

BZX55C 3V3 - 33 Series Half Watt Zeners

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
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
P _D	Total Device Dissipation	500	mW
	Derate above 25°C	4.0	mW/°C
	Surge Power**	30	W

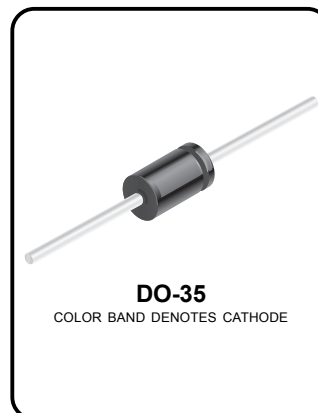
*These ratings are limiting values above which the serviceability of the diode may be impaired.

**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

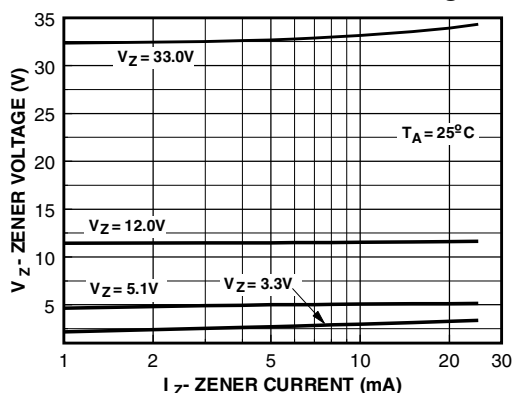
TA = 25°C unless otherwise noted

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

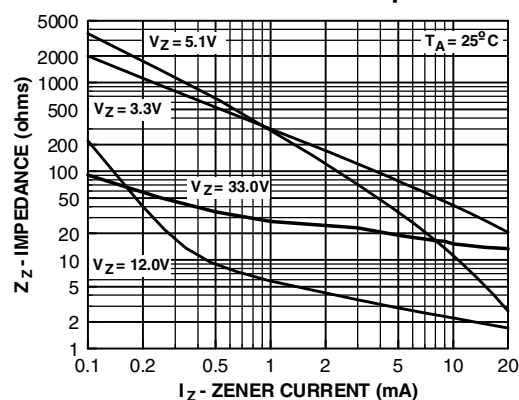
V_F Forward Voltage = 1.0 V Maximum @ I_F = 100 mA for all BZX 55 series

