

Surface Mount Ultra Fast Rectifiers

 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 : 0.002 Ounce ,0.064 grams

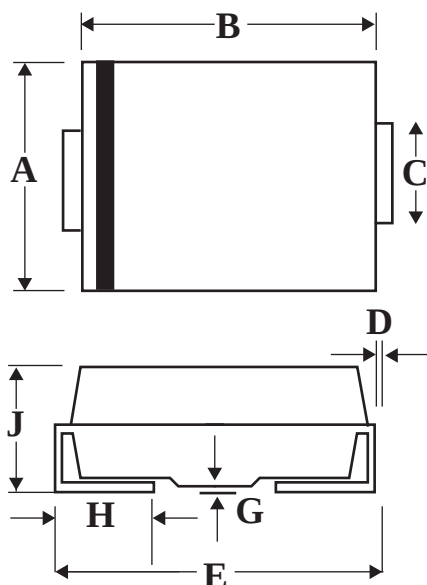
REVERSE VOLTAGE
50 TO 1000 VOLTS
FORWARD CURRENT
1.0 AMPERE



SMA(DO-214AC)

SMA Outline Dimension

Unit:mm



SMA		
Dim	Min	Max
A	2.20	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.48	5.59
G	0.10	0.20
H	0.76	1.52
J	1.70	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	US1A	US1B	US1D	US1G	US1J	US1K	US1M	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℃	IF(AV)	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	IFSM	30							A
Maximum Instantaneous At 1.0A DC	VF	1.0			1.30		1.70		V
Maximum DC Reverse Current @T _A =25℃ At Rated DC Blocking Voltage @T _A =100℃	IR	5.0 100							uA
Maximun Reverse Recocery Time(Note1)	Trr	50				100			nS
Typical Junction Capacitance (Note 2)	C _J	20				10			P _F
Typical Thermal Resistance (Note 3)	R _{θJT}	75							℃/W
Operating Temperature Range	T _J	-55 to+150							℃
Storage Temperature Range	TSTG	-55 to+150							℃

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

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.

