



## QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, PE-C240

### RF Connectors Technical Data Sheet

PE45222

#### Configuration

- Snap-On QN Male Connector
- 50 Ohms
- Straight Body Geometry
- LMR-240, PE-C240 Interface Type
- Crimp/Solder Attachment

#### Features

- Max. Operating Frequency 6 GHz
- Excellent VSWR of 1.2:1
- Silver Plated Brass Contact
- Operates to 6 GHz
- Quick Locking Snap On Connection
- Reduced connector to connector spacing
- 100 mating cycles
- No torque wrench required
- 360 degree rotation capability

#### Applications

- General Purpose Test
- Custom Cable Assemblies
- Telecommunication system
- Rack and Panel Mount Applications
- High connection density systems

#### Description

Pasternack's PE45222 QN male snap-on connector with crimp/solder attachment for LMR-240 and PE-C240 is part of our full line of RF components available for same-day shipping. Our QN male connector operates up to a maximum frequency of 6 GHz and offers excellent VSWR of 1.2:1. Pasternack's PE45222 Snap-On QN Male connector is part of our full line of RF connectors available for same-day shipping. Our Male QN connector operates to 6 GHz. The PE45222 provides excellent VSWR of 1.2:1 maximum to 6 GHz. The PE45222 Pasternack RF connector is designed for use with LMR-240 and PE-C240 and is attached to the body using a crimp connection and the center contact employs a solder connection.

QN connectors allow for an easy snap-on connection that securely locks in place for an easy mating reliable connection. In addition to the time savings offered by the Snap-On interface the QN interface allow for a tighter density than a Threaded N interface which requires the use of a torque wrench to properly complete the connection. The QN interface is operational to 6 GHz when used on LMR-240 Coaxial cable. This QN connector is QLF approved and insures intermateability with other QLF QN products.

Our QN male connector PE45222 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		6	GHz
VSWR			1.2:1	
Insertion Loss			0.12	dB
Operating Voltage (AC)			500	Vrms
Dielectric Withstanding Voltage (AC)			1,500	Vrms
Insulation Resistance	5,000			MOhms

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, PE-C240 PE45222](#)



QN Male Snap-On Connector Crimp/Solder  
Attachment for LMR-240, PE-C240

RF Connectors  
Technical Data Sheet

PE45222

Electrical Specification Notes:  
Insertion Loss Calculation: .048 vF(GHz) dB

**Mechanical Specifications**

**Size**

Length	1.38 in [35.05 mm]
Width/Dia.	0.75 in [19.05 mm]
Weight	0.042 lbs [19.05 g]
Mating Cycles	100 Cycles

**Material Specifications**

Description	Material	Plating
Contact	Brass	Silver
Insulation	PTFE	
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal

**Environmental Specifications**

**Temperature**

Operating Range	-55 to +125 deg C
Hermetic Seal	ATM. cm3/s

**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: [QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, PE-C240 PE45222](#)



## QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, PE-C240

### RF Connectors Technical Data Sheet

PE45222

QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, 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.

