GPS/GSM Antenna

MODEL: GMA-100

1. GSM Antenna

General Description

Model No	P/N
GMA-100	

Below is a table summarizing the antenna design specification.

1.1 Electrical Properties

Parameter	Description
Frequency Band	800/900/1800/1900/2170Hz
Nominal impedance	50ohm
Polarization	Vertical
Electrical Wave	1/4 λ Dipole
V.S.W.R	2.0：1
Antenna Average Gain	0dBi
Note:Gain includes the cable loss	

1.2 Mechanical Properties

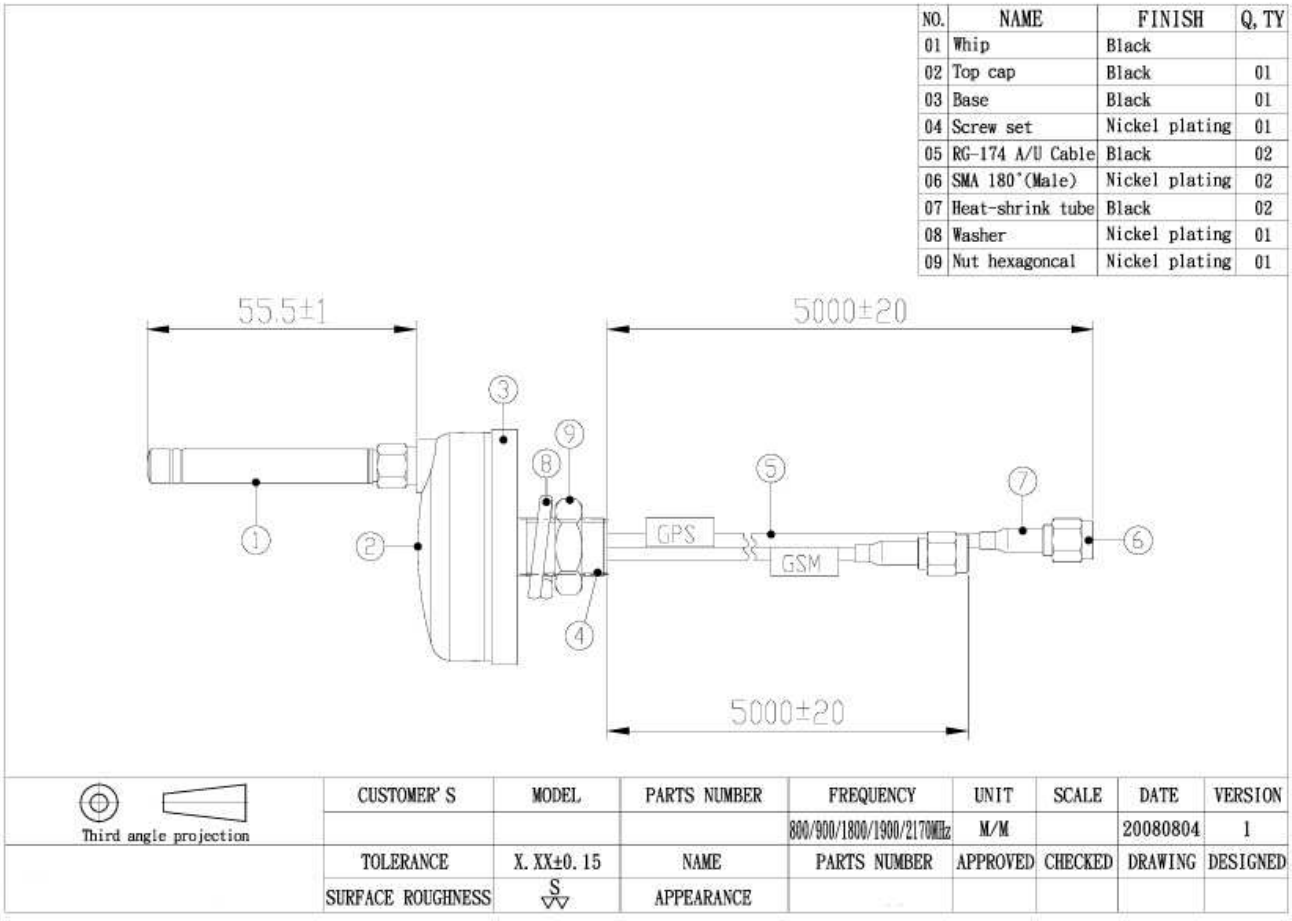
Parameter	Description
Antenna Type	External Antenna
Antenna Cover	TPEE 630
Touch Type	Screw Type
Connector Type	SMA 180°(Male)
Antenna Dimensions	5000 ± 20
Antenna Color	Black

