

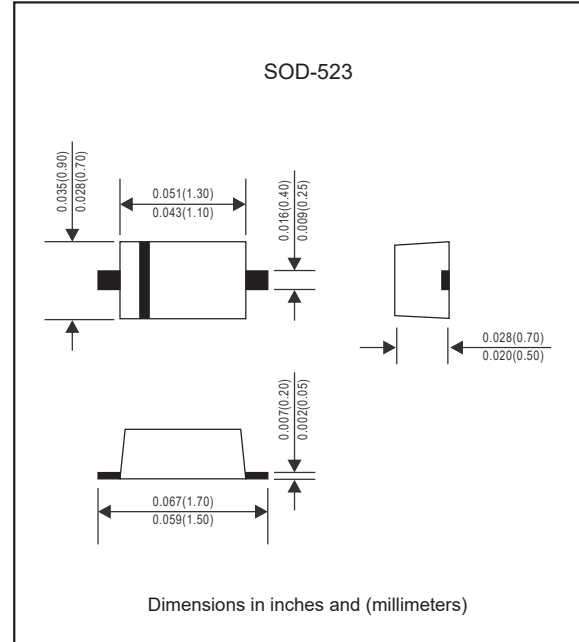
Features

- Silicon epitaxial planar chip structure
- Wide zener reverse voltage range 2.4V to 75V
- Tiny package size for high density applications
- Ideally suited for automated assembly processes
- Lead-free parts meet RoHS requirements
- Compliant to Halogen-free.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-523
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package outline



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

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Total device dissipation	$T_A = 25^{\circ}\text{C}$	P_D			150	mW
Operating junction temperature range		T_J	-55		+150	$^{\circ}\text{C}$
Storage temperature range		T_{STG}	-55		+150	$^{\circ}\text{C}$

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}				I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	V _R
		Min.(V)	Nom.(V)	Max.(V)		mA	(Ω)Max	(Ω)Max	mA	(uA)Max	Volts
MM5Z2V4B	Z1./05	2.35	2.4	2.45	5	100	600	1.0	50	1.0	
MM5Z2V7B	Z2./15	2.65	2.7	2.75	5	100	600	1.0	20	1.0	
MM5Z3V0B	Z3./25	2.94	3.0	3.06	5	100	600	1.0	10	1.0	
MM5Z3V3B	Z4./35	3.23	3.3	3.37	5	95	600	1.0	5	1.0	
MM5Z3V6B	Z5./45	3.53	3.6	3.67	5	90	600	1.0	5	1.0	
MM5Z3V9B	Z6./+5	3.82	3.9	3.98	5	90	600	1.0	3	1.0	
MM5Z4V3B	Z7./65	4.21	4.3	4.39	5	90	600	1.0	3	1.0	
MM5Z4V7B	X1./75	4.61	4.7	4.79	5	80	500	1.0	3	2.0	
MM5Z5V1B	Z22/85	5.00	5.1	5.20	5	60	480	1.0	2	2.0	
MM5Z5V6B	Z23/95	5.49	5.6	5.71	5	40	400	1.0	1	2.0	
MM5Z6V2B	Z24/A5	6.08	6.2	6.32	5	10	150	1.0	3	4.0	
MM5Z6V8B	Z25/B5	6.66	6.8	6.94	5	15	80	1.0	2	4.0	
MM5Z7V5B	Z26/C5	7.35	7.5	7.65	5	15	80	1.0	1	5.0	
MM5Z8V2B	Z27/D5	8.04	8.2	8.36	5	15	80	1.0	0.7	5.0	
MM5Z9V1B	Z28/E5	8.92	9.1	9.28	5	15	100	1.0	0.5	6.0	
MM5Z10VB	Z29/F5	9.80	10	10.20	5	20	150	1.0	0.2	7.0	
MM5Z11VB	2Y1/G5	10.78	11	11.22	5	20	150	1.0	0.1	8.0	
MM5Z12VB	2Y2/H5	11.76	12	12.24	5	25	150	1.0	0.1	8.0	
MM5Z13VB	2Y3/J5	12.74	13	13.26	5	30	170	1.0	0.1	8.0	
MM5Z15VB	2Y4/K5	14.70	15	15.30	5	30	200	1.0	0.1	10.5	
MM5Z16VB	2Y5/L5	15.68	16	16.32	5	40	200	1.0	0.1	11.2	
MM5Z18VB	2Y6/M5	17.64	18	18.36	5	45	225	1.0	0.1	12.6	
MM5Z20VB	2Y7/N5	19.60	20	20.40	5	55	225	1.0	0.1	14.0	
MM5Z22VB	W8./P5	21.56	22	22.44	5	55	250	1.0	0.1	15.4	
MM5Z24VB	W9./R5	23.52	24	24.48	5	70	250	1.0	0.1	16.8	
MM5Z27VB	Y1./S5	26.46	27	27.54	2	80	300	0.5	0.1	18.9	
MM5Z30VB	Y2./T5	29.40	30	30.60	2	80	300	0.5	0.1	21.0	
MM5Z33VB	Y3./U5	32.34	33	33.66	2	80	325	0.5	0.1	23.0	
MM5Z36VB	Y4./V5	35.28	36	36.72	2	90	350	0.5	0.1	25.2	
MM5Z39VB	Y5./X5	38.22	39	39.78	2	130	350	0.5	0.1	27.3	
MM5Z43VB	Y6./Y5	42.14	43	43.86	2	150	353	0.5	0.1	29.4	
MM5Z47VB	V1./Z5	45.83	47	48.17	2	170	1000	0.5	0.1	33.0	
MM5Z51VB	V2./-5	49.73	51	52.27	2	180	1300	0.5	0.1	35.7	
MM5Z56VB	V3./=5	54.60	56	57.40	2	200	1400	0.5	0.1	39.2	
MM5Z62VB	V4./≠5	60.45	62	63.55	2	225	1400	0.5	0.1	43.4	
MM5Z68VB	V5./>5	66.30	68	69.70	2	240	1600	0.5	0.1	47.6	
MM5Z75VB	V6./<5	73.13	75	76.87	2	265	1700	0.5	0.1	52.5	