Typical Characteristics

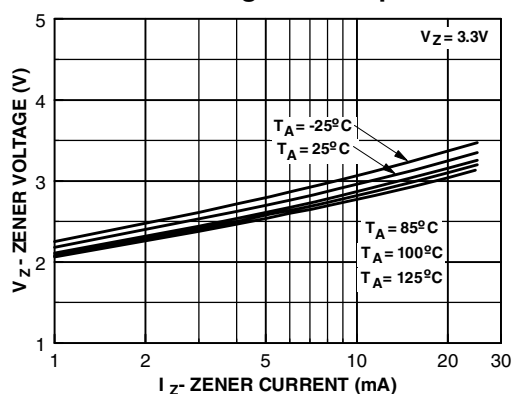
Zener Current vs. Zener Voltage



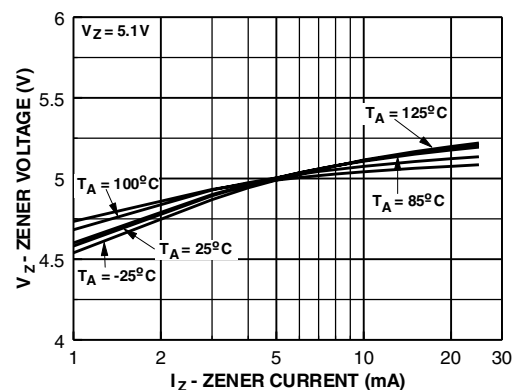
Zener Current vs. Zener Impedance



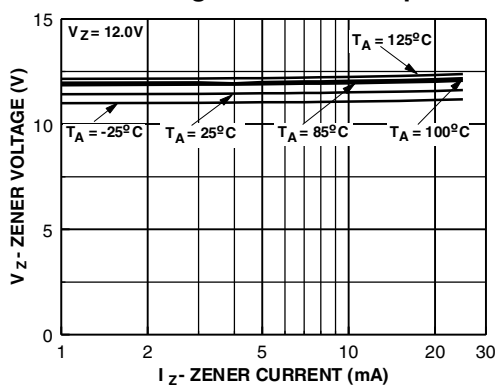
3.3 Zener Voltage vs. Temperature



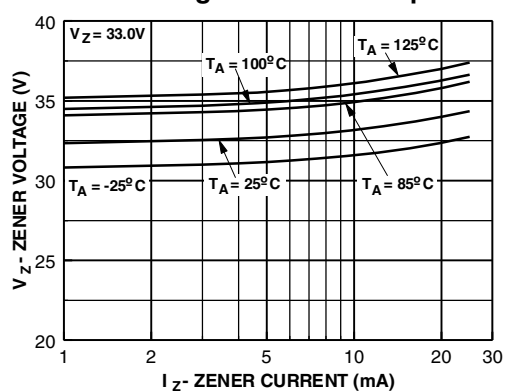
5.1 Zener Voltage vs. Temperature



12 Zener Voltage vs. Zener Temperature



33 Zener Voltage vs. Zener Temperature

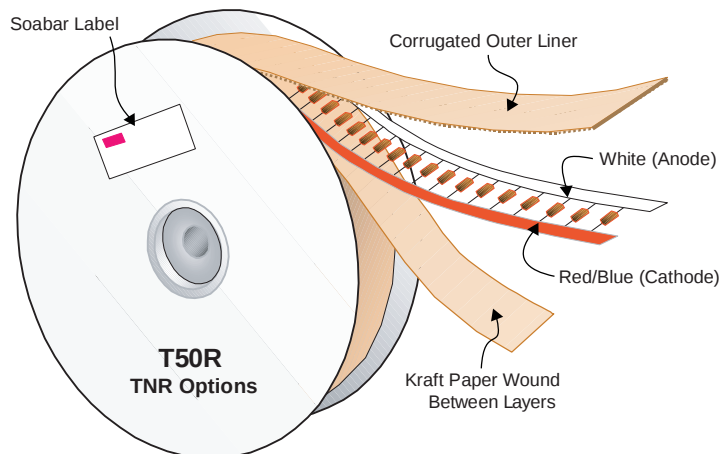


DO-35 Tape and Reel Data



DO-35 Packaging

Configuration: Figure 1.0



DO-35 Packaging

Information Table: Figure 2.0

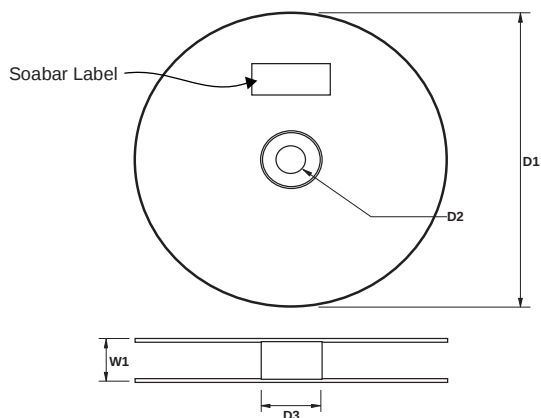
DO-35 Packaging Information			
Packaging Option	T50R	T50A	Standard (no flow code)
Packaging type	TNR	Ammo	Bag
Qty per Reel/Tube/Bag	10,000	5,000	500
Reel Size (inch diameter)	13	-	-
Inside Tape Spacing (mm)	52	52	-
Int Box Dimension (mm)	254x79x794	406x267x184	279x133x108
Max qty per Box	30,000	50,000	5,000
Weight per unit (gm)	0.137	0.137	0.137
Weight per Reel/Ammo (kg)	2.23	0.800	-
Note/Comments			Bulk

Soabar Label sample

FAIRCHILD SEMICONDUCTOR		P.O. No.	
TYPE	IN5225A	MARK	BLK-BRN
REV	A2	PART No.	
PKG		EC No.	
QTY	10,000	M.O. No.	OX5046F035
Q.C.		DATE	D9903
MFD. UNDER US PAT 3,025,589 & OTHER US PATS & APPLICATIONS			

DO-35 Reel Dimensions:

Figure 3.0



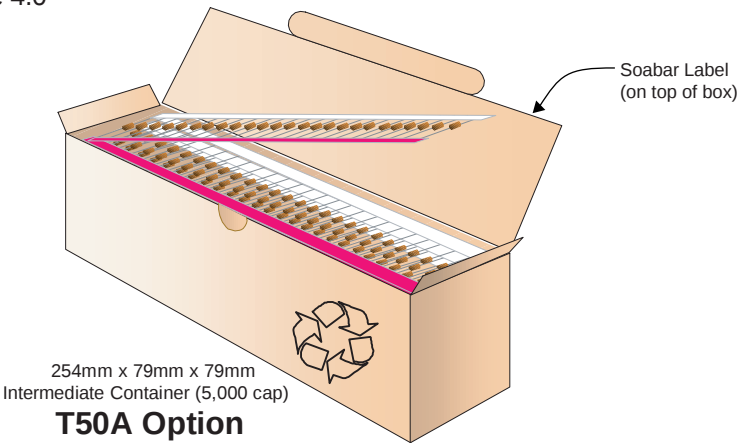
REEL DIMENSIONS

ITEM DESCRIPTION	SYMBOL	MINIMUM	MAXIMUM
Reel Diameter	D1	10.375	10.625
Arbor Hole Diameter (Standard)	D2	1.245	1.255
Core Diameter	D3	3.190	3.310
Flange to Flange Inner Width	W1		3.400

