



TNC Male Right Angle Connector Crimp/Solder  
Attachment For RG8X, PE-C240, 0.240 inch

**TECHNICAL DATA SHEET**

**PE44635**

**TNC Male Right Angle Connector Crimp/Solder Attachment For RG8X, PE-C240, 0.240 inch**

**Configuration**

|                                          |                           |
|------------------------------------------|---------------------------|
| Connector                                | TNC Male                  |
| Connector Interface Type                 | RG8X, PE-C240, 0.240 inch |
| Cable Attachment Method (Shield/Contact) | Crimp/Solder              |
| Body Style                               | Right Angle               |

**Electrical Specifications**

|                 |    |
|-----------------|----|
| Impedance, Ohms | 50 |
|-----------------|----|

**Mechanical Specifications**

**Size**

|                     |               |
|---------------------|---------------|
| Length, in [mm]     | 1.103 [28.02] |
| Width/Dia., in [mm] | 0.59 [15]     |
| Height, in [mm]     | 1.06 [26.92]  |
| Weight, lbs [g]     | 0.042 [19.05] |

**Connector**

|                                   |               |
|-----------------------------------|---------------|
| Type                              | TNC Male      |
| Contact Material and Plating      | Brass, Gold   |
| Coupling Nut Material and Plating | Brass, Nickel |
| Body Material and Plating         | Brass, Nickel |
| Dielectric Type                   | Teflon        |

**Compliance Certifications** (visit [www.Pasternack.com](http://www.Pasternack.com) for current document)

|                |     |
|----------------|-----|
| RoHS Compliant | Yes |
|----------------|-----|

**Plotted and Other Data**

|        |                            |
|--------|----------------------------|
| Notes: | Values at 25 °C, sea level |
|--------|----------------------------|

URL: <http://www.pasternack.com/tnc-male-standard-rg8x-pe-c240-0.240-connector-pe44635-p.aspx>

TNC Male Right Angle Connector Crimp/Solder Attachment For RG8X, PE-C240, 0.240 inch from Pasternack Enterprises has same day shipment for domestic and International orders. We maintain 99% availability of the industry's broadest selection of RF, microwave and fiber optic products.

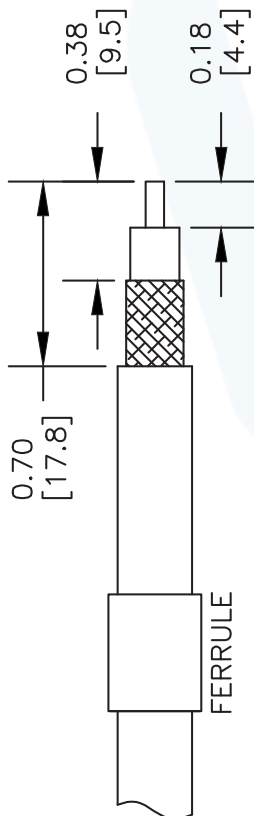
The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Pasternack reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal.

# PE44635 CAD Drawing

TNC Male Right Angle Connector Crimp/Solder  
Attachment For RG8X, PE-C240, 0.240 inch

## ASSEMBLY PROCEDURES

1. STRIP CABLE AS SHOWN. SLIDE FERRULE OVER CABLE.



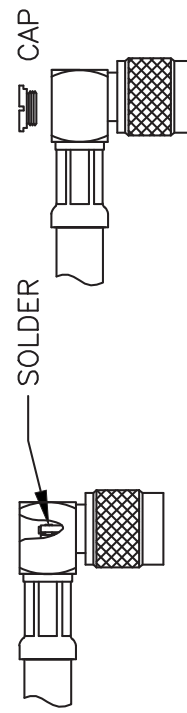
2. FLAIR BRAID AND INSERT THE STRIPPED CABLE INTO BODY AND POSITION THE CENTER CONDUCTOR IN THE SLOT OF THE CENTER PIN.



3. SLIDE FERRULE OVER BRAID UP TO THE CONNECTOR BODY AND CRIMP AS CLOSE TO THE CONNECTOR BODY AS POSSIBLE USING A .255" HEX CRIMP TOOL.



4. SOLDER THE CENTER CONDUCTOR OF THE CABLE TO THE CENTER PIN. TIGHTEN DOWN THE CAP INTO THE REAR APERTURE OF THE BO



DWG TITLE

PE44635

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.

