

ASS115HS-HF

Reverse Voltage: 150V

Forward Current: 1A

RoHS Device

Halogen Free

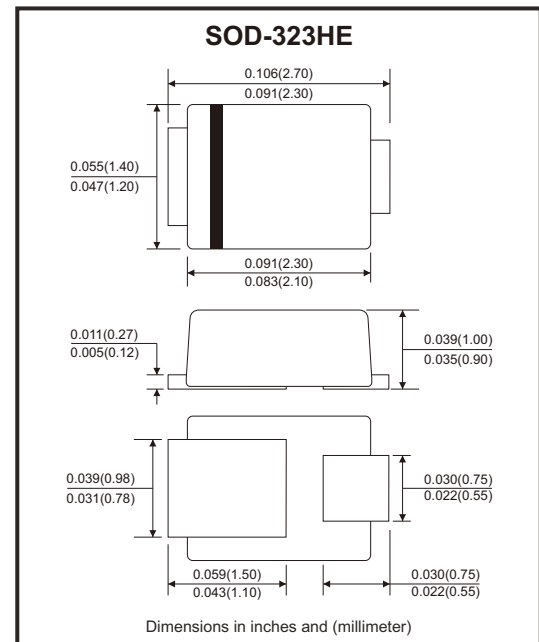


Features

- Low profile package.
- 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°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V _{RRM}	150	V
Maximum RMS reverse voltage	V _{RMS}	105	V
Maximum DC blocking voltage	V _{DC}	150	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/μs
Operating junction temperature range	T _J	-55 to +175	°C
Storage temperature range	T _{STG}	-55 to +175	°C

Thermal Characteristics (at T_A=25°C, unless otherwise noted)

Parameter	Symbol	Value	Unit
Thermal resistance (Note 1)	R _{θJA}	260	°C/W
Thermal resistance (Note 1)	R _{θJL}	70	
Thermal resistance (Note 2)	R _{θJ-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.

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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Instantaneous forward voltage	$I_F = 1\text{A}$	$T_J = 25^\circ\text{C}$	V_F	0.8	0.9	V
		$T_J = 125^\circ\text{C}$	V_F		0.7	V
Reverse current	Rated V_R	$T_J = 25^\circ\text{C}$	I_R		1	μA
		$T_J = 125^\circ\text{C}$	I_R		50	μA
Typical junction capacitance	$V_R = 4\text{V}$, $f = 1\text{MHz}$	C_J		25		pF

Typical Rating and Characteristics Curves (ASS115HS-HF)

