

7. HOPPING CHANNEL SEPARATION MEASUREMENT

7.1 APPLIED PROCEDURES / LIMIT

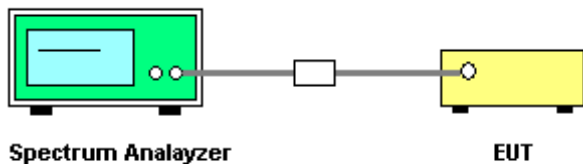
Frequency hopping systems operating in the 902-928 MHz band may have hopping channel carrier frequencies that are separated by 20 dB bandwidth of the hopping channel, whichever is greater.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.2 TEST PROCEDURE

- The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
- The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
- The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for channel separation measurement.

7.3 TEST SETUP



7.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.



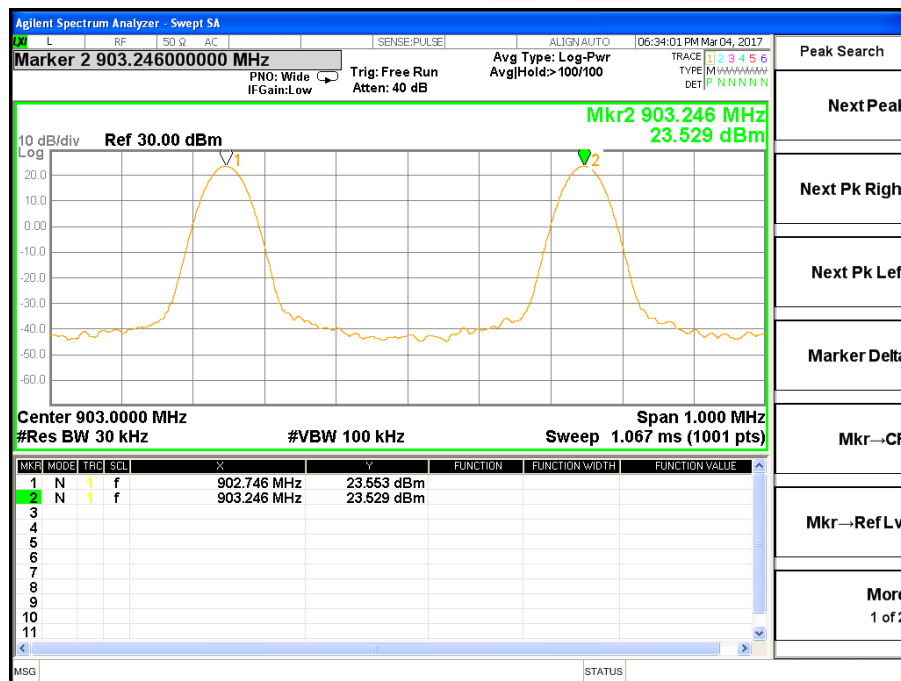
7.5 TEST RESULTS

EUT :	GTSYS-RFID UHF Integrated Reader Radio Frequency Identification Reader / Interrogator	Model Name :	IR-U-POEv3/12
Temperature :	25 °C	Relative Humidity :	50%
Pressure :	1012 hPa	Test Voltage :	AC120V60Hz

Frequency	Ch. Separation (KHz)	Limit(MHz)	Result
902.75 MHz	500.0	0.153	Complies
914.75 MHz	500.0	0.157	Complies
927.75 MHz	500.0	0.156	Complies

