FAIRCHILD
SEMICONDUCTOR TM

BZX85C 3V3 - 33 Series 1.3 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 Derate above 25°C	1.3 10.4	W mW/°C

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

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%

DO-41

COLOR BAND DENOTES CATHODE

Electrical Characteristics

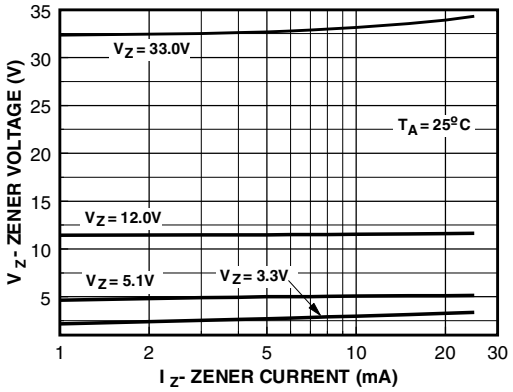
TA = 25°C unless otherwise noted

Device	V_Z (V)	Z_Z (Ω) @	I_{ZT} (mA)	Z_{ZK} (Ω) @	I_{ZK} (mA)	V_R (V) @	I_R (μA)	I_{SURGE} (mA)	I_{ZRM} (mA)
BZX85C 3V3	3.3	20	80	400	1.0	1.0	60	1,380	276
BZX85C 3V6	3.6	15	60	500	1.0	1.0	30	1,260	252
BZX85C 3V9	3.9	15	60	500	1.0	1.0	5.0	1,190	234
BZX85C 4V3	4.3	13	50	500	1.0	1.0	3.0	1,070	217
BZX85C 4V7	4.7	13	45	600	1.0	1.5	3.0	970	193
BZX85C 5V1	5.1	10	45	500	1.0	2.0	1.0	890	178
BZX85C 5V6	5.6	7.0	45	400	1.0	2.0	1.0	810	162
BZX85C 6V2	6.2	4.0	35	300	1.0	3.0	1.0	730	146
BZX85C 6V8	6.8	3.5	35	300	1.0	4.0	1.0	660	133
BZX85C 7V5	7.5	3.0	35	200	1.0	4.5	1.0	605	121
BZX85C 8V2	8.2	5.0	25	200	0.5	5.0	1.0	550	110
BZX85C 9V1	9.1	5.0	25	200	0.5	6.5	1.0	500	100
BZX85C 10	10	7.0	25	200	0.5	7.0	0.5	454	91
BZX85C 11	11	8.0	20	300	0.5	7.7	0.5	414	83
BZX85C 12	12	9.0	20	350	0.5	8.4	0.5	380	76
BZX85C 13	13	10	20	400	0.5	9.1	0.5	344	69
BZX85C 15	15	15	15	500	0.5	10.5	0.5	304	61
BZX85C 16	16	15	15	500	0.5	11	0.5	285	57
BZX85C 18	18	20	15	500	0.5	12.5	0.5	250	50
BZX85C 20	20	24	10	600	0.5	14	0.5	225	45
BZX85C 22	22	25	10	600	0.5	15.5	0.5	205	41
BZX85C 24	24	25	10	600	0.5	17	0.5	190	38
BZX85C 27	27	30	8.0	750	0.25	19	0.5	170	34
BZX85C 30	30	30	8.0	1,000	0.25	21	0.5	150	30
BZX85C 33	33	35	8.0	1,200	0.25	23	0.5	135	27

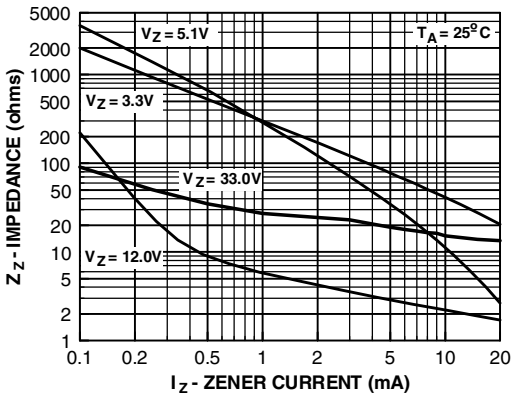
V_F Foward Voltage = 1.2 V Maximum @ I_F = 200 mA for all BZX85 series

