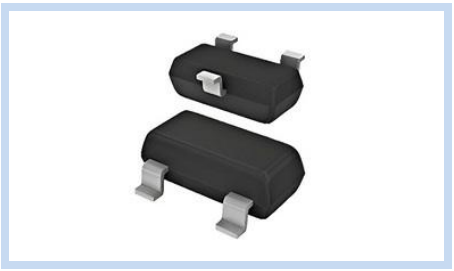
Diodes Array
250mW SOT-323

BAV199W

MERITEK

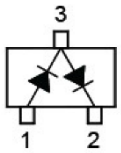
FEATURE

- Power Dissipation: 250mW
- Low Forward Voltage
- Low Leakage Switching Double Diode



MECHANICAL DATA

- Case: SOT-323, Molded Plastic
- Terminals: Solderable per MIL-STD, Method 2026



RoHS

MAXIMUM RATINGS

Parameter		Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage		V_{RRM}	85	V
Reverse Voltage		V_R	85	V
Average Forward Current	Single Diode	$I_{F(AV)}$	160	mA
	Double Diode		140	
Non-Repetitive Peak Forward Surge Current	t = 1μs	I_{FSM}	4	A
	t = 1ms		1	
	t = 1s		0.5	
Power Dissipation		P_{TOT}	250	mW
Typical Thermal Resistance from Junction to Ambient		$R_{\Theta JA}$	500	°C/W
Operating Junction and Storage Temperature Range		T_J ,T_{STG}	-55~+150	°C

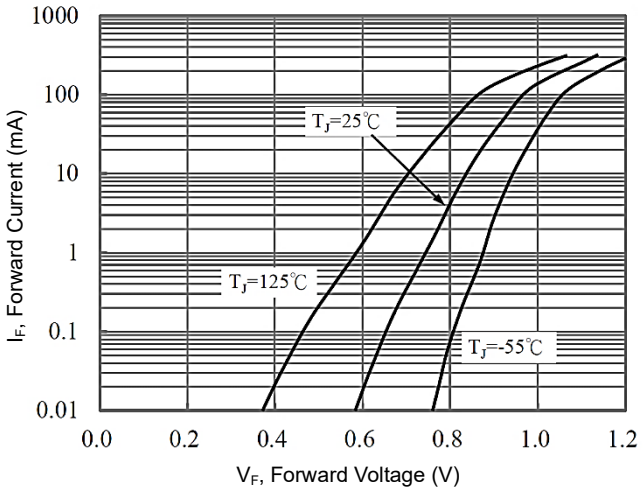
ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Max	Unit
Reverse Breakdown Voltage	I_R= 100μA	$V_{(BR)R}$	85	-	V
Forward Voltage	I_F= 1mA	V_F	-	900	mV
	I_F= 10mA		-	1000	
	I_F= 50mA		-	1100	
	I_F= 150mA		-	1250	
Reverse Leakage Current	V_R=75V, T_J=25°C	I_R	-	5	nA
	V_R=75V, T_J=125°C		-	80	
Total Capacitance	V_R= 0V, f=1MHz	C_d	-	2	pF
Reverse Recovery Time	I_F=10mA, V_R= 6V, I_{rr}= 0.1xI_R, R_L=100Ω	t_{rr}	-	3	μS

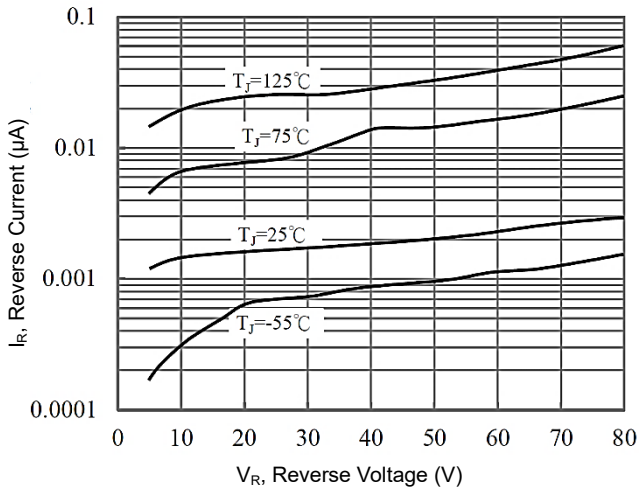
Note:
1. T_A = 25°C unless otherwise specified.
2. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

CHARACTERISTIC CURVES

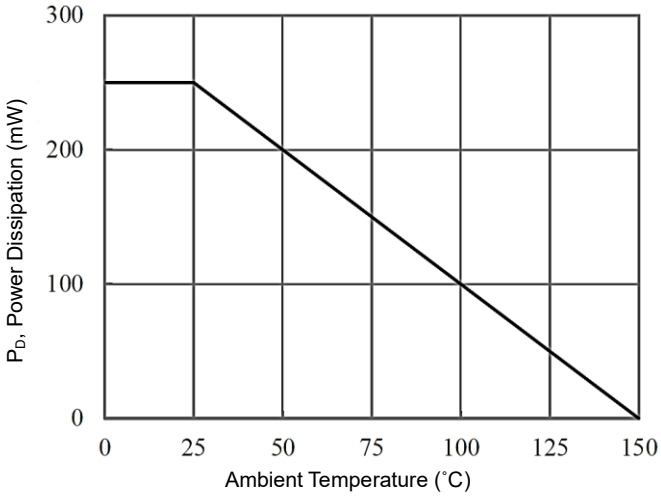
Typical Forward Characteristics



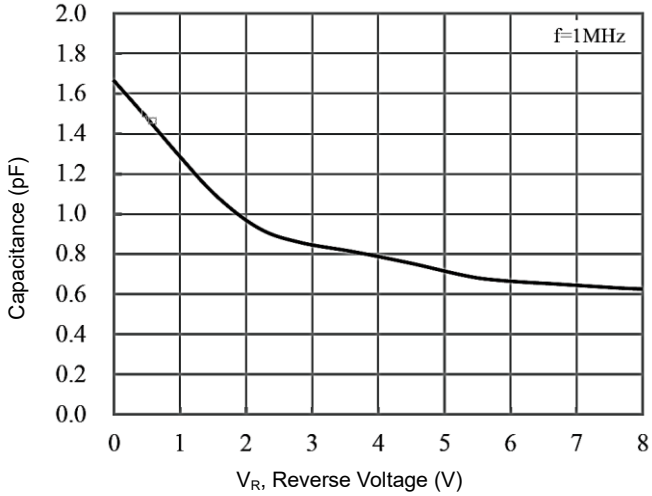
Typical Reverse Characteristics



Power Derating Curve



Capacitance



DIMENSIONS AND RECOMMENDED LAND PATTERN

SOT-23	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.80	1.10
b	0.20	0.40
C	0.05	0.25
D	1.80	2.20
e	0.60	0.70
e1	1.20	1.40
E	2.00	2.40
E1	1.15	1.35
L	0.10	-
X	0.80	
X1	0.65	
Y	0.80	
Y1	0.80	
Y2	2.40