

200mW SOD-323 SURFACE MOUNT Small Outline Gull Wing Lead Plastic Package Zener Voltage Regulators

Green Product

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	-65 to +150	$^\circ\text{C}$
T_{OPR}	Operating Temperature Range	-65 to +150	$^\circ\text{C}$

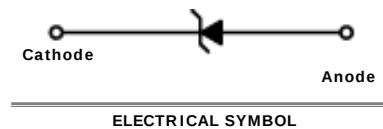
These ratings are limiting values above which the serviceability of the diode may be impaired.

Specification Features:

- Wide Zener Voltage Range Selection, 2.0V to 75V
- VZ Tolerance Selection of $\pm 2\%$ (B Series)
- Gull Wing Lead SOD-323 Small Outline Plastic Package
- Surface Device Type Mounting
- RoHS Compliant
- Green EMC
- Matte Tin(Sn) Lead Finish
- Band Indicates Cathode
- Weight: approx. 0.004g



OD-323 Gull Wing Lead



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						
MM3Z2V0BWG	+Z	1.95	2.0	2.05	5	100	1	564	120	0.5
MM3Z2V2BWG	$\perp$ Z	2.14	2.2	2.26	5	100	1	564	120	0.7
MM3Z2V4BWG	0Z	2.35	2.4	2.45	5	100	1	564	45	1
MM3Z2V7BWG	1Z	2.65	2.7	2.75	5	100	1	564	18	1
MM3Z3V0BWG	2Z	2.94	3.0	3.06	5	100	1	564	9	1
MM3Z3V3BWG	3Z	3.23	3.3	3.37	5	95	1	564	4.5	1
MM3Z3V6BWG	4Z	3.53	3.6	3.67	5	90	1	564	4.5	1
MM3Z3V9BWG	5Z	3.82	3.9	3.98	5	90	1	564	2.7	1
MM3Z4V3BWG	6Z	4.21	4.3	4.39	5	90	1	564	2.7	1
MM3Z4V7BWG	7Z	4.61	4.7	4.79	5	80	1	470	2.7	2
MM3Z5V1BWG	8Z	5.00	5.1	5.20	5	60	1	451	1.8	2
MM3Z5V6BWG	9Z	5.49	5.6	5.71	5	40	1	376	0.9	2
MM3Z6V2BWG	AZ	6.08	6.2	6.32	5	10	1	141	2.7	4
MM3Z6V8BWG	BZ	6.66	6.8	6.94	5	15	1	75	1.8	4
MM3Z7V5BWG	CZ	7.35	7.5	7.65	5	15	1	75	0.9	5
MM3Z8V2BWG	DZ	8.04	8.2	8.36	5	15	1	75	0.63	5
MM3Z9V1BWG	EZ	8.92	9.1	9.28	5	15	1	94	0.45	6
MM3Z10VBWG	FZ	9.80	10	10.20	5	20	1	141	0.18	7
MM3Z11VBWG	GZ	10.78	11	11.22	5	20	1	141	0.09	8
MM3Z12VBWG	HZ	11.76	12	12.24	5	25	1	141	0.09	8
MM3Z13VBWG	JZ	12.74	13	13.26	5	30	1	160	0.09	8
MM3Z15VBWG	KZ	14.70	15	15.30	5	30	1	188	0.045	10.5

