### US1001FL thru US1006FL

# SURFACE MOUNT SUPER FAST RECOVERY RECTIFIERS

REVERSE VOLTAGE - 100 to 600 Volts FORWARD CURRENT - 1.0 Amperes

#### **FEATURES**

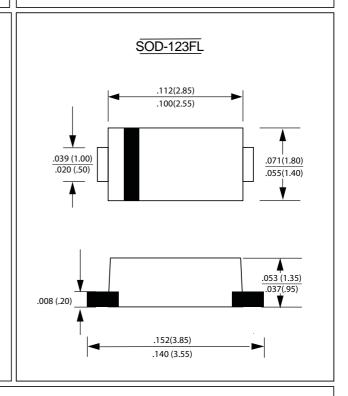
- Low power loss , high efficiency
- For surface mounted applications
- Low reverse leakage current
- Fast reverse recovery time
- High current capability
- The plastic material carries UL recognition 94V-0

#### **MECHANICAL DATA**

• Case : SOD-123FL

• Polarity: Color band denotes cathode

Weight: 0.0110 gramsMounting position: Any



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

For capacitive load, derate current by 20%

PARAMETER	SYMBOL	US 1001FL	US 1002FL	US 1004FL	US 1006FL	UNIT
Maximum repetitive peak reverse voltage	VRRM	100	200	400	600	V
Maximum RMS voltage	VRMS	70	140	280	420	V
Maximum DC blocking voltage	VDC	100	200	400	600	V
Maximum average forward rectified current	IF	1.0				Α
Peak forward surge current, 8.3ms single half sine-wave superim posed on rated load	IFSM	30.0				A
Maximum instantaneous I F=1A@25°C	VF	0.95 1.25 1.70			V	
Maximum DC Reverse Current @TA=25℃ at Rated DC Blocking Voltage @TA=100℃	IR	5 100				uA
Typical Junction Capacitance(Note1)	CJ	10				pF
Maximum Reverse Recovery Time(Note2)	Trr	35				nS
Operating Temperature Range	TJ	-55 to +150				${\mathbb C}$
Storage Temperature Range	TSTG	-55 to +150				${\mathbb C}$
Marking code		S2	S4	S6	S8	

Note1: Measured 1.0MHZ and applied reverse voltage of 4.0 VDC

Note2: Measured with IF=0.5A, IR=1A, IRR=0.25A



#### FIG.1-TYPICAL FORWARD

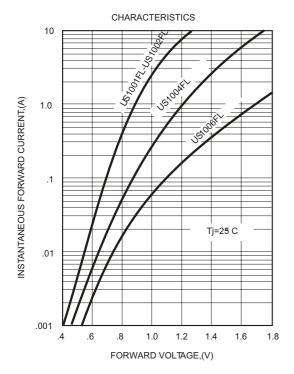
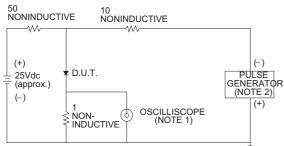


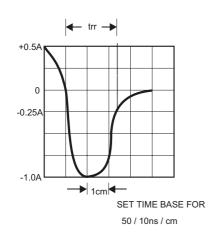
FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE

#### RECOVERY TIME CHARACTERISTICS

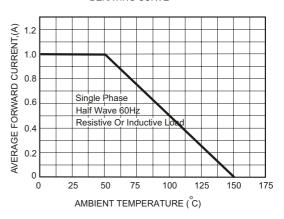


NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

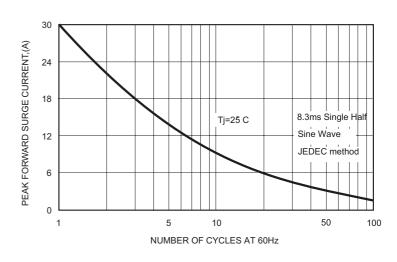
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



## FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE



### FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



#### FIG.5-TYPICAL JUNCTION CAPACITANCE

