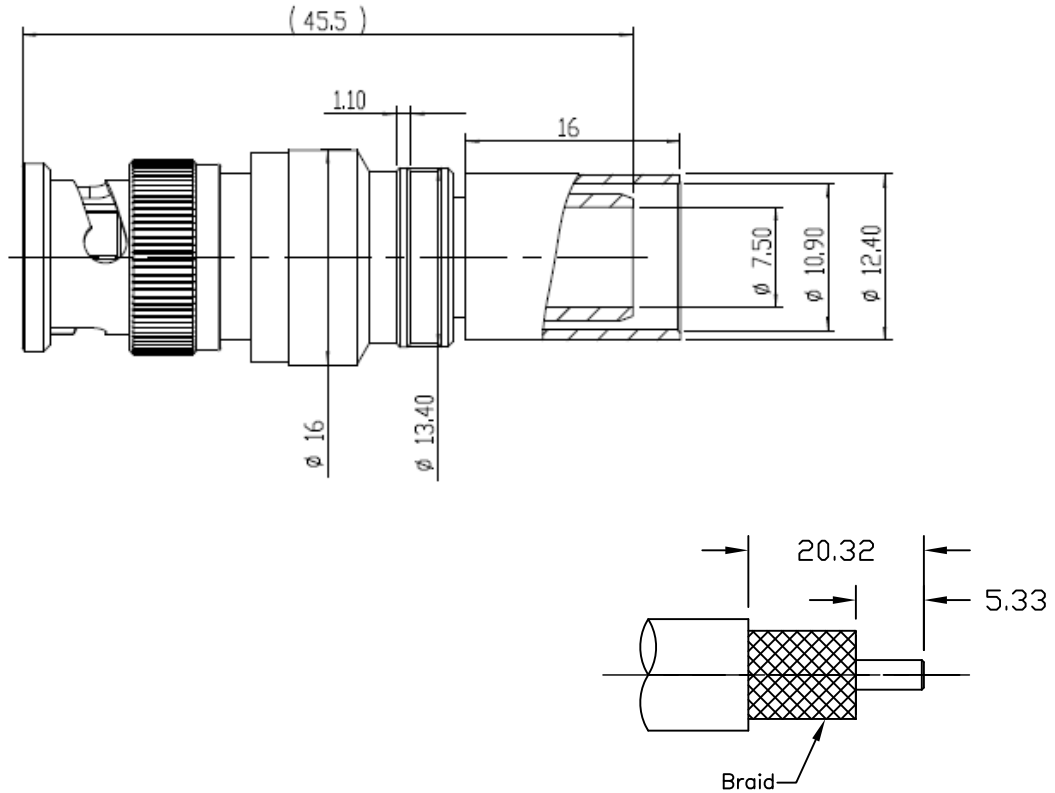


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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	N.N.N	8/6/13	J.D.B.	8/9/13



Reference standard IEC60169-8

I. Electric Performance  
 Nominal Impedance( $\Omega$ ): 50  
 Frequency Range: DC-4GHz  
 VSWR:  $\leq 1.35$   
 Insert Loss:  $\leq 0.1$   
 Insulation resistance ( $M\Omega$ ): 25000  
 Withstand voltage (V): 1500  
 Conductor resistance ( $m\Omega$ ):  
 outer conductor  $< 0.4$   
 inner conductor  $< 1.5$

II. Mechanical Performance  
 Tensile force(cable-connect): 400N  
 Torsion(cable-connect): 2N.m

III. Material and plating:

Component	Material	Plating
inner conductor	Spring copper	Au 1.27um
outer conductor	Brass	Copper-tin-zinc 2um
insulator	PTFE	
o-ring	Silicone rubber	

IV. Environment

Temp.range: -55°C~+155°C  
 Weather standard: IEC 60068 55 / 155/ 56  
 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  
 ROHS compliant

V. Assemble: inner conductor installed and outer conductor crimped

MATL:	UNLESS OTHERWISE SPECIFIED		DFTM: N, N, N	TIMES MICROWAVE SYSTEMS			
	ALL DIMENSIONS ARE IN mm MACHINED SURFACES FINISH N/A RMS MAX. REMOVE ALL BURRS N/A MAX. BREAK MACHINE CORNERS N/A MAX. FILLET R. TOLERANCES ON DECIMALS . XX $\pm$ N/A . XXX $\pm$ N/A ANGLES $\pm$ N/A FRACTIONS $\pm$ N/A		DATE: 8/6/13				
USED ON: ~			CHKD: J, D, B.	<b>EZ-400-BM-X</b> BNCM for LMR-400			
			DATE: 8/9/13				
SCALE: N/A	DWG. SIZE: A	DO NOT SCALE DRAWING	CODE IDENT: 68999	DATE: 8/9/13	SH: 1 of 1	SD3190-2852	REV: A



