

**SEZ52C series**  
**SMD Zener Diodes**

Revision: A

**General Description**

Silicon planar zener diode in a small plastic SOD-523 package.

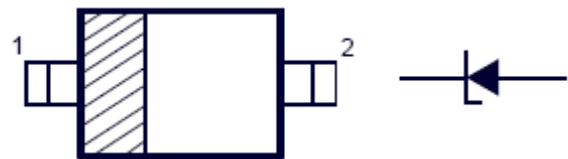
**Features**

- Total power dissipation: max. 200mW
- Designed for mounting on small surface
- Wide variety of voltage ranges: nom. 2.0 to 39V
- Extremely thin/leadless package
- Pb free product

**Functional diagram**



SOD-523



Note: 1-Cathode;2-Anode

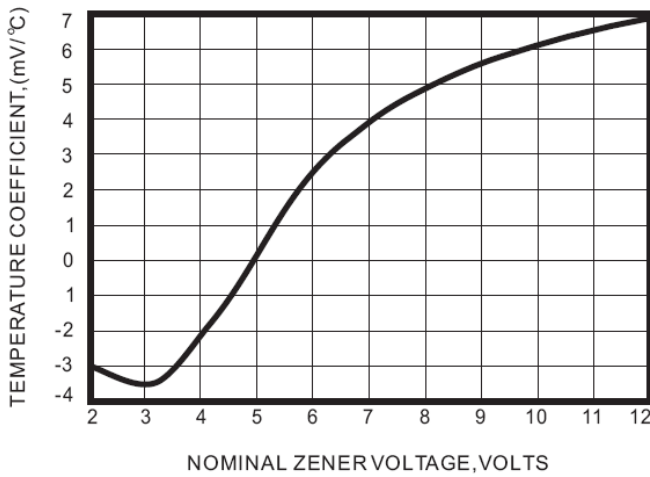
**Absolute Maximum Ratings (T<sub>a</sub>=25°C)**

Symbol	Parameter	Value	Unit
	Zener Current see Table "Characteristics"		
P <sub>tot</sub>	Power Dissipation	200	mW
V <sub>F</sub>	Maximum Forward Voltage Drop at I <sub>F</sub> =10mA	0.9	V
IFSM	Forward current , surge peak 8.3 ms single half sine-wave superimposed on rate load (JEDEC method)	2.0	A
T <sub>S</sub>	Storage Temperature Range	-55 to +125	°C

