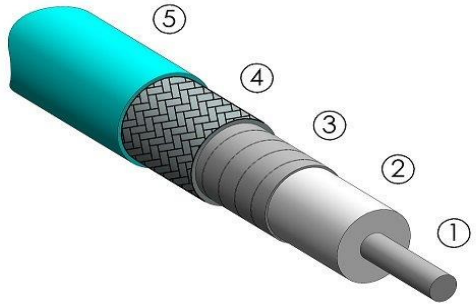
UTiFLEX PRODUCT SPECIFICATION

Part Description	Item Number	Rev.
UFB142A	73909	A

Contruction Layers and Standards

1	Center Conductor	Solid silver plated copper per ASTM B-3 and ASTM B-298
2	Dielectric	Ultra Low density PTFE in accordance with MIL-DTL-17
3	Outer Conductor	Silver plated copper tape per ASTM B-298
4	Outer Shield	High-strength, high-conductivity copper-alloy wire per UNS C17510, silver-plated per ASTM B-298
5	Jacket	Fluorinated Ethylene Propylene (FEP) per MIL-DTL-17, Type IX, aqua in color
6	Cable Marking	MICRO-COAX UTiFLEX 142A Series Lot Number -Sublot



Mechanical / Physical Properties

Temperature Range (°C)	-65 / +165
Center Conductor Diameter (inch)	0.0403
Dielectric Diameter (inch)	0.1100
Outer Condutor Diameter (inch)	0.1165
Outer Shield Diameter (inch)	0.1300
Jacket Diameter (inch)	0.1420 ± 0.004
Jacket Wall Thickness (inch)	≥ 0.003
Center Conductor Strands	1
Weight (grams/ft)	≤ 10.1
Minimum Static Bend Radius (inch)	0.38
Flex Life[3] (Cycles)	75,000

Environmental Properties

Where applicable after each test, the assembly shall show no damage, insertion loss and VSWR shall remain within the specified limits, and connector interface dimensions remain within the specified limits of MIL-PRF-39012.

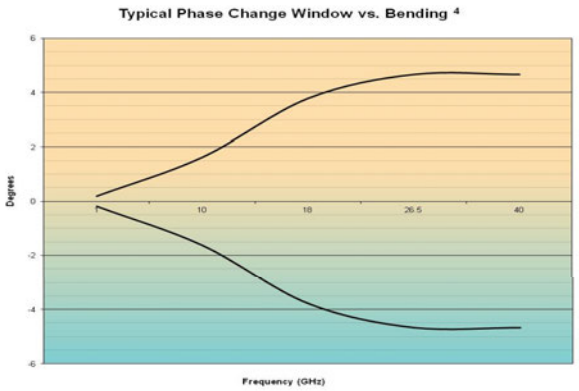
Thermal Shock	MIL-STD-202, Method 107, 5 Cycles, -55 to +165°C (cable and SMA connectors only)
Aging Stability	MIL-DTL-17, Paragraph 4.8.16, 165°C for 168 hours (cable and SMA connectors only)
Vibration	MIL-STD-202, Method 204, Test Condition B
High Pressure	Pressure increased ≤ 10 bar/min to 100 +/- 2 bar for 12 hrs.
Low Pressure	SAE-AS-13441, Method 1004.1
Humidity	MIL-STD-810, Method 108, Procedure 1 and 2
Salt Fog	MIL-STD-810, Method 509, Procedure 1
Sand and Dust	MIL-STD-810, Method 510, Procedure 1
Stress Crack Resistance	MIL-DTL-17, Paragraph 4.8.17
Cold Bend Test	MIL-DTL-17, Paragraph 4.8.19
Outgassing	Less than 1% TML and 0.1% CVCM
Radiation Resistance	30 Mrads
Flammability	14 CFR Part 25, Appendix F, Part I (b) (7), 60° flammability test

