FCC Part 15 SUBPART C Test Report

for

Remote Controller for models

Model No.: Commander

FCC ID: VEJ-COMMANDER

of

Applicant: Thunder Tiger Corp.

Address: No.7 6th Road Industry park Taichung 407 Taiwan

Tested and Prepared

by

Worldwide Testing Services (Taiwan) Co., Ltd.

FCC Registration No.: 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A-1

A2LA Accredited No.: 2732.01





Report No.: W6D21506-15057-C-1

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C. TEL: 886-2-66068877 FAX: 886-2-66068879 E-mail: wts@wts-lab.com



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

TABLE OF CONTENTS

1 (GENERAL INFORMATION	2
1.1	Notes	2
1.2	Testing laboratory	
1.2.1	Location	3
1.2.2	Details of accreditation status	3
1.3	Details of approval holder	3
1.4	Application details	4
1.5	General information of Test item.	4
1.6	Test standards	5
2 T	TECHNICAL TEST	6
2.1	Summary of test results	6
2.2	Test environment	6
2.3	Test Equipment List	7
2.4	General Test Procedure	9
3 T	TEST RESULTS (ENCLOSURE)	11
3.1	Peak Output Power (transmitter)	12
3.2	Equivalent isotropic radiated power	15
3.3	RF Exposure Compliance Requirements	
3.4	Transmitter Radiated Emissions in restricted Bands	16
3.5	Spurious emissions (tx)	17
3.6	Carrier Frequency Separation	18
3.7	Number of Hopping Frequencies	
3.7.1	Pseudorandom Frequency Hopping Sequence	23
3.7.2	Coordination of hopping sequences to other transmitters	23
3.7.3	System Receiver Hopping Capability	23
3.8	Time of Occupancy (Dwell Time)	23
3.9	20dB Bandwidth	28
3.9.1	System Receiver Input Bandwidth	30
3.10	Band-edge Compliance of RF Emissions	31
3.11	Radiated Emissions from Receiver Section of Transceiver	34
3.12	Power Line Conducted Emission.	35
Apper	ndix	37

FCC ID: VEJ-COMMANDER **General Information**

1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that is performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

Tester:

June 03, 2015 Robert Ren

Date WTS-Lab. Name Signature

Technical responsibility for area of testing:

June 03, 2015 Kevin Wang

Date WTS Name Signature



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

1.2 Testing laboratory

1.2.1 Location

OATS

No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207,

Taiwan (R.O.C.)

3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

TEL:886-2-6613-0228 FAX:886-2-2791-5046

Company

Worldwide Testing Services(Taiwan) Co., Ltd. 6F, NO. 58, LANE 188, RUEY-KUANG RD. NEIHU, TAIPEI 114, TAIWAN R.O.C.

Tel : 886-2-66068877 Fax : 886-2-66068879

1.2.2 Details of accreditation status

Accredited testing laboratory

A2LA accredited number: 2732.01

FCC filed test laboratory Reg. No. 930600

Industry Canada filed test laboratory Reg. No. IC 5679A-1, IC 5107A-1

Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd.:

Name:	./.
Accredited number:	./.
Street:	./.
Town:	./.
Country:	./.
Telephone:	./.
Fax:	./.

1.3 Details of approval holder

Name: Thunder Tiger Corp.

Street: No.7 6th Road Industry park

Town: Taichung 407

Country: Taiwan

Telephone: 04-2359-1616 Fax: 04-2359-1902

FCC ID: VEJ-COMMANDER **1.4** Application details

Date of receipt of test item: June 02, 2015

Date of test: from June 02, 2015 to June 03, 2015

1.5 General information of Test item

Type of test item: Remote Controller for models

Model Number: Commander

Multi-listing model number: ./.

Photos: see Annex

Technical data

Frequency band: 2402 – 2483.5 MHz

Frequency (ch A): 2402 MHz Frequency (ch B): 2441 MHz Frequency (ch C): 2479 MHz

<u>Transmitter</u> <u>Unom</u>

Power (ch 0): Conducted: 7.43 dBm Power (ch 39): Conducted: 7.63 dBm Power (ch 78): Conducted: 7.79 dBm

Power supply: Adaptor: (I/P: 120VAC / 60Hz,

O/P: 7.2VDC / 80mA TX; 4.8VDC / 160mA RX)

Battery: DC 7.2V

Operation modes: Half-duplex

Modulation Type: GFSK

Antenna Type: Dipole antenna

Antenna gain: 2.31 dBi



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER Host device: none

Classification:

Fixed Device	
Mobile Device (Human Body distance > 20cm)	
Portable Device (Human Body distance < 20cm)	\boxtimes
Modular Radio Device	

Manufacturer: (if applicable)

Name: Thunder Tiger Corp. (Ningbo), China

Street: 28 Jin-Feng Road, Liang Hui Industrial Park,

Town: Yuyao, Zhejiang 315400

Country: China

Additional information: ./.

1.6 Test standards

Technical standard: FCC RULES PART 15 SUBPART C § 15.247 (2014-10)

FCC ID: VEJ-COMMANDER

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.	×
or	
The deviations as specified in 3 were ascertained in the course of the tests performed.	

2.2 Test environment

Temperature: 23 °C

Relative humidity content: 20 ... 75 %

Air pressure: 86 ... 103 kPa

Details of power supply Adaptor: (I/P: 120VAC / 60Hz,

O/P: 7.2VDC / 80mA TX; 4.8VDC / 160mA RX)

Battery: DC 7.2V

Extreme conditions parameters: test voltage : -- extreme

 $\begin{array}{ll} min: --V \\ max: --V \end{array}$



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

2.3 Test Equipment List

No.	Test equipment	Туре	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2014/9/2	2015/9/1
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Functi	on Test
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function	on Test
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2014/7/8	2015/7/7
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2014/10/13	2015/10/12
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2014/9/2	2015/9/1
ETSTW-RE 005	EMI TEST RECEIVER	ESVS10	843207/020	R&S	2014/9/2	2015/9/1
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Functi	on Test
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Functi	on Test
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2014/10/15	2015/10/14
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2014/7/01	2015/6/30
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2015/3/17	2016/3/16
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-te	st Use
ETSTW-RE 049	TRILOG Super Broadband test Antenna	VULB 9160	9160-3185	Schwarzbeck	2015/3/19	2016/3/18
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2015/3/2	2016/3/1
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2015/3/2	2016/3/1
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2015/3/2	2016/3/1
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S 2014/6/05		2015/6/04
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2015/3/2	2016/3/1
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2014/11/26	2015/11/25
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function	on Test
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ETS-Lindgren	Functi	on Test
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2014/10/9	2015/10/8
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2014/9/22	2015/9/21
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2015/3/2	2016/3/1
ETSTW-RE 106	Humidity Temperature Meter	TES-1366	091011113	TES	2014/11/7	2015/11/6
ETSTW-RE 111	TRILOG Super Broadband test Antenna	VULB 9160	9160-3309	Schwarz beck	2014/12/5	2015/12/4
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Functi	on test
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2015/1/7	2016/1/6
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	Functi	on test
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2014/6/11	2015/6/10
ETSTW-RE 125	5GHz Notch filter	5NSL11- 5200/E221.3-O/O	1	K&L Microwave	2014/8/12	2015/8/11



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

ETSTW-RE 126	-COMMANDER 5GHz Notch filter	5NSL11- 5800/E221.3-O/O	1	K&L Microwave	2014/8/12	2015/8/11
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2015/3/2	2016/3/1
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circits	2014/8/12	2015/8/11
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circits	2014/8/12	2015/8/11
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-te	st Use
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2014/10/20	2015/10/19
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2015/3/5	2016/3/4
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849- 822/851-40 /12+9SS	3	WI	2015/1/7	2016/1/6
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748- 1743/1752-32/5SS	1	WI	2015/1/7	2016/1/6
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5 -1875.5/1884.5- 32/5SS	3	WI	2015/1/7	2016/1/6
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1- 904.25-50/8SS	1	WI	2015/1/7	2016/1/6
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2014/9/17	2015/9/16
ETSTW-Cable 010	BNC Cable	5 M BNC Cable	None	JYE BAO CO.,LTD.	2014/10/15	2015/10/14
ETSTW-Cable 011	BNC Cable	BNC Cable 1	None	JYE BAO CO.,LTD.	Pre-test I	Use NCR
ETSTW-Cable 012	N TYPE To SMA Cable	Cable 012	None	JYE BAO CO.,LTD.	2014/10/15	2015/10/14
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2015/2/25	2016/2/24
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2015/2/25	2016/2/24
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2015/2/25	2016/2/24
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2015/2/25	2016/2/24
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2015/4/23	2016/4/22
ETSTW-Cable 022	N TYPE Cable	5006	0002	JYE BAO CO.,LTD.	2015/3/19	2016/3/18
ETSTW-Cable 026	Microwave Cable	SUCOFLEX 104	279075	HUBER+SUHNER	2015/3/2	2016/3/1
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2015/5/14	2016/5/13
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2015/1/16	2016/1/15
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2014/9/22	2015/9/21
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S_Cable 9)	279067	HUBER+SUHNER	2015/3/2	2016/3/1
ETSTW-Cable 031	Microwave Cable	SUCOFLEX 104 (S_Cable 10)	238092	HUBER+SUHNER	2014/11/26	2015/11/25
ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2014/11/26	2015/11/25
ETSTW-Cable 048	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2014/11/26	2015/11/25
ETSTW-Cable 053	N TYPE To SMA Cable	RG142	None	JYE BAO CO.,LTD.	2015/3/19	2016/3/18
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2015/3/19	2016/3/18
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version F	ETS-03A1

FCC ID: VEJ-COMMANDER

2.4 General Test Procedure

POWER LINE CONDUCTED INTERFERENCE: The procedure used was ANSI STANDARD C63.4-2009 5.2 using a $50\mu H$ LISN (if necessary). Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed.

RADIATION INTERFERENCE: The test procedure used was according to ANSI STANDARD C63.4-2009 6.4 employing a spectrum analyzer. For investigated frequency is equal to or below 1GHz, the RBW and VBW of the spectrum analyzer was 100 kHz and 100kHz respectively with an appropriate sweep speed. For investigated frequency is above 1GHz, both of RBW and VBW of the spectrum analyzer were 1 MHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The ambient, temperature of the UUT was 23°C with a humidity of 40 %.

FORMULA OF CONVERSION FACTORS: The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of $dB\mu V$) to the antenna correction factor supplied by the antenna manufacturer. The antenna correction factors are stated in terms of dB.

Example:

Freq (MHz) METER READING + ACF + CABLE LOSS (to the receiver) = FS

33 $20 \text{ dB}\mu\text{V} + 10.36 \text{ dB} + 6 \text{ dB} = 36.36 \text{ dB}\mu\text{V/m} \text{ (a)3m}$

The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m (non metallic table) and arranged according to ANSI C63.4-2009 6.3.1. The table used for radiated measurements is capable of continuous rotation. The spectrum was scanned from 30 MHz to the frequency specified as follows:

- (1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
- (2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.
- (3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.
- (4) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a)(1)-(a)(3) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this Section, whichever is the higher frequency range of investigation.

For hand-held devices, a exploratory test was performed with three (3) orthogonal planes to determine the highest emissions.

Measurements were made by Worldwide Testing Services(Taiwan) Co., Ltd. at the registered open field test site located No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.). The Registration Number: **930600**.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes.



FCC ID: VEJ-COMMANDER

When the radiated emission limits are expressed in terms of the average value of the emission, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.

The formula is as follows:

Average = Peak + Duty Factor

Duty Factor = 20 log (dwell time/T)

T = 100ms when the pulse train period is over 100 ms or the period of the pulse train.

Modified Limits for peak according to 15.35 (b) = Max Permitted average Limits + 20dB

ANSI STANDARD C63.4-2009 10.2.7: Any measurements that utilize special test software shall be indicated and referenced in the test report. During testing, test software 'EZ EMC' was used for setting up different operation modes.



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

3 Test results (enclosure)

TEST CASE	Para. Number	Required	Test passed	Test failed
Peak Output Power	15.247(b)	×	×	
Equivalent radiated Power	15.247(b)	×	×	
Spurious Emissions radiated – Transmitter operating	15.247(c)	×	×	
Spurious Emissions conducted – Transmitter operating	15.247			
Carrier Frequency Separation	15.247(a) (1)	×	×	
Number of Hopping Frequencies	15.247(a) (1)(i)	×	×	
Time of Occupancy (Dwell Time)	15.247(a) (1)(i)	×	×	
20 dB Bandwidth	15.247(a) (1)(i)	×	×	
Band-edge Compliance of RF Emission	15.247(c)	×	×	
Radiated Emission from Receiver Part	15.109	×	×	
Power Line Conducted Emission	15.207(a)	×	×	

The follows is intended to leave blank.



Registration number: W6D21506-15057-C-1

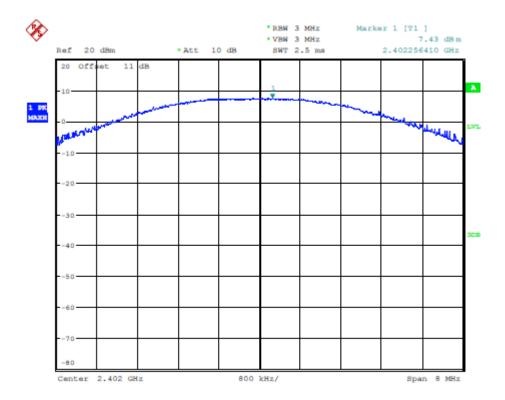
FCC ID: VEJ-COMMANDER

3.1 Peak Output Power (transmitter)

FCC Rule: 15.247

This measurement applies to equipment with an integral antenna and to equipment with an antenna connector and equipped with an antenna as declared by the applicant.

The power was measured with modulation (declared by the applicant).

