

ASS14HS-HF

Reverse Voltage: 40V

Forward Current: 1A

RoHS Device

Halogen Free



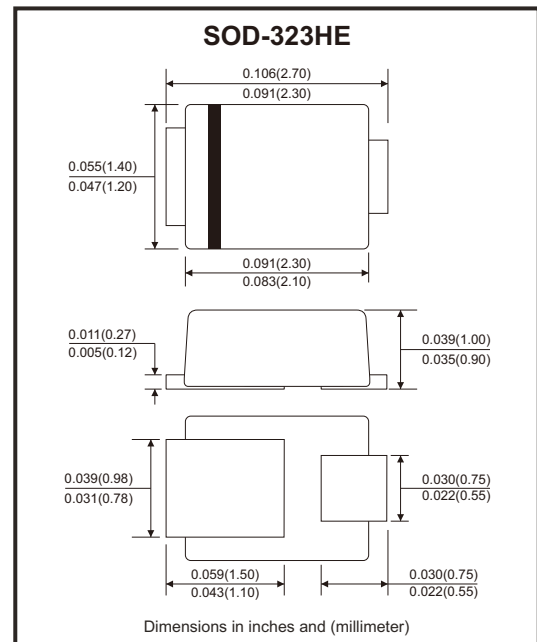
Features

- Low forward voltage drop.
- Ideal for automated placement.
- Low power losses, high efficiency.
- High forward surge capability.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOD-323HE, molded plastic.
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Polarity: Cathode line denotes the cathode end.
- Mounting position: Any.

Circuit Diagram



Maximum Ratings (at $T_J=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	40	V
Maximum RMS reverse voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum average forward rectified current at T_L (Fig.1)	I_o	1	A
Peak forward surge current, 8.3ms single half sine-wave	I_{FSM}	30	A
Voltage rate of change (rated V_R)	dV/dt	10000	V/ μ s
Operating junction temperature range	T_J	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

Thermal Characteristics (at $T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Symbol	Value	Unit
Thermal resistance (Note 1)	$R_{\theta JA}$	260	$^{\circ}\text{C}/\text{W}$
Thermal resistance (Note 1)	$R_{\theta JL}$	65	
Thermal resistance (Note 3)	$R_{\theta JL}$	30	
Thermal resistance (Note 2)	$R_{\theta J-SP}$	10	

Notes: 1. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B without copper pad areas.

2. Thermal resistance between junction and cathode tab solder point.

3. Thermal resistance between junction and lead mounted on P.C.B with 6mm x 6mm copper pad areas.

Electrical Characteristics (at TA=25°C, unless otherwise noted)

Parameter	Conditions		Symbol	Min.	Typ.	Max.	Unit
Instantaneous forward voltage	IF = 1A	TJ = 25°C	VF		0.5	0.55	V
		TJ = 125°C	VF			0.45	V
Reverse current	Rated VR	TJ = 25°C	IR		2	50	μA
		TJ = 125°C	IR			10	mA
Typical junction capacitance	VR = 4V, f = 1MHz		CJ		55		pF

Typical Rating and Characteristics Curves (ASS14HS-HF)