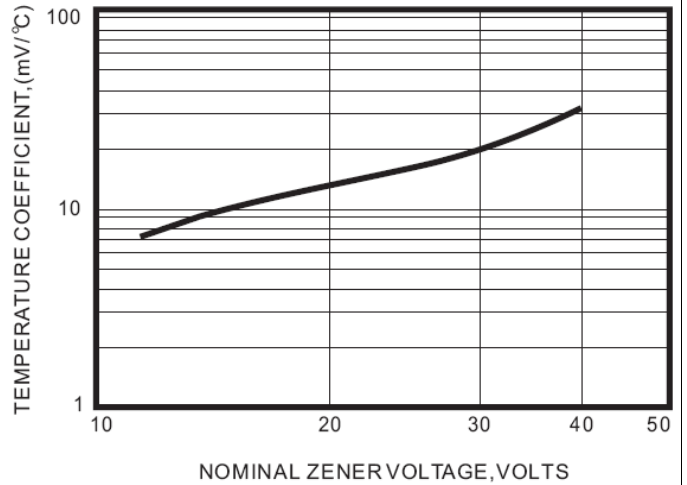
## SEZ52C series

Electrical Characteristics										
Type	Zener Voltage			Operating resistance		Rising operating Resistance		Reverse current		@V <sub>R</sub> =0 f=1MH z
	VZ(V)			ZZT(Ohm)		ZZK(Ohm)		IR(uA)		C(pF)
	Min	Max	Iz(mA)	Max	VR(V)	Iz	Max	Iz	Max	380
SEZ52C2	1.90	2.10	5	100	1	5	600	1	100	380
SEZ52C2V2	2.09	2.31	5	100	1	5	600	1	100	380
SEZ52C2V4	2.28	2.52	5	85	1	5	600	1	100	380
SEZ52C2V7	2.57	2.84	5	83	1	5	500	1	75	380
SEZ52C3	2.85	3.15	5	95	1	5	500	1	50	380
SEZ52C3V3	3.14	3.47	5	95	1	5	500	1	25	380
SEZ52C3V6	3.42	3.78	5	95	1	5	500	1	15	380
SEZ52C3V9	3.71	4.10	5	95	1	5	500	1	10	380
SEZ524V3	4.09	4.52	5	95	1	5	500	1	5	380
SEZ524V7	4.47	4.94	5	78	2	5	500	1	5	200
SEZ52C5V1	4.85	5.36	5	60	0.8	5	480	1	0.1	160
SEZ52C5V6	5.32	5.88	5	40	1	5	400	1	0.1	130
SEZ52C6V2	5.89	6.51	5	10	2	5	200	1	0.1	120
SEZ52C6V8	6.46	7.14	5	8	3	5	150	1	0.1	100
SEZ52C7V5	7.13	7.88	5	7	5	5	50	1	0.1	80
SEZ52C8V2	7.79	8.61	5	10	7	5	50	1	0.1	75
SE52C9V1	8.65	9.56	5	10	7	5	50	1	0.1	70
SEZ52C10	9.50	10.5	5	15	7.5	5	70	1	0.1	70
SEZ52C11	10.45	11.6	5	20	8.5	5	70	1	0.1	70
SEZ52C12	11.40	12.6	5	20	9	5	90	1	0.1	70
SEZ52C13	12.35	13.7	5	25	10	5	110	1	0.1	60
SEZ52C15	14.25	15.8	5	30	11	5	110	1	0.1	50
SEZ52C16	15.2	16.8	5	40	12	5	170	1	0.1	50
SEZ52C18	17.10	18.9	5	50	14	5	170	1	0.1	40
SEZ52C20	19.0	21.0	5	50	15	5	220	1	0.1	40
SEZ52C22	20.90	23.1	5	80	17	5	220	1	0.1	40
SEZ52C24	22.8	25.2	5	80	18	5	220	1	0.1	40
SEZ52C27	25.65	28.4	5	80	20	5	250	1	0.1	40
SEZ52C30	28.50	31.5	5	80	23	5	250	1	0.1	30
SEZ52C33	31.35	34.7	5	80	25	5	250	1	0.1	30
SEZ52C36	34.20	37.8	5	90	27	5	250	1	0.1	30
SEZ52C39	37.05	41.0	5	90	29	5	300	1	0.1	30

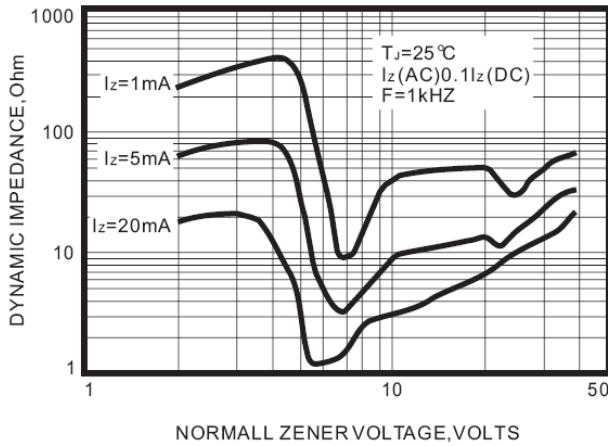
**Breakdown Characteristics  $T_J = \text{constant}$  (pulse)**



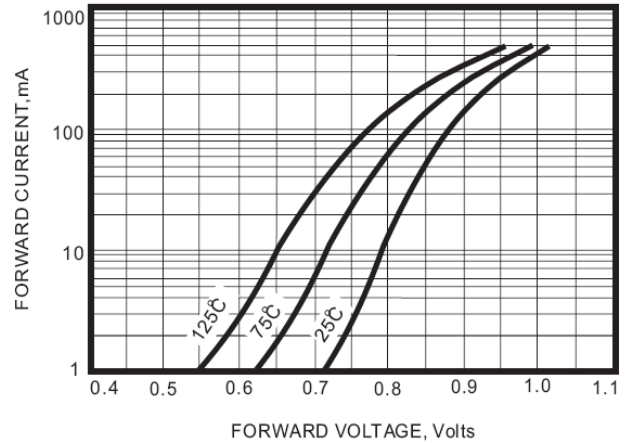
**Fig1. Temperature Coefficients**



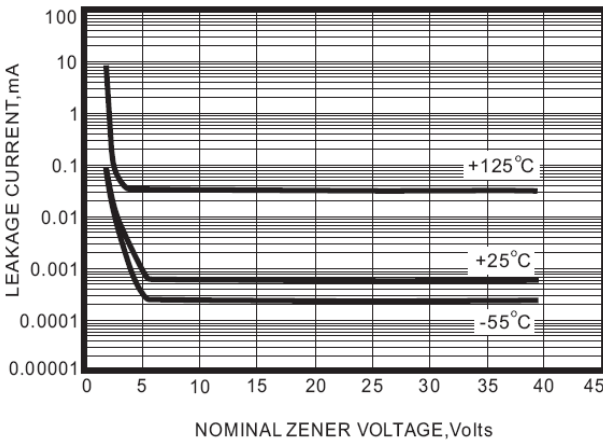
**Fig2. Temperature Coefficients**



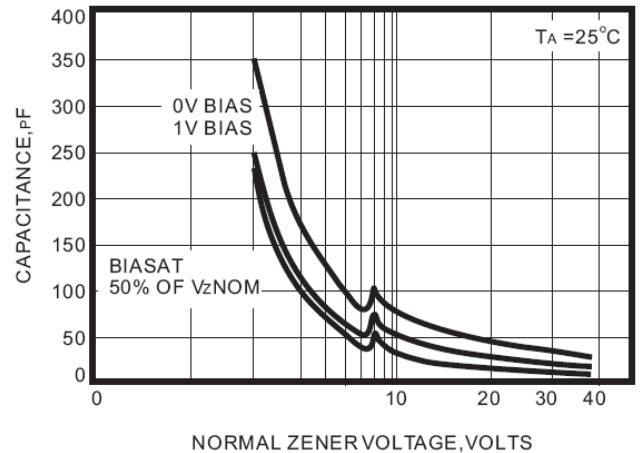
**Fig3. Effect Of Zener Voltage On Zener Impedance**



