



# **TEST REPORT**

Applicant Name : Address :

Report Number : FCC ID: TECNO MOBILE LIMITED FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG RA230331-16045E-RF-00A 2ADYY-LH6N

## Test Standard (s)

FCC PART 15.247

## **Sample Description**

Product Type:	Mobile Phone
Model No.:	LH6n
Multiple Model(s) No.:	N/A
Trade Mark:	TECNO
Date Received:	2023/03/31
Report Date:	2023/04/23

Test Result: Pass\*

\* In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:

Nick Fang

Nick Fang EMC Engineer

## **Approved By:**

Candy . Li

Candy Li EMC Engineer

Note: This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk "\* ".

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the sample(s) tested. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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Version 7: 2023-01-30

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# **DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Revision
0	RA230331-16045E-RF-00A	Original Report	2023-04-23

## **GENERAL INFORMATION**

<b>Product Description for Equipment under Test (EUT)</b>
---

Frequency Range	Bluetooth: 2402~2480MHz
Maximum conducted Peak output power	Bluetooth: 4.79dBm
Modulation Technique	Bluetooth: GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Specification*	0.8dBi (provided by the applicant)
Voltage Range	DC 3.89V from battery or DC 5V/7.5V from adapter
Test Sample serial number	23W4_1 for Conducted and Radiated Emissions Test 23W4_5 for RF Conducted Test (Assigned by ATC)
Sample/EUT Status	Good condition
Adapter information	Model: U180TSA Input: AC 100-240V, 50/60Hz, 0.6A Output: DC 5.0V, 2.4A or DC 7.5V, 2.4A 18.0W Max

## Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

## **Test Methodology**

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Shenzhen Accurate Technology Co., Ltd. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Parameter		Uncertainty	
Occupied Channel Bandwidth		5%	
RF Frequency		$0.082*10^{-7}$	
RF output power, conducted		0.73dB	
Unwanted Emission, conducted		1.6dB	
AC Power Lines Conducted Emissions		2.72dB	
	9kHz - 30MHz	2.66dB	
	30MHz - 1GHz	4.28dB	
Emissions, Radiated	1GHz - 18GHz	4.98dB	
Kaulateu	18GHz - 26.5GHz	5.06dB	
	26.5GHz - 40GHz	4.72dB	
Temperature		1 °C	
Hun	nidity	6%	
Supply voltages		0.4%	

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

## **Test Facility**

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 708358, the FCC Designation No.: CN1189. Accredited by American Association for Laboratory Accreditation (A2LA) The Certificate Number is 429 7.01.

The lab has been recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements, the CAB identifier: CN0016. The Registration Number is 30241.

# SYSTEM TEST CONFIGURATION

## **Description of Test Configuration**

The system was configured for testing in an engineering mode.

## **EUT Exercise Software**

EUT was test in the engineering mode and the power level is default \*. The power level was provided by the manufacturer.

## **Special Accessories**

No special accessory.

## **Equipment Modifications**

No modification was made to the EUT tested.

## Support Equipment List and Details

Manufacturer Description		Model	Serial Number
Unknown earphone		Unknown	Unknown

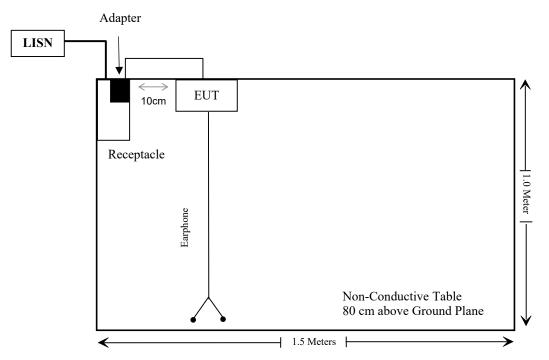
## External I/O Cable

Cable Description	Length (m)	From Port	То
Un-shielding Detachable USB Cable	1.0	EUT	Adapter

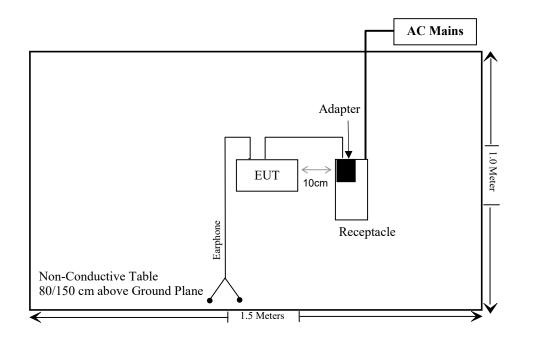
Report No.: RA230331-16045E-RF-00A

## **Block Diagram of Test Setup**

For Conducted Emissions



For Radiated Emissions:



# SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) & §2.1093	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.207(a)	AC Line Conducted Emissions	Compliant
§15.205, §15.209 & §15.247(d)	Radiated Emissions	Compliant
§15.247(a)(1)	20 dB Emission Bandwidth & 99% Occupied Bandwidth	Compliant
§15.247(a)(1)	Channel Separation Test	Compliant
§15.247(a)(1)(iii)	Time of Occupancy (Dwell Time)	Compliant
§15.247(a)(1)(iii)	Quantity of hopping channel Test	Compliant
§15.247(b)(1)	Peak Output Power Measurement	Compliant
§15.247(d)	Band edges	Compliant

# **TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	
Conducted Emissions Test						
Rohde& Schwarz	EMI Test Receiver	ESCI	100784	2022/11/25	2023/11/24	
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2022/11/25	2023/11/24	
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2022/12/07	2023/12/06	
Unknown	RF Coaxial Cable	No.17	N0350	2022/11/25	2023/11/24	
	Conducted En	nission Test Softv	ware: e3 19821b (V	79)		
	ŀ	Radiated Emissio	ons Test			
Rohde& Schwarz	Test Receiver	ESR	102725	2022/11/25	2023/11/24	
Rohde&Schwarz	Spectrum Analyzer	FSV40	101949	2022/11/25	2023/11/24	
SONOMA INSTRUMENT	Amplifier	310 N	186131	2022/11/08	2023/11/07	
A.H. Systems, inc.	Preamplifier	PAM-0118P	135	2022/11/08	2023/11/07	
Quinstar	Amplifier	QLW- 18405536-J0	15964001002	2022/11/08	2023/11/07	
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2021/07/06	2024/07/05	
Schwarzbeck	Horn Antenna	BBHA9120D	9120D-1067	2022/11/30	2025/11/29	
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2022/12/26	2025/12/25	
Radiated Emission Test Software: e3 19821b (V9)						
Unknown	RF Coaxial Cable	No.10	N050	2022/11/25	2023/11/24	
Unknown	RF Coaxial Cable	No.11	N1000	2022/11/25	2023/11/24	
Unknown	RF Coaxial Cable	No.12	N040	2022/11/25	2023/11/24	
Unknown	RF Coaxial Cable	No.13	N300	2022/11/25	2023/11/24	
Unknown	RF Coaxial Cable	No.14	N800	2022/11/25	2023/11/24	
Unknown	RF Coaxial Cable	No.15	N600	2022/11/25	2023/11/24	
Unknown	RF Coaxial Cable	No.16	N650	2022/11/25	2023/11/24	

#### Report No.: RA230331-16045E-RF-00A

Manufacturer	Description	Model Serial Number		Calibration Date	Calibration Due Date				
RF Conducted Test									
Rohde&Schwarz	Spectrum Analyzer	FSV-40	101495	2022/11/25	2023/11/24				
Tonscend	RF Control Unit	JS0806-2	19G8060182	2022/10/24	2023/10/23				
WEINSCHEL	10dB Attenuator	5324	AU 3842	2022/11/25	2023/11/24				

\* **Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## FCC§1.1307 (b) & §2.1093 – RF EXPOSURE

## Applicable Standard

According to FCC §2.1093 and §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

#### **Measurement Result**

Please refer to SAR test report: RA230331-16045E-SA.

## FCC §15.203 – ANTENNA REQUIREMENT

## Applicable Standard

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## Antenna Connector Construction

The EUT has one internal antenna which was permanently attached, and the maximum antenna gain is 0.8dBi, fulfill the requirement of this section. Please refer to the EUT photos.

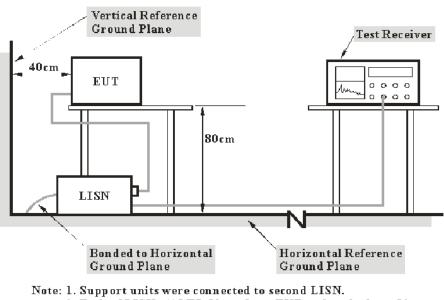
Result: Compliance.

# FCC §15.207 (a) – AC LINE CONDUCTED EMISSIONS

## **Applicable Standard**

FCC §15.207(a)

## **EUT Setup**



Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

## **EMI Test Receiver Setup**

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

## **Test Procedure**

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

### **Transd Factor & Margin Calculation**

The Transd factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

Transd Factor = LISN VDF + Cable Loss

The "**Over Limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a over limit of -7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

Over Limit = level – Limit Level= reading level+ Transd Factor

## **Test Data**

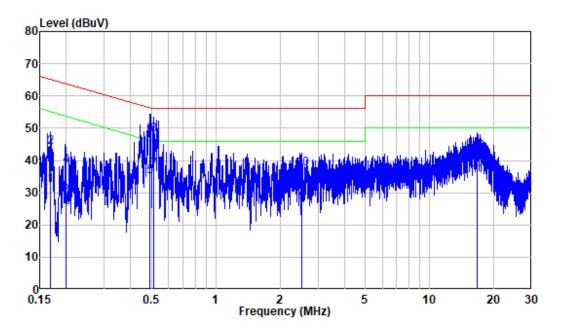
#### **Environmental Conditions**

Temperature:	23°C
<b>Relative Humidity:</b>	49 %
ATM Pressure:	101.2 kPa

The testing was performed by Jerry on 2023-04-21

EUT operation mode: Transmitting (the worst case is GFSK Mode, Middle channel)

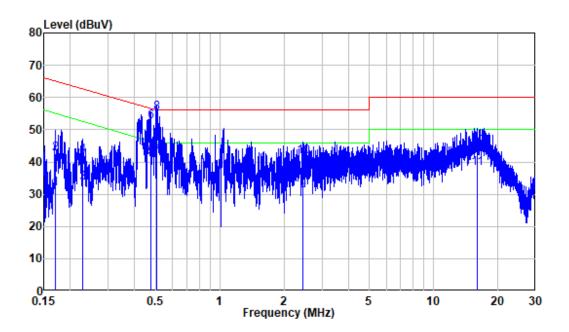
## AC 120V/60 Hz, Line



Site	:	Shielding Room
Condition	:	Line
Job No.	:	RA230331-16045E-RF
Mode	:	Charging+BT Transmitting
Power	:	AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.168	9.98	22.45	32.43	55.05	-22.62	Average
2	0.168	9.98	34.05	44.03	65.05	-21.02	QP
3	0.200	9.99	18.97	28.96	53.61	-24.65	Average
4	0.200	9.99	28.23	38.22	63.61	-25.39	QP
5	0.493	10.07	24.90	34.97	46.11	-11.14	Average
6	0.493	10.07	38.01	48.08	56.11	-8.03	QP
7	0.514	10.08	27.13	37.21	46.00	-8.79	Average
8	0.514	10.08	37.97	48.05	56.00	-7.95	QP
9	2.512	10.38	16.36	26.74	46.00	-19.26	Average
10	2.512	10.38	27.04	37.42	56.00	-18.58	QP
11	16.617	14.75	20.54	35.29	50.00	-14.71	Average
12	16.617	14.75	27.70	42.45	60.00	-17.55	QP

