Surface Mount Ultrafast Recovery Rectifier

Reverse Voltage : 50V to 1000V
Forward Current : 1.0Amp

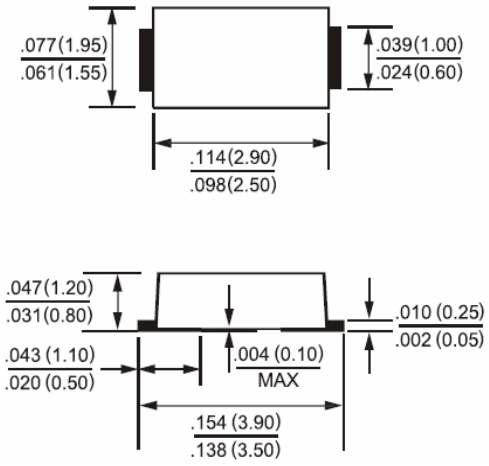
FEATURES

- Plastic package has Underwriters Laboratory Flammabiliy Classification 94V-O
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Ultrafast recovery times for high efficiency
- High temperature soldering : 260°C /10 seconds atterminals

MECHANICAL DATA

Case : Molded plastic, SOD-123FL
Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
Polarity : Color band denotes cathode end
Packaging : 8mm tape per EIA STD RS-481
Weight : 0.0006 ounce, 0.018 gram

SOD-123FL



Dimensions in inchs and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z , resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Symbol	US1AFL	US1BFL	US1DFL	US1GFL	US1JFL	US1KFL	US1MFL	Unit
Marking Code		U1A	U1B	U1D	U1G	U1J	U1K	U1M	
Maximum Recerrent 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 T_{TP}=65℃ / T_J=45℃	$I_{F(AV)}$	1.4 (with heatsink) / 1.0							A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Maximum Forward Voltage at 1.0A	V_F	1.0			1.3	1.7			V
Maximum Reverse Current at T_A=25℃ / at Rated DC Blocking Voltage T_A= T_J =100℃	I_R	5.0 / 100							μA
Typical Junction Capacitance (Note 1)	C_J	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	130							℃/W
Maximum Reverse Recovery Time (Note 3)	T_{RR}	50				75			nS
Operating Junction Temperature Range	T_J	-65 to +150							℃
Storage Temperature Range	Tstg	-65 to +150							℃

NOTES:

1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3” (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions I_F=.5A , I_R=1A , I_{RR}=.25A.

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RATING AND CHARACTERISTIC CURVES

