



Zeners

BZX55C 3V3 - BZX55C 33

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P _D	Power Dissipation	500	mW
T _{STG}	Storage Temperature Range	-65 to +200	°C
T _J	Maximum Junction Operating Temperature	+ 200	°C
	Lead Temperature (1/16" from case for 10 seconds)	+ 230	°C
	Surge Power**	30	W

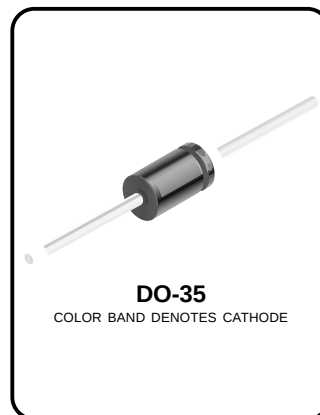
*These ratings are limiting values above which the serviceability of the diode may be impaired.

**Non-recurrent square wave PW= 8.3 ms, TA= 50 degrees C.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 200 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Tolerance: C = 5%



Electrical Characteristics

T_A = 25°C unless otherwise noted

Device	V _Z (V)		Z _Z (Ω) @ I _Z (mA)		Z _{ZK} (Ω) @ I _{ZK} (mA)		I _{R1} (μA) @ V _R (V)		I _{R2} (μA) @ V _R (V) T _A = 150°C		T _C (%/°C)	I _{ZRM} (mA)
	MIN	MAX										
BZX55C 3V3	3.1	3.5	85	5.0	600	1.0	2.0	1.0	40	1.0	- 0.060	115
BZX55C 3V6	3.4	3.8	85	5.0	600	1.0	2.0	1.0	40	1.0	- 0.055	105
BZX55C 3V9	3.7	4.1	85	5.0	600	1.0	2.0	1.0	40	1.0	- 0.050	95
BZX55C 4V3	4.0	4.6	75	5.0	600	1.0	1.0	1.0	20	1.0	- 0.040	90
BZX55C 4V7	4.4	5.0	60	5.0	600	1.0	0.5	1.0	10	1.0	- 0.020	85
BZX55C 5V1	4.8	5.4	35	5.0	550	1.0	0.1	1.0	2.0	1.0	+0.010	80
BZX55C 5V6	5.2	6.0	25	5.0	450	1.0	0.1	1.0	2.0	1.0	+0.025	70
BZX55C 6V2	5.8	6.6	10	5.0	200	1.0	0.1	2.0	2.0	2.0	+0.032	64
BZX55C 6V8	6.4	7.2	8.0	5.0	150	1.0	0.1	3.0	2.0	3.0	+0.040	58
BZX55C 7V5	7.0	7.9	7.0	5.0	50	1.0	0.1	5.0	2.0	5.0	+0.045	53
BZX55C 8V2	7.7	8.7	7.0	5.0	50	1.0	0.1	6.2	2.0	6.2	+0.048	47
BZX55C 9V1	8.5	9.6	10	5.0	50	1.0	0.1	6.8	2.0	6.8	+0.050	43
BZX55C 10	9.4	10.6	15	5.0	70	1.0	0.1	7.5	2.0	7.5	+0.055	40
BZX55C 11	10.4	11.6	20	5.0	70	1.0	0.1	8.2	2.0	8.2	+0.060	36
BZX55C 12	11.4	12.7	20	5.0	90	1.0	0.1	9.1	2.0	9.1	+0.065	32
BZX55C 13	12.4	14.1	26	5.0	110	1.0	0.1	10	2.0	10	0.070	29
BZX55C 15	13.8	15.6	30	5.0	110	1.0	0.1	11	2.0	11	0.070	27
BZX55C 16	15.3	17.1	40	5.0	170	1.0	0.1	12	2.0	12	0.075	24
BZX55C 18	16.8	19.1	50	5.0	170	1.0	0.1	13	2.0	13	0.075	21
BZX55C 20	18.8	21.1	55	5.0	220	1.0	0.1	15	2.0	15	0.080	20
BZX55C 22	20.8	23.3	55	5.0	220	1.0	0.1	16	2.0	16	0.080	18
BZX55C 24	22.8	25.6	80	5.0	220	1.0	0.1	18	2.0	18	0.080	16
BZX55C 27	25.1	28.9	80	5.0	220	1.0	0.1	20	2.0	20	0.085	14
BZX55C 30	28.0	32.0	80	5.0	220	1.0	0.1	22	2.0	22	0.085	13
BZX55C 33	31.0	35.0	80	5.0	220	1.0	0.1	24	2.0	24	0.085	12

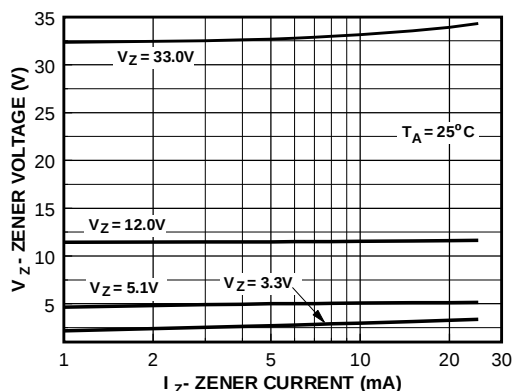
V_F Forward Voltage = 1.0 V Maximum @ I_F = 100 mA for all BZX 55 series

