

High Speed Switching Diode



SOT-323

Features

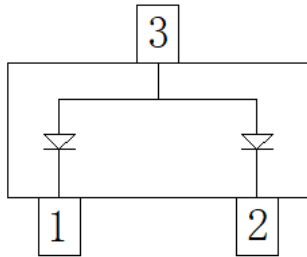
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_{BR} 100V
- I_{FAV} 150mA@ Single diode loaded
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

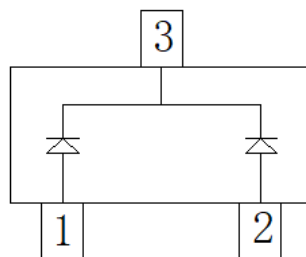
- Extreme fast switches

Mechanical Data

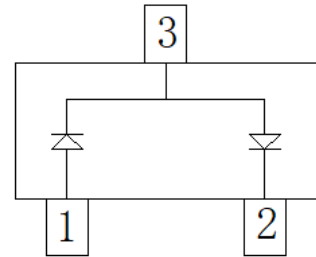
- **Case:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



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	$P_{tot}^{(1)(2)}$	mW		200
Thermal Resistance Junction to Ambient	$R_{thJA}^{(2)}$	$^\circ\text{C/W}$		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

(2) Device mounted on an FR4 PCB(1.0 x 1.0 x 0.06 inch), single-sided copper, tin-plated and standard footprint.



BAW56WTQ&BAV70WTQ&BAV99WTQ

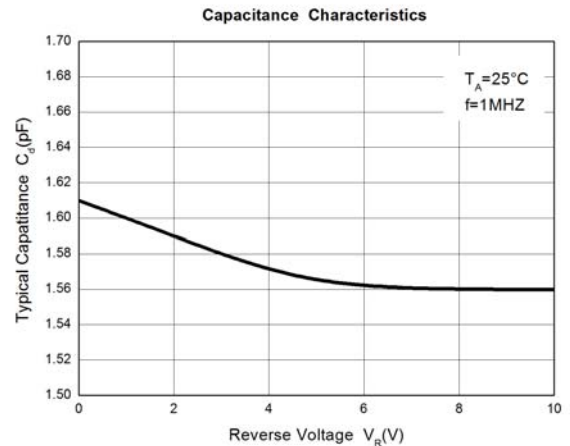
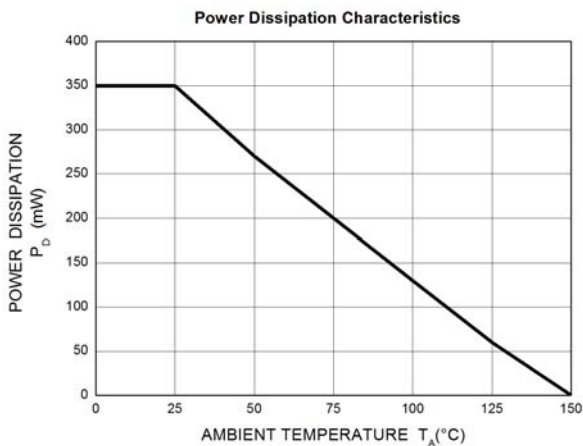
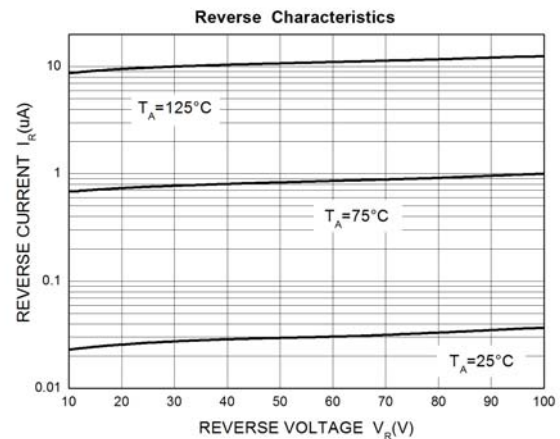
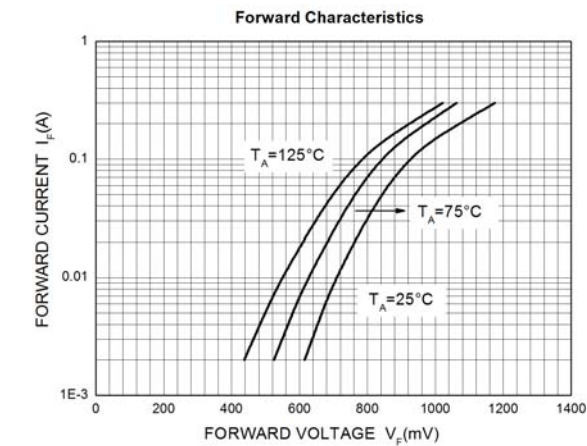
■ Electrical Characteristics (T_A=25°C Unless otherwise specified)

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 =100μA	100
Diode Capacitance	C _j	pF	V _R =V _F =0V, f=1MHz	2
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
BAW56WTQ BAV70WTQ BAV99WTQ	F2	Approximate 0.006	3000	30000	120000	7" reel

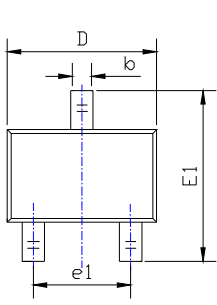
■ Characteristics (Typical)



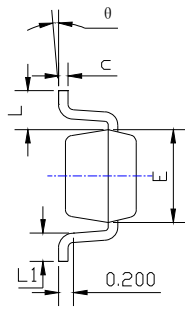


BAW56WTQ&BAV70WTQ&BAV99WTQ

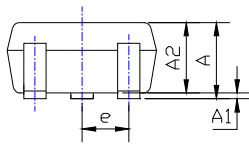
■ Outline Dimensions



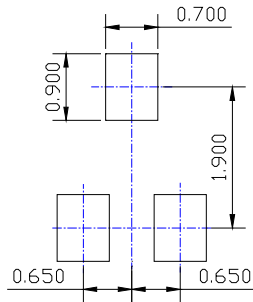
TOP VIEW



SIDE VIEW



SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026 TYP		0.650 TYP	
e1	0.047	0.055	1.200	1.400
L	0.021 REF		0.525 REF	
L1	0.010	0.018	0.260	0.460
θ	0°		8°	

NOTE:

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



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 automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military, 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.