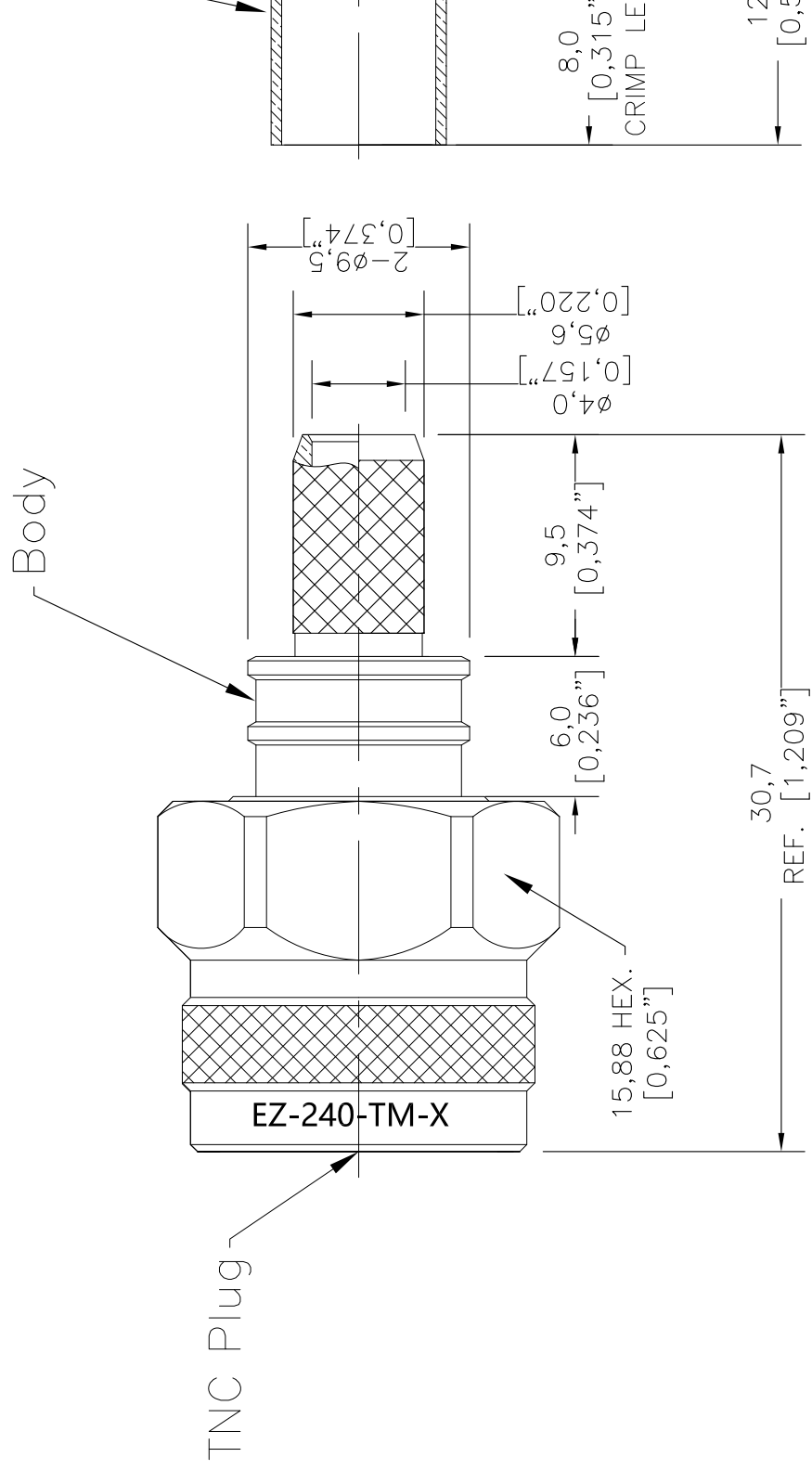


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## I. MATERIALS & FINISHES

## II. ELECTRICAL PROPERTIES

Components Materials Finishes

Thk. ( $\mu$ "

Impedance ( $\Omega$ ):

50



# TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240

## RF Connectors Technical Data Sheet



**EZ-240-TF-X**

### Times Microwave Systems Connector Specification

#### Configuration

- TNC Female Connector
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240

#### Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.3:1
- Tri-Metal Plated Brass Contact
- 80 µin minimum contact plating

#### Applications

- General Purpose Test
- Custom Cable Assemblies

#### Description

EZ-240-TF-X QMA female coaxial connector has an interface type of QMA female LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, and PE-C240 and a 50 Ohms impedance. Pasternack's QMA female connector uses crimp/non-solder contact as an attachment method. Our female QMA coaxial connector provides a maximum frequency of 6 GHz.

