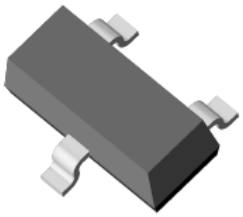
ESD Protection Zener Diode

General Description

SDZ5V6AWA in small SOT-23 SMD plastic package designed to protect one data line from the damage caused by Electro Static Discharge (ESD) and other transients.



SOT-23

Features and Benefits

- ESD protection of one data line
- Transient protection for data lines to **IEC 61000-4-2 (ESD)**
  Air discharge mode: ±15kV, Contact discharge mode: ±8kV
- Small package for use in portable equipment
- Full lead(Pb)-free device and RoHS compliant
- Available in “Green” device

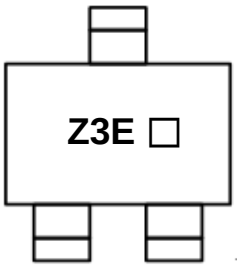
Applications

- ESD protection

Ordering Information

Part Number	Marking Code	Package	Packaging
SDZ5V6AWA	**Z3E □**	**SOT-23**	**Tape & Reel**

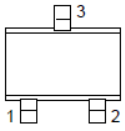
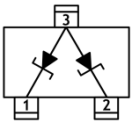
Marking Information



Z3E = Specific Device Code

□ = Year & Week Code Marking

Pinning Information

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode (Diode 1)		
2	Cathode (Diode 2)		
3	Common Anode		

Absolute Maximum Ratings (T_{amb}=25℃, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Peak Pulse Power (tp = 8/20㎲)	P_{PK}	100	W
Power dissipation [1)]	P_D	200	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55 ~ 150	°C

[1)] Device mounted on FR-4 board with recommended pad layout.

Thermal Characteristics (T_{amb}=25℃, Unless otherwise specified)

Characteristic	Symbol	Ratings	Unit
Thermal resistance, junction to ambient [1)]	$R_{th(j-a)}$	625	°C/W

[1)] Device mounted on FR-4 board with recommended pad layout.

Electrical Characteristics (T_{amb}=25℃, Unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Zener voltage	V_Z	I_Z=5mA	5.31	-	5.92	V
Dynamic impedance	Z_{ZT}	I_Z=5mA	-	-	60	Ω
KNEE dynamic impedance	Z_{ZK}	I_Z=0.5mA	-	-	200	Ω
Reverse current	I_R	V_R=2.5V	-	-	1	uA
Total capacitance	C_T	V_R=0V, f=1MHz	-	30	-	pF

