MOSPEC

MH36 thru MH38

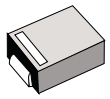
Surface Mount
High Efficiency Power Rectifiers

Ideally suited for high voltage, high frequency rectification, or as free wheeling and protection diodes in surface mount applications where compact size and weight are critical to the system.

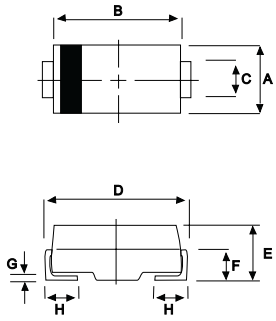
* Low Power Loss, High efficiency
* Glass Passivated chips junction
* 150 °C Operating Junction Temperature
* Low Stored Charge Majority Carrier Conduction
* Low Forward Voltage Drop , High Current Capability
* High-Switching Speed 100 Nanosecond Recovery Time
* Small Compact Surface Mountable Package with J-Bend Lead
* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

HIGH EFFICIENCY RECTIFIERS

3.0 AMPERES
600 -- 1000 VOLTS



DO-214AA(SMB)



DIM	MILLMETERS	
	MIN	MAX
A	3.30	3.90
B	4.20	4.60
C	1.80	2.20
D	4.90	5.60
E	1.90	2.50
F	---	1.30
G	---	0.22
H	0.85	1.45

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	MH36	MH37	MH38	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	560	700	V
Average Rectifier Forward Current	I_O	3.0			A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware,single phase,60Hz)	I_{FSM}	50			A
Operating and Storage Junction Temperature Range	T_j , T_{stg}	- 65 to + 150			°C

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	MH36	MH37	MH38	Unit
Maximum Instantaneous Forward Voltage (I_F=3.0 Amp, T_C = 25 °C)	V_F	1.50		1.75	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25 °C) (Rated DC Voltage, T_C = 125 °C)	I_R	5.0 70			uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	100			ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	25	20		pF

MH36 Thru MH38

FIG-1 TYPICAL FORWARD CHARACTERISTICS

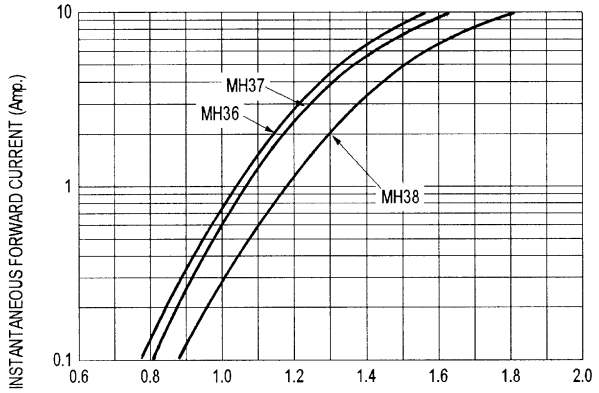


FIG-2 TYPICAL REVERSE CHARACTERISTICS

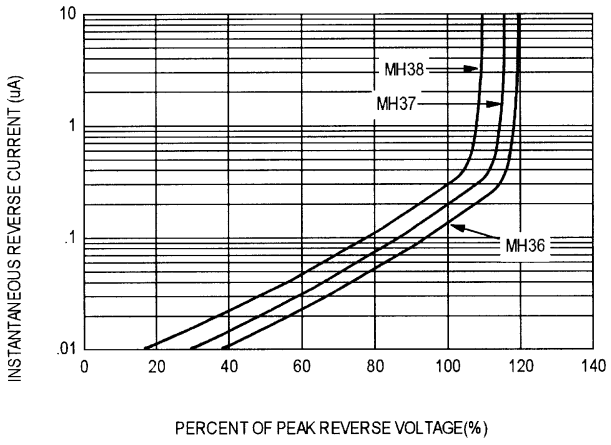


FIG-3 FORWARD CURRENT DERATING CURVE

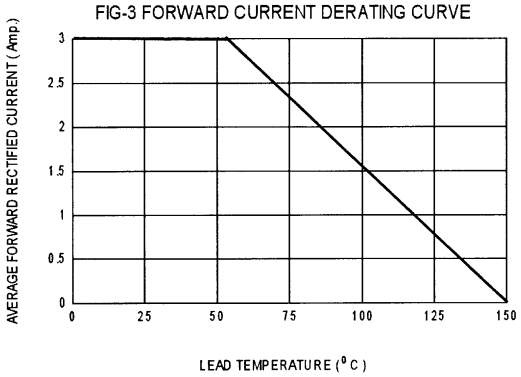


FIG-4 TYPICAL JUNCTION CAPACITANCE

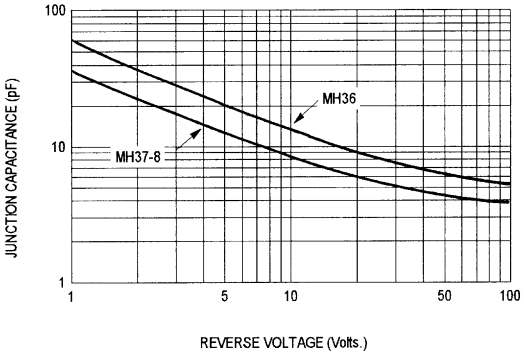
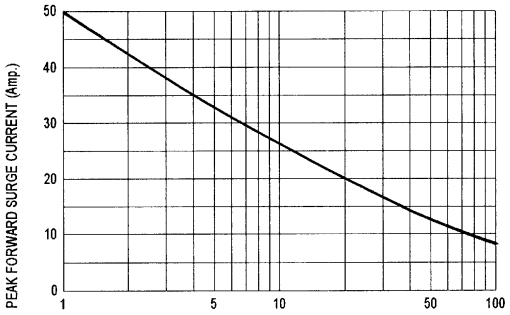
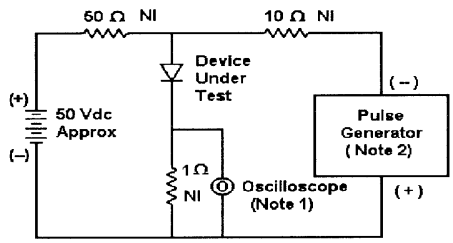
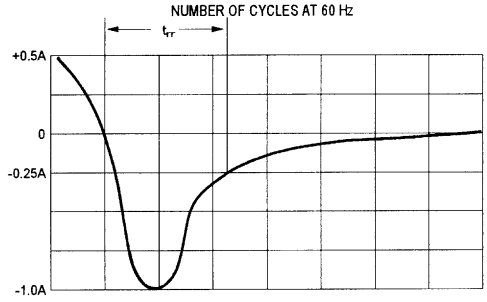


FIG-5 PEAK FORWARD SURGE CURRENT





Notes:
1. Rise Time = 7 ns max. Input Impedance =1 M Ω , 22 pF
2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 20/50 ns/div

Fig-6 Reverse Recovery Time Characteristic and Test Circuit Diagram