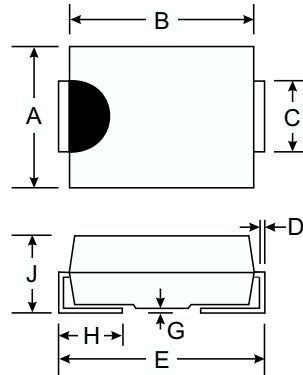


### Features

- Glass Passivated Die Construction
- Diffused Junction
- Ultra-Fast Recovery Time for High Efficiency
- Low Forward Voltage Drop, High Current Capability, and Low Power Loss
- Surge Overload Rating to 30A Peak
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.064 grams (approx.)
- Mounting Position: Any



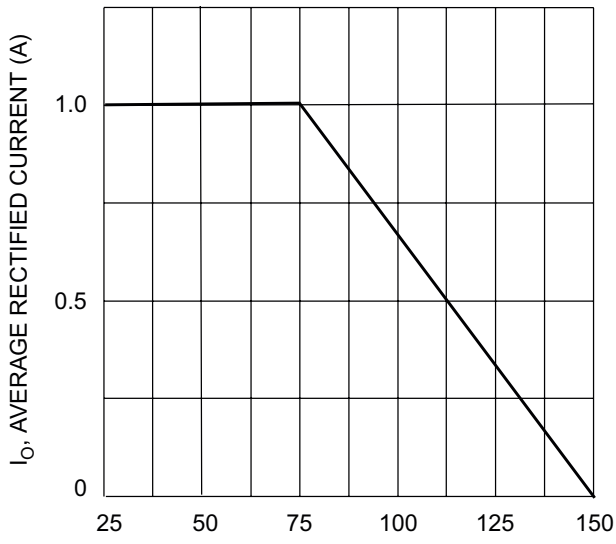
SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.62
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

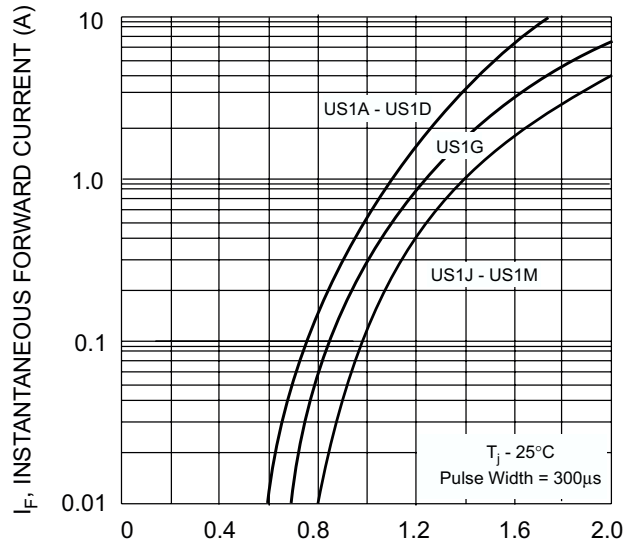
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	US1A	US1B	US1D	US1G	US1J	US1K	US1M	Unit	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Working Peak Reverse Voltage	V <sub>RWM</sub>									
DC Blocking Voltage	V <sub>R</sub>									
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V	
Average Rectified Output Current @ T <sub>T</sub> = 75°C	I <sub>O</sub>	1.0							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30							A	
Forward Voltage Drop @ I <sub>F</sub> = 1.0A	V <sub>FM</sub>	1.0			1.3	1.7			V	
Peak Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 100°C	I <sub>RM</sub>					5.0	100			μA
Reverse Recovery Time (Note 2)	t <sub>rr</sub>	50				75			ns	
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	20				10			pF	
Typical Thermal Resistance, Junction to Terminal	R <sub>θJT</sub>	30							°C/W	
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C	

