FCC ID: K7S-F6D3050

FCC TEST REPORT (15.407)

REPORT NO.: RF931207L04
MODEL NO.: F6D3050
RECEIVED: Dec. 07, 2004
TESTED: Dec. 08 ~ Dec. 23, 2004
ISSUED: Dec. 27, 2004

APPLICANT: Belkin Corporation

ADDRESS: 501 West Walnut Avenue Compton, CA 90220, U.S.A.

ISSUED BY: Advance Data Technology Corporation

LAB ADDRESS: No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang 244, Taipei Hsien, Taiwan, R.O.C.

TEST LOCATION: No. 19, Hwa Ya 2nd Rd., Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

0528
ILAC MRA

No. 2177-01

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1. CERTIFICATION

PRODUCT:	Wireless A/G USB Adapter
BRAND NAME:	Belkin
MODEL NO.:	F6D3050
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Dec. 08 ~ Dec. 23, 2004
APPLICANT:	Belkin Corporation
STANDARDS:	FCC Part 15, Subpart E (Section 15.407) ANSI C63.4-2003

The above equipment has been tested by **Advance Data Technology Corporation,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Candice Chen (Candice Chen) , **DATE:** Dec. 27, 2004

TECHNICAL ACCEPTANCE : Gary Chang (Gary Chang) , **DATE:** Dec. 27, 2004
Responsible for RF

APPROVED BY : (Cody Chang, Deputy Manager) , **DATE:** Dec. 27, 2004

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart E (Section 15.407)			
Standard Section	**Test Type**	**Result**	**Remark**
15.407(b)(5)	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is –14.30dB at 0.185MHz
15.407(b/1/2/3)(b)(5)	Electric Field Strength Spurious Emissions, 30MHz ~ 40000MHz	PASS	Meet the requirement of limit. Minimum passing margin is –1.75dB at 5350.00MHz
15.407(a/1/2/3)	Peak Transmit Power	PASS	Meet the requirement of limit.
15.407(a)(6)	Peak Power Excursion	PASS	Meet the requirement of limit.
15.407(a/1/2/3)	Peak Power Spectral Density	PASS	Meet the requirement of limit.
15.407(g)	Frequency Stability	PASS	Meet the requirement of limit.

2.1 MEASUREMENT UNCERTAINTY

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

Measurement	Frequency	Uncertainty
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.73 dB
	200MHz ~1000MHz	3.74 dB
	1GHz ~ 18GHz	2.20 dB
	18GHz ~ 40GHz	1.88 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Wireless A/G USB Adapter
MODEL NO.	F6D3050
POWER SUPPLY	5Vdc from host equipment
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
TRANSFER RATE	802.11b:11/5.5/2/1Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps (Turbo mode: up to 108Mbps *see Note 2) 802.11a: 54/48/36/24/18/12/9/6Mbps (Turbo mode: up to 108Mbps *see Note 2)
FREQUENCY RANGE	802.11b & 802.11g: 2412 ~ 2462MHz 802.11a: 5.15 ~ 5.35GHz and 5.725 ~ 5.850GHz
NUMBER OF CHANNEL	802.11b & 802.11g: 11 for Normal mode / 1 for Turbo mode 802.11a: 13 for Normal mode / 5 for Turbo mode
CHANNEL SPACING	802.11b & 802.11g: 5MHz 802.11a: 20MHz for Normal mode / 40MHz for Turbo mode
OUTPUT POWER	802.11b: 41.591mW 802.11g: 41.783mW 802.11a: 32.734mW
DATA CABLE	1.5m shielded cable without core
ANTENNA TYPE	Printed antenna with 1.5dBi gain for 2.4GHz Printed antenna with 2.9dBi gain for 5GHz
I/O PORTS	USB
ASSOCIATED DEVICES	NA

NOTE:

1. The EUT operates in both the 5GHz and 2.4GHz Bands and compatibility with 802.11a and 802.11b, 802.11g technology.
2. This EUT is capable of providing data rates of up to 108Mbps in Turbo Mode depending upon reception quality.
3. The above EUT information was declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

Operated in 5150 ~ 5250MHz, 5250MHz ~ 5350MHz bands:

Eight channels are provided to this EUT for normal mode.

