

TEST REPORT

Applicant	HUAWEI TECHNOLOGIES CO., LTD.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian Longgang District, Shenzhen 518129 P.R. China

Manufacturer or Supplier	HUAWEI TECHNOLOGIES CO., LTD.
Address	Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian Longgang District, Shenzhen 518129 P.R. China
Product Name	Huawei STB
Additional Product Name	Smart STB
Brand Name	HUAWEI
Model	EC6108V9
Additional Model & Model Difference	EC6108V9A, EC6108V9B, EC6108V9C, EC6108V9D, EC6108V9E, EC6108V9F; See items 3.1
Date of tests	Aug. 14, 2015~ Sep. 13, 2015

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

☒ **FCC Part 15, Subpart E, Section 15.407**

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

Tested by Blue zheng Project Engineer / EMC Department	Approved by Chris Chen Supervisor / EMC Department
	 Date: Sep. 14, 2015

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TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1. SUMMARY OF TEST RESULTS.....	5
1.1 MEASUREMENT UNCERTAINTY	5
2. GENERAL INFORMATION	6
2.1 GENERAL DESCRIPTION OF EUT.....	6
2.2 DESCRIPTION OF TEST MODES.....	8
2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL	10
2.3 DUTY CYCLE OF TEST SIGNAL	13
2.4 DESCRIPTION OF SUPPORT UNITS.....	14
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	14
3. TEST TYPES AND RESULTS.....	15
3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT	15
3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT	15
3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS	16
3.1.3 TEST INSTRUMENTS.....	17
3.1.4 TEST PROCEDURES	18
3.1.5 DEVIATION FROM TEST STANDARD	18
3.1.6 TEST SETUP	19
3.1.7 EUT OPERATING CONDITION	19
3.1.8 TEST RESULTS	20
3.2 CONDUCTED EMISSION MEASUREMENT	55
3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT	55
3.2.2 TEST INSTRUMENTS.....	55
3.2.3 TEST PROCEDURES	56
3.2.4 DEVIATION FROM TEST STANDARD	56
3.2.5 TEST SETUP	56
3.2.6 EUT OPERATING CONDITIONS	56
3.2.7 TEST RESULTS	57
3.3 TRANSMIT POWER MEASUREMENT	59



3.3.1	LIMITS OF TRANSMIT POWER MEASUREMENT	59
3.3.2	TEST SETUP	59
3.3.3	TEST INSTRUMENTS.....	60
3.3.4	TEST PROCEDURE.....	60
3.3.5	DEVIATION FROM TEST STANDARD	62
3.3.6	EUT OPERATING CONDITIONS	62
3.3.7	TEST RESULTS	63
3.4	PEAK POWER SPECTRAL DENSITY MEASUREMENT.....	83
3.4.1	LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT	83
3.4.2	TEST SETUP	83
3.4.3	TEST INSTRUMENTS.....	83
3.4.4	TEST PROCEDURES	83
3.4.5	DEVIATION FROM TEST STANDARD	84
3.4.6	EUT OPERATING CONDITIONS	84
3.4.7	TEST RESULTS	85
3.5	FREQUENCY STABILITY	100
3.5.1	LIMITS OF FREQUENCY STABILITY MEASUREMENT.....	100
3.5.2	TEST SETUP	100
3.5.3	TEST INSTRUMENTS.....	100
3.5.4	TEST PROCEDURE.....	101
3.5.5	DEVIATION FROM TEST STANDARD	101
3.5.6	EUT OPERATING CONDITION	101
3.5.7	TEST RESULTS	102
4.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	103
5.	APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	104



Test Report No.: RF150813N009-3

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF150813N009-3	Original release.	Sep. 14, 2015

1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART E (SECTION 15.407 UNDER NEW RULE)			
STANDARD SECTION	TEST TYPE	RESULT	REMARK
15.407(b)(6)	AC Power Conducted Emissions	PASS	Meet the requirement of limit.
15.407(b)(1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Max Average Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is RSMA not a standard connector.

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.66dB
Radiated emissions	9KHz ~ 30MHz	2.74dB
	30MHz ~ 1GMHz	3.55dB
	1GHz ~ 18GHz	4.84dB
	18GHz ~ 40GHz	4.84dB

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

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT NAME	Huawei STB
ADDITIONAL PRODUCT NAME	Smart STB
MODEL NO.	EC6108V9
ADDITIONAL MODELS	EC6108V9A, EC6108V9B, EC6108V9C, EC6108V9D, EC6108V9E, EC6108V9F
FCC ID	QISEC6108V9
POWER SUPPLY	DC 12V From Adapter Input AC120V 60Hz
MODULATION TYPE	64QAM, 16QAM, QPSK, BPSK
MODULATION TECHNOLOGY	OFDM
TRANSFER RATE	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 300.0Mbps
OPERATING FREQUENCY	5180 ~ 5240MHz, 5260 ~ 5320MHz 5500 ~ 5700MHz, 5745 ~ 5825MHz
NUMBER OF CHANNEL	5180 ~ 5240MHz: 3 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5260 ~ 5320MHz: 3 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 5500 ~ 5700MHz: 3 for 802.11a, 802.11n (20MHz) 3 for 802.11n (40MHz) 5745 ~ 5825MHz: 3 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz)
OUTPUT POWER	23.53 dBm for 5180 ~ 5240MHz (Maximum AVG Power) 23.77 dBm for 5260 ~ 5320MHz (Maximum AVG Power) 23.76 dBm for 5500 ~ 5700MHz (Maximum AVG Power) 22.39 dBm for 5745 ~ 5825MHz (Maximum AVG Power)
ANTENNA TYPE	Wire Antenna; 3dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	HDMI Line: Unshielded, Detachable, 1.50m AV Line: Unshielded, Detachable, 1.50m RJ45 Line: Unshielded, Detachable, 1.50m

NOTE:

1. The EUT provides completed transmitters and receivers.

MODULATION MODE	TX FUNCTION
802.11a	2TX/2RX
802.11n (20MHz)	2TX/2RX
802.11n (40MHz)	2TX/2RX

2. The above EUT information is declared by manufacturer and for more detailed feature description, please refer to the manufacturer's specifications or user's manual.
3. Please refer to the EUT photo document (Reference No.: 150813N009) for detailed product photo.
4. Additional models EC6108V9A, EC6108V9B, EC6108V9C, EC6108V9D, EC6108V9E, and EC6108V9F are identical with the test model EC6108V9 except the model no. for trading purpose.
5. Additional product name: Smart STB is identical with the test product Huawei STB except the name difference for trading purpose.
6. The EUT can be powered by adapters as list as following:

ADAPTER 1	
BRAND:	FRECOM
MODEL:	F12L14-1201000SPAUL.P.S.
INPUT:	AC 100-240V, 50/60Hz 0.3A
OUTPUT:	DC 12V, 1A
DC LINE:	Unshielded, Non-detachable, 1.50m.

ADAPTER 2	
BRAND:	MASS POWER
MODEL:	NBS12E120100VU-1
INPUT:	AC 100-240V, 50/60Hz 0.3A
OUTPUT:	DC 12V, 1A
DC LINE:	Unshielded, Non-detachable, 1.50m.

ADAPTER 3	
BRAND:	FRECOM
MODEL:	F12W8-120100SPAUL.P.S.
INPUT:	AC 100-240V, 50/60Hz 0.3A
OUTPUT:	DC 12V, 1A
DC LINE:	Unshielded, Non-detachable, 1.50m.

ADAPTER 4	
BRAND:	MASS POWER
MODEL:	NBS12E120100UV-1
INPUT:	AC 100-240V, 50/60HZ 0.3A
OUTPUT:	DC 12V, 1A
DC LINE:	Unshielded, Non-Detachable, 1.50m.

2.2 DESCRIPTION OF TEST MODES

FOR 5150 ~ 5250MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
36	5180 MHz	40	5200 MHz
48	5240 MHz		

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
38	5190 MHz	46	5230 MHz

FOR 5250 ~ 5350MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
52	5260 MHz	60	5300 MHz
64	5320 MHz		

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
54	5270 MHz	62	5310 MHz

FOR 5470 ~ 5725MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
100	5500 MHz	116	5580 MHz
140	5700 MHz		

3 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
102	5510 MHz	110	5550 MHz
134	5670 MHz		



Test Report No.: RF150813N009-3

FOR 5725 ~ 5850MHz

3 channels are provided for 802.11a, 802.11n (20MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
149	5745MHz	157	5785MHz
165	5825MHz	--	--

2 channels are provided for 802.11n (40MHz):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
151	5755MHz	159	5795MHz

2.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	Power by AC 120V/60Hz

Where **RE≥1G**: Radiated Emission above 1GHz **RE<1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

NOTE:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

NOTE: "-" means no effect.

RADIATED EMISSION TEST (ABOVE 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	MCS0
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
-	802.11a	5260-5320	52 to 64	52, 56, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 56, 64	OFDM	BPSK	MCS0
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
-	802.11a	5725-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0

RADIATED EMISSION TEST (BELOW 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240 5725-5850	36 to 48 149 to 165	36	OFDM	BPSK	6.0



POWER LINE CONDUCTED EMISSION TEST:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240 5725-5850	36 to 48 149 to 165	36	OFDM	BPSK	6.0

BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 48	OFDM	BPSK	MCS0
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
-	802.11a	5260-5320	52 to 64	52, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 64	OFDM	BPSK	MCS0
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
-	802.11a	5500-5700	100 to 140	100, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 140	OFDM	BPSK	MCS0
-	802.11n (40MHz)		102 to 134	102, 134	OFDM	BPSK	MCS0
-	802.11a	5725-5850	149 to 165	149, 165	OFDM	BPSK	6.0
-	802.11n (20MHz)		149 to 165	149, 165	OFDM	BPSK	MCS0
-	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0

ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (20MHz)		36 to 48	36, 40, 48	OFDM	BPSK	MCS0
-	802.11n (40MHz)		38 to 46	38, 46	OFDM	BPSK	MCS0
-	802.11a	5260-5320	52 to 64	52, 56, 64	OFDM	BPSK	6.0
-	802.11n (20MHz)		52 to 64	52, 56, 64	OFDM	BPSK	MCS0
-	802.11n (40MHz)		54 to 62	54, 62	OFDM	BPSK	MCS0
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (20MHz)		100 to 140	100, 116, 140	OFDM	BPSK	MCS0
-	802.11n (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	MCS0
-	802.11a	5725-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (20MHz)		149 to 165	149, 157, 165	OFDM	BPSK	MCS0
-	802.11n (40MHz)		151 to 159	151, 159	OFDM	BPSK	MCS0

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE<1G	26deg. C, 67%RH	DC 12V from Adapter	Sen He
RE≥1G	26deg. C, 67%RH	DC 12V from Adapter	Sen He
PLC	20deg. C, 56%RH	DC 12V from Adapter	Sen He
APCM	20deg. C, 55%RH	DC 12V from Adapter	Blue Zheng



BUREAU
VERITAS

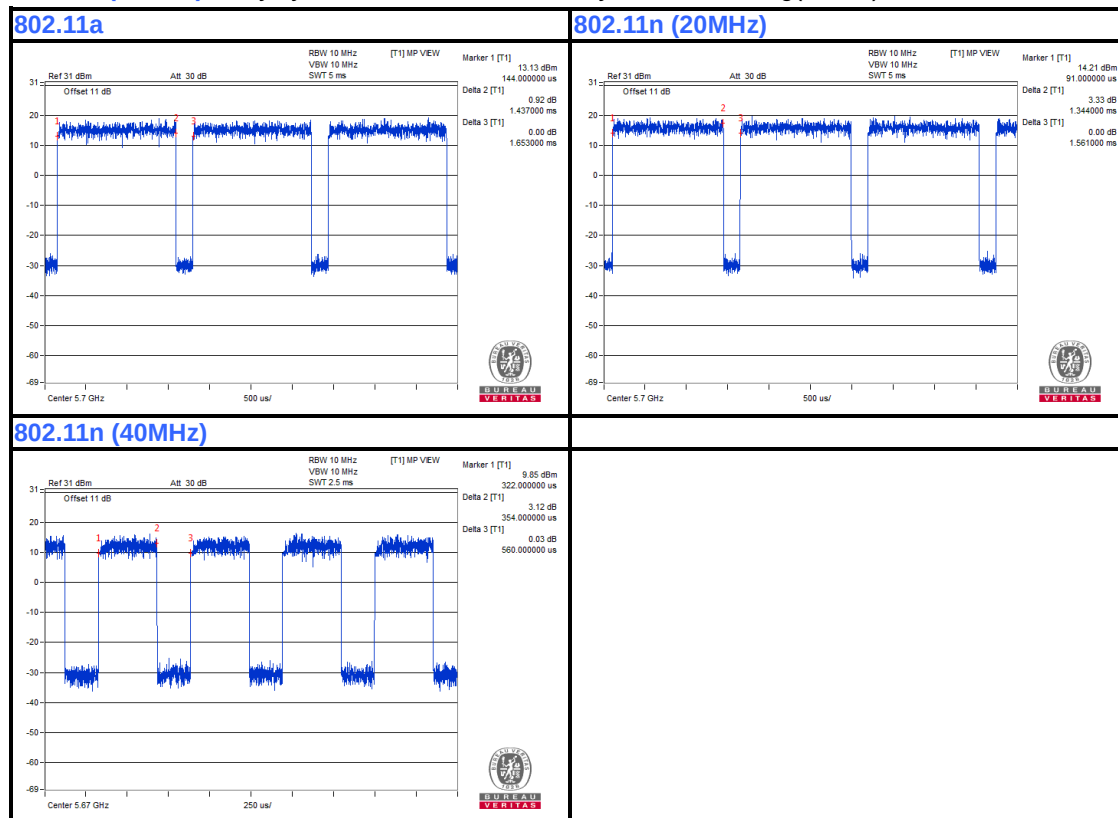
Test Report No.: RF150813N009-3

2.3 DUTY CYCLE OF TEST SIGNAL

802.11a: Duty cycle = $1.437/1.653 = 0.87$, Duty factor = $10 * \log(1/0.87) = 0.61$

802.11n (20MHz): Duty cycle = $1.344/1.561 = 0.86$, Duty factor = $10 * \log(1/0.86) = 0.66$

802.11n (40MHz): Duty cycle = $0.354/0.56 = 0.63$, Duty factor = $10 * \log(1/0.63) = 2.00$



2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Notebook	HP	4431s	CNU238944Z	N/A

NO.	DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line;unshielded, detachable 1.8m.

2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specification of the EUT declared by the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

789033 D02 General UNII Test Procedures New Rules v01

662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2009

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

3. TEST TYPES AND RESULTS

3.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT

3.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 30dB under any condition of modulation.



3.1.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedures New Rules v01	FIELD STRENGTH AT 3m	
	PK: 74 (dBμV/m)	AV: 54 (dBμV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.3 (dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK: -27 (dBm/MHz) ^{*1} PK: -17 (dBm/MHz) ^{*2}	PK: 68.3 (dBμV/m) ^{*1} PK: 78.3 (dBμV/m) ^{*2}

NOTE: ^{*1} beyond 10MHz of the band edge ^{*2} within 10 MHz of band edge

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts).}$$

**3.1.3 TEST INSTRUMENTS**

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Apr 27,15	Apr 26,16
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Apr 23,15	Apr 22,16
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 16, 15	Jul. 15, 16
Horn Antenna	ETS-Lindgren	3117	00062558	May 30,14	May 29,16
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,15	Mar. 03, 16
Pre-Amplifier (0.5~18GHz)	SCHWARZBECK	BBV 9718	9718-266	Mar 26,14	Mar 25,16
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Mar 26,14	Mar 25,16
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	April. 19,14	April. 18,16
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	Jan. 21,14	Jan. 20,17
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 20,14	Nov. 19,15

NOTE:

1. The test was performed in 966 Chamber.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GREGT/CHINA and NIM/CHINA.
3. The FCC Site Registration No. is 502831.

3.1.4 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. 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 is a broadband antenna, and its 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 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.

NOTE:

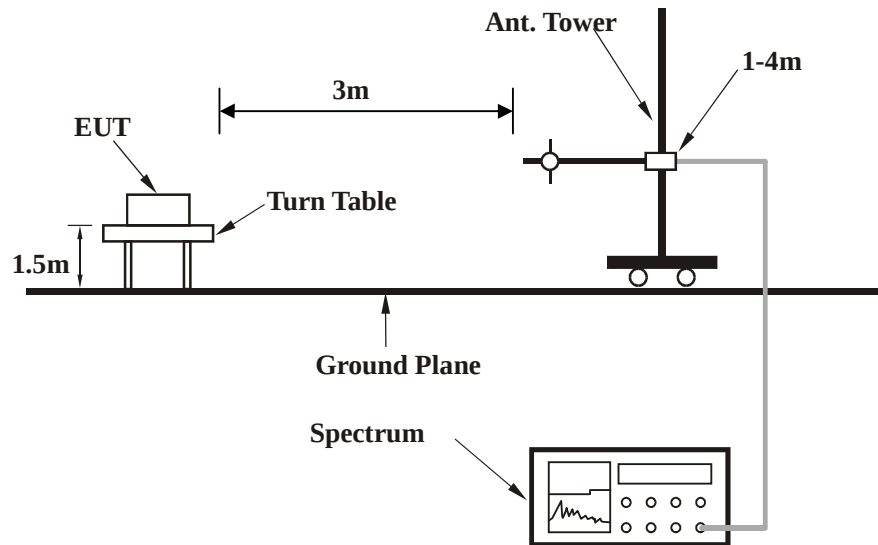
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

3.1.5 DEVIATION FROM TEST STANDARD

No deviation.



3.1.6 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.7 EUT OPERATING CONDITION

- Placed the EUT on the testing table.
- Prepared a notebook to act as a communication partner and placed it outside of testing area.
- The communication partner was connected with the EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable the EUT under transmission condition continuously at specific channel frequency.



**BUREAU
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Test Report No.: RF150813N009-3

3.1.8 TEST RESULTS

BELOW 1GHz WORST-CASE DATA

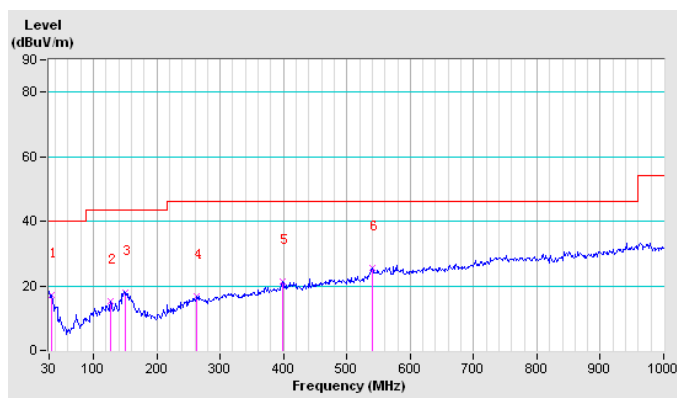
802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	34.22	17.29	40.00	-22.71	100	0	28.37	-11.08
2	127.00	15.27	43.50	-28.23	100	0	30.14	-14.87
3	150.90	18.00	43.50	-25.50	100	0	33.11	-15.11
4	263.36	16.82	46.00	-29.18	100	0	28.51	-11.69
5	398.32	21.17	46.00	-24.83	100	0	29.43	-8.26
6	540.30	25.62	46.00	-20.38	100	0	29.85	-4.23

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

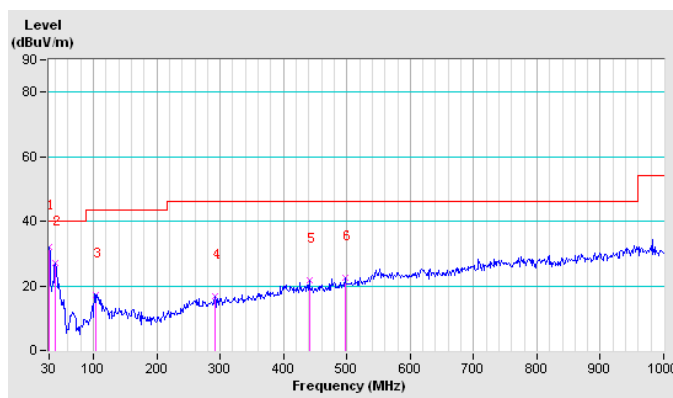


CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.00	32.18	40.00	-7.82	100	0	41.27	-9.09
2	39.84	27.00	40.00	-13.00	100	0	40.79	-13.79
3	103.10	17.26	43.50	-26.24	100	0	33.72	-16.46
4	291.48	16.65	46.00	-29.35	100	0	28.46	-11.81
5	440.49	21.59	46.00	-24.41	100	0	29.64	-8.05
6	496.72	22.64	46.00	-23.36	100	0	28.94	-6.30

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.





