The step numbers in this data sheet refer to those in the laboratory exercise instructions.

Step 2:

*R*B value: *R*C value:

Step 3:

Table 1. *I*C vs. *V*CE, *I*B = \_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Nominal *V*CE (V) | | | | | | |
| Parameter | 2.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 |
| Measured *V*CE (V) |  |  |  |  |  |  |  |
| Measured *I*C (mA) |  |  |  |  |  |  |  |

Table 2. *I*C vs. *V*CE, *I*B = \_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Nominal *V*CE (V) | | | | | | |
| Parameter | 2.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 |
| Measured *V*CE (V) |  |  |  |  |  |  |  |
| Measured *I*C (mA) |  |  |  |  |  |  |  |

Step 4:

Table 3. Diode-Connected Transistor Output Characteristics *V*CE vs. *I*E.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Nominal *I*E (mA) | | | | | | | |
| Parameter | 0.25 | 0.50 | 0.75 | 1.0 | 1.25 | 1.50 | 1.75 | 2.0 |
| Measured *I*E (mA) |  |  |  |  |  |  |  |  |
| Measured*V*CE (V) |  |  |  |  |  |  |  |  |

Analysis:

Table 4. Calculated Transistor Parameters at *V*CE = 6 V.

|  |  |  |  |
| --- | --- | --- | --- |
| Nominal *I*B (μA) | *β* | *α* | *g*m |
| 20 |  |  |  |
| 40 |  |  |  |

Other observations: