## **Detailed Specifications & Technical Data**



ENGLISH MEASUREMENT VERSION

## 1694F Coax - Low Loss Serial Digital Coax

For more Information please call

1-800-Belden1



### **General Description:**

19 AWG stranded (7x27) bare copper conductor, gas-injected foam HDPE insulation, double tinned copper braid shield (95% coverage), PVC jacket.

| Physical Characteristics (Overall)  |                 |
|---|-----------------|
| Conductor<br>AWG:   |                 |
| # Coax AWG Stranding Conductor Material Dia. (in.)  |                 |
| 1 19 7x27 BC - Bare Copper .040   |                 |
| Total Number of Conductors:   | 1               |
| Insulation<br>Insulation Material:  |                 |
| Insulation Material   Dia. (in.)     Gas-injected FHDPE - Foam High Density Polyethylene   .180           |                 |
| Outer Shield<br>Outer Shield Material:  |                 |
| Layer # TypeOuter Shield MaterialCoverage (%)1BraidTC - Tinned Copper95.0002BraidTC - Tinned Copper95.000 |                 |
| Outer Jacket  |                 |
| Outer Jacket Material:<br>Outer Jacket Material   |                 |
| PVC - Polyvinyl Chloride  |                 |
| Overall Cable   |                 |
| Overall Nominal Diameter:   | 0.276 in.       |
| Mechanical Characteristics (Overall)  |                 |
| Operating Temperature Range:  | -30°C To +75°C  |
| UL Temperature Rating:  | 75°C            |
| Bulk Cable Weight:  | 50 lbs/1000 ft. |
| Max. Recommended Pulling Tension:   | 116 lbs.        |
| Min. Bend Radius/Minor Axis:  | 2.750 in.       |
| Applicable Specifications and Agency Compliance (   |                 |
| Applicable Standards & Environmental Programs   |                 |
| NEC/(UL) Specification:   | CMR             |
| CEC/C(UL) Specification:  | CMG             |
| EU Directive 2011/65/EU (ROHS II):  | Yes             |
| 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             |

