



FCC&ISED Radio Test Report

FCC ID: 2AFZI-AVI1010B

IC: 20544-AVI1010B

This report concerns	(check one):	⊠Original Grant	□ Class	I Change	Class II	Change
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Project No. : 1711C205 Equipment : Avi-on 1010 Test Model : AVI1010

Series Model : AVI1010UFL, AVI1010NA

Applicant: Avi-on Labs, Inc.

Address : 2750 Rasmussen, Suite 206 Park City, Utah United

States 84098

Date of Receipt : Nov. 23, 2017

Date of Test: Nov. 23, 2017 ~ Feb. 06, 2018

Issued Date : Feb. 28, 2018 Tested by : BTL Inc.

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I imitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FICP-1-1711C205	Original Issue.	Feb. 28, 2018

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1. CERTIFICATION

Equipment : Avi-on 1010 Brand Name : Avi-ON Test Model : AVI1010

Series Model: AVI1010UFL, AVI1010NA

Applicant : Avi-on Labs, Inc.

Manufacturer: Iton Technology Corp.,Ltd

Address : Room 1302, Block A, Building 4, Tianan Cyber Park, Huangge Road,

Longgang District, Shenzhen, China

Factory : Iton Technology Corp.,Ltd

Address : Floor 3, Building E, Ainan Road, w\Weixinda Industrial Park,Longgang District,

Shenzhen, China

Date of Test : Nov. 23, 2017 ~ Feb. 06, 2018

Test Sample: Engineering Sample

Standard(s) : FCC Part15, Subpart C (15.247) / ANSI C63.10-2013

RSS-247 Issue 2, Feb. 2017 RSS-GEN Issue 4, Nov. 2014

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FICP-1-1711C205) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP according to the ISO-17025 quality assessment standard and technical standard(s).

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PASS

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C Canada RSS-247 Issue 2, Feb. 2017, RSS-GEN Issue 4, Nov. 2014					
Standard(:	s) Section	Test Item	Judgment	Remark	
FCC	IC				
15.207	RSS-GEN 8.8	Conducted Emission	PASS		
15.247(d)	RSS-247 5.5	Antenna conducted Spurious Emission	PASS		
15.247(a)(2)	RSS-247 5.2 (a)	6dB Bandwidth	PASS		
15.247(b)(3)	RSS-247 5.4 (d)	Peak Output Power	PASS		
15.247(e)	RSS-247 5.2 (b)	Power Spectral Density	PASS		
15.203	-	Antenna Requirement	PASS		

Transmitter Radiated Emissions

NOTE:

15.247(d)/ 15.205/

15.209

(1)" N/A" denotes test is not applicable to this device.

RSS-247 5.5

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2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's test firm number for FCC: 319330 BTL's designation number for FCC: CN5020 BTL's test firm number for IC: 4428B-1

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty figures shall be calculated according the methods described in the ETSI TR 100 028 and shall correspond to an expansion factor (coverage factor) k=1.96 or k=2(which provide confidence levels of respectively 90% and 95.45% in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)). Measurement Uncertainty for a Level of Confidence of 95 %, U=2xUc(y).

The BTL measurement uncertainty as below table:

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150 KHz ~ 30MHz	2.32

B. Radiated Measurement:

Test Site	Method Measurement Frequency Range		Ant. H / V	U, (dB)			
		9KHz~30MHz	V	3.79			
		9KHz~30MHz	Н	3.57			
		30MHz ~ 200MHz	V	3.82			
	CISPR	CICDD			30MHz ~ 200MHz	Η	3.78
DG-CB03			200MHz ~ 1,000MHz	V	4.10		
DG-CB03		200MHz ~ 1,000MHz	Η	4.06			
		1GHz~18GHz	V	3.12			
			1GHz~18GHz	Η	3.68		
		18GHz~40GHz	V	4.15			
		18GHz~40GHz	Н	4.14			

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

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3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Avi-on 1010		
Brand Name	Avi-ON		
Test Model	AVI1010		
Series Model	AVI1010UFL, AVI1010NA		
Model Difference	Differ in antenna matched with it, please see below note 2 for the		
Woder Difference	details.		
	Operation Frequency	2402~2480 MHz	
Product Description	Modulation Technology	GFSK(1Mbps)	
1 Toddot Becomption	Bit Rate of Transmitter	or ord rivibps)	
	Output Power (Max.)	9.72 dBm (1Mbps)	
Power Source	Supplied from host.		
Power Rating	DC 3.3V		

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2.

Model	Antenna	
AVI1010	ANT1(6005ANT) / ANT2(6008ANT)/ ANT3(Dipole Antenna)	
AVI1010UFL	ANT3(Dipole Antenna)	
AVI1010NA	ANT1(6005ANT) / ANT2(6008ANT)	

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2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

3. Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Wire Monopole	N/A	3.18	N/A
2	N/A	N/A	Wire Monopole	N/A	2.61	N/A
3	Laird TECHNOL OGIES	N/A	Dipole	N/A	5.50	N/A

Note:

There are 3 options for the antenna of product, only one antenna is used at a time.

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3.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	TX Mode NOTE (1)

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test			
Final Test Mode Description			
Mode 1	TX Mode		

For Radiated Test			
Final Test Mode	Description		
Mode 1	TX Mode NOTE (1)		

Note:

(1) The measurements are performed at the high, middle, low available channels.

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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

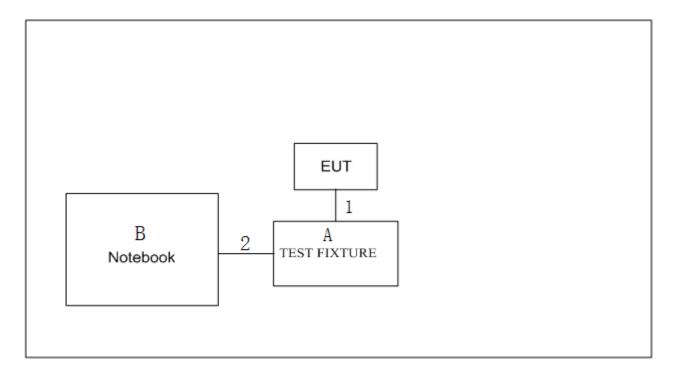
Test Software Version	CSR	μEnergy Tools	s 2.4.3
Frequency (MHz)	2402	2440	2480
BT LE	7	7	7

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3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
Α	Test Fixture	N/A	N/A	N/A	N/A
В	Notebook	DELL	N/A	N/A	N/A

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	0.05m	Data Cable
2	NO	NO	1m	USB Cable

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4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBµV)		
	Quasi-peak	Average	
0.15 -0.5	66 to 56*	56 to 46*	
0.50 -5.0	56	46	
5.0 -30.0	50	50	

Note:

(1) The limit of " * " decreases with the logarithm of the frequency

(2) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use) Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

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

4.1.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e For the actual test configuration, please refer to the related Item -EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

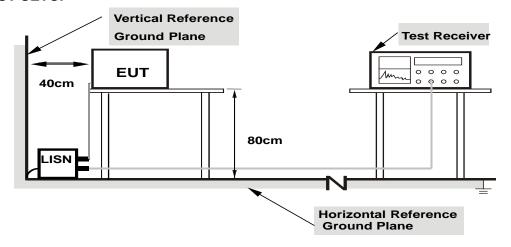
No deviation

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4.1.4 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

4.1.5 EUT OPERATING CONDITIONS

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

4.1.6 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Appendix A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a " * " marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.
- (3) "N/A" denotes test is not applicable to this device.

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4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

In case the emission fall within the restricted band specified on 15.205(a) and RSS-247 5.5, then the 15.209(a) and RSS-Gen limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)		
Frequency (Miriz)	PEAK	AVERAGE	
Above 1000	74	54	

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C and RSS-247.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value

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Spectrum Parameter	Setting	
Attenuation	Auto	
Start Frequency	1000 MHz	
Stop Frequency	10th carrier harmonic	
RBW / VBW	RBW 1MHz VBW 3MHz peak detector for Pk value	
(Emission in restricted band)	RMS detector for AV value	

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.2.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. 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 find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

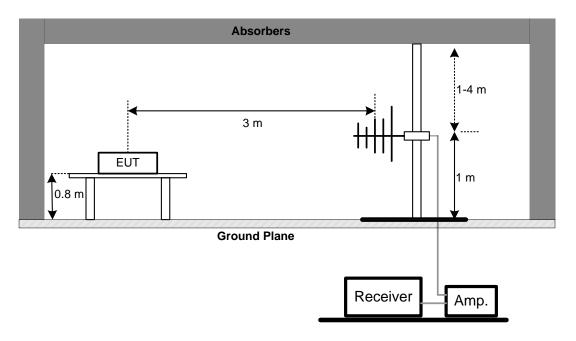
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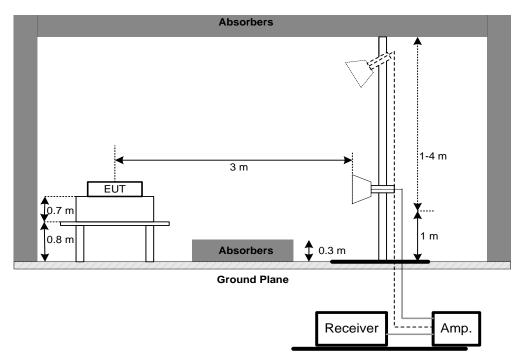


4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz

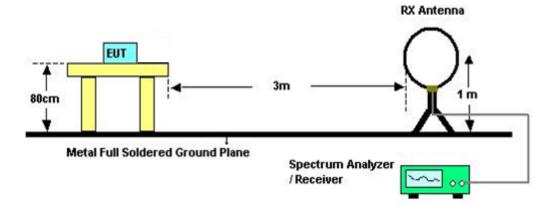


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(C) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 22°C Relative Humidity: 56% Test Voltage: AC 120V/60Hz

4.2.7TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the Appendix C.

4.2.9TEST RESULTS (ABOVE 1000MHZ)

Please refer to the Appendix D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable. For fundamental signal judgment was referred to Peak output test.

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5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C / RSS-247				
Section Test Item Limit Frequency Range (MHz) Result				
15.247(a)(2) RSS-GEN section 6.6 RSS-247 5.2 (a)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

5.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Appendix E.

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6. MAXIMUM OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C / RSS-247					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247(b)(3) RSS-247 5.4 (d)	Maximum Output Power	1 watt or 30dBm	2400-2483.5	PASS	

6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- b. The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

EUT	Power Meter
	1 5 WEI WICKEI

6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Appendix F.

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7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 10 ms.
- c. Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 EUT OPERATION CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Appendix G.

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8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C / RSS-247					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247(e) RSS-247 5.2 (b)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS	

8.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10 KHz, Sweep time = auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

8.1.6 TEST RESULTS

Please refer to the Appendix H.

