

Zeners BZX79C2V4 - BZX79C180

Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P _D	Power Dissipation @ TL ≤ 75°C, Lead Length = 3/8"	500	mW
	Derate above 75°C	4.0	mW/°C
T _J , T _{STG}	Operating and Storage Temperature Range	-65 to +200	°C

* These ratings are limiting values above which the serviceability of the diode may be impaired.

Tolerance = 5%



Electrical Characteristics T_A = 25°C unless otherwise noted

Device	Zener Voltage (Note 1)			Z _Z @ I _Z (Ω)	Leakage Current		T _C (mV / °C)		C (pF)
	Min.	Max.	I _Z (mA)	Max.	I _R (μA)	V _R (V)	Min.	Max.	V _Z = 0, f = 1MHz
BZX79C2V4	2.2	2.6	5	100	100	1	-3.5	0	255
BZX79C2V7	2.5	2.9	5	100	75	1	-3.5	0	230
BZX79C3V0	2.8	3.2	5	95	50	1	-3.5	0	215
BZX79C3V3	3.1	3.5	5	95	25	1	-3.5	0	200
BZX79C3V6	3.4	3.8	5	90	15	1	-3.5	0	185
BZX79C3V9	3.7	4.1	5	90	10	1	-3.5	+0.3	175
BZX79C4V3	4	4.6	5	90	5	1	-3.5	+1	160
BZX79C4V7	4.4	5	5	80	3	2	-3.5	+0.2	130
BZX79C5V1	4.8	5.4	5	60	2	2	-2.7	+1.2	110
BZX79C5V6	5.2	6	5	40	1	2	-2	+2.5	95
BZX79C6V2	5.8	6.6	5	10	3	4	0.4	3.7	90
BZX79C6V8	6.4	7.2	5	15	2	4	1.2	4.5	85
BZX79C7V5	7	7.9	5	15	1	5	2.5	5.3	80
BZX79C8V2	7.7	8.7	5	15	0.7	5	3.2	6.2	75
BZX79C9V1	8.5	9.6	5	15	0.5	6	3.8	7	70
BZX79C10	9.4	10.6	5	20	0.2	7	4.5	8	70
BZX79C11	10.4	11.6	5	20	0.1	8	5.4	9	65
BZX79C12	11.4	12.7	5	25	0.1	8	6	10	65
BZX79C13	12.4	14.1	5	30	0.1	8	7	11	60
BZX79C14	13.8	15.6	5	30	0.05	10.5	9.2	13	55
BZX79C16	15.3	17.1	5	40	0.05	11.2	10.4	14	52
BZX79C18	16.8	19.1	5	45	0.05	12.6	12.9	16	47
BZX79C20	18.8	21.2	5	55	0.05	14	14.4	18	36
BZX79C22	20.8	23.3	5	55	0.05	15.4	16.4	20	34
BZX79C24	22.8	25.6	5	70	0.05	16.8	18.4	22	33
BZX79C27	25.1	28.9	2	80	0.05	18.9	-	23.5	30
BZX79C30	28	32	2	80	0.05	21	-	26	27
BZX79C33	31	35	2	80	0.05	23.1	-	29	25
BZX79C36	34	38	2	90	0.05	25.2	-	31	23
BZX79C39	37	41	2	130	0.05	27.3	-	34	21

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

Device	Zener Voltage (Note 1)			$Z_Z @ I_Z (\Omega)$	Leakage Current		$T_C (mV / ^{\circ}\text{C})$		C (pF)
	Min.	Max.	$I_Z (mA)$	Max.	$I_R (\mu A)$	$V_R (V)$	Min.	Max.	$V_Z = 0, f = 1MHz$
BZX79C43	40	46	2	150	0.05	30.1	-	37	21
BZX79C47	44	50	2	170	0.05	32.9	-	40	19
BZX79C51	48	54	2	180	0.5	35.7	-	44	19
BZX79C56	52	60	2	200	0.05	39.2	-	47	18
BZX79C62	58	66	2	215	0.05	43.4	-	51	17
BZX79C68	64	72	2	240	0.05	47.6	-	56	17
BZX79C75	70	79	2	255	0.05	52.5	-	60	16.5
BZX79C82	77	87	2	280	0.1	62	46	95	29
BZX79C91	85	96	2	300	0.1	69	51	107	28
BZX79C100	94	106	1	500	0.1	76	57	119	27
BZX79C110	104	116	1	650	0.1	84	63	131	26
BZX79C120	114	127	1	800	0.1	91	69	144	24
BZX79C130	124	141	1	950	0.1	99	75	158	23
BZX79C150	138	156	1	1250	0.1	115	87	185	21
BZX79C160	153	171	1	1400	0.1	122	93	200	20
BZX79C180	168	191	1	1700	0.1	137	105	228	18

V_F Forward Voltage = 1.5V Max @ $I_F = 100mA$

Notes:

