

TEST REPORT

Report No.:	BCTC2302299312E					
Applicant:	TRANSTYLE TECHNOLOGY CO., LIMITED					
Product Name:	Truly Wireless Earphones					
Model/Type reference:	TN10RH3	CHENZHA				
Tested Date:	2023-02-21 to 2023-02-27					
Issued Date:	2023-02-27					
She	nzhen BCTC Testing Co., Ltd.					
No.: BCTC/RF-EMC-007	Page: 1 of 80	Edition: A,5				



FCC ID:2ALN9-TN10RH3

Product Name:	Truly Wireless Earphones			
Trademark:	N/A			
Model/Type Reference:	TN10RH3 MZX5201,MZX5201-BLK, MZX5201-CGRY, MZX5201-ICY, MZX5201-PP, MZX5201-MT, MZX5201-RYB, MZX5201-EPNK, MZX5201-FGRN, MZX5201-BLK-STK-6, MZX5201-CGRY-STK-6, MZX5201-ICY-STK-6, MZX5201-PP-STK-6, MZX5201-MT-STK-6, MZX5201-RYB-STK-6, MZX5201-EPNK-STK-6, MZX5201-FGRN-STK-6			
Prepared For:	TRANSTYLE TECHNOLOGY CO., LIMITED			
Address:	Room 404, Gainian Kongjian Factory, Building B, No.32 Huimin 1st Road, Guihua community,Guanlan Street, Longhua District, Shenzhen, China			
Manufacturer:	TRANSTYLE TECHNOLOGY CO., LIMITED			
Address:	Room 404, Gainian Kongjian Factory, Building B, No.32 Huimin 1st Road, Guihua community,Guanlan Street, Longhua District, Shenzhen, China			
Prepared By:	Shenzhen BCTC Testing Co., Ltd.			
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China			
Sample Received Date:	2023-02-21			
Sample tested Date:	2023-02-21 to 2023-02-27			
Issue Date:	2023-02-27			
Report No.:	BCTC2302299312E			
Test Standards:	FCC Part15.247 ANSI C63.10-2013			
Test Results:	PASS			
Remark:	This is Bluetooth Classic radio test report.			

Tested by:

kelsey Ton

Kelsey Tan/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

Page: 2 of 80



Table Of Content

Test	Report Declaration Pa	ge
1.	Version	5
2.	Test Summary	6
3.	Measurement Uncertainty	7
4.	Product Information And Test Setup	
4.1	Product Information	
4.2	Test Setup Configuration	8
4.3	Support Equipment	
4.4	Channel List	
4.5	Test Mode	10
4.6	Table Of Parameters Of Text Software Setting	10
5.	Test Facility And Test Instrument Used	
5.1	Test Facility	
5.2	Test Instrument Used	11
6.	Conducted Emissions	
6.1	Block Diagram Of Test Setup	
6.2	Limit	
6.3	Test procedure	
6.4	EUT operating Conditions	
6.5	Test Result	
7.	Radiated emissions	
7.1	Block Diagram Of Test Setup	
7.2	Limit	
7.3	Test procedure	
7.4	EUT operating Conditions	
7.5	Test Result.	
8.	Radiated Band Emission Measurement And Restricted Bands Of Operation	
8.1	Block Diagram Of Test Setup	
8.2		24
8.3	Test procedure	
8.4	EUT operating Conditions	
8.5	Test Result	26
9.	Spurious RF Conducted Emissions	
9.1	Block Diagram Of Test Setup	27
02	-1 imit $\sim \sim \sim$	27
9.3	Test procedure Test Result	27
9.4	Test Result	28
10.	20 dB Bandwidth	49
10.1	Block Diagram Of Test Setup	49
10.2	Limit	49
10.3	Test procedure	49
10.4	Test Result	49
11.	Maximum Peak Output Power	
11.1	Block Diagram Of Test Setup	55
11.2	Limit	00 55
11.3		
11.4		55





Hopping Channel Separation	61
Block Diagram Of Test Setup	
Limit	61
Test procedure	61
Test Result	61
Number Of Hopping Frequency	67
Block Diagram Of Test Setup	67
Test procedure	67
Dwell Time	70
Block Diagram Of Test Setup	70
Test procedure	70
Test Result	70
Antenna Requirement	76
Limit	76
Test Result	76
EUT Photographs	77
EUT Test Setup Photographs	
	Block Diagram Of Test Setup Limit Test procedure Test Result Number Of Hopping Frequency Block Diagram Of Test Setup Limit Test procedure Test Result Dwell Time Block Diagram Of Test Setup Limit Test procedure Test procedure Test Result Antenna Requirement Limit Test Result Antenna Requirement Limit Test Result EUT Photographs

(Note: N/A Means Not Applicable)

No.: BCTC/RF-EMC-007

Page: 4 of 80

Edition: A,5

检



1. Version

Report No.	Issue Date	Description	Approved
BCTC2302299312E	2023-02-27	Original	Valid



Page: 5 of 80



2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	Conducted emission AC power port	§15.207	PASS
2	Conducted peak output power for FHSS	§15.247(b)(1)	PASS
3	20dB Occupied bandwidth	§15.247(a)(1)	PASS
4	Hopping channel separation	§15.247(a)(1)	PASS
5	Number of hopping frequencies	§15.247(a)(1)(iii)	PASS
6	Dwell Time	§15.247(a)(1)(iii)	PASS
7	Spurious RF conducted emissions	§15.247(d)	PASS
8	Band edge	§15.247(d)	PASS
9	Spurious radiated emissions for transmitter	§15.247(d) & §15.209 & §15.205	PASS
10	Antenna Requirement	15.203	PASS

Page: 6 of 80



3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59° C





Product Information And Test Setup 4.

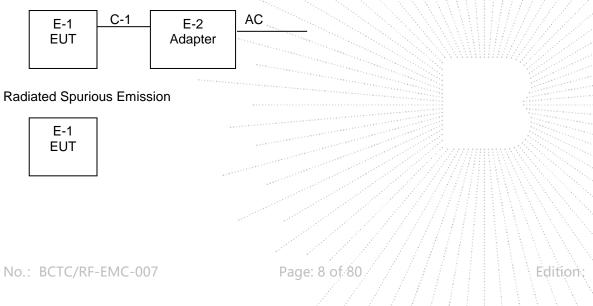
Product Information 4.1

Model/Type Reference:	TN10RH3 MZX5201,MZX5201-BLK, MZX5201-CGRY, MZX5201-ICY, MZX5201-PP, MZX5201-MT, MZX5201-RYB, MZX5201-EPNK, MZX5201-FGRN, MZX5201-BLK-STK-6, MZX5201-CGRY-STK-6, MZX5201-ICY-STK-6, MZX5201-PP-STK-6, MZX5201-MT-STK-6, MZX5201-RYB-STK-6, MZX5201-EPNK-STK-6, MZX5201-FGRN-STK-6
Model differences:	All the model are the same circuit and RF module, except model names.
Bluetooth version:	5.3
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	Bluetooth: 2402-2480MHz
Type of Modulation:	Bluetooth: GFSK, π/ 4 DQPSK, 8DPSK
Number Of Channel	79CH
Antenna installation:	FPC antenna
Antenna Gain:	1.28 dBi
Ratings:	USB:DC 5V Batter:DC 3.7V
Remark:	The antenna gain of the product is provided by the customer, and the test data is affected by the customer information

4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:





4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Truly Wireless Earphones	N/A	TN10RH3	Ref. the Section 4.1	EUT
E-2	ADAPTER	UGREEN	CD122	N/A	Auxiliary

ltem	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	0.3M	DC cable unshielded

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

СН	Frequency (MHz)	СН	Frequency (MHz)	СН	Frequency (MHz)	СН	Frequency (MHz)
0	2402	1	2403	2	2404	3	2405
4	2406	5	2407	6	2408	7	2409
8	2410	9	2411	10	2412	11	2413
12	2414	13	2415	14	2416	15	2417
16	2418	17	2419	18	2420	19	2421
20	2422	21	2423	22	2424	23	2425
24	2426	25	2427	. 26	2428	27	2429
28	2430	29	2431	30	2432	31	2433
32	2434	33	2435	34	2436	35	2437
36	2438	37	2439	38	2440	39	2441
40	2442	41	2443	42	2444	43	2445
44	2446	45	2447	46	2448	47	2449
48	2450	49	2451	50	2452	51	2453
52	2454	53	2455	54	2456	55	2457
56	2458	57	2459	58	2460	59	2461
60	2462	61	2463	62	2464	63	2465
64	2466	65	2467	66	2468	67	2469
68	2470	69	2471	70	2472	71	2473
72	2474	73	2475	74	2476	75	2477
76	2478	77	2479	78	2480	79	1



PR



4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test Mode	Test mode Low channel		Middle channel	High channel		
1	Transmitting(GFSK)	2402MHz	2441MHz	2480MHz		
2	Transmitting(π/ 4 DQPSK)	2402MHz	2441MHz	2480MHz		
3	Transmitting(8DPSK)	2402MHz	2441MHz	2480MHz		
4	Charging(Conducted emission)					
5	Transmitting (Radiated emission)					

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

(2) Fully-charged battery is used during the test

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version		SecureCRT	÷ /
Frequency	2402 MHz	2441 MHz	2480 MHz
Parameters	DEF A	DEF	DEF

TE,



5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address:1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards. FCC Test Firm Registration Number: 712850 IC Registered No.: 23583

FCC Designation No.: CN1212

5.2 Test Instrument Used

Conducted Emissions Test						
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.	
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023	
LISN	R&S	ENV216	101375	May 24, 2022	May 23, 2023	
Software	Frad	EZ-EMC	EMC-CON 3A1	١	\	
Attenuator	\	10dB DC-6GHz	1650	May 24, 2022	May 23, 2023	

	RF Conducted Test						
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.		
Power Metter	Keysight	E4419		May 24, 2022	May 23, 2023		
Power Sensor (AV)	Keysight	E9300A		May 24, 2022	May 23, 2023		
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 24, 2022	May 23, 2023		
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 24, 2022	May 23, 2023		
Radio frequency control box	MAIWEI	MW100-RFC B					
Software	MAIWEI	MTS 8310	······				



	Radiated Emissions Test (966 Chamber01)						
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.		
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023		
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023		
Receiver	R&S	ESRP	101154	May 24, 2022	May 23, 2023		
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 24, 2022	May 23, 2023		
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 26, 2022	May 25, 2023		
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 26, 2022	May 25, 2023		
Amplifier	SKET	LAPA_01G18 G-45dB	١	May 24, 2022	May 23, 2023		
Horn Antenna	Schwarzbeck	BBHA9120D	1541	Jun. 06, 2022	Jun. 05, 2023		
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 26, 2022	May 25, 2023		
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	Jun. 06, 2022	Jun. 05, 2023		
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 24, 2022	May 23, 2023		
Software	Frad	EZ-EMC	FA-03A2 RE	\	Λ_{j}		

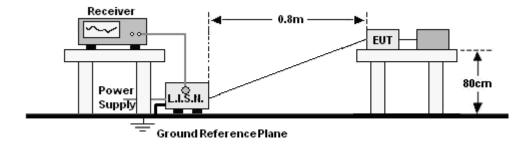
n. 00.,LTA

No.: BCTC/RF-EMC-007



6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)		
Frequency (MHz)	Quas-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	

Notes:

1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters		Setting	
Attenuation		10 dB	
Start Frequency		0.15 MHz	
Stop Frequency		30 MHz	
IF Bandwidth		9 kHz	

a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

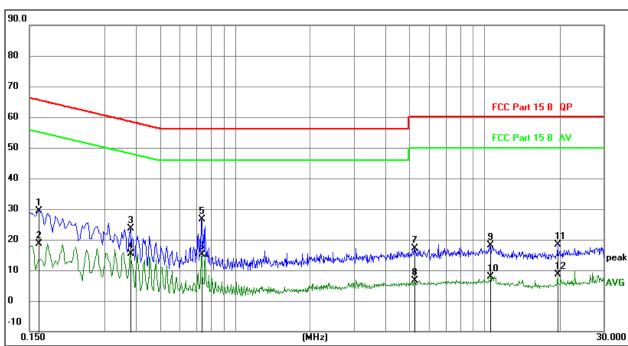
6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



6.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 4	Test Voltage :	AC120V/60Hz



Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.