Rating and Characteristic Curves

Fig. 1) Typical Zener Characteristics

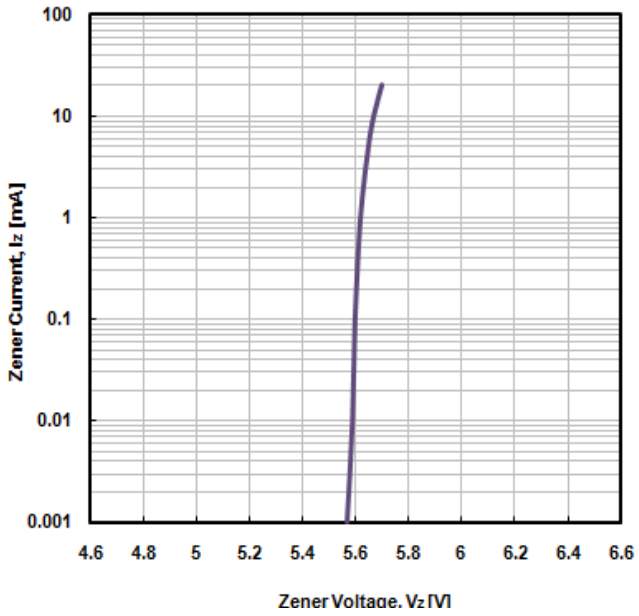
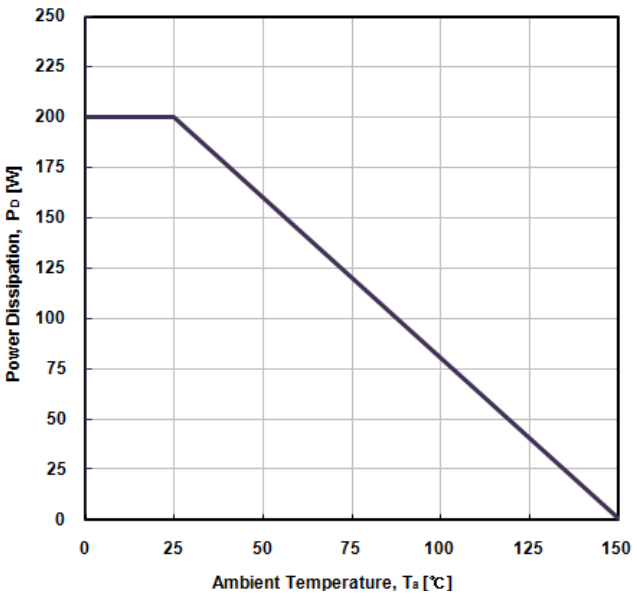
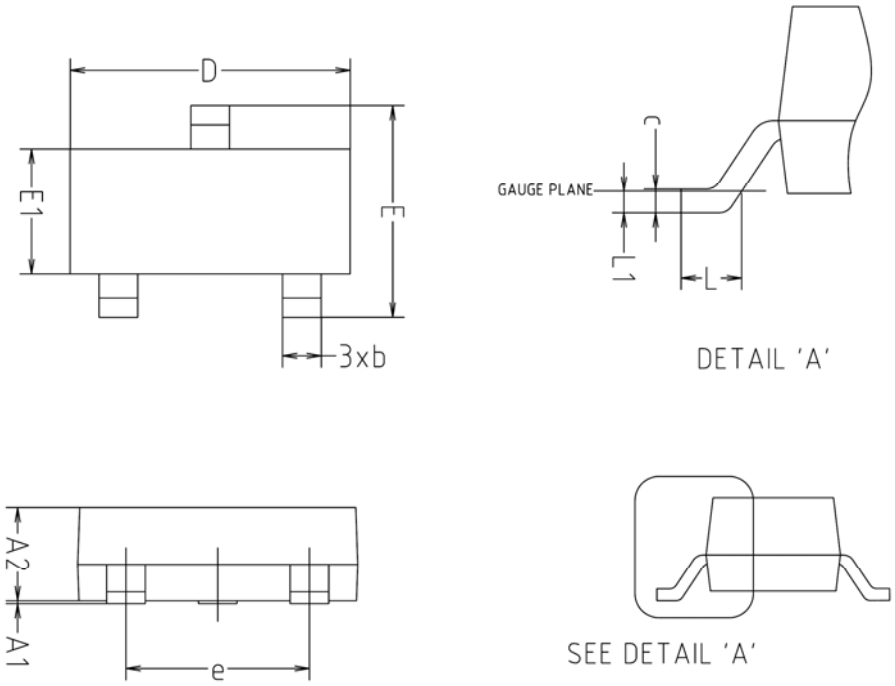


Fig. 2) Power Dissipation vs. Ambient Temperature

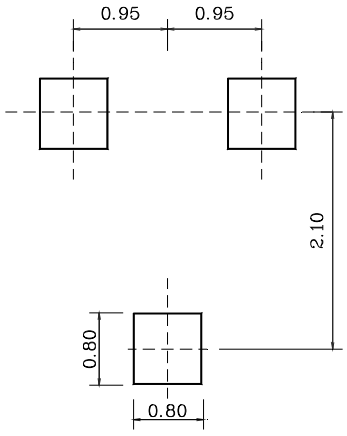


Package Outline Dimensions



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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