

## 1 M SMA to SMA M/M 240 Series Low Loss Cable Jumper

### CA240LL022-1M



#### Configuration

- Connector 1: SMA Male
- Connector 2: SMA Male
- Cable Type: PPBC-240LL

#### Features

- LMR Equivalent Coax
- Max Frequency 5.8 GHz
- Shielding Effectivity > 90 dB
- 84% Phase Velocity
- Low Insertion Loss
- Double Shielded
- PE Jacket
- One Time Bend Radius of 0.75 Inches



#### Applications

- General Purpose
- Laboratory Use
- Antenna Installations
- Land Mobile Radio & Other Communication Systems
- Cellular & Wi-Fi Systems

#### Description

PolyPhaser CA240LL022-1M is a 1 meter SMA to SMA M/M 240 Series Low Loss Cable Jumper is built using high quality components by skilled technicians to ensure a reliable product. The SMA Male cable jumper connections are designed to industry standard interface dimensions to ensure superior performance. This product is in stock and available for same day shipping. This high-quality RF coaxial assembly is perfect in many RF Interconnect applications such as IoT network, test and measurement, Wireless Lan, and many other RF systems. The CA240LL022-1M SMA to SMA cable assembly is the perfect companion to PolyPhaser line of RF surge protection devices particularly when used as an antenna jumper cable.

The 240 Series coax used in these SMA to SMA assemblies is a 0.24 inch diameter coax with a black PE jacket. This cable's foam PE dielectric is low loss material with a phase velocity of 84% reducing the attenuation when compared to solid dielectric coax cables. PolyPhaser Low Loss 240 Series coax has a solid center conductor and uses a double shield consisting of a wire braid over a foil tape construction providing >90% shielding effectivity. The construction and materials of the CA240LL022-1M result in a coax cable assembly with 0.75 inch one time bend radius and a repeat bend radius of 2.5 inches. The cable assembly's combination of SMA to SMA Male/Male and 240 Series Low Loss Cable supports a maximum operating frequency of 5.8 GHz. You can find detailed performance specifications in the product datasheet. All PolyPhaser assemblies are tested and inspected prior to shipping.

For additional strength, these SMA Male to SMA Male cable assemblies have polyolefin heat shrink strain relief boots on both ends of the RF Cable Assembly Jumpers. The heat shrink booting uses a double walled epoxy filled material to prolong the life of the assembly.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications:  
[1 M SMA to SMA M/M 240 Series Low Loss Cable Jumper CA240LL022-1M](#)

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### CA240LL022-1M

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
VSWR			1.5:1	
Velocity of Propagation		84		%
RF Shielding	90			dB
Capacitance		24.2 [79.4]		pF/ft [pF/m]
Jacket Spark			5,000	Vrms

#### Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.25	0.5	1	2.5	5.8	GHz
Insertion Loss (Max.)	1.78	2.17	3.75	6.11	9.26	dB

##### Electrical Specification Notes:

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

#### Mechanical Specifications

##### Size

Length	39.37 in [100 cm]
Diameter	0.24 in [6.1 mm]
Weight	0.12443 lbs [56.44 g]

##### Cable

Cable Type	PPBC-240LL
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper
Dielectric Type	PE (F)
Number of Shields	2
Shield Layer 1	Aluminum Tape
Shield Layer 2	Tinned Copper Braid
Jacket Material	PE, Black
Jacket Diameter	0.24 in [6.1 mm]
One Time Minimum Bend Radius	0.752 in [19.1 mm]
Repeated Minimum Bend Radius	2.5 in [63.5 mm]

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#### Connectors

Description	Connector 1	Connector 2
Type	SMA Male	SMA Male
Impedance	50 Ohms	50 Ohms
Contact Material and Plating	Phosphor Bronze, Gold	Phosphor Bronze, Gold
Dielectric Type	Teflon	Teflon
Body Material and Plating	Brass, Gold	Brass, Gold
Coupling Nut Material and Plating	Brass, Gold	Brass, Gold
Hex Size	16-May in	16-May in
Torque	5 in-lbs [0.57 Nm]	5 in-lbs [0.57 Nm]

#### Environmental Specifications

##### Temperature

Operating Range -40 to +85 deg C

#### Compliance Certifications

#### Plotted and Other Data

##### Notes:

- Values at 25°C, sea level.

PolyPhaser protects and increases the reliability of global RF communications networks, including transportation, telecommunications, defense, security and industrial applications, with superior RF surge protection technologies including DC Block, DC Pass and Ultra Low PIM. Backed by responsive service and expert technical support PolyPhaser continually expands its product offering and services to serve engineers' urgent needs for RF components in mission critical communication networks.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [1 M SMA to SMA M/M 240 Series Low Loss Cable Jumper CA240LL022-1M](#)

URL: <https://www.polyphaser.com/1-m-sma-to-sma-m-m-240-series-low-loss-cable-jumper-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. PolyPhaser reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. PolyPhaser does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and PolyPhaser does not assume any liability arising out of the use of any part or documentation.

CA240LL022-1M CAD Drawing

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	07/26/2020	SELLIS

LENGTH MEASURED FROM CONTACT TO CONTACT

2X HEAT SHRINK BOOTING

LOW LOSS 240 SERIES COAX

SMA MALE

SMA MALE

LABEL (SEE NOTE 1)

**NOTES:**

1. CABLES 36" AND UNDER HAVE 1 LABEL CENTERED. CABLES OVER 36" HAVE 2 LABELS, ONE AT EACH END 6.0" FROM THE FRONT OF THE CONNECTOR.

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

TOLERANCES:

X = +2	[5.08]	FRACTIONS
.XX = +.02	[.51]	+1/32
.XXX = +.005	[.13]	ANGLES ±1°

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	±.6% L	/-0

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10701 Airport Road, Hayden, Idaho 83835, USA  
Phone: 1.208.635.6400 | 1.800.882.9110  
Fax: 1.208.762.6133  
Website: [www.PolyPhaser.com](http://www.PolyPhaser.com)  
E-mail: [CustomerService@PolyPhaser.com](mailto:CustomerService@PolyPhaser.com)

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

SIZE A CAGE CODE 30992 DRAWN BY MVEERAPPAN ITEM NO. CA240LL022 REV A