3. I	Measurement =	Reading	Level +	Correct	Factor
------	---------------	---------	---------	---------	--------

4	4. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1635	9.67	19.71	29.38	65.28	-35.90	QP
2		0.1635	-1.05	19.71	18.66	55.28	-36.62	AVG
3		0.3795	3.79	19.75	23.54	58.29	-34.75	QP
4		0.3795	-4.44	19.75	15.31	48.29	-32.98	AVG
5	*	0.7349	6.80	19.74	26.54	56.00	-29.46	QP
6		0.7349	-4.70	19.74	15.04	46.00	-30.96	AVG
7		5.2395	-3.00	20.13	17.13	60.00	-42.87	QP
8		5.2395	-13.61	20.13	6.52	50.00	-43.48	AVG
9		10.5450	-2.18	20.28	18.10	60.00	-41.90	QP
10		10.5450	-12.43	20.28	7.85	50.00	-42.15	AVG
11		19.7070	-2.17	20.50	18.33	60.00	-41.67	QP
12		19.7070	-11.86	20.50	8.64	50.00	-41.36	AVG

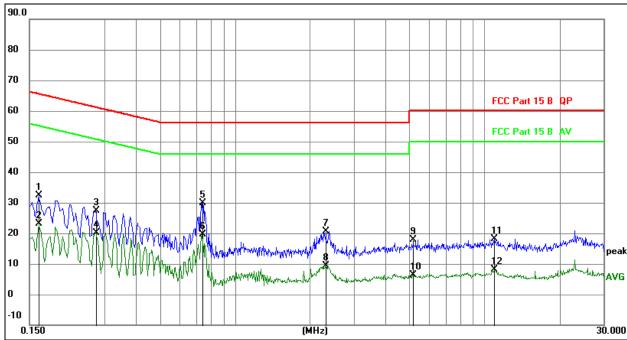
No.: BCTC/RF-EMC-007

Page: 14 of 80

Edition: A E



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Ν
Test Mode:	Mode 4	Test Voltage :	AC120V/60Hz



Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.
 Measurement = Reading Level + Correct Factor

4	. Over =	Measurement -	Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1633	12.59	19.70	32.29	65.29	-33.00	QP
2		0.1633	3.38	19.70	23.08	55.29	-32.21	AVG
3		0.2759	7.49	19.78	27.27	60.94	-33.67	QP
4		0.2759	0.47	19.78	20.25	50.94	-30.69	AVG
5	*	0.7391	10.10	19.74	29.84	56.00	-26.16	QP
6		0.7391	-0.03	19.74	19.71	46.00	-26.29	AVG
7		2.3090	0.77	19.91	20.68	56.00	-35.32	QP
8		2.3090	-10.55	19.91	9.36	46.00	-36.64	AVG
9		5.1390	-2.28	20.13	17.85	60.00	-42.15	QP
10		5.1390	-13.75	20.13	6.38	50.00	-43.62	AVG
11		10.9629	-2.18	20.28	18.10	60.00	-41.90	QP
12		10.9629	-12.10	20.28	8.18	50.00	-41.82	AVG
				et i station and stations an				

No.: BCTC/RF-EMC-007

Page: 15 of 80

Edition:

JC 3C

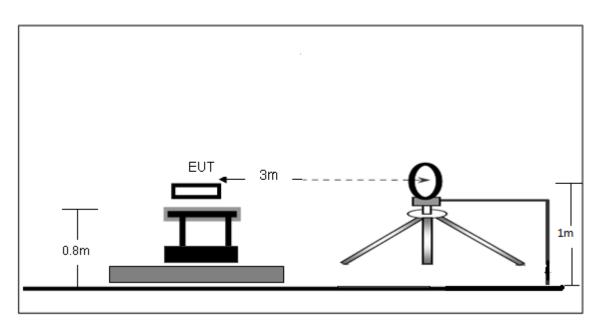
PR



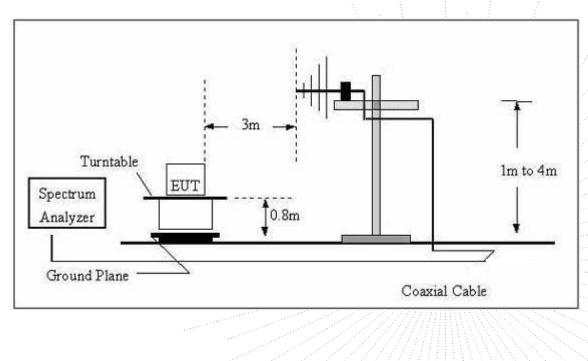
7. Radiated emissions

7.1 Block Diagram Of Test Setup

(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz

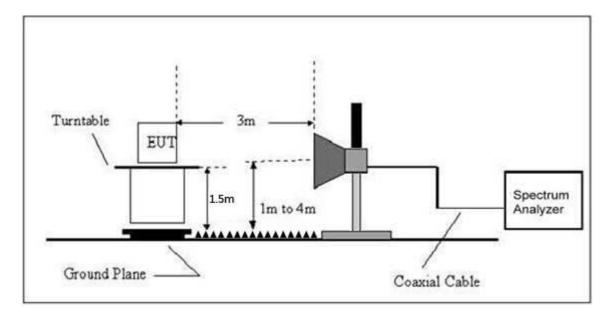


TE. TC OVE





(C) Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Field Strength	Distance	Field Strength Li	imit at 3m Distance	
uV/m	(m)	uV/m	dBuV/m	
2400/F(kHz)	300	10000 * 2400/F(kHz)	20log ^{(2400/F(kHz))} + 80	
24000/F(kHz)	30	100 * 24000/F(kHz)	20log ^{(24000/F(kHz))} + 40	
30	30	100 * 30	20log ⁽³⁰⁾ + 40	
100	3	100	20log ⁽¹⁰⁰⁾	
150	3	150	20log ⁽¹⁵⁰⁾	
200	3	200	20log ⁽²⁰⁰⁾	
500	3	500	20log ⁽⁵⁰⁰⁾	
	uV/m 2400/F(kHz) 24000/F(kHz) 30 100 150 200	uV/m (m) 2400/F(kHz) 300 24000/F(kHz) 30 30 30 100 3 150 3 200 3	uV/m(m)uV/m2400/F(kHz)30010000 * 2400/F(kHz)24000/F(kHz)30100 * 24000/F(kHz)3030100 * 30100310015031502003200	

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (N		Limit (dBuV/m) (at 3M)
	Frequency (MHZ)	Peak	Average
	Above 1000	74	54

Notes:

(1)The limit for radiated test was performed according to FCC PART 15C.

(2)The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

FD



Frequency Range Of Radiated Measurement

(a) For an intentional radiator the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in this paragraph:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

(4) If the intentional radiator operates at or above 95 GHz: To the third harmonic of the highest fundamental frequency or to 750 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

(5) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a) (1)through (4) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this section, whichever is the higher frequency range of investigation.

7.3 Test procedure

Receiver Parameter	Setting
Attenuation	Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Spectrum Parameter	Setting
1-25GHz	RBW 1 MHz /VBW 1 MHz for Peak, RBW 1 MHz / VBW 10Hz for Average

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.



d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middlest channel, the Highest channel.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

7.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

No.: BCTC/RF-EMC-007

Page: 19 of 80



7.5 Test Result

Below 30MHz

Temperature:	26 ℃	Relative Humidity:	54%	
Pressure:	101KPa	Test Voltage :	DC 3.7V	
Test Mode:	Mode 5	Test vollage.		

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the

permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.

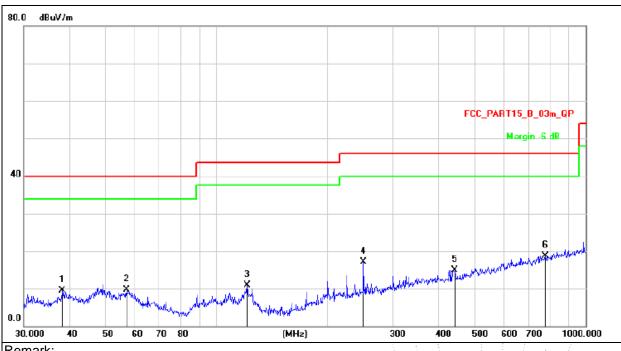
No.: BCTC/RF-EMC-007

Page: 20 of 80



Between 30MHz - 1GHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 5	Test Voltage :	DC 3.7V



Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.

2. Measurement = Reading Level + Correct Factor

3. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		38.2120	26.57	-17.02	9.55	40.00	-30.45	QP
2		56.9912	26.38	-16.64	9.74	40.00	-30.26	QP
3		121.1231	30.02	-19.15	10.87	43.50	-32.63	QP
4	:	250.3012	32.96	-15.82	17.14	46.00	-28.86	QP
5	4	441.7426	26.56	-11.61	14.95	46.00	-31.05	QP
6	*	779.6068	24.69	-5.90	18.79	46.00	-27.21	QP

JC JC JC

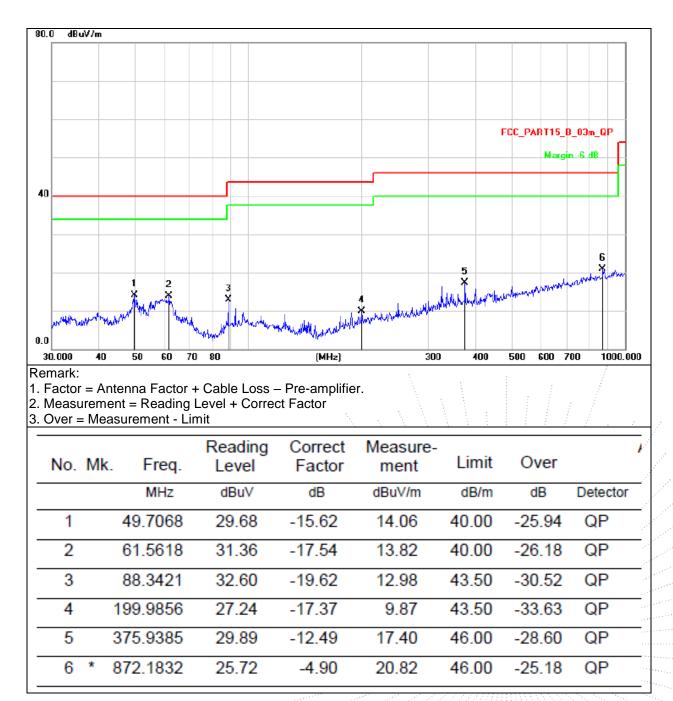
测

Page: 21 of 80

Edition:



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 5	Test Voltage :	DC 3.7V



检

Page: 22 of 80



Between 1GHz – 25GHz

Polar	Frequency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	Туре
			GFSK Low ch	annel			
V	4804.00	54.85	-0.43	54.42	74.00	-19.58	PK
V	4804.00	46.01	-0.43	45.58	54.00	-8.42	AV
V	7206.00	47.43	8.31	55.74	74.00	-18.26	PK
V	7206.00	37.40	8.31	45.71	54.00	-8.29	AV
Н	4804.00	51.17	-0.43	50.74	74.00	-23.26	PK
Н	4804.00	40.42	-0.43	39.99	54.00	-14.01	AV
Н	7206.00	45.80	8.31	54.11	74.00	-19.89	PK
Н	7206.00	37.29	8.31	45.60	54.00	-8.40	AV
		G	FSK Middle c	hannel			
V	4882.00	51.64	-0.38	51.26	74.00	-22.74	PK
V	4882.00	45.32	-0.38	44.94	54.00	-9.06	AV
V	7323.00	44.45	8.83	53.28	74.00	-20.72	PK
V	7323.00	34.53	8.83	43.36	54.00	-10.64	AV
Н	4882.00	47.06	-0.38	46.68	74.00	-27.32	PK
Н	4882.00	37.52	-0.38	37.14	54.00	-16.86	AV
Н	7323.00	42.68	8.83	51.51	74.00	-22.49	PK
Н	7323.00	34.72	8.83	43.55	54.00	-10.45	AV
			GFSK High ch	annel			
V	4960.00	54.15	-0.32	53.83	74.00	-20.17	PK
V	4960.00	45.17	-0.32	44.85	54.00	-9.15	AV
V	7440.00	45.17	9.35	54.52	74.00	-19.48	PK
V	7440.00	34.27	9.35	43.62	54.00	-10.38	AV
Н	4960.00	52.11	-0.32	51.79	74.00	-22.21	PK
Н	4960.00	42.68	-0.32	42.36	54.00	-11.64	AV
Н	7440.00	42.61	9.35	51.96	74.00	-22.04	PK
Н	7440.00	34.02	9.35	43.37	54.00	-10.63	AV

Remark:

1.Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level - Limit

2.If peak below the average limit, the average emission was no test.

3. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB

4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

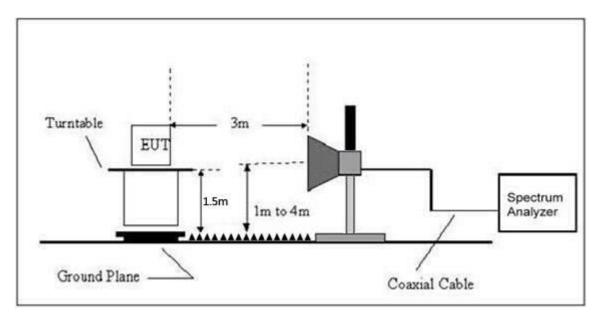
5.All the Modulation are test, the worst mode is GFSK, the data recording in the report.



8. Radiated Band Emission Measurement And Restricted Bands Of Operation

8.1 Block Diagram Of Test Setup

Radiated Emission Test-Up Frequency Above 1GHz



8.2 Limit

FCC Part15 C Section 15.209 and 15.205

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 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	(²)
13.36-13.41			



Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)				
Frequency (MIRZ)	Peak	Average			
Above 1000	74	54			

Notes:

(1)The limit for radiated test was performed according to FCC PART 15C.

(2)The tighter limit applies at the band edges.

(3)Emission level (dBuV/m)=20log Emission level (uV/m).

8.3 Test procedure

Receiver Parameter	Setting
Attenuation	Auto
Start Frequency	2300MHz
Stop Frequency	2520
RB / VB (Emission In Restricted Band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Above 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

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

c.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the Highest channel.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

8.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



8.5 Test Result

Test mode	Polar (H/V)	Frequency (MHz)	Reading Level	Correct Factor	Measure- ment (dBuV/m)		nits V/m)	Result
	(141)	()	(dBuV/m)	(dB)	РК	РК	AV	
			Low	Channel 2	402MHz			
	Н	2390.00	53.38	-6.70	46.68	74.00	54.00	PASS
	Н	2400.00	57.60	-6.71	50.89	74.00	54.00	PASS
	V	2390.00	53.58	-6.70	46.88	74.00	54.00	PASS
GFSK	V	2400.00	53.73	-6.71	47.02	74.00	54.00	PASS
GFSK			High	h Channel 2	480MHz			
	Н	2483.50	52.97	-6.79	46.18	74.00	54.00	PASS
	Н	2500.00	48.48	-6.81	41.67	74.00	54.00	PASS
	V	2483.50	52.46	-6.79	45.67	74.00	54.00	PASS
	V	2500.00	49.24	-6.81	42.43	74.00	54.00	PASS
			Low	/ Channel 2	402MHz			
	Н	2390.00	52.28	-6.70	45.58	74.00	54.00	PASS
	Н	2400.00	56.07	-6.71	49.36	74.00	54.00	PASS
	V	2390.00	51.67	-6.70	44.97	74.00	54.00	PASS
π/4DQPSK	V	2400.00	51.95	-6.71	45.24	74.00	54.00	PASS
II/4DQF3N				n Channel 2	480MHz			
	Н	2483.50	51.73	-6.79	44.94	74.00	54.00	PASS
	Н	2500.00	49.08	-6.81	42.27	74.00	54.00	PASS
	V	2483.50	51.46	-6.79	44.67	74.00	54.00	PASS
	V	2500.00	46.88	-6.81	40.07	74.00	54.00	PASS
			Low	Channel 2	402MHz			
	Н	2390.00	52.99	-6.70	46.29	:74.00	54.00	PASS
	Н	2400.00	57.11	-6.71	50.40	74.00	54.00	PASS
	V	2390.00	53.76	-6.70	47.06	74.00	54.00	PASS
	V	2400.00	55.19	-6.71	48.48	74.00	54.00	PASS
8DPSK		•	High	h Channel 2	480MHz			
	Н	2483.50	51.45	-6.79	44.66	74.00	54.00	PASS
	Н	2500.00	49.10	-6.81	42.29	74.00	54.00	PASS
	V	2483.50	53.72	-6.79	46.93	74.00	54.00	PASS
	V	2500.00	50.13	-6.81	43.32	74.00	54.00	PASS
Dl	v	2000.00	50.15	-0.01	43.32	74.00	54.00	FAO

Remark:

1. Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss - Pre-amplifier. Over= Emission Level - Limit

2. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

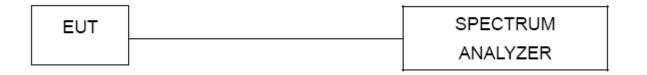
3 In restricted bands of operation, The spurious emissions below the permissible value more than 20dB

4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



9. Spurious RF Conducted Emissions

9.1 Block Diagram Of Test Setup



9.2 Limit

Regulation 15.247 (d),In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.205(c))

9.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

2. Set the spectrum analyzer:

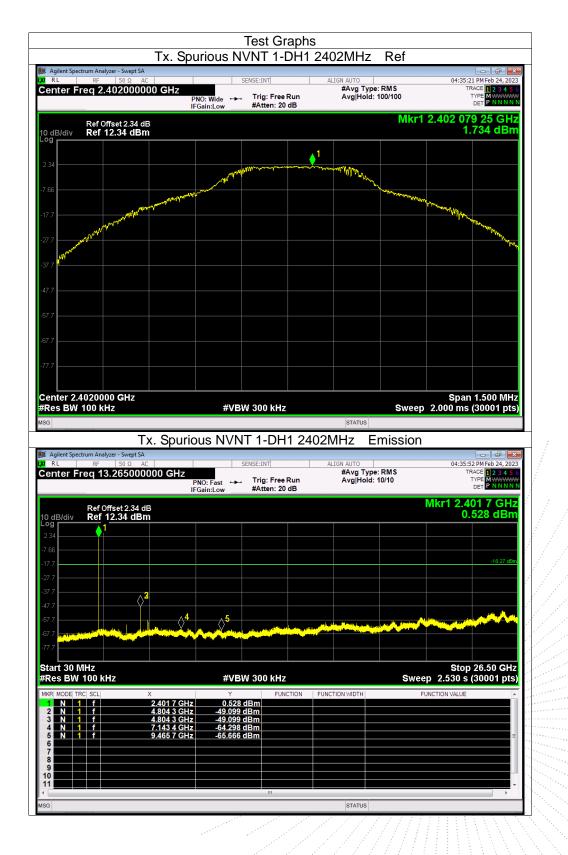
RBW = 100kHz, VBW = 300kHz, Sweep = auto

Detector function = peak, Trace = max hold

Page: 27 of 8



9.4 Test Result



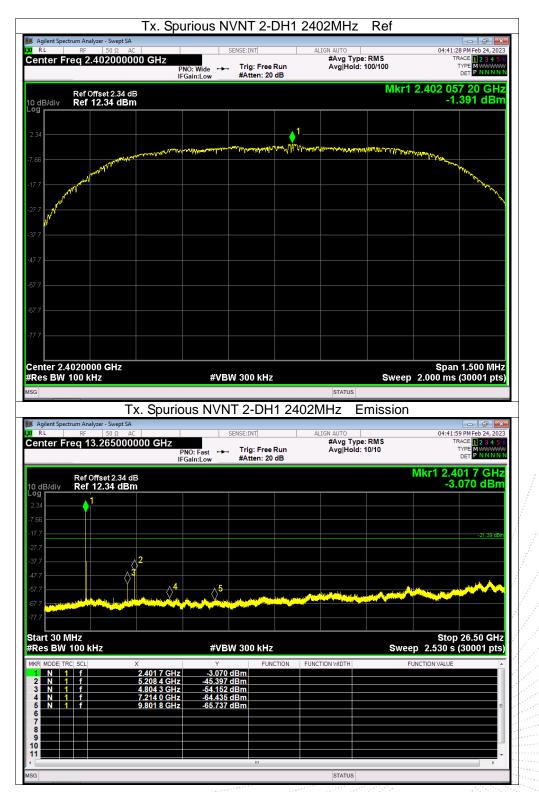


	50 Ω AC		SE	NSE:INT		ALIGN AUTO	BMC	04:36:	53 PM Feb 24, 202
enter Freq 2.44	1000000 G	PNC	D:Wide ↔ ain:Low	Trig: Free F #Atten: 20		#Avg Type Avg Hold:		т	RACE 12345 TYPE M DET PNNNN
	et 2.36 dB .36 dBm						Mkr1		0 40 GH .676 dBn
					1				
36				Wry		Marthan Maran			
64		and party and the bard	Part Part Part Part Part Part Part Part				and the second second		
7.6	and the first of the second							Marrie Marrie	^
7.6									Allower Collinson
7.6									
7.6									
7.6									
7.6									
7.6									
enter 2.4410000	CH7							Ener	1.500 MH
Res BW 100 kHz			#VBW	300 kHz			Sweep	3pai 2.000 ms	(30001 pts
G									
						STATUS			
		Spuriou	ıs NVN	1-DH	1 2441		mission		
R L RF	r - Swept SA 50 Ω AC			NSE:INT	1 2441	ALIGN AUTO		04:37:: T	25 PM Feb 24, 202
R L RF	r - Swept SA 50 Ω AC	GHz			Run	IMHz E	: RMS	04:37: т	
RL RF enter Freq 13.2 Ref Offs	r - Swept SA 50 Ω AC	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202
RL RF enter Freq 13.2 Ref Offs 0 dB/div Ref 12	r - Swept SA 50 Ω AC 2650000000	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE M DET P NNNN 41 4 GH
RL RF enter Freq 13.2 Ref Offs 0 dB/div Ref Offs 9 1 64 1	r - Swept SA 50 Ω AC 2650000000	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE M DET P NNNN 41 4 GH
RL RF enter Freq 13.2 Ref Offs 0 dB/div Ref Offs 29 1	r - Swept SA 50 Ω AC 2650000000	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE WWWW DET NNNN 41 4 GH: .941 dBn
RL RF enter Freq 13.2 Ref Offs 0 dB/div Ref 12 29 ↓1 64 ↓1 64 ↓1 7.6 ↓1 7.6 ↓1 7.6 ↓1	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE WWWW DET NNNN 41 4 GH: .941 dBn
RL RF enter Freq 13.2 Ref Offs dB/div Ref 12 9 0 0 0 0 0 0 0 0 0 0 0 0 0	r - Swept SA 50 Ω AC 2650000000	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO #Avg Type	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE WWWW DET NNNN 41 4 GH: .941 dBn
RL	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO #Avg Type	e: RMS 10/10	™ Mkr1 2.4	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE WWWW DET NNNN 41 4 GH: .941 dBn
RL PF enter Freq 13.2 Ref Offs dB/div Ref 12 36 1 64 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1 76 1	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm	GHz	O: Fast ↔	NSE:INT	Run	ALIGN AUTO #Avg Type	e: RMS 10/10	T Mkr1 2.4 1	25 PM Feb 24, 202 RACE 1 2 3 4 5 DET P NN NN 41 4 GH: 941 dBn -18.32 dB
RL PF enter Freq 13.2 Ref Offs dB/div Ref 12 36 1 64 1 76	r-Swept SA S0 Ω AC 265000000 set 2.36 dB .36 dBm 3 3 3 3 4 3 3 4 3 3 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4	GHz	O: Fast →→	NSE:INT Trig: Free I #Atten: 20	Run dB	ALIGN AUTO #Avg Type Avg Hold:	ERMS 10/10	Mkr1 2.4 1. Stop p 2.530 s	25 PM Feb 24, 202 RACE 1 2 3 4 5 TYPE WWWW DET NNNN 41 4 GH: .941 dBn
RL PF enter Freq 13.2 Ref Offs Ref Offs Ref 12 Ref 12 Ref 0 Ref 12 Ref 13 Ref	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm 1 1 1 1 1 1 1 1	GHz PNU IFGa	O: Fast →→→ ain:Low →→→ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	NSE:INT Trig: Free I #Atten: 20 **********************************	Run dB	ALIGN AUTO #Avg Type	ERMS 10/10	Mkr1 2.4 1	25 PH Feb 24, 202 RACE 1 2 3 4 5 2 3 4 5 DET P NNNN 41 4 GH: 941 dBn -10 32 dB -10 32 dB
RL PF enter Freq 13.2 Ref Offs Ref 12 OdB/div Ref 14 Call Date Call Dat Call	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm .36 dBm .37 dC .38 dBm .38 dBm .39 dBm .38 dBm	GHz PNU IFGa 14 GHz 97 GHz 20 GHz 20 GHz	0: Fast →→ ain:Low →	NSE:INT Trig: Free I #Atten: 20 #Atten:	Run dB	ALIGN AUTO #Avg Type Avg Hold:	ERMS 10/10	Mkr1 2.4 1. Stop p 2.530 s	25 PH Feb 24, 202 RACE 1 2 3 4 5 2 3 4 5 DET P NNNN 41 4 GH: 941 dBn -10 32 dB -10 32 dB
RL PF enter Freq 13.2 Ref Offs 0 dB/div Ref 12 0 dB/div Ref 14 0 dB/div Ref 12 0 dB/div Ref 14 0 dB/div <	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm .36 dBm .37 dC .38 dBm .38 dBm .39 dBm .38 dBm	GHz PNU IFG IFG I 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 7 6 1 2 0 6 Hz	0: Fast →→→ ain:Low →→ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	NSE:INT Trig: Free I #Atten: 20 #Atten:	Run dB	ALIGN AUTO #Avg Type Avg Hold:	ERMS 10/10	Mkr1 2.4 1. Stop p 2.530 s	25 PH Feb 24, 202 RACE 1 2 3 4 5 2 3 4 5 DET P NNNN 41 4 GH: 941 dBn -10 32 dB -10 32 dB
Ref Offs O dB/div Ref 12 99 1 64 1 7.6 1 7.7.6 1 7.7.6 1 7.7.6 1 7.7.6 1 7.7.6 1 7.7.6 1 7.7.6 1 7.7.6 1 7.7.7 1 7.8 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.9 1 7.0 1 7.0 1 7.1 1 7.2 1 7.3 1 7 1 7 1 7 1 <td< td=""><td>r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm .36 dBm .37 dC .38 dBm .38 dBm .39 dBm .38 dBm</td><td>GHz PNU IFGa 14 GHz 97 GHz 20 GHz 20 GHz</td><td>0: Fast →→ ain:Low →</td><td>NSE:INT Trig: Free I #Atten: 20 #Atten: 20 #Atten:</td><td>Run dB</td><td>ALIGN AUTO #Avg Type Avg Hold:</td><td>ERMS 10/10</td><td>Mkr1 2.4 1. Stop p 2.530 s</td><td>25 PH Feb 24, 202 RACE 1 2 3 4 5 2 3 4 5 DET P NNNN 41 4 GH: 941 dBn -10 32 dB -10 32 dB</td></td<>	r-Swept SA 50 Ω AC 265000000 set 2.36 dB .36 dBm .36 dBm .37 dC .38 dBm .38 dBm .39 dBm .38 dBm	GHz PNU IFGa 14 GHz 97 GHz 20 GHz 20 GHz	0: Fast →→ ain:Low →	NSE:INT Trig: Free I #Atten: 20 #Atten:	Run dB	ALIGN AUTO #Avg Type Avg Hold:	ERMS 10/10	Mkr1 2.4 1. Stop p 2.530 s	25 PH Feb 24, 202 RACE 1 2 3 4 5 2 3 4 5 DET P NNNN 41 4 GH: 941 dBn -10 32 dB -10 32 dB



Agilent Spectrum Analyzer - S								- 6 2
RL RF 5	0 Ω AC	SEN	NSE:INT	A	LIGN AUTO #Avg Typ	e: RMS		:39 PM Feb 24, 202
	F	PNO:Wide ↔↔ FGain:Low	Trig: Free Run #Atten: 20 dB		Avg Hold:	: 100/100		DET PNNN
Ref Offset						Mkr	2.480 0	73 85 GH
dB/div Ref 12.4							1	.419 dBn
				▲1				
40		n	w					
60		AND THE			1 forther	The second second		
	and the second second	No. a				and a second of the	We where a	
7.6	man						Mary Mary	When .
7.6								- Marine Contraction
Ammin								141
7.6								
7.6								
7.6								
7.6								
7.6								
enter 2.4800000 G	iHz	-#\/D\\	200 641-			8		n 1.500 MH
Res BW 100 kHz		#VBW	300 kHz			Swee	5-2.000 ms	s (30001 pts
G								
					STATUS			
	Tx. Spuric	ous NVNT	1-DH1	2480		Emission		
RL RF 5	Swept SA 0 Ω AC		1-DH1		MHZ E		04:39	:10 PM Feb 24, 202
RL RF 5	Swept SA 0 Ω AC 50000000 GHz	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHz E	e: RMS	04:39	:10 PM Feb 24, 202
RL RF 5	Swept SA 0 Ω AC 50000000 GHz	SEI	NSE:INT	n Al	MHZ E	e: RMS	04:39	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE M DET P NNNN
RL RF 5 enter Freq 13.26 Ref Offset 0 dB/div Ref 12.4	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE WWWW DET PNNNN 480 2 GH2
RL RF SI enter Freq 13.26 Ref Offset 0 dB/div Ref 12.4	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MWWW DET PNNNN 480 2 GH2
RL RF 0ffset Ref 0ffset 0 dB/div Ref 12.4 9 40	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE WWWW DET PNNNN 480 2 GH2
RL RF 13.26 Ref Offset 0 dB/div Ref 12.4 9 1 60	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE WWWW DET PNNNN 480 2 GH2
RL RF 75 5 enter Freq 13.26 Ref Offset 0 dB/div Ref 12.4 9 1 60 7 6	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MANAGE DET P.NNNN 480 2 GHz .621 dBm
RL Rc Si enter Freq 13.26 Ref Offset Ref Offset 0 dB/div Ref 12.4 Ref 12.4 0 dB/div Ref 12.4 1 60 7.6 1 7.6 7.6 1 7.6 7.6 1 7.6 7.6 1	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MAXAMM DET P NNNN 480 2 GH2 .621 dBm
Ref Offset 0 dB/div Ref 12.4 0 dB/div Ref 12.4 0 1 1 0 dB/div 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Swept SA 0 Ω AC 55000000 GHz 	PNO: Fast ↔ FGain:Low	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MAXAMM DET P NNNN 480 2 GH2 .621 dBm
RL Rc Si enter Freq 13.26 Ref Offset Ref Offset dB/div Ref 12.4 Ref 12.4 0 1 1 60 7.6 1 7.6 7.6 1 7.6 7.6 7.6 7.6 7.6 7.6	Swept SA 0 Ω AC 55000000 GHz 	SEN PNO: Fast ↔→→	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MANAGE DET P.NNNN 480 2 GHz .621 dBm
RL R6 Si enter Freq 13.26 Ref Offset dB/div Ref 12.4 0 1 0.0 1 <td>Swept SA 0 Ω AC 55000000 GHz </td> <td>PNO: Fast ↔ FGain:Low</td> <td>NSE:INT</td> <td>n Al</td> <td>MHZ E</td> <td>e: RMS</td> <td>04:39 Mkr1 2.4</td> <td>10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MANAGE DET P.NNNN 480 2 GHz .621 dBm</td>	Swept SA 0 Ω AC 55000000 GHz 	PNO: Fast ↔ FGain:Low	NSE:INT	n Al	MHZ E	e: RMS	04:39 Mkr1 2.4	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MANAGE DET P.NNNN 480 2 GHz .621 dBm
RL R6 SI enter Freq 13.26 Ref Offset 1 dB/div Ref 12.4 1 60 1 1 60 1 1 60 1 1 60 1 1 60 1 1 76 1 1 76 1 1 76 1 1 7.6 1 1 7.6 1 1 7.6 1 1	Swept SA 0 Ω AC 55000000 GHz 	PNO: Fast ↔ FGain:Low	NSE:INT	n Al	MHZ E	e: RMS	04:39	110 PM Feb 24, 202 TRACE 12 3 4 5 TYPE MWWWW DET P N N NN 480 2 GH2 .621 dBm -10 59 dBm
RL R6 Si enter Freq 13.26 Ref Offset 8 dB/div Ref 12.4 9 0 1 60 1 07.6 1 60 1 07.6 1 1 60 1 0 7 1 60 1 1 0 7 6 1 <t< td=""><td>Swept SA 0 Ω AC 55000000 GHz </td><td>PNO: Fast FGain:Low →</td><td>NSE:INT</td><td>n Al</td><td>MHZ E</td><td>e: RMS : 10/10</td><td>04:39</td><td>10 PM Feb 24, 202 TARACE 1, 2, 34 55 TYPE MUMM DET P NNNN 480 2 GH2 .621 dBm -10 50 dP 2 2 2 2 2 2 2 2 2 2 2 2 2</td></t<>	Swept SA 0 Ω AC 55000000 GHz 	PNO: Fast FGain:Low →	NSE:INT	n Al	MHZ E	e: RMS : 10/10	04:39	10 PM Feb 24, 202 TARACE 1, 2, 34 55 TYPE MUMM DET P NNNN 480 2 GH2 .621 dBm -10 50 dP 2 2 2 2 2 2 2 2 2 2 2 2 2
RL Ref Si enter Freq 13.26 Ref Offset 34 dB/div Ref 12.4 1 00 1 1 01 1 1 02 1 1 03 1 1 04 1 1 05 1 1 06 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 07.6 1 1 08.7 1 1 09.7 1	Swept SA 9 Ω AC 5000000 GHz 2.4 dB 0 dBm 3 4 4 4 4 4 4 4 4 4 4 4 4 4	PNO: Fast FGain:Low	VSE:INT Trig: Free Rur #Atten: 20 dB		MHZ E	e: RMS : 10/10	04:39	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MININ 0ET P N N N N 480 2 GH2 .621 dBm -10 50 dBm -10 50 dBm -2 p 26.50 GH2 5 (30001 pts
RL Ref Si enter Freq 13.26 Ref Offset 1 dB/div Ref 12.4 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.7.6 1 1 7.8 1 1 7.8 1 1 8 1 1 1 1 1	Swept SA 0 Ω AC 55000000 GHz 2.4 dB 0 dBm 3 3 3 4 2.4 80 2 GHz 2.480 2 GHz 25.895 6 GHz	PNO: Fast FGain:Low 4 4 4 4 5 5 4 4 4 4 5 5 4 4 4 5 5 4 4 5 5 4 4 5 5 4 4 5 5 4 7 5 4 5 5 4 7 5 8 7 8 7 8 7 8 7 8 7 8 8 7 8 7 8 8 8 7 8 8 8 8 7 8	SE:INT		MHz E	e: RMS : 10/10	04:39 Mkr1 2.4 1	p 26.50 GHz 6 (30001 pts
RL RF SI enter Freq 13.26 Ref Offset SI dB/div Ref 12.4 SI 40 1 1 40 1 1 7.6 7.6 1 7.6 7.6 1 7.6 7.6 1 7.6 7.6 1 7.6 7.6 1 7.6 7.6 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 7.6 1 1 8 N 1 1 1 1 2 1 1 3 1 1	Swept SA 0 Ω AC 550000000 GHz 1 III 22.4 dB 0 dBm 0 dBm III 2.4 dB 0 dBm 3 III 2.4 dB 0 dBm 2.4 80 2 GHz III 25.695 6 GHz 4.959 6 GHz 7.624 2 GHz 7.624 2 GHz	PNO: Fast FGain:Low 4 4 4 5 5 5 4 4 5 5 5 4 7 5 5 5 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	SE:INT Trig: Free Run #Atten: 20 dB () () () () () () () () () ()		MHz E	e: RMS : 10/10	04:39 Mkr1 2.4 1	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MININ 0ET P N N N N 480 2 GH2 .621 dBm -10 50 dBm -10 50 dBm -2 p 26.50 GH2 5 (30001 pts
RL RF SI enter Freq 13.26 Ref Offset dB/div Ref 12.4 0 1 40 1 76 1 77 1 78 1 79 1 <	Swept SA 0 Ω AC 550000000 GHz 1 III 22.4 dB 0 dBm 0 dBm III 2.4 dB 0 dBm 3 III 2.4 dB 0 dBm	PNO: Fast FGain:Low 4 4 5 5 4 5 5 5 4 7 4 5 5 5 4 7 5 5 5 4 7 9 0 16 21 dt -50.916 dt -54.790 dt -54.790 dt -54.339 dt	SE:INT Trig: Free Run #Atten: 20 dB () () () () () () () () () ()		MHz E	e: RMS : 10/10	04:39 Mkr1 2.4 1	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MININ 0ET P N N N N 480 2 GH2 .621 dBm -10 50 dBm -10 50 dBm -2 p 26.50 GH2 5 (30001 pts
RL RF SI enter Freq 13.26 Ref Offset Si 0 dB/div Ref 12.4 1 1 dat Ref 12.4 1 1 N 1 1 2 N 1 1 3 N 1 1 5 N 1 1 6 7 7 8 <td< td=""><td>Swept SA 0 Ω AC 550000000 GHz 1 III 22.4 dB 0 dBm 0 dBm III 2.4 dB 0 dBm 3 III 2.4 dB 0 dBm 2.4 80 2 GHz III 25.695 6 GHz 4.959 6 GHz 7.624 2 GHz 7.624 2 GHz</td><td>PNO: Fast FGain:Low 4 4 4 5 5 5 4 4 5 5 5 4 7 5 5 5 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7</td><td>SE:INT Trig: Free Run #Atten: 20 dB () () () () () () () () () ()</td><td></td><td>MHz E</td><td>e: RMS : 10/10</td><td>04:39 Mkr1 2.4 1</td><td>10 PM Feb 24,202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 480 2 GH2 .621 dBm </td></td<>	Swept SA 0 Ω AC 550000000 GHz 1 III 22.4 dB 0 dBm 0 dBm III 2.4 dB 0 dBm 3 III 2.4 dB 0 dBm 2.4 80 2 GHz III 25.695 6 GHz 4.959 6 GHz 7.624 2 GHz 7.624 2 GHz	PNO: Fast FGain:Low 4 4 4 5 5 5 4 4 5 5 5 4 7 5 5 5 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	SE:INT Trig: Free Run #Atten: 20 dB () () () () () () () () () ()		MHz E	e: RMS : 10/10	04:39 Mkr1 2.4 1	10 PM Feb 24,202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N 480 2 GH2 .621 dBm
RL RF S enter Freq 13.26 Ref Offset S dB/div Ref 12.4 Ref 12.4 0 1 1 0 7 1 0 7 1 0 7 1 0 7 1 0 7 1 0 7 1 0 7 1 1 7 1 1 7 1 1 1 1 1 1 1 1 1 1 2 1 1 3 1 1 4 1 1 5 1 1	Swept SA 0 Ω AC 550000000 GHz 1 III 22.4 dB 0 dBm 0 dBm III 2.4 dB 0 dBm 3 III 2.4 dB 0 dBm 2.4 80 2 GHz III 25.695 6 GHz 4.959 6 GHz 7.624 2 GHz 7.624 2 GHz	PNO: Fast FGain:Low 4 4 4 5 5 5 4 4 5 5 5 4 7 5 5 5 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	SE:INT Trig: Free Run #Atten: 20 dB () () () () () () () () () ()		MHz E	e: RMS : 10/10	04:39 Mkr1 2.4 1	10 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MININ 0ET P N N N N 480 2 GH2 .621 dBm -10 50 dBm -10 50 dBm -2 p 26.50 GH2 5 (30001 pts

