Prüfbericht-Nr.: *Test report no.:*	CN21478R(P15C-24GHz) 001	**Auftrags-Nr.:** *Order no.:*	238495708	Seite 1 von 24 *Page 1 of 24*
Kunden-Referenz-Nr.: *Client reference no.:*	N/A	**Auftragsdatum:** *Order date:*	2020-12-28	
Auftraggeber: *Client:*	SZ DJI TECHNOLOGY CO.,LTD. 14th floor, West Wing, Skyworth Semiconductor Design Building NO.18 Gaoxin South 4th Ave, Nanshan, Shenzhen, Guangdong, China			
Prüfgegenstand: *Test item:*	Omnidirectional Digital Radar/CSM Radar			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	RD2424R			
Auftrags-Inhalt: *Order content*:	FCC Part 15C Test report			
Prüfgrundlage: *Test specification:*	FCC 47CFR Part 15: Subpart C Section 15.249			

Wareneingangsdatum: *Date of sample receipt:*	2020-12-11
Prüfmuster-Nr.: *Test sample no:*	A002967117-006
Prüfzeitraum: *Testing period:*	2021-01-18 - 2021-03-19
Ort der Prüfung: *Place of testing:*	EMC/RF Taipei Testing Site
Prüflaboratorium: *Testing laboratory:*	Taipei Testing Laboratories
Prüfergebnis*: *Test result*:*	Pass

überprüft von: *reviewed by:*		**genehmigt von:** authorized by:	
Datum: *Date:*	2021-03-22	**Ausstellungsdatum:** *Issue date:*	2021-03-22
Stellung / *Position:*	Mars Lin Senior Project Engineer	**Stellung** / *Position:*	Brenda Chen Senior Project Manager

Sonstiges / *Other:* **This EUT contains two 24G modules, supporting 1T1R and 2T4R respectively.**

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m test specification(s)		*F(ail) = failed a.m test specification(s)*	*N/A = not applicable*	*N/T = not tested*

TEST SUMMARY

Report Section	FCC Clause	Test Item	Result
5.1.1	15.203	Antenna Requirement	Pass
5.1.2	15.215	20 dB Bandwidth	Pass
5.1.2	2.1049	99% Occupied Bandwidth	Pass
5.1.3	15.249 (a)	Field Strength of Fundamental Emissions	Pass
5.1.4	15.249 (d)	Radiated Spurious Emissions	Pass
5.2.1	15.207	Mains Conducted Emission	Not Applicable

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Contents

HISTORY OF THIS TEST REPORT

Report No.	Description	Date Issued
CN21478R(P15C-24GHz) 001	Original Release	2021-03-22

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:
Appendix A - Test Result of Radiated Emissions
Appendix SP - Photographs of Test Setup
Appendix EP - Photographs of EUT

Applied Standard and Test Levels

Radio
FCC 47CFR Part 15: Subpart C Section 15.249 ANSI C63.10:2013

1.2 Decision Rule of Conformity

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

2. Test Sites

2.1 Test Laboratory

Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

2.2 Test Facility

Taipei Testing Laboratories

No.458-18, Sec. 2, Fenliao Rd., Linkou Dist.,
New Taipei City 244
Taiwan (R.O.C.)
FCC Registration No.: 226631
ISED Registration No.: 25563

2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

All measurement uncertainty values are shown with a coverage factor of k=2 to indicate a 95% level of confidence.

Emission Measurement Uncertainty

Parameter	Uncertainty
Radiated Emission (9 kHz ~ 30 MHz)	± 1.15 dB
Radiated Emission (30 MHz ~ 200 MHz)	± 1.32 dB
Radiated Emission (200 MHz ~ 1 GHz)	± 1.31 dB
Radiated Emission (1 GHz ~ 18 GHz)	± 1.53 dB
Radiated Emission (18 GHz ~ 40 GHz)	± 2.50 dB
Radiated Emission (40 GHz ~ 100 GHz)	±1.78 dB
Mains Conducted Emission	± 1.65 dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT is an Omnidirectional Digital Radar/CSM Radar. It contains a 24GHz compatible module enabling the user to detect the object from the blindside through a radar detector.
For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 System Details and Ratings

Basic Information of EUT

Item	EUT information
Kind of Equipment/Test Item	Omnidirectional Digital Radar/CSM Radar
Type Identification	RD2424R
FCC ID	SS3-RD2424R

Technical Specification of EUT

Item	EUT information
Operating Frequency	24.05-24.25GHz
Operation Voltage	15Vdc
Modulation	FMCW
Antenna Information	Refer to 5.1.1
Accessory Device	Refer to 4.3

3.3 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.4 Submitted Documents

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum emission level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Setup for testing: The EUT is tested after power on.

Test Software	None.

The samples were used as follows:
A002967117-006
Full test was applied on all test modes, but only worst case was shown.

EUT Configure Mode	Applicable To				Description
	20 dB Bandwidth and Occupied Bandwidth	Field Strength of Fundamental Emissions	Radiated Spurious Emissions	Mains Conducted Emission	
-	√	√	√	-	-

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when position on Y-plane.
2. "-" means no effect.

20 dB Bandwidth and Occupied Bandwidth

☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Frequency (GHz)	Tested Frequency (GHz)
2T4R	24.05 to 24.25	24.05-24.25
1T1R	24.05 to 24.25	24.05-24.25

Field Strength of Fundamental Emissions

☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Frequency (GHz)	Tested Frequency (GHz)
2T4R	24.05 to 24.25	24.05-24.25
1T1R	24.05 to 24.25	24.05-24.25

Radiated Spurious Emission

☒ Pre-Scan full test was applied on all test modes, but only worst case was shown.
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT Configure Mode	Available Frequency (GHz)	Tested Frequency (GHz)
2T4R	24.05 to 24.25	24.05-24.25
1T1R	24.05 to 24.25	24.05-24.25

Test Condition

Test Item	Ambient Temperature	Relative Humidity	Tested by
20 dB Bandwidth & 99% Occupied Bandwidth	19.1~21.1°C	67~69 %	Eagle Tsai
Radiated Spurious Emissions	19.1~21.1°C	67~69 %	Eagle Tsai
Field Strength of Fundamental Emissions	19.1~21.1 °C	67~69 %	Eagle Tsai

