

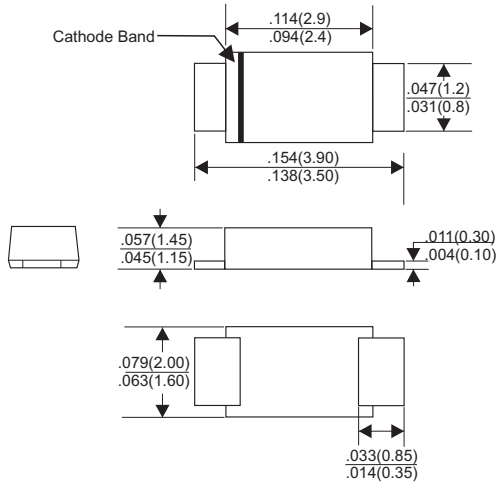


US1AL THRU US1ML

SURFACE MOUNT HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

SOD-123 FL



FEATURES

- * Glass passivate device
- * Ideal for surface mounted applications
- * Low reverse leakage
- * Metallurgically bonded construction
- * High temperature soldering guaranteed:
250°C/10 seconds 0.375"(9.5mm)lead length,
5 lbs.(2.3kg) tension

MECHANICAL DATA

- * Case: JEDEC SMAL molded plastic
- * Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- * Polarity: Color band denotes cathode end
- * Mounting Position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	US1AL	US1BL	US1DL	US1GL	US1JL	US1KL	US1ML	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=55°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage at 1.0A	1.0				1.7			V
Maximum DC Reverse Current Ta=25°C	5.0							µA
at Rated DC Blocking Voltage Ta=100°C	100							µA
Maximum Reverse Recovery Time (Note 1)	50			75				nS
Typical Junction Capacitance (Note 2)	20			15				pF
Operating Temperature Range Tj	-65 — +125							°C
Storage Temperature Range Tstg	-65 — +150							°C
Marking code	UA	UB	UD	UG	UJ	UK	UM	

NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (US1AL THRU US1ML)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

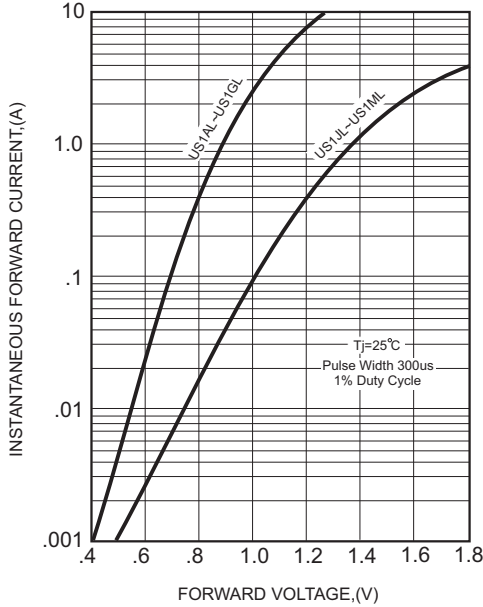


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

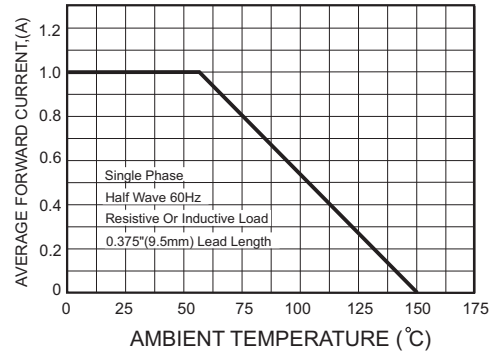


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

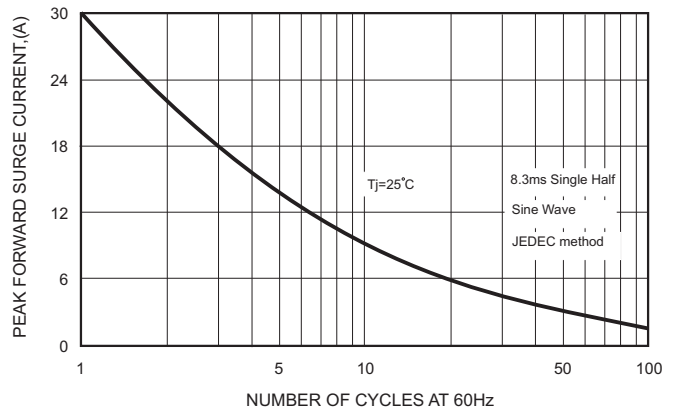
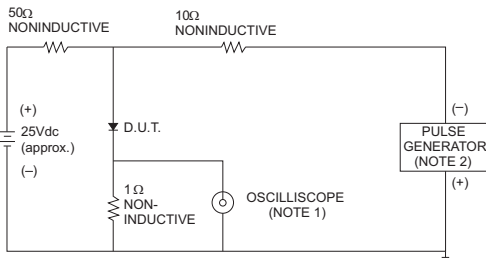


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

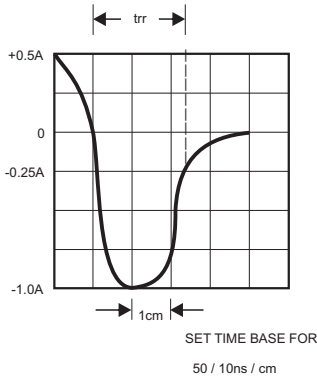


FIG.5-TYPICAL JUNCTION CAPACITANCE