Zeners (BZX55C 3V3 - BZX55C 33)

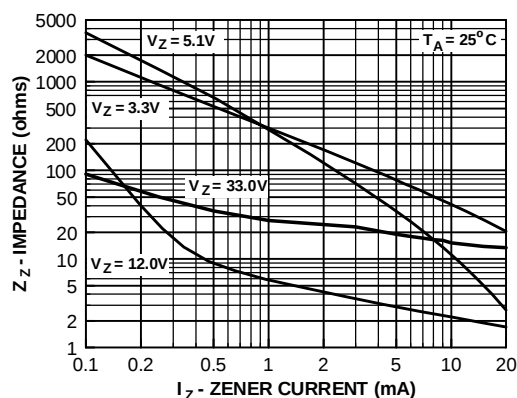
Zeners (BZX55C 3V3 - BZX55C 33)

(continued)

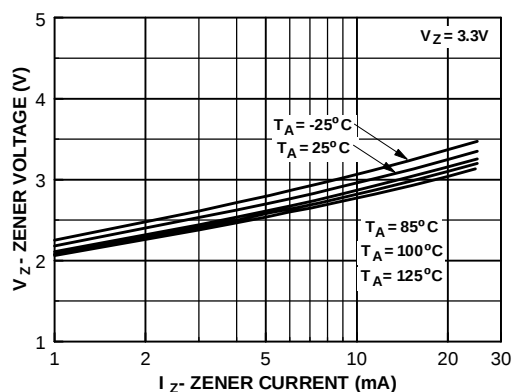
Typical Characteristics



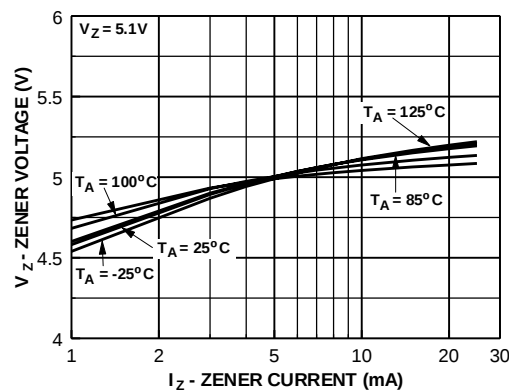
Zener Current vs. Zener Voltage



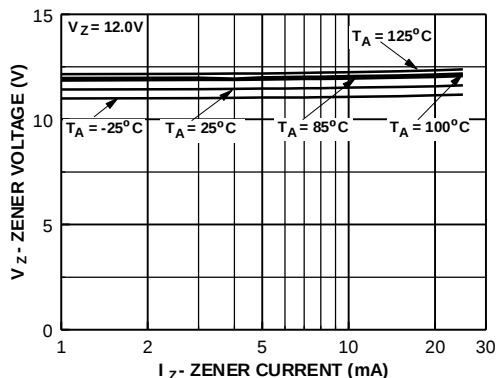
Zener Current vs. Zener Impedance



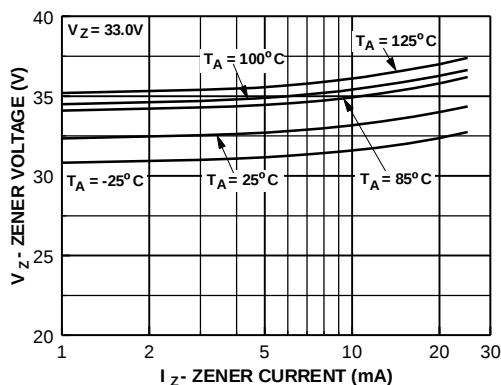
3.3 Zener Voltage vs. Temperature



5.1 Zener Voltage vs. Temperature



12 Zener Voltage vs. Zener Temperature



33 Zener Voltage vs. Zener Temperature

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 ^{Ex} TM	FAST [®]	OPTOLOGIC TM	SMART START TM	VCX TM
Bottomless TM	FAST ^r TM	OPTOPLANAR TM	STAR*POWER TM	
CoolFET TM	FRFET TM	PACMAN TM	Stealth TM	
CROSSVOLT TM	GlobalOptoisolator TM	POP TM	SuperSOT TM -3	
DenseTrench TM	GTO TM	Power247 TM	SuperSOT TM -6	
DOME TM	HiSeC TM	PowerTrench [®]	SuperSOT TM -8	
EcoSPARK TM	ISOPLANAR TM	QFET TM	SyncFET TM	
E ² CMOS TM	LittleFET TM	QS TM	TinyLogic TM	
EnSigna TM	MicroFET TM	QT Optoelectronics TM	TruTranslation TM	
FACT TM	MicroPak TM	Quiet Series TM	UHC TM	
FACT Quiet Series TM	MICROWIRE TM	SILENT SWITCHER [®]	UltraFET [®]	

STAR*POWER is used under license

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.