## AC 120V/60 Hz, Neutral



Site	:	Shielding Room
Condition	:	Neutral
Job No.	:	RA230331-16045E-RF
Mode	:	Charging+BT Transmitting
Power	:	AC 120V 60Hz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.170	10.18	21.41	31.59	54.96	-23.37	Average
2	0.170	10.18	32.46	42.64	64.96	-22.32	QP
3	0.228	10.21	23.37	33.58	52.51	-18.93	Average
4	0.228	10.21	31.84	42.05	62.51	-20.46	QP
5	0.475	10.35	31.04	41.39	46.43	-5.04	Average
6	0.475	10.35	42.16	52.51	56.43	-3.92	QP
7	0.505	10.36	31.41	41.77	46.00	-4.23	Average
8	0.505	10.36	44.94	55.30	56.00	-0.70	QP
9	2.449	10.10	20.87	30.97	46.00	-15.03	Average
10	2.449	10.10	31.62	41.72	56.00	-14.28	QP
11	15.991	14.61	23.34	37.95	50.00	-12.05	Average
12	15.991	14.61	30.15	44.76	60.00	-15.24	QP

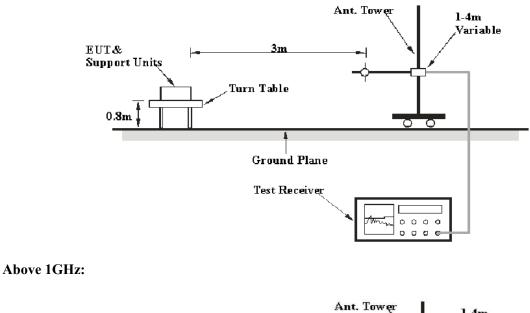
# FCC §15.205, §15.209 & §15.247(d) – RADIATED EMISSIONS

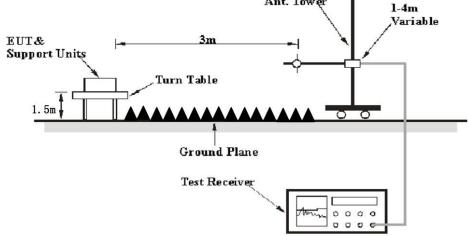
## Applicable Standard

FCC §15.205; §15.209; §15.247(d)

## **EUT Setup**

Below 1 GHz:





The radiated emission tests were performed in the 3 meters, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.247 limits.

## EMI Test Receiver & Spectrum Analyzer Setup

The EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement	
30 MHz – 1000 MHz	100 kHz	300 kHz	120 kHz	QP	
Above 1 GHz	1 MHz	3 MHz	/	РК	

For average measurement:

Use the duty cycle factor correction factor method per 15.35(c). Duty cycle=On time/100milliseconds, On time=N1\*L1+N2\*L2+...Nn-1\*Ln-1+Nn\*Ln, Where N1 is number of type 1 pulses, L1 is length of type 1 pulse, etc. Average Emission Level=Peak Emission Level+20\*log(Duty cycle)

## **Test Procedure**

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All final data was recorded in Quasi-peak detection mode for frequency range of 30 MHz -1 GHz and peak and Average detection modes for frequencies above 1 GHz.

### **Corrected Factor & Margin Calculation**

The Corrected Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Corrected Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit or Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a overlimit/margin of -7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin/Over Limit = Corrected Amplitude/Level-Limit Corrected Amplitude/Level = Reading + Corrected Factor

#### **Test Data**

#### **Environmental Conditions**

Temperature:	24 ~25.5℃
<b>Relative Humidity:</b>	52~57%
ATM Pressure:	101kPa

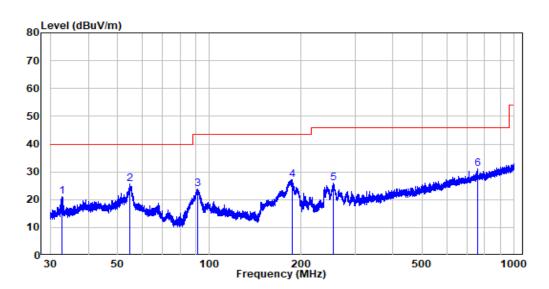
The testing was performed by Jimi Zheng on 2023-04-20 for below 1GHz andon 2023-04-12 for above 1GHz.

*Test mode: Transmitting (Pre-scan in the X,Y and Z axes of orientation, the worst case X-axes of orientation was recorded)* 

#### **30MHz-1GHz:** (worst case is GFSK Mode, Middle channel)

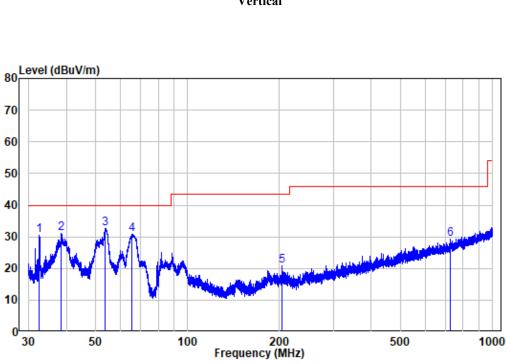
Note: When the test result of Peak was more than 6dB below the limit of QP, just the Peak value was recorded.

#### Horizontal:



Site : chamber Condition: 3m HORIZONTAL Job No. : RA230331-16045E-RF Test Mode: BT

	Freq	Factor			Limit Line		Remark
-	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.749	-12.07	33.25	21.18	40.00	-18.82	Peak
2	54.859	-10.35	35.93	25.58	40.00	-14.42	Peak
3	91.175	-13.68	37.50	23.82	43.50	-19.68	Peak
4	186.523	-11.97	39.07	27.10	43.50	-16.40	Peak
5	255.175	-10.59	36.41	25.82	46.00	-20.18	Peak
6	758.706	-0.46	31.41	30.95	46.00	-15.05	Peak



Vertical

Site : chamber Condition: 3m VERTICAL Job No. : RA230331-16045E-RF Test Mode: BT

	Freq	Factor			Limit Line		Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.663	-12.08	42.60	30.52	40.00	-9.48	Peak
2	38.498	-10.80	41.84	31.04	40.00	-8.96	Peak
3	53.646	-10.33	43.00	32.67	40.00	-7.33	Peak
4	65.544	-12.78	43.70	30.92	40.00	-9.08	Peak
5	203.791	-11.88	32.83	20.95	43.50	-22.55	Peak
6	725.850	-1.18	30.52	29.34	46.00	-16.66	Peak

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## Above 1GHz: (the worst case is GFSK Mode, DH5)

<b>F</b>	Receiver			Rx Antenna		Frater	Absolute	<b>.</b>		
Frequency (MHz)	Reading (dBµV)	PK/Ave	Turntable Degree	Height (m)	Polar (H/V)	Factor (dB/m)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	
	Low Channel 2402MHz									
2378.86	67.60	РК	45	2.2	Н	-10.73	56.87	74	-17.13	
2386.95	67.71	РК	333	1.7	V	-10.71	57.00	74	-17.00	
2390	65.09	РК	85	1.6	Н	-10.70	54.39	74	-19.61	
2390	65.22	РК	109	1.1	V	-10.70	54.52	74	-19.48	
4804	61.17	РК	297	1.3	Н	-6.11	55.06	74	-18.94	
4804	60.98	РК	227	1.3	V	-6.11	54.87	74	-19.13	
			Mide	lle Channel	2441MHz					
4882	61.64	РК	187	1.1	Н	-5.90	55.74	74	-18.26	
4882	61.32	РК	342	1.1	V	-5.90	55.42	74	-18.58	
			Hig	h Channel 2	480MHz					
2483.5	66.08	РК	329	1.7	Н	-10.55	55.53	74	-18.47	
2483.5	66.22	РК	110	1.6	V	-10.55	55.67	74	-18.33	
2484.69	68.78	РК	352	2.1	Н	-10.54	58.24	74	-15.76	
2483.75	68.93	РК	345	1.9	V	-10.55	58.38	74	-15.62	
4960	61.48	РК	358	2.3	Н	-5.47	56.01	74	-17.99	
4960	61.23	РК	44	2.3	V	-5.47	55.76	74	-18.24	

#### Report No.: RA230331-16045E-RF-00A

			Field Strengtl	h of Average			
Frequency	Peak Measurement	Polar	Duty Cycle Correction	Corrected	FC	C Part 15.2	47
(MHz)	@3m (dBµV/m)	(H/V)	Factor (dB)	Ampitude (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Comment
			Low Channe	1 2402MHz			
2378.86	56.87	Н	-24.73	32.14	54	-21.86	Bandedge
2386.95	57.00	V	-24.73	32.27	54	-21.73	Bandedge
2390	54.39	Н	-24.73	29.66	54	-24.34	Bandedge
2390	54.52	V	-24.73	29.79	54	-24.21	Bandedge
4804	55.06	Н	-24.73	30.33	54	-23.67	Harmonic
4804	54.87	V	-24.73	30.14	54	-23.86	Harmonic
			Middle Chann	el 2441MHz			
4882	55.74	Н	-24.73	31.01	54	-22.99	Harmonic
4882	55.42	V	-24.73	30.69	54	-23.31	Harmonic
			High Channe	1 2480MHz			
2483.5	55.53	Н	-24.73	30.80	54	-23.20	Bandedge
2483.5	55.67	V	-24.73	30.94	54	-23.06	Bandedge
2484.69	58.24	Н	-24.73	33.51	54	-20.49	Bandedge
2483.75	58.38	V	-24.73	33.65	54	-20.35	Bandedge
4960	56.01	Н	-24.73	31.28	54	-22.72	Harmonic
4960	55.76	V	-24.73	31.03	54	-22.97	Harmonic

Note:

Absolute Level = Corrected Factor + Reading Margin = Corrected. Amplitude - Limit Average level= Peak level+ Duty Cycle Corrected Factor The other spurious emission which is in the noise floor level was not recorded.

