NZ3FxxxT1G Series, SZNZ3FxxxT1G Series

Zener Voltage Regulators

800 mW SOD−323FL Surface Mount

This series of Zener diodes is packaged in a SOD−323FL surface mount package that has a power dissipation of 800 mW. 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, high density PC boards, and automotive.

Specification Features:

- Standard Zener Breakdown Voltage Range − 2.4 V to 75 V
- Steady State Power Rating of 800 mW
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- SZ Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC−Q101 Qualified and PPAP Capable
- These Devices are Pb−Free, Halogen Free/BFR Free and are RoHS Compliant

Mechanical Characteristics:

CASE: Void-free, Transfer-Molded Plastic
FINISH: All External Surfaces are Corrosion Resistant
MAXIMUM CASE TEMPERATURE FOR SOLDERING PURPOSES: 260°C for 10 Seconds
LEADS: Plated with Pb−Sn or Sn Only (Pb−Free)
POLARITY: Cathode Indicated by Polarity Band
FLAMMABILITY RATING: UL 94 V−0
MOUNTING POSITION: Any

MAXIMUM RATINGS

Rating	Symbol	Max	Unit
Total Device Dissipation FR−4 Board, (Note 1) @ T_A = 25°C Derate above 25°C	P_D	800 6.4	mW mW/°C
Thermal Resistance, Junction−to−Ambient	$R_{\theta JA}$	156	°C/W
Junction and Storage Temperature Range	T_J, T_{stg}	−65 to +150	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.
1. FR−4 printed circuit board, single−sided copper, mounting pad 1 cm^2.

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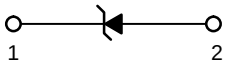
SOD−323FL
CASE 477AC



MARKING DIAGRAM

XX = Specific Device Code
M = Date Code

ORDERING INFORMATION

Device	Package	Shipping†
NZ3FxxxT1G	SOD−323FL (Pb−Free)	3,000 / Tape & Reel
SZNZ3FxxxT1G	SOD−323FL (Pb−Free)	3,000 / Tape & Reel

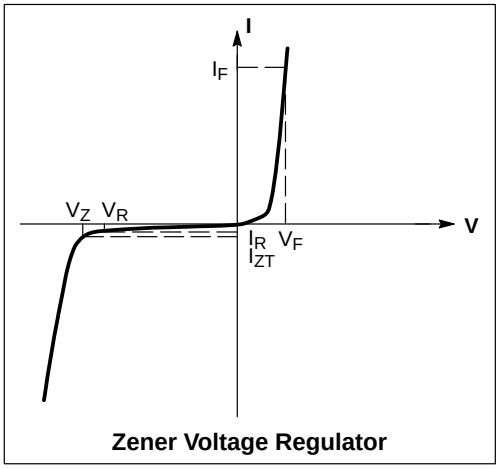
†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

DEVICE MARKING INFORMATION

See specific marking information in the device marking column of the Electrical Characteristics table on page 2 of this data sheet.

ELECTRICAL CHARACTERISTICS

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
ΘV_Z	Maximum Temperature Coefficient of V_Z
C	Max. Capacitance @V_R = 0 and f = 1 MHz



Zener Voltage Regulator

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted, V_F = 1.3 V Max. @ I_F = 10 mA for all types)

Device*	Device Marking	Zener Voltage (Note 2) V_Z (Volts) Min	Nom	Max	@ I_{ZT} mA	Zener Impedance Z_{ZT} @ I_{ZT} Ω	Z_{ZK} @ I_{ZK} Ω	mA	Leakage Current I_R @ V_R µA	Volts	ΘV_Z (mV/k) @ I_{ZT} Min	Max	C @ V_R = 0 f = 1 MHz pF
NZ3F2V4T1G		2.2	2.4	2.6	5	120	1000	0.5	50	1.0	−3.5	0	450
NZ3F4V7T1G		4.4	4.7	5.0	5	100	800	0.5	3	2.0	−3.5	0.2	260
NZ3F5V1T1G		4.8	5.1	5.4	5	80	500	0.5	2	2.0	−2.7	1.2	225
NZ3F5V6T1G		5.2	5.6	6.0	5	60	200	0.5	1	2.0	−2.0	2.5	200
NZ3F9V1T1G		8.5	9.1	9.6	5	45	240	0.5	0.2	7.0	3.8	7.0	130
NZ3F10VT1G		9.4	10	10.6	5	40	175	0.5	0.1	8.0	4.5	8.0	130
NZ3F12VT1G		11.4	12	12.7	5	60	220	0.5	0.1	8.0	6.0	10	130
NZ3F15VT1G		14.3	15	15.8	5	100	220	0.5	0.05	10.5	9.2	13	110
NZ3F18VT1G		16.8	18	19.1	5	60	290	0.5	0.05	12.6	12.4	16	100
NZ3F33VT1G		31	33	35	2	140	310	0.5	0.05	23.2	27.4	33.4	70
NZ3F47VT1G		44	47	50	2	150	500	0.5	0.05	32.9	42.0	51.8	40
NZ3F75VT1G		70	75	79	2	155	780	0.5	0.05	52.5	73.4	88.6	35