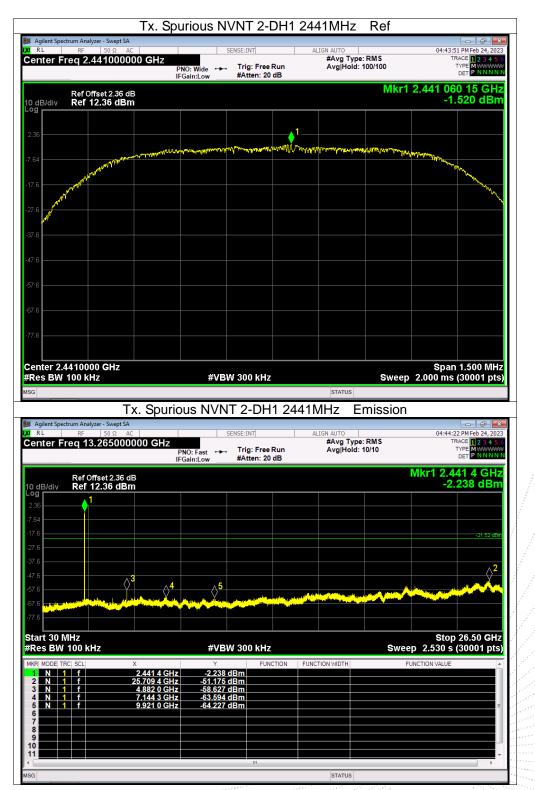






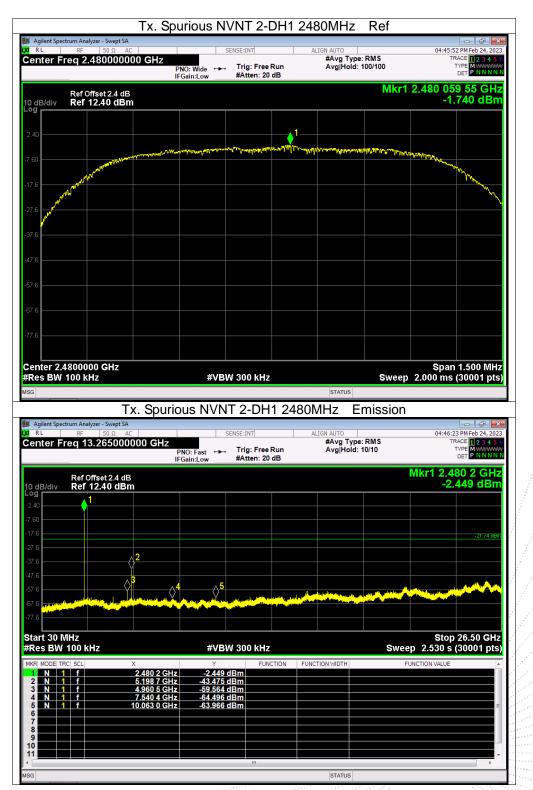
Page: 31 of 80





No.: BCTC/RF-EMC-007

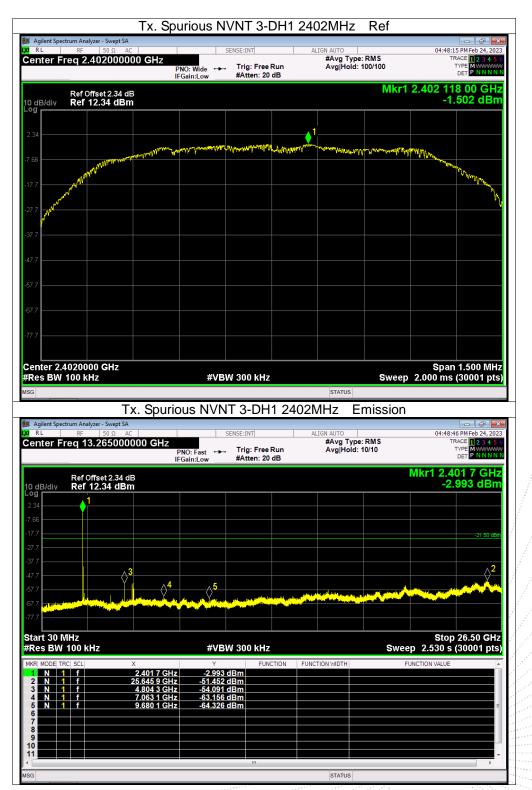






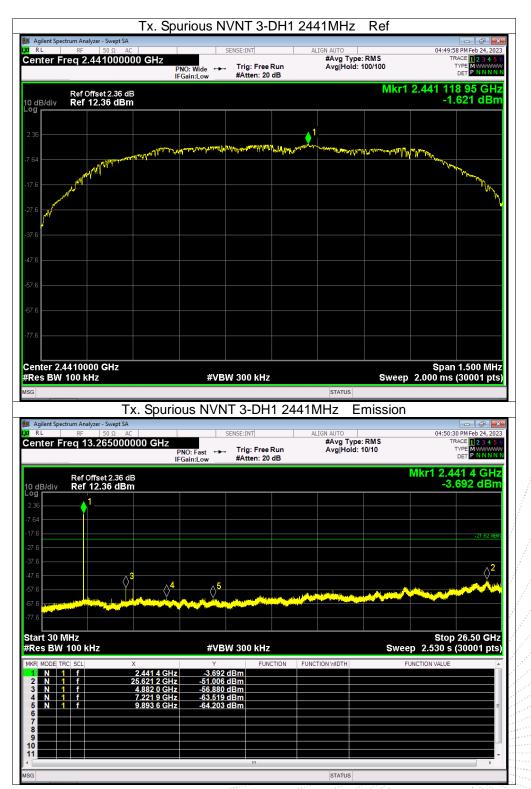




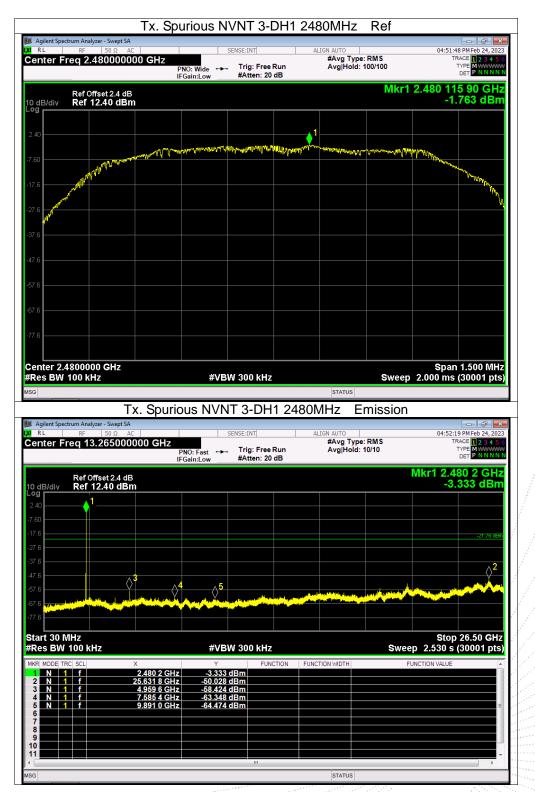




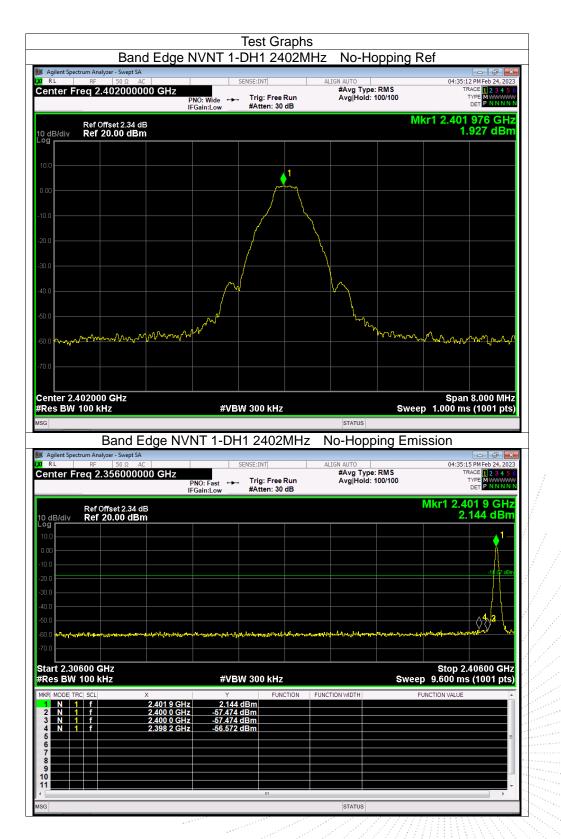












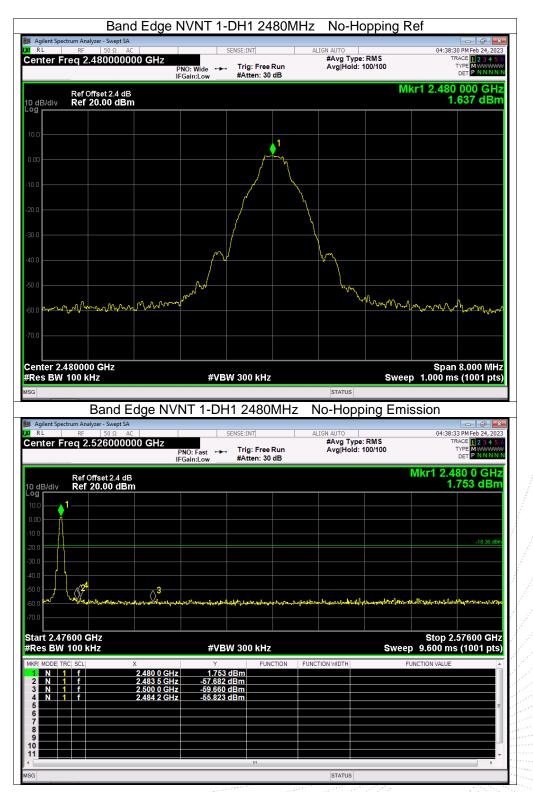


Edition: A.5

Page: 37 of 80

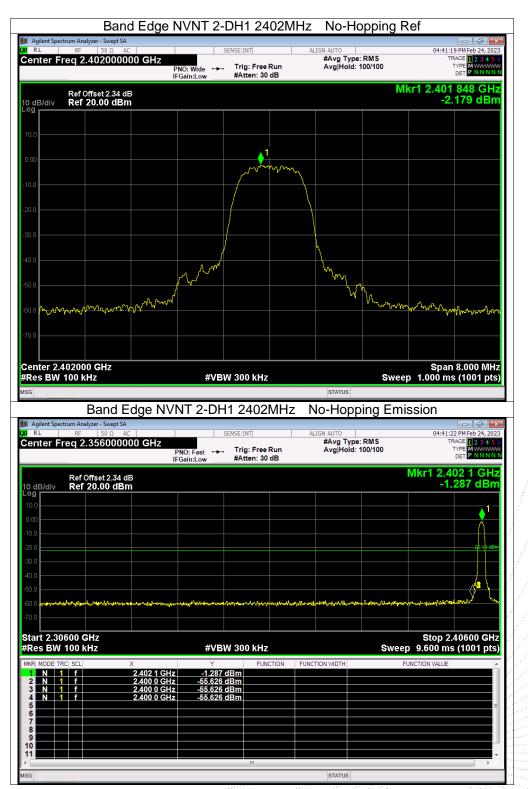
No.: BCTC/RF-EMC-007







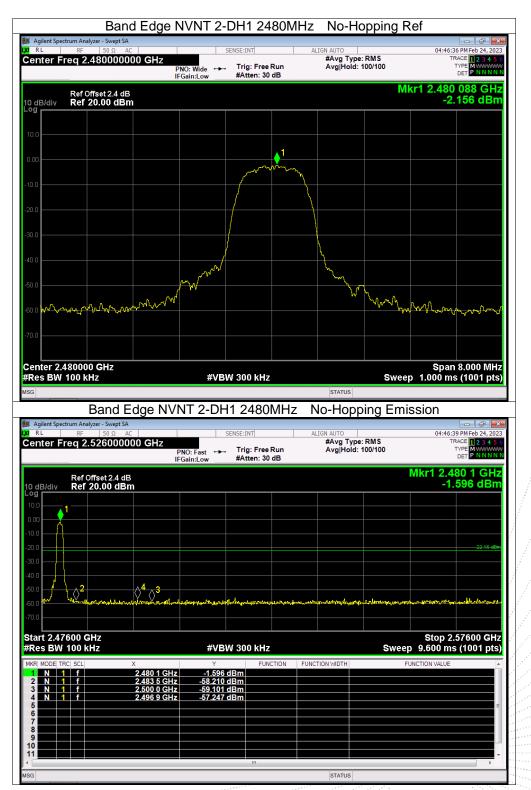










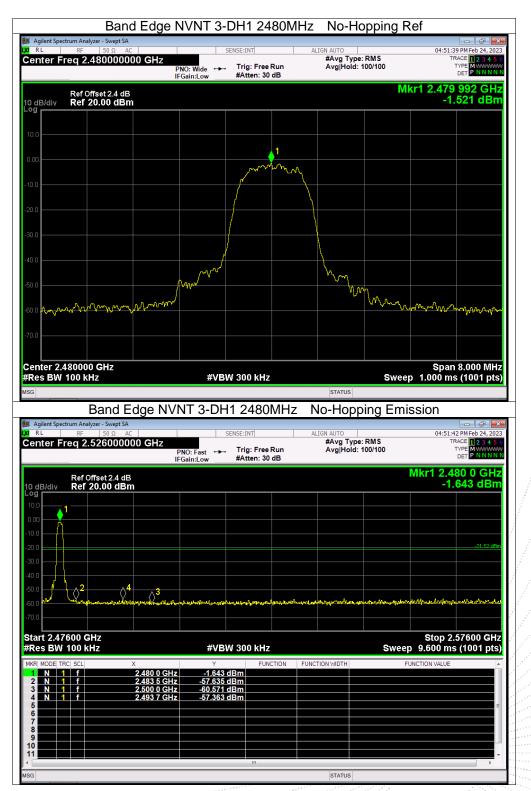




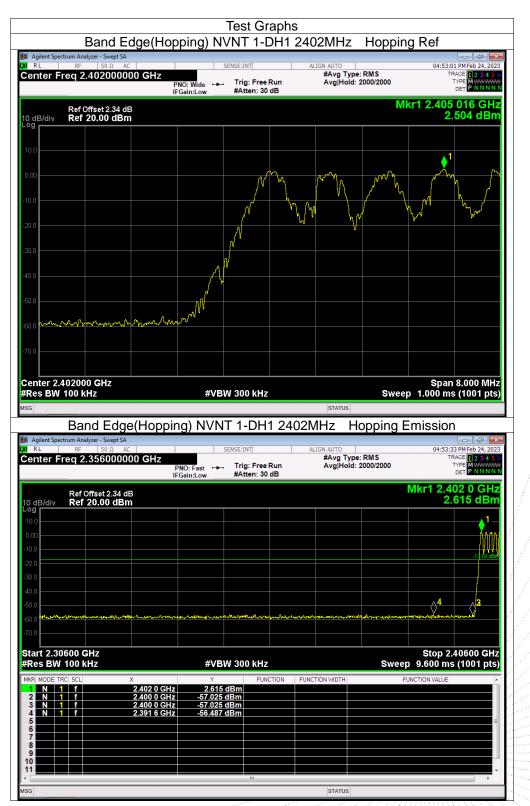


		NVNT 3-DH1 24	402MHz N	Io-Hopping Ref	
	50 Ω AC	SENSE:INT	ALIGN AL		04:48:05 PM Feb 24, 2023
Center Freq 2.402		PNO: Wide ↔ Trig: Free IFGain:Low #Atten: 3	eRun Av	vg Type: RMS g Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET PNNNNN
Ref Offse 10 dB/div Ref 20.0	t 2.34 dB 00 dBm			Mkr1 2	.401 992 GHz -1.250 dBm
Log					
10.0			1		
0.00			my		
-10.0					
-20.0					
-30.0					
-40.0					
-50.0		My r.	<u>لم</u>	M.	
-60.0 mmmmmmmm	www.			mmmaa	m Annon
-70.0					
Center 2.402000 G	H7				Span 8.000 MHz
#Res BW 100 kHz		#VBW 300 kH		Sweep 1.0	00 ms (1001 pts)
Ba	nd Edae NV	NT 3-DH1 2402		Hoppina Emissio	n
🎉 Agilent Spectrum Analyzer -	Swept SA	NT 3-DH1 2402	2MHz No-I	Hopping Emissio	- 6 💌
	Swept SA 50 Ω AC 6000000 GHz	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av		
Agilent Spectrum Analyzer - Center Freq 2.350 Ref Offse	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	SENSE:INT PNO: Fast ↔ Trig: Free	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24, 2023 TRACE 123456
Agilent Spectrum Analyzer -	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24, 2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
Agilent Spectrum Analyzer- Agilent Spectrum Analyzer- Center Freq 2.35(Ref Offse 10 dB/div Ref 20.0	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24,2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
Agilent Spectrum Analyzer- Agilent Spectrum Analyzer- Center Freq 2.356 Ref Offse 10 dB/div Ref 20.0 0.00 -10 0 -20 0	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24,2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
Agilent Spectrum Analyzer-(M) RL RE I Center Freq 2.35(Ref Offse I 10 dB/div Ref 20.0 I 0.00 I I I	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24,2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
R.glient Spectrum Analyzer-(M) RF I Center Freq 2.356 Ref Offse I 10 dB/div Ref 20.0 I I 10 dB/div Ref 20.0 I I I 0.00 I <t< td=""><td>Swept SA 50 Ω AC 6000000 GHz et 2.34 dB</td><td>PNO: Fast → Trig: Fre</td><td>2MHz No-I ALIGN AL #A #Run Av</td><td>uto vg Type: RMS g Hold: 100/100</td><td>04:48:09 PM Feb 24, 2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ</td></t<>	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24, 2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
Agilent Spectrum Analyzer- Agilent Spectrum Analyzer- Center Freq 2.356 Ref Offse 10 dB/div Ref 20.0 0.00 -10.0 -20 0 -30 0 -40 0 -50 0	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A #Run Av	uto vg Type: RMS g Hold: 100/100	04:48:09 PM Feb 24,2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
Agilent Spectrum Analyzer-(X) RL RF 1 Center Freq 2.356 Ref Offse 1 0 dB/div Ref 20.0 1 10 0	Swept SA 50 Ω AC 6000000 GHz et 2.34 dB	PNO: Fast → Trig: Fre	2MHz No-I ALIGN AL #A e Run Av o dB	vg Type: RMS gjHold: 100/100 Mkr/	04:48:09 PM Feb 24,2023 TRACE 1 2 3 4 5 6 TYPE M DET PNNNNN 1 2.402 1 GHZ
Agilent Spectrum Analyzer-(X) RL RF I Center Freq 2.356 Ref Offse I 0 dB/div Ref 20.0 I <t< td=""><td>Swept SA 50 Q AC 60000000 GHz 42.34 dB 00 dBm</td><td>SENSE:INT PNO: Fast Trig: Free FGain:Low #Atten: 3</td><td>2MHz No-I ALIGN AL #A e Run Av o dB</td><td>vg Type: RMS g Hold: 100/100 Mkr1</td><td>04:48:09 PM Feb 24, 2023 TRACE 2 3 4 5 6 TYPE MED 24, 2023 TYPE MED 24, 2023 TYPE MED 24, 2023 1 2.4002 1 GHz -1.530 dBm -1.530 dBm</td></t<>	Swept SA 50 Q AC 60000000 GHz 42.34 dB 00 dBm	SENSE:INT PNO: Fast Trig: Free FGain:Low #Atten: 3	2MHz No-I ALIGN AL #A e Run Av o dB	vg Type: RMS g Hold: 100/100 Mkr1	04:48:09 PM Feb 24, 2023 TRACE 2 3 4 5 6 TYPE MED 24, 2023 TYPE MED 24, 2023 TYPE MED 24, 2023 1 2.4002 1 GHz -1.530 dBm -1.530 dBm
Agilent Spectrum Analyzer - (V) Rc RF I Center Freq 2.350 Ref Offse I 0 dB/div Ref 20.0 I I 10 dB/div Ref 20.0 I I I 10 dB/div Ref 20.0 I I I I I 10 dB/div Ref 20.0 I	Swept SA 50 Q AC 50 000000 GHz tt 2.34 dB 00 dBm 4	PNO: Fast →→ Trig: Free FGain:Low →→ #Atten: 3 #VEW 300 kH #VBW 300 kH Y FU -1.530 dBm -65.750 dBm	2MHz No-I ALIGN AL #A 9 Run Av 0 dB	vg Type: RMS rg Hold: 100/100 Mkr1	04:48:09 PM Feb 24, 2023 TRACE 2 3 4 5 6 DET PNNNNN 1 2:402 1 GHz -1.530 dBm -1.530 d
