



Coaxial Cables 086-XXSMRMCR+ SERIES

50Ω DC to 6 GHz SMA Right Angle Male to MCX Right Angle Male

KEY FEATURES

- Wideband frequency coverage DC to 6 GHz
- Hand-formable into almost any custom shape without special bending tools
- 6 mm bend radius for tight installation
- Insulated outer jacket standard

APPLICATIONS

- Replacement for custom bent 0.086" semi-rigid cables
- Communication Receivers and Transmitters
- Military and Aerospace Systems
- Environmental Test Chambers

*Generic photo used for illustration purposes only*

PRODUCT OVERVIEW

The 086 Series Hand-Flex™ Coaxial Cables are ideal for interconnection of coaxial components or subsystems. The construction includes a silver-plated copper steel center conductor which maintains its shape after bending. The outer shield is copper braid, tin-soaked, which minimizes signal leakage while remaining flexible for easy bending. Dielectric is low-loss PTFE. These cables are presently available in lengths of 6, 12, 18 and 24 inches; for custom lengths, please contact the Mini-Circuits Sales Department.

ELECTRICAL SPECIFICATIONS¹

Operating Frequency (GHz)	6
Impedance (Ω)	50
Velocity of Propagation (%)	70
Shielding Effectiveness Min. (dB)	100
Voltage Withstand Max. (VDC)	2000
Return Loss Typ. [VSWR Typ.]	32.26 dB [1.05:1]
Return Loss Max. [VSWR Typ.]	17.69 dB [1.3:1]

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

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS¹

Operating Case Temperature ²	-45 °C to +125 °C
Storage Temperature	-45 °C to +125 °C
Bend Radius: Installation mm [in]	6 [0.236]
Bend Radius: Repeated mm [in]	30 [1.18]
Cable Weight ³ (g/m) [lbs/1000ft]	28.87 [19.40]

2. Temperature extremes are not intended for continuous normal operation.

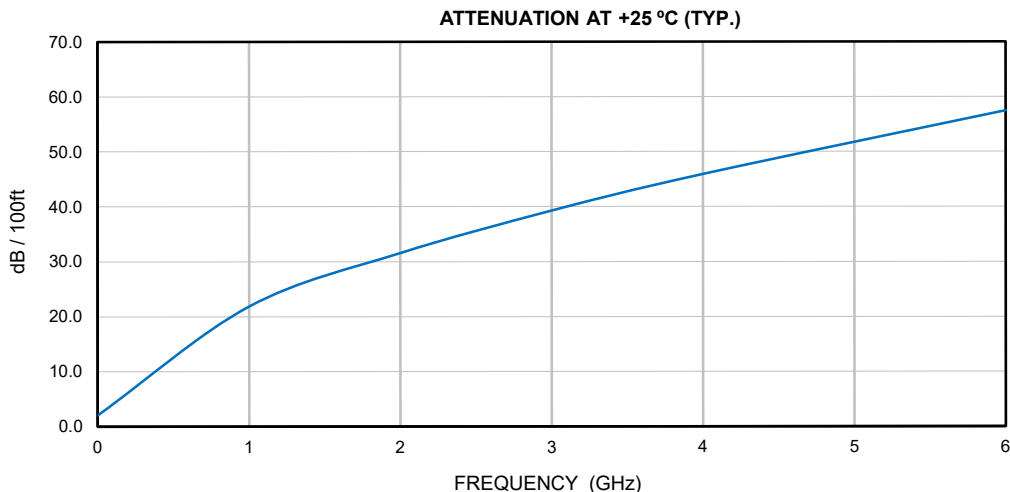
3. Total connector weight is 4.2 g per cable.