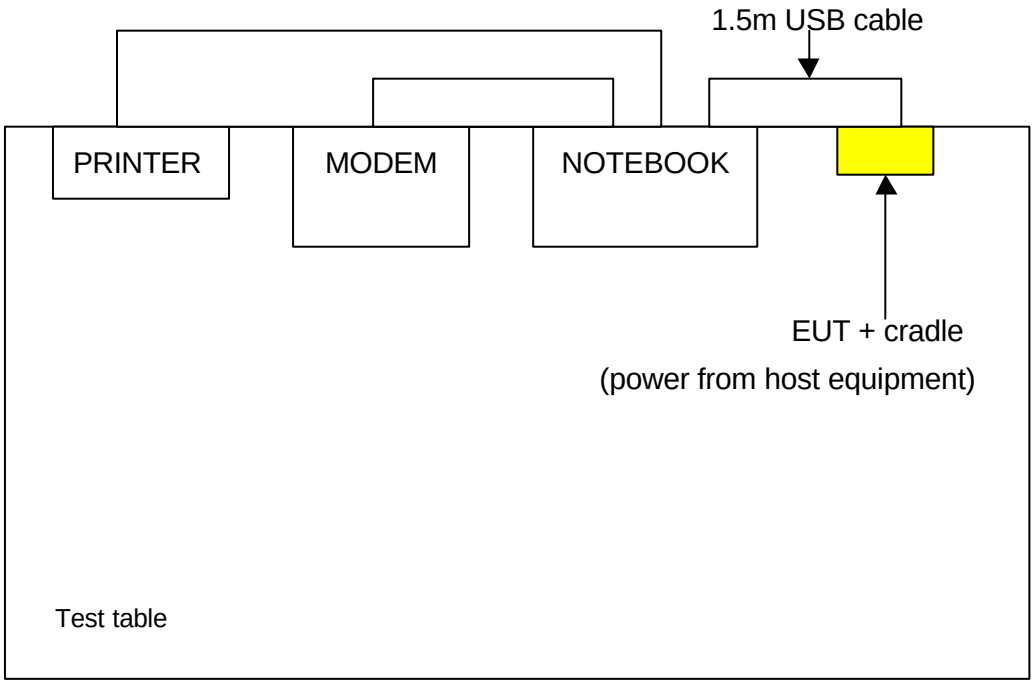
Channel	Frequency
1	5180 MHz
2	5200 MHz
3	5220 MHz
4	5240 MHz
5	5260 MHz
6	5280 MHz
7	5300 MHz
8	5320 MHz

Three channels are provided to this EUT for turbo mode.

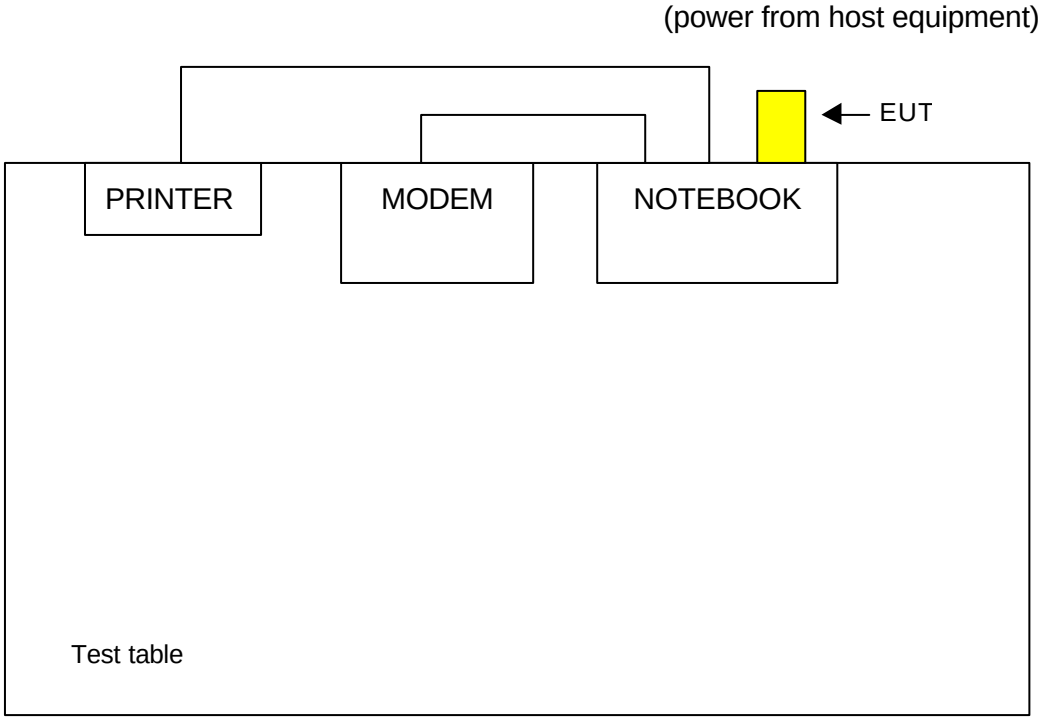
Channel	Frequency
1	5210 MHz
2	5250 MHz
3	5290 MHz

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Mode 1 (With USB cradle)



Mode 2 (Without USB cradle)



3.2.2 TEST MODE APPLICABILITY:

EUT configure mode	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
1	x	x	Note 1	Note 2	EUT tested with USB cradle
2	x	x	Note 1	Note 2	EUT tested without USB cradle

Where PLC: Power Line Conducted Emission RE<1G RE: Radiated Emission below 1GHz
RE≥1G: Radiated Emission above 1GHz APCM: Antenna Port Conducted Measurement
Note 1:No effect on Radiated Emission above 1GHz.
2: Conducted RF measurement is independent of Cradle.

