

2.2mm SCuNi/CuNi cryogenic Cable Assemblies

G2CNCN /SMA Male / SMA Male/DC-18 GHz

Model: G2CNCN-SMAMSMAM-L



Features:

- Max Frequency 18 GHz
- VSWR max of 1.35

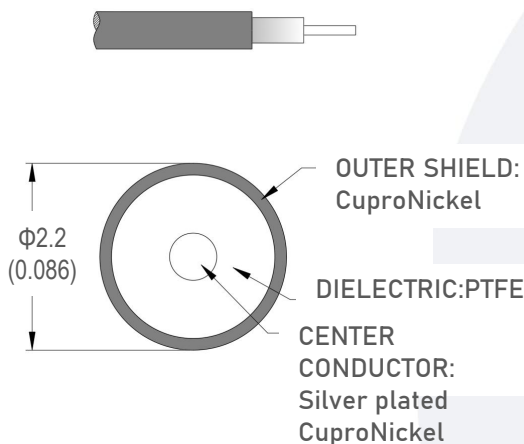
Applications:

- 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		110		dB
Capacitance			98	pF/m
Impedance		50		ohm

Cable Cross Section:



Environmental And Physical Characteristics:

Description	Parameter	Units
Cable Diameter	2.2	mm
Min. Bending Radius	10	mm
Thermal conductivity@4-20K*	61 (for 10cm cable)	$\mu\text{w/k}$
Operating Temperature	mK To 200	$^{\circ}\text{C}$
Storage Temperature	-55 to +85	$^{\circ}\text{C}$

* 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.

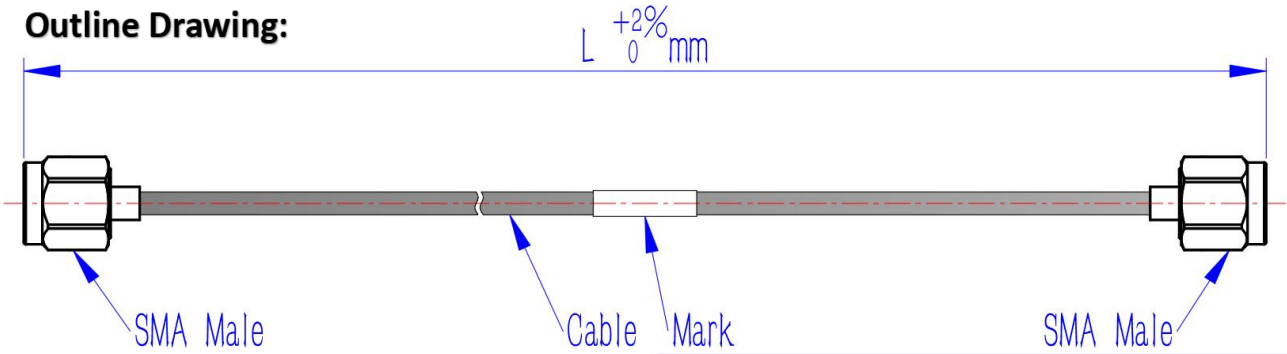
Cable Performance By Frequency

Frequency	0.5 GHz	1 GHz	5 GHz	10 GHz	20 GHz
Insertion Loss (dB/m)@300K	0.8	1.17	2.58	3.7	5.23
Insertion Loss (dB/m)@4K	0.4	0.6	1.3	1.8	2.6

Connectors:

Description	Connector 1	Connector 2
Type	SMA Straight Male	SMA Straight Male
Contact Material And Plating	Beryllium bronze, Gold	Beryllium bronze, Gold
Dielectric Type	PTFE	PTFE
Body Material And Plating	Beryllium bronze	Beryllium bronze
Insertion Loss (dB Max)	$0.05 \cdot \sqrt{f_{\text{GHz}}}$	$0.05 \cdot \sqrt{f_{\text{GHz}}}$

Outline Drawing:



Ordering Information:

Base Number	Lenth (Unit mm)	Custom Design Services
G2CNCN-SMAMSMAM	-L	LEAVE BLANK(NOT REQUIRED) -Loop (Stress relief loop)