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Test Report No.: RJ2410WDG0234-1



Certificate # 2951.01

TEST REPORT

Applicant	Razer Inc.
Address	9 Pasteur, Suite 100, Irvine, CA92618, USA

Manufacturer or Supplier	RAZER (ASIA-PACIFIC) PTE. LTD.	
Address	Razer SEA HQ, 1 One-north Crescent, #02-01, Singapore 138538, Singapore	
Product	Wireless Mouse	
Brand Name	RAZER	
Model	RZ01-0525	
Additional Model & Model Difference	RZ01-0525XXXX-XXXX (X can be 0~9 or A~Z); see item 2.1	
Date of tests	Nov. 05, 2024 ~ Nov. 18, 2024	

The tests have been carried out according to the requirements of the following standards:

☒ ARIB STD-T66, Article 2 Section 1 Item 19, MIC Notice No.88 Appendix No.43

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

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Lucas

Glyn He

Date: Dec. 02, 2024

This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at <http://www.bureauveritas.com/home/about-us/our-business/cps/about-us/terms-conditions/> and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

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6 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT
BY THE LAB 59



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RJ2410WDG0234-1	Original release	Dec. 02, 2024



1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications (For BT-LE):

Article 2 Section 1 Item 19 Reference	ARIB STD-T66 Ref.	Report reference	Parameter	Test Results (NOTE)
GENERAL PROVISIONS				
C	3.2 (4)	3.1	Frequency tolerance	C
D	3.2 (7)	3.2	Occupied bandwidth	C
E	3.2 (6)	3.3	Spurious emissions	C
TRANSMITTING EQUIPMENT				
F	3.2(1)	3.4	Antenna power	C
--	--	--	SAR	NA
TRANSMITTING ANTENNA				
--	--	2.5	Type, configuration, etc. of transmitting antenna	C
--	--	2.5	Direction pattern of transmitting antenna	C
RECEIVING EQUIPMENT				
G	3.3 (1)	3.5	Spurious emissions of receiver	C
--	--	2.5	Refer to all articles for transmitting antenna	C
OPERATING FREQUENCY 2400 TO 2483.5MHz				
--	3.7 (1)	3.3	High Frequency/modulation section cannot be opened easily	C
--	3.1 (1)	2.1	Communication method	C
--	3.2 (1)a	2.1	Modulation method	C
--	3.2 (1)a	2.1	Spread spectrum method	C
--	3.2 (2)	3.4	Antenna power	C
--	3.6 (2)	3.4	Absolute gain of transmitting antenna	C
--	3.6 (2)	3.4	Angular width of principal radiation (AWPR)	C
--	3.2 (10)	-	Number of carriers within 1 MHz bandwidth in OFDM	N/A
--	3.2 (8)	-	Diffusion bandwidth	N/A
--	3.2 (9)	-	Spreading factor	N/A
--	3.4.1(1)	3.6	Interference Prevention Function	C
--	3.4.1(3)	-	Carrier Sense Capability	N/A
NOTE: C = Conform NC = Not Conform NT = Not Tested NA = Not Applicable				



1.1 MEASUREMENT UNCERTAINTY

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

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

ITEM	UNCERTAINTY
Occupied Bandwidth	206.50 Hz
Spurious emissions	$\pm 3.93\text{dB}$
Output power density	1.37dB
Out of band radiated power	2.52dB
Frequency Tolerance	0.104 ppm



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Wireless Mouse
MODEL NO.	RZ01-0525
ADDITIONAL MODELS	RZ01-0525XXXX-XXXX (X can be 0~9 or A~Z)
NOMINAL VOLTAGE	DC 3.7V from Li-ion battery or DC 5V from USB Host Unit
TYPE OF EQUIPMENT	Data transmission equipment operating in the 2.4GHz
MODULATION TYPE	BT-LE GFSK (1, 2 Mbps)
MODULATION TECHNOLOGY	DTS
OPERATING FREQUENCY	2402MHz ~ 2480MHz for BT-LE GFSK (1, 2 Mbps)
NUMBER OF CHANNEL	40 for BT-LE GFSK (1,2 Mbps)
RATED RF OUTPUT POWER	BT-LE 1Mbps :4 mW BT-LE 2Mbps :4 mW
CONDUCTED RF OUTPUT POWER	BT-LE 1Mbps :3.177mW BT-LE 2Mbps :3.199mW
EIRP OUTPUT POWER	BT-LE 1Mbps :5.862mW BT-LE 2Mbps :5.902mW
HW-RELEASE NO	V10
SW-RELEASE NO	V1.0
ANTENNA TYPE	Metal Antenna, 2.66dBi Gain
CABLE SUPPLIED	USB Cable (1/2/3): Shielded, Detachable, 1.2m

NOTES:

1. For the test results, the EUT had been tested with all conditions.
2. The above EUT information was declared by manufacturer and for more detailed features description please refers to the manufacturer's specifications or user's manual.
3. Please refer to the EUT photo document (Reference No.: 2410WDG0234-3) for detailed product photo.
4. Additional models (see above table) are identical with the test model RZ01-0525 except model number for trading purposes.



5. For trade convenience, products with three different specifications of USB cable (see below list). When the product is shipped, one of them will be used randomly. The difference has been considered during this test; full test was performed for the "Cable 3".

CABLE (NO.)	MODEL	MANUFACTURERS	LENGTH	DIAMETER	TEST DETAILS
1	41-200-0557-100Y	DONGGUAN YUEYANG WIRE&CABLE CO LTD	1.2m	OD: 3.5±0.15mm ID(2C): 0.80±0.05mm ID(1C): 0.95±0.07mm	PARTIAL TEST (for radiated emission (below 1GHz), ESD)
2	41-200-0557-100A	DONG GUAN HAN HUI ELECTRONICS CO.,LTD	1.2m	OD: 3.5±0.15mm ID(2C): 0.95±0.08mm ID(1C): 1.05±0.08mm	PARTIAL TEST (for radiated emission (below 1GHz), ESD)
3	400000502	DONG GUAN HANHUI ELECTRONICS CO.,LTD	1.2m	OD: 3.5±0.15mm ID(2C): 0.95±0.08mm ID(1C): 1.05±0.08mm	FULL TEST

Remark: The aluminum foil layer of the three cables is different, refer to the wire specification for details.



2.2 DESCRIPTION OF TEST CHANNELS

40 channels are provided for BLE GFSK (1,2 Mbps):

CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

NOTES:

1. The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore, only the data of the test channels were recorded in this report.
2. By means of test software for BT LE provided by manufacturers, the power levels during the tests were set according to the following codes:

BT-LE (GFSK) 1Mbps		BT-LE (GFSK) 2Mbps	
CHANNEL	POWER SETTING	CHANNEL	POWER SETTING
0	Default	0	Default
19	Default	19	Default
39	Default	39	Default



2.3 TEST CONDITIONS

Test conditions	Voltage (Vdc)
V_{normal}	3.7
V_{max}	4.07
V_{min}	3.33

2.4 ASSEMBLY

The RF circuit and components are inside the shield, also it won't be easy to open. Frequency Band, channels and Modulation parameters are fixed inside the module. They cannot be edited or modified by end-user.

2.5 ANTENNA SPECIFICATIONS

2.5.1 ANTENNA GAIN

Ant. Type	Connector Type	Highest Peak Gain (dBi) 2.4GHz ~ 2.5GHz
Mental	N/A	2.66

2.5.2 ANTENNA PATTERN

Please refer to the attached file (Antenna report).



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3 TEST RESULTS

3.1 FREQUENCY TOLERANCE MEASUREMENT

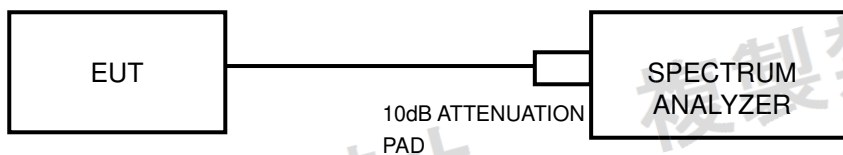
3.1.1 LIMITS OF FREQUENCY TOLERANCE MEASUREMENT

Tolerance of frequency shall be +/- 50ppm.

3.1.2 TEST METHOD

According to MIC Notice No. 88 Appendix 43.

3.1.3 TEST SETUP





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3.1.4 TEST RESULTS

BT-LE (GFSK 1 Mbps)

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH					
Channel	Frequency (MHz)	Voltage normal		Voltage +10%		Voltage -10%	
		Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)
0	2402	2401.994400	-2.331	2401.994360	-2.348	2401.994279	-2.381
19	2440	2439.994160	-2.393	2439.994120	-2.409	2439.994119	-2.410
39	2480	2479.994000	-2.419	2479.994000	-2.419	2479.993960	-2.435

BT-LE (GFSK 2 Mbps)

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH					
Channel	Frequency (MHz)	Voltage normal		Voltage +10%		Voltage -10%	
		Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)
1	2402	2401.993032	-2.900	2401.993003	-2.912	2401.993003	-2.912
19	2440	2439.992886	-2.915	2439.992886	-2.915	2439.992857	-2.927
38	2480	2479.992742	-2.926	2479.992713	-2.938	2479.992713	-2.938



3.2 OCCUPIED BANDWIDTH MEASUREMENT (99% POWER BANDWIDTH)

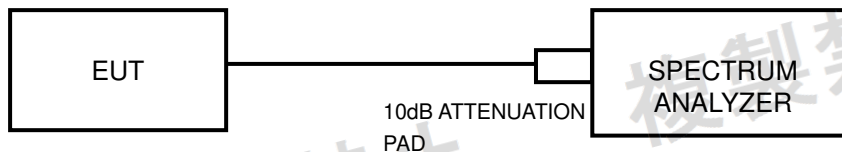
3.2.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

ITEM	LIMIT	REMARK
Occupied bandwidth	<26MHz	For 802.11b, g & 802.11n (HT20)
Occupied bandwidth	<26MHz	For BT-LE (GFSK)

3.2.2 TEST METHOD

According to MIC Notice No. 88 Appendix 43.

3.2.3 TEST SETUP



3.2.4 TEST RESULTS

BT-LE (GFSK 1 Mbps)

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH		
CHANNEL	FREQUENCY (MHz)	V _{normal}	V _{+10%}	V _{-10%}
		OCCUPIED BANDWIDTH (MHz)	OCCUPIED BANDWIDTH (MHz)	OCCUPIED BANDWIDTH (MHz)
0	2402	1.30	1.30	1.30
19	2440	1.30	1.30	1.30
39	2480	1.30	1.30	1.30
Measurement uncertainty		± 206.50 Hz		

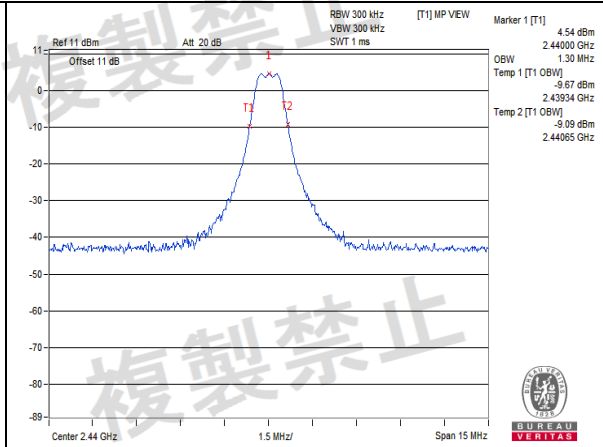
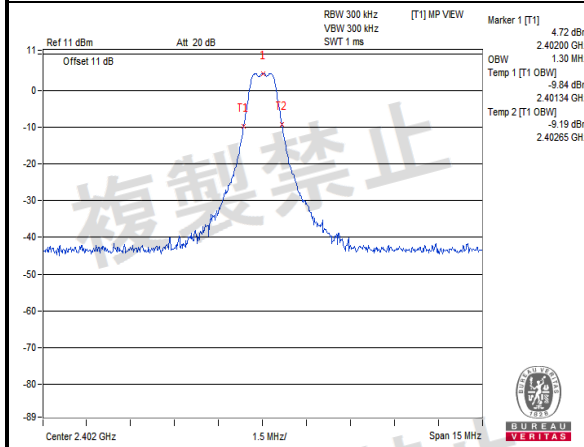
NOTE: For the test plots please refer to the below pages.



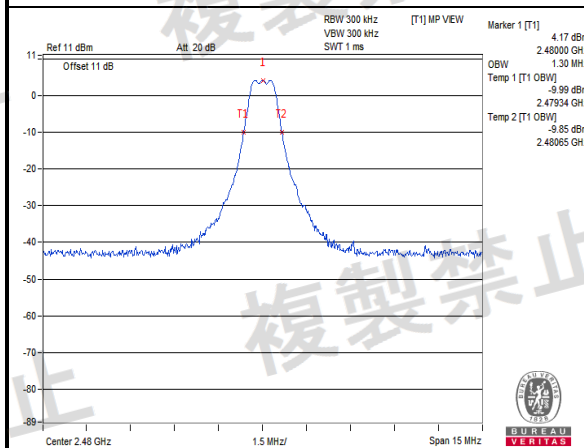
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Vnormal



Channel 0



Channel 19

NULL

Channel 39

NULL

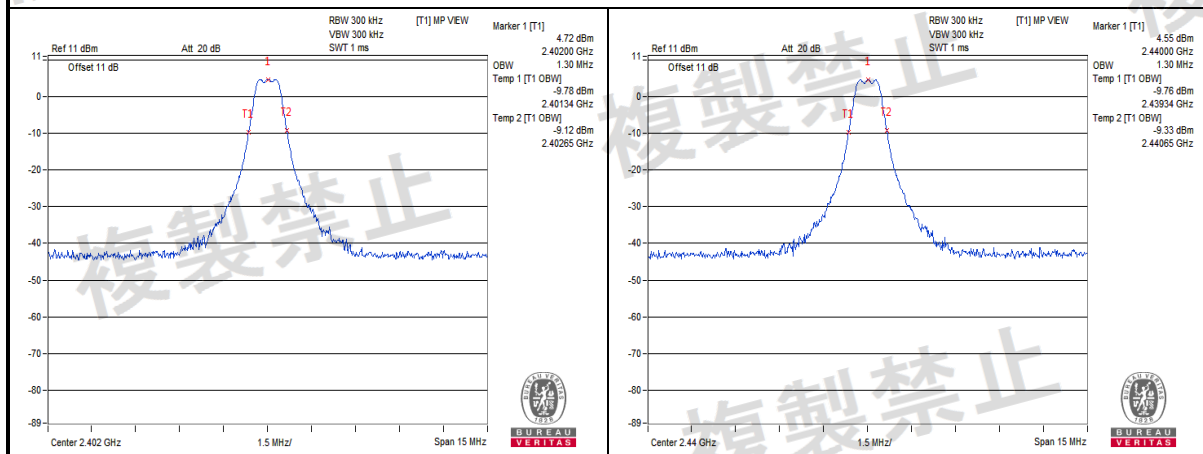
Measurement uncertainty: ± 206.50 Hz



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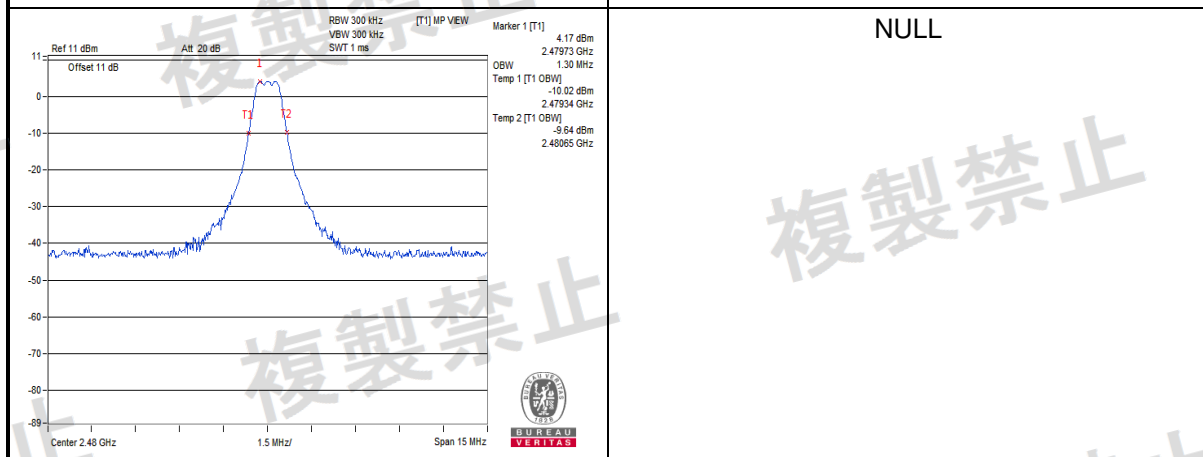
Test Report No.: RJ2410WDG0234-1

V+10%



Channel 0

Channel 19



Channel 39

NULL

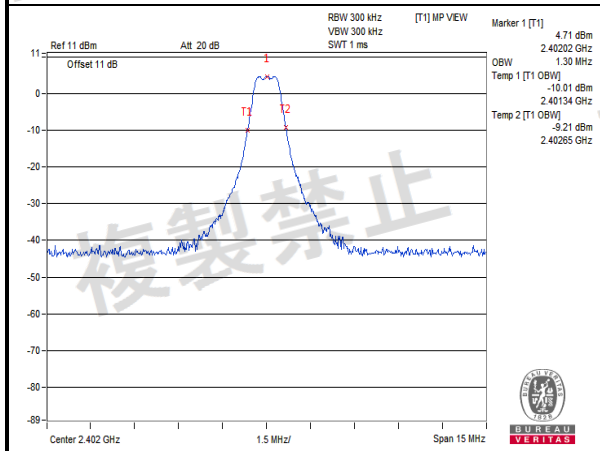
Measurement uncertainty: ± 206.50 Hz



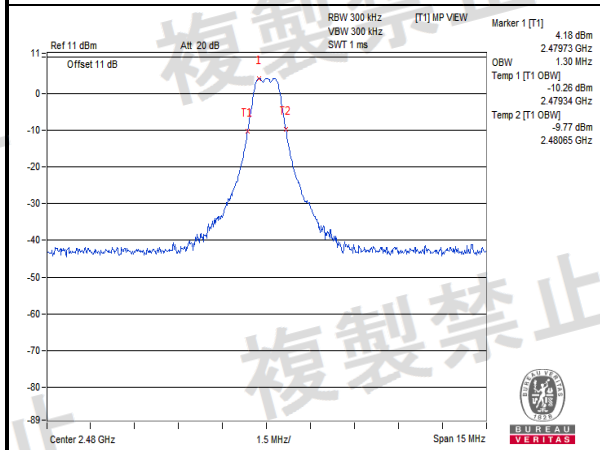
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Test Report No.: RJ2410WDG0234-1

V-10%



Channel 0



Channel 19

NULL

Channel 39

NULL

Measurement uncertainty: ± 206.50 Hz



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BT-LE (GFSK 2 Mbps)

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH		
CHANNEL	FREQUENCY (MHz)	V _{normal}	V _{+10%}	V _{-10%}
		OCCUPIED BANDWIDTH (MHz)	OCCUPIED BANDWIDTH (MHz)	OCCUPIED BANDWIDTH (MHz)
1	2402	2.19	2.17	2.19
19	2440	2.19	2.19	2.19
39	2480	2.19	2.19	2.19
Measurement uncertainty		± 206.50 Hz		

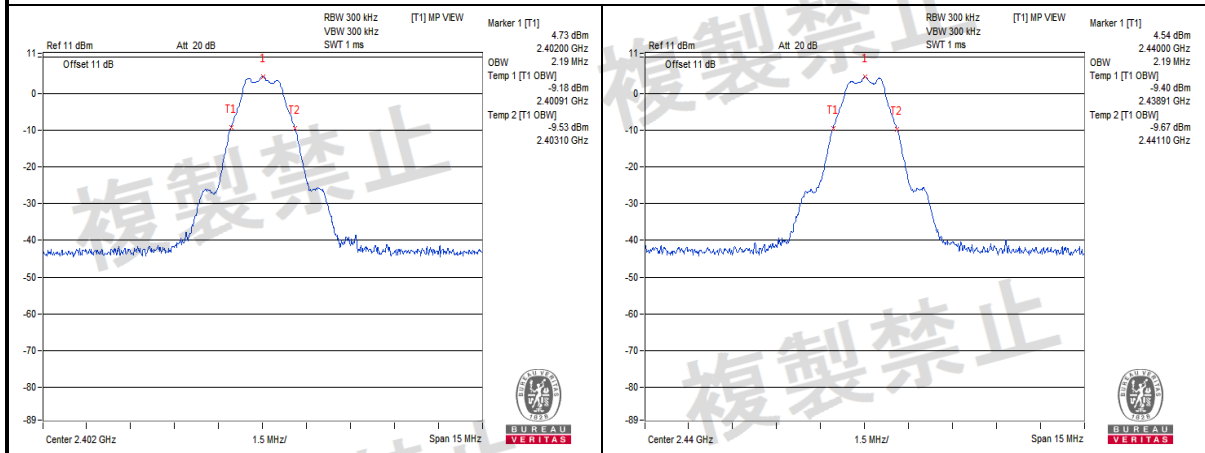
NOTE: For the test plots please refer to the below pages.



