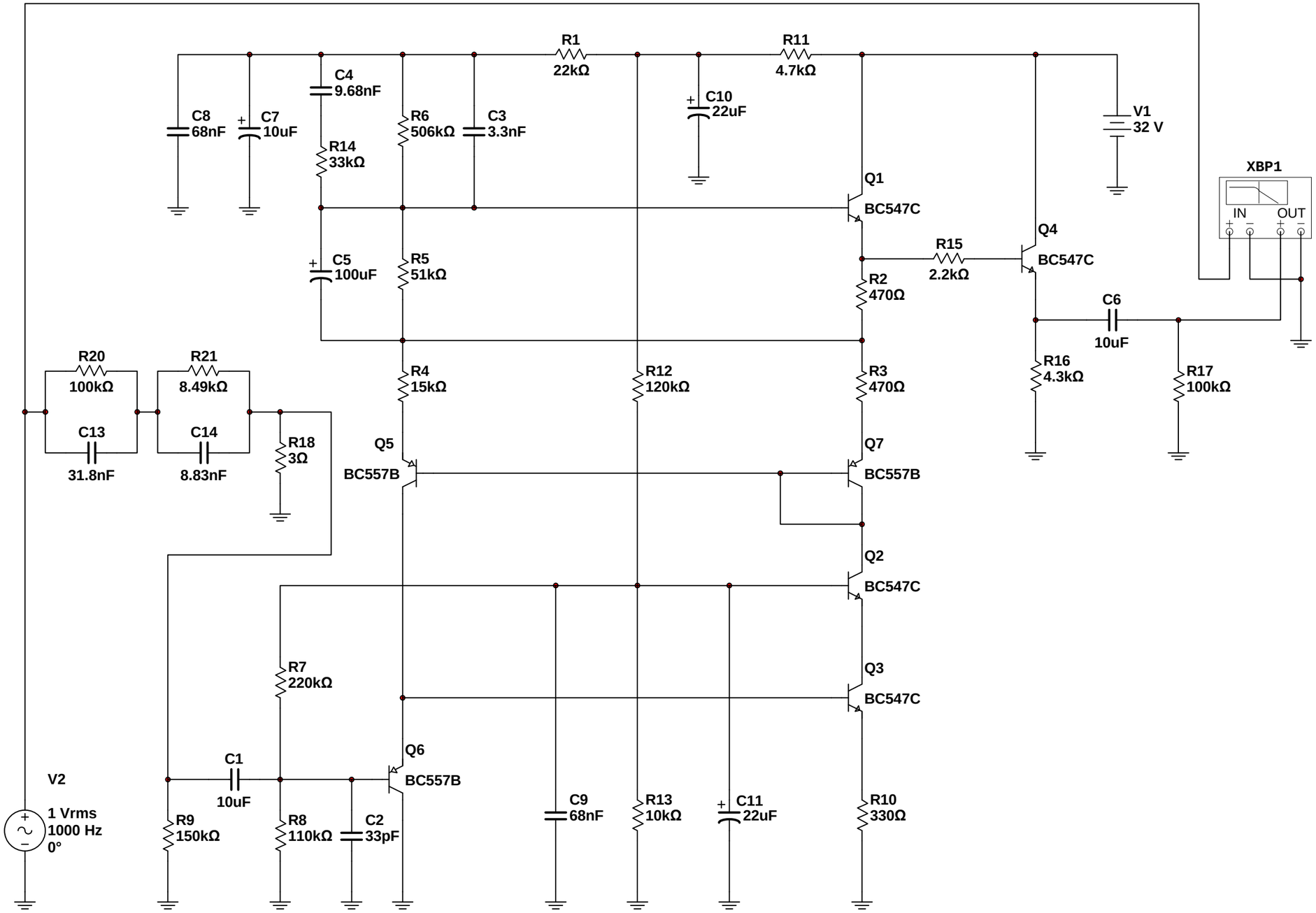
R1
22kΩ
R11
4.7kΩ
C4
9.68nF
C8
68nF
C7
10uF
R6
506kΩ
C3
3.3nF
C10
22uF
V1
32 V
R14
33kΩ
Q1
BC547C
XBP1
IN
OUT
Q4
BC547C
R15
2.2kΩ
C5
100uF
R5
51kΩ
R2
470Ω
C6
10uF
R20
100kΩ
R21
8.49kΩ
R4
15kΩ
R12
120kΩ
R3
470Ω
R16
4.3kΩ
R17
100kΩ
C13
31.8nF
C14
8.83nF
R18
3Ω
Q5
BC557B
Q7
BC557B
Q2
BC547C
R7
220kΩ
Q3
BC547C
Q6
BC557B
C1
10uF
V2
1 Vrms
1000 Hz
0°
R9
150kΩ
R8
110kΩ
C2
33pF
C9
68nF
R13
10kΩ
C11
22uF
R10
330Ω