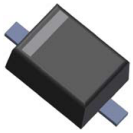
DACO SEMICONDUCTOR CO LTD

MM3Z2V4T1
THRU
MM3Z75VT1

SURFACE MOUNT ZENER DIODES

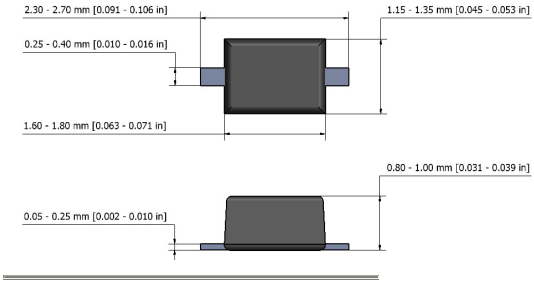
FEATURES:

- Small Signal Zener Diodes
- 200 mW Power dissipation
- Ideal for surface mounted application
- Zener breakdown voltage range 2.4V to 75V
- Power Dissipation 200 mW



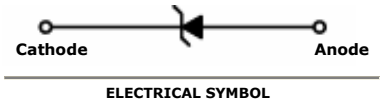
SOD-323 Flat Lead

Package Outline



MEGHANIGAL DATA

Case: Flat Lead SOD-323 Small Outline Plastic Package
Terminals: Solderable per MIL-std-202, Method 208
Polarity : Cathode Indicated by polarity band
Storage Temperature Range: -55 °C to +150 °C
Operating Temperature Range -55 °C to +150 °C



ELECTRICAL SYMBOL

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.
Single phase, half sine wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20 %.

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						
MM3Z2V4T1	Z0	2.28	2.4	2.52	5	94	1	564	45	1
MM3Z2V7T1	Z1	2.57	2.7	2.84	5	94	1	564	18	1
MM3Z3V0T1	Z2	2.85	3.0	3.15	5	89	1	564	9	1
MM3Z3V3T1	Z3	3.14	3.3	3.47	5	89	1	564	4.5	1
MM3Z3V6T1	Z4	3.42	3.6	3.78	5	84	1	564	4.5	1
MM3Z3V9T1	Z5	3.71	3.9	4.10	5	84	1	564	2.7	1
MM3Z4V3T1	Z6	4.09	4.3	4.52	5	84	1	564	2.7	1
MM3Z4V7T1	Z7	4.47	4.7	4.94	5	75	1	470	2.7	2
MM3Z5V1T1	Z8	4.85	5.1	5.36	5	56	1	451	1.8	2
MM3Z5V6T1	Z9	5.32	5.6	5.88	5	37	1	376	0.9	2
MM3Z6V2T1	ZA	5.89	6.2	6.51	5	9	1	141	2.7	4
MM3Z6V8T1	ZB	6.46	6.8	7.14	5	14	1	75	1.8	4
MM3Z7V5T1	ZC	7.11	7.5	7.86	5	14	1	75	0.9	5
MM3Z8V2T1	ZD	7.79	8.2	8.61	5	14	1	75	0.63	5
MM3Z9V1T1	ZE	8.65	9.1	9.56	5	14	1	94	0.45	6
MM3Z10VT1	ZF	9.50	10	10.50	5	18	1	141	0.18	7
MM3Z11VT1	ZG	10.45	11	11.55	5	18	1	141	0.09	8
MM3Z12VT1	ZH	11.40	12	12.60	5	23	1	141	0.09	8
MM3Z13VT1	ZJ	12.35	13	13.65	5	28	1	160	0.09	8
MM3Z15VT1	ZK	14.25	15	15.75	5	28	1	188	0.045	10.5
MM3Z16VT1	ZL	15.20	16	16.80	5	37	1	188	0.045	11.2
MM3Z18VT1	ZM	17.10	18	18.90	5	42	1	212	0.045	12.6
MM3Z20VT1	ZN	19.00	20	21.00	5	51	1	212	0.045	14.0

