GSZxxxL10D2F Series

Zener Diodes

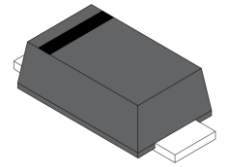
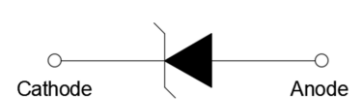
Product Description

Zener diode with 1W power dissipation.

Features

- Zener Voltage Range 3.0V to 100V
- Tolerance of ±5%
- SOD-123FL Package
- Band Indicates Cathode
- RoHS Compliant and Halogen Free

Packages & Pin Assignments

SOD-123FL	Equivalent Circuit
 *Band Indicates Cathode	

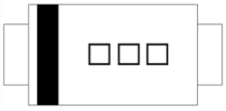
Ordering and Marking Information

Ordering Information

Part Number	Package	Part Marking	Quantity / Reel
GSZ□□□L10D2F	SOD-123FL	□□□	3,000 PCS

- **Product Code:** GSZ is Zener Diode
- **Voltage Code:** □□□, such as 3V0 is 3.0V and 75V is 75V etc.
- **V_Z Tolerance:** L is 5%
- **Series Code:** 10 is SMF47 Series
- **Package Code:** D2 is SOD-123FL
- **Green Level:** F is RoHS Compliant and Halogen Free

Marking Information



- □□□
  Device Marking please refer to the Electrical Characteristics Section

Absolute Maximum Ratings (T_A=25°C Unless Otherwise Specified)

Symbol	Parameter	Value	Unit
P_D	Power Dissipation	1	W
T_J	Junction Temperature Range	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C
V_F	Maximum Forward Voltage @ I_F = 200 mA	1.2	V

Electrical Characteristics (T_A=25°C Unless Otherwise Specified)

Part Number	Marking	V_Z (V) @ I_{ZT}			Z_{ZT} (Ω) @ I_{ZT}	I_{ZT} (mA)	Z_{ZK} (Ω) @ I_{ZK}	I_{ZK} (mA)	I_R (μA) @ V_R	V_R (V)
		Min	Nom	Max	Max		Max		Max	
GSZ3V0L10D2	27A	2.85	3.0	3.15	15	80	400	1	100	1
GSZ3V3L10D2	28A	3.14	3.3	3.47	10	76	400	1	100	1
GSZ3V6L10D2	29A	3.42	3.6	3.78	10	69	400	1	100	1
GSZ3V9L10D2	30A	3.71	3.9	4.10	9	64	400	1	50	1
GSZ4V3L10D2	31A	4.09	4.3	4.52	9	58	400	1	10	1
GSZ4V7L10D2	32A	4.47	4.7	4.94	8	53	500	1	10	1
GSZ5V1L10D2	33A	4.85	5.1	5.36	7	49	550	1	10	1
GSZ5V6L10D2	34A	5.32	5.6	5.88	5	45	600	1	10	2
GSZ6V2L10D2	35A	5.89	6.2	6.51	2	41	700	1	10	3
GSZ6V8L10D2	36A	6.46	6.8	7.14	4	37	700	1	10	4
GSZ7V5L10D2	37A	7.11	7.5	7.86	4	34	700	0.5	10	5
GSZ8V2L10D2	38A	7.79	8.2	8.61	5	31	700	0.5	10	6
GSZ9V1L10D2	39A	8.65	9.1	9.56	5	28	700	0.5	10	7
GSZ10VL10D2	40A	9.50	10	10.50	7	25	700	0.25	10	7.6
GSZ11VL10D2	41A	10.45	11	11.55	8	23	700	0.25	0.5	8.4
GSZ12VL10D2	42A	11.40	12	12.60	9	21	700	0.25	0.5	9.1
GSZ13VL10D2	43A	12.35	13	13.65	10	19	700	0.25	0.5	9.9
GSZ15VL10D2	44A	14.25	15	15.75	14	17	700	0.25	0.5	11.4
GSZ16VL10D2	45A	15.20	16	16.80	16	15.5	700	0.25	0.5	12.2
GSZ18VL10D2	46A	17.10	18	18.90	20	14	750	0.25	0.5	13.7
GSZ20VL10D2	47A	19.00	20	21.00	22	12.5	750	0.25	0.5	15.2
GSZ22VL10D2	48A	20.9	22	23.10	23	11.5	750	0.25	0.5	16.7
GSZ24VL10D2	49A	22.8	24	25.20	25	10.5	750	0.25	0.5	18.2
GSZ27VL10D2	50A	25.65	27	28.35	35	9.5	750	0.25	0.5	20.6
GSZ30VL10D2	51A	28.5	30	31.50	40	8.5	1000	0.25	0.5	22.8
GSZ33VL10D2	52A	31.35	33	34.65	45	7.5	1000	0.25	0.5	25.1
GSZ36VL10D2	53A	34.20	36	37.80	50	7	1000	0.25	0.5	27.4
GSZ39VL10D2	54A	37.05	39	40.95	60	6.5	1000	0.25	0.5	29.7
GSZ43VL10D2	55A	40.85	43	45.15	70	6	1500	0.25	0.5	32.7

Electrical Characteristics (T_A=25°C Unless Otherwise Specified)