Fig.1 - Forward Current Derating Curve

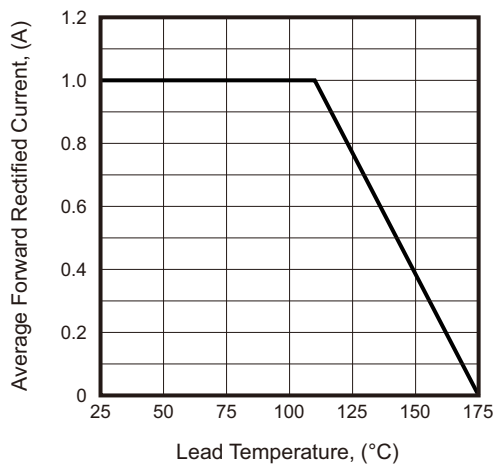


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

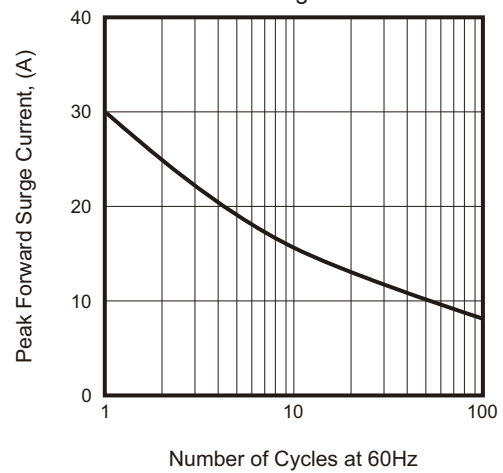


Fig.3 - Typical Instantaneous Forward Characteristics

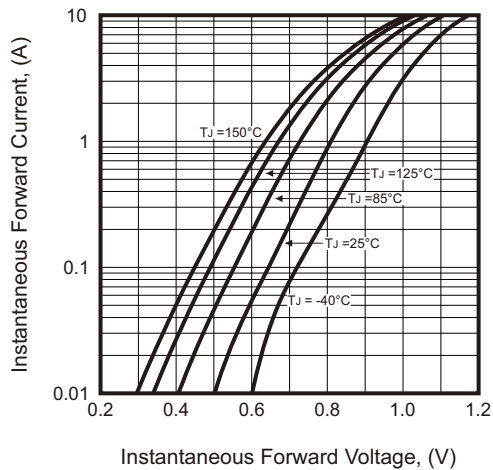
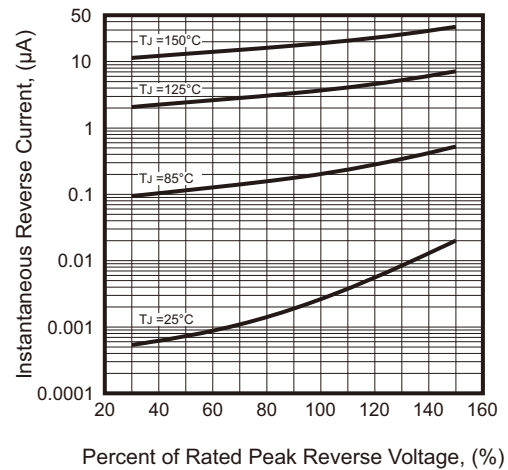
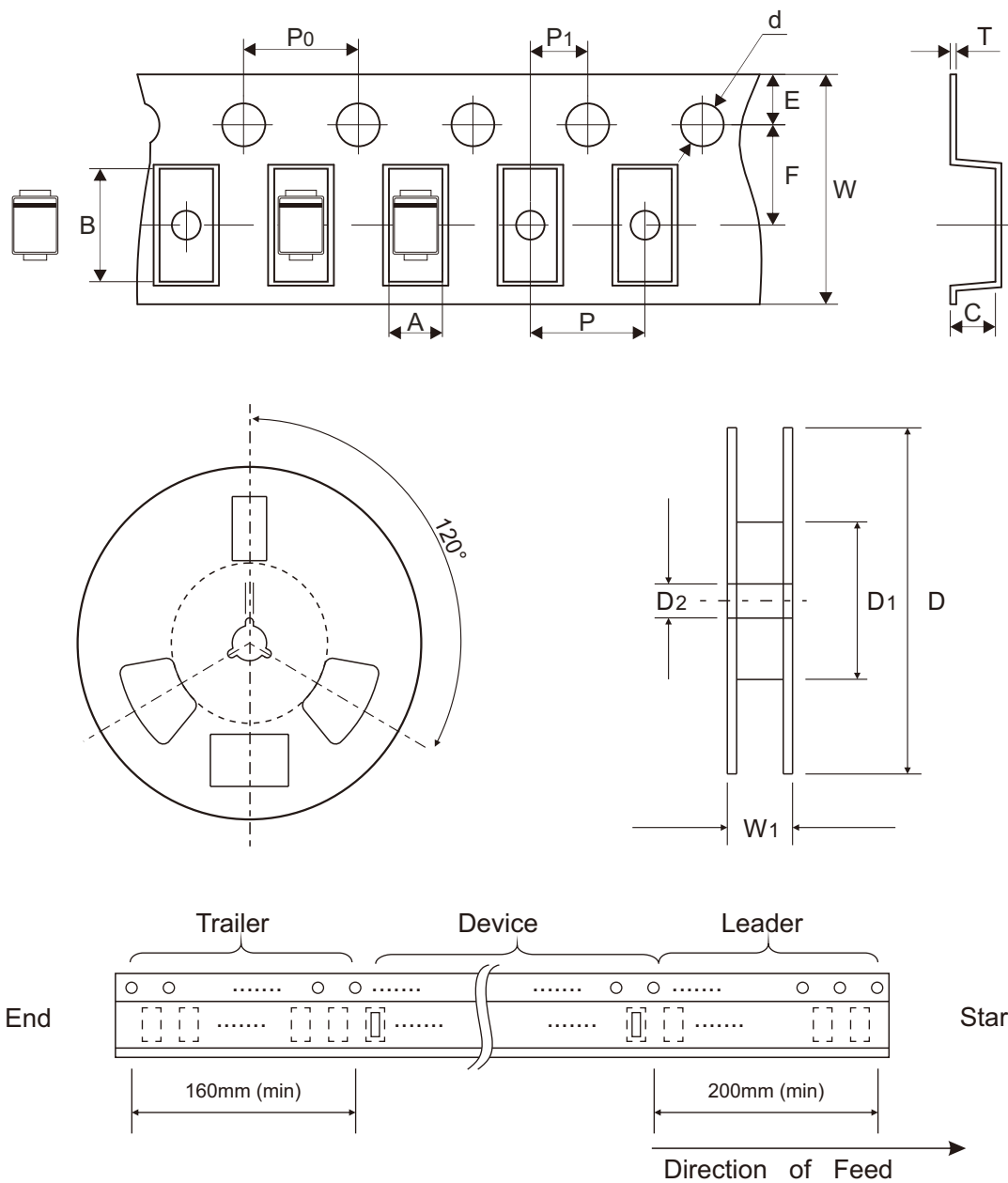


Fig.4 - Typical Reverse Leakage Characteristics



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
ASS115HS-HF	115

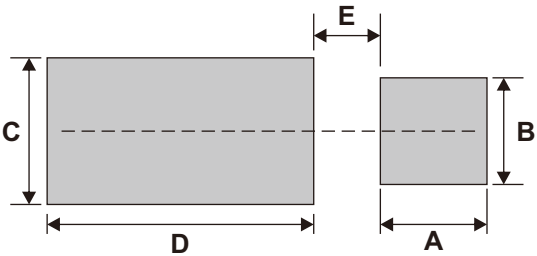


 = Cathode band

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