



ELECTROMAGNETIC COMPATIBILITY TEST REPORT

Company : Arima Computer Corporation.
 Address : 2nd Fl., No. 327, Sung Lung Road, Taipei, Taiwan
 Product name : Tablet PC with built-in 802.11a&b Wireless LAN module
 Model name : NEC VERSA LitePad
 Data applies to : NEC Versa T400, LaVie TB(PC-TB7005T), LaVie G
 (PC-LG93JGLRD), VersaPro(VA93JGL)
 Date Received : Jan. 15, 2003
 Date Tested : Feb.05 ~ Mar. 28, 2003

MEASUREMENT REQUIREMENT USED :

47 CFR Part 15 Subpart E(section 15.407),
 ANSI C63.4-2001

WE HEREBY CERTIFY THAT: The measurements shown in the attachment were made in accordance with the procedures indicated, and the energy emitted by the equipment was found to be within the limits applicable. We assume full responsibility for the accuracy and completeness of these measurements and vouch for the qualifications of all persons taking them.

	Name	Signature	Date
Testing Engineer	Roger Sheng / NVLAP	<i>Roger Sheng</i>	<i>Mar. 28, 2003</i>
Approving Manager	Chieh-De Tsai / NVLAP	<i>Chieh-De Tsai</i>	<i>Mar. 28, 2003</i>

Notes :

1. This report will be invalid if duplicated or photocopied in part.
2. This report refers only to the specimen(s) submitted to test, and is invalid as separately used.
3. This report is invalid without examination stamp and signature of this institute.
4. The tested specimen(s) will be preserved for thirty days from the data issued.
5. The report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.



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0. SUMMARY of RESULTS

The test below represents the highest recorded measurements with respect to the FCC Part 15 Subpart B,C and E limits. Unless stated otherwise, the complete data can be found in the Tests data Sheets submitted with this report.

General requirements for all bands			
FCC Part 15 Section	Description	Comments	Result
15.407(a)(b)	Peak Excursion Ratio	< 13dB	Complied
15.407(a)(b)	Automatic Discontinuation of Operation in the absence of information to transmit	Operation is discontinued in the absence of information to transmit, refer to the "Theory of Operations" for a detailed explanation	Complied
15.407(g)	Frequency Stability	Frequency stability is +/- 20ppm	Complied
15.107 15.207 15.407(b)(5)	Conducted AC power Line 150kHz~30MHz <table 15.107 or 15.207	See test result	Complied

Operation in the 5.15-5.25GHz Band			
FCC Part 15 Section	Description	Comments	Result
15.407 (d)	As the device operates in the 5.15-5.25GHz band the antenna must be integral to the device.	Antenna Gain = <u>-2dBi</u> The antenna is integral. Antenna specification included in <u>Section 9</u>	Complied
15.407 (e)	Indoor operation only	Refer to user's manual	Complied
15.407 (a) (1)	26dB Bandwidth	<u>30MHz</u>	N/A
15.407 (a) (1)	Output Power	<u>See test Results</u>	Complied
15.407 (a) (1)	Power Spectral Density 4dBm/Mhz	<u>See test Results</u>	Complied
15.407 (b) (5) 15.209(a)	Spurious Emissions below 1GHz	See test result	Complied
15.407 (b) (2)	Spurious Emissions above 1GHz	See test result	Complied



Operation in the 5.25-5.35 GHz Band Note : The device is restricted to **indoor use only**, therefore the spectral density of spurious emissions in the 5.15-5.25 GHz band were limited to the power spectral limits for intentional signals detailed in FCC 15.407(a)(1)

FCC Part 15 Section	Description	Comments	Result
15.407 (d)	Maximum Antenna Gain/ Antenna Type	Antenna Gain = <u>-2dBi</u> The antenna is <u>integral type</u>	Complied
15.407(a) (2)	Bandwidth 26dB	30.62MHz	N/A
15.407(a) (2)	Output Power : 250mW or 11dBm+10logB	<u>See test Results</u>	Complied
15.407(a) (2)	Power Spectral Density 11dBm/Mhz	<u>See test Results</u>	Complied
15.407(b) (5) 15.209	Spurious Emissions below 1GHz	<u>See test Results</u>	Complied
15.407(b) (2)	Spurious Emissions above 1GHz	<u>See test Results</u>	Complied

Operation in the 5.725-5.825 GHz Band

FCC Part 15 Section	Description	Comments	Result
15.407 (d)	Maximum Antenna Gain/ Antenna Type	Antenna Gain = <u>-2dBi</u> The antenna is <u>integral type</u>	Complied
15.407(a) (3)	Bandwidth 26dB	29.55MHz	N/A
15.407(a) (3)	Output Power* : 30dBm or 17dBm+10logB	<u>See test Results</u>	Complied
15.407(a) (3)	Power Spectral Density 17dBm/Mhz	<u>See test Results</u>	Complied
15.407(b) (5) 15.209	Spurious Emissions below 1GHz	<u>See test Results</u>	Complied
15.407(b) (3)	Spurious Emissions above 1GHz 10MHz : -17dBm 10MHz : -27dBm	<u>See test Results</u>	Complied

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. Fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required.



TEST RESULT CERTIFICATION

Applicant : Arima Computer Corporation.
 Address : 2nd Fl., No. 327, Sung Lung Road, Taipei, Taiwan
 EUT Description : 802.11a&b Wireless LAN Notebook Personal Computer.
 Product name : Tablet PC with built-in 802.11a&b Wireless LAN module
 Model name : NEC VERSA LitePad
 Data applies to : NEC Versa T400, LaVie TB(PC-TB7005T), LaVie G (PC-LG93JGLRD),
 VersaPro(VA93JGL)
 Serial Number : N/A
 Data Tested : Feb.05, ~Mar.28, 2003

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
47 CFR Part 15 Subpart E(section 15.407) ANSI C63.4-2001	Complied

The above equipment was tested by Electronics Research & Service Organization /Industrial Technology Research Institute, ERSO/ITRI for compliance with the requirements with the requirements set forth in the FCC Part15 Subpart E The results of testing in this report apply to the product/system, which was tested only. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.



1. GENERAL INFORMATION

1.1. GENERAL STATEMENT

MEASUREMENT DEVIATION : Comply with standard in full

TRACEABILITY : This test result is traceable to national or international std.

1.2. GENERAL DESCRIPTION OF EUT & POWER

MANUFACTURER	: Arima COMPUTER CORP.
PRODUCT NAME	: Tablet PC with built-in 802.11a&b Wireless LAN module
MODEL NAME	: NEC VERSA LitePad
DATA APPLIES TO	: NEC Versa T400, LaVie TB (PC-TB7005T), LaVie G (PC-LG93JGLRD), VersaPro (VA93JGL)
FREQUENCY RANGE	: 2400 MHz TO 24835 MHz (ISM band) for 802.11b, 5150 MHz TO 5350MHz (U-NII band) for 802.11a 5725 MHz TO 5825MHz (U-NII band) for 802.11a
CHANNEL NUMBER	: 11 channel for 802.11b 12 channel for 802.11a
CHANNEL Bandwidth	: 20 MHz
AIR DATA RATE	: 56Mbps
TYPE OF MODULATION	: OFDM-BPSK/QPSK/16QAM/64QAM for 802.11a DSSS-BPSK/QPSK/CCK , For 802.11b
FREQUENCY SELECTION	: BY SOFTWARE
ANTENNA TYPE	: PIFA
Power Adapter	:
Manufacturer	: NEC CustomTechnica, Ltd.
Model Number	: ADP-50HH REV.A
Serial Number	: 2405180DA
Input	: 100~240 VAC
Output	: 19 VDC 2.64A



1.3. CHANNEL ALLOCATION

The EUT operated on the following channel frequencies in 5.15~5.35GHz, 5.725~5.825GHz

Channel	Carrier centre frequency fc (MHz)
1	5 180
2	5 200
3	5 220
4	5 240
5	5 260
6	5 280
7	5 300
8	5 320
1	5 745
2	5 765
3	5 785
4	5 805

1.4. DESCRIPTION OF PERIPHERALS

(1) Notebook PC

MANUFACTURER : DELL CORP.
MODEL NUMBER : PP01L
SERIAL NUMBER : CN-09C748-48155-1AP-6081
F.C.C. : DOC
POWER CORD : Unshielded, Detachable, 1.8m

(2) MODEM

MANUFACTURER : ZyXEL CORP.
MODEL NUMBER : omni 56K
SERIAL NUMBER : S1Z4107729
F.C.C. ID : I880MNI56K
POWER CORD : UnShielded , Detachable , 1.8m (9VAC from Power Adapter)

(3) PRINTER

MANUFACTURER : HP CORP.
MODEL NUMBER : C6431D
SERIAL NUMBER : CN19T6S011
F.C.C. : DOC
POWER CORD : Unshielded , Detachable , 1.8m
DATA CABLE : Shielded , Detachable , 1.2m

(4) MONITOR



MANUFACTURER : HP CORP.
 MODEL NUMBER : D8894A
 SERIAL NUMBER : CN00905269
 F.C.C. ID : ARSCM569N
 POWER CORD : UnShielded , Detachable , 1.8m
 SIGNAL CABLE : Shielded , Undetachable , 1.8m

(5) KEYBOARD

MANUFACTURER : HP CORP.
 MODEL NUMBER : SK-2502C
 SERIAL NUMBER : M000303429
 F.C.C. ID : -----
 POWER SOURCE : 5VDC (from Notebook PC)
 SIGNAL CABLE : Shielded , Undetachable , 1.8m

(6) MOUSE

MANUFACTURER : HP CORP.
 MODEL NUMBER : SK-2502C
 SERIAL NUMBER : M000303429
 F.C.C. ID : -----
 POWER SOURCE : 5VDC (from Notebook PC)
 SIGNAL CABLE : Shielded , Undetachable , 1.8m

(6) MOUSE

MODEL NUMBER : M-S34
 SERIAL NUMBER : LZE95050431
 MANUFACTURER : HP CORP.
 FCC ID : DZL211029
 SIGNAL CABLE : Shielded , Undetachable , 1.8m
 POWER SOURCE : 5VDC (from PC)

(7) PC

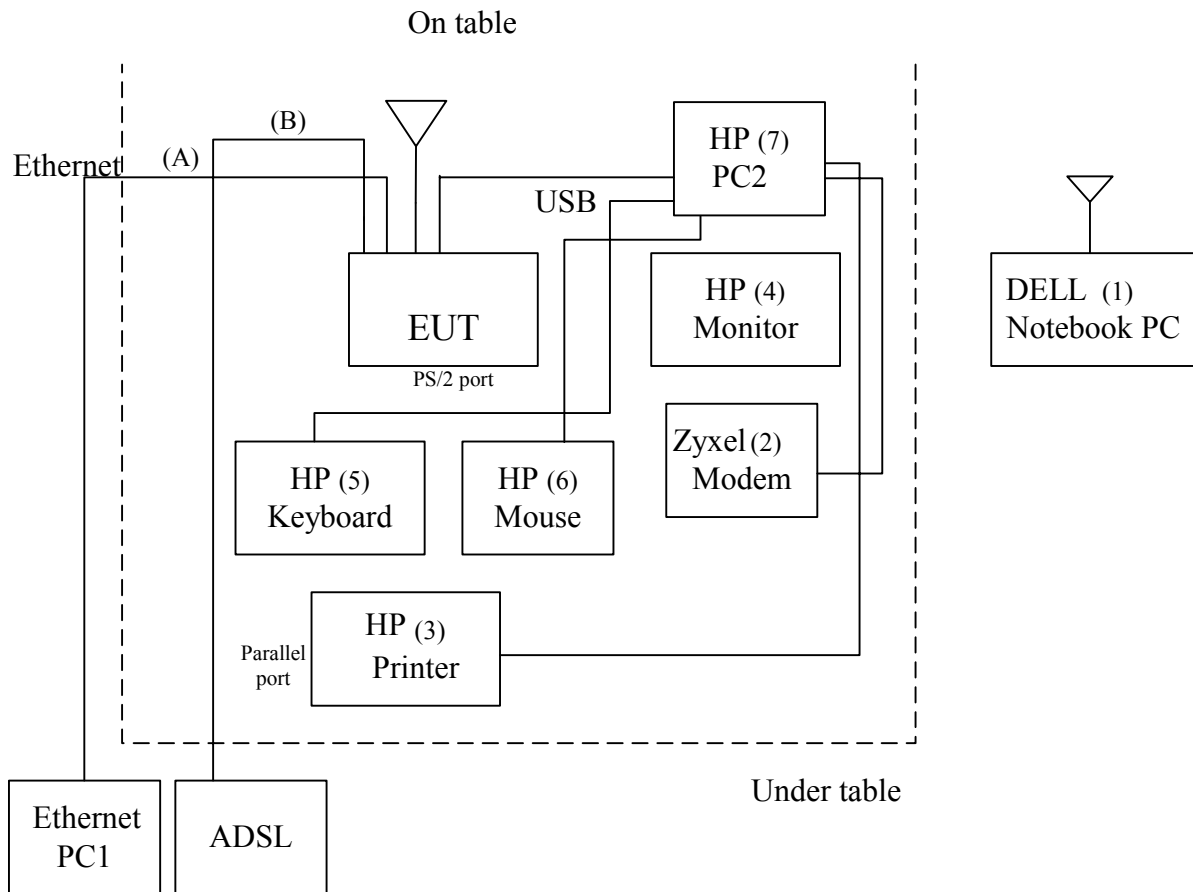
MANUFACTURER : HP CORP.
 MODEL NUMBER : 8894
 SERIAL NUMBER : P3129-WOYO
 F.C.C. : DOC
 POWER CORD : Unshielded, Detachable, 1.8m

(8) CABLE

	Type	Connector	shielded	Length
(A)	Cross-over Cat5 twisted-pair	RJ-45,Plastic	NO	15m
(B)	Telephone Line	RJ-45,Plastic	NO	15m



1.5. EUT & PERIPHERALS SETUP DIAGRAM



The indicated numbers (1) (2)..., Please refer to item 1.3

1.6. EUT OPERATING CONDITION

1. Set up all computers as in the setup diagram.
2. Run ART.exe, change the test modes to TX, RX, or Stand-By mode.
3. Set the carrier frequency to lowest middle, highest channel.
4. Turn on the RF output.
5. Start test.



1.7. DESCRIPTION OF TEST SITE

SITE DESCRIPTION	: FCC certificate NO. : 31040/PRV TUV certificate NO. : I9664582-9911 BSMI certificate NO. : SL2-IN-E-0002 NVLAP Lab code : 200118-0 CNLA certificate NO. : CNLA-ZL97018 VCCI certificate NO. : R-1229, C-1250
NAME OF SITE	: Electronics Research & Service Organization Industrial Technology Research Institute
SITE LOCATION	: R1500, 195-4 , sec. 4, Chung Hsing Rd., Chu-Tung Chen. Hsin-Chu, Taiwan 310 R.O.C.

1.8. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications :



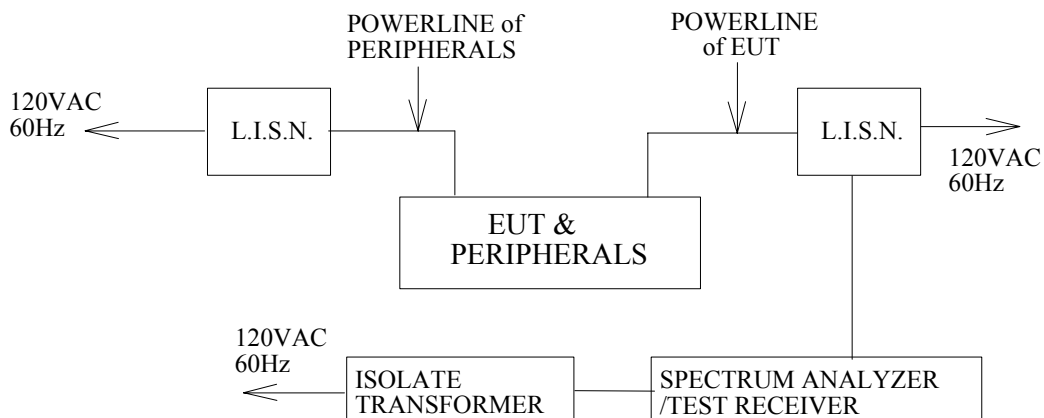
2. CONDUCTED POWERLINE TEST

2.1. TEST EQUIPMENTS

The following test equipments are used during the conducted powerline tests :

MANUFACTURER OR TYPE	MODEL No	SERIAL NO.	DATE OF CALIBRATION	CALIBRATION PERIOD	REMARK
SPECTRUM ANALYZER & DISPLAY	HP 8568A	2235A02320	APR. 01, 2002	1 Year	PRETEST
QUASI-PEAK ADAPTER	HP 85650 A	2341A00672	APR. 01, 2002	1 Year	PRETEST
ISOLATION TRANSFORMER	SOLAR 7032-1	N/A	N/A	N/A	FINAL
L.I.S.N.	EMCO 3850/2	9311-1025 9401-1028	JAN. 08, 2002 For Characteristic impedance	1 Year	FINAL
			MAY 18, 2002 For Insertion loss		
TEST RECEIVER	R/S ESHS30	838550/003	JUN. 07, 2002	1 Year	FINAL
SHIELDED ROOM	KEENE 5983	NO.1	N/A	N/A	FINAL
PULSE LIMIT	R/S EHS3Z2	357.8810.52	JUL. 10, 2002	1 Year	FINAL
N TYPE COAXIAL CABLE	-----	-----	JUL. 10, 2002	1 Year	FINAL
50 TERMINATOR	-----	-----	JUL. 10, 2002	1 Year	FINAL

2.2. TEST SETUP





2.3. CONDUCTED POWER LINE EMISSION LIMIT

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

FREQUENCY (MHz)	MAXIMUM RF LINE VOLTAGE (dB μ V)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56	56-46
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

For intentional device, according to § 15.207(a) Line Conducted Emission Limit is same as above table.

2.4. TEST PROCEDURE

The test procedure is performed in a 12ft×12ft×8ft(L×W×H) shielded room. the EUT along with its peripherals were placed on a 1.0m(W)× 1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chasis ground was bounded to the horizontal ground plane of shielded room. All peripherals were connected to the second LISN and the chasis ground also bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

2.5. UNCERTAINTY OF CONDUCTED EMISSION

The uncertainty of conducted emission is ± 1.36 dB.



2.6. CONDUCTED RF VOLTAGE MEASUREMENT(TX)

The EUT is in **Transmitting mode** while testing.

The frequency spectrum from 0.15 MHz to 30 MHz was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

Temperature : 26

Humidity : 65 % RH

FREQUENCY (MHz)	READING(dB μ V)				LIMITS (dB μ V)	
	ONE END & GRD'D		THE OTHER END & GRD'D			
	Q.P.	AVG	Q.P.	AVG	Q.P.	AVG
0.21600	50.1	*	52.9	*	63.0	56.00
0.29100	43.6	*	*	*	60.5	54.80
0.36000	*	*	42.9	*	58.7	50.20
0.57600	*	*	35.7	*	56	46.00
0.65100	29.2	*	*	*	56	46.00
1.29900	*	*	29.8	*	56	46.00
2.09700	28.7	*	*	*	56	46.00
2.23200	*	*	22.7	*	56	46.00
3.73800	22.6	*	*	*	56	46.00
4.22100	*	*	22.9	*	56	46.00
6.74100	26.8	*	*	*	60	50.00
12.01500	28.5	*	*	*	60	50.00
12.43800	*	*	22.2	*	60	50.00
27.7200	*	*	33.8	*	60	50.00
28.61700	30.9	*	*	*	60	50.00

REMARKS :

- * Undetectable
- After the preliminary scan, we found the EUT is in Transmitting Mode producing the highest emission level so the channel 1 (5.18GHZ) were recorded for final testing.
- Mode: Transmitting (TX)



2.7. CONDUCTED RF VOLTAGE MEASUREMENT(RX)

The EUT is in **Receiving** while testing.

The frequency spectrum from 0.15 MHz to 30 MHz was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

Temperature : 26

Humidity : 65 % RH

FREQUENCY (MHz)	READING(dB μ V)				LIMITS	
	ONE END & GRD'D		THE OTHER END & GRD'D		(dB μ V)	
	Q.P.	AVG	Q.P.	AVG	Q.P.	AVG
0.16	52.44	*	53.34	*	66	56.00
0.285	38.3	*	*	*	60.5	54.80
0.498	*	*	42.6	*	56	50.20
0.575	31.7	*	*	*	56	46.00
0.70	*	*	36.4	*	56	46.00
1.156	*	*	33.7	*	56	46.00
1.832	29.24	*	*	*	56	46.00
3.738	27.89	*	21.5	*	56	46.00
4.45	25.7	*	*	*	56	46.00
4.72	*	*	24.6	*	56	46.00
12.015	27.5	*	*	*	60	50.00
12.048	*	*	25.81	*	60	50.00
26.29	*	*	34.18	*	60	50.00
27.72	30.3	*	*	*	60	50.00
27.74	*	*	33.5	*	60	50.00

REMARKS :

- * Undetectable
- After the preliminary scan, we found the EUT is in Receiving Mode producing the highest emission level so the channel 1 (5.18GHZ) were recorded for final testing.
- Mode: Receiving (RX)



2.8. PHOTOS OF CONDUCTION TEST





3. RADIATED EMISSION TEST

3.1. TEST EQUIPMENTS

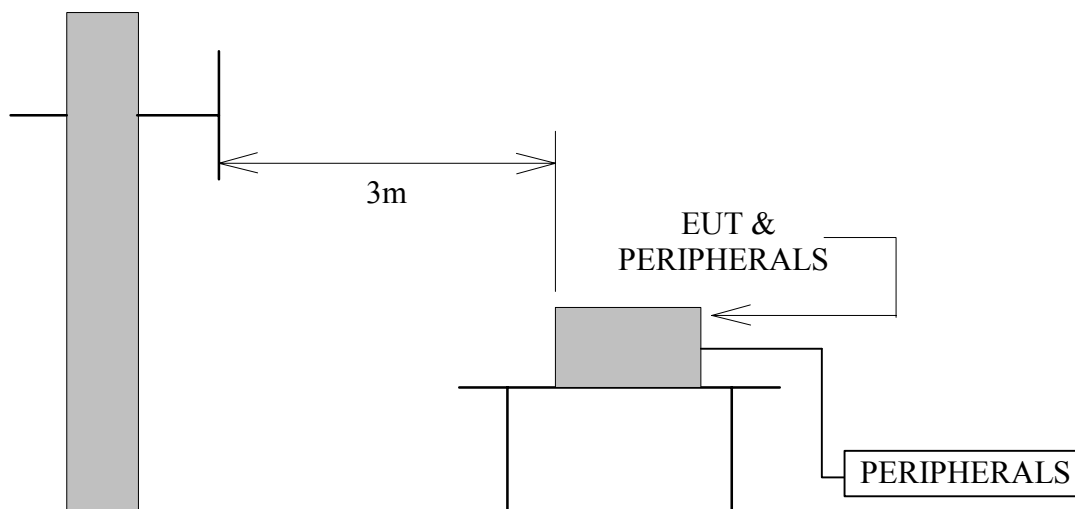
The following test equipments are utilized in making the measurements contained in this report.

MANUFACTURER OR TYPE	MODEL NO	SERIAL NO	DATE OF CALIBRATION	CALIBRATION PERIOD	REMARK
CHASE BI-LOG ANTENNA	CBL6112B	2421	MAY 07, 2002	1 Year	FINAL
R/S TEST RECEIVER	ESMI	842088/005 841978/008	SEPT. 3, 2002	1 Year	FINAL
HP Spectrum Analyzer	8564E	04348	Aug.15,2002	1 Year	FINAL
OPEN SITE	-----	No.1	JUL. 10~12, 2002	1 Year	FINAL
N TYPE COAXIAL CABLE	CHA9525	4	JUL. 13, 2002	1 Year	FINAL
Horn Antenna	AH-118	10089	FEB. 25, 2002	1 Year	FINAL
HP Pre-amplifier	8449B	3008A01471	OCT. 11, 2001	1 Year	FINAL
HP High pass filter	84300/80038	010	cal. on use	1 Year	FINAL
Horn Antenna	AH-840	03077	FEB. 25, 2002	1 Year	FINAL
HP High pass Fitter	84300/80039	009	cal. on use	1 Year	FINAL

3.2. TEST SETUP

Below 1GHz :

The diagram below shows the test setup which is utilized to make these measurements.



Antenna Elevation Variable



3.3. RADIATION LIMIT

According to FCC Section 15.407(b)(5), the unwanted emission below 1 GHz should comply with the general field strength limits set forth in Section 15.209.

FREQUENCY (MHz)	DISTANCE (METERS)	Radiated (dB μ V/M)	Radiated (μ V/M)
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

According to FCC Section 15.407(b)(1) (2) (3), the unwanted emission above 1 GHz, outside of the operating frequency band below, should exceed an EIRP of the values listed in table below.

Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dB μ V/M)
5150-5250	-27	68.3
5250-5350	-27	68.3
5725-5825	-27*	68.3
	-17**	78.3

The remark “*” means: outside the frequency range 5715~5835MHz.

The remark “**” means: within the frequency range from the band edge to 10MHz below or above the band edge.

According to FCC Section 15.407(b)(6), the provisions of 15.205 apply to intentional radiators operating under this section.



3.4. Test procedure

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

- a. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- b. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarization of the antenna are set to make the measurement.
- c. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- d. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- e. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

NOTE :

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Peak detection (PK) and Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1 MHz for Peak detection and frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 10 Hz for Average detection (AV) at frequency above 1GHz.

3.5. UNCERTAINTY OF RADIATED EMISSION

The uncertainty of radiated emission is ± 2.72 dB.



3.6. TEST RESULTS

3.6.1. Spurious emission below 1GHz

Test Requirement: 15.407(b)(5), 15.2092

The frequency spectrum from **30 MHz to 1000 MHz** was investigated. All emissions not reported below are more than 20 dB below the prescribed limits.

All readings are **quasi-peak** values.

Temperature : 31

Humidity : 53 % RH

FREQ- UENCY (MHz)	ANTENNA FACTOR (dB)	CABLE LOSS (dB)	METER READING AT3m(dB μ V/M)		LIMITS (dB μ V/M)	EMISSION LEVEL AT3m(dB μ V/M)	
			HORIZON- TAL	VERTICAL		HORIZON- TAL	VERTICAL
30.00	18.06	0.90	*	*	40.00	*	*
34.99	14.64	1.00	7.50	11.90	40.00	23.14	27.54
46.75	9.93	1.34	16.10	28.60	40.00	27.37	39.87
85.61	9.43	1.76	20.30	28.17	40.00	31.49	39.36
132.84	12.32	2.25	12.70	15.24	43.50	27.27	29.81
181.25	9.85	2.60	6.30	7.26	43.50	18.75	19.71
260.87	12.92	3.14	5.80	5.24	46.00	21.86	21.30
527.99	18.27	4.36	5.30	6.73	46.00	27.93	29.36
927.83	20.84	5.82	8.40	9.48	46.00	35.06	36.14

REMARKS :

- * Undetectable
- Emission level (dB μ V/M) = Antenna Factor (dB/m) + Cable loss (dB) + Meter Reading (dB μ V).
- After the preliminary scan, we found the EUT were in Transmitting and Receiving Mode producing the highest emission level so the channel 1 (5.18GHZ) were recorded for final testing.



3.6.2. Spurious emission outside of the 5.15~5.35GHz Band(TX)

Test Requirement: 15.407(b)(1)(2)

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5180MHz**. Operation Mode: **Transmitting(TX)**

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3.m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1064.81 *	63.89	25.31	1.83	36.19	9.5	0	45.35	74	-28.65	P	H	1.0
1199.74 *	60.46	26.18	2.70	36.04	9.5	0	43.80	74	-30.20	P	H	1.0
1323.22 *	50.46	26.97	3.50	35.90	9.5	0	35.53	74	-38.47	P	H	1.0
1466.16 *	56.09	27.88	4.42	35.74	9.5	0	43.16	74	-30.84	P	H	1.0
1591.55 *	52.31	28.85	4.02	35.61	9.5	0	40.07	74	-33.93	P	H	1.0
1998.39	53.22	32.19	1.28	35.23	9.5	0	41.96	68.3	-26.34	P	H	1.0
2266.29 *	53.46	31.93	1.97	35.28	9.5	0	42.58	74	-31.42	P	H	1.0
2266.29 *	40.35	31.93	1.97	35.28	9.50	0	29.47	54	-24.53	A	H	1.0
2515.48 *	50.70	31.7	2.57	35.34	9.5	0	40.13	68.3	-28.17	P	H	1.0
● 5180.00	69.07	35.9	3.14	0.00	9.5	0	98.56	Fundamental Frequency		P	H	1.0
● 5180.00	60.16	35.9	3.14	0.00	9.5	0	89.65			A	H	1.0
2515.48	50.70	31.7	2.57	35.34	9.5	0	40.13	68.3	-28.17	P	H	1.0
10361.23	49.77	38.9	4.78	35.52	9.5	1	49.46	68.3	-18.84	P	H	1.0
15540.00 *	---	---	---	---	9.5	1	---	74	---	P	H	1.0
20720.00	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
25900.00	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0

Note :

1. Measurement was up to 10th harmonic,“---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict or non-ristrict band(DELTA). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting DELTA from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance)=9.5dB
8. Check the end of this section to see Band Edge at 5.15GHz and 5.35GHz.



Test Requirement: 15.407(b)(1)(2)

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5180MHz**. Operation Mode: **Transmitting(TX)**

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/M)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1064.81 *	63.89	25.3	1.83	36.19	9.5	0	45.35	74	-28.65	P	V	1.0
1199.74 *	71.73	26.2	2.70	36.04	9.5	0	55.07	74	-18.93	P	V	1.0
1199.74 *	46.24	26.2	2.70	36.04	9.5	0	29.58	54	-24.42	A	V	1.0
1323.22 *	64.71	27	3.50	35.90	9.5	0	49.78	74	-24.22	P	V	1.0
1466.16 *	63.49	27.9	4.42	35.74	9.5	0	50.56	74	-23.44	P	V	1.0
1591.55 *	62.58	28.9	4.02	35.61	9.5	0	50.34	74	-3.66	P	V	1.0
1591.55 *	39.14	28.85	4.02	35.61	9.5	0	26.90	54	-27.10	A	V	1.0
1998.39	71.18	32.2	1.28	35.23	9.5	0	59.92	68.3	-8.38	P	V	1.0
2266.29 *	63.28	31.9	1.97	35.28	9.5	0	52.40	74	-21.60	P	V	1.0
2266.29 *	40.35	31.9	1.97	35.28	9.5	0	29.47	54	-24.53	A	V	1.0
2515.48	53.13	31.7	2.57	35.34	9.5	0	42.56	68.3	-25.74	P	V	1.0
● 5180	76.50	35.85	3.14	0.00	9.5	0	105.99	Fundamental Frequency		P	V	1.0
● 5180	66.56	35.85	3.14	0.00	9.5	0	96.05			A	V	1.0
10361	53.05	38.9	4.78	35.53	9.5	1	52.74	68.3	-15.56	P	V	1.0
15540 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0
20720.00	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0
25900.00	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic,“---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(Delta). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting Delta from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.15GHz and 5.35GHz.



Test Requirement: 15.407(b)(1) (2)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Fundamental Frequency : 5240MHz Operation Mode: Transmitting(TX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1064.81 *	64.16	25.3	1.83	36.19	9.5	0	45.62	74	-28.38	P	H	1.0
1199.74 *	61.08	26.2	2.70	36.04	9.5	0	44.42	74	-29.58	P	H	1.0
1323.22 *	50.89	27	3.50	35.90	9.5	0	35.96	74	-38.04	P	H	1.0
1466.16 *	57.24	27.9	4.42	35.74	9.5	0	44.31	74	-29.69	P	H	1.0
1591.55 *	53.41	28.9	4.02	35.61	9.5	0	41.17	74	-32.83	P	H	1.0
1998.39	55.06	32.2	1.28	35.23	9.5	0	43.80	68.3	-24.50	P	H	1.0
2266.29 *	54.21	31.9	1.97	35.28	9.5	0	43.33	74	-30.67	P	H	1.0
2515.48	50.98	31.7	2.57	35.34	9.5	0	40.41	68.3	-27.89	P	H	1.0
10480.1	48.23	39.1	5.10	35.42	9.5	1	48.48	68.3	-19.82	P	H	1.0
15720 *	---	---	---	---	9.5	1	---	74	---	P	H	1.0
20960 *	---	---	---	---	9.5	1	---	74	---	P	H	1.0
26200 *	---	---	---	---	9.5	1	---	74	---	P	H	1.0
1064.81 *	68.89	25.3	1.83	36.19	9.5	0	50.35	74	-23.65	P	V	1.0
1199.74 *	71.25	26.2	2.70	36.04	9.5	0	54.59	74	-19.41	P	V	1.0
1199.74 *	48.40	26.2	2.70	36.04	9.5	0	31.74	54	-22.26	A	V	1.0
1323.22 *	64.28	27	3.50	35.90	9.5	0	49.35	74	-24.65	P	V	1.0
1466.16 *	63.74	27.9	4.42	35.74	9.5	0	50.81	74	-23.19	P	V	1.0
1591.55 *	64.17	28.9	4.02	35.61	9.5	0	51.93	74	-22.07	P	V	1.0
1591.55 *	48.30	28.85	4.02	35.61	9.5	0	36.06	54	-17.94	A	V	1.0
1998.39	70.67	32.2	1.28	35.23	9.5	0	59.41	68.3	-8.89	P	V	1.0
2266.29 *	63.08	31.9	1.97	35.28	9.5	0	52.20	74	-21.80	P	V	1.0
2266.29 *	39.14	31.9	1.97	35.28	9.5	0	28.26	54	-25.74	A	V	1.0
10480.1	52.69	39.1	5.10	35.42	9.5	1	52.94	68.3	-15.36	P	V	1.0
15720 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0
20960 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0
26200 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. Remark " * " means that Restricted band.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.407(b)(1) (2)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Fundamental Frequency : 5260MHz Operation Mode: Transmitting(TX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Preamp (dB)	Dist (dB)	Filter (dB)	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1064.81 *	53.28	25.3	1.83	36.19	9.5	0	34.74	74	-39.26	P	H	1.0
1199.74 *	60.18	26.2	2.70	36.04	9.5	0	43.52	74	-30.48	P	H	1.0
1323.22 *	50.87	27	3.50	35.90	9.5	0	35.94	74	-38.06	P	H	1.0
1466.16 *	56.93	27.9	4.42	35.74	9.5	0	44.00	74	-30.00	P	H	1.0
1591.55 *	52.89	28.9	4.02	35.61	9.5	0	40.65	74	-33.35	P	H	1.0
1998.39	52.84	32.2	1.28	35.23	9.5	0	41.58	68.3	-26.72	P	H	1.0
2266.29 *	54.28	31.9	1.97	35.28	9.5	0	43.40	74	-30.60	P	H	1.0
2515.48	51.26	31.7	2.57	35.34	9.5	0	40.69	68.3	-27.61	P	H	1.0
10517.6	46.36	39.1	5.12	35.39	9.5	1	46.71	68.3	-21.59	P	H	1.0
15780 *	---	---	---	---	9.5	1	---	74	---	P	H	1.0
21040	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
26300	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
1064.81 *	69.02	25.3	1.83	36.19	9.5	0	50.48	74	-23.52	P	V	1.0
1199.74 *	71.89	26.2	2.70	36.04	9.5	0	55.23	74	-18.77	P	V	1.0
1199.74 *	49.85	26.2	2.70	36.04	9.5	0	33.19	54	-20.81	A	V	1.0
1323.22 *	65.29	27	3.50	35.90	9.5	0	50.36	74	-23.64	P	V	1.0
1466.16 *	64.28	27.9	4.42	35.74	9.5	0	51.35	74	-22.65	P	V	1.0
1591.55 *	64.71	28.9	4.02	35.61	9.5	0	52.47	74	-21.53	P	V	1.0
1591.55 *	45.17	28.85	4.02	35.61	9.5	0	32.93	54	-21.07	A	V	1.0
1998.39	70.98	32.2	1.28	35.23	9.5	0	59.72	68.3	-8.58	P	V	1.0
2266.29 *	64.29	31.9	1.97	35.28	9.5	0	53.41	74	-20.59	P	V	1.0
2266.29 *	40.46	31.9	1.97	35.28	9.5	0	29.58	54	-24.42	A	V	1.0
2515.48	51.27	31.7	2.57	35.34	9.5	0	40.70	68.3	-27.60	P	V	1.0
10518	52.54	39.1	5.12	35.39	9.5	1	52.89	68.3	-15.41	P	V	1.0
15780 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0
21040	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0
26300	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.407**(b)(1) (2)**

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5320MHz** Operation Mode: **Transmitting(TX)**

Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1064.81 *	64.81	25.3	1.83	36.19	9.5	0	46.27	74	-27.73	P	H	1.0
1199.74 *	60.87	26.2	2.70	36.04	9.5	0	44.21	74	-29.79	P	H	1.0
1323.22 *	51.20	27	3.50	35.90	9.5	0	36.27	74	-37.73	P	H	1.0
1466.16 *	55.27	27.9	4.42	35.74	9.5	0	42.34	74	-31.66	P	H	1.0
1591.55 *	53.26	28.9	4.02	35.61	9.5	0	41.02	74	-32.98	P	H	1.0
1998.39	51.84	32.2	1.28	35.23	9.5	0	40.58	68.3	-27.72	P	H	1.0
2266.29 *	54.91	31.9	1.97	35.28	9.5	0	44.03	74	-29.97	P	H	1.0
2515.48	51.83	31.7	2.57	35.34	9.5	0	41.26	68.3	-27.04	P	H	1.0
● 5320	67.52	36.05	3.34	0.00	9.5	0	97.41	Fundamental Frequency		P	H	1.0
● 5320	58.15	36.05	3.34	0.00	9.5	0	88.04			A	H	1.0
10639.1 *	47.78	39.3	4.93	35.31	9.5	1	48.17	74	-25.83	P	H	1.0
10639.1 *	34.74	39.3	4.93	35.31	9.5	1	35.13	54	-18.87	A	H	1.0
15960 *	---	---	---	---	9.5	1	---	74	---	P	H	1.0
21280	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
26600	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0

Note :

1. Measurement was up to 10th harmonic, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(Delta). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting Delta from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.15GHz and 5.35GHz.



Test Requirement: 15.407(b)(1) (2)

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits. Readings are both peak and average values.

Fundamental Frequency : **5320MHz** Operation Mode: **Transmitting(TX)**

Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1064.81 *	67.48	25.3	1.83	36.19	9.5	0	48.94	74	-25.06	P	V	1.0
1199.74 *	70.58	26.2	2.70	36.04	9.5	0	53.92	74	-20.08	P	V	1.0
1199.74 *	48.93	26.2	2.70	36.04	9.5	0	32.27	54	-21.73	A	V	1.0
1323.22 *	63.58	27	3.50	35.90	9.5	0	48.65	74	-25.35	P	V	1.0
1466.16 *	63.48	27.9	4.42	35.74	9.5	0	50.55	74	-23.45	P	V	1.0
1591.55 *	64.29	28.9	4.02	35.61	9.5	0	52.05	74	-21.95	P	V	1.0
1591.55 *	48.93	28.85	4.02	35.61	9.5	0	36.69	54	-17.31	A	V	1.0
1998.39	71.54	32.2	1.28	35.23	9.5	0	60.28	68.3	-8.02	P	V	1.0
2266.29 *	63.48	31.9	1.97	35.28	9.5	0	52.60	74	-21.40	P	V	1.0
2266.29 *	39.22	31.9	1.97	35.28	9.5	0	28.34	54	-25.66	A	V	1.0
2515.48	52.19	31.7	2.57	35.34	9.5	0	41.62	68.3	-26.68	P	V	1.0
● 5320	72.50	36.05	3.34	0.00	9.5	0	102.39	Fundamental Frequency		P	V	1.0
● 5320	63.28	36.05	3.34	0.00	9.5	0	93.17			A	V	1.0
10639.1 *	52.63	39.3	4.93	35.31	9.5	1	53.02	74	-20.98	P	V	1.0
10639.1 *	39.49	39.3	4.93	35.31	9.5	1	39.88	54	-14.12	A	V	1.0
15960 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0
21280	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0
26600	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark " * " means that Restricted band. Remark " ● " means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(Delta). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting Delta from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.15GHz and 5.35GHz.



● Band Edge

Freq.	Reading	AF	Cable	Pre-amp	Dist	delta	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	AT 3M (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
5120*	---		---			47.71	50.85	74	-23.15	P	H	1.0
5120*	---		---			45.78	43.87	54	-10.13	A	H	1.0
5150*	---		---			48.88	49.68	74	-24.32	P	H	1.0
5150*	---		---			53.30	36.35	54	-17.65	A	H	1.0
● 5180.00	69.07	35.9	3.14	0.00	9.5	---	98.56	Fundamental		P	H	1.0
● 5180.00	60.16	35.9	3.14	0.00	9.5	---	89.65	Frequency		A	H	1.0
5120*	---		---			47.71	58.28	74	-15.72	P	V	1.0
5120*	---		---			45.78	50.27	54	-3.73	A	V	1.0
5150*	---		---			48.88	57.11	74	-16.89	P	V	1.0
5150*	---		---			53.30	42.75	54	-11.25	A	V	1.0
● 5180.00	76.50	35.85	3.14	0.00	9.5	---	105.99	Fundamental		P	V	1.0
● 5180.00	66.56	35.85	3.14	0.00	9.5	---	96.05	Frequency		A	V	1.0

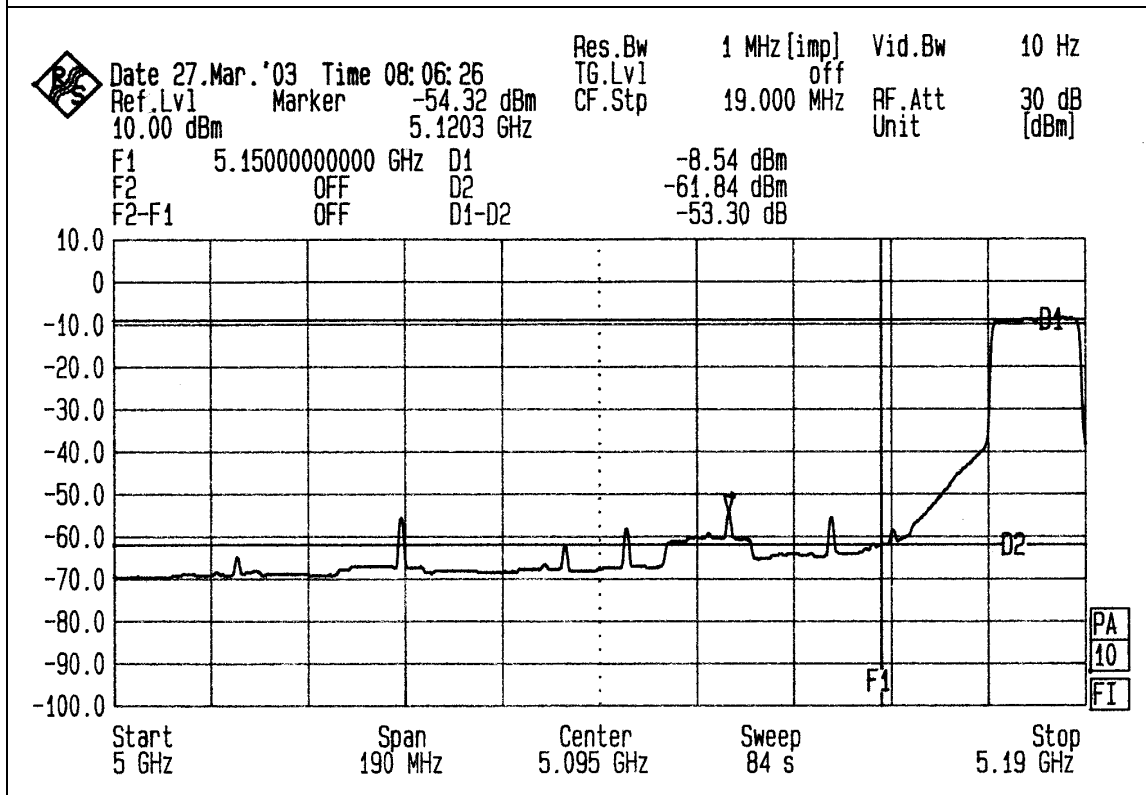
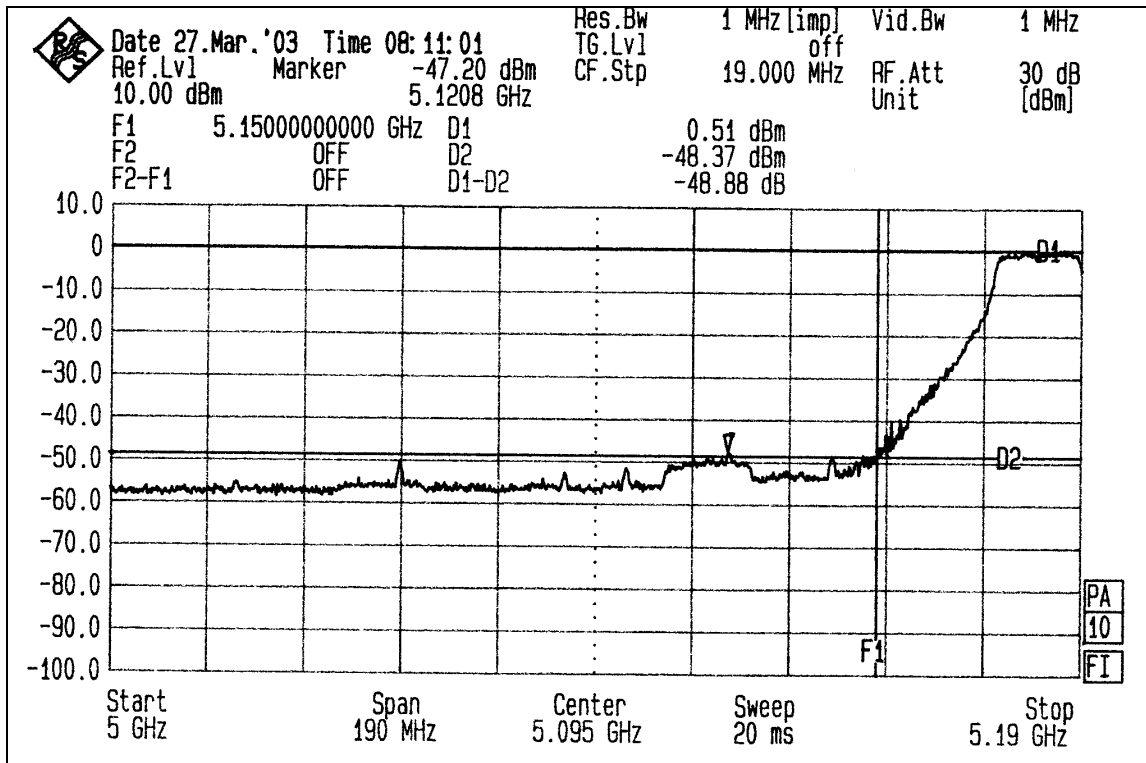
1. The **conducted** band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(DELTA). The **radiated peak and average spurious emission power** next to the operating band is calculated by subtracting DELTA from the radiated average and peak carrier power individually. For example, the **horizontal peak** emission power at 5120MHz is 98.56-47.71=50.85.

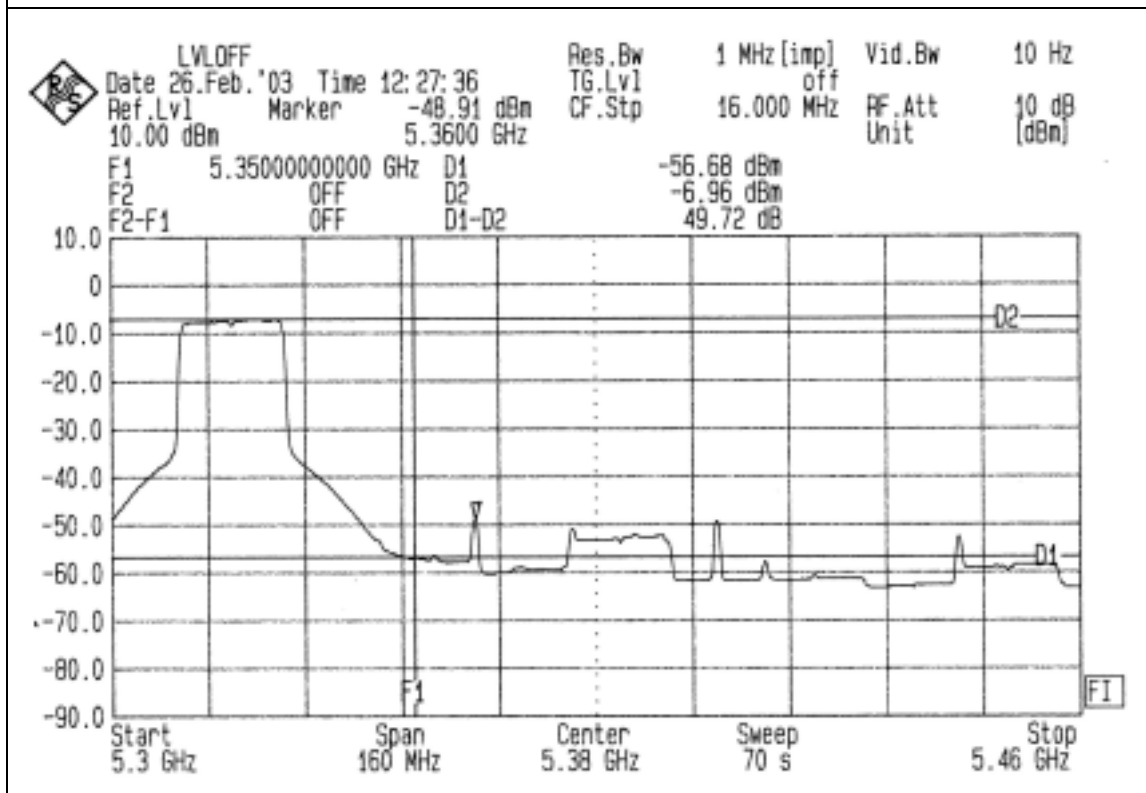
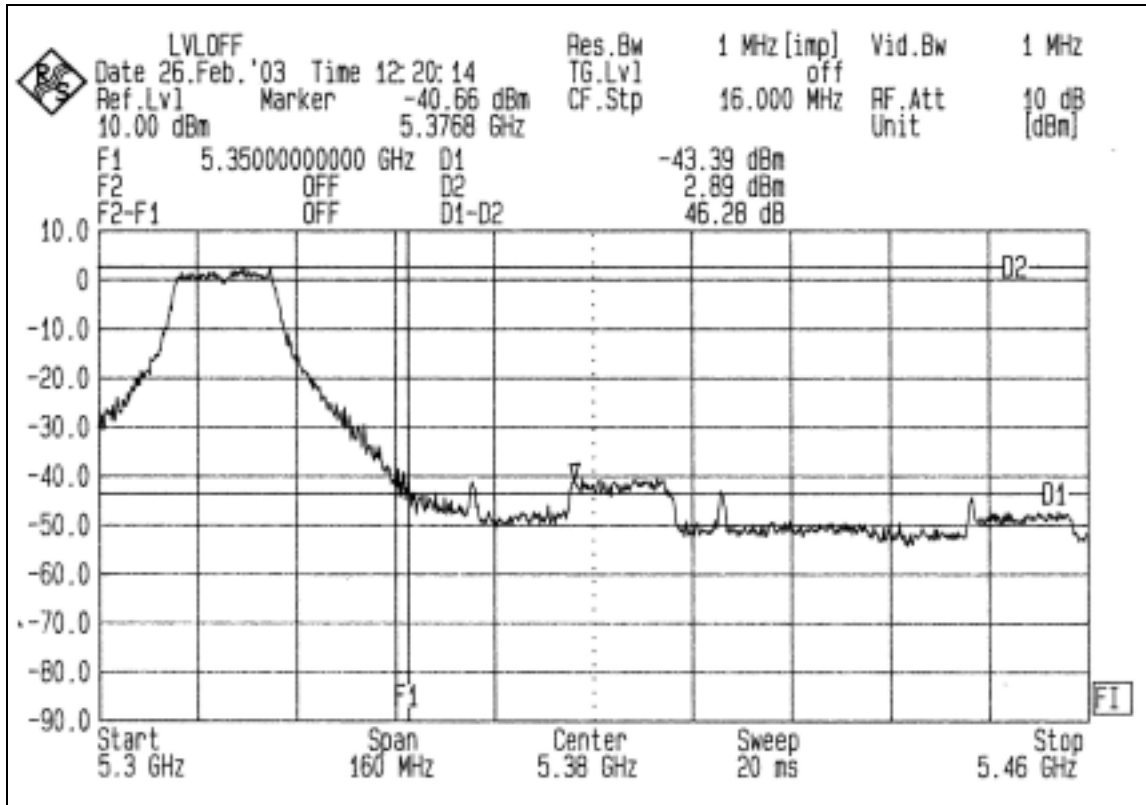
2. Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.

Freq.	Reading	AF	Cable	Pre-amp	Dist	delta	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	AT 3M (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
● 5320	72.50	36.05	3.34	0.00	9.5	0	97.41	Fundamental		P	H	1.0
● 5320	63.28	36.05	3.34	0.00	9.5	0	88.04	Frequency		A	H	1.0
5350*	---		---			46.28	51.13	74	-22.87	P	H	1.0
5350*	---		---			49.72	38.32	54	-15.68	A	H	1.0
5360*	---		---			43.55	53.86	74	-20.14	P	H	1.0
5360*	---		---			41.95	46.09	54	-7.91	A	H	1.0
5377*	---		---			43.55	53.86	74	-20.14	P	H	1.0
5377*	---		---			41.95	46.09	54	-7.91	A	H	1.0
● 5320	72.50	36.05	3.34	0.00	9.5	0	102.39	Fundamental		P	V	1.0
● 5320	63.28	36.05	3.34	0.00	9.5	0	93.17	Frequency		A	V	1.0
5350*	---		---			46.28	56.11	74	-17.89	P	V	1.0
5350*	---		---			49.72	43.45	54	-10.55	A	V	1.0
5360*	---		---			43.55	58.84	74	-15.16	P	V	1.0
5360*	---		---			41.95	51.22	54	-2.78	A	V	1.0
5377*	---		---			43.55	58.84	74	-15.16	P	V	1.0
5377*	---		---			41.95	51.22	54	-2.78	A	V	1.0

1. The **conducted** band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(DELTA). The **radiated peak and average spurious emission power** next to the operating band is calculated by subtracting DELTA from the radiated average and peak carrier power individually. For example, the **horizontal peak** emission power at 5377MHz is 102.39-43.55=58.84.

2. Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.







3.6.3. Spurious emission outside of the 5.725~5.825GHz Band (TX)

Test Requirement: 15.205, 15.407**(b)(3)** The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5745MHz**. Operation Mode: **Transmitting(TX)**

Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1064.81 *	64.29	25.3	1.83	36.19	9.5	0	45.75	74	-28.25	P	H	1.0
1199.74 *	61.08	26.2	2.70	36.04	9.5	0	44.42	74	-29.58	P	H	1.0
1323.22 *	51.49	27	3.50	35.90	9.5	0	36.56	74	-37.44	P	H	1.0
1466.16 *	55.82	27.9	4.42	35.74	9.5	0	42.89	74	-31.11	P	H	1.0
1591.55 *	51.29	28.9	4.02	35.61	9.5	0	39.05	74	-34.95	P	H	1.0
1998.39	54.87	32.2	1.28	35.23	9.5	0	43.61	68.3	-24.69	P	H	1.0
2266.29 *	50.19	31.9	1.97	35.28	9.5	0	39.31	74	-34.69	P	H	1.0
2515.48	51.91	31.7	2.57	35.34	9.5	0	41.34	68.3	-26.96	P	H	1.0
● 5745	87.62	36.69	4.43	35.50	9.5	0	83.74	Fundamental Frequency		P	H	1.0
● 5745	77.94	36.69	4.43	35.50	9.5	0	74.06			A	H	1.0
11501 *	49.37	39.7	4.36	35.08	9.5	1	49.85	74	-24.15	P	H	1.0
11501 *	37.10	39.7	4.36	35.08	9.5	1	37.58	54	-16.42	A	H	1.0
17235	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
22980	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0

Note :

1. Measurement was up to 10th harmonic, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(Delta). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting Delta from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.725GHz and 5.825GHz.



Test Requirement: 15.205, 15.407(b)(3) The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5745MHz. Operation Mode: Transmitting(TX)

Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1064.81 *	67.97	25.3	1.83	36.19	9.5	0	49.43	74	-24.57	P	V	1.0
1199.74 *	71.29	26.2	2.70	36.04	9.5	0	54.63	74	-19.37	P	V	1.0
1199.74 *	44.92	26.2	2.70	36.04	9.5	0	28.26	54	-25.74	A	V	1.0
1323.22 *	63.25	27	3.50	35.90	9.5	0	48.32	74	-25.68	P	V	1.0
1466.16 *	64.12	27.9	4.42	35.74	9.5	0	51.19	74	-22.81	P	V	1.0
1591.55 *	64.18	28.9	4.02	35.61	9.5	0	51.94	74	-22.06	P	V	1.0
1591.55 *	44.92	28.85	4.02	35.61	9.5	0	32.68	54	-21.32	A	V	1.0
1998.39	70.94	32.2	1.28	35.23	9.5	0	59.68	68.3	-8.62	P	V	1.0
2266.29 *	64.83	31.9	1.97	35.28	9.5	0	53.95	74	-20.05	P	V	1.0
2266.29 *	37.46	31.9	1.97	35.28	9.5	0	26.58	54	-27.42	A	V	1.0
2515.48	53.14	31.7	2.57	35.34	9.5	0	42.57	68.3	-25.73	P	V	1.0
● 5745	103.40	36.69	4.43	35.50	9.5	0	99.52	Fundamental Frequency		P	V	1.0
● 5745	93.51	36.69	4.43	35.50	9.5	0	89.63			A	V	1.0
11501 *	51.75	39.7	4.36	35.08	9.5	1	52.23	74	-21.77	P	V	1.0
11501 *	38.98	39.7	4.36	35.08	9.5	1	39.46	54	-14.54	A	V	1.0
17235	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0
22980 *	---	---	---	---	9.5	1	---	74	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band. Remark "●" means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(Delta). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting Delta from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.725GHz and 5.825GHz.



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5765MHz Operation Mode: Transmitting(TX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1064.81 *	64.58	25.3	1.83	36.19	9.5		46.04	74	-27.96	P	H	1.0
1199.74 *	61.29	26.2	2.70	36.04	9.5	0	44.63	74	-29.37	P	H	1.0
1323.22 *	51.29	27	3.50	35.90	9.5	0	36.36	74	-37.64	P	H	1.0
1466.16 *	57.28	27.9	4.42	35.74	9.5	0	44.35	74	-29.65	P	H	1.0
1591.55 *	53.17	28.9	4.02	35.61	9.5	0	40.93	74	-33.07	P	H	1.0
1998.39	54.81	32.2	1.28	35.23	9.5	0	43.55	68.3	-24.75	P	H	1.0
2266.29 *	53.21	31.9	1.97	35.28	9.5	0	42.33	74	-31.67	P	H	1.0
2515.48	52.18	31.7	2.57	35.34	9.5	0	41.61	68.3	-26.69	P	H	1.0
11528.8 *	49.65	39.7	4.48	35.09	9.5	1	50.26	74	-23.74	P	H	1.0
11528.8 *	36.67	39.7	4.48	35.09	9.5	1	37.28	54	-16.72	A	H	1.0
17295	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
23060	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
1064.81	69.24	25.3	1.83	36.19	9.5	0	50.70	74	-23.30	P	V	1.0
1199.74 *	70.96	26.2	2.70	36.04	9.5	0	54.30	74	-19.70	P	V	1.0
1199.74 *	46.02	26.2	2.70	36.04	9.5	0	29.36	74	-44.64	A	V	1.0
1466.16 *	63.59	27.9	4.42	35.74	9.5	0	50.66	74	-23.34	P	V	1.0
1591.55 *	64.92	28.9	4.02	35.61	9.5	0	52.68	74	-21.32	P	V	1.0
1591.55 *	46.02	28.85	4.02	35.61	9.5	0	33.78	54	-20.22	A	V	1.0
1998.39	71.26	32.2	1.28	35.23	9.5	0	60.00	68.3	-8.30	P	V	1.0
2266.29 *	62.83	31.9	1.97	35.28	9.5	0	51.95	74	-22.05	P	V	1.0
2266.29 *	38.12	31.9	1.97	35.28	9.5	0	27.24	54	-26.76	A	V	1.0
11528.8 *	50.61	39.7	4.48	35.09	9.5	1	51.22	74	-22.78	P	V	1.0
11528.8 *	37.76	39.7	4.48	35.09	9.5	1	38.37	54	-15.63	A	V	1.0
17295	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0
23060	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. Remark "*" means that Restricted band.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5785MHz Operation Mode: Transmitting(TX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1064.81 *	65.28	25.3	1.83	36.19	9.5	0	46.74	74	-27.26	P	H	1.0
1199.74 *	62.28	26.2	2.70	36.04	9.5	0	45.62	74	-28.38	P	H	1.0
1323.22 *	51.83	27	3.50	35.90	9.5	0	36.90	74	-37.10	P	H	1.0
1466.16 *	57.49	27.9	4.42	35.74	9.5	0	44.56	74	-29.44	P	H	1.0
1591.55 *	53.84	28.9	4.02	35.61	9.5	0	41.60	74	-32.40	P	H	1.0
1998.39	53.75	32.2	1.28	35.23	9.5	0	42.49	68.3	-25.81	P	H	1.0
2266.29 *	54.78	31.9	1.97	35.28	9.5	0	43.90	74	-30.10	P	H	1.0
2515.48	52.24	31.7	2.57	35.34	9.5	0	41.67	68.3	-26.63	P	H	1.0
11570.72 *	49.16	39.8	4.65	35.10	9.5	1	49.97	74	-24.03	P	H	1.0
11570.72 *	36.62	39.8	4.65	35.10	9.5	1	37.43	54	-16.57	A	H	1.0
17355	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
23140	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
1064.81 *	69.54	25.3	1.83	36.19	9.5	0	51.00	74	-23.00	P	V	1.0
1199.74 *	72.08	26.2	2.70	36.04	9.5	0	55.42	74	-18.58	P	V	1.0
1199.74 *	47.39	26.2	2.70	36.04	9.5	0	30.73	54	-23.27	A	V	1.0
1466.16 *	62.82	27.9	4.42	35.74	9.5	0	49.89	74	-24.11	P	V	1.0
1591.55 *	63.91	28.9	4.02	35.61	9.5	0	51.67	74	-22.33	P	V	1.0
1591.55 *	47.39	28.85	4.02	35.61	9.5	0	35.15	54	-18.85	A	V	1.0
1998.39	71.09	32.2	1.28	35.23	9.5	0	59.83	68.3	-8.47	P	V	1.0
2266.29 *	62.28	31.9	1.97	35.28	9.5	0	51.40	74	-22.60	P	V	1.0
2266.29 *	37.03	31.9	1.97	35.28	9.5	0	26.15	54	-27.85	A	V	1.0
11570.72 *	52.21	39.8	4.65	35.10	9.5	1	53.02	74	-20.98	P	V	1.0
11570.72 *	39.59	39.8	4.65	35.10	9.5	1	40.40	54	-13.60	A	V	1.0
17355	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0
23140	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. Remark "*" means that Restricted band.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5805MHz Operation Mode: Transmitting(TX)

Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1064.81 *	64.89	25.3	1.83	36.19	9.5	0	46.35	74	-27.65	P	H	1.0
1199.74 *	60.75	26.2	2.70	36.04	9.5	0	44.09	74	-29.91	P	H	1.0
1323.22 *	51.87	27	3.50	35.90	9.5	0	36.94	74	-37.06	P	H	1.0
1466.16 *	57.28	27.9	4.42	35.74	9.5	0	44.35	74	-29.65	P	H	1.0
1591.55 *	53.48	28.9	4.02	35.61	9.5	0	41.24	74	-32.76	P	H	1.0
1998.39	53.29	32.2	1.28	35.23	9.5	0	42.03	68.3	-26.27	P	H	1.0
2266.29 *	53.92	31.9	1.97	35.28	9.5	0	43.04	74	-30.96	P	H	1.0
2515.48	51.09	31.7	2.57	35.34	9.5	0	40.52	68.3	-27.78	P	H	1.0
● 5805	68.34	36.79	4.63	0.00	9.5	0	100.26	Fundamental Frequency		P	H	1.0
● 5805	57.85	36.79	4.63	0.00	9.5	0	89.77			P	H	1.0
11611.23 *	49.19	39.8	4.81	35.11	9.5	1	50.18	74	-23.82	P	H	1.0
11611.23 *	36.92	39.8	4.81	35.11	9.5	1	37.91	54	-16.09	A	H	1.0
17415	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0
23220	---	---	---	---	9.5	1	---	68.3	---	P	H	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band. Remark "●" means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(Delta). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting Delta from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.725GHz and 5.825GHz.



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5805MHz Operation Mode: Transmitting(TX)

Freq.	Reading	AF	Cable	Pre-amp	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1064.81 *	69.38	25.3	1.83	36.19	9.5	0	50.84	74	-23.16	P	V	1.0
1199.74 *	72.01	26.2	2.70	36.04	9.5	0	55.35	74	-18.65	P	V	1.0
1199.74 *	46.13	26.2	2.70	36.04	9.5	0	29.47	54	-24.53	A	V	1.0
1466.16 *	63.25	27.9	4.42	35.74	9.5	0	50.32	74	-23.68	P	V	1.0
1591.55 *	65.24	28.9	4.02	35.61	9.5	0	53.00	74	-21.00	P	V	1.0
1591.55 *	46.13	28.85	4.02	35.61	9.5	0	33.89	54	-20.11	A	V	1.0
1998.39	71.09	32.2	1.28	35.23	9.5	0	59.83	68.3	-8.47	P	V	1.0
2266.29 *	64.29	31.9	1.97	35.28	9.5	0	53.41	74	-20.59	P	V	1.0
2266.29 *	41.12	31.9	1.97	35.28	9.5	0	30.24	54	-23.76	A	V	1.0
2515.48	53.09	31.7	2.57	35.34	9.5	0	42.52	68.3	-25.78	P	V	1.0
● 5805	74.46	36.79	4.63	0.00	9.5	0	106.38	Fundamental Frequency		A	V	1.0
● 5805	65.09	36.79	4.63	0.00	9.5	0	97.01			P	V	1.0
11611.23 *	51.93	39.8	4.81	35.11	9.5	1	52.92	74	-21.08	P	V	1.0
11611.23 *	39.16	39.8	4.81	35.11	9.5	1	40.15	54	-13.85	A	V	1.0
17415	---	---	---	---	9.5	1	---	68.3	---	P	V	1.0

Note :

1. Measurement was up to 10th harmonic, "----" means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. Remark "*" means that Restricted band. Remark "●" means the fundamental frequency.
5. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
6. The conducted band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band(DELTA). The radiated peak and average spurious emission power next to the operating band is calculated by subtracting DELTA from the radiated average and peak carrier power individually.
7. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB
8. Check the end of this section to see Band Edge at 5.725GHz and 5.825GHz.



