

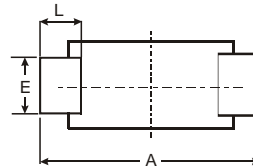
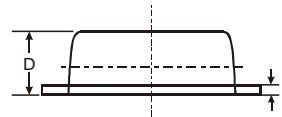
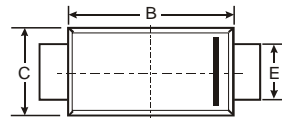
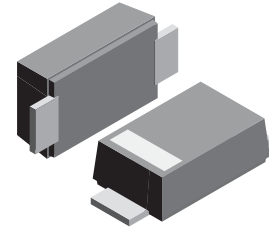
**VOLTAGE RANGE: 2.4 - 110V**  
**POWER: 0.5 Watts**

### Features

- Total Power Dissipation 500 mW on FR-4 or FR-5 Board
- Wide Zener Reverse Voltage Range 2.4 V to 110 V
- Package Designed for Optimal Automated Board Assembly
- Small Package Size for High Density Applications
- General Purpose, Medium Current

### Mechanical Data

- Case: SOD-123FL  
plastic body over passivated junction
- Terminals : Plated axial leads,
- solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight: 0.0007 ounce, 0.02 grams



SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55
All Dimensions in mm			

### Maximum Ratings $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Total Power Dissipation on FR-5 Board, at $T_L = 75^\circ\text{C}$ Derated above $75^\circ\text{C}$	$P_D$	500 <sup>(1)</sup> 6.7	mW mW/ $^\circ\text{C}$
Maximum Forward Voltage at $I_F = 10\text{ mA}$	$V_F$	0.9	V
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	340	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	$T_J, T_S$	-55 to + 150	$^\circ\text{C}$

