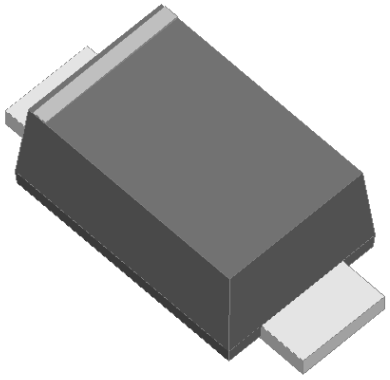
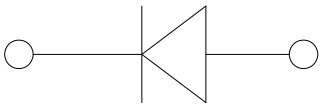
Surface Mount Super Fast Recovery Rectifier





Features

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

Typical Applications

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

Mechanical Date

- **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 (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	E1JS
Device marking code			E1JS
Repetitive peak reverse voltage	V_{RRM}	V	600
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	1.0
Surge(non-repetitive) forward current @ 60Hz half-sine wave,1 cycle, Ta=25℃	I_{FSM}	A	30
Storage temperature	T_{stg}	℃	-55 ~ +150
Junction temperature	T_j	℃	-55 ~ +150

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	E1JS
Maximum instantaneous forward voltage drop per diode	VF	V	I_{FM}=1.0A	1.7
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A, I_{RR}=0.25A	35
Maximum DC reverse current at rated DC blocking voltage per diode	I_{RRM}	μA	Ta=25℃	5
			Ta=125℃	100

■Thermal Characteristics （Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	E1JS
Typical Thermal resistance	RθJ-A	℃/W	60[1)]
	RθJ-L		20[1)]

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

■ Characteristics (Typical)

