

#### CFR 47 FCC PART 15 SUBPART C ISED RSS-247 ISSUE 2

#### **CERTIFICATION TEST REPORT**

For

**Bluetooth Headset** 

#### MODEL NUMBER: JR310BT

#### FCC ID: APIJBLJR310BT

IC: 6132A-JBLJR310BT

#### **REPORT NUMBER: 4789485754-5**

ISSUE DATE: June 01, 2020

Prepared for

#### HARMAN INTERNATIONAL INDUSTRIES INC 8500 Balboa Blvd Nothridge CA 91329,UNITED STATES

Prepared by

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, People's Republic of China Tel: +86 769 22038881 Fax: +86 769 33244054 Website: www.ul.com

The results reported herein have been performed in accordance with the laboratory's terms of accreditation. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report apply to the test sample(s) mentioned above at the time of the testing period only and are not to be used to indicate applicability to other similar products. This report does not imply that the product(s) has met the criteria for certification.



#### **Revision History**

Rev.	Issue Date	Revisions	Revised By
V0	06/01/2020	Initial Issue	



Summary of Test Results				
Clause	Test Items	FCC/ISED Rules	Test Results	
1	20dB Bandwidth and 99% Occupied Bandwidth	FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a) RSS-Gen Clause 6.7	Pass	
2	Conducted Output Power	FCC 15.247 (b) (1) RSS-247 Clause 5.1 (b)	Pass	
3	Carrier Hopping Channel Separation	FCC 15.247 (a) (1) RSS-247 Clause 5.1 (b)	Pass	
4	Number of Hopping Frequency	15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Pass	
5	Time of Occupancy (Dwell Time)	15.247 (a) (1) III RSS-247 Clause 5.1 (d)	Pass	
6	Conducted Bandedge	FCC 15.247 (d) RSS-247 Clause 5.5	Pass	
7	Radiated Bandedge and Spurious	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9 RSS-GEN Clause 8.10	Pass	
8	Conducted Emission Test For AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	Pass	
9	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	Pass	

Note:

1. This test report is only published to and used by the applicant, and it is not for evidence purpose in China.

2. The measurement result for the sample received is <Pass> according to < CFR 47 FCC PART 15 SUBPART C >< ISED RSS-247 > when <Accuracy Method> decision rule is applied.



## TABLE OF CONTENTS

1.	ATT	ESTATION OF TEST RESULTS	6
2.	TES	ST METHODOLOGY	7
3.	FAG	CILITIES AND ACCREDITATION	7
4.	CAI	LIBRATION AND UNCERTAINTY	8
2	4.1.	MEASURING INSTRUMENT CALIBRATION	8
4	4.2.	MEASUREMENT UNCERTAINTY	8
5.	EQ	JIPMENT UNDER TEST	9
ł	5.1.	DESCRIPTION OF EUT	9
ł	5.2.	MAXIMUM OUTPUT POWER	9
ł	5.3.	PACKET TYPE CONFIGURATION	9
ł	5.4.	CHANNEL LIST	10
ł	5.5.	TEST CHANNEL CONFIGURATION	10
ł	5.6.	THE WORSE CASE POWER SETTING PARAMETER	11
ł	5.7.	DESCRIPTION OF AVAILABLE ANTENNAS	12
ł	5.8.	WORST-CASE CONFIGURATIONS	12
ł	5.9.	TEST ENVIRONMENT	12
ł	5.10.	DESCRIPTION OF TEST SETUP	13
6.	ME	ASURING INSTRUMENT AND SOFTWARE USED	14
7.	AN	TENNA PORT TEST RESULTS	16
7	7.1.	ON TIME AND DUTY CYCLE	16
7	7.2.	20dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH	18
7	7.3.	CONDUCTED OUTPUT POWER	20
7	7.4.	CARRIER HOPPING CHANNEL SEPARATION	22
7	7.5.	NUMBER OF HOPPING FREQUENCY	24
7	7.6.	TIME OF OCCUPANCY (DWELL TIME)	26
7	7.7.	CONDUCTED SPURIOUS EMISSION	28
8.	RAI	DIATED TEST RESULTS	30
8	3.1.	LIMITS AND PROCEDURE	30
ξ	3.2 <i>.</i> 8.2. 8.2.		36



	T ugo o or TTT
8.3. SPURIOUS EMISSIONS (1~3GHz) 8.3.1. GFSK MODE	
8.3.2. 8DPSK MODE	
8.4. SPURIOUS EMISSIONS (3~18GHz)	
8.4.1. GFSK MODE	60
8.4.2. 8DPSK MODE	
8.5. SPURIOUS EMISSIONS 18G ~ 26GHz	
8.5.1. GFSK MODE	
8.6. SPURIOUS EMISSIONS 30M ~ 1 GHz 8.6.1. GFSK MODE	
8.7. SPURIOUS EMISSIONS BELOW 30M	
8.7.1. GFSK MODE	
9. AC POWER LINE CONDUCTED EMISSIONS	
9.1. 8DPSK MODE	
10. ANTENNA REQUIREMENTS	
Appendix A: 20dB Emission Bandwidth	
Test Result	
Test Graphs	
Appendix B: Occupied Channel Bandwidth	
Test Result Test Graphs	
Appendix C: Maximum conducted output power	
Test Result	
Appendix D: Carrier frequency separation	
Test Result	
Test Graphs	
Appendix E: Time of occupancy	
Test Result Test Graphs	
Appendix F: Number of hopping channels Test Result	
Test Graphs	
Appendix G: Band edge measurements	
Test Result	
Test Graphs	
Appendix H: Conducted Spurious Emission	
Test Result Test Graphs	
·	



### **1. ATTESTATION OF TEST RESULTS**

#### Applicant Information

Company Name:	HARMAN INTERNATIONAL INDUSTRIES INC
Address:	8500 Balboa Blvd Nothridge CA 91329, UNITED STATES
Manufacturer Information	
Company Name:	HARMAN INTERNATIONAL INDUSTRIES INC
Address:	8500 Balboa Blvd Nothridge CA 91329, UNITED STATES

#### **EUT Description**

EUT Name:	Bluetooth Headset
Model:	JR310BT
Brand:	JBL
Sample Received Date:	May 20, 2020
Sample Status:	Normal
Sample ID:	3072495
Date of Tested:	May 20~29, 2020

APPLICABLE STANDARDS		
STANDARD	TEST RESULTS	
CFR 47 FCC PART 15 SUBPART C	PASS	
ISED RSS-247 Issue 2	PASS	
ISED RSS-GEN Issue 5	PASS	

Prepared By:

Kebo. zhong.

Checked By:

Kebo Zhang

Project Engineer

Approved By:

Aephenbuo

Stephen Guo Laboratory Manager Sherry les

Shawn Wen Laboratory Leader



# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, CFR 47 FCC Part2, CFR 47 FCC Part 15, ANSI C63.10-2013, ISED RSS-247 Issue 2 and ISED RSS-GEN Issue 5.

# 3. FACILITIES AND ACCREDITATION

Accreditation Certificate	<ul> <li>A2LA (Certificate No.: 4102.01)</li> <li>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.</li> <li>FCC (FCC Designation No.: CN1187)</li> <li>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Delcaration of Conformity (DoC) and Certification rules</li> <li>ISED(Company No.: 21320)</li> <li>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with ISED. The Company Number is 21320.</li> <li>VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)</li> <li>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004</li> </ul>
	Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B , the VCCI registration No. is C-20012 and T-20011

Note:

- 1. All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China.
- The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.
- 3. For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.



# 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

### 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty	
Conduction emission	3.62dB	
Radiation Emission test(include Fundamental emission) (9kHz-30MHz)	2.2dB	
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	4.00dB	
Radiation Emission test	5.78dB (1GHz-18GHz)	
(1GHz to 26GHz)( include Fundamental emission)	5.23dB (18GHz-26GHz)	
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.		

# 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

EUT Name	Bluetooth Headset		
Model	JR310BT		
	Operation Frequency	2402 MHz ~ 2480 MHz	
	Modulation Type	Data Rate	
Product Description (Bluetooth)	GFSK	1Mbps	
Blactoothy	∏/4-DQPSK	2Mbps	
	8DPSK	3Mbps	
Bluetooth Version	V5.0 BR+EDR		
Input Rating: 5.0 V DC, 1.0 A			
Battery	3.7V, 400mAh		

### 5.2. MAXIMUM OUTPUT POWER

Bluetooth Mode	Frequency (MHz)	Channel Number	Max PEAK Output Power (dBm)	EIRP (dBm)
GFSK	2402-2480	0-78[79]	0.18	3.50
8DPSK	2402-2480	0-78[79]	0.21	3.53

### 5.3. PACKET TYPE CONFIGURATION

Bluetooth Mode	Test Mode	Setting(Packet Length)
	DH1	27
GFSK	DH3	183
	DH5	339
	2-DH1	54
∏/4-DQPSK	2-DH3	367
	2-DH5	679
	3-DH1	83
8DPSK	3-DH3	552
	3-DH5	1021



### 5.4. CHANNEL LIST

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	/	/

### 5.5. TEST CHANNEL CONFIGURATION

Modulation Type	Test Channel	Frequency
GFSK	CH0, CH39, CH78/	2402MHz, 2441MHz, 2480MHz
	Low, Middle, High	
GFSK-Hopping mode	/	2402~2480MHz
8DPSK	CH0, CH39, CH78/ Low, Middle, High	2402MHz, 2441MHz, 2480MHz
8DPSK - Hopping mode	/	2402~2480MHz



## 5.6. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band					
Test Se	oftware	Non Signaling Test Tool			
Modulation Type	Transmit Antenna	Test Software setting value			
	Number	CH 0	CH 39	CH 78	
GFSK	1	1	1	1	
8DPSK	1	1 1 1			



### 5.7. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency (MHz)	Antenna Type	MAX Antenna Gain (dBi)
1	2402-2480	PCB Antenna	3.32

Note: The value of the antenna gain was declared by customer.

### 5.8. WORST-CASE CONFIGURATIONS

Bluetooth Mode	Modulation Technology	Modulation Type	Data Rate (Mbps)
BR	FHSS	GFSK(DH5)	1Mbit/s
EDR	FHSS	8DPSK(3DH5)	3Mbit/s

Note: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

### 5.9. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests				
Relative Humidity	45 ~ 70%				
Atmospheric Pressure:	101kPa				
Temperature	TN	22 ~ 28 °C			
	VL	N/A			
Voltage:	VN	DC 3.7V			
	VH	N/A			

Note: VL= Lower Extreme Test Voltage VN= Nominal Voltage.

VH= Upper Extreme Test Voltage

TN= Normal Temperature



### 5.10. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	P/N
1	Laptop	Lenovo	TP00094A	/
2	UART	/	/	/

#### I/O CABLES

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	TYPE C	/	1.0	/

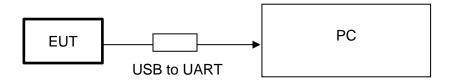
#### ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	/	/	/	/

#### TEST SETUP

The EUT can work in an engineer mode with software through a PC.

#### SETUP DIAGRAM FOR TESTS



# 6. MEASURING INSTRUMENT AND SOFTWARE USED

	Conducted Emissions							
			Instru	iment				
Used	Equipment	Manufacturer	Mod	lel No.	Seria	al No.	Last Cal.	Next Cal.
$\checkmark$	EMI Test Receiver	R&S	E	SR3	101	961	Dec.05,2019	Dec.05,2020
V	Two-Line V- Network	R&S	EN	V216	101	983	Dec.05,2019	Dec.05,2020
V	Artificial Mains Networks	Schwarzbeck	NSLI	K 8126	8126	6465	Dec.05,2019	Dec.05,2020
	Software							
Used	Des	cription		Manu	ufactu	rer	Name	Version
$\checkmark$	Test Software for C	Conducted distu	rbance	e F	arad		EZ-EMC	Ver. UL-3A1
		Rad	iated I	Emissio	ns			
			Instru	iment				
Used	Equipment	Manufacturer	Mod	lel No.	Seria	al No.	Last Cal.	Next Cal.
V	MXE EMI Receiver	KESIGHT	N9	N9038A		6400 36	Dec.06,2019	Dec.06,2020
V	Hybrid Log Periodic Antenna	TDK	HLP-3003C		130	960	Sep.17, 2018	Sep.17, 2021
V	Preamplifier	HP	8447D			A090 9	Dec.05,2019	Dec.05,2020
V	EMI Measurement Receiver	R&S	ESR26		101	377	Dec.05,2019	Dec.05,2020
$\checkmark$	Horn Antenna	TDK	HRN	I-0118	130	939	Sep.17, 2018	Sep.17, 2021
V	High Gain Horn Antenna	Schwarzbeck	BBH	A-9170	69	91	Aug.11, 2018	Aug.11, 2021
V	Preamplifier	TDK	PA-0	2-0118	000	-305- 066	Dec.05,2019	Dec.05,2020
$\checkmark$	Preamplifier	TDK	PA	-02-2		-307- 003	Dec.05,2019	Dec.05,2020
$\checkmark$	Loop antenna	Schwarzbeck	15	19B	000	800	Jan.07, 2019	Jan.07, 2022
V	Band Reject Filter	Wainwright	WRCJV8- 2350-2400- 2483.5- 2533.5-40SS		4	4	Dec.05,2019	Dec.05,2020
V	High Pass Filter	Wi	WHKX10- 2700-3000- 18000-40SS		2	23	Dec.05,2019	Dec.05,2020
			Soft	ware				
Used	Descr	iption	Ν	lanufact	turer		Name	Version
$\checkmark$	Test Software for Ra	adiated disturba	ince	Farac	k		EZ-EMC	Ver. UL-3A1

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



#### REPORT No.: 4789485754-5

	Other instruments							
Used	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.		
$\checkmark$	Spectrum Analyzer	Keysight	N9030A	MY55410512	Dec.06,2019	Dec.06,2020		
$\checkmark$	Power Meter	Keysight	N1911A	MY55416024	Dec.06,2019	Dec.06,2020		
$\checkmark$	Power Sensor	Keysight	U2021XA	MY5100022	Dec.06,2019	Dec.06,2020		



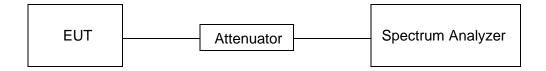
# 7. ANTENNA PORT TEST RESULTS

### 7.1. ON TIME AND DUTY CYCLE

#### <u>LIMITS</u>

None; for reporting purposes only

#### TEST SETUP



#### **TEST ENVIRONMENT**

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V

#### **RESULTS**

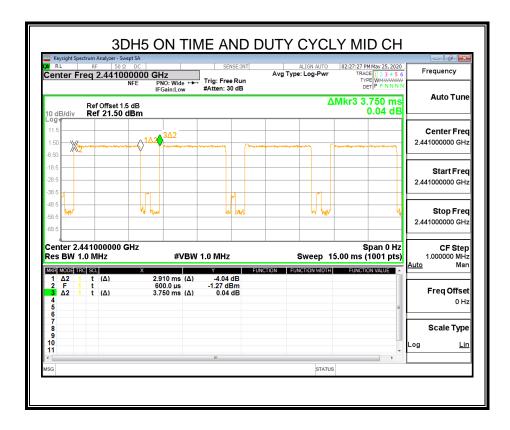
Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
GFSK	2.910	3.750	0.776	77.6%	1.10	0.34	0.5
8DPSK	2.910	3.750	0.776	77.6%	1.10	0.34	0.5

Note:

Duty Cycle Correction Factor=10log (1/x). Where: x is Duty Cycle (Linear) Where: T is On Time If that calculated VBW is not available on the analyzer then the next higher value should be used.



Center Freq 2	50 Ω DC .441000000 GHz NFE PNO: Wide ↔ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr	02:26:08 PM May 25, 2020 TRACE 1 2 3 4 5 6 TYPE DET P P N N N N	Frequency
0 dB/div Ref	Offset 1.5 dB 21.50 dBm		ΔΝ	/kr3 3.750 ms -0.03 dB	Auto Tun
11.5 1.50 8.50	<u>1∆2</u> 3∆2				Center Fre 2.441000000 GH
28.5					<b>Start Fre</b> 2.441000000 GH
48.5 58.5 68.5		VI WYY	γ h.1		<b>Stop Fre</b> 2.441000000 GH
enter 2.44100 tes BW 1.0 MH	Hz #VBI	№ 1.0 MHz	•	Span 0 Hz 00 ms (1001 pts)	<b>CF Ste</b> 1.000000 MH Auto Ma
$\begin{array}{c cccc} \text{MKR} & \text{MODE} & \text{TRC} & \text{SCL} \\ 1 & \Delta 2 & 1 & t \\ 2 & F & 1 & t \\ 3 & \Delta 2 & 1 & t \\ 4 & & & \\ 5 & & \\ 6 & & & \end{array}$	525.0 µs	-1.47 dB -2.69 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offse 0 H
7 8 9 10				1	Scale Typ
9 10 11				L	_og



UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



### 7.2. 20dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

#### LIMITS

CFR 47FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1) RSS-247 Clause 5.1 (a)	20dB Occupied Bandwidth	/	2400-2483.5
ISED RSS-Gen Clause 6.7	99% Occupied Bandwidth	/	2400-2483.5

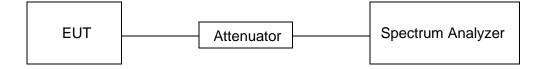
#### TEST PROCEDURE

Connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	For 20dB:Occupied Bandwidth:1% to 5% of the 20 dB bandwidth For 99%:Occupied Bandwidth: 1% to 5% of the occupied bandwidth
VBW	For 20dB Occupied Bandwidth: approximately 3×RBW For 99% Occupied Bandwidth: ≥ 3×RBW
Span	For 20dB: between 2 times and 5 times the OBW. For 99dB: between 1.5 times and 5.0 times the OBW.
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB and 99% relative to the maximum level measured in the fundamental emission.

#### TEST SETUP





#### **TEST ENVIRONMENT**

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V

#### **RESULTS**

Please refer to Appendix A and B.



### 7.3. CONDUCTED OUTPUT POWER

#### <u>LIMITS</u>

CFR 47 FCC Part15 (15.247) , Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (b) (1) ISED RSS-247 Clause 5.4 (b)	Peak Conducted Output Power	<ul> <li>Hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel : 1 watt or 30dBm;</li> <li>Hopping channel carrier frequencies that are separated by 25 kHz or two- thirds of the 20 dB bandwidth of the hopping channel : 125 mW or 21dBm</li> </ul>	2400-2483.5

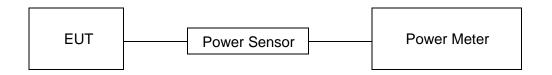
#### TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.

Measure peak power of each channel.

#### TEST SETUP





#### **TEST ENVIRONMENT**

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V

#### **RESULTS**

Please refer to Appendix C.



### 7.4. CARRIER HOPPING CHANNEL SEPARATION

#### <u>LIMITS</u>

CFR 47 FCC Part15 (15.247) , Subpart C ISED RSS-247 ISSUE 2			
Section	Test Item	Limit	Frequency Range (MHz)
CFR 47 FCC 15.247 (a) (1) ISED RSS-247 Clause 5.1 (b)	Carrier Hopping Channel Separation	Frequency hopping systems shall have hopping 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.	2400-2483.5

#### TEST PROCEDURE

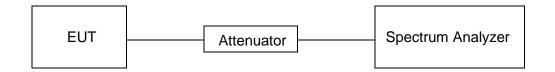
Connect the UUT to the spectrum Analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Span	wide enough to capture the peaks of two adjacent channels
Detector	Peak
RBW	Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
VBW	≥RBW
Trace	Max hold
Sweep time	Auto couple

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

Compliance of an EUT with the appropriate regulatory limit shall be determined. A plot of the data shall be included in the test report.

#### TEST SETUP





#### **TEST ENVIRONMENT**

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V

#### **RESULTS**

Please refer to Appendix D.



### 7.5. NUMBER OF HOPPING FREQUENCY

#### <u>LIMITS</u>

CFR 47 FCC Part15 (15.247) , Subpart C ISED RSS-247 ISSUE 2			
Section Test Item		Limit	
CFR 47 15.247 (a) (1) III ISED RSS-247 Clause 5.1 (d)	Number of Hopping Frequency	at least 15 hopping channels	

#### TEST PROCEDURE

Connect the EUT to the spectrum Analyzer and use the following settings:

Detector	Peak
RBW	To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
VBW	≥RBW
Span	The frequency band of operation
Trace	Max hold
Sweep time	Auto couple

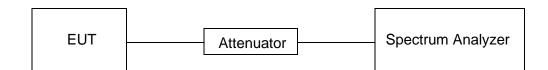
Set EUT to transmit maximum output power and switch on frequency hopping function. then set enough count time (larger than 5000 times) to get all the hopping frequency channel displayed on the screen of spectrum analyzer.

Count the quantity of peaks to get the number of hopping channels.

FHSS Mode: 79 Channels observed.

AFHSS Mode: 20 Channels declared.

#### TEST SETUP



#### TEST ENVIRONMENT

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V



Please refer to Appendix F



### 7.6. TIME OF OCCUPANCY (DWELL TIME)

#### <u>LIMITS</u>

CFR 47	FCC Part15 (15.2 ISED RSS-247	
Section	Test Item	Limit
CFR 47 15.247 (a) (1) III ISED RSS-247 Clause 5.1 (d)	Time of Occupancy (Dwell Time)	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.

#### TEST PROCEDURE

Connect the UUT to the spectrum Analyzer and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Average
RBW	1MHz
VBW	≥RBW
Span	zero span
Trace	Clear Write
Sweep time	As necessary to capture the entire dwell time per hopping channel

a. The transmitter output (antenna port) was connected to the spectrum analyzer

- b. Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- e. Set the center frequency on any frequency would be measure and set the frequency span to zero span.
- f. Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- h. Measure the maximum time duration of one single pulse. A Period Time = (channel number)\*0.4

For FHSS Mode (79 Channel):

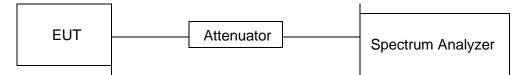
DH1 Time Slot: Reading \* (1600/2)\*31.6/(channel number) DH3 Time Slot: Reading \* (1600/4)\*31.6/(channel number) DH5 Time Slot: Reading \* (1600/6)\*31.6/(channel number)

For AFHSS Mode (20 Channel):

DH1 Time Slot: Reading \* (800/2)\*8/(channel number) DH3 Time Slot: Reading \* (800/4)\*8/(channel number) DH5 Time Slot: Reading \* (800/6)\*8/(channel number)



#### TEST SETUP



#### **TEST ENVIRONMENT**

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V

#### **RESULTS**

Please refer to Appendix E.



### 7.7. CONDUCTED SPURIOUS EMISSION

#### LIMITS

C	FR 47 FCC Part15 (19 ISED RSS-24	
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	Conducted Spurious Emission	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

#### TEST PROCEDURE

For Bandedge use the following settings:

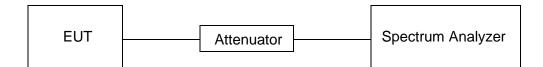
Detector	Peak
RBW	100kHz
VBW	300kHz
Span	wide enough to fully capture the emission being measured
Trace	Max hold
Sweep time	Auto couple.

For Spurious Emission use the following settings:

Detector	Peak
RBW	100kHz
VBW	300kHz
Span	wide enough to fully capture the emission being measured
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

#### TEST SETUP



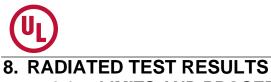
#### **TEST ENVIRONMENT**

Temperature	24.0°C	Relative Humidity	67.7%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V



#### **RESULTS**

Please refer to Appendix G & H.



# 8.1. LIMITS AND PROCEDURE

#### LIMITS

Please refer to CFR 47 FCC §15.205 and §15.209.

Please refer to ISED RSS-GEN Clause 8.9 and Clause 8.10.

Radiation Disturbance Test Limit for FCC (Class B) (9kHz-1GHz)

Emissions rad	iated outside of the specified frequence	y bands above 30N	ИНz
Frequency Range	Field Strength Limit	Field Strer	ngth Limit
(MHz)	(uV/m) at 3 m	(dBuV/m	uV/m) at 3 m
(((((((((((((((((((((((((((((((((((((((		Quasi-	Peak
30 - 88	100	40	)
88 - 216	150	43.	.5
216 - 960	200	46	6
Above 960	500	54	4
Above 1000	500	Peak	Average
Above 1000	500	74	54

FCC Emis	ssions radiated outside of the specified free	equency bands below 30MHz
Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30

#### ISED General field strength limits at frequencies below 30 MHz

	Table 6 – General field strength limits at frequencie	s below 30 MHz
Frequency	Magnetic field strength (H-Field) (μΑ/m)	Measurement distance (m)
9 - 490 kHz <sup>Note 1</sup>	6.37/F (F in kHz)	300
490 - 1705 kHz	63.7/F (F in kHz)	30
1.705 - 30 MHz	0.08	30

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.



#### ISED Restricted bands please refer to ISED RSS-GEN Clause 8.10

z	MHz	GHz
90 - 0.110	149.9 - 150.05	9.0 - 9.2
95 - 0.505	158.52475 - 158.52525	9.3 - 9.5
735 - 2.1905	156.7 - 156.9	10.6 - 12.7
20 - 3.026	162.0125 - 167.17	13.25 - 13.4
25 - 4.128	187.72 - 173.2	14.47 - 14.5
725 - 4.17775	240 - 285	15.35 - 16.2
0725 - 4.20775	322 - 335.4	17.7 - 21.4
77 - 5.683	399.9 - 410	22.01 - 23.12
15 - 6.218	608 - 614	23.6 - 24.0
3775 - 6.26825	960 - 1427	31.2 - 31.8
175 - 6.31225	1435 - 1626.5	36.43 - 36.5
1 - 8.294	1845.5 - 1648.5	Above 38.6
2 - 8.366	1660 - 1710	
7625 - 8.38675	1718.8 - 1722.2	
425 - 8.41475	2200 - 2300	
29 - 12.293	2310 - 2390	
1975 - 12.52025	2483.5 - 2500	
7675 - 12.57725	2855 - 2900	
3 - 13.41	3260 - 3267	
12 - 16.423	3332 - 3339	
9475 - 16.69525	3345.8 - 3358	
0425 - 16.80475	3500 - 4400	
- 25.67	4500 - 5150	
- 38.25	5350 - 5460	
74.6	7250 - 7750	
- 75.2	8025 - 8500	

Note 1: Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

### FCC Restricted bands of operation refer to FCC §15.205 (a):

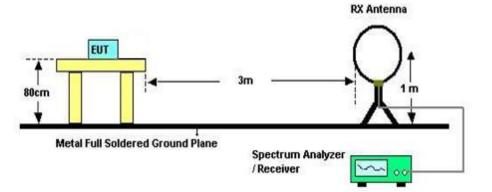
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	( <sup>2</sup> )
13.36-13.41			

Note: <sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. <sup>2</sup>Above 38.6c

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



#### TEST SETUP AND PROCEDURE Below 30MHz



The setting of the spectrum Analyzer

RBW	200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9kHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80cm meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

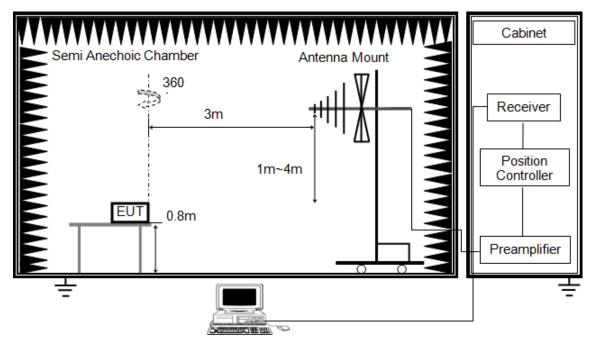
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

6. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m OFS. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.



#### Below 1G and above 30MHz



The setting of the spectrum Analyzer

RBW	120kHz
VBW	300kHz
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 80cm above ground.

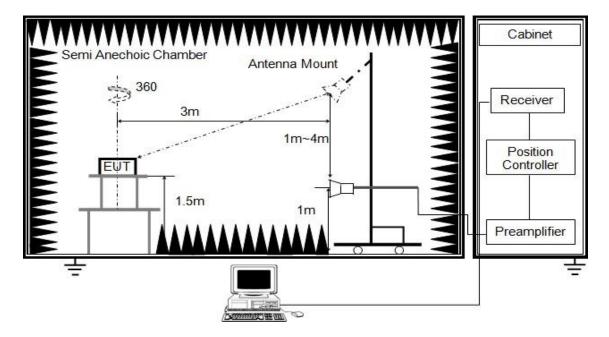
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



#### Above 1G



RBW	1MHz
	PEAK: 3MHz AVG: see note 6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 150cm above ground.

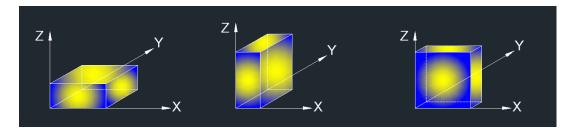
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

6. For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T video bandwidth with peak detector. For the Duty Cycle please refer to clause 7.1.ON TIME AND DUTY CYCLE.



#### X axis, Y axis, Z axis positions:



Note 1: For radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worst case (X axis) data recorded in the report.

Note 2: The EUT does not support simultaneous transmission.

#### TEST ENVIRONMENT

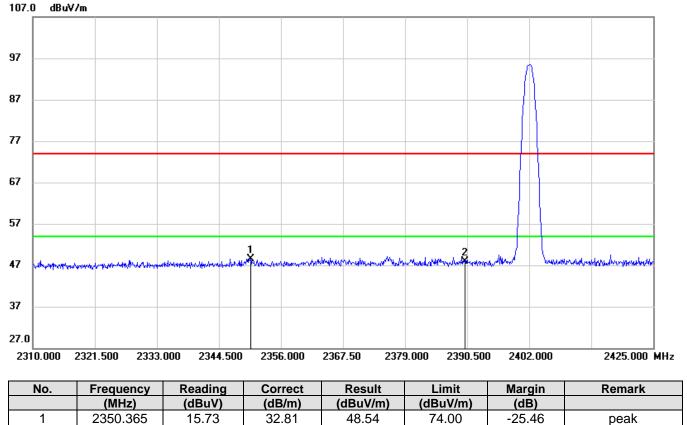
Temperature	23.5°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	DC 3.7V



### 8.2. RESTRICTED BANDEDGE

### 8.2.1. GFSK MODE

# RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)



Note: 1. Measurement = Reading Level + Correct Factor.

14.92

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

47.86

74.00

-26.14

peak

3. Peak: Peak detector.

2390.000

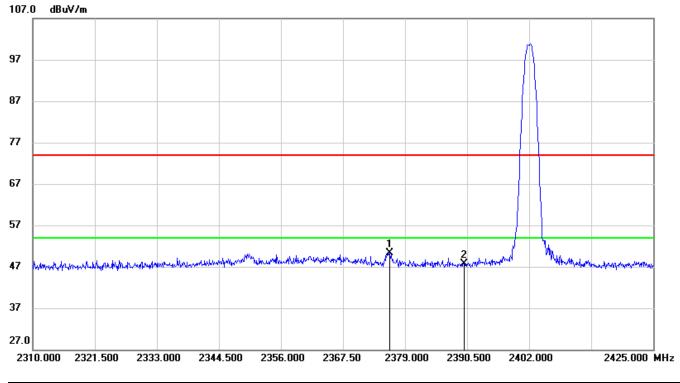
2

4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

32.94



## **RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**



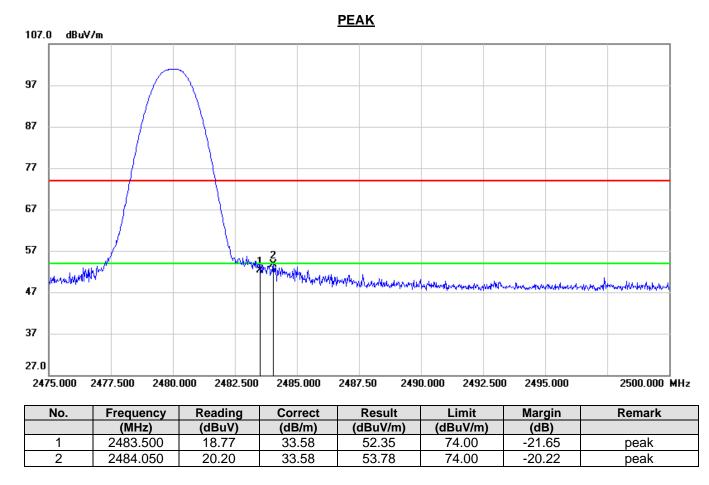
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2376.125	17.42	32.90	50.32	74.00	-23.68	peak
2	2390.000	14.77	32.94	47.71	74.00	-26.29	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2.If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 3.Peak: Peak detector.



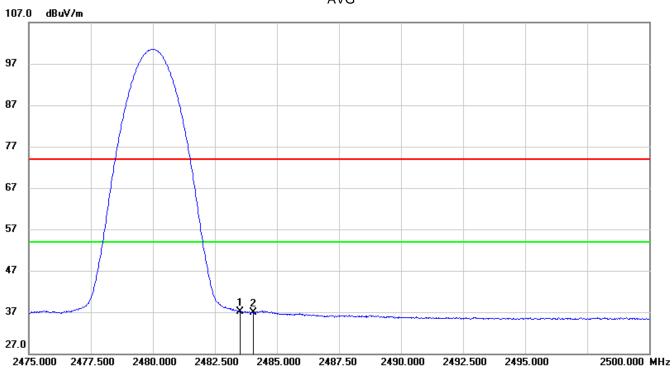
## **RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**



Note: 1. Measurement = Reading Level + Correct Factor.

2.If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 3.Peak: Peak detector.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	3.54	33.58	37.12	54.00	-16.88	AVG
2	2484.050	3.38	33.58	36.96	54.00	-17.04	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. AVG: VBW=1/Ton where: ton is transmit duration.

4. For transmit duration, please refer to clause 7.1.

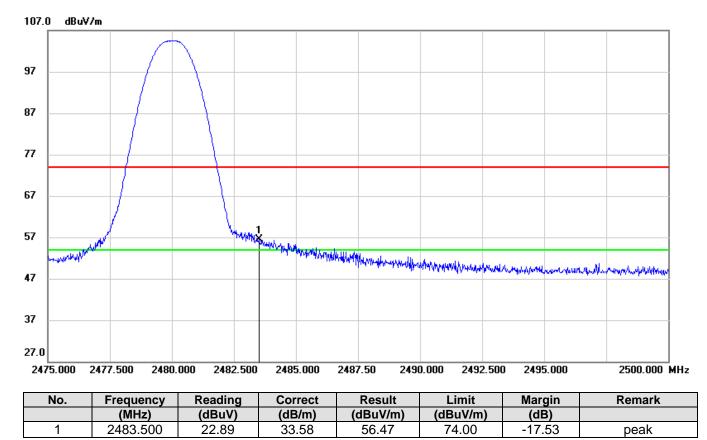
5. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

AVG



## **RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)**

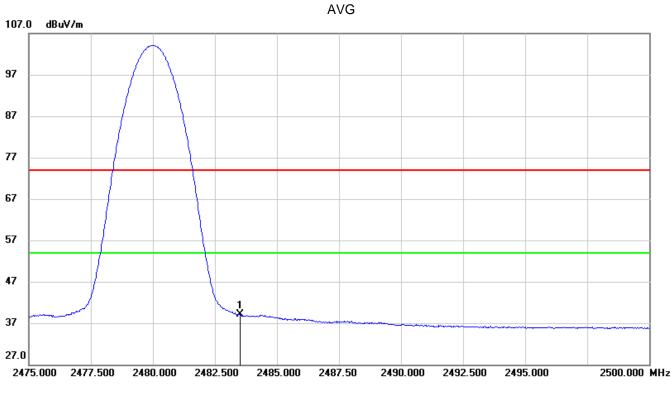
<u>PEAK</u>



Note: 1. Measurement = Reading Level + Correct Factor.

2.If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 3.Peak: Peak detector.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	5.46	33.58	39.04	54.00	-14.96	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

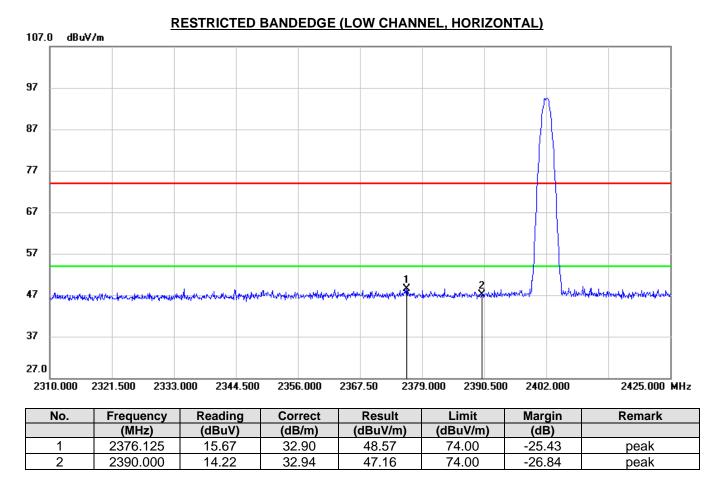
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. AVG: VBW=1/Ton where: ton is transmit duration.

