

Applicant: DMR Technologies

Product: Unmanned Aircraft

Model No.: D-Series 517, D-Series

Trademark: N/A

Test Standards: FCC Part 15.247

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10, FCC Part 15.247 for the

evaluation of electromagnetic compatibility

Approved By

Terry land

Terry Tang

Manager

Dated: February 28, 2025

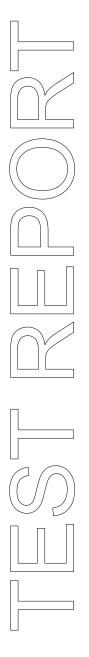
Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TESTING LABORATORIES

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# **Special Statement:**

# FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

# Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

# A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

CAB identifier: CN0033

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# **Test Report Conclusion**

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### 1.0 General Details

### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site Listed with Federal Communications commission (FCC)

Registration Number:744189 For 3m Anechoic Chamber

Site Listed with Industry Canada of Ottawa, Canada

Registration Number: IC: 5205A

For 3m Anechoic Chamber

### 1.2 Applicant Details

Applicant: DMR Technologies

Address: 2050 15th St., Detroit, MI 48216

# 1.3 Description of EUT

Product: Unmanned Aircraft
Manufacturer: DMR Technologies

Address: 2050 15th St., Detroit, MI 48216

Trademark: N/A

Model Number: D-Series 517
Additional Model Number: D-Series
Hardware Version: R1000\_V4.2
Software Version: V1.4.6

Serial No.: 2110FD51700000000002

Rating: DC45.6V

Battery: DC45.6V, 14000mAh Li-ion battery

Type of Modulation IEEE 802.11b: DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20, HT40): OFDM (64QAM, 16QAM, QPSK, BPSK)

Frequency range IEEE 802.11b/g/n (HT20): 2412-2462MHz;

IEEE 802.11n (HT40): 2422-2452MHz

Channel Spacing 5MHz for IEEE 802.11b/g/n (HT20, HT40)

Air Data Rate IEEE 802.11b: 11, 5.5, 2, 1 Mbps

IEEE 802.11g: 54, 48,36, 24, 18, 12, 9, 6 Mbps

IEEE 802.11n HT20/HT40: mcs0-mcs7

Frequency Selection By software

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Channel Number IEEE 802.11b/g/n (HT20): 11 Channels;

IEEE 802.11n (HT40): 7 Channels;

Antenna: PCB Antenna used. The gain of the antennas is 4.54dBi maximum. (Get from the

antenna specification provided the applicant)

1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2025-01-22 to 2025-02-28

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

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2.0 Test Equipment						
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date	
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11	
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11	
LISN	R&S	EZH3-Z5	100253	2024-07-12	2025-07-11	
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2024-07-12	2025-07-11	
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17	
Spectrum	R&S	FSIQ26	100292	2024-07-12	2025-07-11	
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17	
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2025-07-17	
Power meter	Anritsu	ML2487A	6K00003613	2024-07-12	2025-07-11	
Power sensor	Anritsu	MA2491A	32263	2024-07-12	2025-07-11	
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17	
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25	
EMI Test Receiver	RS	ESVB	826156/011	2024-07-12	2025-07-11	
EMI Test Receiver	RS	ESCS 30	834115/006	2024-07-12	2025-07-11	
Spectrum	HP/Agilent	E4407B	MY50441392	2024-07-12	2025-07-11	
Spectrum	RS	FSP	1164.4391.38	2024-07-12	2025-07-11	
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	1	2024-07-12	2025-07-11	
RF Cable	Zhengdi	7m	1	2024-07-12	2025-07-11	
Pre-Amplifier	Schwarebeck	BBV9743	#218	2024-07-12	2025-07-11	
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2024-07-12	2025-07-11	
LISN	SCHAFFNER	NNB42	00012	2024-07-12	2025-07-11	
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11	
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11	

# 2.2 Automation Test Software

### For Conducted Emission Test

Name	Version	
EZ-EMC	Ver.EMC-CON 3A1.1	

# For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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### 3. DESCRIPTION OF TEST MODES

### IEEE 802.11b, 802.11g, 802.11n (HT20) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2412
Middle	2437
High	2462

IEEE 802.11b mode: 1Mbps data rate (worst case) was chosen for full testing. IEEE 802.11g mode: 6Mbps data rate (worst case) was chosen for full testing. IEEE 802.11n (HT20) mode: mcs0 (worst case) were chosen for full testing;

### IEEE 802.11n (HT40) mode

The EUT had been tested under operating condition. There are three channels have been tested as following:

Channel	Frequency (MHz)
Low	2422
Middle	2437
High	2452

IEEE 802.11n (HT40) mode: mcs0 data rate (worst case) were chosen for full testing

Note: 1. During the test, the duty cycle was set up to >98%

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#### 3.0 **Technical Details**

#### 3.1 **Summary of test results**

Standard	Test Type	Result	Notes
CC Part 15, Paragraph15.203	Antenna Requirement	Pass	Complies
CCC Part 15, Paragraph15.207	<b>Conducted Emission Test</b>	N/A	N/A
FCC Part 15 Subpart C Paragraph 15.247(a)(2) Limit	Spectrum bandwidth of a Orthogonal Frequency Division Multiplex System Limit: 6dB bandwidth>500kHz	Pass	Complies
FCC Part 15, Paragraph 15.247(b)	Maximum peak output power Limit: max. 30dBm	Pass	Complies
FCC Part 15, Paragraph 15.109,15.205 & 15.209	Transmitter Radiated Emission Limit: Table 15.209	Pass	Complies
FCC Part 15, Paragraph 15.247(e)	Power Spectral Density Limit: max. 8dBm	Pass	Complies
FCC Part 15, Paragraph 15.247(d)	Out of Band Emission and Restricted Band Radiation Limit: 20dB less than peak value of fundamental frequency Restricted band limit: Table 15.209	Pass	Complies

#### 3.2 **Test Standards**

FCC Part 15 Subpart & Subpart C, Paragraph 15.247

#### 4.0 **EUT Modification**

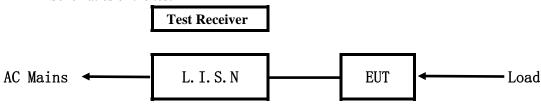
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### **5.0** Power Line Conducted Emission Test

### 5.1 Schematics of the test



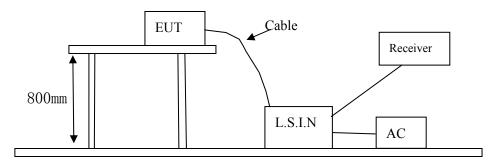
EUT: Equipment Under Test

### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: N/A

Block diagram of Test setup



### 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

### A. EUT

Device	Manufacturer	Model	FCC ID
Unmanned Aircraft	DMR Technologies	D-Series 517, D-Series	2BM3J-D517

## B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

# C. Peripherals

Device	Manufacturer	Model	FCC ID/DOC	Cable
N/A				

# 5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013.

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- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition
- 5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB μ V)		
(MHz)	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	56.0	46.0	
5.00 ~ 30.00	6 .0	50.0	

Notes:

- 1. \*Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results N/A

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

Note: EUT not directly or in-directly connected to the AC power source. so this test item not applicable.

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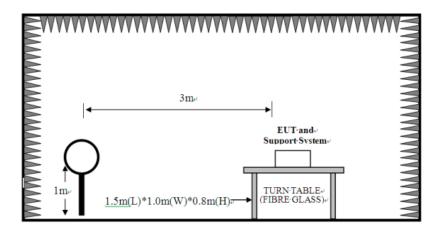


### 6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are Quasi-peak values with a resolution bandwidth of 120 kHz. F For measurement above 1GHz, peak values with RBW=1MHz VBW=3MHz and PK detector. AV value with RBW=1MHz, VBW=3MHz and RMS detector. Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization: Vertical polarization and Horizontal polarization.

