

Small Signal Schottky Diode



SOT-323

Features

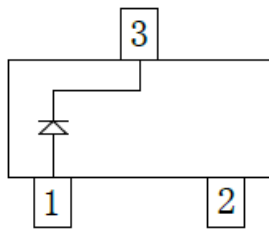
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Forward Voltage Schottky Rectifier
- V_{RRM} 40V
- I_{FAV} 0.12A
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

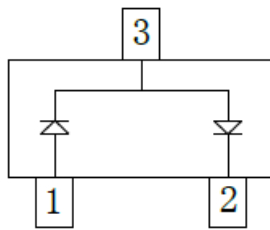
- Ultra high speed switching
- Voltage clamping

Mechanical Data

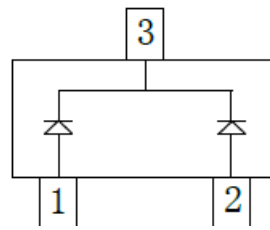
- **Case:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102



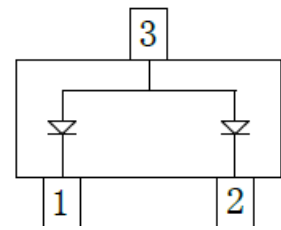
BAS40WTQ
Marking:43



BAS40WT-04Q
Marking:44



BAS40WT-05Q
Marking:45



BAS40WT-06Q
Marking:46

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Peak Repetitive Reverse Voltage	V_{RRM}	V		40
Average Forward Current	I_{FAV}	mA		120
Non-repetitive Peak Forward Surge Current	I_{FSM}	A	square wave $t_p < 10\text{ms}$	0.6
Power Dissipation	P_D	mW		200
Thermal Resistance Junction to Ambient	R_{thJA}	$^{\circ}\text{C/W}$		500
Junction Temperature	T_j	$^{\circ}\text{C}$		-55 to +125
Storage Temperature Range	T_{stg}	$^{\circ}\text{C}$		-55 to +150



BAS40WTQ-THRU BAS40WTQ

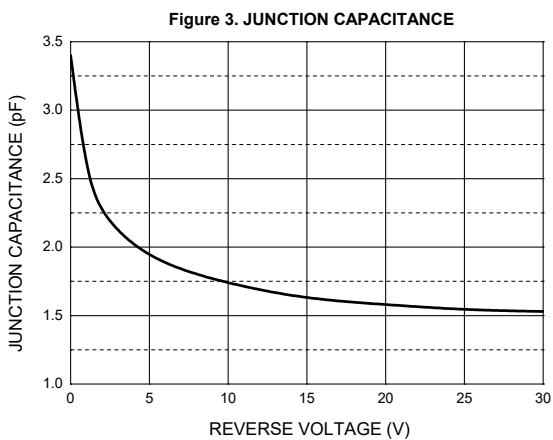
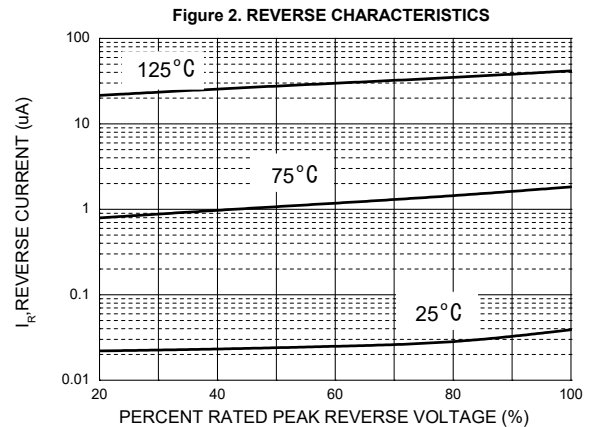
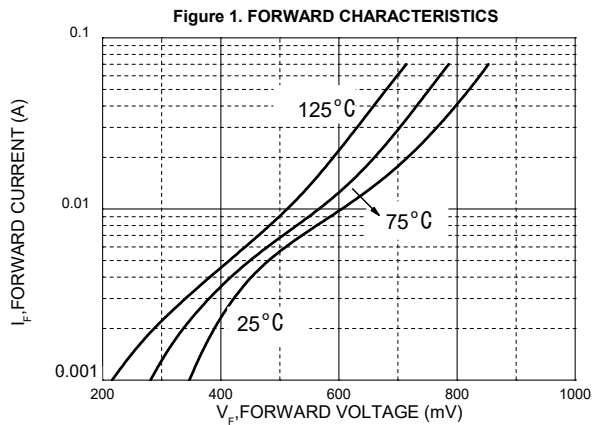
■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Reverse Breakdown Voltage	$V_{(BR)R}$	V	$I_R=10\mu\text{A}$	40	
Forward Voltage	V_F	V	$I_F=1.0\text{mA}$	-	0.38
			$I_F=40\text{mA}$	-	1.0
Reverse Current	I_R	μA	$V_R=30\text{V}$	-	0.2
Junction Capacitance	C_J	pF	$V_R=0\text{V}$, $f=1\text{MHz}$	-	5
Reverse Recovery Time	t_{rr}	ns	$I_F=I_R=5\text{mA}$, $I_{rr}=0.5\text{mA}$, $R_L=100\Omega$	-	5

