MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA

MR836HX, HXV

Processed per MIL-S-19500/xxx

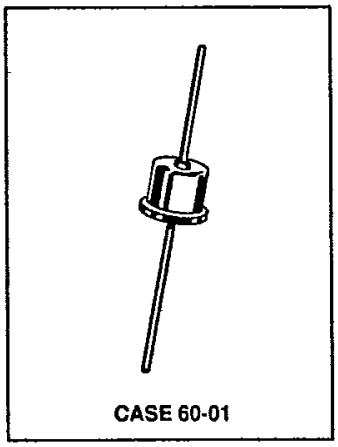
Power Rectifier

Fast Recovery

. . .designed for applications where high-efficiency at frequencies up to 250 kHz and recovery time on the order of 150 nanoamperes are required.

DMO

Discrete Military Operation



CASE 60-01

MAXIMUM RATINGS			
Rating	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	600	
Working Peak Reverse Voltage	V_{RWM}	600	Volts
DC Blocking Voltage	V_R	600	
Average Rectifier Forward Current (Single-phase resistive load, T_C = 100°C)	I_O	3.0	Amps
Non-Repetitive Peak Surge Current (surge applied at rated load conditions)	I_{FSM}	100	Amps
Junction Temperature Range	T_J	–65 to +150	°C
Storage Temperature Range	T_{stg}	–65 to +175	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)				
Characteristic	**Symbol**	**Min**	**Max**	**Unit**
Forward Voltage (I_F = 3.0 Adc, T_A = 25°C)	V_F	—	1.1	Volts
Reverse Current (rated DC Voltage) (V_R = 600 Vdc, T_A = 25°C) (T_A = 100°C)	I_R	— —	0.5 1.5	mAdc
REVERSE RECOVERY CHARACTERISTICS				
Reverse Recovery Time (I_F = 1.0 Adc to V_R = 30 Vdc) (I_{FM} = 15 A, di/dt = 25 A/μs)	t_{rr}	— —	200 300	ns
Reverse Recovery Current (I_F = 1.0 A to V_R = 30 Vdc)	$I_{RM(REC)}$	—	2.0	Amps

ASSURANCE TESTING (Pre/Post Burn-In)				
		Initial and End Point Limits		
Characteristics Tested	**Symbol**	**Min**	**Max**	**Unit**
Forward Voltage (I_F = 3.0 Adc)	V_F	—	1.1	Volts
Reverse Current (V_R = 600 Vdc)	I_R	—	0.5	mAdc

Delta from Pre-Burn-In Measured Values		**Min**	**Max**	
Delta Forward Voltage	ΔV_F	—	±100 or ±0.1 whichever is greater	% of Initial Value Vdc
Delta Reverse Current	ΔI_R	—	±100 or ±50 whichever is greater	% of Initial Value μAdc