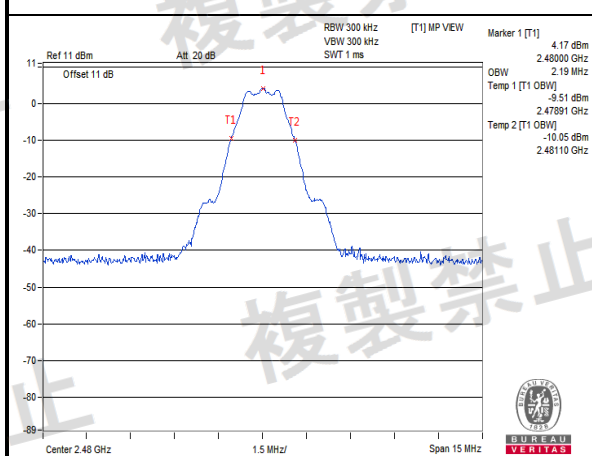
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Vnormal



Channel 0



Channel 19

NULL

Channel 39

NULL

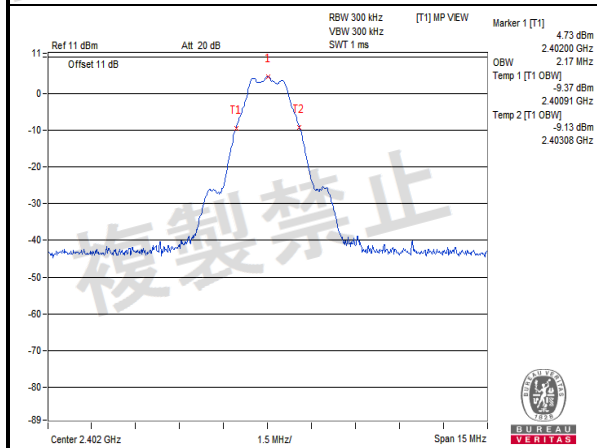
Measurement uncertainty: ± 206.50 Hz



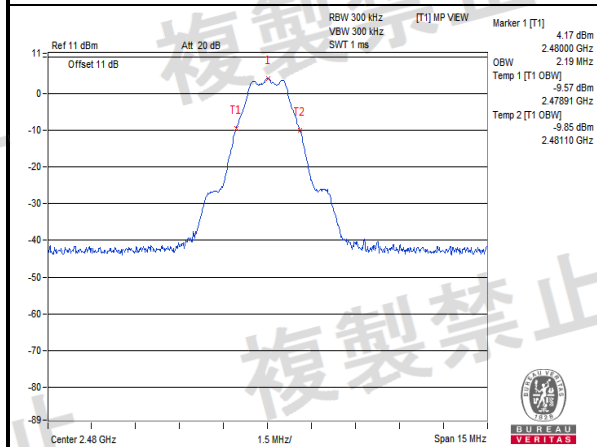
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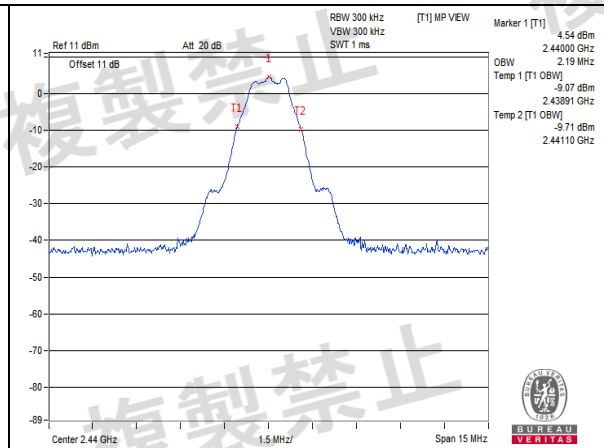
V+10%



Channel 0



Channel 39



Channel 19

NULL

NULL

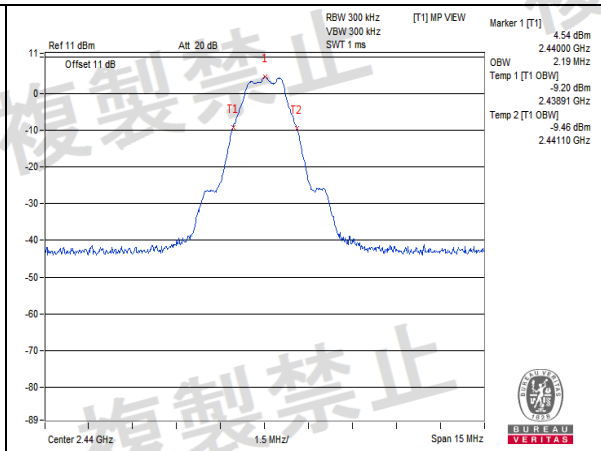
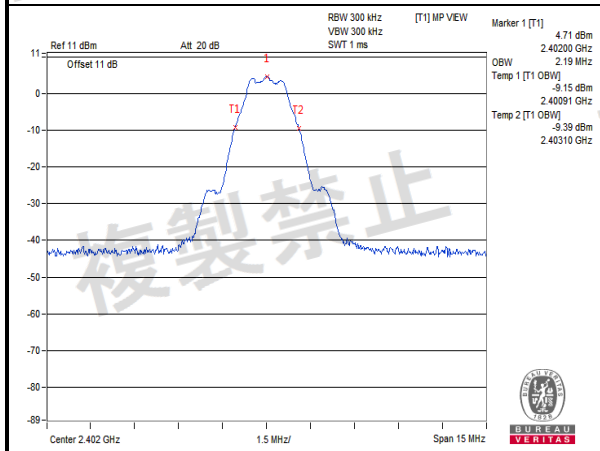
Measurement uncertainty: ± 206.50 Hz



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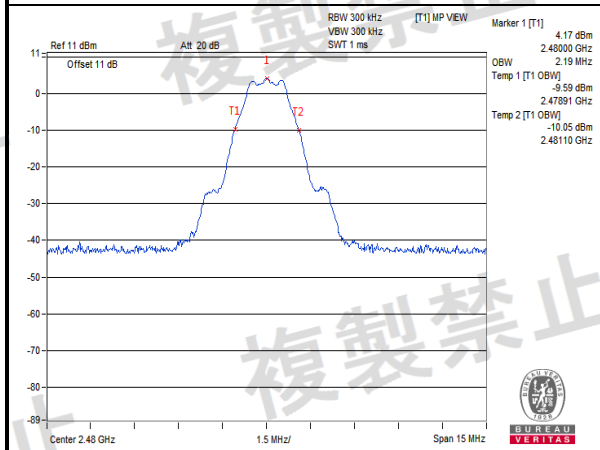
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V-10%



Channel 0

Channel 19



NULL

Channel 39

NULL

Measurement uncertainty: ± 206.50 Hz



3.3 SPURIOUS EMISSIONS FOR TRANSMITTER MEASUREMENT

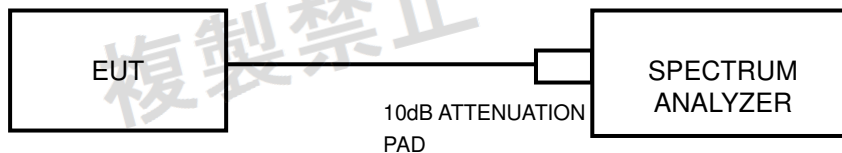
3.3.1 LIMITS OF SPURIOUS EMISSIONS

FREQUENCIES (MHz)	LIMIT
Operating frequency 2400 to 2483.5MHz	
30.0MHz to 1000.0MHz	$\leq 2.5\mu\text{W/MHz}$
1000.0MHz to 2387MHz	$\leq 2.5\mu\text{W/MHz}$
2387.0MHz to 2400.0MHz	$\leq 25\mu\text{W/MHz}$
2483.5MHz to 2496.5MHz	$\leq 25\mu\text{W/MHz}$
2496.5MHz to 12500.0MHz	$\leq 2.5\mu\text{W/MHz}$

3.3.2 TEST METHOD

According to MIC Notice No. 88 Appendix 43.

3.3.3 TEST SETUP





3.3.4 SUMMARY OF TEST RESULT

BT-LE (GFSK 1 Mbps)

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH					
TEST CHANNEL		CH0 (2402MHz)		CH19 (2440MHz)		LIMIT (uW/MHz)	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE. VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE. VALUE (uW/MHz)		
V _{normal}	30.0MHz to 1000.0MHz	919.240	0.003545	847.460	0.004194	2.5	PASS
	1000.0MHz to 2387MHz	2370.350	0.003671	2312.100	0.002743	2.5	PASS
	2387.0MHz to 2400.0MHz	2399.990	4.401809	2387.490	0.003854	25	PASS
	2483.5MHz to 2496.5MHz	2493.500	0.003402	2483.540	0.003448	25	PASS
	2496.5MHz to 12500.0MHz	7208.140	0.022022	7318.180	0.02773	2.5	PASS
V _{+10%}	30.0MHz to 1000.0MHz	885.540	0.003225	878.990	0.003319	2.5	PASS
	1000.0MHz to 2387MHz	2370.700	0.004012	2312.100	0.003262	2.5	PASS
	2387.0MHz to 2400.0MHz	2399.990	4.153734	2388.490	0.004039	25	PASS
	2483.5MHz to 2496.5MHz	2488.900	0.003703	2485.880	0.003994	25	PASS
	2496.5MHz to 12500.0MHz	7205.640	0.025265	7318.180	0.028558	2.5	PASS
V _{-10%}	30.0MHz to 1000.0MHz	554.520	0.003303	859.350	0.003654	2.5	PASS
	1000.0MHz to 2387MHz	2370.350	0.004012	2385.950	0.003691	2.5	PASS
	2387.0MHz to 2400.0MHz	2400.000	4.371393	2387.910	0.004497	25	PASS
	2483.5MHz to 2496.5MHz	2490.730	0.003384	2494.020	0.004371	25	PASS
	2496.5MHz to 12500.0MHz	7205.640	0.023736	7318.180	0.029959	2.5	PASS

NOTE: 1. the worst value in each frequency range v.s. each channel has been marked by boldface.



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ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH			
TEST CHANNEL		CH39 (2480MHz)		LIMIT (uW/MHz)	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE. VALUE (uW/MHz)		
V _{normal}	30.0MHz to 1000.0MHz	761.860	0.003264	2.5	PASS
	1000.0MHz to 2387MHz	2319.380	0.002846	2.5	PASS
	2387.0MHz to 2400.0MHz	2395.850	0.003062	25	PASS
	2483.5MHz to 2496.5MHz	2483.500	0.211047	25	PASS
	2496.5MHz to 12500.0MHz	7438.220	0.019574	2.5	PASS
V _{+10%}	30.0MHz to 1000.0MHz	887.230	0.003306	2.5	PASS
	1000.0MHz to 2387MHz	2352.320	0.003681	2.5	PASS
	2387.0MHz to 2400.0MHz	2397.990	0.003332	25	PASS
	2483.5MHz to 2496.5MHz	2483.540	0.184997	25	PASS
	2496.5MHz to 12500.0MHz	7440.720	0.018501	2.5	PASS
V _{-10%}	30.0MHz to 1000.0MHz	823.700	0.003024	2.5	PASS
	1000.0MHz to 2387MHz	1936.570	0.003401	2.5	PASS
	2387.0MHz to 2400.0MHz	2397.020	0.003218	25	PASS
	2483.5MHz to 2496.5MHz	2483.540	0.191909	25	PASS
	2496.5MHz to 12500.0MHz	7440.720	0.018437	2.5	PASS

NOTES: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.

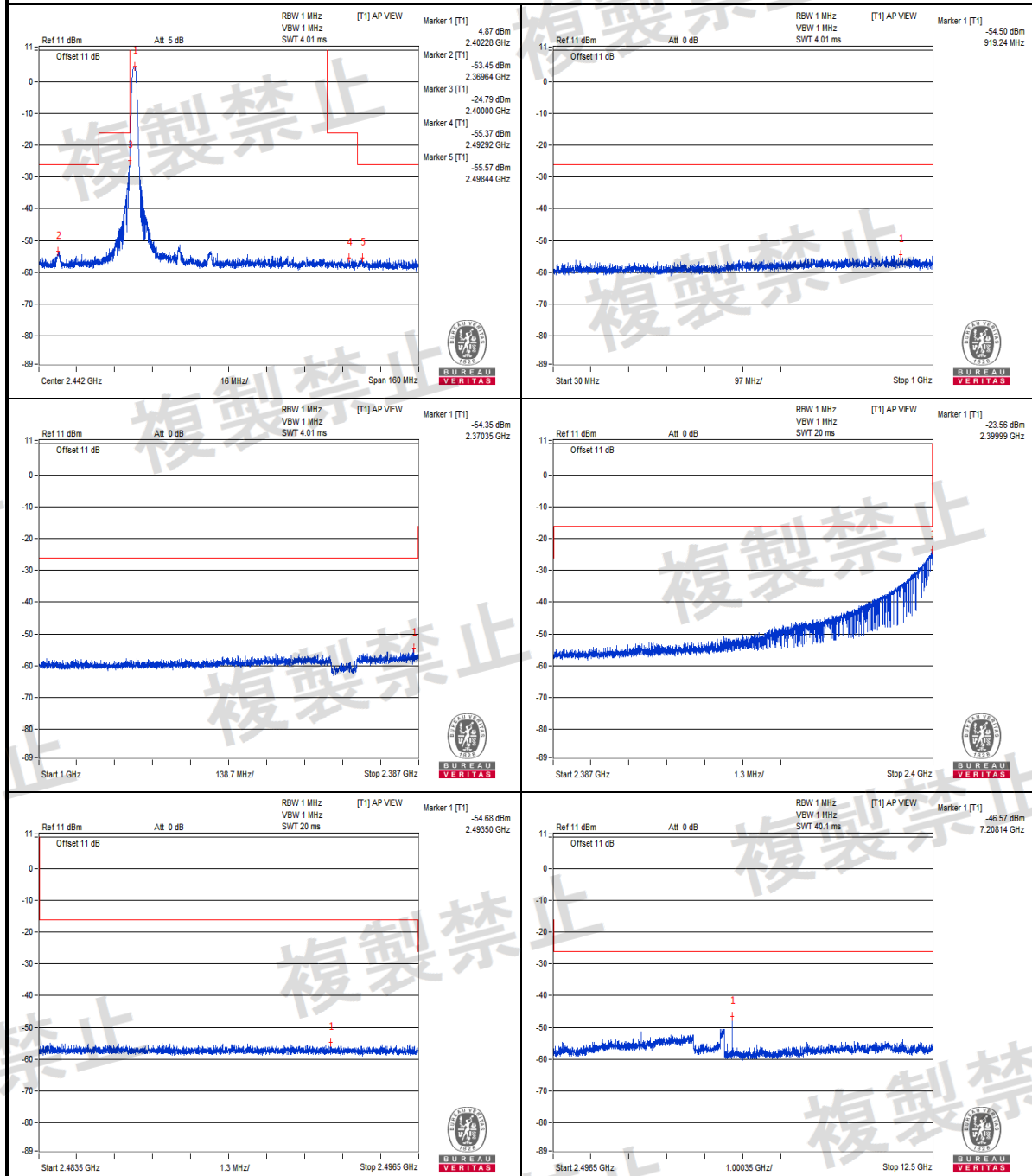
2. The spectrum plots are attached on the following pages.