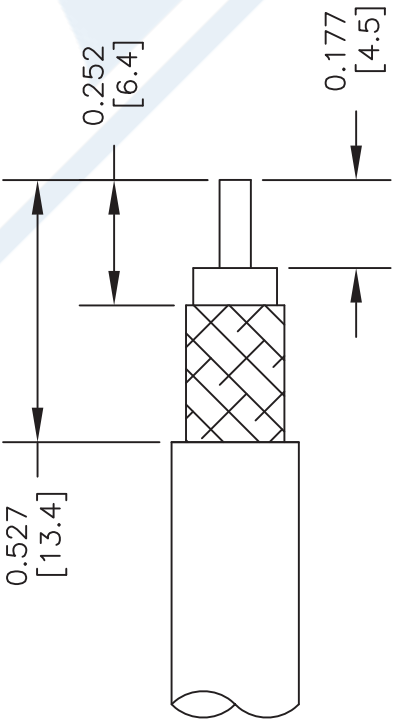
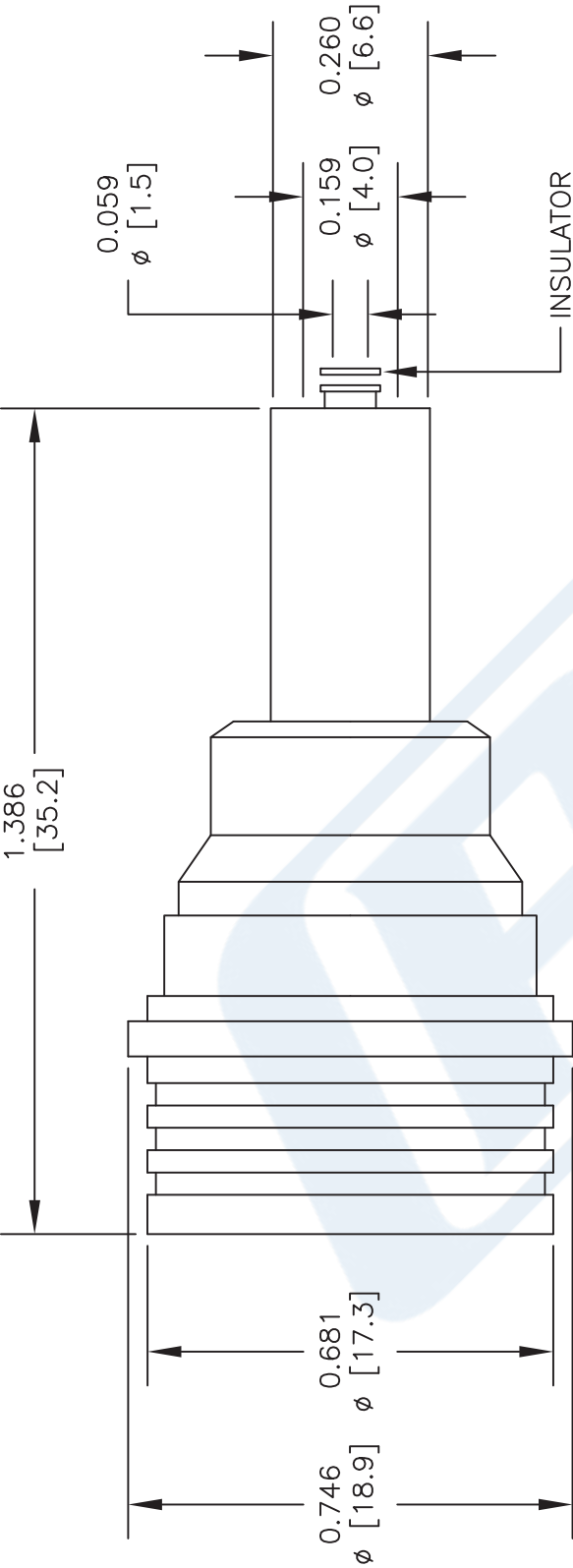
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, PE-C240 PE45222](https://www.pasternack.com/qn-male-snap-on-lmr-240-pe-c240-connector-pe45222-p.aspx)

URL: <https://www.pasternack.com/qn-male-snap-on-lmr-240-pe-c240-connector-pe45222-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.

PE45222 CAD Drawing

QN Male Snap-On Connector Crimp/Solder Attachment for LMR-240, PE-C240



STRIPPING DIMENSIONS  
CRIMP SIZE REQUIRED  
CONTACT: SOLDER  
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  
**PE45222**

**PE PASTERNAK®**  
THE ENGINEER'S RF SOURCE  
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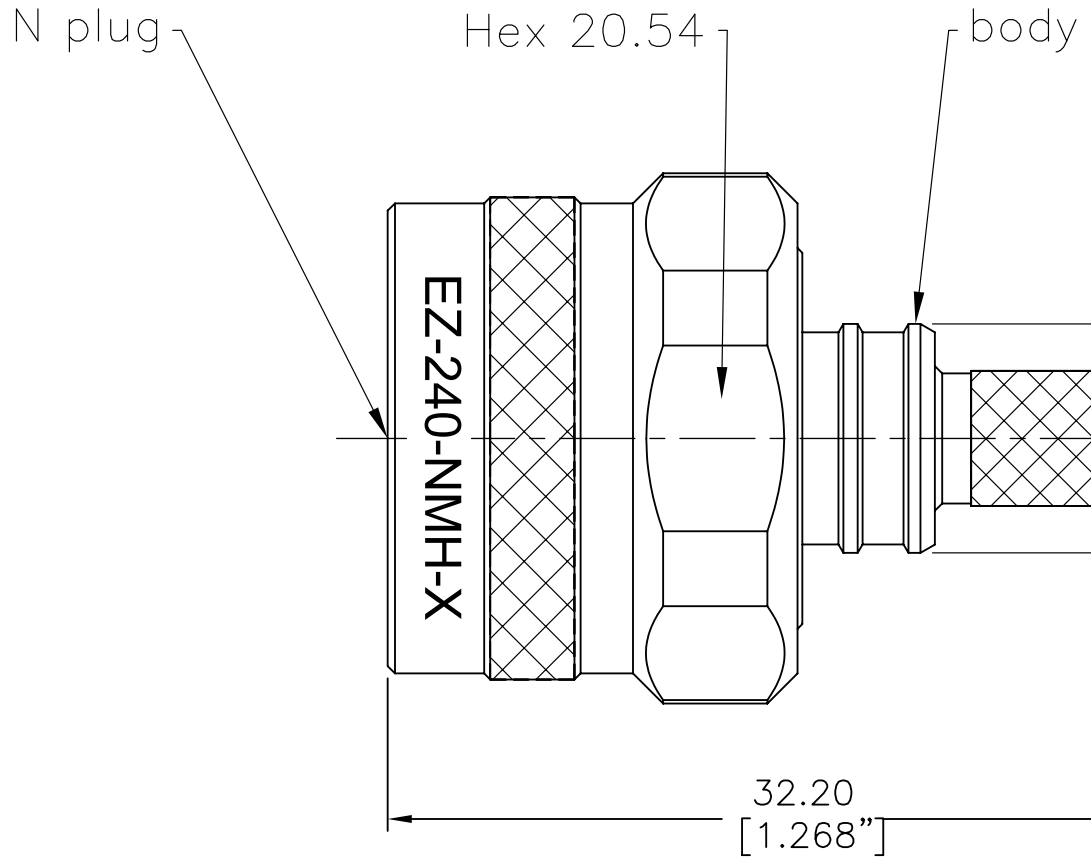
FSCM NO. 53919

