

AccuPhase[®] 70

UKJ186D



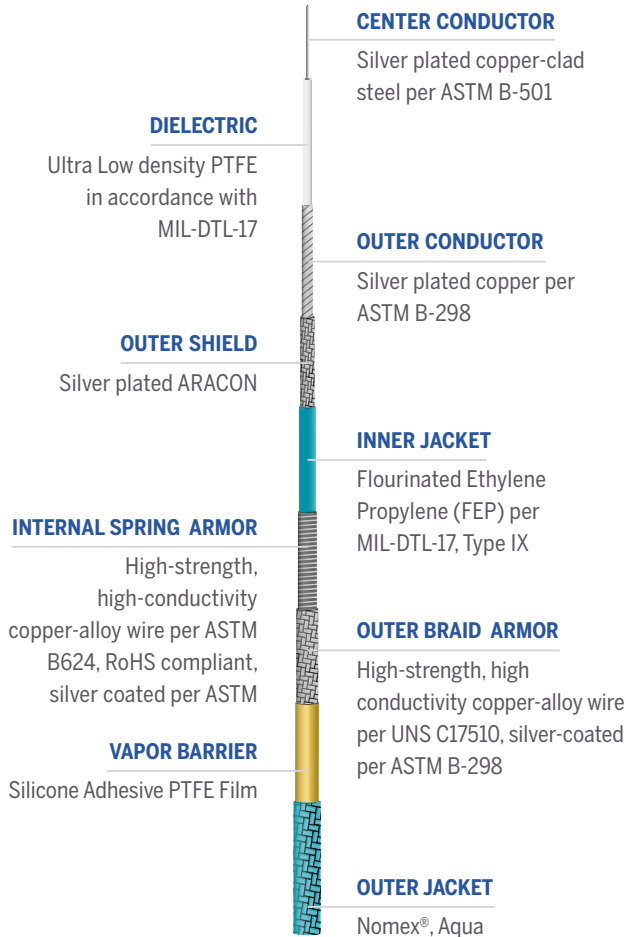
AccuPhase 70 test cable assemblies represent the best in microwave cable technology. It is the first and only test cable assembly that incorporates ARACON[®] braid for the outer shield, that in combination with a helically wrapped silver-plated copper outer conductor and ultra-low-density PTFE dielectric, results in the most stable and durable 70 GHz RF cable assembly in the market. Ideal choice for test labs or any testing environment requiring excellent mechanical strength and long-term reliability in a compact package.

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

Mechanical/Physical Properties

Jacket Diameter	in	0.186
	mm	4.72
Weight	grams/ft	≤ 17.3
	grams/m	≤ 56.8
Min Static Bend Radius	in	1.000
	mm	25.40
Crush Resistance	lbs/in	≥ 250
Flex-Life-Snake ³	cycles	200,000
Center Conductor Strands		1

Details and Materials



Electrical Properties

Velocity of Propagation	(%)	80
RF Shielding (1-18 GHz with connectors shielded)	dB	≥ 90
Capacitance	pF/ft	25.00
	pF/m	82.02
Cutoff Frequency	GHz	70
Corona Extinction Voltage	VRMS @ 60Hz	1500
Dielectric Withstanding Voltage	VRMS @ 60Hz	5000
Insertion Loss Stability	% Change ²	≤ 5
K1	Ft (m)	19.85 (0.651)
K2	Ft (m)	0.41 (0.013)

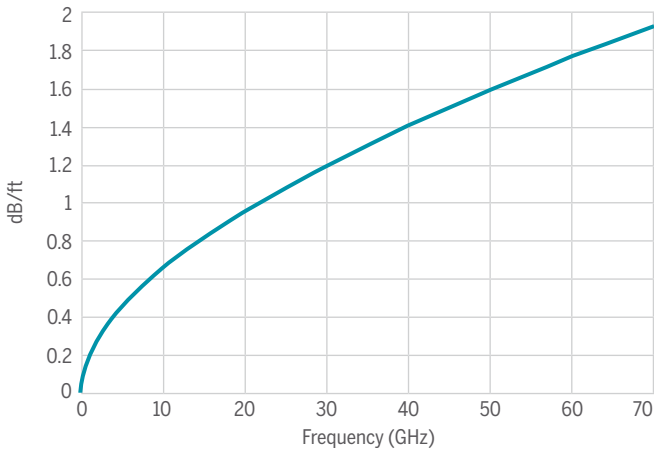
Maximum Attenuation¹ and Power (at 20°C and Sea Level)