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	5	OFDM	BPSK	6

Radiated Emission Test (Below 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	5	OFDM	BPSK	6

Radiated Emission Test (Above 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6
802.11a Turbo	1 to 3	1, 2, 3	OFDM	BPSK	12

Bandedge Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	1, 8	OFDM	BPSK	6
802.11a Turbo	1 to 3	1, 3	OFDM	BPSK	12

Antenna Port Conducted Measurement:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11a	1 to 8	1, 4, 5, 8	OFDM	BPSK	6
802.11a Turbo	1 to 3	1, 2, 3	OFDM	BPSK	12

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a Wireless A/G USB Adapter. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart E (15.407)

ANSI C63.4-2003

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

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

3.4 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	NOTEBOOK COMPUTER	DELL	PP05L	12130898320	E2K24CLNS
2	MODEM	ACEEX	1414V/3	0401008269	IFAXDM1414
3	PRINTER	EPSON	LQ-300+	DCGY047264	FCC DoC Approved

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	1.2 shielded cable without core
3	1.2 shielded cable without core

NOTE: All power cords of the above support units are non shielded (1.8m).

4. TEST TYPES AND RESULTS (5150 ~ 5350MHz Band)

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

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

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

4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	100291	Nov. 16, 2005
RF signal cable Woken	5D-FB	Cable-HYC01-01	Mar. 02, 2005
LISN ROHDE & SCHWARZ	ESH3-Z5	100312	Mar. 03, 2005
LISN ROHDE & SCHWARZ	ESH2-Z5	100104	Mar. 02, 2005
Software ADT	ADT_Cond_V3	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

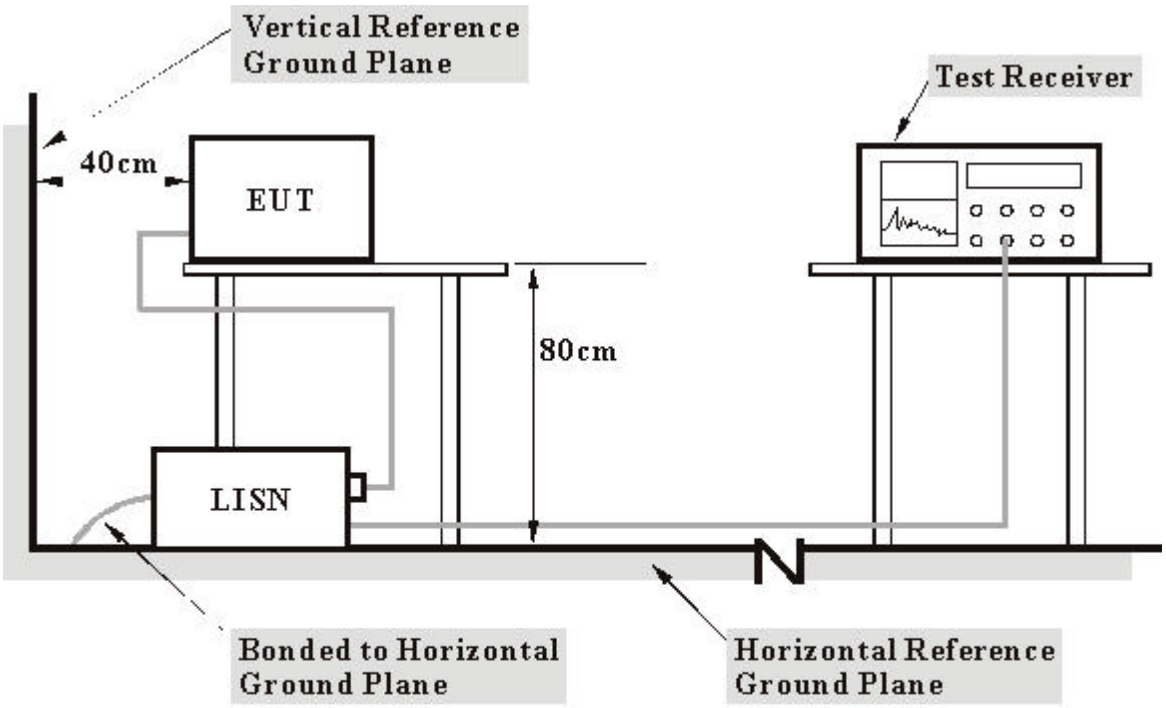
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



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

For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.1.6 EUT OPERATING CONDITIONS

a. Connected the EUT to a notebook system placed on a testing table.
b. The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission/receiving condition continuously at specific channel frequency.
c. The notebook system sent "H" messages to its screen.
d. The notebook system sent “H” messages to modem.
e. The notebook system sent "H" messages to printer, and the printer printed them on paper.
f. Steps c ~ e were repeated.