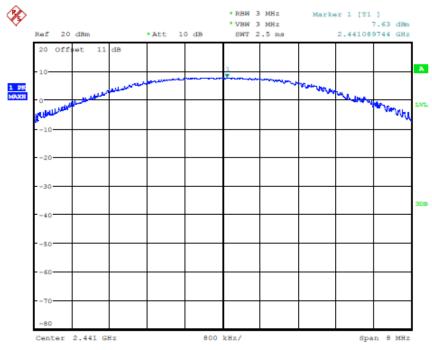


MAX OUTPUT POWER 2402MHz Date: 2.JUN.2015 16:19:37

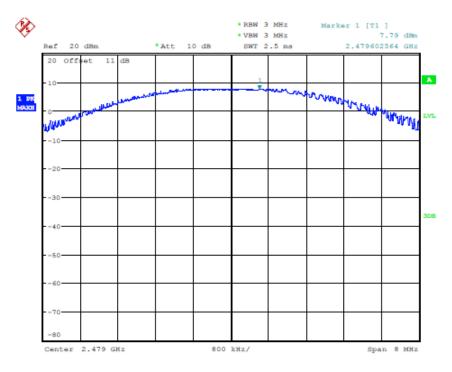


Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



MAX OUTPUT POWER 2441MHs Date: 2.JUN.2015 16:19:59



MAX OUTPUT POWER 2479MHz Date: 2.JUN.2015 16:19:06



FCC ID: VEJ-COMMANDER

Maximum Peak Output Power

Limits:

Frequency	Number of hopping channels							
MHz	≥ 75	≥ 50	49 ≥ 25	74 ≥ 15				
902-928		30 dBm	24 dBm					
2400-2483.5 MHz 30 dBm				21 dBm				
5725-5850 MHz	30 dBm							

In case of employing transmitter antennas having antenna gain >dBi and using fixed poin-to point operation consider §15.247 (b)(4).

Test equipment used: ETSTW-RE 055, ETSTW-RE 050, ETSTW-RE 064

FCC ID: VEJ-COMMANDER

3.2 Equivalent isotropic radiated power

FCC Rule: 15.247(b)(3)

EIRP = max. conducted output power + antenna gain

EIRP = 7.79 dBm + 2.31 dBi = 10.1 dBm

Limit: EIRP = +36 dBm for Antenna gain <6 dBi

Test equipment used: ETSTW-RE 055

3.3 RF Exposure Compliance Requirements

RESULT:

Test standard : FCC KDB Publication

447498 D01 General RF Exposure Guidance v05r02

According to 447498 D01 General RF Exposure Guidance v05r02:

SAR evaluation, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The enclosure of the device provides ≥ 1 cm separation from the antenna elements to significant metal parts of the enclosure to minimize potential perturbations.

Frequency Band:2400-2483.5 MHz

Maximum Power fed to Antenna: 10.2329 mW

Separation distances:

Radiator to user: > 10 mm

Distance prescribed in user manual: > 10 mm

M	ИHz		5		10)		15		20		25			mm		
24	150 10 19 29 38			48		SAR Test Exclusion Threshold (mW)		W)									
M	ИHz		30		3:	5		40		45		50		mm			
24	450		57		6'	7		77		86		96		Exc	R Test clusion old (m	W)	
MHz	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	mm	
2450	96	196	296	396	496	596	696	796	896	996	1096	1196	1296	1396	1496	mW	



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

3.4 Transmitter Radiated Emissions in restricted Bands

FCC Rules: 15.247 (c), 15.205, 15.209, 15.35

Radiated emission measurements were performed from 30 MHz to 26000 MHz.

For radiated emission tests, the analyzer setting was as followings:

RES BW VID BW

Frequency <1 GHz 100 kHz 100 kHz (Peak measurements) Frequency >1 GHz 1 MHz 1 MHz (Peak measurements)

1 MHz 1 MHz (Average measurements)

Limits:

For frequencies below 1GHz:

Frequency of Emission (MHz)	Field strength (microvolts/meter)	Field Strength (dB microvolts/meter)
30 - 88	100	40.0
88 – 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

For frequencies above 1GHz (Average measurements).

Guidance on Measurement of FHSS Systems:

"If the emission is pulsed, modify the unit for continues operation, use the settings shown above, then correct the reading by subtracting the peak-average correction factor, derived from the appropriate duty cycle calculation." Here the correction was added to the limit instead subtracted from the reading.

Duty cycle correction = $20 \log (dwell time/100ms)$

For frequencies above 1GHz (Average measurements).

Limit – duty cycle correction

No duty cycle correction was added to the reading.

 $54.0dB\mu V/m$

For frequencies above 1GHz (Peak measurements).

Limit + 20dB

 $54.0 dB \mu V/m + 20 dB = 74 dB \mu V/m$

Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111, ETSTW-RE 064

Explanation: See attached diagrams in appendix.

FCC ID: VEJ-COMMANDER

3.5 Spurious emissions (tx)

Spurious emission was measured with modulation (declared by manufacturer).

In any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c))

SAMPLE CALCULATION OF LIMIT. All results will be updated by an automatic measuring system in accordance to point 2.3.

Calculation of test results:

Such factors like antenna correction, cable loss, external attenuation etc. are already included in the provided measurement results. This is done by using validated test software and calibrated test system according the accreditation requirements.

The peak and average spurious emission plots was measured with the average limits.

In the Table being listed the critical peak and average value an exhibit the compliance with the above calculated Limits.

If in the column's correction factor states a value then the max. Field strength in the same row is corrected by a value gained from the "Marker-Delta-Method" or the "Duty-Cycle Correction Factor".

Summary table with radiated data of the test plots

Model:	(Commander		Date:				
Mode:				Temperature:		°C	Engineer:	
Polarization:	Horizontal			Humidity:		%		
Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)

Note

- 1. Correction Factor = Antenna factor + Cable loss Preamplifier
- 2. The formula of measured value as: Test Result = Reading + Correction Factor
- 3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.
- 5. Measurement uncertainty above 1GHz: 30-1000 MHz = \pm 4.32 dB, 1-18 GHz = \pm 4.95 dB, 18-40 GHz = \pm 2.94 dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.
- 6. See attached diagrams in appendix.

All other not noted test plots do not contain significant test results in relation to the limits.

TEST RESULT (Transmitter): The unit DOES meet the FCC requirements.

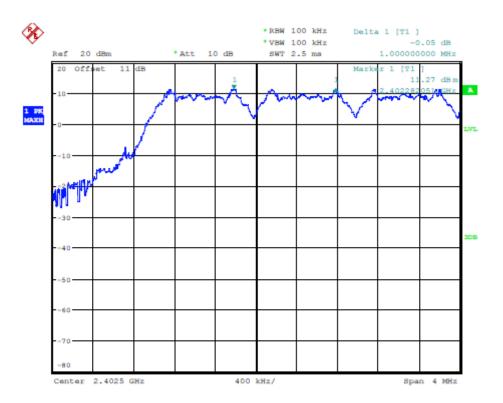
Test equipment used: ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030, ETSTW-RE 111,ETSTW-RE 064 ETSTW-RE 088, ETSTW-RE 018

FCC ID: VEJ-COMMANDER

3.6 Carrier Frequency Separation

Carrier Frequency Separation was measured with modulation (declared by manufacturer).

According to FCC rules part 15 subpart C §15.247 frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or 20 dB bandwidth of the hopping channel, whichever is greater.

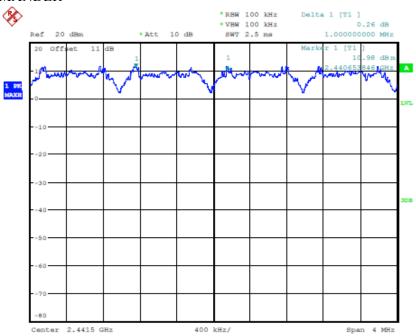


FREQUENCY SEPARATION 2402MHz Date: 2.JUN.2015 18:10:40

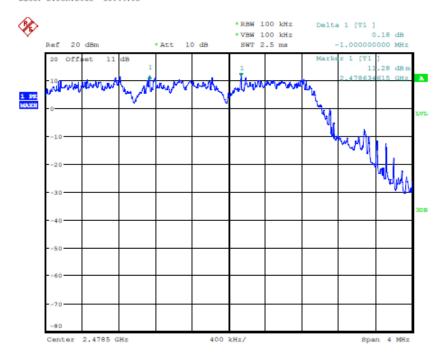


Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



FREQUENCY SEPARATION 2441MHz Date: 2.JUN.2015 18:44:05



FREQUENCY SEPARATION 2479MHz Date: 2.JUN.2015 18:55:23



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

Limits:

Frequency Range	Limits					
MHz	20 dB bandwidth < 25 kHz	20 dB bandwidth > 25 kHz				
902-928	25 kHz	20 dB bandwidth				
2400-2483.5 5725-5850.0	25 kHz	20 dB bandwidth				

Test equipment used: ETSTW-RE 055, ETSTW-RE 064



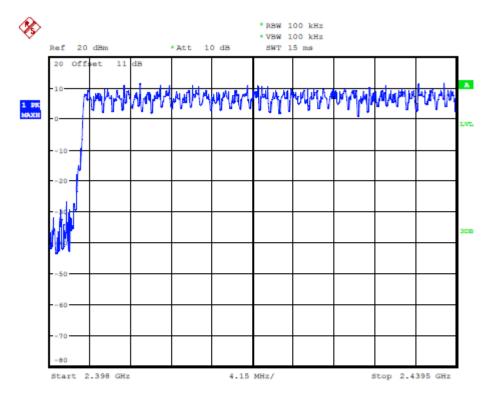
Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

3.7 Number of Hopping Frequencies

According to FCC rules part 15 subpart C §15.247 frequency hopping systems operating in the 2400-2483.5 MHz band shall use at least 15 hopping frequencies. Frequency hopping systems in 5725-5850 MHz bands shall use least 75 hopping frequencies.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies; if the 20dB bandwidth of the hopping channel 250 kHz or greater, the system shall use at least 25 hopping frequencies.

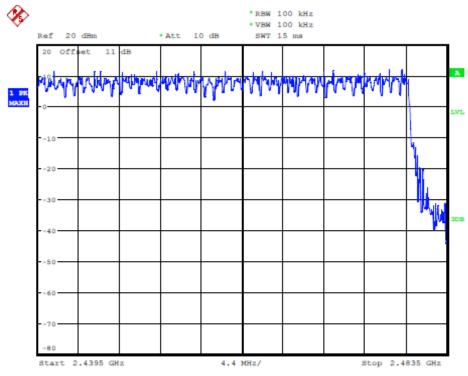


NUMBER OF HOPPING CH0-37 Date: 2.JUN.2015 19:00:03



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



NUMBER OF HOPPING CH38-77 Date: 2.JUN.2015 19:08:50

Limits:

Frequency Range	Limit					
MHz	20dB Bandwidth	Number of Channels				
902-928 MHz	Bandwidth < 250 kHz	≥ 50				
902-928 MHZ	Bandwidth ≥ 250 kHz	≥ 25				
2400-2483.5	not defined	15				
5725-5850.0 MHz	1 MHz	75				

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

FCC ID: VEJ-COMMANDER

3.7.1 Pseudorandom Frequency Hopping Sequence

The CYWUSB6935 contains a 2.4GHz radio transceiver, a GFSK modem, and a dual DSSS reconfigurable baseband. The radio and baseband are both code- and frequency-agile. Forty-nine spreading codes selected for optimal performance (Gold codes) are supported across 78 (1MHz) channels yielding a theoretical spectral capacity of 3822 channels. The CYWUSB6935 supports a range of up to 50 meters or more. The transmitter uses a DSP-based vector modulator to convert the 1-MHz chips to an accurate GFSK carrier. The receiver uses a fully integrated Frequency Modulator (FM) detector with automatic data slicer to demodulate the GFSK signal.

3.7.2 Coordination of hopping sequences to other transmitters

The CYWUSB6935 transceiver is a single-chip 2.4-GHz Direct Sequence Spread Spectrum (DSSS) Gaussian Frequency Shift Keying (GFSK) baseband modem radio that connects directly to a microcontroller via a simple serial peripheral interface.

3.7.3 System Receiver Hopping Capability

The receiver and transmitter are a single-conversion, low-Intermediate Frequency (low-IF) architecture

with fully integrated IF channel matched filters to achieve high performance in the presence of interference. An integrated Power Amplifier (PA) provides an output power control range of 30 dB in seven steps. Both the receiver and transmitter integrated Voltage Controlled Oscillator (VCO) and synthesizer have the agility to cover the complete 2.4-GHz GFSK radio transmitter ISM band. The synthesizer provides the frequency-hopping local oscillator for the transmitter and receiver. The VCO loop filter is also integrated on-chip.



Registration number: W6D21506-15057-C-1

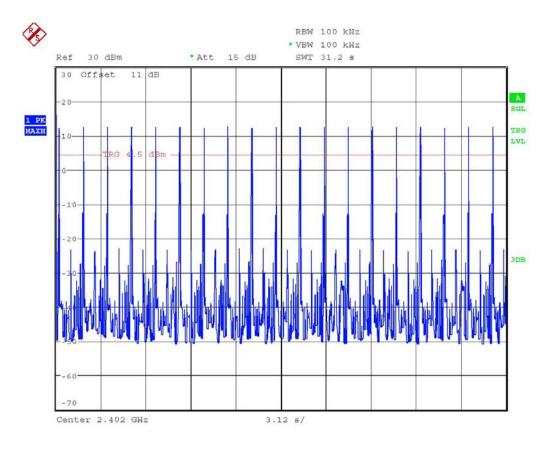
FCC ID: VEJ-COMMANDER

3.8 Time of Occupancy (Dwell Time)

Frequency hopping systems operating in the 5725-5850 MHz band shall use an average time of occupancy on any frequency not greater than 0.4 seconds within a 30 second period.

In 2400-2483.5 MHz band the average time of occupancy on any channel shall not be greater than 0.4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 902-928 MHz band: if the 20dB bandwidth of the hopping channel is less than 250 kHz, the average time of occupancy on any frequency shall not greater than 0.4 seconds within a 20 second period; if the 20dB bandwidth of the hopping channel is 250 kHz or greater, the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.



