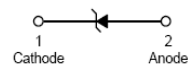


Features

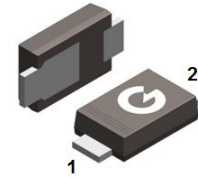
- Tight voltage tolerance: $\pm 2\%$
- Ultra low-profile package well suited for automated assembly
- Moisture sensitivity level 1
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 standards for high reliability

HF



Mechanical Data

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



SOD-323T

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBZT52B43HE	SOD-323T	4000 pcs / Tape & Reel	WV.

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	100	$^{\circ}C/W$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	52	$^{\circ}C/W$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	39	$^{\circ}C/W$
Operating Junction Temperature Range	T_J	-55 ~ +150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^{\circ}C$

Note 1: The data tested by surface mounted on a 25.4mm * 25.4mm * 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener Voltage	V_Z	$I_{ZT} = 2mA$	42.14	43.00	43.86	V
Forward Voltage	V_F	$I_F = 10mA$	-	-	0.9	V
Maximum Reverse Current	I_R	$V_R = 30.1V$	-	-	0.045	μA
Maximum Zener Impedance	Z_{ZT}	$I_{ZT} = 2mA$	-	-	141	Ω
Maximum Zener Impedance	Z_{ZK}	$I_{ZK} = 0.5mA$	-	-	353	Ω
Temperature Coefficient	T_C	$I_{ZT} = 2mA$	37.6	38.6	46.6	mV/ $^{\circ}C$

