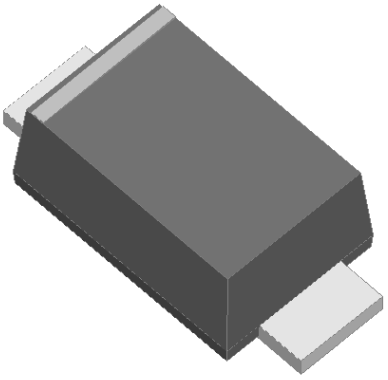
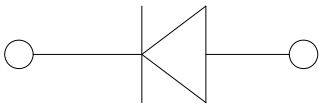
S12 THRU S120

Surface Mount Schottky Rectifier





Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, 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 low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

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	S12	S13	S14	S15	S16	S18	S110	S115	S120
Device marking code			S12	S13	S14	S15	S16	S18	S110	S115	S120
Repetitive peak reverse voltage	V_{RRM}	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, Resistance load, T_L (FIG.1)	I_O	A	1.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	30								
Storage temperature	T_{stg}	℃	-55 ~+175								
Junction temperature	T_j	℃	-55 ~+125					-55 ~+175			

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S12	S13	S14	S15	S16	S18	S110	S115	S120
Maximum instantaneous forward voltage drop per diode	V_F	V	I_{FM}=1.0A	0.50			0.70		0.85		0.90	
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I_{RRM}	mA	T_a=25℃	0.50					0.10			
			T_a=100℃	10					5			

Note1:Pulse test:300uS pulse widh,1% duty cycle
Note2:Pulse test:pulse widh 40mS

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

PARAMETER	SYMBOL	UNIT	S12	S13	S14	S15	S16	S18	S110	S115	S120
Thermal Resistance	$R_{\theta J-A}$	℃/W	70[1)]								
	$R_{\theta J-L}$		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-TLCurve