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9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 26, 2018		
2	LISN	EMCO	3816/2	52765	Mar. 26, 2018		
3	50Ω Terminator	SHX	TF2-3G-A	8122901	Mar. 26, 2018		
4	TWO-LINE V-NETWORK	R&S	ENV216	101447	Mar. 26, 2018		
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
6	Cable	N/A	RG223	12m	Oct. 19, 2018		

	Radiated Emission Measurement - Below 1GHz						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 26, 2018		
2	Amplifier	HP	8447D	2944A09673	Oct. 19, 2018		
3	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018		
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	Jun. 26, 2018		
5	Controller	CT	SC100	N/A	N/A		
6	Controller	MF	MF-7802	MF780208416	N/A		
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
8	Antenna	EM	EM-6876-1	230	Mar. 06, 2018		

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	Radiated Emission Measurement - Above 1GHz						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 26, 2018		
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 08, 2018		
3	Amplifier	Agilent	8449B	3008A02274	May. 16, 2018		
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 26, 2018		
5	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018		
6	Antenna	EM	EM-6876-1	230	Mar. 06, 2018		
7	Controller	СТ	SC100	N/A	N/A		
8	Controller	MF	MF-7802	MF780208416	N/A		
9	Cable	emci	EMC104-SM-SM-1 2000(12m)	N/A	Jun. 26, 2018		
10	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		

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	6dB Bandwidth Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018	

	Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Power Meter	ANRITSU	ML2495A	1128009	Mar. 26, 2018	
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 26, 2018	

	Antenna Conducted Spurious Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018	

	Power Spectral Density Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018	

Remark: "N/A" denotes no model name, serial no. or calibration specified.

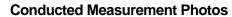
All calibration period of equipment list is one year.

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10. EUT TEST PHOTO







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Radiated Measurement Photos

9KHz to 30MHz





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Radiated Measurement Photos

30MHz to 1000MHz





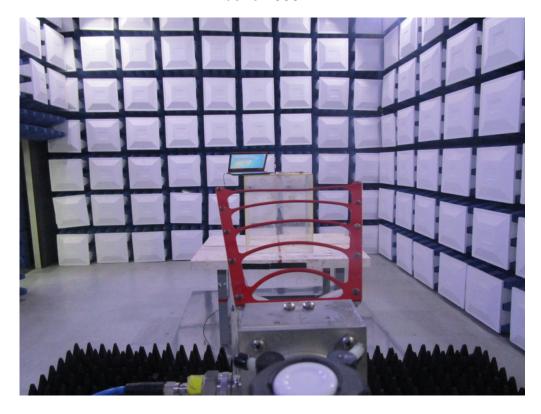
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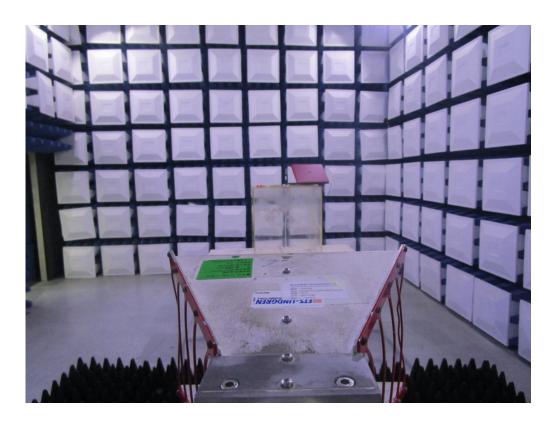




Radiated Measurement Photos

Above 1000MHz





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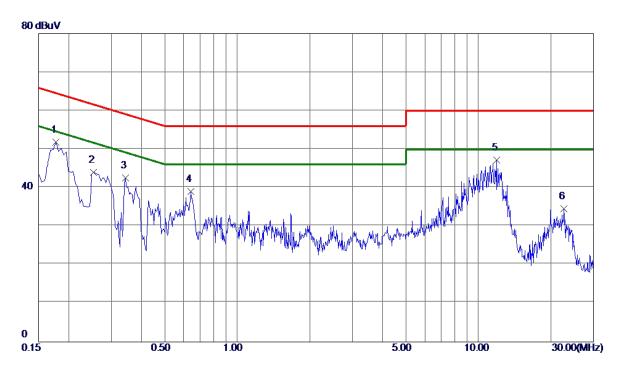
APP	ENDIX A - CONDUCTED EMISSION

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Line



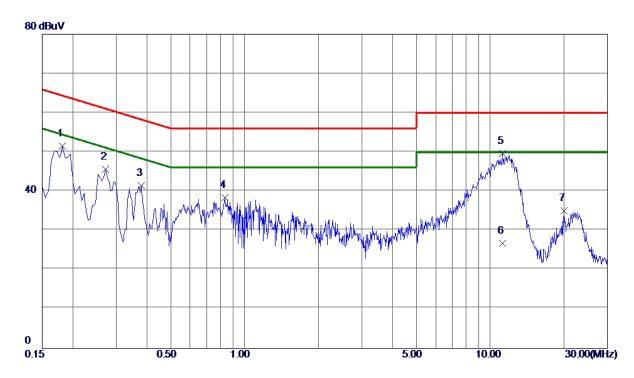
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.1770	42.02	9. 78	51.80	64.63	-12.83	Peak	
2	0. 2535	34. 26	9. 76	44.02	61.64	-17.62	Peak	
3	0.3435	32. 73	9. 79	42. 52	59. 12	-16. 60	Peak	
4	0.6405	29. 21	9.81	39. 02	56.00	-16. 98	Peak	
5	11.8905	36. 72	10.43	47. 15	60.00	-12.85	Peak	
6	22.6230	23. 87	10.73	34.60	60.00	-25.40	Peak	

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Neutral



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0. 1815	41.81	9. 68	51. 49	64.42	-12.93	Peak	
2	0.2714	35. 92	9. 67	45. 59	61.07	-15. 48	Peak	
3	0.3795	31.70	9.69	41.39	58. 29	-16.90	Peak	
4	0.8340	28.74	9. 73	38. 47	56.00	-17. 53	Peak	
5 *	11. 2245	39. 25	10.36	49.61	60.00	-10.39	Peak	
6	11. 2245	16. 30	10.36	26. 66	50.00	-23. 34	AVG	
7	20.0400	24. 23	10.75	34. 98	60.00	-25 . 0 2	Peak	

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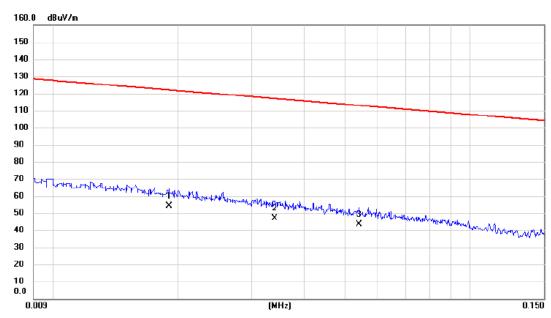
APPENDIX B - RADIATED EMISSION (9KHZ TO 30MHZ)

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Ant 0°



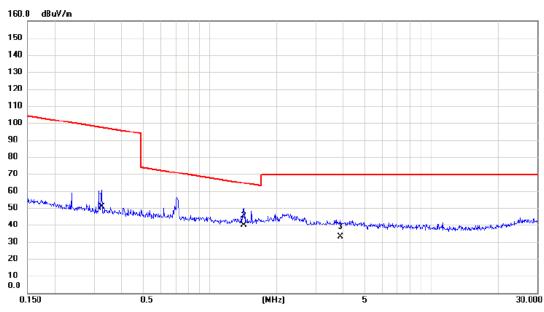
No. Mk.	Freq.	Reading Level		Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	0.0190	34.64	19.75	54.39	122.03	-67.64	AVG	
2	0.0340	27.89	19.20	47.09	116.98	-69.89	AVG	
3	0.0542	24.94	18.64	43.58	112.92	-69.34	AVG	

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Ant 0°



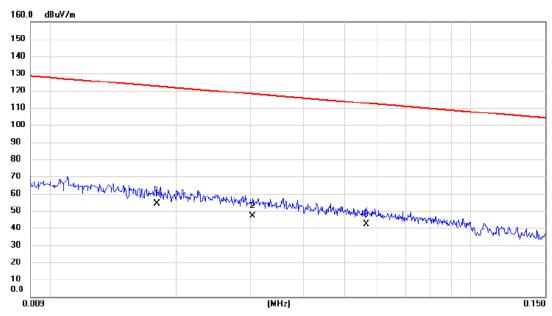
No. Mk.	Freq.	Reading Level		Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.3251	33.86	16.60	50.46	97.36	-46.90	AVG	
2 *	1.4256	24.11	15.73	39.84	64.52	-24.68	QP	
3	3.8808	17.84	14.99	32.83	69.54	-36.71	QP	

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Ant 90°



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	0.0180	34.19	19.88	54.07	122.50	-68.43	AVG	
2	0.0303	27.68	19.31	46.99	117.98	-70.99	AVG	
3	0.0565	23.56	18.60	42.16	112.56	-70.40	AVG	

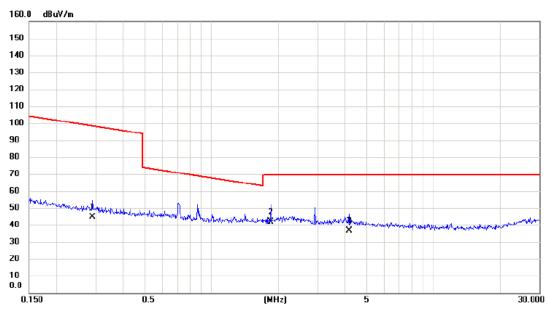
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Test Mode: TX Mode

Ant 90°



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.2910	28.12	16.63	44.75	98.33	-53.58	AVG	
2 *	1.8483	26.11	15.57	41.68	69.54	-27.86	QP	
3	4.1574	21.78	14.86	36.64	69.54	-32.90	QP	

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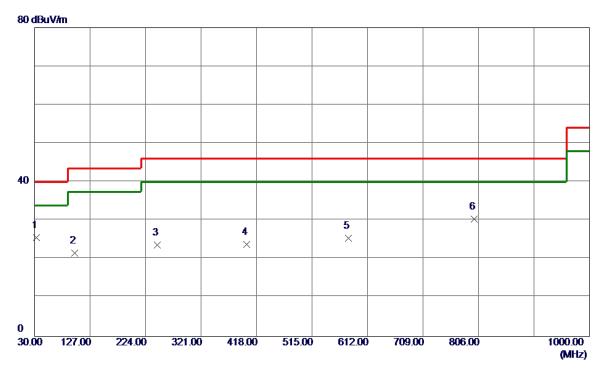
AI	PPENDIX C - RADIATED EMISSION (30MHZ TO 1000MHZ)

