



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

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 80 µin minimum
Insulation	PTFE	
Body	Brass	Tri-Metal 80 µin minimum
Crimp Sleeve	Brass	Tri-Metal 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

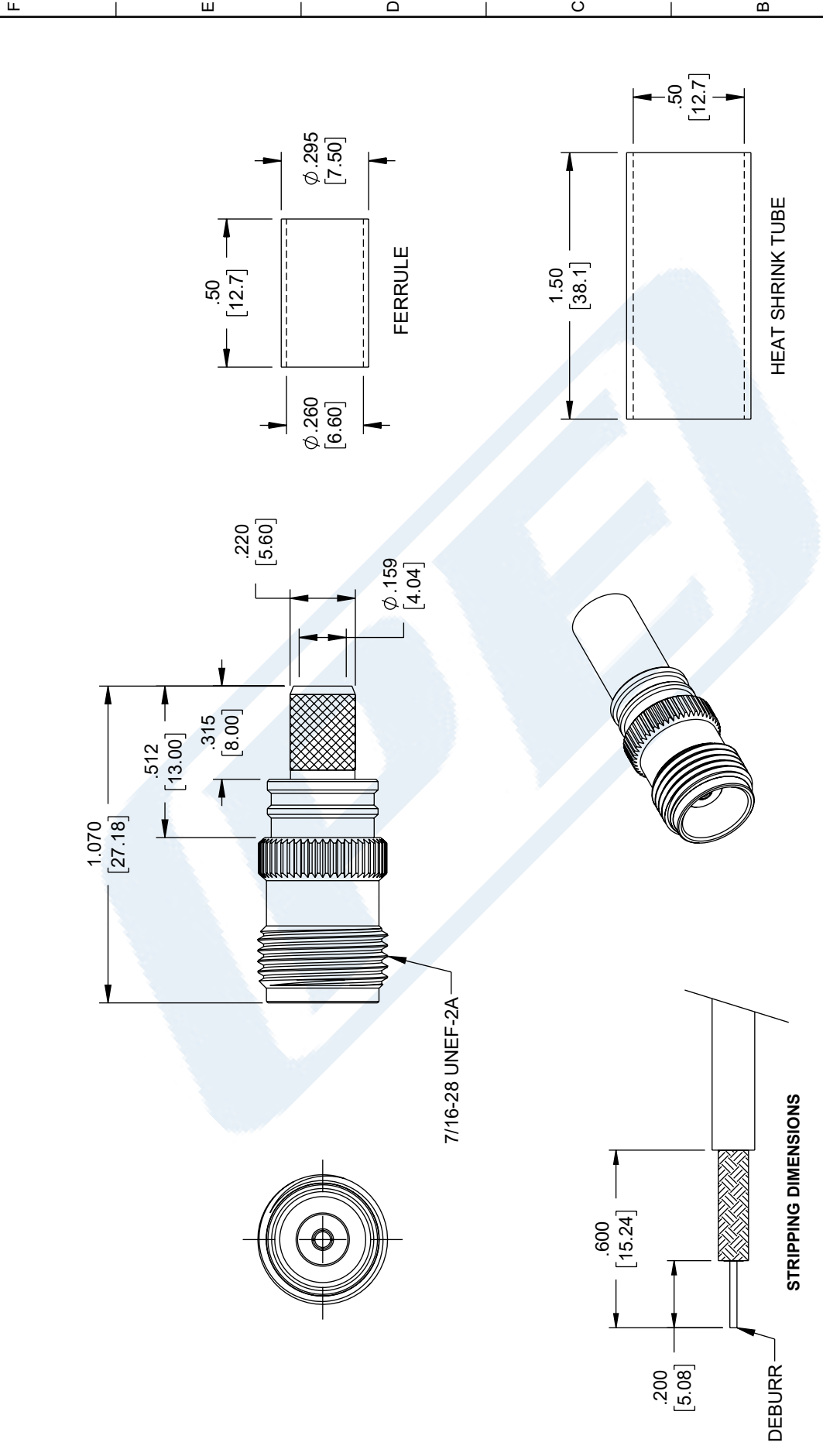
TNC Female Connector Crimp/Non-Solder Contact Attachment for LMR-240, LMR-240-DB, LMR-240-UF, LMR-240-FR, RG8X, PE-C240 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of 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](https://www.pasternack.com/tnc-female-lmr-240-lmr-240-db-connector-ez-240-tf-x-p.aspx)

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



PE PASTERNAK
an INFINITI® brand

Website: www.Pasternack.com
Phone: 1.866.727.8376 | 1.949.261.1920

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

SCALE: NONE SHEET: 1 OF 1

INTERPRET ALL DIMENSIONS AND TOLERANCES PER ASME Y14.5

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

ALL DIMENSIONS ARE FOR REFERENCE ONLY AND SUBJECT TO CHANGE WITHOUT NOTICE

ITEM NO. EZ-240-TF-X

REV A

NOTES:

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

STRIPPING DIMENSIONS

DEBURR

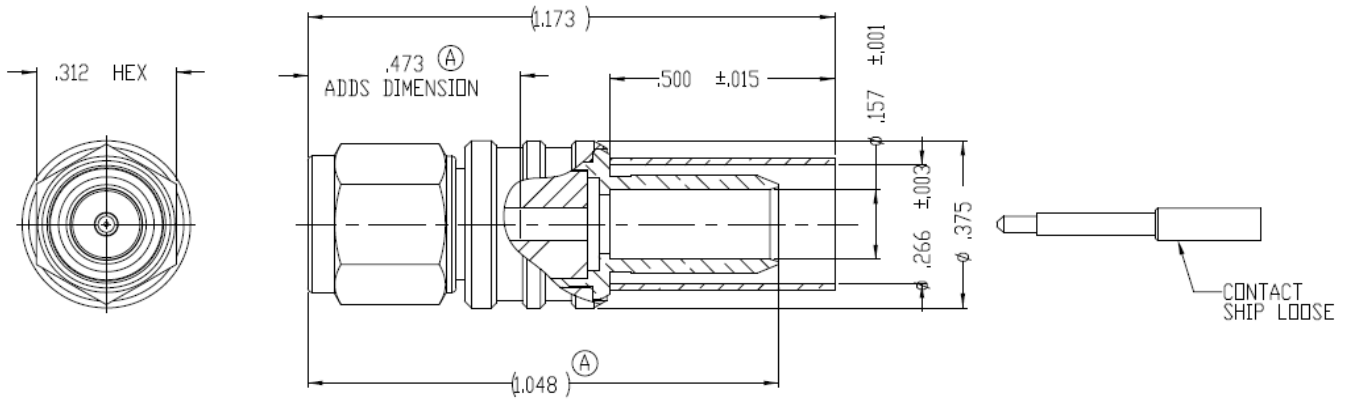
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HEAT SHRINK TUBE

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SYM	REVISION DESCRIPTION	DFTM	DATE	APPD	DATE
A	RELEASED FOR PRODUCTION	N. N. N	9/4/13	J. D. B.	9/10/13



NOTES:

- ASSEMBLED CONNECTOR INTERFACE IS DESIGNED IN ACCORDANCE WITH MIL-STD-348
- MATERIAL:**

CLAMP & CONTACT - BRASS PER ASTM B16, C36000 ALLOY, TEMPER H02
 BODY, CNUT - STAINLESS STEEL PER ASTM 582, S30300 ALLOY, COND. A
 INSULATOR - TEFLON PER ASTM D1710, TYPE 1, GRADE 1, CLASS A
 GASKET - SILICONE RUBBER PER A-A-59588, 50-75 DUROMETER
 SHRINK SLEEVE - HEAT SHRINKABLE ATUM PER MIL-I-23053/4 (NOT SHOWN)
 CRIMP SLEEVE - D.H.P. COPPER CDA, ALLOY #122, TEMPER HARD
 CONTACT & LOCKING RING - BERYLLIUM COPPER PER ASTM B196, C17300 ALLOY, CONDITION HT

- FINISH:**
 CONTACT - GOLD PLATE PER ASTM B488
 CRIMP SLEEVE - SULFAMATE NICKEL PER MIL-P-27418
 CLAMP - NICKEL PLATE PER AMS-QQ-N-290
 C'NUT & BODY - PASSIVATE PER SAE-AMS-2700

MATL:	UNLESS OTHERWISE SPECIFIED		DFTM. N. N. N	TIMES MICROWAVE SYSTEMS	
	ALL DIMENSIONS ARE IN INCHES MACHINED SURFACES FINISH 63 RMS MAX. REMOVE ALL BURRS .004 MAX. BREAK MACHINE CORNERS .005 MAX. FILLET R. TOLERANCES ON DECIMALS . XX ± .01 . XXX ± .005 ANGLES ± 1° FRACTIONS ± 1/64		DATE 9/4/13		
USED ON: A	DO NOT SCALE DRAWING		CHKD. J. D. B.	TC-240-SM-SS-X CONNECTOR ASSEMBLY SMAM for LMR-240	
			DATE 9/10/13		
SCALE: NONE	DWG. SIZE A	CODE IDENT 68999	APPD. J. D. B.	DATE 9/10/13	1 of 1 SD3190-2898 A

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)

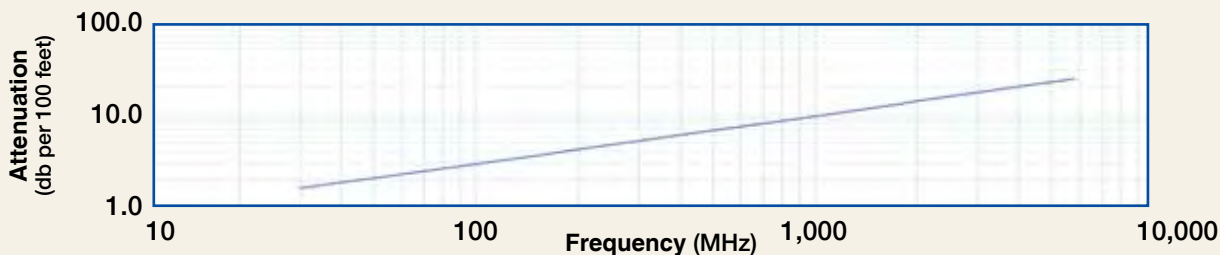
Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	0.75	(19.1)
Bend Radius: repeated	in. (mm)	2.5	(63.5)
Bending Moment	ft-lb (N-m)	0.125	(0.17)
Weight	lb/ft (kg/m)	0.034	(0.05)
Tensile Strength	lb (kg)	80	(36.3)
Flat Plate Crush	lb/in. (kg/mm)	13	(0.23)

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

