

Units			
pico	p	÷1 000 000 000 000	10^{-12}
nano	n	÷1 000 000 000	10^{-9}
micro	μ	÷1 000 000	10^{-6}
milli	m	÷1 000	10^{-3}
kilo	k	•1 000	10^3
mega	M	•1 000 000	10^6
giga	G	•1 000 000 000	10^9

Resistor Color Codes			
Color	Digit	Multiplier	Tolerance
Black	0	• 1	
Brown	1	• 10	1%
Red	2	• 100	2%
Orange	3	• 1000	
Yellow	4	• 10 000	
Green	5	• 100 000	
Blue	6	• 1 000 000	
Violet	7	• 10 000 000	
Grey	8	• 100 000 000	
White	9	• 1 000 000 000	
Gold			5%
Silver			10%

Ohm's Law
$V = IR$
Volts = Amperes • Ohms

Kirchoff's Laws
Kirchoff's Current Law: $I_{IN} = I_{OUT}$
Kirchoff's Voltage Law(1) The voltage between any two points in a circuit is equal to the sum of the voltage drops along any path connecting those points
Kirchoff's Voltage Law(2) The sum of the voltage drops around any closed circuit is zero

Resistors in Series
$V_1 = IR_1$ <i>Ohm's Law</i>
$V_2 = IR_2$
$V_{TOTAL} = V_1 + V_2$ <i>Kirchoff's Voltage Law</i>
$\therefore V_{TOTAL} = IR_1 + IR_2$
$\therefore V_{TOTAL} = I(R_1 + R_2)$

Resistors in Parallel
$I_1 = V/R_1$ <i>Ohm's Law</i>
$I_2 = V/R_2$
$I_{TOTAL} = I_1 + I_2$ <i>Kirchoff's Current Law</i>
$\therefore I_{TOTAL} = V/R_1 + V/R_2$
Applying Oh's Law to the whole circuit: $V/R_{PARALLEL} = I_{TOTAL} = V/R_1 + V/R_2$
$\therefore 1/R_{PARALLEL} = 1/R_1 + 1/R_2$

Bands		
160 Meter	1.8 MHz	
80 Meter	3.5 MHz	
40 Meter	7 MHz	
20 Meter	14 MHz	
17 Meter	18 MHz	
15 Meter	21 MHz	
12 Meter	24 MHz	
10 Meter	28 MHz	
6 Meter	50 MHz	
2 Meter	144 MHz	144-146 MHz
70 cm	420 MHz	430-440MHz

