

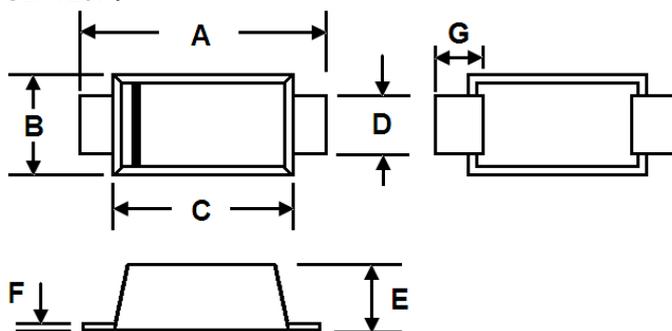
Features

- * Glass Passivated Junction Chip
- * Ideal for Automated Placement
- * Low Profile Package
- * Low Power Loss, High Efficiency
- * Fast Switching for High Efficiency



Package Outline Dimensions in inches (millimeters)

SOD-123F:



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	3.55	3.85	0.140	0.152
B	1.75	1.95	0.069	0.077
C	2.70	2.90	0.106	0.114
D	0.80	1.10	0.031	0.043
E	0.95	1.15	0.037	0.045
F	0.15	0.25	0.006	0.010
G	0.35	0.85	0.014	0.033

Mechanical Data

- * JEDEC SOD-123F molded plastic body over passivated chip
- * Terminals: Solderable per MIL-STD-750, Method 2026
- * Polarity: Color band denotes cathode end
- * Mounting Position: Any

Maximum Ratings and Electrical Characteristics

Rating 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%.

Type Number	Symbols	US 1AL	US 1BL	US 1DL	US 1GL	US 1JL	US 1KL	US 1ML	Unit	
Marking Code		UAL	UBL	UDL	UGL	UJL	UKL	UML		
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 D.C Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0							A	
Peak Forward Surge Current, 8.3ms single half sine-wave	I_{FSM}	30							A	
Maximum Instantaneous Forward Voltage at 1.0A (Note 1)	V_F	0.95			1.3	1.7			V	
Maximum reverse current @ rated VR	I_R	5							μA	
		150								
Maximum reverse recovery time (Note 3)	T_{rr}	50				75				nS
Typical Junction Capacitance(Note2)	C_J	20				15				pF
Typical Thermal Resistance	$R_{\theta JA}$	100							$^{\circ}C/W$	
Operating junction and Storage Temperature Range	T_J/T_{STG}	-55 to +150							$^{\circ}C$	

Note: 1、 Pulse test with PW=300 μs , 1% duty cycle. 2、 Measured at 1 MHz and Applied VR=4.0 Volts.

