

VCZ2V40W5MD5F through VCZ75V0W5MD5F Series

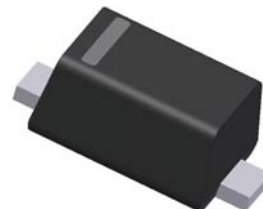
500mW SOD-523

Absolute Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	500	mW
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_{OPR}	Operating Temperature Range	-55 to +150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the diode may be impaired.

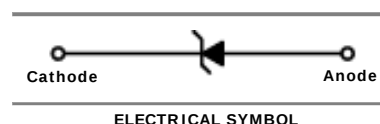
Green Product



SOD-523 Flat Lead

Specification Features:

- Wide Zener Voltage Range Selection, 2.0V to 75V
- Flat Lead SOD-523 Small Outline Plastic Package
- Extremely Small SOD-523 Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Terminal Finish
- Band Indicates Cathode



Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
		Min	Nom	Max						
VCZ2V40W5MD5F	50	2.2	2.4	2.6	5	100	1	1000	50	1
VCZ2V70W5MD5F	51	2.5	2.7	2.9	5	100	1	1000	20	1
VCZ3V0W5MD5F	52	2.8	3.0	3.2	5	100	1	1000	10	1
VCZ3V30W5MD5F	53	3.1	3.3	3.5	5	95	1	1000	5	1
VCZ3V60W5MD5F	54	3.4	3.6	3.8	5	90	1	1000	5	1
VCZ3V90W5MD5F	55	3.7	3.9	4.1	5	90	1	1000	3	1
VCZ4V30W5MD5F	56	4.0	4.3	4.6	5	90	1	1000	3	1
VCZ4V70W5MD5F	57	4.4	4.7	5.0	5	80	1	800	3	2
VCZ5V10W5MD5F	58	4.8	5.1	5.4	5	60	1	500	2	2
VCZ5V60W5MD5F	59	5.2	5.6	6.0	5	40	1	200	1	2
VCZ6V20W5MD5F	5A	5.8	6.2	6.6	5	10	1	100	3	4
VCZ6V80W5MD5F	5B	6.4	6.8	7.2	5	15	1	160	2	4
VCZ7V50W5MD5F	5C	7.0	7.5	7.9	5	15	1	160	1	5
VCZ8V20W5MD5F	5D	7.7	8.2	8.7	5	15	1	160	0.7	5
VCZ9V10W5MD5F	5E	8.5	9.1	9.6	5	15	1	160	0.2	7
VCZ10V0W5MD5F	5F	9.4	10	10.6	5	20	1	160	0.1	8
VCZ11V0W5MD5F	5G	10.4	11	11.6	5	20	1	160	0.1	8
VCZ12V0W5MD5F	5H	11.4	12	12.7	5	25	1	80	0.1	8
VCZ13V0W5MD5F	5J	12.4	13	14.1	5	30	1	80	0.1	8
VCZ15V0W5MD5F	5K	14.3	15	15.8	5	30	1	80	0.05	10.5
VCZ16V0W5MD5F	5L	15.3	16	17.1	5	40	1	80	0.05	11.2
VCZ18V0W5MD5F	5M	16.8	18	19.2	5	45	1	80	0.05	12.6
VCZ20V0W5MD5F	5N	18.8	20	21.2	5	55	1	100	0.05	14

