



Mini-Circuits

HAND
FLEX™

Coaxial Cable

141-24BM+

50Ω 24 inch DC to 3 GHz BNC-Male

THE BIG DEAL

- Wideband frequency coverage, DC-3GHz
 - Low Loss, 0.46 dB at 3 GHz
 - Excellent Return Loss, 31 dB at 3 GHz
 - Hand formable to almost any custom shape without special bending tools
 - 8mm bend radius for tight installations
 - Insulated outer jacket standard¹
- Ideal for interconnect of assembled systems



Generic photo used for illustration purposes only

Model No.	141-24BM+
Case Style	KQ2160-24
Connectors	BNC-Male

+RoHS Compliant

The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- Replacement for custom bent 0.141" semi-rigid cables
- Communication Receivers and Transmitters
- Military and Aerospace System
- Environmental and Test Chambers

PRODUCT OVERVIEW

141-BM+ series Hand-Flex™ coaxial cables are ideal for interconnecting coaxial components and sub-assemblies in a wide range of systems, including communications, military and aerospace, environmental test chambers and more. The hand-formable cable provides a minimum bend radius of 8mm to accommodate tight layouts without the need for bending tools, adapters or brackets. BNC-male connectors make these cables ideal for connection of assemblies with BNC connector types. 141-BM+ series cables are available in a variety of lengths to meet your system needs.

KEY FEATURES

Features	Advantages
Hand-formable RF cables	Facilitates the assembly of coaxial systems and sub-systems without the need for special cablebending tools or adapters. Reduces the risk of damage during bending.
Tight bend-radius, 8mm	8mm bend-radius makes the cable ideal for connections in tight spaces and crowded layouts.
Low insertion loss	Minimizes overall signal path loss.
Excellent Return Loss	Minimizes signal reflection and VSWR ripple contribution.
BNC-Male connectors	Supports easy interconnection of components and equipment in systems with BNC connector types.
High Power Handling Capability: • 546W at 0.5 GHz • 180W at 3 GHz	Supports medium to high RF power levels used in transmit paths. Uses thicker cable compared to our 086-XBM+ series cables resulting in higher power handling.

1. Unjacketed cable also available upon request.





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ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		3	GHz
Length ²			24		inches
Insertion Loss	DC - 3	—	0.31	0.75	dB
Return Loss	DC - 3	19	37	—	dB

2. Custom sizes available, consult factory.

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-55°C to +105°C
Storage Temperature	-55°C to +105°C
Power Handling at +25°C, Sea Level	546W at 0.5 GHz 387W at 1 GHz 273W at 2 GHz 180W at 3 GHz

Permanent damage may occur if any of these limits are exceeded.

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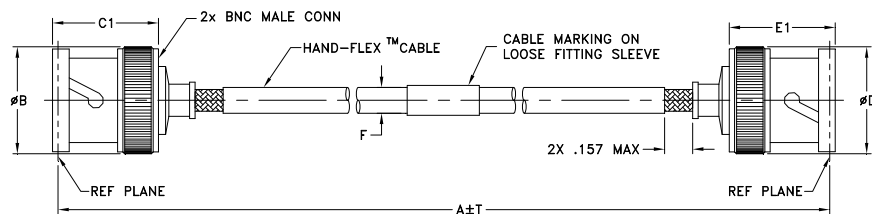
CABLE CONSTRUCTION



- Center Conductor: Silver Plated Copper Clad Steel
- Dielectric: Solid PTFE
- Outer Shield: Copper Braid, Tin Soaked
- Jacket: FEP, Blue (Unjacketed cable also available upon request)

Connectors:
Body & Coupling Nut: Brass, Nickel plated
Center Pin: Brass, Gold plated

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch/mm)

A	B	C1	C2	D	E1	E2	F	T	wt
24.0	.57	.59	-	.57	.59	-	.163±.004	.15	grams
609.60	14.48	14.99	-	14.48	14.99	-	4.14±0.10	3.81	47.83





