東莞市亨松電子科技有限公司

Dongguan Hengxin Electronic Technology Co., Ltd.

承認書

客　　戶：

品　　名：1.8-1.9G铜管天线

料　　號：HX-A01-115B

客戶料號：

送樣日期：2025.06.17

客戶確認			供應廠商	
工程部	品保部	採購部	核准	送樣人
			赵 2025.06.17 守 刚	龚银明

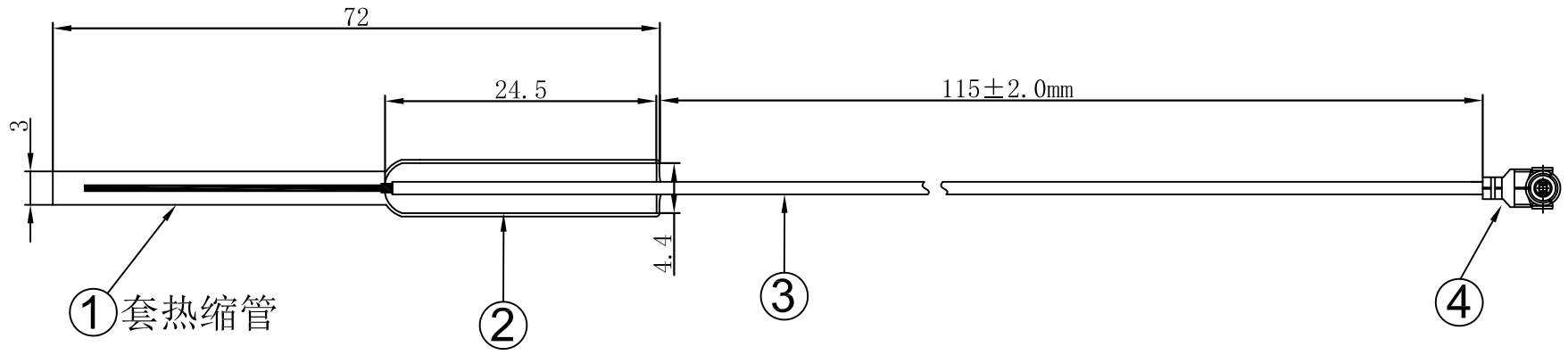
地址：東莞市沙田鎮楊公洲楊和路75號
TEL ：0769-81663533　FAX：0769-89361945
E-mail:nogps@nogps.com
Http://www.nogps.com

目　　录

RoHS Compatible

CUSTOMER	
PART NO	

REV.	DESCRIPTION	DATE



NO	Part number	Name	Material	Qt'y
4	HX-CI-113	Connector	一代端子	1
3	HX-CB-113B	Cable	O.D1.13mm L=115mm	1
2	HX-4.4TG03-N	镀锡铜管	CU	1
1	HX-RSTG-01	Heat shrink	Ø5.0*72mm	1

东莞市亨松电子科技有限公司

PART NAME: 1.8-1.9G铜管天线

PART NO.: HX-A01-115B

DATE:2025.06.17

APPROVED BY	CHECKED BY	DESIGNED BY	UNITS: mm	Tolerance
	赵 2025.06.17 守 刚	卓蜻婷	SCALE: 1/1	X.X ±0.50
			REVISION: A	X.XX ±0.15
				X° ±3°

