

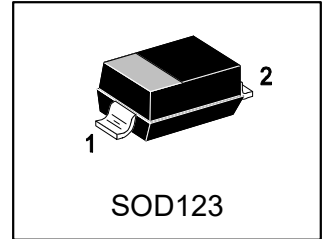
# BAV21

## S-BAV21

### HIGH VOLTAGE SWITCHING DIODE

#### 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



#### 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
BAV21	JS	3000/Tape&Reel



#### 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Continuous Reverse Voltage	VR	250	V
Peak Forward Current	IF	200	mA
Peak Forward Surge Current	IFM(surge)	625	mA
Non-Repetitive Peak Forward Current tp=10ms	IFSM	3.5	A

#### 4. THERMAL CHARACTERISTICS

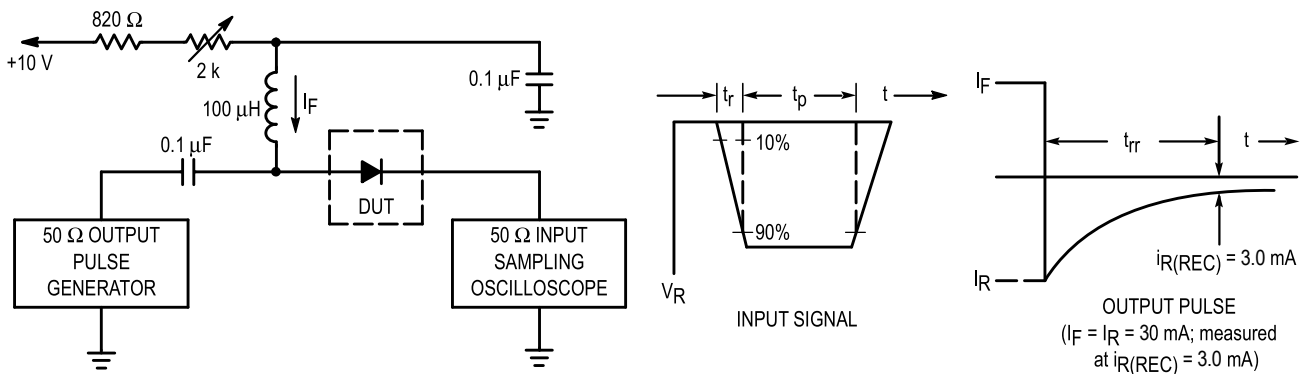
Parameter	Symbol	Limits	Unit
Total Device Dissipation FR-5 Board, (Note 1) TA = 25°C	PD	250	mW
Derate above 25°C		2	mW/°C
Thermal resistance from junction to ambient	RθJA	500	°C/W
Junction and Storage Temperature	TJ , Tstg	-55~+150	°C