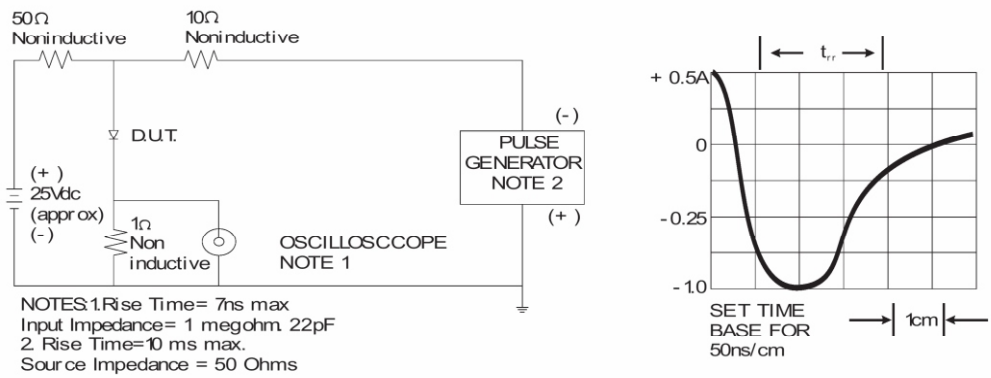
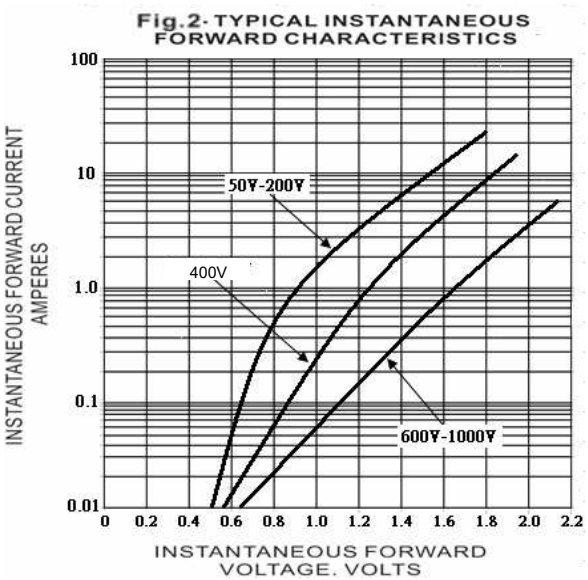
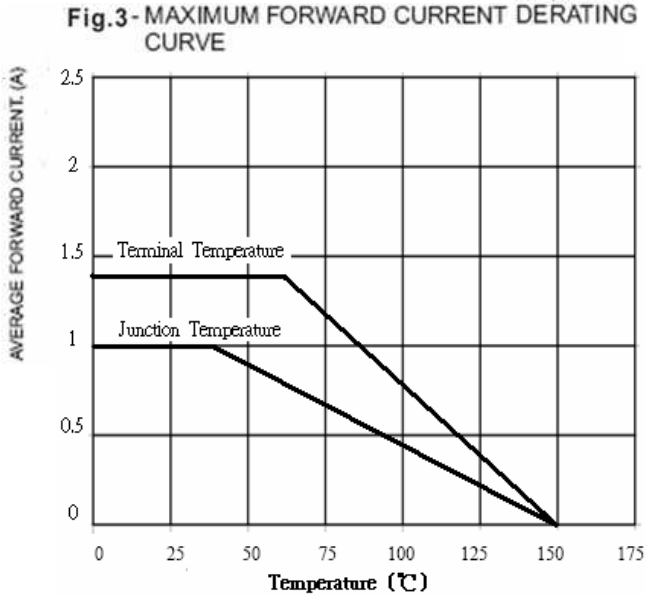


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





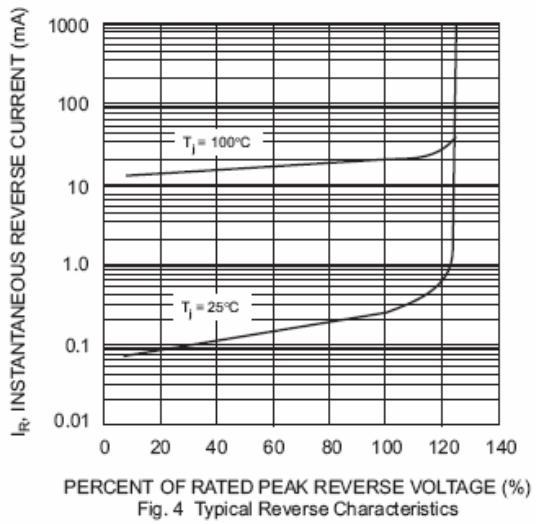


Fig. 4 Typical Reverse Characteristics

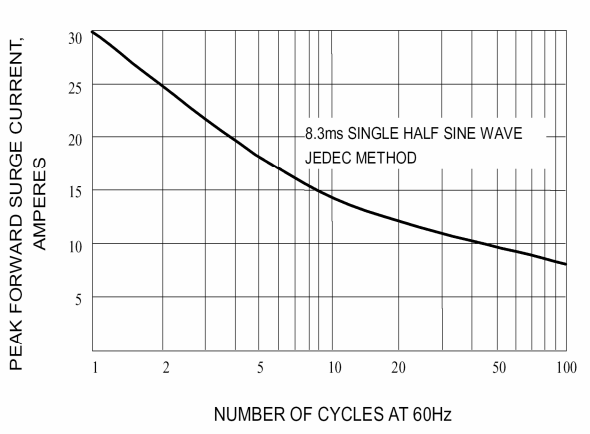


Fig. 5-PEAK FORWARD SURGE CURRENT