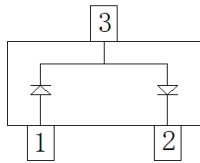


## High Speed Switching Diode



**SOT-323**



### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- $V_{BR}$  85V
- $I_{FAV}$  160mA@ Single diode loaded
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- Low-Leakage

### Mechanical Data

- **Case:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** K52

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Reverse Breakdown Voltage	$V_{BR}$	V		85
Average Forward Current	$I_{FAV}^{[1]}$	mA		160
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	A	$t_p=1\ \mu\text{s}$	4
Power Dissipation	$P_D$	mW		200
Thermal Resistance Junction to Ambient	$R_{thJA}$	$^\circ\text{C}/\text{W}$		625
Maximum Junction Temperature	$T_j$	$^\circ\text{C}$		150
Storage Temperature Range	$T_{stg}$	$^\circ\text{C}$		-55 to +150

[1] Single diode loaded

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN.	TPY.	MAX.
Forward Voltage	$V_F$	mV	$I_F=1\ \text{mA}$			900
			$I_F=10\ \text{mA}$			1000
			$I_F=50\ \text{mA}$			1100
			$I_F=150\ \text{mA}$			1250
Reverse Current	$I_R$	nA	$V_R=75\ \text{V}$			5
Reverse Breakdown Voltage	$V_{BR}$	V	$I_R=100\ \mu\text{A}$	85		
Junction Capacitance	$C_j$	pF	$V_R=V_F=0\ \text{V}$ , $f=1\ \text{MHz}$			4
Reverse Recovery Time	$t_{rr}$	$\mu\text{s}$	$I_F=I_R=10\ \text{mA}$ , $I_{rr}=0.1I_R$ , $R_L=100\ \Omega$			3



## Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAV199WTQ	F2	Approximate 0.006	3000	30000	120000	7" reel

## Characteristics (Typical)

Fig.1 - Forward Characteristics

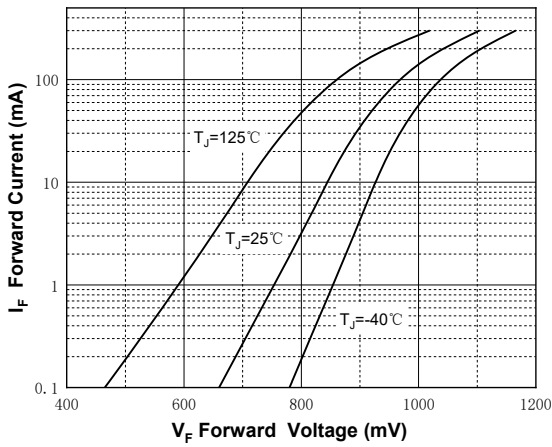


Fig.2 - Reverse Characteristics

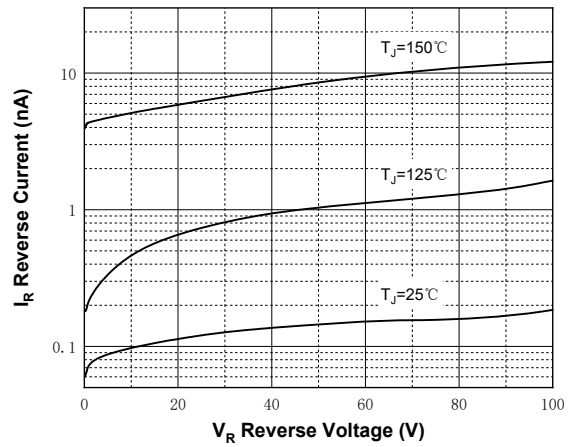
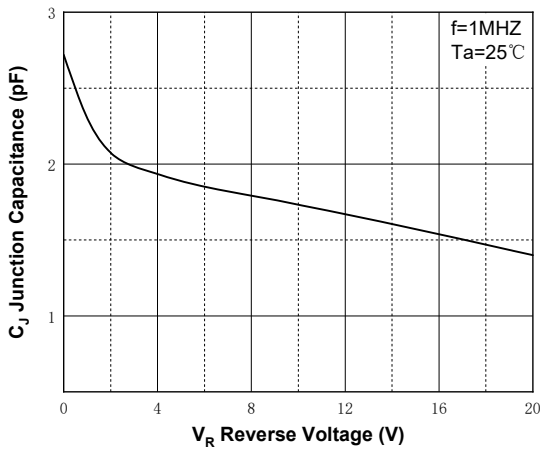
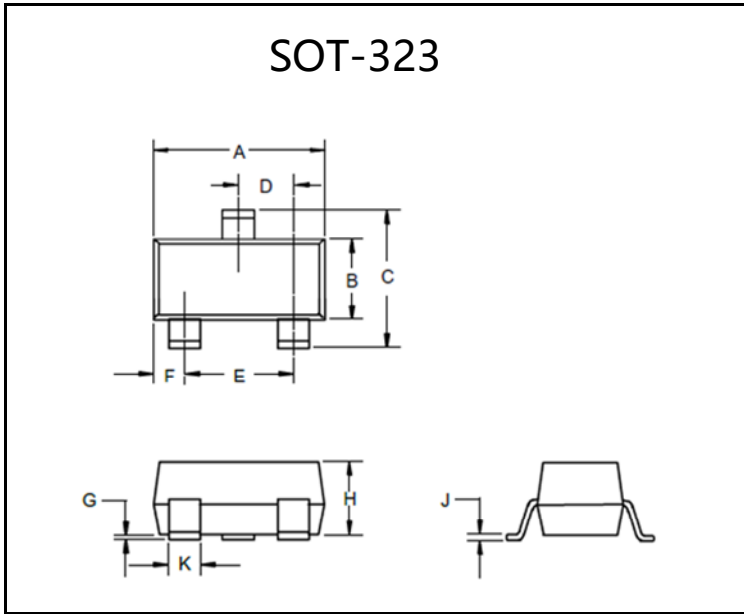


Fig.3 - Junction Capacitance

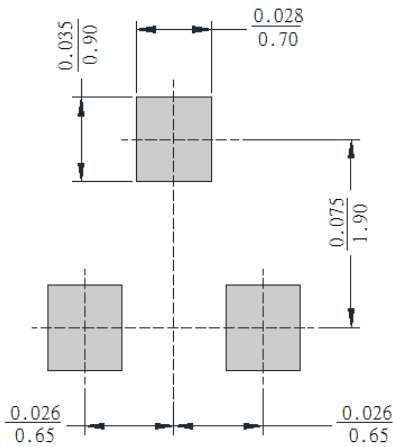


## ■ Outline Dimensions



DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.071	0.087	1.80	2.20
B	0.045	0.053	1.15	1.35
C	0.083	0.096	2.10	2.45
D	0.026Nominal		0.65Nominal	
E	0.047	0.055	1.20	1.40
F	0.012	0.016	0.30	0.40
G	0.000	0.004	0.00	0.10
H	0.035	0.039	0.90	1.00
J	0.004	0.010	0.10	0.250
K	0.006	0.016	0.15	0.40

## ■ Soldering Footprint



Unit:  $\frac{\text{inch}}{\text{mm}}$



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