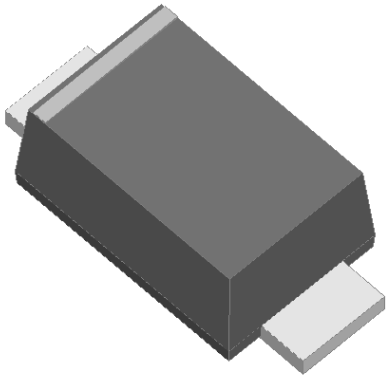
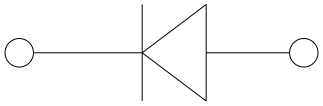
Surface Mount Super Fast Recovery Rectifier





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 (T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	E15A	E15B	E15C	E15D	E15F	E15G	E15H	E15J
Device marking code			E15A	E15B	E15C	E15D	E15F	E15G	E15H	E15J
Maximum Repetitive Peak Reverse Voltage	VRRM	V	50	100	150	200	300	400	500	600
Maximum RMS Voltage	VRMS	V	35	70	105	140	210	280	350	420
Maximum DC blocking Voltage	VDC	V	50	100	150	200	300	400	500	600
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I_O	A	1.5							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	45							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			90							
Current squared time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	8.4							
Storage temperature	Tstg	℃	-55 ~ +150							
Junction temperature	Tj	℃	-55 ~ +150							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	E15A	E15B	E15C	E15D	E15F	E15G	E15H	E15J
Maximum instantaneous forward voltage	V_F	V	I_{FM}=1.5A	1.0				1.3		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	IR	μA	Tj =25℃	5							
			Tj =125℃	100							
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	23				15		10	

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

PARAMETER	SYMBOL	UNIT	E15A	E15B	E15C	E15D	E15F	E15G	E15H	E15J
Typical Thermal resistance	$R_{\theta J-A}$(1)	℃/W	68							
	$R_{\theta J-L}$(1)		20							
	$R_{\theta J-C}$(1)		18							

