

Dual High-voltage Switching Diode



SOT-23

Features

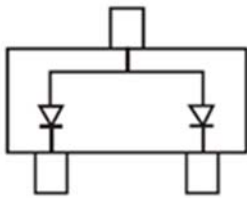
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Fast Switching Speed
- High Conductance
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

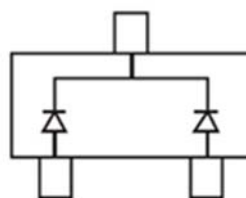
- For General Purpose Switching Applications
- Automotive

Mechanical Data

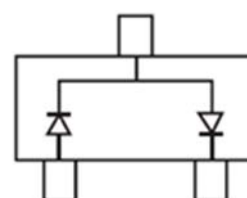
- Case: SOT-23
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102



BAV23AQ Marking: KT7



BAV23CQ Marking: KT6



BAV23SQ Marking: KL31

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

Item	Symbol	Unit	Value
Repetitive peak reverse voltage	V_{RRM}	V	250
Forward Continuous Current, Per Leg	$I_{F[1]}$	mA	225
Non-Repetitive Peak Forward Surge Current@ $t_p=10\text{ms}$,	I_{FSM}	A	1.7
Power Dissipation	$P_{D[1]}$	mW	350
Thermal Resistance from Junction to Ambient	R_{thJA}	$^\circ\text{C}/\text{W}$	357
Operation Junction Temperature	T_J	$^\circ\text{C}$	-55 to +150
Storage Temperature	T_{STG}	$^\circ\text{C}$	-55 to +150

[1] Single diode loaded



BAV23AQ/CQ/SQ

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

Item	Symbol	Unit	Conditions	Min	Typ	Max
Reverse Voltage	V _{BR}	V	I _R =100uA	250		
Forward Voltage	V _F	V	I _{FM} =100mA, T _J =25°C			1
			I _{FM} =200mA, T _J =25°C			1.25
Reverse Current	I _R	uA	V _R =200V			0.1
Total Capacitance	C _{tot}	pF	f=1.0MHz, V _R =0V			5
Reverse Recovery Time	T _{rr}	ns	I _F =I _R =30mA, V _R =6V, R _L =100Ω, I _{rr} =3mA			50

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAV23AQ/CQ/SQ	F2	Approximate 0.01	3000	30000	120000	7" reel



■ Typical Characteristics (Per Leg)

