



Small Signal Schottky Diode



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Forward Voltage Schottky Rectifier
- V_{RRM} 40V
- I_{FAV} 120mA
- Part no. with suffix "Q" means AEC-Q101 qualified

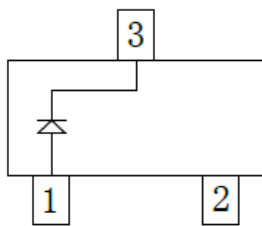
Applications

- Ultra high speed switching
- Voltage clamping
- Automotive

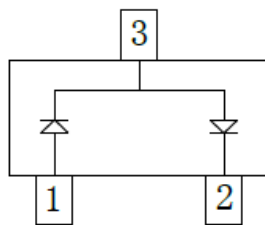
SOT-23

Mechanical Data

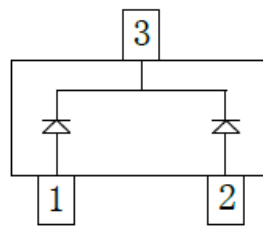
- **Case:** SOT-23
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



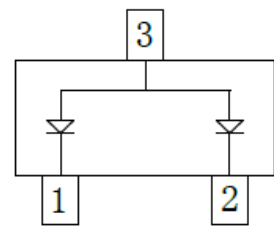
BAS40HQ
Marking:43%



BAS40-04HQ
Marking:44%



BAS40-05HQ
Marking:45%



BAS40-06HQ
Marking:46%

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Repetitive Peak Reverse Voltage	V_{RRM}	V		40
Average Forward Current	I_{FAV}	mA		120
Peak Forward Surge Current	I_{FSM}	A	square wave $t_p < 10\text{ms}$	2
Power Dissipation	P_{tot}	mW		250
Thermal Resistance Junction to Ambient	R_{thJA}	$^{\circ}\text{C}/\text{W}$		500
Junction Temperature	T_j	$^{\circ}\text{C}$		-55 to +150
Storage Temperature Range	T_{stg}	$^{\circ}\text{C}$		-55 to +150



BAS40HQ&BAS40-04HQ&BAS40-05HQ&BAS40-06HQ

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Forward Voltage	V _F	V	I _F =1mA		0.38
			I _F =40mA		1
Reverse Current	I _R	μA	V _R =30V		0.2
Breakdown Voltage	V _R	V	I _R =10μA	40	
Junction Capacitance	C _J	pF	V _R =0 V, f =1MHZ		5
Reverse Recovery Time	t _{rr}	ns	I _F =I _R =10mA, I _{rr} =1mA, R _L =100Ω		7

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAS40HQ BAS40- 04HQ BAS40-05HQ BAS40- 06HQ	F2	Approximate 0.01	3000	30000	120000	7" reel



■ Characteristics (Typical)

