MOSPEC

MU56C

Switchmode
Surface Mount Ultrafast Power Rectifier

-- Designed for use in switching power supplies inverters and as free wheelin
These state-of-the-art devices have the following features:

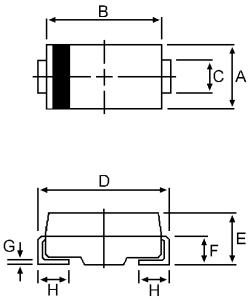
- ∗High Surge Capacity
- ∗Low Power Loss, High efficiency
- ∗Glass Passivated chip junctions
- ∗150 ^{O}C Operating Junction Temperature
- ∗Low Stored Charge Majority Carrier Conduction
- ∗Low Forward Voltage, High Current Capability
- ∗High-Switching Speed 35 Nanosecong Recovery Time
- ∗Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

∗*In compliance with EU RoHs 2002/95/EC directives*

ULTRAFAST RECTIFIERS

5.0 AMPERES
400 VOLTS

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
F		1.40
G		0.21
H	0.76	1.52

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	MU56C	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	400	V
RMS Reverse Voltage	$V_{R(RMS)}$	280	V
Average Rectifier Forward Current Total Device (Rated V_R), T_C=125℃	$I_{F(AV)}$	5	A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz)	I_{FSM}	75	A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	-65 to +150	℃

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min	Type	Max.	Unit
Maximum Instantaneous Forward Voltage (I_F =5 Amp T_C = 25℃)	V_F	---	---	1.3	V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 100℃)	I_R	--- ---	--- ---	5 100	uA uA
Reverse Recovery Time (I_F = 0.5 A, I_R =1.0 , I_{rr} =0.25 A)	T_{rr}	---	---	50	ns

MU56C

FIG-1 TYPICAL FORWARD CHARACTERISITICS

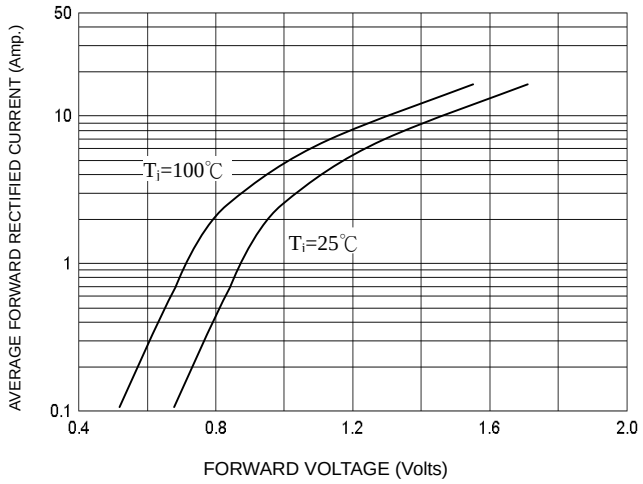


FIG-2 FORWARD CURRENT DERATING CURVE

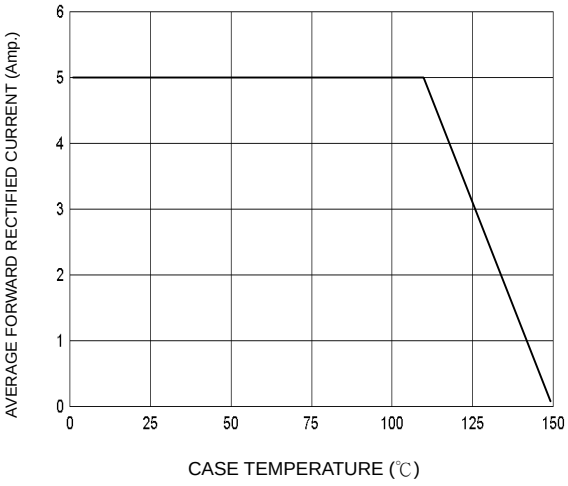


FIG-3 TYPICAL REVERSE CHARACTERISTICS

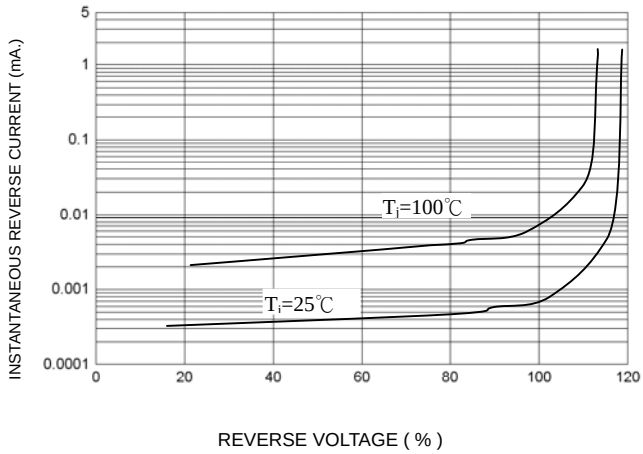
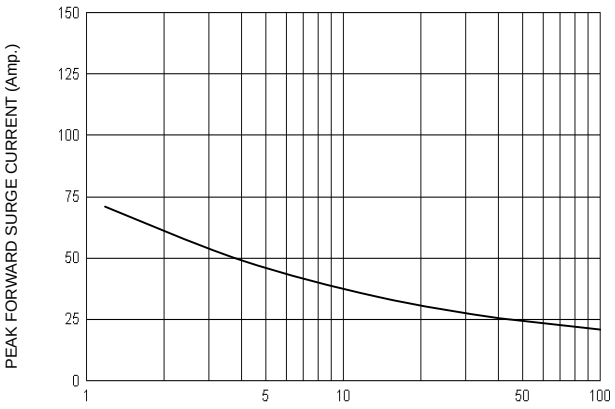
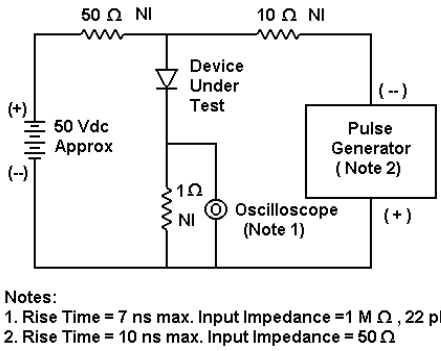
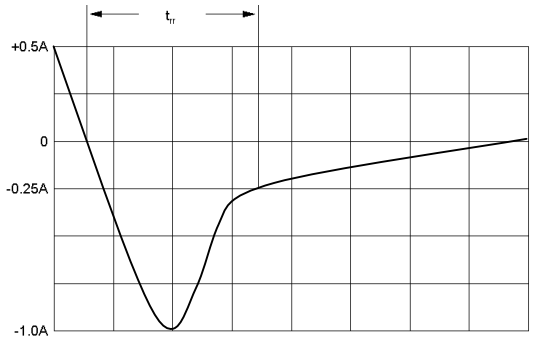


FIG-4PEAK FORWARD SURGE CURRENT





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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