

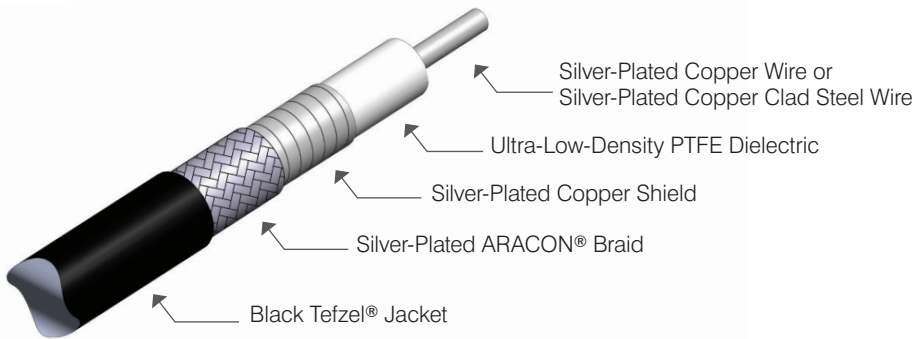
UTiFLEX® Ultra-Light Cable Assemblies

UTiFLEX® Ultra-Light Cable Assemblies are optimized for spaceflight applications. They provide the lightest weight, lowest insertion loss, and best radiation resistance in a flexible cable construction. The cables utilize our ARACON® for the outer shield, an ultra-low-density PTFE for the dielectric, and a DuPont Tefzel® jacket. If required, cable assemblies are manufactured in a Class 10,000 clean-room by certified solder technicians.

Mechanical Characteristics	MCJ088D	MCJ142A	MCJ185A	MCJ205A	MCJ311A
Outer Diameter <i>in (mm)</i>	0.088 (2.24)	0.142 (3.61)	0.185 (4.70)	0.205 (5.21)	0.310 (7.87)
Center Conductor Type	Solid	Solid	Solid	Solid	Solid
Max. Weight <i>g/ft (g/m)</i>	3.6 (11.8)	8.8 (28.9)	12.4 (40.7)	16.0 (52.5)	35 (114.8)
Min. Bend Radius <i>in (mm)</i>	0.25 (6.35)	0.38 (9.65)	0.38 (9.65)	0.50 (12.70)	1.25 (31.75)
Electrical Characteristics	MCJ088D	MCJ142A	MCJ185A	MCJ205A	MCJ311A
Impedance	50 Ω	50 Ω	50 Ω	50 Ω	50 Ω
Frequency Range	DC to 18 GHz	DC to 40 GHz	DC to 32 GHz	DC to 26.5 GHz	DC to 18 GHz
Velocity of Propagation	80%	83%	83%	84%	83%
Capacitance <i>pF/ft (pF/m)</i>	25.5 (83.7)	24.5 (80.4)	24.5 (80.4)	24.2 (79.4)	24.5 (80.4)
Shielding Effectiveness	@ 1 GHz > 100 dB	> 100 dB	> 100 dB	> 100 dB	> 100 dB
Max. Insertion Loss <i>db/ft (dB/M)</i>	See figure on next page				
	@ 1 GHz	0.20 (0.66)	0.10 (0.33)	0.08 (0.26)	0.07 (0.23)
	@ 10 GHz	0.66 (2.17)	0.33 (1.08)	0.27 (0.89)	0.23 (0.75)
	@ 18 GHz	0.89 (2.92)	0.44 (1.44)	0.36 (1.18)	0.32 (1.05)
	@ 26.5 GHz	-	0.54 (1.77)	0.44 (1.44)	0.39 (1.28)
	@ 32 GHz	-	0.60 (1.97)	0.49 (1.61)	-
Phase Stability vs. Flexure	@ 10 GHz	2° †	2° †	2° †	1° †
	@ 18 GHz	2° †	3° †	6° †	2° †
Phase Stability vs. Temp.	See figure on next page				
Power Handling	See figure on next page				
VSWR	See connector selection guide				
Environmental Characteristics	MCJ088D	MCJ142A	MCJ185A	MCJ205A	MCJ311A
Temperature Range	-150 °C to 165 °C	-150 °C to 165 °C	-150 °C to 165 °C	-150 °C to 165 °C	-150 °C to 165 °C

See Page 22 for applicable environmental test

† Cable wrapped once around a 3 in diameter mandrel



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We are constantly improving products. Please contact us for the latest detailed specification sheet for any individual cable.

Performance