# **Detailed Specifications & Technical Data**





## 1694F Coax - Low Loss Serial Digital Coax

| UL Flame  |   |                       |
|---|---|-----------------------|
|   | Test:   | UL1666 Vertical Shaft |
| Suitability   |   |                       |
| Suitability   | / - Indoor:   | Yes                   |
|   |   |                       |
| Plenum/Non-   |   |                       |
| Plenum (Y   | r/n):   | No                    |
| Plenum N  | umber:  | 1695A                 |
| la atria al Ci  | haracteristics (Ov  |                       |
|   | haracteristics (Ove<br>eristic Impedance:   | raii)                 |
| Impedance   |   |                       |
| 75  | ()  |                       |
| Nom. Inductan   |   |                       |
| Inductance  |   |                       |
| 0.106   | ()  |                       |
|   |   |                       |
| Capacitance   |   |                       |
| 16.2  |   |                       |
|   | ity of Propagation  |                       |
| VP (%)  | ity of Propagation:   |                       |
| 81  |   |                       |
|   |   |                       |
| lominal Delay:<br>Delay (ns/ft)   |   |                       |
| 1.25  | <i>,</i>  |                       |
|   |   |                       |
|   | or DC Resistance:<br>C (Ohm/1000 ft)  |                       |
| 8.5   |   |                       |
|   |   |                       |
|   | Shield DC Resistance:   |                       |
|   | C (Ohm/1000 ft)   |                       |
| 1.7   |   |                       |
| om. Attenuati   |   |                       |
|   | Attenuation (dB/100 ft.)  |                       |
| 1.000   | 0.240   |                       |
| 3.580   | 0.450   |                       |
| 5.000<br>6.000  | 0.540   |                       |
| 7.000   | 0.620   |                       |
| 10.000  | 0.720   |                       |
| 12.000  | 0.830   |                       |
| 25.000  | 1.180   |                       |
| 1   | 1.100   | 1                     |
| 67.500  | 1.900   |                       |
| 67.500<br>71.500  |   |                       |
|   | 1.900   |                       |
| 71.500<br>88.500<br>100.000   | 1.900<br>2.000  |                       |
| 71.500<br>88.500<br>100.000<br>135.000  | 1.900     2.000     2.200     2.400     2.800   |                       |
| 71.500<br>88.500<br>100.000<br>135.000<br>143.000   | 1.900<br>2.000<br>2.200<br>2.400<br>2.800<br>2.900  |                       |
| 71.500<br>88.500<br>100.000<br>135.000<br>143.000<br>180.000  | 1.900     2.000     2.200     2.400     2.800     2.900     3.300   |                       |
| 71.500<br>88.500<br>100.000<br>135.000<br>143.000<br>180.000<br>270.000   | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   |                       |
| 71.500<br>88.500<br>100.000<br>135.000<br>143.000<br>180.000<br>270.000<br>360.000  | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   |                       |
| 71.500     88.500     100.000     135.000     143.000     180.000     270.000     360.000     540.000   | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   |                       |
| 71.500     88.500     100.000     135.000     143.000     270.000     360.000     540.000     720.000   | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   |                       |
| 71.500     88.500     100.000     135.000     143.000     270.000     360.000     540.000     720.000     750.000   | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   |                       |
| 71.500     88.500     100.000     135.000     143.000     270.000     360.000     540.000     720.000     750.000     1000.000  | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   |                       |
| 71.500     88.500     100.000     135.000     143.000     270.000     360.000     540.000     720.000     750.000     1000.000     1500.000                           | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   10.400  |                       |
| 71.500     88.500     100.000     135.000     143.000     270.000     360.000     540.000     720.000     750.000     1000.000     1500.000     2000.000              | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   10.400   12.300   |                       |
| 71.500     88.500     100.000     135.000     143.000     270.000     360.000     540.000     720.000     750.000     1000.000     1500.000     2000.000     2250.000 | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   10.400   12.300   |                       |
| 71.500   88.500   100.000   135.000   143.000   270.000   360.000   540.000   720.000   100.000   1500.000   2000.000   2000.000   2250.000   3000.000                | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   10.400   12.300   |                       |
| 71.500   88.500   100.000   135.000   143.000   270.000   360.000   540.000   720.000   750.000   1000.000   250.000   3000.000   4500.000                            | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   10.400   12.300   13.200   15.600   19.800  |                       |
| 71.500   88.500   100.000   135.000   143.000   270.000   360.000   540.000   720.000   100.000   1500.000   2000.000   2250.000   3000.000   4500.000                | 1.900   2.000   2.200   2.400   2.800   2.900   3.300   4.000   4.700   5.900   6.900   7.000   8.200   10.400   12.300   13.200  |                       |
| 71.500   88.500   100.000   135.000   143.000   270.000   360.000   540.000   720.000   750.000   1000.000   250.000   3000.000   4500.000                            | 1.900<br>2.000<br>2.200<br>2.400<br>2.800<br>2.900<br>3.300<br>4.000<br>4.700<br>5.900<br>6.900<br>7.000<br>8.200<br>10.400<br>12.300<br>13.200<br>15.600<br>19.800<br><b>5.001</b><br><b>7.001</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b><br><b>7.000</b> |                       |

## **Detailed Specifications & Technical Data**



### ENGLISH MEASUREMENT VERSION

### 1694F Coax - Low Loss Serial Digital Coax

Voltage 300 V RMS

Other Electrical Characteristic 1:

Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination. 75 +/- 1.5 Ohms

**Other Electrical Characteristic 2:** 

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              | 20           |
| 850               | 4500             | 15           |

Sweep Test

Sweep Testing:

100% Sweep tested 5 MHz to 4.5 GHz.

#### Put Ups and Colors:

| Item #        | Putup    | Ship Weight | Color         | Notes | Item Desc                |
|---------------|----------|-------------|---------------|-------|--------------------------|
| 1694F B591000 | 1,000 FT | 54.000 LB   | BLACK, MATTE  | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F G7V1000 | 1,000 FT | 54.000 LB   | RED, MATTE    | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F G7W1000 | 1,000 FT | 54.000 LB   | GREEN, MATTE  | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F G7X1000 | 1,000 FT | 54.000 LB   | BLUE, MATTE   | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F G7Y1000 | 1,000 FT | 54.000 LB   | WHITE, MATTE  | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F G8L1000 | 1,000 FT | 54.000 LB   | ORANGE, MATTE | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F G8M1000 | 1,000 FT | 54.000 LB   | YELLOW, MATTE | С     | #19 GIFHDLDPE DBLB FRPVC |
| 1694F Z4B1000 | 1,000 FT | 54.000 LB   | VIO Z4B       | С     | #19 GIFHDLDPE DBLB FRPVC |

Notes:

C = CRATE REEL PUT-UP.

Revision Number: 11 Revision Date: 08-01-2013

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product. Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.