

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

FEATURES

- Fast Switching Speed
- High Conductance
- Connected in Series
- Surface Mount Package Ideally Suited for Automatic Insertion

APPLICATIONS

- High-Speed Switching in Thick and Thin-Film Circuits

MARKING

A7

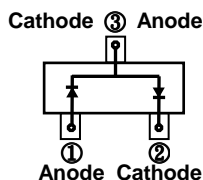
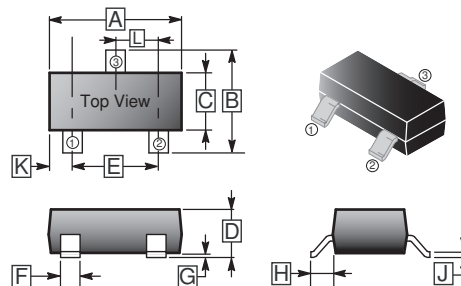
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

Part Number	Type
BAV99	Lead (Pb)-free
BAV99-C	Lead (Pb)-free and Halogen-free

SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0	0.18
B	2.10	2.95	H	0.55	REF.
C	1.20	1.7	J	0.08	0.20
D	0.89	1.3	K	0.6	REF.
E	1.70	2.3	L	0.95	BSC.
F	0.30	0.50			

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Reverse Voltage	V _R	70	V
Forward Current	I _F	215	mA
Peak Forward Surge Current	I _{FM(Surge)}	500	mA
Total Device Dissipation FR-5 Board ¹	P _D	T _A =25°C	225
		De-rate above 25°C	1.8
Thermal Resistance Junction-Ambient	R _{θJA}	556	°C/W
Total Device Dissipation Alumina Substrate ²	P _D	T _A =25°C	300
		De-rate above 25°C	2.4
Thermal Resistance Junction-Ambient	R _{θJA}	417	°C/W
Junction, Storage Temperature	T _J , T _{STG}	-55~150	°C

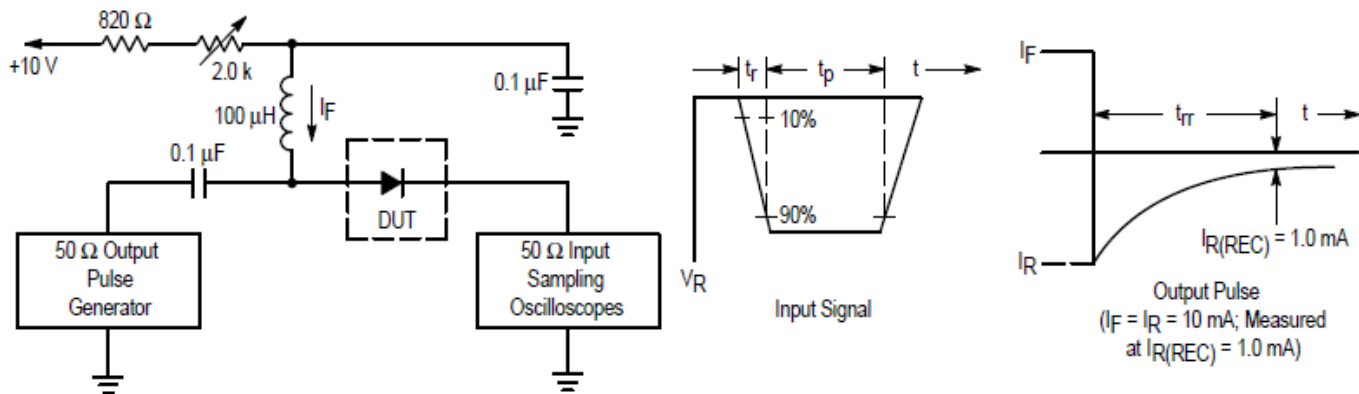
Notes:

- FR-5=1x0.75x0.062 in.
- Alumina=0.4x0.3x0.024 in. 99.5% alumina.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Breakdown Voltage	V _{(BR)R}	70	-	-	V	I _{BR} =100µA
Leakage Current	I _R	-	-	30	µA	V _R =25V, T _J =150°C
		-	-	2.5		V _R =70V
		-	-	50		V _R =70V, T _J =150°C
Forward Voltage	V _F	-	-	715	mV	I _F =1mA
		-	-	855		I _F =10mA
		-	-	1000		I _F =50mA
		-	-	1250		I _F =150mA
Diode Capacitance	C _D	-	1.5	-	pF	V _R =0, f=1MHz
Reverse Recovery Time	T _{RR}	-	6	-	nS	I _F =I _R =10mA, I _{R(REC)} =1mA(Fig.1) R _L =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 $I_{R(\text{peak})}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

