

REGULATORY COMPLIANCE TEST REPORT

FCC CFR 47 15.407, RSS-247 Issue 2

Report No.: RDWN69-U2 Rev A

Company: Radwin Ltd.

Model Name: RADWIN JET DUO 5.x/5.x GHz



REGULATORY COMPLIANCE TEST REPORT

Company: Radwin Ltd.

Model Name: RADWIN JET DUO 5.x/5.x GHz

To: FCC CFR 47 Part 15 Subpart E 15.407, RSS-247

Test Report Serial No.: RDWN69-U2 Rev A

This report supersedes: NONE

Applicant: Radwin Ltd.

27 Habarzel Street Tel Aviv, 6971039

Israel

Issue Date: 10th June 2020

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.

575 Boulder Court Pleasanton California 94566 USA

Phone: +1 (925) 462-0304 Fax: +1 (925) 462-0306 www.micomlabs.com



MiCOM Labs is an ISO 17025 Accredited Testing Laboratory



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Table of Contents

1. ACCREDITATION, LISTINGS & RECOGNITION	4
1.1. TESTING ACCREDITATION	4
1.2. RECOGNITION	
1.3. PRODUCT CERTIFICATION	6
2. DOCUMENT HISTORY	7
3. TEST RESULT CERTIFICATE	
4. REFERENCES AND MEASUREMENT UNCERTAINTY	9
4.1. Normative References	9
4.2. Test and Uncertainty Procedure	
5. PRODUCT DETAILS AND TEST CONFIGURATIONS	11
5.1. Technical Details	
5.2. Scope Of Test Program	
5.3. Equipment Model(s) and Serial Number(s)	13
5.4. Antenna Details	
5.5. Cabling and I/O Ports	
5.6. Test Configurations	
5.7. Equipment Modifications	
5.8. Deviations from the Test Standard	14
6. TEST SUMMARY	
7. TEST EQUIPMENT CONFIGURATION(S)	
7.1. Radiated Emissions - 3m Chamber	16
7.2. DFS - Conducted	
8. MEASUREMENT AND PRESENTATION OF TEST DATA	
9. TEST RESULTS	
9.1. Peak Transmit Power	
9.2. 26 dB & 99% Bandwidth	
9.3. Power Spectral Density	
APPENDIX A - GRAPHICAL IMAGES	
A.1. 26 dB & 99% Bandwidth	
A 2 Power Spectral Density	92



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard ISO/IEC 17025:2017. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; https://www.a2la.org/scopepdf/2381-01.pdf



Accredited Laboratory

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 24th day of February 2020.

Vice President, Accreditation Services For the Accreditation Council Certificate Number 2381.01 Valid to November 30, 2021

Page:

4 of 154

For the fests to which this accreditation applies, please refer to the laboratory's Bectrical Scope of Accreditation.

Issue Date: 10th June 2020



: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

1.2. RECOGNITION

MiCOM Labs, Inc has widely recognized wireless testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA countries. MiCOM Labs test reports are accepted globally.

Country	Recognition Body	Status	Phase	Identification No.
USA	Federal Communications Commission (FCC)	ТСВ	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2 4143A-3
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	APEC MRA 2	RCB 210
	VCCI			A-0012
Europe	European Commission	NB	EU MRA	NB 2280
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	
Hong Kong	Office of the Telecommunication Authority (OFTA)	CAB	APEC MRA 1	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)	CAB	APEC MRA 1	
Singapore	Infocomm Development Authority (IDA)	CAB	APEC MRA 1	US0159
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)	CAB	APEC MRA 1	
Vietnam	Ministry of Communication (MIC)	САВ	APEC MRA 1	

EU MRA - European Union Mutual Recognition Agreement.

NB - Notified Body

APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement. Recognition agreement under which test lab is accredited to regulatory standards of the APEC member countries.

Phase I - recognition for product testing

Phase II – recognition for both product testing and certification

Issue Date: 10th June 2020 **Page**: 5 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

1.3. PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065:2012. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-02.pdf



Accredited Product Certification Body

A2LA has accredited

MICOM LABS

Pleasanton, CA

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC 17065:2012 Requirements for bodies certifying products, processes and services. This product certification body also meets the A2LA R322 – Specific Requirements – Notified Body Accreditation Requirements and A2LA R308 – Specific Requirements - ISO-IEC 17065 - Telecommunication Certification Body Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a management system.



Presented this 24th day of February 2020

Vice President, Accreditation Services For the Accreditation Council Certificate Number 2381 02 Valid to November 30, 2021

Page:

6 of 154

For the product certification schemes to which this accreditation applies, please leter to the organization's Product Certification Scope of Accreditation.

United States of America – Telecommunication Certification Body (TCB) Industry Canada – Certification Body, CAB Identifier – US0159 Europe – Notified Body (NB), NB Identifier - 2280 Japan – Recognized Certification Body (RCB), RCB Identifier - 210

Issue Date: 10th June 2020



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

2. DOCUMENT HISTORY

Document History					
Revision	Date	Comments			
Draft	29 th May 2020	Draft for comment			
Rev A	10 th June 2020	Initial Release			

In the above table the latest report revision will replace all earlier versions.

Issue Date: 10th June 2020 Page: 7 of 154



RADWIN JET DUO 5.x/5.x GHz

FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

RDWN69-U2 Rev A Serial #:

3. TEST RESULT CERTIFICATE

Manufacturer: Radwin Ltd.

27 Habarzel Street

Tel Aviv, 6971039

Israel

Tested By: MiCOM Labs, Inc.

575 Boulder Court

Pleasanton California 94566

USA

Model: RADWIN JET DUO 5.x/5.x GHz

Telephone: +1 925 462 0304

Equipment Type: Dual Carrier 5.x GHz Base Station

with Beamforming Antenna

Fax: +1 925 462 0306

S/N's: Prototype

Test Date(s): 13th – 21st May 2020

Website: www.micomlabs.com

STANDARD(S)

FCC CFR 47 Part 15 Subpart E 15.407 ISED RSS-247 Issue 2

TEST RESULTS

EQUIPMENT COMPLIES

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Notes:

- 1. This document reports conditions under which testing was conducted and the results of testing performed.
- 2. Details of test methods used have been recorded and kept on file by the laboratory.

3. Test results apply only to the item(s) tested.

Approved & Released for MiCOM Labs, Inc. by:

TESTING CERT #2381.01

Graeme Grieve

Quality Manager MiCOM Labs, Inc.

Gordon Hurst

President & CEO MiCOM Labs, Inc.

Issue Date: 10th June 2020 Page: 8 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	KDB 662911 D01 v02r01	31 st October 2013	Guidance for measurement of output emission of devices that employ single transmitter with multiple outputs or systems with multiple transmitters operating simultaneously in the same frequency band
II	KDB 662911 D02 V01	25 th October 2013	MIMO with Cross-Polarized Antenna
III	KDB 905462 D07 v02	22 nd August 2016	Test guidance to demonstrate compliance for U-NII devices subject to DFS requirements.
IV	KDB 926956 D01 V02	22 nd August 2016	U-NII Device Transition Plan
V	A2LA	October 2019	R105 - Requirement's When Making Reference to A2LA Accreditation Status
VI	ANSI C63.10	2013	American National Standard for Testing Unlicensed Wireless Devices
VII	ANSI C63.4	2014	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
VIII	CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements
IX	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
X	FCC 06-96	Jun 30 2006	Memorandum Opinion and Order
XI	FCC 47 CFR Part 15.407	2016	Radio Frequency Devices; Subpart E –Unlicensed National Information Infrastructure Devices
XII	ICES-003	Issue 6 Jan 2016; Updated April 2019	Information Technology Equipment (Including Digital Apparatus) – Limits and methods of measurement.
XIII	M 3003	Edition 3 Nov.2012	Expression of Uncertainty and Confidence in Measurements
XIV	RSS-247 Issue 2	Feb 2017	Digital Transmission Systems (DTSs), Frequency Hopping System (FHSs) and Licence-Exempt Local Area Network (LE-LEN) Devices
XV	RSS-Gen Issue 5	March 2019 Amendment 1	General Requirements for Compliance of Radio Apparatus
XVI	FCC 47 CFR Part 2.1033	2016	FCC requirements and rules regarding photographs and test setup diagrams.
XVII	KDB 789033 D02 V02r01	14 th December 2017	Guidelines for Compliance Testing Of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E

Issue Date: 10th June 2020 **Page:** 9 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

4.2. Test and Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

Issue Date: 10th June 2020 **Page:** 10 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the RADWIN Dual Carrier 5.x GHz Base Station with
	Beamforming Antenna to;
	FCC CFR 47 Part 15 Subpart E 15.407
	ISED RSS-247 Issue 2
A!	D. J. S.
Applicant:	27 Habarzel Street
	Tel Aviv 6971039
	Israel
Manufacturer:	Same as applicant
Laboratory performing the tests:	
	575 Boulder Court
	Pleasanton California 94566 USA
Test report reference number:	RDWN69-U2
Date EUT received:	13 th May 2020
Standard(s) applied:	FCC CFR 47 Part 15 Subpart E 15.407
	ISED RSS 15.247 Issue 2
Dates of test (from - to):	•
No of Units Tested:	
Product Family Name:	
	RADWIN JET DUO 5.x/5.x GHz
Location for use:	
	5250 – 5350, 5470 - 5725 MHz
Type of Modulation:	
EUT Bandwidths:	
Declared Nominal Output Power (dBm):	+30 dBm EIRP
Transmit/Receive Operation:	
Rated Input Voltage and Current:	55V DC
Operating Temperature Range:	-40 to +60 °C
	20M0W7W, 40M0W7W, 80M0W7W
Equipment Dimensions:	
Weight:	
Hardware Rev:	• •
Software Rev:	(DFS): 4.9.80_b0022_Mar 19 2020

Issue Date: 10th June 2020 **Page:** 11 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

5.2. Scope Of Test Program

RADWIN JET DUO 5.x/5.x GHz

The scope of the test program was to test the RADWIN JET DUO 5.x/5.x GHz, Dual Carrier 5.x GHz Base Station with Beamforming Antenna configurations in the frequency ranges 5250 - 5350 MHz; 5470 - 5725 MHz; for compliance against the following specification:

FCC CFR 47 Part 15 Subpart E 15.407

Compliance Measurement Procedures for Unlicensed National Information Infrastructure devices operating in the 5250 to 5350 MHz and 5470 to 5725 bands.

RSS-247 Issue 2

Digital Transmission Systems (DTSs), Frequency Hopping System (FHSs) and License-Exempt Local Area Network (LE-LEN) Devices.

As the RADWIN JET DUO 5.x/5.x GHz has integrated beamforming antenna the test program was completed all radiatively.

System Test and Measurement Configurations

The RADWIN JET DUO 5.x/5.x GHz consists of 2 identical radios each with 2 ports driving one cross polarized antenna per radio. Each radio can transmit on all available frequencies, but both radios cannot transmit on the same frequency simultaneously.

Issue Date: 10th June 2020 **Page**: 12 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

5.3. Equipment Model(s) and Serial Number(s)

Type (EUT/ Support)	Equipment Description	Manufacturer	Model No.	Serial No.
EUT	Dual Carrier 5.x GHz Base Station with Beamforming Antenna	RADWIN	RADWIN JET DUO 5.x/5.x GHz	Prototype
EUT	Dual Carrier 5.x GHz Base Station with Beamforming Antenna	RADWIN	RADWIN JET DUO 5.x/5.x GHz	DFS Master
Support	POE Power Supply	Sinpro	CPU55A-270-1	
Support	Laptop	Dell		
Support	5.x GHz Client endpoint device	RADWIN	RADWIN SU-INT	DFS Client

5.4. Antenna Details

Туре	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
Integrated	RADWIN Ltd.	AP0200600	Panel	9.0		80	Yes	5250 - 5725
Integrated	RADWIN Ltd.	AP0200600	Directional	19.0	10.0	19	Yes	5250 - 5725

BF Gain - Beamforming Gain Dir BW - Directional BeamWidth

X-Pol - Cross Polarization

5.5. Cabling and I/O Ports

Port Type	Max Cable Length	# of Ports	Screened	Connector Type	Data Type	Data Rate(s)
Ethernet PoE IN	>30m	1	No	RJ45	Packet	10,100,1000

Issue Date: 10th June 2020 **Page:** 13 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

5.6. Test Configurations

Results for the following configurations are provided in this report:

Channel	Data Rate with Highest Power	Channel Frequency (MHz)					
Bandwidths	MBit/s	Low	Mid	High			
	5250 - 5350 MHz						
20	78	5,265.00	5,300.00	5,330.00			
40	180	5,275.00	5,300.00	5,320.00			
80	390	5,290.00	5,295.00	5,300.00			
		5470 - 5725 MHz					
20	78	5,490.00	5,590.00	5,705.00			
40	180	5,500.00	5,580.00	5,695.00			
80	390	5,525.00	5,560.00	5,675.00			

5.7. Equipment Modifications

The following modifications were required to bring the equipment into compliance:

1. NONE

5.8. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:

1. NONE

Issue Date: 10th June 2020 **Page:** 14 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

6. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
Peak Transmit Power	Complies	View Data
26 dB & 99% Bandwidth	Complies	View Data
6 dB & 99% Bandwidth	Complies	View Data
Power Spectral Density	Complies	View Data
Radiated	Complies	See Part 2
TX Spurious & Restricted Band Emissions	Complies	See Part 2
Antenna AP0200600	Complies	See Part 2
Antenna AP0200600 BF	Complies	See Part 2
Restricted Edge & Band-Edge Emissions	Complies	See Part 2
Antenna AP0200600	Complies	See Part 2
Antenna AP0200600 BF	Complies	See Part 2
Dynamic Frequency Selection (DFS)	Complies	See Part 3
Channel Availability Check	Complies	See Part 3
Initial CAC	Complies	See Part 3
Beginning CAC	Complies	See Part 3
End CAC	Complies	See Part 3
Channel Close / Transmission Time	Complies	See Part 3
Non-Occupancy Period	Complies	See Part 3
Probability of Detection	Complies	See Part 3
Detection Bandwidth	Complies	See Part 3
AC Wireline	Complies*	
	•	•

^{*}ac Wireline test results, see MiCOM Labs test report RDWN64-U2 (Non-DFS Bands)

Test Report Part 2 Contains: Radiated Spurious Results

Test Report Part 3 Contains: Dynamic Frequency Selection (DFS) Results

Issue Date: 10th June 2020 **Page:** 15 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

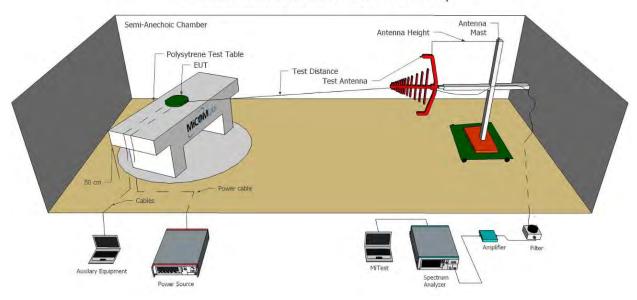
Serial #: RDWN69-U2 Rev A

7. TEST EQUIPMENT CONFIGURATION(S)

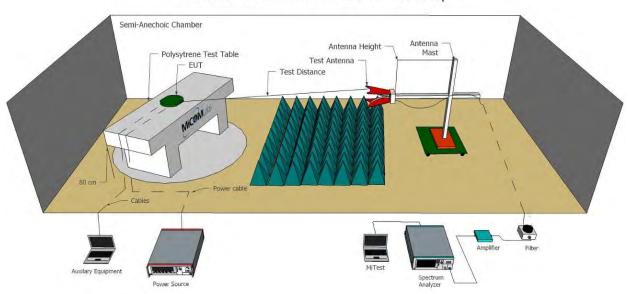
7.1. Radiated Emissions - 3m Chamber

Test Setup for Radiated Emissions for above and below 1 GHz

Radiated Emissions Below 1GHz Test Setup



Radiated Emissions Above 1GHz Test Setup



Issue Date: 10th June 2020

Page: 16 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

A full system calibration was performed on the test station and any resulting system losses (or gains) were

taken into account in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CU101	04R08507	Not Required
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	8 Oct 2020
298	3M Radiated Emissions Chamber Maintenance Check	MiCOM	3M Chamber	298	26 Feb 2020
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	4 Apr 2020
377	Band Rejection Filter 5150 to 5880MHz	Microtronics	BRM50716	034	3 Sep 2020
396	2.4 GHz Notch Filter	Microtronics	BRM50701	001	3 Mar 2020
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	6 Sep 2020
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	12 Oct 2020
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	9 Sep 2020
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
447	MiTest Rad Emissions Test Software	MiCOM	Rad Emissions Test Software Version 1.0	447	Not Require
462	Schwarzbeck cable from Antenna to Amplifier.	Schwarzbeck	AK 9513	462	5 Sep 2020
463	Schwarzbeck cable from Amplifier to Bulkhead.	Schwarzbeck	AK 9513	463	5 Sep 2020
464	Schwarzbeck cable from Bulkhead to Receiver	Schwarzbeck	AK 9513	464	9 Sep 2020
466	Low Pass Filter DC- 1500 MHz	Mini-Circuits	NLP-1750+	VUU10401438	3 Sep 2020
480	Cable - Bulkhead to Amp	SRC Haverhill	157-3050360	480	9 Sep 2020
481	Cable - Bulkhead to Receiver	SRC Haverhill	151-3050787	481	9 Sep 2020
510	Barometer/Thermometer	Control Company	68000-49	170871375	20 Dec 2020
518	Cable - Amp to Antenna	SRC Haverhill	157-3051574	518	9 Sep 2020

Issue Date: 10th June 2020 Page: 17 of 154

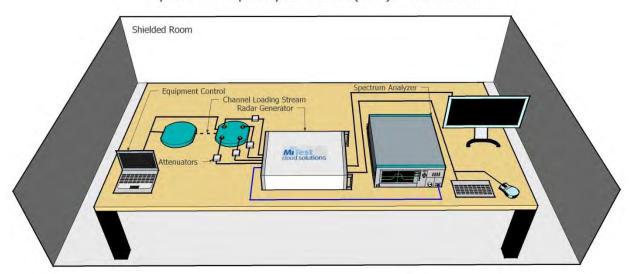


To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

7.2. DFS - Conducted

Dynamic Frequency Selection (DFS) - Conducted



A full system calibration was performed on the test station and any resulting system losses (or gains) were taken into account in the production of all final measurement data.

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
422	Splitter/Combiner	Pasternack	PE 2031	001	Cal when used
495	RF Power Divider	Micon Precise Corp	91002	495	Cal when used
504	MiTest Cloud Solutions RF Test Box	MiCOM	2nd Gen	504	5 Mar 2020
510	Barometer/Thermometer	Control Company	68000-49	170871375	20 Dec 2020
533	MiTest DFS Test Software	MiCOM	MiTest DFS Test software Version 2.8	533	Not Required
71	Spectrum Analyser 9KHz-50GHz	HP	8565E	3425A00181	Not Required
DFS SMA#1	SMA Cable for DFS	Megaphase	SMA Cable	None	Cal when used
DFS SMA#2	SMA Cable for DFS	Megaphase	SMA Cable	None	Cal when used
DFS SMA#3	SMA Cable for DFS	Megaphase	SMA Cable	None	Cal when used
DFS SMA#4	SMA Cable for DFS	Megaphase	SMA Cable	None	Cal when used

Issue Date: 10th June 2020

Page: 18 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

8. MEASUREMENT AND PRESENTATION OF TEST DATA

The measurement and graphical data presented in this test report was generated automatically using state-of-the-art technology creating an easy to read report structure. Numerical measurement data is separated from supporting graphical data (plots) through hyperlinks. Numerical measurement data can be reviewed without scrolling through numerous graphical pages to arrive at the next data matrix.

Plots have been relegated into the Appendix 'Graphical Data'.

Test and report automation was performed by <u>MiTest</u>. <u>MiTest</u> is an automated test system developed by MiCOM Labs. <u>MiTest</u> is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.





The MiCOM Labs "MiTest" Automated Test System" (Patent Pending)

Issue Date: 10th June 2020 **Page**: 19 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

9. TEST RESULTS

9.1. Peak Transmit Power

Conducted Test Conditions for Maximum Conducted Output Power					
Standard:	FCC CFR 47:15.407 RSS-247: 6.2.4.1				
Test Heading:	Maximum Output Power	Rel. Humidity (%):	32 - 45		
Standard Section(s):	15.407 (a)(2) Pressure (mBars) : 999 - 1001				
Reference Document(s):	KDB 789033 - D02 General UNII Test Procedures New Rules v01				

Test Procedure for Maximum Output Power Measurement

Spectrum Analyzer Method. KDB 789033 defines a methodology using spectrum analyzer. Where power shall be calculated by integrating the spectrum across a frequency span that encompasses, at a minimum, either the EBW or the 99% occupied bandwidth of the signal. However, the EBW must be used to determine bandwidth dependent limits on maximum conducted output power in accordance with Section 15.407(a). Testing was performed under ambient conditions at nominal voltage.

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document. Supporting KDB's referenced below.

KDB 662911 D01 & KDB 662911 D02

NOTE: KDB 412172 D01 was used to determine the EIRP from the results of a power measurements performed under far-field conditions with respect to all transmit and receive (measurement) antennas.

Radiated measurements used for compliance with conducted limits, the following steps are required to ensure that the total emission power is determined for equipment driving cross polarized antennas:

- (1) Measure radiated emissions with vertical and horizontal polarizations of the measurement antenna;
- (2) Convert each radiated measurement to transmit power based on the antenna gain;

EIRP level to an equivalent electric field strength using the following relationship: E = EIRP - 20*log(D) + 104.8

Where:

E = electric field strength in dBμV/m,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

(3) Sum the powers across the two polarizations to compare the resultant electric field strength level to the applicable limit.