Typical Characteristics

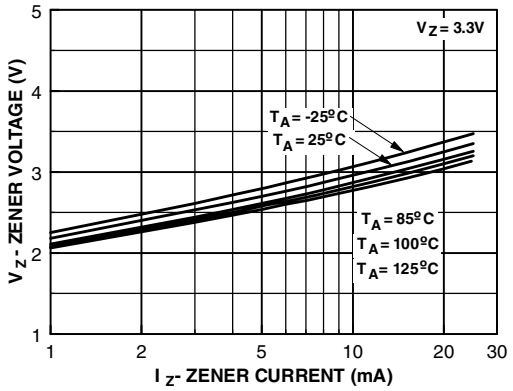
Zener Current vs. Zener Voltage



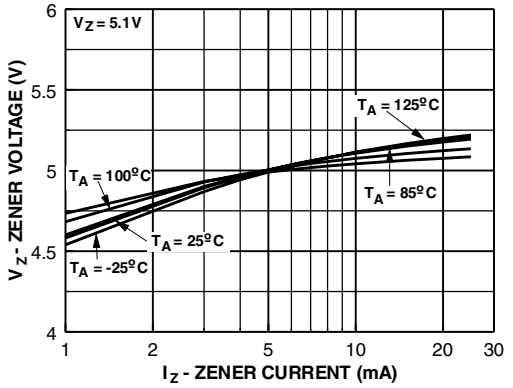
Zener Current vs. Zener Impedence



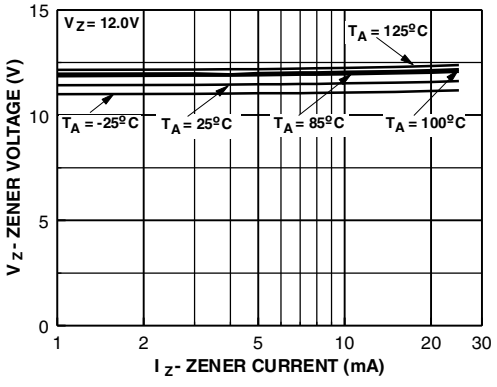
3.3 Zener Voltage vs. Temperature



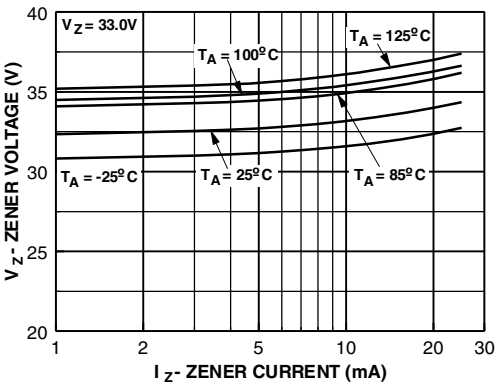
5.1 Zener Voltage vs. Temperature



12 Zener Voltage vs. Zener Temperature

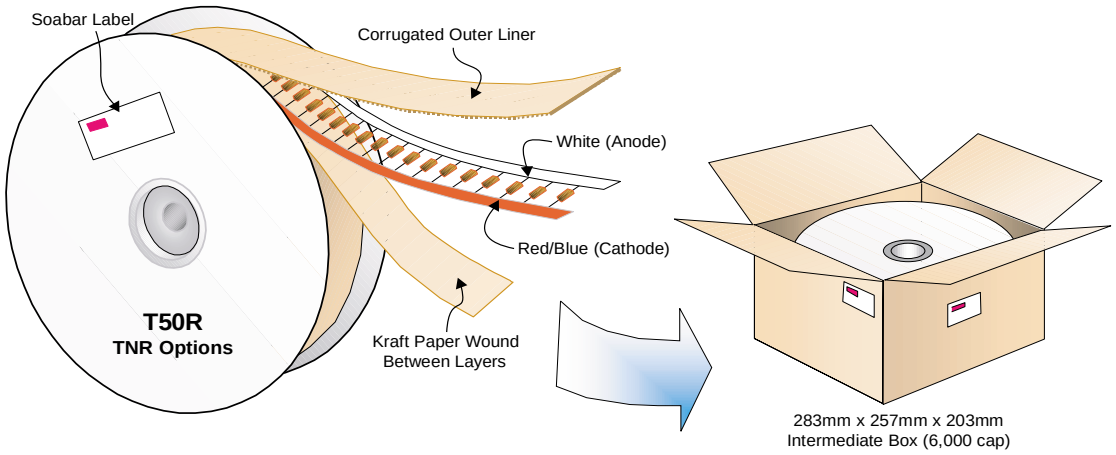


33 Zener Voltage vs. Zener Temperature



DO-41 (Glass) Tape and Ammo Data

DO-41 (Glass) Packaging Configuration: Figure 1.0



DO-41 (Glass) Packaging Information Table : Figure 2.0

DO-41 (Glass) Packaging Information			
Packaging Option	T50R	T50A	Standard (no flow code)
