Through Hole Resistor, 330Ω, 250 mW, ±5%, Axial Leaded, 250 V

**Features**
- Resistance: 330ohm
- Power Rating: 250mW
- Resistance Tolerance: ±5%
- Resistor Case Style: Axial Leaded
- Voltage Rating: 250V
- Resistor Element Type: Carbon Film
- Temperature Coefficient: -450ppm/°C

140 Pc. Jumper Wire Kit, 22 AWG, Solid, Insulated, Assorted Lengths and Colors, Pre-Stripped, Case

**Features**
- Wire Gauge: 22AWG
- Jacket Color: Multi-colored
- Kit Contents: 140Pcs of Jumper Wires in Assorted Lengths

**WK-1, Jumper Wire Kit, 350 pcs.**
The Global Specialties WK-1 Wire Kit contains 350 pre-cut, prestripped and pre-formed #22 gauge insulated solid hookup wires. The WK-1 consists of 25 each of 14 different sized, color-coded lengths of 0.1 inches through 5.0 inches. The WK-1 comes in a compartmentalized plastic case and each group of wires are individually wrapped to prevent mix-ups in shipping.

**WK-2, Jumper Wire Kit, 140 pcs.**
The Global Specialties WK-2 Wire Kit contains 140 pre-cut, prestripped and pre-formed #22 gauge insulated solid hook-up wires. The WK-2 comes in a compartmentalized plastic case and each group of wires are individually wrapped to prevent mix-ups in shipping.
WK-3, Jumper Wire Kit, 70 pcs.
The Global Specialties WK-3 Wire Kit contains 70 pre-cut, prestripped and pre-formed #22 gauge insulated solid hookup wires. The WK-3 comes in a compartmentalized plastic case and each group of wires are individually wrapped to prevent mix-ups in shipping.

WK-4, Jumper Wire Kit, 100 pcs
The Global Specialties WK-4 Wire Kit contains 100 pre-cut premium #22 gauge insulated stranded wire. Each wire comes with specially-designed, machined pins soldered to each end to allow for extended insertion life and maximum surface contact. The WK-4 comes in a convenient plastic case.

Jumper Cable, Male to Male Connectors, 150mm Length, Pack of 10, Arduino, Beaglebone

Features:
- 150mm in length
- Supplied in packs of 10

Specification
- 150mm in length
- Supplied in a pack of 10
- Pro Signal products are rated 4.2 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details

Description:
Jumper wires for all your development needs. These cables come in a variety of connections either male or female connectors.
Assortments & Kits

Trimpot, Single Turn, Cermet, Top Adjust, 10 kΩ, Through Hole, 1 Turns

**Features**
- Trimpot Type: Single Turn
- Element Material: Cermet
- Adjustment Type: Top Adjust
- Track Resistance: 10kΩ
- Potentiometer Mounting: Through Hole
- No. of Turns: 1 Turns
- Product Range: 3362 Series
- Power Rating: 500mW
- Resistance Tolerance: ± 10%
- Temperature Coefficient: ± 100ppm/°C
- Trimpot Shape / Size: 1/4 Inch Square

USB Cable, Type A Plug to Mini Type B Plug, 900 mm, 3 ft, USB 2.0, Grey

**Features**
- Cable Assembly Type: USB
- Cable Length - Imperial: 3ft
- Cable Length - Metric: 915mm
- Connector Type A: USB A Plug
- Connector Type B: Mini USB B Plug
- Jacket Colour: Grey

Development Board, Arduino Nano, ATmega328 MCU, 14 3.3V I/O, 6 PWM Outputs, USB Mini B

**Features**
- Silicon Manufacturer: Atmel
- No. of Bits: 8bit
- Silicon Family Name: ATmega
- Core Architecture: AVR
- Core Sub-Architecture: megaAVR
- Silicon Core Number: ATmega328
- Kit Contents: Board only

**Specification**
- Microcontroller Atmel ATmega168
- Operating voltage is 5V
- Maximum supply voltage 6 to 20V
- Digital I/O pins 14 (of which 6 provide PWM output)
- DC current per I/O pin 40 mA
- DC current for 3.3V pin 50 mA
- Flash memory16KB of which 2KB is used by Boot loader
- SRAM 1KB, EEPROM 512bytes
- Clock speed 16MHz
- USB Connector type Mini B male
Operational Amplifier, Dual, 1 MHz, 2, 0.6 V/µs, 1.8V to 6V, DIP, 8 RoHS Compliant: Yes