Calculated Power = $A + G + Y + 10 \log (1/x) dBm$

A = Total Power [$10*Log10 (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$]

G = Antenna Gain

Y = Beamforming Gain

x = Duty Cycle (average power measurements only)

Issue Date: 10th June 2020

20 of 154

Page:



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Limits Maximum Conducted Output Power

Operating Frequency Band 5250-5350 and 5470 - 5725 MHz

15. 407 (a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Issue Date: 10th June 2020 **Page:** 21 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Consolidated Power Results, EIRP Limits

The EUT was tested for Radiated Output Power and the following tables define the worst case compliant results defined for each Antenna

Output Power Summary Table

Antenna Type - Integrated (outdoor use only)

Antenna Type - Integrated (Outdoor use only)							
Antenna	Gain	Channel Bandwidths	Channel	Combined Output Power (<i>H</i> + <i>V</i>)	Limit	Margin	Power Setting
Model Number	dBi	MHz	MHz	dBm	dBm/EIRP	dB	
			5265	20.63	21.00	-0.37	14.0
		20	5300	20.98	21.00	-0.02	12.5
			5330	20.75	21.00	-0.25	13.0
4 D0000000			5275	20.75	21.00	-0.25	15.0
AP0200600 80°	9.0	40	5300	20.98	21.00	-0.02	14.0
00°			5320	15.62	21.00	-5.38	8.5*
		80	5290	20.75	21.00	-0.25	14.0
			5295	20.77	21.00	-0.23	14.0
			5300	15.61	21.00	-5.39	8.0*
			5265	10.47	10.52	-0.05	7.0
	20	20	5300	10.36	10.52	-0.16	6.5
4 D0000000			5330	10.31	10.52	-0.21	7.0
AP0200600 19° (with Beam Forming)			5275	10.77	11.0	-0.23	6.0
	19.0	40	5300	10.82	11.0	-0.18	6.0
			5320	8.83	11.0	-2.17	4.0*
			5290	10.73	11.0	-0.27	6.0
		80	5295	10.89	11.0	-0.11	6.0
			5300	8.62	11.0	-2.38	3.5*

Note* = Power reduction due to Band Edge Testing

Issue Date: 10th June 2020 **Page:** 22 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Output Power Summary Table

Antenna Type – Integrated (outdoor use only)

Antenna	Gain	Channel Bandwidths	Channel	Combined Output Power (<i>H</i> + <i>V</i>)	Limit	Margin	Power Setting
Model Number	dBi	MHz	MHz	dBm	dBm/EIRP	dB	
			5490	20.88	21.00	-0.12	14.5
		20	5590	20.59	21.00	-0.41	13.0
			5705	20.51	21.00	-0.49	15.0
AP0200600			5500	15.65	21.00	-5.35	8.5*
80°	9.0	40	5580	20.99	21.00	-0.01	13.0
80			5695	20.57	21.00	-0.43	14.0
			5525	17.61	21.00	-3.39	9.0*
	80	5560	20.93	21.00	-0.07	12.5	
			5675	20.67	21.00	-0.33	14.5
			5490	9.80	10.52	-0.72	5.0*
		20	5590	10.35	10.52	-0.17	3.0
4 D0000000			5705	10.26	10.52	-0.26	5.5
AP0200600 19° (with Beam Forming)		5500	4.64	11.00	-6.36	-1.5*	
	40	5580	10.73	11.00	-0.27	3.5	
			5695	10.80	11.00	-0.2	4.5
			5525	6.81	11.00	-4.19	-1.0*
		80	5560	10.71	11.00	-0.29	2.5
			5675	10.71	11.00	-0.29	3.5

Note* = Power reduction due to Band Edge Testing

Issue Date: 10th June 2020 **Page:** 23 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

9.2. 26 dB & 99% Bandwidth

Conducted Test Conditions for 26 dB and 99% Bandwidth					
Standards: FCC CFR 47:15.407 Ambient Temp. (°C): 24.0 - 27.5					
Test Heading:	26 dB and 99 % Bandwidth	Rel. Humidity (%):	32 - 45		
Standard Section(s):	15.407 (a) Pressure (mBars):		999 - 1001		
Reference Document(s):	See Normative References				

Test Procedure for 26 dB and 99% Bandwidth Measurement

The bandwidth at 26 dB and 99 % is measured radiated, in a 3 meter chamber, while EUT is operating in transmission mode at the appropriate center frequency. The Resolution Bandwidth was set to approximately 1% of the emission bandwidth. Testing was performed under ambient conditions at nominal voltage. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured and reported. In this case Vertical a (V) and Horizontal for port b (H).

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document.

Issue Date: 10th June 2020 **Page:** 24 of 154



5300

5330

Title: RADWIN JET DUO 5.x/5.x GHz

Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	20 MHz Bandwidth	Duty Cycle (%):	Not Applicable
Data Rate:	78 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Frequency	Measured 26 dB	Measured 26 dB Bandwidth (MHz)		26 dB Bandwidth (MHz)		
MHz	Н	V	Highest	Lowest		
5265	<u>22.68</u>	<u>23.16</u>	23.16	22.68		
5300	<u>22.76</u>	<u>23.32</u>	23.32	22.76		
5330	<u>22.58</u>	<u>22.82</u>	22.82	22.58		
Test Frequency	Measured 99% E	Measured 99% Bandwidth (MHz)		width (MHz)		
MHz	Н	V	Highest	Lowest		
5265	17.79	17.87	17.87	17.79		

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

17.87

17.87

17.79

17.79

17.87

17.87

Note: click the links in the above matrix to view the graphical image (plot).

17.79

17.79

Issue Date: 10th June 2020 **Page:** 25 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	40 MHz Bandwidth	Duty Cycle (%):	Not Applicable
Data Rate:	180 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Frequency	Measured 26 dB Bandwidth (MHz)		Measured 26 dB Bandwidth (MHz) 26 dB Bandwidth (MHz)		
MHz	Н	V	Highest	Lowest	
5275	<u>44.56</u>	<u>45.85</u>	45.85	44.56	
5300	<u>44.40</u>	<u>46.33</u>	46.33	44.40	
5320	<u>44.86</u>	<u>46.63</u>	46.63	44.86	
Test Frequency	Measured 99% E	Measured 99% Bandwidth (MHz)		vidth (MHz)	
MHz	Н	V	Highest	Lowest	
5275	<u>36.71</u>	<u>36.71</u>	36.71	36.71	
5300	<u>36.71</u>	<u>36.71</u>	36.71	36.71	
5320	<u>36.71</u>	<u>36.87</u>	36.87	36.71	

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK			
Measurement Uncertainty:	±2.81 dB			

Note: click the links in the above matrix to view the graphical image (plot).

Issue Date: 10th June 2020 **Page:** 26 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	80 MHz Bandwidth	Duty Cycle (%):	Not Applicable
Data Rate:	390 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Frequency	Measured 26 dB Bandwidth (MHz)		Measured 26 dB Bandwidth (MHz) 26 dB Bandwidth (MHz)		
MHz	Н	V	Highest	Lowest	
5290	<u>92.74</u>	<u>95.63</u>	95.63	92.74	
5295	<u>93.30</u>	<u>96.27</u>	96.27	93.30	
5300	<u>93.17</u>	<u>101.08</u>	101.08	93.17	
Test Frequency	Measured 99% E	Measured 99% Bandwidth (MHz)		vidth (MHz)	
MHz	Н	V	Highest	Lowest	
5290	<u>76.31</u>	<u>76.95</u>	76.95	76.31	
5295	<u>76.63</u>	<u>76.95</u>	76.95	76.63	
5300	<u>76.63</u>	<u>77.27</u>	77.27	76.63	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

Issue Date: 10th June 2020 **Page:** 27 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	20 MHz Bandwidth	Duty Cycle (%):	Not Applicable
Data Rate:	78 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Frequency	Measured 26 dB	Bandwidth (MHz)	26 dB Band	width (MHz)	
MHz	Н	V	Highest	Lowest	
5490	23.00	<u>23.24</u>	23.24	23.00	
5590	<u>22.20</u>	<u>22.76</u>	22.76	22.20	
5705	23.40	<u>23.32</u>	23.40	23.32	
Test Frequency	Measured 99% I	Bandwidth (MHz)	99% Bandy	vidth (MHz)	
MHz	н	V	Highest	Lowest	

Frequency	Measured 99% E	Bandwidth (MHz)	99% Band	vidth (MHz)	
MHz	Н	V	Highest	Lowest	
5490	<u>17.87</u>	<u>17.87</u>	17.87	17.87	
5590	<u>17.87</u>	<u>17.87</u>	17.87	17.87	
5705	<u>17.87</u>	<u>17.95</u>	17.95	17.87	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

Issue Date: 10th June 2020 **Page:** 28 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	40 MHz Bandwidth	Duty Cycle (%):	Not Applicable
Data Rate:	180 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Frequency	Measured 26 dB Bandwidth (MHz)		26 dB Bandwidth (MHz)		
MHz	Н	V	Highest	Lowest	
5500	<u>44.88</u>	<u>45.05</u>	45.05	44.88	
5580	<u>45.05</u>	<u>44.56</u>	45.05	44.56	
5695	<u>46.33</u>	<u>45.53</u>	46.33	45.53	
Test Frequency	Measured 99% E	Bandwidth (MHz)	99% Bandy	vidth (MHz)	
MHz	Н	٧	Highest	Lowest	
5500	<u>36.55</u>	<u>36.71</u>	36.71	36.55	
5580	<u>36.71</u>	<u>36.55</u>	36.71	36.55	
5695	<u>36.71</u>	<u>36.87</u>	36.87	36.71	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

Issue Date: 10th June 2020 **Page:** 29 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	80 MHz Bandwidth	Duty Cycle (%):	Not Applicable
Data Rate:	390 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Frequency	Measured 26 dB Bandwidth (MHz)		26 dB Bandwidth (MHz)		
MHz	Н	V	Highest	Lowest	
5525	<u>93.30</u>	<u>96.46</u>	96.46	93.30	
5560	<u>92.61</u>	<u>99.07</u>	99.07	92.61	
5675	<u>92.98</u>	<u>96.51</u>	96.51	92.98	
Test Frequency	Measured 99% E	Bandwidth (MHz)	99% Bandy	vidth (MHz)	
MHz	Н	V	Highest	Lowest	
5525	<u>76.63</u>	<u>76.95</u>	76.95	76.63	
5560	<u>76.63</u>	<u>76.63</u>	76.63	76.63	
5675	<u>76.63</u>	<u>76.95</u>	76.95	76.63	

Traceability to Industry Recognized Test Methodologies					
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB				

Note: click the links in the above matrix to view the graphical image (plot).

Issue Date: 10th June 2020 **Page**: 30 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

9.3. Power Spectral Density

Conducted Test Conditions for Power Spectral Density							
Standard:	FCC CFR 47:15.407	CC CFR 47:15.407 Ambient Temp. (°C): 24.0 - 27.5					
Test Heading:	Power Spectral Density	Rel. Humidity (%):	32 - 45				
Standard Section(s):	15.407 (a)	15.407 (a) Pressure (mBars): 999 - 1001					
Reference Document(s):	KDB 789033 - D02 General UNII Test Procedures New Rules v01						

Test Procedure for Power Spectral Density

The In-Band power spectral density was measured using the measure and sum approach per FCC KDB 662911 (D01 Multiple Transmitter Output v02.)

Measure and sum the spectra across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The individual spectra are then summed mathematically in linear power units. Unlike in-band power measurements, in which the sum involves a single measured value (output power) from each output, measurements for compliance with PSD limits involve summing entire spectra across corresponding frequency bins on the various outputs. Consistency is maintained for any device with N transmitter outputs to be certain the individual outputs are all aligned with the same span and same number of points. In this instance, the linear power spectrum value within the first spectral bin of output 0 is summed with that in the first spectral bin of output 1, and the first spectral bin of output 2, and so on up to the Nth output to obtain the true value for the first frequency bin of the summed spectrum. The summed spectrum value for each frequency bin is computed in this fashion. These summed spectral values were calculated on a computer, and the results read back into the spectrum analyzer as a data file to produce a representative plot of total spectral power density.

Calculated Power = $A + 10 \log (1/x) dBm$

A = Total Power Spectral Density [10 Log10 (10a/10 + 10 b/10 + 10c/10 + 10d/10)]

x = Duty Cycle

Test configuration and setup used for the measurement was per the Radiated Test Set-up section specified in this document. Supporting KDB's referenced below.

KDB 662911 D01 & KDB 662911 D02

Radiated measurements used for compliance with conducted limits, the following steps are required to ensure that the total emission power s determined for equipment driving cross polarized antennas:

- (1) Measure radiated emissions with vertical and horizontal polarizations of the measurement antenna;
- (2) Convert each radiated measurement to transmit power based on the antenna gain;

EIRP level to an equivalent electric field strength using the following relationship:

E = EIRP - 20*log(D) + 104.8

Where:

E = electric field strength in $dB\mu V/m$,

EIRP = equivalent isotropic radiated power in dBm

D = specified measurement distance in meters.

(3) Sum the powers or PSDs across the two polarizations to compare the resultant electric field strength level to the applicable limit.

Calculated Power = A + G + Y+ 10 log (1/x) dBm

A = Total Power [$10*Log10 (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$]

G = Antenna Gain

Y = Beamforming Gain

x = Duty Cycle (average power measurements only)

Issue Date: 10th June 2020

Page: 31 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Limits Maximum Power Spectral Density

Operating Frequency Band 5250-5350 and 5470 - 5725 MHz

15. 407 (a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Issue Date: 10th June 2020 **Page:** 32 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

9.3.1.1. Antenna AP0200600

Equipment Configuration for Power Spectral Density

Variant:	20 MHz Bandwidth	Duty Cycle (%):	91.0
Data Rate:	78 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurem	Test Measurement Results					
Test Measured Power Spectral De		pectral Density	Summation Peak			
Frequency	(dBuV/N	/lHz)	Marker + DCCF Limit N (+0.41 dB)		Margin	
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5265	<u>102.73</u>	<u>101.67</u>	1.42	8.00	-6.58	
5300	<u>104.63</u>	<u>99.6</u>	2.00	8.00	-6.00	
5330	<u>104.24</u>	<u>100.08</u>	2.04	8.00	-5.96	

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK		
Measurement Uncertainty:	2.81 dB		

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 33 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	40 MHz Bandwidth	Duty Cycle (%):	82.4
Data Rate:	180 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results						
Test	Measured Power S	pectral Density	Summation Peak	Limelé	Manain	
Frequency	(dBuV/N	ЛHz)	Marker + DCCF Limit N (+0.84 dB)		Margin	
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5275	<u>100.64</u>	<u>98.98</u>	-0.49	8.00	-8.49	
5300	<u>101.58</u>	<u>99.72</u>	0.37	8.00	-7.63	
5320	<u>103.31</u>	<u>99.20</u>	1.35	8.00	-6.65	

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK		
Measurement Uncertainty:	±2.81 dB		

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 34 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	80 MHz Bandwidth	Duty Cycle (%):	72.5
Data Rate:	390 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurem	Test Measurement Results						
Test	Measured Power S	pectral Density	Summation Peak				
Frequency	(dBuV/N	//Hz)	Marker + DCCF Limit (+1.44 dB)		Margin		
MHz	Н	V	dBm/MHz	dBm/MHz	dB		
5290	<u>98.21</u>	<u>94.79</u>	-2.99	8.00	-10.99		
5295	<u>97.65</u>	<u>95.52</u>	-3.11	8.00	-11.11		
5300	<u>98.12</u>	<u>94.32</u>	-3.20	8.00	-11.20		

Traceability to Industry Recognized Test Methodologies				
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK			
Measurement Uncertainty:	±2.81 dB			

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 35 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	20 MHz Bandwidth	Duty Cycle (%):	91.0
Data Rate:	78 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurem	Test Measurement Results					
Test Frequency	Measured Power Spectral Density (dBuV/MHz)		Summation Peak Marker + DCCF (+0.41 dB)	Limit	Margin	
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5490	<u>102.78</u>	<u>103.44</u>	2.31	8.00	-5.69	
5590	<u>105.30</u>	<u>103.03</u>	3.50	8.00	-4.50	
5705	<u>106.31</u>	<u>100.72</u>	3.55	8.00	-4.45	

Traceability to Industry Recognized Test Methodologies		
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK	
Measurement Uncertainty:	2.81 dB	

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 36 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	40 MHz Bandwidth	Duty Cycle (%):	82.4
Data Rate:	180 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results							
Test	Measured Power S	pectral Density	Summation Peak	Limelé			
Frequency	(dBuV/N	/IHz)	Marker + DCCF Limit (+0.84 dB)		Margin		
MHz	Н	V	dBm/MHz	dBm/MHz	dB		
5500	<u>101.49</u>	<u>99.87</u>	0.38	8.00	-7.62		
5580	<u>102.39</u>	<u>100.14</u>	1.03	8.00	-6.97		
5695	<u>104.51</u>	<u>98.65</u>	2.12	8.00	-5.88		

Traceability to Industry Recognized Test Methodologies				
Work Instruction: WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	±2.81 dB			

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 37 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	80 MHz Bandwidth	Duty Cycle (%):	72.5
Data Rate:	390 MBit/s	Antenna Gain (dBi):	9.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results							
Test Frequency	Measured Power S	pectral Density	Summation Peak	Limelé	Manain		
	(dBuV/I	MHz)	Marker + DCCF Limit (+1.40 dB)	Margin			
MHz	Н	V	dBm/MHz	dBm/MHz	dB		
5525	<u>98.24</u>	<u>95.6</u>	-2.70	8.00	-10.70		
5560	<u>98.18</u>	<u>96.3</u>	-2.48	8.00	-10.48		
5675	<u>101.91</u>	<u>97.2</u>	0.34	8.00	-7.66		

Traceability to Industry Recognized Test Methodologies					
Work Instruction: WI-03 MEASURING RF SPECTRUM MASK					
Measurement Uncertainty:	±2.81 dB				

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 38 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

9.3.1.2. Antenna AP0200600 BF

Equipment Confi	guration for	Power S	nactral Daneity	,
Equipment Com	guralion ioi	Power 5	pectial Delisity	,

Variant:	20 MHz Bandwidth	Duty Cycle (%):	91.0
Data Rate:	78 MBit/s	Antenna Gain (dBi):	19.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurem	Test Measurement Results							
Test Frequency	Measured Power S (dBuV/N	. ,	Summation Peak Marker + DCCF (+0.41 dB)	Limit	Margin			
MHz	Н	V	dBm/MHz	dBm/MHz	dB			
5265	<u>104.33</u>	<u>104.57</u>	-6.36	-2.00	-4.36			
5300	<u>105.91</u>	<u>102.03</u>	-6.42	-2.00	-4.42			
5330	<u>105.24</u>	<u>102.56</u>	-6.70	-2.00	-4.70			

Traceability to Industry Recognized Test Methodologies				
Work Instruction: WI-03 MEASURING RF SPECTRUM MASK				
Measurement Uncertainty:	2.81 dB			

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 39 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	40 MHz Bandwidth	Duty Cycle (%):	82.4
Data Rate:	180 MBit/s	Antenna Gain (dBi):	19.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results							
Test	Measured Power S	pectral Density	Summation Peak				
Frequency	(dBuV/N	Marker + DCCF (+0.84 dB)	Limit	Margin			
MHz	Н	V	dBm/MHz	dBm/MHz	dB		
5275	<u>101.30</u>	<u>101.16</u>	-9.15	-2.00	-7.15		
5300	<u>101.94</u>	<u>100.15</u>	-9.24	-2.00	-7.24		
5320	<u>101.68</u>	<u>97.92</u>	-10.18	-2.00	-8.18		

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK		
Measurement Uncertainty:	±2.81 dB		

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 40 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	80 MHz Bandwidth	Duty Cycle (%):	72.5
Data Rate:	390 MBit/s	Antenna Gain (dBi):	19.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results						
Test Measured Power S		pectral Density	Summation Peak			
Frequency	(dBuV/N	//Hz)	Marker + DCCF (+1.44 dB)	Limit	Margin	
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5290	<u>99.48</u>	<u>97.76</u>	-11.12	-2.00	-9.12	
5295	<u>100.11</u>	<u>98.15</u>	-10.58	-2.00	-8.58	
5300	<u>99.49</u>	<u>96.27</u>	-11.65	-2.00	-9.65	

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK		
Measurement Uncertainty:	±2.81 dB		

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 41 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	20 MHz Bandwidth	Duty Cycle (%):	91.0
Data Rate:	78 MBit/s	Antenna Gain (dBi):	19.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results						
Test	Measured Power S	pectral Density	Summation Peak Marker + DCCF (+0.41 dB)	Limit	Margin	
Frequency	(dBuV/N	ЛHz)				
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5490	<u>105.24</u>	<u>103.35</u>	-6.41	-2.00	-4.41	
5590	<u>106.09</u>	<u>102.65</u>	-6.11	-2.00	-4.11	
5705	<u>105.58</u>	<u>102.37</u>	-6.54	-2.00	-4.54	

Traceability to Industry Recognized Test Methodologies			
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK		
Measurement Uncertainty:	2.81 dB		

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 42 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	40 MHz Bandwidth	Duty Cycle (%):	82.4
Data Rate:	180 MBit/s	Antenna Gain (dBi):	19.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results						
Test Measured Power Sp		pectral Density	Summation Peak	1 !14		
Frequency	(dBuV/N	ИHz)	Marker + DCCF (+0.84 dB)	Limit	Margin	
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5500	<u>101.24</u>	<u>99.96</u>	-9.73	-2.00	-7.73	
5580	<u>102.02</u>	<u>99.21</u>	-9.54	-2.00	-7.54	
5695	<u>102.14</u>	<u>99.45</u>	-9.38	-2.00	-7.38	

Traceability to Industry Recognized Test Methodologies			
Work Instruction: WI-03 MEASURING RF SPECTRUM MASK			
Measurement Uncertainty:	±2.81 dB		

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 43 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

Equipment Configuration for Power Spectral Density

Variant:	80 MHz Bandwidth	Duty Cycle (%):	72.5
Data Rate:	390 MBit/s	Antenna Gain (dBi):	19.0
Modulation:	256QAM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	JMH
Engineering Test Notes:			

Test Measurement Results						
Test Measured Power S		pectral Density	Summation Peak			
Frequency	(dBuV/N	ИHz)	Marker + DCCF (+1.40 dB)	Limit	Margin	
MHz	Н	V	dBm/MHz	dBm/MHz	dB	
5525	<u>98.53</u>	<u>95.80</u>	-12.44	-2.00	-10.44	
5560	<u>95.57</u>	<u>95.25</u>	-14.41	-2.00	-12.41	
5675	<u>98.26</u>	<u>96.08</u>	-12.52	-2.00	-10.52	

Traceability to Industry Recognized Test Methodologies	
Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

DCCF - Duty Cycle Correction Factor

Note: click the links in the above matrix to view the graphical image (plot).

KDB 789033 - D02 General UNII Test Procedures New Rules v01 was used to calculate the above Power Spectral Density

Issue Date: 10th June 2020 **Page:** 44 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

APPENDIX A - GRAPHICAL IMAGES

Issue Date: 10th June 2020 **Page:** 45 of 154

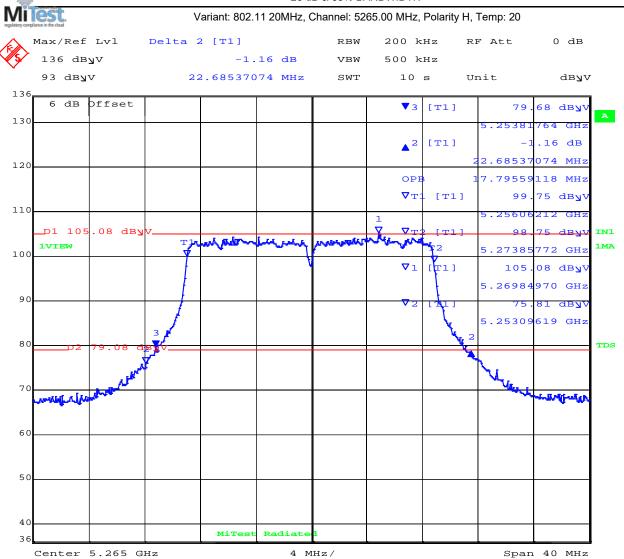


o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

A.1. 26 dB & 99% Bandwidth

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 12:19:39

back to matrix

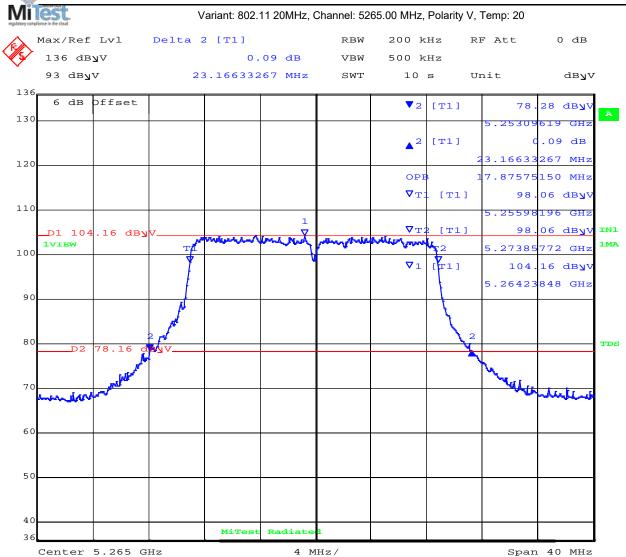
Issue Date: 10th June 2020 **Page**: 46 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 12:15:15

back to matrix

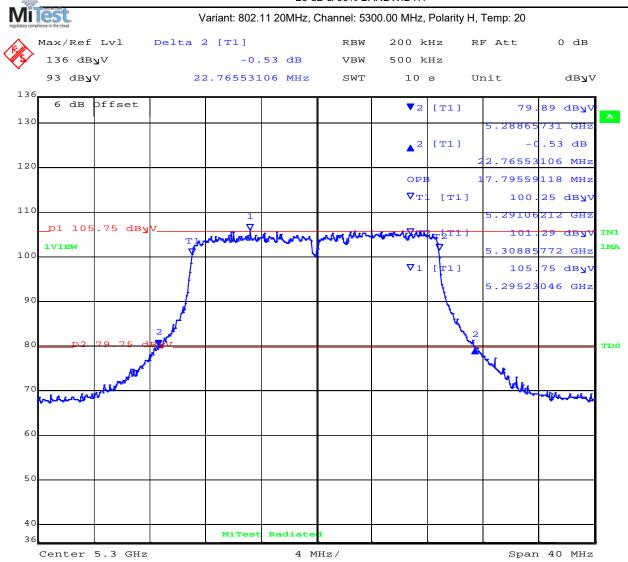
Issue Date: 10th June 2020 **Page**: 47 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 13:30:02

back to matrix

Issue Date: 10th June 2020 **Page:** 48 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

VIITEST. ulstory compliance in the cloud	Variant: 802.	.11 20MHz, Channel: 530	00.00 MHz, Polarity V	, Temp: 20	
Max/Ref Lvl	Delta 2 [T1]	RBW	200 kHz	RF Att	0 dB
136 dB y V	-0	.08 dB VBW	500 kHz		
93 dB 7 V	23.326653	331 MHz SWT	10 s	Unit	dB⊿V
6 dB Offset			▼2 [T1]	75	.82 dByV
130				5.28817	/635 GHz
			_2 [T1]	- (.08 dB
120				23.32665	331 MHz
			OPB	17.87575	5150 MHz
			▽ T1 [T1]	95	.30 dB y V
110				5.29098	3196 GHZ
		1	▽ ⊤2 [⊤1]	95	
100 101.56 di	37A THE STATE OF T	Marie Marie Marie	ALALA CARO	5.30885	772 GHz 11
	★	Ų	V 1 (171)		.56 dB y V
90				5.30252	505 GHz
D2 75.56	2 A		N.	2	TI
<u>, </u>	KAPP .			Ч.	
70 Made March Control				The same of the sa	much
60					
50					
40					
36	MiTest	Radiated			

Date: 14.MAY.2020 13:32:52

back to matrix

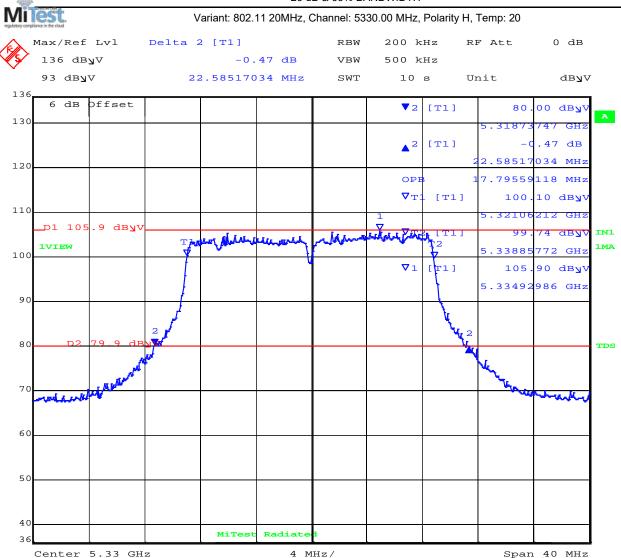
Issue Date: 10th June 2020 **Page:** 49 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 13:49:32

back to matrix

Issue Date: 10th June 2020 **Page:** 50 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

litest. ny compliance in the cloud	Variant:	802.11 20MHz, C	channel: 533	30.00 MHz, Polarity	V, Temp: 20	
Max/Ref Lvl	Delta 2 [T1	1	RBW	200 kHz	RF Att	0 dB
136 dB y V		0.54 dB	VBW	500 kHz		
_	22.825	65130 MHz	SWT	10 s	Unit	dв у V
6 dB Offset				▼ 2 [T1]	76	.11 dByV
30					5.31849	699 GHz
				2 [T1]		.54 dB
20					22.82565	130 MHz
				OPB	17.87575	150 MHz
				▽ T1 [T1] 96	.14 dByV
10					5.32098	196 GHz
				▼ T2 [T1] 96	.52 dB y V
_D1 102.12 dB	V	lereing insi,	Andrew All	ALVALA LANGE	5.33885	772 GHz
00	T#			V1 (Vr1)		.15 dByV
						355 GHz
80				V _k		
D2 76.15 (dev v			,	\ <u>^</u>	
70	d ^r				The Later of the L	
(MENTINE MATERIAL)					200	استهاماندسه
60						
50						
40						
36	Mil	est Radiate	1			

Date: 14.MAY.2020 13:39:18

back to matrix

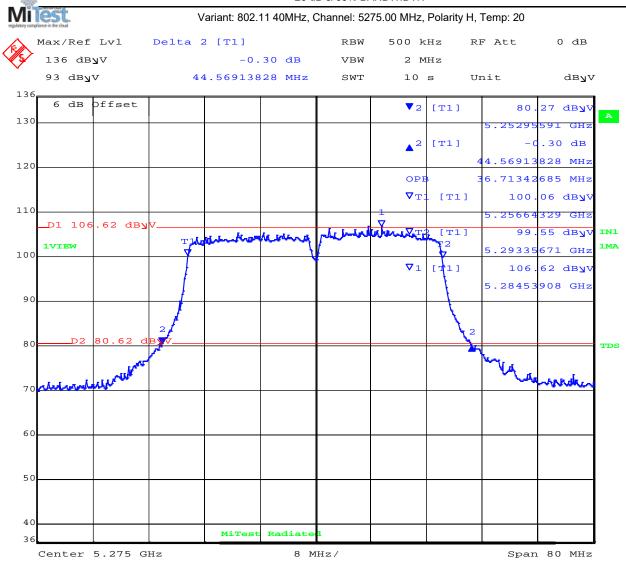
Issue Date: 10th June 2020 **Page:** 51 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 14:34:39

back to matrix

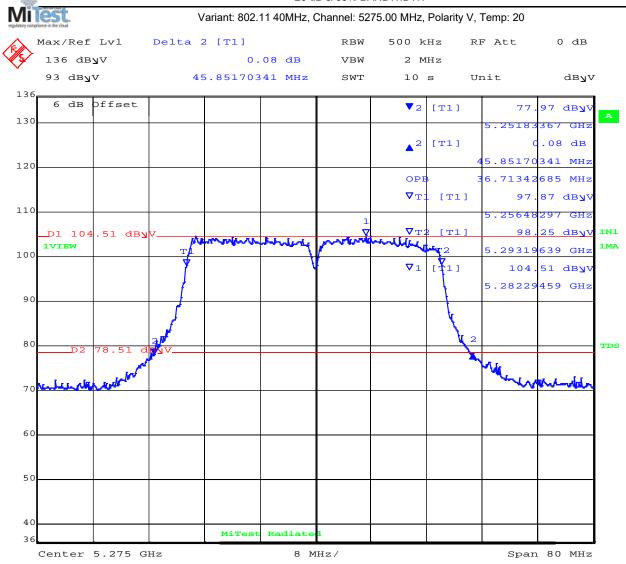
Issue Date: 10th June 2020 **Page**: 52 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 14:32:26

back to matrix

Issue Date: 10th June 2020 **Page**: 53 of 154



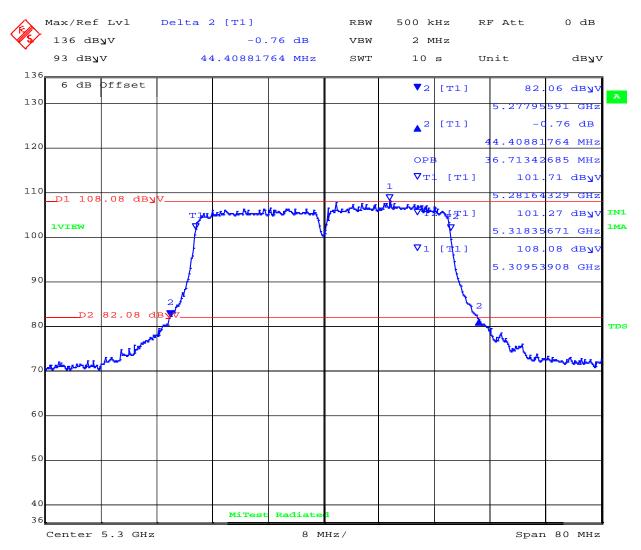
FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Variant: 802.11 40MHz, Channel: 5300.00 MHz, Polarity H, Temp: 20



Date: 14.MAY.2020 14:44:49

back to matrix

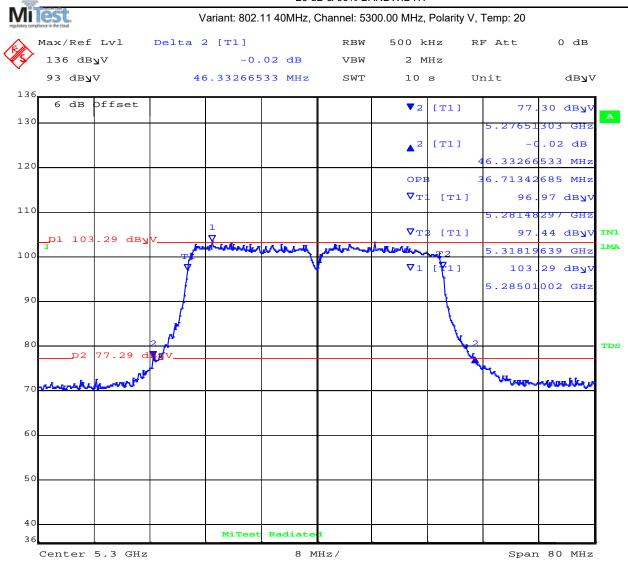
Issue Date: 10th June 2020 **Page:** 54 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 14:47:34

back to matrix

Issue Date: 10th June 2020 **Page**: 55 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

/II]	est.		V	ariant: 802.	11 40MHz, (Channel: 53	20.00 MHz,	Polarity H	I, Temp: 20	
	Max/Ref	Lvl	Delta 2	[T1]		RBW	500 k	Hz	RF Att	0 dB
5 >	136 dB	Λ_{Λ}		-0.	70 dB	VBW	2 M	Hz		
	93 dB y	V	44	.869739	48 MHz	SWT	10	s	Unit	db y v
.36	6 dB	Offset					▼2	[T1]	0.1	21 dp.//
30							▼ 2	[TI]	81	_
							2	[]	5.2980	
							▲ ²	[T1]		0.70 dB 3948 MHz
20							OPE			2685 MHz
							∇ _T 1			
10						1	V T1	[T1]		.91 dByV 4329 GHz
	_D1 107	.28 dBy		and a second	Minter	~\r	milla desert	[T1]		.39 dbyv
	1VIEW		T }\		1		, p	12		.39 ав у v 5671 GHz
00							V 1	[11]		.28 dByV
			ļ ļ				V 1	1 1		_
90			1					t	5.3210	4369 GHz
	D2	81.28 d	2 B					The state of the s	2	
30	م ا الإيالة ال	a Ker							VALLE CONTROL OF	The talk of
70	The state of the s	Therit								- Co or off of
50										
50										
40										
36				MiTest	Radiate	1				

Date: 14.MAY.2020 15:14:18

back to matrix

Issue Date: 10th June 2020 **Page:** 56 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

lilest.	Variant: 80	2.11 40MHz, C	Channel: 532	20.00 MHz, Po	larity V, Temp: 20	
Max/Ref Lvl	Delta 2 [T1]		RBW	500 kHz	RF Att	0 dB
136 dB y V	_	1.07 dB	VBW	2 MHz		
93 dB y V	46.6332	6653 MHz	SWT	10 s	Unit	dB y V
6 dB Offset				V 2 [5	r1] 76	.68 dB y V
30					5.2968	
				<u>^</u> 2 [:		1.07 dB
20				_	46.6332	6653 MHz
				OPB	36.8737	4749 MHz
				∇ _T 1	[T1] 95	.21 dByV
1.0						8297 GHz
_D1 102.01 dB	N 7.7			1 ∇⊤2 ∇	[T1] 95	.57 dByV
00 102.01 48	The state of the s	markey	MANAGER	andra of		5671 GHz
	Th.	ţ t	f	∇ 1 [102	.01 dByV
9.0					5.3319	4389 GHz
					T _k	
30	2,1				2	
D2 76.01 (The same of the sa	
70 Miles In the Contraction of t					W.Co.	Aranna
60						
5.0						
40	MiTe	st Radiate	1			
36. Center 5.32 GI		8 M			Ĺ	n 80 MHz

Date: 14.MAY.2020 15:10:50

back to matrix

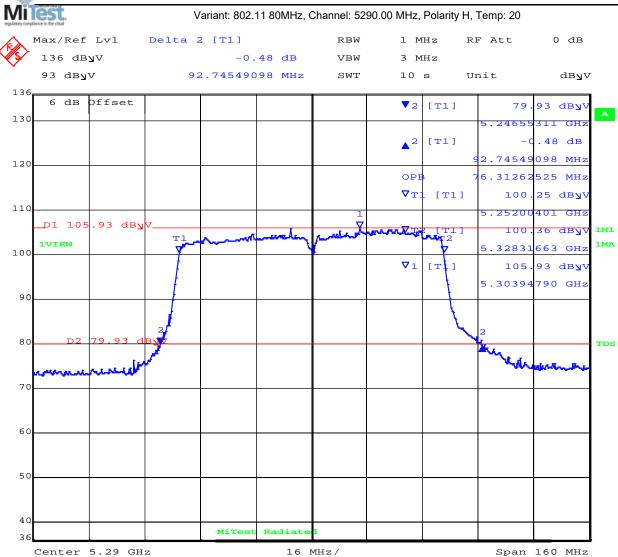
Issue Date: 10th June 2020 **Page:** 57 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 17:03:36

back to matrix

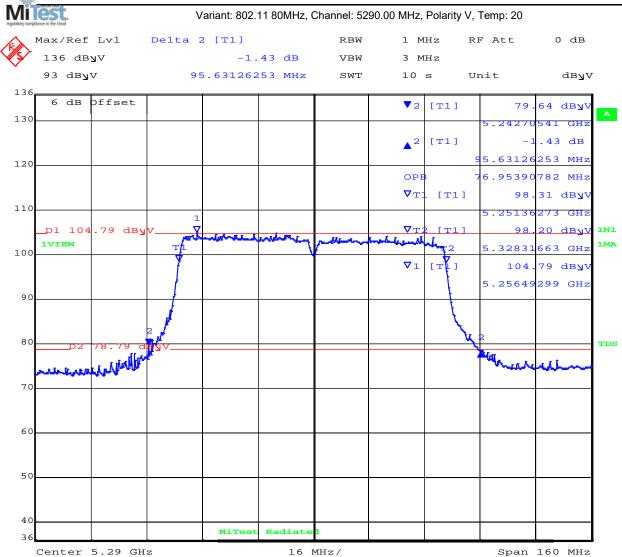
Issue Date: 10th June 2020 **Page**: 58 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 16:58:00

back to matrix

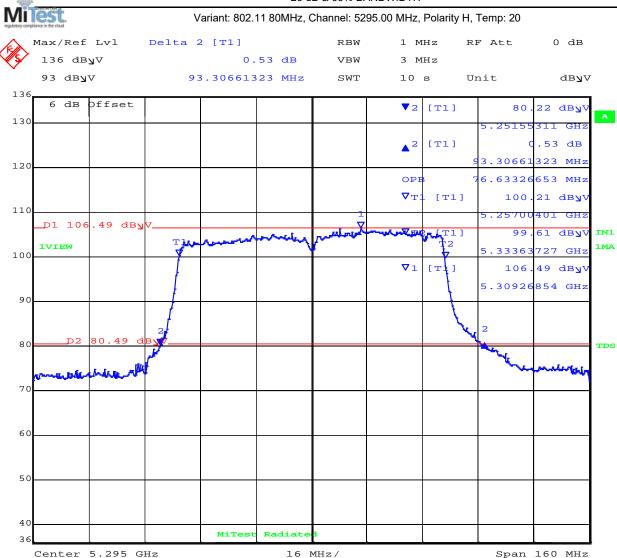
Issue Date: 10th June 2020 **Page**: 59 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 19.MAY.2020 08:46:04

back to matrix

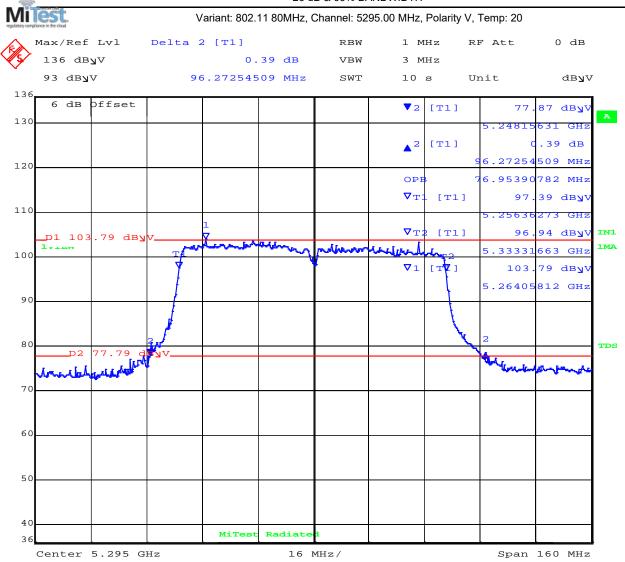
Issue Date: 10th June 2020 **Page**: 60 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 15.MAY.2020 08:09:44

back to matrix

Issue Date: 10th June 2020 Page: 61 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

Mi regulatory con	Test.		V	ariant: 802.	11 80MHz, (Channel: 53	00.00 MHz,	Polarity H	, Temp: 20		
(£)	Max/Ref L	vl	Delta 2	[T1]		RBW	1 M	IHZ I	RF Att	0 dB	
V5 /	136 dB y V			0.	02 dB	VBW	3 M	Hz			
-	93 dB y V		93	.176352	71 MHz	SWT	10	s (Jnit	dв у V	7
136		fset					▼2	[T1]	80	.54 dB y V	Ī
130										2144 GHz	A
							▲ ²	[T1]		.02 dB	
120							_		93.17635	271 MHz	
							OPE	8	76.63326	653 MHz	
							∇ _T :	[T1]	101	.08 db y V	
110	_D1 106.6	dBuV				1 V			5.26200	401 GHz	
		α Δ3 ν	Т1		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	and the same		T[T1]	100	.09 dB y V	IN1
100	1VIEW		7		`			 	5.33863	727 GHz	1MA
			<i>‡</i>				∇ 1	[T]		.60 dB y V	1
90			Į.						5.31170	341 GHz	
90											
			2					1	2		
80	D2 80	.6 dB	N. A.						*		TDS
	150,000 mm.	مرين مهلايمين	P.						The same	more white	
70		_									
60											1
50											
40											
36				MiTest	Radiate	3					
	Center 5.	3 GHz			16 1	MHz/			Span	160 MHz	-

Date: 19.MAY.2020 08:53:37

back to matrix

Issue Date: 10th June 2020 **Page:** 62 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

