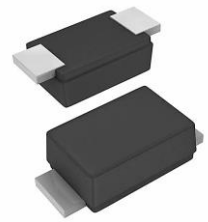
Zener Diodes
500mW SOD-123FL

MMSZS52-B Series

MERITEK

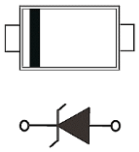
FEATURE

- Zener Voltage Range: 2.4V to 39V
- Zener Voltage Tolerance: ±5%
- Clip Bonding Construction, Good Thermal Capability
- Application: Power Management Systems, Voltage Regulation



MECHANICAL DATA

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



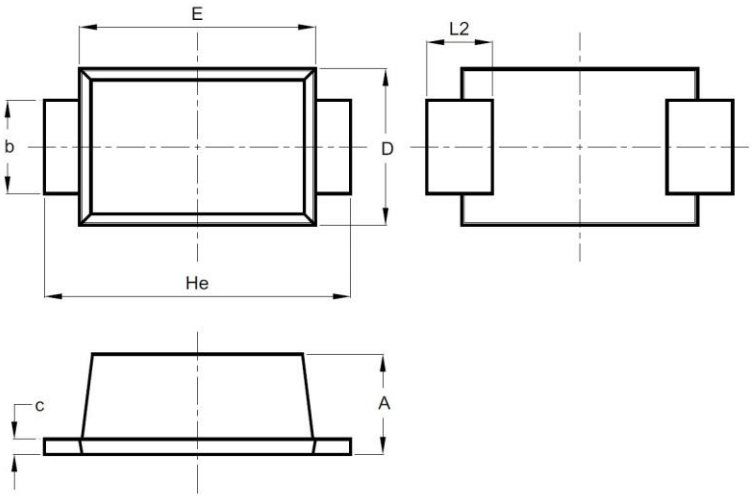
RoHS

MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
Maximum Forward Voltage at I_F=10mA	V_F	0.9	V
Typical Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	350	°C/W
Junction Temperature	T_J	150	˚C
Storage Temperature Range	T_{STG}	-55~+150	˚C

DIMENSIONS

SOD-123FL	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
C	3.05	
G	2.20	
X	0.85	
X1	3.90	
Y	1.20	



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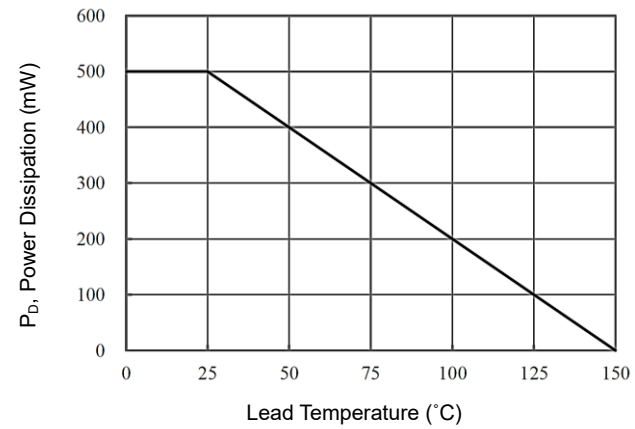
ELECTRICAL CHARACTERISTICS

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)	Max (Ω)	(mA)	Max (Ω)	(mA)	Max (μA)	(V)
MMSZS5221B	2.28	2.40	2.52	30	20	1200	0.25	100	1.0
MMSZS5223B	2.57	2.70	2.84	30	20	1300	0.25	75	1.0
MMSZS5225B	2.85	3.00	3.15	29	20	1600	0.25	50	1.0
MMSZS5226B	3.14	3.30	3.47	28	20	1600	0.25	25	1.0
MMSZS5227B	3.42	3.60	3.78	24	20	1700	0.25	15	1.0
MMSZS5228B	3.71	3.90	4.10	23	20	1900	0.25	10	1.0
MMSZS5229B	4.09	4.30	4.52	22	20	2000	0.25	5.0	1.0
MMSZS5230B	4.47	4.70	4.94	19	20	1900	0.25	5.0	2.0
MMSZS5231B	4.85	5.10	5.36	17	20	1600	0.25	5.0	2.0
MMSZS5232B	5.32	5.60	5.88	11	20	1600	0.25	5.0	3.0
MMSZS5234B	5.89	6.20	6.51	7	20	1000	0.25	5.0	4.0
MMSZS5235B	6.46	6.80	7.14	5	20	750	0.25	3.0	5.0
MMSZS5236B	7.13	7.50	7.88	6	20	500	0.25	3.0	6.0
MMSZS5237B	7.79	8.20	8.61	8	20	500	0.25	3.0	6.5
MMSZS5239B	8.65	9.10	9.56	10	20	600	0.25	3.0	7.0
MMSZS5240B	9.50	10.00	10.50	17	20	600	0.25	3.0	8.0
MMSZS5241B	10.45	11.00	11.55	22	20	600	0.25	2.0	8.4
MMSZS5242B	11.40	12.00	12.60	30	20	600	0.25	1.0	9.1
MMSZS5243B	12.35	13.00	13.65	13	9.5	600	0.25	0.5	9.9
MMSZS5245B	14.25	15.00	15.75	16	8.5	600	0.25	0.1	11.0
MMSZS5246B	15.20	16.00	16.80	17	7.8	600	0.25	0.1	12.0
MMSZS5247B	16.15	17.00	17.85	19	7.4	600	0.25	0.1	13.0
MMSZS5248B	17.10	18.00	18.90	21	7.0	600	0.25	0.1	14.0
MMSZS5249B	18.05	19.00	19.95	23	6.6	600	0.25	0.1	14.0
MMSZS5250B	19.00	20.00	21.00	25	6.2	600	0.25	0.1	15.0
MMSZS5251B	20.90	22.00	23.10	29	5.6	600	0.25	0.1	17.0
MMSZS5252B	22.80	24.00	25.20	33	5.2	600	0.25	0.1	18.0
MMSZS5253B	23.75	25.00	26.25	35	5.0	600	0.25	0.1	19.0
MMSZS5254B	25.65	27.00	28.35	41	4.6	600	0.25	0.1	21.0
MMSZS5256B	28.50	30.00	31.50	49	4.2	600	0.25	0.1	23.0
MMSZS5257B	31.35	33.00	34.65	58	3.8	700	0.25	0.1	25.0
MMSZS5258B	34.20	36.00	37.80	70	3.4	700	0.25	0.1	27.0
MMSZS5259B	37.05	39.00	40.95	80	3.2	800	0.25	0.1	30.0
MMSZS5260B	40.80	43.00	45.20	93	3.0	900	0.25	0.1	33.0
MMSZS5261B	44.65	47.00	49.35	105	2.7	1000	0.25	0.1	36.0
MMSZS5262B	48.45	51.00	53.55	125	2.5	1100	0.25	0.1	39.0

