

## S1AWS-HF Thru. S1MWS-HF

Reverse Voltage: 50 to 1000 V

Forward Current: 1.0 A

RoHS Device

Halogen Free



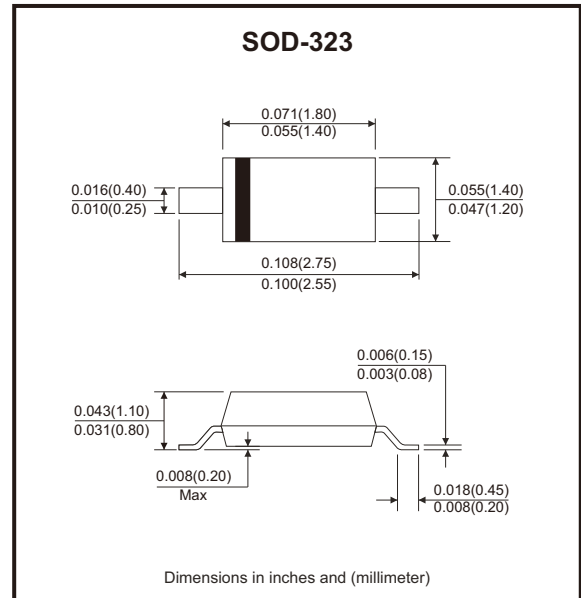
### Features

- For surface mounted application.
- Low profile package.
- Glass passivated chip junction.
- Easy to pick and place.

### Mechanical data

- Case: SOD-323, 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	S1AWS-HF	S1BWS-HF	S1DWS-HF	S1GWS-HF	S1JWS-HF	S1KWS-HF	S1MWS-HF	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	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	$I_{FSM}$	15							A
Maximum instantaneous forward voltage at 1A	$V_F$	1.1							V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	5 50							$\mu A$
Typical thermal resistance (Note 1)	$R_{\theta JA}$	55							°C/W
Typical reverse recovery time (Note 2)	$t_{rr}$	1.8							$\mu s$
Typical junction capacitance (Note 3)	$C_j$	5							pF
Operating and storage temperature range	$T_j, T_{stg}$	-55 to +150							°C

Notes: 1. P.C.B. mounted with 0.2" x 0.2" (5 x 5mm) copper pad areas.  
2. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .  
3. Measured at 1 MHz and applied reverse voltage of 4V D.C.

