HAND FLEX™

Coaxial Cable

141 SMNB Model Series

50Ω DC to 12.5 GHz



CASE STYLE: KQ1669-XX

XX= cable length in inches

The Big Deal

- N-Type (F) Bulkhead Connector to SMA (M)
- Hand Formable
- Tight Bend-Radius (8mm min.)
- Ideal for interconnect of assembled systems

Product Overview

141-SMNB-series Hand-Flex coaxial cables are ideal for integrating rack-mounted coaxial components and sub-assemblies in tight spaces and dense system configurations. N-Type female bulkhead connector at one end is equipped with a nickel-plated brass flange for secure connections to rack mounted equipment. SMA-connector has a passivated stainless-steel coupling nut over a gold-plated connector body. The outer shield is tin-soaked copper braid, which minimizes signal leakage with high flexibility for easy bending, and dielectric is low loss PTFE. 141-SMNB-series Hand-Flex coaxial cables are available in various lengths for different system requirements.

Key Features

Feature	Advantages
Single N-Type female bulkhead connector	Eliminates need for a bulkhead adapter and connects directly to the front panel of rack-mounted equipment, improving reliability and reducing system cost.
Hand-formable	141-SMNB-series Hand Flex cables avoid the need for cable-bending tools, alleviating the risk of damage during bending processes typical of semi-rigid cable assemblies.
8mm bend radius	Ideal for making connections in tight spaces and dense system assemblies.
Excellent return loss	Typical return loss of 21 dB to 12.5 GHz or better makes 141-SMNB series cables ideal for connecting a wide variety of RF components while minimizing VSWR ripple contribution due to mating cables & connectors.
Good power handling capability • 546W at 0.5 GHz • 110W at 12.5 GHz	141-SMNB coaxial cables can support medium to high RF power levels and can be used in the transmit path. (Power rating at sea-level).
Built-in anti-torque nut	Anti-torque feature supports the SMA connector body during installation, preventing stress to the connector/cable interface. Connector interface meets MIL-STD-348.

Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

HAND FLEX™

Coaxial Cable

141-8SMNB+

50Ω 8 inch DC to 12.5 GHz



CASE STYLE: KQ1669-8

Connectors		Model
Conn1	Conn2	
SMA-Male	N-Female Bulkhead	141-8SMNB+

+RoHS Compliant

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

Maximum 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 156W at 6 GHz 121W at 10 GHz 110W at 12.5 GHz

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

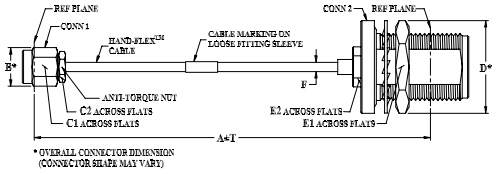
Features

- Bulkhead Female Type-N connector at one end
- Low Loss, 0.3 dB at 12.5 GHz
- Excellent Return Loss, 21 dB at 12.5 GHz
- Hand formable to almost any custom shape without special bending tools
- 8mm bend radius for tight installations
- Anti-torque nut prevents cable stress during installation
- Insulated outer jacket standard
- **Ideal for interconnect of assembled systems**

Applications

- Replacement for custom bent 0.141" semi-rigid cables
- Communication receivers and transmitters
- Military and aerospace system
- Environmental and test chambers

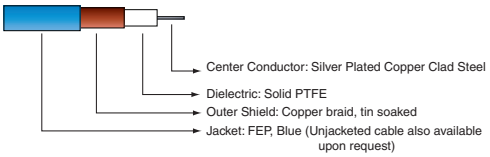
Outline Drawing



Outline Dimensions (inch / mm)

A	B	C1	C2	D
8.0	.36	.313	.250	.87
203.20	9.14	7.95	6.35	22.10
E1	**E2**	**F**	**T**	**wt**
.750	.531	.163±.004	.10	**grams**
19.05	13.49	4.14±0.10	2.54	50.44

Cable Construction



SMA-Male
Connectors: Washer Nut: Stainless Steel Passivated
Body: Stainless Steel Gold Plated
Center Pin: Silver Plated Copper Clad Steel

N-Female
Washer, Nut & Body: Brass Nickel Plated.
Center Pin: BecuB, Gold Plated

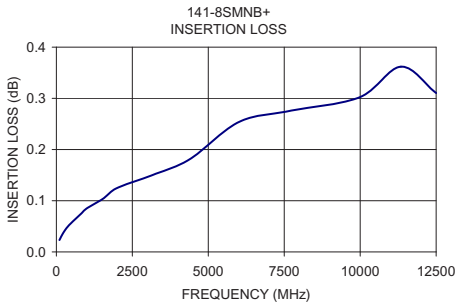
Electrical Specifications at 25°C

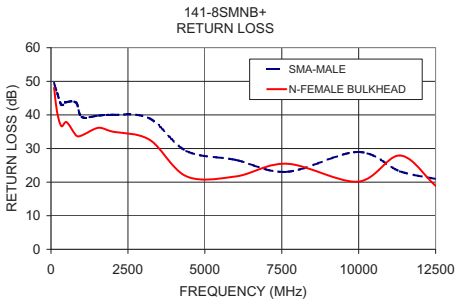
Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		12.5	GHz
Length[1]			8		inches
Insertion Loss	DC - 2	—	0.13	0.30	dB
	2 - 6	—	0.26	0.60	
	6 - 10	—	0.31	0.75	
	10 - 12.5	—	0.32	0.95	
Return Loss	DC - 2	22.0	32.0	—	dB
	2 - 6	17.0	19.0	—	
	6 - 10	17.0	18.0	—	
	10 - 12.5	17.0	19.0	—	

1. Custom sizes available, consult factory.

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		SMA-Male	N-Female Bulkhead
100	0.02	49.5	48.1
200	0.03	46.5	40.7
340	0.05	43.0	36.7
510	0.06	43.8	37.8
820	0.07	43.6	33.9
1000	0.09	39.4	33.9
1540	0.10	39.8	36.2
2000	0.12	40.1	35.0
3200	0.15	39.0	32.6
4400	0.18	29.3	21.7
6000	0.25	26.6	21.7
7670	0.28	23.1	25.5
9970	0.30	29.0	20.1
11340	0.36	23.2	27.9
12500	0.31	20.9	18.9





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