### **Block diagram of Test setup**

For radiated emissions from 9kHz to 30MHz



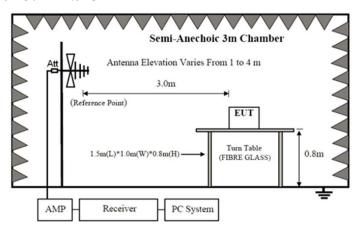
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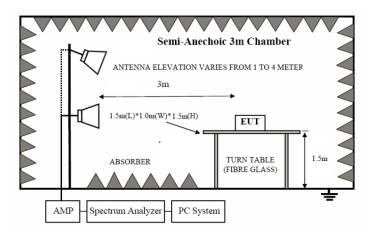
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of The EUT
  Same as section 5.3 of this report
- 6.3 EUT Operating Condition

  Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

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# Frequencies in restricted band are complied to limit on Paragraph 15.209

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
0.009-0.049	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the higher limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. Worse case were recorded in the test report. 802.11g was the worst case.

Note: Only the worst case was recorded in the test report.

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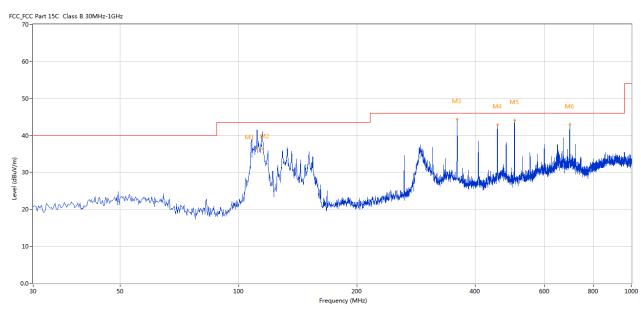


# Test result General Radiated Emission Data and Harmonics Radiated Emission Data

## Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: **Keep Transmitting** 

**Results: Pass** 



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1*	111.217	36.39	-5.99	43.5	7.11	QP	352.00	100	Horizontal	Pass
2*	115.339	36.43	-6.83	43.5	7.07	QP	358.00	100	Horizontal	Pass
3*	359.960	44.26	-1.86	46.0	1.74	QP	119.00	100	Horizontal	Pass
4*	455.966	42.86	-0.98	46.0	3.14	QP	299.00	100	Horizontal	Pass
5*	503.969	44.02	-1.05	46.0	1.98	QP	299.00	100	Horizontal	Pass
6*	696.223	42.90	2.42	46.0	3.10	QP	205.00	100	Horizontal	Pass

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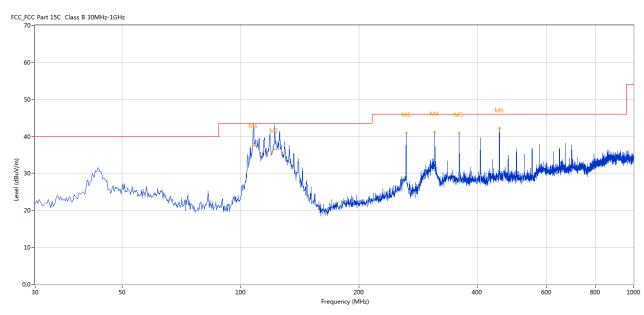


# Test result General Radiated Emission Data and Harmonics Radiated Emission Data

## Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: **Keep Transmitting** 

**Results: Pass** 



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1*	107.823	37.85	-6.02	43.5	5.65	QP	234.00	100	Vertical	Pass
2*	122.127	36.47	-7.95	43.5	7.03	QP	341.00	100	Vertical	Pass
3*	263.954	40.88	-5.22	46.0	5.12	QP	326.00	100	Vertical	Pass
4*	311.957	41.14	-3.72	46.0	4.86	QP	335.00	100	Vertical	Pass
5*	359.960	40.86	-1.86	46.0	5.14	QP	128.00	100	Vertical	Pass
6*	455.966	42.15	-0.98	46.0	3.85	QP	158.00	100	Vertical	Pass

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# Operation Mode: Transmitting under CH01 for 802.11b mode

Frequency (MHz)	Level@3m (dB μ V/m)	Antenna Polarity	Limit@3m (dB µ V/m)
4824.00	62.2(PK) / 46.5 (AV)	Н	74(Peak)/ 54(AV)
4824.00	57.5 (PK) / 41.8 (AV)	V	74(Peak)/ 54(AV)
7236.00	-	H/V	74(Peak)/ 54(AV)
9648.00		H/V	74(Peak)/ 54(AV)
12060		H/V	74(Peak)/ 54(AV)
14472		H V	74(Peak)/ 54(AV)
16884	-	H/V	74(Peak)/ 54(AV)
19296		H/V	74(Peak)/ 54(AV)
21708		H/V	74(Peak)/ 54(AV)
24120		H/V	74(Peak)/ 54(AV)

# Operation Mode: Transmitting under CH06 for 802.11b mode

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \( \mu \)V/m)
4874.00	61.3 (PK)/ 45.9 (AV)	Н	74(Peak)/ 54(AV)
4874.00	56.6 (PK)/ 41.4 (AV)	V	74(Peak)/ 54(AV)
7311.00	-	H/V	74(Peak)/ 54(AV)
9748.00	-	H/V	74(Peak)/ 54(AV)
12185		H/V	74(Peak)/ 54(AV)
14622	1	H/V	74(Peak)/ 54(AV)
17059	-	H/V	74(Peak)/ 54(AV)
19496		H/V	74(Peak)/ 54(AV)
21933		H/V	74(Peak)/ 54(AV)
24370		H/V	74(Peak)/ 54(AV)

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# Operation Mode: Transmitting under CH11 for 802.11b mode

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \u03b4 V/m)
4924	63.3 (PK) / 47.2 (AV)	Н	74(Peak)/ 54(AV)
4924	59.5(PK) / 43.3(AV)	V	74(Peak)/ 54(AV)
7368		H/V	74(Peak)/ 54(AV)
9848		H/V	74(Peak)/ 54(AV)
12310		H/V	74(Peak)/ 54(AV)
14772		H/V	74(Peak)/ 54(AV)
17234		H/V	74(Peak)/ 54(AV)
19 96		H/V	74(Peak)/ 54(AV)
22158		H/V	74(Peak)/ 54(AV)
24620		H/V	74(Peak)/ 54(AV)

Note: 1. Result Level = Reading + Factor

2. Factor= AF + Cable Loss- Preamp

3. Margin = Result– Limit

4. For radiated Emissions from 18-25GHz and below 30MHz, it is only the floor noise and less than the limit for more than 20dB. No necessary to take down.

5. Note: the final peak measurement results less than the AV limit. No necessary to take down the final AV measurement result

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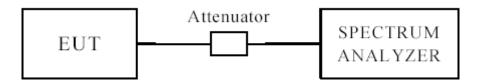
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# 7.0 6dB Bandwidth Measurement

# 7.1 Test Setup



### 7.2 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is >500 kHz

### 7.3 Test Procedure

- 1. Set resolution bandwidth (RBW) = 100 kHz
- 2. Set the video bandwidth  $(VBW) \ge 3 \times RBW$ .
- 3. Detector = Peak.
- 4. Trace mode =  $\max$  hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.
- 7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

### 7.4 Test Result

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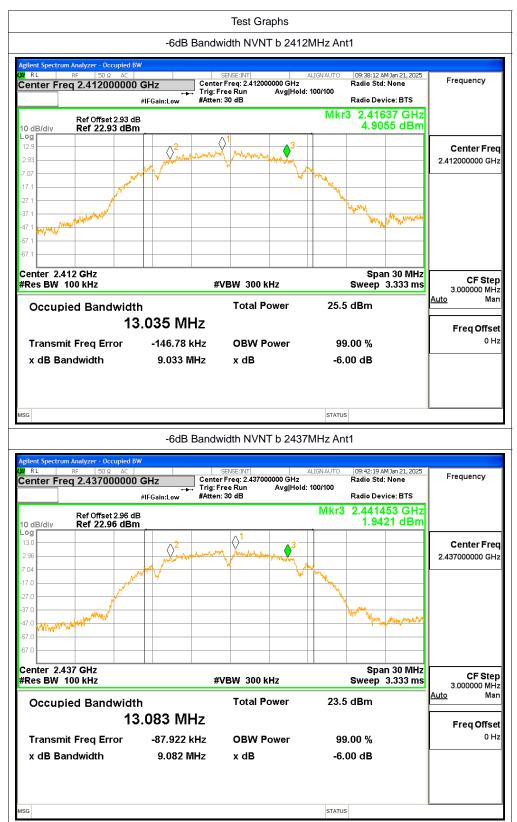
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# 6dB Occupied Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
		2412		9.033	0.5	Pass
	b	2437		9.082	0.5	Pass
		2462		9.007	0.5	Pass
		2412		16.05	0.5	Pass
	g	2437		16.32	0.5	Pass
NVNT		2462	A m+4	16.08	0.5	Pass
INVINI		2412	Ant1	17.31	0.5	Pass
	n20	2437		17.55	0.5	Pass
		2462		17.54	0.5	Pass
		2422		35.47	0.5	Pass
	n40	2437		36.05	0.5	Pass
		2452		33.84	0.5	Pass