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

Accessory of EUT

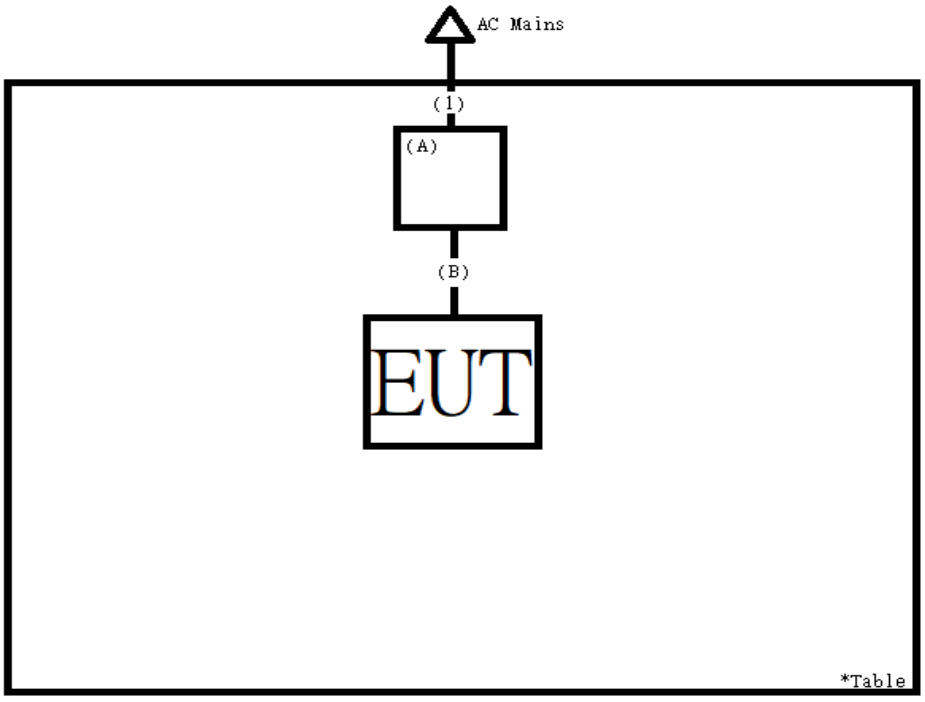
None.

Support Unit

No.	Description	Brand	Model	S/N	Remark
Radiated Test					
A	Fixture	DJI	PP002212.01	-	-
B	Signal Cable	DJI	RADAR	-	56 cm shielded cable w/o core
1	Power Cable	TUV	006	-	160 cm non-shielded cable w/o core
-	Signal Cable	TUV	008	-	60 cm non-shielded cable w/o core
-	Notebook	HP	15s-du0007TX	CND93662VF	-

4.4 Test Setup Diagram

<Radiated Spurious Emissions mode>



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

Requirement Use of approved antennas only

According to the manufacturer declaration, the antenna information is as listed below. The antenna is with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

EUT Configure Mode	Brand Name	Model No.	Antenna Type	Antenna Gain (dBi)
2T4R	DJI	AG501 Omni Ant	Linear Antenna	14
1T1R	DJI	AG501 Height Ant	Linear Antenna	13

Refer to EUT photo for details.

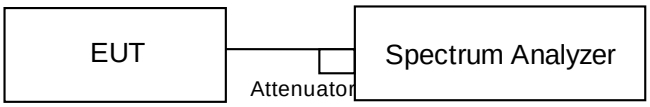
5.1.2 20 dB Bandwidth and 99% Occupied Bandwidth

Limit

The occupied bandwidth shall be specified in operating frequency band.

Kind of Test Site Shielded room

Test Setup



Test Instruments

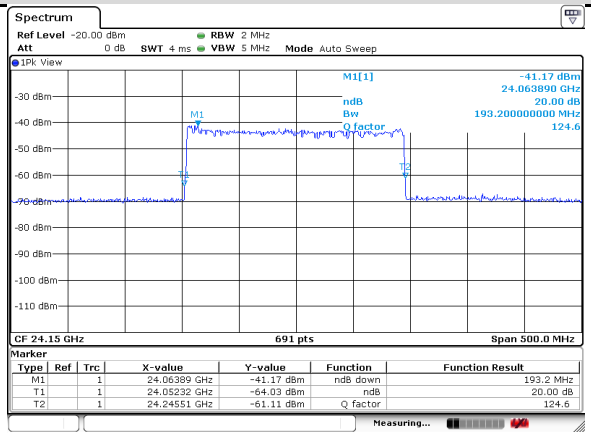
Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date	Test Date	
						From	Until
Spectrum Analyzer	Agilent	N9010A	MY53470241	2020/6/2	2021/6/1	2021/3/5	2021/3/19

Test Procedure

a. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
c. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
d. Repeat above procedures until all frequencies measured were complete.
e. The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1 % to 5 % of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to Sampling. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

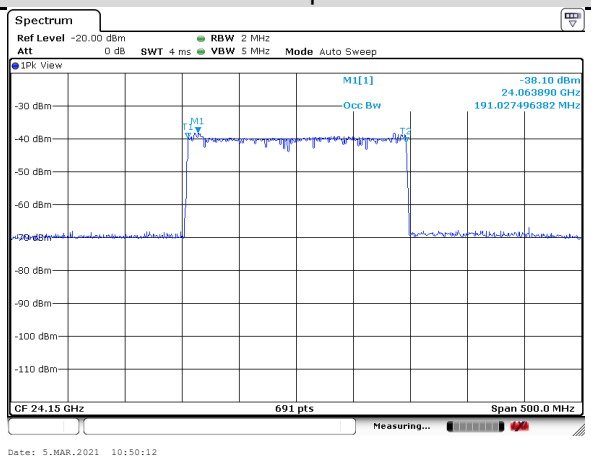
Test Results of 2T4R

Plot of 20 dB Bandwidth



Frequency (GHz)	20dB BW		Limit	
	FL(GHz)	FH(GHz)	FL(GHz)	FH(GHz)
24.05-24.25	**24.052**	**24.246**	**>24.05**	**<24.25**