4. For transmit duration, please refer to clause 7.1.



# 8.2.2. 8DPSK MODE



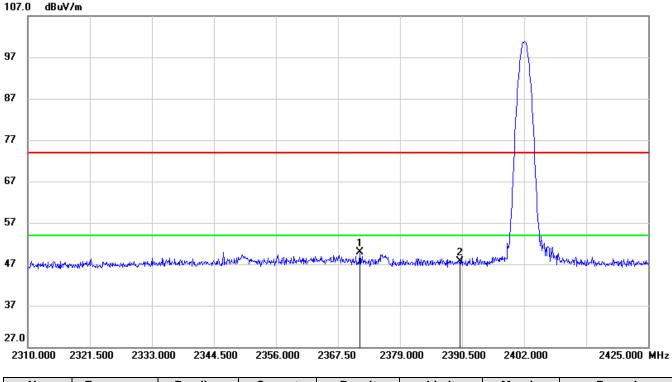
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



## **RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)**



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2371.525	17.09	32.88	49.97	74.00	-24.03	peak
2	2390.000	14.84	32.94	47.78	74.00	-26.22	peak

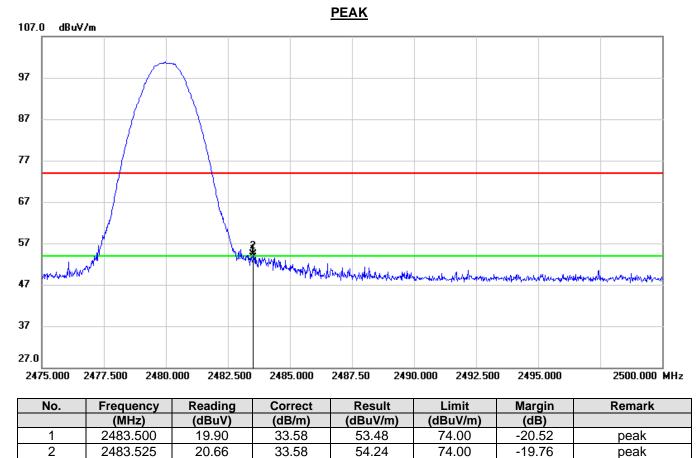
Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



## **RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)**

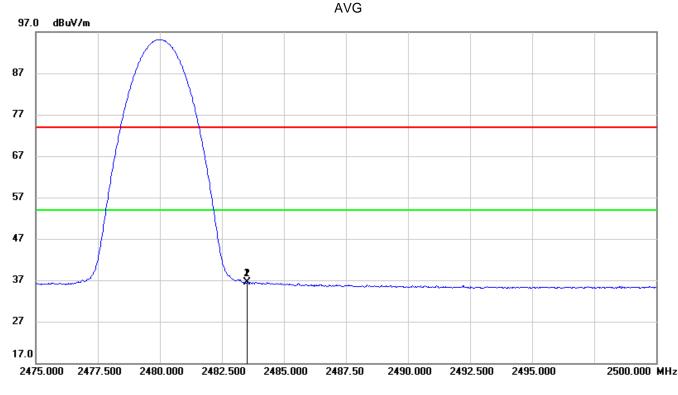


Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	2.93	33.58	36.51	54.00	-17.49	AVG
2	2483.525	2.96	33.58	36.54	54.00	-17.46	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

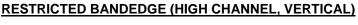
3. AVG: VBW=1/Ton where: ton is transmit duration.

4. For transmit duration, please refer to clause 7.1.

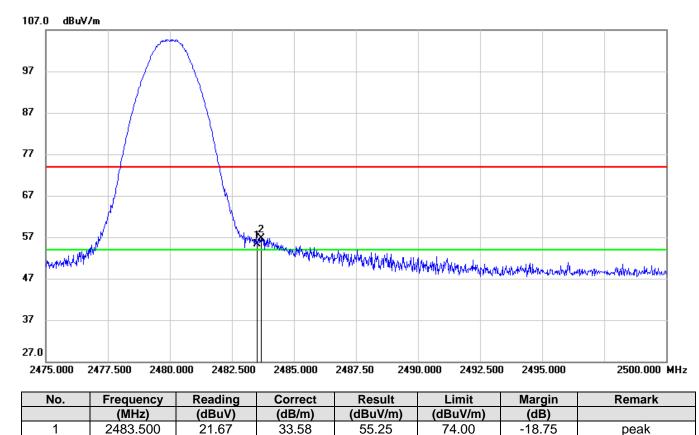


-17.22

peak



PEAK



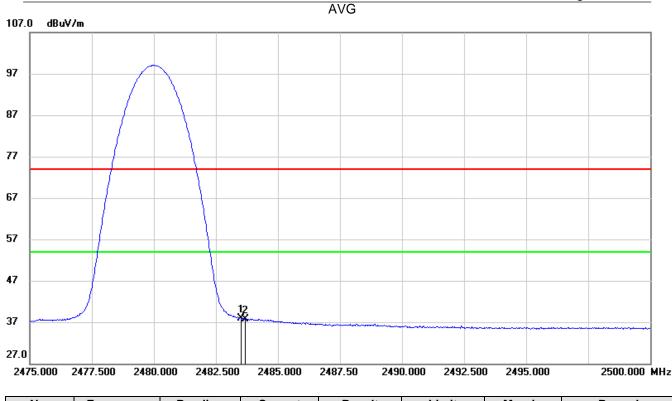
2	2483.675	23.20	33.58	56.78	74.00	

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	4.25	33.58	37.83	54.00	-16.17	AVG
2	2483.675	4.05	33.58	37.63	54.00	-16.37	AVG

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

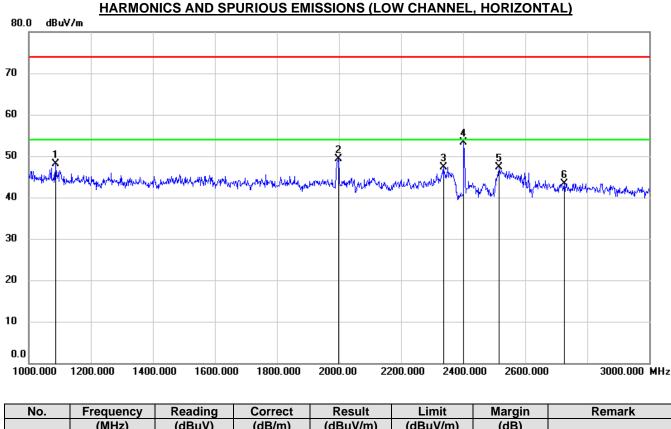
3. AVG: VBW=1/Ton where: ton is transmit duration.

4. For transmit duration, please refer to clause 7.1.



# 8.3. SPURIOUS EMISSIONS (1~3GHz)

# 8.3.1. GFSK MODE

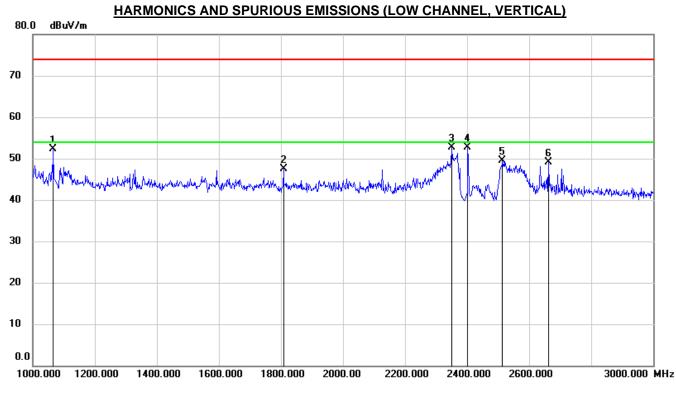


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1086.000	65.29	-17.27	48.02	74.00	-25.98	peak
2	1998.000	64.10	-14.79	49.31	74.00	-24.69	peak
3	2336.000	61.40	-14.00	47.40	74.00	-26.60	peak
4	2402.000	67.13	-13.85	53.28	/	/	fundamental
5	2516.000	60.78	-13.55	47.23	74.00	-26.77	peak
6	2726.000	56.09	-12.69	43.40	74.00	-30.60	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

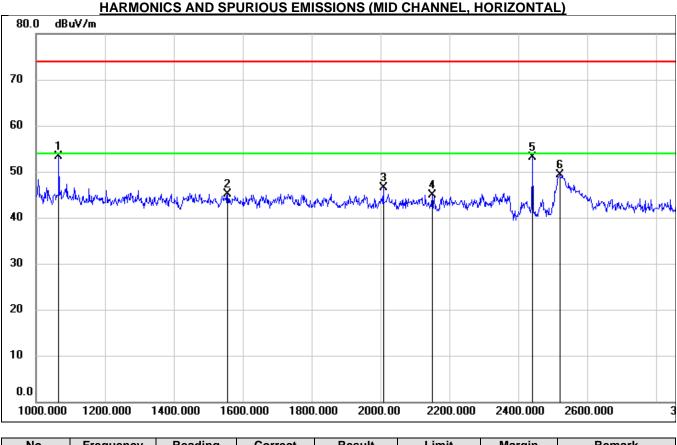




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1066.000	69.68	-17.29	52.39	74.00	-21.61	peak
2	1808.000	62.89	-15.48	47.41	74.00	-26.59	peak
3	2350.000	66.64	-13.96	52.68	74.00	-21.32	peak
4	2402.000	66.48	-13.85	52.63	/	/	fundamental
5	2514.000	63.03	-13.56	49.47	74.00	-24.53	peak
6	2662.000	62.01	-12.95	49.06	74.00	-24.94	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

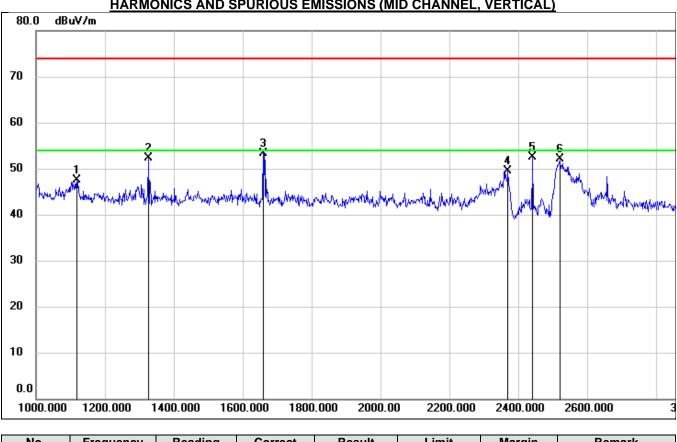




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1066.000	70.68	-17.29	53.39	74.00	-20.61	peak
2	1556.000	61.47	-16.39	45.08	74.00	-28.92	peak
3	2008.000	61.34	-14.77	46.57	74.00	-27.43	peak
4	2150.000	59.34	-14.43	44.91	74.00	-29.09	peak
5	2441.000	66.86	-13.75	53.11	/	/	fundamental
6	2520.000	62.77	-13.53	49.24	74.00	-24.76	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





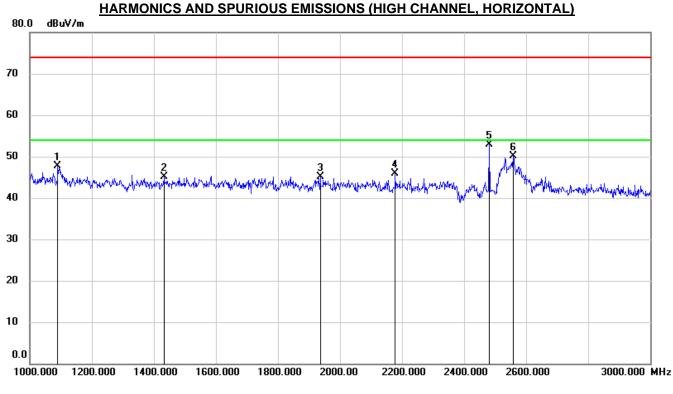
### HARMONICS AND SPURIOUS EMISSIONS (MID CHANNEL, VERTICAL)

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1118.000	64.71	-17.21	47.50	74.00	-26.50	peak
2	1326.000	69.16	-16.87	52.29	74.00	-21.71	peak
3	1660.000	69.31	-16.01	53.30	74.00	-20.70	peak
4	2370.000	63.50	-13.91	49.59	74.00	-24.41	peak
5	2441.000	66.20	-13.75	52.45	/	/	fundamental
6	2520.000	65.72	-13.53	52.19	74.00	-21.81	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

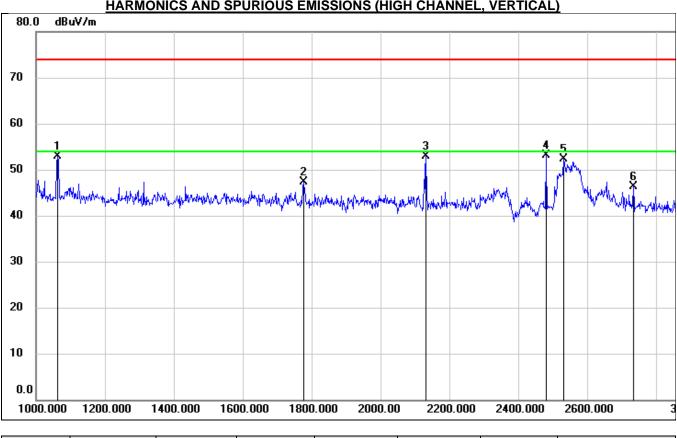




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1090.000	64.89	-17.26	47.63	74.00	-26.37	peak
2	1432.000	61.75	-16.70	45.05	74.00	-28.95	peak
3	1936.000	60.12	-15.01	45.11	74.00	-28.89	peak
4	2178.000	60.36	-14.37	45.99	74.00	-28.01	peak
5	2480.000	66.53	-13.67	52.86	/	/	fundamental
6	2558.000	63.55	-13.37	50.18	74.00	-23.82	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





### HARMONICS AND SPURIOUS EMISSIONS (HIGH CHANNEL, VERTICAL)

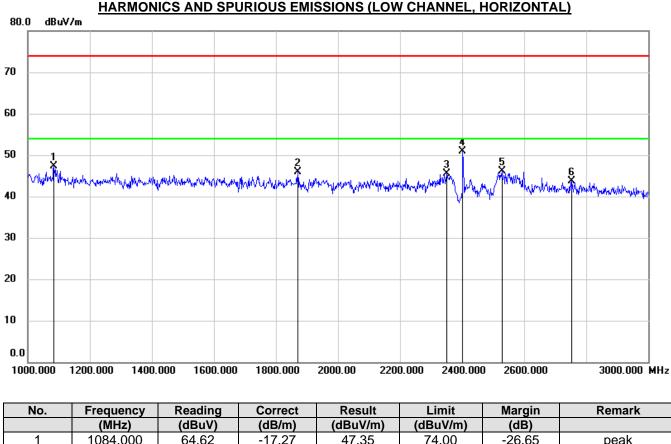
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1062.000	70.22	-17.30	52.92	74.00	-21.08	peak
2	1776.000	62.96	-15.59	47.37	74.00	-26.63	peak
3	2132.000	67.28	-14.47	52.81	74.00	-21.19	peak
4	2480.000	66.78	-13.67	53.11	/	/	fundamental
5	2532.000	65.77	-13.48	52.29	74.00	-21.71	peak
6	2734.000	59.05	-12.65	46.40	74.00	-27.60	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



## 8.3.2. 8DPSK MODE

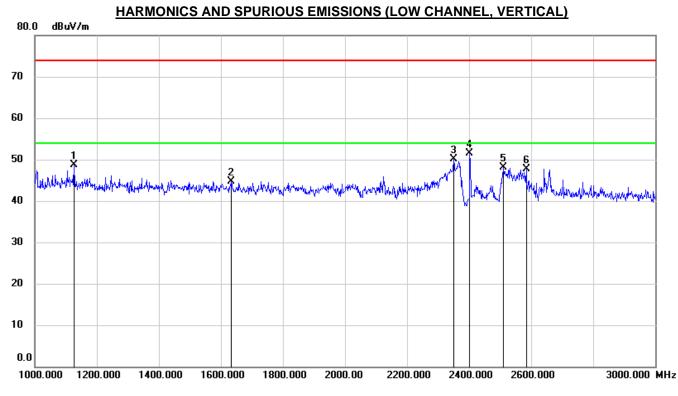


		nouung		nooun			
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1084.000	64.62	-17.27	47.35	74.00	-26.65	peak
2	1870.000	61.18	-15.25	45.93	74.00	-28.07	peak
3	2350.000	59.48	-13.96	45.52	74.00	-28.48	peak
4	2402.000	64.74	-13.85	50.89	/	/	fundamental
5	2528.000	59.59	-13.50	46.09	74.00	-27.91	peak
6	2754.000	56.28	-12.57	43.71	74.00	-30.29	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

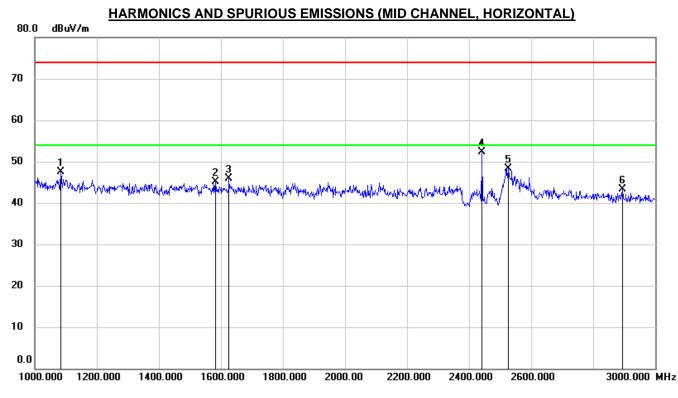




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1126.000	65.94	-17.19	48.75	74.00	-25.25	peak
2	1634.000	60.81	-16.10	44.71	74.00	-29.29	peak
3	2350.000	64.00	-13.96	50.04	74.00	-23.96	peak
4	2402.000	65.27	-13.85	51.42	/	/	fundamental
5	2510.000	61.67	-13.57	48.10	74.00	-25.90	peak
6	2584.000	60.93	-13.27	47.66	74.00	-26.34	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

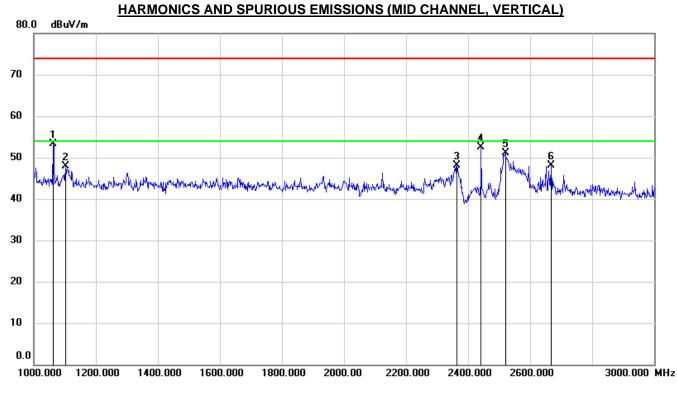




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1084.000	64.68	-17.27	47.41	74.00	-26.59	peak
2	1582.000	61.35	-16.29	45.06	74.00	-28.94	peak
3	1626.000	61.98	-16.13	45.85	74.00	-28.15	peak
4	2441.000	66.12	-13.75	52.37	/	/	fundamental
5	2526.000	61.86	-13.51	48.35	74.00	-25.65	peak
6	2894.000	55.23	-11.99	43.24	74.00	-30.76	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

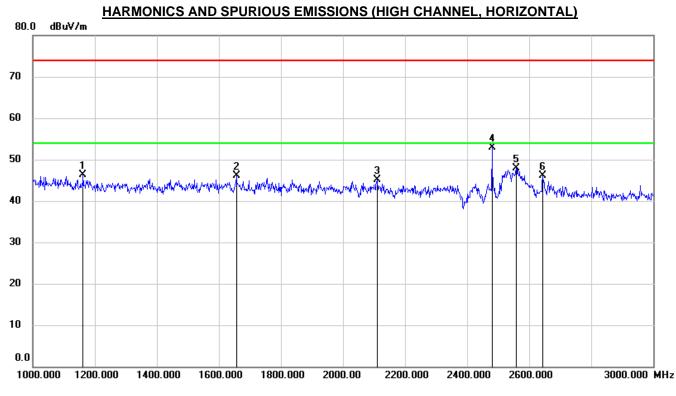




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1062.000	70.55	-17.30	53.25	74.00	-20.75	peak
2	1102.000	65.15	-17.24	47.91	74.00	-26.09	peak
3	2364.000	62.10	-13.93	48.17	74.00	-25.83	peak
4	2441.000	66.29	-13.75	52.54	/	/	fundamental
5	2520.000	64.65	-13.53	51.12	74.00	-22.88	peak
6	2668.000	60.97	-12.93	48.04	74.00	-25.96	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

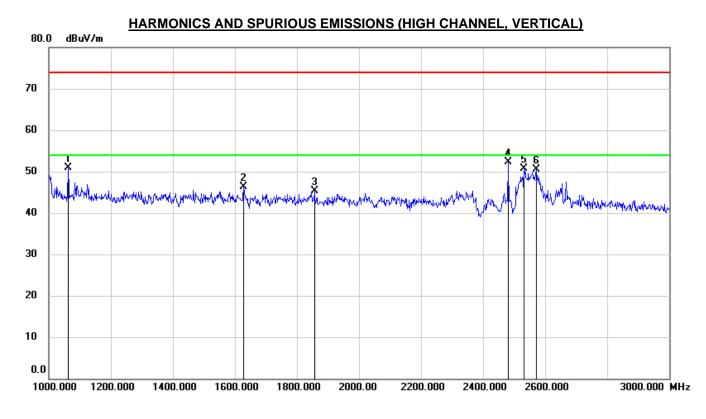




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1162.000	63.42	-17.14	46.28	74.00	-27.72	peak
2	1656.000	62.07	-16.03	46.04	74.00	-27.96	peak
3	2110.000	59.60	-14.52	45.08	74.00	-28.92	peak
4	2480.000	66.52	-13.67	52.85	/	/	fundamental
5	2558.000	61.26	-13.37	47.89	74.00	-26.11	peak
6	2644.000	59.13	-13.02	46.11	74.00	-27.89	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





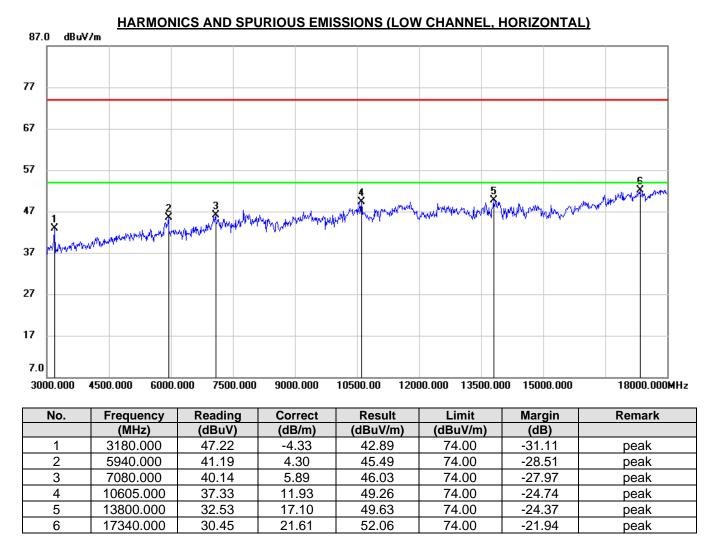
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1062.000	68.30	-17.30	51.00	74.00	-23.00	peak
2	1628.000	62.41	-16.12	46.29	74.00	-27.71	peak
3	1856.000	60.52	-15.30	45.22	74.00	-28.78	peak
4	2480.000	65.97	-13.67	52.30	/	/	fundamental
5	2532.000	64.28	-13.48	50.80	74.00	-23.20	peak
6	2572.000	63.74	-13.32	50.42	74.00	-23.58	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band reject filter losses
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



# 8.4. SPURIOUS EMISSIONS (3~18GHz)

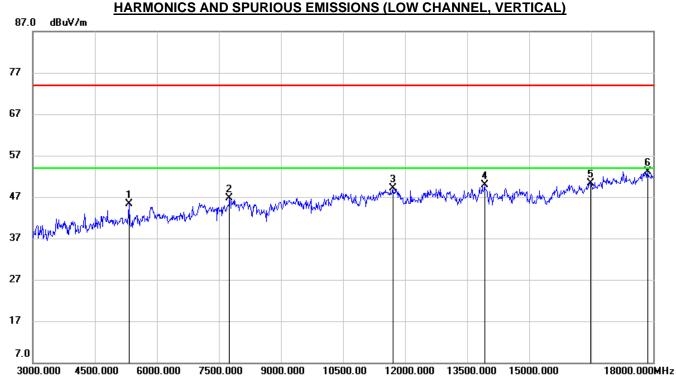
## 8.4.1. GFSK MODE



Note: 1. Peak Result = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

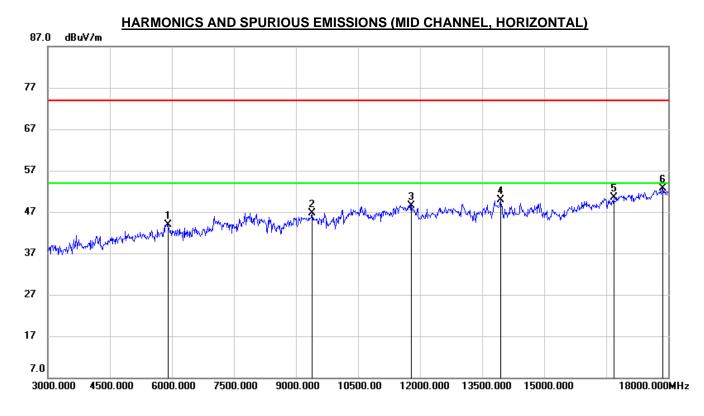




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5325.000	43.27	1.99	45.26	74.00	-28.74	peak
2	7755.000	39.35	7.29	46.64	74.00	-27.36	peak
3	11700.000	36.15	12.95	49.10	74.00	-24.90	peak
4	13920.000	33.67	16.17	49.84	74.00	-24.16	peak
5	16485.000	31.26	19.13	50.39	74.00	-23.61	peak
6	17865.000	29.79	23.33	53.12	74.00	-20.88	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5910.000	39.08	4.79	43.87	74.00	-30.13	peak
2	9390.000	37.15	9.53	46.68	74.00	-27.32	peak
3	11790.000	35.42	13.17	48.59	74.00	-25.41	peak
4	13950.000	33.87	16.11	49.98	74.00	-24.02	peak
5	16680.000	30.62	19.84	50.46	74.00	-23.54	peak
6	17865.000	29.46	23.33	52.79	74.00	-21.21	peak

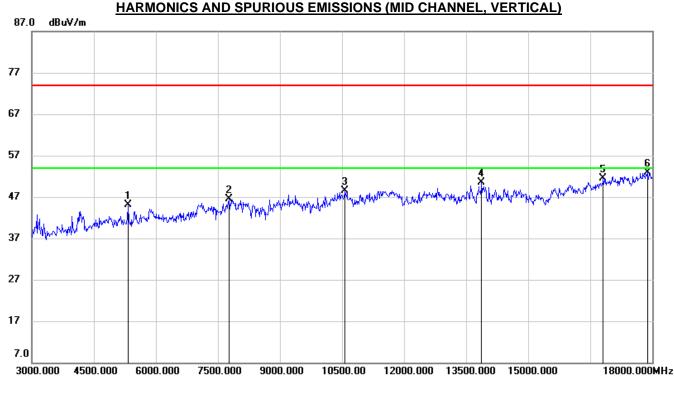
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

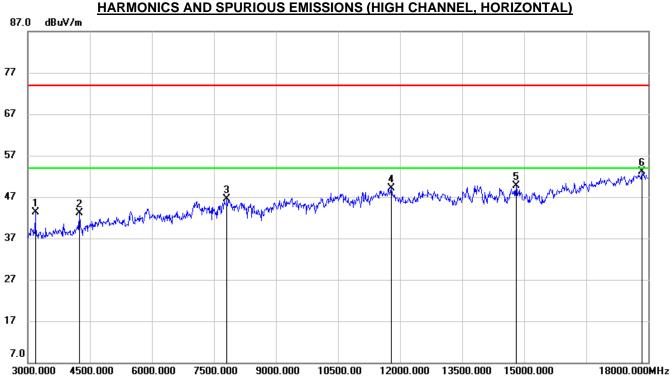




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5325.000	43.11	1.99	45.10	74.00	-28.90	peak
2	7770.000	39.02	7.50	46.52	74.00	-27.48	peak
3	10575.000	36.61	11.81	48.42	74.00	-25.58	peak
4	13875.000	34.02	16.44	50.46	74.00	-23.54	peak
5	16815.000	31.53	19.96	51.49	74.00	-22.51	peak
6	17880.000	29.66	23.34	53.00	74.00	-21.00	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

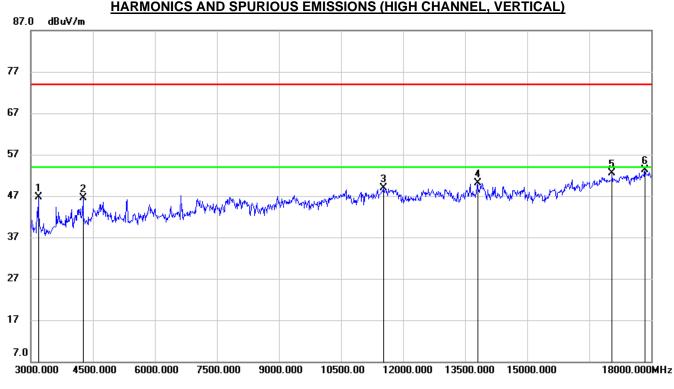




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3180.000	47.54	-4.33	43.21	74.00	-30.79	peak
2	4245.000	44.66	-1.59	43.07	74.00	-30.93	peak
3	7815.000	38.60	7.83	46.43	74.00	-27.57	peak
4	11790.000	35.97	13.17	49.14	74.00	-24.86	peak
5	14805.000	33.76	15.92	49.68	74.00	-24.32	peak
6	17850.000	29.71	23.32	53.03	74.00	-20.97	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





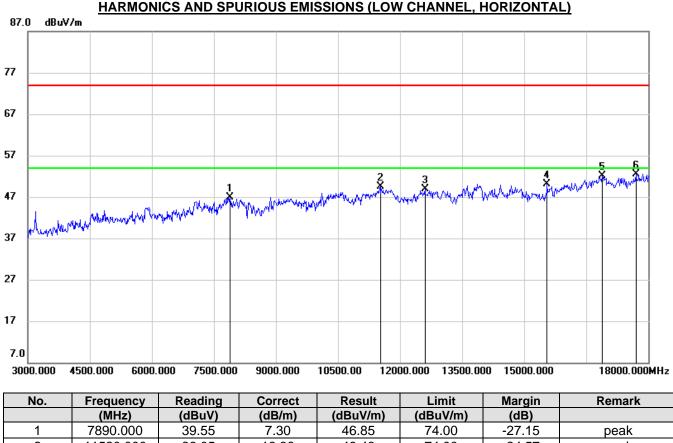
#### Reading Remark No. Frequency Correct Result Limit Margin (dBuV/m) (dBuV/m) (MHz) (dBuV) (dB/m) (dB) 3180.000 1 50.96 -4.33 46.63 74.00 -27.37 peak 2 4260.000 48.12 -1.71 46.41 74.00 -27.59 peak 3 35.53 13.38 48.91 74.00 -25.09 11520.000 peak 4 13800.000 32.92 17.10 74.00 50.02 -23.98 peak 5 17055.000 31.89 20.53 52.42 74.00 -21.58 peak 6 17850.000 30.07 23.32 53.39 74.00 -20.61 peak

Note: 1. Peak Result = Reading Level + Correct Factor.

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.



# 8.4.2. 8DPSK MODE

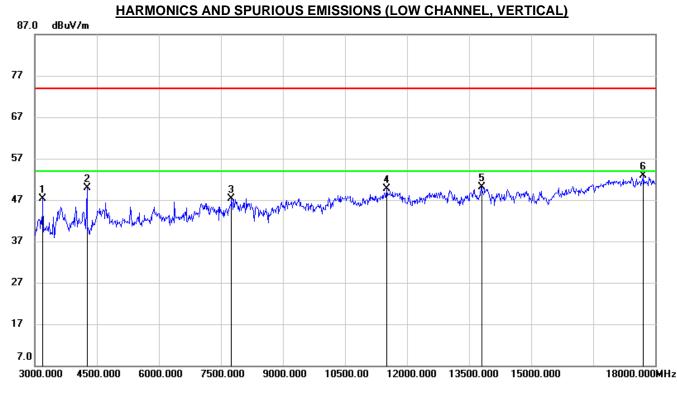


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	7890.000	39.55	7.30	46.85	74.00	-27.15	peak
2	11520.000	36.05	13.38	49.43	74.00	-24.57	peak
3	12600.000	34.90	13.99	48.89	74.00	-25.11	peak
4	15555.000	33.36	16.66	50.02	74.00	-23.98	peak
5	16890.000	32.19	19.97	52.16	74.00	-21.84	peak
6	17700.000	30.09	22.43	52.52	74.00	-21.48	peak

Note: 1. Peak Result = Reading Level + Correct Factor.

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3195.000	51.65	-4.42	47.23	74.00	-26.77	peak
2	4260.000	51.53	-1.71	49.82	74.00	-24.18	peak
3	7755.000	40.08	7.29	47.37	74.00	-26.63	peak
4	11505.000	36.33	13.42	49.75	74.00	-24.25	peak
5	13800.000	33.03	17.10	50.13	74.00	-23.87	peak
6	17715.000	30.36	22.56	52.92	74.00	-21.08	peak

Note: 1. Measurement = Reading Level + Correct Factor.

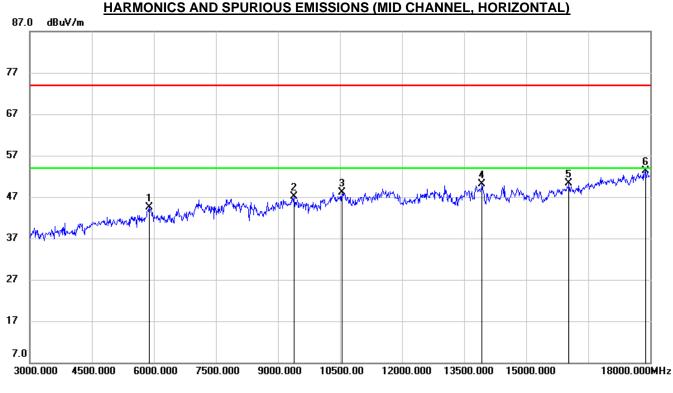
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.

4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.

5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

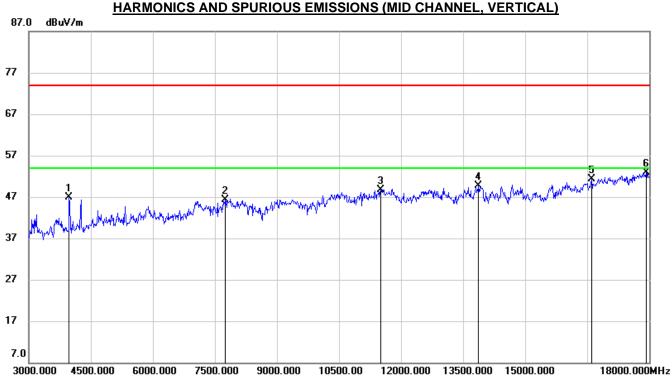




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5880.000	40.01	4.59	44.60	74.00	-29.40	peak
2	9390.000	37.53	9.53	47.06	74.00	-26.94	peak
3	10545.000	36.44	11.64	48.08	74.00	-25.92	peak
4	13935.000	33.87	16.15	50.02	74.00	-23.98	peak
5	16035.000	32.39	17.85	50.24	74.00	-23.76	peak
6	17880.000	30.02	23.34	53.36	74.00	-20.64	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

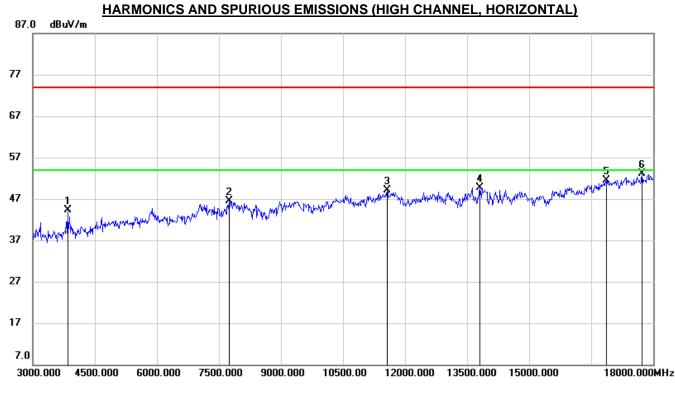




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3975.000	49.76	-2.90	46.86	74.00	-27.14	peak
2	7755.000	38.92	7.29	46.21	74.00	-27.79	peak
3	11505.000	35.31	13.42	48.73	74.00	-25.27	peak
4	13875.000	33.21	16.44	49.65	74.00	-24.35	peak
5	16605.000	31.78	19.49	51.27	74.00	-22.73	peak
6	17925.000	29.56	23.37	52.93	74.00	-21.07	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.

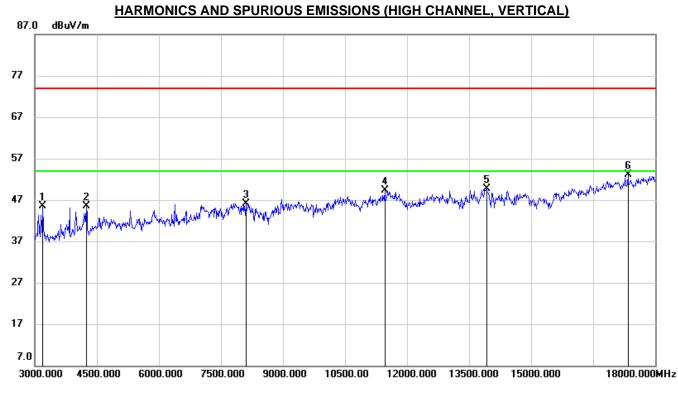




No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3840.000	47.21	-2.84	44.37	74.00	-29.63	peak
2	7740.000	39.42	7.08	46.50	74.00	-27.50	peak
3	11565.000	35.78	13.26	49.04	74.00	-24.96	peak
4	13800.000	32.56	17.10	49.66	74.00	-24.34	peak
5	16860.000	31.62	19.95	51.57	74.00	-22.43	peak
6	17730.000	30.45	22.70	53.15	74.00	-20.85	peak

- 3. Peak: Peak detector.
- 4. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 5. Proper operation of the transmitter prior to adding the filter to the measurement chain.





No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3195.000	49.94	-4.42	45.52	74.00	-28.48	peak
2	4245.000	47.12	-1.59	45.53	74.00	-28.47	peak
3	8100.000	38.36	7.81	46.17	74.00	-27.83	peak
4	11460.000	36.19	13.11	49.30	74.00	-24.70	peak
5	13920.000	33.45	16.17	49.62	74.00	-24.38	peak
6	17340.000	31.52	21.61	53.13	74.00	-20.87	peak

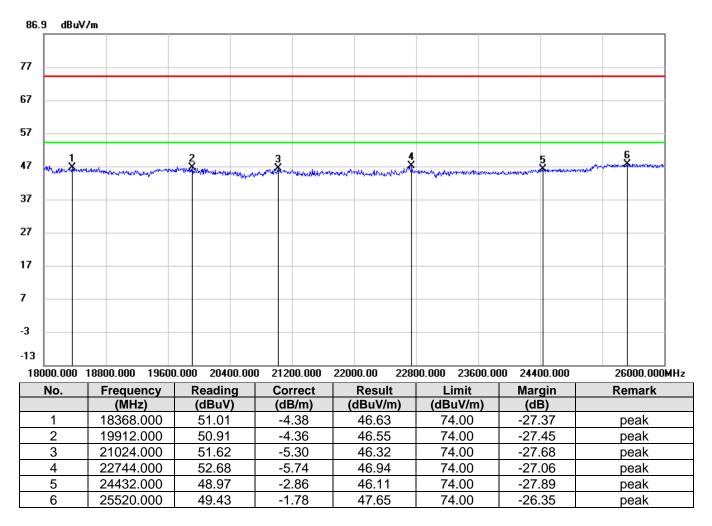
- 3. Peak: Peak detector.
- 4. AVG: VBW=1/Ton where: ton is transmit duration.
- 5. For transmit duration, please refer to clause 7.1.
- 6. Filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for High Pass Filter losses.
- 7. Proper operation of the transmitter prior to adding the filter to the measurement chain.



# 8.5. SPURIOUS EMISSIONS 18G ~ 26GHz

# 8.5.1. GFSK MODE

SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)



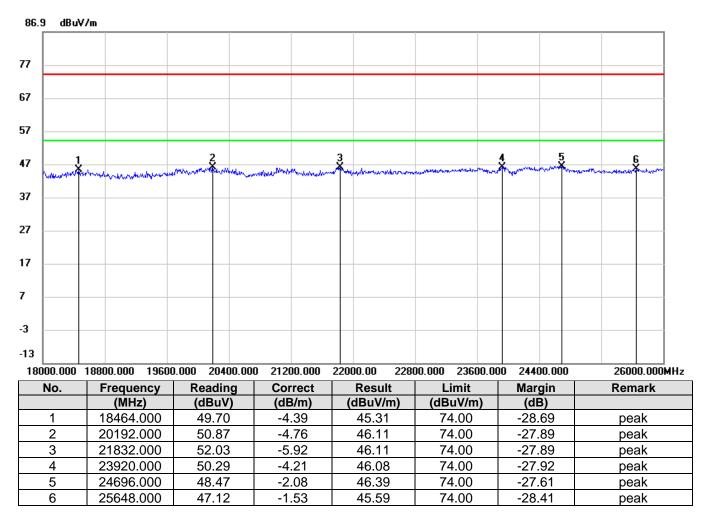
Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Peak: Peak detector.



## SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



Note: 1. Peak Result = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

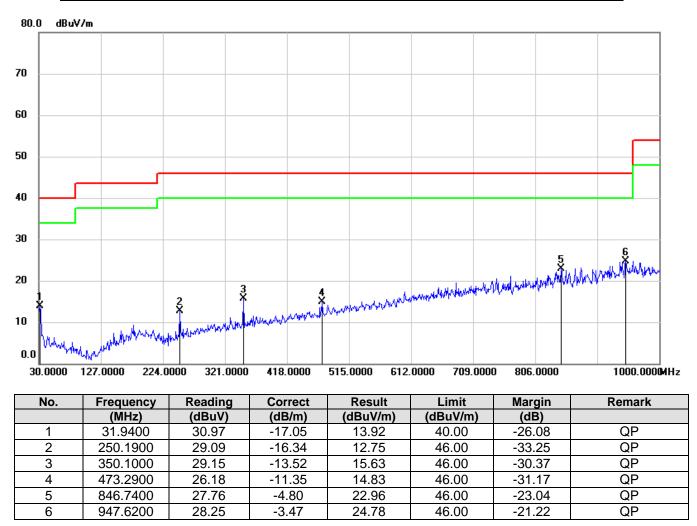
3. Peak: Peak detector.

Note: All test modes have been tested, only the worst data record in the report.



## 8.6. SPURIOUS EMISSIONS 30M ~ 1 GHz

## 8.6.1. GFSK MODE



SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, HORIZONTAL)

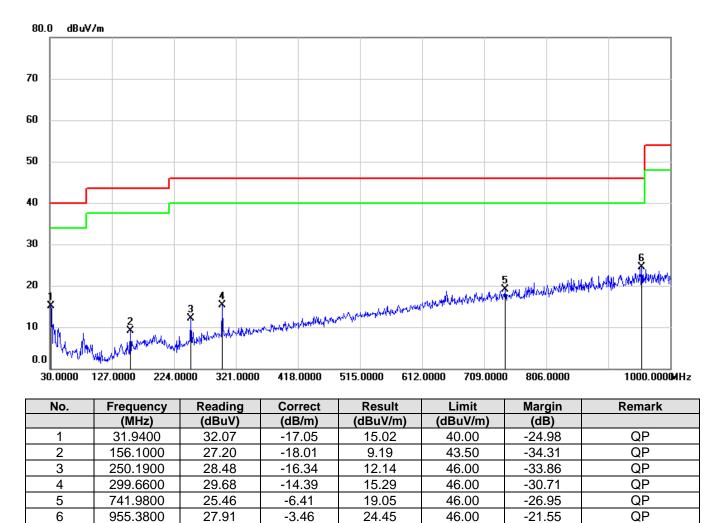
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.



## SPURIOUS EMISSIONS (MID CHANNEL, WORST-CASE CONFIGURATION, VERTICAL)



Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto

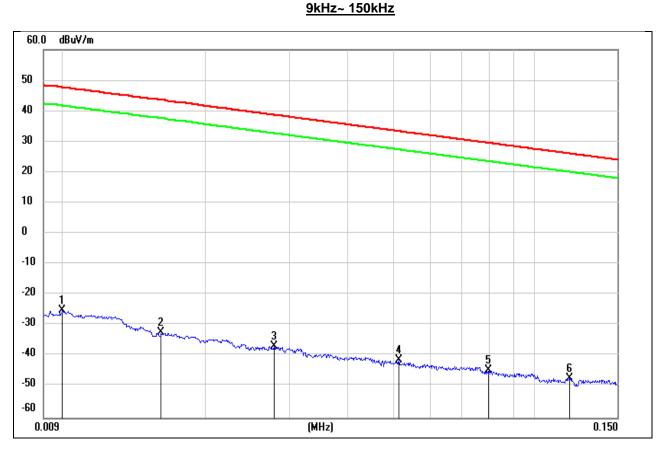
Note: All test modes have been tested, only the worst data record in the report.



## 8.7. SPURIOUS EMISSIONS BELOW 30M

## 8.7.1. GFSK MODE

## SPURIOUS EMISSIONS (MID CHANNEL, LOOP ANTENNA FACE ON TO THE EUT, WORST-CASE CONFIGURATION)



No.	Frequency	Reading	Correct	Result	Limit	ISED	ISED	Margin	Remark
						Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0100	76.22	-101.40	-25.18	47.60	-76.68	-3.90	-72.78	peak
2	0.0160	68.97	-101.37	-32.40	43.52	-83.90	-7.98	-75.92	peak
3	0.0279	64.67	-101.38	-36.71	38.69	-88.21	-12.81	-75.40	peak
4	0.0514	60.18	-101.48	-41.30	33.38	-92.8	-18.12	-74.68	peak
5	0.0796	57.03	-101.63	-44.60	29.58	-96.10	-21.92	-74.18	peak
6	0.1184	54.52	-101.74	-47.22	26.14	-98.72	-25.36	-73.36	peak

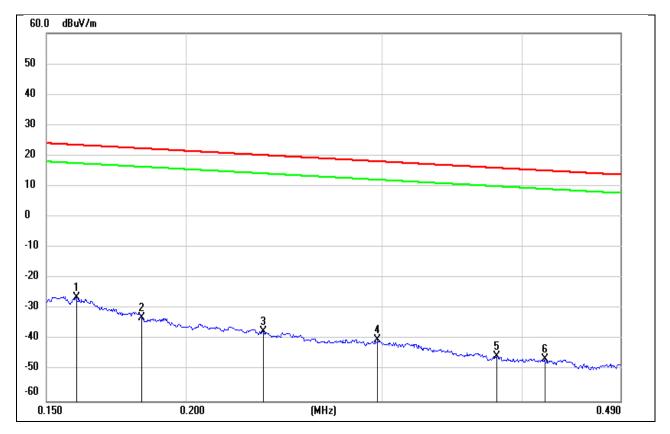
Note: 1. Measurement = Reading Level + Correct Factor ( $dBuA/m = dBuV/m - 20Log10[120\pi] = dBuV/m - 51.5$ ).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.



## <u> 150kHz ~ 490kHz</u>



No.	Frequency	Reading	Correct	Result	Limit	ISED	ISED	Margin	Remark
						Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1595	75.36	-101.65	-26.29	23.55	-77.79	-27.95	-49.84	peak
2	0.1826	68.76	-101.69	-32.93	22.38	-84.43	-29.12	-55.31	peak
3	0.2346	64.35	-101.77	-37.42	20.19	-88.92	-31.31	-57.61	peak
4	0.2972	61.66	-101.85	-40.19	18.14	-91.69	-33.36	-58.33	peak
5	0.3800	56.52	-101.94	-45.42	16.01	-96.92	-35.49	-61.43	peak
6	0.4193	55.68	-101.98	-46.30	15.15	-97.80	-36.35	-61.45	peak

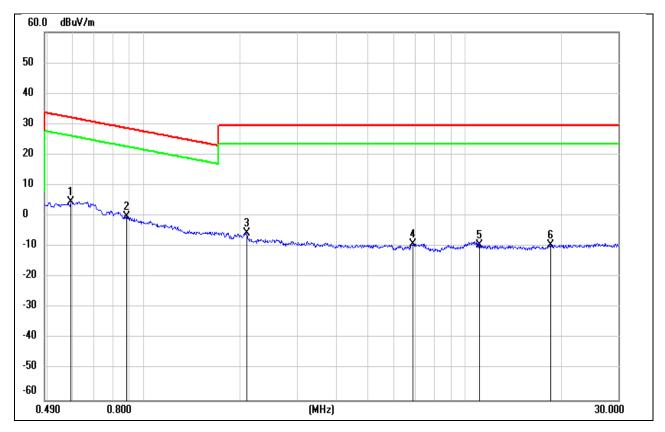
Note: 1. Measurement = Reading Level + Correct Factor ( $dBuA/m = dBuV/m - 20Log10[120\pi] = dBuV/m - 51.5$ ).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.



<u>490kHz ~ 30MHz</u>



No.	Frequency	Reading	Correct	Result	Limit	ISED	ISED	Margin	Remark
						Result	Limit		
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.5917	66.74	-62.08	4.66	32.16	-46.84	-19.34	-27.50	peak
2	0.8820	62.18	-62.19	-0.01	28.69	-51.51	-22.81	-28.70	peak
3	2.0939	56.39	-61.79	-5.40	29.54	-56.90	-21.96	-34.94	peak
4	6.8936	52.09	-61.22	-9.13	29.54	-60.63	-21.96	-38.67	peak
5	11.0838	51.28	-60.84	-9.56	29.54	-61.06	-21.96	-39.10	peak
6	18.4908	51.55	-60.89	-9.34	29.54	-60.84	-21.96	-38.88	peak

Note: 1. Measurement = Reading Level + Correct Factor ( $dBuA/m = dBuV/m - 20Log10[120\pi] = dBuV/m - 51.5$ ).

2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.

3. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report.

Note: All test modes have been tested, only the worst data record in the report.



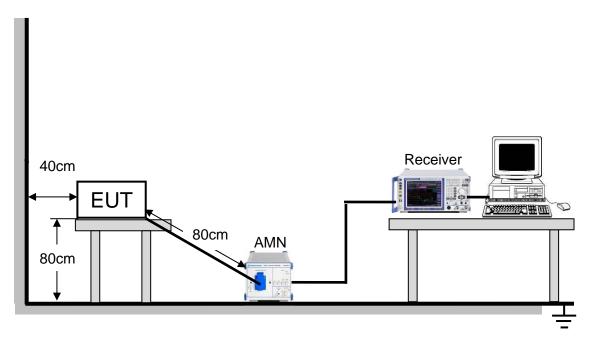
# 9. AC POWER LINE CONDUCTED EMISSIONS

## LIMITS

Please refer to CFR 47 FCC §15.207 (a) and ISED RSS-Gen Clause 8.8.

FREQUENCY (MHz)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

## TEST SETUP AND PROCEDURE



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

#### TEST ENVIRONMENT

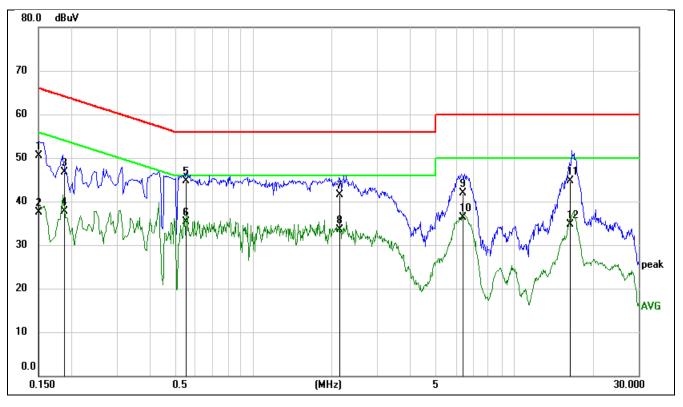
Temperature	22.0°C	Relative Humidity	68.3%
Atmosphere Pressure	101kPa	Test Voltage	AC120V 60Hz

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



## 9.1. 8DPSK MODE

## TEST RESULTS (HIGH CHANNEL, WORST-CASE CONFIGURATION)



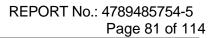
## LINE N RESULTS

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1511	40.86	9.60	50.46	65.94	-15.48	QP
2	0.1511	27.83	9.60	37.43	55.94	-18.51	AVG
3	0.1887	37.10	9.60	46.70	64.09	-17.39	QP
4	0.1887	28.17	9.60	37.77	54.09	-16.32	AVG
5	0.5577	35.19	9.60	44.79	56.00	-11.21	QP
6	0.5577	25.78	9.60	35.38	46.00	-10.62	AVG
7	2.1547	31.96	9.63	41.59	56.00	-14.41	QP
8	2.1547	23.84	9.63	33.47	46.00	-12.53	AVG
9	6.3794	32.19	9.71	41.90	60.00	-18.10	QP
10	6.3794	26.52	9.71	36.23	50.00	-13.77	AVG
11	16.5497	34.66	10.00	44.66	60.00	-15.34	QP
12	16.5497	24.67	10.00	34.67	50.00	-15.33	AVG

Note: 1. Result = Reading +Correct Factor.

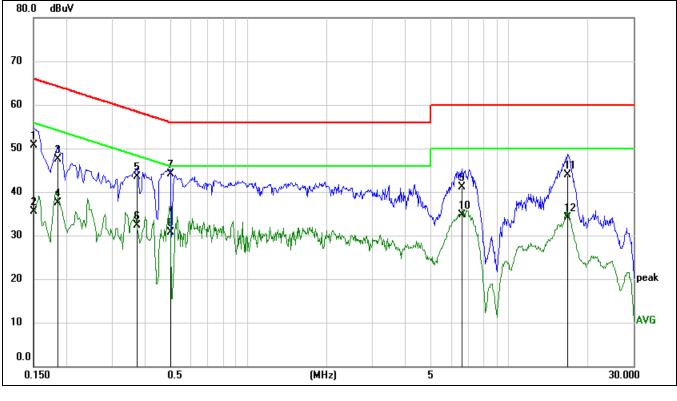
- 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- 4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch This report shall not be reproduced except in full, without the written approval of UL Verification Services (Guangzhou) Co., Ltd, Song Shan Lake Branch.



# UL

## LINE L RESULTS



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dB)	
1	0.1511	41.17	9.61	50.78	65.94	-15.16	QP
2	0.1511	25.82	9.61	35.43	55.94	-20.51	AVG
3	0.1855	37.92	9.60	47.52	64.24	-16.72	QP
4	0.1855	27.95	9.60	37.55	54.24	-16.69	AVG
5	0.3764	33.88	9.60	43.48	58.36	-14.88	QP
6	0.3764	22.65	9.60	32.25	48.36	-16.11	AVG
7	0.5001	34.42	9.60	44.02	56.00	-11.98	QP
8	0.5001	21.13	9.60	30.73	46.00	-15.27	AVG
9	6.6373	31.39	9.70	41.09	60.00	-18.91	QP
10	6.6373	24.95	9.70	34.65	50.00	-15.35	AVG
11	16.7912	34.00	9.94	43.94	60.00	-16.06	QP
12	16.7912	24.07	9.94	34.01	50.00	-15.99	AVG

Note: 1. Result = Reading +Correct Factor.

- 2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- 4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

Note: All the modes and channels had been tested, but only the worst data recorded in the report.

## **10. ANTENNA REQUIREMENTS**

## APPLICABLE REQUIREMENTS

#### Please refer 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.

## Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

## **RESULTS**

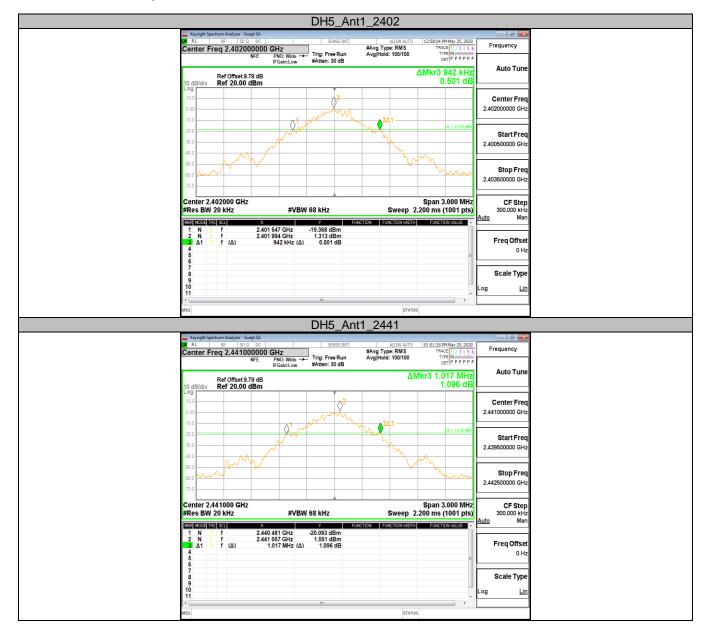
Complies



## Appendix A: 20dB Emission Bandwidth Test Result

Test Mode	Antenna	Channel	20db EBW[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2402	0.942	2401.547	2402.489		PASS
DH5	Ant1	2441	1.017	2440.481	2441.498		PASS
		2480	0.930	2479.499	2480.429		PASS
		2402	1.275	2401.352	2402.627		PASS
3DH5	Ant1	2441	1.179	2440.421	2441.600		PASS
		2480	1.155	2479.427	2480.582		PASS

## **Test Graphs**





## REPORT No.: 4789485754-5 Page 85 of 114

						1 age 00 01 114
		DH5_A	nt1_2480			
	Keysight Spectrum Analyzer - Swept SA				- 2 -	
	RL RF 50 Ω DC     Center Freq 2.48000000	0 GHz	ALIGN AUTO #Avg Type: RMS	01:07:07 PM May 25, 2020 TRACE 1 2 3 4 5 6	Frequency	
	Veriller Freq 2.4600000	PNO: Wide +++ Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE M		
				Mkr3 930 kHz	Auto Tune	
	Ref Offset 9.79 dB 10 dB/div Ref 20.00 dBm		4	0.187 dB		
	Log	Y I I I I I I I I I I I I I I I I I I I				
	10.0	$\wedge^2$			Center Freq	
	0.00	wwww			2.48000000 GHz	
	-10.0		∿⊶3∆1	DL1 -18.60 dBm		
	-20.0	A AV	- May		Start Freq	
	-30.0	N	- Yhay		2.478500000 GHz	
	-40.0			My -		
	-50.0			humm	Stop Freq	
					2.481500000 GHz	
	-70.0					
	Center 2.480000 GHz			Span 3.000 MHz	CF Step	
	#Res BW 20 kHz	#VBW 68 kHz	· · ·	200 ms (1001 pts)	300.000 kHz	
	MKR MODE TRC SCL X	79 499 GHz -18.991 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man	
	1 N 1 f 2.4 2 N 1 f 2.4	80 057 GHz 1.405 dBm			Eron Offert	
	<b>3</b> Δ1 1 f (Δ)	930 kHz (Δ) 0.187 dB			Freq Offset 0 Hz	
	5			E	0112	
	7				Coole Trme	
	9				Scale Type	
	10 11				Log <u>Lin</u>	
	<[	m		•		
	MSG		STATUS			
		3DH5 A	nt1_2402			
	Keysight Spectrum Analyzer - Swept SA					
	RL RF 50 Ω DC     Center Freq 2.40200000	0 GHz	#Avg Type: RMS	01:10:06 PM May 25, 2020 TRACE 1 2 3 4 5 6 TYPE M	Frequency	
	NFE	PNO: Wide +++ Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hold: 100/100	DET P P P P P		
			٨М	kr3 1.275 MHz	Auto Tune	
	Ref Offset 9.79 dB 10 dB/div Ref 20.00 dBm			0.361 dB		
	Log	The second secon				
	10.0	A2			Center Freq	
	0.00				2.402000000 GHz	
	-10.0	1 mm wer Vin	mm _ 3∆1			
	-20.0	<u>Y</u>		DL1 -23.40 dBm	Start Freq	
	-30.0	1			2.400500000 GHz	
1						
	-40.0		$\langle \wedge \rangle$	m i		
	-50.0 mm / MM			Mary Mary	Stop Freq	
	-50.0			and and a second	Stop Freq 2.403500000 GHz	
	-50.0 mm / MM			Mar and a second s		
	50.0 60.0 70.0 Center 2.402000 GHz			Span 3.000 MHz	2.403500000 GHz	
	60.0 70.0 Center 2.402000 GHz #Res BW 20 kHz	#VBW 68 kHz		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz	
	50.0 60.0 70.0 Center 2.402000 GHz #Res BW 20 kHz TOR LIVE FOR FOR FOR	l v l	Sweep 2.1	Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz	
	50.0 60.0 70.0 Center 2.402000 GHz #Res BW 20 kHz TOR LIVE FOR FOR FOR	l v l		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man	
	50.0 60.0 70.0 Center 2.402000 GHz #Res BW 20 kHz TOR LIVE FOR FOR FOR	01 352 GHz -23.910 dBm		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man Freq Offset	
	50.0 60.0 70.0 Center 2.402000 GHz #Res BW 20 kHz TOR LIVE FOR FOR FOR	l v l		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man	
	50.0 60.0 70.0 Center 2.402000 GHz #Res BW 20 kHz TOR LIVE FOR FOR FOR	l v l		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man Freq Offset 0 Hz	
	500	l v l		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man Freq Offset	
	600	l v l		Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man Freq Offset 0 Hz	
	600	l v l	FUNCTION FUNCTION MIDTH	Span 3.000 MHz 200 ms (1001 pts)	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man Freq Offset 0 Hz Scale Type	
	600	l v l		Span 3.000 MHz 200 ms (1001 pts) FUNCTIONVALUE	2.403500000 GHz CF Step 300.000 kHz <u>Auto</u> Man Freq Offset 0 Hz Scale Type	



#### REPORT No.: 4789485754-5 Page 86 of 114

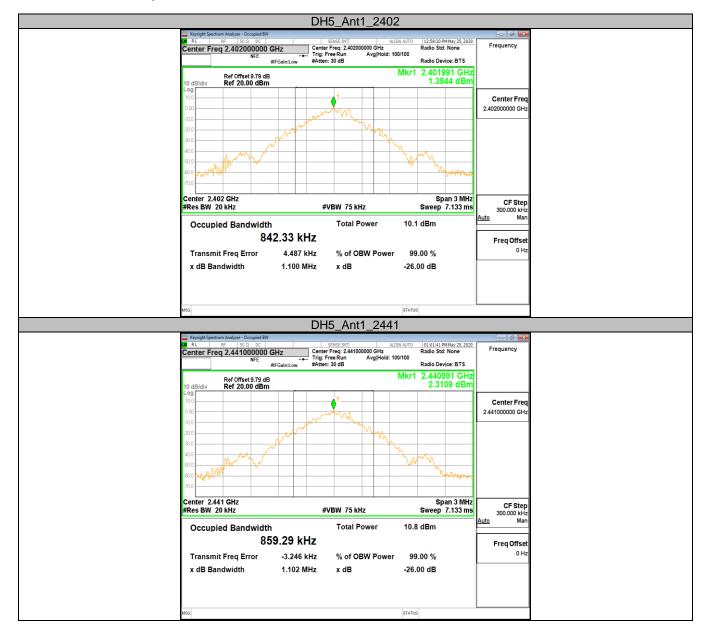
				Fage 60 01 114
	3DH5_Ar	nt1_2441		
Keysight Spectrum Analyzer - 1	Swept SA	ALTER ALTER ALTER ALTER PROFESSION		
Center Freq 2.4410		ALIGN AUTO 01:16:00 PMMay 2 #Avg Type: RMS TRACE 1 2 Avg[Hold: 100/100 TYPE MW DET P P	Frequency	
Ref Offsett 10 dB/div Ref 20.00	9.79 dB	ΔMkr3 1.179 I -0.378	Auto Tune	
10 dB/div Ref 20.00			Center Freq	
-10.0	12 mm mm		2.441000000 GHz	
-20.0		DL1-18	42 dBm Start Freq 2.439500000 GHz	
-400 -500	nt nt	Maria		
-70.0			2.442500000 GHz	
Center 2.441000 GH #Res BW 20 kHz	#VBW 68 kHz	Span 3.000 Sweep 2.200 ms (1001 NCTION FUNCTION WIDTH FUNCTION VAL	pts) 300.000 kHz	
DECENTIONE         Filler         Scale           1         N         f           2         N         f           3         A.1         f           4         5         6	X Y FU 2.440 421 GHz -18.528 dBm 2.441 000 GHz 1.585 dBm 1.179 MHz (Δ) -0.378 dB	NC HON FUNCTION WIDTH FUNCTION VAL	Freq Offset	
7 8 9 9			Scale Type	
10 11 < t			Log Lin	
MSG		STATUS		
	3DH5_Ar	nt1_2480		
Keysight Spectrum Analyzer - S R R R F S0	Swept SA	ALIGN AUTO 01:18:46 PM May 2		
Center Freq 2.4800		#Avg Type: RMS TRACE 12 Avg Hold: 100/100 TYPE MW DET P P	PPPP	
Ref Offset : 10 dB/div Ref 20.00	9.79 dB	∆Mkr3 1.155 I -0.431	Auto Tune	
Log 10.0 0.00 	2	ΔΩ, , Δ3Δ1	Center Freq 2.480000000 GHz	
-20.0			30 dBm Start Freq 2.478500000 GHz	
500	↓ ↓ ↓		Stop Freq 2.481500000 GHz	
Center 2.480000 GH #Res BW 20 kHz	#VBW 68 kHz	Span 3.000 Sweep 2.200 ms (1001	pts) 300.000 kHz	
1 Ν 1 Γ 2 Ν 1 Γ 3 Δ1 Γ Γ 4 Δ1 Γ (Δ) 4 5 6	2.479 427 GHz -17.438 dBm 2.479 994 GHz 2.703 dBm 1.155 MHz (Δ) -0.431 dB		Freq Offset 0 Hz	
7 8 9 9 10			Scale Type	
		STATUS	, Log <u>Lin</u>	
MSG		STATUS		



## Appendix B: Occupied Channel Bandwidth Test Result

Test Mode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
		2402	0.84233	2401.583	2402.426		PASS
DH5	Ant1	2441	0.85929	2440.567	2441.426		PASS
		2480	0.87450	2479.554	2480.428		PASS
		2402	1.1514	2401.420	2402.572		PASS
3DH5	Ant1	2441	1.1431	2440.426	2441.569		PASS
		2480	1.1630	2479.416	2480.579		PASS

## **Test Graphs**



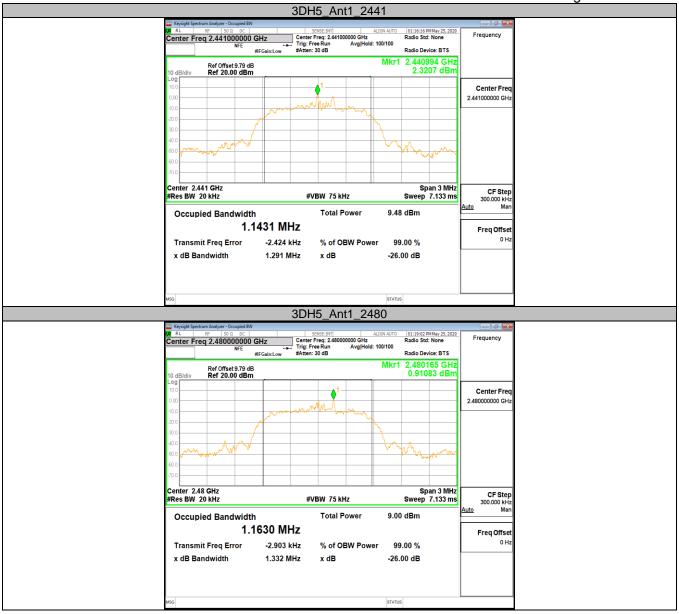


## REPORT No.: 4789485754-5 Page 89 of 114





## REPORT No.: 4789485754-5 Page 90 of 114





## Appendix C: Maximum Peak conducted output power Test Result

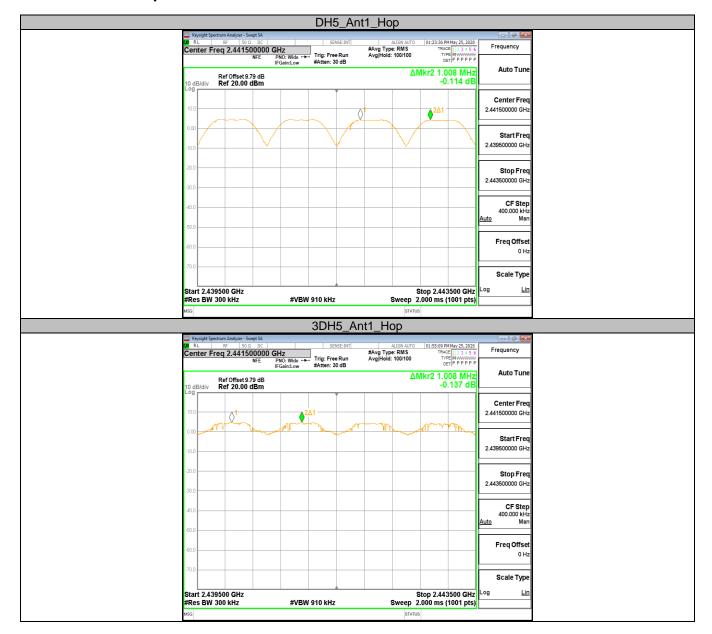
Test Mode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
DH5	Ant1	2402	0.18	<=21	PASS
		2441	-0.80	<=21	PASS
		2480	-0.90	<=21	PASS
	Ant1	2402	0.21	<=21	PASS
3DH5		2441	-0.83	<=21	PASS
		2480	-0.87	<=21	PASS



## Appendix D: Carrier frequency separation Test Result

Test Mode	Antenna	Channel	Result[MHz]	Limit[MHz]	Verdict
DH5	Ant1	Нор	1.008	>=0.678	PASS
3DH5	Ant1	Нор	1.008	>=0.850	PASS

## Test Graphs



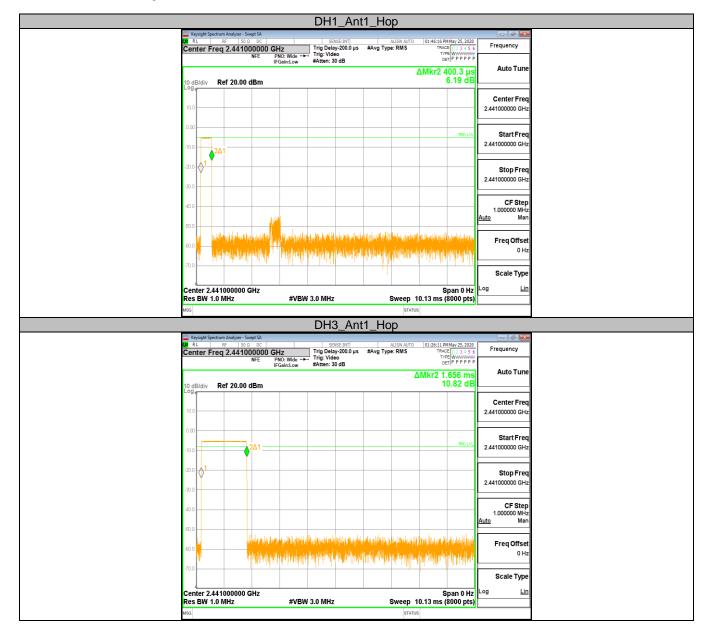


## Appendix E: Time of occupancy Test Result

			FHSS Mode			
Test Mode	Antenna	Channel	BurstWidth [ms]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Нор	0.40	0.128	<=0.4	PASS
DH3	Ant1	Нор	1.66	0.266	<=0.4	PASS
DH5	Ant1	Нор	2.90	0.309	<=0.4	PASS
3DH1	Ant1	Нор	0.41	0.131	<=0.4	PASS
3DH3	Ant1	Нор	1.66	0.266	<=0.4	PASS
3DH5	Ant1	Нор	2.91	0.310	<=0.4	PASS

			AFHSS Mode			
Test Mode	Antenna	Channel	BurstWidth [ms]	Result[s]	Limit[s]	Verdict
DH1	Ant1	Нор	0.40	0.064	<=0.4	PASS
DH3	Ant1	Нор	1.66	0.133	<=0.4	PASS
DH5	Ant1	Нор	2.90	0.155	<=0.4	PASS
3DH1	Ant1	Нор	0.41	0.066	<=0.4	PASS
3DH3	Ant1	Нор	1.66	0.133	<=0.4	PASS
3DH5	Ant1	Нор	2.91	0.155	<=0.4	PASS

