

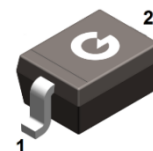
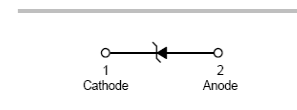
Features

- Ultra low-profile package well suited for automated assembly
- Moisture sensitivity level 1
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF

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



SOD-323

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TPDZ12B	SOD-323	3000 pcs / Tape & Reel	ZH

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation *1	P_D	400	mW
Continuous Forward Current	I_F	200	mA
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	312	°C/W
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	166	°C/W
Thermal Resistance Junction-to-Lead	$R_{\theta JL}$	135	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note 1: Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener Voltage	V_Z	$I_{ZT} = 5\text{mA}$	11.74	-	12.24	V
Forward Voltage	V_F	$I_F = 10\text{mA}$	-	-	0.9	V
		$I_F = 100\text{mA}$	-	-	1.1	V
Maximum Reverse Current	I_R	$V_R = 9\text{V}$	-	-	0.1	μA
Maximum Zener Impedance	Z_{ZT}	$I_{ZT} = 5\text{mA}$	-	-	10	Ω
Maximum Zener Impedance	Z_{ZK}	$I_{ZK} = 0.5\text{mA}$	-	-	80	Ω
Temperature Coefficient	T_C	$I_{ZT} = 5\text{mA}$	-	8.4	-	mV/°C
Diode Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	105	pF

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

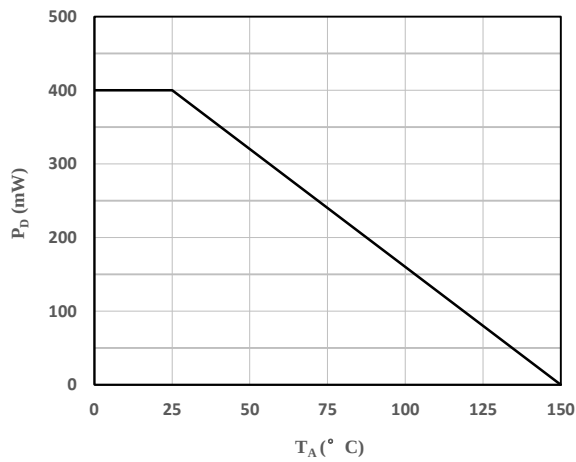


Fig 1 Steady State Power Derating

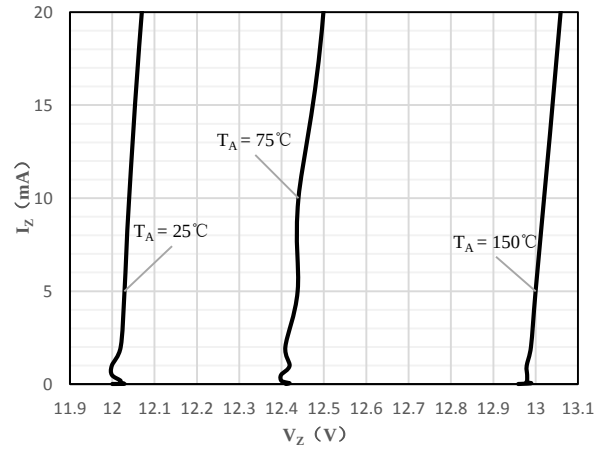


Fig 2 Typical Zener Breakdown Characteristics

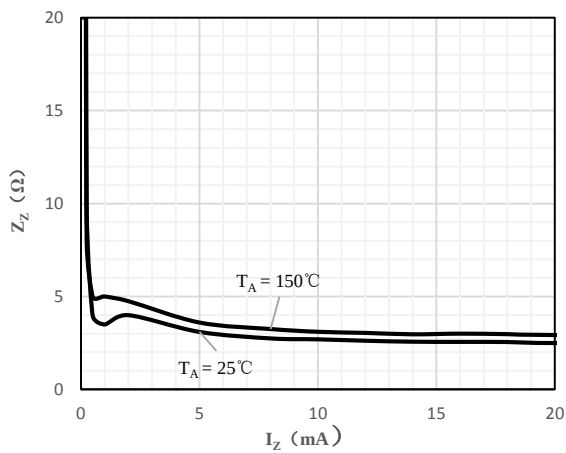


Fig 3 Zener Impedance vs. Zener Current

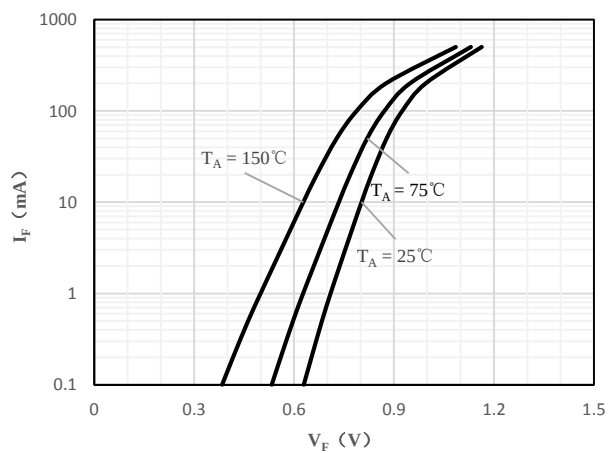


Fig 4 Typical Forward Characteristics

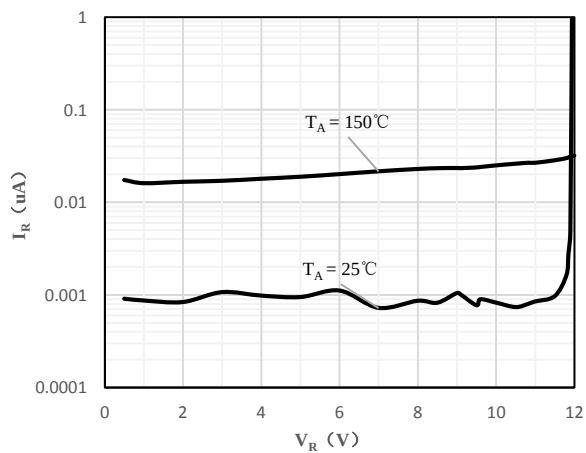
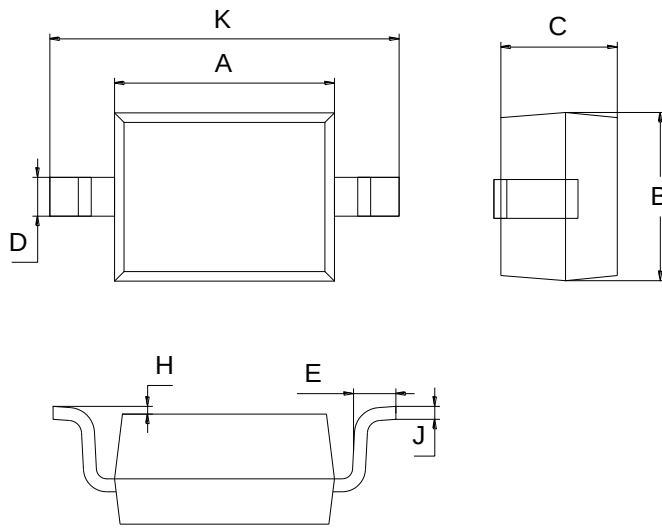


Fig 5 Typical Reverse Characteristics

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