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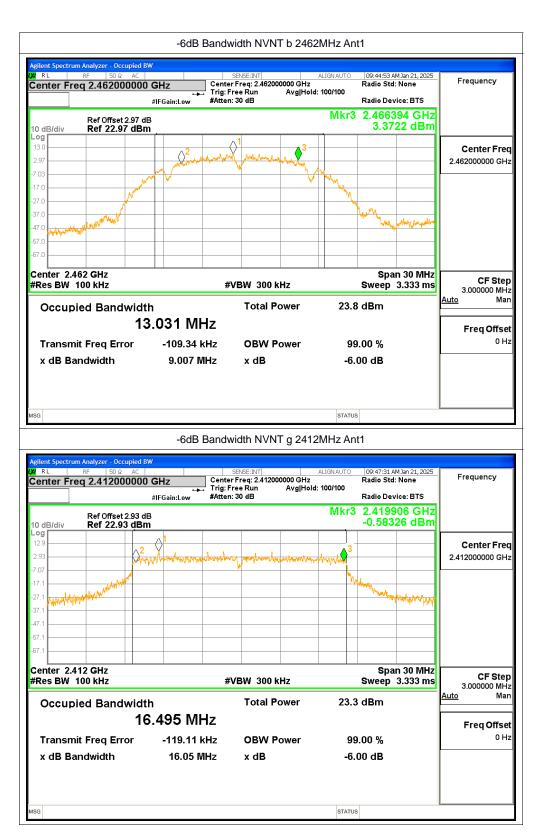
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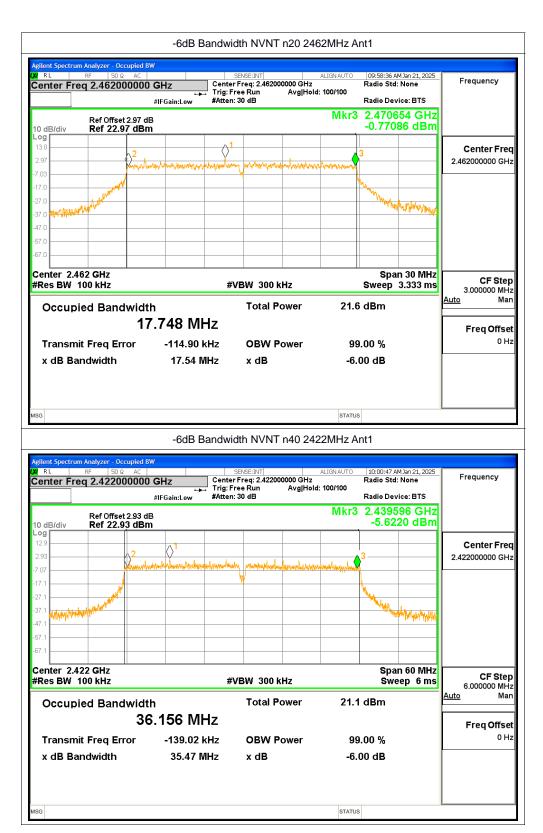
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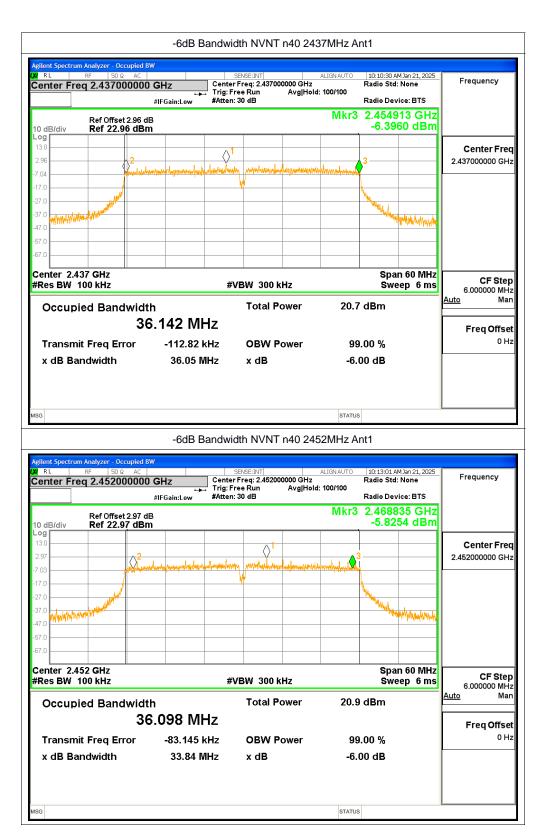
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att. 2023-02-20

# 8. Maximum Output Power

# 8.1 Test Setup



# 8.2 Limits of Maximum Output Power

The Maximum Output Power Measurement is 30dBm.

### **8.3 Test Procedure**

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate centre frequency.

Note: The Peak power was measured

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### **8.4Test Results**

Condition	Mode	Frequency	Antenna	Conducted Power	<b>Duty Factor</b>	Total Power	Limit	Verdict
		(MHz)		(dBm)	(dB)	(dBm)	(dBm)	
		2412		18.98	0	18.98	30	Pass
	b	2437		18.6	0	18.6	30	Pass
		2462		19.5	0	19.5	30	Pass
		2412		17.81	0	17.81	30	Pass
	g	2437		17.41	0	17.41	30	Pass
NVNT		2462	A mtd	18.17	0	18.17	30 Pass 30 Pass 30 Pass 30 Pass 30 Pass 30 Pass	Pass
INVINI		2412	Ant1	17.08	0	17.08	30	Pass
	n20	2437		16.69	0	16.69	30	Pass
		2462		17.41	0	17.41	41 30	Pass
		2422		15.95	0	15.95	30	Pass
	n40	2437		15.81	0	15.81	30	Pass Pass Pass Pass Pass Pass Pass Pass
		2452		16.26	0	16.26	30	Pass

Note: 1. The worst-cases were recorded

2. The result basic equation calculation as follow: Power Output = Power Reading + Cable loss + Attenuator

3. The worse case was recorded

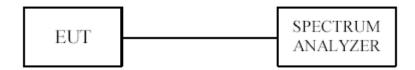
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# 9. Power Spectral Density Measurement

# 9.1 Test Setup



### 9.2 Limits of Power Spectral Density Measurement

The Maximum Power Spectral Density Measurement is 8dBm/3kHz.

### 9.3 Test Procedure

- 1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
- 2. Set the RBW = 3 kHz.
- 3. Set the VBW  $\geq$  10 kHz.
- 4. Set the span to 1.5 times the DTS channel bandwidth.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
- 11. The resulting peak PSD level must be  $\leq 8 \text{ dBm/3kHz}$ .

