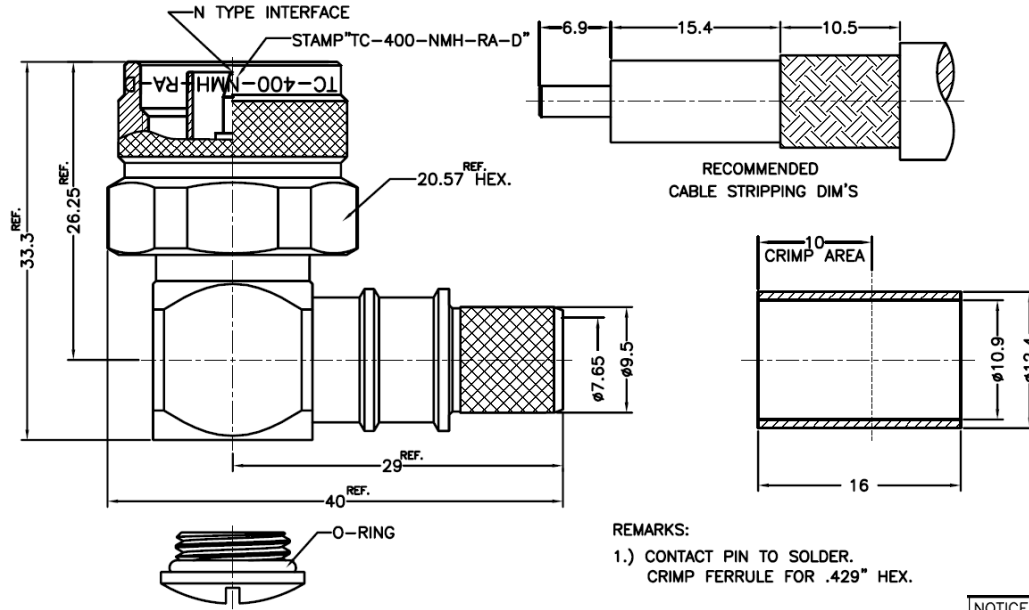


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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	D. J. H.	5/30/07	J. D. B.	5/30/07
B	CHANGED PER CDC #27394	D. J. H.	10/2/07	J. D. B.	10/2/07
C	CHANGED PER CDC #27653	D. J. H.	12/6/07	J. D. B.	12/10/07
D	CHANGED PER CDC #28404	D. J. H.	5/27/08	J. D. B.	5/27/08

THIS CONNECTOR IS INDIVIDUALLY PACKAGED. FOR BULK PACKAGING, SEE 3190-2293BLK.



REMARKS:
1.) CONTACT PIN TO SOLDER.
CRIMP FERRULE FOR .429" HEX.

NOTICE: ALL PARTS MUST MEET TO RoHS REQUIREMENTS

MATERIALS AND PLATING UNIT: MICRO-INCHES		
BODY,SHELL	BRASS C3604	ALBALOY(COPPER-TIN-ZINC) PL.80 MIN.
CONTACT PIN	BRASS C3604	GOLD 50/ COPPER
INSULATOR	TEFLON MIL-P-19468	RED
FERRULE	COPPER	ALBALOY(COPPER-TIN-ZINC) PL.80 MIN.
GASKET	SILICONE	RED

ELECTRICAL CHARACTERISTICS	
Impedance	50 Ω
Voltage rating	1000V(rms)
Frequency range	0~11GHz
Dielectric withstanding voltage	1500V
Contact resistance	Center contact: ≤1mΩ Outer contact≤0.25m Ω
Insulation resistance	≥5000MΩ
Insertion loss	According as the cable
RF- leakage	-90 dB up to 3 GHz
VSWR	≤1.25 (DC-2.5GHz)
3rd Intermodulation	-

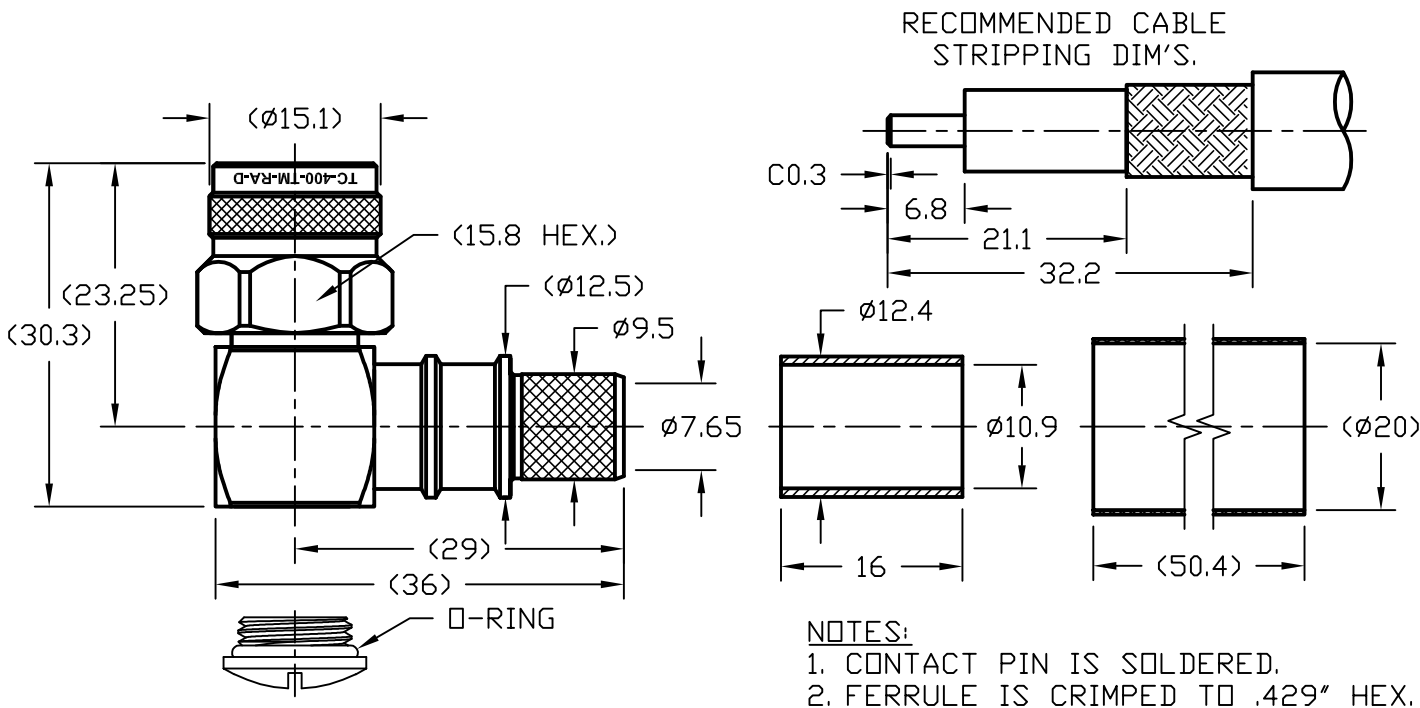
(MECHANICAL CHARACTERISTICS)	
Force to engage and disengage	6 lbs MAX.
Center contact retention force	6 lbs MIN.
Coupling torque	30 in-lbs MIN.
Coupling nut retention force	100 lbs MIN.
Durability	≥ 500 cycles

ENVIRONMENTAL CHARACTERISTICS	
Temperature range	-55° C- +155° C
Thermal shock	US MIL- STD 202, Meth. 107, Cond. B
Vibration	US MIL- STD 202, Meth. 204, Cond. B
Shock	US MIL- STD 202, Meth. 213, Cond. I
Climatic class	IEC 60068 65/165/21

MATERIAL: UNLESS OTHERWISE SPECIFIED	DFTM. D, J, H.	TIMES MICROWAVE SYSTEMS						
	DATE 5/30/07							
USED ON: 0	ALL DIMENSIONS ARE IN INCHES MACHINED SURFACES FINISH N/A RMS MAX. REMOVE ALL BURRS .005 MAX. BREAK MACHINE CORNERS .005 MAX. FILLET R. TOLERANCES ON DECIMALS .XX ± 0.2 .XXX ± 0.1 ANGLES ± 3° FRACTIONS ± N/A	TC-400-NMH-RA-D 90° N MALE (INDIVIDUALLY PACKAGED) FOR LMR400 CABLE						
	CHKD. J, D, B.							
	DATE 5/30/07							
SCALE: N/A	DWG. SIZE A	DO NOT SCALE DRAWING	CODE IDENT 68999	DATE 5/30/07	DATE 5/30/07	1 of 1	SD3190-2293	REV D

