

Surface Mount Ultra Fast Rectifiers

(Pb) Lead(Pb)-Free

Features:

- * For Surface Mount Application
- * Glass Passivated Chip
- * Low Reverse Leakage Current
- * Low Forward Voltage Drop And High Current Capability
- * Ultra Fast Switching For High Efficiency
- * Plastic Material Has UL Flammability Classification 94V-0

Mechanical Data

- * Case : Molded Plastic
- * Terminals: Solder Plated Terminal-Solderable per MIL-STD-202, Method 208
- * Polarity :Indicated by cathode band
- * Weight :0.003 Ounce ,0.093 grams

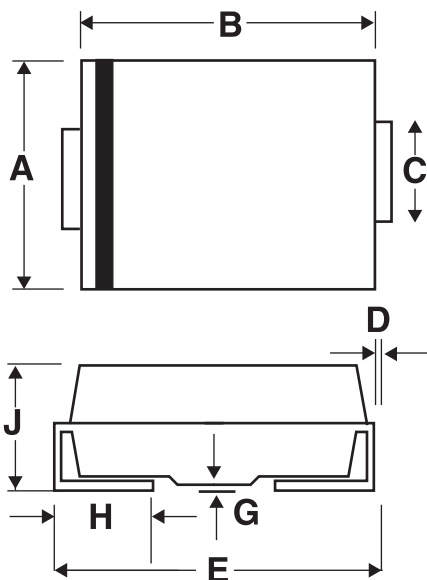
**REVERSE VOLTAGE
50 TO 1000 VOLTS
FORWARD CURRENT
2.0 AMPERE**



SMB(DO-214AA)

SMB Outline Dimension

Unit:mm



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.80
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.52
J	2.00	2.62

Maximum Ratings and Electrical Characteristics

Rating 25°C Ambient Temperature Unless Otherwise Specified.

Single Phase Half Wave, 60Hz , Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.

Characteristics	Symbol	US2A	US2B	US2D	US2G	US2J	US2K	US2M	Unit
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Current @ $T_T=75^\circ\text{C}$	IF(AV)	2.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	IFSM	50							A
Maximum Instantaneous At 2.0A DC	VF	1.0		1.30	1.70				V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	IR				5.0				uA
					350				
Maximum Reverse Recovery Time(Note1)	Trr	50			100			ns	
Typical Junction Capacitance (Note 2)	C _J	25							P _F
Typical Thermal Resistance (Note 3)	R _{θJT}	25							°C/W
Operating Temperature Range	T _J	-55 to+150							°C
Storage Temperature Range	TSTG	-55 to+150							°C

NOTES:1.Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$.

2.Measured at 1.0MHz applied reverse voltage of 4.0V DC.

3.Unit Mounted on PC board with 5.0 mm²(0.03mm thick) land areas.