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Test Report No.: RJ2410WDG0234-1

Vnormal Channel 0



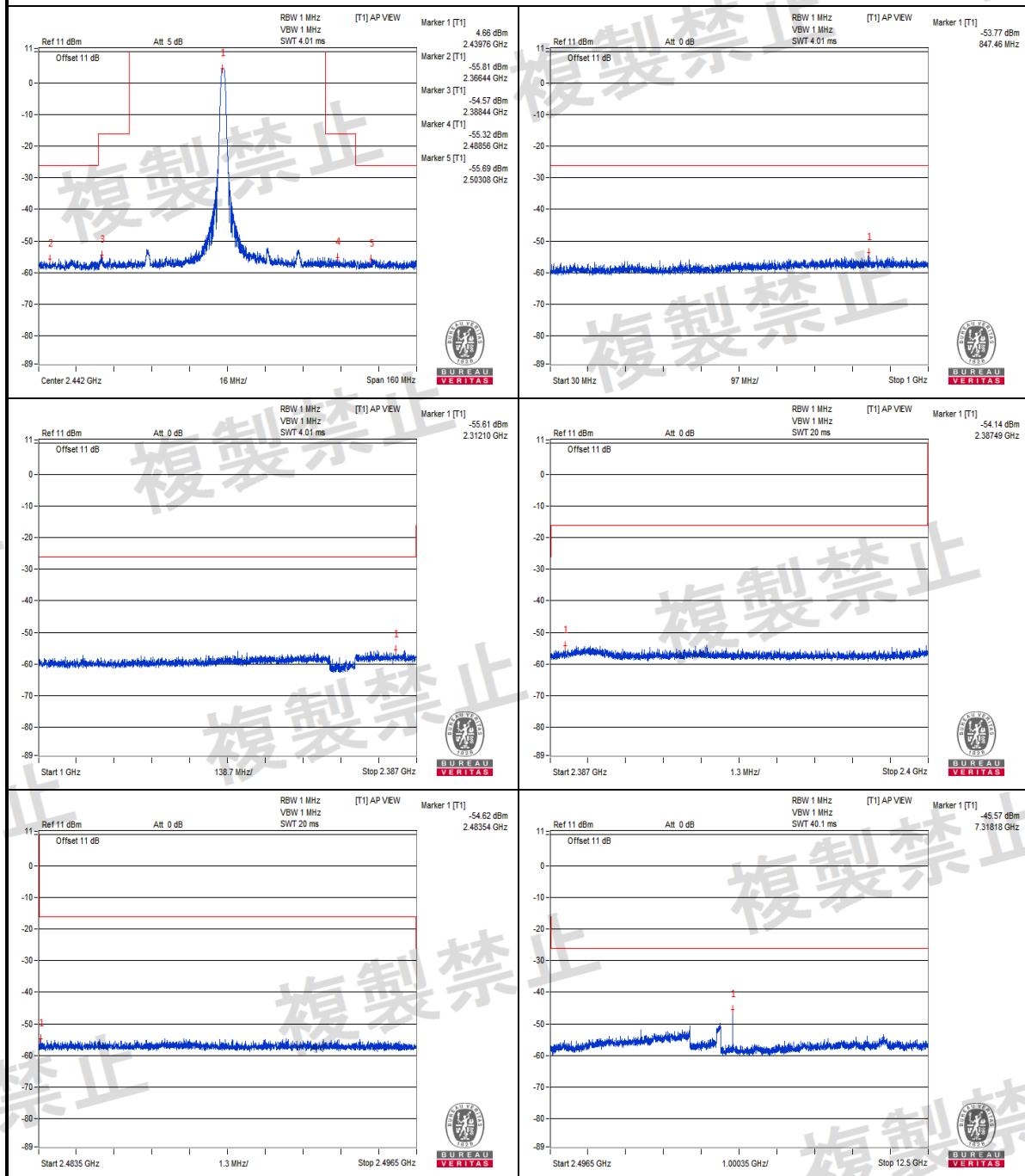
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

Vnormal Channel 19



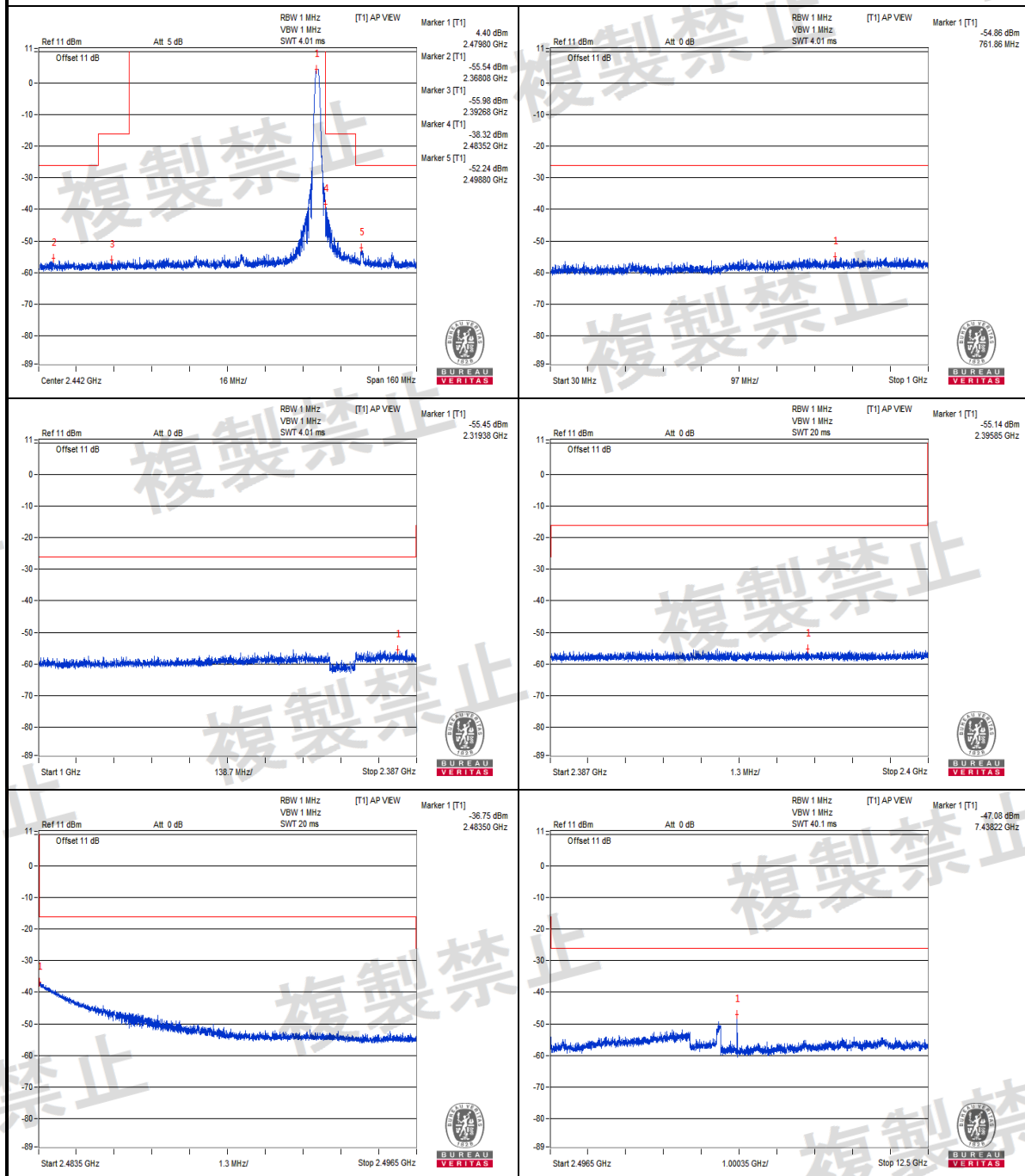
Measurement uncertainty: $\pm 3.93\text{dB}$



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Test Report No.: RJ2410WDG0234-1

Vnormal
Channel 39



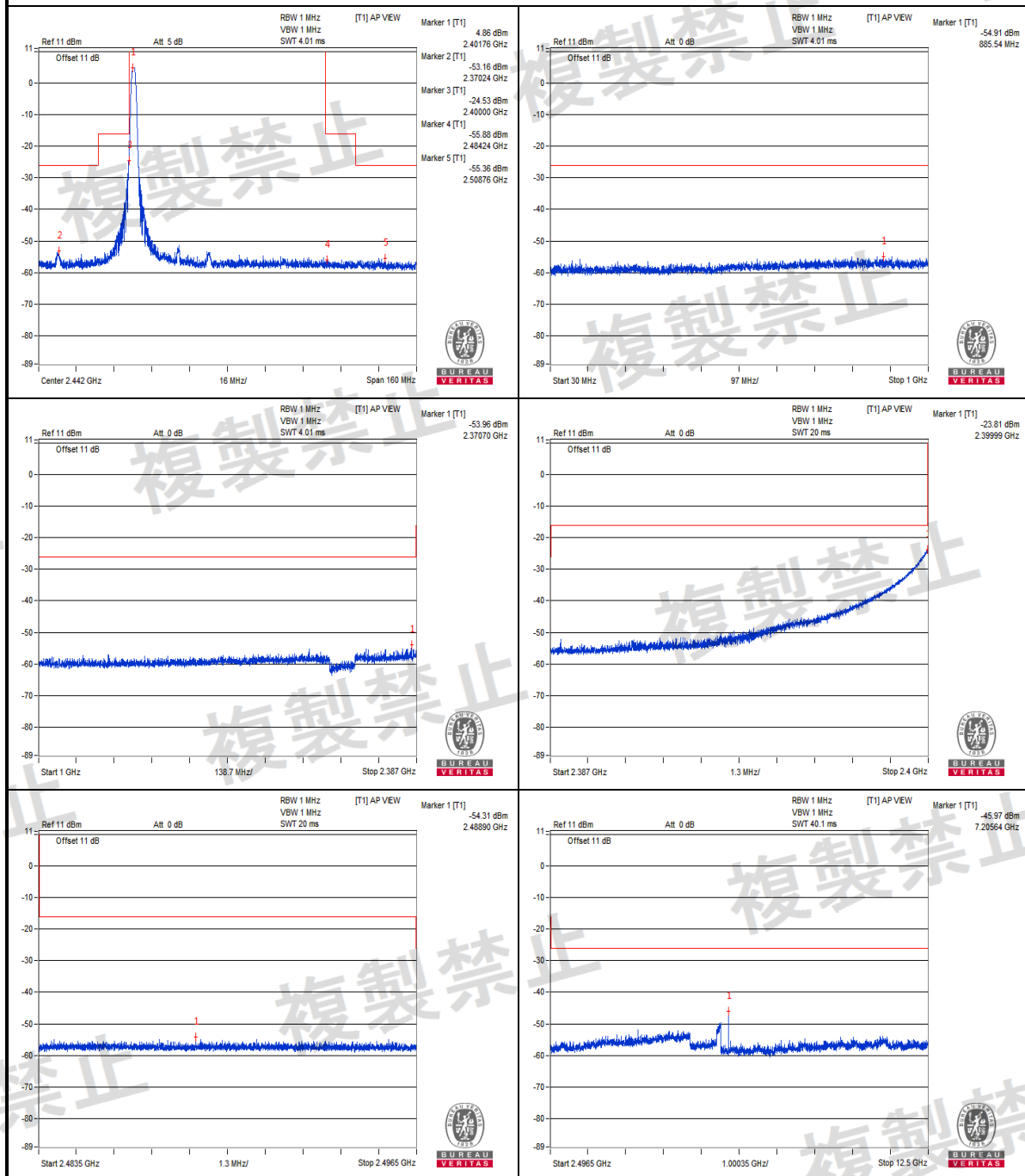
Measurement uncertainty: $\pm 3.93\text{dB}$



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Test Report No.: RJ2410WDG0234-1

V+10%
Channel 0



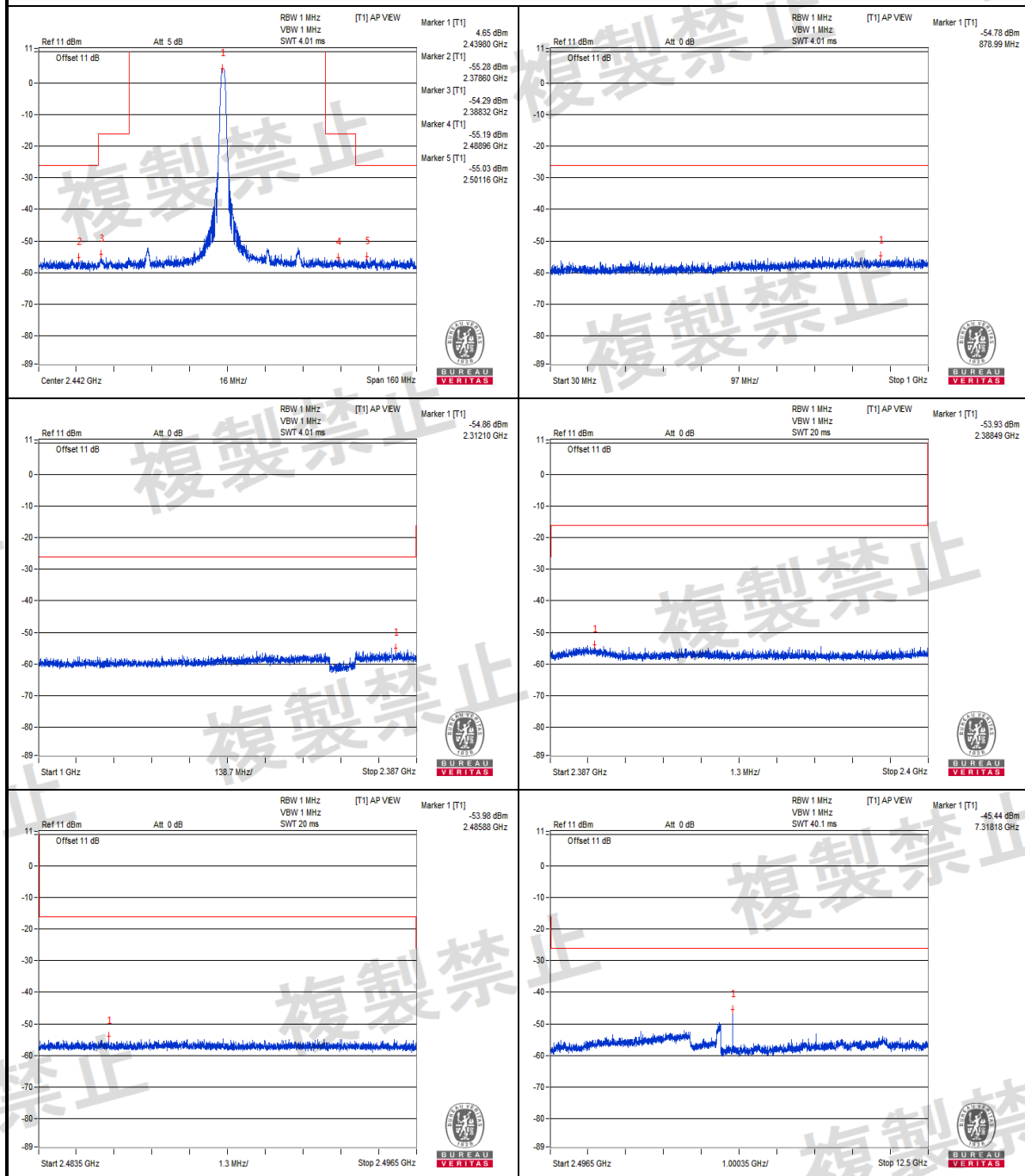
Measurement uncertainty: $\pm 3.93\text{dB}$



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VERITAS

Test Report No.: RJ2410WDG0234-1

V+10%
Channel 19



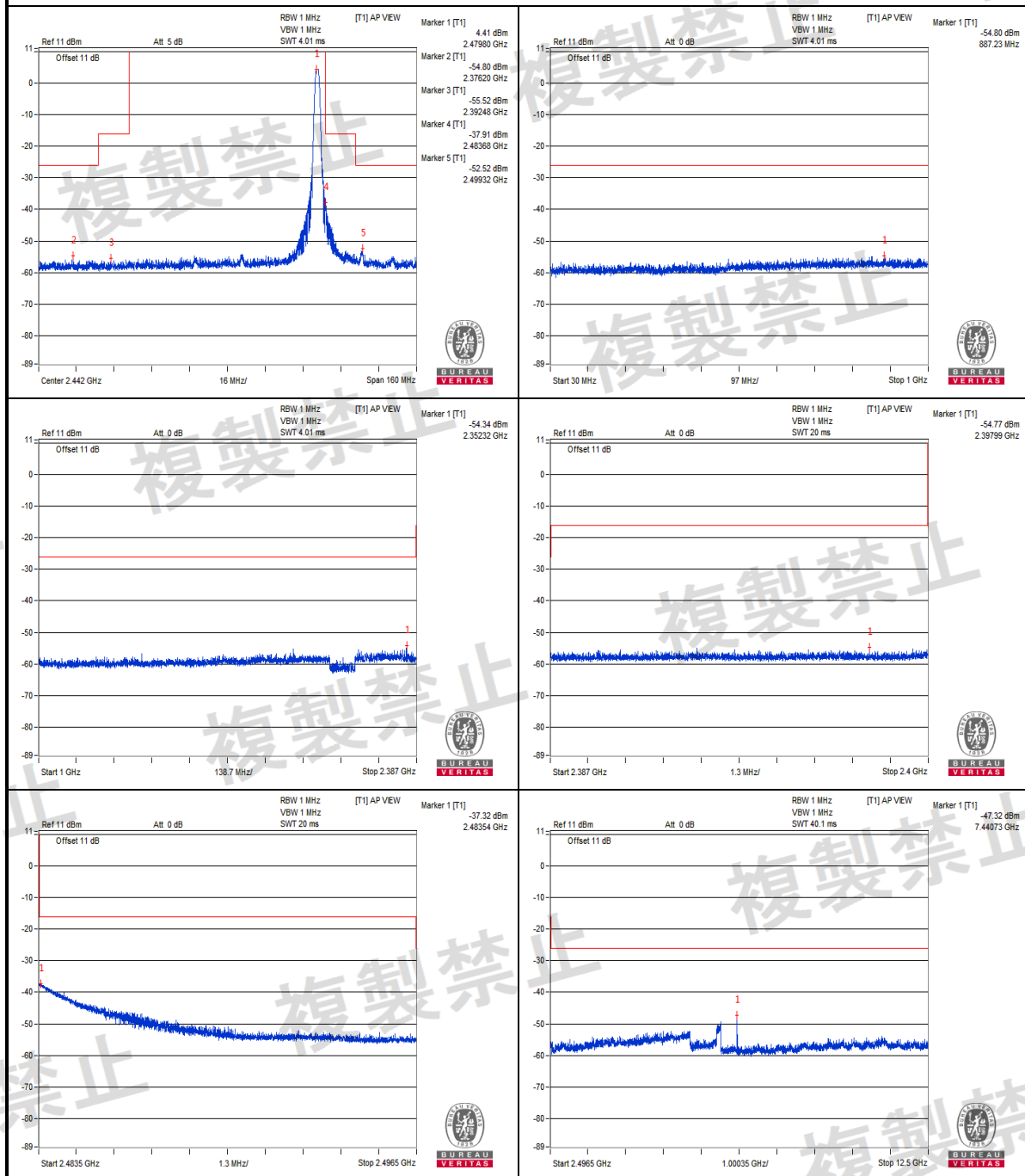
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
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Test Report No.: RJ2410WDG0234-1