Zener Voltage Regulators

Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

Device Type	Device Marking	$V_Z @ I_{ZT}$ (Volts)			I_{ZT} (mA)	$Z_{ZT} @ I_{ZT}$ (Ω) Max	I_{ZK} (mA)	$Z_{ZK} @ I_{ZK}$ (Ω) Max	$I_R @ V_R$ (μA) Max	V_R (Volts)
		Min	Nom	Max						
VCZ22V0W5MD5F	5P	20.8	22	23.3	5	55	1	100	0.05	15.4
VCZ24V0W5MD5F	5R	22.8	24	25.6	5	70	1	120	0.05	16.8
VCZ27V0W5MD5F	5S	25.1	27	28.9	2	80	0.5	300	0.05	18.9
VCZ30V0W5MD5F	5T	28	30	32	2	80	0.5	300	0.05	21
VCZ33V0W5MD5F	5U	31	33	35	2	80	0.5	300	0.05	23.2
VCZ36V0W5MD5F	5V	34	36	38	2	90	0.5	500	0.05	25.2
VCZ39V0W5MD5F	5X	37	39	41	2	130	0.5	500	0.05	27.3
VCZ43V0W5MD5F	5Y	40	43	46	2	150	0.5	500	0.05	30.1
VCZ47V0W5MD5F	5Z	44	47	50	2	170	0.5	500	0.05	32.9
VCZ51V0W5MD5F	5-	48	51	54	2	180	0.5	500	0.05	35.7
VCZ56V0W5MD5F	5=	52	56	60	2	200	0.5	500	0.05	39.2
VCZ62V0W5MD5F	5 $\equiv$	58	62	66	2	215	0.5	500	0.05	43.4
VCZ68V0W5MD5F	5>	64	68	72	2	240	0.5	500	0.05	47.6
VCZ75V0W5MD5F	5<	70	75	79	2	255	0.5	500	0.05	52.5

V_F Forward Voltage = 1 V Maximum @ $I_F = 10$ mA for all types

Notes:

1. The Zener Voltage (V_Z) is tested under pulse condition of 10mS.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.
3. The zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK} .