Agilent Spectrum Analyzer-(XI) RL RF I Center Freq 2.350 Ref Offse I 0 dB/div Ref 20.0 I I 10 dB/div Ref 20.0 I I I 10 dB/div Ref 20.0 I I I I I 10 dB/div Ref 20.0 I	Swept SA 50 Q AC 50000000 GHz 400 dBm 400 dB	PNO: Fast →→ Trig: Free FGain:Low →→ #Atten: 3 #VEW 300 kH #VBW 300 kH Y FU -1.530 dBm -65.750 dBm	2MHz No-I ALIGN AL #A 9 Run Av 0 dB	vg Type: RMS rg Hold: 100/100 Mkr1	04:48:09 PM Feb 24, 2023 TRACE 2 3 4 5 6 DET PNNNNN 1 2:402 1 GHz -1.530 dBm -1.530 d
Agilent Spectrum Analyzer - (V) Ref RF I Center Freq 2.350 Ref Offse I Io dB/cliv Ref 20.0 I I 10 dB/cliv Ref 20.0 I I 20 dB/cliv Ref 20.0 I I 20 dB/cliv I I I I 20 dB/cliv I I I I I 30 dB/cliv I I I I I I 30 dB/cliv I	Swept SA 50 Q AC 50 000000 GHz tt 2.34 dB 00 dBm 4	PNO: Fast →→ Trig: Free FGain:Low →→ #Atten: 3 #VEW 300 kH #VBW 300 kH Y FU -1.530 dBm -65.750 dBm	2MHz No-I ALIGN AL #A 9 Run Av 0 dB	vg Type: RMS rg Hold: 100/100 Mkr1	04:48:09 PM Feb 24, 2023 TRACE 2 3 4 5 6 DET PNNNNN 1 2:402 1 GHz -1.530 dBm -1.530 d













Agilent Spectrum Analyzer - Sw R L RF 50	Ω AC	SEN	ISE:INT	ALIGN AUTO		04:55:40	PM Feb 24, 2
nter Freq 2.4800	00000 GHz	PNO:Wide ↔ → →	Trig: Free Run	#Avg Type Avg Hold:	: RMS 2000/2000	TR	ACE 1 2 3 4 YPE MWWW DET PNNN
Dut offereto		FGain:Low	#Atten: 30 dB		Mk	r1 2.478	
Ref Offset 2 dB/div Ref 20.00	dBm						060 dB
0							
	<u></u>	♦ ¹					
	1 (M		\wedge				
	$h_{N_{\rm e}}$		h h	}			
0 /M	- W	Ŋ	` ₩	h.			
0				hy .			
0				4 M			
				N Y			
0				N M			
0				V. 1	Mmmmhn	\dots	ᢣ᠕ᠰᢏ᠕ᠰᢦᡗᠰᡗ
0							
es BW 100 kHz Band E	dge(Hoppir		300 kHz 1-DH1 24	status 80MHz H	sweep opping E	1.000 ms	(1001 pi
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 50	dge(Hoppir ept SA 2 AC 000000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E	1.000 ms mission	(1001 p
Band E Agilent Spectrum Analyzer - Sw RL RF 500 nter Freq 2.5260	dge(Hoppir eptSA 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 p PMFeb 24, 2 ACE 12 34 PMFeb 24, 2 ACE 234 PMFeb 24, 2 ACE 12 34 PMFeb 24, 2 ACE 14 ACE 14 PMFeb 24, 2 ACE 14 ACE 14 PMFeb 24, 2 ACE 14
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 nter Freq 2.5260 Ref Offset 2 dB/div Ref 20.00	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 p PMFeb 24, 2 ACE 12 34 PMFeb 24, 2 ACE 234 PMFeb 24, 2 ACE 12 34 PMFeb 24, 2 ACE 14 ACE 14 PMFeb 24, 2 ACE 14 ACE 14 PMFeb 24, 2 ACE 14
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 nter Freq 2.5260 Ref Offset 2 dB/div Ref 20.00	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 p PMFeb 24, 2 ACE 12 34 PMFeb 24, 2 ACE 234 PMFeb 24, 2 ACE 12 34 PMFeb 24, 2 ACE 14 ACE 14 PMFeb 24, 2 ACE 14 ACE 14 PMFeb 24, 2 ACE 14
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 nter Freq 2.5260 BJ/div Ref Offset 2 dB/div Ref 20.00	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 p PMFeb 24, 2 PMFeb 24,
Band E Band E Agilent Spectrum Analyzer - Sw RL RF 500 Inter Freq 2.52600 Ref Offset 2 dB/div Ref 20.00	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 p PMFeb 24, 2 PMFeb 24,
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 nter Freq 2.5260	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 pi PM Feb 24,2 PP Feb 2
Agilent Spectrum Analyzer - Sw RL RF 50 nter Freq 2.5260 Ref Offset 2	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	PM Feb 24, 2 ACE 1 2 3 4 YPE MWWW DET P NNN
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF S00 nter Freq 2.52600	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms mission 04:56:12 TR T T Vkr1 2.47	(1001 pi PM Feb 24,2 PP Feb 2
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 onter Freq 2.52600 Ref Offset 2 B/div Ref 20.000 0 0 0 0 0 0 0 0 0 0 0 0	dge(Hoppir ept A 2 AC 0 00000 GHz	ng) NVNT	1-DH1 24	80MHz H	opping E RMS 2000/2000	1.000 ms	(1001 p) 3PM Feb 24, 2 ACE 1 2 3 4 76 0 GH 769 dB -17 94 c 57600 GI
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 onter Freq 2.52600 CB/div Ref 20.000 CB/div Ref 20.0000 CB/div	A dB dBm	ng) NVNT SEN PNO: Fast FGain:Low #VBW	1-DH1 24	80MHz H	opping E 2000/2000	1.000 ms	(1001 p) 3PM Feb 24, 2 ACE 1 2 3 4 76 0 GH 769 dB -17 94 c 57600 GI
es BW 100 kHz Band E Aglient Spectrum Analyzer - Sw RL RF S0 nter Freq 2.52600 C C C C C C C C C C C C C C C C C C C	idge(Hoppir ept SA 2 AC 000000 GHz ∥ .4 dB dBm ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	ng) NVNT SEN PNO: Fast FGain:Low #VBW 1.769 dB -57.984 dB	1-DH1 24	80MHz H	opping E 2000/2000	1.000 ms	(1001 pt PM Feb 24, 2 ACE 1 2 3 4 PC 1
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF 500 onter Freq 2.5260 CB/CR Ref 20.00 CD CALL RF 2	idge(Hoppir ept SA 2 AC 3 OD000 GHz 4 AB 4 AB 4 AB 4 AB 4 AB 4 AB 4 AB 4 AB	ng) NVNT SEN PNO: Fast →→ FGain:Low #VBW X 1.769 dE -57.984 dE -57.984 dE	1-DH1 24	80MHz H	opping E 2000/2000	1.000 ms	(1001 pt PM Feb 24, 2 ACE 1 2 3 4 PC 1
es BW 100 kHz Band E Agilent Spectrum Analyzer - Sw RL RF S0 onter Freq 2.5260 Ref Offset 2 dB/div Ref 20.00	Cdge(Hoppir ept SA 2 AC ↓ ↓ 000000 GHz ↓ 1 4 dB dBm ↓ 4 ↓ 3 ↓ 4 ↓ 3 ↓ 4 ↓ 4 ↓ 3 ↓ 4 ↓ 4 ↓ 5 GHz 2,500 GHz	ng) NVNT SEN PNO: Fast →→ FGain:Low #VBW X 1.769 dE -57.984 dE -57.984 dE	1-DH1 24	80MHz H	opping E 2000/2000	1.000 ms	(1001 pt PM Feb 24, 2 ACE 1 2 3 4 PC 1



