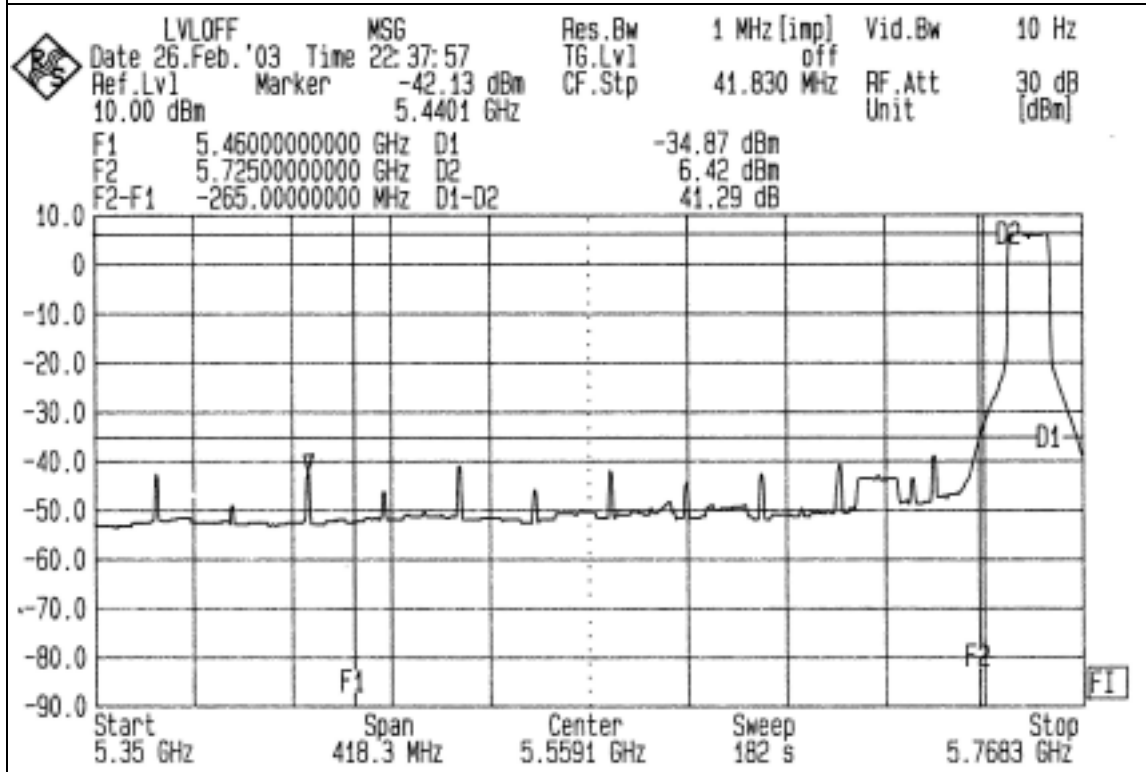
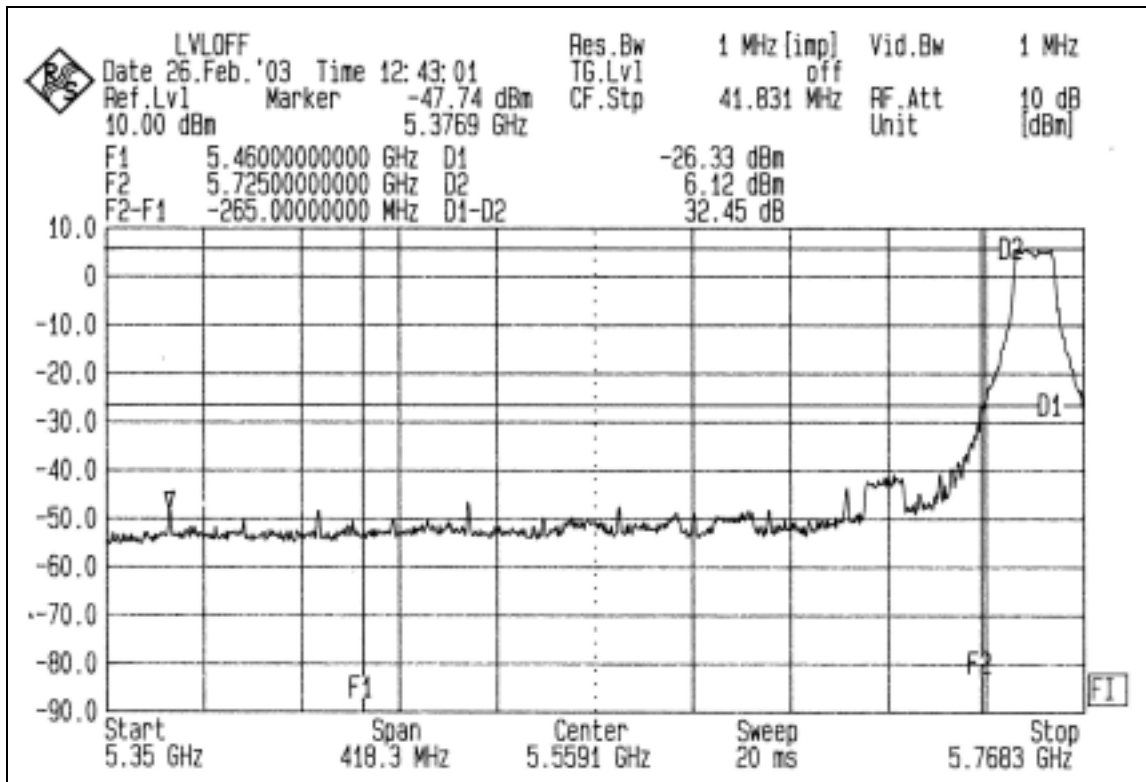
● **BAND EDGE**

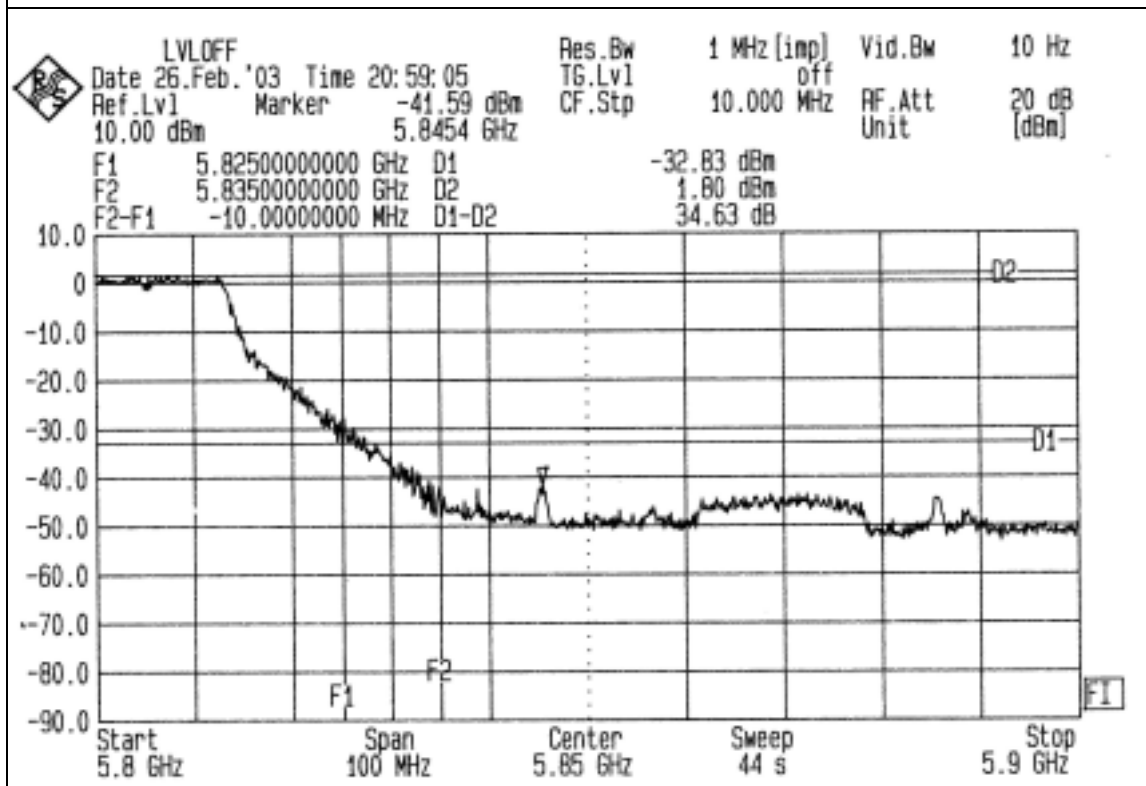
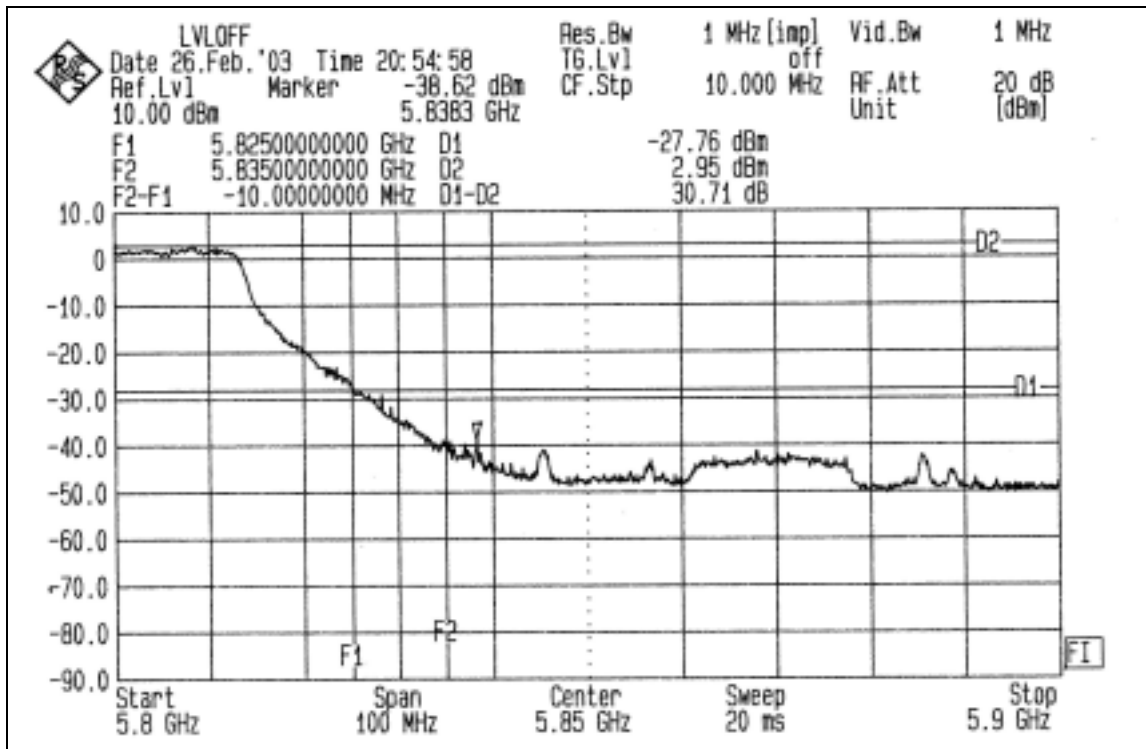
Freq.	Reading	AF	Cable	Pre-am p	Dist	Delta	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	AT 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
5376.9*			----			53.86	29.88	74	-44.12	P	H	1.0
5376.9*			----			48.55	25.51	54	-28.49	A	H	1.0
5440.1*			----			53.86	29.88	74	-44.12	P	H	1.0
5440.1*			----			48.55	25.51	54	-28.49	A	H	1.0
5725			----			32.45	51.29	78.3	-27.01	P	H	1.0
5725			----			41.29	42.45	78.3	-35.85	A	H	1.0
● 5745	87.62	36.69	4.43	35.50	9.5	0	83.74	Fundamental Frequency		P	H	1.0
● 5745	77.94	36.69	4.43	35.50	9.5	0	74.06		A	H	1.0	
5376.9*			----			53.86	45.66	74	-28.34	P	V	1.0
5376.9*			----			48.55	41.08	54	-12.92	A	V	1.0
5440.1*			----			53.86	45.66	74	-28.34	P	V	1.0
5440.1*			----			48.55	41.08	54	-12.92	A	V	1.0
5725			----			32.45	67.07	78.3	-11.23	P	V	1.0
5725			----			41.29	48.34	78.3	-29.96	A	V	1.0
● 5745	103.40	36.69	4.43	35.50	9.5	0	99.52	Fundamental Frequency		P	V	1.0
● 5745	93.51	36.69	4.43	35.50	9.5	0	89.63		A	V	1.0	

- The **conducted** band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band (**DELTA**). The **radiated** peak and average spurious emission power next to the operating band is calculated by subtracting **DELTA** from the radiated average and peak carrier power individually. For example, the **horizontal peak** emission power at 5376.9MHz is 83.74-53.86=29.88
- Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.

Freq.	Reading	AF	Cable	Pre-a mp	Dist	Delta	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	(dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
● 5805	68.34	36.79	4.63	0.00	9.5	0	100.26	Fundamental Frequency		P	H	1.0
● 5805	57.85	36.79	4.63	0.00	9.5	0	89.77		A	H	1.0	
5825			----			30.71	69.55	78.3	-8.75	P	H	1.0
5825			----			34.63	55.14	78.3	-23.16	A	H	1.0
5838.3			----			41.57	58.69	78.3	-19.61	P	H	1.0
5845.4			----			43.39	46.38	68.3	-21.92	A	H	1.0
● 5805	74.46	36.79	4.63	0.00	9.5	0	106.38	Fundamental Frequency		P	V	1.0
● 5805	65.09	36.79	4.63	0.00	9.5	0	97.01		A	V	1.0	
5825			----			30.71	75.67	78.3	-2.63	P	V	1.0
5825			----			34.63	62.38	78.3	-15.92	A	V	1.0
5838.3			----			41.57	64.81	78.3	-13.49	P	V	1.0
5845.4			----			43.39	53.62	68.3	-14.68	A	V	1.0

- The **conducted** band-edge emission plots on the following figures show the difference between carrier maximum power and maximum emitting power in restrict band (**DELTA**). The **radiated** peak and average spurious emission power next to the operating band is calculated by subtracting **DELTA** from the radiated average and peak carrier power individually. For example, the **horizontal peak** emission power at 5838MHz is 102.26-41.57=58.69.
- Remark “*” means that Restricted band. Remark “●” means the fundamental frequency.







3.6.4. Spurious emission outside of the 5.15~5.35GHz Band (RX)

Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5180MHz Operation Mode: Receiving (RX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065.00	61.79	25.3	1.83	36.19	9.5	0	43.25	74	-30.75	P	H	1.0
1200.00	62.37	26.2	2.70	36.04	9.5	0	45.71	74	-28.29	P	H	1.0
1323.00	56.61	27	3.50	35.90	9.5	0	41.68	74	-32.32	P	H	1.0
1466.00	56.91	27.9	4.42	35.74	9.5	0	43.98	74	-30.02	P	H	1.0
1592.00	52.77	28.9	4.02	35.61	9.5	0	40.53	74	-33.47	P	H	1.0
1998.00	51.88	32.2	1.28	35.23	9.5	0	40.62	74	-33.38	P	H	1.0
2266.00	56.31	31.9	1.97	35.28	9.5	0	45.43	74	-28.57	P	H	1.0
2515.00	52.73	31.7	2.57	35.34	9.5	0	42.16	74	-31.84	P	H	1.0
1065	67.86	25.3	1.83	36.19	9.5	0	49.32	74	-24.68	P	V	1.0
1200	71.48	26.2	2.70	36.04	9.5	0	54.82	74	-19.18	P	V	1.0
1200	50.20	26.18	2.70	36.04	9.5	0	33.54	54	-20.46	A	V	1.0
1323	62.98	27	3.50	35.90	9.5	0	48.05	74	-25.95	P	V	1.0
1466	63.36	27.9	4.42	35.74	9.5	0	50.43	74	-23.57	P	V	1.0
1592	63.98	28.9	4.02	35.61	9.5	0	51.74	74	-22.26	P	V	1.0
1592	53.20	28.85	4.02	35.61	9.5	0	40.96	54	-13.04	A	V	1.0
1998	60.14	32.2	1.28	35.23	9.5	0	48.88	74	-25.12	P	V	1.0
2266	61.29	31.9	1.97	35.28	9.5	0	50.41	74	-23.59	P	V	1.0
2515.00	53.97	31.7	2.57	35.34	9.5	0	43.40	74	-30.60	P	V	1.0

Note :

1. Measurement was up to 40GHz, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5240MHz** Operation Mode: **Receiving (RX)**

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065	60.89	25.3	1.83	36.19	9.5	0	42.35	74	-31.65	P	H	1.0
1200	60.06	26.2	2.70	36.04	9.5	0	43.40	74	-30.60	P	H	1.0
1323	55.81	27	3.50	35.90	9.5	0	40.88	74	-33.12	P	H	1.0
1466	57.21	27.9	4.42	35.74	9.5	0	44.28	74	-29.72	P	H	1.0
1592	52.16	28.9	4.02	35.61	9.5	0	39.92	74	-34.08	P	H	1.0
1727	54.32	30	3.11	35.49	9.5	0	42.41	74	-31.59	P	H	1.0
2266	56.90	31.9	1.97	35.28	9.5	0	46.02	74	-27.98	P	H	1.0
2515	49.19	31.7	2.57	35.34	9.5	0	38.62	74	-35.38	P	H	1.0
1065	67.87	25.3	1.83	36.19	9.5	0	49.33	74	-24.67	P	V	1.0
1200	71.46	26.2	2.70	36.04	9.5	0	54.80	74	-19.20	P	V	1.0
1200	51.60	26.18	2.70	36.04	9.5	0	34.94	54	-19.06	A	V	1.0
1323	61.97	27	3.50	35.90	9.5	0	47.04	74	-26.96	P	V	1.0
1466	62.27	27.9	4.42	35.74	9.5	0	49.34	74	-24.66	P	V	1.0
1592	63.98	28.9	4.02	35.61	9.5	0	51.74	74	-22.26	P	V	1.0
1592	54.30	28.85	4.02	35.61	9.5	0	42.06	54	-11.94	A	V	1.0
1727	63.17	30	3.11	35.49	9.5	0	51.26	74	-22.74	P	V	1.0
2266	60.95	31.9	1.97	35.28	9.5	0	50.07	74	-23.93	P	V	1.0
2515	52.97	31.7	2.57	35.34	9.5	0	42.40	74	-31.60	P	V	1.0
2786	49.67	31.7	2.15	35.43	9.5	0	38.60	74	-35.40	P	V	1.0

Note :

1. Measurement was up to 40GHz,“---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist,
Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



PHOTOS OF OPEN SITE Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5260MHz** Operation Mode: **Receiving (RX)**