Rating and Characteristic Curves

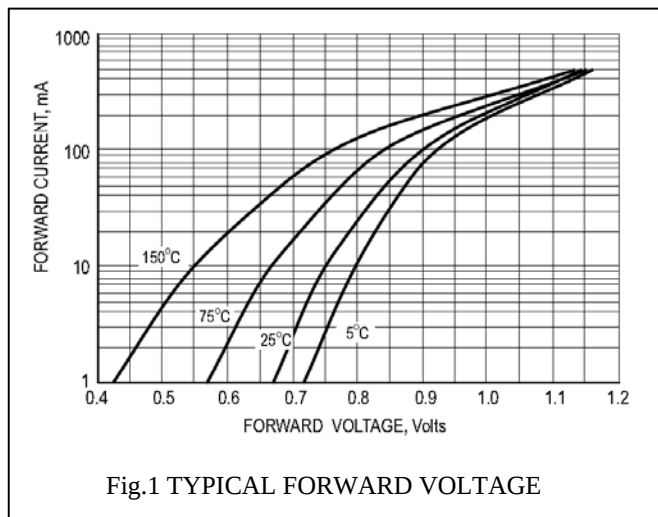


Fig.1 TYPICAL FORWARD VOLTAGE

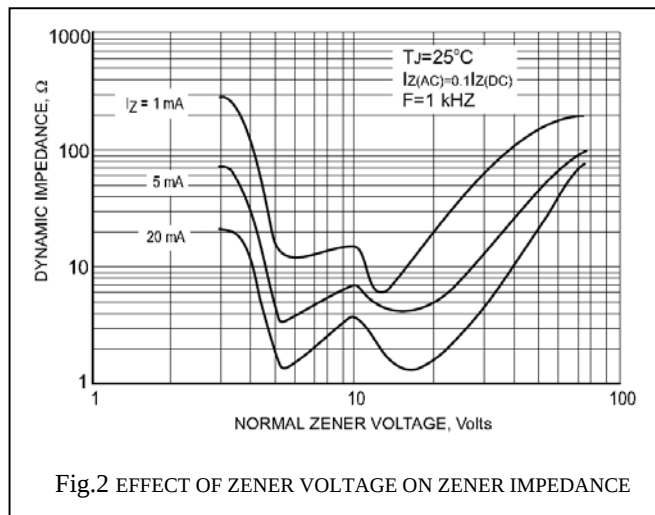


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

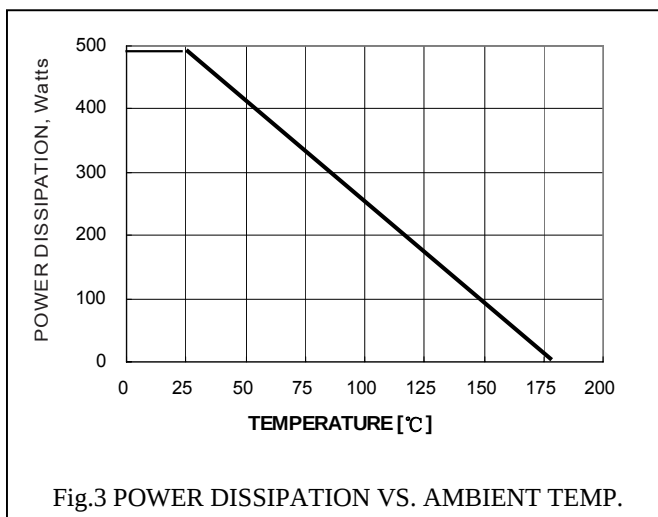


Fig.3 POWER DISSIPATION VS. AMBIENT TEMP.

