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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild_questions@onsemi.com.

FAIRCHILD SEMICONDUCTOR®

July 2007

BZX79C2V4 - BZX79C56

Zener Diodes

Tolerance = 5%

DO-35 Glass case

COLOR BAND DENOTES CATHODE

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.

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
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

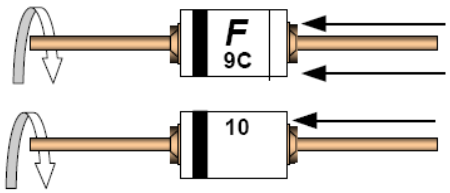
Device	Zener Voltage (Note 1)			Z_Z @ I_Z (Ω)	Leakage Current		T_C (mV / °C)		C (pF)
	Min.	Max.	I_Z (mA)	Max.	I_R (μA)	V_R (V)	Min.	Max.	V_Z = 0, f = 1MHz
BZX79C27	25.1	28.9	2	80	0.05	18.9	-	23.5	30
BZX79C30	28	32	2	80	0.05	21	-	26	27
BZX79C33	31	35	2	80	0.05	23.1	-	29	25
BZX79C36	34	38	2	90	0.05	25.2	-	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_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°C ± 1°C and 3/8" lead length.

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

Top Mark Information (Continued)



1st line: F - Fairchild Logo

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

3rd line: Device Name - 6th to 7th 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: 4th to 5th characters of the device name.

For BZxx series: 5th 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 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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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.

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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.

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