RoHS
COMPLIANT

High Speed Switching Diode

SOT-323

Features

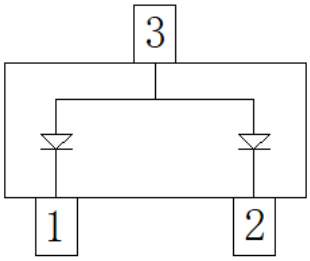
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_{BR} 100V
- I_{FAV}150mA@ Single diode loaded
- Part no. with suffix “Q” means AEC-Q101 qualified

Applications

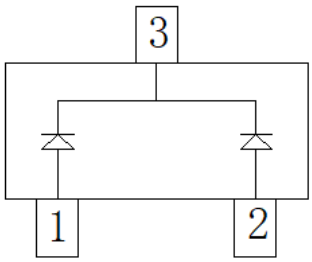
- Extreme fast switches
- Automotive

Mechanical Data

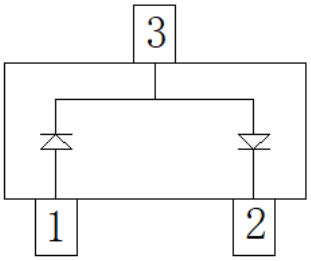
- **Case**: SOT-323
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102



BAW56WTQ
Marking:KJC



BAV70WTQ
Marking:KJA



BAV99WTQ
Marking: KJG

■ Maximum Ratings (Ta=25℃ 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 ms	1
Power Dissipation	$P_{tot}^{(1)(2)}$	mW		200
Thermal Resistance Junction to Ambient	$R_{thJA}^{(2)}$	℃/W		625
Maximum Junction Temperature	T_j	℃		-55 to +150
Storage Temperature Range	T_{stg}	℃		-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.

S-S3017
Rev.1.3,30-Dec-22

■ Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
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 =1MH$_Z$		2
Reverse Recovery Time	t_{rr}	ns	I_F=10mA,Irr=0.1I_R,R_L=100Ω		4

■ Ordering Information (Example)

PREFERED 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)