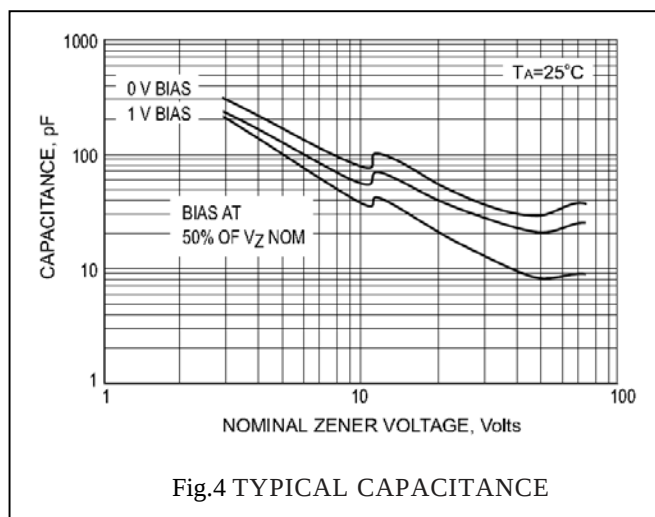


Fig.4 TYPICAL CAPACITANCE

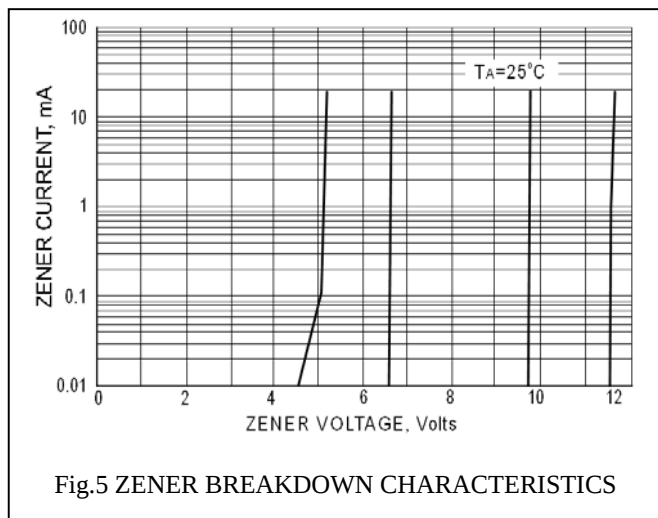


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

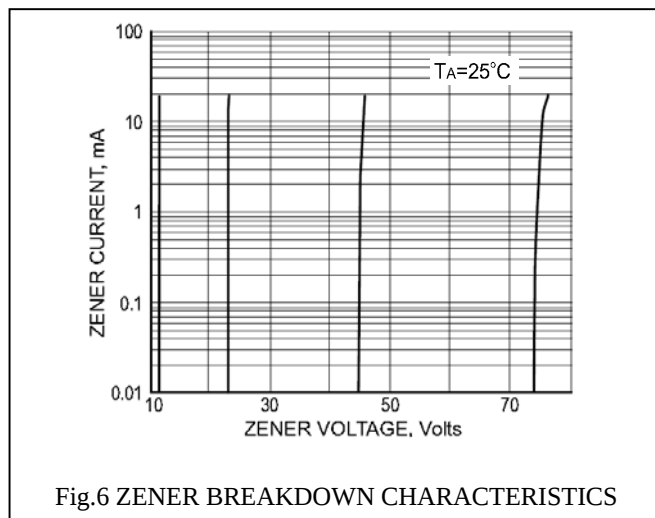
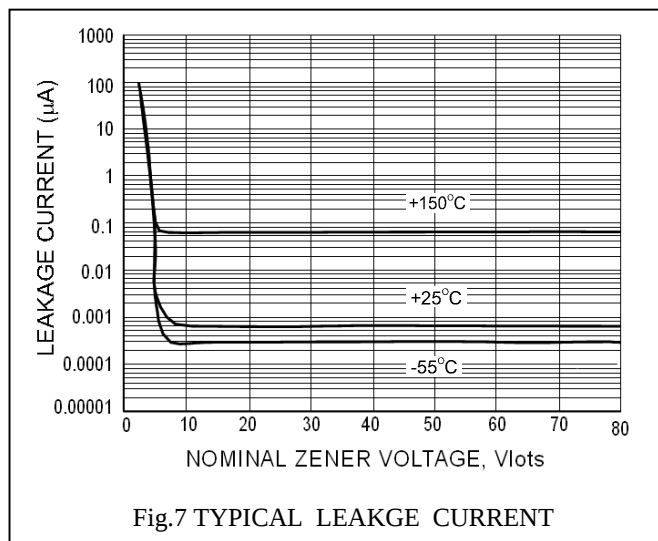
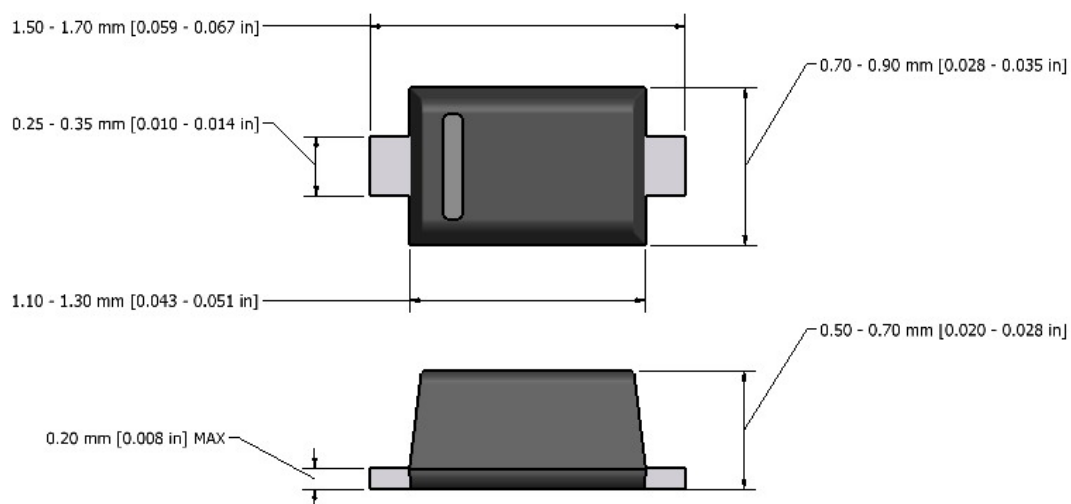


Fig.6 ZENER BREAKDOWN CHARACTERISTICS



Flat Lead SOD-523 Package Outline



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.



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