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| 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( $\Omega$ ): 50

Frequency Range: DC-6GHz

VSWR:  $\leq 1.25$

Insert Loss: (dB)  $\leq 0.1$

Insulation resistance (M $\Omega$ )  $> 5000$

Work voltage (V) 1500

Conductor resistance (m $\Omega$ )  
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°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

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

|                      |  |                |   |
|----------------------|--|----------------|---|
| MATERIAL:            | UNLESS OTHERWISE SPECIFIED   | DFTM. D. J. H. | TIMES MICROWAVE SYSTEMS   |
|                      | ALL DIMENSIONS ARE IN mm<br>MACHINED SURFACES FINISH N/A RMS MAX.<br>REMOVE ALL BURRS N/A MAX. BREAK<br>MACHINE CORNERS N/A MAX. FILLET R.<br>TOLERANCES ON DECIMALS<br>. XX $\pm$ N/A . XXX $\pm$ N/A<br>ANGLES $\pm 1^\circ$ FRACTIONS $\pm$ N/A | DATE 3/15/11   |   |
| USED ON: 0           |  | CHKD. J. D. B. | <b>TC-400-NMH-X</b><br>"N" MALE FOR LMR-400 CABLE<br>SOLDER/CRIMP/NO BRAID TRIM |
|                      |  | DATE 8/16/11   |   |
| SCALE: N/A           | DWG. SIZE A  | APPD. J. D. B. | SHEET 1 of 1 SD3190-2626 REV A  |
| DO NOT SCALE DRAWING | CODE IDENT 68999   | DATE 8/16/11   |   |



## N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch

### RF Connectors Technical Data Sheet

PE44526

#### Configuration

- N Male Connector
- MIL-STD-348A
- 50 Ohms
- Right Angle Body Geometry
- PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch Interface Type
- Crimp/Solder Attachment

#### Features

- Max. Operating Frequency 11 GHz
- Good VSWR of 1.5:1
- Gold Plated Brass Contact
- 30 µin minimum contact plating

#### Applications

- General Purpose Test
- Custom Cable Assemblies

#### Description

Pasternack's PE44526 type N male right angle connector with crimp/solder attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF and 0.400 inch is part of our full line of RF components available for same-day shipping. Our type N male connector operates up to a maximum frequency of 11 GHz and offers good VSWR of 1.5:1. Its right angle body geometry allows for easier connections in tight spaces.

Our type N male right angle connector PE44526 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      |         | 11      | GHz   |
| VSWR                                 |         |         | 1.5:1   |       |
| Operating Voltage (AC)               |         |         | 1,500   | Vrms  |
| Dielectric Withstanding Voltage (AC) |         |         | 2,500   | Vrms  |
| Inner Conductor DC Resistance        |         |         | 1       | mOhms |
| Outer Conductor DC Resistance        |         |         | 1       | mOhms |
| Insulation Resistance                | 5,000   |         |         | MOhms |
| RF Leakage                           | 90      |         |         | dB    |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch PE44526](#)



N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch

## RF Connectors Technical Data Sheet

PE44526

### Performance by Frequency

| Description         | F1       | F2 | F3 | F4 | F5 | Units |
|---------------------|----------|----|----|----|----|-------|
| Frequency Range     | DC to 10 |    |    |    |    | GHz   |
| Insertion Loss, Max | 0.15     |    |    |    |    | dB    |

### Mechanical Specifications

#### Size

|               |                     |
|---------------|---------------------|
| Length        | 1.31 in [33.27 mm]  |
| Width/Dia.    | 0.83 in [21.08 mm]  |
| Height        | 1.31 in [33.27 mm]  |
| Weight        | 0.109 lbs [49.44 g] |
| Mating Cycles | 500 Cycles          |

### Material Specifications

| Description  | Material | Plating                |
|--------------|----------|------------------------|
| Contact      | Brass    | Gold<br>30 µin minimum |
| Insulation   | PTFE     |                        |
| Body         | Brass    | Tri-Metal              |
| Coupling Nut | Brass    | Tri-Metal              |

### Environmental Specifications

#### Temperature

|                   |                                      |
|-------------------|--------------------------------------|
| Operating Range   | -65 to +165 deg C                    |
| Vibration         | MIL-STD-202, Method 204, Condition B |
| Temperature Cycle | MIL-STD-202, Method 107, Condition B |
| Salt Spray        | MIL-STD-202, Method 101, Condition B |

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch PE44526](#)



N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch

## RF Connectors Technical Data Sheet

PE44526

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

### Plotted and Other Data

Notes:

N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99% availability and are part of the broadest selection in the industry.

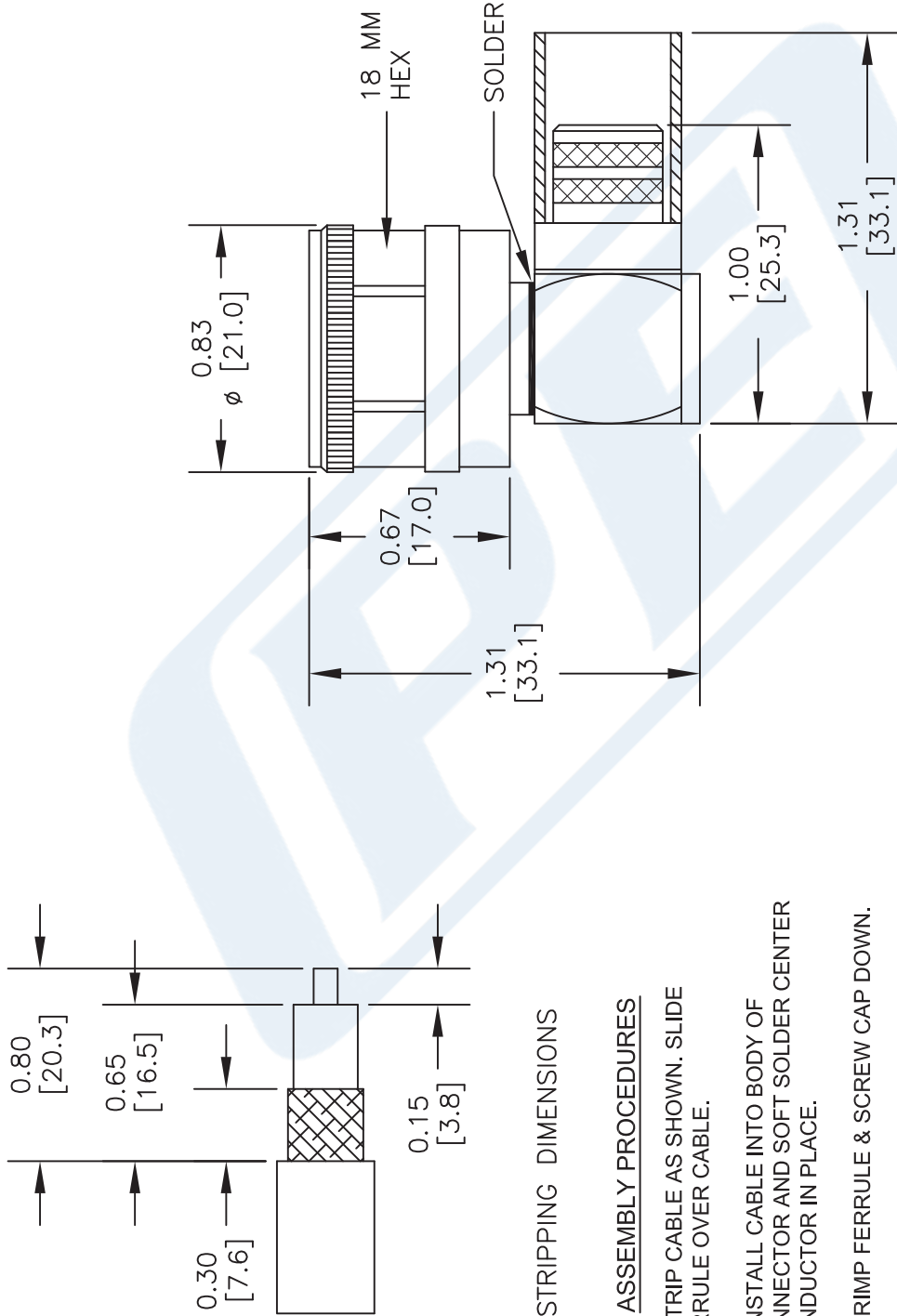
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch PE44526](#)

URL: <https://www.pasternack.com/n-male-standard-pe-c400-0.400-connector-pe44526-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.

# PE44526 CAD Drawing

N Male Right Angle Connector Crimp/Solder Attachment for PE-C400, PE-B400, PE-B405, LMR-400, LMR-400-DB, LMR-400-UF, 0.400 inch



## STRIPPING DIMENSIONS

## ASSEMBLY PROCEDURES

1. STRIP CABLE AS SHOWN. SLIDE FERRULE OVER CABLE.
2. INSTALL CABLE INTO BODY OF CONNECTOR AND SOFT SOLDER CENTER CONDUCTOR IN PLACE.
3. CRIMP FERRULE & SCREW CAP DOWN.

## CRIMP SIZE REQUIRED

FERRULE: .429" HEX CRIMP TOOL

DWG TITLE

**PE44526**

NOTES:  
 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.  
 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME.  
 3. DIMENSIONS ARE IN INCHES [mm].

FSCM NO. 53919

CAD FILE 040416

SCALE N/A

SIZE A

3045

**(PE) PASTERNAK®**  
 THE ENGINEER'S RF SOURCE

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## LMR-<sup>®</sup>400-UF UltraFlex Communications Coax

### Ideal for...

- Drop-in replacement for RG-8/9913 Air-Dielectric type Cable
- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application that requires periodic/repeated flexing



• **LMR<sup>®</sup> - UltraFlex** has a stranded center conductor and rubber outer jacket designed for multiple bending/flexing cycles. It is used for both indoor and outdoor applications.

• **Flexibility** and bendability are hallmarks of the LMR-400-UF cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-400-UF. Size for size LMR has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability:** LMR-400-UF cables are designed for outdoor exposure and have a life expectancy in excess of 10 years.

• **Connectors:** A wide variety of connectors are available for LMR-400-UF cable, including all common interface types, reverse polarity, and solder-on center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies:** All LMR-400-UF cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

| Part Description |                |        |       |            |
|------------------|----------------|--------|-------|------------|
| Part Number      | Application    | Jacket | Color | Stock Code |
| LMR-400-UF       | Indoor/Outdoor | TPE    | Black | 54040      |

| Construction Specifications |                               |       |         |  |
|-----------------------------|-------------------------------|-------|---------|--|
| Description                 | Material                      | In.   | (mm)    |  |
| Inner Conductor             | Stranded BC                   | 0.108 | (2.74)  |  |
| Dielectric                  | Foam Polyethylene             | 0.285 | (7.24)  |  |
| Outer Conductor             | Aluminum Tape                 | 0.291 | (7.39)  |  |
| Overall Braid               | Tinned Copper                 | 0.320 | (8.13)  |  |
| Jacket                      | Black Thermoplastic Elastomer | 0.405 | (10.29) |  |