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Test Report No.: RF150813N009-3

Band 1 (5150-5250MHz):

ABOVE 1GHz DATA

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	70.8 PK	74.0	-3.2	1.03 H	14	63.21	7.60
2	5150.00	50.6 AV	54.0	-3.4	1.03 H	14	43.00	7.60
3	*5180.00	113.3 PK			1.03 H	14	105.55	7.70
4	*5180.00	102.4 AV			1.03 H	14	94.69	7.70
5	#10360.00	60.9 PK	93.3	-32.5	1.00 H	314	46.86	14.04
6	#10360.00	46.5 AV	82.4	-35.9	1.00 H	314	32.47	14.04
7	15540.00	66.7 PK	74.0	-7.3	1.02 H	241	50.26	16.48
8	15540.00	50.7 AV	54.0	-3.3	1.02 H	241	34.18	16.48
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	67.2 PK	74.0	-6.8	1.07 V	303	59.60	7.60
2	5150.00	48.4 AV	54.0	-5.6	1.07 V	303	40.80	7.60
3	*5180.00	108.7 PK			1.07 V	303	101.00	7.70
4	*5180.00	97.6 AV			1.07 V	303	89.90	7.70
5	#10360.00	59.8 PK	88.7	-28.9	1.00 V	205	45.74	14.04
6	#10360.00	46.2 AV	77.6	-31.4	1.00 V	205	32.18	14.04
7	15540.00	65.1 PK	74.0	-8.9	1.00 V	136	48.59	16.48
8	15540.00	50.1 AV	54.0	-3.9	1.00 V	136	33.66	16.48

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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Test Report No.: RF150813N009-3

CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	109.3 PK			1.21 H	64	101.49	7.76
2	*5200.00	101.1 AV			1.21 H	64	93.30	7.76
3	#10400.00	59.9 PK	89.3	-29.4	1.00 H	147	45.87	14.07
4	#10400.00	45.7 AV	81.1	-35.4	1.00 H	147	31.60	14.07
5	15600.00	65.7 PK	74.0	-8.3	1.00 H	172	49.15	16.56
6	15600.00	50.3 AV	54.0	-3.7	1.00 H	172	33.72	16.56
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	103.5 PK			1.04 V	28	95.74	7.76
2	*5200.00	95.3 AV			1.04 V	28	87.50	7.76
3	#10400.00	58.6 PK	83.5	-24.9	1.00 V	139	44.53	14.07
4	#10400.00	45.2 AV	75.3	-30.1	1.00 V	139	31.13	14.07
5	15600.00	60.5 PK	74.0	-13.5	1.00 V	274	43.91	16.56
6	15600.00	47.7 AV	54.0	-6.3	1.00 V	274	31.09	16.56

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



**BUREAU
VERITAS**

Test Report No.: RF150813N009-3

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.3 PK			1.06 H	102	103.36	7.89
2	*5240.00	101.9 AV			1.06 H	102	93.97	7.89
3	#10480.00	60.8 PK	91.3	-30.5	1.00 H	142	46.68	14.14
4	#10480.00	46.5 AV	81.9	-35.4	1.00 H	142	32.37	14.14
5	15720.00	65.4 PK	74.0	-8.6	1.00 H	162	48.72	16.72
6	15720.00	50.3 AV	54.0	-3.7	1.00 H	162	33.57	16.72
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.8 PK			1.13 V	269	99.95	7.89
2	*5240.00	97.6 AV			1.13 V	269	89.66	7.89
3	#10480.00	57.6 PK	87.8	-30.2	1.00 V	108	43.46	14.14
4	#10480.00	45.0 AV	77.6	-32.6	1.00 V	108	30.88	14.14
5	15720.00	62.4 PK	74.0	-11.6	1.00 V	54	45.72	16.72
6	15720.00	52.3 AV	54.0	-1.7	1.00 H	162	33.57	16.72

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



**BUREAU
VERITAS**

Test Report No.: RF150813N009-3

802.11n (20MHz)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	70.2 PK	74.0	-3.9	1.09 H	358	62.55	7.60
2	5150.00	50.6 AV	54.0	-3.4	1.09 H	358	43.03	7.60
3	*5180.00	113.0 PK			1.09 H	358	105.32	7.70
4	*5180.00	101.8 AV			1.09 H	358	94.10	7.70
5	#10360.00	61.3 PK	91.3	-30.0	1.01 H	192	47.24	14.04
6	#10360.00	46.1 AV	81.8	-35.7	1.01 H	192	32.08	14.04
7	15540.00	67.1 PK	74.0	-6.9	1.00 H	168	50.66	16.48
8	15540.00	50.6 AV	54.0	-3.4	1.00 H	168	34.13	16.48
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.2 PK	74.0	-8.8	1.05 V	22	57.60	7.60
2	5150.00	46.3 AV	54.0	-7.7	1.05 V	22	38.74	7.60
3	*5180.00	104.2 PK			1.05 V	22	96.50	7.70
4	*5180.00	96.5 AV			1.05 V	22	88.80	7.70
5	#10360.00	56.4 PK	84.2	-27.8	1.01 V	226	42.35	14.04
6	#10360.00	45.0 AV	76.5	-31.5	1.01 V	226	30.97	14.04
7	15540.00	62.3 PK	74.0	-11.7	1.00 V	123	45.82	16.48
8	15540.00	49.0 AV	54.0	-5.0	1.00 V	123	32.49	16.48

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 40	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	110.2 PK			1.07 H	23	102.44	7.76
2	*5200.00	100.1 AV			1.07 H	23	92.33	7.76
3	#10400.00	61.3 PK	90.2	-28.9	1.00 H	68	47.19	14.07
4	#10400.00	46.4 AV	80.1	-33.7	1.00 H	68	32.30	14.07
5	15600.00	66.5 PK	74.0	-7.5	1.00 H	147	49.91	16.56
6	15600.00	50.2 AV	54.0	-3.8	1.00 H	147	33.60	16.56
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	106.4 PK			1.02 V	51	98.66	7.76
2	*5200.00	95.9 AV			1.02 V	51	88.16	7.76
3	#10400.00	58.3 PK	86.4	-28.1	1.00 V	92	44.23	14.07
4	#10400.00	46.0 AV	75.9	-29.9	1.00 V	92	31.92	14.07
5	15600.00	63.2 PK	74.0	-10.8	1.00 V	169	46.65	16.56
6	15600.00	49.0 AV	54.0	-5.0	1.00 V	169	32.40	16.56

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	109.7 PK			1.03 H	46	101.81	7.89
2	*5240.00	98.7 AV			1.03 H	46	90.77	7.89
3	#10480.00	61.2 PK	89.7	-28.5	1.00 H	87	47.06	14.14
4	#10480.00	47.0 AV	78.7	-31.7	1.00 H	87	32.84	14.14
5	15720.00	65.8 PK	74.0	-8.2	1.00 H	242	49.09	16.72
6	15720.00	50.6 AV	54.0	-3.4	1.00 H	242	33.89	16.72
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	106.5 PK			1.09 V	132	98.61	7.89
2	*5240.00	95.3 AV			1.09 V	132	87.39	7.89
3	#10480.00	56.9 PK	86.5	-29.6	1.00 V	178	42.75	14.14
4	#10480.00	45.3 AV	75.3	-30.0	1.00 V	178	31.18	14.14
5	15720.00	64.1 PK	74.0	-9.9	1.00 V	125	47.38	16.72
6	15720.00	47.4 AV	54.0	-6.6	1.00 V	125	30.70	16.72

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (40MHz)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.2 PK	74.0	-4.8	1.11 H	38	61.63	7.60
2	5150.00	50.3 AV	54.0	-3.7	1.11 H	38	42.69	7.60
3	*5190.00	109.9 PK			1.11 H	38	102.18	7.73
4	*5190.00	101.4 AV			1.11 H	38	93.68	7.73
5	#10380.00	60.2 PK	89.9	-29.7	1.00 H	123	46.17	14.05
6	#10380.00	46.0 AV	81.4	-35.4	1.00 H	123	31.99	14.05
7	15570.00	65.8 PK	74.0	-8.2	1.00 H	168	49.28	16.52
8	15570.00	48.1 AV	54.0	-5.9	1.00 H	168	31.58	16.52
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.5 PK	74.0	-10.5	1.06 V	66	55.87	7.60
2	5150.00	46.2 AV	54.0	-7.8	1.06 V	66	38.60	7.60
3	*5190.00	104.3 PK			1.06 V	66	96.53	7.73
4	*5190.00	97.8 AV			1.06 V	66	90.10	7.73
5	#10380.00	57.0 PK	84.3	-27.3	1.00 V	195	42.97	14.05
6	#10380.00	45.6 AV	77.8	-32.2	1.00 V	195	31.53	14.05
7	15570.00	63.1 PK	74.0	-10.9	1.00 V	206	46.59	16.52
8	15570.00	47.9 AV	54.0	-6.1	1.00 V	206	31.34	16.52

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



BUREAU
VERITAS

Test Report No.: RF150813N009-3

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	109.2 PK			1.05 H	34	101.34	7.86
2	*5230.00	96.7 AV			1.05 H	34	88.88	7.86
3	#10460.00	60.1 PK	89.2	-29.1	1.00 H	201	45.99	14.13
4	#10460.00	46.7 AV	76.7	-30.0	1.00 H	201	32.56	14.13
5	15690.00	65.4 PK	74.0	-8.6	1.00 H	339	48.74	16.68
6	15690.00	50.2 AV	54.0	-3.8	1.00 H	339	33.55	16.68
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	103.2 PK			1.09 V	12	95.34	7.86
2	*5230.00	94.5 AV			1.09 V	12	86.66	7.86
3	#10460.00	58.6 PK	83.2	-24.6	1.00 V	324	44.49	14.13
4	#10460.00	45.5 AV	74.5	-29.0	1.00 V	324	31.34	14.13
5	15690.00	63.2 PK	74.0	-10.8	1.00 V	322	46.53	16.68
6	15690.00	48.2 AV	54.0	-5.8	1.00 V	322	31.55	16.68

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



**BUREAU
VERITAS**

Test Report No.: RF150813N009-3

Band 2 (5250-5350MHz):

ABOVE 1GHz DATA

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	113.4 PK			1.03 H	327	105.47	7.95
2	*5260.00	100.6 AV			1.03 H	327	92.65	7.95
3	#10520.00	60.4 PK	93.4	-33.0	1.00 H	102	46.22	14.14
4	#10520.00	45.5 AV	80.6	-35.1	1.00 H	102	31.38	14.14
5	15780.00	66.7 PK	74.0	-7.3	1.00 H	219	49.93	16.80
6	15780.00	50.4 AV	54.0	-3.6	1.00 H	219	33.63	16.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	109.9 PK			1.01 V	233	101.98	7.95
2	*5260.00	94.9 AV			1.01 V	233	86.93	7.95
3	#10520.00	58.7 PK	89.9	-31.2	1.00 V	142	44.57	14.14
4	#10520.00	44.6 AV	74.9	-30.3	1.00 V	142	30.46	14.14
5	15780.00	64.2 PK	74.0	-9.8	1.00 V	267	47.40	16.80
6	15780.00	48.1 AV	54.0	-5.9	1.00 V	267	31.30	16.80

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



**BUREAU
VERITAS**

Test Report No.: RF150813N009-3

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	114.3 PK			1.02 H	351	106.18	8.08
2	*5300.00	102.7 AV			1.02 H	351	94.63	8.08
3	10600.00	62.4 PK	74.0	-11.6	1.01 H	231	48.33	14.06
4	10600.00	45.7 AV	54.0	-8.3	1.01 H	231	31.64	14.06
5	15900.00	66.1 PK	74.0	-7.9	1.00 H	225	49.14	16.96
6	15900.00	49.9 AV	54.0	-4.1	1.00 H	225	32.96	16.96
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	110.0 PK			1.00 V	136	101.94	8.08
2	*5300.00	96.7 AV			1.00 V	136	88.64	8.08
3	10600.00	63.4 PK	74.0	-10.6	1.00 V	292	49.31	14.06
4	10600.00	46.0 AV	54.0	-8.0	1.00 V	292	31.95	14.06
5	15900.00	67.4 PK	74.0	-6.6	1.00 V	167	50.40	16.96
6	15900.00	50.5 AV	54.0	-3.5	1.00 V	167	33.51	16.96

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	116.3 PK			1.12 H	349	108.16	8.14
2	*5320.00	100.4 AV			1.12 H	349	92.26	8.14
3	5350.00	70.1 PK	74.0	-3.9	1.12 H	349	61.86	8.24
4	5350.00	50.8 AV	54.0	-3.2	1.12 H	349	42.56	8.24
5	10640.00	62.2 PK	74.0	-11.8	1.00 H	226	48.18	14.03
6	10640.00	46.2 AV	54.0	-7.8	1.00 H	226	32.17	14.03
7	15960.00	67.2 PK	74.0	-6.8	1.00 H	136	50.16	17.04
8	15960.00	49.2 AV	54.0	-4.8	1.00 H	136	32.16	17.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.9 PK			1.02 V	91	102.76	8.14
2	*5320.00	92.7 AV			1.02 V	91	84.60	8.14
3	5350.00	64.6 PK	74.0	-9.4	1.02 V	91	56.36	8.24
4	5350.00	46.8 AV	54.0	-7.2	1.02 V	91	38.56	8.24
5	10640.00	61.0 PK	74.0	-13.0	1.00 V	217	46.99	14.03
6	10640.00	45.1 AV	54.0	-8.9	1.00 V	217	31.08	14.03
7	15960.00	64.4 PK	74.0	-9.6	1.00 V	309	47.33	17.04
8	15960.00	49.2 AV	54.0	-4.8	1.00 V	309	32.18	17.04

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.



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Test Report No.: RF150813N009-3

802.11n (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	116.2 PK			1.04 H	345	108.25	7.95
2	*5260.00	101.1 AV			1.04 H	345	93.10	7.95
3	#10520.00	60.2 PK	96.2	-36.0	1.02 H	139	46.06	14.14
4	#10520.00	46.1 AV	81.1	-35.0	1.02 H	139	31.99	14.14
5	15780.00	67.4 PK	74.0	-6.6	1.13 H	349	50.62	16.80
6	15780.00	50.6 AV	54.0	-3.4	1.13 H	349	33.81	16.80
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5260.00	111.6 PK			1.12 V	129	103.65	7.95
2	*5260.00	93.4 AV			1.12 V	129	85.45	7.95
3	#10520.00	59.3 PK	91.6	-32.3	1.00 V	82	45.16	14.14
4	#10520.00	45.1 AV	73.4	-28.3	1.00 V	82	30.96	14.14
5	15780.00	63.3 PK	74.0	-10.7	1.02 V	315	46.47	16.80
6	15780.00	48.3 AV	54.0	-5.7	1.02 V	315	31.46	16.80

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	115.4 PK			1.11 H	331	107.34	8.08
2	*5300.00	100.8 AV			1.11 H	331	92.74	8.08
3	10600.00	64.1 PK	74.0	-9.9	1.02 H	122	50.04	14.06
4	10600.00	45.6 AV	54.0	-8.4	1.02 H	122	31.54	14.06
5	15900.00	66.5 PK	74.0	-7.5	1.00 H	314	49.50	16.96
6	15900.00	50.3 AV	54.0	-3.7	1.00 H	314	33.37	16.96
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	111.2 PK			1.06 V	104	103.15	8.08
2	*5300.00	95.3 AV			1.06 V	104	87.20	8.08
3	10600.00	63.6 PK	74.0	-10.4	1.00 V	132	49.58	14.06
4	10600.00	45.0 AV	54.0	-9.0	1.00 V	132	30.96	14.06
5	15900.00	65.2 PK	74.0	-8.8	1.00 V	218	48.24	16.96
6	15900.00	49.1 AV	54.0	-4.9	1.00 V	218	32.17	16.96

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.



CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	116.9 PK			1.19 H	337	108.71	8.14
2	*5320.00	102.2 AV			1.19 H	337	94.06	8.14
3	5350.00	70.1 PK	74.0	-3.9	1.19 H	337	61.82	8.24
4	5350.00	50.7 AV	54.0	-3.3	1.19 H	337	42.47	8.24
5	10640.00	63.4 PK	74.0	-10.6	1.00 H	135	49.37	14.03
6	10640.00	46.1 AV	54.0	-7.9	1.00 H	135	32.09	14.03
7	15960.00	66.0 PK	74.0	-8.0	1.00 H	314	48.97	17.04
8	15960.00	49.0 AV	54.0	-5.0	1.00 H	314	31.98	17.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	110.0 PK			1.05 V	288	101.89	8.14
2	*5320.00	92.3 AV			1.05 V	288	84.16	8.14
3	5350.00	62.7 PK	74.0	-11.3	1.05 V	288	54.50	8.24
4	5350.00	47.0 AV	54.0	-7.0	1.05 V	288	38.78	8.24
5	10640.00	62.4 PK	74.0	-11.6	1.00 V	144	48.37	14.03
6	10640.00	46.2 AV	54.0	-7.8	1.00 V	144	32.17	14.03
7	15960.00	65.2 PK	74.0	-8.8	1.00 V	46	48.16	17.04
8	15960.00	49.7 AV	54.0	-4.3	1.00 V	46	32.66	17.04

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.



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Test Report No.: RF150813N009-3

802.11n (40MHz)

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	115.2 PK			1.05 H	327	107.22	7.98
2	*5270.00	94.7 AV			1.05 H	327	86.74	7.98
3	#10540.00	63.1 PK	95.2	-32.1	1.00 H	165	48.98	14.12
4	#10540.00	46.2 AV	74.7	-28.5	1.00 H	165	32.11	14.12
5	15810.00	67.0 PK	74.0	-7.0	1.02 H	339	50.18	16.84
6	15810.00	50.3 AV	54.0	-3.7	1.02 H	339	33.43	16.84
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5270.00	111.2 PK			1.03 V	34	103.22	7.98
2	*5270.00	92.0 AV			1.03 V	34	84.06	7.98
3	#10540.00	62.7 PK	91.2	-28.5	1.00 V	214	48.58	14.12
4	#10540.00	45.3 AV	72.0	-26.7	1.00 V	214	31.16	14.12
5	15810.00	65.8 PK	74.0	-8.2	1.00 V	320	48.98	16.84
6	15810.00	49.1 AV	54.0	-4.9	1.00 V	320	32.27	16.84

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	110.3 PK			1.07 H	351	102.19	8.11
2	*5310.00	91.2 AV			1.07 H	351	83.09	8.11
3	5350.00	70.2 PK	74.0	-3.8	1.07 H	351	61.96	8.24
4	5350.00	50.1 AV	54.0	-3.9	1.07 H	351	41.86	8.24
5	10620.00	63.4 PK	74.0	-10.6	1.01 H	174	49.35	14.05
6	10620.00	46.0 AV	54.0	-8.0	1.01 H	174	31.98	14.05
7	15930.00	66.5 PK	74.0	-7.5	1.00 H	300	49.47	17.00
8	15930.00	49.0 AV	54.0	-5.0	1.00 H	300	32.01	17.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	107.2 PK			1.13 V	218	99.09	8.11
2	*5310.00	87.7 AV			1.13 V	218	79.58	8.11
3	5350.00	68.2 PK	74.0	-5.8	1.13 V	218	59.96	8.24
4	5350.00	48.8 AV	54.0	-5.2	1.13 V	218	40.52	8.24
5	10620.00	63.4 PK	74.0	-10.6	1.00 V	77	49.36	14.05
6	10620.00	45.8 AV	54.0	-8.2	1.00 V	77	31.75	14.05
7	15930.00	65.8 PK	74.0	-8.2	1.00 V	258	48.82	17.00
8	15930.00	48.9 AV	54.0	-5.1	1.00 V	258	31.86	17.00

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

Band 3 (5470-5725MHz):

ABOVE 1GHz DATA

802.11a

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.5 PK	74.0	-13.6	1.14 H	266	51.85	8.60
2	5460.00	47.6 AV	54.0	-6.4	1.14 H	266	38.96	8.60
3	#5470.00	64.5 PK	74.0	-9.5	1.14 H	266	55.87	8.63
4	*5500.00	115.2 PK			1.14 H	266	106.47	8.73
5	*5500.00	98.1 AV			1.14 H	266	89.37	8.73
6	11000.00	63.9 PK	74.0	-10.1	1.02 H	137	50.19	13.70
7	11000.00	46.2 AV	54.0	-7.8	1.02 H	137	32.52	13.70
8	#16500.00	67.5 PK	95.2	-27.7	1.00 H	218	50.43	17.04
9	#16500.00	49.1 AV	78.1	-29.0	1.00 H	218	32.08	17.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.2 PK	74.0	-13.8	1.02 V	312	51.60	8.60
2	5460.00	46.7 AV	54.0	-7.3	1.02 V	312	38.10	8.60
3	#5470.00	62.1 PK	74.0	-11.9	1.02 V	312	53.47	8.63
4	*5500.00	110.4 PK			1.02 V	312	101.67	8.73
5	*5500.00	93.2 AV			1.02 V	312	84.47	8.73
6	11000.00	62.8 PK	74.0	-11.2	1.00 V	125	49.10	13.70
7	11000.00	45.8 AV	54.0	-8.2	1.00 V	125	32.10	13.70
8	#16500.00	65.7 PK	90.4	-24.7	1.00 V	308	48.66	17.04
9	#16500.00	48.9 AV	73.2	-24.3	1.00 V	308	31.86	17.04

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	117.0 PK			1.12 H	332	108.10	8.92
2	*5580.00	99.6 AV			1.12 H	332	90.70	8.92
3	11160.00	62.3 PK	74.0	-11.7	1.01 H	210	48.35	13.95
4	11160.00	46.2 AV	54.0	-7.8	1.01 H	210	32.25	13.95
5	#16740.00	66.2 PK	97.0	-30.8	1.03 H	264	47.91	18.32
6	#16740.00	50.4 AV	79.6	-29.2	1.03 H	264	32.09	18.32
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	112.3 PK			1.07 V	211	103.38	8.92
2	*5580.00	96.1 AV			1.07 V	211	87.22	8.92
3	11160.00	61.8 PK	74.0	-12.2	1.02 V	195	47.89	13.95
4	11160.00	45.8 AV	54.0	-8.2	1.02 V	195	31.85	13.95
5	#16740.00	65.7 PK	92.3	-26.6	1.00 V	339	47.42	18.32
6	#16740.00	48.2 AV	76.1	-27.9	1.00 V	339	29.88	18.32

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	117.8 PK			1.03 H	318	108.60	9.20
2	*5700.00	101.2 AV			1.03 H	318	92.00	9.20
3	#5725.00	65.1 PK	74.0	-8.9	1.03 H	318	55.84	9.26
4	11400.00	62.4 PK	74.0	-11.6	1.00 H	162	48.04	14.32
5	11400.00	45.6 AV	54.0	-8.4	1.00 H	162	31.28	14.32
6	#17100.00	66.8 PK	97.8	-30.2	1.02 H	304	47.02	19.78
7	#17100.00	50.6 AV	81.2	-30.6	1.02 H	304	30.85	19.78
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	112.4 PK			1.21 V	241	103.20	9.20
2	*5700.00	95.8 AV			1.21 V	241	86.60	9.20
3	#5725.00	62.3 PK	74.0	-11.7	1.21 V	241	53.04	9.26
4	11400.00	62.0 PK	74.0	-12.0	1.00 V	322	47.70	14.32
5	11400.00	45.1 AV	54.0	-8.9	1.00 V	322	30.78	14.32
6	#17100.00	64.5 PK	92.4	-27.9	1.03 V	55	44.72	19.78
7	#17100.00	48.7 AV	75.8	-27.1	1.03 V	55	28.89	19.78

