

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 _{RRM} V _{RWM} V _R	50	100	200	300	400	600	Volts
Non-Repetitive Peak Reverse Voltage	V _{RSM}	75	150	250	350	450	650	Volts
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	210	280	420	Volts
Average Rectified Forward Current (Single phase, resistive load, T _C = 100°C)	I _O	30						Amps
Non-Repetitive Peak Surge Current (surge applied at rated load conditions)	I _{FSM}	300						Amp
Operating Junction Temperature Range	T _J	-65 to +150						°C
Storage Temperature Range	T _{stg}	-65 to +175						°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	1.2	°C/W

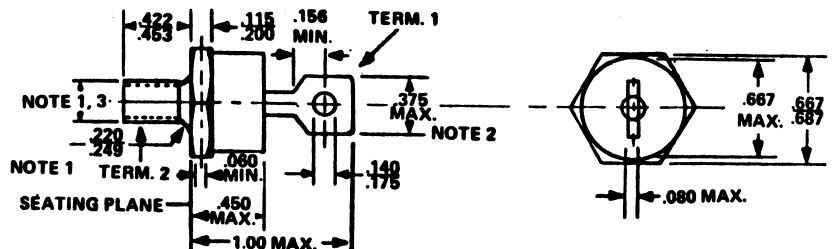
*ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Instantaneous Forward Voltage (I _F = 93 Amp, T _J = 150°C)	v _F	-	1.2	1.5	Volts
Forward Voltage (I _F = 30 Amp, T _C = 25°C)	V _F	-	1.1	1.4	Volts
Reverse Current (rated dc voltage) T _C = 25°C T _C = 100°C	I _R	-	10 0.5	25 1.0	μA mA

*REVERSE RECOVERY CHARACTERISTICS

Characteristic	Symbol	Min	Typ	Max	Unit
Reverse Recovery Time (I _F = 1.0 Amp to V _R = 30 Vdc, Figure 16) (I _{FM} = 36 Amp, di/dt = 25 A/μs, Figure 17)	t _{rr}	-	150 200	200 400	ns
Reverse Recovery Current (I _F = 1.0 Amp to V _R = 30 Vdc, Figure 16)	I _{RM(REC)}	-	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.

