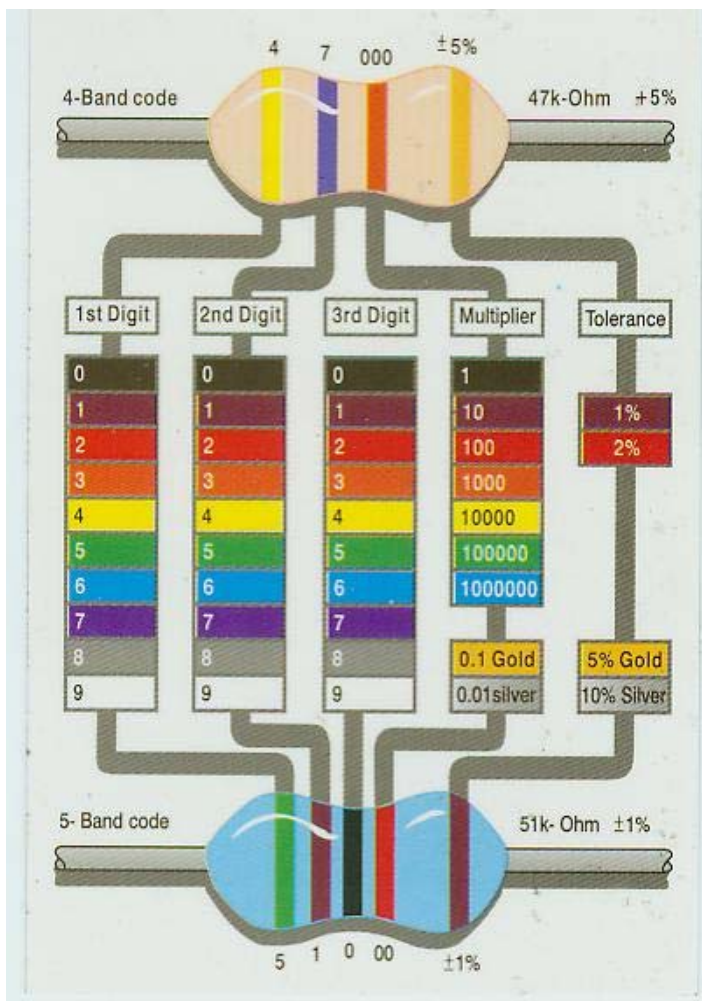


### Introduction

The electronic color code was developed in the early 1920s. Colorbands were commonly used, especially on resistors, because they are easily printed on tiny components.

In the example below, a resistor (read left to right) displays the colors *yellow, violet, yellow, brown*. Take the first two bands as the value, in this case 4, 7. The third band, another *yellow*, is the multiplier  $10^4$ . The total value is then  $47 \times 10^4 \Omega$ , totaling  $470,000 \Omega$  or  $470 \text{ k}\Omega$ . The brown band is a tolerance of  $\pm 1\%$ .

Below are a few color code charts:



# Resistor Colour Code



62 Edgeware Road, Aldgate, South Australia, 5154  
Internet <http://www.leonaudio.com.au>

5 Band Code

237K $\Omega$  1%



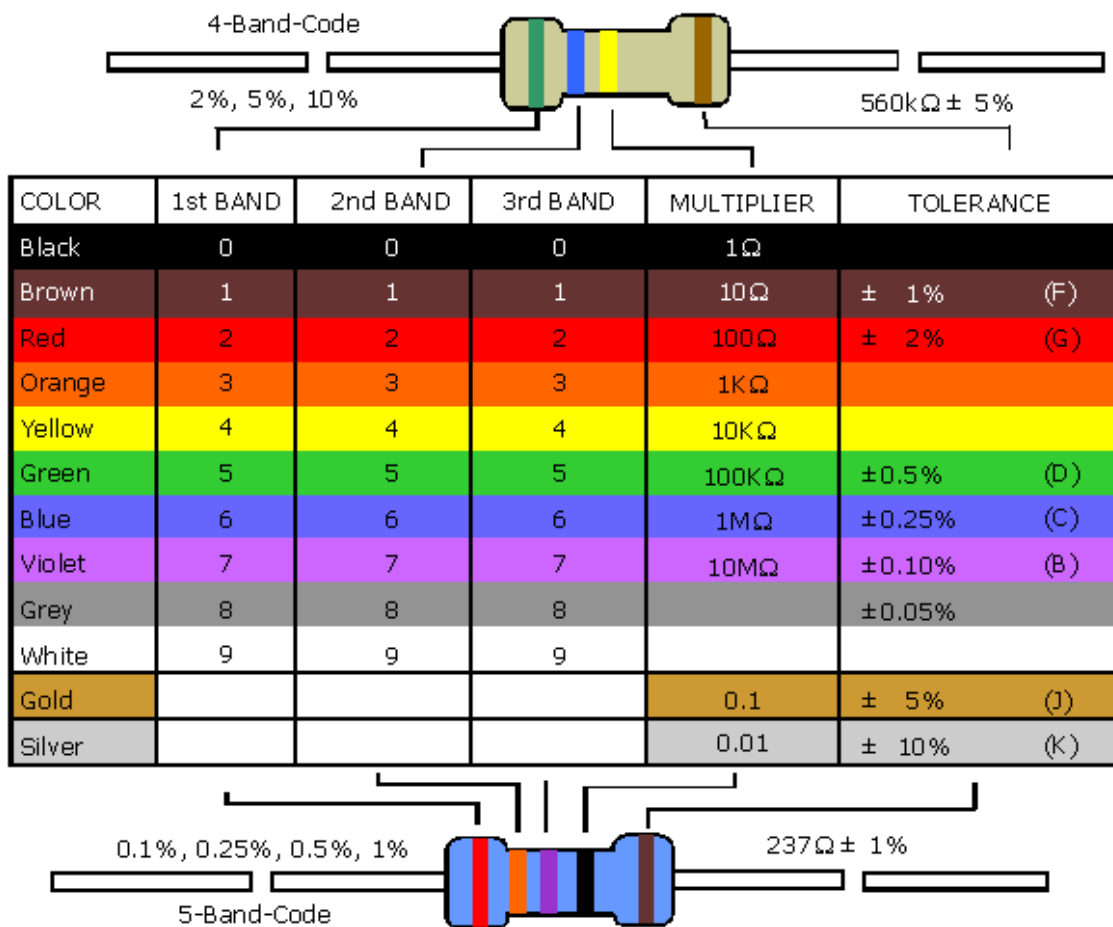
1st circle 1st figure	2nd circle 2nd figure	3rd circle 3rd figure	4th circle number of zeros	5th circle tolerance
0	0	0	0	
1	1	1	1	+/- 1%
2	2	2	2	+/- 2%
3	3	3	3	
4	4	4	4	
5	5	5	5	+/- 0.5%
6	6	6	6	+/- 0.25%
7	7	7	7	+/- 0.1%
8	8	8	8	+/- 0.05%
9	9	9	9	

x0.1		+/- 5%	
x0.01		+/- 10%	
		+/- 20%	

4 Band Code

47K $\Omega$  5%





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 In NJ 732-381-8020

**Assessment**

Use any of the three charts above to answer the following questions:

- 1) If a resistor has four color bands in the following order (from left to right) green, purple, yellow, red, what is the total value and tolerance of the resistor?
- 2) If a resistor has five color bands in the following order (from left to right), blue, green, yellow, orange, purple, what is the total value and tolerance of the resistor?