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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Test Report No.: RF150813N009-3

802.11n (20MHz)

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.3 PK	74.0	-11.7	1.07 H	322	53.70	8.60
2	5460.00	45.2 AV	54.0	-8.8	1.07 H	322	36.60	8.60
3	#5470.00	65.1 PK	74.0	-8.9	1.07 H	322	56.47	8.63
4	*5500.00	115.2 PK			1.07 H	322	106.47	8.73
5	*5500.00	100.1 AV			1.07 H	322	91.39	8.73
6	11000.00	63.5 PK	74.0	-10.5	1.00 H	132	49.84	13.70
7	11000.00	46.1 AV	54.0	-7.9	1.00 H	132	32.40	13.70
8	#16500.00	66.3 PK	95.2	-28.9	1.01 H	228	49.26	17.04
9	#16500.00	49.5 AV	80.1	-30.6	1.01 H	228	32.48	17.04
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.2 PK	74.0	-12.8	1.11 V	254	52.60	8.60
2	5460.00	44.9 AV	54.0	-9.1	1.11 V	254	36.30	8.60
3	#5470.00	63.2 PK	74.0	-10.8	1.11 V	254	54.57	8.63
4	*5500.00	109.9 PK			1.11 V	254	101.16	8.73
5	*5500.00	94.7 AV			1.11 V	254	85.94	8.73
6	11000.00	62.5 PK	74.0	-11.5	1.00 V	221	48.84	13.70
7	11000.00	45.4 AV	54.0	-8.6	1.00 V	221	31.70	13.70
8	#16500.00	65.8 PK	89.9	-24.1	1.00 V	193	48.76	17.04
9	#16500.00	49.0 AV	74.7	-25.7	1.00 V	193	31.93	17.04

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	113.4 PK			1.12 H	288	104.48	8.92
2	*5580.00	98.6 AV			1.12 H	218	89.72	8.92
3	11160.00	64.2 PK	74.0	-9.8	1.00 H	132	50.25	13.95
4	11160.00	46.1 AV	54.0	-7.9	1.00 H	132	32.15	13.95
5	#16740.00	66.8 PK	93.4	-26.6	1.00 H	228	48.48	18.32
6	#16740.00	49.7 AV	78.6	-28.9	1.00 H	228	31.35	18.32
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	112.3 PK			1.06 V	314	103.33	8.92
2	*5580.00	97.6 AV			1.06 V	314	88.72	8.92
3	11160.00	63.2 PK	74.0	-10.8	1.00 V	66	49.25	13.95
4	11160.00	45.2 AV	54.0	-8.8	1.00 V	66	31.25	13.95
5	#16740.00	66.2 PK	92.3	-26.1	1.00 V	241	47.88	18.32
6	#16740.00	49.2 AV	77.6	-28.4	1.00 V	241	30.92	18.32

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	115.2 PK			1.35 H	302	106.01	9.20
2	*5700.00	99.0 AV			1.35 H	302	89.81	9.20
3	#5725.00	64.7 PK	74.0	-9.3	1.35 H	302	55.48	9.26
4	11400.00	63.3 PK	74.0	-10.7	1.00 H	133	48.98	14.32
5	11400.00	46.2 AV	54.0	-7.8	1.00 H	133	31.92	14.32
6	#17100.00	66.8 PK	95.2	-28.4	1.00 H	77	47.05	19.78
7	#17100.00	50.4 AV	79.0	-28.6	1.00 H	77	30.59	19.78
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.2 PK			1.03 V	264	102.02	9.20
2	*5700.00	96.8 AV			1.03 V	264	87.58	9.20
3	#5725.00	62.3 PK	74.0	-11.7	1.03 V	264	53.05	9.26
4	11400.00	62.0 PK	74.0	-12.0	1.00 V	172	47.70	14.32
5	11400.00	45.1 AV	54.0	-8.9	1.00 V	172	30.81	14.32
6	#17100.00	65.8 PK	91.2	-25.4	1.00 V	206	46.02	19.78
7	#17100.00	49.2 AV	76.8	-27.6	1.00 V	206	29.42	19.78

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (40MHz)

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.4 PK	74.0	-10.6	1.06 H	146	54.80	8.60
2	5460.00	47.9 AV	54.0	-6.1	1.06 H	146	39.33	8.60
3	#5470.00	65.0 PK	68.3	-3.3	1.06 H	146	56.37	8.63
4	*5510.00	109.2 PK			1.06 H	146	100.44	8.76
5	*5510.00	87.6 AV			1.06 H	146	78.88	8.76
6	11020.00	58.8 PK	74.0	-15.2	1.00 H	322	45.03	13.74
7	11020.00	46.5 AV	54.0	-7.5	1.00 H	322	32.76	13.74
8	#16530.00	61.3 PK	89.2	-27.9	1.00 H	322	44.10	17.20
9	#16530.00	49.1 AV	67.6	-18.5	1.00 H	322	31.90	17.20
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.2 PK	74.0	-12.8	1.02 V	211	52.60	8.60
2	5460.00	46.5 AV	54.0	-7.5	1.02 V	211	37.90	8.60
3	#5470.00	64.3 PK	68.3	-4.0	1.02 V	211	55.67	8.63
4	*5510.00	107.5 PK			1.02 V	211	98.74	8.76
5	*5510.00	86.5 AV			1.02 V	211	77.74	8.76
6	11020.00	58.1 PK	74.0	-15.9	1.00 V	194	44.36	13.74
7	11020.00	45.8 AV	54.0	-8.2	1.00 V	194	32.06	13.74
8	#16530.00	60.2 PK	87.5	-27.3	1.00 V	214	43.00	17.20
9	#16530.00	48.1 AV	66.5	-18.4	1.00 V	214	30.90	17.20

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5500.00	112.3 PK			1.06 H	208	103.57	8.73
2	#5500.00	90.0 AV			1.06 H	208	81.28	8.73
3	11100.00	64.2 PK	74.0	-9.8	1.00 H	300	50.37	13.86
4	11100.00	46.3 AV	54.0	-7.7	1.00 H	300	32.45	13.86
5	#16650.00	65.2 PK	92.3	-27.1	1.00 H	112	47.36	17.84
6	#16650.00	50.5 AV	70.0	-19.5	1.00 H	112	32.66	17.84
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	108.4 PK			1.01 V	224	99.55	8.85
2	*5550.00	86.2 AV			1.01 V	224	77.35	8.85
3	11100.00	62.0 PK	74.0	-12.0	1.02 V	142	48.17	13.86
4	11100.00	46.3 AV	54.0	-7.7	1.02 V	142	32.44	13.86
5	#16620.00	63.2 PK	88.4	-25.2	1.00 V	134	45.52	17.68
6	#16620.00	50.4 AV	66.2	-15.8	1.00 V	134	32.73	17.68

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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Test Report No.: RF150813N009-3

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	112.4 PK			1.04 H	294	103.26	9.14
2	*5670.00	89.1 AV			1.04 H	294	79.96	9.14
3	11340.00	62.1 PK	74.0	-11.9	1.02 H	132	47.87	14.23
4	11340.00	44.2 AV	54.0	-9.8	1.02 H	132	29.97	14.23
5	#17010.00	64.2 PK	92.4	-28.2	1.00 H	338	44.49	19.71
6	#17010.00	48.8 AV	69.1	-20.3	1.00 H	338	29.09	19.71
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	108.6 PK			1.02 V	69	99.46	9.14
2	*5670.00	86.6 AV			1.02 V	69	77.46	9.14
3	11340.00	62.1 PK	74.0	-11.9	1.00 V	122	47.87	14.23
4	11340.00	43.9 AV	54.0	-10.1	1.00 V	122	29.67	14.23
5	#17010.00	63.8 PK	88.6	-24.8	1.00 V	144	44.04	19.71
6	#17010.00	48.7 AV	66.6	-17.9	1.00 V	144	28.96	19.71

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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Test Report No.: RF150813N009-3

Band 4 (5725-5850MHz):

ABOVE 1GHz DATA

802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	63.4 PK	78.3	-14.9	1.03 H	299	54.16	9.24
2	#5725.00	74.6 PK	78.3	-3.7	1.03 H	299	65.34	9.26
3	*5745.00	109.2 PK			1.03 H	299	99.89	9.31
4	*5745.00	92.3 AV			1.03 H	299	82.99	9.31
5	11490.00	60.1 PK	74.0	-13.9	1.00 H	54	45.64	14.46
6	11490.00	45.1 AV	54.0	-8.9	1.00 H	54	30.64	14.46
7	#17235.00	64.0 PK	89.2	-25.2	1.02 H	139	44.13	19.90
8	#17235.00	49.7 AV	72.3	-22.6	1.02 H	139	29.76	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	62.8 PK	78.3	-15.5	1.01 V	241	53.56	9.24
2	#5725.00	72.6 PK	78.3	-5.7	1.01 V	241	63.34	9.26
3	*5745.00	108.4 PK			1.01 V	241	99.09	9.31
4	*5745.00	91.9 AV			1.01 V	241	82.63	9.31
5	11490.00	60.6 PK	74.0	-13.4	1.01 V	344	46.18	14.46
6	11490.00	45.1 AV	54.0	-8.9	1.01 V	344	30.66	14.46
7	#17235.00	63.7 PK	88.4	-24.7	1.00 V	172	43.80	19.90
8	#17235.00	49.2 AV	71.9	-22.7	1.00 V	172	29.30	19.90

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	114.5 PK			1.04 H	318	105.10	9.40
2	*5785.00	98.9 AV			1.04 H	318	89.53	9.40
3	11570.00	62.1 PK	74.0	-11.9	1.00 H	128	47.47	14.63
4	11570.00	46.2 AV	54.0	-7.8	1.00 H	128	31.57	14.63
5	#17355.00	64.3 PK	94.5	-30.2	1.00 H	214	44.25	20.01
6	#17355.00	50.6 AV	78.9	-28.3	1.00 H	214	30.60	20.01
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	111.7 PK			1.29 V	224	102.34	9.40
2	*5785.00	94.6 AV			1.29 V	224	85.20	9.40
3	11570.00	61.3 PK	74.0	-12.7	1.01 V	212	46.67	14.63
4	11570.00	46.3 AV	54.0	-7.7	1.01 V	212	31.68	14.63
5	#17355.00	64.1 PK	91.7	-27.6	1.00 V	177	44.09	20.01
6	#17355.00	50.3 AV	74.6	-24.3	1.00 V	177	30.29	20.01

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	115.2 PK			1.08 H	319	105.75	9.45
2	*5825.00	100.0 AV			1.08 H	319	90.54	9.45
3	#5850.00	64.5 PK	78.3	-13.5	1.08 H	319	54.94	9.56
4	#5860.00	64.7 PK	78.3	-13.6	1.08 H	319	55.12	9.58
5	11610.00	62.1 PK	74.0	-11.9	1.00 H	229	47.39	14.71
6	11610.00	45.2 AV	54.0	-8.8	1.00 H	229	30.49	14.71
7	#17415.00	64.2 PK	95.2	-31.0	1.00 H	146	44.14	20.06
8	#17415.00	50.5 AV	80.0	-29.5	1.00 H	146	30.42	20.06
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	110.3 PK			1.08 V	256	100.81	9.45
2	*5825.00	94.2 AV			1.08 V	256	84.75	9.45
3	#5850.00	63.2 PK	78.3	-15.1	1.08 V	256	53.64	9.56
4	#5860.00	62.8 PK	78.3	-15.5	1.08 V	256	53.22	9.58
5	11610.00	62.4 PK	74.0	-11.6	1.01 V	173	47.69	14.71
6	11610.00	45.2 AV	54.0	-8.8	1.01 V	173	30.51	14.71
7	#17415.00	63.9 PK	90.3	-26.4	1.00 V	294	43.82	20.06
8	#17415.00	50.0 AV	74.2	-24.2	1.00 V	294	29.93	20.06

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



802.11n (20MHz)

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	64.2 PK	78.3	-14.1	1.16 H	322	54.96	9.24
2	#5725.00	75.0 PK	78.3	-3.3	1.16 H	322	65.75	9.26
3	*5745.00	115.4 PK			1.16 H	322	106.10	9.31
4	*5745.00	98.2 AV			1.16 H	322	88.89	9.31
5	11490.00	63.1 PK	74.0	-10.9	1.00 H	217	48.64	14.46
6	11490.00	46.0 AV	54.0	-8.0	1.00 H	217	31.56	14.46
7	#17235.00	64.3 PK	95.4	-31.1	1.01 H	199	44.40	19.90
8	#17235.00	49.9 AV	78.2	-28.3	1.01 H	199	30.00	19.90
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	62.9 PK	78.3	-15.4	1.07 V	196	53.66	9.24
2	#5725.00	73.2 PK	78.3	-5.1	1.07 V	196	63.94	9.26
3	*5745.00	110.0 PK			1.07 V	196	100.70	9.31
4	*5745.00	95.1 AV			1.07 V	196	85.83	9.31
5	11490.00	63.8 PK	74.0	-10.2	1.02 V	211	49.38	14.46
6	11490.00	45.5 AV	54.0	-8.5	1.02 V	211	31.06	14.46
7	#17235.00	64.1 PK	90.0	-25.9	1.00 V	42	44.20	19.90
8	#17235.00	49.7 AV	75.1	-25.4	1.00 V	42	29.77	19.90

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	115.0 PK			1.24 H	266	105.64	9.40
2	*5785.00	100.0 AV			1.24 H	266	90.61	9.40
3	11570.00	63.1 PK	74.0	-10.9	1.00 H	211	48.47	14.63
4	11570.00	46.2 AV	54.0	-7.8	1.00 H	211	31.57	14.63
5	#17355.00	65.0 PK	95.0	-30.0	1.00 H	97	44.97	20.01
6	#17355.00	50.4 AV	80.0	-29.6	1.00 H	97	30.41	20.01
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5785.00	111.3 PK			1.06 V	52	101.90	9.40
2	*5785.00	93.6 AV			1.06 V	52	84.22	9.40
3	11570.00	62.2 PK	74.0	-11.8	1.03 V	154	47.57	14.63
4	11570.00	45.1 AV	54.0	-8.9	1.03 V	154	30.47	14.63
5	#17355.00	64.3 PK	91.3	-27.0	1.00 V	314	44.29	20.01
6	#17355.00	50.1 AV	73.6	-23.5	1.00 V	314	30.11	20.01

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5825.00	115.0 PK			1.32 H	297	105.59	9.45
2	*5825.00	98.5 AV			1.32 H	297	89.05	9.45
3	#5850.00	63.2 PK	78.3	-14.8	1.32 H	297	53.64	9.56
4	#5860.00	63.0 PK	78.3	-15.3	1.32 H	297	53.44	9.58
5	11610.00	63.1 PK	74.0	-10.9	1.02 H	116	48.39	14.71
6	11610.00	45.7 AV	54.0	-8.3	1.02 H	116	30.99	14.71
7	#17415.00	64.3 PK	95.0	-30.7	1.00 H	322	44.24	20.06
8	#17415.00	50.4 AV	78.5	-27.6	1.00 H	322	30.30	20.06
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5805.00	111.6 PK			1.04 V	284	102.15	9.45
2	*5805.00	95.4 AV			1.04 V	284	85.97	9.45
3	#5850.00	62.9 PK	78.3	-15.4	1.04 V	284	53.34	9.56
4	#5860.00	62.8 PK	78.3	-15.5	1.04 V	284	53.22	9.58
5	11610.00	62.5 PK	74.0	-11.6	1.01 V	144	47.74	14.71
6	11610.00	45.2 AV	54.0	-8.8	1.01 V	144	30.48	14.71
7	#17415.00	64.1 PK	91.6	-27.5	1.00 V	330	44.01	20.06
8	#17415.00	50.0 AV	75.4	-25.4	1.00 V	330	29.95	20.06

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.



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Test Report No.: RF150813N009-3

802.11n (40MHz)

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	64.8 PK	78.3	-13.5	1.02 H	299	55.56	9.24
2	#5725.00	73.4 PK	78.3	-4.9	1.02 H	299	64.14	9.26
3	*5755.00	106.2 PK			1.02 H	299	96.87	9.33
4	*5755.00	86.7 AV			1.02 H	299	77.37	9.33
5	11510.00	62.7 PK	74.0	-11.3	1.01 H	231	48.20	14.50
6	11510.00	46.0 AV	54.0	-8.0	1.01 H	231	31.53	14.50
7	#17265.00	64.7 PK	86.2	-21.5	1.02 H	342	44.77	19.93
8	#17265.00	50.0 AV	66.7	-16.7	1.02 H	342	30.08	19.93
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5715.00	63.5 PK	78.3	-14.8	1.15 V	63	54.26	9.24
2	#5725.00	71.7 PK	78.3	-7.1	1.15 V	63	62.43	9.26
3	*5755.00	104.3 PK			1.15 V	63	94.97	9.33
4	*5755.00	84.1 AV			1.15 V	63	74.77	9.33
5	11510.00	62.7 PK	74.0	-11.3	1.00 V	227	48.20	14.50
6	11510.00	45.7 AV	54.0	-8.3	1.00 V	227	31.19	14.50
7	#17265.00	64.0 PK	84.3	-20.3	1.01 V	357	44.05	19.93
8	#17265.00	49.8 AV	64.1	-14.3	1.01 V	357	29.91	19.93

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	112.3 PK			1.09 H	293	102.87	9.43
2	*5795.00	90.1 AV			1.09 H	293	80.67	9.43
3	#5850.00	64.3 PK	78.3	-14.0	1.09 H	293	54.74	9.56
4	#5860.00	63.9 PK	78.3	-14.1	1.09 H	293	54.32	9.58
5	11590.00	62.8 PK	74.0	-11.2	1.01 H	206	48.14	14.66
6	11590.00	46.1 AV	54.0	-7.9	1.01 H	206	31.44	14.66
7	#17385.00	64.3 PK	92.3	28.0	1.00 H	166	44.29	20.03
8	#17385.00	50.1 AV	70.1	-20.0	1.00 H	166	30.03	20.03
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	108.9 PK			1.04 V	50	99.47	9.43
2	*5795.00	87.6 AV			1.04 V	50	78.21	9.43
3	#5850.00	63.8 PK	78.3	-14.5	1.04 V	50	54.24	9.56
4	#5860.00	63.4 PK	78.3	-14.9	1.04 V	50	53.82	9.58
5	11590.00	62.4 PK	74.0	-11.6	1.02 V	217	47.74	14.66
6	11590.00	45.4 AV	54.0	-8.6	1.02 V	217	30.76	14.66
7	#17385.00	63.9 PK	88.9	-25.0	1.00 V	247	43.84	20.03
8	#17385.00	50.0 AV	67.6	-17.6	1.00 V	247	29.92	20.03

REMARKS:

1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

3.2 CONDUCTED EMISSION MEASUREMENT

3.2.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	100962	Mar. 05,15	Mar. 04,16
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	April 25,15	Apr. 24,16
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	April 25,15	Apr. 24,16
Test software	ADT	ADT_Conc_ V7.3.7	N/A	N/A	N/A

- NOTE:**
1. The test was performed in shielded room 553.
 2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.2.3 TEST PROCEDURES

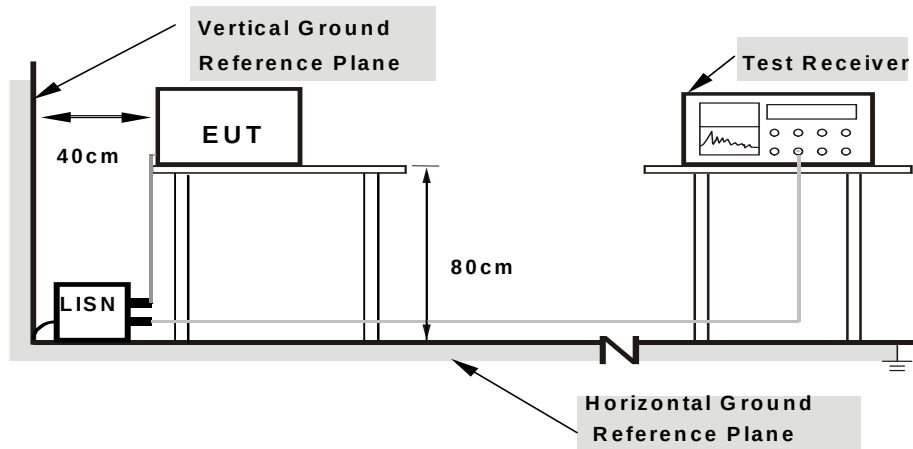
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.2.4 DEVIATION FROM TEST STANDARD

No deviation.

3.2.5 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

Same as 3.1.6

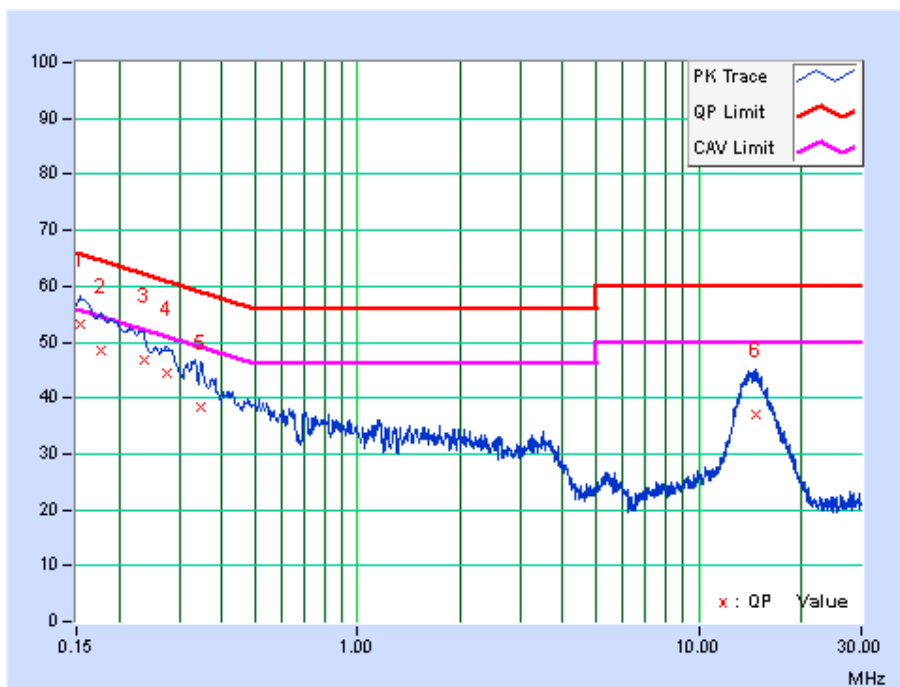
3.2.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: 802.11a

PHASE	Line	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15468	9.78	43.45	28.01	53.23	37.79	65.74	55.74	-12.52	-17.96
2	0.17698	9.76	38.79	22.57	48.55	32.33	64.63	54.63	-16.07	-22.29
3	0.23600	9.75	37.00	21.82	46.75	31.57	62.24	52.24	-15.48	-20.66
4	0.27433	9.77	34.83	21.32	44.60	31.09	60.99	50.99	-16.38	-19.89
5	0.34800	9.82	28.47	13.94	38.29	23.76	59.01	49.01	-20.72	-25.25
6	14.75025	10.16	27.01	18.65	37.17	28.81	60.00	50.00	-22.83	-21.19

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. The emission levels of other frequencies were very low against the limit.
 3. Margin value = Emission level - Limit value
 4. Correction factor = Insertion loss + Cable loss
 5. Emission Level = Correction Factor + Reading Value.