I lest.	Variant: 802.	11 80MHz, Channel: 530	00.00 MHz, Polarity	V, Temp: 20	
Max/Ref Lvl	Delta 2 [T1]	RBW	1 MHz	RF Att	0 dB
136 dByV	-0.	.53 dB VBW	3 MHz		
93 dB y V	101.082164	133 MHz SWT	10 s	Unit	dB ∄ V
6 dB Dffset			▼2 [T1]	77	.35 dB y V
30				5.2487	9760 GHz
			▲2 [T1]	_	0.53 dB
20				101.0821	6433 MHz
			OPB		4910 MHz
10			∇ T1 [T1]		.43 dByV
	1		▽ ⊤2 [⊤1]		.94 dByV
_D1 102.68 dB	Z V	Many Addition	a Reliz na 1		3727 GHz
	T	V	V 1 [1 ¹ 1 ²]		.68 dByV
			🕴		5992 GHz
30 2				2	
	dayv_			Λ."	
D2 76.68	, and the second			Mercuri	a dicular
70					
50					
50					
10					
36	MiTest	Radiated			

Date: 15.MAY.2020 08:25:45

back to matrix

Issue Date: 10th June 2020 **Page:** 63 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

ry compliance in the cloud	Va	ariant: 802.	11 20MHz, (Channel: 54	90.00 MHz,	Polarity F	I, Temp: 20	
Max/Ref Lvl	Delta 2	[T1]		RBW	200 k	Hz	RF Att	0 dB
136 dByV		-1.	02 dB	VBW	500 k	Hz		
93 db7 V	23	.006012	02 MHz	SWT	10	S	Unit	dB y V
6 dB Offset					▼2	[T1]	80	.70 db y V
30							5.4782	5651 GHz
					▲ ²	[T1]	_	1.02 dB
20							23.0060	1202 MHz
					OPE	8	17.8757	5150 MHz
					▽ T	[T1]	100	.76 dB y V
10		1					5.4809	8196 GHz
_D1 105.62 di	Τ <u>Ι</u>	mander	when	والمسال معالي	رياليدر كالأر	(T1)	99	. <mark>80 dBy</mark> V
1VIEW	₹					7	5.4988	5772 GHz
	l ł				∇ 1	[T1]	105	.62 dB y V
90	[]					Ţ	5.4852	3046 GHz
80 D2 79.62	2 2 4 V					L. Veren	2	
70 ACCEPTION OF THE PROPERTY O	park .						and rober	ak .
/ Limiter was								Metro Mark
60								
50								
40		MiTest	Radiate	a E				

Date: 14.MAY.2020 13:53:17

back to matrix

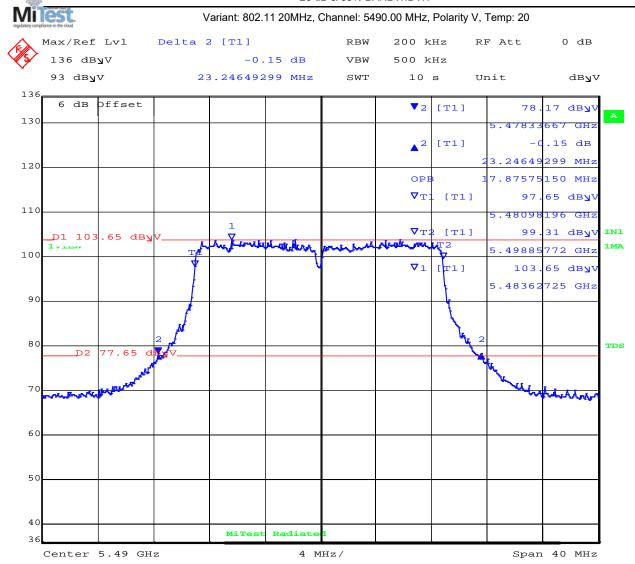
Issue Date: 10th June 2020 **Page:** 64 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 13:56:04

back to matrix

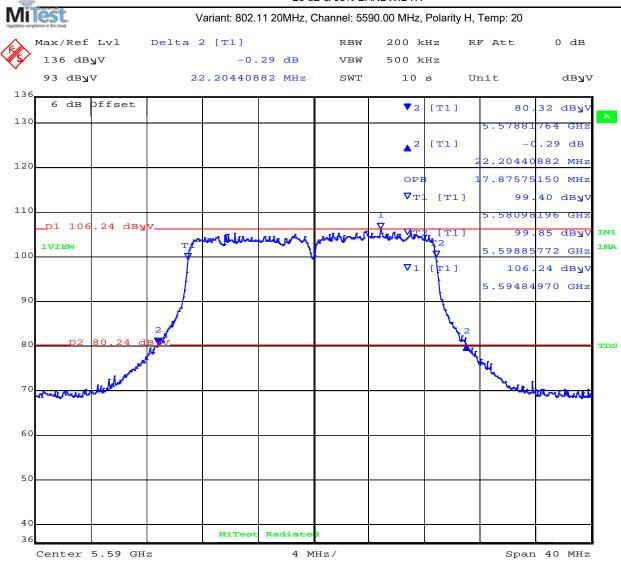
Issue Date: 10th June 2020 **Page:** 65 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 14:02:09

back to matrix

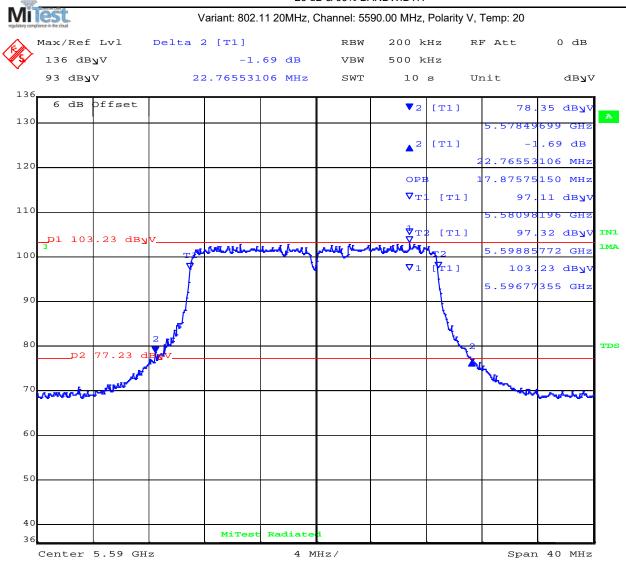
Issue Date: 10th June 2020 **Page:** 66 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 13:59:48

back to matrix

Issue Date: 10th June 2020 **Page**: 67 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

iTest	V	ariant: 802 1	11 20MHz, C	hannel: 57	05 00 MHz	Polarity F	1 Temp: 20	
y compliance in the cloud			2011112, 0			-		ar o
Max/Ref Lvl	Delta 2			RBW	200 k		RF Att	0 dB
136 dByV			22 dB	VBW	500 k			
93 dB y V	23	.406813	63 MHz	SWT	10	s	Unit	dB y V
6 dB Offset					▼2	[T1]	7.8	.80 dByV
30					V Z	[11]		
						[m 1 1	5.6930	
					▲ ²	[T1]		0.22 dB
20								1363 MHz
					OPI		17.8757	5150 MHz
1.0					▽ _T :	[T1]	98	.12 dByV
					1		5.6959	8196 GHZ
_D1 104.72 dB	л <u>~</u>	مستريش يمساره	Marks a present	مكناك مراجعين		2 [T1] * ▼2	99	.82 dB <u>u</u> V
1VIEW	тĹ	- Andrew	~~~~~	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		7	5.7138	5772 GHz
	¥		, and the second		∇ 1	[11]	104	.72 dByV
						1 1	5.7092	8858 GHz
90	+ +					1		
	f					1		
30	2 /					X	2	
D2 78.72	dgy ∨					1	4.	
1 1 1	ρ <u>α</u>						will.	<u>ڐٵڵڎڽڎؙڂٷڛڞ</u> ڎڋۮ
70 Carininik Land							سمر	La lite de la
50								
5.0								
10								
36		MiTest	Radiate	1				

Date: 14.MAY.2020 14:06:34

back to matrix

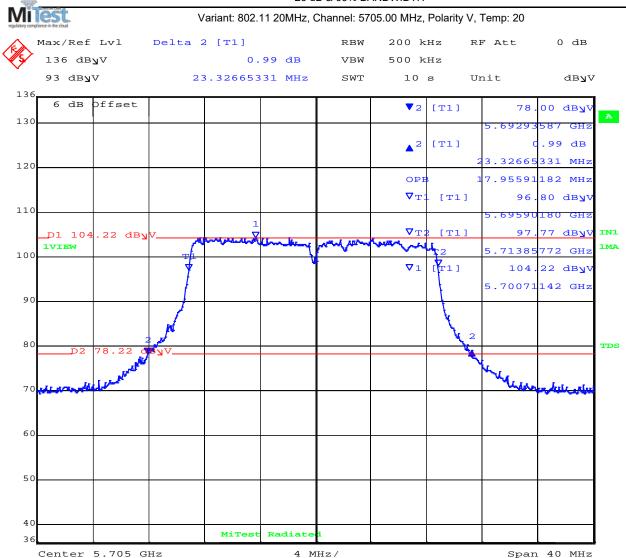
Issue Date: 10th June 2020 **Page:** 68 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 14:08:37

back to matrix

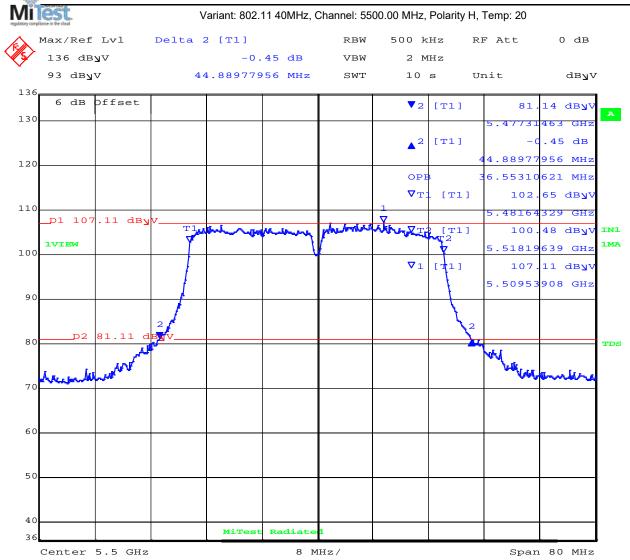
Issue Date: 10th June 2020 **Page**: 69 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 15:32:15

back to matrix

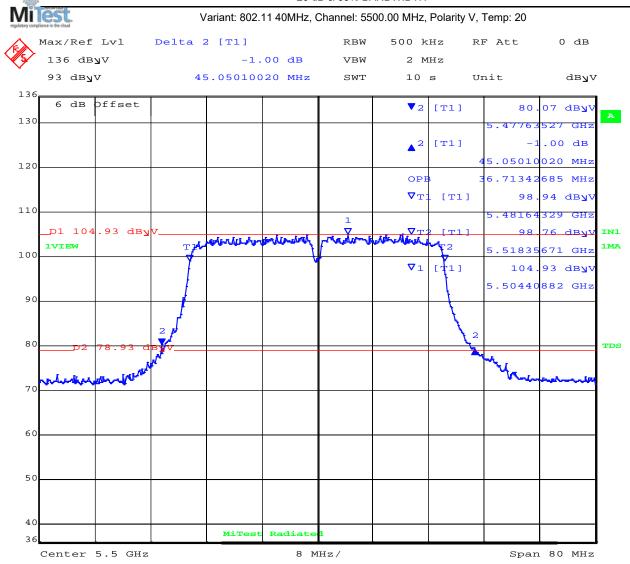
Issue Date: 10th June 2020 **Page**: 70 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 15:34:59

back to matrix

Issue Date: 10th June 2020 **Page**: 71 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

i lest	Variant:	302.11 40MHz,	Channel: 55	80.00 MHz, Po	plarity H, Temp: 20	
y compliance in the cloud Max/Ref Lvl	Delta 2 [T1		RBW	500 kH:		0 dB
136 dByV		-0.15 dB	VBW	2 MH:	z	
93 dB y V	45.050	10020 MHz	SWT	10 s	Unit	dв у V
36						
6 dB Offset				▼2 [T1] 81	.11 dByV
30					5.5574	7495 GHz
				<u>^</u> 2 [T1] -	0.15 dB
20					45.0501	0020 MHz
				OPB	36.7134	2685 MHz
				▽ _Т :	[T1] 101	.33 dB y V
10				1	5.5616	4329 GHz
_D1 106.99 di	T Total March of the Control of the	and the later	- The State of the	A A A A A A A A A A A A A A A A A A A	[T1] 100	.29 dB y V
1VIEW	₹.		Į.	"	5.5983	5671 GHz
				V 1 [11] 106	.99 dByV
					1	0421 GHz
90	 				+	
D2 80.99	2 dB V V				2	
70 manhetinehit					M	
70					-terff	diame
50			+			
5.0						
10						
36	Mil	est Radiat	ed			

Date: 14.MAY.2020 15:59:10

back to matrix

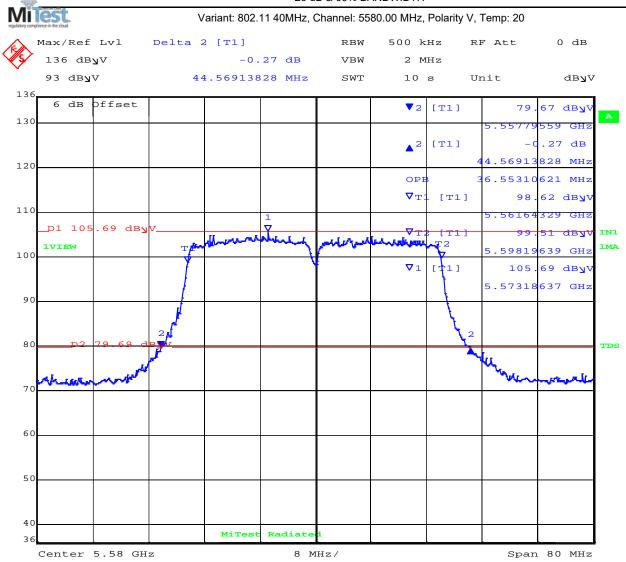
Issue Date: 10th June 2020 **Page:** 72 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 16:02:12

back to matrix

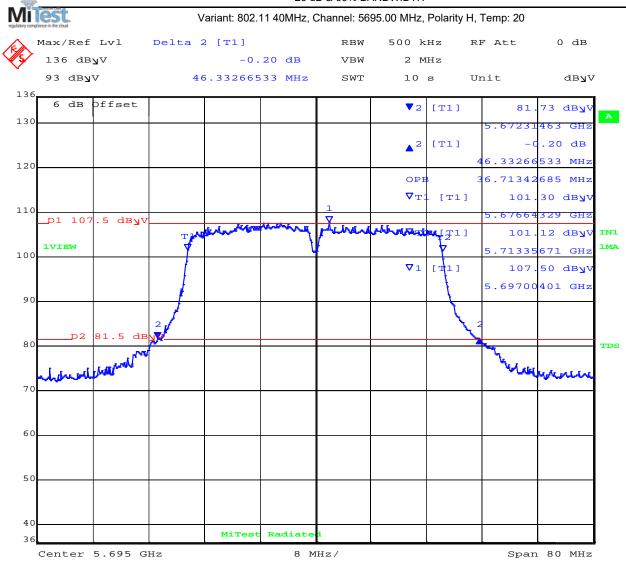
Issue Date: 10th June 2020 **Page**: 73 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 16:33:12

back to matrix

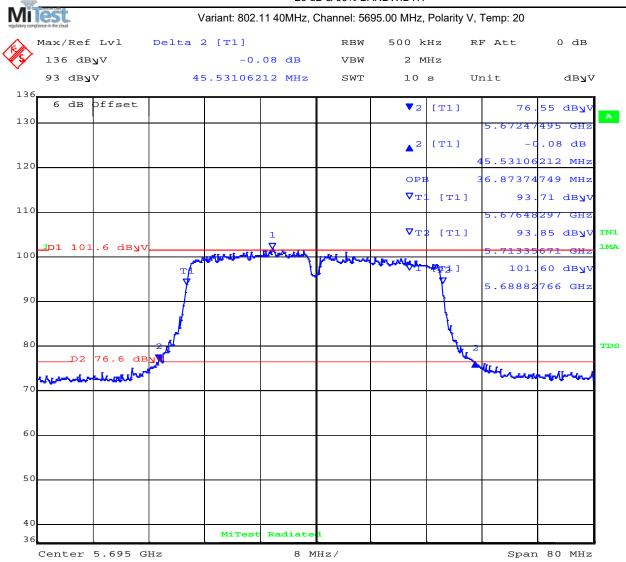
Issue Date: 10th June 2020 **Page**: 74 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 14.MAY.2020 16:36:03

back to matrix

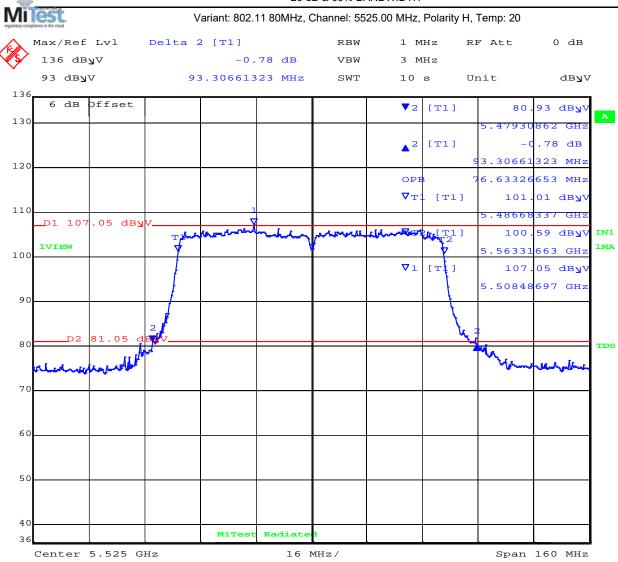
Issue Date: 10th June 2020 **Page:** 75 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 15.MAY.2020 08:43:41

back to matrix

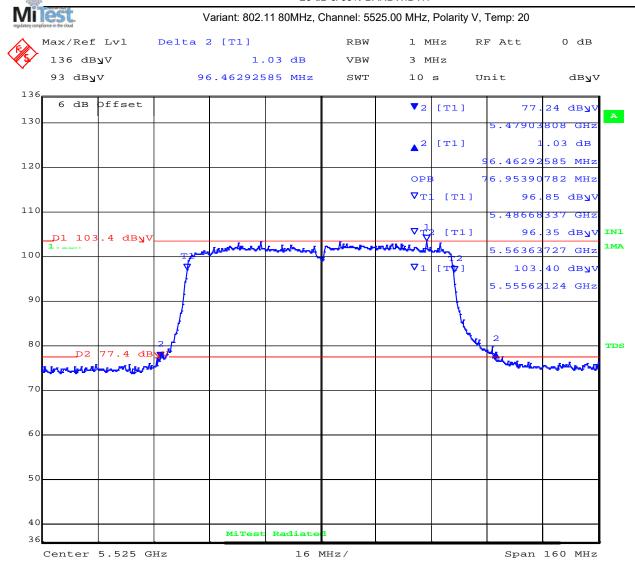
Issue Date: 10th June 2020 **Page**: 76 of 154



Fo: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 15.MAY.2020 08:49:25

back to matrix

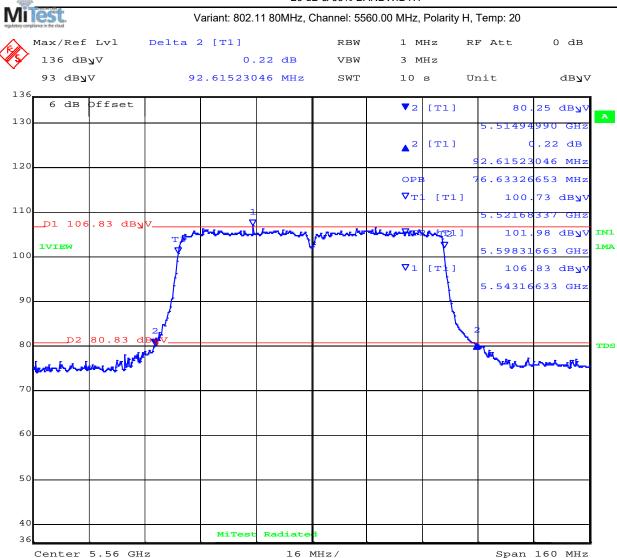
Issue Date: 10th June 2020 **Page**: 77 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 15.MAY.2020 08:58:15

back to matrix

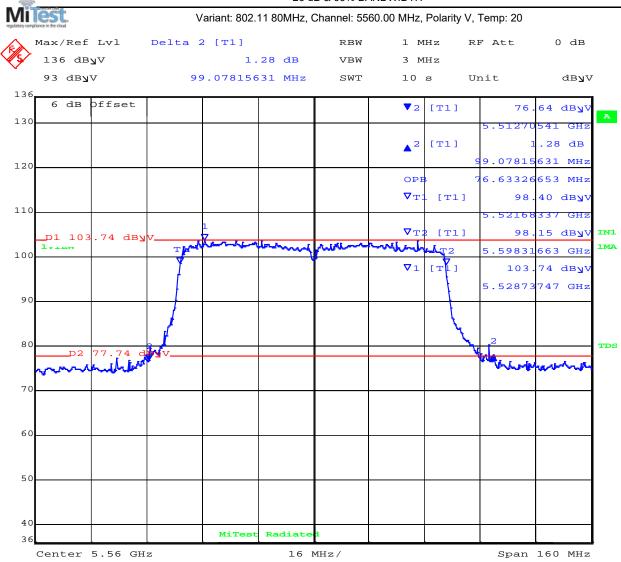
Issue Date: 10th June 2020 **Page**: 78 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 15.MAY.2020 09:03:31

back to matrix

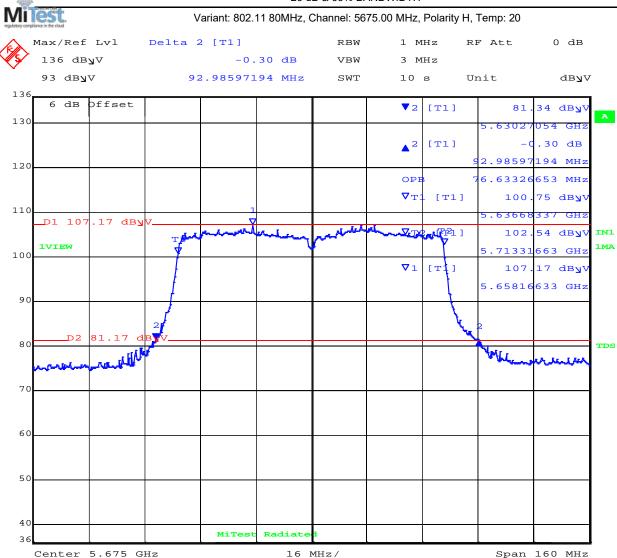
Issue Date: 10th June 2020 **Page**: 79 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH



Date: 15.MAY.2020 09:26:53

back to matrix

Issue Date: 10th June 2020 **Page**: 80 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

26 dB & 99% BANDWIDTH

tory compliance in the	t.			Variant: 802	2.11 80MHz,	Channel: 56	75.00 MHz,	Polarity	V, Temp: 2	0	
Max	/Ref	Lvl	Delta	2 [T1]		RBW	1 M	Hz	RF Att	0 dB	3
13	6 dB	Λ_{Λ}		-0	.25 dB	VBW	3 M	Hz			
	dву	V		96.51302	605 MHz	SWT	10	s	Unit	dву	V
36	dВ	Offset					▼2	[T1]		78.32 dBy	V
130									5.627	738477 GH	
							<u>^</u> 2	[T1]		-0.25 dB	
.20									96.513	302605 МН	z
							OPI	3	76.953	390782 мн	z
							▽ _T :	[T1] 9	96.45 dBy	V
10					L				5.636	36273 GH	Z
_D:	L 104	ر.34 dB	v		7			2 [T1] 9	97.23 dBy	V 1
00 1V:	LEW		_t^	the transfer of the second	The williams	Part State Land	mintered	₩	5.713	31663 GH	z
			▼				∇ 1	[T]	10	04.34 dBy	V
			<i> </i>					[5.657	752505 GH	z
90											1
			<i> </i>					{			
80			Proft.					,	2		╝.
	D2	78.34 d	עע עע						Villa	الموسيسية المن	_
		Transfer to									1
70											-
60											
50											+
4.0											
36				MiTes	t Radiate	4					1

Date: 15.MAY.2020 09:23:19

back to matrix

Issue Date: 10th June 2020 **Page**: 81 of 154

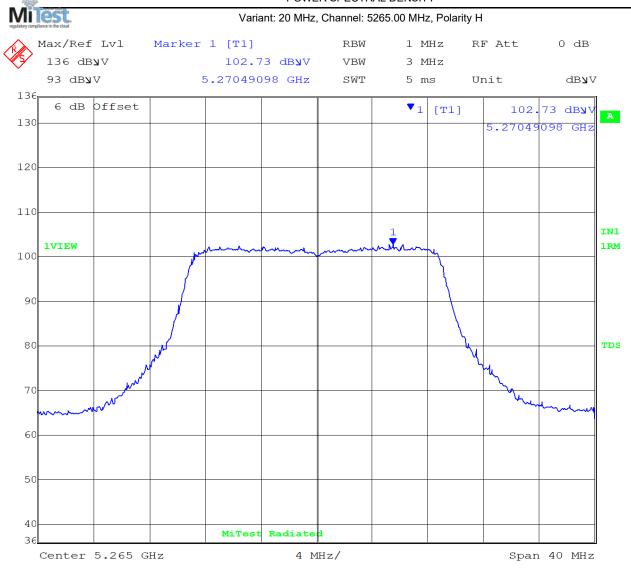


To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

A.2. Power Spectral Density

POWER SPECTRAL DENSITY



Date: 15.MAY.2020 11:46:16

back to matrix

Issue Date: 10th June 2020 **Page:** 82 of 154

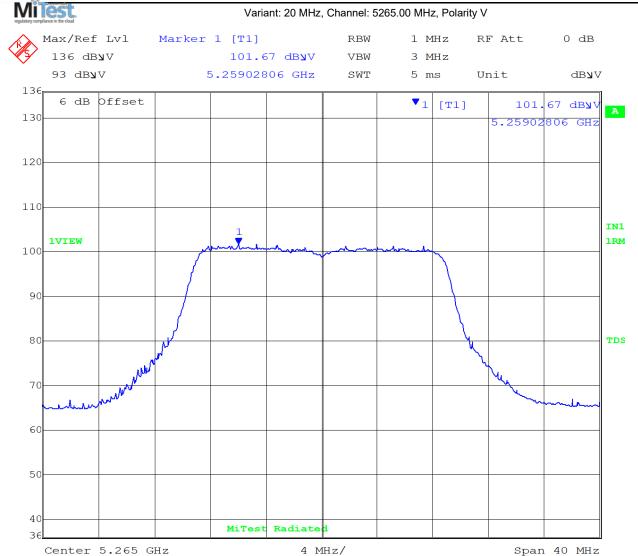


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5265.00 MHz, Polarity V



15.MAY.2020 11:44:27 Date:

back to matrix

10th June 2020 Issue Date: Page: 83 of 154

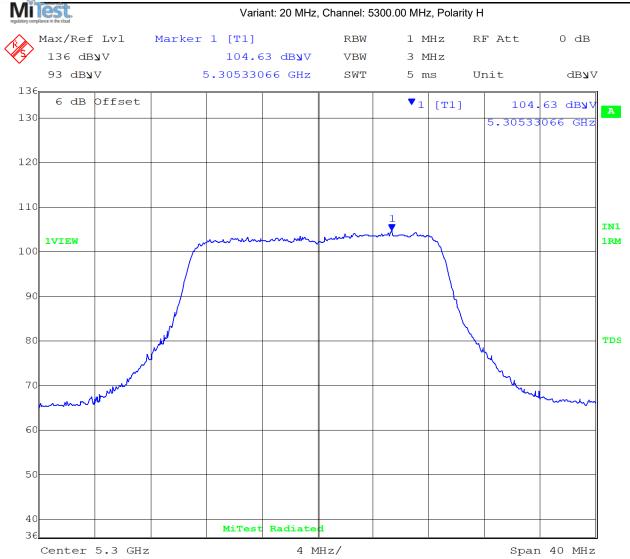


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5300.00 MHz, Polarity H



15.MAY.2020 11:55:04 Date:

back to matrix

10th June 2020 Issue Date: Page: 84 of 154

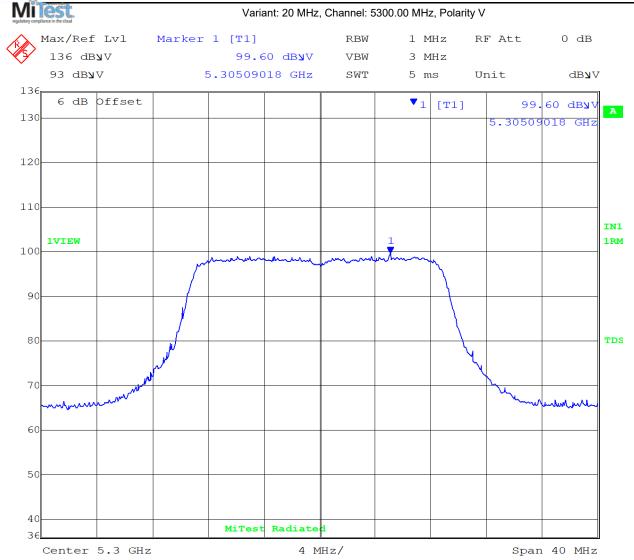


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5300.00 MHz, Polarity V



15.MAY.2020 11:56:22 Date:

back to matrix

10th June 2020 Issue Date: Page: 85 of 154

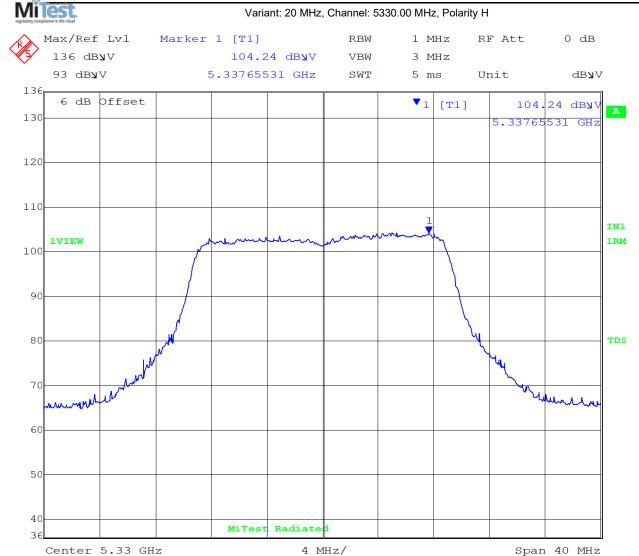


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5330.00 MHz, Polarity H



15.MAY.2020 11:59:44 Date:

back to matrix

10th June 2020 Issue Date: Page: 86 of 154



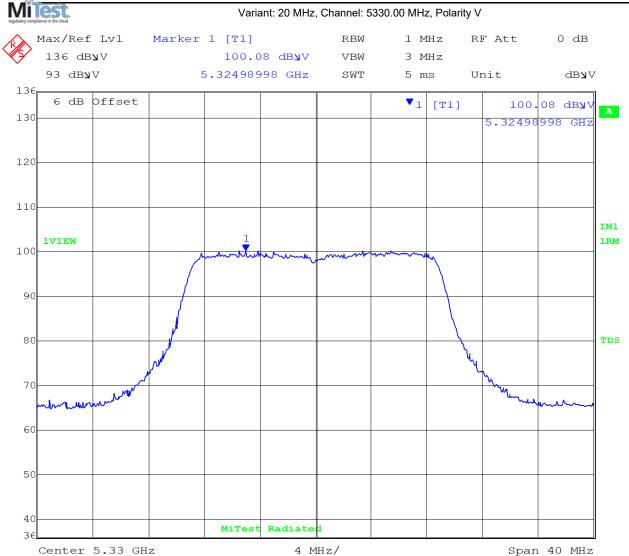
RADWIN JET DUO 5.x/5.x GHz

FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5330.00 MHz, Polarity V



15.MAY.2020 11:58:20 Date:

back to matrix

10th June 2020 Issue Date: Page: 87 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5275.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 db**y**V 100.64 dByV VBW 3 MHz 93 dB**y**V 5.28453908 GHz SWT 5 ms Unit dbyv 6 dB Offset [T1] 100.64 dBy 130 5.28453908 GHz 120 110 IN1 1VIEW 1RM 100 90 80 TDS 70 50 MiTest Radiate Center 5.275 GHz 8 MHz/ Span 80 MHz

Date: 15.MAY.2020 14:58:39

back to matrix

Issue Date: 10th June 2020 **Page:** 88 of 154

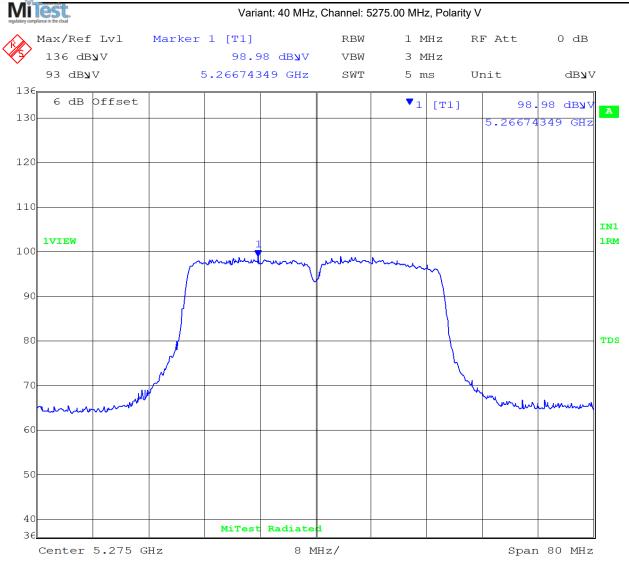


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5275.00 MHz, Polarity V



15.MAY.2020 15:05:01 Date:

back to matrix

10th June 2020 Issue Date: Page: 89 of 154

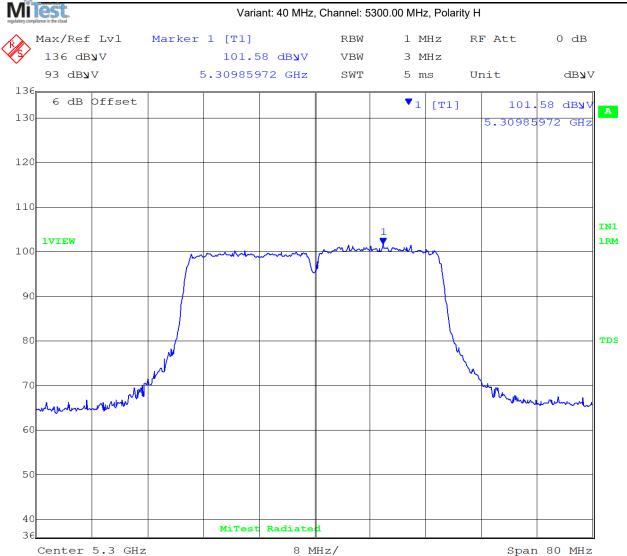


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5300.00 MHz, Polarity H



15.MAY.2020 14:56:56 Date:

back to matrix

10th June 2020 Issue Date: Page: 90 of 154

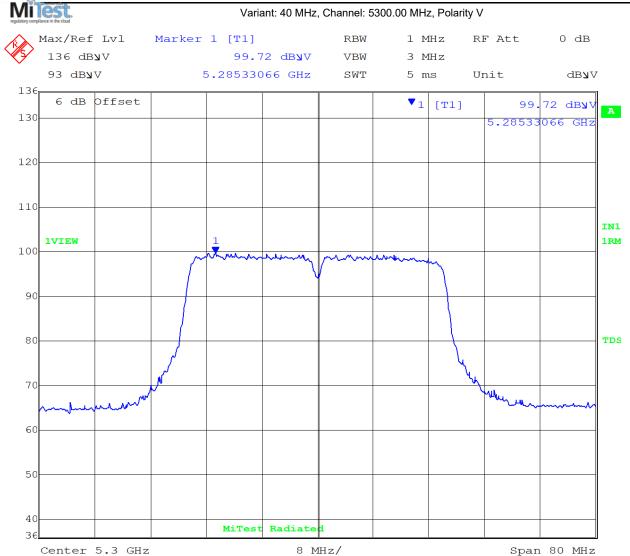


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5300.00 MHz, Polarity V



15.MAY.2020 14:54:49 Date:

back to matrix

10th June 2020 Issue Date: Page: 91 of 154

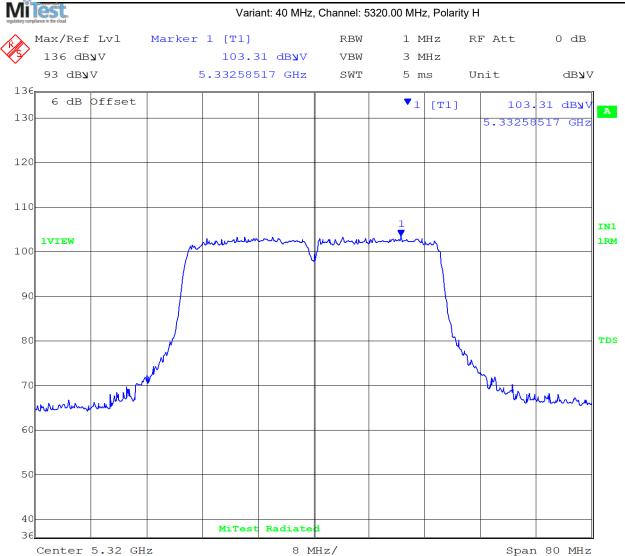


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5320.00 MHz, Polarity H



15.MAY.2020 14:50:45 Date:

back to matrix

10th June 2020 Issue Date: Page: 92 of 154

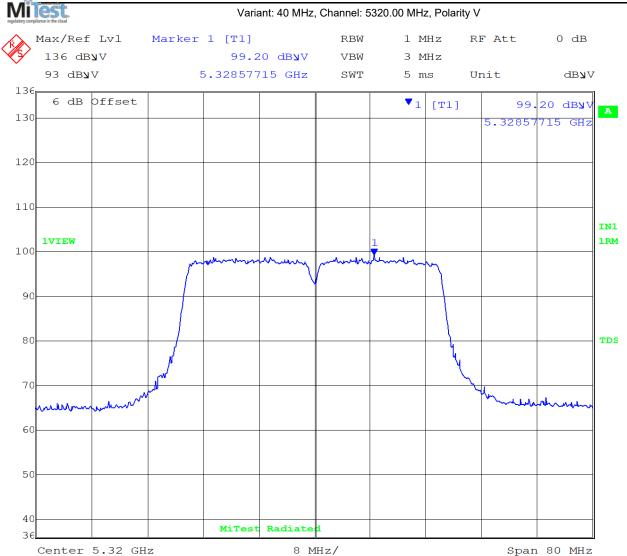


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5320.00 MHz, Polarity V



15.MAY.2020 14:52:27 Date:

back to matrix

10th June 2020 Issue Date: Page: 93 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5290.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 db**y**V 98.21 dByV VBW 3 MHz 93 dB**y**V 5.30875752 GHz SWT 5 ms Unit dbyv 6 dB Offset \mathbf{v}_1 98.21 dBy [T1] 130 5.30875752 GHz 120 110 IN1 1VIEW 1RM 100 90 80 TDS 70 50 MiTest Radiate Center 5.29 GHz 16 MHz/ Span 160 MHz

Date: 15.MAY.2020 15:09:54

back to matrix

Issue Date: 10th June 2020 **Page:** 94 of 154



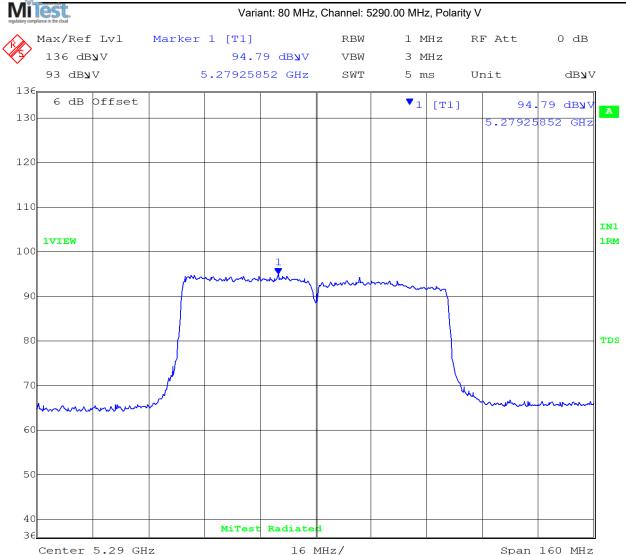
FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 160 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5290.00 MHz, Polarity V



15.MAY.2020 15:07:33 Date:

Center 5.29 GHz

back to matrix

10th June 2020 Issue Date: Page: 95 of 154

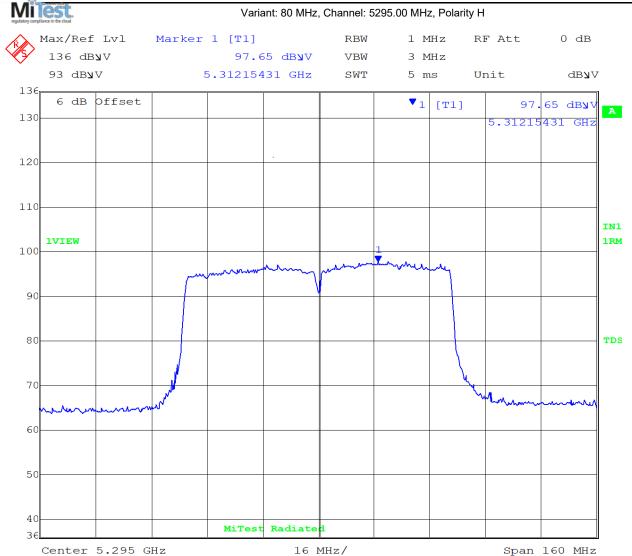


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5295.00 MHz, Polarity H



15.MAY.2020 15:11:19 Date:

back to matrix

10th June 2020 Issue Date: Page: 96 of 154

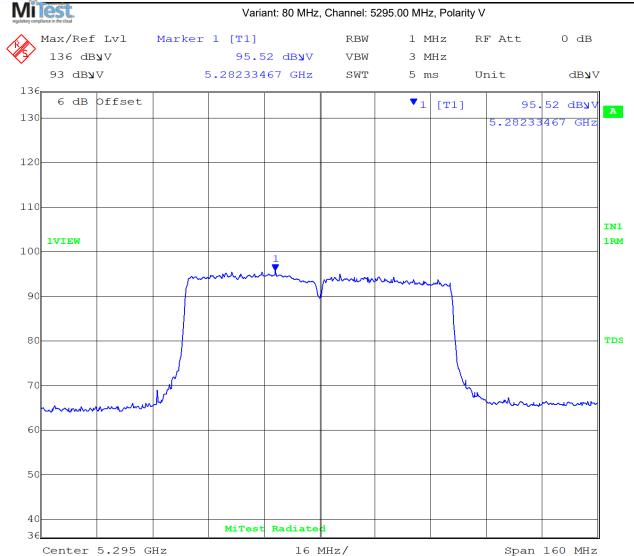


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5295.00 MHz, Polarity V



15.MAY.2020 15:13:03 Date:

back to matrix

10th June 2020 Issue Date: Page: 97 of 154

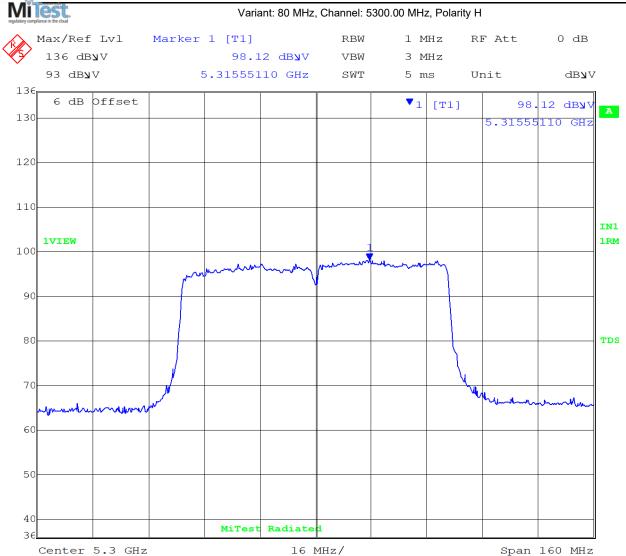


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5300.00 MHz, Polarity H



15.MAY.2020 15:20:58 Date:

back to matrix

10th June 2020 Issue Date: Page: 98 of 154

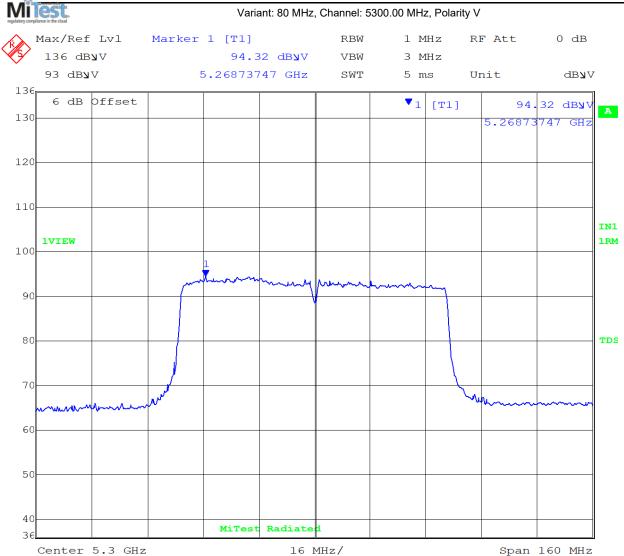


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5300.00 MHz, Polarity V



15.MAY.2020 15:19:36 Date:

back to matrix

10th June 2020 Issue Date: Page: 99 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5490.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 db**y**V 102.78 dB**y**V VBW 3 MHz 93 dB**y**V 5.49525050 GHz SWT 5 ms Unit dbyv 6 dB Offset 102.78 dBy [T1] 130 5.49525050 GHz 120 110 IN1 1VIEW 1RM 100 90 80 TDS 70 50 MiTest Radiate Center 5.49 GHz 4 MHz/ Span 40 MHz