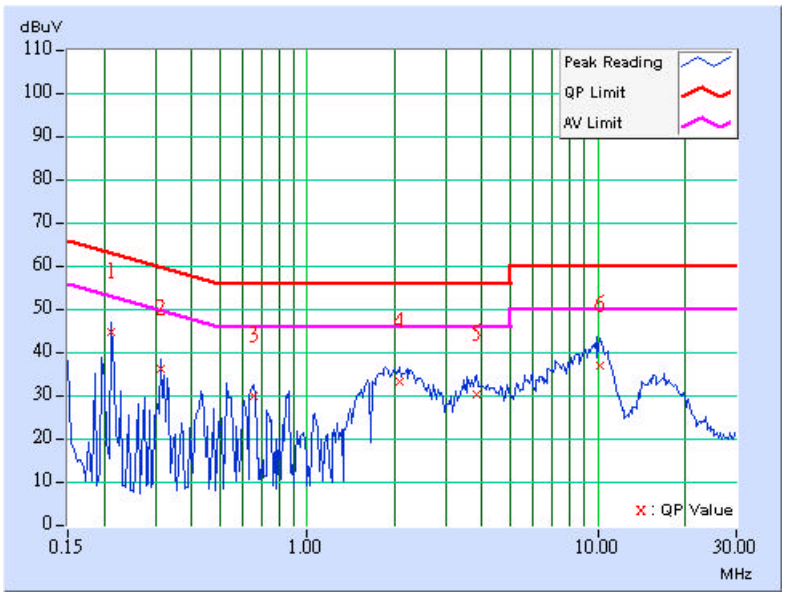
4.1.7 TEST RESULTS

Conducted Worst-Case Data (with cradle)

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Leo Hung
TEST MODE	1 (With USB cradle)		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.213	0.12	44.62	-	44.74	-	63.11	53.11	-18.37	-
2	0.314	0.12	35.87	-	35.99	-	59.86	49.86	-23.87	-
3	0.658	0.13	29.72	-	29.85	-	56.00	46.00	-26.15	-
4	2.074	0.16	33.03	-	33.19	-	56.00	46.00	-22.81	-
5	3.824	0.20	29.92	-	30.12	-	56.00	46.00	-25.88	-
6	10.172	0.32	36.74	-	37.06	-	60.00	50.00	-22.94	-

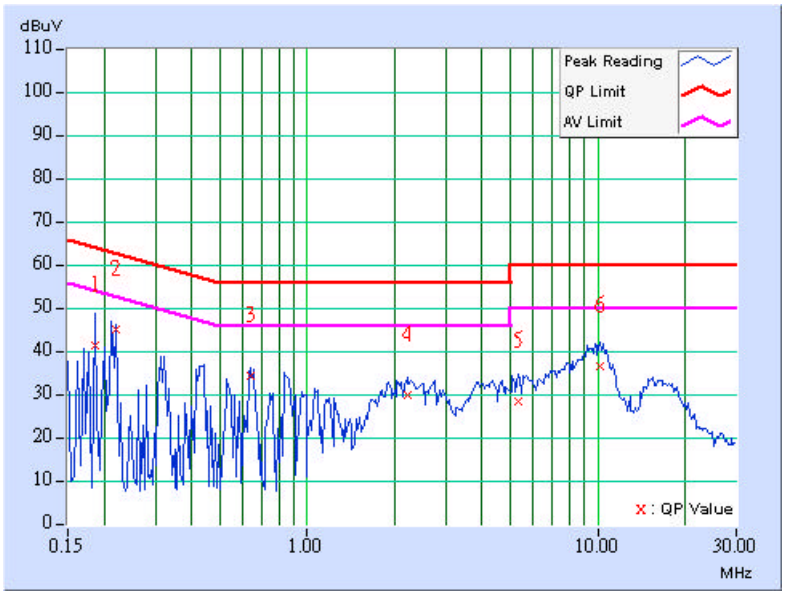
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Neutral (N)
TEST MODE	1 (With USB cradle)		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.11	41.12	-	41.23	-	64.25	54.25	-23.02	-
2	0.220	0.11	45.07	-	45.18	-	62.81	52.81	-17.63	-
3	0.638	0.12	34.28	-	34.40	-	56.00	46.00	-21.60	-
4	2.207	0.16	29.65	-	29.81	-	56.00	46.00	-26.19	-
5	5.336	0.23	28.29	-	28.52	-	60.00	50.00	-31.48	-
6	10.141	0.29	36.54	-	36.83	-	60.00	50.00	-23.17	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

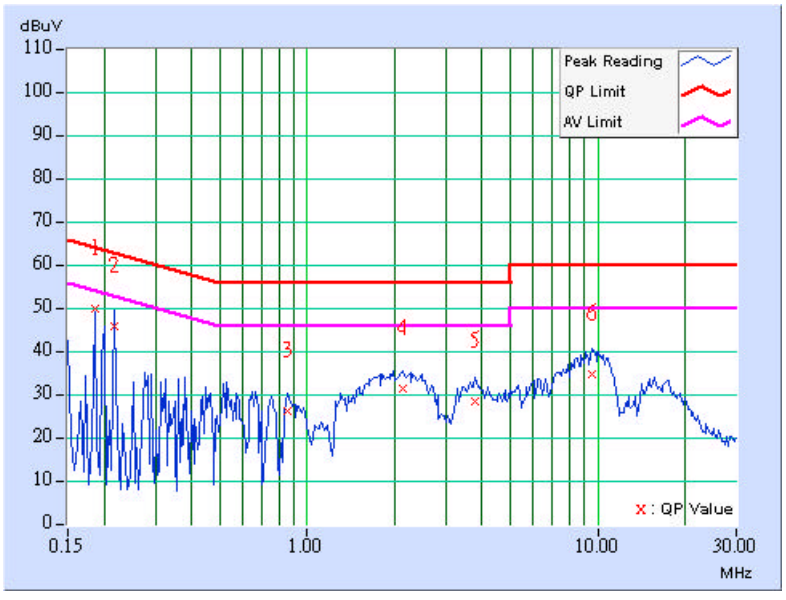


Conducted Worst-Case Data (without cradle)

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Line (L)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Leo Hung
TEST MODE	2 (Without USB cradle)		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.185**	**0.12**	**49.84**	**-**	**49.96**	**-**	**64.25**	**54.25**	**-14.30**	**-**
2	0.216	0.12	45.53	-	45.65	-	62.96	52.96	-17.31	-
3	0.853	0.14	25.89	-	26.03	-	56.00	46.00	-29.97	-
4	2.133	0.16	31.31	-	31.47	-	56.00	46.00	-24.53	-
5	3.797	0.20	28.09	-	28.29	-	56.00	46.00	-27.71	-
6	9.516	0.30	34.69	-	34.99	-	60.00	50.00	-25.01	-

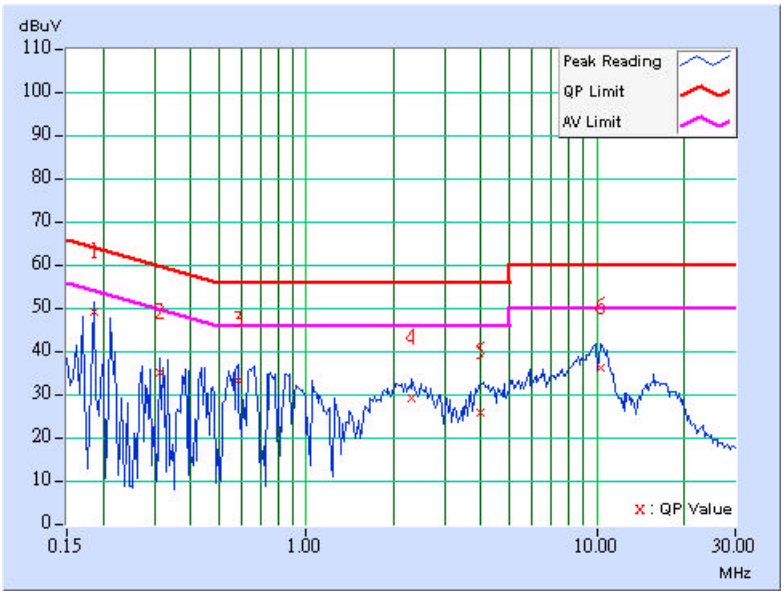
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**6dB BANDWIDTH**	9 kHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**PHASE**	Neutral (N)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Leo Hung
TEST MODE	2 (Without USB cradle)		

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.185	0.11	48.92	-	49.03	-	64.25	54.25	-15.22	-
2	0.314	0.11	34.87	-	34.98	-	59.86	49.86	-24.88	-
3	0.584	0.12	33.13	-	33.25	-	56.00	46.00	-22.75	-
4	2.301	0.17	28.89	-	29.06	-	56.00	46.00	-26.94	-
5	3.980	0.20	25.67	-	25.87	-	56.00	46.00	-30.13	-
6	10.270	0.30	35.85	-	36.15	-	60.00	50.00	-23.85	-

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

Frequencies (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

Frequencies (MHz)	**EIRP Limit (dBm)**	**Equivalent Field Strength at 3m (dBμV/m)** *note 3
5150~5250	-27	68.3
5250~5350	-27	68.3
5725~5825	-27 *note 1	68.3
	-17 *note 2	78.3

NOTE:

1. For frequencies 10MHz or greater above or below the band edge.
2. All emissions within the frequency range from the band edge to 10MHz above or below the band edge.
3. The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength

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

4.2.3 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESIB7	100188	Jan. 13, 2005
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Nov. 21, 2005
BILOG Antenna SCHWARZBECK	VULB9168	9168-157	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-407	Feb. 03, 2005
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA 9170241	Feb. 23, 2005
Preamplifier Agilent	8449B	3008A01961	Nov. 09, 2005
Preamplifier Agilent	8447D	2944A10629	Nov. 09, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218182/4	Mar. 04, 2005
RF signal cable HUBER+SUHNER	SUCOFLEX 104	218194/4	Mar. 04, 2005
Software ADT.	ADT_Radiated_V5.14	NA	NA
Antenna Tower ADT.	AT100	AT93021702	NA
Turn Table ADT.	TT100.	TT93021702	NA
Controller ADT.	SC100.	SC93021702	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 1.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The IC Site Registration No. is IC4924-2.

