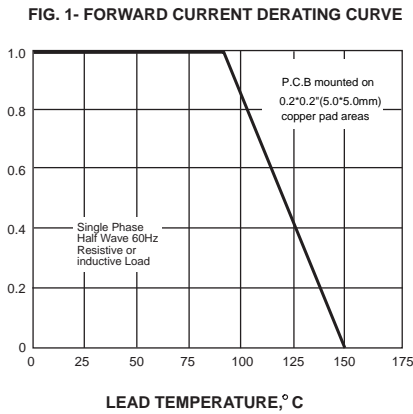


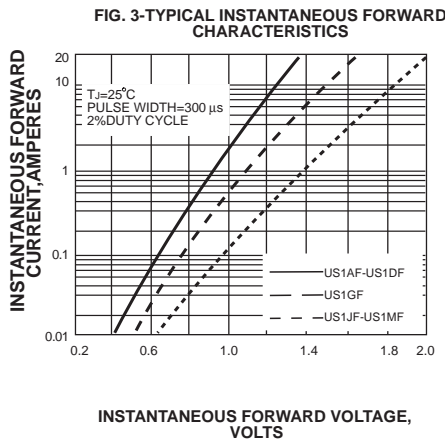
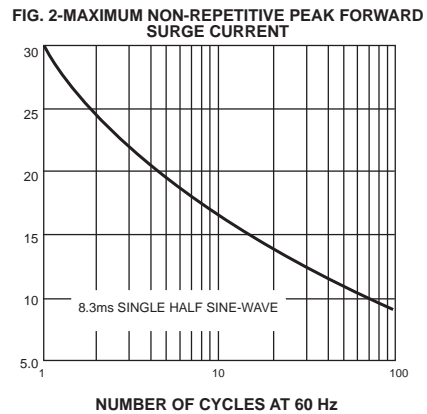
SURFACE MOUNT ULTRA FAST RECTIFIER	Reverse Voltage - 50 to 1000 Volts Forward Current -1.0 Ampere								
<p style="text-align: center;">SMAF</p> <p style="text-align: center;"><i>Dimensions in inches and (millimeters)</i></p>	<h3>Features</h3> <ul style="list-style-type: none"> ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 ◆ For surface mounted applications ◆ Ultra fast switching for high efficiency ◆ Low reverse leakage ◆ Built-in strain relief, ideal for automated placement ◆ High forward surge current capability ◆ High temperature soldering guaranteed 260°C/10 seconds at terminals ◆ Glass passivated chip junction <h3>Mechanical Data</h3> <p>Case: SMAF molded plastic body over passivated chip Terminals: Solder plated, solderable per MIL-STD-750, Method 2026 Polarity: Color band denotes cathode end Mounting Position: Any Weight: 0.0014 ounce, 0.038grams</p>								
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS									
Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.									
	SYMBOLS	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	UNITS
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 $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.0		1.4	1.7			V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	5.0				50.0			μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	50			75			ns	
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	88.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 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 RATINGS AND CHARACTERISTIC CURVES US1AF THRU US1MF

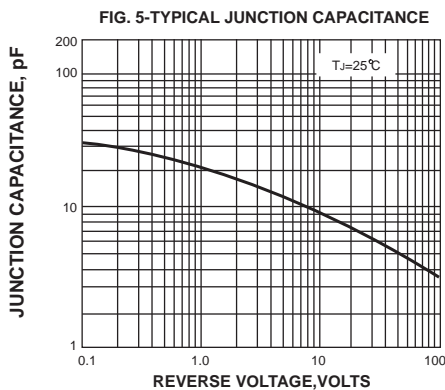
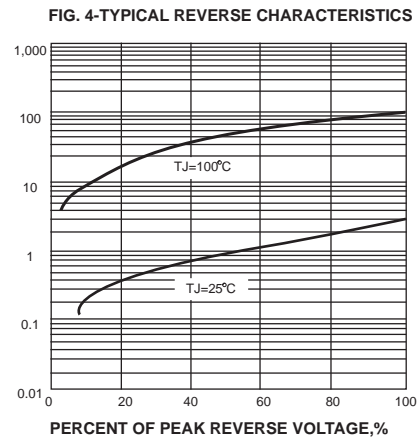
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



PEAK FORWARD SURGE CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



TRANSIENT THERMAL IMPEDANCE, °C/W

