

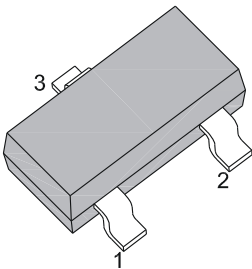
Three Terminals SMD Switching Diode

Features

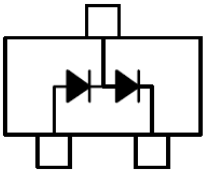
- Silicon Epitaxial Planar Diode
- Low Current Leakage
- Low Forward Voltage
- Fast Switching Dual Diode with Common Cathode
- RoHS Compliant

Mechanical Data

Case:	SOT-23, Plastic Package
Terminals:	Solderable per MIL-STD-202G, Method 208
Weight:	Approx. 0.008 gram



SOT-23



Maximum Ratings* *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description		BAV99	Unit	Conditions
	Marking Code		A7		
VRRM	Maximum Repetitive Reverse Voltage		70	V	
IF(AV)	Average Rectified Forward Current		215	mA	Average over any 20ms period
IFSM	Non-Repetitive Peak Forward Surge Current	Pulse Width=1.0μs	2.0	A	
		Pulse Width=1.0s	1.0		
Pd	Power Dissipation FR-5 Board at TA=25° C		225	mW	Note 1
	Derate above 25° C		1.8	mW/° C	
	Power Dissipation Alumina Substrate at TA=25° C		300	mW	Note 2
	Derate above 25° C		2.4	mW/° C	
RthJA	Thermal Resistance, Junction to Ambient		556	° C/W	Note 1
			417	° C/W	Note 2
TJ, TSTG	Operating Junction and Storage Temperature Range		-55 to +150	° C	

Three Terminals SMD Switching Diode

BAV99

Note: 1: FR-5=1.0X0.75X0.062"
2: Alumina=0.4x0.3x0.024", 99.5% alumina

Electrical Characteristics *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description	Min.	Max.	Unit	Conditions
V_R	Reverse Breakdown Voltage	70	-	V	I _(BR) =100μA
V_F	Forward Voltage	-	0.715	V	I _F =1.0mA
			0.855		I _F =10mA
			1.0		I _F =50mA
			1.25		I _F =150mA
I_R	Reverse Current	-	2.5	μA	V _R =70V
			30		V _R =25V, T _J =150° C
			50		V _R =70V, T _J =150° C
C_T	Total Capacitance	-	1.5	pF	V _R =0V, f=1MHz
T_{rr}	Reverse Recovery Time	-	6.0	nS	I _F =I _R =10mA, V _R =5.0V, I _{R(REC)} =1.0mA, R _L =100Ω