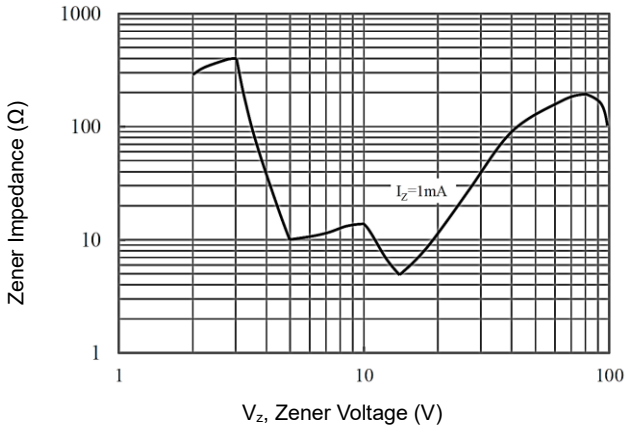
Note:
1. T_A =25°C unless otherwise noted.
2. The zener voltage (V_Z) is tested under pulse condition of 20ms.
3. The device numbers listed have a standard tolerance on the nominal zener voltage of ±5%.
4. The Zener impedance Z_{ZT} and Z_{ZK} are measured by dividing the AC voltage drop across the device by the AC current applied. The specified limits are for $I_{Z(AC)}$ = 0.1 $I_{Z(DC)}$ with f=1 KHz.

CHARACTERISTIC CURVES

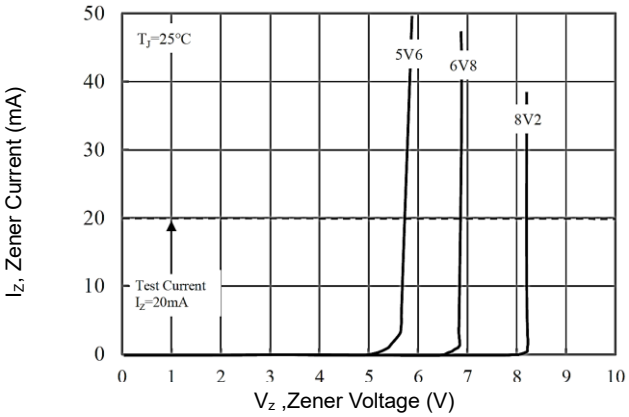
Power Derating Curve



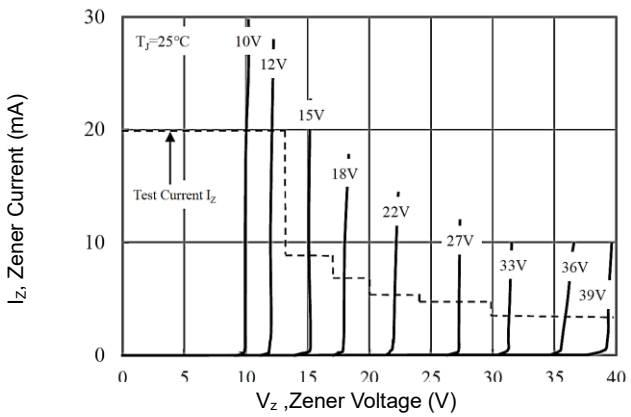
Typical Zener Impedance Characteristics



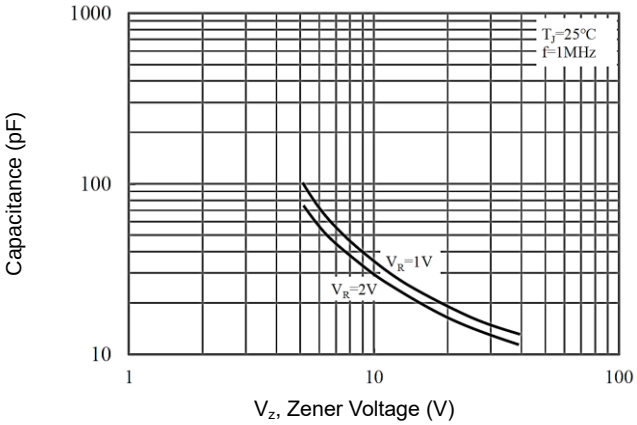
Zener Breakdown Characteristics



Zener Breakdown Characteristics



Typical Capacitance



*Specifications subject to change without notice.