



MEGAPHASE MEGAFORM™ CABLES TO 20 GHZ



MegaForm™ Cables to 20 GHz

Hand-Formable Jumper Cables for Flexible Installation

- Hand-formable cable assemblies provide a practical alternative to semi-rigid cables for rapid, in-place routing
- Low-VSWR performance with a durable tin-dipped copper braid outer conductor that bends and holds its shape
- Ideal for cabinet interconnects, ATE, and system integration applications, with multiple sizes and connector options available

Electrical Data

Maximum Frequency	Impedance	Propagation Velocity	Time Delay
CC086, CC141: 20.0 GHz	50 Ω nominal	69.5% nominal	1.46 ns/ft (4.79 ns/m)
Shielding Effectiveness	Dielectric Withstanding Voltage	Capacitance	
-110 dB minimum (cable only)	CC086: 1.5 kV at 60 Hz CC141: 1.9 kV at 60 Hz	29.5 pF/ft (96.8 pF/m)	

Mechanical Data

Finished Outer Diameter	Static Bend Radius	Weight with Standard Jacket/ Armor	Operating Temp. Range
CC086: 0.085 in (0.216 cm) CC141: 0.139 in (0.353 cm)	CC086: 0.125 in (0.3175 cm) CC141: 0.43 in (1.092 cm)	CC086: 0.01 lbs/ft (0.018 kg/m) CC141: 0.02 lbs/ft (0.030 kg/m)	-85 to 392°F (-65 to 200°C)

Cable Construction

Inner Conductor	Dielectric	Outer Conductor
Solid Ag-plated C-clad Steel	PTFE	Metallic Alloy Saturated Cu Braid (Pb Free)

Available Connectors

CC086: 2.4 mm, 2.92 mm, 3.5 mm, MMCX, OSP, OSSP, SMA, SMB, SMC, SMP, SSMA, SSMB, SSMP, TNC, Type N, ZMA
 CC141: 2.9 mm, 3.5 mm, SMA, TNC, Type N
 (maximum frequency dependent on cable)
 Other connectors available upon request



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Specifications

Frequency		CC086		CC14		Conn. Loss dB	VSWR
		Attenuation		Attenuation			
GHz	Band	dB/ft	dB/m	dB/ft	dB/m		
0.3	UHF	0.117	0.384	0.063	0.206	0.006	1.10
0.5		0.153	0.501	0.082	0.270	0.009	
0.8		0.195	0.641	0.106	0.348	0.012	
1.0	L	0.220	0.722	0.120	0.394	0.014	
2.0	S	0.319	1.047	0.177	0.579	0.024	1.15
2.4		0.352	1.156	0.196	0.643	0.027	
3.0		0.398	1.307	0.223	0.731	0.032	
4.0	C	0.467	1.533	0.264	0.865	0.040	
6.0		0.587	1.927	0.336	1.102	0.055	
8.0	X	0.693	2.273	0.400	1.314	0.070	1.20
10.0		0.789	2.588	0.460	1.510	0.084	1.25
12.4		0.896	2.938	0.527	1.730	0.101	1.30
15.0	Ku	1.004	3.293	0.596	1.956	0.118	
18.0		1.121	3.677	0.672	2.203	0.139	1.35
20.0	K	1.195	3.922	0.720	2.362	0.152	

Note: Typical Insertion Loss dB = (Attenuation)(Length) +2(Conn. Loss)

Attenuation at any frequency =

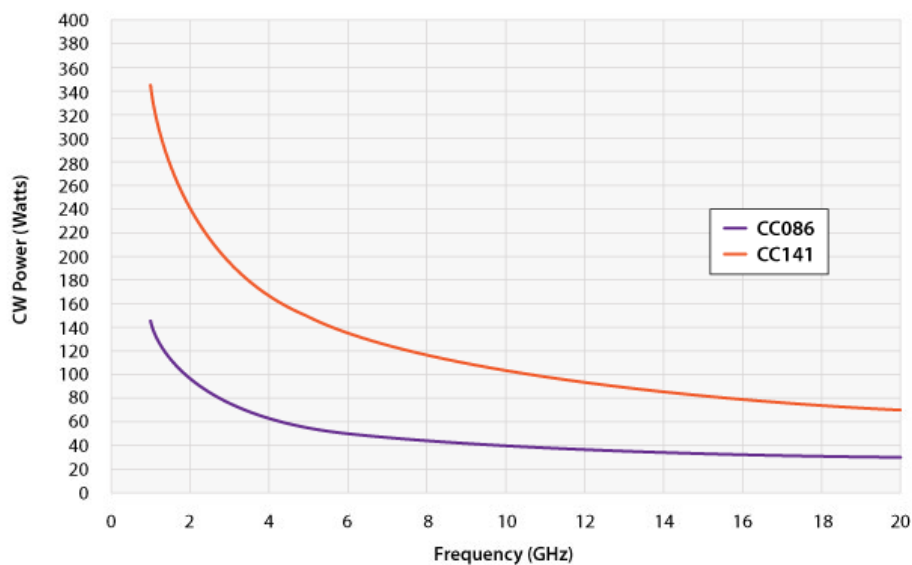
CC086: $(0.20638 \times \sqrt{\text{freq GHz}}) + (0.1362 \times \text{freq GHz})$

