HAND FLEX™

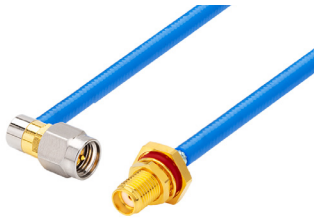
Coaxial Cable

141-6SBSMR+

50Ω 6 inch DC to 18 GHz SMA Female Bulkhead to Right-Angle SMA Male

THE BIG DEAL

- Wideband Frequency Coverage, DC to 18 GHz
- Low Insertion Loss, 0.45 dB Typ. at 18 GHz
- Excellent Return Loss, 20 dB Typ. to 18 GHz
- SMA Female Bulkhead Connector at One End
- Hand Formable to Almost Any Custom Shape Without Special Bending Tools
- 8 mm Bend Radius for Tight Installations
- Anti-Torque Nut Prevents Cable Stress During Installation
- Insulated Outer Jacket Standard
- Connector Interface, Meets MIL-STD-348
- Ideal for Interconnect of Assembled Systems



Generic photo used for illustration purposes only

Model No.	141-6SBSMR+
Case Style	KQ1927-6
Connectors	SMA Female Bulkhead to Right-Angle SMA Male

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

APPLICATIONS

- Bulkhead Connector Mounts on Front Panel of Equipment Racks
- Replacement for Custom Bent 0.141" Semi-Rigid Cables
- Communication Receivers and Transmitters
- Military and Aerospace Systems
- Environmental and Test Chambers

PRODUCT OVERVIEW

Mini-Circuits' 141 SBSMR+ Series Hand-Flex™ Coaxial Cables are ideal for interconnection of coaxial components or sub-systems to equipment racks. The construction includes a silver-plated copper-clad steel center conductor which maintains the shape after bending. The outer shield is copper braid, tin soaked, which minimizes signal leakage and at the same time flexible for easy bend. Dielectric is low loss PTFE. Both connectors have passivated stainless steel coupling nut. Right-angle SMA male has a gold-plated connector body, brass center conductor and SMA female has gold-plated BeCu center conductor.

KEY FEATURES

Feature	Advantages
Hand-Formable RF Cables	The 141 Series Hand-Flex cables are hand formable making them ideal for use integrating coaxial components and sub-assemblies without the need for special cable-bending tools and alleviating the risk of damage during the bending process typical of semi-rigid coaxial cable assemblies.
SMA Female Bulkhead Connector at One End	Mounts directly on equipment racks eliminating need for bulkhead adapter, thereby improving reliability.
Tight Bend Radius, 8 mm	Capable of only 8 mm bend radius, the 141 Hand-Flex Series is able to make connections in tight spaces making these cables ideal for dense system integration.
Excellent Return Loss	The 141 Series Hand-Flex cables are ideally suited for interconnecting a wide variety of RF components while minimizing VSWR ripple contribution due to mating cables & connectors.
Good Power Handling Capability: • 546 W at 0.5 GHz • 90 W at 18 GHz	141 SBSMR+ 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 on SMA Male Connector	Mini-Circuits 141 Series Hand-Flex cables include an anti-torque feature to support the straight SMA connector body during installation alleviating risk of stress to the connector/cable interface.
Right-Angle SMA Connectors	Avoids multiple right-angle bends and improves reliability.

ELECTRICAL SPECIFICATIONS AT +25 °C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		DC		18	GHz
Length[1]			6		inches
Insertion Loss	DC–2	–	0.07	0.4	dB
	2–6	–	0.16	0.6	
	6–10	–	0.23	0.8	
	10–18	–	0.28	1.1	
Return Loss	DC–2	23	43	–	dB
	2–6	23	34	–	
	6–10	17	36	–	
	10–18	17	31	–	

1. Custom sizes available, consult factory.

ABSOLUTE MAXIMUM RATINGS[2]

Parameter	Ratings
Operating Temperature	-55 °C to +105 °C
Storage Temperature	-55 °C to +105 °C
Power Handling at +25 °C, Sea Level	546 W at 0.5 GHz 387 W at 1 GHz 273 W at 2 GHz 156 W at 6 GHz 121 W at 10 GHz 90 W at 18 GHz

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

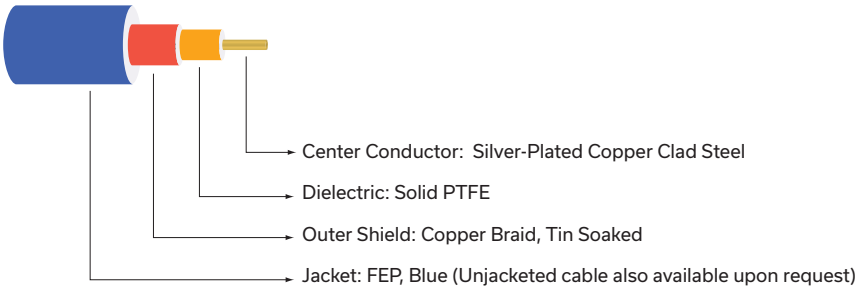
HAND FLEX™

Coaxial Cable

141-6SBSMR+

50Ω 6 inch DC to 18 GHz SMA Female Bulkhead to Right-Angle SMA Male

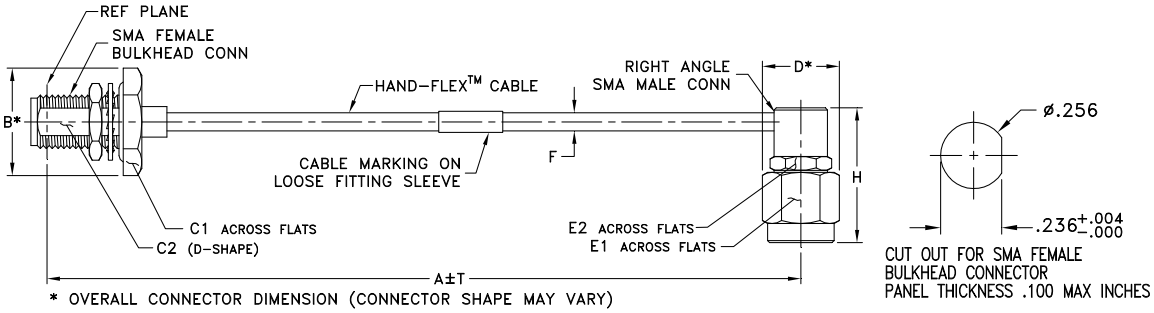
CABLE CONSTRUCTION



Connectors:
SMA Male Connector: Coupling Nut: Stainless Steel Passivated
Body: Stainless Steel Gold Plated
Center Pin: Gold-Plated Brass

SMA Female Bulkhead Connector: Body & Hex Nut: Stainless Steel, Gold Plated
Socket: BeCu, Gold Plated

OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch / mm)

A	B	C1	C2	D	E1	E2	F	H	T	wt
6.0	.51	.438	.232	.36	.313	.250	.163±.004	.728±.02	0.05	grams
152.40	12.95	11.13	5.89	9.14	7.95	6.35	(4.14±0.10)	18.50±0.5	1.27	13.06

