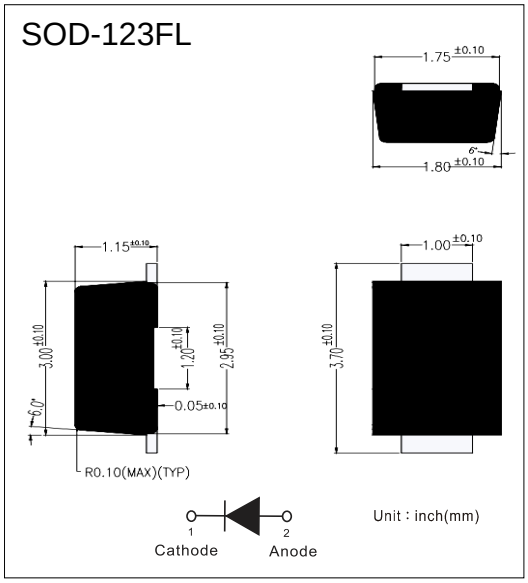
U1A-U1M

1A, 50V - 1000V High Efficient Surface Mount Rectifiers

Features

- Glass passivated junction chip
- Ideal for automated placement
- Fast switching for high efficiency
- Comply with RoHS standard, halogen-free



Mechanical Data

- package:SOD-123FL
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any

Maximum Ratings And Electrical Characteristics(T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	U1A	U1B	U1D	U1G	U1J	U1K	U1M	UNIT
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 DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	1							A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Maximum instantaneous forward voltage (Note 1) @ 1 A	V_F	1.0				1.7			V
Maximum reverse current @ rated V_R T_J=25°C T_J=125°C	I_R	5 150							μA
Maximum reverse recovery time (Note 2)	t_{rr}	50				75			ns
Typical junction capacitance (Note 3)	C_J	15				10			pF
Typical thermal resistance	$R_{\theta JL}$ $R_{\theta JA}$	27 75							°C/W
Operating junction temperature range	T_J	- 55 to +150							°C
Storage temperature range	T_{STG}	- 55 to +150							°C

Note 1: Pulse test with PW=300μs, 1% duty cycle
Note 2: Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
Note 3: Measured at 1 MHz and Applied V_R=4.0 Volts

■ Ratings And Characteristics Curves(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