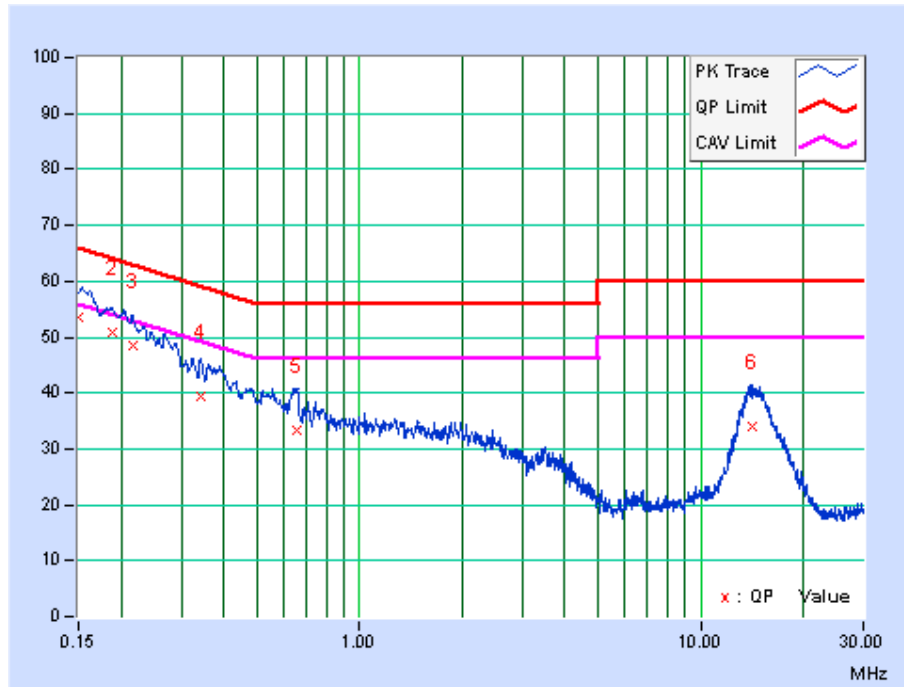
**BUREAU
VERITAS**

Test Report No.: RF150813N009-3

PHASE	Neutral	6dB BANDWIDTH	9kHz
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.50	44.16	27.75	53.66	37.25	66.00	56.00	-12.34	-18.75
2	0.18825	9.51	41.23	25.32	50.74	34.83	64.11	54.11	-13.38	-19.29
3	0.21573	9.51	38.92	23.29	48.43	32.80	62.98	52.98	-14.55	-20.18
4	0.34064	9.55	30.00	14.77	39.55	24.32	59.19	49.19	-19.64	-24.87
5	0.65850	9.51	23.83	9.38	33.34	18.89	56.00	46.00	-22.66	-27.11
6	14.1270	9.92	24.23	15.99	34.15	25.91	60.00	50.00	-25.85	-24.09

- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.





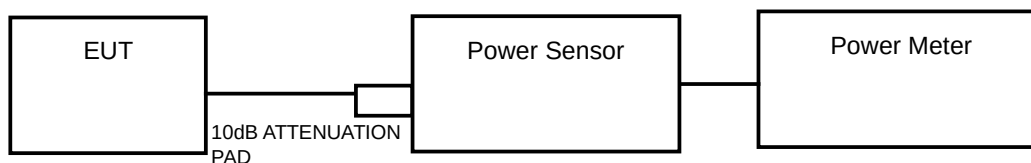
3.3 TRANSMIT POWER MEASUREMENT

3.3.1 LIMITS OF TRANSMIT POWER MEASUREMENT

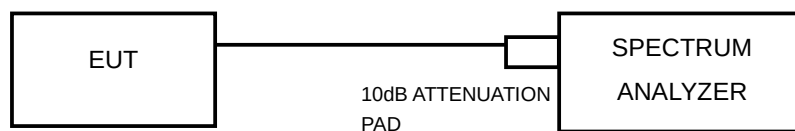
Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-2C	√		250mW(24dBm) or 11 dBm+10LogB*
U-NII-3	√		1 Watt (30 dBm)

NOTE: 1. Where B is the 26dB emission bandwidth in MHz.

3.3.2 TEST SETUP



FOR 6/26dB BANDWIDTH



3.3.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	Feb. 18,15	Feb. 17,16
Power Sensor	Keysight	U2021XA	MY55060018	Feb. 18,15	Feb. 17,16
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 27,14	Oct. 26,15
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Oct. 27,14	Oct. 26,15
Oscilloscope	Agilent	DSO9254A	MY51260160	Oct. 17, 14	Oct. 16, 15
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 05,14	Nov. 04,15
Signal Generator	Agilent	N5183A	MY50140980	Nov. 05,14	Nov. 04,15
ESG Vector Signal Generator	Agilent	E4438C	MY49072505	Apr. 22, 15	Apr. 21, 16

NOTE:

1. The test was performed in RF Oven room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

3.3.4 TEST PROCEDURE

FOR AVERAGE POWER MEASUREMENT

Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

FOR 26dB BANDWIDTH

- 1) Set RBW = approximately 1% of the emission bandwidth.
- 2) Set the VBW > RBW.
- 3) Detector = RMS.
- 4) Trace mode = max hold.
- 5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

FOR 6dB BANDWIDTH

- 1) Set RBW = 100 kHz.
- 2) Set the video bandwidth (VBW) ≥ 3 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.



Test Report No.: RF150813N009-3

3.3.5 DEVIATION FROM TEST STANDARD

No deviation.

3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

3.3.7 TEST RESULTS

OUTPUT POWER:

802.11a

Channel Number	Frequency (MHz)	AVG power output (dBm)		AVG power output (mW)		Total AVG power output		AVG power limit (dBm)	PASS / FAIL
		Chain0	Chain1	Chain0	Chain1	mW	dBm		
36	5180	12.58	12.41	115.345	109.901	225.246	23.53	23.99	PASS
40	5200	12.52	12.25	105.925	109.144	215.069	23.33	23.99	PASS
48	5240	12.43	12.37	106.660	106.660	213.320	23.29	23.99	PASS
52	5260	12.75	12.71	121.619	116.681	238.300	23.77	23.99	PASS
60	5300	12.65	12.58	117.761	118.577	236.338	23.74	23.99	PASS
64	5320	12.55	12.35	106.414	117.761	224.175	23.51	23.99	PASS
100	5500	12.79	12.62	119.674	117.761	237.435	23.76	23.99	PASS
116	5580	12.25	12.31	114.288	110.662	224.950	23.52	23.99	PASS
140	5700	10.25	10.86	66.834	74.645	141.479	21.51	23.99	PASS
149	5745	10.88	11.71	73.282	88.105	161.387	22.08	29.99	PASS
157	5785	11.28	11.53	77.446	83.946	161.392	22.08	29.99	PASS
165	5825	11.53	11.46	79.250	83.753	163.003	22.12	29.99	PASS

NOTE:

For 5150-5250MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99 dBm.

For 5250-5350MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99dBm.

For 5470-5725MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99dBm.

For 5725-5850MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 29.99dBm.

802.11n (20MHz)

Channel Number	Frequency (MHz)	AVG power output (dBm)		AVG power output (mW)		Total AVG power output		AVG power limit (dBm)	PASS / FAIL
		Chain0	Chain1	Chain0	Chain1	mW	dBm		
36	5180	19.45	19.72	88.105	93.756	181.861	22.60	23.99	PASS
40	5200	19.41	19.62	87.297	91.622	178.919	22.53	23.99	PASS
48	5240	19.85	19.73	96.605	93.972	190.577	22.80	23.99	PASS
52	5260	19.77	19.74	94.842	94.189	189.031	22.77	23.99	PASS
60	5300	19.48	19.93	88.716	98.401	187.117	22.72	23.99	PASS
64	5320	19.48	19.88	88.716	97.275	185.991	22.69	23.99	PASS
100	5500	19.57	19.18	90.573	82.794	173.367	22.39	23.99	PASS
116	5580	19.04	19.78	80.168	95.060	175.228	22.44	23.99	PASS
132	5660	19.08	19.55	80.910	90.157	171.067	22.33	23.99	PASS
140	5700	17.53	17.94	56.624	62.230	118.854	20.75	29.99	PASS
149	5745	18.79	19.10	75.683	81.283	156.966	21.96	29.99	PASS
157	5785	19.11	19.11	81.470	81.470	162.940	22.12	29.99	PASS
165	5825	19.48	19.28	88.716	84.723	173.439	22.39	23.99	PASS

NOTE:

For 5150-5250MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99 dBm.

For 5250-5350MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99dBm.

For 5470-5725MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99dBm.

For 5725-5850MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 29.99dBm.

802.11n (40MHz)

Channel Number	Frequency (MHz)	AVG power output (dBm)		AVG power output (mW)		Total AVG power output		AVG power limit (dBm)	PASS / FAIL
		Chain0	Chain1	Chain0	Chain1	mW	dBm		
38	5190	19.58	19.49	90.782	88.920	179.702	22.55	23.99	PASS
46	5230	19.53	19.44	89.743	87.902	177.645	22.50	23.99	PASS
54	5270	19.51	19.71	89.331	93.541	182.872	22.62	23.99	PASS
62	5310	19.48	19.95	88.716	98.855	187.571	22.73	23.99	PASS
102	5510	19.38	19.54	86.696	89.950	176.646	22.47	23.99	PASS
110	5550	19.49	19.65	88.920	92.257	181.177	22.58	23.99	PASS
134	5670	18.71	18.97	74.302	78.886	153.188	21.85	23.99	PASS
151	5755	18.61	19.20	72.611	83.176	155.787	21.93	29.99	PASS
159	5795	19.08	19.21	80.910	83.368	164.278	22.16	29.99	PASS

NOTE:

For 5150-5250MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99 dBm.

For 5250-5350MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99dBm.

For 5470-5725MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 23.99dBm.

For 5725-5850MHz

Directional gain = 3dBi + 10log(2) = 6.01dBi > 6dBi , so the power limit shall be reduced to 29.99dBm.

26dB BANDWIDTH:

802.11a

Channel Number	Freq. (MHz)	26dB DOWN BAND WIDTH (MHz)		PASS /FAIL
		Chain0	Chain1	
36	5180	24.63	22.27	PASS
40	5200	25.29	24.79	PASS
48	5240	27.29	23.63	PASS
52	5260	25.79	24.14	PASS
60	5300	23.23	27.39	PASS
64	5320	24.79	28.34	PASS
100	5500	20.37	21.88	PASS
116	5580	22.14	27.02	PASS
132	5660	21.67	25.18	PASS
140	5700	20.79	20.06	PASS
149	5745	16.32	16.11	PASS
157	5785	16.10	16.32	PASS
165	5825	16.32	16.32	PASS

802.11n (20MHz)

Channel Number	Freq. (MHz)	26dB DOWN BAND WIDTH (MHz)		PASS /FAIL
		Chain0	Chain1	
36	5180	24.13	23.98	PASS
40	5200	24.08	22.60	PASS
48	5240	25.59	23.95	PASS
52	5260	24.93	23.56	PASS
60	5300	26.96	24.40	PASS
64	5320	27.41	25.60	PASS
100	5500	22.60	23.36	PASS
116	5580	22.63	21.87	PASS
132	5660	21.38	24.18	PASS
140	5700	21.64	20.57	PASS
149	5745	17.05	16.83	PASS
157	5785	16.97	17.08	PASS
165	5825	17.07	17.07	PASS

**802.11n (40MHz)**

Channel Number	Freq. (MHz)	26dB DOWN BAND WIDTH (MHz)		PASS /FAIL
		Chain0	Chain1	
38	5190	65.09	51.77	PASS
46	5230	52.15	55.23	PASS
54	5270	52.07	61.28	PASS
62	5310	53.96	60.58	PASS
102	5510	48.88	42.41	PASS
110	5550	54.49	42.46	PASS
134	5670	47.14	41.78	PASS
151	5755	35.23	35.41	PASS
159	5795	35.24	35.23	PASS

6dB BANDWIDTH For 5725-5850MHz**802.11a**

Channel Number	Freq. (MHz)	6dB DOWN BAND WIDTH (MHz)		PASS /FAIL
		Chain0	Chain1	
149	5745	16.32	16.11	PASS
157	5785	16.10	16.32	PASS
165	5825	16.32	16.32	PASS

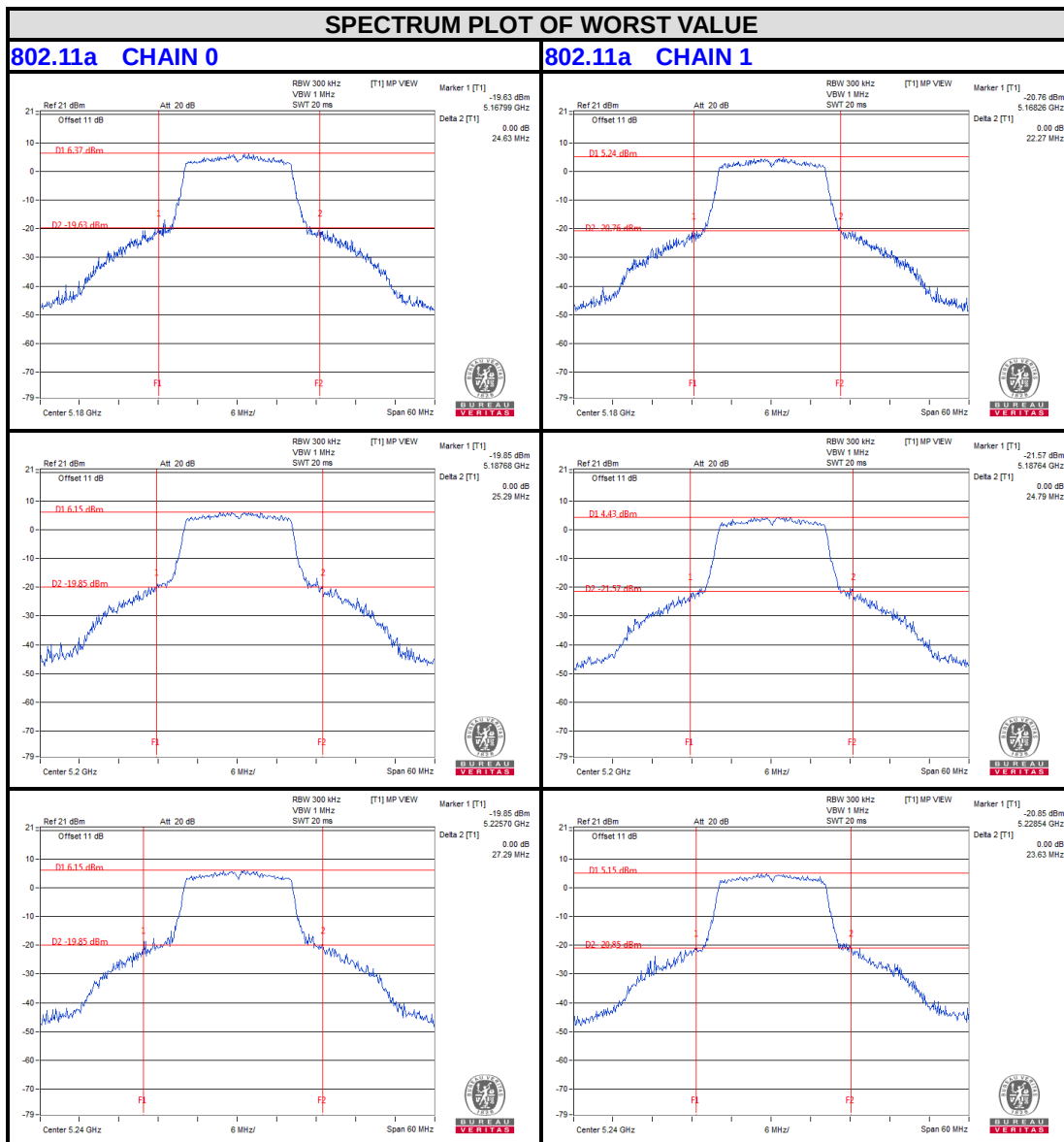
802.11n (20M)

Channel Number	Freq. (MHz)	6dB DOWN BAND WIDTH (MHz)		PASS /FAIL
		Chain0	Chain1	
149	5745	17.05	16.83	PASS
157	5785	16.97	17.08	PASS
165	5825	17.07	17.07	PASS

802.11n (40M)

Channel Number	Freq. (MHz)	6dB DOWN BAND WIDTH (MHz)		PASS /FAIL
		Chain0	Chain1	
151	5755	35.23	35.41	PASS
159	5795	35.24	35.23	PASS

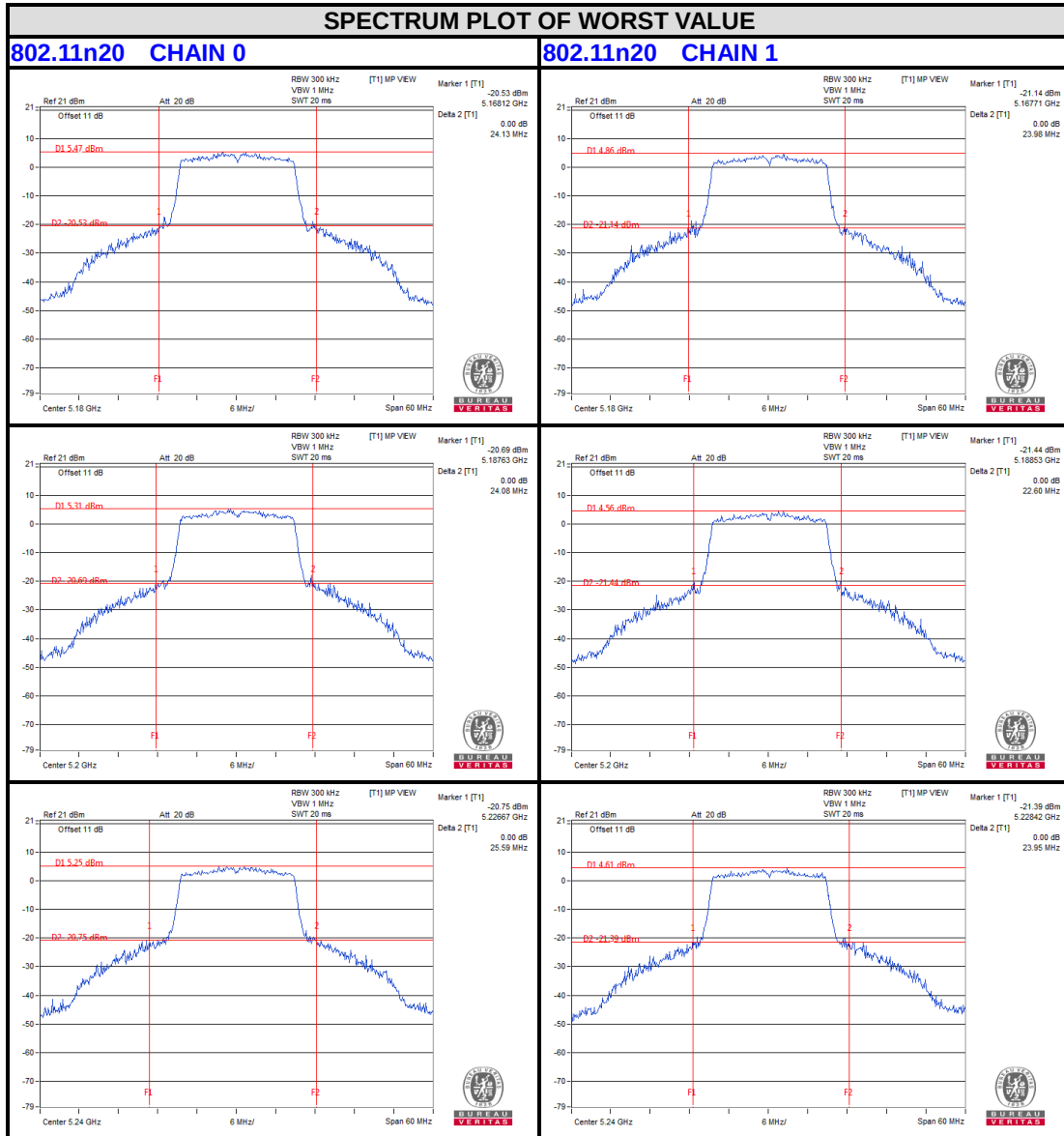
**26dB bandwidth Test Plot
For 5150-5250MHz worst plot**