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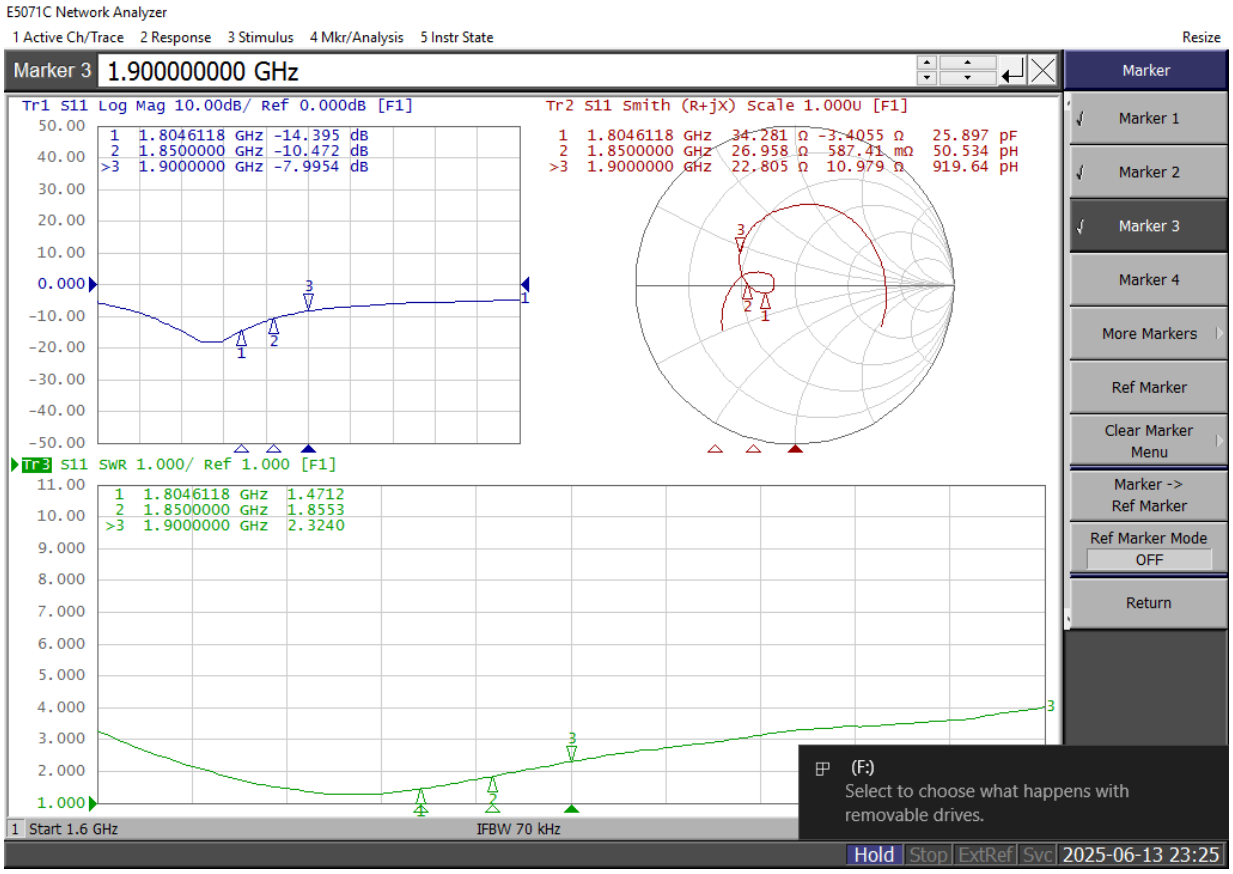
1. Reliability Testing

Test Item	Procedure	Requirement
1. Visual inspection and Dimension Check	Applicable methods using x5 magnification	follow specification
2. Rapid Changing of Temperature	-40˚C (30minutes) to 80˚C (30minutes); 24 cycles	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
3. Damp Heat	24 hours at 60˚C; 90 ~ 95% RH	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
4. Endurance	24 hours at 80˚C	After 2 hours recovery: 1. no visible damage 2. bandwidth tolerance < ±5%
5. Connector Pull Strength Test	>= 1.0 Kg	Hold 2~3S: 1. no visible damage 2. bandwidth tolerance < ±5%