REV. B

FSCM NO. 53919

CAD FILE 012012-B

SCALE N/A

SIZE A

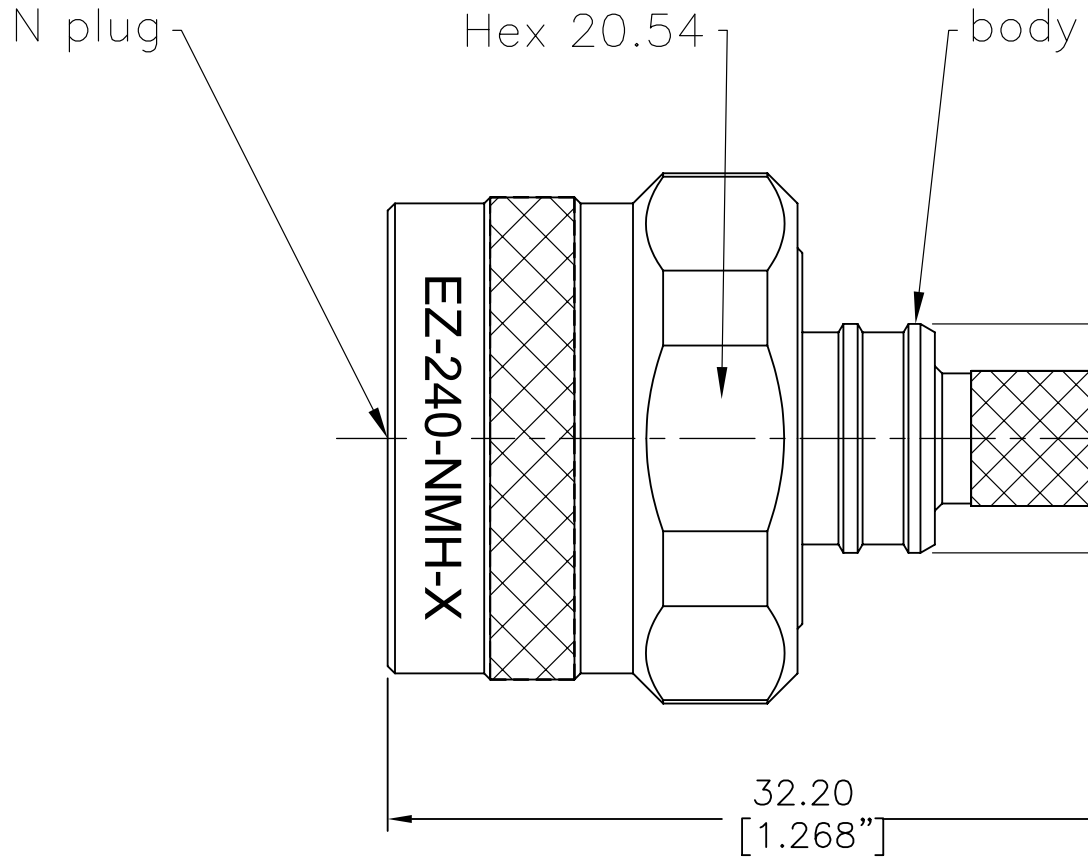
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### I. MATERIALS & FINISHES

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

### 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                      |

### V. TOOLING

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

### 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 √f    |

### 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            |

# LMR<sup>®</sup>-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<sup>®</sup>** 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<sup>®</sup>-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<sup>®</sup>-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<sup>®</sup>-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<sup>®</sup>-PVC** is designed for low loss general-purpose applications and is somewhat more flexible than the standard polyethylene jacketed LMR.
- **LMR<sup>®</sup>-PVC-W** is a white-jacketed version of LMR-PVC for marine and other applications where color compatibility is desired.
- **LMR<sup>®</sup>-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 |