CC141: $(0.10819 \times \sqrt{\text{freq GHz}}) + (0.01181 \times \text{freq GHz})$

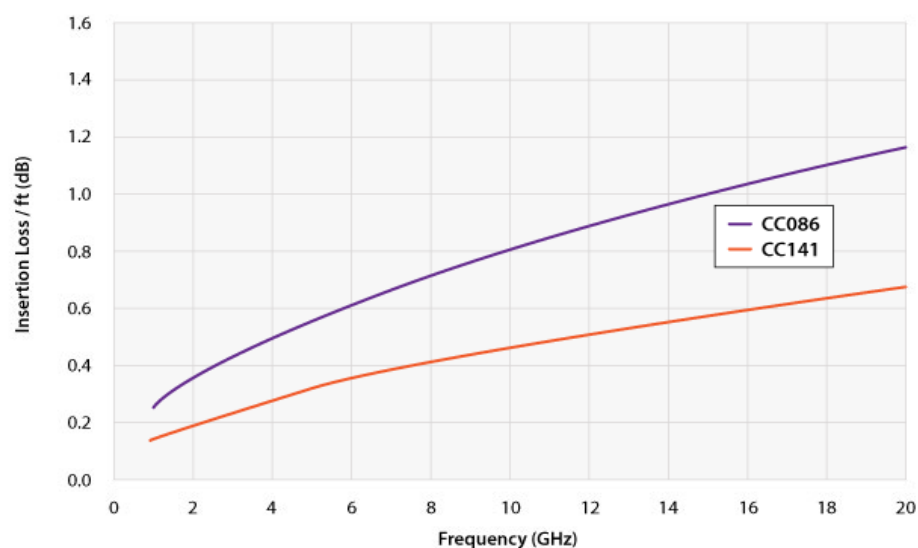


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Cable CW Power Handling



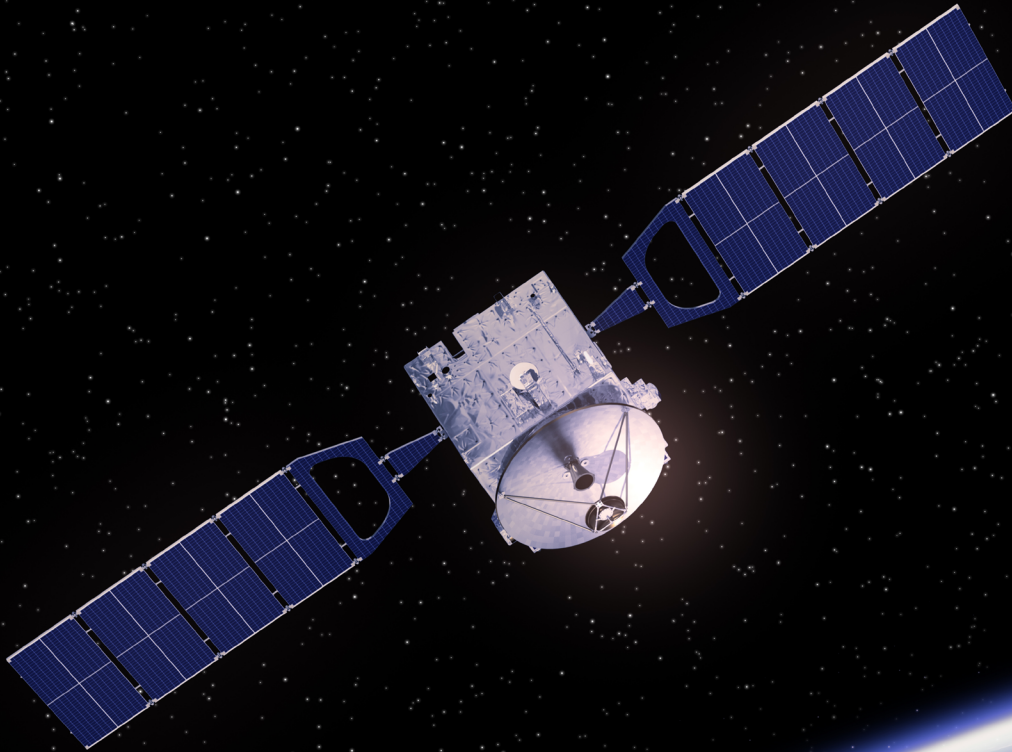
Insertion Loss





MegaPhase®

With the right connection anything is possible



Visit us at megaphase.com

About us

Founded in 1998 and headquartered in Stroudsburg, Pennsylvania, MegaPhase designs and manufactures high-performance RF coaxial cables and connectors for OEMs in critical markets including test instrumentation, defense, aerospace, telecommunications, and satellite systems. Serving more than 500 customers in 30 countries—including major technology leaders and the U.S. government—MegaPhase is best known for its industry-leading GrooveTube® technology, a breakthrough flexible cable design used in high-reliability, high-power, and phase-defined applications across ground, sea, air, and space platforms. All products are manufactured in-house, tested 100% in a state-of-the-art RF lab up to 110 GHz, and engineered to deliver exceptional phase stability, low loss, and long-term measurement repeatability, helping customers achieve more reliable results at a lower cost per measurement.

MegaPhase

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