Zener Diode
TBZT52C5V6

Features

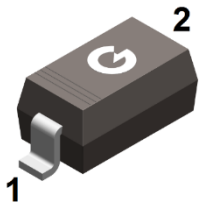
HF

- Tight voltage tolerance: ±5%
- Ultra low-profile package well suited for automated assembly
- Moisture sensitivity level 1
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

Mechanical Data

- Case: SOD-123
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208





SOD-123

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TBZT52C5V6	SOD-123	3000 pcs / Tape & Reel	W9

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	250	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	150	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	180	°C/W
Operating Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note 1: The data tested by surface mounted on a 1 inch^2 FR-4 board with 2OZ copper

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener Voltage	V_Z	I_{ZT} = 5mA	5.32	5.6	5.88	V
Forward Voltage	V_F	I_F = 10mA	-	-	0.9	V
Maximum Reverse Current	I_R	V_R = 2V	-	-	1	μA
Maximum Zener Impedance	Z_{ZT}	I_{ZT} = 5mA	-	-	40	Ω
Maximum Zener Impedance	Z_{ZK}	I_{ZK} = 1mA	-	-	400	Ω
Temperature Coefficient	T_C	I_{ZT} = 5mA	-2	1.41	2.5	mV/°C

TYPICAL CHARACTERISTICS (@ T_A = 25°C unless otherwise specified)

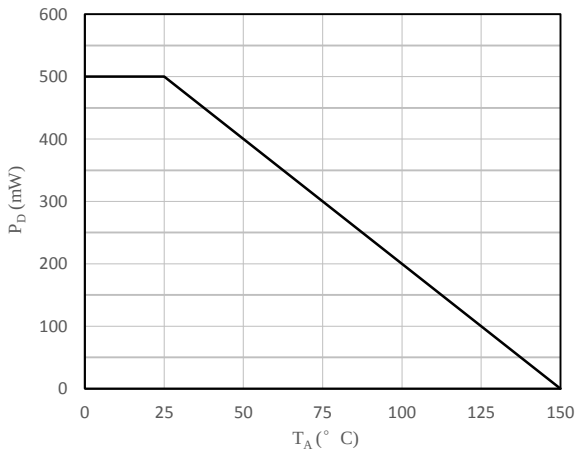


Fig 1 Steady State Power Derating

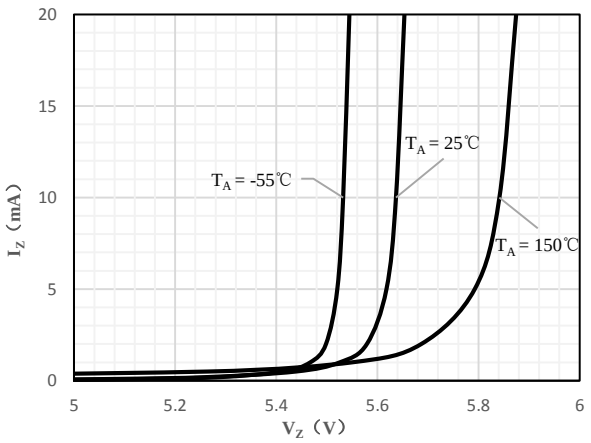


Fig 2 Typical Zener Breakdown Characteristics

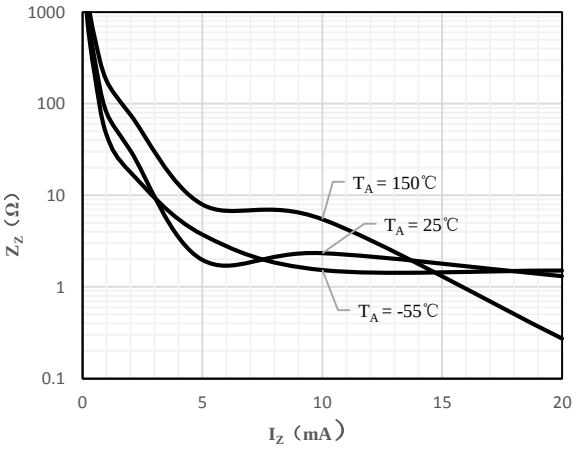


Fig 3 Zener Impedance vs. Zener Current

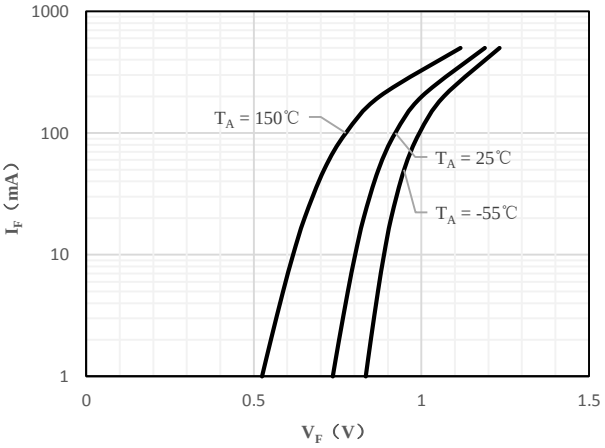


Fig 4 Typical Forward Characteristics

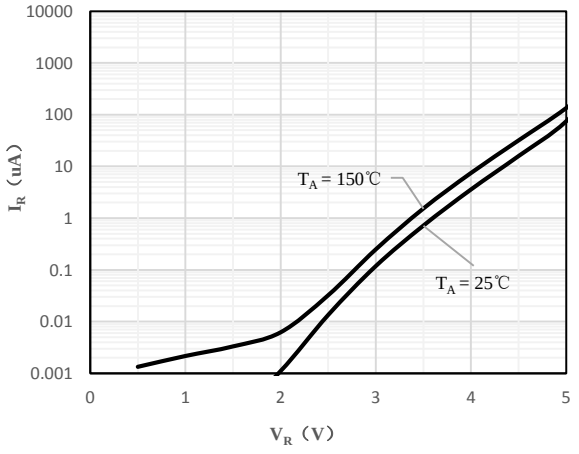
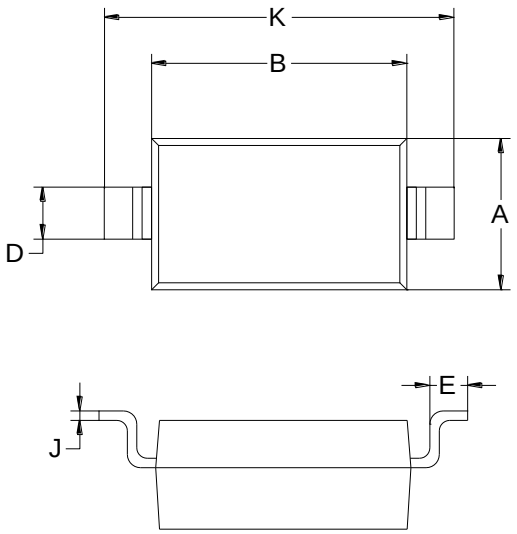


Fig 5 Typical Reverse Characteristics

Package Outline Dimensions (Unit: mm)



SOD-123		
Dimension	**Min.**	**Max.**
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Package Outline Dimensions (Unit: mm)

SOD-123

