

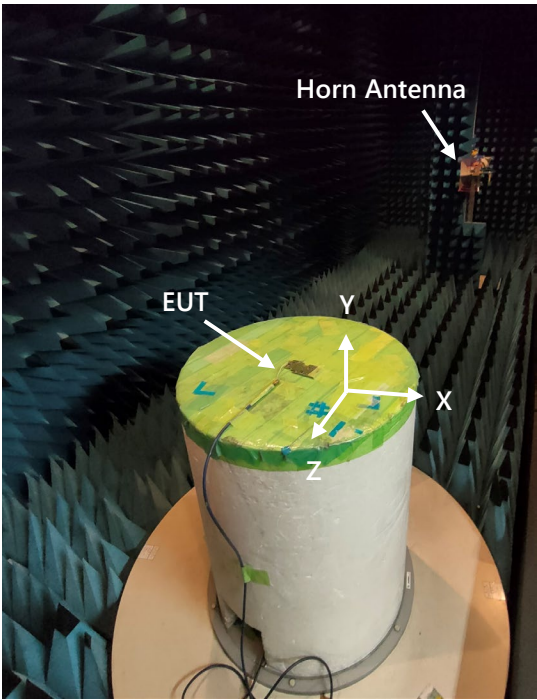
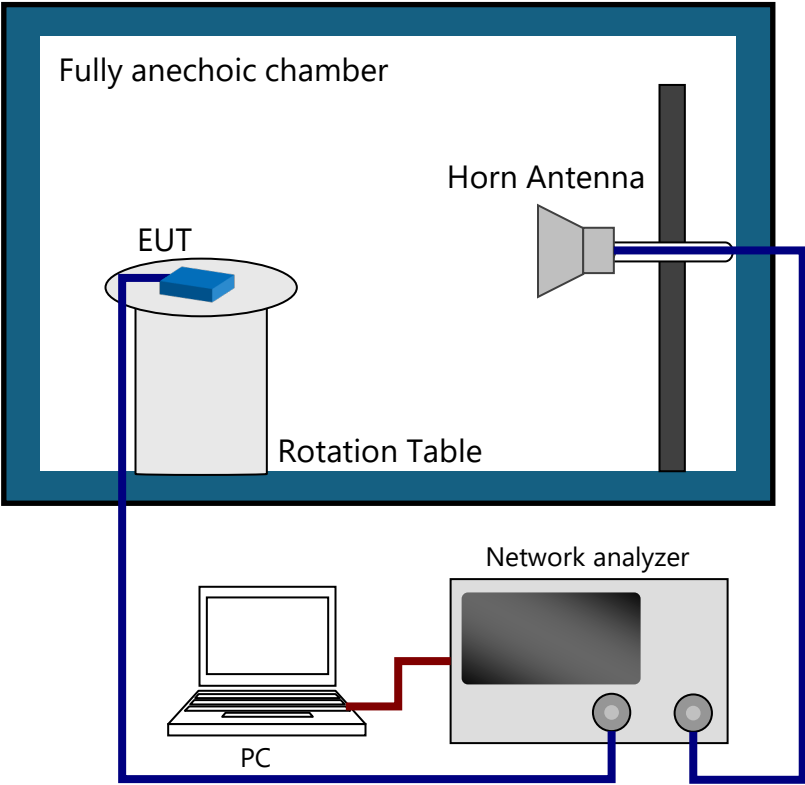
Antenna Test Report

SH-GNW30

Panasonic Entertainment & Communication Co., Ltd

Test date: 18 Nov. 2024
Tested by: W. Noguchi
Approved by: K. Ogawa

■ Measurement setup



■ Test Procedure

- The pass loss between EUT and the horn antenna is measured by the network analyzer.
 - This is passive measurement, which means EUT is power off condition.
1. Reference dipole antenna is set on the rotation table.
 2. Pass loss of each degree is measured by rotating the table using the network analyzer .
 - This value is reference gain.
 3. EUT is set on the rotation table and measure pass loss same way as 2.
 - Total 6 measurements are executed by changing polarization (V/H) and axis of EUT (XY/YZ/ZX).
 4. Antenna gain of EUT is calculated by subtracting from reference gain.

■ Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration date	Expiration date
Horn Antenna	ETS LINDGREN	Model 3115	00110025	-	-
Dipole Antenna	Anritsu	MA5612 B4	6200248853	-	-
Network analyzer	Agilent technology	E5071C	MY46631101	2023/12	2024/12/31
PC	DELL	OptiPlex 3060	13NVOW2	-	-
Software	Device Co., LTD	DM5125N-VHAZ- E5071B ver.1.8	-	-	-

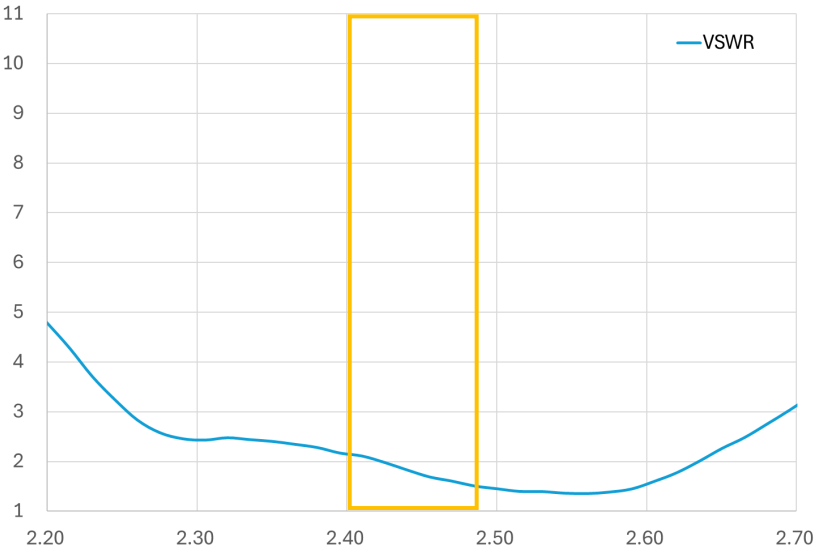
Antenna Test report

秘 Confidential
無期限 Indefinite

Antenna Specification

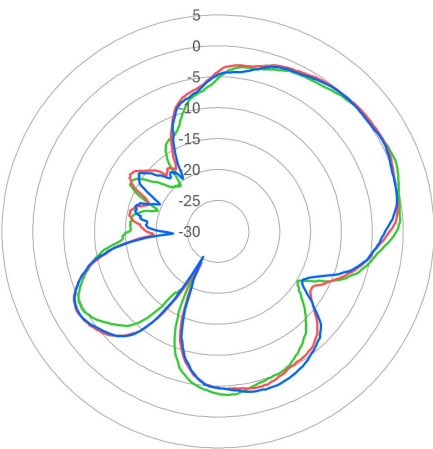
Antenna type	Printed Inverted F antenna
Frequency	2.402 ~ 2.480 GHz
Max Antenna Gain	+ 1.8 dBi

VSWR characteristics

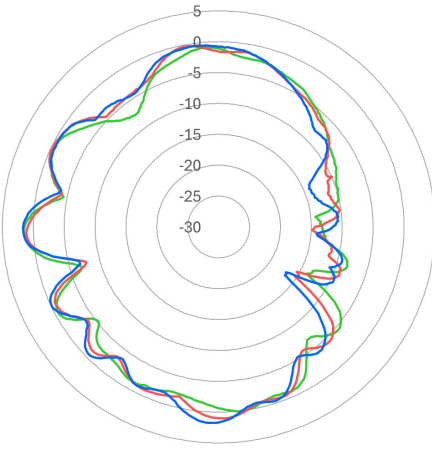


Frequency(GHz)	VSWR
2.402	2.2
2.441	1.8
2.480	1.5

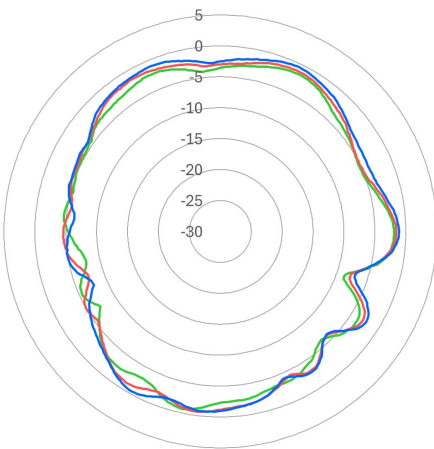
Radiation pattern



XY axis



YZ axis



ZX axis — 2.402GHz
— 2.441GHz
— 2.480GHz

Antenna gain

Axis	XY			YZ			ZX		
Frequency (GHz)	2.402	2.441	2.480	2.402	2.441	2.480	2.402	2.441	2.480
Max gain	0.92	0.61	0.46	1.5	1.1	1.8	0.67	-0.60	-0.42
Average gain	-8.0	-7.6	-8.1	-4.4	-4.3	-4.3	-3.8	-3.3	-3.0

Unit: dBi