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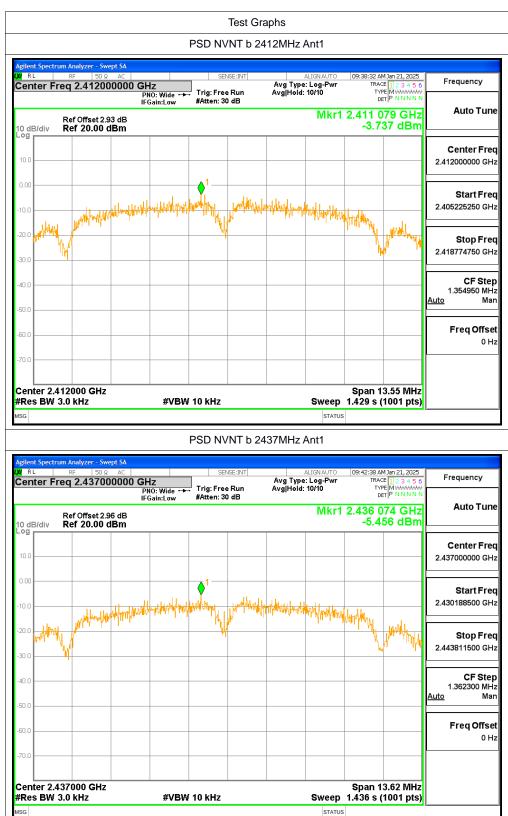
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## 9.4Test Result

Condition	Mode	Frequency	Antenna	Conducted PSD	Duty	Total PSD	Limit	Verdict
		(MHz)		(dBm/3kHz)	Factor	(dBm/3kHz)	(dBm/3kHz)	
					(dB)			
		2412		-3.74	0	-3.74	8	Pass
	b	2437		-5.46	0	-5.46	8	Pass Pass Pass Pass Pass Pass Pass Pass
		2462		-5.1	0	-5.1	8	Pass
		2412		-7.73	0	-7.73	8	Pass
	g	2437		-9.18	0	-9.18	8	Pass Pass Pass Pass Pass Pass Pass Pass
NIV/NIT		2462	Ant1	-8.7	0	-8.7	8	Pass
NVNT		2412	AIILI	-8.13	0	-8.13	8	Pass
	n20	2437		-9.2	0	-9.2	8	Pass
		2462		-9.47	0	-9.47	8	Pass
		2422		-12.06	0	-12.06	8	Pass
	n40	2437		-12.19	0	-12.19	8	Pass
		2452		-10.83	0	-10.83	8	Pass

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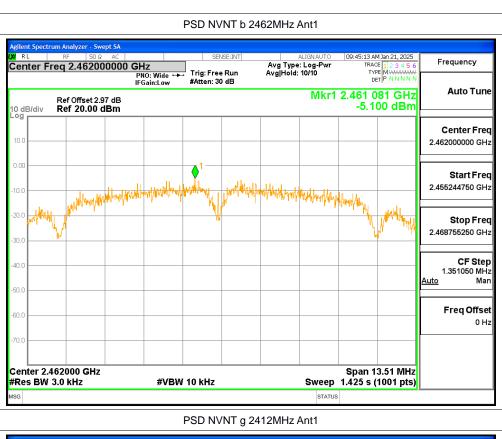
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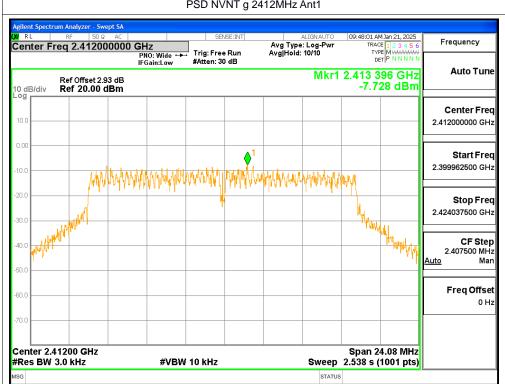
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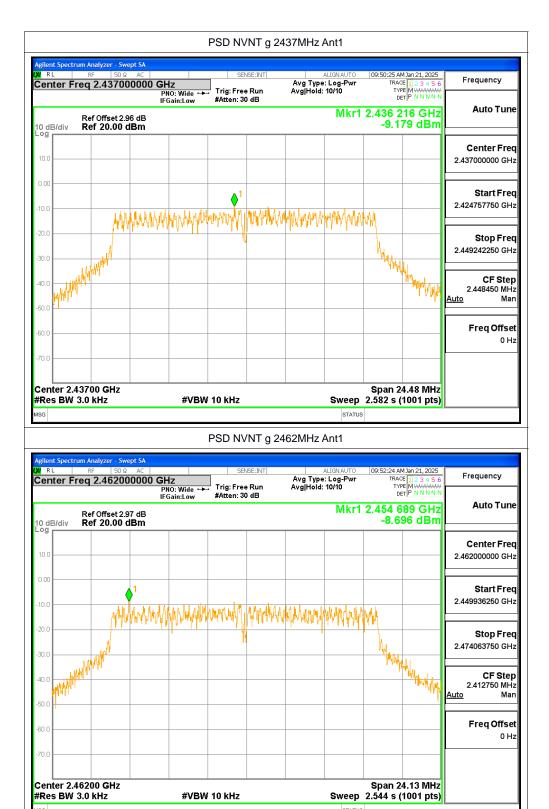
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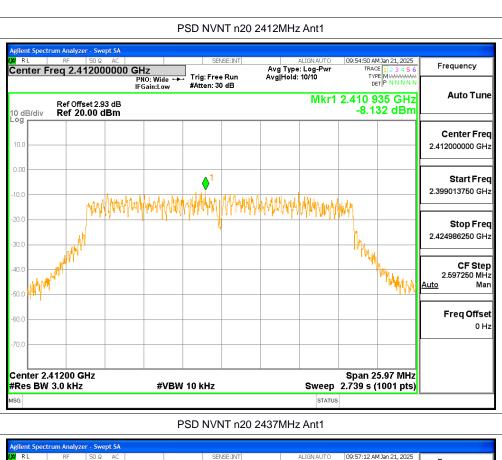
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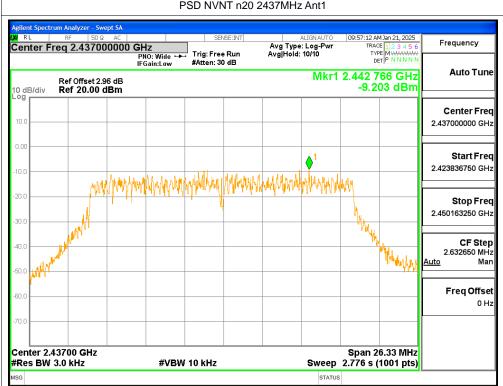
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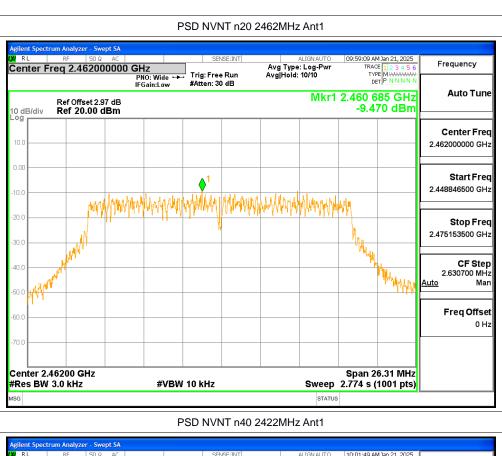
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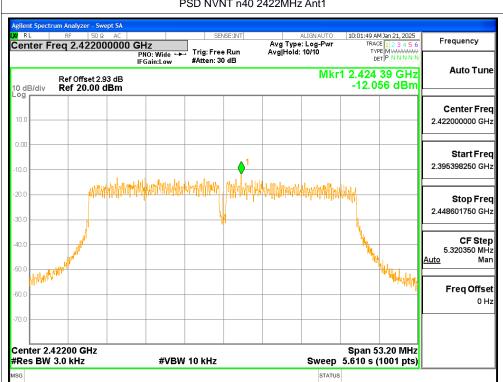
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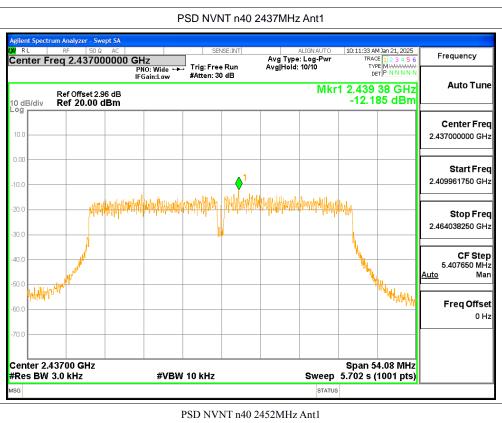
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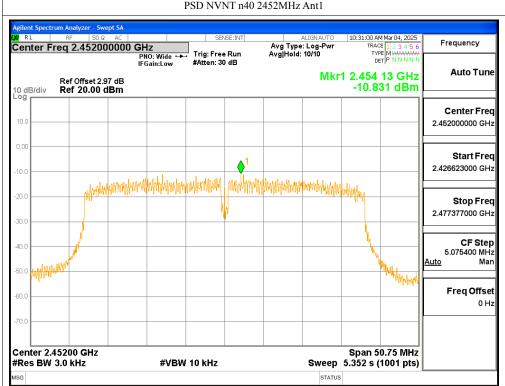
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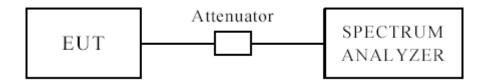
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# 10 Out of Band Measurement