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

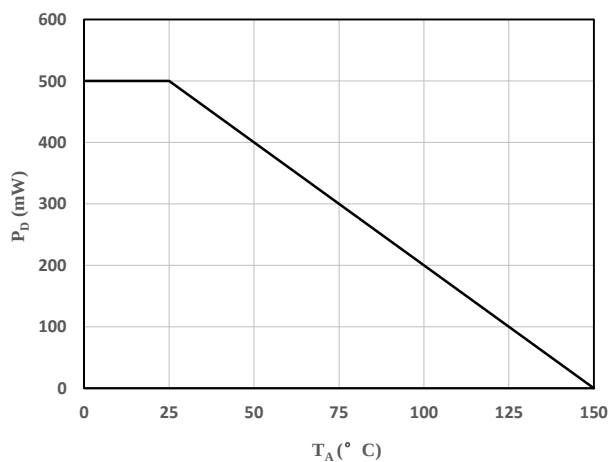


Fig 1 Steady State Power Derating

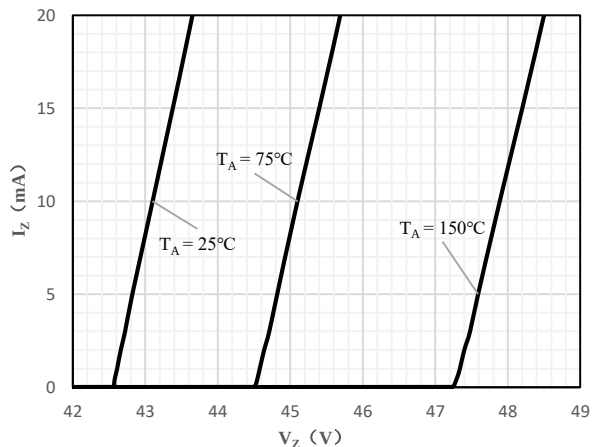


Fig 2 Typical Zener Breakdown Characteristics

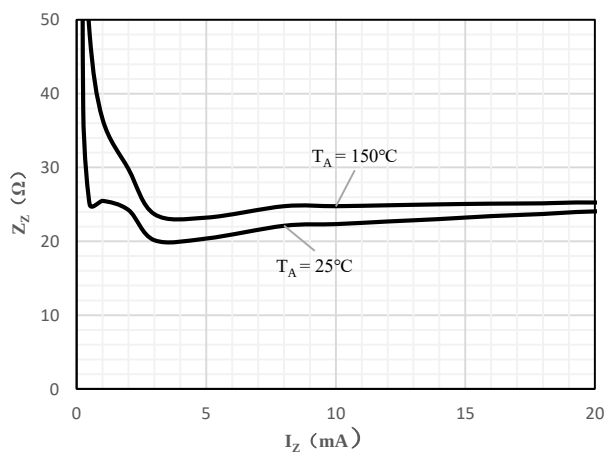


Fig 3 Zener Impedance vs. Zener Current

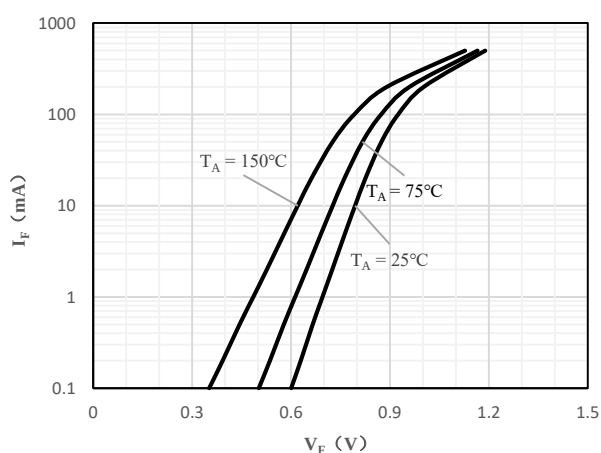


Fig 4 Typical Forward Characteristics

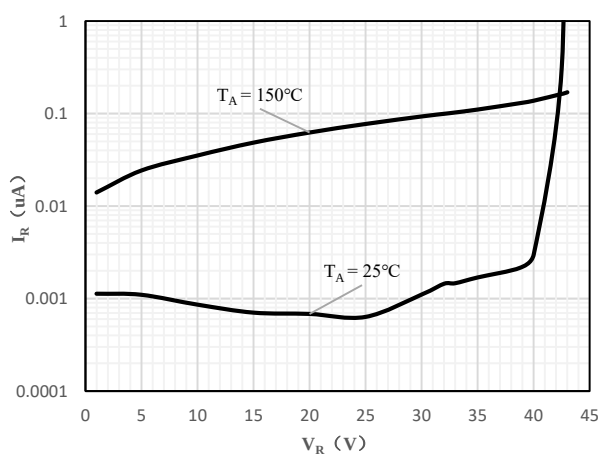
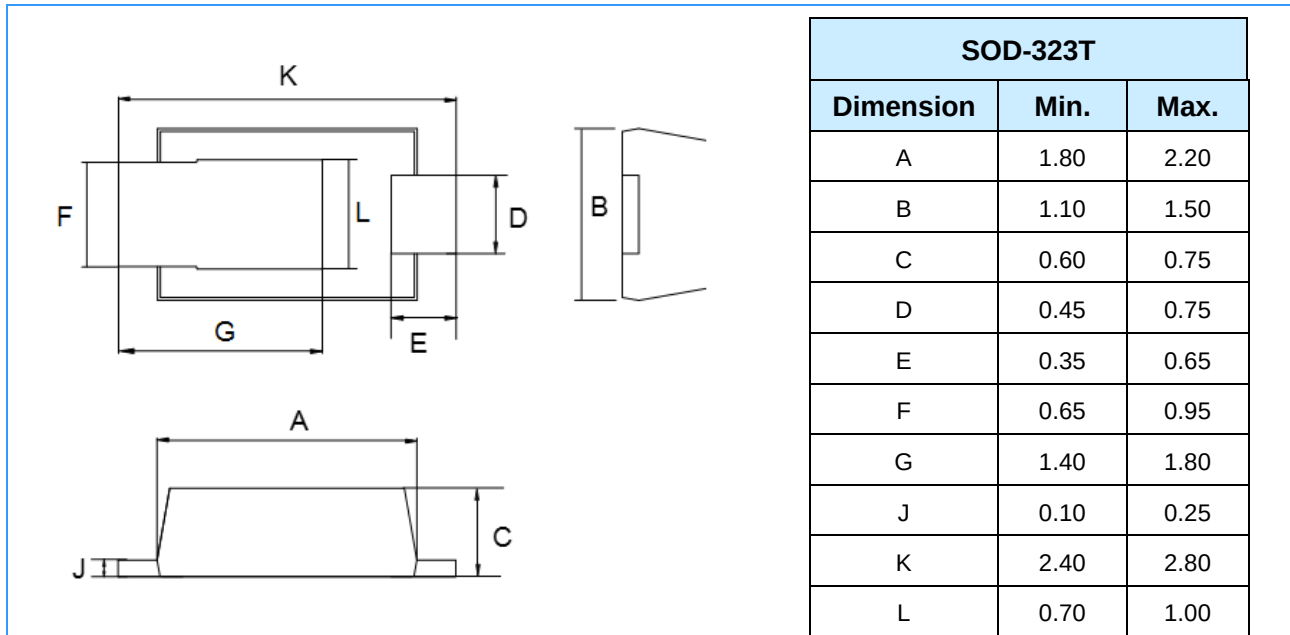
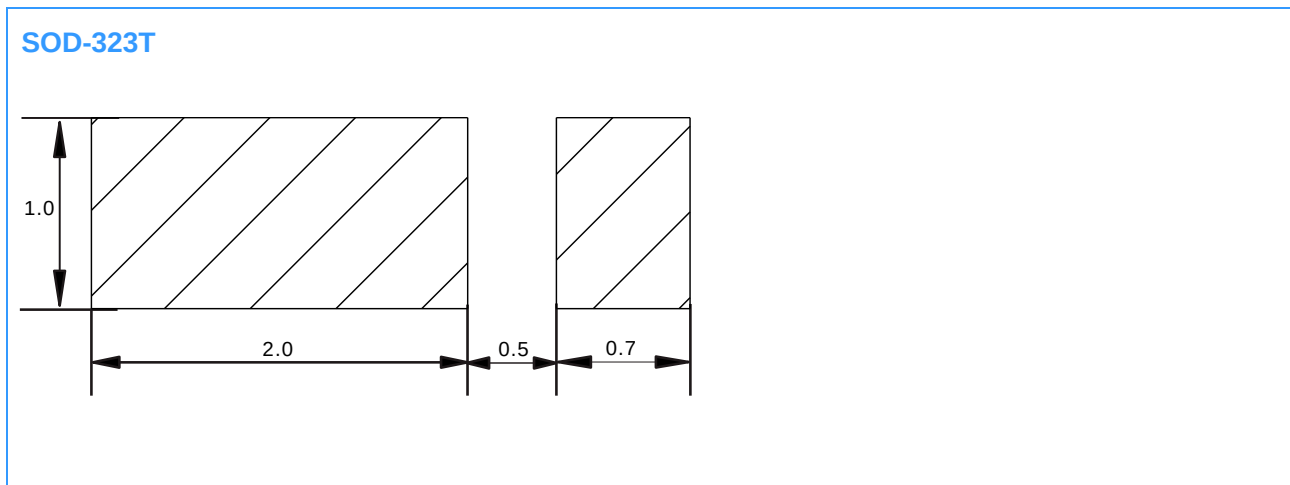


Fig 5 Typical Reverse Characteristics

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



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