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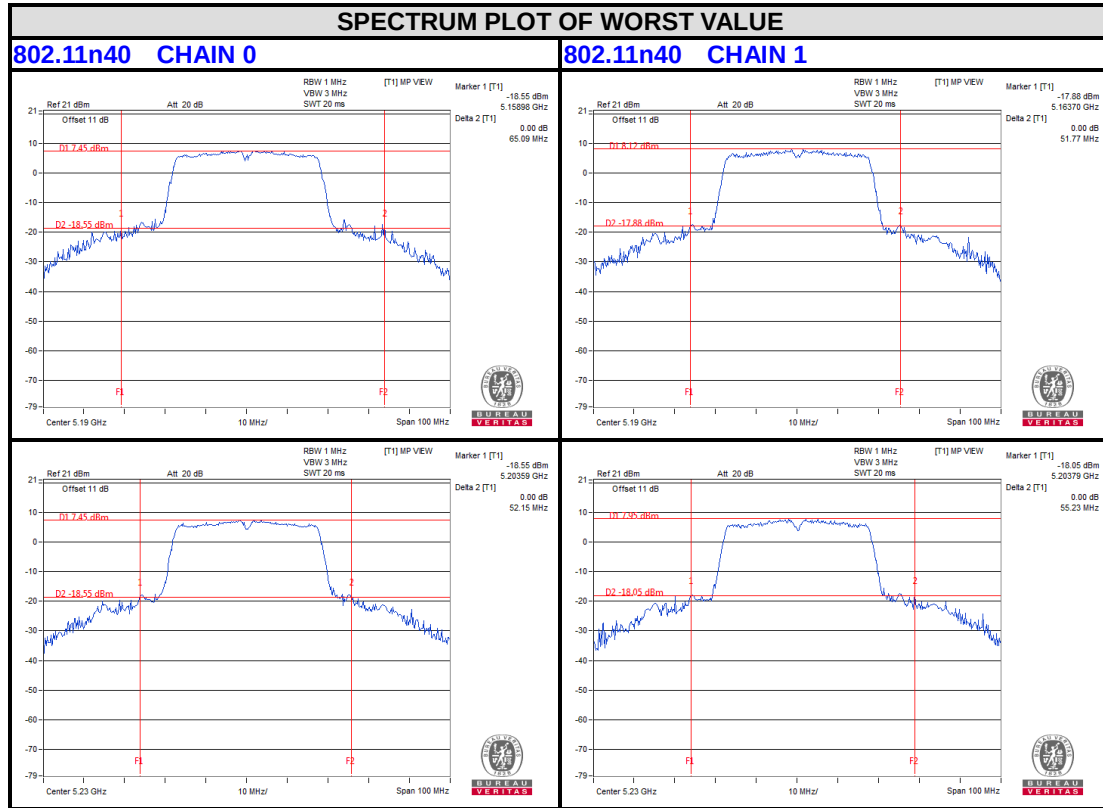
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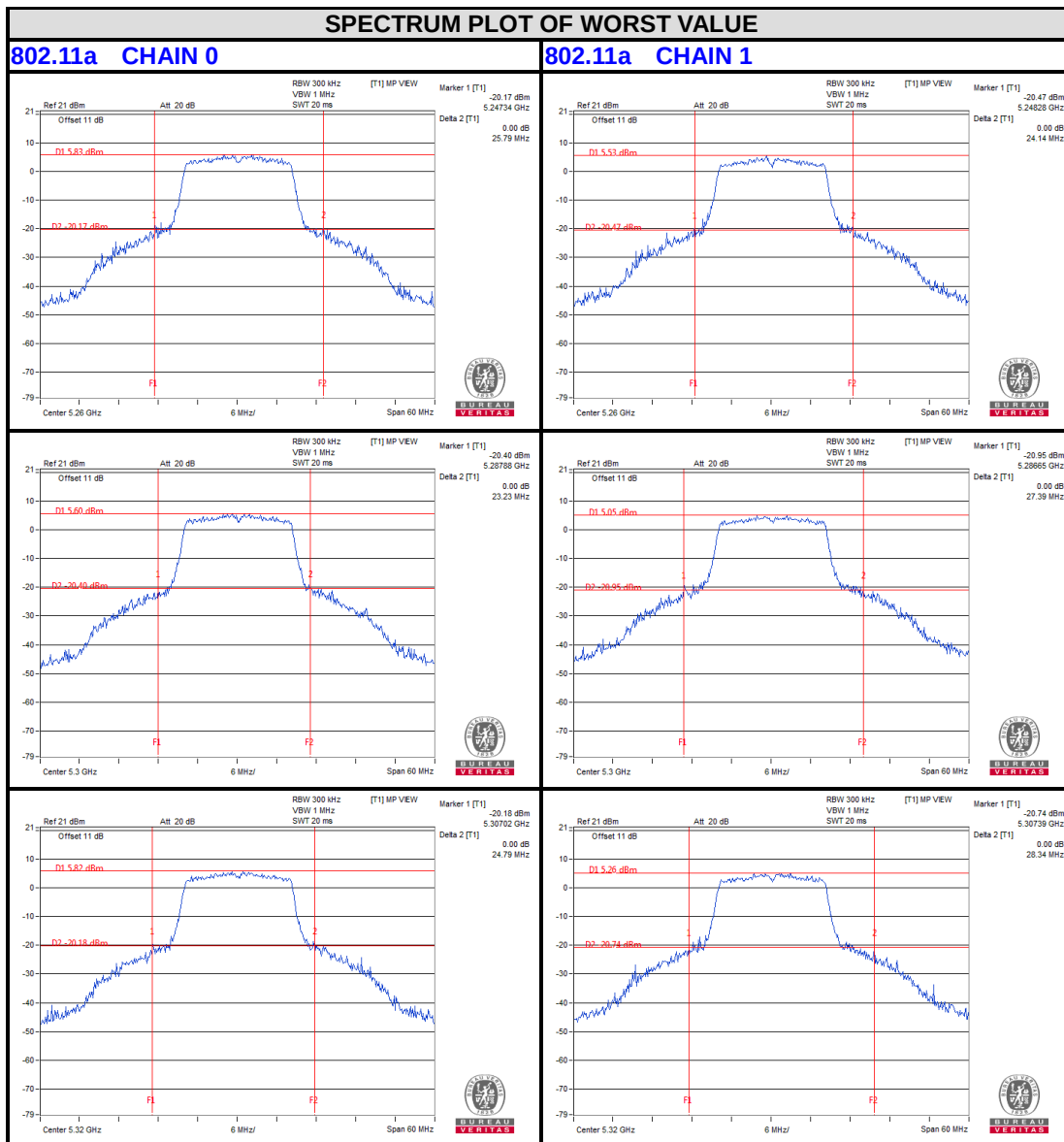


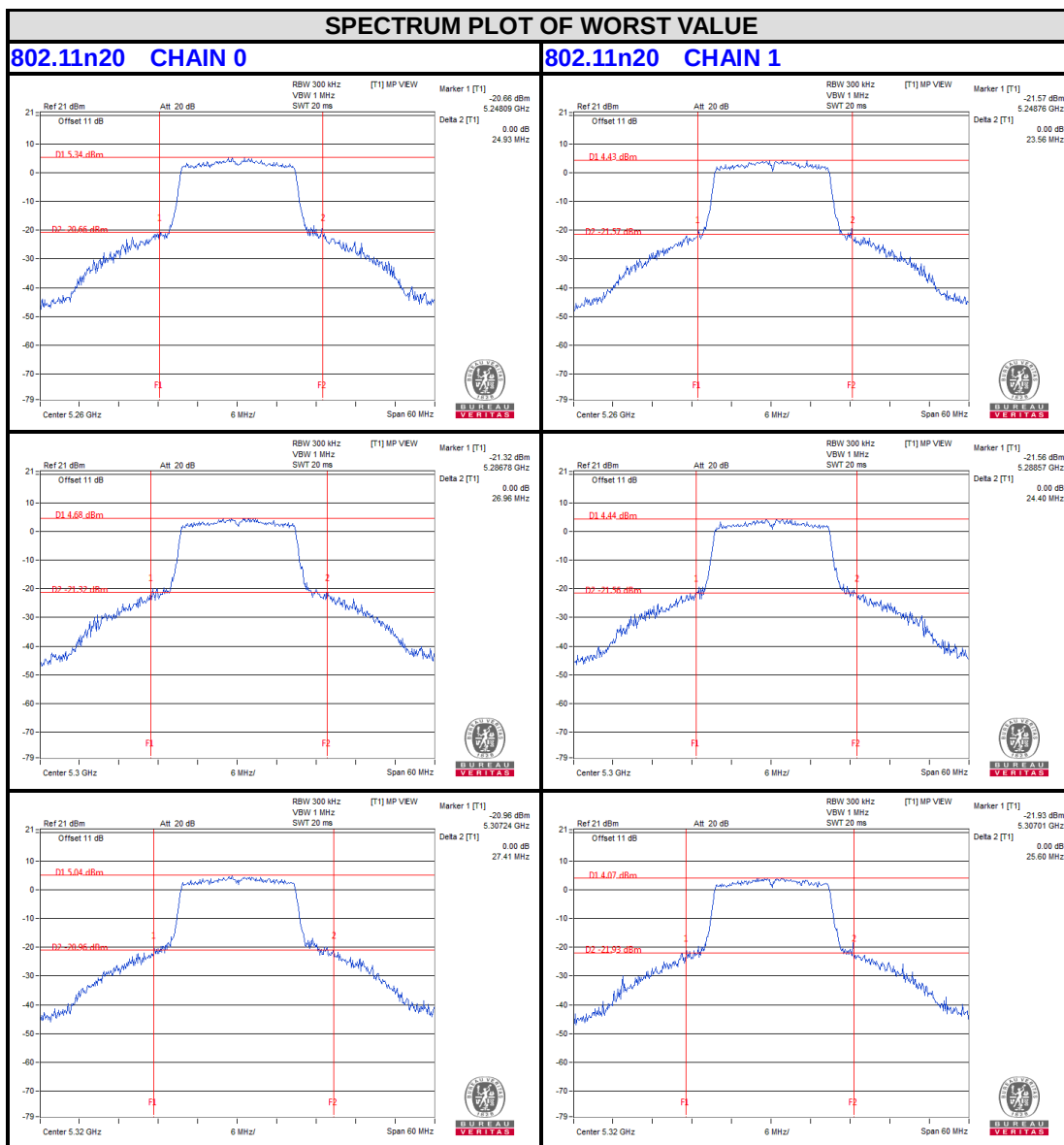
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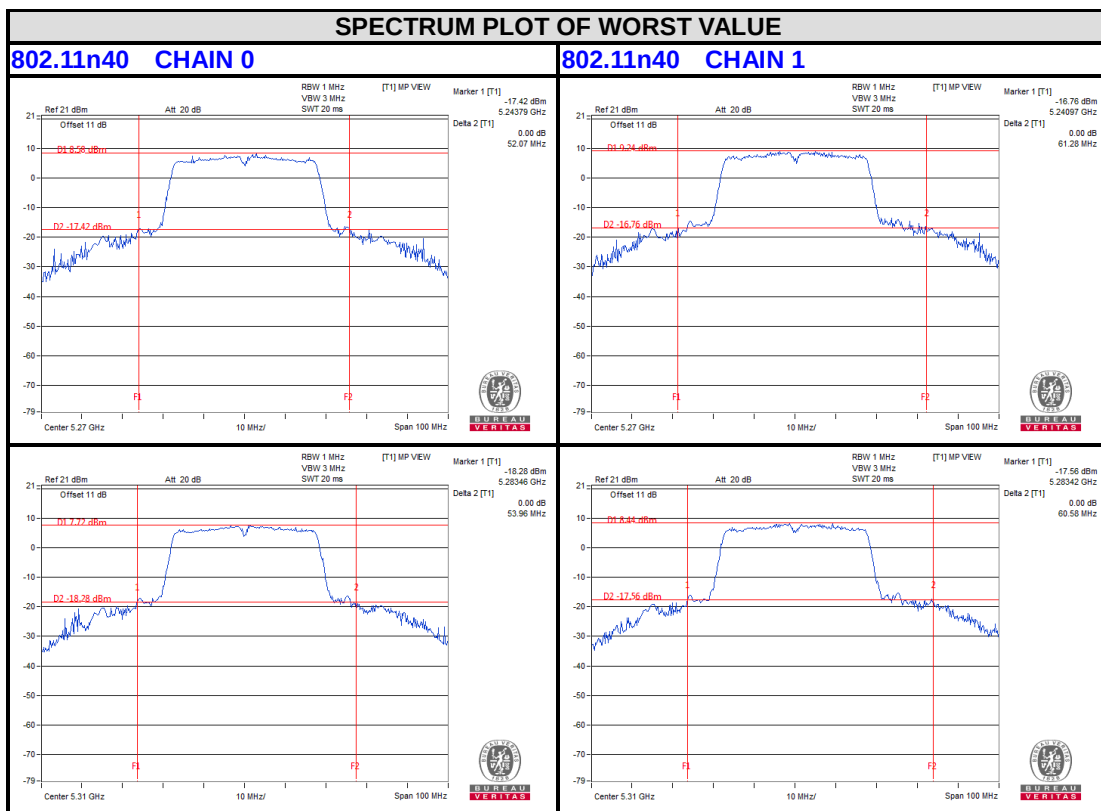
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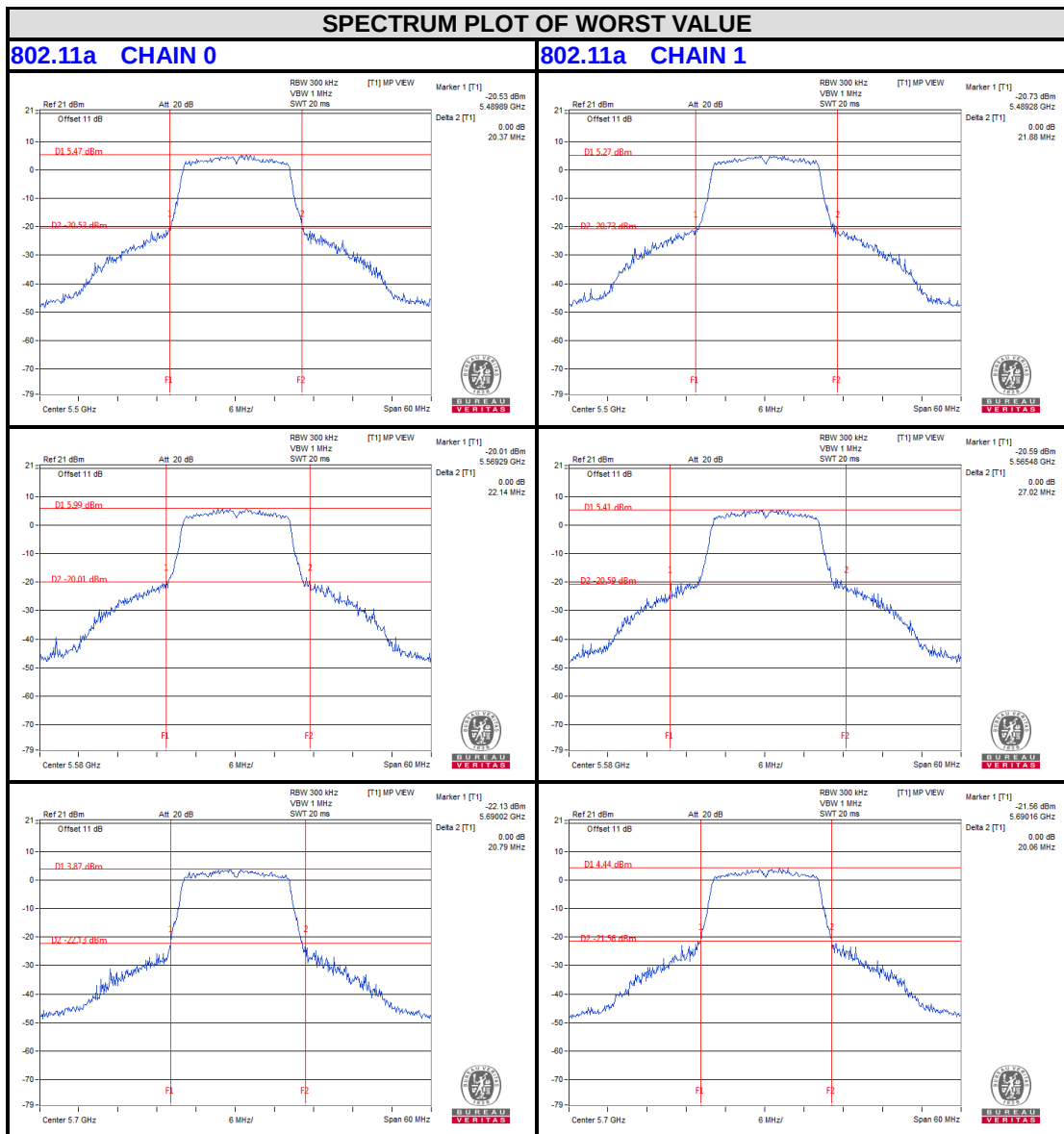
For 5250-5350MHz