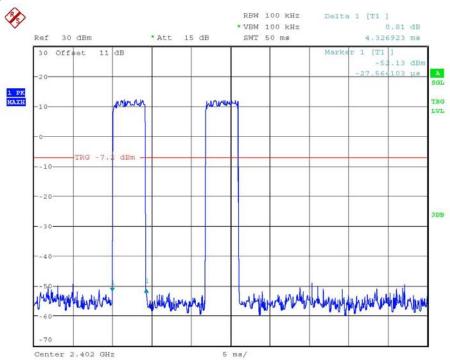
DWELL TIME 2402MHz(4.32*2*19 = 164.16ms)

Date: 2.JUN.2015 12:36:28



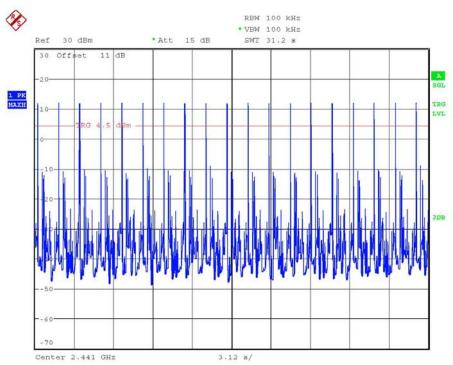
Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



DWELL TIME 2402MHz

Date: 2.JUN.2015 12:46:02



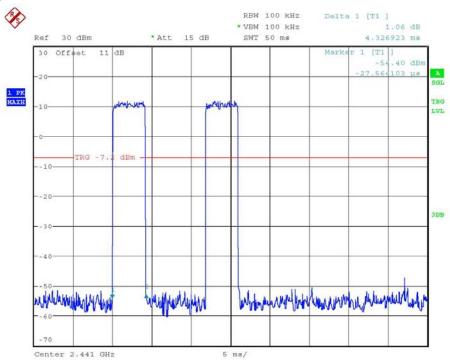
DWELL TIME 2441MHz(4.32*2*19 = 164.16ms)

Date: 2.JUN.2015 12:37:58

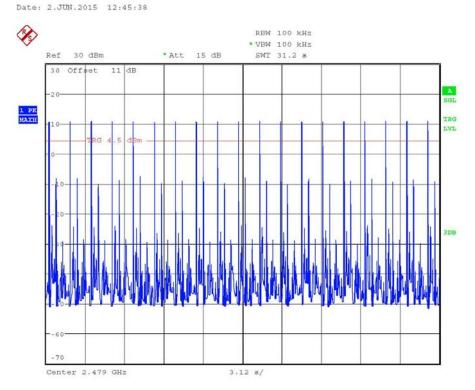


Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



DWELL TIME 2441MHz



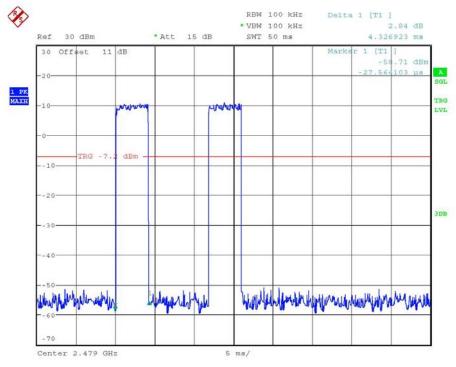
DWELL TIME 2479MHz(4.32*2*19 = 164.16ms)

Date: 2.JUN.2015 12:38:50



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



DWELL TIME 2479MHz

Date: 2.JUN.2015 12:45:14

Limits and measurement periods:

Frequency MHz	Number of channels	Measurement Periode	Limit
902 – 928	≥50	20 s	0.4 s
902 – 928	49 ≥ 25	10 s	0.4 s
2400 – 2483.5	≥ 15	0.4 s * number of used channels	0.4 s
5725- 5850	≥ 75	30 s	0.4s

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

FCC ID: VEJ-COMMANDER

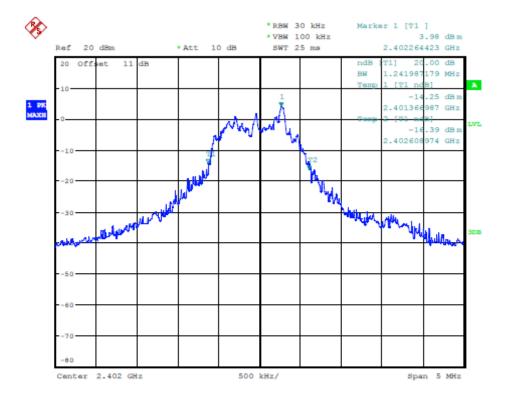
3.9 20dB Bandwidth

bandwidth of 1 MHz.

Frequency hopping systems operating in the 5725-5850 MHz bands shall use a maximum 20dB

The 20dB bandwidth is measured on the lowest, middle and highest hopping channel.

For frequency hopping systems operating in the 902-928 MHz band the maximum 20dB bandwidth of the hopping channel is 500 kHz.

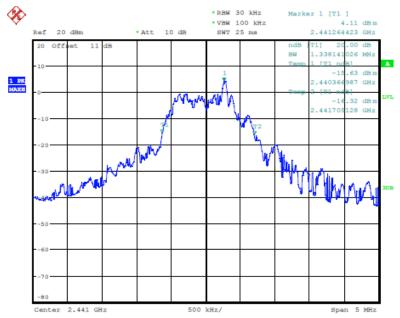


20DB BANDWIDTH 2402MHz Date: 2.JUN.2015 16:11:36

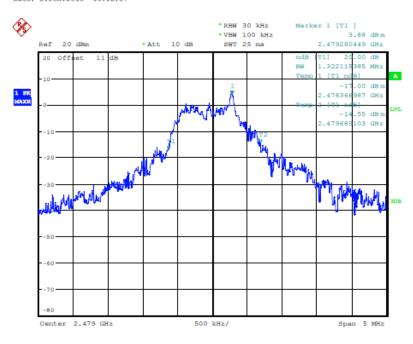


Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



20DB BANDWIDTH 2441MHz Date: 2.JUN.2015 16:12:17



20DB BANDWIDTH 2479MHz Date: 2.JUN.2015 16:13:11



FCC ID: VEJ-COMMANDER

Limits:

Frequency Range / MHz	Limit
902-928	≤ 500 kHz
2400-2483.5	not defined
5725-5850	≤ 1 MHz

Test equipment used: ETSTW-RE 055, ETSTW-RE 064

3.9.1 System Receiver Input Bandwidth

According to the 2.4GHz DSSS Radio SoC's providing the frequency-hopping function for transceiver, the bandwidth of the transceiver was determined to which it was matched the appropriate required value.



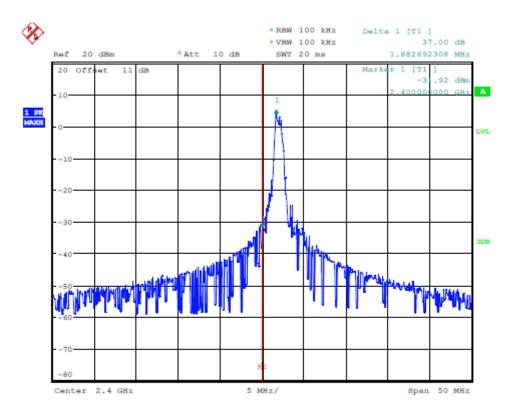
Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

3.10 Band-edge Compliance of RF Emissions

According to FCC rules part 15 subpart C §15.247(c) in any 100 kHz bandwidth outside the frequency band in which the intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in § 15.209(a) is not required.

In addition radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also with the radiated emission limits.



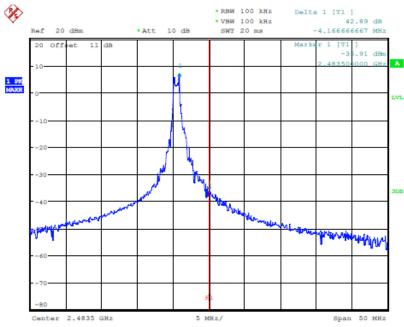
BANDEDGE 2402MHs

Date: 2.JUN.2015 16:16:11



Registration number: W6D21506-15057-C-1

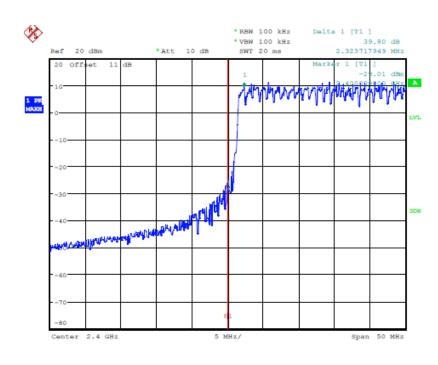
FCC ID: VEJ-COMMANDER



BANDEDGE 2479MHz

Date: 2.JUN.2015 16:15:29

Hopping



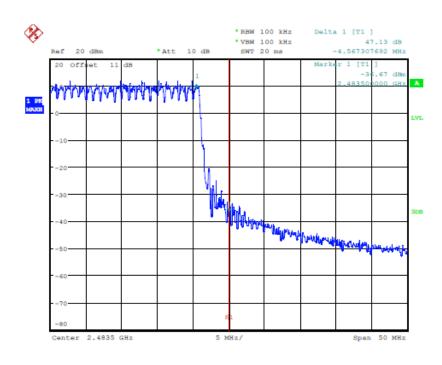
BANDEDGE 2402MHs

Date: 2.JUN.2015 17:06:48



Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



BANDEDGE 2479MHz

Date: 2.JUN.2015 17:21:10

Limits:

Frequency Range / MHz	Limit
902 –928	
2400 – 2483.5	- 20 dB
5725 - 5850	

Test equipment used: ETSTW-RE 055, ETSTW-RE 064



FCC ID: VEJ-COMMANDER

3.11 Radiated Emissions from Receiver Part

FCC Rule: 15.109

Summary table with radiated data of the test plots

Model: Commander Date: -
Mode: -- Temperature: -- °C Engineer: -
Polarization: Horizontal Humidity: -- %

Frequency (MHz)	Reading (dBuV)	Detector	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (cm)

Note

- 1. Correction Factor = Antenna factor + Cable loss Preamplifier
- 2. The formula of measured value as: Test Result = Reading + Correction Factor
- 3. Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- 4. All not in the table noted test results are more than 20 dB below the relevant limits.
- 5. Measurement uncertainty above 1GHz: $30\text{-}1000~\text{MHz} = \pm 4.32~\text{dB}$, $1\text{-}18~\text{GHz} = \pm 4.95~\text{dB}$, $18\text{-}40~\text{GHz} = \pm 2.94~\text{dB}$; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 6. See attached diagrams in appendix.

Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission	Field Strength	Field Strength
(MHz)	(microvolts/meter)	(dBmicrovolts/meter)
30 - 88	100	40.0
88 - 216	150	43.5
216 – 960	200	46.0
Above 960	500	54.0

Test equipment used: ETSTW-RE 055, ETSTW-RE 064, ETSTW-RE 003, ETSTW-RE 004, ETSTW-RE 030 ETSTW-RE 111



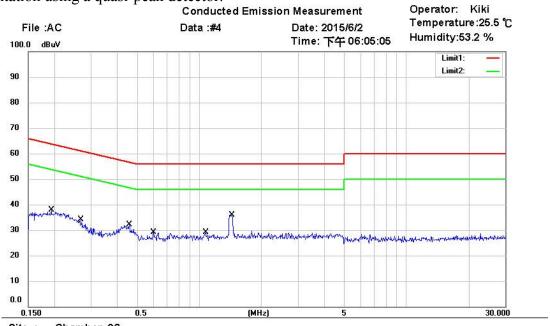
Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

3.12 Power Line Conducted Emission

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the table bellows with this provision shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminals.

This measurement was transact first with instrumentation using an average and peak detector and a 10 kHz bandwidth. If the peak detector achieves a calculated level, the measurement is repeated by an instrumentation using a quasi-peak detector.



Site: Chamber_03

Condition: FCC Part 15 Class B Conduction (QP)

Phase: Power: 120 Va.c.

EUT: W6D21506-15057

M/N: Test Mode: Note:

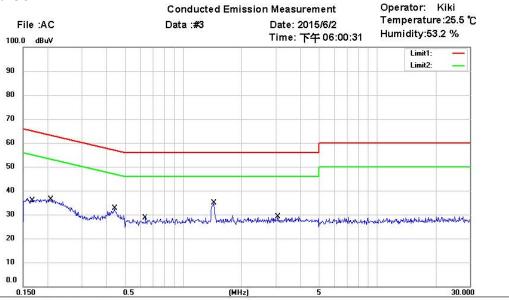
Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
7	0.1932	13.14	QP	9.76	22.90	63.90	-41.00	
	0.1932	2.40	AVG	9.76	12.16	53.90	-41.74	
	0.2678	8.40	QP	9.76	18.16	61.19	-43.03	
	0.2678	-6.72	AVG	9.76	3.04	51.19	-48.15	
9	0.4575	4.17	QP	9.77	13.94	56.74	-42.80	
	0.4575	-7.00	AVG	9.77	2.77	46.74	-43.97	
	0.5990	-1.22	QP	9.78	8.56	56.00	-47.44	
	0.5990	-6.55	AVG	9.78	3.23	46.00	-42.77	
	1.0737	10.74	QP	9.80	20.54	56.00	-35.46	
ı	1.0737	2.51	AVG	9.80	12.31	46.00	-33.69	
*	1.4360	21.83	QP	9.81	31.64	56.00	-24.36	
	1.4360	11.66	AVG	9.81	21.47	46.00	-24.53	



Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER



Site: Chamber_03

Condition: FCC Part 15 Class B Conduction (QP)

Phase:

EUT: W6D21506-15057

Power: 120 Va.c.

M/N: Test Mode: Note:

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corrected factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Comment
	0.1666	12.66	QP	9.70	22.36	65.13	-42.77	
	0.1666	1.47	AVG	9.70	11.17	55.13	-43.96	
	0.2083	12.52	QP	9.70	22.22	63.27	-41.05	
	0.2083	-2.48	AVG	9.70	7.22	53.27	-46.05	
	0.4417	5.74	QP	9.70	15.44	57.03	-41.59	
	0.4417	-6.90	AVG	9.70	2.80	47.03	-44.23	
	0.6372	-1.43	QP	9.71	8.28	56.00	-47.72	
	0.6372	-6.54	AVG	9.71	3.17	46.00	-42.83	
*	1.4360	26.74	QP	9.73	36.47	56.00	-19.53	
	1.4360	16.38	AVG	9.73	26.11	46.00	-19.89	
	3.0695	-1.94	QP	9.79	7.85	56.00	-48.15	
	3.0695	-6.86	AVG	9.79	2.93	46.00	-43.07	

Limits:

Frequency of Emission (MHz)	Conducted Limit (dBuV)					
	Quasi Peak	Average				
0.15-0.5	66 to 56	56 to 46				
0.5-5	56	46				
5-30	60	50				

Note: 1.The formula of measured value as: Test Result = Reading + Correction Factor

- 2.The Correction Factor = Cable Loss + LISN Insertion Loss + Pulse Limit Loss
- 3.Detector function in the form: PK = Peak, QP = Quasi Peak, AV = Average
- 4.All not in the table noted test results are more than 20 dB below the relevant limits.
- 5.Measurement uncertainty = ± 1.67 dB; Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 6.Up Line: QP Limit Line, Down Line: Ave Limit Line.

Test equipment used: ETSTW-CE 001, ETSTW-CE 016, ETSTW-CE 006, ETSTW-RE 064

Registration number: W6D21506-15057-C-1

FCC ID: VEJ-COMMANDER

Appendix

A. Photos

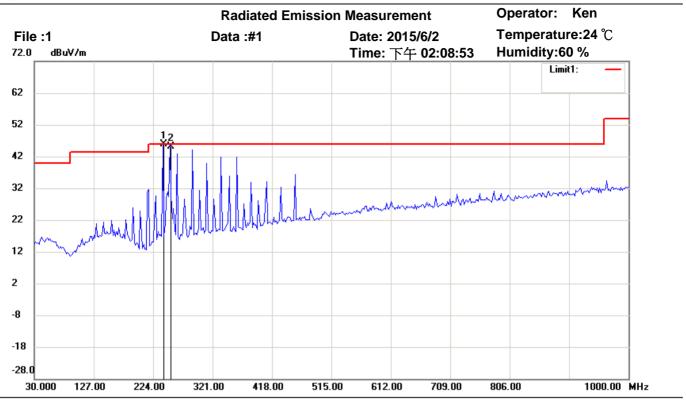
- 1. External Photos
- 2. Internal Photos
- 3. Set Up Photo of Radiated Emission

B. Measurement diagrams

Spurious Emissions radiated



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_30-1000MHz Polarization: Horizontal

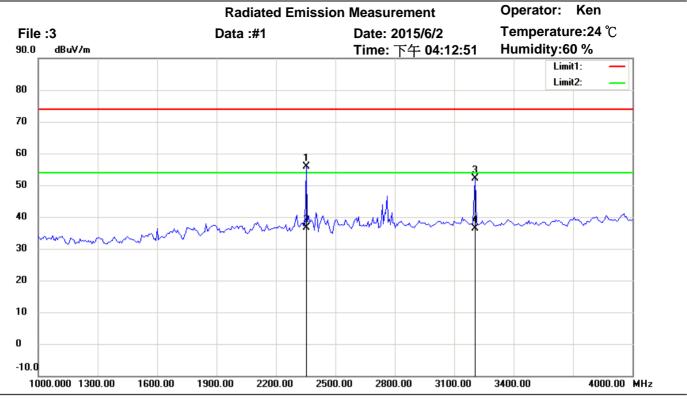
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9760	31.74	QP	14.16	45.90	46.00	100	280	-0.10	
	251.9690	30.63	QP	14.46	45.09	46.00	100	250	-0.91	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

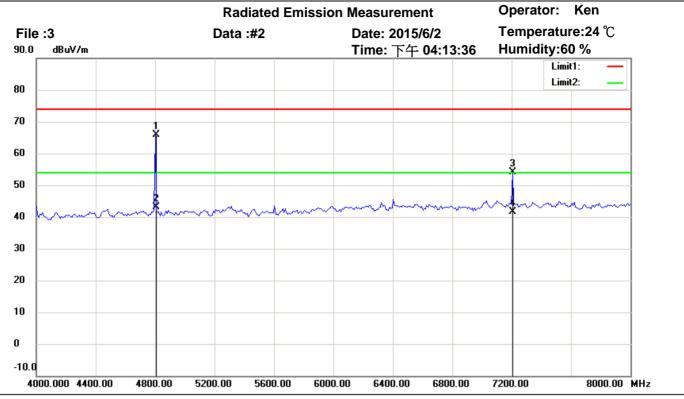
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2352.114	60.84	peak	-4.94	55.90	74.00	100	240	-18.10	
*	2352.114	41.56	AVG	-4.94	36.62	54.00	100	240	-17.38	
	3202.620	55.15	peak	-3.09	52.06	74.00	100	100	-21.94	
	3202.620	39.59	AVG	-3.09	36.50	54.00	100	100	-17.50	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

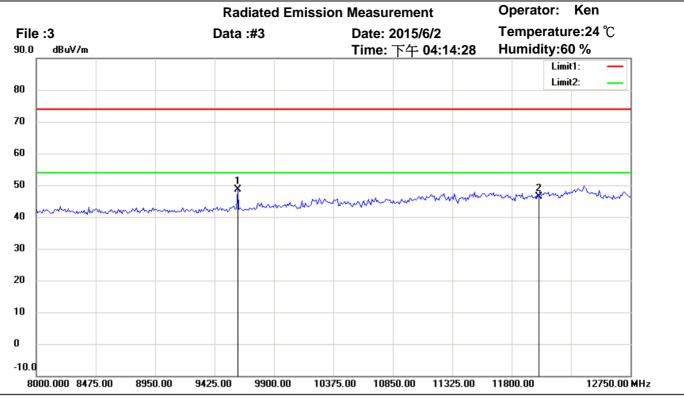
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4803.908	65.72	peak	0.28	66.00	74.00	100	133	-8.00	
	4803.908	42.77	AVG	0.28	43.05	54.00	100	133	-10.95	
	7206.125	50.38	peak	3.85	54.23	74.00	100	160	-19.77	
	7206.125	37.82	AVG	3.85	41.67	54.00	100	160	-12.33	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

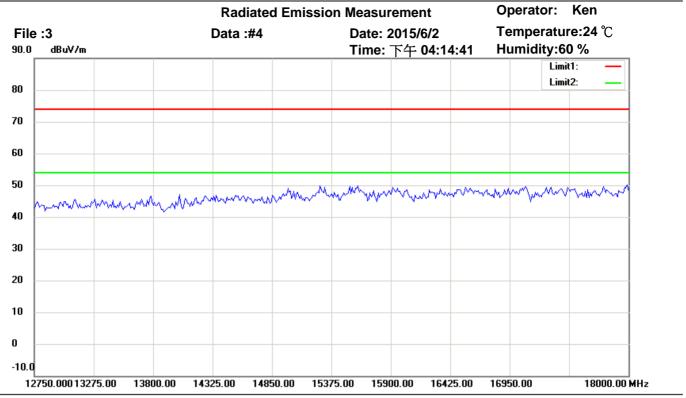
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	9608.000	40.77	peak	7.93	48.70	74.00	100	125	-25.30	
	12010.000	33.84	peak	12.65	46.49	74.00	100	160	-27.51	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

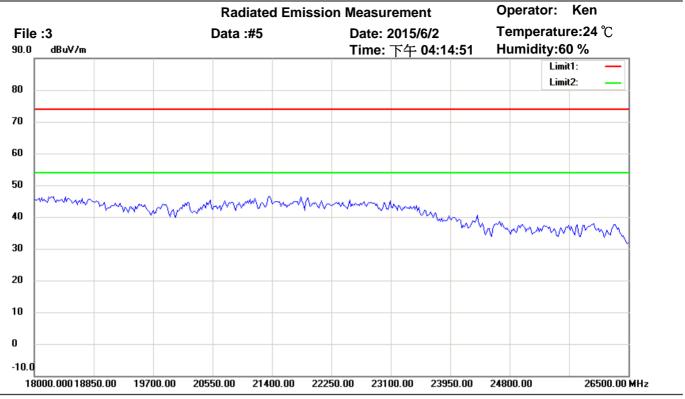
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

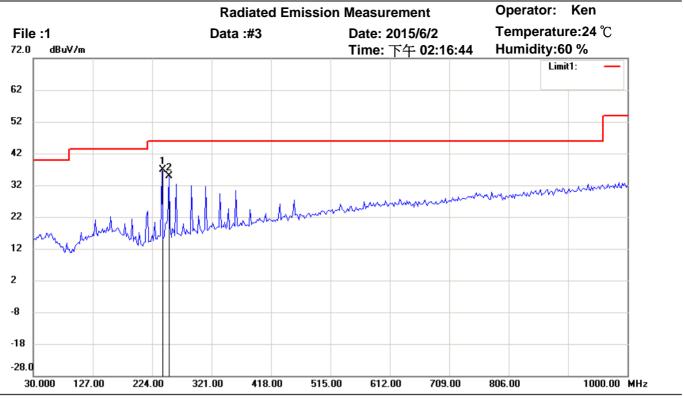
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_30-1000MHz Polarization: Vertical

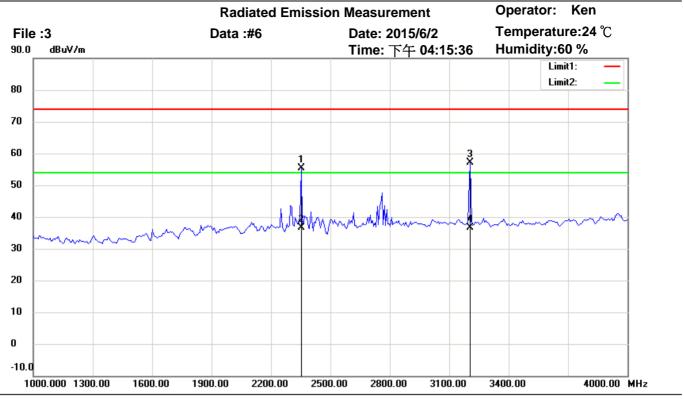
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9400	22.67	peak	14.16	36.83	46.00	100	200	-9.17	
	251.6032	20.48	peak	14.45	34.93	46.00	100	160	-11.07	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

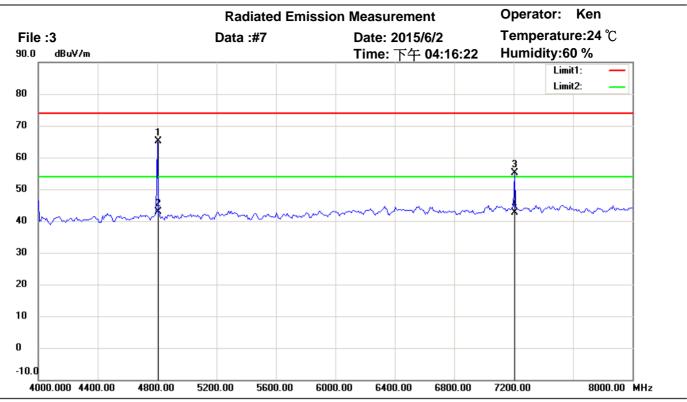
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2352.014	60.21	peak	-4.94	55.27	74.00	100	195	-18.73	
	2352.014	41.67	AVG	-4.94	36.73	54.00	100	195	-17.27	
*	3202.650	60.31	peak	-3.09	57.22	74.00	100	180	-16.78	
	3202.650	39.74	AVG	-3.09	36.65	54.00	100	180	-17.35	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

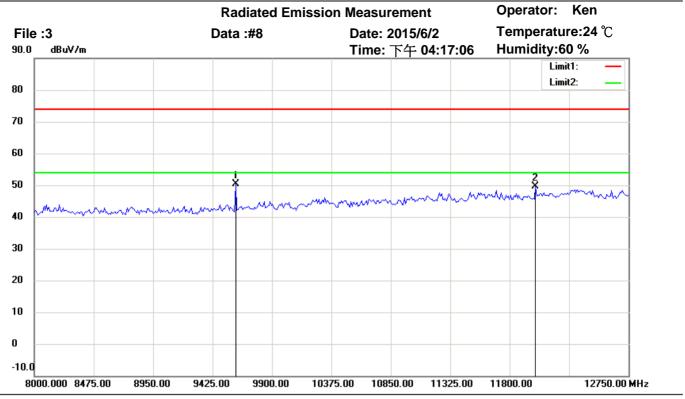
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4804.043	64.85	peak	0.28	65.13	74.00	100	5	-8.87	
	4804.043	42.64	AVG	0.28	42.92	54.00	100	5	-11.08	
	7206.055	51.28	peak	3.85	55.13	74.00	100	105	-18.87	
	7206.055	38.66	AVG	3.85	42.51	54.00	100	105	-11.49	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

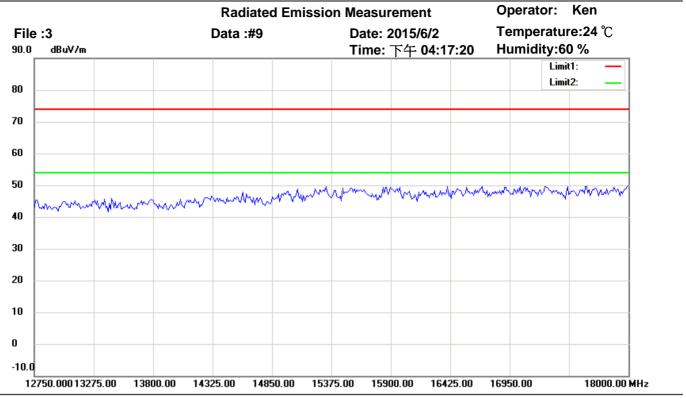
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	9608.717	42.46	peak	7.93	50.39	74.00	100	145	-23.61	
	12007.515	36.97	peak	12.62	49.59	74.00	100	120	-24.41	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

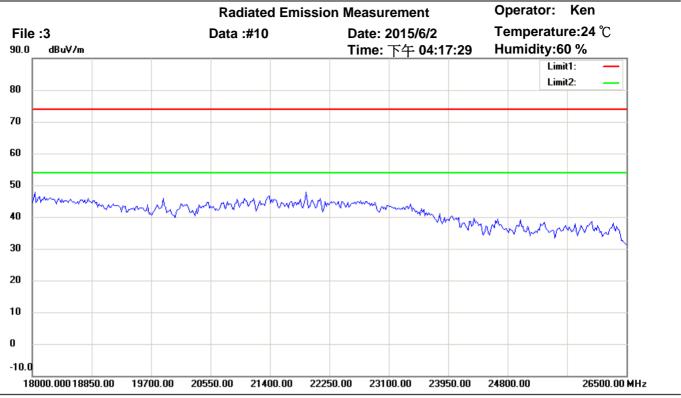
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

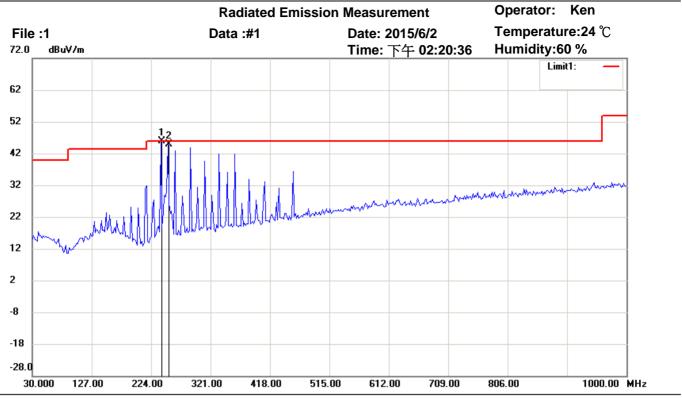
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_30-1000MHz Polarization: Horizontal

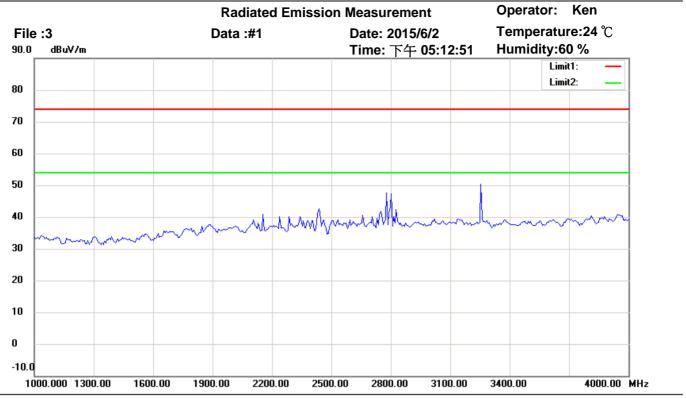
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9790	31.73	QP	14.16	45.89	46.00	100	265	-0.11	
	251.9885	30.50	QP	14.46	44.96	46.00	100	245	-1.04	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

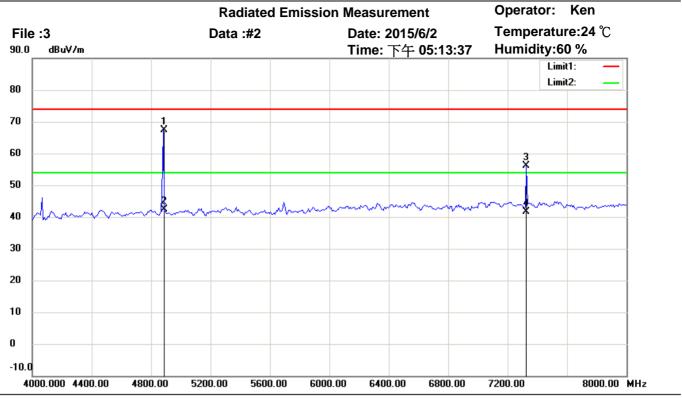
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

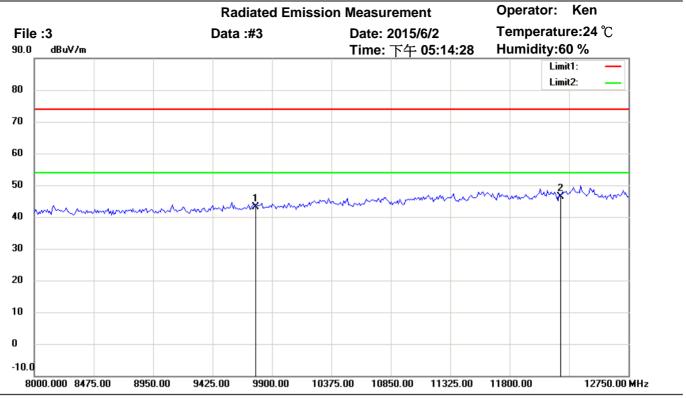
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4882.185	66.86	peak	0.48	67.34	74.00	100	120	-6.66	
	4882.185	41.98	AVG	0.48	42.46	54.00	100	120	-11.54	
	7322.905	52.50	peak	3.66	56.16	74.00	100	0	-17.84	
	7322.905	37.88	AVG	3.66	41.54	54.00	100	0	-12.46	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

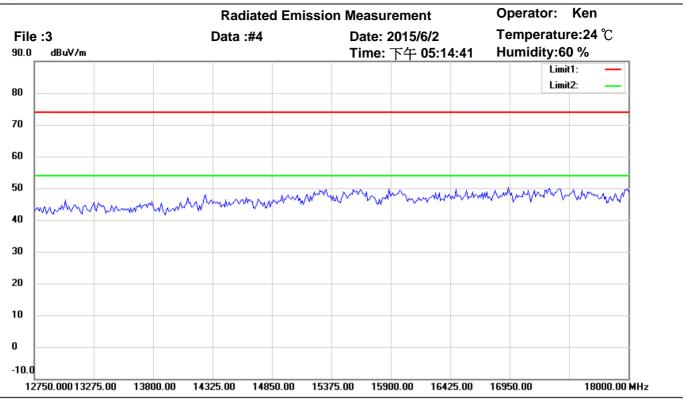
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9764.000	34.91	peak	8.33	43.24	74.00	100	150	-30.76	
*	12205.000	32.70	peak	13.75	46.45	74.00	100	200	-27.55	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

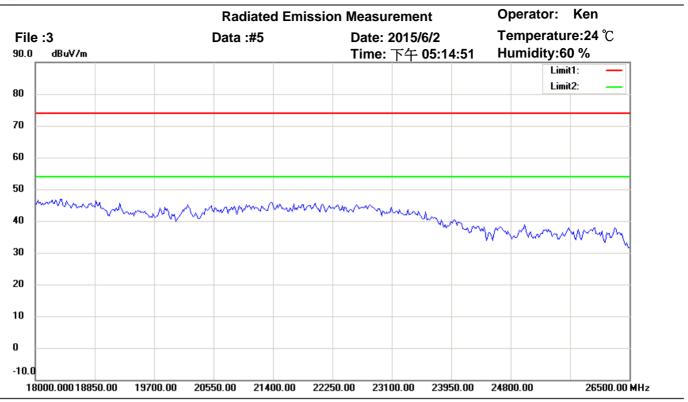
Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

Test Mode: TX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

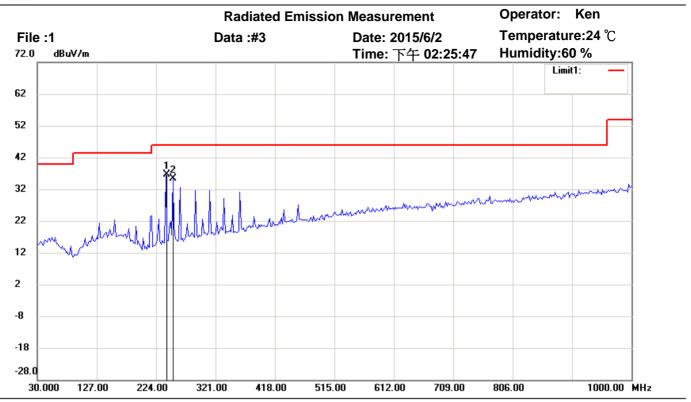
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_30-1000MHz Polarization: Vertical

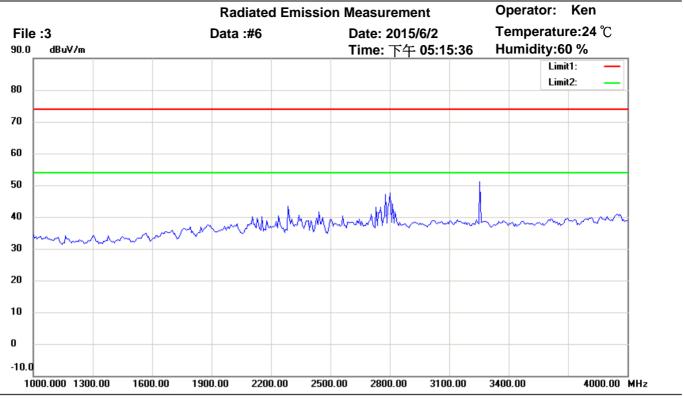
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9400	22.47	peak	14.16	36.63	46.00	100	205	-9.37	
	251.6032	20.85	peak	14.45	35.30	46.00	100	155	-10.70	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

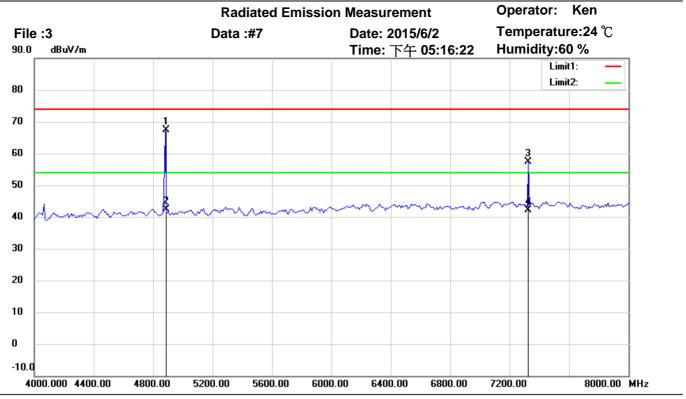
Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

Test Mode: TX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

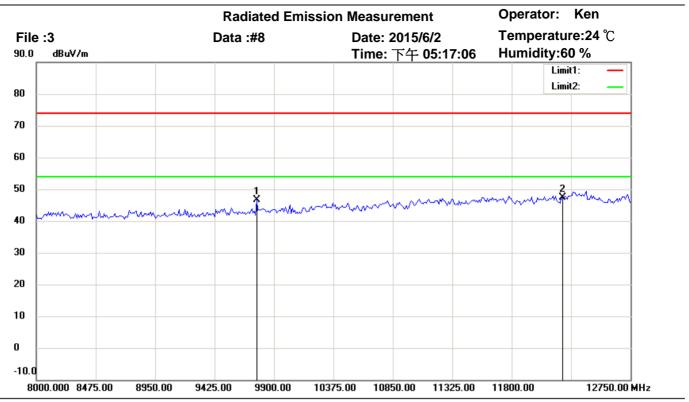
Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

Test Mode: TX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4882.100	66.80	peak	0.48	67.28	74.00	100	245	-6.72	
	4882.100	41.97	AVG	0.48	42.45	54.00	100	245	-11.55	
	7323.045	53.74	peak	3.66	57.40	74.00	100	105	-16.60	
	7323.045	38.35	AVG	3.66	42.01	54.00	100	105	-11.99	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

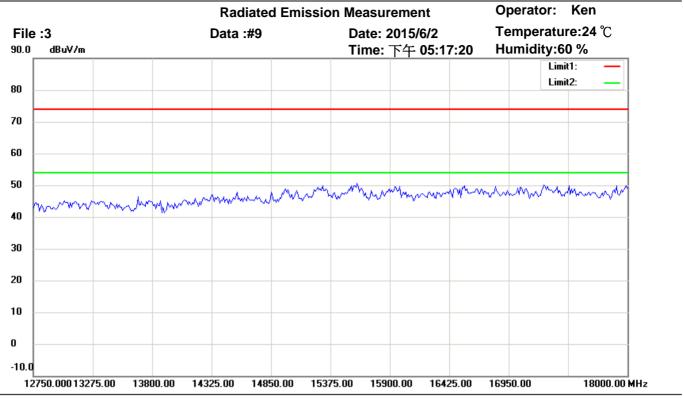
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9761.022	38.42	peak	8.30	46.72	74.00	100	120	-27.28	
*	12205.000	33.63	peak	13.75	47.38	74.00	100	135	-26.62	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

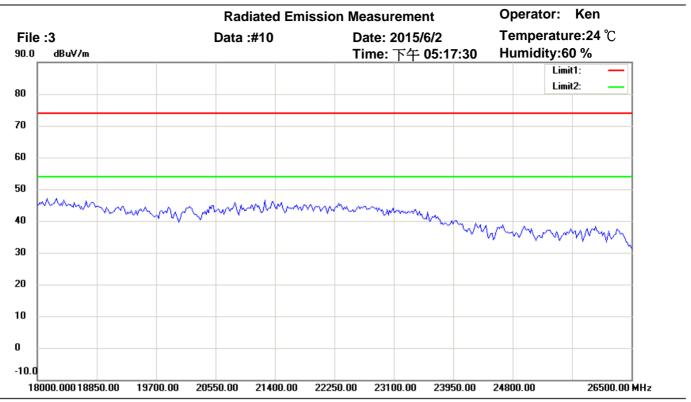
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

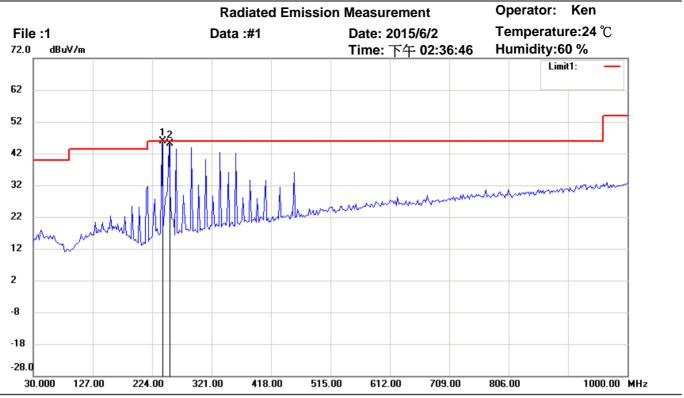
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_30-1000MHz Polarization: Horizontal

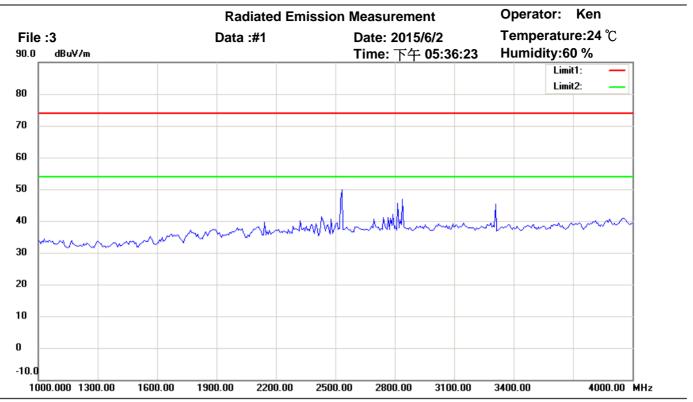
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9770	31.82	QP	14.16	45.98	46.00	100	275	-0.02	
	251.9785	30.56	QP	14.46	45.02	46.00	100	240	-0.98	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

