

# Zener Voltage Regulators

## 200 mW SOD-882 Surface Mount

This series of Zener diodes is packaged in a SOD-882 surface mount package. They are designed to provide voltage regulation protection and are especially attractive in situations where space is at a premium. They are well suited for applications such as cellular phones, hand held portables, and high density PC boards.

### Specification Features:

- Standard Zener Breakdown Voltage Range – 2.4 V to 24 V
- Steady State Power Rating of 200 mW
- ESD Rating of Class 3 (>16 kV) per Human Body Model
- We declare that the material of product compliance with RoHS requirements and Halogen free.

### Mechanical Characteristics:

**CASE:** Void-free, transfer-molded, thermosetting plastic  
Epoxy Meets UL 94 V-0

**LEAD FINISH:** 100% Matte Sn (Tin)

**MOUNTING POSITION:** Any

**QUALIFIED MAX REFLOW TEMPERATURE:** 260°C

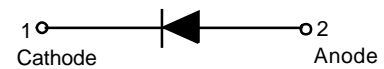
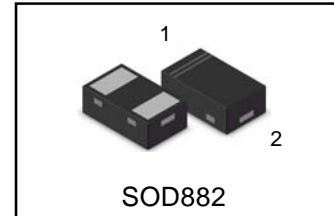
Device Meets MSL 1 Requirements

### MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Total Device Dissipation FR-5 Board, @ T <sub>A</sub> = 25°C	P <sub>D</sub>	200	mW
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

## LNZ8F2V4T5G Series



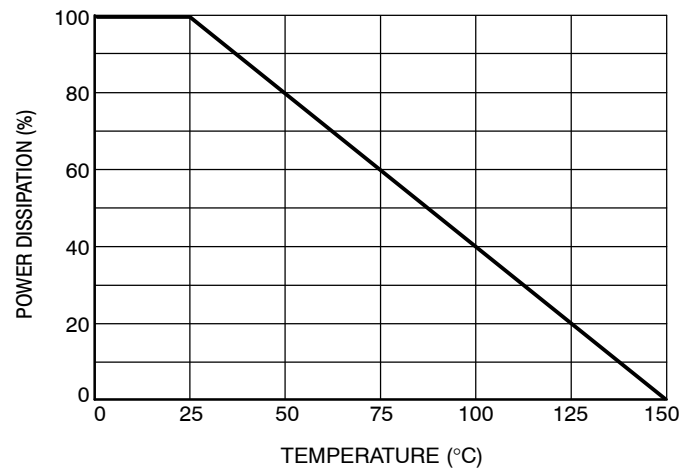
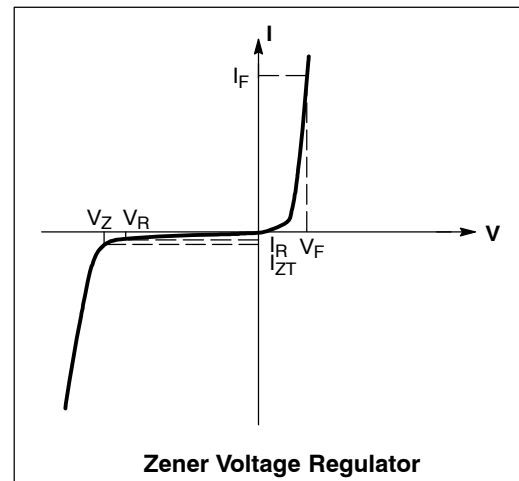
### ORDERING INFORMATION

Device	Package	Shipping
LNZ8F2V4T1G Series	SOD882	5000/Tape&Reel
LNZ8F2V4T3G Series	SOD882	8000/Tape&Reel
LNZ8F2V4T5G Series	SOD882	10000/Tape&Reel

**ELECTRICAL CHARACTERISTICS**

( $T_A = 25^\circ\text{C}$  unless otherwise noted,  
 $V_F = 0.9\text{ V Max. @ } I_F = 10\text{ mA}$  for all types)

Symbol	Parameter
$V_Z$	Reverse Zener Voltage @ $I_{ZT}$
$I_{ZT}$	Reverse Current
$Z_{ZT}$	Maximum Zener Impedance @ $I_{ZT}$
$I_{ZK}$	Reverse Current
$Z_{ZK}$	Maximum Zener Impedance @ $I_{ZK}$
$I_R$	Reverse Leakage Current @ $V_R$
$V_R$	Reverse Voltage
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$
$\Theta_{VZ}$	Maximum Temperature Coefficient of $V_Z$
C	Max. Capacitance @ $V_R = 0$ and $f = 1\text{ MHz}$