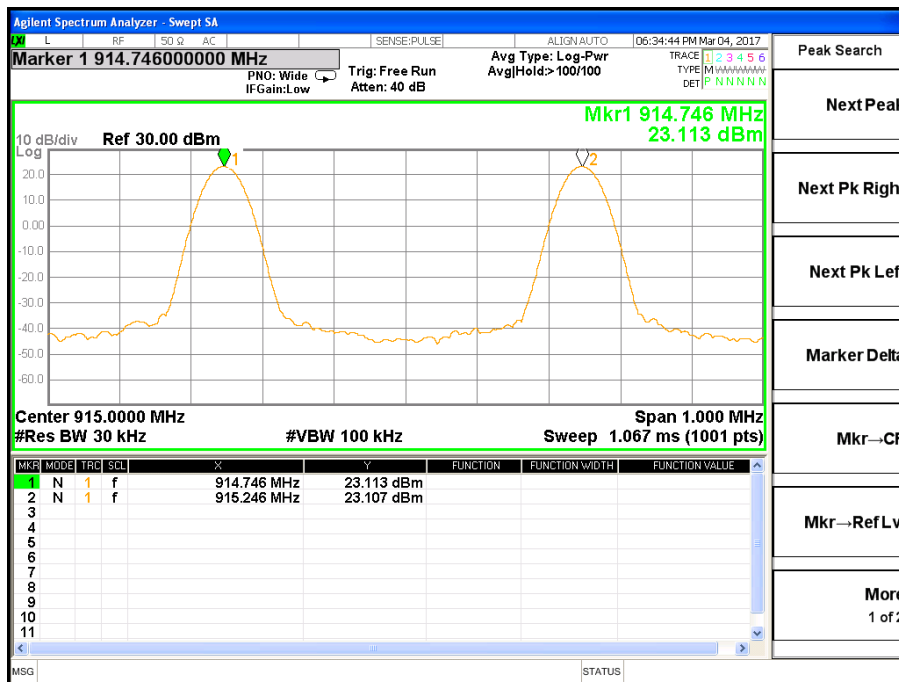
For GFSK: Ch. Separation Limits: >20dB bandwidth

CH00

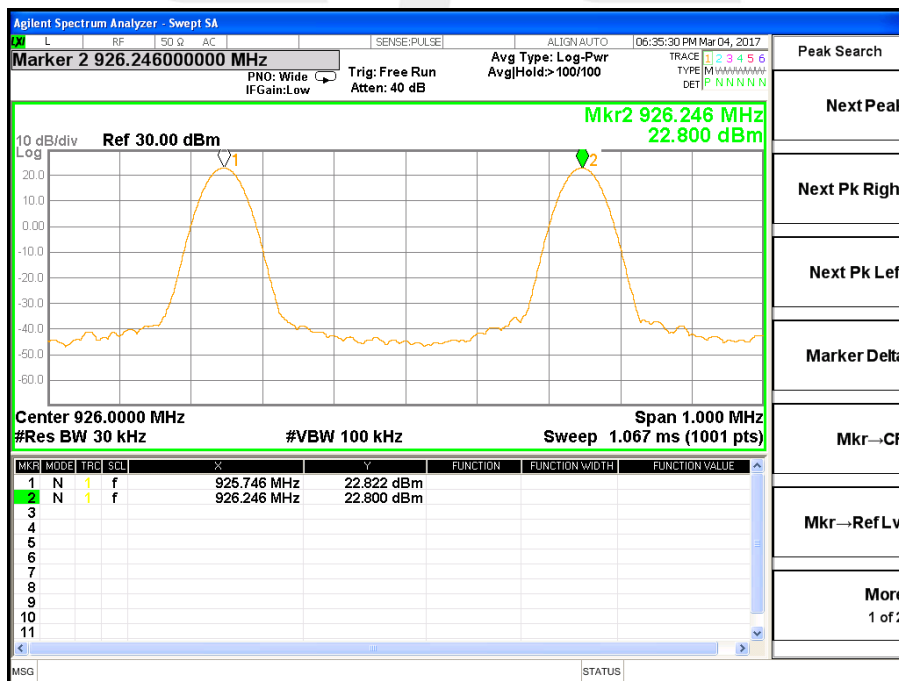




CH24



CH50





8. BANDWIDTH TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C

Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (a)(i)	Bandwidth	(20dB bandwidth)	902-928	PASS

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : RBW= 30KHz, VBW=100KHz, Sweep time = Auto.