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Attenuation (Typical @ +25 °C & VSWR = 1.0) dB

Frequency (MHz)	1000	2000	3000	4000	6000
dB / 100 m	71.68	103.51	128.77	150.65	188.51
dB / 100 ft	21.85	31.56	39.26	45.93	57.47

$$\text{Calculate Max Attenuation}^4 = [K1 * \sqrt{FMHz} + K2 * FMHz] * 1.1 \text{ dB}$$

dB / 100 m	K1 =	2.1516	K2 =	0.0036417
dB / 100 ft	K1 =	0.65598	K2 =	0.00111

4. For cable only, include 0.5 dB loss for connectors

Max Power (VSWR = 1.0; +25 °C; Sea Level) W

Frequency (MHz)	1000	2000	3000	4000	6000
Avg. Power (W)	277	195.7	160.6	138.2	112.8



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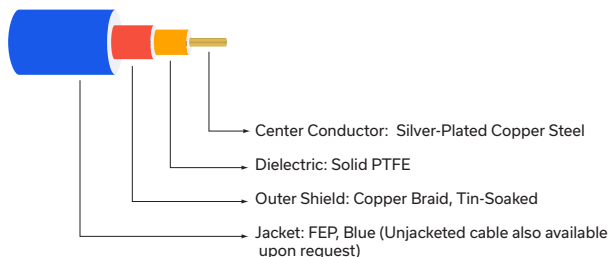
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COAXIAL CONNECTIONS

Description	Connector 1	Connector 2
Connector Type	SMA Male	MCX Male
Orientation	Right Angle	Right Angle

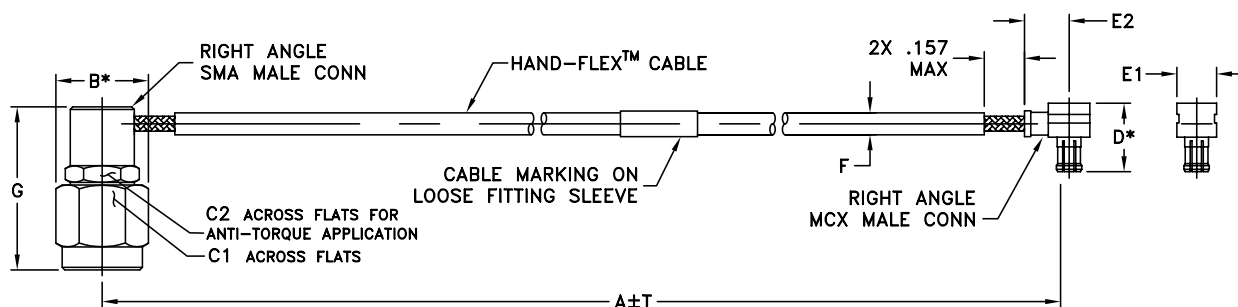
CABLE CONSTRUCTION



Connectors

1. SMA(M) RA- Body: Stainless Steel, Gold, Center pin: Brass, Gold
2. MCX(M) RA- Body: Brass/ Gold, Center Pin: Brass, Gold

CASE STYLE DRAWING



* OVERALL CONNECTOR DIMENSION
 [CONNECTOR SHAPE MAY VARY]

Dimensions are in inches [mm]

A		B	C1	C2	D	E1	E2	F	T		Wt. grams
Inch	mm								Inch	mm	
6	15.40	.36 [9.14]	.315 [8.0]	.250 [6.35]	.335 [8.5]	.197 [5.0]	.22 [5.6]	.108 NOM [2.74 NOM]	±.05	±1.27	7.94
12	304.80								±.10	±2.54	10.68
18	457.20								±.15	±3.81	13.43
24	609.60								±.15	±3.81	16.17

PRODUCT MARKING*: 086-XXSMRMCR+

*Marking may contain other features or characters for internal lot control.

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PAGE 3 OF 4



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ADDITIONAL INFORMATION IS AVAILABLE ON OUR DASHBOARD

[CLICK HERE](#)

Performance Data & Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file)
Case Style	KP3379
RoHS Status	Compliant
Environmental Ratings	ENV157

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/terms/viewterm.html

