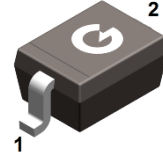


Features

- Extremely fast switching speed
- Low forward voltage
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF

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CATHODE ANODE



SOD-323

Mechanical Data

- Case: SOD-323
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TB0340WSH	SOD-323	3000 pcs / Tape & Reel	340

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

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	40	V
RMS Reverse Voltage	V _{RMS}	28	V
DC Reverse Voltage	V _R	40	V
Maximum Average Forward Output Current	I _{F(AV)}	300	mA
Peak Forward Surge Current (10ms single half sine-wave)	I _{FSM}	1	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P _D	225	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	555	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	306	°C/W
Thermal Resistance Junction-to-Lead *1	R _{θJL}	358	°C/W
Thermal Resistance Junction-to-Air *2	R _{θJA}	330	°C/W
Thermal Resistance Junction-to-Case *2	R _{θJC}	220	°C/W
Thermal Resistance Junction-to-Lead *2	R _{θJL}	250	°C/W
Operating Junction Temperature	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-65 ~ +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V_R	$I_R = 100\mu\text{A}$	40	-	-	V
Forward Voltage *3	V_F	$I_F = 0.1\text{mA}$	-	-	240	mV
		$I_F = 1\text{mA}$	-	-	320	mV
		$I_F = 10\text{mA}$	-	-	400	mV
		$I_F = 30\text{mA}$	-	-	500	mV
		$I_F = 100\text{mA}$	-	-	800	mV
Maximum Peak Reverse Current *4	I_R	$V_R = 30\text{V}, T_J = 25^\circ\text{C}$	-	-	1	μA
		$V_R = 30\text{V}, T_J = 100^\circ\text{C}$	-	-	100	μA
Reverse Recovery Time	t_{rr}	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1X I_R, R_L = 100\Omega$	-	-	5	ns
Capacitance Between Terminals	C_T	$V_R = 1\text{V}, f = 1\text{MHz}$	-	-	10	pF

Notes:

1. The data tested by surface mounted on FR-4 board with recommended pad layout
2. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper
3. Pulse test, $t_p \leq 300\mu\text{s}$
4. Pulse test, $t_p \leq 5\text{ms}$

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

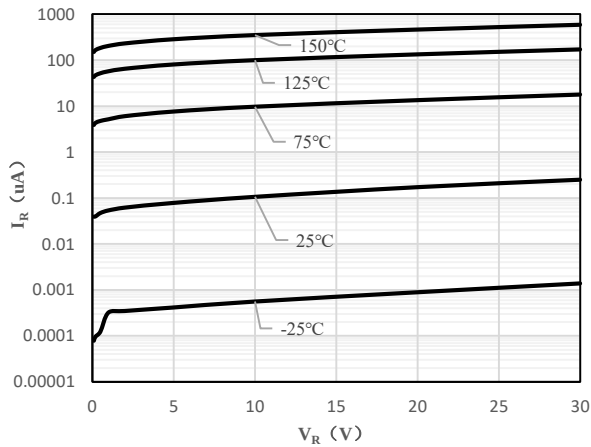


Fig 1 Typical Reverse Characteristic

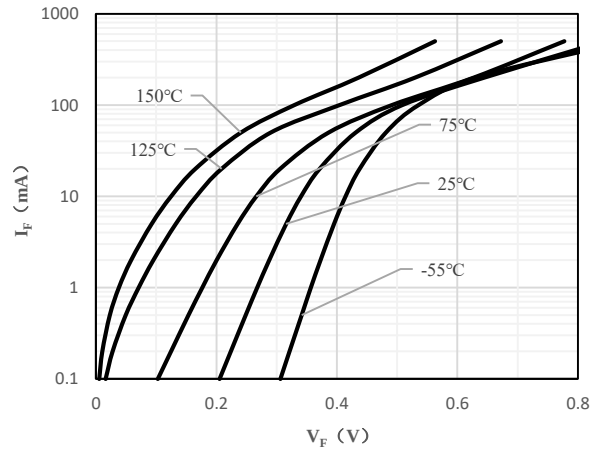


Fig 2 Typical Forward Characteristics

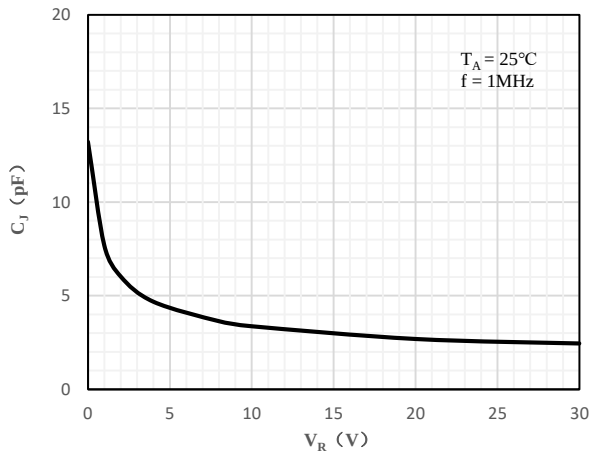


Fig 3 Capacitance vs. Reverse Voltage

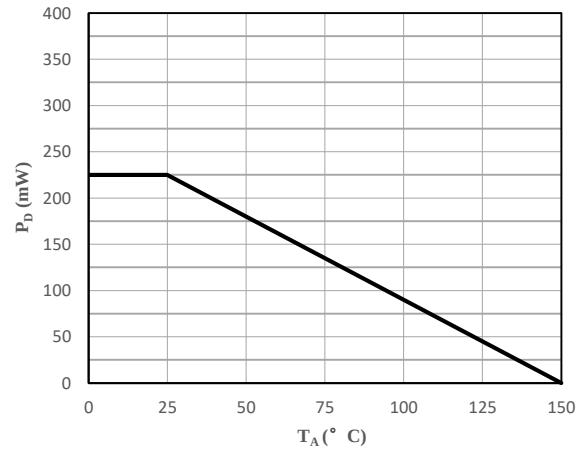
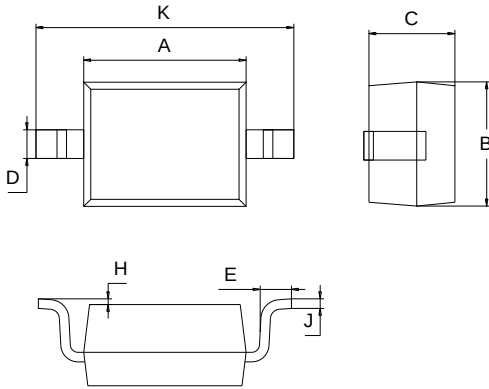


Fig 4 Power Derating Curve

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