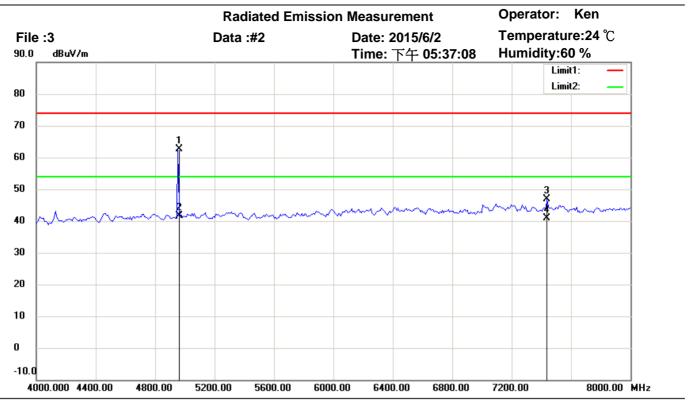
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

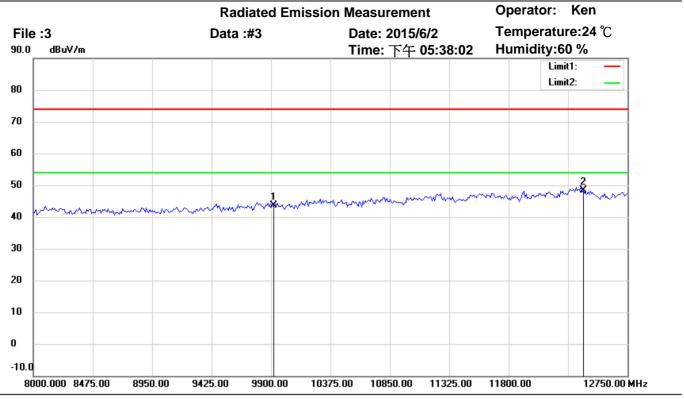
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	4957.976	61.85	peak	0.87	62.72	74.00	100	120	-11.28	
	4957.976	40.71	AVG	0.87	41.58	54.00	100	120	-12.42	
	7436.243	42.98	peak	3.93	46.91	74.00	100	145	-27.09	
	7436.243	36.99	AVG	3.93	40.92	54.00	100	145	-13.08	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

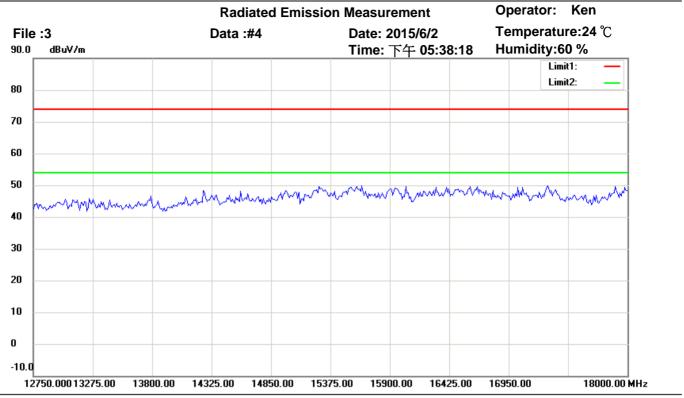
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9916.000	35.03	peak	8.50	43.53	74.00	100	170	-30.47	
*	12395.000	34.01	peak	14.46	48.47	74.00	100	135	-25.53	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

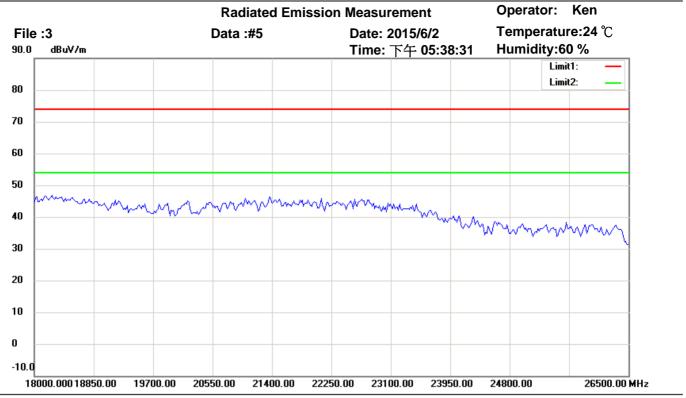
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Horizontal

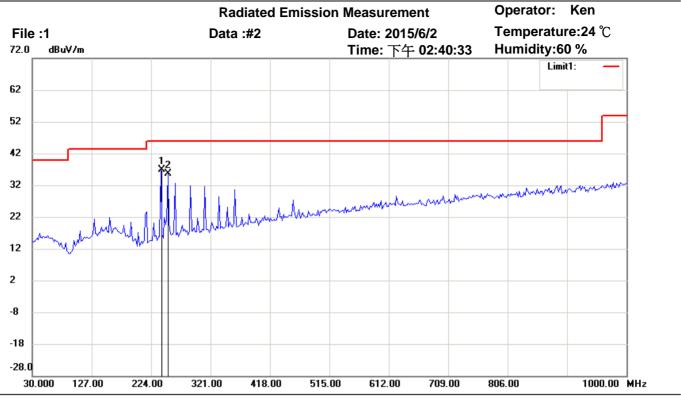
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_30-1000MHz Polarization: Vertical

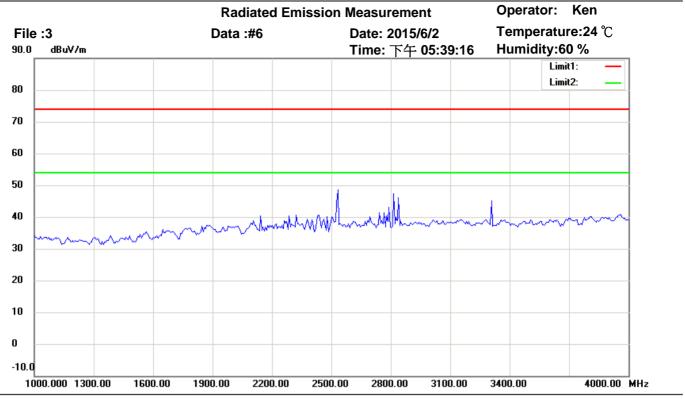
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9400	22.82	peak	14.16	36.98	46.00	100	185	-9.02	
	251.6032	21.06	peak	14.45	35.51	46.00	100	170	-10.49	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

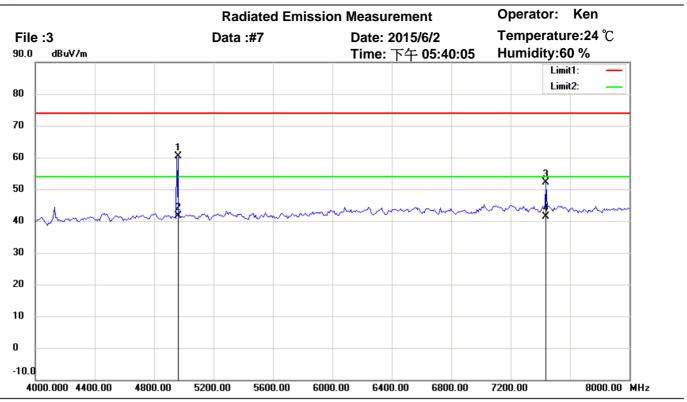
Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

Test Mode: TX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

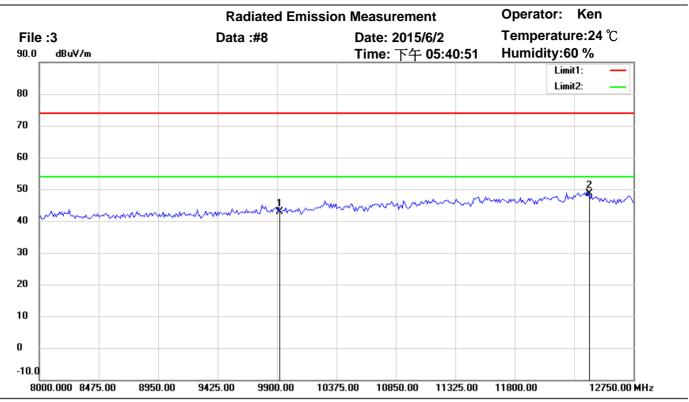
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	4958.096	59.43	peak	0.87	60.30	74.00	100	350	-13.70	
*	4958.096	40.84	AVG	0.87	41.71	54.00	100	350	-12.29	
	7436.744	48.22	peak	3.93	52.15	74.00	100	15	-21.85	
	7436.744	37.35	AVG	3.93	41.28	54.00	100	15	-12.72	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

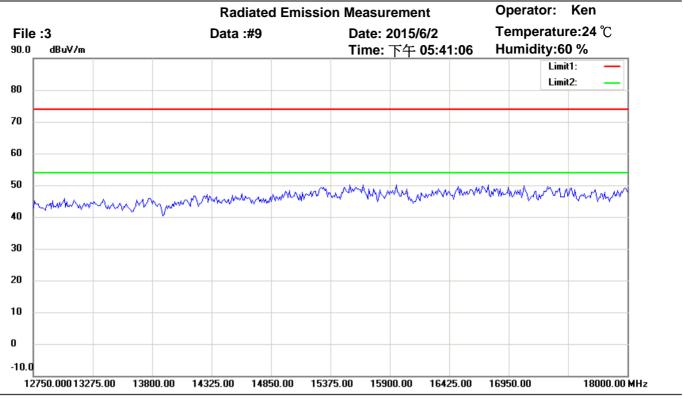
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	9916.000	34.41	peak	8.50	42.91	74.00	100	165	-31.09	
*	12395.000	34.11	peak	14.46	48.57	74.00	100	120	-25.43	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

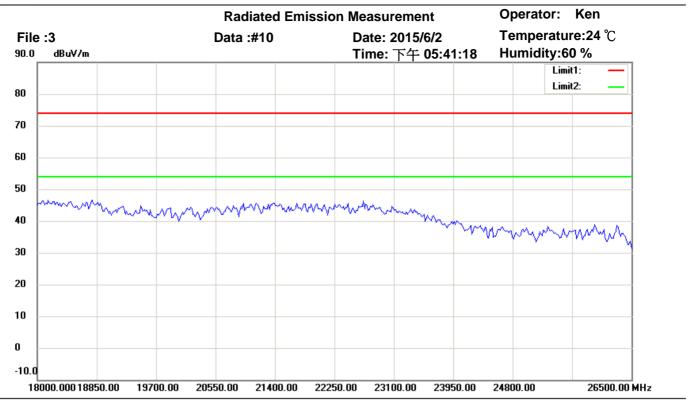
Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

Test Mode: TX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class C_Above 1GHz_PK Polarization: Vertical

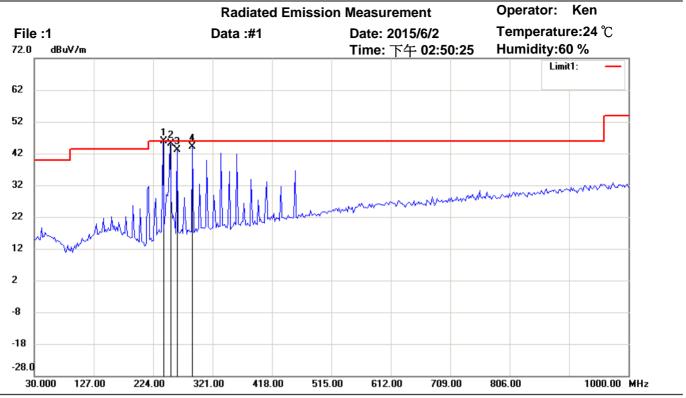
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: TX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_30-1000MHz Polarization: Horizontal

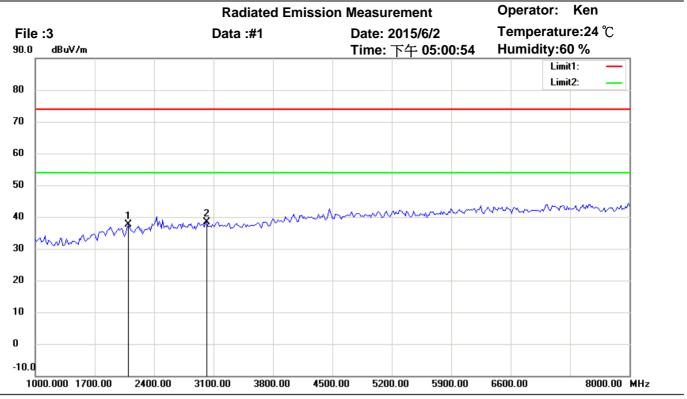
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9790	31.82	QP	14.16	45.98	46.00	100	280	-0.02	
	251.9674	30.63	QP	14.46	45.09	46.00	100	260	-0.91	
	263.2664	28.38	peak	14.79	43.17	46.00	100	270	-2.83	
	288.5371	28.33	peak	15.75	44.08	46.00	100	150	-1.92	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

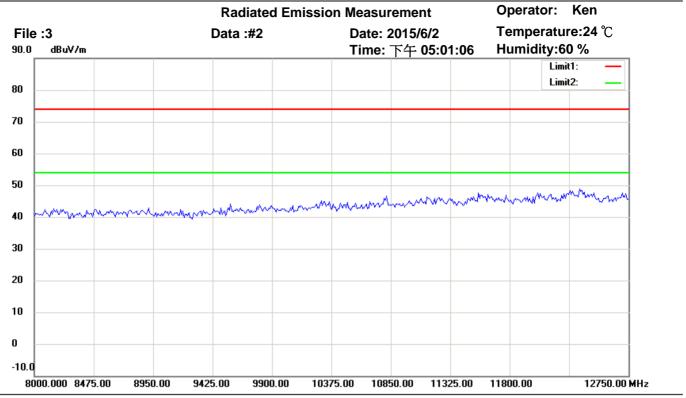
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2094.188	43.45	peak	-5.78	37.67	74.00	100	130	-36.33	
*	3020.040	41.94	peak	-3.49	38.45	74.00	100	165	-35.55	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

