



75 Ohm HD-BNC Male to 75 Ohm HD-BNC Male 6G SDI  
Cable 120 Inch Length Using 75 Ohm 1694A-YW Coax

## RF Cable Assemblies Technical Data Sheet

**PE3C8816/YW-120**

### Configuration

- Connector 1: HD-BNC Male
- Connector 2: HD-BNC Male
- Cable Type: Belden 1694A-YW

### Features

- Max Frequency 6 GHz
- 82% Phase Velocity
- PVC Jacket
- Meets SMPTE ST 2081-1
- 6Gb/s Transmission
- Cost Effective

### Applications

- General Purpose
- Laboratory Use
- 6G-SDI, Video, and Broadband UHDTV
- Broadband Internet Delivery
- Broadcast A/V
- 4K/8K Video Equipment
- Medical Equipment Requiring High Speed Video
- HD Cameras

### Description

Pasternack's PE3C8816/YW-120 75 ohm HD-BNC male to 75 ohm HD-BNC male 120 inch cable using 75 ohm 1694A-YW coax is part of our full line of RF components available for same-day shipping. Pasternack's flexible RF cable assemblies are ideal for applications where tight bends and flexure are required. This Pasternack HD-BNC to HD-BNC cable assembly has a male to male gender configuration with 75 ohm flexible Belden 1694A-YW coax. The PE3C8816/YW-120 HD-BNC male to HD-BNC male cable assembly operates to 6 GHz and enables 6Gb/s data transfer rates for high resolution uncompressed video signal transmission. These products offer 4K and Ultra-HD quality signals that meet SMPTE Standard 2081-1.

Custom versions of most RF cable assemblies can be built and shipped same day. Custom cable assembly lengths can be obtained by specifying the desired length on the web site at time of order or by contacting a sales representative. Other available RF cable assembly value added services include connector orientation or clocking, heat shrink booting and custom labeling. RF testing can also be performed to document the electrical performance of your cable assembly.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 Ohm HD-BNC Male to 75 Ohm HD-BNC Male 6G SDI Cable 120 Inch Length Using 75 Ohm 1694A-YW Coax PE3C8816/YW-120](#)



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### Electrical Specifications

| Description                   | Minimum | Typical      | Maximum | Units                            |
|-------------------------------|---------|--------------|---------|----------------------------------|
| Frequency Range               | DC      |              | 6       | GHz                              |
| VSWR                          |         |              | 1.5:1   |                                  |
| Velocity of Propagation       |         | 82           |         | %                                |
| Group Delay                   |         | 4.06 [13.32] |         | ns/ft [ns/m]                     |
| Capacitance                   |         | 16.2 [53.15] |         | pF/ft [pF/m]                     |
| Inductance                    |         | 0.347 [1.14] |         | uH/ft [uH/m]                     |
| DC Resistance Inner Conductor |         | 6.4 [21]     |         | $\Omega$ /1000ft [ $\Omega$ /Km] |
| DC Resistance Outer Conductor |         | 3.8 [12.47]  |         | $\Omega$ /1000ft [ $\Omega$ /Km] |
| Operating Voltage (AC)        |         |              | 300     | Vrms                             |

### Specifications by Frequency

| Description           | F1   | F2   | F3   | F4   | F5   | Units |
|-----------------------|------|------|------|------|------|-------|
| Frequency             | 0.25 | 0.5  | 1    | 2.5  | 6    | GHz   |
| Insertion Loss (Typ.) | 0.5  | 0.63 | 0.83 | 1.23 | 1.97 | dB    |

#### Electrical Specification Notes:

The Insertion Loss data above is based on the performance specifications of the coax and connectors used in this assembly. The Insertion Loss includes an estimated insertion loss of 0.1 dB per connector.

### Mechanical Specifications

#### Cable Assembly

|         |                    |
|---------|--------------------|
| Length* | 120 in [304.8 cm]  |
| Weight  | 0.3 lbs [136.08 g] |

#### Cable

|                                      |                    |
|--------------------------------------|--------------------|
| Cable Type                           | Belden 1694A-YW    |
| Impedance                            | 75 Ohms            |
| Inner Conductor Type                 | Solid              |
| Inner Conductor Material and Plating | Copper, Bare       |
| Dielectric Type                      | PE                 |
| Number of Shields                    | 1                  |
| Shield Layer 1                       | Aluminum Polyester |
| Shield Layer 2                       | Tinned Copper      |
| Jacket Material                      | PVC, Yellow        |
| Jacket Diameter                      | 0.274 in [6.96 mm] |

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### Connectors

| Description                           | Connector 1     | Connector 2     |
|---------------------------------------|-----------------|-----------------|
| Type                                  | HD-BNC Male     | HD-BNC Male     |
| Impedance                             | 75 Ohms         | 75 Ohms         |
| Contact Material and Plating          | Brass, Gold     | Brass, Gold     |
| Contact Plating Specification         | 10 µin minimum  | 10 µin minimum  |
| Dielectric Type                       | PTFE            | PTFE            |
| Outer Conductor Material and Plating  | Brass, Nickel   | Brass, Nickel   |
| Outer Conductor Plating Specification | 50 µin minimum  | 50 µin minimum  |
| Body Material and Plating             | Brass, Nickel   | Brass, Nickel   |
| Body Plating Specification            | 100 µin minimum | 100 µin minimum |

### Environmental Specifications

#### Temperature

Operating Range

-20 to +75 deg C

**Compliance Certifications** (see [product page](#) for current document)

### Plotted and Other Data

Notes:

- Values at 25°C, sea level.