## **Test Graphs**





## REPORT No.: 4789485754-5 Page 96 of 114

											Fage 90 01 114
				DH5	Ant	1_Ho	p				
Keysight Spectrum Analyzer - Swept SA         ALLON AUTO         01:43:58 PM May 25,2020           R L         RF         IS 0.0         DC         SENSE:INT         ALLON AUTO         01:43:58 PM May 25,2020           Center Freq 2.441000000 GHz         Trip Oelay-200.0 µs         #Avg Type: RMS         Trace 1/2.4 % GM May 25,2020					- 3 💌						
Keysigin Sp	RF 50	Ω DC			SE:INT	4	LIGN AUTO	01:43:58 P	M May 25, 2020		
Center F	req 2.4410	000000 GHz	Z De Miliel	Trig Delay Trig: Video	-200.0 µs	#Avg Type	RMS	TY	CE 1 2 3 4 5 6 PE WWWWWW	Frequency	
		NFE PNO IFGa	D: Wide 🔸	#Atten: 30	dB			D	ETPPPPP		
							1	∆Mkr2 2	.904 ms	Auto Tune	
10 dB/div	Ref 20.00	dBm						1	5.47 dB		
Log											
										Center Freq	
10.0										2.441000000 GHz	
0.00									TRIG LVL	Start Freq	
-10.0			2∆1							2.441000000 GHz	
- 10.0											
-20.0											
1										Stop Freq	
-30.0										2.441000000 GHz	
-40.0										CF Step	
										1.000000 MHz <u>Auto</u> Man	
-50.0											
4			لللاسالات	المتدانية الألي	u hiter a	<b>Augura</b>	hiller	بالإراد إربادا و	ال عناسيا بل	Freq Offset	
-60.0										0 Hz	
1			1.00	of the left of the	a francis	制神	A MARINA A		The Party	0112	
-70.0				Total 1			- 1	• • • •			
										Scale Type	
Center 2	441000000	GHz							Span 0 Hz	Log <u>Lin</u>	
Res BW 1	1.0 MHz		#VBW	3.0 MHz		5	Sweep 1	10.13 ms	(8000 pts)		
MSG							STATU	IS			
				201	1 An	+1 ⊔c					
				3DH'	1_An	t1_Ho					
Keysight Sp	pectrum Analyzer - S	wept SA Ω DC					р	02:02:47 F	M May 25, 2020		
LXI RL	RF 50	Ω DC   000000 GHz	Z	SENS Trig Delay	SE:INT -200.0 µs			TRA	M May 25, 2020 CE 1 2 3 4 5 6	Frequency	
LXI RL	RF 50	Ω DC 000000 GHz NEF PNO	): Wide 🔸	SENS Trig Delay	5E:INT -200.0 μs			TRA	M May 25, 2020 CE 1 2 3 4 5 6 PE WWWWWWW ET P P P P P P	Frequency	
LXI RL	RF 50	Ω DC 000000 GHz NEF PNO	Z D: Wide ↔ ain:Low	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWW ET P P P P P P 410.4 μs	Frequency Auto Tune	
Center F	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWWW ET P P P P P P	Frequency Auto Tune	
LXI RL	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWW ET P P P P P P 410.4 μs	Frequency Auto Tune	
Center F	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWW ET P P P P P P 410.4 μs	Frequency Auto Tune Center Freq	
Center F	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWW ET P P P P P P 410.4 μs	Frequency Auto Tune	
10 dB/div Log	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWW ET P P P P P P 410.4 μs	Frequency Auto Tune Center Freq	
Center F	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 1 2 3 4 5 6 PE WWWWWW ET P P P P P P 410.4 μs	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq	
10 dB/div Log	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Auto Tune	
10 dB/div Log	RF 50 Freq 2.4410	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq	
10 dB/div Log	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz	
10 dB/div Log	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz Stop Freq	
10 dB/div Log	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz	
20 RL Center F 10 dB/div 10.0 -10.0 -20.0 -30.0	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz 2.441000000 GHz	
20 RL Center F 10 dB/div 10.0 -10.0 -20.0	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq	
20 RL Center F 10 dB/div Log 10.0 -10.0 -20.0 -20.0 -40.0	RF 50 Freq 2.4410 Ref 20.00	Ω DC 1000000 GHz NFE PNO IFGa	): Wide 🔸	SENS Trig Delay Trig: Video	5E:INT -200.0 μs		DD LIGN AUTO 2: RMS	TRA TY ΔMkr2	CE 123456 PPPPPP 410.4 µs 3.56 dB	Frequency Auto Tune Center Freq 2.44100000 GHz 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz CF Step	
00 RL Center F 10 dB/div 10.0 -10.0 -20.0 -20.0 -40.0 -50.0	2Δ1	dBm	): Wide - → - in:Low	SEN4	se:int] -200.0 µs dB	#Avg Type	E RMS		TROLVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz	
00 RL Center F 10 dB/div 10.0 -10.0 -10.0 -20.0 -20.0 -40.0 -50.0	2Δ1	Ω DC 1000000 GHz NFE PNO IFGa	): Wide - → - in:Low	SEN4	se:int] -200.0 µs dB	#Avg Type	E RMS		TROLVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz	
00 RL Center F 10 dB/div 10.0 -10.0 -20.0 -20.0 -40.0 -50.0	με         30           req 2.4410	A DC HAR PRODUCTION CHAR PRODUCTICA P	): Wide - → - in:Low	SENE Trig Delay Trig: Videc #Atten: 30	dB	#Avg Type	E RMS		TROLVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           2.441000000 GHz           CF Step           1.000000 MHz           Auto           Man	
00 €L Center F 10 dB/div 10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0	με         30           req 2.4410	dBm	): Wide - → - in:Low	SENE Trig Delay Trig: Videc #Atten: 30	dB	#Avg Type	E RMS		TROLVL	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz 3.00000 GHz 1.000000 GHz 1.000000 GHz 5.00000 GHz 1.000000 GHz 1.000000 GHz 5.00000 GHz 1.000000 GHz 1.00000 GHz 2.441000000 GHz 3.0000 GHz 3.00000 GHz 3.0000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.00000 GHZ 3.000000 GHZ 3.00000 GHZ 3.000000 GHZ 3.000000 GHZ 3.000000 GHZ 3.000000 GHZ 3.0000000 GHZ 3.00000000 GHZ 3.0000000 GHZ 3.000000000000 GHZ 3.000000000000000000000000000000000000	
00 RL Center F 10 dB/div 10.0 -10.0 -10.0 -20.0 -20.0 -40.0 -50.0	με         30           req 2.4410	A DC HAR PRODUCTION CHAR PRODUCTICA P	): Wide - → - in:Low	SENE Trig Delay Trig: Videc #Atten: 30	dB	#Avg Type	E RMS		TROLVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz           Auto           Man           Freq Offset           0 Hz	
10 dB/div 10 dB/div 10.0 10	2Δ1	dBm dBm dBm dBm	): Wide - → - in:Low	SENE Trig Delay Trig: Videc #Atten: 30	dB	#Avg Type	E RMS		TTOOLVL	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz 0 CF Step 1.000000 MHz Auto Man Freq Offset 0 Hz Scale Type	
Center 2. Conter F 10 dB/div 10 0 10 0	PF   50 req 2.4410 Ref 20.00 2∆1	dBm dBm dBm dBm	D: Wide	SENTING SERVICE SERVIC	dB	#Avg Type			100 LVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz           Auto           Man           Freq Offset           0 Hz           Scale Type           Log         Lin	
Center 2. Center 2. Code de d	PF   50 req 2.4410 Ref 20.00 2∆1	dBm dBm	D: Wide	SENE Trig Delay Trig: Videc #Atten: 30	dB	#Avg Type	Sweep 1	TRA 0 ΔMkr2 4 1 1 1 1 1 1 1 1 1 1 1 1 1	TTOOLVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz           Auto           Man           Freq Offset           0 Hz           Scale Type           Log         Lin	
Center 2. Conter F 10 dB/div 10 0 10 0	PF   50 req 2.4410 Ref 20.00 2∆1	dBm dBm	D: Wide	SENTING SERVICE SERVIC	dB	#Avg Type		TRA 0 ΔMkr2 4 1 1 1 1 1 1 1 1 1 1 1 1 1	100 LVL	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz           Auto           Man           Freq Offset           0 Hz           Scale Type           Log         Lin	



#### REPORT No.: 4789485754-5 Page 97 of 114

							Page 97 of 114
			3DH3_An	t1_Hop			
	Keysight Spectrum Analyzer - Swe	pt SA				- 6 💌	
	RL RF 50 Ω     Center Freq 2.44100	0000 GHz	SENSE:INT Trig Delay-200.0 µs	#Avg Type: RMS	01:57:17 PM May 25, 2020 TRACE 1 2 3 4 5 6 TYPE W	Frequency	
		NFE PNO: Wide +++ IFGain:Low	Trig: Video #Atten: 30 dB		DET P P P P F		
				L	ΔMkr2 1.661 ms	Auto Tune	
	10 dB/div Ref 20.00 d	Bm			10.78 dB		
						Center Freq	
	10.0					2.441000000 GHz	
	0.00						
	Compared Street and Application				TRIG LVL	Start Freq 2.441000000 GHz	
	-10.0	Δ1				2.44 100000 0112	
	-20.0					Stop Freq	
						2.441000000 GHz	
	-30.0						
	-40.0					CF Step 1.000000 MHz	
						Auto Man	
	-50.0	Masha kata mana kata kata kata kata kata kata kata k	والمتحاجبة بالتحاليات	المتعادية المتعادية	Industria di damana		
	-60.0					Freq Offset 0 Hz	
	1 1	kales, altitud availet					
	-70.0					Scale Type	
		-					
	Center 2.441000000 G Res BW 1.0 MHz		3.0 MHz	Sweep 1	Span 0 Hz (8000 pts) 10.13	Log <u>Lin</u>	
	MSG			STATU			
			3DH5_An	t1 Hop			
	Keysight Spectrum Analyzer - Swe	pt SA				- 6 💌	
	RL RF 50 Ω     Center Freq 2.44100	0000 GHz	SENSE:INT Trig Delay-200.0 µs	#Avg Type: RMS	01:55:51 PM May 25, 2020 TRACE 1 2 3 4 5 6 TYPE WWWWWWW	Frequency	
	,	NFE PNO: Wide +++ IFGain:Low	Trig: Video #Atten: 30 dB		DET P P P P P		
				1	ΔMkr2 2.911 ms		
	10 dB/div Ref 20.00 d	Bm			11.61 dB		
						Center Freq	
	10.0					2.441000000 GHz	
	0.00						
		n, balding baldin			TRIG LVL	Start Freq 2.441000000 GHz	
	-10.0	<u>2∆1</u>				2.441000000 0112	
	-20.0					Stop Freq	
	<b>≬</b> 1					2.441000000 GHz	
	-30.0						
	-40.0					CF Step 1.000000 MHz	
						Auto Man	
	-50.0	المرابعة والمراجع	an ta aka ta bilinte ta a	in , al den sait de matric	Willia have a logal the		
	-60.0					Freq Offset 0 Hz	
	1	I should be the			i filosofili at Mala		
	-70.0					Scale Type	
1							
	Contor 3 444000000 C	U-3			C	Log Lin	
	Center 2.441000000 G Res BW 1.0 MHz		3.0 MHz	Sweep 1	Span 0 Hz 10.13 ms (8000 pts)	Log <u>Lin</u>	
			3.0 MHz	Sweep 1	10.13 ms (8000 pts)	Log <u>Lin</u>	



## Appendix F: Number of hopping channels Test Result

Test Mode	Antenna	Channel	Result[Num]	Limit[Num]	Verdict
DH5	Ant1	Нор	79	>=15	PASS
3DH5	Ant1	Нор	79	>=15	PASS



## **Test Graphs**





## Appendix G: Band edge measurements Test Result

Test Mode	Antenna	ChName	Channel	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
		Low	2402	3.47	-50.09	<=-16.54	PASS
	Apt1	High	2480	4.88	-49.57	<=-15.12	PASS
DHD	DH5 Ant1	Low	Hop_2402	3.07	-48.9	-16.93	PASS
		High	Hop_2480	5.09	-49.84	-14.91	PASS
		Low	2402	3.51	-50.75	<=-16.49	PASS
2045	A not 1	High	2480	4.74	-50.04	<=-15.26	PASS
3000	3DH5 Ant1	Low	Hop_2402	0.55	-50.92	-19.45	PASS
		High	Hop_2480	5.10	-50.24	-14.9	PASS

# Test Graphs

		DH5_Ant1	Low 2402			
	eysight Spectrum Analyzer - Swept SA	SENSE:INT		10-59-24 04-4 05 2020		
Cen	RL RF 50 Ω DC nter Freq 2.352500000 G NFE		#Avg Type: RMS Avg Hold: 300/300	12:58:34 PM May 25, 2020 TRACE 1 2 3 4 5 6 TYPE M DET P P P P P P	Frequency	
10.4	Ref Offset 9.79 dB IB/div Ref 20.00 dBm	I Gant Low	Mkr5	2.376 020 GHz -50.088 dBm	Auto Tune	
Log 10.0					Center Freq	
0.00				DL1 -16.54 oBm	2.352500000 GHz	
-20.0 -30.0					Start Freq 2.300000000 GHz	
-40.0 -50.0	∧4		5		Cton From	
-60.0 -70.0					Stop Freq 2.40500000 GHz	
	rt 2.30000 GHz es BW 100 kHz	#VBW 300 kHz		Stop 2.40500 GHz .867 ms (1001 pts)	CF Step 10.500000 MHz	
1 1	MODE TRC SCL X	Y F	INCTION FUNCTION WIDTH		<u>Auto</u> Man	
2 3 4 5	N 1 f 2.400 0 N 1 f 2.390 0 N 1 f 2.310 0	00 GHz -52.064 dBm 00 GHz -53.362 dBm 00 GHz -53.018 dBm			Freq Offset 0 Hz	
6 7 8		20 012 -00.000 0Dm			Scale Type	
9 10 11					Log <u>Lin</u>	
A MSG			STATUS	•		
		DH5_Ant1_	Ligh 2480	1		
	eysight Spectrum Analyzer - Swept SA				- 2 ×	
(X) R	RF 50Ω DC	SENSE:INT	ALIGN AUTO #Avg Type: RMS	01:07:37 PM May 25, 2020	Frequency	
	nter Freq 2.510000000 G	PNO: Fast Trig: Free Run FGain:Low #Atten: 30 dB	#Avg Type. Kino	TRACE 1 2 3 4 5 6 TYPE M WWWWW		
661	NFE	FGain:Low #Atten: 30 dB	Avg Hold: 300/300	DET PPPPP	Auto Turce	
10 d	Ref Offset 9.79 dB IB/div Ref 20.00 dBm	FGain:Low #Atten: 30 dB		оет/РРРРРР 4 2.506 08 GHz -49.573 dBm	Auto Tune	
10 d Log 10.0	Ref Offset 9.79 dB Bldiv Ref 20.00 dBm	FGaintLow #Atten: 30 0B		DET PPPPP 4 2.506 08 GHz	Center Freq	
<b>10 d</b> 10 0 10 0 -10 0	Ref Offset 9.79 dB IB/div Ref 20.00 dBm	Figain:Low #Atten: 30 0D		DET PPPPP 4 2.506 08 GHz	Center Freq 2.51000000 GHz	
<b>10 d</b> 100 100 -100 -300 -300	BIdiv Ref 20.00 dBm	Faintow Patter: 30 0D		4 2.506 08 GHz -49.573 dBm	Center Freq	
10 d 10 d 10 0 10 0 10 0 10 0 10 0 10 0	Ref Offset 9.79 dB	Faintow Paten: 30 00		24.2.506 08 GHz -49.573 dBm 24.1512 dbm	Center Freq 2.51000000 GHz Start Freq 2.470000000 GHz	
<b>10 d</b> 10.0 -10.0 -20.0 -30.0 -40.0	Ref Offset 979 dB Bldiv Ref 20.00 dBm		Mkr	24.2.506 08 GHz -49.573 dBm 24.1512 dbm	Center Freq 2.51000000 GHz Start Freq	
10 d Log 100 -000 -000 -000 -000 -000 -000 -000	Ref Offset 979 dB Bldiv Ref 20.00 dBm			24.2.506 08 GHz -49.573 dBm 24.1512 dbm	Center Freq           2.510000000 GHz           Start Freq           2.470000000 GHz           Stop Freq           2.550000000 GHz           CF Step           8.0000000 MHz	
10 d Log 100 -100 -300 -300 -400 -400 -400 -400 -400 -4	Ref Offset 9.79 dB IBIdity Ref 20.00 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1	#VBW 300 kHz		25.55000 GHz 000 ms (1001 pts)	Center Freq 2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step	
10 d 10 0 10 0 10 0 10 0 10 0 10 0 10 0	Ref Offset 9.79 dB Bldiv Ref 20.00 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1	#VBW 300 kHz	Mkr.	25.55000 GHz 000 ms (1001 pts)	Center Freq           2.510000000 GHz           Start Freq           2.470000000 GHz           Stop Freq           2.550000000 GHz           CF Step           8.0000000 MHz	
10 d 10 d 000 -100 -300 -300 -300 -300 -300 -300	Ref Offset 9.79 dB IBIdity Ref 20.00 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1	#VBW 300 kHz	Mkr.	25.55000 GHz 000 ms (1001 pts)	Center Freq           2.510000000 GHz           Start Freq           2.470000000 GHz           Stop Freq           2.550000000 GHz           CFF Step           8.000000 MHz           Auto           Freq Offset           0 Hz	
10 d 10 0 10 0 10 0 10 0 10 0 10 0 10 0	Ref Offset 9.79 dB IBIdity Ref 20.00 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1	#VBW 300 kHz	Mkr.	25.55000 GHz 000 ms (1001 pts)	Center Freq           2.510000000 GHz           Start Freq           2.470000000 GHz           Stop Freq           2.55000000 GHz           CF Step           8.000000 MHz           Auto           Man           Freq Offset	



## REPORT No.: 4789485754-5 Page 102 of 114

		Anti Low L	Jan 240	10		
		5_Ant1_Low_H	$10p_240$	)2		
Keysi RL	ight Spectrum Analyzer - Swept SA	actives tard	41704 41777		- 3 💌	
	er Freq 2.355000000 GHz	SENSE:INT #Ave	ALIGN AUTO g Type: RMS	01:21:23 PM May 25, 2020 TRACE 1 2 3 4 5 6	Frequency	
Cento	NFE PNO: Fast ->		Hold: 500/500	TRACE 1 2 3 4 5 6 TYPE M		
	NFE PNO: Fast ↔ IFGain:Low	#Atten: 30 dB		DET P P P P P		
		,	Mkr	5 2.379 09 GHz	Auto Tune	
10 dBi	Ref Offset 9.64 dB /div Ref 20.00 dBm			-48.895 dBm		
		V		10.000 0.011		
10.0 -				{1	Center Freq	
				Y.		
0.00 -				lákutott.	2.355000000 GHz	
-10.0 -				DL1 /16 s0 oBm		
-20.0				DLY /16.53/opm		
					Start Freq	
-30.0 -					2.30000000 GHz	
-40.0 -			<b>4</b> 5	-2 -2		
-50.0 -	()*		<b>Y</b>	2 2 2 2 2 2		
- 0.02	and a second and a second and the second and a second and a second and the second and the second and the second	- and	Change Contraction of the second	hand the second of the	Stop Freq	
00.0					2.41000000 GHz	
-70.0 -		+				
Start	2.30000 GHz			Stop 2.41000 GHz	CF Step	
#Res	BW 100 kHz #VBW	V 300 kHz	Sweep 4.	.067 ms (1001 pts)	11.000000 MHz	
MKRI M	DDE TRC SCL X	Y FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man	
1 1	N 1 f 2.403 07 GHz	3.065 dBm				
2 3 4	N 1 f 2.400 00 GHz N 1 f 2.390 00 GHz	-52.397 dBm -52.723 dBm			Freq Offset	
3	N 1 f 2.390 00 GHz N 1 f 2.310 00 GHz	-52./23 dBm -53.377 dBm			0 Hz	
5	N 1 f 2.379 09 GHz	-48.895 dBm		E	0 HZ	
6						
8					Scale Type	
9						
10 11					Log <u>Lin</u>	
				· · ·		
MSG			STATUS			
muu						
	DH5	_Ant1_High_H	Hop 24	80		
Kenter Kenter	ight Spectrum Analyzer - Swept SA		. –		- 3 ×	
UN RL	RF 50Ω DC	SENSE:INT	ALIGN AUTO	01:45:34 PM May 25, 2020		
			g Type: RMS  Hold:>500/500	TRACE 1 2 3 4 5 6 TYPE M	Frequency	
	NFE PNO: Fast IFGain:Low	#Atten: 30 dB	Hold:>500/500	DET P P P P P		
	ii Gameon		Mice		Auto Tune	
	Ref Offset 9.79 dB		IVIKI4	4 2.521 04 GHz -49.843 dBm		
	Rei Oliset 3.73 ub			-49.845 OBMI		
10 dB	Idiv Ref 20.00 dBm					
	Idiv Ref 20.00 dBm	T T				
Log 10.0 -	/div Ref 20.00 dBm				Center Freq	
Log					Center Freq 2.51000000 GHz	
Log 10.0 -	/div Ref 20.00 dBm					
Log 100 - 0.00 - -100 -	/div Ref 20.00 dBm			DL1 -14 91 dBm	2.51000000 GHz	
Log 100 600 -100 -200	/div Ref 20.00 dBm				2.51000000 GHz Start Freq	
Log 100 - 0.00 - -100 -	/div Ref 20.00 dBm				2.51000000 GHz	
Log 1 10.0 .000 .1000 .200			4		2.51000000 GHz Start Freq	
Log   1000   -000   -300   -300   -400			4		2.51000000 GHz Start Freq	
Log - 100 - -100 - -200 - -300 - -400 - -500 -	1         3000 dBm           1         1           1         1           1         1		4		2.51000000 GHz Start Freq 2.47000000 GHz	
Log   1100   0.00   -200   -300   -400			4		2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq	
Log   100   .000   .000   .300   .400   .500		3	4		2.51000000 GHz Start Freq 2.47000000 GHz	
Log 100 00 -000 -000 -000 -000 -000 -000 -			4	0.1 -14 91 db6	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz	
Log 100 000 -000 -000 -000 -000 -000 -000	2.47000 GHz			E17-1497 abor	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step	
Log 1100 1100 1100 1000 1000 1000 1000 10	2.47000 GHz	3 3 V 300 kHz		0.1 -14 91 db6	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step 8.000000 MHz	
Log 1100 1100 1000 1000 1000 1000 1000 10	2.47000 GHz	V 300 kHz	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step	
Log 100 000 -000 -000 -000 -000 -000 -000	2.47000 GHz BW 100 kHz #VBW	V 300 kHz	Sweep 3.	E17-1497 abor	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step 8.000000 MHz	
Log 100 00 -00 -00 -00 -00 -00 -00 -00 -00	Vidiv         Ref 20.00 dBm           01         0           01         0           02         03           03         0           04         0	V 300 kHz V 300 kHz V FUNCTION 5.091 dBm -52.590 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz 2.55000000 GHz CF Step 8.00000 MHz <u>Auto</u> Man	
Log 100 000 	Image: state	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset	
Log 100 100 100 100 100 100 100 100 100 10	Vidiv         Ref 20.00 dBm           01         0           01         0           02         03           03         0           04         0	V 300 kHz V 300 kHz V FUNCTION 5.091 dBm -52.590 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz 2.55000000 GHz CF Step 8.00000 MHz <u>Auto</u> Man	
Log 100 00 -00 -00 -00 -00 -00 -00 -00 -00	Image: state	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset	
Log 100 100 100 100 100 100 100 100 100 10	Image: state	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset 0 Hz	
Log = 100 - 100 - - -00 - - -00 - - - - - - - - - - -	Image: state	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset	
Log 100 -000 -000 -000 -000 -000 -000 -000	Image: state	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset 0 Hz	
Log = 100 100 -000 -000 -000 -000 -000 -000	Image: Second	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	511-14 97 abn 	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset 0 Hz Scale Type	
Log 100 -000 -000 -000 -000 -000 -000 -000	Image: Second	V 300 kHz V 300 kHz 5.091 dBm -52.500 dBm -52.705 dBm	Sweep 3.	C1.1497865 C1.1497865 Stop 2.55000 GHz 000 ms (1001 pts)	2.51000000 GHz Start Freq 2.47000000 GHz Stop Freq 2.55000000 GHz CF Step 8.000000 MHz <u>Auto</u> Man Freq Offset 0 Hz Scale Type	



## REPORT No.: 4789485754-5 Page 103 of 114

3DH5_Ant1	_Low_2402	
Keysight Spectrum Analyzer - Swept SA		
V RL RF 50 Ω DC SENSE:INT	ALIGN AUTO 01:10:36 PM May 25, 2020 #Avg Type: RMS TRACE 1 2 3 4 5 6 Frequence	y l
Center Freq 2.352500000 GHz NFE PNO: Fast + Trig: Free Run IFGain:Low #Atten: 30 dB	AvaiHold: 300/300 TYPE MWWWWW	
IFGain:Low #Atten: 30 dB		Tuna
Ref Offset 9.79 dB	WKI5 2.376 230 GHZ	i unc
Ref Offset 9.79 dB 10 dB/div Ref 20.00 dBm	-50.752 dBm	_
10.0	Center	Free
0.00	2.35250000	
-10.0	2.35250000	
	DL1 -16.49 dBm	
-20.0	Start	Freq
-30.0	2.3000000	0 GHz
-40.0	5 03 02	
-50.0 - The stand of the second the second strand of the second strand of the second strand of the second strand of the second strand s		From
-60.0	2.40500000	
-70.0	2.40500000	0.0112
Start 2.30000 GHz #Res BW 100 kHz #VBW 300 kHz	Stop 2.40500 GHz CF Sweep 3.867 ms (1001 pts) 10.500000	Step
	Auto	Man
NKR MODE TRC Scl.         X         Y         F           1         N         1         f         2.402 060 GHz         3.514 dBm	UNCTION FUNCTION WIDTH FUNCTION VALUE	_
2 N 1 f 2.400 000 GHz -51.203 dBm	FregO	Iffset
3 N 1 f 2.390 000 GHz -53.493 dBm 4 N 1 f 2.310 000 GHz -55.121 dBm	Frequ	0 Hz
5 N 1 f 2.376 230 GHz -50.752 dBm	=	
7		7.00
9	Scale	туре
10 11	Log	Lin
۲	*	
MSG	STATUS	
	_High_2480	
Keysight Spectrum Analyzer - Swept SA     RL     RF     S0 Ω DC     SENSE:INT	ALIGN AUTO 01:19:16 PM May 25, 2020	
Center Freq 2.510000000 GHz	#Avg Type: RMS TRACE 1 2 3 4 5 6 Frequence	у У
NFE PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB		
Ref Offset 9.79 dB	Mkr4 2.534 40 GHz Auto	Tune
10 dB/div Ref 20.00 dBm	-50.044 dBm	
Log		
	Center	
0.00	2.51000000	0 GHz
-10.0	DL1 -15 28 dBm	=
-20.0	Start	Freq
-30.0	2.47000000	
-40.0	4	
50.0 January Augusting Stranger		
	the make work work and the state of the state of the state of the	
-60.0	Stop	
a provide an addition of the state of the st	Manual 2.5500000	
-60.0	2.5500000	0 GHz
50.0 50.0 Start 2.47000 GHz	Stop 2.55000 GHz CF	0 GHz Step
480 0         70.0           Start 2.47000 GHz         #VEW 300 kHz	Stop         2.5500000           Stop         2.5500000Hz           Sweep         3.000 ms (1001 pts)	D GHz Step J MHz
400 0 700 0 Start 2.47000 GHz #Res BW 100 KHz #VBW 300 kHz	Stop 2.55000 GHz CF	0 GHz Step
400 0 700 0 Start 2.47000 GHz #Res BW 100 KHz #VBW 300 kHz	Stop 2.55000 GHz Sweep 3.000 ms (1001 pts) Auto	D GHz Step MHz Man
480 0	Stop         2.5500000           Stop         2.5500000Hz           Sweep         3.000 ms (1001 pts)	D GHz Step D MHz Man Iffset
x         x	Stop 2.55000 GHz Sweep 3.000 ms (1001 pts) Auto	D GHz Step MHz Man
4000	Stop 2.55000 GHz         2.55000000           Stop 2.55000 GHz         8.000000           Sweep 3.000 ms (1001 pts)         4.000           UNCTION         FUNCTION WATE	0 GHz Step Man Man 0 Hz
400 0         70 0         70 0           Start 2.47000 GHz         #VBW 300 kHz           #Res BW 100 kHz         #VBW 300 kHz           1 N 1 f         2.480 00 GHz         4.730 dBm           3 N 1 f         2.680 00 GHz         53.653 dBm           3 N 1 f         2.650 00 GHz         53.653 dBm           6 N 1 f         2.654 40 GHz         50.044 dBm           6 7         6         6	Stop 2.55000 GHz Sweep 3.000 ms (1001 pts) Auto	0 GHz Step Man Man 0 Hz
480 0         70.0         70.0           Start 2.47000 GHz         #VBW 300 kHz           #Res BW 100 kHz         #VBW 300 kHz           1 N 1 f         2.480 00 GHz         4.739 dBm           2 N 1 f         2.483 80 GHz         4.53.663 dBm           3 N 1 f         2.600 00 GHz         53.663 dBm           6 N 1 f         2.634 40 GHz         -50.044 dBm           7 R         9         9         9	Stop 2.55000 GHz Sweep 3.000 ms (1001 pts) UNITION FUNCTION WAUTH FUNCTION VALUE Scale	D GHz Step Man Man Man Man Tffset 0 Hz Type
Image: start 2.47000 GHz         #VEW 300 kHz           #Res BW 100 kHz         #VEW 300 kHz           Image: start 2.47000 GHz         4.39 dBm           Image: start 2.47000 GHz         4.39 dBm           Image: start 2.47000 GHz         4.378 dBm           Image: start 2.47000 GHz         4.378 dBm           Image: start 2.4700 GHz         5.3663 dBm           Image: start 2.4700 GHz         5.50044 dBm           Image: start 2.4700 GHz         50044 dBm           Image: start 2.4700 GHz         50044 dBm	Stop 2.55000 GHz         2.55000000           Stop 2.55000 GHz         8.000000           Sweep 3.000 ms (1001 pts)         4.000           UNCTION         FUNCTION WATE	0 GHz Step Man Man 0 Hz



