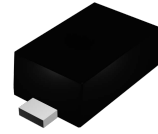
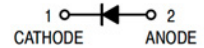


## Features

- Low leakage current losses
- Negligible switching losses
- Low forward and reverse recovery times
- Extremely fast switching
- Low capacitance diode
- Halogen and Antimony Free (HAF), RoHS compliant



SOD-523



Schematic Diagram

## Absolute Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	80	V
Average Forward Rectified Current	$I_{F(AV)}$	200	mA
Peak Forward Surge Current ( $t_p=10\text{ms}$ )	$I_{FSM}$	1	A
Power Dissipation	$P_D$	200	mW
Max. Thermal Resistance from Junction to Ambient <sup>1</sup>	$R_{\theta JA}$	500	$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_J$	125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^{\circ}\text{C}$

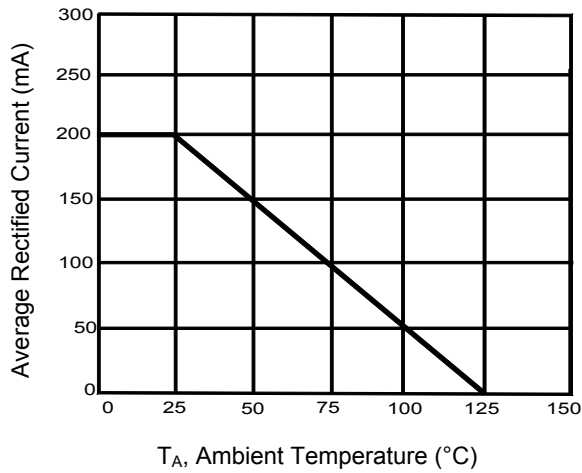
Note:

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

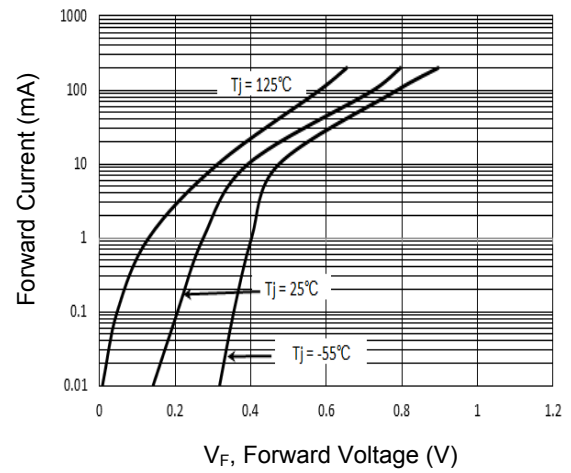
## Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=100\mu\text{A}$	80	-	-	V
Forward Voltage	$V_F$	$I_F=1\text{mA}$	-	-	0.45	V
		$I_F=200\text{mA}$	-	-	1	
Reverse Current	$I_R$	$V_R=50\text{V}$	-	-	1	$\mu\text{A}$
		$V_R=50\text{V}, T_J=100^{\circ}\text{C}$	-	30	-	
Total Capacitance	$C_T$	$V_R=1\text{V}, F=1\text{MHz}$	-	-	10	pF

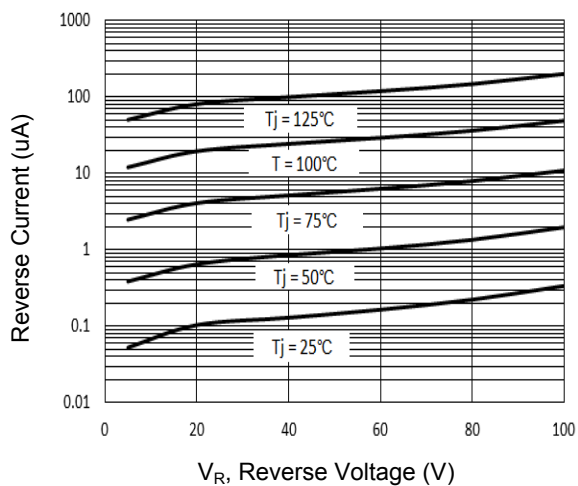
**Electrical Characteristic Curves**



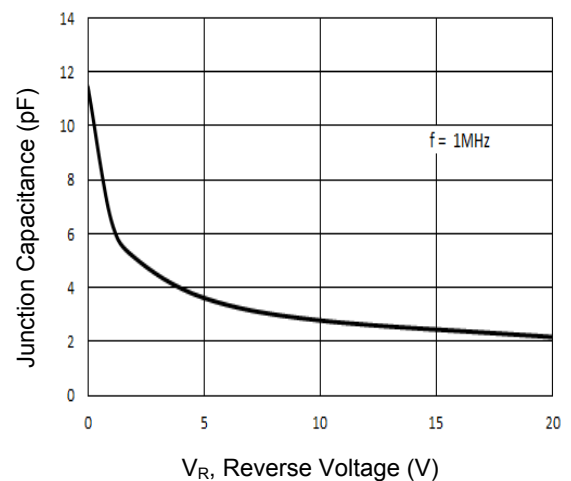
**Figure 1. Average Current Derating Curve**



**Figure 2. Forward Characteristic Curve**

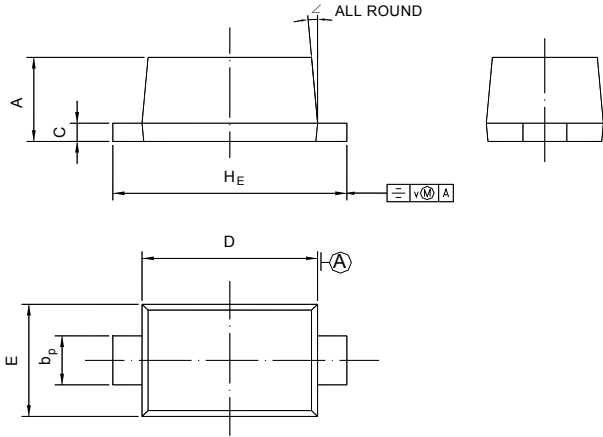


**Figure 3. Reverse Characteristic Curve**



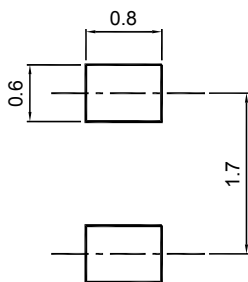
**Figure 4. Junction Capacitance**

**Package Outline Dimension (SOD-523)**



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.600	0.700	0.024	0.028
b <sub>p</sub>	0.300	0.400	0.012	0.016
C	0.100	0.135	0.004	0.005
D	1.150	1.250	0.045	0.049
E	0.750	0.850	0.030	0.033
H <sub>E</sub>	1.500	1.700	0.059	0.067
V	0.100 REF		0.004 REF	
∠	5° REF		5° REF	

**Recommended Pad Layout**



Note:  
 1. Unit: mm

**Order Information**

Device	Package	Marking	Carrier	Quantity
GSBAT41M	SOD-523	TP	Tape & Reel	4,000pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)