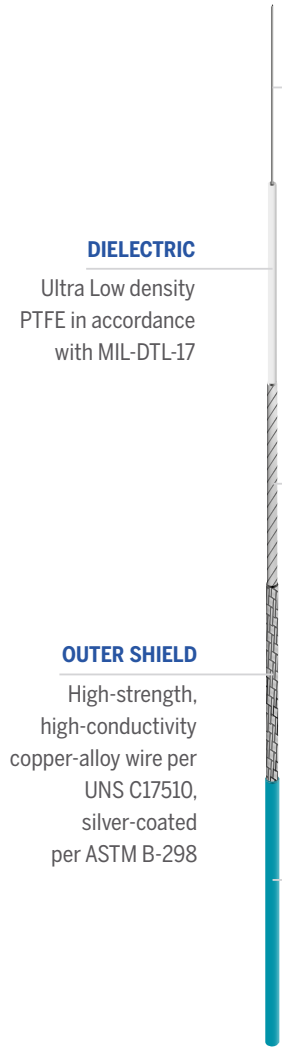
UFB088D

UTiFLEX®

UFB088D is the ideal coaxial solution for high-frequency applications in aerospace, defense, and advanced test systems. Its robust construction and reliable electrical performance make it perfect for use in radar systems, electronic warfare platforms, and space-constrained test environments. When design demands consistent performance under pressure, trust UTiFLEX® to deliver.

Impedance 50 Ohms | **Operating Temperature** -65°C to +165°C | **RoHS** Compliant

Details and Materials



CENTER CONDUCTOR
Silver plated copper-clad steel per ASTM B-501

DIELECTRIC
Ultra Low density PTFE in accordance with MIL-DTL-17

OUTER CONDUCTOR
Silver plated copper per ASTM B-298

OUTER SHIELD
High-strength, high-conductivity copper-alloy wire per UNS C17510, silver-coated per ASTM B-298

JACKET
Fluorinated Ethylene Propylene (FEP) per MIL-DTL-17, Type IX

Mechanical/Physical Properties

Center Conductor Diameter	in	0.0201
	mm	0.51
Dielectric Diameter	in	0.057
	mm	1.45
Outer Conductor Diameter	in	0.0650
	mm	1.65
Outer Shield Diameter	in	0.077
	mm	1.96
Jacket Diameter	in	0.088
	mm	2.24
Jacket Wall Thickness	in	≥ 0.003
	mm	≥ 0.076
Weight	grams/ft	≤ 4.6
	grams/m	≤ 15.1
Min Static Bend Radius	in	0.250
	mm	6.35
Dynamic Flex Life[3]	cycles	5,000
Center Conductor Strands		1

Electrical Properties

Velocity of Propagation	(%)	80
RF Shielding	(dB) at 1 GHz	≥ 100
Capacitance	pF/ft	25.46
	pF/m	83.53
Maximum Frequency	GHz	70
Corona Extinction Voltage	VRMS @ 60Hz	1000
Dielectric Withstanding Voltage	VRMS @ 60Hz	5000
Insertion Loss Stability	% Change[2]	≤ 5
K1	Ft (m)	20.30 (0.666)
K2	Ft (m)	0.11 (0.004)

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MICRO·COAX
AN AMPHENOL COMPANY

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Maximum Attenuation[1], Power, and VSWR

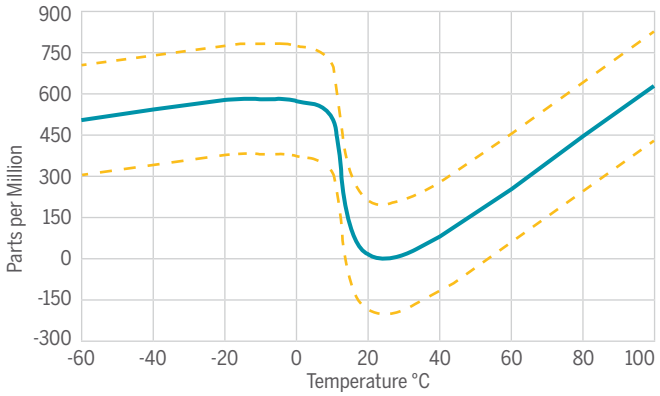
(at 20°C and Sea Level)

Frequency GHz	Attenuation dB/100ft	dB/m	Power Watts (CW)	VSWR
0.5	14	0.47	290	≤1.20:1
1	21	0.69	205	≤1.20:1
5	46	1.51	91	≤1.20:1
10	66	2.17	64	≤1.20:1
18	89	2.92	48	≤1.20:1
26.5	108	3.54	39	≤1.25:1
40	133	4.36	32	≤1.25:1
60	164	5.38	26	≤1.30:1
70	178	5.84	24	≤1.30:1

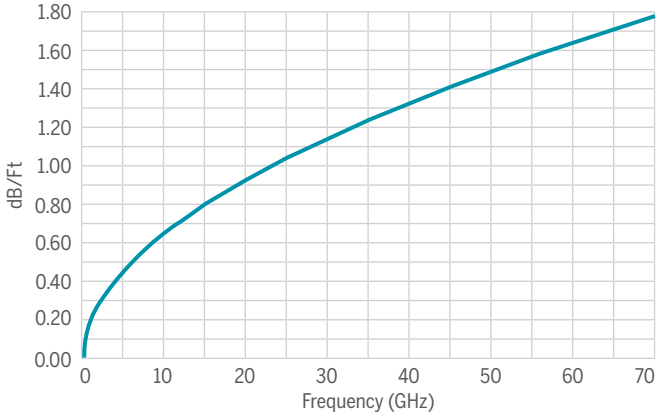
Environmental Properties

Thermal Shock	MIL-STD-202, Method 107, 20 Cycles, -65 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.
Humidity	MIL-STD-810, Method 507.5, Procedure I and II
Salt Fog	MIL-STD-810, Method 509
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

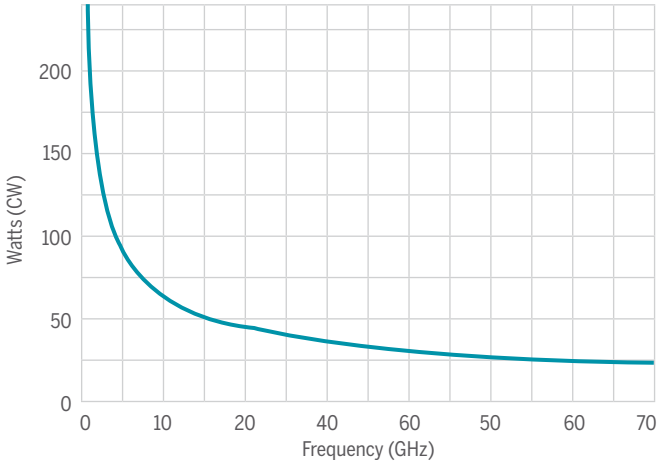
Typical Phase Change vs. Temperature[4]



Maximum Insertion Loss



Maximum Power Handling



Notes

1. Maximum Attenuation (db./100Ft) = K1√F + 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. One end of a 3-ft sample is fixed. 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. Cable assemblies of equal length and connectors made from the same cable manufacturing lot shall phase track within 200 PPM of each other.

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