## Rating and Characteristic Curves (S1AWS-HF Thru. S1MWS-HF)

Fig.1 - Forward Current Derating Curve

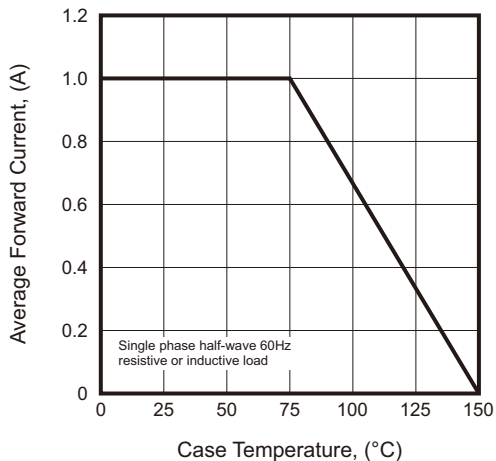


Fig.2 - Typical Instantaneous Reverse Characteristics

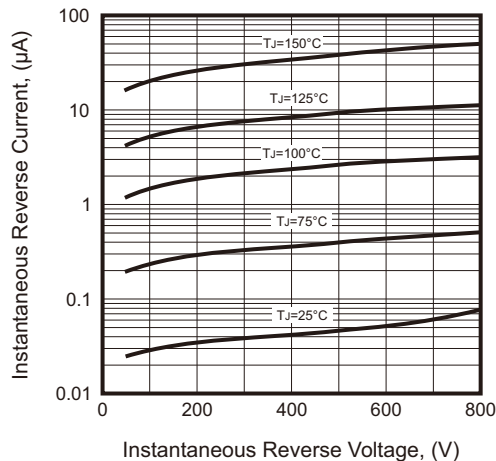


Fig.3 - Typical Forward Characteristic

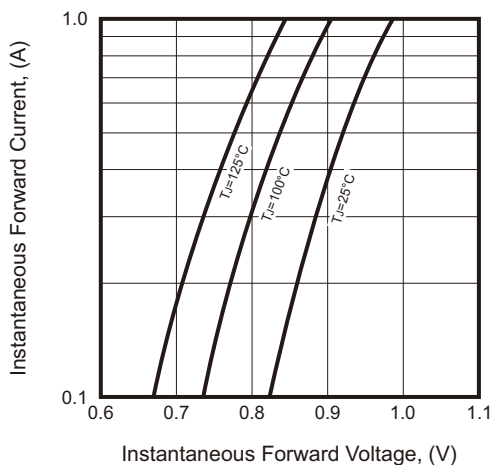


Fig.4 - Typical Junction Capacitance

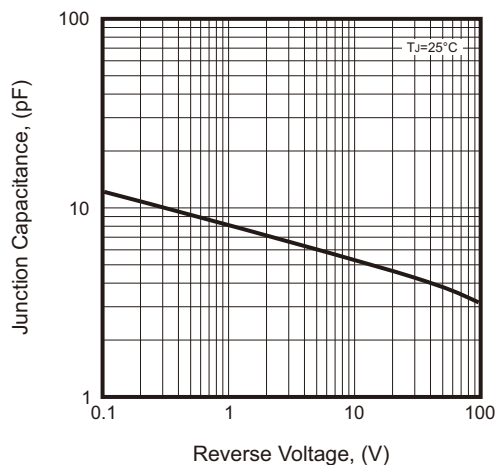
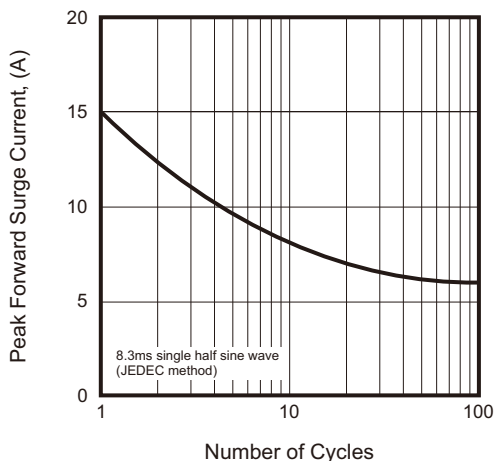
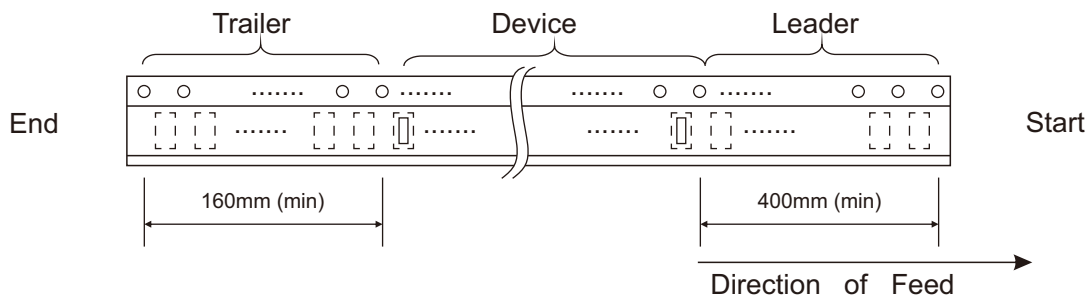
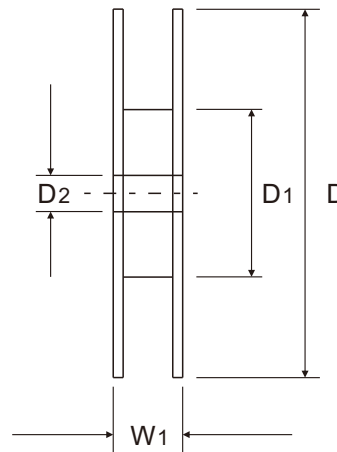
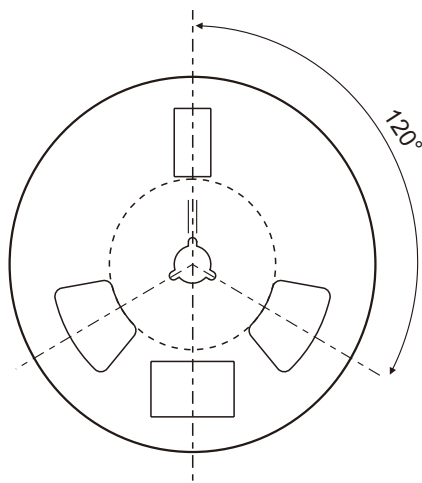
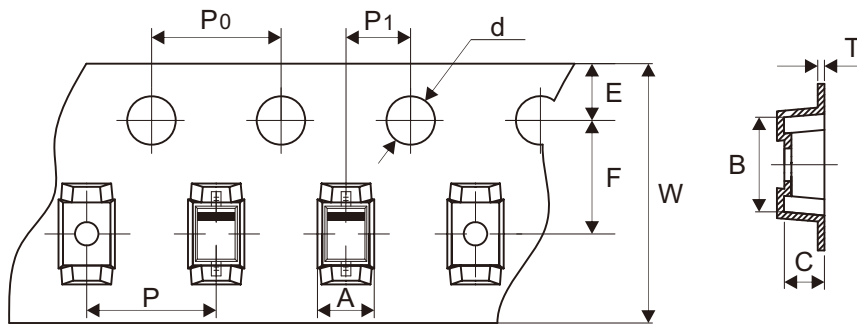


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current



## Reel Taping Specification

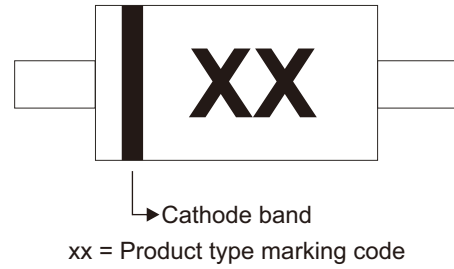


SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.41 ± 0.10	2.90 ± 0.10	1.25 ± 0.10	1.55 ± 0.05	178.00 ± 3.00	54.50 ± 2.00	13.30 ± 0.30
	(inch)	0.056 ± 0.004	0.114 ± 0.004	0.049 ± 0.004	0.061 ± 0.002	7.008 ± 0.118	2.146 ± 0.079	0.524 ± 0.012

SOD-323	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.01	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	8.00 + 0.30 - 0.10	12.40 ± 0.50
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.0004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 + 0.012 - 0.004	0.488 ± 0.020

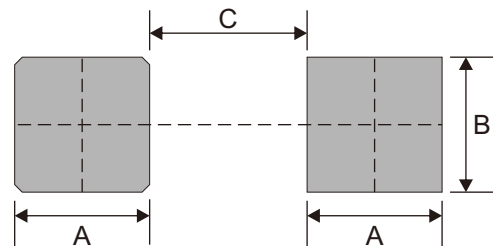
## Marking Code

Part Number	Marking Code
S1AWS-HF	1A
S1BWS-HF	2A
S1DWS-HF	3A
S1GWS-HF	4A
S1JWS-HF	5A
S1KWS-HF	6A
S1MWS-HF	7A



## Suggested P.C.B. PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	1.20	0.047
B	1.20	0.047
C	1.40	0.055



## Standard Packaging

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