

**MOTOROLA
SEMICONDUCTOR
TECHNICAL DATA**
MR836HX, HXV

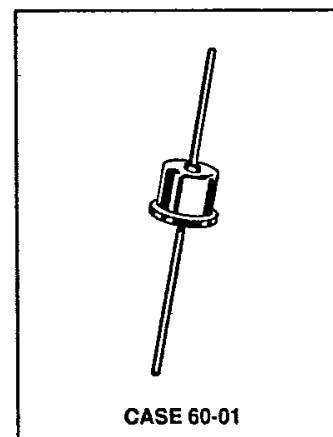
Processed per MIL-S-19500/xxx

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.



*Discrete
Military
Operation*



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, $T_C = 100^\circ\text{C}$)	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	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +175	$^\circ\text{C}$

MR836 SERIES

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

ASSURANCE TESTING (Pre/Post Burn-In)				
Characteristics Tested	Symbol	Initial and End Point Limits		Unit
		Min	Max	
Forward Voltage ($I_F = 3.0\text{ A dc}$)	V_F	—	1.1	Volts
Reverse Current ($V_R = 600\text{ Vdc}$)	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