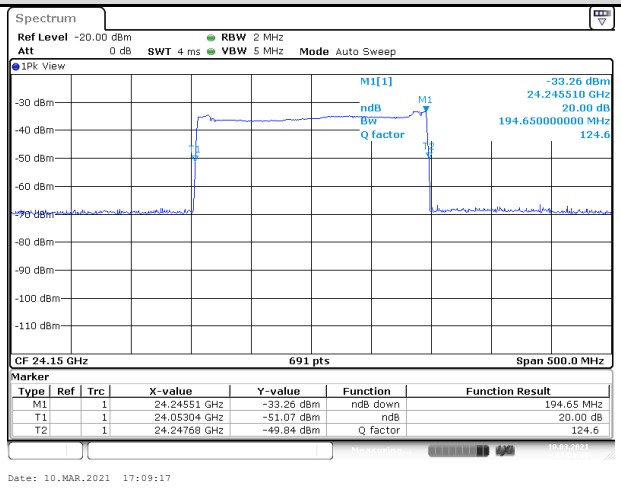
Plot of 99% Occupied Bandwidth



Frequency (GHz)	99% OBW
	(MHz)
24.05-24.25	**191.03**

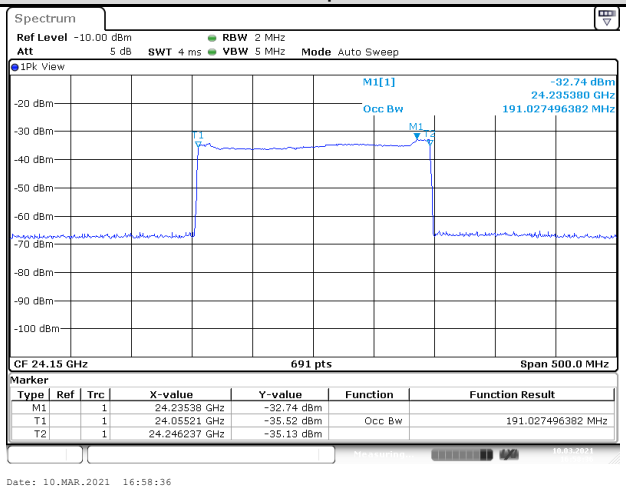
Test Results of 1T1R

Plot of 20 dB Bandwidth



Frequency (GHz)	20dB BW		Limit	
	FL(GHz)	FH(GHz)	FL(GHz)	FH(GHz)
24.05-24.25	**24.0523**	**24.247**	**>24.05**	**<24.25**

Plot of 99% Occupied Bandwidth



Frequency (GHz)	99% OBW
	(MHz)
24.05-24.25	**191.03**

5.1.3 Field Strength of Fundamental Emissions

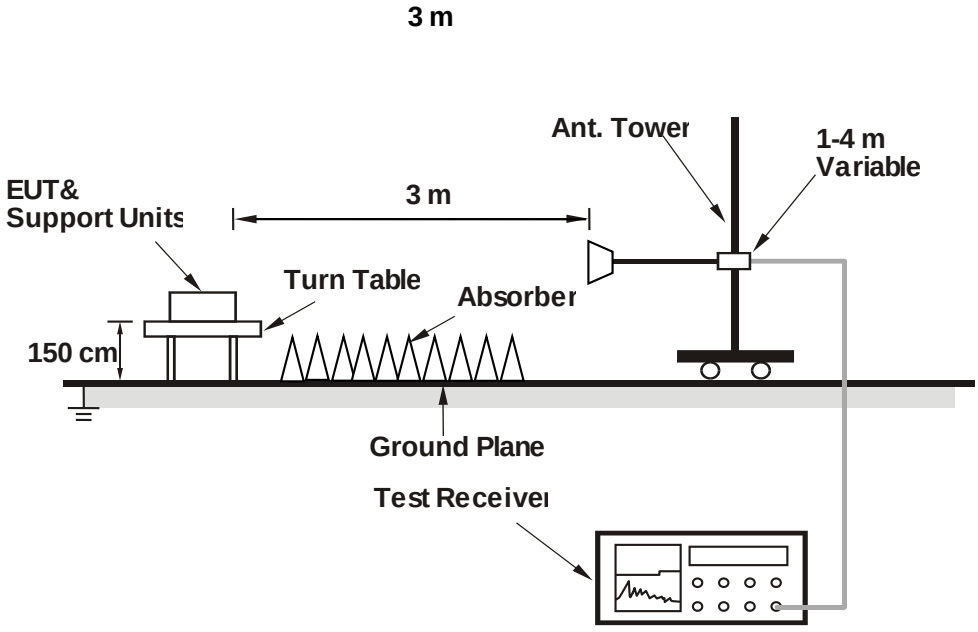
Limit

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field Strength of Fundamental (microvolts/meter)	Field Strength of Harmonics (microvolts/meters)
902 ~ 928 MHz	50	500
2400 ~ 2483.5 MHz	50	500
5725 ~ 5875 MHz	50	500
24 ~ 24.25 GHz	250	2500

Kind of Test Site 3m Semi-Anechoic Chamber

Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Test Instruments

Kind of Equipment	Manufacturer	Type	S/N	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV40	101509	2020/5/5	2021/5/4
Receiver	R&S	ESR7	102109	2020/3/30	2021/3/29
Bilog Antenna	SCHWARZBECK	VULB-9168	00950	2020/1/20	2021/1/18
Bilog Antenna	SCHWARZBECK	VULB-9168	00950	2021/1/18	2022/1/17
Horn Antenna	ETS-Lindgren	3117	00218929	2020/11/6	2021/11/5
LF-AMP	Agilent	8447D	2727A05146	2020/2/17	2021/2/15
LF-AMP	Agilent	8447D	2727A05146	2021/2/15	2022/2/14
HF-AMP + AC source	EMCI	EMC051845SE	980635	2020/2/11	2021/2/9
HF-AMP + AC source	EMCI	EMC051845SE	980635	2021/2/09	2022/2/8
HF-AMP + AC source	EMCI	EMC184045SE	980656	2020/2/11	2021/2/9
HF-AMP + AC source	EMCI	EMC184045SE	980656	2021/2/09	2022/2/8
Horn Antenna	SCHWARZBECK	BBHA 9170	00890	2020/4/13	2021/4/12
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104EA	800057/4EA	2020/4/22	2021/4/21
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104	802244/4	2020/4/22	2021/4/21
Microwave Cable	HUBER+SUHNER	SUCOFLEX 104	MY37203/4	2020/4/22	2021/4/21
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	800897/2EA	2020/3/25	2021/3/24
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	800902/2EA	2020/3/25	2021/3/24
Microwave Cable	HUBER+SUHNER	SUCOFLEX 102EA	801026/2EA	2020/3/25	2021/3/24
Mixer SA	VDI	N9029AV15	SAX039	2019/7/1	2021/6/30
Mixer SA	VDI	N9029AV10	SAX047	2019/7/1	2021/6/30
Harmonic Mixer	Keysight	M19HWDX	160118-1	2019/7/1	2021/6/30
Loop Antenna	SCHWARZBECK	FMZB1513	249	2020/9/17	2021/9/15

Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) or 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.
4. The Radiated Emissions testing was performed in the X, Y and Z axis orientation. The worst-case Axis orientation is recorded in this test report.

Test Results

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)
Level (dBuV/m) = Reading (dBuV) + Factor (dB/m)

Please refer to Appendix A.

5.1.4 Radiated Spurious Emissions

Limit

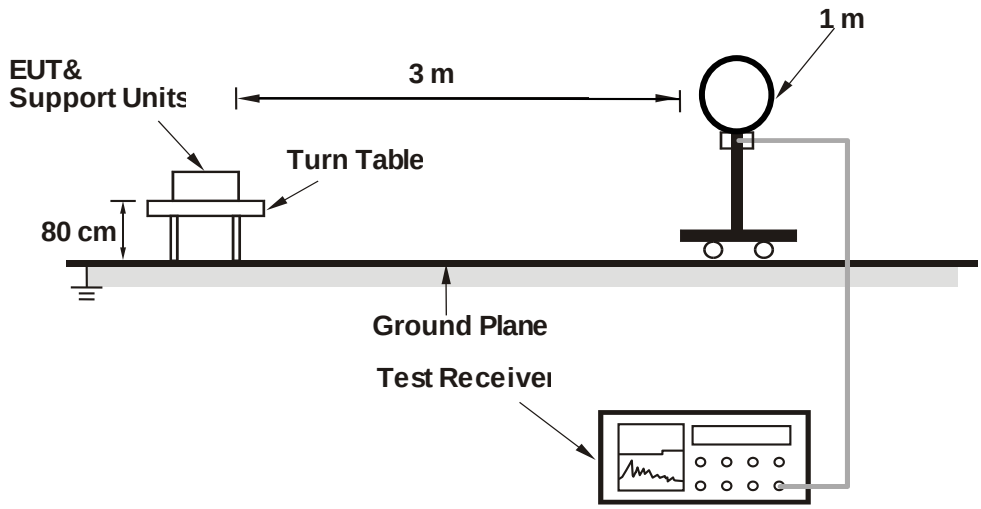
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits as below table, whichever is the lesser attenuation.