# 10.1 Test Setup for band edge



The restricted band requirement based on radiated emission test; please see the clause 6 for the test setup

### 10.2 Limits of Out of Band Emissions Measurement

- 1. Below –20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).
- 2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

#### 10.3 Test Procedure

For signals in the restricted bands above and below the 2.4-2.483GHz allocated band a measurement was made of radiated emission test. (Peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK detector)

For bandage test, the spectrum set as follows: RBW=100, VBW=300 kHz. A conducted measurement used

#### 10.4 Test Result

Please see next pages

Note: For band-edge measurement, the frequency from 30MHz-25GHz was tested. And It met the FCC rule.

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Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
	<b>b</b>	2412		-48.92	-20	Pass
	b	2462		-52.75	-20	Pass
	~	2412		-30.29	-20	Pass
NVNT	g	2462	Ant1	-41.21	-20	Pass
INVINI	00	2412	Anti	-32.44	-20	Pass
	n20	2462		-41.7	-20	Pass
	n40	2422		-33.35	-20	Pass
	1140	2452		-38.72	-20	Pass

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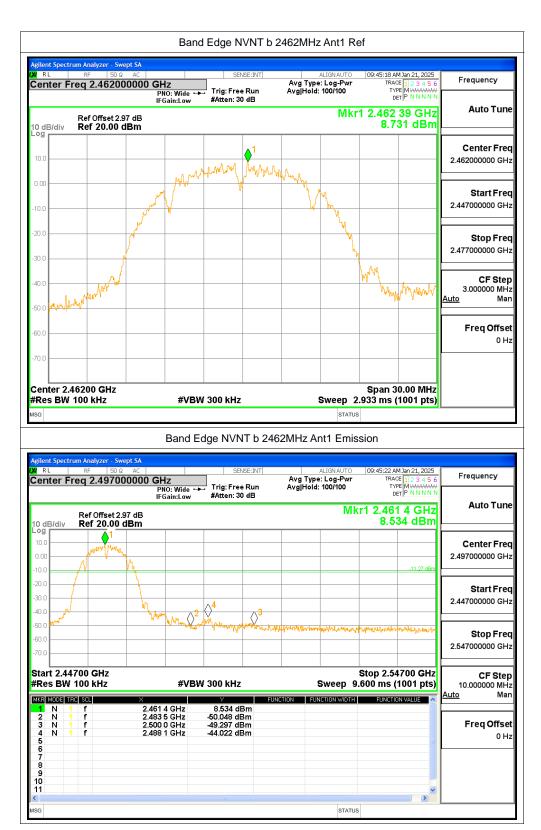
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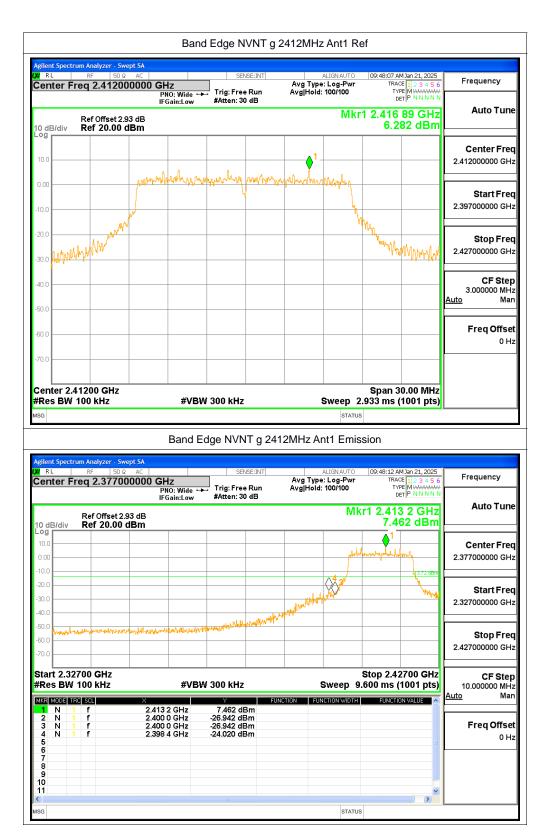
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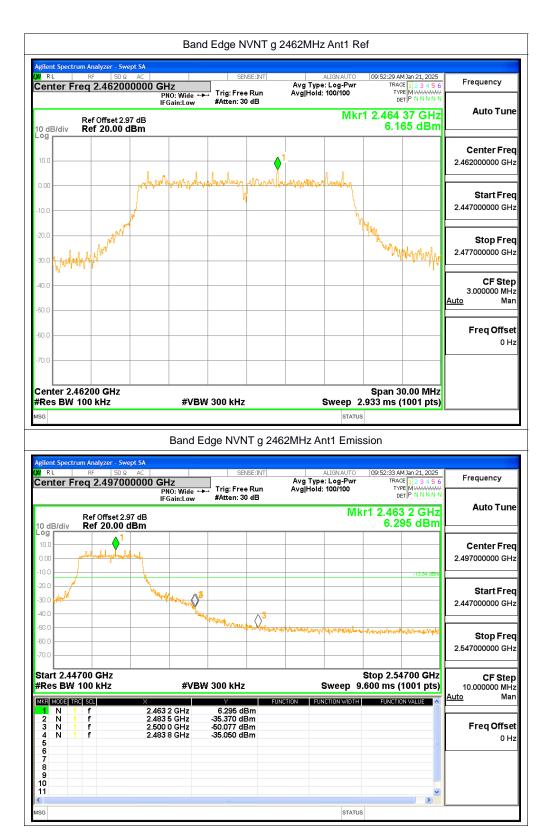
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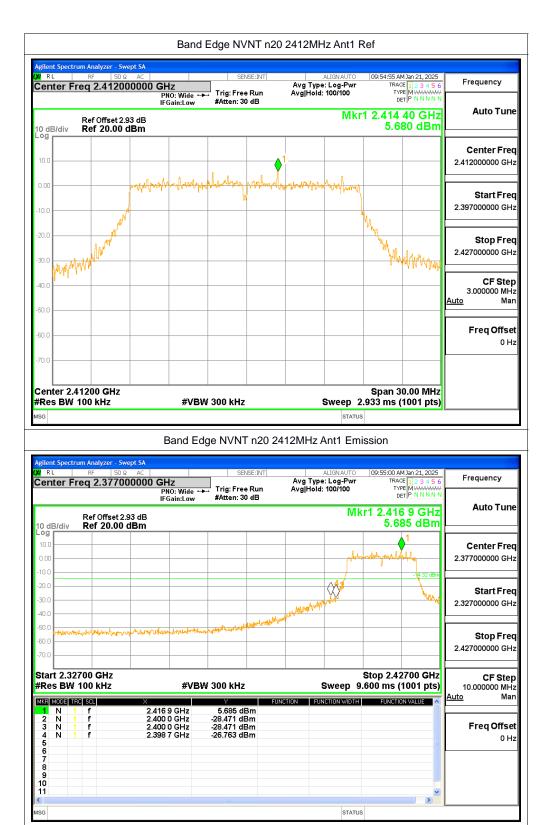
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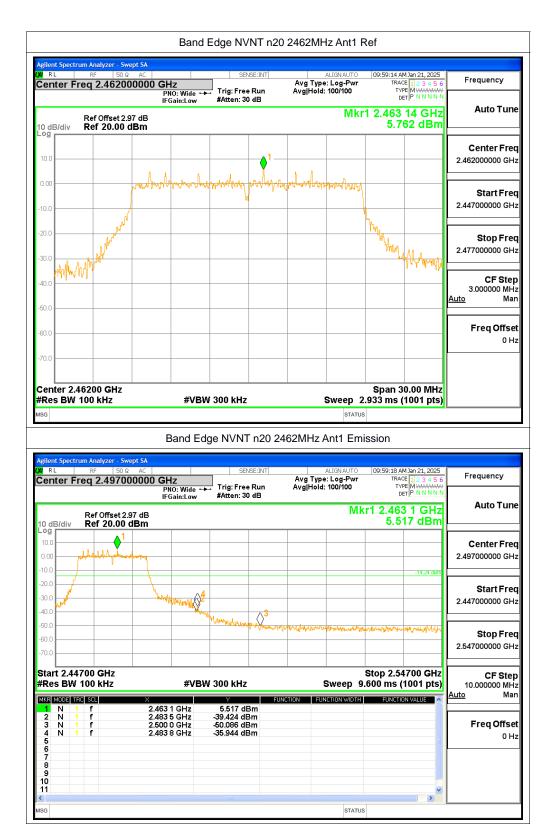
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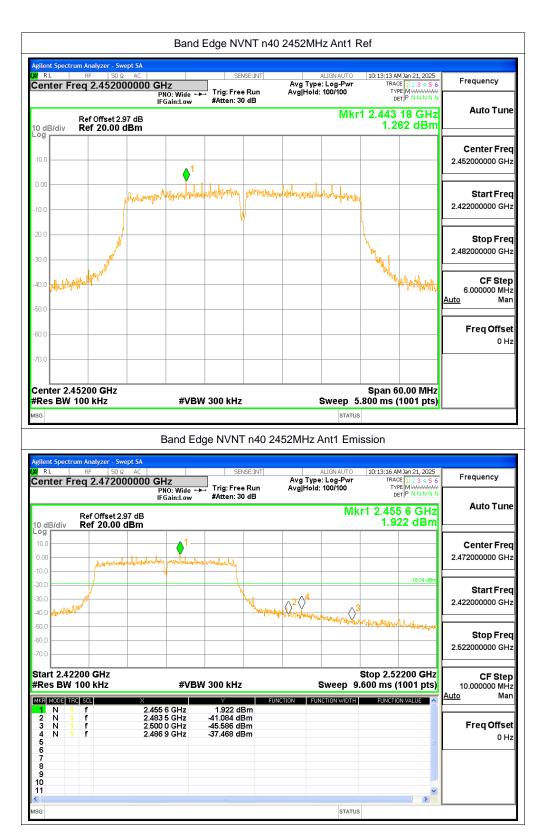
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# Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
		2412		-23.79	-20	Pass
	b	2437		-24.82	-20	Pass
		2462		-25.32	-20	Pass
		2412		-31.22	-20	Pass
	g	2437		-32.37	-20	Pass
NVNT		2462	A = 44	-30.23	-20	Pass
INVINI		2412	Ant1	-33.38	-20	Pass
	n20	2437		-32.54	-20	Pass
		2462		-33.84	-20	Pass
		2422		-32.14	-20	Pass
	n40	2437		-32.71	-20	Pass
		2452		-35.21	-20	Pass

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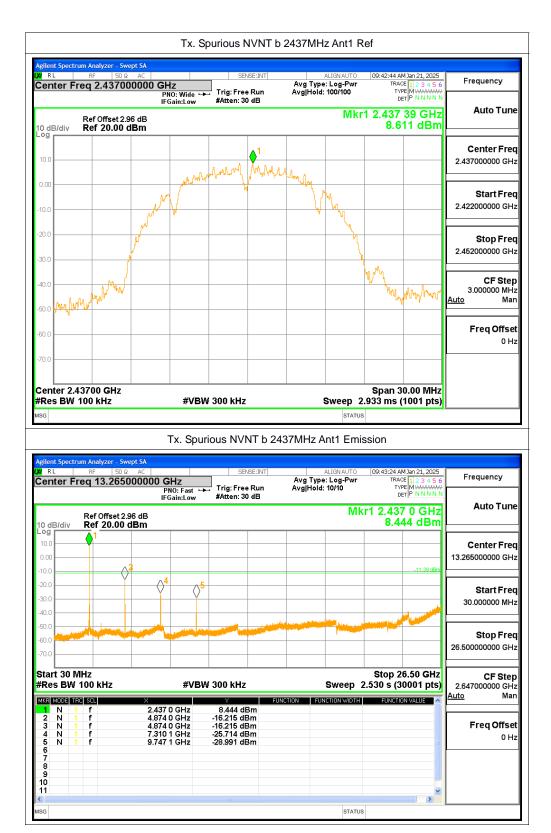
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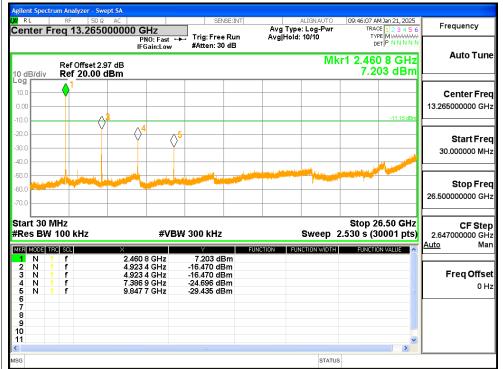
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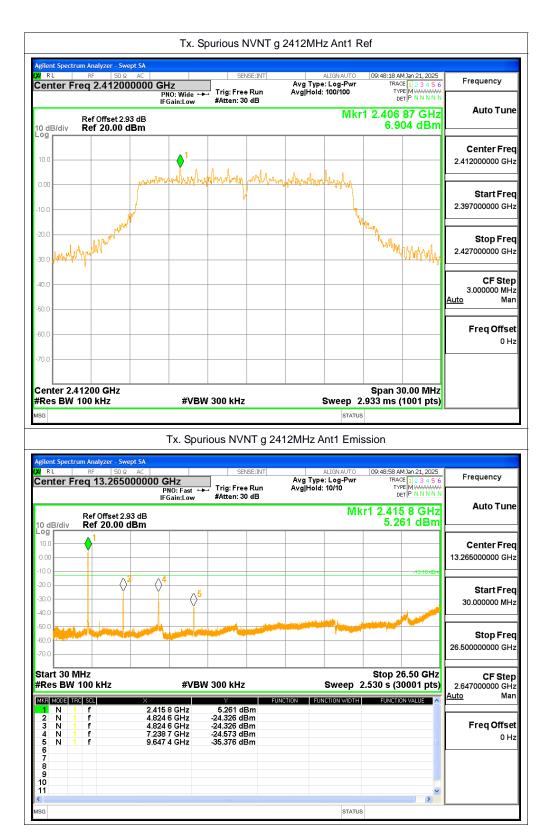
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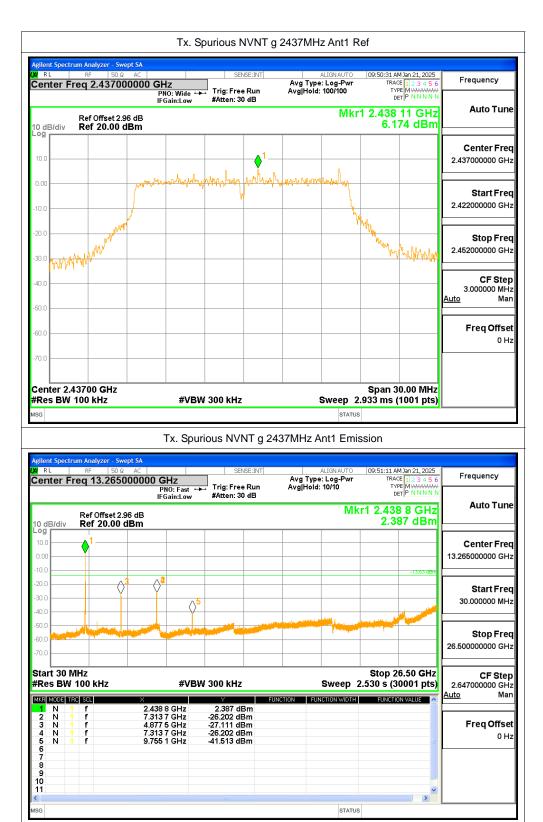
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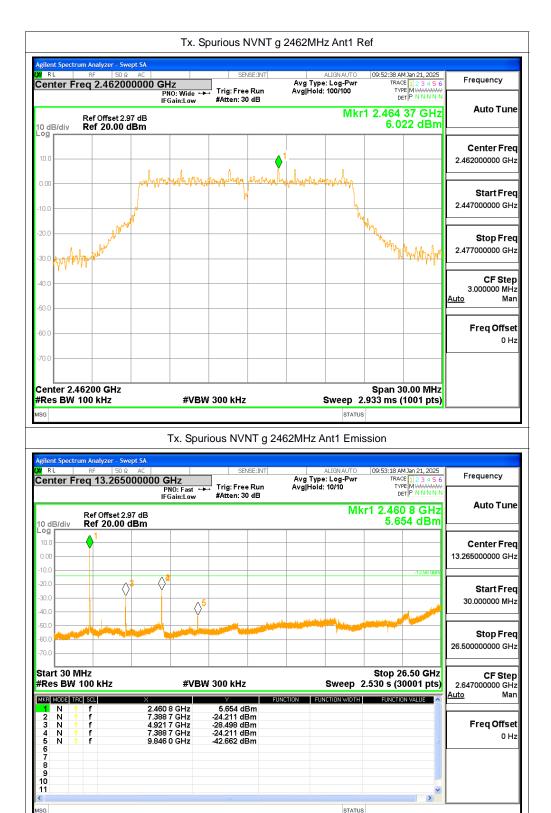
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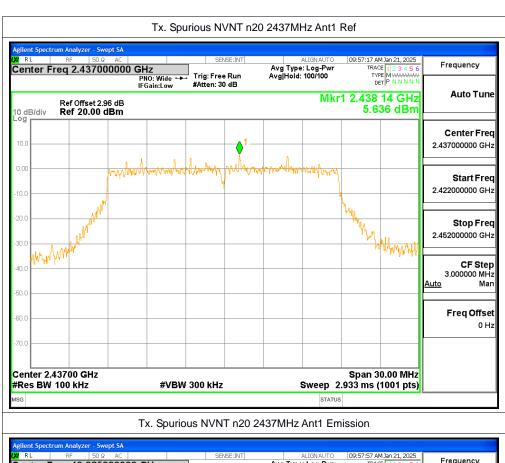