NOTICE OF PROPRIETARY RIGHTS THIS DOCUMENT CONTAINS CONFIDENTIAL TECHNICAL DATA, INCLUDING TRADE SECRETS, PROPRIETARY TO TIMES MICROWAVE SYSTEMS. DISCLOSURE OF THIS DATA IS EXPRESSLY CONDITIONED UPON YOUR ASSENT THAT ITS USE IS LIMITED TO USE WITHIN YOUR COMPANY ONLY. ANY OTHER USE IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF TIMES MICROWAVE SYSTEMS.

SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	K.A.M.	6/3/11	J.D.B.	6/3/11
B	CHANGED PER CDC #34607/36250	D.J.H.	9/24/12	J.D.B.	9/25/12



ALL PARTS SATISFIED ROHS REQUIREMENTS

MATERIALS AND PLATING		UNIT: MICRO-INCHES
BODY/SHELL	BRASS C3604	ALBALOY 80 MIN/COPPER
CONTACT PIN	BRASS C3604	GOLD 50 MIN/NICKEL/COPPER
INSULATOR	TEFLON MIL-P-19468	N/A
GASKET	SILICONE	RED
FERRULE	BRASS	ALBALOY 80 MIN/COPPER
SHRINK TUBING	PO	BLACK

ELECTRICAL CHARACTERISTICS	
Impedance	50 Ω
Frequency range	0~11GHz
Voltage rating	500V(rms)
Dielectric withstanding voltage	1000V
Contact resistance	Center contact ≤ 3 mΩ
	Outer contact ≤ 2 mΩ
Insulation resistance	≥ 5000MΩ
Insertion loss	According to the cable
RF-leakage	N/A
VSWR	≤ 1.35 MAX@0-6GHz

MECHANICAL CHARACTERISTICS	
Force to engage and disengage	N/A
Center contact retention force	6 lbs Min
Coupling torque	15 in-lbs Min
Coupling nut retention force	60 lbs Min
Durability	≥ 500 cycles

ENVIRONMENTAL CHARACTERISTICS	
Temperature range	-55°C - +125°C
Thermal Shock	MIL-STD-202, Method 107, Cond B
Vibration	MIL-STD-202, Method 204, Cond B
Shock	MIL-STD-202, Method 213, Cond I
Climatic Class	IEC 60068 55/155/56

MATERIAL: UNLESS OTHERWISE SPECIFIED	DFTM: K. A. M.	TIMES MICROWAVE SYSTEMS
	DATE: 6/3/11	
USED ON: 0-4	ALL DIMENSIONS ARE IN mm MACHINED SURFACES FINISH 1.6 RMS MAX. REMOVE ALL BURRS 0.15X45° MAX. BREAK MACHINE CORNERS 0.15X45°D MAX. FILLET R. TOLERANCES ON DECIMALS .X ± 0.3 .XX ± 0.2 ANGLES ± 1° FRACTIONS ± N/A	TC-400-TM-RA-D 90° TNC MALE FOR LMR400 CABLE
	CHKD: J. D. B.	
SCALE: N/A	DATE: 6/3/11	1 of 1 SD3190-2671 B
DWG. SIZE: A	APPD: J. D. B.	
DO NOT SCALE DRAWING	DATE: 6/3/11	
CODE IDENT: 68999		



LMR-400-FR Fire Rated version of the 400 series Low Loss Coax

Times Microwave Systems Coax Cable Specification

Configuration

- Low Loss, Outdoor Flexible Cable
- 2 Shield(s)

Features

- CMR Riser Rated Coax
- Non-Halogen, Low Smoke FRPE Jacket
- Max Operating Frequency of 5.8 GHz
- Phase Velocity 84% VoP
- Max Operating Temperature +85°C
- Min Install Bend Radius of 1 inches

Applications

- In-Building Riser Runs
- Short Antenna Installs
- RF Test Systems
- General Purpose RF Interconnect
- Laboratory Applications

Description

LMR-400-FR Fire Rated version of the 400 series Low Loss Coax from Times Microwave is part of the large product offering by Pasternack of radio frequency coaxial cable types specifically stocked to be ready for same-day shipment. Pasternack LMR-400-FR coax cable is manufactured in a flexible design and has a 50 Ohm impedance. This low loss and CMR riser rated 50 Ohm coax cable LMR-400-FR is constructed with a 0.405 inch diameter and Black FRPE jacket.