Worst case duty cycle:

Duty cycle = Ton/100ms = 2.899\*2/100=0.05798

Duty Cycle Corrected Factor = 20lg (Duty cycle) = 20lg0.05798 = -24.73

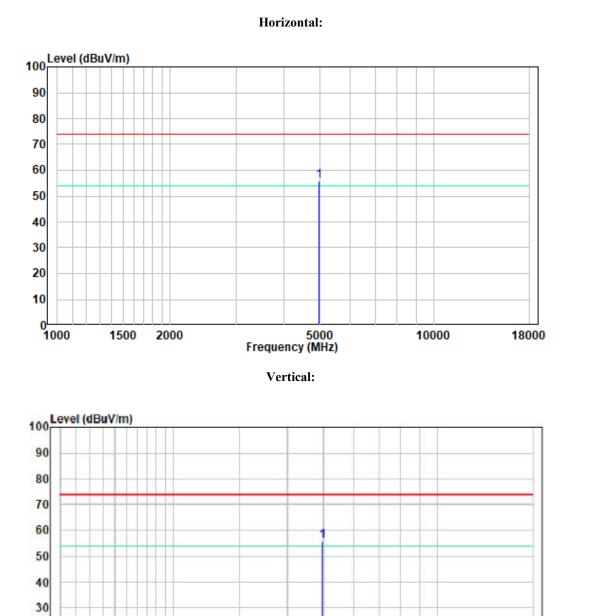
Report No.: RA230331-16045E-RF-00A

-		_						Duty	cycl	C						G
Spectr																[]
Ref Le Att	vel 9			e swi				1 MHz 1 MHz								
SGL TRO	S: VID			• • • • •												
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, and a																
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CF 2.40 te: 13 Spectr Ref Le Att SGL TRO	. APR . um <b>vel 9</b> G: VID	2023	ΪΒμ∨		r 100			691 3W 1 MHz 3W 1 MHz	pts						1	00.0 ms/
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CF 2.40 te: 13 Spectr Ref Le Att SGL TRO 1Pk Ma	. APR. um vel 9 S: VID x	2023	lBµ∨ ) dB	● SW1	Г 100			W 1 MHz	pts							-9.35 c 52.464 n
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CF 2.40 te: 13 Spectr Ref Le Att SGL TRC JPK Ma 00 dBµV- 30 dBµV- 70 dBµV-	. APR . um vel 9 S: VID x TR	2023 17.00 d TDF	lBµ∨ ) dB	● SW1	F 100			3W 1 MHz 3W 1 MHz	pts						D	-9.35 c 52.464 n 53.1 dBj
CF 2.40           ate:         13           Spectr           Ref Le           Att           SGL TRC           IPk Ma           30 dBµV-           30 dBµV-           50 dBµV-           50 dBµV-	APR. um vel 9 s: VID x TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	F 100			3W 1 MHz 3W 1 MHz	pts				La social de		D S	-9.35 c 52.464 n 53.1 dBj
CF 2.40           ate:         13           Spectr         Aft           SGL TRC         Aft           SGL TRC         Aft           30 dBµV-         BµV-           30 dBµV-         BµV-           50 dBµV-         S0 dBµV-           50 dBµV-         S0 dBµV-	APR. um vel 9 S:VID x TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	Г 100 	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		ประเภณส์ ประ		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
CF 2.40           ite:         13           Spectr         Ref Le Att           SGL TRC         1Pk Ma           30 dBµV-         30 dBµV-	APR. um vel 9 S:VID x TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	Γ 100	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		لم the second equi		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
CF 2.40 ite: 13 Spectr Ref Le Att SGL TRC 1Pk Ma 30 dBµV- 30 dBµV- 50 dBµV- 50 dBµV- 50 dBµV- 50 dBµV-	APR. um vel 9 S:VID X TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	Г 100 	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		न् ) र स्पर्धन्तुः स्पृत्		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
CF 2.40           ste:         13           Spectr         Ref Le           Att         SGL TRO           SGL TRO         B           30         dBµV	APR. um vel 9 S:VID X TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	Γ 100	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		ารายเป		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
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CF 2.40 atte: 13 Spectr Refte Att SSG TR/F SSG TR/F Att SSG TR/F Att Att SSG TR/F Att SSG TR/F Att Att Att Att Att Att Att At	APR. um vel 9 S:VID X TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	F 100	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		la sonel di		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
CF 2.40 Spectr Ref Le Att SGL TRR SGL TRR Ma B B B B B B B B B C C C C C C C C C C C C C	APR. um vel 9 S:VID X TR	2023 17.00 d TDF	Bµ∨ ) dB	● SW1	F 100	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		ารายเราะ		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
CF 2.40           CF 2.40           ste:           13           Spectr           Ref Le           Att           Att           Spectr	. APR. um vel 9 S: VID x TR mua/le	2023 7.00 d TDF	Bµ∨ ) dB	● SW1	F 100	ms =		3W 1 MHz 3W 1 MHz <sup>1/2</sup> D1			1[1]		la sonsi di		D S	-9.35 c 52.464 n 57.1 dB 37.536 n
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0 dBµV- CF 2.40 Spectr Ref Le Spectr Ref Le SG LR Att SG TR G B dBµV- 0 dBµV- 0	APR. um vel 9 S:VID x TR 2 GH:	2023 77.00 d TDF	Bµ∨ ) dB	swi		ms •		уш 1 МН2 3₩ 1 МН2 1 D1	pts		1[1]			Land at the second seco	Q National States	9.35 c 52.464 n 5-1 dBj 37 536 n

Date: 13.APR.2023 02:04:58

## 1-18GHz

Pre-scan, High Channel (worst case)



20

1000

1500

2000

Frequency (MHz)

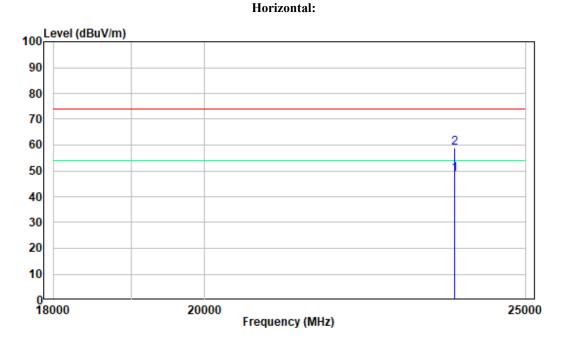
18000

10000

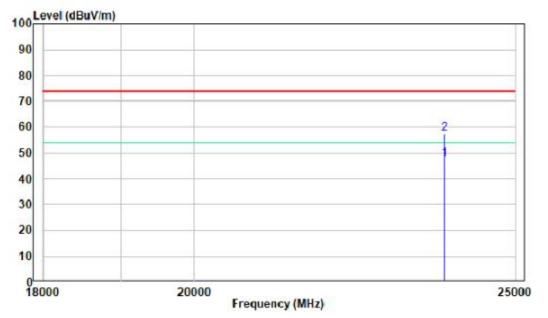
Report No.: RA230331-16045E-RF-00A

## 18-25GHz

Pre-scan, High Channel (worst case)







## FCC §15.247(a) (1)-CHANNEL SEPARATION TEST

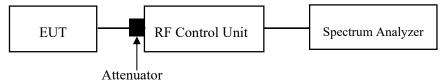
## **Applicable Standard**

Frequency hopping systems shall have hoping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

### **Test Procedure**

Test Method: ANSI C63.10-2013 Clause 7.8.2

- 1. Set the EUT in transmitting mode, maxhold the channel.
- 2. Set the adjacent channel of the EUT and maxhold another trace.
- 3. Measure the channel separation.



#### **Test Data**

## **Environmental Conditions**

Temperature:	26.4℃
<b>Relative Humidity:</b>	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Bob Liao on 2023-04-18.

#### EUT operation mode: Transmitting

# FCC §15.247(a) (1) – 20 dB EMISSION BANDWIDTH & 99% OCCUPIED BANDWIDTH

## **Applicable Standard**

Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

## **Test Procedure**

Test Method: ANSI C63.10-2013 Clause 7.8.7 & Clause 6.9.2

The following conditions shall be observed for measuring the occupied bandwidth and 20 dB bandwidth:

• The transmitter shall be operated at its maximum carrier power measured under normal test conditions.

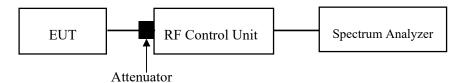
• The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.

• The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / 20 dB bandwidth if the device is not transmitting continuously.

• The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / 20 dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99% emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99% emission bandwidth).



## **Test Data**

## **Environmental Conditions**

Temperature:	26.4°C
<b>Relative Humidity:</b>	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Bob Liao on 2023-04-18.

EUT operation mode: Transmitting

# FCC §15.247(a) (1) (iii)-QUANTITY OF HOPPING CHANNEL TEST

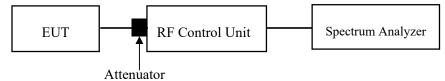
## **Applicable Standard**

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

### **Test Procedure**

Test Method: ANSI C63.10-2013 Clause 7.8.3

- 1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
- 2. Set the EUT in hopping mode from first channel to last.
- 3. By using the max-hold function record the quantity of the channel.



## **Test Data**

## **Environmental Conditions**

Temperature:	26.4°C
<b>Relative Humidity:</b>	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Bob Liao on 2023-04-18.

EUT operation mode: Transmitting

# FCC §15.247(a) (1) (iii) - TIME OF OCCUPANCY (DWELL TIME)

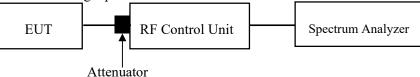
## **Applicable Standard**

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

## **Test Procedure**

Test Method: ANSI C63.10-2013 Clause 7.8.4

- 1. The EUT was worked in channel hopping.
- 2. Set the RBW to: 1MHz.
- 3. Set the VBW  $\geq 3 \times RBW$ .
- 4. Set the span to 0Hz.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Recorded the time of single pulses



## **Test Data**

## **Environmental Conditions**

Temperature:	26.4℃
<b>Relative Humidity:</b>	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Bob Liao on 2023-04-18.

#### EUT operation mode: Transmitting

# FCC §15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT

## **Applicable Standard**

According to §15.247(b) (1), for frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. And for all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

## **Test Procedure**

Test Method: ANSI C63.10-2013 Clause 7.8.5

- 1. Place the EUT on a bench and set in transmitting mode.
- 2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.
- 3. Add a correction factor to the display.



Attenuator

## **Test Data**

## **Environmental Conditions**

Temperature:	26.4℃
<b>Relative Humidity:</b>	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Bob Liao on 2023-04-18.

EUT operation mode: Transmitting

# FCC §15.247(d) & RSS-247 § 5.5 - BAND EDGES TESTING

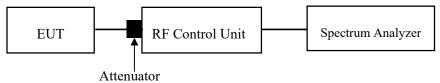
## **Applicable Standard**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

## **Test Procedure**

Test Method: ANSI C63.10-2013 Clause 7.8.6 & Clause 6.10

- 1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- 2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
- 3. Set RBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
- 4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
- 5. Repeat above procedures until all measured frequencies were complete.



## Test Data

## **Environmental Conditions**

Temperature:	26.4℃
Relative Humidity:	51 %
ATM Pressure:	101.0 kPa

The testing was performed by Bob Liao on 2023-04-18.

EUT operation mode: Transmitting

# APPENDIX

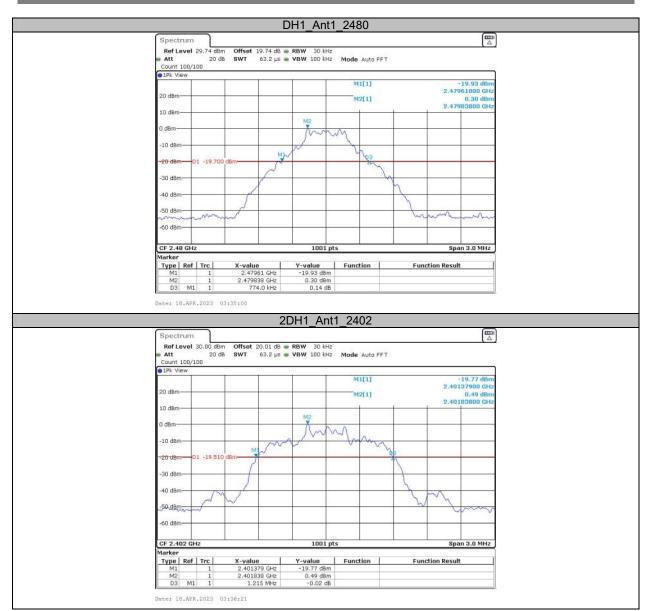
## Appendix A: 20dBEmission Bandwidth Test Result

Test Mode	Antenna	Frequency[MHz]	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2402	0.77	2401.61	2402.38		
DH1	Ant1	2441	0.77	2440.61	2441.38		
		2480	0.77	2479.61	2480.38		
		2402	1.22	2401.38	2402.59		
2DH1	Ant1	2441	1.22	2440.38	2441.59		
		2480	1.22	2479.38	2480.59		
		2402	1.22	2401.40	2402.62		
3DH1	Ant1	2441	1.22	2440.40	2441.62		
		2480	1.22	2479.40	2480.62		

