



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

## RF Cable Assemblies Technical Data Sheet

**PE3C8816/GR-120**

### Configuration

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

### 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/GR-120 75 ohm HD-BNC male to 75 ohm HD-BNC male 120 inch cable using 75 ohm 1694A-GR 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-GR coax. The PE3C8816/GR-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-GR Coax PE3C8816/GR-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-GR
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, Green
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/GR-120**

**How to Order**

Part Number Configuration:

**PE3C8816/GR - xx uu**

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

Example: PE3C8816/GR-12 = 12 inches long cable  
PE3C8816/GR-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-GR 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-GR Coax PE3C8816/GR-120](https://www.pasternack.com/75-ohm-hd-bnc-male-to-75-ohm-hd-bnc-male-6g-sdi-cable-120-inch-length-using-75-ohm-1694a-gr-coax-pe3c8816-gr-120)

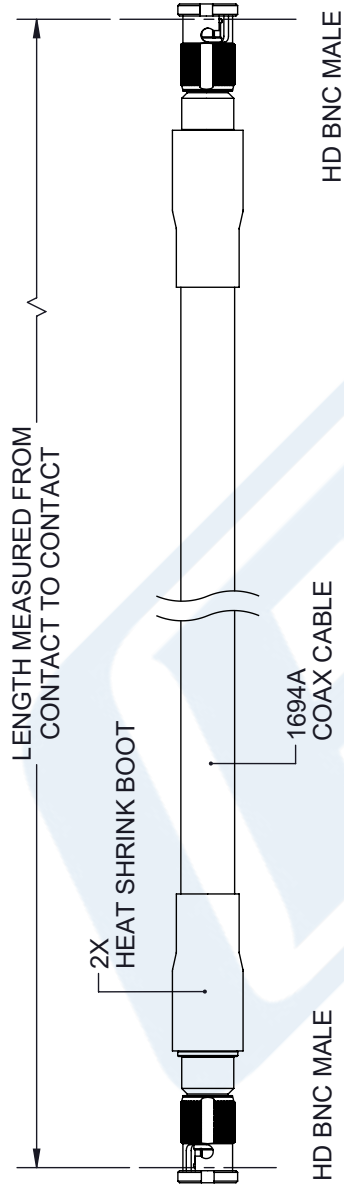
URL: <https://www.pasternack.com/75-ohm-hd-bnc-male-to-75-ohm-hd-bnc-male-6g-sdi-cable-120-inch-length-using-1694a-gr-pe3c8816-gr-120-p.aspx>

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# PE3C8816/GR-120 CAD Drawing

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

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	4/29/22
		APPROVED AGANWANI



PE3C8816/ZZ (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

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

**TOLERANCES:**

.X = ±.2 [ .08]    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.

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THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.	REV	REV
A	53919	HBAKKE	PE3C8816/ZZ	N/A	A

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