

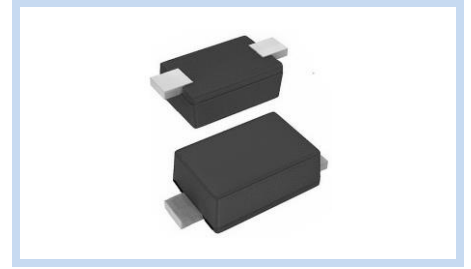
Zener Diodes SOD-323F

MM3Z-C Series

MERITEK

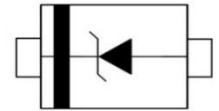
FEATURE

- Zener Voltage Range: 2.0V to 75V
- Zener Voltage Tolerance: $\pm 5\%$
- Power Dissipation: 200mW
- Silicon Planar Zener Diode
- Ideally Suited for Automated Assembly Processes
- Application: Power Management Systems, Voltage Regulation



MECHANICAL DATA

- Case: SOD-323F, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026



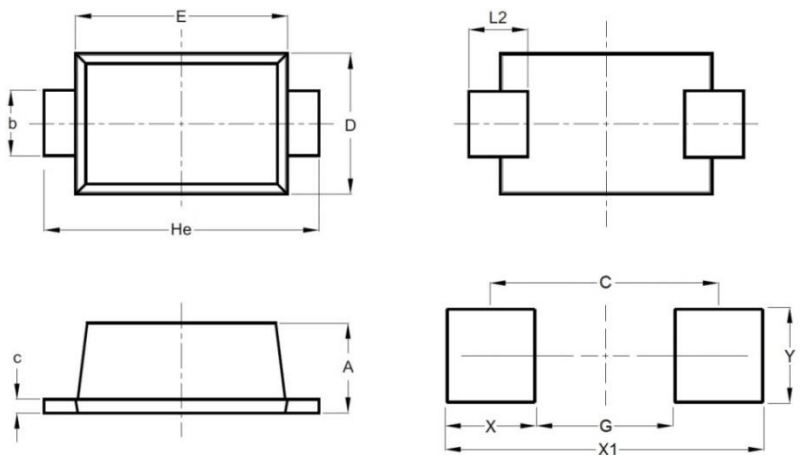
ABSOLUTE MAXIMUM RATINGS

Parameter	Symbols	Value	Unit
Power Dissipation	P_D	200	mW
Forward Voltage at $I_F=10\text{mA}$	V_F	0.9	V
Resistance Junction to Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C}/\text{W}$
Resistance Junction to Lead	$R_{\theta JL}$	180	$^{\circ}\text{C}/\text{W}$
Junction Temperature Range	T_J	-55~+150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

Note: $T_A = 25^{\circ}\text{C}$ unless otherwise noted

DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.70	0.90
b	0.25	0.35
C	0.05	0.15
D	1.15	1.35
E	1.75	1.95
He	2.30	2.70
L2	0.30	-
C	2.17	2.17
G	1.44	1.44
X	0.73	0.73
X1	2.90	2.90
Y	0.50	0.50



