

BZX85C3V3 - BZX85C56

Zener Diodes

Tolerance = 5%



DO-41 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 ≤ 50°C, Lead Length = 3/8"	1.0	W
	Derate above 50°C	6.67	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)		Zener Impedance			Leakage Current		
	V _Z (Volts)		I _Z	Z _Z @ I _Z	Z _{ZK} @ I _{ZK}	I _R @ V _R		
	Min.	Max.	mA	(Ω)	(Ω)	(mA)	μA Max.	Volts
BZX85C3V3	3.1	3.5	80	20	400	1	60	1
BZX85C3V6	3.4	3.8	60	15	500	1	30	1
BZX85C3V9	3.7	4.1	60	15	500	1	5	1
BZX85C4V3	4.0	4.6	50	13	500	1	3	1
BZX85C4V7	4.4	5	45	13	600	1	3	1.5
BZX85C5V1	4.8	5.4	45	10	500	1	1	2
BZX85C5V6	5.2	6	45	7	400	1	1	2
BZX85C6V2	5.8	6.6	35	4	300	1	1	3
BZX85C6V8	6.4	7.2	35	3.5	300	1	1	4
BZX85C7V5	7.0	7.9	35	3	200	0.5	1	4.5
BZX85C8V2	7.7	8.7	25	5	200	0.5	1	5
BZX85C9V1	8.5	9.6	25	5	200	0.5	1	6.5
BZX85C10	9.4	10.6	25	7	200	0.5	0.5	7
BZX85C11	10.4	11.6	20	8	300	0.5	0.5	7.7
BZX85C12	11.4	12.7	20	9	350	0.5	0.5	8.4
BZX85C13	12.4	14.1	20	10	400	0.5	0.5	9.1
BZX85C15	13.8	15.6	15	15	500	0.5	0.5	10.5
BZX85C16	15.3	17.1	15	15	500	0.5	0.5	11
BZX85C18	16.8	19.1	15	20	500	0.5	0.5	12.5
BZX85C20	18.8	21.2	10	24	600	0.5	0.5	14

Device	Zener Voltage (Note 1)		Zener Impedance			Leakage Current		
	V _Z (Volts)		I _Z	Z _Z @ I _Z	Z _{ZK} @ I _{ZK}		I _R @ V _R	
	Min.	Max.	mA	(Ω)	(Ω)	(mA)	μA Max.	Volts
BZX85C22	20.8	23.3	10	25	600	0.5	0.5	15.5
BZX85C24	22.8	25.6	10	25	600	0.5	0.5	17
BZX85C27	25.1	28.9	8	30	750	0.25	0.5	19
BZX85C30	28	32	8	30	1000	0.25	0.5	21
BZX85C33	31	35	8	35	1000	0.25	0.5	23
BZX85C36	34	38	8	40	1000	0.25	0.5	25
BZX85C39	37	41	6	45	1000	0.25	0.5	27
BZX85C43	40	46	6	50	1000	0.25	0.5	30
BZX85C47	44	50	4	90	1500	0.25	0.5	33
BZX85C51	48	54	4	115	1500	0.25	0.5	36
BZX85C56	52	60	4	120	2000	0.25	0.5	39

V_F Forward Voltage = 1.2V Max @ I_F = 200mA

Notes:

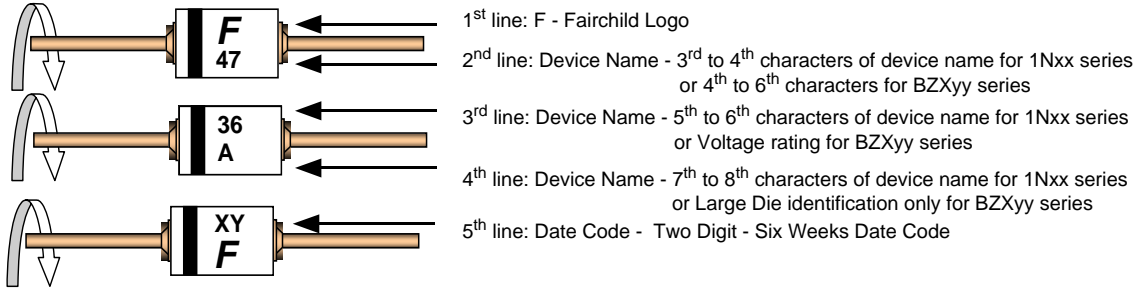
1. Zener Voltage (V_Z)

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	Line 4	Line 5
BZX85C3V3	LOGO	85C	3V3		XY
BZX85C3V6	LOGO	85C	3V6		XY
BZX85C3V9	LOGO	85C	3V9		XY
BZX85C4V3	LOGO	85C	4V3		XY
BZX85C4V7	LOGO	85C	4V7		XY
BZX85C5V1	LOGO	85C	5V1		XY
BZX85C5V6	LOGO	85C	5V6		XY
BZX85C6V2	LOGO	85C	6V2		XY
BZX85C6V8	LOGO	85C	6V8		XY
BZX85C7V5	LOGO	85C	7V5		XY
BZX85C8V2	LOGO	85C	8V2		XY
BZX85C9V1	LOGO	85C	9V1		XY
BZX85C10	LOGO	85C	10		XY
BZX85C11	LOGO	85C	11		XY
BZX85C12	LOGO	85C	12		XY
BZX85C13	LOGO	85C	13		XY
BZX85C15	LOGO	85C	15		XY
BZX85C16	LOGO	85C	16		XY
BZX85C18	LOGO	85C	18		XY
BZX85C20	LOGO	85C	20		XY
BZX85C22	LOGO	85C	22		XY
BZX85C24	LOGO	85C	24		XY
BZX85C27	LOGO	85C	27		XY
BZX85C30	LOGO	85C	30		XY
BZX85C33	LOGO	85C	33		XY
BZX85C36	LOGO	85C	36		XY
BZX85C39	LOGO	85C	39		XY
BZX85C43	LOGO	85C	43		XY
BZX85C47	LOGO	85C	47		XY
BZX85C51	LOGO	85C	51		XY
BZX85C56	LOGO	85C	56		XY

Top Mark Information (Continued)



1st line: F - Fairchild Logo

2nd line: Device Name - 3rd to 4th characters of device name for 1Nxx series
or 4th to 6th characters for BZXyy series

3rd line: Device Name - 5th to 6th characters of device name for 1Nxx series
or Voltage rating for BZXyy series

4th line: Device Name - 7th to 8th characters of device name for 1Nxx series
or Large Die identification only for BZXyy series

5th line: Date Code - Two Digit - Six Weeks Date Code

General Requirements:

1.0 Cathode Band

2.0 First Line: F - Fairchild Logo

3.0 Second Line: Device name - For 1Nxx series: 3rd to 4th 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: 5th to 6th characters of the device name.
For BZXyy series: Voltage rating

5.0 Third Line: Device name - For 1Nxx series: 7th to 8th characters of the device name.
(the 8th character is the large die identification)
For BZXyy series: Large Die Identification character

6.0 Fourth Line: Date Code - Two Digit - Six Weeks Date Code

Where: X represents the last digit of the calendar year
Y represents the Six weeks numeric code

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

8.0 Maximum no. of marking lines: 5

9.0 Maximum no. of digits per line: 3

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

11.0 Marking Font: Arial (Except FSC Logo)

12.0 First character of each marking line must be aligned vertically

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



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.

ACE ^x ™	GTO™	PowerSaver™	TinyBuck™
Across the board. Around the world.™	HiSeC™	PowerTrench®	TinyLogic®
ActiveArray™	<i>i-Lo</i> ™	Programmable Active Droop™	TINYOPTO™
Bottomless™	ImpliedDisconnect™	QFET®	TinyPower™
Build it Now™	IntelliMAX™	QS™	TinyWire™
CoolFET™	ISOPLANAR™	QT Optoelectronics™	TruTranslation™
CROSSVOLT™	MICROCOUPLER™	Quiet Series™	μSerDes™
CTL™	MicroPak™	RapidConfigure™	UHC®
<i>Current Transfer Logic</i> ™	MICROWIRE™	RapidConnect™	UniFET™
DOME™	MSX™	ScalarPump™	VCX™
E ² CMOS™	MSXPro™	SMART START™	Wire™
EcoSPARK®	OCX™	SPM™	
EnSigna™	OCXPro™	SuperFET™	
FACT Quiet Series™	OPTOLOGIC®	SuperSOT™-3	
FACT®	OPTOPLANAR™®	SuperSOT™-6	
FAST®	PACMAN™	SuperSOT™-8	
FAST _r ™	POP™	TCM™	
FPS™	Power220®	The Power Franchise®	
FRFET™	Power247®	TinyBoost™	
GlobalOptoisolator™	PowerEdge™		

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. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

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.

Rev. I23

BZX85C5V6 [Datasheet](#) [Buy](#) [Sample](#)

5.6V, 1W Zener Diode









Table of Contents:

- [Product Status/Pricing/Packaging](#)
- [Support Features](#)
- [Engineering Connections](#)
- [Qualification Support](#)

Product Status/Pricing/Packaging

[Back to Top](#)

- Fairchild 1,000 piece Budgetary Pricing. *
- If there is no sample button displayed at the top of the page, please contact one of the [Fairchild distributors](#) or your [local sales office](#) to obtain samples.
- [Top mark packaging information for product BZX85C5V6](#) is available. **

Product	Product Status	Eco Status	*Pricing	Package Type	Leads	Packing Method	Package Drawing	**Package Marking Convention	RoHS IPC1752	RoHS/REACH/JIG Certificate of Compliance
BZX85C5V6	Full Production	RoHS Compliant	\$0.0445	DO-41	2	BULK		Line 1: \$Y (Fairchild logo) Line 2: 85C Line 3: 5V6 Line 5: &2	 	
BZX85C5V6_T50R	Full Production	RoHS Compliant	\$0.0445	DO-41	2	TAPE REEL		Line 1: \$Y (Fairchild logo) Line 2: 85C Line 3: 5V6 Line 5: &2	 	

Support

[Back to Top](#)

- [Knowledgebase - \(online Q&A\)](#)
- [Find a local sales office](#)
- [Product change notices \(PCN\)](#)
- [How to Buy Products or Order Samples](#)






Features

[Back to Top](#)

Zeners

Engineering Connections

[Back to Top](#)

-  [Engineering Connections Blog](#)
-  [Become our Fan on Facebook](#)
-  [Follow us on Twitter](#)
-  [Watch our Videos on YouTube](#)
-  [Check out our Podcasts on iTunes](#)

Qualification Support

[Back to Top](#)

- Customer qualification data for the [BZX85C5V6](#)
- Customer qualification data for the [BZX85C5V6_T50R](#)