

Small Signal Product

## Surface Mount, Switching Schottky Barrier Diode

### FEATURES

- Low forward voltage drop
- Guard ring construction for transient protection
- Negligible reverse recovery time
- Packing code with suffix "G" means green compound (halogen-free)


**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 guar
- High temperature soldering guaranteed : 260°C/10s
- Polarity: Indicated by cathode band
- Weight: 0.01 g (approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER	SYMBOL	SD101AW	SD101BW	SD101CW	UNIT
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	60	50	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	42	35	28	V
Forward Continue Current (Note 1)	I <sub>FM</sub>	15			mA
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	50			mA
					@ t = 10 μs
Power Dissipation (Note 1)	P <sub>d</sub>	400			mW
Thermal Resistance Junction to Ambient (Note 1)	R <sub>θJA</sub>	300			°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125			°C

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PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage				
SD101AW $I_R = 10 \mu A$	$V_{(BR)}$	60	-	V
SD101BW $I_R = 10 \mu A$		50		
SD101CW $I_R = 10 \mu A$		40		
Peak Reverse Current				
SD101AW $V_R = 50 V$	$I_R$		200	nA
SD101BW $V_R = 40 V$				
SD101CW $V_R = 30 V$				
Forward Voltage Drop (Note 2)				
SD101AW $I_R = 1.0 mA$	$V_F$		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	$C_J$		2.0	pF
SD101BW		-	2.1	
SD101CW			2.2	
Reverse Recovery Time $I_F = I_R = 5.0 mA$ $I_{rr} = 0.1 \times I_R, R_L = 100 \Omega$	$t_{rr}$	-	1.0	ns

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

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

RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Typical Forward Characteristics

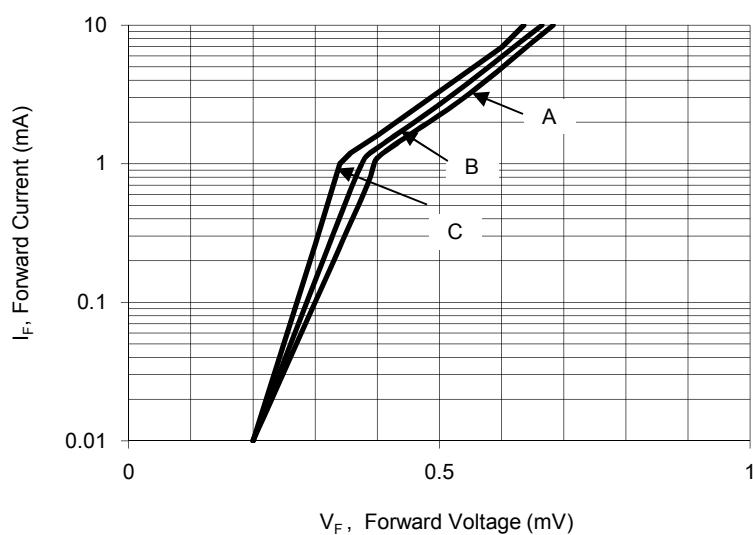
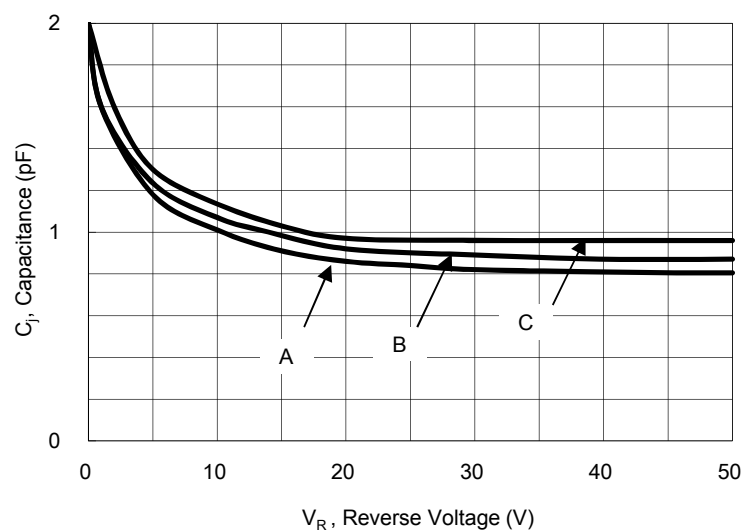


Fig. 2 Typ. Junction Capacitance VS. Reverse Voltage



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ORDERING INFORMATION					
PART NO.	PART NO. SUFFIX (Note 2)	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
SD101xW (Note 1)	-xx	RH	G	SOD-123	3,000 / 7" Reel
		RF			

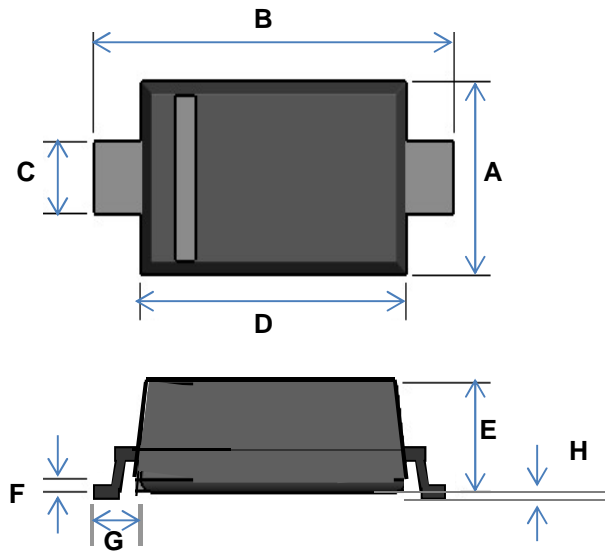
Note 1: "x" is Device Code from "A" thru "C".

Note 2: Part No. Suffix „-xx “ would be used for special requirement

EXAMPLE					
PREFERRED PART NO.	PART NO.	PART NO. SUFFIX	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
SD101AW RH	SD101AW		RH		Multiple manufacture source
SD101AW RHG	SD101AW		RH	G	Multiple manufacture source Green compound
SD101AW-D0 RFG	SD101AW	-D0	RF	G	Define manufacture source Green compound

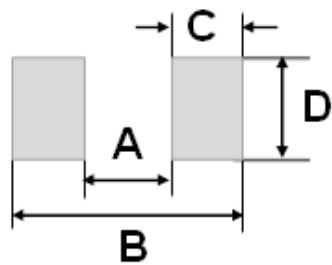
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PACKAGE OUTLINE DIMENSIONS  
**SOD-123**



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)	
	Typ.		Typ.	
A	2.36		0.093	
B	4.19		0.165	
C	0.91		0.036	
D	1.22		0.048	

MARKING

Part No.	Marking
SD101AW	S1
SD101BW	S2
SD101CW	S3

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