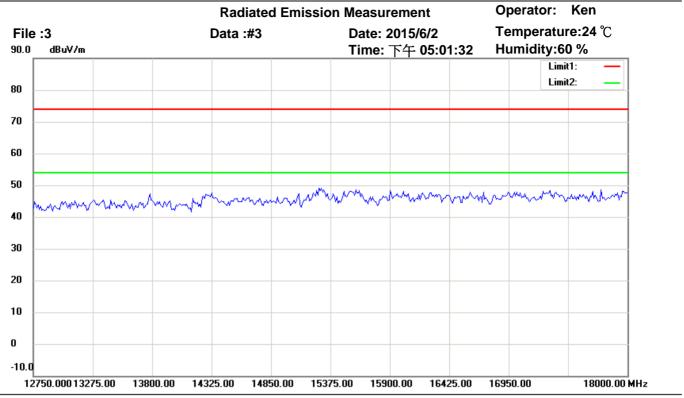
Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

Test Mode: RX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

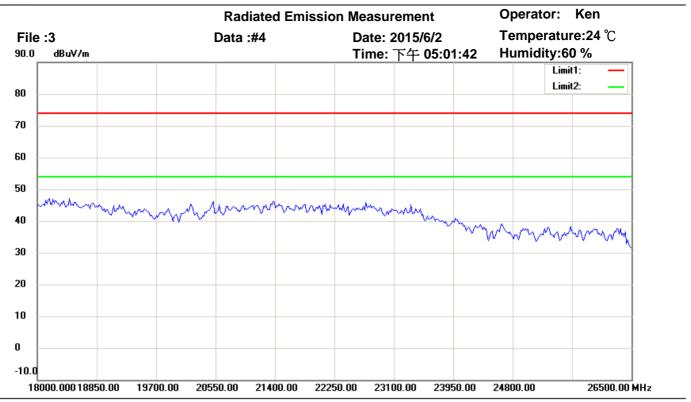
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

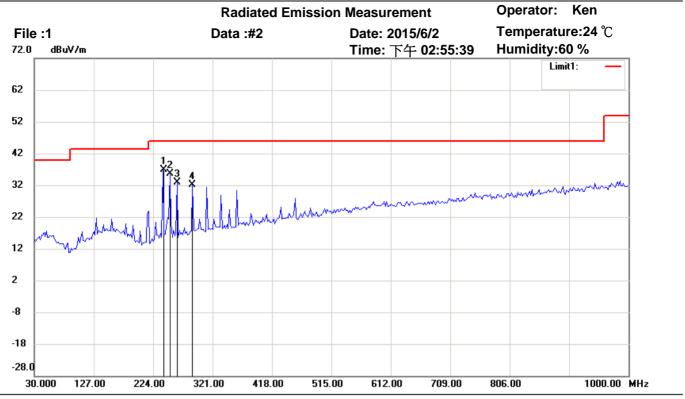
Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

Test Mode: RX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_30-1000MHz Polarization: Vertical

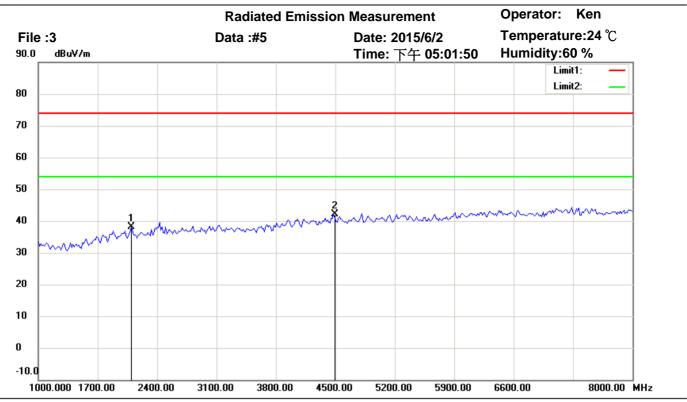
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9400	22.80	peak	14.16	36.96	46.00	100	210	-9.04	
	251.6032	21.12	peak	14.45	35.57	46.00	100	170	-10.43	
	263.2664	18.07	peak	14.79	32.86	46.00	100	225	-13.14	
	288.5371	16.31	peak	15.75	32.06	46.00	100	150	-13.94	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

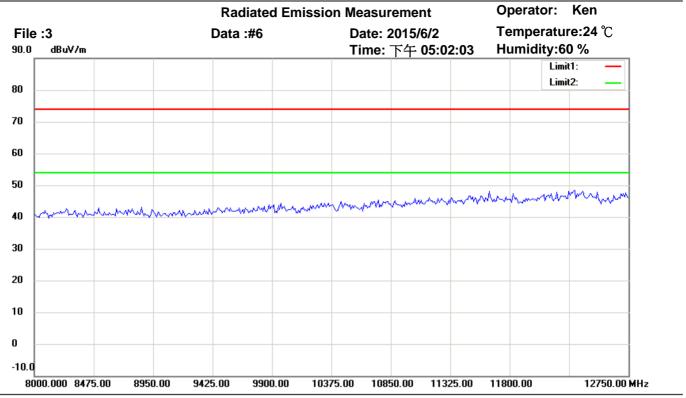
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2094.188	43.88	peak	-5.78	38.10	74.00	100	80	-35.90	
*	4478.958	42.19	peak	-0.18	42.01	74.00	100	135	-31.99	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

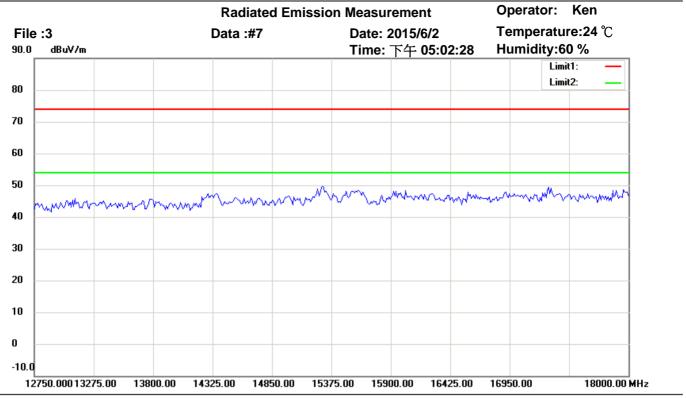
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

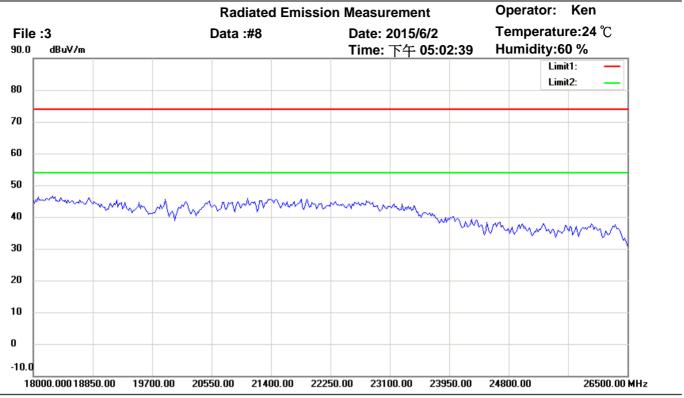
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment	1
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)		



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

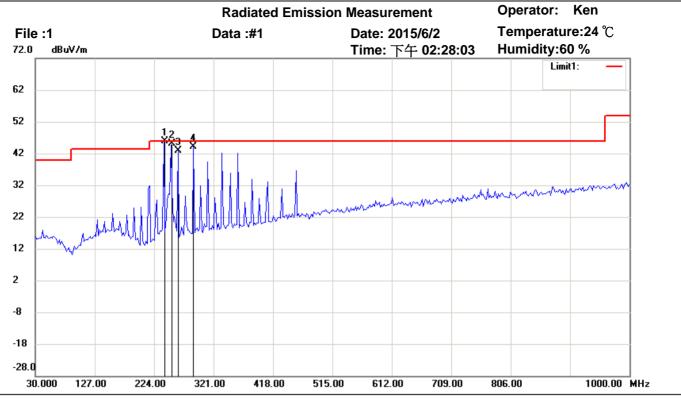
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2402MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_30-1000MHz Polarization: Horizontal

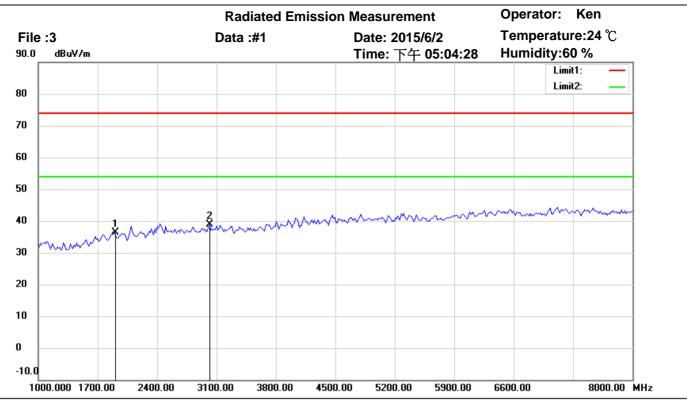
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9730	31.65	QP	14.16	45.81	46.00	100	280	-0.19	
	251.9774	30.60	QP	14.46	45.06	46.00	100	245	-0.94	
	263.2664	28.06	peak	14.79	42.85	46.00	100	240	-3.15	
	288.5371	28.26	peak	15.75	44.01	46.00	100	175	-1.99	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

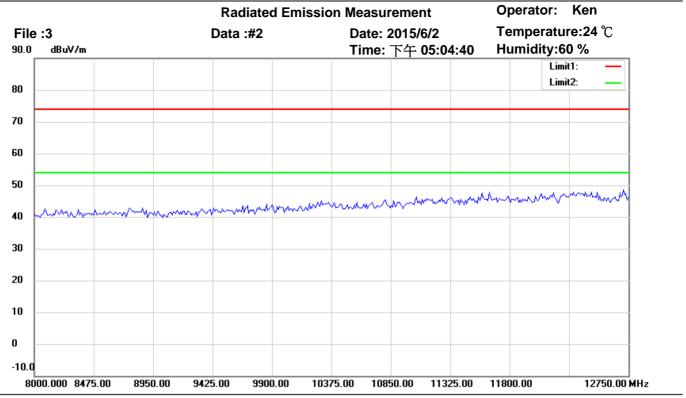
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	1897.796	42.45	peak	-6.02	36.43	74.00	100	200	-37.57	
*	3020.040	42.40	peak	-3.49	38.91	74.00	100	140	-35.09	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

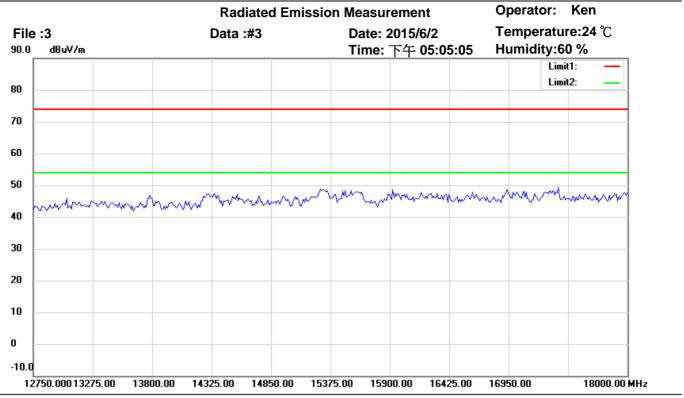
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

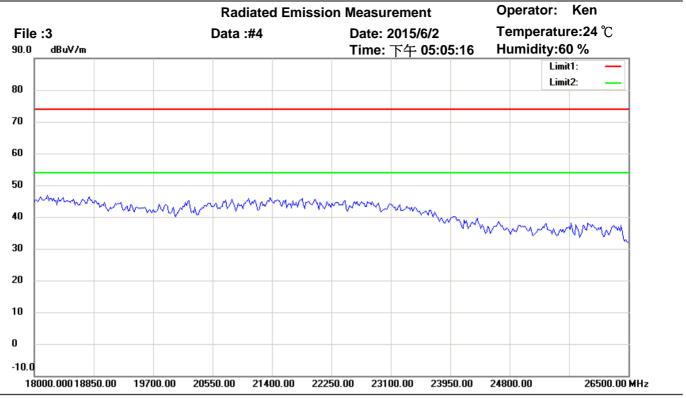
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

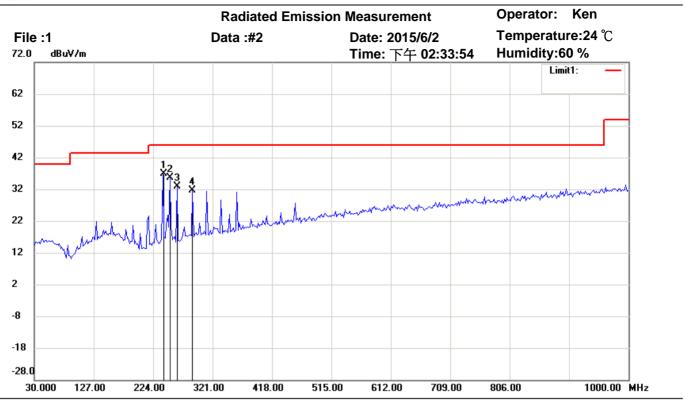
Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

Test Mode: RX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
M	· (MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_30-1000MHz Polarization: Vertical

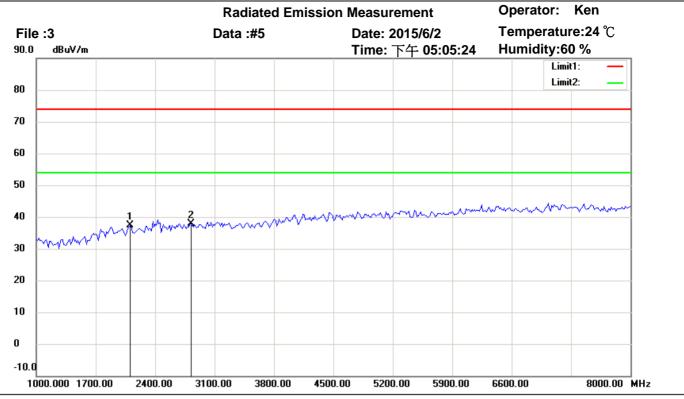
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9400	22.71	peak	14.16	36.87	46.00	100	195	-9.13	
	251.6032	21.15	peak	14.45	35.60	46.00	100	165	-10.40	
	263.2664	18.05	peak	14.79	32.84	46.00	100	200	-13.16	
	288.5371	15.89	peak	15.75	31.64	46.00	100	155	-14.36	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