Rating and characteristic curves (MM5Z2V4B THRU MM5Z75VB)

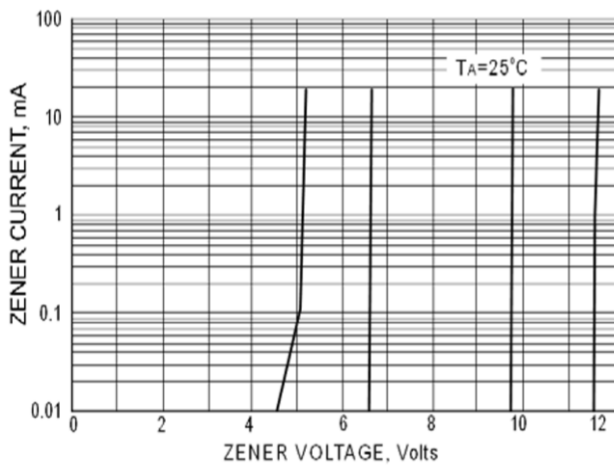


Figure 1. Zener Break Down Characteristic

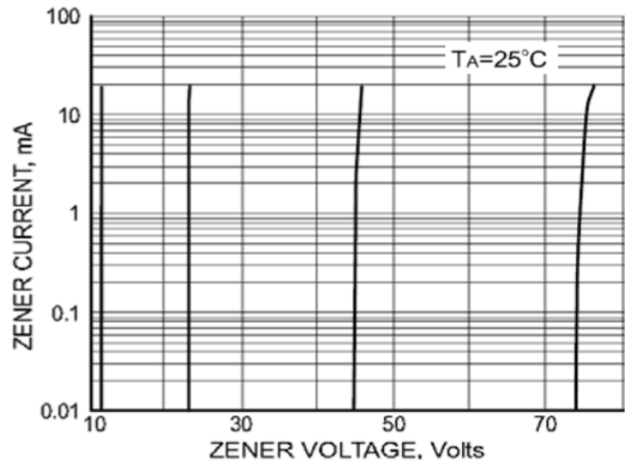


Figure 2. Zener Break Down Characteristic

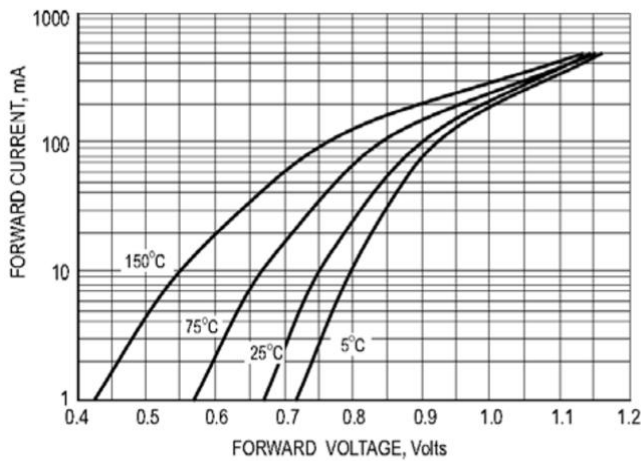


Figure 3. Typical Forward Voltage

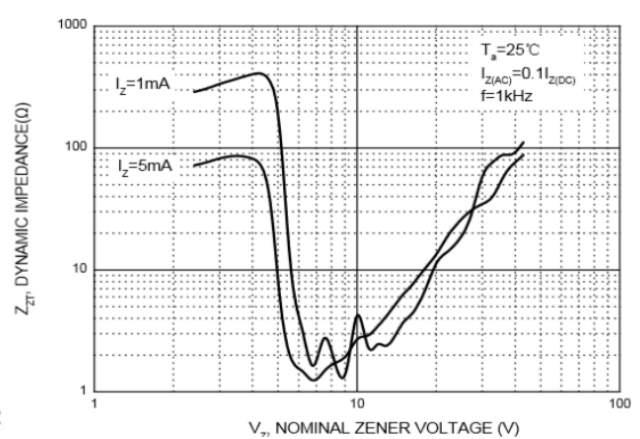


Figure 4. Effect of Zener Voltage on Zener Impedance

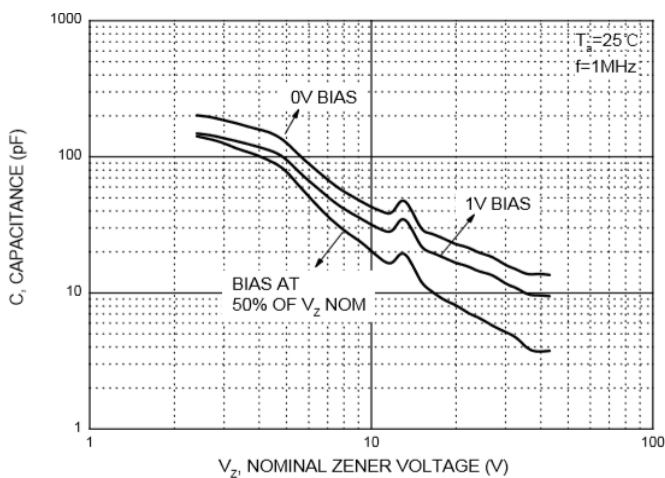


Figure 5. Typical Capacitance

