

$$K = 10^3 = 1000$$

$$R_1 = 1M = 1000000$$

$$R_2 = 100K = 100000$$

$$R_3 = 100K = 100000$$

$$V_{esp32} = 3.3 = 3.3 \quad \left(\begin{smallmatrix} \square \\ \square \end{smallmatrix} \right)$$

$$V_{piezo} = -20 = -20$$

$$I_{esp32} = \frac{V_{esp32}}{R_2} = 3.3 \times 10^{-5} \quad \left(\begin{smallmatrix} \square \\ \square \end{smallmatrix} \right)$$

$$I_{piezo} = \frac{V_{piezo}}{R_1} = -2 \times 10^{-5} \quad \left(\begin{smallmatrix} \square \\ \square \end{smallmatrix} \right)$$

$$I_{tot} = I_{esp32} + I_{piezo} = 1.3 \times 10^{-5} \quad \left(\begin{smallmatrix} \square \\ \square \end{smallmatrix} \right)$$

$$R_{eq} = \frac{R_1 R_2 R_3}{R_1 R_2 + R_1 R_3 + R_2 R_3} = 47619.04762 \quad \left(\begin{smallmatrix} \square \\ \square \end{smallmatrix} \right)$$

$$V_{out} = I_{tot} R_{eq} = 0.619047619 \quad \left(\begin{smallmatrix} \square \\ \square \end{smallmatrix} \right)$$