The Pasternack QMA female coaxial connector has a PTFE dielectric type and a VSWR of 1.3:1. Pasternack's QMA coaxial connector has a brass body with tri-metal plating. Our EZ-240-TF-X QMA connector uses a tri-metal plated brass contact. Additional RF connector specs and dimensions for this component can be found on its PDF specification datasheet and CAD drawings above.

The radio frequency connector is made from brass material and has a contact life of 500 cycles or more. Our high-quality EZ-240-TF-X features an 80 µin minimum body plating specification. The Pasternack EZ-240-TF-X QMA connector operates at a temperature range of -55 to 155 deg C.

This Pasternack female QMA connector will ship the same business day as purchased. Our QMA female connector is part of over 40,000 RF, microwave, and millimeter wave components in stock for local, domestic, and international shipment. For further information on similar products, our expert technical support and trained sales team can get you the ideal RF connector as per your requirements.

#### Electrical Specifications

| Description           | Minimum | Typical | Maximum | Units |
|-----------------------|---------|---------|---------|-------|
| Frequency Range       | DC      |         | 6       | GHz   |
| VSWR                  |         |         | 1.3:1   |       |
| Insertion Loss        |         |         | 0.24    | dB    |
| Impedance             |         | 50      |         | Ohms  |
| Insulation Resistance | 5,000   |         |         | MOhms |

Electrical Specification Notes:  
Insertion Loss is 0.1\*SQRT(fGHz) dB

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240 EZ-240-TF-X](#)



TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240

## RF Connectors Technical Data Sheet

#### Mechanical Specifications

##### Size

|                       |                    |
|-----------------------|--------------------|
| Length                | 1.07 in [27.18 mm] |
| Width                 | 0.44 in [11.13 mm] |
| Height                | 0.44 in [11.13 mm] |
| Weight                | 0.10 lbs [45.36 g] |
| Mating Cycles         | 500 Cycles         |
| Cable Retention Force | 200 lbs 90.72 kg   |

#### Material Specifications

| Description  | Material | Plating                     |
|--------------|----------|-----------------------------|
| Contact      | Brass    | Tri-Metal<br>80 µin minimum |
| Insulation   | PTFE     |                             |
| Body         | Brass    | Tri-Metal<br>80 µin minimum |
| Crimp Sleeve | Brass    | Tri-Metal<br>80 µin minimum |

#### Environmental Specifications

##### Temperature

|                 |                                |
|-----------------|--------------------------------|
| Operating Range | -55 to +155 deg C              |
| Shock           | MIL-STD 202G, Meth.213, Cond I |
| 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:

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240 EZ-240-TF-X](#)



TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240

## RF Connectors Technical Data Sheet

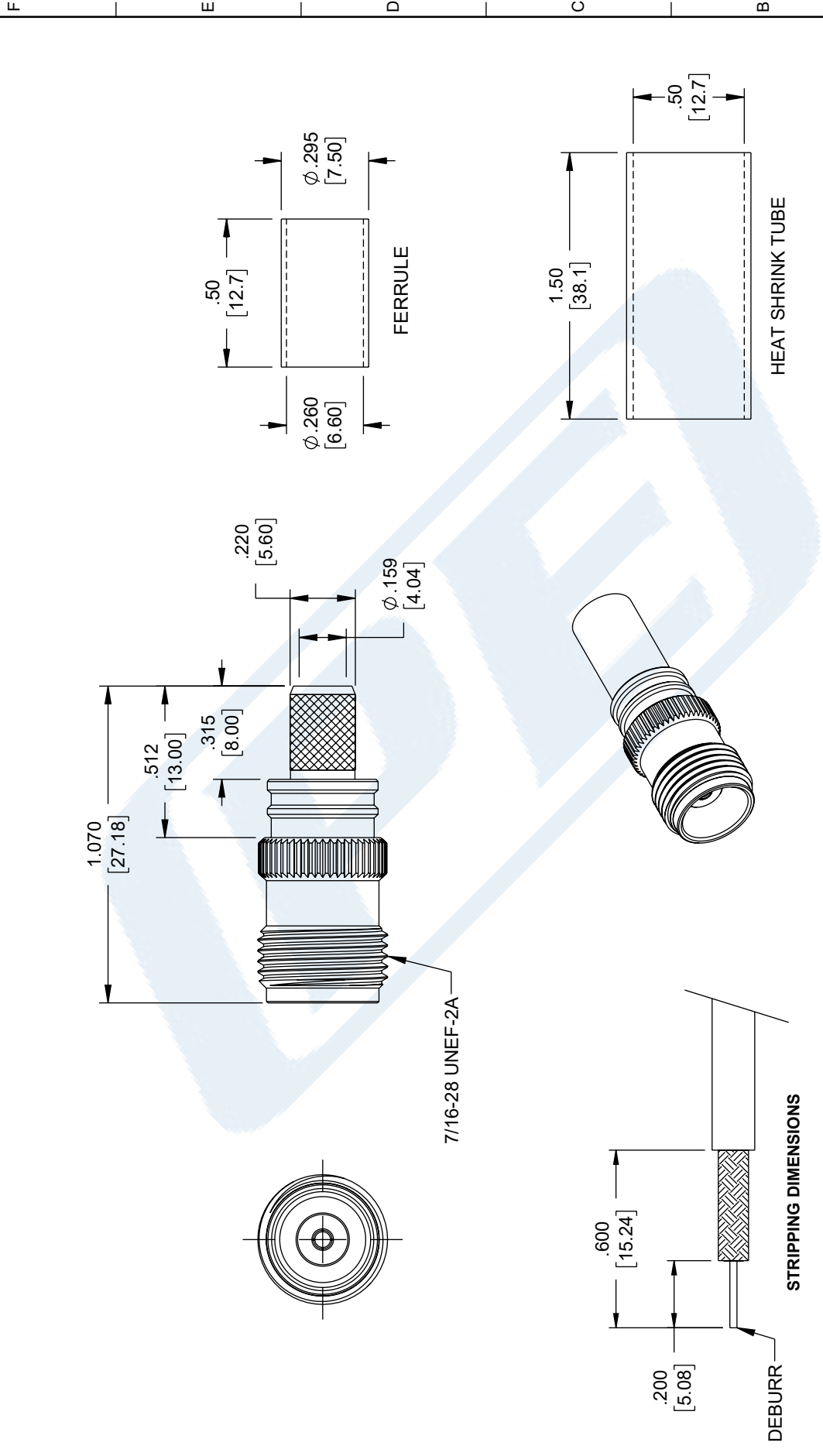
TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of 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: [TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240 EZ-240-TF-X](#)

URL: <https://www.pasternack.com/tnc-female-lmr-240-lmr-240-db-connector-ez-240-tf-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.

| ZONE | REV | DESCRIPTION     | DATE      | CHANGED BY | APPROVED |
|------|-----|-----------------|-----------|------------|----------|
| A    |     | INITIAL RELEASE | 5/19/2023 | KDANG      | AGANWANI |



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Phone: 1.866.727.8376 | 1.949.261.1920

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

TOLERANCES:  
 .X = ±.2 [5] FRACTIONS  
 .XX = ±.02 [5] ±.1/32  
 .XXX = ±.005 [13] ANGLES ± 1°  
 CABLE LENGTH TOLERANCES:  
 ≤12 [305] = +1 [25] / -0  
 >12 [305] ≤ 60 [1524] = +2 [51] / -0  
 >60 [1524] ≤ 120 [3048] = +4 [102] / -0  
 >120 [3048] ≤ 300 [7620] = +6 [152] / -0  
 >300 [7620] = +5% / -0

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

DESCRIPTION  
TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240

ITEM NO. EZ-240-TF-X  
CAGE CODE 53919  
DRAWN BY KDANG  
REV A

**NOTES:**

- CABLE ATTACHMENT:  
• OUTER: CRIMP.
- CRIMP SIZE REQUIRED:  
• FERRULE: .255 [6.48] HEX. CRIMP TOOL.