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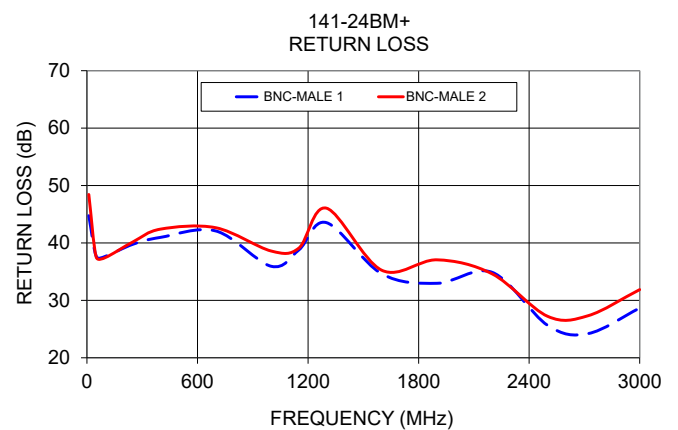
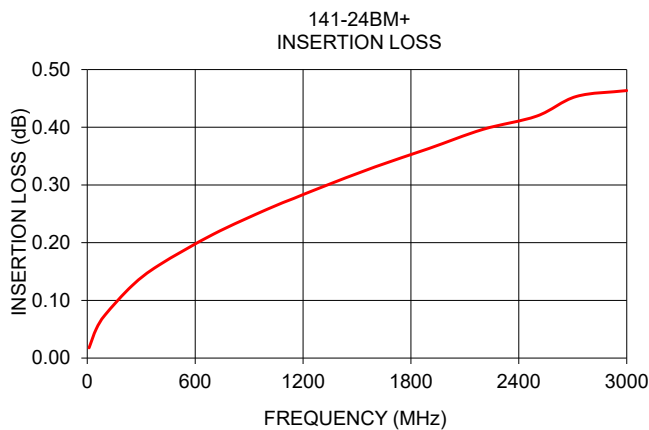
Coaxial Cable

141-24BM+

50Ω 24 inch DC to 3 GHz BNC-Male

TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		BNC-Male	BNC-Male
10	0.02	44.75	48.44
50	0.05	37.71	37.56
100	0.08	37.67	37.46
250	0.13	39.78	40.19
400	0.16	40.97	42.41
700	0.21	42.08	42.65
1000	0.26	35.94	38.59
1150	0.28	38.78	39.10
1300	0.30	43.53	46.06
1600	0.33	34.63	35.25
1900	0.36	32.97	37.06
2200	0.40	34.87	34.60
2500	0.42	25.66	27.23
2720	0.45	24.21	27.33
3000	0.46	28.66	31.87



