

SS14HE-HF Thru. SS120HE-HF

Reverse Voltage: 40 to 200 V

Forward Current: 1 A

RoHS Device
Halogen Free



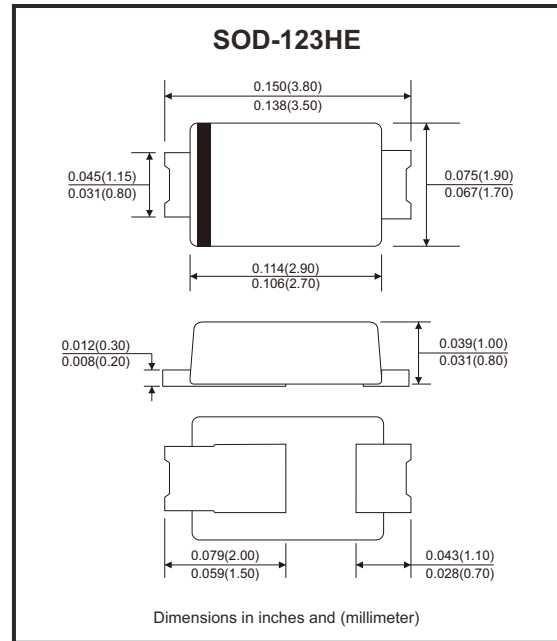
Features

- Metal silicon junction, majority carrier conduction.
- For surface mounted applications.
- Low power loss, high efficiency.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

Mechanical data

- Case: SOD-123HE, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.

Circuit Diagram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20%

Parameter	Symbols	SS14HE-HF	SS16HE-HF	SS110HE-HF	SS115HE-HF	SS120HE-HF	Units
Maximum repetitive peak reverse voltage	V_{RRM}	40	60	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	42	70	105	140	V
Maximum DC blocking voltage	V_{DC}	40	60	100	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	1					A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30					A
Max instantaneous forward voltage at 1A	V_F	0.55	0.70	0.85	0.95		V
Maximum DC reverse current at rated DC reverse voltage	I_R	0.3 10		0.2 5	0.1 2		mA
Typical junction capacitance (Note 1)	C_j	110	80				pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	100					°C/W
Operating junction temperature range	T_j	-55 to +125					°C
Storage temperature range	T_{stg}	-55 to +150					°C

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4V D.C.
2. P.C.B. mounted with 3.81 x 3.81 cm copper pad areas.

Typical Rating and Characteristic Curves (SS14HE-HF Thru. SS120HE-HF)

Fig.1 - Forward Current Derating Curve

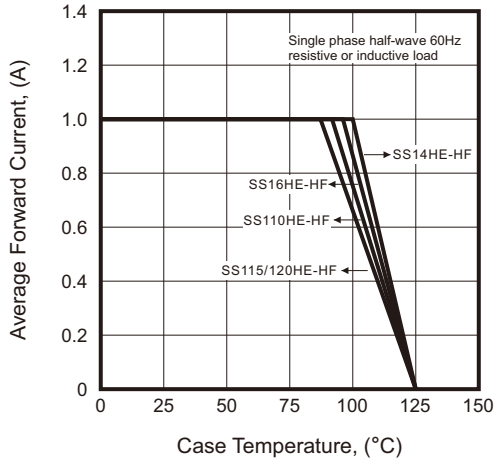


Fig.2 - Typical Reverse Characteristics

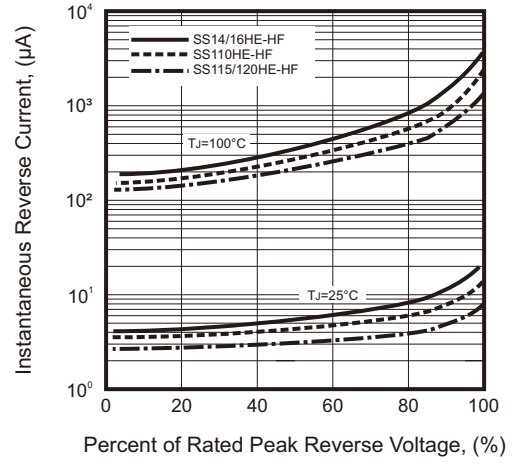


Fig.3 - Typical Forward Characteristic

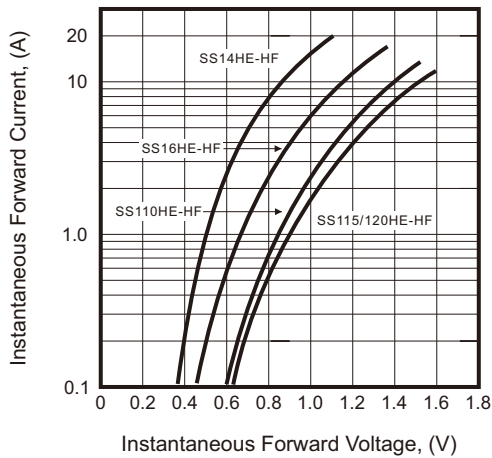


Fig.4 - Typical Junction Capacitance

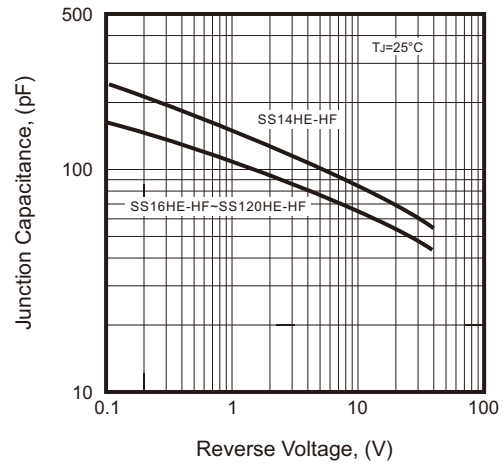
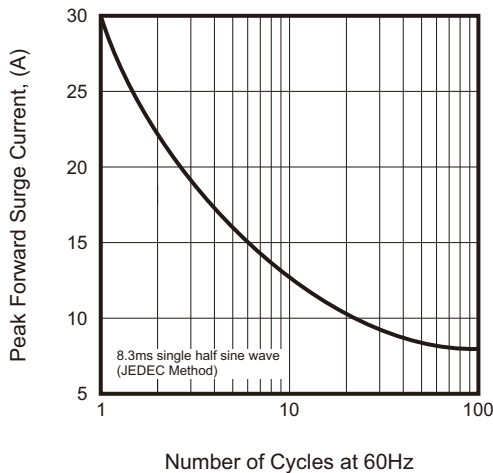
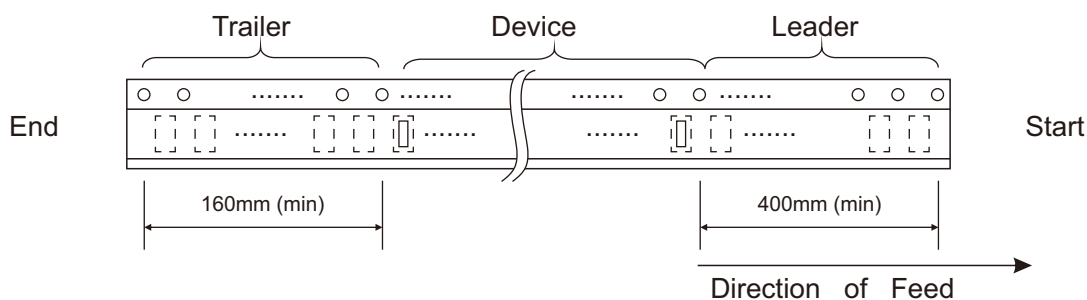
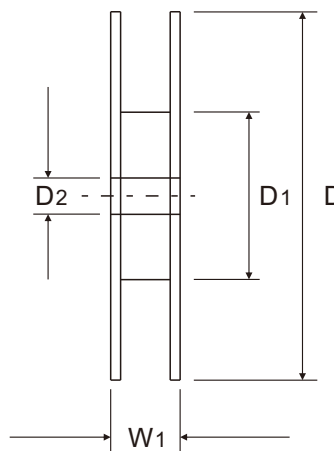
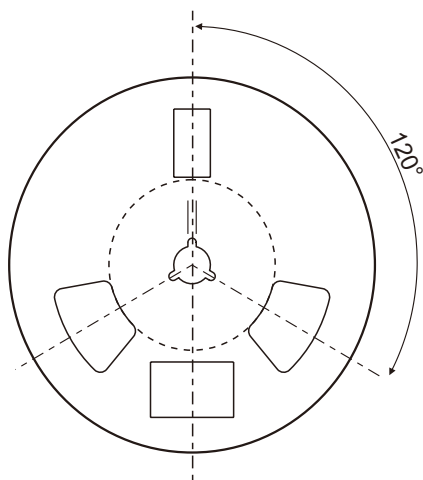
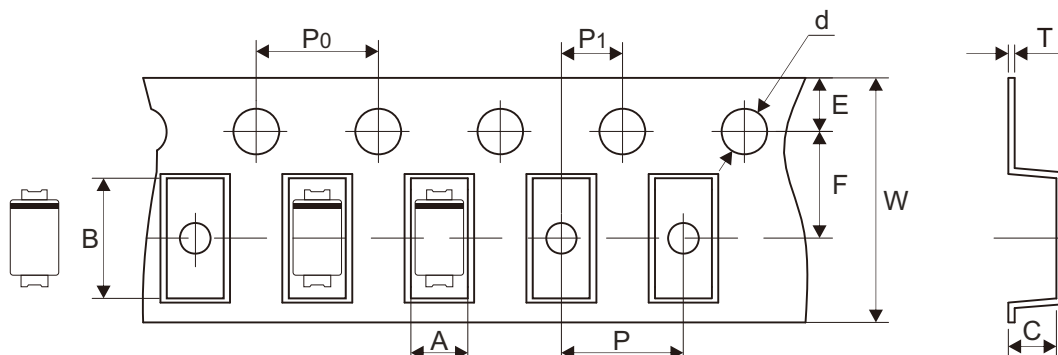