4.2.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

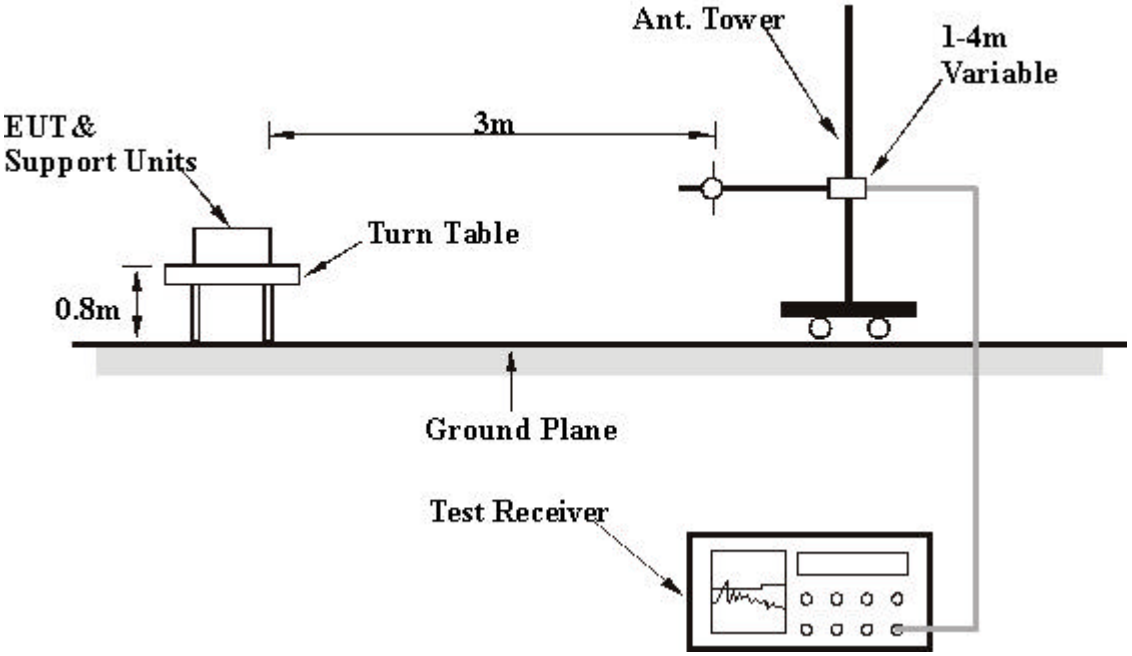
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for 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 at 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.

4.2.5 DEVIATION FROM TEST STANDARD

No deviation

4.2.6 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.7 EUT OPERATING CONDITION

Same as 4.1.6

4.2.8 TEST RESULTS

Below 1GHz Worst-Case Data (with cradle)

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**	Match Tsui
TEST MODE	1 (With USB cradle)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	59.16	19.51 QP	40.00	-20.49	1.50 H	61	5.72	13.79
2	119.42	29.67 QP	43.50	-13.83	1.25 H	76	16.70	12.97
3	169.96	33.53 QP	43.50	-9.97	1.00 H	271	19.61	13.93
4	220.50	42.70 QP	46.00	-3.30	1.00 H	355	30.83	11.87
5	274.93	33.76 QP	46.00	-12.24	1.00 H	7	19.78	13.98
6	319.64	36.93 QP	46.00	-9.07	1.00 H	241	21.98	14.95
7	393.51	34.86 QP	46.00	-11.14	1.00 H	190	18.26	16.61
8	480.98	33.02 QP	46.00	-12.98	1.00 H	265	14.54	18.48
9	605.39	32.25 QP	46.00	-13.75	1.25 H	244	11.16	21.08
10	665.65	27.06 QP	46.00	-18.94	1.00 H	25	5.18	21.87
11	706.47	33.23 QP	46.00	-12.77	1.00 H	358	10.77	22.46
12	760.90	28.90 QP	46.00	-17.10	1.00 H	151	5.30	23.59
13	863.93	27.54 QP	46.00	-18.46	1.25 H	1	3.09	24.45
14	974.73	34.50 QP	54.00	-19.50	1.00 H	337	8.79	25.72

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**	Match Tsui
TEST MODE	1 (With USB cradle)		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	57.21	29.32 QP	40.00	-10.68	1.00 V	67	15.34	13.99
2	123.31	33.54 QP	43.50	-9.96	1.25 V	349	20.28	13.26
3	171.90	35.96 QP	43.50	-7.54	1.25 V	310	22.22	13.74
4	218.56	35.17 QP	46.00	-10.83	1.50 V	178	23.36	11.80
5	239.94	33.70 QP	46.00	-12.30	1.25 V	205	20.63	13.07
6	337.13	28.18 QP	46.00	-17.82	1.25 V	262	12.83	15.35
7	399.34	34.05 QP	46.00	-11.95	1.00 V	277	17.31	16.74
8	480.98	40.51 QP	46.00	-5.49	1.25 V	4	22.03	18.48
9	494.59	34.88 QP	46.00	-11.12	1.50 V	199	16.22	18.66
10	599.56	30.06 QP	46.00	-15.94	1.00 V	184	9.06	21.00
11	667.60	31.96 QP	46.00	-14.04	1.00 V	121	10.06	21.90
12	733.69	31.46 QP	46.00	-14.54	1.50 V	280	8.33	23.13
13	776.45	29.41 QP	46.00	-16.59	1.50 V	94	5.73	23.68
14	867.82	29.28 QP	46.00	-16.72	1.25 V	349	4.76	24.52
15	920.30	28.03 QP	46.00	-17.97	1.00 V	223	2.70	25.33

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

Below 1GHz Worst-Case Data (without cradle)

