

Part 1: Zener Diode Test

1)

	Forward Biased	Reverse Biased
V(diode)	0,7756 volt	overranged

As you can see from our table, our diode is good.

Part 2: Forward and Reverse Characteristics of Zener Diode

1)

Diode Volts	Current in mA BZX55C
.35	0,00025 mA
.45	0,0019 mA
.55	0,0199 mA
.60	0,0636 mA
.65	0,248 mA
.70	0,969 mA
.75	5,291 mA
.80	31,44 mA
.85	69,72 mA

2)

V(applied) in Volts	V(zener) in Volts (measured)	I(zener) in mA (measured)
2	2,07 V	0,00001 mA
4	4,10 V	0,00085 mA
6	5,80 V	0,75 mA
8	5,94 V	6,34 mA
10	5,95 V	12,62 mA
12	5,96 V	18,85 mA
14	5,97 V	24,92 mA

4)

Part 3: Zener Regulation

	Vout			
	Vs=15		Vs=8	
	R(L)=1,8 k	R(L)=470	R(L)=1,8 k	R(L)=470
Rs= 390 ohm	5,99 V	5,96 V	5,88 V	4,40 V
Rs= 220 ohm	6,03 V	6,00 V	5,95 V	5,50 V
Rs= 150 ohm	6,05 V	6,03 V	5,95 V	5,86 V
Rs= 100 ohm	6,12 V	6,10 V	6,00 V	5,94 V