LMR-400-FR flexible 50 Ohm coax cable with FRPE jacket is rated for a 5.8 GHz maximum operating frequency. This 50 Ohm 0.405 inch diameter and low loss fire rated coax cable is built with an aluminum double shield count and RF shielding of 90 dB. Times Microwave LMR-400-FR FRPE coax is constructed with Foam PE dielectric and a maximum operating temperature of 85 degrees C. Pasternack's offering of LMR-400-FR coax cable provides specs for this wire on its RF coax cable LMR-400-FR datasheet.

LMR-400-FR cable is part of more than one million RF, microwave parts in stock at Pasternack. This Times Microwave low loss flexible LMR-400-FR coax cable is ready to buy and can be shipped worldwide. Pasternack also maintains a wide selection of other radio frequency coaxial cable types that ship same-day from our warehouse as with the rest of our other RF/microwave components.

* LMR™ is a trademark of Times Microwave Systems.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		5.8	GHz
Impedance		50		Ohms
Velocity of Propagation		84		%
Time Delay		1.2 3.94		ns/ft ns/m
Shielding Effectiveness	90			dB
Dielectric Withstanding Voltage (DC)			2,500	Vdc

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)



LMR-400-FR Fire Rated version of the 400 series Low Loss Coax

RF Cables Technical Data Sheet



LMR-400-FR

Jacket Spark	8,000	Vrms
Inner Conductor DC Resistance	1.39	Ohms/1000ft
Outer Conductor DC Resistance	1.65	Ohms/1000ft
Nominal Capacitance	23.9 [78.41]	pF/ft [pF/m]
Nominal Inductance	0.06 [0.2]	uH/ft [uH/m]
Input Power (Peak)	16	kWatts

Performance by Frequency Band

Description	F1	F2	F3	F4	F5	Units
Frequency	50	150	220	450	900	MHz
Attenuation, Typ	0.9	1.5	1.9	2.7	3.9	dB/100ft
	2.95	4.92	6.23	8.86	12.8	dB/100m
Input Power (CW), Max	2,570	1,470	1,200	830	580	Watts

Description	F6	F7	F8	F9	F10	Units
Frequency	1.5	1.8	2	2.5	5.8	GHz
Attenuation, Typ	5.1	5.7	6	6.8	10.8	dB/100ft
	16.73	18.7	19.69	22.31	35.43	dB/100m
Input Power (CW), Max	440	400	370	330	210	Watts

Mechanical Specifications

Diameter	0.405 in 10.29 mm
Weight	0.068 lbs/ft [0.1 Kg/m]
Min. Bend Radius (Installation)	1 in [25.4 mm]
Min. Bend Radius (Repeated)	4 in [101.6 mm]
Bending Moment	0.5 lbs-ft [0.68 N-m]
Tensile Strength	160 lbs [72.57 kg]
Flat Plate Crush	40 lbs/in [0.71 Kg/mm]

Construction Specifications

Description	Material and Plating	Diameter
Inner Conductor	Copper, 1 Strand	0.108 in [2.74 mm]

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)



LMR-400-FR Fire Rated version of the 400 series Low Loss Coax

RF Cables
Technical Data Sheet



LMR-400-FR

Conductor Type	Solid	
Dielectric	Foam PE	0.285 in [7.24 mm]
First Shield	Aluminum Tape	[]
Second Shield	Tinned Copper	[]
Jacket	FRPE, Black	0.405 in [10.29 mm]

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Installation 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:

