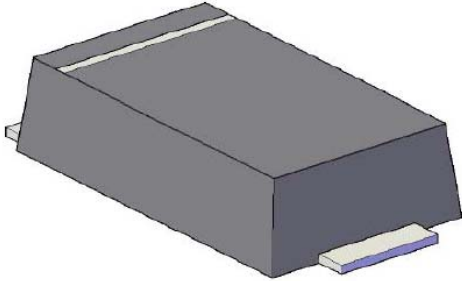


Surface Mount Schottky Rectifier

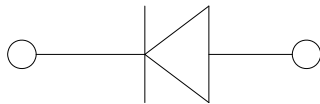


Features

- 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 Data

- **Package:** SOD-123HE
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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S320E
Device marking code			S320E
Repetitive peak reverse voltage	VRRM	V	200
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _O	A	3.0
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T _j =25°C	I _{FSM}	A	65
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150

■Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	S320E
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =3.0A	0.9
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I _{RRM}	mA	T _a =25°C	0.1
			T _a =100°C	5

Note1:Pulse test:300uS pulse width,1% duty cycle

Note2:Pulse test:pulse width 40mS



S320E

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	S36E
Thermal Resistance	R _{θJ-A}	°C/W	80
	R _{θJ-L}		20

■ Characteristics (Typical)

