PASTERNACK®
THE ENGINEER'S RF SOURCE

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

## RF Connectors Technical Data Sheet PE4344

## Configuration

- N Male Connector
- MIL-STD-348A
- 50 Ohms
- Straight Body Geometry
- RG8X, PE-C240, 0.240 inch, B7808A, LMR-240 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 PE4344 type N male connector with crimp/solder attachment for RG8X, PE-C240, 0.240 inch, B7808A and LMR-240 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.

Our type N male connector PE4344 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) | | | 1,000 | Vrms |

### Mechanical Specifications

**Size**

| | |
|---|---|
| Length | 1.394 in [35.41 mm] |
| Width/Dia. | 0.827 in [21.01 mm] |
| Weight | 0.068 lbs [30.84 g] |

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 RG8X, PE-C240, 0.240 inch, B7808A, LMR-240 PE4344

Pasternack Enterprises, Inc. • P.O. Box 16759, Irvine, CA 92623
**Phone:** (866) 727-8376 or (949) 261-1920 • **Fax:** (949) 261-7451
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# N Male Connector Crimp/Solder Attachment for RG8X, PE-C240, 0.240 inch, B7808A, LMR-240

## RF Connectors Technical Data Sheet PE4344

### Material Specifications

| Description | Material | Plating |
|---|---|---|
| Contact | Brass | Gold<br>30 µin minimum |
| Insulation | PTFE | |
| Body | Brass | Nickel<br>100 µin minimum |
| Coupling Nut | Brass | Nickel<br>100 µin minimum |

### Environmental Specifications

**Temperature**

| | |
|---|---|
| Operating Range | -65 to +165 deg C |

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

### Plotted and Other Data

Notes:

N Male Connector Crimp/Solder Attachment for RG8X, PE-C240, 0.240 inch, B7808A, LMR-240 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 Connector Crimp/Solder Attachment for RG8X, PE-C240, 0.240 inch, B7808A, LMR-240 PE4344

URL: https://www.pasternack.com/n-male-standard-rg8x-pe-c240-connector-pe4344-p.aspx



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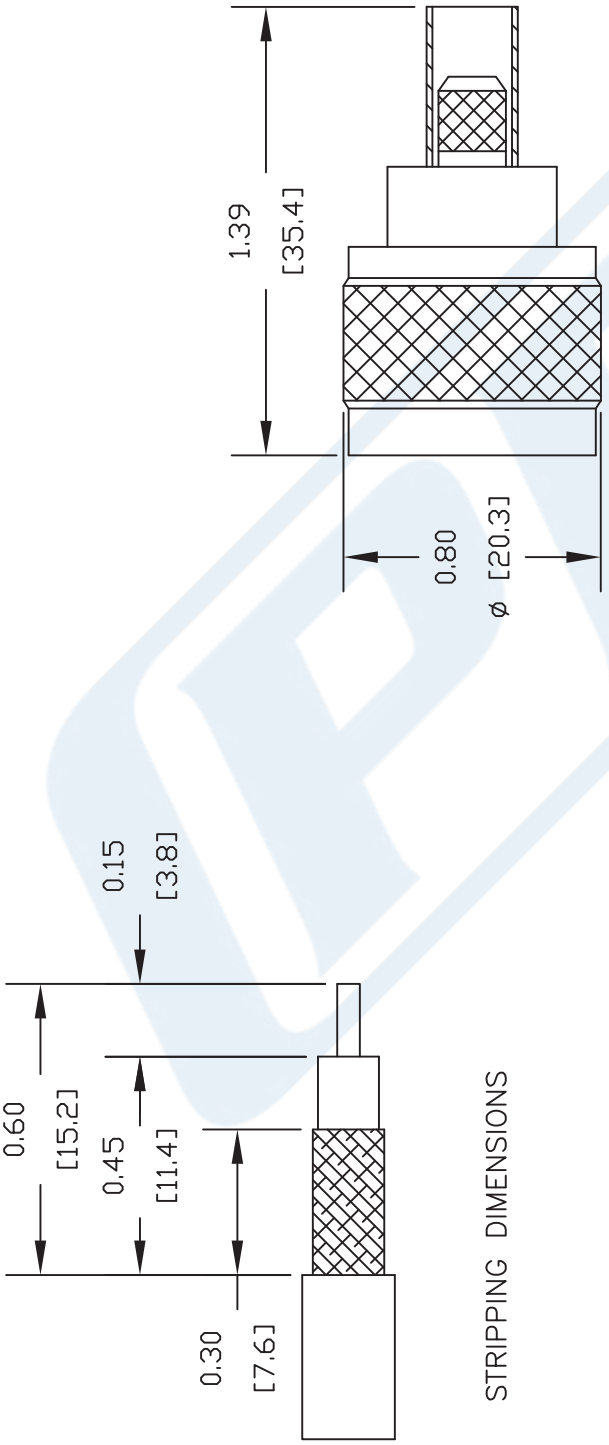
# PE4344 CAD Drawing

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




STRIPPING DIMENSIONS

CRIMP SIZES REQUIRED

CONTACT: .100" HEX CRIMP TOOL
FERRULE: .255" HEX CRIMP TOOL

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].
4. FITS MIL-C-17 AND EQUIVALENT CABLES.

| DWG TITLE | | | | | |
|---|---|---|---|---|---|
| PE4344 | REV. A | FSCM NO. 53919 | CAD FILE 050609 | SCALE N/A | SIZE A | 127 |

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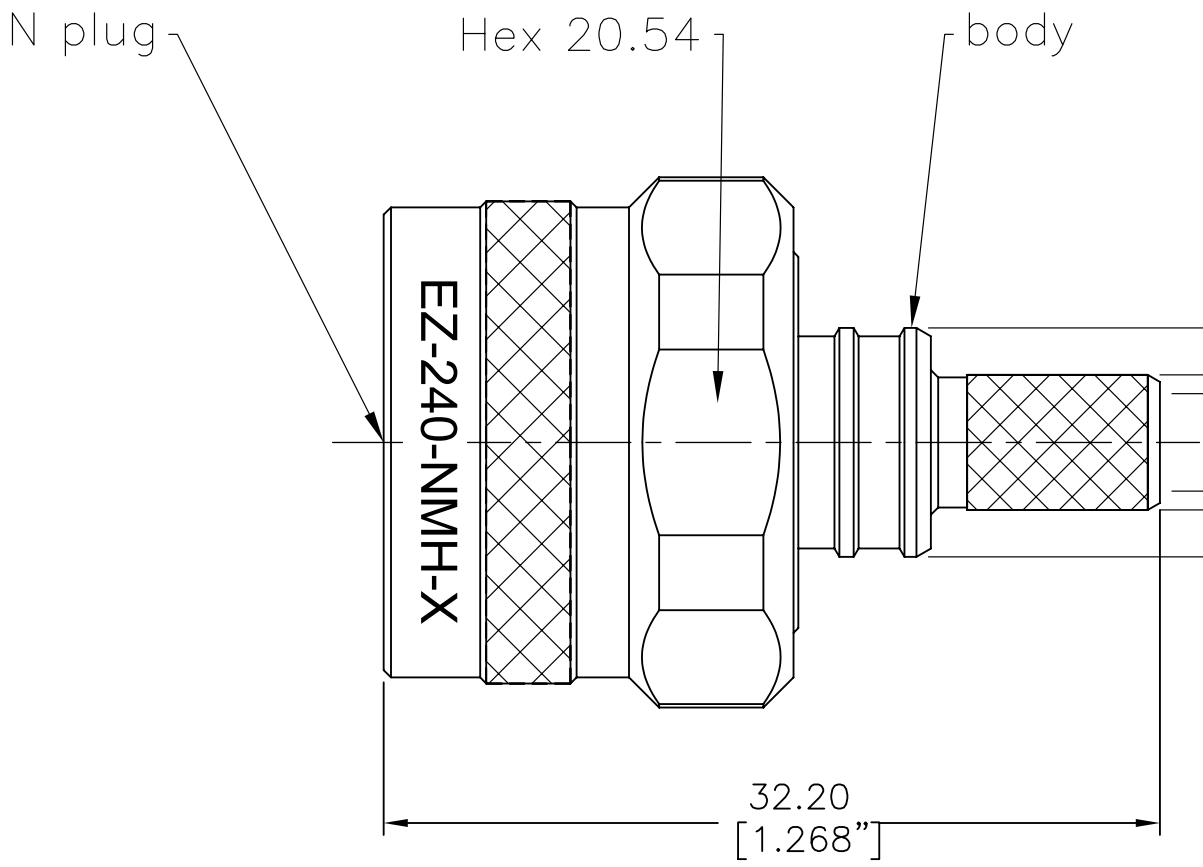



## I. MATERIALS & FINISHES

| Components | Materials | Finishes | Thk. (μ") |
|---|---|---|---|
| Body | Brass | Albaloy | 80 |
| Center Cont. | QBe2 | Gold | 50 |
| Ferrule | Brass | Albaloy | 80 |
| Nut | Brass | Albaloy | 80 |
| Insulator | PTFE | -- | -- |
| Gaskt | Silicone | -- | -- |

## II. ELECTRICAL PROPERTIES

| | |
|---|---|
| **Impedance (Ω):** | 50 |
| Frequency Range (GHz): | DC to 6 GHz |
| Working Voltage (V): | 2500 |
| Insulation Resistance (MΩ): | ≥10000 |
| VSWR: | ≤1.30 |
| Insertion Loss(dB, f/GHz): | $-0.1x\sqrt{f}$ |

## III. ENVIRONMENT PROPERTIES

| | |
|---|---|
| Temperature Range: | -40°c~+125°c |
| Thermal Shock: | MIL-STD 202G, Meth.107, Cond.B |
| Vibration: | MIL-STD 202G, Meth.204, Cond.B |
| Shock: | MIL-STD 202G, Meth.213, Cond I |
| Climatic Class: | IEC 60068 55/155/56 |
| (2002/95/EC)RoHS: | Compliant |

## IV. MECHANICAL PROPERTIES

| | |
|---|---|
| Center Cont.: | Finger Contact |
| Outer Cont.: | Crimp |
| Coupling Nut Torque (N.m): | 1.7 |
| Cbl-Connector Retention Force (N): | 250 |
| Durability (cycles): | 500 |

## V. TOOLING

Stripping Tool: 3192-152/CST-240A
Crimping Tool: 3190-667/CT-240/200/100

TIMES MICROWAVE SYSTEMS

# LMR®-240
# Flexible Low Loss Communications Coax

## Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs (e.g. WLL, GPS, LMR, Mobile Antennas)
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable


• **LMR®** standard is a UV Resistant Polyethylene jacketed cable designed for 20-year service outdoor use. The bending and handling characteristics are significantly better than air-dielectric and corrugated hard-line cables.

• **LMR®- DB** is identical to standard LMR plus has the advantage of being watertight. The addition of waterproofing compound in and around the foil/braid insures continuous reliable service should the jacket be inadvertently damaged during installation or in the future.

• **LMR®- FR** is a non-halogen (non-toxic), low smoke, fire retardant cable designed for in-building runs that can be routed anywhere except air handling plenums. LMR-FR is UL/NEC & CSA rated'CMR' and 'FT4' respectively, meets FAA FAR25 requirements and is MSHA-P for mining applications.

• **LMR®- FR-PVC** is a general-purpose indoor cable and has a UL/NEC & CSA rating of 'CMR' and 'FT4' respectively. It is less expensive than LMR-FR, however it emits toxic fumes (HCL) and greater smoke density when burned.

• **LMR®- PVC** is designed for low loss general-purpose applications and is somewhat more flexible than the standard polyethylene jacketed LMR.

• **LMR®- PVC-W** is a white-jacketed version of LMR-PVC for marine and other applications where color compatibility is desired.

• **LMR®- MA** is a flexible cable designed specifically for mobile antenna applications. It has a PVC jacket and un-bonded aluminum tape to facilitate end stripping with automated equipment.

• **Flexibility** and bendability are hallmarks of the LMR-240 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. 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 cables designed for outdoor exposure incorporate the best materials for UV resistance and have life expectancy in excess of 20 years.

• **Connectors**: A wide variety of connectors are available for LMR-240 cable, including all common interface types, reverse polarity, and a choice of solder or non-solder center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies**: All LMR-240 cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

| Part Description | | | | Stock |
|---|---|---|---|---|
| Part Number | Application | Jacket | Color | Code |
| LMR-240 | Outdoor | PE | Black | 54021 |
| LMR-240-DB | Outdoor/Watertight | PE | Black | 54090 |
| LMR-240-FR | Indoor/Outdoor Riser CMR | FRPE | Black | 54029 |
| LMR-240-FR-PVC | Indoor/Outdoor Riser CMR | FRPVC | Black | 54214 |
| LMR-240-PVC | General Purpose | PVC | Black | 54140 |
| LMR-240-PVC-W | General Purpose | PVC | White | 54202 |
| LMR-240-MA | Indoor & Mobile Antenna | PVC | Black | 54046 |

| Construction Specifications | | | |
|---|---|---|---|
| Description | Material | In. | (mm) |
| Inner Conductor | Solid BC | 0.056 | (1.42) |
| Dielectric | Foam PE | 0.150 | (3.81) |
| Outer Conductor | Aluminum Tape | 0.155 | (3.94) |
| Overall Braid | Tinned Copper | 0.178 | (4.52) |
| Jacket | (see table above) | 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) | 0.25 | (0.34) |
| Weight | lb/ft (kg/m) | 0.034 | (0.05) |
| Tensile Strength | lb (kg) | 80 | (36.3) |
| Flat Plate Crush | lb/in. (kg/mm) | 20 | (0.36) |

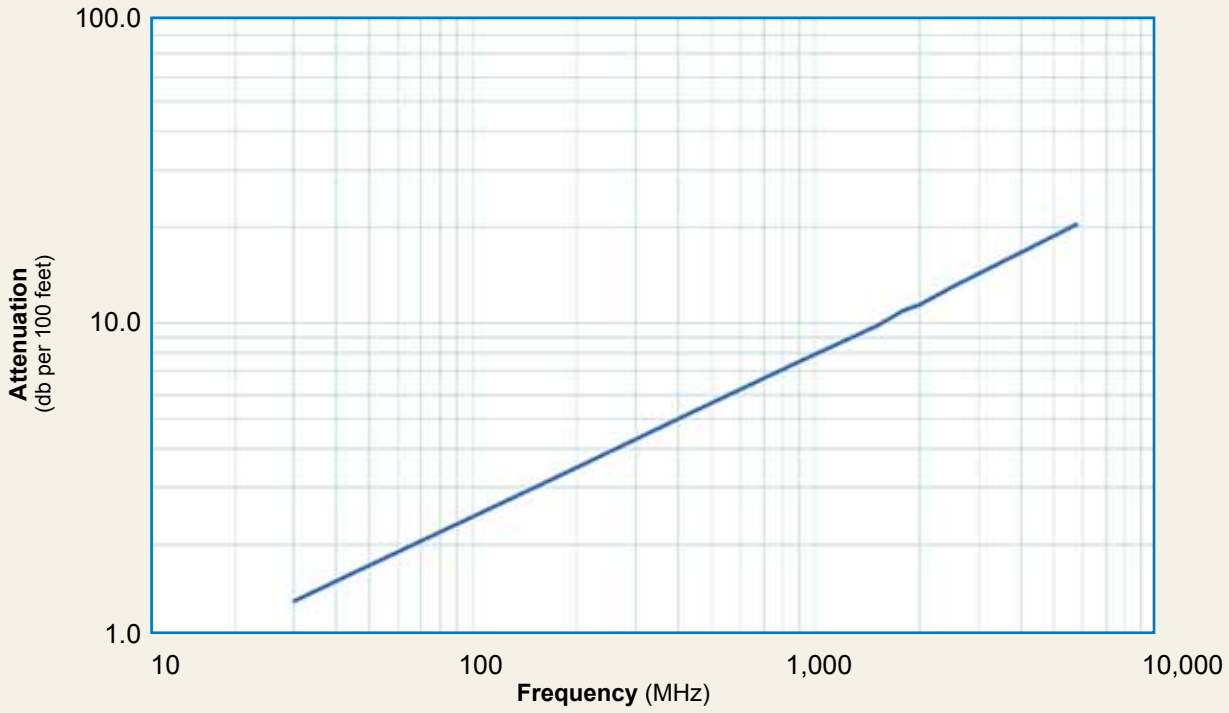
## Environmental Specifications

| 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) |
|---|---|---|---|
| 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) | 3.2 | (10.5) |
| Outer Conductor | ohms/1000ft (/km) | 3.89 | (12.8) |
| Voltage Withstand | Volts DC | 1500 | |
| Jacket Spark | Volts RMS | 5000 | |
| Peak Power | kW | 5.6 | |

## Attenuation vs. Frequency (typical)




| Frequency (MHz) | 30 | 50 | 150 | 220 | 450 | 900 | 1500 | 1800 | 2000 | 2500 | 5800 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Attenuation dB/100 ft** | 1.3 | 1.7 | 3.0 | 3.7 | 5.3 | 7.6 | 9.9 | 10.9 | 11.5 | 12.9 | 20.4 |
| **Attenuation dB/100 m** | 4.4 | 5.7 | 9.9 | 12.0 | 17.3 | 24.8 | 32.4 | 35.6 | 37.7 | 42.4 | 66.8 |
| **Avg. Power kW** | 1.49 | 1.15 | 0.66 | 0.54 | 0.38 | 0.26 | 0.20 | 0.18 | 0.17 | 0.15 | 0.10 |

**Calculate Attenuation =**

$(0.242080) \cdot \sqrt{FMHz} + (0.000330) \cdot FMHz$ (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

TIMES MICROWAVE SYSTEMS

# LMR®-240
# Flexible Low Loss Communications Coax


## Connectors

| Interface | Description | Part Number | Stock Code | VSWR** Freq. (GHz) | Coupling Nut | Inner Contact Attach | Outer Contact Attach | Finish* Body /Pin | Length in | Length (mm) | Width in | Width (mm) | Weight lb | Weight (g) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F Male | Straight Plug | TC-240-FM | 3190-924 | <1.25:1 (2.5) | Knurl | Solder | Crimp | N/G | 1.1 | (28) | 0.45 | (11.4) | 0.014 | (6.4) |
| N Male | Straight Plug | EZ-240-NMH-D | 3190-1127 | <1.25:1 (2.5) | Hex/Knurl | Spring Finger | Crimp | A/G | 1.5 | (38.1) | 0.78 | (19.8) | 0.086 | (39.0) |
| N Male | Right Angle | TC-240-NM-RA | 3190-2426 | <1.35:1 (6) | Hex | Solder | Crimp | A/G | 1.3 | (32.4) | 1.22 | (31.0) | 0.092 | (41.7) |
| 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) |
| N Male | Straight Plug | TC-240-NMH-D | 3190-382# | <1.25:1 (2.5) | Hex/Knurl | Solder | Crimp | N/S | 1.5 | (38) | 0.75 | (19.1) | 0.086 | (39.0) |
| 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) |
| 1.0/2.3 DIN | Straight Plug | EZ-240-1023M | 3190-2512 | <1.35:1 (2.5) | knurl | Spring Finger | Crimp | N/G | 1.1 | (228.5) | 0.33 | (8.5) | 0.014 | (6.63) |
| 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) |
| N Female | Panel Mount | TC-240-NF-BHF(A) | 3190-866# | <1.25:1 (2.5) | NA | Solder | Crimp | A/G | 1.7 | (44) | 0.88 | (22.2) | 0.115 | (52.2) |
| 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) |
| BNC Male | Straight Plug | TC-240-BM(A) | 3190-867 | <1.25:1 (2.5) | Knurl | Solder | Crimp | A/G | 1.7 | (43) | 0.5 6 | (14.2) | 0.043 | (19.5) |
| TNC Male | Straight Plug | EZ-240-TM | 3190-1128 | <1.25:1 (2.5) | Knurl | Spring Finger | Crimp | N/G | 1.4 | (34.3) | 0.59 | (15.0) | 0.043 | (19.5) |
| TNC Male | Straight Plug | TC-240-TM | 3190-275 | <1.25:1 (2.5) | Knurl | Solder | Crimp | N/G | 1.7 | (43) | 0.59 | (15.0) | 0.043 | (19.5) |
| TNC Male | Right Angle | TC-240-TM-RA | 3190-604 | <1.35:1 (2.5) | Knurl | Solder | Crimp | N/G | 1.3 | (33) | 0.57 | (14.5) | 0.055 | (24.9) |
| TNC Male | Reverse Polarity | EZ-240-TM-RP | 3190-970 | <1.25:1 (2.5) | Knurl | Spring Finger | Crimp | A/G | 1.4 | (36) | 0.59 | (15.0) | 0.043 | (19.5) |
| QMA Male | Straight Plug | EZ-240-QM | 3190-1533 | <1.25: (6) | Knurl | Spring Finger | Crimp | N/G | 1.2 | (30.0) | 0.41 | (10.5) | 0.014 | (6.35) |
| QMA Male | Right Angle | EZ-240-QM-RA | 3190-1539 | <1.25: (<6) | Knurl | Spring Finger | Crimp | N/G | 0.8 | (20.3) | 0.65 | (16.5) | 0.019 | (8.62) |
| SMA Male | Straight Plug | EZ-240-SM | 3190-1530 | <1:25: (6) | Hex | Spring Finger | Crimp | N/G | 1.0 | (25.4) | 0.32 | (8.1) | 0.016 | (7.26) |
| 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) |
| SMA Male | Right Angle | TC-240-SM-RA | 3190-381# | <1.35:1 (6) | Hex | Solder | Crimp | SS/G | 0.8 | (20) | 0.65 | (16.5) | 0.019 | (8.6) |
| 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) |
| SMA Female | Bulkhead Jack | TC-240-SF-BH | 3190-824# | <1.25:1 (2.5) | NA | Solder | Crimp | SS/G | 1.1 | (29) | 0.31 | (7.9) | 0.019 | (8.6) |
| 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) |

* 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


TC-240-SM-RA


TC-240-SM-RP


TC-240-SF-BH


TC-240-MUHF


EZ-240-QM


EZ-240-QM-RA


EZ-240-SM


TC-240-NF-BHF (A)


GK-S240TT

## Hardware Accessories

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


CCT-01


RB-CST


DBT-U


CT-240/200/195/100


CST-240

## 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 |
| Strip Tool | CST-240 | 3192-070 | Strip tool |
| Deburr Tool | DBT-U | 3192-001 | Removes center conductor rough edges |
| Cutting Tool | CCT-01 | 3190-1544 | Cable end flush cut tool |
| Replacement Blade | RB-01 | 3190-1609 | Replacement blade for cutting tool |
| Replacement | RB-CST | 3192-086 | Replacement blade kit for all CST strip tools |