



N Male Connector Crimp/Solder Attachment for PE-C240, RG8X, 0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF, B7808A

RF Connectors Technical Data Sheet

PE44521

Configuration

- N Male Connector
- MIL-STD-348A
- 50 Ohms
- Straight Body Geometry
- PE-C240, RG8X, 0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF, B7808A Interface Type
- Crimp/Solder Attachment

Features

- Max. Operating Frequency 11 GHz
- Good VSWR of 1.3:1
- Gold Plated Brass Contact
- 30 μ m minimum contact plating

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's PE44521 type N male connector with crimp/solder attachment for PE-C240, RG8X, 0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF and B7808A 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 1.3:1.

Our type N male connector PE44521 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 | | | 1.3:1 | |
| 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 Connector Crimp/Solder Attachment for PE-C240, RG8X, 0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF, B7808A PE44521](#)



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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 | 1.36 in [34.54 mm] |
| Width/Dia. | 0.83 in [21.08 mm] |
| Weight | 0.069 lbs [31.3 g] |
| Mating Cycles | 500 Cycles |

Material Specifications

| Description | Material | Plating |
|--------------|----------|------------------------|
| Contact | Brass | Gold 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 Connector Crimp/Solder Attachment for PE-C240, RG8X, 0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF, B7808A PE44521](#)



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

Plotted and Other Data

Notes:

N Male Connector Crimp/Solder Attachment for PE-C240, RG8X, 0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF, B7808A 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.

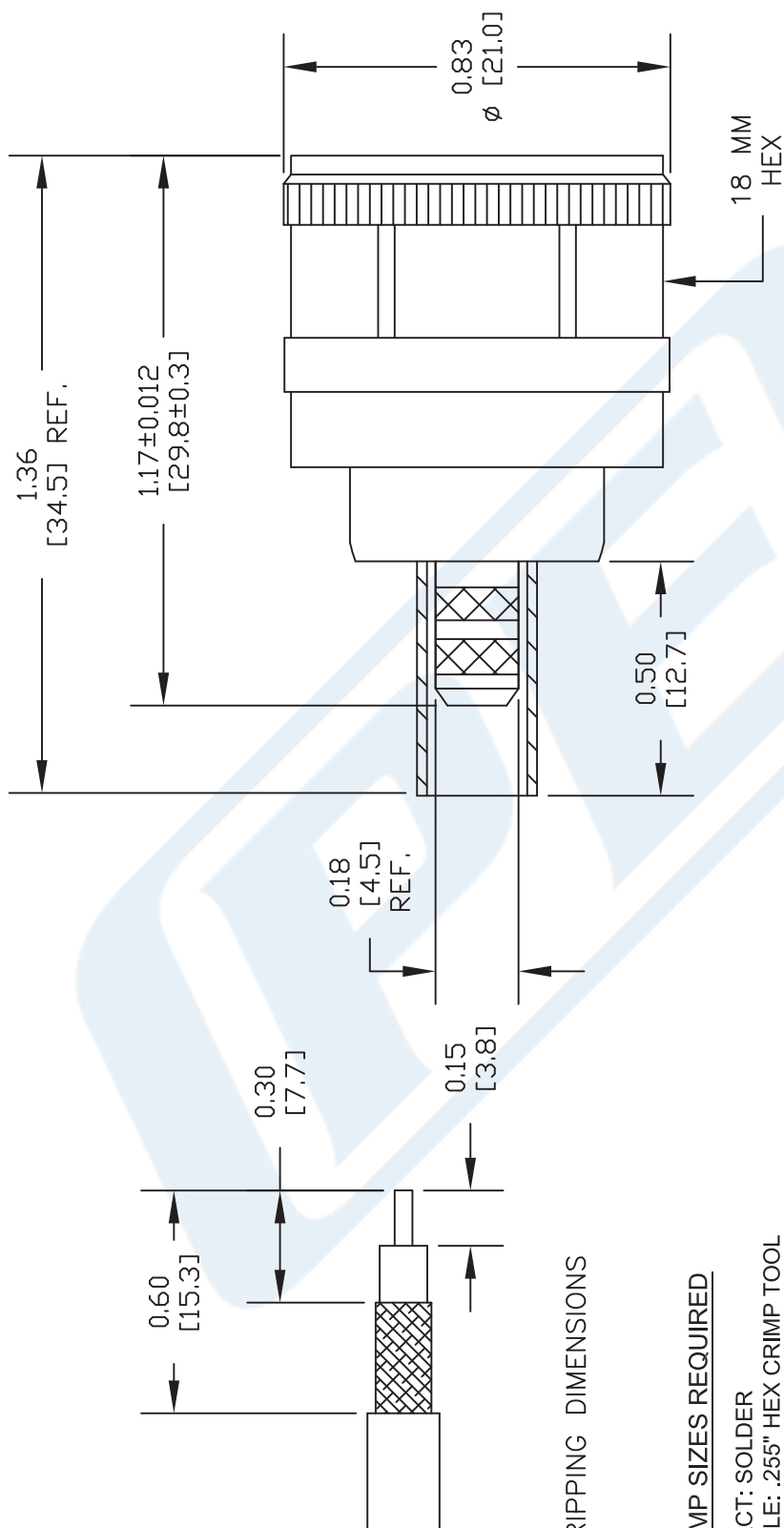
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URL: <https://www.pasternack.com/n-male-standard-pe-c240-0.240-connector-pe44521-p.aspx>

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.

PE44521 CAD Drawing

N Male Connector Crimp/Solder Attachment for PE-C240, RG8X,
0.240 inch, LMR-240, LMR-240-DB, LMR-240-UF, B7808A



STRIPPING DIMENSIONS

CRIMP SIZES REQUIRED

CONTACT: SOLDER
FERRULE: .255" HEX CRIMP TOOL

| STANDARD TOLERANCES | |
|---------------------|--------|
| .X | ±0.008 |
| .XX | ±0.004 |
| .XXX | ±0.002 |

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

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].

DWG TITLE
PE44521

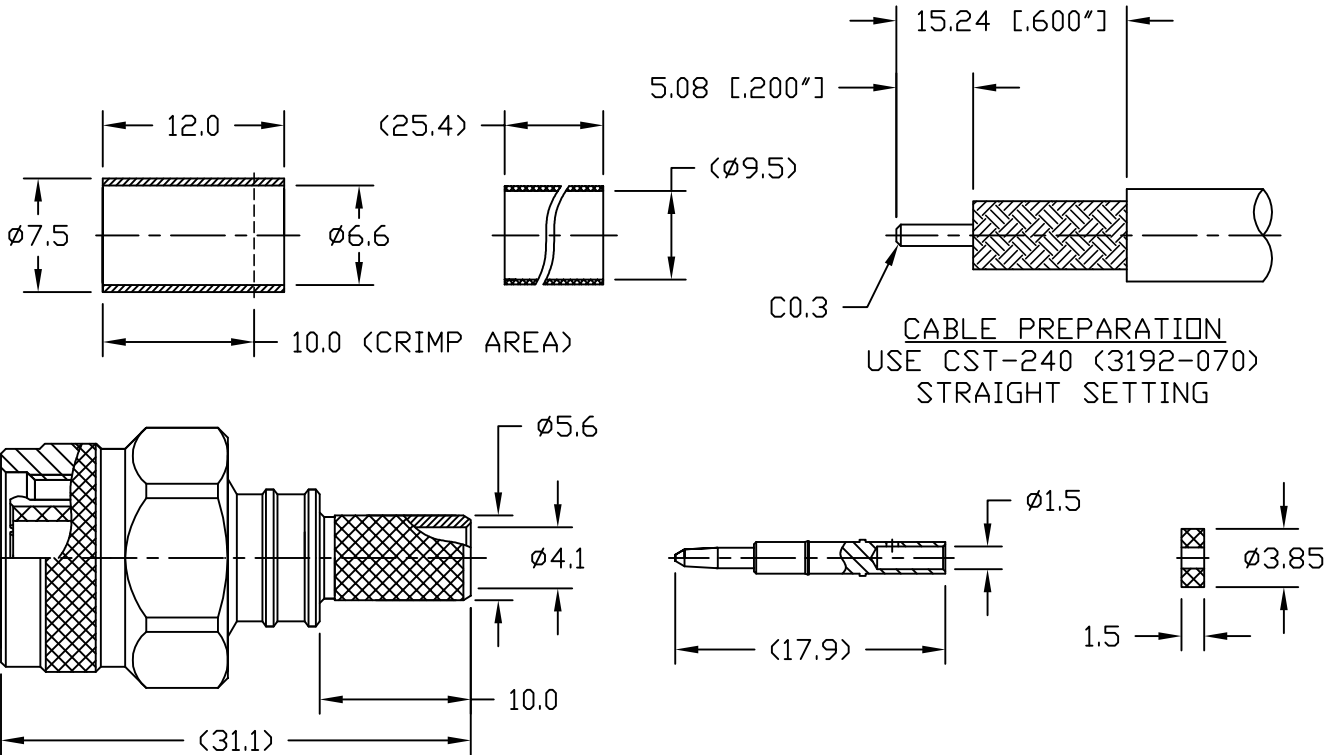
PE PASTERNAK®
THE ENGINEER'S RF SOURCE
Pasternack Enterprises, Inc.
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FSCM NO. 53919

CAD FILE 032316 SCALE N/A SIZE A 3045

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| SYM | REVISION DESCRIPTION | DFTM | DATE | APPD | DATE |
|-----|-------------------------|----------|---------|----------|---------|
| A | RELEASED FOR PRODUCTION | D. J. H. | 9/12/12 | J. D. B. | 9/21/12 |



CABLE PREPARATION
USE CST-240 (3192-070)
STRAIGHT SETTING

- NOTES:
1. CONTACT PIN IS SOLDERED.
2. CRIMP THE FERRULE TO .255" HEX.

ALL PARTS SATISFIED ROHS REQUIREMENTS

| MATERIALS AND PLATING | | UNIT: MICRO-INCHES |
|-----------------------|--------------------|---------------------|
| BODY | BRASS C3604 | ALBALOY 80u"/COPPER |
| CONTACT PIN | BRASS C3604 | GOLD 50u"/COPPER |
| INSULATOR | TEFLON MIL-P-19468 | NATURAL |
| FERRULE | BRASS | ALBALOY 80u"/COPPER |

| MECHANICAL CHARACTERISTICS | |
|--------------------------------|--------------|
| Force to engage and disengage | N/A |
| Center contact retention force | 6 lbs |
| Coupling recommend torque | 4-6 in-lbs |
| Coupling nut retention force | 100 lbs |
| Durability | ≥ 500 cycles |

| ELECTRICAL CHARACTERISTICS | |
|---------------------------------|---|
| Impedance | 50 Ω |
| Voltage rating | 500V(rms) |
| Frequency range | 0~6GHz |
| Dielectric withstanding voltage | 1000V |
| Contact resistance | Center contact ≤ 2.0mΩ Outer contact ≤ 0.2mΩ |
| Insulation resistance | ≥ 5000MΩ |
| Insertion loss | According to the cable |
| RF-leakage | N/A |
| VSWR | 1.3MAX@0-6GHz |

| ENVIRONMENTAL CHARACTERISTICS | |
|-------------------------------|----------------------------------|
| Temperature range | -65°C - +165°C |
| Vibration | MIL-STD-202, Method 204, Cond. B |
| Shock | MIL-STD-202, Method 213, Cond. I |
| Corrosion | MIL-STD-202, Method 101, Cond. B |

| | | | |
|--------------|---|----------------|--|
| MATL: | UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN mm MACHINED SURFACES FINISH 1.6 RMS MAX. REMOVE ALL BURRS 0.15X45° MAX. BREAK MACHINE CORNERS 0.15X45° MAX. FILLET R. TOLERANCES ON DECIMALS .X ± 0.3 .XX ± 0.2 ANGLES ± 1/2° FRACTIONS ± N/A | DFTM. D. J. H. | TIMES MICROWAVE SYSTEMS |
| | | DATE 9/12/12 | |
| USED ON: 0-2 | DO NOT SCALE DRAWING | CHKD. J. D. B. | TC-240-TM-X "TNC" MALE FOR LMR-240 CABLE SOLDER/CRIMP/NO BRAID TRIM |
| | | DATE 9/21/12 | |
| SCALE: N/A | DWG. SIZE A | APPD. J. D. B. | SHEET 1 of 1 SD3190-2797 REV A |
| | CODE IDENT 68999 | DATE 9/21/12 | |

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) |

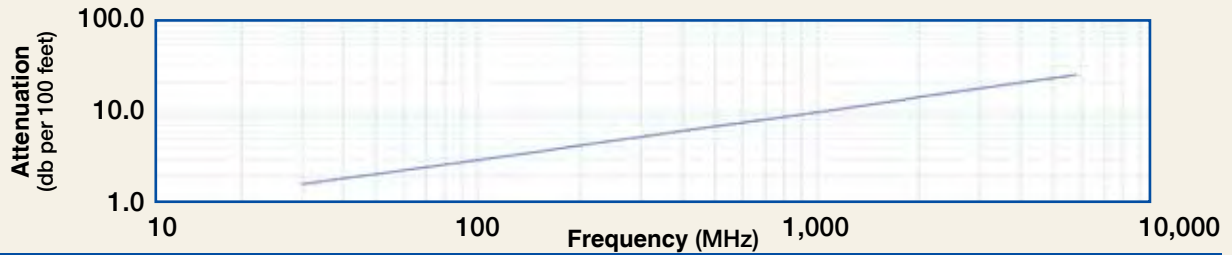
| Mechanical Specifications | | | |
|---------------------------|----------------|-------|----------|
| Performance Property | Units | US | (metric) |
| Bend Radius: installation | in. (mm) | 0.75 | (19.1) |
| Bend Radius: repeated | in. (mm) | 2.5 | (63.5) |
| Bending Moment | ft-lb (N-m) | 0.125 | (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 | |

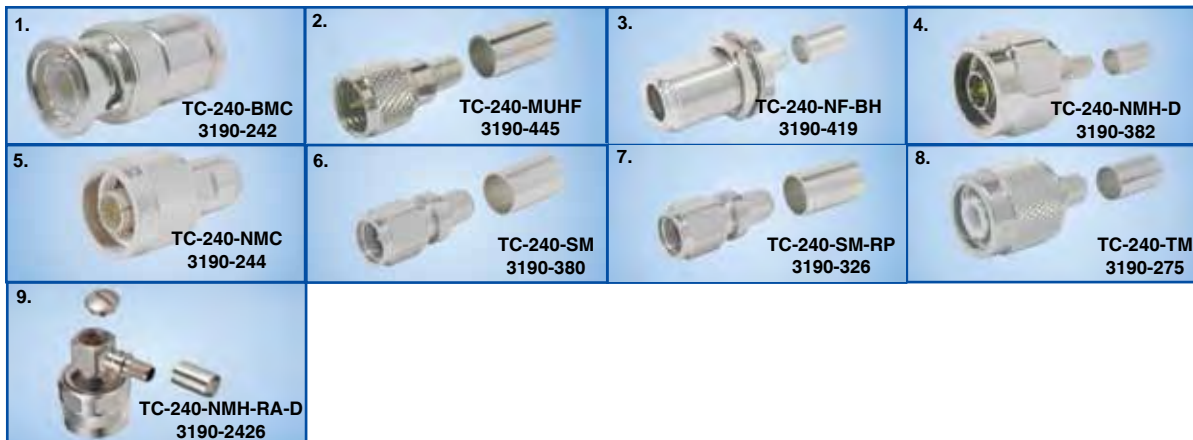
| Part Description | | | | |
|------------------|----------------|--------|-------|------------|
| Part Number | Application | Jacket | Color | Stock Code |
| LMR-240-UF | Indoor/Outdoor | TPE | Black | 54041 |

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)
 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 |

