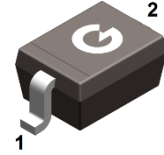


Features

- Fast switching speed
- High conductance
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOD-323

Mechanical Data

- Case: SOD-323
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBAS316	SOD-323	3000 pcs / Tape & Reel	A6

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Peak Reverse Voltage	V _{RRM}	100	V
DC Blocking Voltage	V _R	100	V
Average Rectified Output Current	I _O	250	mA
Repetitive peak forward current *1	I _{FRM}	1	A
Non-repetitive Peak Forward Surge Current, t = 1μs	I _{FSM}	4	A
Non-repetitive Peak Forward Surge Current, t = 1ms	I _{FSM}	1	A
Non-repetitive Peak Forward Surge Current, t = 1s	I _{FSM}	0.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *2	P _D	400	mW
Thermal Resistance Junction-to-Air *3	R _{θJA}	500	°C/W
Thermal Resistance Junction-to-Lead *3	R _{θJL}	493	°C/W
Thermal Resistance Junction-to-Case *2	R _{θJC}	281	°C/W
Operating Junction Temperature Range	T _J	-65 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

Notes:

1. Square wave, f = 40kHz, PW = 200ns, Test duration = 60s, T_J = 25°C prior to surge
2. Mounted on aluminum plate
3. Mounted on a FR4, single-sided copper, with 114×76mm PCB

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu\text{A}$	100	-	-	V
Forward Voltage	V_F	$I_F = 1\text{mA}$	-	-	0.715	V
		$I_F = 10\text{mA}$	-	-	0.855	V
		$I_F = 50\text{mA}$	-	-	1.000	V
		$I_F = 150\text{mA}$	-	-	1.250	V
Maximum Peak Reverse Current	I_R	$V_R = 25\text{V}, T_J = 25^\circ\text{C}$	-	-	30	nA
		$V_R = 75\text{V}, T_J = 25^\circ\text{C}$	-	-	1	μA
		$V_R = 25\text{V}, T_J = 150^\circ\text{C}$	-	36	60	μA
		$V_R = 75\text{V}, T_J = 150^\circ\text{C}$	-	40	80	μA
		$V_R = 100\text{V}, T_J = 150^\circ\text{C}$	-	49	100	μA
Total Capacitance	C_J	$V_R = 0\text{V}, f = 1.0\text{MHz}$	-	-	1.5	pF
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	-	-	4	ns