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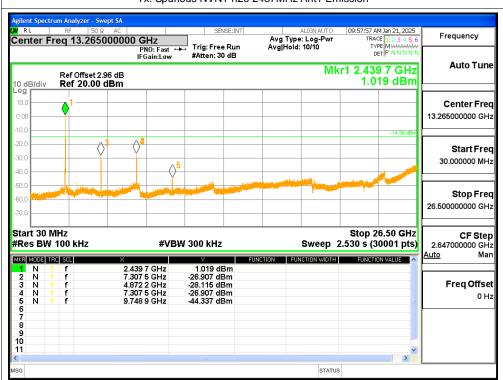
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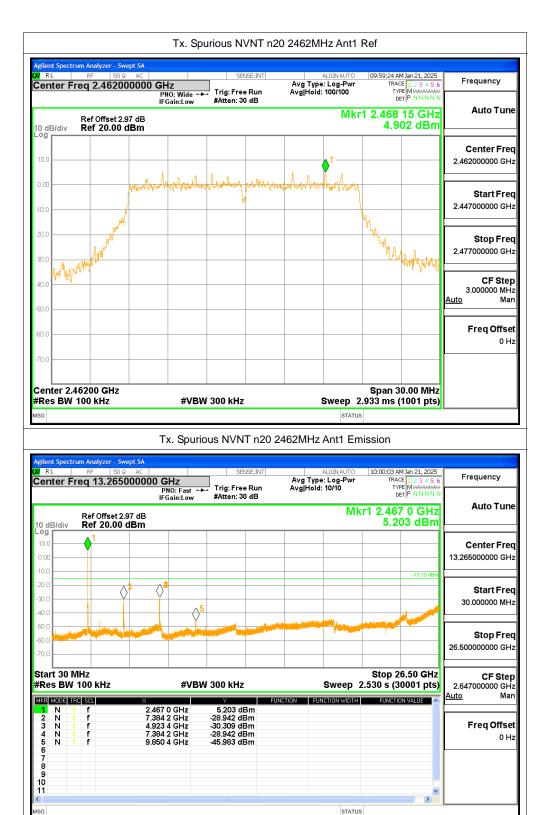
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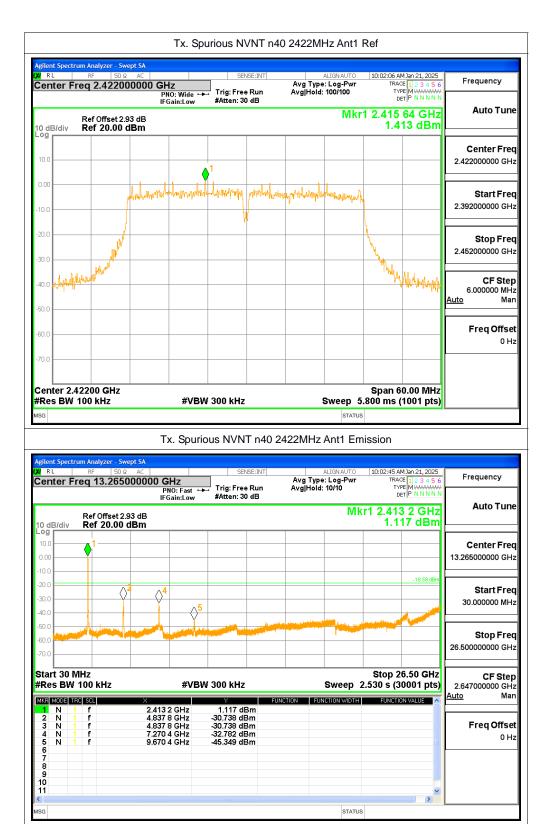
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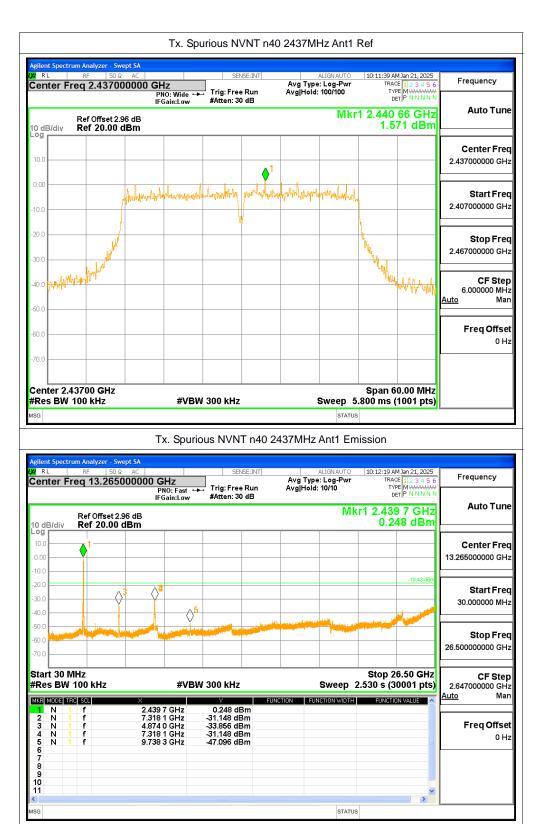
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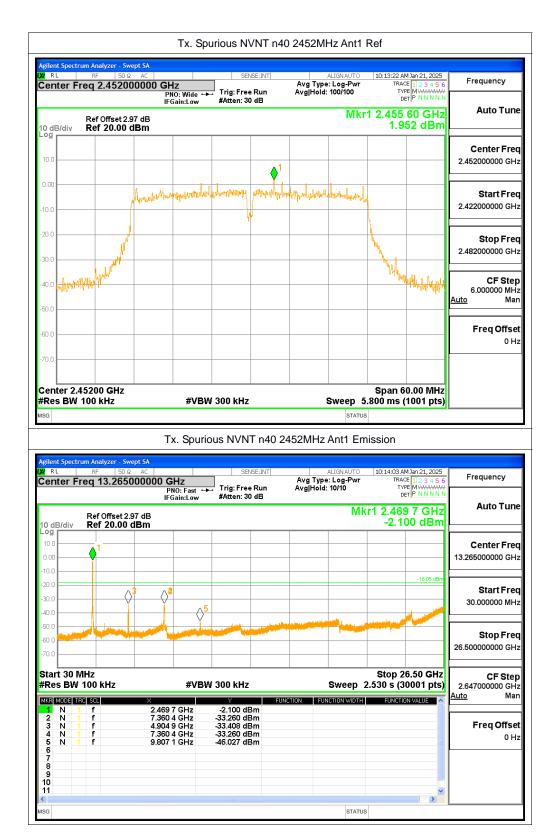
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#### 10.5 Restricted band Measurement

