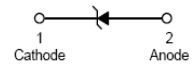


Features

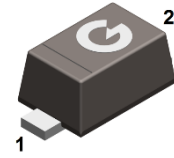
- Tight voltage tolerance: $\pm 5\%$
- Ultra low-profile package well suited for automated assembly
- Moisture sensitivity level 1
- RoHS compliant with Halogen-free

HF



Mechanical Data

- Case: SOD-523
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOD-523

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
XCEZ12V	SOD-523	3000 pcs / Tape & Reel	P4

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Operating Junction Temperature Range	T_J	-55 ~ +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	± 30	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	± 30	kV
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	200	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	7	A

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener Voltage	V_Z	$I_{ZT} = 5\text{mA}$	11.4	12	12.6	V
Forward Voltage	V_F	$I_F = 10\text{mA}$	-	-	0.9	V
Maximum Reverse Current	I_R	$V_R = 9\text{V}$	-	-	0.1	μA
		$V_R = 10\text{V}$	-	-	0.1	μA
Maximum Zener Impedance	Z_{ZT}	$I_{ZT} = 5\text{mA}$	-	-	30	Ω
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	40	-	pF

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

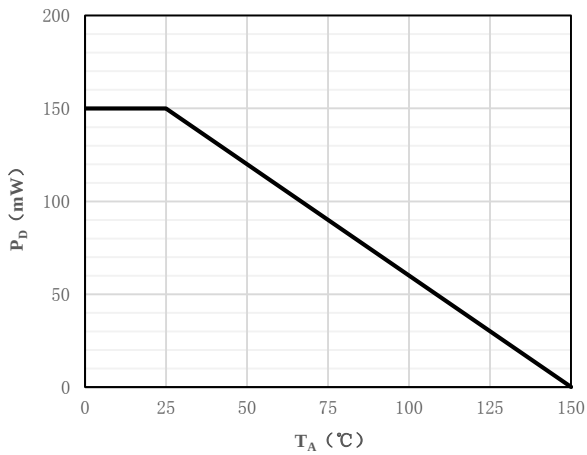


Fig 1 Steady State Power Derating

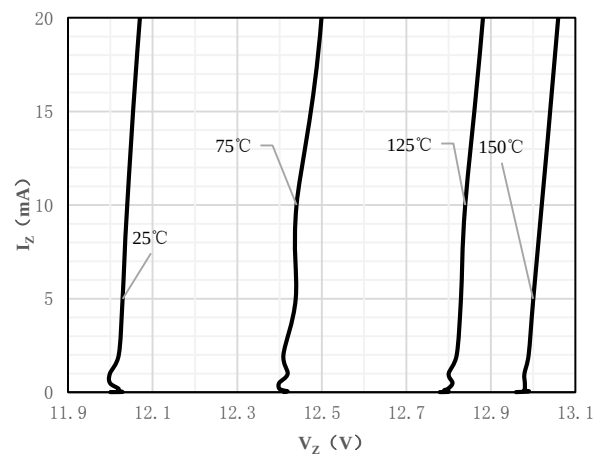


Fig 2 Typical Zener Breakdown Characteristics

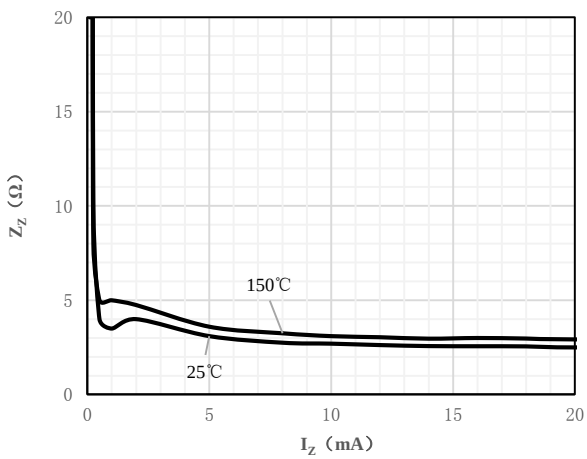


Fig 3 Zener Impedance vs. Zener Current

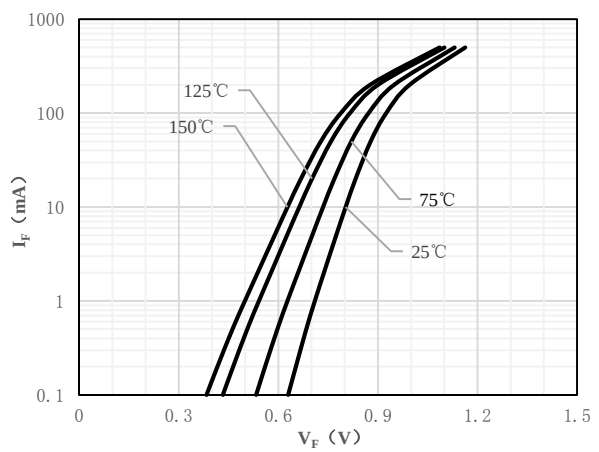


Fig 4 Typical Forward Characteristics

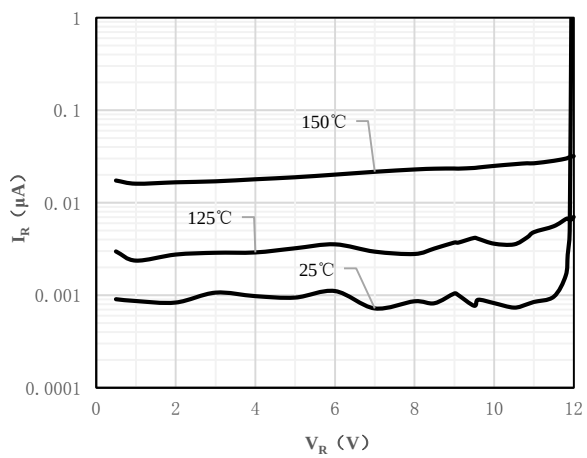
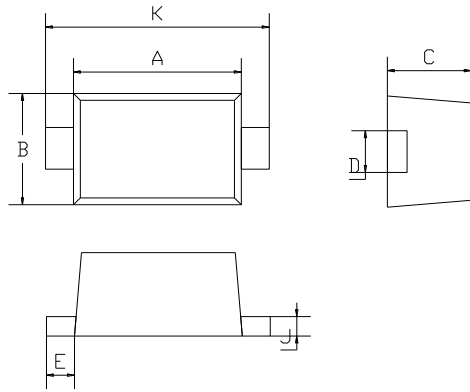


Fig 5 Typical Reverse Characteristics

Package Outline Dimensions (Unit: mm)



SOD-523		
Dimension	Min.	Max.
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
E	0.15	0.25
J	0.05	0.15
K	1.50	1.70

Package Outline Dimensions (Unit: mm)

SOD-523