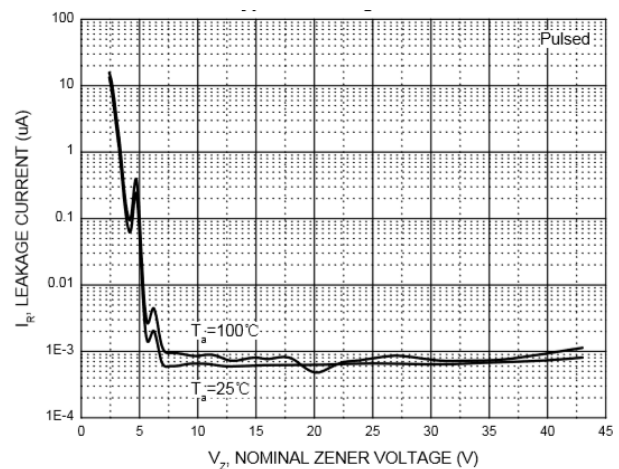
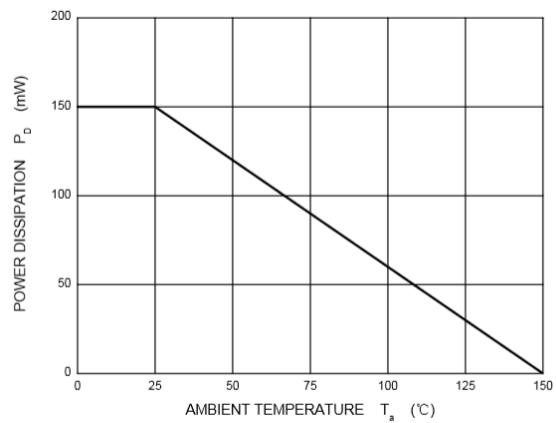


Figure 6. Typical Leakage Current

Rating and characteristic curves (MM5Z2V4B THRU MM5Z75VB)



Power Derating Curve

Figure 7. Power Derating Curve



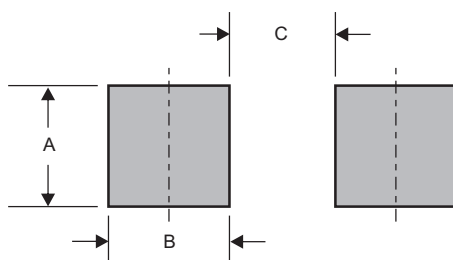
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Month code

Type number	Marking
MM5Z Series	Page2

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-523	0.032 (0.80)	0.024 (0.60)	0.044 (1.10)