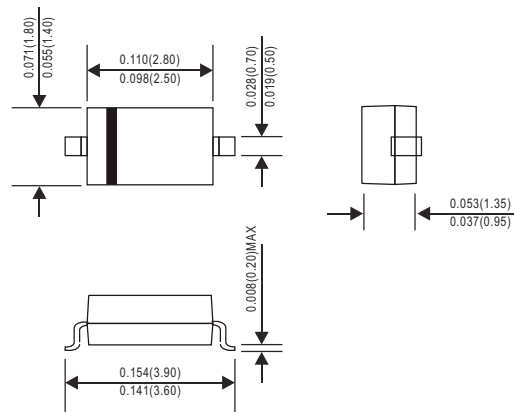
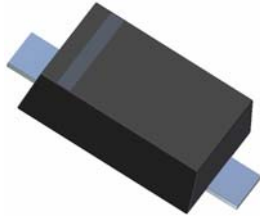


MMSZ5221B THRU MMSZ5262B

SURFACE MOUNT ZENER TYPE

SOD-123F



Dimensions in inches and (millimeters)

FEATURES

- Up to 500mW power dissipation.
- Silicon epitaxial planar chip structure.
- Wide zener reverse voltage range 2.4V to 75V.
- Very tiny package size for high density applications.
- Ideally suited for automated assembly processes.
- Lead-free parts meet environmental standards of MIL-STD-19500 / 228

MECHANICAL DATA

- Epoxy: UL94-VO rated flame retardant
- Case : Molded plastic, SOD-123F
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.010gram

MAXIMUM RATINGS (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100 \text{ mADC}$	V_F			1.00	V
Power Dissipation		P_D			500	mW
Forward surge current	8.3ms single halfsine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			4000	mA
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$
Operating temperature		T_J	-55		+150	$^{\circ}\text{C}$

MMSZ5221B THRU MMSZ5262B

SURFACE MOUNT ZENER TYPE



ELECTRICAL CHARACTERISTICS (at T_A=25°C unless otherwise noted)

Part No.	Marking code	Zener voltage			Test current	Zener impedance			Leakage current	
		V _Z @ I _{ZT} (Volts)			I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min	Nom	Max	mA	OHMs	OHMs	mA	uA	Volts
MMSZ5221B	C1	2.28	2.4	2.52	20.0	30	1200	0.25	100	1.0
MMSZ5222B	C2	2.38	2.5	2.63	20.0	30	1250	0.25	100	1.0
MMSZ5223B	C3	2.57	2.7	2.84	20.0	30	1300	0.25	75	1.0
MMSZ5225B	C5	3.85	3.0	3.15	20.0	30	1600	0.25	50	1.0
MMSZ5226B	D1	3.14	3.3	3.47	20.0	28	1600	0.25	25	1.0
MMSZ5227B	D2	3.42	3.6	3.78	20.0	24	1700	0.25	15	1.0
MMSZ5228B	D3	3.71	3.9	4.10	20.0	23	1900	0.25	10	1.0
MMSZ5229B	D4	4.09	4.3	4.52	20.0	22	2000	0.25	5.0	1.0
MMSZ5230B	D5	4.47	4.7	4.94	20.0	19	1900	0.25	5.0	2.0
MMSZ5231B	E1	4.85	5.1	5.36	20.0	17	1600	0.25	5.0	2.0
MMSZ5232B	E2	5.32	5.6	5.88	20.0	11	1600	0.25	5.0	3.0
MMSZ5234B	E4	5.89	6.2	6.51	20.0	7	1000	0.25	5.0	4.0
MMSZ5235B	E5	6.46	6.8	7.14	20.0	5	750	0.25	3.0	5.0
MMSZ5236B	F1	7.13	7.5	7.88	20.0	6	500	0.25	3.0	6.0
MMSZ5237B	F2	7.79	8.2	8.61	20.0	8	500	0.25	3.0	6.0
MMSZ5238B	F3	8.27	8.7	9.14	20.0	8	600	0.25	3.0	6.5
MMSZ5239B	F4	8.65	9.1	9.56	20.0	10	600	0.25	3.0	6.5
MMSZ5240B	F5	9.50	10	10.50	20.0	17	600	0.25	3.0	8.0
MMSZ5241B	H1	10.45	11	11.55	20.0	22	600	0.25	2.0	8.4
MMSZ5242B	H2	11.40	12	12.60	20.0	30	600	0.25	1.0	9.1
MMSZ5243B	H3	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ5244B	H4	13.30	14	14.70	9.0	15	600	0.25	0.1	10.5
MMSZ5245B	H5	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MMSZ5246B	J1	15.20	16	16.80	7.8	17	600	0.25	0.1	12
MMSZ5247B	J2	16.15	17	17.85	7.5	19	600	0.25	0.1	13
MMSZ5248B	J3	17.10	18	18.90	7.0	21	600	0.25	0.1	14
MMSZ5250B	J5	19.00	20	21.00	6.2	25	600	0.25	0.1	15
MMSZ5251B	K1	20.90	22	23.10	5.6	29	600	0.25	0.1	17
MMSZ5252B	K2	22.80	24	25.20	5.2	33	600	0.25	0.1	18
MMSZ5254B	K4	25.65	27	28.35	5.0	41	600	0.25	0.1	21
MMSZ5255B	K5	26.60	28	29.40	4.5	44	600	0.25	0.1	21
MMSZ5256B	M1	28.50	30	31.50	4.2	49	600	0.25	0.1	23
MMSZ5257B	M2	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MMSZ5258B	M3	34.20	36	37.80	3.4	70	700	0.25	0.1	27
MMSZ5259B	M4	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MMSZ5260B	M5	40.85	43	45.15	3.0	93	900	0.25	0.1	33
MMSZ5261B	N1	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MMSZ5262B	N2	48.45	51	53.55	2.5	125	1100	0.25	0.1	39