Electrical Characteristics

T_A = 25°C unless otherwise noted

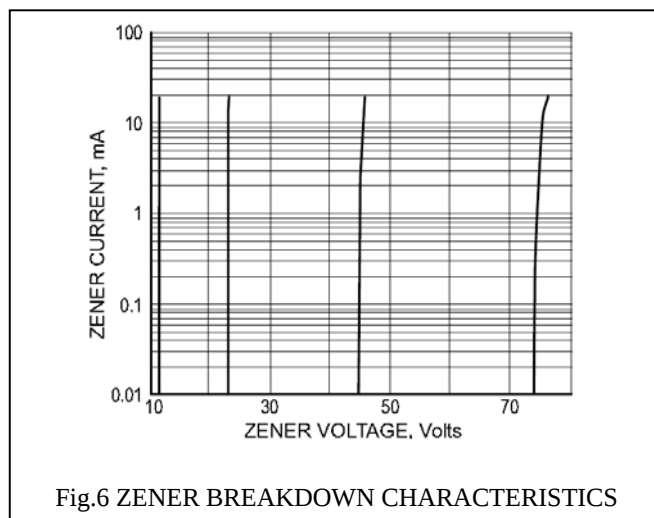
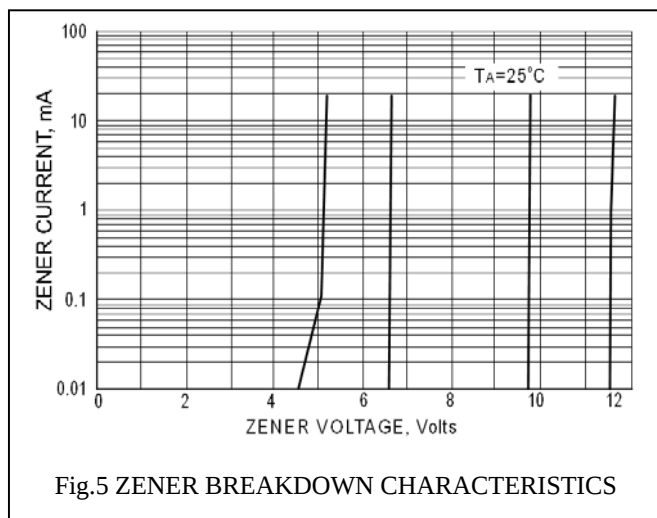
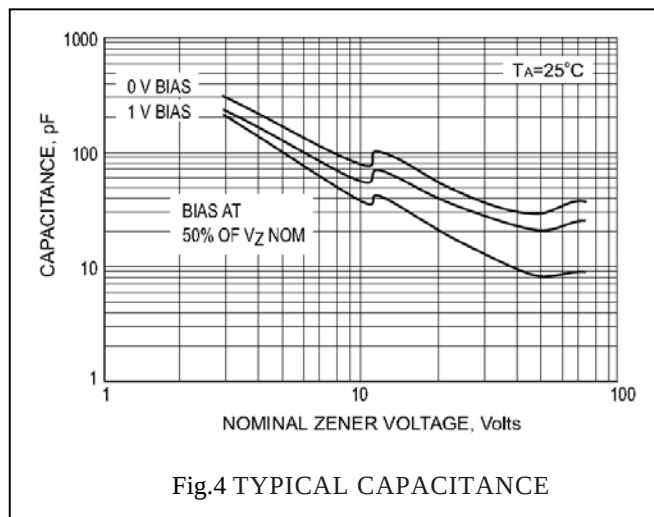
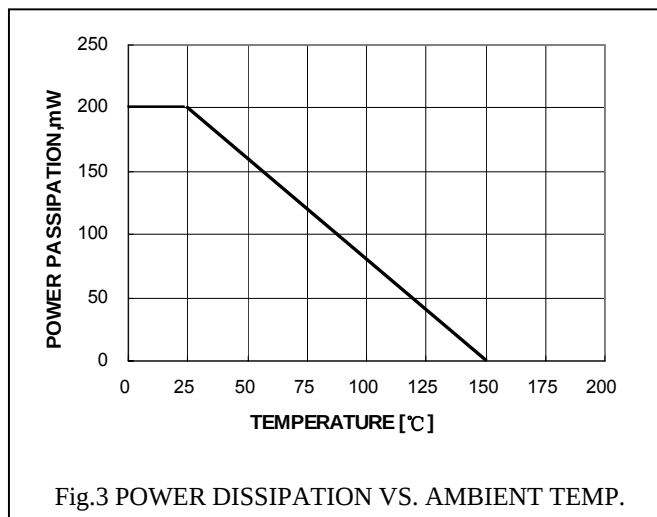
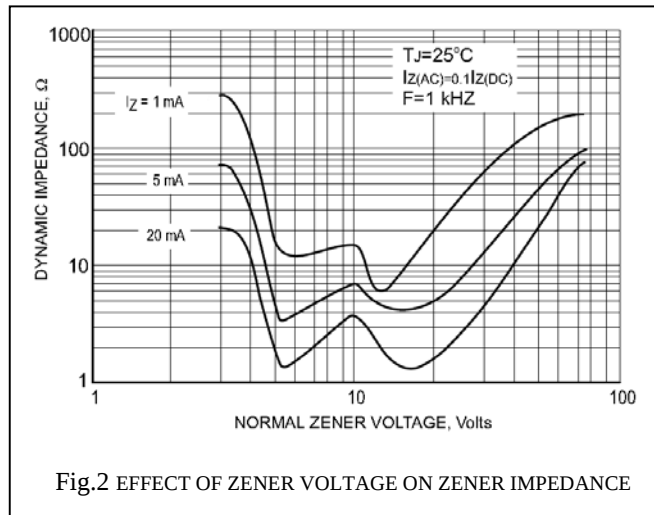
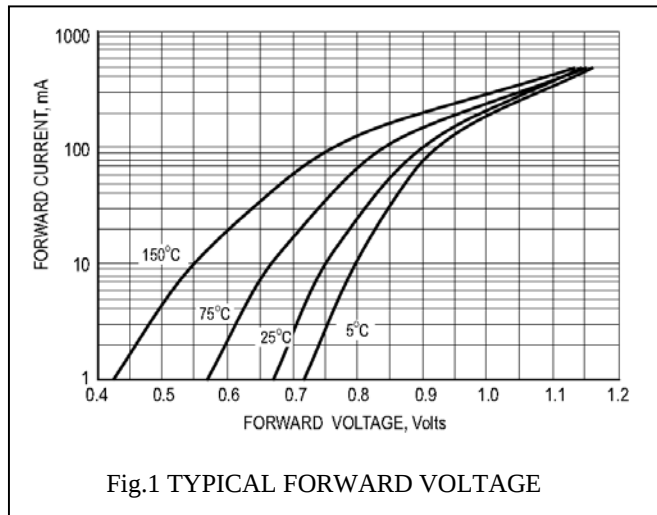
Device Type	Device Marking	V _Z @ I _{ZT} (Volts)			I _{ZT} (mA)	Z _{ZT} @ I _{ZT} (Ω) Max	I _{ZK} (mA)	Z _{ZK} @ I _{ZK} (Ω) Max	I _R @ V _R (μA) Max	V _R (Volts)
		Min	Nom	Max						
MM3Z16VBWG	LZ	15.68	16	16.32	5	40	1	188	0.045	11.2
MM3Z18VBWG	MZ	17.64	18	18.36	5	45	1	212	0.045	12.6
MM3Z20VBWG	NZ	19.60	20	20.40	5	55	1	212	0.045	14.0
MM3Z22VBWG	PZ	21.56	22	22.44	5	55	1	235	0.045	15.4
MM3Z24VBWG	RZ	23.52	24	24.48	5	70	1	235	0.045	16.8
MM3Z27VBWG	SZ	26.46	27	27.54	2	80	0.5	282	0.045	18.9
MM3Z30VBWG	TZ	29.40	30	30.60	2	80	0.5	282	0.045	21.0
MM3Z33VBWG	UZ	32.34	33	33.66	2	80	0.5	306	0.045	23.0
MM3Z36VBWG	VZ	35.28	36	36.72	2	90	0.5	329	0.045	25.2
MM3Z39VBWG	WZ	38.22	39	39.78	2	130	0.5	329	0.045	27.3
MM3Z43VBWG	XZ	42.14	43	43.86	2	150	0.5	353	0.045	30.1
MM3Z47VBWG	YZ	46.06	47	47.94	2	170	0.5	353	0.045	33.0
MM3Z51VBWG	-Z	49.98	51	52.02	2	180	0.5	376	0.045	35.7
MM3Z56VBWG	=Z	54.88	56	57.12	2	200	0.5	400	0.045	39.2
MM3Z62VBWG	≡Z	60.76	62	63.24	2	215	0.5	423	0.045	43.4
MM3Z68VBWG	>Z	66.64	68	69.36	2	240	0.5	447	0.045	47.6
MM3Z75VBWG	<Z	73.50	75	76.50	2	255	0.5	470	0.045	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. The device numbers listed have a standard tolerance on the nominal zener voltage of ±2%.
3. 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.
4. 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