NOTES

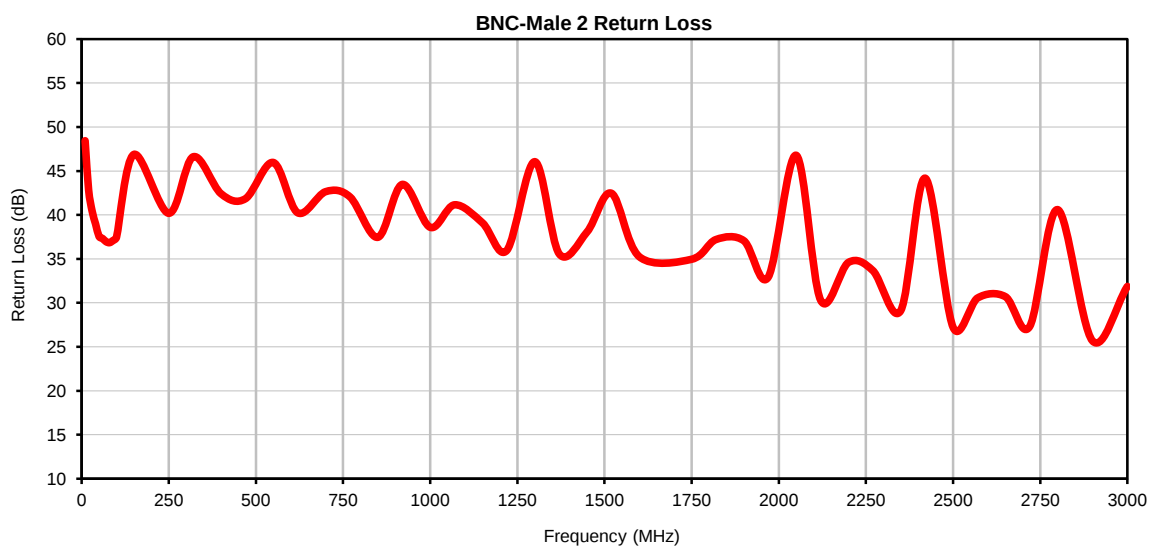
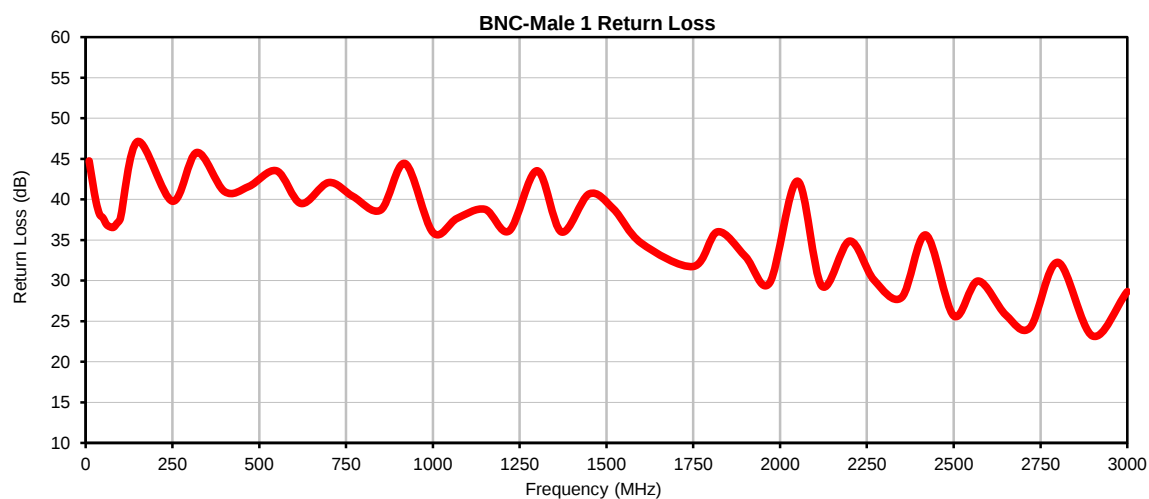
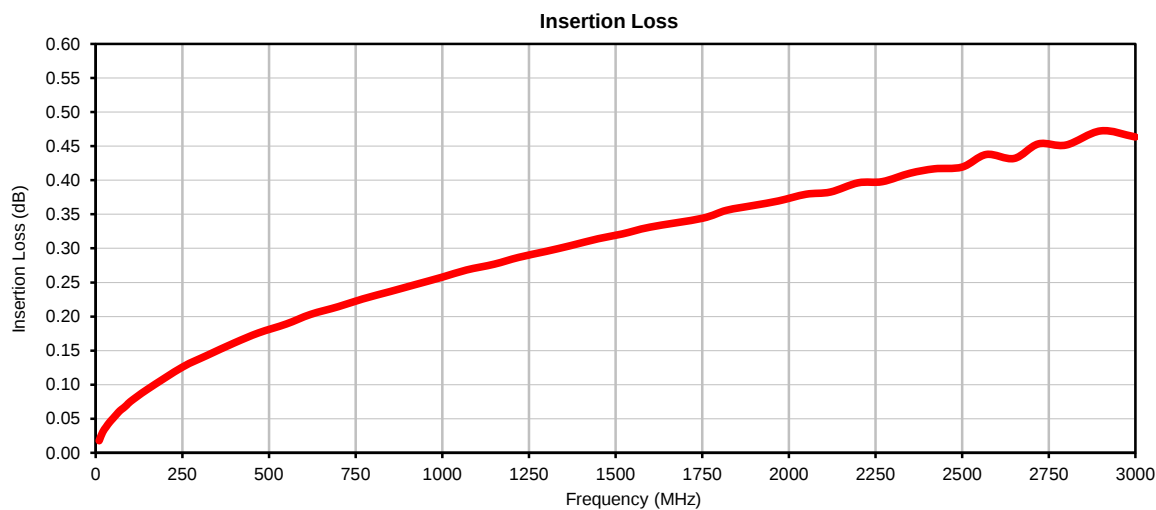
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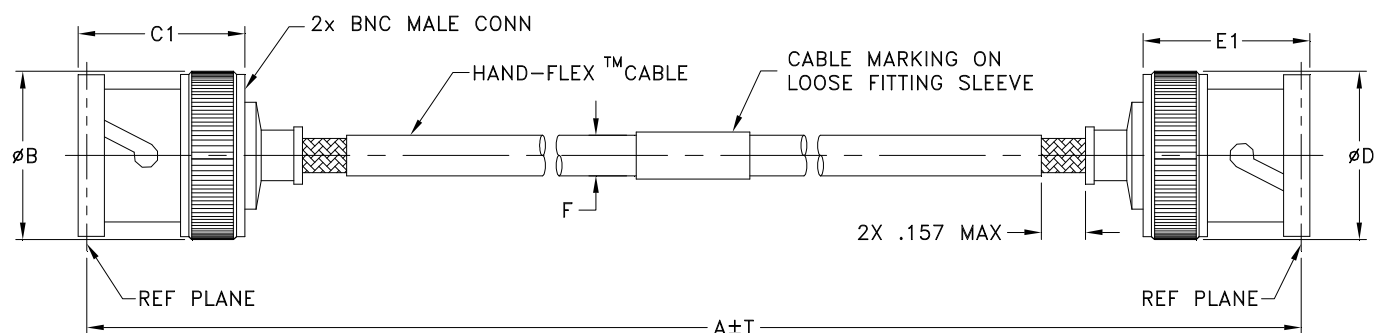
Typical Performance Data

