

**Features**

- Fast switching speed
- Low forward voltage
- Low Capacitance
- Guard ring construction for transient protection



SOD-123

**Mechanical Data**

- Case: SOD-123
- Terminals: Solderable per MIL-STD-202, Method 208



Schematic Diagram

**Maximum Ratings** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

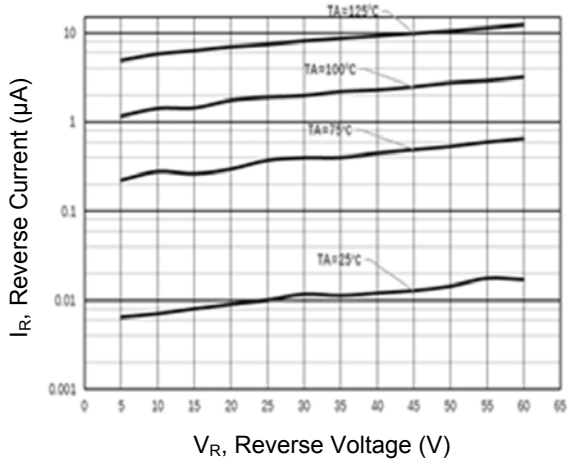
Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	70	V
Working Peak Reverse Voltage	$V_{RWM}$	70	V
DC Reverse Voltage	$V_R$	70	V
RMS Reverse Voltage	$V_{R(RMS)}$	49	V
Forward Continuous Current	$I_F$	15	mA
Power Dissipation	$P_d$	400	mW
Thermal Resistance Junction to Ambient <sup>1</sup>	$R_{\theta JA}$	250	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

Note1 : Part mounted on FR-4 board with recommended pad layout

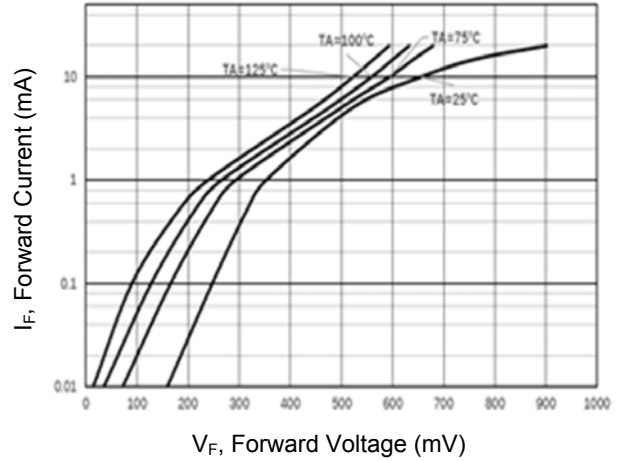
**Electrical Characteristics** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Test Condition	Min	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=10\mu\text{A}$	70	-	V
Forward voltage	$V_F$	$I_F=1\text{mA}$	-	0.41	V
		$I_F=15\text{mA}$		1.00	
Reverse Voltage Leakage Current	$I_R$	$V_R=50\text{V}$	-	200	nA
Total Capacitance	$C_T$	$V_R=0\text{V}$ , $f=1.0\text{MHz}$	-	2	pF
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10\text{mA}$ , $I_{rr}=0.1*I_R$ , $R_L=100\Omega$	-	1	ns

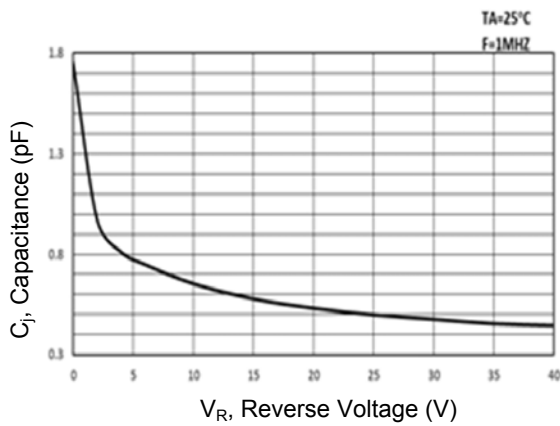
**Typical Characteristic Curves** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)



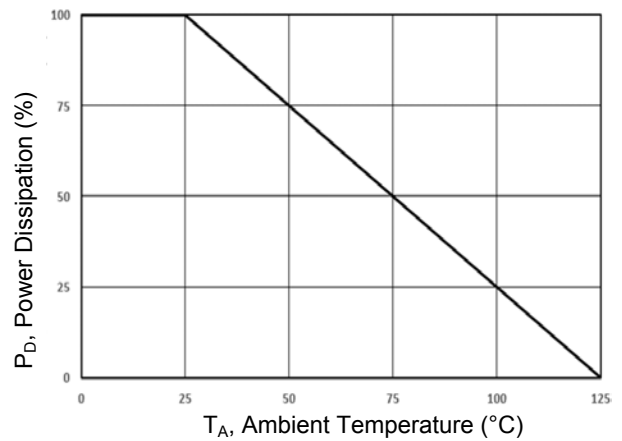
**Figure 1. Typical Reverse Characteristic**



**Figure 2. Typical Forward Characteristic**

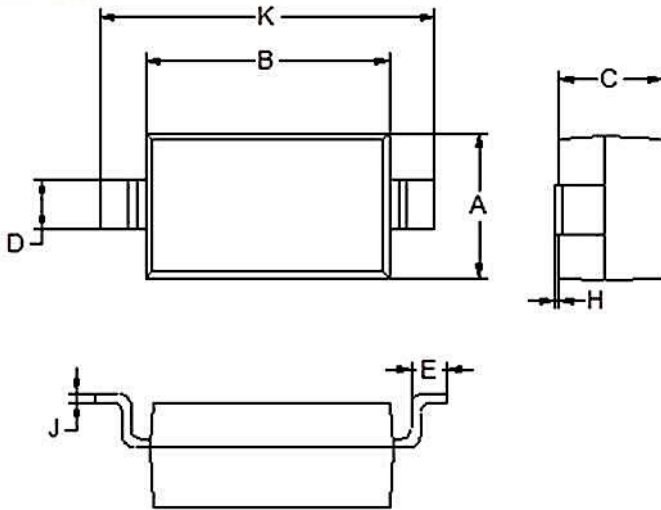


**Figure 3. Capacitance vs. Reverse Voltage**



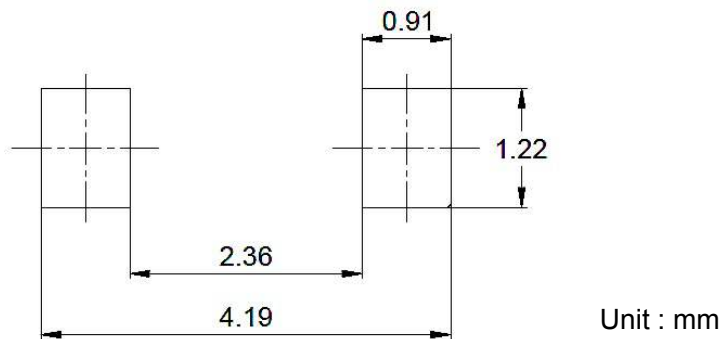
**Figure 4. Derating Curve ( $P_D$ - $T_A$ )**

**Package Outline Dimensions (SOD-123)**



SOD-123 unit:mm		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

**Recommended Pad Layout**



**Order Information**

Device	Package	Marking	Carrier	Quantity
GS1N5711W	SOD-123	SA	Tape & Reel	3,000pcs