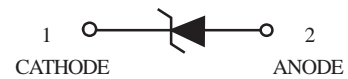


Zener Diode

200mW SOD-323 Surface Mount

• **Features**

- 1) Non-wire bonding structure improves
- 2) High demand voltage range (2.4V-75V)
- 3) Nominal Voltage Tolerance About $\pm 5\%$
- 4) ESD Rating of Class 3 ($>16\text{kV}$) per Human Body Model
- 5) This is a Pb-Free device
- 6) We declare that the material of product compliance with RoHS requirements



• **Device Marking and Ordering Information**

Device	Package	Shipping
FDZ**	SOD-323	3000/Tape&Reel

* See specific marking table.

• **ABSOLUTE MAXIMUM RATINGS** ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limit	Unit
Power dissipation	P	200	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{sg}	- 55 ~ +150	$^\circ\text{C}$
Operating temperature	T_{opr}	- 55 ~ +150	$^\circ\text{C}$



FDZ2.4 ~ FDZ75

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted, Vf=0.9V Max. @ If=10mA for all types)

Device	Device Marking	Zener Voltage (Note 2.)				Zener Impedance			Leakage Current		ΘV _Z (mV/K) @I _{ZT}		C @V _R =0 f=1MHz pF
		V _Z (Volts)			@I _{ZT}	Z _{ZT} @I _{ZT}	Z _{ZK} @I _{ZK}		I _R @V _R		Min.	Max.	
		Min.	Nom.	Max.	mA	Ω	Ω	mA	μA	Volts			
FDZ2.4	00	2.2	2.4	2.6	5	100	1000	0.5	50	1.0	-3.5	0	450
FDZ2.7	01	2.5	2.7	2.9	5	100	1000	0.5	20	1.0	-3.5	0	450
FDZ3.0	02	2.8	3.0	3.2	5	100	1000	0.5	10	1.0	-3.5	0	450
FDZ3.3	05	3.1	3.3	3.5	5	95	1000	0.5	5	1.0	-3.5	0	450
FDZ3.6	06	3.4	3.6	3.8	5	90	1000	0.5	5	1.0	-3.5	0	450
FDZ3.9	07	3.7	3.9	4.1	5	90	1000	0.5	3	1.0	-3.5	-2.5	450
FDZ4.3	08	4.0	4.3	4.6	5	90	1000	0.5	3	1.0	-3.5	0	450
FDZ4.7	09	4.4	4.7	5.0	5	80	800	0.5	3	2.0	-3.5	0.2	260
FDZ5.1	0A	4.8	5.1	5.4	5	60	500	0.5	2	2.0	-2.7	1.2	225
FDZ5.6	0C	5.2	5.6	6.0	5	40	200	0.5	1	2.0	-2.0	2.5	200
FDZ6.2	0E	5.8	6.2	6.6	5	10	100	0.5	3	4.0	0.4	3.7	185
FDZ6.8	0F	6.4	6.8	7.2	5	15	160	0.5	2	4.0	1.2	4.5	155
FDZ7.5	0G	7.0	7.5	7.9	5	15	160	0.5	1	5.0	2.5	5.3	140
FDZ8.2	0H	7.7	8.2	8.7	5	15	160	0.5	0.7	5.0	3.2	6.2	135
FDZ9.1	0K	8.5	9.1	9.6	5	15	160	0.5	0.2	7.0	3.8	7.0	130
FDZ10	0L	9.4	10	10.6	5	20	160	0.5	0.1	8.0	4.5	8.0	130
FDZ11	0M	10.4	11	11.6	5	20	160	0.5	0.1	8.0	5.4	9.0	130
FDZ12	0N	11.4	12	12.7	5	25	80	0.5	0.1	8.0	6.0	10	130
FDZ13	0P	12.4	13.25	14.1	5	30	80	0.5	0.1	8.0	7.0	11	120
FDZ15	0T	14.3	15	15.8	5	30	80	0.5	0.05	10.5	9.2	13	110
FDZ16	0U	15.3	16.2	17.1	5	40	80	0.5	0.05	11.2	10.4	14	105
FDZ18	0W	16.8	18	19.1	5	45	80	0.5	0.05	12.6	12.4	16	100
FDZ20	0Z	18.8	20	21.2	5	55	100	0.5	0.05	14.0	14.4	18	85
FDZ22	10	20.8	22	23.3	5	55	100	0.5	0.05	15.4	16.4	20	85
FDZ24	11	22.8	24.2	25.6	5	70	120	0.5	0.05	16.8	18.4	22	80
FDZ27	12	25.1	27	28.9	2	80	300	0.5	0.05	18.9	21.4	25.3	70
FDZ30	14	28	30	32	2	80	300	0.5	0.05	21.0	24.4	29.4	70
FDZ33	18	31	33	35	2	80	300	0.5	0.05	23.2	27.4	33.4	70
FDZ36	19	34	36	38	2	90	500	0.5	0.05	25.2	30.4	37.4	70
FDZ39	20	37	39	41	2	130	500	0.5	0.05	27.3	33.4	41.2	45
FDZ43	21	40	43	46	2	150	500	0.5	0.05	30.1	37.6	46.6	40
FDZ47	1A	44	47	50	2	170	500	0.5	0.05	32.9	42.0	51.8	40
FDZ51	1C	48	51	54	2	180	500	0.5	0.05	35.7	46.6	57.2	40
FDZ56	1D	52	56	60	2	200	500	0.5	0.05	39.2	52.2	63.8	40
FDZ62	1E	58	62	66	2	215	500	0.5	0.05	43.4	58.8	71.6	35
FDZ68	1F	64	68	72	2	240	500	0.5	0.05	47.6	65.6	79.8	35
FDZ75	1G	70	75	79	2	255	500	0.5	0.05	52.5	73.4	88.6	35