8.3 TEST SETUP



8.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

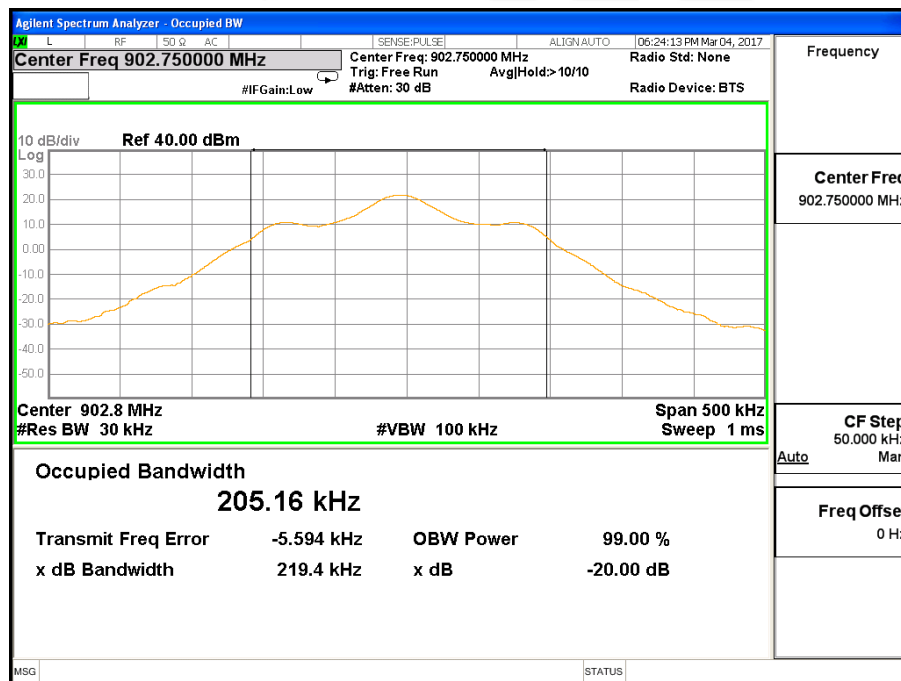


8.5 TEST RESULTS

EUT :	GTSYS-RFID UHF Integrated Reader Radio Frequency Identification Reader / Interrogator	Model Name :	IR-U-POEv3/12
Temperature :	25 °C	Relative Humidity :	50%
Pressure :	1012 hPa	Test Voltage :	AC120V60Hz

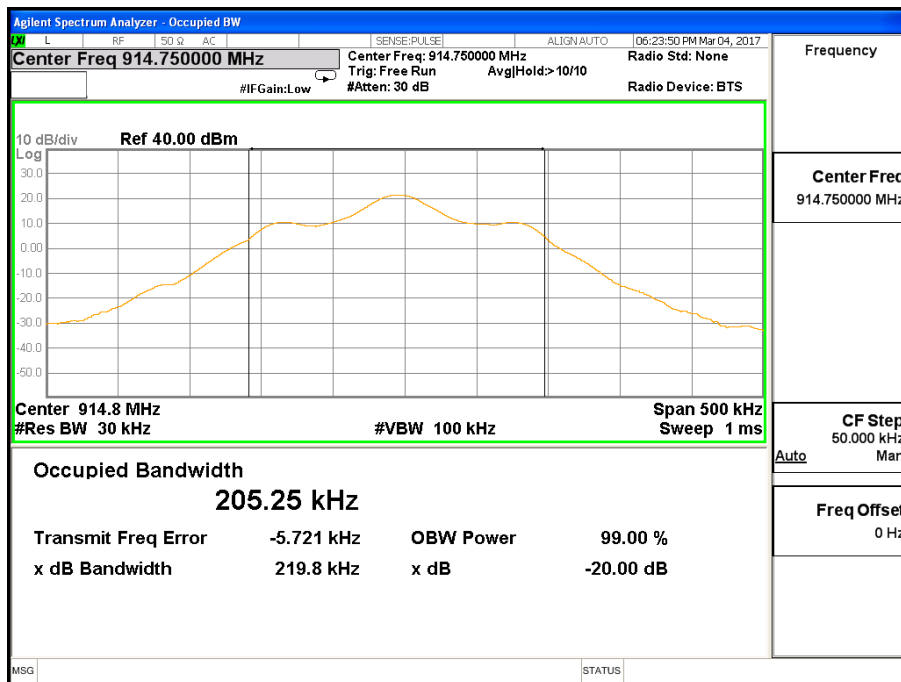
Frequency	20dB Bandwidth (MHz)	Result
902.75 MHz	0.219	PASS
914.75 MHz	0.220	PASS
927.75 MHz	0.220	PASS

