MOSPEC

MU48C

Switchmode
Surface Mount Ultrafast Power Rectifier

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.

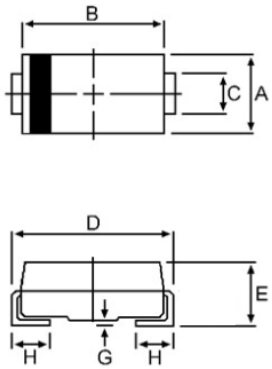
ULTRAFAST RECTIFIERS

4 AMPERES
600 VOLTS

Features

- ∗Low Power Loss, High efficiency
- ∗150℃ Operating Junction Temperature
- ∗Low Stored Charge Majority Carrier Conduction
- ∗Low Forward Voltage Drop , High Current Capability
- ∗High-Switching Recovery Time
- ∗Small Compact Surface Mountable Package with J-Bend Lead
- ∗Plastic Material used Carries Underwriters Laboratory
- ∗Flammability Classification 94V-O
- ∗*Pb free*
- ∗*In compliance with EU RoHs directives*
- ∗*Plating pb free is indicated by box*

DO-214AB(SMC)



DIM	MILLIMETERS	
	MIN	MAX
A	5.59	6.22
B	6.60	7.11
C	2.90	3.20
D	7.75	8.13
E	2.06	2.62
G	---	0.21
H	0.76	1.52

CASE---
Transfer molded plastic

OLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	MU48C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	420	V
Average Rectifier Forward Current	I_O	4	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz)	I_{FSM}	80	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +150	℃

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (I_F=4.0 Amp, T_C = 25℃) (I_F=4.0 Amp, T_C = 125℃)	V_F	 ---	1.20 1.05	1.5 ---	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	 ---	0.1 10	5 ---	uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	---	---	50	ns

FIG-1 TYPICAL FORWARD CHARACTERISTICS

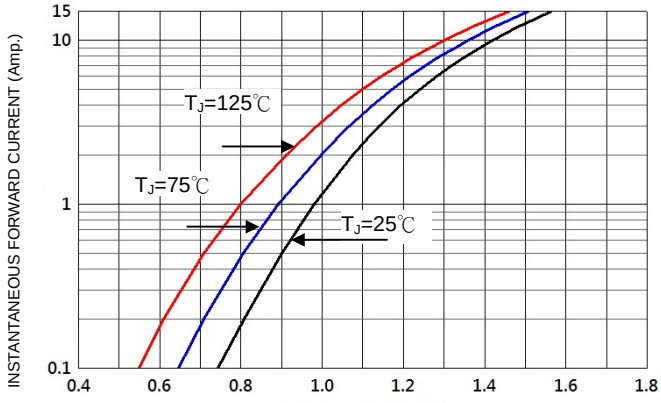


FIG-2 FORWARD CURRENT DERATING CURVE

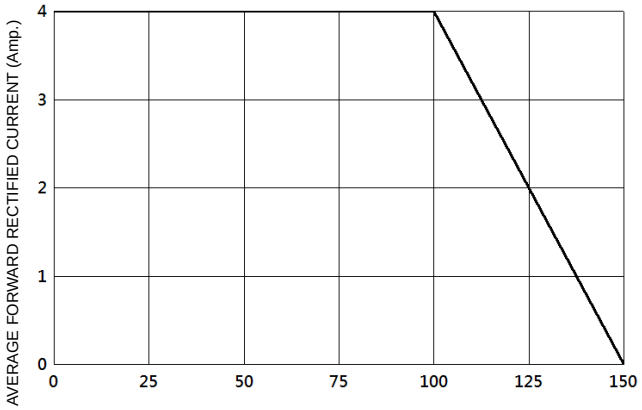


FIG-3 TYPICAL REVERSE CHARACTERISTICS

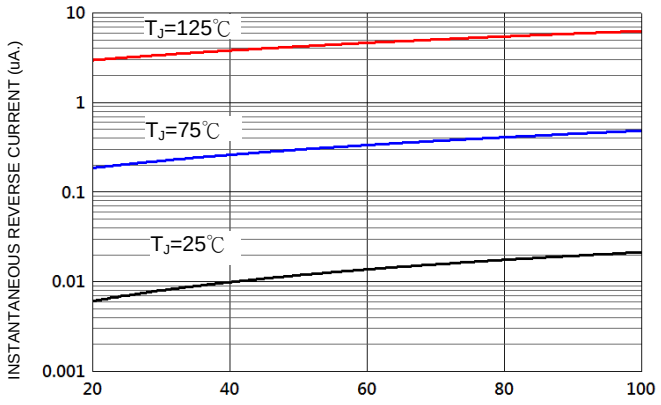
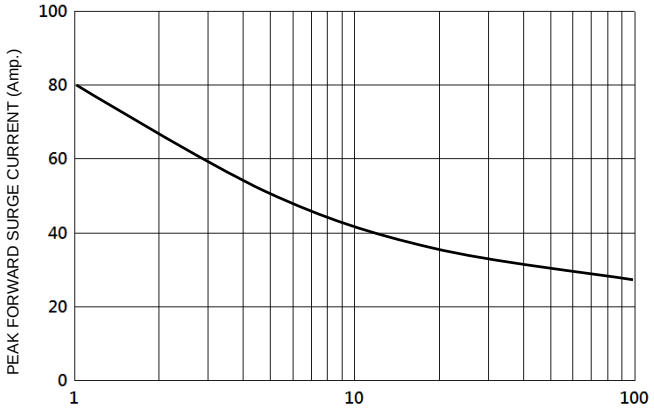
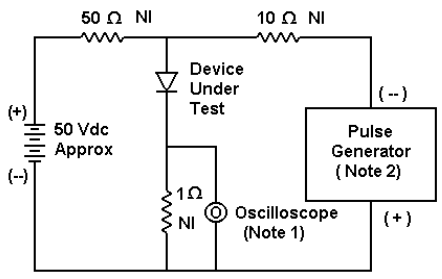
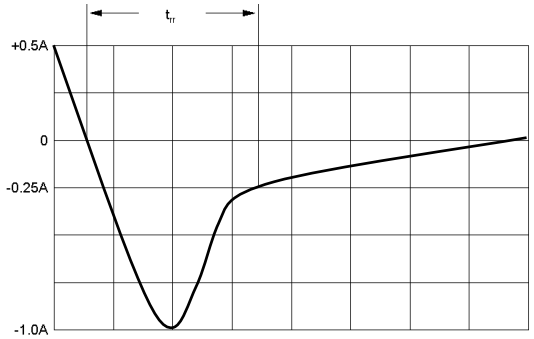


FIG-4 PEAK FORWARD SURGE CURRENT





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-5 Reverse Recovery Time Characteristic and Test Circuit Diagram

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