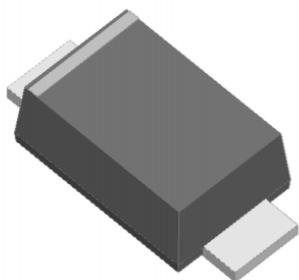


Zener Voltage Regulators



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) Lead Finish
- Band Indicates Cathode

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

Symbol	Parameter	Value	Units
P_D	Power Dissipation	200	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.

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						
MM5Z2V0	5±	1.90	2.0	2.10	5	100	1	564	120	0.5
MM5Z2V2	5⊥	2.09	2.2	2.31	5	100	1	564	120	0.7
MM5Z2V4	50	2.2	2.4	2.6	5	100	1	1000	50	1
MM5Z2V7	51	2.5	2.7	2.9	5	100	1	1000	20	1
MM5Z3V0	52	2.8	3.0	3.2	5	100	1	1000	10	1
MM5Z3V3	53	3.1	3.3	3.5	5	95	1	1000	5	1
MM5Z3V6	54	3.4	3.6	3.8	5	90	1	1000	5	1
MM5Z3V9	55	3.7	3.9	4.1	5	90	1	1000	3	1
MM5Z4V3	56	4.0	4.3	4.6	5	90	1	1000	3	1
MM5Z4V7	57	4.4	4.7	5.0	5	80	1	800	3	2
MM5Z5V1	58	4.8	5.1	5.4	5	60	1	500	2	2
MM5Z5V6	59	5.2	5.6	6.0	5	40	1	200	1	2
MM5Z6V2	5A	5.8	6.2	6.6	5	10	1	100	3	4
MM5Z6V8	5B	6.4	6.8	7.2	5	15	1	160	2	4
MM5Z7V5	5C	7.0	7.5	7.9	5	15	1	160	1	5
MM5Z8V2	5D	7.7	8.2	8.7	5	15	1	160	0.7	5
MM5Z9V1	5E	8.5	9.1	9.6	5	15	1	160	0.2	7
MM5Z10V	5F	9.4	10	10.6	5	20	1	160	0.1	8
MM5Z11V	5G	10.4	11	11.6	5	20	1	160	0.1	8
MM5Z12V	5H	11.4	12	12.7	5	25	1	80	0.1	8
MM5Z13V	5J	12.4	13	14.1	5	30	1	80	0.1	8
MM5Z15V	5K	14.3	15	15.8	5	30	1	80	0.05	10.5
MM5Z16V	5L	15.3	16	17.1	5	40	1	80	0.05	11.2