Fig.1 - Forward Current Derating Curve

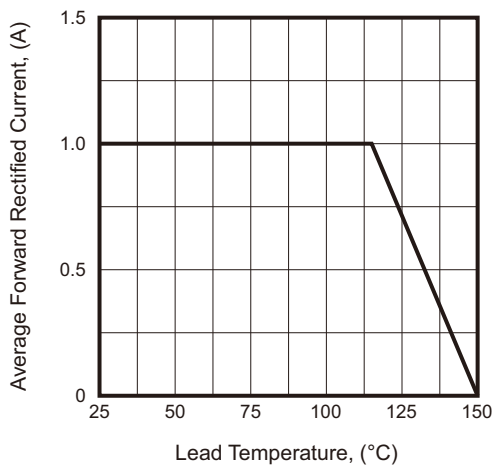


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

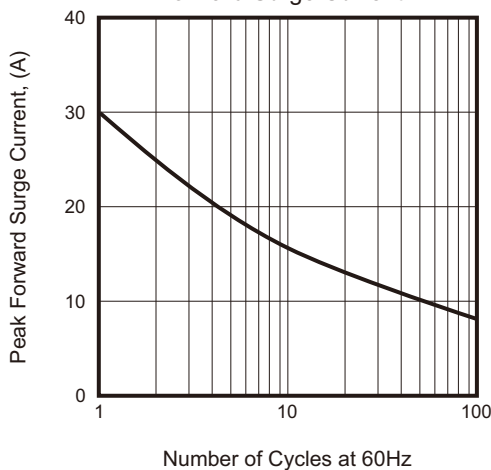


Fig.3 - Typical Forward Characteristics

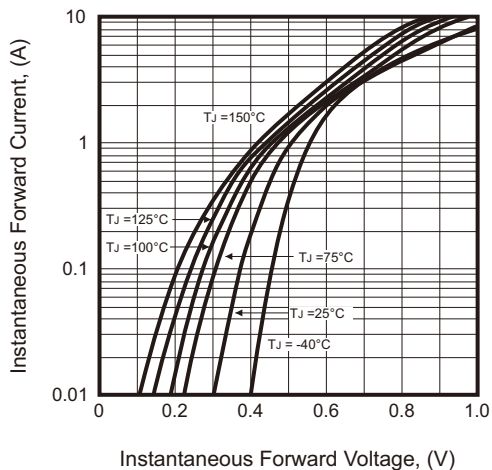
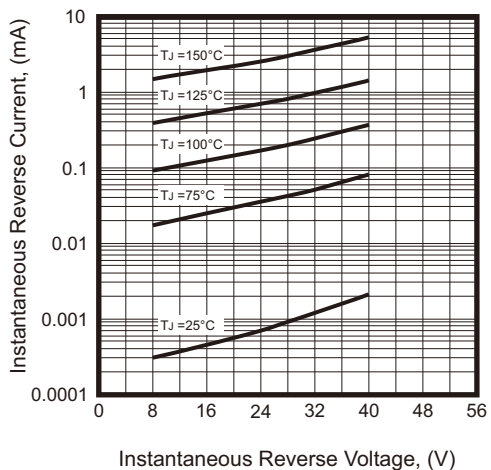
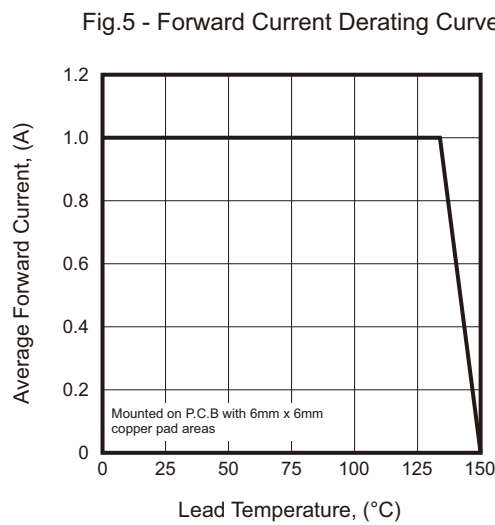