Date: 15.MAY.2020 13:05:49

back to matrix

Issue Date: 10th June 2020 **Page:** 100 of 154

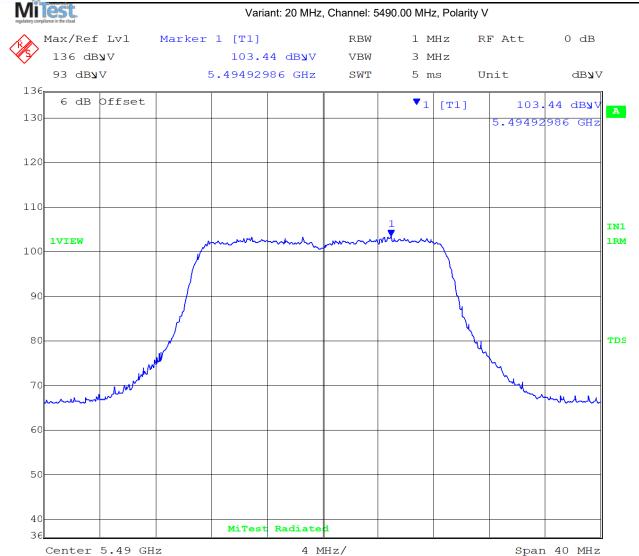


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5490.00 MHz, Polarity V



15.MAY.2020 13:07:15 Date:

back to matrix

10th June 2020 101 of 154 Issue Date: Page:



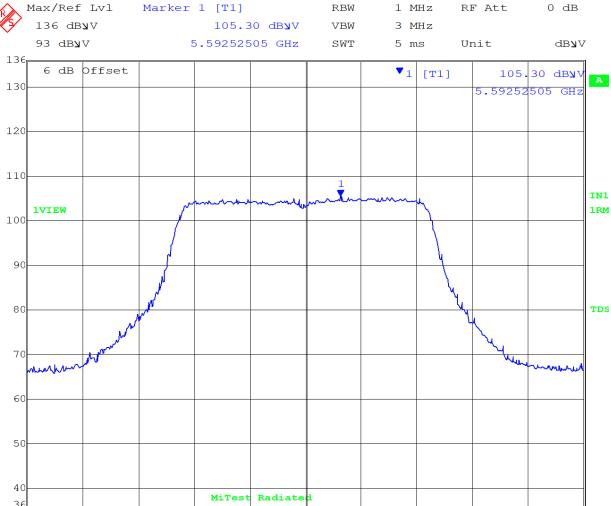
To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 40 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5590.00 MHz, Polarity H



4 MHz/

Date: 15.MAY.2020 13:11:11

Center 5.59 GHz

back to matrix

Issue Date: 10th June 2020 **Page:** 102 of 154

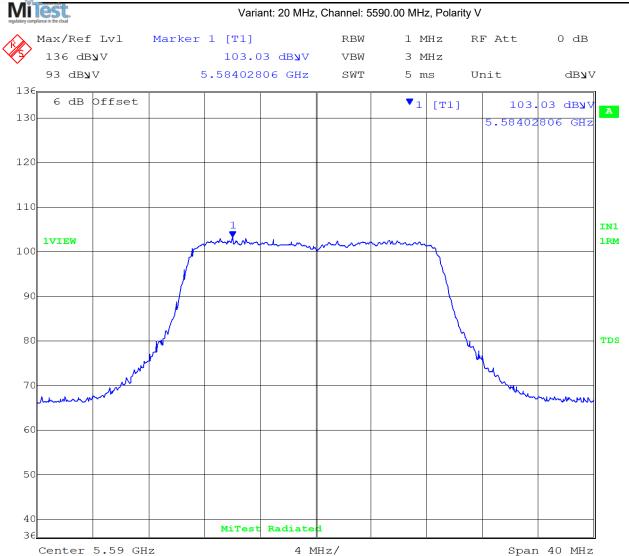


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5590.00 MHz, Polarity V



15.MAY.2020 13:09:39 Date:

back to matrix

10th June 2020 Issue Date: Page: 103 of 154

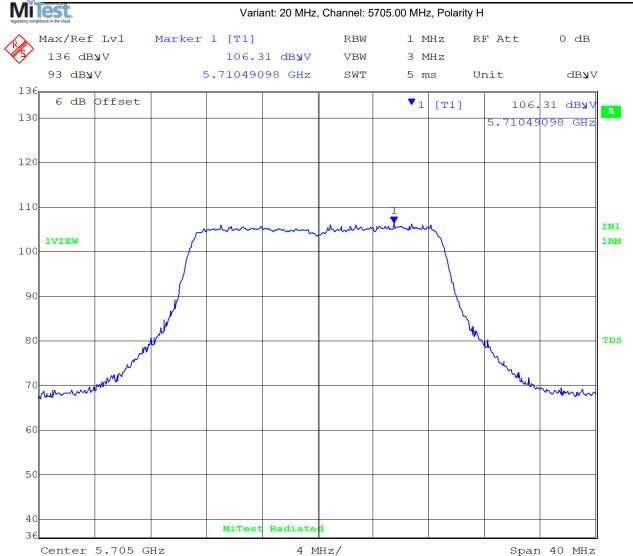


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5705.00 MHz, Polarity H



15.MAY.2020 13:13:58 Date:

back to matrix

10th June 2020 104 of 154 Issue Date: Page:

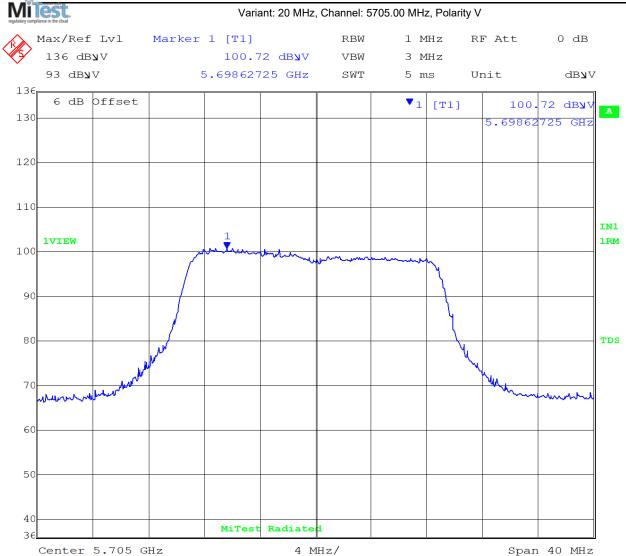


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5705.00 MHz, Polarity V



15.MAY.2020 14:06:18 Date:

back to matrix

10th June 2020 Issue Date: Page: 105 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5500.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 db**y**V 101.49 dB**y**V VBW 3 MHz 93 dB**y**V 5.48436874 GHz SWT 5 ms Unit dbyv 6 dB Offset [T1] 101.49 dBy 130 5.48436874 GHz 120 110 IN1 1VIEW 1RM 100 90 80 TDS 70 50 MiTest Radiate Center 5.5 GHz 8 MHz/ Span 80 MHz

Date: 15.MAY.2020 14:26:23

back to matrix

Issue Date: 10th June 2020 **Page:** 106 of 154

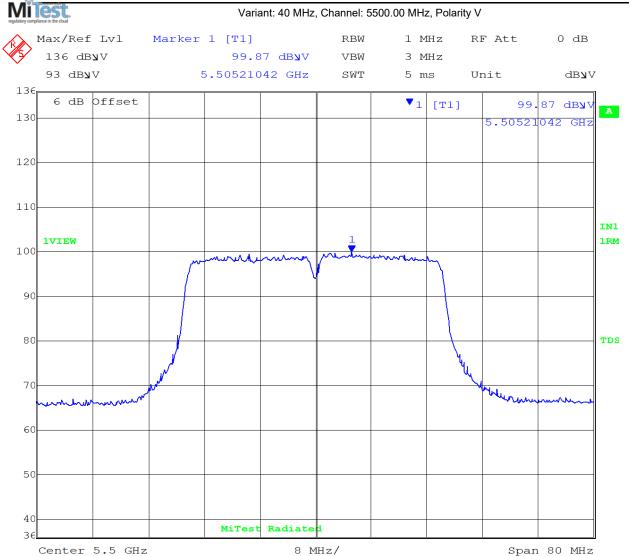


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5500.00 MHz, Polarity V



15.MAY.2020 14:29:34 Date:

back to matrix

10th June 2020 107 of 154 Issue Date: Page:

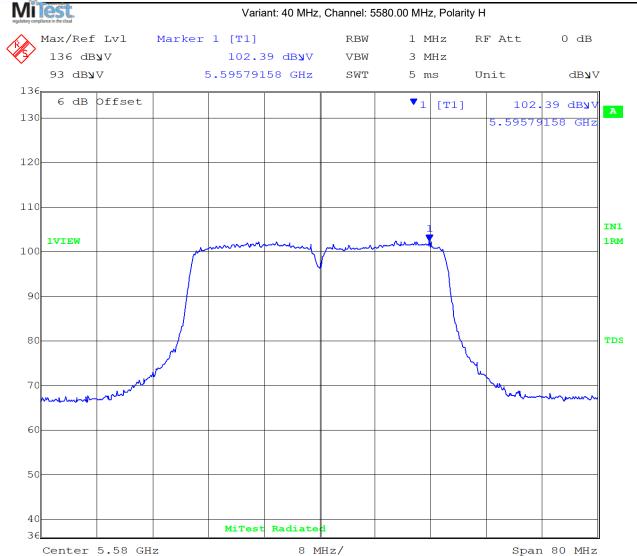


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5580.00 MHz, Polarity H



15.MAY.2020 14:23:21 Date:

back to matrix

10th June 2020 Issue Date: Page: 108 of 154

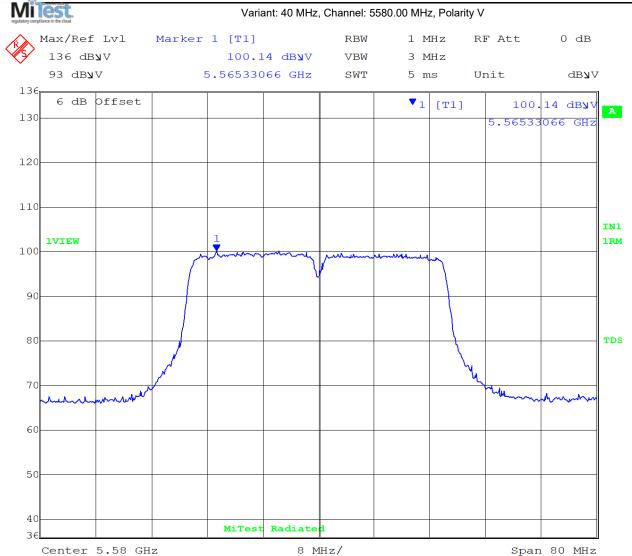


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5580.00 MHz, Polarity V



15.MAY.2020 14:13:31 Date:

back to matrix

10th June 2020 Issue Date: Page: 109 of 154

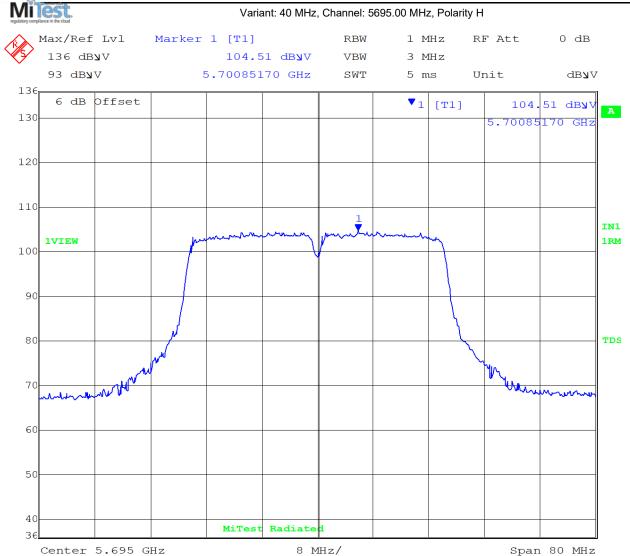


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5695.00 MHz, Polarity H



15.MAY.2020 13:52:56 Date:

back to matrix

10th June 2020 Issue Date: Page: 110 of 154

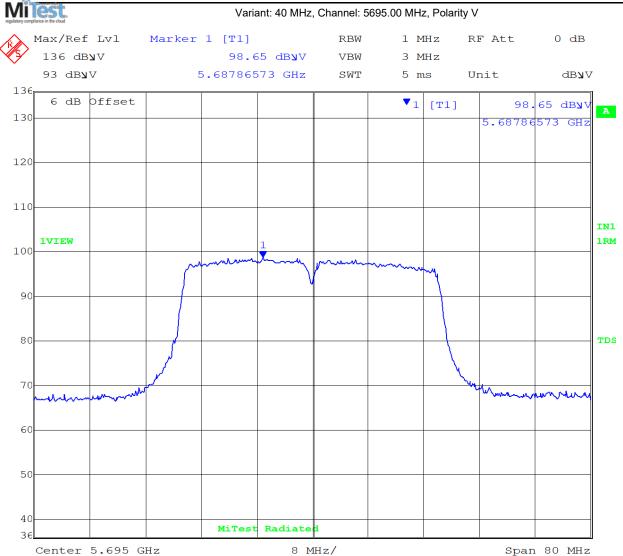


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5695.00 MHz, Polarity V



15.MAY.2020 13:53:57 Date:

back to matrix

10th June 2020 Issue Date: Page: 111 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 160 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5525.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 dbyv 98.24 dByV VBW 3 MHz 93 db**y**V 5.54311623 GHz 5 ms SWT dbyv Unit 6 dB Offset \mathbf{v}_1 [T1] 98.24 dBy 130 5.54311623 GHz 120 IN1 **1VIEW** 1RM 100 90 80 TDS 70 60 MiTest Radiated

Date: 15.MAY.2020 15:23:24

Center 5.525 GHz

back to matrix

Issue Date: 10th June 2020 **Page:** 112 of 154

16 MHz/

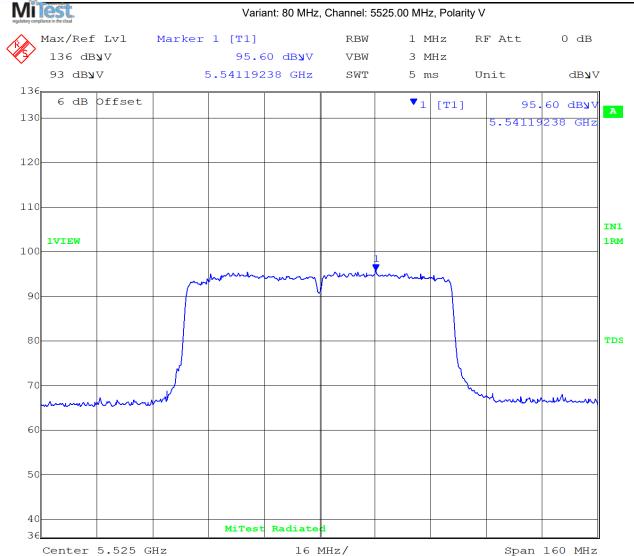


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5525.00 MHz, Polarity V



15.MAY.2020 15:24:36 Date:

back to matrix

10th June 2020 Issue Date: Page: 113 of 154



Milest

Title: RADWIN JET DUO 5.x/5.x GHz

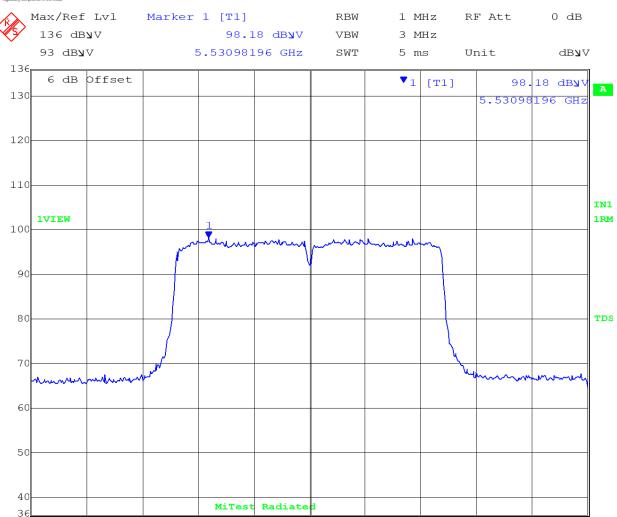
o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 160 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5560.00 MHz, Polarity H



16 MHz/

Date: 15.MAY.2020 15:27:46

Center 5.56 GHz

back to matrix

Issue Date: 10th June 2020 **Page:** 114 of 154



Milest

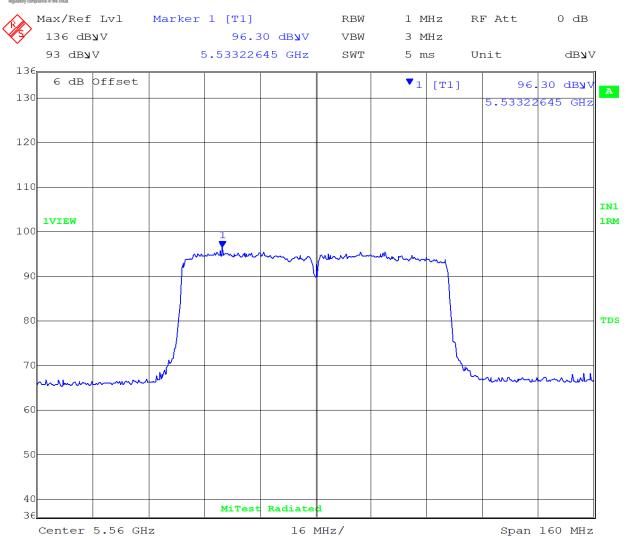
Title: RADWIN JET DUO 5.x/5.x GHz

o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5560.00 MHz, Polarity V



Date: 15.MAY.2020 15:26:30

back to matrix

Issue Date: 10th June 2020 **Page:** 115 of 154

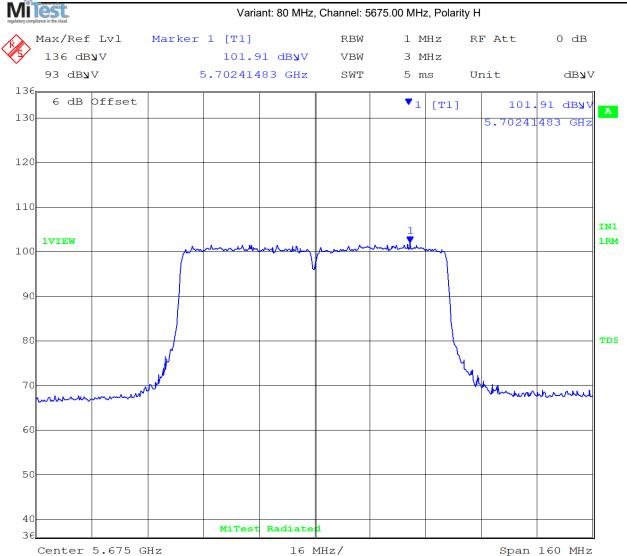


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5675.00 MHz, Polarity H



15.MAY.2020 15:30:35 Date:

back to matrix

10th June 2020 Issue Date: Page: 116 of 154



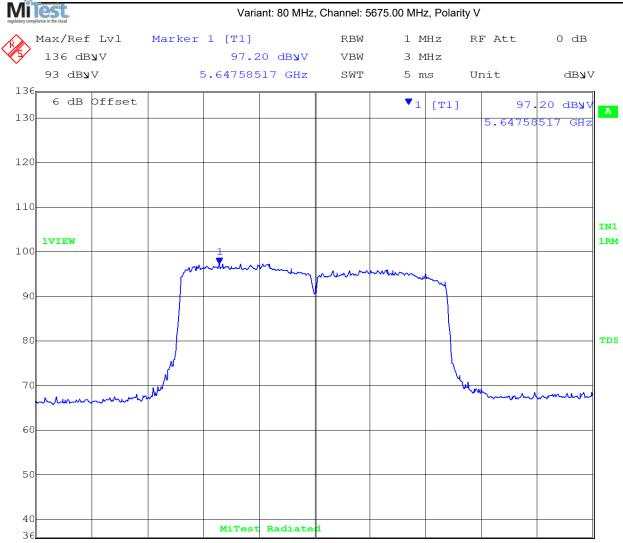
FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 160 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5675.00 MHz, Polarity V



