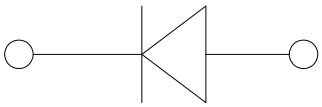
SU13

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, -compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (Tj=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SU13
Device marking code			**SU13**
Repetitive peak reverse voltage	V_{RRM}	V	30
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG1)	I_O	A	1.0
Surge(non-repetitive)forward current @ 60Hz half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	50
Current squared time @1ms≤t≤8.3ms Tj=25℃， Rating of per diode	I^2t	A^2s	10.3
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V D.C	Cj	pF	85
Storage temperature	T_{stg}	℃	-55 ~+150
Junction temperature	T_j	℃	-55 ~+150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	Min	Typ	Max
Instantaneous forward voltage drop per diode	V_F	V	I_{FM}=1.0A	-	0.31	0.36
DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I_{RRM}	mA	T_j=25℃	-	0.4	1.5

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

PARAMETER	SYMBOL	UNIT	SU13
Thermal Resistance	RθJ-A	℃/W	70[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

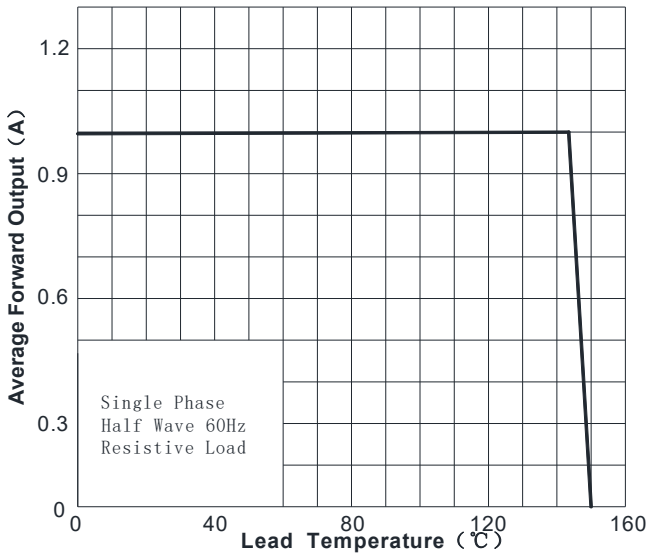


FIG2: Surge Forward Current Capability

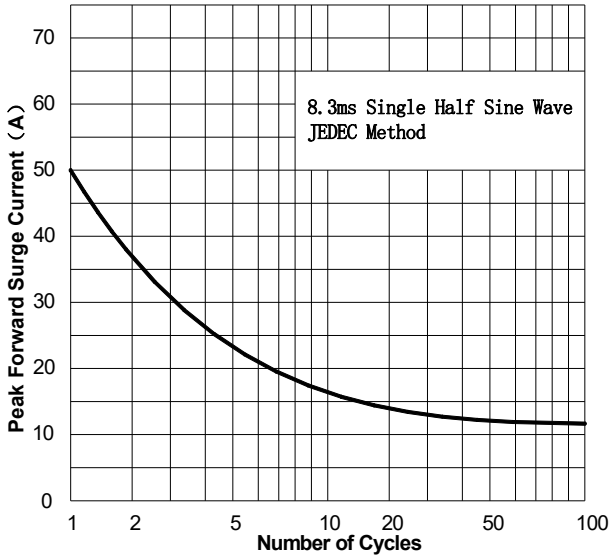


FIG3: Forward Voltage

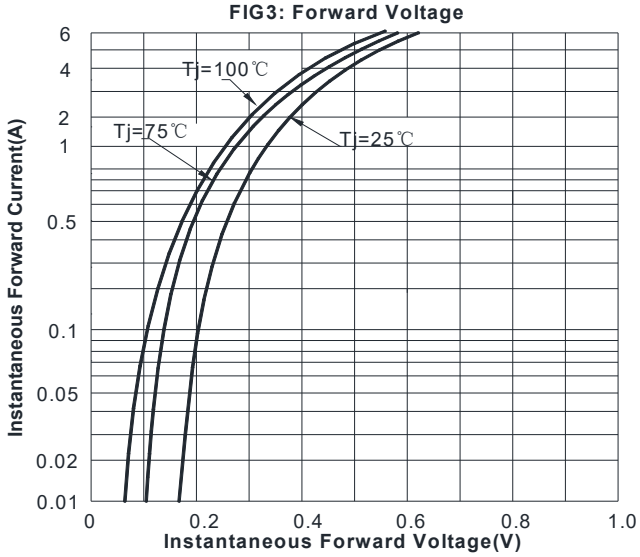
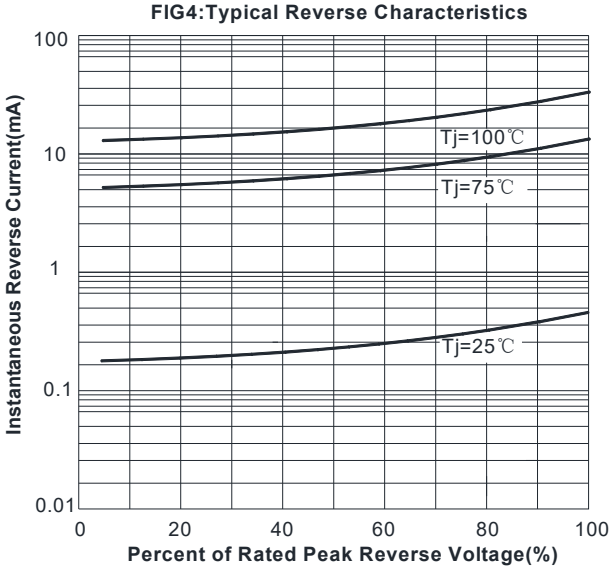
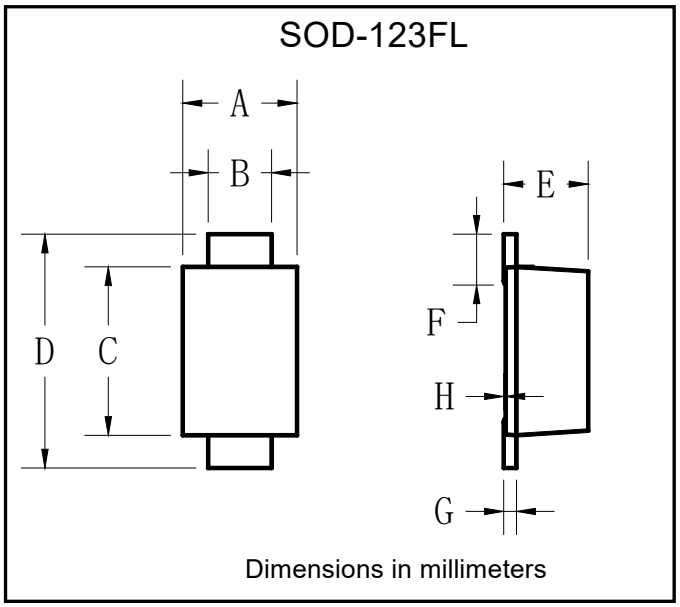


FIG4:Typical Reverse Characteristics

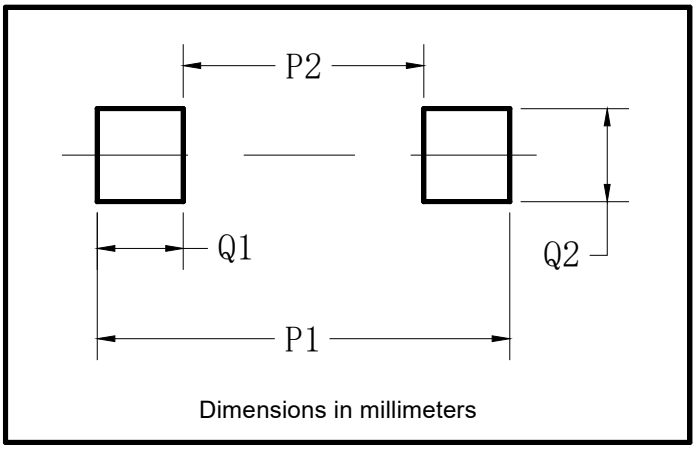


■ Outline Dimensions



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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