Operating Temperature Range	-20℃~+55℃
Storage Temperature Range	-30℃~+55℃

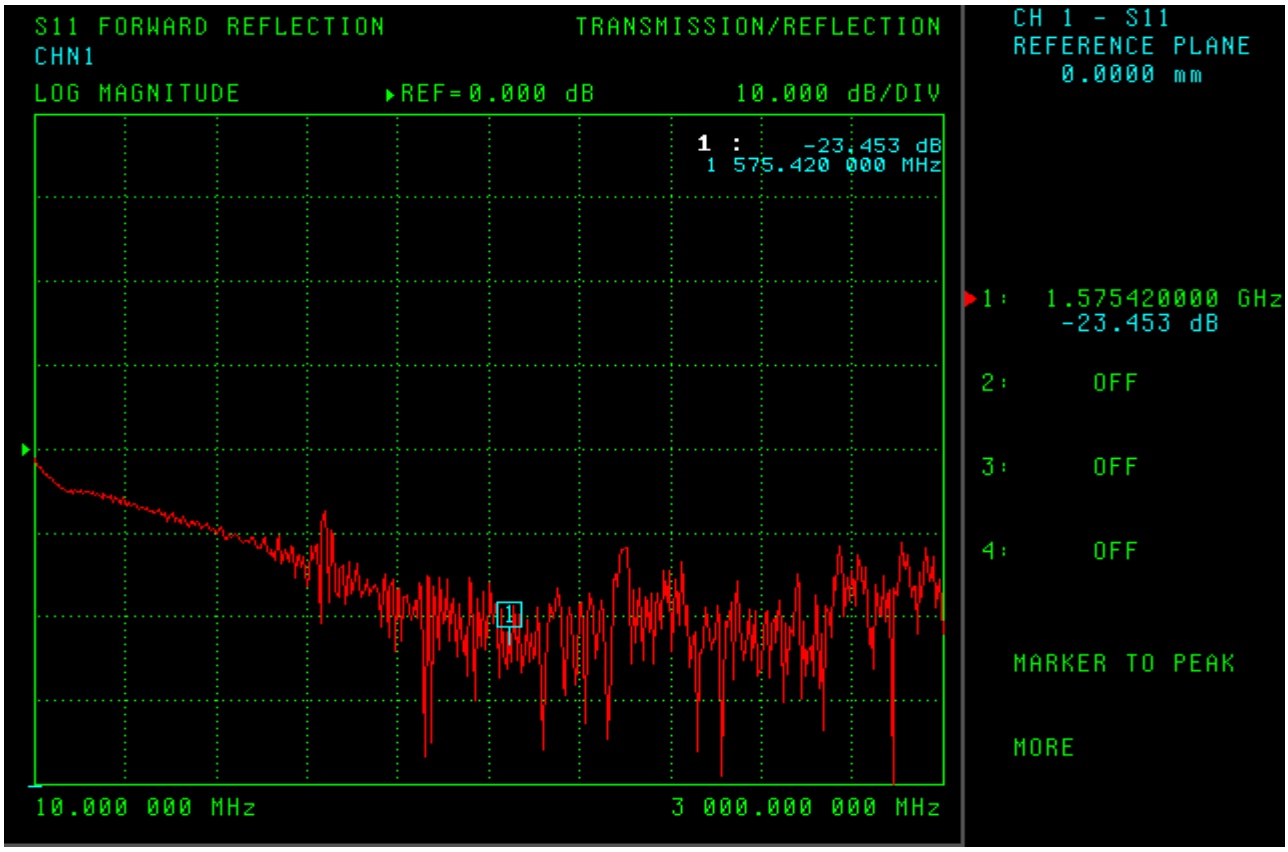
2. GPS Antenna

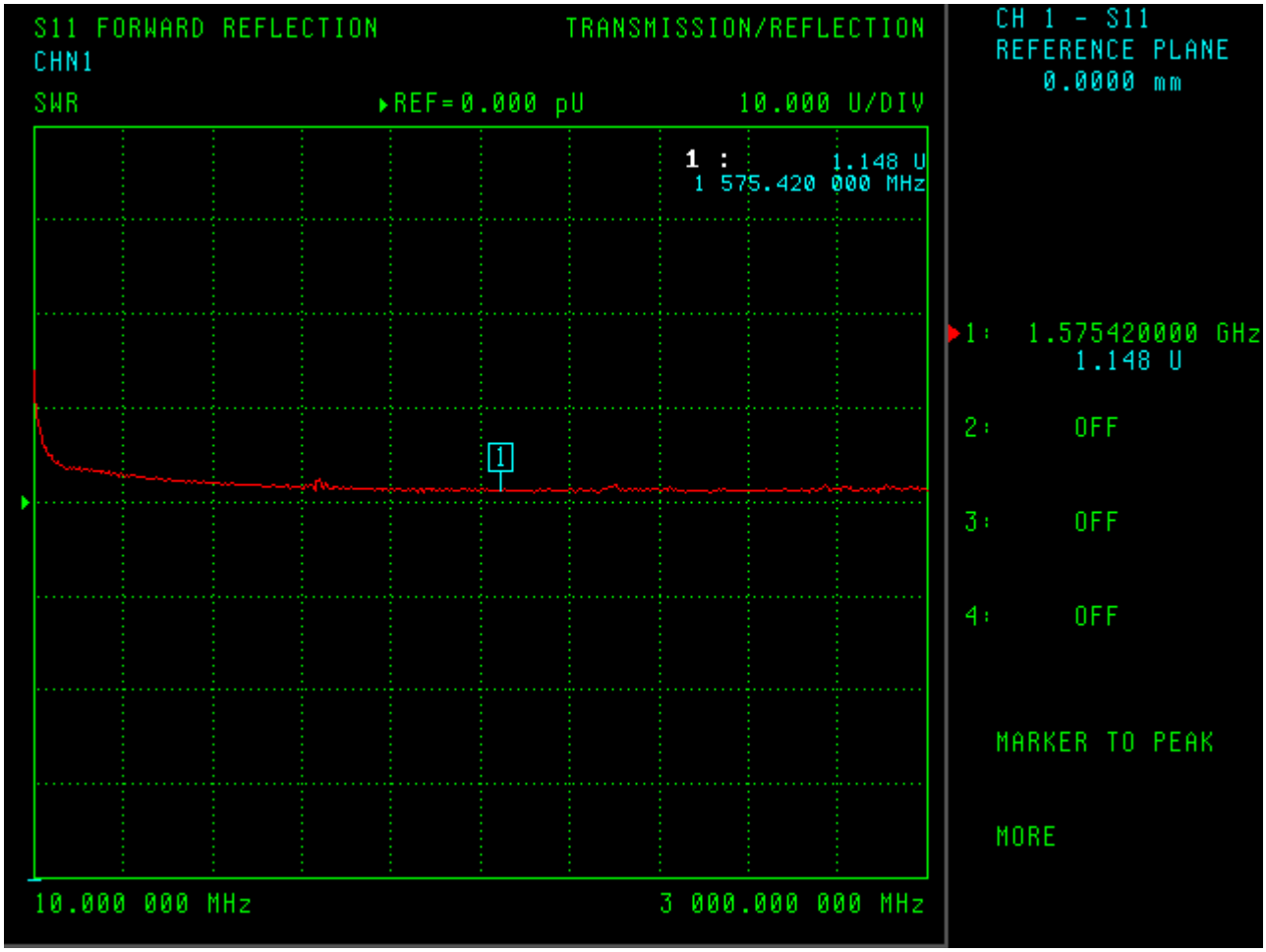
Electrical Specifications	
Input voltage	2.3~5.5V
Current	2.5V：6.6mA Typical
	3V：8.6 mA Typical
	4V：12.6 mA a Typical
	5V：16.6 mA Typical
Antenna	
Operating Frequency	1575.42±1.023 MHz
Gain at 10°elevation	-1 dBic Typ
Gain at Zenith	5.0 dBic Typ
Bandwidth	10MHz min.@S11≦10dB
Polarization	R.H.C.P
Axial Ratio	3.0dB Typ
LNA	
Operating Frequency	1575.42 ± 1.023MHz
Gain	28dB Typ
Noise Figure	1.5 dB Typ
Filter	20 dB 25dB min @fo +/-50MHz 30 dB 35dB min @fo +/-100MHz *fo=1575.42MHz
Output Impedance	50ohm
VSWR	2.0 max

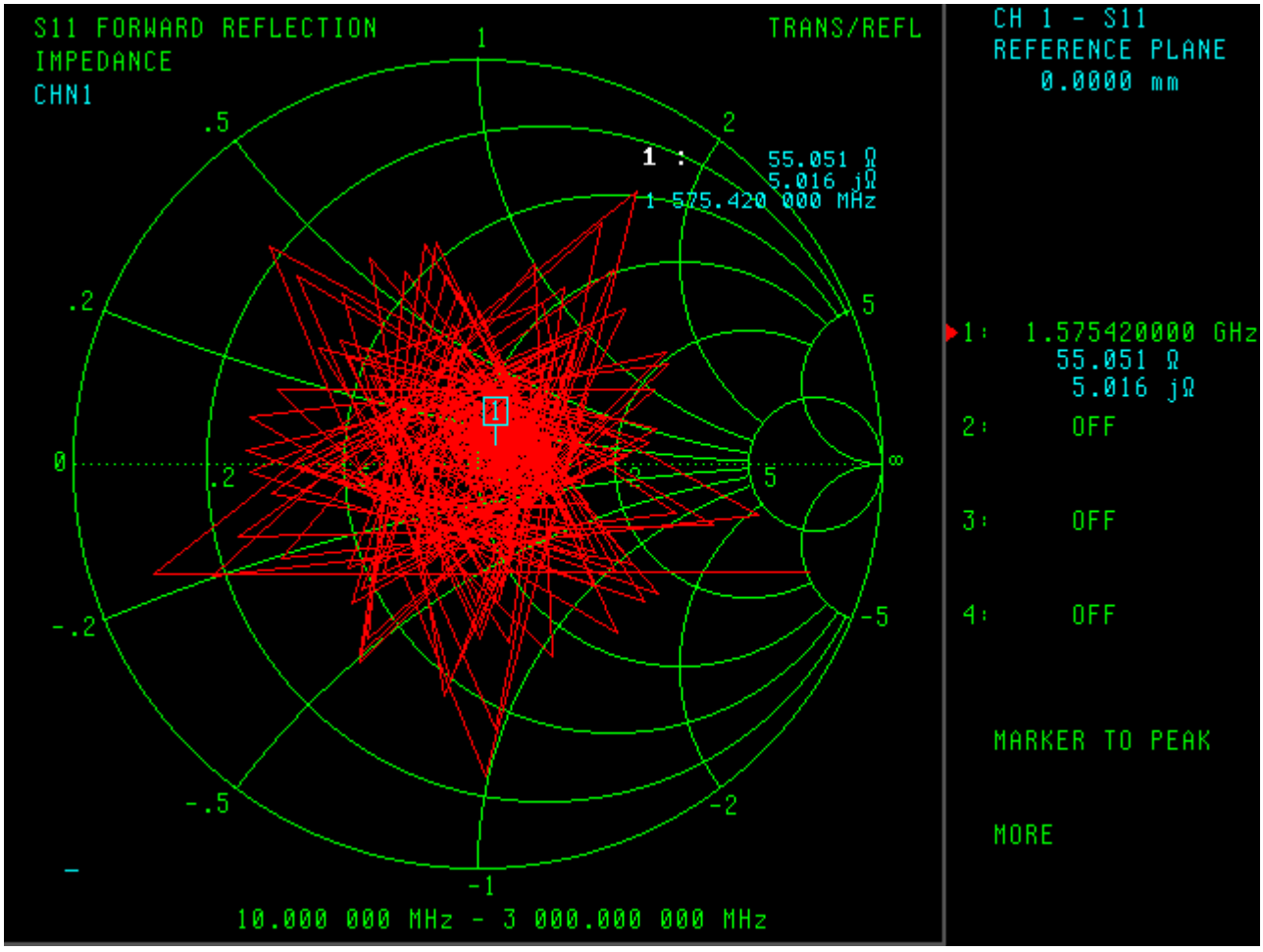
3. Appearance

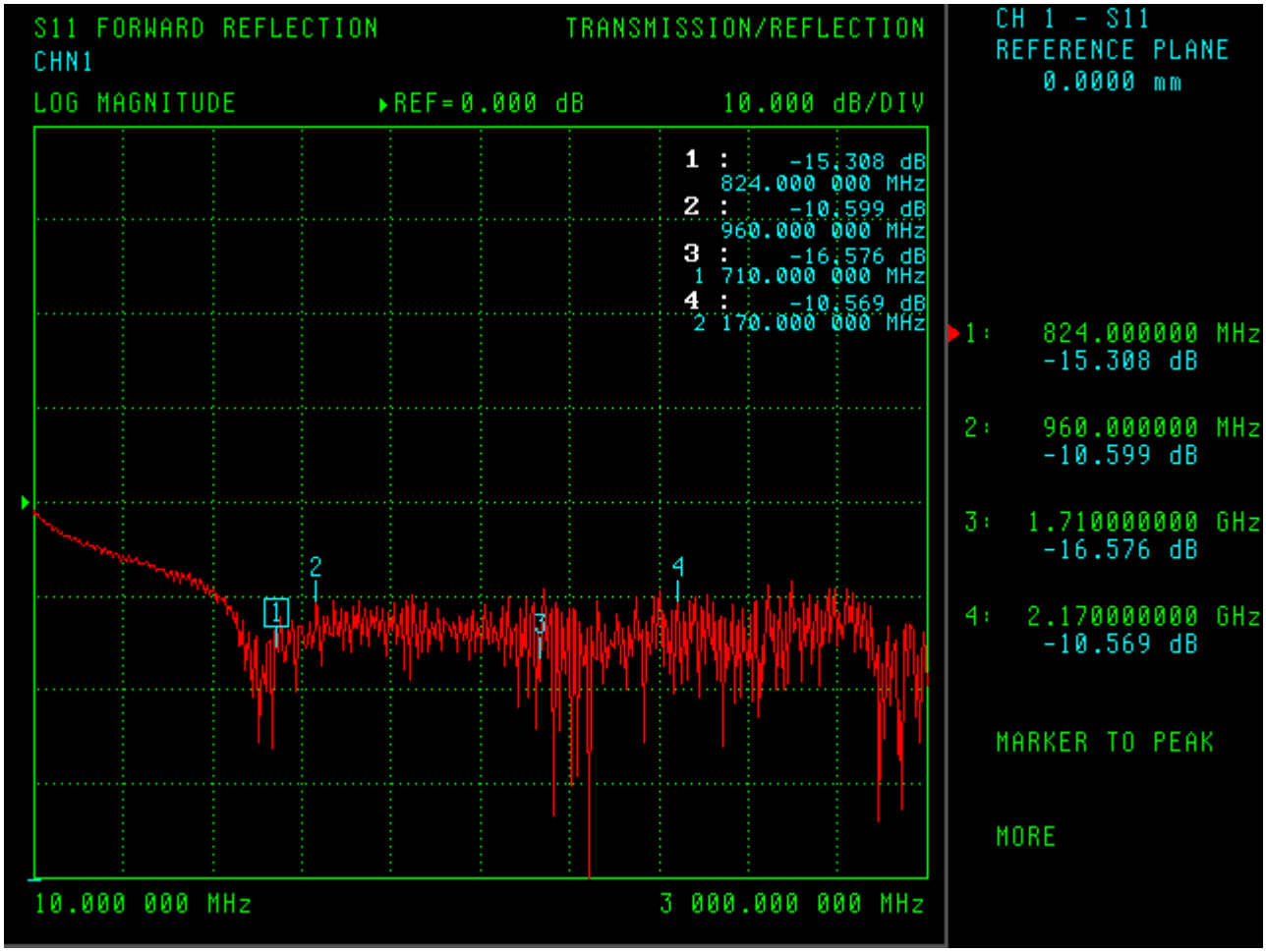


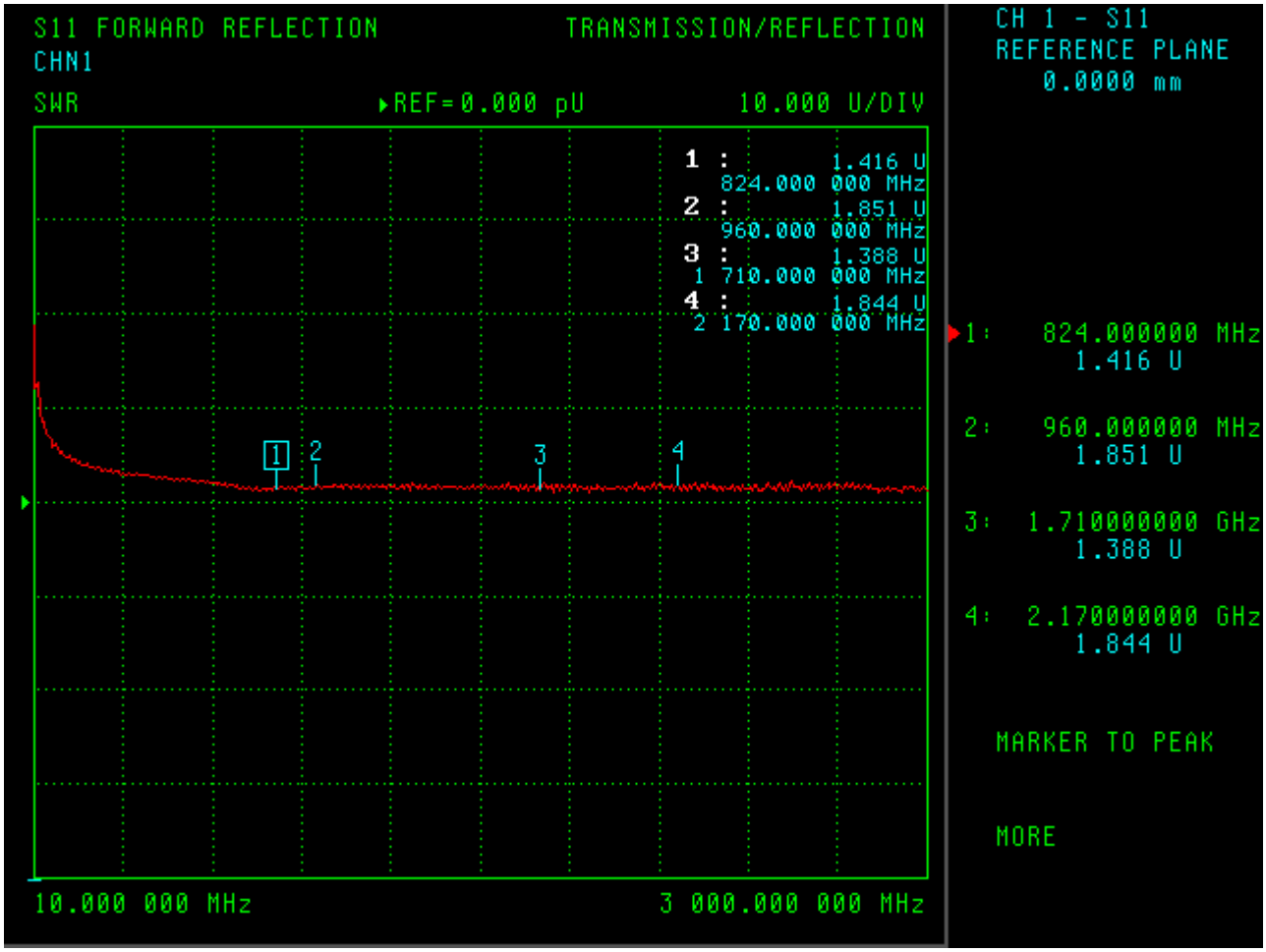
4.Frequency

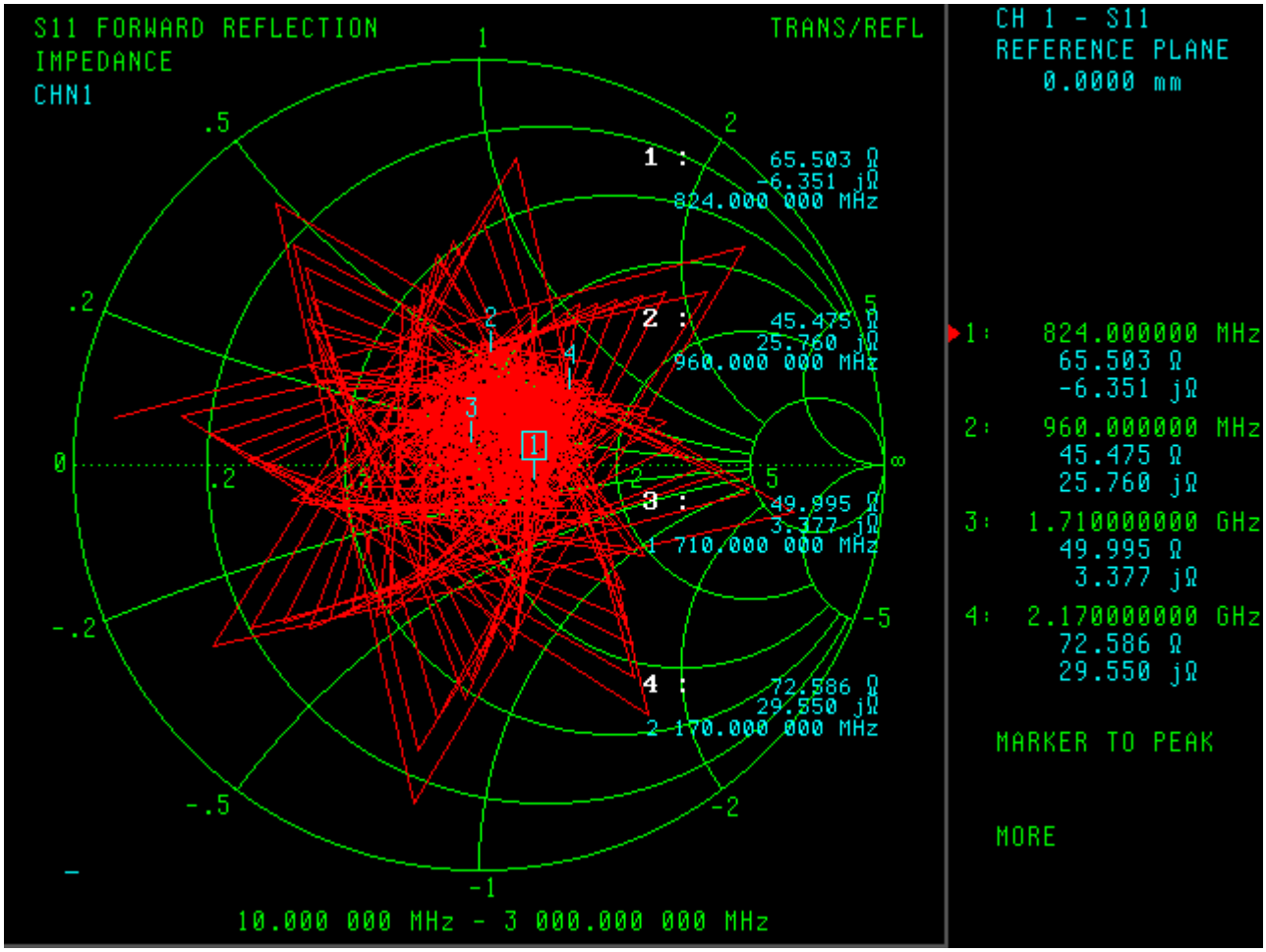



S11 FORWARD REFLECTION
TRANSMISSION/REFLECTION
CHN1
SWR
REF=0.000 pU
10.000 U/DIV
1 : 1.148 U
1 575.420 000 MHz
10.000 000 MHz
3 000.000 000 MHz
CH 1 - S11
REFERENCE PLANE
0.0000 mm
1: 1.575420000 GHz