FIG1: I_o-T_L Curve

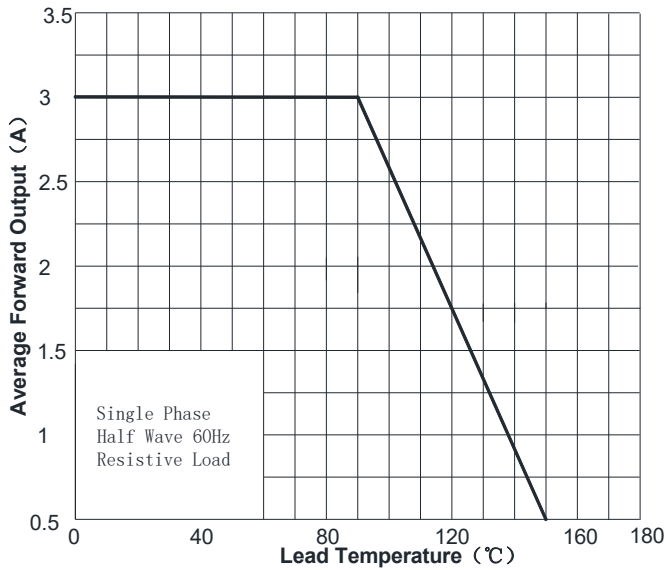


FIG2: Surge Forward Current Capability

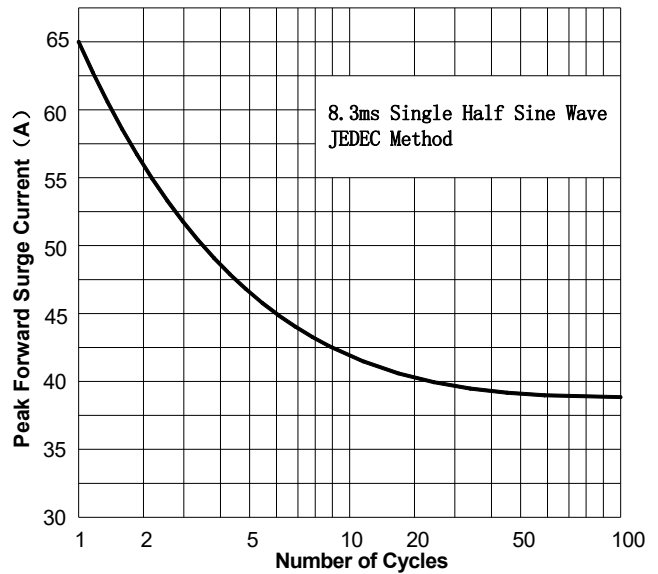


FIG3: Forward Voltage

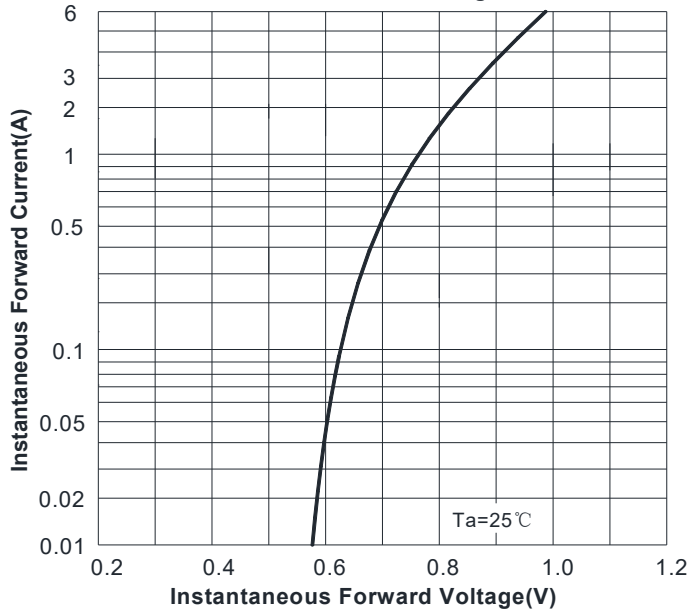
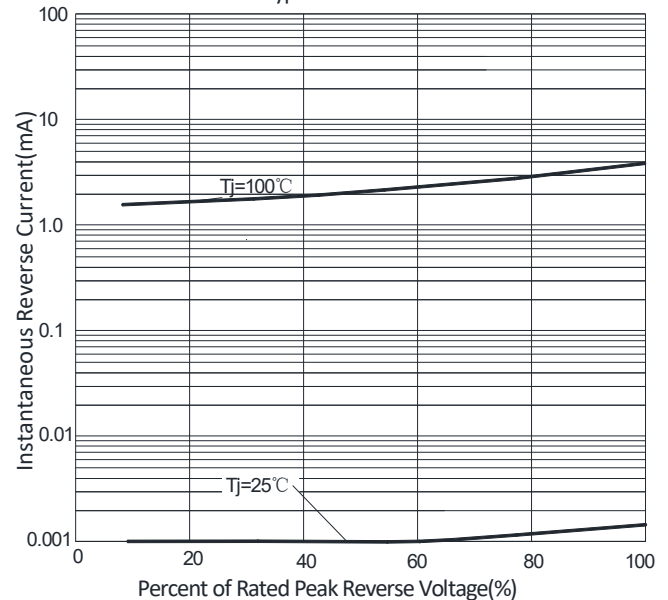
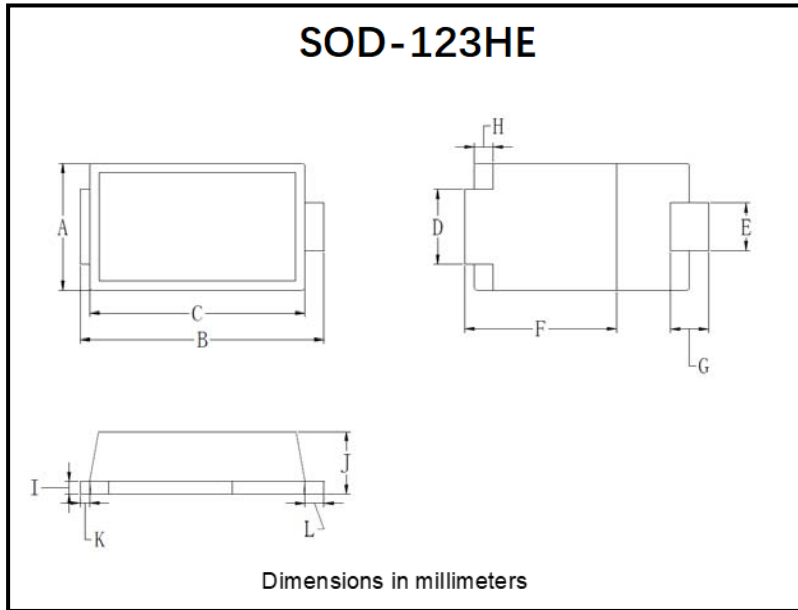


FIG4: Typical Reverse Characteristics

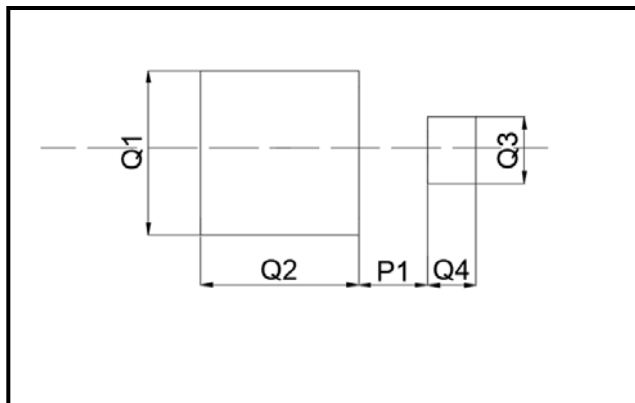


■ Outline Dimensions



SOD-123HE		
Dim	Min	Max
A	1.88	2.18
B	3.70	4.00
C	3.19	3.61
D	1.05	1.35
E	0.61	0.91
F	2.20	2.90
G	0.40	0.80
H	0.30 TYP	
I	0.10	0.30
J	0.85	1.15
K	0.00	0.30
L	0.15	0.45

■ Suggested pad layout



SOD-123HE	
Dim	Millimeters
P1	0.64
Q1	2.54
Q2	2.67
Q3	1.27



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