Packaging type	TNR	Ammo	Bag
Qty per Reel/Tube/Bag	3,000	3,000	250
Reel Size (inch diameter)	10.5	-	-
Inside Tape Spacing (mm)	52	52	-
Int Box Dimension (mm)	283x257x203	406x267x184	381x203x127
Max qty per Box	6,000	30,000	5,000
Weight per unit (gm)	0.320	0.320	0.320
Weight per Reel (kg)	1.356	1.077	-
Note/Comments			Bulk

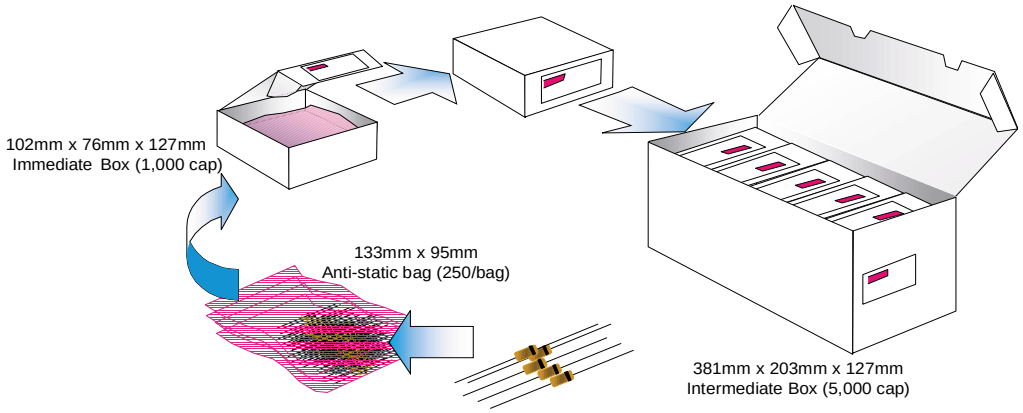
Soabar Label sample

FAIRCHILD SEMICONDUCTOR TM

		P.O. No.	
TYPE	1N4744A	**MARK**	BLK-BRN
REV	A2	**PART No.**	
PKG		**EC No.**	
QTY	3,000	**M.O. No.**	OX5046F035
Q.C.		**DATE**	D9903

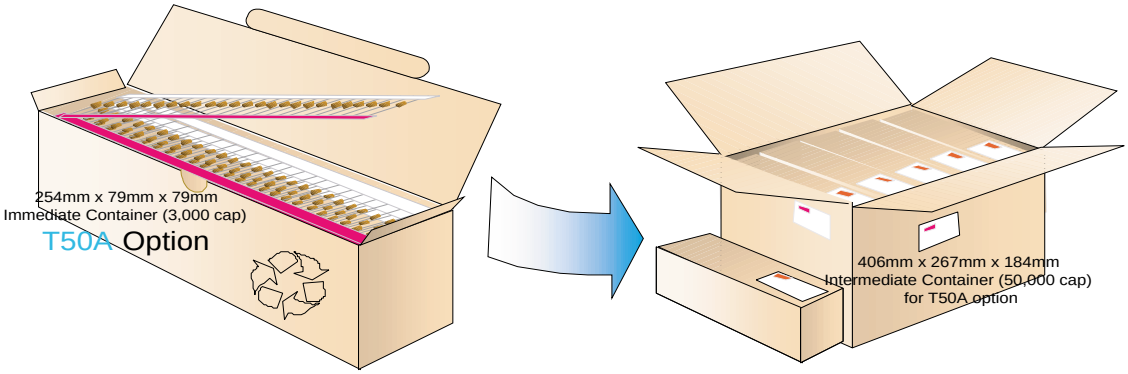
MFD. UNDER US PAT 3.025.589 & OTHER US PATS & APPLICATIONS

