



MMSZS5221B THRU MMSZS5259B

SILICON ZENER DIODES

REVERSE VOLTAGE: 2.4 TO 39 VOLTS

POWER DISSIPATION: 500 mWATTS

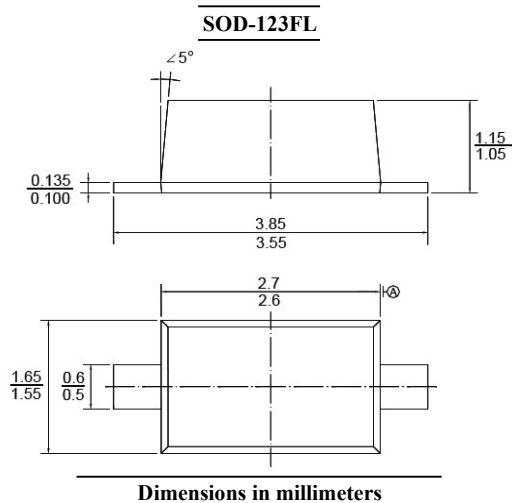
FEATURES

- Planar Die construction
- Zener Voltages from 2.4V - 39V and 500mW Power Dissipation
- Suffix "H" indicates Halogen-free parts, ex. MMSZS5221BH

MECHANICAL DATA

Case : SOD-123FL

Mounting Position: Any



Maximum Ratings @ 25 °C Unless Otherwise Specified

Tamb = 25 °C, unless otherwise specified

Parameter	Symbol	Value	Unit
Power Dissipation	P_{tot}	500	mW
Maximum Forward Voltage@ $I_F=10mA$	V_F	0.9	V
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	350	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C



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Electrical Characteristics

Tamb = 25 °C, unless otherwise specified

Type	Zener Voltage Range ¹⁾			Test Current at I _{ZT}	Dynamic Impedance ²⁾				Reverse Current	
	V _{ZT}				Z _{ZT}	I _{ZT}	Z _{ZK}	at I _{ZK}	I _R	at V _R
	Min.(V)	Nom.(V)	Max.(V)	mA	Max.(Ω)	mA	Max.(Ω)	mA	Max.(μA)	V
MMSZS5221B	2.28	2.4	2.52	20	30	20	1200	0.25	100	1.0
MMSZS5223B	2.57	2.7	2.84	20	30	20	1300	0.25	75	1.0
MMSZS5225B	2.85	3.0	3.15	20	29	20	1600	0.25	50	1.0
MMSZS5226B	3.14	3.3	3.47	20	28	20	1600	0.25	25	1.0
MMSZS5227B	3.42	3.6	3.78	20	24	20	1700	0.25	15	1.0
MMSZS5228B	3.71	3.9	4.10	20	23	20	1900	0.25	10	1.0
MMSZS5229B	4.09	4.3	4.52	20	22	20	2000	0.25	5.0	1.0
MMSZS5230B	4.47	4.7	4.94	20	19	20	1900	0.25	5.0	2.0
MMSZS5231B	4.85	5.1	5.36	20	17	20	1600	0.25	5.0	2.0
MMSZS5232B	5.32	5.6	5.88	20	11	20	1600	0.25	5.0	3.0
MMSZS5234B	5.89	6.2	6.51	20	7	20	1000	0.25	5.0	4.0
MMSZS5235B	6.46	6.8	7.14	20	5	20	750	0.25	3.0	5.0
MMSZS5236B	7.13	7.5	7.88	20	6	20	500	0.25	3.0	6.0
MMSZS5237B	7.79	8.2	8.61	20	8	20	500	0.25	3.0	6.5
MMSZS5239B	8.65	9.1	9.56	20	10	20	600	0.25	3.0	7.0
MMSZS5240B	9.50	10.0	10.50	20	17	20	600	0.25	3.0	8.0
MMSZS5241B	10.45	11.0	11.55	20	22	20	600	0.25	2.0	8.4
MMSZS5242B	11.40	12.0	12.60	20	30	20	600	0.25	1.0	9.1
MMSZS5243B	12.35	13.0	13.65	9.5	13	9.5	600	0.25	0.5	9.9
MMSZS5245B	14.25	15.0	15.75	8.5	16	8.5	600	0.25	0.1	11.0
MMSZS5246B	15.20	16.0	16.80	7.8	17	7.8	600	0.25	0.1	12.0
MMSZS5247B	16.15	17.0	17.85	7.4	19	7.4	600	0.25	0.1	13.0
MMSZS5248B	17.10	18.0	18.90	7.0	21	7.0	600	0.25	0.1	14.0
MMSZS5249B	18.05	19.0	19.95	6.6	23	6.6	600	0.25	0.1	14.0
MMSZS5250B	19.00	20.0	21.00	6.2	25	6.2	600	0.25	0.1	15.0
MMSZS5251B	20.90	22.0	23.10	5.6	29	5.6	600	0.25	0.1	17.0
MMSZS5252B	22.80	24.0	25.20	5.2	33	5.2	600	0.25	0.1	18.0
MMSZS5253B	23.75	25.0	26.25	5.0	35	5.0	600	0.25	0.1	19.0
MMSZS5254B	25.65	27.0	28.35	4.6	41	4.6	600	0.25	0.1	21.0
MMSZS5256B	28.50	30.0	31.50	4.2	49	4.2	600	0.25	0.1	23.0
MMSZS5257B	31.35	33.0	34.65	3.8	58	3.8	700	0.25	0.1	25.0
MMSZS5258B	34.20	36.0	37.80	3.4	70	3.4	700	0.25	0.1	27.0
MMSZS5259B	37.05	39.0	40.95	3.2	80	3.2	800	0.25	0.1	30.0

