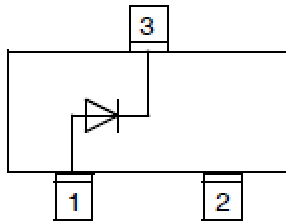


Switching Diode



SOT-23

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Low Current Leakage
- 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
- **Marking:** JS

■Maximum Rating (Ta=25°C Unless otherwise specified)

Item	Symbol	Unit	Value
Reverse Voltage	V_R	V	250
Forward Continuous Current, Per Leg	I_F	mA	200
Non-Repetitive Peak Forward Surge Current@ t=1s,	I_{FSM}	A	0.5
Power Dissipation	P_D	mW	350
Operation Junction Temperature	T_J	°C	-55 to +150
Storage Temperature	T_{STG}	°C	-55 to +150
Electrostatic Discharge	ESD	V	MM<400V HBM<2KV

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

Item	Symbol	Unit	Conditions	MIN	MAX
Reverse Voltage	V_R	V	$I_R=100\mu A$	250	
Maximum Instantaneous Forward Voltage	V_F	V	$I_{FM}=100mA, T_J=25^\circ C$		1.0
			$I_{FM}=200mA, T_J=25^\circ C$		1.25
Maximum DC Reverse Current	I_R	nA	$V_R=200V$		100
Typical Junction Capacitance	C_J	pF	f=1.0MHz, $V_R=0V$		5
Reverse Recovery Time	T_{rr}	ns	$I_F=30mA, I_R=30mA, R_L=100\Omega, I_{rr}=3mA$		50



BAS21Q

■ Thermal Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Value
Thermal Resistance(Typical)	$R_{\theta JA}$	°C/W	357

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAS21Q	F2	Approximate 0.010	3000	30000	120000	7" reel

■ Typical Characteristics (Per Leg)

