

## High Speed Switching Diode



**SOT-323**

### Features

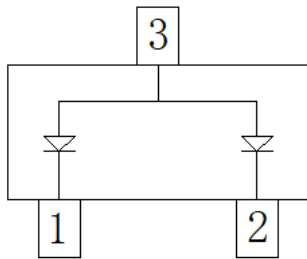
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- $V_{BR}$  100V
- $I_{FAV}$  150mA@ Single diode loaded
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

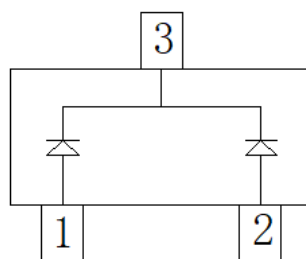
- Extreme fast switches

### Mechanical Data

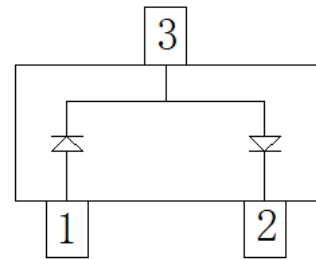
- **Case:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



BAW56WTQ  
Marking:KJC



BAV70WTQ  
Marking:KJA



BAV99WTQ  
Marking: KJG

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Reverse Breakdown Voltage	$V_{BR}$	V		100
Average Forward Current	$I_{FAV[1]}$	mA		150
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	A	$t_p=1\text{ ms}$	1
Power Dissipation	$P_{tot[1]}$	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



# BAW56WTQ&BAV70WTQ&BAV99WTQ

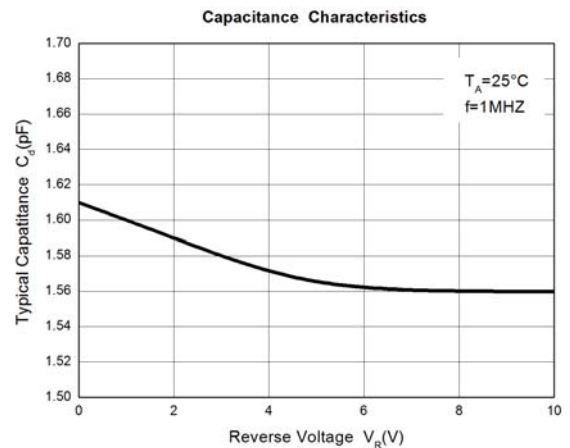
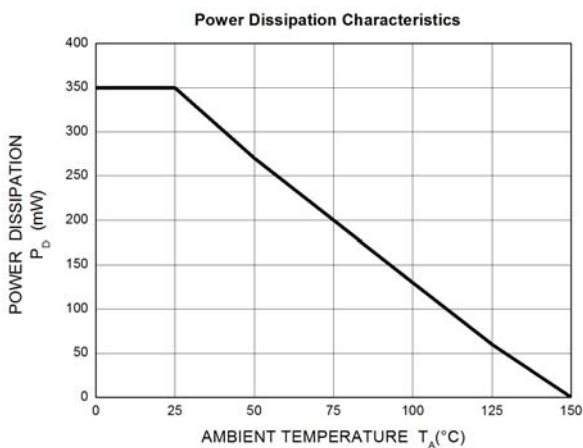
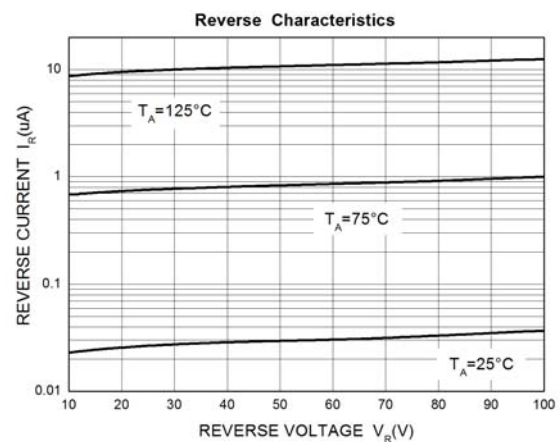
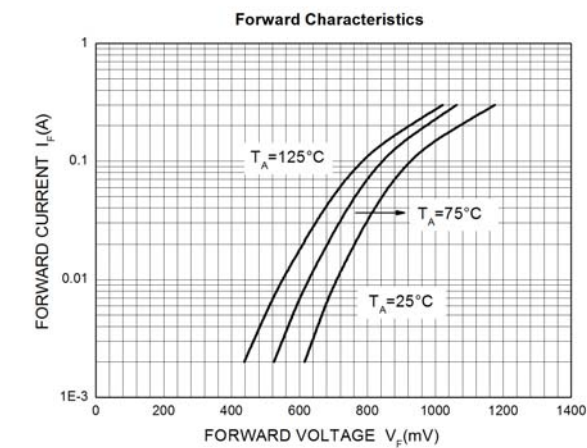
## ■ Electrical Characteristics (T<sub>A</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =1mA	0.715
			I <sub>F</sub> =10mA	0.855
			I <sub>F</sub> =50mA	1.0
			I <sub>F</sub> =150mA	1.25
Reverse Current	I <sub>R</sub>	μA	V <sub>R</sub> =75V	1
Reverse Breakdown Voltage	V <sub>BR</sub>	V	I <sub>R</sub> =100μA	100
Diode Capacitance	C <sub>j</sub>	pF	V <sub>R</sub> =V <sub>F</sub> =0V, f=1MHz	2
Reverse Recovery Time	t <sub>rr</sub>	ns	I <sub>F</sub> =10mA, I <sub>rr</sub> =0.1I <sub>R</sub> , R <sub>L</sub> =100Ω	4

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAW56WTQ BAV70WTQ BAV99WTQ	F2	Approximate 0.006	3000	30000	120000	7" reel

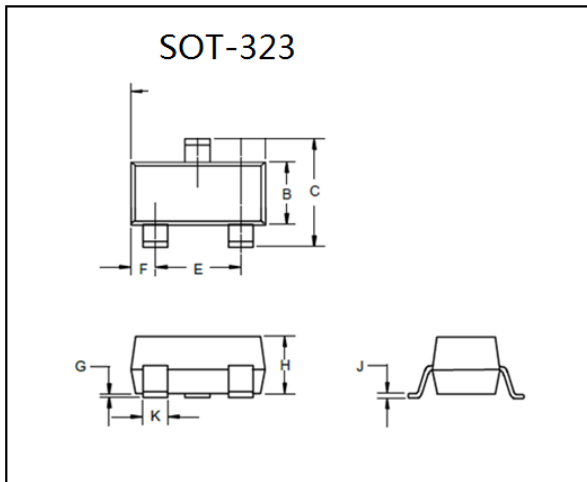
## ■ Characteristics (Typical)





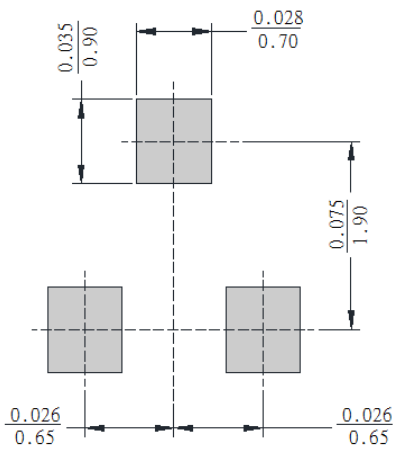
# BAW56WTQ&BAV70WTQ&BAV99WTQ

## ■ Outline Dimensions



DIM	INCHES		MM		NOTE
	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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