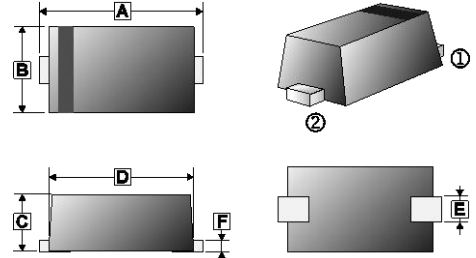


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Low Forward Voltage Drop
- Extremely Fast Switching Speed
- Low Reverse Capacitance

## SOD-523



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.50	1.70	D	1.10	1.30
B	0.70	0.90	E	0.25	0.40
C	0.50	0.77	F	0.05	0.20

## MARKING

JV

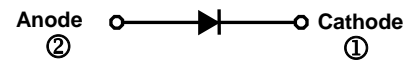
B

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-523	8K	7 inch

## ORDER INFORMATION

Part Number	Type
BAT54X-C	Lead (Pb)-free and Halogen-free



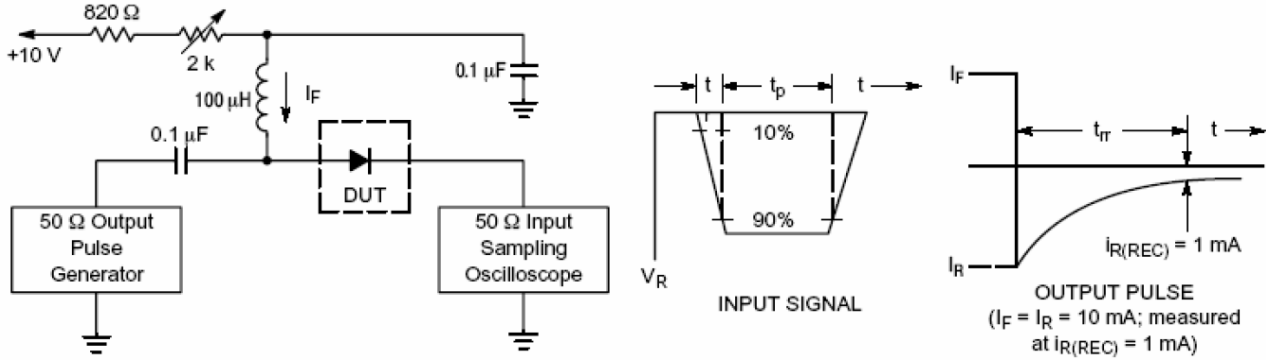
## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	30	V
DC Blocking Voltage	V <sub>R</sub>	21	V
Forward Current	I <sub>F</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	300	mA
Non-Repetitive Peak Forward Current @t=1μs	I <sub>FSM</sub>	600	mA
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance Junction-Ambient	R <sub>θJA</sub>	635	°C/W
Operating & Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	125, -55~125	°C

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified)

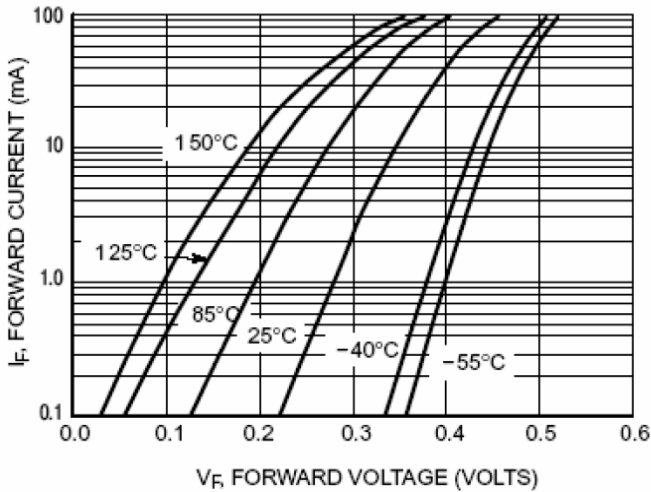
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	30	-	-	V	I <sub>R</sub> =100μA
Reverse Current	I <sub>R</sub>	-	0.5	2	μA	V <sub>R</sub> =25V
Forward Voltage	V <sub>F</sub>	-	0.22	0.24	V	I <sub>F</sub> =0.1mA
		-	0.29	0.32		I <sub>F</sub> =1mA
		-	0.35	0.4		I <sub>F</sub> =10mA
		-	0.41	0.5		I <sub>F</sub> =30mA
		-	0.52	1		I <sub>F</sub> =100mA
Capacitance Between Terminals	C <sub>T</sub>	-	7.6	-	pF	V <sub>R</sub> =1V, f=1MHz
Reverse Recovery Time	T <sub>RR</sub>	-	-	5	nS	I <sub>F</sub> =10mA, I <sub>R</sub> =10mA~1mA R <sub>L</sub> =100Ω