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						
MM3Z22VT1	ZP	20.90	22	23.10	5	51	1	235	0.045	15.4
MM3Z24VT1	ZR	22.80	24	25.20	5	65	1	235	0.045	16.8
MM3Z27VT1	ZS	25.65	27	28.35	5	75	0.5	282	0.045	18.9
MM3Z30VT1	ZT	28.50	30	31.50	5	75	0.5	282	0.045	21.0
MM3Z33VT1	ZU	31.35	33	34.65	5	75	0.5	306	0.045	23.0
MM3Z36VT1	ZV	34.20	36	37.80	5	84	0.5	329	0.045	25.2
MM3Z39VT1	ZW	37.05	39	40.95	5	122	0.5	329	0.045	27.3
MM3Z43VT1	ZX	40.85	43	45.15	5	141	0.5	353	0.045	30.1
MM3Z47VT1	ZY	44.65	47	49.35	5	160	0.5	353	0.045	33.0
MM3Z51VT1	Z–	48.45	51	53.55	5	169	0.5	376	0.045	35.7
MM3Z56VT1	Z=	53.20	56	58.80	5	188	0.5	400	0.045	39.2
MM3Z62VT1	Z≡	58.90	62	65.10	5	202	0.5	423	0.045	43.4
MM3Z68VT1	Z>	64.60	68	71.40	5	226	0.5	447	0.045	47.6
MM3Z75VT1	Z<	71.25	75	78.75	5	240	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 ±5%.
3. For detailed information on price, availability and delivery of nominal zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest YEASHIN 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}.

DEVICE CHARACTERISTICS

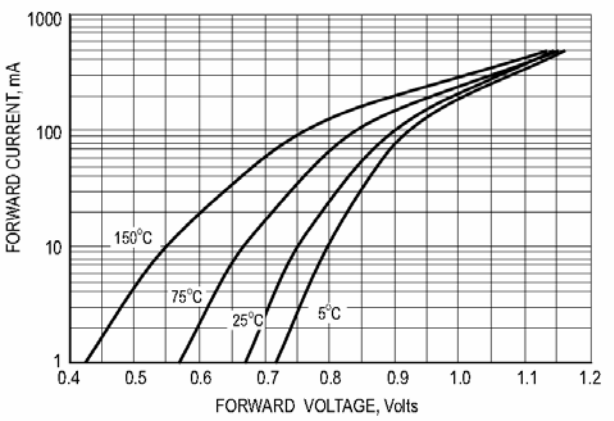


Fig.1 TYPICAL FORWARD VOLTAGE

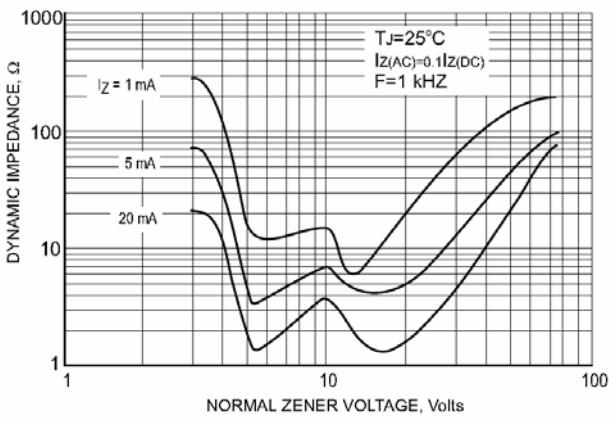


Fig.2 EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

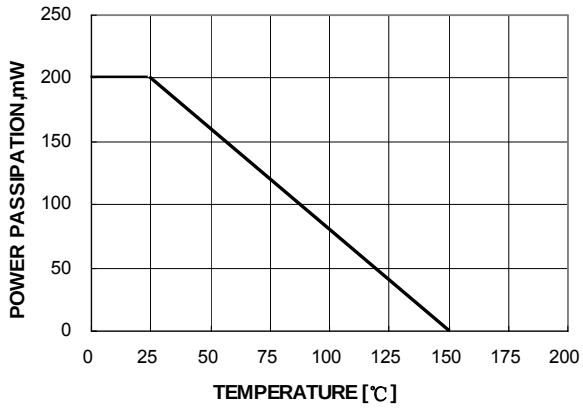


Fig.3 POWER DISSIPATION VS. AMBIENT TEMP.

