

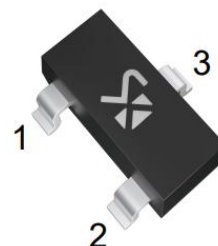


BAS116 Series

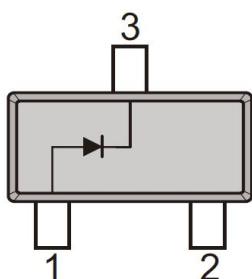
Switching Diodes

Features

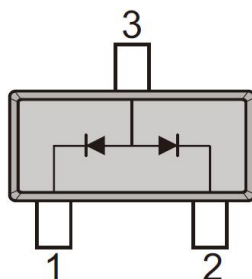
- Fast switching speed
- For general purpose switching applications
- High conductance



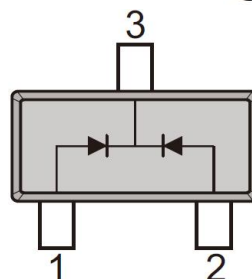
SOT-23



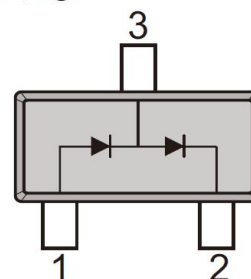
BAS116



BAW156



BAV170



BAV199

Absolute Maximum Ratings($T_A = 25^\circ\text{C}$)

Parameter		Symbol	Value	Unit
Reverse Voltage		V_R	85	V
Forward Current	Single Diode	I_F	215	mA
	Double Diode		125	
Non-Repetitive Peak Forward Surge Current@ $t=1\text{ms}$		I_{FSM}	1.0	A
Power Dissipation		P_D	225	mW
Thermal Resistance Junction to Ambient		R_{thJA}	417	$^\circ\text{C}/\text{W}$
Operation Junction and Storage Temperature Range		T_J, T_{STG}	-55~+150	$^\circ\text{C}$

Electrical Characteristics(at $T_A = 25^\circ\text{C}$, unless specified otherwise.)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V_R	$I_R=100\mu\text{A}$	85			V
Forward Voltage	V_F	$I_F=1\text{mA}$			0.9	V
		$I_F=10\text{mA}$			1.0	
		$I_F=50\text{mA}$			1.1	
		$I_F=150\text{mA}$			1.25	
Reverse Current	I_R	$V_R=75\text{V}$			5	nA
Capacitance Between Terminals	C_T	$V_R=0\text{V}, f=1\text{MHz}$			2	pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R, R_L=100\Omega$			3	us