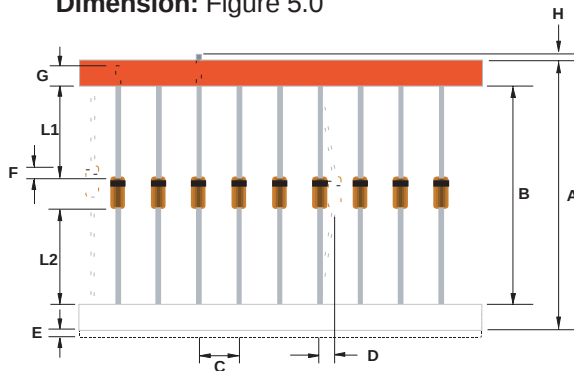
Note: All Dimensions are in inches

DO-35 Tape and Ammo Data, continued

DO-35 Ammo Packing
Configuration: Figure 4.0



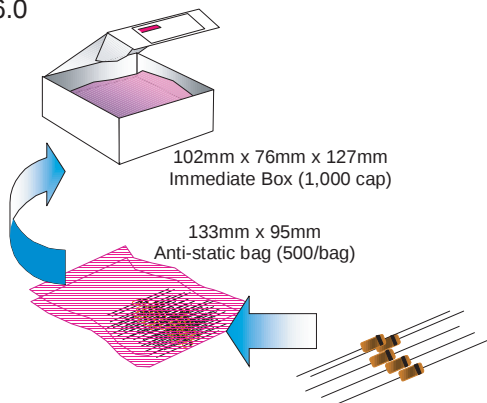
DO-35 Taping
Dimension: Figure 5.0



TAPING DIMENSIONS

	INCH	MM	MILS	NOTES
A	2.520 +0.066/ -0.027	64.00 +1.69/ -0.69	2519 +66.5/ -27.0	Overall width
B	2.047±0.027	52 ±0.69	2047±27	Inside Tape Spacing
C	0.200 ±0.0157	5.08 ±0.40	200 ±15.7	Component Pitch
D	0.047(max)	1.2(max)	47(max)	Component Misalignment
E	0.022(max)	0.55(max)	22(max)	Tape Mismatch
F	0.027(max)	±0.69	±27	Units in line w/ one another
G	0.126(min)	3.2(min)	126(min)	Lead amount between tapes
H	0	0	0	Lead amount beyond tapes
L1-L2	±0.027	±0.69	±27	Delta between two leads

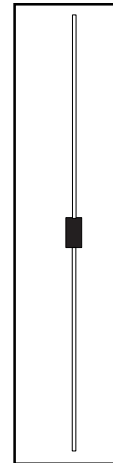
DO-35 Bulk Packing
Configuration: Figure 6.0



DO-35 Package Dimensions



DO-35 (FS PKG Code D2)

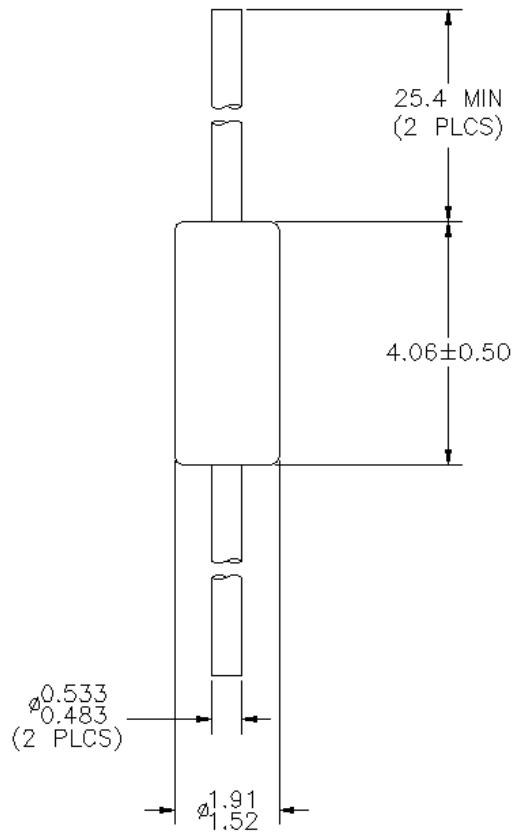


1:1

Scale 1:1 on letter size paper

Dimensions shown below are in millimeters

Part Weight per unit (gram): 0.137



NOTES: UNLESS OTHERWISE SPECIFIED

- A) THIS PACKAGE CONFORMS TO JEDEC
DO-204, VAR. AH, ISSUE B,
DATED JANUARY 20, 1976.
- B) HERMITICALLY SEALED GLASS PACKAGE

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