SPICE MODEL: 1N5711W

1N5711W

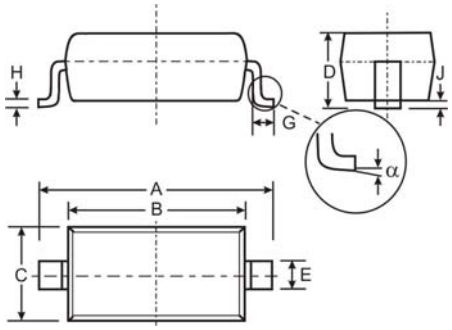
SURFACE MOUNT SCHOTTKY BARRIER DIODE

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Fast Switching Time
- Low Reverse Capacitance
- Surface Mount Package Ideally Suited for Automatic Insertion
- **Lead Free/RoHS Compliant (Note 3)**

Mechanical Data

- Case: SOD-123
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe)
- Polarity: Cathode Band
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.01 grams (approximate)



SOD-123		
Dim	**Min**	**Max**
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.45	0.65
	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
α	0°	8°
All Dimensions in mm		

Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	70	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	V
Maximum Forward Current	I_{FM}	15	mA
Power Dissipation (Note 1)	P_d	333	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	300	°C/W
Operating Temperature Range	T_j	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	70	—	—	V	I_R = 10μA
Forward Voltage Drop	V_F	—	—	0.41 1.00	V	I_F = 1.0mA I_F = 15mA
Reverse Leakage Current (Note 2)	I_R	—	—	200	nA	V_R = 50V
Total Capacitance	C_T	—	—	2.0	pF	V_R = 0V, f = 1.0MHz
Reverse Recovery Time	t_{rr}	—	—	1.0	ns	I_F = I_R= 5.0mA I_{rr} = 0.1 x I_R, R_L = 100Ω

Notes:
1. Part mounted on FR-4 board with recommended pad layout, which can be found on our website at http://www.diodes.com/datasheets/ap02001.pdf.
2. Short duration test pulse used to minimize self-heating effect.
3. No purposefully added lead.

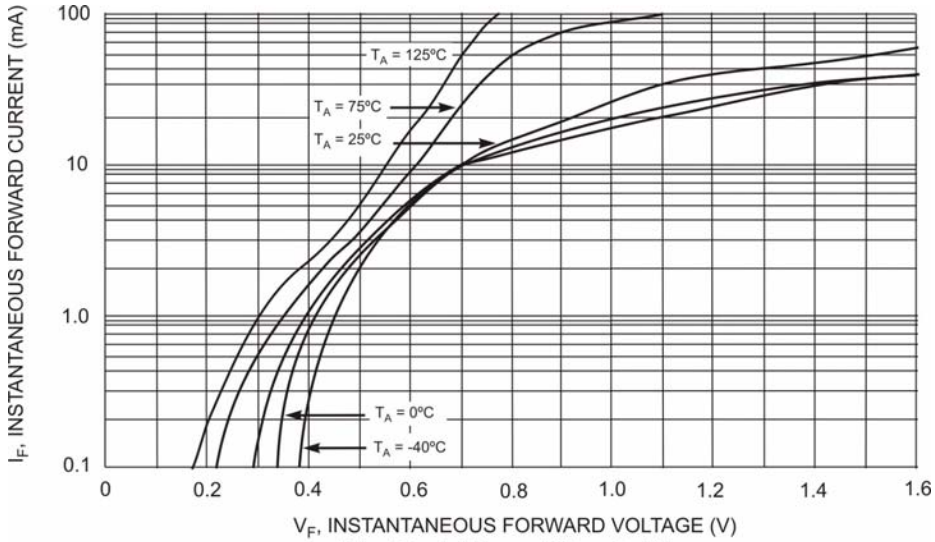


Fig. 1 Typical Forward Characteristics

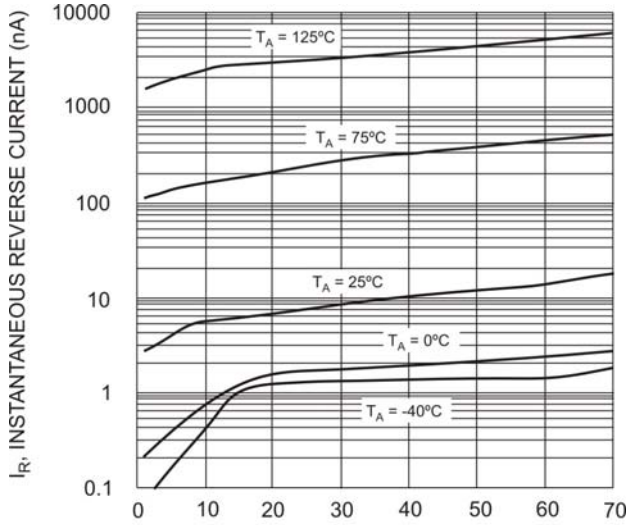


Fig. 2 Typical Reverse Characteristics

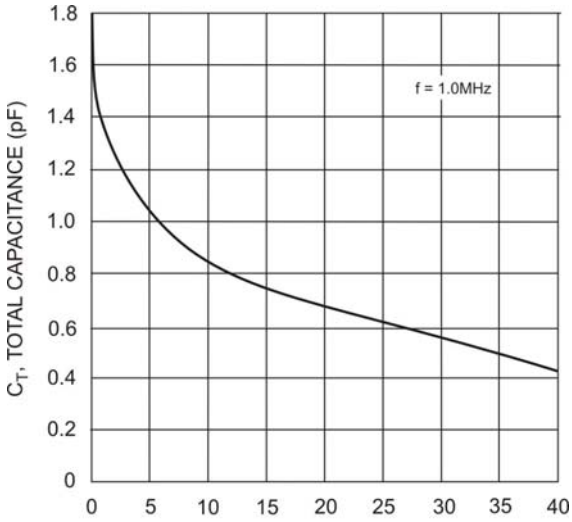


Fig. 3 Typical Capacitance

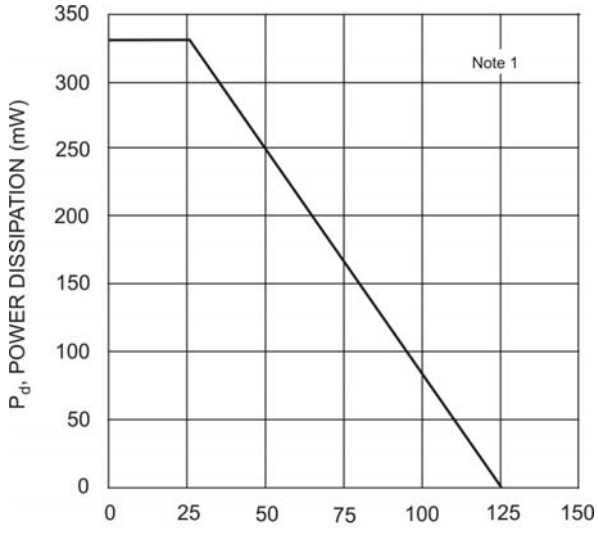


Fig. 4 Power Derating Curve

Ordering Information (Note 4)

Device	Packaging	Shipping
1N5711W-7-F	SOD-123	3000/Tape and Reel

Notes: 4. For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information

SA = Product Type Marking Code
YM = Date Code Marking
Y = Year (ex: T = 2006)
M = Month (ex: 9 = September)

Date Code Key

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Code	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D