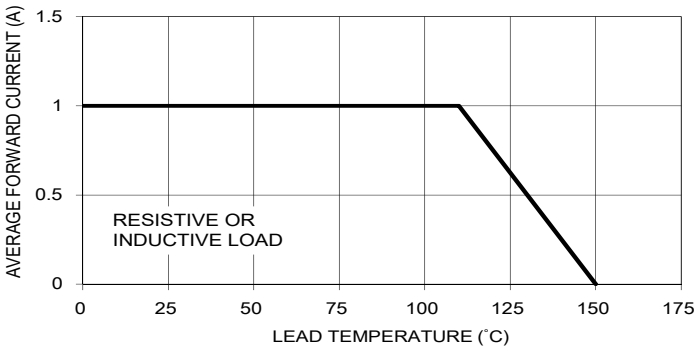


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

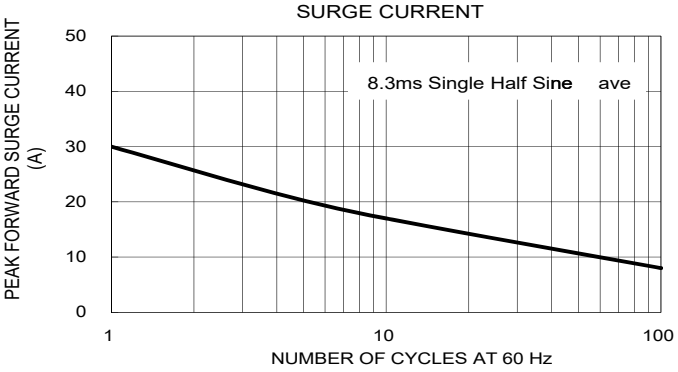


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

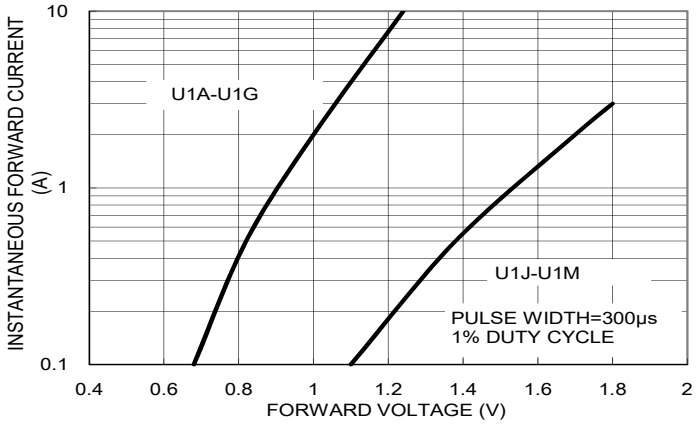


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

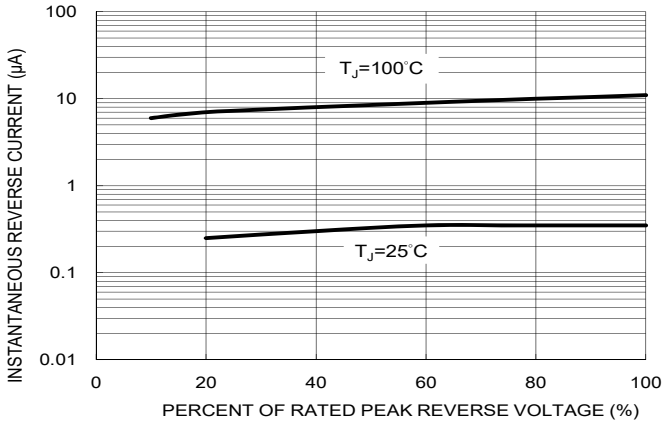


FIG. 5 TYPICAL JUNCTION CAPACITANCE

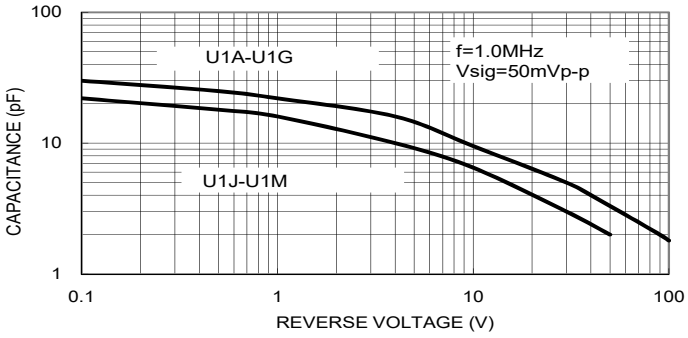


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

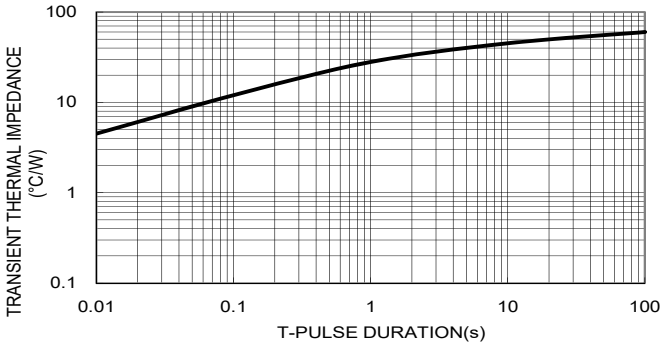
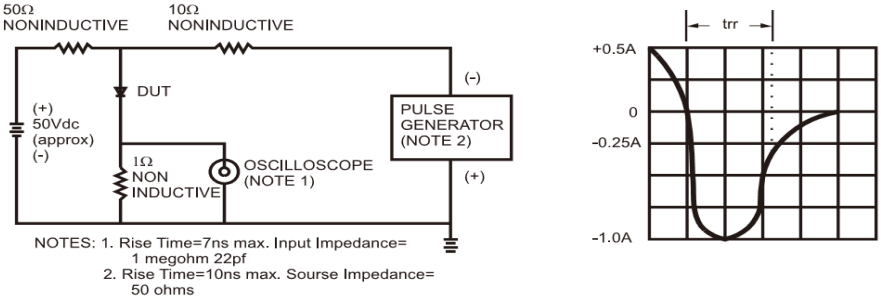


FIG.7- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance=
1 megohm 22pf
2. Rise Time=10ns max. Sourse Impedance=
50 ohms