**Features**
- No. of Amplifiers: 2 Amplifier
- Bandwidth: 1MHz
- Slew Rate: 0.6V/µs
- Supply Voltage Range: 1.8V to 6V
- Amplifier Case Style: DIP
- No. of Pins: 8Pins
- Operating Temperature Min: -40°C
- Operating Temperature Max: 85°C
- Automotive Qualification Standard: AEC-Q100
- MSL: MSL 1 - Unlimited

LED, Red, Through Hole, T-1 3/4 (5mm), 20 mA, 2.1 V, 624 nm

**Features**
- LED Color: Red
- LED Mounting: Through Hole
- LED Case Size: T-1 3/4 (5mm)
- Forward Current If: 20mA
- Forward Voltage: 2.1V
- Wavelength Typ: 624nm
- Luminous Intensity: 15cd
- Viewing Angle: 15°
- Lens Shape: Round

Infrared Emitter, 950 nm, 15 °, T-1 3/4 (5mm), 800 mW/Sr, 800 ns, 800 ns

**Features**
- Peak Wavelength: 950nm
- Angle of Half Intensity: 15°
- Diode Case Style: T-1 3/4 (5mm)
- Radiant Intensity (Ie): 800mW/Sr
- Rise Time: 800ns
- Fall Time tf: 800ns
- Forward Current If(AV): 100mA
- Forward Voltage VF Max: 1.3V
- Operating Temperature Min: -40°C
- Operating Temperature Max: 85°C
Battery Holder, PP3 (9V) x 1, Strap, Wire Leads

**Features**
- Battery Sizes Accepted: PP3 (9V)
- No. of Batteries: 1
- Battery Holder Mount: Strap

**Specification**
- Vinyl material
- Nickel-plated brass contacts
- 8" lead

Bipolar (BJT) Single Transistor, NPN, 30 V, 500 mW, 800 mA, 100 RoHS Compliant: Yes

**Features**
- Transistor Polarity: NPN
- Collector Emitter Voltage V(br)CEO: 30V
- DC Collector Current: 800mA
- Power Dissipation Pd: 500mW
- Transistor Case Style: TO-18
- Transistor Mounting: Through Hole
- No. of Pins: 3Pins
- Transition Frequency ft: 250MHz
- DC Current Gain hFE: 100hFE
- Operating Temperature Max: 200°C

Photodiode, 20 °, 150 pA, 950 nm, T-1 (3mm)

**Features**
- No. of Pins: 2Pins
- Diode Case Style: T-1 (3mm)
- Wavelength of Peak Sensitivity: 950nm
- Angle of Half Sensitivity ±: 20°
- Dark Current: 150pA
- Operating Temperature Min: -40°C
- Operating Temperature Max: 100°C

**Specification**
- High radiant sensitivity
- Fast response times
**Assortments & Kits**

**Linear Voltage Regulator, Fixed, 30 Vin, 5 V Out, TO-226AA-3**

**Features**
- Fixed Output Voltage Nom.: 5V
- Input Voltage Max.: 30V
- Product Range: 7805 Voltage Regulators
- Output Current: 100mA
- Output Type: Fixed
- Linear Regulator Case Style: TO-226AA
- No. of Pins: 3Pins
- Operating Temperature Min: -40°C
- Operating Temperature Max: 125°C

**Specification**
- Thermal overload protection
- Short-circuit current limiting
- Output voltage offered in ±5% tolerance

---

**Test Lead Set, Alligator Clip, Alligator Clip, Black, Green, Red, White, Yellow, 609.6 mm**

**Features**
- Test Connector Type A: Alligator Clip
- Test Connector Type B: Alligator Clip
- Insulator Colour: Black, Green, Red, White, Yellow
- Lead Length - Metric: 609.6mm
- Lead Length - Imperial: 24"
- No. of Test Leads: 10

**Specification**
- Includes 10 Pieces total (2 each of Yellow, White, Black, Green and Red)
- Gauge: 24 AWG
- Length: 24"
- 12 month limited warranty *view Terms & Conditions for details
**Assortments & Kits**

**NTC Thermistor, 10KΩ, Radial Leaded**

**Features**
- Zero Power Resistance at 25°C : 10kohm
- Thermistor Mounting : Through Hole
- Beta Value (K) : 3977K
- Thermistor Terminals : Radial Leaded
- Operating Temperature Min : -40°C
- Operating Temperature Max : 125°C

