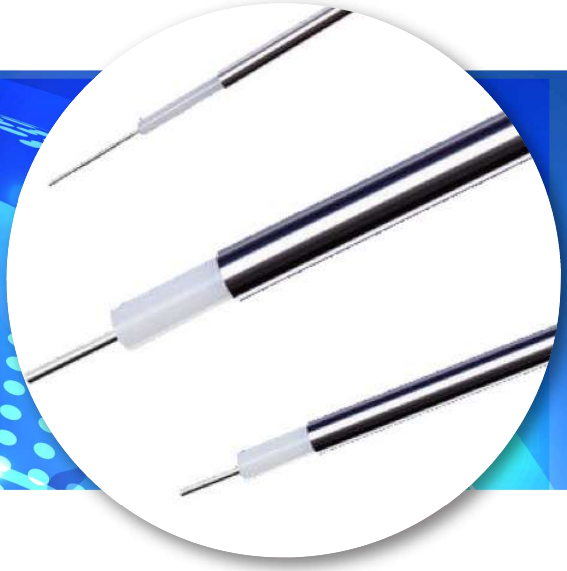
G Series
Semi-Rigid Coax Cable

07



INTRODUCTION

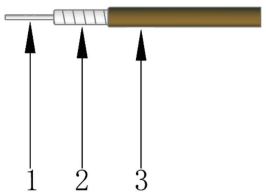
G series features stable attenuation, good shielding, no signal crosstalk and low VSWR. Talent Microwave has strong technical strength so that can research and develop semi-rigid cable up to 110GHz and can also customize according to customer special need.

Typical Application

- Aerospace
- Plate-to-plate connection
- Instrumentation and card interconnection
- Feed network
- Cabinet jumper

Features

- Maximum operating frequency up to 67GHz
- Good shielding
- Excellent corrosion resistance
- Cost-effective



1–Center Conductor——SPC(Silver Plated Copper)

