

July 2007

# BZX79C2V4 - BZX79C56

# **Zener Diodes**





DO-35 Glass case
COLOR BAND DENOTES CATHODE

# Absolute Maximum Ratings \* T<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P <sub>D</sub>	Power Dissipation @ TL ≤ 75°C, Lead Length = 3/8"	500	mW
	Derate above 75°C	4.0	mW/°C
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature Range	-65 to +200	°C

<sup>\*</sup> These ratings are limiting values above which the serviceability of the diode may be impaired.

# Electrical Characteristics T<sub>A</sub>=25°C unless otherwise noted

Device	Zener Voltage (Note 1)		Z <sub>Z</sub> @ I <sub>Z</sub> (Ω) Leakage		Current	T <sub>C</sub> (m	V / °C)	C (pF)	
Device	Min.	Max.	I <sub>Z</sub> (mA)	Max.	$I_R (\mu A) V_R$		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
BZX79C15	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

Device	Zen	Zener Voltage (Note 1)		<b>Z</b> <sub>Z</sub> @ I <sub>Z</sub> (Ω)	Leakage Current		T <sub>C</sub> (mV / °C)		C (pF)	
	Min.	Max.	I <sub>Z</sub> (mA)	Max.	I <sub>R</sub> (μA)	V <sub>R</sub> (V)	Min.	Max.	V <sub>Z</sub> = 0, f = 1MHz	
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	
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	
V- Forward Vo	ltage = 1.5	V May @	_ = 100m A	•	•	•	•	•		

# **Top Mark Information**

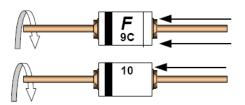
Device	Line 1	Line 2	Line 3		
BZX79C2V4	LOGO	9C	2V4		
BZX79C2V7	LOGO	9C	2V7		
BZX79C3V0	LOGO	9C	3V0		
BZX79C3V3	LOGO	9C	3V3		
BZX79C3V6	LOGO	9C	3V6		
BZX79C3V9	LOGO	9C	3V9		
BZX79C4V3	LOGO	9C	4V3		
BZX79C4V7	LOGO	9C	4V7		
BZX79C5V1	LOGO	9C	5V1		
BZX79C5V6	LOGO	9C	5V6		
BZX79C6V2	LOGO	9C	6V2		
BZX79C6V8	LOGO	9C	6V8		
BZX79C7V5	LOGO	9C	7V5		
BZX79C8V2	LOGO	9C	8V2		
BZX79C9V1	LOGO	9C	9V1		
BZX79C10	LOGO	9C	10		
BZX79C11	LOGO	9C	11		
BZX79C12	LOGO	9C	12		
BZX79C13	LOGO	9C	13		
BZX79C15	LOGO	9C	15		
BZX79C16	LOGO	9C	16		
BZX79C18	LOGO	9C	18		
BZX79C20	LOGO	9C	20		
BZX79C22	LOGO	9C	22		
BZX79C24	LOGO	9C	24		
BZX79C27	LOGO	9C	27		
BZX79C30	LOGO	9C	30		
BZX79C33	LOGO	9C	33		
BZX79C36	LOGO	9C	36		
BZX79C39	LOGO	9C	39		
BZX79C43	LOGO	9C	43		
BZX79C47	LOGO	9C	47		
BZX79C51	LOGO	9C	51		
BZX79C56	LOGO	9C	56		

Notes:

1. Zener Voltage (V<sub>Z</sub>)

The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T<sub>L</sub>) at 30°C ± 1°C and 3/8" lead length.

### **Top Mark Information** (Continued)



1st line: F - Fairchild Logo

 $2^{nd}$  line: Device Name -  $4^{th}$  to  $5^{th}$  characters of the device name. or  $5^{th}$  to  $6^{th}$  characters for BZXyy series

3<sup>rd</sup> line: Device Name - 6<sup>th</sup> to 7<sup>th</sup> characters of the device name. or Voltage rating for BZXyy series

#### **General Requirements:**

1.0 Cathode Band

2.0 First Line: F - Fairchild Logo

3.0 Second Line: Device name - For 1Nxx series: 4<sup>th</sup> to 5<sup>th</sup> characters of the device name.

For BZxx series: 5<sup>th</sup> to 6<sup>th</sup> characters of the device name.

4.0 Third Line: Device name - For 1Nxx series: 6<sup>th</sup> to 7<sup>th</sup> characters of the device name.

For BZXyy series: Voltage rating

5.0 Devices shall be marked as required in the device specification (PID or FSC Test Spec).

6.0 Maximum no. of marking lines: 3

7.0 Maximum no. of digits per line: 2

8.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.

9.0 Marking Font: Arial (Except FSC Logo)

10.0 First character of each marking line must be aligned vertically.

11.0 All device markings must be based on Fairchild device specification.





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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.				
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### BZX79C2V4

Zener Diode

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Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
BZX79C2V4	Full Production	Full Production	\$0.0218	DO-35	2	BULK	<u>Line 1:</u> <b>\$Y</b> (Fairchild logo) <u>Line 2:</u> 79C <u>Line 3:</u> 2V4 <u>Line 4:</u> &2
BZX79C2V4_T50A	Full Production	Full Production	N/A	DO-35	2	AMMO	<u>Line 1:</u> <b>\$Y</b> (Fairchild logo) <u>Line 2:</u> 79C <u>Line 3:</u> 2V4 <u>Line 4:</u> &2
BZX79C2V4_T50R	Full Production	Full	N/A	DO-35	2		<u>Line 1:</u> <b>\$Y</b> (Fairchild logo) <u>Line 2:</u> 79C <u>Line 3:</u> 2V4 <u>Line 4:</u> &2

<sup>\*</sup> Fairchild 1,000 piece Budgetary Pricing

<sup>\*\*</sup> A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a Fairchild distributor to obtain samples



Indicates product with Pb-free second-level interconnect. For more information click here.

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