FIG1:Io-TL Curve

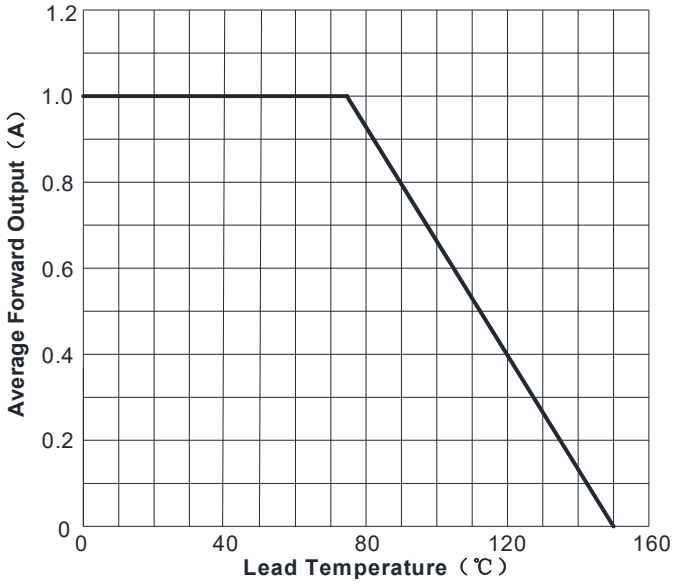


FIG2:Surge Forward Current Capability

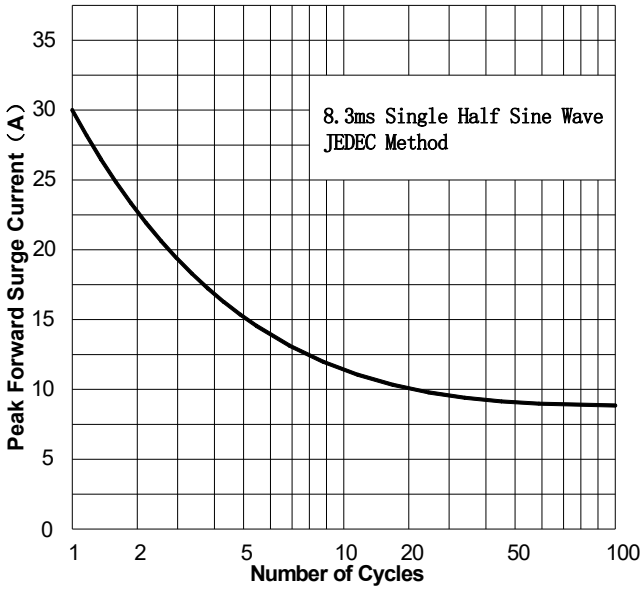


FIG3:Typical Forward Voltage

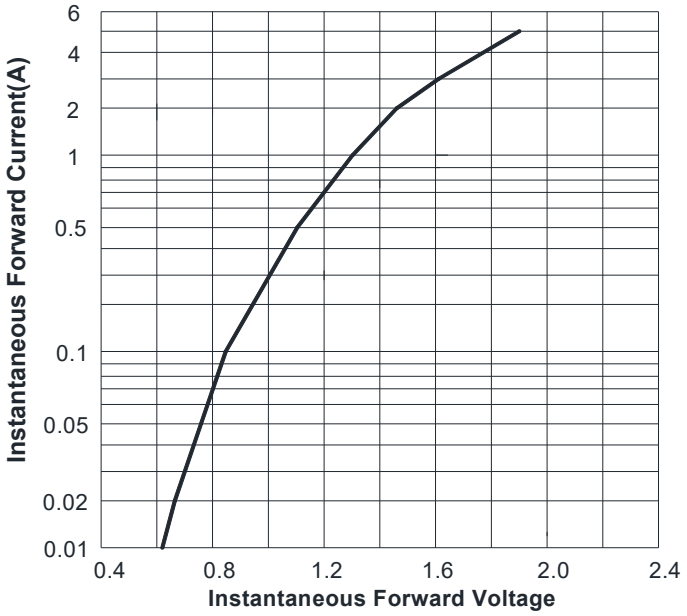


FIG4:Typical Reverse Characteristics

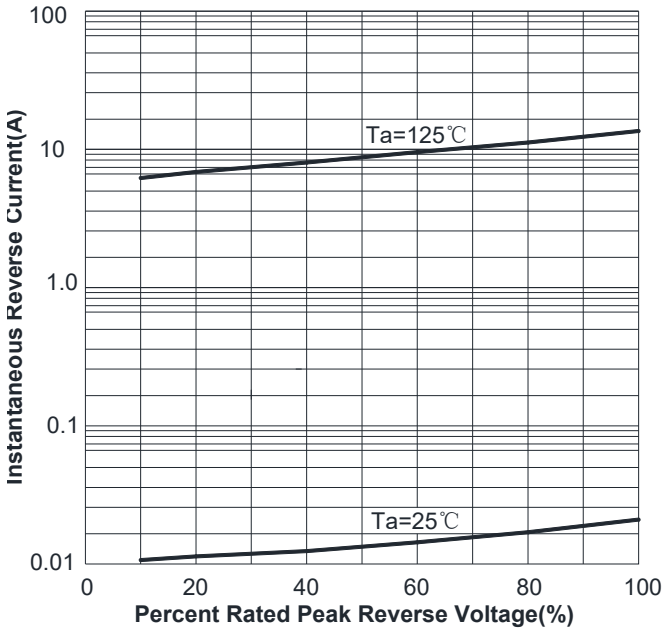
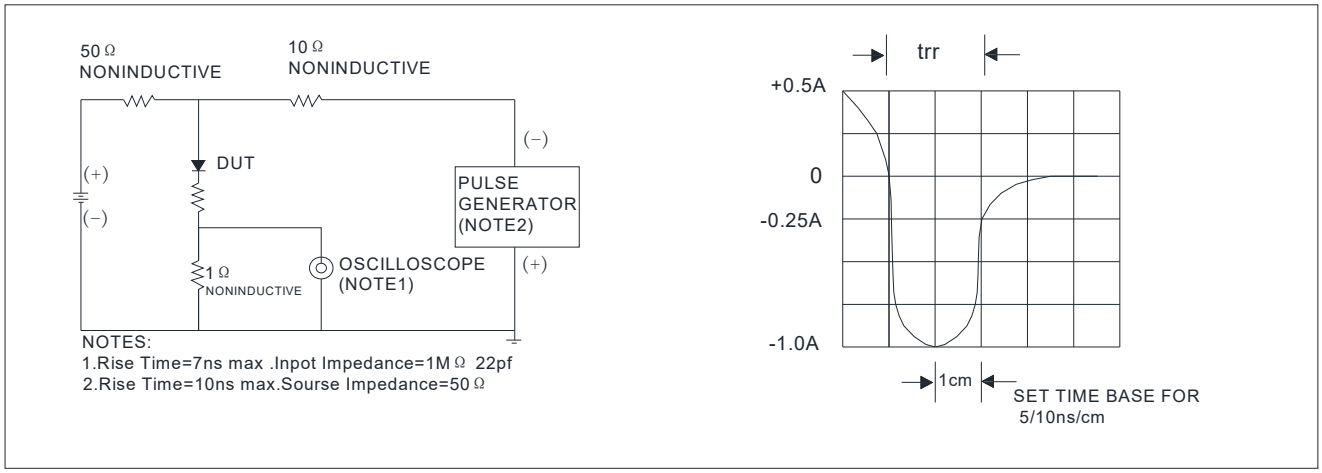


