

GSZxxxL05D2F Series

Zener Diodes

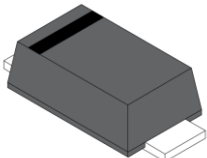
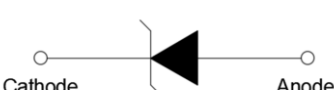
Product Description

Zener diode with 500mW power dissipation.

Features

- Zener Voltage Range 2.0V to 75V
- Tolerance of $\pm 5\%$
- 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□□□L05D2F	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: 05 is MMSZ 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	500	mW
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 = 10 mA	0.9	V

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

Device	Device Marking	V _Z (V)			Z _{zT} @ I _{zT} Max		Z _{zK} @ I _{zK} Max		I _R @ V _R Max	
		Min	Nom	Max	Ω	mA	Ω	mA	uA	V
GSZ2V0L05D2F	2V0Z	1.90	2.0	2.10	100	5	564	1	120	0.5
GSZ2V2L05D2F	2V2Z	2.09	2.2	2.31	100	5	564	1	120	0.7
GSZ2V4L05D2F	2V4Z	2.28	2.4	2.52	100	5	564	1	45	1
GSZ2V7L05D2F	2V7Z	2.57	2.7	2.84	100	5	564	1	18	1
GSZ3V0L05D2F	3V0Z	2.85	3.0	3.15	100	5	564	1	9	1
GSZ3V3L05D2F	3V3Z	3.14	3.3	3.47	95	5	564	1	4.5	1
GSZ3V6L05D2F	3V6Z	3.42	3.6	3.78	90	5	564	1	4.5	1
GSZ3V9L05D2F	3V9Z	3.71	3.9	4.10	90	5	564	1	2.7	1
GSZ4V3L05D2F	4V3Z	4.09	4.3	4.52	90	5	564	1	2.7	1
GSZ4V7L05D2F	4V7Z	4.47	4.7	4.94	80	5	470	1	2.7	2
GSZ5V1L05D2F	5V1Z	4.85	5.1	5.36	60	5	451	1	1.8	2
GSZ5V6L05D2F	5V6Z	5.32	5.6	5.88	40	5	376	1	0.9	2
GSZ6V2L05D2F	6V2Z	5.89	6.2	6.51	10	5	141	1	2.7	4
GSZ6V8L05D2F	6V8Z	6.46	6.8	7.14	15	5	75	1	1.8	4
GSZ7V5L05D2F	7V5Z	7.11	7.5	7.86	15	5	75	1	0.9	5
GSZ8V2L05D2F	8V2Z	7.79	8.2	8.61	15	5	75	1	0.63	5
GSZ9V1L05D2F	9V1Z	8.65	9.1	9.56	15	5	94	1	0.45	6
GSZ10VL05D2F	10VZ	9.50	10	10.50	20	5	141	1	0.18	7
GSZ11VL05D2F	11VZ	10.45	11	11.55	20	5	141	1	0.09	8
GSZ12VL05D2F	12VZ	11.40	12	12.60	25	5	141	1	0.09	8
GSZ13VL05D2F	13VZ	12.35	13	13.65	30	5	160	1	0.09	8
GSZ15VL05D2F	15VZ	14.25	15	15.75	30	5	188	1	0.045	10.5
GSZ16VL05D2F	16VZ	15.20	16	16.80	40	5	188	1	0.045	11.2
GSZ18VL05D2F	18VZ	17.10	18	18.90	45	5	212	1	0.045	12.6
GSZ20VL05D2F	20VZ	19.00	20	21.00	55	5	212	1	0.045	14
GSZ22VL05D2F	22VZ	20.9	22	23.10	55	5	235	1	0.045	15.4
GSZ24VL05D2F	24VZ	22.8	24	25.20	70	5	235	1	0.045	16.8