Fig. 1: P_D-T_A

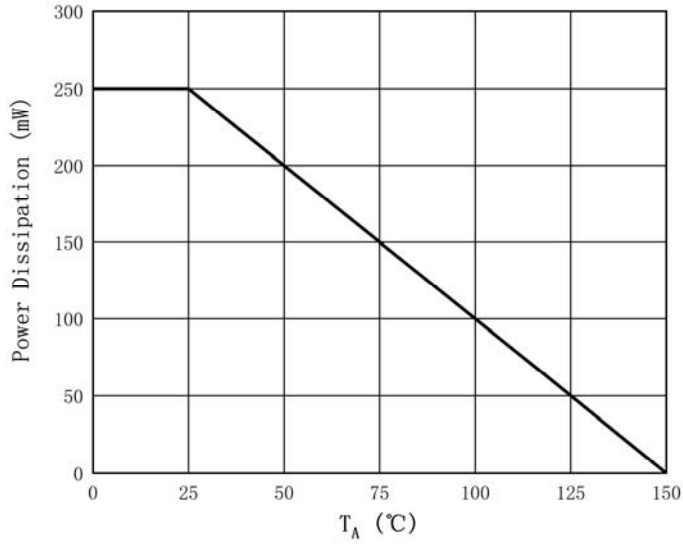


Fig. 2: Capacitance Characteristics

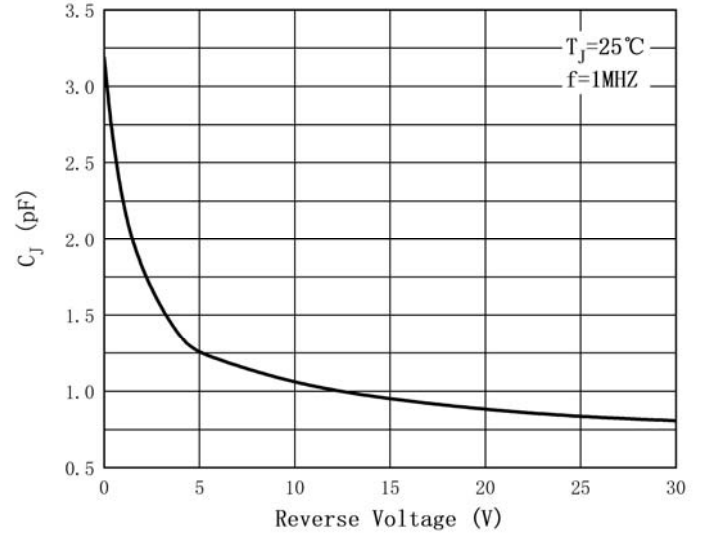


Fig. 3: Forward Characteristics

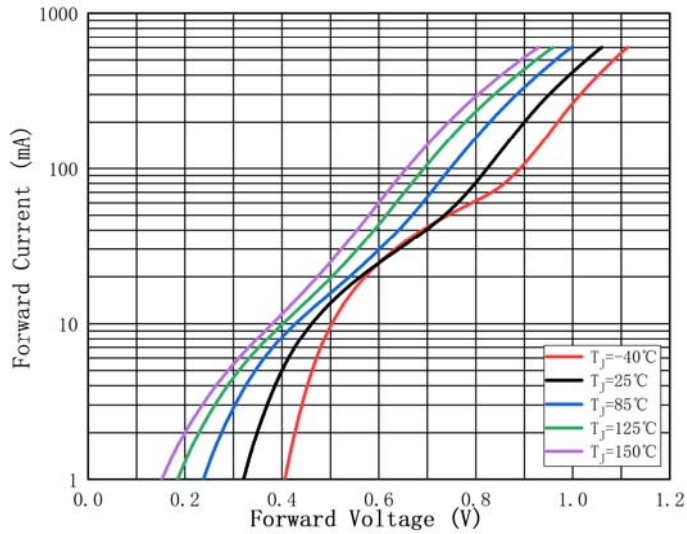
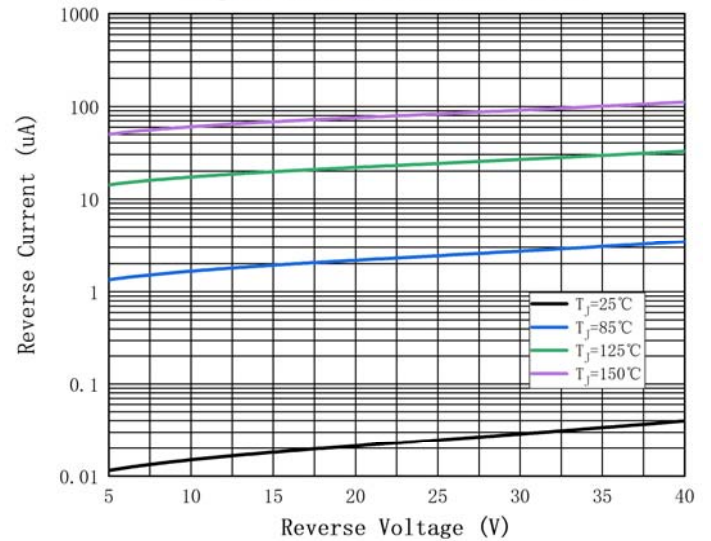
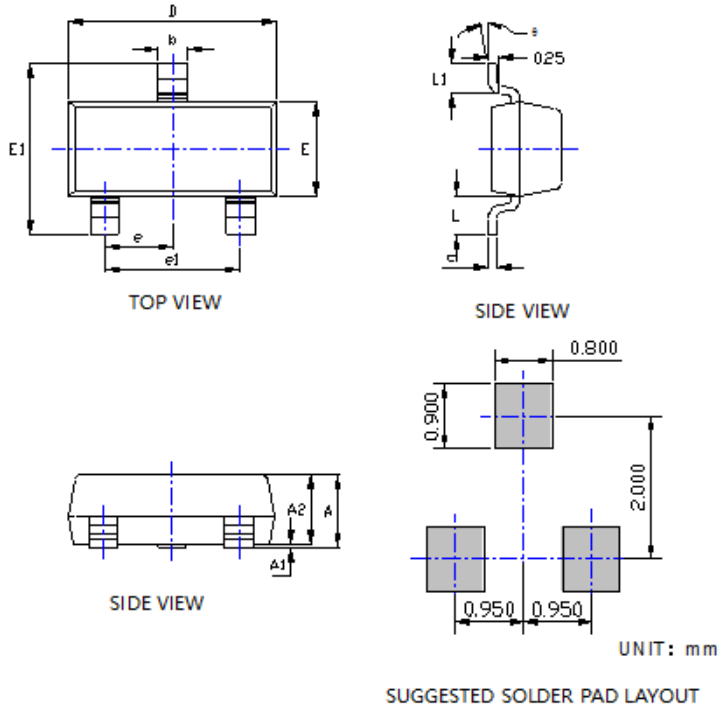


Fig. 4: Reverse Characteristics





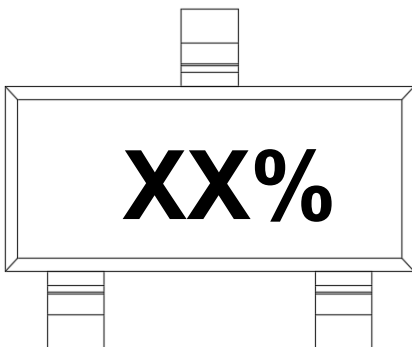
■ Outline Dimensions



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
BAS40HQ	43%
BAS40- 04HQ	44%
BAS40-05HQ	45%
BAS40- 06HQ	46%

Note:

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



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, life-sustaining, 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.