*Includes SZ-prefix devices where applicable.
2. Zener voltage is measured with a pulse test current I_Z at an ambient temperature of 25°C.

TYPICAL CHARACTERISTICS

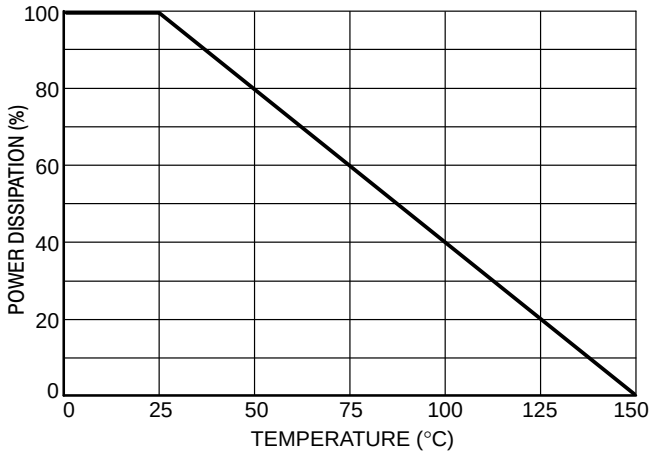
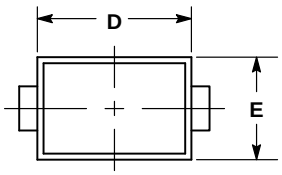


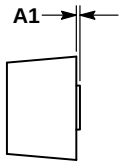
Figure 1. Steady State Power Derating

PACKAGE DIMENSIONS

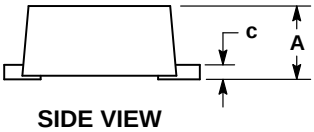
SOD−323FL
CASE 477AC
ISSUE B



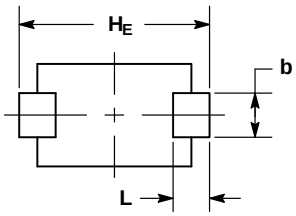
TOP VIEW



END VIEW



SIDE VIEW

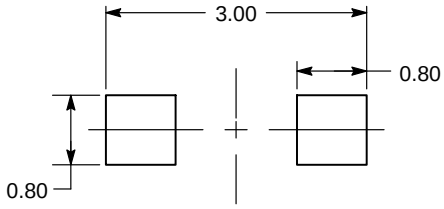


BOTTOM VIEW

NOTES:
1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. LEAD THICKNESS INCLUDES LEAD FINISH.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS, OR GATE BURRS.

	MILLIMETERS	
DIM	MIN	MAX
A	0.90	1.08
A1	−−−	0.10
b	0.50	0.70
c	0.10	0.25
D	2.00	2.20
E	1.30	1.60
H_E	2.40	2.80
L	0.35	0.65

RECOMMENDED SOLDERING FOOTPRINT*



DIMENSION: MILLIMETERS

*For additional information on our Pb−Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

PUBLICATION ORDERING INFORMATION

LITERATURE FULFILLMENT:
Literature Distribution Center for ON Semiconductor
19521 E. 32nd Pkwy, Aurora, Colorado 80011 USA
Phone: 303−675−2175 or 800−344−3860 Toll Free USA/Canada
Fax: 303−675−2176 or 800−344−3867 Toll Free USA/Canada
Email: orderlit@onsemi.com

N. American Technical Support: 800−282−9855 Toll Free USA/Canada
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Phone: 421 33 790 2910
Japan Customer Focus Center
Phone: 81−3−5817−1050

ON Semiconductor Website: **www.onsemi.com**

Order Literature: http://www.onsemi.com/orderlit

For additional information, please contact your local Sales Representative

Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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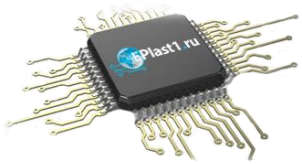
- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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