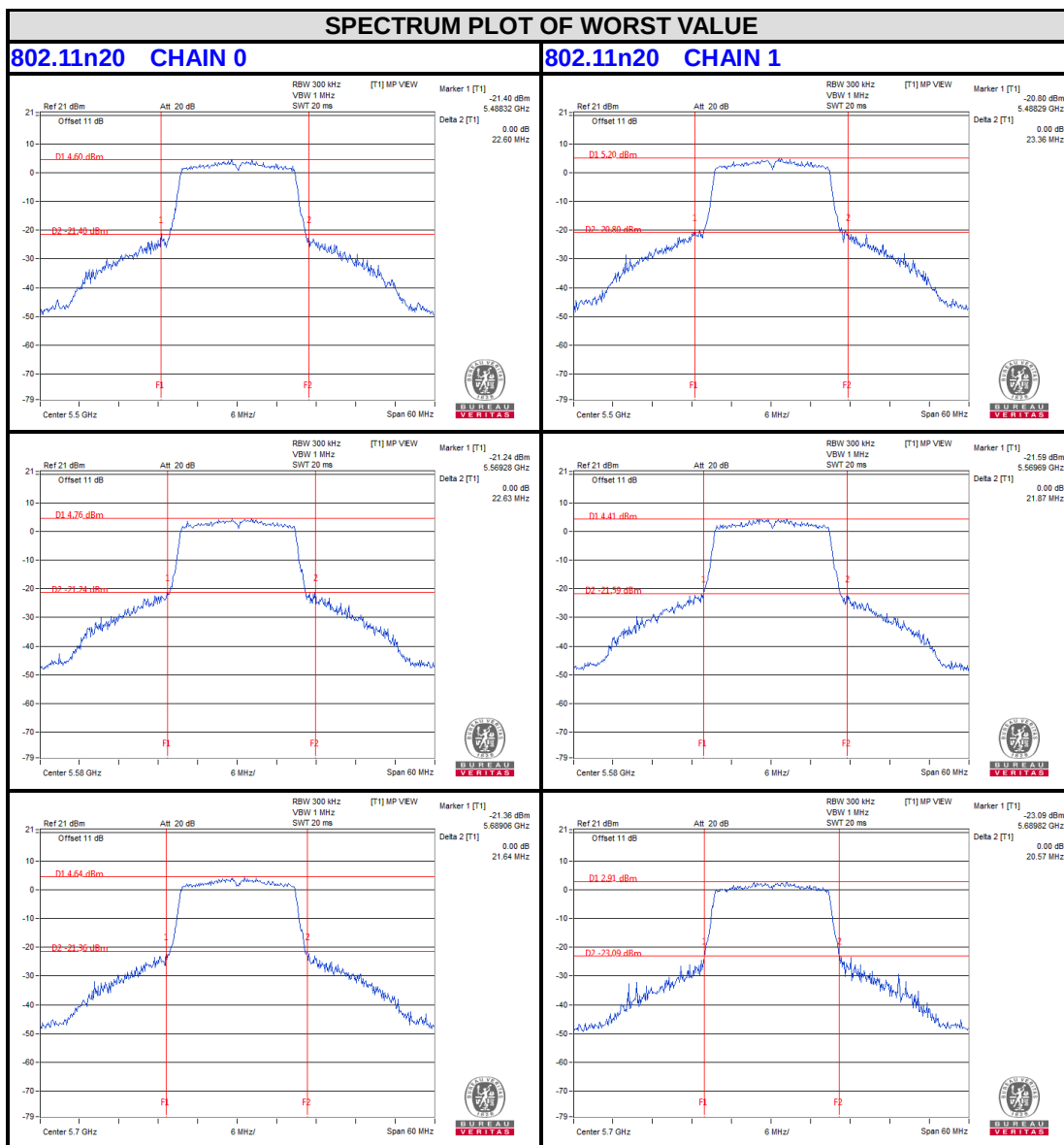


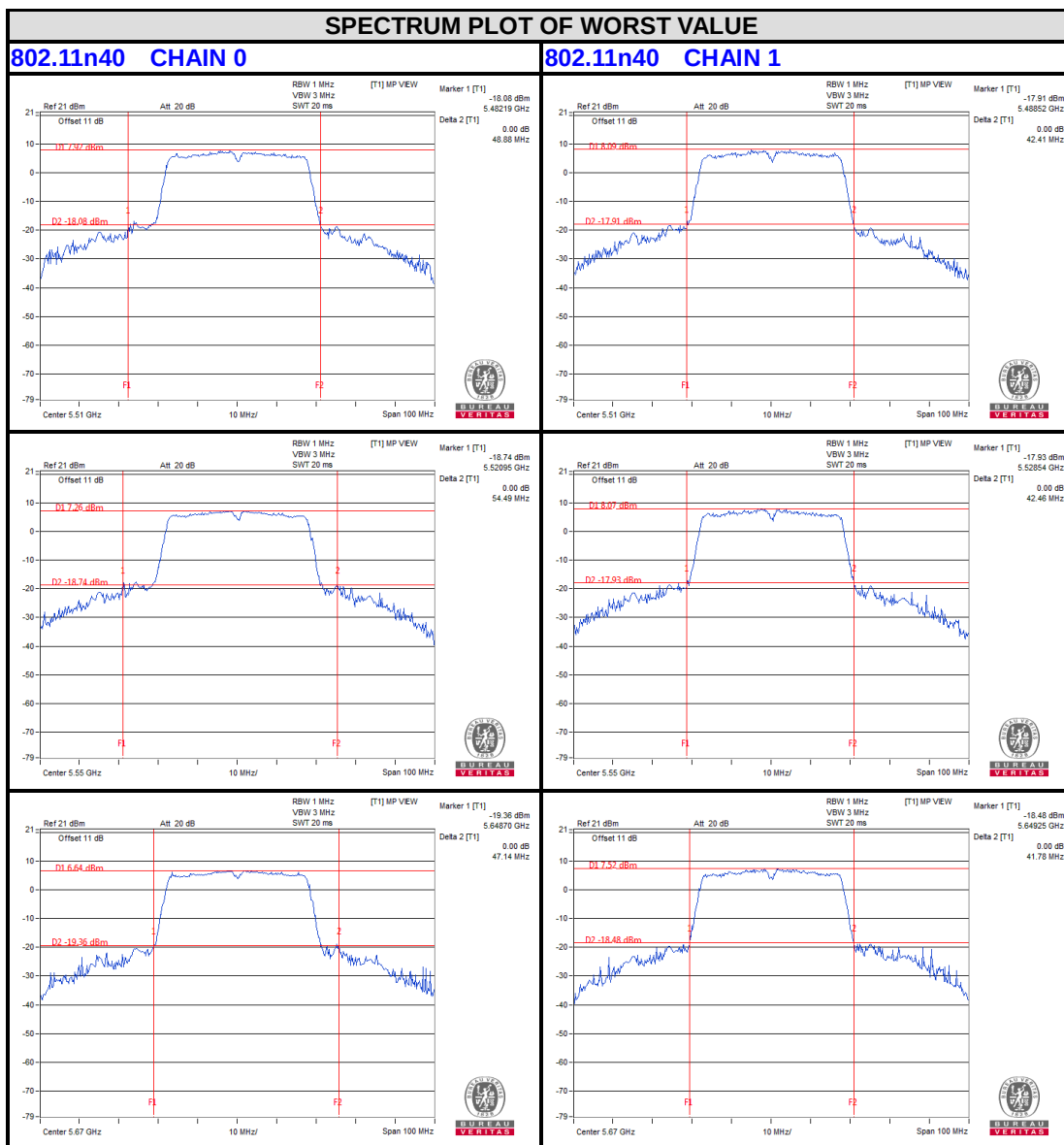




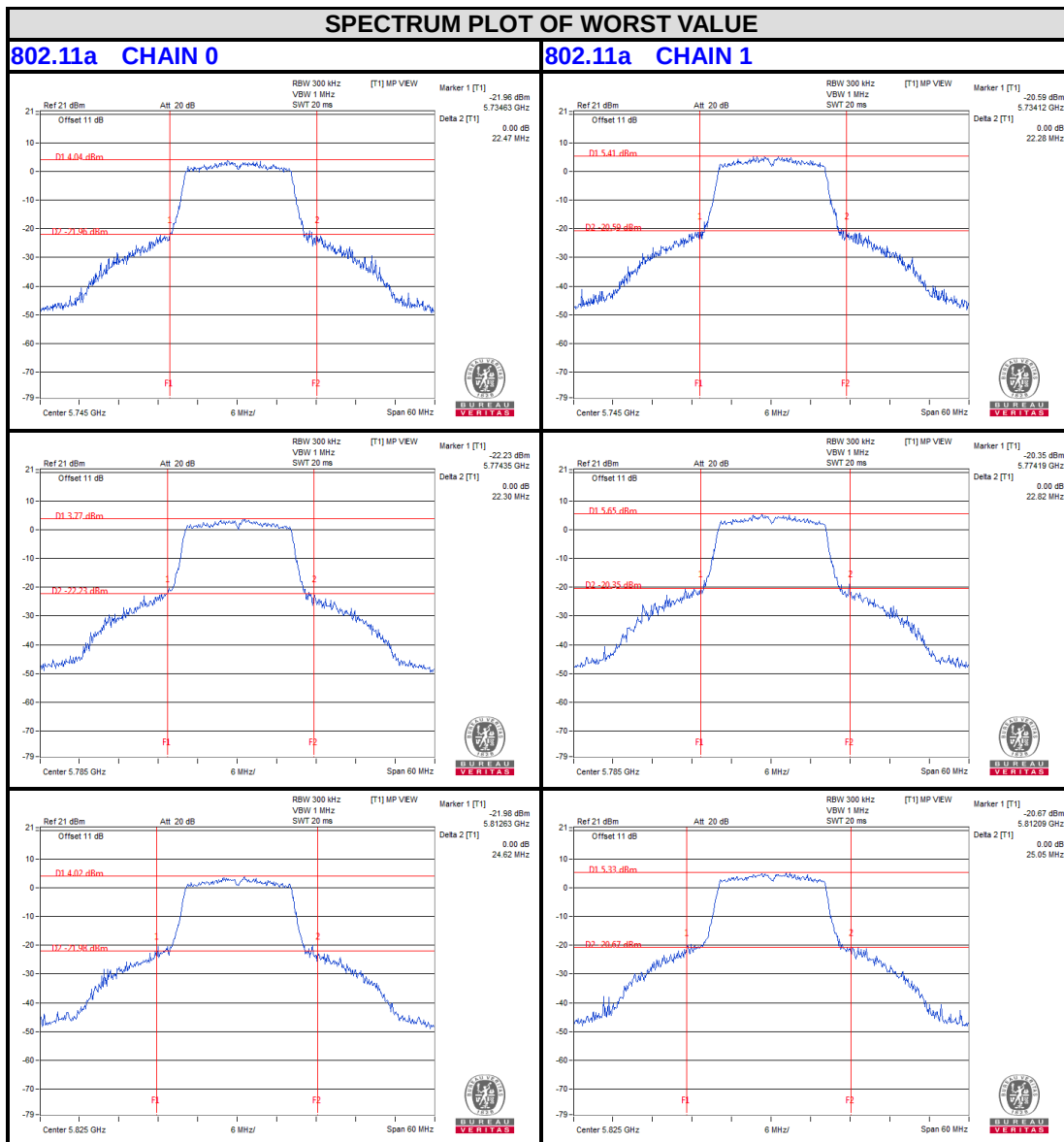
For 5470-5725MHz

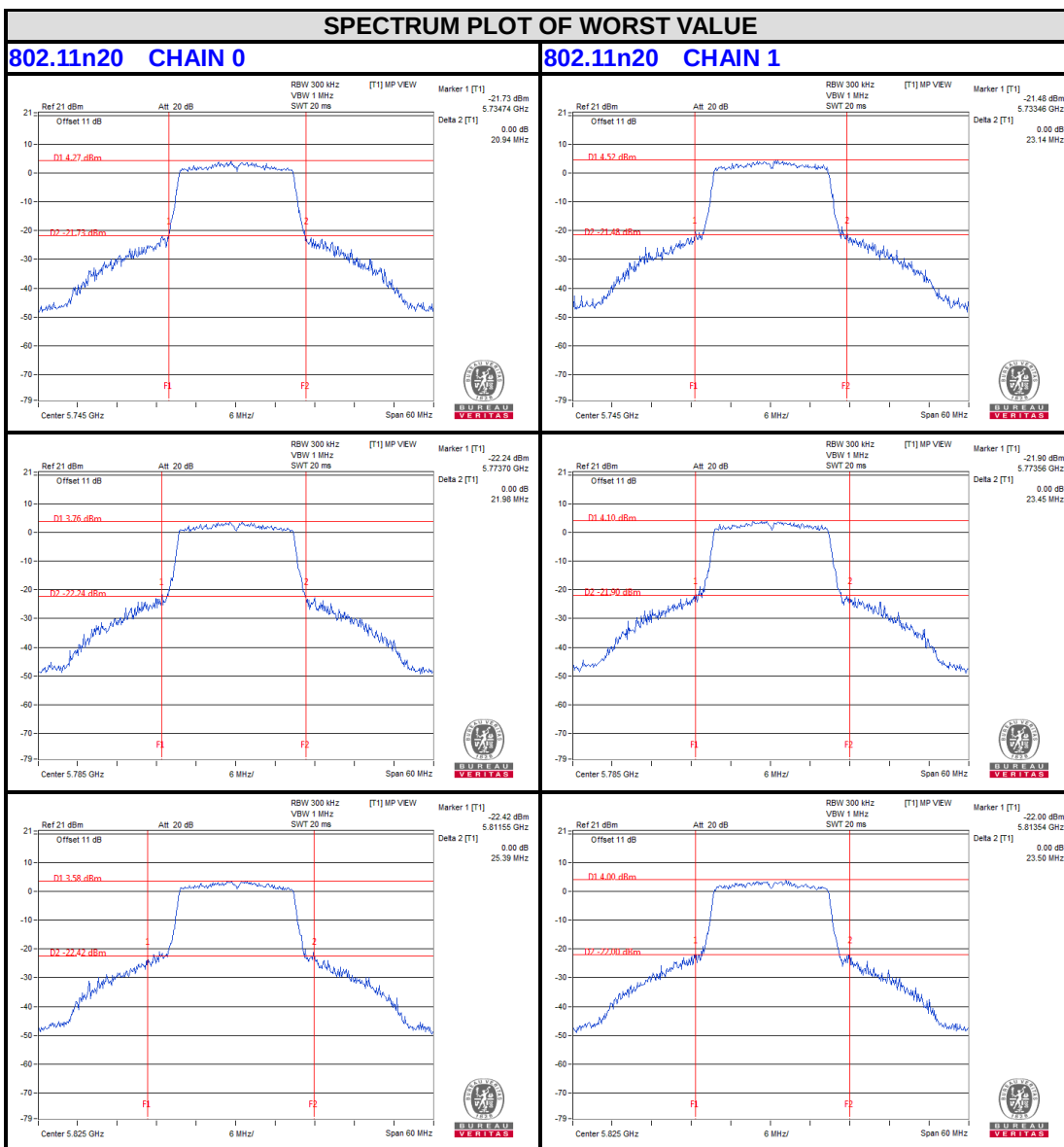






For 5725-5850MHz

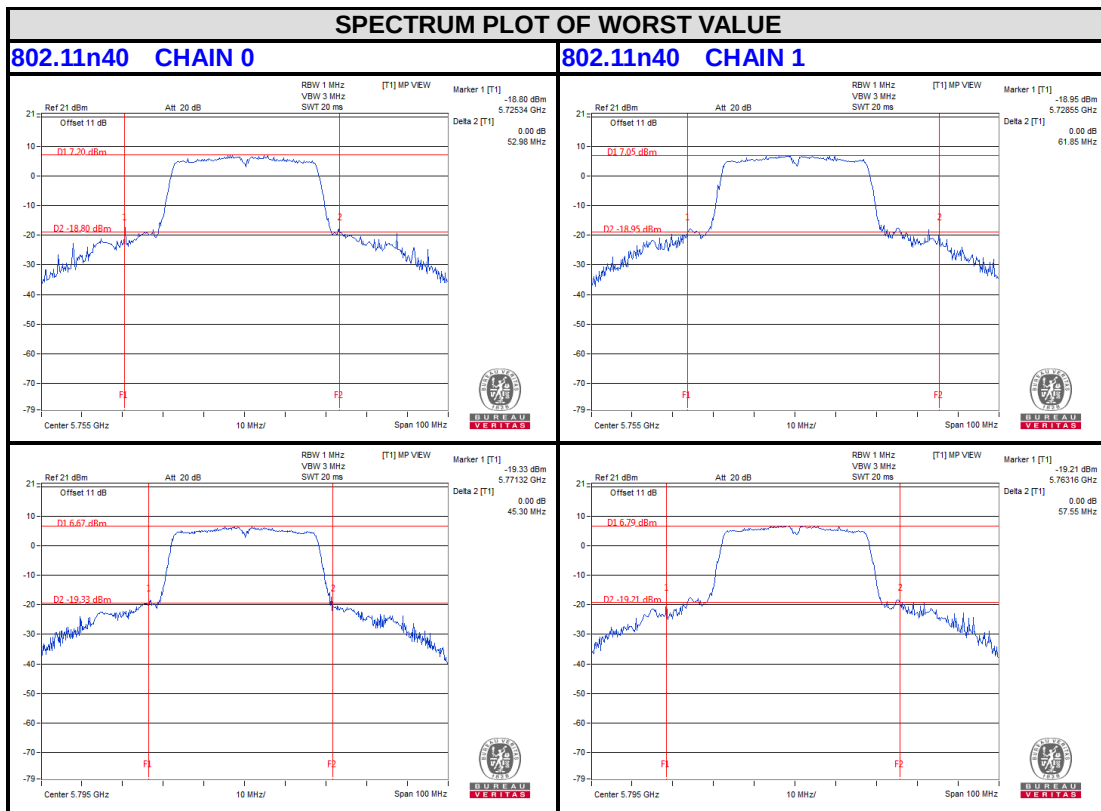






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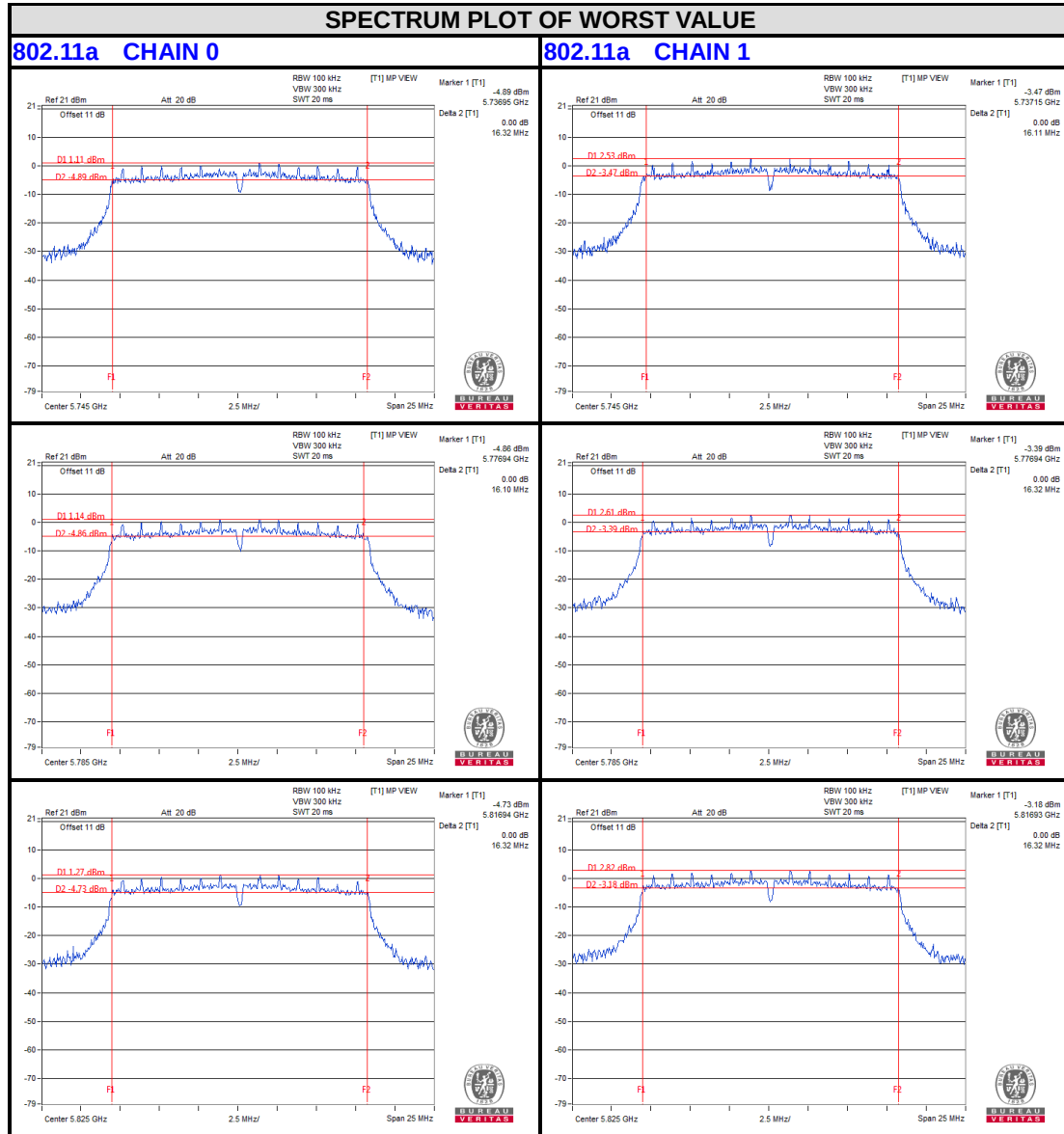




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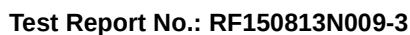
6dB BANDWIDTH For 5725-5850MHz



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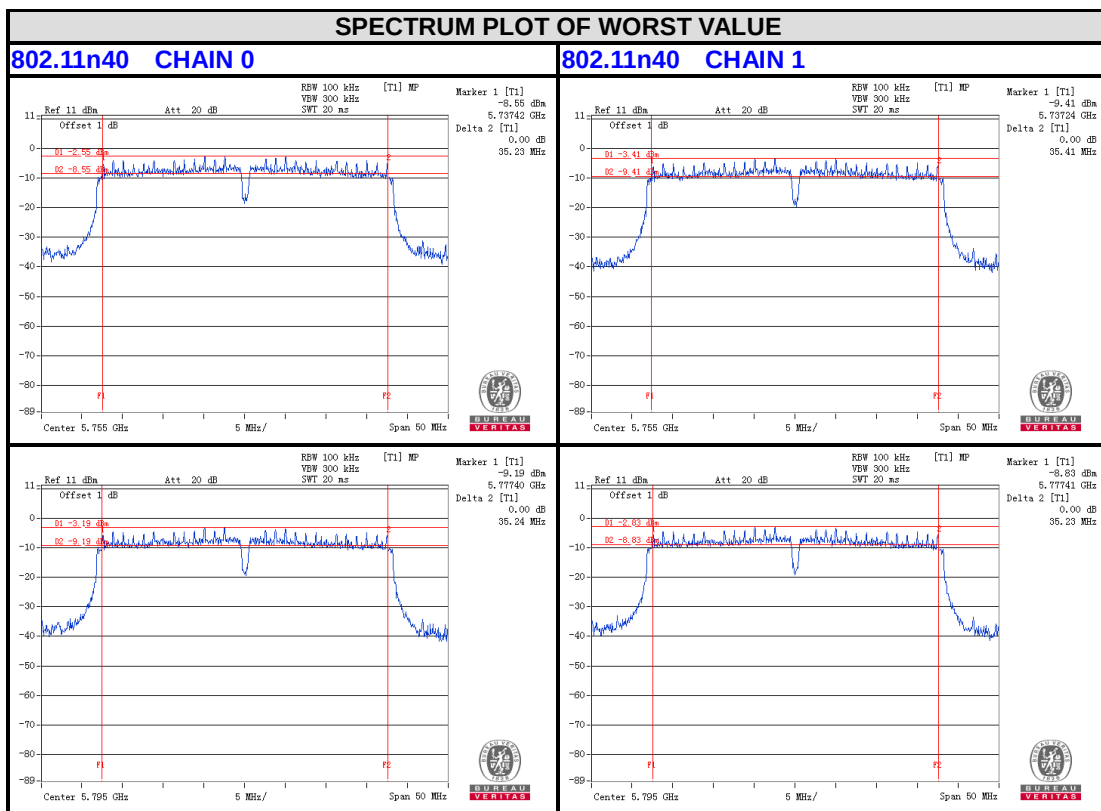
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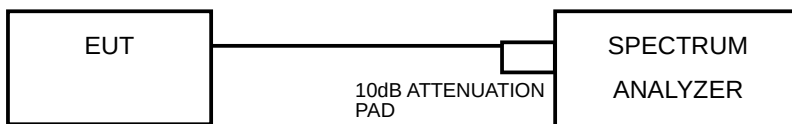


3.4 PEAK POWER SPECTRAL DENSITY MEASUREMENT

3.4.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ 500kHz
U-NII-2C	√		11dBm/ 500kHz
U-NII-3	√		30dBm/ 500kHz

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.

3.4.4 TEST PROCEDURES

For U-NII-1, U-NII-2A, U-NII-2C, U-NII-3 band:

Using method SA-1

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value

Using method SA-2

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 30 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- 3) Set Channel power measure = 1MHz
- 4) Sweep time = auto, trigger set to "free run".
- 5) Trace average at least 100 traces in power averaging mode.
- 6) Record the max value and add 10 log (1/duty cycle)

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

Same as 3.3.6



3.4.7 TEST RESULTS

For U-NII-1, U-NII-2A & U-NII-2C, For U-NII-3:
802.11a

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		Total power density (dBm)	MAX. Limit (dBm)	PASS / FAIL
		Chain0	Chain1			
36	5180	-1.09	-2.04	1.47	17.00	PASS
40	5200	-1.64	-2.16	1.12	17.00	PASS
48	5240	-2.23	-2.08	0.86	17.00	PASS
52	5260	-2.28	-1.99	0.88	11.00	PASS
60	5300	-1.20	-2.93	1.03	11.00	PASS
64	5320	-1.60	-1.55	1.44	11.00	PASS
100	5500	-1.62	-2.77	0.85	11.00	PASS
116	5580	-1.33	-1.32	1.69	11.00	PASS
132	5660	-2.95	-2.99	0.04	11.00	PASS
140	5700	-3.15	-3.10	-0.11	11.00	PASS
Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)		Total power density (dBm/500k)	MAX. Limit (dBm/500k)	PASS / FAIL
		Chain0	Chain0			
149	5745	-6.54	-5.94	3.23	30.00	PASS
157	5785	-6.82	-5.46	-3.13	30.00	PASS
165	5825	-6.60	-4.65	-2.61	30.00	PASS

802.11n (20MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		Total power density (dBm)	MAX. Limit (dBm)	PASS / FAIL
		Chain0	Chain1			
36	5180	-3.14	-2.99	-0.05	17.00	PASS
40	5200	-1.78	-2.57	0.85	17.00	PASS
48	5240	-3.27	-2.73	0.02	17.00	PASS
52	5260	-3.23	-2.77	0.02	11.00	PASS
60	5300	-2.15	-2.70	0.59	11.00	PASS
64	5320	-3.10	-2.57	0.18	11.00	PASS
100	5500	-3.68	-2.14	0.17	11.00	PASS
116	5580	-2.48	-2.72	0.41	11.00	PASS
132	5660	-2.64	-2.30	0.54	11.00	PASS
140	5700	-3.99	-5.18	-1.53	11.00	PASS
Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)		Total power density (dBm/500k)	MAX. Limit (dBm/500k)	PASS / FAIL
		Chain0	Chain1			
149	5745	-6.96	-6.15	-3.54	30.00	PASS
157	5785	-6.35	-5.89	-3.11	30.00	PASS
165	5825	-7.37	-5.86	-3.60	30.00	PASS



802.11n (40MHz)

Channel Number	Frequency (MHz)	RF Power Level in 1MHz BW (dBm)		Total power density (dBm)	MAX. Limit (dBm)	PASS / FAIL
		Chain0	Chain1			
38	5190	-8.06	-8.38	-5.21	17.00	PASS
46	5230	-8.33	-8.83	-5.56	17.00	PASS
54	5270	-7.94	-7.83	-4.87	11.00	PASS
62	5310	-7.92	-8.13	-5.01	11.00	PASS
102	5510	-8.40	-8.50	-5.44	11.00	PASS
110	5550	-8.34	-8.97	-5.63	11.00	PASS
134	5670	-8.78	-9.06	-5.91	11.00	PASS
Channel Number	Frequency (MHz)	RF Power Level in 500kHz BW (dBm)		RF Power Level in 500kHz BW (dBm)	MAX. Limit (dBm/500k)	PASS / FAIL
		Chain0	Chain0			
151	5755	-10.97	-11.9	-8.42	30.00	PASS
159	5795	-11.21	-11.59	-8.39	30.00	PASS

NOTE:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.