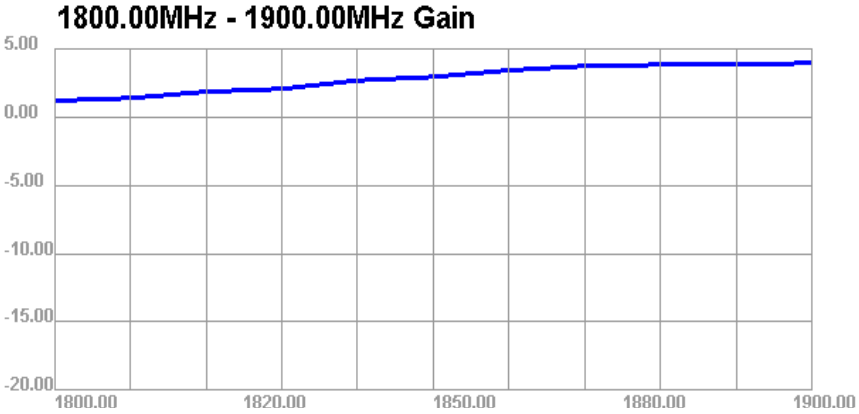
2. Specification

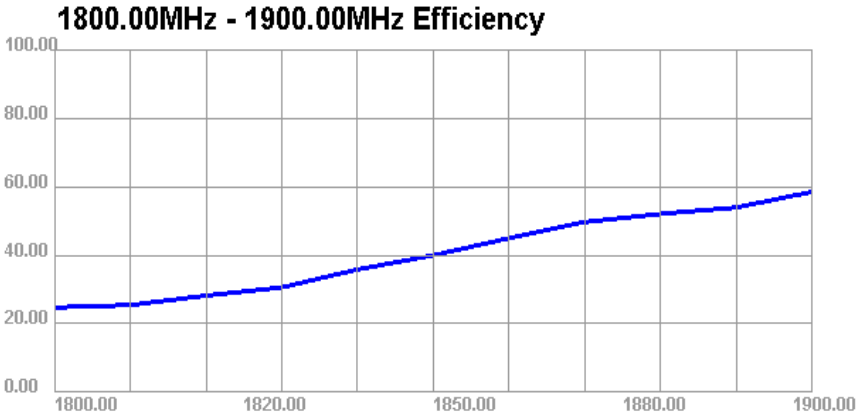
A. Electrical Characteristics	
S.W.R.(Tested in PC)	<= 2.0 @ 1800~1900 MHz
Typical Antenna Gain	3.0dBi
Impedance	50 Ohm
B. Material	
Material of Radiator	CU
Connector Type	U.FL
Material of Coaxial Cable	1.13
C. Environmental	
Operation Temperature	- 30 ˚C ~ + 85 ˚C
Storage Temperature	- 30 ˚C ~ + 85 ˚C

3. S.W.R. Testing Result

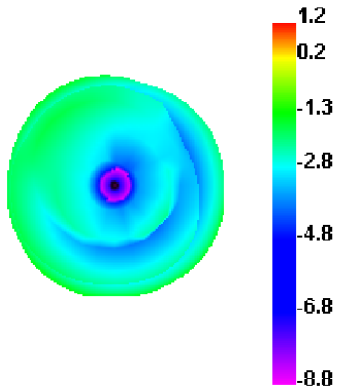


Passive Test For 1.8-1.9G												
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Gain (dBd)	UHIS (%)	DHIS (%)	Max (dB)	Min (dB)	irectivit (dBi)	Beamwidth (3dB)	AttH (dB)	AttV (dB)
1800	24.78	-6.06	1.19	-0.96	7.672	17.105	1.19	-20.57	7.25	0	43.68	43.04
1810	25.47	-5.94	1.39	-0.76	7.947	17.525	1.39	-18.58	7.33	0	43.78	43.44
1820	28.21	-5.5	1.85	-0.3	8.741	19.47	1.85	-18.49	7.34	0	43.58	43.2
1830	30.62	-5.14	2.06	-0.09	9.82	20.801	2.06	-17.39	7.2	0	43.12	43.46
1840	35.85	-4.45	2.67	0.52	11.867	23.987	2.67	-15.87	7.13	0	43.35	43.01
1850	39.99	-3.98	2.94	0.79	14.304	25.69	2.94	-14.06	6.92	0	43.05	43.5
1860	44.99	-3.47	3.42	1.27	17.115	27.872	3.42	-12.93	6.89	0	42.88	43.26
1870	49.73	-3.03	3.73	1.58	19.683	30.045	3.73	-12.88	6.76	0	42.99	43.19
1880	52.11	-2.83	3.83	1.68	21.335	30.773	3.83	-13.48	6.66	0	42.84	43.03
1890	53.96	-2.68	3.82	1.67	22.085	31.876	3.82	-13.8	6.5	0	42.5	43.18
1900	58.54	-2.33	3.95	1.8	24.849	33.689	3.95	-14.18	6.28	0	42.99	42.97