BAS116 Series

Typical Characteristics

Fig.1 Power Derating Curve

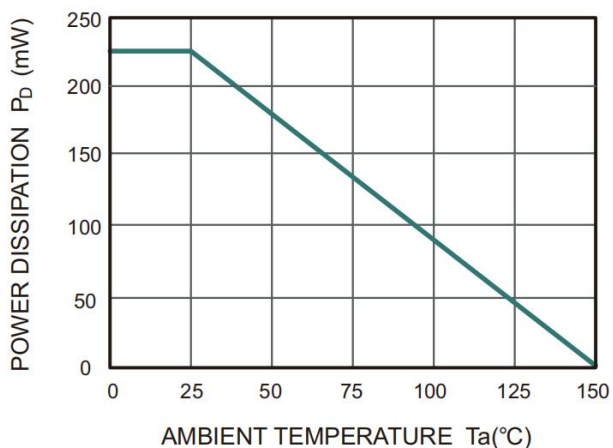


Fig.2 Reverse Characteristics

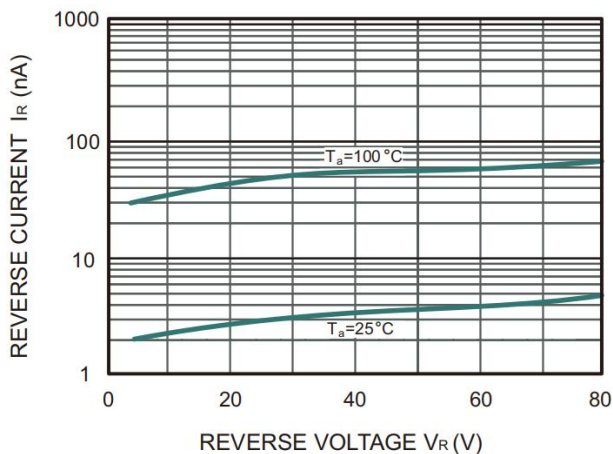


Fig.3 Forward Characteristics

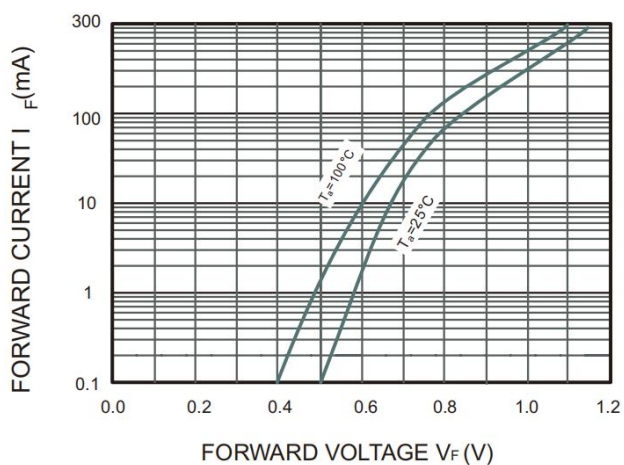
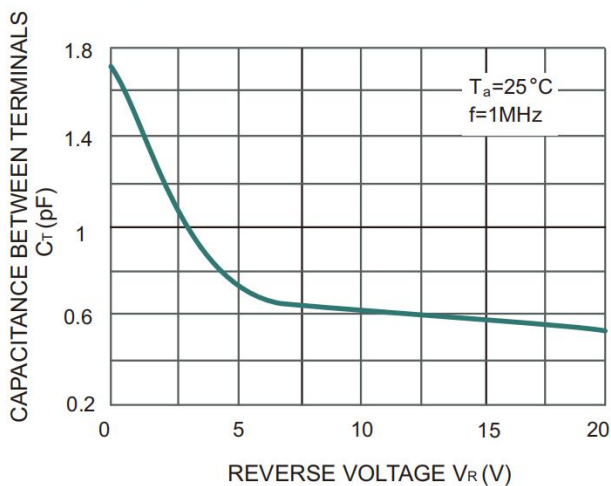


Fig.4 Capacitance Characteristics



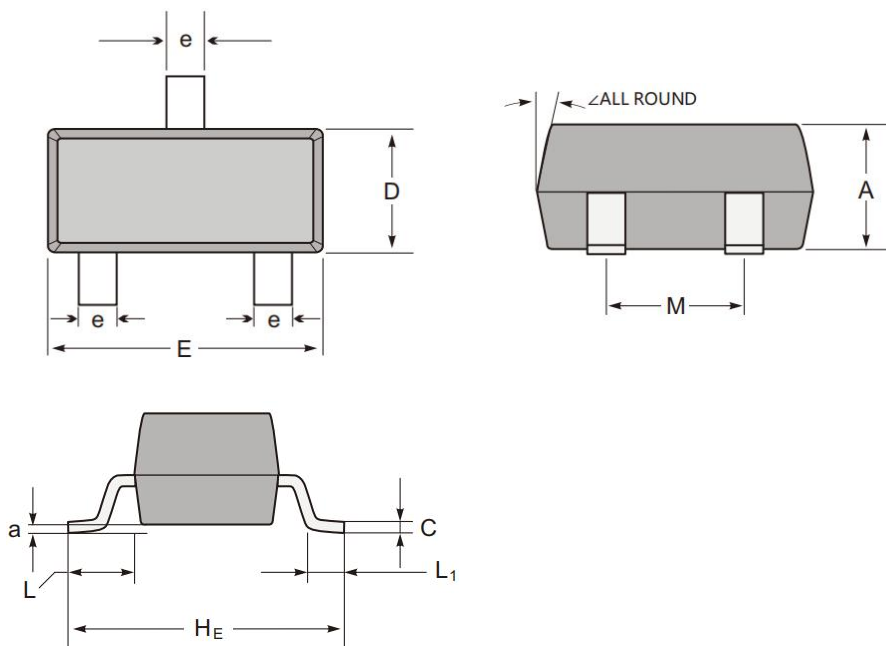


BAS116 Series

Package Information

SOT-23

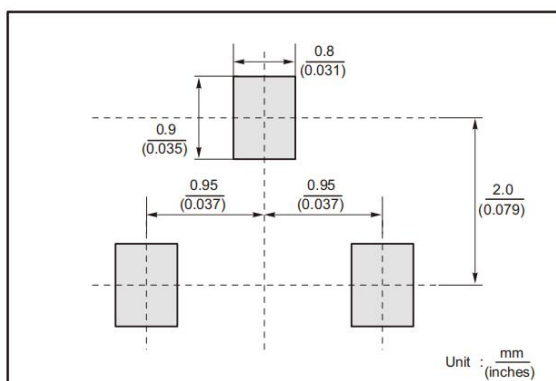
Dimensions in mm



SOT-23 mechanical data

UNIT		A	C	D	E	HE	e	M	L	L ₁	a	∠
mm	max	1.1	0.20	1.4	3.0	2.6	0.6	1.95	0.55 (ref)	0.36 (ref)	0.15	12°
	min	0.9	0.08	1.2	2.8	2.2	0.35	1.7			0.0	
mil	max	43	7.9	55	118	102	24	77	22 (ref)	14 (ref)	6	
	min	35	3.1	47	110	87	13	67			0.0	

The recommended mounting pad size



Marking

Type number	Marking code
BAS116	K50
BAW156	53
BAV170	51
BAV199	52