

**FEATURES**

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Ideally Suited for Automated Assembly
- Plastic Material: UL Flammability Classification Rating 94V-0



SMAF

**MECHANICAL DATA**

- Case: SMAF Molded plastic
- Terminals: Pure tin plated, lead free
- Polarity: Indicated by cathode band
- Weight: 27mg (approx.)



Cathode

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

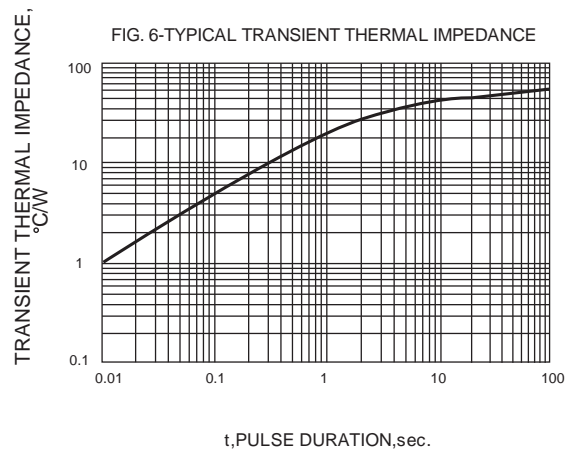
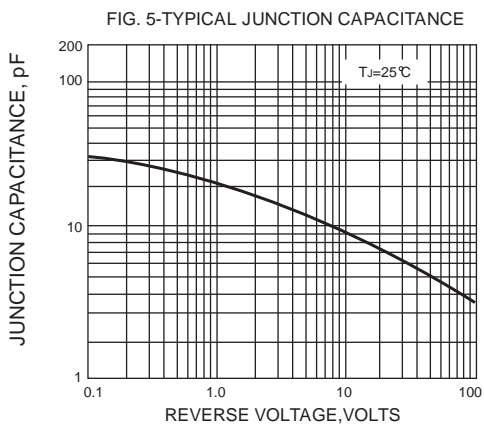
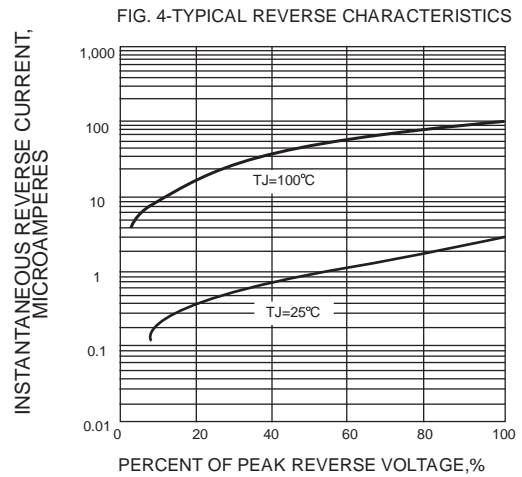
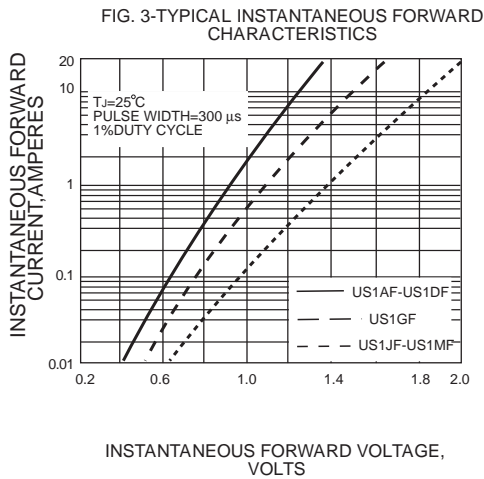
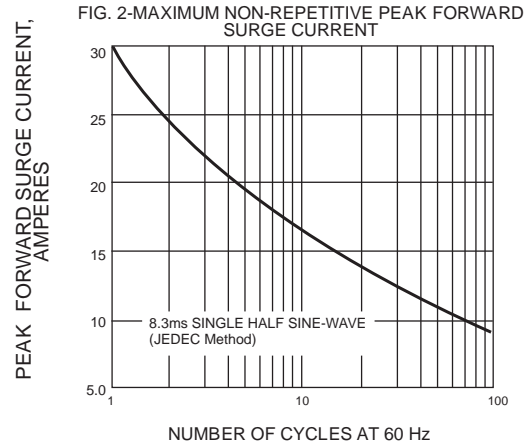
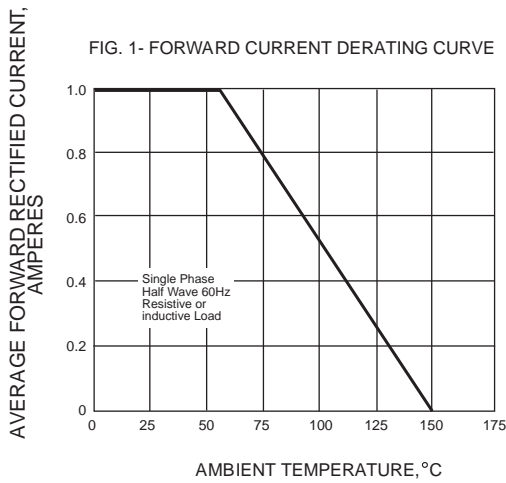
Parameter	Symbol	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_A=75\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC)	$I_{FSM}$	30.0							A
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	1.0		1.4		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	$T_A=25\text{ }^{\circ}\text{C}$		5.0		$T_A=100\text{ }^{\circ}\text{C}$		$\mu\text{A}$	
Maximum reverse recovery time (NOTE1)	$t_{rr}$	50			75			nS	
Typical Junction Capacitance (NOTE2)	$C_J$	15.0							pF
Maximum Thermal Resistance (NOTE3)	$R_{\theta JL}$	50.0							$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	$T_{J,TS}$	-50 to + 150							$^{\circ}\text{C}$

