

# BZX83C

## SILICON EPITAXIAL PLANAR ZENER DIODES

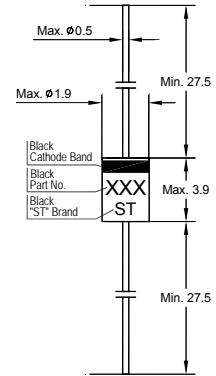
The Zener voltages are graded according to the international E 24 standard. Other tolerances and higher Zener voltages are upon request.

### Features

High reliability

### Applications

Voltage stabilization



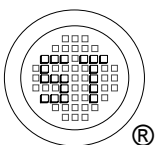
Glass Case DO-35  
Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation	$P_{\text{tot}}$	500	mW
Z-Current	$I_Z$	$P_{\text{tot}} / V_Z$	mA
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	- 65 to + 175	$^\circ\text{C}$

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air	$R_{\text{thA}}$	350	K/mW
Forward Voltage at $I_F = 50\text{ mA}$	$V_F$	1	V



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company  
listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506088

Dated : 21/06/2007

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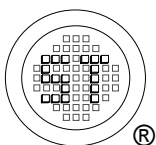
Type	Zener Voltage Range <sup>1), 2)</sup>			Dynamic Resistance			Reverse Leakage Current	
	V <sub>znom</sub> V	I <sub>ZT</sub> mA	for V <sub>ZT</sub> V	r <sub>ZJT</sub> Max. (Ω)	r <sub>ZJK</sub> Max. (Ω)	at I <sub>ZK</sub> mA	I <sub>R</sub> Max. (μA)	at V <sub>R</sub> V
BZX83C2V7	2.7	5	2.5...2.9	90	600	1	100	1
BZX83C3V0	3.0	5	2.8...3.2	90	600	1	60	1
BZX83C3V3	3.3	5	3.1...3.5	90	600	1	30	1
BZX83C3V6	3.6	5	3.4...3.8	90	600	1	20	1
BZX83C3V9	3.9	5	3.7...4.1	90	600	1	10	1
BZX83C4V3	4.3	5	4...4.6	80	600	1	5	1
BZX83C4V7	4.7	5	4.4...5	80	600	1	2	1
BZX83C5V1	5.1	5	4.8...5.4	60	550	1	1	1
BZX83C5V6	5.6	5	5.2...6.1	40	450	1	1	1
BZX83C6V2	6.2	5	5.8...6.6	10	200	1	1	2
BZX83C6V8	6.8	5	6.4...7.2	8	150	1	1	3
BZX83C7V5	7.5	5	7...7.9	7	50	1	1	3.6
BZX83C8V2	8.2	5	7.7...8.7	7	50	1	1	4
BZX83C9V1	9.1	5	8.5...9.6	10	50	1	1	5
BZX83C10	10	5	9.4...10.6	15	70	1	1	6
BZX83C11	11	5	10.4...11.6	20	70	1	1	8.2
BZX83C12	12	5	11.4...12.7	20	90	1	1	9.1
BZX83C13	13	5	12.4...14.1	26	110	1	1	10
BZX83C15	15	5	13.8...15.6	30	110	1	1	11
BZX83C16	16	5	15.3...17.1	40	170	1	1	12
BZX83C18	18	5	16.8...19.1	55	170	1	1	13
BZX83C20	20	5	18.8...21.2	55	220	1	1	15
BZX83C22	22	5	20.8...23.3	58	220	1	1	16
BZX83C24	24	5	22.8...25.6	80	220	1	1	18
BZX83C27	27	5	25.1...28.9	80	220	1	1	20
BZX83C30	30	5	28...32	80	220	1	1	22
BZX83C33	33	5	31...35	90	220	1	1	24
BZX83C36	36	5	34...38	90	220	1	1	27
BZX83C39	39	2.5	37...41	100	500	0.5	1	30
BZX83C43	43	2.5	40...46	100	600	0.5	1	33
BZX83C47	47	2.5	44...50	120	700	0.5	1	36
BZX83C51	51	2.5	48...54	125	700	0.5	1	39
BZX83C56	56	2.5	52...60	135	1000	0.5	1	43
BZX83C62	62	2.5	58...66	170	1000	0.5	1	47
BZX83C68	68	2.5	64...72	200	1000	0.5	1	51
BZX83C75	75	2.5	70...79	250	1500	0.5	1	56

<sup>1)</sup> Tighter tolerances available request:

B-----±2% of V<sub>znom</sub>

C-----±5% of V<sub>znom</sub>

<sup>2)</sup> Tested with pulses t<sub>p</sub> = 20 ms.



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