

500mW 2% Zener Diodes

FEATURES

- Wide zener voltage range selection: 2.4V to 75V
- VZ Tolerance Selection of $\pm 2\%$
- Hermetically sealed glass
- Compliant to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Low voltage stabilizers or voltage references
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: DO-35
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 109 ± 4 mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
V_Z	2.4-75	V
Test current I_{ZT}	2.5-5	mA
P_{tot}	500	mW
V_F at $I_F=100mA$	1	V
T_J MAX	175	$^{\circ}C$
Package	DO-35	
Configuration	Single dice	



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^{\circ}C$ unless otherwise noted)			
PARAMETER	SYMBOL	PART NUMBER	UNIT
Forward voltage @ $I_F=100mA$	V_F	1	V
Total power dissipation	P_{tot}	500	mW
Junction temperature range	T_J	-55 ~ 175	$^{\circ}C$
Storage temperature range	T_{STG}	-55 ~ 175	$^{\circ}C$

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-ambient thermal resistance	$R_{\theta JA}$	240	$^{\circ}C/W$

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PART NUMBER	ZENER VOLTAGE			TEST CURRENT	REGULAR IMPEDANCE		TEST CURRENT	LEAKAGE CURRENT	
	$V_Z @ I_{ZT}$			I_{ZT}	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	I_{ZK}	$I_R @ V_R$	
	V			mA	Ω	Ω	mA	μA	V
	Min.	Nom.	Max.		Max.	Max.		Max.	
BZX55B2V4	2.35	2.40	2.45	5	85	600	1.0	50	1.0
BZX55B2V7	2.65	2.70	2.75	5	85	600	1.0	10	1.0
BZX55B3V0	2.94	3.00	3.06	5	85	600	1.0	4.0	1.0
BZX55B3V3	3.23	3.30	3.37	5	85	600	1.0	2.0	1.0
BZX55B3V6	3.53	3.60	3.67	5	85	600	1.0	2.0	1.0
BZX55B3V9	3.82	3.90	3.98	5	85	600	1.0	2.0	1.0
BZX55B4V3	4.21	4.30	4.39	5	75	600	1.0	1.0	1.0
BZX55B4V7	4.61	4.70	4.79	5	60	600	1.0	0.5	1.0
BZX55B5V1	5.00	5.10	5.20	5	35	550	1.0	0.1	1.0
BZX55B5V6	5.49	5.60	5.71	5	25	450	1.0	0.1	1.0
BZX55B6V2	6.08	6.20	6.32	5	10	200	1.0	0.1	2.0
BZX55B6V8	6.66	6.80	6.94	5	8	150	1.0	0.1	3.0
BZX55B7V5	7.35	7.50	7.65	5	7	50	1.0	0.1	5.0
BZX55B8V2	8.04	8.20	8.36	5	7	50	1.0	0.1	6.2
BZX55B9V1	8.92	9.10	9.28	5	10	50	1.0	0.1	6.8
BZX55B10	9.80	10.00	10.20	5	15	70	1.0	0.1	7.5
BZX55B11	10.78	11.00	11.22	5	20	70	1.0	0.1	8.2
BZX55B12	11.76	12.00	12.24	5	20	90	1.0	0.1	9.1
BZX55B13	12.74	13.00	13.26	5	26	110	1.0	0.1	10
BZX55B15	14.70	15.00	15.30	5	30	110	1.0	0.1	11
BZX55B16	15.68	16.00	16.32	5	40	170	1.0	0.1	12
BZX55B18	17.64	18.00	18.36	5	50	170	1.0	0.1	14
BZX55B20	19.60	20.00	20.40	5	55	220	1.0	0.1	15
BZX55B22	21.56	22.00	22.44	5	55	220	1.0	0.1	17
BZX55B24	23.52	24.00	24.48	5	80	220	1.0	0.1	18
BZX55B27	26.46	27.00	27.54	5	80	220	1.0	0.1	20
BZX55B30	29.40	30.00	30.6	5	80	220	1.0	0.1	22
BZX55B33	32.34	33.00	33.66	5	80	220	1.0	0.1	24
BZX55B36	35.28	36.00	36.72	5	80	220	1.0	0.1	27
BZX55B39	38.22	39.00	39.78	2.5	90	500	0.5	0.1	28
BZX55B43	42.14	43.00	43.86	2.5	90	600	0.5	0.1	32
BZX55B47	46.06	47.00	47.94	2.5	110	700	0.5	0.1	35
BZX55B51	49.98	51.00	52.02	2.5	125	700	0.5	0.1	38
BZX55B56	54.88	56.00	57.12	2.5	135	1000	0.5	0.1	42
BZX55B62	60.76	62.00	63.24	2.5	150	1000	0.5	0.1	47
BZX55B68	66.64	68.00	69.36	2.5	160	1000	0.5	0.1	51
BZX55B75	73.50	75.00	76.50	2.5	170	1000	0.5	0.1	56

Notes:

1. Tolerance and voltage designation : the type numbers listed have Zener voltage as shown
2. The device numbers listed have a standard tolerance on the nominal Zener voltage of $\pm 2\%$
3. For detailed information on price, availability and delivery of nominal Zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative
4. 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}

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
BZX55BXXX (Note 1&2)	R0	G	DO-35	10K / 14" Reel
	A0			5K / Box (Ammo)

Notes:

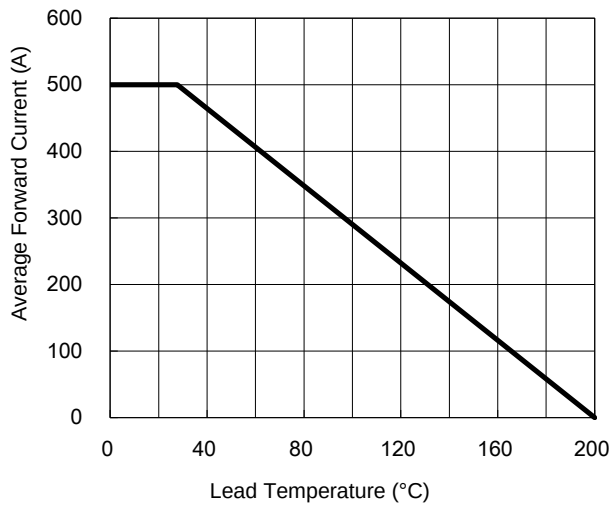
1. "xxx" defines voltage from 2.4V (BZX55B2V4) to 75V (BZX55B75)
2. Whole series with green compound

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BZX55B75 R0G	BZX55B75	R0	G	Green compound

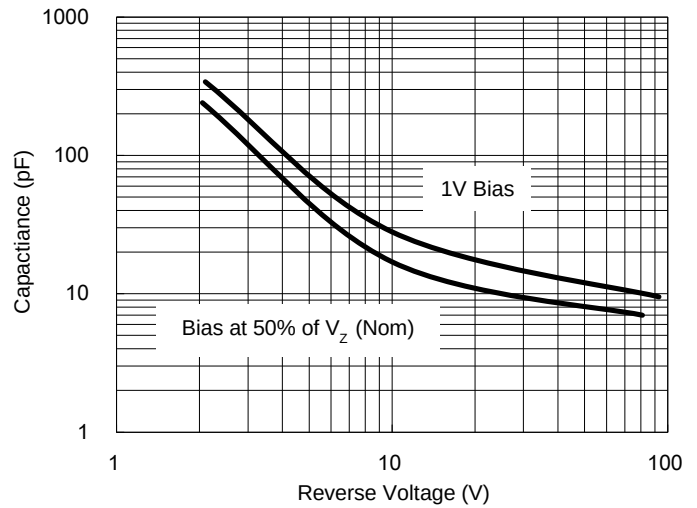
CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

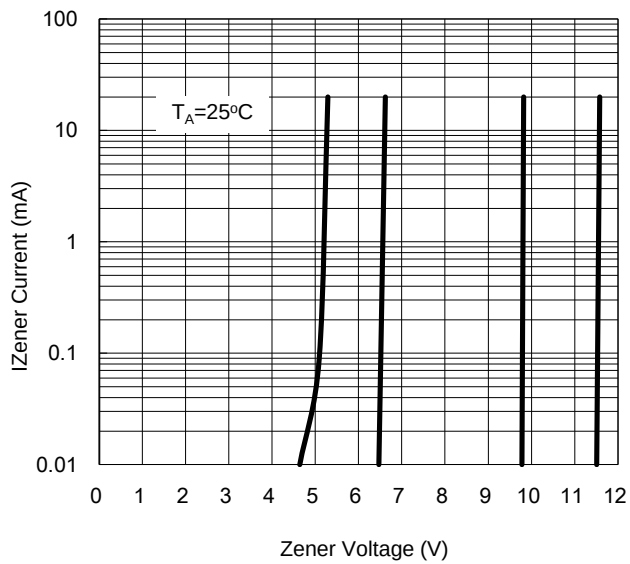
Forward Current Derating Curve



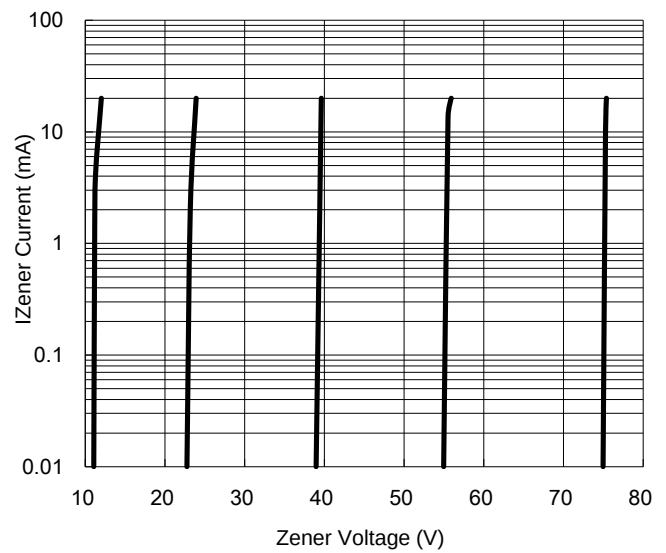
Typical Junction Capacitance



Zener Breakdown Characteristics



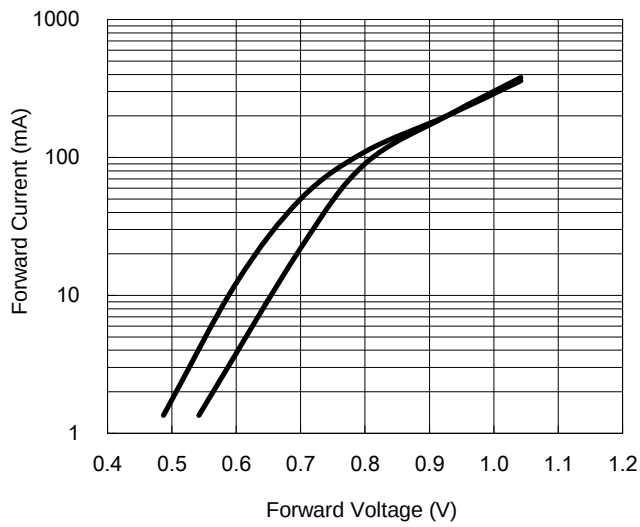
Zener Breakdown Characteristics



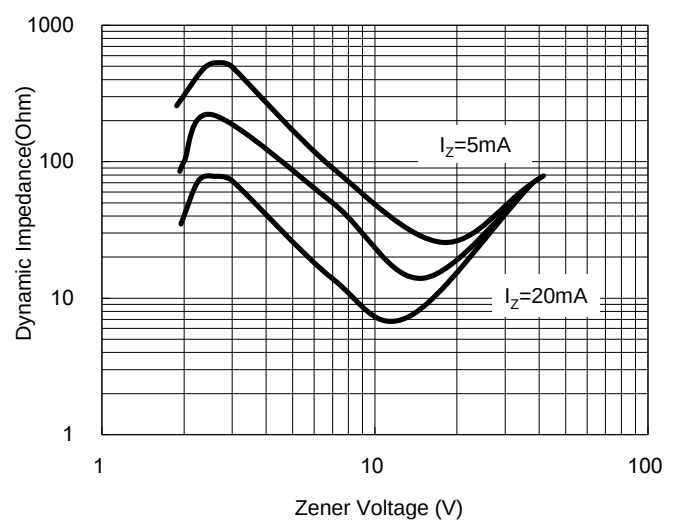
CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

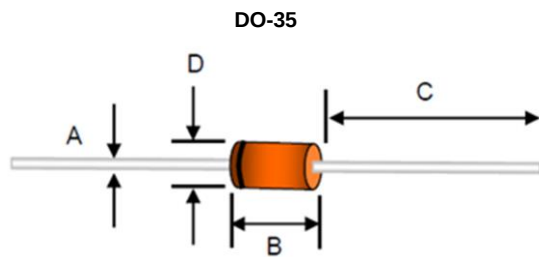
Typical Forward Characteristics



Effect of Zener Voltage on Impedance



PACKAGE OUTLINE DIMENSION



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	0.34	0.60	0.013	0.024
B	2.90	5.08	0.114	0.200
C	25.40	38.10	1.000	1.500
D	1.30	2.28	0.051	0.090

MARKING DIAGRAM



Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.



**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,
Промышленная ул, дом № 19, литера Н,
помещение 100-Н Офис 331