

## Dual High-voltage Switching Diode



**SOT-23**

### Features

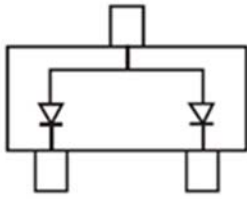
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Fast Switching Speed
- High Conductance
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

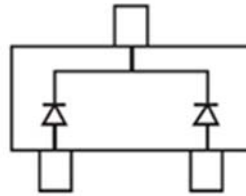
- For General Purpose Switching Applications

### Mechanical Data

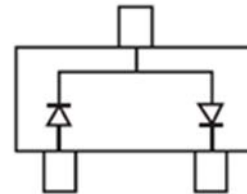
- Case: SOT-23
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102



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

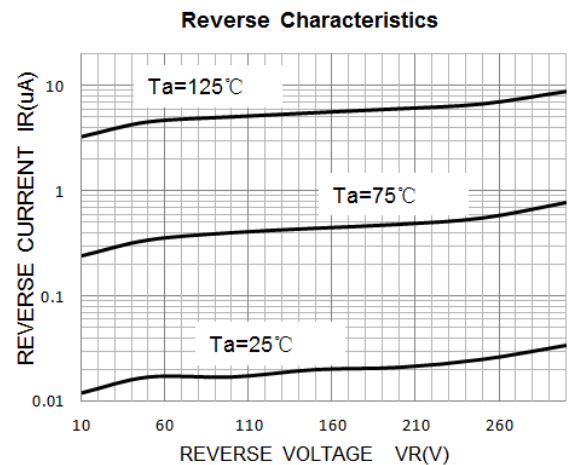
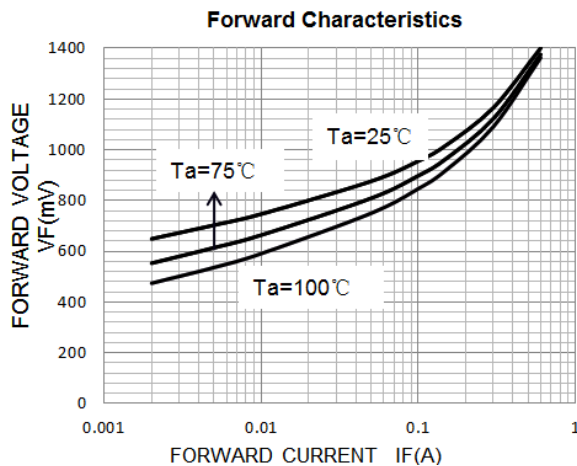
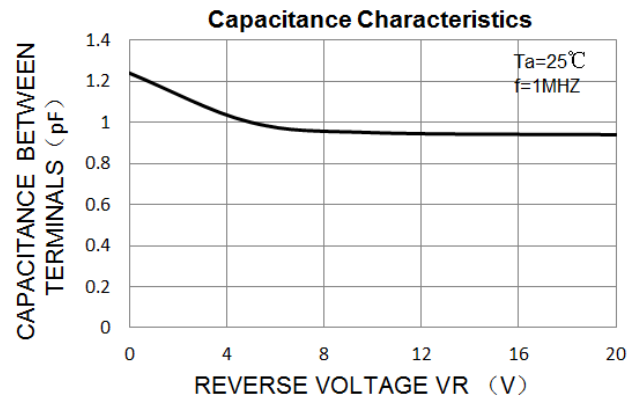
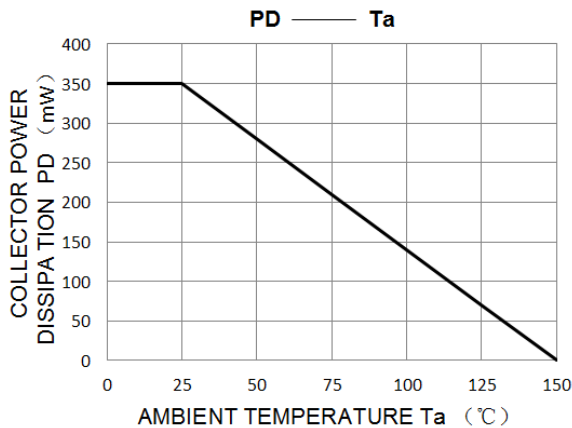
## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified, Per Leg)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Reverse Voltage	V <sub>BR</sub>	V	I <sub>R</sub> =100uA	250		
Forward Voltage	V <sub>F</sub>	V	I <sub>FM</sub> =100mA, T <sub>J</sub> =25°C			1
			I <sub>FM</sub> =200mA, T <sub>J</sub> =25°C			1.25
Reverse Current	I <sub>R</sub>	uA	V <sub>R</sub> =200V			0.1
Total Capacitance	C <sub>tot</sub>	pF	f=1.0MHz, V <sub>R</sub> =0V			5
Reverse Recovery Time	T <sub>rr</sub>	ns	I <sub>F</sub> =I <sub>R</sub> =30mA, V <sub>R</sub> =6V, R <sub>L</sub> =100Ω, I <sub>rr</sub> =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

