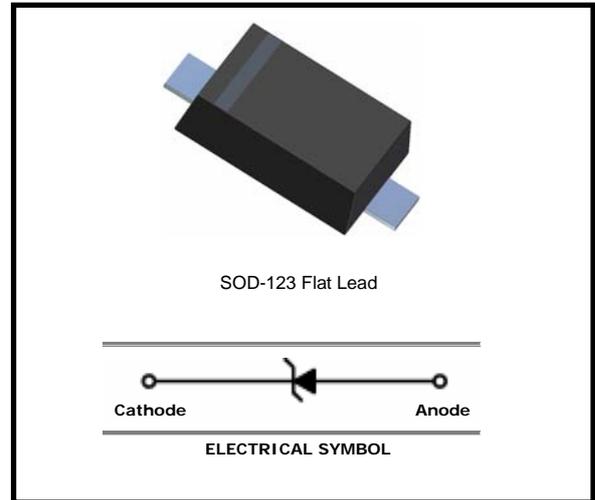


**SILICON PLANAR ZENER DIODES**  
**Silicon planar zener diode in a small plastic**  
**SMD SOD-123 package**

Pb Free Plating Product

**Features**

- Total power dissipation: max. 500 mW
- Small plastic package suitable for
- surface mounted design
- Wide variety of voltage ranges:  
nom.2.0 to 120V (E24 range)
- Tolerance approximately + / - 5%



**Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )**

	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Power Dissipation	$P_{tot}$	500	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-55 to +150	$^\circ\text{C}$

**Characteristics at  $T_{amb} = 25^\circ\text{C}$**

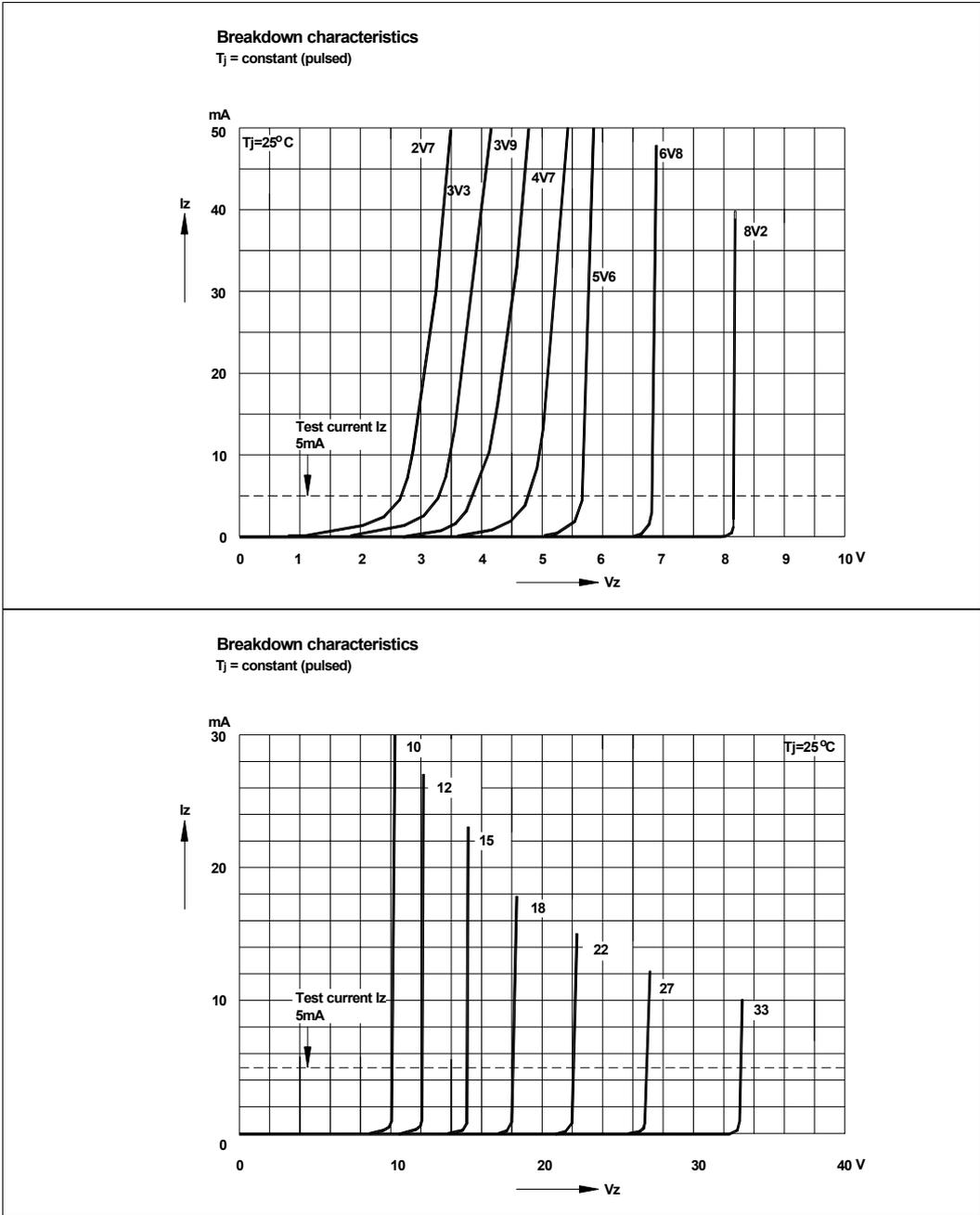
	Symbol	Min.	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{thA}$	-	-	0.3	K/mW
Forward Voltage at $I_F = 10\text{mA}$	$V_F$	-	-	0.9	V