## **Test Graphs**

	D	H1_Ant1_	2402		
 Spectrum					
Ref Level 30.00 dBm	Offset 20.01 dB 🖷	RBW 30 kHz			( <sup>23</sup>
Att 20 dB		VBW 100 kHz N	ode Auto FFT		
Count 100/100					
PK VIEW		T T	M1[1]		-19.13 dBm
20 dBm					2.40161000 GHz
Sn gew			M2[1]		1.12 dBm 2.40183800 GHz
10 dBm			- 11	1 1	2.40183800 GHZ
		M2			
0 dBm		mou	1		
-10 dBm			7		
	MJN	~	403		
-20 dBm-01 -18.880 d	Bm A		2 m		
-30 dBm-	5		V		
50 dom	1			5	
-40 dBm-	- F			1	
-50 dBm	2				
-50 dBm	5			h	man
-60 dBm-			_		
CF 2.402 GHz		1001 pts		·	Span 3.0 MHz
Marker	· · · · · · · · · · · · · · · · · · ·				]
Type Ref Trc M1 1	2.40161 GHz	-19.13 dBm	Function	Func	tion Result
M2 1	2.401838 GHz	1.12 dBm			
D3 M1 1	774.0 kHz	0.23 dB	14		
Date: 18.APR.2023 03:	:32:54				
	10000				
	D	H1_Ant1_	2441		
 Spectrum					
		RBW 30 kHz			1 A A
Ref Level 29.74 dBm	Offset 19.74 dB 🖷				
Att 20 dB		VBW 100 kHz N	lode Auto FFT		
Att 20 dB Count 100/100			lode Auto FFT		
Att 20 dB			Cont No.		-18.32 dBm
Att 20 dB     Count 100/100     Pk View			M1[1]		-18.32 dBm 2.44061000 GHz
Att 20 dB Count 100/100			Cont No.		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     Pk View		VBW 100 kH2 N	M1[1]		2.44061000 GHz
Att 20 dB     Count 100/100     Plk View 20 dBm 10 dBm		VBW 100 kHz N	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     PIk View 20 dBm		VBW 100 kH2 N	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     IPk View 20 dBm 10 dBm 0 dBm		VBW 100 kHz N	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     IPk View 20 dBm 10 dBm 0 dBm -10	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     IPk View 20 dBm 10 dBm 0 dBm	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     ● 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm D1 -18.080 d	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     IPk View 20 dBm 10 dBm 0 dBm -10	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     ● 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm D1 -18.080 d	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB Count 100/100 PIPk View 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -10 dBm -40 dBm	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GH2 1.92 dBm 2.44083800 GHz
Att 20 dB     Count 100/100     ● 1Pk View 20 dBm 20 dBm 10 dBm 0 dBm -10 dBm -10 dBm -20 dBm -10 dBm -30 dBm -40 dBm -50 dBm -5	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GH2 1.92 dBm 2.44083800 GHz
Att 20 dB     Count 100/100     IPk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -10 dBm -30 dBm -40	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GHz 1.92 dBm
Att 20 dB     Count 100/100     ● 1Pk View 20 dBm 20 dBm 10 dBm 0 dBm -10 dBm -10 dBm -20 dBm -10 dBm -30 dBm -40 dBm -50 dBm -5	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GH2 1.92 dBm 2.44083800 GHz
Att 20 dB Count 100/100 P1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -50 dBm	SWT 63.2 µs ●		M1[1]		2.44061000 GHz 1.92 dBm 2.44083800 GHz
Att 20 dB     Count 100/100     ● 1Pk View 20 dBm 20 dBm 10 dBm 0 dBm -10 dBm -10 dBm -20 dBm -10 dBm -30 dBm -40 dBm -50 dBm -5	SWT 63.2 µs ●	M2	M1[1]		2.44061000 GH2 1.92 dBm 2.44083800 GHz
Att 20 dB Count 100/100 PIPk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -10 dBm -20 dBm -10 dBm -20 dBm -10 dBm -20 dBm -10 dBm -20 dBm -11 -18.080 d -30 dBm -50 dBm -	SWT 63.2 µs •	VBW 100 kHz N	M1[1]		2.44061000 GHz 1.92 dBm 2.44083800 GHz
Att         20 dB           Count 100/100         100/100           ● 1Pk View         20 dBm           20 dBm         10 dBm           10 dBm         0 dBm           -20 dBm         0 dBm           -20 dBm         0 dBm           -30 dBm         -18.080 d           -30 dBm         -50 dBm           -50 dBm         -60 dBm           -50 dBm         -50 dBm           -50 dBm         -50 dBm           -50 dBm         -70           -60 dBm         -70           -70 dBm         -70 </td <td>SWT 63.2 µs •</td> <td>VBW 100 kHz N M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2</td> <td>M1[1] M2[1]</td> <td></td> <td>2.44061000 GHz 3.92 dBm 2.440838000 GHz</td>	SWT 63.2 µs •	VBW 100 kHz N M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2	M1[1] M2[1]		2.44061000 GHz 3.92 dBm 2.440838000 GHz
Att 20 dB Count 100/100 PIPk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -10 dBm -20 dBm -10 dBm -20 dBm -10 dBm -20 dBm -10 dBm -20 dBm -11 -18.080 d -30 dBm -50 dBm -	SWT 63.2 µs •	VBW 100 kHz N	M1[1] M2[1]		2.44061000 GHz 3.92 dBm 2.440838000 GHz
Att         20 dB           Count 100/100         10k View           20 dBm         10 dBm           10 dBm         0 dBm           -10 dBm         -10 dBm           -20 dBm         01 -18.000 d           -30 dBm         -18.000 d           -50 dBm         -60 dBm           -50 dBm         -60 dBm           -50 dBm         -11 -11 -11 -11 -11 -11 -11 -11 -11 -11	SWT 63.2 µs е	VBW 100 kHz M M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2	M1[1] M2[1]		2.44061000 GHz 3.92 dBm 2.440838000 GHz
Att         20 dB           Count 100/100         10k View           20 dBm         10 dBm           10 dBm         0 dBm           -10 dBm         -0 dBm           -20 dBm         01 -18.000 d           -30 dBm         -01 -18.000 d           -50 dBm         -01 -18.000 d           -50 dBm         -00 dBm           -10 dBm         -10 dBm           -10 dBm         -10 dBm	SWT 63.2 µs е	VBW 100 kHz M M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2 M2	M1[1] M2[1]		2.44061000 GHz 3.92 dBm 2.440838000 GHz

Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



### Report No.: RA230331-16045E-RF-00A

## Appendix B: Occupied Channel Bandwidth Test Result

Test Mode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2402	0.725	2401.631	2402.357		
DH1	Ant1	2441	0.725	2440.631	2441.357		
		2480	0.725	2479.631	2480.357		
		2402	1.133	2401.431	2402.563		
2DH1	Ant1	2441	1.133	2440.431	2441.563		
		2480	1.133	2479.431	2480.563		
		2402	1.124	2401.446	2402.569		
3DH1	Ant1	2441	1.127	2440.446	2441.572		
		2480	1.127	2479.443	2480.569		

# **Test Graphs**

		DH1_Ant1	_2402			
Spectrum						
Ref Level 30.00 d	Bm Offset 20.01 dB	BRBW 30 kHz	200300 COT 2000	a		
Att 20		VBW 100 kHz	Mode Auto FFT			
Count 100/100						
ALL TRUE			M1[1]		1	1.13 dBm
20 dBm					2.40103	1820 GHz
20 0611			Occ Bw	ĩ	725.274725	5275 kHz
10 dBm				-		
		M1				
0 dBm		man	M			
-10 dBm		T N	1			
100000		X	ALS.			
-20 dBm	5		J.			
-30 dBm		_	V	0		
	1			2		
-40 dBm-	1			1		
-50 dBm	1					
man	nn			hu	non	m
-60 dBm				-		
CF 2.402 GHz	94 - 94 <sup>-</sup>	1001 pt:	5		Span 3	3.0 MHz
Marker _Type   Ref   Trc	X-value	Y-value	Function	Euro	ction Result	
M1 1	2.4018382 GHz	1.13 dBm		- ditt		
T1 1 T2 1	2.40163137 GHz 2.40235664 GHz	-15.36 dBm -17.08 dBm	Occ Bw		725.274725	275 kHz
12 1	2,40233004 GHz	-17.00 00m				
Date: 18.APR.2023	03:33:06					
		DILA A.A				
			2//1			
		DH1_Ant1	_2441			
Spectrum		DH1_Ant1	_2441			
Ref Level 29.74 d		RBW 30 kHz	201380 505 Darm			
RefLevel 29.74 d Att 20	lBm <b>Offset</b> 19.74 dB dB <b>SWT</b> 63.2 µs	RBW 30 kHz	201380 505 Darm	8		
Ref Level 29.74 d Att 20 Count 100/100		RBW 30 kHz	201380 505 Darm	1		
RefLevel 29.74 d Att 20		RBW 30 kHz	201380 505 Darm	)		L.92 dBm
Ref Level 29.74 d Att 20 Count 100/100		RBW 30 kHz	Mode Auto FFT M1[1]	8	2.44083	1.92 dBm 1820 GHz
Ref Level 29.74 d Att 20 Count 100/100 P1Pk View 20 dBm-		RBW 30 kHz	Mode Auto FFT	1		1.92 dBm 1820 GHz
Ref Level 29.74 d Att 20 Count 100/100 1Pk View		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1]		2.44083	1.92 dBm 1820 GHz
Ref Level 29.74 d           Att         20           count 100/100           IPk View           20 d8m           10 d8m		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1]		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d Att 20 Count 100/100 P1Pk View 20 dBm-		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1]		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d           Att         20           count 100/100           IPk View           20 d8m           10 d8m		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1]		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d           Att         20           Count 100/100           IPk View           20 dBm           10 dBm           0 dBm           -10 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d           Att         20           Count 100/100           IPk View           20 dBm           10 dBm           0 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d           Att         20           Count 100/100           IPk View           20 dBm           10 dBm           0 dBm           -10 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d           Att         20           Count 100/100           ● 1Pk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2.44083	1.92 dBm 3820 GHz
Ref Level 29.74 d           Att         20           Count 100/100           1Pk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2.44083	1.92 dBm 3820 GHz
Rof Level 29.74 d           Att         20           Count 100/100           1Pk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2:44083 725.274725	L.92 dBm 1820 GH2 5275 kH2
Ref Level 29.74 d           Att         20           Count 100/100           ● 1Pk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2.44083	L.92 d8m 1820 GHz 5275 kHz
Rof Level 29.74 d           Att         20           Count 100/100           1Pk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2:44083 725.274725	L.92 d8m 1820 GHz 5275 kHz
Ref Level 29.74 d           Att         20           Count 100/100         10k View           20 dBm         20           10 dBm         0           -10 dBm         -           -20 dBm         -           -30 dBm         -           -40 dBm         -		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT M1[1] Occ Bw		2:44083 725.274725	L.92 d8m 1820 GHz 5275 kHz
Ref Level 29.74 d           Att         20           Count 100/100         10k View           20 dBm         20           10 dBm         0           -10 dBm         -           -20 dBm         -           -30 dBm         -           -50 dBm         -           -60 dBm         -           CF 2.441 GHz         -		RBW 30 kHz     VBW 100 kHz	Mode Auto FFT MI[1] Occ Bw		2.44083 725.274725	L.92 d8m 1820 GH2 5275 kHz
Rof Level 29.74 d           Att         20           Count 100/100           • IPk View           20 dBm           10 dBm           0 dBm           -20 dBm           -30 dBm           -50 dBm           -60 dBm           CF 2.141 GHz           Marker	dð SWT 63.2 µs	RBW 30 kHz     VBW 100 kHz	Mode Auto FFT MI[1] Occ Bw V V2 V2 S		2,44083 725,274725	L.92 dBm 1820 GH2 5275 kHz
Ref Level 29,74 d           Att         20           Count 100/100           ● IPk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -50 dBm	dð SWT 63.2 µs	RBW 30 kHz     VBW 100 kHz	Mode Auto FFT MI[1] Occ Bw		2.44083 725.274725	L.92 dBm 1820 GH2 5275 kHz
Ref Level 29,74 d           Att         20           Count 100/100           ● IPk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -60 dBm	dð SWT 63.2 µs	RBW 30 kHz     VBW 100 kHz      M1     M1     M1     100 lpt:     1001 pt:     1.92 dBm     14.50 dBm	Mode Auto FFT MI[1] Occ Bw V V2 V2 S		2,44083 725,274725	1.92 dBm 1820 GHz 5275 kHz
Ref Level 29.74 d           Att         20           Count 100/100           IPk View           20 dBm           10 dBm           0 dBm           -20 dBm           -30 dBm           -30 dBm           -50 dBm	dð SWT 63.2 µs	RBW 30 kHz     VBW 100 kHz     VBW 100 kHz	Mode Auto FFT MI[1] Occ Bw VV VV VV S Function		2.44083 725.274725	1.92 dBm 1820 GHz 5275 kHz
Ref Level 29.74 d           Att         20           Count 100/100           ● IPk View           20 dBm           10 dBm           0 dBm           -10 dBm           -20 dBm           -30 dBm           -50 dBm           -60 dBm           -50 dBm           -50 dBm           -50 dBm           -50 dBm           -10 dBm           -10 dBm           -10 dBm           -20 dBm           -50 dBm           -50 dBm           -60 dBm           -10 dBm           -10 dBm           -10 dBm           -10 dBm           -20 dBm           -10 dBm           -10 dBm           -10 dBm           -10 dBm           -50 dBm	db         SWT         63.2 µs	RBW 30 kHz     VBW 100 kHz      M1     M1     M1     100 lpt:     1001 pt:     1.92 dBm     14.50 dBm	Mode Auto FFT MI[1] Occ Bw VV VV VV S Function		2.44083 725.274725	1.92 dBm 1820 GHz 5275 kHz

