

High Speed Switching Diode



SOT-23

Features

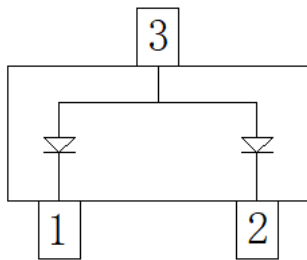
- Epoxy meets UL-94 V-0 flammability rating
- Moisture Sensitivity Level 1
- V_{BR} 100V
- I_{FAV} 200mA@ Single diode loaded
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

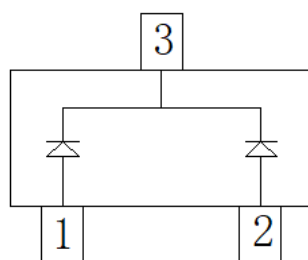
- Extreme fast switches

Mechanical Data

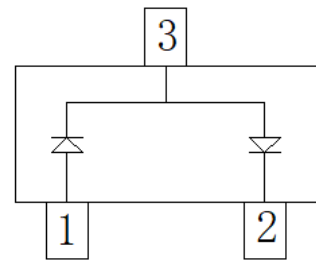
- **Case:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



BAW56Q
Marking:A1



BAV70Q
Marking:A4



BAV99Q
Marking:A7

■ 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		200
Non-Repetitive Peak Forward Surge Current	I_{FSM}	A	$t_p=1\text{ ms}$	1
Power Dissipation	$P_{tot[1]}$	mW		350
Thermal Resistance Junction to Ambient	R_{thJA}	$^{\circ}\text{C/W}$		357
Maximum Junction Temperature	T_j	$^{\circ}\text{C}$		150
Storage Temperature Range	T_{stg}	$^{\circ}\text{C}$		-55 to +150

[1] Single diode loaded



BAW56Q&BAV70Q&BAV99Q

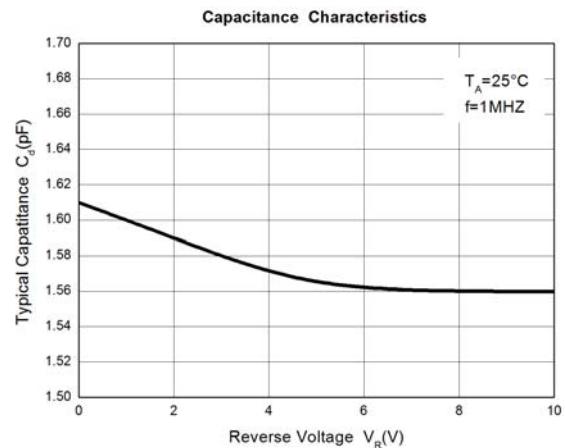
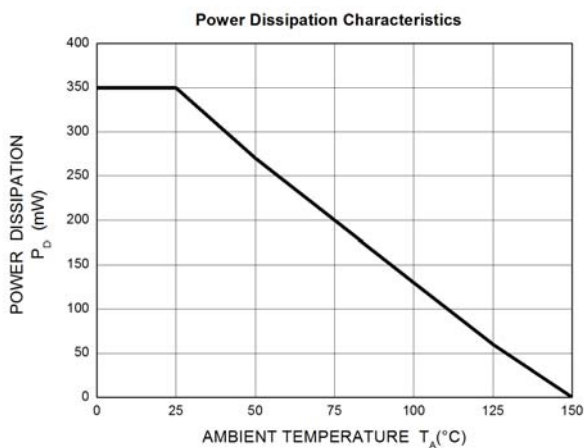
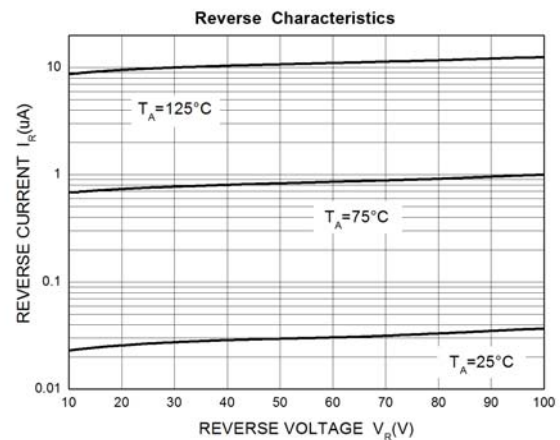
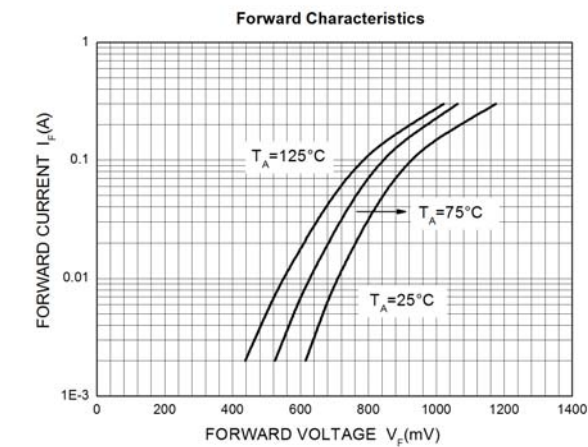
■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Forward Voltage	V _F	V	I _F =1mA	0.715
			I _F =10mA	0.855
			I _F =50mA	1.0
			I _F =150mA	1.25
Reverse Current	I _R	μA	V _R =75V	1
Reverse Breakdown Voltage	V _{BR}	V	I _R =10μA	100
Diode Capacitance	C _D	pF	V _R =V _F =0V, f=1MHz	4
Reverse Recovery Time	t _{rr}	ns	I _F =10mA, I _{rr} =0.1I _R , R _L =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
BAW56Q&BAV70Q&BAV99Q	F2	Approximate 0.010	3000	30000	120000	7" reel

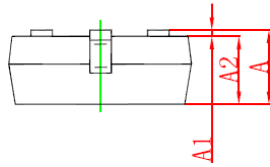
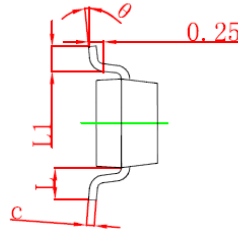
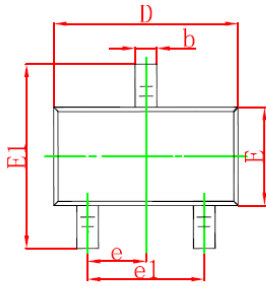
■ Characteristics (Typical)





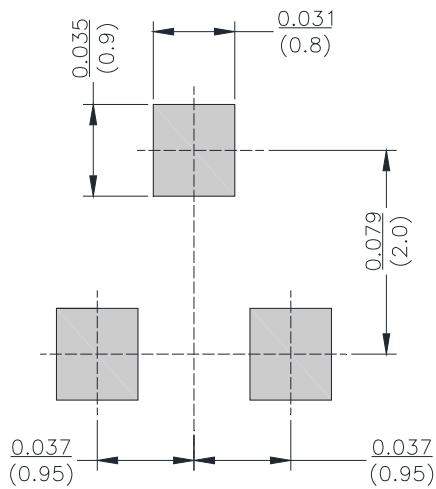
BAW56Q&BAV70Q&BAV99Q

■ Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

■ Soldering Footprint



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



BAW56Q&BAV70Q&BAV99Q

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.