## REPORT No.: 4789485754-5 Page 104 of 114

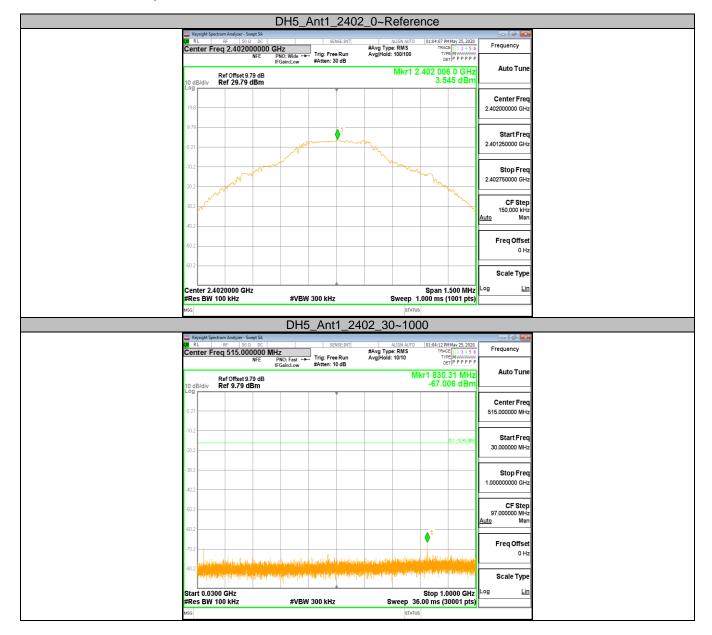
SDH5_Ant1_Low_Hop_2402         Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2">Image: Colspan="2" Image: Colspan=
Interfered 23500000 GHz       Interfered 23500000 GHz       Frequency       Frequency         Interfered 23500000 GHz       Frequency         Interfered 23500000 GHz       Stop 2.41000 GHz         Stop 2.41000 GHz       Frequency         Stop 2.41000 GHz       Stop 2.41000 GHz         Stop 2.4100 GHz       Frequency         Stop 2.4100 GHz       Frequency         Stop 2.4100 GHz       Frequency         Stop 2.5100 GHz       Stop 2.5100 GHz         Stop 2.5100 GHz       Stop 2.5100 GHz         Stop 2.5100 GHz       Stop 2.5100 GHz       Stop 2.5000 GHz
Image: the state of the st
Bit of the set of the se
Bet Offset 9.84 dB       Mkr6 2.38 9.9 GHz       Auto Tune         10 gBoder       Ref 20.00 dBm       50.921 dBm       Center Freq         10 gBoder       Ref 20.00 dBm       Start Freq       2.800000 GHz         10 gBoder       Ref 20.00 dBm       Start Freq       2.800000 GHz         10 gBoder       Ref 20.00 dBm       Start Freq       2.800000 GHz         10 gBoder       Ref 20.00 dHz       start 2.0000 GHz       Stort Freq         10 gBoder       Ref 20.00 dHz       stort 2.4000 GHz       Stort Freq         10 gBoder       Ref 20.00 GHz       stort 2.4000 GHz       Stort Freq         10 gBoder       Ref 20.00 GHz       stort 2.4000 GHz       Stort Freq         10 gBoder       Ref 20.00 GHz       Stort 2.4000 GHz       Stort 2.00 GHz         10 gBoder       Ref 20.00 GHz       Stort 2.4000 GHz       Stort 2.00 GHz         10 gBoder       Ref 20.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz         10 gBoder       Ref 20.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz         10 gBoder       Ref 20.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz         10 gBoder       Ref 20.00 GHz       Stort 2.00 GHz       Stort 2.00 GHz
Immediate       Immediate       Sol 921 dBm         100       100       100       100       100         100       100       100       100       100       100         100       100       100       100       100       100       100         100       100       100       100       100       100       100       100         100
In delider       Ref 20.00 dBm       -00.921 dBm       Center Freq         In delider       Ref 20.00 dBm       In delider       Ref 20.00 dBm       In delider         In delider       Ref 20.00 dBm       In delider       Ref 20.00 dBm       In delider         In delider       Ref 20.00 dBm       In delider       In delider       In delider         In delider       Ref 20.00 dBm       In delider       In delider       In delider       In delider         In delider       Ref 20.00 dBm       In delider
Center Freq 23500000 GHz Start Z: 20000 GHz Start Z: 20000 GHz Start Z: 2000 GHz Sta
Start 2.30000 GHz Start 2.3000 GHz Start 2.2000 GHz Start 2.200
Image: start Z.30000 GHz       Freq         Start Z.30000 GHz       FVEW 300 KHz         Start Z.30000 GHz       FVEW 300 KHz         Start Z.30000 GHz       FVEW 300 KHz         Start T C.30000 GHz       Start T C.30000 GHz         Start T C.30000 GHz       Start T C.300000 GHz         Start T C.300000 GHz       Trep Freq C.3000000 GHz         Start T C.3000000 GHz       Trep Freq C.30000000 GHz         Start T C.3000 GHz       Start T C.3000 GHz         Start T C.3000 GHz
Start 2.30000 GHz Start 2.30000 GHz Start 2.30000 GHz Start 2.30000 GHz Start 2.30000 GHz Start 2.4000 GHz Start 2.5000 GHZ Start 2
Start Freq 2.1000000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.3000 GHz Start Z.47000 GHz Start
2 3000000 GHz Stop Freq 2100000 GHz Stop Freq 21000000 GHz Stop Freq 2100000 GHz Stop Freq 21000000 GHz Stop Freq 210000000 GHz Stop Freq 21000000 GHz Stop Freq 21000000 G
Star 12.3000 GHz Star 12.3000
Stop Z 4000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.30000 GHz Start Z.400 IG
Image: Control of the second of the secon
Start 2.30000 GHz       FVEW 300 KHz       Sweep 4.067 ms (1001 pt)         Start 2.30000 GHz       FVEW 300 KHz       Sweep 4.067 ms (1001 pt)         Start 2.30000 GHz       FVEW 300 KHz       Sweep 4.067 ms (1001 pt)         Start 2.30000 GHz       FVEW 300 KHz       Sweep 4.067 ms (1001 pt)         Start 2.30000 GHz       FVEW 300 KHz       Sweep 4.067 ms (1001 pt)         Start 2.30000 GHz       Start 2.47000 GHz       Start 2.47000 GHz         Start 2.47000 GHz       Freq Offset       OFF         Start 2.47000 GHz       Start 2.47000 GHz       Start 2.47000 GHz         Start 2.47000 GHz       FVEW 300 KHz       Start 2.500 0G GHz         Start 2.47000 GHz       FVEW 300 KHz       Start 2.500 0G GHz         Start 2.47000 GHz       FVEW 300 KHz       Stort 2.5000 GHz         Start 2.47000 GHz       FVEW 300 KHz       Stort 2.5000 GHz         Start 2.47000 GHz       FVEW 300 KHz       Stort 2.5000 GHz         Start 2.47000 GHz       FVEW 300 KHz       Stort 2.5000 GHz
Start 2.30000 GHz       #VBW 300 kHz       Stop 2.41000 GHz       Improve the stop 2.41000 GHz         FRes BW 100 kHz       #VBW 300 kHz       Stop 2.41000 GHz       Improve the stop 2.41000 GHz         Improve the stop 2.41000 GHz       #VBW 300 kHz       Stop 2.41000 GHz       Improve the stop 2.4100 GHz         Improve the stop 2.4100 GHz       #VBW 300 KHz       Stop 2.4100 GHz       Improve the stop 2.4100 GHz         Improve the stop 2.4100 GHz       #VBW 300 KHz       Stop 2.4100 GHz       Improve the stop 2.4100 GHz         Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz         Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz         Improve the stop 2.4100 GHz       Improve the stop 2.4100 GHz       Improve the stop 2.410 GHz       Improve the stop 2.410 GHz       Improve the stop 2.410 GHz         Improve the stop 2.4100 GHz       Improve the stop 2.410 GHz       Improve stop 2.410 GHz       Improve the
#Res BW 100 kHz       #VBW 300 kHz       Sweep 4.067 ms (1001 pts)       1.00000 MHz         Image: Control of the state of the s
Image: Section Address
Control       Contro       Control       Control
Image: sector freq 2.5000000 Hz       Solition         Image: sector freq 2.500000000 Hz       Solition         Image: sector freq 2.51000000000000000000000000000000000000
3       N       1       2.390 00 GHz       -50.21 dBm       0 Hz         9       1       2.389 98 GHz       -50.921 dBm       0 Hz       Scale Type         10       1       1       1       1       1       1         11       1       1       1       1       1       1         11       1       1       1       1       1       1         11       1       1       1       1       1       1       1         11       1
4       N       1       2.330 99 GHz       -32.276 dBm       0 Hz         9
Scale Type og Lin Scale Type og Lin Frequency Frequency Auto Tune of dBddv Ref 20.00 dBm -50.241 dBm -
Big in the second secon
by the second se
BUDGE Start Freq 2.51000000 GHz Ref Offset 5.79 dB 10 dB
Start 2.47000 GHz Start 2.47000
SUBS_Ant1_High_Hop_2480
Registive server 3.00
Report Section Analyze: Section           Ref Offset 9.79 dB           NE PNO: Fast         Trig: Free Run #Atten: 30 dB         Micro Trig: Free Run #Atten: 40 dB         Micro Trig: Free Run #Atten: 40 dB </th
M         N         FF         So 0 oc         Sense:Int         ALLIGN AUTO         Dis2747 PMilly 25,2020         Frequency           M         NFE         PHO: Fast (Saludow)         Trig: Free Run Matter: 30 dB         Aug/Hold>>500:500         Trig: Free RNS Trig: Free RNS         Frequency         Auto Tune           10 dB/div         Ref Offset 9.79 dB
Center Pred 2:51000000 GHz         Trig: Free Run Productor         Augiticiz:500500         Trig: Free Run Productor         Augiticiz:500500           Ref Offset 39:3 dB         Mkr4 2:509 04 GHz         Auto Tune           00         1         -50.241 dBm         Center Freq           251000000 GHz         251000000 GHz         Center Freq           00         -50.241 dBm         Start Freq           00         -50.241 dBm         Center Freq           251000000 GHz         -50.241 dBm         Start Freq           00         -50.241 dBm         -50.241 dBm           00         -2.5000000 GHz         -50.241 dBm           00 <td< td=""></td<>
Ref Offset 9.79 dB         Mkr4 2.509 04 GHz         Auto Tune           10 dB/div         Ref 20.00 dBm         -50.241 dBm         Center Freq           10 d         1         1         1         Center Freq           2510000000 GHz         100         1         1         1           10 d         1         1         1         1         1           10 d         1         1         1         1         1         1           10 d         1
Ref Offset 373 dB         MRT 2, 509 04 GHZ           10 dB/div         Ref 20.00 dBm         -50.241 dBm           100         -1         -1         -2           100         -1         -2         -2           100         -2         -3         -5           100         -2         -3         -5           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2         -3         -4           100         -2
O dBidiv         Ref 20.00 dBm         -50.241 dBm           100         1         1         1         1         2         2         2         2         2         2         2         2         2         2         3         1         2         2         2         3         1         <
Log         1         Center Freq           100         1         1         1           100         1         1         1         1           100         1         1         1         1         1           100         1
000       0000       000       000
100       01/1/1/00/04       01/1/1/00/05       01/1/1/00/05         300       01/1/1/00/05       01/1/1/00/05       01/1/1/00/05         400       01/1/00/05       01/1/00/05       01/1/00/05         500       01/1/00/05       01/1/00/05       01/1/00/05         500       01/1/00/05       01/1/00/05       01/1/00/05         500       01/1/00/05       01/1/00/05       01/1/00/05         500       01/1/00/05       01/1/00/05       01/1/00/05         500       01/1/00/05       01/1/00/05       01/1/00/05         500       01/1/00/05       01/1/00/05       01/1/00/05         51art 2.470000 GHz       #VBW 300 kHz       Sweep 3.000 ms (100 1 pt)       0.0000000 MHz
100         100
300       300       300       4       247000000 GHz         400       4       4       500       500         500       4       4       500       500         500       4       500       500       500         500       500       500       500       500         500       500       500       500       500         700       500       500       500       600         700       500       500       600       600         8tart 2.47000 GHz       #VBW 300 KHz       Sweep 3.000 ms (100 1 pts)       8.000000 MHz
300         2.47000000 GHz           400         2.47000000 GHz           500         2.5000000 GHz           700         5tart 2.47000 GHz           Start 2.47000 GHz         \$top 2.55000 GHz           #Res BW 100 KHz         #VBW 300 KHz         \$weep 3.000 ms (100 pts)
40.0         2         3         4         Stop Freq           60.0         2         3         4         Stop Freq           70.0         2         5         5         5           Start 2.47000 GHz         #VBW 300 kHz         Stop 2.55000 GHz         CF Step           #Res BW 100 kHz         #VBW 300 kHz         Sweep 3.000 ms (100 thz)         8.000000 MHz
Stop Freq 2.5000000 GHz #Res BW 100 KHz #VBW 300 KHz Sweep 3.000 ms (100 pts) 8.0000000 MHz
Stop Freq         Stop Freq           250000000 GHz         250000000 GHz           Start 2.47000 GHz         Stop 2.55000 GHz           #Res BW 100 kHz         #VBW 300 kHz         Sweep 3.000 ms (1001 pts)
30.0         2.55000000 GHz           70.0         Start 2.47000 GHz           Start 2.47000 GHz         Stop 2.55000 GHz           #Res BW 100 KHz         #VBW 300 kHz           Sweep 3.000 ms (100 pts)         8.000000 MHz
Start 2.47000 GHz Stop 2.55000 GHz CF Step #Res BW 100 kHz #VBW 300 kHz Sweep 3.000 ms (1001 pts) 8.000000 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 3.000 ms (1001 pts) 8.000000 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 3.000 ms (1001 pts) 8.000000 MHz
INVERTIGE SCI_X_Y_FUNCTION FUNCTION NOTIFIE FUNCTION VALUE A
1 N 1 f 2474 00 GHz 5103 dBm
1 N 1 f 2474 00 GHz 5.103 dBm 2 N 1 f 2483 50 GHz -52.513 dBm 3 N 1 f 2.500 00 GHz -52.52 dBm Freq Offset
4 N 1 f 2.509 04 GHz -50.241 dBm 0 Hz
5
67
7 8 Scale Type
7 8 9 10 Scale Type
7 8 9 10 11
7 8 9 10



## Appendix H: Conducted Spurious Emission Test Result

Test Mode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
			Reference	3.55	3.55		PASS
		2402	30~1000	30~1000	-67.006	<=-16.455	PASS
			1000~26500	1000~26500	-54.859	<=-16.455	PASS
			Reference	4.33	4.33		PASS
DH5	DH5 Ant1	2441	30~1000	30~1000	-61.15	<=-15.669	PASS
			1000~26500	1000~26500	-56.582	<=-15.669	PASS
		2480	Reference	4.78	4.78		PASS
			30~1000	30~1000	-69.211	<=-15.223	PASS
			1000~26500	1000~26500	-55.976	<=-15.223	PASS
			Reference	2.75	2.75		PASS
		2402	30~1000	30~1000	-71.229	<=-17.253	PASS
			1000~26500	1000~26500	-57.419	<=-17.253	PASS
			Reference	4.23	4.23		PASS
3DH5	Ant1	2441	30~1000	30~1000	-72.587	<=-15.771	PASS
			1000~26500	1000~26500	-57.324	<=-15.771	PASS
			Reference	2.65	2.65		PASS
		2480	30~1000	30~1000	-69.635	<=-17.355	PASS
			1000~26500	1000~26500	-60.274	<=-17.355	PASS

## **Test Graphs**





## REPORT No.: 4789485754-5 Page 107 of 114

			[	DH5_	Ant1	2402	200	0~26	500			
	ight Spectrum	n Analyzer - Sw	ept SA			_					- 6 🔼	
CXI RL	1	RF 50 Ω	DC		SEN	SE:INT		ALIGN AUTO	01:04:35 PI	M May 25, 2020		
Cent	er Freq	13.750	000000	GHz			#Avg Type	e: RMS	TRAC	E 1 2 3 4 5 6 E M T P P P P P P	Frequency	
			NEE P	PNO: Fast 😁	Trig: Free	Run	Avg Hold:	10/10	TYP			
			IF	FGain:Low	#Atten: 10	) dB					A	
	Re	ef Offset 9.	79 dB					Mkr	1 2.399	95 GHz	Autorune	
10 dB	ídiv Re	ef 9.79 d	Bm						-54.8	59 dBm		
Log Г												
											Center Freq	
-0.21											13.750000000 GHz	
											10.7000000000000	
-10.2 -											Start Freq	
										DL1 -16.45 dBm		
-20.2											1.000000000 GHz	
-30.2												
000.2											Stop Freq	
											26.50000000 GHz	
-40.2			-	-							L	
											07.01	
-50.2	1										CF Step 2.55000000 GHz	
	<b>Y</b>										Auto Man	
-61.2											Man Man	
-00.2											L	
	<u> </u>							الا	المرجبة والمرجبة	a tangan sa ka ka	Freq Offset	
-70.2	La Maria	a substant	and the state of the	i la	in the legal is	elett fitterie	Chine of the second		and the second second	In passion in the	0 Hz	
1	19 M W	State and	No. of Lot of	fictionalities.	and the second second	and the Rest of the Rest	hopelessee	a de la construcción de la const				
-80.2			-									
											Scale Type	
L												
Ctort									Stop 2	6.50 GHz	Log <u>Lin</u>	
ວເລາເ	1.00 GH	IZ										
#Res	1.00 GF BW 100	iz ) kHz		#VBV	/ 300 kHz		S	weep 93	8.0 ms (3	0001 pts)		
#Res	1.00 GF BW 100	lz ) kHz		#VBV	/ 300 kHz		S	weep 93	8.0 ms (3	0001 pts)		
#Res	1.00 GF BW 100	lz ) kHz						STATUS	8.0 ms (3	0001 pts)		
#Res	1.00 GF BW 100	iz ) kHz	[			2441	s _0~R	STATUS	8.0 ms (3	0001 pts)		
#Res <sup>MSG</sup>	BW 100	) kHz				2441		STATUS	8.0 ms (3	0001 pts)		
#Res	BW 100	n Analyzer - Sw	ept SA	DH5_	Ant1_	<b>2441</b>	_0~R	STATUS efere	8.0 ms (3 NCE	0001 pts)		
#Res	BW 100	n Analyzer - Sw	ept SA DC 00000 Gł	DH5_	Ant1_	SE:INT	_0~R	STATUS efere ALIGN AUTO E: RMS	8.0 ms (3 NCE	0001 pts)		
#Res	BW 100	n Analyzer - Sw	ept SA DC DOOOO GI NFE P	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R	STATUS efere ALIGN AUTO E: RMS	8.0 ms (3 NCE	0001 pts)		
#Res	ight Spectrum	n Analyzer - Sw RF 50 Ω 1 2.44100	ept SA DC DOOOO GH NFE P IF	DH5_	Ant1_	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYR DE	MMay 25, 2020	Frequency	
#Res MSG (x) RL Cent	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency	
#Res MSG WRL Cent	BW 100	n Analyzer - Sw RF 50 Ω 1 2.44100	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	MMay 25, 2020	Frequency	
#Res MSG (x) RL Cent	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune	
#Res MSG (X) RL Cent	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune	
#Res MSG WRL Cent	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune	
#Res MSG (X) RL Cent	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune	
 #Res MSG (X) RL Cent	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune	
#Res MSG MSG RL Cent 10 dB Log 19.8 -	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune	
#Res MSG 20 RL Cent 10 dB Log 19.8 - 9.79 -	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz	
#Res MSG MSG RL Cent 10 dB Log 19.8 -	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq	
#Res MSG (2) RL (2) RL Cent 10 dB. Log 19.8 - 9.79 - -0.21 -	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq	
#Res MSG 20 RL Cent 10 dB Log 19.8 - 9.79 -	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz	
#Res MSG (2) RL (2) RL Cent 10 dB. Log 19.8 - 9.79 - -0.21 -	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	STATUS efere Align Auto e: RMS 100/100	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq	
#Res           MSG           Image: Cent           10 dB           19.8           -0.21           -0.21           -10.2	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz	
#Res MSG (2) RL (2) RL Cent 10 dB. Log 19.8 - 9.79 - -0.21 -	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq	
#Res wss 10 dB 19.8 - -0.21 - -0.21 - -20.2 -	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz	
#Res           MSG           Image: Cent           10 dB           19.8           -0.21           -0.21           -10.2	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz CF Step 150.000 KHz	
#Res MSG MSG MSG MSG MSG MSG MSG MSG	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz	
#Res wss 10 dB 19.8 - -0.21 - -0.21 - -20.2 -	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Center Frequency Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz CF Step 150.000 KHz	
#Res MSG MSG MSG MSG MSG MSG MSG MSG	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz CF Step 150.000 KHz Auto Man	
#Res MSG MSG MSG MSG MSG MSG MSG MSG	BW 100	0 kHz n Analyzer - Sin RF 50 Ω 2.44100 ef Offset 9.7	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TY9 DB	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Start Freq 2.441750000 GHz CF Step 150.000 kHz Auto Man Freq Offset	
#Res MsG	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz CF Step 150.000 KHz Auto Man	
#Res MSG 10 dB 10 dB 10 dB 198 - 198	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Start Freq 2.441750000 GHz CF Step 150.000 kHz Auto Man Freq Offset	
#Res MsG	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Center Freq 2.44100000 GHz Center Freq 2.440250000 GHz CF Step 150.000 KHz CF Step 150.000 KHz CF Step 150.000 KHz 0 Hz 0 Hz	
#Res MsG 10 dB 10 dB 198 - 198	BW 100	0 kHz n Analyzer - Sin №F 50 Ω 2.44100 ef Offset 9.1	ept SA DC DOOOO GH NFE P IF 79 dB	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 01:05:01 PI TRAC TYS 00 441 00	10001 pts) Мау 25, 2020 Е 1 2 3 4 5 6 Е М У Р Р Р Р Т Р Р Р Р Р Р 3 0 GHz	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Start Freq 2.441750000 GHz CF Step 150.000 kHz Auto Man Freq Offset	
#Res           MSG           Image: Central state s	BW 100	n Analyzer - 55	end 54 DC   DC   DC   F PC   F PC	DH5_, Hz ™O: Wide →	Ant1	SE:INT	_0~R #Avg Type Avg Hold:	efere efere atten auto e: RMS 100/100 Mkr1 2.	8.0 ms (3 NCC 010501 PI TRAC 10 10 10 10 10 10 10 10 10 10	May 25, 2020 May 25, 2020 12 3 4 5 6 12 3 4 5 6 31 dBm	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.440250000 GHz Stop Freq 2.441750000 GHz CF Step 150.000 KHz Auto Man Freq Offset 0 Hz Scale Type	
#Res           MSG           Image: Control of the second se	BW 100	n Analyser - Sa	end 54 DC   DC   DC   F PC   F PC	DH5_, NO: Wide → Gain:Low	Ant1	SE:INT	_0~R	atarus efere interesting and auto atomic mkr1 2	8.0 ms (3 NCE 0:05:01 P1 1717 1717 10 0 4.3 5pan 1	(10001 pts)     (10001 p	Frequency Center Freq 2.44100000 GHz Center Freq 2.44025000 GHz Start Freq 2.441750000 GHz CF Step 150.000 KHz CF Step 150.000	
#Res           MSG           Image: Control of the second se	BW 100	n Analyser - Sa	end 54 DC   DC   DC   F PC   F PC	DH5_, NO: Wide → Gain:Low	Ant1	SE:INT	_0~R	atarus efere interesting and auto atomic mkr1 2	8.0 ms (3 NCC 0:0:5:01 PI TTAC 0:0:5:01 PI 0:0:01 PI 0:00 PI Span 1 0:000 ms (3 0:00 PI 0:00	May 25, 2020 May 25, 2020 12 3 4 5 6 12 3 4 5 6 31 dBm	Frequency Center Freq 2.44100000 GHz Center Freq 2.44025000 GHz Start Freq 2.441750000 GHz CF Step 150.000 KHz CF Step 150.000	



## REPORT No.: 4789485754-5 Page 108 of 114

				DH	5_Ant	1 <u>_2</u> 4	41_30	~100	0			
🔤 Keysi	ight Spectrun	n Analyzer - Sw	rept SA								- 3 💌	
Cente	er Freq	RF 50 Ω   515.000	0000 MH	z		NSE:INT	#Avg Type Avg Hold:	RMS	TRAC	M May 25, 2020 DE 1 2 3 4 5 6 PE M WWWWW	Frequency	
			I	PNO: Fast ↔ FGain:Low	#Atten: 1	0 dB	, traji loid.		DE	.89 MHz	Auto Tune	
10 dB/	Re Idiv <b>R</b> e	ef Offset 9.7 ef 9.79 di	79 dB Bm					IVIT	-61.1	50 dBm		
											Center Freq	
-0.21 —											515.000000 MHz	
-10.2 —											04	
-20.2										DL1 -15.67 dBm	Start Freq 30.000000 MHz	
-30.2 —											Stop Freq 1.00000000 GHz	
-40.2 —												
-50.2											CF Step 97.000000 MHz	
-60.2									<b>♦</b> <sup>1</sup>		<u>Auto</u> Man	
											Freq Offset	
-70.2	المراجع المراجع	diatan seta		and the second	ca salfa ti	والمتحدثا	(Bellawith)	المانية بال	e	a line to all i	0 Hz	
-00.2		rationationate automatication	- <mark>1944 (S. Sept.</mark> 1974 (S. Sept. S	rentrije në pretrik j Gjana dhena dhend	and in the line is the	in a line of the second	and the second	A ling the of	diamit a de	iti dinati	Scale Type	
L	0.0300		I .	1.2.10	p					0000 GHz	Log <u>Lin</u>	
#Res	BW 100	) kHz		#VBV	V 300 kHz		S	weep 36.	.00 ms (3	0000 GHZ 80001 pts)		
MSG												
 Mad	_							STATUS				 
				DH5_	Ant1_	_2441	_100					
	ight Spectrun	n Analyzer - Sw		DH5_	Ant1_	_2441		0~26	500	MMay 25, 2020		
Keysi	ight Spectrun F er Freq	n Analyzer - Sw RF 50 Ω 13.7500	rept SA 2 DC 000000	GHz	SE	NSE:INT	#Avg Type	0~26	500 01:05:29 PI TRAC	M May 25, 2020 DE 1 2 3 4 5 6 PE M	Frequency	
Keysi	er Freq	13.7500	Pept SA 2 DC DOOOOOO ( NFE I II		SEI	NSE:INT		0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYR DE	DE 1 2 3 4 5 6 PE M WWWWWW ET P P P P P P		
Keysia (X) RL Cente	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	DE 1 2 3 4 5 6	Frequency	
Keysi (X) RL Cente	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	2E 1 2 3 4 5 6 PE M WWWWW ET P P P P P P 90 GHz	Frequency Auto Tune Center Freq	
Keysia (X) RL Cente	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	2E 1 2 3 4 5 6 PE M WWWWW ET P P P P P P 90 GHz	Frequency Auto Tune	
Keysia (X) RL Cente	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency Auto Tune Center Freq 13.76000000 GHz	
10 dB/r Log -0.21	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	2E 1 2 3 4 5 6 PE M WWWWW ET P P P P P P 90 GHz	Frequency Auto Tune Center Freq	
10 dB/ Log -0.21 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz	
10 dB/ 20 dB/ 10 dB/ -0.21 - -10.2 - -20.2 - -30.2 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq	
10 dB/r Log -0.21 - -20.2 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 26.5000000 GHz	
10 dB/ 20 dB/ 10 dB/ -0.21 - -10.2 - -20.2 - -30.2 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency           Auto Tune           Center Freq           13.75000000 GHz           Start Freq           1.00000000 GHz           Stop Freq           26.50000000 GHz           2.55000000 GHz	
10 dB/ -0.21 - -0.22 - -30.2 - -40.2 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SE	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 26.50000000 GHz CF Step	
Keysia RL Cente 10 dB/ 10 2 - -0.21 - -0.21 - -0.22 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SEI	NSE:INT	#Avg Type	0~26 LIGN AUTO E: RMS 10/10	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Start Freq           13.76000000 GHz           13.76000000 GHz           1.00000000 GHz           26.50000000 GHz           25.50000000 GHz           2.55000000 GHz           2.55000000 GHz           2.55000000 GHz           Auto           Man           Freq Offset	
Konstant           10         BL           -0.21         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -           -0.22         -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SEI	NSE:INT	#Avg Type	0~265 : RMS 10/10 Mkr	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Start Freq           13.75000000 GHz           Start Freq           1.00000000 GHz           Stop Freq           26.5000000 GHz           CF Step           2.55000000 GHz	
Keysia RL Cente 10 dB/ 10 2 - -0.21 - -0.21 - -0.22 -	er Freq Re	13.7500	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SEI	NSE:INT	#Avg Type	0~265 : RMS 10/10 Mkr	01:05:29 PI TRAC TYS DI 1 2.388	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Start Freq           13.76000000 GHz           13.76000000 GHz           1.00000000 GHz           26.50000000 GHz           25.50000000 GHz           2.55000000 GHz           2.55000000 GHz           2.55000000 GHz           Auto           Man           Freq Offset	
Image: Control of the second	er Freq Re	ef Offset 9.79 di	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz PNO: Fast. ↔	SEI	NSE:INT	#Avg Type	0~265 : RMS 10/10 Mkr	500 (1.15.29 PT) TRACE T	201-1557 dbn	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 26.50000000 GHz CF Step 2.550000000 GHz Auto Man Freq Offset 0 Hz	
Image: New York         New York           10         dB/d         ALL           40         d         ALL           40 <td< td=""><td></td><td>ef Offsete 3: ef 9.79 di</td><td>Pept SA 2 DC 0000000 NFE 1 1 1 79 dB</td><td>GHz NO: Fast → GainLow</td><td>SEI</td><td>45E.1017</td><td>#Avg Type AvgHold:</td><td>D~2650 APRO 4</td><td>500 (1.152.97 PT TRACE T</td><td>22 3 4 5 6 PP PP PP P 90 GHz 82 dBm</td><td>Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.0000000 GHz Stop Freq 26.50000000 GHz CF Step 2.550000000 GHz Auto Man Freq Offset 0 Hz Scale Type</td><td></td></td<>		ef Offsete 3: ef 9.79 di	Pept SA 2 DC 0000000 NFE 1 1 1 79 dB	GHz NO: Fast → GainLow	SEI	45E.1017	#Avg Type AvgHold:	D~2650 APRO 4	500 (1.152.97 PT TRACE T	22 3 4 5 6 PP PP PP P 90 GHz 82 dBm	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.0000000 GHz Stop Freq 26.50000000 GHz CF Step 2.550000000 GHz Auto Man Freq Offset 0 Hz Scale Type	