**Figure 1. Steady State Power Derating**

## LNZ8F2V4T5G Series

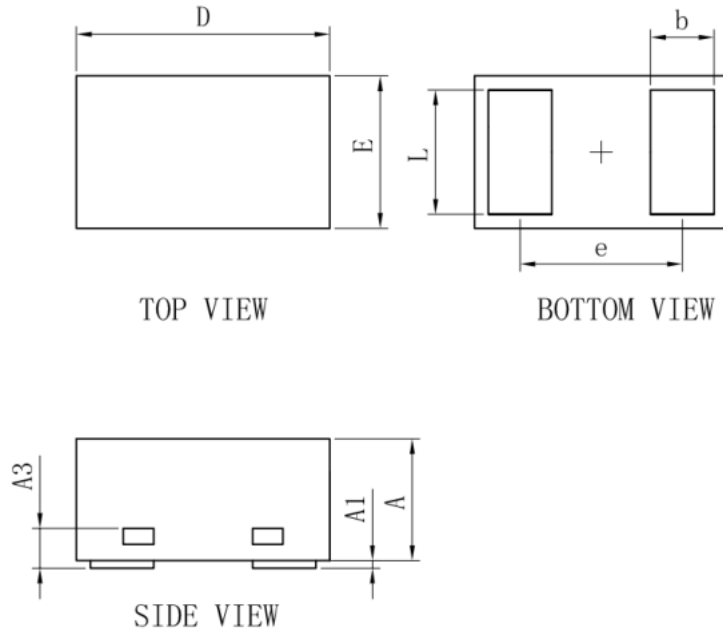
**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted,  $V_F = 0.9\text{ V Max.}$  @  $I_F = 10\text{ mA}$  for all types)

Device	Device Marking	Zener Voltage (Note 1)			Zener Impedance			Leakage Current		$\Theta V_Z$ (mV/k) @ $I_{ZT}$		$C$ @ $V_R = 0$ f = 1 MHz
		$V_Z$ (Volts)		@ $I_{ZT}$	$Z_{ZT}$ @ $I_{ZT}$	$Z_{ZK}$ @ $I_{ZK}$	$I_R$ @ $V_R$		Min	Max	pF	
		Min	Max	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	Volts			
LNZ8F2V4T5G	J	2.28	2.52	5	100	1000	1	50	1	-3.5	0	210
LNZ8F2V7T5G	E**	2.57	2.84	5	100	1000	1	20	1	-3.5	0	210
LNZ8F3V0T5G	T**	2.85	3.15	5	100	1000	1	10	1	-3.5	0	210
LNZ8F3V3T5G	Q	3.14	3.47	5	100	1000	1	10	1	-3.5	0	210
LNZ8F3V6T5G	3**	3.42	3.78	5	100	1000	1	10	1	-3.5	0	210
LNZ8F3V9T5G	V**	3.71	4.10	5	100	1000	1	5	1	-3.5	-2.5	210
LNZ8F4V3T5G	Y**	4.09	4.52	5	100	1000	1	5	1	-3.5	0	210
LNZ8F4V7T5G	7	4.47	4.94	5	100	800	0.5	2	1	-3.5	0.2	150
LNZ8F5V1T5G	4	4.85	5.36	5	80	500	0.5	2	1.5	-2.7	1.2	130
LNZ8F5V6T5G	5*	5.32	5.88	5	60	200	0.5	1	2.5	-2.0	2.5	115
LNZ8F6V2T5G	6	5.89	6.51	5	60	100	0.5	1	3	0.4	3.7	110
LNZ8F6V8T5G	A*	6.46	7.14	5	40	60	0.5	0.5	3.5	1.2	4.5	105
LNZ8F7V5T5G	D*	7.13	7.88	5	30	60	0.5	0.5	4	2.5	5.3	100
LNZ8F8V2T5G	E*	7.79	8.61	5	30	60	0.5	0.5	5	3.2	6.2	90
LNZ8F9V1T5G	F*	8.65	9.56	5	30	60	0.5	0.5	6	3.8	7	80
LNZ8F10VT5G	J*	9.50	10.50	5	30	60	0.5	0.1	7	4.5	8	80
LNZ8F11VT5G	K*	10.45	11.55	5	30	60	0.5	0.1	8	5.4	9	80
LNZ8F12VT5G	L*	11.40	12.60	5	30	80	0.5	0.1	9	6	10	80
LNZ8F13VT5G	P*	12.35	13.65	5	37	80	0.5	0.1	10	7	11	75
LNZ8F15VT5G	Q*	14.25	15.75	5	42	80	0.5	0.1	11	9.2	13	70
LNZ8F16VT5G	R*	15.20	16.80	5	50	80	0.5	0.1	12	10.4	14	65
LNZ8F18VT5G	T*	17.10	18.90	5	50	80	0.5	0.1	14	12.4	16	60
LNZ8F20VT5G	V*	19.00	21.00	5	55	100	0.5	0.1	15.4	14.4	18	55
LNZ8F22VT5G	Y*	20.90	23.10	5	55	100	0.5	0.1	16.8	15.4	20	55
LNZ8F24VT5G	S	22.80	25.20	5	70	120	0.5	0.1	18.9	16.8	22	50

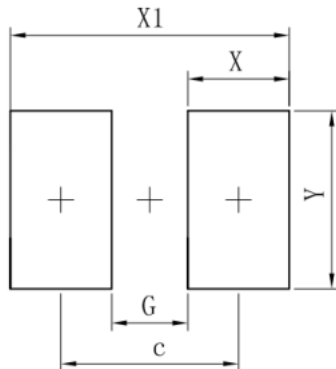
 \*Rotated  $90^\circ$ .

 \*\*Rotated  $270^\circ$ .

 1. Zener voltage is measured with a pulse test current  $I_Z$  at an ambient temperature of  $25^\circ\text{C}$ .

**LNZ8F2V4T5G Series**
**OUTLINE AND DIMENSIONS**
**SOD882**


SOD882			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		
All Dimensions in mm			

**SOLDERING FOOTPRINT**
**SOD882**


Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70