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

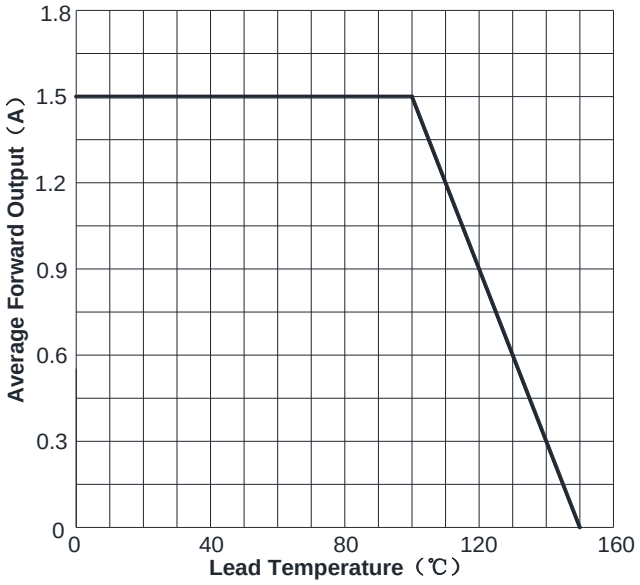


FIG2: Surge Forward Current Capability

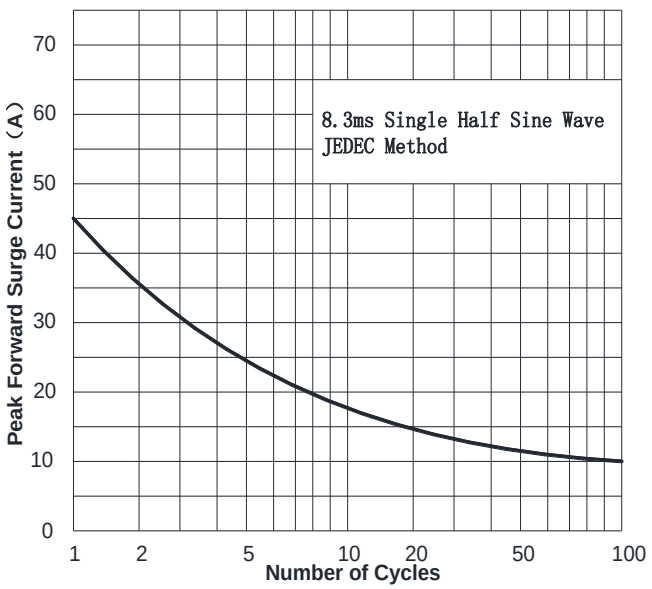


FIG.3: Typical Forward Voltage

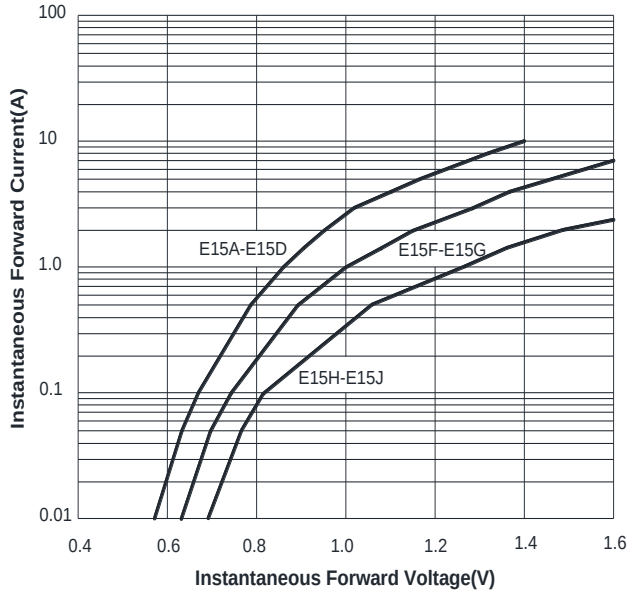


FIG.4: Typical Reverse Characteristics

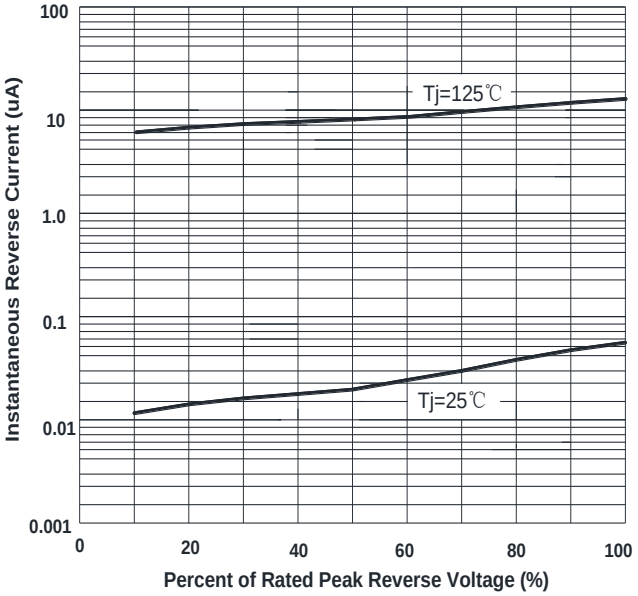
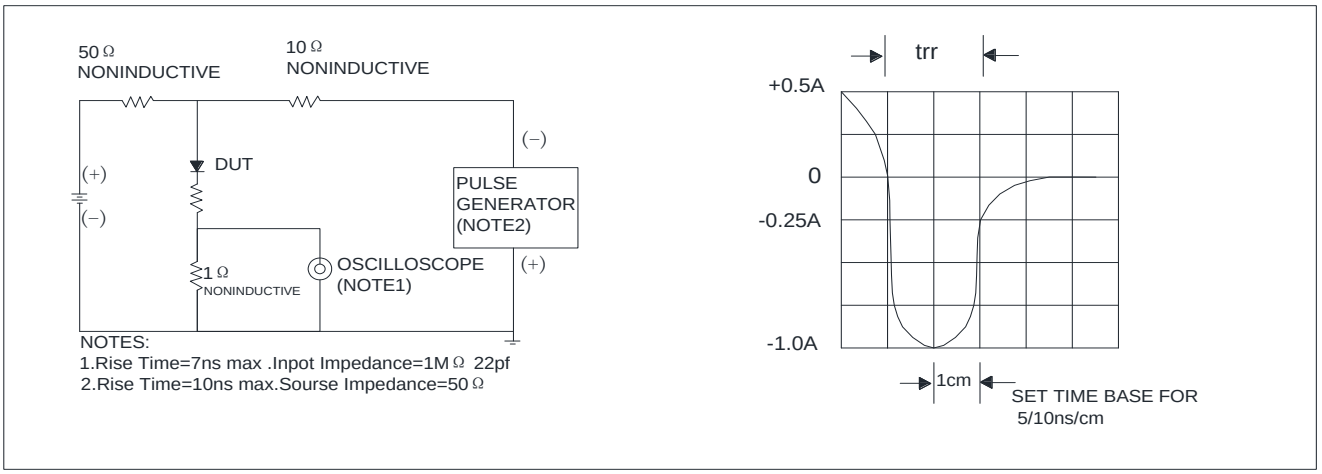