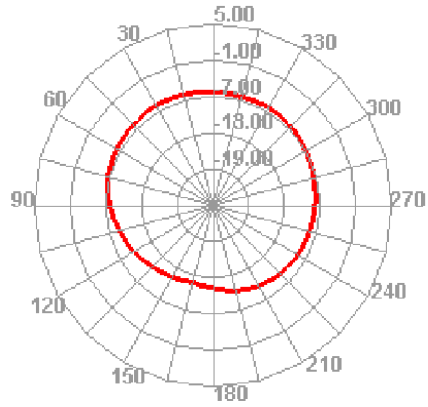




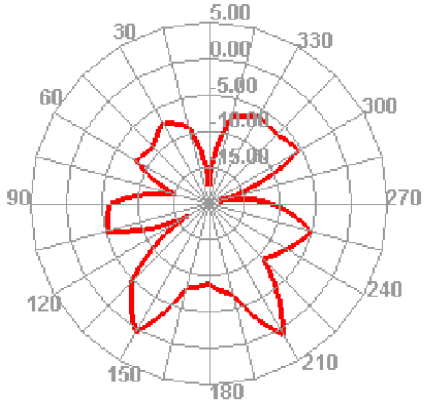
1800.000MHz



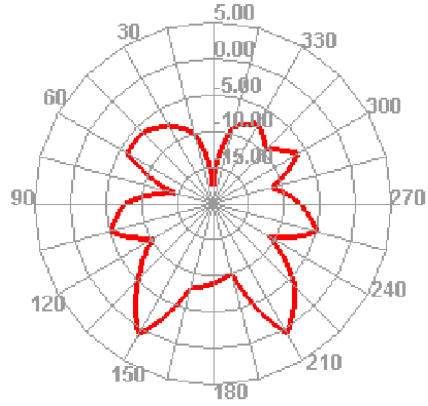
1800.000MHz H



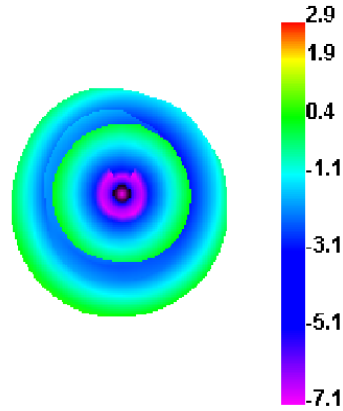
1800.000MHz E1



1800.000MHz E2



1850.000MHz



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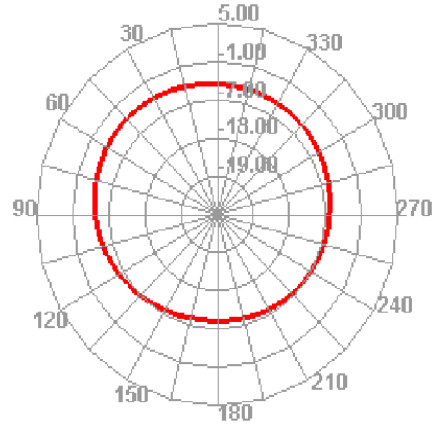

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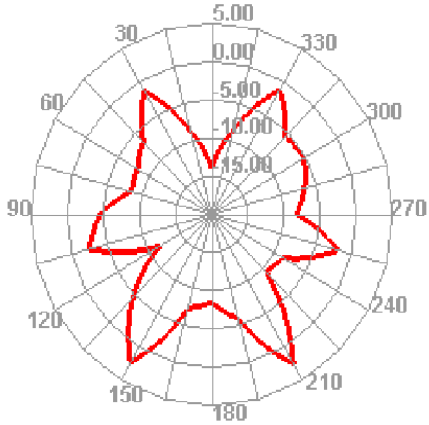

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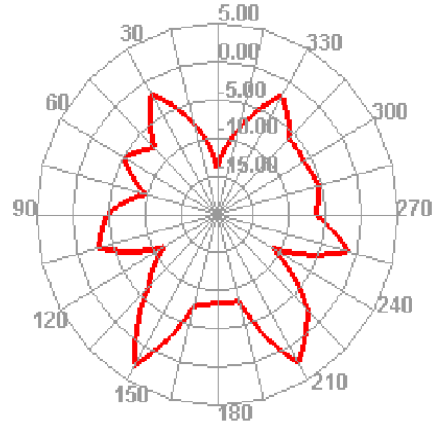

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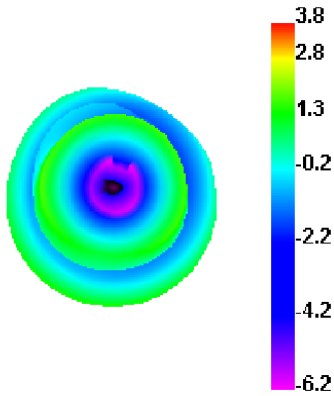

