

UF Series Ultra-Flex Low-Loss Phase-Stable RF Coaxial Cable

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UF SERIES: ULTRA-FLEX PHASE-STABLE RF COAXIAL CABLE

This cable utilizes proprietary structural design and specialized

manufacturing processes to achieve ultra-flexible performance without compromising electrical integrity, making it ideal for applications demanding high flexibility and repeated flexing cycles. Ultra-Flexible Design, ideal for tight-space routing, capable of withstanding long-term repeated bending. High-Frequency Performance, Operating frequency up to 40GHz. Robust Environmental Resistance, Operating temperature: -55°C to $+85^{\circ}\text{C}$. TPU jacket resists oils, fuels, UV radiation, and abrasion (IP67 rating).

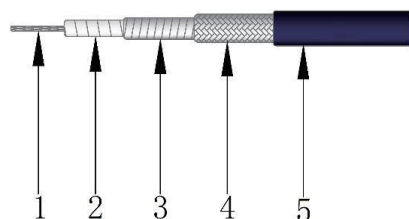
Typical Applications

- Medical Robotics
- Industrial Automation
- Aerospace
- Test Equipment

Product Features

- Operating frequency up to 40GHz
- Ultra-Flexible
- Robust Environmental Resistance



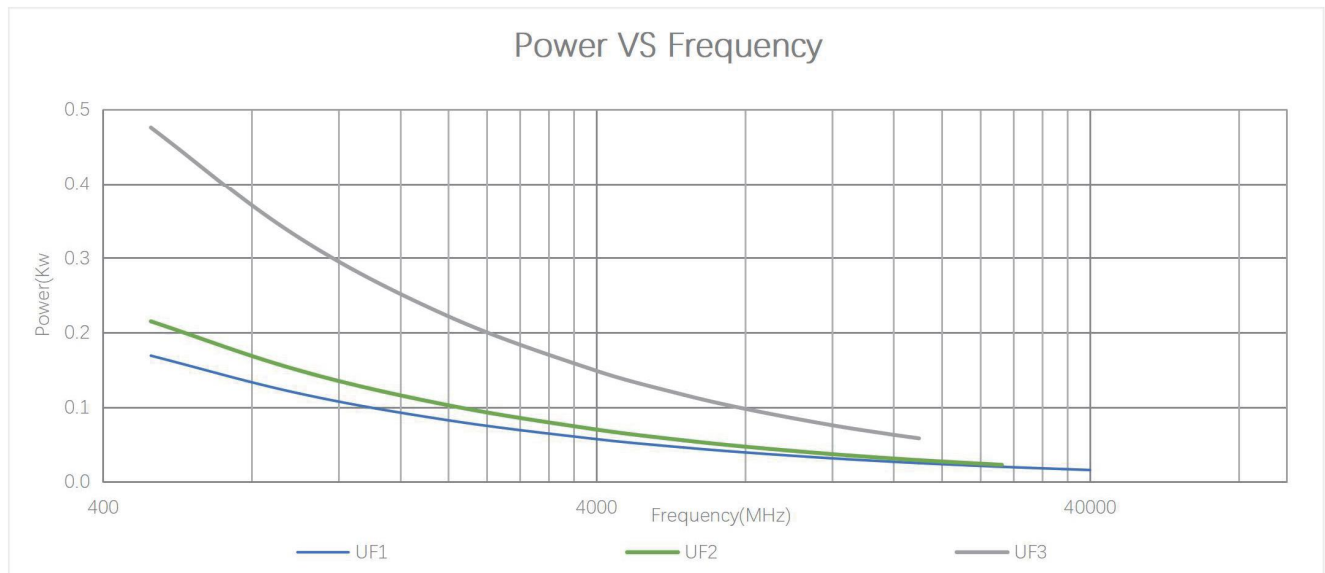
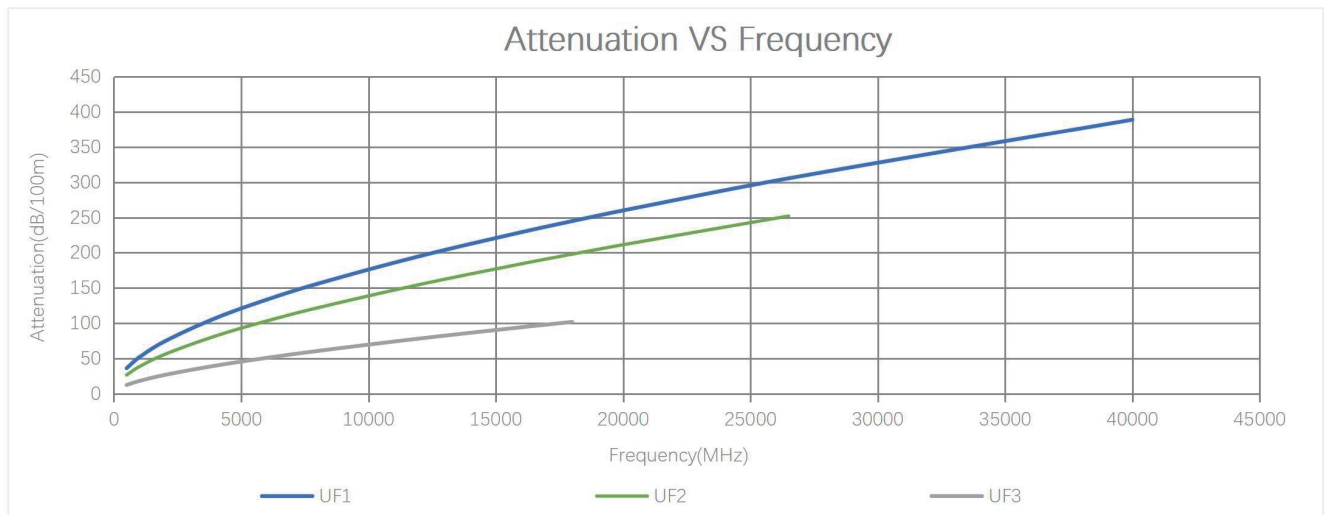