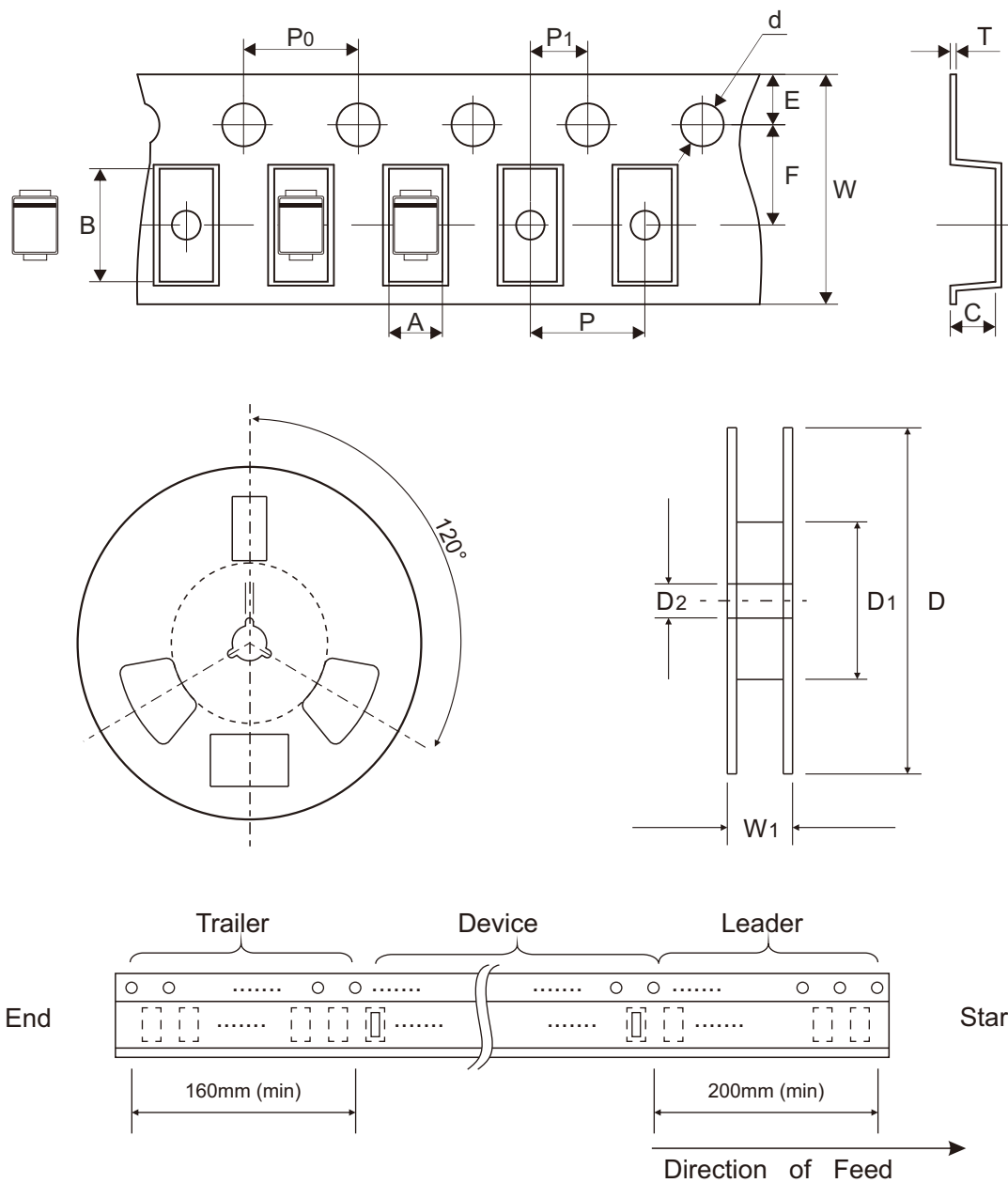
Fig.4 - Typical Reverse Leakage Characteristics



Typical Rating and Characteristics Curves (ASS14HS-HF)



Reel Taping Specification



	SYMBOL	A	B	C	d	D	D1	D2
SOD-323HE	(mm)	1.50 ± 0.10	2.80 ± 0.10	1.20 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	55.00 ± 0.50	13.30 ± 0.20
	(inch)	0.059 ± 0.004	0.110 ± 0.004	0.047 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.165 ± 0.020	0.524 ± 0.008

	SYMBOL	E	F	P	P0	P1	T	W	W1
SOD-323HE	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 ± 0.10	11.40 ± 0.30
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 ± 0.004	0.449 ± 0.012

Marking Code

Part Number	Marking Code
ASS14HS-HF	14

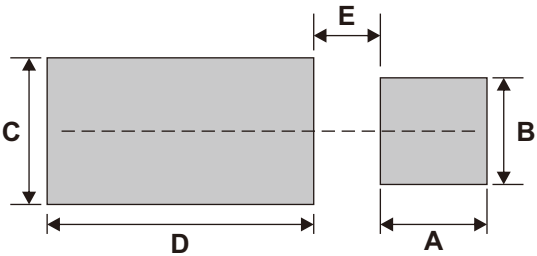


█ = Cathode band

XXX = Control code

Suggested P.C.B. PAD Layout

SIZE	SOD-323HE	
	(mm)	(inch)
A	0.80	0.031
B	0.80	0.031
C	1.10	0.043
D	2.00	0.079
E	0.50	0.020



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-323HE	3,000	7