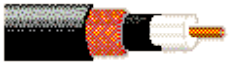
# Detailed Specifications & Technical Data

**ENGLISH MEASUREMENT VERSION**

**9224 Coax - Low Noise**



## Description:

Low Noise, RG-59/U type, 22 AWG solid .025" bare copper-covered steel conductor, polyethylene insulation, conductive layer, bare copper braid shield (93% coverage), PVC jacket.

## Physical Characteristics (Overall)

### Conductor

**AWG:**

| # Coax | AWG | Stranding | Conductor Material | Dia. (in.) |
|---|---|---|---|---|
| 1 | 22 | Solid | BCCS - Bare Copper Covered Steel | .025 |

### Insulation

**Insulation Material:**

| Layer # | Insulation Material | Dia. (in.) |
|---|---|---|
| 1 | PE - Polyethylene | 0.146 |
| 2 | CPVC - Conductive PVC | 0.154 |

### Outer Shield

**Outer Shield Material:**

| Type | Outer Shield Material | Coverage (%) |
|---|---|---|
| Braid | BC - Bare Copper | 93 |

### Outer Jacket

**Outer Jacket Material:**

| Outer Jacket Material |
|---|
| PVC - Polyvinyl Chloride |

### Overall Cabling

| | |
|---|---|
| **Overall Nominal Diameter:** | 0.242 in. |

## Mechanical Characteristics (Overall)

| | |
|---|---|
| **Operating Temperature Range:** | -40°C To +75°C |
| **Non-UL Temperature Rating:** | 75°C |
| **Bulk Cable Weight:** | 33 lbs/1000 ft. |
| **Max. Recommended Pulling Tension:** | 80 lbs. |
| **Min. Bend Radius (Install)/Minor Axis:** | 3 in. |

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

| | |
|---|---|
| **EU CE Mark:** | Yes |
| **EU Directive 2000/53/EC (ELV):** | Yes |
| **EU Directive 2002/95/EC (RoHS):** | Yes |
| **EU RoHS Compliance Date (mm/dd/yyyy):** | 01/01/2004 |
| **EU Directive 2002/96/EC (WEEE):** | Yes |
| **EU Directive 2003/11/EC (BFR):** | Yes |
| **CA Prop 65 (CJ for Wire & Cable):** | Yes |

| | |
|---|---|
| **MII Order #39 (China RoHS):** | Yes |
| **RG Type:** | 59/U |

### Flame Test

| | |
|---|---|
| **UL Flame Test:** | UL1685 UL Loading, VW-1 |

### Plenum/Non-Plenum

| | |
|---|---|
| **Plenum (Y/N):** | No |

## Electrical Characteristics (Overall)

**Nom. Characteristic Impedance:**

| Impedance (Ohm) |
|---|
| 75 |

**Nom. Inductance:**

| Inductance (µH/ft) |
|---|
| .124 |

**Nom. Capacitance Conductor to Shield:**

| Capacitance (pF/ft) |
|---|
| 22 |

**Nominal Velocity of Propagation:**

| VP (%) |
|---|
| 65 |

**Nominal Delay:**

| Delay (ns/ft) |
|---|
| 1.56 |

**Nom. Conductor DC Resistance:**

| DCR @ 20°C (Ohm/1000 ft) |
|---|
| 54.0 |

**Nominal Outer Shield DC Resistance:**

| DCR @ 20°C (Ohm/1000 ft) |
|---|
| 2.5 |

| | |
|---|---|
| **Other Electrical Characteristic 1:** | NBS Low Noise Test (Modified) MIL-C-17 Paragraph 4.8.14, 5 mV Peak to Peak Max |
| **Max. Noise Level (Peak to Peak):** | 5 mV |

## Notes (Overall)

**Notes:** Not recommended for RF use. Nom. Voltage Breakdown Conductor to Shield: 30 kV RMS. Nom. Voltage Breakdown Jacket (Shield to Water): 30 kV RMS.

## Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---|---|---|---|---|---|
| 9224 010U500 | 500 FT | 19.500 LB | BLACK | | #22AWG LOW NOISE COAX |
| 9224 0101000 | 1,000 FT | 39.000 LB | BLACK | | #22AWG LOW NOISE COAX |

# Special Audio, Communication and Instrumentation Cable

## Miniature Instrumentation and Low Triboelectric Noise Coax

| Description | Part No. | UL NEC/ C(UL) CEC Type | Standard Lengths | | Standard Unit Weight | | Conductor (stranding) Diameter Nom. DCR | Nominal Core OD | | Shielding Materials Nom. DCR | Nominal OD | | Nom. Imp. (Ω) | Nom. Vel. of Prop. | Nominal Capacitance | | Nominal Attenuation | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Ft. | m | Lbs. | kg | | Inch | mm | | Inch | mm | | | pF/Ft. | pF/m | MHz | dB/ 100 Ft. | dB/ 100m |
| **Miniature • 28 AWG** Solid .013″ Tinned Copper Conductor • Bare Copper Braid Shield (90% Coverage) | | | | | | | | | | | | | | | | | | | |
| **Polypropylene Insulation • Black PVC Jacket** | | | | | | | | | | | | | | | | | | | |
| 105°C<br>VW-1 | **8700** | NEC:<br>CMH<br>CEC:<br>CMH FT1 | 250 | 76.2 | .8 | .3 | 28 AWG<br>(solid)<br>.013″<br>TC<br>66.9Ω/M′<br>219.5Ω/km | .023 | .58 | BC Braid<br>90% Shield<br>Coverage<br>28.7Ω/M′<br>94.2Ω/km | .054 | 1.37 | 32 | 66% | 55.2 | 181.1 | 1<br>10<br>50<br>100<br>200<br>400<br>700<br>900<br>1000 | 2.5<br>7.7<br>17.2<br>24.5<br>34.8<br>50.0<br>66.0<br>75.0<br>79.0 | 8.2<br>25.3<br>56.4<br>80.4<br>114.2<br>164.4<br>216.5<br>246.1<br>259.2 |
| **Low Noise • RG-174/U Type • 26 AWG** Stranded (7x34) .019″ Bare Copper-covered Steel Conductor • TC Braid Shield (90% Coverage) | | | | | | | | | | | | | | | | | | | |
| **Polyethylene Insulation • Conductive Layer • Black PVC Jacket** | | | | | | | | | | | | | | | | | | | |
| 60°C | **9239** | — | 100<br>500<br>1000 | 30.5<br>152.4<br>304.8 | 1.0<br>4.5<br>8.0 | .5<br>2.0<br>3.6 | 26 AWG<br>(7x34)<br>.019″<br>BCCS<br>97.0Ω/M′<br>318.3Ω/km | .044 | 1.12 | TC Braid<br>90% Shield<br>Coverage<br>14.0Ω/M′<br>45.9Ω/km | .101 | 2.57 | 50 | 62% | 38 | 125 | — | — | — |
| 5mV peak-to-peak max.<br>Not recommended for RF use. | | | | | | | | | | | | | | | | | | | |
| **Low Noise • RG-59/U Type • 22 AWG** Solid .025″ Bare Copper-covered Steel Conductor • Bare Copper Braid Shield (93% Coverage) | | | | | | | | | | | | | | | | | | | |
| **Polyethylene Insulation • Conductive Layer • Black PVC Jacket** | | | | | | | | | | | | | | | | | | | |
| 75°C<br>VW-1 | **9224** | — | U-500<br>1000 | U-152.4<br>304.8 | 19.5<br>39.0 | 8.9<br>17.7 | 22 AWG<br>(solid)<br>.025″<br>BCCS<br>54.0Ω/M′<br>177.0Ω/km | .146 | 3.71 | BC Braid<br>93% Shield<br>Coverage<br>2.5Ω/M′<br>8.2Ω/km | .242 | 6.15 | 75 | 65% | 22 | 72 | — | — | — |
| 5mV peak-to-peak max.<br>Not recommended for RF use. | | | | | | | | | | | | | | | | | | | |
| **Low Noise • RG-58/U Type • 22 AWG** Stranded (7x30) .030″ TC Conductor • Duobond® II + TC Braid Shield (95% Coverage) | | | | | | | | | | | | | | | | | | | |
| **Polyethylene Insulation • Conductive Layer • Black PVC Jacket** | | | | | | | | | | | | | | | | | | | |
| 80°C<br>VW-1 | **9223** | — | 100<br>500<br>1000 | 30.5<br>152.4<br>304.8 | 3.4<br>12.0<br>24.0 | 1.5<br>5.4<br>10.9 | 22 AWG<br>(7x30)<br>.030″<br>TC<br>10.8Ω/M′<br>35.4Ω/km | .112 | 2.85 | Duobond II*<br>+ 95%<br>TC Braid<br>100% Shield<br>Coverage<br>4.1Ω/M′<br>13.5Ω/km | .195 | 4.95 | 50 | 56% | 37 | 122 | — | — | — |
| 8mV peak-to-peak max.<br>Not recommended for RF use. | | | | | | | | | | | | | | | | | | | |

BC = Bare Copper • BCCS = Bare Copper-covered Steel • DCR = DC Resistance • TC = Tinned Copper

*Duobond II = Bonded Duofoil® (100% coverage) + aluminum braid (67% coverage).