

Small Signal Product

Surface Mount, Switching Schottky Barrier Diode

FEATURES

- Low forward voltage drop
- Guard ring construction for transient protection
- Negligible reverse recovery time
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21


SOD-123


MECHANICAL DATA

- Case: SOD-123 small outline plastic package
- Molding compound meets UL 94 V-0 flammability rating
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 gaa
- High temperature soldering guaranteed : 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 0.01 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	SD101AW	SD101BW	SD101CW	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	60	50	40	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	42	35	28	V
Forward Continue Current (Note 1)	I_{FM}	15			mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 1$ s @ $t = 10 \mu\text{s}$	I_{FSM}	50			mA
		2			A
Power Dissipation (Note 1)	P_D	400			mW
Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	300			$^{\circ}\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125			$^{\circ}\text{C}$

Note 1: Valid provided that terminals are kept at ambient temperature.

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PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	SD101AW $I_R = 10 \mu A$	60	-	V
	SD101BW $I_R = 10 \mu A$	50	-	
	SD101CW $I_R = 10 \mu A$	40	-	
Peak Reverse Current	SD101AW $V_R = 50 V$	-	200	nA
	SD101BW $V_R = 40 V$			
	SD101CW $V_R = 30 V$			
Forward Voltage Drop (Note 2)	SD101AW $I_R = 1.0 mA$	-	0.41	V
	SD101BW $I_R = 1.0 mA$		0.40	
	SD101CW $I_R = 1.0 mA$		0.39	
	SD101AW $I_R = 15 mA$		1.00	
	SD101BW $I_R = 15 mA$		0.95	
	SD101CW $I_R = 15 mA$		0.90	
Junction Capacitance $V_R = 0 V, f = 1.0 MHz$	SD101AW	-	2.0	pF
	SD101BW		2.1	
	SD101CW		2.2	
Reverse Recovery Time	$I_F = I_R = 5.0 mA$ $I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$	-	1.0	ns

Note 2: Pulse test: pulse width = 300 μs , duty cycle $\leq 2\%$.

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25^\circ C$ unless otherwise noted)

Fig.1 Typical Forward Characteristics

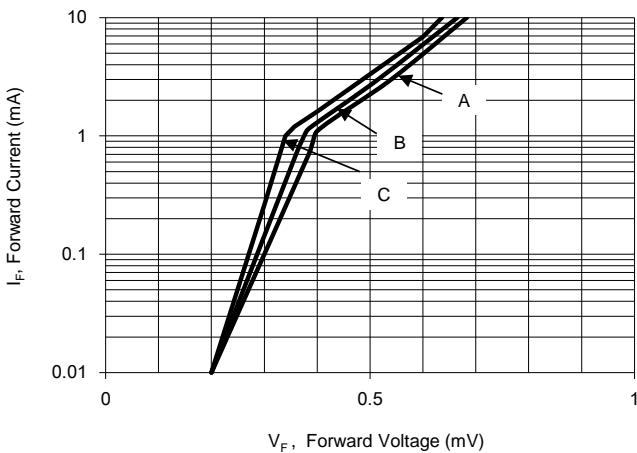
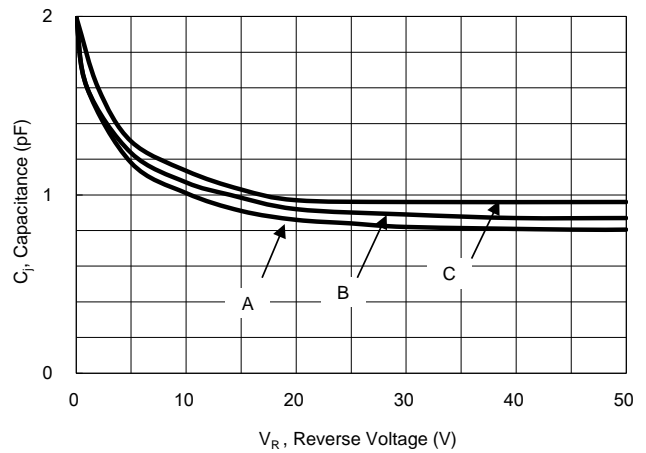


Fig. 2 Typ. Junction Capacitance VS. Reverse Voltage



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ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SD101xW (Note 1, 2)	RH	G	SOD-123	3K / 7" Reel

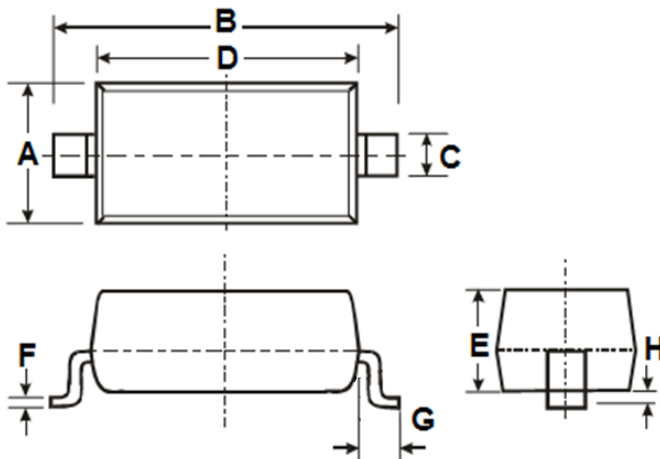
Note 1: "x" is Device Code from "A" - "C".

Note 2: Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SD101AW RHG	SD101AW	RH	G	Green compound

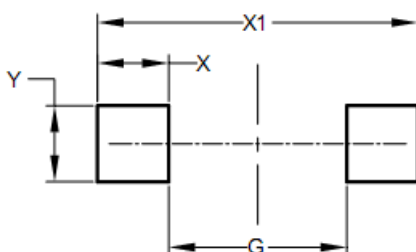
PACKAGE OUTLINE DIMENSIONS

SOD-123



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

SUGGEST PAD LAYOUT



DIM.	Unit (mm)		Unit (inch)	
	Min	Min	Min	Min
G	2.25		0.089	
X	0.90		0.035	
X1	4.05		0.159	
Y	0.95		0.037	

MARKING

Part No.	Marking
SD101AW	S1
SD101BW	S2
SD101CW	S3

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