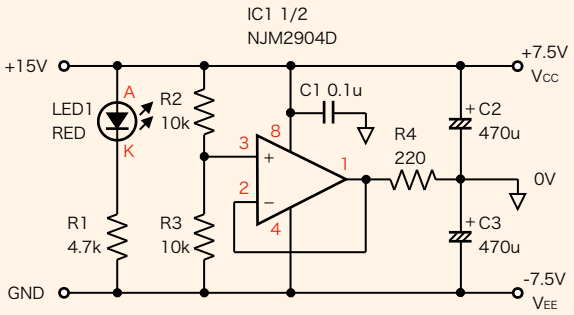
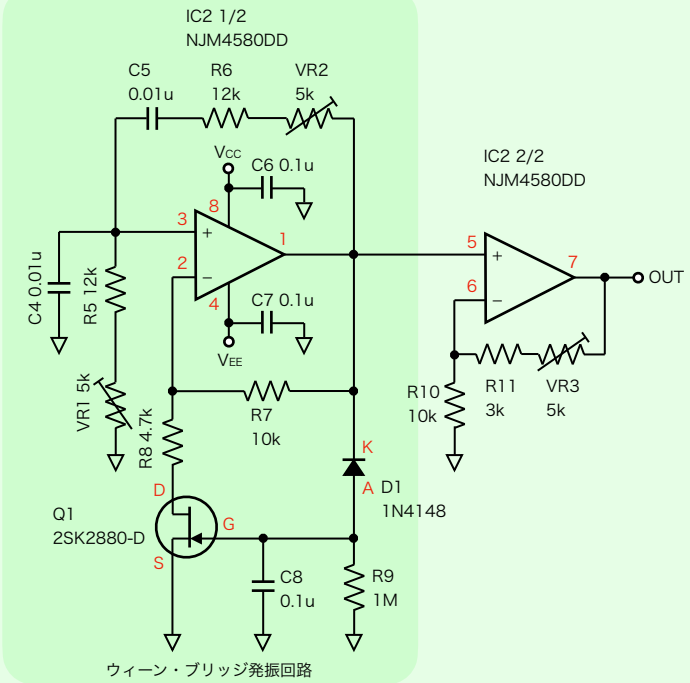
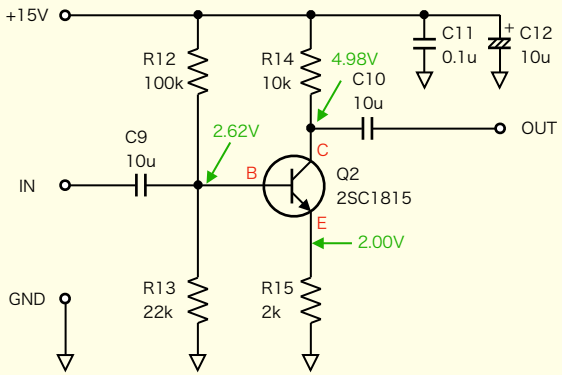
AB級アンプ（その４）



正弦波発生回路用電源回路



正弦波発生回路



電源電圧 V_{CC} = 15V
電圧利得 Av = 5
エミッタ電流 I_E = 1mA = I_C
エミッタ電圧 V_E = 2V
V_{BE} = 0.6V
R12とR13に流す電流 I = 0.1mA

R_E(R15) = V_E/I_E = 2/0.001 = 2,000 = 2kΩ
R_C(R14) = $R_E \times Av$ = 2,000×5 = 10,000 = 10kΩ
V_C = V_{CC}-$I_C \cdot R_C$ = 15-0.001×10,000 = 5V
V_{CE} = V_C-V_E = 5-2 = 3V
コレクタ損失 P_C = $V_{CE} \cdot I_C$ = 3×0.001 = 0.003 = 3mW
V_B = V_E+V_{BE} = 2+0.6 = 2.6V
R12 = (V_{CC}-V_B)/I = (15-2.6)/0.0001 = 124,000 ≒ 100kΩ
R13 = V_B/I = 2.6/0.0001 = 26,000 ≒ 22kΩ

エミッタ接地増幅回路