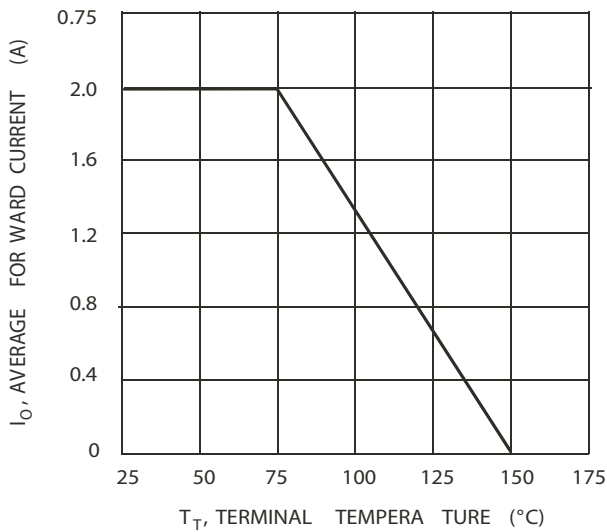


FIG.1 Forward Current Deration Curve

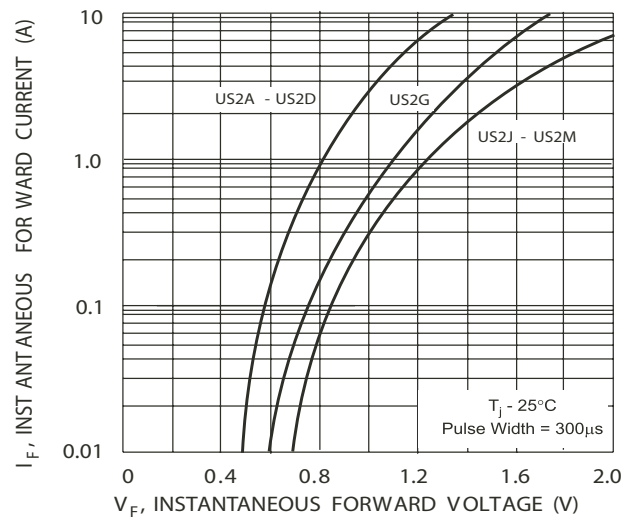


FIG.2 Typical Forward Characteristics

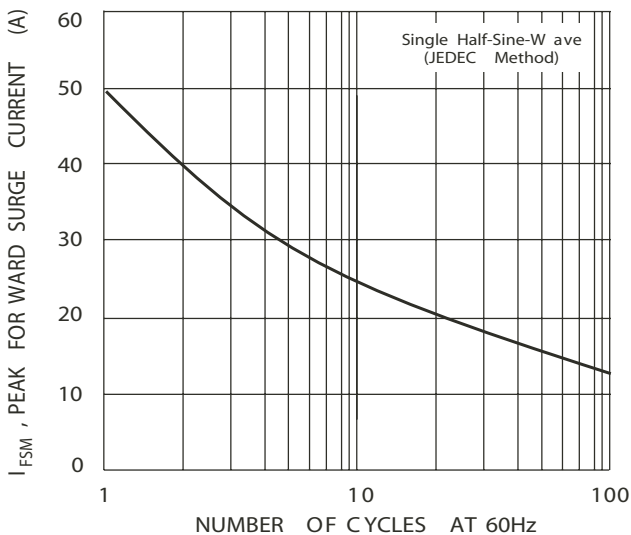


FIG.3 Forward Surge Current Derating Curve

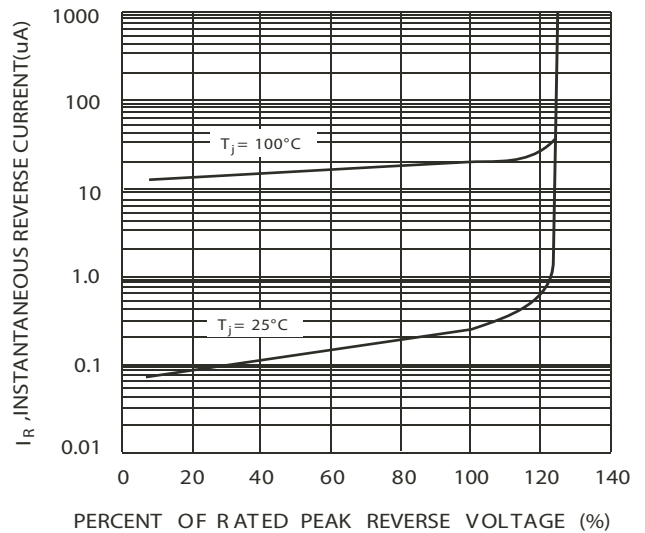


FIG.4 Typical Reverse Characteristics

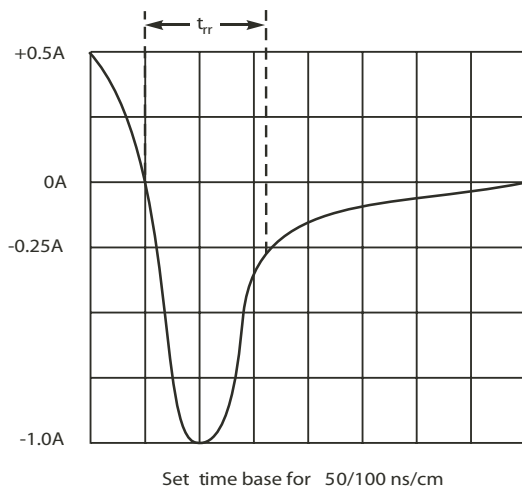
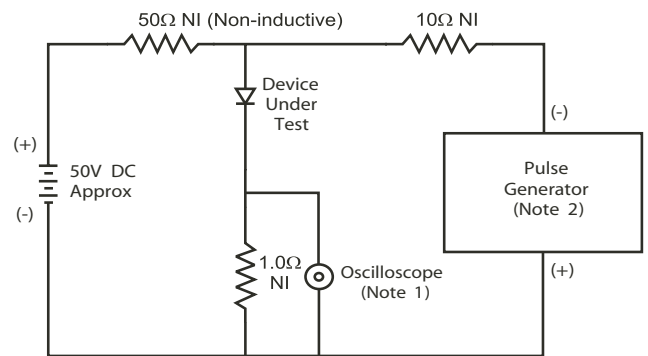


FIG.5 Rverse Recover Time Characteristics and Test Circuit



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.