

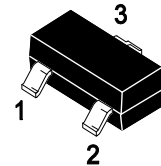


BAS16 Switching Diode



1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.



2. DEVICE MARKING AND RESISTOR VALUES

Marking: A6

3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Continuous Reverse Voltage	VR	75	V
Peak Forward Current	IF	200	mA
Peak Forward Surge Current	IFSM	500	mA

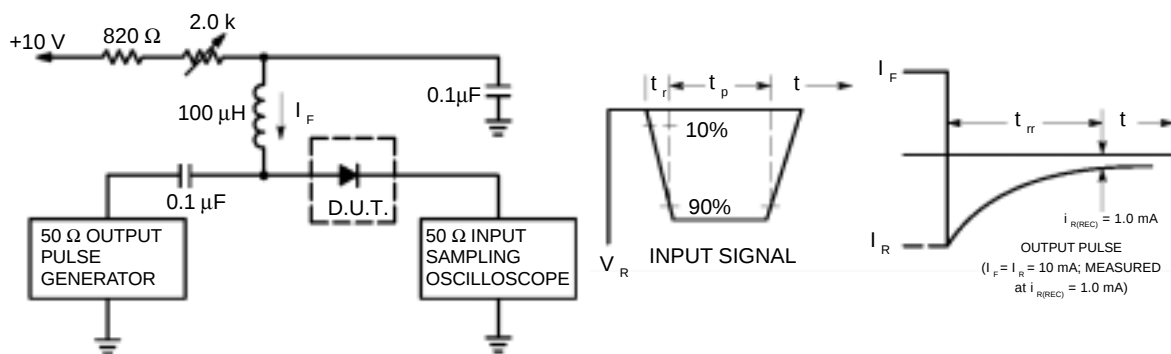
4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation FR- 5 Board, (Note 1) TA = 25°C Derate above 25°C	PD	225 1.8	mW mW/°C
Thermal Resistance, Junction to Ambient	RθJA	556	°C/W
Total Device Dissipation Alumina Substrate, (Note 2) TA = 25°C Derate above 25°C	PD	300 2.4	mW mW/°C
Thermal Resistance, Junction to Ambient	RθJA	417	°C/W
Junction and Storage Temperature	TJ , Tstg	-55~+150	°C



5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

CHARACTERISTICS	Symbol	Min	Max	Unit
Reverse Voltage Leakage Current (VR=75V) (VR=75V, TJ = 150°C) (VR=25V, TJ = 150°C)	IR	- - -	1 50 30	μA
Reverse Breakdown Voltage (IBR = 100 μA)	VBR	75	-	V
Forward voltage (IF =1mA) (IF =10mA) (IF =50mA) (IF =150mA)	VF	- - - -	715 855 1000 1250	mV
Diode capacitance (f=1MHz, VR =0)	Cd	-	2	pF
Forward Recovery Voltage (IF = 10 mA, tr = 20ns)	VFR	-	1.75	V
Reverse Recovery Time (IF = IR = 10mA, RL = 50 Ω)	Trr	-	6	nS
Stored Charge (IF = 10 mA to VR = 5.0V, RL = 500 Ω)	QS	-	45	pC

