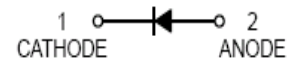


Features

- Low forward voltage drop
- Fast switching
- PN junction guard ring for transient and ESD protection



SOD-523



Schematic Diagram

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

Parameter	Symbol	Limits	Unit
DC Reverse Voltage	V_R	30	V
Continuous Forward Current	I_F	200	mA
Peak Forward Surge Current	I_{FSM}	600	mA
Total Power Dissipation	P_{tot}	200	mW
Total Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Breakdown Voltage	$V_{(BR)R}$	30			V	$I_R=100\mu\text{A}$
Forward Voltage	V_F		0.22	0.24	V	$I_F=0.1\text{mA}$
			0.41	0.5		$I_F=30\text{mA}$
			0.52	0.8		$I_F=100\text{mA}$
			0.29	0.32		$I_F=1.0\text{mA}$
			0.35	0.40		$I_F=10\text{mA}$
Reverse Current	I_R		0.5	2.0	μA	$V_R=25\text{V}$
Diode Capacitance	C_d		7.6	10	pF	$V_R=1\text{V}, f=1\text{MHz}$
Reverse Recovery Time	t_{rr}			5	ns	$I_F=I_R=10\text{mA}$

Typical Electrical Characteristic Curves

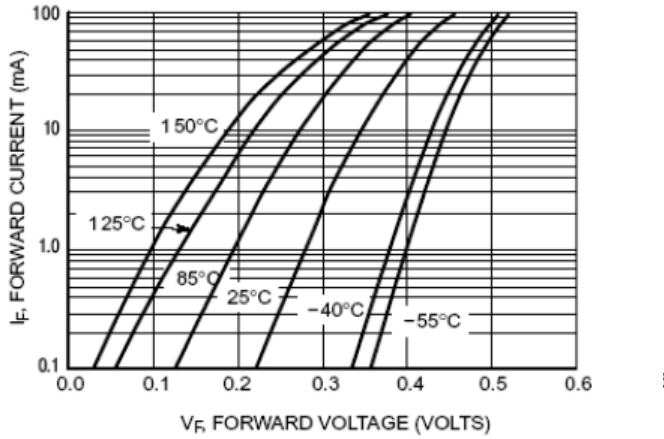


Figure 1. Forward Voltage

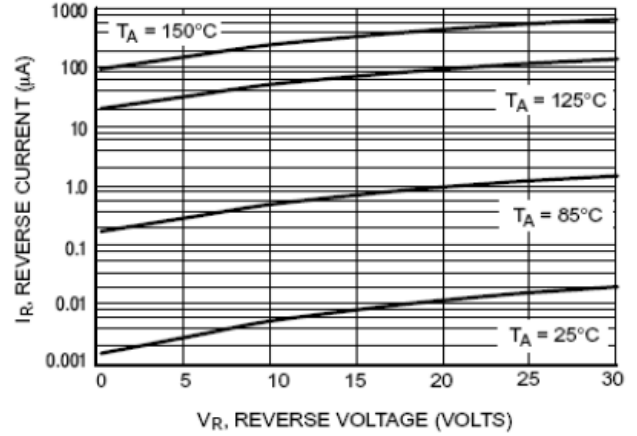


Figure 2. Leakage Current

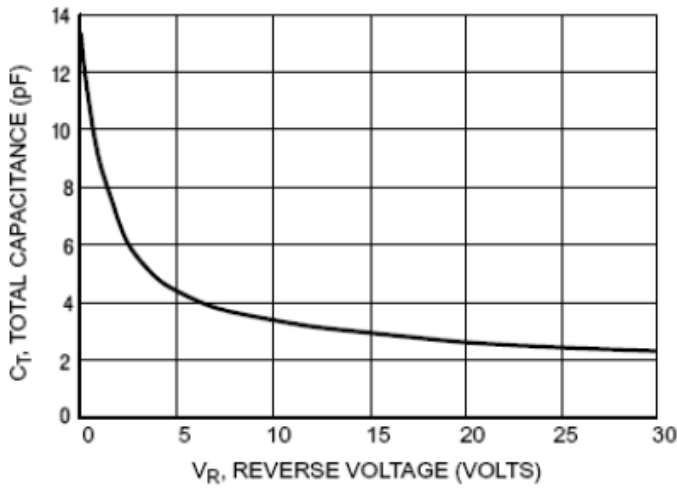
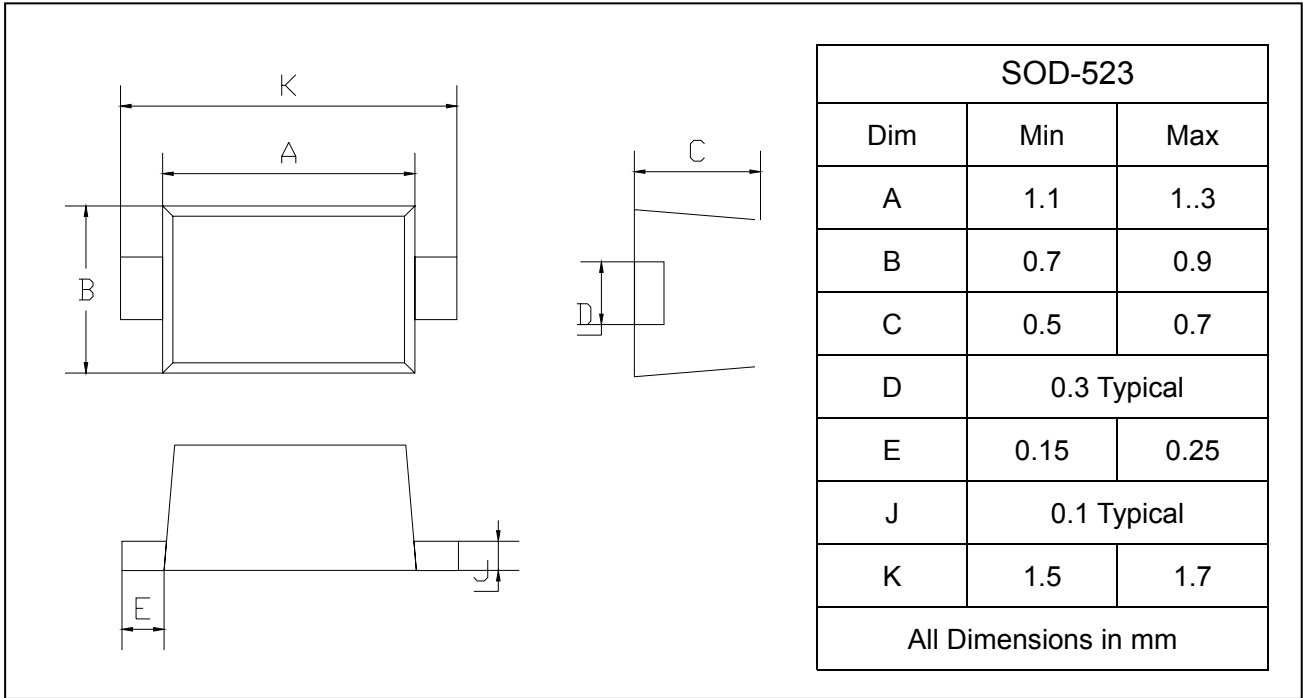


Figure 3. Total Capacitance

Package Outline Dimensions SOD-523



Marking and Ordering Information

Device	Package	Carrier	Quantity	Marking
SPBAT54X	SOD-523	Tape & Reel	8,000pcs / Reel	JV