

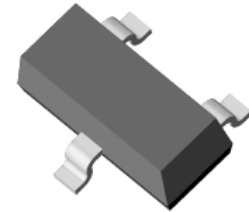
## Small Signal Zener Diode

### General Description

These diodes small signal Zener diodes, fabricated in planar technology, and packaged in small SOT-23 surface mounted device (SMD) packages.

### Features and Benefits

- Silicon epitaxial planar diode
- Low Zener impedance and low leakage current
- Standard Zener voltage tolerance is 4.3%.
- Full lead (Pb)-free device and RoHS compliant device
- Available in "Green" device



SOT-23



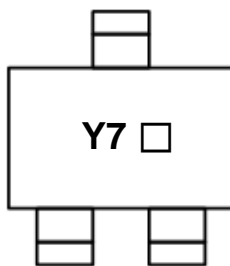
### Applications

- Voltage regulator

### Ordering Information

Part Number	Marking Code	Package	Packaging
SDZ20V	Y7 □	SOT-23	Tape & Reel

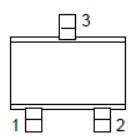
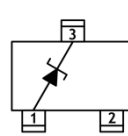
### Marking Information



Y7 = Specific Device Code

□ = Year & Week Code Marking

### Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Anode		
2	Not Connected		
3	Cathode		

**Absolute Maximum Ratings** ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Power dissipation <sup>1)</sup>	$P_D$	250	mW
Operating junction temperature	$T_j$	150	$^{\circ}\text{C}$
Storage temperature range	$T_{stg}$	-55 ~ 150	$^{\circ}\text{C}$

<sup>1)</sup> Device mounted on FR-4 board with recommended pad layout.

**Thermal Characteristics** ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Thermal resistance, junction to ambient <sup>1)</sup>	$R_{th(j-a)}$	500	$^{\circ}\text{C}/\text{W}$

<sup>1)</sup> Device mounted on FR-4 board with recommended pad layout.

**Electrical Characteristics** ( $T_{amb}=25^{\circ}\text{C}$ , Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener voltage	$V_Z$	$I_Z=5\text{mA}$	19.1	-	20.9	V
Dynamic impedance	$Z_{ZT}$	$I_Z=5\text{mA}$	-	-	48	$\Omega$
KNEE dynamic impedance	$Z_{ZK}$	$I_Z=0.25\text{mA}$	-	-	600	$\Omega$
Reverse leakage current	$I_R$	$V_R=14\text{V}$	-	-	0.1	$\mu\text{A}$