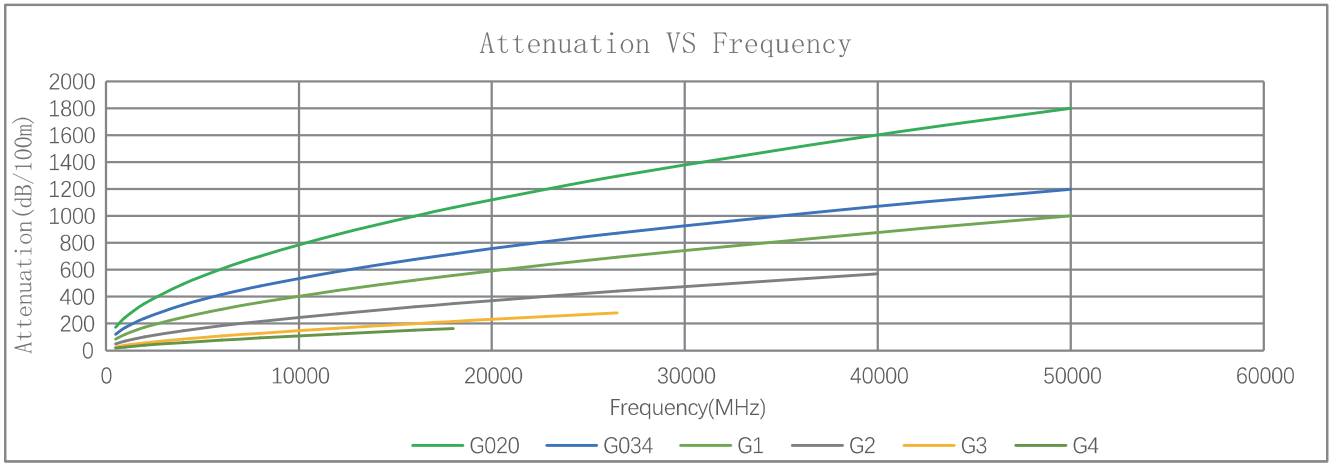
2–Dielectric——PTFE

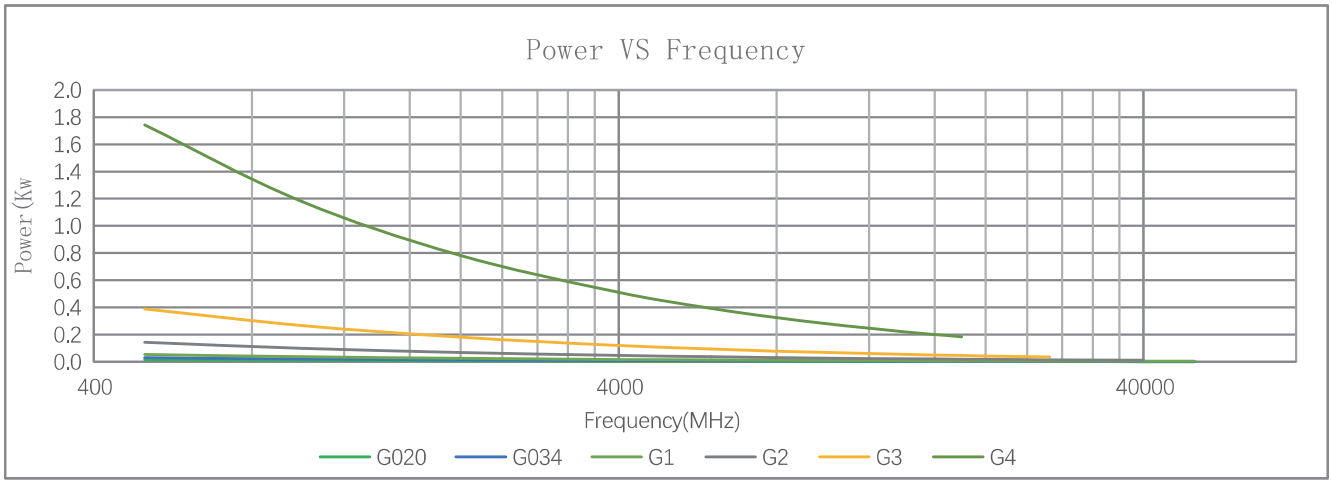
3–Out conductor——Copper/Ternary Alloy

Cable Specification

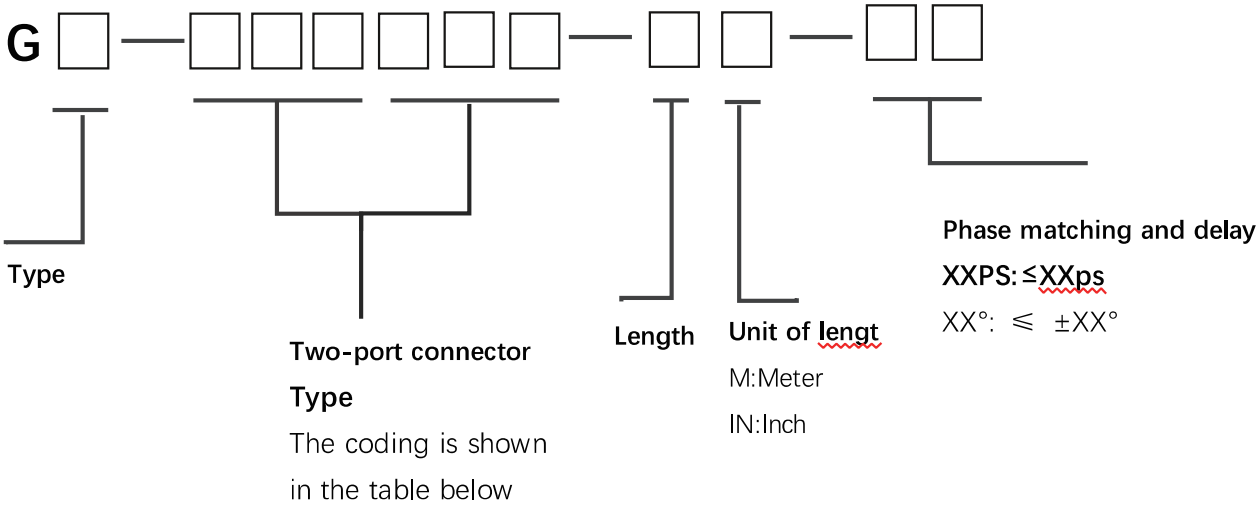
Model	G020		G034		G1		G2		G3		G4	
Mechanical Specifications												
Center Conductor	0.13		0.20		0.29		0.51		0.92		1.63	
Dielectric	0.43		0.66		0.94		1.68		2.98		5.31	
Outer Conductor	0.58		0.86		1.19		2.20		3.58		6.35	
Electrical Specifications												
Impedance(Ω)	50		50		50		50		50		50	
Velocity of Propagation(%)	70		70		70		70		70		70	
Shielding Effectiveness(dB)	< -110 (0-1GHz)		< -110 (0-1GHz)		< -165		< -165		< -165		< -165	
Time Delay (ns/m)	4.76		4.76		4.76		4.76		4.76		4.76	
Capacitance (pF/m)	95		98		96.5		95.2		96.5		96.1	
Cut-off Frequency(GHz)	237		154		108		61		34		19	
Voltage Withstand(V,DC)	220 (1 min)		330 (1 min)		450		850		1500		2600	
Static Bending Radius (mm)	1.3		5		6		15		18		32	
Operating Temperature (℃)	-55~125		-55~125		-55~200		-55~200		-55~200		-55~200	
Attenuation(+25°C Ambient)&Power Handling(+40°C Ambient;SeaLevel;VSWR 1:1)												
Frequency (MHz)	dB/100 m	KW	dB/100 m	KW	dB/100 m	KW	dB/100 m	KW	dB/100 m	KW	dB/100 m	KW
500	173.06	0.017	119.68	0.031	83.94	0.054	48.19	0.144	26.17	0.390	17.37	1.743
1000	245.20	0.012	169.25	0.022	119.76	0.038	69.30	0.100	38.17	0.267	25.72	1.177
2000	347.67	0.009	239.38	0.015	171.47	0.026	100.31	0.069	56.28	0.181	38.69	0.783
4000	493.49	0.006	338.57	0.011	246.68	0.018	146.47	0.047	84.20	0.121	59.32	0.510
6000	606.10	0.005	414.69	0.009	306.07	0.015	183.73	0.038	107.46	0.095	76.99	0.393
8000	701.52	0.004	478.87	0.008	357.25	0.011	216.37	0.032	128.31	0.080	93.12	0.325