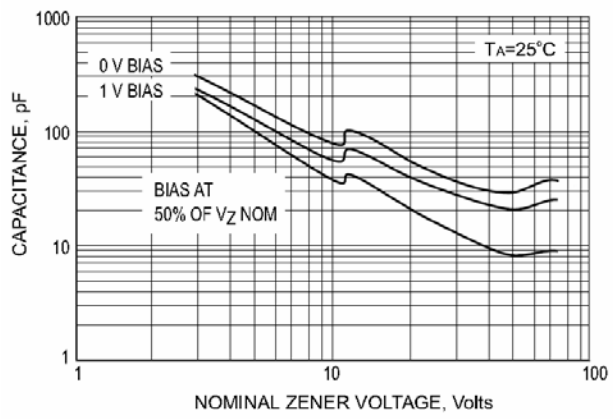


Fig.4 TYPICAL CAPACITANCE

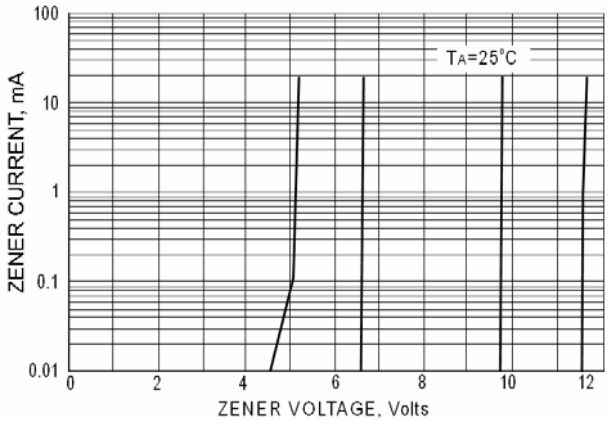


Fig.5 ZENER BREAKDOWN CHARACTERISTICS

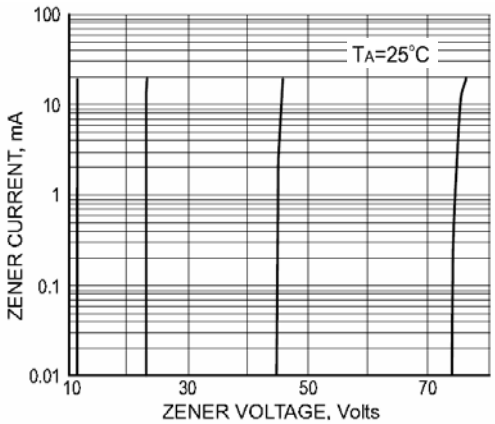


Fig.6 ZENER BREAKDOWN CHARACTERISTICS

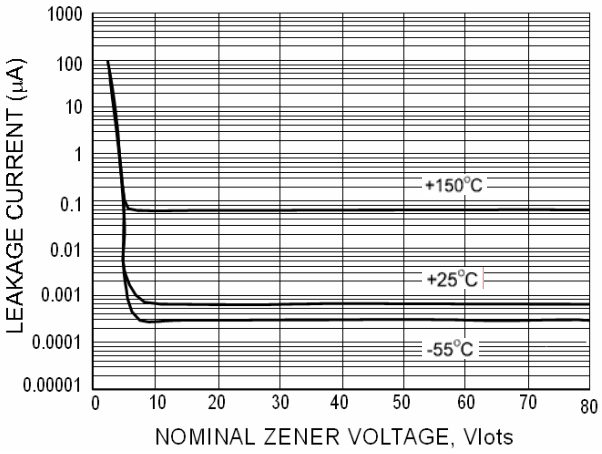


Fig.7 TYPICAL LEAKGE CURRENT