

Low Loss TNC Male to TNC Male Cable Assembly using LMR-240 Coax, 3 FT with Times Microwave Components



## LCCA30177-FT3

### Configuration

- Connector 1: TNC Male
- Connector 2: TNC Male
- Cable Type: LMR-240

### Features

- Using Times Microwave Components
- Max Frequency 5.8 GHz
- Shielding Effectivity > 90 dB
- 84% Phase Velocity
- PE Jacket
- Low Insertion Loss
- Bend Radius of 2.5 Inches

### Applications

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



### Description

L-com's LCCA30177-FT3 is a low loss TNC male to TNC male cable assembly using LMR-240 coax, 3 FT with Times Microwave components and ships same-day. The LMR-240 coax of this TNC cable uses the PE (F) dielectric with a VoP of 84%, 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 TNC to TNC cable assembly has a male to male gender configuration with flexible LMR-240 series coax and operates to 5.8 GHz. The double shield of this TNC cable is layered by tinned copper braid over aluminum tape providing shielding effectiveness greater than 90dB. \*LMR™ is a trademark of Times Microwave Systems.

Custom versions of this TNC male to TNC 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 LCCA30177-FT3 L-com Low Loss TNC Male to TNC Male Cable Assembly using LMR-240 Coax, 3 FT with Times Microwave Components data sheet PDF includes details of the RF product specifications, CAD drawing(s) and dimensions below.

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### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
VSWR			1.4:1	
Velocity of Propagation		84		%
RF Shielding	90			dB
Group Delay		1.21 [3.97]		ns/ft [ns/m]
Capacitance		24.2 [79.4]		pF/ft [pF/m]
Inductance		0.06 [0.2]		uH/ft [uH/m]
DC Resistance Inner Conductor		3.2 [10.5]		Ohms/1000ft [Ohms/Km]
DC Resistance Outer Conductor		3.89 [12.76]		Ohms/1000ft [Ohms/Km]
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 (Typ.)	0.31	0.36	0.43	0.58	0.81	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. The Insertion Loss includes an estimated insertion loss of 0.1 dB per connector

### Mechanical Specifications

#### Cable Assembly

Length	36 in [914.4 mm]
Diameter	0.594 in [15.09 mm]
Weight	0.13 lbs [58.97 g]

#### Cable

Cable Type	LMR-240
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

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Jacket Material	PE, Black
Jacket Diameter	0.24 in [6.1 mm]
One Time Minimum Bend Radius	0.75 in [19.05 mm]
Repeated Minimum Bend Radius	2.5 in [63.5 mm]
Bending Moment	0.25 lbs-ft [0.34 N-m]
Flat Plate Crush	20 lbs/in [0.36 Kg/mm]
Tensile Strength	80 lbs [36.29 Kg]

### Connectors

Description	Connector 1	Connector 2
Type	TNC Male	TNC Male
Impedance	50 Ohms	50 Ohms
Mating Cycles		500
Contact Material and Plating	Brass, Gold	Phosphor Bronze, Gold
Contact Plating Specification		50µ in. minimum
Dielectric Type	Teflon	Teflon
Body Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Body Plating Specification		80µ in. minimum
Coupling Nut Material and Plating	Brass, Tri-Metal	Brass, Tri-Metal
Coupling Nut Plating Specification		80µ in. minimum
Torque		20 in-lbs 2.26 Nm

### Environmental Specifications

#### Temperature

Operating Range	-40 to +85 deg C
Storage Range	-70 to +85 deg C

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

### Plotted and Other Data

Notes:

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## LCCA30177-FT3

### How to Order

Part Number Configuration:

**LCCA30177 - xx uu**



Example: LCCA30177-12 = 12 inches long cable  
LCCA30177-100cm = 100 cm long cable

Low Loss TNC Male to TNC Male Cable Assembly using LMR-240 Coax, 3 FT with Times Microwave Components from L-com has same day shipment for domestic and International orders. L-com is a leading manufacturer of wired and wireless connectivity products and committed to in-stock availability and same day shipping. 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.

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.ontained 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.

Low Loss TNC Male to TNC Male Cable Assembly using LMR-240 Coax,  
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L-com CAD Drawing

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02/03/2020	SELLIS

  

LENGTH MEASURED FROM CONTACT TO CONTACT

TNC MALE

TNC MALE

WWW.L-COM.COM  
L-COM P/N  
(SEE NOTE 1)

2X HEAT SHRINK

LMR-240

LABEL

  

<p>UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [ ] ARE MILLIMETERS</p> <p><b>TOLERANCES:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">.X ± .2 [ .008 ]</td> <td style="width: 50%;">FRACTIONS ± 1/32</td> </tr> <tr> <td>.XX ± .02 [ .51 ]</td> <td>ANGLES ± 1°</td> </tr> <tr> <td>.XXX ± .005 [ .13 ]</td> <td></td> </tr> </table> <p><b>CABLE LENGTH (L) TOLERANCES:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">L ≤ 12 [305] = +1 [25] / -0</td> <td style="width: 50%;">12 [305] &lt; L ≤ 60 [1524] = +2 [61] / -0</td> </tr> <tr> <td>60 [1524] &lt; L ≤ 120 [3048] = +4 [102] / -0</td> <td>120 [3048] &lt; L ≤ 300 [7620] = +6 [152] / -0</td> </tr> <tr> <td>300 [7620] &lt; L = +5%L / -0</td> <td></td> </tr> </table> <p>ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.</p>	.X ± .2 [ .008 ]	FRACTIONS ± 1/32	.XX ± .02 [ .51 ]	ANGLES ± 1°	.XXX ± .005 [ .13 ]		L ≤ 12 [305] = +1 [25] / -0	12 [305] < L ≤ 60 [1524] = +2 [61] / -0	60 [1524] < L ≤ 120 [3048] = +4 [102] / -0	120 [3048] < L ≤ 300 [7620] = +6 [152] / -0	300 [7620] < L = +5%L / -0		<p style="text-align: center;"><b>L-com</b><sup>TM</sup> an INFINITE brand</p> <p>50 High Street, West Mill, 3rd Floor, Suite #30 North Andover, MA 01845 USA. Phone: 1.800.341.5266   1.978.682.6936 Fax: 1.978.689.9484 Website: www.L-com.com E-mail: CustomerService@L-com.com</p> <p>THIRD-ANGLE PROJECTION</p> <p>THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF L-COM GLOBAL CONNECTIVITY. ALL RIGHTS RESERVED.</p> <p>SHEET 1 OF 1</p> <p>SCALE N/A</p>
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SIZE A	CAGE CODE DRAWN BY	PART NUMBER	REV										
	A 43321	MVEERAPPAN	LCCA30177										
<p>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.</p> <p>THESE COMMODITIES, TECHNOLOGY OR SOFTWARE WERE EXPORTED FROM THE UNITED STATES IN ACCORDANCE WITH THE EXPORT ADMINISTRATION REGULATIONS. DIVERSION CONTRARY TO U.S. LAW PROHIBITED.</p>													