V+10%
Channel 39



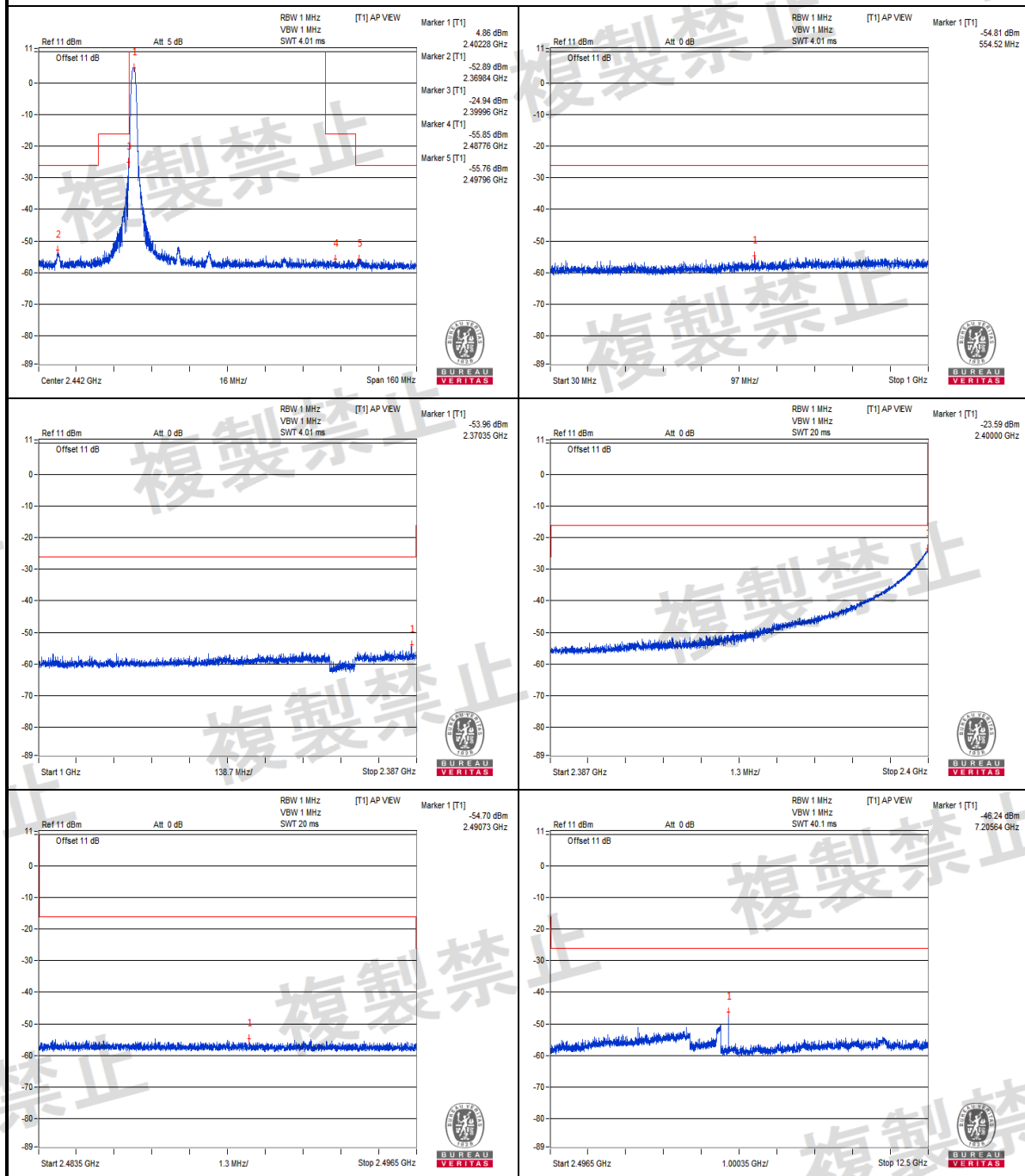
Measurement uncertainty: $\pm 3.93\text{dB}$



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VERITAS

Test Report No.: RJ2410WDG0234-1

V-10%
Channel 0



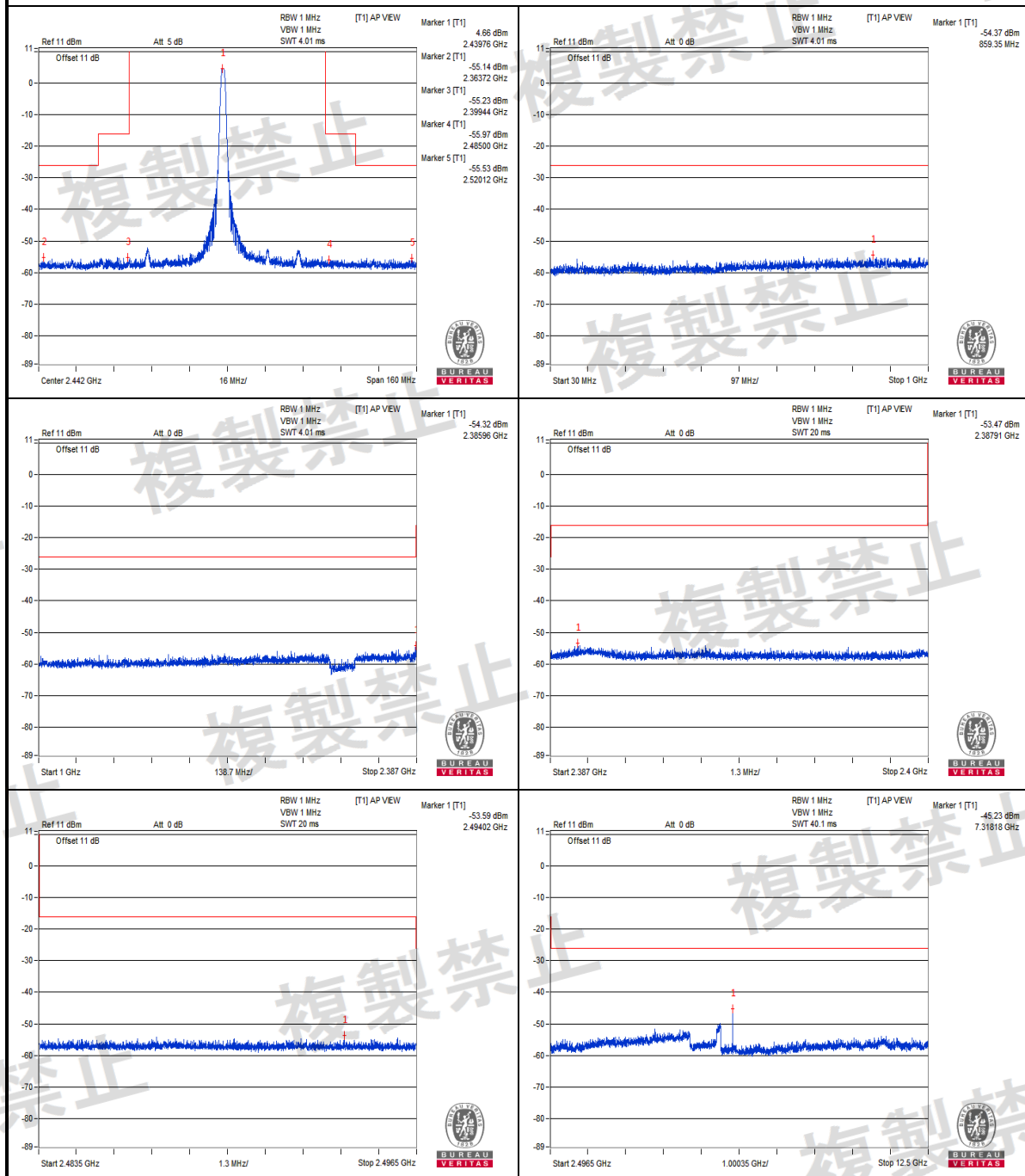
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V-10%
Channel 19



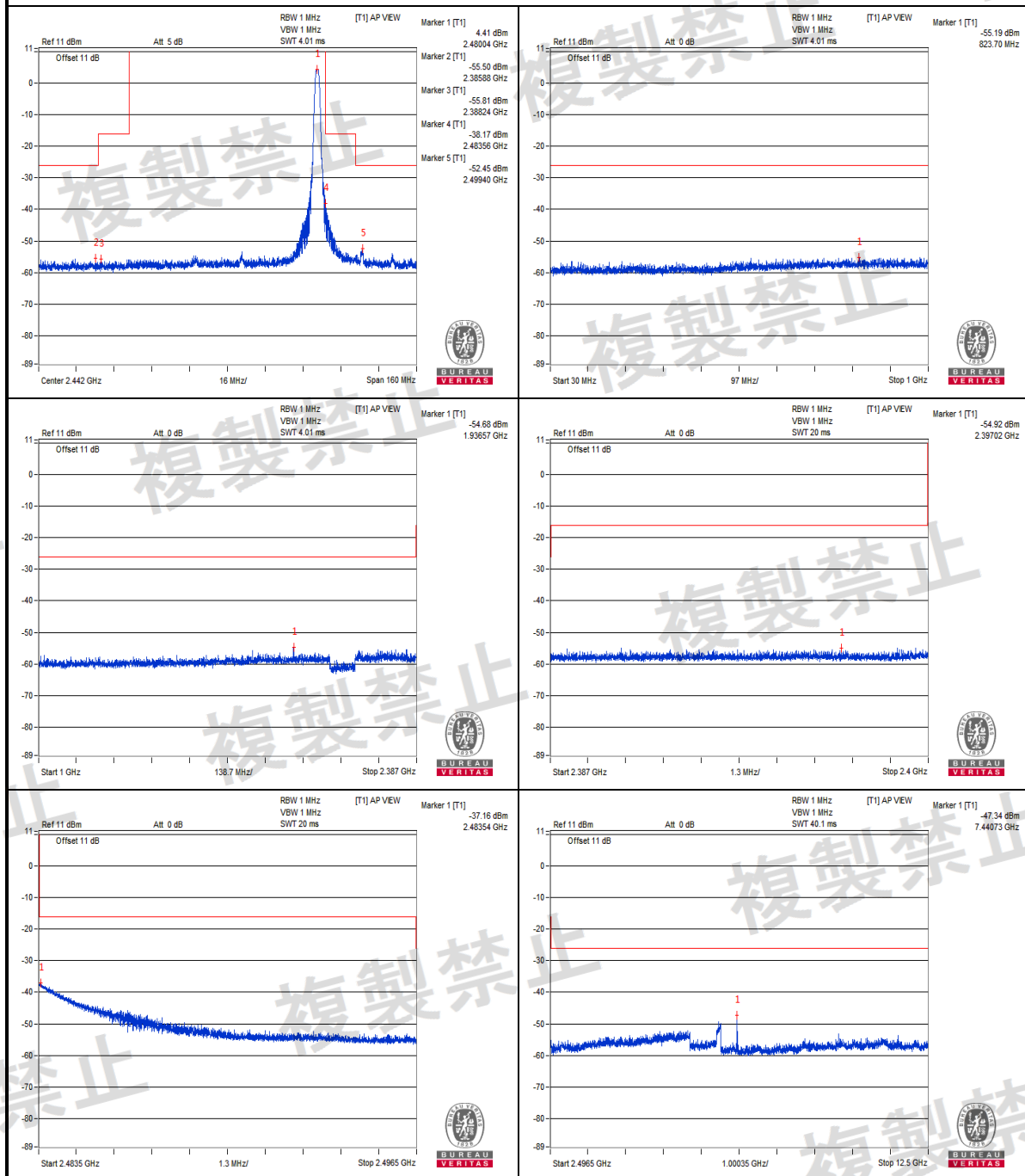
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V-10%
Channel 39



Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

BT-LE (GFSK 2 Mbps)

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH					
TEST CHANNEL		CH1 (2404MHz)		CH19 (2440MHz)		LIMIT (uW/MHz)	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE. VALUE (uW/MHz)	FREQUENCY (MHz)	MEASURE. VALUE (uW/MHz)		
V _{normal}	30.0MHz to 1000.0MHz	769.620	0.003416	804.780	0.003738	2.5	PASS
	1000.0MHz to 2387MHz	2386.300	0.003801	2218.130	0.002736	2.5	PASS
	2387.0MHz to 2400.0MHz	2400.000	22.058949	2387.850	0.004226	25	PASS
	2483.5MHz to 2496.5MHz	2489.070	0.003658	2485.480	0.003841	25	PASS
	2496.5MHz to 12500.0MHz	7205.640	0.026623	7320.680	0.023372	2.5	PASS
V _{+10%}	30.0MHz to 1000.0MHz	825.400	0.003142	653.220	0.003176	2.5	PASS
	1000.0MHz to 2387MHz	2369.310	0.003968	2176.520	0.003219	2.5	PASS
	2387.0MHz to 2400.0MHz	2399.990	21.884341	2387.810	0.005091	25	PASS
	2483.5MHz to 2496.5MHz	2496.000	0.004187	2495.950	0.004383	25	PASS
	2496.5MHz to 12500.0MHz	7208.140	0.024497	7320.680	0.030932	2.5	PASS
V _{-10%}	30.0MHz to 1000.0MHz	771.800	0.003765	872.440	0.004022	2.5	PASS
	1000.0MHz to 2387MHz	2386.300	0.005295	2376.590	0.003526	2.5	PASS
	2387.0MHz to 2400.0MHz	2399.990	20.907101	2388.280	0.003972	25	PASS
	2483.5MHz to 2496.5MHz	2495.580	0.003593	2494.700	0.003767	25	PASS
	2496.5MHz to 12500.0MHz	7208.140	0.024881	7318.180	0.01411	2.5	PASS

NOTE: 1. the worst value in each frequency range v.s. each channel has been marked by boldface.



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VERITAS

Test Report No.: RJ2410WDG0234-1

ENVIRONMENTAL CONDITIONS		25 deg.C, 56% RH			
TEST CHANNEL		CH38 (2478MHz)		LIMIT (uW/MHz)	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE. VALUE (uW/MHz)		
V _{normal}	30.0MHz to 1000.0MHz	757.250	0.003262	2.5	PASS
	1000.0MHz to 2387MHz	2352.670	0.004806	2.5	PASS
	2387.0MHz to 2400.0MHz	2391.620	0.003243	25	PASS
	2483.5MHz to 2496.5MHz	2483.500	0.288538	25	PASS
	2496.5MHz to 12500.0MHz	6985.570	0.01351	2.5	PASS
V _{+10%}	30.0MHz to 1000.0MHz	941.310	0.004711	2.5	PASS
	1000.0MHz to 2387MHz	2352.670	0.004101	2.5	PASS
	2387.0MHz to 2400.0MHz	2390.780	0.002972	25	PASS
	2483.5MHz to 2496.5MHz	2483.510	0.276995	25	PASS
	2496.5MHz to 12500.0MHz	7440.720	0.01763	2.5	PASS
V _{-10%}	30.0MHz to 1000.0MHz	934.280	0.003217	2.5	PASS
	1000.0MHz to 2387MHz	2351.630	0.003034	2.5	PASS
	2387.0MHz to 2400.0MHz	2399.120	0.003343	25	PASS
	2483.5MHz to 2496.5MHz	2483.510	0.291172	25	PASS
	2496.5MHz to 12500.0MHz	7438.220	0.018328	2.5	PASS

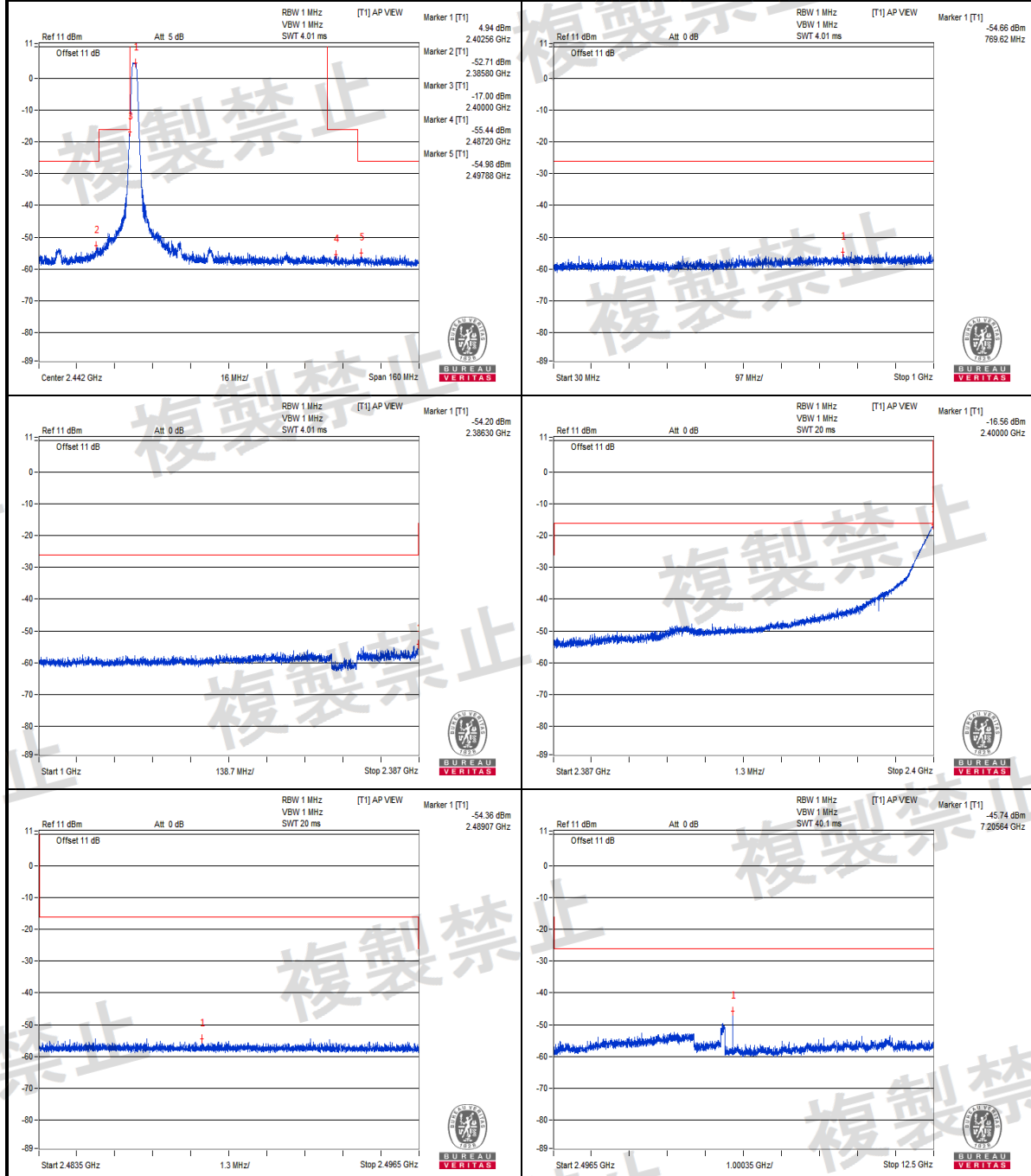
NOTES: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.



