

Chapter 6.0 Hamtronics

Section 6.3 Series and Parallel Components

G5B02 (C) p.198

How does the total current relate to the individual currents in each branch of a purely resistive parallel circuit?

- A. It equals the average of each branch current
- B. It decreases as more parallel branches are added to the circuit
- C. It equals the sum of the currents through each branch
- D. It is the sum of the reciprocal of each individual voltage drop

G5C03 (B) p.200

Which of the following components should be added to an existing resistor to increase the resistance?

- A. A resistor in parallel
- B. A resistor in series
- C. A capacitor in series
- D. A capacitor in parallel

G5C04 (C) p.200

What is the total resistance of three 100 ohm resistors in parallel?

- A. 0.30 ohms
- B. 0.33 ohms
- C. 33.3 ohms
- D. 300 ohms

G5C05 (C) p.203

If three equal value resistors in series produce 450 ohms, what is the value of each resistor?

- A. 1500 ohms
- B. 90 ohms
- C. 150 ohms
- D. 175 ohms

G5C08 (D) p.203

What is the equivalent capacitance of two 5.0 nanofarad capacitors and one 750 picofarad capacitor connected in parallel?

- A. 576.9 nanofarads
- B. 1733 picofarads
- C. 3583 picofarads
- D. 10.750 nanofarads

G5C09 (C) p.202

What is the capacitance of three 100 microfarad capacitors connected in series?

- A. 0.30 microfarads
- B. 0.33 microfarads
- C. 33.3 microfarads
- D. 300 microfarads

G5C10 (C) p.202

What is the inductance of three 10 millihenry inductors connected in parallel?

- A. 0.30 henrys
- B. 3.3 henrys
- C. 3.3 millihenrys
- D. 30 millihenrys

G5C11 (C) p.200

What is the inductance of a 20 millihenry inductor connected in series with a 50 millihenry inductor?

- A. 0.07 millihenrys
- B. 14.3 millihenrys
- C. 70 millihenrys
- D. 1000 millihenrys

G5C12 (B) p.202

What is the capacitance of a 20 microfarad capacitor connected in series with a 50 microfarad capacitor?

- A. 0.07 microfarads
- B. 14.3 microfarads
- C. 70 microfarads
- D. 1000 microfarads

G5C13 (C) p.200

Which of the following components should be added to a capacitor to increase the capacitance?

- A. An inductor in series
- B. A resistor in series
- C. A capacitor in parallel
- D. A capacitor in series

G5C14 (D) p.200

Which of the following components should be added to an inductor to increase the inductance?

- A. A capacitor in series
- B. A resistor in parallel
- C. An inductor in parallel
- D. An inductor in series

G5C15 (A) p.201

What is the total resistance of a 10 ohm, a 20 ohm, and a 50 ohm resistor connected in parallel?

- A. 5.9 ohms
- B. 0.17 ohms
- C. 10000 ohms
- D. 80 ohms