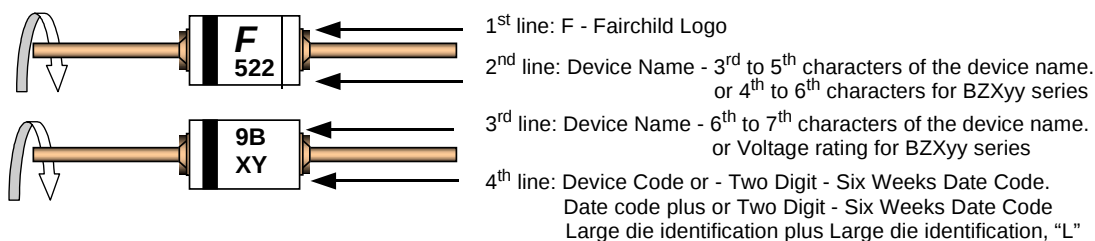
1. Zener Voltage (V_Z)

The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at $30^{\circ}\text{C} \pm 1^{\circ}\text{C}$ and 3/8" lead length.

Top Mark Information

Device	Line 1	Line 2	Line 3	Line 4
BZX79C2V4	LOGO	79C	2V4	XY
BZX79C2V7	LOGO	79C	2V7	XY
BZX79C3V0	LOGO	79C	3V0	XY
BZX79C3V3	LOGO	79C	3V3	XY
BZX79C3V6	LOGO	79C	3V6	XY
BZX79C3V9	LOGO	79C	3V9	XY
BZX79C4V3	LOGO	79C	4V3	XY
BZX79C4V7	LOGO	79C	4V7	XY
BZX79C5V1	LOGO	79C	5V1	XY
BZX79C5V6	LOGO	79C	5V6	XY
BZX79C6V2	LOGO	79C	6V2	XY
BZX79C6V8	LOGO	79C	6V8	XY
BZX79C7V5	LOGO	79C	7V5	XY
BZX79C8V2	LOGO	79C	8V2	XY
BZX79C9V1	LOGO	79C	9V1	XY
BZX79C10	LOGO	79C	10	XY
BZX79C11	LOGO	79C	11	XY
BZX79C12	LOGO	79C	12	XY
BZX79C13	LOGO	79C	13	XY
BZX79C14	LOGO	79C	14	XY
BZX79C16	LOGO	79C	16	XY
BZX79C18	LOGO	79C	18	XY
BZX79C20	LOGO	79C	20	XY
BZX79C22	LOGO	79C	22	XY
BZX79C24	LOGO	79C	24	XY
BZX79C27	LOGO	79C	27	XY
BZX79C30	LOGO	79C	30	XY
BZX79C33	LOGO	79C	33	XY
BZX79C36	LOGO	79C	36	XY
BZX79C39	LOGO	79C	39	XY
BZX79C43	LOGO	79C	43	XY
BZX79C47	LOGO	79C	47	XY
BZX79C51	LOGO	79C	51	XY
BZX79C56	LOGO	79C	56	XY
BZX79C62	LOGO	79C	62	XY
BZX79C68	LOGO	79C	68	XY
BZX79C75	LOGO	79C	75	XY
BZX79C82	LOGO	79C	82	XY
BZX79C91	LOGO	79C	91	XY
BZX79C100	LOGO	79C	100	XY
BZX79C110	LOGO	79C	110	XY
BZX79C120	LOGO	79C	120	XY
BZX79C130	LOGO	79C	130	XY
BZX79C150	LOGO	79C	150	XY
BZX79C160	LOGO	79C	160	XY
BZX79C180	LOGO	79C	180	XY

Top Mark Information (Continued)



General Requirements:

- 1.0 Cathod Band
- 2.0 First Line: F - Fairchild Logo
- 3.0 Second Line: Device name - For 1Nxx series: 3rd to 5th characters of the device name.
For BZxx series: 4th to 6th characters of the device name.
- 4.0 Third Line: Device name - For 1Nxx series: 6th to 7th characters of the device name.
For BZXyy series: Voltage rating
- 5.0 Fourth Line: XY or XYL - Two Digit - Six Weeks Date Code
Where: X represents the last digit of the calendar year
Y represents the Six weeks numeric code
L represents the Large die identification
- 6.0 Devices shall be marked as required in the device specification (PID or FSC Test Spec).
- 7.0 Maximum no. of marking lines: 4
- 8.0 Maximum no. of digits per line: 3
- 9.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.
- 10.0 Marking Font: Arial (Except FSC Logo)
- 11.0 First character of each marking line must be aligned vertically

TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™	FACT Quiet Series™	ISOPLANAR™	POP™	Stealth™
ActiveArray™	FAST®	LittleFET™	Power247™	SuperFET™
Bottomless™	FASTr™	MICROCOUPLER™	PowerSaver™	SuperSOT™-3
CoolFET™	FPS™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET®	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic®
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TINYOPTO™
EnSigna™	I ² C™	OCX™	RapidConfigure™	TruTranslation™
FACT™	ImpliedDisconnect™	OCXPro™	RapidConnect™	UHC™
Across the board. Around the world.™		OPTOLOGIC®	SILENT SWITCHER®	UltraFET®
The Power Franchise®		OPTOPLANAR™	SMART START™	VCX™
Programmable Active Droop™		PACMAN™	SPM™	

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.