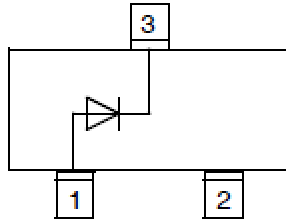


High Speed Switching Diode



SOT-323

Features

Epoxy meets UL-94 V-0 flammability rating and halogen free
 Moisture Sensitivity Level 1
 V_R 75V
 I_{FAV} 150mA
 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

Polarity: Cathode line denotes the cathode end

Marking: A2

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Reverse Voltage	V_R	V		75
Repetitive Peak Reverse Voltage	V_{RRM}	V		100
Average Forward Current	I_{FAV}	mA		150
Peak Forward Surge Current	I_{FSM}	A	Pulse width=1 us Pulse width=1 s	2 1
Power Dissipation	P_{tot}	mW		200
Thermal Resistance Junction to Ambient	R_{thJA}	K/W		625
Junction Temperature	T_j			-55 to +150
Storage Temperature Range	T_{stg}			-55 to +150



BAS16WTQ

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

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Forward Voltage	V _F	V	IF=1mA		0.715
			IF=10mA		0.855
			IF=50mA		1.0
			IF=150mA		1.25
Reverse Current	I _R	μA	V _R =75V		1.0
Breakdown Voltage	V _R	V	I _R =100μA	75	
Diode Capacitance	C _D	pF	V _R =V _F =0V, f =1MHz		4
Reverse Recovery Time	t _{rr}	ns	I _F =10mA, I _{rr} =0.1I _R , R _L =100		4

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAS16WTQ	F2	Approximate 0.006	3000	30000	120000	7" reel



BAS16WTQ

Characteristics (Typical)

