



US1MW

1.0 AMP SURFACE MOUNT HIGH EFFICIENCY RECTIFIERS

FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Fast switching speed

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any

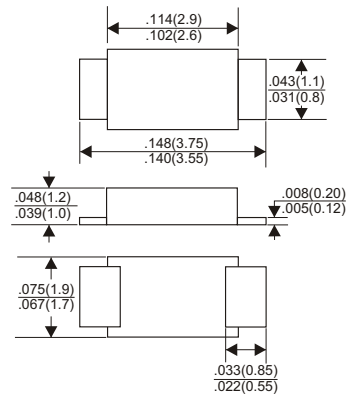
VOLTAGE RANGE

1000 Volts

CURRENT

1.0 Ampere

SOD123FL



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	US1MW	UNITS
Maximum Recurrent Peak Reverse Voltage	1000	V
Maximum RMS Voltage	700	V
Maximum DC Blocking Voltage	1000	V
Maximum Average Forward Rectified Current 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	1.7	V
Maximum DC Reverse Current Ta=25°C	2.0	μA
at Rated DC Blocking Voltage Ta=100°C	200	μA
Maximum Reverse Recovery Time (Note 1)	75	nS
Typical Junction Capacitance (Note 2)	9	pF
Operating and Storage Temperature Range Tj, Tstg	-65 — +150	°C

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 (US1MW)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

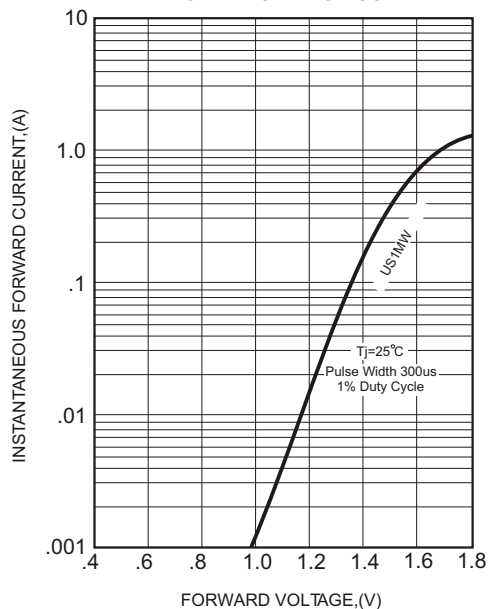


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

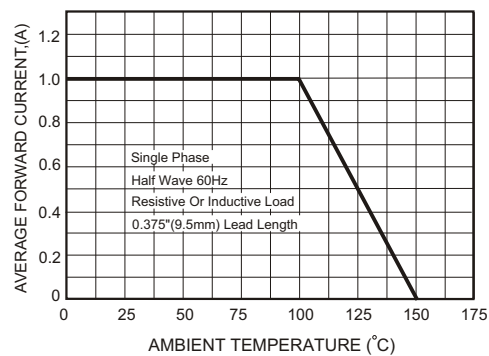
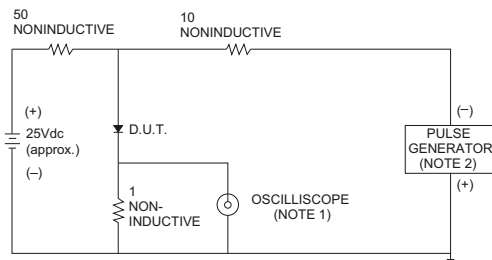


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

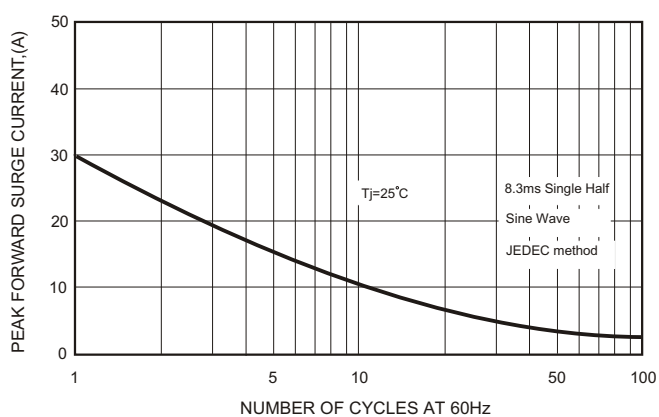


FIG.5-TYPICAL JUNCTION CAPACITANCE