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F (kHz)	300
0.490 ~ 1.705	24000/F (kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

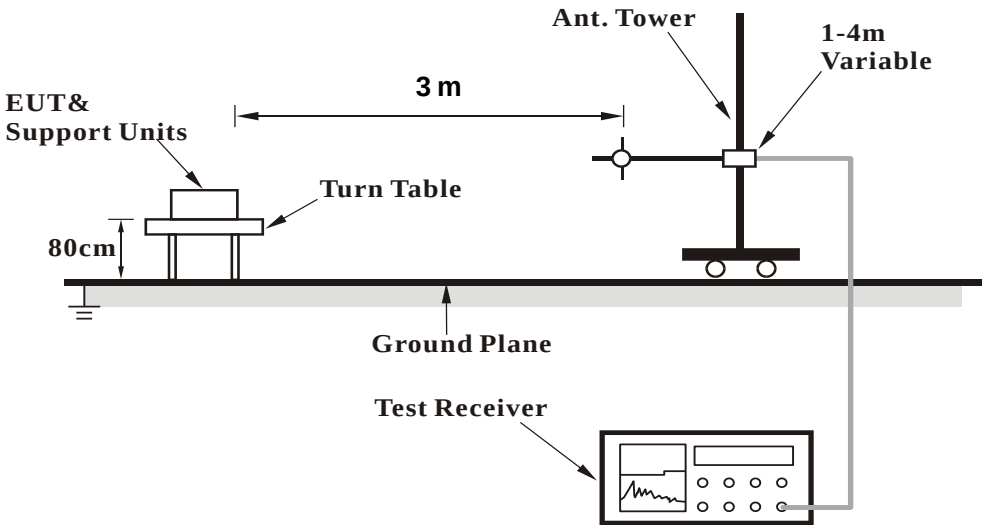
Kind of Test Site 3m Semi-Anechoic Chamber

Test Setup

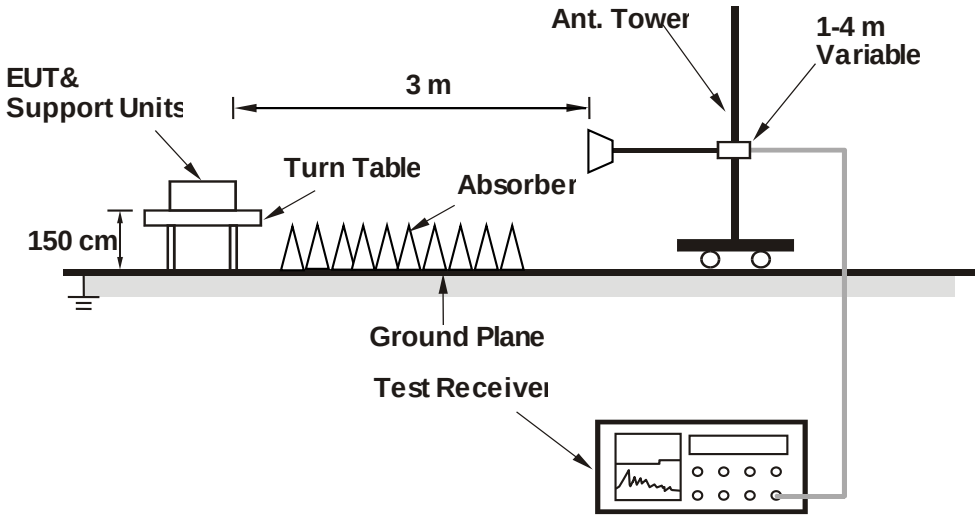
<Radiated Emissions below 30 MHz>



<Radiated Emissions 30 MHz to 1 GHz>



<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Test Instruments

Please refer to 5.1.3 Instruments

Test Procedures

For Radiated Emissions below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. Parallel (OPEN), perpendicular (CLOSE), and ground-parallel (GROUND) orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz at frequency below 30 MHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated Emissions above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30 MHz ~ 1 GHz) / 1.5 meters (for above 1 GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
f. The test-receiver system was set to peak and average detected function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) or Peak detection (PK) at frequency below 1 GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1 GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.
4. The Radiated Emissions testing was performed in the X, Y and Z axis orientation. The worst-case Axis orientation is recorded in this test report.

Test Results

Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB)
Level (dBuV/m) = Reading (dBuV) + Factor (dB/m)

Please refer to Appendix A.

5.2 Mains Emission

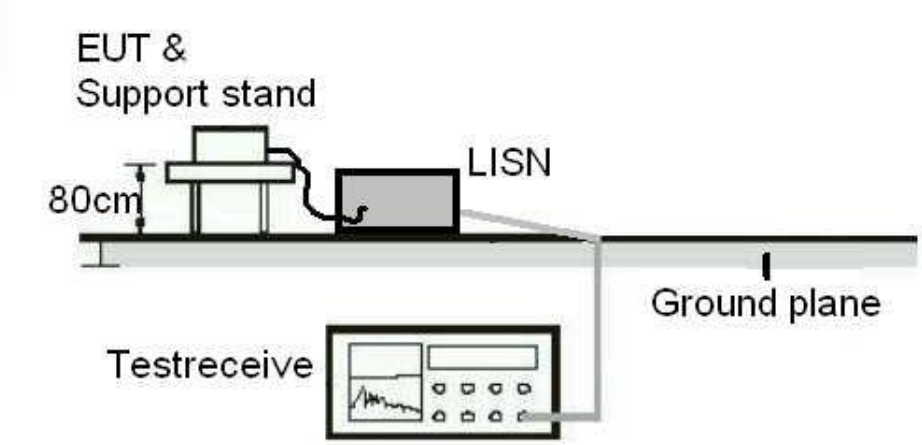
5.2.1 Mains Conducted Emission

Limit

Mains Conducted emissions as defined in §15.207 must comply with the mains conducted emission limits.

Kind of Test Site Shielded room

Test Setup



Test Instruments

None.

Test Procedures

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/50 uH of coupling impedance for the measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

Test Results

None.