Type	Zener Voltage Range <sup>1)</sup>			Dynamic Impedance <sup>2)</sup>		Reverse Leakage Current		Temp. coefficient of Zener Voltage
	V <sub>znom</sub>	I <sub>ZT</sub> for V <sub>ZT</sub>		Z <sub>Z</sub> (Max) at I <sub>Z</sub>		I <sub>R</sub> (Max) at V <sub>R</sub>		TK <sub>vz</sub>
	V	mA	V	Ω	mA	μA	V	%/K
MM1Z 2V0	2.0	5	1.80... 2.15	100	5	120	0.5	-0.09... -0.06
MM1Z 2V2	2.2	5	2.08... 2.33	100	5	120	0.7	-0.09... -0.06
MM1Z 2V4	2.4	5	2.28... 2.56	100	5	120	1.0	-0.09... -0.06
MM1Z 2V7	2.7	5	2.5... 2.9	110	5	120	1.0	-0.09... -0.06
MM1Z 3V0	3.0	5	2.8... 3.2	120	5	50	1.0	-0.08... -0.05
MM1Z 3V3	3.3	5	3.1... 3.5	130	5	20	1.0	-0.08... -0.05
MM1Z 3V6	3.6	5	3.4... 3.8	130	5	10	1.0	-0.08... -0.05
MM1Z 3V9	3.9	5	3.7... 4.1	130	5	5	1.0	-0.08... -0.05
MM1Z 4V3	4.3	5	4.0... 4.6	130	5	5	1.0	-0.06... -0.03
MM1Z 4V7	4.7	5	4.4... 5.0	130	5	2	1.0	-0.05... +0.02
MM1Z 5V1	5.1	5	4.8... 5.4	130	5	2	1.5	-0.02... +0.02
MM1Z 5V6	5.6	5	5.2... 6.0	80	5	1	2.5	-0.05... +0.05
MM1Z 6V2	6.2	5	5.8... 6.6	50	5	1	3.0	0.03... 0.06
MM1Z 6V8	6.8	5	6.4... 7.2	30	5	0.5	3.5	0.03... 0.07
MM1Z 7V5	7.5	5	7.0... 7.9	30	5	0.5	4.0	0.03... 0.07
MM1Z 8V2	8.2	5	7.7... 8.7	30	5	0.5	5.0	0.03... 0.08
MM1Z 9V1	9.1	5	8.5... 9.6	30	5	0.5	6.0	0.03... 0.09
MM1Z 10	10	5	9.4... 10.6	30	5	0.1	7.0	0.03... 0.1
MM1Z 11	11	5	10.4... 11.6	30	5	0.1	8.0	0.03... 0.11
MM1Z 12	12	5	11.4... 12.7	35	5	0.1	9.0	0.03... 0.11
MM1Z 13	13	5	12.4... 14.1	35	5	0.1	10	0.03... 0.11
MM1Z 15	15	5	13.8... 15.6	40	5	0.1	11	0.03... 0.11
MM1Z 16	16	5	15.3... 17.1	40	5	0.1	12	0.03... 0.11
MM1Z 18	18	5	16.8... 19.1	45	5	0.1	13	0.03... 0.11
MM1Z 20	20	5	18.8... 21.2	50	5	0.1	15	0.03... 0.11
MM1Z 22	22	5	20.8... 23.3	55	5	0.1	17	0.04... 0.12
MM1Z 24	24	5	22.8... 25.6	60	5	0.1	19	0.04... 0.12
MM1Z 27	27	5	25.1... 28.9	70	2	0.1	21	0.04... 0.12
MM1Z 30	30	5	28... 32	80	2	0.1	23	0.04... 0.12
MM1Z 33	33	5	31... 35	80	2	0.1	25	0.04... 0.12
MM1Z 36	36	5	34... 38	90	2	0.1	27	0.04... 0.12
MM1Z 39	39	2.5	37... 41	100	2	2	30	0.04... 0.12
MM1Z 43	43	2.5	40... 46	130	2	2	33	0.04... 0.12
MM1Z 47	47	2.5	44... 50	150	2	2	36	0.04... 0.12
MM1Z 51	51	2.5	48... 54	180	2	1	39	0.04... 0.12
MM1Z 56	56	2.5	52... 60	180	2	1	43	0.04... 0.12
MM1Z 62	62	2.5	58... 66	200	2	0.2	47	0.04... 0.12
MM1Z 68	68	2.5	64... 72	250	2	0.2	52	0.04... 0.12
MM1Z 75	75	2.5	70... 79	300	2	0.2	57	0.04... 0.12
MM1Z 82	82	2.5	77... 87	300	2	0.2	63	0.05... 0.12
MM1Z 91	91	1	85... 96	700	1	0.2	69	0.05... 0.12
MM1Z 100	100	1	94... 106	700	1	0.2	76	0.05... 0.12
MM1Z 110	110	1	104... 116	800	1	0.2	84	0.05... 0.12
MM1Z 120	120	1	114... 127	900	1	0.2	91	0.05... 0.12

1) V<sub>Z</sub> is tested with pulses (20 ms).

2) Z<sub>Z</sub> is measured at I<sub>Z</sub> by given a very small A.C. current signal.





## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123