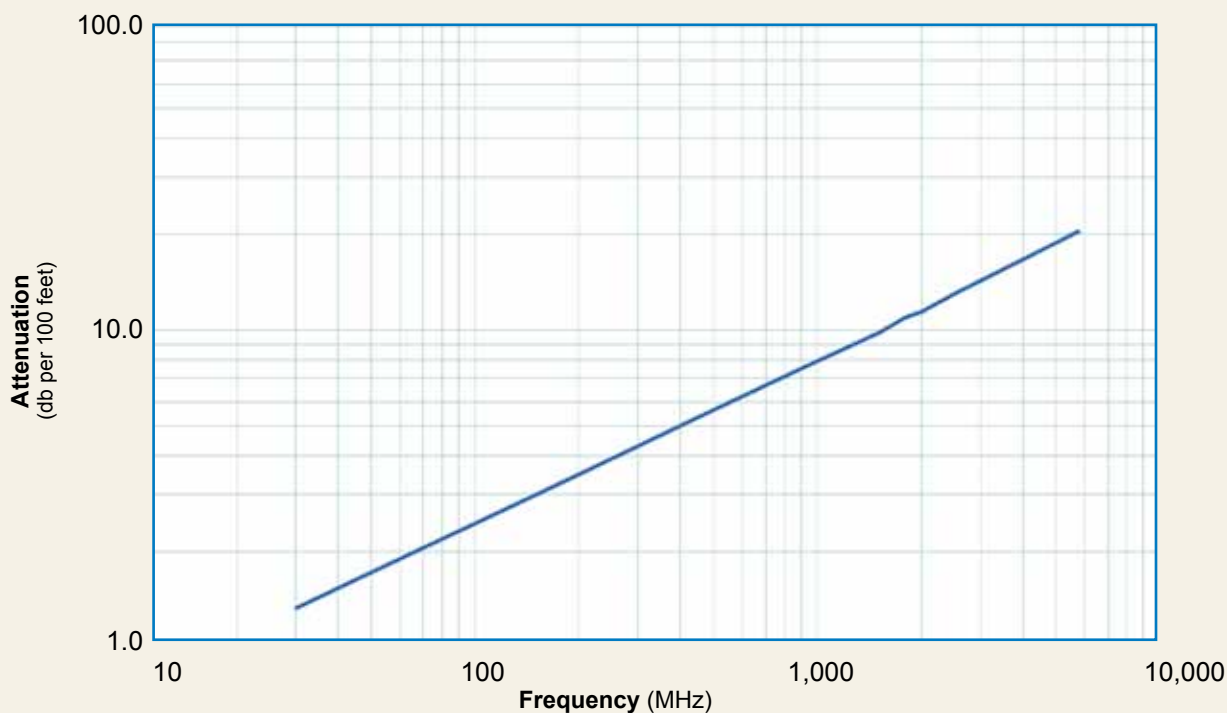
| Construction Specifications |                   |       |        |
|-----------------------------|-------------------|-------|--------|
| Description                 | Material          | In.   | (mm)   |
| Inner Conductor             | Solid BC          | 0.056 | (1.42) |
| Dielectric                  | 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 |
|------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| <b>Attenuation dB/100 ft</b> | 1.3  | 1.7  | 3.0  | 3.7  | 5.3  | 7.6  | 9.9  | 10.9 | 11.5 | 12.9 | 20.4 |
| <b>Attenuation dB/100 m</b>  | 4.4  | 5.7  | 9.9  | 12.0 | 17.3 | 24.8 | 32.4 | 35.6 | 37.7 | 42.4 | 66.8 |
| <b>Avg. Power kW</b>         | 1.49 | 1.15 | 0.66 | 0.54 | 0.38 | 0.26 | 0.20 | 0.18 | 0.17 | 0.15 | 0.10 |

**Calculate Attenuation =**

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

# LMR<sup>®</sup>-240 Flexible Low Loss Communications Coax



## Connectors

| Interface   | Description      | Part Number      | Stock Code | VSWR**<br>Freq. (GHz) | Coupling<br>Nut | Inner<br>Contact<br>Attach | Outer<br>Contact<br>Attach | Finish*<br>Body /Pin | Length<br>in (mm) | Width<br>in (mm) | Weight<br>lb (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 (28.5)        | 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)          | 0.56 (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)     |
| QM Male     | Straight Plug    | EZ-240-QM        | 3190-1533  | <1.25:1 (6)           | Knurl           | Spring Finger              | Crimp                      | N/G                  | 1.2 (30.0)        | 0.41 (10.5)      | 0.014 (6.35)     |
| QM Male     | Right Angle      | EZ-240-QM-RA     | 3190-1539  | <1.25:1 (<6)          | Knurl           | Spring Finger              | Crimp                      | N/G                  | 0.8 (20.3)        | 0.65 (16.5)      | 0.019 (8.62)     |
| SM Male     | Straight Plug    | EZ-240-SM        | 3190-1530  | <1.25:1 (6)           | Hex             | Spring Finger              | Crimp                      | N/G                  | 1.0 (25.4)        | 0.32 (8.1)       | 0.016 (7.26)     |
| SM 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)      |
| SM 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)      |
| SM 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=Alloy \*\*VSWR spec based on 3 foot cable with a connector pair \*Available in bulk pack



## 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 |
| Strip Tool        | CST-240            | 3192-070   | Strip tool                                          |
| Debur 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       |