# LMR<sup>®</sup>-400-UF UltraFlex Communications Coax



## Connectors

| Interface       | Description   | Part Number     | Stock Code | VSWR**  | Coupling Freq. (GHz) | Nut       | Inner Contact Attach | Outer Contact Attach | Finish* /Pin | Length in (mm) | Width in (mm) | Weight lb (g) |
|-----------------|---------------|-----------------|------------|---------|----------------------|-----------|----------------------|----------------------|--------------|----------------|---------------|---------------|
| 7-16 DIN Female | Straight Jack | TC-400-716-FC   | 3190-376   | <1.25:1 | (2.5)                | NA        | Solder               | Clamp                | S/S          | 1.6 (41)       | 1.13 (28.7)   | 0.281 (127.5) |
| 7-16 DIN Male   | Straight Plug | TC-400-716-MC   | 3190-279   | <1.25:1 | (2.5)                | Hex       | Solder               | Clamp                | S/S          | 1.4 (36)       | 1.40 (35.6)   | 0.268 (121.6) |
| BNC Male        | Straight Plug | TC-400-BM       | 3190-318   | <1.25:1 | (2.5)                | Knurl     | Solder               | Crimp                | N/S          | 1.7 (43)       | 0.56 (14.2)   | 0.063 (28.6)  |
| Mini-UHF        | Straight Plug | TC-400-MUHF     | 3190-520   | <1.25:1 | (2.5)                | Knurl     | Solder               | Crimp                | N/G          | 1.1 (28)       | 0.50 (12.7)   | 0.020 (9.1)   |
| N Female        | Straight Jack | TC-400-NFC      | 3190-299   | <1.25:1 | (2.5)                | NA        | Solder               | Clamp                | N/S          | 1.6 (41)       | 0.75 (19.1)   | 0.119 (54.0)  |
| N Male          | Straight Plug | SC-400-NM       | 3190-1454  | <1.25:1 | (2.5)                | Knurl     | Solder               | Crimp                | N/G          | 1.5 (38)       | 0.75 (19.1)   | 0.090 (40.8)  |
|                 | Straight Plug | TC-400-NM       | 3190-188   | <1.25:1 | (2.5)                | Knurl     | Solder               | Crimp                | N/G          | 1.5 (38)       | 0.75 (19.1)   | 0.090 (40.8)  |
|                 | Straight Plug | TC-400-NMC      | 3190-277   | <1.25:1 | (2.5)                | Knurl     | Solder               | Clamp                | N/G          | 1.5 (38)       | 0.75 (19.1)   | 0.121 (54.9)  |
|                 | Straight Plug | TC-400-NMH-D    | 3190-552   | <1.25:1 | (10)                 | Hex/Knurl | Solder               | Crimp                | A/G          | 1.5 (38)       | 0.89 (22.6)   | 0.113 (51.3)  |
|                 | Right Angle   | TC-400-NMH-RA   | 3190-422*  | <1.35:1 | (6)                  | Hex       | Solder               | Crimp                | S/G          | 1.8 (46)       | 1.25 (31.8)   | 0.130 (59.0)  |
|                 | Right Angle   | TC-400-NMH-RA-D | 3190-2293* | <1.35:1 | (6)                  | Hex/Knurl | Solder               | Crimp                | A/G          | 1.8 (46)       | 1.25 (31.8)   | 0.130 (59.0)  |
| SMA Male        | Straight Plug | TC-400-SM       | 3190-439   | <1.25:1 | (8)                  | Hex       | Solder               | Crimp                | N/G          | 1.2 (29)       | 0.50 (12.7)   | 0.032 (14.5)  |
| TNC Male        | Straight Plug | TC-400-TM       | 3190-260   | <1.25:1 | (2.5)                | Knurl     | Solder               | Crimp                | N/S          | 1.7 (43)       | 0.59 (15.0)   | 0.074 (33.6)  |
|                 | Right Angle   | TC-400-TM-RA    | 3190-442*  | <1.35:1 | (2.5)                | Knurl     | Solder               | Crimp                | N/G          | 1.7 (43)       | 0.59 (15.0)   | 0.085 (38.6)  |

\* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy \*\*VSWR spec based on 3 foot cable with a connector pair \*Available in bulk pack

### Mechanical Specifications

| Performance Property      | Units          | US    | (metric) |
|---------------------------|----------------|-------|----------|
| Bend Radius: installation | in. (mm)       | 1.0   | (25.4)   |
| Bend Radius: repeated     | in. (mm)       | 4.0   | (101.6)  |
| Bending Moment            | ft-lb (N-m)    | 0.375 | (0.51)   |
| Weight                    | lb/ft (kg/m)   | .088  | (0.131)  |
| Tensile Strength          | lb (kg)        | 160   | (72.6)   |
| Flat Plate Crush          | lb/in. (kg/mm) | 20    | (0.36)   |