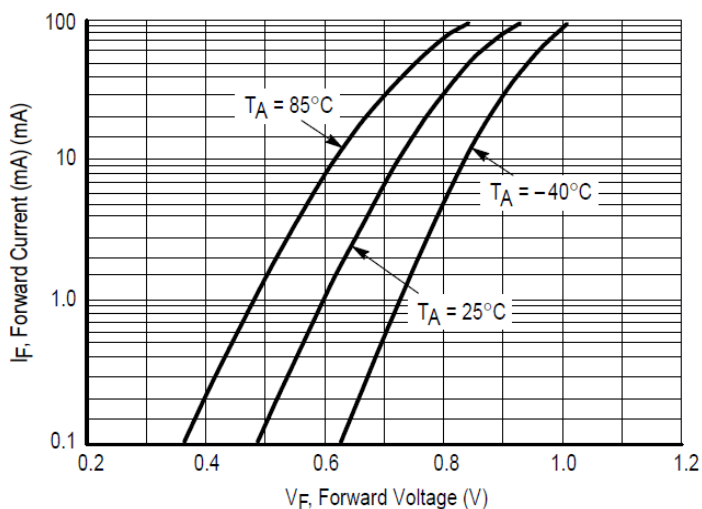


Figure 2. Forward Voltage

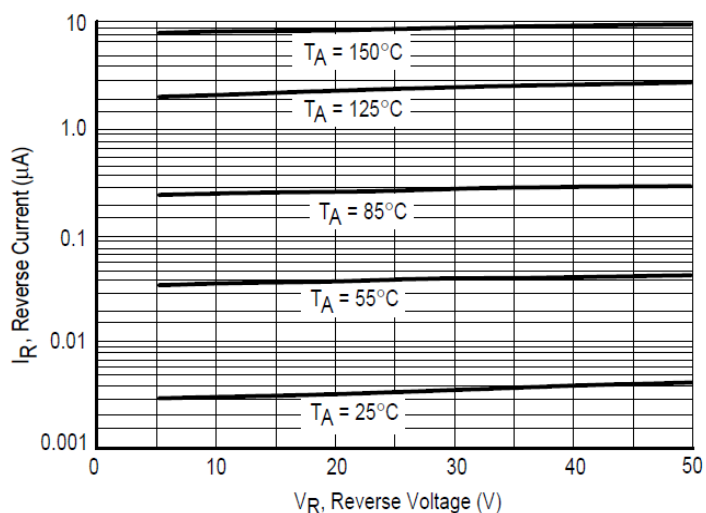


Figure 3. Leakage Current

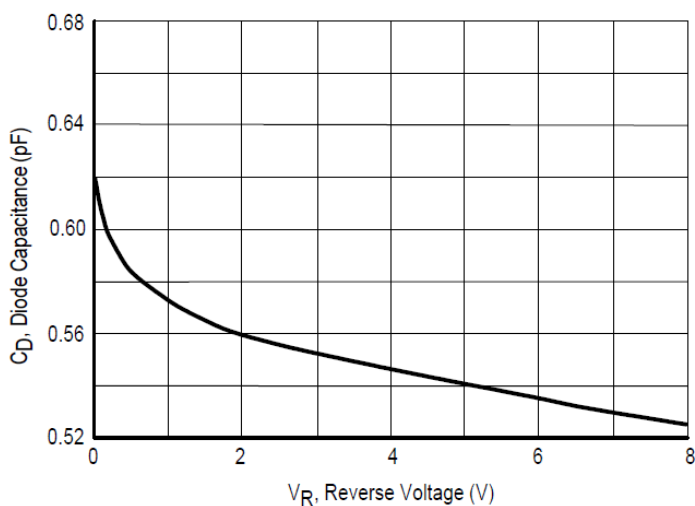


Figure 4. Capacitance