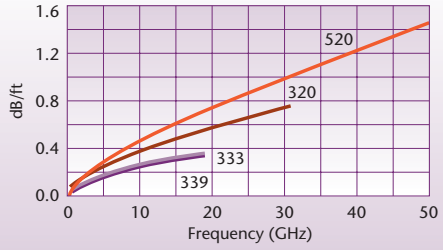
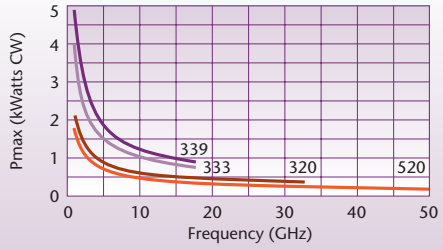
GrooveTube® Phase Defined – Series 3 & 5

Custom Phase & Power Applications – Radar/Array • Space • Thermal-VAC

Cable Attenuation @ STP



Cable CW Power Handling @ STP



Series 3 & 5 Cable Construction

Inner Conductor	Solid Ag-plated Cu
Dielectric	PTFE Spline (320, 333 & 339), PTFE Solid (520)
Outer Conductor	Cu GrooveTube®
Outer Jacket	Polyolefin - C

Standard Connectors

320: 2.92mm, 3.5mm, 7mm, BNC, C, SC, SMA, TNC, Type N

333: 7-16, C, HN, SC, SMA, TNC, Type N

339: 7-16, C, HN, SC, TNC, Type N

520: 1.85mm, 2.4mm, 2.92mm, 3.5mm, 7mm, BNC, C, SC, SMA, TNC, Type N

Other connectors available upon request.

Series 3 & 5 Typical Insertion Loss$_{dB}$ = (Attenuation)(Length) + 2(Connector Loss)

Frequency		Attenuation								Conn. Loss dB	SWR
		320		333		339		520			
GHz	Band	dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m	dB/ft	dB/m		
0.045	VHF	0.02	0.07	0.02	0.07	0.02	0.07	0.03	0.10	0.01	1.02:1
0.512	UHF	0.06	0.20	0.04	0.13	0.04	0.13	0.08	0.27	0.02	1.04:1
0.900		0.09	0.30	0.06	0.20	0.07	0.23	0.11	0.36	0.02	1.05:1
1.000	L	0.09	0.30	0.06	0.20	0.07	0.23	0.12	0.39	0.02	
1.900		0.13	0.43	0.09	0.30	0.08	0.26	0.17	0.56	0.03	
2.000	S	0.14	0.46	0.10	0.33	0.08	0.26	0.17	0.57	0.03	1.10:1
3.000		0.18	0.59	0.10	0.33	0.11	0.36	0.22	0.73	0.04	
4.000	C	0.21	0.69	0.14	0.46	0.13	0.43	0.26	0.86	0.04	
5.000		0.24	0.79	0.16	0.52	0.14	0.45	0.29	0.95	0.05	
6.000		0.27	0.89	0.18	0.59	0.16	0.52	0.34	1.10	0.06	1.20:1
7.000		0.29	0.95	0.19	0.62	0.18	0.59	0.37	1.20	0.06	
8.000	X	0.31	1.02	0.21	0.69	0.19	0.62	0.40	1.31	0.07	
9.000		0.33	1.08	0.23	0.75	0.22	0.72	0.44	1.44	0.07	
10.000		0.36	1.18	0.25	0.82	0.23	0.75	0.46	1.50	0.08	1.25:1
12.000		0.39	1.28	0.28	0.92	0.27	0.89	0.50	1.64	0.08	
12.400		0.40	1.31	0.28	0.92	0.27	0.89	0.53	1.74	0.09	
14.000	Ku	0.44	1.44	0.29	0.95	0.30	0.98	0.58	1.89	0.09	
15.000		0.46	1.51	0.30	0.98	0.32	1.05	0.61	2.00	0.10	
16.000		0.48	1.57	0.32	1.05	0.33	1.08	0.66	2.17	0.10	1.30:1
18.000		0.51	1.67	0.34	1.12			0.69	2.26	0.11	
20.000	K	0.57	1.87					0.74	2.44	0.12	
22.000		0.61	2.00					0.79	2.61	0.13	
24.000		0.64	2.10					0.86	2.82	0.14	1.35:1
26.500		0.68	2.23					0.91	2.99	0.15	
28.000	Ka	0.75	2.46					0.95	3.11	0.16	
30.000								1.00	3.27	0.17	1.40:1
32.000								1.05	3.43	0.18	
38.000								1.19	3.90	0.22	1.45:1
40.000								1.24	4.06	0.25	
50.000	mm							1.47	4.82	0.37	1.50:1

Series 3 & 5 Electrical Data

	320	333	339	520
Maximum Frequency	28 GHz	18 GHz	16 GHz	50 GHz
Impedance	50 Ω nominal	50 Ω nominal	50 Ω nominal	50 Ω nominal
Propagation Velocity	72.5% nominal	80% nominal	80% nominal	69.0% nominal
Time Delay	1.40 ns/ft (4.59 ns/m)	1.27 ns/ft (4.17 ns/m)	1.27 ns/ft (4.17 ns/m)	1.47 ns/ft (4.82 ns/m)
Capacitance	28.0 pF/ft (95.1 pF/m)	27.0 pF/ft (88.6 pF/m)	27.0 pF/ft (88.6 pF/m)	29.0 pF/ft (95.1 pF/m)
Shielding Effectiveness	< -90 dB minimum	< -90 dB minimum	< -90 dB minimum	< -90 dB minimum
Dielectric Constant	1.90	1.56	1.60	2.1
Dielectric Withstdg. Voltage	10 kV at 60 Hz	15 kV at 60 Hz	15 kV at 60 Hz	10 kV at 60 Hz

Series 3 & 5 Mechanical Data

	320	333	339	520
Outer Conductor Diam.	0.207 in (5.26 mm)	0.335 in (8.51 mm)	0.395 in (10.03 mm)	0.207 in (5.26 mm)
Bend Radius	0.50 in (1.27 cm)	1.00 in (2.54 cm)	1.50 in (3.81 cm)	0.50 in (1.27 cm)
Operating Temp. Range	-76 to 347°F (-60 to +175°C)		-76 to 347°F (-60 to +175°C)	
Jacketed Weight	0.040 lbs/ft (0.060 kg/m)	0.088 lbs/ft (0.132 kg/m)	0.112 lbs/ft (0.167 kg/m)	0.045 lbs/ft (0.067 kg/m)
Max. Assembly Length	25 ft (7.62 m)	40 ft (12.20 m)	75 ft (22.86 m)	25 ft (7.62 m)
Flex. Rating – Highest = 5.0	4.0	3.0	2.5	4.5

Phone: 1-877-MegaPhase / 570-424-8400
Fax: 1-877-MegaFax / 570-424-6031
www.MegaPhase.com