

Switching Diodes

SOT-323 AEC-Q101

BAS21xW-A Series

MERITEK

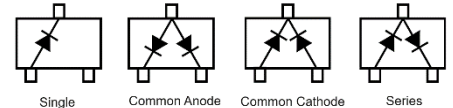
FEATURE

- High Reverse Voltage
- Fast Switching Speed
- Low Junction Capacitance, Low Leakage Current
- Application: Signal
- AEC-Q101 Compliant



MECHANICAL DATA

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



MAXIMUM RATING

Parameter	Symbol	BAS21W-A	BAS21AW-A	BAV21CW-A	BAS21SW-A	Units
Reverse Voltage	V_R	250				V
Average Forward Rectified Current	$I_{F(AV)}$	200				mA
Non-Repetitive Peak Forward Surge Current	$t = 1\mu s$	2.5				A
	$t = 1 s$	0.5				
Power Dissipation	P_{TOT}	250				mW
Typical Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500				$^{\circ}C/W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150				$^{\circ}C$
Circuit Figure	-	Single	Common Anode	Common Cathode	Series	-

ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Typ.	Max	Unit
Reverse Breakdown Voltage	$I_R = 100\mu A$	$V_{(BR)R}$	250	--	--	V
Instantaneous Forward Voltage	$I_F = 100mA$	V_F	--	--	1.00	V
	$I_F = 200mA$		--	--	1.25	
Reverse Leakage Current	$V_R = 200V$	I_R	--	--	0.1	μA
	$V_R = 200V, T_J = 150^{\circ}C$		--	--	100	
Capacitance	$V_R = 0V, f = 1MHz$	C_d	--	--	5	pF
Reverse Recovery Time	$I_F = I_R = 30mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}	--	--	50	nS

Note:

1. $T_A = 25^{\circ}C$ unless otherwise specified.
2. Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

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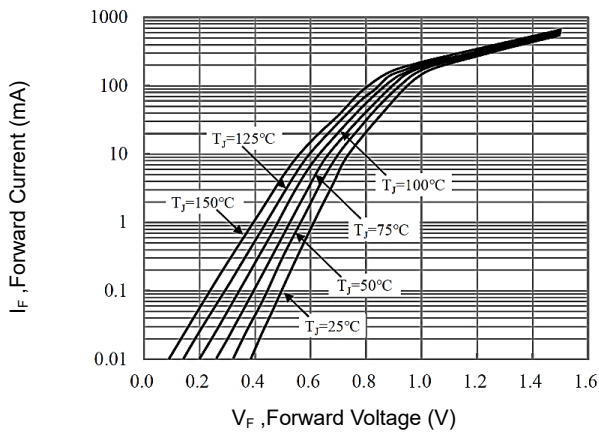
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BAS21xW-A Series

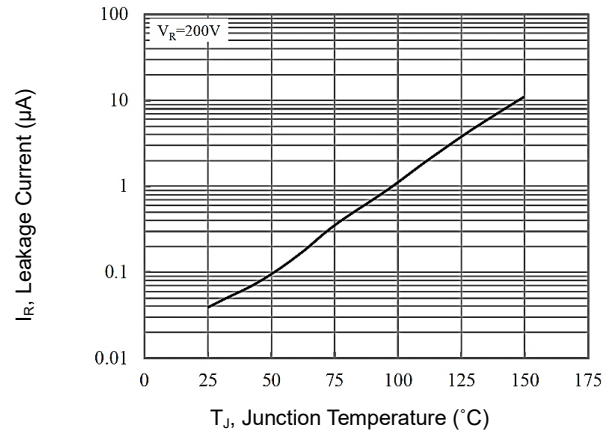
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CHARACTERISTIC CURVES

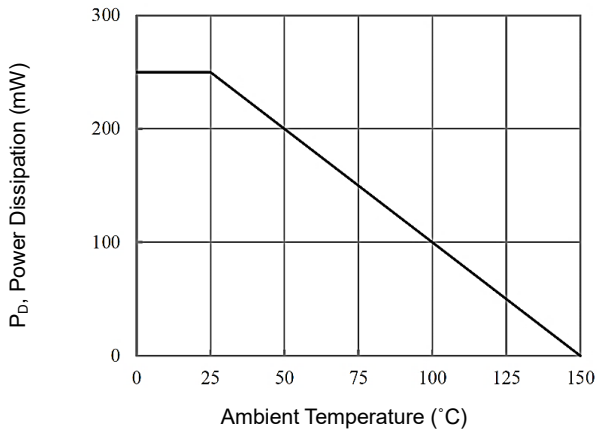
Typical Forward Characteristics



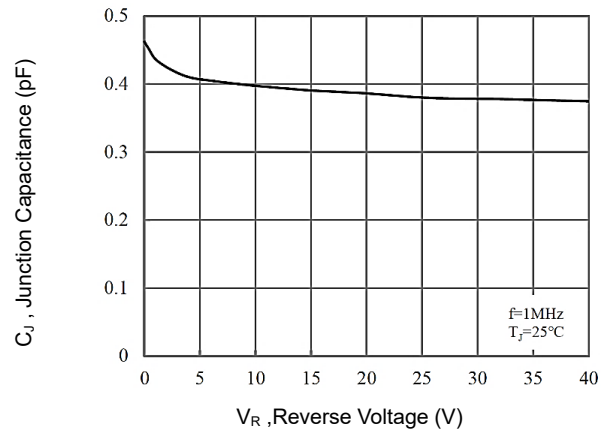
Leakage Current vs. Junction Temperature



Power Derating Curve

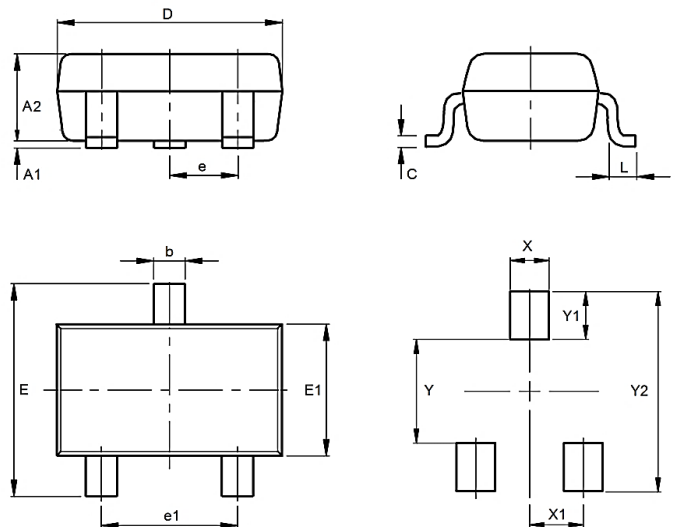


Typical Junction Capacitance



DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.70	1.10
b	0.20	0.40
c	0.05	0.25
D	2.70	3.10
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		1.40
Y1		0.80
Y2		2.40



*Specifications subject to change without notice.