**Specification**
- Accuracy over a wide temperature range
- High stability over a long life
- 500mW Power dissipation
- 500mW Maximum power dissipation (at 55°C)

---

**Through Hole Resistor, 47Ω, MCMF0W4 Series, 250 mW, ± 1%, Axial Leaded, 250 V**

**Features**
- Resistance : 47Ω
- Power Rating : 250mW
- Resistance Tolerance : ± 1%
- Resistor Case Style : Axial Leaded
- Voltage Rating : 250V
- Resistor Element Type : Metal Film
- Temperature Coefficient : ± 50ppm/°C

**Specification**
- EIA standard colour-coding
- Non-flame type available
- Low noise and voltage coefficient
- Low temperature coefficient range
- Wide precision range in small package
- Too low or too high ohmic value can be supplied on a case to case basis
- Multcomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend
**Multilayer Ceramic Capacitor, 1 µF, 50 V, Mono-Kap Series, ± 20%, Radial Leaded, X7R**

**Features**
- Capacitance: 1 µF
- Voltage Rating: 50 V
- Product Range: Mono-Kap Series
- Capacitance Tolerance: ± 20%
- Capacitor Terminals: Radial Leaded
- Dielectric Characteristic: X7R
- Lead Spacing: 5 mm
- Operating Temperature Min: -55°C
- Operating Temperature Max: 125°C

**Specification**
- High capacitance with small size
- High reliability

**Trimpot, Multi Turn, Cermet, Side Adjust, 500 ohm, Through Hole, 22 Turns**

**Features**
- Trimpot Type: Multi Turn
- Element Material: Cermet
- Adjustment Type: Side Adjust
- Track Resistance: 500 Ω
- Potentiometer Mounting: Through Hole
- No. of Turns: 22 Turns
- Product Range: 1012 Series
- Power Rating: 500 mW
- Resistance Tolerance: ± 10%
- Temperature Coefficient: ± 100 ppm/°C
- Trimpot Shape / Size: Rectangular

**Specification**
- 200-cycle Rotational life
- Multicomps Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend
Breadboard, Solderless, Plastic, 165.1mm x 54.356mm

Features
- Breadboard Type: Solderless Breadboard
- Total Number of Tie Points: 830 Tie Points
- No. of Distribution Strips / Buses: 2 Bus Strips
- No. of Terminal Strips: 1 Terminal Strip
- Board Dimensions - Imperial: 6.5” × 2.14” (L × W)
- Board Dimensions - Metric: 165mm × 54.35mm (L × W)

Specification
- Holes spaced 2.54mm × 2.54 mm
- Clearly labelled rows and columns
- Compatible with all Twin Industries machine pin jumper wires

Through Hole Resistor, 1 kΩ, 250 mW, ± 5%, Axial Ledged, 250 V

Features
- Resistance: 1kΩ
- Power Rating: 250mW
- Resistance Tolerance: ± 5%
- Resistor Case Style: Axial Ledged
- Voltage Rating: 250V
- Resistor Element Type: Carbon Film
- Temperature Coefficient: -450ppm/°C

Specification
- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend
**Assortments & Kits**

**Through Hole Resistor, 2.2 kΩ, 250 mW, ±5%, Axial Leded, 250 V**

<table>
<thead>
<tr>
<th>Features</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistance</td>
<td>2.2kΩ</td>
</tr>
<tr>
<td>Power Rating</td>
<td>250mW</td>
</tr>
<tr>
<td>Resistance Tolerance</td>
<td>± 5%</td>
</tr>
<tr>
<td>Resistor Case Style</td>
<td>Axial Leaded</td>
</tr>
<tr>
<td>Voltage Rating</td>
<td>250V</td>
</tr>
<tr>
<td>Resistor Element Type</td>
<td>Carbon Film</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>-450ppm/°C</td>
</tr>
</tbody>
</table>

**Specification**

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

**Through Hole Resistor, 6.8 kΩ, 250 mW, ±5%, Axial Leded, 250 V**

<table>
<thead>
<tr>
<th>Features</th>
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</thead>
<tbody>
<tr>
<td>Resistance</td>
<td>6.8kΩ</td>
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<td>MCCFR0W4J Series</td>
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<tr>
<td>Resistance Tolerance</td>
<td>± 5%</td>
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<tr>
<td>Resistor Case Style</td>
<td>Axial Leaded</td>
</tr>
<tr>
<td>Voltage Rating</td>
<td>250V</td>
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<td>Carbon Film</td>
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<tr>
<td>Temperature Coefficient</td>
<td>-450ppm/°C</td>
</tr>
</tbody>
</table>

**Specification**

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend
Assortments & Kits

Through Hole Resistor, 10 kΩ, 250 mW, ±5%, Axial Leaded, 250 V

Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
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<tr>
<td>Resistance</td>
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<tr>
<td>Power Rating</td>
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<td>Resistance Tolerance</td>
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<tr>
<td>Voltage Rating</td>
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<td>Resistor Element Type</td>
<td>Carbon Film</td>
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<tr>
<td>Temperature Coefficient</td>
<td>-450ppm/°C</td>
</tr>
</tbody>
</table>

Specification

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

Through Hole Resistor, 47 kΩ, 250 mW, ±5%, Axial Leaded, 250 V

Features

<table>
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<tr>
<th>Feature</th>
<th>Specification</th>
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<tbody>
<tr>
<td>Resistance</td>
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<tr>
<td>Power Rating</td>
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<tr>
<td>Resistance Tolerance</td>
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<tr>
<td>Resistor Case Style</td>
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<tr>
<td>Voltage Rating</td>
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<tr>
<td>Resistor Element Type</td>
<td>Carbon Film</td>
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<tr>
<td>Temperature Coefficient</td>
<td>-450ppm/°C</td>
</tr>
</tbody>
</table>

Specification

- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro
Assortments & Kits

**Through Hole Resistor, 100 kΩ, 250 mW, ±5%, Axial Leaded, 250 V**

### Features
- **Resistance**: 100kΩ
- **Power Rating**: 250mW
- **Resistance Tolerance**: ± 5%
- **Resistor Case Style**: Axial Leaded
- **Voltage Rating**: 250V
- **Resistor Element Type**: Carbon Film
- **Temperature Coefficient**: -700ppm/°C

### Specification
- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

**Through Hole Resistor, 120 kΩ, 250 mW, ±5%, Axial Leaded, 250 V**

### Features
- **Resistance**: 120ohm
- **Power Rating**: 250mW
- **Resistance Tolerance**: ± 5%
- **Resistor Case Style**: Axial Leaded
- **Voltage Rating**: 250V
- **Resistor Element Type**: Carbon Film
- **Temperature Coefficient**: -450ppm/°C

### Specification
- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend
Assortments & Kits

Through Hole Resistor, 1MΩ, 250 mW, ±5%, Axial Leaded, 250 V

Features
- Resistance : 1MΩ
- Power Rating : 250mW
- Resistance Tolerance : ± 5%
- Resistor Case Style : Axial Leaded
- Voltage Rating : 250V
- Resistor Element Type : Carbon Film
- Temperature Coefficient : -700ppm/°C

Specification
- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

Through Hole Resistor, 10MΩ, 250 mW, ±5%, Axial Leaded, 250 V

Features
- Resistance : 10MΩ
- Power Rating : 250mW
- Resistance Tolerance : ± 5%
- Resistor Case Style : Axial Leaded
- Voltage Rating : 250V
- Resistor Element Type : Carbon Film
- Temperature Coefficient : -1500ppm/°C

Specification
- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend
Multilayer Ceramic Capacitor, 10000 pF, 50 V, MLR Series, ± 10%, Radial Leaded, X7R

**Features**
- Capacitance: 10000pF
- Voltage Rating: 50V
- Product Range: MLR Series
- Capacitance Tolerance: ± 10%
- Capacitor Terminals: Radial Leaded
- Dielectric Characteristic: X7R
- Lead Spacing: 2.54mm
- Operating Temperature Min: -55°C
- Operating Temperature Max: 125°C

**Specification**
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

Multilayer Ceramic Capacitor, 0.1 µF, 100 V, ± 20%, Radial Leaded, Z5U

**Features**
- Capacitance: 0.1µF
- Voltage Rating: 100V
- Capacitance Tolerance: ± 20%
- Capacitor Terminals: Radial Leaded
- Dielectric Characteristic: Z5U
- Lead Spacing: 2.54mm
- Operating Temperature Min: 10°C
- Operating Temperature Max: 85°C

Through Hole Resistor, 100Ω, 250 mW, ± 5%, Axial Leaded, 250 V

**Features**
- Capacitance: 10000pF
- Resistance Tolerance: ± 5%
- Resistor Case Style: Axial Leaded
- Voltage Rating: 250V
- Resistor Element Type: Carbon Film
- Temperature Coefficient: -450ppm/°C

**Specification**
- 1000MΩ Insulation resistance
- 500V Dielectric withstanding voltage
- 250V Maximum working voltage
- 500V Maximum overload voltage
- -55 to 155°C Operating temperature range
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro
**Electrolytic Capacitor, 10 µF, 25V, ±20%, Radial Leaded, 1000 hours @ 85°C**

**Features**
- Capacitance: 10µF
- Voltage Rating: 25V
- Capacitance Tolerance: ± 20%
- Capacitor Terminals: Radial Leaded
- Lifetime @ Temperature: 1000 hours @ 85°C
- Polarity: Polar
- Diameter: 4mm
- Lead Spacing: 1.5mm
- Height: 7mm
- Operating Temperature Min: -40°C
- Operating Temperature Max: 85°C

**Specification**
- Capacitance value ranges from 2.2µF to 22000µF for 6.3VDC to 100VDC
- Capacitance value ranges from 1µF to 470µF for 160VDC to 450VDC
- Automotive grade AEC-Q200 compliant
- Tolerance of ±20%
- Endurance of 2000h at 85°C
- Available in -40°C to 85°C and -25°C to 85°C temperature ranges based on rated voltage
- High reliability

---

**Electrolytic Capacitor, 100 µF, 35 V, ±20%, Radial Leaded, 2000 hours @ 85°C**

**Features**
- Capacitance: 100µF
- Voltage Rating: 35V
- Capacitance Tolerance: ± 20%
- Capacitor Terminals: Radial Leaded
- Lifetime @ Temperature: 2000 hours @ 85°C
- Polarity: Polar
- Diameter: 6.3mm
- Lead Spacing: 2.5mm
- Height: 11.2mm
- Operating Temperature Min: -40°C
- Operating Temperature Max: 85°C

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Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro
Phone Audio Connector, Jack, 3.5 mm, Silver Plated Contacts, Plastic Body

Features
- Gender: Jack
- Pin Diameter: 3.5mm
- Contact Plating: Silver Plated Contacts
- Connector Body Material: Plastic Body

Specification
- Silver-plated phosphor bronze springs
- Silver-plated TiCu tip
- 30mΩ contact resistance
- 500VAC dielectric strength
- 5000-cycle operating life
- Multicomp Pro products are rated 4.6 out of 5 stars
- 12 month limited warranty *view Terms & Conditions for details
- 96% of customers would recommend to a friend

<table>
<thead>
<tr>
<th>Order Code</th>
<th>Description</th>
<th>Qty.</th>
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</thead>
<tbody>
<tr>
<td>58K5042</td>
<td>Through Hole Resistor, 330 ohmΩ, 250 mW, ±5%, Axial Ledged, 250 V</td>
<td>10</td>
</tr>
<tr>
<td>10R0134</td>
<td>140 Pc. Jumper Wire Kit, 22 AWG, Solid, Insulated, Assorted Lengths and Colors, Pre-Stripped, Case</td>
<td>1</td>
</tr>
<tr>
<td>31Y3513</td>
<td>Jumper Cable, Male to Male Connectors, 150mm Length, Pack of 10, Arduino, Beaglebone</td>
<td>1</td>
</tr>
<tr>
<td>62J1882</td>
<td>Trimpot, Single Turn, Cermet, Top Adjust, 10 kOhm, Through Hole, 1 Turns</td>
<td>3</td>
</tr>
<tr>
<td>83K3789</td>
<td>USB Cable, Type A Plug to Mini Type B Plug, 900 mm, 3 ft, USB 2.0, Grey</td>
<td>1</td>
</tr>
<tr>
<td>13T9275</td>
<td>Development Board, Arduino Nano, ATmega328 MCU, 14 3.3V I/O, 6 PWM Outputs, USB Mini B</td>
<td>1</td>
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<tr>
<td>26M1280</td>
<td>Operational Amplifier, Dual, 1 MHz, 2, 0.6 V/ s, 1.8V to 6V, DIP, 8 RoHS Compliant: Yes</td>
<td>4</td>
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<tr>
<td>13AC8414</td>
<td>LED, Red, Through Hole, T-1 3/4 (5mm), 20 mA, 2.1 V, 624 nm</td>
<td>4</td>
</tr>
<tr>
<td>88K1272</td>
<td>Infrared Emitter, 950 nm, 15 °, T-1 3/4 (5mm), 800 mW/Sr, 800 ns, 800 ns</td>
<td>2</td>
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<tr>
<td>99F9979</td>
<td>Battery Holder, PP3 (9V) x 1, Strap, Wire Leads</td>
<td>1</td>
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<tr>
<td>87K2254</td>
<td>Bipolar (BJT) Single Transistor, NPN, 30 V, 500 mA, 800 mA, 100 RoHS Compliant: Yes</td>
<td>2</td>
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<tr>
<td>82T8676</td>
<td>Photodiode, 20 °, 150 pA, 950 nm, T-1 (3mm)</td>
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<tr>
<td>72K8867</td>
<td>Linear Voltage Regulator, Fixed, 30 Vin, 5 V Out, TO-226AA-3</td>
<td>2</td>
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<tr>
<td>38C9114</td>
<td>Test Lead Set, Alligator Clip, Alligator Clip, Black, Green, Red, White, Yellow, 609.6 mm</td>
<td>1</td>
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<tr>
<td>98K8278</td>
<td>NTC Thermistor, 10KΩ, Radial Ledged</td>
<td>1</td>
</tr>
<tr>
<td>58K3856</td>
<td>Through Hole Resistor, 47Ω, MCMF0W4 Series, 250 mW, ± 1%, Axial Ledged, 250 V</td>
<td>5</td>
</tr>
</tbody>
</table>

Newark.com/multicomp-pro
Farnell.com/multicomp-pro
Element14.com/multicomp-pro
## Assortments & Kits

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20J7056</td>
<td>Multilayer Ceramic Capacitor, 1 µF, 50 V, Mono-Kap Series, ± 20%, Radial Leaded, X7R</td>
<td>2</td>
</tr>
<tr>
<td>05N1562</td>
<td>Trimpot, Multi Turn, Cermet, Side Adjust, 500 ohm, Through Hole, 22 Turns</td>
<td>2</td>
</tr>
<tr>
<td>56T0250</td>
<td>Breadboard, Solderless, Plastic, 165.1mm x 54.356mm</td>
<td>1</td>
</tr>
<tr>
<td>58K5001</td>
<td>Through Hole Resistor, 1 kΩ, 250 mW, ± 5%, Axial Leaded, 250 V</td>
<td>10</td>
</tr>
<tr>
<td>58K5030</td>
<td>Through Hole Resistor, 2.2 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>5</td>
</tr>
<tr>
<td>58K5069</td>
<td>Through Hole Resistor, 6.8 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>2</td>
</tr>
<tr>
<td>58K5002</td>
<td>Through Hole Resistor, 10 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>10</td>
</tr>
<tr>
<td>58K5031</td>
<td>Through Hole Resistor, 22 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>2</td>
</tr>
<tr>
<td>58K5057</td>
<td>Through Hole Resistor, 47 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>2</td>
</tr>
<tr>
<td>58K5003</td>
<td>Through Hole Resistor, 100 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
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<tr>
<td>58K5008</td>
<td>Through Hole Resistor, 120 kΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>4</td>
</tr>
<tr>
<td>58K5004</td>
<td>Through Hole Resistor, 1MΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
<td>4</td>
</tr>
<tr>
<td>58K5005</td>
<td>Through Hole Resistor, 10MΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
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<tr>
<td>97M4158</td>
<td>Through Hole Resistor, 10MΩ, 250 mW, ±5%, Axial Leaded, 250 V</td>
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<tr>
<td>02B642</td>
<td>Multilayer Ceramic Capacitor, 10000 pF, 50 V, MLR Series, ± 10%, Radial Leaded, X7R</td>
<td>4</td>
</tr>
<tr>
<td>58K5000</td>
<td>Multilayer Ceramic Capacitor, 0.1 µF, 100 V, ± 20%, Radial Leaded, Z5U</td>
<td>10</td>
</tr>
<tr>
<td>38K4752</td>
<td>Electrolytic Capacitor, 10 µF, 25V, ±20%, Radial Leaded, 1000 hours @ 85°C</td>
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</tr>
<tr>
<td>96K9198</td>
<td>Electrolytic Capacitor, 100 µF, 35 V, ±20%, Radial Leaded, 2000 hours @ 85°C</td>
<td>2</td>
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<tr>
<td>11M0543</td>
<td>Phone Audio Connector, Jack, 3.5 mm, Silver Plated Contacts, Plastic Body</td>
<td>1</td>
</tr>
</tbody>
</table>

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