Notes) 2. Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25°C)

Typical Characteristics

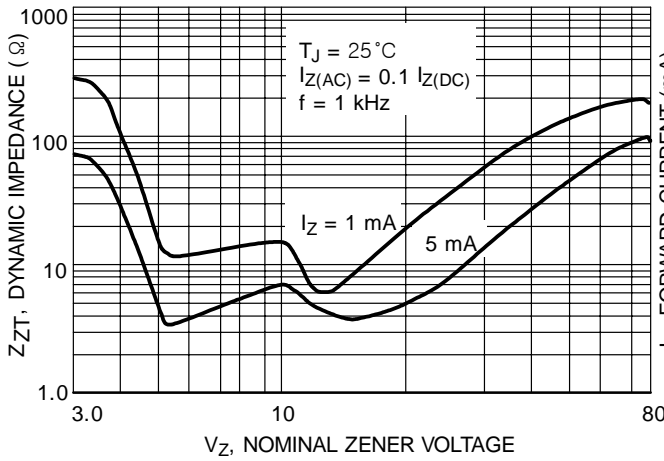


Figure 1. Effect of Zener Voltage on Zener Impedance

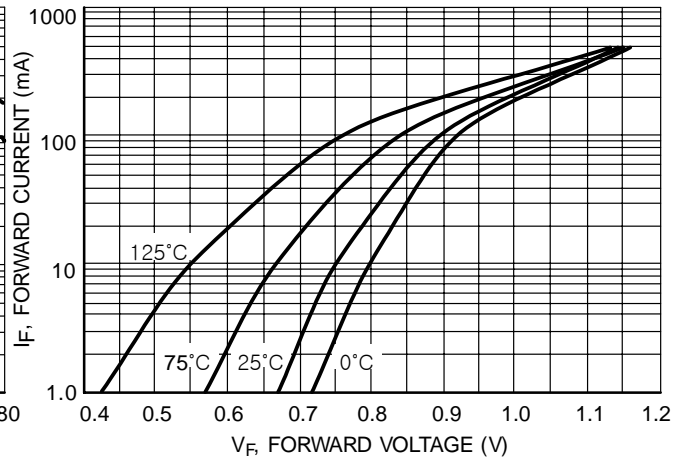


Figure 2. Typical Forward Voltage

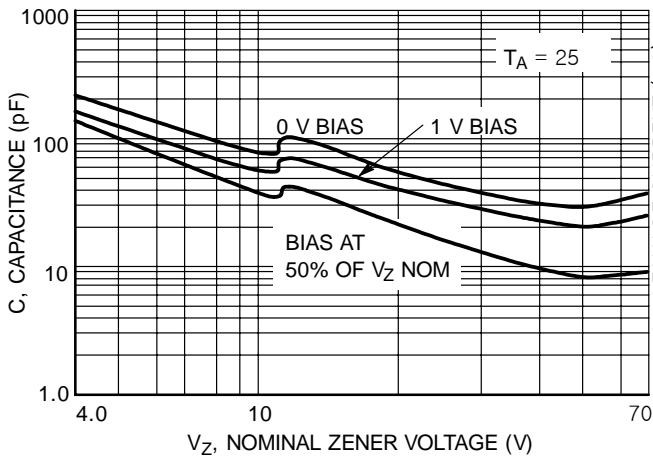


Figure 3. Typical Capacitance

