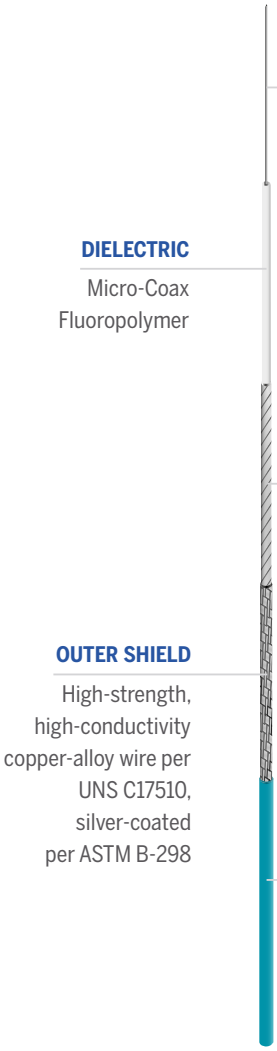
UFP088D

UTiFLEX®

UFP088D 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** -55°C to +125°C | **RoHS** Compliant

Details and Materials



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

DIELECTRIC
Micro-Coax Fluoropolymer

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

Jacket Diameter	in	0.088
	mm	2.24
Weight	grams/ft	≤ 4.5
	grams/m	≤ 14.8
Min Static Bend Radius	in	0.250
	mm	6.35
Dynamic Flex Life - Snake[3]	cycles	1,000
Center Conductor Strands		1

Electrical Properties

Velocity of Propagation	(%)	77
RF Shielding	(dB) at 1 GHz	≥ 90
Capacitance	pF/ft	26.45
	pF/m	86.79
Maximum Frequency	GHz	70
Corona Extinction Voltage	VRMS @ 60Hz	500
Dielectric Withstanding Voltage	VRMS @ 60Hz	5000
Insertion Loss Stability	% Change[2]	≤ 5
K1	Ft (m)	19.80 (0.649)
K2	Ft (m)	1.40 (0.046)

Maximum Attenuation[1] and VSWR[4]

(at 20°C and Sea Level)

Frequency GHz	Attenuation dB/100ft	dB/m	VSWR
1	22	0.72	≤1.25:1
10	77	2.53	≤1.25:1
26.5	140	4.59	≤1.25:1
40	182	5.97	≤1.25:1
60	238	7.81	≤1.25:1
70	264	8.66	≤1.35:1

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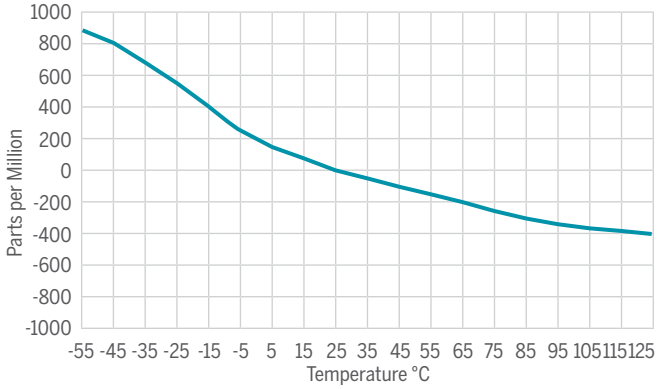
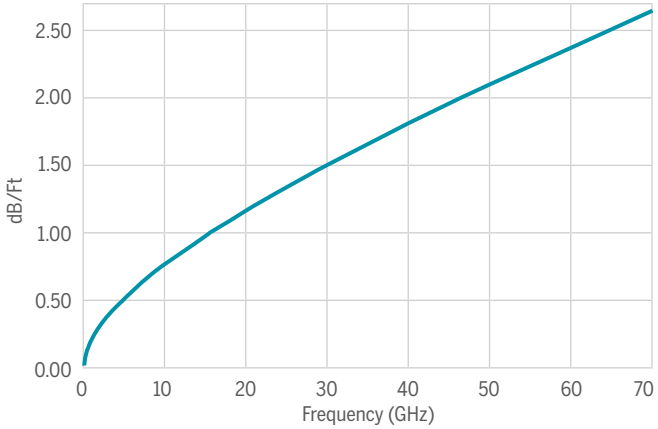
Environmental Properties

Thermal Shock	MIL-STD-202, Method 107, 20 Cycles, -55 to 125 °C (cable and SMA connectors only)
Stress Crack Resistance	MIL-DTL-17, Paragraph 4.8.17, except at 125 °C
Cold Bend Test	MIL-DTL-17, Paragraph 4.8.19

Typical Phase Change vs. Temperature



Maximum Insertion Loss



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: 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 10-foot minimum lengths with gating used to remove connector contributions. Minimum frequency points shall be 1601.

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