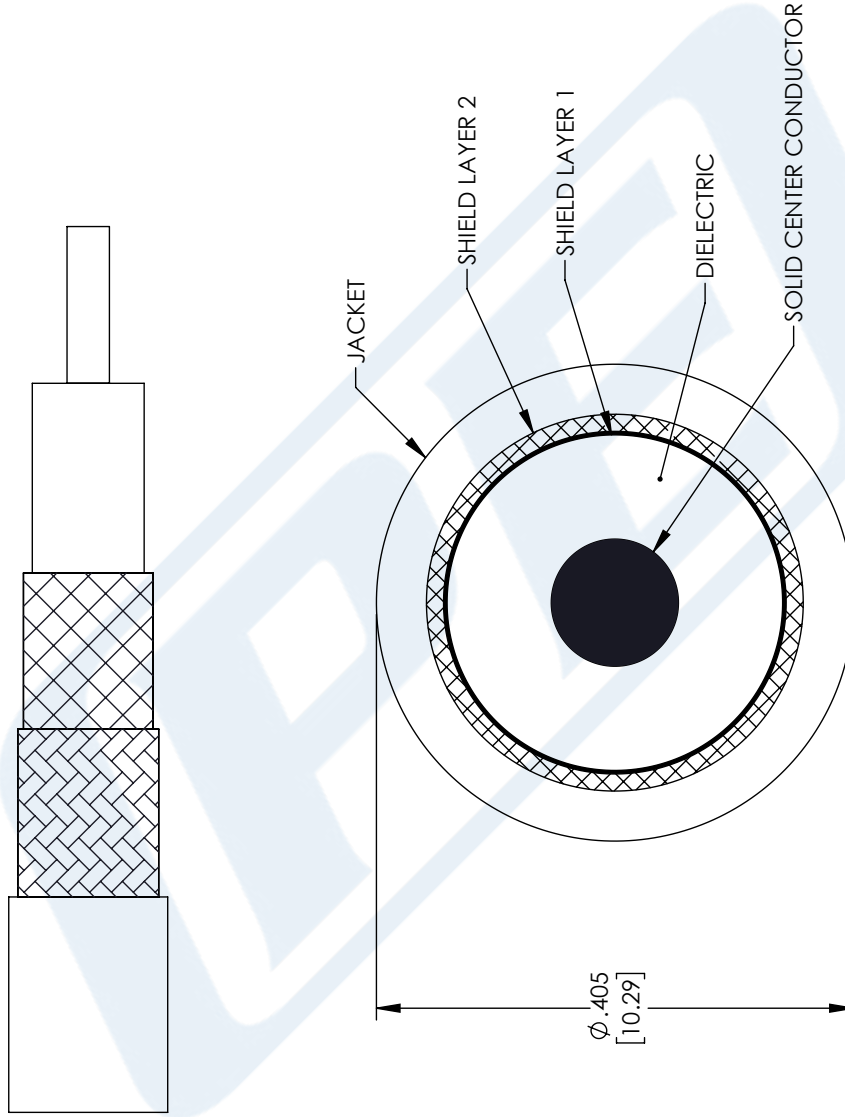
LMR-400-FR Fire Rated version of the 400 series Low Loss Coax from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)

URL: <https://www.pasternack.com/low-loss-flexible-lmr-400-fr-frpe-jacket-aluminum-tape-over-tinned-copper-outer-conductor-double-shielded-lmr-400-fr-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. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Pasternack does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Pasternack does not assume any liability arising out of the use of any part or documentation.

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL RELEASE	06-04-2021
		APPROVED
		SELLIS



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

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

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 = +5% / -0

ALL DIMENSIONS SHOWN
 ARE FOR REFERENCE ONLY.

PE PASTERNAK
 an INFINITI brand

Pasternack Enterprises, Inc.
 P. O. Box 16759, Irvine, CA 92623.
 Phone: 1.949.261.1920 | 1.866.727.8376
 Fax: 1.949.261.7451
 Website: www.pasternack.com
 E-mail: sales@pasternack.com

SIZE [CAGE CODE] DRAWN BY ITEM NO.
 A 53919 MVEERAPPAN LMR-400-FR

THIRD-ANGLE PROJECTION

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SHEET 1 OF 1

SCALE N/A

REV A

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