



SMA Male Connector Crimp/Non-Solder Contact Attachment for LMR-240, PE-C240

RF Connectors Technical Data Sheet



EZ-240-SM-X

Times Microwave Systems Connector Specification

Configuration

- SMA Male Connector
- MIL-STD-348
- 50 Ohms
- Straight Body Geometry
- Connector Interface Types: LMR-240, PE-C240
- 5/16 Inch Hex

Features

- Max. Operating Frequency 6 GHz
- Good VSWR of 1.3:1
- Gold Plated Beryllium Copper Contact
- Contact plating according to ASTM B488

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's EZ-240-SM-X SMA male connector with crimp/non-solder contact attachment for LMR-240 and PE-C240 is part of our full line of RF components available for same-day shipping. Our SMA male connector operates up to a maximum frequency of 6 GHz and offers good VSWR of 1.3:1.

Our SMA male connector EZ-240-SM-X 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			1.3:1	
Insertion Loss			0.25	dB
Operating Voltage (AC)			1,000	Vrms
Insulation Resistance	10,000			MOhms

Mechanical Specifications

Size

Length	1.17 in [29.72 mm]
Width/Dia.	0.375 in [9.53 mm]
Weight	0.02 lbs [9.07 g]

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



SMA Male Connector Crimp/Non-Solder Contact
Attachment for LMR-240, PE-C240

RF Connectors
Technical Data Sheet



EZ-240-SM-X

Material Specifications

Description	Material	Plating
Contact	Beryllium Copper	Gold ASTM B488
Insulation	PTFE	
Outer Conductor	Brass	Tri-Metal
Body	Brass	Tri-Metal
Coupling Nut	Brass	Tri-Metal

Environmental Specifications

Temperature

Operating Range

-40 to +125 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:

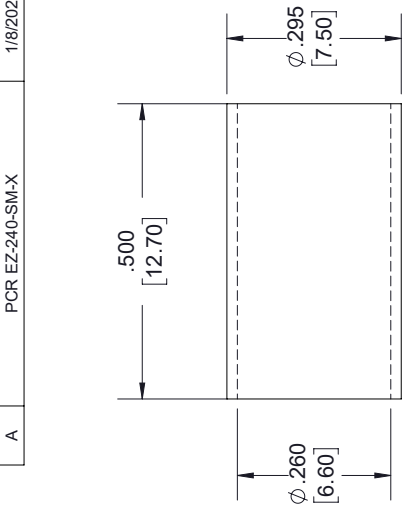
SMA Male Connector Crimp/Non-Solder Contact Attachment for LMR-240, PE-C240 from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

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

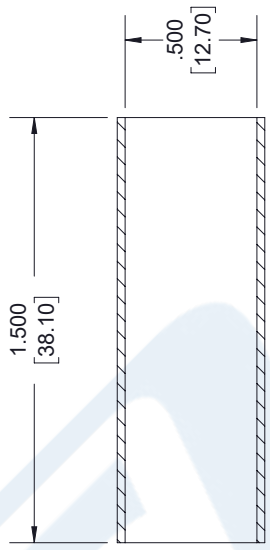
URL: <https://www.pasternack.com/sma-male-standard-lmr-240-pe-c240-connector-ez-240-sm-x-p.aspx>

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.