1.148 U
2: OFF
3: OFF
4: OFF
MARKER TO PEAK
MORE


S11 FORWARD REFLECTION
IMPEDANCE
CHN1
TRANS/REFL
1 : 55.051 Ω
5.016 jΩ
1 575.420 000 MHz
10.000 000 MHz - 3 000.000 000 MHz
CH 1 - S11
REFERENCE PLANE
0.0000 mm
1: 1.575420000 GHz
55.051 Ω
5.016 jΩ
2: OFF
3: OFF
4: OFF
MARKER TO PEAK
MORE


S11 FORWARD REFLECTION
TRANSMISSION/REFLECTION
CHN1
LOG MAGNITUDE
REF=0.000 dB
10.000 dB/DIV
1 : -15.308 dB
824.000 000 MHz
2 : -10.599 dB
960.000 000 MHz
3 : -16.576 dB
1 710.000 000 MHz
4 : -10.569 dB
2 170.000 000 MHz
10.000 000 MHz
3 000.000 000 MHz
CH 1 - S11
REFERENCE PLANE
0.0000 mm
1: 824.000000 MHz
-15.308 dB
2: 960.000000 MHz
-10.599 dB
3: 1.710000000 GHz
-16.576 dB
4: 2.170000000 GHz
-10.569 dB
MARKER TO PEAK
MORE


S11 FORWARD REFLECTION
TRANSMISSION/REFLECTION
CHN1
SWR
