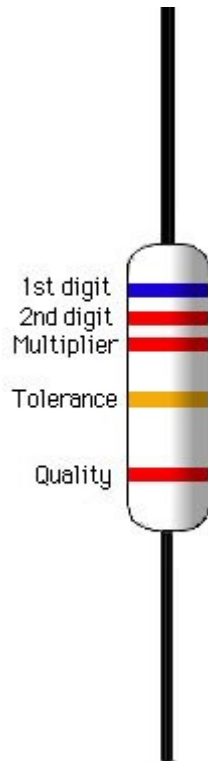


## How to Read Resistor Color Codes



### Resistor Color Code:

Black	Brown	Red	Orange	Yellow	Green	Blue	Violet	Gray	White
0	1	2	3	4	5	6	7	8	9

### How to read the code:

First, find the tolerance band. It will typically be gold (5%) and sometimes silver (10%).

Starting from the other end, identify the first band. Write down the number associated with that color; in this case, blue is 6.

Now, 'read' the next color in the example; it is red. Write down a '2' next to the six. (You should have '62' so far.)

Now, read the third, or 'multiplier' band, and write down that number of zeros. In this example, it is '2', so you have '6,200'. If the 'multiplier' band is black (for zero), don't write any zeros down.

If the 'multiplier' band is gold, move the decimal point one place to the left. If the 'multiplier' band is silver, move the decimal point two places to the left. If the resistor has one more band past the tolerance band, it is a quality band.

Read the quality number as the '% failure rate per 1000 hour'. This is rated assuming full wattage is being applied to the resistors. (To get better failure rates, resistors are typically specified to have twice the needed wattage dissipation that the circuit produces.) Some resistors

use this band for Temco (Temperature coefficient) information. 1% resistors have three bands to read digits to the left of the multiplier. They have a different Tempco in order to provide the 1% tolerance.