

ZENER DIODES

V_Z : 3.3 - 240 Volts

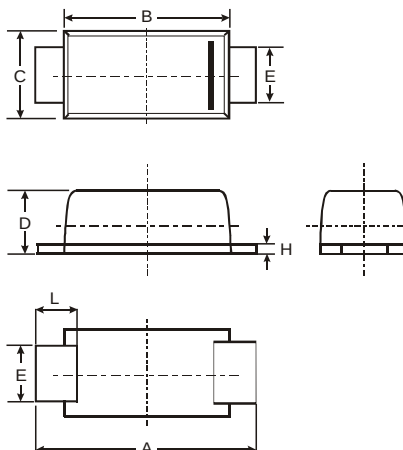
P_D : 1.5 Watts

Features

- Complete Voltage Range 3.3 to 240 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

Mechanical Data

- Case: JEDEC SOD-123FL, molded plastic over passivated chip
- Polarity: Color band denotes positive end (cathode) except for bidirectional
- Mounting position: Any
- Weight: 0.0007 ounce, 0.02 grams



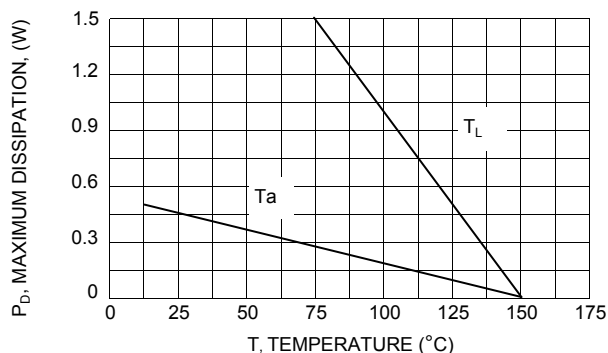
SOD-123FL			
Dim	Min	Max	Typ
A	3.58	3.72	3.65
B	2.72	2.78	2.75
C	1.77	1.83	1.80
D	1.02	1.08	1.05
E	0.097	1.03	1.00
H	0.13	0.17	0.15
L	0.53	0.57	0.55

All Dimensions in mm

MAXIMUM RATINGS Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation @ $T_L = 75\text{ °C}$	P_D	1.5	W
Measured zero lead length(1" square copper pad, FR-4 board) Derate above 75 °C		20	mW/°C
Thermal Resistance Junction to Lead	$R_{\theta JL}$	50	°C/W
DC Power Dissipation @ $T_a = 25\text{ °C}$	P_D	0.5	W
(FR-4 board) Derate above 25 °C		4.0	mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	250	°C/W
Maximum Forward Voltage at $I_F = 200\text{ mA}$	V_F	1.5	V
Operating Junction and Storage Temperature Range	T_J, T_{STG}	- 65 to + 150	°C

Fig. 1 POWER TEMPERATURE DERATING CURVE



ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R @ V _R		I _{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
1SMF5913B	3.3	113.6	10	500	1.0	100	1.0	454
1SMF5914B	3.6	104.2	9.0	500	1.0	75	1.0	416
1SMF5915B	3.9	96.1	7.5	500	1.0	25	1.0	384
1SMF5916B	4.3	87.2	6.0	500	1.0	5.0	1.0	348
1SMF5917B	4.7	79.8	5.0	500	1.0	5.0	1.5	319
1SMF5918B	5.1	73.5	4.0	350	1.0	5.0	2.0	294
1SMF5919B	5.6	66.9	2.0	250	1.0	5.0	3.0	267
1SMF5920B	6.2	60.5	2.0	200	1.0	5.0	4.0	241
1SMF5921B	6.8	55.1	2.5	200	1.0	50	5.2	220
1SMF5922B	7.5	50.0	3.0	400	0.5	50	6.0	200
1SMF5923B	8.2	45.7	3.5	400	0.5	50	6.5	182
1SMF5924B	9.1	41.2	4.0	500	0.5	50	7.0	164
1SMF5925B	10	37.5	4.5	500	0.25	50	8.0	150
1SMF5926B	11	34.1	5.5	550	0.25	50	8.4	136
1SMF5927B	12	31.2	6.5	550	0.25	1.0	9.1	125
1SMF5928B	13	28.8	7.0	550	0.25	1.0	9.9	115
1SMF5929B	15	25.0	9.0	600	0.25	1.0	11.4	100
1SMF5930B	16	23.4	10	600	0.25	1.0	12.2	93
1SMF5931B	18	20.8	12	650	0.25	1.0	13.7	83
1SMF5932B	20	18.7	14	650	0.25	1.0	15.2	75
1SMF5933B	22	17.0	17.5	650	0.25	1.0	16.7	68
1SMF5934B	24	15.6	19	700	0.25	1.0	18.2	62
1SMF5935B	27	13.9	23	700	0.25	1.0	20.6	55
1SMF5936B	30	12.5	26	750	0.25	1.0	22.8	50
1SMF5937B	33	11.4	33	800	0.25	1.0	25.1	45
1SMF5938B	36	10.4	38	850	0.25	1.0	27.4	41
1SMF5939B	39	9.6	45	900	0.25	1.0	29.7	38
1SMF5940B	43	8.7	53	950	0.25	1.0	32.7	34
1SMF5941B	47	8.0	67	1000	0.25	1.0	35.8	31
1SMF5942B	51	7.3	70	1100	0.25	1.0	38.8	29
1SMF5943B	56	6.7	86	1300	0.25	1.0	42.6	26
1SMF5944B	62	6.0	100	1500	0.25	1.0	47.1	24
1SMF5945B	68	5.5	120	1700	0.25	1.0	51.7	22
1SMF5946B	75	5.0	140	2000	0.25	1.0	56.0	20
1SMF5947B	82	4.6	160	2500	0.25	1.0	62.2	18
1SMF5948B	91	4.1	200	3000	0.25	1.0	69.2	16
1SMF5949B	100	3.7	250	3100	0.25	1.0	76.0	15
1SMF5950B	110	3.4	300	4000	0.25	1.0	83.6	13
1SMF5951B	120	3.1	380	4500	0.25	1.0	91.2	12
1SMF5952B	130	2.9	450	5000	0.25	1.0	98.8	11
1SMF5953B	150	2.5	600	6000	0.25	1.0	114.0	10
1SMF5954B	160	2.3	700	6500	0.25	1.0	121.6	9.0
1SMF5955B	180	2.1	900	7000	0.25	1.0	136.8	8.0
1SMF5956B	200	1.9	1200	8000	0.25	1.0	152.0	7.0
1SMF5957B	240	1.5	1600	9000	0.25	1.0	182.4	6.0

Note :

- (1) Suffix " B " indicates $\pm 5\%$ tolerance suffix " A " indicates $\pm 10\%$ tolerance.