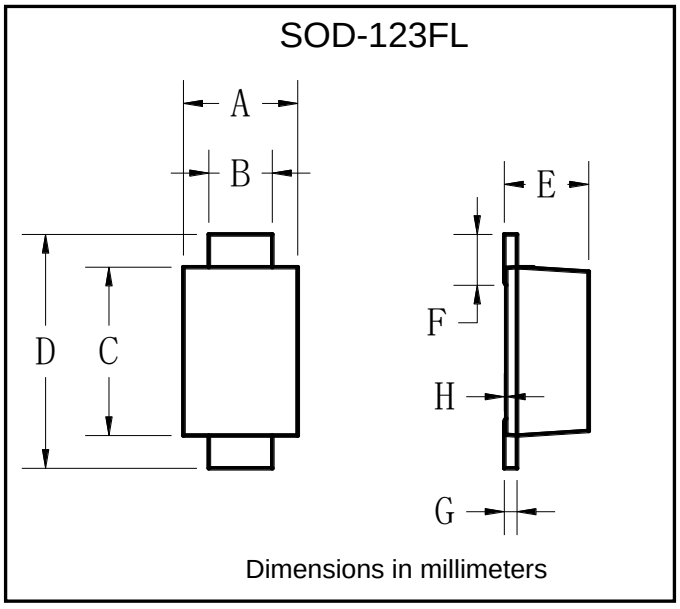
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

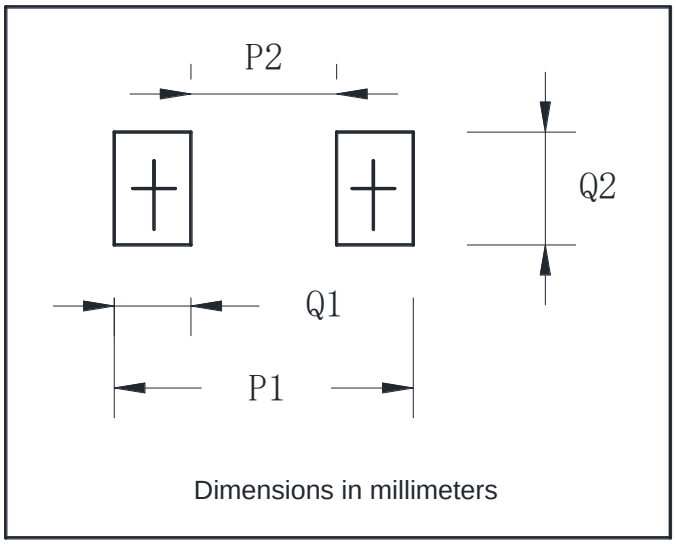
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
E15A THRU E15J	F1	Approximate 0.0169	3000	30000	120000	7” reel
E15A THRU E15J	F2	Approximate 0.0169	2500	25000	100000	7” reel
E15A THRU E15J	F3	Approximate 0.0169	10000	/	210000	13” reel
E15A THRU E15J	F4	Approximate 0.0169	3000	54000	108000	7” reel
E15A THRU E15J	F5	Approximate 0.0169	10000	/	160000	13” reel
E15A THRU E15J	F6	Approximate 0.0169	3000	12000	60000	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	0.00	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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