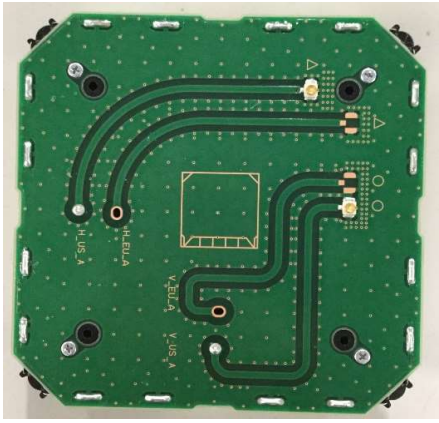
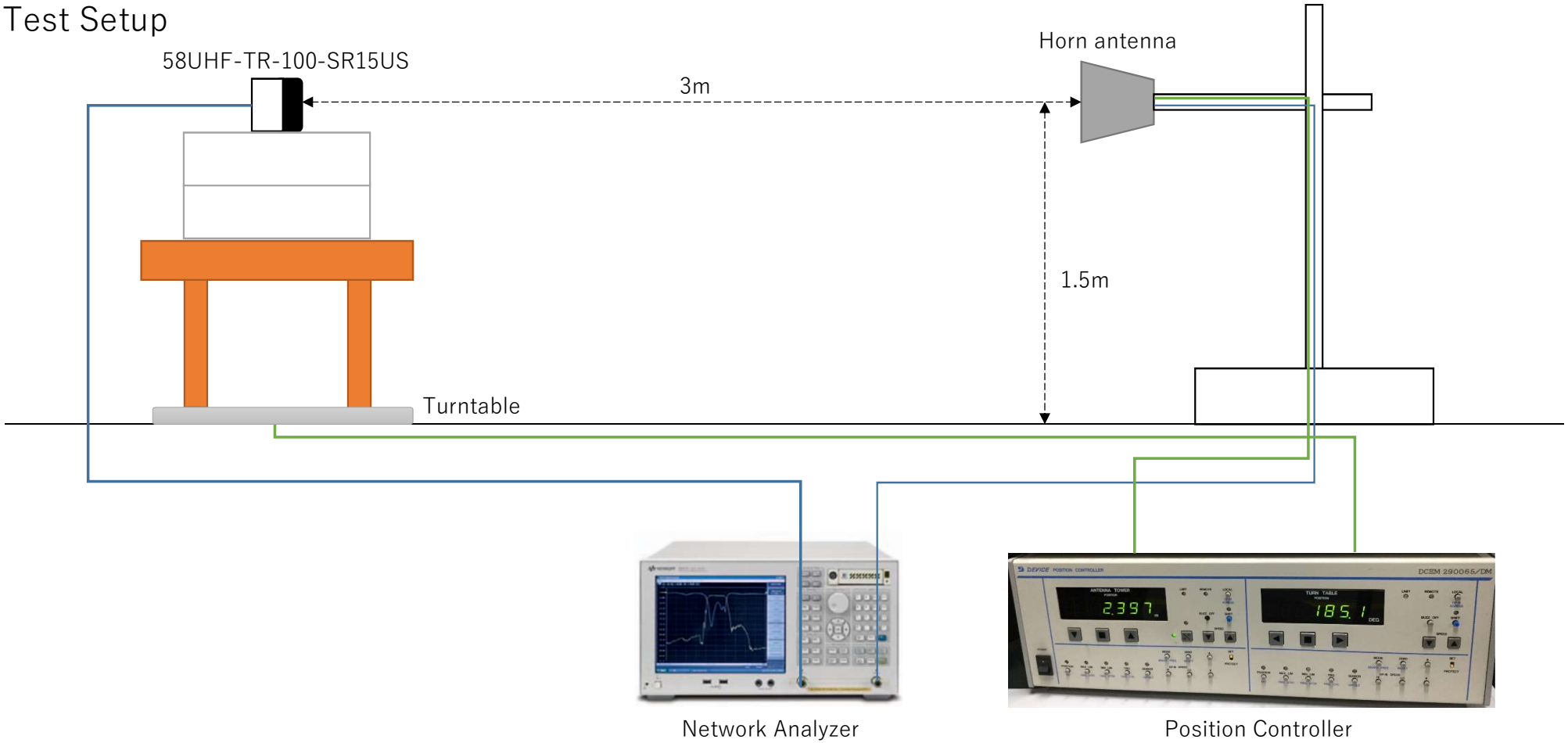
Antenna specification	
Model number	58UHF-TR-100-SR15US
Frequency Range	902.75MHz to 927.25MHz
Antenna Type	λ/2 Patch antenna
Connector Type	UFL
Antenna Gain	3.62dBi max(902MHz to 928MHz)
Impedance	50Ω
Cable length	105mm
Cable loss	902MHz：-0.2544 dB 915MHz：-0.2549 dB 928MHz：-0.2444 dB
Does the value of antenna gain include cable loss?	Not included
Photographs of antenna	Front Back 