HAND FLEX™

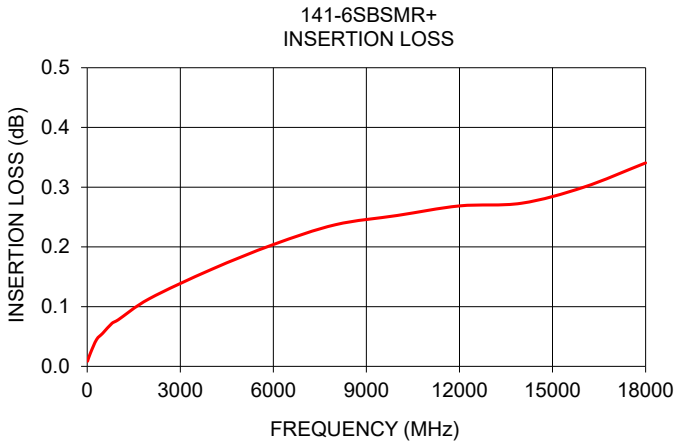
Coaxial Cable

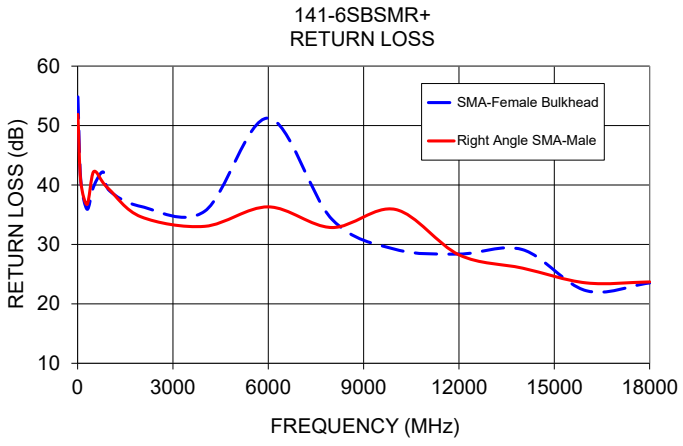
141-6SBSMR+

50Ω 6 inch DC to 18 GHz SMA Female Bulkhead to Right-Angle SMA Male

TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	
		SMA Female Bulkhead	Right-Angle SMA Male
10	0.01	54.83	51.87
100	0.02	40.82	40.60
300	0.04	35.91	36.74
500	0.06	39.67	42.21
800	0.07	42.20	40.40
1000	0.08	39.05	39.23
2000	0.11	36.38	34.64
4000	0.16	35.59	33.05
6000	0.20	51.26	36.32
8000	0.24	34.25	32.84
10000	0.25	29.17	35.89
12000	0.27	28.38	28.25
14000	0.27	29.13	26.01
16000	0.30	22.22	23.53
18000	0.34	23.52	23.69





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-Circuits' 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/terms/viewterm.html

