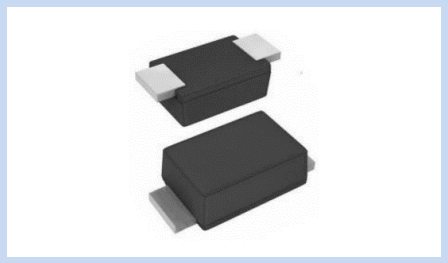
Zener Diodes
500mW SOD-123FL

MMSZ series

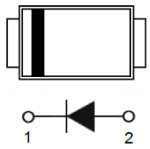
MERITEK

FEATURE



- Zener Voltage Range: 2V to 75V
- Zener Voltage Tolerance: ±5%
- Power Dissipation: 500mW
- Clip Bonding Construction, Good Thermal Capability
- Application: Power Management Systems, Voltage Regulation

MECHANICAL DATA



RoHS

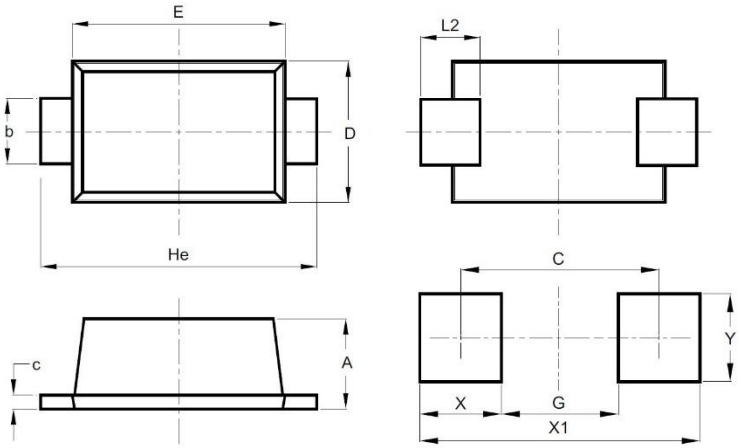
- Case: SOD-123FL, Molded Plastic
- Terminals: Solderable Per MIL-STD-750, Method 2026

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbols	Value	Unit
Power Dissipation	P_D	500	mW
Maximum Forward Voltage at I_F=10mA	V_F	0.9	V
Junction Temperature	T_J	150	˚C
Storage Temperature Range	T_{STG}	-65~+150	˚C

DIMENSIONS

Item	Min (mm)	Max (mm)
A	1.05	1.15
b	0.50	0.60
c	0.10	0.14
D	1.55	1.65
E	2.60	2.70
He	3.55	3.85
L2	0.35	0.85
C	3.10	3.10
G	1.95	1.95
X	1.15	1.15
X1	4.25	4.25
Y	1.22	1.22



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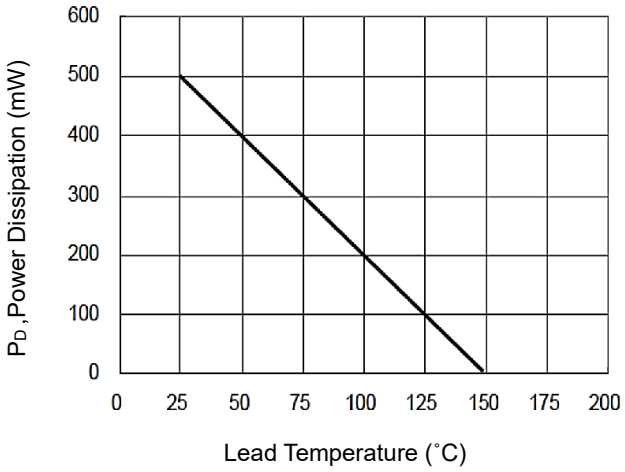
ELECTRICAL CHARACTERISTICS

Part Number	Zener Voltage Range			Zener Impedance		Zener Impedance		Reverse Current	
	V_Z At I_{ZT}			Z_{ZT}	I_{ZT}	Z_{ZK}	I_{ZK}	I_R	V_R
	Min (V)	Nom (V)	Max (V)	Ω	(mA)	Ω	(mA)	Max (μA)	(V)
MMSZ2V0	1.90	2.00	2.10	100	5	600	1	120	0.5
MMSZ2V2	2.09	2.20	2.31	100	5	600	1	120	0.7
MMSZ2V4	2.28	2.40	2.52	100	5	564	1	45	1.0
MMSZ2V7	2.57	2.70	2.84	100	5	564	1	18	1.0
MMSZ3V0	2.85	3.00	3.15	100	5	564	1	9.0	1.0
MMSZ3V3	3.14	3.30	3.47	95	5	564	1	4.5	1.0
MMSZ3V6	3.42	3.60	3.78	90	5	564	1	4.5	1.0
MMSZ3V9	3.71	3.90	4.10	90	5	564	1	2.7	1.0
MMSZ4V3	4.09	4.30	4.52	90	5	564	1	2.7	1.0
MMSZ4V7	4.47	4.70	4.94	80	5	470	1	2.7	2.0
MMSZ5V1	4.85	5.10	5.36	60	5	451	1	1.8	2.0
MMSZ5V6	5.32	5.60	5.88	40	5	376	1	0.9	2.0
MMSZ6V2	5.89	6.20	6.51	10	5	141	1	2.7	4.0
MMSZ6V8	6.46	6.80	7.14	15	5	75	1	1.8	4.0
MMSZ7V5	7.13	7.50	7.88	15	5	75	1	0.9	5.0
MMSZ8V2	7.79	8.20	8.61	15	5	75	1	0.63	5.0
MMSZ9V1	8.65	9.10	9.56	15	5	94	1	0.45	6.0
MMSZ10V	9.50	10.00	10.50	20	5	141	1	0.18	7.0
MMSZ11V	10.45	11.00	11.55	20	5	141	1	0.09	8.0
MMSZ12V	11.40	12.00	12.60	25	5	141	1	0.09	8.0
MMSZ13V	12.35	13.00	13.65	30	5	160	1	0.09	8.0
MMSZ15V	14.25	15.00	15.75	30	5	188	1	0.045	10.5
MMSZ16V	15.20	16.00	16.80	40	5	188	1	0.045	11.2
MMSZ18V	17.10	18.00	18.90	45	5	212	1	0.045	12.6
MMSZ20V	19.00	20.00	21.00	55	5	212	1	0.045	14.0
MMSZ22V	20.90	22.00	23.10	55	5	235	1	0.045	15.4
MMSZ24V	22.80	24.00	25.20	70	5	235	1	0.045	16.8
MMSZ27V	25.65	27.00	28.35	80	5	282	0.5	0.045	18.9
MMSZ30V	28.50	30.00	31.50	80	5	282	0.5	0.045	21.0
MMSZ33V	31.35	33.00	34.65	80	5	306	0.5	0.045	23.0
MMSZ36V	34.20	36.00	37.80	90	5	329	0.5	0.045	25.2
MMSZ39V	37.05	39.00	40.95	130	5	329	0.5	0.045	27.3
MMSZ43V	40.85	43.00	45.15	150	5	353	0.5	0.045	30.1
MMSZ47V	44.65	47.00	49.35	170	5	353	0.5	0.045	33.0
MMSZ51V	48.45	51.00	53.55	180	5	376	0.5	0.045	35.7
MMSZ56V	53.20	56.00	58.80	200	5	400	0.5	0.045	39.2
MMSZ62V	58.90	62.00	65.10	215	5	423	0.5	0.045	43.4
MMSZ68V	64.60	68.00	71.40	240	5	447	0.5	0.045	47.6
MMSZ75V	71.25	75.00	78.75	255	5	470	0.5	0.045	52.5

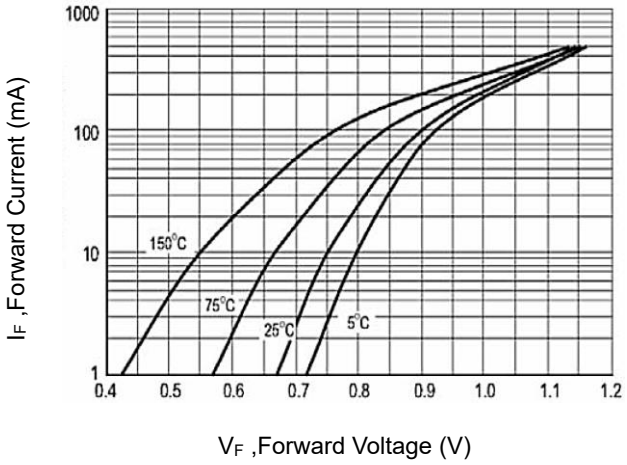
Note:
1. T_A =25°C unless otherwise noted.
2. The zener voltage (V_Z) is tested under pulse condition of 10ms.
3. The device numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
4. The Zener impedance is derived from the 60-cycle AC voltage, which results when an AC current having a RMS value equal to 10% of the DC zener current(I_{ZT} or I_{ZK}) Is superimposed to I_{ZT} or I_{ZK}.