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## LMR®-240-UF UltraFlex Communications Coax

### Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs (e.g. WLL, GPS, LMR, Mobile Antennas)
- Any application that requires periodic/repeated flexing



• **LMR® - 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-240-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-240-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-240-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-240-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-240-UF cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

| Construction Specifications |                               |       |        |
|-----------------------------|-------------------------------|-------|--------|
| Description                 | Material                      | In.   | (mm)   |
| Inner Conductor             | Stranded BC                   | 0.056 | (1.42) |
| Dielectric                  | Foam Polyethylene             | 0.150 | (3.81) |
| Outer Conductor             | Aluminum Tape                 | 0.155 | (3.94) |
| Overall Braid               | Tinned Copper                 | 0.178 | (4.52) |
| Jacket                      | Black Thermoplastic Elastomer | 0.240 | (6.10) |

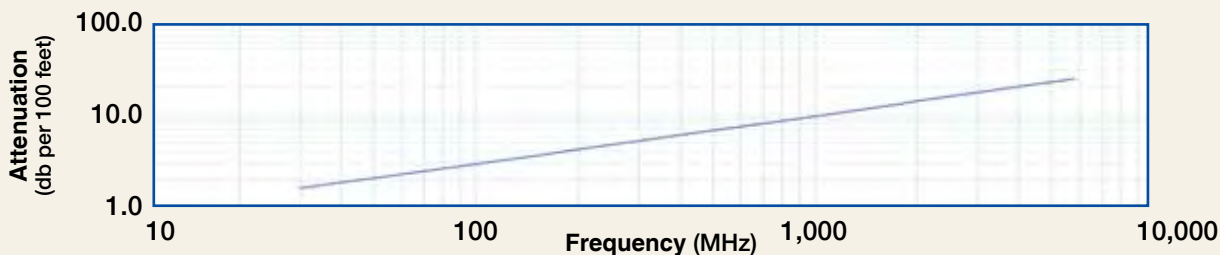
| Mechanical Specifications |                |       |          |
|---------------------------|----------------|-------|----------|
| Performance Property      | Units          | US    | (metric) |
| Bend Radius: installation | in. (mm)       | 0.75  | (19.1)   |
| Bend Radius: repeated     | in. (mm)       | 2.5   | (63.5)   |
| Bending Moment            | ft-lb (N-m)    | 0.125 | (0.17)   |
| Weight                    | lb/ft (kg/m)   | 0.034 | (0.05)   |
| Tensile Strength          | lb (kg)        | 80    | (36.3)   |
| Flat Plate Crush          | lb/in. (kg/mm) | 13    | (0.23)   |

| 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) |
| Velocity of Propagation   | %                 | 84    |          |
| Dielectric Constant       | NA                | 1.42  |          |
| Time Delay                | nS/ft (nS/m)      | 1.21  | (3.97)   |
| Impedance                 | ohms              | 50    |          |
| Capacitance               | pF/ft (pF/m)      | 24.2  | (79.4)   |
| Inductance                | uH/ft (uH/m)      | 0.060 | (0.20)   |
| Shielding Effectiveness   | dB                | >90   |          |
| DC Resistance             |                   |       |          |
| Inner Conductor           | ohms/1000ft (/km) | 4.28  | (14.1)   |
| Outer Conductor           | ohms/1000ft (/km) | 3.89  | (12.8)   |
| Voltage Withstand         | Volts DC          | 1500  |          |
| Jacket Spark              | Volts RMS         | 5000  |          |
| Peak Power                | kW                | 5.6   |          |

| Part Description |                |        |       |            |
|------------------|----------------|--------|-------|------------|
| Part Number      | Application    | Jacket | Color | Stock Code |
| LMR-240-UF       | Indoor/Outdoor | TPE    | Black | 54041      |

Attenuation vs. Frequency (typical)



| Frequency (MHz)       | 30   | 50   | 150  | 220  | 450  | 900  | 1500 | 1800 | 2000 | 2500 | 5800 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|
| Attenuation dB/100 ft | 1.6  | 2.1  | 3.6  | 4.4  | 6.3  | 9.1  | 11.8 | 13.0 | 13.8 | 15.5 | 24.4 |
| Attenuation dB/100 m  | 5.3  | 6.8  | 11.9 | 14.4 | 20.8 | 29.8 | 38.9 | 42.8 | 45.2 | 50.9 | 80.1 |
| Avg. Power kW         | 1.24 | 0.96 | 0.55 | 0.45 | 0.31 | 0.22 | 0.17 | 0.15 | 0.14 | 0.13 | 0.08 |

Calculate Attenuation = (0.290501) • √FMHz + (0.000396) • 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



**Connectors**

| Interface   | Description      | Part Number     | Stock Code | VSWR** Freq. (GHz) | Coupling Nut | Inner Contact Attach | Outer Contact Attach | Finish* /Pin | Length in (mm) | Width in (mm) | Weight lb (g) |
|-------------|------------------|-----------------|------------|--------------------|--------------|----------------------|----------------------|--------------|----------------|---------------|---------------|
| 1. BNC Male | Straight Plug    | TC-240-BMC      | 3190-242   | <1.25:1 (2.5)      | Knurl        | Solder               | Clamp                | S/G          | 1.7 (43)       | 0.56(14.2)    | 0.040 (18.1)  |
| 2. Mini-UHF | Straight Plug    | TC-240-MUHF     | 3190-445   | <1.25:1 (2.5)      | Knurl        | Solder               | Crimp                | N/G          | 1.1 (28)       | 0.45(11.4)    | 0.014 (6.4)   |
| 3. N Female | Bulkhead Jack    | TC-240-NF-BH    | 3190-419   | <1.25:1 (2.5)      | NA           | Solder               | Crimp                | A/G          | 1.7 (44)       | 0.88(22.2)    | 0.115 (52.2)  |
| 4. N Male   | Straight Plug    | TC-240-NMH-D    | 3190-382   | <1.25:1 (2.5)      | Hex          | Solder               | Crimp                | N/S          | 1.5 (38)       | 0.75(19.1)    | 0.086 (39.0)  |
| 5. N Male   | Straight Plug    | TC-240-NMC      | 3190-244   | <1.25:1 (2.5)      | Knurl        | Solder               | Clamp                | S/G          | 1.5 (38)       | 0.75(19.1)    | 0.082 (37.2)  |
| 6. SMA Male | Straight Plug    | TC-240-SM       | 3190-380   | <1.25:1 (10)       | Hex          | Solder               | Crimp                | SS/G         | 1.0 (25)       | 0.32(8.1)     | 0.016 (7.3)   |
| 7. SMA Male | Reverse Polarity | TC-240-SM-RP    | 3190-326   | <1.25:1 (2.5)      | Hex          | Solder               | Crimp                | SS/G         | 1.0 (25)       | 0.32(8.1)     | 0.016 (7.3)   |
| 8. TNC Male | Straight Plug    | TC-240-TM       | 3190-275   | <1.25:1 (2.5)      | Knurl        | Solder               | Crimp                | N/S          | 1.7 (43)       | 0.59(15.0)    | 0.043 (19.5)  |
| 9. N Male   | Right Angle      | TC-240-NMH-RA-D | 3190-2426  | <1.35:1 (6)        | Hex/Knurl    | Solder               | Crimp                | A/G          | 1.2 (32.4)     | 1.22 (31.0)   | 0.091 (41.7)  |

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

**Hardware Accessories**

| Type       | Part Number | Stock Code | Description                |
|------------|-------------|------------|----------------------------|
| Ground Kit | GK-S240TT   | GK-S240TT  | Standard Ground Kit (each) |

**Install Tools**

| Type              | Part Number        | Stock Code | Description   |
|-------------------|--------------------|------------|---|
| Crimp Tool        | CT-240/200/195/100 | 3190-667   | Crimp tool for LMR-100, 195, 200 and 240 connectors |
| Cutting Tool      | CCT-01             | 3190-1544  | Cable end flush cut tool                            |
| Replacement Blade | RB-01              | 3190-1609  | Replacement blade for cutting tool                  |

