



US1AFLH THRU US1MFLH

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIERS

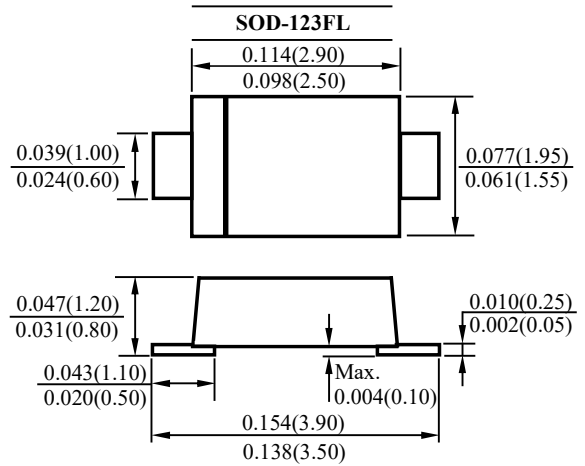
REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 1.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass Passivated Die Construction
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Ultrafast recovery times for high efficiency
- Suffix "H" indicates Halogen-free parts, ex. US1AFLH

MECHANICAL DATA

Case : Molded plastic, SOD-123FL
 Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
 Polarity : Color band denotes cathode end



Dimensions in inches and (millimeters)

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, derate current by 20%.

Parameter	Symbols	US1AFLH	US1BFLH	US1DFLH	US1GFLH	US1JFLH	US1KFLH	US1MFLH	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current at $T_L=75^\circ\text{C}$	$I_{(AV)}$	1.0							Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25							Amp	
Maximum Forward Voltage at 1.0A	V_F	1.0			1.3		1.7		Volts	
Maximum Reverse Current at $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	I_R	5							μAmp	
Typical Junction Capacitance (Note 1)	C_J	17							pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	30							$^\circ\text{C/W}$	
Maximum Reverse Recovery Time (Note 3)	t_{rr}	50				75				ns
Operating Junction Temperature Range	T_J	-65 to +150							$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	-65 to +150							$^\circ\text{C}$	

NOTES:

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- Thermal resistance from junction to lead mounted on P.C.B. with 3.0 x 3.0mm copper pad areas
- 3- Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$.



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RATINGS AND CHARACTERISTIC CURVES

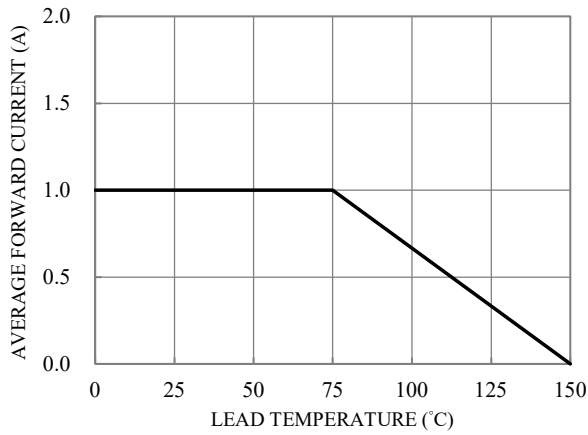


Fig.1-FORWARD CURRENT DERATING CURVE

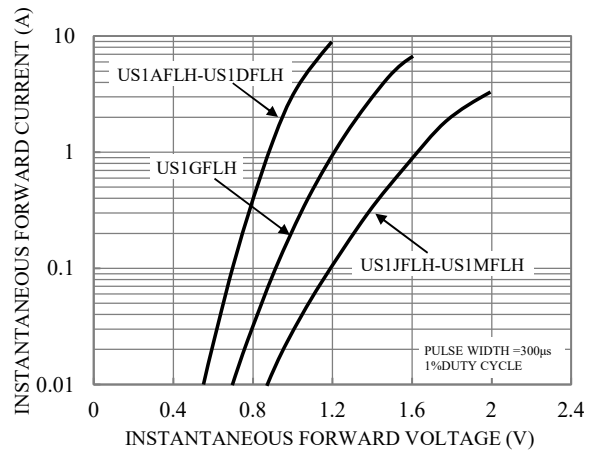


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

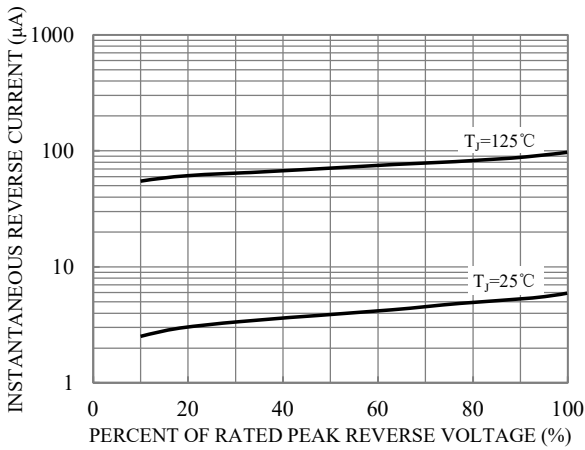


Fig.3-TYPICAL REVERSE CHARACTERISTICS

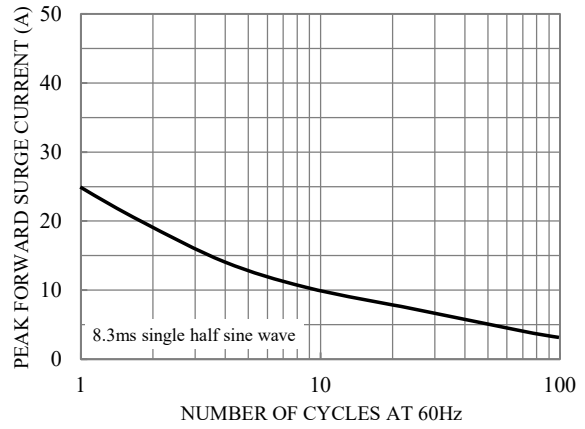


Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT