

Surface Mount Glass Passivated Standard Rectifier
Reverse Voltage -50~1000 V
Forward Current - 1.0A

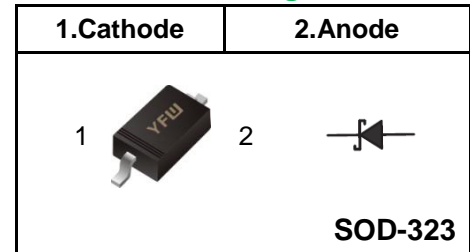
FEATURES

- ◆ Low Forward Voltage Drop
- ◆ Guard Ring Construction for Transient Protection
- ◆ Negligible Reverse Recovery Time
- ◆ Low Capacitance
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SOD-323
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 5.48mg /0.00019oz

Pinning



Marking Code

SM4001WS	1A
SM4002WS	2A
SM4003WS	3A
SM4004WS	4A
SM4005WS	5A
SM4006WS	6A
SM4007WS	7A

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbols	SM4001WS	SM4002WS	SM4003WS	SM4004WS	SM4005WS	SM4006WS	SM4007WS	Units
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
RMS reverse voltage	V_{RMS}	35	70	140	280	420	560	700	V
Working Peak Reverse 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 1A	V_F	1.1							v
Maximum DC Reverse Current Ta=25 °C at Rated DC Blocking Voltage Ta=125 °C	I_R	5 50							uA
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	55							°C/W
Typical reverse recovery time ⁽²⁾	T_{rr}	1.8							uS
Typical junction capacitance ⁽³⁾	C_j	5							pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

(1) P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) 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 4 V D.C

Fig.1 Forward Current Derating Curve

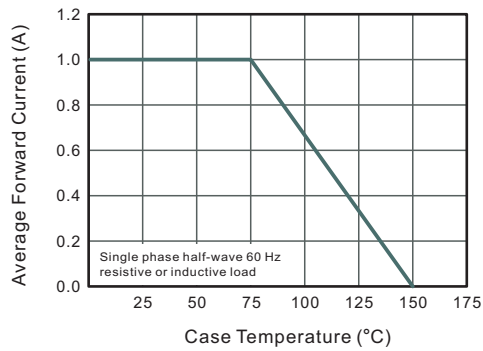


Fig.2 Typical Instaneous Reverse Characteristics

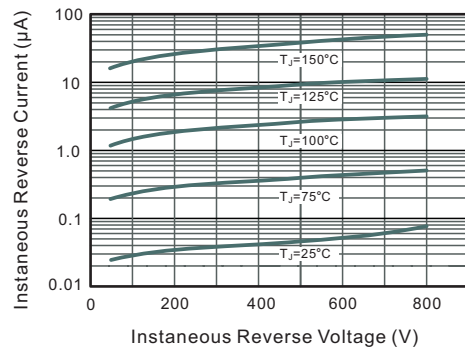


Fig.3 Typical Forward Characteristic

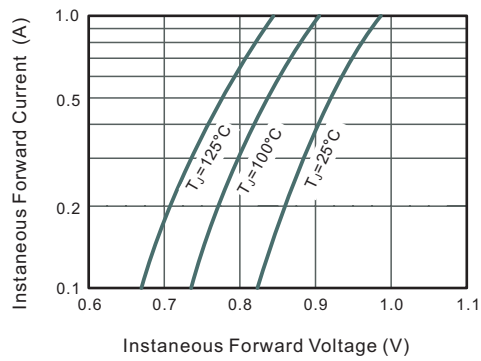


Fig.4 Typical Junction Capacitance

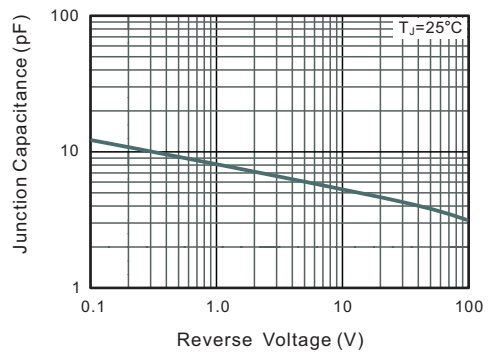
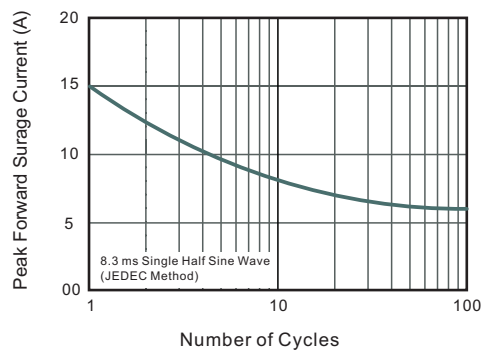


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



Ordering information

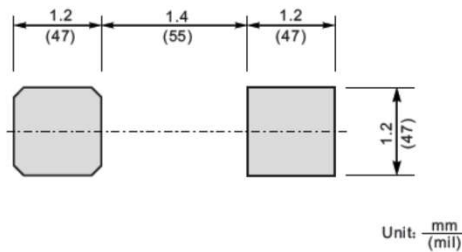
Package	Packing Description	Packing Quantity
SOD-323	Tape/Reel,7"reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOD-323

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
C	0.08	0.15	3.1	5.9
D	1.2	1.4	47	55
E	1.4	1.8	63	70
E1	2.55	2.75	100	108
b	0.25	0.4	9.8	16
L1	0.2	0.45	7.9	16
A1	-	0.2	-	8
∠	9°			

The recommended mounting pad size



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