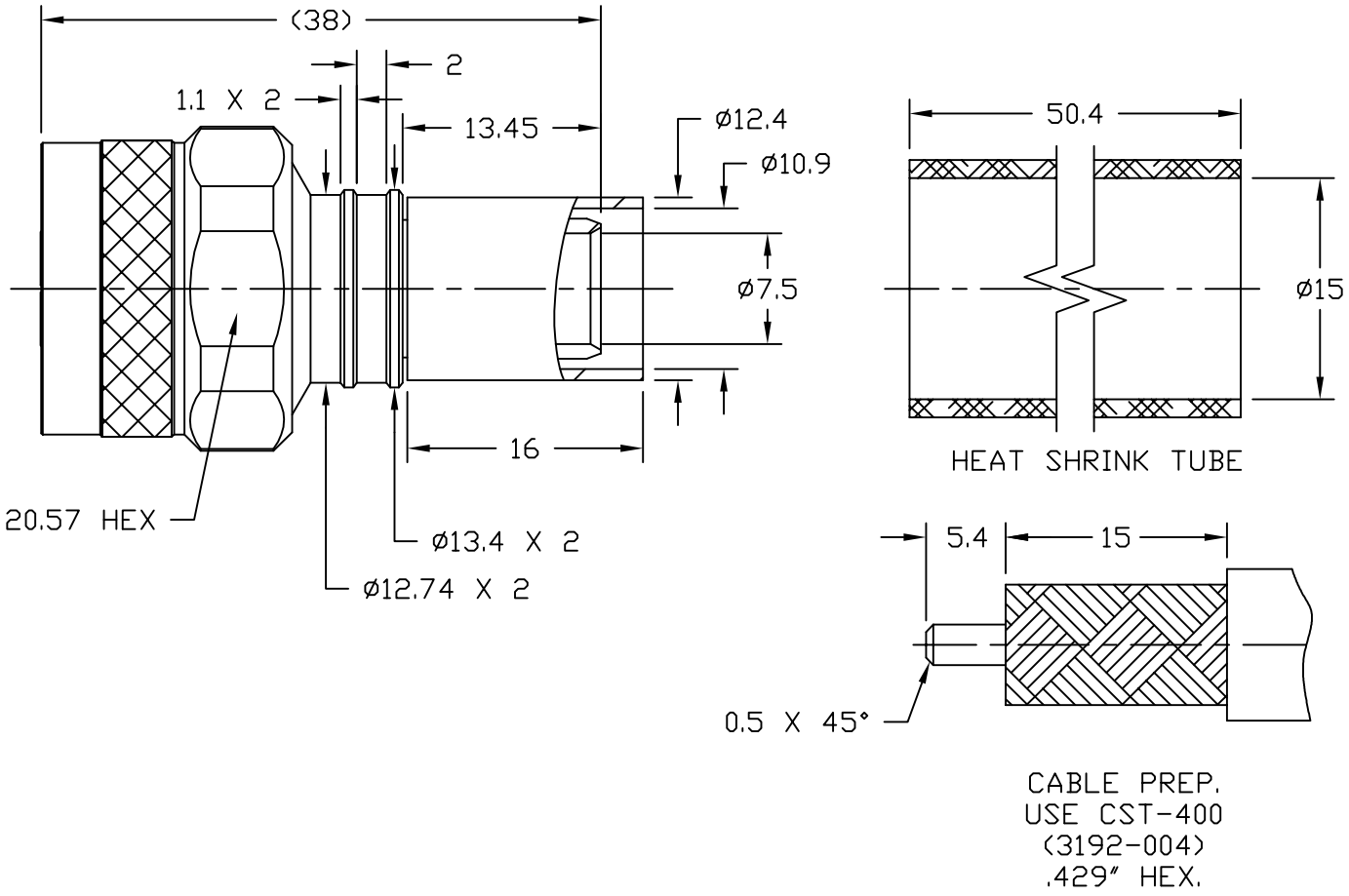
SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	D. J. H.	3/15/11	J. D. B.	8/16/11



Reference standard	IEC60169-16
I. Electric Performance	
Impedance(Ω):	50
Frequency Range:	DC-6GHz
VSWR:	≤1.25
Insert Loss: (dB)	≤0.1
Insulation resistance (MΩ)	>5000
Work voltage (V)	1500
Conductor resistance (mΩ)	outer conductor <0.2
	inner conductor <0.8
II. Mechanical Performance	
Nut torque	25N.m
(Nut) Whorl pull	1000N
Tensile force (cable-connect)	400N
Torsion (cable-connect)	2N.m

III. Material and plating:

Component	Material	Plating
inner conductor	Brass	Au50 micro inches over nickel 100 over copper
outer conductor	Brass	copper tin-zinc 100-150 micro inches
tube	Copper	copper tin-zinc 100-150 micro inches
nut	Brass	copper tin-zinc 100-150 micro inches
gasket	Silicone rubber	
insulator	PTFE	