## REPORT No.: 4789485754-5 Page 109 of 114

DH5_Ant1_2480_0~Reference           Image: Set	 Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq	Regular Spectrum Analyzer - Surgt SA         Schede: INT         ALION AUTO         (01.07.48 DM May 25, 2020)           R. A.         RF         IND 0.0 CC         Schede: INT         ALION AUTO         (01.07.48 DM May 25, 2020)         Frequency           Center Freq 2.480000000 GHz         Trig: Free Run         #Avg Type: RMS         Trig: Free Run         #Avg Type: RMS         Frequency           MEC         INFC         PINC: Wide ++         Trig: Free Run         #Avg Type: RMS         Trig: Free Run         #Avg Type: RMS           NEE         PINC: Wide ++         Trig: Free Run         #Avg Type: RMS         Trig: Free Run         #Avg Type: RMS         Trig: Free Run         Auto Tune           10 dB/div         Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune         Auto Tune           19 // 19 // 19 // 19 // 19 // 19 // 19 // 19 // 19 // 19 // 19 // 10	Keydyld Spectrum Andyner - Swegt SA         SENSE INT         ALLOW AUTO         Gal LOY AUTO         Gal LOY AUTO         Gal LOY AUTO         Frequency           Center Freq 2.480000000 GHz IFGal Low Autor         NE         PNO: Wide → IFGal Low Autor         Trig: Free Run AvgiHold: 100100         Mkr1 2.479 997 0 GHz 4.777 dBm         Auto Tune           10 4B/div         Ref Offset 979 dB Ref 29.79 dBm         Mkr1 2.479 997 0 GHz 4.777 dBm         Auto Tune           19 8         19 8         Center Freq 2.480000000 GHz         Center Freq 2.48000000 GHz	DH5_Ant1_2480_0~Reference		DH5 Ant1 2480 0~Reference	
Reportion Analyzer - Swept SA           R.t.         HS         ISBNELINT         ALLON AUTO         OL (27:48) PMHay 25, 2020         Frequency           Center Freq 2.4800000000 GHz         Trig: Free Run If Gainciow         Trig: Free Run Atten: 30 dB         Mkr1 2.479 997 0 GHz         Auto Tune           Ref Offset 9.79 dB         Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref Offset 9.79 dB         4.777 dBm         2.480000000 GHz           19.9         19.9         1	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq	Keydpit Spectrum Adalyzer-Sargt SA         Collegit Spectrum Adalyzer-Sargt SA           R. At         RF         100 0.000         Center Freq 2.4800000000 GHz         Frequency           NFE         PNOL Wide → IFGaintow         Trig: Free Run #Arvg Type: RMS         Trig: Free Run Avgil/Hold: 100/100         Trig: Free Run Arvg/Hold: 100/100         Trig: Free Run Arvg/Hold: 100/100         Frequency           Ref Offset 5.79 dB         Mkr1 2.479 997 0 GHz 4.7777 dBm         Auto Tune           10 dB/div         Ref 29.79 dBm         Center Freq 2.480000000 GHz         Center Freq 2.480000000 GHz	Keydyld Spectrum Andyner - Swegt SA         SENSE INT         ALLOW AUTO         Gal LOY AUTO         Gal LOY AUTO         Gal LOY AUTO         Frequency           Center Freq 2.480000000 GHz IFGal Low Autor         NE         PNO: Wide → IFGal Low Autor         Trig: Free Run AvgiHold: 100100         Mkr1 2.479 997 0 GHz 4.777 dBm         Auto Tune           10 4B/div         Ref Offset 979 dB Ref 29.79 dBm         Mkr1 2.479 997 0 GHz 4.777 dBm         Auto Tune           19 8         19 8         Center Freq 2.480000000 GHz         Center Freq 2.48000000 GHz				
Image: Note of the sector o	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq	Bit Rt         PF         Structure         Licol Auton         Dis 3748 PMR23, 2020         Frequency           Center Freq 2.480000000 GHz         Trig: Free Run         Trig: Free Run         AugiHold: 100100         Trace[12:34:54         Frequency           NFE         PRO: Mide -> IFGoinLow         Trig: Free Run         AvgiHold: 100100         Trace[12:34:54         Frequency           0 db/div         Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 db/div         Ref 29.79 dBm         Center Freq         2.480000000 GHz           19         1         1         1         1         1	M     RL     PF     ISIG     DC     DE     AUG AUTO     DE     Frequency       Center Freq 2.4800000000 GHz       NE     PNC: Wide → Trig: Free Run IFGalint.Low     Aug Trig: Free Run Aug Hold: 100100     Trig: Free Run Trig: Free Run     Aug Trig: Free Run Aug Hold: 100100     Trig: Free Run Ref Offset 9.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 29.79 dBm     4.777 dBm     Center Freq 2.480000000 GHz     2.480000000 GHz		Keysight Spectrum Analyzer - Swept SA		
Center Freq 2.480000000000 GHz           Trig: Free Run BrGeinc Low         Trig: Free Run Avgipied: 100100         Trig: Center Freq Avgipied: 100100         Trig: Center Freq 2.479 79 09 CG Hz           NFE PIO: Wide	Auto Tune Center Freq 2.48000000 GHz Start Freq	Center Freq 2.480000000 GHz           NE         PNO: Mide → IFGain:Low         Trig: Free Run #Atten: 30 dB         #Avg Type: RMS AvgIHd: 100100         Trig: Free Run Cerl # PP PP PP Cerl # PP PP PP Cerl # PP PP PP Cerl # PP PP PP         Auto Tune           10 dB/div         Ref 0/fiset 9.79 dBm         Mkr1 2.479 970 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         Center Freq 2.480000000 GHz         Center Freq 2.480000000 GHz	Center Freq 2.480000000 GHz           NFE         PROL Mide →→         Trig: Free Run Avg/Hoid: 100/100         TRICE [1: 33:5 6 Avg/Hoid: 100/100         TRICE [1: 33:5 6 Dec/ PP PP P           NFE         PROL Mide →→         TRICE PP P         Trig: Free Run #Atten: 30 dB         TRICE PP PP P           10 dB/div         Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq 2.480000000 GHz           19.9         Center Freq 2.480000000 GHz		RL RE 50.0 DC SENSEINT ALTON 41TO 01:07:48.PM May 25, 2020		
Ref Offset 3.79 dB     Mkr1 2.479 997 0 GHz       10 dBldiv     Ref 29.79 dB       19 8     4.777 dBm       19 8     2.48000000 GHz       10 2     373       10 2     373	Center Freq 2.48000000 GHz Start Freq	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq           19 9         10 10 10 10 10 10 10 10 10 10 10 10 10 1	Intel in Gaintow         #Atten: 30 dB         Intel in Gaintow         Def (P P P P P)         Auto Tune           10 dB/div         Ref 075set 9.79 dB         4.777 dBm         4.777 dBm         Center Freq           19.8         19.8         19.8         2.48000000 GHz         2.48000000 GHz	A RL RF 50 Ω DC SENSE:INT ALIGN AUTO 01:07:48 PM May 25,2020	Constar Erag 2 49000000 CHa #Avg Type: PMS TRACE 1 2 4 5 6 Frequency	X RL RF 50 Ω DC SENSE:INT ALIGN AUTO 01:07:48 PM May 25,2020	
Ref Offset9 79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq           19 9         9.79         2.48000000 GHz         2.48000000 GHz           9.79         0.21         Start Freq         2.47925000 GHz           10 2	Center Freq 2.48000000 GHz Start Freq	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq           19 8         979         4.1         Center Freq	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         248000000 GHz           19.6         19.6         2.48000000 GHz         248000000 GHz	Center Freq 2.48000000 GHz #Avg Type: RMS TRACE 123456	Center Fred 2.46000000 GHZ	Center Freq 2.480000000 GHz #Avg Type: RMS TRACE 2.3456	
10 dB/div         Ref 29.79 dBm         4.777 dBm           198         2.48000000 GHz         2.48000000 GHz           979         1         2.47925000 GHz           10.2	2.480000000 GHz Start Freq	O dBldiv         Ref 29.79 dBm         4.777 dBm           198         2.48000000 GHz           979         41	10 dB/dV Ref 29.79 dBm 4.777 dBm Center Freq 2.48000000 GHz	Center Freq 2.48000000 GHz #Avg Type: RMS TRACE[]:3456		Center Freq 2.480000000 GHz	
Log         Center Freq           198         2.48000000 GHz           9.79         1           0.21         3500 Freq           10.2         3500 Freq           2.480750000 GHz	2.480000000 GHz Start Freq	Log Center Freq 248000000 GHz 979	19.8 Center Freq 2.48000000 GHz	Center Freq 2.480000000 GHz #Avg Type: RNS TRACE[]:3456 NFE PROV.Wide ++ IFGsinLow #Atten: 30 dB March 2.470 0027 0 CH Auto Tune	IFGainLow #Atten: 30 dB Der PPPPP Atten: 20 dB	Center Freq 2.480000000 GHz NFE PRO: Wide	
19.8     Center Freq       9.79     1       0.21     Start Freq       10.2     Manual	2.480000000 GHz Start Freq	19.8 Center Freq 2.48000000 GHz	13.8 Center Freq 2.48000000 GHz	Center Freq 2.480000000 GHz       #Avg Type: RMS       TRACE[]: 13 4 5 6         NFE       PIOC Wide	Inclusion of the second secon	#Avg Type: RMS     TREETING TYPE: RMS       NFE PRC: Wide ->- Trig: Free Run       Avg Type: RMS     TREETING TYPE       NFE PRC: Wide ->- Trig: Free Run       Avg/Hold: 100/100     Trig: Free Run       Avg/Hold: 100/100     Trig: Free Run       Ref Offset 9.79 dB       Mkr1 2.479 997 0 GHz	
198     2.48000000 GHz       979     1       0.21     StartFreq 2.47925000 GHz       102     Manual	2.480000000 GHz Start Freq	19.8 2.49000000 GHz	19.8 2.48000000 GHz	Center Freq 2.480000000 GHz         #Avg Type: RNS         TRACE[]: 3 4 5 6           NFE Photo Wide - Trig: Free Run IFGainLow         Trig: Free Run #Atten: 30 dB         Trig: Free Run Avg[Hold: 100/100         Trig: Free Run Perf PFPPP           Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz           Auto Tune 4.777 4Bm	Ref Offset 979 dB 10 dB/div. Ref 29.79 dB 10 dB/div. Ref 29.79 dBm 10 dB/div. Ref 29.79 dBm	Every Type: RMS     Tag: Free Run IFG aimLow     Trig: Free Run IfG aimLow     Trig: Free Run Avg Hold: 100100     Trig: Free Run Very PP PP P       Ref Offset 9.79 dB       10 dB/div     Ref Offset 9.79 dB     Mkr1 2.479 997 0 GHz	
979 021 102 102 102 102 102 102 102	Start Freq	979		Center Freq 2.480000000 GHz     #Avg Type: RMS     Tracel: 13.4.5.6       NFE Photo: Wide	NPL     Image: Stream of the str	Center Freg 2.480000000 GHz     #Avg Type: RMS     Trace III 34 5 6       NFE     PNO: Wide       NFE PNO: Wide       Frig: Free Run       Avg Type: RMS       Avg Type: RMS       Avg Type: RMS       Ref Offset 9.79 dB       Mkr1 2.479 997 0 GHz       Auto Tune       10 dbldiv     Ref 29.79 dBm       4.777 dBm	
0.21 10.2				Center Freq 2.480000000 GHz         #Avg Type: RMS         TRACE[]: 24 5 6           NFE PNO: Wide	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq	Eventer Freq 2.480000000 GHz       #Avg Type: RMS       Avg Hold: 100/100       Trig: Free Run       Avg Hold: 100/100       Mkr1 2.479 997 0 GHz       Log       Center Freq	
0.21 10.2 Market Market Mark				Center Freq 2.480000000 GHz         #Avg Type: RMS         TRACE[]: 24 5 6           NFE PNO: Wide	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq	Eventer Freq 2.480000000 GHz       #Avg Type: RMS       Avg Hold: 100/100       Trig: Free Run       Avg Hold: 100/100       Mkr1 2.479 997 0 GHz       Log       Center Freq	
0.21 2.479250000 GHz 10.2 Mm MM MM Stop Freq 2.480750000 GHz		V STATT Fred		Center Freq 2.480000000 GHz         #Avg Type: RNS         Trig: Free Run           NFE Prob. Wide - the problem of	Ref 0ffset 979 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/d/v         Ref 29.79 dB         4.777 dB         2.48000000 GHz           19 8         19 8         19 8         2.48000000 GHz	Center Freg 2.480000000 GHz     Trig: Free Run     Trig: Free Run     Trig: Free Run       NFE     PNC: Wide       NFE (Price Run)     Trig: Free Run       NFE (Price Run)       Aveg Type: RMS       Ref Offset 9.79 dB       Auto Tune       Center Freg       Log       Center Freg       19.8	
102 Minimum Minimu Minimum Minimum Min		2 470250000 CH-		Center Freq 2.480000000 GHz     #Avg Type: RNS     #Avg Type: RNS </td <td>Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dB         4.777 dBm         Center Freq           19.6         9.79         1         1         1</td> <td>Center Freq 2.480000000 GHz NFE Proc. Water 30 dB Ref Offset 3.79 dB 10 dEldiv Ref 29.79 dBm 10 a</td> <td></td>	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dB         4.777 dBm         Center Freq           19.6         9.79         1         1         1	Center Freq 2.480000000 GHz NFE Proc. Water 30 dB Ref Offset 3.79 dB 10 dEldiv Ref 29.79 dBm 10 a	
Stop reg			2 /7025000 GHz	Center Freq 2.480000000 GHz     #Avg Type: RNS     #Avg Type: RNS </td <td>Ref 0ffset 9.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dB     Center Freq       13.8     3.79     1     1     1       37.9     1     1     1     1</td> <td>Center Freq 2.480000000 GHz NFE Provide Trig: Free Run FGainLow Trig: Free Run Ref Offset 3.79 dB 10 dEldiv Ref 29.79 dBm 10 a 10 d</td> <td></td>	Ref 0ffset 9.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dB     Center Freq       13.8     3.79     1     1     1       37.9     1     1     1     1	Center Freq 2.480000000 GHz NFE Provide Trig: Free Run FGainLow Trig: Free Run Ref Offset 3.79 dB 10 dEldiv Ref 29.79 dBm 10 a 10 d	
Stop reg			2 /72250000 CH-	Center Freq 2.480000000 GHz     #Avg Type: RNS     #Avg Type: RNS </td <td>Ref 0ffset 9.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dB     Center Freq       13.8     3.79     1     1     1       37.9     1     1     1     1</td> <td>Center Freq 2.480000000 GHz NFE Provide Trig: Free Run FGainLow Trig: Free Run Ref Offset 3.79 dB 10 dEldiv Ref 29.79 dBm 10 a 10 d</td> <td></td>	Ref 0ffset 9.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dB     Center Freq       13.8     3.79     1     1     1       37.9     1     1     1     1	Center Freq 2.480000000 GHz NFE Provide Trig: Free Run FGainLow Trig: Free Run Ref Offset 3.79 dB 10 dEldiv Ref 29.79 dBm 10 a 10 d	
2.480750000 GHz	Stop Freq		0.21 2.479250000 GHz	Center Freq 2.48000000 GHz     Trig: Free Run MFE     Trig: Free Run #Avg/Hold: 100/100     Trig: Free Run Mer (10 dB/d/v       Ref Offset 9.79 dB     Mkr1 2.479 997 O GHz       10 dB/d/v     Ref 29.79 dB     4.777 dB       10 g     0     0       10 dB/d/v     Ref 29.79 dB     4.777 dB       10 dB/d/v     Ref 29.79 dB     4.777 dB       10 dB/d/v     Ref 29.79 dB     4.777 dB	Inclusion     Inclusion     Extent 30 dB     Inclusion     Inclusion     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dB     4.777 dB     2.40000000 GHz       198     1     1     1     1     1       979     2.21     1     1     1     1	Center Freg 2.48000000 GHz       Meter Brow       NFE PROMOTION GHZ       MigainLow       Trig: Free Run       Meter 30 dB       Mkr1 2.479 997 0 GHz       Auto Tune       Center Freg       Center Freg       Center Freg 2.79 dB       Mkr1 2.479 997 0 GHz       Center Freg       Start Freg       2.480000000 GHz       Start Freg       2.479250000 GHz	
		10.2 Stop Free	0.21 2.479250000 GHz	Center Freq 2.48000000 GHz     Trig: Free Run AvgHold: 100100     Trig: Free Run AvgHold: 100100     Trig:	Ref Offset 979 dB     Mkr1 2.479 997 0 GHz       10 dB/div     Ref 29.79 dB       99     4.777 dB       99     22	Event Trig: Free Run NFE     Pree Run Frig: Free Run Pree Run AvgHoid: 100100     Trig: Free Run Weil 1987 Trig: Free Run Pree Run Veil 1987 Trig: Free Run Veil 1987 Trig: Free Run Veil 1987 Trig: Fri	
		Supreq	0.21 2.479250000 GHz	Center Freq 2.48000000 GHz         Trig: Free Run #AvgHold: 100/100         Trig: Free Run Performance         Trig: Free Run Performance	Inclusion     Inclusion     Entropy of the paper       10 dB/div     Ref 0ffset 979 dB     Mkr1 2.479 997 0 GHz       10 dB/div     Ref 29.79 dB     4.777 dB       198     4.777 dB     2.4000000 GHz       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       198     1     1       199     1     1       100     1     1       101     1     1       102     1     1	Center Freq 2.48000000 GHz       Meter Brow       NFE PROMOTION OF The Run IFGaint.cov       The Freq Run If Gaint.cov       Ref Offset 3.79 dB       Mkr1 2.479 997 0 GHz       Log       Center Freq 10 dBldiv       Ref Offset 3.79 dB       Mkr1 2.479 997 0 GHz       Center Freq 2.480000000 GHz       Start Freq 2.480000000 GHz       Start Freq 2.479250000 GHz       Start Freq 2.479250000 GHz	
		Supreq	0.21         2.479250000 GHz           10.2         Mm MM	Center Freq 2.48000000 CHz     Trig: Free Run AvgHod: 100100     Trig: Tree Run Met Ell 1: 3 4:5 6       NFE PNO: Wide - to Trig: Free Run FeGoffset9.79 dB     Trig: Free Run AvgHod: 100100     Trig: Free Run Mkr1 2.479 997 OG FL 4.777 dBm       Ref offset9.79 dB 10 dB/div     Center Freq 2.480000000 GHz       Start Freq 2.480000000 GHz       Start Freq 2.479250000 GHz       Stop Freq 2.480750000 GHz	Ref Offset 9.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dBldlv     Ref 29.79 dB     4.777 dB     Center Freq       138     1     1     1       21     1     1     1       102     1     1     1       1032     1     1     1       1032     1     1     1       1033     1     1     1       1034     1     1     1       1035     1     1     1       1036     1     1     1       1036     1     1     1       1037     1     1     1       1038     1     1     1       1038     1     1     1       1039     1     1     1       1039     1     1     1       1039     1     1     1       1039     1     1     1       1039     1     1     1       1030     1     1     1       1031     1     1     1       1032     1     1     1       1032     1     1     1       1033     1     1     1       1034     1	Center Freq 2.48000000 GHz NEE PRO: Wide Trig: FreeRun FGaint.cw #Atten: 30 dB Ref Offset 3.79 dB 10 dB/div Ref 29.79 dBm 4.777 dBm 10 dB/div Ref 29.79 dBm 10 dB/di	
30.2 K	CF Step	-30.2	0.21     0.21     0.21     0.21       102     0.21     0.21     0.21       30.2     0.21     0.21     0.21	Center Freq 2.48000000 CHz NE Provide to the second secon	Ref Offset 3.79 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dB       373	Center Freq 2.48000000 GHz NEE PRO: Wide Trig: Free Run #AvgHoid: 100100 THZell 12.45.6 AvgHoid: 100100 THZell 12.45.6 Trig: PrePP PrePP Auto Tune Center Freq 2.480000000 GHz 2.40000000 GHz 2.40000000 GHz 2.479250000 GHz 2.479250000 GHz	
		20.2 Autor CF Step	3.21	Center Freq 2.48000000 CHz NE Prosinicov Ref Offset 9.79 dB 10 dBidiv Ref 29.79 dB 198 198 198 198 198 198 198 198	Inclusion     Production     #Atten: 30 dB     Mkr1 2.479 997 0 GHz       10 dBidiv     Ref 0ffset 379 dB     4.777 dB       10 dBidiv     Ref 29.79 dB     4.777 dB       19 g     1     1       10 dBidiv     Ref 29.79 dB     4.777 dB       10 dBidiv     Ref 29.79 dB     1       10 dBidiv     Ref 29.79 dB	Center Freq 2.48000000 GHz NEC Price Runs NEC Price Runs Freq Freq 2.48000000 GHz Ref Offset 3.79 dB 10 dB/d/v Ref 29.79 dBm 10 dB/d/v Ref 29.79 dB/d Ref 29.79 dB/d Ref 20.70	
		30.2	0.21     0.21     0.21     0.21       10.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21	Center Freq 2.48000000 CHz NE Provide to the second secon	Inclusion     Production     #Atten: 30 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref 0ffset 979 dB     4.777 dBm     Center Freq     2.40000000 GHz       198     1     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div     Ref 29.79 dB     1     1     1     1       10 dB/div	Center Freq 2.48000000 GHz NEE PROV Ref Offset 3.79 dB 10 dBidly Ref 29.79 dBm 2.40000000 GHz 4.777 dBm 2.40000000 GHz 4.777 dBm 2.40000000 GHz 2.49000000 GHz 2.49000000 GHz 2.49000000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 3.2 4.777 tBm 4.777 tBm 5.0000 GHz 5.000 tHz 5.000 tHz	
		30.2	0.21     0.21     0.21     0.21       102     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21       30.2     0.21     0.21     0.21	Center Freq 2.4800000 CHz     Trig: Free Run #AvgHod: 100100     Trig: Free Run regime for the starter is 0 dB     Trig: Free Run regime for the starter is 0 dB     Trig: Free Run regime for the starter is 0 dB       Ref Offset 9.79 dBm     Mkr1 2.479 997 CGHz     Auto Tune       10 dBidiv     Ref 29.79 dBm     4.777 dBm       138     1     2.48000000 GHz       138     1     1       138     1     1       139     1     1       130     1     1 <td< td=""><td>Inclusion     Production     #Atten: 30 dB     Mkr1 2.479 997 0 GHz       10 dBidiv     Ref 075est 979 dB     4.777 dBm       10 dBidiv     Ref 29.79 dBm     1.77 dBm       10 dBidiv     Ref 20.70 dBm     1.77 dBm</td><td>Center Freq 2.48000000 GHz NEE PROVIDE The Freq Run Ref Offset 3.79 dB 10 dB/div Ref Offs</td><td></td></td<>	Inclusion     Production     #Atten: 30 dB     Mkr1 2.479 997 0 GHz       10 dBidiv     Ref 075est 979 dB     4.777 dBm       10 dBidiv     Ref 29.79 dBm     1.77 dBm       10 dBidiv     Ref 20.70 dBm     1.77 dBm	Center Freq 2.48000000 GHz NEE PROVIDE The Freq Run Ref Offset 3.79 dB 10 dB/div Ref Offs	
		302	0.21     0.21     0.21     0.21     0.21       10.2     0.21     0.21     0.21     0.21       30.2     0.21     0.21     0.21     0.21       40.2     0.21     0.21     0.21     0.21	Center Freg 2.4800000 CHz     Trig: Free Run #AvgHod: 100100     Trig: Free Run regimes to dB     Trig: Free Run regimes to dB       NFE     PNO: Wido - FGainLow     Trig: Free Run #AvgHod: 100100     Trig: Free Run regimes to dB     Trig: Free Run regimes to dB       Ref Offset 9.79 dB     Mkr1 2.479 997 CHZ     Auto Tune       10 dB/div     Ref 29.79 dB     4.777 dBm       138     Image: Ref 29.79 dB     4.777 dBm       139     Image: Ref 29.79 dB     4.777 dBm       139     Image: Ref 29.79 dB     4.777 dBm       130     Image: Ref 29.79 dB     1mage: Ref 29.79 dB       130     Image: Ref 29.79 dB     1mage: Ref 29.79 dB       131     Image: Ref 29.79 dB     1mage: Ref 29.79 dB       132     Image: Ref 29.79 dB     1mage: Ref 29.79 dB       132     Image: Ref 29.79 dB     Image: Ref 29.79 dB       132     Image: Ref 29.79 dB     Image: Ref 29.79 dB	Inclusion     Frequencies       Frequencies     Frequencies       10     Bildiv       Ref 29.79     dBm       10     Bildiv       10     Bildiv       10     Bildiv       10     Bildiv       100     Bildiv       101     Bildiv       102     Bildiv       103     Bildiv       104     Bildiv       105     Bildiv       102     Bildiv       103     Bildiv       104     Bildiv       105     Bildiv       102     Bildiv       103     Bildiv       104     Bildiv       105     Bildiv       105     Bildiv       105     Bildiv       105     Bildiv	Center Freq 2.48000000 GHz NEE PRO: Wide Trig: Freq Run Ref Offset 3.79 dB 10 dB/div Ref 29.79 dBm 10 dB/div Ref 29.7	
0 Hz	0 Hz	30.2     30.2     30.2     30.2     500 Frequence       40.2     40.2     50.2     50.2     50.2	3.21     2.479250000 GHz       102     103       302     104       402     105       402     105       402     105       602     105	Center Freg 2.4800000 CHz     Trig: Free Run #AvgHod: 100100     Trig: Free Run metric     Trig: Free Run Run     Trig: Free Run     R	Image: Note of the set of t	Center Freg 2.48000000 GHz NEC PROVIDE TIG: FreeRun FGSint.cow TARE PROVIDE TIG: FreeRun PArten: 30 dB Mkr1 2.479 99.77 GHz 4.777 dBm 4.000000 GHz 4.8000000 GHz 4.8000000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.795 000 GH	
		302	3.21     2.479250000 GHz       102     103       302     104       402     105       402     105       402     105       602     105	Center Freg 2.4800000 CHz     Trig: Free Run #AvgHod: 100100     Trig: Free Run metric     Trig: Free Run Run     Trig: Free Run     R	Image: Note of the set of t	Center Freg 2.48000000 GHz NEC PROVIDE TIG: FreeRun FGSint.cow TARE PROVIDE TIG: FreeRun PArten: 30 dB Mkr1 2.479 99.77 GHz 4.777 dBm 4.000000 GHz 4.8000000 GHz 4.8000000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.772 dBm 6.000 GHz 4.795 000 GH	
	Scale Type	30.2	3.21     2.479250000 GHz       40.2     40.2       40.2     50.2       40.2     50.2	Center Freq 2.48000000 GHZ     Trig: Free Run PGelin P3 P3 C GHZ     Mkr1 2.479 997 C GHZ     Auto Tune       Ref Offset 379 dB     Mkr1 2.479 997 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 997 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 997 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 997 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 997 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 807 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 807 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 807 C GHZ     Auto Tune       10 dB/div     Ref Offset 379 dB     Mkr1 2.479 8000 GHZ     Stop Freq 2.480750000 GHZ       20 dD     Man     Man     Man       10 dD     Man     Man     Man	Image: Brownic will water: 30 dB       Mkr1 2.479 997 0 GHz         10 dB/dv       Ref 28.79 dB	Center Freq 2.4800000 GHz     Trig: Freq Run #Atten: 30 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dBidiy     Ref 0free 379 dB     Mkr1 2.479 997 0 GHz     Auto Tune       10 dBidiy     Ref 2.48000000 GHz     4.777 dBn     Center Freq 2.48000000 GHz       10 dBidiy     Ref 2.48000000 GHz     4.777 dBn       10 dBidiy     Ref 2.48000000 GHz     2.479250000 GHz       2.02     Mkr1 2.4792 function     2.479250000 GHz       2.02     Mkr1 2.4792 function     500 Freq 2.480750000 GHz       2.02     Mkr1 2.479 function     500 Freq 2.48075000 GHz       2.02     Freq 0ffset 0Hz     10 for the function	
	ocale Type	202     302     302     302     CF Step 150,000 KHz       40.2     40.2     Freq Offset 0 Hz	0.21     0.21     2.479250000 GHz       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01	Center Freq 2.48000000 GHz     Trig: Free Run Ref Offset 37a dB     Mikr1 2.479 997 0 GHz     Auto Tune       Ref Offset 37a dB     Mikr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.4800000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.48000000 GHz     Center Freq 2.480000000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.480000000 GHz     Center Freq 2.48000000 GHz <td>Auto Tune       Ref Orset 3.79 dB     Mkr1 2.479 997 0 GHz       10 gBid/u     Ref 29.79 dB       10 g     Center Freq       10 g     Start Freq</td> <td>Center Freg 2.48000000 Type: RNS       Trig: Free Run       Arginizer Type: RNS       Trig: Free Run       Auto Tune         Trig: Free Run       MEr 12.479 907 0G Free       Center Freq       2.480000000 GHz       Start Freq       2.480070000 GHz       Start Freq       2.480750000 GHz       Start Freq       2.480750000 GHz       Center Freq       2.480750000 GHz       Center Freq       2.480750000 GHz       CE Step       Start Freq       2.480750000</td> <td></td>	Auto Tune       Ref Orset 3.79 dB     Mkr1 2.479 997 0 GHz       10 gBid/u     Ref 29.79 dB       10 g     Center Freq       10 g     Start Freq	Center Freg 2.48000000 Type: RNS       Trig: Free Run       Arginizer Type: RNS       Trig: Free Run       Auto Tune         Trig: Free Run       MEr 12.479 907 0G Free       Center Freq       2.480000000 GHz       Start Freq       2.480070000 GHz       Start Freq       2.480750000 GHz       Start Freq       2.480750000 GHz       Center Freq       2.480750000 GHz       Center Freq       2.480750000 GHz       CE Step       Start Freq       2.480750000	
Center 2,4800000 GHz Span 1,500 MHz Log Lin	Log <u>Lin</u>	30.2	0.21     0.21     2.479250000 GHz       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01       0.02     0.01     0.01	Center Freq 2.48000000 GHz     Trig: Free Run Ref Offset 37a dB     Mikr1 2.479 997 0 GHz     Auto Tune       Ref Offset 37a dB     Mikr1 2.479 997 0 GHz     Auto Tune       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 37a dB     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.4800000 GHz     Center Freq 2.4800000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.4800000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.48000000 GHz     Center Freq 2.48000000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.48000000 GHz     Center Freq 2.480000000 GHz       10 dB/div     Ref Offset 3000 GHz     Center Freq 2.480000000 GHz     Center Freq 2.48000000 GHz <td>Auto Tune       Ref Orset 3.79 dB     Mkr1 2.479 997 0 GHz       10 gBid/u     Ref 29.79 dB       10 g     Center Freq       10 g     Start Freq</td> <td>Center Freg 2.48000000 Type: RNS       Trig: Free Run       Arginizer Type: RNS       Trig: Free Run       Auto Tune         Trig: Free Run       MER of Start Freq       2.480000000 GHz         Start Freq       2.480070000 GHz         Trig: Free Run       Center Freq       2.480070000 GHz       Start Freq       2.480070000 GHz       Center Freq       2.480070000 GHz       CE Step       Start Freq       2.480070000 GHz       CE Step</td> <td></td>	Auto Tune       Ref Orset 3.79 dB     Mkr1 2.479 997 0 GHz       10 gBid/u     Ref 29.79 dB       10 g     Center Freq       10 g     Start Freq	Center Freg 2.48000000 Type: RNS       Trig: Free Run       Arginizer Type: RNS       Trig: Free Run       Auto Tune         Trig: Free Run       MER of Start Freq       2.480000000 GHz         Start Freq       2.480070000 GHz         Trig: Free Run       Center Freq       2.480070000 GHz       Start Freq       2.480070000 GHz       Center Freq       2.480070000 GHz       CE Step       Start Freq       2.480070000 GHz       CE Step	
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)		30.2     30.2     30.2     30.2     CF Step 150.000 KHz Auto       40.2     Auto     Man       60.2     Scale Type	0.21     0.24     2.479250000 GHz       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0       0.02     0     0	Center Freq 2.48000000     PHC Wide + Trig: Free Run Braining     PHC Wide + Trig: Free Run Braining     PHC Wide + Trig     PHC Wide + Trig: Free Run Braining	Int     Int <td>Center Freq 2.28000000 GHz       NE     PRC: ING: +++       Freq Offset 39 dB     Mkr1 2.479 997 0 GHz       Auto Tune       10 dB(div)     Ref 076et 37 9 dB       10 dB(div)     Ref 076 9 dB</td> <td></td>	Center Freq 2.28000000 GHz       NE     PRC: ING: +++       Freq Offset 39 dB     Mkr1 2.479 997 0 GHz       Auto Tune       10 dB(div)     Ref 076et 37 9 dB       10 dB(div)     Ref 076 9 dB	
MSG STATUS		302     Stop Freq 2.48075000 GHz       302     GF Step 150.000 Hz       40.2     GF Step 150.000 Hz       50.2     GF Step 150.000 Hz       60.2     GF Step 150.000 Hz	0.21       0.21       2.479250000 GHz         0.2       0.2       0.2         0.2       0.2 <td>Center Freq 2.4800000 GHz  NE POLVMAN PERMIN PERMIN NE POLVMAN PERMIN NE POLVMAN PERMIN PER</td> <td>Internation     Production     Action: 30 dB     Mkr1 2.479 997 0 GHz       10 dBidiv     Ref 29.79 dBm     4.777 dBm       10 dBidiv     Ref 29.79 dBm     2.480750000 GHz       10 dBidiv     Ref 29.79 dBm     1.500 MHz       10 dBidiv     Ref 29.79 dBm</td> <td>Center Freq 2.4800000 GHz NE PO.Wat Tigeres Run Ref Orfset 37.9 dBm 10 dBlatv Ref 23.79 dBm 10 dBlatv Ref 2.4800000 GHz 10 dBlatv 10 dBlatv</td> <td></td>	Center Freq 2.4800000 GHz  NE POLVMAN PERMIN PERMIN NE POLVMAN PERMIN NE POLVMAN PERMIN PER	Internation     Production     Action: 30 dB     Mkr1 2.479 997 0 GHz       10 dBidiv     Ref 29.79 dBm     4.777 dBm       10 dBidiv     Ref 29.79 dBm     2.480750000 GHz       10 dBidiv     Ref 29.79 dBm     1.500 MHz       10 dBidiv     Ref 29.79 dBm	Center Freq 2.4800000 GHz NE PO.Wat Tigeres Run Ref Orfset 37.9 dBm 10 dBlatv Ref 23.79 dBm 10 dBlatv Ref 2.4800000 GHz 10 dBlatv 10 dBlatv	
		302     302     2.48075000 GHz       402     302     CF Step 150.000 Hz       402     302       402     302       402     302       402     302       402     302       402     302       402     302       402     302       402     302       402     302       402     302       402     302       403     302       404     300       405     302       405     302       405     302       402     302       403     302       404     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405     302       405	0.21       0.24       2.479250000 GHz         0.2       0.2       0.2         0.2       0.2 <th>Center Freq 2.4800000 GHz       Processing of the start of the start</th> <th>Auto Tune       Ref officet 379 dB     Mkr1 2.479 997 0 GHz       10     dBIdW     Ref 28.79 dBm       10     dBIdW     dBIdW       10     dB</th> <th>Center Freq 2.4800000 GHz WG MUK MG MG</th> <th></th>	Center Freq 2.4800000 GHz       Processing of the start	Auto Tune       Ref officet 379 dB     Mkr1 2.479 997 0 GHz       10     dBIdW     Ref 28.79 dBm       10     dBIdW     dBIdW       10     dB	Center Freq 2.4800000 GHz WG MUK MG	
		302     Supprint       302     Supprint       302     Supprint       302     Supprint       302     Supprint       402     Supprint       403     Supprint       50     Supprint	0.21       0.21       0.21       2.479250000 GHz         0.2       0.2       0.2       0.2       0.2      <	Center Freq 2.4800000 GHz         Tree Freq Num         Rev Type: RMS	Ref Offset379 dB     Mkr1 2.479 970 GHz     Auto Tune       10 dBidv     Ref 29.79 dB     4.777 dBm     4.777 dBm       10 dBidv     Ref 29.79 dB     4.777 dBm     2.48000000 GHz       10 dBidv     Ref 29.79 dB     1     1       10 dBidv     Ref 29.79 dB     4.777 dBm     2.48000000 GHz       10 dBidv     Ref 29.79 dB     1     1     2.48000000 GHz       10 dBidv     Ref 29.79 dB     1     1     1       10 dBidv     Ref 29.79 dB     1     1     1 <th>Center Freq 2.48000000 GHz         Trip Free Run Ber Offset 373 dB         Rev offset 23.79 dB         Auto Tune           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         Ref Offset 23.79 dB         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         Ref Offset 24.800000 GHz         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         Ref BW 100 KHz         #VBW 300 KHz         Span 1.500 MHz         10 dHz           10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         10 dBld/v         10 dBld/v&lt;</th> <th></th>	Center Freq 2.48000000 GHz         Trip Free Run Ber Offset 373 dB         Rev offset 23.79 dB         Auto Tune           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         4.777 dBm         2.4000000 GHz         2.4000000 GHz           10 dBld/v         Ref Offset 23.79 dB         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         Ref Offset 23.79 dB         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         Ref Offset 24.800000 GHz         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         Ref BW 100 KHz         #VBW 300 KHz         Span 1.500 MHz         10 dHz           10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v         10 dBld/v           10 dBld/v         10 dBld/v         10 dBld/v<	
🔤 Keysight Spectrum Analyzer - Swept SA 👘 👘		302     Supprint       302     Supprint       302     Supprint       302     Supprint       302     Supprint       302     Supprint       402     Supprint       403     Supprint       502     Supprint       502     Supprint       502     Supprint       503     Supprint       504     Supprint	102       100       102       100       102       1	Center Freq 2.48000000 GHz MC Tride - Trige Free Run Ment 12.479 997 0 GHz 4.777 dBn 10 dBdW Ref 29.79 dBm 10 dBdW Ref 29.70 dBm 10 dBdW Ref 29.79 dBm 10 dBdW Ref 29.70 dBm 10 dBW Ref 29.70 dBW 10 dBW	Ref Office 33 73 dB     Mkr1 2.479 937 0 GHz       10 gGMU     Ref 29.79 dBm       10 gGMU     Ref 29.70 dBm	Center Freq 2.48000000 GHz PC.Mater: 30 dB Mkr1 2.479 997 0 GHz 4.777 dBn 10 dBidly Ref 29.79 dBm 10 dBidly Ref 29.70 dBm 10 dBidly Ref 29.7	
X RL RF 50 Ω DC SENSE:INT ALIGN AUTO 01:07:53 PM May 25, 2020		302       Supprint         302       Supprint         402       Supprint         402       Supprint         402       Supprint         402       Supprint         402       Supprint         403       Supprint         404       Supprint         405       Scale Type         Struct       Struct         DH5_Ant1_2480_30~1000	Land Land Land Land Land Land Land Land	Center Freq 2.48000000 CHz WE WOLL WG THE KNOW Water 30 dB Mkr1 2.479 997 0 GHz 4.777 dB Center Freq 2.4000000 GHz 2.4000000 GHz 2.4000000 GHz 2.4000000 GHz 2.47525000 GHz 2.47525000 GHz 2.400000 GHz 3.007 Freq 2.4075000 GHz 3.007 Freq 3.007	Auto Tune Ref Offset 37 a B 10 gBdd/v Ref 23.79 gBm 10 gBdd/v Ref 23.79 gBd/v Ref 23.79 gB/v Ref 23.79 g	Center Freq 2.48000000 CHz Figs Tee Run ME M2: Mar 20 dB Mkr1 2.479 997 0 CH2 4.00 Ture Ref Offset 3 r9 dB Ref Offset 3	
Frequency		302       300 PT eq 2480750000 GHz         402       400 F Step 150.000 Hz         402       500 Hz         402       500 Hz         500       500 Hz         500 Hz       500 Hz	0 2 1       0 0 <td< td=""><td>Center Freq 2.48000000 CHz NE WOL WOL TO THE Free Run Augin Type: RM3 Augin Type: RM3 A</td><td>Auto Tune Trianting and the states and the states</td><td>Centrer Freq 2.4800000 GHz Mt Plants: Wild Mt Plants: W</td><td></td></td<>	Center Freq 2.48000000 CHz NE WOL WOL TO THE Free Run Augin Type: RM3 Augin Type: RM3 A	Auto Tune Trianting and the states	Centrer Freq 2.4800000 GHz Mt Plants: Wild Mt Plants: W	
Center Freq 515.000000 MHz Tree Frequency	Frequency	302       Supprint         302       Supprint         302       Supprint         302       Supprint         302       Supprint         302       Supprint         402       Supprint         402       Supprint         402       Supprint         402       Supprint         402       Supprint         402       Supprint         403       Supprint         404       Supprint         405       Supprint         502       Supprint         Supprint	2479250000 GHz Stop Freq 24075000 GHz 302 402 402 402 402 402 402 402 4	Center Freq 2.48000000 GHz PEGLIVIC	Auto Tune Ref Offset \$79 ab Ref Offset \$70 ab Ref Offset \$70 ab Ref Ref Ref Ref Ref Ref Ref Ref Ref Ref	Center Freq 2.4800000 GHz Starts: 30 B Mkr1 2.479 997 0 GHz 4.777 GBm Center Freq 2.4800000 GHz Start Freq 3.000 Freq Start Freq 3.000 Freq	
Center Freq 515.000000 MHz     #Avg Type: RMS     Trace[]:2:3:4:5     Frequency       NFE     PNO: Fast     Trig: Free Run IFGainLow     Avg Hold: 10/10     Trig: PP P P P       afAtten: 10 dB	Frequency	 302       Auto       Suppred         302       Auto       CF Step         402       Auto       Man         403       State: 100       State: 100         Mac       Man       State: 100         Mac       Man       Man         Mac       Man       Man         Mac       State: 100       State: 100         Mac       Man       Man         Man       Man       Man         Mac       Man       Man         Mac       State: 100       State: 100         Mac       Man       Man         Mac       Man       Man         Mac       Man       Man         Mac       State: 100	2.479250000 GHz 310 42 42 42 42 42 42 42 42 42 42	Center Freq 24.800000 GHZ Mathew 30 dB Mkr1 2.479 997 0 GHZ 4.400 Ture 4.4777 dBn 4.400 Ture 4.4777 dBn 4.400 Ture 4.4777 dBn 4.400 Ture 4.4777 dBn 4.400 Ture 4.400 Ture 4.4777 dBn 4.400 Ture 4.400 Ture 4.4777 dBn 4.400 Ture 4.400 Ture 5.500 Freq 2.400 Torout H 5.500 Freq 2.400 Torout H 5.500 Freq 5.500 F	Auto Tune Ref Offset 917 de Ref Ref Ref Ref Ref Ref Ref Ref Ref Ref	Center Freq 24.800000 GHz Freq USA William Freq 24.800000 GHz 10 dBidet Ref 29.79 dBm 10 dBidet Ref 29.70 dBm 10 dBid	
Center Freq 515.000000 MHz NFE PN0: Fast →→ Trig: Free Run IFGainLow #Atten: 10 dB #Avg[Hold: 10/10 TVPE[PP.PP.P.P.P.P.P.P.P.P.P.P.P.P.P.P.P.P	Frequency	 Suppried 2480750000 GHz 2480750000 GHz 2480750000 GHz 2480750000 GHz Genter 2.4800000 GHz #Res BW 100 kHz #VBW 300 kHz By The State of the S	101       102       103       1	Center Freq 2.4800000 GHZ Mathew Water 30 GB Ref 28.79 GBm Ref 28.70 GBm Ref	Mc       Production       Attion to the part of the p	Center Freq 2.48000000 CHz Production: Anten 10 dB Ref Offset 37 dB Ref 23.79 dBm Ref 23.70 dBm Ref 23.79 dBm Ref 23.70 dBm Ref 73.70 dBm Ref 73.70 dBm Ref 73.70 dBm Ref 73.70 dBm Ref 73.70	