## BNC Male Connector Crimp/Solder Attachment for LMR-400, PE-C400

### RF Connectors Technical Data Sheet



TC-400-BM-X

### Times Microwave Systems Connector Specification

#### Configuration

- BNC Male Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: LMR-400, PE-C400

#### Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.3:1
- Gold Plated Brass Contact
- 50 microns contact plating

#### Applications

- General Purpose Test
- Custom Cable Assemblies

#### Description

Pasternack's TC-400-BM-X BNC male connector with crimp/solder attachment for LMR-400 and PE-C400 is part of our full line of RF components available for same-day shipping. Our BNC male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.3:1.

Our BNC male connector TC-400-BM-X datasheet specifications and drawing with dimensions are shown below in this PDF. Pasternack's broad catalog of RF, microwave and millimeter wave connectors allows designers to configure and customize their signal connections however they like. Whether the need is to provide an I/O for a board design, or simply create a custom cable assembly configuration, Pasternack has the right connector for the job. Pasternack can also expertly build your custom cable assemblies for you and ship same-day.

#### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Frequency Range	DC		6	GHz
VSWR			1.3:1	
Insertion Loss			0.25	dB
Dielectric Withstanding Voltage (AC)			1,500	Vrms
Insulation Resistance	5,000			MOhms

#### Mechanical Specifications

##### Size

Length	1.91 in [48.51 mm]
Width/Dia.	0.55 in [13.97 mm]
Weight	0.083 lbs [37.65 g]
Mating Cycles	500 Cycles

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [BNC Male Connector Crimp/Solder Attachment for LMR-400, PE-C400 TC-400-BM-X](#)



# BNC Male Connector Crimp/Solder Attachment for LMR-400, PE-C400

## RF Connectors Technical Data Sheet



TC-400-BM-X

### Material Specifications

Description	Material	Plating
Contact	Brass	Gold 50 microns
Insulation	PTFE	
Body	Brass	Tri-Metal 80 microns
Coupling Nut	Brass	Tri-Metal 80 microns
Gasket	Silicone	
Crimp Sleeve	Brass	Tri-Metal 80 microns

### Environmental Specifications

#### Temperature

Operating Range

-55 to +125 deg C

Shock

MIL-STD 202G, Meth.213, Cond G

Vibration

MIL-STD 202G, Meth.204, Cond B

Thermal Shock

MIL-STD 202G, Meth.107, Cond B

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

### Plotted and Other Data

Notes:

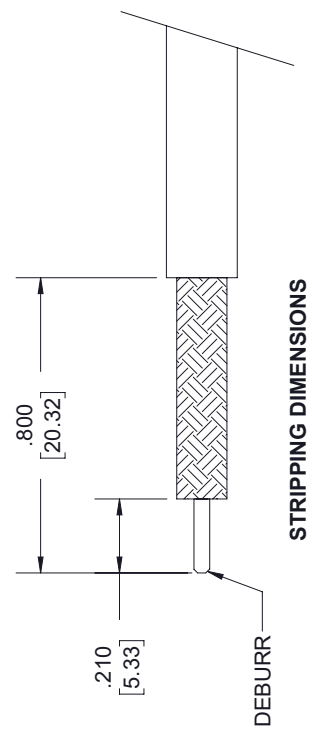
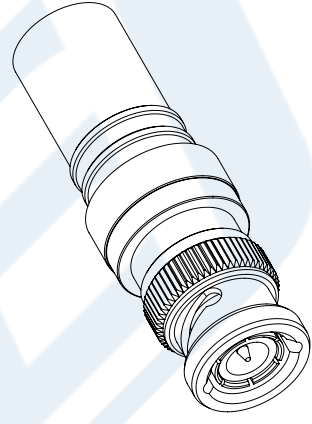
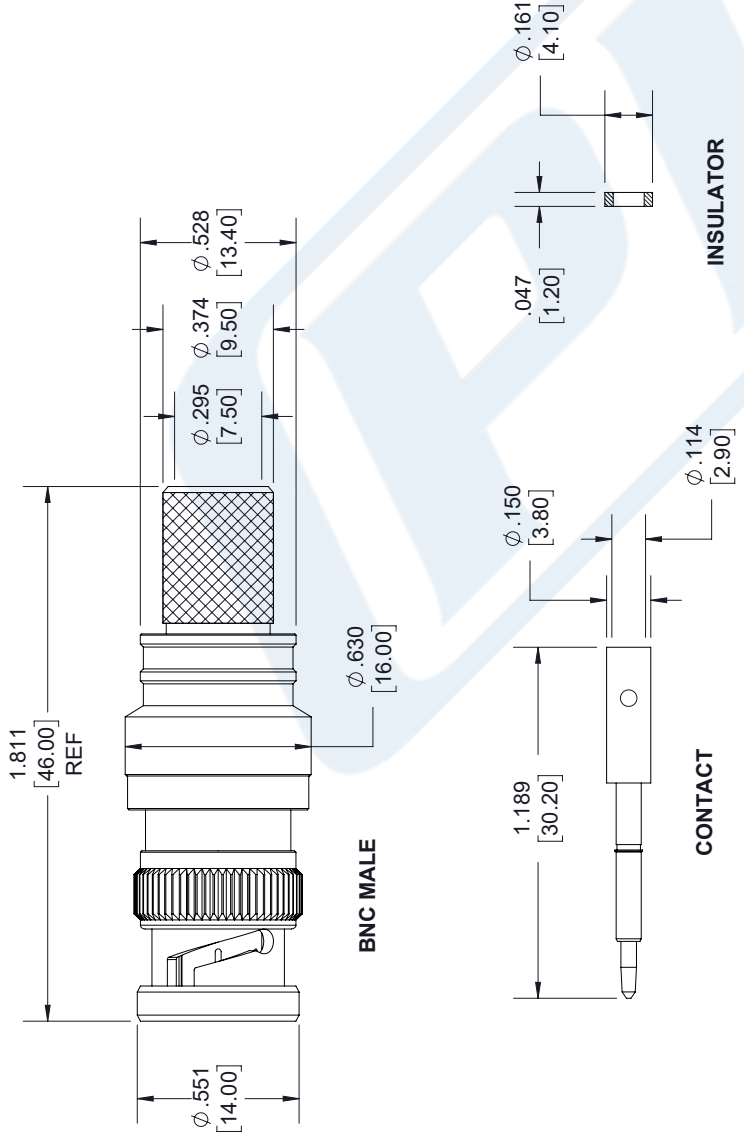
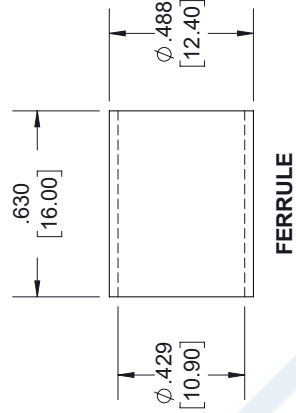
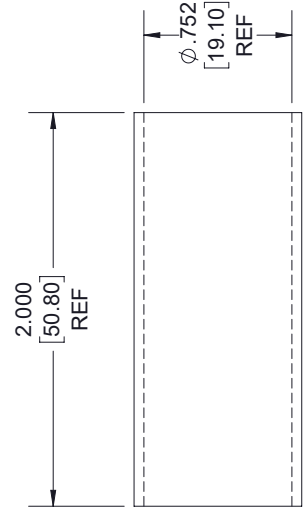
BNC Male Connector Crimp/Solder Attachment for LMR-400, PE-C400 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.


Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [BNC Male Connector Crimp/Solder Attachment for LMR-400, PE-C400 TC-400-BM-X](#)

URL: <https://www.pasternack.com/bnc-male-lmr-400-pe-c400-connector-tc-400-bm-x-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	APPROVED
AA	INITIAL RELEASE	12/09/19	SELLIS



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SHEET 1 OF 1	SCALE N/A


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 Fax: 1.949.261.7451  
 Website: www.pasternack.com  
 E-mail: sales@pasternack.com

SIZE	CAGE CODE	DRAWN BY	PART NUMBER
A	53919	K. DANG	TC-400-BM-X
REV			A

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%L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

- NOTES:**
- CABLE ATTACHMENT:
    - OUTER: CRIMP.
    - INNER: SOLDER.
  - CRIMP SIZE REQUIRED:
    - FERRULE: .429 [10.90] HEX. CRIMP TOOL.
    - CONTACT: SOLDER.

