

■ FEATURES

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Fast switching for fast recovery
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

■ TYPICAL APPLICATIONS

For use in fast switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer and telecommunication.

■ MECHANICAL DATA

- **Package:** SOD-123FL
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■ MAXIMUM RATINGS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	F15A	F15B	F15D	F15G	F15J	F15K	F15M
Device marking code			F15A	F15B	F15D	F15G	F15J	F15K	F15M
Repetitive peak reverse voltage	V _{RRM}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, Resistance load, T _a (FIG.1)	I _o	A	1.5						
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T _j =25°C	I _{FSM}	A	45						
Storage temperature	T _{stg}	°C	-55 ~+150						
Junction temperature	T _j	°C	-55 ~+150						

■ ELECTRICAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	F15A	F15B	F15D	F15G	F15J	F15K	F15M
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.5A	1.3						
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A		150			250		500
Maximum DC reverse current at rated DC blocking voltage per diode	I _{RRM}	µA	T _a =25°C	5						
			T _a =125°C	100						

■ THERMAL CHARACTERISTICS (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	F15A	F15B	F15D	F15G	F15J	F15K	F15M
Thermal resistance	R _{θJ-A}	°C/W	70 ¹⁾						
	R _{θJ-L}		30 ¹⁾						

Note:

(1) Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm.

CHARACTERISTICS (TYPICAL)