	Band Edg	ge(Hopping	g) NVN I	3-DH1 24	402MHz	Hopping	
Agilent Spectrum A RL R Center Freg		GHz	SENSE:INT		ALIGN AUTO #Avg Type		05:03:13 PM Feb 24, 202: TRACE 1 2 3 4 5
		PNO: Wid IFGain:Lo		Free Run en: 30 dB	Avg Hold: :		
	f Offset 2.34 dB ef 20.00 dBm					MKr	1 2.402 968 GHz 1.028 dBm
10.0					♦ ¹		
0.00			ĥ	MALL	~~~~~	mm	m m
10.0				¥			
20.0							
30.0							
40.0			/\				
50.0		M	7				
50.0 ~~^~~ ~	n A.M. mm	mand					
70.0							
Center 2.4020							Span 8.000 MHz
Res BW 100	KHZ		#VBW 300	KHZ	STATUS	Sweep	1.000 ms (1001 pts
	and Edge(I	Hopping) N	NVNT 3-I	DH1 2402	2MHz Ho	opping En	nission
Agilent Spectrum A	Analyzer - Swept SA						
RL R	Analyzer - Swept SA F 50 Ω AC 2.356000000		SENSE:INT		ALIGN AUTO #Avg Type	: RMS	05:03:47 PM Feb 24, 202 TRACE 1 2 3 4 5
RL R Renter Freq	F 50 Ω AC 2.356000000	GHz PNO: Fa: IFGain:Lo	st 🛶 Trig:	Free Run n: 30 dB	ALIGN AUTO	2000/2000	05:03:47 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE M WWWW DET P NNNN
enter Freq	F 50 Ω AC	PNO: Fa	st 🛶 Trig:	Free Run	ALIGN AUTO #Avg Type	2000/2000	05:03:47 PM Feb 24, 202 TRACE 2 3 4 5 TYPE MWWWW DET P NNNN kr1 2.404 2 GHz
center Freq center Freq 0 dB/div Re	F 50 Ω AC 2.356000000 of Offset 2.34 dB	PNO: Fa	st 🛶 Trig:	Free Run	ALIGN AUTO #Avg Type	2000/2000	05:03:47 PM Feb 24, 202 TRACE 2 3 4 5 TYPE MWWWW DET P NNNN kr1 2.404 2 GHz
RL R Center Freq Re 0 dB/div Re 0 0 0.00 10.0 0.00	F 50 Ω AC 2.356000000 of Offset 2.34 dB	PNO: Fa	st 🛶 Trig:	Free Run	ALIGN AUTO #Avg Type	2000/2000	05:03:47 PM Feb 24, 202 TRACE 2 3 4 5 TYPE MWWWW DET P NNNN kr1 2.404 2 GHz
0 RL R Center Freq Re 10 dE/div Re 0 00 0.00 10.0 20.00 0.00 30.0 0 0.00	F 50 Ω AC 2.356000000 of Offset 2.34 dB	PNO: Fa	st 🛶 Trig:	Free Run	ALIGN AUTO #Avg Type	2000/2000	kr1 2.404 2 GHz 1.027 dBm
W RL R Center Freq	F 50 Ω AC 2.356000000 of Offset 2.34 dB	PNO: Fa	st 🛶 Trig:	Free Run	ALIGN AUTO #Avg Type	2000/2000	05:03:47 PMFeb 24, 2021 TRACE 12 3 4 3 TYPE WWWW DET P NNNN Kr1 2.404 2 GHz 1.027 dBm
M RL R Center Freq Re 10 GB/dlv Re 00 000 Re 000	F 50 Ω AC 2.356000000 of Offset 2.34 dB	PNO: Fa	st 🛶 Trig:	Free Run	ALIGN AUTO #Avg Type	2000/2000	05:03:47 PMFeb 24, 2021 TRACE 12 3 4 3 TYPE WWWW DET P NNNN Kr1 2.404 2 GHz 1.027 dBm
Reg Reg 10 dB/div Ref 0 00 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000 0 000 000	E 50 Ω AC 2.356000000 offset 2.34 dB 20.00 dBm 0 GHz	PNO: Fa	st →→ Trig: w #Atte	All the second s	ALIGN AUTO #Avg Type		05:03:47 PMFeb 24,2023 TRACE 23 4 5 TYPE WWWW kr1 2.404 2 GHz 1.027 dBm
RL R Center Freq Re 0 dB/div Re 0 g	E 50 Ω AC 2.356000000 offset2.34 dB 20.00 dBm 0 dBm	PNO: Fat IFGain:Lo	st → Trig: w #Atte	Free Run n: 30 dB	ALIGN AUTO #Avg Type	Sweep	05:03:47 PMFeb 24, 2027 TRACE 12 34 - 5 TYPE WWWWW RT1 2.404 2 GHz 1.027 dBm
# RL R Center Freq Re 0 dB/div Re 0 dB/div </td <td>F 902 AC 2.356000000 of Offset 2.34 dB of 20.00 dBm b b b b b b b b b b b b b b b b b b b</td> <td>PNO: Fa IFGain:Lo 404 2 GHz 400 0 GHz -</td> <td>st → Trig: w #Atte</td> <td>Free Run n: 30 dB</td> <td>ALIGN AUTO AVg Hold: : Avg Hold: :</td> <td>Sweep</td> <td>05:03:47 PMFeb 24,2027 TRACE 12:34:5 TYPE WINNIN kr1 2:404 2 GHz 1.027 dBm </td>	F 902 AC 2.356000000 of Offset 2.34 dB of 20.00 dBm b b b b b b b b b b b b b b b b b b b	PNO: Fa IFGain:Lo 404 2 GHz 400 0 GHz -	st → Trig: w #Atte	Free Run n: 30 dB	ALIGN AUTO AVg Hold: : Avg Hold: :	Sweep	05:03:47 PMFeb 24,2027 TRACE 12:34:5 TYPE WINNIN kr1 2:404 2 GHz 1.027 dBm
RL R Center Freq Re 0 dB/div Re 10 dB/div Re 11 dB/div Re 11 dB/div Re 11 dB/div Re 11 dB/div Re	F 902 AC 2.356000000 of Offset 2.34 dB of 20.00 dBm b b b b b b b b b b b b b b b b b b b	PNO: Fa IFGain:Lo 404 2 GHz 400 0 GHz -	st → Trig: w #Atte	Free Run n: 30 dB	ALIGN AUTO AVg Hold: : Avg Hold: :	Sweep	05:03:47 PMFeb 24,2027 TRACE 12:34:5 TYPE WINNIN kr1 2:404 2 GHz 1.027 dBm
4 RL R Center Freq Re 0 dB/div Re 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 30.0 - - 40.0 - - 50.0 - - 60.0 - - 70.0 - - Start 2.306000 - - 70.0 - - 1 N 1 f 2 N 1 f 4 N 1 f 6 - - - 9 - - -	F 902 AC 2.356000000 of Offset 2.34 dB of 20.00 dBm b b b b b b b b b b b b b b b b b b b	PNO: Fa IFGain:Lo 404 2 GHz 400 0 GHz -	st → Trig: w #Atte	Free Run n: 30 dB	ALIGN AUTO AVg Hold: : Avg Hold: :	Sweep	05:03:47 PM Feb 24, 2027 TRACE 12:34:5 TYPE WINNIN kr1 2:404 2:GHz 1.027 dBm 4 .1.027 dBm 4 .1.027 dBm 5 top 2:40600 GHz 9.600 ms (1001 pts) TION VALUE
RL R center Freq Re 0 dB/div Re 10 0	F 902 AC 2.356000000 of Offset 2.34 dB of 20.00 dBm b b b b b b b b b b b b b b b b b b b	PNO: Fa IFGain:Lo 404 2 GHz 400 0 GHz -	st → Trig: #Atte	Free Run n: 30 dB	ALIGN AUTO AVg Hold: : Avg Hold: :	Sweep	05:03:47 PM Feb 24, 2027 TRACE 12:34:5 TYPE WINNIN kr1 2:404 2:GHz 1.027 dBm 4 .1.027 dBm 4 .1.027 dBm 5 top 2:40600 GHz 9.600 ms (1001 pts) TION VALUE



6 A 11 - 6	Band Ed	age(nop	ping) N				-11	ig i toi	
Agilent Spectrum Ar RL RF enter Freq 2	50 Ω AC	00 GHz	NO: Wide ↔→	SENSE:INT Trig: Free Ru #Atten: 30 dE	in	AUTO #Avg Type: Avg Hold: 2	RMS 2000/2000	05:0	5:47 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE M WWWW DET P NNN
Ref	Offset 2.4 dB 20.00 dBm		Gam.eow				Μ		6 856 GH 1.208 dBn
0 dB/div Ref									
10.0	▲ 1								
no hmar	Mr. M. M	m		hund	nM				
	- · W		· .	¥ TY	- N				
20.0									
30.0									
10.0					3	MA			
50.0 						- W	Lucon aller	mark	and the second
70.0									
.0.0									
enter 2.4800 Res BW 100 I			#VBI	N 300 kHz			Swee		n 8.000 MH ns (1001 pts
Ba	nd Edge	(Hoppir		T 3-DH1	249014	STATUS	opping l	Emissic	n
	ina Euge								
	nalyzer - Swept SA 50 Ω AC					I IZ I IC	pping		
RL RF	50 Ω AC	00 GHz		SENSE:INT Trig: Free Ru #Atten: 30 dE	ALIG		RMS		5:21 PM Feb 24, 202 TRACE 1 2 3 4 5
enter Freq 2 enter Ref 0 dB/div Ref	50 Ω AC	DO GHz	PNO: Fast ↔	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS	05:0 Mkr1 2.	5:21 PM Feb 24, 203 TRACE 1 2 3 4 5 TYPE M WWW DET P N N N N
enter Freq 2 enter Freq 2 0 dB/div Ref 0 dB/div Ref	50 Ω AC 2.52600000 Offset 2.4 dB	DO GHz	PNO: Fast ↔	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS	05:0 Mkr1 2.	5:21 PM Feb 24, 203 TRACE 1 2 3 4 5 TYPE M WWW DET P N N N N
enter Freq 2 Conter Freq 2 Ref 0 dB/div Ref 0 dB/div Ref 0 dB/div Ref	50 Ω AC 2.52600000 Offset 2.4 dB	DO GHz	PNO: Fast ↔	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS	05:0 Mkr1 2.	5:21 PM Feb 24, 202 TRACE [] 2:3 4 3 TYPE MANNE DET PNNNN 480 0 GH: 0.783 dBn
enter Freq 2 0 dB/div Ref 0 dB/div Ref 0 dB/div Ref 0 dB/div Ref 0 dB/div Ref 0 dB/div Ref	50 Ω AC 2.52600000 Offset 2.4 dB	DO GHz	PNO: Fast ↔	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS	05:0 Mkr1 2.	5:21 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE MWWW DET P N N N N
RL RF eenter Freq 2 0 dB/div Ref 0 dB/div Re	50 Ω AC 2.52600000 Offset 2.4 dB	DO GHz	PNO: Fast ↔	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS	05:0 Mkr1 2.	5:21 PM Feb 24, 202 TRACE [] 23 4 5 TYPE MANNE DET PNNNN 480 0 GH; 0.783 dBn
RL RF Center Freq 2 Ref 0 dB/div Ref	50 Ω AC 2.52600000 Offset 2.4 dB	DO GHz	PNO: Fast ↔	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS	05:0 Mkr1 2.	5:21 PM Feb 24, 202 TRACE [] 2:3 4 3 TYPE MANNE DET PNNNN 480 0 GH: 0.783 dBn
RL RF Ref Freq 2 0 dB/div Ref 0 dB/div Re	0ffset 2.4 dB	DO GHz	PNO: Fast	SENSE:INT	ALIG	GN AUTO #Avg Type:	RMS 2000/2000	05:0 Mkr1 2. ()	2.57600 GH
RL RF Center Freq 2 Ref 0 dB/div Ref 10.0 1 0 dB/div Ref 0 dB/div Ref <t< td=""><td>0ffset 2.4 dB f 20.00 dBm</td><td>DO GHz</td><td>PNO: Fast</td><td>SENSE:INT</td><td>ALIC</td><td>GN AUTO #Avg Type:</td><td>RMS 2000/2000</td><td>05:0 Mkr1 2. ()</td><td>480 0 GH: </td></t<>	0ffset 2.4 dB f 20.00 dBm	DO GHz	PNO: Fast	SENSE:INT	ALIC	GN AUTO #Avg Type:	RMS 2000/2000	05:0 Mkr1 2. ()	480 0 GH:
RL RF Ref Freq 2 0 dB/div Ref 9 0 dB/div Ref 9 0 0 0 0 0 0 0 0 0 0 0 0 0	0ffset 2.4 dB f 20.00 dBm	2.480 0 GHz	PNO: Fast → Gain:Low #VEN #VEN	SENSE:INT Trig: Free Ru #Atten: 30 dE	ALIC	N AUTO #Avg Type Avg Hold: 2	RMS 2000/2000	05:0 Mkr1 2. (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	480 0 GH:
RL RF Ref Freq 2 0 dB/div Ref 9 9 10.0 0.00 0.00 0.00 0.0 0.0 0.0	0ffset 2.4 dB f 20.00 dBm	2.480 0 GHz	PNO: Fast → Gain:Low #VEN #VEN	SENSE:INT Trig: Free Ru #Atten: 30 dE	ALIC	N AUTO #Avg Type Avg Hold: 2	RMS 2000/2000	05:0 Mkr1 2. (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	480 0 GH:
RL RF center Freq 2 Ref 0 dB/div Ref 10.0 1 0 00 1 0 00 20 <td< td=""><td>0ffset 2.4 dB f 20.00 dBm</td><td>2.480 0 GHz</td><td>PNO: Fast Gain:Low #VB1 #VB1</td><td>SENSE:INT Trig: Free Ru #Atten: 30 dE</td><td>ALIC</td><td>N AUTO #Avg Type Avg Hold: 2</td><td>RMS 2000/2000</td><td>05:0 Mkr1 2. (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)</td><td>480 0 GH: </td></td<>	0ffset 2.4 dB f 20.00 dBm	2.480 0 GHz	PNO: Fast Gain:Low #VB1 #VB1	SENSE:INT Trig: Free Ru #Atten: 30 dE	ALIC	N AUTO #Avg Type Avg Hold: 2	RMS 2000/2000	05:0 Mkr1 2. (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	480 0 GH:
RL PF enter Freq 2 0 dB/div 0 1 0 1 0 0 0 2 1 1 1 1 1 1 1 1 1	0ffset 2.4 dB f 20.00 dBm	2.480 0 GHz	PNO: Fast Gain:Low #VB1 #VB1	SENSE:INT Trig: Free Ru #Atten: 30 dE	ALIC	N AUTO #Avg Type Avg Hold: 2	RMS 2000/2000	05:0 Mkr1 2. (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	480 0 GH