Report No.: RA230331-16045E-RF-00A



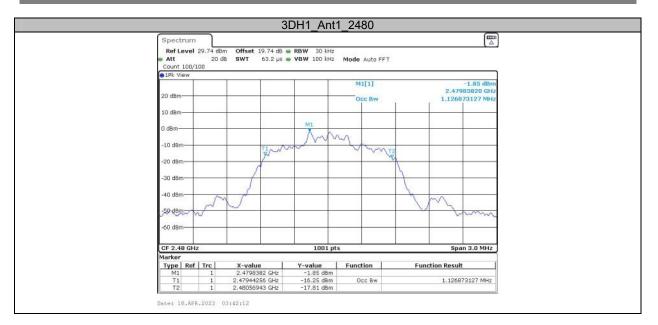
Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



## Appendix C: Maximum conducted output power Test Result

Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
		2402	3.84	≤20.97	PASS
DH1	Ant1	2441	4.79	≤20.97	PASS
		2480	3.33	≤20.97	PASS
		2402	2.91	≤20.97	PASS
2DH1	Ant1	2441	3.88	≤20.97	PASS
		2480	2.43	≤20.97	PASS
		2402	3.06	≤20.97	PASS
3DH1	Ant1	2441	4.02	≤20.97	PASS
		2480	2.61	≤20.97	PASS

## **Test Graphs**



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A

	3DH1_Ant1_2402	
Spectrum		
Ref Level 30.00 dBm Off:	set 20.01 dB 👄 RBW 3 MHz	
Att 20 dB SW Count 100/100	T 1 ms 🖷 VBW 10 MHz Mode Auto Sweep	
• 1Pk View		)
-	M1[1]	3.06 dBm
20 dBm		2.40206390 GHz
20 0011		
10 dBm-		
	911	
0 dBm		
-10 dBm		
-20 dBm-		
0.0000		
-30 dBm		
-40 dBm-		
-50 dBm-		
-50 dBm		
-60 dBm		
CF 2.402 GHz Date: 18.APR.2023 03:40:3	5 3DH1_Ant1_2441	Span 8.0 MHz
Date: 18.APR.2023 03:40:3	5	
Date: 18.APR.2023 03:40:3	3DH1_Ant1_2441	Span 8.0 MHz ) ∭∆
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level 29.74 dBm         Off:           Att         20 dB         SW	3 3DH1_Ant1_2441 set 19.74 dB RBW 3 MHz	(m) A
Date: 18.APR.2023 03:40:3  Spectrum Ref Level 29.74 dBm Off: Att 20 dB sW Count 100/100	3 3DH1_Ant1_2441 set 19.74 dB RBW 3 MHz	(m) A
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level 29.74 dBm         Off:           Att         20 dB         SW	S SDH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1ms VBW 10 MHz Mode Auto Sweep	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off:           Att         20 dB         SW         Count 100/100           Output         100/100         Filk View         Filk View	3 3DH1_Ant1_2441 set 19.74 dB RBW 3 MHz	(m) A
Date: 18.APR.2023 03:40:3  Spectrum Ref Level 29.74 dBm Off: Att 20 dB sW Count 100/100	S SDH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1ms VBW 10 MHz Mode Auto Sweep	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off.           Att         20 dB         SW         Count 100/100           1Pk View         20 dBm         100         100	S SDH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1ms VBW 10 MHz Mode Auto Sweep	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off:           Att         20 dB         SW         Count 100/100           Output         100/100         Filk View         Filk View	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date: 18.APR.2023 03:40:3  Spectrum RefLevel 29.74 dBm Off: Att 20 dB SW Count 100/100  IPk View 20 dBm 10 dBm	S SDH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1ms VBW 10 MHz Mode Auto Sweep	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off.           Att         20 dB         SW         Count 100/100           1Pk View         20 dBm         100         100	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Spectrum           Rof Level 29,74 dBm Off.           Att 20 dB SW           Count 100/100           1Pk View           20 dBm           10 dBm           0 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date: 18.APR.2023 03:40:3  Spectrum RefLevel 29.74 dBm Off: Att 20 dB SW Count 100/100  IPk View 20 dBm 10 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Spectrum           Ref Level 29.74 dBm           Att           20 dB           System           10 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Spectrum           Rof Level 29,74 dBm Off.           Att 20 dB SW           Count 100/100           1Pk View           20 dBm           10 dBm           0 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Spectrum           Ref Level 29.74 dBm           Att           20 dB           System           10 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off.           Ref Level         29.74 dBm         Off.         Att         20 dB         SW           Count 100/100         1Pk View         20 dBm         0         dBm         0         dBm         10 dBm         10 dBm         -10 dBm         -20 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off.           Ref Level         29.74 dBm         Off.         Att         20 dB         SW           Count 100/100         1Pk View         20 dBm         0         dBm         0         dBm         10 dBm         10 dBm         -10 dBm         -20 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date: 18.APR.2023         03:40:3           Spectrum         Ref Level 29.74 dBm Off:           Att         20 dB           Out1 100/100         IPk View           20 dBm         10 dBm           10 dBm         -30 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date: 18.APR.2023         03:40:3           Spectrum         Ref Level 29.74 dBm Off:           Att         20 dB           Out1 100/100         IPk View           20 dBm         10 dBm           10 dBm         -30 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date:         10.APR.2023         03:40:3           Spectrum         Ref Level 29.74 dBm Off:         0           Att         20 dB         SW           Count 100/100         IPk View         0           ØBm         10 dBm         0           0 dBm         -30 dBm         -30 dBm           -40 dBm         -50 dBm         -50 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date:         18.APR.2023         03:40:3           Spectrum         Ref Level         29.74 dBm         Off.           Ref Level         29.74 dBm         Off.         Att         20 dB         SW           Count         100/100         1Pk View         20 dBm         10 dBm         10 dBm         10 dBm         -30 dBm         -30 dBm         -40 dBm         -4	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 
Date:         10.APR.2023         03:40:3           Spectrum         Ref Level 29.74 dBm Off:         0           Att         20 dB         SW           Count 100/100         IPk View         0           ØBm         10 dBm         0           0 dBm         -30 dBm         -30 dBm           -40 dBm         -50 dBm         -50 dBm	S 3DH1_Ant1_2441 Set 19.74 dB  RBW 3 MHz T 1 ms  VBW 10 MHz Mode Auto Sweep M1[1]	(∭ 

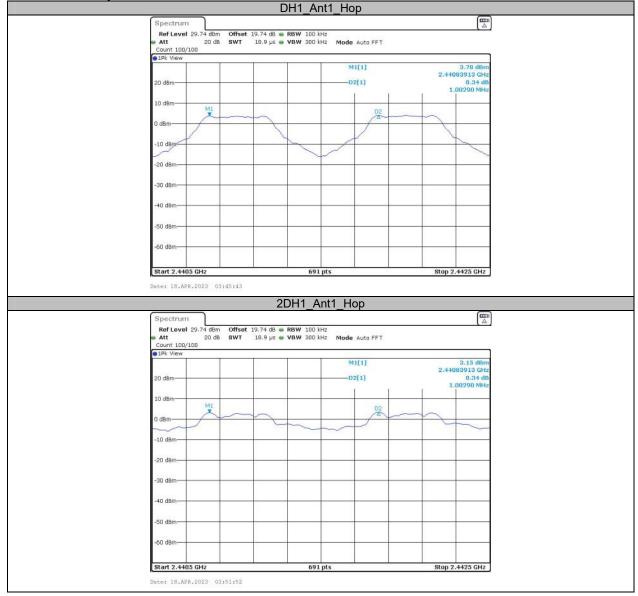
Report No.: RA230331-16045E-RF-00A

ſ	Spectrum						
		ffset 19.74 dB 🖷 RB1		nero ne			
	Att 20 dB S	WT 1 ms 🖷 VB	W 10 MHz Mode	uto Sweep			
r	Count 100/100 1Pk View						
			M	[1]	2.	61 dBm	
	525.000				2.480010		
	20 dBm	8 8					
	17-20-0						
	10 dBm	0 0			-		
	0.720.5		MI				
	0 dBm						
	-10 dBm	2 2			-		
	-20 dBm-						
	-30 dBm				-		
	-40 dBm				-		
	-50 dBm-				-		
						1	
	-60 dBm				-		
L	CF 2.48 GHz	54. 274	1001 pts	312	Span 8	U MHZ	

## Appendix D: Carrier frequency separation Test Result

Test Mode	Antenna	Frequency[MHz]	Result[MHz]	Limit[MHz]	Verdict
DH1	Ant1	Нор	1.003	≥0.513	PASS
2DH1	Ant1	Нор	1.003	≥0.813	PASS
3DH1	Ant1	Нор	1.003	≥0.813	PASS

