MOSPEC

MU11 thru MU16

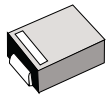
Surface Mount
Ultrafast Power Rectifiers

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.

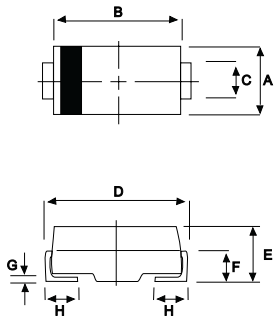
* Low Power Loss, High efficiency
* Glass Passivated chips junction
* 150 °C Operating Junction Temperature
* Low Stored Charge Majority Carrier Conduction
* Low Forward Voltage Drop , High Current Capability
* High-Switching Speed 35 & 50 Nanosecond Recovery Time
* Small Compact Surface Mountable Package with J-Bend Lead
* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

ULTRA FAST RECTIFIERS

1.0 AMPERES
50 -- 400 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	MU						Unit
		11	12	13	14	15	16	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	300	400	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	V
Average Rectifier Forward Current	I_o	1.0						A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware,single phase,60Hz)	I_{FSM}	30				25		A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	- 65 to + 150						°C

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	MU						Unit
		11	12	13	14	15	16	
Maximum Instantaneous Forward Voltage (I_F=1.0 Amp, T_C = 25 °C)	V_F	0.95				1.30		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25 °C) (Rated DC Voltage, T_C = 125 °C)	I_R	5.0 50						uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	35				50		ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	25				20		pF

MU11 Thru MU16

FIG-1 TYPICAL FORWARD CHARACTERISTICS

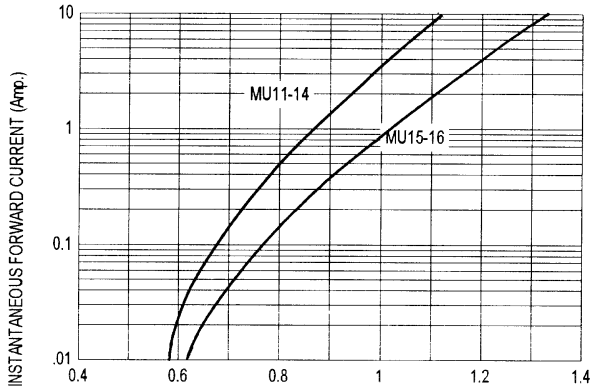


FIG-2 TYPICAL REVERSE CHARACTERISTICS

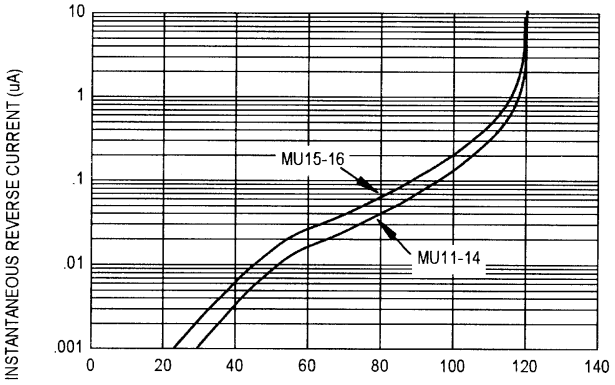


FIG-3 FORWARD CURRENT DERATING CURVE

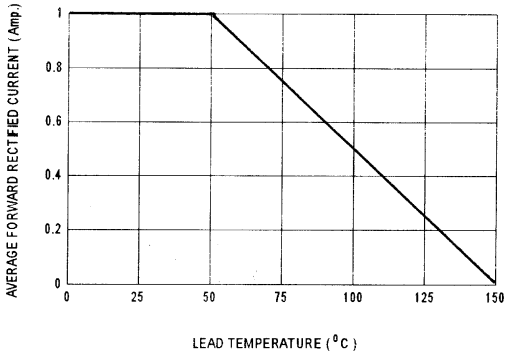


FIG-4 TYPICAL JUNCTION CAPACITANCE

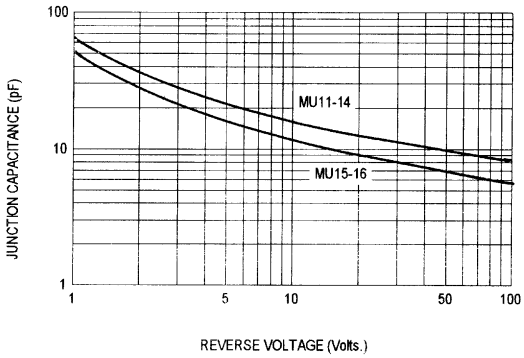
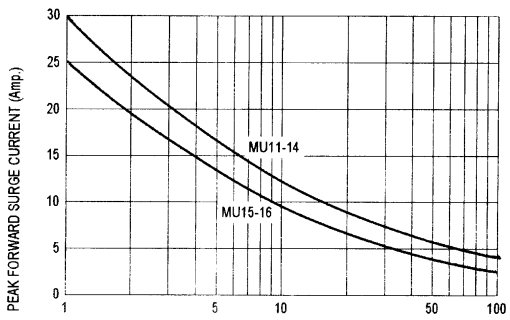
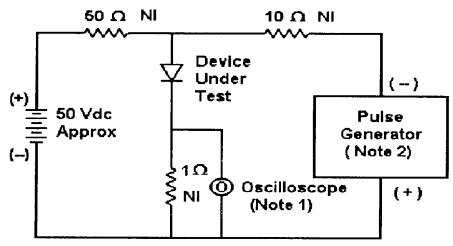
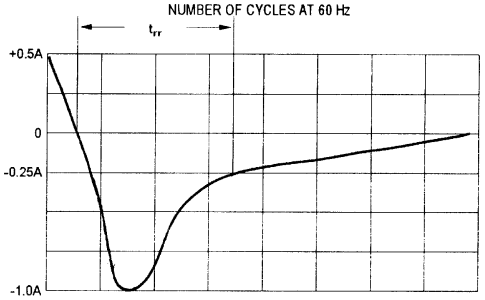


FIG-5 PEAK FORWARD SURGE CURRENT





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 10/20 ns/cm

Fig-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

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