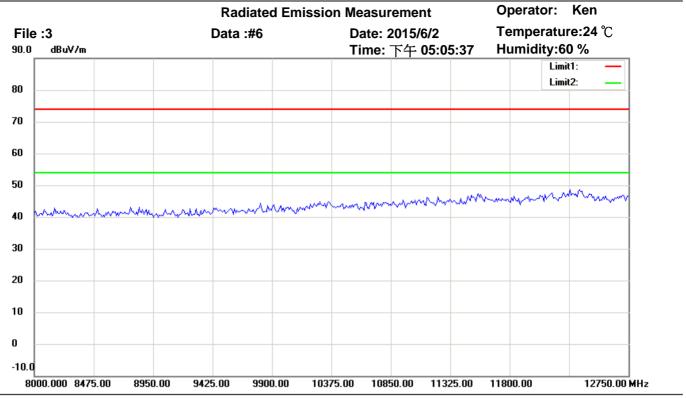
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2108.216	43.02	peak	-5.76	37.26	74.00	100	80	-36.74	
*	2823.647	41.71	peak	-3.75	37.96	74.00	100	155	-36.04	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

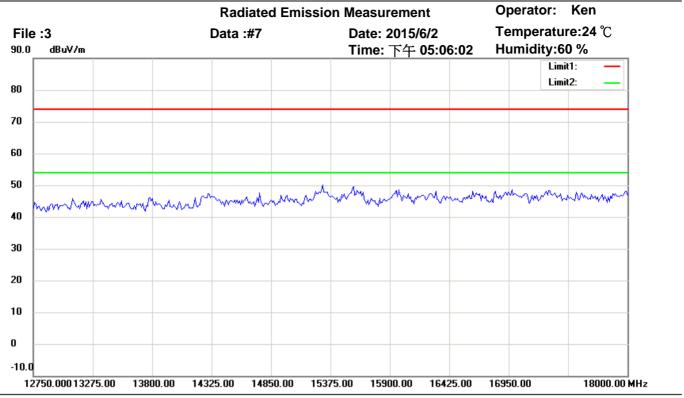
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

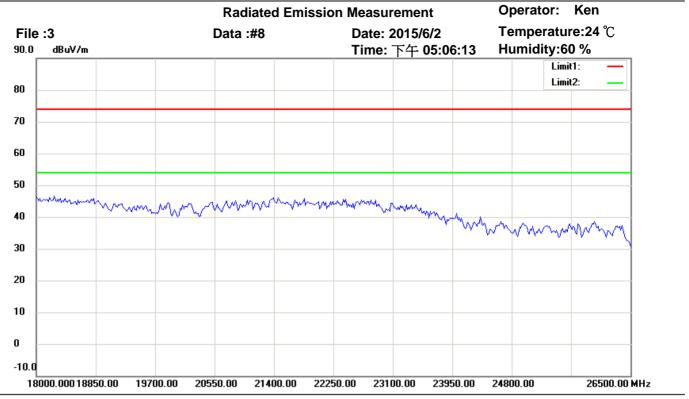
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

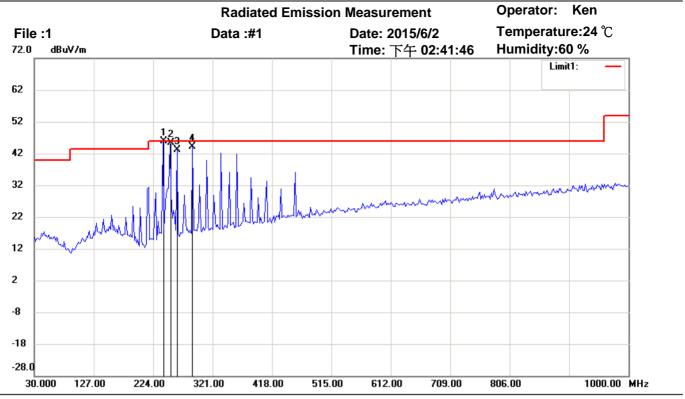
Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

Test Mode: RX 2441MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_30-1000MHz Polarization: Horizontal

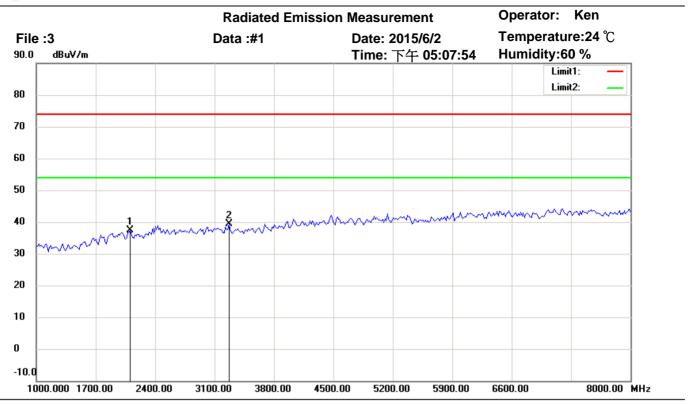
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
*	239.9730	31.71	QP	14.16	45.87	46.00	100	265	-0.13	
	251.9810	31.02	QP	14.46	45.48	46.00	100	250	-0.52	
	263.2664	28.29	peak	14.79	43.08	46.00	100	270	-2.92	
	288.5371	28.39	peak	15.75	44.14	46.00	100	155	-1.86	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

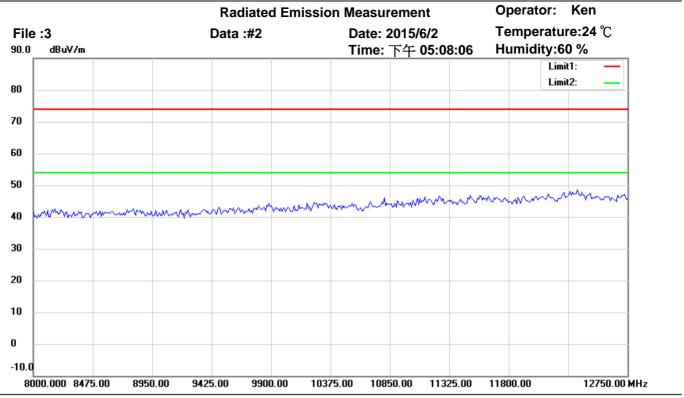
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	2108.216	43.11	peak	-5.76	37.35	74.00	100	150	-36.65	
*	3272.545	42.34	peak	-2.97	39.37	74.00	100	70	-34.63	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

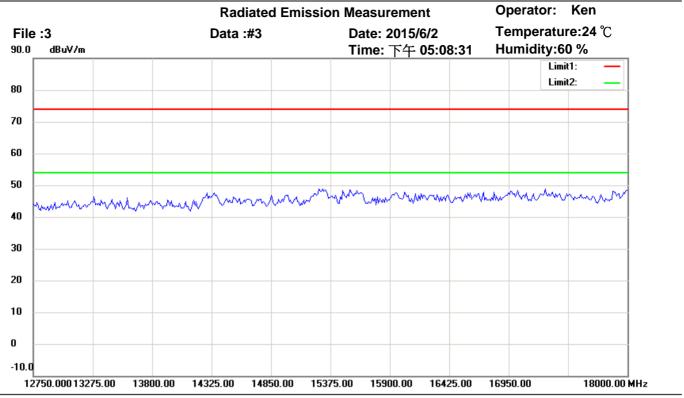
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

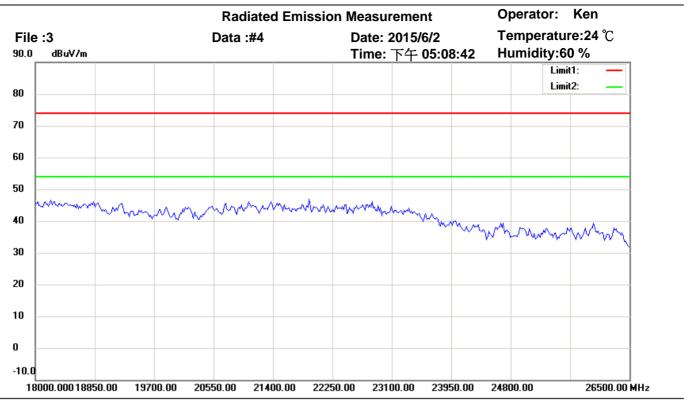
Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

Test Mode: RX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Horizontal

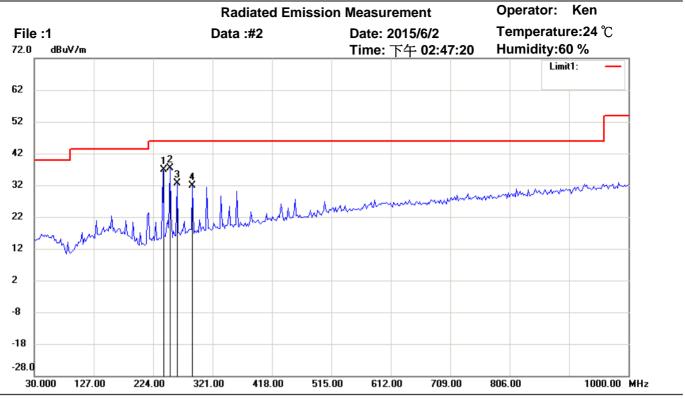
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_30-1000MHz Polarization: Vertical

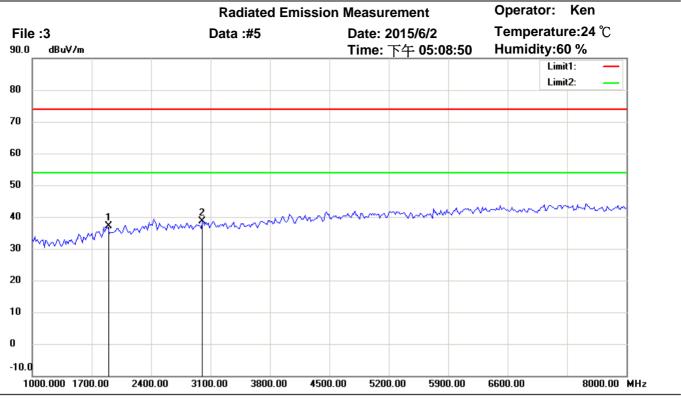
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	239.9400	22.65	peak	14.16	36.81	46.00	100	180	-9.19	
*	251.6032	22.81	peak	14.45	37.26	46.00	100	210	-8.74	
	263.2664	17.72	peak	14.79	32.51	46.00	100	175	-13.49	
	288.5371	16.13	peak	15.75	31.88	46.00	100	140	-14.12	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

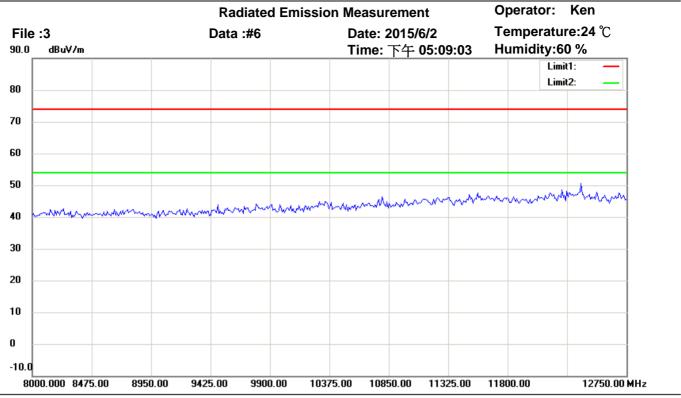
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

Mk.	Frequency (MHz)	Reading (dBuV)	Detector	Corr. factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Ant.Pos (cm)	Tab.Pos (deg.)	Margin (dB)	Comment
	1883.768	43.39	peak	-6.16	37.23	74.00	100	130	-36.77	
*	3006.012	42.16	peak	-3.54	38.62	74.00	100	175	-35.38	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

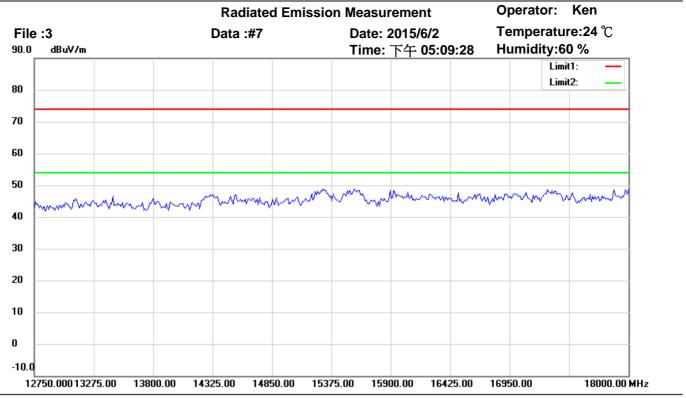
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

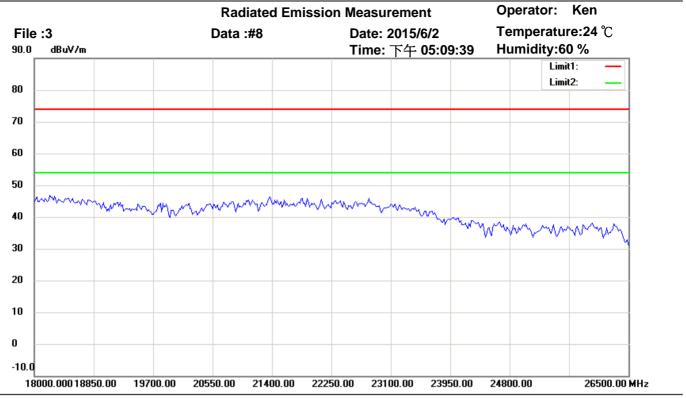
EUT: W6D21506-15057 Power: 7.2 Vd.c.
M/N: Distance: 3m

Test Mode: RX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)	



Tel:+886-2-6606-8877 Fax:+886-2-6606-8875



Site: Chamber

Condition: FCC_part 15 RE-Class B_Above 1GHz_PK Polarization: Vertical

Test Mode: RX 2479MHz

	Frequency	Reading	Detector	Corr. factor	Result	Limit	Ant.Pos	Tab.Pos	Margin	Comment	1
Mk.	(MHz)	(dBuV)		(dB/m)	(dBuV/m)	(dBuV/m)	(cm)	(deg.)	(dB)		