

## Low Loss N Male to TNC Male Cable Assembly using LMR-400-UF Coax With Times Microwave Components with HeatShrink



### LCCA9963

#### Configuration

- Connector 1: N Male
- Connector 2: TNC Male
- Cable Type: LMR-400-UF
- Coax Flex Type: Flexible

#### Description

L-com's LCCA9963 is a low loss N male to TNC male cable assembly using LMR-400-UF coax with Times Microwave components with heatshrink and ships same-day. The LMR-400-UF 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 TNC cable assembly has a male to male gender configuration with flexible LMR-400-UF series coax and operates to 5.8 GHz. The double shield of this N cable is layered by tinned copper braid over aluminum tape providing shielding effectiveness greater than 90dB.

Custom versions of this N male to N male 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 LCCA9963 L-com Low Loss N Male to TNC Male Cable Assembly using LMR-400-UF Coax With Times Microwave Components with HeatShrink 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		5.8	GHz
VSWR			1.5:1	
Velocity of Propagation		85		%
RF Shielding	90			dB
Group Delay		1.2 [3.94]		ns/ft [ns/m]
Capacitance		23.9 [78.41]		pF/ft [pF/m]
Inductance		0.06 [0.2]		uH/ft [uH/m]
DC Resistance Inner Conductor		1.07 [3.51]		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
Input Power (Peak)			16	KWatts

#### Specifications by Frequency

Low Loss N Male to TNC Male Cable  
Assembly using LMR-400-UF Coax With Times  
Microwave Components with HeatShrink



**LCCA9963**

Part Number	Length	Description	F1	F2	F3	F4	F5	Units	Weight (lbs)
			Frequency		250	500	1000	2500	
LCCA9963	Custom Lengths Available	Insertion Loss (Typ.)	0.023	0.034	0.049	0.081	0.13	dB/ft	
			0.08	0.12	0.17	0.27	0.43	dB/m	
LCCA9963-FT1	12 inch	Insertion Loss (Typ.)	0.23	0.24	0.25	0.29	0.33	dB	0.279
LCCA9963-FT2	24 inch	Insertion Loss (Typ.)	0.25	0.27	0.3	0.37	0.46	dB	0.366
LCCA9963-FT3	36 inch	Insertion Loss (Typ.)	0.27	0.31	0.35	0.45	0.59	dB	0.453
LCCA9963-FT5	60 inch	Insertion Loss (Typ.)	0.32	0.37	0.45	0.61	0.85	dB	0.627
LCCA9963-FT25	300 inch	Insertion Loss (Typ.)	0.78	1.05	1.43	2.23	3.45	dB	2.367

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 dB  
 Base Weight: 0.279 pounds  
 Additional Weight per Inch: 0.00725 pounds

**Mechanical Specifications**

**Cable Assembly**

Width/Diameter 0.5 in [12.7 mm]  
 Weight 0.279 lbs [126.55 g]

**Cable**

Cable Type LMR-400-UF  
 Inner Conductor Type Stranded  
 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 TPE  
 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 0.38 lbs-ft [0.52 N-m]  
 Flat Plate Crush 20 lbs/in [0.36 Kg/mm]  
 Tensile Strength 160 lbs [72.57 Kg]

Low Loss N Male to TNC Male Cable  
Assembly using LMR-400-UF Coax With Times  
Microwave Components with HeatShrink



**LCCA9963**

**Connectors**

Description	Connector 1	Connector 2
Type	N Male	TNC Male
Configuration	Straight	Straight
Mating Cycles		500
Contact Material and Plating	Brass, Gold	Brass, Gold
Contact Plating Specification	50 µin. minimum	
Dielectric Type	PTFE	
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification	150 µin. minimum	
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Coupling Nut Plating Specification	150 µin. minimum	
Hex Size	13/16 inch	

**Environmental Specifications**

Operating Range Temperature -40 to +85 deg C

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

**Plotted and Other Data**

Notes:  
Values at 25°C, sea level.

Low Loss N Male to TNC Male Cable  
Assembly using LMR-400-UF Coax With Times  
Microwave Components with HeatShrink



**LCCA9963**

**Typical Performance Data**

**How to Order**

Part Number Configuration:

**LCCA9963**

**- xx**

**uu**

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

Example: LCCA9963-12 = 12 inches long cable  
LCCA9963-100cm = 100 cm long cable

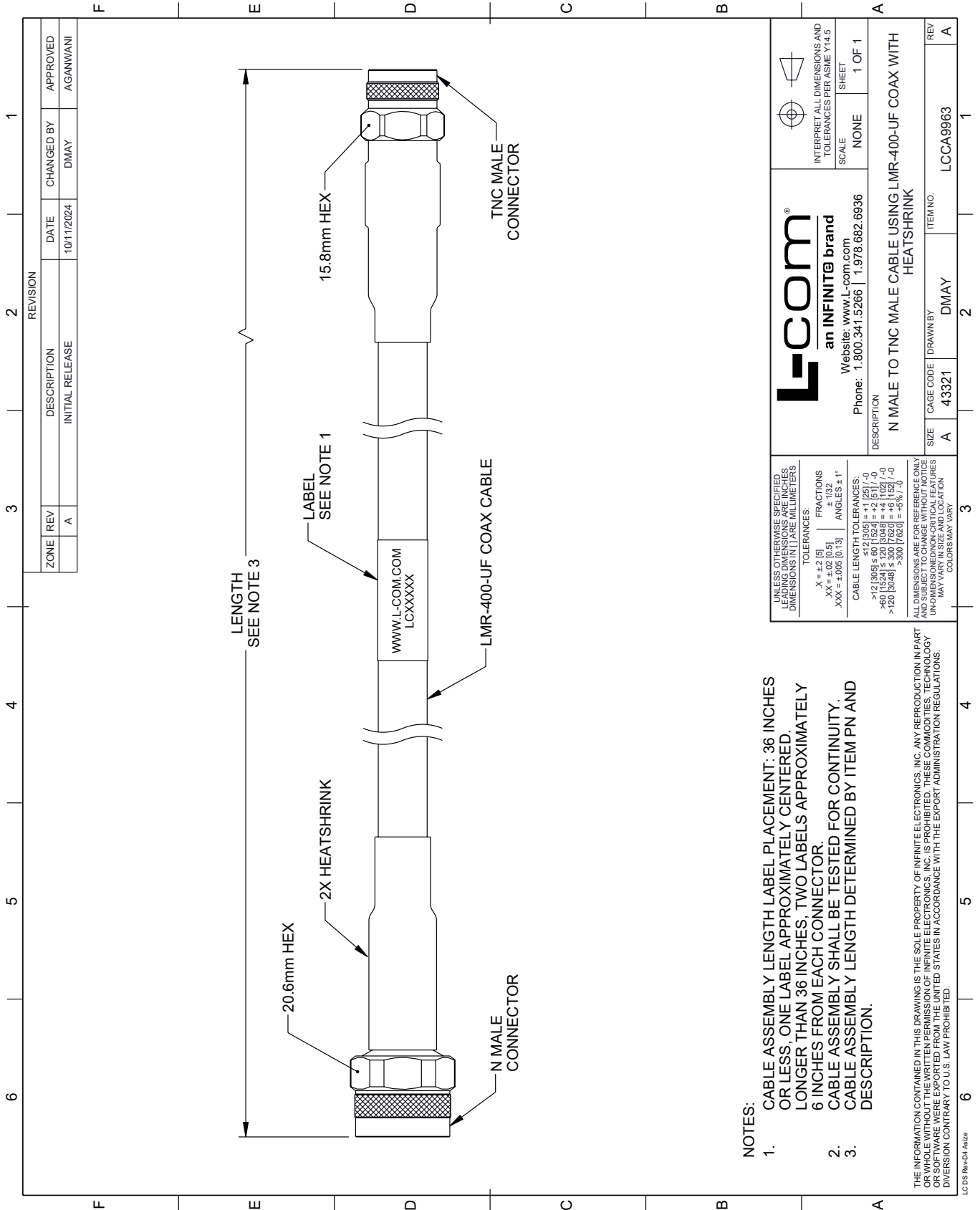
Low Loss N Male to TNC Male Cable Assembly using LMR-400-UF Coax With Times Microwave Components with HeatShrink from L-com has same day shipment for domestic and International orders. Our portfolio includes coaxial cable assemblies, connectors, adapters and custom products as well as lightning and surge 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-tnc-male-cable-assembly-invalid-lcca9963-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 impliment 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.

# LCCA9963 CAD Drawing

Low Loss N Male to TNC Male Cable Assembly using LMR-400-UF Coax  
With Times Microwave Components with HeatShrink



**NOTES:**

1. CABLE ASSEMBLY LENGTH LABEL PLACEMENT: 36 INCHES OR LESS, ONE LABEL APPROXIMATELY CENTERED, LONGER THAN 36 INCHES, TWO LABELS APPROXIMATELY 6 INCHES FROM EACH CONNECTOR.
2. CABLE ASSEMBLY SHALL BE TESTED FOR CONTINUITY.
3. CABLE ASSEMBLY LENGTH DETERMINED BY ITEM PN AND DESCRIPTION.

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF INFINITE ELECTRONICS, INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF INFINITE ELECTRONICS, INC. IS PROHIBITED. THESE COMMODITIES, TECHNOLOGY OR SERVICES ARE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.

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

TOLERANCES:  
 .X = ±.2 [5]  
 .XX = ±.02 [0.5]  
 .XXX = ±.005 [0.13]

FRACTIONS  
 ± 1/32

ANGLES ± 1°

CABLE LENGTH TOLERANCES:  
 <12 [305] ≤ 60 [1524] = ±.1 [25] / -0  
 >60 [1524] ≤ 120 [3048] = ±.4 [102] / -0  
 >120 [3048] ≤ 300 [7620] = ±.6 [15] / -0

ALL DIMENSIONS ARE FOR REFERENCE ONLY. UNDIMENSIONED NON-CRITICAL FEATURES MAY VARY IN SIZE AND LOCATION. COLORS MAY VARY.

<p><b>L-com</b> an INFINITE brand</p> <p>Website: <a href="http://www.L-com.com">www.L-com.com</a> Phone: 1.800.341.5266   1.978.682.6936</p>		<p>INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5</p> <p>SCALE: NONE</p> <p>SHEET: 1 OF 1</p>
<p>DESCRIPTION: N MALE TO TNC MALE CABLE USING LMR-400-UF COAX WITH HEATSHRINK</p>		
SIZE: A	CAGE CODE: 43321	ITEM NO.: LCCA9963
DRAWN BY: DMAY	REV: A	