Hand-Flex Coaxial Cable 141-6SBSMR+

SMA Female Bulkhead/Right Angle SMA Male

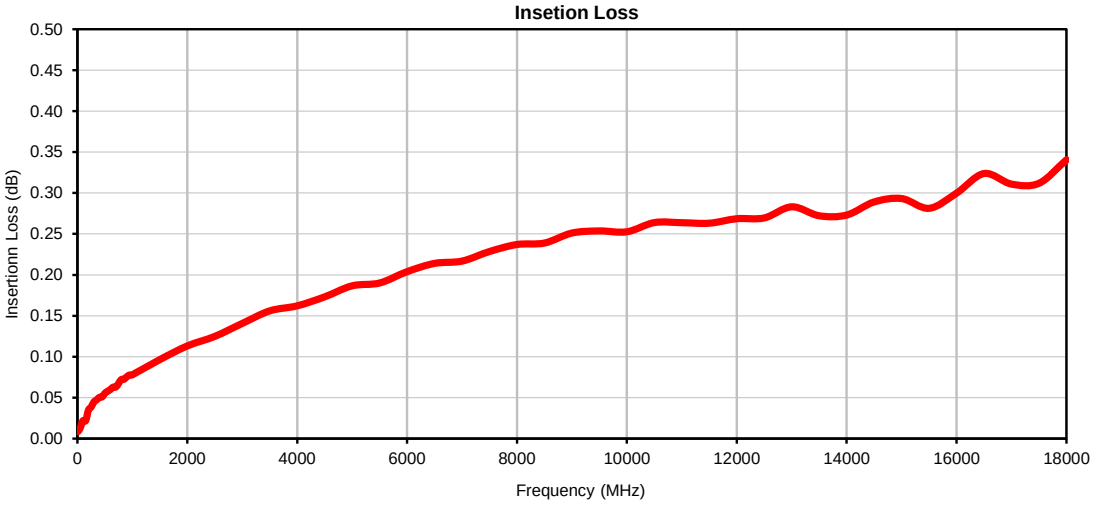
Typical Performance Data

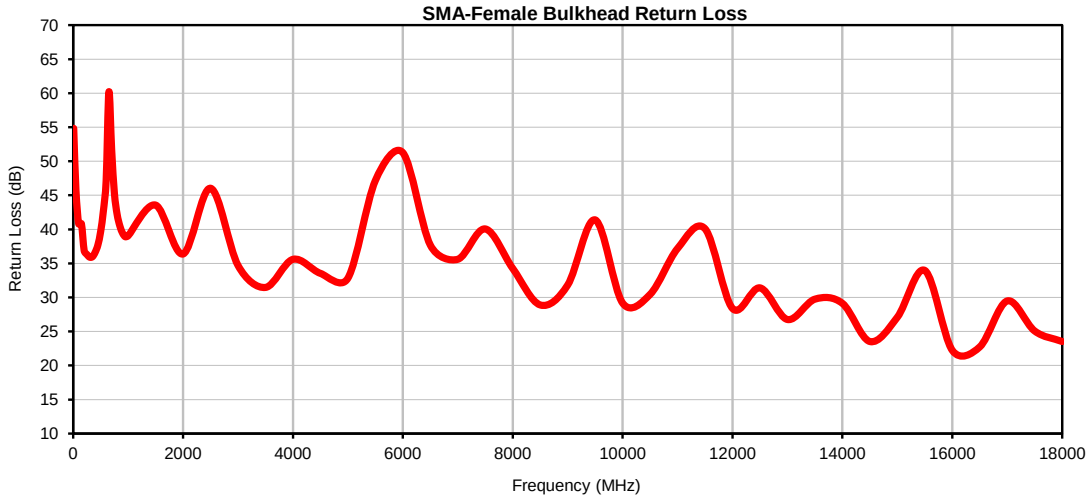
FREQUENCY (MHz)	INSERTION LOSS (dB)	SMA-FEMALE BULKHEAD RETURN LOSS (dB)	RIGHT ANGLE SMA-MALE RETURN LOSS (dB)
10	0.01	54.83	51.87
50	0.01	45.78	44.17
100	0.02	40.82	40.60
150	0.02	40.82	40.60
200	0.03	36.88	37.36
250	0.04	36.31	36.82
300	0.04	35.91	36.74
350	0.05	35.97	37.04
400	0.05	36.63	38.12
450	0.05	37.71	39.55
500	0.06	39.67	42.21
550	0.06	42.72	45.85
600	0.06	47.11	51.90
650	0.06	60.17	51.43
700	0.06	51.74	46.34
750	0.07	45.32	42.40
800	0.07	42.20	40.40
850	0.07	40.48	39.38
900	0.08	39.42	38.75
950	0.08	38.90	38.86
1000	0.08	39.05	39.23
1500	0.10	43.56	41.26
2000	0.11	36.38	34.64
2500	0.12	46.04	37.94
3000	0.14	34.69	32.86
3500	0.16	31.47	29.99
4000	0.16	35.59	33.05
4500	0.17	33.53	31.12
5000	0.19	32.83	29.75
5500	0.19	47.17	38.61
6000	0.20	51.26	36.32
6500	0.21	37.69	32.75
7000	0.22	35.61	49.70
7500	0.23	40.06	32.78
8000	0.24	34.25	32.84
8500	0.24	28.89	36.69
9000	0.25	31.82	28.56
9500	0.25	41.39	32.00
10000	0.25	29.17	35.89
10500	0.26	30.45	28.52
11000	0.26	37.19	28.89
11500	0.26	40.08	42.05
12000	0.27	28.38	28.25
12500	0.27	31.40	26.28
13000	0.28	26.75	27.14
13500	0.27	29.74	30.44
14000	0.27	29.13	26.01
14500	0.29	23.52	26.70
15000	0.29	27.09	29.23
15500	0.28	33.96	42.31
16000	0.30	22.22	23.53
16500	0.32	22.73	23.00
17000	0.31	29.49	30.78
17500	0.31	25.06	29.79
18000	0.34	23.52	23.69