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**PE3C8816/YW-120**

**How to Order**

Part Number Configuration:

**PE3C8816/YW - xx uu**

Unit of Measure:  
cm = Centimeters  
<blank> = Inches  
Length  
Base Number

Example: PE3C8816/YW-12 = 12 inches long cable  
PE3C8816/YW-100cm = 100 cm long cable

75 Ohm HD-BNC Male to 75 Ohm HD-BNC Male 6G SDI Cable 120 Inch Length Using 75 Ohm 1694A-YW Coax from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [75 Ohm HD-BNC Male to 75 Ohm HD-BNC Male 6G SDI Cable 120 Inch Length Using 75 Ohm 1694A-YW Coax PE3C8816/YW-120](https://www.pasternack.com/75-ohm-hd-bnc-male-to-75-ohm-hd-bnc-male-6g-sdi-cable-120-inch-length-using-1694a-yw-pe3c8816-yw-120-p.aspx)

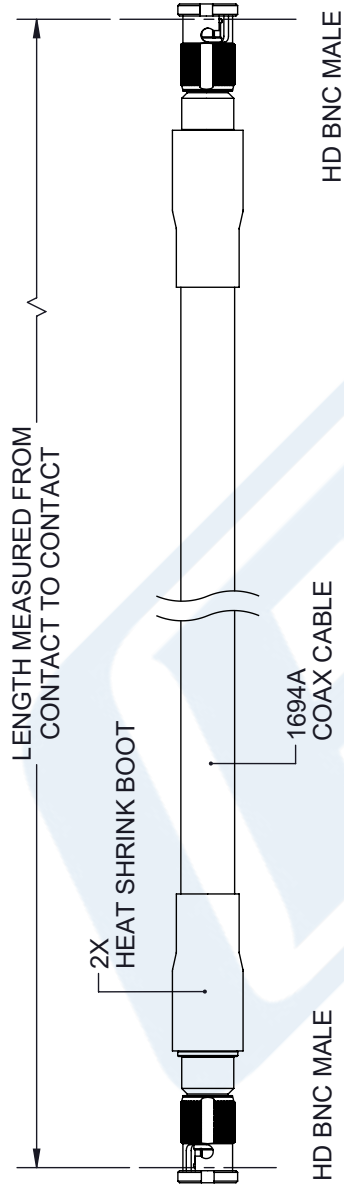
URL: <https://www.pasternack.com/75-ohm-hd-bnc-male-to-75-ohm-hd-bnc-male-6g-sdi-cable-120-inch-length-using-1694a-yw-pe3c8816-yw-120-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

# PE3C8816/YW-120 CAD Drawing

## 75 Ohm HD-BNC Male to 75 Ohm HD-BNC Male 6G SDI Cable 120 Inch Length Using 75 Ohm 1694A-YW Coax

| REVISIONS |                 |                      |
|-----------|-----------------|----------------------|
| REV.      | DESCRIPTION     | DATE                 |
| A         | INITIAL RELEASE | 4/29/22              |
|           |                 | APPROVED<br>AGANWANI |



| PE3C8816/ZZ<br>(ZZ = CABLE COLOR DESIGNATION) | COAX CABLE COLOR |
|---|------------------|
| PE3C8816/BK                                   | BLACK            |
| PE3C8816/BL                                   | BLUE             |
| PE3C8816/BR                                   | BROWN            |
| PE3C8816/GR                                   | GREEN            |
| PE3C8816/GY                                   | GRAY             |
| PE3C8816/OR                                   | ORANGE           |
| PE3C8816/RD                                   | RED              |
| PE3C8816/VL                                   | VIOLET           |
| PE3C8816/WH                                   | WHITE            |
| PE3C8816/YW                                   | YELLOW           |

**PE PASTERNAK**  
an INFINITI<sup>®</sup> brand

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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

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UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS

TOLERANCES:

.X = ±.2 [ .008 ]    FRACTIONS ± 1/32  
.XX = ±.02 [ .51 ]    ANGLES ± 1°  
.XXX = ±.005 [ .13 ]

CABLE LENGTH (L), TOLERANCES:

L ≤ 12 [305] = +1 [25] / -0  
12 [305] < L ≤ 60 [1524] = +2 [51] / -0  
60 [1524] < L ≤ 120 [3048] = +4 [102] / -0  
120 [3048] < L ≤ 300 [7620] = +6 [152] / -0  
300 [7620] < L = +5% / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

ITEM NO. PE3C8816/ZZ

SIZE A

CAGE CODE 53919

DRAWN BY HBAKKE