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



## LMR-400-FR



### Times Microwave Systems Connector 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 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 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		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
Jacket Spark			8,000	Vrms
Inner Conductor DC Resistance			1.39	Ohms/1000ft

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



## LMR-400-FR

### Electrical Specifications

Description	Minimum	Typical	Maximum	Units
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	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	0.081 lbs/ft [0.12 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]
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]

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



## LMR-400-FR

### 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.

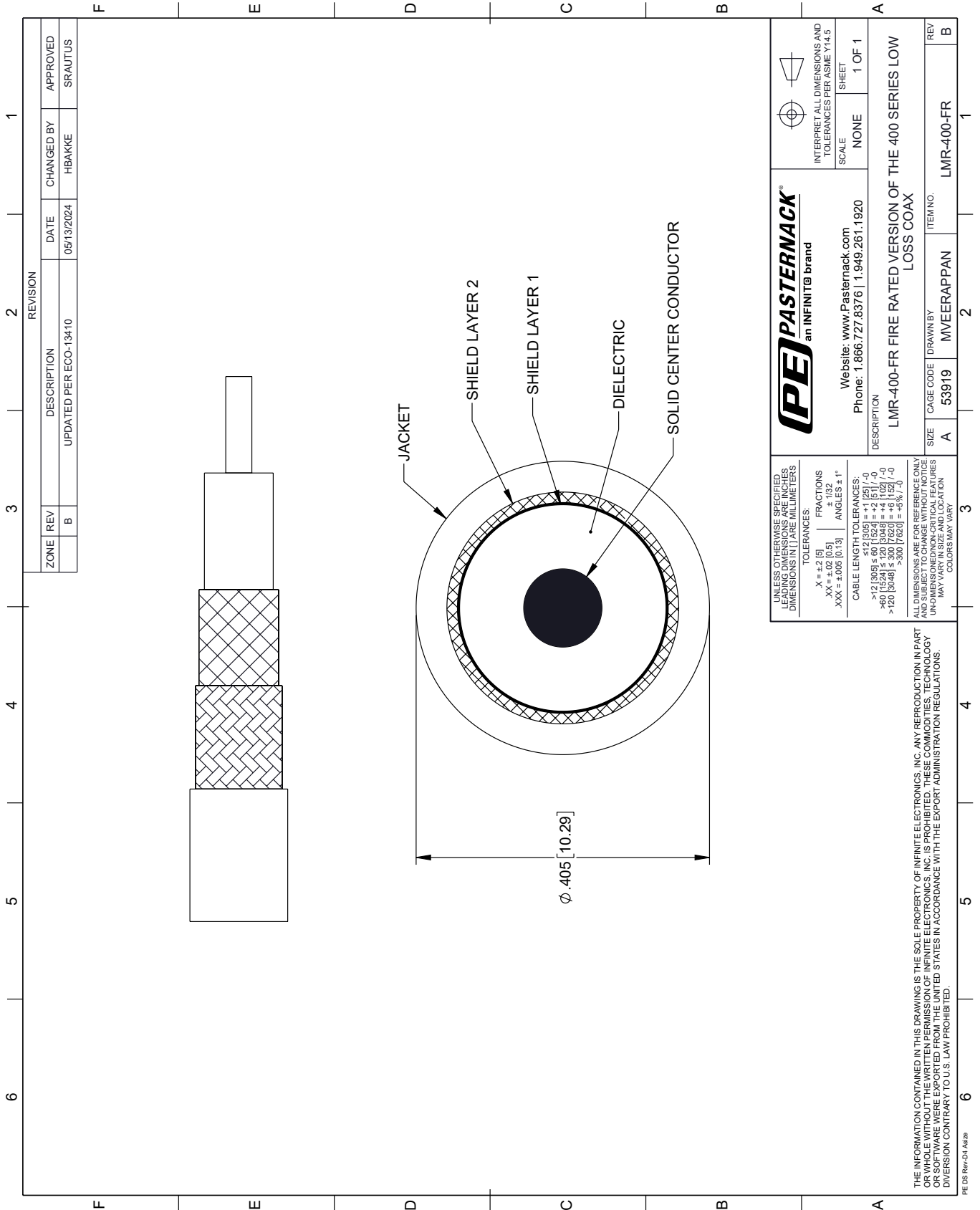
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [LMR-400-FR Fire Rated version of the 400 series Low Loss Coax LMR-400-FR](#)

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

# LMR-400-FR CAD Drawing

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



REVISION		DATE	CHANGED BY	APPROVED
ZONE	REV	DESCRIPTION		
	B	UPDATED PER ECO-13410	HBAKKE	SRAUTUS

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INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5  
SCALE: NONE  
SHEET: 1 OF 1

DESCRIPTION: LMR-400-FR FIRE RATED VERSION OF THE 400 SERIES LOW LOSS COAX

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

UNLESS OTHERWISE SPECIFIED, LEADING DIMENSIONS ARE IN INCHES AND TRAILING DIMENSIONS IN 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 [2.5] / -0  
 >60 [1524] ≤ 120 [3048] = ±.4 [10.2] / -0  
 >120 [3048] ≤ 300 [7620] = ±.6 [15.2] / -0  
 >300 [7620] = ±.6 [15.2] / -0

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

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PE DS Rev-04 Add2