CHARACTERISTIC CURVES

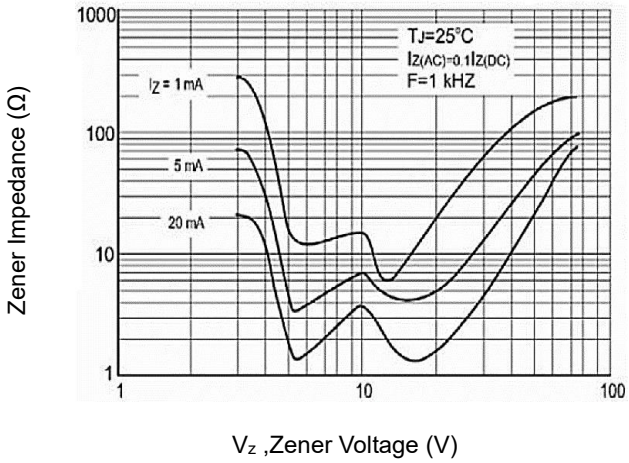
Power Derating Curve



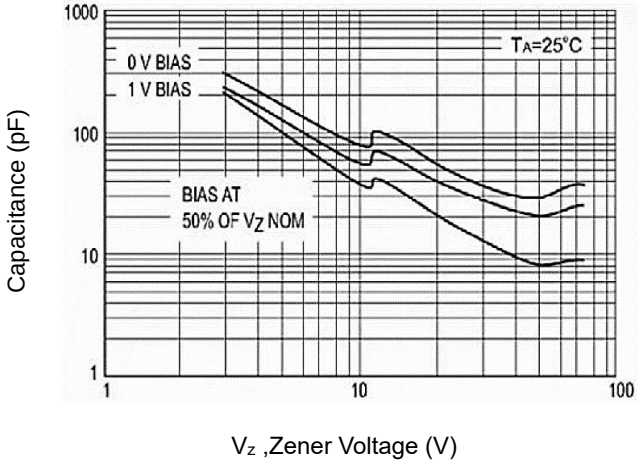
Typical Forward Voltage



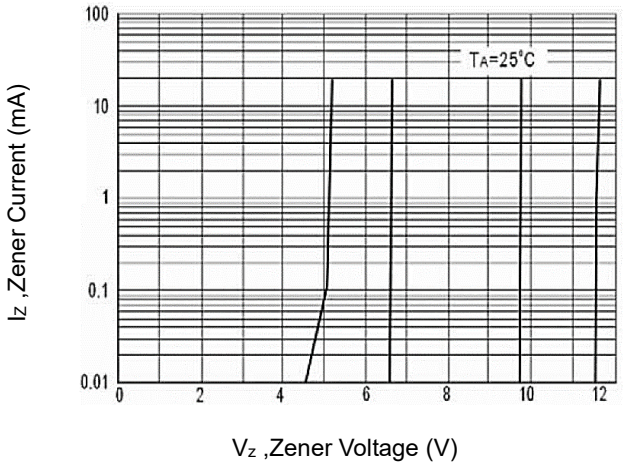
Zener Voltage On Zener Impedance



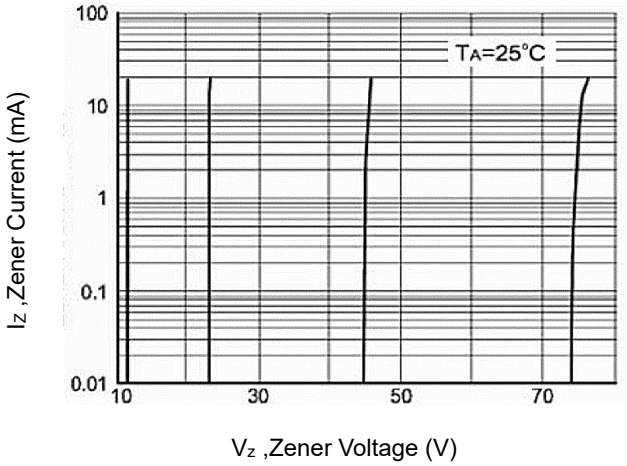
Typical Capacitance



Zener Breakdown Characteristic

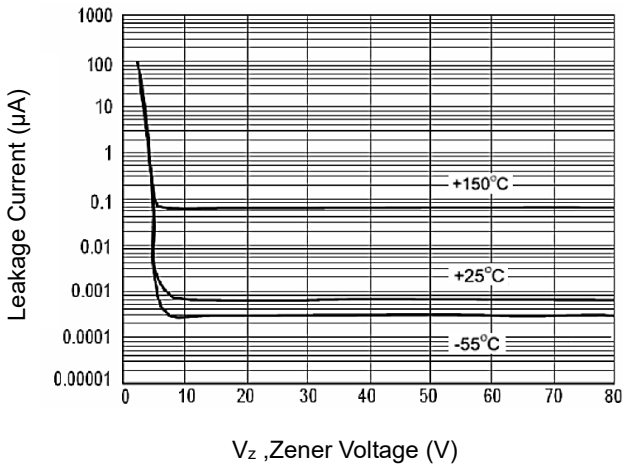


Zener Breakdown Characteristic



CHARACTERISTIC CURVES

Typical Leakage Current



*Specifications subject to change without notice.