3、 Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A

Ratings and Characteristic Curves

FIG. 1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

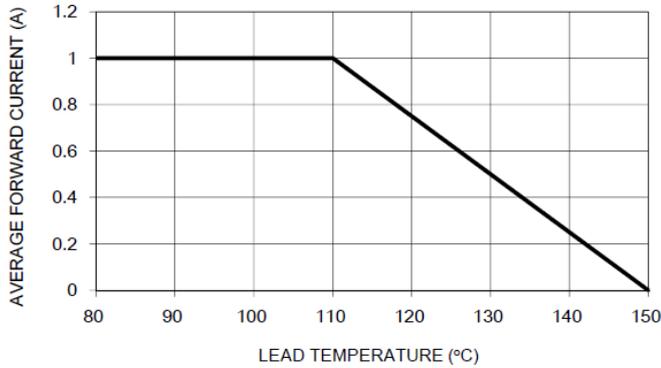


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

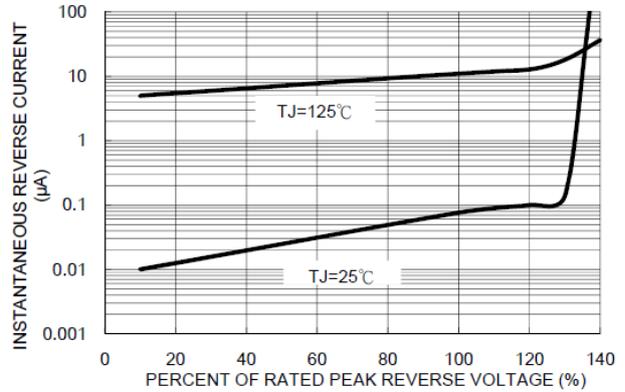


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

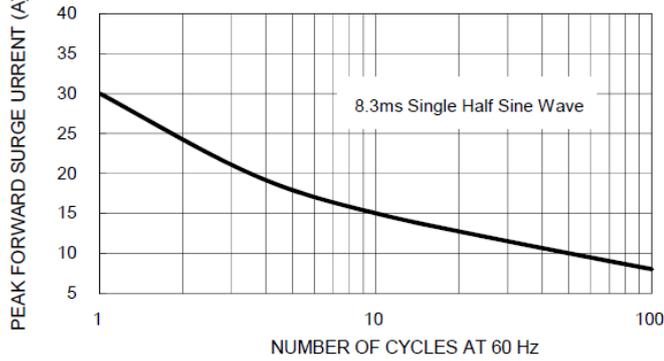


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

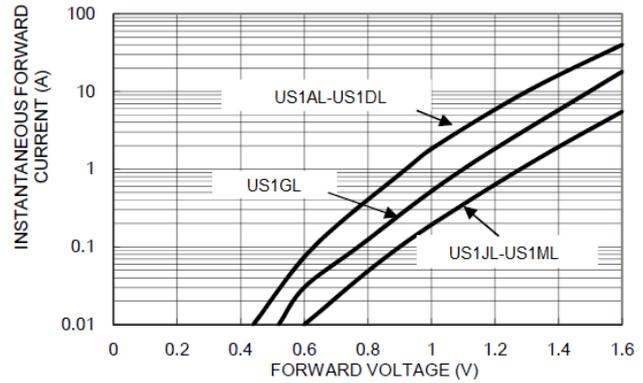


FIG. 5- TYPICAL JUNCTION CAPACITANCE

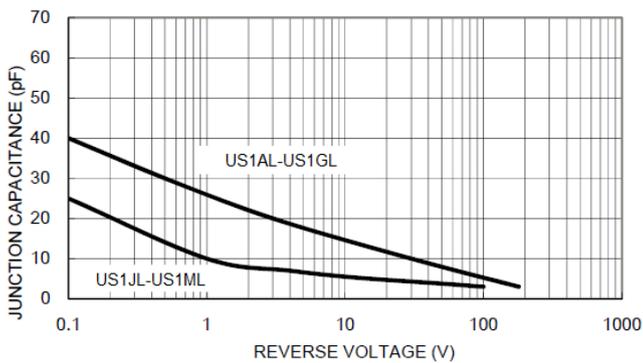
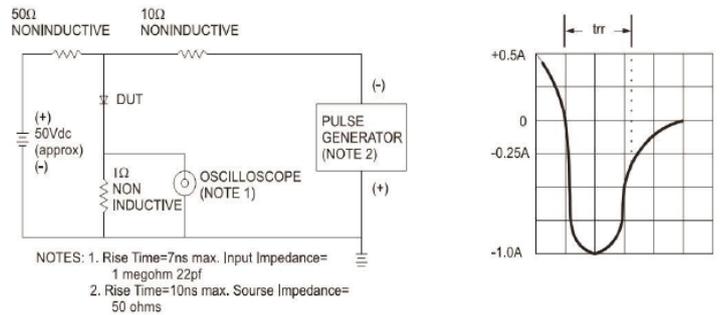


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





US1AL THRU US1ML

High Efficient Surface Mount Rectifiers

Ordering Information

Part No.	Package	Packing
US1AL~US1ML	SOD-123F	3K/Reel