



Coaxial Cable

141-20SMNB+

50Ω 20 inch DC to 12.5 GHz

THE BIG DEAL

- Bulkhead Female Type-N connector at one end
- Low Loss, 1.0 dB at 12.5 GHz
- Excellent Return Loss, 18 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 standard¹
- Ideal for interconnect of assembled systems



Generic photo used for illustration purposes only

Model No.	141-20SMNB+
Case Style	KQ1669-20
Connectors	SMA-Male to N-Female Bulkhead

+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 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

Features	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.
High Power Handling Capability: <ul style="list-style-type: none"> • 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.



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ELECTRICAL SPECIFICATIONS AT +25°C

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		12.5	GHz
Length ¹		20			inches
Insertion Loss	DC - 2	—	0.31	0.51	dB
	2 - 6	—	0.60	0.94	
	6 - 10	—	0.78	1.26	
	10 - 12.5	—	1.01	1.70	
Return Loss	DC - 2	22.0	31.0	—	dB
	2 - 6	17.0	21.0	—	
	6 - 10	17.0	19.0	—	
	10 - 12.5	17.0	18.0	—	

1. 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	546W at 0.5 GHz 387W at 1 GHz 273W at 2 GHz
Sea Level	156W at 6 GHz 121W at 10 GHz 110W at 12.5 GHz

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



HAND FLEX™

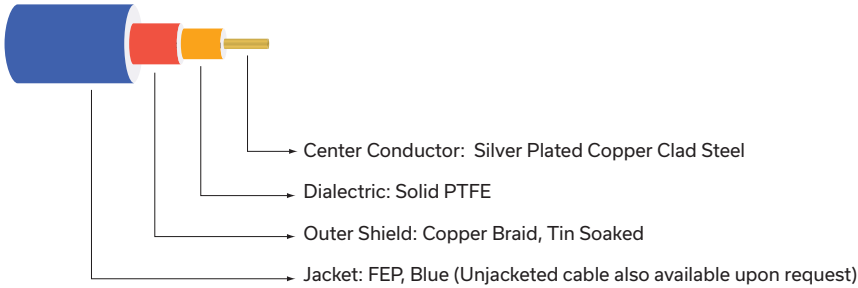
Coaxial Cable

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Mini-Circuits

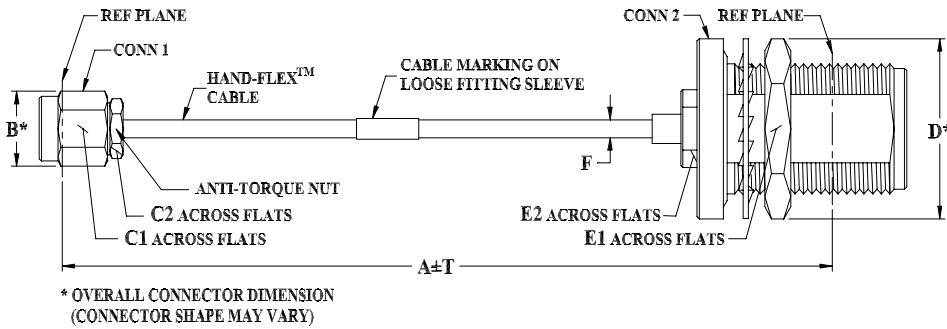
50Ω 20 inch DC to 12.5 GHz

CABLE CONSTRUCTION



- SMA-Male Connector:
 Washer Nut: Stainless Steel
 Passivated Body: Stainless Steel
 Gold Plated Center Pin: Silver Plated Copper Clad Steel
- N-Female Connector:
 Washer, Nut & Body: Brass Nickel Plated.
 Center Pin: BecuB, Gold Plated

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch/mm)

A	B	C1	C2	D	E1	E2	F	T	wt grams
20.0	.36	.313	.250	.87	.750	.531	.163±.004	.15	64.13
508.00	9.14	7.95	6.35	22.10	19.05	13.49	4.14±0.10	3.81	

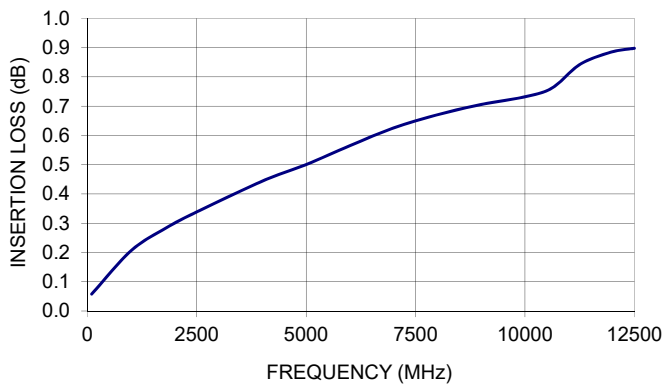
Mini-Circuits



TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		SMA-Male	N-Female Bulkhead
100	0.06	45.7	41.7
1000	0.21	48.8	36.5
1800	0.28	46.2	43.4
2404	0.33	33.8	33.6
4001	0.44	32.6	29.6
5000	0.50	27.0	29.1
6000	0.56	25.6	25.0
7001	0.63	24.2	22.3
8001	0.67	23.4	21.8
9000	0.71	28.1	24.2
10000	0.73	32.4	31.0
10626	0.76	33.5	38.5
11251	0.84	32.1	30.5
11951	0.88	29.0	22.9
12500	0.90	27.5	20.8

141-20SMNB+
INSERTION LOSS



141-20SMNB+
RETURN LOSS