Typical Characteristics Curves

Fig.1- Recovery Time Equivalent Test Circuit

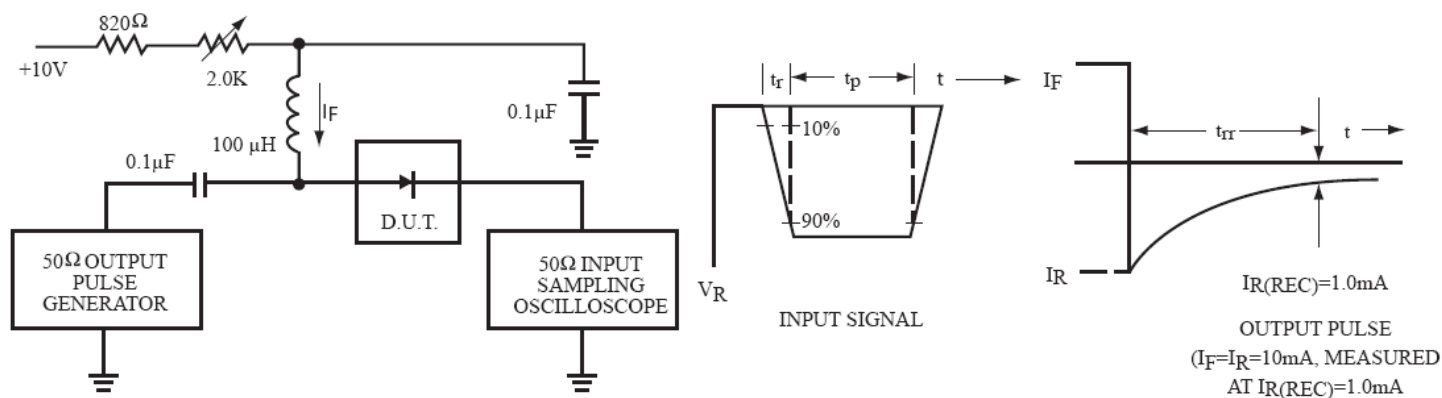


Fig.2- Typical Instantaneous Forward Characteristics

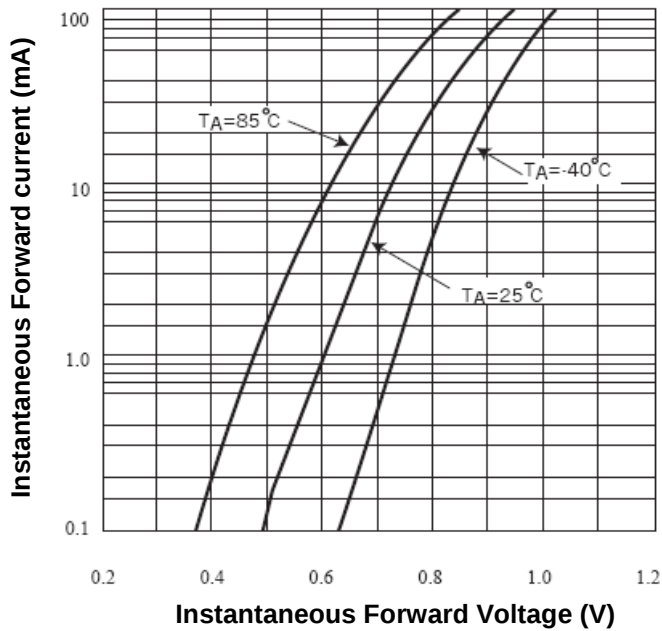


Fig.3- Typical Reverse Characteristics

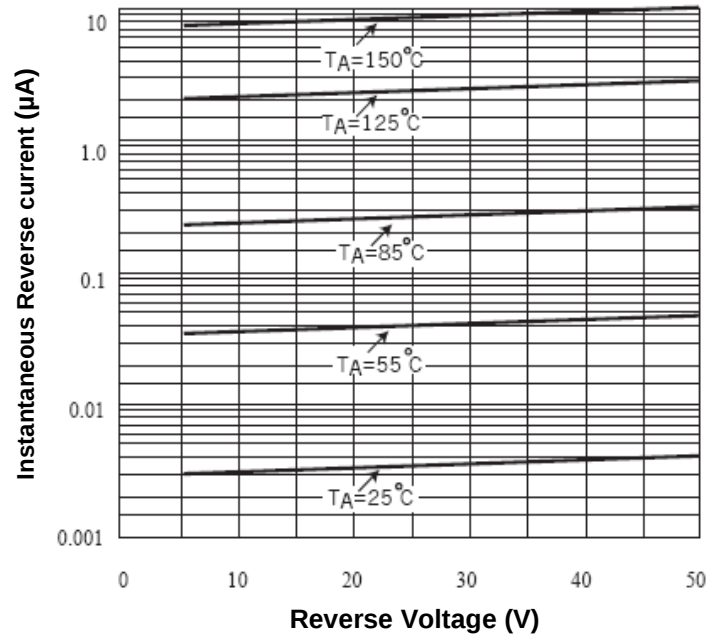