Electrical Characteristics T_A = 25°C unless otherwise noted

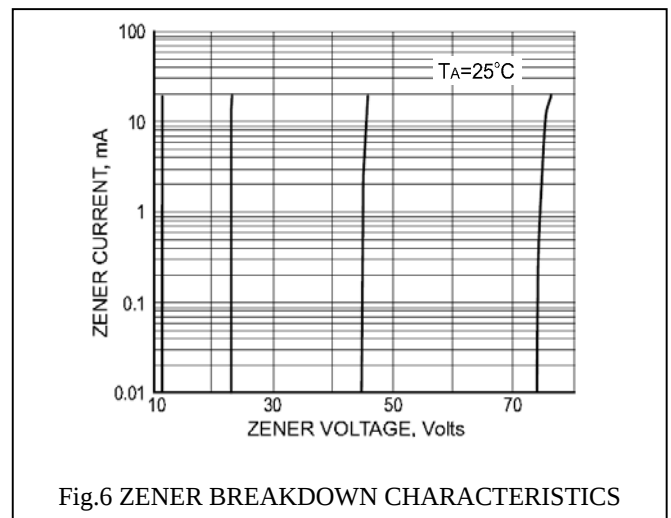
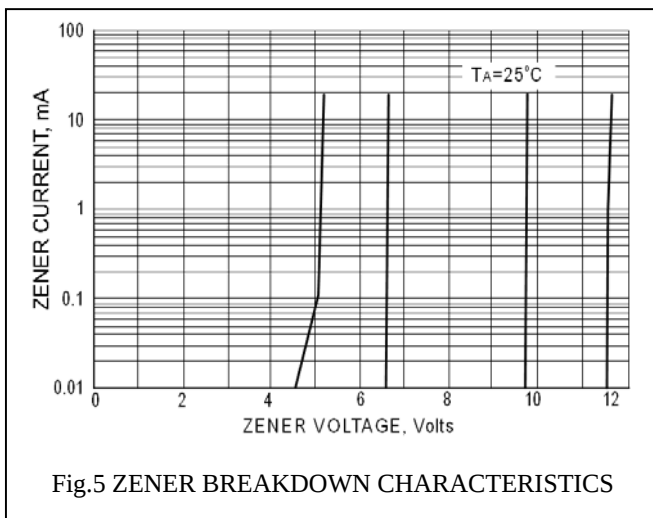
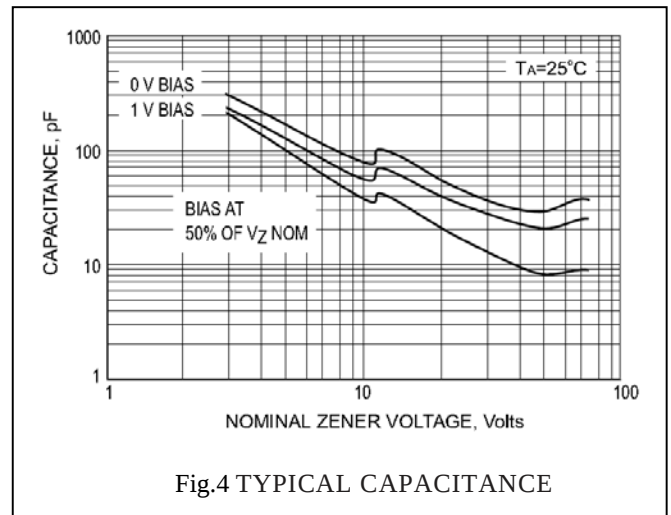
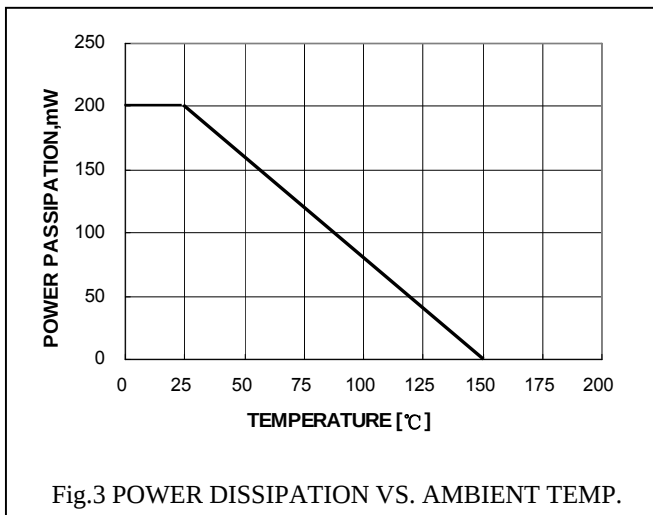
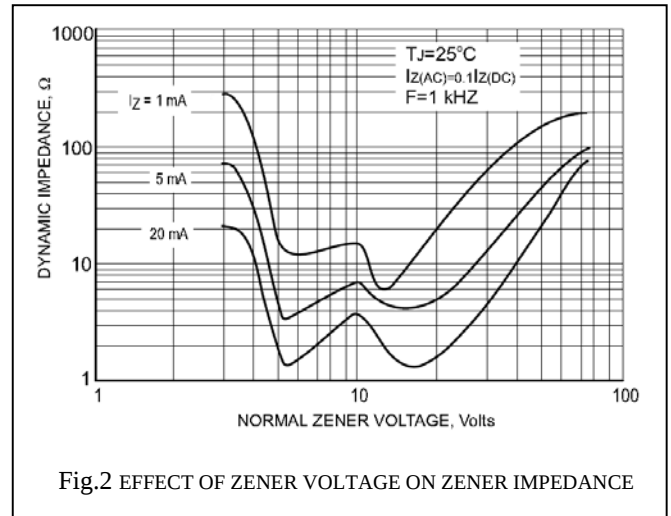
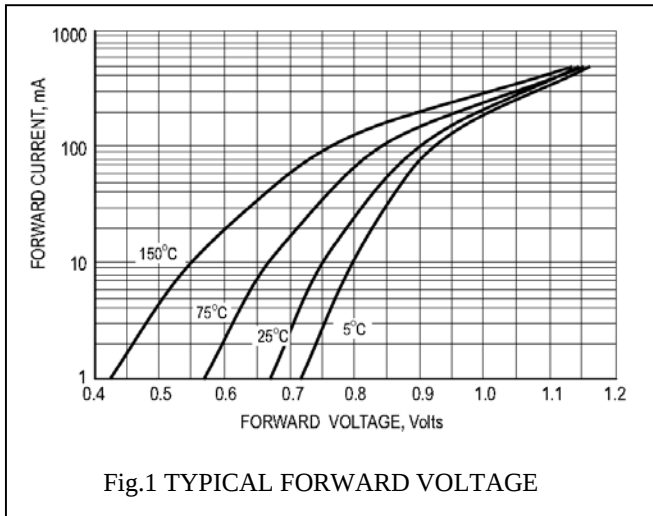
Device Type	Device Marking	V _Z @ I _{ZT} (Volts)			I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω) Max	I _{ZK} (mA)	Z _{ZK} @ I _{ZK} (Ω) Max	I _R @ V _R (μA) Max	V _R (Volts)
		Min	Nom	Max						
MM5Z18V	5M	16.8	18	19.1	5	45	1	80	0.05	12.6
MM5Z20V	5N	18.8	20	21.2	5	55	1	100	0.05	14
MM5Z22V	5P	20.8	22	23.3	5	55	1	100	0.05	15.4
MM5Z24V	5R	22.8	24	25.6	5	70	1	120	0.05	16.8
MM5Z27V	5S	25.1	27	28.9	2	80	0.5	300	0.05	18.9
MM5Z30V	5T	28	30	32	2	80	0.5	300	0.05	21
MM5Z33V	5U	31	33	35	2	80	0.5	300	0.05	23.2
MM5Z36V	5V	34	36	38	2	90	0.5	500	0.05	25.2
MM5Z39V	5X	37	39	41	2	130	0.5	500	0.05	27.3
MM5Z43V	5Y	40	43	46	2	150	0.5	500	0.05	30.1
MM5Z47V	5Z	44	47	50	2	170	0.5	500	0.05	32.9
MM5Z51V	5-	48	51	54	2	180	0.5	500	0.05	35.7
MM5Z56V	5=	52	56	60	2	200	0.5	500	0.05	39.2
MM5Z62V	5≡	58	62	66	2	215	0.5	500	0.05	43.4
MM5Z68V	5>	64	68	72	2	240	0.5	500	0.05	47.6
MM5Z75V	5<	70	75	79	2	255	0.5	500	0.05	52.5