Remark

This testing is not applicable since USB is designed to only be connected to charging board which is equipped on airplane and powered by battery.

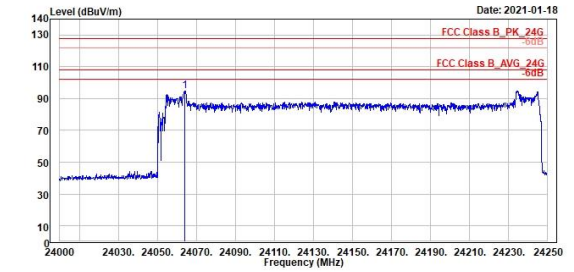
Appendix A: Test Results of Radiated Emissions

Fundamental Emission

24 GHz Radar 2T4R

Horizontal_Peak

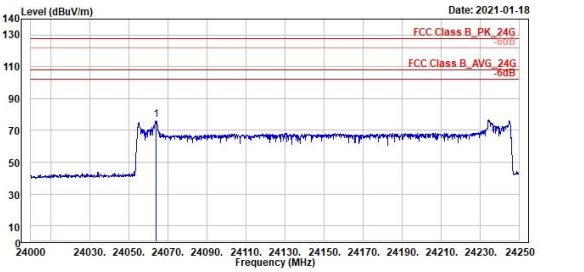
TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24064.00	94.87	90.90	3.97	127.96	-33.09	219	0	Peak	Horizontal	

Vertical_Peak

TUV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

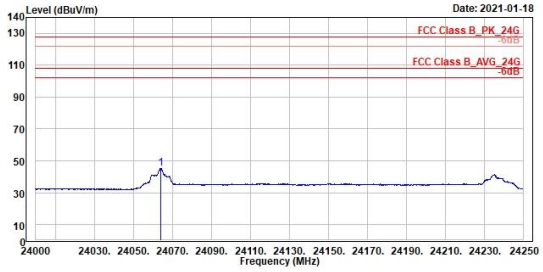


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24064.00	76.65	72.68	3.97	127.96	-51.31	100	118	Peak	Vertical	

24 GHz Radar 2T4R

Horizontal_Average

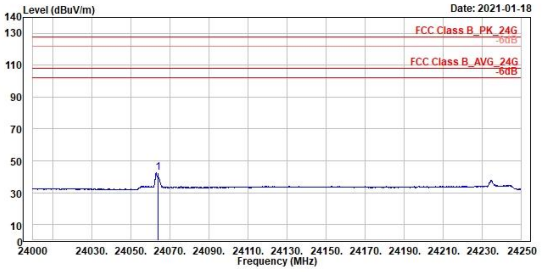
TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24064.00	45.35	41.38	3.97	107.96	-62.61	219	0	Average	Horizontal	

Vertical_Average

TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

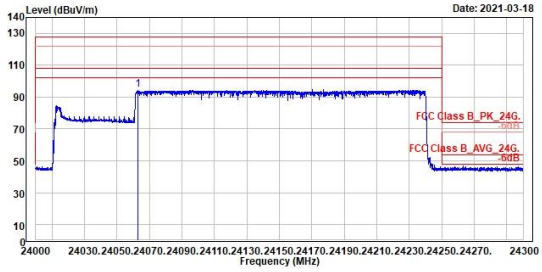


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24064.00	42.39	38.42	3.97	107.96	-65.57	100	118	Average	Vertical	

24 GHz Radar 1T1R

Horizontal_Peak

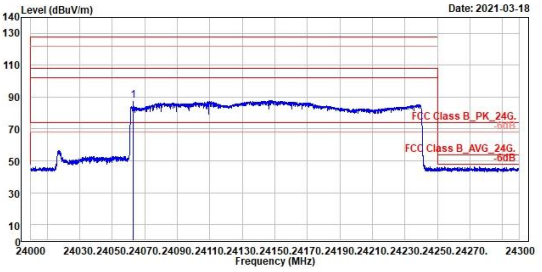
TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24062.94	94.92	90.94	3.98	127.96	-33.04	100	360	Peak	Horizontal	

Vertical_Peak

TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24062.94	87.74	83.76	3.98	127.96	-40.22	400	0	Peak	Vertical	

24 GHz Radar 1T1R

Horizontal_Average

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No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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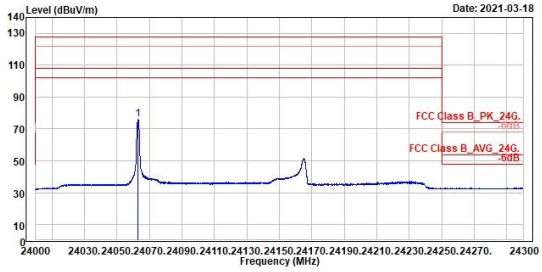

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24062.94	76.38	72.40	3.98	107.96	-31.58	100	360	Average	Horizontal	

Vertical_Average

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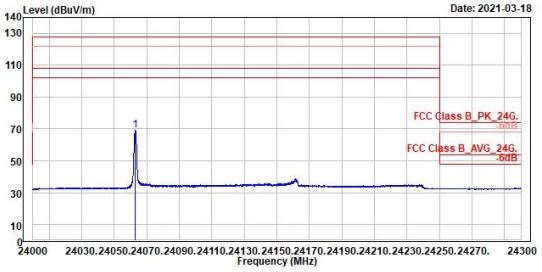
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	24062.94	69.07	65.09	3.98	107.96	-38.89	400	0	Average	Vertical	

Spurious Emissions, Tx Mode, 9kHz ~ 30MHz

24 GHz Radar 2T4R

OPEN_9kHz~150kHz

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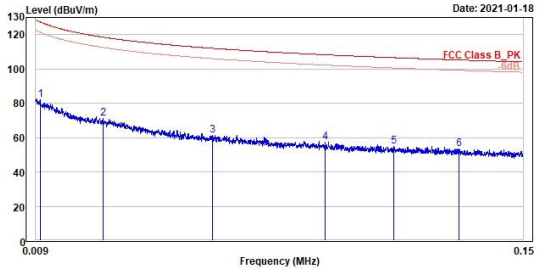
No. 458-18, Sec 2, Fenliao, ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	82.16	3.49	78.67	127.35	-45.19	100	171	QP	Open	
2	0.03	71.22	0.22	71.00	118.48	-47.26	100	61	QP	Open	
3	0.06	61.22	-2.40	63.62	112.00	-50.78	100	337	QP	Open	
4	0.09	57.56	-2.56	60.12	108.25	-50.69	100	207	QP	Open	
5	0.11	54.75	-3.77	58.52	106.57	-51.82	100	267	QP	Open	
6	0.13	53.60	-3.83	57.43	105.22	-51.62	100	333	QP	Open	

