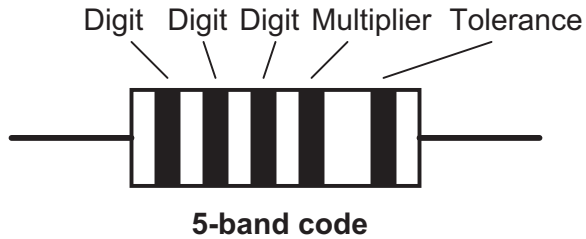
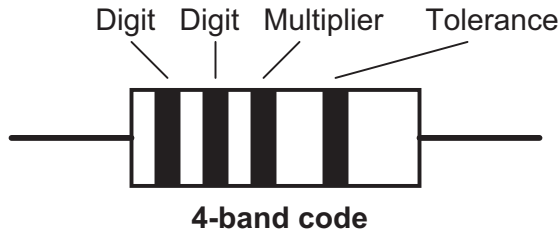


Chapter 2

RESISTOR COLOR CODES

Color	Digit	Multiplier	Tolerance (%)
Black	0	10^0 (1)	
Brown	1	10^1	1
Red	2	10^2	2
Orange	3	10^3	
Yellow	4	10^4	
Green	5	10^5	0.5
Blue	6	10^6	0.25
Violet	7	10^7	0.1
Grey	8	10^8	
White	9	10^9	
Gold		10^{-1}	5
Silver		10^{-2}	10
(none)			20

The colors brown, red, green, blue, and violet are used as tolerance codes on 5-band resistors only. All 5-band resistors use a colored tolerance band. The blank (20%) "band" is only used with the "4-band" code (3 colored bands + a blank "band").



2.1 Example #1



A resistor colored *Yellow-Violet-Orange-Gold* would be 47 k Ω with a tolerance of \pm 5%.

2.2 Example #2



A resistor colored *Green-Red-Gold-Silver* would be 5.2 Ω with a tolerance of \pm 10%.

2.3 Example #3



A resistor colored *White-Violet-Black* would be 97 Ω with a tolerance of \pm 20%. When you see only three color bands on a resistor, you know that it is actually a 4-band code with a blank (20%) tolerance band.

2.4 Example #4



A resistor colored *Orange-Orange-Black-Brown-Violet* would be $3.3 \text{ k}\Omega$ with a tolerance of $\pm 0.1\%$.

2.5 Example #5



A resistor colored *Brown-Green-Grey-Silver-Red* would be 1.58Ω with a tolerance of $\pm 2\%$.

2.6 Example #6



A resistor colored *Blue-Brown-Green-Silver-Blue* would be 6.15Ω with a tolerance of $\pm 0.25\%$.