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Vertical



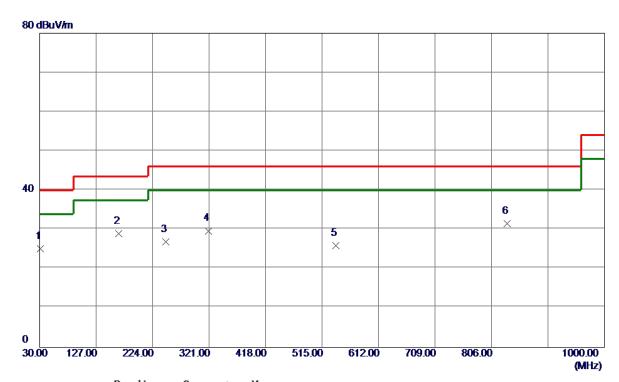
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	32.9100	40.51	-14.89	25.62	40.00	-14. 38	Peak	
2	99.8399	39. 10	-17. 52	21.58	43.50	-21.92	Peak	
3	244. 3700	38. 34	-14. 59	23.75	46.00	-22. 25	Peak	
4	400. 5400	35. 12	-11. 34	23. 78	46.00	-22. 22	Peak	
5	579. 0200	32. 34	-6. 96	25. 38	46.00	-20.62	Peak	
6	798. 2400	31.75	-1.40	30. 35	46.00	-15.65	Peak	

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Horizontal



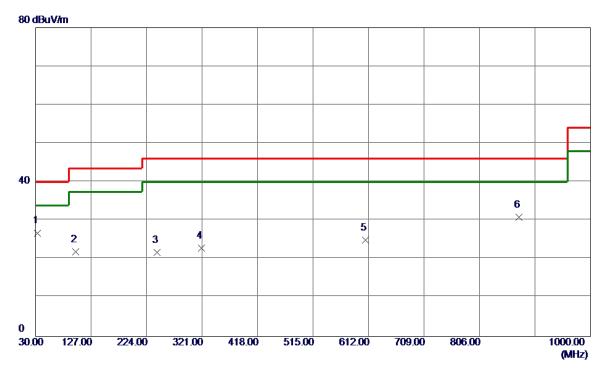
Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
30.9700	40. 19	-15. 14	25.05	40.00	-14.95	Peak	
165.8000	41.60	-12. 58	29.02	43.50	-14.48	Peak	
246. 3100	41. 52	-14.69	26.83	46.00	-19. 17	Peak	
320.0300	42. 16	-12.48	29.68	46.00	-16. 32	Peak	
538. 2800	33.89	-7. 95	25. 94	46.00	-20.06	Peak	
833. 1599	31. 91	-0.46	31. 45	46.00	-14. 55	Peak	
	MHz 30. 9700 165. 8000 246. 3100 320. 0300 538. 2800	MHz dBuV/m	MHz dBuV/m dB 30.9700 40.19 -15.14 165.8000 41.60 -12.58 246.3100 41.52 -14.69 320.0300 42.16 -12.48 538.2800 33.89 -7.95	MHz dBuV/m dB dBuV/m 30.9700 40.19 -15.14 25.05 165.8000 41.60 -12.58 29.02 246.3100 41.52 -14.69 26.83 320.0300 42.16 -12.48 29.68 538.2800 33.89 -7.95 25.94	MHz dBuV/m dB dBuV/m dBuV/m 30.9700 40.19 -15.14 25.05 40.00 165.8000 41.60 -12.58 29.02 43.50 246.3100 41.52 -14.69 26.83 46.00 320.0300 42.16 -12.48 29.68 46.00 538.2800 33.89 -7.95 25.94 46.00	MHz dBuV/m dB dBuV/m dBuV/m dB 30.9700 40.19 -15.14 25.05 40.00 -14.95 165.8000 41.60 -12.58 29.02 43.50 -14.48 246.3100 41.52 -14.69 26.83 46.00 -19.17 320.0300 42.16 -12.48 29.68 46.00 -16.32 538.2800 33.89 -7.95 25.94 46.00 -20.06	MHz dBuV/m dB dBuV/m dBuV/m dB Detector 30.9700 40.19 -15.14 25.05 40.00 -14.95 Peak 165.8000 41.60 -12.58 29.02 43.50 -14.48 Peak 246.3100 41.52 -14.69 26.83 46.00 -19.17 Peak 320.0300 42.16 -12.48 29.68 46.00 -16.32 Peak 538.2800 33.89 -7.95 25.94 46.00 -20.06 Peak

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Vertical



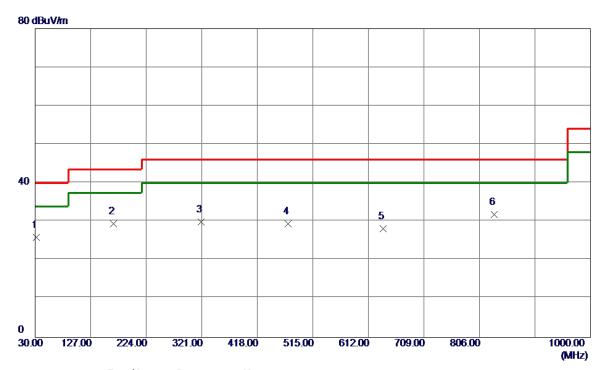
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	32.9100	41.69	-14.89	26. 80	40.00	-13. 20	Peak	
2	99.8399	39. 50	-17. 52	21.98	43.50	-21.52	Peak	
3	242. 4300	36. 25	-14.49	21.76	46.00	-24. 24	Peak	
4	320.0300	35. 29	-12.48	22.81	46.00	-23. 19	Peak	
5	606. 1800	31. 21	-6. 30	24.91	46.00	-21.09	Peak	
6	874.8700	30. 37	0. 51	30.88	46.00	-15. 12	Peak	

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Horizontal



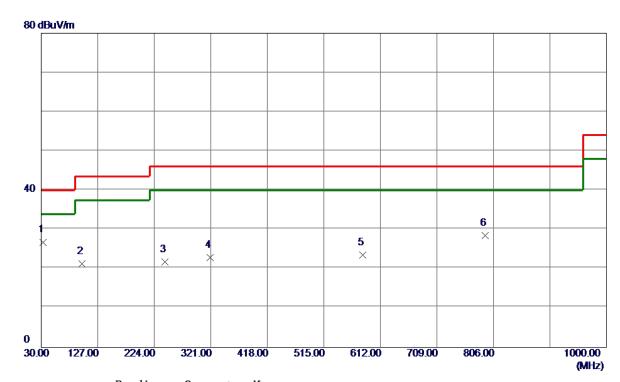
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	40.90	-15.04	25. 86	40.00	-14.14	Peak	
2 *	166.7700	42.00	-12. 53	29. 47	43.50	-14.03	Peak	
3	320.0300	42.44	-12.48	29. 96	46.00	-16.04	Peak	
4	471.3500	38.86	-9.42	29.44	46.00	-16. 56	Peak	
5	638. 1900	33.88	-5. 70	28. 18	46.00	-17.82	Peak	
6	832. 1900	32. 33	-0.48	31.85	46.00	-14. 15	Peak	

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Vertical



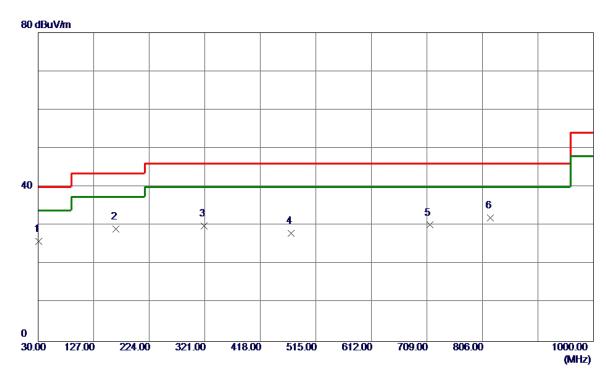
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	32.9100	41.69	-14.89	26. 80	40.00	-13. 20	Peak	
2	99.8399	38.83	-17. 52	21. 31	43.50	-22. 19	Peak	
3	242. 4300	36. 25	-14.49	21.76	46.00	-24.24	Peak	
4	320.0300	35. 29	-12.48	22.81	46.00	-23. 19	Peak	
5	581. 9300	30.40	-6. 89	23. 51	46.00	-22.49	Peak	
6	792. 4200	29. 96	-1. 52	28.44	46.00	-17. 56	Peak	

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Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	30. 9700	41. 10	-15. 14	25. 96	40.00	-14.04	Peak	
2	165. 8000	41.69	-12. 58	29. 11	43.50	-14.39	Peak	
3	320.0300	42.42	-12.48	29. 94	46.00	-16.06	Peak	
4	471. 3500	37.45	-9.42	28. 03	46.00	-17.97	Peak	
5	713.8500	33.69	-3. 53	30. 16	46.00	-15.84	Peak	
6 *	819. 5800	32. 90	-0.83	32. 07	46.00	-13. 93	Peak	

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Vertical dBuV/m 80.0 70 60 50 40 5 X 2 3 X ź 20 10 0.0 1000.00 MHz 30.000 127.00 224.00 321.00 418.00 515.00 612.00 709.00 806.00

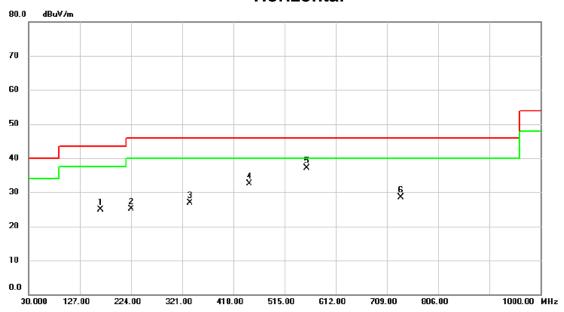
No. MI	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	62.980	47.66	-14.82	32.84	40.00	-7.16	peak	
2	167.740	35.14	-12.47	22.67	43.50	-20.83	peak	
3	195.870	37.01	-13.38	23.63	43.50	-19.87	peak	
4	338.460	33.79	-12.16	21.63	46.00	-24.37	peak	
5	491.720	38.24	-8.93	29.31	46.00	-16.69	peak	
6	587.750	45.35	-6.73	38.62	46.00	-7.38	peak	

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Horizontal



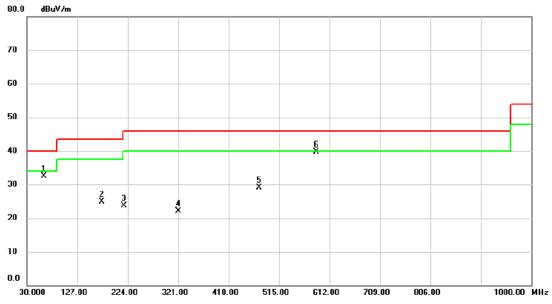
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	165.800	37.58	-12.58	25.00	43.50	-18.50	peak	
2	224.000	39.04	-13.99	25.05	46.00	-20.95	peak	
3	335.550	39.05	-12.21	26.84	46.00	-19.16	peak	
4	448.070	42.41	-10.00	32.41	46.00	-13.59	peak	
5 *	557.680	44.56	-7.52	37.04	46.00	-8.96	peak	
6	735.190	31.31	-2.89	28.42	46.00	-17.58	peak	