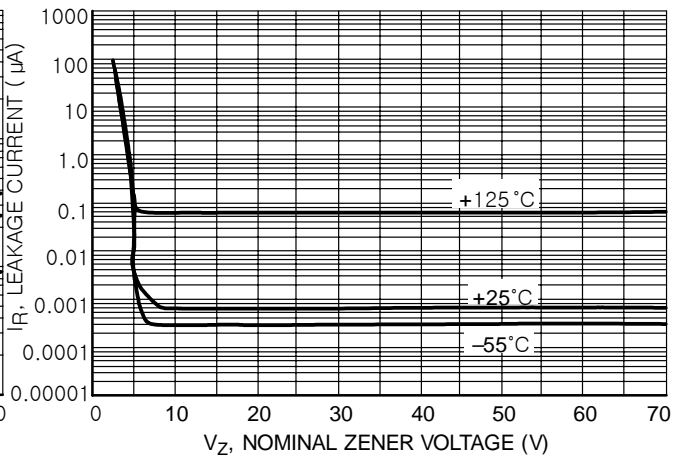


Figure 4. Typical Leakage Current

Typical Characteristics

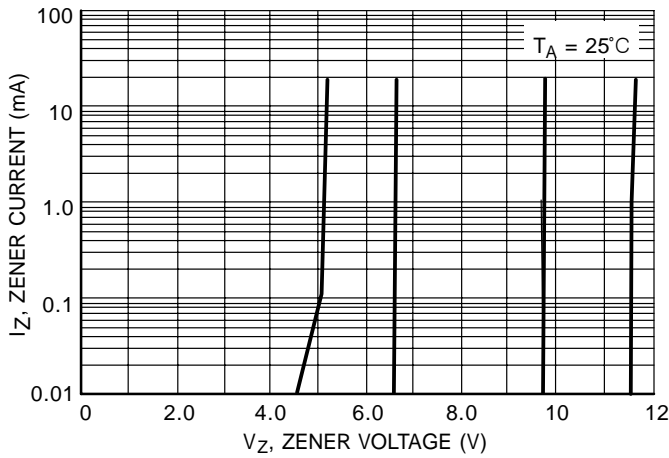


Figure 5. Zener Voltage versus Zener Current (V_Z Up to 12 V)

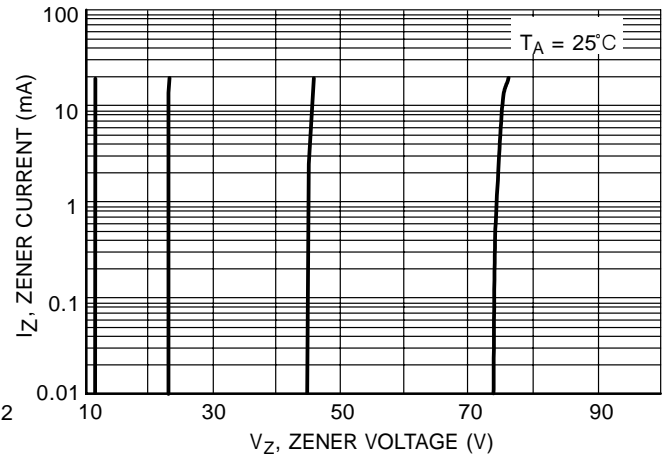


Figure 6. Zener Voltage versus Zener Current (12 V to 75 V)

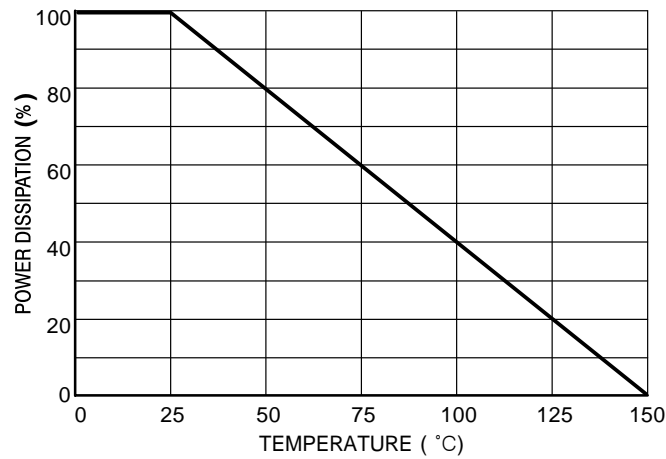
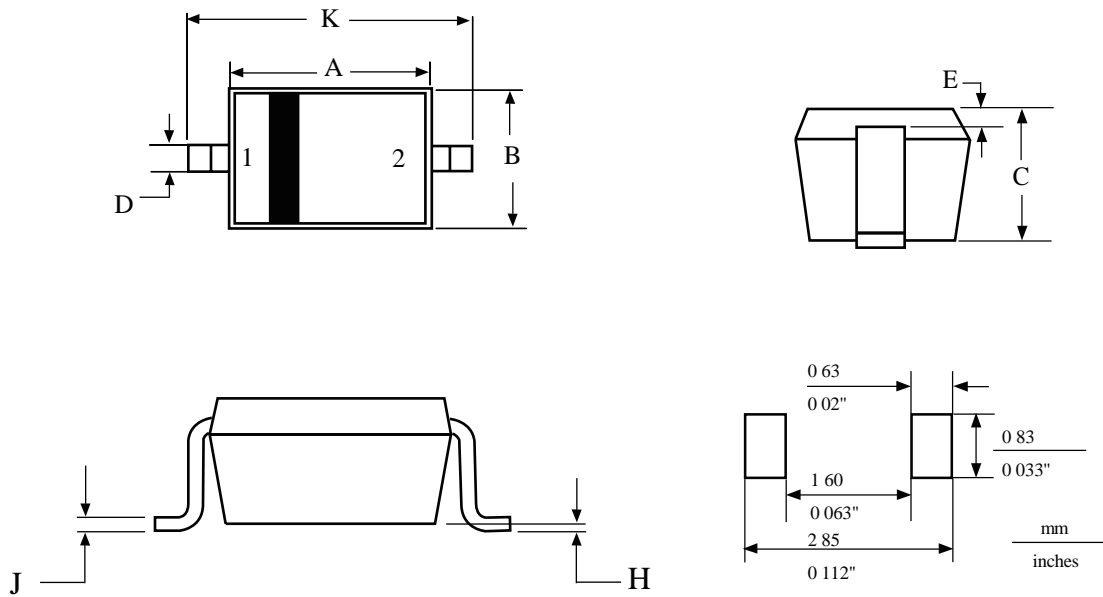


Figure 7. Steady State Power Derating

SOD-323 / SC-76 / USC



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.80	0.063	0.071
b	1.15	1.35	0.045	0.053
C	0.80	1.00	0.031	0.039
D	0.25	0.40	0.010	0.016
E	0.15 REF		0.006 REF	
H	0.00	0.10	0.000	0.004
J	0.089	0.177	0.0035	0.0070
K	2.30	2.70	0.091	0.106

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS
3. LEAD THICKNESS SPECIFIED PER L/F DRAWING WITH SOLDER PLATING.
4. 477-01 OBSOLETE, NEW STANDARD 477-22.

PIN: 1: CATHODE

2: ANODE