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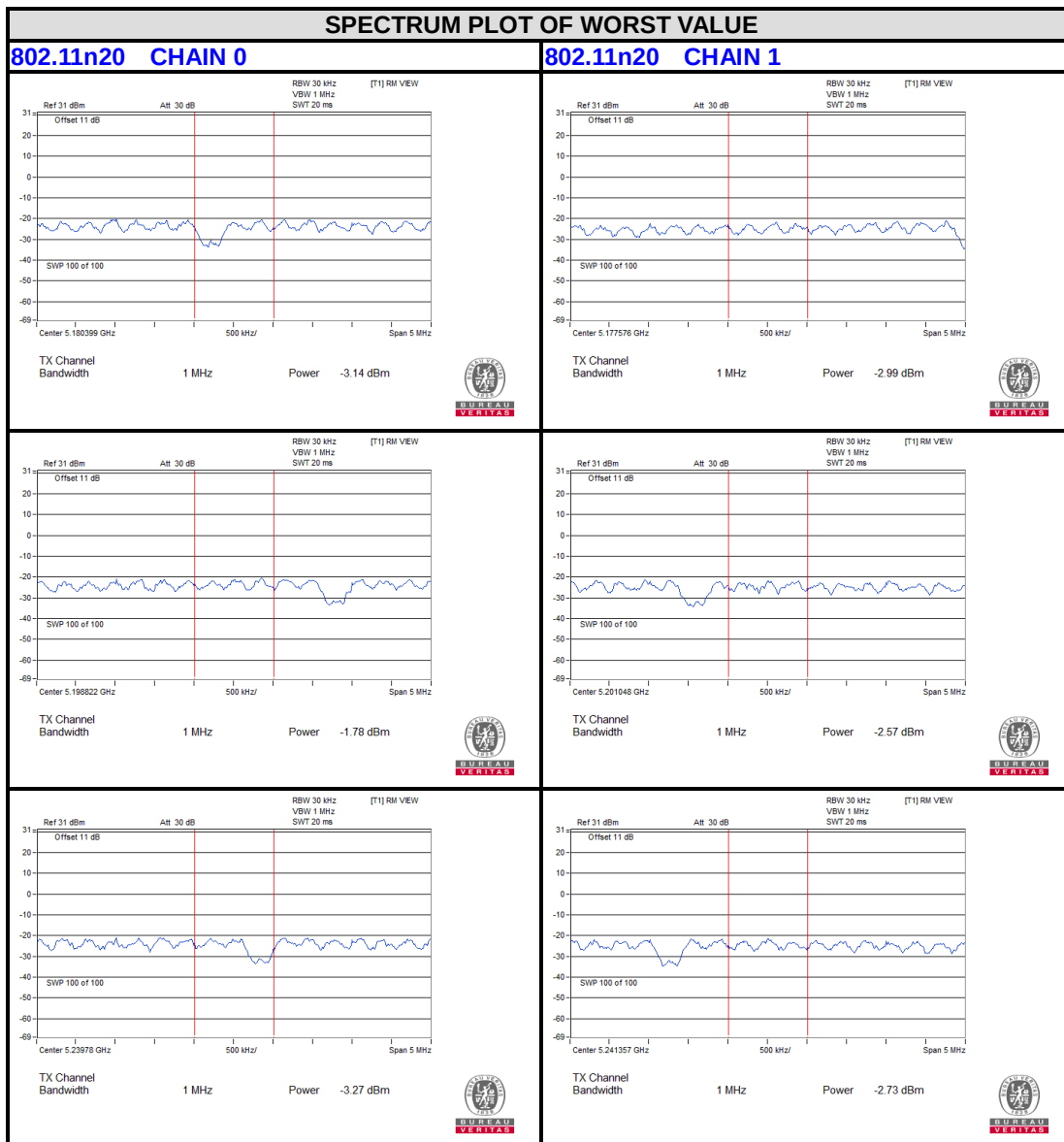
PSD Test Plot
BAND 1
5150-5250MHz



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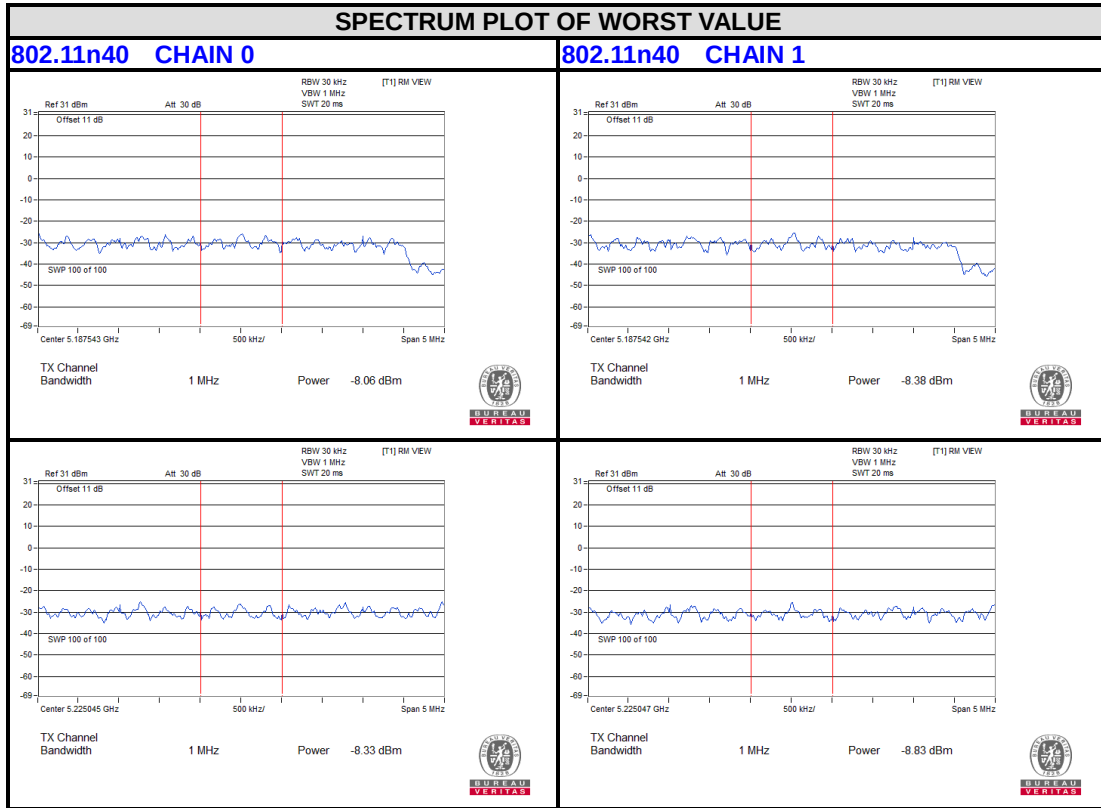
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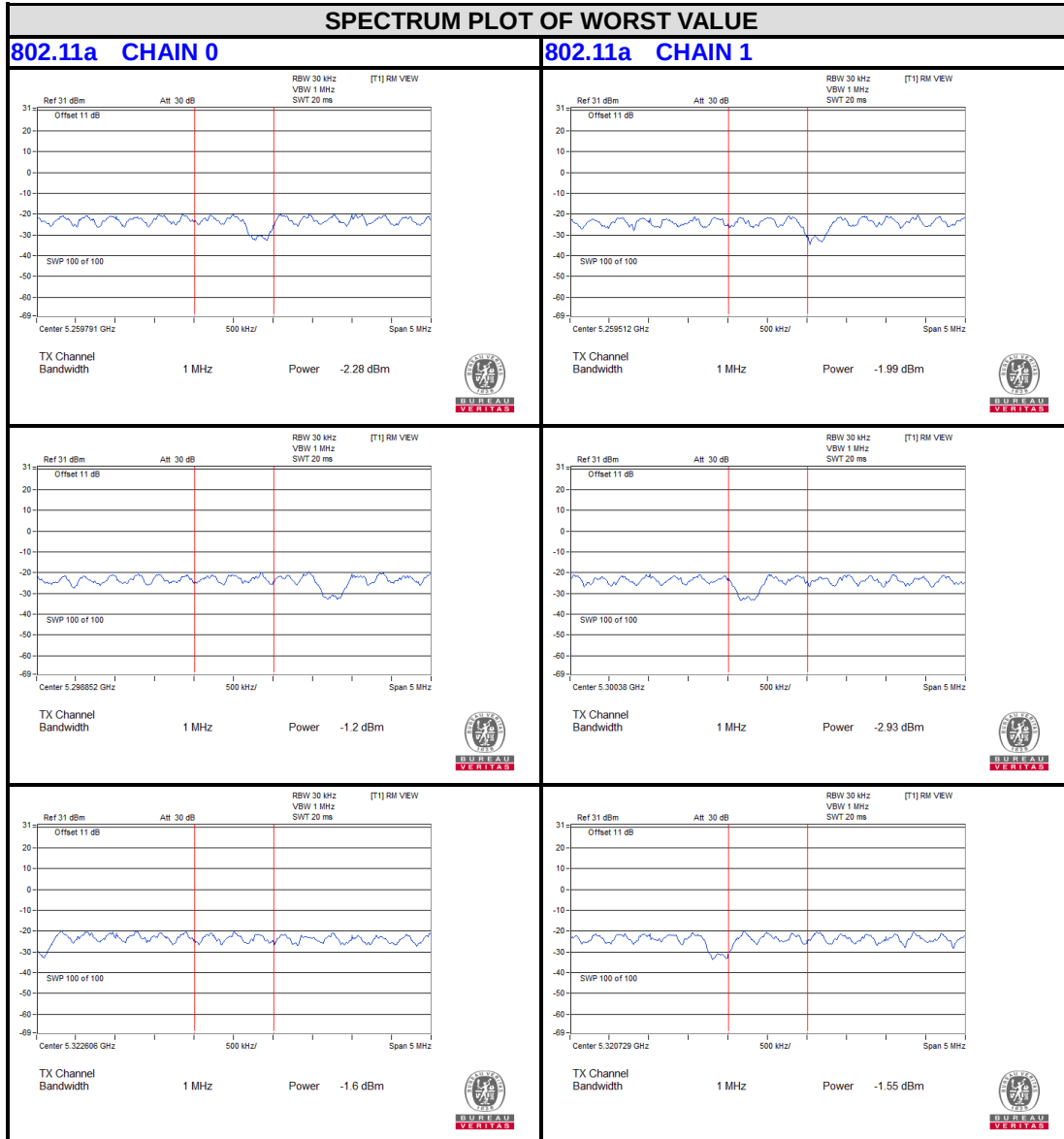


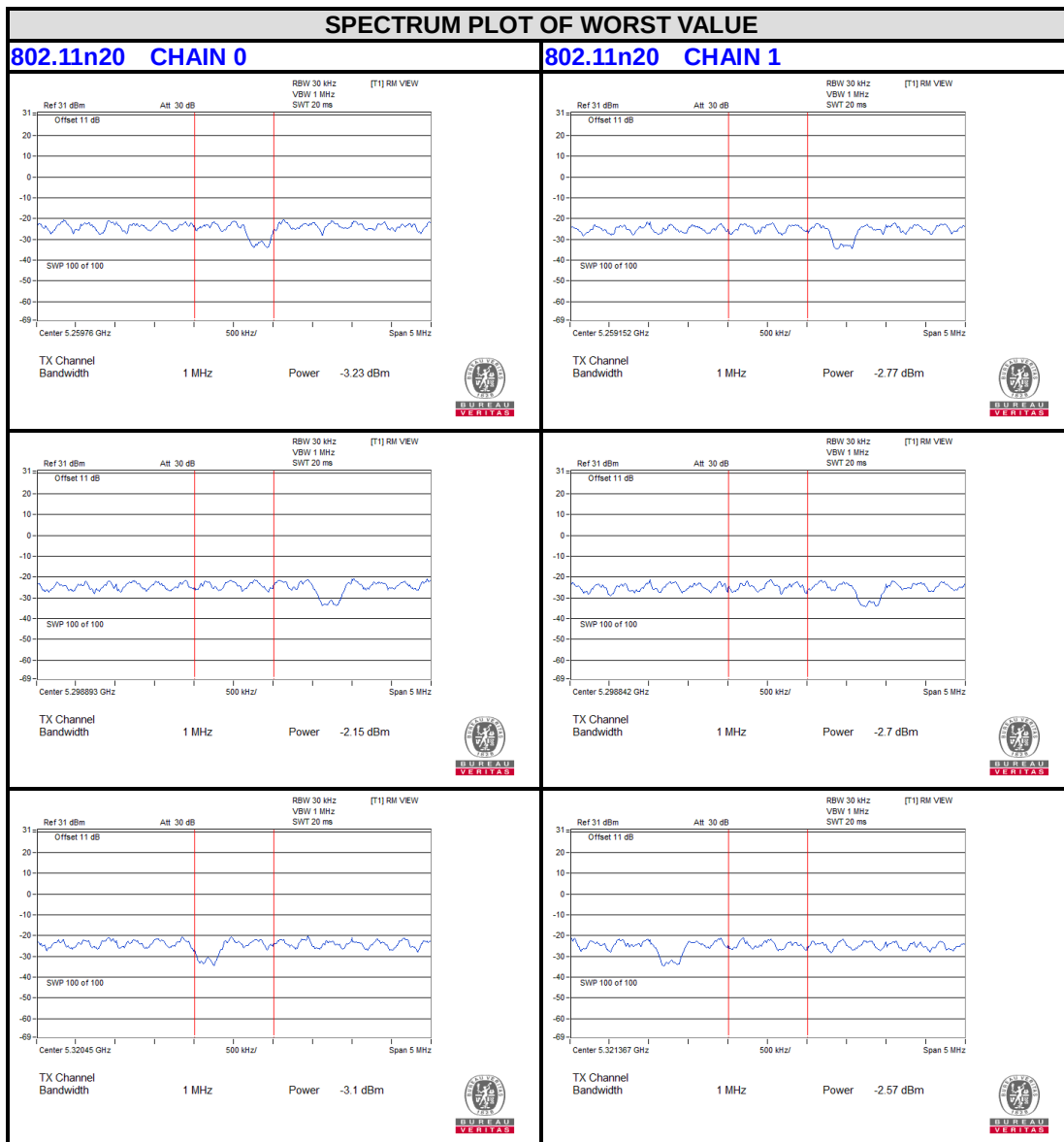


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Test Report No.: RF150813N009-3

BAND 2
5250-5350MHz

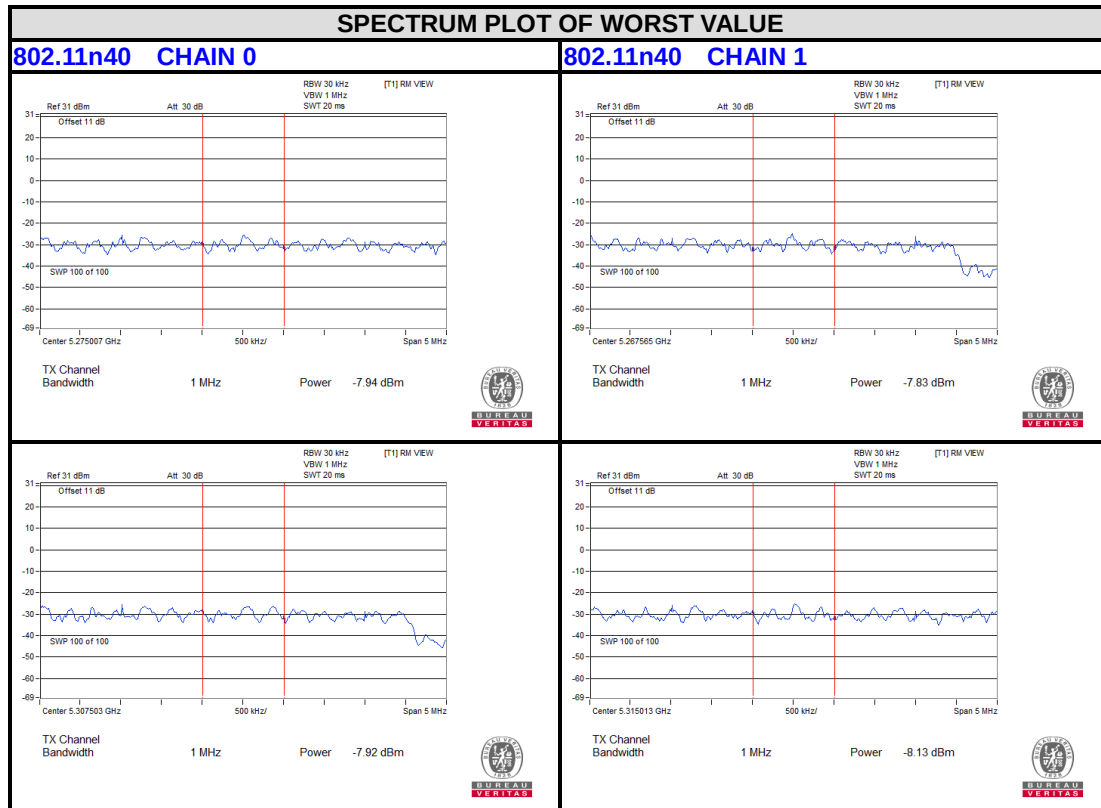






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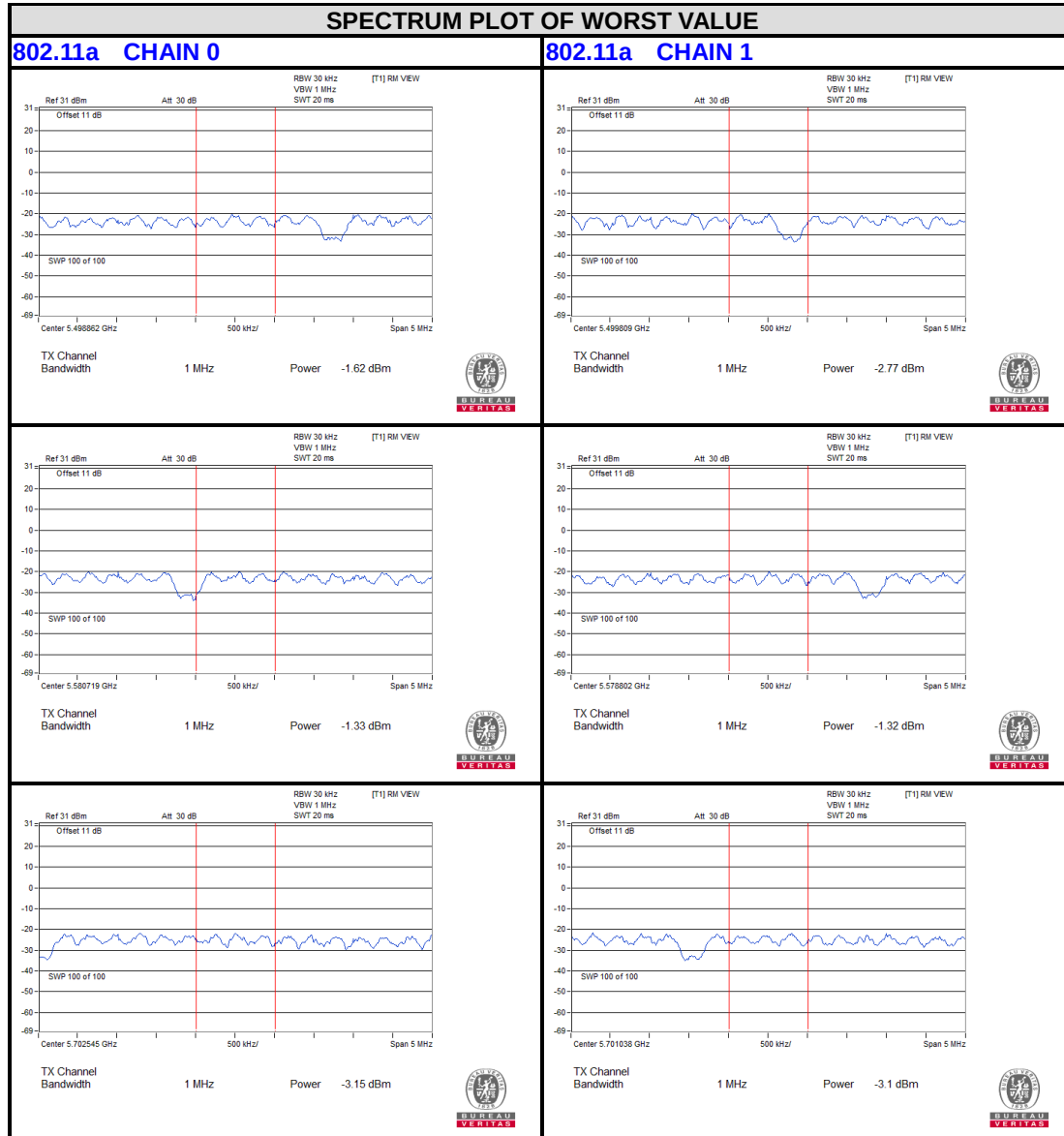