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Vertical



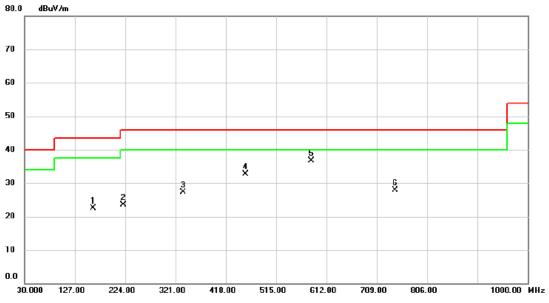
No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	62.980	47.41	-14.82	32.59	40.00	-7.41	peak	
2	174.530	37.11	-12.20	24.91	43.50	-18.59	peak	
3	216.240	37.60	-13.93	23.67	46.00	-22.33	peak	
4	321.000	34.55	-12.47	22.08	46.00	-23.92	peak	
5	476.200	38.39	-9.30	29.09	46.00	-16.91	peak	
6 *	586.780	46.54	-6.77	39.77	46.00	-6.23	peak	

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Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	162.890	35.36	-12.76	22.60	43.50	-20.90	peak	
2	221.090	37.43	-13.93	23.50	46.00	-22.50	peak	
3	335.550	39.47	-12.21	27.26	46.00	-18.74	peak	
4	455.830	42.44	-9.80	32.64	46.00	-13.36	peak	
5 *	582.900	43.63	-6.86	36.77	46.00	-9.23	peak	
6	743.920	30.51	-2.63	27.88	46.00	-18.12	peak	





Vertical dBuV/m 80.0 70 60 50 40 30 Ş X 2 X 4 X 20 10 0.0 1000.00 MHz 30.000 127.00 224.00 321.00 418.00 515.00 612.00 709.00 806.00

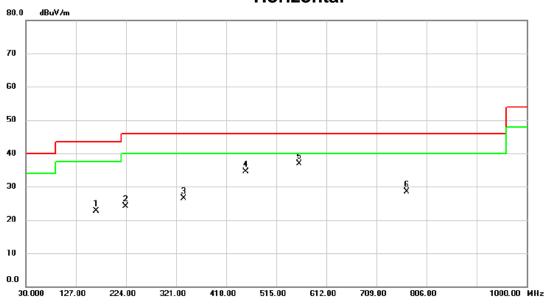
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	62.980	47.32	-14.82	32.50	40.00	-7.50	peak	
2	163.860	36.26	-12.70	23.56	43.50	-19.94	peak	
3	216.240	36.62	-13.93	22.69	46.00	-23.31	peak	
4	355.920	32.09	-11.89	20.20	46.00	-25.80	peak	
5	448.070	37.54	-10.00	27.54	46.00	-18.46	peak	
6 *	588.720	46.19	-6.71	39.48	46.00	-6.52	peak	

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Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	165.800	35.21	-12.58	22.63	43.50	-20.87	peak	
2	223.030	38.13	-13.98	24.15	46.00	-21.85	peak	
3	335.550	38.71	-12.21	26.50	46.00	-19.50	peak	
4	455.830	44.30	-9.80	34.50	46.00	-11.50	peak	
5 *	559.620	44.47	-7.47	37.00	46.00	-9.00	peak	
6	767.200	30.66	-2.06	28.60	46.00	-17.40	peak	

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321.00

418.00

Vertical 80.0 dBuV/m 70 60 50 40 30 X 3 * 20 10 0.0 1000.00 MHz 30.000 127.00 224.00 612.00

No. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	62.980	47.15	-14.82	32.33	40.00	-7.67	peak	
2	110.510	36.15	-16.15	20.00	43.50	-23.50	peak	
3	163.860	37.00	-12.70	24.30	43.50	-19.20	peak	
4	216.240	37.83	-13.93	23.90	46.00	-22.10	peak	
5 *	587.750	46.54	-6.73	39.81	46.00	-6.19	peak	
6	615.880	44.50	-6.13	38.37	46.00	-7.63	peak	

515.00

709.00

806.00

Report No.: BTL-FICP-1711C205 Page 51 of 108



30.000

127.00

224.00

321.00

418.00



1000.00 MHz

Test Mode: TX 2402MHz _CH00_1Mbps_ AVI1010NA _ANT2(6008ANT)

No. M	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	165.800	35.55	-12.58	22.97	43.50	-20.53	peak	
2	216.240	38.82	-13.93	24.89	46.00	-21.11	peak	
3	363.680	37.96	-11.80	26.16	46.00	-19.84	peak	
4	455.830	43.53	-9.80	33.73	46.00	-12.27	peak	
5 *	568.350	45.32	-7.24	38.08	46.00	-7.92	peak	
6	810.850	30.90	-1.06	29.84	46.00	-16.16	peak	

515.00

612.00

709.00

806.00

Report No.: BTL-FICP-1711C205 Page 52 of 108



30.000

127.00

224.00

321.00

418.00



1000.00 MHz

Test Mode: TX 2440MHz _CH19_1Mbps_ AVI1010NA _ANT2(6008ANT)

Vertical 80.0 dBuV/m 70 60 40 20 10 0.0

No. N	Лk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		62.980	47.44	-14.82	32.62	40.00	-7.38	peak	
2	1	64.830	35.77	-12.65	23.12	43.50	-20.38	peak	
3	2	16.240	37.63	-13.93	23.70	46.00	-22.30	peak	
4	3	27.790	33.49	-12.34	21.15	46.00	-24.85	peak	
5	4	68.440	38.23	-9.49	28.74	46.00	-17.26	peak	
6 *	5	85.810	46.72	-6.79	39.93	46.00	-6.07	peak	

515.00

612.00

709.00

806.00

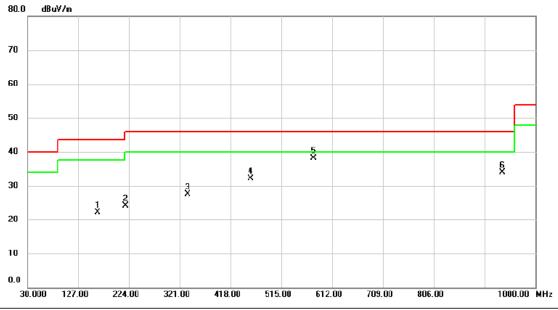
Report No.: BTL-FICP-1711C205 Page 53 of 108





Test Mode: TX 2440MHz _CH19_1Mbps_ AVI1010NA _ANT2(6008ANT)

Horizontal



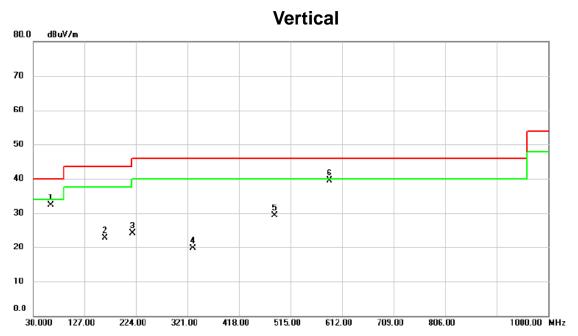
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	163.860	34.74	-12.70	22.04	43.50	-21.46	peak	
2	216.240	38.06	-13.93	24.13	46.00	-21.87	peak	
3	335.550	39.62	-12.21	27.41	46.00	-18.59	peak	
4	455.830	41.98	-9.80	32.18	46.00	-13.82	peak	
5 *	576.110	45.08	-7.04	38.04	46.00	-7.96	peak	
6	936.950	32.20	1.74	33.94	46.00	-12.06	peak	

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Test Mode: TX 2480MHz _CH39_1Mbps_ AVI1010NA _ANT2(6008ANT)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		62.980	47.04	-14.82	32.22	40.00	-7.78	peak	
2		164.830	35.42	-12.65	22.77	43.50	-20.73	peak	
3		216.240	37.94	-13.93	24.01	46.00	-21.99	peak	
4		330.700	32.10	-12.30	19.80	46.00	-26.20	peak	
5		483.960	38.38	-9.11	29.27	46.00	-16.73	peak	
6	*	587.750	46.29	-6.73	39.56	46.00	-6.44	peak	

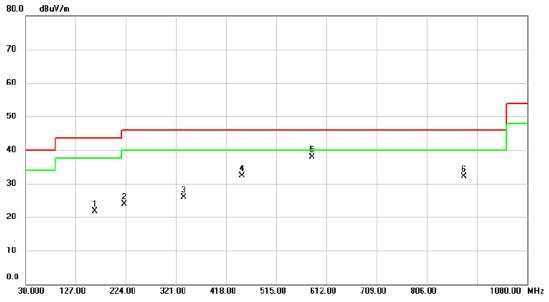
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Test Mode: TX 2480MHz _CH39_1Mbps_ AVI1010NA _ANT2(6008ANT)

Horizontal



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	163.860	34.45	-12.70	21.75	43.50	-21.75	peak	
2	221.090	37.91	-13.93	23.98	46.00	-22.02	peak	
3	335.550	38.16	-12.21	25.95	46.00	-20.05	peak	
4	448.070	42.29	-10.00	32.29	46.00	-13.71	peak	
5 *	583.870	44.69	-6.84	37.85	46.00	-8.15	peak	
6	877.780	31.45	0.58	32.03	46.00	-13.97	peak	

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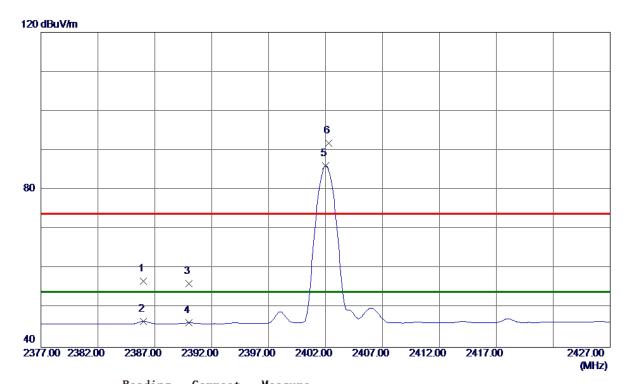
APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