1.FR-5 Minimum Pad



**5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

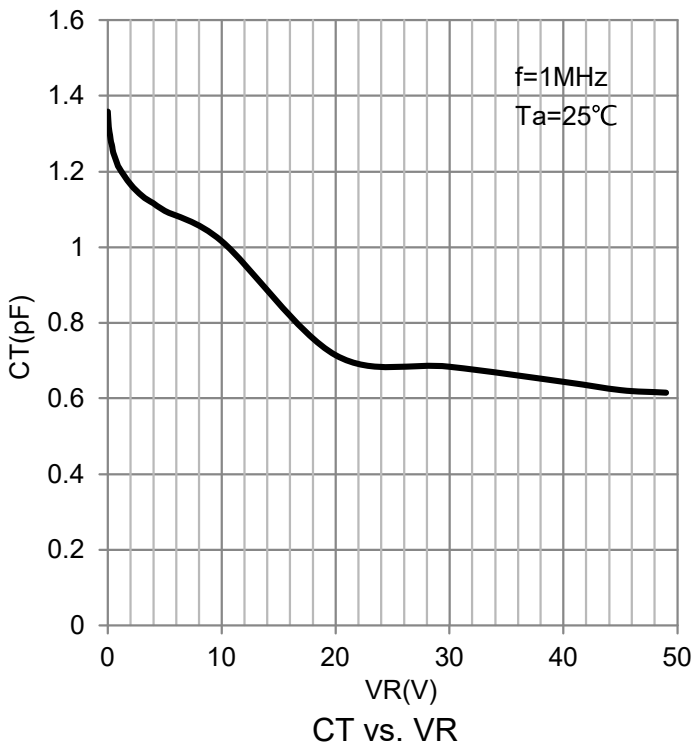
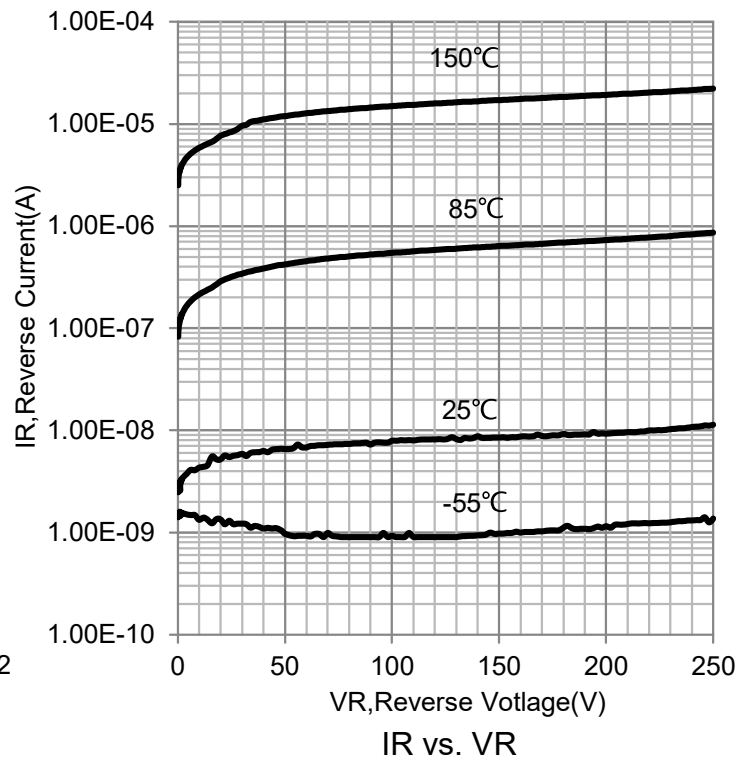
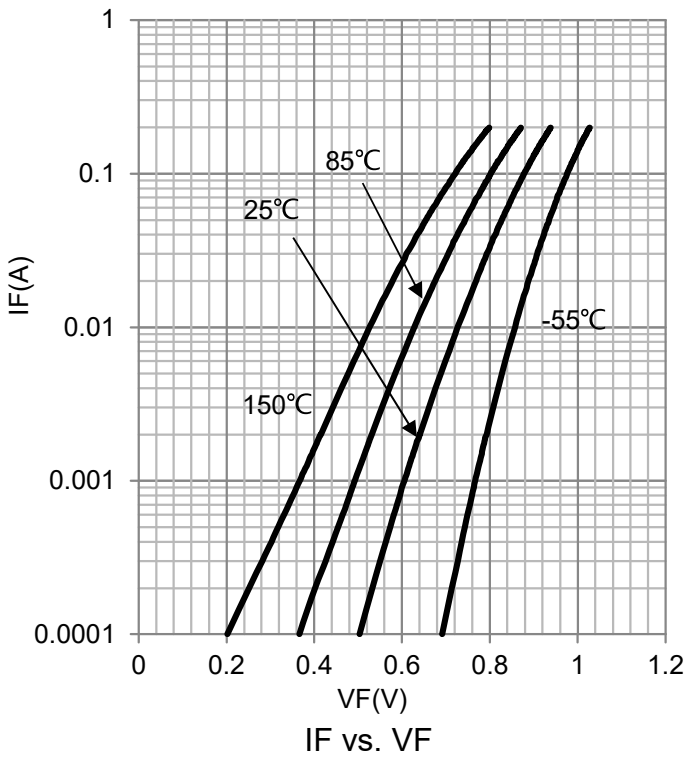
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Voltage Leakage Current (VR=200V) (VR=200V, Tj=150°C)	IR	- -	- -	0.1 100	μA
Reverse Breakdown Voltage (IBR=100μA)	VBR	250	-	-	V
Forward Voltage (IF=100mA)	VF	-	-	1000	mV
(IF=200mA)		-	-	1250	mV
Diode Capacitance (VR =0V, f=1.0MHz)	CD	-	-	5	pF
Reverse Recovery Time (IF =IR =30mA, RL =100Ω)	trr	-	-	50	ns



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (IF) of 30 mA.  
 2. Input pulse is adjusted so IR(peak) is equal to 30 mA.  
 3. tp >> trr

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

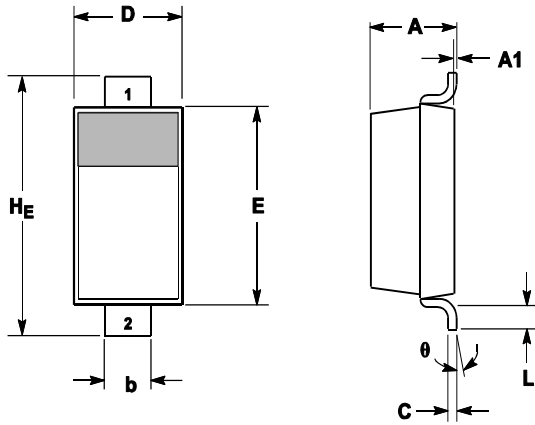

6.ELECTRICAL CHARACTERISTICS CURVES



**7.OUTLINE AND DIMENSIONS**

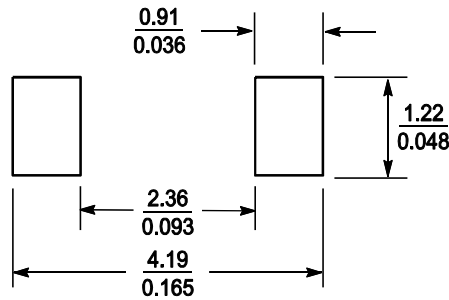
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.94	1.17	1.35	0.037	0.046	0.053
A1	0.00	0.05	0.10	0.000	0.002	0.004
b	0.51	0.61	0.71	0.020	0.024	0.028
c	---	---	0.15	---	---	0.006
D	1.40	1.60	1.80	0.055	0.063	0.071
E	2.54	2.69	2.84	0.100	0.106	0.112
HE	3.56	3.68	3.86	0.140	0.145	0.152
L	0.25	---	---	0.010	---	---
θ	0°	---	10°	0°	---	10°

**8.SOLDERING FOOTPRINT**



SCALE 10:1 (mm/inches)