# **Test Graphs**



Report No.: RA230331-16045E-RF-00A

Spectrum	3DH1_Ant1_Hop	
	74 dB 🖷 RBW 100 kHz	
🕳 Att 20 dB SWT 1	8.9 µs · VBW 300 kHz Mode Auto FFT	
Count 100/100		
e 1Pk View		0.15.10
	M1[1]	3.16 dBm 2.44083913 GHz
20 dBm	D2[1]	0.33 dB
	3 1	1.00290 MHz
10 dBm		
M1	02	
0 dBm		
~~~~~		
-10 dBm		
-20 dBm		
100-00-000		
-30 dBm		
100021200		
-40 dBm		
100000		
-50 dBm		
10.10		
-60 dBm		
Start 2.4405 GHz	691 pts	Stop 2.4425 GHz

### Report No.: RA230331-16045E-RF-00A

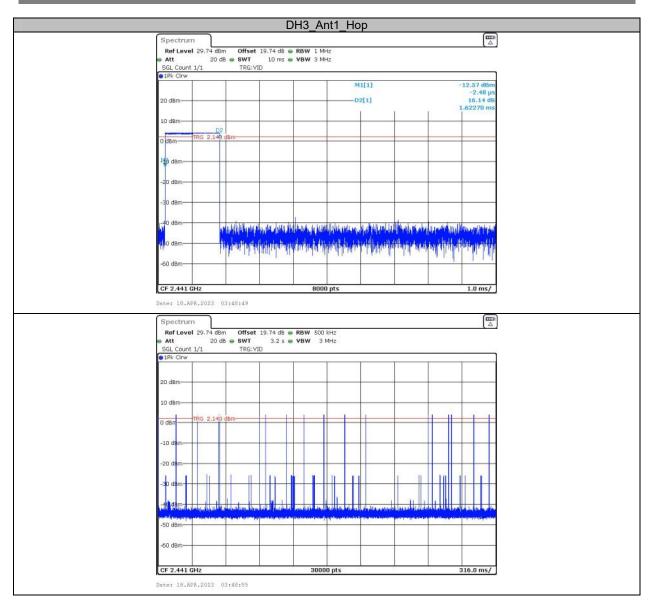
# Appendix E: Time of occupancy Test Result

Test Mode	Antenna	Frequency[MHz]	BurstWidth [ms]	TotalHops [Num]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Нор	0.38	320	0.120	≤0.4	PASS
DH3	Ant1	Нор	1.62	180	0.292	≤0.4	PASS
DH5	Ant1	Нор	2.86	110	0.315	≤0.4	PASS
2DH1	Ant1	Нор	0.38	320	0.122	≤0.4	PASS
2DH3	Ant1	Нор	1.63	160	0.260	≤0.4	PASS
2DH5	Ant1	Нор	2.87	130	0.373	≤0.4	PASS
3DH1	Ant1	Нор	0.38	320	0.122	≤0.4	PASS
3DH3	Ant1	Нор	1.63	170	0.276	≤0.4	PASS
3DH5	Ant1	Нор	2.87	130	0.373	≤0.4	PASS

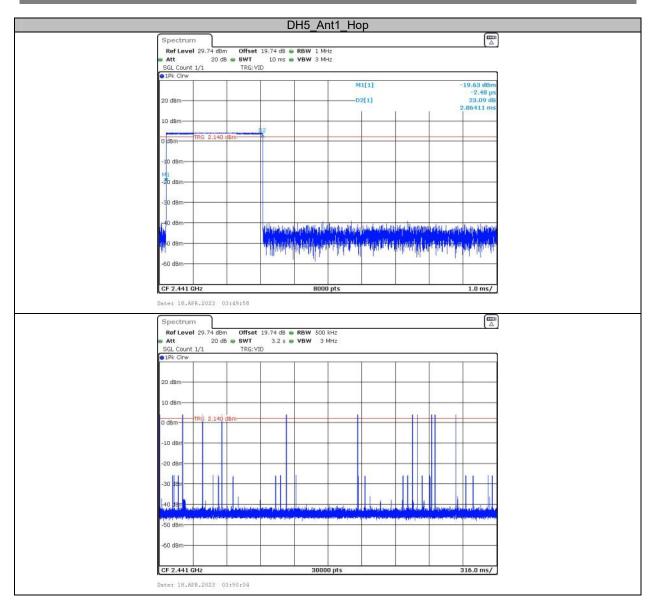
# Test Graphs

	DH1_Ant1_Hop
	Spectrum 🔂
	Ref Level 29.74 dB Offset 19.74 dB RBW 1 MHz
	Att 20 dB SWT 10 ms VBW 3 MHz SGL Count 1/1 TRG: VID
	● 1Pk Clrw M1[1] -11.29 dBm
	-2.48 µs
	20 dBmD2[1] 14.76 dB 375.05 μs
	10 dBm
	176 2.140 dBm
	0/8m 100 2170 0m
	-40 dBm-
	-30 dBm
	40 dBm at 14 from the later of a relativity of the data from a still individual or at most restand to a strand
	A STATE AND A STATE AND A STATE AND A STATE AND
	-50 dBm
	CF 2.441 GHz 8000 pts 1.0 ms/
	Date: 18.APR.2023 03:46:22
	Spectrum A
	Ref Level         29.74 dB         Offset         19.74 dB         RBW         500 kHz           Att         20 dB         SWT         3.2 s         VBW         3 MHz
	SGL Count 1/1 TRG:VID
	IPk Clrw
	20 dBm
	10 dBm
	d dBm
	-10 dBm
	-20 dBm
	-50 dBm-
	-60 dBm
	CF 2.441 GHz 30000 pts 316.0 ms/
	Date: 18.APR.2023 03:46:27
1	

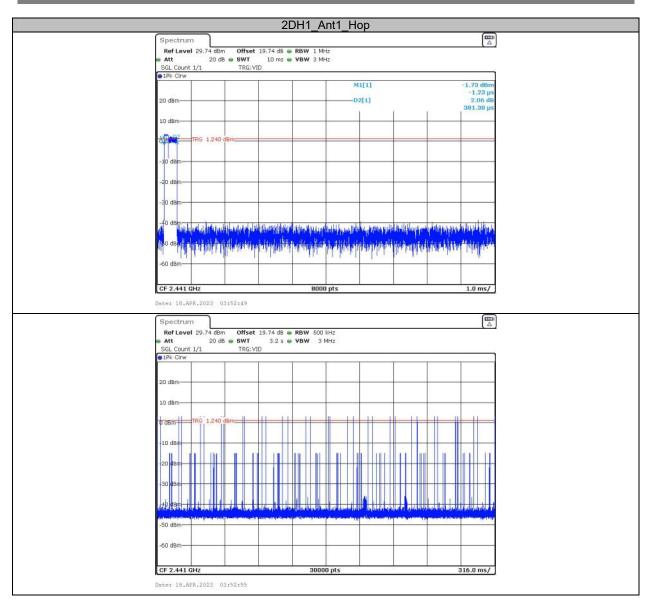
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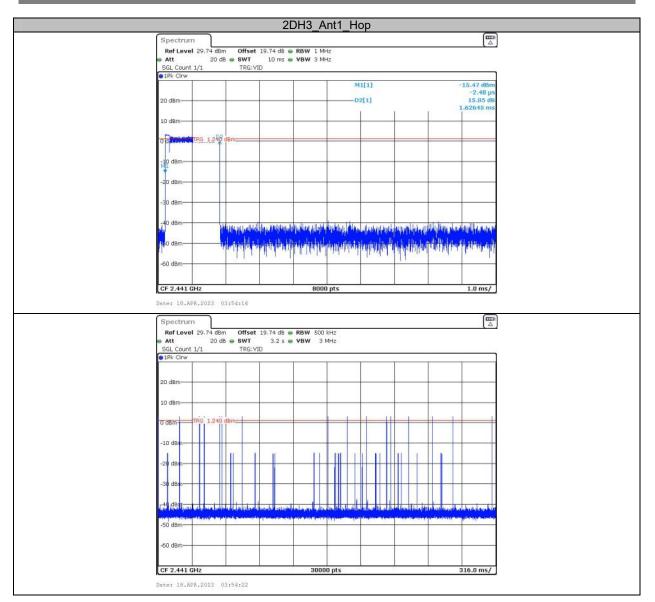
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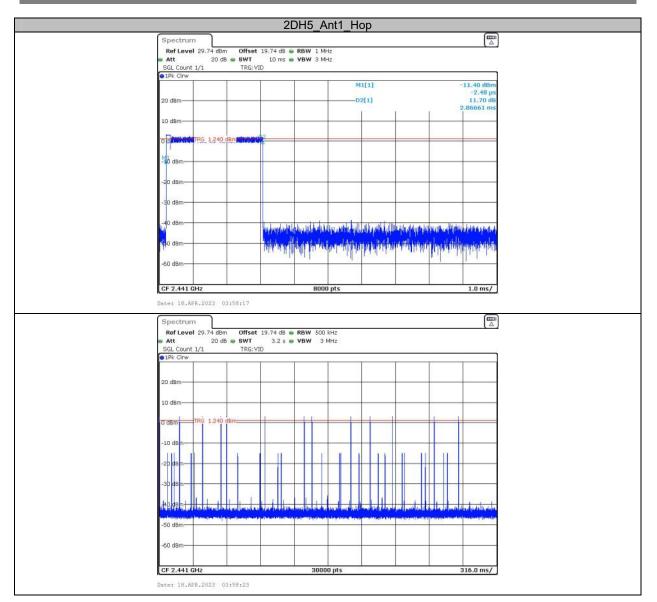
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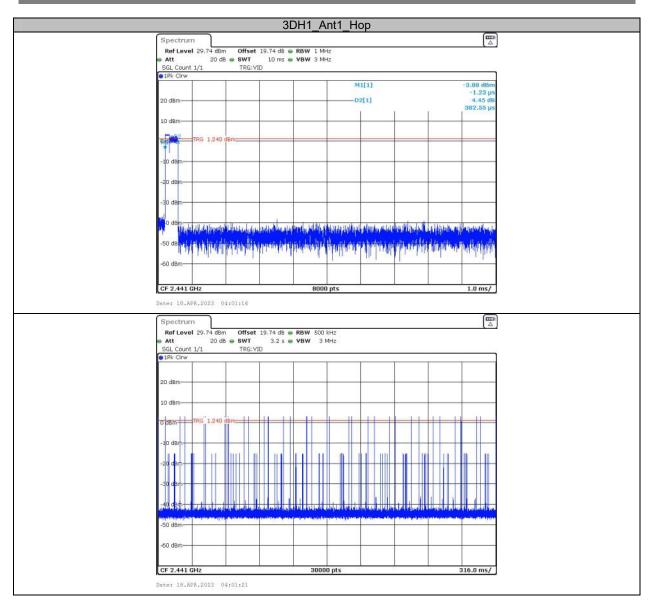
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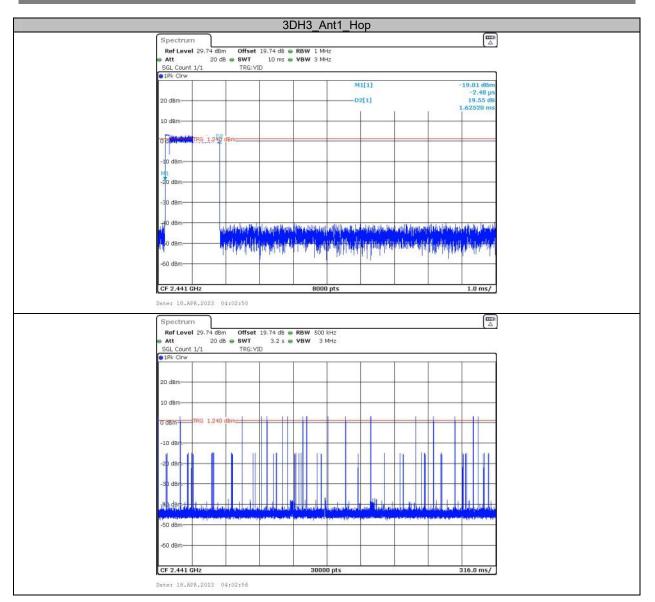
Report No.: RA230331-16045E-RF-00A



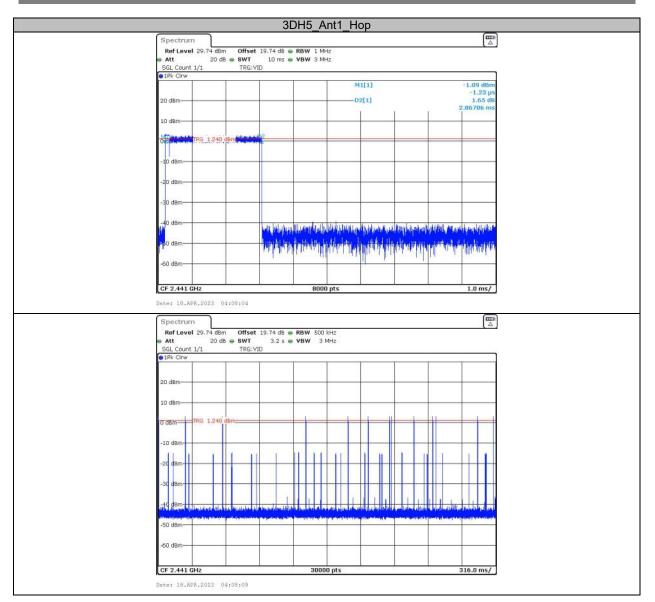
Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



# Appendix F: Number of hopping channels Test Result

Test Mode	Antenna	Frequency[MHz]	Result[Num]	Limit[Num]	Verdict
DH1	Ant1	Нор	79	≥15	PASS
2DH1	Ant1	Нор	79	≥15	PASS
3DH1	Ant1	Нор	79	≥15	PASS

# Test Graphs

	DH1_Ant1_Hop	
Spectrum		
Ref Level 30.00 dBm Offset 30.00 dBm Off	20.01 dB • RBW 100 kHz 1 ms • VBW 300 kHz Mode Auto Sweep	
Count 1000/1000	1 ms - VBW 300 kH2 MOOB AUTO Sweep	
• 1Pk View		
20 d8m		
20 0011		
10 dBm		
088688888888888888888888888888888888888		
-10 #B#		
-20 dBm	Desire a second production during the	
-30 dBm		
-40 dBm		
C. 1997. 1		
~50 dBm		
-60 dBm-		
Start 2.4 GHz	691 pts Stop 2.4835 GHz	
Date: 18.APR.2023 03:46:06		
	2DH1_Ant1_Hop	
Spectrum		
Ref Level 30.00 dBm Offset	20.01 dB 🖷 RBW 100 kHz	
Ref Level 30.00 dBm Offset 3 Att 20 dB SWT Count 1000/1000		
RefLevel 30.00 dBm Offset 3 Att 20 dB SWT	20.01 dB 🖷 RBW 100 kHz	
Ref Level 30.00 dBm Offset : Att 20 dB SWT Count 1000/1000 PIPk View	20.01 dB 🖷 RBW 100 kHz	
Ref Level 30.00 dBm Offset 3 Att 20 dB SWT Count 1000/1000	20.01 dB 🖷 RBW 100 kHz	
Ref Level 30.00 dBm Offset : Att 20 dB SWT Count 1000/1000 PIPk View	20.01 dB 🖷 RBW 100 kHz	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 db           9 IPk View         20 dBm         10 dBm	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level         30,00         dBm         Offset         3           Att         20 dB         SWT         Count 1000/1000         SWT           Count 1000/1000         20 dBm	20.01 dB 🖷 RBW 100 kHz	
Ref Level 30,00 dBm         Offset ;           Att         20 dB         SWT           Count 1000/1000         SWT         20 dBm           20 dBm         20 dBm         10 dBm           10 dBm         0 MBR/h th Ath Ath Ath Ath Ath Ath Ath Ath Ath	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 db           9 JPk View         20 dBm         10 dBm           10 dBm         -10 dBm         -10 dBm	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 dB         SWT           Count 1000/1000         100/1000         SWT           20 dBm         20 dBm         10 dBm           10 dBm         0 MSm         10 dBm	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 db           9 JPk View         20 dBm         10 dBm           10 dBm         -10 dBm         -10 dBm	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 dbm           9 JPk View         20 dBm         10 dBm           10 dBm         -10 dBm         -10 dBm           -10 dBm         -30 dBm         -30 dBm	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000           I DR View         Image: Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000           I DR View         Image: Count 1000/1000         Image: Count	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 dbm           9 JPk View         20 dBm         10 dBm           10 dBm         -         -           -10 dBm         -         -           -20 dBm         -         -           -30 dBm         -         -	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 db           © 1Pk View         20 dbm         10 dbm           10 dBm         -         -           10 dBm         -         -           20 dBm         -         -           -10 dBm         -         -           -20 dBm         -         -           -30 dBm         -         -           -50 dBm         -         -	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000           I DR View         Image: Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000         Image: Count 1000/1000           I DR View         Image: Count 1000/1000         Image: Count	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 db           © 1Pk View         20 dbm         10 dbm           10 dBm         -         -           10 dBm         -         -           20 dBm         -         -           -10 dBm         -         -           -20 dBm         -         -           -30 dBm         -         -           -50 dBm         -         -	20.01.dB RBW 100 HHE 1 ms VBW 300 HHE Mode Auto Sweep	