REF=0.000 pU
10.000 U/DIV
1 : 1.416 U
824.000 000 MHz
2 : 1.851 U
960.000 000 MHz
3 : 1.388 U
1 710.000 000 MHz
4 : 1.844 U
2 170.000 000 MHz
10.000 000 MHz
3 000.000 000 MHz
CH 1 - S11
REFERENCE PLANE
0.0000 mm
1: 824.000000 MHz
1.416 U
2: 960.000000 MHz
1.851 U
3: 1.710000000 GHz
1.388 U
4: 2.170000000 GHz
1.844 U
MARKER TO PEAK
MORE


S11 FORWARD REFLECTION
IMPEDANCE
CHN1
TRANS/REFL
1 : 65.503 Ω -6.351 jΩ 824.000 000 MHz
2 : 45.475 Ω 25.760 jΩ 960.000 000 MHz
3 : 49.995 Ω 3.377 jΩ 1.710 000 000 MHz
4 : 72.586 Ω 29.550 jΩ 2.170 000 000 MHz
10.000 000 MHz - 3 000.000 000 MHz
CH 1 - S11
REFERENCE PLANE
0.0000 mm
1: 824.000000 MHz
65.503 Ω
-6.351 jΩ
2: 960.000000 MHz
45.475 Ω
25.760 jΩ
3: 1.710000000 GHz
49.995 Ω
3.377 jΩ
4: 2.170000000 GHz
72.586 Ω
29.550 jΩ
MARKER TO PEAK
MORE