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065	60.98	25.3	1.83	36.19	9.5	0	42.44	74	-31.56	P	H	1.0
1200	60.98	26.2	2.70	36.04	9.5	0	44.32	74	-29.68	P	H	1.0
1323	55.18	27	3.50	35.90	9.5	0	40.25	74	-33.75	P	H	1.0
1466	58.26	27.9	4.42	35.74	9.5	0	45.33	74	-28.67	P	H	1.0
1592	52.26	28.9	4.02	35.61	9.5	0	40.02	74	-33.98	P	H	1.0
1727	57.39	30	3.11	35.49	9.5	0	45.48	74	-28.52	P	H	1.0
1998	56.31	32.2	1.28	35.23	9.5	0	45.05	74	-28.95	P	H	1.0
2255	56.59	31.9	1.94	35.28	9.5	0	45.70	74	-28.30	P	H	1.0
2526	53.56	31.7	2.55	35.34	9.5	0	42.97	74	-31.03	P	H	1.0
1065	66.59	25.3	1.83	36.19	9.5	0	48.05	74	-25.95	P	V	1.0
1200	69.51	26.2	2.70	36.04	9.5	0	52.85	74	-21.15	P	V	1.0
1200	49.60	26.18	2.70	36.04	9.5	0	32.94	54	-21.06	A	V	1.0
1323	62.36	27	3.50	35.90	9.5	0	47.43	74	-26.57	P	V	1.0
1466	64.18	27.9	4.42	35.74	9.5	0	51.25	74	-22.75	P	V	1.0
1592	63.56	28.9	4.02	35.61	9.5	0	51.32	74	-22.68	P	V	1.0
1592	51.60	28.85	4.02	35.61	9.5	0	39.36	54	-14.64	A	V	1.0
1727	61.30	30	3.11	35.49	9.5	0	49.39	74	-24.61	P	V	1.0
1998	57.25	32.2	1.28	35.23	9.5	0	45.99	74	-28.01	P	V	1.0
2255	61.25	31.9	1.94	35.28	9.5	0	50.36	74	-23.64	P	V	1.0
2526	53.56	31.7	2.55	35.34	9.5	0	42.97	74	-31.03	P	V	1.0

Note :

1. Measurement was up to 40GHz,“---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist,
Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5320MHz Operation Mode: Receiving (RX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065	62.98	25.3	1.83	36.19	9.5	0	44.44	74	-29.56	P	H	1.0
1200	63.72	26.2	2.70	36.04	9.5	0	47.06	74	-26.94	P	H	1.0
1323	57.02	27	3.50	35.90	9.5	0	42.09	74	-31.91	P	H	1.0
1466	58.31	27.9	4.42	35.74	9.5	0	45.38	74	-28.62	P	H	1.0
1592	57.92	28.9	4.02	35.61	9.5	0	45.68	74	-28.32	P	H	1.0
1998	56.31	32.2	1.28	35.23	9.5	0	45.05	74	-28.95	P	H	1.0
2266	55.60	31.9	1.97	35.28	9.5	0	44.72	74	-29.28	P	H	1.0
2515	48.29	31.7	2.57	35.34	9.5	0	37.72	74	-36.28	P	H	1.0
2786	45.28	31.7	2.15	35.43	9.5	0	34.21	74	-39.79	P	H	1.0
1065	67.49	25.3	1.83	36.19	9.5	0	48.95	74	-25.05	P	V	1.0
1200	68.82	26.2	2.70	36.04	9.5	0	52.16	74	-21.84	P	V	1.0
1200	48.70	26.18	2.70	36.04	9.5	0	32.04	54	-21.96	A	V	1.0
1323	62.35	27	3.50	35.90	9.5	0	47.42	74	-26.58	P	V	1.0
1466	63.46	27.9	4.42	35.74	9.5	0	50.53	74	-23.47	P	V	1.0
1592	63.49	28.9	4.02	35.61	9.5	0	51.25	74	-22.75	P	V	1.0
1592	56.10	28.85	4.02	35.61	9.5	0	43.86	54	-10.14	A	V	1.0
1998	59.56	32.2	1.28	35.23	9.5	0	48.30	74	-25.70	P	V	1.0
2266	60.14	31.9	1.97	35.28	9.5	0	49.26	74	-24.74	P	V	1.0
2515	53.36	31.7	2.57	35.34	9.5	0	42.79	74	-31.21	P	V	1.0

Note :

1. Measurement was up to 40GHz, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



3.6.5. Spurious emission outside of the 5.725~5.825GHz Band (RX)

Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum **above 1 GHz** was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : **5745MHz** Operation Mode: **Receiving (RX)**

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065	63.36	25.3	1.83	36.19	9.5	0	44.82	74	-29.18	P	H	1.0
1200	68.92	26.2	2.70	36.04	9.5	0	52.26	74	-21.74	P	H	1.0
1323	57.21	27	3.50	35.90	9.5	0	42.28	74	-31.72	P	H	1.0
1466	62.10	27.9	4.42	35.74	9.5	0	49.17	74	-24.83	P	H	1.0
1592	60.83	28.9	4.02	35.61	9.5	0	48.59	74	-25.41	P	H	1.0
1998	58.96	32.2	1.28	35.23	9.5	0	47.70	74	-26.30	P	H	1.0
2266	55.70	31.9	1.97	35.28	9.5	0	44.82	74	-29.18	P	H	1.0
2515	50.86	31.7	2.57	35.34	9.5	0	40.29	74	-33.71	P	H	1.0
2782	48.62	31.7	2.16	35.43	9.5	0	37.56	74	-36.44	P	H	1.0
1065	66.24	25.3	1.83	36.19	9.5	0	47.70	74	-26.30	P	V	1.0
1200	70.24	26.2	2.70	36.04	9.5	0	53.58	74	-20.42	P	V	1.0
1200	52.30	26.18	2.70	36.04	9.5	0	35.64	54	-18.36	A	V	1.0
1323	58.42	27	3.50	35.90	9.5	0	43.49	74	-30.51	P	V	1.0
1466	65.07	27.9	4.42	35.74	9.5	0	52.14	74	-21.86	P	V	1.0
1592	62.87	28.9	4.02	35.61	9.5	0	50.63	74	-23.37	P	V	1.0
1592	51.50	28.85	4.02	35.61	9.5	0	39.26	54	-14.74	A	V	1.0
1998	60.47	32.2	1.28	35.23	9.5	0	49.21	74	-24.79	P	V	1.0
2266	60.14	31.9	1.97	35.28	9.5	0	49.26	74	-24.74	P	V	1.0
2515	53.91	31.7	2.57	35.34	9.5	0	43.34	74	-30.66	P	V	1.0
2782	49.49	31.7	2.16	35.43	9.5	0	38.43	74	-35.57	P	V	1.0

Note :

1. Measurement was up to 40GHz, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist,
Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5765MHz. Operation Mode: Receiving (RX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist (dB)	Filter (dB)	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065	62.38	25.3	1.83	36.19	9.5	0	43.84	74	-30.16	P	H	1.0
1200	60.52	26.2	2.70	36.04	9.5	0	43.86	74	-30.14	P	H	1.0
1323	58.31	27	3.50	35.90	9.5	0	43.38	74	-30.62	P	H	1.0
1466	56.81	27.9	4.42	35.74	9.5	0	43.88	74	-30.12	P	H	1.0
1592	57.32	28.9	4.02	35.61	9.5	0	45.08	74	-28.92	P	H	1.0
1998	54.32	32.2	1.28	35.23	9.5	0	43.06	74	-30.94	P	H	1.0
2266	59.67	31.9	1.97	35.28	9.5	0	48.79	74	-25.21	P	H	1.0
2515	51.32	31.7	2.57	35.34	9.5	0	40.75	74	-33.25	P	H	1.0
1728	54.32	30	3.11	35.49	9.5	0	42.41	74	-31.59	P	H	1.0
1065	66.75	25.3	1.83	36.19	9.5	0	48.21	74	-25.79	P	V	1.0
1200	67.66	26.2	2.70	36.04	9.5	0	51.00	74	-23.00	P	V	1.0
1200	53.10	26.18	2.70	36.04	9.5	0	36.44	54	-17.56	A	V	1.0
1323	62.07	27	3.50	35.90	9.5	0	47.14	74	-26.86	P	V	1.0
1466	62.32	27.9	4.42	35.74	9.5	0	49.39	74	-24.61	P	V	1.0
1592	63.90	28.9	4.02	35.61	9.5	0	51.66	74	-22.34	P	V	1.0
1592	54.30	28.85	4.02	35.61	9.5	0	42.06	54	-11.94	A	V	1.0
1998	60.36	32.2	1.28	35.23	9.5	0	49.10	74	-24.90	P	V	1.0
2266	62.18	31.9	1.97	35.28	9.5	0	51.30	74	-22.70	P	V	1.0
2515	50.13	31.7	2.57	35.34	9.5	0	39.56	74	-34.44	P	V	1.0

Note :

1. Measurement was up to 40GHz, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5785MHz Operation Mode: Receiving (RX)

Freq. (MHz)	Reading (dBuV)	AF (dBuV)	Cable (dB)	Pre-amp (dB)	Dist dB	Filter dB	Level (dBuV/m)	Limit At 3m (dBuV/m)	Margin (dB)	Mark (P/Q/A)	Pol (H/V)	Height (Meter)
1065	62.75	25.3	1.83	36.19	9.5	0	44.21	74	-29.79	P	H	1.0
1200	60.03	26.2	2.70	36.04	9.5	0	43.37	74	-30.63	P	H	1.0
1323	49.56	27	3.50	35.90	9.5	0	34.63	74	-39.37	P	H	1.0
1466	53.36	27.9	4.42	35.74	9.5	0	40.43	74	-33.57	P	H	1.0
1592	54.24	28.9	4.02	35.61	9.5	0	42.00	74	-32.00	P	H	1.0
1727	52.36	30	3.11	35.49	9.5	0	40.44	74	-33.56	P	H	1.0
1998	55.64	32.2	1.28	35.23	9.5	0	44.38	74	-29.62	P	H	1.0
2266	61.83	31.9	1.97	35.28	9.5	0	50.95	74	-23.05	P	H	1.0
2515	50.86	31.7	2.57	35.34	9.5	0	40.29	74	-33.71	P	H	1.0
1065	66.11	25.3	1.83	36.19	9.5	0	47.57	74	-26.43	P	V	1.0
1200	66.98	26.2	2.70	36.04	9.5	0	50.32	74	-23.68	P	V	1.0
1200	41.90	26.18	2.70	36.04	9.5	0	25.24	54	-28.76	A	V	1.0
1323	60.44	27	3.50	35.90	9.5	0	45.51	74	-28.49	P	V	1.0
1466	62.69	27.9	4.42	35.74	9.5	0	49.76	74	-24.24	P	V	1.0
1592	64.89	28.9	4.02	35.61	9.5	0	52.65	74	-21.35	P	V	1.0
1591.6	43.20	28.85	4.02	35.61	9.5	0	30.96	54	-23.04	A	V	1.0
1727	62.11	30	3.11	35.49	9.5	0	50.19	74	-23.81	P	V	1.0
1998	60.57	32.2	1.28	35.23	9.5	0	49.31	74	-24.69	P	V	1.0
2266 *	61.15	31.9	1.97	35.28	9.5	0	50.27	74	-23.73	P	V	1.0
2515	52.11	31.7	2.57	35.34	9.5	0	41.54	74	-32.46	P	V	1.0

Note :

1. Measurement was up to 40GHz, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz,VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist,
Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



Test Requirement: 15.205, 15.407(b)(3)

The frequency spectrum above 1 GHz was investigated. All emissions not reported below are more than 40 dB below the prescribed limits.

Readings are both peak and average values.

Fundamental Frequency : 5805MHz Operation Mode: Receiving (RX)

Freq.	Reading	AF	Cable	Pre-am p	Dist	Filter	Level	Limit	Margin	Mark	Pol	Height
(MHz)	(dBuV)	(dBuV)	(dB)	(dB)	dB	dB	(dBuV/m)	At 3m (dBuV/m)	(dB)	(P/Q/A)	(H/V)	(Meter)
1065	60.30	25.3	1.83	36.19	9.5	0	41.76	74	-32.24	P	H	1.0
1200	62.83	26.2	2.70	36.04	9.5	0	46.17	74	-27.83	P	H	1.0
1323	58.03	27	3.50	35.90	9.5	0	43.10	74	-30.90	P	H	1.0
1466	57.62	27.9	4.42	35.74	9.5	0	44.69	74	-29.31	P	H	1.0
1592	59.32	28.9	4.02	35.61	9.5	0	47.08	74	-26.92	P	H	1.0
1727	58.92	30	3.11	35.49	9.5	0	47.00	74	-27.00	P	H	1.0
1998	55.26	32.2	1.28	35.23	9.5	0	44.00	74	-30.00	P	H	1.0
2266	57.39	31.9	1.97	35.28	9.5	0	46.51	74	-27.49	P	H	1.0
2515	48.32	31.7	2.57	35.34	9.5	0	37.75	74	-36.25	P	H	1.0
1065	67.42	25.3	1.83	36.19	9.5	0	48.88	74	-25.12	P	V	1.0
1200	71.08	26.2	2.70	36.04	9.5	0	54.42	74	-19.58	P	V	1.0
1200	50.63	26.18	2.70	36.04	9.5	0	33.97	54	-20.03	P	V	1.0
1323	61.38	27	3.50	35.90	9.5	0	46.45	74	-27.55	P	V	1.0
1466	61.74	27.9	4.42	35.74	9.5	0	48.81	74	-25.19	P	V	1.0
1592	63.41	28.9	4.02	35.61	9.5	0	51.17	74	-22.83	P	V	1.0
1591.6	51.20	28.85	4.02	35.61	9.5	0	38.96	54	-15.04	A	V	1.0
1727	62.30	30	3.11	35.49	9.5	0	50.38	74	-23.62	P	V	1.0
1998	59.32	32.2	1.28	35.23	9.5	0	48.06	74	-25.94	P	V	1.0
2266	61.56	31.9	1.97	35.28	9.5	0	50.68	74	-23.32	P	V	1.0
2515	53.84	31.7	2.57	35.34	9.5	0	43.27	74	-30.73	P	V	1.0

Note :

1. Measurement was up to 40GHz, “---” means that the emissions level is too low to be measured.
2. AF: Antenna Factor, Cable: Cable Loss, Filt : High pass Filter Insertion Loss (8.5GHz), pre-Amp : preamp gain
3. Analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz
4. The result basic equation calculation in as follow : Level : Reading + AF + cable – preamp + Filter – Dist, Margin=Level – Limit
5. Dist : correction factor (3m specification distance to 1m measurement distance) = 9.5dB



3.7. PHOTO OF RADIATED EMISSION TEST







4. EMISSION BANDWIDTH MEASUREMENT

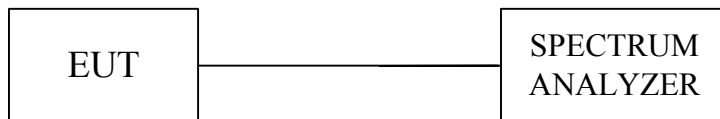
4.1. TEST EQUIPMENTS

Description & Manufacturer	Model No.	Serial No.	DATE OF CALIBRATION
ROHDE & SCHWARZ TEST RECEIVER	ESMI	842088/005 841978/008	SEPT. 3, 2002
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7750A	725A 852141	N/A

NOTE :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.2. TEST SETUP



4.3. TEST PROCEDURE

- A. The transmitter output was connected to the spectrum analyzer through an attenuator.
- B. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 300KHz RBW and 1MHz VBW.
- C. The 26dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 26dB.
- D. The measured Emission Bandwidth, B, is the 26dB bandwidth.

4.4. UNCERTAINTY OF CONDUCTED EMISSION

The uncertainty of conducted emission is ± 200 KHz.