CH00

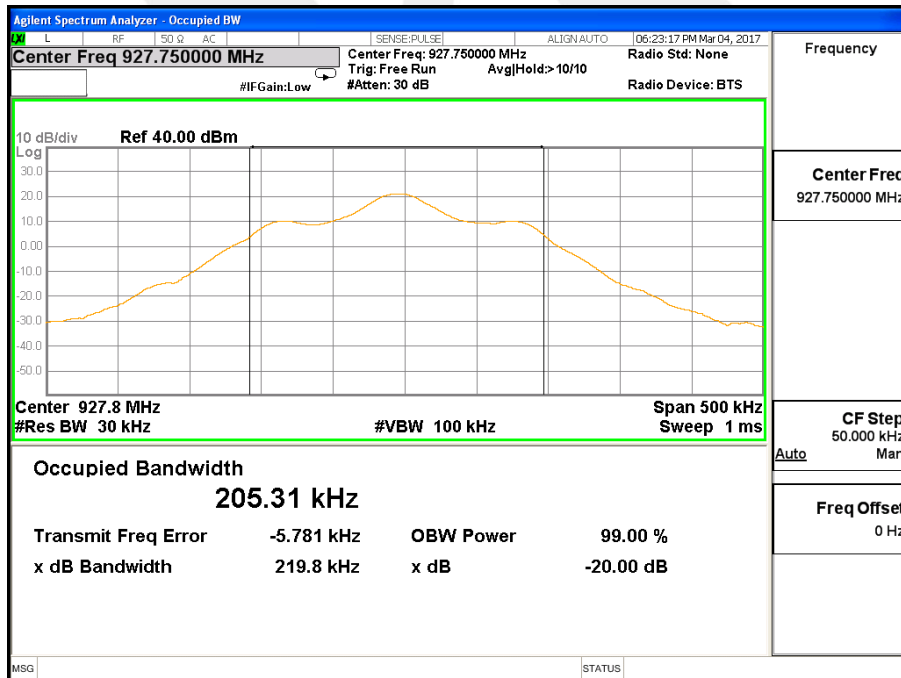




CH24



CH50





9. PEAK OUTPUT POWER TEST

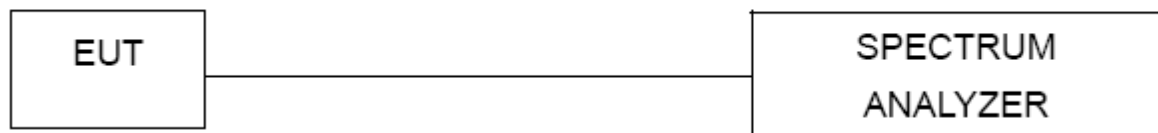
9.1 APPLIED PROCEDURES / LIMIT

FCC Part15.247 , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (b)(2)	Peak Output Power	1 W	902-928	PASS

9.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- Spectrum Setting : GFSK:RBW= 1MHz, VBW= 3MHz, Sweep time = Auto.