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Vertical



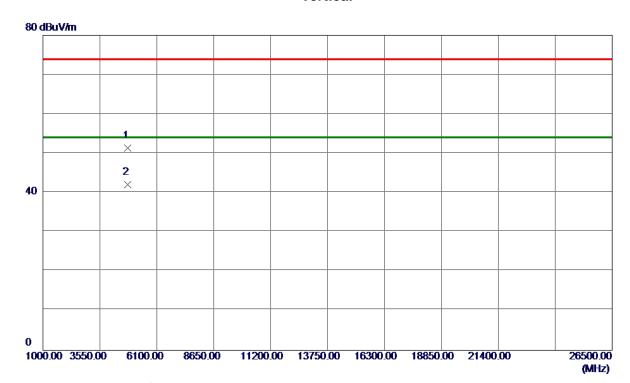
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2386.0000	23.72	33. 04	56. 76	74.00	-17.24	Peak	
2	2386.0000	13. 59	33. 04	46.63	54.00	-7. 37	AVG	
3	2390.0000	23. 15	33.06	56. 21	74.00	-17.79	Peak	
4	2390.0000	13. 17	33. 06	46. 23	54.00	-7.77	AVG	
5 *	2402.0000	52. 96	33. 10	86. 06	54.00	32.06	AVG	No Limit
6	2402. 3000	58. 68	33. 10	91.78	74.00	17. 78	Peak	No Limit

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Vertical



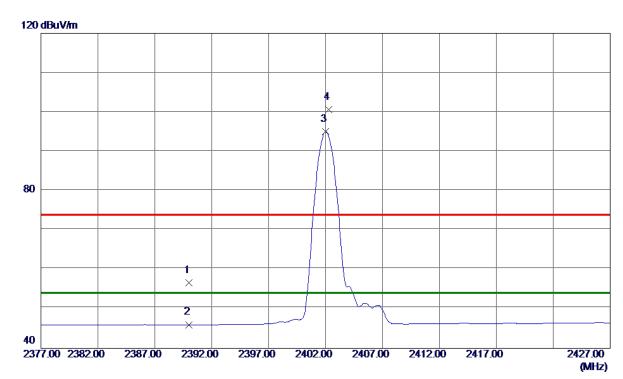
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4803. 5450	44.81	6. 58	51. 39	74.00	-22.61	Peak	
2 *	4803. 9450	35. 52	6. 59	42. 11	54.00	-11.89	AVG	

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Horizontal



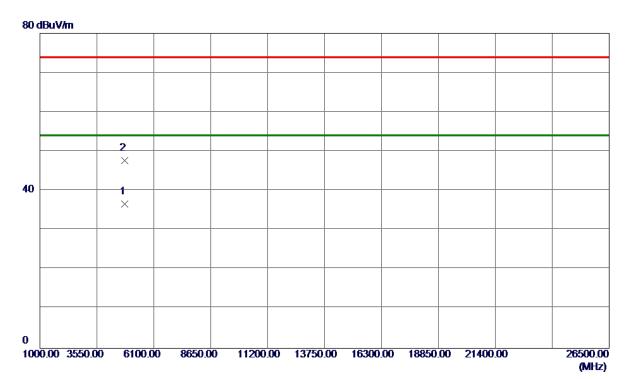
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	23. 54	33. 06	56. 60	74.00	-17.40	Peak	
2	2390.0000	12.94	33. 06	46.00	54.00	-8.00	AVG	
3 *	2402.0000	61.88	33. 10	94. 98	54.00	40.98	AVG	No Limit
4	2402. 3000	67. 57	33. 10	100. 67	74.00	26. 67	Peak	No Limit

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Horizontal



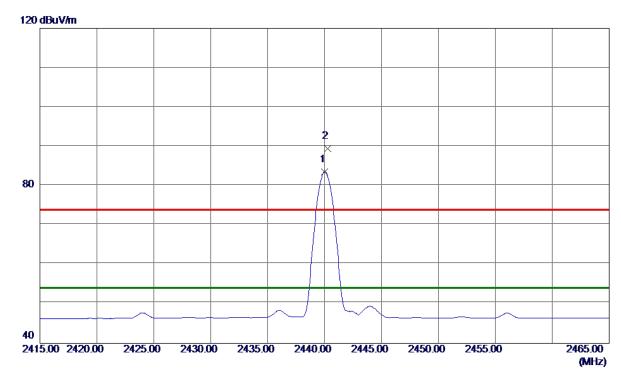
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4803.9750	30. 11	6. 59	36. 70	54.00	-17.30	AVG	
2	4804. 4950	41.07	6. 59	47.66	74.00	-26. 34	Peak	

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Vertical



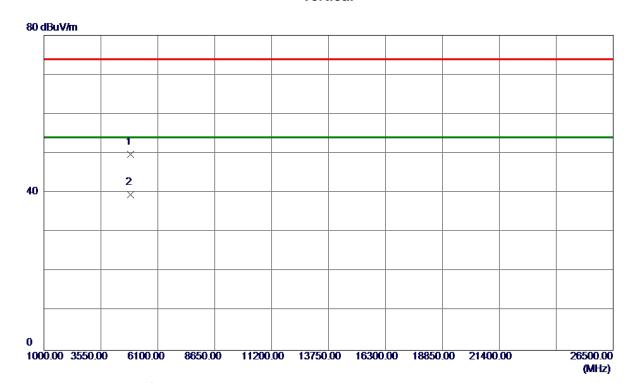
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2440.0000	50. 30	33. 24	83. 54	54.00	29.54	AVG	No Limit
2	2440. 2500	56. 12	33. 25	89. 37	74.00	15. 37	Peak	No Limit

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Vertical



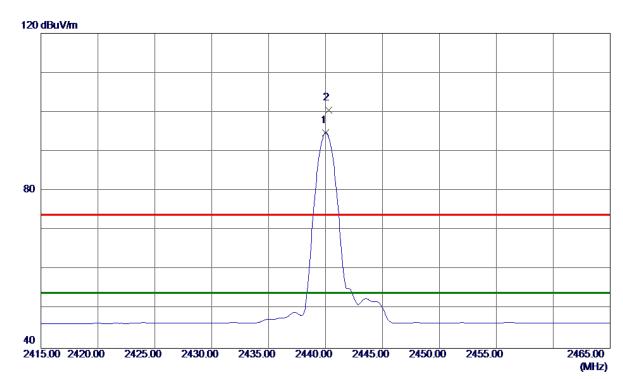
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4879.5000	42.83	6.86	49.69	74.00	-24.31	Peak	
2 *	4879. 9500	32.65	6. 86	39. 51	54.00	-14.49	AVG	

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Horizontal



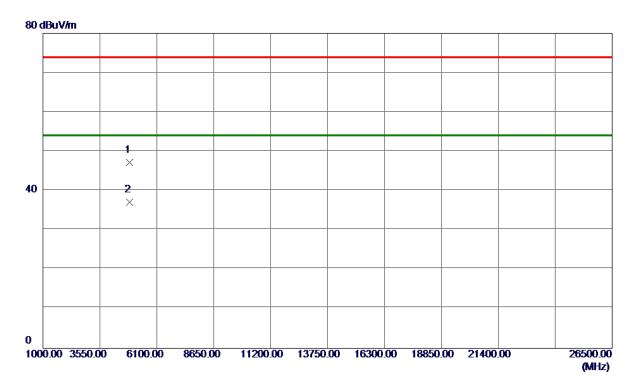
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2440.0000	61. 51	33. 24	94.75	54.00	40.75	AVG	No Limit
2	2440. 2500	67. 24	33. 25	100. 49	74.00	26. 49	Peak	No Limit

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Horizontal



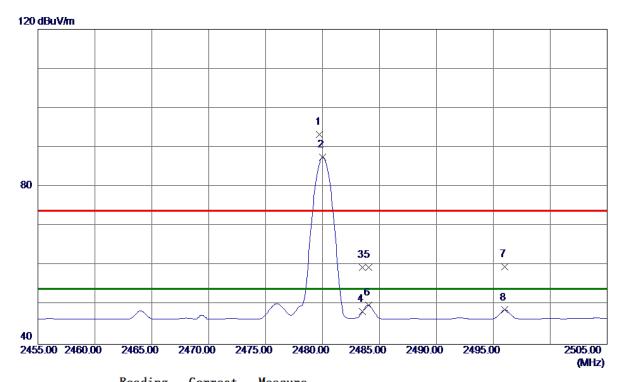
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4879.6400	40.40	6.86	47. 26	74.00	-26.74	Peak	
2 *	4879. 9150	30. 22	6. 86	37.08	54.00	-16. 92	AVG	

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Vertical



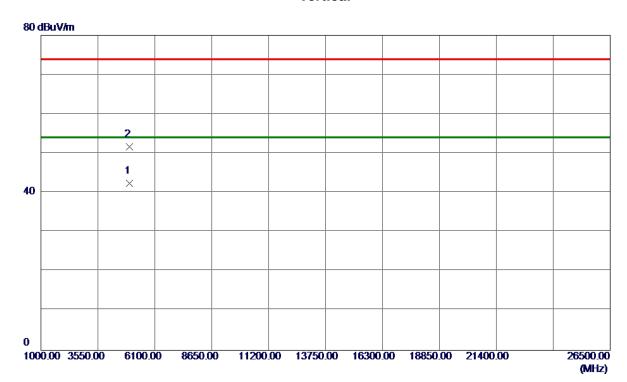
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2479.7500	59.82	33. 39	93. 21	74.00	19. 21	Peak	No Limit
2 *	2480.0000	54.08	33. 39	87.47	54.00	33. 47	AVG	No Limit
3	2483. 5000	26. 12	33.41	59. 53	74.00	-14.47	Peak	
4	2483. 5000	14.86	33.41	48. 27	54.00	-5. 73	AVG	
5	2484.0500	26. 15	33.41	59. 56	74.00	-14.44	Peak	
6	2484.0500	16. 51	33.41	49.92	54.00	-4.08	AVG	
7	2496. 0000	26. 23	33. 45	59. 68	74.00	-14.32	Peak	
8	2496.0000	15. 27	33. 45	48.72	54.00	-5. 28	AVG	

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Vertical



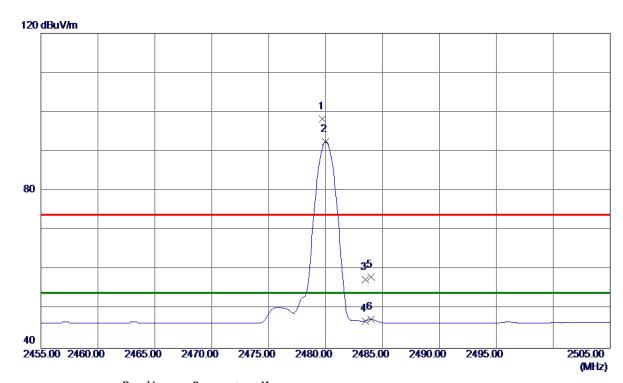
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4959. 9650	35. 25	7. 15	42.40	54.00	-11.60	AVG	
2	4960. 5250	44. 58	7. 15	51.73	74.00	-22. 27	Peak	

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Horizontal



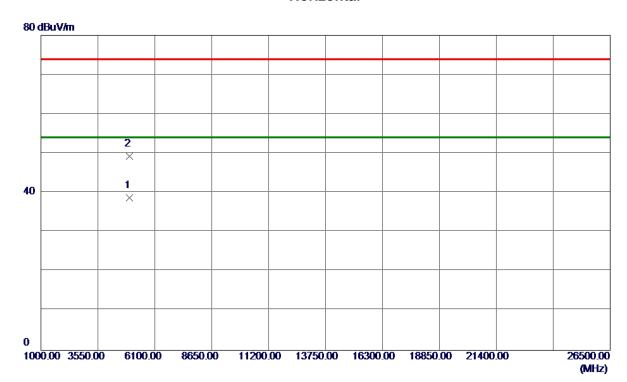
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2479.7500	64.79	33. 39	98. 18	74.00	24. 18	Peak	No Limit
2 *	2480.0000	59.06	33. 39	92.45	54.00	38. 45	AVG	No Limit
3	2483. 5000	24.01	33.41	57.42	74.00	-16. 58	Peak	
4	2483. 5000	13. 52	33.41	46. 93	54.00	-7.07	AVG	
5	2484.0000	24. 63	33. 41	58. 04	74.00	-15. 96	Peak	
6	2484.0000	13. 94	33. 41	47. 35	54.00	-6. 65	AVG	
6	2484. 0000	13. 94	33. 41	47.35	54.00	-6. 65	AVG	

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Horizontal



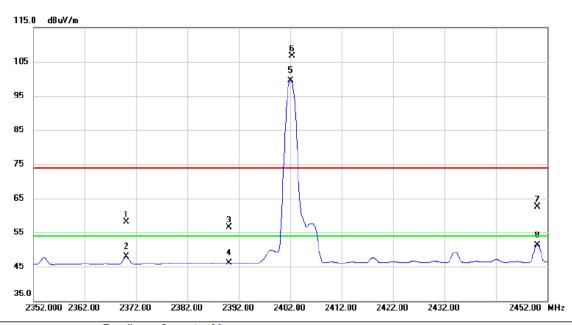
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4959.9500	31. 59	7. 15	38. 74	54.00	-15. 26	AVG	
2	4960. 4100	42.08	7. 15	49. 23	74.00	-24.77	Peak	

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Vertical



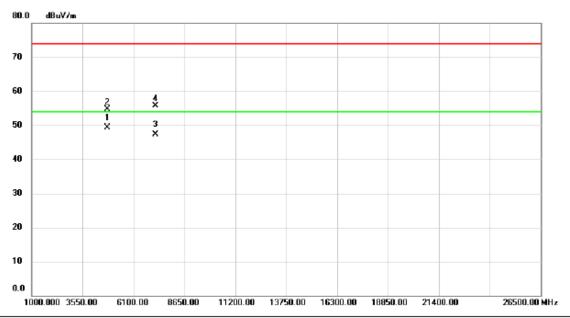
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2370.100	25.11	32.98	58.09	74.00	-15.91	peak	
2		2370.100	14.93	32.98	47.91	54.00	-6.09	AVG	
3		2390.000	23.39	33.05	56.44	74.00	-17.56	peak	
4		2390.000	13.09	33.05	46.14	54.00	-7.86	AVG	
5	*	2402.100	66.37	33.11	99.48	54.00	45.48	AVG	No Limit
6	X	2402.300	73.58	33.11	106.69	74.00	32.69	peak	No Limit
7		2450.100	29.15	33.28	62.43	74.00	-11.57	peak	
8		2450.100	17.96	33.28	51.24	54.00	-2.76	AVG	

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Vertical



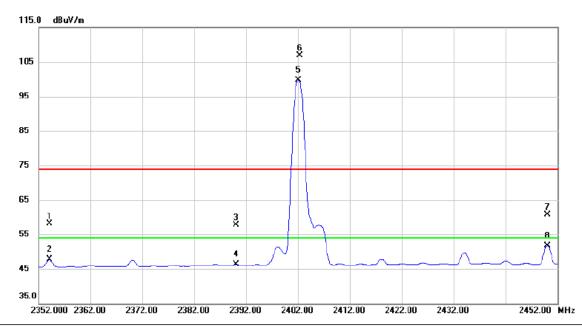
No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4803.996	42.64	6.59	49.23	54.00	-4.77	AVG	
2		4804.484	48.02	6.59	54.61	74.00	-19.39	peak	
3		7206.578	34.09	13.14	47.23	54.00	-6.77	AVG	
4		7206.742	42.58	13.14	55.72	74.00	-18.28	peak	

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Horizontal



No.	Mk	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2354.100	25.27	32.92	58.19	74.00	-15.81	peak	
2		2354.100	14.74	32.92	47.66	54.00	-6.34	AVG	
3		2390.000	24.59	33.05	57.64	74.00	-16.36	peak	
4		2390.000	13.18	33.05	46.23	54.00	-7.77	AVG	
5	*	2402.000	66.66	33.11	99.77	54.00	45.77	AVG	No Limit
6	X	2402.300	73.87	33.11	106.98	74.00	32.98	peak	No Limit
7		2450.100	27.41	33.28	60.69	74.00	-13.31	peak	
8		2450.100	18.36	33.28	51.64	54.00	-2.36	AVG	

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Horizontal



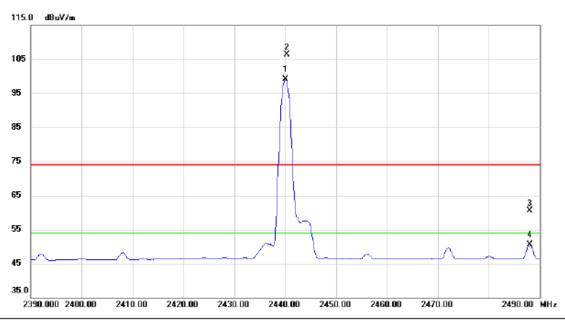
No	. M	1k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4	803.944	39.74	6.59	46.33	54.00	-7.67	AVG	
2		4	804.532	45.63	6.59	52.22	74.00	-21.78	peak	
3		7	206.636	30.03	13.14	43.17	54.00	-10.83	AVG	
4		7	206.764	39.46	13.14	52.60	74.00	-21.40	peak	

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Vertical



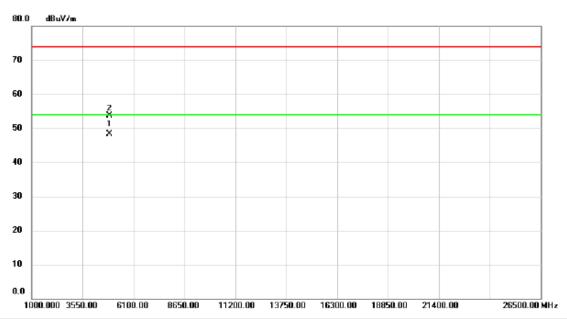
No. M	۱k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2	2440.000	65.78	33.24	99.02	54.00	45.02	AVG	No Limit
2 X	2	440.300	72.98	33.24	106.22	74.00	32.22	peak	No Limit
3	2	488.100	27.03	33.43	60.46	74.00	-13.54	peak	
4	2	488.100	17.00	33.43	50.43	54.00	-3.57	AVG	

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Vertical



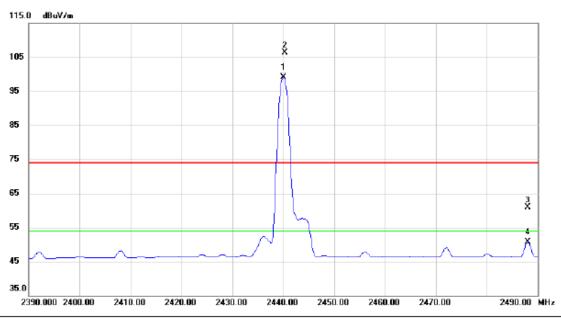
No.	Mk.	Freq.	Reading Level		Measure- ment		Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	* 4	1879.966	41.35	6.86	48.21	54.00	-5.79	AVG	
2	4	1880.594	46.89	6.87	53.76	74.00	-20.24	peak	

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Horizontal



No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2440.000	65.91	33.24	99.15	54.00	45.15	AVG	No Limit
2 X	2440.300	73.11	33.24	106.35	74.00	32.35	peak	No Limit
3	2488.100	27.50	33.43	60.93	74.00	-13.07	peak	
4	2488.100	17.19	33.43	50.62	54.00	-3.38	AVG	

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Horizontal



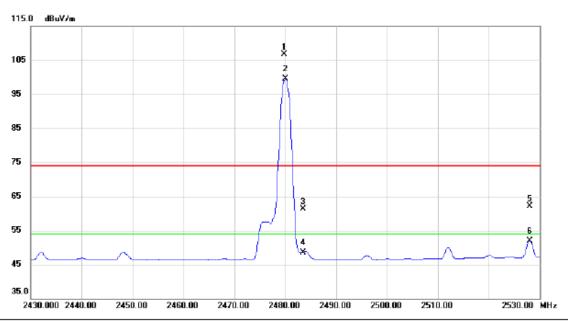
No.	Mk.	Freq.	Reading Level		Measure- ment		Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4879.930	36.34	6.86	43.20	54.00	-10.80	AVG	
2		4880.580	42.87	6.87	49.74	74.00	-24.26	peak	

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Vertical



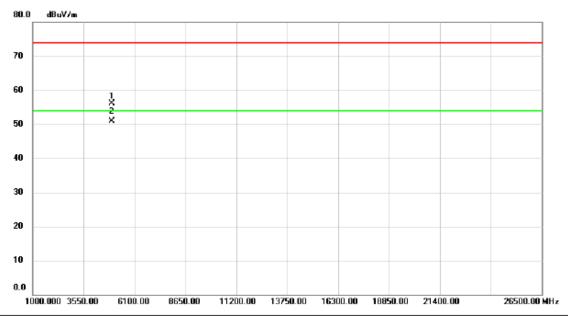
	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	Х	2479.800	73.30	33.40	106.70	74.00	32.70	peak	No Limit
	2	*	2480.000	66.14	33.40	99.54	54.00	45.54	AVG	No Limit
	3		2483.500	27.84	33.41	61.25	74.00	-12.75	peak	
_	4		2483.500	15.15	33.41	48.56	54.00	-5.44	AVG	
_	5		2528.100	28.62	33.58	62.20	74.00	-11.80	peak	
	6		2528.100	18.32	33.58	51.90	54.00	-2.10	AVG	

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Vertical



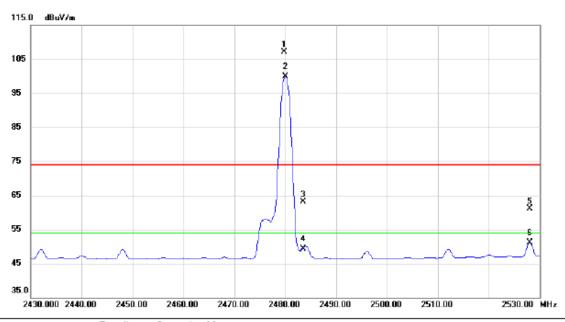
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4	959.498	48.99	7.15	56.14	74.00	-17.86	peak	
2 1	* 4	959.922	43.68	7.15	50.83	54.00	-3.17	AVG	