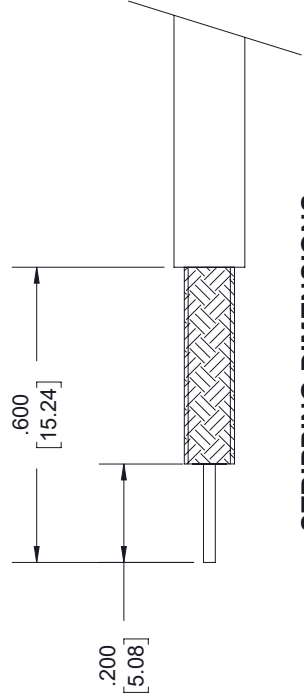
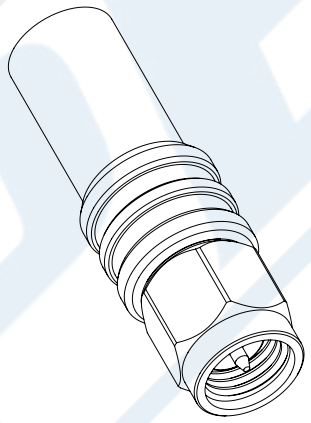
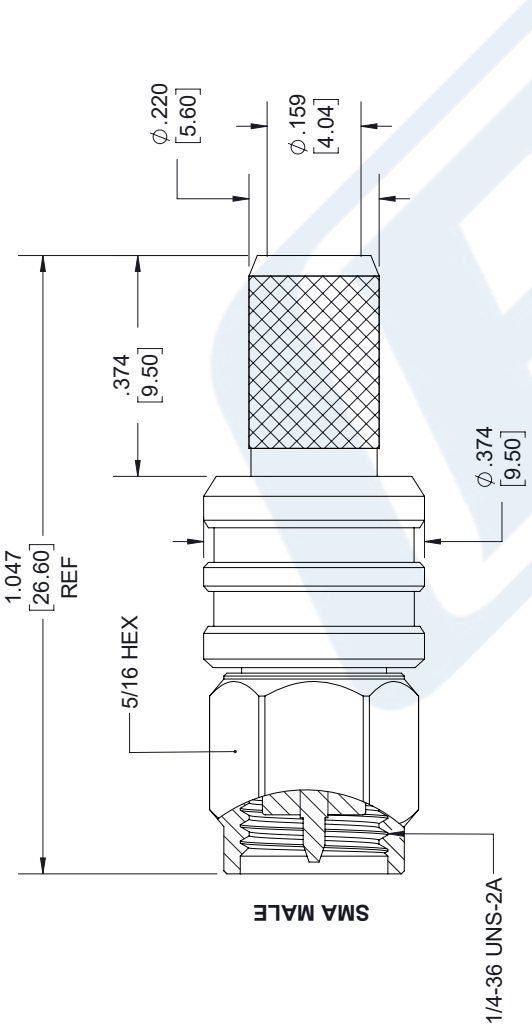
REVISIONS		
REV.	DESCRIPTION	DATE
A	PCR EZ-240-SM-X	1/8/2020
		APPROVED SELLIS



FERRULE



SHRINK TUBE



STRIPPING DIMENSIONS

- NOTES:
- CABLE ATTACHMENT:
 - OUTER: CRIMP.
 - INNER: NON-SOLDER.
 - CRIMP SIZE REQUIRED:
 - FERRULE: .255 [6.48] HEX. CRIMP TOOL
 - CONTACT: NON-SOLDER.


UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS

TOLERANCES:

.X = ±.2	[5.08]	FRACTIONS	± 1/32
.XX = ±.02	[.51]	ANGLES ± 1°	
.XXX = ±.005	[.13]	CABLE LENGTH (L) TOLERANCES:	
		L ≤ 12 [305]	= +1 [25] / -0
		12 [305] < L ≤ 60 [1524]	= +2 [51] / -0
		60 [1524] < L ≤ 120 [3048]	= +4 [102] / -0
		120 [3048] < L ≤ 300 [7620]	= +6 [152] / -0
		300 [7620] < L	= +5%L / -0

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

THIRD-ANGLE PROJECTION



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PE PASTERNAK
an INFINIT® brand

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E-mail: sales@pasternack.com

SHEET 1 OF 1
SCALE N/A

SIZE	CAGE CODE	DRAWN BY	ITEM NO.
A	53919	K. DANG	EZ-240-SM-X
REV			A



TNC Male Connector Clamp/Solder Attachment for
 RG8X, PE-C240, .240 inch, B7808A, LMR-240

RF Connectors Technical Data Sheet

PE45437

Configuration

- TNC Male Connector
- MIL-STD-348A
- 50 Ohms
- Straight Body Geometry
- RG8X, PE-C240, .240 inch, B7808A, LMR-240 Interface Type
- Clamp/Solder Attachment

Features

- Gold Plated Brass Contact
- Contact plating according to MIL-G-45204

Applications

- General Purpose Test
- Custom Cable Assemblies

Description

Pasternack's PE45437 TNC male connector with clamp/solder attachment for RG8X, PE-C240, .240 inch, B7808A and LMR-240 is part of our full line of RF components available for same-day shipping.

Our TNC male connector PE45437 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.

Mechanical Specifications

Size

Length	1.06 in [26.92 mm]
Width/Dia.	0.6 in [15.24 mm]
Weight	0.046 lbs [20.87 g]

Material Specifications

Description	Material	Plating
Contact	Brass	Gold MIL-G-45204
Insulation	PTFE	
Body	Brass	Nickel QQ-N-290
Coupling Nut	Brass	Nickel QQ-N-290

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Male Connector Clamp/Solder Attachment for RG8X, PE-C240, .240 inch, B7808A, LMR-240 PE45437](#)



TNC Male Connector Clamp/Solder Attachment for
RG8X, PE-C240, .240 inch, B7808A, LMR-240

RF Connectors Technical Data Sheet

PE45437

Environmental Specifications

Temperature

Operating Range

-65 to +165 deg C

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 Male Connector Clamp/Solder Attachment for RG8X, PE-C240, .240 inch, B7808A, LMR-240 PE45437](#)

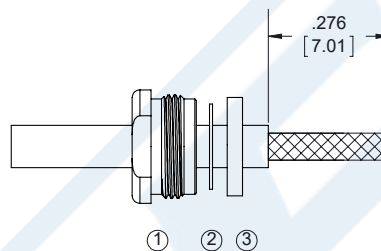


TNC Male Connector Clamp/Solder Attachment for
RG8X, PE-C240, .240 inch, B7808A, LMR-240

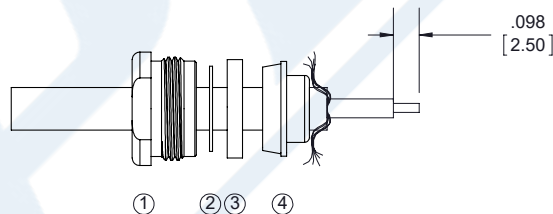
Assembly Instruction

ASSEMBLY PROCEDURES

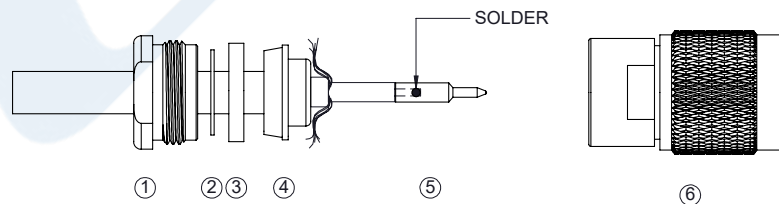
1. SLIDE CLAMP NUT ①, THINNER WASHER ② & GASKET ③ OVER CABLE. STRIP CABLE AS SHOWN. DO NOT NICK BRAID WHILE CUTTING JACKET. TAPER END OF BRAID TO PERMIT ASSEMBLY OF CLAMP.



2. SLIDE BRAID CLAMP ④ OVER BRAID & SEAT AGAINST CABLE. FORM BRAID OVER CLAMP NUT. TRIM BRAID BACK TO SHOULDER. CUT DIELECTRIC & CENTER CONDUCTOR TO DIMENSION SHOWN. DO NOT NICK CENTER CONDUCTOR.



3. SOLDER CONTACT ⑤ TO CENTER CONDUCTOR. REMOVE EXCESS SOLDER. DO NOT OVER HEAT DIELECTRIC. INSERT CABLE ASSEMBLY INTO BODY ⑥ & TIGHTEN.



Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Male Connector Clamp/Solder Attachment for RG8X, PE-C240, .240 inch, B7808A, LMR-240 PE45437](#)



TNC Male Connector Clamp/Solder Attachment for
RG8X, PE-C240, .240 inch, B7808A, LMR-240

RF Connectors Technical Data Sheet

PE45437

TNC Male Connector Clamp/Solder Attachment for RG8X, PE-C240, .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 99.4% availability and are part of the broadest selection in the industry.

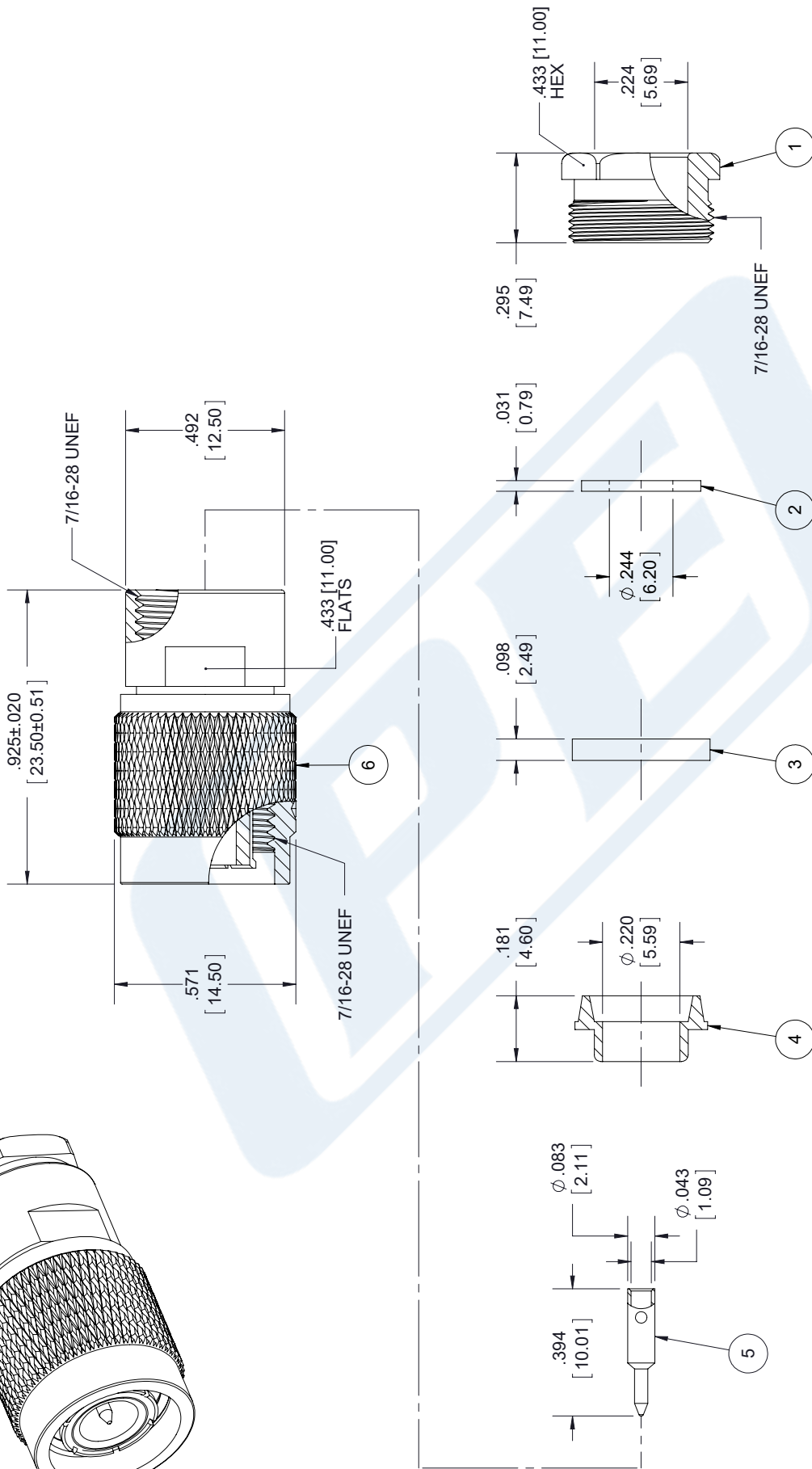
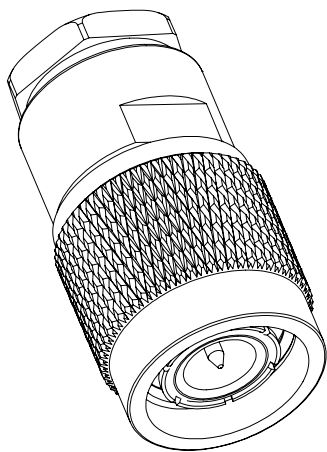
Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [TNC Male Connector Clamp/Solder Attachment for RG8X, PE-C240, .240 inch, B7808A, LMR-240 PE45437](https://www.pasternack.com/tnc-male-rg8x-pe-c240-.240-b7808a-lmr-240-connector-pe45437-p.aspx)

URL: <https://www.pasternack.com/tnc-male-rg8x-pe-c240-.240-b7808a-lmr-240-connector-pe45437-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.

