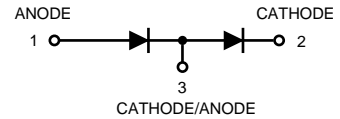
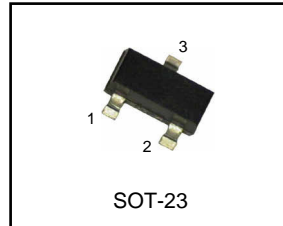


Dual Series Switching Diode

BAV99



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	VR	70	Vdc
Peak Forward Current	IF	215	mAdc
Peak Forward Surge Current	IFM(surge)	500	mAdc
Repetitive Peak Reverse Voltage	VRRM	70	Vdc
Average Rectifier Forward Current ⁽¹⁾ (averaged over any 20 ms period)	IF(AV)	715	mAdc
Repetitive Peak Forward Current	IFRM	450	mAdc
Non-Repetitive Peak Forward Current	IFSM	t=1.0 uS 2.0	A
		t=1.0 mS 1.0	
		t=1.0 S 0.5	

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Total Device Dissipation FR-5 Board ⁽¹⁾ TA=25°C Derate above 25°C	PD	225	mW
		1.8	mW / °C
Thermal Resistance, Junction to Ambient	RθJA	556	°C / W
Total Device Dissipation Alumina Substrate, ⁽²⁾ TA=25°C Derate above 25°C	PD	300	mW
		2.4	mW / °C
Thermal Resistance, Junction to Ambient	RθJA	417	°C / W
Junction and Storage Temperature	TJ,TSTG	-65 to +150	°C

DEVICE MARKING

BAV99=A7

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) (Continued) (EACH DIODE)

Characteristic	Symbol	Min.	Max.	Unit
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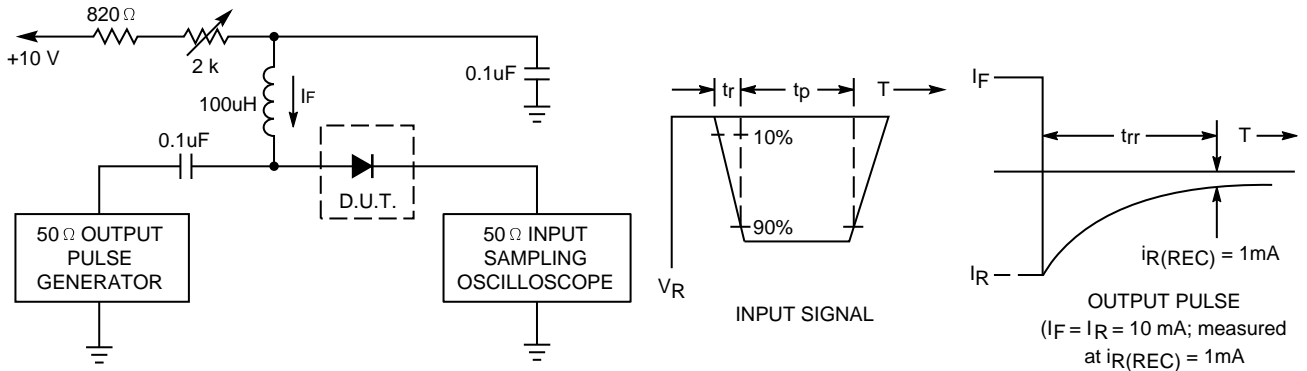
OFF CHARACTERISTICS

Reverse Breakdown Voltage (IBR=100uAdc)	V(BR)	70	-	Vdc	
Forward Voltage	VF	(IF=1.0 mAdc)	-	715	mVdc
		(IF=10 mAdc)	-	855	
		(IF=50 mAdc)	-	1000	
		(IF=150 mAdc)	-	1250	
Reverse Voltage Leakage Current	IR	(VR=70 Vdc)	-	2.5	uAdc
		(VR=25 Vdc, TJ=150°C)	-	30	
		(VR=70 Vdc, TJ=150°C)	-	50	
Diode Capacitance (VR=0, f=1.0MHZ)	CJ	-	1.5	pF	
Reverse Recovery Time (IF=IR=10 mAdc, IR(REC)=1.0mA, RL=50Ω)	trr	-	6.0	nS	
Forward Recovery Voltage (IF=10 mAdc, tr=20nS)	VFR	-	1.75	Vdc	

(1) FR-5=1.0 x 0.75 x 0.062in.

(2) Alumina=0.4 x 0.3 x 0.024in. 99.5% alumina.

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



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

FIGURE 2. FORWARD VOLTAGE

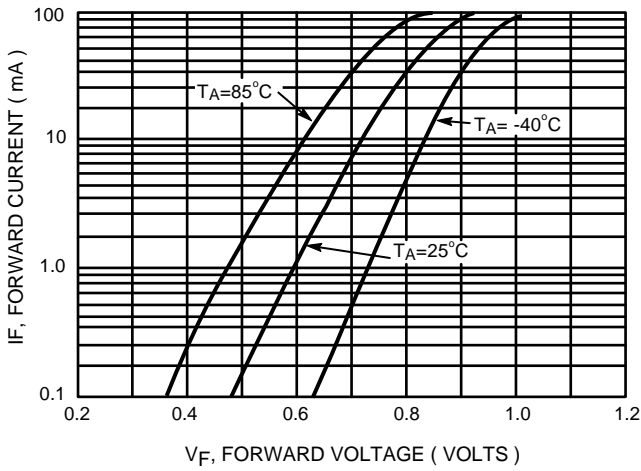


FIGURE 3. LEAKAGE CURRENT

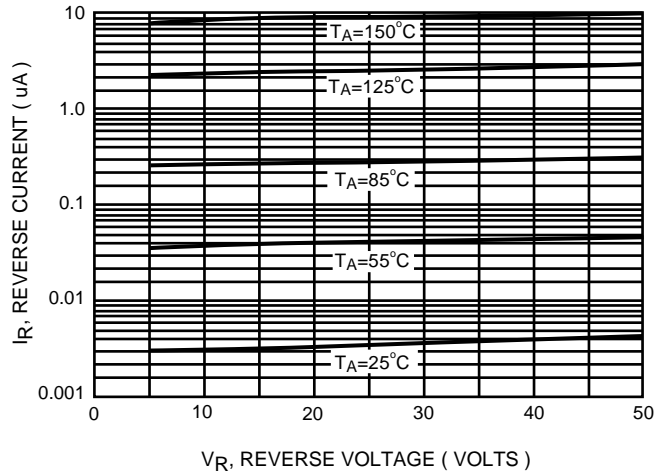


FIGURE 4. CAPACITANCE

