

Low Loss N Male to N Female Bulkhead Weatherproof Cable Assembly with Silicone using LMR-400 Coax, 3 FT with Times Microwave Components



LCCA30194/WP-FT3

Configuration

- Connector 1: N Male
- Connector 2: N Female Bulkhead
- Cable Type: LMR-400
- Coax Flex Type: Flexible

Features

- Silicone Connector Boot
- IP68 Rated

Description

L-com's LCCA30194/WP-FT3 is a low loss N male to N female bulkhead weatherproof cable assembly with silicone using LMR-400 coax, 3 FT with Times Microwave components and ships same-day. The LMR-400 coax of this N cable uses the PE (F) dielectric with a VoP of 85%, resulting in very low insertion loss compared to solid dielectrics. These flexible RF cable assemblies are ideal for applications where flexure is required. Our L-com N to N cable assembly has a male to female gender configuration with flexible LMR-400 series coax and operates to 6 GHz. The double shield of this N cable is layered by tinned copper braid over aluminum tape providing shielding effectiveness greater than 90dB. L-com's RF cable assembly with N bulkhead interface enables system designers to have external connections on their product enclosures or to be used for other rack mount and panel mount applications.

Custom versions of this N male to N female cable, along with the rest of L-com's other RF assemblies, can also be built and shipped same day. Other available RF cable assembly value added services from L-com 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. Contact a sales representative for testing or custom RF cable quotes. Part number LCCA30194/WP-FT3 L-com Low Loss N Male to N Female Bulkhead Weatherproof Cable Assembly with Silicone using LMR-400 Coax, 3 FT with Times Microwave Components data sheet PDF includes details of the RF product specifications, CAD drawing(s) and dimensions below.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.4:1	
Velocity of Propagation		85		%
RF Shielding	90			dB
Capacitance		23.9 [78.41]		pF/ft [pF/m]
Inductance		0.06 [0.2]		uH/ft [uH/m]
DC Resistance Inner Conductor		1.39 [4.56]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		1.65 [5.41]		Ohms/1000ft [Ohms/Km]
Dielectric Withstanding Voltage (DC)			2,500	Vdc
Jacket Spark			8,000	Vrms

Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Frequency	0.25	0.5	1	2.5	6	GHz

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Specifications by Frequency

Description	F1	F2	F3	F4	F5	Units
Insertion Loss (Typ.)	0.21	0.26	0.33	0.47	0.67	dB

Specifications by Frequency

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
		Frequency	250	500	1000	2500	6000	MHz	
LCCA30194/WP	Custom Lengths Available	Insertion Loss (Typ.)	0.020	0.028	0.041	0.068	0.108	dB/ft	
			0.07	0.1	0.14	0.23	0.36	dB/m	
LCCA30194/WP-FT2	24 In	Insertion Loss (Typ.)	0.19	0.23	0.29	0.4	0.57	dB	0.905
LCCA30194/WP-FT3	36 In	Insertion Loss (Typ.)	0.21	0.26	0.33	0.47	0.67	dB	0.972
LCCA30194/WP-FT4	48 In	Insertion Loss (Typ.)	0.23	0.29	0.37	0.54	0.78	dB	1.039
LCCA30194/WP-FT5	60 In	Insertion Loss (Typ.)	0.25	0.32	0.41	0.6	0.89	dB	1.106

The insertion loss data for the base model does not include loss due to the connectors. Each length includes insertion loss due to the connectors.

Loss due to Connector 1: 0.1 dB

Loss due to Connector 2: $0.1 * \text{SQRT}(\text{FGHz})$ dB

Base Weight: 0.838 pounds

Additional Weight per Inch: 0.00559 pounds

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 for the male connector and $0.1 * \text{SQRT}(\text{FGHz})$ dB for the female connector.

Mechanical Specifications

Cable Assembly

Length	36 in [914.4 mm]
Width/Diameter	.5 in [12.7 mm]
Weight	0.972 lbs [440.89 g]

Cable

Cable Type	LMR-400
Impedance	50 Ohms
Inner Conductor Type	Solid
Inner Conductor Material and Plating	Copper Clad Aluminum
Dielectric Type	PE (F)
Number of Shields	2
Shield Layer 1	Aluminum Tape
Shield Layer 2	Tinned Copper Braid
Jacket Material	PE
Jacket Diameter	0.405 in [10.29 mm]
One Time Minimum Bend Radius	1 in [25.4 mm]
Repeated Minimum Bend Radius	4 in [101.6 mm]
Bending Moment	0.5 lbs-ft [0.68 N-m]
Flat Plate Crush	40 lbs/in [0.71 Kg/mm]

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Tensile Strength 160 lbs [72.57 Kg]

Connectors

Description	Connector 1	Connector 2
Type	N Male	N Female Bulkhead
Option	Weatherproof Boot	
Impedance	50 Ohms	50 Ohms
Configuration	Straight	Straight
Contact Material and Plating	Brass, Gold	Beryllium Copper, Gold
Contact Plating Specification	50 µin minimum	50 µin minimum
Dielectric Type	PTFE	PTFE
Outer Conductor Material and Plating		Brass, Tri-metal
Outer Conductor Plating Specification		80 µin minimum
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-metal
Body Plating Specification	150 µin minimum	80 µin minimum
Coupling Nut Material and Plating	Brass, Tri-Metal	
Coupling Nut Plating Specification	150 µin minimum	
Hex Size	13/16 inch	
Boot Material	Silicone	Silicone

Environmental Specifications

Ingress Protection (IP) Rating IP68

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

Plotted and Other Data

Notes:
Values at 25°C, sea level.

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LCCA30194/WP-FT3

Typical Performance Data

How to Order

Part Number Configuration:

LCCA30194/WP

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Unit of Measure:

cm = Centimeters

<blank> = Inches

Length

Base Number

Example: LCCA30194/WP-12 = 12 inches long cable
LCCA30194/WP-100cm = 100 cm long cable

Low Loss N Male to N Female Bulkhead Weatherproof Cable Assembly with Silicone using LMR-400 Coax, 3 FT with Times Microwave Components from L-com has same day shipment for domestic and International orders. Our portfolio includes coaxial cable assemblies, connectors, adapters and custom products as well as lightning and surge protectors, NEMA rated enclosures, and an RF product line which includes antennas, amplifiers, passive, and active components.

URL: <https://www.l-com.com/n-male-n-female-cable-assembly-lcca30194-wp-ft3-p.aspx>

The information contained within 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. L-com reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. L-com does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and L-com does not assume liability arising out of the use of any part or document.

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