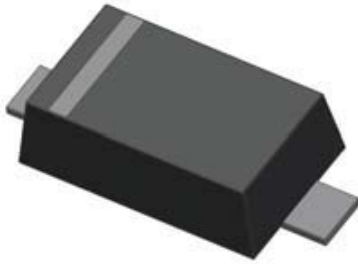
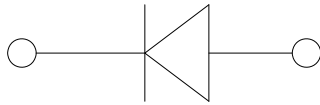


Small-Signal Fast Switching Diodes



SOD523



Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_R 100V
- I_{FAV} 250mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

- Extreme fast switches
- Automotive

Mechanical Data

- **Package:** SOD523
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** 61

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

PARAMETER	SYMBOL	UNIT	Conditions	VALUE
Repetitive peak reverse voltage	V_{RRM}	V		100
Reverse voltage	V_R	V	$I_R=100\mu\text{A}$	100
Peak forward surge current	I_{FSM}	A	Pulse width=1 μs	2
			Pulse width=1 s	1
Non-repetitive peak forward surge current	I_{FSM}	A	8.3ms half sine-wave	1
Average forward current	I_{FAV}	mA		250
Thermal Resistance Junction to Ambient	R_{thJA}	$^\circ\text{C/W}$		833
Power dissipation	P_D	mW		150
Maximum junction temperature	T_j	$^\circ\text{C}$		-55 to +150
Storage temperature range	T_{stg}	$^\circ\text{C}$		-55 to +150



BAS516Q

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

PARAMETER	Symbol	UNIT	Conditions	Min	Max
Breakdown Voltage	V _R	V	I _R =100uA	100	
Forward Voltage	V _F	V	I _F =1mA		0.715
			I _F =10mA		0.855
			I _F =50mA		1.00
			I _F =150mA		1.25
Reverse Leakage Current	I _{R1}	nA	V _R =25V		30
	I _{R2}	uA	V _R =75V		1
Capacitance	C _j	pF	V _R =0V, f=1MHz; V _{sig} =50mV _{p-p}		4
Reverse Recovery Time	T _{rr}	ns	I _F =I _R =10mA, I _{rr} =0.1*I _R , R _L =100Ω		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
BAS516Q	F2	Approximate 0.002	8000	80000	320000	7" reel



■ Characteristics (Typical)

