



FCC Radio Test Report

FCC ID: KA2CS8630LHA1

This report concerns: Original Grant

Project No. : 1911H008

Equipment: Full HD Wi-Fi Spotlight Camera

Brand Name : D-Link
Test Model : DCS-8630LH
Series Model : DCS-8627LH

Applicant : DCS-8627LH : D-Link Corporation

Address : No.289, Sinhu 3rd Rd, Neihu District, Taipei 114, Taiwan, R.O.C

Manufacturer : D-Link Corporation

Address : No.289, Sinhu 3rd Rd, Neihu District, Taipei 114, Taiwan, R.O.C

Factory : LEEDARSON LIGHTING CO., LTD.

Address : Xingtai Industrial Zone, Economic Development Zone, Changtai

County, Zhangzhou City, Fujian Province, P.R.China

Date of Receipt : Dec. 30, 2019

Date of Test : Jan. 17, 2020 ~ Mar. 13, 2020

Issued Date : Mar. 31, 2020

Report Version : R00

Test Sample : Engineering Sample No.: SH2019122670-2, SH2019122670-3,

SH2020012018, SH2020030390

Standard(s) : FCC Part15, Subpart C (15.247)

ANSI C63.10-2013

KDB 558074 D01 15.247 Meas Guidance v05r02

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

Prepared by: Iscaa Min

Approved by : Krain Wu

IAC MRA

ACCREDITE

Certificate # 5123.03

Add: No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China

TEL: +86-021-61765666 Web: www.newbtl.com



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The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

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.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.



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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Mar. 31, 2020



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart C (15.247)						
Standard(s) Section	Test Item	Test Result	Judgment	Remark		
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS			
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS			
15.247(a)(2)	Bandwidth	APPENDIX E	PASS			
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS			
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS			
15.247(e)	Power Spectral Density	APPENDIX H	PASS			
15.203	Antenna Requirement		PASS	Note(2)		

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.



1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China.

BTL's Test Firm Registration Number for FCC: 476765

BTL's Designation Number for FCC: CN1241

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U, (dB)
SH-C01	CISPR	150 kHz~30MHz	2.40

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)		
		9 KHz~30 MHz	V	3.79		
		9 KHz~30 MHz	Η	3.57		
		30 MHz~200 MHz	V	4.04		
	SH-CB01 CISPR		30 MHz~200 MHz	Ι	3.76	
SH CB01		200 MHz~1,000 MHz	V	4.24		
311-0601		200 MHz~1,000 MHz	Н	3.84		
		1 GHz~18 GHz	V	4.46		
				1 GHz~18 GHz	Н	4.40
		18 GHz~40 GHz	V	3.95		
		18 GHz~40 GHz	Η	3.95		

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	18°C	56%	AC 120V	Bill Dong
Radiated Emissions-30 MHz to 1GHz	18°C	42%	AC 120V	Vince Zong
Radiated Emissions-Above 1000 MHz	18°C	42%	AC 120V	Vince Zong
Bandwidth	18°C	56%	AC 120V	Bill Dong
Maximum output power & e.i.r.p.	18°C	56%	AC 120V	Bill Dong
Conducted Spurious Emissions	18°C	56%	AC 120V	Bill Dong
Power Spectral Density	18°C	56%	AC 120V	Bill Dong



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Full HD Wi-Fi Spotlight Camera
Brand Name	D-Link
Test Model	DCS-8630LH
Series Model	DCS-8627LH
Model Difference(s)	DCS-8630LH has one more zigbee module than DCS-8627LH.
Software Version	1.00
Hardware Version	A1
Power Source	DC voltage supplied from AC/DC adapter. 1# Brand/Model: APD/WB-12G12FU, WB-12G12R 2# Brand/Model:Keyu/KA1201A-1201000US
Power Rating	1# I/P: 100-240 ~ 50-60Hz 0.3A Max O/P: 12.0V1.0A 2# I/P: 100-240 ~ 50/60Hz 0.4A Max O/P: 12.0V1000mA
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps
Maximum Output Power Non-Beamforming	IEEE 802.11b: 21.36 dBm (0.1368 W) IEEE 802.11g:25.53 dBm (0.3573 W) IEEE 802.11n (HT20): 26.89 dBm (0.4887 W) IEEE 802.11n (HT40): 26.82 dBm (0.4805 W)

Note:

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

2. Channel List:

CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20) CH03 - CH09 for IEEE 802.11n (HT40)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		



3. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Internal	IPEX	2.80	N/A
2	N/A	N/A	Internal	IPEX	2.80	N/A

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, Direction gain = Gant, that is Directional gain =2.80.

4. Table for Antenna Configuration:

Operating Mede	
Operating Mode TX Mode	2TX
802.11b	V (Ant. 1 / Ant. 2)
802.11g	V (Ant. 1 / Ant. 2)
802.11n(20 MHz)	V (Ant. 1 + Ant. 2)
802.11n(40 MHz)	V (Ant. 1 + Ant. 2)



2.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description	
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	TX G Mode Channel 01/06/11	
Mode 3	TX N-20 MHz Mode Channel 01/06/11	
Mode 4	TX N-40 MHz Mode Channel 03/06/09	
Mode 5	TX N40 Mode Channel 06	

Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test		
Final Test Mode:	Description	
Mode 5	TX N40 Mode Channel 06	

Radiated emissions test - Below 1GHz		
Final Test Mode:	Description	
Mode 5	TX N40 Mode Channel 06	

Radiated emissions test- Above 1GHz		
Final Test Mode:	Description	
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	TX G Mode Channel 01/06/11	
Mode 3	TX N-20 MHz Mode Channel 01/06/11	
Mode 4	TX N-40 MHz Mode Channel 03/06/09	

Conducted test		
Final Test Mode:	Description	
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	TX G Mode Channel 01/06/11	
Mode 3	TX N-20 MHz Mode Channel 01/06/11	
Mode 4	TX N-40 MHz Mode Channel 03/06/09	



NOTE:

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

(2) 802.11b mode: CCK (1 Mbps) 802.11g mode: OFDM (6 Mbps)

802.11n HT20 mode : BPSK (13 Mbps) 802.11n HT40 mode : BPSK (27 Mbps)

For radiated emission tests, the highest output powers were set for final test.

- (3) For radiated emission below 1 GHz test, the IEEE 802.11n40 Channel 06 is found to be the worst case and recorded.
- (4) For radiated emission above 1 GHz test, 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.

2.3 PARAMETERS OF TEST SOFTWARE

Non-Beamforming

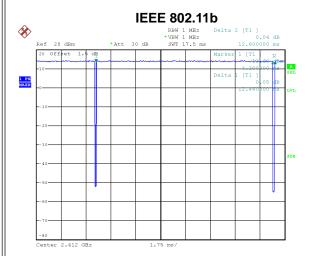
Test Software	SecureCRT		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	40/41	42/40	42/40
IEEE 802.11g	48/47	49/47	47/45
IEEE 802.11n (HT20)	41/41	42/40	43/41
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	46/45	46/45	45/43





2.4 DUTY CYCLE

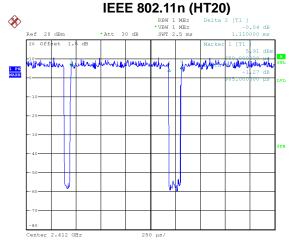
If duty cycle is \geq 98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered. The output power = measured power + duty factor.



IEEE 802.11g

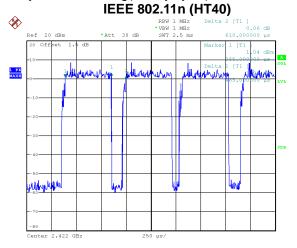
Date: 9.JAN.2020 19:49:21

Duty cycle = 12.460 ms / 12.600 ms = 98.89% Duty Factor = 10 log(1/Duty cycle) = 0.00



Duty cycle = 2.064 ms / 2.200 ms = 93.82% Duty Factor = 10 log(1/Duty cycle) = 0.28

Date: 9.JAN.2020 19:54:58



Date: 9.JAN.2020 20:09:27

Duty cycle = 0.985 ms / 1.110 ms = 88.74%Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.52$, Date: 9.JAN.2020 20:15:37

Duty cycle = 0.465 ms / 0.610 ms = 7

Duty cycle = 0.465 ms / 0.610 ms = 76.23%Duty Factor = $10 \log(1/\text{Duty cycle}) = 1.18$

NOTE:

For IEEE 802.11g and IEEE 802.11n (HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

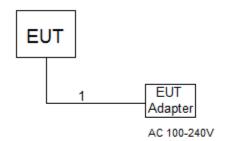
%

For IEEE 802.11n (HT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).



2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Brand	Model/Type No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC	N/A	N/A	1m



3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Fragues of Emission (MIII-)	Limit (d	BμV)
Frequency of Emission (MHz)	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 to 46*
0.50 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

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

3.2 TEST PROCEDURE

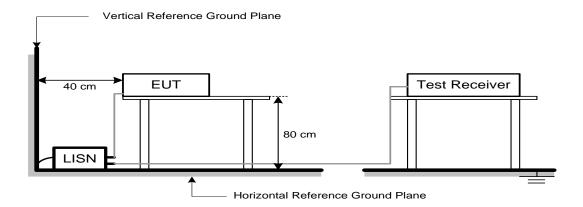
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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.

3.3 DEVIATION FROM TEST STANDARD

No deviation



3.4 TEST SETUP



3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULTS

Please refer to the APPENDIX A.



4. RADIATED EMISSIONS TEST

4.1 LIMIT

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

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

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
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

NOTE:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (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



Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	1 MHz / 3 MHz for Peak,
(Emission in restricted band)	1 MHz / 1/T for Average

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

4.2 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 1 GHz)
- b. The measuring distance of 3 m or 1.5m 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 1 GHz.
- 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 1 GHz)
- 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 1 GHz)
- i. For the actual test configuration, please refer to the related Item -EUT Test Photos.

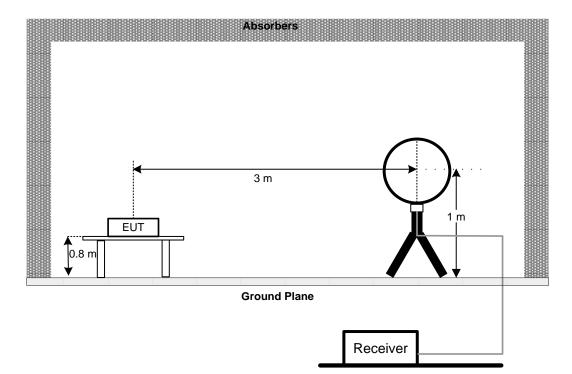
4.3 DEVIATION FROM TEST STANDARD

No deviation

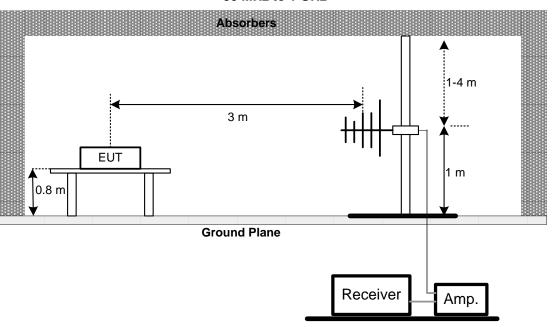


4.4 TEST SETUP

9 kHz-30 MHz

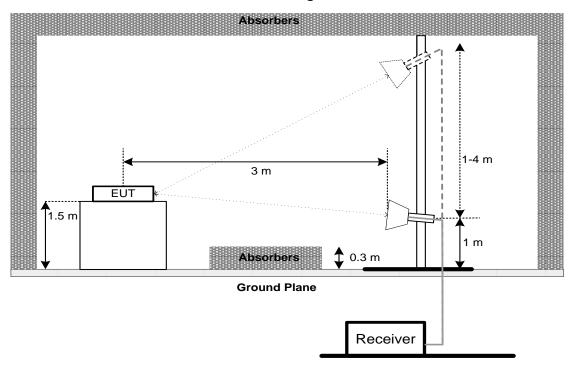


30 MHz to 1 GHz





Above 1 GHz Band edge



4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B

Remark:

- (1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

4.8 TEST RESULTS - ABOVE 1000 MHZ

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.



5. BANDWIDTH TEST

5.1 LIMIT

FCC Part15, Subpart C (15.247)				
Section Test Item Limit				
45.047(-)(0)	6 dB Bandwidth	Minimum 500 kHz		
15.247(a)(2)	99% Emission Bandwidth	-		

5.2 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:

For 6 dB Bandwidth: RBW= 100 kHz, VBW=300 kHz, Sweep time = auto.

For 99% Emission Bandwidth B/G/N-20 Mode: RBW= 300 KHz, VBW=1 MHz, Sweep time = 2.5 ms.

For 99% Emission Bandwidth N-40 Mode: RBW= 1 MHz, VBW=3 MHz, Sweep time = 2.5 ms.

c. The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP

EUT		SPECTRUM	
		ANALYZER	

5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.



6. MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section Test Item Limit					
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm			

6.2 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 conducted output power was performed in accordance with method 11.9.1.3 (for peak power) or 11.9.2.3.1 (for AVG power) of ANSI C63.10-2013.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

EUT	Power Meter
	1 ower weter

6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX F.



7. CONDUCTED SPURIOUS EMISSIONS

7.1 LIMIT

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

For ISED

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 Output Power limits. If the transmitter complies with the Output Power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

7.2 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= 100 kHz, VBW=300 kHz, Sweep time = Auto.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP

EUT		SPECTRUM	
		ANALYZER	

7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX G.



8. POWER SPECTRAL DENSITY TEST

8.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section Test Item Limit					
15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)			

8.2 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=3 kHz, VBW=10 kHz, Sweep time = Auto.
- c. The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP

EUT		SPECTRUM	
		ANALYZER	

8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX H.



9. MEASUREMENT INSTRUMENTS LIST

	AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Line Impedance Stabilisation Network	Schwarzbeck	NNLK 8121	8121-822	Mar. 29, 2020	
2	TWO-LINE V-NETWORK	R&S	ENV216	101340	Sep. 01, 2020	
3	Test Cable	emci	EMCRG400-BM-N M-10000	170628	Apr. 17, 2020	
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 29, 2020	
5	50Ω Terminator	SHX	TF2-1G-A	17051602	Mar. 29, 2020	
6	50Ω coaxial switch	Anritsu	MP59B	6201750902	Mar. 29, 2020	
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	

	Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	719	Mar. 29, 2020	
2	Pre-Amplifier	emci	EMC9135	980400	Mar. 29, 2020	
3	MXE EMI Receiver	Keysight	N9038A	MY57150106	Mar. 29, 2020	
4	Test Cable	emci	EMC104-SM-SM-7 000	170330	Apr. 17, 2020	
5	Test Cable	emci	EMC104-SM-SM-1 000	170331	Apr. 17, 2020	
6	Test Cable	emci	EMC104-SM-NM-3 500	170621	Apr. 17, 2020	
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	



	Radiated Emissions - Above 1 GHz						
Itom							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	9120D	00206960	Mar. 29, 2020		
2	Pre-Amplifier	emci	EMC012645SE	980421	Mar. 29, 2020		
3	EXA Spectrum Analyzer	Keysight	N9010A	MY56480545	Mar. 29, 2020		
4	Test Cable	emci	EMC104-SM-SM-7 000	170330	Apr. 17, 2020		
5	Test Cable	emci	EMC104-SM-SM-1 000	170331	Apr. 17, 2020		
6	Test Cable	emci	EMC104-SM-NM-3 500	170621	Apr. 17, 2020		
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
8	MXE EMI Receiver	Keysight	N9038A	MY57150106	Mar. 29, 2020		
9	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	3116C	00203919	Mar. 29, 2020		
10	Pre-Amplifier	emci	EMC184045SE	980409	Mar. 29, 2020		
11	EXA Spectrum Analyzer	Keysight	N9010A	MY56480579	Mar. 29, 2020		
12	Test Cable	emci	EMC102-KM-KM-8 00	170654	Apr. 17, 2020		
13	Test Cable	emci	Super Reliable-40G-SS11- 7000	W0030860001	Apr. 17, 2020		
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		

	Bandwidth									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 29, 2020					

	Maximum Output Power											
Item	em Kind of Equipment Manufacturer Type No. Serial No. Calibrated											
1	Peak Power Analyze	Keysight	8990B	MY51000507	Mar. 29, 2020							
2	Wideband Power Sensor	Keysight	N9123A	MY58310003	Mar. 29, 2020							

	Antenna Conducted Spurious Emissions										
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until						
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 29, 2020						

	Power Spectral Density										
Item	Item Kind of Equipment Manufacturer Type No. Serial No. C										
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 29, 2020						

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

All calibration period of equipment list is one year.



10. EUT TEST PHOTO

AC Power Line Conducted Emissions Test Photos

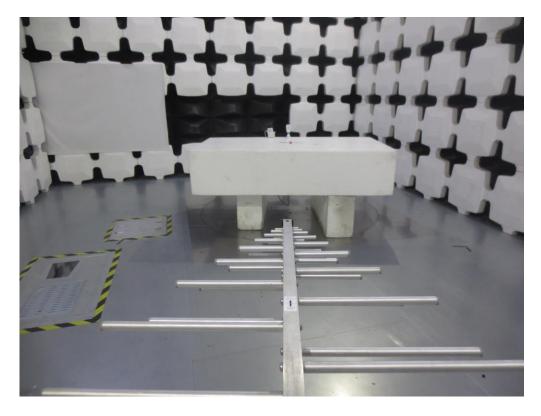


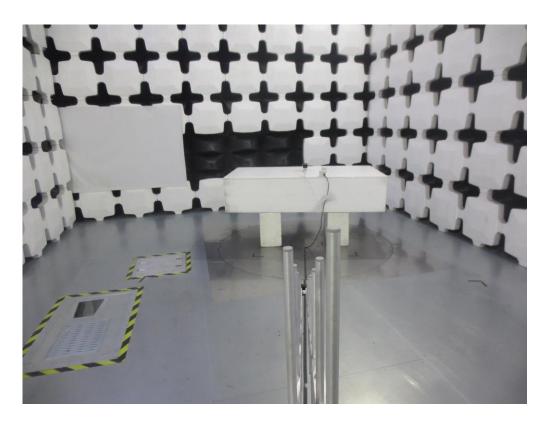




Radiated Emissions Test Photos

30 MHz to 1 GHz

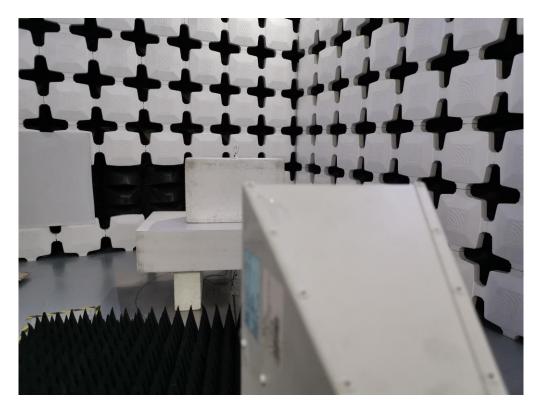






Radiated Emissions Test Photos

Above 1 GHz

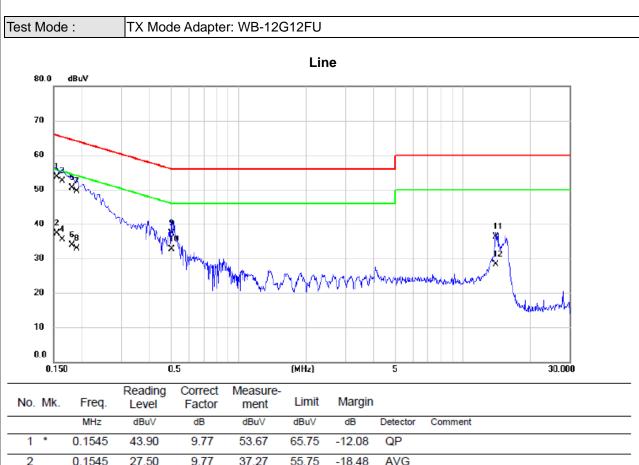






APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS





Ι.	io. iviic.	r roq.	Level	ractor	ment				
		MHz	dBu∨	dB	dBu∀	dBu∀	dB	Detector	Comment
	1 *	0.1545	43.90	9.77	53.67	65.75	-12.08	QP	
	2	0.1545	27.50	9.77	37.27	55.75	-18.48	AVG	
	3	0.1635	42.70	9.78	52.48	65.28	-12.80	QP	
	4	0.1635	25.80	9.78	35.58	55.28	-19.70	AVG	
	5	0.1815	40.70	9.81	50.51	64.42	-13.91	QP	
	6	0.1815	24.10	9.81	33.91	54.42	-20.51	AVG	
	7	0.1905	39.60	9.81	49.41	64.01	-14.60	QP	
	8	0.1905	23.10	9.81	32.91	54.01	-21.10	AVG	
	9	0.5055	27.40	10.00	37.40	56.00	-18.60	QP	
	10	0.5055	22.70	10.00	32.70	46.00	-13.30	AVG	
	11	14.0010	26.30	10.09	36.39	60.00	-23.61	QP	
	12	14.0010	18.20	10.09	28.29	50.00	-21.71	AVG	
									·

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Test Mode: TX Mode Adapter: WB-12G12FU

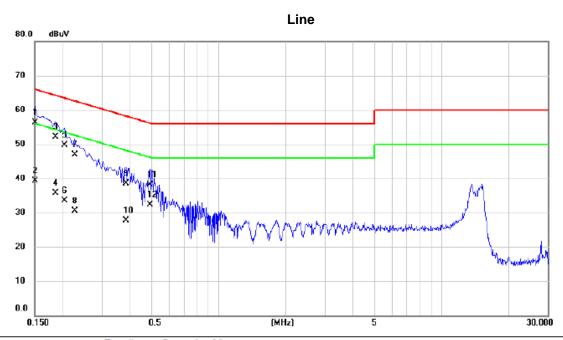
Neutral 80.0 dBuV 70 60 50 10 × 40 30 20 10 0.030.000 0.5 (MHz) 0.150 5

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1	*	0.1500	46.00	9.63	55.63	66.00	-10.37	QP	
2		0.1500	29.10	9.63	38.73	56.00	-17.27	AVG	
3		0.2130	38.60	9.68	48.28	63.09	-14.81	QP	
4		0.2130	21.60	9.68	31.28	53.09	-21.81	AVG	
5		0.2940	30.40	9.77	40.17	60.41	-20.24	QP	
6		0.2940	14.60	9.77	24.37	50.41	-26.04	AVG	
7		0.4020	26.70	9.75	36.45	57.81	-21.36	QP	
8		0.4020	11.40	9.75	21.15	47.81	-26.66	AVG	
9		1.3695	11.80	9.84	21.64	56.00	-34.36	QP	
10		1.3695	2.60	9.84	12.44	46.00	-33.56	AVG	
11		14.0010	23.30	10.11	33.41	60.00	-26.59	QP	
12		14.0010	12.90	10.11	23.01	50.00	-26.99	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.





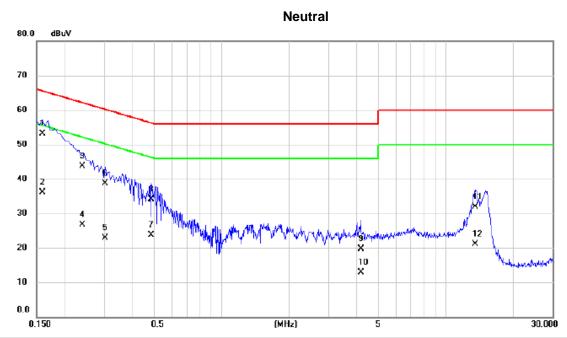


N	o. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∀	dB	dBu∨	dBu∀	dB	Detector	Comment
	1 *	0.1500	46.50	9.76	56.26	66.00	-9.74	QP	
- :	2	0.1500	29.50	9.76	39.26	56.00	-16.74	AVG	
;	3	0.1860	42.30	9.81	52.11	64.21	-12.10	QP	
4	4	0.1860	25.90	9.81	35.71	54.21	-18.50	AVG	
;	5	0.2040	39.90	9.82	49.72	63.45	-13.73	QP	
	6	0.2040	23.60	9.82	33.42	53.45	-20.03	AVG	
	7	0.2265	37.00	9.85	46.85	62.58	-15.73	QP	
	8	0.2265	20.70	9.85	30.55	52.58	-22.03	AVG	
!	9	0.3840	28.60	9.88	38.48	58.19	-19.71	QP	
10	0	0.3840	17.90	9.88	27.78	48.19	-20.41	AVG	
1	1	0.4920	28.20	9.99	38.19	56.13	-17.94	QP	
13	2	0.4920	22.30	9.99	32.29	46.13	-13.84	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Test Mode: TX Mode Adapter: WB-12G12R

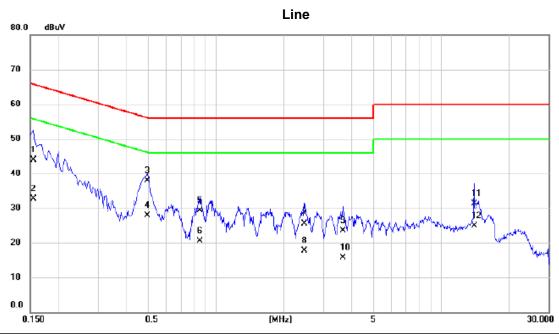


No. Mi	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBu∀	dB	dBuV	dBu∀	dB	Detector	Comment
1	0.1590	43.50	9.60	53.10	65.52	-12.42	QP	
2	0.1590	26.50	9.60	36.10	55.52	-19.42	AVG	
3	0.2400	33.90	9.71	43.61	62.10	-18.49	QP	
4	0.2400	16.90	9.71	26.61	52.10	-25.49	AVG	
5	0.3030	13.10	9.77	22.87	60.16	-37.29	QP	
6 *	0.3030	28.90	9.77	38.67	50.16	-11.49	AVG	
7	0.4875	13.80	9.82	23.62	56.21	-32.59	QP	
8	0.4875	24.30	9.82	34.12	46.21	-12.09	AVG	
9	4.1910	9.70	10.02	19.72	56.00	-36.28	QP	
10	4.1910	2.90	10.02	12.92	46.00	-33.08	AVG	
11	13.5420	21.70	10.12	31.82	60.00	-28.18	QP	
12	13.5420	10.90	10.12	21.02	50.00	-28.98	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Test Mode: TX Mode Adapter: KA1201A-1201000US

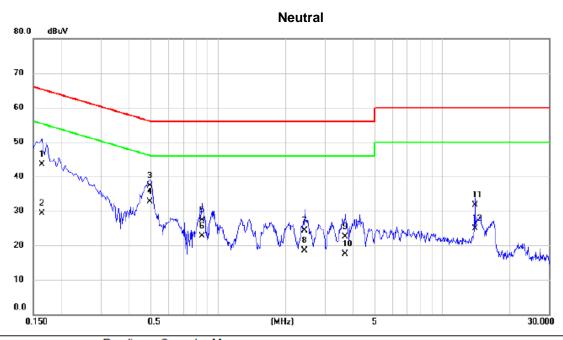


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1		0.1545	34.10	9.73	43.83	65.75	-21.92	QP	
2		0.1545	22.90	9.73	32.63	55.75	-23.12	AVG	
3		0.4965	28.00	9.90	37.90	56.06	-18.16	QP	
4	*	0.4965	18.10	9.90	28.00	46.06	-18.06	AVG	
5		0.8475	19.50	9.79	29.29	56.00	-26.71	QP	
6		0.8475	10.80	9.79	20.59	46.00	-25.41	AVG	
7		2.4630	15.70	9.82	25.52	56.00	-30.48	QP	
8		2.4630	7.80	9.82	17.62	46.00	-28.38	AVG	
9		3.6735	13.70	9.90	23.60	56.00	-32.40	QP	
10		3.6735	5.80	9.90	15.70	46.00	-30.30	AVG	
11		13.9965	21.20	10.19	31.39	60.00	-28.61	QP	
12		13.9965	14.70	10.19	24.89	50.00	-25.11	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Test Mode: TX Mode Adapter: KA1201A-1201000US



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∀	dB	dBu∀	dBu∀	dB	Detector	Comment
1		0.1635	33.90	9.61	43.51	65.28	-21.77	QP	
2		0.1635	19.60	9.61	29.21	55.28	-26.07	AVG	
3		0.4965	27.60	9.69	37.29	56.06	-18.77	QP	
4	*	0.4965	23.10	9.69	32.79	46.06	-13.27	AVG	
5		0.8475	17.50	9.71	27.21	56.00	-28.79	QP	
6		0.8475	13.00	9.71	22.71	46.00	-23.29	AVG	
7		2.4405	14.50	9.81	24.31	56.00	-31.69	QP	
8		2.4405	8.60	9.81	18.41	46.00	-27.59	AVG	
9		3.7050	12.60	9.89	22.49	56.00	-33.51	QP	
10		3.7050	7.60	9.89	17.49	46.00	-28.51	AVG	
11		14.0010	21.60	10.15	31.75	60.00	-28.25	QP	
12		14.0010	14.80	10.15	24.95	50.00	-25.05	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

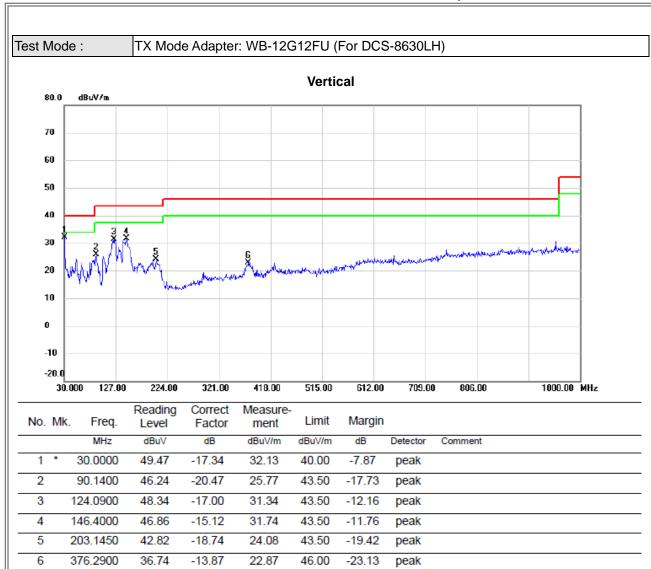


APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ
Note: The measured value have enough margin over 20dB than the limit, therefore they are not reported.



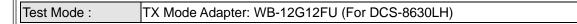
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

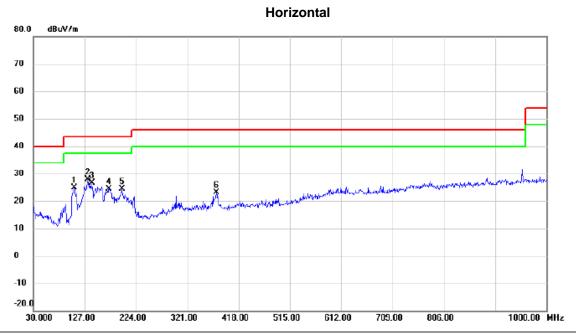




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



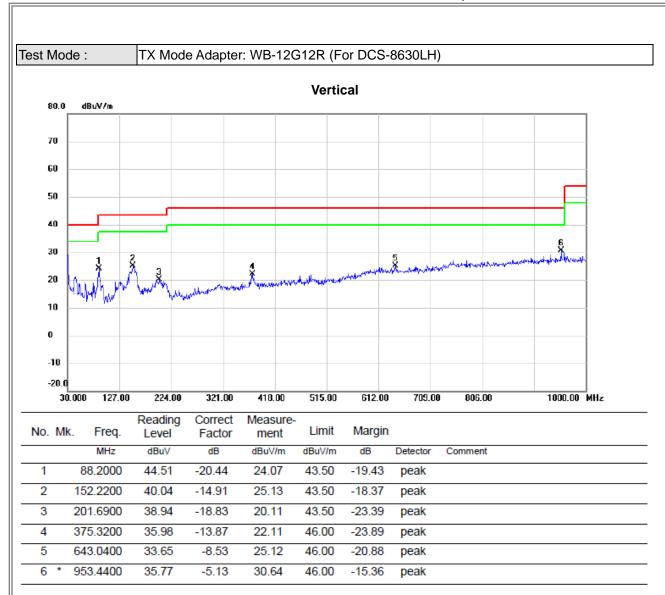




No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		106.6300	43.66	-18.73	24.93	43.50	-18.57	peak	
2	*	133.3050	44.36	-16.49	27.87	43.50	-15.63	peak	
3		140.5800	42.14	-15.63	26.51	43.50	-16.99	peak	
4		172.5900	40.56	-16.09	24.47	43.50	-19.03	peak	
5		197.3250	43.02	-18.75	24.27	43.50	-19.23	peak	
6		375.3200	36.91	-13.87	23.04	46.00	-22.96	peak	

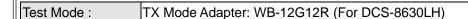
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

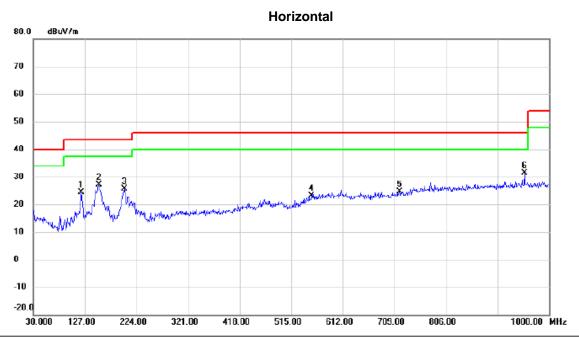




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



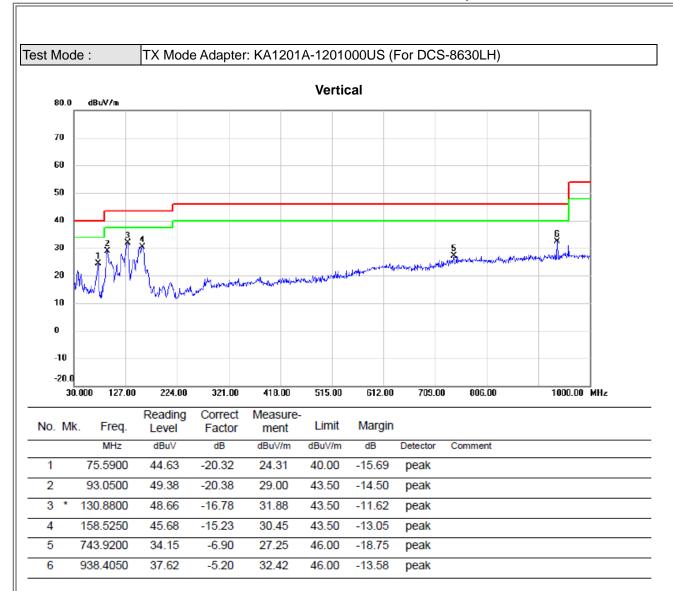




N	lo.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
			MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		120.2100	41.53	-17.07	24.46	43.50	-19.04	peak	
	2		153.1900	42.01	-14.96	27.05	43.50	-16.45	peak	
	3		201.2050	44.40	-18.87	25.53	43.50	-17.97	peak	
	4		553.8000	34.08	-11.04	23.04	46.00	-22.96	peak	
	5		719.1850	32.56	-7.84	24.72	46.00	-21.28	peak	
	6	*	953.4400	36.53	-5.13	31.40	46.00	-14.60	peak	

- (1) Measurement Value = Reading Level + Correct Factor.
 (2) Margin Level = Measurement Value Limit Value.

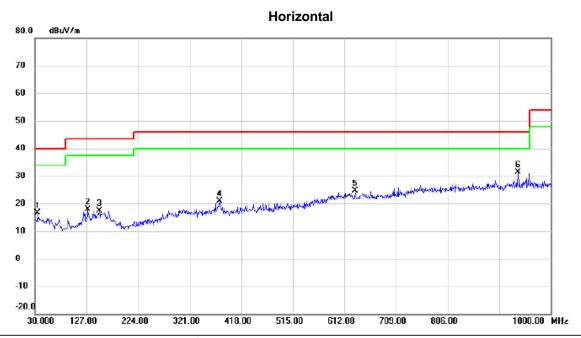




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



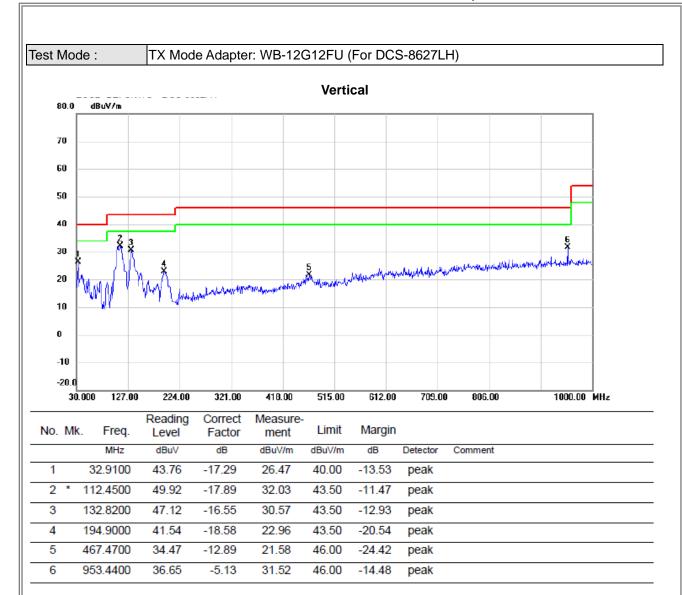




	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
-			MHz	dBu∀	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		34.3650	33.81	-17.27	16.54	40.00	-23.46	peak	
_	2		129.4250	34.76	-16.90	17.86	43.50	-25.64	peak	
_	3		150.7650	32.14	-14.84	17.30	43.50	-26.20	peak	
_	4	,	377.2600	34.68	-13.89	20.79	46.00	-25.21	peak	
_	5		631.8850	33.14	-8.56	24.58	46.00	-21.42	peak	
_	6	*	937.9200	36.63	-5.20	31.43	46.00	-14.57	peak	

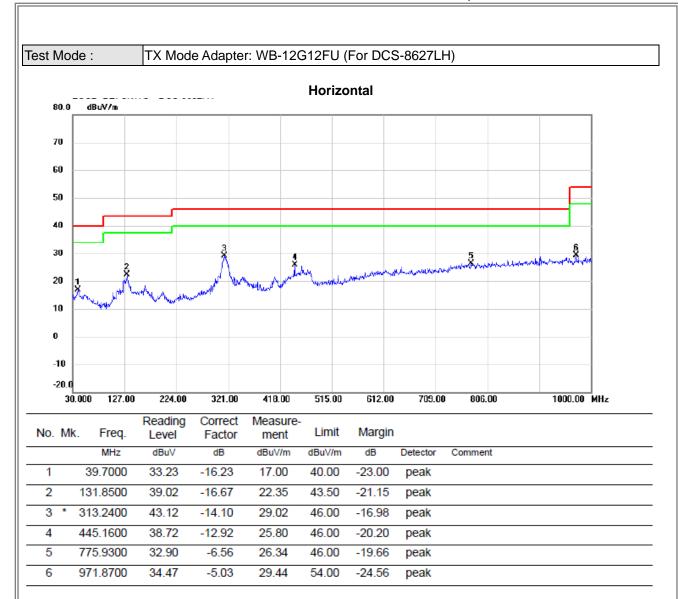
- (1) Measurement Value = Reading Level + Correct Factor.
 (2) Margin Level = Measurement Value Limit Value.





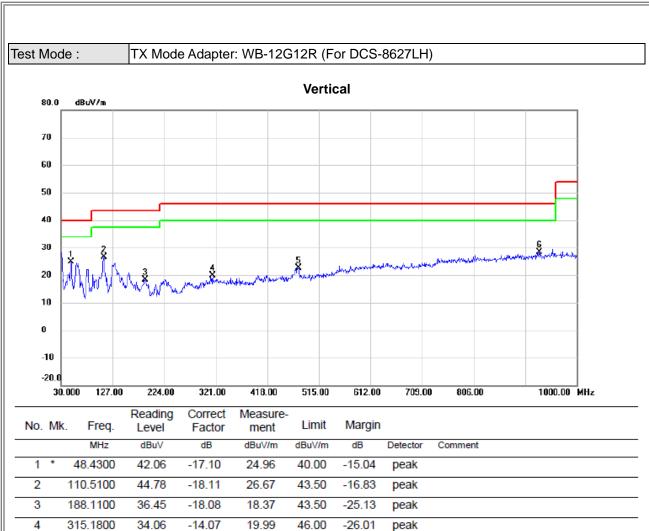
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





5

6

476.2000

929.1900

(1) Measurement Value = Reading Level + Correct Factor.

-12.85

-5.25

22.58

28.27

46.00

46.00

-23.42

-17.73

peak

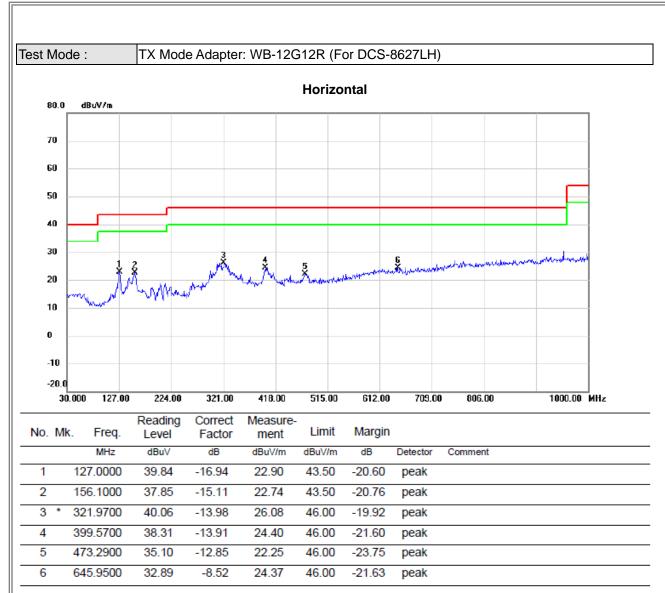
peak

(2) Margin Level = Measurement Value - Limit Value.

35.43

33.52





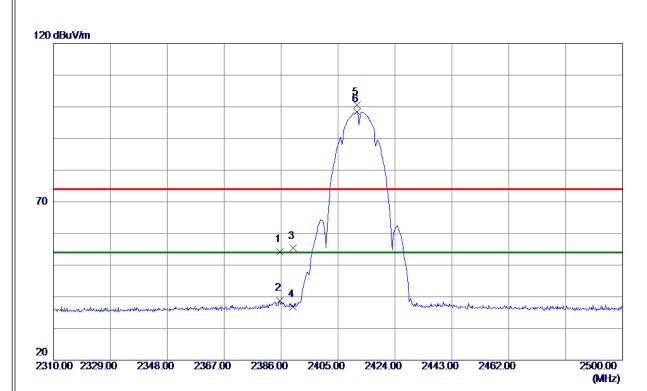
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ



Vertical

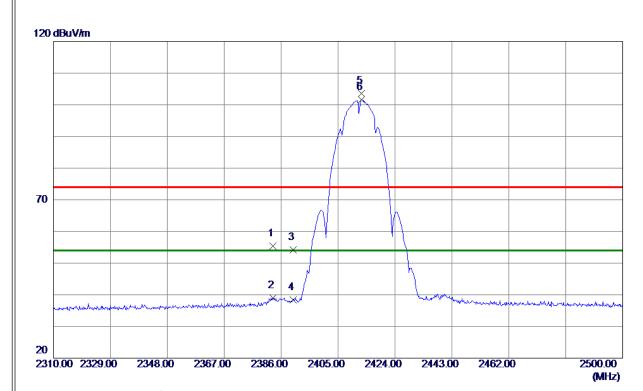


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2385. 6200	21.90	32. 38	54. 28	74.00	-19.72	Peak	
2	2385. 6200	6. 45	32. 38	38. 83	54.00	-15. 17	AVG	
3	2390. 0000	22. 91	32. 39	55. 30	74.00	-18.70	Peak	
4	2390. 0000	4.44	32. 39	36. 83	54.00	-17.17	AVG	
5	2411. 2700	68. 13	32.45	100. 58	74.00	26. 58	Peak	No limit
6 *	2411. 2700	66. 02	32. 45	98. 47	54.00	44.47	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

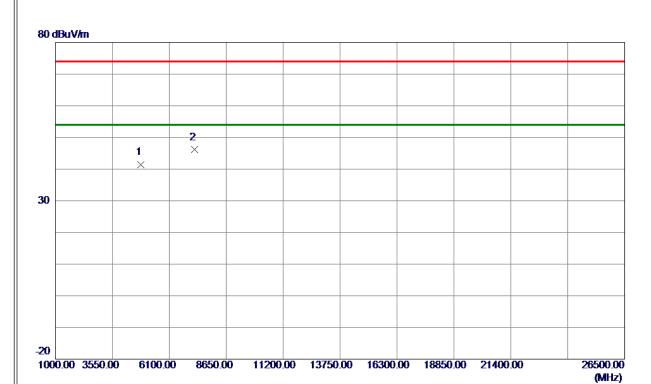


No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2383. 1500	22. 95	32. 37	55. 32	74.00	-18.68	Peak	
2	2383. 1500	6. 61	32. 37	38. 98	54.00	-15.02	AVG	
3	2390.0000	21. 79	32. 39	54. 18	74.00	-19.82	Peak	
4	2390.0000	5. 96	32. 39	38. 35	54.00	-15.65	AVG	
5	2412. 7900	71.09	32.46	103. 55	74.00	29. 55	Peak	No limit
6 *	2412. 7900	69. 15	32. 46	101.61	54.00	47.61	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	51.03	-9. 69	41. 34	74.00	-32.66	Peak	
2 *	7236. 0000	48. 97	-2.87	46. 10	74.00	-27.90	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

26500.00

(MHz)



Test Mode: TX B Mode 2412 MHz_Ant. 2

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	54. 14	-9.69	44.45	74.00	-29. 55	Peak	
2 *	7236. 0000	53.44	-2.87	50. 57	74.00	-23.43	Peak	

11200.00 13750.00 16300.00 18850.00 21400.00

REMARKS:

-20

1000.00 3550.00

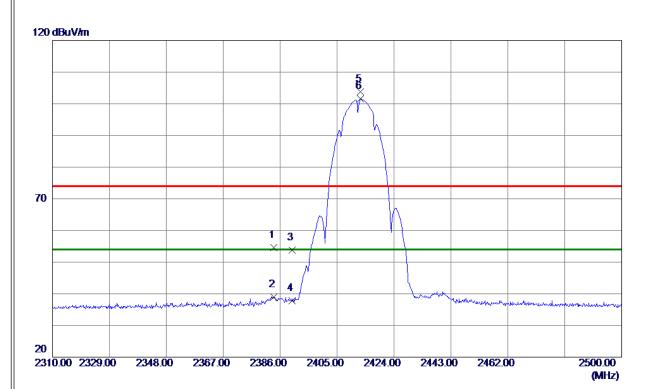
(1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value - Limit Value.

8650.00

6100.00



Horizontal

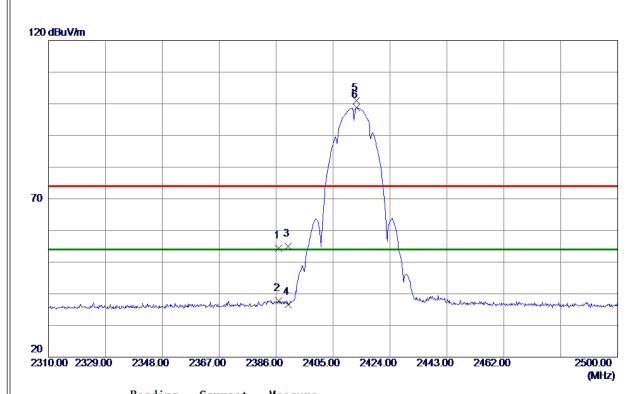


No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2383. 9100	22. 24	32. 38	54.62	74.00	-19. 38	Peak	
2	2383. 9100	6. 60	32. 38	38. 98	54.00	-15.02	AVG	
3	2390.0000	21. 37	32. 39	53.76	74.00	-20. 24	Peak	
4	2390. 0000	5. 40	32. 39	37. 79	54.00	-16. 21	AVG	
5	2412. 7900	71. 26	32.46	103.72	74.00	29.72	Peak	No limit
6 *	2412. 7900	69. 10	32.46	101. 56	54.00	47.56	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

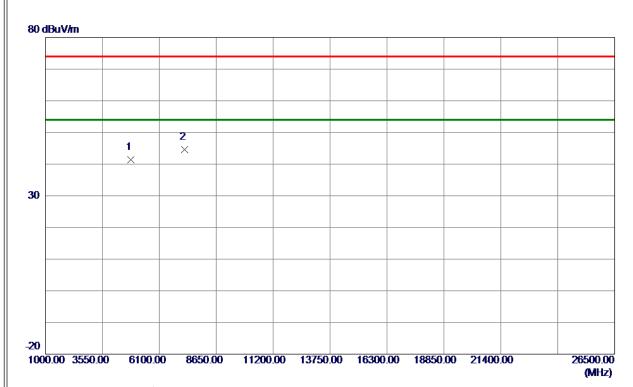


No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2386.7600	21. 99	32. 38	54. 37	74.00	-19.63	Peak	
2	2386.7600	5. 39	32. 38	37.77	54.00	-16. 23	AVG	
3	2390.0000	22. 69	32. 39	55 . 0 8	74.00	-18.92	Peak	
4	2390. 0000	4. 29	32. 39	36. 68	54.00	-17.32	AVG	
5	2412. 7900	68. 59	32.46	101.05	74.00	27.05	Peak	No limit
6 *	2412. 7900	66. 34	32.46	98. 80	54.00	44.80	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	51. 02	-9. 69	41.33	74.00	-32.67	Peak	
2 *	7236. 0000	47. 39	-2.87	44. 52	74.00	-29.48	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

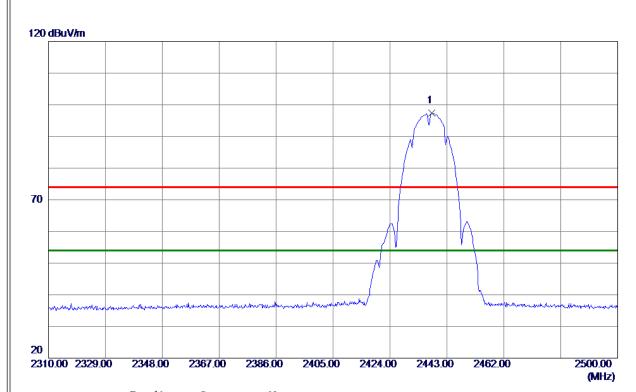
80 dBuV/m **30 -20** 1000.00 3550.00 11200.00 13750.00 16300.00 18850.00 21400.00 6100.00 8650.00 26500.00 (MHz)

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	53.68	-9. 69	43.99	74.00	-30.01	Peak	
2 *	7236. 0000	50. 01	-2.87	47.14	74.00	-26.86	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

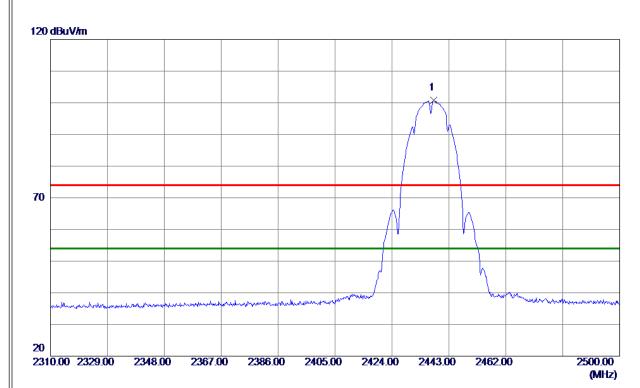


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437.8700	64.85	32. 53	97. 38	54.00	43.38	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

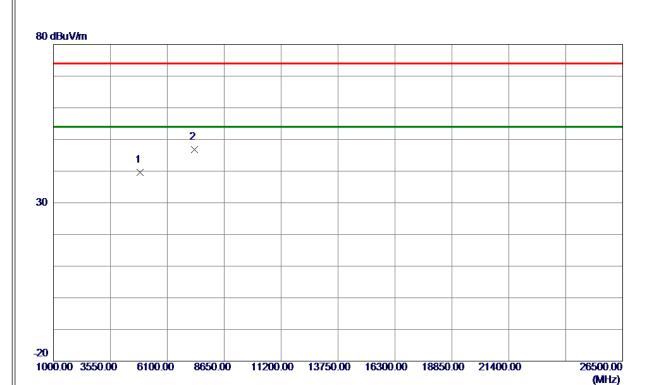


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437.8700	68. 18	32. 53	100.71	54.00	46.71	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

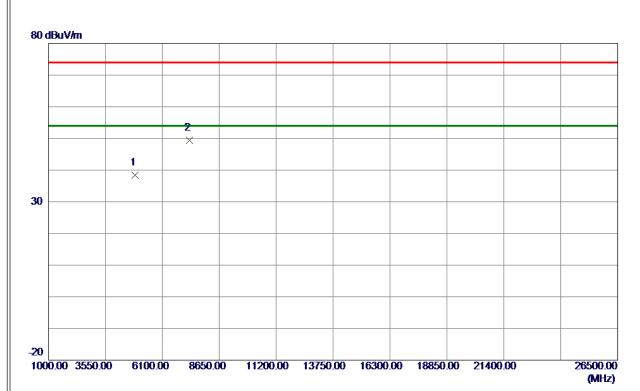


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	49. 11	-9. 50	39. 61	74.00	-34.39	Peak	
2 *	7311. 0000	49. 61	-2.74	46.87	74.00	-27. 13	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Vertical

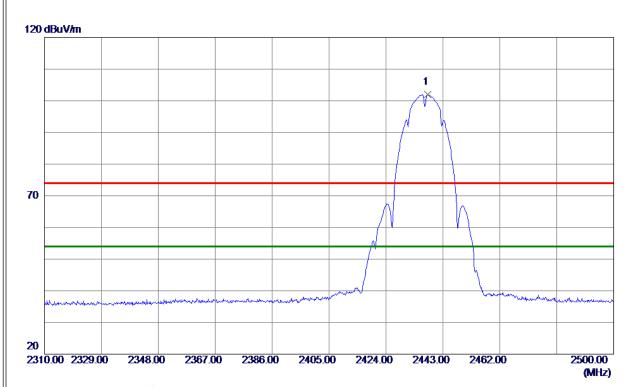


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	47.86	-9. 50	38. 36	74.00	-35.64	Peak	
2 *	7311. 0000	52. 21	-2.74	49. 47	74.00	-24.53	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

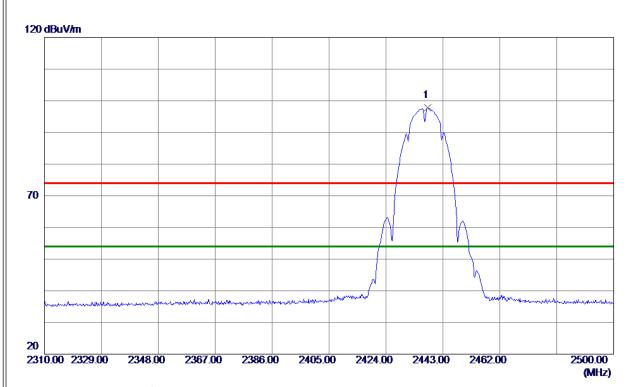


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437. 8700	69. 43	32. 53	101.96	54.00	47. 96	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437.8700	65. 21	32. 53	97.74	54.00	43.74	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



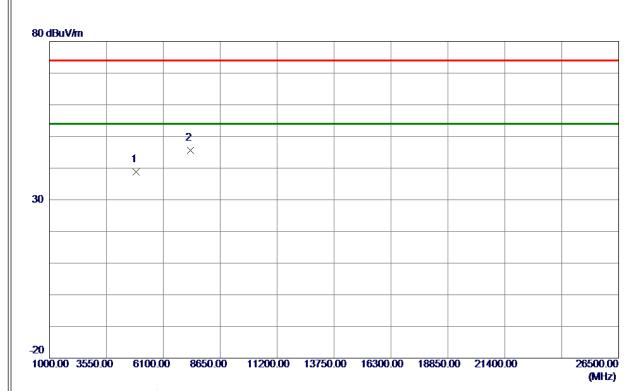
Horizontal

No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	50.85	-9.50	41.35	74.00	-32.65	Peak	
2 *	7311. 0000	45. 15	-2.74	42.41	74.00	-31. 59	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

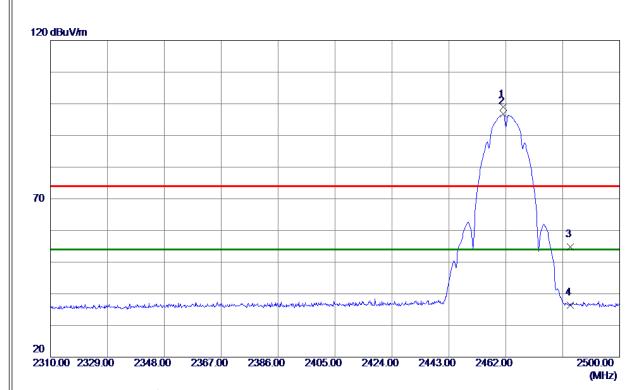


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	48. 39	-9. 50	38.89	74.00	-35. 11	Peak	
2 *	7311.0000	48. 25	-2.74	45. 51	74.00	-28.49	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Vertical

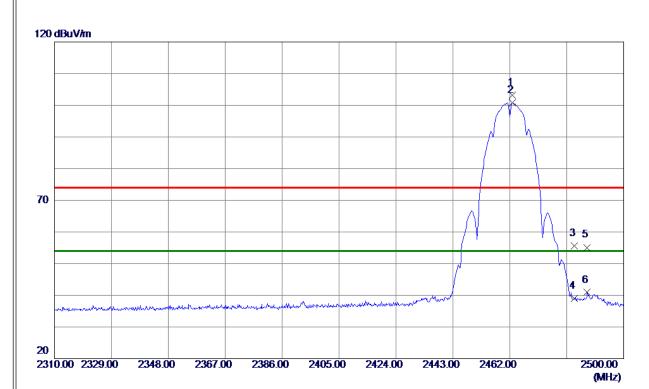


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461. 2400	66. 31	32.60	98. 91	74.00	24.91	Peak	No limit
2 *	2461. 2400	64. 20	32.60	96. 80	54.00	42.80	AVG	No limit
3	2483. 5000	22. 18	32.66	54.84	74.00	-19. 16	Peak	
4	2483. 5000	3.70	32.66	36. 36	54.00	-17.64	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2462.7600	70. 58	32.60	103. 18	74.00	29. 18	Peak	No limit
2 *	2462.7600	68. 26	32.60	100.86	54.00	46.86	AVG	No limit
3	2483. 5000	23. 03	32.66	55. 69	74.00	-18.31	Peak	
4	2483. 5000	6. 36	32.66	39. 02	54.00	-14.98	AVG	
5	2487.8400	22. 43	32. 67	55. 10	74.00	-18. 90	Peak	
6	2487.8400	8. 23	32. 67	40. 90	54.00	-13. 10	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4924.0000	56. 14	-9. 31	46. 83	74.00	-27. 17	Peak	
2	7386. 0000	44. 12	-2.60	41.52	74.00	-32.48	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

26500.00

(MHz)



Test Mode: TX B Mode 2462 MHz_Ant. 2

8650.00

6100.00

Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924.0000	51.41	-9. 31	42. 10	74.00	-31.90	Peak	
2 *	7386. 0000	49. 19	-2.60	46. 59	74.00	-27.41	Peak	

11200.00 13750.00 16300.00 18850.00 21400.00

REMARKS:

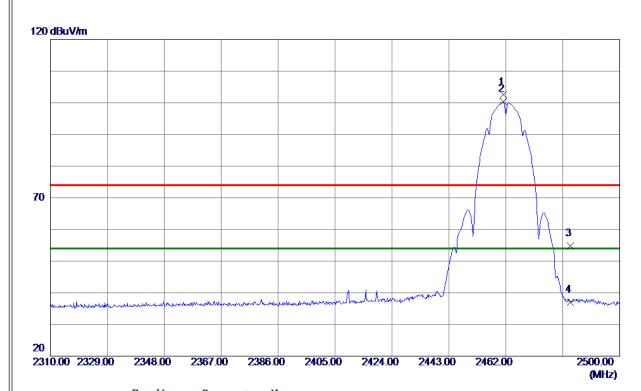
-20

1000.00 3550.00

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

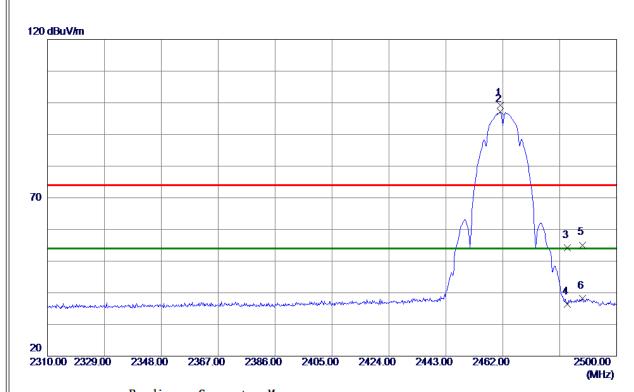


No.	Freq.	Keading Level	Correct Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461. 2400	70.09	32.60	102.69	74.00	28.69	Peak	No limit
2 *	2461. 2400	67.71	32.60	100. 31	54.00	46. 31	AVG	No limit
3	2483. 5000	22. 23	32.66	54.89	74.00	-19. 11	Peak	
4	2483. 5000	4. 37	32. 66	37. 03	54.00	-16. 97	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal



No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461. 2400	66. 68	32.60	99. 28	74.00	25. 28	Peak	No limit
2 *	2461. 2400	64. 52	32.60	97. 12	54.00	43. 12	AVG	No limit
3	2483. 5000	21.63	32.66	54. 29	74.00	-19.71	Peak	
4	2483. 5000	3. 77	32.66	36. 43	54.00	-17.57	AVG	
5	2488. 6000	22. 42	32. 68	55. 10	74.00	-18. 90	Peak	
6	2488. 6000	5. 52	32.68	38. 20	54.00	-15.80	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

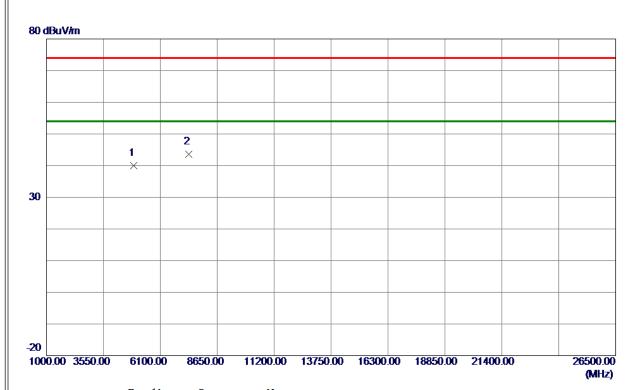


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4924.0000	56. 57	-9. 31	47. 26	74.00	-26. 74	Peak	
2	7386. 0000	45. 07	-2.60	42.47	74.00	-31.53	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

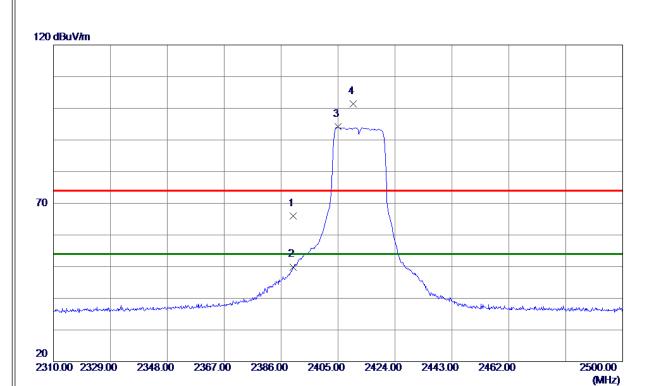


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924.0000	49. 32	-9. 31	40.01	74.00	-33.99	Peak	
2 *	7386. 0000	46. 21	-2.60	43.61	74.00	-30. 39	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

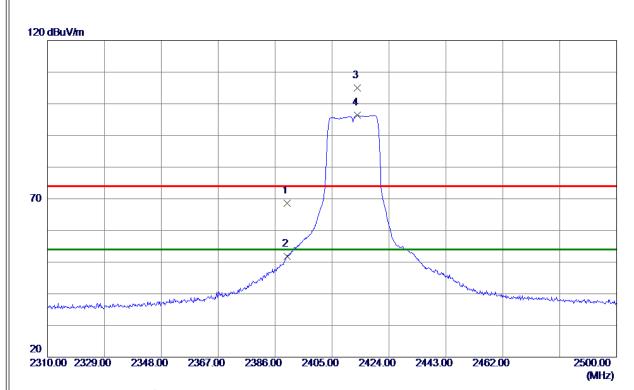


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	33. 54	32. 39	65. 93	74.00	-8. 07	Peak	
2	2390. 0000	17. 51	32. 39	49. 90	54.00	-4. 10	AVG	
3 *	2405.0000	61.81	32.44	94. 25	54.00	40. 25	AVG	No limit
4	2410. 1299	68. 86	32. 45	101.31	74.00	27.31	Peak	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	36. 15	32. 39	68. 54	74.00	-5.46	Peak	
2	2390. 0000	19. 49	32. 39	51.88	54.00	-2. 12	AVG	
3	2413. 3600	72. 59	32.46	105. 05	74.00	31.05	Peak	No limit
4 *	2413. 3600	63. 97	32.46	96. 43	54.00	42.43	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

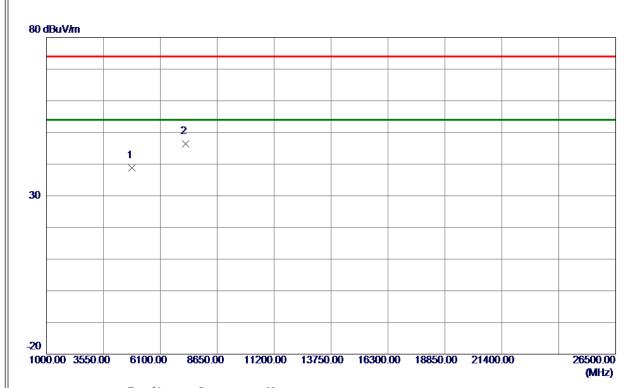


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	52. 66	-9. 69	42. 97	74.00	-31.03	Peak	
2 *	7236. 0000	52. 16	-2.87	49. 29	74.00	-24.71	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

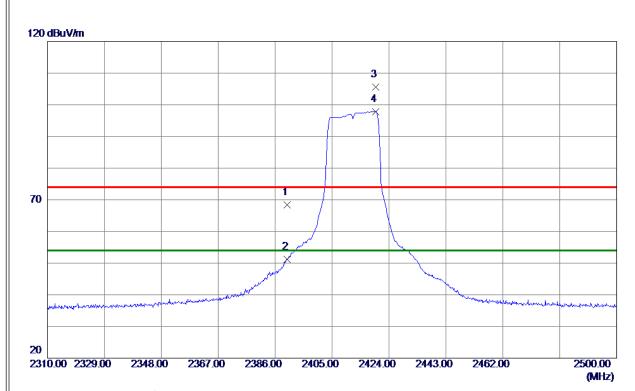


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	48.41	-9. 69	38.72	74.00	-35.28	Peak	
2 *	7236. 0000	49. 36	-2.87	46. 49	74.00	-27.51	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

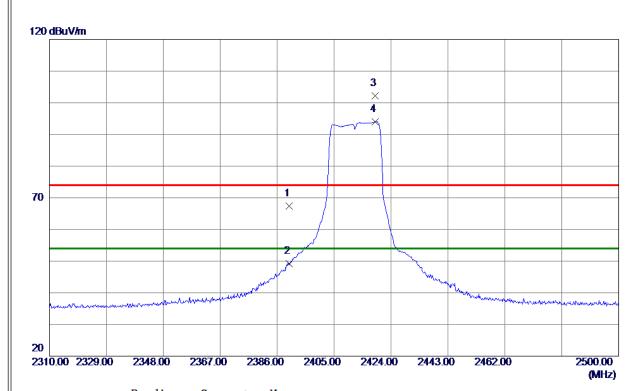


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	36. 05	32. 39	68. 44	74.00	-5. 56	Peak	
2	2390. 0000	18.87	32. 39	51. 26	54.00	-2.74	AVG	
3	2419. 6299	73. 19	32.48	105.67	74.00	31.67	Peak	No limit
4 *	2419.6299	65. 35	32.48	97.83	54.00	43.83	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

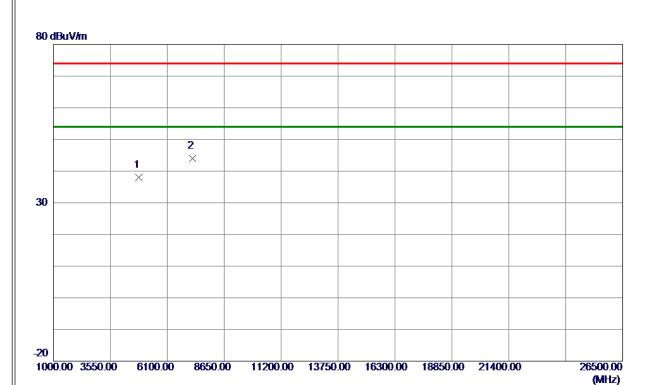


No.	Freq.	Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	35. 0 8	32. 39	67.47	74.00	-6. 53	Peak	
2	2390.0000	16.88	32. 39	49. 27	54.00	-4.73	AVG	
3	2418.6800	69. 68	32.48	102. 16	74.00	28. 16	Peak	No limit
4 *	2418.6800	61. 55	32.48	94. 03	54.00	40.03	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