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

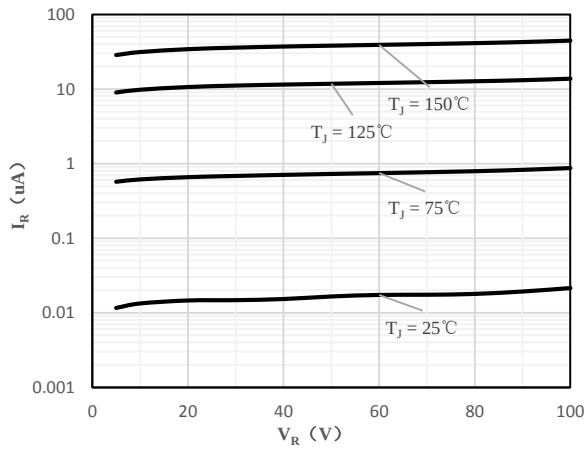


Fig 1 Typical Reverse Characteristic

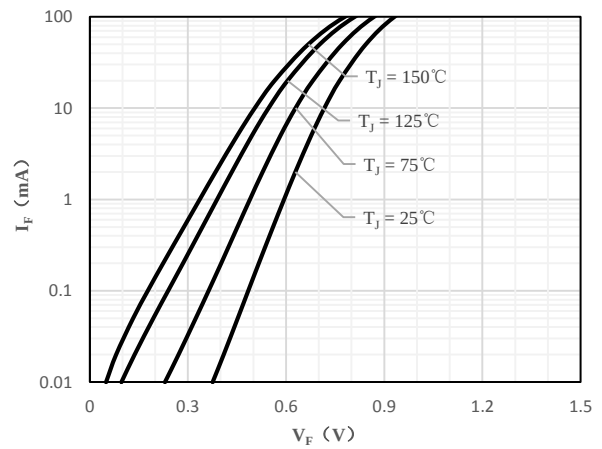


Fig 2 Typical Forward Characteristics

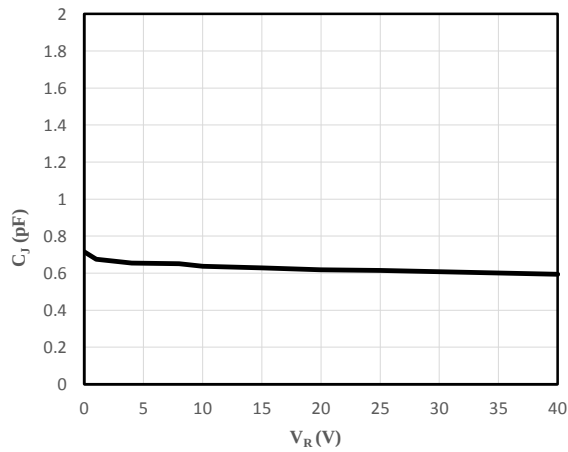


Fig 3 Capacitance vs. Reverse Voltage

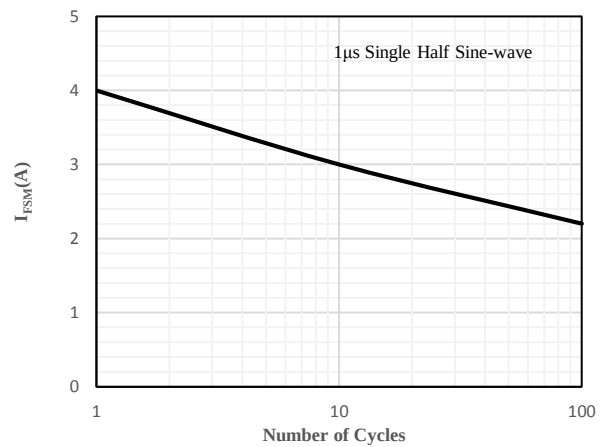
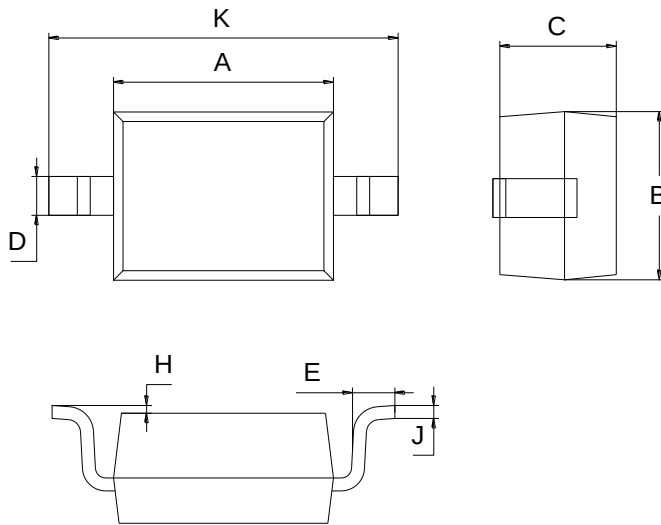


Fig 4 Peak Forward Surge Current

Package Outline Dimensions (Unit: mm)



SOD-323		
Dimension	Min.	Max.
A	1.60	1.80
B	1.20	1.40
C	0.80	0.90
D	0.25	0.35
E	0.22	0.42
H	0.02	0.10
J	0.05	0.15
K	2.55	2.75

Mounting Pad Layout (Unit: mm)

SOD-323