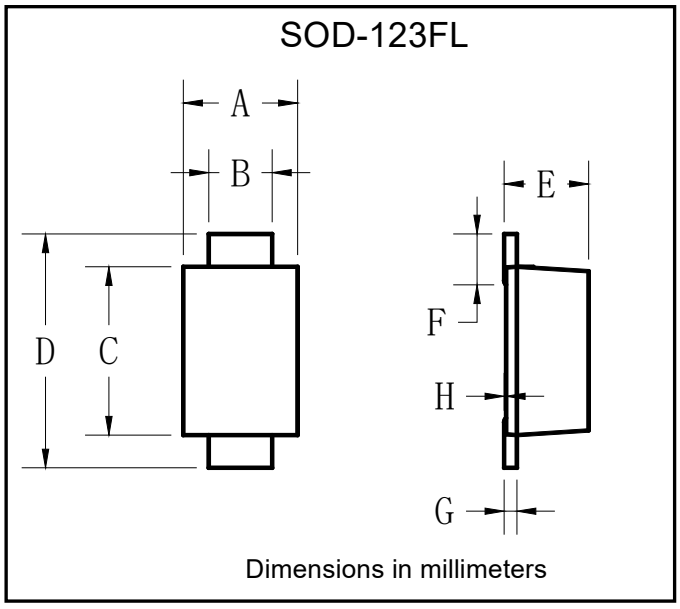
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

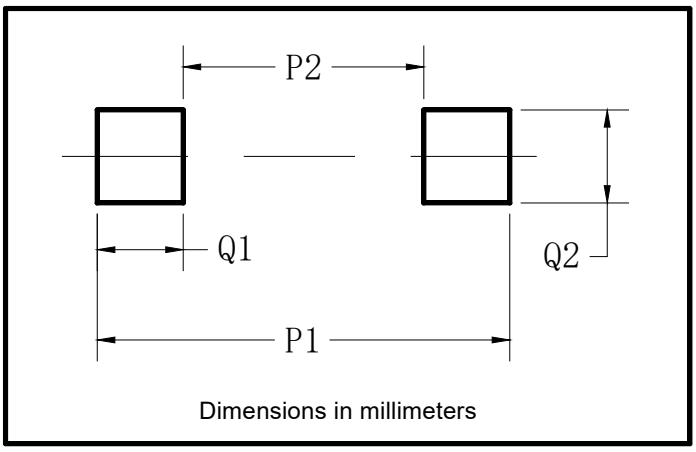
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
E1JS	F1	Approximate 0.0169	3000	15000	120000	7” reel

■ 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

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