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_A=25°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 ≦ 1.0 s	I_{FSM}	50			mA
	@ t = 10 μs		2			A
Power Dissipation	(Note 1)	P_d	400			mW
Thermal Resistance Junction to Ambient	(Note 1)	$R_{\theta JA}$	300			°C/W
Operating and Storage Temperature Range		T_J , T_{STG}	-65 to +125			°C

PARAMETER			SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage						
	SD101AW	I_R = 10 μA	$V_{(BR)}$	60	-	V
	SD101BW	I_R = 10 μA		50		
	SD101CW	I_R = 10 μA		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	SD101AW	I_R = 1.0 mA	V_F	-	0.41	V
(Note 2)	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		C_J	-		pF
	SD101AW				2.0	
	SD101BW				2.1	
	SD101CW				2.2	
Reverse Recovery Time	I_F = I_R = 5.0 mA		t_{rr}	-	1.0	ns
	I_{rr} = 0.1 × I_R , R_L = 100 Ω					

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

Note 2: Pulse test: pulse width = 300 μs , duty cycle ≦ 2%.

RATINGS AND CHARACTERISTICS CURVES

(T_A=25℃ unless otherwise noted)

Fig.1 Typical Forward Characteristics

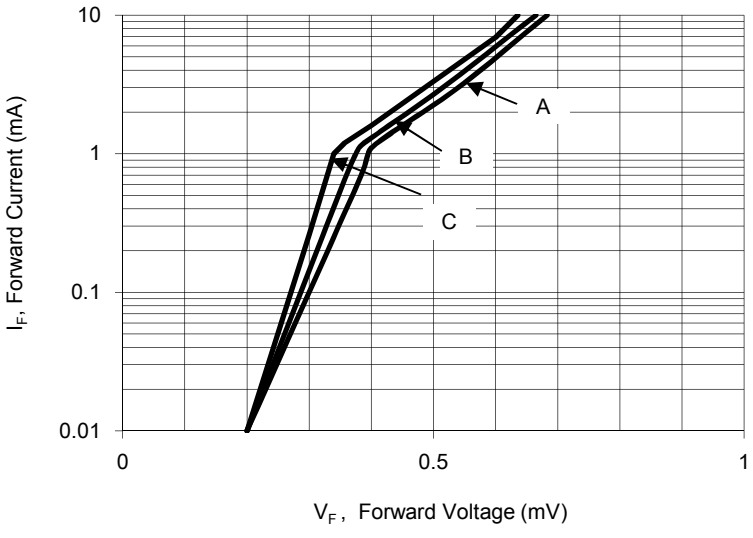
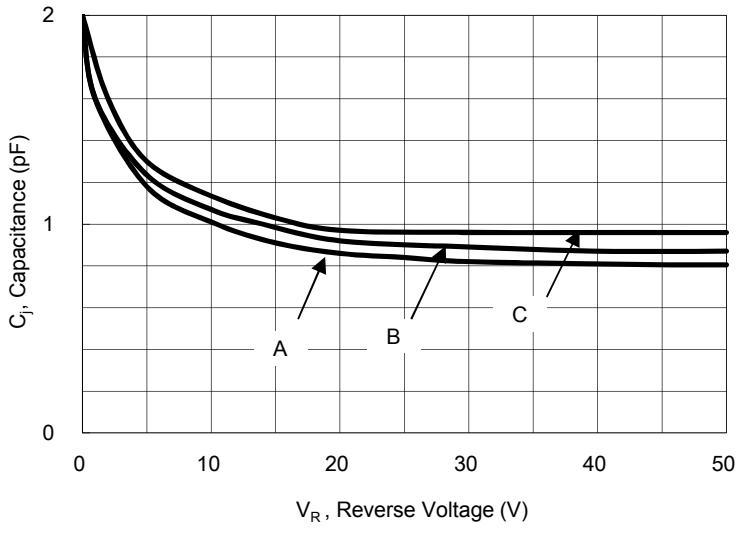


Fig. 2 Typ. Junction Capacitance VS. Reverse Voltage



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			

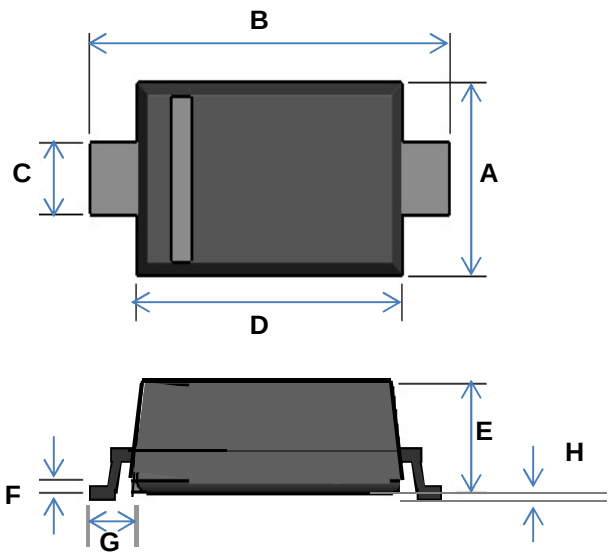
Note 1: "x" is Device Code from "A" thru "C".

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

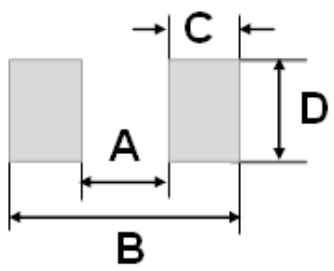
PACKAGE OUTLINE DIMENSIONS

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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