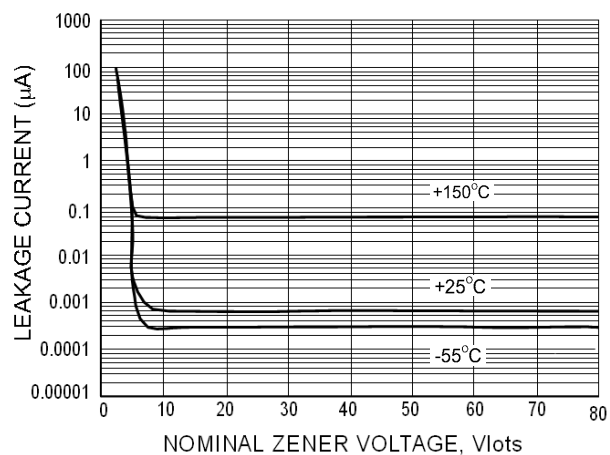
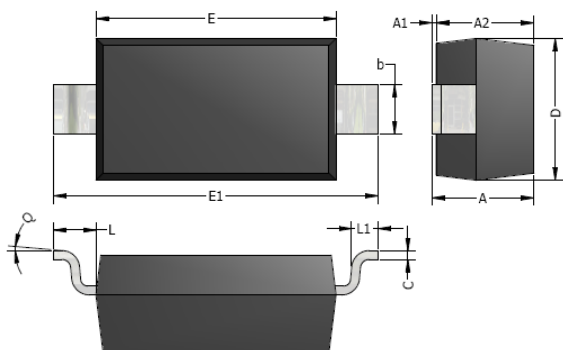
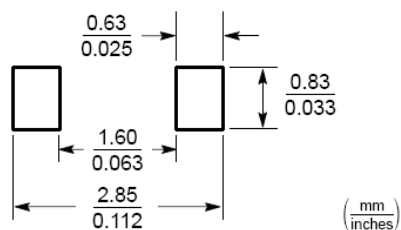


Fig.7 TYPICAL LEAKGE CURRENT

SOD-323 Gull Wing Lead Package Outline



Typical Soldering Pattern:



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.80	1.00	0.031	0.039
A1	0.00	0.10	0.000	0.004
A2	0.80	0.90	0.031	0.035
b	0.30	0.40	0.012	0.016
c	0.08	0.15	0.003	0.006
D	1.20	1.40	0.047	0.055
E	1.60	1.80	0.063	0.071
E1	2.50	2.70	0.098	0.106
L	0.475 REF.		0.019 REF.	
L1	0.25	0.40	0.010	0.016
θ	0°	8°	0°	8°

Note:

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