Zener Diodes SOD-323F

MM3Z-C Series

MERITEK

ELECTRICAL CHARACTERISTICS

Part Number	Nominal Zener Voltage V_Z at I_{ZT}				Max Zener Impedance Z_{ZT} at I_{ZT} , Z_{ZK} at $I_{ZK}=0.25mA$		Max Reverse Leakage Current		Capacitance at $V_R=0V$, $F=1MHz$
	Nom	Min	Max	I_{ZT}	Z_{ZT}	Z_{ZK}	I_R at V_R		C
	(V)	(V)	(V)	(mA)	(Ω)	(Ω)	(μA)	(V)	(pF)
MM3Z2V0C	2.0	1.80	2.15	5.0	100	1000	120	0.5	450
MM3Z2V2C	2.2	2.08	2.33	5.0	100	1000	120	0.7	450
MM3Z2V4C	2.4	2.28	2.52	5.0	100	1000	120	1.0	450
MM3Z2V7C	2.7	2.57	2.84	5.0	100	1000	120	1.0	450
MM3Z3V0C	3.0	2.85	3.15	5.0	100	1000	50	1.0	450
MM3Z3V3C	3.3	3.14	3.47	5.0	95	1000	20	1.0	450
MM3Z3V6C	3.6	3.42	3.78	5.0	90	1000	10	1.0	450
MM3Z3V9C	3.9	3.71	4.10	5.0	90	1000	5.0	1.0	450
MM3Z4V3C	4.3	4.09	4.52	5.0	90	1000	5.0	1.0	450
MM3Z4V7C	4.7	4.47	4.94	5.0	80	800	2.0	1.0	260
MM3Z5V1C	5.1	4.85	5.36	5.0	60	500	2.0	1.5	225
MM3Z5V6C	5.6	5.32	5.88	5.0	40	200	1.0	2.5	200
MM3Z6V2C	6.2	5.89	6.51	5.0	10	100	1.0	3.0	185
MM3Z6V8C	6.8	6.46	7.14	5.0	15	160	0.5	3.5	155
MM3Z7V5C	7.5	7.13	7.88	5.0	13	160	0.5	4.0	140
MM3Z8V2C	8.2	7.79	8.61	5.0	15	160	0.5	5.0	135
MM3Z9V1C	9.1	8.65	9.56	5.0	15	160	0.5	6.0	130
MM3Z10C	10	9.50	10.50	5.0	20	160	0.1	7.0	130
MM3Z11C	11	10.45	11.55	5.0	20	160	2.0	8.0	130
MM3Z12C	12	11.40	12.60	5.0	25	80	1.0	9.0	130
MM3Z13C	13	12.35	13.65	5.0	30	80	0.5	10	120
MM3Z15C	15	14.25	15.75	5.0	30	80	0.1	11	110
MM3Z16C	16	15.20	16.80	5.0	40	80	0.1	12	105
MM3Z18C	18	17.10	18.90	5.0	45	80	0.1	13	100
MM3Z20C	20	19.00	21.00	5.0	55	100	0.1	15	85
MM3Z22C	22	20.90	23.10	5.0	55	100	0.1	17	85
MM3Z24C	24	22.80	25.20	5.0	70	120	0.1	20	80
MM3Z27C	27	25.65	28.35	5.0	80	300	0.1	21	70
MM3Z30C	30	28.50	31.50	5.0	80	300	0.1	23	70
MM3Z33C	33	31.35	34.65	5.0	80	300	0.1	25	70
MM3Z36C	36	34.20	37.80	5.0	90	300	0.1	27	70
MM3Z39C	39	37.05	40.95	2.5	130	500	0.1	30	45
MM3Z43C	43	40.85	45.15	2.5	150	500	0.1	33	40
MM3Z47C	47	44.65	49.35	2.5	170	500	0.1	36	40