4.5. TEST RESULTS



In 5.15~5.35GHz Band

CHANNEL	CHANNEL FREQUENCY (MHz)	26dB BANDWIDTH (MHz)
1	5180	29.44
4	5240	30.00
5	5260	29.49
8	5320	30.61

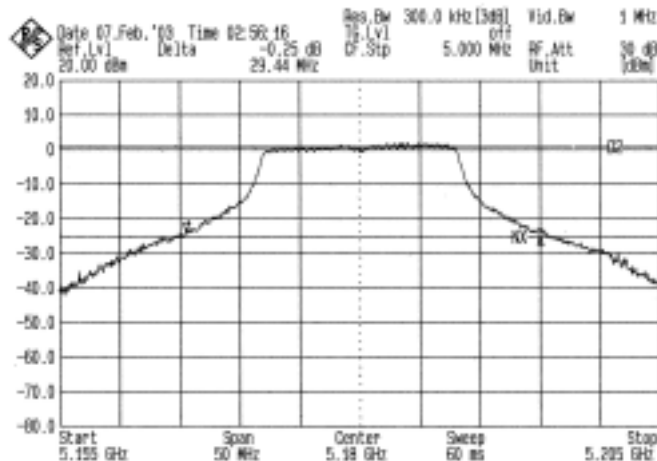
In 5.725~5.825GHz Band

CHANNEL	CHANNEL FREQUENCY (MHz)	26dB BANDWIDTH (MHz)
1	5745	28.00
2	5765	28.83
3	5785	28.72
4	5805	29.55

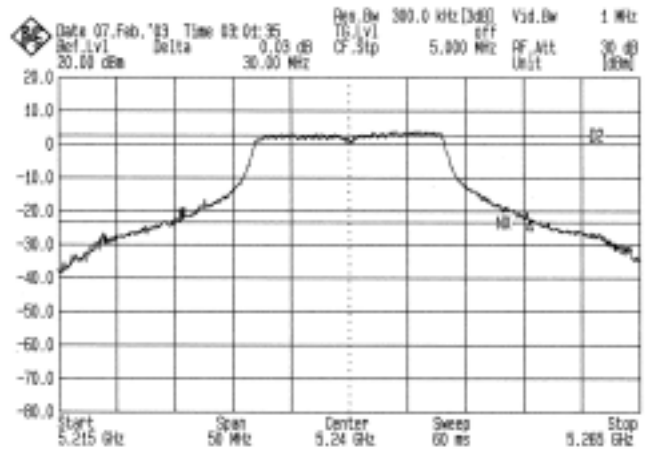


4.6. PHOTO OF 26DB BANDWIDTH MEASUREMENT

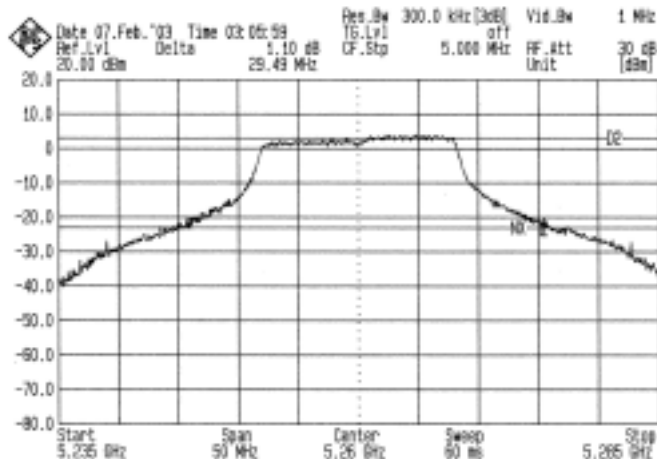
In 5.15~5.35GHz Band



Channel 1

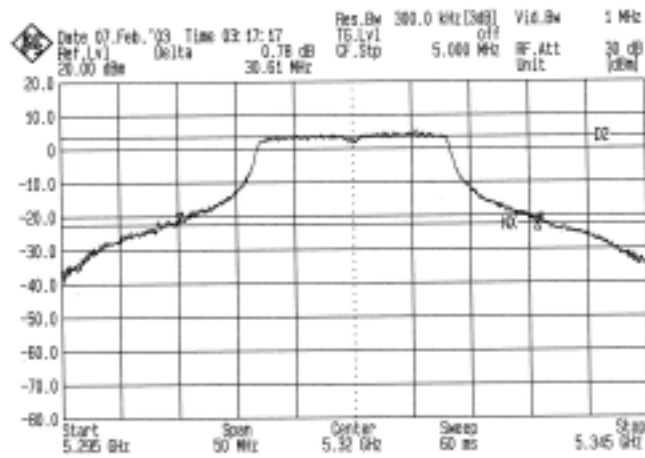


Channel 4



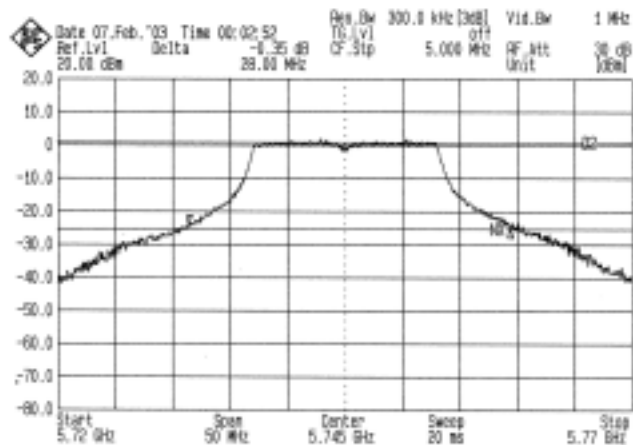


Channel 5

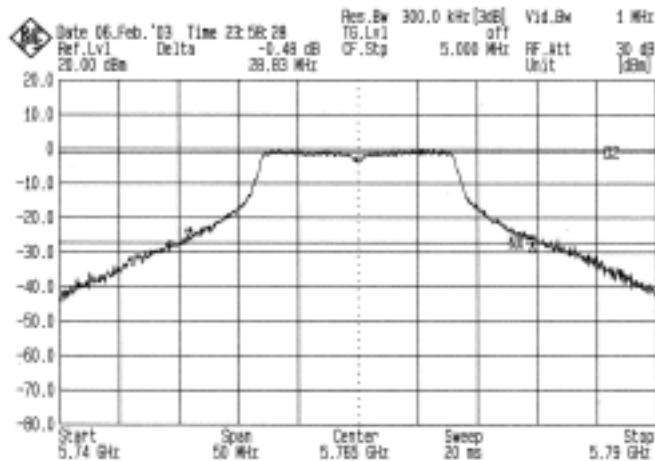


Channel 8

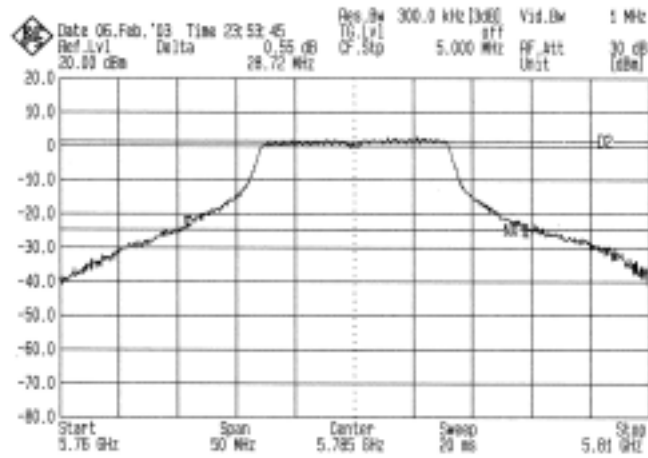
In 5.725~5.825GHz Band



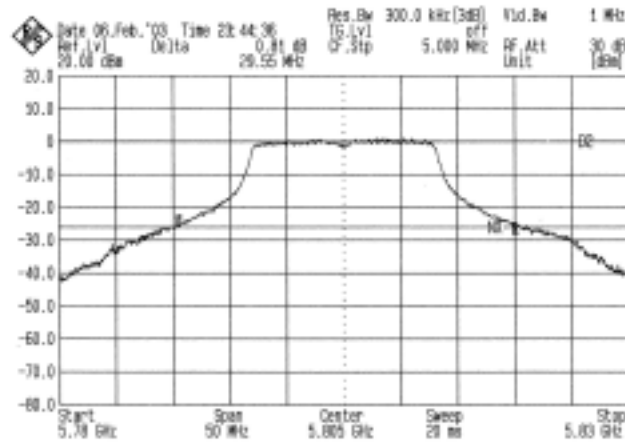
Channel 1



Channel2



Channel 3



Channel 4



5. PEAK CONDUCTED TRANSMIT POWER

Test Requirement: 15.407(a)(1)(2) (3)(4)(5)(6)

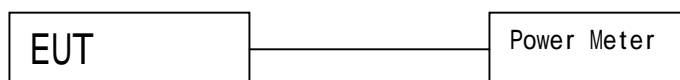
5.1. TEST EQUIPMENTS

Description & Manufacturer	Model No.	Serial No.	DATE OF CALIBRATION
ROHDE & SCHWARZ TEST RECEIVER	ESMI	842088/005 841978/008	SEPT. 3, 2002
Agilent Power meter	E4118b	GB41299799	Dec. 2002
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7750A	725A 852141	N/A

NOTE :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

5.2. TEST SETUP



5.3. LIMITS OF MAXIMUM PEAK OUTPUT POWER

Channel Frequency Band	FCC Output Power Limit (dBm)
5.15~5.25GHz Band	17
5.15~5.35GHz Band	24
5.725~5.825GHz Band	30

The FCC Output power limit also depends on the emission bandwidth of EUT .



5.4. TEST PROCEDURE

The RF power output was measured with a Power meter connected to the RF Antenna connector (conducted measurement) while EUT was operating in transmit mode at the appropriate center frequency.

5.5. UNCERTAINTY OF CONDUCTED EMISSION

The uncertainty of conducted emission is $\pm 1.82\text{dB}$.

5.6. TEST RESULTS

In 5.15~5.35GHz Band

CHANNEL	CHANNEL FREQUENCY (MHz)	26dB BANDWIDTH (MHz)	Output Power (dBm)	FCC Output Power Limit (dBm)	PASS / FAIL
1	5180	29.44	12.53	17	PASS
4	5240	30.00	12.73	17	PASS
5	5260	29.49	12.86	24	PASS
8	5320	30.61	12.73	24	PASS

In 5.725~5.825GHz Band

CHANNEL	CHANNEL FREQUENCY (MHz)	26dB BANDWIDTH (MHz)	Output Power (dBm)	FCC Output Power Limit (Dbm)	PASS / FAIL
1	5745	28.00	13.75	30	PASS
2	5765	28.83	13.64	30	PASS
3	5785	28.72	13.50	30	PASS
4	5805	29.55	13.37	30	PASS



6. PEAK POWER DENSITY MEASUREMENT

Test Requirement: 15.407(a)(1)(2) (3)(4)(5)(6)

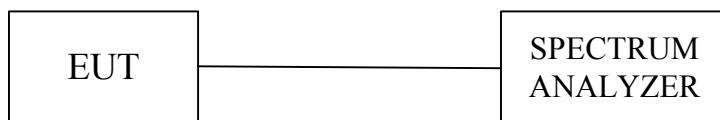
6.1. TEST EQUIPMENTS

Description & Manufacturer	Model No.	Serial No.	DATE OF CALIBRATION
ROHDE & SCHWARZ TEST RECEIVER	ESMI	842088/005 841978/008	SEPT. 3, 2002
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7750A	725A 852141	N/A

NOTE :

1. The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

6.2. TEST EQUIPMENTS



6.3. LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

Channel Frequency Band	FCC Peak Power Spectrum density Limit (dBm/MHz)
5.15~5.25GHz Band	4 dBm/MHz
5.25~5.35GHz Band	11 dBm/MHz
5.725~5.825GHz Band	17 dBm/MHz



6.4. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 1MHz RBW and 3MHz VBW. The power spectral density was measured and recorded.

6.5. UNCERTAINTY OF CONDUCTED EMISSION

The uncertainty of conducted emission is ± 1.82 dB.

6.6. TEST RESULT

In 5.15~5.35GHz Band

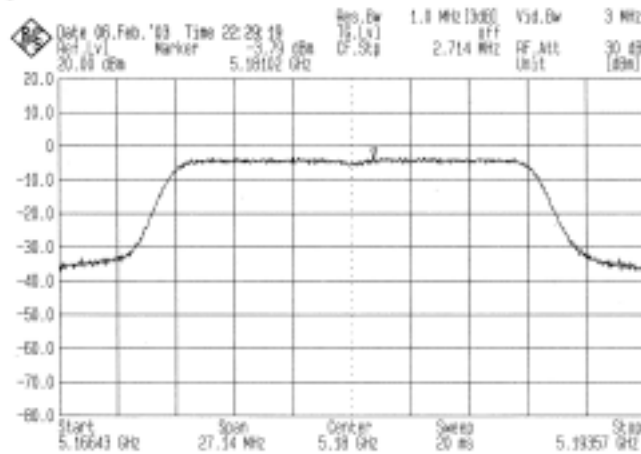
CHANNEL	CHANNEL FREQUENCY (MHz)	26dB BANDWIDTH (MHz)	Peak Power Spectrum density (dBm/MHz)	FCC Peak Power Spectrum density Limit (dBm/MHz)	PASS / FAIL
1	5180	29.44	-3.79	4 dBm/MHz	PASS
4	5240	30.00	-2.87	4 dBm/MHz	PASS
5	5260	29.49	-2.47	11 dBm/MHz	PASS
8	5320	30.61	-1.53	11 dBm/MHz	PASS

In 5.725~5.825GHz Band

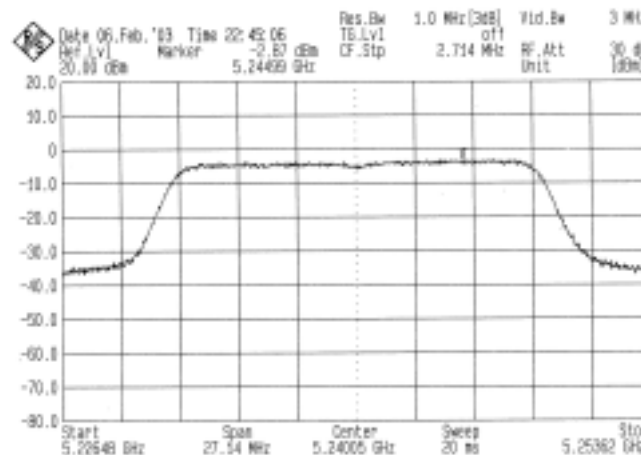
CHANNEL	CHANNEL FREQUENCY (MHz)	26dB BANDWIDTH (MHz)	Peak Power Spectrum density (dBm/MHz)	FCC Peak Power Spectrum density Limit (dBm/MHz)	PASS / FAIL
1	5745	28.00	-2.67	17 dBm/MHz	PASS
2	5765	28.83	-1.02	17 dBm/MHz	PASS
3	5785	28.72	-1.45	17 dBm/MHz	PASS
4	5705	29.55	-1.73	17 dBm/MHz	PASS



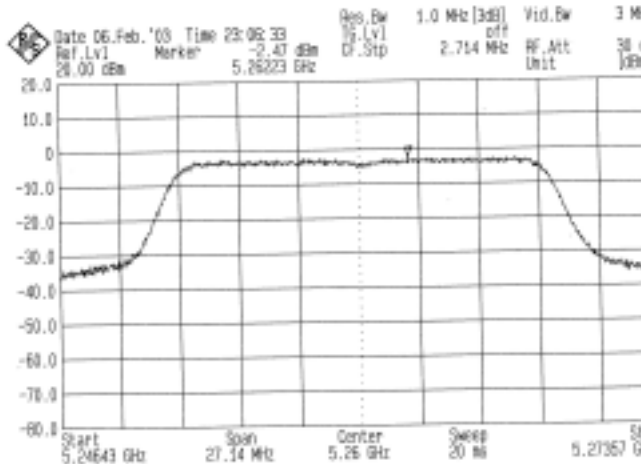
6.7. PHOTO OF PEAK POWER DENSITY MEASUREMENT



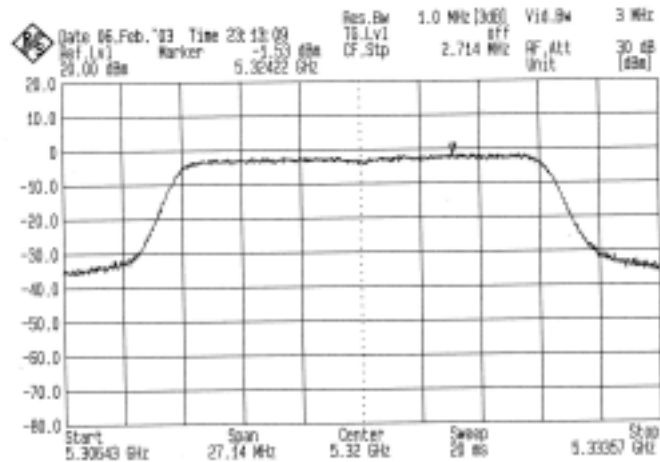
Channel 1



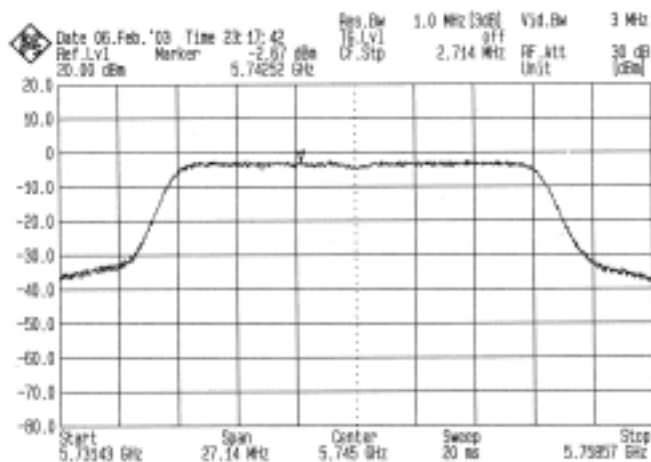
Channel 4



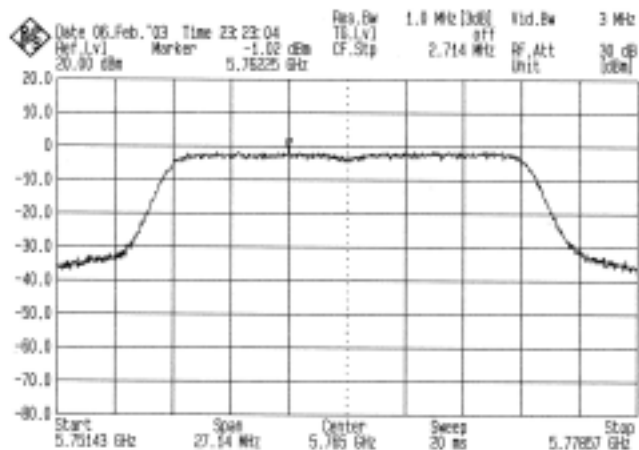
Channel 5



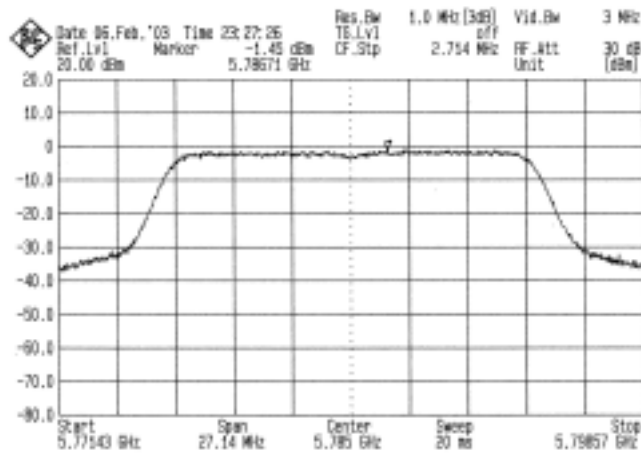
Channel 8



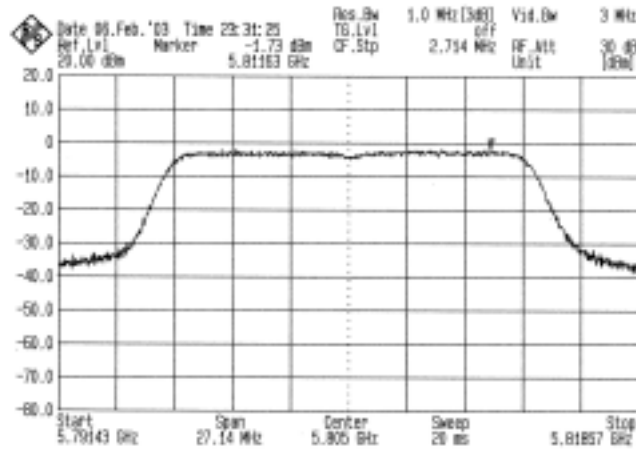
Channel 1



Channel 2



Channel 3



Channel 4



7. PEAK POWER EXCURSION MEASUREMENT

Test Requirement: 15.407(a) (6)

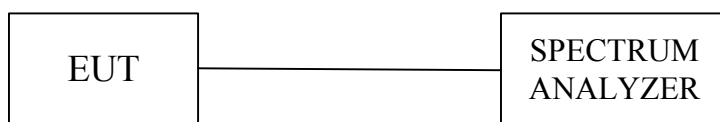
7.1. TEST EQUIPMENTS

Description & Manufacturer	Model No.	Serial No.	DATE OF CALIBRATION
ROHDE & SCHWARZ TEST RECEIVER	ESMI	842088/005 841978/008	SEPT. 3, 2002
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7750A	725A 852141	N/A

NOTE :

- The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

7.2. TEST SETUP



7.3. LIMITS OF PEAK POWER EXCURSION MEASUREMENT

The largest distance between the two traces described in test procedure must be fewer than 13dB. For all frequencies across the emission bandwidth.