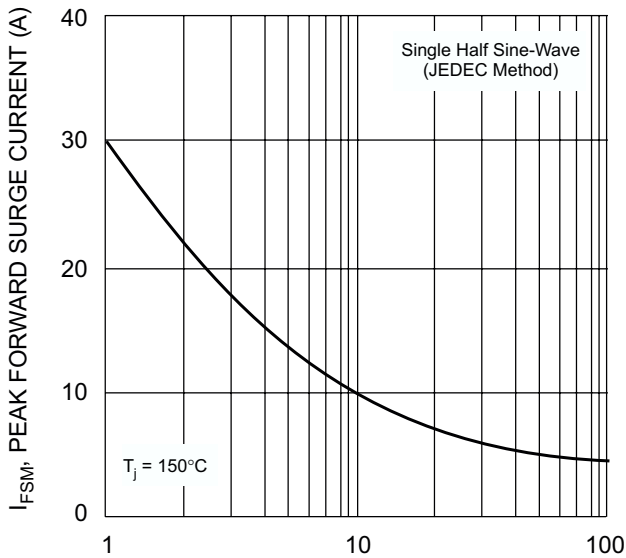
- Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.



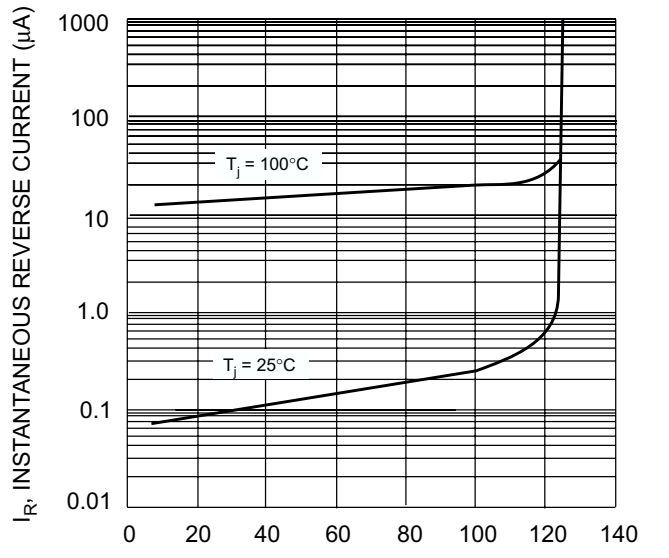
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



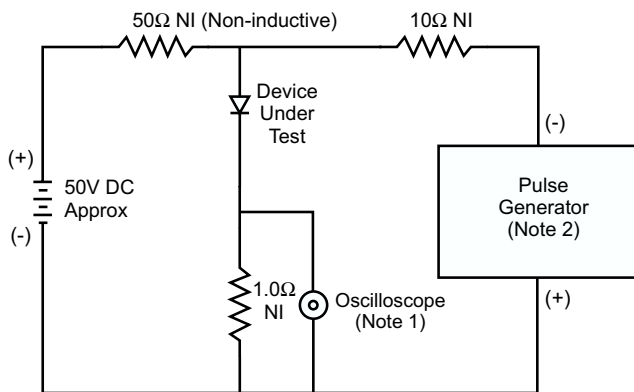
$I_F$ , INSTANTANEOUS FORWARD CURRENT (A)  
 $V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



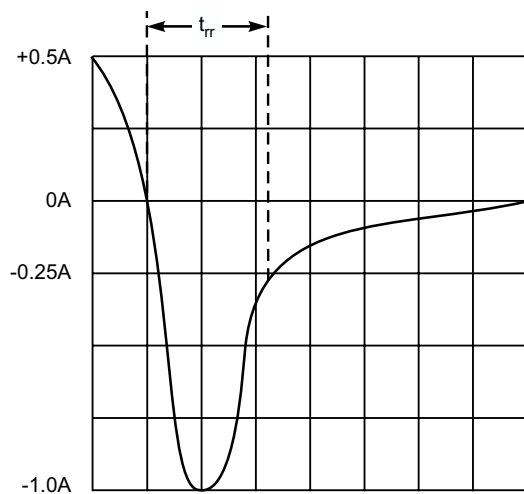
$I_{FSM}$ , PEAK FORWARD SURGE CURRENT (A)  
NUMBER OF CYCLES AT 60Hz  
Fig. 3 Forward Surge Current Derating Curve



$I_R$ , INSTANTANEOUS REVERSE CURRENT ( $\mu A$ )  
PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 4 Typical Reverse Characteristics



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



Set time base for 50/100 ns/cm