Silicon Planar Zener Diodes

Features

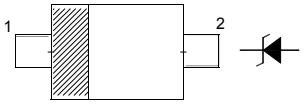
- Total power dissipation : max. 300 mW
- Small plastic package suitable for surface mounted design
- High reliability

Description

Silicon planar Zener diode in a small plastic SMD SOD-323 package

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Simplified outline SOD-323 and symbol

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	300	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

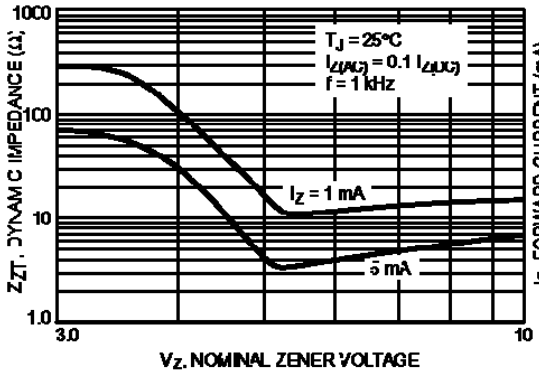
Characteristics at T_a = 25 °C

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	R_{thA}	417	°C/W
Forward Voltage at I_F = 10 mA	V_F	0.9	V

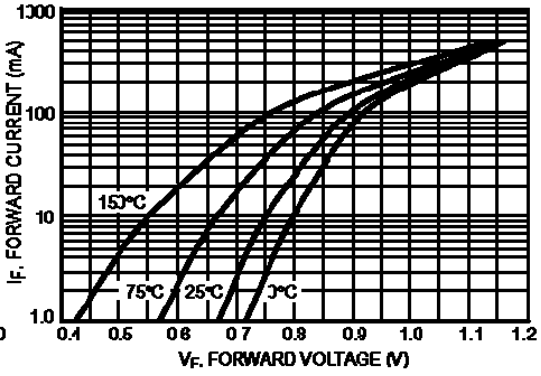
Characteristics at T_a = 25 °C

Type	Marking Code	Zener Voltage Range [1]			Dynamic Impedance		Reverse Leakage Current	
		V_{znom}	I_{ZT} for	V_{ZT}	Z_{ZT} (Max.)	at I_{ZT}	I_R (Max.)	at V_R
		V	mA	V	Ω	mA	μA	V
MM3Z2V2B	MF	2.2	5	2.1...2.4	100	5	120	0.7
MM3Z2V4B	7C	2.4	5	2.3…2.65	100	5	120	1
MM3Z2V7B	7D	2.7	5	2.65…2.95	110	5	120	1
MM3Z3V0B	7E	3.0	5	2.95…3.25	120	5	50	1
MM3Z3V3B	7F	3.3	5	3.25…3.55	120	5	20	1
MM3Z3V6B	7H	3.6	5	3.6…3.845	100	5	10	1
MM3Z3V9B	7J	3.9	5	3.89…4.16	100	5	5	1
MM3Z4V3B	7K	4.3	5	4.17…4.43	100	5	5	1
MM3Z4V7B	7M	4.7	5	4.61…4.79	100	5	2	1
MM3Z5V1B	7N	5.1	5	4.98…5.20	80	5	2	1.5
MM3Z5V6B	7P	5.6	5	5.49…5.73	60	5	1	2.5
MM3Z6V2B	7R	6.2	5	6.06…6.33	60	5	1	3
MM3Z6V8B	7X	6.8	5	6.65…6.93	40	5	0.5	3.5
MM3Z7V5B	7Y	7.5	5	7.35…7.65	30	5	0.5	4
MM3Z8V2B	7Z	8.2	5	8.02…8.36	30	5	0.5	5
MM3Z9V1B	8A	9.1	5	8.92…9.28	30	5	0.5	6
MM3Z10B	8B	10	5	9.80…10.20	30	5	0.1	7
MM3Z11B	8C	11	5	10.78…11.22	30	5	0.1	8
MM3Z12B	8D	12	5	11.76…12.24	30	5	0.1	9
MM3Z13B	8E	13	5	12.74…13.26	37	5	0.1	10
MM3Z15B	8F	15	5	14.70…15.30	42	5	0.1	11
MM3Z16B	8H	16	5	15.68…16.32	50	5	0.1	12
MM3Z18B	8J	18	5	17.64…18.36	65	5	0.1	13
MM3Z20B	8K	20	5	19.60…20.40	85	5	0.1	15
MM3Z22B	8M	22	5	21.56…22.44	100	5	0.1	17
MM3Z24B	8N	24	5	23.52…24.48	120	5	0.1	19
MM3Z27B	8P	27	5	26.46…27.54	150	5	0.1	21
MM3Z30B	8R	30	5	29.40…30.60	200	5	0.1	23
MM3Z33B	8X	33	5	32.34…33.66	250	5	0.1	25
MM3Z36B	8Y	36	5	35.28…36.72	300	5	0.1	27
MM3Z39B	8Z	39	5	38.22…39.78	100	5	2	30
MM3Z43B	9A	43	2	42.14…43.86	141	2	0.1	31
MM3Z47B	9B	47	2	46.06…47.95	160	2	0.1	33
MM3Z51B	9C	51	2	49.98…52.02	269	2	0.1	36
MM3Z56B	9D	56	2	54.88…57.12	188	2	0.1	40
MM3Z62B	9E	62	2	60.76…63.24	202	2	0.1	44
MM3Z68B	9F	68	2	66.64…69.36	226	2	0.1	48
MM3Z75B	9G	75	2	73.5…76.5	240	2	0.1	53

