

VOLTAGE RANGE: 50 - 1000V

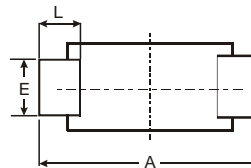
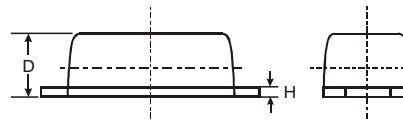
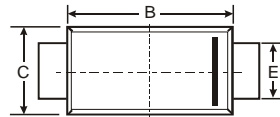
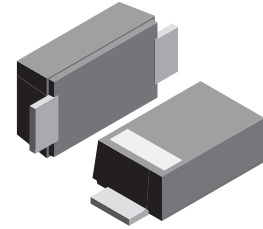
CURRENT: 1.0 A

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
- Ideally Suited for Automated Assembly

Mechanical Data

- Case: SMAF, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0018 ounce, 0.064 grams



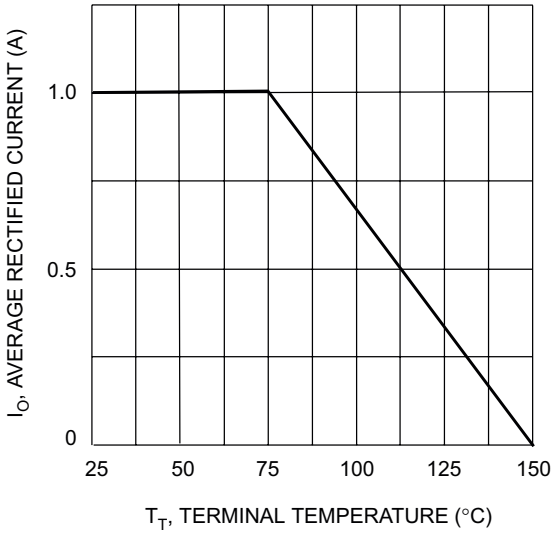
SMAF			
Dim	Min	Max	Typ
A	4.75	4.85	4.80
B	3.68	3.72	3.70
C	2.57	2.63	2.60
D	0.097	1.03	1.00
E	1.38	1.42	1.40
H	0.13	0.17	0.15
L	0.63	0.67	0.65
All Dimensions in mm			

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

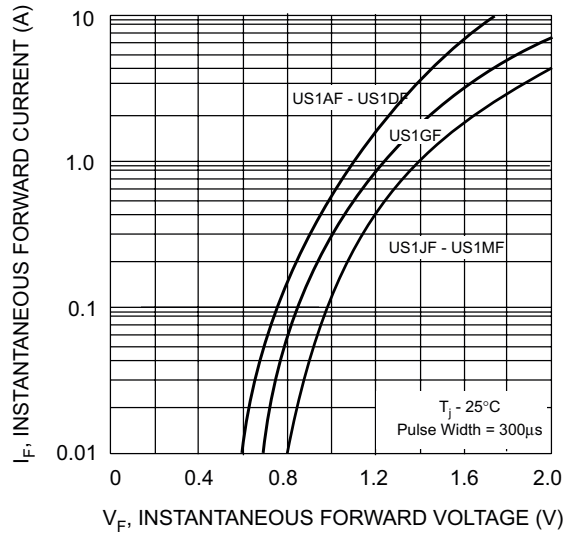
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @ $T_T = 75^\circ\text{C}$	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage Drop @ $I_F = 1.0\text{A}$	V_{FM}	1.0			1.3	1.7		V	
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$	I_{RM}	5.0				100			μA
Reverse Recovery Time (Note 2)	t_{rr}	50				75			ns
Typical Junction Capacitance (Note 1)	C_j	20				10			pF
Typical Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	30							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							$^\circ\text{C}$

- Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $t_{rr} = 0.25\text{A}$.



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



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics

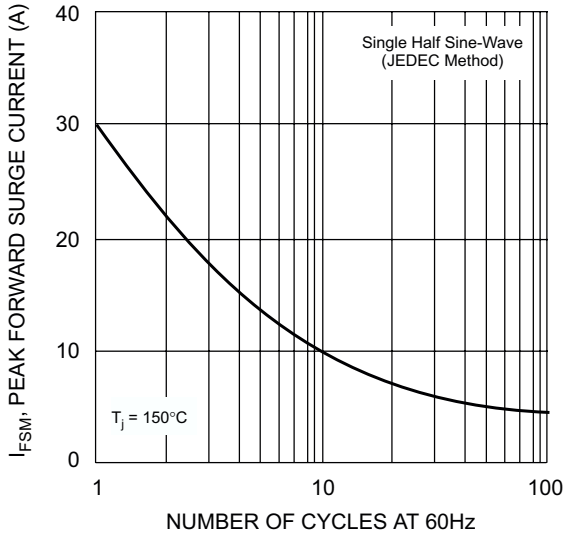


Fig. 3 Forward Surge Current Derating Curve

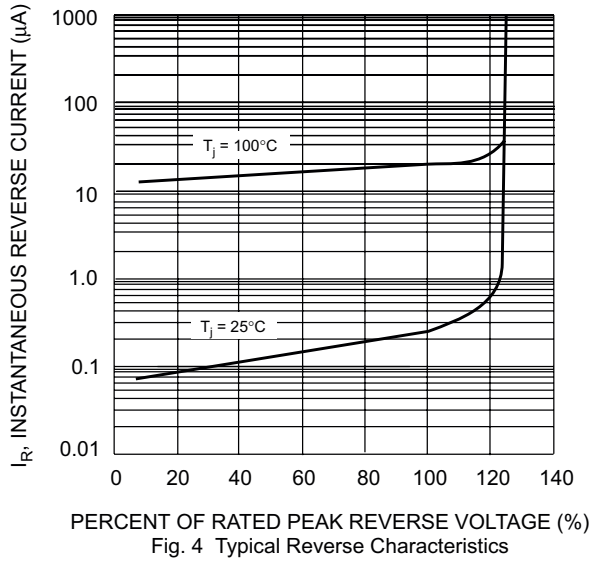
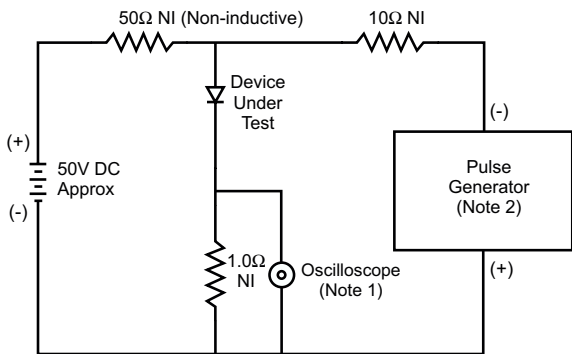
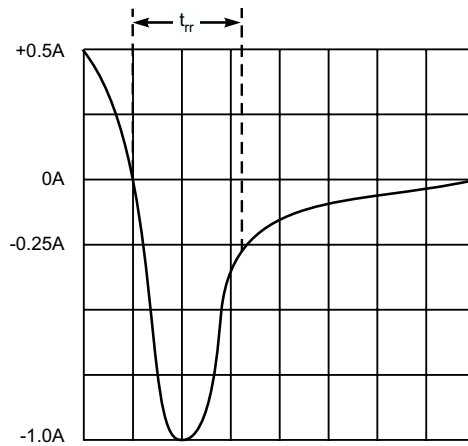


Fig. 4 Typical Reverse Characteristics



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



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit