Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION



1283S3 Coax - Banana Peel® Unjacketed VideoFLEX® Bundles





Description:

20 AWG solid .032" bare copper conductors, foam FEP insulation, Duofoil® + tinned copper braid shield (95% coverage), Flamarrest® jackets in colors, 5 and 6 bundles in all black, center spline binder.

Usage (Overall)

Suitable Applications:

RGB, VGA, SVGA, XGA, SXGA, UXGA, HDTV, LCD, Plasma, Digital Signage, Component Video, Video Mult, Animation, Special effects.Suitable for use in Plenum spaces

Physical Characteristics (Overall)

Conductor

AWG:

| # Coax | AWG | Stranding | Conductor Material | Dia. (in.) |
|--------|-----|-----------|--------------------|------------|
| 3 | 20 | Solid | BC - Bare Copper | .032 |

Insulation

Insulation Material:

| Insulation Material | Dia. (in.) |
|--|------------|
| FFEP - Foam Fluorinated Ethylene Propylene | .133 |

Inner Shield

Inner Shield Material:

| | Layer# | Inner Shield Trade Name | Type | Inner Shield Material | Coverage (%) |
|---|--------|-------------------------|-------|--|--------------|
| ſ | 1 | Duofoil® | Tape | Aluminum Foil-Polyester Tape-Aluminum Foil | 100 |
| | 2 | | Braid | TC - Tinned Copper | 95 |

Inner Jacket

Inner Jacket Material:

| Inner Jacket Material | Nom. Dia. (in.) |
|---------------------------------------|-----------------|
| Plenum Grade PVC - Polyvinyl Chloride | .196 |

Inner Jacket Color Code Chart:

| Number | Color |
|--------|-------|
| 1 | Red |
| 2 | Green |
| 3 | Blue |

Outer Shield

Outer Shield Material:

Outer Shield Material Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material Unjacketed

Overall Cabling

Overall Cabling Fillers: Bonded Spline

Overall Nominal Diameter: 0.422 in.

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1283S3 Coax - Banana Peel® Unjacketed VideoFLEX® Bundles

| lechanical Characteristics (Overall) | |
|--|-----------------|
| Operating Temperature Range: | -20°C To +75°C |
| UL Temperature Rating: | 60°C |
| Non-UL Temperature Rating: | 75°C |
| Bulk Cable Weight: | 93 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 216 lbs. |
| Min. Bend Radius (Install)/Minor Axis: | 6.500 in. |

Applicable Specifications and Agency Compliance (Overall)

| Applicable Standards & Environmental Progra | ms |
|---|----|
|---|----|

| NEC/(UL) Specification: | CMP |
|---------------------------------------|------------|
| CEC/C(UL) Specification: | CMP |
| 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): | 06/01/2005 |
| 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 |
| ame Test | |
| UL Flame Test: | NFPA 262 |

Fla

Suitability

Suitability - Indoor: Yes Suitability - Outdoor: Yes

Plenum/Non-Plenum

Plenum (Y/N): Yes Non-Plenum Number: 7794A

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm) 75

Nom. Inductance:

Inductance (µH/ft) 0.107

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft) 16.2

Nominal Velocity of Propagation:

VP (%) 83

Nominal Delay:

Delay (ns/ft) 1.22

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Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 10.0

Nom. Inner Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 3.8

Nom. Attenuation:

| Freq. (MHz) | Attenuation (dB/100 ft.) |
|-------------|--------------------------|
| 1 | 0.3 |
| 3.6 | 0.6 |
| 10 | 0.9 |
| 71.5 | 2.1 |
| 135 | 2.7 |
| 270 | 3.8 |
| 360 | 4.4 |
| 540 | 5.5 |
| 720 | 6.4 |
| 750 | 6.5 |
| 1000 | 7.6 |
| 1500 | 9.4 |
| 2500 | 12.4 |
| 3000 | 13.8 |

Max. Operating Voltage - UL:

Voltage 300 V RMS

Other Electrical Characteristic 1: Impedance tested in accordance with

Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination.

Other Electrical Characteristic 2: Return Loss Tested in Accordance W

Return Loss Tested in Accordance With ASTM D-4566 Paragraph 45.3, Using a 75 Ohm Fixed Bridge and Termination.

Minimum Return Loss:

| Start Freq. (MHz) | Stop Freq. (MHz) | Min. RL (dB) |
|-------------------|------------------|--------------|
| 5 | 850 | 23 |
| 851 | 3000 | 15 |

Sweep Test

Sweep Testing: Sweep tested 5 MHz to 3 GHz.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc | |
|----------------|----------|-------------|-------|-------|-----------|--|
| 1283S3 0001000 | 1,000 FT | 102.000 LB | NONE | С | 3C20 RGB | |
| 1283S3 000250 | 250 FT | 26.250 LB | NONE | С | 3C20 RGB | |
| 1283S3 000500 | 500 FT | 51.500 LB | NONE | С | 3C20 RGB | |

Notes

C = CRATE REEL PUT-UP.

Introduction

Compare Belden® Coaxial cables and the companies who produce them and you will discover the obvious: Belden has no equal. That's because Belden Coaxial cables are time-tested for performance. Performance that guarantees outstanding value. Belden guarantees this level of performance because every cable is tested with equipment that simulates every known environmental and electrical performance condition. As a result, Belden Coaxial cable can be counted on for positive, reliable and trouble-free operation.

Belden Coaxial cables are engineered in a wide selection of sizes and materials, with each offering the benefits needed for physical, electrical and cost-requirement applications. Cable choices include broadband, standard analog, precision video for analog and digital, bundled RGB, high-flex S-Video, video triax, conformable coax and more.

Most of our Coax cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a Coax cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

Coax Cable Shielding

Belden's line of coaxial cable features a wide range of shielding configurations. Among the options are:

Duofoil®

Duofoil is a shield in which metallic foil is applied to both sides of a supporting polyester or polypropylene film.

Duobond®

Duobond is essentially the same construction as Duofoil (a laminated shielding tape consisting of aluminum foil/plastic film/ aluminum foil), but with an extra layer of heat-sensitive adhesive bonding the foil shield to the dielectric core. This foil shield provides 100% coverage and insures maximum shield protection.

Duobond II (Foil/Braid)

Combines all the features of Duobond with an outer braid applied for greater protection against interference and to increase the overall tensile strength.

Duobond III (Tri-Shield)

Duobond III utilizes the Duobond II design (foil/braid) plus an additional surrounding layer of Duofoil. This extra layer of foil improves shield reliability and provides an additional interference barrier.

Duobond IV (Quad Shield)

Duobond IV adds a second layer of braid to the Tri-Shield design (foil/braid/foil/braid). This extra layer of braid shield provides improved strength and durability.

Duobond Plus®

Features the same foil/braid/foil construction as Duobond II but with the addition of a shorting fold in the outermost foil. This fold prevents a slot opening from being created in the shield, thereby preventing signal egress or ingress. This unique feature creates the effect of a solid metal conduit, which improves the high-frequency performance of the cable. (See the Technical Information section of this catalog for a more detailed explanation of "shorting folds.")

Coax Cable Packaging

As with most Belden cables, several Coax cable products are available in Belden's UnReel® cardboard dispenser. The UnReel is a unique packaging dispensing system developed by Belden to save time, cut costs and labor, and eliminate the need for dereeling equipment. Lightweight and more economical than conventional drums or reels, UnReel dispensers have pre-punched handles for easy, individual transport as well as rectangular boxes for easy pallet delivery and storage. UnReel cable pays out smoothly and evenly with no kinking, twisting, or backlashing. It also rolls out 60% faster than conventionally packaged cable.

Corresponding Literature

Technical Bulletins

TB-65: Digital Studio Cable Guide



6 • Coaxial Cables

RG Coaxial and Triaxial Reference Guide

Bundled and S-Video Coax

| Cable Designation | Part No. | No. of Coax | Page No. | Spec. Reference | Conductor Stranding/ Dia. & Type* (DCR/1000 Ft.) | Insulation Material (OD in.) | Shield Type Tape/Braid (DCR/1000 Ft.) | Jacket Material (OD in.) | Nom. Weight (Lbs./Ft.) | Nom. Imp. (Ω) | Nom. Cap. (pF/Ft.) | Suggested Operating Temp. Range (°C) UL | Max. Oper. Voltage (RMS) Non UL |
|---|-------------|-------------------|-------------|--------------------|---|------------------------------------|---|--------------------------------|------------------------------|---------------------|--------------------------|--|--|
| Bundled Coa | x (con | itinued) | | | | | | | | | | | |
| RG-6 Type Bundled SDI Coax | 7710A | 3 | 6.46 | Belden | 1/.040" BC (6.4) | GIFPE (.180) | DF/95% TC (3.0) | PVC-M (.770) | .234 | 75 | 16.2 | -40 to +75 | 300 |
| RG-6 Type Bundled SDI Coax | 7711A | 4 | 6.46 | Belden | 1/.040" BC (6.4) | GIFPE (.180) | DF/95% TC (3.0) | PVC-M (.900) | .303 | 75 | 16.2 | -40 to +75 | 300 |
| RG-6 Type Bundled SDI Coax | 7712A | 5 | 6.46 | Belden | 1/.040" BC (6.4) | GIFPE (.180) | DF/95% TC (3.0) | PVC-M (.970) | .371 | 75 | 16.2 | -40 to +75 | 300 |
| RG-6 Type Bundled SDI Coax | 7713A | 10 | 6.46 | Belden | 1/.040" BC (6.4) | GIFPE (.180) | DF/95% TC (3.0) | PVC-M (1.386) | .772 | 75 | 16.2 | -40 to +75 | 300 |
| RG-59/U Type Bundled (Miniature) | 7787A | 3 | 6.45 | Belden | 1/.023" BC (20.1) | GIFHDPE (.102) | DF/95% TC (7.6) | PVC (.432) | .081 | 75 | 16.5 | -35 to +75 | 300 |
| RG-59/U Type Bundled (Miniature) | 7788A | 4 | 6.45 | Belden | 1/.023" BC (20.1) | GIFHDPE (.102) | DF/95% TC (7.6) | PVC (.481) | .106 | 75 | 16.5 | -35 to +75 | 300 |
| RG-59/U Type Bundled (Miniature) | 7789A | 5 | 6.45 | Belden | 1/.023" BC (20.1) | GIFHDPE (.102) | DF/95% TC (7.6) | PVC (.539) | .133 | 75 | 16.5 | -35 to +75 | 300 |
| RG-59/U Type Bundled (Miniature) | 7790A | 6 | 6.45 | Belden | 1/.023" BC (20.1) | GIFHDPE (.102) | DF/95% TC (7.6) | PVC (.597) | .163 | 75 | 16.5 | -35 to +75 | 300 |
| RG-59/U Type Bundled (Miniature) | 7791A | 12 | 6.45 | Belden | 1/.023" BC (20.1) | GIFHDPE (.102) | DF/95% TC (7.6) | PVC (.796) | .280 | 75 | 16.5 | -35 to +75 | 300 |
| RG-59/U Type Bundled (Miniature) | 7792A | 12 | 6.45 | Belden | 1/.023" BC (20.1) | GIFHDPE (.102) | DF/95% TC (7.6) | PVC (.825) | .336 | 75 | 16.5 | -35 to +75 | 300 |
| RG-59/U Type Bundled | 7794A | 3 | 6.45 | Belden | 1/.032" BC (10.0) | GIFHDPE (.145) | DF/95% TC (3.8) | PVC (.631) | .084 | 75 | 16.3 | -35 to +75 | 300 |
| RG-59/U Type Bundled | 7795A | 4 | 6.45 | Belden | 1/.032" BC (10.0) | GIFHDPE (.145) | DF/95% TC (3.8) | PVC (.706) | .190 | 75 | 16.3 | -35 to +75 | 300 |
| RG-59/U Type Bundled | 7796A | 5 | 6.45 | Belden | 1/.032" BC (10.0) | GIFHDPE (.145) | DF/95% TC (3.8) | PVC (.790) | .238 | 75 | 16.3 | -35 to +75 | 300 |
| RG-59/U Type Bundled | 7798A | 10 | 6.45 | Belden | 1/.032" BC (10.0) | GIFHDPE (.145) | DF/95% TC (3.8) | PVC (1.166) | .501 | 75 | 16.3 | -35 to +75 | 300 |
| RG-59/U Type Bundled RGB Coax BananaPeel Plenum | 128383 | 3 | 6.46 | Belden | 1/.032" TC (10.0) | FFEP (.133) | DF/95% TC (3.8) | PVC (.422) | .103 | 75 | 16.2 | -20 to +75 | 300 |
| RG-59/U Type Bundled RGB Coax BananaPeel Plenum | 128385 | 5 5 | 6.46 | Belden | 1/.032" TC (10.0) | FFEP (.133) | DF/95% TC (3.8) | PVC (.529) | .174 | 75 | 16.2 | -20 to +75 | 300 |
| RG-59/U Type Bundled RGB Coax BananaPeel Plenum | 128386 | 6 | 6.46 | Belden | 1/.032" TC (10.0) | FFEP (.133) | DF/95% TC (3.8) | PVC (.588) | .209 | 75 | 16.2 | -20 to +75 | 300 |
| S-Video Coa | x | | | | | | | | | | | | |
| Parallel Coax S-Video Plenum | 7700A | 2 | 6.50 | Belden | 7/.012" TC (100.0) | FFEP (.053) | None/98% TC (7.5) | FLM (.107 x .214) | .017 | 75 | 17.3 | -20 to +60 | 300 |
| Parallel Coax S-Video High-Flex | 1807A | 2 | 6.50 | Belden | 7/.012" TC (100.0) | FHDPE (.056) | None/90% TC (7.5) | PVC (.110 x .230) | .013 | 75 | 17.3 | -40 to +75 | 300 |
| Round S-Video High-Flex Design | 1808A | 2 | 6.50 | Belden | 7/.012" TC (100.0) | FHDPE (.056) | None/90% TC (7.5) | PVC (.255) | .031 | 75 | 17.3 | -40 to +75 | 300 |

^{*}Inner conductors are entered as: number of strands/strand diameter (in inches).

Conductor Abbreviations

BC = Bare Copper BCCA = Bare Copper-covered Aluminum CCS = Copper-clad Steel SC = Silver-coated Copper SCA = Silver-coated Alloy
SCCS = Silver-coated Copper-covered Steel SPC = Silver-plated Copper SPCCS = Silver-plated Copper-covered Steel TC = Tinned Copper

Braid Abbreviations AL = Aluminum

BC = Bare Copper CT = Copper-Tin Composite SC = Silver-coated Copper SPC = Silver-plated Copper TC = Tinned Copper

Tape Abbreviations

BB = Bonded Beldfoil® BF = Beldfoil DB = Duobond® DBII = Duobond II DBIII = Duobond III DBIV = Duobond IV DB+ = Duobond Plus® DF = Duofoil® F = Foil

Insulation Abbreviations

FEP = Fluorinated Ethylene Propylene FFEP = Foam FEP FHDPE = Foam High-Density Polyethylene FPE = Foam Polyethylene FRSFPE = Flame-retardant Semi-foam Polyethylene GIFHDPE = Gas-injected Foam High-Density Polyethylene GIFPE = Gas-injected Foam Polyethylene GIFFE = Gas-injected Foatil Polye
PE = Solid Polyethylene
PP = Solid Polypropylene
SSFEP = Semi-solid FEP
SSPE = Semi-solid Polyethylene
TFE = Tetrafluoroethylene

Jacket Abbreviations

BELFX = Belflex® FCP = Fluorocopolymer FEP = Fluorinated Ethylene Propylene FG = Fiberglass FLM = Flamarrest® H = Hypalon®
HDPE = High-density Polyethylene
LSZH = Low-Smoke, Zero-Halogen
PE = Polyethylene
PVC = Polyvinyl Chloride PVC-M = Matte finish Polyvinyl Chloride PVC-NC = Non-contaminating Polyvinyl Chloride TFE-T = Tetrafluoroethylene Tape Wrap

Hypalon is a DuPont trademark.



Brilliance VideoFLEX® Snake Cable for Precision Analog and Digital Video





| Description | Part | UL NEC/ | No. | Standard Lengths | | Standard Unit Weight | | Conductor (stranding) | Nominal Core OD | | Shielding | Nominal OD | | Nom. | Nom. Vel. | Nominal Capacitance | | Nominal Attenuation MHz dB/ dB/ 100 Ft. 100m | | |
|--|------|---------|-------|---------------------|---|-------------------------|----|-----------------------|--------------------|----|-----------|------------|----|------|--------------|------------------------|------|---|----------------|-------------|
| Description F | No. | Type | Cond. | Ft. | m | Lbs. | kg | Diameter Nom. DCR | Inch | mm | Nom. DCR | Inch | mm | (Ω) | of Prop. | pF/Ft. | pF/m | MHz 1 | dB/ 100 Ft. | dB/ 100m |
| RG-59/U • 20 AWG Solid .032" Bare Copper Conductors • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage) | | | | | | | | | | | | | | | | | | | | |

| Plenum • | Foam F | EP Ins | ulation | • Plenum- | Grade | PVC | Jackets | (Color | Code | : See char | t below |) • Ce | nter | Spline • | No O | verall | Jac | ket |
|----------|------------------|----------------------------|---------|------------------------------------|-------|----------------------|--|--------|------|---|---------|--------|------|-----------|-----------|---|--|---|
| 300V RMS | 1283\$3 (TEW) | NEC: CMP CEC: CMP | 3 1 | 250 76.2 500 152.4 000 304.8 | 54.0 | 11.9 24.5 46.7 | 20 AWG (solid) .032" BC 10.0Ω/M' 32.8Ω/km | .133 | 3.38 | Duofoil (95%) + TC Braid 3.8Ω/M' 12.5Ω/km | .422 | 10.72 | 75 | 83% 16.2 | | 1 3.6 10 71.5 135 270 360 540 720 | .3 .6 .9 2.1 2.7 3.8 4.4 5.5 6.4 | 1.0 2.0 2.9 6.9 8.9 12.5 14.4 18.0 21.0 |
| | 1283\$5 (TEW) | NEC: CMP CEC: CMP | 5 1 | 250 76.2 500 152.4 000 304.8 | 88.0 | 19.7 39.9 78.9 | same as above | .133 | 3.38 | same as above | .529 | 13.44 | | | 2 | 750 1000 1500 2500 | 6.5 7.6 9.4 12.4 | 21.3 24.9 30.8 40.7 |
| | 1283S6 (TEV) | NEC: CMP CEC: CMP | 6 | 250 76.6 500 152.4 000 304.8 | 108.0 | 26.8 49.0 94.8 | same as above | .133 | 3.38 | same as above | .588 | 14.94 | | Sweep tes | ted. 5 MI | | 13.8 GHz. | 45.3 |

Suitable for Indoor and Outdoor applications.

RG-6/U Type • 18 AWG Solid .040" Bare Copper Conductors • Duofoil® (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

| Gas-injec | ted F | oam HD | PE I | Insulat | ion • (| Overa | all Ma | atte Blac | k PV | C Ja | cket (Co | lor Co | de: Se | e cha | art be | low) | | | | |
|---|-------|--------------------------------|------|-------------|----------------|----------------|----------------|---|----------------------|-----------------------|--|--------|--------|-------|------------------------------|------|------|---|--|---|
| SDI/HDTV Digital Video 75°C (1694A Bundled | 7710A | NEC: CMR CEC: CMG FT4 | 3 | 500 1000 | 152.4 304.8 | 137.5 285.0 | 62.4 129.3 | 18 AWG (solid) .040" BC 6.4Ω/M' 21.0Ω/km | .180 Coa: .275 | 4.57 × OD: 6.99 | Duofoil + 95% TC Braid 3.0Ω/M′ 9.8Ω/km | .770 | 19.56 | 75 | 82% | 16.2 | 53.1 | 1 3.6 10 71.5 135 270 360 540 720 | .2 .5 .7 1.6 2.1 3.0 3.4 4.3 4.9 | .8 1.5 2.4 5.2 6.9 9.7 11.3 13.9 16.1 |
| | 7711A | NEC: CMR CEC: CMG FT4 | 4 | 500 1000 | | 179.5 350.0 | 81.4 158.8 | same as above | .180 Coar .275 | 4.57 × OD: 6.99 | same as above | .900 | 22.86 | | | | | 750 1000 1500 2500 3000 | 5.0 5.9 7.3 9.1 10.6 | 16.4 19.3 24.0 31.8 35.0 |
| | 7712A | NEC: CMR CEC: CMG FT4 | 5 | 500 1000 | | 216.5 454.0 | 98.2 205.9 | same as above | .180 Coar .275 | 4.57 × OD: 6.99 | same as above | .970 | 24.64 | | | | | | | |
| | 7713A | | 10 | 500 1000 | 152.4 304.8 | 463.0 904.0 | 210.0 410.4 | same as above | .180 Coax .275 | 4.57 × OD: 6.99 | same as above | 1.386 | 35.20 | | Sweep tested 5 MHz to 3 GHz. | | | | GHz. | |

BC = Bare Copper • DCR = DC Resistance • FEP = Fluorinated Ethylene Propylene • HDPE = High-density Polyethylene • TC = Tinned Copper

Color Code Chart

| Cond. | Color | Cond. | Color |
|-------|--------|-------|--------|
| 1 | Red | 6 | Brown |
| 2 | Green | 7 | Orange |
| 3 | Blue | 8 | Gray |
| 4 | White | 9 | Purple |
| 5 | Yellow | 10 | Black |