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

Device	Device Marking	V _Z (V)			Z _{ZT} @ I _{ZT} Max		Z _{ZK} @ I _{ZK} Max		I _R @ V _R Max	
		Min	Nom	Max	Ω	mA	Ω	mA	uA	V
GSZ27VL05D2F	27VZ	25.65	27	28.35	80	2	282	0.5	0.045	18.9
GSZ30VL05D2F	30VZ	28.5	30	31.50	80	2	282	0.5	0.045	21
GSZ33VL05D2F	33VZ	31.35	33	34.65	80	2	306	0.5	0.045	23
GSZ36VL05D2F	36VZ	34.20	36	37.80	90	2	329	0.5	0.045	25.2
GSZ39VL05D2F	39VZ	37.05	39	40.95	130	2	329	0.5	0.045	27.3
GSZ43VL05D2F	43VZ	40.85	43	45.15	150	2	353	0.5	0.045	30.1
GSZ47VL05D2F	47VZ	44.65	47	49.35	170	2	353	0.5	0.045	33
GSZ51VL05D2F	51VZ	48.45	51	53.55	180	2	376	0.5	0.045	35.7
GSZ56VL05D2F	56VZ	52	56	58.80	200	2	400	0.5	0.045	39.2
GSZ62VL05D2F	62VZ	58.90	62	65.10	215	2	423	0.5	0.045	43.4
GSZ68VL05D2F	68VZ	64.60	68	71.40	240	2	447	0.5	0.045	47.6
GSZ75VL05D2F	75VZ	71.25	75	78.75	255	2	470	0.5	0.045	52.5