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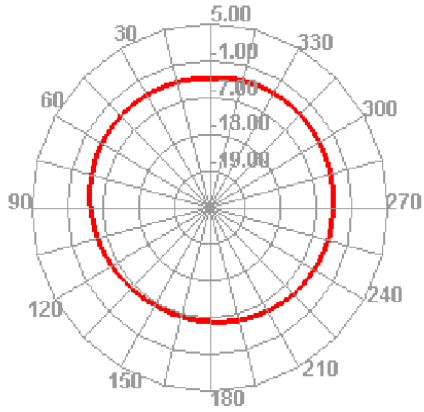
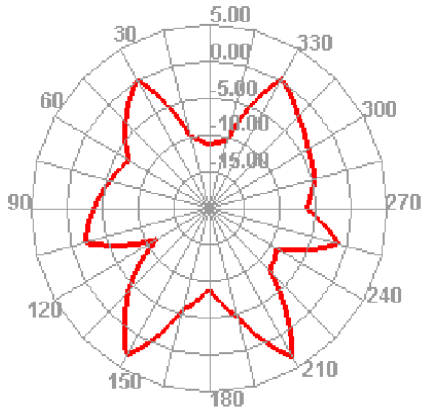


1880.000MHz E1



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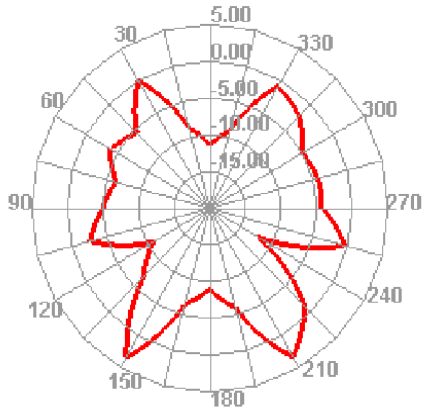
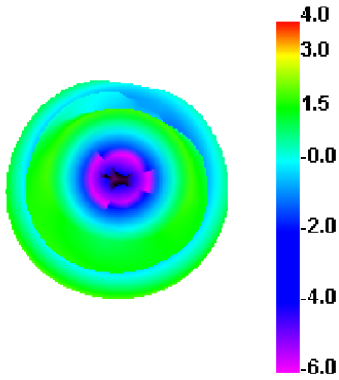


1900.000MHz



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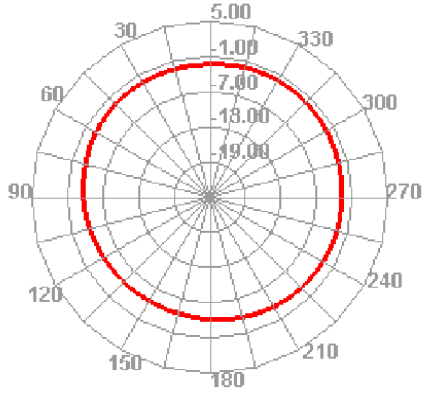
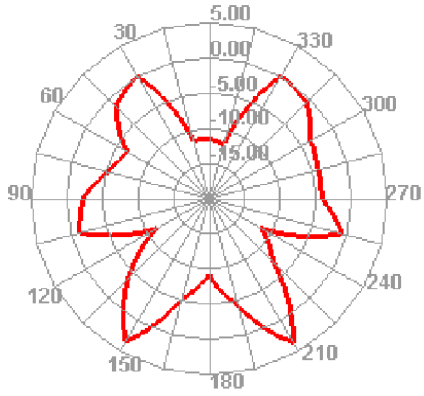