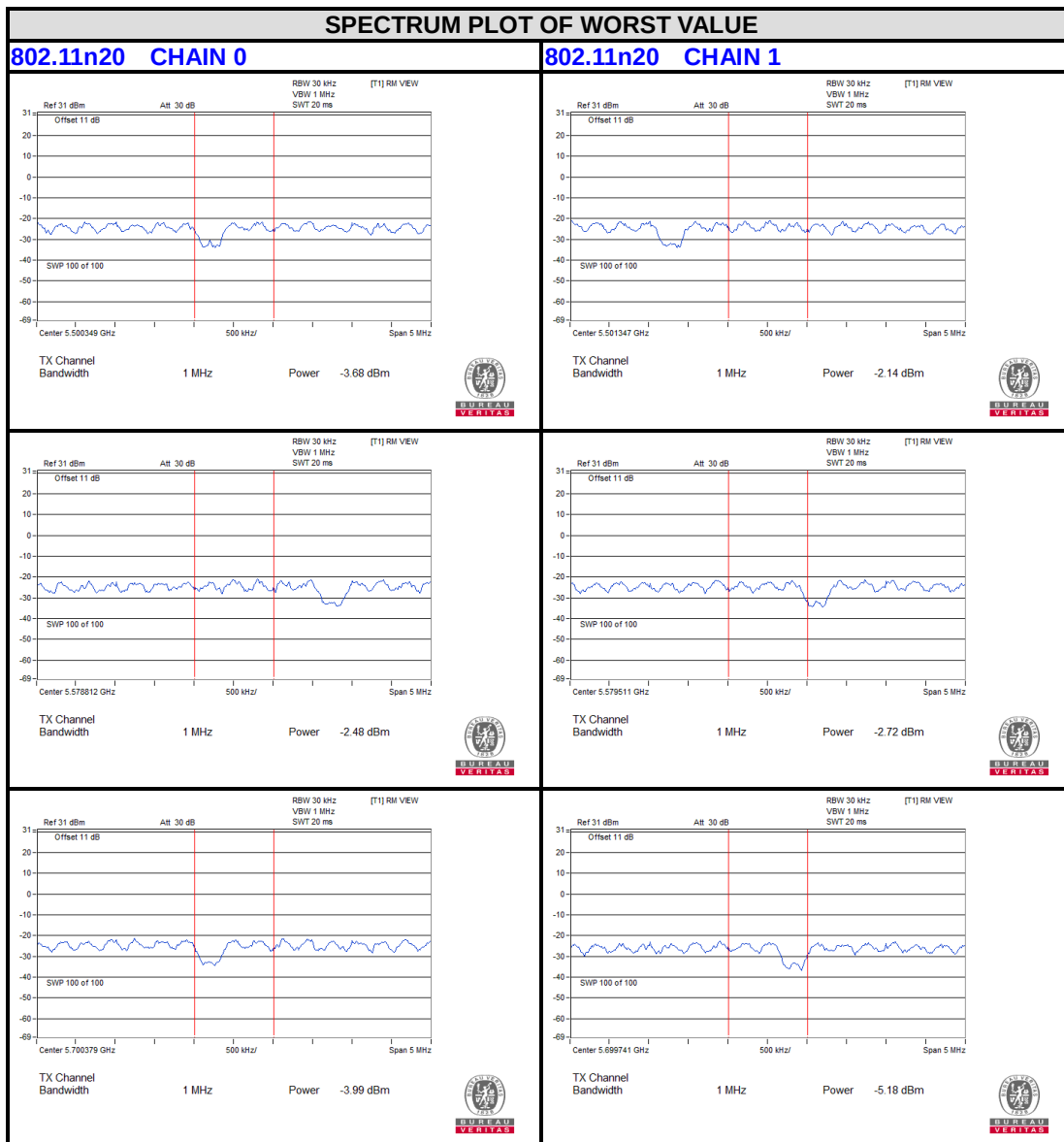


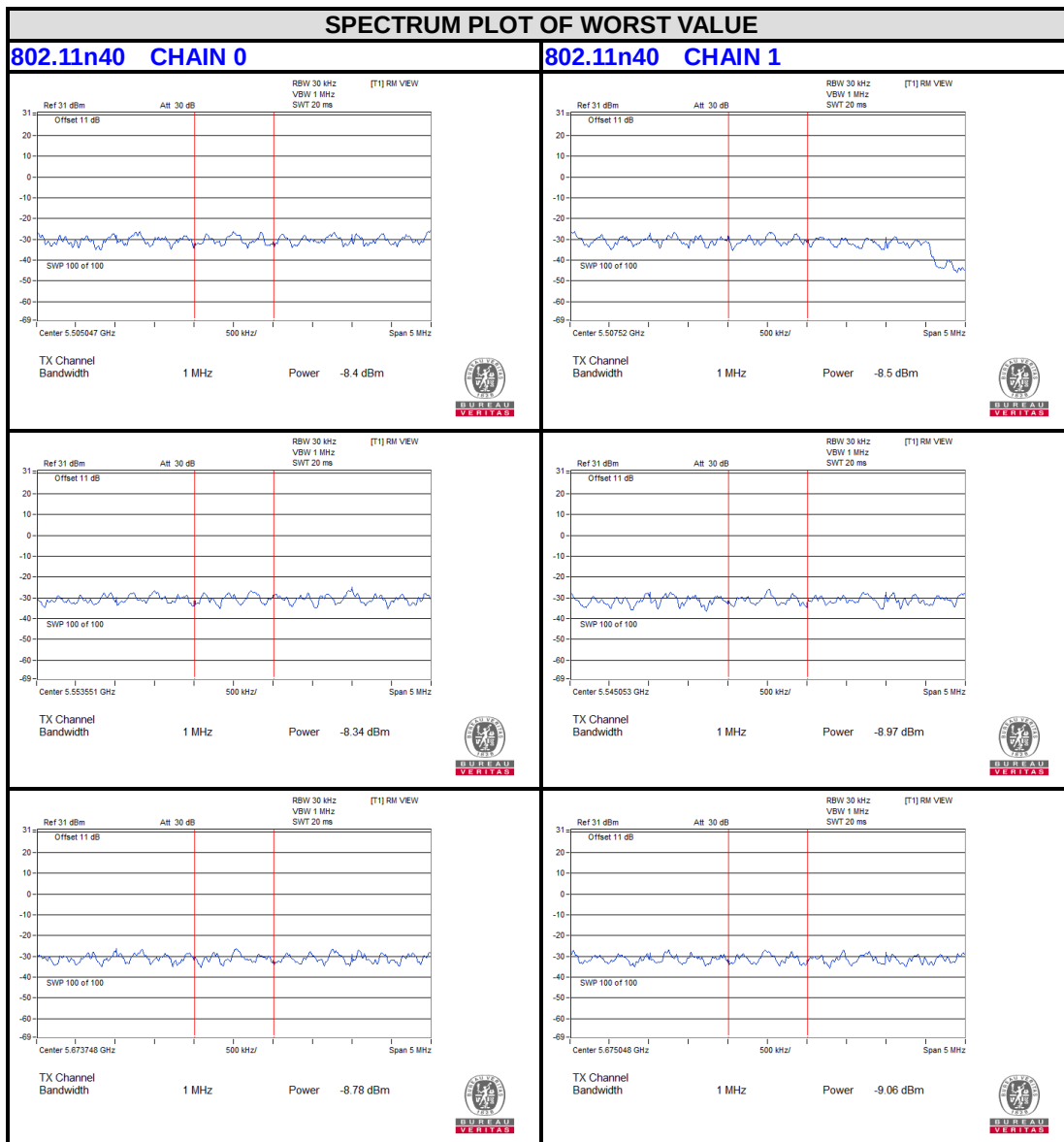
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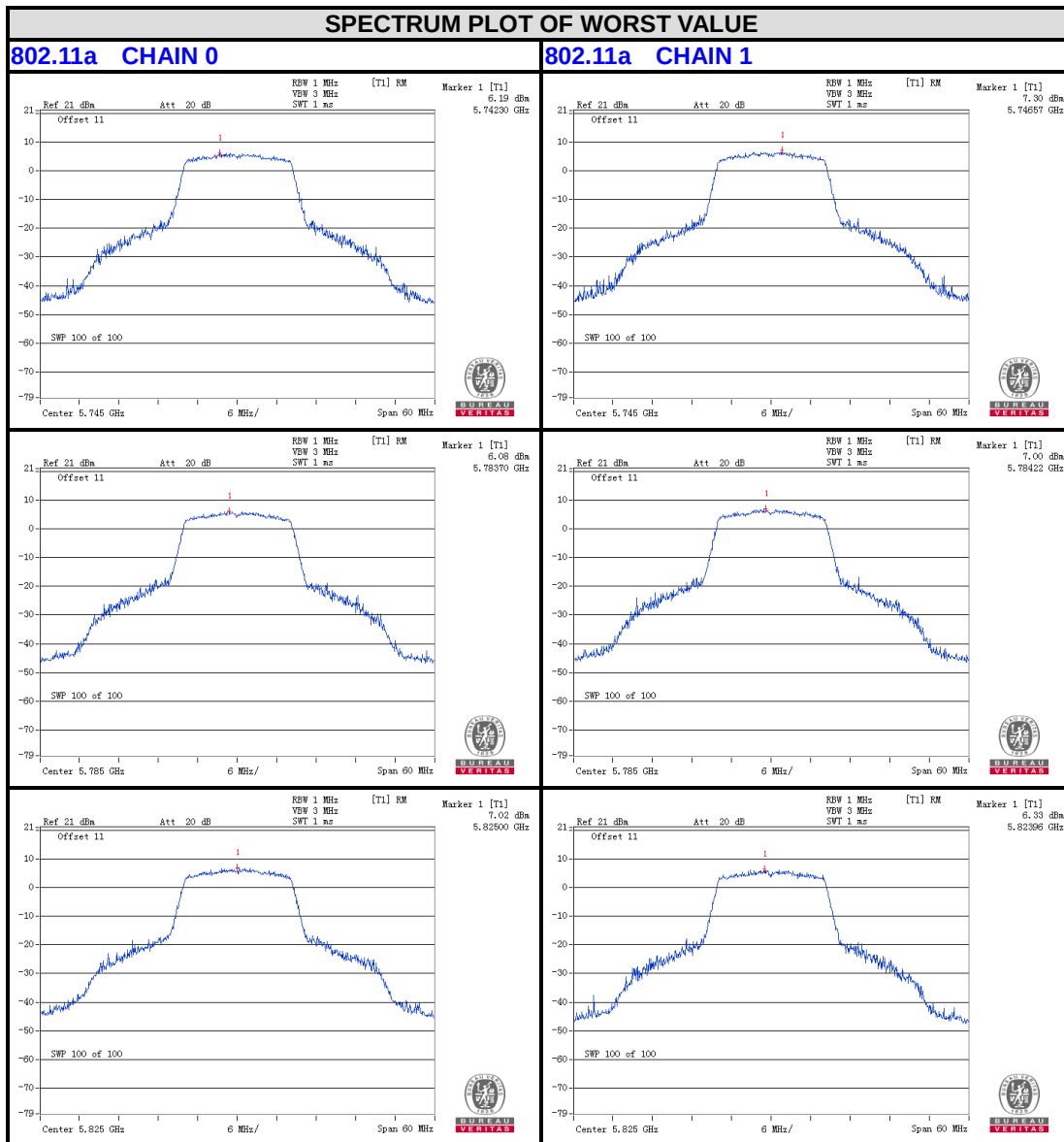
BAND 3
5470-5725MHz

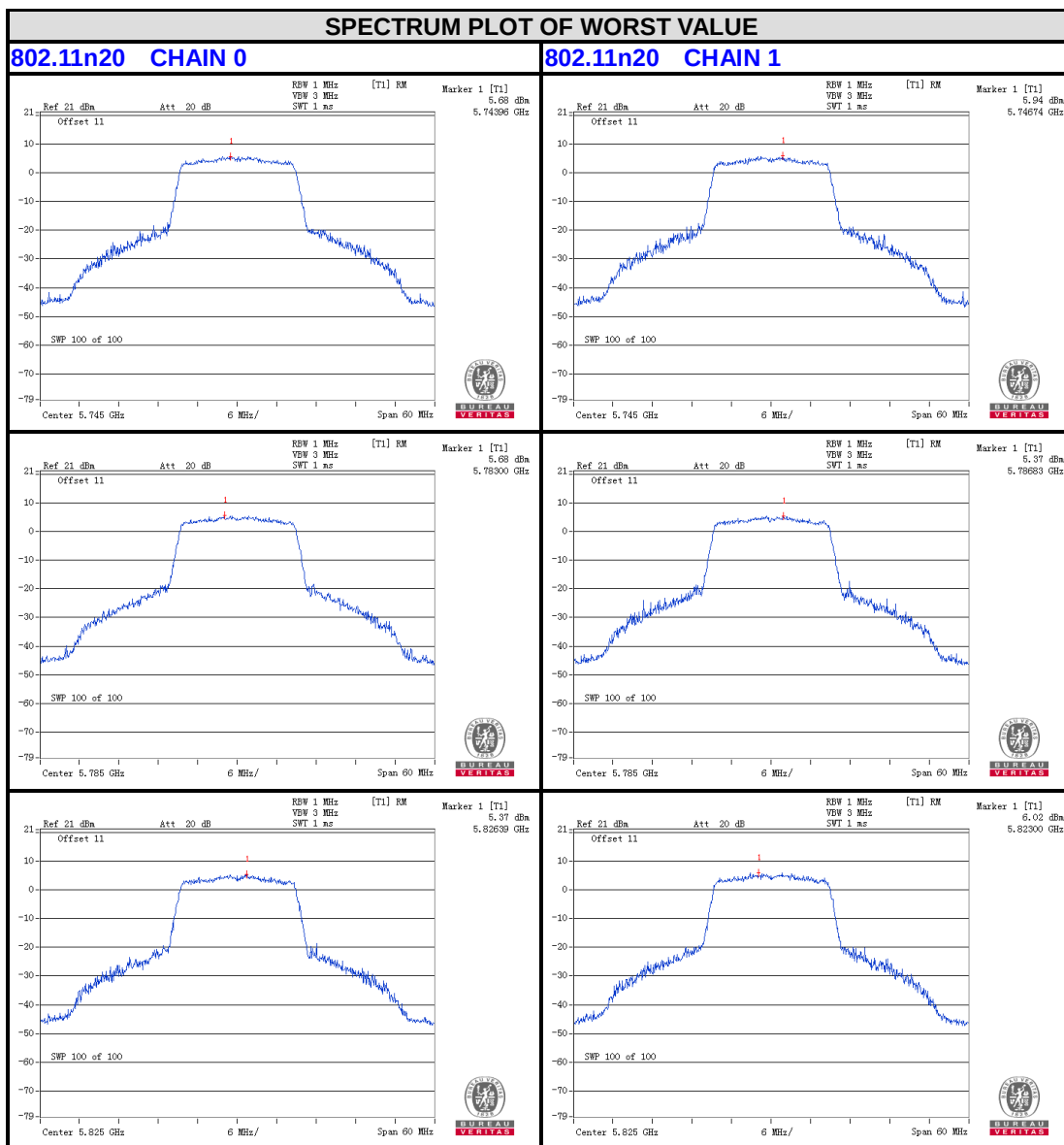






BAND4
5725-5850MHz

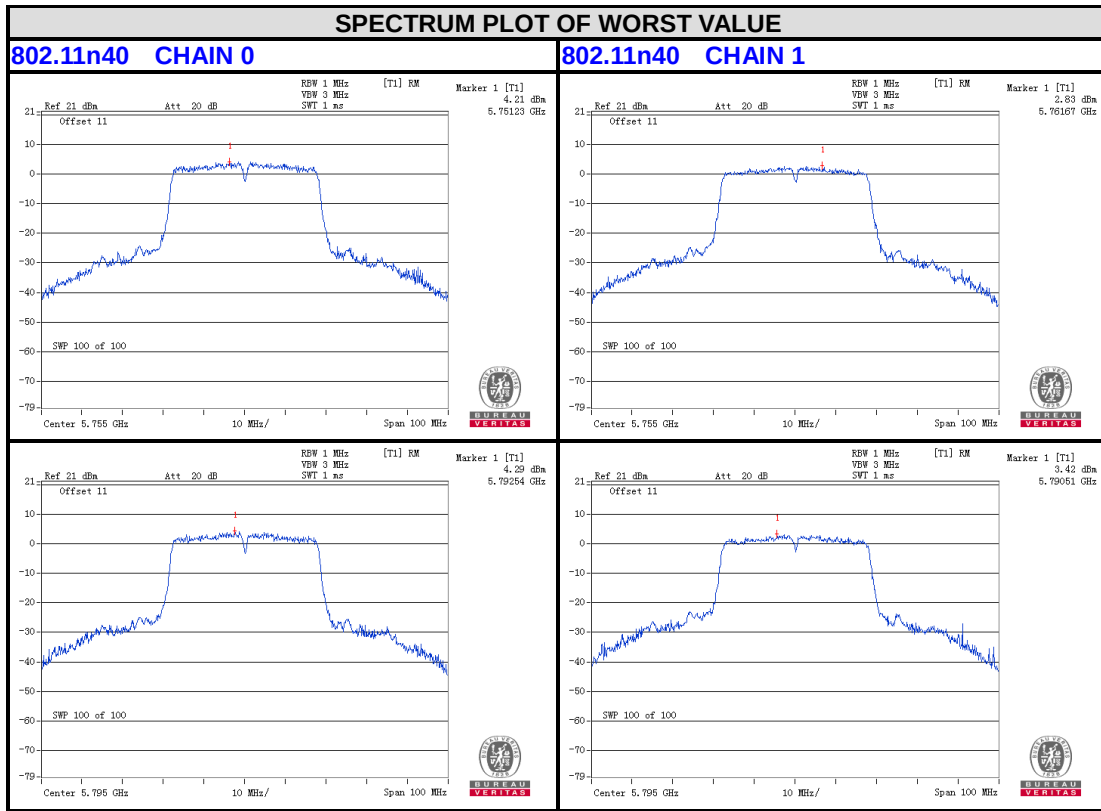






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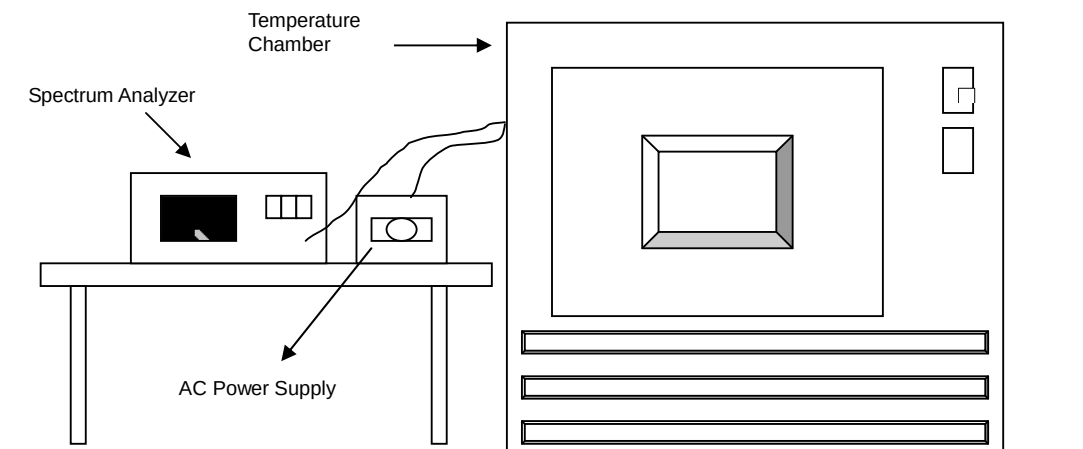
Tel: +86 769 8593 5656
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Email: customerservice.dg@cn.bureauveritas.com

3.5 FREQUENCY STABILITY

3.5.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency of the carrier signal shall be maintained within band of operation.

3.5.2 TEST SETUP



3.5.3 TEST INSTRUMENTS

Refer to section 3.3.3 to get information of above instrument.



3.5.4 TEST PROCEDURE

- a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- b. Turn the EUT on and couple its output to a spectrum analyzer.
- c. Turn the EUT off and set the chamber to the highest temperature specified.
- d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

3.5.6 EUT OPERATING CONDITION

Set the EUT transmit at un-modulation mode to test frequency stability.



3.5.7 TEST RESULTS

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
50	138	5179.9906	-1.8147	5179.998	-0.3861	5179.9949	-0.9846	5179.9901	-1.9112
40	120	5179.9891	-2.1042	5179.9978	-0.4247	5179.9948	-1.0039	5179.9887	-2.1815
30	102	5179.9894	-2.0463	5179.997	-0.5792	5179.9948	-1.0039	5179.9892	-2.0849
20	138	5179.9729	-5.2317	5179.9794	-3.9768	5179.9758	-4.6718	5179.972	-5.4054
10	120	5179.9732	-5.1737	5179.9794	-3.9768	5179.9767	-4.4981	5179.9715	-5.5019
0	102	5179.9725	-5.3089	5179.9785	-4.1506	5179.9771	-4.4208	5179.9722	-5.3668
-10	138	5180.0192	3.7066	5180.0117	2.2587	5180.0185	3.5714	5180.0199	3.8417
-20	120	5180.0195	3.7645	5180.0135	2.6062	5180.0187	3.6100	5180.02	3.8610
-30	102	5180.0205	3.9575	5180.0127	2.4517	5180.0183	3.5328	5180.0201	3.8803

FREQUENCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (°C)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift	Measured Frequency (MHz)	Frequency Drift
20	138	5180.0262	5.0579	5180.0235	4.5367	5180.0217	4.1892	5180.0251	4.8456
	120	5180.027	5.2124	5180.022	4.2471	5180.0209	4.0347	5180.0251	4.8456
	102	5180.0257	4.9614	5180.0221	4.2664	5180.0208	4.0154	5180.0243	4.6911



Test Report No.: RF150813N009-3

4. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).



Test Report No.: RF150813N009-3

5. 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---