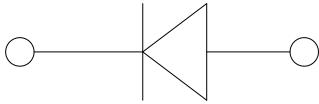
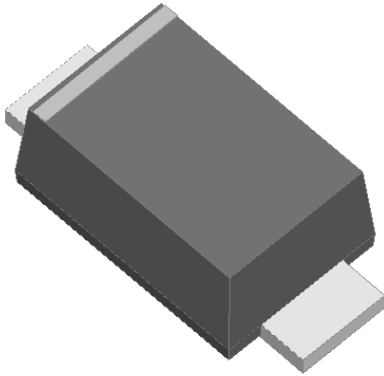


## S12 THRU S120



### 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 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 ( $T_a=25^\circ\text{C}$ 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	VRRM	V	20	30	40	50	60	80	100	150	200
Average rectified output current @60Hz sine wave, Resistance load, $T_a$ (FIG.1)	$I_O$	A	1.0								
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, $T_j=25^\circ\text{C}$	$I_{FSM}$	A	30								
Storage temperature	$T_{stg}$	$^\circ\text{C}$	-55 ~+150								
Junction temperature	$T_j$	$^\circ\text{C}$	-55 ~+125			-55 ~+150					

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ 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 @ $V_{RM}=V_{RRM}$	$I_{RRM}$	mA	$T_a=25^\circ\text{C}$	0.50					0.10			
			$T_a=100^\circ\text{C}$	10					5			

## ■ Thermal Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S12	S13	S14	S15	S16	S18	S110	S115	S120
Thermal Resistance	R $\theta$ J-A	$^{\circ}\text{C/W}$	70 <sup>1)</sup>								
	R $\theta$ J-L		20 <sup>1)</sup>								