Fig.1: P_D-T_A

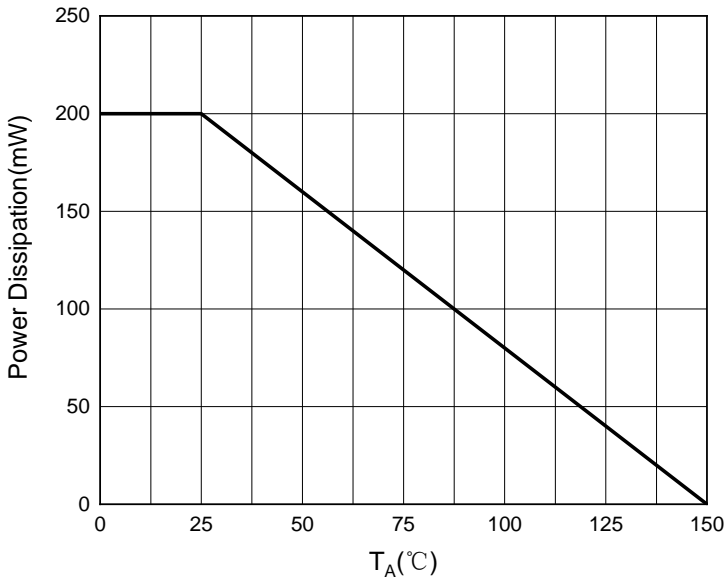


Fig.2: Capacitance Characteristics

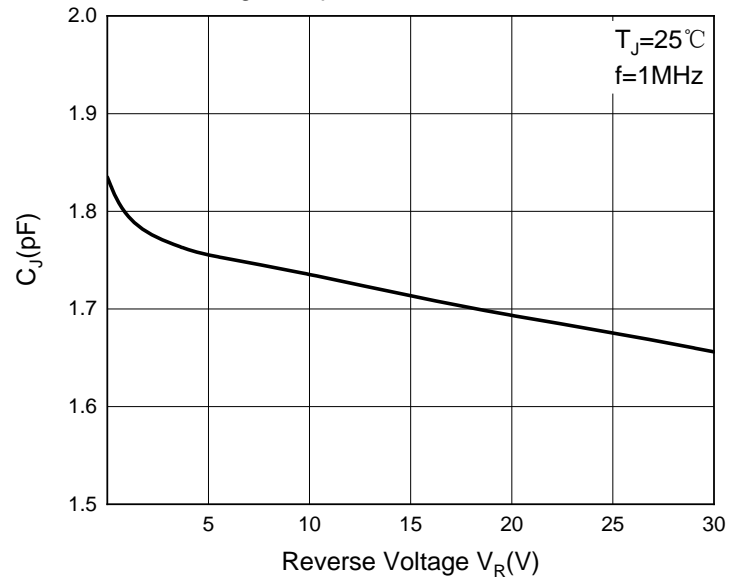


Fig.3: Forward Characteristics

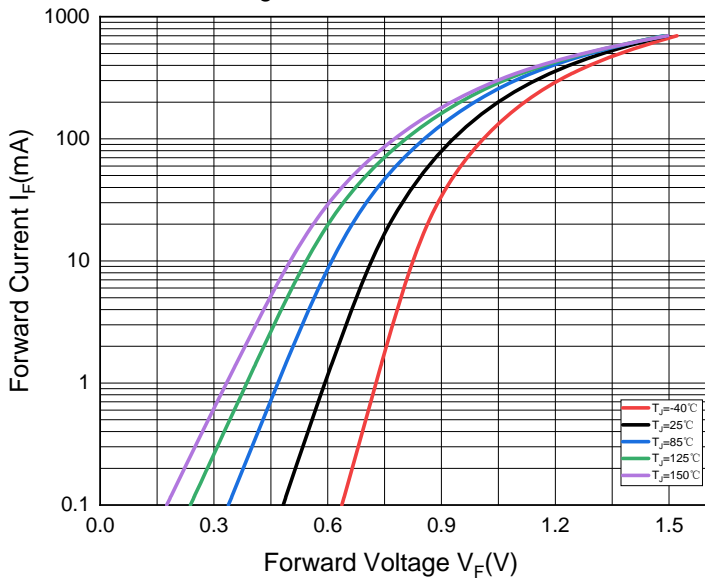
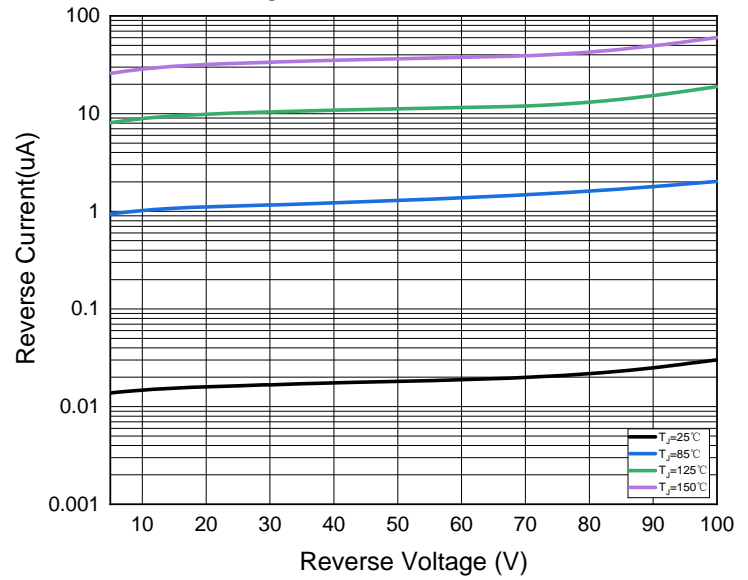


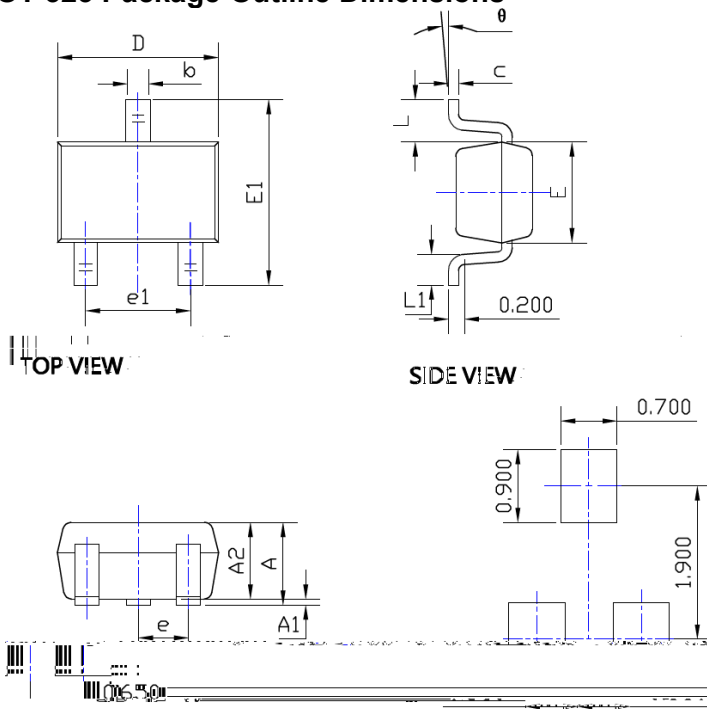
Fig.4: Reverse Characteristics





BAS16WTQ

SOT-323 Package Outline Dimensions



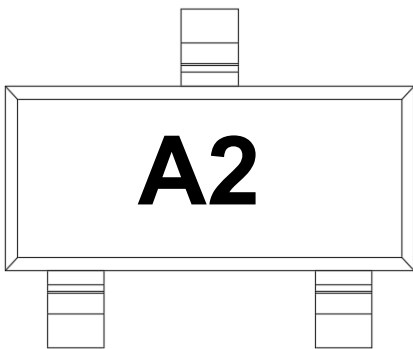
SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E1	0.085	0.096	2.150	2.450
e	0.026 TYP		0.650 TYP	
e1	0.047	0.055	1.200	1.400
L	0.021 REF		0.525 REF	
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.

UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

Marking Information



Note:

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



BAS16WTQ

Disclaimer

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