# Experiment # 2

Finding resistance of unknown resistor by color coding method and DMM

# Objective:

To find the resistance of unknown resistor using color coding method.

# Procedure:

1. First note the color bands on the resistor.
2. Write values for the respective bands using the following table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Color** | **1st Band** | **2nd Band** | **3rd Band** | **4th Band**  **( Tolerance )** |
| Black | 0 | 0 |  |  |
| Brown | 1 | 1 |  |  |
| Red | 2 | 2 |  |  |
| Orange | 3 | 3 |  |  |
| Yellow | 4 | 4 |  |  |
| Green | 5 | 5 |  |  |
| Blue | 6 | 6 |  |  |
| Violet | 7 | 7 |  |  |
| Gray | 8 | 8 |  |  |
| White | 9 | 9 |  |  |
| Gold |  |  |  | ± 05 % |
| Silver |  |  |  | ± 10 % |
| No Color |  |  |  | ± 20 % |

1. Find the range of the resistance by adding and subtracting the tolerance.
2. Now the reading from the multimeter with the range and find the percentage error.

# Observation:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S.no.** | **1st Band** | **2nd Band** | **3rd Band** | **4th Band**  **Tolerance** | **Resistance**  **(Color Code)**  **(Ω)** | **Range of resistance**  **(Ω)** | **Resistance**  **(Digital Multimeter)**  **(Ω)** | **Error (%)** |
| 1. |  |  |  |  |  |  |  |  |
| 2. |  |  |  |  |  |  |  |  |
| 3. |  |  |  |  |  |  |  |  |
| 4. |  |  |  |  |  |  |  |  |
| 5. |  |  |  |  |  |  |  |  |