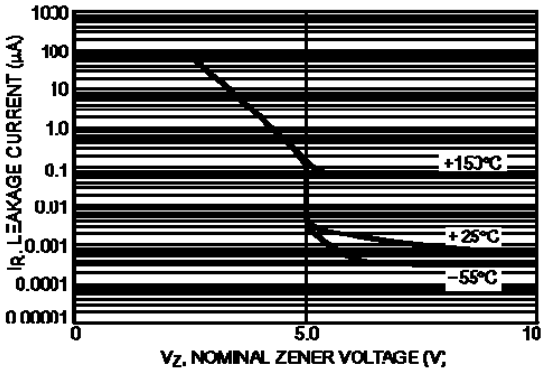
[1] V_Z is tested with pulses (20 ms).



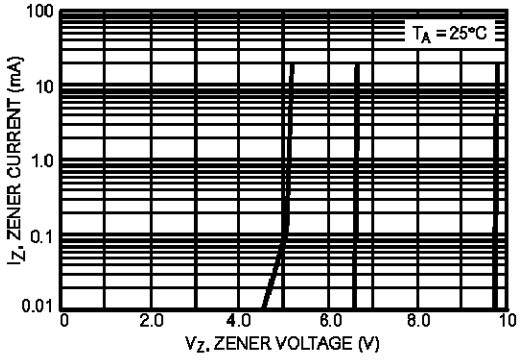
Effect of Zener Voltage on Zener Impedance



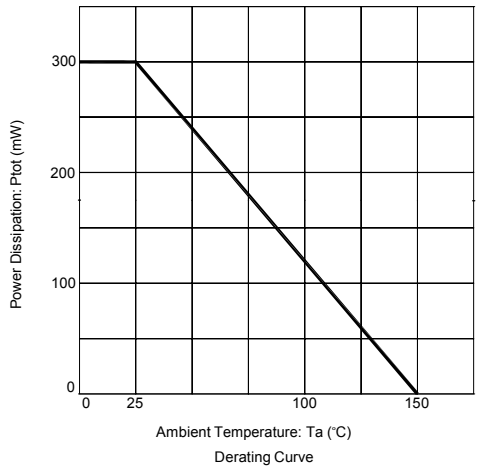
Typical Forward Voltage



Typical Leakage Current



. Zener Voltage versus Zener Current (V_Z Up to 9 V)



Derating Curve