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Horizontal



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	X 2	2479.800	73.70	33.40	107.10	74.00	33.10	peak	No Limit
-	2	* 1	2480.000	66.56	33.40	99.96	54.00	45.96	AVG	No Limit
	3	2	2483.500	29.79	33.41	63.20	74.00	-10.80	peak	
-	4	- 2	2483.500	15.99	33.41	49.40	54.00	-4.60	AVG	
-	5	- 1	2528.100	27.44	33.58	61.02	74.00	-12.98	peak	
-	6	- 2	2528.100	17.43	33.58	51.01	54.00	-2.99	AVG	
-										

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Horizontal



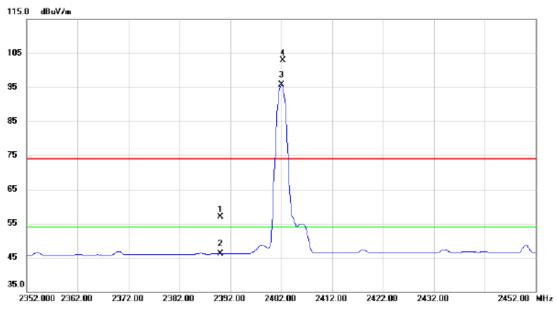
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4	1959.578	45.55	7.15	52.70	74.00	-21.30	peak	
2	* 4	1959.944	39.97	7.15	47.12	54.00	-6.88	AVG	

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Vertical



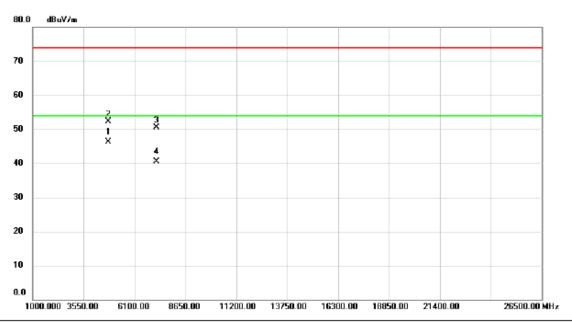
No.	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.83	33.05	56.88	74.00	-17.12	peak	
2		2390.000	13.06	33.05	46.11	54.00	-7.89	AVG	
3	*	2402.100	62.62	33.11	95.73	54.00	41.73	AVG	No Limit
4	Х	2402.300	69.70	33.11	102.81	74.00	28.81	peak	No Limit

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Vertical



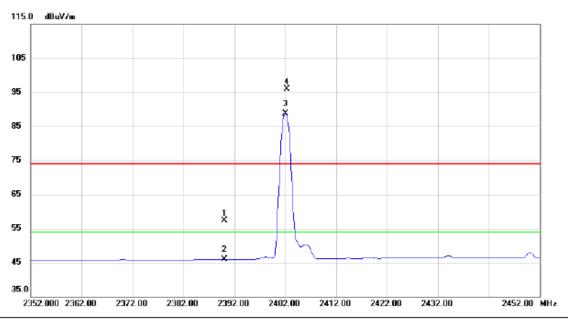
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4803.914	39.68	6.59	46.27	54.00	-7.73	AVG	
2		4804.508	45.62	6.59	52.21	74.00	-21.79	peak	
3		7205.520	37.28	13.13	50.41	74.00	-23.59	peak	
4		7206.566	27.45	13.14	40.59	54.00	-13.41	AVG	

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Horizontal



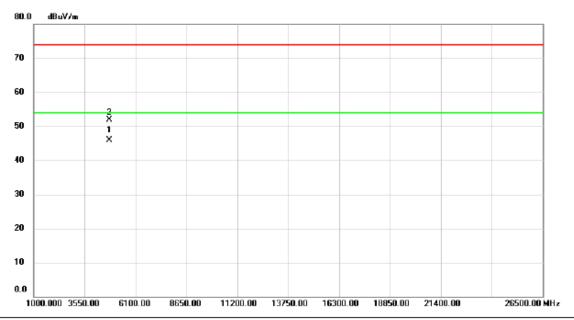
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1		2390.000	24.25	33.05	57.30	74.00	-16.70	peak		
2		2390.000	12.86	33.05	45.91	54.00	-8.09	AVG		
3	×	2402.100	55.64	33.11	88.75	54.00	34.75	AVG	No Limit	
4	X	2402.300	62.85	33.11	95.96	74.00	21.96	peak	No Limit	

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Horizontal



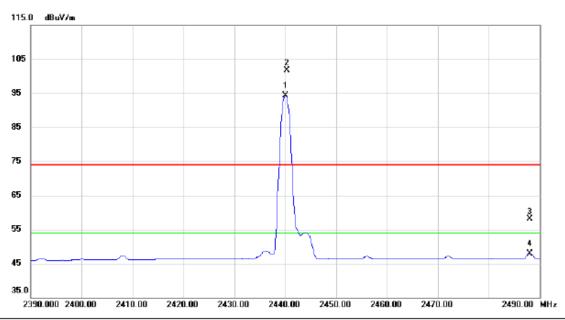
	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1	*	4803.926	39.38	6.59	45.97	54.00	-8.03	AVG	
	2	4	4804.498	45.30	6.59	51.89	74.00	-22.11	peak	

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Vertical



No. MI	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2440.000	61.15	33.24	94.39	54.00	40.39	AVG	No Limit
2 X	2440.300	68.38	33.24	101.62	74.00	27.62	peak	No Limit
3	2488.100	24.67	33.43	58.10	74.00	-15.90	peak	
4	2488.100	14.57	33.43	48.00	54.00	-6.00	AVG	

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Vertical



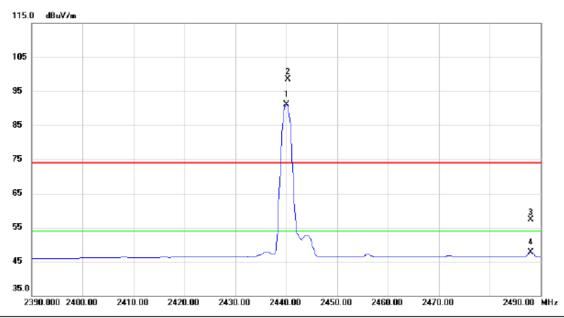
No.	Mk.	Freq.	Reading Level		Measure- ment		Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4879.948	43.72	6.86	50.58	54.00	-3.42	AVG	
2		4880.496	49.15	6.86	56.01	74.00	-17.99	peak	

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Horizontal



No. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2440.000	57.93	33.24	91.17	54.00	37.17	AVG	No Limit
2 X	2440.300	65.27	33.24	98.51	74.00	24.51	peak	No Limit
3	2488.100	23.89	33.43	57.32	74.00	-16.68	peak	
4	2488.100	14.23	33.43	47.66	54.00	-6.34	AVG	

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Horizontal



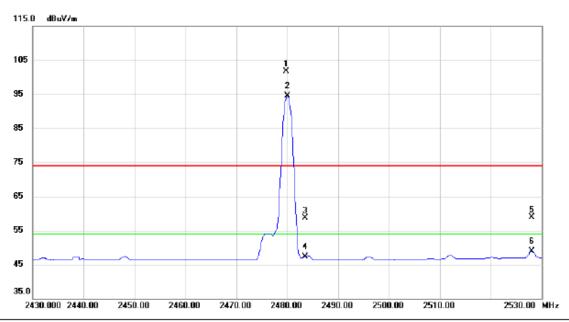
ı	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	4	1879.920	37.46	6.86	44.32	54.00	-9.68	AVG	
	2	4	1880.516	43.99	6.86	50.85	74.00	-23.15	peak	

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Vertical



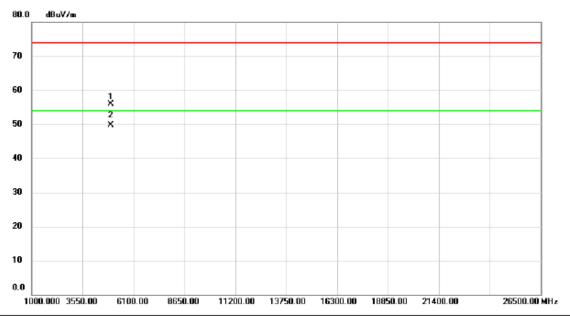
No.	_	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2	X	2479.800	68.26	33.40	101.66	74.00	27.66	peak	No Limit
2	1	k	2480.000	61.08	33.40	94.48	54.00	40.48	AVG	No Limit
3			2483.500	25.34	33.41	58.75	74.00	-15.25	peak	
4			2483.500	13.90	33.41	47.31	54.00	-6.69	AVG	
5			2528.100	25.41	33.58	58.99	74.00	-15.01	peak	
6			2528.100	15.37	33.58	48.95	54.00	-5.05	AVG	

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Vertical



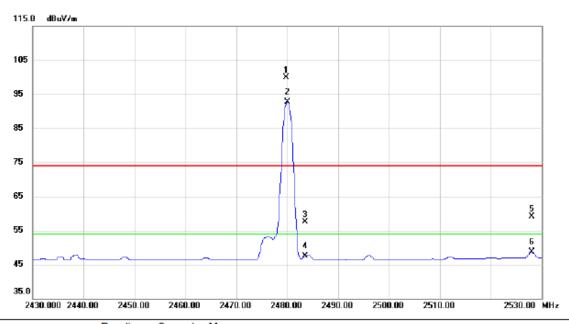
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4	1959.574	48.71	7.15	55.86	74.00	-18.14	peak	
2	* 4	1959.958	42.51	7.15	49.66	54.00	-4.34	AVG	

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Horizontal



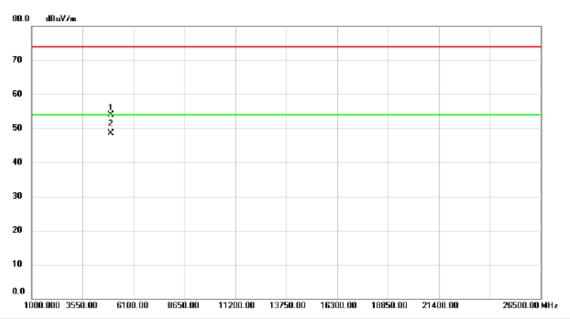
	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	X :	2479.800	66.60	33.40	100.00	74.00	26.00	peak	No Limit
-	2	*	2480.000	59.39	33.40	92.79	54.00	38.79	AVG	No Limit
	3		2483.500	24.08	33.41	57.49	74.00	-16.51	peak	
	4		2483.500	14.08	33.41	47.49	54.00	-6.51	AVG	
-	5		2528.100	25.57	33.58	59.15	74.00	-14.85	peak	
	6		2528.100	15.10	33.58	48.68	54.00	-5.32	AVG	
-										