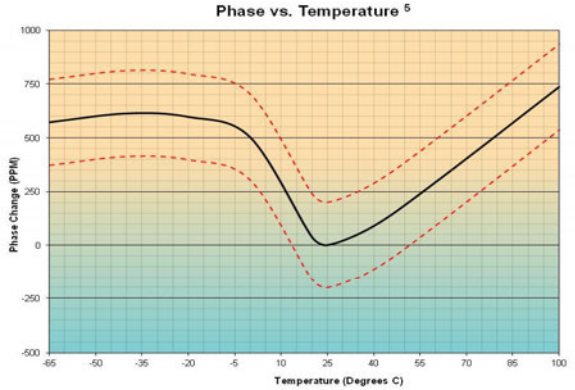
Attenuation[1], Power, and VSWR at 20°C and Sea Level

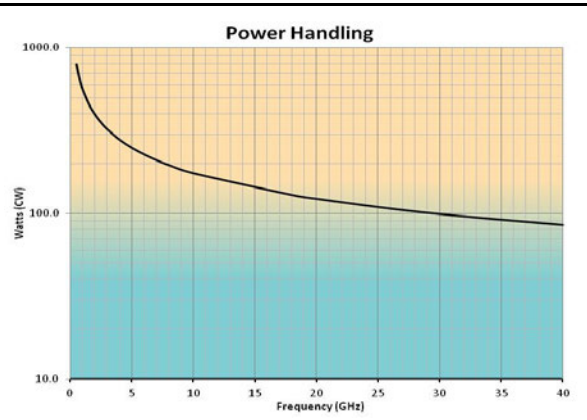
Frequency (GHz)	dB / 100ft	Watts (CW)	VSWR
0.5	7.0	797.7	1.20
1	10.0	562.8	1.20
5	23.0	249.3	1.20
10	33.0	175.0	1.20
18	44.0	129.4	1.20
26.5	54.0	105.9	1.25
40	68.0	85.4	1.25

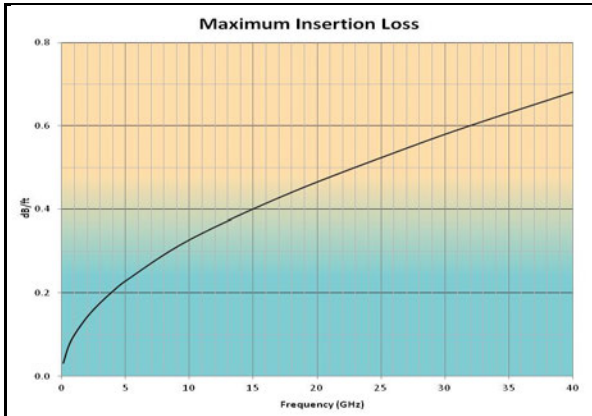
Electrical Properties

Impedance (Ohms)	50
Velocity of Propagation (%)	83
RF Shielding (dB)	≥ 90
Capacitance (pF/Ft)	24.5
Cutoff Frequency (GHz)	41.92
Corona Extinction (VRMS @ 60Hz)	2500
Dielectric Withstanding (VRMS @ 60Hz)	5000
Insertion Loss Stability (% Change)[2]	≤ 5
K1 : K2	10.014 : 0.111









Notes:

1. Attenuation (db/100Ft) = K1·√F + K2·F where F is Frequency in GHz
2. Insertion Loss change, while being vibrated at a frequency of 6 Hz and an amplitude of 1 inch.
3. Connect both ends of cable to flex (snake) machine. The movement of the flex machine arm from 36 inches to 18 inches, stopping, and then returning to 36 inches shall be 1 flex cycle.
4. Typical phase change vs bending is cable wrapped 360° around a 3 inch diameter mandrel.
5. Cable assemblies of equal length and connectors made from the same cable manufacturing lot shall phase track within 200 PPM of each other.

Specifications subject to change. Please contact Micro-Coax, Inc. for the latest document revision.

Rev.	ECN #	DATE	INIT.	APPROVALS		
A	145484	11/19/2014	NAP	DWN	NAP	11/19/2014
				ENG	NAP	11/19/2014
				QA	DMD	11/19/2014

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CARLISLE
MICRO-COAX
PROVEN RELIABLE
Micro-Coax, Inc.
206 Jones Blvd.
Pottstown, PA 19464

UFB142A CABLE SPECIFICATION