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**	Match Tsui
TEST MODE	2 (Without USB cradle)		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	117.47	35.70 QP	43.50	-7.80	1.50 H	265	22.93	12.77
2	166.07	31.73 QP	43.50	-11.77	1.75 H	76	17.42	14.30
3	199.12	34.45 QP	43.50	-9.05	1.25 H	73	22.99	11.46
4	399.34	35.99 QP	46.00	-10.01	1.00 H	280	19.25	16.74
5	479.04	28.86 QP	46.00	-17.14	1.75 H	40	10.41	18.45
6	560.68	31.91 QP	46.00	-14.09	1.50 H	76	11.94	19.97
7	599.56	31.07 QP	46.00	-14.93	1.50 H	94	10.07	21.00
8	640.38	32.60 QP	46.00	-13.40	1.25 H	55	11.05	21.55
9	681.20	31.23 QP	46.00	-14.77	1.25 H	4	9.17	22.07
10	720.08	33.69 QP	46.00	-12.31	1.25 H	52	10.89	22.79
11	760.90	32.59 QP	46.00	-13.41	1.00 H	46	8.99	23.59
12	799.78	33.45 QP	46.00	-12.55	1.00 H	43	9.64	23.82
13	865.87	30.20 QP	46.00	-15.80	1.50 H	304	5.72	24.48
14	920.30	30.61 QP	46.00	-15.39	1.50 H	40	5.28	25.33
15	961.12	41.99 QP	54.00	-12.01	1.25 H	106	16.31	25.68

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**FREQUENCY RANGE**	Below 1000MHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Quasi-Peak
ENVIRONMENTAL CONDITIONS	25deg. C, 60%RH, 991hPa	**TESTED BY**	Match Tsui
TEST MODE	2 (Without USB cradle)		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	41.66	25.18 QP	40.00	-14.82	1.00 V	79	9.94	15.25
2	84.43	28.13 QP	40.00	-11.87	1.00 V	343	18.06	10.07
3	125.25	35.99 QP	43.50	-7.51	1.00 V	22	22.60	13.39
4	173.85	32.32 QP	43.50	-11.18	1.25 V	301	18.77	13.55
5	263.27	29.59 QP	46.00	-16.41	1.00 V	4	16.09	13.50
6	399.34	30.41 QP	46.00	-15.59	1.50 V	82	13.68	16.74
7	467.37	30.32 QP	46.00	-15.68	1.00 V	40	12.02	18.30
8	560.68	28.08 QP	46.00	-17.92	1.00 V	271	8.11	19.97
9	599.56	29.34 QP	46.00	-16.66	1.00 V	37	8.34	21.00
10	640.38	30.10 QP	46.00	-15.90	1.00 V	337	8.55	21.55
11	681.20	29.12 QP	46.00	-16.88	1.00 V	37	7.05	22.07
12	720.08	30.87 QP	46.00	-15.13	1.50 V	13	8.08	22.79
13	760.90	30.66 QP	46.00	-15.34	1.00 V	271	7.06	23.59
14	799.78	30.12 QP	46.00	-15.88	1.50 V	22	6.31	23.82
15	840.60	29.80 QP	46.00	-16.20	1.50 V	337	5.68	24.12

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

802.11a OFDM modulation

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3453.00	48.47 PK	68.30	-19.83	1.07 H	58	12.89	35.58
2	#5150.00	53.38 PK	74.00	-20.62	1.01 H	7	14.28	39.10
2	#5150.00	44.00 AV	54.00	-10.00	1.01 H	7	4.90	39.10
3	*5180.00	110.62 PK			1.01 H	7	71.45	39.17
3	*5180.00	101.24 AV			1.01 H	7	62.07	39.17
4	6906.00	51.02 PK	68.30	-17.28	1.07 H	207	9.51	41.51
5	10360.00	59.36 PK	68.30	-8.94	1.12 H	191	14.07	45.29
6	#15540.00	61.56 PK	74.00	-12.44	1.05 H	242	13.02	48.54
6	#15540.00	48.49 AV	54.00	-5.51	1.05 H	242	-0.05	48.54

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3453.00	46.84 PK	68.30	-21.46	1.17 V	277	11.26	35.58
2	#5150.00	48.69 PK	74.00	-25.31	1.23 V	347	9.59	39.10
2	#5150.00	38.59 AV	54.00	-15.41	1.23 V	347	-0.51	39.10
3	*5180.00	105.93 PK			1.23 V	347	66.76	39.17
3	*5180.00	95.83 AV			1.23 V	347	56.66	39.17
4	10360.00	58.10 PK	68.30	-10.20	1.01 V	331	12.81	45.29
5	#15540.00	62.71 PK	74.00	-11.29	1.05 V	168	14.17	48.54
5	#15540.00	49.25 AV	54.00	-4.75	1.05 V	168	0.71	48.54

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 4	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3493.00	49.25 PK	68.30	-19.05	1.00 H	16	13.56	35.70
2	*5240.00	109.65 PK			1.00 H	10	70.47	39.18
2	*5240.00	99.03 AV			1.00 H	10	59.85	39.18
3	6986.00	51.35 PK	68.30	-16.95	1.10 H	206	9.64	41.70
4	10480.00	64.22 PK	68.30	-4.08	1.37 H	70	18.14	46.08