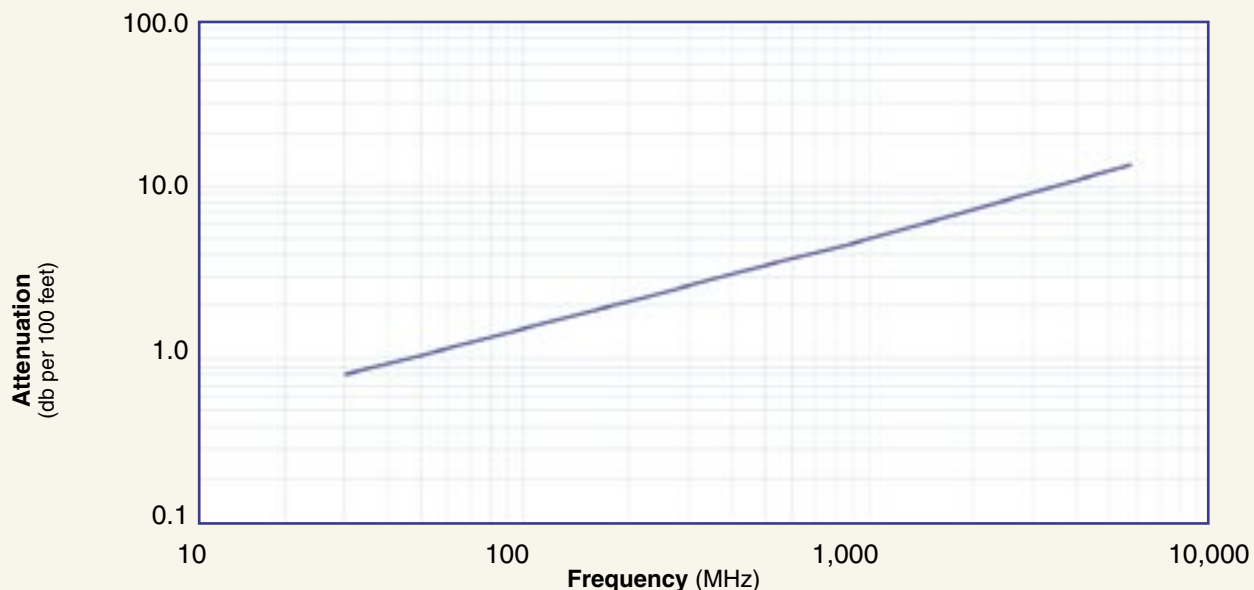
### Environmental Specifications

| Performance Property           | °F       | °C      |
|--------------------------------|----------|---------|
| Installation Temperature Range | -40/+185 | -40/+85 |
| Storage Temperature Range      | -94/+185 | -70/+85 |
| Operating Temperature Range    | -40/+185 | -40/+85 |

### Electrical Specifications

| Performance Property    | Units             | US    | (metric) |
|-------------------------|-------------------|-------|----------|
| Cutoff Frequency        | GHz               | 16.2  |          |
| Velocity of Propagation | %                 | 85    |          |
| Dielectric Constant     | NA                | 1.38  |          |
| Time Delay              | nS/ft (nS/m)      | 1.20  | (3.92)   |
| Impedance               | ohms              | 50    |          |
| Capacitance             | pF/ft (pF/m)      | 23.9  | (78.40)  |
| Inductance              | uH/ft (uH/m)      | 0.060 | (0.21)   |
| Shielding Effectiveness | dB                | >90   |          |
| DC Resistance           |                   |       |          |
| Inner Conductor         | ohms/1000ft (/km) | 1.07  | (3.51)   |
| Outer Conductor         | ohms/1000ft (/km) | 1.65  | (5.4)    |
| Voltage Withstand       | Volts DC          | 2500  |          |
| Jacket Spark            | Volts RMS         | 8000  |          |
| Peak Power              | kW                | 16    |          |

### Attenuation vs. Frequency (typical)



| Frequency (MHz)       | 30   | 50   | 150  | 220  | 450  | 900  | 1500 | 1800 | 2000 | 2500 | 5800 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 0.8  | 1.1  | 1.8  | 2.2  | 3.3  | 4.7  | 6.2  | 6.8  | 7.2  | 8.1  | 13.0 |
| Attenuation dB/100 m  | 2.7  | 3.5  | 6.1  | 7.4  | 10.7 | 15.4 | 20.2 | 22.3 | 23.6 | 26.6 | 42.6 |
| Avg. Power kW         | 2.77 | 2.14 | 1.22 | 1.00 | 0.69 | 0.48 | 0.36 | 0.33 | 0.31 | 0.28 | 0.17 |

Calculate Attenuation =  $(0.146748) \cdot \sqrt{\text{FMHz}} + (0.000312) \cdot \text{FMHz}$  (interactive calculator available at [http://www.timesmicrowave.com/cable\\_calculators](http://www.timesmicrowave.com/cable_calculators))  
 Attenuation: VSWR=1.0; Ambient = +25°C (77°F) Power: VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F);  
 Sea Level; dry air; atmospheric pressure; no solar loading



## Hardware Accessories

| Type          | Part Number | Stock Code | Description                   |
|---------------|-------------|------------|-------------------------------|
| Ground Kit    | GK-S400TT   | GK-S400TT  | Standard Grounding Kit (each) |
| Hoisting Grip | HG-400T     | HG-400T    | Laced Type (each)             |



## Install Tools

| Type              | Part Number | Stock Code | Description  |
|-------------------|-------------|------------|--|
| Crimp Tool        | HX-4        | 3190-200   | Crimp Handle   |
| Crimp Dies        | Y1719       | 3190-202   | .429" Hex Dies                                       |
| Crimp Tool        | CT-400/300  | 3190-666   | Crimp tool for LMR 400 connectors                    |
| Crimp Rings       | CR-400      | 3190-830   | Crimp rings for TC/EZ-400 connectors (package of 10) |
| Cutting Tool      | CCT-01      | 3190-1544  | Cable end flush cut tool                             |
| Replacement Blade | RB-01       | 3190-1609  | Replacement blade for cutting tool                   |