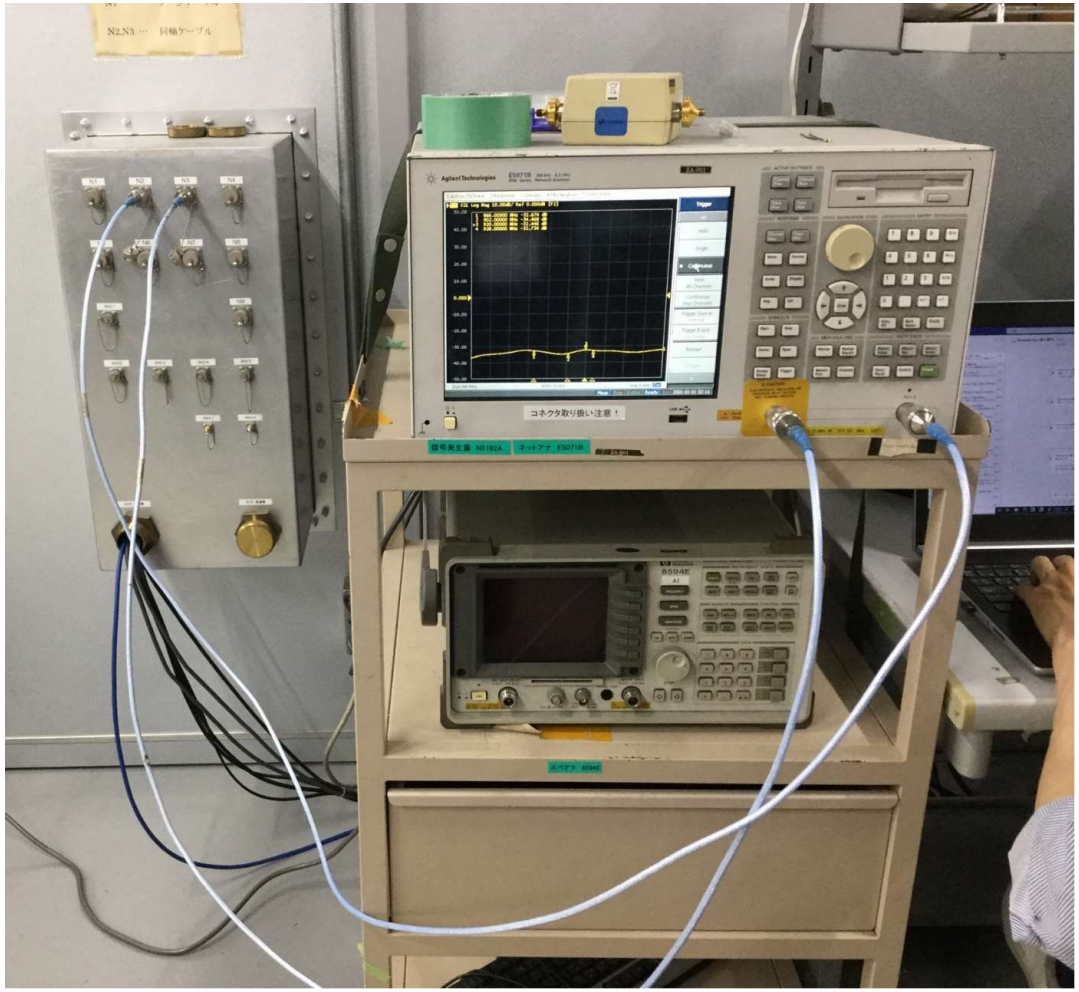
Company Name	DENSO WAVE INCORPORATED
Company Address	1 Yoshiike Kusagi Agui-cho, Chita-gun, Aichi 470-2297, Japan
date	2022/12/13
Engineer	Tatsuya Terashima

①Test method of antenna gain

Test Setup



Setting of Network Analyzer

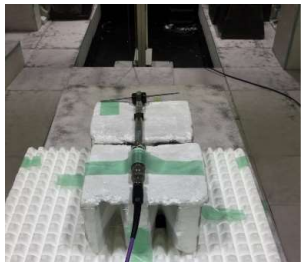


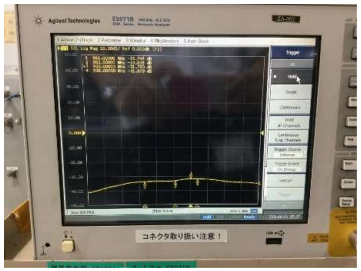
- Frequency range
  - 800MHz to 1000MHz
- Number of measurement points
  - 1000

Antenna measurement

Standard Dipole Antenna

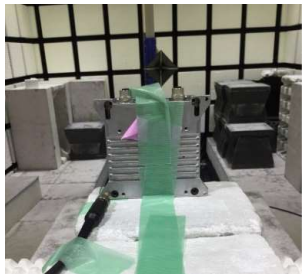
1. Adjust the scale of the standard dipole antenna to 920 MHz.
2. Measure S21 characteristics.





UHF Antenna(58UHF-TR-100-SR15US)

1. Measure the S21 characteristics of horizontal polarization and linear polarization.
   (Rotate the turntable within ±90° .)