EUT	Unmanned Aircraft			Model		D-Series 517		
Mode	Kee	ping Transmitting		Test Vo	oltage	DC45.6V		
Temperature		24 deg. C,		Humi	idity	56% RH		
Test Result:	Pass			Dete	ctor	PK		
802.11b mode, Low Channel, Horizontal								
2390	PK (dBμV/m)	44.30		,	$74(dB\mu V/m)$			
	AV (dBμV/m)			imit	$54(dB\mu V/m)$			
	802.11b mode, Vertical							
2390	PK (dBμV/m)	42.62	Limit			74(dBµV/m)		
	AV (dBμV/m)					$54(dB\mu V/m)$		

EUT	Unmanned Aircraft			Model		D-Series 517			
Mode	Keep	oing Transmitting		Test Voltage		DC45.6V			
Temperature		24 deg. C,		Humidity		56% RH			
Test Result:	Pass			Dete	ctor	PK			
	802.11b mode, High Channel, Horizontal								
2483.5	PK (dBμV/m)	49.40	т			$74(dB\mu V/m)$			
	AV (dBμV/m)		L	Limit	54(dBμV/m)				
	802.11b mode, High Channel, Vertical								
2483.5	PK (dBµV/m)	46.26	Limit		74(dBμV/m)				
	AV (dBμV/m)				54(dBμV/m)				

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#### 10.5 Restricted band Measurement

EUT	Unmanned Aircraft			Mo	del	D-Series 517			
Mode	Kee	ping Transmitting		Test Voltage		DC45.6V			
Temperature		24 deg. C,		Humidity		56% RH			
Test Result:	Pass			Dete	ctor	PK			
	802.11g mode, Low Channel, Horizontal								
2390	PK (dBμV/m)	45.45	T	Limit		$74(dB\mu V/m)$			
	AV (dBμV/m)					54(dBμV/m)			
	802.11g mode, Vertical								
2390	PK (dBμV/m)	43.78	Limit		74(dBμV/m)				
	AV (dBμV/m)				54(dBμV/m)				

EUT	Unmanned Aircraft			Model		D-Series 517		
Mode	Kee	ping Transmitting		Test Voltage		DC45.6V		
Temperature		24 deg. C,		Humidity		56% RH		
Test Result:	Pass			Detector		PK		
802.11g mode, High Channel, Horizontal								
2483.5	PK (dBµV/m)	61.50	Limit		$74(dB\mu V/m)$			
	AV (dBμV/m)	44.67			$54(dB\mu V/m)$			
802.11g mode, High Channel, Vertical								
2483.5	PK (dBµV/m)	58.83	T,			$74(dB\mu V/m)$		
	AV (dBμV/m)	42.82		Limit		$54(dB\mu V/m)$		

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#### 10.5 Restricted band Measurement

EUT	Unmanned Aircraft			Model		D-Series 517			
Mode	Kee	ping Transmitting		Test Voltage		DC45.6V			
Temperature		24 deg. C,		Humidity		56% RH			
Test Result:	Pass			Dete	ctor	PK			
	802.11n HT20 mode, Low Channel, Horizontal								
2390	PK (dBµV/m)	45.17	T			$74(dB\mu V/m)$			
	AV (dBμV/m)			imit	$54(dB\mu V/m)$				
	802.11n HT20 mode, Vertical								
2390	PK (dBµV/m)	45.58	Limit		74(dBμV/m)				
	AV $(dB\mu V/m)$					54(dBµV/m)			

EUT	Unmanned Aircraft			Model		D-Series 517		
Mode	Keepi	ng Transmitting		Test Voltage		DC45.6V		
Temperature		24 deg. C,		Humidity		56% RH		
Test Result:	Pass			Detector		PK		
802.11n HT20 mode, High Channel, Horizontal								
2483.5	PK (dBμV/m)	63.10		Limit		$74(dB\mu V/m)$		
	AV (dBμV/m)	47.54	L			$54(dB\mu V/m)$		
	802.11n HT20 mode, High Channel, Vertical							
2483.5	PK (dBμV/m)	59.49	T		$74(dB\mu V/m)$			
	AV (dBμV/m)	45.42		Limit		$54(dB\mu V/m)$		

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#### 10.5 Restricted band Measurement

EUT	Unmanned Aircraft			Model		D-Series 517		
Mode	Кеер	oing Transmitting		Test Vo	oltage	DC45.6V		
Temperature		24 deg. C,		Hum	dity	56% RH		
Test Result:	Pass			Detector		PK		
	802.11n HT40 mode, Low Channel, Horizontal							
2390	PK (dBµV/m)	45.72	т			$74(dB\mu V/m)$		
	AV (dBμV/m)			imit	54(dBµV/m)			
	802.11n HT40 mode, Vertical							
2390	PK (dBμV/m)	44.14	ī	T. invite		74(dBµV/m)		
	AV (dBμV/m)		Limit			$54(dB\mu V/m)$		

EUT	Unmanned Aircraft			Model		D-Series 517		
Mode	Keepi	ng Transmitting		Test Voltage		DC45.6V		
Temperature		24 deg. C,		Humidity		56% RH		
Test Result:	Pass			Detector		PK		
802.11n H40 mode, High Channel, Horizontal								
2483.5	PK (dBμV/m)	65.03		<b>.</b>		$74(dB\mu V/m)$		
	AV (dBμV/m)	49.69	L	Limit	$54(dB\mu V/m)$			
	802.11n H40 mode, High Channel, Vertical							
2483.5	PK (dBμV/m)	59.86	Limit		74(dBμV/m)			
	AV (dBμV/m)	45.15			$54(dB\mu V/m)$			

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# 11.0 Antenna Requirement

# 11.1 Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if transmitter antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the mount in dB that the directional gain of the antenna exceeds 6 dBi.

### 11.2 Antenna Connected construction

PCB antenna used. The gain of the antennas is 4.54dBi maximum. (Get from the antenna specification provided the applicant)

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### 12.0 FCC ID Label

## **FCC ID: 2BM3J-D517**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

### **Mark Location:**



Date: 2025-02-28

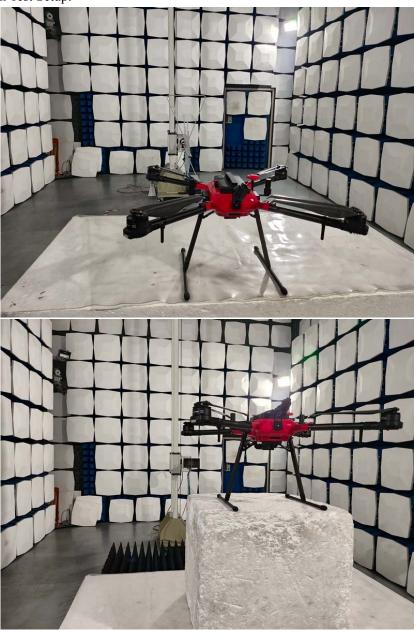


#### 13.0 Photo of testing

Conducted Emission Test Setup:

N/A

Radiated Emission Test Setup:



Photographs - EUT

Please refer test report TW2501164-02E

-End of the report-

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