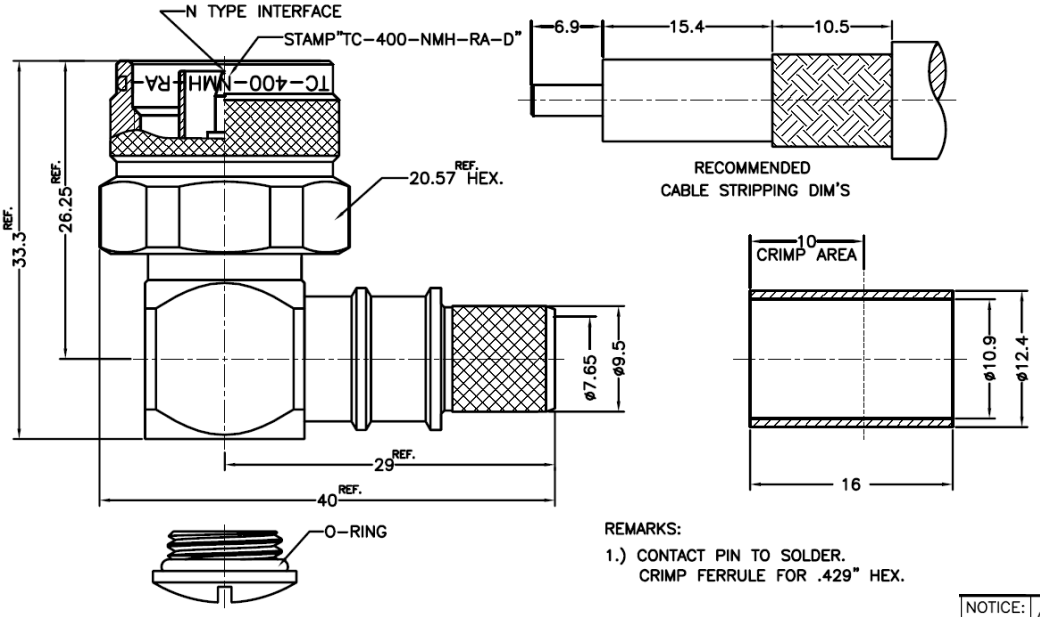
IV. Environment	
Temp. range	-55℃~+155℃
Weather standard	IEC 60068 55 / 155/ 56
Thermal shock	US MIL-STD 202,Meth.107,Cond.B
Vibration	US MIL-STD 202,Meth.204,Cond.B
Shock	US MIL-STD 202,Meth.213,Cond.I
Waterproofing standard IP67	

V. Assembly: inner conductor soldered and outer conductor crimped.

MATL:	UNLESS OTHERWISE SPECIFIED	DFTM. D. J. H.	TIMES MICROWAVE SYSTEMS
USED ON: O	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 ± N/A .XXX ± N/A ANGLES ± 1° FRACTIONS ± N/A	DATE 3/15/11 CHKD. J. D. B. DATE 8/16/11 APPD. J. D. B.	**TC-400-NMH-X** "N" MALE FOR LMR-400 CABLE SOLDER/CRIMP/NO BRAID TRIM
SCALE: N/A DWG. SIZE A	DO NOT SCALE DRAWING CODE IDENT 68999	DATE 8/16/11	SHT. 1 of 1 SD3190-2626 REV. A

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: RoHS ✓ 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

(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

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	-

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

MATL:

USED ON: 0

UNLESS OTHERWISE SPECIFIED
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

DFTM. D. J. H. DATE 5/30/07
CHKD. J. D. B. DATE 5/30/07
APPD. J. D. B. DATE 5/30/07

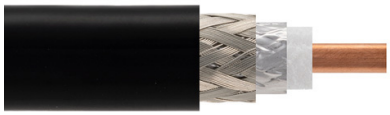
TIMES MICROWAVE SYSTEMS

TC-400-NMH-RA-D

90° N MALE (INDIVIDUALLY PACKAGED) FOR LMR400 CABLE

SCALE: N/A DWG. SIZE A DO NOT SCALE DRAWING CODE IDENT 68999 SHT. 1 of 1 SD3190-2293 REV. D

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



LMR-400-FR

TIMES MICROWAVE SYSTEMS An Amphenol Company

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

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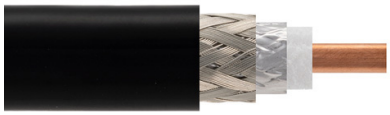
LMR-400-FR Fire Rated version of the 400 series Low Loss Coax



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

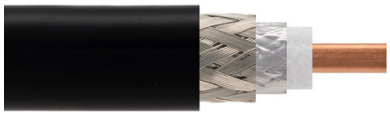
Mechanical Specifications

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

LMR-400-FR CAD Drawing

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