9.3 TEST SETUP



9.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



9.5 TEST RESULTS

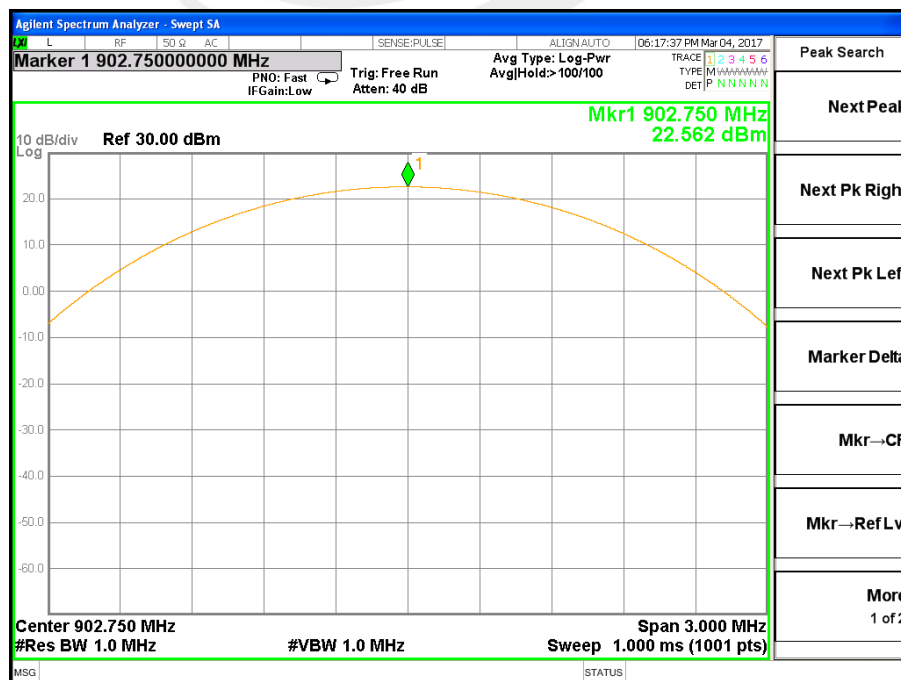
EUT :	GTSYS-RFID UHF Integrated Reader Radio Frequency Identification Reader / Interrogator	Model Name :	IR-U-POEv3/12
Temperature :	25 °C	Relative Humidity :	60%
Pressure :	1012 hPa	Test Voltage :	AC120V60Hz
Test Mode :	CH00/ CH24 /CH50		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)
CH00	902.75	22.562	30
CH24	914.75	22.190	30
CH50	927.75	21.921	30

Note: (1) the channel separation > bandwidth

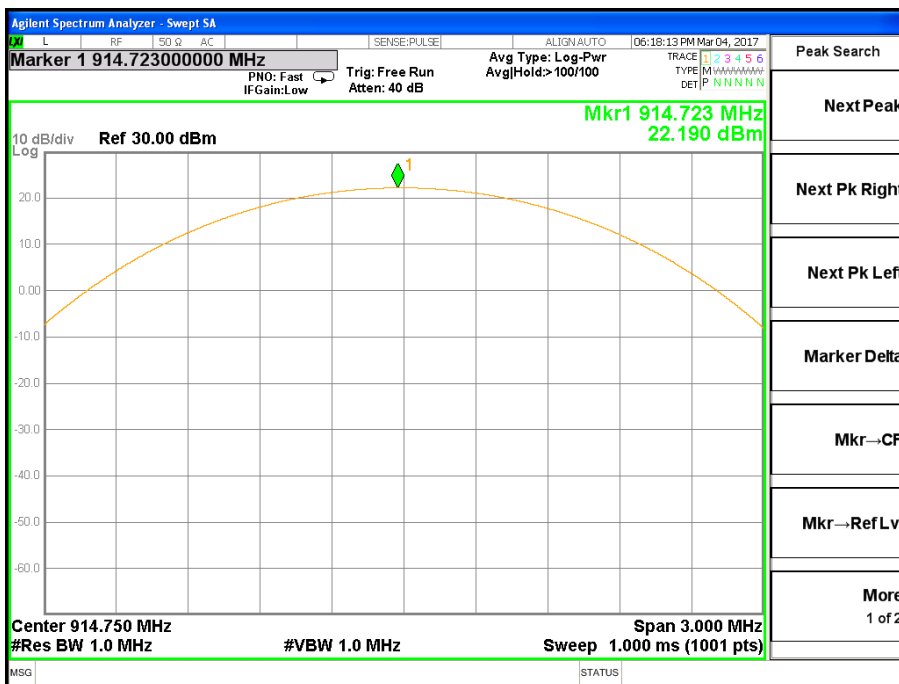
(2) if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