Fig.1: P_D-T_A

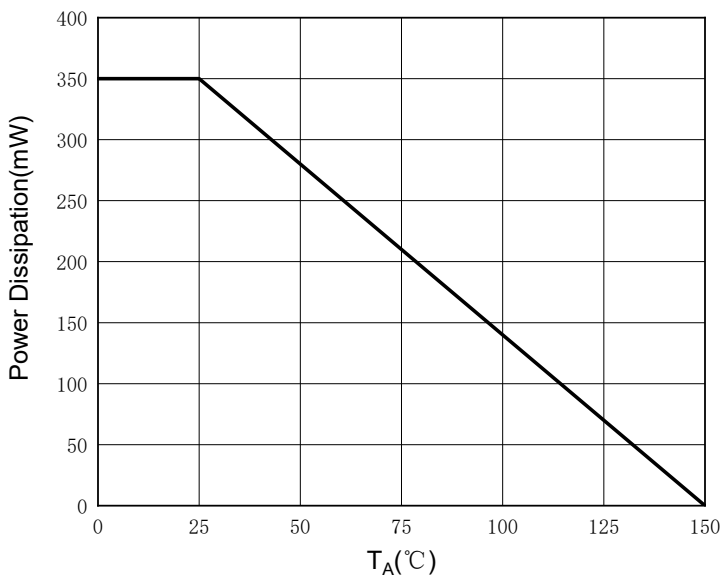


Fig.2: Forward Characteristics

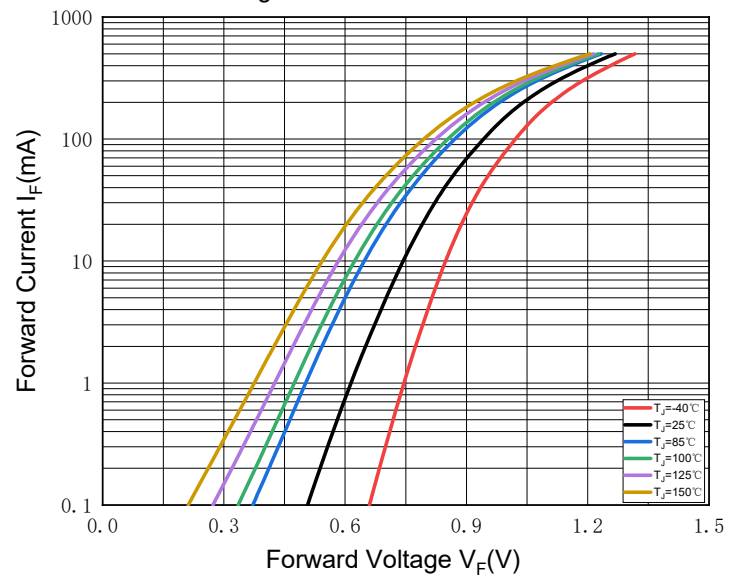


Fig.3: Reverse Characteristics

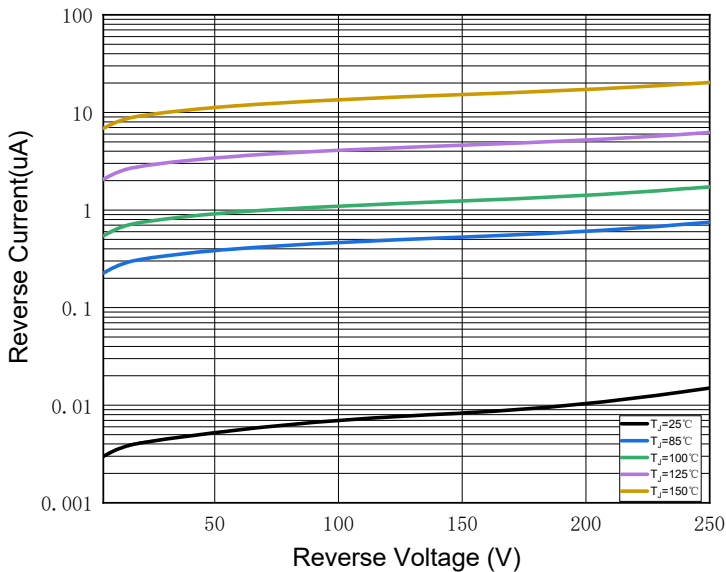
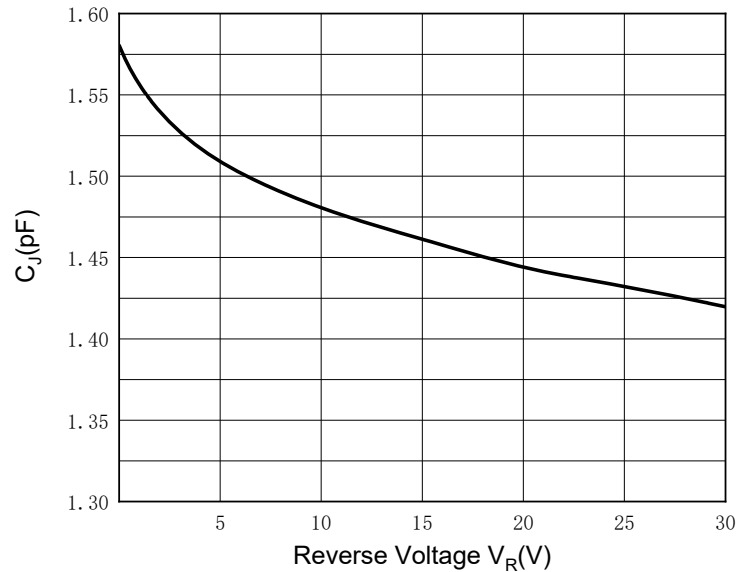


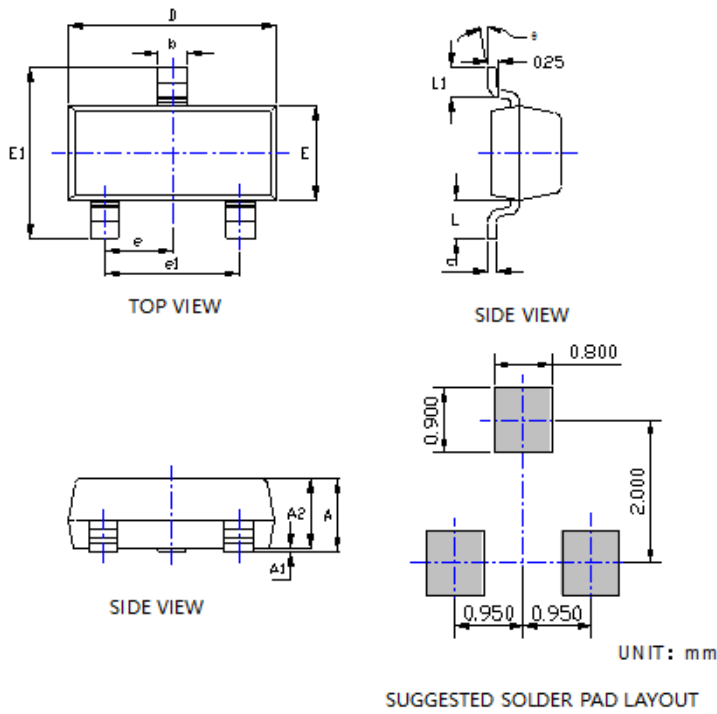
Fig.4: Capacitance Characteristics





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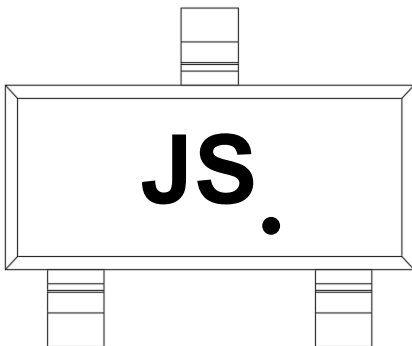
■ SOT-23 Package Outline Dimensions



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



Note:

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



BAS21Q

Disclaimer

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