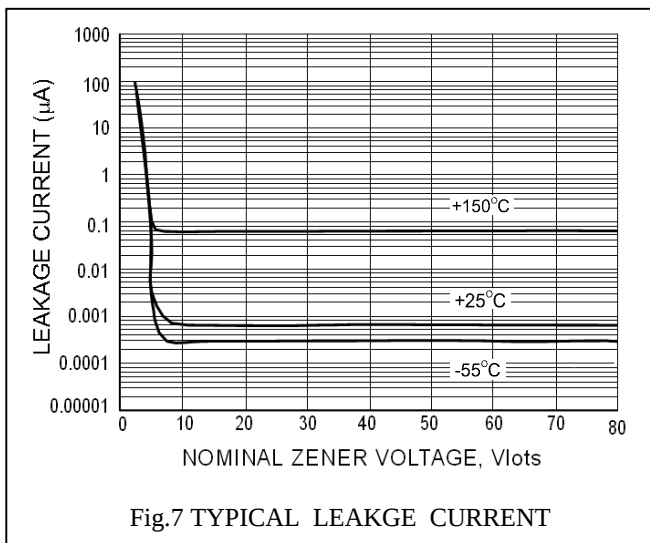
V_F Forward Voltage = 1 V Maximum @ I_F = 10 mA for all types

Notes:

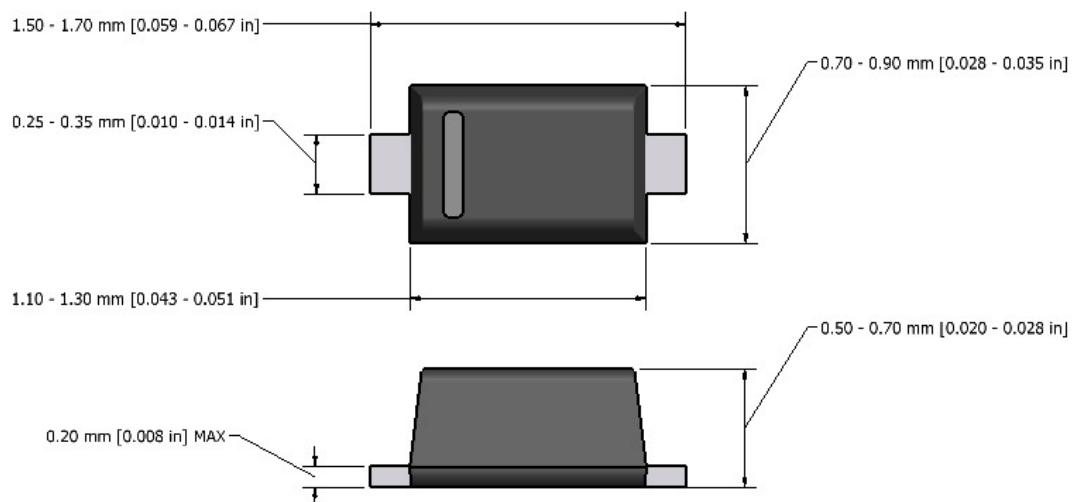
1. The Zener Voltage (V_Z) is tested under pulse condition of 10mS.
2. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Tak Cheong Electronics representative.
3. The zener impedance is 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





Flat Lead SOD-523 Package Outline



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