

0.86mm SCuNi/CuNi cryogenic Cable Assemblies

G034CNCN 12 channel/SSMP Female / SSMP Female/DC-18 GHz

Model: G034CNCN12-SSMPFSSMPF-L

Features:

- Max Frequency 18 GHz
- VSWR max of 1.35

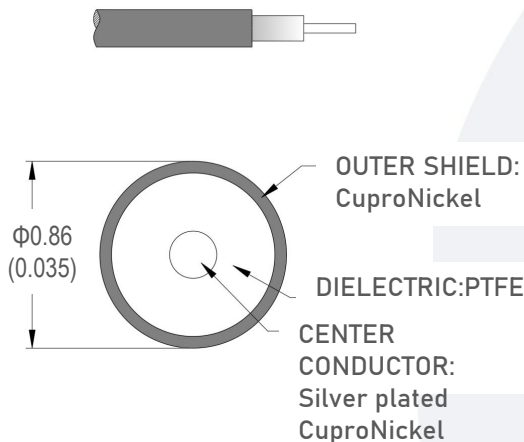
Applications:

- Dilution refrigerators/Cryogenic devices
- Quantum Computing
- Vacuum Chambers

Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency Range	DC		18	GHz
VSWR		1.25	1.35	:1
Shielding Effectiveness	90			dB
Capacitance			95.2	pF/m
Impedance		50		ohm

Cable Cross Section:



Environmental And Physical Characteristics:

Description	Parameter	Units
Cable Diameter	0.86	mm
Min. Bending Radius	3.2	mm
Thermal conductivity@4-20K*	31 (for 10cm cable)	$\mu\text{W/k}$
Operating Temperature	10mK To 200	$^{\circ}\text{C}$
Storage Temperature	-55 to +200	$^{\circ}\text{C}$
Of Channels	12	

* Note: Heat quantity required for one end of 10 cm long cable (excluding connectors) to reach 20 K when 4 K heat anchor is applied to the other end of the cable.

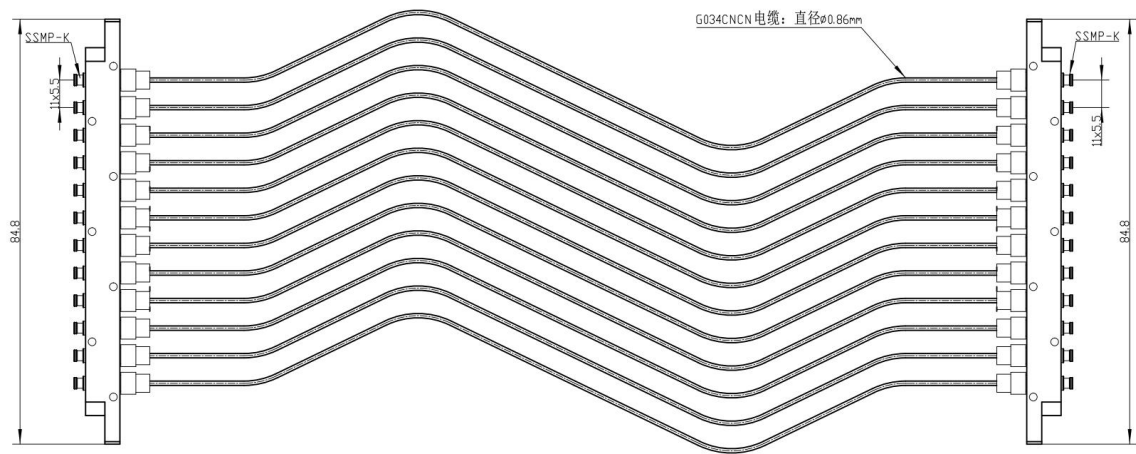
Cable Performance By Frequency

Frequency	0.5 GHz	1 GHz	5 GHz	10 GHz	20 GHz
Insertion Loss (dB/m)@300K	2.1	3.0	6.7	9.5	13.4
Insertion Loss (dB/m)@4K	1.0	1.5	3.2	4.6	6.5

Connectors:

Description	Connector 1	Connector 2
Type	SSMP Straight Female	SSMP Straight Female
Contact Matericl And Plating	Beryllium bronze, Gold	Beryllium bronze, Gold
Dielectric Type	PTFE	PTFE
Body Matericl And Plating	Beryllium bronze	Beryllium bronze
Packaging case	Oxygen-free copper	Oxygen-free copper
Insertion Loss (dB Max)	0.05* $\sqrt{f_GHz}$	0.05* $\sqrt{f_GHz}$

Outline Drawing:



Ordering Information:

Base Number	Lenth (Unit mm)	Custom Design Services
G034CNCN12-SSMPFSSMPF	-L	LEAVE BLANK(NOT REQUIRED) -Loop (Stress relief loop)