CAD FILE 022516

SCALE N/A

SIZE A

2233



### 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®-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)

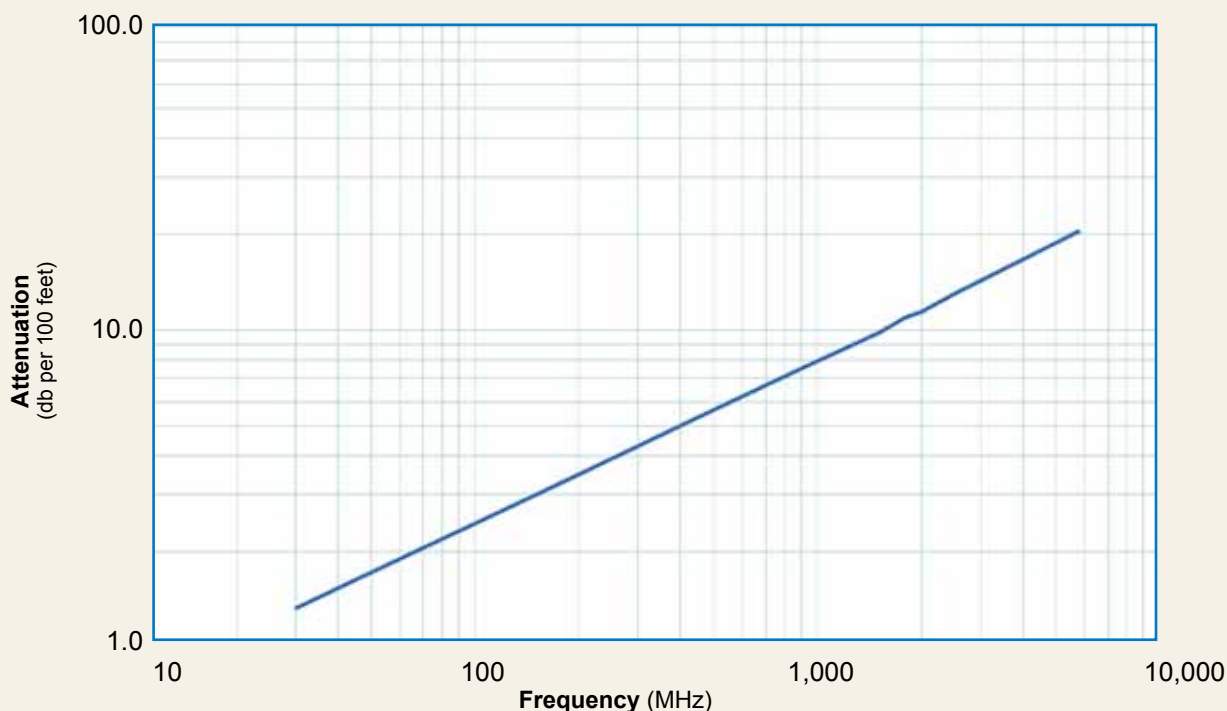
### Environmental Specifications

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
<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** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight 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