Part Number	Marking	V_Z (V) @ I_{ZT}			Z_{ZT} (Ω) @ I_{ZT}	I_{ZT} (mA)	Z_{ZK} (Ω) @ I_{ZK}	I_{ZK} (mA)	I_R (μA) @ V_R	V_R (V)
		Min	Nom	Max	Max		Max		Max	
GSZ47VL10D2	56A	44.65	47	49.35	80	5.5	1500	0.25	0.5	35.8
GSZ51VL10D2	57A	48.45	51	53.55	95	5	1500	0.25	0.5	38.8
GSZ56VL10D2	58A	52	56	58.80	110	4.5	2000	0.25	0.5	42.6
GSZ62VL10D2	59A	58.90	62	65.10	125	4	2000	0.25	0.5	47.1
GSZ68VL10D2	60A	64.60	68	71.40	150	3.7	2000	0.25	0.5	51.7
GSZ75VL10D2	61A	71.25	75	78.75	175	3.3	2000	0.25	0.5	56.0
GSZ82VL10D2	62A	77.90	82	86.10	200	3.0	3000	0.25	0.5	62.2
GSZ91VL10D2	63A	86.45	91	95.55	250	2.8	3000	0.25	0.5	69.2
GSZA0VL10D2	64A	95	100	105	350	2.5	3000	0.25	0.5	76.0

NOTE:

1. The Zener Voltage (V_Z) is tested under pulse condition of 10mS.
2. The device numbers listed have a standard tolerance on the nominal Zener voltage of ±5%.
3. The Zener impedance is derived from the 60-cycle ac voltage, which results when an ac current having an rms value equal to 10% of the dc Zener current (I_{ZT} or I_{ZK}) is superimposed to I_{ZT} or I_{ZK}.

Typical Characteristics

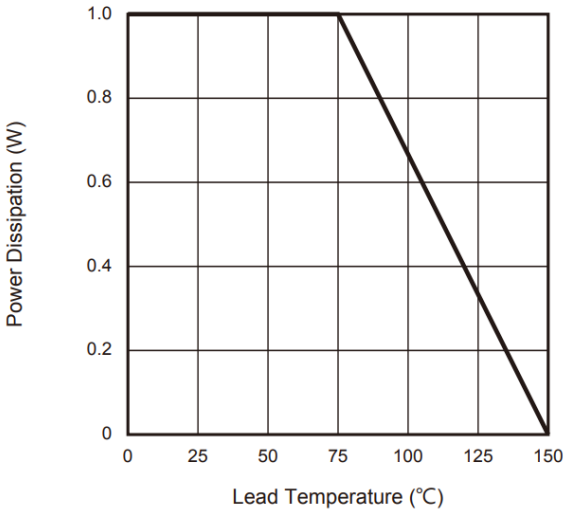


FIG.1 Power Derating Curve

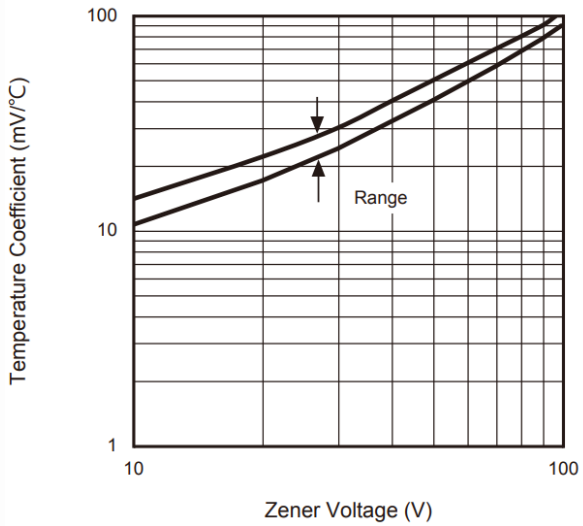
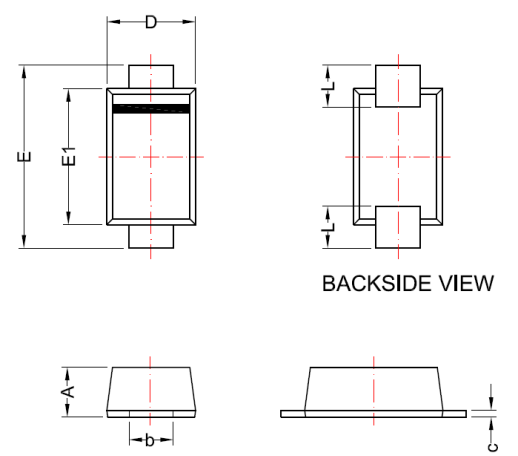


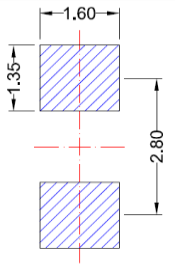
FIG.2 Temperature Coefficients vs. Zener Voltage

SOD-123FL

Package Dimension



Recommended Land Pattern



(Unit:mm)

Dimensions				
Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	0.80	1.40	0.031	0.055
b	0.50	1.20	0.020	0.047
c	0.05	0.25	0.002	0.010
D	1.50	2.10	0.059	0.083
E	3.30	3.90	0.130	0.154
E1	2.45	2.90	0.096	0.114
L	0.30	0.90	0.012	0.035

NOTE:
Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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