Fig.1: P_D-T_A

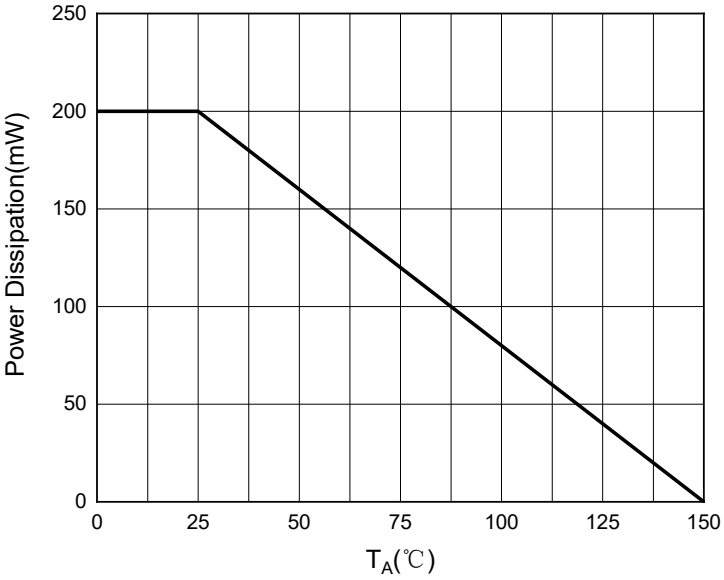


Fig.2: Capacitance Characteristics

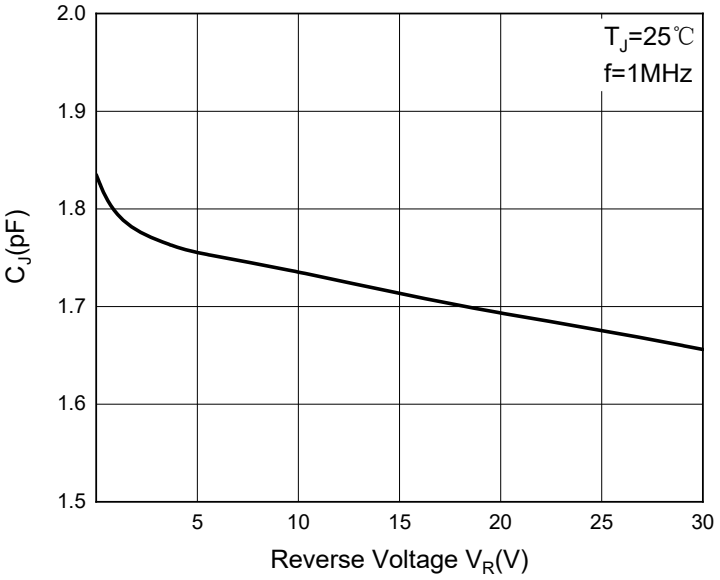


Fig3: Forward Characteristics

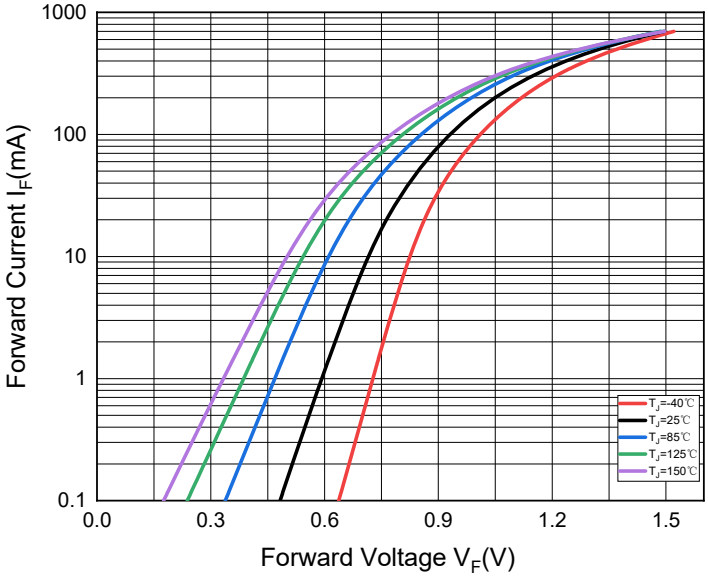
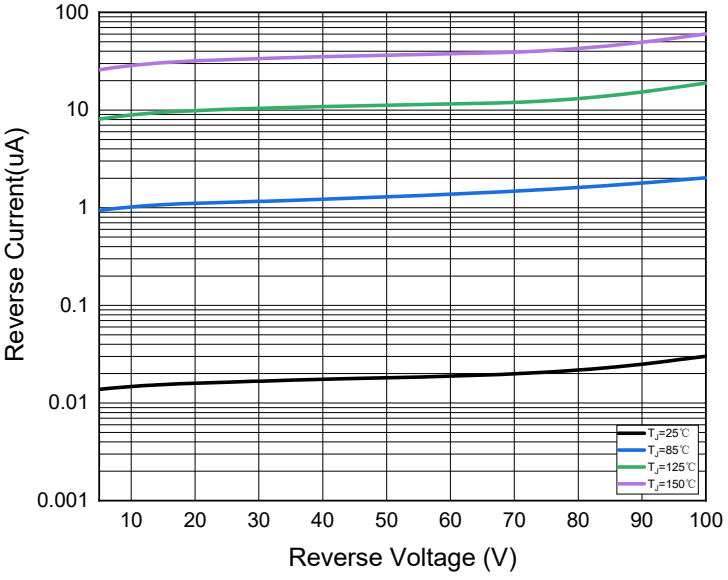
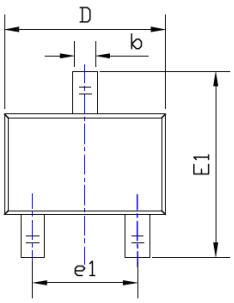


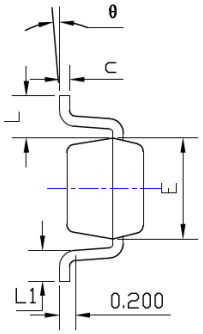
Fig.4: Reverse Characteristics



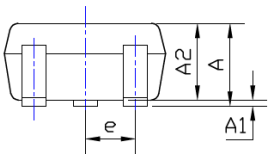
■ Outline Dimensions



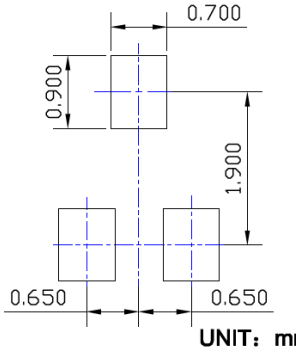
TOP VIEW



SIDE VIEW



SIDE VIEW



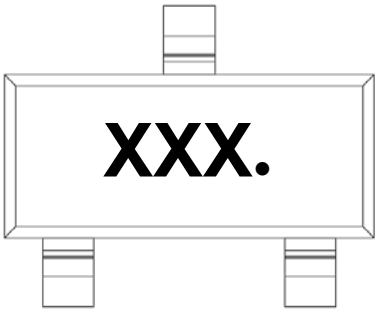
UNIT：mm

SUGGESTED SOLDER PAD LAYOUT

DIMENSIONS				
SYMBOL	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	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	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.

■ Marking Information



PN	Marking Code
BAW56WTQ	KJC
BAV70WTQ	KJA
BAV99WTQ	KJG

Note:
1. All marking is at middle of the product body
2. All marking is in laser marking
3. XXX is Marking Code
4. Body color: Black

Disclaimer

The information presented in this document is for reference only. Anhui Lingte Microsemiconductor 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 i mproper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.ltwsemi.cn .