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Test Report No.: RJ2410WDG0234-1

Vnormal
Channel 0



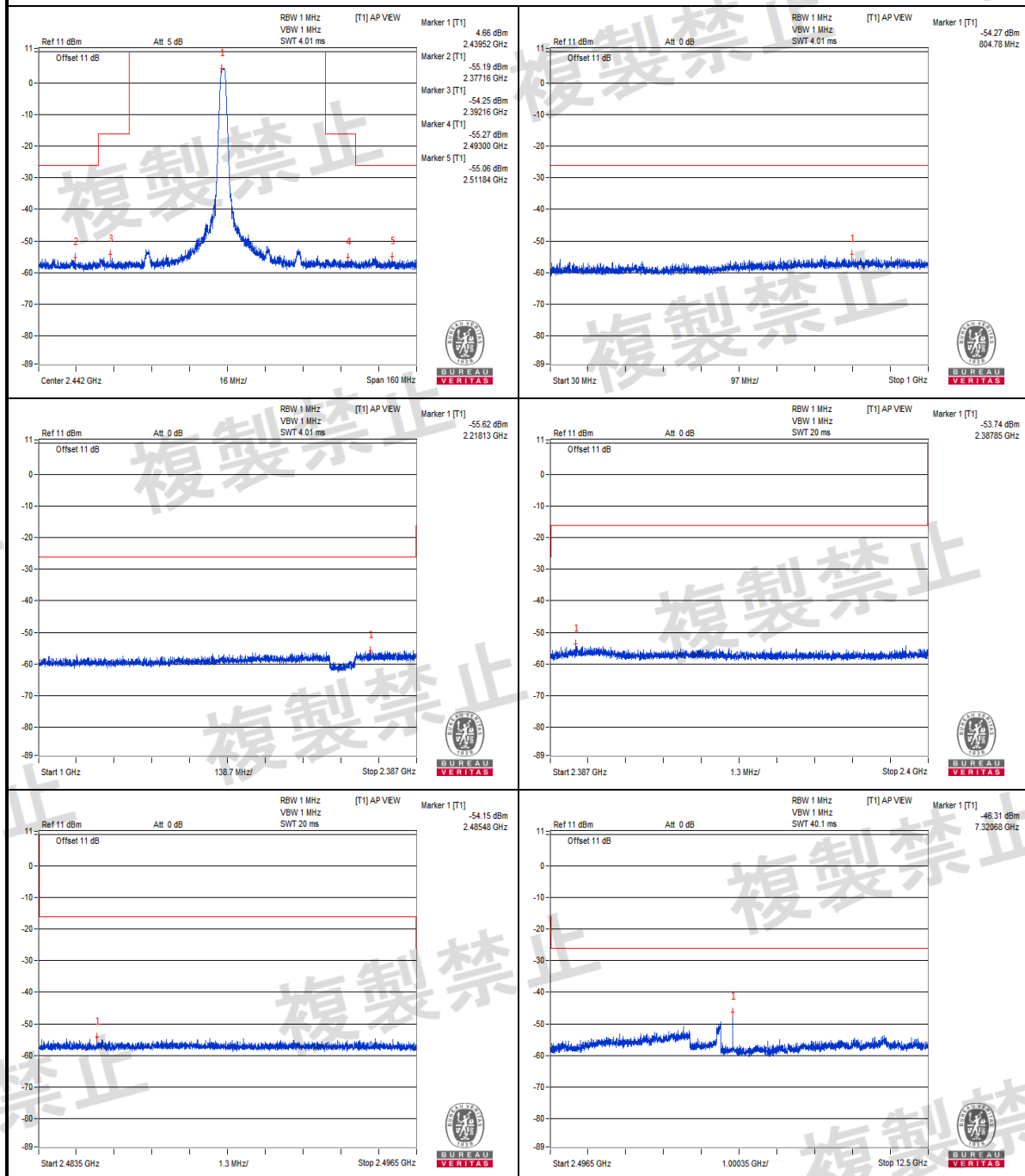
Measurement uncertainty: $\pm 3.93\text{dB}$



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Test Report No.: RJ2410WDG0234-1

Vnormal Channel 19



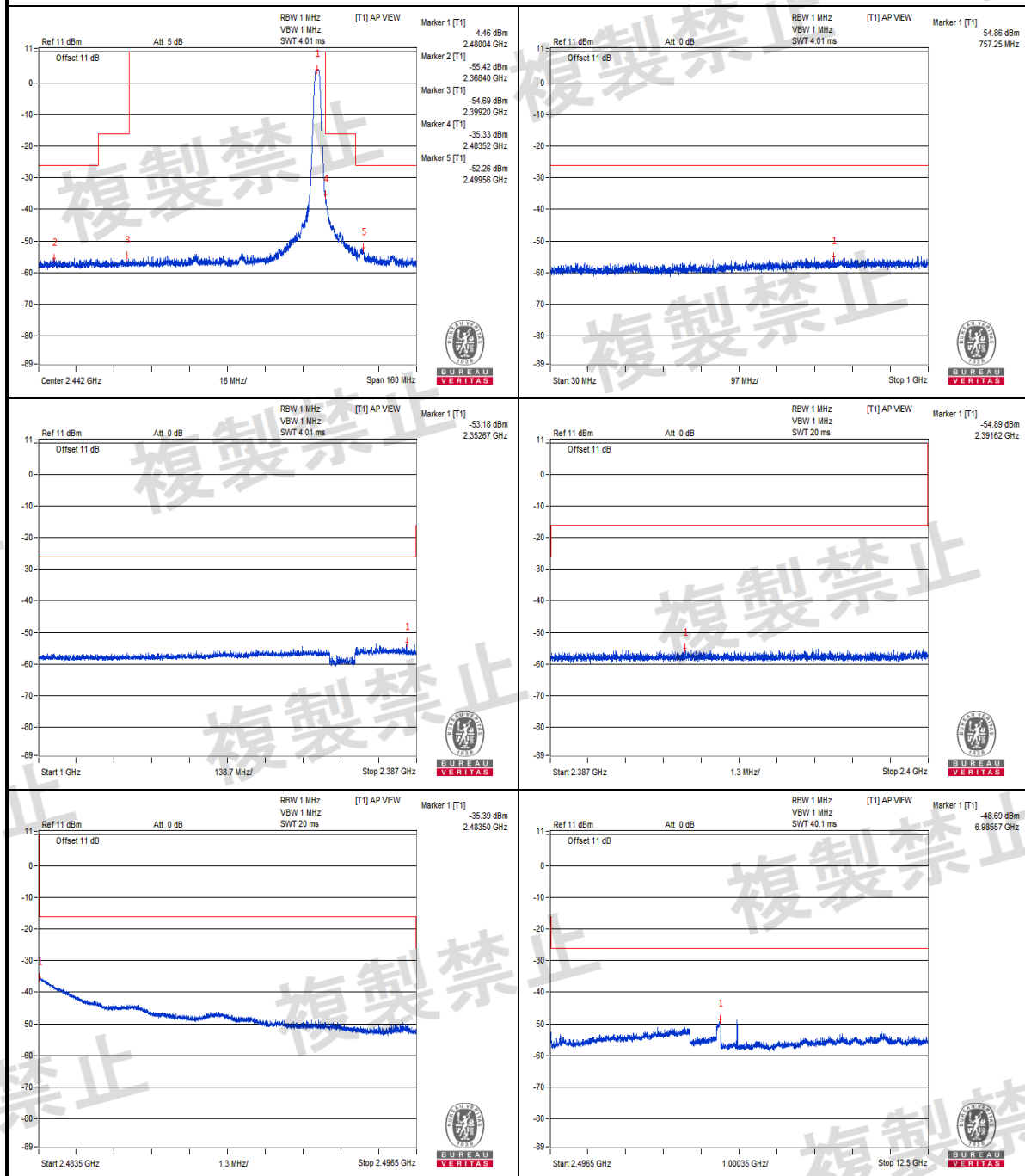
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

Vnormal Channel 39



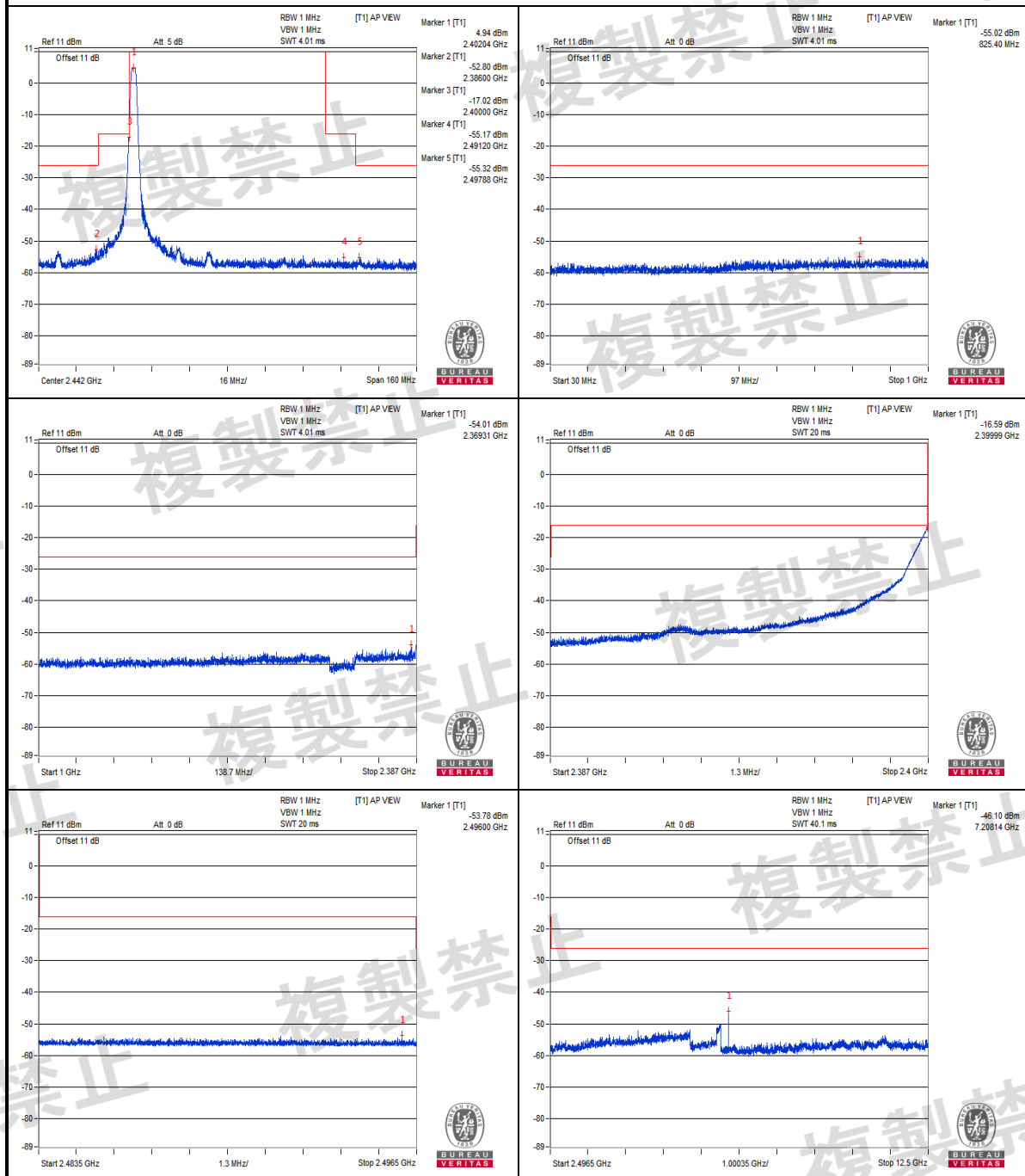
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V+10%
Channel 0



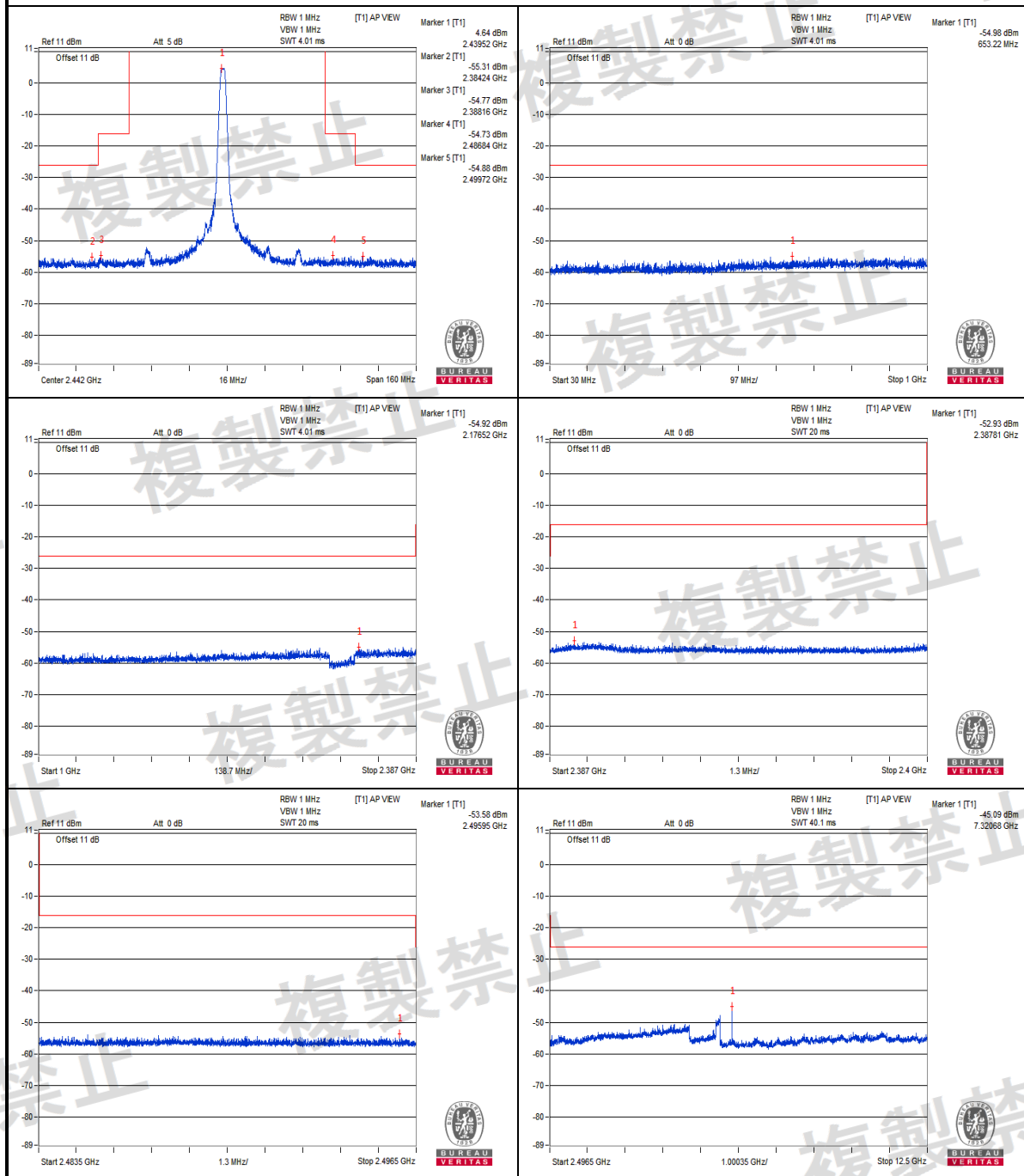
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V+10%
Channel 19



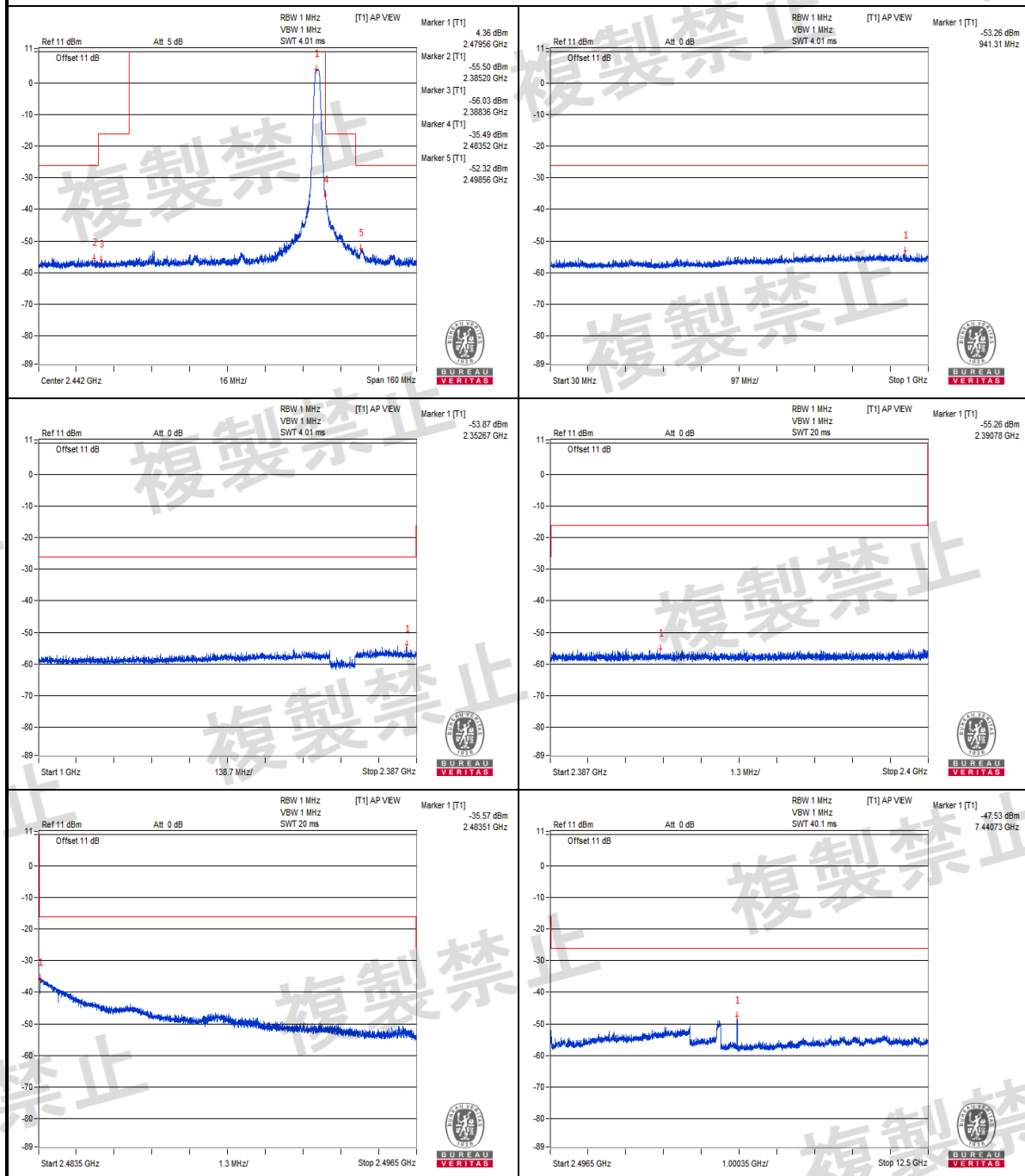
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V+10%
Channel 39