1900.000MHz E1



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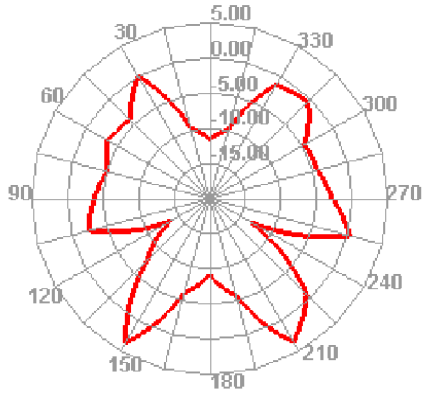
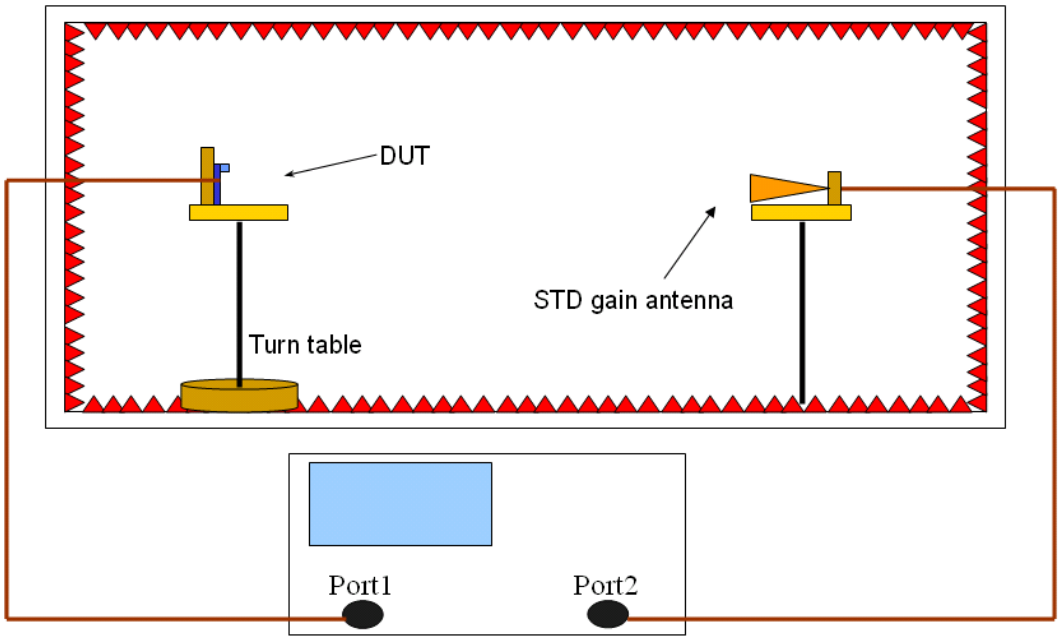


4. Antenna Radiation Pattern

Testing Equipment Specification:

Antenna Anechoic Chamber Dimension: 8 x 4 x 4 m
Quite Zone: 600mm @1 GHz
Isolation: >100dB @ 1 MHz ~ 10 GHz
Testing Equipment: Agilent 5071B
Received Antenna: 0.7 ~ 6.0 GHz for Gain Calibration
Double Ridged Horn Antenna



1. 适用范围:
Scope
本规格书制定了 RF113 50Ω FEP 绝缘射频电缆的结构和电气特性.
This specification covers the construction and the celec trical properties of RF11 50Ω FEP Insulation Coaxial Cable

2. 结构/Construction:

单位/Unit:mm

项目/Item		详细资料/Details
导体/Conductor	材料/Material	镀银铜线/Silver plated Copper
	构成(根/mm)/Composition(No./mm)	7/0.08±0.003
	标称直径/NOM.O.D	0.24±0.01
绝缘层 /Insulation	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM.O.D	0.7±0.03
	颜色/Color	Natural
编织层/Braid Shield	材料/Material	镀锡铜线 Tinned copper
	构成/Composition	16/4/0.05±0.003
	标称直径/NOM.O.D	0.92±0.03
护套/Jacket	材料/Material	聚全氟乙丙烯/FEP
	标称外径/NOM.O.D	1.13±0.05
	颜色/Color	/

3. 电气特性(20℃时)/Electrical Properties(at 20℃)

项目/Item	单位/Unit	详细资料/Details	
电容/Capacitance	pF/m	98	
特性阻抗/Conductor Resistance	Ω	50±3.0	
耐压强度/Dielectric Strength	A.C V/1min	1000	
最大工作频率/Max.oper. frequency	MHz	6000	
伸长率/ elongation	%	200%	
抗拉强度/Tensile strength	kgf/mm²	1.76	
工作温度范围/Operating Temp.	℃	-55to200	
衰减/Attenuation	/	频率 /Frequency(MHz)	dB/1m
		1000	≤2.2
		2000	≤3.1
		3000	≤3.9
		4000	≤4.5
		5000	≤5.0
		6000	≤5.5
驻波比/Standing wave(0-6GHz)	/	≤1.5	