Frequency GHz	Attenuation		Power Watts (CW)
	dB/100ft	dB/m	
0.5	14	0.47	150
1	20	0.66	106
5	46	1.52	47
10	67	2.19	33
18	92	3.00	25
26.5	113	3.70	20
40	142	4.65	16
50	161	5.27	15
65	186	6.11	13
70	194	6.38	12

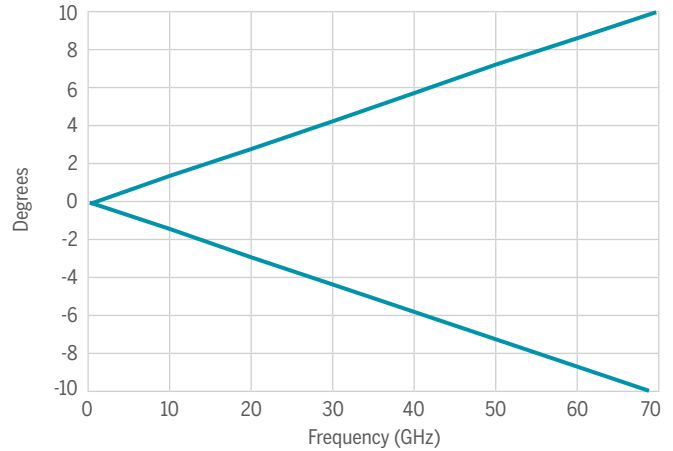
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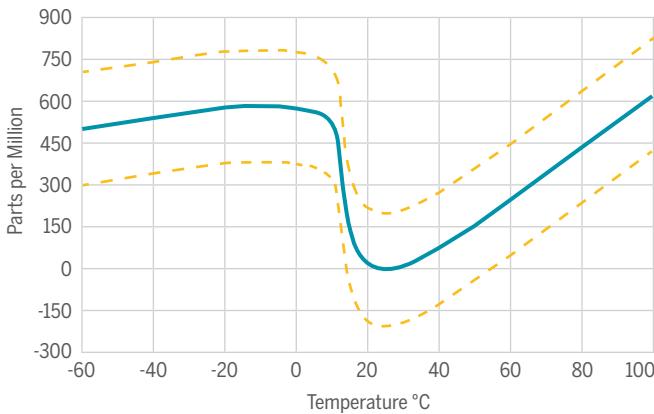
Maximum Attenuation



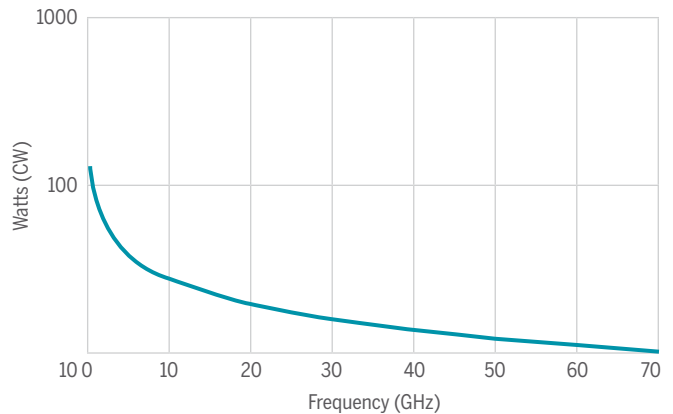
Typical Phase Change vs. Bending⁴



Typical Phase Change vs. Temperature



Maximum Power Handling



Connectors

Description	Part Number	Rated Frequency (GHz)	Max VSWR*(per connector)
1.85mm Plug	C00	70	1.20:1
1.85mm Jack	C10	70	1.22:1
1.85mm Ruggedized DUT Male	C0Z	70	1.20:1
1.85mm Ruggedized Port Socket	C1Z	70	1.22:1

* Max VSWR for the complete cable assembly = Max VSWR(con1) * Max VSWR (con2)

Notes

1. Maximum Attenuation (db./100Ft) = K1vF + K2F where F is the Frequency in GHz.
2. Insertion Loss change, while 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 to 18 inches, stopping, and then returning to 36 inches shall be 1 flex cycle.
4. Typical phase change vs bending for cable wrapped 360° around a 4.5 in diameter mandrel.
5. Assembly insertion loss can be calculated by adding the attenuation for the length of cable and the insertion loss contribution of the 2 connectors.
6. Test Plots required with Shipment (Attenuation and VSWR).
7. The values in this document are not guaranteed and may change without prior notice.