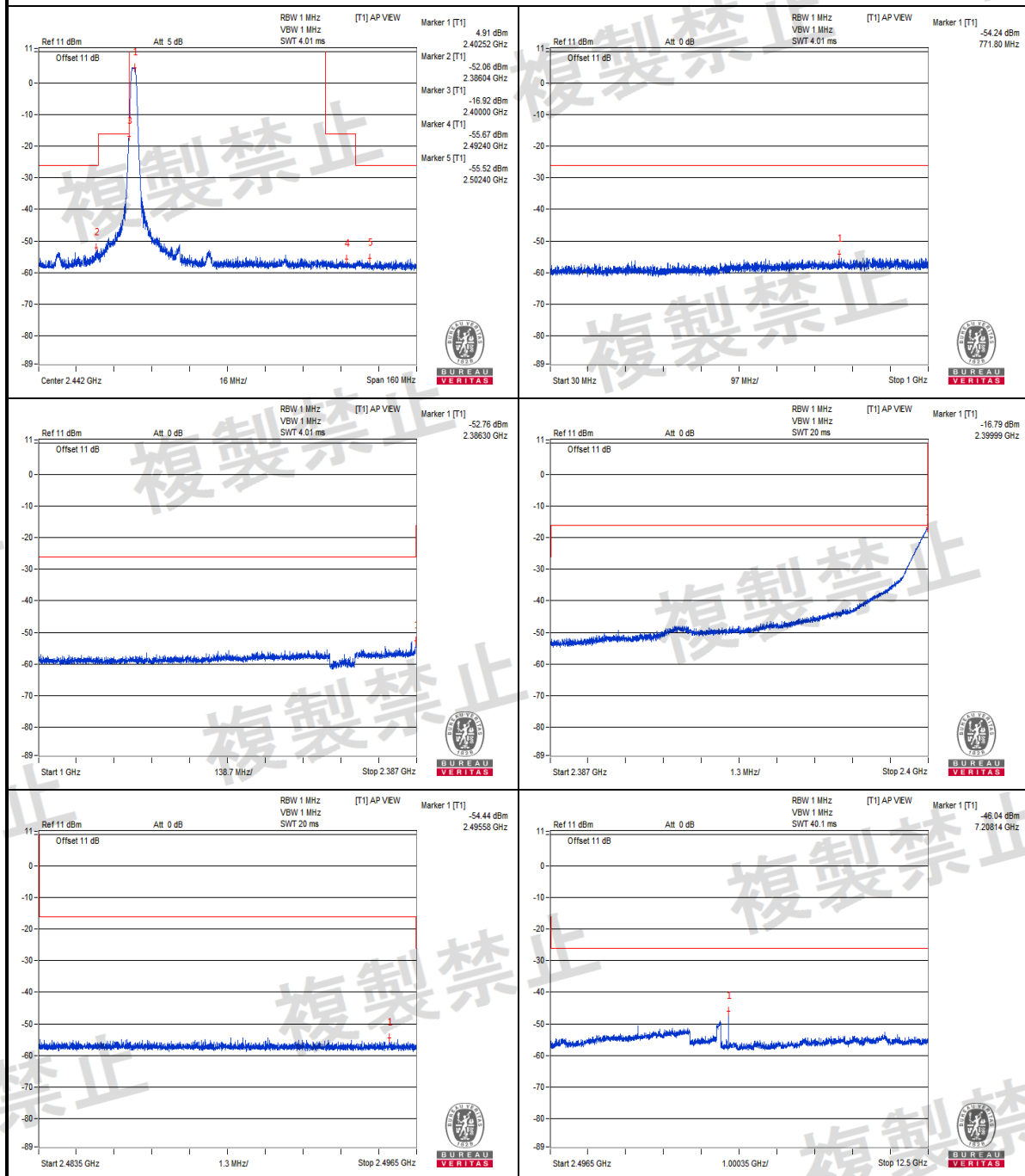
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V-10%
Channel 0



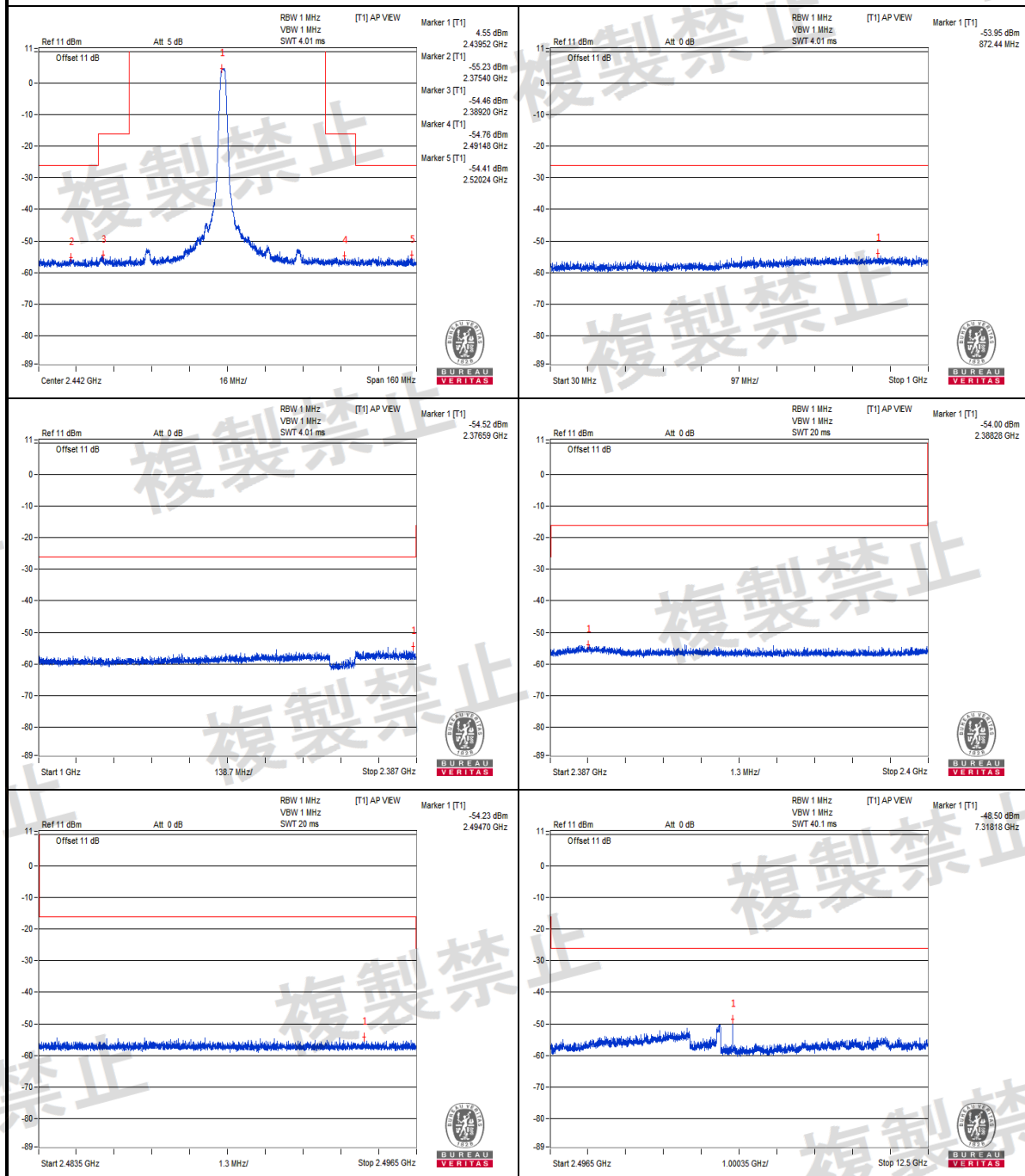
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V-10%
Channel 19



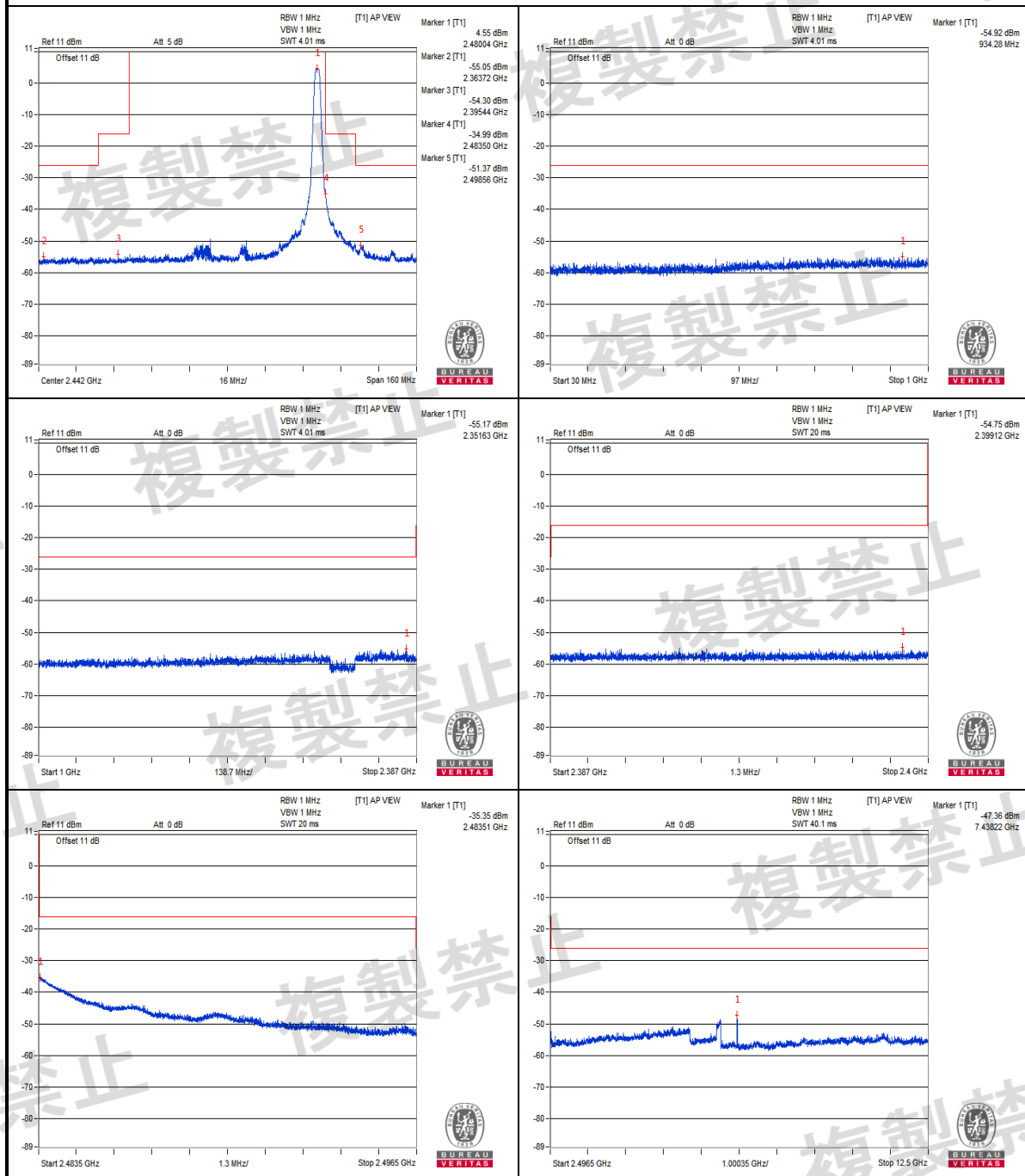
Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

V-10% Channel 39



Measurement uncertainty: $\pm 3.93\text{dB}$



3.4 ANTENNA POWER MEASUREMENT

3.4.1 LIMITS OF ANTENNA POWER

Modulation system	Frequency band used	Antenna power (max.)	EIRP (max)	
			Omni-directional case	Directional case
DS.OFDM (Narrow-Band)	2,400 – 2,4835 MHz	10mW/MHz	12.14 dBm/MHz (16.367 mW/MHz)	22.14 dBm/MHz (163.682 mW/MHz)
OFDM (Wide-Band)	2,400 – 2,4835 MHz	5mW/MHz	9.13dBm/MHz (8.185mW/MHz)	19.13dBm/MHz (81.846mW/MHz)
DTS	2,400 – 2,4835 MHz	10mW	12.14 dBm 16.367 mW	22.14 dBm 163.682 mW

Tolerance of antenna power shall be +20% (upper value).

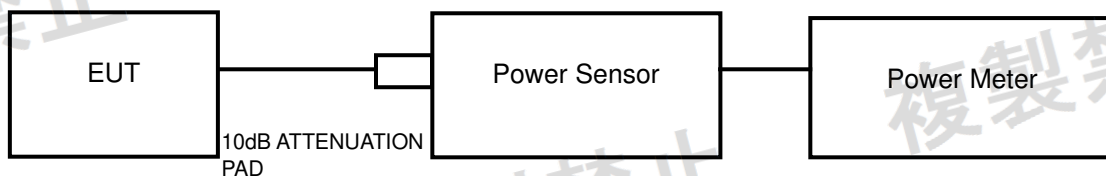
According article 49.20 f(2) The angular width of the principal radiation in the horizontal and vertical planes of the transmitting antenna shall not exceed the value obtained by the following expression. $360/A$ degree

A represents the value determined by dividing an equivalent isotropically radiated power by the value obtained by applying an antenna power with the mean power of 10 mW to the transmitting antenna with its absolute gain being 2.14 dB, and shall be 1 when it is lower than 1

3.4.2 TEST METHOD

According to MIC Notice No. 88 Appendix 43.

3.4.3 TEST SETUP





3.4.4 TEST RESULTS

BT-LE (GFSK 1 Mbps)

ENVIRONMENTAL CONDITIONS	25 deg.C, 56% RH			
TEST CONDITION	Conducted RF output power (mW)			
	CHANNEL 0 2402MHz	CHANNEL 19 2440MHz	CHANNEL 39 2480MHz	MAX. LIMIT (mW)
V _{normal}	3.148	3.126	2.767	10
V _{+10%}	3.177	3.162	2.805	10
V _{-10%}	3.126	3.105	2.742	10
RATED POWER	4			
TOLERANCE OF ANTENNA POWER	<4.8			

ENVIRONMENTAL CONDITIONS	25 deg.C, 56% RH			
TEST CONDITION	EIRP output power (mW)			
	CHANNEL 0 2402MHz	CHANNEL 19 2440MHz	CHANNEL 39 2480MHz	MAX. LIMIT (mW)
V _{normal}	5.808	5.768	5.105	16.367
V _{+10%}	5.862	5.834	5.175	16.367
V _{-10%}	5.768	5.729	5.059	16.367

NOTES: 1. The EIRP output power is a “calculated” value derived from the conducted value.

2. Formula: EIRP output power = Conducted RF output power + Antenna Gain.

**BT-LE (GFSK 2 Mbps)**

ENVIRONMENTAL CONDITIONS	25 deg.C, 56% RH			
TEST CONDITION	Conducted RF output power (mW)			
	CHANNEL 0 2402MHz	CHANNEL 19 2440MHz	CHANNEL 39 2480MHz	MAX. LIMIT (mW)
V_{normal}	3.170	3.148	2.831	10
$V_{+10\%}$	3.199	3.192	2.871	10
$V_{-10\%}$	3.148	3.155	2.805	10
RATED POWER	4			
TOLERANCE OF ANTENNA POWER	<4.8			

ENVIRONMENTAL CONDITIONS	25 deg.C, 56% RH			
TEST CONDITION	EIRP output power (mW)			
	CHANNEL 1 2404MHz	CHANNEL 19 2440MHz	CHANNEL 38 2478MHz	MAX. LIMIT (mW)
V_{normal}	5.849	5.808	5.223	16.367
$V_{+10\%}$	5.902	5.889	5.297	16.367
$V_{-10\%}$	5.808	5.821	5.175	16.367

NOTES: 1. The EIRP output power is a “calculated” value derived from the conducted value.

2. Formula: EIRP output power = Conducted RF output power + Antenna Gain.



3.5 SPURIOUS EMISSIONS FOR RECEIVER

3.5.1 LIMITS OF SPURIOUS EMISSIONS FOR RECEIVER

FREQUENCIES (MHz)	LIMIT
Below 1GHz	$\leq 4\text{nW}$ (-54dBm)
Above 1GHz	$\leq 20\text{nW}$ (-47dBm)

3.5.2 TEST METHOD

According to MIC Notice No. 88 Appendix 43.

3.5.3 TEST SETUP





3.5.4 SUMMARY OF TEST RESULT

BT-LE (GFSK 1 Mbps)

TEST CHANNEL		CH 0 (2402MHz)		CH 19 (2440MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE. VALUE	FREQUENCY (MHz)	MEASURE. VALUE		
Vnormal	below 1GHz	728.880	0.326539nW	767.680	0.3556nW	4nW	PASS
	above 1GHz	6977.120	10.806497nW	6957.000	9.160287nW	20nW	PASS
V+10%	below 1GHz	961.920	0.377057nW	730.340	0.372857nW	4nW	PASS
	above 1GHz	6997.250	12.048426nW	6965.620	10.878801nW	20nW	PASS
V-10%	below 1GHz	947.860	0.383913nW	677.710	0.349002nW	4nW	PASS
	above 1GHz	6997.250	8.057233nW	6985.750	8.740509nW	20nW	PASS
TEST CHANNEL		CH 39 (2480MHz)				LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)		MEASURE. VALUE			
Vnormal	below 1GHz	976.230		0.416128nW		4nW	PASS
	above 1GHz	7000.120		9.823091nW		20nW	PASS
V+10%	below 1GHz	847.220		0.34496nW		4nW	PASS
	above 1GHz	6994.370		8.2596nW		20nW	PASS
V-10%	below 1GHz	933.070		0.50962nW		4nW	PASS
	above 1GHz	6971.370		8.997072nW		20nW	PASS

NOTES: 1. The worst value in each frequency range v.s. each channel has been marked by boldface.

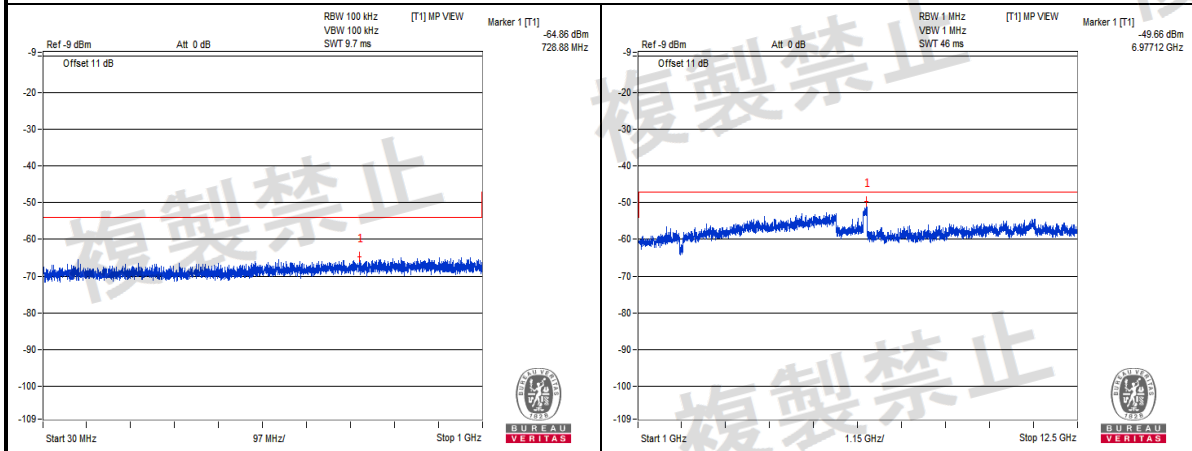
2. The spectrum plots are attached on the following pages.