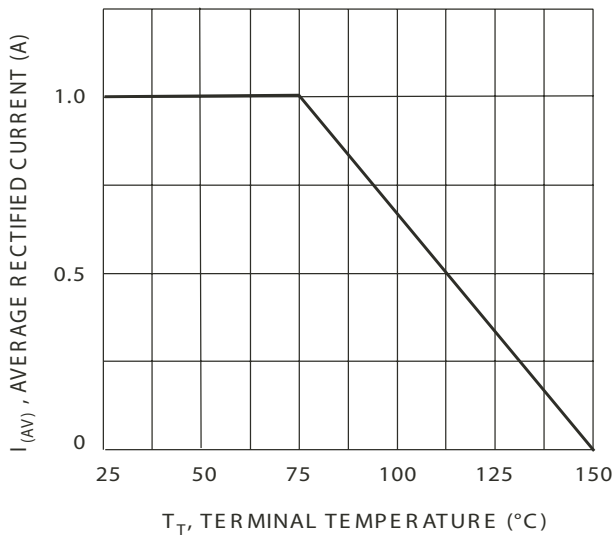


FIG.1 Forward Current Deratin Curve

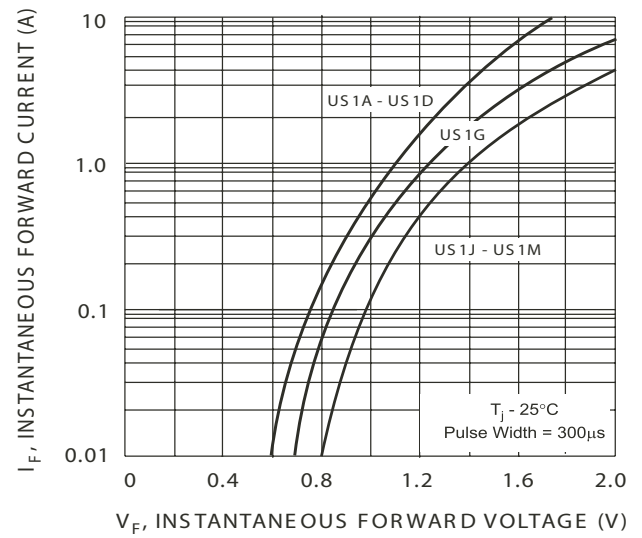


FIG.2 Typical Forward Characteristics

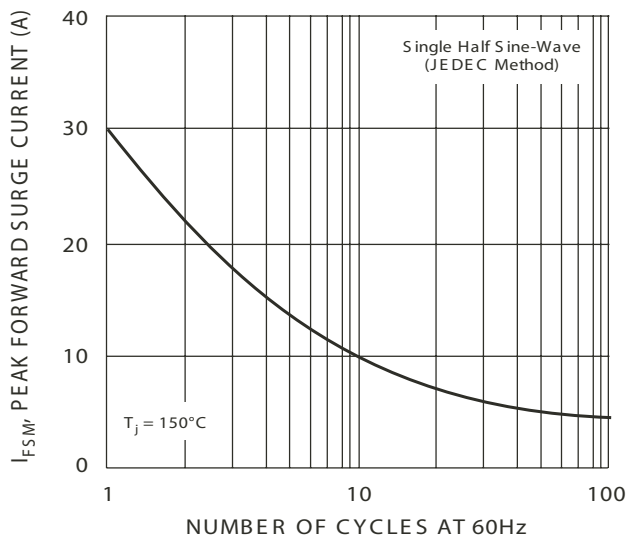


FIG.3 Forward Surge Current Derating Curve

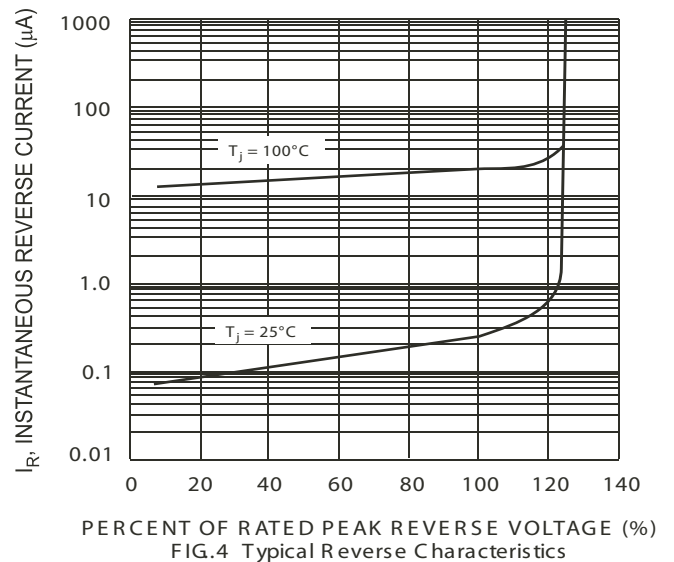


FIG.4 Typical Reverse Characteristics

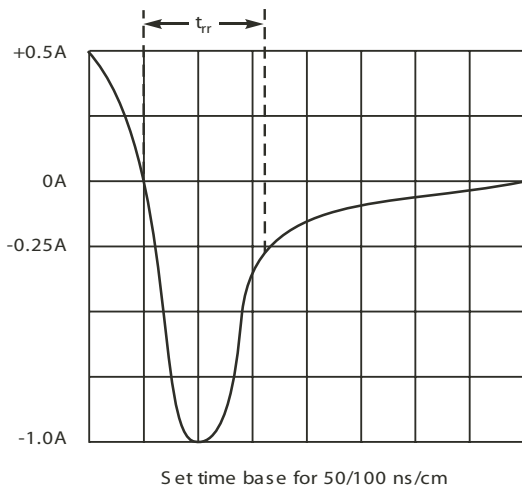
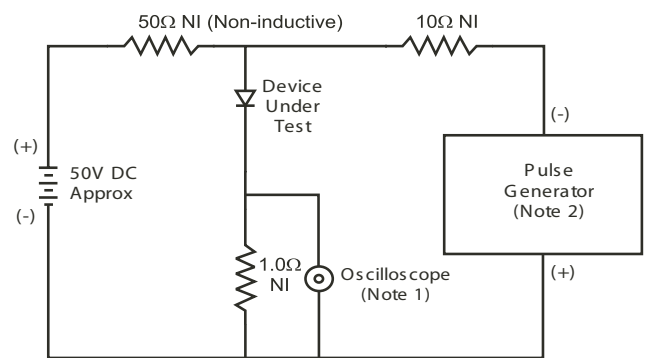


FIG.5 Reverse Recovery Time Characteristic and Test Circuit



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