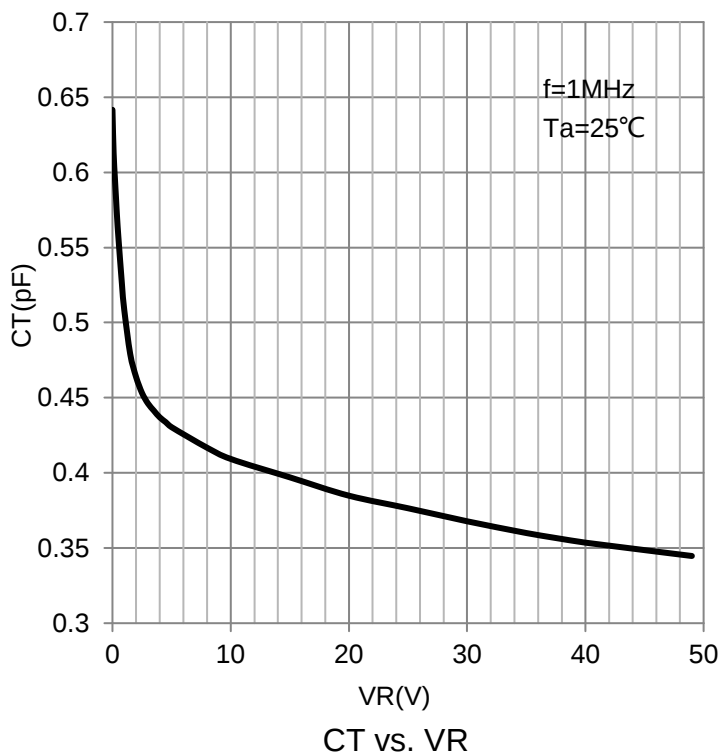
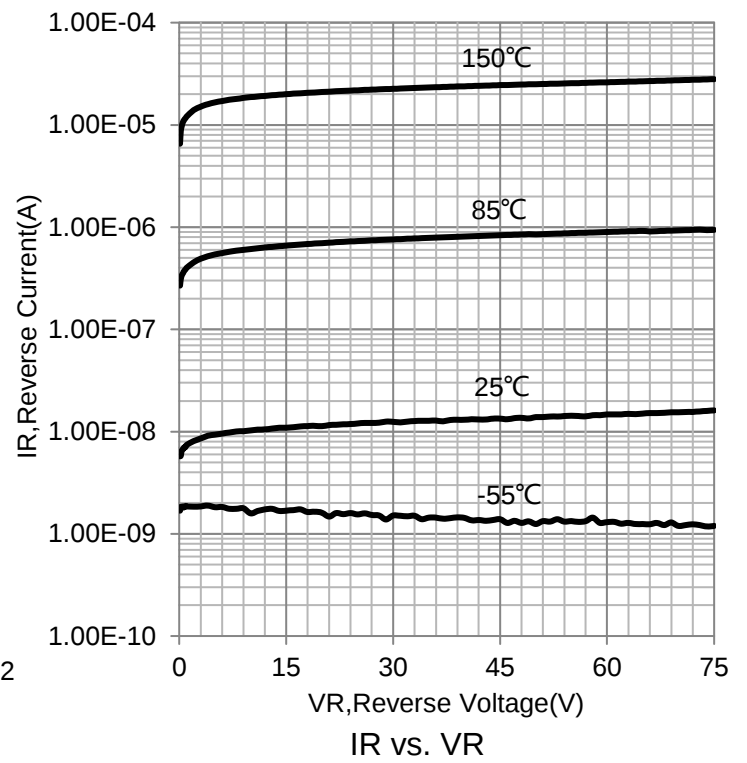
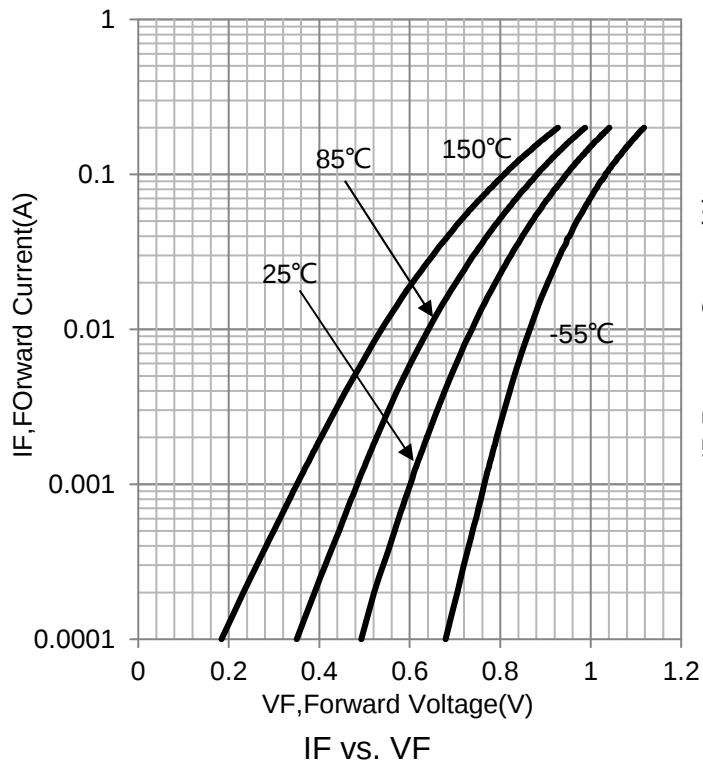


- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit



6.ELECTRICAL CHARACTERISTICS CURVES

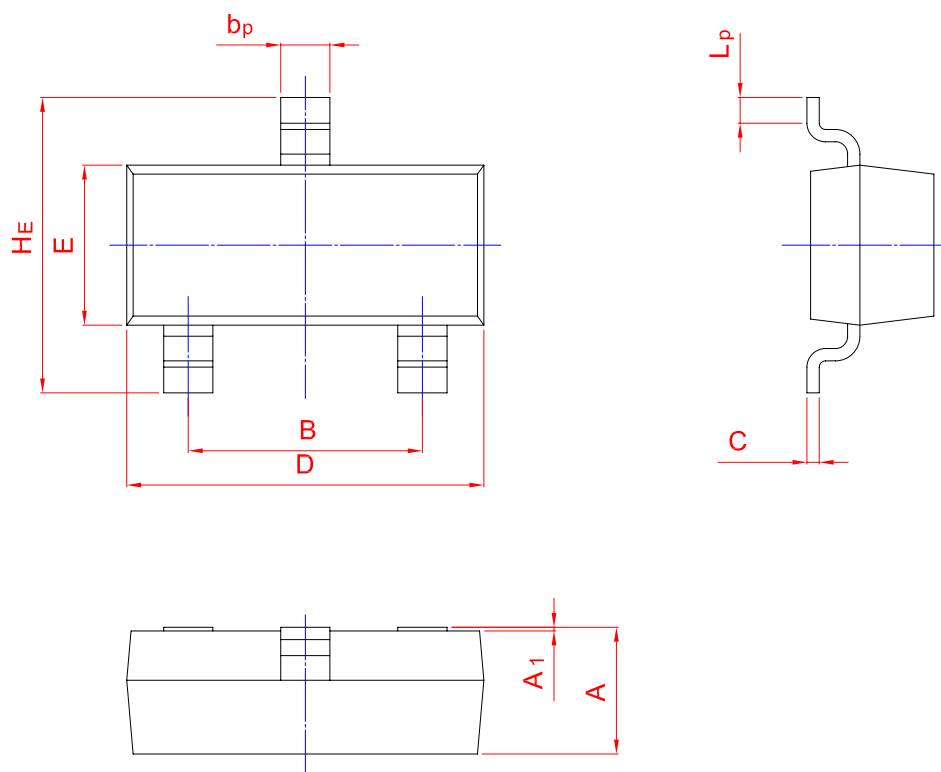
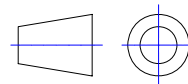




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20