FREQUENCY (MHz)	INSERTION LOSS (dB)	BNC-MALE 1 RETURN LOSS (dB)	BNC-MALE 2 RETURN LOSS (dB)
10	0.02	44.75	48.44
20	0.03	42.11	42.86
30	0.04	39.69	40.45
40	0.04	38.18	38.97
50	0.05	37.71	37.56
60	0.06	36.93	37.32
70	0.06	36.63	36.96
80	0.07	36.56	36.85
90	0.07	37.05	37.09
100	0.08	37.67	37.46
150	0.09	47.14	46.89
250	0.13	39.78	40.19
320	0.14	45.79	46.62
400	0.16	40.97	42.41
470	0.18	41.60	41.85
550	0.19	43.52	45.97
620	0.20	39.50	40.25
700	0.21	42.08	42.65
770	0.23	40.36	42.04
850	0.24	38.70	37.46
920	0.25	44.42	43.47
1000	0.26	35.94	38.59
1070	0.27	37.67	41.15
1150	0.28	38.78	39.10
1220	0.29	36.13	35.97
1300	0.30	43.53	46.06
1370	0.30	36.00	35.58
1450	0.31	40.68	38.06
1520	0.32	38.83	42.46
1600	0.33	34.63	35.25
1750	0.34	31.74	34.96
1820	0.36	36.01	37.20
1900	0.36	32.97	37.06
1970	0.37	29.72	32.94
2050	0.38	42.25	46.78
2120	0.38	29.34	30.32
2200	0.40	34.87	34.60
2270	0.40	30.10	33.67
2350	0.41	27.92	29.13
2420	0.42	35.62	44.18
2500	0.42	25.66	27.23
2570	0.44	29.95	30.54
2650	0.43	25.77	30.71
2720	0.45	24.21	27.33
2800	0.45	32.25	40.60
2900	0.47	23.17	25.67
3000	0.46	28.66	31.87

Typical Performance Curves



Outline Dimensions



KQ2160 SERIES BNC MALE (CONN-1) BNC MALE (CONN-2)

CASE STYLE #	A		B	C1	C2	D	E1	E2	F		T		WEIGHT GRAMS
	INCH	MM							141U-ABM+	141-ABM+	INCH	MM	
KQ2160-6	6.00	152.40	.57 (14.5)	.59 (14.9)	-	.57 (14.5)	.59 (14.9)	-	.141±.003 (3.58±0.07)	.163±.004 (4.14±0.10)	.05	1.27	27.26
KQ2160-8	8.00	203.20									.10	2.54	29.54
KQ2160-10	10.00	254.00									.10	2.54	31.83
KQ2160-12	12.00	304.80									.10	2.54	34.12
KQ2160-14	14.00	355.60									.15	3.81	36.40
KQ2160-18	18.00	457.20									.15	3.81	40.97
KQ2160-24	24.00	609.60									.15	3.81	47.83

Unless otherwise specified dimensions are in inches (mm).

Tolerances: 2Pl. ± .03; 3Pl. ± .015

Note:

1. 141 Hand-Flex™ Coaxial Cable.
2. "A" represents length of cable.



INTERNET <http://www.minicircuits.com>

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Mini-Circuits ISO 9001 & ISO 14001 Certified



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 105° C or -55° to 85° C (see datasheet) Ambient Environment	Individual Model Data sheet
Storage Temperature	-55° to 105° C or -55° to 85° C (see data sheet) Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 Cycles	MIL-STD-202F; Method 107G
Multiple Bend Radius	40 mm, 5 times for 141 series cables 30 mm, 5 times for 086 series cables	
Single Bend Radius	8 mm for 141 series cables 6 mm for 086 series cables	