OPEN _150kHz~30MHz

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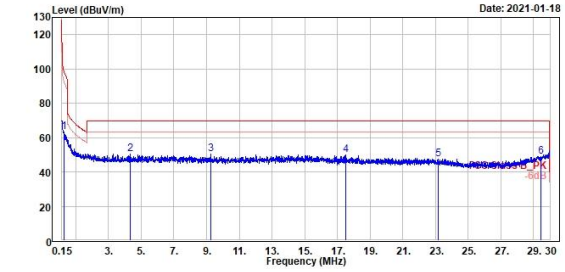
No. 458-18, Sec 2, Fenliao, ,Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.29	63.08	12.25	50.83	98.43	-35.35	100	73	QP	Open	
2	4.32	50.31	11.97	38.34	69.50	-19.19	100	153	QP	Open	
3	9.27	50.19	12.46	37.73	69.50	-19.31	100	238	QP	Open	
4	17.50	49.83	12.84	36.99	69.50	-19.67	100	167	QP	Open	
5	23.18	47.60	12.14	35.46	69.50	-21.90	100	46	QP	Open	
6	29.44	48.92	10.56	38.36	69.50	-20.58	100	265	QP	Open	

24 GHz Radar 2T4R

CLOSE_9kHz~150kHz

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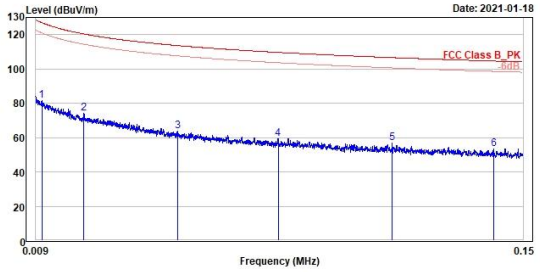
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	81.44	3.05	78.39	126.98	-45.54	100	164	QP	Close	
2	0.02	74.03	2.01	72.02	120.39	-46.36	100	276	QP	Close	
3	0.05	63.61	-1.45	65.06	113.62	-50.01	100	107	QP	Close	
4	0.08	59.28	-2.07	61.35	109.63	-50.35	100	220	QP	Close	
5	0.11	56.65	-1.90	58.55	106.60	-49.95	100	19	QP	Close	
6	0.14	53.48	-3.36	56.84	104.58	-51.10	100	170	QP	Close	

CLOSE_150kHz~30MHz

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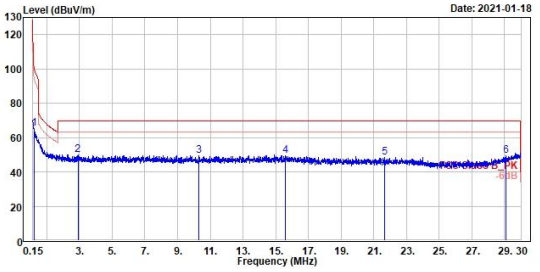
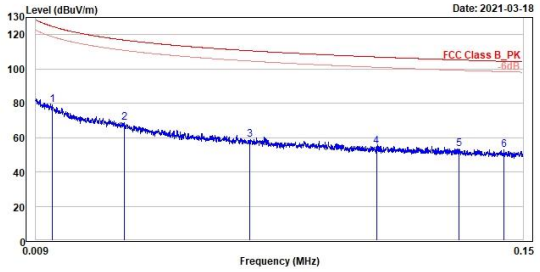


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.22	65.27	12.47	52.80	100.69	-35.42	100	310	QP	Close	
2	2.90	49.69	11.43	38.26	69.50	-19.81	100	280	QP	Close	
3	10.29	49.62	12.15	37.47	69.50	-19.88	100	192	QP	Close	
4	15.61	49.57	11.96	37.61	69.50	-19.93	100	229	QP	Close	
5	21.67	48.25	12.31	35.94	69.50	-21.25	100	201	QP	Close	
6	29.10	49.29	11.81	37.48	69.50	-20.21	100	130	QP	Close	

24 GHz Radar 1T1R

OPEN_9kHz~150kHz

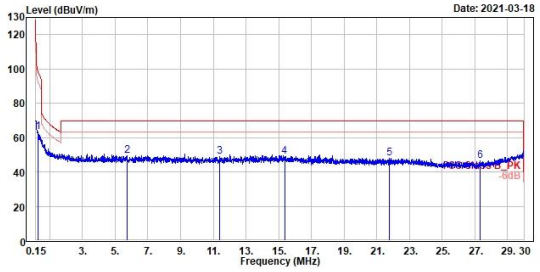
TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	79.17	2.72	76.45	124.79	-45.62	100	195	QP	Open	
2	0.03	68.58	-0.70	69.28	116.81	-48.23	100	19	QP	Open	
3	0.07	58.82	-3.42	62.24	110.56	-51.74	100	157	QP	Open	
4	0.11	54.82	-3.99	58.81	106.96	-52.14	100	65	QP	Open	
5	0.13	53.60	-3.83	57.43	105.22	-51.62	100	333	QP	Open	
6	0.14	52.72	-3.95	56.67	104.40	-51.68	100	111	QP	Open	

OPEN _150kHz~30MHz

TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322

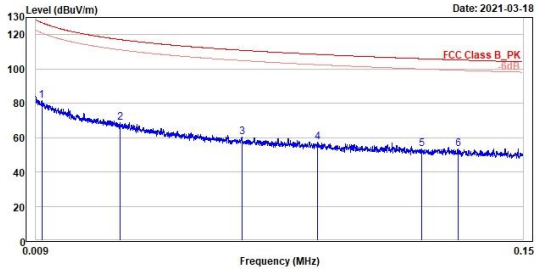


	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.29	63.08	12.25	50.83	98.43	-35.35	100	73	QP	Open	
2	5.74	49.39	11.03	38.36	69.50	-20.11	100	306	QP	Open	
3	11.40	48.70	11.46	37.24	69.50	-20.80	100	261	QP	Open	
4	15.36	49.17	11.51	37.66	69.50	-20.33	100	355	QP	Open	
5	21.76	48.17	12.25	35.92	69.50	-21.33	100	288	QP	Open	
6	27.31	46.59	12.03	34.56	69.50	-22.91	100	317	QP	Open	

24 GHz Radar 1T1R

CLOSE_9kHz~150kHz

TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.01	81.44	3.05	78.39	126.98	-45.54	100	164	QP	Close	
2	0.03	68.89	-0.77	69.66	117.11	-48.22	100	206	QP	Close	
3	0.07	60.45	-2.08	62.53	110.86	-50.41	100	154	QP	Close	
4	0.09	57.16	-3.21	60.37	108.45	-51.29	100	180	QP	Close	
5	0.12	53.19	-4.85	58.04	105.96	-52.77	100	278	QP	Close	
6	0.13	53.59	-3.84	57.43	105.23	-51.64	100	160	QP	Close	