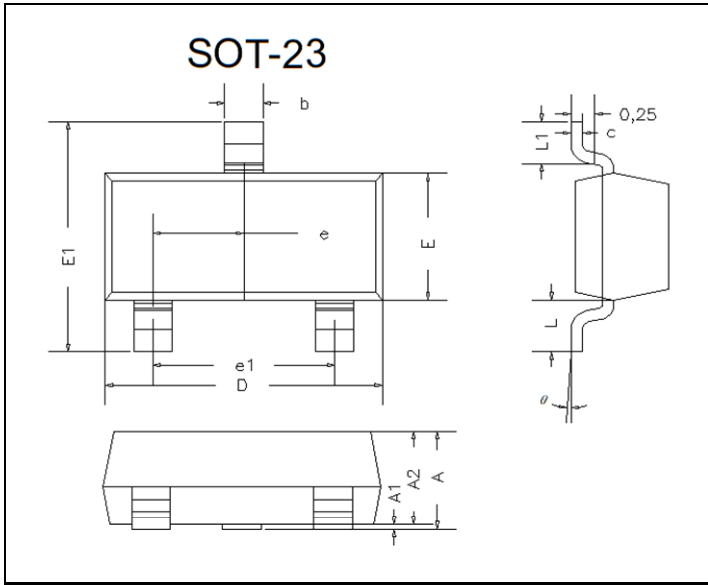
## ■ Typical Characteristics (Per Leg)





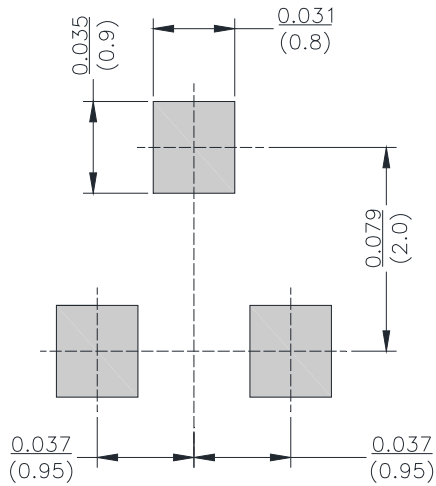
# BAV23AQ/CQ/SQ

## ■SOT-23 Package Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.035	0.045	0.90	1.15	
A1	0.000	0.004	0.00	0.10	
A2	0.035	0.041	0.90	1.05	
b	0.012	0.020	0.30	0.50	
c	0.004	0.008	0.10	0.20	
D	0.110	0.118	2.80	3.00	
E	0.047	0.055	1.20	1.40	
E1	0.089	0.100	2.25	2.55	
e	0.370TYP		0.95TYP		
e1	0.071	0.079	1.80	2.00	
L	0.220REF		0.55REF		
L1	0.012	0.020	0.30	0.50	
theta	0°	8°	0°	8°	

## ■SOT-23 Suggested Pad Layout



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



## BAV23AQ/CQ/SQ

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