12000	862.58	0.003	586.56	0.006	445.42	0.010	273.66	0.025	165.81	0.062	122.72	0.247
16000	999.33	0.003	677.37	0.005	522.00	0.009	324.44	0.021	199.91	0.051	150.14	0.202
18000	1061.54	0.003	718.49	0.005	557.35	0.008	348.17	0.020	216.09	0.047	163.30	0.185
20000	1120.55	0.003	757.38	0.005	591.17	0.008	371.05	0.019	231.81	0.044		
26500	1295.22	0.002	871.91	0.004	692.94	0.007	440.80	0.016	280.53	0.036		
40000	1602.78	0.002	1071.44	0.003	877.98	0.005	570.87	0.012				
50000	1800.12	0.002	1198.06	0.003	1000.51	0.005						
K1	7.7051381		5.351381		3.6740161		2.0669291		1.0824		0.688976	
K2	0.0015439		0.000029		0.0035795		0.003937		0.003937		0.003937	

Test Data


Attenuation VS Frequency
Attenuation(dB/100m)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
10000
20000
30000
40000
50000
60000
Frequency(MHz)
G020
G034
G1
G2
G3
G4


Power VS Frequency
Power(Kw
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
400
4000
40000
Frequency(MHz)
G020
G034
G1
G2
G3
G4

Assembly Selection Information



Optional Connectors

Connector Code	Connector Type	Operating Frequency	G020	G034	G1	G2	G3	G4	VSWR（Max）
1.0M	1.0mm Male	DC-110GHz			●				1.50
1.0F	1.0mm Female	DC-110GHz			●				1.50
1.85M	1.85mm Male	DC-67GHz			●	●			1.30
1.85F	1.85mm Female	DC-67GHz			●	●			1.30
2.4M	2.4mm Male	DC-50GHz	●	●	●	●			1.30
2.92M	2.92mm Male	DC-40GHz	●	●	●	●			1.30
2.92F	2.92mm Female	DC-40GHz	●	●	●	●			1.30
SSMAM	SSMA Male	DC-40GHz	●	●		●			1.30
3.5M	3.5mm Male	DC-27GHz	●	●		●	●		1.30
SMAM	SMA Male	DC-27GHz	●	●		●	●	●	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
SMPF	SMP Female	DC-40GHz	●	●		●			1.25
SSMPF	SSMP Female	DC-40GHz	●	●		●			1.25