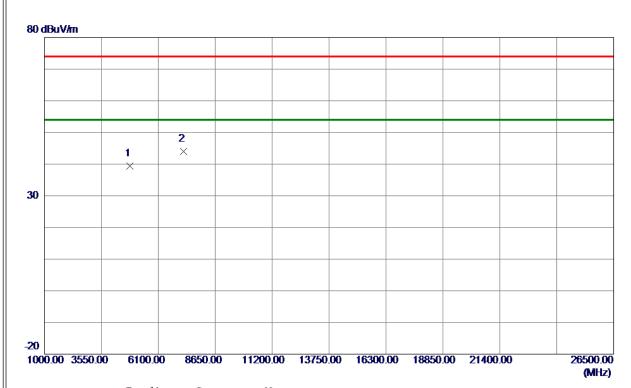


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	47.67	-9. 69	37.98	74.00	-36. 02	Peak	
2 *	7236. 0000	46.81	-2.87	43.94	74.00	-30.06	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

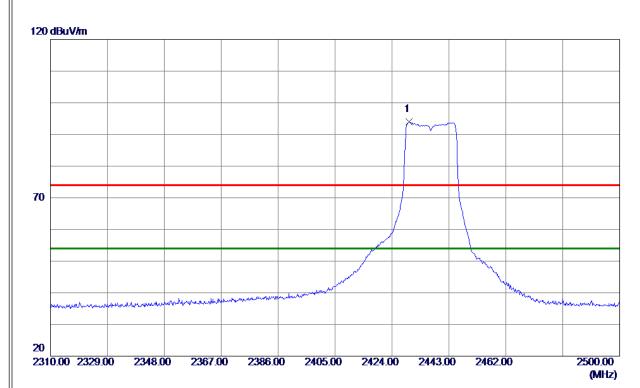


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0000	49. 10	-9. 69	39. 41	74.00	-34.59	Peak	
2 *	7236. 0000	46.80	-2.87	43. 93	74.00	-30.07	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Vertical

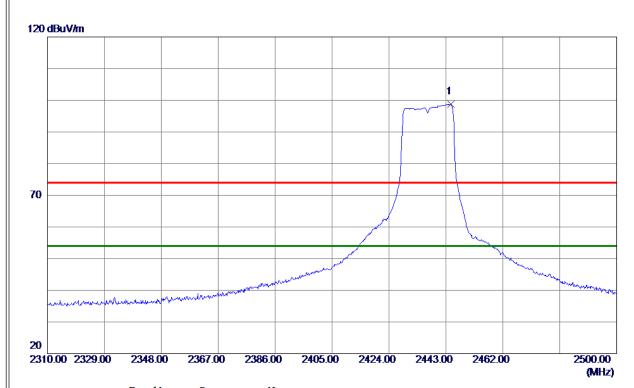


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2429. 7000	61. 39	32. 51	93. 90	54.00	39. 90	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

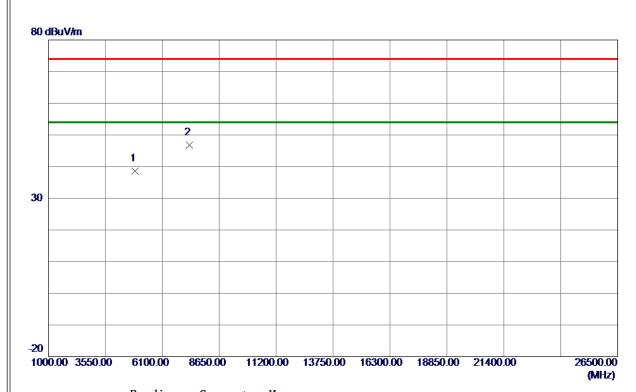


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2444. 7100	66. 17	32. 55	98. 72	54.00	44.72	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical

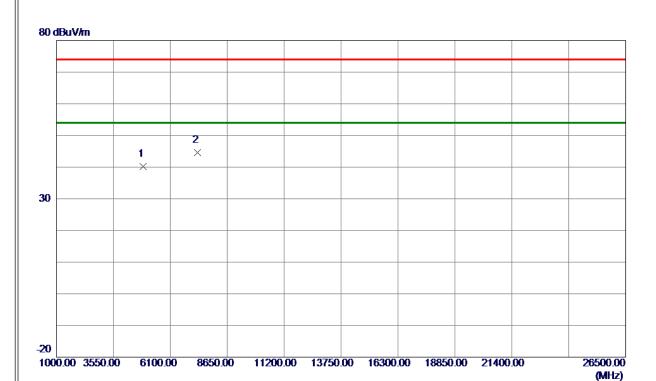


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	48. 10	-9. 50	38. 60	74.00	-35.40	Peak	
2 *	7311. 0000	49.63	-2.74	46. 89	74.00	-27. 11	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Vertical

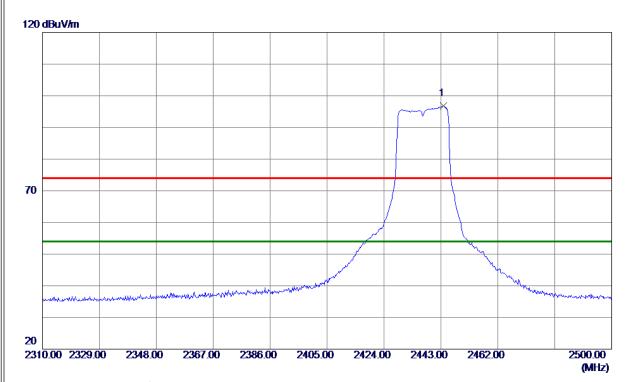


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	49.67	-9. 50	40. 17	74.00	-33.83	Peak	
2 *	7311. 0000	47. 39	-2.74	44.65	74.00	-29. 35	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

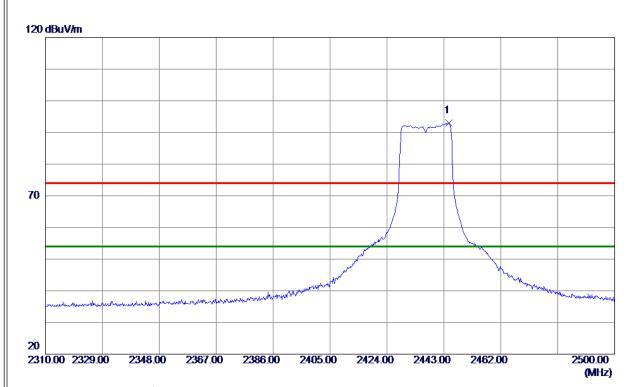


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2443. 7600	64. 22	32. 55	96. 77	54.00	42.77	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

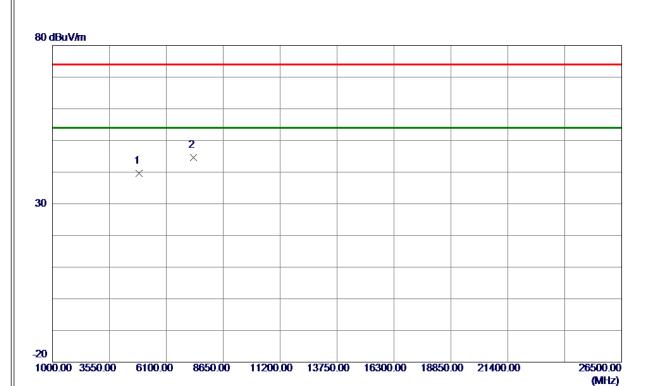


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2444. 7100	60. 41	32. 55	92. 96	54.00	38. 96	AVG	No limit

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Horizontal

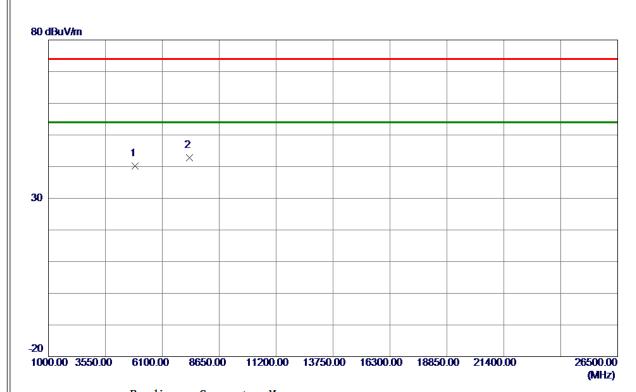


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	49.09	-9. 50	39. 59	74.00	-34.41	Peak	
2 *	7311. 0000	47. 39	-2.74	44.65	74.00	-29. 35	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Horizontal

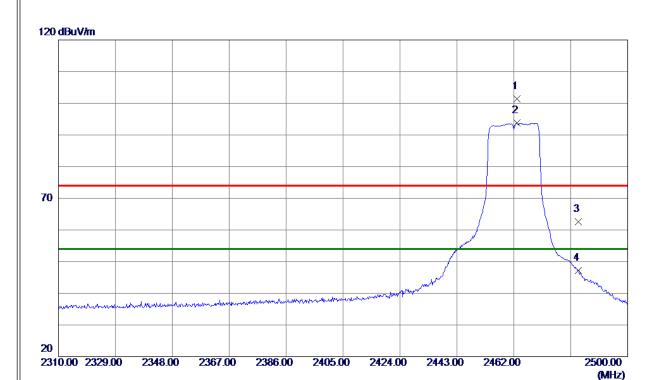


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0000	49.70	-9.50	40. 20	74.00	-33.80	Peak	
2 *	7311. 0000	45.60	-2.74	42.86	74.00	-31. 14	Peak	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



Vertical



No. Fr	eq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
MH	Z	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 24	63. 1399	68. 85	32.60	101.45	74.00	27.45	Peak	No limit
2 * 24	63. 1399	61. 13	32.60	93. 73	54.00	39.73	AVG	No limit
3 24	33. 5000	29. 88	32.66	62. 54	74.00	-11.46	Peak	
4 24	33. 5000	14. 55	32.66	47.21	54.00	-6. 79	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.