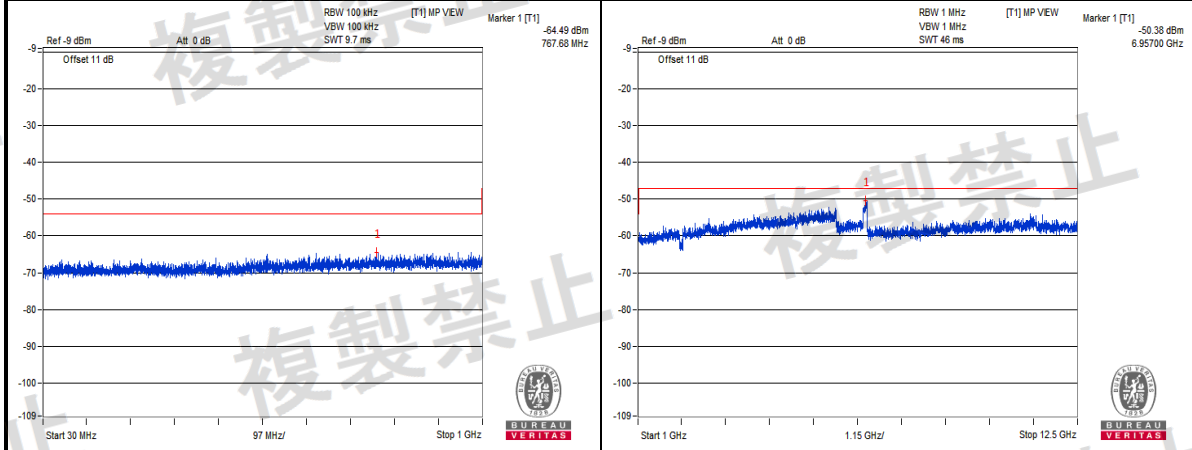
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Test Report No.: RJ2410WDG0234-1

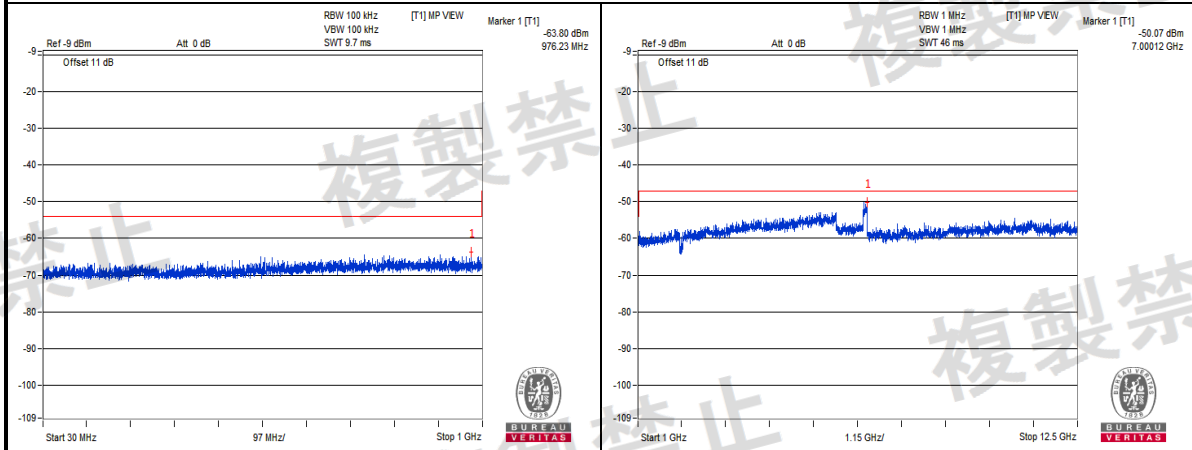
Vnormal



Channel 0



Channel 19



Channel 39

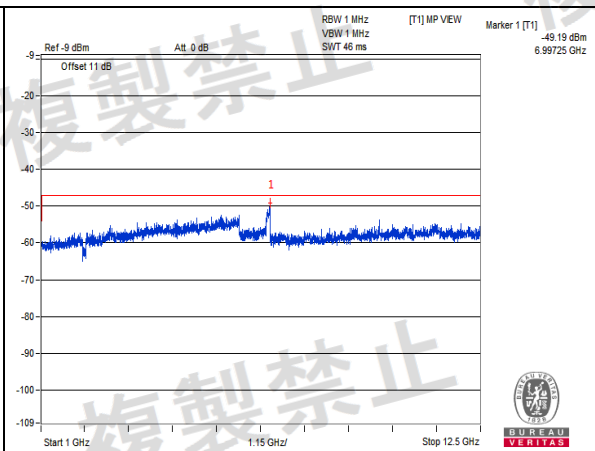
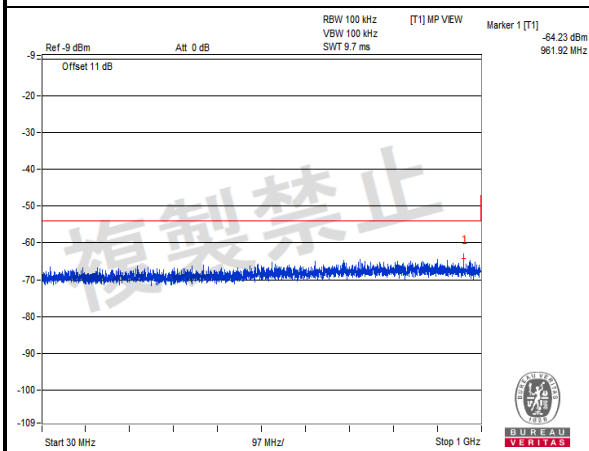
Measurement uncertainty: $\pm 3.93\text{dB}$



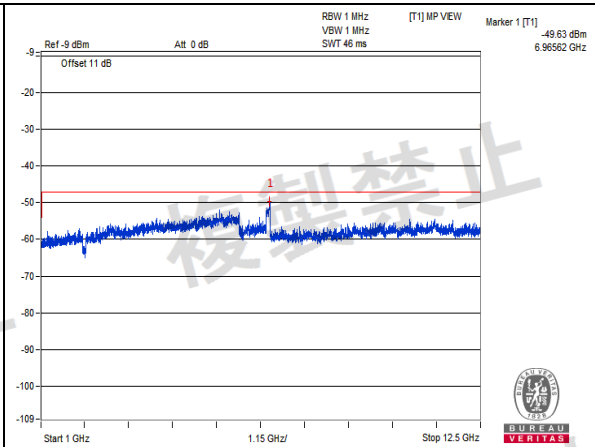
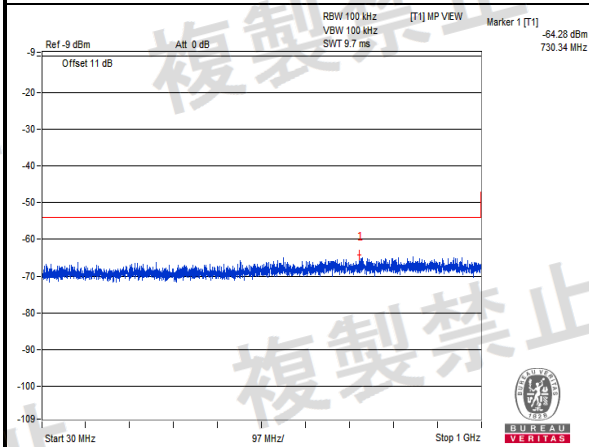
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VERITAS

Test Report No.: RJ2410WDG0234-1

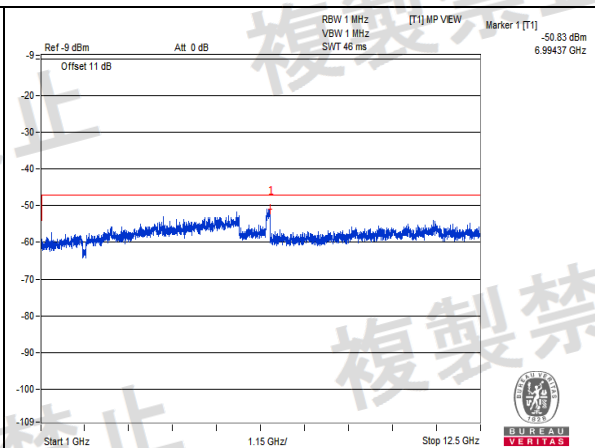
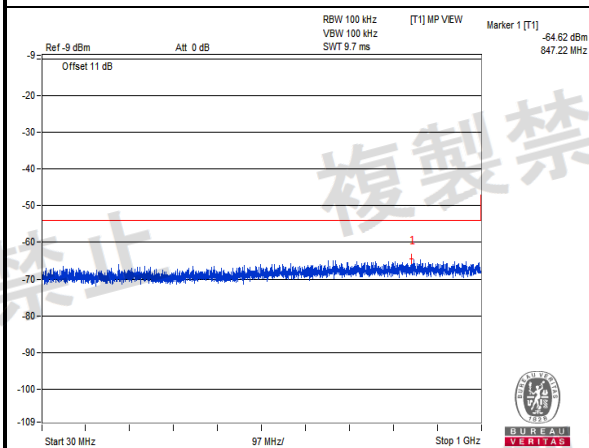
V+10%



Channel 0



Channel 19



Channel 39

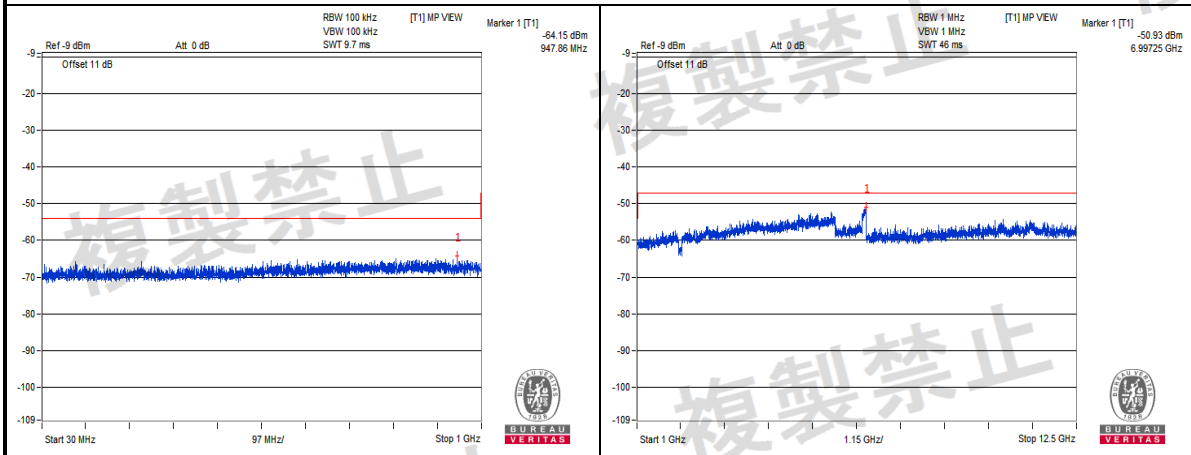
Measurement uncertainty: $\pm 3.93\text{dB}$



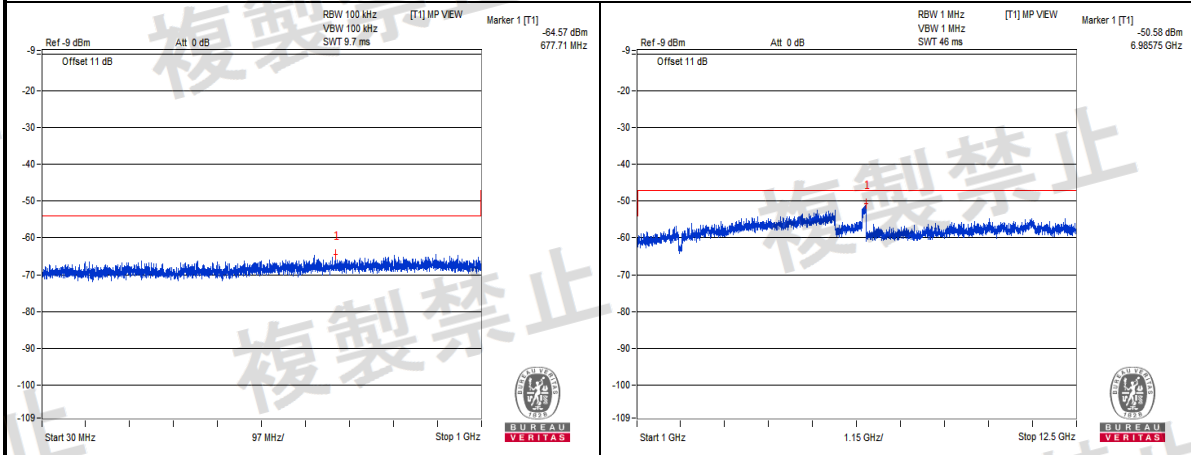
BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

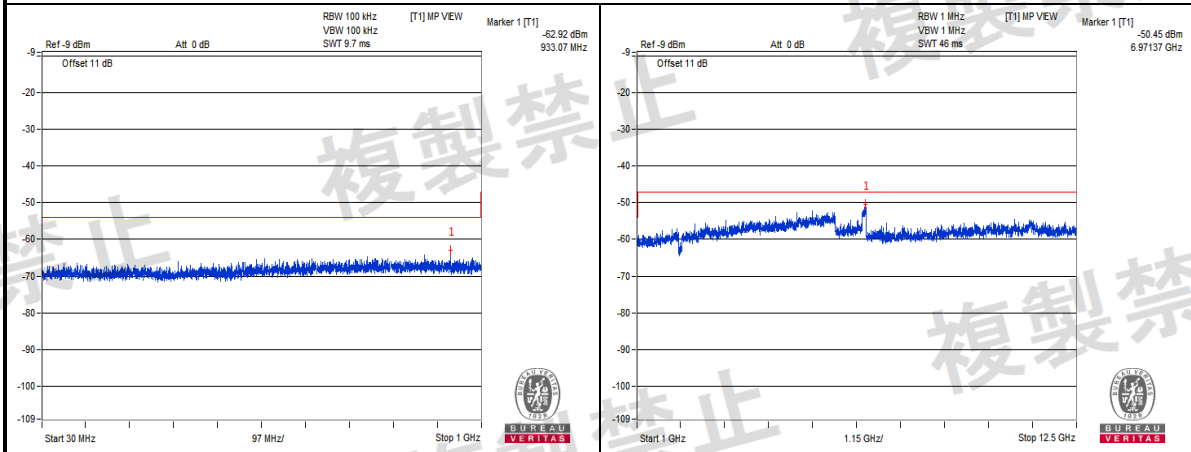
V-10%



Channel 0



Channel 19



Channel 39

Measurement uncertainty: $\pm 3.93\text{dB}$



BUREAU
VERITAS

Test Report No.: RJ2410WDG0234-1

BT-LE (GFSK 2 Mbps)

TEST CHANNEL		CH 1 (2402MHz)		CH 19 (2440MHz)		LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)	MEASURE. VALUE	FREQUENCY (MHz)	MEASURE. VALUE		
Vnormal	below 1GHz	821.030	0.358996nW	958.040	0.359449nW	4nW	PASS
	above 1GHz	6957.000	8.175676nW	6997.250	10.617949nW	20nW	PASS
V+10%	below 1GHz	658.560	0.441958nW	839.950	0.390893nW	4nW	PASS
	above 1GHz	6991.500	11.645473nW	6994.370	10.986477nW	20nW	PASS
V-10%	below 1GHz	961.920	0.392582nW	868.560	0.395441nW	4nW	PASS
	above 1GHz	6908.120	8.917208nW	7000.120	9.599839nW	20nW	PASS
TEST CHANNEL		CH 39 (2480MHz)				LIMIT	RESULT
TEST CONDITION	FREQUENCY RANGE	FREQUENCY (MHz)		MEASURE. VALUE			
Vnormal	below 1GHz	734.460		0.441461nW		4nW	PASS
	above 1GHz	6957.000		7.952707nW		20nW	PASS
V+10%	below 1GHz	967.990		0.407386nW		4nW	PASS
	above 1GHz	7000.120		9.078759nW		20nW	PASS
V-10%	below 1GHz	819.330		0.375155nW		4nW	PASS
	above 1GHz	6994.370		8.484984nW		20nW	PASS

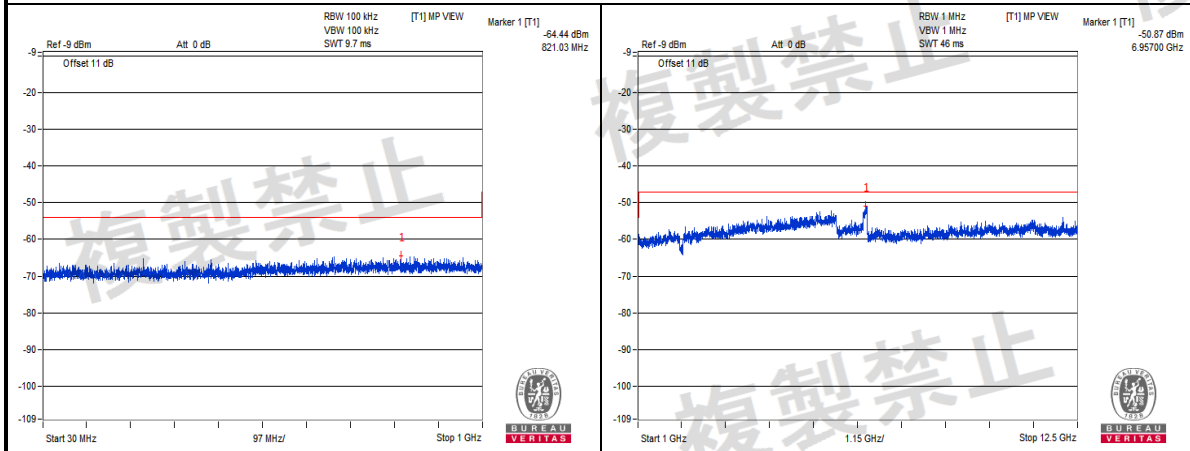
- NOTES:** 1. The worst value in each frequency range v.s. each channel has been marked by boldface.
2. The spectrum plots are attached on the following pages.