NOTES:

1) V_{ZT} is tested with pulses (20 ms)

2) Z_{ZT} and Z_{ZK} are measured by dividing the AC voltage drop across the device by the AC current applied. The specified limits are for I_{Z(AC)} = 0.1 I_{Z(DC)} with the AC frequency = 1 KHz



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RATINGS AND CHARACTERISTIC CURVES

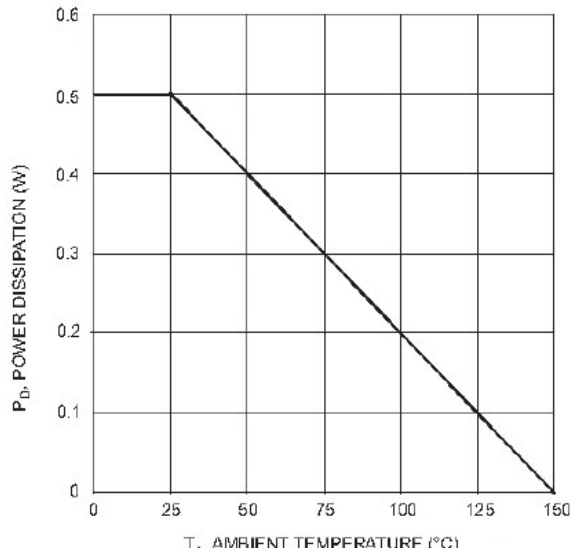


Fig. 1 Power Dissipation vs Ambient Temperature

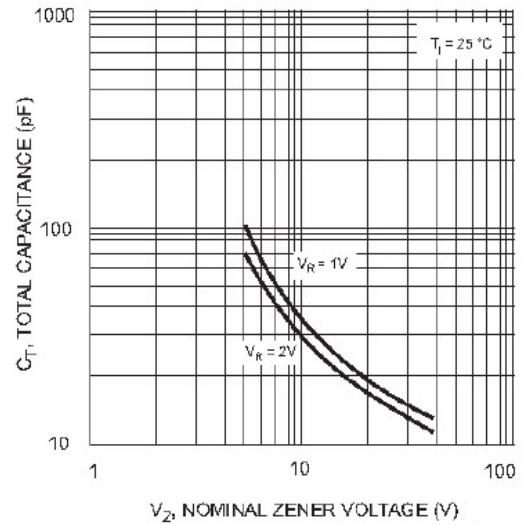


Fig. 2 Total Capacitance vs Nominal Zener Voltage

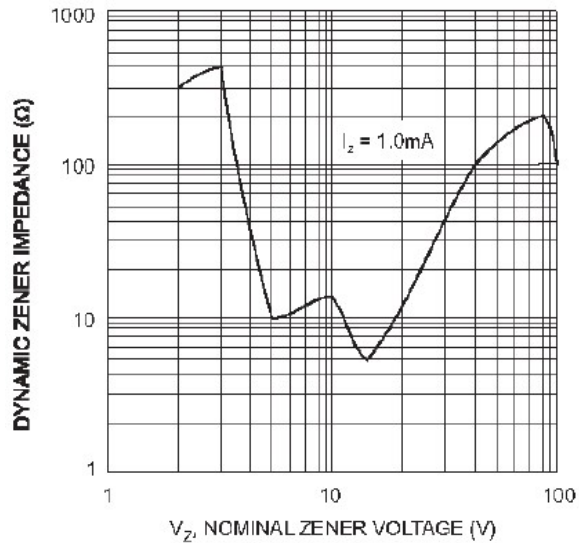


Fig. 3 Zener Voltage vs. Zener Impedance

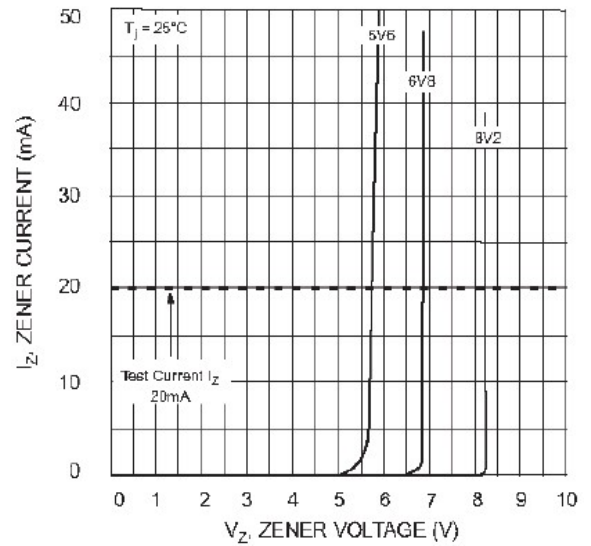


Fig. 4 Zener Breakdown Characteristics



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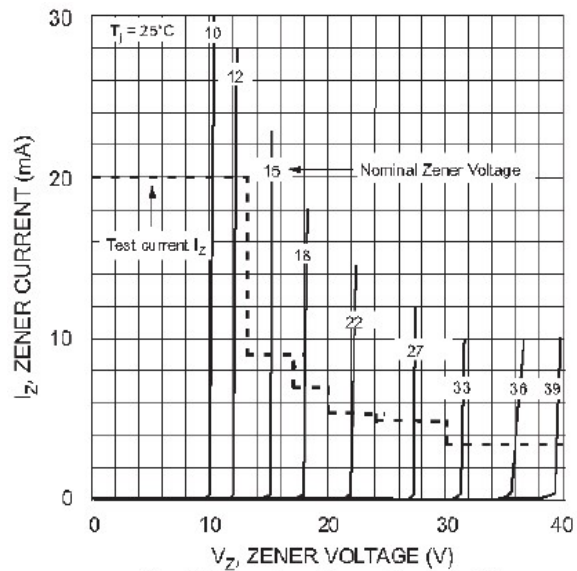


Fig. 5 Zener Breakdown Characteristics