

MM1Z5221B - MM1Z5268B

ZENER DIODES

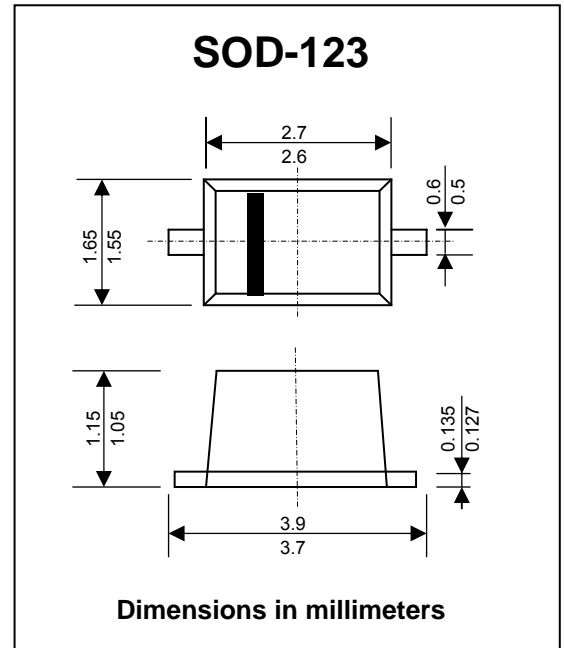
V_Z : 2.4 to 82 V
 P_D : 500 mW

FEATURES :

- * Total Power Dissipation 500 mW
- * Small plastic package suitable for surface mounted design
- * Tolerance approximately $\pm 5\%$
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOD-123
- * Weight : 0.01 gram (approximately)



Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Power Dissipation at $T_L = 75\text{ °C}$	P_D	500	mW
Derated above 75 °C		6.7	mW/°C
Forward Voltage at $I_F = 10\text{ mA}$	V_F	0.9	V
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	340	°C/W
Thermal Resistance Junction to Lead	$R_{\theta JL}$	150	°C/W
Junction Temperature Range	T_J	-55 to + 150	°C
Storage Temperature Range	T_{STG}	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (Ta=25 °C unless otherwise noted)

Type No.	Marking	Zener Voltage ^(1,2)			Test Current	Maximum Zener Impedance ⁽³⁾		Test Current	Maximum Reverse Leakage Current	
		V_Z @ I_{ZT} (V)				I_{ZT}	Z_{ZT} @ I_{ZT}		Z_{ZK} @ I_{ZK}	I_{ZK}
		Min.	Nom.	Max.	(mA)	(Ω)	(Ω)	(mA)	(μ A)	(V)
MM1Z5221B	A4	2.28	2.4	2.52	20	30	1200	0.25	100	1.0
MM1Z5222B	AB	2.38	2.5	2.63	20	30	1250	0.25	100	1.0
MM1Z5223B	B4	2.57	2.7	2.84	20	30	1300	0.25	75	1.0
MM1Z5224B	AC	2.66	2.8	2.94	20	30	1400	0.25	75	1.0
MM1Z5225B	C4	2.85	3.0	3.15	20	29	1600	0.25	50	1.0
MM1Z5226B	D4	3.14	3.3	3.47	20	28	1600	0.25	25	1.0
MM1Z5227B	E4	3.42	3.6	3.78	20	24	1700	0.25	15	1.0
MM1Z5228B	F4	3.71	3.9	4.10	20	23	1900	0.25	10	1.0
MM1Z5229B	H4	4.09	4.3	4.52	20	22	2000	0.25	5	1.0
MM1Z5230B	J4	4.47	4.7	4.94	20	19	1900	0.25	5	2.0
MM1Z5231B	K4	4.85	5.1	5.36	20	17	1600	0.25	5	2.0
MM1Z5232B	M4	5.32	5.6	5.88	20	11	1600	0.25	5	3.0
MM1Z5233B	AD	5.70	6.0	6.30	20	7	1600	0.25	5	3.5
MM1Z5234B	N4	5.89	6.2	6.51	20	7	1000	0.25	5	4.0
MM1Z5235B	P4	6.46	6.8	7.14	20	5	750	0.25	3	5.0
MM1Z5236B	R4	7.13	7.5	7.88	20	6	500	0.25	3	6.0
MM1Z5237B	X4	7.79	8.2	8.61	20	8	500	0.25	3	6.5
MM1Z5238B	AE	8.27	8.7	9.14	20	8	600	0.25	3	6.5
MM1Z5239B	Y4	8.65	9.1	9.56	20	10	600	0.25	3	7.0
MM1Z5240B	Z4	9.50	10	10.50	20	17	600	0.25	3	8.0
MM1Z5241B	A5	10.45	11	11.50	20	22	600	0.25	2	8.4
MM1Z5242B	B5	11.40	12	12.60	20	30	600	0.25	1	9.1
MM1Z5243B	C5	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MM1Z5245B	D5	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MM1Z5246B	E5	15.20	16	16.80	7.8	17	600	0.25	0.1	12
MM1Z5247B	AH	16.15	17	17.85	7.4	19	600	0.25	0.1	13
MM1Z5248B	F5	17.10	18	18.90	7.0	21	600	0.25	0.1	14
MM1Z5249B	K9	18.05	19	19.95	6.6	23	600	0.25	0.1	14
MM1Z5250B	H5	19.00	20	21.00	6.2	25	600	0.25	0.1	15
MM1Z5251B	J5	20.90	22	23.10	5.6	29	600	0.25	0.1	17
MM1Z5252B	K5	22.80	24	25.20	5.2	33	600	0.25	0.1	18
MM1Z5253B	M9	23.75	25	26.25	5.0	35	600	0.25	0.1	19
MM1Z5254B	M5	25.65	27	28.35	4.6	41	600	0.25	0.1	21
MM1Z5255B	AJ	26.60	28	29.40	4.5	44	600	0.25	0.1	21
MM1Z5256B	N5	28.50	30	31.50	4.2	49	600	0.25	0.1	23
MM1Z5257B	P5	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MM1Z5258B	R5	34.20	36	37.80	3.4	70	700	0.25	0.1	27
MM1Z5259B	X5	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MM1Z5260B	Y5	40.85	43	45.15	3.0	93	900	0.25	0.1	33
MM1Z5261B	Z5	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MM1Z5262B	A6	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
MM1Z5263B	B6	53.20	56	58.80	2.2	150	1300	0.25	0.1	43
MM1Z5264B	AK	57.00	60	63.00	2.1	170	1400	0.25	0.1	46
MM1Z5265B	C6	58.90	62	65.10	2.0	185	1400	0.25	0.1	47
MM1Z5266B	D6	64.60	68	71.40	1.8	230	1600	0.25	0.1	52
MM1Z5267B	E6	71.25	75	78.75	1.7	270	1700	0.25	0.1	56
MM1Z5268B	F6	77.90	82	86.10	1.5	330	2000	0.25	0.1	62

Notes :

- (1) V_Z is tested with pulses (20 ms)
- (2) Nominal Zener voltage is measured with the device junction in thermal equilibrium at $T_L = 30 \text{ }^\circ\text{C} \pm 1 \text{ }^\circ\text{C}$
- (3) Z_{ZT} and Z_{ZK} are measured by diode 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