CLOSE_150kHz~30MHz

TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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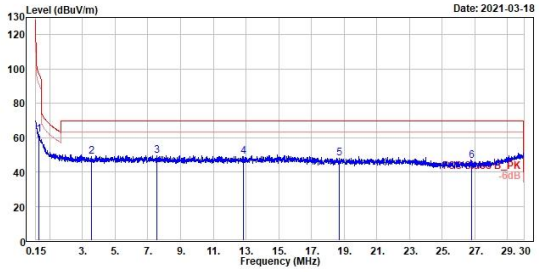

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	0.32	61.94	11.97	49.97	97.41	-35.47	100	64	QP	Close	
2	3.56	48.98	10.70	38.28	69.50	-20.52	100	257	QP	Close	
3	7.56	49.42	11.22	38.20	69.50	-20.08	100	33	QP	Close	
4	12.84	48.84	11.45	37.39	69.50	-20.66	100	134	QP	Close	
5	18.72	48.00	11.44	36.56	69.50	-21.50	100	21	QP	Close	
6	26.80	46.37	12.07	34.30	69.50	-23.13	100	29	QP	Close	

Spurious Emissions, Tx Mode, 30MHz ~ 1GHz

24 GHz Radar 2T4R

Horizontal

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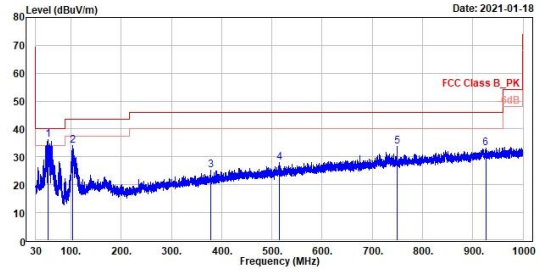
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 !	54.15	36.14	42.35	-6.21	40.00	-3.86	200	237	QP	horizontal	
2	103.82	34.04	44.61	-10.57	43.50	-9.46	200	224	QP	horizontal	
3	378.23	25.23	28.89	-3.66	46.00	-20.77	200	10	QP	horizontal	
4	514.81	27.87	29.46	-1.59	46.00	-18.13	312	22	QP	horizontal	
5	749.74	33.88	31.72	2.16	46.00	-12.12	100	147	QP	horizontal	
6	925.80	33.25	28.63	4.62	46.00	-12.75	200	2	QP	horizontal	

Vertical

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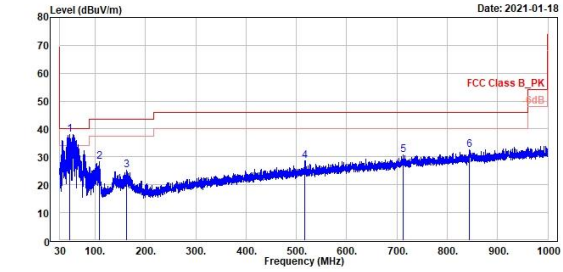
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
Tel:+886-2172-1000 Fax:+886-2172-1322



	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 !	49.89	38.01	44.07	-6.06	40.00	-1.99	100	360	QP	vertical	
2	107.79	28.18	38.14	-9.96	43.50	-15.32	100	163	QP	vertical	
3	163.18	25.40	31.29	-5.89	43.50	-18.10	100	167	QP	vertical	
4	517.52	28.69	30.25	-1.56	46.00	-17.31	200	150	QP	vertical	
5	712.88	30.74	29.28	1.46	46.00	-15.26	100	230	QP	vertical	
6	844.80	32.67	29.42	3.25	46.00	-13.33	300	329	QP	vertical	

24 GHz Radar 1T1R

Horizontal

TÜV Rheinland Taiwan Ltd.
No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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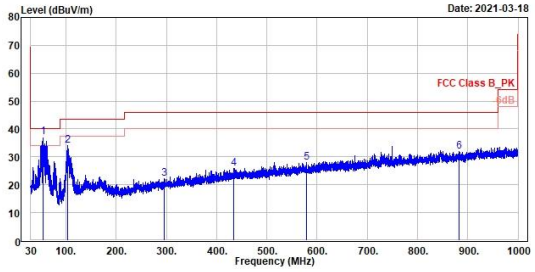

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 !	54.15	37.14	43.35	-6.21	40.00	-2.86	200	237	QP	horizontal	
2	103.82	34.04	44.61	-10.57	43.50	-9.46	200	224	QP	horizontal	
3	295.68	22.06	27.15	-5.09	46.00	-23.94	100	152	QP	horizontal	
4	434.49	25.98	28.63	-2.65	46.00	-20.02	100	16	QP	horizontal	
5	578.63	27.93	28.44	-0.51	46.00	-18.07	100	207	QP	horizontal	
6	882.15	32.03	28.32	3.71	46.00	-13.97	100	26	QP	horizontal	

Vertical

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No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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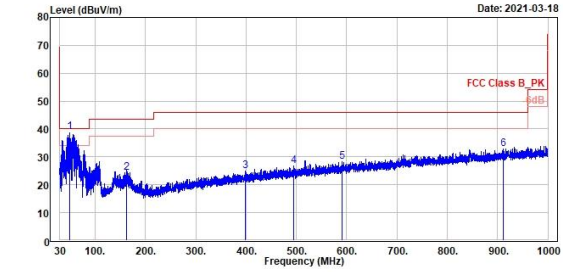

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1 !	49.89	39.01	45.07	-6.06	40.00	-0.99	100	360	QP	vertical	
2	163.18	24.40	30.29	-5.89	43.50	-19.10	100	167	QP	vertical	
3	398.41	25.06	28.41	-3.35	46.00	-20.94	100	60	QP	vertical	
4	495.50	26.77	28.74	-1.97	46.00	-19.23	100	334	QP	vertical	
5	590.66	28.23	28.61	-0.38	46.00	-17.77	100	243	QP	vertical	
6	912.12	32.89	28.58	4.31	46.00	-13.11	200	165	QP	vertical	

Spurious Emissions, Tx Mode, 1GHz ~ 40GHz

24 GHz Radar 2T4R

Horizontal

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No. 458-18, Sec 2, Fenliao, , Linkou Dist., New Taipei City 244, Taiwan(R.O.C.)
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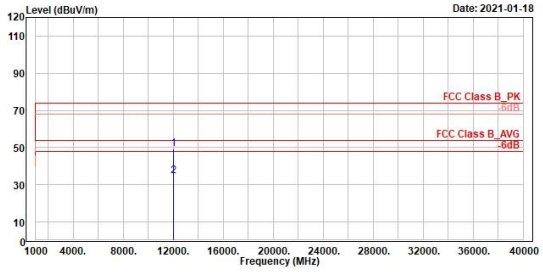

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	12032.06	49.39	49.38	0.01	74.00	-24.61	200	348	Peak	horizontal	
2	12032.06	34.59	34.58	0.01	54.00	-19.41	200	348	Average	horizontal	