Antenna gain calculation

- S21 characteristics of Standard dipole antenna

  G1：Horn antenna Gain＋ Standard dipole antenna Gain＋Free Space Path Loss

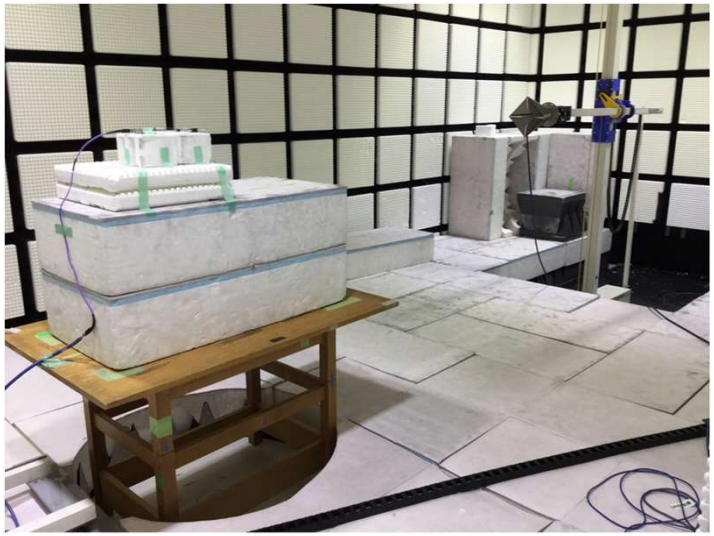
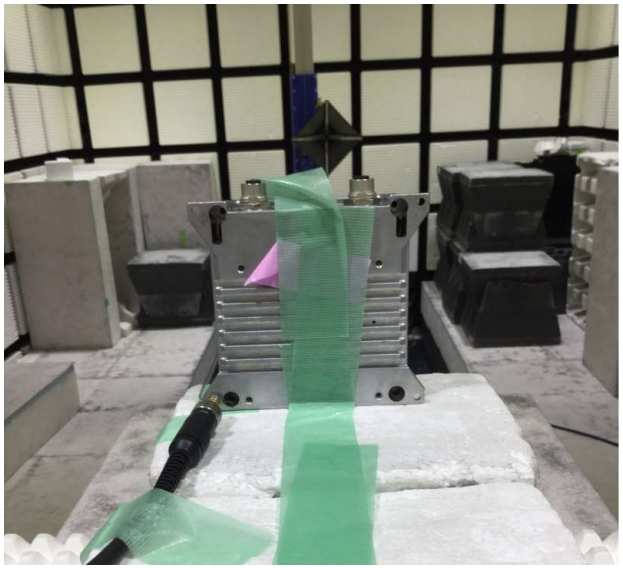
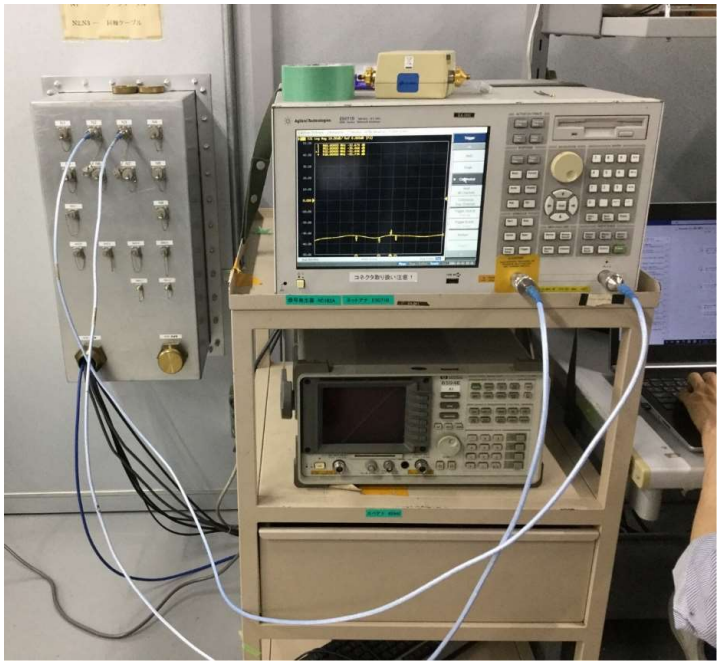
  Standard dipole antenna Gain：2.15dBi

- S21 characteristics of UHF antenna

  G2： Horn antenna Gain＋ UHF antenna Gain＋Free Space Path Loss

UHF antenna Gain [dBi] = G2 – G1 ＋ Standard dipole antenna Gain

②Test Equipment

Description	Manufacturer	Model	Serial
Network Analyzer	Agilent Technologies	E5071B	E5071B-AO-16984 MY42404382
Horn antenna	-	-	-
Standard Dipole Antenna	ANRITSU CORP.	-	-
Antenna tower	DEVICE CO.,LTD	DW3259AV2/O	
Position Controller	DEVICE CO.,LTD	-	-
Turntable	-	-	-

③Photographs of test setup