CH00

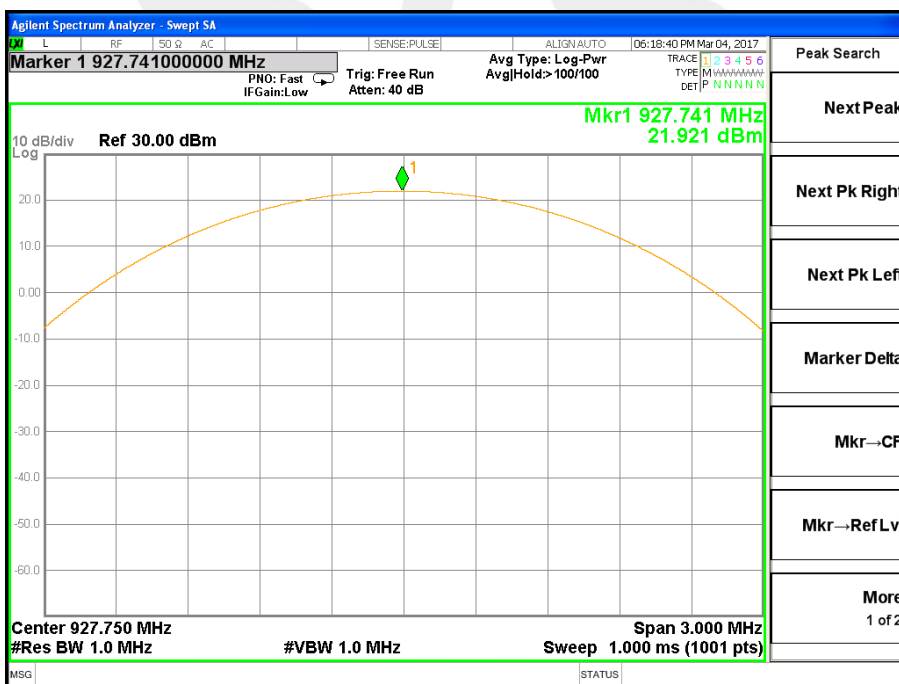




CH24



CH50





10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

10.2 EUT ANTENNA

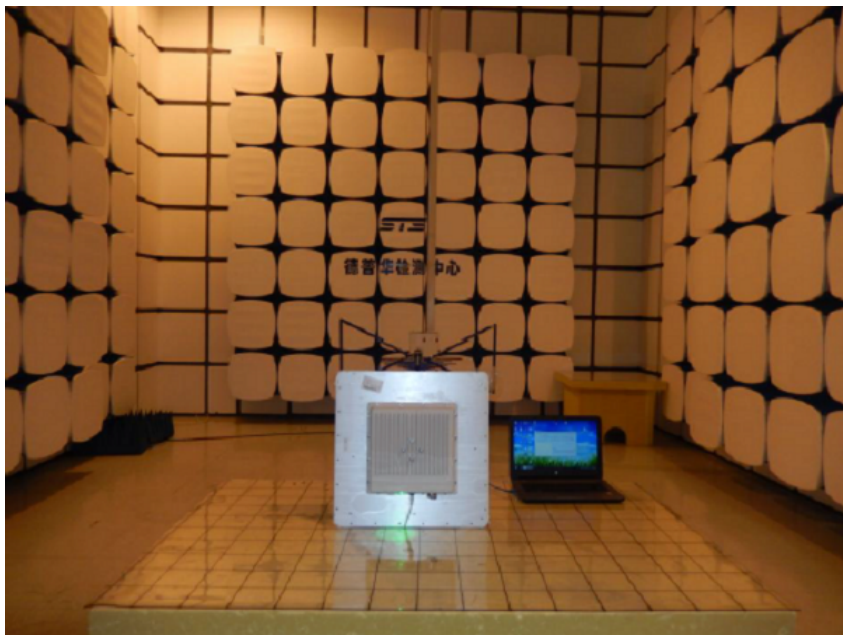
The EUT antenna is flat panel Antenna. It comply with the standard requirement.





APPENDIX- PHOTOS OF TEST SETUP

Radiated Measurement Photos





conduction Measurement Photos



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