16 MHz/

15.MAY.2020 15:38:41 Date:

Center 5.675 GHz

back to matrix

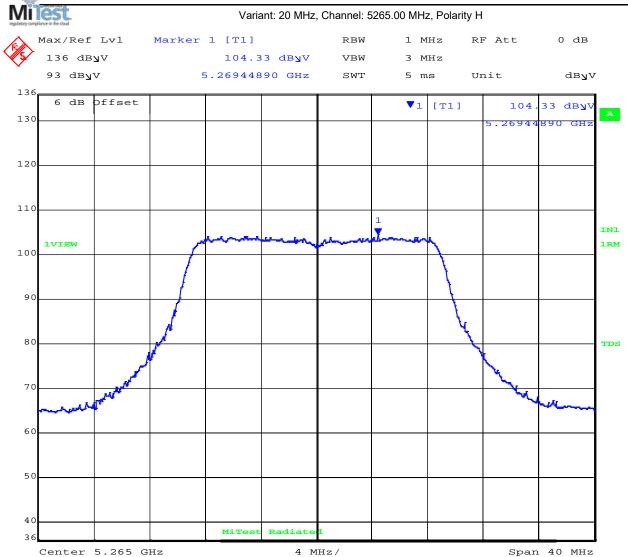
10th June 2020 Issue Date: Page: 117 of 154



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY



Date: 18.MAY.2020 17:06:30

back to matrix

Issue Date: 10th June 2020 **Page:** 118 of 154

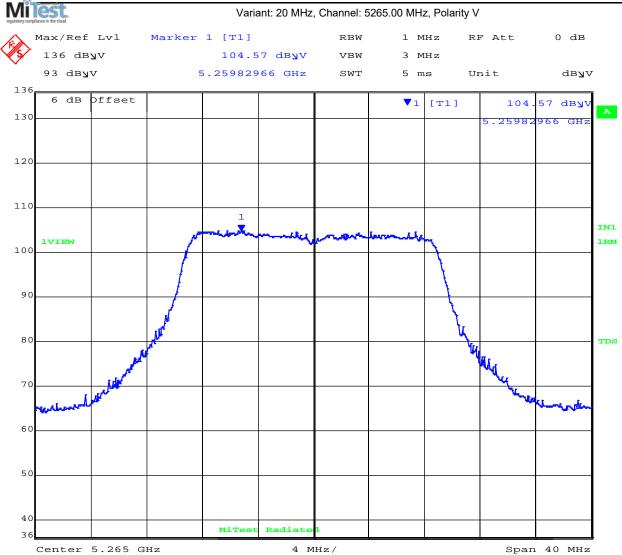


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5265.00 MHz, Polarity V



18.MAY.2020 17:05:00 Date:

back to matrix

10th June 2020 119 of 154 Issue Date: Page:

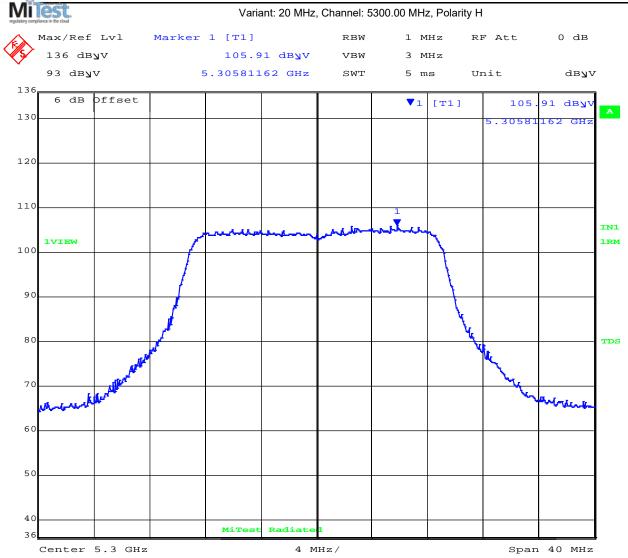


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5300.00 MHz, Polarity H



18.MAY.2020 17:01:34 Date:

back to matrix

10th June 2020 120 of 154 Issue Date: Page:

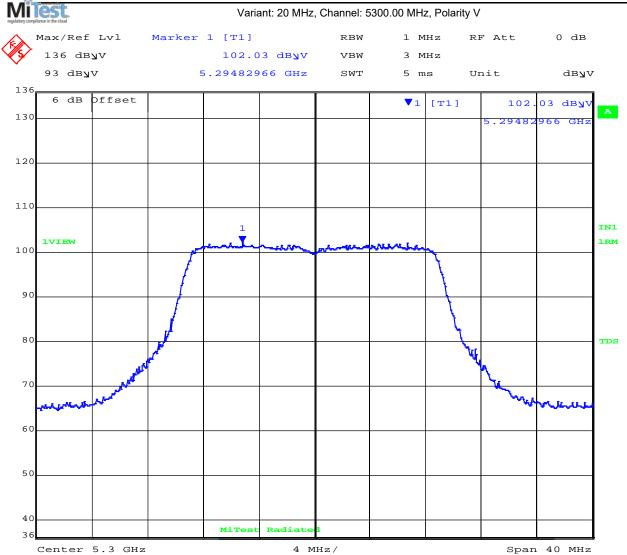


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5300.00 MHz, Polarity V



18.MAY.2020 17:02:56 Date:

back to matrix

10th June 2020 121 of 154 Issue Date: Page:

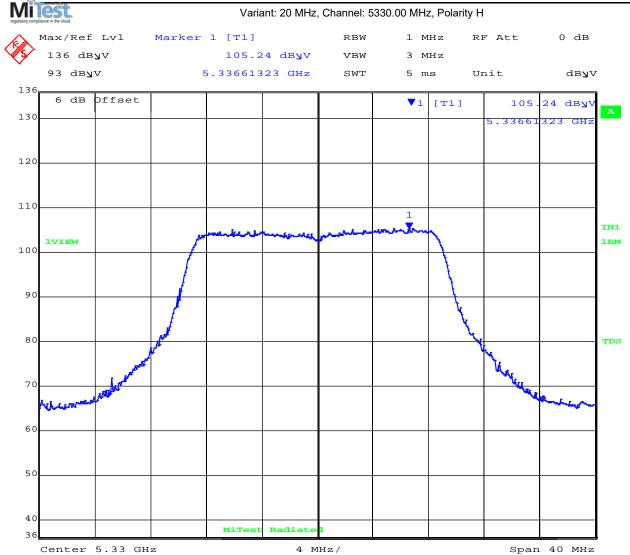


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5330.00 MHz, Polarity H



18.MAY.2020 17:00:21 Date:

back to matrix

10th June 2020 Issue Date: Page: 122 of 154

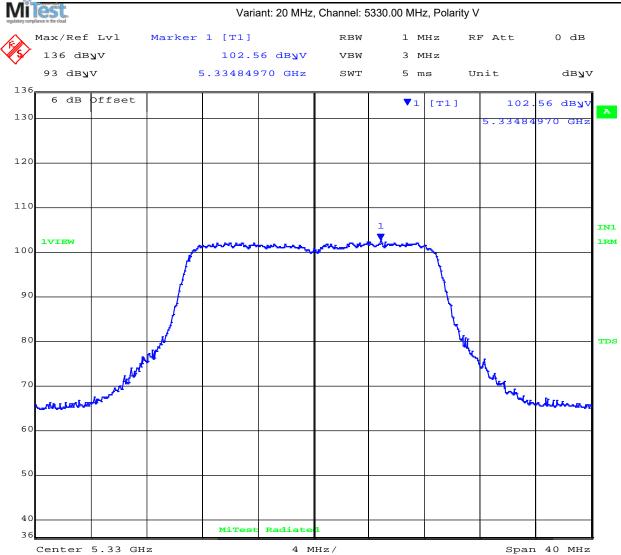


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5330.00 MHz, Polarity V



18.MAY.2020 16:58:44 Date:

back to matrix

10th June 2020 Issue Date: Page: 123 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5275.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 db**y**V 101.30 dB**y**V VBW 3 MHz 93 dB**y**V 5.28662325 GHz SWT 5 ms Unit dbyv 6 dB Offset [T1] 101.30 dBy 130 5.28662325 GHz 120 110 IN1 **1VIEW** 1RM 100 90 80 TDS 70 50 MiTest Radiate Center 5.275 GHz 8 MHz/ Span 80 MHz

Date: 18.MAY.2020 15:16:36

back to matrix

Issue Date: 10th June 2020 **Page:** 124 of 154

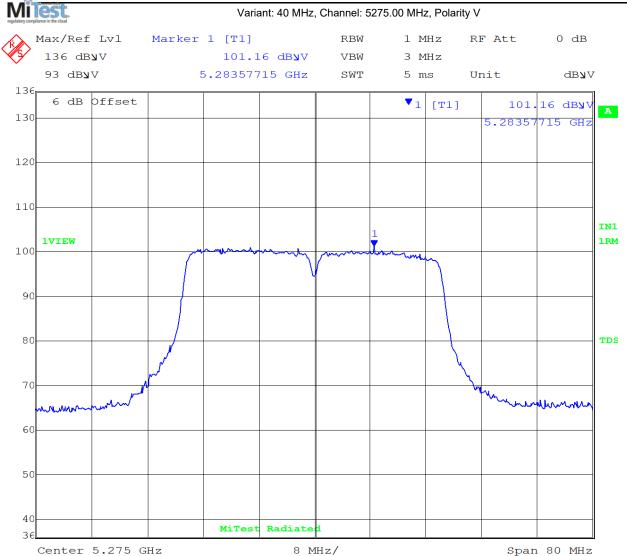


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5275.00 MHz, Polarity V



18.MAY.2020 15:17:32 Date:

back to matrix

10th June 2020 Issue Date: Page: 125 of 154

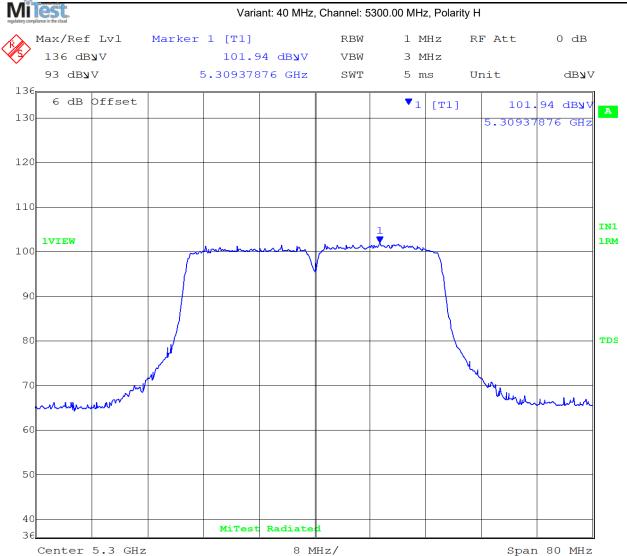


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5300.00 MHz, Polarity H



18.MAY.2020 15:21:51 Date:

back to matrix

10th June 2020 Issue Date: Page: 126 of 154

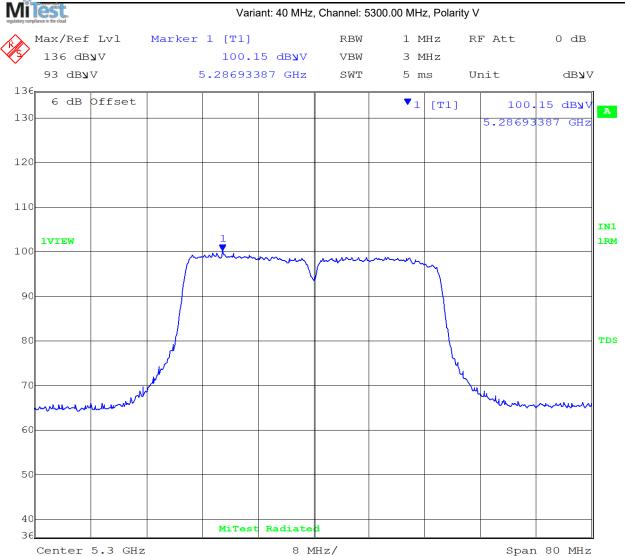


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5300.00 MHz, Polarity V



18.MAY.2020 15:19:48 Date:

back to matrix

10th June 2020 Issue Date: Page: 127 of 154

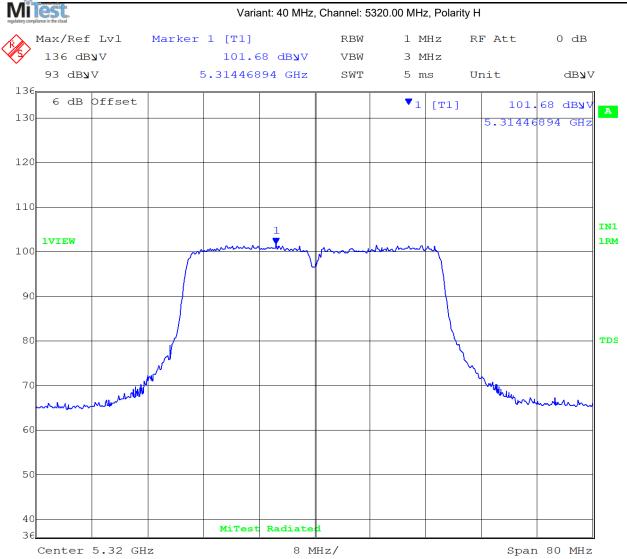


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5320.00 MHz, Polarity H



18.MAY.2020 15:23:14 Date:

back to matrix

10th June 2020 Issue Date: Page: 128 of 154

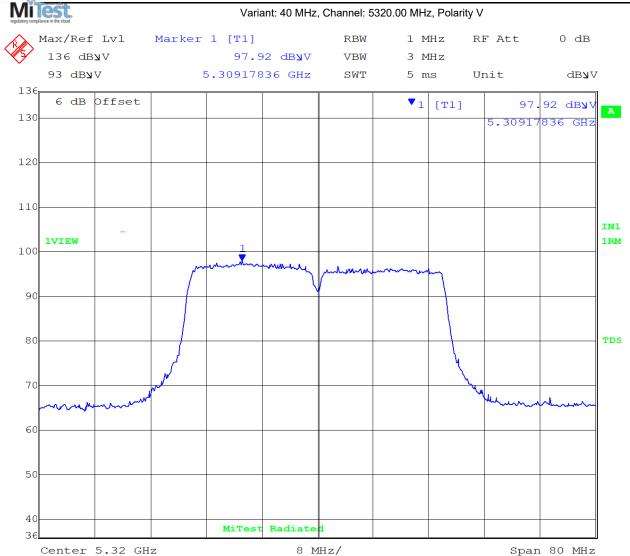


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5320.00 MHz, Polarity V



18.MAY.2020 15:25:04 Date:

back to matrix

10th June 2020 Issue Date: Page: 129 of 154



To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

compliance in the cloud		Variant: 80 MHz, Channel: 5290.00 MHz, Polarity H						
Max/Ref Lvl	l Marker 1 [T1]		RBW	1 M	Mz F	RF Att	0 dB	
136 db y V		99.48 db y V	VBW	3 M	Mz			
93 db y V	5.31132265 GHz		SWT	5 ms		Jnit	dB y V	
6 dB Offset				v ₁	[T1]	99	.48 db y V	
30						5.31132	2265 GHz	
20								
10								
1VIEW				7				
10 IVIEW				1 milyun				
	mm	Mary and and			my			
90								
30								
70	- Yen				7,74	W		
munder	w.					- American	Munum	
50								
50								
10		mark Dadists						
36	Mi	Test Radiate						

Date: 18.MAY.2020 15:14:03

back to matrix

Issue Date: 10th June 2020 **Page:** 130 of 154

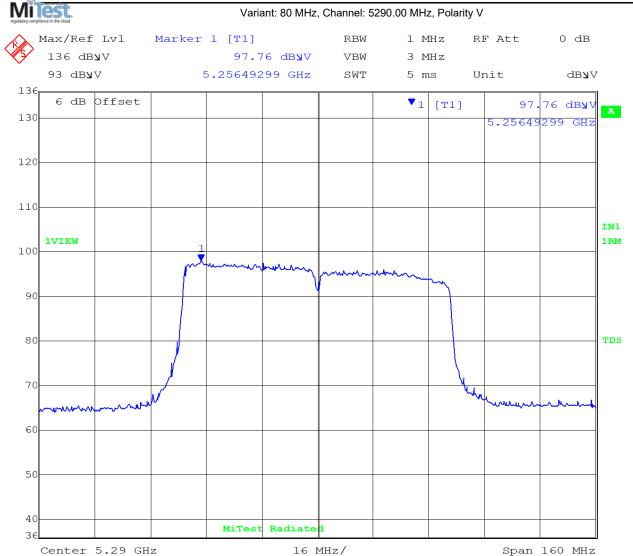


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5290.00 MHz, Polarity V



18.MAY.2020 15:12:42 Date:

back to matrix

10th June 2020 Issue Date: Page: 131 of 154

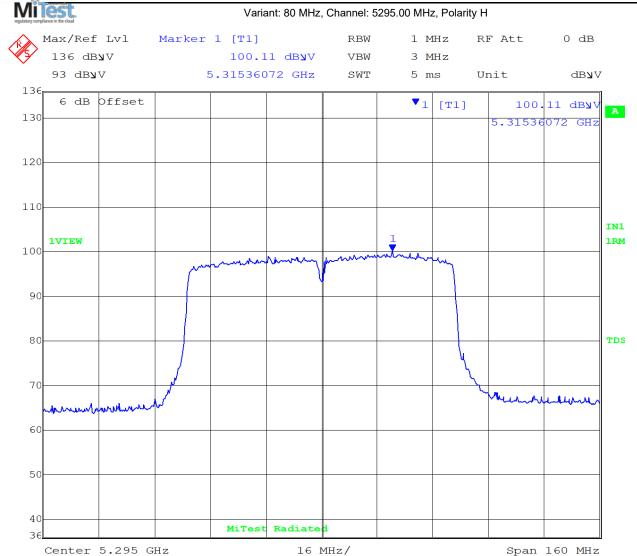


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5295.00 MHz, Polarity H



18.MAY.2020 15:05:50 Date:

back to matrix

10th June 2020 Issue Date: Page: 132 of 154



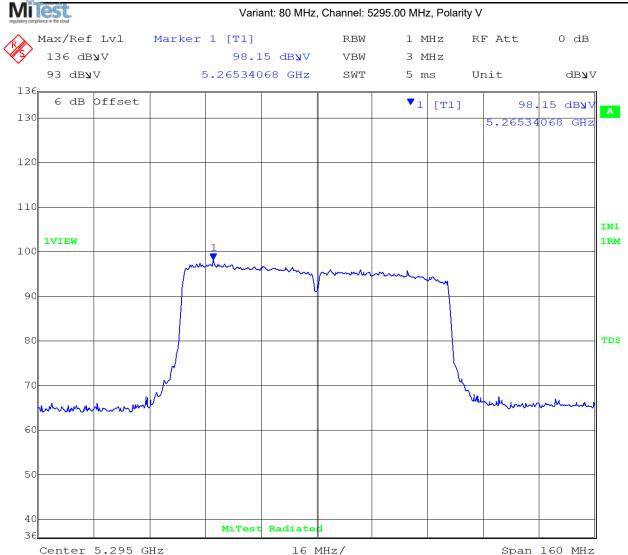
FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 160 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5295.00 MHz, Polarity V



18.MAY.2020 15:03:26 Date:

Center 5.295 GHz

back to matrix

10th June 2020 Issue Date: Page: 133 of 154

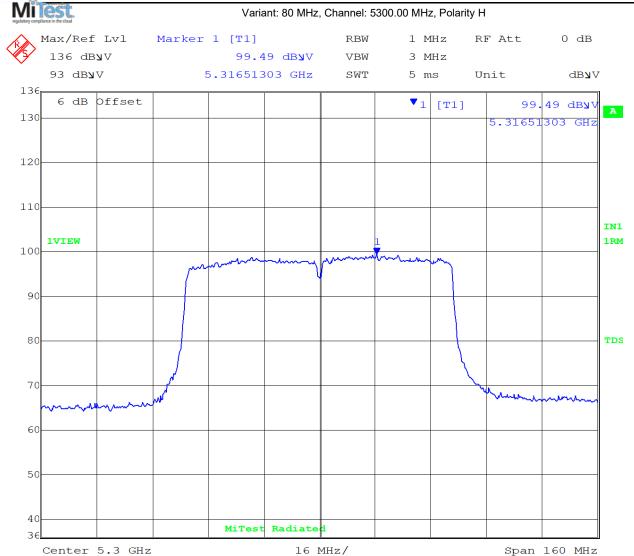


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5300.00 MHz, Polarity H



18.MAY.2020 15:09:59 Date:

back to matrix

10th June 2020 134 of 154 Issue Date: Page:

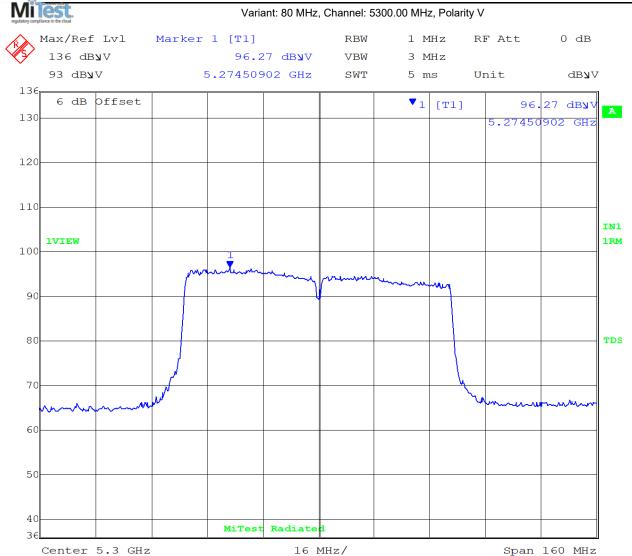


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5300.00 MHz, Polarity V



18.MAY.2020 15:11:15 Date:

back to matrix

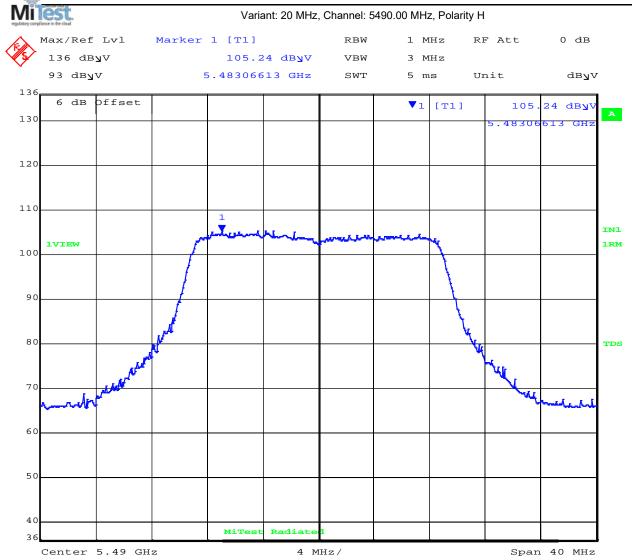
10th June 2020 Issue Date: Page: 135 of 154



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY



Date: 18.MAY.2020 16:54:40

back to matrix

Issue Date: 10th June 2020 **Page:** 136 of 154

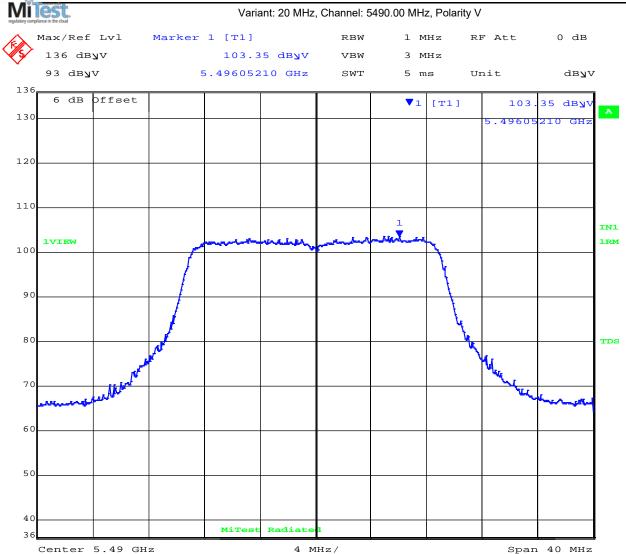


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5490.00 MHz, Polarity V



4 MHz/

18.MAY.2020 16:56:07 Date:

Center 5.49 GHz

back to matrix

10th June 2020 137 of 154 Issue Date: Page:

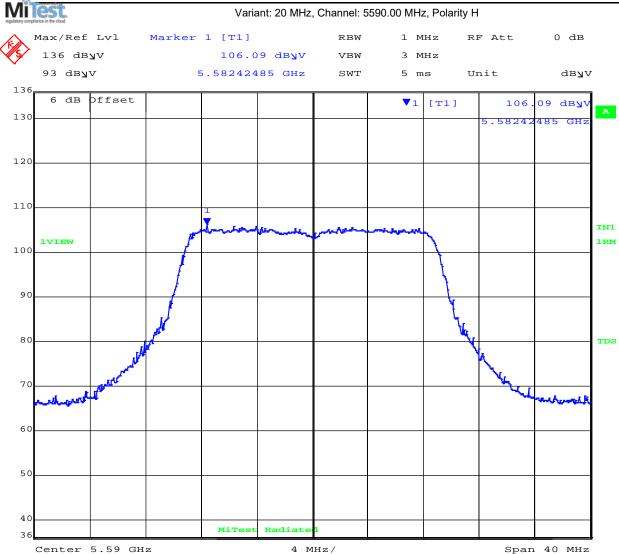


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5590.00 MHz, Polarity H



18.MAY.2020 16:52:30 Date:

back to matrix

10th June 2020 Issue Date: Page: 138 of 154

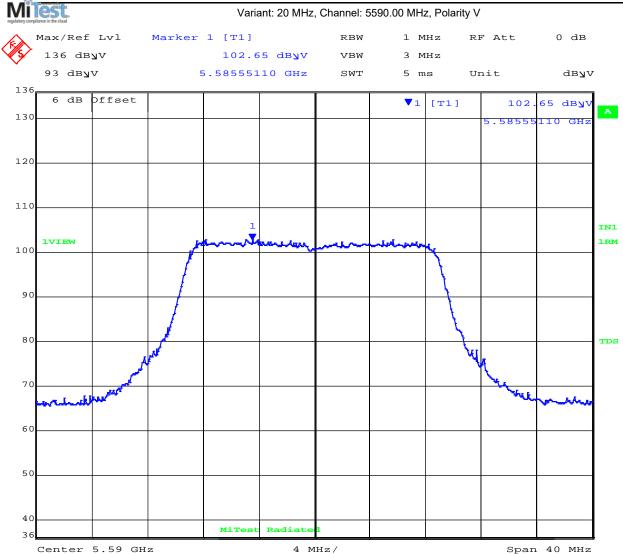


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5590.00 MHz, Polarity V



4 MHz/

18.MAY.2020 16:50:49 Date:

Center 5.59 GHz

back to matrix

10th June 2020 Issue Date: Page: 139 of 154

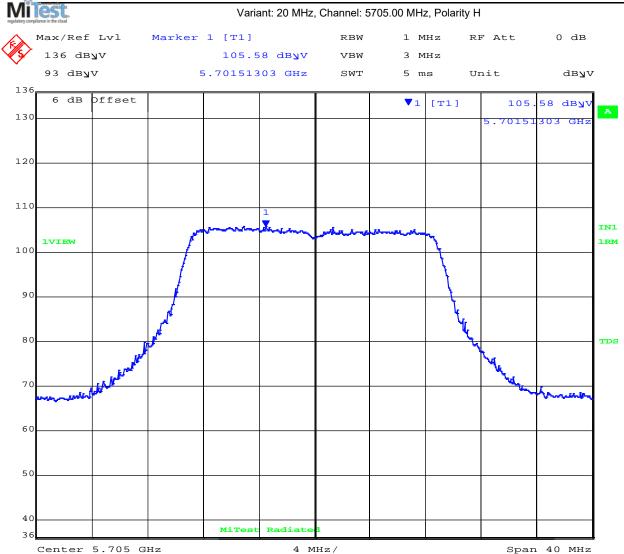


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5705.00 MHz, Polarity H



18.MAY.2020 16:47:18 Date:

back to matrix

10th June 2020 140 of 154 Issue Date: Page:

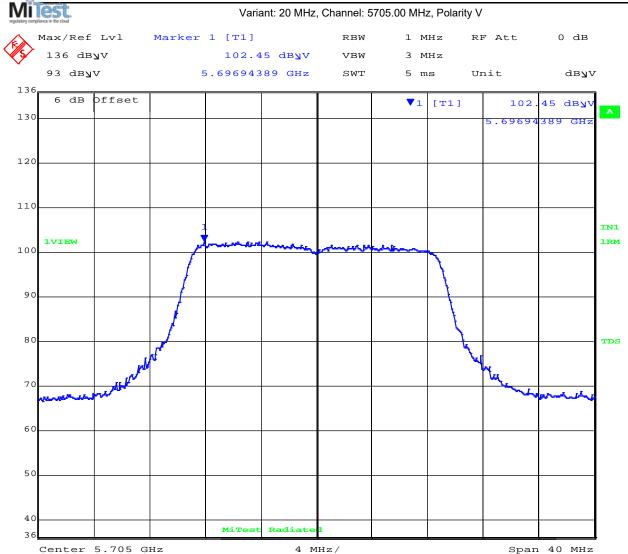


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 20 MHz, Channel: 5705.00 MHz, Polarity V



18.MAY.2020 16:49:30 Date:

back to matrix

10th June 2020 141 of 154 Issue Date: Page:



o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5500.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 db**y**V 101.24 dB**y**V VBW 3 MHz 93 dB**y**V 5.48933868 GHz SWT 5 ms Unit dbyv 6 dB Offset 101.24 dBy [T1] 130 5.48933868 GHz 120 110 IN1 **1VIEW** 1RM 100 90 80 TDS 70 50 MiTest Radiate Center 5.5 GHz 8 MHz/ Span 80 MHz

Date: 18.MAY.2020 15:33:50

back to matrix

Issue Date: 10th June 2020 **Page:** 142 of 154

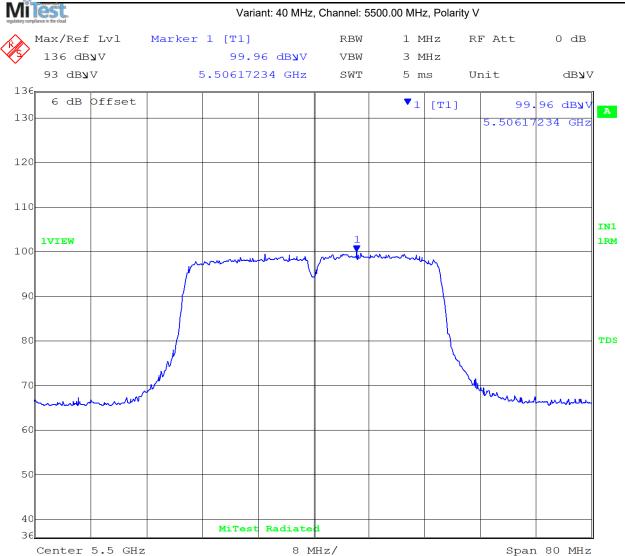


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5500.00 MHz, Polarity V



18.MAY.2020 15:35:44 Date:

back to matrix

10th June 2020 143 of 154 Issue Date: Page:

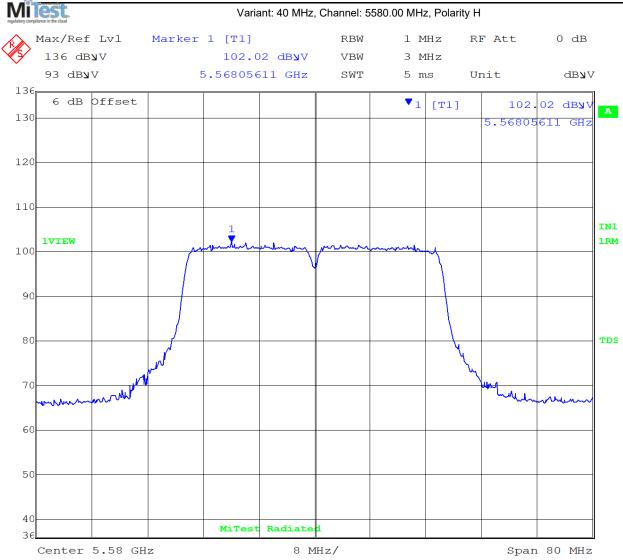


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5580.00 MHz, Polarity H



18.MAY.2020 15:38:07 Date:

back to matrix

10th June 2020 Issue Date: Page: 144 of 154

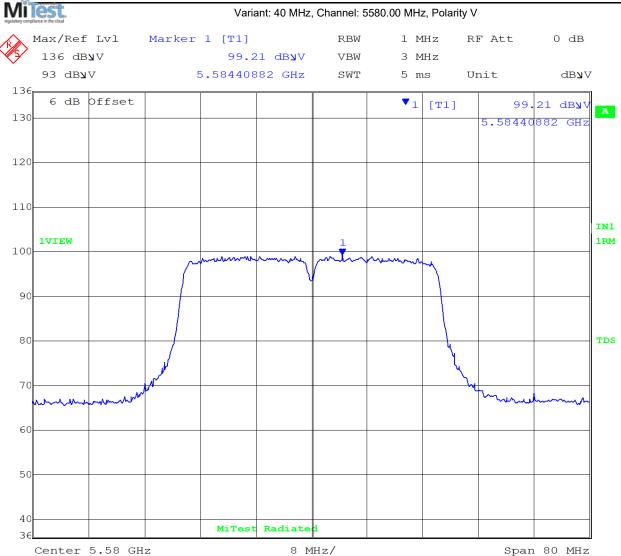


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5580.00 MHz, Polarity V



18.MAY.2020 15:36:55 Date:

back to matrix

10th June 2020 145 of 154 Issue Date: Page:

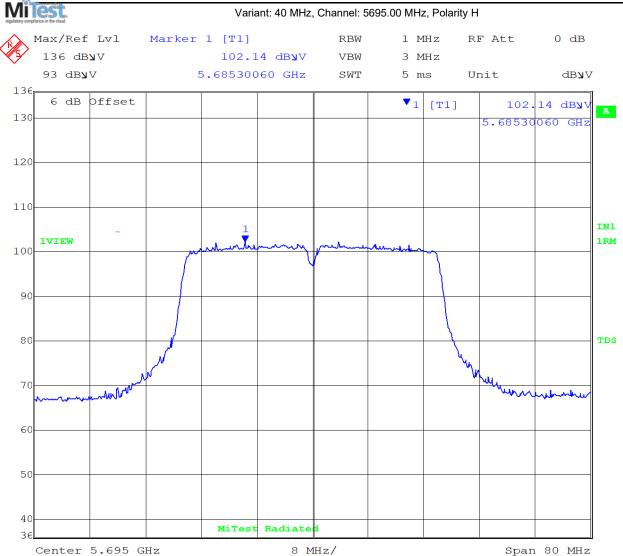


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5695.00 MHz, Polarity H



18.MAY.2020 15:40:06 Date:

back to matrix

10th June 2020 Issue Date: Page: 146 of 154

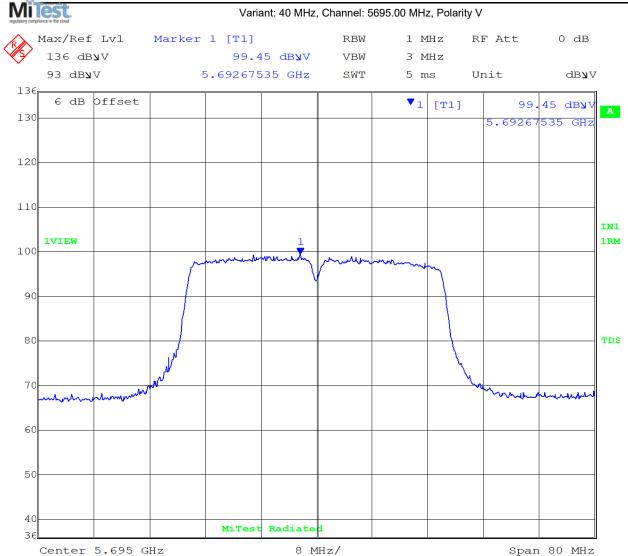


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 40 MHz, Channel: 5695.00 MHz, Polarity V



18.MAY.2020 15:43:02 Date:

back to matrix

10th June 2020 147 of 154 Issue Date: Page:



FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5525.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF Att 0 dB 136 dbyv 98.53 dByV VBW 3 MHz 93 db**y**V 5.49469940 GHz 5 ms SWT dbyv Unit 6 dB Offset \mathbf{v}_1 [T1] 98.53 dBy 130 5.49469940 GHz 120 IN1 **1VIEW** 1RM 100 90 80 TDS 70 60 MiTest Radiated Center 5.525 GHz 16 MHz/ Span 160 MHz

Date: 18.MAY.2020 14:53:07

back to matrix

Issue Date: 10th June 2020 **Page:** 148 of 154

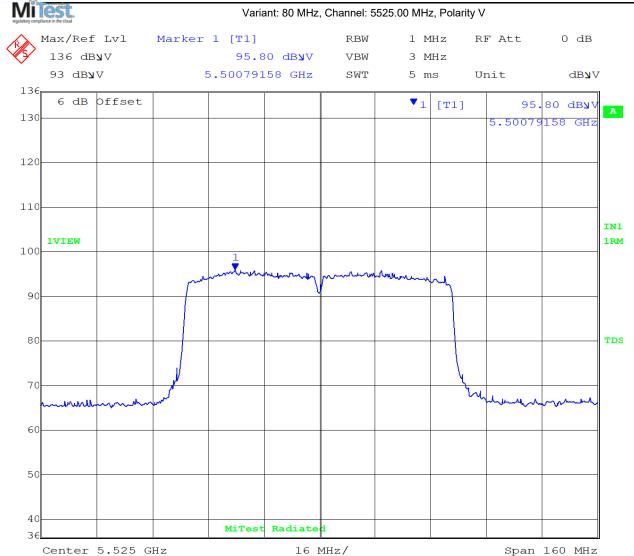


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5525.00 MHz, Polarity V



18.MAY.2020 14:51:53 Date:

back to matrix

10th June 2020 149 of 154 Issue Date: Page:

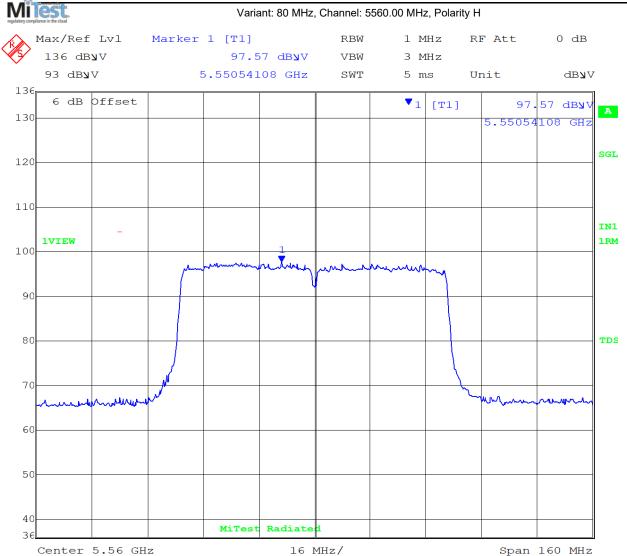


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5560.00 MHz, Polarity H



18.MAY.2020 14:48:27 Date:

back to matrix

10th June 2020 Issue Date: Page: 150 of 154



Milest

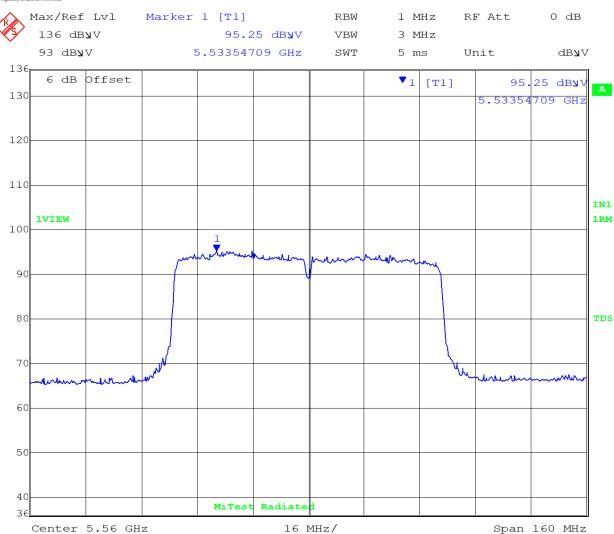
Title: RADWIN JET DUO 5.x/5.x GHz

To: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5560.00 MHz, Polarity V



Date: 18.MAY.2020 14:49:44

back to matrix

Issue Date: 10th June 2020 **Page:** 151 of 154



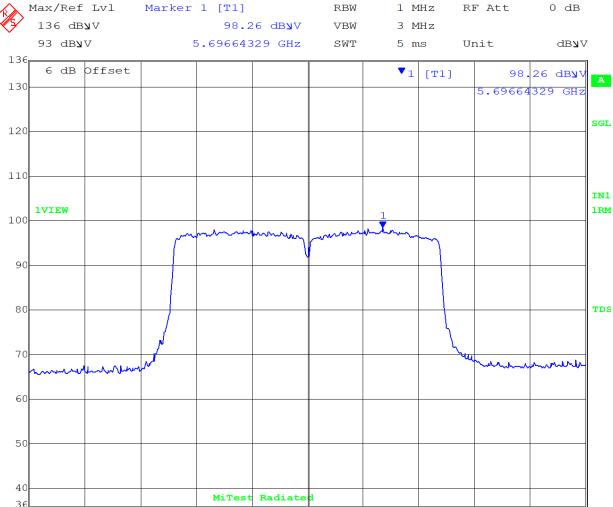
o: FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Span 160 MHz

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5675.00 MHz, Polarity H Max/Ref Lvl Marker 1 [T1] RBW 1 MHz RF



16 MHz/

Date: 18.MAY.2020 14:45:20

Center 5.675 GHz

back to matrix

Issue Date: 10th June 2020 **Page:** 152 of 154

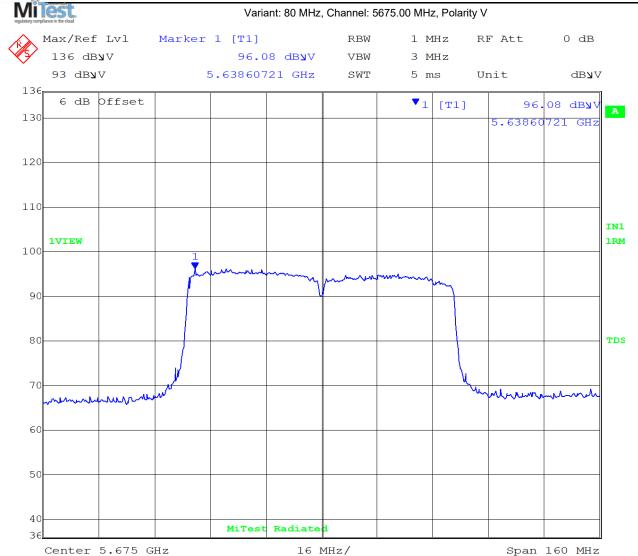


FCC CFR 47 Part 15 Subpart E 15.407, ISED RSS 247

Serial #: RDWN69-U2 Rev A

POWER SPECTRAL DENSITY

Variant: 80 MHz, Channel: 5675.00 MHz, Polarity V



18.MAY.2020 14:42:52 Date:

back to matrix

10th June 2020 Issue Date: Page: 153 of 154





575 Boulder Court Pleasanton, California 94566, USA Tel: +1 (925) 462 0304 Fax: +1 (925) 462 0306 www.micomlabs.com