**RATINGS AND CHARACTERISTIC CURVES**

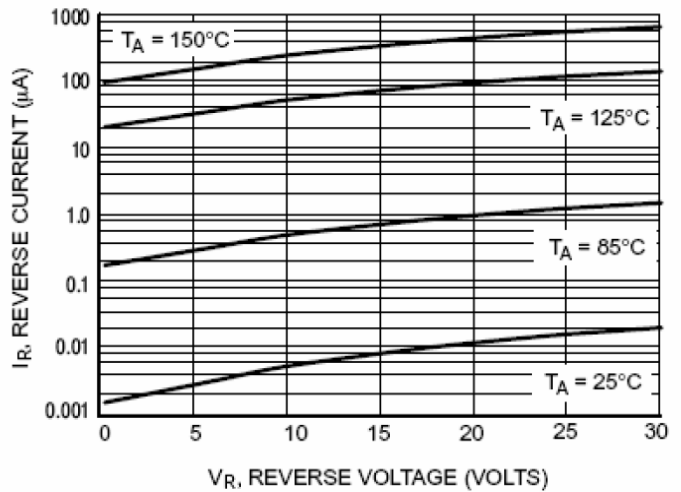


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10 mA.  
 2. Input pulse is adjusted so  $I_{R(peak)}$  is equal to 10 mA.  
 3.  $t_p \gg t_{rr}$

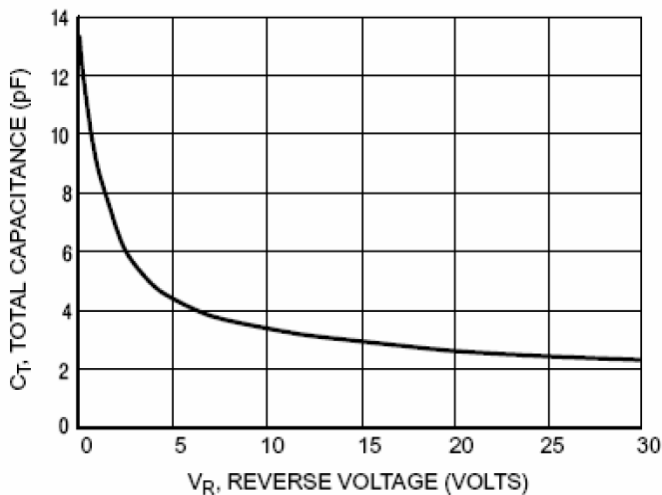
**Figure 1. Recovery Time Equivalent Test Circuit**



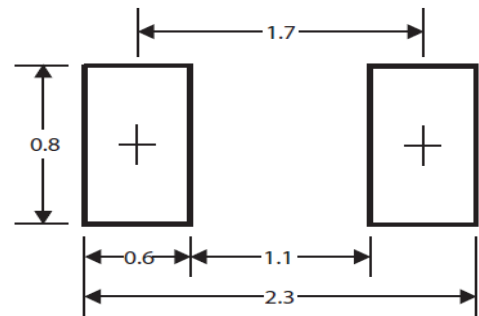
**Figure 2. Forward Voltage**



**Figure 3. Leakage Current**



**Figure 4. Total Capacitance**



\*Dimensions in millimeters

**Figure 5. Mounting Pad Layout**