Ref Level 30,00 dBm         Offset ;           Att         20 db         SWT           Count 1000/1000         SWT         20 db           © 1Pk View         20 dbm         10 dbm           10 dBm         -         -           0 kSibult Att Att Att Att Att Att Att Att Att A	20.01 dB • RBW 100 HH2 1 ms • VBW 300 HH2 Mode Auto Sweep	

Report No.: RA230331-16045E-RF-00A

Spectrum		Ant1_Hop		2
	Offset 20.01 dB . RBW 100	kHz		
Att 20 dB	SWT 1 ms . VBW 300	kHz Mode Auto Sweep		
Count 1000/1000				T C
				1
20 dBm				
10 dBm				-
○₩₽₩ <del>₽↓↓<u>↓</u>↓↓↓↓↓↓↓</del>	MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM		And a hid a had a had been a second s	
	IAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	.4	vadan of a fall and on a fan of	
-10 dBm				
-20 d8m-				_
-30 dBm-				-
-40 dBm-				-
				w and the second s
-50 d8m-				
-60 dBm				
-50 0811				
Start 2.4 GHz				
		1 pts	Stop 2.4835 GHz	

## Appendix G: Band edge measurements Test Graphs

		DHT AND	1 Low 2402			
Spectrum		_				
Ref Level 30		20.01 dB 👄 RBW 10		20		4
<ul> <li>Att Count 300/300</li> </ul>		132.7 µs 🖷 VBW 30	0 kHz Mode Auto FF	т		
• 1Pk View						
			M1[1]		2.97 dBm 2.4020150 GHz	
20 dBm			M2[1]		-50.77 dBm 2.4000000 GHz	
10 dBm				1	M1	
0 dBm				-	Å	
-10 dBm-			_	_		
	-17.030 dBm				A	
2000 000 000 000 000 000 000 000 000 00						
-30 dBm						
-40 dBm	M4					
st0,dBm	W4	monterance	warmen and and	MB MB	error 12 2 tes	
-60 dBm						
So dan-						
Start 2.35 GHz	2	6	91 pts		Stop 2.405 GHz	
Marker Type   Ref   1	frc X-value	a   Y-value	Function	Functi	on Result	
M1 M2	1 2.4020		dBm			
M3	1 2.	39 GHz -49.97	dBm			
M4	1 2.36474	64 GHz -47.17	dBm			
Date: 18.APR.2	023 03:33:17	DH1_Ant	1_High_2480		Ē	1
Spectrum Ref Level 29	.74 dBm Offset :	19.74 dB 👄 RBW 10	0 kHz		(m) A	]
Spectrum Ref Level 29 e Att Count 300/300	0.74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10				]
Spectrum Ref Level 29 Att	0.74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz <b>Mode</b> Auto Sw			]
Spectrum Ref Level 29 e Att Count 300/300	0.74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz	]
Spectrum Rof Level 29 Att Count 300/300 1Pk View 20 dBm	0.74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz <b>Mode</b> Auto Sw		2.33 dBm	]
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm	,74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm	]
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm	,74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm	]
Spectrum Rof Level 29 Att Count 300/300 1 Pk View 20 dBm 10 dBm -10 dBm	,74 dBm Offset : 20 d8 SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm	]
Spectrum Rof Level 29 Att Count 300/300 1 Pk View 20 dBm 10 dBm -10 dBm	,74 dBm Offset : 20 dB SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm	,74 dBm Offset : 20 d8 SWT	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	.74 dBm Offset : 20 dB SWT : -17,870 dBm-	19.74 dB 👄 RBW 10	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	-17.670 dBm-	19.74 dB • RBW 10 1.1 ms • VBW 30 	0 HH2 Mode Auto Sw M1[1] M2[1]		2.33 dBm 2.479900 GHz -49.64 dBm 2.483500 GHz	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	-17.670 dBm	19.74 dB • RBW 10 1.1 ms • VBW 30 	0 kHz 0 kHz Mode Auto Sw M1[1]		2.33 dBm 2.479900 GHz -49.64 dBm 2.483500 GHz	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	-17.670 dBm-	19.74 dB • RBW 10 1.1 ms • VBW 30 	0 HH2 Mode Auto Sw M1[1] M2[1]		2.33 dBm 2.479900 GHz -49.64 dBm 2.483500 GHz	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm -40 dBm	-17.670 dBm-	19.74 dB • RBW 10 1.1 ms • VBW 30 	D HHE D HHE MI[1] M2[1]		2.33 dBm 2.479900 GHz -49.64 dBm 2.489500 GHz	
Spectrum Ref Level 29 Att Count 300/300 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm -0 dBm -0 dBm -60 dBm -60 dBm -50 dBm -50 dBm	-17.670 dBm	19.74 dB • RBW 10 1.1 ms • VBW 30 	0 HH2 D HH2 Mode Auto Sw M1[1] M2[1] M2[1] 91 pts		2.33 dBm 2.479900 GHz -49.64 dBm 2.483500 GHz	
Spectrum           Rof Level 29           Att           Count 300/300           I Ik View           20 dBm           10 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           Start 2.47 GHz           Marker           Type   Kef   1	-17. 670 dBm -17. 670 dBm -17. 670 dBm -17. 670 dBm -17. 670 dBm -17. 670 dBm	19.74 d8 • RBW 10 1.1 ms • VBW 30 	D LHE D LHE Mode Auto Sw M1[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1] M2[1]		2.33 dBm 2.479900 GHz -49.64 dBm 2.489500 GHz	
Spectrum           Rof Level 29           Att           Count 300/300           IPk View           20 dBm           10 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm	-17.670 dBm -17.670 dBm	19.74 dB  RBW 10 1.1 ms  VBW 30 1.1 ms  VBW 30	0 HH2 0 H1[1] 0 H1[1] 0 H1[1] 0 H1[1] 0 H1[1] 0 H1		2.33 dBm 2.479900 GHz -49.64 dBm 2.483500 GHz	
Spectrum           Ref Level 29           Att           Count 300/300           1Pk View           20 dBm           10 dBm           -10 dBm           -20 dBm           -30 dBm           -40 dBm           -50 dBm           -60 dBm           Start 2.47 GHz           Marker           Type   Ref   1           Mt1	-17.670 dBm -17.670 dBm -17.670 dBm -17.670 dBm -17.671 dBm -17.671 dBm -17.671 dBm	19.74 dB = RBW 10 1.1 ms = VBW 30 	D HH2 D H42 Mode Auto Sw M1[1] M2[1] M2[1] 91 pts 91 pts 93 Function dBm dBm		2.33 dBm 2.479900 GHz -49.64 dBm 2.483500 GHz	

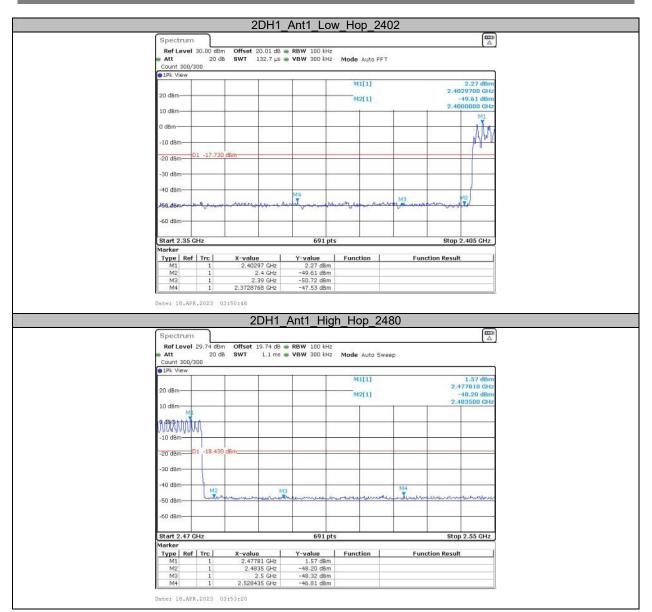
Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A



Report No.: RA230331-16045E-RF-00A

				<u>3D</u>	HT_Anti	_Low_2	2402			
Spectre	Im									6
	el 30.00	0 dBm	Offset	20.01 dB	RBW 100 k	Hz				
Att		20 dB	SWT	132.7 µs	👄 VBW 300 k	Hz Mode /	uto FFT			
Count 3										
		1		1		M1	1]			2.32 dB
20 dBm-	_			-						18560 GI 51.03 dB
						M2	11			00000 GI
10 dBm-	1	-								.M1
0 dBm	-			-					-	- Ă
-10 dBm-										1
-10 dBm-	- Larre		2164.							
-20 dBm-	D1 -1	7.680 c	lBm	-				-		
-30 dBm-										
-30 dBm-										1. 1.
-40 dBm-	-	-+		-				814		14
-58.deto-	ed and		per al al and		Murt winter	mer h	a diam	W. J. Wash	in the second	13/ 4
CHORE WORLD	- Carlo Ca	Contraction of	All Hold		a Armades of	anna Arta	o ou	0.040.04	Antonia	
-60 dBm-		-		-						
Start 2.3	85 GHz				691	pts			Stop 2	.405 GH
Marker Type	of   Ter	1	X-valu		Y-value	Functi	an 1	Fund	tion Result	
M1		1	2.401	856 GHz	2.32 dB	m		T unc	tion Result	
M2		1		2.4 GHz	-51.03 dB					
M2 M3 M4 Date: 18.		volu-	2.3888	39 GHz 986 GHz 3DI	-49.89 dB -47.09 dB -41_Ant1	m	2480			