Center Freq 515.00000 MHz     #Avg Type: RMS     Trace[1:34:59]     Frequency       Infigure Run Broatnicow     Trig: Free Run Broatnicow     More Run AvgIHold: 1010     Trig: Free Run AvgIHold: 1010     Trig: Free Run Broatnicow     Tr	Frequency	302       300 Prev         302       40750000 GHz         402       400         402       40750000 GHz         403       400         404       400         405       400         402       400         403       400         404       400         405       400         405       400         405       400         405       400         400       400         400       400         400       400         400       400         400       400         400       500         400       500         400       500         400       500         400       500         400       500         400       500         400       500         400       500         400       500         400	2.47925000 GHz Stop Freq 2.48075000 GHz 4.2 4.2 4.2 4.2 4.2 5.2 5.2 5.2 5.2 5.2 5.2 5.2 5	Center Freq 248000000 CH2 Freq Offset 379 dB Ref	Ref Offeet 378 dB Ref Offeet 37	Center Freq 2.48000000 CH2 Ref Offset 379 GB Ref 23.79 GBm Ref 23.70 GBm Ref	
Center Freq 515.000000 MHz       #Avg Type: RMS       TraccE[]: 23 + 5       Frequency         NFE       PNO: Fast       Trig: Free Run       Avg[Hold: 10/10       Trig: PP P P P         Ref Offset 9.79 dB       Mkr1 829.34 MHz       Auto Tune	Frequency	 302       300       Feed       2480750000 GHz         302       400       400       400       400         402       400       400       400       400         402       400       400       400       400         402       400       400       400       400         402       400       400       400       400         402       400       400       400       400         402       400       400       400       400         403       400       400       400       400         403       400       400       400       400         403       400       400       400       400         404       400       400       400       400         405       400       400       400       400         400       400       400       400       400       400         400       400       400       400       400       400       400         400       400       400       400       400       400       400       400         400       400       400       400       400	247925000 GHz Stop Freq 24075000 GHz 42 42 42 42 42 42 42 42 42 42	Center Freq 248000000 CH2 Freq Offset 379 dB Ref	Ref Offeet 378 dB Ref Offeet 37	Center Freq 2.48000000 CH2 Ref Offset 379 GB Ref 23.79 GBm Ref 23.70 GBm Ref	
Center Freq 515.00000 MHz     #Avg Type: RMS     Trace[1:34:59]     Frequency       Infigure Run Broatnicow     Trig: Free Run Broatnicow     More Run AvgIHold: 1010     Trig: Free Run AvgIHold: 1010     Trig: Free Run Broatnicow     Tr	Frequency Auto Tune	 suppried 2.480750000 GHz 2.480750000 GHz 4.2480750000 GHz 4.248075000 GHz 4.248075000 GHz 4.248075000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.2480750000 GHz 4.248075000 GHz 4.2480750000 GHz 4.248075000 GHz 4.2480750000 GHz 4.24807500000 GHz 4.2480750000 GHz 4.248075	2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz 2.479250000 GHz CF Step 150.000 Hz 4.4to Man Freq Offset 0 Hz Scale Type Log Lin Total Stop Freq 2.47925000 GHz 150.000 Hz 4.4to Man Freq Offset 0 Hz Scale Type Log Lin Total Stop Freq 150.000 Hz 4.4to Man Freq Offset 0 Hz Scale Type Log Lin 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.000 Hz 150.0000 Hz 150.000 Hz 150.0000	Center Freq 248000000 CH2 Fig. Tree Run NE Office 23 73 dBm Ref	Ref 0.57 0 dBm Ref 2.7 0 dBm Ref 7.7 0 dBm Ref 7	Center Freq 248000000 GHz Freq New York With With With With With With With With	
Center Freq 515.00000 MHz     #Avg Type: RMS     Trace[1:2:3:5:5]     Frequency       Infection Colspan="2">Trig: Free Run IFGainLow     Avg Type: RMS     Trace[1:2:3:5:5]     Frequency       Ref Offset 9.79 dB     Mkr1 829.34 MHz       Log Iddition     Colspan="2">Colspan="2"       Colspan="2">Colspan="2"       Colspan="2"       Colspan="2"       Colspan="2"       Colspan="2"       Colspan="2"       Colspan="2"       Colspan= 2"       Colspan= 2"       Colspan="2"       Colspan= 2"       Colspan="2"       <	Frequency Auto Tune Center Freq	 Suppried 2480750000 GHz 2480750000 GHz 40.2	2479250000 GHz 300 400 400 400 400 400 400 400	Center Freq 2.48000000 CHz PCONTON Met 12.479 997 0 CHz Ref 0/met 2.79 0 CH Ref 2.427 0 CHz Ref 0/met 2.79 0 CHz Ref 0/met 2.4800000	Ref Offset 379 dB     Mkr1 2.479 BP7 0 GHz     Auto Tune       Ref Offset 379 dB     Mkr1 2.479 BP7 0 GHz     Auto Tune       Ref Start Park     Center Freq     2.48070000 GHz       270     0     0     0       02     0     0     0	Center Freq 248000000 GHz Footback 12 / 20 Ref Onet 27 / 20 Ref Ref Onet 27 / 20 Ref Ref Onet 27 / 20 Ref Onet 27 /	
Center Freq 515.000000 MHz       #Avg Type: RMS       Trace[1:2:3:5:5]       Prequency         NFE       PNO: Fast       Trig: Free Run       Avg Hold: 10/10       Trig: Free Run       Trig: Free Run         NFE       PNO: Fast       Avg       Avg Hold: 10/10       Trig: Free Run	Frequency Auto Tune Center Freq	302       Auto       Supprint         302       Auto       Supprint         402       Auto       Man         503       Auto       Man         504       Freq Offset       0 Hz         502       Scale Type       0 Hz         503       Both       Scale Type         100       Mkr       Sweep 1.000 ms (1001 pts)         100       Man       Trace         DH5_Ant1_2480_30~1000         Center Freq 515.000000 MHz         100       Man       Trace         PRO: Fast - Tige Free Run         Auto       Trace       Trace         Auto Tune         100       Mkr1 829.34 MHz         100       Mkr1 829.34 MHz         100       Man       -69.211 dBm         100       Man       -69.211 dBm	2479260000 GHz 100 100 100 100 100 100 100 10	Center Freq 2.48000000 CHz PCONTON Met 12.479 997 0 CHz Ref 0/met 2.79 0 CH Ref 2.427 0 CHz Ref 0/met 2.79 0 CHz Ref 0/met 2.4800000	Ref Offset 379 dB     Mkr1 2.479 BP7 0 GHz     Auto Tune       Ref Offset 379 dB     Mkr1 2.479 BP7 0 GHz     Auto Tune       Ref Start Park     Center Freq     2.48070000 GHz       270     0     0     0       02     0     0     0	Center Freq 248000000 GHz Footback 12 / 20 Ref Onet 27 / 20 Ref Ref Onet 27 / 20 Ref Ref Onet 27 / 20 Ref Onet 27 /	
Center Freq 515.000000 MHz     Frequency       NFE     PRO: Fast       Ing: Freq Units     Trace [1:2:3:5:3       NFE     PRO: Fast       Ing: Freq Units     Trace [1:2:3:5:3       Ref Offset 9.79 dB       10 dB/div     Ref 9.79 dBm     -69.211 dBm       -0.21     -0.21     -0.21     -0.21       -0.21     -0.21     -0.21     -0.21	Frequency Auto Tune Center Freq 515.00000 MHz	 202       402       2480750000 GHz         402       403       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         402       404       404       404         403       404       404       404         404       404       404       404         404       404       404       404         404       404       404       404         404       404       404       404         405       504       504       404         404       404       404       404       404         404       404       404       404       404	2.479250000 GHz Stop Freq 2.407050000 GHz Freq Offset 0.12 Center Freq 555,00000 GHz Freq Market Stop Freq 2.48070000 GHz Freq Offset 0.12 DH5_Ant1_2480_30~1000 ms (1001 pts) Total Stop Freq 2.48070000 GHz Freq Offset 0.12 Freq Offset 0.12 Fre	Center Freq 2.4800000 GHz Production Mark States 30 GHZ Prod	Auto Tune Ref 28.7 8 dBm Ref	Center Freq 2.4800000 CHz Become freq 2.4800000 CHz Become freq 2.477 dBm Center Freq 2.4800000 CHz Center Freq 2.480000 CHz Center Freq 2.480000 CHz	
Center Freq 515.000000 MHz         Trig: Free Run IFGelinLow         Trig: Free Run AvgiHold: 1010         Trice [1: 34: 54         Frequency           Trice Freq 515.00000 MHz         Trice Freq 515.00000 MHz         Trice Freq 51: 34: 54         Frequency           Trice Freq 515.00000 MHz         Trice Freq 51: 34: 54         Auto Tune           Trice Freq 51: 50: 50: 50: 50: 50: 50: 50: 50: 50: 50	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq	 202       2400750000 GHz         302       2400750000 GHz         402       2400750000 GHz         402       General State         403       General State         604       General State         605       General State         606       General State         607       General State         608       Mkr1 829.34 MHz         609       General State         716       Free Run         Auto Tune       General State         102       General State <td< td=""><td>2.47520000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.4075000 CH2 Stop Freq Stop Freq FreqUency Auto Ture FreqUency Auto Ture Stop Freq 3.400 Ture 3.400 Ture 3.4</td><td>Center Freq 2.4900000 CHz Viscation reg Fres Run Ref 22.79 GBn Center Freq 2.4000000 CHz Ref 22.79 GBn Center Freq 2.4000000 CHz Ref 22.79 GBn Center Freq 2.4000000 CHz Ref 2.79 GBn Center Freq Stool Center Freq St</td><td>Auto Tune Ref 28.72 dBm Ref 28.72</td><td>Center Freq 2.800000 GHz Main State Main State Main</td><td></td></td<>	2.47520000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.40750000 CH2 Stop Freq 2.4075000 CH2 Stop Freq Stop Freq FreqUency Auto Ture FreqUency Auto Ture Stop Freq 3.400 Ture 3.400 Ture 3.4	Center Freq 2.4900000 CHz Viscation reg Fres Run Ref 22.79 GBn Center Freq 2.4000000 CHz Ref 22.79 GBn Center Freq 2.4000000 CHz Ref 22.79 GBn Center Freq 2.4000000 CHz Ref 2.79 GBn Center Freq Stool Center Freq St	Auto Tune Ref 28.72 dBm Ref 28.72	Center Freq 2.800000 GHz Main State Main	
Center Freq 515.000000 MHz     Frequency       NFE     PRO: Fast       Ing: Freq Units     Trace [1:2:3:5:3       NFE     PRO: Fast       Ing: Freq Units     Trace [1:2:3:5:3       Ref Offset 9.79 dB       10 dB/div     Ref 9.79 dBm     -69.211 dBm       -0.21     -0.21     -0.21     -0.21       -0.21     -0.21     -0.21     -0.21	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq	Suppress Suppre	2.479250000 GHz Stop Freq 2.40750000 GHz Stop Freq 2.4075000 GHz Stop Freq 2.4075000 GHz Stop Freq 2.4075000 GHz Stop Freq 0.42 0.42 0.42 0.42 0.42 0.42 0.42 0.42 0.42 0.42 Scale Type Log Log 1.5 0.42 Scale Type Log 1.5 0.42 0.42 Scale Type Log 1.5 0.42 0.42 Scale Type Log 1.5 0.42 Scale Type 1.5 0.42 Scale Type 1.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0	Center Freq 2.48000000 GHz       The Freq Direction of the Freq Direct	Auto Ture 10 diskey Ref 22/3 dBm 10 diskey Ref 22/3	Center Freq 2.800000 GHz Figure Main Figure Main Figur	
Center Freq 515.000000 MHz         #Avg Type: RMS         Trace [1:2:3:5:5:6]         Prequency           NFE         PN0: Fast         AvgHold: 10/10         Trace [1:2:3:5:6]         Prequency           Ref Offset 9.79 dB         Akten: 10 dB         Mkr1 829.34 MHz         Auto Tune           10 dB/div         Ref 9.79 dBm         -69.211 dBm         6515.000000 MHz           021         Image: Center Freq 515.000000 MHz         Start Freq 515.000000 MHz         515.000000 MHz           102         Image: Center Freq 515.000000 MHz         Image: Center Freq 515.000000 MHz         515.000000 MHz	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq	 Suppress Suppre	2.479250000 GHz Stop Freq 2.40750000 GHz Stop Freq 2.4075000 GHz Stop Freq 2.4075000 GHz Stop Freq 2.4075000 GHz Stop Freq 0.42 0.42 0.42 0.42 0.42 0.42 0.42 0.42 0.42 0.42 Scale Type Log Log 1.5 0.42 Scale Type Log 1.5 0.42 0.42 Scale Type Log 1.5 0.42 0.42 Scale Type Log 1.5 0.42 Scale Type 1.5 0.42 Scale Type 1.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0	Center Freq 2.48000000 GHz       The Freq Direction of the Freq Direct	Auto Ture 10 diskey Ref 22/3 dBm 10 diskey Ref 22/3	Center Freq 2.800000 GHz Figure Main Figure Main Figur	
Center Freq 515.000000 MHz         Freq Figure Run IFGalanLow         Freq Figure Run AvgIhold: 1010         Trace [1:3:4:5:1]         <	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq 30.00000 MHz	202       302	1       1	Permer Freg 2.8000000 GHz     Prog Freg June       Viet 12.479 9970 GHz     Auto Ture       Viet 12.479 9070 GHz     Auto Ture       Viet 12.479 0070 GHz     A	Image: Section of the sold of the sol	Center Freq 2.4800000 GHz Figure Freq 2.499 GHz Conter Freq 2.4800000 GHz Freq Charter Biology Conter Freq 2.499 GHz Center Freq 2.4800000 GHz Freq Chart 2.4800000 GHz Freq Chart 2.4800000 GHz Freq Status Center Freq 3.5800000 GHz Freq Status Freq Status Center Freq 3.5800000 Hz Status Freq Status Status Freq Status Status Status Freq Status	
Ref Offset 9.79 dB     Mkr1 829.34 MHz       Trig: Free Run IFGainLow     Trig: Free Run Bef Offset 9.79 dB       Mkr1 829.34 MHz       0 dB/div     Ref 9.79 dB     Mkr1 829.34 MHz       0 dB/div     Ref 9.79 dB     Center Freq 615.000000 MHz       0 21     Image: Center Freq 9.21     Image: Center Freq 9.21       0 21     Image: Center Freq 9.21     Image: Center Freq 9.1152.000       0 22     Image: Center Freq 9.1152.000     Image: Center Freq 9.1152.000       0 21     Image: Center Freq 9.1152.000     Image: Center Freq 9.1152.000       0 22     Image: Center Freq 9.1152.000     Image: Center Freq 9.1152.000       0 22     Image: Center Freq 9.1152.000     Image: Center Freq 9.1152.000       0 21     Image: Center Freq 9.1152.000     Image: Center Freq 9.1152.0000       0 22     Image: Center Freq 9.1152.000     Image: Center Freq 9.1152.0000       0 21     Image: Center Freq 9.1152.0000     Image: Center Freq 9.1152.0000       0 22     Image: Center Freq 9.1152.0000     Image: Center Freq 9.1152.00000       0 21     Image: Center Freq 9.1152.0000     Image: Center Freq 9.1152.0000       0 22     Image: Center Freq 9.1152.0000     Image: Center Freq 9.1152.0000       0 23     Image: Center Freq 9.1152.00000     Image: Center Freq 9.1152.00000       0 24	Frequency Auto Tune Center Freq 515.000000 MHz Start Freq 30.000000 MHz Stop Freq	august sectors     soup rise       august sectors     c F step       august sectors     soup rise	2479550000 cHz 2479550000 cHz 2492 249755000 cHz 249755000 cHz 24975500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 24075500 cHz 2407500 cHz 24075500 cHz 2407500 cHz 24	Center Freq 2.4800000 GHz       Tigs Freq Bin       Mix 12.479 8970 GHz       Auto Tune         Pg GBW       Ref 26.9 gBm       Mix 12.479 8970 GHz       Auto Tune         Center Freq 2.4800000 GHz       2.47760000 GHz       2.4780000 GHz         Center Freq 2.4800000 GHz       Storp Freq       2.4780000 GHz         Center Freq 2.4800000 GHz       Storp Freq       2.4780000 GHz         Center Freq 2.4800000 GHz       Storp Freq       2.4780000 GHz         Storp Freq       Storp Freq       2.4780000 GHz         Storp Freq       Storp Freq       2.4780000 GHz         Storp Freq       Storp Freq       Storp Freq         Center Freq       Storp Freq       Storp Freq	Image: Section of the section of t	Center Prog 2.4800000 GHz Examine with the results of the results	
Center Freq 515.000000 MHz         Freq Figure Run IFGalinLow         Freq Figure Run AvgiHold: 1010         Trace [1:3:4:5:1]         Freq Figure Run Det P P P P P           Ref Offset 9.79 dB         Mkr1 829.34 MHz         Auto Tune           10 dB/div         Ref 9.79 dB         -69.211 dBm           0 dB/div         Ref 9.79 dB         Center Freq 515.00000 MHz           0 d2	Frequency Auto Tune Center Freq 515.000000 MHz Start Freq 30.000000 MHz Stop Freq	302       Auto       Sup Preg         302       CF Step 190000 KHz       Span 1.500 MHz         402       Auto       Man         403       Statution       Scale Type         Log       Statution       Scale Type         DH5_Ant1_2480_30~1000       Man       Man         Med       Statution       Man         Med       Auto       Auto         Med       Auto       Statution         Auto       Auto       Statution	2.47520000 GH2 2.47720000 GH2	Perfect Pres 2.480000 OHz Example And The Pres Ban Ref 23-29 dBm Ref 23-29 dBm	Image: Control 20 and 20 an	Center Freq 2.4800000 GHz Examine Weight State Marker 50 dB Mer 12.479 927 0 GHz Auto Tune Center Freq 2.4000000 Hz 2.47250000 GHz Freq Offset 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1	
Ref Offset 9.79 dB         Mkr1 829.34 Mb         Trig: Free Run AvglHold: 1010         Trice [1:3 a 3 a VoglHold: 1010         Auto Tune           0 dBld/v         Ref 0.79 dBm         -69.211 dBm         -69.	Start Freq           30.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.00000000 GHz	232     2.400 Frequency       232     2.400 February       233     2.400 February       240     2.400 February    <	2.40750000 GHz 2.4075000 GHz 4.00 Min Freq Offset 0.12 5.00 Min Freq Offset 0.12 5.00 Min Freq Offset 0.12 5.00 Min 4.00 Min 5.00 Min	Center Freq 24.990000 CHz The first and the	Image: Second	Entire Freq 2.4800000 OHz     The Freq Num     Mar 12 478 9870     Center Freq 2.4800000 OHz       Ref 0.48 27 0 GBm     Mirt 2.478 977 0 GHz     Auto Ture       10     0     0     0       10     0 <td< td=""><td></td></td<>	
Prequency           Ref Offset 9.79 dB         Mkr1 829.34 MHz           Mkr1 829.34 MHz           Center Freq 51.000000 MHz           Trig: Freq Run BrodinkLow         Auto Tune           10 dB/div         Ref 9.79 dB         Center Freq 615.000000 MHz         Center Freq 615.000000 MHz           02         Auto colspan="2">Storp Freq 1.00000000 GHz         Storp Freq 1.00000000 GHz         CF Step	Frequency Auto Tune Center Freq 516.00000 MHz Start Freq 30.000000 MHz Stop Freq 1.00000000 GHz CF Step	302       400       4	247820000 GHz 24070000 GHz 24070000 GHz 24070000 GHz 24070000 GHz 24070000 GHz 24070000 GHz 24070000 GHz 24070000 Hz 24070000 Hz 24070000 Hz 24070000 Hz 2407000 Hz 240700 Hz 240700 Hz 240700 Hz 2407000 Hz	Center Freq 24800000 CH2 The first in the set of the s	Auto Ture 10 gellur. Ref 23.78 gells 10 gellur. Ref 23.78 gellur. Ref 23.78 gellur. Ref 23.78 gellur. Ref 24.78 gellur. Ref 24.7	Center Freq 24.000000 OHz miles 10 d Micri 2479 8970 GHz Auto Ture 10 dials of 47.27 gen 10 dials of 47.27 gen	
Center Freq 515.000000 MHz         Trig: Freq Run My Biolition         Trig: Freq Run Biolition         Auto Tune           10 dB/div         Ref Offset 9.79 dBm	Frequency           Auto Tune           Center Freq           515.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.000000000 GHz           97.000000 MHz	222     240750000 CH2       223     24075000 CH2       224075000 CH2       224075000 CH2       2202       221       222       223       224       225       225       227       228075000 CH2       Freq Offset       0 H2       229       230       240       252       252       252       252       252       252       252       252       253       254       255       255       255       256       257       257       258       268       268       268       278       288       288       288 <td>2.47250000 GHz 2.4075000 GHz 2.4075000 GHz 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2</td> <td>Center Freq 24.990000 CHz The first with the first</td> <td>Auto Ture Transmission with the state of th</td> <td>Center Freq 2.4500000 OH: The TWO MAY PER TO BO The TWO MAY PER TO</td> <td></td>	2.47250000 GHz 2.4075000 GHz 2.4075000 GHz 4.2 4.2 4.2 4.2 4.2 4.2 4.2 4.2	Center Freq 24.990000 CHz The first with the first	Auto Ture Transmission with the state of th	Center Freq 2.4500000 OH: The TWO MAY PER TO BO The TWO MAY PER TO	
Frequency           Trig: Freq Links         Market Figure Links         Autor Tune           Index Links         Market Els Janks         Market Els Janks         Center Freq Sits00000 MHz           Stop Freq         Janks         Stop Freq         Janks           Gen Links         Links         Stop Freq	Frequency           Auto Tune           Center Freq           515.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.000000000 GHz           97.000000 MHz	22     200 <td>247520000 GHz 24070000 Hz 24070000 Hz 24070000</td> <td>Center Freq 24.800000 CHz Statutor The Freq 24.900000 CHz Statutor The Statutor S</td> <td>Auto Ture 10 genuv 10 ge</td> <td>Center Freq 2.4800000 CHz SVBW 300 Hz SVBW</td> <td></td>	247520000 GHz 24070000 Hz 24070000	Center Freq 24.800000 CHz Statutor The Freq 24.900000 CHz Statutor The Statutor S	Auto Ture 10 genuv 10 ge	Center Freq 2.4800000 CHz SVBW 300 Hz SVBW	
Center Freq 515.000000 MHz       Trig: Freq Run Brequency       Auto Tune         Offset 9.79 dBm       Center Freq 615.000000 MHz         Brequency       Center Freq 615.000000 MHz         Start Freq 30.000000 MHz         Stop Freq 1.00000000 GHz         Offset 9 97.00000 MHz         Auto         Offset 9 97.00000 MHz         Auto         Offset 9 97.00000 MHz         Auto         Offset 9       Offset 9       Offset 9         Offset 9       Offset 9       Offset 9       Offset 9       Offset 9	Frequency           Auto Tune           Center Freq           515.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.000000000 GHz           97.000000 MHz	222       240750000 GHz         232       240750000 GHz         242       24075000 GHz         242       240	2.79220000 0Hz         2.87920000 0Hz         300	Center Freg 2.4800000 GHz No Biological States and Sta	Ref 054:00 % Ref 23.78 dBm     Mirt 12.478 997 0 CHz     Auto Ture       10 gBu/r     Ref 23.78 dBm     Mirt 12.478 997 0 CHz     Auto Ture       10 gBu/r     Ref 23.78 dBm     Mirt 12.478 997 0 CHz     Auto Ture       10 gBu/r     Ref 23.78 dBm     Mirt 2.478 997 0 CHz     Auto Ture       10 gBu/r     Ref 23.78 dBm     Mirt 2.478 997 0 CHz     Auto Ture       10 gBu/r     Ref 23.78 dBm     Gener Fire     2.4770000 GHz       2.4770000 GHz     Start Fire     2.4770000 GHz       10 gBu/r     Ref 23.79 dBm     Start Fire       10 gBu/r     Ref 23.80 MBH     Start Fire       10 gBu/r     Ref 23.90 MBH     Start Fire       10 gBu/r     Ref 23.79 dBm     Start Fire       10 gBu/r     Ref 23.90 MBH     Start Fire <tr< td=""><td>Performance Program 248000000 Here is an intervention of the program intervention of t</td><td></td></tr<>	Performance Program 248000000 Here is an intervention of the program intervention of t	
Center Freq 515.000000 MHz       Trig: Freq Run Breduency       Trig: Freq Run Breduency       Trig: Freq Run Breduency       Trig: Center Freq Distribution       Auto Tune         Mkr1 829.34 MHz -69.211 dBm       Center Freq Distribution       Center Freq Distribution       Center Freq Distribution       Center Freq Distribution       Center Freq Distribution         0.02       Distribution       Center Freq Distribution       Center Freq Distribution         0.02       Distribution       Start Freq Distribution         0.02       Distribution       Center Freq Distribution         0.000000 MHz         Distribution       Start Freq Distribution         Distribution       Start Freq Distribution         Output       Center Freq Distribution         Distribution       Start Freq Distribution         Distribution       Center Freq Distribution         Distribution <th< td=""><td>Start Freq           30.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.00000000 GHz           97.00000 MHz           Man</td><td>322     323     324     325     325     325     325     325     326<td>a       a</td><td>Center Freg 2.4800000 CHz Rec 22/9 dbm Rec 22/9 dbm Rec</td><td>Image: Space       Mint 1 2.473 97 GER       Auto Ture         10 grader, Ref 28.79 GER       Mint 1 2.473 97 GER       Center Freq         10 grader, Ref 28.79 GER       4.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.175 GER       Start Freq         10 grader, Ref 28.79 GER       5.100 INH:       Start Freq         10 grader, Ref 28.79 GER       5.100 INH:       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 38.000000 GHz       FVBW 300 MHz       Start Freq     &lt;</td><td>Presenter Freg 2.48000000 Hz Res Bar 2 and Mir 1 2.478 987 0 GHz Fr d d a Gran Freg 2.4000000 Hz 2.4000000 Hz 2.400000 Hz 2.4000000 Hz 2.4000000 Hz 2.4000000 Hz 2.400000 Hz 2.40</td><td></td></td></th<>	Start Freq           30.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.00000000 GHz           97.00000 MHz           Man	322     323     324     325     325     325     325     325     326 <td>a       a</td> <td>Center Freg 2.4800000 CHz Rec 22/9 dbm Rec 22/9 dbm Rec</td> <td>Image: Space       Mint 1 2.473 97 GER       Auto Ture         10 grader, Ref 28.79 GER       Mint 1 2.473 97 GER       Center Freq         10 grader, Ref 28.79 GER       4.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.175 GER       Start Freq         10 grader, Ref 28.79 GER       5.100 INH:       Start Freq         10 grader, Ref 28.79 GER       5.100 INH:       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 38.000000 GHz       FVBW 300 MHz       Start Freq     &lt;</td> <td>Presenter Freg 2.48000000 Hz Res Bar 2 and Mir 1 2.478 987 0 GHz Fr d d a Gran Freg 2.4000000 Hz 2.4000000 Hz 2.400000 Hz 2.4000000 Hz 2.4000000 Hz 2.4000000 Hz 2.400000 Hz 2.40</td> <td></td>	a       a	Center Freg 2.4800000 CHz Rec 22/9 dbm Rec	Image: Space       Mint 1 2.473 97 GER       Auto Ture         10 grader, Ref 28.79 GER       Mint 1 2.473 97 GER       Center Freq         10 grader, Ref 28.79 GER       4.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.177 GER       Start Freq         10 grader, Ref 28.79 GER       5.175 GER       Start Freq         10 grader, Ref 28.79 GER       5.100 INH:       Start Freq         10 grader, Ref 28.79 GER       5.100 INH:       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 28.00000 GHz       FVBW 300 MHz       Start Freq         10 grader, Ref 38.000000 GHz       FVBW 300 MHz       Start Freq     <	Presenter Freg 2.48000000 Hz Res Bar 2 and Mir 1 2.478 987 0 GHz Fr d d a Gran Freg 2.4000000 Hz 2.4000000 Hz 2.400000 Hz 2.4000000 Hz 2.4000000 Hz 2.4000000 Hz 2.400000 Hz 2.40	
Center Freq 515.000000 MHz       Trig: Free Run #Arug Type: RMS       Trig: [1:3:3:3:3: Wirt 829:34 MHz         Ref Offset 9.79 dB       Mkr1 829:34 MHz         Center Freq 51.00000 MHz         Mkr1 829:34 MHz         Center Freq 51.00000 MHz         Mkr1 829:34 MHz         Center Freq         Center Freq         Center Freq         State: 10 dB         Mkr1 829:34 MHz         Center Freq         Center Freq         Center Freq         State: 10 dB         Center Freq         State: 10 dB         State: 10 dB         Center Freq         State: 10 dB         State: 10 dB         State: 10 dB         State: 10 dB         Center Freq         State: 10 dB	Start Freq           30.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.000000000 GHz           97.000000 MHz           GCF Step           97.00000 MHz           Man           Freq Offset	222     200 <td>2.79250000 GH2     Stop Freq     2.8975000 GH2     Stop Freq     2.897500 GH2     Stop Freq     2.997500 GH2     Stop Freq</td> <td>Center Freg 2.4800000 CHz Ref 2.29 dbm Ref 2.29 dbm Ref</td> <td>Image: Control of the state of the stat</td> <td>Provide the second seco</td> <td></td>	2.79250000 GH2     Stop Freq     2.8975000 GH2     Stop Freq     2.897500 GH2     Stop Freq     2.997500 GH2     Stop Freq	Center Freg 2.4800000 CHz Ref 2.29 dbm Ref	Image: Control of the state of the stat	Provide the second seco	
Center Freq 515.000000 MHz       Trig: Free Run #Arg Type: RNS Arg Type: RNS Arg Type: RNS Arg Type: RNS Arg Type: RNS Arg Type: RNS Center Freq 517.9 dB       Tric: [1:3:3:3:3: Center Freq 69.79 dB         Ref Offset 9.79 dB       Mkr1 829.34 MHz -69.211 dBm         Center Freq 0 dB/dv       Ref Offset 9.79 dB       Center Freq 515.000000 MHz         0 dB/dv       Center Freq 515.000000 MHz         2 Center Freq 30.2       Start Freq 30.000000 MHz         30.2       Center Freq 515.000000 MHz         30.2       Center Freq 97.00000 MHz         0.00000 MHz         30.2       Center Freq 97.00000 MHz         0.00000 MHz         0.00000 MHz         Center Freq 30.000000 GHz         0.00000 MHz         0.000000 MHz         0.000000	Start Freq           30.000000 MHz           Start Freq           30.000000 MHz           Stop Freq           1.000000000 GHz           97.000000 MHz           GCF Step           97.00000 MHz           Man           Freq Offset	322       40 <t< td=""><td>2 47755000 Gra 247055000 Gra 247055000 Gra 247055000 Gra 247055000 Gra 24705500 Gra 2470500 Gra 24705500 Gra 24705500 Gra 24705500 Gr</td><td>Center Freq 248000000 Otto Ref Child 37 dd m Ref Child 37 dd m Ref</td><td>Image: Series of the series</td><td>Center Free 2.48000000 GHz Ref Charles 79 GB Ref Charles 70 GB Ref</td><td></td></t<>	2 47755000 Gra 247055000 Gra 247055000 Gra 247055000 Gra 247055000 Gra 24705500 Gra 2470500 Gra 24705500 Gra 24705500 Gra 24705500 Gr	Center Freq 248000000 Otto Ref Child 37 dd m Ref	Image: Series of the series	Center Free 2.48000000 GHz Ref Charles 79 GB Ref Charles 70 GB Ref	
Center Freq 515.000000 MHz       Trig: Freq Run BRG 0ffset 9.79 dB       Trig: Freq Run Brd 100 B       Trig: Freq Run Brd 1010       Auto Tune         10 dB/div       Ref 9.79 dB       Center Freq 515.000000 MHz         2       Auto Tune         30 2       Storp Freq 1.00000000 GHz         30 2       Storp Freq 1.00000000 GHz         30 2       CF Step 97.000000 MHz         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2	Start Freq           30.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           1.000000000 GHz           CF Step           97.00000 MHz           Man           Freq Offset           0 Hz	322       40 <t< td=""><td>2.47850000 Hz     2.4785000 Hz     2.47850000 Hz     2.4785000 Hz     2.4785000 Hz     2.4785000 H</td><td>Center Free 2.48000000 Otto Sector 37 dem Ref Christo 37 dem Re</td><td>Image: Sector Strate       Mixer 12.479 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Center Free         Vig data:       Ref 72.979 GBm       Stop Free         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.970 GBm       Ref 72.970 GBm         Vig data:       Ref 72.970 GBm       Ref</td><td>Center Free 2.48000000 CHz Free 2.48000000 CHz Center Free 2.48000000 CHz Center Free 2.4800000 CHz Center Free CHZ CHZ CHZ CHZ CHZ CHZ CHZ CHZ</td><td></td></t<>	2.47850000 Hz     2.4785000 Hz     2.47850000 Hz     2.4785000 Hz     2.4785000 Hz     2.4785000 H	Center Free 2.48000000 Otto Sector 37 dem Ref Christo 37 dem Re	Image: Sector Strate       Mixer 12.479 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Center Free         Vig data:       Ref 72.979 GBm       Stop Free         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.970 GBm       Ref 72.970 GBm         Vig data:       Ref 72.970 GBm       Ref	Center Free 2.48000000 CHz Free 2.48000000 CHz Center Free 2.48000000 CHz Center Free 2.4800000 CHz Center Free CHZ CHZ CHZ CHZ CHZ CHZ CHZ CHZ	
Center Freq 515.000000 MHz       Trig: Freq Run BRG 0ffset 9.79 dB       Trig: Freq Run Brd 100 B       Trig: Freq Run Brd 1010       Auto Tune         10 dB/div       Ref 9.79 dB       Center Freq 515.000000 MHz         2       Auto Tune         30 2       Storp Freq 1.00000000 GHz         30 2       Storp Freq 1.00000000 GHz         30 2       CF Step 97.000000 MHz         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2       1         40 2	Start Freq           30.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           1.000000000 GHz           CF Step           97.00000 MHz           Man           Freq Offset           0 Hz	322       40 <t< td=""><td>2.47050000 Hit 2.4705000 Hit 2.470500 Hit 2.470500 Hit 2.4705000 Hit 2.4705000 Hit 2.4705000 Hit 2.</td><td>Center Free 2.48000000 Otto Sector 37 dem Ref Christo 37 dem Re</td><td>Image: Sector Strate       Mixer 12.479 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Center Free         Vig data:       Ref 72.979 GBm       Stop Free         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.970 GBm       Ref 72.970 GBm         Vig data:       Ref 72.970 GBm       Ref</td><td>Center Free 2.48000000 CHz Free 2.48000000 CHz Center Free 2.48000000 CHz Center Free 2.4800000 CHz Center Free CHZ CHZ CHZ CHZ CHZ CHZ CHZ CHZ</td><td></td></t<>	2.47050000 Hit 2.4705000 Hit 2.470500 Hit 2.470500 Hit 2.4705000 Hit 2.4705000 Hit 2.4705000 Hit 2.	Center Free 2.48000000 Otto Sector 37 dem Ref Christo 37 dem Re	Image: Sector Strate       Mixer 12.479 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Auto Ture         Vig data:       Ref 72.979 GBm       Center Free         Vig data:       Ref 72.979 GBm       Stop Free         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.979 GBm       Ref 72.979 GBm         Vig data:       Ref 72.970 GBm       Ref 72.970 GBm         Vig data:       Ref 72.970 GBm       Ref	Center Free 2.48000000 CHz Free 2.48000000 CHz Center Free 2.48000000 CHz Center Free 2.4800000 CHz Center Free CHZ CHZ CHZ CHZ CHZ CHZ CHZ CHZ	
Center Freq 515.00000 MHz	Start Freq           30.00000 MHz           Start Freq           30.000000 MHz           CF Step           97.00000 MHz           Man           Freq Offset           0 Hz           Scale Type	322       30000 Hel         323       State Type         324       State Type         325       State Type         326       State Type         327       State Type Hell         328       Mel         329       State Type         320       State Type         321       State Type         322       State Type         323       State Type         324       State Type         325       State Type         326       State Type	2.17820000 GH 2.8078000 CH 2.8078000 CH 2.80780000 CH 2.807800000 CH 2.807800	Center Freq 248000000 Officer Ref 247 9 00 Ref 247 9 000	Image: Solution of the second seco	Center Freq 2.48000000 Chiz     Freq Chiz     Center Freq 2.4800000 Chiz     Freq	
Center Freq 515.000000 MHz       Trig: Free Run FGainLow       Maxet Type: Ruls AvgType: Ruls AvgType: Ruls AvgType: Ruls AvgType: Ruls Del Prequency       Hart Rect Type Rule Type Del Prequency         Reconserved Bildiv       Reconserved Reconserv	Start Freq           30.00000 MHz           Start Freq           30.000000 MHz           CF Step           97.00000 MHz           Man           Freq Offset           0 Hz           Scale Type	302       All and	2.7520000 0HH 2.0070000 TH 2.0070000 TH 2.00700000 TH 2.0070000 TH 2.007000000 TH 2.00700000 TH 2.0070000 TH 2.0070000 T	Center Freq 2.48000000 CHz Marken Ball Mark 2.479 877 GHz Auto Ture Ref Chat 57 GHz Ref C	Image: State in the state	Defer Freq 24.800000 OFF Records 37 6 B MMT 2.4787 OFF 4.00 Turk FC (76:37 6 B FC (76:37 6 B) FC (76:37 6 B FC (76:37 6	
Center Freg 515.00000 MHz	Start Freq           30.00000 MHz           Start Freq           30.000000 MHz           CF Step           97.00000 MHz           Man           Freq Offset           0 Hz           Scale Type	01       2000000000000000000000000000000000000	2.7520000 0H 2.8070000 H 2.8070000 H 2.807000 H 2.80000 H 2.80000 H 2.80000 H 2.80000 H 2.80000 H 2.80000 H 2.80000 H 2.80000 H 2.8000	Center Prog 2.48000000 0Hz Real No. 2010 Prof 2013 9 80 Prof 2013 9 80 Pro	Auto Ture Ref 27.79 dBm Ref 27.79	Denter freq 24800000 Here Received with a service and	
0.21  Start Freq 2.479250000 GHz    10.2  Stop Freq 2.48075000 GHz				Center Freq 2.480000000 GHz         #Avg Type: RMS         TRACE[]: 24 5 6           NFE PNO: Wide	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 29.79 dBm         4.777 dBm         Center Freq	Eventer Freq 2.480000000 GHz       #Avg Type: RMS       Avg Hold: 100/100       Trig: Free Run       Avg Hold: 100/100       Mkr1 2.479 997 0 GHz       Log       Center Freq	
0.21     Start Freq 2.479250000 GHz       10.2     Stop Freq 2.48075000 GHz				Center Freq 2.480000000 GHz         #Avg Type: RMS         Tracelly 3.4.5.6           NFE PPON Wide	Ref Offset 9.79 dB     Mkr1 2.479 997 0 GHz       10 dB/div     Ref 29.79 dB	Avog Type: RMS     Trig: Free Run MrE     PNO: Wide IFGsimLow     Trig: Free Run AvgHold: 100/100     Trig: Free Run Verif P P P P P       Ref Offset 3.79 dB     Mkr1 2.479 997 0 GHz       Log       Log       Center Freq 2.480000000 GHz       Mkr1 2.479 997 0 GHz       Auto Tune       Log       Center Freq	
10.21 10.2				Center Freq 2.480000000 GHz     #Avg Type: RMS     Tracel: 13.4.5.6       NFE Photo: Wide	Ref 29.79 dB     Mkr1 2.479 997 0 GHz       10 dB/dliv     Ref 29.79 dB	Center Freg 2.480000000 GHz     #Avg Type: RMS     Trace III 34 5 6       NFE     PNO: Wide       NFE PNO: Wide       Frig: Free Run       Avg Type: RMS       Avg Type: RMS       Avg Type: RMS       Ref Offset 9.79 dB       Mkr1 2.479 997 0 GHz       Auto Tune       10 dbldiv     Ref 29.79 dBm       4.777 dBm	
979 421 102 000 102 000 000 000 000 0	Start Freq	979		Center Freq 2.480000000 GHz     #Avg Type: RMS     Tracel: 13.4.5.6       NFE Photo: Wide	Ref 29.79 dB     Mkr1 2.479 997 0 GHz       10 dB/dliv     Ref 29.79 dB	Center Freg 2.480000000 GHz     #Avg Type: RMS     Trace III 34 5 6       NFE     PNO: Wide       NFE PNO: Wide       Frig: Free Run       Avg Type: RMS       Avg Type: RMS       Avg Type: RMS       Ref Offset 9.79 dB       Mkr1 2.479 997 0 GHz       Auto Tune       10 dbldiv     Ref 29.79 dBm       4.777 dBm	
198     2.48000000 GHz       979     1       0.21     3       10.2     3       10.2     3       10.2     3       10.2     3       10.2     3       10.2     3       10.2     3       10.2     3	2.480000000 GHz Start Freq	19.8 2.48000000 GHz	19.8 2.49000000 GHz	Center Freq 2.480000000 GHz         #Avg Type: RNS         TRACE[]: 3 4 5 6           NFE Photo Wide - Trig: Free Run IFGainLow         Trig: Free Run #Atten: 30 dB         Trig: Free Run Avg[Hold: 100/100         Trig: Free Run Perf PFPPP           Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz           Auto Tune 4.777 4Bm	Ref Offset 979 dB         Mkr1 2.479 997 0 GHz           10 dB/div         Ref 279 dB         4.777 dB	Every Type: RMS     Tag: Free Run IFG aimLow     Trig: Free Run IfG aimLow     Trig: Free Run Avg Hold: 100100     Trig: Free Run Very PP PP P       Ref Offset 9.79 dB       10 dB/div     Ref Offset 9.79 dB     Mkr1 2.479 997 0 GHz	
Log         Center Freq           19.8         2.48000000 GHz           9.79         31           0.21         31           10.2         31           10.2         31           10.2         31	2.480000000 GHz Start Freq	Log         Center Freq           19.8         2.48000000 GHz           979         1	Log         Center Freq           19.8         2.48000000 GHz	Center Freq 2.480000000 GHz #Avg Type: KNS TRACE[]:3456 NFE PN0: Wide + Trig: Free Run Avg[Hold: 100/100 Type[Wwwww #Atten: 30 dB per/PPPPP	IFLC INDUCTION #Atten: 30 dB DETIPPPPP	Center Freq 2.480000000 GHz NFE PNO: Wide → Trig: FreeRun Avg[Hold: 100/100 Tree[Wwwww IFGainLow #Atten: 30 dB	
Ref Offset 379 dB         Mixt 2.479 dBm           10 dB/d/v         Ref 29.79 dBm         4.777 dBm           198	Center Freq 2.48000000 GHz Start Freq	Ref Offset 373 dB         Hint 1 2.473 Shi 7 dBn           Log         4.777 dBn           198         2.48000000 GHz           379         1	Ref Offset 3.73 dB         4.777 dB           10 dB/div         Ref 29.79 dBm         4.777 dBm           19.8         Center Freq         2.480000000 GHz	Center Freq 2 480000000 GHz #Avg Type: RMS TRACE 1 2 3 4 5 6		Center Freq 2 48000000 GHz #Avg Type: RMS TRACE 1 2 3 4 5 6	
Ref Offset 3.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dB/div         Ref 0ffset 3.79 dB         4.777 dB         Center Freq           138	Center Freq 2.48000000 GHz Start Freq	Ref Offset 9.79 dB         Mkr1 2.479 997 0 GHz         Auto Tune           10 dBl/div         Ref 29.79 dBm         Center Freq         2.480000000 GHz           19 8         9.79         1         1         1         1         1	Net Offset 379 dB     Mkr1 2.479 997 0 GHz       10 dB/div     Ref 29.79 dB       19.8     Image: Constraint of the second s		R L RF 50.0 DC SDISE:DVT ALLGN AUTO 61:07:48 PM May 52, 02.00 Caster Even 2 400000000 CHz #Ave Twee DAS T TRAFFLOR 24.5 Frequency		