**Fig4. Typical Forward Voltage**



**Fig5. Typical Leakage Current**



**Fig6. Typical Capacitance**

# SEZ52C series

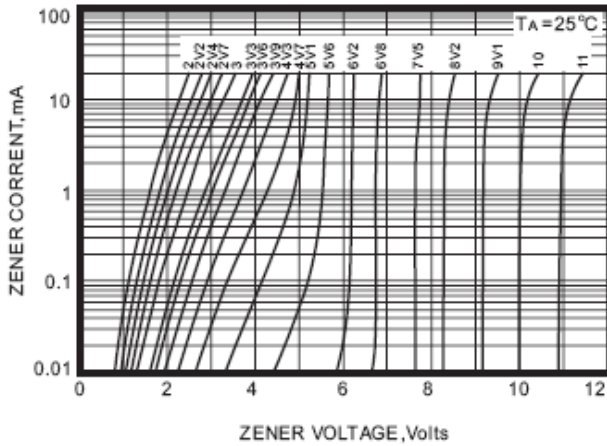


Fig7. Zener Voltage Versus Zener Current

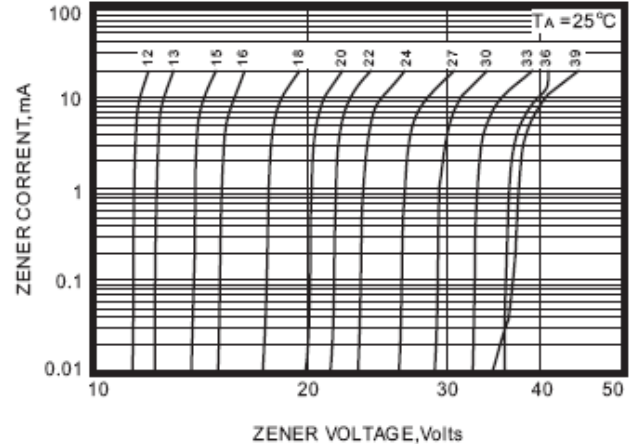


Fig8. Zener Voltage Versus Zener Current

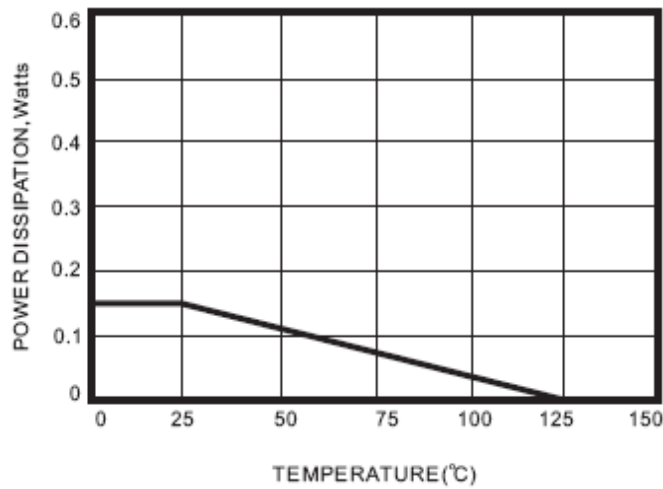
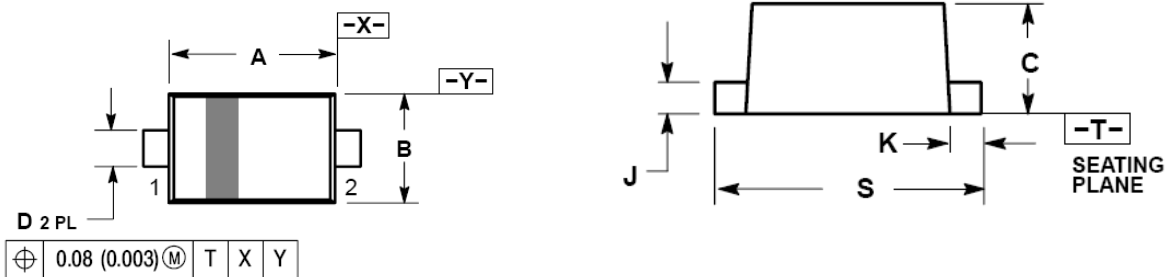


Fig9. Steady State Power Derating

## SOD-523 Mechanical Data



Dim	Millimeters			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
S	1.50	1.60	1.70	0.059	0.063	0.067

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