Channel Frequency Band	Limit
5.15~5.25GHz Band	13dB
5.15~5.35GHz Band	13dB
5.725~5.825GHz Band	13dB



7.4. TEST PROCEDURE

- Set the spectrum to view the entire emission bandwidth.
- Measure trace 1:
- Set RBW=1MHz, VBW ≥ 3MHz with peak detector and Max-hold setting.
- Measure trace2:
- Set RBW=1MHz, VBW ≥30kHz with peak detector and Max-hold setting
- Plot the result of the two traces and mark the largest distance between the two trace.

7.5. UNCERTAINTY OF CONDUCTED EMISSION

The uncertainty of conducted emission is ± 1.82dB.

7.6. TEST RESULT

In 5.15~5.35GHz Band

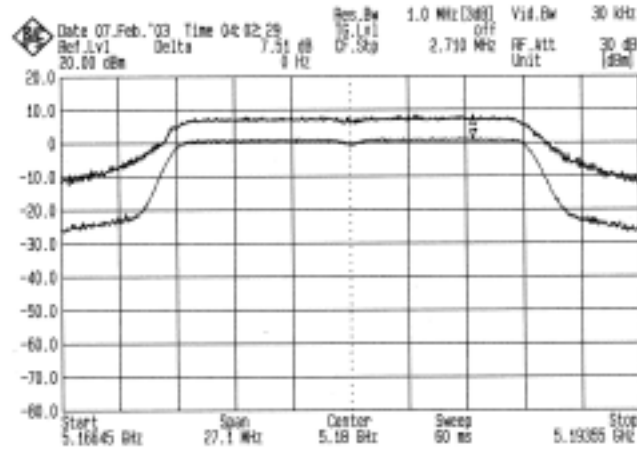
CHANNEL	CHANNEL FREQUENCY (MHz)	Largest distance between Trace 1 and trace 2 (dB)	FCC Peak Excursion Limit (dB)	PASS / FAIL
1	5180	7.51	13	PASS
4	5240	7.52	13	PASS
5	5260	7.72	13	PASS
8	5320	5.36	13	PASS

In 5.725~5.825GHz Band

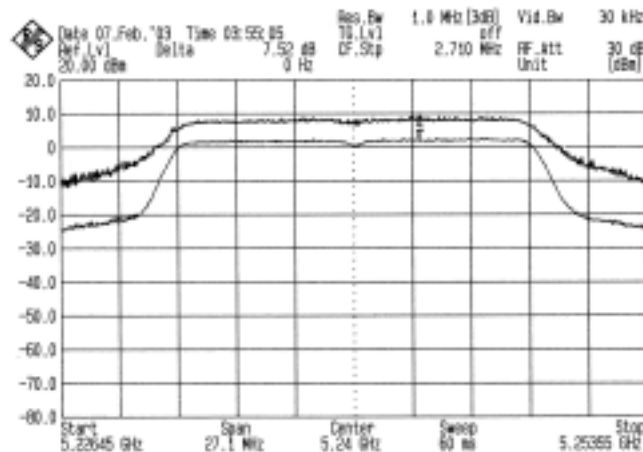
CHANNEL	CHANNEL FREQUENCY (MHz)	Largest distance between Trace 1 and trace 2 (dB)	FCC Peak Excursion Limit (dB)	PASS / FAIL
1	5745	7.59	13	PASS
2	5765	6.96	13	PASS
3	5785	7.21	13	PASS
4	5705	7.21	13	PASS



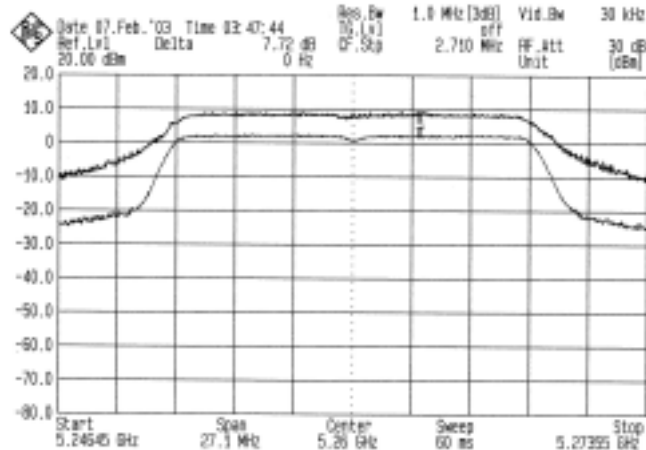
7.7. PHOTO OF PEAK POWER EXCURSION MEASUREMENT



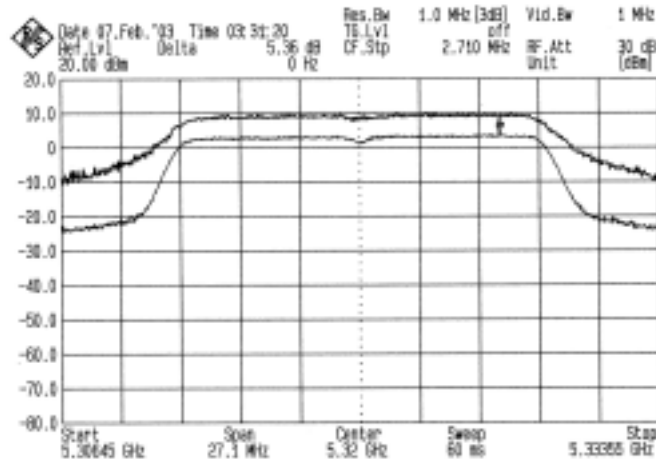
Channel 1



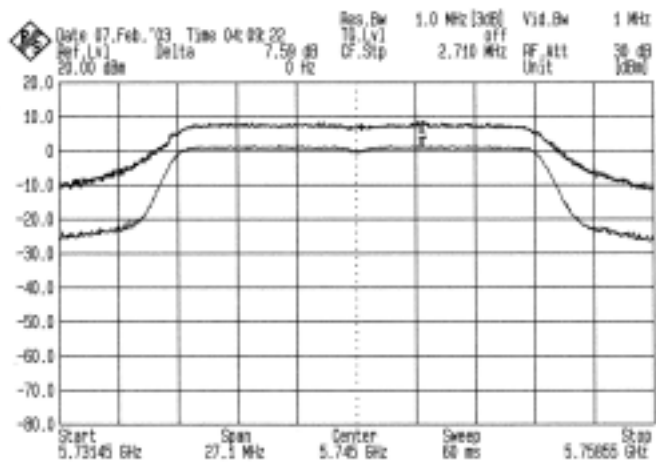
Channel 4



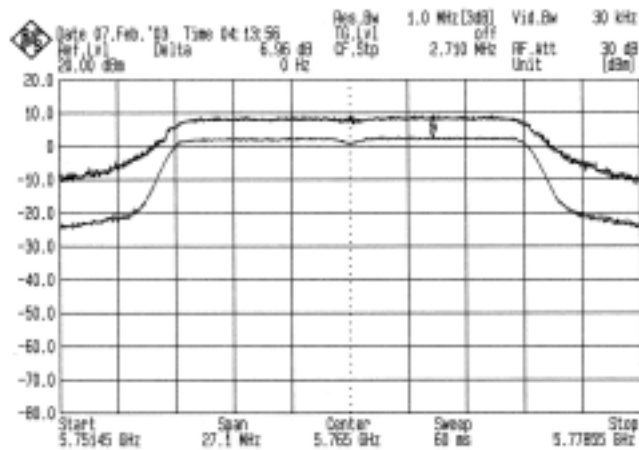
Channel 5



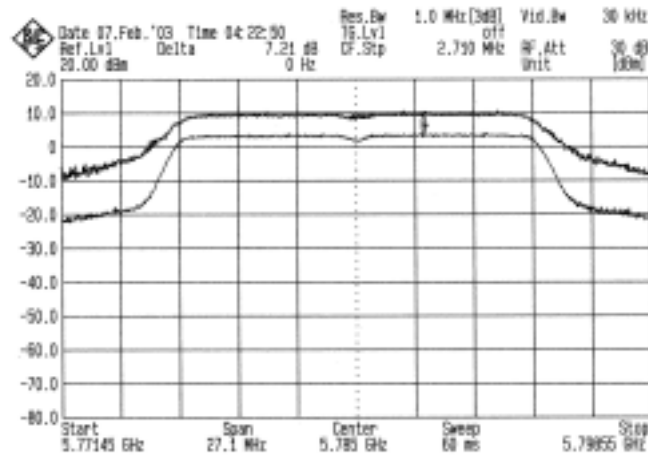
Channel 8



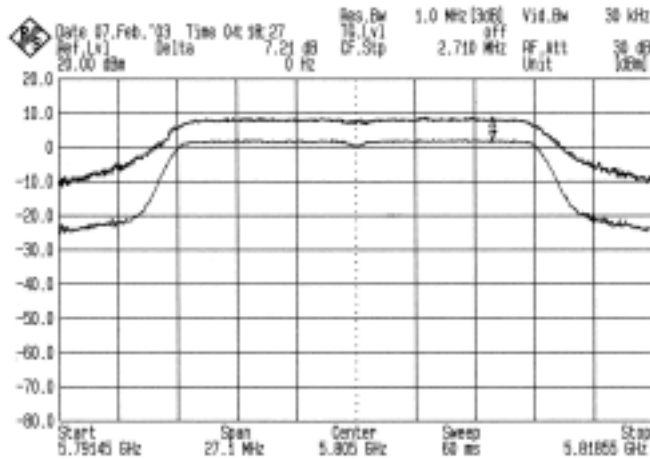
Channel 1



Channel 2



Channel 3



Channel 4



8. FREQUENCY STABILITY

Test Requirement: 15.407(g)

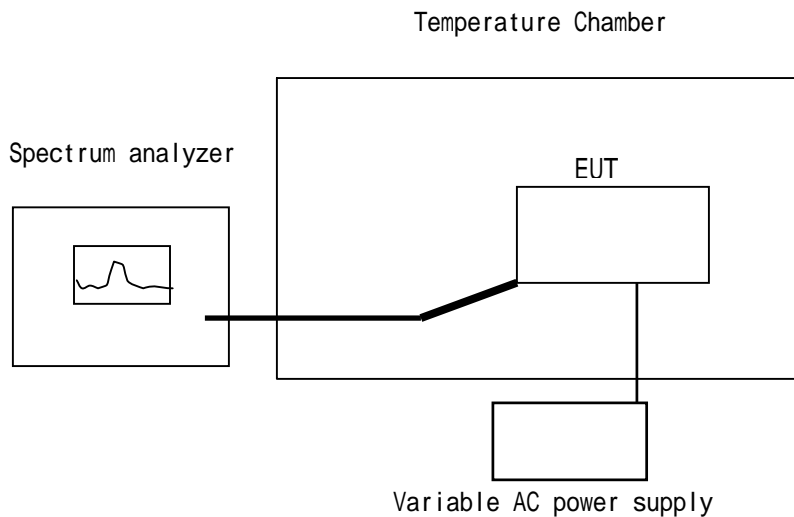
8.1. TEST EQUIPMENTS

Description & Manufacturer	Model No.	Serial No.	DATE OF CALIBRATION
ROHDE & SCHWARZ TEST RECEIVER	ESMI	842088/005 841978/008	SEPT. 3, 2002
HP ATTENUATOR	8496B	3247A18505	Cal. on use
HP PLOTTER	7750A	725A 852141	N/A

NOTE :

- The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

8.2. TEST SETUP



8.3. LIMITS OF OUT OF BAND EMISSIONS MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of 0 to 60 at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 25 at normal.



8.4. TEST PROCEDURE

1. The EUT was placed inside a temperature test chamber and powered by AC voltage supply.
2. Turn the EUT on and connect the RF output port to a spectrum analyzer.
3. Set the temperature in chamber to the declared highest temperature.
4. Wait approximately 30 min to make sure the temperature of the chamber is stabilized.
5. Measure and record the center frequency of carrier at 85% to 115% nominal supplied voltage.
6. Repeat step 4 and 5 with the temperature of chamber is set to the normal temperature, 25 .
7. Repeat step 4 and 5 with the temperature of chamber is set to the lowest temperature.

8.5. UNCERTAINTY OF CONDUCTED EMISSION

The uncertainty of conducted emission is ± 1.82 dB.

8.6. TEST RESULTS

TEST CONDITIONS		Operating Frequency (MHz) 5180MHz			
		Measured Frequency (MHz)	Frequency tolerance (%)	Limit (%)	Test Result
$T_{\min}(0)^{\circ}\text{C}$	$V_{\min}(102)\text{V}$	5180.04467	0.000862348	0.02	Pass
	$V_{\text{nom}}(120)\text{V}$	5180.04544	0.000877212	0.02	Pass
	$V_{\max}(138)\text{V}$	5180.04122	0.000795752	0.02	Pass
$T_{\text{nom}}(25)^{\circ}\text{C}$	$V_{\min}(102)\text{V}$	5180.03460	0.000667949	0.02	Pass
	$V_{\text{nom}}(120)\text{V}$	5180.03430	0.000662158	0.02	Pass
	$V_{\max}(138)\text{V}$	5180.03410	0.000658297	0.02	Pass
$T_{\max}(60)^{\circ}\text{C}$	$V_{\min}(102)\text{V}$	5180.08899	0.001717924	0.02	Pass
	$V_{\text{nom}}(120)\text{V}$	5180.08946	0.001726997	0.02	Pass
	$V_{\max}(138)\text{V}$	5180.08930	0.001723909	0.02	Pass



TEST CONDITIONS		Operating Frequency (MHz) 5260MHz			
		Measured Frequency (MHz)	Frequency tolerance (%)	Limit (%)	Test Result
T_{min}(0)⁰C	V_{min}(102)V	5260.0442	0.00084	0.02	Pass
	V_{nom}(120)V	5260.03485	0.000663	0.02	Pass
	V_{max}(138)V	5260.03483	0.000662	0.02	Pass
T_{nom}(25)⁰C	V_{min}(102)V	5260.03490	0.000663	0.02	Pass
	V_{nom}(120)V	5260.03485	0.000663	0.02	Pass
	V_{max}(138)V	5260.03483	0.000662	0.02	Pass
T_{max}(60)⁰C	V_{min}(102)V	5260.09020	0.001715	0.02	Pass
	V_{nom}(120)V	5260.09020	0.001715	0.02	Pass
	V_{max}(138)V	5260.09090	0.001728	0.02	Pass

TEST CONDITIONS		Operating Frequency (MHz) 5745MHz			
		Measured Frequency (MHz)	Frequency tolerance (%)	Limit (%)	Test Result
T_{min}(0)⁰C	V_{min}(102)V	5745.0480	0.000836	0.02	Pass
	V_{nom}(120) V	5745.0481	0.000837	0.02	Pass
	V_{max}(138) V	5745.0489	0.000851	0.02	Pass
T_{nom}(25)⁰C	V_{min}(102)V	5745.0382	0.000665	0.02	Pass
	V_{nom}(120) V	5745.0382	0.000665	0.02	Pass
	V_{max}(138) V	5745.0381	0.000663	0.02	Pass
T_{max}(60)⁰C	V_{min}(102)V	5745.0994	0.00173	0.02	Pass
	V_{nom}(120) V	5745.0931	0.001621	0.02	Pass
	V_{max}(138) V	5745.0996	0.001734	0.02	Pass



9. ANTENNA REQUIREMENT

9.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407 (d), Any U-NII device that operates in the 5.15-5.25 GHz band shall use a transmitting antenna that is an integral part of the device. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For 5.25-5.35GHz, if transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain up to 23 dBi without any corresponding reduction in the transmitter peak output power or peak power spectral density. For fixed, point-to-point U-NII transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in peak transmitter power and peak power spectral density for each 1 dB of antenna gain in excess of 23 dBi would be required.

9.2. ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is PIFA antenna . The antenna connector is JST. And the average Gain of this antenna is only -2dBi.