ELECTRICAL CHARACTERISTICS

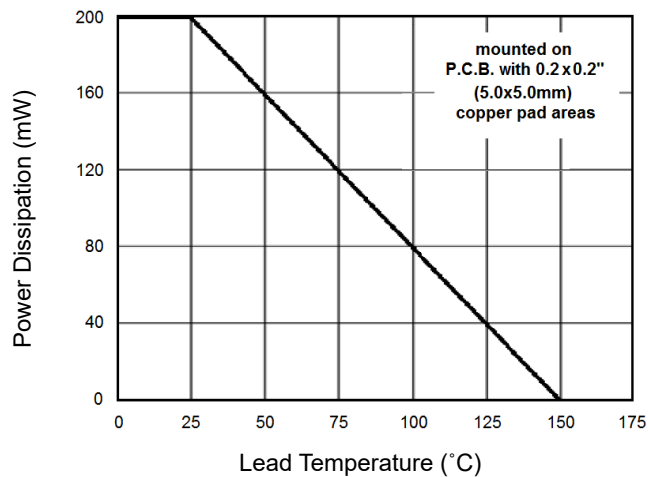
Part Number	Nominal Zener Voltage V_Z at I_{ZT}				Max Zener Impedance Z_{ZT} at I_{ZT} , Z_{ZK} at $I_{ZK}=0.25mA$		Max Reverse Leakage Current		Capacitance at $V_R=0V$, $F=1MHz$
	Nom	Min	Max	I_{ZT}	Z_{ZT}	Z_{ZK}	I_R at V_R		C
	(V)	(V)	(V)	(mA)	(Ω)	(Ω)	(μA)	(V)	(pF)
MM3Z51C	51	48.00	54.00	2.5	180	500	0.1	39	40
MM3Z56C	56	52.00	60.00	2.5	200	500	0.1	43	40
MM3Z62C	62	58.00	64.00	2.5	215	500	0.1	47	35
MM3Z68C	68	64.00	72.00	2.5	240	500	0.1	52	35
MM3Z75C	75	70.00	79.00	2.5	255	500	0.1	57	35

Note:

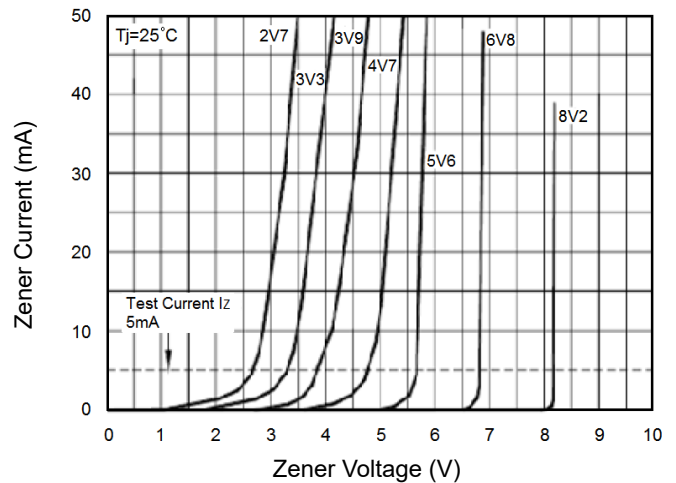
- $T_A = 25^\circ C$ unless otherwise noted
- V_Z is tested with pulses (20ms).
- Nominal Zener Voltage is measured with the device junction in thermal equilibrium at $T_L = 30 \pm 1^\circ C$
- Z_{ZT} and Z_{ZK} are measured by dividing the AC voltage drop across the device by the AC current applied. The AC current value is 10% of I_Z (DC) with 1KHz frequency.

CHARACTERISTIC CURVES

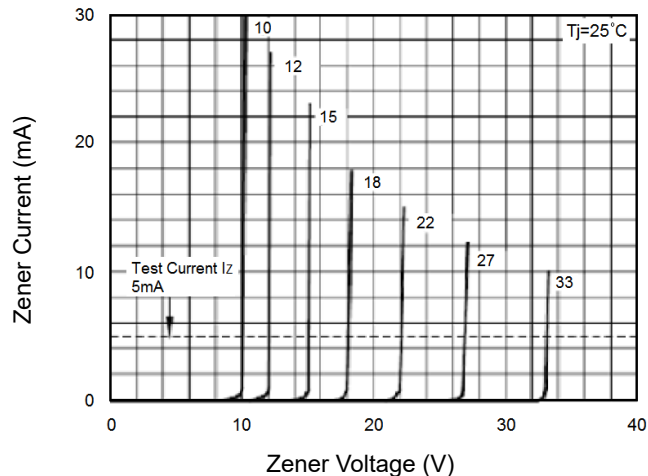
Power Derating



Zener Breakdown Characteristics



Zener Breakdown Characteristics



*Specifications subject to change without notice.