Note: 1.Reverse recovery condition  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

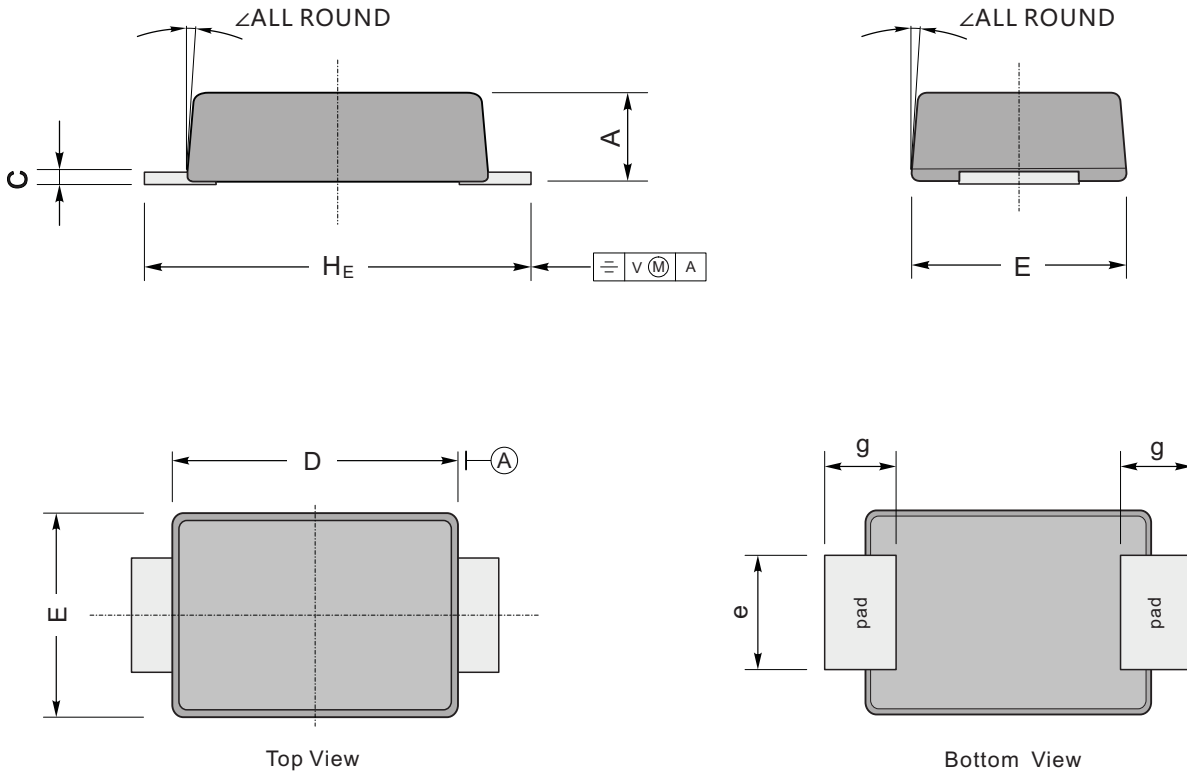
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

**Typical Characteristics**



**SMAF Package Outline Dimensions**



UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	