub>θJC</sub>	1.2	°C/W

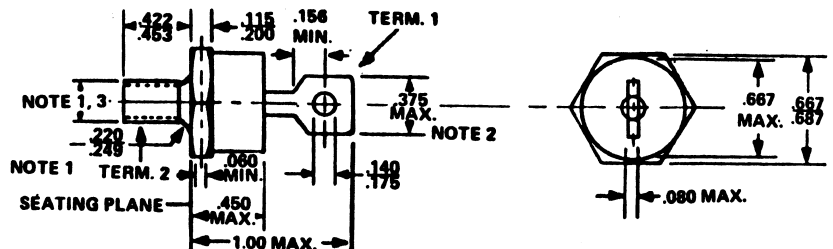
### \*ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage (I <sub>F</sub> = 93 Amp, T <sub>J</sub> = 150°C)	V <sub>F</sub>	-	1.2	1.5	Volts
Forward Voltage (I <sub>F</sub> = 30 Amp, T <sub>C</sub> = 25°C)	V <sub>F</sub>	-	1.1	1.4	Volts
Reverse Current (rated dc voltage) T <sub>C</sub> = 25°C T <sub>C</sub> = 100°C	I <sub>R</sub>	-	10 0.5	25 1.0	μA mA

### \*REVERSE RECOVERY CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time (I <sub>F</sub> = 1.0 Amp to V <sub>R</sub> = 30 Vdc, Figure 16) (I <sub>FM</sub> = 36 Amp, di/dt = 25 A/μs, Figure 17)	t <sub>rr</sub>	-	150 200	200 400	ns
Reverse Recovery Current (I <sub>F</sub> = 1.0 Amp to V <sub>R</sub> = 30 Vdc, Figure 16)	I <sub>RM(REC)</sub>	-	1.5	2.0	Amp

DO5



NOTES:

1. COMPLETE THREADS TO EXTEND TO WITHIN 2-1/2 THREADS OF SEATING PLANE.
2. ANGULAR ORIENTATION OF THIS TERMINAL IS UNDEFINED.
3. 1/4-28 UNF-2A. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE BASIC PITCH DIAMETER (.2268", 5.74 MM) REF. (SCREW THREAD STANDARDS FOR FEDERAL SERVICES 1957) HANDBOOK H28 1957 P1.
4. MINIMUM FLAT.