PE45437 CAD Drawing

TNC Male Connector Clamp/Solder Attachment for RG8X,
PE-C240, .240 inch, B7808A, LMR-240



STANDARD TOLERANCES	
.X	±0.2
.XX	±0.01
.XXX	±0.005

*STANDARD TOLERANCES APPLY ONLY TO DIMENSIONS IN INCHES

<p>PASTERNAK THE ENGINEER'S RF SOURCE Pasternack Enterprises, Inc. P.O. Box 16759 Irvine CA 92623 Phone: (949) 261-1920 Fax: (949) 261-7451 Website: www.pasternack.com E-Mail: sales@pasternack.com</p>	DWG TITLE	PE45437	NOTES:	<p>1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL.</p> <p>2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME</p> <p>3. DIMENSIONS ARE IN INCHES [mm].</p>				
	CAGE CODE	53919	CAD FILE	092817	SCALE	N/A	SIZE	A

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	

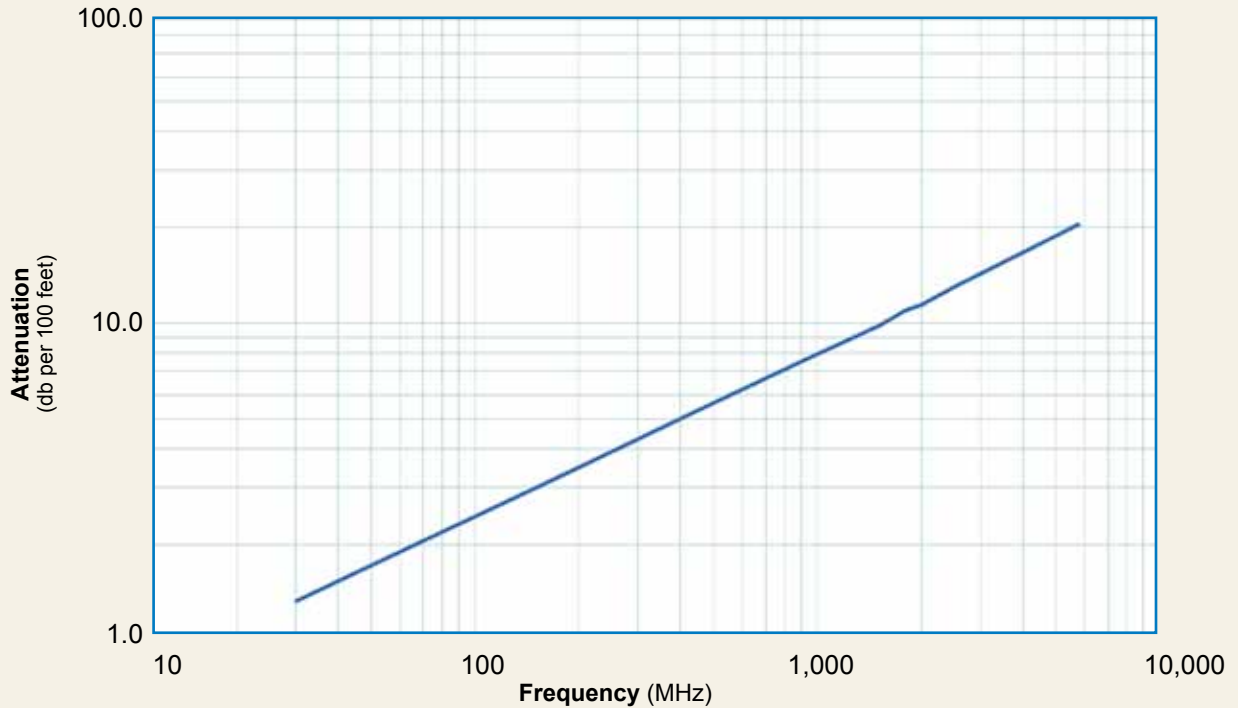
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BC	0.056	(1.42)
Dielectric	Foam PE	0.150	(3.81)
Outer Conductor	Aluminum Tape	0.155	(3.94)
Overall Braid	Tinned Copper	0.178	(4.52)
Jacket	(see table above)	0.240	(6.10)

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 =

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

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 (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)
QMA 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)
QMA 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 A 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 A 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 A 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 A 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
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