

### **Resistor Color Code (19:37)**

Identify the significance of the colors employed in the 4 band resistor color code.

Identify the significance of the first 3 bands of the 4 band resistor color code.

Use the 4 band resistor color code to interpret the first 3 bands of this collection of resistors.

BROWN BLACK BROWN  
BROWN BLACK GREEN  
YELLOW PURPLE ORANGE  
BROWN BLACK RED

Identify which of the first 3 bands is the most important.

Use the 4 band resistor color code to interpret the first 3 bands of this collection of resistors.

ORANGE ORANGE RED  
WHITE BROWN BROWN  
BLUE GREY YELLOW  
BROWN BLACK BLACK

Given the following resistors determine the first 3 bands of the 4 band resistor color code.

51k $\Omega$   
6.8k $\Omega$   
470 $\Omega$   
1.8M $\Omega$

Identify the significance of the colors gold and silver when they appear in the 3<sup>rd</sup> band.

Use the 4 band resistor color code to interpret the first 3 bands of this collection of resistors.

BROWN BLACK GOLD  
GREEN BLUE SILVER

Use the 4 band resistor color code to interpret the first 3 bands of this collection of resistors.

YELLOW ORANGE YELLOW  
BROWN BLUE BLACK  
ORANGE WHITE ORANGE  
BROWN ORANGE GOLD

Given the following resistors determine the first 3 bands of the 4 band resistor color code.

2.4M $\Omega$

620m $\Omega$

4.7k $\Omega$

620 $\Omega$

Identify the significance of the 4<sup>th</sup> band in the 4 band resistor color code. Identify the significance of colors gold, silver, and no color when they appear in the 4<sup>th</sup> band.

Calculate the possible range for a nominal 750 $\Omega$  resistor manufactured with  $\pm 5\%$  tolerance.

Calculate the possible range for a nominal 680 $\Omega$  resistor manufactured with  $\pm 5\%$  tolerance.

Calculate the possible range for a nominal 820 $\Omega$  resistor manufactured with  $\pm 5\%$  tolerance.

Comment on why resistors are manufactured with a tolerance.