Note : 5% tolerance of Zener voltage

MMSZ5221B THRU MMSZ5262B

SURFACE MOUNT ZENER TYPE

Rating and characteristic curves (MMSZ5221 THRU MMSZ5262)

FIG. 1-TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

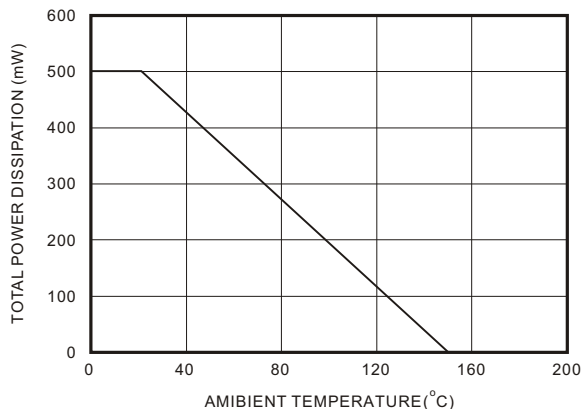


FIG. 2-TYPICAL CHANGE OF WORKING VOLTAGE UNDER OPERATING CONDITIONS AT $T_A = 25^\circ\text{C}$

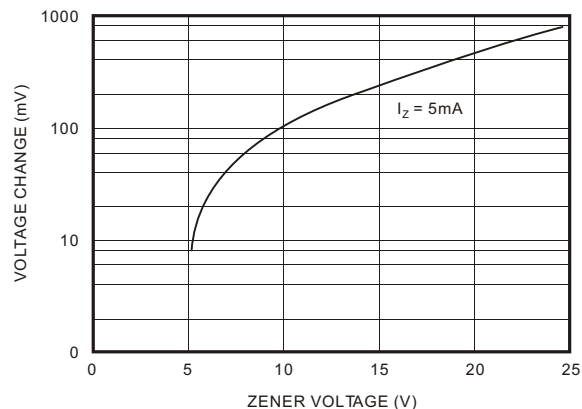


FIG. 3-TYPICAL CHANGE OF WORKING VOLTAGE VS. JUNCTION TEMPERATURE

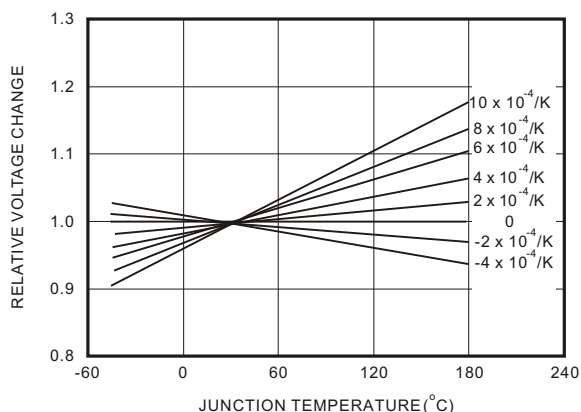


FIG. 4-TEMPERATURE COEFFICIENT OF V_Z VS. Z -VOLTAGE