Fig.1: P_D-T_A

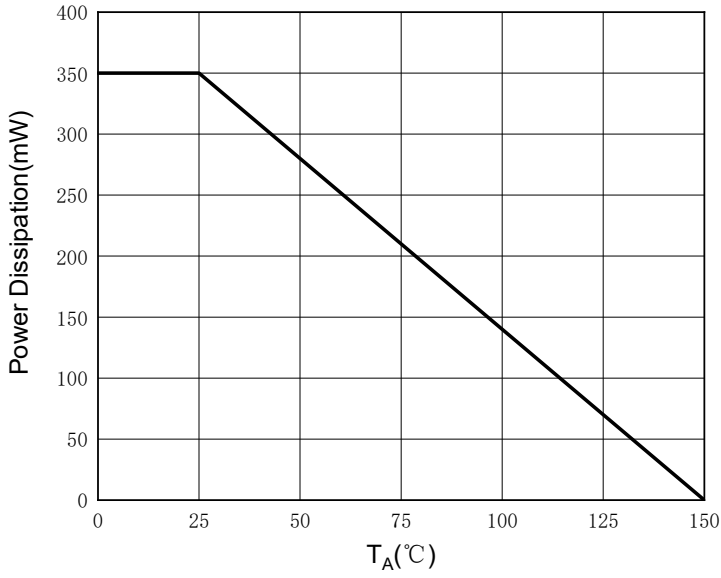


Fig.2: Forward Characteristics

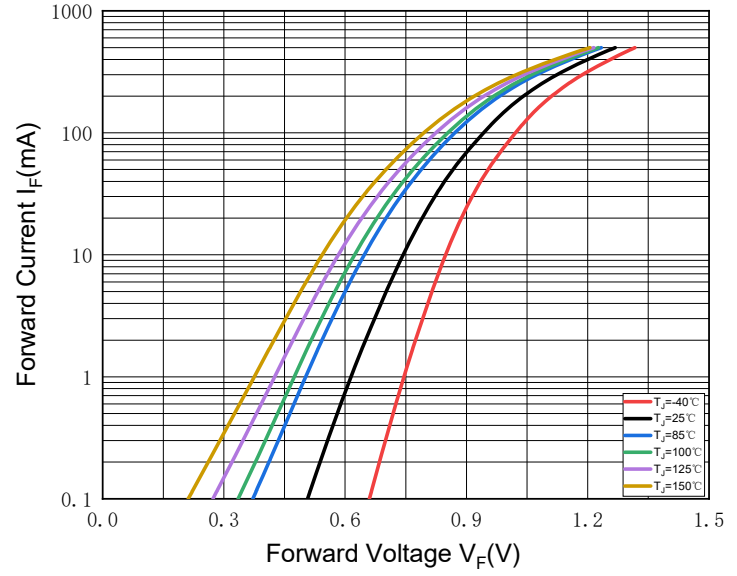


Fig.3: Reverse Characteristics

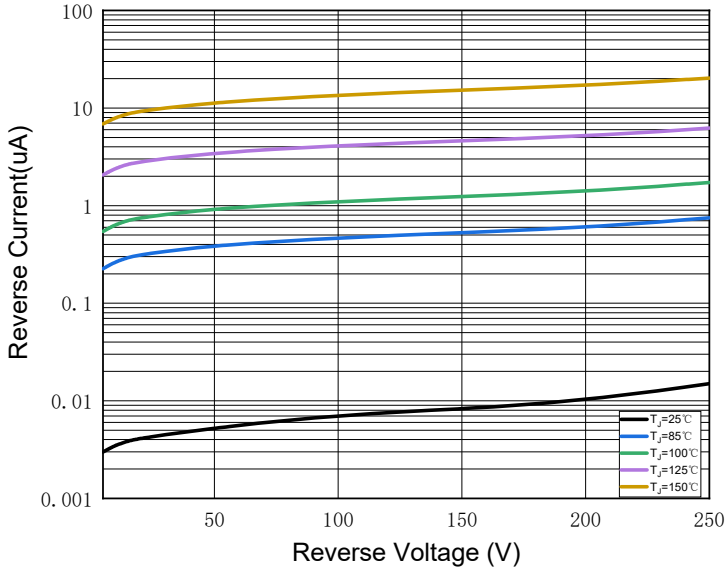
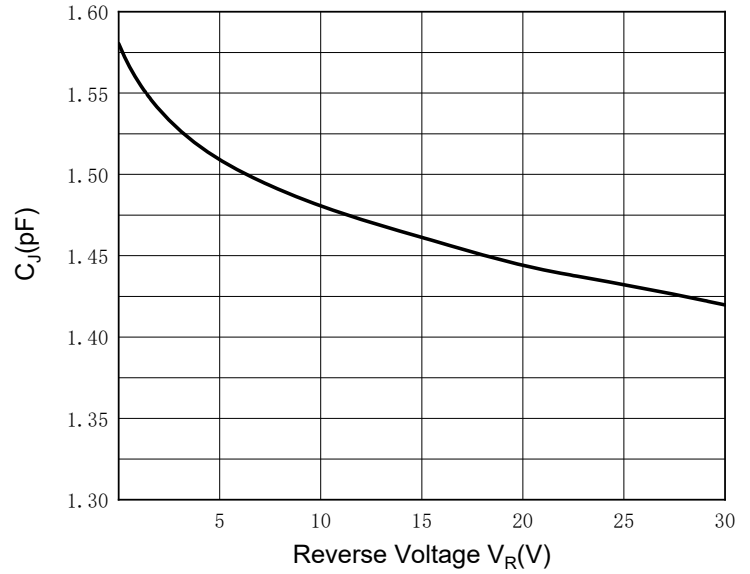


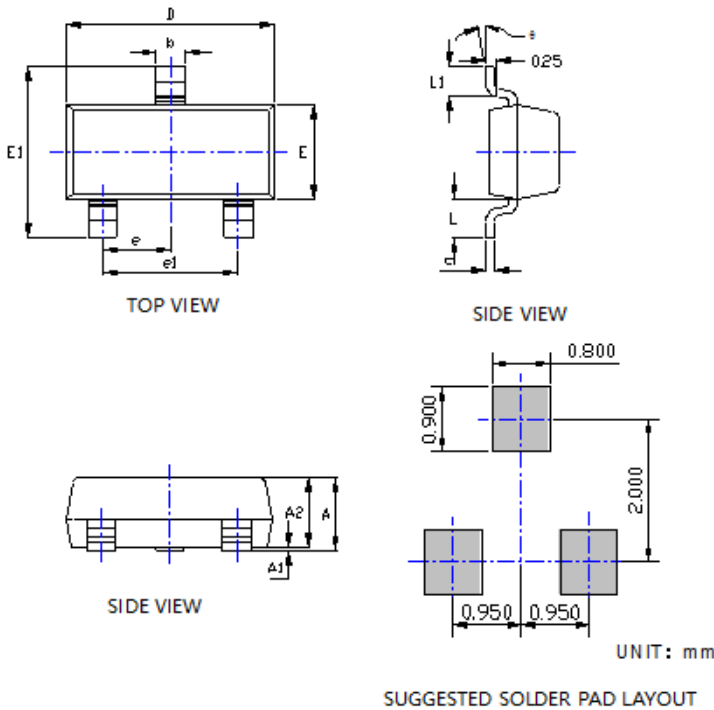
Fig.4: Capacitance Characteristics





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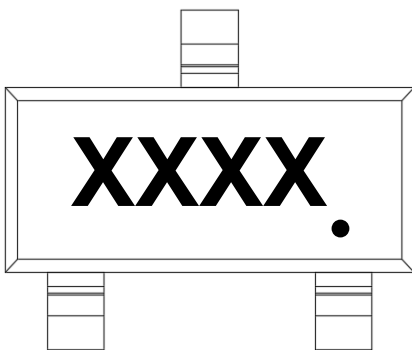
■ SOT-23 Package Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
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
BAV23AQ	KT7
BAV23CQ	KT6
BAV23SQ	KL31

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



BAV23AQ/CQ/SQ

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