#### REPORT No.: 4789485754-5 Page 110 of 114

						00 400	~ ~ ~ ~	- ~ ~			
				DH5	Ant1_24	80 100	0~265	500			
	Keysight Spe	ectrum Analyzer								- 3 - 3	
0	RL	RF 5	0Ω DC		SENSE:II		ALIGN AUTO	01:08:16 PM	4 May 25, 2020		
C	enter F	req 13.75	0000000	GHz	Trin Free Do	#Avg Typ	e:RMS	TRAC	E 1 2 3 4 5 6 E M WWWW	Frequency	
			NFE I	PNO: Fast ↔ FGain:Low	Trig: Free Run #Atten: 10 dB	Avg Hold	10/10	DE	PPPPP		
-				Gameon			Mket	1 2 5 2 1	70 GHz	Auto Tune	
		Ref Offset	9.79 dB				WINI	-55 9	76 dBm		
1	0 dB/div .og	Ref 9.79	abm					-00.0			
					I I					Center Freq	
	121									13.75000000 GHz	
	0.21									13.750000000 GHZ	
-	10.2								DL1 -15.22 dBm	Start Freq	
									COLUMN STREET	1.000000000 GHz	
-	20.2									1.00000000 GH2	
4	30.2									Stop Freq	
										26.500000000 GHz	
-	40.2									20.0000000000000	
	50.2									CF Step	
		)'								2.55000000 GHz	
	an 2									<u>Auto</u> Man	
4	~~									L	
		4			1	ليس ور ان	المرالية والمراجع	فللمتع أودارهم وأنتلا	Nicket AV	Freq Offset	
-	70.2		hand the state of the	i yii i taqal ta	A salat solution	The second s	and to shake the loss	and the second	find you have the state	0 Hz	
		<b>1</b> 4 141	and the second	e la sestira a la	Intellisten stat						
4	80.2									0	
										Scale Type	
					A			Stop 2	6.50 GHz	Log <u>Lin</u>	
	tart 1 00	CH2									
s	tart 1.00 Res BW	GHz 100 kHz		#VBW	/ 300 kHz	s	ween 939	8 fi ms (3	0001 nts)		
#	Res BW	GHz 100 kHz		#VBW	/ 300 kHz	s	weep 938	8.0 ms (3	0001 pts)		
#	tart 1.00 Res BW	GHz 100 kHz					STATUS	8.0 ms (3	0001 pts)		
#	Res BW	GHz 100 kHz	3				STATUS	8.0 ms (3	0001 pts)		
# 	Res BW	100 kHz				s 402_0~F	STATUS	8.0 ms (3	0001 pts)		
# 	Res BW sg Keysight Spe RL	100 kHz ectrum Analyzer RF 5	Swept SA 0 Ω DC	DH5_		402_0~F	STATUS Refere	8.0 ms (3 ENCE	0001 pts)		
# 	Res BW sg Keysight Spe RL	100 kHz ectrum Analyzer RF 5	Swept SA 0 Ω DC   0000000 G	DH5_	Ant1_2	402_0~F		8.0 ms (3 ENCE	0001 pts)		
# 	Res BW sg Keysight Spe RL	100 kHz ectrum Analyzer RF 5	- Swept SA 0 Ω DC   0000000 G NFE F	DH5_	Ant1_2	402_0~F		8.0 ms (3 ENCE	0001 pts)	Frequency	
# 	Res BW sg Keysight Spe RL	100 kHz setrum Analyzer RF 5 req 2.402	Swept SA 0 Ω DC   0000000 G NFE F II	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE	0001 pts)	Frequency	
# 	Keysight Spa RL Center F	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F		8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency	
# 	Res BW sg Keysight Spe RL	100 kHz setrum Analyzer RF 5 req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency	
# 	Keysight Spe RL Center Fi	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune	
#  C  1	Keysight Spe RL Center Fi	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency	
#  C  1	Res BW sc	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune	
# 	Res BW sc	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune	
# 	Res BW ss ss Keysight Spe RL Center Fr 0 dB/div	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 0 DC 0000000 G NFE F II 9.79 dB	BDH5_ Hz ™O: Wide →	Ant1_2	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq	
# 	Res BW ss ss Keysight Spe RL Center Fr 0 dB/div	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 Ω DC 000000 G NFE F 10 9.79 dB 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune Center Freq 2.40200000 GHz	
# 	Res BW ss ss Keysight Spe RL Center Fr 0 dB/div	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq	
#  С  1  1  1  1  1  1  1  1  1 	Res BW sc sc Resident Spr RL Center Fr O dB/div og 9.79 2.21	100 kHz ectrum Analyzer RF S req 2.402	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	BDH5_ Hz ™O: Wide →	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere Align Auto e: RMS 100/100	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz Start Freq 2.401250000 GHz	
#  С  1  1  1  1  1  1  1  1  1 	Res BW ss ss Keysight Spe RL Center Fr 0 dB/div	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz Stop Freq	
# 	Res BW           sc           R cysight Spidt	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz Start Freq 2.401250000 GHz	
# 	Res BW sc sc Resident Spr RL Center Fr O dB/div og 9.79 2.21	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz Stop Freq	
#       	Res BW           So           Reventor           RL           Center Fr           0 dB/div           9           9           19.8           9.79           0.21           10.2           20.2	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz 2.401250000 GHz 2.402750000 GHz	
#       	Res BW           sc           R cysight Spidt	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCE 01:10:46 PM TRAC TYP DE 402 088	0001 pts)	Frequency Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz Stop Freq 2.402750000 GHz CF Step 150.000 KHz	
# 	Res BW           So           Representation           Rt	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz Start Freq 2.401250000 GHz Stop Freq 2.402750000 GHz	
# 	Res BW           So           Reventor           RL           Center Fr           0 dB/div           9           9           19.8           9.79           0.21           10.2           20.2	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz Stop Freq 2.402750000 GHz CF Step 150.000 KHz	
# 	Res BW           So           Representation           Rt	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 2.402750000 GHz CF Step 150.000 KHz Auto Man	
# بر د د د د د د د د د د د د د د د د د د	Res BW           So           Representation           Rt	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz 2.401250000 GHz 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 150.000 KHz Auto Man Freq Offset	
# بر د د د د د د د د د د د د د د د د د د	Res BW           sc           sc           center Fi           0 dB/div           98           979           921           922           923           924           925           927           928           929	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 2.402750000 GHz CF Step 150.000 KHz Auto Man	
# 	Res BW           sc           sc           center Fi           0 dB/div           98           979           921           922           923           924           925           927           928           929	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz 2.401250000 GHz 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 150.000 KHz Auto Man Freq Offset	
# 	c         Keynight Space           SG         Image: Space           C         Center Fi           0         dBldiv           9         Image: Space           10         2	too kHz ctrum Analyzer RF 5 req 2.402 Ref Offset Ref 29.7	Swept SA 0 Ω DC 000000 G NFE I 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 COCC 01:10:46 PM TRAC TVP DE 402 088	0001 pts)	Frequency Auto Tune 2.40200000 GHz 2.401250000 GHz 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 150.000 KHz Auto Man Freq Offset	
н н н н н н н н н н н н н н	Res BW           sc           transfer Spring Spring           0 dB/div           9           19.0           19.0           10.2	too kHz schum Analyzer № 5 req 2.402 Ref 0ffset Ref 29.7 M	- Seept SA 0 2 BC 0 2 BC NFE f 1 9.79 dB 9 dBm	Hz PNC: Wide + FGainLow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB	402_0~F	STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 PINCE 011040PP 101040PP 101040PP 101040PP 101040PP 101040PP 101040PP 101040PP 101040PP 101040PP	0001 pts)	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 150,000 HHz Auto Man Freq Offset 0 Hz Scale Type	
	Res BW           science           science           control	100 kHz strum Analyzer RF ⊆ E Ref 2.402 Ref 2.402 A Ref 29.7 A A A A A A A A A A A A A	- Seept SA 0 2 BC 0 2 BC NFE f 1 9.79 dB 9 dBm	BDH5_ Hz NO: Wide → FGaint.ow	Ant1_2		status Refere e: RMS 100100 Mkr1 2.	8.0 ms (3 PICCE 01:10-45 PF TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE TRACE	4May 25, 2020 E 1 3 4 5 6 E 1 3 4 5 6 F 7 4 5 6 F 7 4 5 6 F 7 4 5 7 F 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 150,000 HHz Auto Man Freq Offset 0 Hz Scale Type	
	Res BW           science           science           control	too kHz schum Analyzer № 5 req 2.402 Ref 0ffset Ref 29.7 M	- Seept SA 0 2 BC 0 2 BC NFE f 1 9.79 dB 9 dBm	BDH5_ Hz NO: Wide → FGaint.ow	Ant1_2 SENSE:IT Trig: Free Run #Atten: 30 dB		STATUS Refere ALIGN AUTO E: RMS 100/100 Mkr1 2.	8.0 ms (3 PICCE (01:10-45 PP TRACE T	4May 25, 2020 E 1 3 4 5 6 E 1 3 4 5 6 F 7 4 5 6 F 7 4 5 6 F 7 4 5 7 F 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7 4 7	Frequency Auto Tune Center Freq 2.40200000 GHz Start Freq 2.401250000 GHz 2.401250000 GHz 2.402750000 GHz 150,000 HHz Auto Man Freq Offset 0 Hz Scale Type	



## REPORT No.: 4789485754-5 Page 111 of 114

			3178	5 ADT	1_2402_					
_				0_/ 410		00~10	00			
	Spectrum Analyzer RF			SENS	INT	ALIGN AUTO	01:10:51 P	M May 25, 2020		
Center	Freq 515.	000000 MI	Hz PNO: Fast ↔ IFGain:Low		#Avg T tun Avg Ho	ype: RMS ld: 10/10	TRAC	DE 1 2 3 4 5 6 PE M ET P P P P P P	Frequency	
10 dB/div	Ref Offse Ref 9.79	t 9.79 dB	IFGain:Low	#Atten: To t	10	ľ	Vkr1 52	.02 MHz 29 dBm	Auto Tune	
Log	Kei 9.73	JUBIII							Center Freq	
-0.21									515.000000 MHz	
-10.2								0L1 -17.25 dBm	Start Freq 30.000000 MHz	
-20.2									30.00000 MH2	
-30.2									Stop Freq 1.00000000 GHz	
-40.2									CF Step	
-60.2									97.000000 MHz <u>Auto</u> Man	
-70.2	1								Freq Offset	
-80.2	ad balandal	an and da	und pality	his yadad	ing kang kang pangan di	an daring barre	delegator Andread		0 Hz	
tie	anther plants	ethory and a second	a that	hi ni na bokuna	han parti har f	alter alter alter			Scale Type	
	0000 011									
Start 0.0 #Res Bi	0300 GHz N 100 kHz		#VBW	/ 300 kHz		Sweep 36	6.00 ms (3	0000 GHz 30001 pts)	Log <u>Lin</u>	
 Start 0.0	0300 GHz W 100 kHz					STATUS	5.00 ms (3 s	0000 GHz 30001 pts)		
Start 0.0 #Res Bi	W 100 kHz				2402_10	STATUS	5.00 ms (3 s	0000 GHz 80001 pts)		
Start 0.0 #Res Bit MSG Keysight	W 100 kHz	r - Swept SA				status 000~26	5.00 ms (3 s 6500	30001 pts)		
Start 0.0 #Res Bl	N 100 kHz	- Swept SA 50 Ω DC 50000000 NFE	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS	5.00 ms (3 s 5500 01:11:15 P TRAC	May 25, 2020		
Start 0.4 #Res Bl	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ ghz	_Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MMay 25, 2020 E 1 2 3 4 5 6 M M P P P P P 95 GHz		
 Start 0.0 #Res Bl	N 100 kHz Spectrum Analyzer RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MMay 25, 2020 2E 1 2 3 4 5 6 P P P P P P P	Frequency Auto Tune	
Start 0. #Res Bi MSG RL Center	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MMay 25, 2020 E 1 2 3 4 5 6 M M P P P P P 95 GHz	Frequency	
Start 0.4 #Res B\ Msg Msg Keysight Center 10 dB/div Log -0.21	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MMay 25, 2020 E 1 2 3 4 5 6 M M P P P P P 95 GHz	Frequency Auto Tune 13.75000000 GHz Start Freq	
Start 0.1 #Res B) uss Res B) uss RL Center 10 dB/div -0.21 -10.2 -20.2	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MHay 25, 2020 # 1 2 3 4 5 6 # 1 2	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz	
Start 0.1 #Res B) MsG MsG RL Center 10 dB/div -0.21 -10.2 -20.2 -30.2	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MHay 25, 2020 # 1 2 3 4 5 6 # 1 2	Frequency Auto Tune 13.75000000 GHz Start Freq	
Start 0.1 #Res B) uss Res B) uss RL Center 10 dB/div -0.21 -10.2 -20.2	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MHay 25, 2020 # 1 2 3 4 5 6 # 1 2	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 26.50000000 GHz CF Step	
Start 0.1 #Res Bi Msa Sa RL D dEldiv -0.2 -10.2 -30.2 -0.2	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MHay 25, 2020 # 1 2 3 4 5 6 # 1 2	Frequency Auto Tune Center Freq 13.750000000 GHz Start Freq 1.00000000 GHz Stop Freq 26.50000000 GHz	
L Center 10 dB/dfv -102 -02 -0	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	STATUS 000~26 ALIGN AUTO ype: RMS Id: 10/10	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MHay 25, 2020 # 1 2 3 4 5 6 # 1 2	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 25.50000000 GHz	
Start 0.1           #Res Bit           uss           Max           Center           10 dB/dlv           -02           -03           -03           -03	N 100 kHz Spectrum Analyzee RF Freq 13.7: Ref Offse	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	ALICA AUTO ALICA AUTO MRT	5.00 ms (3 s 6500 01:11:15 P TRAC TY D r1 2.399	MHay 25, 2020 # 1 2 3 4 5 6 # 1 2	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 25.5000000 GHz CF Step 2.55000000 GHz Auto Man Freq Offset 0 Hz	
Start 0.1           #Res Bit           mss           Image: Start 0.1           Image: Start 0.1      <	Spectrum Analyzes	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PN0: Fast →	Ant1	2402_10	ALICA AUTO ALICA AUTO MRT	5.00 ms (3 s 5500 (011115 P 1784 1784 1784 1784 1784 1784 1784 1784	MMay 25, 2020 EE [12:3 + 5 6 EI 21:3 + 5 6 M May 25, 2020 EE [12:3 + 5 6 M May 25, 2020 EI 21:3 + 5 6 M May 25, 2020 EI 21:3 + 5 6 M May 25, 2020 EI 21:3 + 5 6 EI 21:5 + 5 6 EI 21:5 + 5 6	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 2.55000000 GHz CF Step 2.55000000 GHz Man Freq Offset	
Start 0.0     #Res Bl     #Res Bl	Spectrum Analyzes	r - Swept SA 50 Ω DC   500000000 NFE t 9.79 dB	3DH5_ GHz PNO: Fast → IFGainLow	Ant1	2402_1(	ALICA AUTO ALICA AUTO MRT	5.00 ms (3 s 5500 (011115P TRAG TRAG TRAG TRAG TRAG TRAG TRAG Stop 2	MMay 25, 2020 E 1 2 3 4 5 6 E 1 3	Frequency Auto Tune Center Freq 13.75000000 GHz Start Freq 1.00000000 GHz Stop Freq 25.50000000 GHz Auto Man Freq Offset 0 Hz Scale Type	



## REPORT No.: 4789485754-5 Page 112 of 114

			3	DH5_	Ant1	<u>24</u> 41	I_0~R	etere	ence		
		ectrum Analyzer - Sv	wept SA								- 2 💌
20	RL	RF 50 S	Ω DC		SEN	SE:INT	A	IGN AUTO	01:16:26 PM	M May 25, 2020	Frequency
C	enter F	req 2.4410	00000 GI	HZ NO:Wide ↔	Trig: Free	Run	#Avg Type Avg Hold:	100/100	TYP	E 1 2 3 4 5 6	
			IF	NO: Wide ↔ Gain:Low	#Atten: 30	dB				T P P P P P P	
		Ref Offset 9.	79 dB					Mkr1 2.	.441 00	9 0 GHz	Auto Tune
10	) dB/div		dBm						4.2	29 dBm	
L.											
10	9.8										Center Freq 2.441000000 GHz
											2.44100000 0H2
9.	.79					.1					
						2					Start Freq
-0.	.21			A	A AN	M	Α.				2.440250000 GHz
		. A	man	huber	Mr W . A	1 .2	when	www	Wr. n		
-10	0.2	Nor							100 March		Stop Freq
		p <sup>M</sup>								m	2.441750000 GHz
-20	0.2	4								- M	2.441730000 0112
	M									4	
-30	0.2										CF Step 150.000 kHz
											Auto Man
-4(	0.2										
											Freq Offset
-50	0.2										0 Hz
-60	0.2										Coole Trme
											Scale Type
C	enter 2.4	4410000 GH	iz						Span 1	.500 MHz	Log <u>Lin</u>
#F	Res BW	100 kHz		#VB₩	í 300 kHz		S	weep 1	.000 ms (	1001 pts)	
MSG	G							STATUS			
				3DH	5 Ant	1 24	41_30	)~10	00		
	_										
1111	Keuright Spa	ectrum Analyzer - Sv	Mart SA				00	10	00		
()20	RL	ectrum Analyzer - Sv RF 50 S	Ω DC			SE:INT	A	LIGN AUTO	01:16:31 P	MMay 25, 2020	Ereguerer
()()	RL	RF 50 S RF 50 S	DC 0000 MH	Z	SEN	SE:INT	Al #Avg Type	IGN AUTO	01:16:31 P	M May 25, 2020 E 1 2 3 4 5 6 E M	
()()	RL	RF 50 \$			SEN	SE:INT	A	LIGN AUTO : RMS 10/10	01:16:31 PI TRAC TYF DE	E 1 2 3 4 5 6 E M WWWWWW T P P P P P P	Frequency
()20	RL	RF 50 € Treq 515.00	Ω DC 0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 M P P P P P P 05 MHz	Frequency
	enter Fi	RF 50 \$	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 E M WWWWWW T P P P P P P	Frequency
	enter F	RF 50 5 7req 515.00 Ref Offset 9.	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 M P P P P P P 05 MHz	Frequency Auto Tune
0 C 10 Lo	enter Fi	RF 50 5 7req 515.00 Ref Offset 9.	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 M P P P P P P 05 MHz	Frequency Auto Tune Center Freq
	enter Fi	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 M P P P P P P 05 MHz	Frequency Auto Tune
00 Ci 10 Lo	enter Fi	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 M P P P P P P 05 MHz	Frequency Auto Tune Center Freq
0 C1 10 L0	enter Fi	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq
0 Cr 10 -0. -10	enter Fi	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	E 1 2 3 4 5 6 M P P P P P P 05 MHz	Frequency Auto Tune Center Freq 515.000000 MHz
10 10 -0.	RL   enter Fi 0 dB/div 0 g 1.21	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq
20 10 -0. -10 -10 -10 -10 -10 -10 -10	RL       enter Fi       0 dB/div       0 g       .21       0.2       0.2	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq 30.00000 MHz
10 10 10 10 10 10 10 10 10 10 10 10 10 1	RL   enter Fi 0 dB/div 0 g 1.21	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz 30.00000 MHz Start Freq Stop Freq
10 10 	RL         Image: Constraint of the second seco	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq 30.00000 MHz
10 10 -0 -10 -30 -30	RL         Image: Constraint of the second seco	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz Start Freq 30.00000 MHz Stop Freq 1.00000000 GHz
-23 -23 -24 -24 -24 -24 -24 -24 -24 -24 -24 -24	RL         Image: Constraint of the second seco	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz 30.00000 MHz Start Freq 1.00000000 GHz CF Step
10 10 -0 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	RL         Image: Constraint of the second seco	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           1.00000000 GHz           CF Step           97.000000 MHz
20 10 10 10 10 10 10 10 10 10 10 10 10 10	RL         Image: Constraint of the second seco	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           1.00000000 GHz           CF Step           97.000000 MHz
10 10          -	RL         Image: Constraint of the second seco	RF 50 5	0000 MH NFE P IF	Z PNO: Fast →	SEN	SE:INT	Al #Avg Type	LIGN AUTO : RMS 10/10	01:16:31 PM TRAC TYP DE <b>1kr1 52.</b>	05 MHz 87 dBm	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 GHz           CF Step           97.00000 GHz
2000 	RL         Image: Constraint of the second seco	Ref Offset 9.	2 DC 00000 MH NFE P IF 79 dB Bm	Z NO: Fast → Gain:Low	SEN Trig: Free #Atten: 10	SE:INT Run dB	Avg Type Avg Hold:		01:16:31 PT TRAC TYP 1kr1 52. -72.5	21 2 2 4 5 6 MM TP P P P P P 05 MHz 87 dBm	Frequency Auto Tune Center Freq 515.00000 MHz 30.00000 MHz Stop Freq 1.00000000 GHz CF Step 97.00000 MHz Auto Man Freq Offset
4 10 10 11 11 11 11 11 11 11 11 11 11 11	RL         enter Fi           0 dB/div         0           0 g <td>Ref Offset 9.</td> <td>2 DC 00000 MH NFE P IF 79 dB Bm</td> <td>Z NO: Fast → Gain:Low</td> <td>SEN Trig: Free #Atten: 10</td> <td>SE:INT Run dB</td> <td>Avg Type Avg Hold:</td> <td></td> <td>01:16:31 PT TRAC TYP 1kr1 52. -72.5</td> <td>21 2 2 4 5 6 MM TP P P P P P 05 MHz 87 dBm</td> <td>Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 GHz           CF Step           97.00000 GHz</td>	Ref Offset 9.	2 DC 00000 MH NFE P IF 79 dB Bm	Z NO: Fast → Gain:Low	SEN Trig: Free #Atten: 10	SE:INT Run dB	Avg Type Avg Hold:		01:16:31 PT TRAC TYP 1kr1 52. -72.5	21 2 2 4 5 6 MM TP P P P P P 05 MHz 87 dBm	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 GHz           CF Step           97.00000 GHz
4 10 -0 -11 -11 -11 -11 -11 -11 -11 -11 -	RL         enter F           0 dB/div         02           02         02           02         02           02         02           02         02           02         02           02         02           02         02           02         02           02         02	RF   901 reg 515.00 Ref 0ffset 9. Ref 9.79 d	79 dB Bm	Z NO: Fast → GainLow	Sen	SE-INT		IGN AUTO	01:16:31 PM TRAC TYP <b>1kr1 52.</b> -72.5	212 2 3 4 5 6 MM2100 TP P P P P P 05 MHz 87 dBm DL1-1527 dBe	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           97.000000 MHz           Man           Freq Offset           0 Hz
4 10 -0 -11 -11 -11 -11 -11 -11 -11 -11 -	RL         enter F           0 dB/div         02           02         02           02         02           02         02           02         02           02         02           02         02           02         02           02         02           02         02	Ref Offset 9.	79 dB Bm	Z NO: Fast → GainLow	Sen	SE-INT		IGN AUTO	01:16:31 PM TRAC TYP <b>1kr1 52.</b> -72.5	212 2 3 4 5 6 MM2100 TP P P P P P 05 MHz 87 dBm DL1-1527 dBe	Frequency Auto Tune Center Freq 515.00000 MHz 30.00000 MHz Stop Freq 1.00000000 GHz CF Step 97.00000 MHz Auto Man Freq Offset
4 10 10 11 11 11 11 12 12 12 12 12 12 12 12 12	RL         RL           dB/dlv         0           0.2         0.2           0.2         1.2           0.3	Ref Offset 9. Ref Offset 9. Ref 9.79 d	79 dB Bm	Z NO: Fast → GainLow	Sen	SE-INT		IGN AUTO	(0:163) 91 (0:163) 91	201-1577 dBm	Frequency Auto Tune Center Freq 515.00000 MHz 30.00000 MHz 30.000000 MHz 30.000000 GHz 1.00000000 GHz 1.0000000 GHz CF Step 97.00000 MHz Auto Man Freq Offset 0 Hz Scale Type
2 10 10 10 10 10 10 10 10 10 10 10 10 10	RL         RL           dB/div         gg           02         gg           03         gg           04         gg           14         gg	Ref Offset 9. Ref Offset 9. Ref 9.79 d	79 dB Bm	Z NO: Fast → GainLow	Sen	SE-INT	Avg Type Avg Hold:	ION AUTO	(01:16:3) 91 7826 1785	212 2 3 4 5 6 MM2100 TP P P P P P 05 MHz 87 dBm DL1-1527 dBe	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           97.00000 MHz           Man           Freq Offset           0 Hz           Scale Type           Log         Lin
2 10 10 10 10 10 10 10 10 10 10 10 10 10	RL         Electric           otB/div         0           0	Ref Offset 9. Ref Offset 9. Ref 9.79 d	79 dB Bm	Z NO: Fast → GainLow	SEN Trig: Free EAtten: 10	SE-INT	Avg Type Avg Hold:	ION AUTO	011631 81 81 104 104 105 105 105 105 105 105 105 105	E 1 23 4 5 6 H 2 24 5 6 H 2	Frequency           Auto Tune           Center Freq           515.00000 MHz           Start Freq           30.00000 MHz           Stop Freq           97.00000 MHz           Man           Freq Offset           0 Hz           Scale Type           Log         Lin



## REPORT No.: 4789485754-5 Page 113 of 114

			3D	DH5 .	Ant1_	2441	100	0~26	500			
Keysight	t Spectrum Ana	nalyzer - Swept				-					- 2 🗾	
💢 RL	RF	50 Ω	DC		SEN	E:INT	A	IGN AUTO	01:16:55 PM	4 May 25, 2020		
Center	Freq 13	3.75000	0000 GH	z	Tria: Free	Dum	#Avg Type Avg Hold:	RMS	TRAC	E 1 2 3 4 5 6 E M T P P P P P P	Frequency	
		NF	E PNO	): Fast +++	Trig: Free #Atten: 10	kun dB	Avg Hold:	10/10	DE	PPPPPP		
			li Ga	III.LOW				Milen		45 GHz	Auto Tune	
	Ref O	Offset 9.79	dB					WIKE	57.2	45 GHZ 24 dBm		
10 dB/div Log	Refs	9.79 dBn	n						-07.0	24 UDIII		
203												
											Center Freq	
-0.21	1										13.75000000 GHz	
-10.2												
										DL1 -15.77 dBm	Start Freq	
-20.2											1.00000000 GHz	
-30.2												
											Stop Freq	
-40.2											26.50000000 GHz	
-40.2												
											CF Step	
-50.2											2.55000000 GHz	
	🔶 🕴										<u>Auto</u> Man	
-60.2		_										
										Stanit Parts	Erer Offer	
-70.2	1. A.	ير الم	استانه وراهروا	استاسيا	hindes of		and the second second	handle	up hu hu	and the second	Freq Offset	
1			and the second second	anish distant	and the second	and the second second		a the state of the	hereard ward		0 Hz	
-80.2		F - F -	<b>T</b>									
-00.2											Scale Type	
											ocule Type	
Start 1.	00 GHz								Stop 2	6.50 GHz	Log <u>Lin</u>	
#Res B	W 100 ki	Hz		#VBW	300 kHz		SV	veep 938	B.0 ms (3	0001 pts)		
MSG												
MSG								STATUS				
MSG			3D	)H5_/	Ant1_	2480	_0~R	STATUS				
	t Spectrum Ana	nalyzer - Swept		0H5_/	Ant1_	2480	_0~R	STATUS				
Keysight	t Spectrum Ana	nalyzer - Swept 50 Ω	SA DC		Ant1_	E:INT	A	STATUS Cefere	01:19:28 PM	1May 25, 2020		
Keysight	r Freq 2.	.480000	SA DC 000 GHz		SENS	E:INT	A #Avg Type	STATUS Cefere	01:19:28 PM	1May 25, 2020		
Keysight	RF Freq 2.	nalyzer - Swept 50 Q .4800000 NF	SA DC 000 GHz		SENS	e:INT	A	STATUS Cefere	01:19:28 PM			
Keysight	Freq 2.	.480000	SA DC E PNO IFGai		SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE	1May 25, 2020 E 1 2 3 4 5 6 E M T P P P P P P		
Keysight () RL Center	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB	_	SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency	
Keysight	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB	_	SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E 1 2 3 4 5 6 E M T P P P P P P	Frequency	
Keysight (X) RL Center	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB		SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune	
10 dB/div	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB		SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq	
Keysight (X) RL Center	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB		SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune	
10 dB/dii	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB		SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq	
10 dB/div	Freq 2. Ref 0	.480000	SA DC TE PNO IFGai dB	_	SENS	e:INT	#Avg Type Avg Hold:	STATUS Cefere LIGN AUTO RMS 100/100	01:19:28 PM TRAC TYP DE 479 982	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq 2.46000000 GHz	
10 dB/div	Ref O Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq	
10 dB/dii	Ref O Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq 2.46000000 GHz	
10 dB/div	Ref O Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq	
10 dB/div	Ref 2	.480000 NF 29.79 dB	SA DC TE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz	
Center	Ref O Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.47925000 GHz Stop Freq	
Center	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	1May 25, 2020 E1 2 3 4 5 6 EM TP P P P P P 2 0 GHz	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz	
Keysight           Ø         RL           Center         10 dB/dit           19.8         -           9.79         -           -0.21         -	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.47925000 GHz Stop Freq	
Keysight           Ød         RL           Center         10 dB/div           19.8         -           9.79         -           -0.21         -           -10.2         -	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz Stop Freq 2.480750000 GHz CF Step	
Keysight           Ø         RL           Center         10 dB/dit           19.8         -           9.79         -           -0.21         -	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency           Auto Tune           Center Freq           2.48000000 GHz           Start Freq           2.479250000 GHz           Stop Freq           2.480750000 GHz           CF Step           150.000 KHz	
Image: Constraint of the second sec	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz Stop Freq 2.480750000 GHz CF Step	
Keysight           Ød         RL           Center         10 dB/div           19.8         -           9.79         -           -0.21         -           -10.2         -	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency           Auto Tune           Center Freq           2.48000000 GHz           Start Freq           2.479250000 GHz           Stop Freq           2.480750000 GHz           CF Step           150.000 KHz	
Image: Constraint of the second sec	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency           Auto Tune           Center Freq           2.48000000 GHz           Start Freq           2.480750000 GHz           Stop Freq           2.480750000 GHz           CF Step           150.000 KHz           Auto           Man	
Image: Constraint of the second sec	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Auto Man Freq Offset	
Image: Constraint of the second sec	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency           Auto Tune           Center Freq           2.48000000 GHz           Start Freq           2.480750000 GHz           Stop Freq           2.480750000 GHz           CF Step           150.000 KHz           Auto           Man	
Image: Construction of the second s	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Auto Man Freq Offset	
Image: Construction of the second s	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Man Freq Offset 0 Hz	
Image: Construction of the second s	Ref 2	.480000 NF 29.79 dB	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	01:19:28 PM TRAC TVP DE 479 982 2.64	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.479250000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Auto Man Freq Offset	
Image: Construction of the second s	Ref 2	.480000	SA DC EE PNO IFGai dB	t: Wide →- in:Low	SENS Trig: Free #Atten: 30	E:INT Run dB	Avg Type Avg Hold:	STATUS Refere	(11928P) TRACE 17802 47998; 2.6	4May 25, 2020 E 11 3 3 4 5 6 P P P P P P P 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.47925000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Man Freq Offset 0 Hz Scale Type	
Image: Construction of the second s		4480000 NF + 1379 - 137	SA DC EE PNO IFGai dB	K Wide →→	SENS Trig: Free #Atten: 30	E:INT Run dB	#Avg Type Avg/fold:	status Refere Idea Auto Miker 2.	80000 11192899 17400 1740 174000 174000 174000 174000 174000 174000 174000	4Мау 25, 2020 E [1 2 3 4 5 6 Минист тр Р Р Р Р Р Р 2 0 GHz 45 dBm	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.47925000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Man Freq Offset 0 Hz Scale Type	
Image: Construction of the second s	Freq 2.	4480000 NF + 1379 - 137	SA DC EE PNO IFGai dB	K Wide →→	SENA:	E:INT Run dB	#Avg Type Avg/fold:	status Refere Idea Auto Miker 2.	80000 11122899 11000 11000 11000 11000 11028 10000 11028 10000 11028 10000 10000 10000 10000 100 1000 1	4May 25, 2020 E[] 3 3 4 5 6 E[] 3 3 4 5 6 E] A 3 4 5 6 E]	Frequency Auto Tune Center Freq 2.48000000 GHz Start Freq 2.47925000 GHz Stop Freq 2.480750000 GHz CF Step 150.000 KHz Man Freq Offset 0 Hz Scale Type	



## REPORT No.: 4789485754-5 Page 114 of 114

 _	_					14 0	400.0	0 40	00	_		
				3DF	H5_An	it1_24	480_3	0~10	00			
		ctrum Analyzer				CANCE AND			01/10/22 0	NN 25, 2020	- 6 💌	
Cer	nter Fr	eq 515.0	0000000 P	MHz		ense:INT	#Avg Typ Avg Hold:	e:RMS	TRAI	M May 25, 2020 DE 1 2 3 4 5 6 PE M	Frequency	
_				PNO: Fast IFGain:Low	#Atten:	10 dB				ET PPPPP .34 MHz	Auto Tune	
10 c	dB/div	Ref Offset Ref 9.79	≀9.79 dB )dBm					an		35 dBm		
LUG											Center Freq	
-0.21	·										515.000000 MHz	
-10.2	2											
						<u> </u>				DL1 -17.36 dBm	Start Freq 30.000000 MHz	
-20.2	2	-	_								00.000000 mm 12	
-30.2	2					-					Stop Freq	
-40.2	2										1.00000000 GHz	
											CF Step	
-50.2	2					+					97.000000 MHz	
-60.2	2										<u>Auto</u> Man	
-70.2	,								<b>♦</b> <sup>1</sup>		Freq Offset	
	dist in	المرافع المراجع	يد الدر عالي	a han di kita mat	iliaid headdan	للمرج بافا الم	ور المراجعة المراجعة الم	allian dina	ar Jali II	and an interest	0 Hz	
-80.2	2 Lange have	-	Han berliker	unit in the state of the state	an Koley Josho	N (Status	and the second second	upok faid	na Marpi	(industry)(g	Scale Type	
					1.1.1		4 I.					
sta #Re	rt 0.030 es BW 1	100 GHZ 100 kHz		#VE	3W 300 kHz	z	s	weep 36	.00 ms (3	0000 GHz 30001 pts)		
MSG								STATUS				
				3DH5	5_Ant1	_248	0_100	0~26	500			
ш к	leysight Spec	ctrum Analyzer	r - Swept SA			CALCE ANT			01.40.55.0		- 2 -	
Cer	nter Fr	eq 13.75	5000000	0 GHz		ENSE:INT	#Avg Typ Avg Hold:	ALIGN AUTO e: RMS	TRA	M May 25, 2020 DE 1 2 3 4 5 6	Frequency	
			NFE	PNO: Fast IFGain:Low	#Atten:	10 dB	Avginolu.			PE M WWWWW ET P P P P P P		
		Ref Offset						Mkr	1 2.531	70 GHz 74 dBm	Auto Tune	
10 c Log	B/div	Ref 9.79	dBm			T			-00.2			
-0.21											Center Freq 13.75000000 GHz	
-10.2	2	-	-		-	+				DL1 -17.36 dBm	Start Freq	
-20.2	2	—	—	—						ser er ab adh	1.00000000 GHz	
-30.2												
-30.2	1										Stop Freq 26.50000000 GHz	
-40.2	2											
-50.2	2										CF Step 2.55000000 GHz	
-60.2		1									Auto Man	
-60.2										and the second second	En la francé	
-70.2	2	<u>wike</u>	a set we a	والم المالية الم	i den en fres	distant.		الوقيرين المتلكانة. موتحصه مع ألك	la sel per la presidir Instanti da secondari	Productor Party	Freq Offset 0 Hz	
-80.2	2		A series where		and a faith in the second	A CONTRACTOR OF	and the second second					
											Scale Type	
Sta	rt 1.00	GHz							Stop 2	6.50 GHz	Log <u>Lin</u>	
#Re MSG	es BW 1	100 KHZ		#VE	3W 300 kHz	z	S	weep 93		80001 pts)		

## **End of Report**