FIG1: I_o - T_L Curve

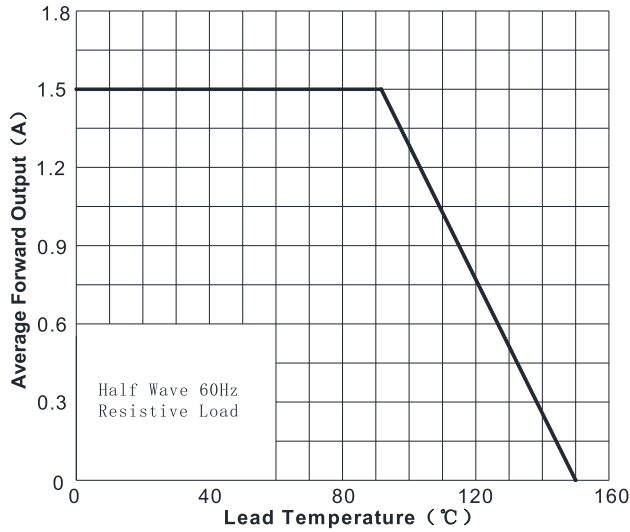


FIG2: Surge Forward Current Capability

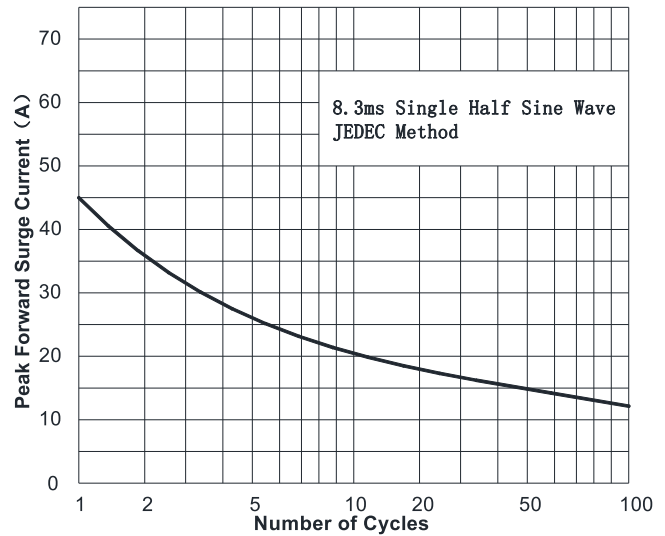


FIG3: Forward Voltage

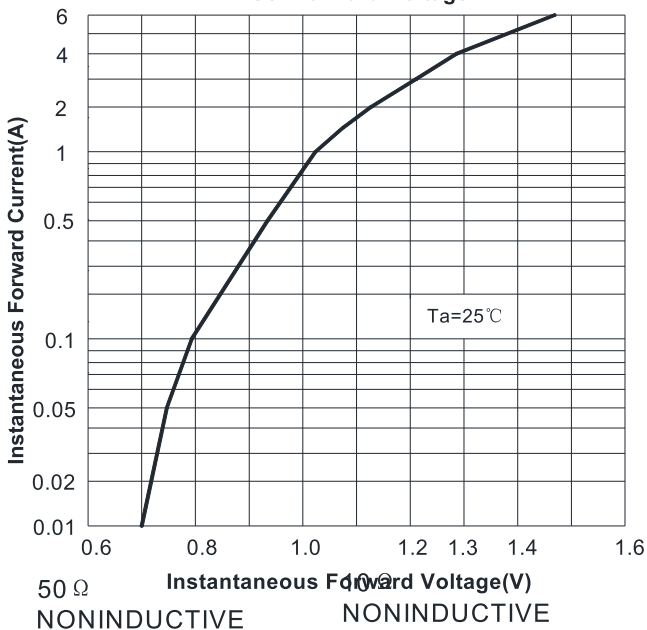
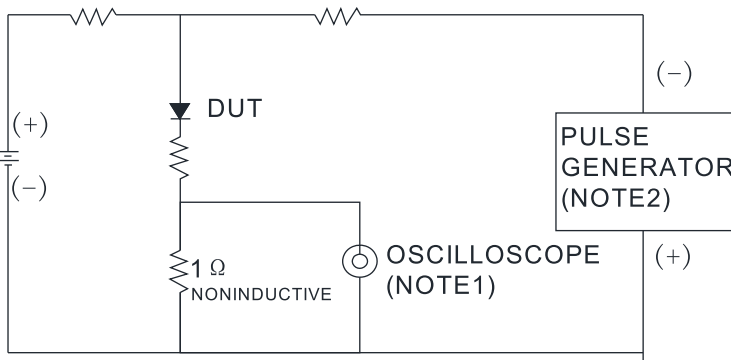
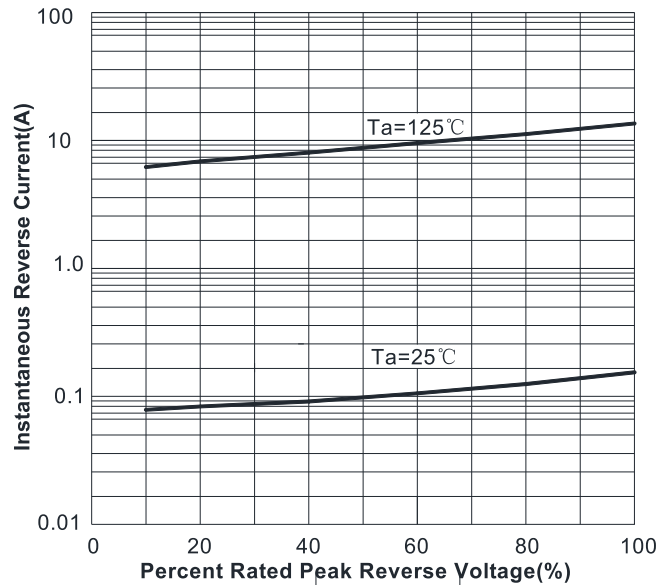
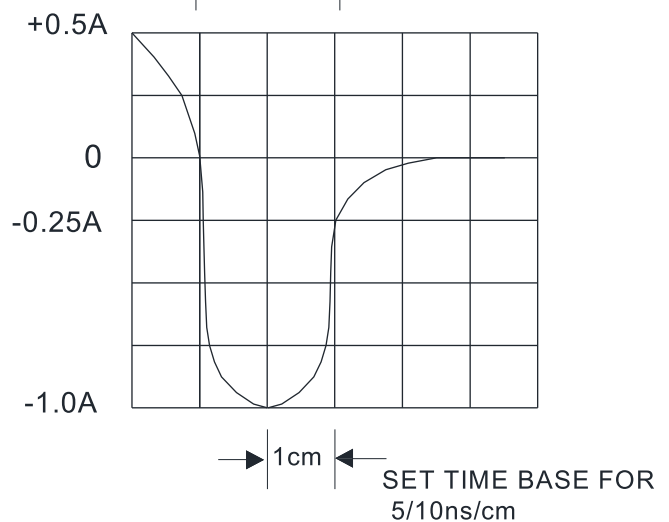