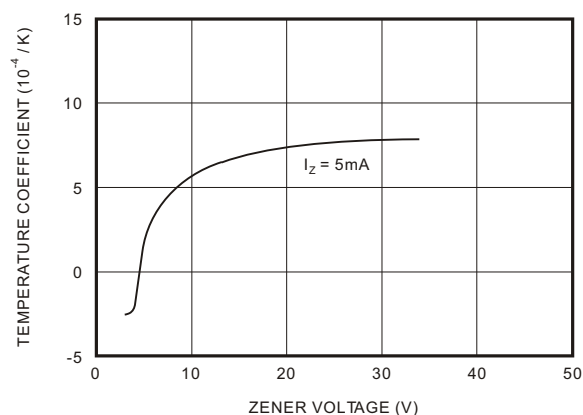
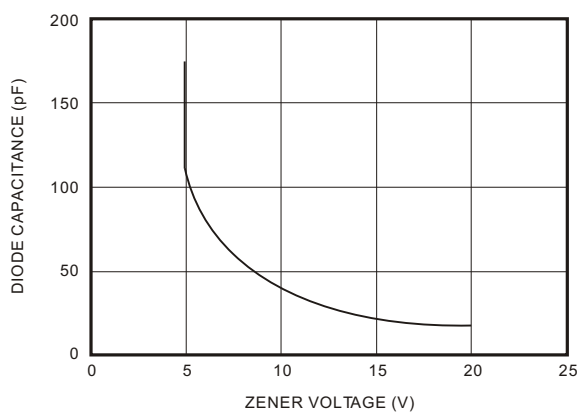


FIG. 5-DIODE CAPACITANCE VS. Z -VOLTAGE



MMSZ5221B THRU MMSZ5262B

SURFACE MOUNT ZENER TYPE

Rating and characteristic curves (MMSZ5221 THRU MMSZ5262)

FIG. 6-FORWARD CURRENT VS. FORWARD VOLTAGE

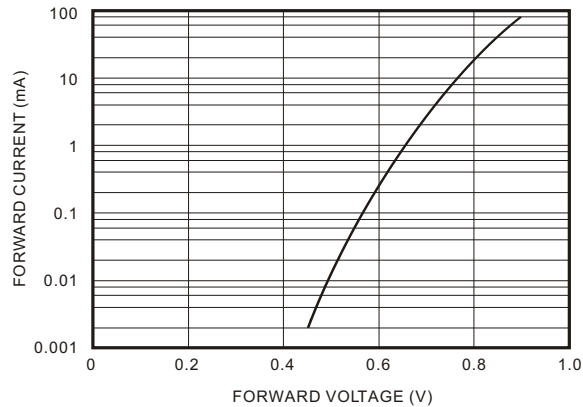


FIG. 7-Z-CURRENT VS. Z-VOLTAGE

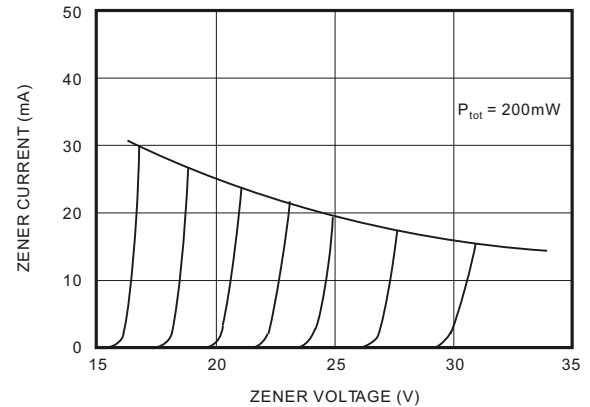


FIG. 8-Z-CURRENT VS. Z-VOLTAGE

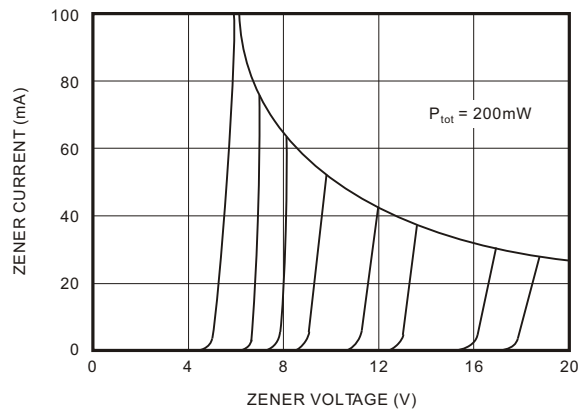


FIG. 9-DIFFERENTIAL Z-RESISTANCE VS. Z-VOLTAGE

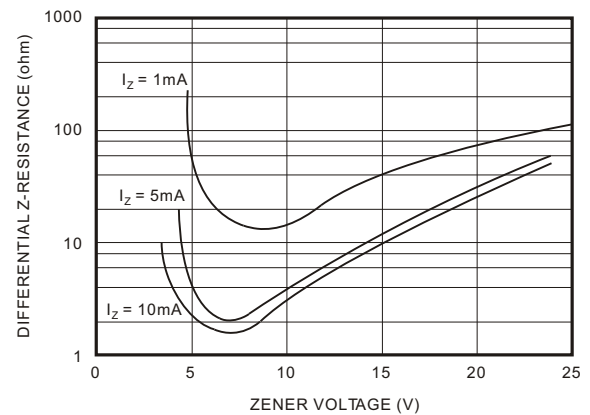


FIG. 10-THERMAL RESPONSE