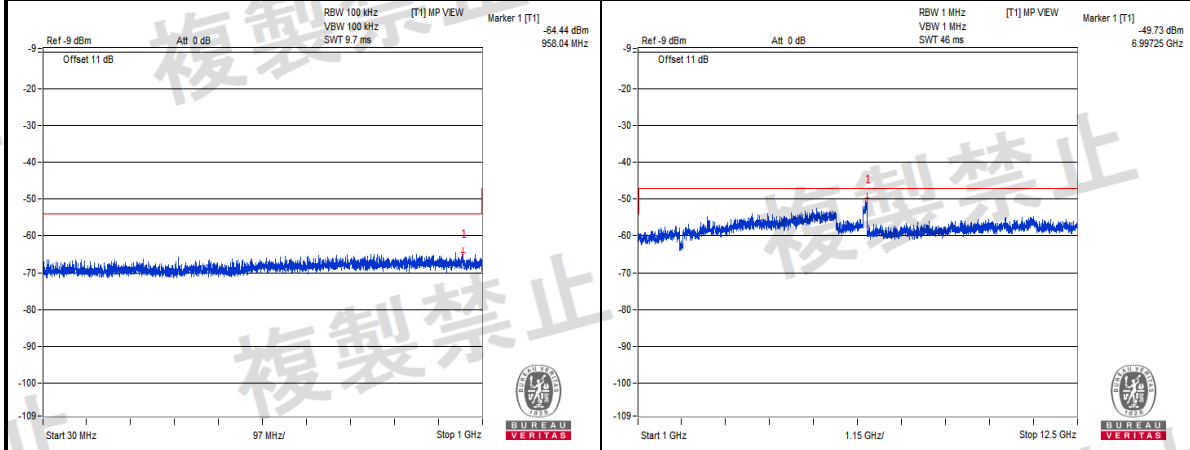
BUREAU
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Test Report No.: RJ2410WDG0234-1

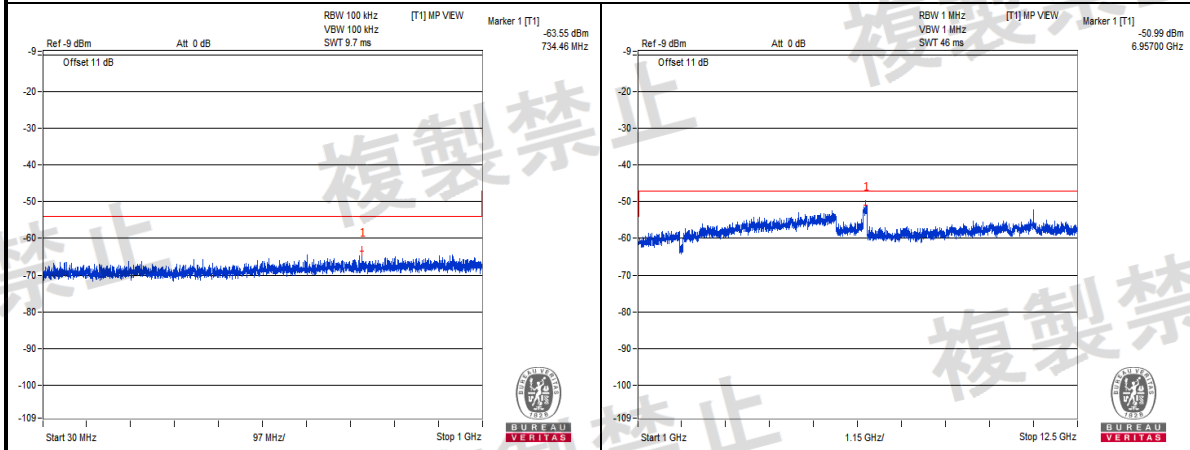
Vnormal



Channel 0



Channel 19



Channel 39

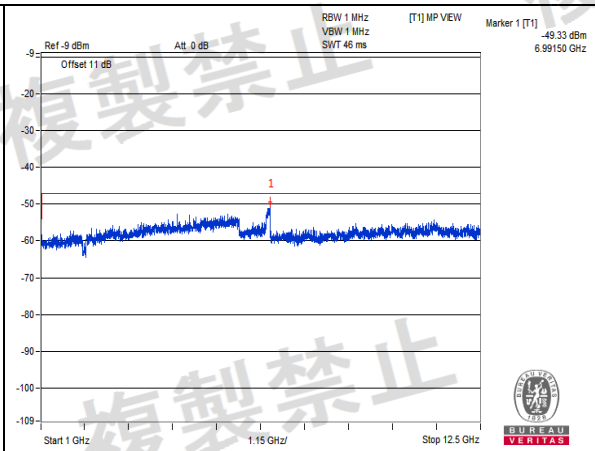
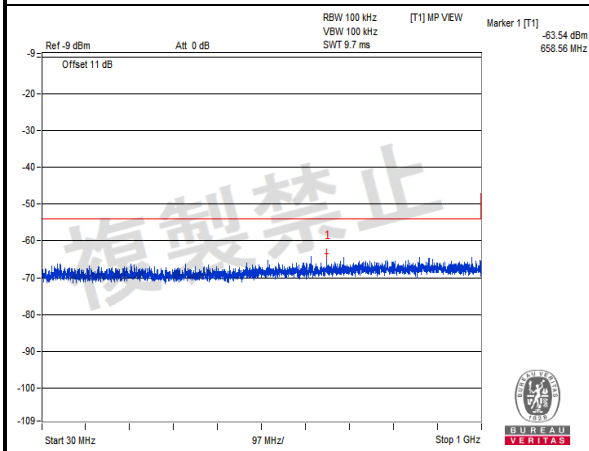
Measurement uncertainty: $\pm 3.93\text{dB}$



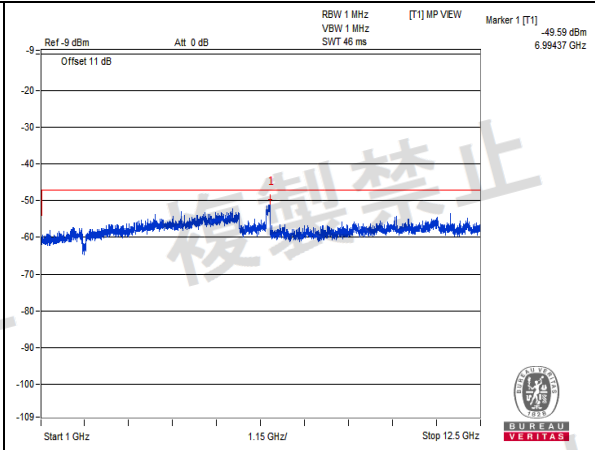
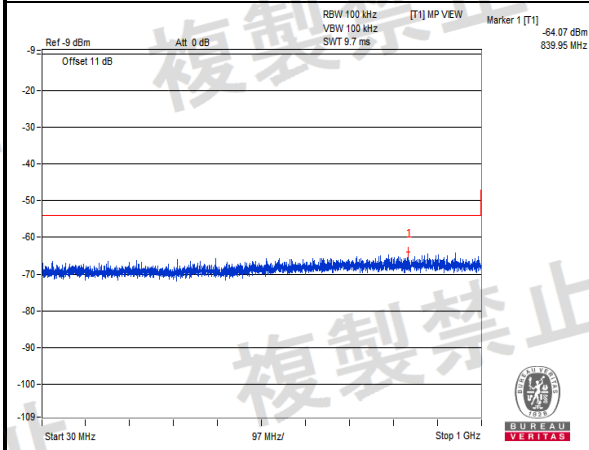
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VERITAS

Test Report No.: RJ2410WDG0234-1

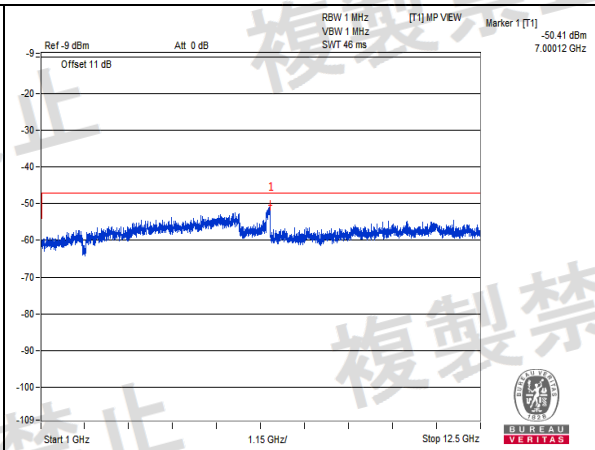
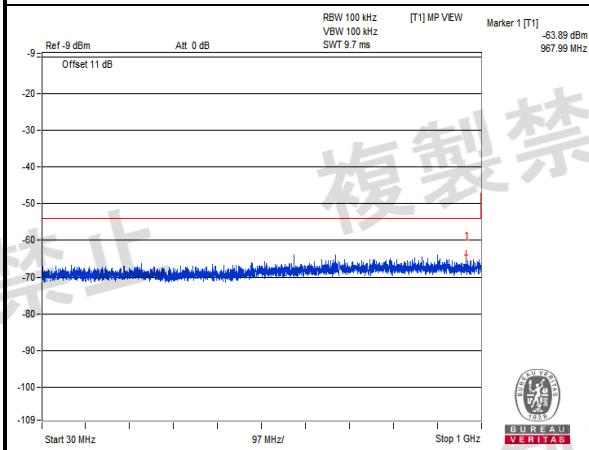
V+10%



Channel 0



Channel 19



Channel 39

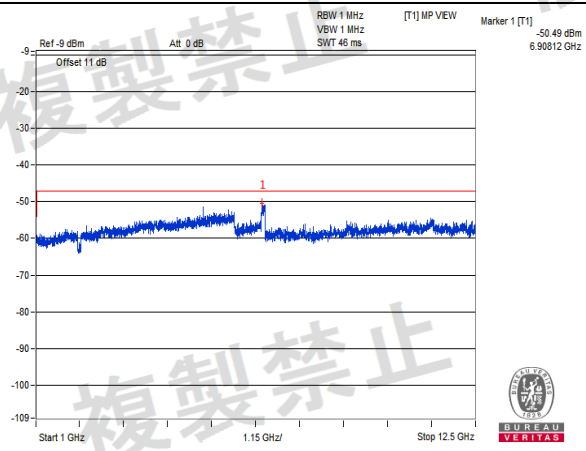
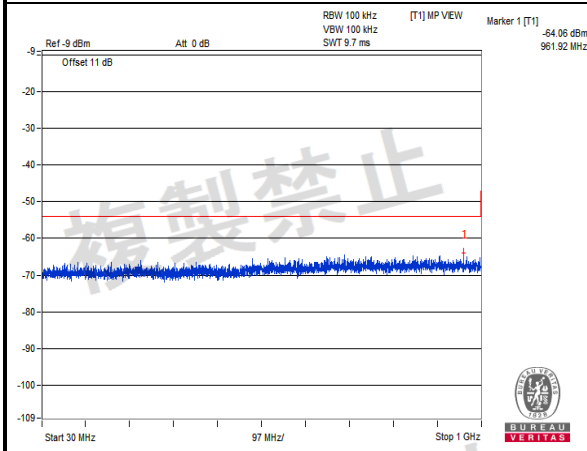
Measurement uncertainty: $\pm 3.93\text{dB}$



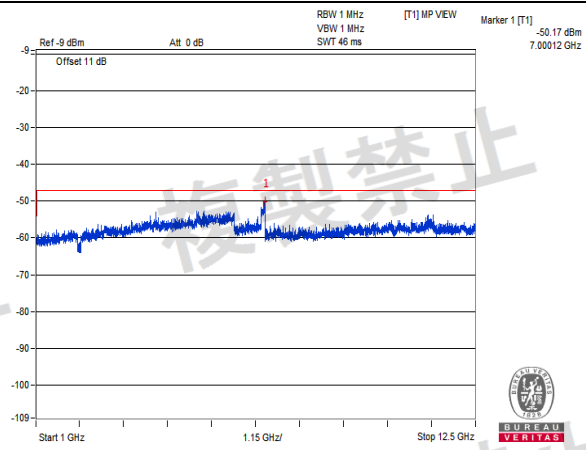
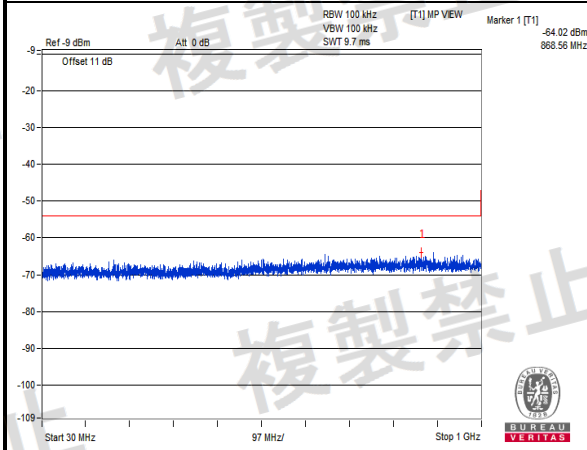
BUREAU
VERITAS

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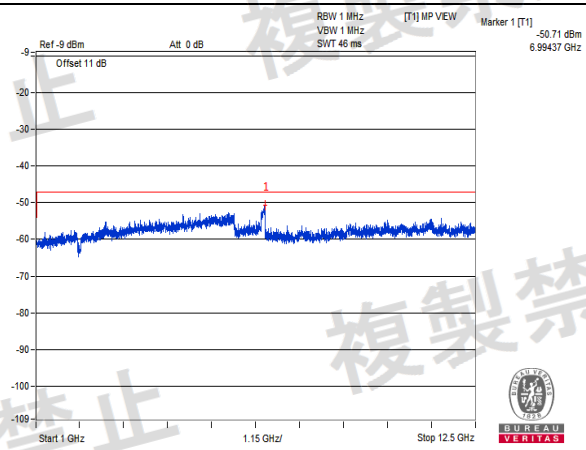
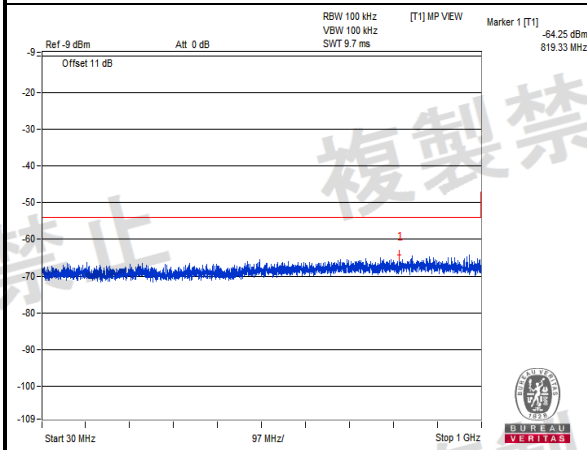
V-10%



Channel 0



Channel 19



Channel 39

Measurement uncertainty: $\pm 3.93\text{dB}$



3.6 INTERFERENCE PREVENTION FUNCTION

3.6.1 LIMITS OF INTERFERENCE PREVENTION FUNCTION

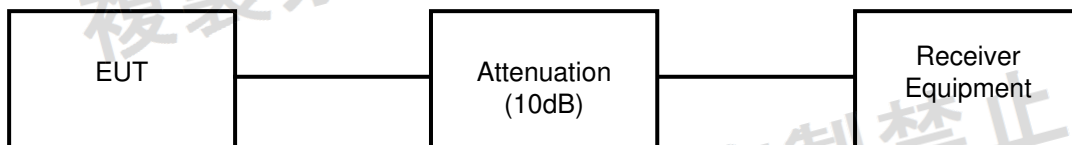
Item	Limits
Identification	≥48bits

Note: In ASCII, a character usually takes 8 bits.

3.6.2 TEST METHOD

According to MIC Notice No. 88 Appendix 43.

3.6.3 TEST SETUP



3.6.4 TEST RESULTS

ENVIRONMENTAL CONDITIONS	25 deg.C, 56% RH
LINK MODE	TEST RESULT
BT-LE	PASS
MAC Address	EC:82:3A:86:13:92



4 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Next Cal.	Calibration Body	Calibration Method
Power Sensor	Keysight	U2021XA	MY57320002	Apr. 07, 25	CEPREI	C
Digital Multimeter	FLUKE	15B	A1220010DG	N/A	internal	C
Humid & Temp Programmable Tester	Haida	HD-225T	1108072001	Oct. 14, 25	CEPREI	C
Oscilloscope	Agilent	DSO9254A	MY51260160	Jul. 07, 25	CEPREI	C
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Jan. 01, 25	CEPREI	C
Signal Generator	Agilent	N5183A	MY50140980	Jul. 11, 25	CEPREI	C
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200288	Jul. 11, 25	CEPREI	C
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	N/A	internal	C
Attenuator	MINI	BW-S10W2+	S130129FGE2	N/A	internal	C
DC Source	Keysight	E3642A	MY56146098	N/A	internal	C
Test software	ADT	ADT_RF Test Software V6.6.5.3	N/A	N/A	internal	C

NOTES:

1. The test was performed in RF Oven room.
2. Equipment are calibrated by calibration laboratory accredited to ISO/IEC 17025 by a mutually recognized Accreditation and all tests are conducted within a valid calibration cycle.

Calibration Method:

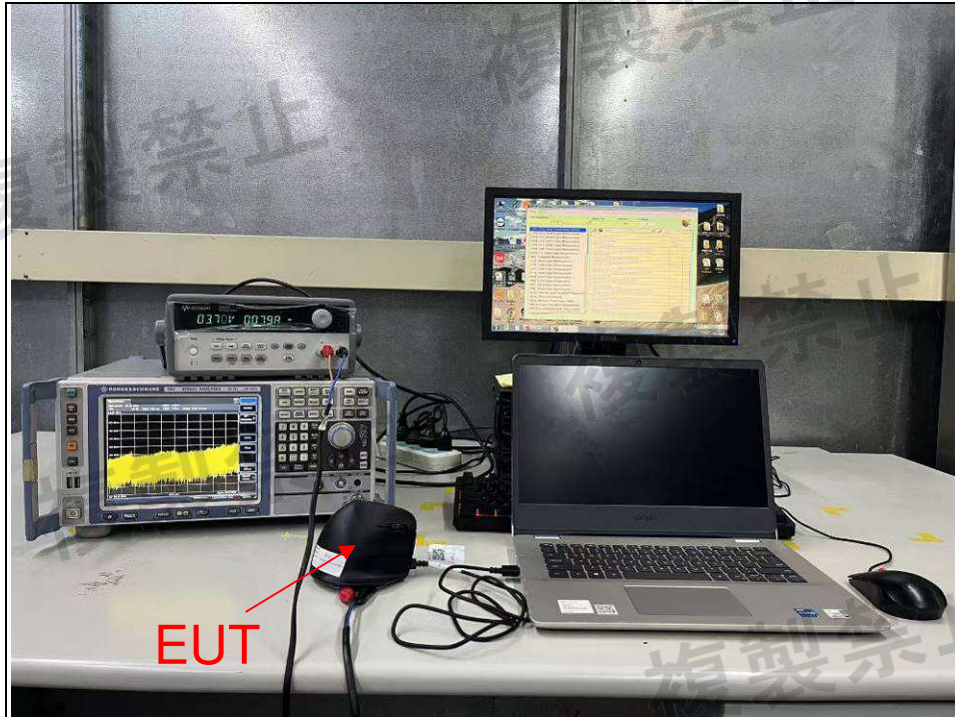
- a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1)
- b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992)
- c) Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)
- d) Calibration conducted by using measuring instruments and other equipment listed in the right column of Table No. 3 attached hereto, which shall have been given any of calibration, etc. listed above from a) to c)



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5 PHOTOGRAPHS OF THE TEST CONFIGURATION





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6 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

--- END ---