DO-41 (Glass) Bulk Packing Configuration: Figure 3.0

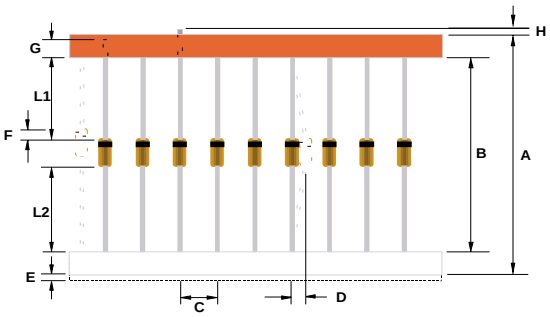


DO-41 (Glass) Tape and Ammo Data, continued

DO-41 (Glass) Ammo Packing
Configuration: Figure 4.0



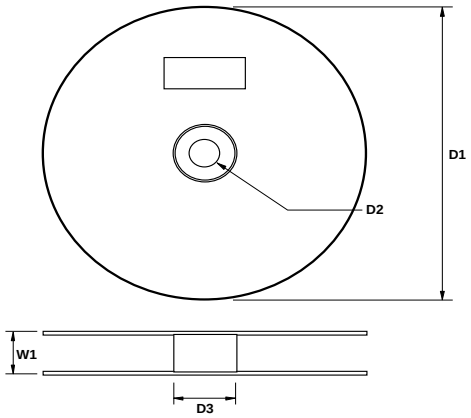
DO-41 (Glass) Taping
Dimension: Figure 5.0



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-41 (Glass) Reel
Dimension: Figure 6.0



REEL DIMENSIONS

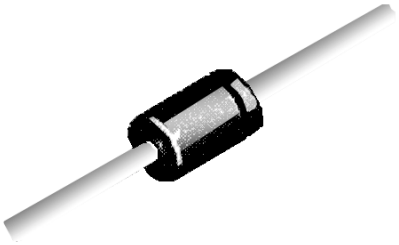
ITEM DESCRIPTION	SYMBOL	MINIMUM	MAXIMUM
Reel Diameter	D1	10.375	10.625
Arbor Hole Diameter (Standard)	D2	1.245	1.255
Core Diameter	D3	3.190	3.310
Flange to Flange Outer Width	W1		3.400

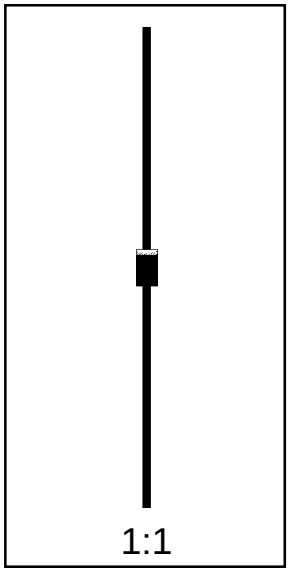
Note: All Dimensions are in inches

DO-41 (Glass) Package Dimensions

FAIRCHILD SEMICONDUCTOR TM

DO-41 (FS PKG Code D4)

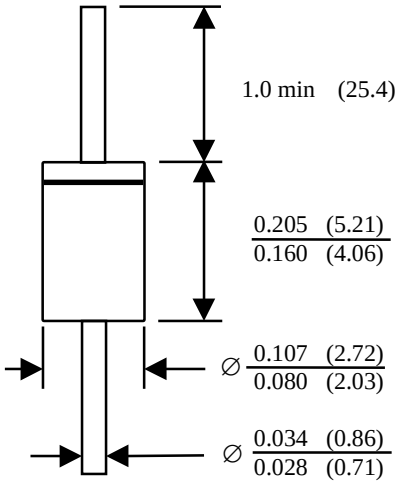




Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.32



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