

### 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  $\pm 5\%$
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

#### SOD-123FL



#### SOD-123



### MECHANICAL DATA

- Case: SOD-123 plastic case
- Weight: Approx. 0.01 gram

### ABSOLUTE MAXIMUM RATINGS (LIMITING VALUES) ( $T_A=25^\circ\text{C}$ )

	Symbols	Value	Units
Zener current see table "Characteristics"			
Power dissipation	$P_{tot}$	500	mW
Junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ )

	Symbols	Min	Typ	Max	Units
Thermal resistance junction to ambient	$R_{\theta JA}$			340	K/W
Forward voltage at $I_F=10\text{mA}$	$V_F$			0.9	V

1) Valid provided that a distance of 8mm from case is kept at ambient temperature

## MM1Z... SILICON PLANAR ZENER DIODES

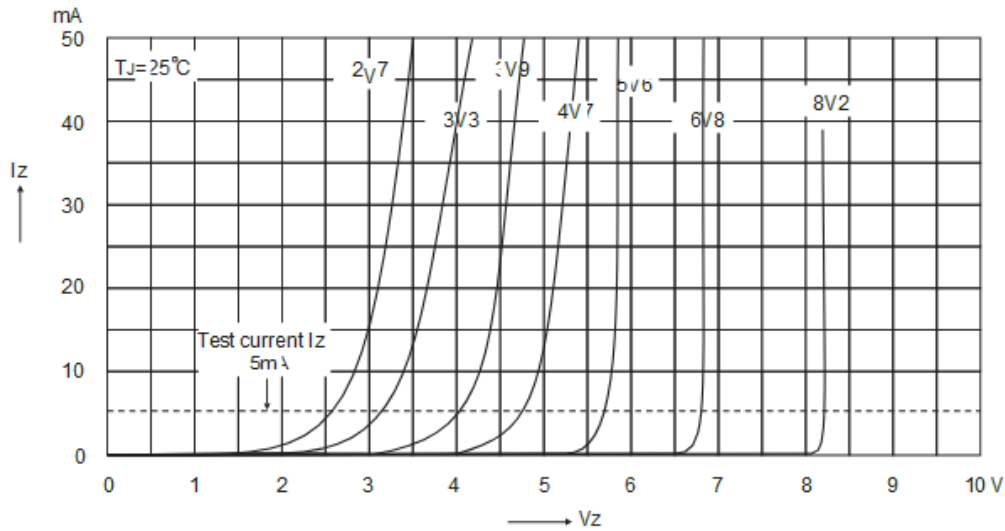
Type	Zener Voltage range <sup>1)</sup>			Dynamic resistance <sup>2)</sup>		Reverse leakage current			Temp Coefficient of zener voltage
	V <sub>Z0</sub>	I <sub>ZT</sub> for V <sub>ZT</sub>		r <sub>Z</sub> and r <sub>ZK</sub> at I <sub>ZK</sub>		I <sub>R</sub> at V <sub>R</sub>			TK <sub>Z</sub>
	V	mA	V	Ω	mA	μA	V	μ	%/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) Tested with pulses tp=20ms.

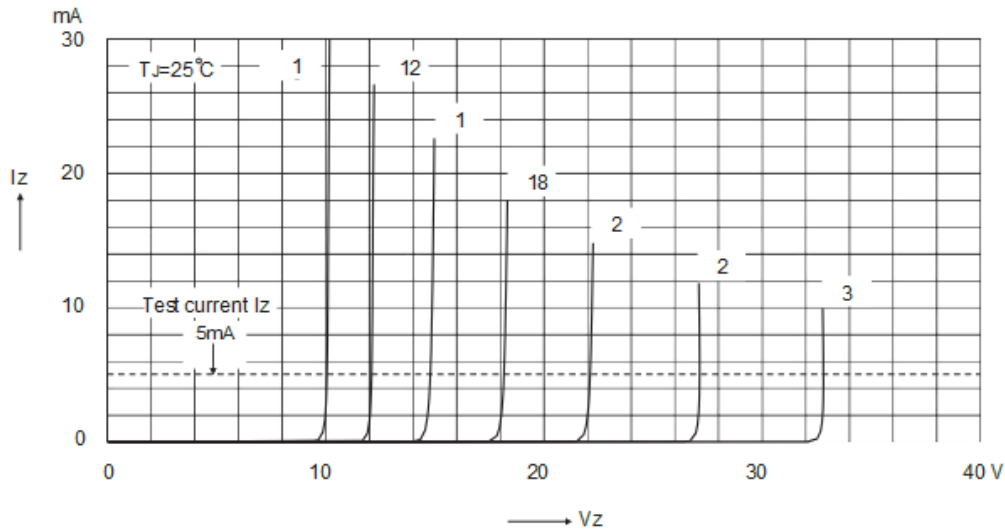
2) Z<sub>t</sub> is measured at I<sub>Z</sub> by given a very small A. C. current signal.

# MM1Z... SILICON PLANAR ZENER DIODES

## BREAKDOWN CHARACTERISTICS AT $T_J = \text{CONSTANT}$ (PULSED)

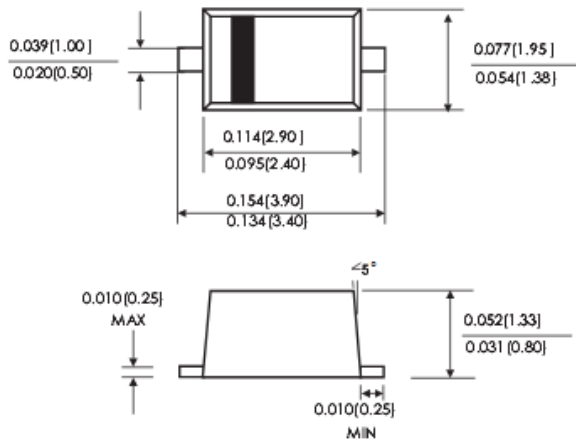


## BREAKDOWN CHARACTERISTICS AT $T_J = \text{CONSTANT}$ (PULSED)



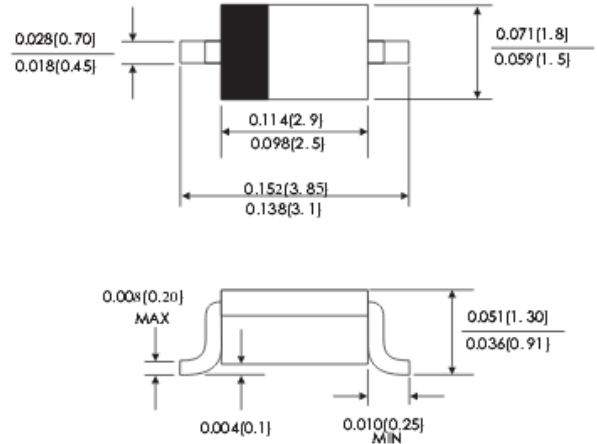
# MM1Z... SILICON PLANAR ZENER DIODES

## SOD-123FL



Dimensions in inches and (millimeters)

## SOD-123



Dimensions in inches and (millimeters)

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