



SOD-523 Plastic-Encapsulate Diodes

BAS16X Switching Diode

SOD-523

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FEATURES

- High-Speed Switching Applications
- Lead Finish: 100% Matte Sn (Tin)
- Qualified Reflow Temperature: 260 °C
- Extremely Small SOD-523 Package

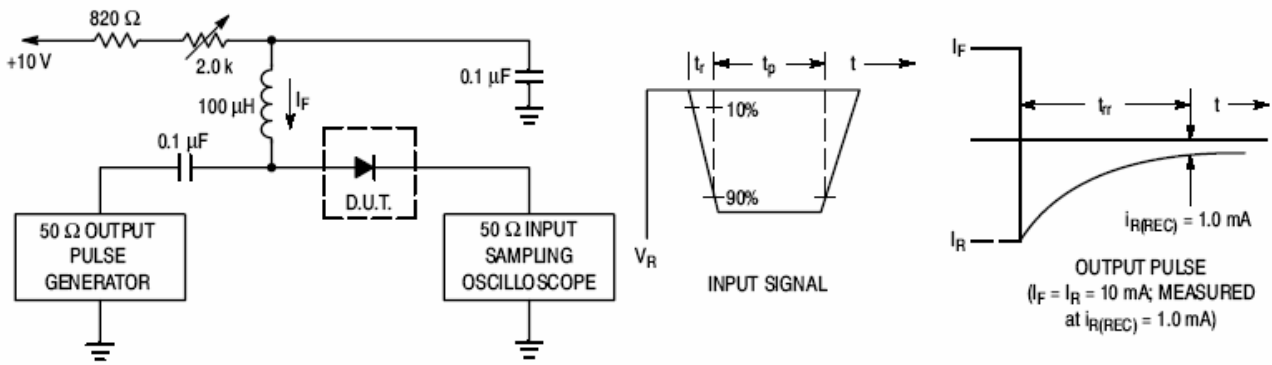
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Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25°C

Parameter	Symbol	Limits	Unit
DC reverse voltage	V _R	75	V
Forward current	I _F	200	mA
Pak forward surge current	I _{FM(surge)}	500	mA
Total Device Dissipation	P _D	150	mW
Thermal Resistance Junction to Ambient	R _{θJA}	635	°C/W
Junction and storage temperature	T _j , T _{stg}	150	°C

Electrical Ratings @T_A=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	V _{(BR)R}	75				I _R =100uA
Forward voltage	V _{F1}			715	mV	I _F =1mA
	V _{F2}			815		I _F =10mA
	V _{F3}			1000		I _F =50mA
	V _{F4}			1250		I _F =150mA
Reverse recovery Time	t _{rr}			6.0	ns	I _F =I _R =10mAdc, R _L =50Ω
Reverse current	I _{R1}			1.0	μ A	V _R =75V
	I _{R2}			50		V _R =75V, T _j =150°C
	I _{R3}			30		V _R =75V, T _j =150°C
Forward recovery voltage	V _{FR}			1.75	V	I _F =10mA, t _r = 20ns
Diode Capacitance	C _D			2.0	pF	V _R =0V, f=1MHZ
Stored charge	Q _S			45	pC	I _F =10mA, V _R =5.0V, R _L =500Ω



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

Figure 1. Recovery Time Equivalent Test Circuit

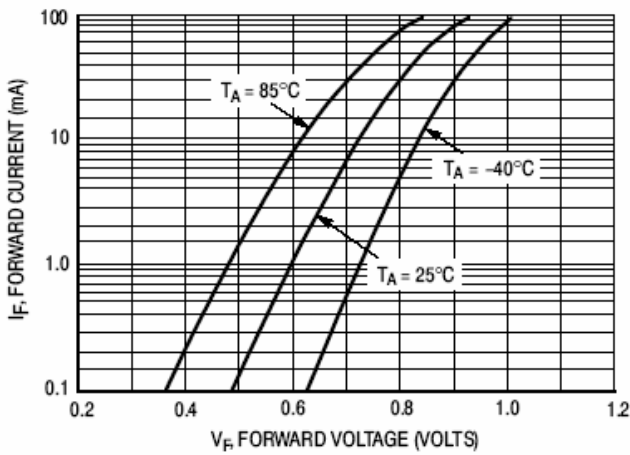


Figure 2. Forward Voltage

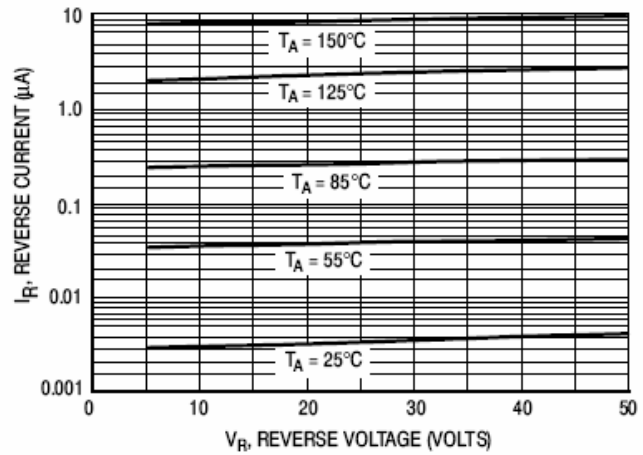


Figure 3. Leakage Current

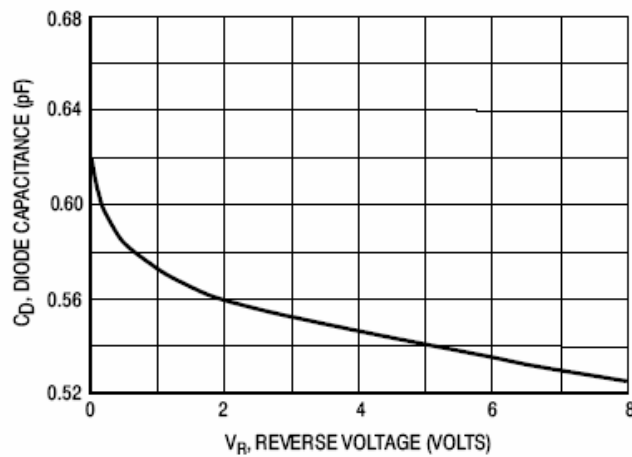


Figure 4. Capacitance