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Horizontal



No.	Mk.	Freq.	Reading Level		Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4959.688	46.76	7.15	53.91	74.00	-20.09	peak	
2	*	4959.912	41.26	7.15	48.41	54.00	-5.59	AVG	

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APPENDIX E - BANDWIDTH

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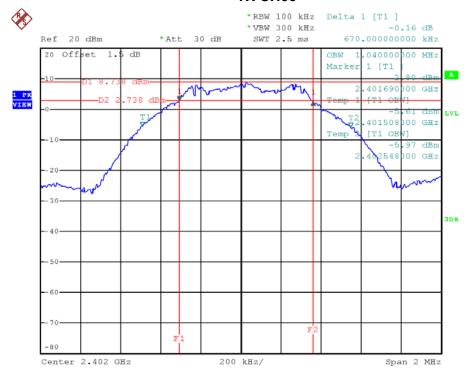




Test Mode: TX Mode

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.670	1.040	500	Pass
2440	0.670	1.036	500	Pass
2480	0.698	1.040	500	Pass

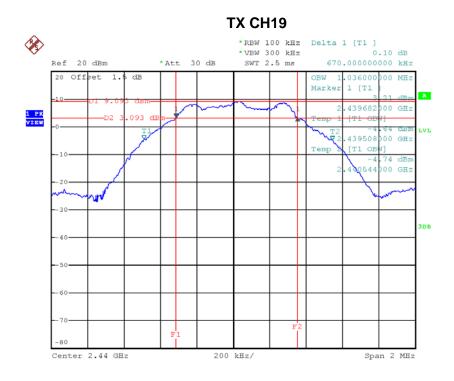
TX CH00



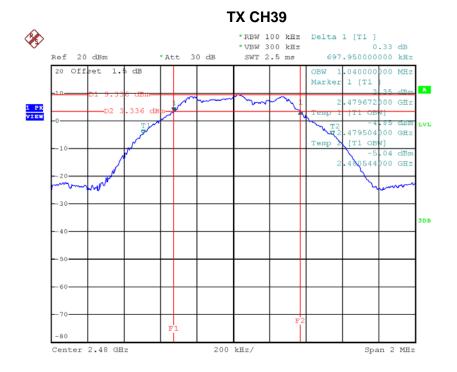
Date: 12.DEC.2017 17:51:23







Date: 12.DEC.2017 17:52:45



Date: 12.DEC.2017 17:54:08





APPENDIX F - MAXIMUM OUTPUT POWER TEST

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Test Mode: CH00, CH19, CH39 - 1Mbps

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	9.18	0.0083	30.00	1.00	Pass
2440	9.51	0.0089	30.00	1.00	Pass
2480	9.72	0.0094	30.00	1.00	Pass

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APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION

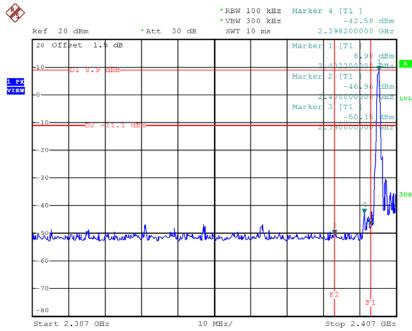
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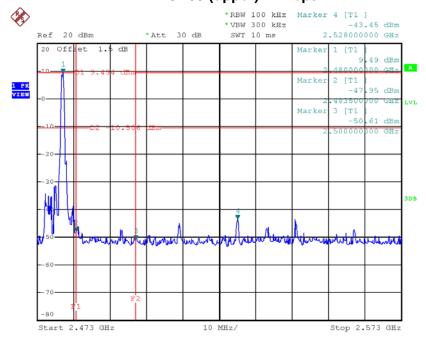
Test Mode: CH00, CH19, CH39 - 1Mbps

CH00 (Lower) - 1Mbps



Date: 12.DEC.2017 17:51:31

CH39 (upper) - 1Mbps

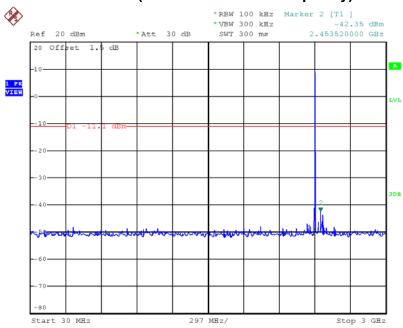


Date: 12.DEC.2017 17:54:16



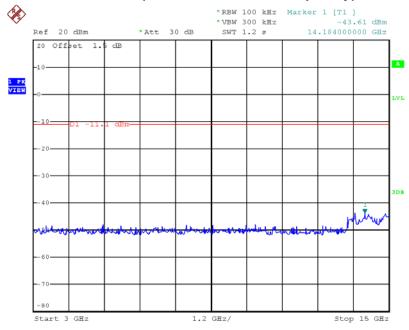






Date: 12.DEC.2017 17:51:45

CH00 (10 Harmonic of the frequency) 2

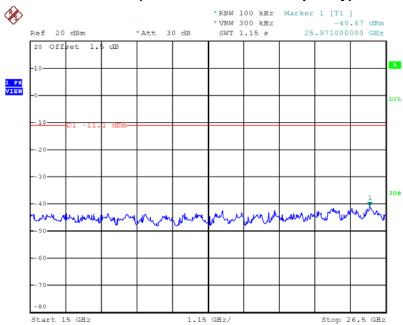


Date: 12.DEC.2017 17:51:53



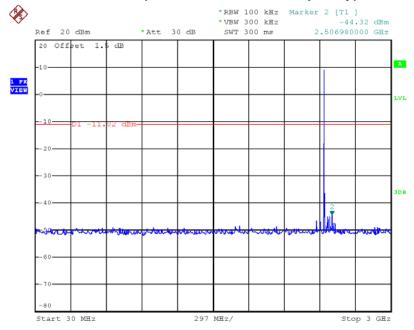






Date: 12.DEC.2017 17:52:01

CH19 (10 Harmonic of the frequency) 1

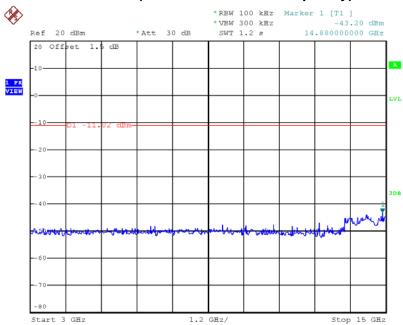


Date: 12.DEC.2017 17:53:07



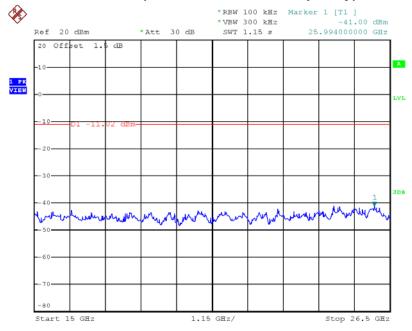






Date: 12.DEC.2017 17:53:15

CH19 (10 Harmonic of the frequency) 3

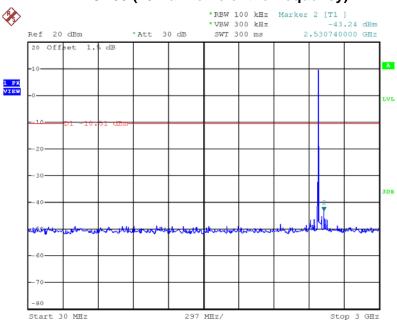


Date: 12.DEC.2017 17:53:23



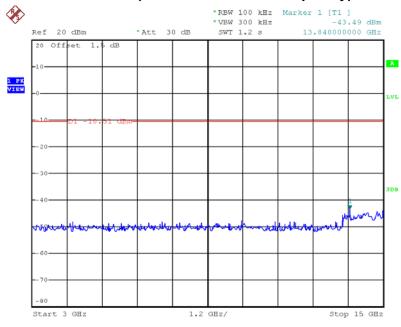






Date: 12.DEC.2017 17:54:30

CH39 (10 Harmonic of the frequency) 2

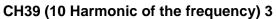


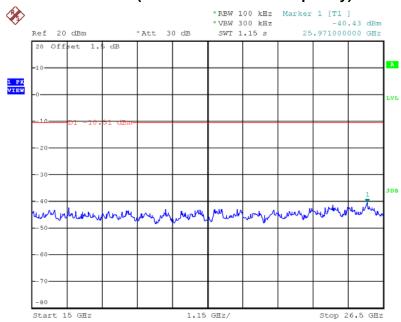
Date: 12.DEC.2017 17:54:38

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Date: 12.DEC.2017 17:54:46

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APPENDIX H - POWER SPECTRAL DENSITY TEST						

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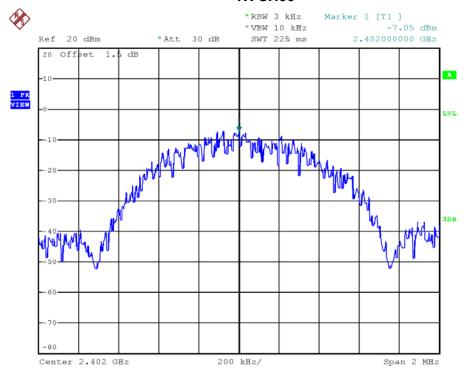




Test Mode: CH00, CH19, CH39 - 1Mbps

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Test Result
2402	-7.050	0.197	8.00	Pass
2440	-6.720	0.213	8.00	Pass
2480	-5.960	0.254	8.00	Pass

TX CH00

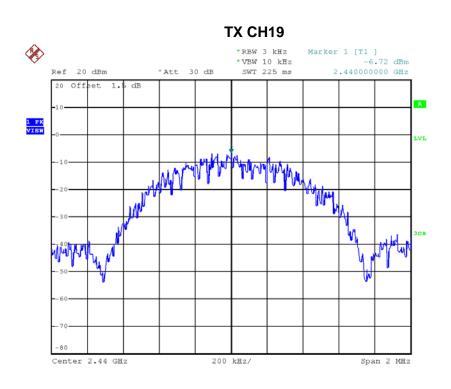


Date: 12.DEC.2017 17:52:07

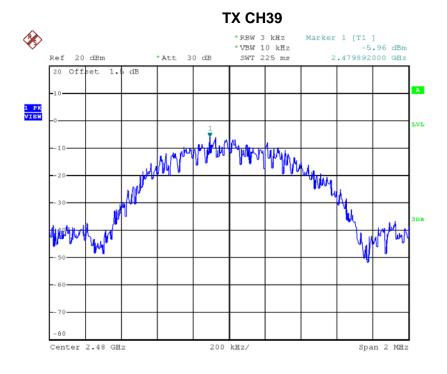
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Date: 12.DEC.2017 17:53:29



Date: 12.DEC.2017 17:54:53