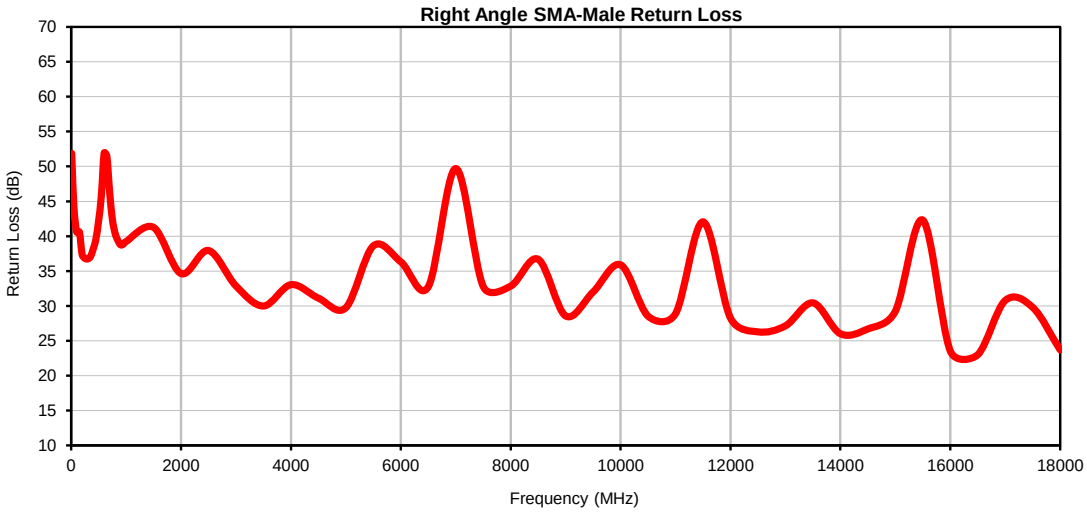
Hand-Flex Coaxial Cable 141-6SBSMR+

SMA Female Bulkhead/Right Angle SMA Male

Typical Performance Data



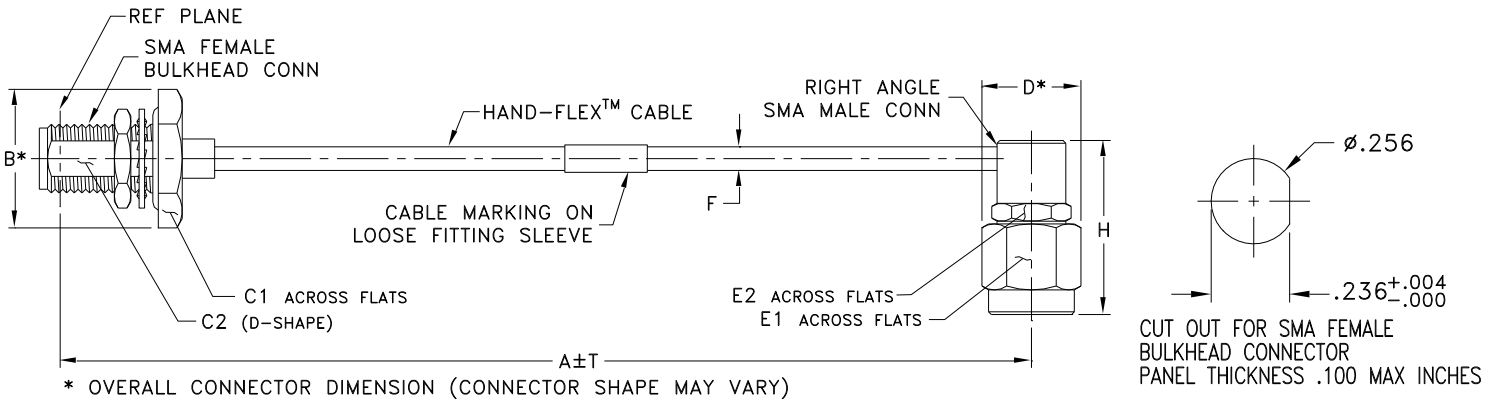




Case Style KQ

Outline Dimensions

KQ1927



KQ1927 SERIES
BULKHEAD SMA FEMALE(CONN-1)
RIGHT ANGLE SMA MALE (CONN-2)

CASE STYLE #	A		B	C1	C2	D	E1	E2	F		G	H	T		WEIGHT GRAMS
	INCH	MM							141U-ASBSMR+	141-ASBSMR+			INCH	MM	
KQ1927-6	6.00	152.40	.51 (12.95)	.438 (11.13)	.232 (5.89)	.36 (9.14)	.313 (7.95)	.250 (6.35)	.139±.002 (3.53±.05)	.163±NOM (4.14 NOM)	- -	.728±.020 (18.50)	0.05	1.27	13.06
KQ1927-36	36.00	914.40											0.20	5.08	47.35

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.

This document and its contents are the property of Mini-Circuits.

Mini-Circuits

Environmental Specifications **ENV52**

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	

This document and its contents are the property of Mini-Circuits.