FIG4: Typical Reverse Characteristics



NOTES:

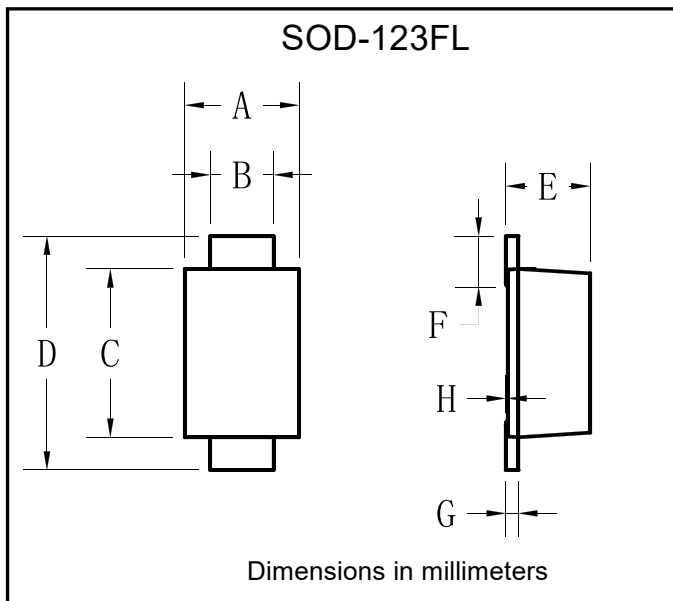
- 1. Rise Time = 7ns max. Input Impedance = 1MΩ 22pf
- 2. Rise Time = 10ns max. Source Impedance = 50Ω



■ **PACKAGING INFORMATION**

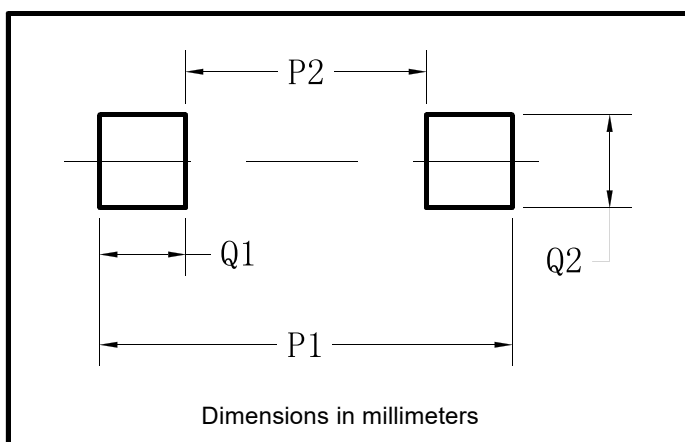
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
F15A THRU F15M	XO7	Approximate 0.0169	3000	15000	120000	7" reel
F15A THRU F15M	Omit for Standard	Approximate 0.0169	10000	30000	210000	13" reel

■ **OUTLINE DIMENSIONS**



SOD-123FL		
Dim	Min	Max
A	1.60	1.90
B	0.90	1.10
C	2.55	2.85
D	3.60	3.90
E	1.00	1.20
F	0.40	0.90
G	0.10	0.25
H	0.02	0.05

■ **SUGGESTED PAD LAYOUT**



SOD-123FL	
Dim	Millimeters
P1	3.90
P2	1.90
Q1	1.00
Q2	1.50