Determine the most suitable transistor from TABLE B for use in the circuit of FIGURE 3. You may assume in all cases that the transistor is biased with VBE $=0.6 \mathrm{~V}$. Justify your choice in detail.

| Transistor | Rating |  |  |
| :--- | :---: | :---: | :---: |
| type | $V_{\text {CEO }}$ | $I_{\mathrm{C}}$ | $P_{\text {tot }} @ 25^{\circ} \mathrm{C}$ |
|  | volts | mA | mW |
|  |  |  |  |
| BC107 | 45 | 100 | 300 |
| BC 109 | 20 | 100 | 300 |
| $\mathrm{BCY88}$ | 40 | 30 | 150 |

TABLE B


FIG. 3