Vertical

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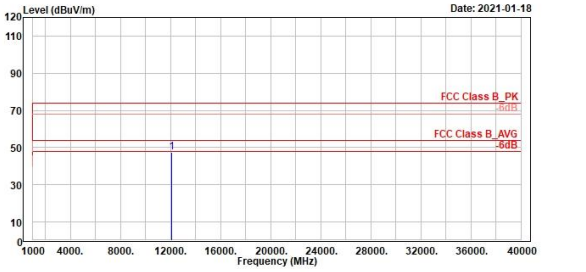

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	12120.83	47.30	47.04	0.26	74.00	-26.70	300	186	Peak	vertical	

24 GHz Radar 1T1R

Horizontal

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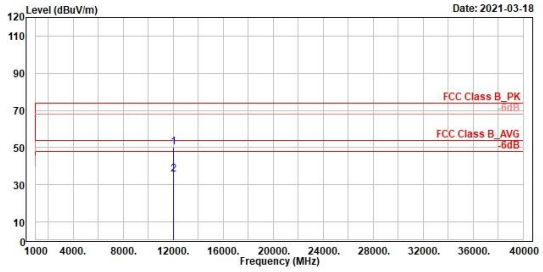

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	12032.06	50.39	50.38	0.01	74.00	-23.61	200	348	Peak	horizontal	
2	12032.06	35.59	35.58	0.01	54.00	-18.41	200	348	Average	horizontal	

Vertical

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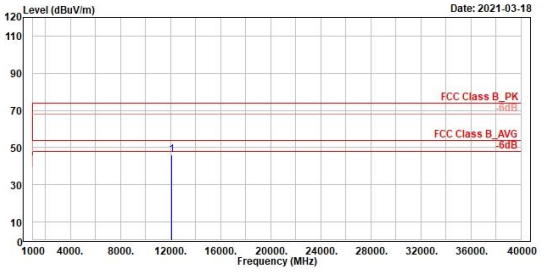

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	12120.83	46.30	46.04	0.26	74.00	-27.70	300	186	Peak	vertical	

Spurious Emissions, Tx Mode, 40GHz ~ 100GHz

24 GHz Radar 2T4R

Horizontal

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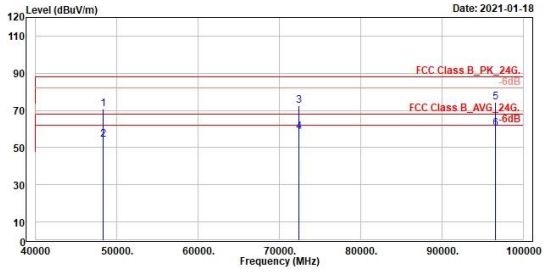

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	48300.00	70.86	18.60	52.26	87.96	-17.10	150	360	Peak	Horizontal	
2	48300.00	54.25	1.99	52.26	67.96	-13.71	150	360	Average	Horizontal	
3	72450.00	72.68	15.13	57.55	87.96	-15.28	150	360	Peak	Horizontal	
4	72450.00	58.59	1.04	57.55	67.96	-9.37	150	360	Average	Horizontal	
5	96600.00	74.22	14.94	59.28	87.96	-13.74	150	360	Peak	Horizontal	
6	96600.00	60.20	0.92	59.28	67.96	-7.76	150	360	Average	Horizontal	

Vertical

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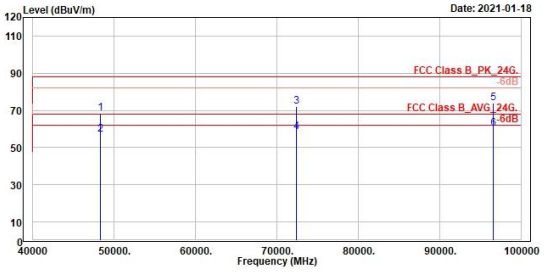

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	48300.00	68.42	16.67	51.75	87.96	-19.54	150	0	Peak	Vertical	
2	48300.00	57.23	5.48	51.75	67.96	-10.73	150	0	Average	Vertical	
3	72450.00	71.96	14.41	57.55	87.96	-16.00	150	0	Peak	Vertical	
4	72450.00	58.27	0.72	57.55	67.96	-9.69	150	0	Average	Vertical	
5	96600.00	73.94	14.66	59.28	87.96	-14.02	150	0	Peak	Vertical	
6	96600.00	60.28	1.00	59.28	67.96	-7.68	150	0	Average	Vertical	

24 GHz Radar 1T1R

Horizontal

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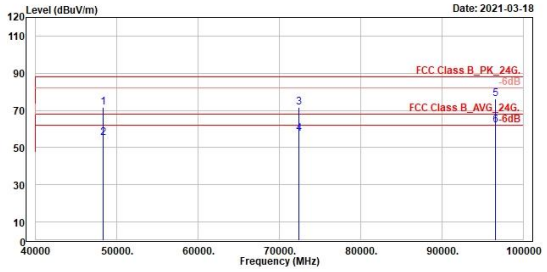

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	48300.00	71.86	19.60	52.26	87.96	-16.10	150	360	Peak	Horizontal	
2	48300.00	55.25	2.99	52.26	67.96	-12.71	150	360	Average	Horizontal	
3	72450.00	71.68	14.13	57.55	87.96	-16.28	150	360	Peak	Horizontal	
4	72450.00	57.59	0.04	57.55	67.96	-10.37	150	360	Average	Horizontal	
5	96600.00	76.22	16.94	59.28	87.96	-11.74	150	360	Peak	Horizontal	
6 !	96600.00	62.20	2.92	59.28	67.96	-5.76	150	360	Average	Horizontal	

Vertical

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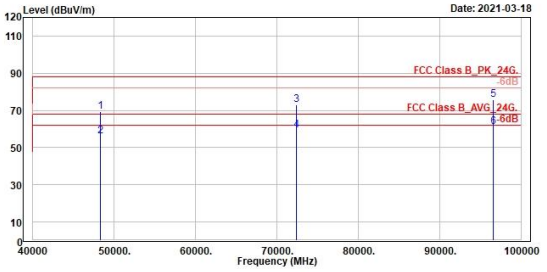

	Freq	Level	Read Level	Factor	Limit Line	Over Limit	APos	TPos	Remark	Pol/Phase	Note
	MHz	dBuV/m	dBuV	dB/m	dBuV/m	dB	cm	deg			
1	48300.00	69.42	17.67	51.75	87.96	-18.54	150	0	Peak	Vertical	
2	48300.00	56.23	4.48	51.75	67.96	-11.73	150	0	Average	Vertical	
3	72450.00	72.96	15.41	57.55	87.96	-15.00	150	0	Peak	Vertical	
4	72450.00	59.27	1.72	57.55	67.96	-8.69	150	0	Average	Vertical	
5	96600.00	75.94	16.66	59.28	87.96	-12.02	150	0	Peak	Vertical	
6	96600.00	61.28	2.00	59.28	67.96	-6.68	150	0	Average	Vertical	