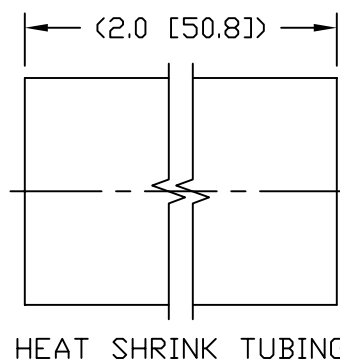
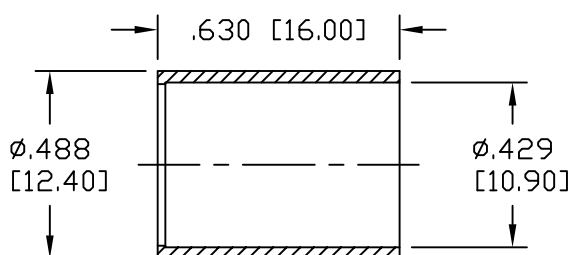
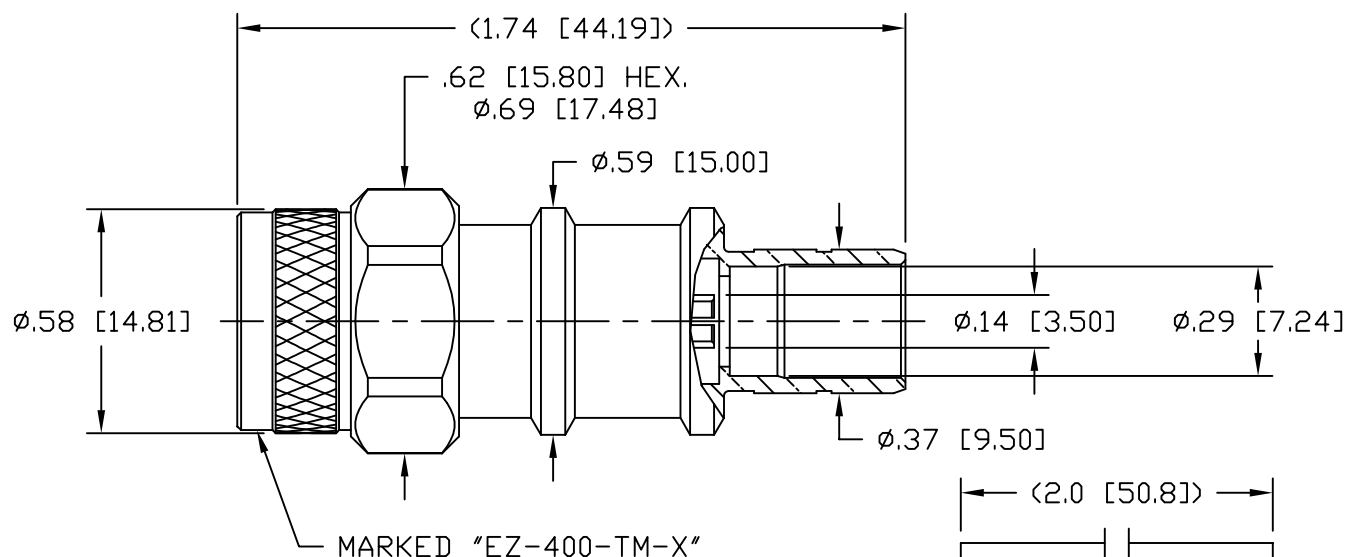
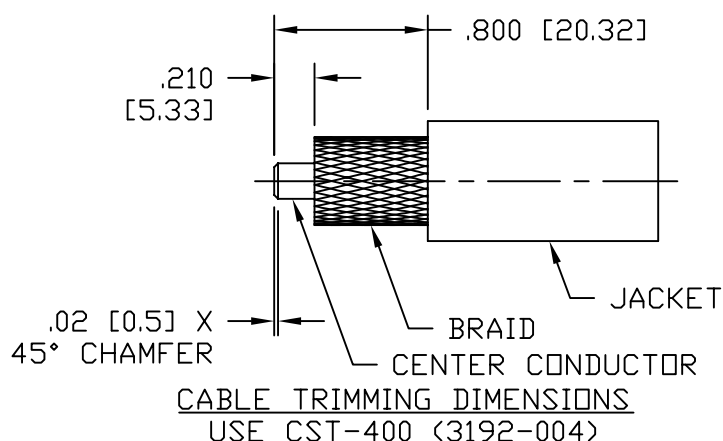


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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	K.A.M.	2/25/10	J.D.B.	3/11/10
B	CHANGED PER CDC #34322	D.J.H.	10/12/11	J.D.B.	10/27/11
C	CHANGED PER CDC #36607	D.J.H.	11/16/12	J.D.B.	11/19/12



HEAT SHRINK TUBING



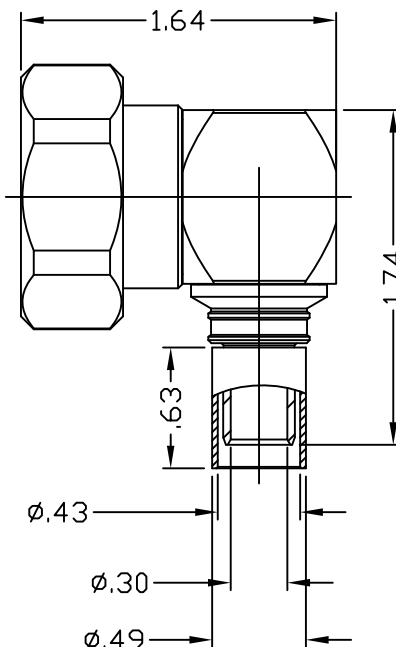
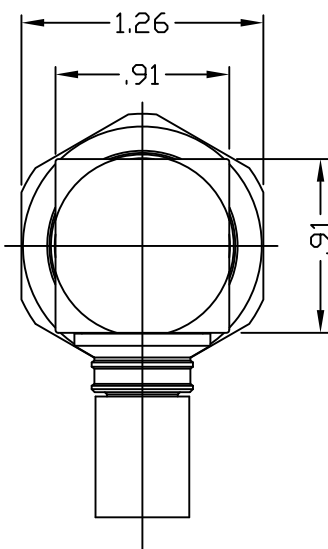
NOTES:

- MATERIALS AND FINISHES:
BODY: BRASS, ALBALOY PLATING
COUPLING NUT: BRASS, ALBALOY PLATING
CENTER CONTACT: BERYLLIUM COPPER, GOLD PLATING
FERRULE: COPPER, ALBALOY PLATING
- ELECTRICAL:
IMPEDANCE: 50 OHMS NOMINAL
FREQUENCY: DC-6 GHz
VSWR: 1.2 DC-6 GHz
DIELECTRIC WITHSTANDING VOLTAGE: 1,000 VOLTS RMS
- MECHANICAL:
DURABILITY: 500 CYCLES MIN.
TEMPERATURE RANGE: -65°C TO +165°C
- CABLING INSTRUCTIONS:
A. SLIDE FERRULE OVER CABLE JACKET
B. TRIM CABLE TO DIMENSIONS SHOWN. MAKE SURE CUTS ARE SHARP AND SQUARE. DO NOT NICK BRAID OR CENTER CONDUCTOR.
C. FLAIR BRAID SLIGHTLY AND INSERT CABLE INTO BODY UNTIL BOTTOMED. SLIDE THE FERRULE UP THE CABLE AND OVER THE BRAID UNTIL BOTTOMED ON BODY. CRIMP FERRULE USING A .429 HEX.
5. RECOMMENDED COUPLING NUT TORQUE: 4-6 IN-LBS.

MATL:		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES MACHINED SURFACES FINISH 32 RMS MAX. REMOVE ALL BURRS .005 MAX. BREAK MACHINE CORNERS .005 MAX. FILLET R. TOLERANCES ON DECIMALS .XX ± .01 .XXX ± .005 ANGLES ± 1° FRACTIONS ± 1/64		DFTM. K. A. M.	TIMES MICROWAVE SYSTEMS	
				DATE 2/25/10		
USED ON: B				CHKD. J. D. B.	EZ-400-TM-X PLUG, TNC, EZ FOR LMR-400	
				DATE 3/11/10		
SCALE: ~		DWG. SIZE A		APPD. J. D. B.	SHEET 1 of 1	
				DATE 3/11/10		
DO NOT SCALE DRAWING		CODE IDENT	68999	SD3190-2533		
				REV C		

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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	K.A.M.	3/31/10	J.B.D.	5/17/10



Reference standard IEC60169-4

I Electric Performance

Nominal Impedance(Ω): 50
Frequency Range: DC-3GHz
VSWR: ≤ 1.15
INSERT LOSS: ≤ 0.1
Insulation resistance(M Ω) 10000
Proof voltage(V) 2500
Conductor resistance(m Ω) outer conductor ≤ 0.2
inner conductor ≤ 0.8

II Mechanical Performance

Pin torque 25N.m
(Nut)Whorl pull 1000N
Tensile force(cable-connect) 400N
Torsion(cable-connect) 2N.m

III Material and plating

Component	Material
Inner conductor	Spring Copper
Outer conductor	Brass
Ferrule	Copper
Nut	Brass
Gasket	Silicone rubber
Insulator	PTFE

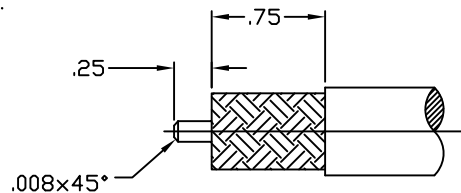
Plating
Ag 200 micro inches
Copper-tin-zin (Albaloy) 150 micro inches
Copper-tin-zin (Albaloy) 150 micro inches
Copper-tin-zin (Albaloy) 150 micro inches

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
Waterproofing standard IP67

V Assembly: inner conductor installed and
outer conductor crimped

VI ROHS Compliant.



Recommended
cable stripping Dim's

MATL:	UNLESS OTHERWISE SPECIFIED		DFTM. K. A. M.	TIMES MICROWAVE SYSTEMS	
	ALL DIMENSIONS ARE IN INCHES		DATE 3/31/10		
USED ON: 0			CHKD. J. D. B.	90° 7/16 MALE FOR LMR400 CABLE	
			DATE 5/17/10		
SCALE: ~	DWG. SIZE A		APPD. J. D. B.	1 of 1 SD3190-2545	
			DATE 5/17/10		
DO NOT SCALE DRAWING		CODE IDENT 68999	DATE 5/17/10	SH 1 of 1	REV A

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



LMR-400-FR

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		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
Outer Conductor DC Resistance			1.65	Ohms/1000ft
Nominal Capacitance		23.9 [78.41]		pF/ft [pF/m]

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



LMR-400-FR

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
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	0.081 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]

Environmental Specifications

Temperature Operating Range	-40 to +85 deg C
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LMR-400-FR Fire Rated version of the 400 series Low Loss Coax



LMR-400-FR

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.