M3 M4	APR.202	1	2.3888	986 GHz	-47.09 dB	m	2480			
M3 M4 Date: 18 Spectro Ref Lev	APR.202 Jm Jm	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	_High_2	10 R			[
M3 M4 Date: 18. Spectro Ref Lev Att	APR.202 Jm Jm Jel 29.74	1 3 03 4 dBm	2.3888 :40:26	986 GHz 3DI 19.74 dB	-47.09 dB	_High_2	10 R	ep	_	[
M3 M4 Date: 18 Spectro Ref Lev	APR.202 Jm /el 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	_High_2	10 R	ep		Ē
M3 M4 Date: 18. Spectri Ref Let Att Count 3	APR.202 Jm /el 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	_High_2	uto Swe	ep		1.70 dB
M3 M4 Date: 18. Spectri Ref Let Att Count 3	APR.202 Jm /el 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep		1.70 dB
M3 M4 Date: 18. Spectri Ref Lev Att Count 3 0 1Pk Vie 20 dBm-	APR.202 Jm /el 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	High_2	uto Swee	ep	-4	1.70 dB
M3 M4 Date: 18. Spectro Ref Let Att Count 3 0 1Pk Viet	APR.202 Jm /el 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Date: 18. Spectri Ref Lev Att Count 3 0 1Pk Vie 20 dBm-	APR, 202 Jm vel 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Date: 18. Spectro Ref Let Att Count 3 IPk Vier 20 dBm- 10 dBm- 0 dBm-	APR, 202 Jm vel 29.74	1 3 03 4 dBm	2.3888 : 40 : 26 Offset	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Date: 18. Spectro Ref Lev Att Count 3 IPk Viev 20 dBm- 10 dBm-	APR.202	1 3 03 4 dBm 20 dB	2.3888 :40:26 Offset SWT	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Date: 18. Spectro Ref Let Att Count 3 IPk Vier 20 dBm- 10 dBm- 0 dBm-	APR.202	1 3 03 4 dBm	2.3888 :40:26 Offset SWT	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	8p	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Date: 18. Spectra Ref Le: 20 dBm- 10 dBm- -10 dBm- -20 dBm-	APR.202	1 3 03 4 dBm 20 dB	2.3888 :40:26 Offset SWT	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Dates 18. Spectro Ref Let Att Count 3 1Pk Viet 20 dBm- 10 dBm- -10 dBm-	APR.202	1 3 03 4 dBm 20 dB	2.3888 :40:26 Offset SWT	986 GHz 3DI 19.74 dB	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3 M4 Date: 18. Spectra Ref Le: 20 dBm- 10 dBm- -10 dBm- -20 dBm-	APR, 202	1 13 03 4 dBm 20 dB	2.3888 :40:26 Offset SWT	3DI 19.74 dB 1.1 ms	-47.09 dB	High_: Hz Hz Mode /	uto Swee	ep	-4	1.70 dB 79900 GI 18.56 dB
M3           M4           Date: 18.           Spectra           Ref Let           Att           Count 3           IPk Vie           20 dBm-           10 dBm-           0 dBm-           -20 dBm-           -30 dBm-	APR.202	1 3 03 4 dBm 20 dB	2.3888 :40:26 Offset SWT	3DI 3DI 19.74 dB 1.1 ms	-47.09 dB	M High_: Hz Mode / M1 M2	1] 1]		-4	1.70 dB 79900 G 18.56 dB 33500 G
M3 M4 Date: 18. Spectra Rof Le: Att Count 3 IPk Vie 20 dBm- 0 dBm- 0 dBm- -10 dBm- -20 dBm- -40 dBm- wb/bB/m	APR.202	4 dBm 20 dB 8.300 d	2.3888 :40:26 Offset SWT	3DI 3DI 19.74 dB 1.1 ms	-47.09 dB	M High_: Hz Mode / M1 M2	1] 1]		2.46	1.70 dB 79900 G 18.56 dB 33500 G
M3           M4           Date:           18.           Spectra           Ref Let           Att           Count 3           1Pk Viet           20 dBm-           10 dBm-           0 dBm-           -20 dBm-           -30 dBm-           -40 dBm-	APR.202	4 dBm 20 dB 8.300 d	2.3888 :40:26 Offset SWT	3DI 3DI 19.74 dB 1.1 ms	-47.09 dB	M High_: Hz Mode / M1 M2	1] 1]		2.46	1.70 dB 79900 G 18.56 dB 33500 G
M3           M4           Date:           18.           Spectra           Ref Let           0           10           0           0           0           0           0           10           -10           -20           -30           -40           -60	APR.202	4 dBm 20 dB 8.300 d	2.3888 :40:26 Offset SWT	3DI 3DI 19.74 dB 1.1 ms	-47.09 dB	Migh_:	1] 1]		-4 2.46	1.70 dB 79900 Gi 18.56 dB 33500 Gi
M3           M4           Dates 18.           Spectm           Ref Les           Att           20 dBm—           10 dBm—           0 dBm—           -10 dBm—           -30 dBm—           -60 dBm—           -60 dBm—           Start 2.4	APR.202	4 dBm 20 dB 8.300 d	2.3888 :40:26 Offset SWT	3DI 3DI 19.74 dB 1.1 ms	-47.09 dB	Migh_:	1] 1]		-4 2.46	1.70 dB 79900 G 18.56 dB 33500 G
M3           M4           Date: 18.           Spectra           Ref Let           Att           Count 3           IPk Vie           20 dBm-           10 dBm-           0 dBm-           -10 dBm-           -30 dBm-           -40 dBm-           -50 dBm-           -60 dBm-           50 dBm-           50 dBm-           60 dBm-           50 dBm-	APR.202	4 dBm 20 dB	2.3888 :40:26 Offset SWT	3DI 19.74 dB 1.1 ms	-47.09 dB	Miles of the second sec	1] 1]			1.70 dB 79900 Gi 18.56 dB 33500 Gi
M3           M4           Date: 18.           Spectra           Ref Let           Att           Count 3           1Pk Vie           20 dBm-           10 dBm-           0 dBm-           -10 dBm-           -30 dBm-           -40 dBm-           -50 dBm-           -60 dBm-           50 dBm-           50 dBm-           Marker           Type 1           M1	APR.202	1 3 03 4 dBm 20 dB 8.300 d M2 M2 4 1	2.3888 :40:26 Offset SWT #8m 	BOR GHZ      SOLUTION       SOLUTION       SOLUTION      SOLUTION      SOLUTION	-47.09 dB	High : High : Z Mode A M1 M2 control of the second se	1] 1]		-4 2.46	1.70 dB 79900 Gi 18.56 dB 33500 Gi
M3           M4           Date:           18.           Spectra           Ref Let           20 dBm-           10 dBm-           0 dBm-           10 dBm-           20 dBm-           30 dBm-           40 dBm-           50 dBm-           40 dBm-           50 dBm-           50 dBm-           10 dBm-           50 dBm-           40 dBm-           50 dBm-           40 dBm-           50 dBm-           40 dBm-           50 dBm-	APR.2022	1 3 03 4 dBm 20 dB 8.300 d d 8.300 d d 1 1	2.38889 :40:26 Offset SWT dBm X-volu 2.4. 2.4.	BOP GHZ	-47.09 dB		1] 1]			1.70 dB 79900 Gi 18.56 dB 33500 Gi
M3           M4           Date: 18.           Spectra           Ref Let           Att           Count 3           1Pk Vie           20 dBm-           10 dBm-           0 dBm-           -10 dBm-           -30 dBm-           -40 dBm-           -50 dBm-           -60 dBm-           50 dBm-           50 dBm-           Marker           Type 1           M1	M11 M7 M11 M11 M11 M11 M11 M11 M	1 3 03 4 dBm 20 dB 8.300 d M2 M2 4 1	2.3888 :40:26 Offset SWT	BOR GHZ      SOLUTION       SOLUTION       SOLUTION      SOLUTION      SOLUTION	-47.09 dB		1] 1]			1.70 dB 79900 Gi 18.56 dB 33500 Gi

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