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

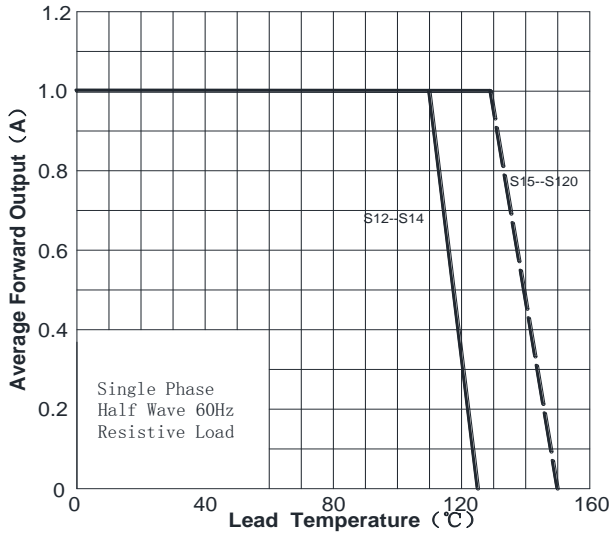


FIG2: Surge Forward Current Capability

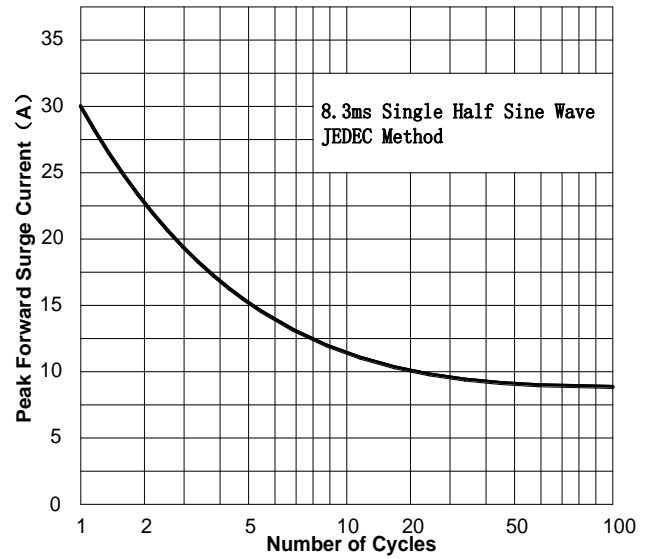


FIG3: Forward Voltage

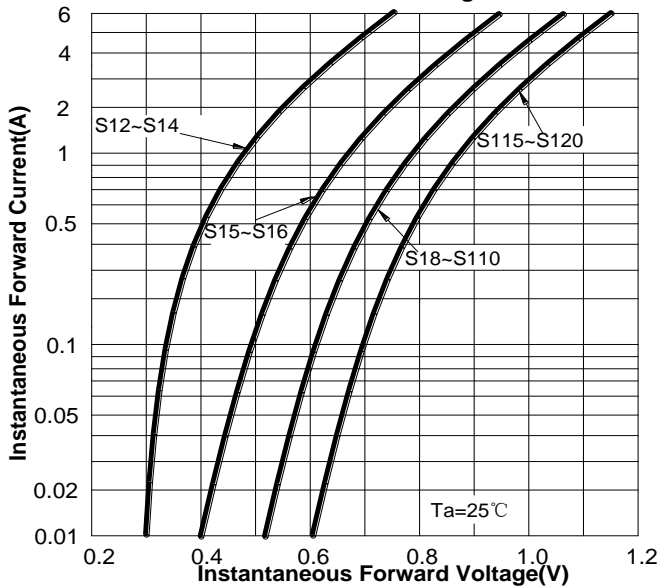
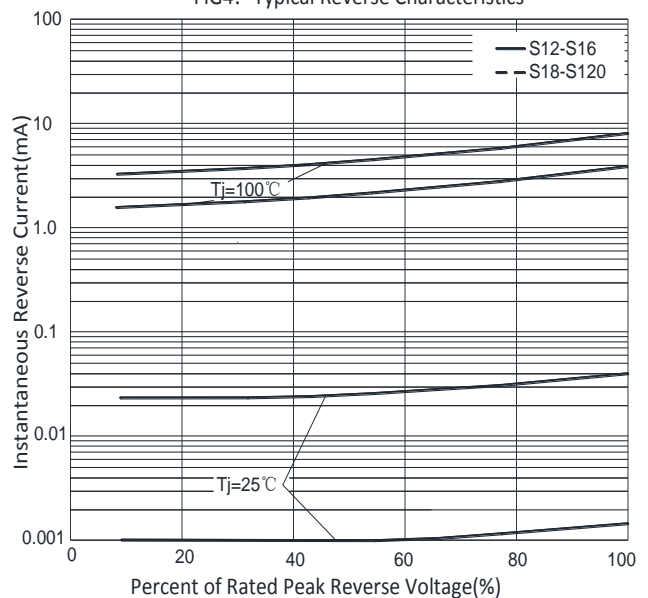
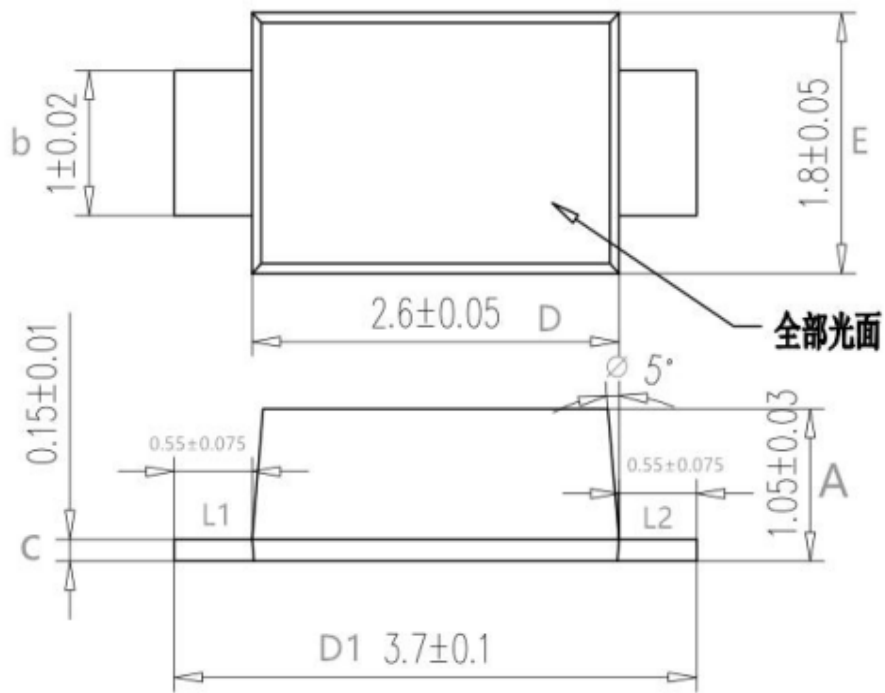


FIG4: Typical Reverse Characteristics





项目	公制 (mm)	
	MIN	MAX
*A	1.02	1.08
*b	0.98	1.02
*c	0.14	0.16
*D	2.55	2.65
*D1	3.60	3.80
*E	1.75	1.85
*L1	0.475	0.625
*L2	0.475	0.625
$\emptyset$	$4^\circ$	$6^\circ$
带*为检验尺寸		