Which agency regulates and enforces the rules for the Amateur Radio Service in the United States?

A. FEMA
B. Homeland Security
C. The FCC
D. All of these choices are correct

FCC Rule: [97.1] T1A02 HRLM (7 - 2)

Which agency regulates and enforces the rules for the Amateur Radio Service in the United States?

A. FEMA
B. Homeland Security
C. The FCC
D. All of these choices are correct

FCC Rule: [97.1] T1A02 HRLM (7 - 2)

How many milliamperes is 1.5 amperes?

A. 15 milliamperes
B. 150 milliamperes
C. 1,500 milliamperes
D. 15,000 milliamperes

T5B01 HRLM (2-2)

How many milliamperes is 1.5 amperes?

A. 15 milliamperes
B. 150 milliamperes
C. 1,500 milliamperes
D. 15,000 milliamperes

T5B01 HRLM (2-2)

What is another way to specify a radio signal frequency of 1,500,000 hertz?

A. 1500 kHz
B. 1500 MHz
C. 15 GHz
D. 150 kHz

T5B02 HRLM (2-2)

What is another way to specify a radio signal frequency of 1,500,000 hertz?

A. 1500 kHz
B. 1500 MHz
C. 15 GHz
D. 150 kHz

T5B02 HRLM (2-2)

How many volts are equal to one kilovolt?

A. One one-thousandth of a volt
B. One hundred volts
C. One thousand volts
D. One million volts

T5B03 HRLM (2-2)

How many volts are equal to one kilovolt?

A. One one-thousandth of a volt
B. One hundred volts
C. One thousand volts
D. One million volts

T5B03 HRLM (2-2)

How many volts are equal to one microvolt?

A. One one-millionth of a volt
B. One million volts
C. One thousand kilovolts
D. One one-thousandth of a volt

T5B04 HRLM (2-2)

How many volts are equal to one microvolt?

A. One one-millionth of a volt
B. One million volts
C. One thousand kilovolts
D. One one-thousandth of a volt

T5B04 HRLM (2-2)

Which of the following is equal to 500 milliwatts?

A. 0.02 watts
B. 0.5 watts
C. 5 watts
D. 50 watts

T5B05 HRLM (2-2)

Which of the following is equal to 500 milliwatts?

A. 0.02 watts
B. 0.5 watts
C. 5 watts
D. 50 watts

T5B05 HRLM (2-2)

If an ammeter calibrated in amperes is used to measure a 3000-milliampere current, what reading would it show?

A. 0.003 amperes
B. 0.3 amperes
C. 3 amperes
D. 3,000,000 amperes

T5B06 HRLM (2-2)

If an ammeter calibrated in amperes is used to measure a 3000-milliampere current, what reading would it show?

A. 0.003 amperes
B. 0.3 amperes
C. 3 amperes
D. 3,000,000 amperes

T5B06 HRLM (2-2)

2018 - 2022 Technician License Course

If a frequency display calibrated in megahertz shows a reading of 3.525 MHz, what would it show if it were calibrated in kilohertz?

A. 0.003525 kHz
B. 35.25 kHz
C. 3525 kHz
D. 3,525,000 kHz

T5B07 HRLM (2-2)

2018 - 2022 Technician License Course

If a frequency display calibrated in megahertz shows a reading of 3.525 MHz, what would it show if it were calibrated in kilohertz?

A. 0.003525 kHz
B. 35.25 kHz
C. 3525 kHz
D. 3,525,000 kHz

T5B07 HRLM (2-2)

2018 - 2022 Technician License Course

How many microfarads are equal to 1,000,000 picofarads?

A. 0.001 microfarads
B. 1 microfarad
C. 1000 microfarads
D. 1,000,000,000 microfarads

T5B08 HRLM (2-2)

2018 - 2022 Technician License Course

How many microfarads are equal to 1,000,000 picofarads?

A. 0.001 microfarads
B. 1 microfarad
C. 1000 microfarads
D. 1,000,000,000 microfarads

T5B08 HRLM (2-2)

2018 - 2022 Technician License Course

Which of the following frequencies is equal to 28,400 kHz?

A. 28.400 MHz
B. 2.800 MHz
C. 284.00 MHz
D. 28.400 kHz

T5B12 HRLM (2-2)

Which of the following frequencies is equal to 28,400 kHz?

A. 28.400 MHz
B. 2.800 MHz
C. 284.00 MHz
D. 28.400 kHz

T5B12 HRLM (2-2)

If a frequency display shows a reading of 2425 MHz, what frequency is that in GHz?

A. 0.002425 GHz
B. 24.25 GHz
C. 2.425 GHz
D. 2425 GHz

T5B13 HRLM (2-2)

If a frequency display shows a reading of 2425 MHz, what frequency is that in GHz?

A. 0.002425 GHz
B. 24.25 GHz
C. 2.425 GHz
D. 2425 GHz

T5B13 HRLM (2-2)

What is the proper abbreviation for megahertz?

A. mHz
B. mhZ
C. Mhz
D. MHz

T5C14 HRLM (2 - 3)

What is the proper abbreviation for megahertz?

A. mHz
B. mhZ
C. Mhz
D. MHz

T5C14 HRLM (2 - 3)

What describes the number of times per second that an alternating current makes a complete cycle?

A. Pulse rate
B. Speed
C. Wavelength
D. Frequency

T5A12 HRLM (2 - 3)

What describes the number of times per second that an alternating current makes a complete cycle?

A. Pulse rate
B. Speed
C. Wavelength
D. Frequency

T5A12 HRLM (2 - 3)

What is the unit of frequency?

A. Hertz
B. Henry
C. Farad
D. Tesla

T5C05 HRLM (2-3)

What is the unit of frequency?

A. Hertz
B. Henry
C. Farad
D. Tesla

T5C05 HRLM (2-3)

What are the frequency limits of the VHF spectrum?

A. 30 to 300 kHz
B. 30 to 300 MHz
C. 300 to 3000 kHz
D. 300 to 3000 MHz

T3B08 HRLM (2-4)

What are the frequency limits of the VHF spectrum?

A. 30 to 300 kHz
B. 30 to 300 MHz
C. 300 to 3000 kHz
D. 300 to 3000 MHz

T3B08 HRLM (2-4)

What are the frequency limits of the UHF spectrum?

A. 30 to 300 kHz
B. 30 to 300 MHz
C. 300 to 3000 kHz
D. 300 to 3000 MHz

T3B09 HRLM (2-4)

What are the frequency limits of the UHF spectrum?

A. 30 to 300 kHz
B. 30 to 300 MHz
C. 300 to 3000 kHz
D. 300 to 3000 MHz

T3B09 HRLM (2-4)

What frequency range is referred to as HF?

A. 300 to 3000 MHz
B. 30 to 300 MHz
C. 3 to 30 MHz
D. 300 to 3000 kHz

T3B10 HRLM (2-4)

What frequency range is referred to as HF?

A. 300 to 3000 MHz
B. 30 to 300 MHz
C. 3 to 30 MHz
D. 300 to 3000 kHz

T3B10 HRLM (2-4)

What does the abbreviation “RF” refer to?

A. Radio frequency signals of all types
B. The resonant frequency of a tuned circuit
C. The real frequency transmitted as opposed to the apparent frequency
D. Reflective force in antenna transmission lines

T5C06 HRLM (2-4)

What does the abbreviation “RF” refer to?

A. Radio frequency signals of all types
B. The resonant frequency of a tuned circuit
C. The real frequency transmitted as opposed to the apparent frequency
D. Reflective force in antenna transmission lines

T5C06 HRLM (2-4)

What is the approximate velocity of a radio wave as it travels through free space?

A. 150,000 kilometers per second
B. 300,000,000 meters per second
C. 300,000,000 miles per hour
D. 150,000 miles per hour

T3B11 HRLM (2 - 5)

ARRL The national association for AMATEUR RADIO

What is the approximate velocity of a radio wave as it travels through free space?

A. 150,000 kilometers per second
B. 300,000,000 meters per second
C. 300,000,000 miles per hour
D. 150,000 miles per hour

T3B11 HRLM (2 - 5)

ARRL The national association for AMATEUR RADIO

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What is the name for the distance a radio wave travels during one complete cycle?

A. Wave speed
B. Waveform
C. Wavelength
D. Wave spread

T3B01 HRLM (2-5)

ARRL The national association for AMATEUR RADIO

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What is the name for the distance a radio wave travels during one complete cycle?

A. Wave speed
B. Waveform
C. Wavelength
D. Wave spread

T3B01 HRLM (2-5)

ARRL The national association for AMATEUR RADIO

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How fast does a radio wave travel through free space?

A. At the speed of light
B. At the speed of sound
C. Its speed is inversely proportional to its wavelength
D. Its speed increases as the frequency increases

T3B04 HRLM (2-5)

ARRL The national association for AMATEUR RADIO

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How fast does a radio wave travel through free space?

A. At the speed of light
B. At the speed of sound
C. Its speed is inversely proportional to its wavelength
D. Its speed increases as the frequency increases

T3B04 HRLM (2-5)

ARRL The national association for AMATEUR RADIO

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How does the wavelength of a radio wave relate to its frequency?

A. The wavelength gets longer as the frequency increases
B. The wavelength gets shorter as the frequency increases
C. There is no relationship between wavelength and frequency
D. The wavelength depends on the bandwidth of the signal

T3B05 HRLM (2-5)

How does the wavelength of a radio wave relate to its frequency?

A. The wavelength gets longer as the frequency increases
B. The wavelength gets shorter as the frequency increases
C. There is no relationship between wavelength and frequency
D. The wavelength depends on the bandwidth of the signal

T3B05 HRLM (2-5)

What is the formula for converting frequency to approximate wavelength in meters?

A. Wavelength in meters equals frequency in hertz multiplied by 300
B. Wavelength in meters equals frequency in hertz divided by 300
C. Wavelength in meters equals frequency in megahertz divided by 300
D. Wavelength in meters equals 300 divided by frequency in megahertz

T3B06 HRLM (2-6)

What is the formula for converting frequency to approximate wavelength in meters?

A. Wavelength in meters equals frequency in hertz multiplied by 300
B. Wavelength in meters equals frequency in hertz divided by 300
C. Wavelength in meters equals frequency in megahertz divided by 300
D. Wavelength in meters equals 300 divided by frequency in megahertz

T3B06 HRLM (2-6)

What property of radio waves is often used to identify the different frequency bands?

A. The approximate wavelength
B. The magnetic intensity of waves
C. The time it takes for waves to travel one mile
D. The voltage standing wave ratio of waves

T3B07 HRLM (2-6)

What property of radio waves is often used to identify the different frequency bands?

A. The approximate wavelength
B. The magnetic intensity of waves
C. The time it takes for waves to travel one mile
D. The voltage standing wave ratio of waves

T3B07 HRLM (2-6)

What is a transceiver?

A. A type of antenna switch
B. A unit combining the functions of a transmitter and a receiver
C. A component in a repeater that filters out unwanted interference
D. A type of antenna matching network

T7A02 HRLM (2 - 7)

What is a transceiver?

A. A type of antenna switch
B. A unit combining the functions of a transmitter and a receiver
C. A component in a repeater that filters out unwanted interference
D. A type of antenna matching network

T7A02 HRLM (2 - 7)

What type of amateur station simultaneously retransmits the signal of another amateur station on a different channel or channels?

A. Beacon station
B. Earth station
C. Repeater station
D. Message forwarding station

FCC Rule: [97.3(a)(40)] T1F09 HRLM (2 - 8)

What type of amateur station simultaneously retransmits the signal of another amateur station on a different channel or channels?

A. Beacon station
B. Earth station
C. Repeater station
D. Message forwarding station

FCC Rule: [97.3(a)(40)] T1F09 HRLM (2 - 8)

Electrical current is measured in which of the following units?

A. Volts
B. Watts
C. Ohms
D. Amperes

T5A01 HRLM (3-1)

Electrical current is measured in which of the following units?

A. Volts
B. Watts
C. Ohms
D. Amperes

T5A01 HRLM (3-1)

What is the name for the flow of electrons in an electric circuit?

A. Voltage
B. Resistance
C. Capacitance
D. Current

T5A03 HRLM (3-1)

What is the name for the flow of electrons in an electric circuit?

A. Voltage
B. Resistance
C. Capacitance
D. Current

T5A03 HRLM (3-1)

What is the electrical term for the electromotive force (EMF) that causes electron flow?

A. Voltage
B. Ampere-hours
C. Capacitance
D. Inductance

T5A05 HRLM (3-1)

What is the electrical term for the electromotive force (EMF) that causes electron flow?

A. Voltage
B. Ampere-hours
C. Capacitance
D. Inductance

T5A05 HRLM (3-1)

Which instrument is used to measure electric current?

A. An ohmmeter
B. A wavemeter
C. A voltmeter
D. An ammeter

T7D04 HRLM (3-1)

Which instrument is used to measure electric current?

A. An ohmmeter
B. A wavemeter
C. A voltmeter
D. An ammeter

T7D04 HRLM (3-1)

What is the name for a current that flows only in one direction?

A. Alternating current
B. Direct current
C. Normal current
D. Smooth current

T5A04 HRLM (3-2)

What is the name for a current that flows only in one direction?

A. Alternating current
B. Direct current
C. Normal current
D. Smooth current

T5A04 HRLM (3-2)

What is the name for a current that reverses direction on a regular basis?

A. Alternating current
B. Direct current
C. Circular current
D. Vertical current

T5A09 HRLM (3-2)

What is the name for a current that reverses direction on a regular basis?

A. Alternating current
B. Direct current
C. Circular current
D. Vertical current

T5A09 HRLM (3-2)

What is the unit of electromotive force?

A. The volt
B. The watt
C. The ampere
D. The ohm

T5A11 HRLM (3-2)

What is the unit of electromotive force?

A. The volt
B. The watt
C. The ampere
D. The ohm

T5A11 HRLM (3-2)

In which type of circuit is current the same through all components?

A. Series
B. Parallel
C. Resonant
D. Branch

T5A13 HRLM (3 - 2)

In which type of circuit is current the same through all components?

A. Series
B. Parallel
C. Resonant
D. Branch

T5A13 HRLM (3 - 2)

In which type of circuit is voltage the same across all components?

A. Series
B. Parallel
C. Resonant
D. Branch

T5A14 HRLM (3 - 2)

In which type of circuit is voltage the same across all components?

A. Series
B. Parallel
C. Resonant
D. Branch

T5A14 HRLM (3 - 2)

Which instrument would you use to measure electric potential or electromotive force?

A. An ammeter
B. A voltmeter
C. A wavemeter
D. An ohmmeter

T7D01 HRLM (3-2)

Which instrument would you use to measure electric potential or electromotive force?

A. An ammeter
B. A voltmeter
C. A wavemeter
D. An ohmmeter

T7D01 HRLM (3-2)

What happens to current at the junction of two components in series?

A. It divides equally between them
B. It is unchanged
C. It divides based on the on the value of the components
D. The current in the second component is zero

T5D13 HRLM (3 - 2)

What happens to current at the junction of two components in series?

A. It divides equally between them
B. It is unchanged
C. It divides based on the on the value of the components
D. The current in the second component is zero

T5D13 HRLM (3 - 2)

What happens to current at the junction of two components in parallel?

A. It divides between them dependent on the value of the components
B. It is the same in both components
C. Its value doubles
D. Its value is halved

T5D14 HRLM (3 - 2)

What happens to current at the junction of two components in parallel?

A. It divides between them dependent on the value of the components
B. It is the same in both components
C. Its value doubles
D. Its value is halved

T5D14 HRLM (3 - 2)

What is the voltage across each of two components in series with a voltage source?

A. The same voltage as the source
B. Half the source voltage
C. It is determined by the type and value of the components
D. Twice the source voltage

T5D15 HRLM (3 - 2)

What is the voltage across each of two components in series with a voltage source?

A. The same voltage as the source
B. Half the source voltage
C. It is determined by the type and value of the components
D. Twice the source voltage

T5D15 HRLM (3 - 2)

What is the voltage across each of two components in parallel with a voltage source?

A. It is determined by the type and value of the components
B. Half the source voltage
C. Twice the source voltage
D. The same voltage as the source

T5D16 HRLM (3 - 3)

What is the voltage across each of two components in parallel with a voltage source?

A. It is determined by the type and value of the components
B. Half the source voltage
C. Twice the source voltage
D. The same voltage as the source

T5D16 HRLM (3 - 3)

What is the correct way to connect a voltmeter to a circuit?

A. In series with the circuit
B. In parallel with the circuit
C. In quadrature with the circuit
D. In phase with the circuit

T7D02 HRLM (3-3)

What is the correct way to connect a voltmeter to a circuit?

A. In series with the circuit
B. In parallel with the circuit
C. In quadrature with the circuit
D. In phase with the circuit

T7D02 HRLM (3-3)

How is an ammeter usually connected to a circuit?

A. In series with the circuit
B. In parallel with the circuit
C. In quadrature with the circuit
D. In phase with the circuit

T7D03 HRLM (3-3)

How is an ammeter usually connected to a circuit?

A. In series with the circuit
B. In parallel with the circuit
C. In quadrature with the circuit
D. In phase with the circuit

T7D03 HRLM (3-3)

Which of the following might damage a multimeter?

A. Measuring a voltage too small for the chosen scale
B. Leaving the meter in the milliamps position overnight
C. Attempting to measure voltage when using the resistance setting
D. Not allowing it to warm up properly

T7D06 HRLM (3-4)

Which of the following might damage a multimeter?

A. Measuring a voltage too small for the chosen scale
B. Leaving the meter in the milliamps position overnight
C. Attempting to measure voltage when using the resistance setting
D. Not allowing it to warm up properly

T7D06 HRLM (3-4)

Which of the following measurements are commonly made using a multimeter?

A. SWR and RF power
B. Signal strength and noise
C. Impedance and reactance
D. Voltage and resistance

T7D07 HRLM (3-4)

Which of the following measurements are commonly made using a multimeter?

A. SWR and RF power
B. Signal strength and noise
C. Impedance and reactance
D. Voltage and resistance

T7D07 HRLM (3-4)

What is probably happening when an ohmmeter, connected across an unpowered circuit, initially indicates a low resistance and then shows increasing resistance with time?

A. The ohmmeter is defective
B. The circuit contains a large capacitor
C. The circuit contains a large inductor
D. The circuit is a relaxation oscillator

T7D10 HRLM (3-4)

What is probably happening when an ohmmeter, connected across an unpowered circuit, initially indicates a low resistance and then shows increasing resistance with time?

A. The ohmmeter is defective
B. The circuit contains a large capacitor
C. The circuit contains a large inductor
D. The circuit is a relaxation oscillator

T7D10 HRLM (3-4)

Which of the following precautions should be taken when measuring circuit resistance with an ohmmeter?

A. Ensure that the applied voltages are correct
B. Ensure that the circuit is not powered
C. Ensure that the circuit is grounded
D. Ensure that the circuit is operating at the correct frequency

T7D11 HRLM (3-4)

Which of the following precautions should be taken when measuring circuit resistance with an ohmmeter?

A. Ensure that the applied voltages are correct
B. Ensure that the circuit is not powered
C. Ensure that the circuit is grounded
D. Ensure that the circuit is operating at the correct frequency

T7D11 HRLM (3-4)

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Which of the following precautions should be taken when measuring high voltages with a voltmeter?

A. Ensure that the voltmeter has very low impedance
B. Ensure that the voltmeter and leads are rated for use at the voltages to be measured
C. Ensure that the circuit is grounded through the voltmeter
D. Ensure that the voltmeter is set to the correct frequency

T7D12 HRLM (3-4)

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Which of the following precautions should be taken when measuring high voltages with a voltmeter?

A. Ensure that the voltmeter has very low impedance
B. Ensure that the voltmeter and leads are rated for use at the voltages to be measured
C. Ensure that the circuit is grounded through the voltmeter
D. Ensure that the voltmeter is set to the correct frequency

T7D12 HRLM (3-4)

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What instrument is used to measure resistance?

A. An oscilloscope
B. A spectrum analyzer
C. A noise bridge
D. An ohmmeter

T7D05 HRLM (3-5)

2018 - 2022 Technician License Course

What instrument is used to measure resistance?

A. An oscilloscope
B. A spectrum analyzer
C. A noise bridge
D. An ohmmeter

T7D05 HRLM (3-5)

2018 - 2022 Technician License Course

Which of the following is a good electrical conductor?

A. Glass
B. Wood
C. Copper
D. Rubber

T5A07 HRLM (3-5)

Which of the following is a good electrical conductor?

A. Glass
B. Wood
C. Copper
D. Rubber

T5A07 HRLM (3-5)

Which of the following is a good electrical insulator?

A. Copper
B. Glass
C. Aluminum
D. Mercury

T5A08 HRLM (3-5)

Which of the following is a good electrical insulator?

A. Copper
B. Glass
C. Aluminum
D. Mercury

T5A08 HRLM (3-5)

What formula is used to calculate current in a circuit?

A. Current (I) equals voltage (E) multiplied by resistance (R)
B. Current (I) equals voltage (E) divided by resistance (R)
C. Current (I) equals voltage (E) added to resistance (R)
D. Current (I) equals voltage (E) minus resistance (R)

T5D01 HRLM (3-5)

What formula is used to calculate current in a circuit?

A. Current (I) equals voltage (E) multiplied by resistance (R)
B. Current (I) equals voltage (E) divided by resistance (R)
C. Current (I) equals voltage (E) added to resistance (R)
D. Current (I) equals voltage (E) minus resistance (R)

T5D01 HRLM (3-5)

What formula is used to calculate voltage in a circuit?

A. Voltage (E) equals current (I) multiplied by resistance (R)
B. Voltage (E) equals current (I) divided by resistance (R)
C. Voltage (E) equals current (I) added to resistance (R)
D. Voltage (E) equals current (I) minus resistance (R)

T5D02 HRLM (3-5)

What formula is used to calculate voltage in a circuit?

A. Voltage (E) equals current (I) multiplied by resistance (R)
B. Voltage (E) equals current (I) divided by resistance (R)
C. Voltage (E) equals current (I) added to resistance (R)
D. Voltage (E) equals current (I) minus resistance (R)

T5D02 HRLM (3-5)

What formula is used to calculate resistance in a circuit?

A. Resistance (R) equals voltage (E) multiplied by current (I)
B. Resistance (R) equals voltage (E) divided by current (I)
C. Resistance (R) equals voltage (E) added to current (I)
D. Resistance (R) equals voltage (E) minus current (I)

T5D03 HRLM (3-5)

What formula is used to calculate resistance in a circuit?

A. Resistance (R) equals voltage (E) multiplied by current (I)
B. Resistance (R) equals voltage (E) divided by current (I)
C. Resistance (R) equals voltage (E) added to current (I)
D. Resistance (R) equals voltage (E) minus current (I)

T5D03 HRLM (3-5)

What is the resistance of a circuit in which a current of 3 amperes flows through a resistor connected to 90 volts?

A. 3 ohms
B. 30 ohms
C. 93 ohms
D. 270 ohms

T5D04 HRLM (3-6)

What is the resistance of a circuit in which a current of 3 amperes flows through a resistor connected to 90 volts?

A. 3 ohms
B. 30 ohms
C. 93 ohms
D. 270 ohms

T5D04 HRLM (3-6)

What is the resistance in a circuit for which the applied voltage is 12 volts and the current flow is 1.5 amperes?

A. 18 ohms
B. 0.125 ohms
C. 8 ohms
D. 13.5 ohms

T5D05 HRLM (3-6)

What is the resistance in a circuit for which the applied voltage is 12 volts and the current flow is 1.5 amperes?

A. 18 ohms
B. 0.125 ohms
C. 8 ohms
D. 13.5 ohms

T5D05 HRLM (3-6)

2018 - 2022 Technician License Course

What is the resistance of a circuit that draws 4 amperes from a 12-volt source?

A. 3 ohms
B. 16 ohms
C. 48 ohms
D. 8 ohms

T5D06 HRLM (3-6)

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What is the resistance of a circuit that draws 4 amperes from a 12-volt source?

A. 3 ohms
B. 16 ohms
C. 48 ohms
D. 8 ohms

T5D06 HRLM (3-6)

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What is the current in a circuit with an applied voltage of 120 volts and a resistance of 80 ohms?

A. 9600 amperes
B. 200 amperes
C. 0.667 amperes
D. 1.5 amperes

T5D07 HRLM (3-6)

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What is the current flow in a circuit with an applied voltage of 120 volts and a resistance of 80 ohms?

A. 9600 amperes
B. 200 amperes
C. 0.667 amperes
D. 1.5 amperes

T5D07 HRLM (3-6)

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What is the current through a 100-ohm resistor connected across 200 volts?

A. 20,000 amperes
B. 0.5 amperes
C. 2 amperes
D. 100 amperes

T5D08 HRLM (3-6)

What is the current flowing through a 100-ohm resistor connected across 200 volts?

A. 20,000 amperes
B. 0.5 amperes
C. 2 amperes
D. 100 amperes

T5D08 HRLM (3-6)

What is the current through a 24-ohm resistor connected across 240 volts?

A. 24,000 amperes
B. 0.1 amperes
C. 10 amperes
D. 216 amperes

T5D09 HRLM (3-6)

What is the current flowing through a 24-ohm resistor connected across 240 volts?

A. 24,000 amperes
B. 0.1 amperes
C. 10 amperes
D. 216 amperes

T5D09 HRLM (3-6)

What is the voltage across a 2-ohm resistor if a current of 0.5 amperes flows through it?

A. 1 volt
B. 0.25 volts
C. 2.5 volts
D. 1.5 volts

T5D10 HRLM (3-6)

What is the voltage across a 2-ohm resistor if a current of 0.5 amperes flows through it?

A. 1 volt
B. 0.25 volts
C. 2.5 volts
D. 1.5 volts

T5D10 HRLM (3-6)

What is the voltage across a 10-ohm resistor if a current of 1 ampere flows through it?

A. 1 volt
B. 10 volts
C. 11 volts
D. 9 volts

T5D11 HRLM (3-7)

What is the voltage across a 10-ohm resistor if a current of 1 ampere flows through it?

A. 1 volt
B. 10 volts
C. 11 volts
D. 9 volts

T5D11 HRLM (3-7)

What is the voltage across a 10-ohm resistor if a current of 2 amperes flows through it?

A. 8 volts
B. 0.2 volts
C. 12 volts
D. 20 volts

T5D12 HRLM (3-7)

What is the voltage across a 10-ohm resistor if a current of 2 amperes flows through it?

A. 8 volts
B. 0.2 volts
C. 12 volts
D. 20 volts

T5D12 HRLM (3-7)

Electrical power is measured in which of the following units?

A. Volts
B. Watts
C. Ohms
D. Amperes

T5A02 HRLM (3-7)

Electrical power is measured in which of the following units?

A. Volts
B. Watts
C. Ohms
D. Amperes

T5A02 HRLM (3-7)

Which term describes the rate at which electrical energy is used?

A. Resistance
B. Current
C. Power
D. Voltage

T5A10 HRLM (3-7)

Which term describes the rate at which electrical energy is used?

A. Resistance
B. Current
C. Power
D. Voltage

T5A10 HRLM (3-7)

What is the formula used to calculate electrical power in a DC circuit?

A. Power (P) equals voltage (E) multiplied by current (I)
B. Power (P) equals voltage (E) divided by current (I)
C. Power (P) equals voltage (E) minus current (I)
D. Power (P) equals voltage (E) plus current (I)

T5C08 HRLM (3-7)

What is the formula used to calculate electrical power in a DC circuit?

A. Power (P) equals voltage (E) multiplied by current (I)
B. Power (P) equals voltage (E) divided by current (I)
C. Power (P) equals voltage (E) minus current (I)
D. Power (P) equals voltage (E) plus current (I)

T5C08 HRLM (3-7)

How much power is being used in a circuit when the applied voltage is 13.8 volts DC and the current is 10 amperes?

A. 138 watts
B. 0.7 watts
C. 23.8 watts
D. 3.8 watts

T5C09 HRLM (3-7)

How much power is being used in a circuit when the applied voltage is 13.8 volts DC and the current is 10 amperes?

A. 138 watts
B. 0.7 watts
C. 23.8 watts
D. 3.8 watts

T5C09 HRLM (3-7)

How much power is being used in a circuit when the applied voltage is 12 volts DC and the current is 2.5 amperes?

A. 4.8 watts
B. 30 watts
C. 14.5 watts
D. 0.208 watts

T5C10 HRLM (3-7)

How much power is being used in a circuit when the applied voltage is 12 volts DC and the current is 2.5 amperes?

A. 4.8 watts
B. 30 watts
C. 14.5 watts
D. 0.208 watts

T5C10 HRLM (3-7)

How many amperes are flowing in a circuit when the applied voltage is 12 volts DC and the load is 120 watts?

A. 0.1 amperes
B. 10 amperes
C. 12 amperes
D. 132 amperes

T5C11 HRLM (3-7)

How many amperes are flowing in a circuit when the applied voltage is 12 volts DC and the load is 120 watts?

A. 0.1 amperes
B. 10 amperes
C. 12 amperes
D. 132 amperes

T5C11 HRLM (3-7)

What is the ability to store energy in an electric field called?

A. Inductance
B. Resistance
C. Tolerance
D. Capacitance

T5C01 HRLM (3-9)

What is the ability to store energy in an electric field called?

A. Inductance
B. Resistance
C. Tolerance
D. Capacitance

T5C01 HRLM (3-9)

What is the basic unit of capacitance?

A. The farad
B. The ohm
C. The volt
D. The henry

T5C02 HRLM (3-9)

What is the basic unit of capacitance?

A. The farad
B. The ohm
C. The volt
D. The henry

T5C02 HRLM (3-9)

What electrical component stores energy in an electric field?

A. Resistor
B. Capacitor
C. Inductor
D. Diode

T6A04 HRLM (3-9)

What electrical component stores energy in an electric field?

A. Resistor
B. Capacitor
C. Inductor
D. Diode

T6A04 HRLM (3-9)

What is the ability to store energy in a magnetic field called?

A. Admittance
B. Capacitance
C. Resistance
D. Inductance

T5C03 HRLM (3-9)

What is the ability to store energy in a magnetic field called?

A. Admittance
B. Capacitance
C. Resistance
D. Inductance

T5C03 HRLM (3-9)

What is the basic unit of inductance?

A. The coulomb
B. The farad
C. The henry
D. The ohm

T5C04 HRLM (3-9)

What is the basic unit of inductance?

A. The coulomb
B. The farad
C. The henry
D. The ohm

T5C04 HRLM (3-9)

What type of electrical component stores energy in a magnetic field?

A. Resistor
B. Capacitor
C. Inductor
D. Diode

T6A06 HRLM (3-9)

What type of electrical component stores energy in a magnetic field?

A. Resistor
B. Capacitor
C. Inductor
D. Diode

T6A06 HRLM (3-9)

What electrical component opposes the flow of current in a DC circuit?

A. Inductor
B. Resistor
C. Voltmeter
D. Transformer

T6A01 HRLM (3-9)

What electrical component opposes the flow of current in a DC circuit?

A. Inductor
B. Resistor
C. Voltmeter
D. Transformer

T6A01 HRLM (3-9)

What type of component is often used as an adjustable volume control?

A. Fixed resistor
B. Power resistor
C. Potentiometer
D. Transformer

T6A02 HRLM (3-9)

What type of component is often used as an adjustable volume control?

A. Fixed resistor
B. Power resistor
C. Potentiometer
D. Transformer

T6A02 HRLM (3-9)

What electrical parameter is controlled by a potentiometer?

A. Inductance
B. Resistance
C. Capacitance
D. Field strength

T6A03 HRLM (3-9)

What electrical parameter is controlled by a potentiometer?

A. Inductance
B. Resistance
C. Capacitance
D. Field strength

T6A03 HRLM (3-9)

What type of electrical component consists of two or more conductive surfaces separated by an insulator?

A. Resistor
B. Potentiometer
C. Oscillator
D. Capacitor

T6A05 HRLM (3-9)

What type of electrical component consists of two or more conductive surfaces separated by an insulator?

A. Resistor
B. Potentiometer
C. Oscillator
D. Capacitor

T6A05 HRLM (3-9)

What electrical component usually is constructed of a coil of wire?

A. Switch
B. Capacitor
C. Diode
D. Inductor

T6A07 HRLM (3-9)

What electrical component usually is constructed of a coil of wire?

A. Switch
B. Capacitor
C. Diode
D. Inductor

T6A07 HRLM (3-9)

What component is commonly used to change 120V AC house current to a lower AC voltage for other uses?

A. Variable capacitor
B. Transformer
C. Transistor
D. Diode

T6D06 HRLM (3-9)

What component is commonly used to change 120V AC house current to a lower AC voltage for other uses?

A. Variable capacitor
B. Transformer
C. Transistor
D. Diode

T6D06 HRLM (3-9)

What is impedance?

A. A measure of the opposition to AC current flow in a circuit
B. The inverse of resistance
C. The Q or Quality Factor of a component
D. The power handling capability of a component

T5C12 HRLM (3-10)

What is impedance?

A. A measure of the opposition to AC current flow in a circuit
B. The inverse of resistance
C. The Q or Quality Factor of a component
D. The power handling capability of a component

T5C12 HRLM (3-10)

What are the units of impedance?

A. Volts
B. Amperes
C. Coulombs
D. Ohms

T5C13 HRLM (3-10)

What are the units of impedance?

A. Volts
B. Amperes
C. Coulombs
D. Ohms

T5C13 HRLM (3-10)

Which of the following is a resonant or tuned circuit?

A. An inductor and a capacitor connected in series or parallel to form a filter
B. A type of voltage regulator
C. A resistor circuit used for reducing standing wave ratio
D. A circuit designed to provide high-fidelity audio

T6D11 HRLM (3-10)

Which of the following is a resonant or tuned circuit?

A. An inductor and a capacitor connected in series or parallel to form a filter
B. A type of voltage regulator
C. A resistor circuit used for reducing standing wave ratio
D. A circuit designed to provide high-fidelity audio

T6D11 HRLM (3-10)

Which of the following is combined with an inductor to make a tuned circuit?

A. Resistor
B. Zener diode
C. Potentiometer
D. Capacitor

T6D08 HRLM (3-10)

Which of the following is combined with an inductor to make a tuned circuit?

A. Resistor
B. Zener diode
C. Potentiometer
D. Capacitor

T6D08 HRLM (3-10)

What electrical component is used to protect other circuit components from current overloads?

A. Fuse
B. Capacitor
C. Inductor
D. All of these choices are correct

T6A09 HRLM (3-12)

What electrical component is used to protect other circuit components from current overloads?

A. Fuse
B. Capacitor
C. Inductor
D. All of these choices are correct

T6A09 HRLM (3-12)

What class of electronic components uses a voltage or current signal to control current flow?

A. Capacitors
B. Inductors
C. Resistors
D. Transistors

T6B01 HRLM (3-12)

What class of electronic components uses a voltage or current signal to control current flow?

A. Capacitors
B. Inductors
C. Resistors
D. Transistors

T6B01 HRLM (3-12)

What electronic component allows current to flow in only one direction?

A. Resistor
B. Fuse
C. Diode
D. Driven Element

T6B02 HRLM (3-12)

What electronic component allows current to flow in only one direction?

A. Resistor
B. Fuse
C. Diode
D. Driven Element

T6B02 HRLM (3-12)

Which of these components can be used as an electronic switch or amplifier?

A. Oscillator
B. Potentiometer
C. Transistor
D. Voltmeter

T6B03 HRLM (3-12)

Which of these components can be used as an electronic switch or amplifier?

A. Oscillator
B. Potentiometer
C. Transistor
D. Voltmeter

T6B03 HRLM (3-12)

Which of the following components can consist of three layers of semiconductor material?

A. Alternator
B. Transistor
C. Triode
D. Pentagrid converter

T6B04 HRLM (3-12)

Which of the following components can consist of three layers of semiconductor material?

A. Alternator
B. Transistor
C. Triode
D. Pentagrid converter

T6B04 HRLM (3-12)

Which of the following electronic components can amplify signals?

A. Transistor
B. Variable resistor
C. Electrolytic capacitor
D. Multi-cell battery

T6B05 HRLM (3-12)

Which of the following electronic components can amplify signals?

A. Transistor
B. Variable resistor
C. Electrolytic capacitor
D. Multi-cell battery

T6B05 HRLM (3-12)

How is the cathode lead of a semiconductor diode often marked on the package?

A. With the word "cathode"
B. With a stripe
C. With the letter "C"
D. All of these choices are correct

T6B06 HRLM (3-12)

How is the cathode lead of a semiconductor diode often marked on the package?

A. With the word "cathode"
B. With a stripe
C. With the letter "C"
D. All of these choices are correct

T6B06 HRLM (3-12)

What does the abbreviation LED stand for?

A. Low Emission Diode
B. Light Emitting Diode
C. Liquid Emission Detector
D. Long Echo Delay

T6B07 HRLM (3-12)

What does the abbreviation LED stand for?

A. Low Emission Diode
B. Light Emitting Diode
C. Liquid Emission Detector
D. Long Echo Delay

T6B07 HRLM (3-12)

What does the abbreviation FET stand for?

A. Field Effect Transistor
B. Fast Electron Transistor
C. Free Electron Transition
D. Frequency Emission Transmitter

T6B08 HRLM (3-12)

What does the abbreviation FET stand for?

A. Field Effect Transistor
B. Fast Electron Transistor
C. Free Electron Transition
D. Frequency Emission Transmitter

T6B08 HRLM (3-12)

What are the names of the two electrodes of a diode?

A. Plus and minus
B. Source and drain
C. Anode and cathode
D. Gate and base

T6B09 HRLM (3-12)

What are the names of the two electrodes of a diode?

A. Plus and minus
B. Source and drain
C. Anode and cathode
D. Gate and base

T6B09 HRLM (3-12)

What is the term that describes a device's ability to amplify a signal?

A. Gain
B. Forward resistance
C. Forward voltage drop
D. On resistance

T6B11 HRLM (3-12)

What is the term that describes a device's ability to amplify a signal?

A. Gain
B. Forward resistance
C. Forward voltage drop
D. On resistance

T6B11 HRLM (3-12)

Which of the following could be the primary gain-producing component in an RF power amplifier?

A. Transformer
B. Transistor
C. Reactor
D. Resistor

T6B10 HRLM (3 - 12)

Which of the following could be the primary gain-producing component in an RF power amplifier?

A. Transformer
B. Transistor
C. Reactor
D. Resistor

T6B10 HRLM (3 - 12)

Which of the following devices or circuits changes an alternating current into a varying direct current signal?

A. Transformer
B. Rectifier
C. Amplifier
D. Reflector

T6D01 HRLM (3-12)

Which of the following devices or circuits changes an alternating current into a varying direct current signal?

A. Transformer
B. Rectifier
C. Amplifier
D. Reflector

T6D01 HRLM (3-12)

What is the purpose of a fuse in an electrical circuit?

A. To prevent power supply ripple from damaging a circuit
B. To interrupt power in case of overload
C. To limit current to prevent shocks
D. All of these choices are correct

T0A04 HRLM (3-12)

What is the purpose of a fuse in an electrical circuit?

A. To prevent power supply ripple from damaging a circuit
B. To interrupt power in case of overload
C. To limit current to prevent shocks
D. All of these choices are correct

T0A04 HRLM (3-12)

Why is it unwise to install a 20-ampere fuse in the place of a 5-ampere fuse?

A. The larger fuse would be likely to blow because it is rated for higher current
B. The power supply ripple would greatly increase
C. Excessive current could cause a fire
D. All of these choices are correct

T0A05 HRLM (3-12)

Why is it unwise to install a 20-ampere fuse in the place of a 5-ampere fuse?

A. The larger fuse would be likely to blow because it is rated for higher current
B. The power supply ripple would greatly increase
C. Excessive current could cause a fire
D. All of these choices are correct

T0A05 HRLM (3-12)

Which of the following is commonly used as a visual indicator?

A. LED
B. FET
C. Zener diode
D. Bipolar transistor

T6D07 HRLM (3-12)

Which of the following is commonly used as a visual indicator?

A. LED
B. FET
C. Zener diode
D. Bipolar transistor

T6D07 HRLM (3-12)

What is the name of a device that combines several semiconductors and other components into one package?

A. Transducer
B. Multi-pole relay
C. Integrated circuit
D. Transformer

T6D09 HRLM (3-12)

What is the name of a device that combines several semiconductors and other components into one package?

A. Transducer
B. Multi-pole relay
C. Integrated circuit
D. Transformer

T6D09 HRLM (3-12)

What is the function of component 2 in Figure T1?

A. Give off light when current flows through it
B. Supply electrical energy
C. Control the flow of current
D. Convert electrical energy into radio waves

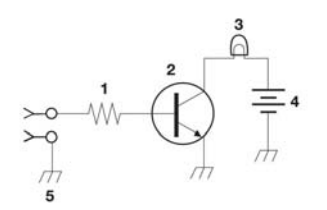

Figure T-1

T6D10 HRLM (3-12)

What is the function of component 2 in Figure T1?

A. Give off light when current flows through it
B. Supply electrical energy
C. Control the flow of current
D. Convert electrical energy into radio waves

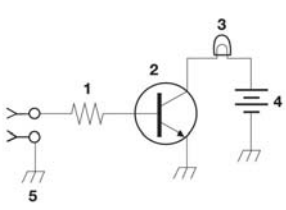

Figure T-1

T6D10 HRLM (3-12)

What is a relay?

A. An electrically-controlled switch
B. A current controlled amplifier
C. An optical sensor
D. A pass transistor

T6D02 HRLM (3-13)

What is a relay?

A. An electrically-controlled switch
B. A current controlled amplifier
C. An optical sensor
D. A pass transistor

T6D02 HRLM (3-13)

What electrical component is used to connect or disconnect electrical circuits?

A. Magnetron
B. Switch
C. Thermistor
D. All of these choices are correct

T6A08 HRLM (3-13)

What electrical component is used to connect or disconnect electrical circuits?

A. Magnetron
B. Switch
C. Thermistor
D. All of these choices are correct

T6A08 HRLM (3-13)

What is the name of an electrical wiring diagram that uses standard component symbols?

A. Bill of materials
B. Connector pinout
C. Schematic
D. Flow chart

T6C01 HRLM (3 - 14)

What is the name of an electrical wiring diagram that uses standard component symbols?

A. Bill of materials
B. Connector pinout
C. Schematic
D. Flow chart

T6C01 HRLM (3 - 14)

What do the symbols on an electrical schematic represent?

A. Electrical components
B. Logic states
C. Digital codes
D. Traffic nodes

T6C12 HRLM (3-14)

What do the symbols on an electrical schematic represent?

A. Electrical components
B. Logic states
C. Digital codes
D. Traffic nodes

T6C12 HRLM (3-14)

Which of the following displays an electrical quantity as a numeric value?

A. Potentiometer
B. Transistor
C. Meter
D. Relay

T6D04 HRLM (3-14)

Which of the following displays an electrical quantity as a numeric value?

A. Potentiometer
B. Transistor
C. Meter
D. Relay

T6D04 HRLM (3-14)

What type of switch is represented by component 3 in figure T2?

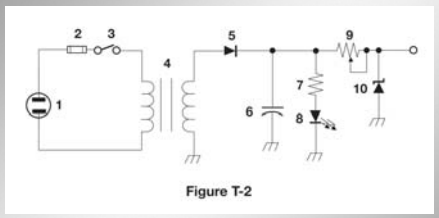

Figure T-2

A. Single-pole single-throw
B. Single-pole double-throw
C. Double-pole single-throw
D. Double-pole double-throw

T6D03 HRLM (3-14)

What type of switch is represented by component 3 in figure T2?

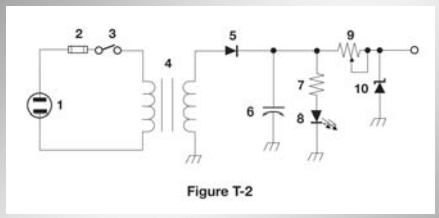

Figure T-2

A. Single-pole single-throw
B. Single-pole double-throw
C. Double-pole single-throw
D. Double-pole double-throw

T6D03 HRLM (3-14)

What is component 1 in figure T1?

A. Resistor
B. Transistor
C. Battery
D. Connector

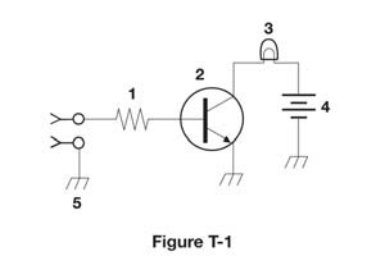

Figure T-1

T6C02 HRLM (3-16)

What is component 1 in figure T1?

A. Resistor
B. Transistor
C. Battery
D. Connector

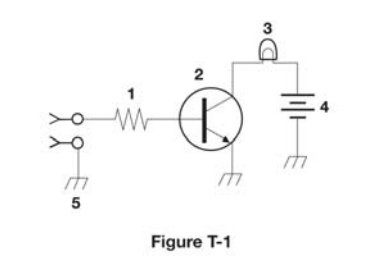

Figure T-1

T6C02 HRLM (3-16)

What is component 2 in figure T1?

A. Resistor
B. Transistor
C. Indicator lamp
D. Connector

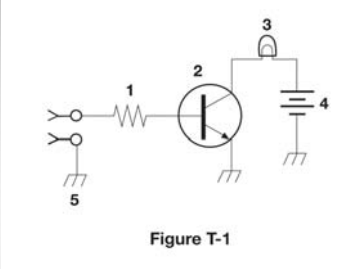

Figure T-1

T6C03 HRLM (3-16)

What is component 2 in figure T1?

A. Resistor
B. Transistor
C. Indicator lamp
D. Connector

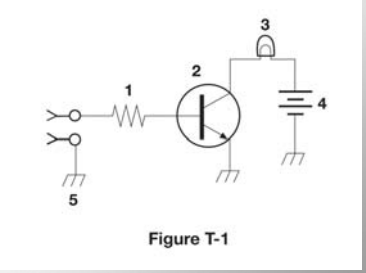

Figure T-1

T6C03 HRLM (3-16)

What is component 3 in figure T1?

A. Resistor
B. Transistor
C. Lamp
D. Ground symbol

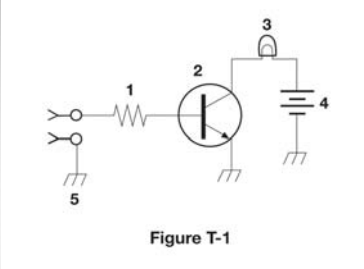

Figure T-1

T6C04 HRLM (3-16)

What is component 3 in figure T1?

A. Resistor
B. Transistor
C. Lamp
D. Ground symbol

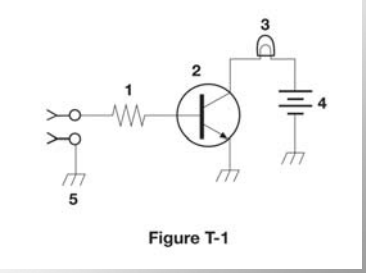

Figure T-1

T6C04 HRLM (3-16)

What is component 4 in figure T1?

A. Resistor
B. Transistor
C. Battery
D. Ground symbol

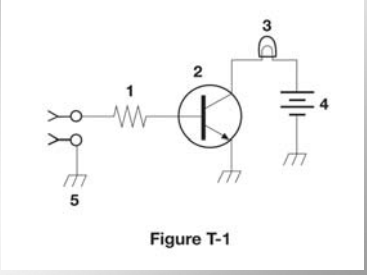

Figure T-1

T6C05 HRLM (3-16)

What is component 4 in figure T1?

A. Resistor
B. Transistor
C. Battery
D. Ground symbol

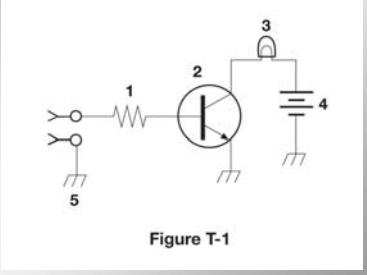

Figure T-1

T6C05 HRLM (3-16)

What is component 6 in figure T2?

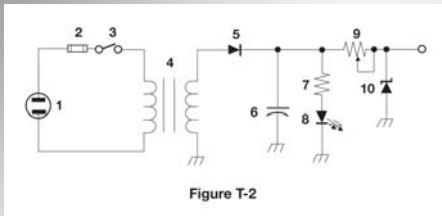

Figure T-2

A. Resistor
B. Capacitor
C. Regulator IC
D. Transistor

T6C06 HRLM (3-16)

What is component 6 in figure T2?

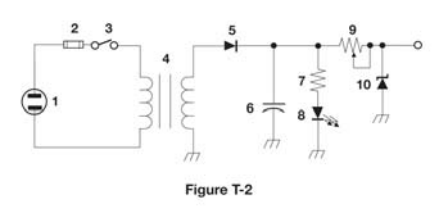

Figure T-2

A. Resistor
B. Capacitor
C. Regulator IC
D. Transistor

T6C06 HRLM (3-16)

What is component 8 in figure T2?

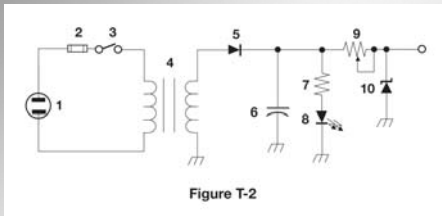

Figure T-2

A. Resistor
B. Inductor
C. Regulator IC
D. Light emitting diode

T6C07 HRLM (3-16)

What is component 8 in figure T2?

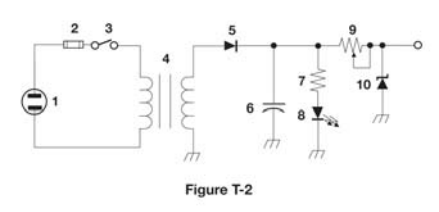

Figure T-2

A. Resistor
B. Inductor
C. Regulator IC
D. Light emitting diode

T6C07 HRLM (3-16)

What is component 9 in figure T2?

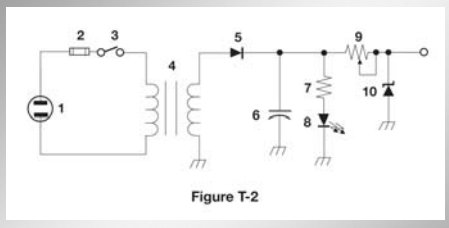

Figure T-2

A. Variable capacitor
B. Variable inductor
C. Variable resistor
D. Variable transformer

T6C08 HRLM (3-16)

What is component 9 in figure T2?

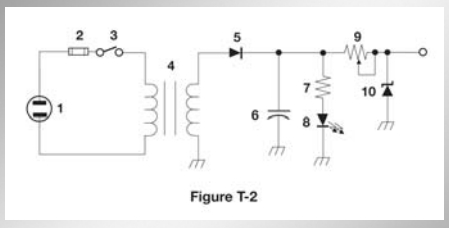

Figure T-2

A. Variable capacitor
B. Variable inductor
C. Variable resistor
D. Variable transformer

T6C08 HRLM (3-16)

What is component 4 in figure T2?

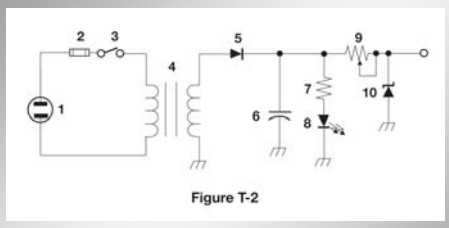

Figure T-2

A. Variable inductor
B. Double-pole switch
C. Potentiometer
D. Transformer

T6C09 HRLM (3-16)

What is component 4 in figure T2?

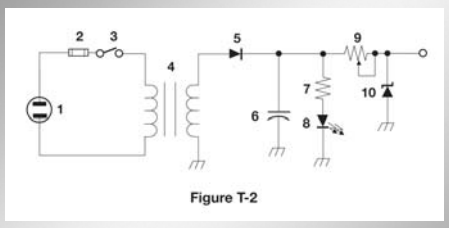

Figure T-2

A. Variable inductor
B. Double-pole switch
C. Potentiometer
D. Transformer

T6C09 HRLM (3-16)

What is component 3 in figure T3?

A. Connector
B. Meter
C. Variable capacitor
D. Variable inductor

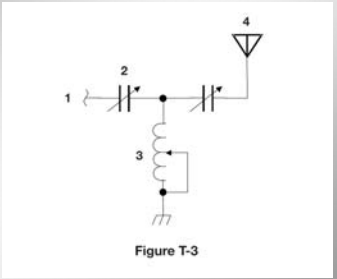

Figure T-3

T6C10 HRLM (3-16)

What is component 3 in figure T3?

A. Connector
B. Meter
C. Variable capacitor
D. Variable inductor

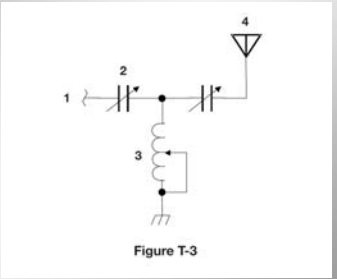

Figure T-3

T6C10 HRLM (3-16)

What is component 4 in figure T3?

A. Antenna
B. Transmitter
C. Dummy load
D. Ground

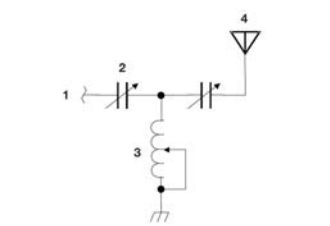

Figure T-3

T6C11 HRLM (3-16)

What is component 4 in figure T3?

A. Antenna
B. Transmitter
C. Dummy load
D. Ground

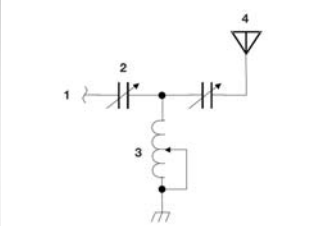

Figure T-3

T6C11 HRLM (3-16)

Which of the following is accurately represented in electrical schematics?

A. Wire lengths
B. Physical appearance of components
C. The way components are interconnected
D. All of these choices are correct

T6C13 HRLM (3-16)

Which of the following is accurately represented in electrical schematics?

A. Wire lengths
B. Physical appearance of components
C. The way components are interconnected
D. All of these choices are correct

T6C13 HRLM (3-16)

What is the name of a circuit that generates a signal at a specific frequency?

A. Reactance modulator
B. Product detector
C. Low-pass filter
D. Oscillator

T7A05 HRLM (3 - 17)

What is the name of a circuit that generates a signal at a specific frequency?

A. Reactance modulator
B. Product detector
C. Low-pass filter
D. Oscillator

T7A05 HRLM (3 - 17)

Which of the following describes combining speech with an RF carrier signal?

A. Impedance matching
B. Oscillation
C. Modulation
D. Low-pass filtering

T7A08 HRLM (3 - 17)

Which of the following describes combining speech with an RF carrier signal?

A. Impedance matching
B. Oscillation
C. Modulation
D. Low-pass filtering

T7A08 HRLM (3 - 17)

Which of the following is used to convert a radio signal from one frequency to another?

A. Phase splitter
B. Mixer
C. Inverter
D. Amplifier

T7A03 HRLM (3 - 18)

Which of the following is used to convert a radio signal from one frequency to another?

A. Phase splitter
B. Mixer
C. Inverter
D. Amplifier

T7A03 HRLM (3 - 18)