

UTiPHASE PRODUCT SPECIFICATION

Part Description	Item Number	Rev.
UFP088D	118715	A1

Construction Layers and Standards

1	Center Conductor	Silver plated copper-clad steel per ASTM B-501
2	Dielectric	CIT Fluoropolymer
3	Outer Conductor	Silver plated copper per ASTM B-298
4	Outer Shield	High-strength, high-conductivity copper-alloy wire per UNS C17510, silver-coated per ASTM B-298
5	Jacket	Fluorinated Ethylene Propylene (FEP) per MIL-DTL-17, Type IX
	Cable Marking	CarlisleIT UTIFLEX UFP088D Lot Number -Sublot

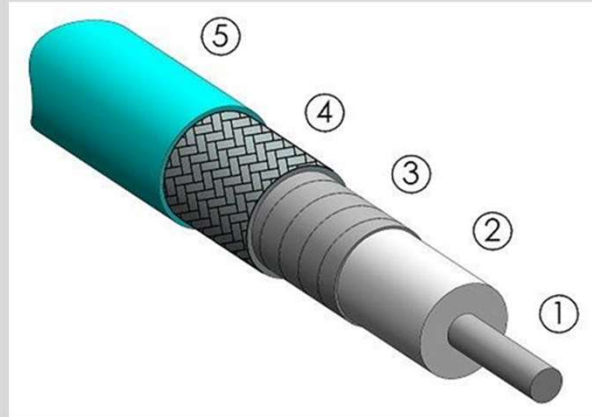
Mechanical / Physical Properties

Temperature Range (°C)	-65 / 165
Center Conductor Diameter [inch(mm)]	0.0201 (0.51)
Dielectric Diameter [inch(mm)]	0.057 (1.45)
Outer Conductor Diameter [inch(mm)]	0.0650 (1.65)
Outer Shield Diameter [inch(mm)]	0.077 (1.96)
Jacket Diameter [inch(mm)]	0.088 (2.24) ± 0.004 (0.10)
Jacket Wall Thickness [inch(mm)]	≥ 0.004 (0.102)
Weight [grams/ft (grams/m)]	≤ 4.5 (14.8)
Min Static Bend Radius [inch (mm)]	0.250 (6.35)
Dynamic Flex Life ³ (Cycles)	1,000
Center Conductor Strands	1

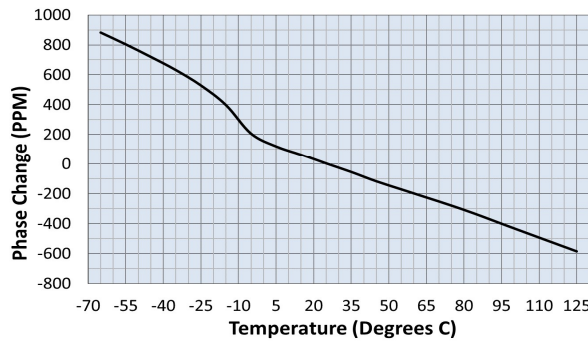
Environmental Properties

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, 20 Cycles, -65 to 165 °C (cable and SMA connectors only)
Stress Crack Resistance	MIL-DTL-17, Paragraph 4.8.17
Cold Bend Test	MIL-DTL-17, Paragraph 4.8.19



Typical Phase Change vs. Temperature



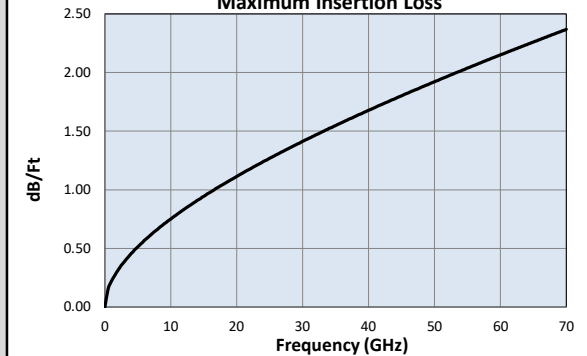
Electrical Properties

Impedance (Ohms)	50
Velocity of Propagation (%)	80
RF Shielding ((dB) at 1 GHz)	≥ 90
Capacitance [pF/Ft (pF/m)]	25.46 (83.53)
Maximum Frequency (GHz)	70
Corona Extinction Voltage (VRMS @ 60Hz)	1500
Dielectric Withstanding Voltage (VRMS @ 60Hz)	5000
Insertion Loss Stability (% Change) ²	≤ 5
K1 for Ft(m) : K2 for Ft(m)	21.02 (0.689) : 0.87 (0.029)

Maximum Attenuation¹ and VSWR⁴ at 20°C and Sea Level

Frequency (GHz)	Attenuation		VSWR
	[(dB/100ft)	(db./m)]	
1	22	(0.72)	≤ 1.25:1
10	76	(2.49)	≤ 1.25:1
26.5	132	(4.33)	≤ 1.25:1
40	168	(5.51)	≤ 1.25:1
60	216	(7.09)	≤ 1.25:1
70	237	(7.78)	≤ 1.35:1

Maximum Insertion Loss



Notes:

1	Maximum Attenuation (db./100Ft) = K1VF + K2F where F is Frequency in GHz
2	Insertion Loss change, while vibrated at a frequency of 6 Hz and an amplitude of 1 inch
3	Snake test: A 3-ft sample is fixed on one end. The other end is moved inward along the axis of the sample forcing the cable into a "U" shape. It then returns to straight configuration for one flex cycle.
4	VSWR testing to be performed on 20-foot minimum lengths with gating used to remove connector contributions. Minimum frequency points shall be 1601.

Rev.	ECO #	DATE	INIT.	APPROVALS		
A1	2050975	5/26/2020	DMD	DWN	DMD	2/24/2020
				ENG	DMD	5/11/2020
				QA	RAY	5/11/2020

Specifications subject to change. Please contact Carlisle Interconnect Technologies for the latest document revision.
Copyright Carlisle Interconnect Technologies

FSCM NO.
64639



UFP088D CABLE SPECIFICATION