Rating and Characteristic Curves

Fig. 1) Typical Zener Characteristics

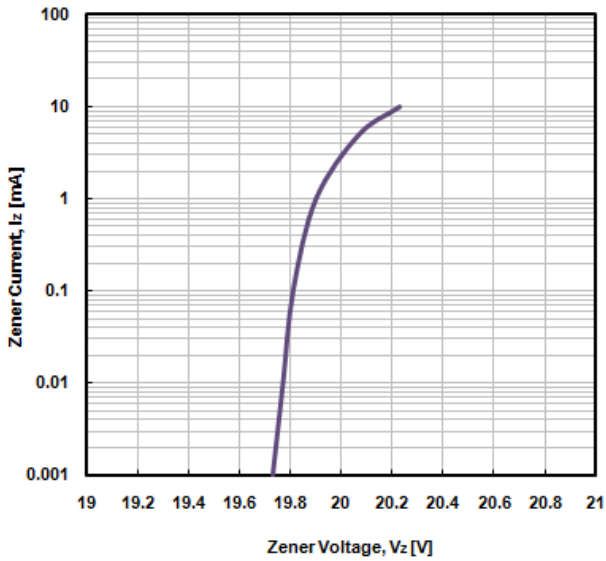


Fig. 2) Zener voltage vs. Ambient Temperature

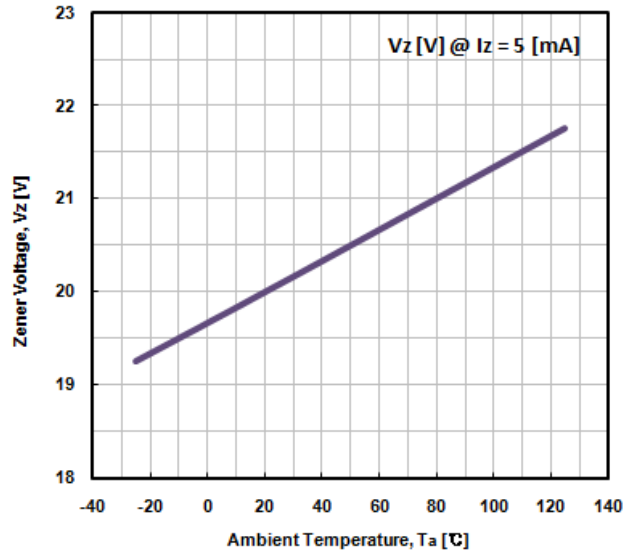


Fig. 3) Typical Reverse Characteristics

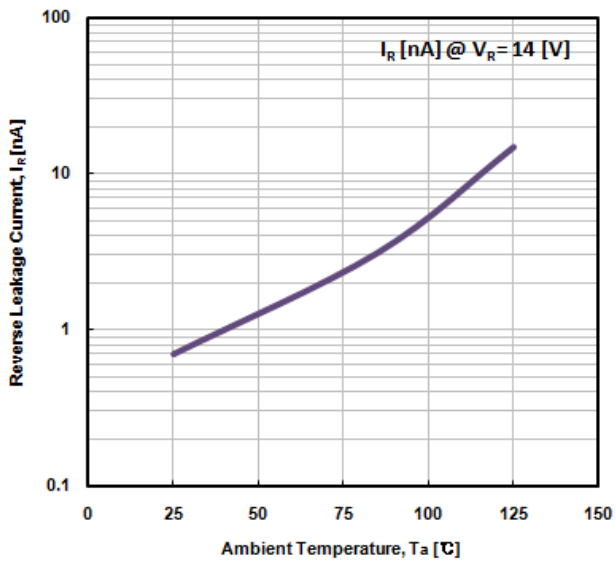
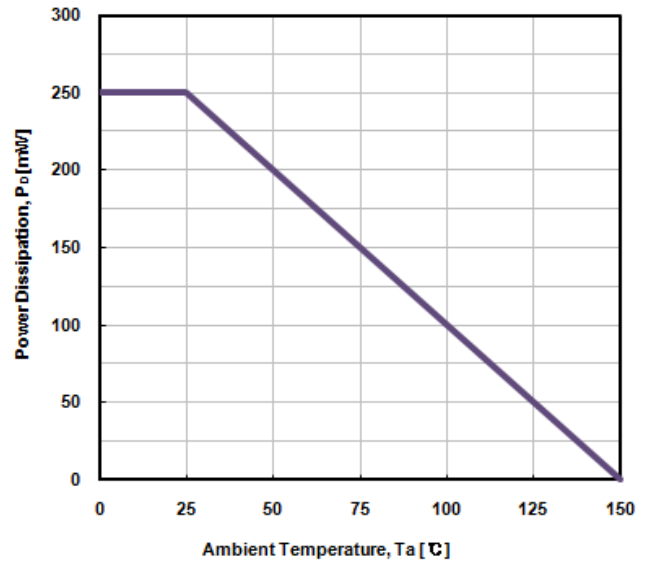
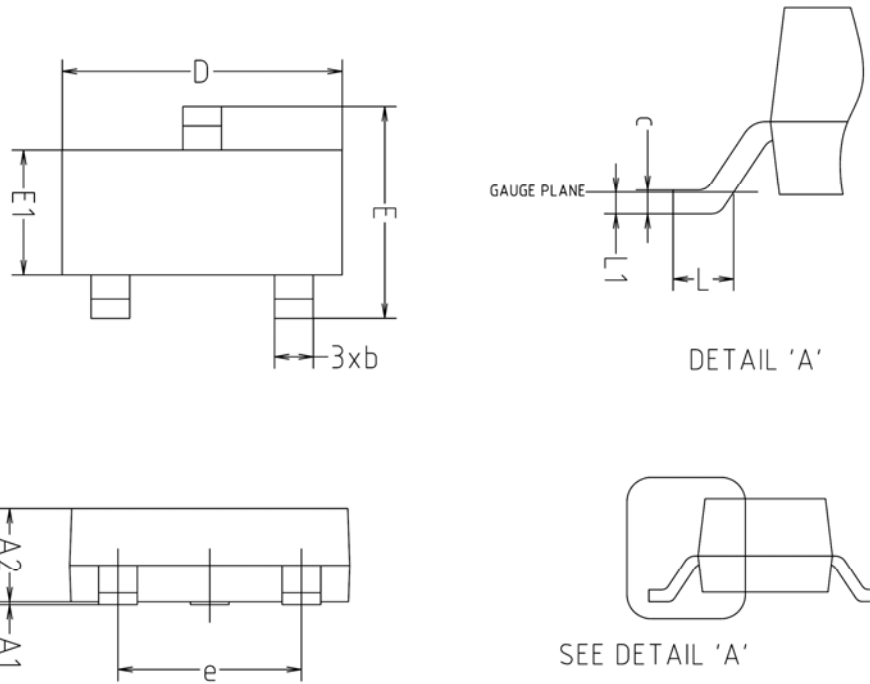


Fig. 4) Power Dissipation vs. Ambient Temperature

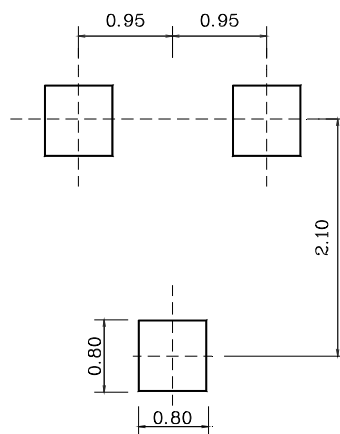


Package Outline Dimensions



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

※ Recommend PCB solder land (Unit : mm)



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