- 1-Center Conductor——Stranded-SPC
- 2-Dielectric——Low density PTFE
- 3-Outer Conductor——SPC
- 4-Outer Shield——SPC
- 5-Jacket——FEP

► Cable Specification

Model	UF1		UF2		UF3	
Mechanical Specifications						
Center Conductor	0.72		1.02		1.88	
Dielectric	2.05		3.00		5.45	
Inner Shield	2.25		3.20		5.77	
Outer Shield	2.65		3.68		6.37	
Jacket	3.60		5.00		8.00	
Electrical Specifications						
Impedance(Ω)	50		50		50	
Velocity of Propagation(%)	76		76		76	
Shielding Effectiveness (dB)	< -90		< -90		< -90	
Time Delay (ns/m)	4.38		4.38		4.38	
Capacitance (pF/m)	89.4		86.8		87.9	
Cut-off Frequency(GHz)	53		36		20	
Voltage Withstand(V,DC)	500		750		1350	
Static Bending Radius (mm)	14		20		40	
Dynamic Bending Radius (mm)	36		50		80	
Operating Temperature (°C)	-55~85		-55~85		-55~85	
Attenuation(+25°C Ambient)&Power Handling(+40°C Ambient;SeaLevel;VSWR 1:1)						
Frequency (MHz)	dB/100m	KW	dB/100m	KW	dB/100m	KW
500	36.30	0.169	26.68	0.215	12.47	0.476
1000	51.86	0.118	38.47	0.149	18.16	0.327
2000	74.40	0.082	55.89	0.103	26.75	0.222
4000	107.34	0.057	82.00	0.070	39.94	0.149
6000	133.45	0.046	103.22	0.056	50.91	0.117
8000	156.35	0.039	121.90	0.047	60.72	0.098
12000	195.07	0.031	154.87	0.037	78.34	0.076
16000	229.12	0.027	184.25	0.031	94.33	0.063
18000	244.88	0.025	198.03	0.029	101.91	0.058
20000	259.98	0.024	211.34	0.027		
26500	305.54	0.020	252.07	0.023		
40000	388.83	0.016				
K1	1.582929		1.1366		0.517315	
K2	0.001806		0.00253		0.001806	

► Test Data





Connector Code	Connector Type	Operating Frequency	UF1	UF2	UF3	VSWR (Max)
2.92M	2.92mm Male	DC-40GHz	●			1.30
2.92F	2.92mm Female	DC-40GHz	●			1.30
SMAM	SMA Male	DC-27GHz		●	●	1.25
SMAWM	SMA Male Right Angle	DC-18GHz		●	●	1.25
SMAF	SMA Female	DC-27GHz		●	●	1.25
NM	N Male	DC-18GHz		●	●	1.25
NF	N Female	DC-18GHz		●	●	1.25
TNCM	TNC Male	DC-12GHz		●	●	1.25
SCM	SC Male	DC-6GHz			●	1.25
DINM	7/16 Male	DC-6GHZ			●	1.25