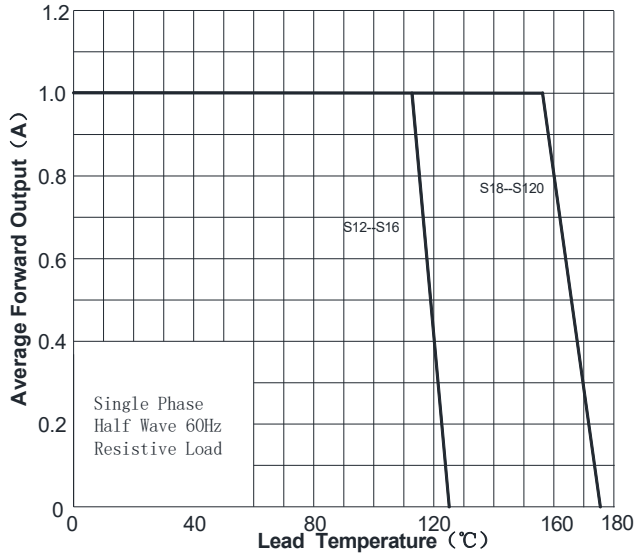


FIG2: Surge Forward Current Capability

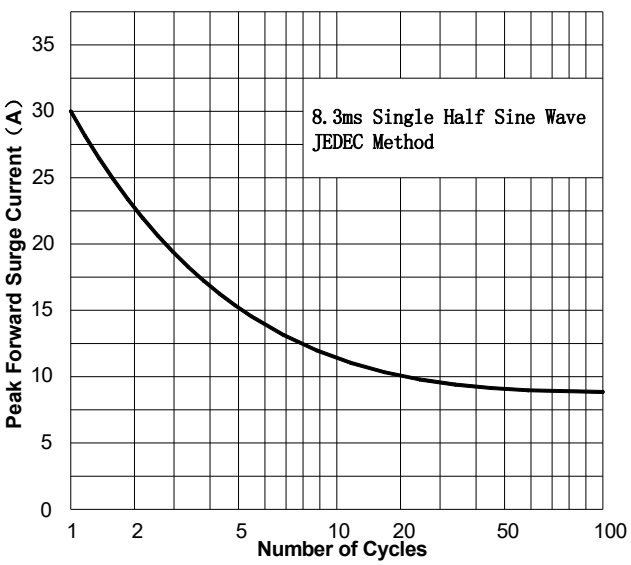


FIG3: Forward Voltage

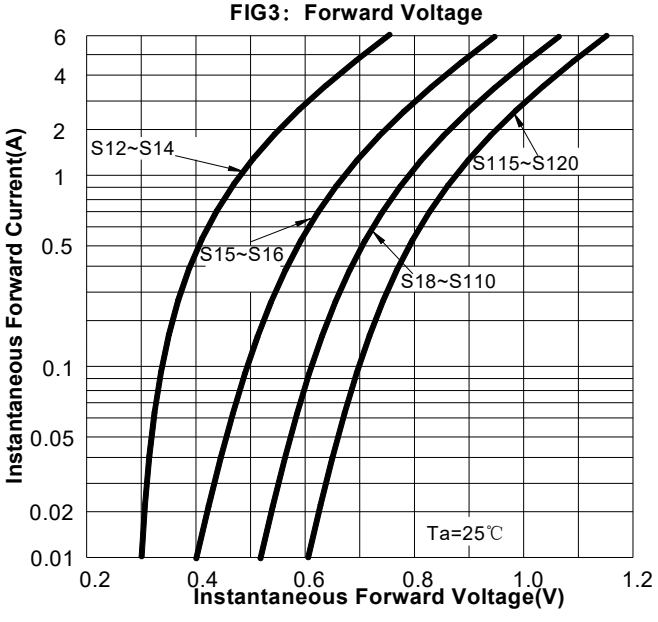
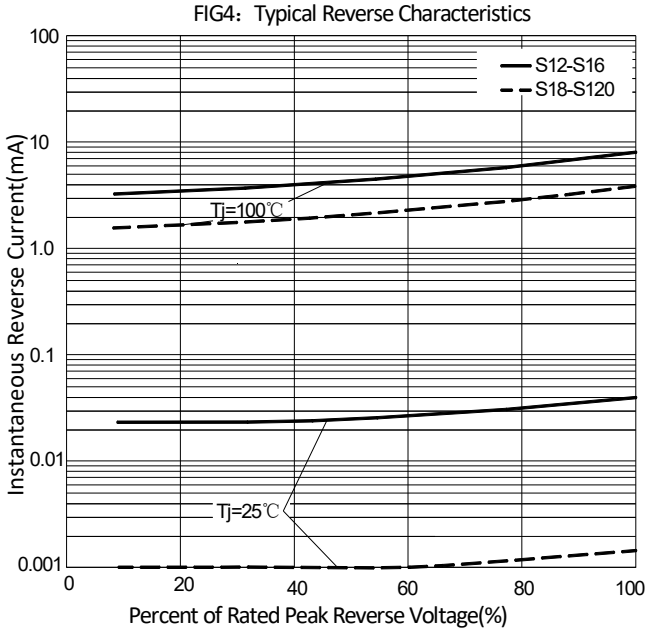


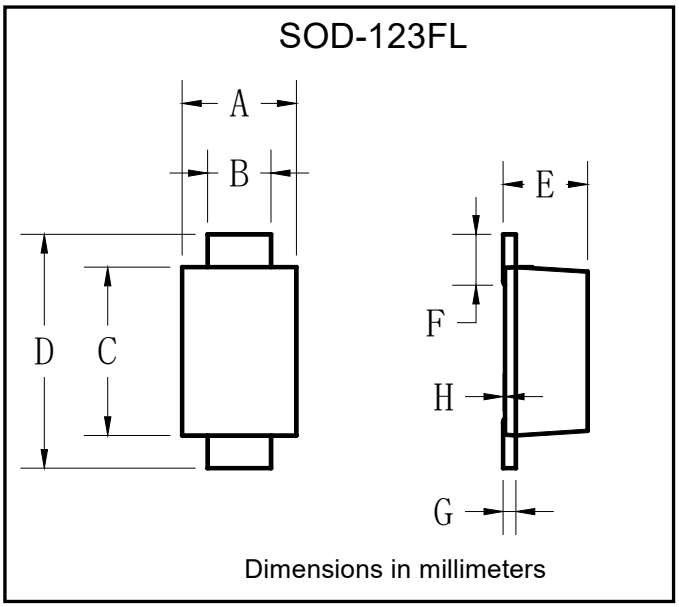
FIG4: Typical Reverse Characteristics



■Ordering Information (Example)

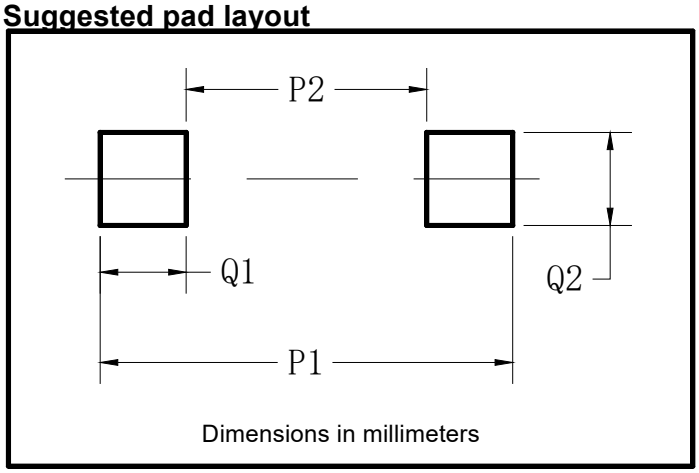
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S12 THRU S120	F1	Approximate 0.0169	3000	30000	120000	7” reel
S12 THRU S120	F2	Approximate 0.0169	2500	25000	100000	7” reel
S12 THRU S120	F3	Approximate 0.0169	10000	30000	210000	13” reel
S12 THRU S120	F4	Approximate 0.0169	3000	27000	108000	7” reel
S12 THRU S120	F5	Approximate 0.0169	10000	20000	160000	13” reel
S12 THRU S120	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	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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