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

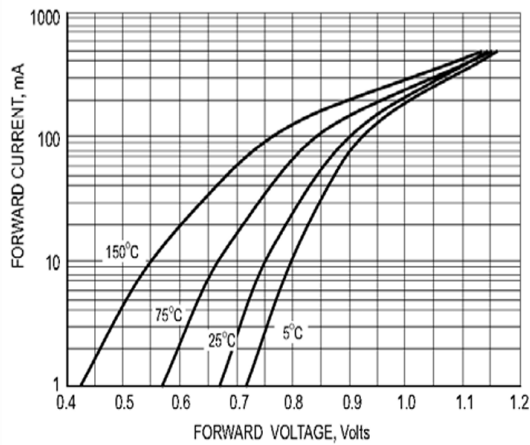


FIG.1 Forward Characteristics

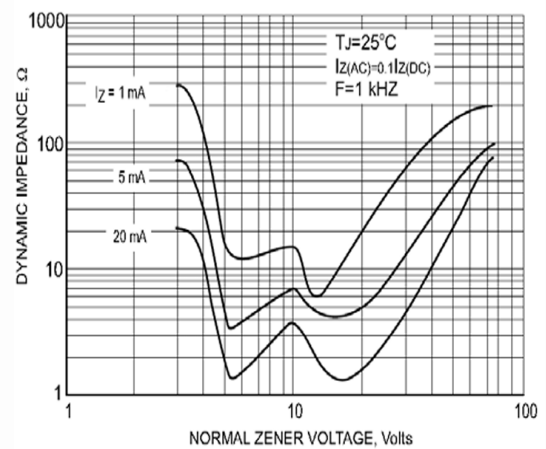


FIG.2 Effect of Zener Voltage on Zener Impedance

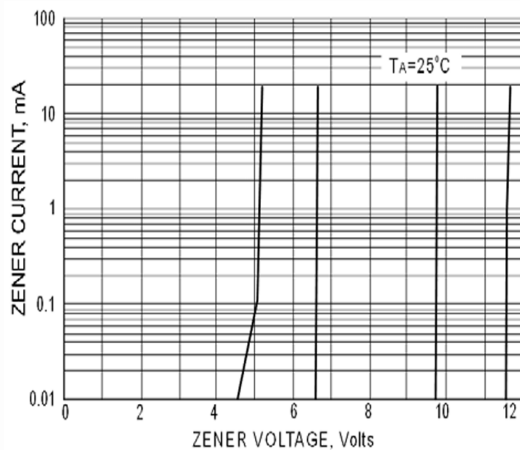


FIG.3 Zener Breakdown Characteristics

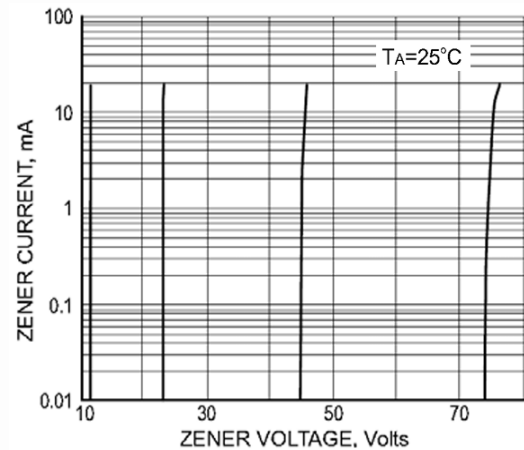


FIG.4 Zener Breakdown Characteristics

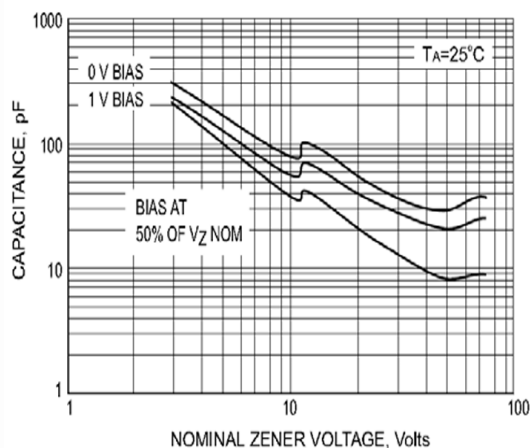


FIG.5 Capacitance Characteristics

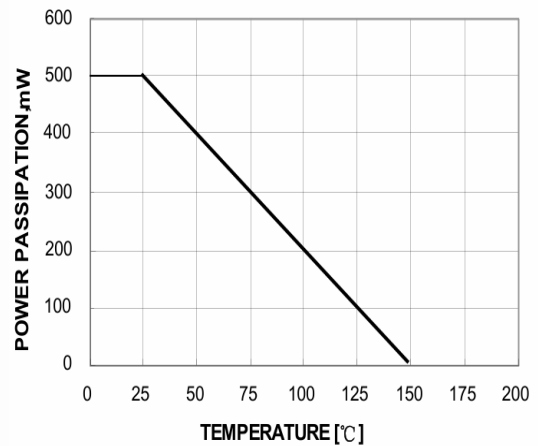
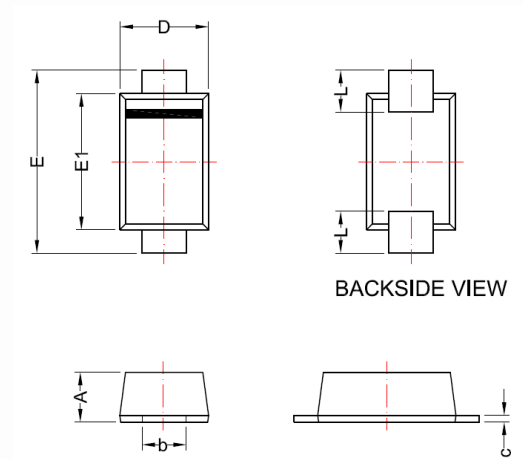


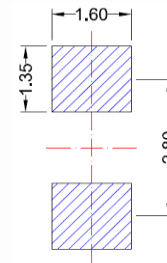
FIG.6 Power Derating Curve

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.

NOTICE

- Globaltech Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all Globaltech Semiconductor products described or contained herein. Globaltech Semiconductor products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Globaltech Semiconductor makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- Information furnished is believed to be accurate and reliable. However Globaltech Semiconductor assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties, which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Globaltech Semiconductor. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information without express written approval of Globaltech Semiconductor.

CONTACT US

GS Headquarter	
	4F, NO.43-1, Lane 11, Sec. 6, Minquan E. Rd Neihu District, Taipei City 114761, Taiwan (R.O.C).
	886-2-2657-9980
	886-2-2657-3630
	sales_twn@gs-power.com

RD Division	
	824 Bolton Drive Milpitas. CA. 95035
	1-408-457-0587