Fig.1: P_D-T_A

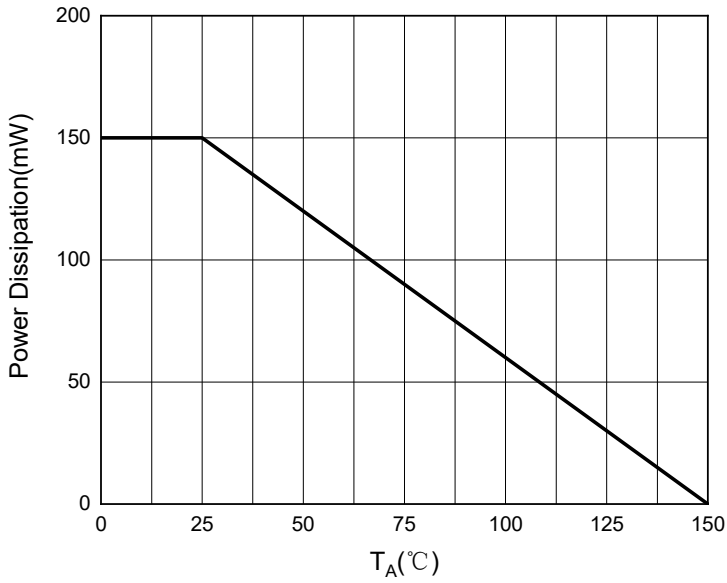


Fig.2: Capacitance Characteristics

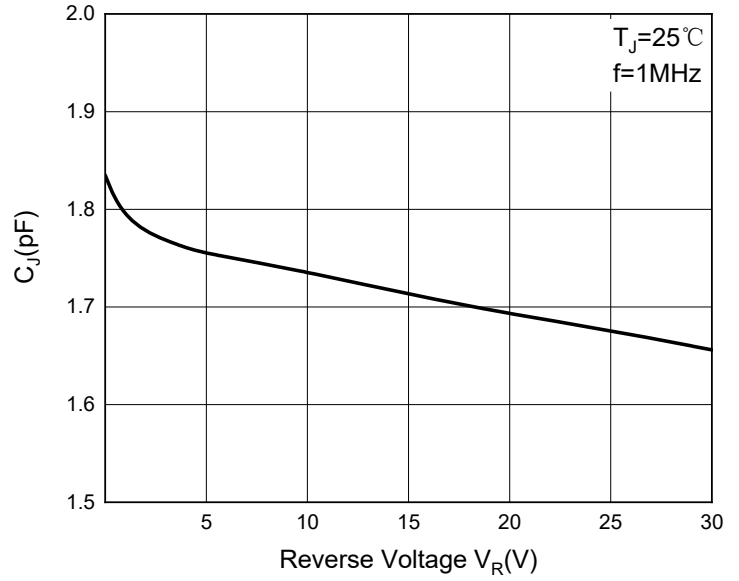


Fig3: Forward Characteristics

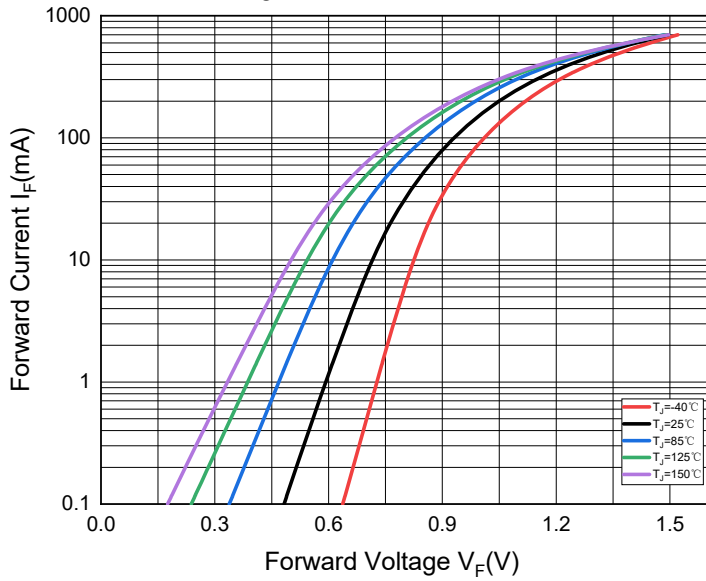
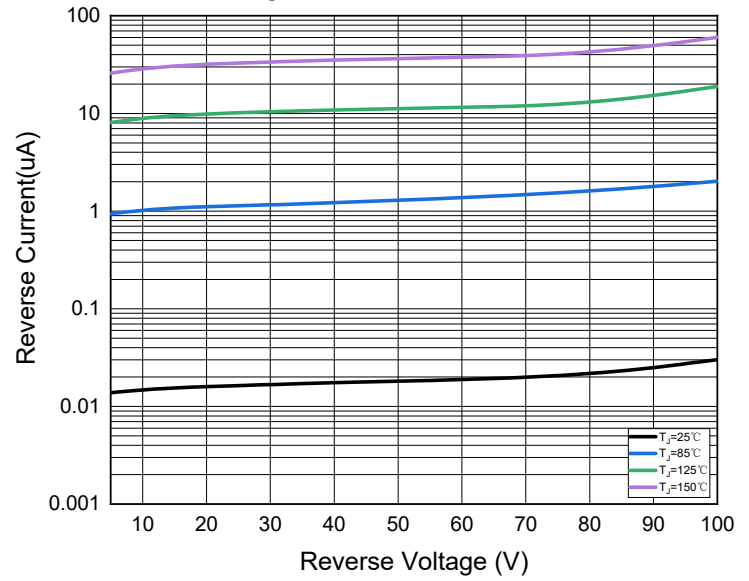


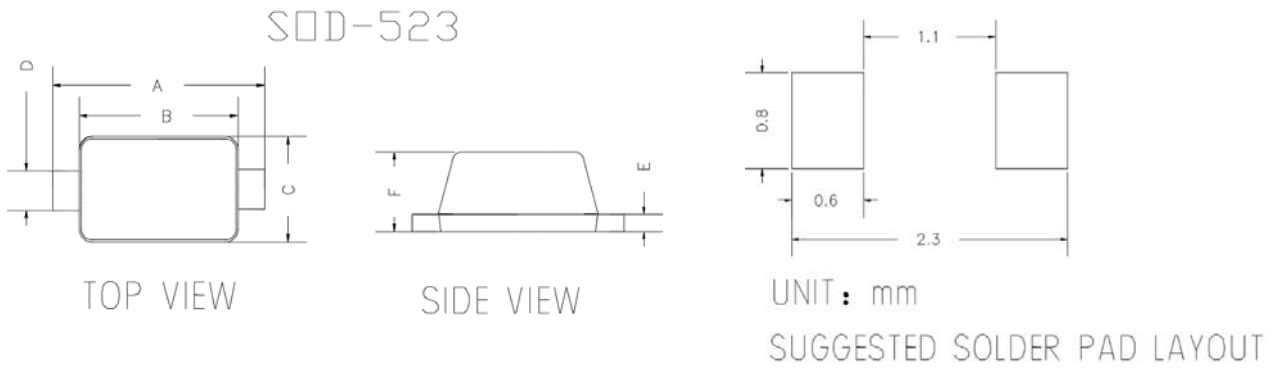
Fig.4: Reverse Characteristics





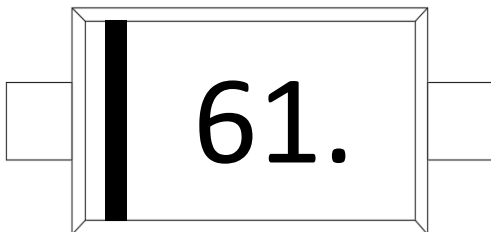
BAS516Q

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.059	0.067	1.500	1.700
B	0.043	0.051	1.100	1.300
C	0.028	0.035	0.700	0.900
D	0.010	0.014	0.250	0.350
E	0.002	0.008	0.050	0.200
F	0.020	0.028	0.500	0.700

■ Marking Information



Note:

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



BAS516Q

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