**Note :**

(1) FR-5 = 3.5 x 1.5 inches, using the minimum recommended footprint



## ELECTRICAL CHARACTERISTICS Rating at 25 °C ambient temperature unless otherwise specific

Type No.	Zener Voltage <sup>(1,2)</sup>			Test Current	Maximum Zener Impedance <sup>(3)</sup>		Test Current	Maximum Reverse Leakage Current	
	$V_Z @ I_{ZT}$ (V)				$I_{ZT}$	$Z_{ZT} @ I_{ZT}$		$Z_{ZT} @ I_{ZK}$	$I_{ZK}$
	Min.	Nom.	Max.	(mA)	( $\Omega$ )	( $\Omega$ )	(mA)	( $\mu$ A)	(V)
MMSZ 5221B	2.28	2.4	2.52	20	30	1200	0.25	100	1.0
MMSZ 5222B	2.38	2.5	2.63	20	30	1250	0.25	100	1.0
MMSZ 5223B	2.57	2.7	2.84	20	30	1300	0.25	75	1.0
MMSZ 5224B	2.66	2.8	2.94	20	30	1400	0.25	75	1.0
MMSZ 5225B	2.85	3.0	3.15	20	29	1600	0.25	50	1.0
MMSZ 5226B	3.14	3.3	3.47	20	28	1600	0.25	25	1.0
MMSZ 5227B	3.42	3.6	3.78	20	24	1700	0.25	15	1.0
MMSZ 5228B	3.71	3.9	4.10	20	23	1900	0.25	10	1.0
MMSZ 5229B	4.09	4.3	4.52	20	22	2000	0.25	5	1.0
MMSZ 5230B	4.47	4.7	4.94	20	19	1900	0.25	5	2.0
MMSZ 5231B	4.85	5.1	5.36	20	17	1600	0.25	5	2.0
MMSZ 5232B	5.32	5.6	5.88	20	11	1600	0.25	5	3.0
MMSZ 5233B	5.70	6.0	6.30	20	7	1600	0.25	5	3.5
MMSZ 5234B	5.89	6.2	6.51	20	7	1000	0.25	5	4.0
MMSZ 5235B	6.46	6.8	7.14	20	5	750	0.25	3	5.0
MMSZ 5236B	7.13	7.5	7.88	20	6	500	0.25	3	6.0
MMSZ 5237B	7.79	8.2	8.61	20	8	500	0.25	3	6.5
MMSZ 5238B	8.27	8.7	9.14	20	8	600	0.25	3	6.5
MMSZ 5239B	8.65	9.1	9.56	20	10	600	0.25	3	7.0
MMSZ 5240B	9.50	10	10.50	20	17	600	0.25	3	8.0
MMSZ 5241B	10.45	11	11.50	20	22	600	0.25	2	8.4
MMSZ 5242B	11.40	12	12.60	20	30	600	0.25	1	9.1
MMSZ 5243B	12.35	13	13.65	9.5	13	600	0.25	0.5	9.9
MMSZ 5244B	13.30	14	14.70	9.0	15	600	0.25	0.1	10
MMSZ 5245B	14.25	15	15.75	8.5	16	600	0.25	0.1	11
MMSZ 5246B	15.20	16	16.80	7.8	17	600	0.25	0.1	12
MMSZ 5247B	16.15	17	17.85	7.4	19	600	0.25	0.1	13
MMSZ 5248B	17.10	18	18.90	7.0	21	600	0.25	0.1	14
MMSZ 5250B	19.00	20	21.00	6.2	25	600	0.25	0.1	15
MMSZ 5251B	20.90	22	23.10	5.6	29	600	0.25	0.1	17
MMSZ 5252B	22.80	24	25.20	5.2	33	600	0.25	0.1	18
MMSZ 5253B	23.75	25	26.25	5	35	600	0.25	0.1	19
MMSZ 5254B	25.65	27	28.35	4.6	41	600	0.25	0.1	21
MMSZ 5255B	26.60	28	29.40	4.5	44	600	0.25	0.1	21
MMSZ 5256B	28.50	30	31.50	4.2	49	600	0.25	0.1	23
MMSZ 5257B	31.35	33	34.65	3.8	58	700	0.25	0.1	25
MMSZ 5258B	34.20	36	37.80	3.4	70	700	0.25	0.1	27
MMSZ 5259B	37.05	39	40.95	3.2	80	800	0.25	0.1	30
MMSZ 5260B	40.85	43	45.15	3.0	93	900	0.25	0.1	33
MMSZ 5261B	44.65	47	49.35	2.7	105	1000	0.25	0.1	36
MMSZ 5262B	48.45	51	53.55	2.5	125	1100	0.25	0.1	39
MMSZ 5263B	53.20	56	58.80	2.2	150	1300	0.25	0.1	43
MMSZ 5264B	57.00	60	63.00	2.1	170	1400	0.25	0.1	46
MMSZ 5265B	58.90	62	65.10	2.0	185	1400	0.25	0.1	47
MMSZ 5266B	64.60	68	71.40	1.8	230	1600	0.25	0.1	52
MMSZ 5267B	71.25	75	78.75	1.7	270	1700	0.25	0.1	56
MMSZ 5268B	77.90	82	86.10	1.5	330	2000	0.25	0.1	62
MMSZ 5269B	82.65	87	91.35	1.4	370	2200	0.25	0.1	68
MMSZ 5270B	86.45	91	95.55	1.4	400	2300	0.25	0.1	69
MMSZ 5272B	104.50	110	115.50	1.1	750	3000	0.25	0.1	84

### Notes :

- (1) The type numbers shown have a standard tolerance of  $\pm 5\%$  on the nominal Zener voltage.
- (2) Nominal Zener voltage is measured with the device junction in thermal equilibrium at  $T_L = 30^\circ\text{C} \pm 1^\circ\text{C}$
- (3)  $Z_{ZT}$  and  $Z_{ZK}$  are measured by device drop across the device by the AC current apply  
The specified limits are for  $I_{Z(AC)} = 0.1 I_{Z(DC)}$  with the AC frequency 1 KHz