

6G SDI 75 Ohm 1.0/2.3 Male to 75 Ohm 1.0/2.3 Male Cable 75 Ohm 1694A-BK Coax

The 75 ohm 1.0/2.3 male to 75 ohm 1.0/2.3 male cable using 75 ohm 1694A-BK coax, part number FMCA2678/BK, from Fairview Microwave is in-stock and ships same day. This Fairview 1.0/2.3 to 1.0/2.3 cable assembly has a male to male gender configuration with 75 ohm flexible Belden 1694A-BK coax. Fairview Microwave's flexible RF cable assemblies are ideal for applications where tight bends and continual flexure are required. The FMCA2678/BK 1.0/2.3 male to 1.0/2.3 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 RF cable assembly value added services including connector orientation or clocking, heat shrink booting and labeling are also available. RF testing can also be performed to document the electrical performance of your cable assembly.

Electrical Specifications

| Description | Min | Typ | Max | 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] | | | Ω /1000ft [Ω /Km] |
| DC Resistance Outer Conductor | 3.8 [12.47] | | | Ω /1000ft [Ω /Km] |
| Operating Voltage (AC) | | | 300 | Vrms |

Performance by Frequency

| Description | F1 | F2 | F3 | F4 | F5 | Units |
|-----------------------|------|-------|-------|-------|-------|-------|
| Frequency | 0.25 | 0.5 | 1 | 2.5 | 6 | GHz |
| Insertion Loss (Typ.) | 0.03 | 0.043 | 0.063 | 0.103 | 0.177 | dB/ft |
| | 0.1 | 0.14 | 0.21 | 0.34 | 0.58 | dB/m |

Electrical Specification Notes:

Insertion Loss does not include the loss of the connectors. Insertion Loss is estimated as 0.1 dB per connector.

Mechanical Specifications

Cable Assembly

Weight 0.1 lbs [45.36 g]

Cable

Cable Type Belden 1694A-BK
 Impedance 75 Ohms
 Inner Conductor Type Solid



Configuration:

- 1.0/2.3 Male
- 1.0/2.3 Male
- Belden 1694A-BK

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

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| | |
|--------------------------------------|--------------------|
| 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, Black |
| Jacket Diameter | 0.274 in [6.96 mm] |

Connectors

| Description | Connector 1 | Connector 2 |
|-------------------------------|-----------------|-----------------|
| Type | 1.0/2.3 Male | 1.0/2.3 Male |
| Impedance | 75 Ohms | 75 Ohms |
| Contact Material & Plating | Brass, Gold | Brass, Gold |
| Contact Plating Spec. | 10 µin minimum | 10 µin minimum |
| Dielectric Type | PTFE | PTFE |
| Outer Cond Material & Plating | Brass, Gold | Brass, Gold |
| Outer Cond Plating Spec. | 3 µin minimum | 3 µin minimum |
| Body Material & Plating | Brass, Nickel | Brass, Nickel |
| Body Plating Spec. | 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.

How to Order

Part Number Configuration:

FMCA2678/BK - xx uu

cm = Centimeters
 <blank> = Inches
 Length

Example: FMCA2678/BK-12 = 12 inches long cable
 FMCA2678/BK-100cm = 100 cm long cable

6G SDI 75 Ohm 1.0/2.3 Male to 75 Ohm 1.0/2.3 Male Cable 75 Ohm 1694A-BK Coax from Fairview Microwave has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

Click the following link to obtain additional part information: [6G SDI 75 Ohm 1.0/2.3 Male to 75 Ohm 1.0/2.3 Male Cable 75 Ohm 1694A-BK Coax FMCA2678/BK](https://www.fairviewmicrowave.com/6g-sdi-75-ohm-1.0-2.3-male-to-75-ohm-1.0-2.3-male-cable-75-ohm-1694a-bk-coax-fmca2678-bk)

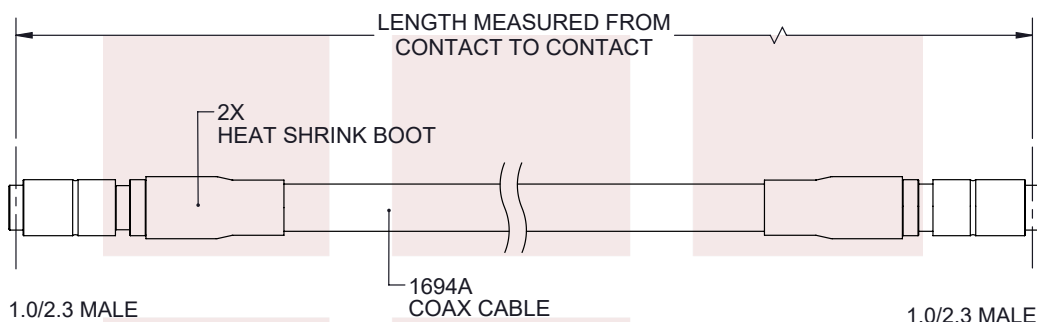
URL: <https://www.fairviewmicrowave.com/6g-sdi-75-ohm-1.0-2.3-male-to-75-ohm-1.0-2.3-male-cable-75-ohm-1694a-bk-coax-fmca2678-bk-p.aspx>

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. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.





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



| FMCA2678/ZZ (ZZ = CABLE COLOR DESIGNATION) | COAX CABLE COLOR |
|--|------------------|
| FMCA2678/BK | BLACK |
| FMCA2678/BL | BLUE |
| FMCA2678/BR | BROWN |
| FMCA2678/GR | GREEN |
| FMCA2678/GY | GRAY |
| FMCA2678/OR | ORANGE |
| FMCA2678/RD | RED |
| FMCA2678/VL | VIOLET |
| FMCA2678/WH | WHITE |
| FMCA2678/YW | YELLOW |

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6G SDI 75 Ohm 1.0/2.3 Male to 75 Ohm 1.0/2.3 Male
Cable 75 Ohm 1694A-BK Coax

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

TOLERANCES:

CABLE LENGTH (L) TOLERANCES:

| | | |
|--------------|--------|-------------|
| .X = ±.2 | [.508] | FRACTIONS |
| .XX = ±.02 | [.51] | ± 1/32 |
| .XXX = ±.005 | [.13] | ANGLES ± 1° |

$$\begin{aligned} L \leq 12 [305] &= +1 [25] / -0 \\ 12 [305] < L \leq 60 [1524] &= +2 [51] / -0 \\ 60 [1524] < L \leq 120 [3048] &= +4 [102] / -0 \\ 120 [3048] < L \leq 300 [7620] &= +6 [152] / -0 \\ 300 [7620] < L &= +5\% L / -0 \end{aligned}$$

THIRD-ANGLE PROJECTION



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|-------|-----|
| SCALE | N/A |
|-------|-----|

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY

| | | | | |
|-----------|--------------------|--------------------|-------------------------|----------|
| SIZE A | CAGE CODE 3FKR5 | DRAWN BY HBAKKE | ITEM NO. FMCA2678/ZZ | REV A |
|-----------|--------------------|--------------------|-------------------------|----------|