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAS40WTQ BAS40-04WTQ BAS40-05WTQ BAS40-06WTQ	F2	Approximate 0.006	3000	30000	120000	7" reel

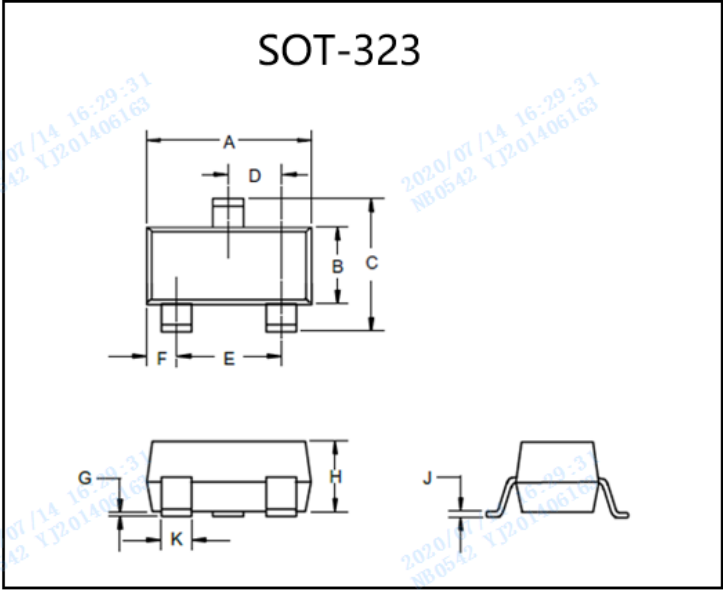
■ Characteristics(Typical)





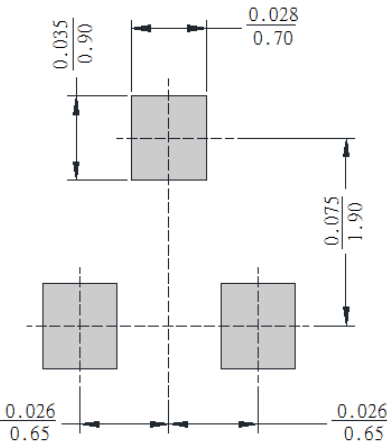
BAS40WTQ-THRU BAS40WTQ

■SOT-323 Package Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026Nominal		0.65Nominal		
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.039	0.90	1.00	
J	0.004	0.010	0.10	0.250	
K	0.006	0.016	0.15	0.40	

■ SOT-323 Suggested Pad Layout



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



BAS40WTQ-THRU BAS40WTQ

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