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current



Reel Taping Specification

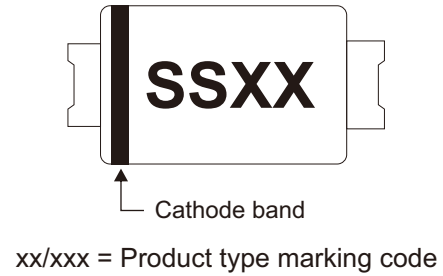


SOD-123HE	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.05 ± 0.10	3.90 ± 0.10	1.28 ± 0.05	1.55 ± 0.05	180.00 ± 1.00	60.00 ± 1.50	13.00 ± 0.20
	(inch)	0.081 ± 0.004	0.154 ± 0.004	0.050 ± 0.002	0.061 ± 0.002	7.087 ± 0.039	2.362 ± 0.059	0.512 ± 0.008

SOD-123HE	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.25 ± 0.02	8.00 ± 0.30	10.70 + 2.00 - 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.010 ± 0.001	0.315 ± 0.012	0.421 + 0.079 - 0.039

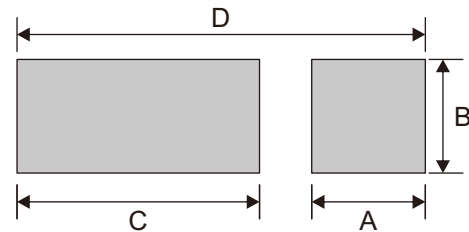
Marking Code

Part Number	Marking Code
SS14HE-HF	SS14
SS16HE-HF	SS16
SS110HE-HF	SS110
SS115HE-HF	SS115
SS120HE-HF	SS120



Suggested P.C.B. PAD Layout

SIZE	SOD-123HE	
	(mm)	(inch)
A	1.30	0.051
B	1.40	0.055
C	2.60	0.102
D	4.40	0.173



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123HE	3,000	7