10. 20 dB Bandwidth

10.1 Block Diagram Of Test Setup



10.2 Limit

N/A

10.3 Test procedure

- 1. Set RBW = 30kHz.
- 2. Set the video bandwidth (VBW) \ge 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.

7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

10.4 Test Result

Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	0.957	Pass
NVNT	1-DH1	2441	0.962	Pass
NVNT	1-DH1	2480	0.957	Pass
NVNT	2-DH1	2402	1.357	Pass
NVNT	2-DH1	2441	1.362	Pass
NVNT	2-DH1	2480	1.367	Pass
NVNT	3-DH1	2402	1.349	Pass
NVNT	3-DH1	2441	1.345	Pass
NVNT	3-DH1	2480	1.346	Pass





Edition: A.5

E















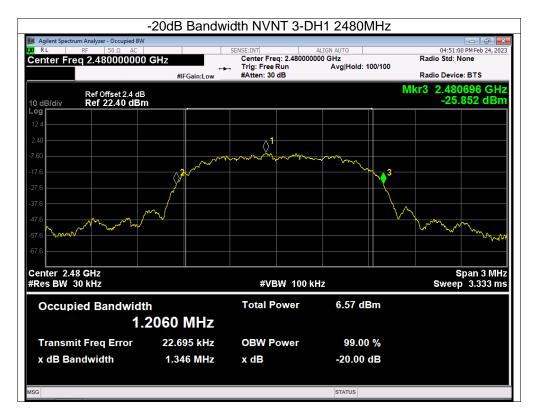


Page: 52 of 80









C. CO., LTA

No.: BCTC/RF-EMC-007

Page: 54 of 80



11. Maximum Peak Output Power

11.1 Block Diagram Of Test Setup



11.2 Limit

	FCC Part15 (15.247) , Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result				
15.247(b)(1)	Peak Output Power	0.125 watt or 21dBm	2400-2483.5	PASS				

11.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

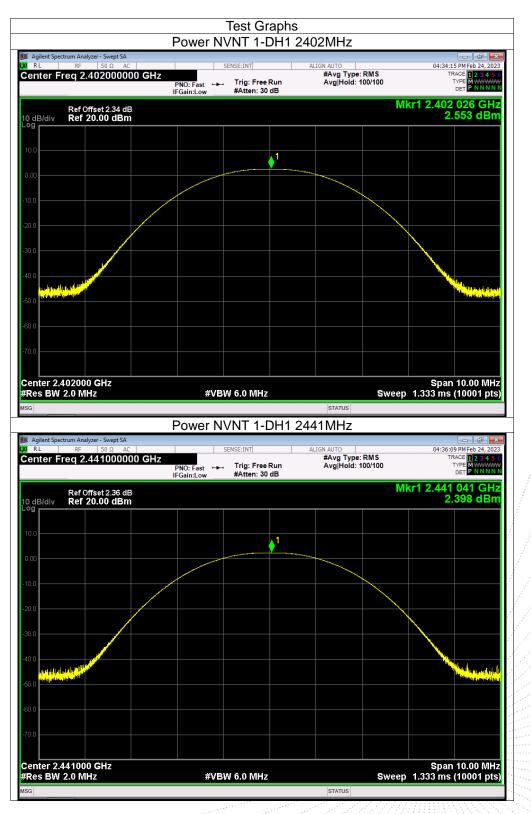
2. Set the spectrum analyzer: RBW = 3MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak.

3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

11.4 Test Result

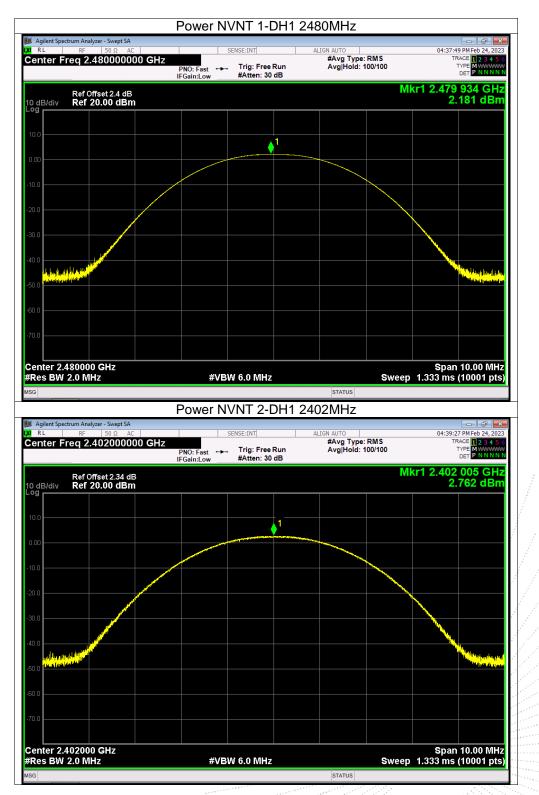
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	2.55	21	Pass
NVNT	1-DH1	2441	2.40	21	Pass
NVNT	1-DH1	2480	2.18	21	Pass
NVNT	2-DH1	2402	2.76	21	Pass
NVNT	2-DH1	2441	2.65	21	Pass
NVNT	2-DH1	2480	2.40	21	Pass
NVNT	3-DH1	2402	3.32	21	Pass
NVNT	3-DH1	2441	3.20	21	Pass
NVNT	3-DH1	2480	3.01	21	Pass



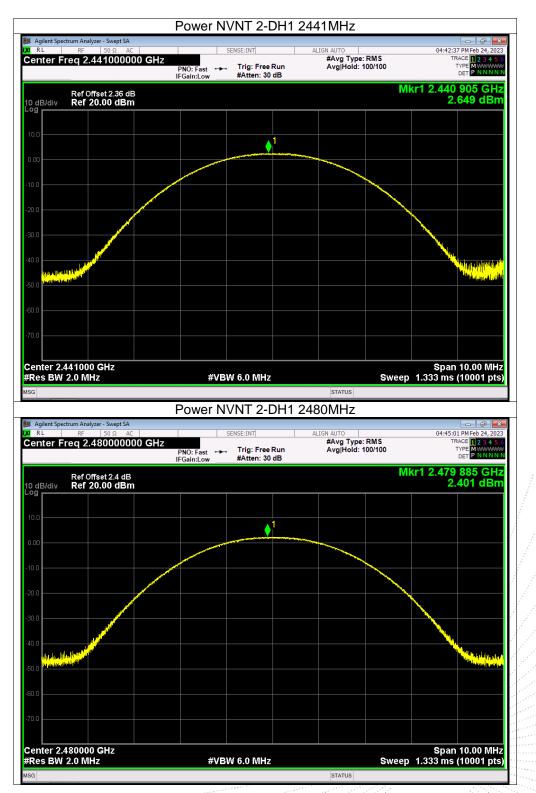


NJITHS





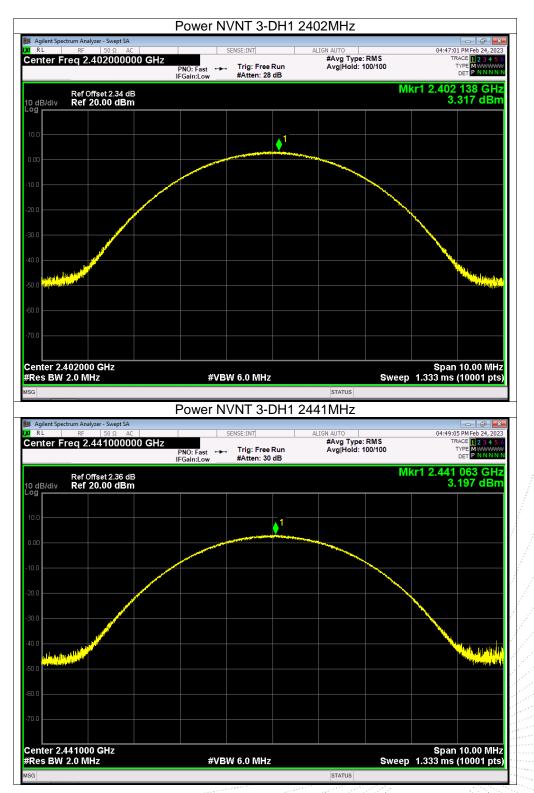




测

No.: BCTC/RF-EMC-007





TH TOV 枪





S/C II /

No.: BCTC/RF-EMC-007

Page: 60 of 80



12. Hopping Channel Separation

12.1 Block Diagram Of Test Setup



12.2 Limit

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, whichever is greater, provided the systems operate with an output power no greater than 0.125W.

12.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

2. Set the spectrum analyzer: RBW = 30kHz. VBW = 100kHz , Span = 2.0MHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.

3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	2401.998	2402.998	1.000	0.957	Pass
NVNT	1-DH1	2440.998	2441.996	0.998	0.962	Pass
NVNT	1-DH1	2478.998	2479.998	1.000	0.957	Pass
NVNT	2-DH1	2402.166	2403.164	0.998	0.905	Pass
NVNT	2-DH1	2441.166	2442.166	1.000	0.908	Pass
NVNT	2-DH1	2479.166	2480.166	1.000	0.911	Pass
NVNT	3-DH1	2401.934	2402.936	1.002	0.899	Pass
NVNT	3-DH1	2440.938	2441.938	1.000	0.897	Pass
NVNT	3-DH1	2478.940	2479.938	0.998	0.897	Pass

12.4 Test Result



Agilent Spectrum Analyzer - Sw	ept SA	FS NVNT 1-I	-		04.25-07 DM 5ch 24 202
enter Freq 2.4025	00000 GHz	SENSE:INT D: Wide Trig: Free ain:Low #Atten: 3	eRun A	AUTO Avg Type: RMS Avg Hold:>100/100	04:35:07 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE M WWWWW DET P N N N
Ref Offset 2 dB/div Ref 20.00	.34 dB dBm			Ν	lkr1 2.401 998 GH: -0.096 dBm
				²	
.00		~		\sim	
			$\overline{}$		
).0).0					
D.0					
J.0					
enter 2.402500 GHz Res BW 30 kHz	2	#VBW 100 kH	z	Swe	Span 2.000 MH: 2.133 ms (1001 pts
R MODE TRC SCL	× 2.401 998 GHz				FUNCTION VALUE
2 N 1 f	2.401 998 GHz 2.402 998 GHz	-0.203 dBm			
5 6					=
7 8 9 9 9 9					
0					
3				STATUS	
Agilent Spectrum Analyzer - Sw		FS NVNT 1-I	DH1 2441N	1Hz	
RL RF 50 enter Freq 2.4415	00000 GHz	SENSE:INT : Wide Trig: Free in: low #Atten: 3	e Run A	AUTO Avg Type: RMS Avg Hold:>100/100	04:36:48 PM Feb 24, 202 TRACE 1 2 3 4 5 TYPE M WWWW DET P N N N N
Ref Offset 2	.36 dB	ain:Low #Atten: 3		N	lkr1 2.440 998 GHz -0.258 dBn
dB/div Ref 20.00	dBm				-0.238 GBI
.00				2	
D.0 D.0			~~~~	~	
D.0					
0.0					
J.0 J.0					
enter 2.441500 GHz Res BW 30 kHz		#VBW 100 kH	Z	Swe	Span 2.000 MH: ep 2.133 ms (1001 pts
	X 2.440 998 GHz				FUNCTION VALUE
2 N 1 f	2.441 996 GHz	-0.324 dBm			
3 4 5 6 7					

No.: BCTC/RF-EMC-007