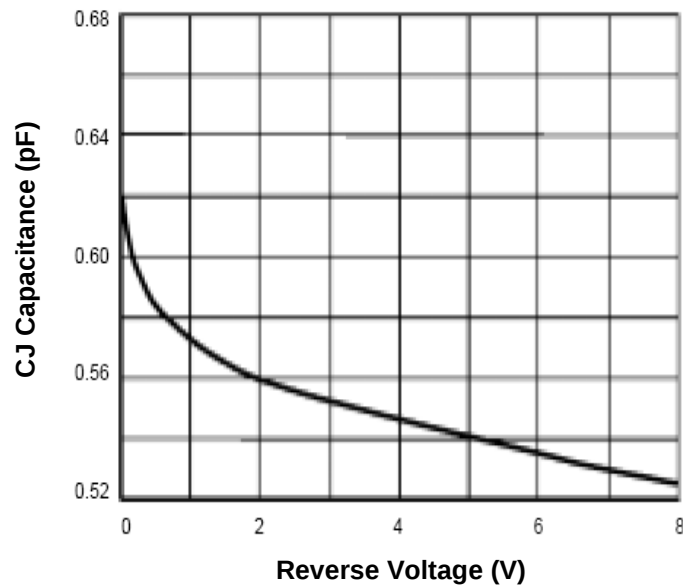
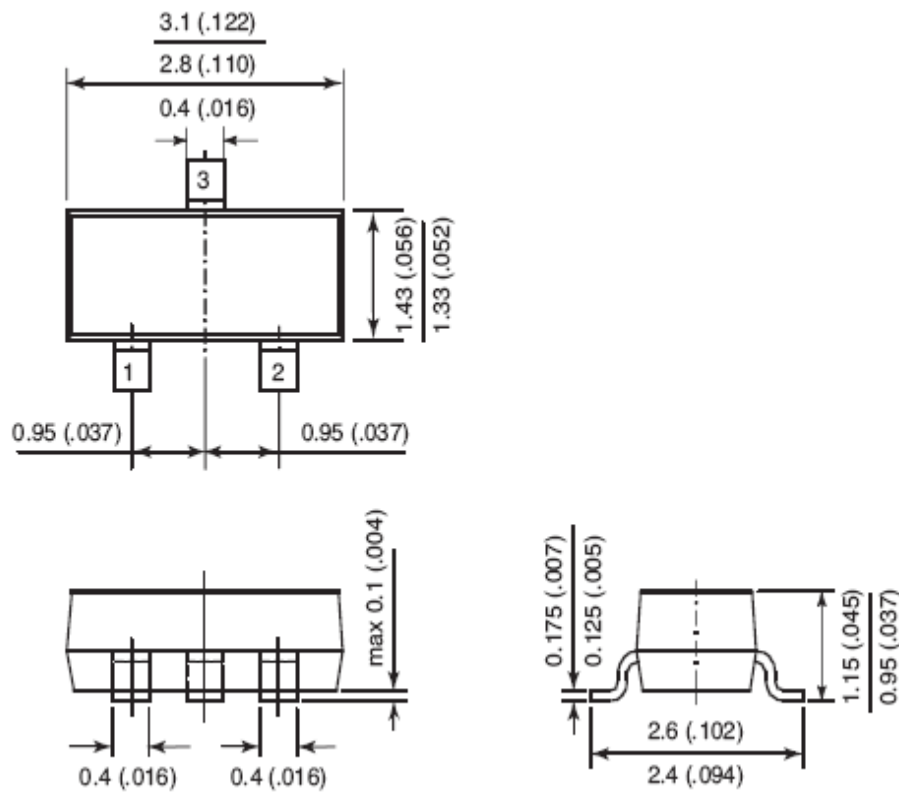


Fig.4- Junction Capacitance

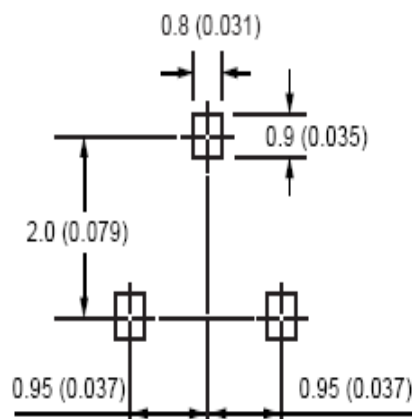


Dimensions in mm (inch)

SOT-23



Mounting Pad Layout in mm (inch)



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