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3493.00	48.01 PK	68.30	-20.29	1.02 V	291	12.32	35.70
2	*5240.00	104.79 PK			1.10 V	341	65.61	39.18
2	*5240.00	95.23 AV			1.10 V	341	56.05	39.18
3	10480.00	58.88 PK	68.30	-9.42	1.05 V	292	12.80	46.08
4	#15720.00	65.20 PK	74.00	-8.80	1.32 V	72	17.44	47.76
4	#15720.00	50.47 AV	54.00	-3.53	1.32 V	72	2.71	47.76

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 5	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	51.39 PK	68.30	-16.91	1.08 H	78	15.65	35.73
2	*5260.00	109.89 PK			1.00 H	10	70.73	39.16
2	*5260.00	98.60 AV			1.00 H	10	59.44	39.16
3	7013.00	52.77 PK	68.30	-15.53	1.37 H	203	10.93	41.85
4	10520.00	60.92 PK	68.30	-7.38	1.51 H	234	14.76	46.16

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3506.00	49.61 PK	68.30	-18.69	1.00 V	283	13.87	35.73
2	*5260.00	104.46 PK			1.20 V	315	65.30	39.16
2	*5260.00	94.27 AV			1.20 V	315	55.11	39.16
3	10520.00	62.06 PK	68.30	-6.24	1.42 V	57	15.90	46.16
4	#15780.00	62.18 PK	74.00	-11.82	1.32 V	72	14.92	47.25
4	#15780.00	48.70 AV	54.00	-5.30	1.32 V	72	1.44	47.25

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 8	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3546.00	50.88 PK	68.30	-17.42	1.06 H	76	15.03	35.85
2	*5320.00	109.76 PK			1.00 H	150	70.61	39.15
2	*5320.00	99.68 AV			1.00 H	150	60.53	39.15
3	#5350.00	50.14 PK	74.00	-23.86	1.00 H	150	10.94	39.20
3	#5350.00	39.41 AV	54.00	-14.59	1.00 H	150	0.21	39.20
4	7092.00	53.89 PK	68.30	-14.41	1.32 H	201	11.38	42.51
5	#10640.00	61.07 PK	74.00	-12.93	1.50 H	234	14.84	46.23
5	#10640.00	48.08 AV	54.00	-5.92	1.50 H	234	1.85	46.23
6	#15960.00	58.64 PK	74.00	-15.36	1.20 H	235	13.67	44.96
6	#15960.00	45.16 AV	54.00	-8.84	1.20 H	235	0.19	44.96

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3546.00	48.99 PK	68.30	-19.31	1.17 V	282	13.14	35.85
2	*5320.00	104.26 PK			1.04 V	37	65.11	39.15
2	*5320.00	94.68 AV			1.04 V	37	55.53	39.15
3	#5350.00	45.43 PK	74.00	-28.57	1.04 V	37	6.23	39.20
3	#5350.00	35.04 AV	54.00	-18.96	1.04 V	37	-4.16	39.20
4	#10640.00	59.53 PK	74.00	-14.47	1.16 V	306	13.30	46.23
4	#10640.00	47.06 AV	54.00	-6.94	1.16 V	306	0.83	46.23
5	#15960.00	58.95 PK	74.00	-15.05	1.04 V	146	13.98	44.96
5	#15960.00	45.23 AV	54.00	-8.77	1.04 V	146	0.26	44.96

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

802.11a Turbo OFDM modulation

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 1	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3473.00	46.49 PK	68.30	-21.81	1.08 H	215	10.85	35.64
2	#5150.00	58.49 PK	74.00	-15.51	1.00 H	143	19.39	39.10
2	#5150.00	49.75 AV	54.00	-4.25	1.00 H	143	10.65	39.10
3	*5210.00	103.69 PK			1.00 H	143	64.48	39.21
3	*5210.00	94.50 AV			1.00 H	143	55.29	39.21
4	10420.00	59.02 PK	68.30	-9.28	1.00 H	346	13.25	45.77

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3473.00	46.89 PK	68.30	-21.41	1.36 V	213	11.25	35.64
2	#5150.00	57.33 PK	74.00	-16.67	1.04 V	30	18.23	39.10
2	#5150.00	47.25 AV	54.00	-6.75	1.04 V	30	8.15	39.10
3	*5210.00	102.08 PK			1.04 V	30	62.87	39.21
3	*5210.00	92.00 AV			1.04 V	30	52.79	39.21
4	10420.00	60.94 PK	68.30	-7.36	1.07 V	259	15.17	45.77

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 2	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3500.00	46.17 PK	68.30	-22.13	1.02 H	237	10.45	35.72
2	*5250.00	107.18 PK			1.07 H	129	68.01	39.17
2	*5250.00	97.24 AV			1.07 H	129	58.07	39.17
3	10500.00	63.92 PK	68.30	-4.38	1.20 H	65	17.73	46.19

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3500.00	48.10 PK	68.30	-20.20	1.14 V	228	12.38	35.72
2	*5250.00	103.62 PK			1.05 V	36	64.45	39.17
2	*5250.00	94.07 AV			1.05 V	36	54.90	39.17
3	10500.00	62.06 PK	68.30	-6.24	1.00 V	42	15.87	46.19

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

EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
CHANNEL	Channel 3	**FREQUENCY RANGE**	1 ~ 40 GHz
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**DETECTOR FUNCTION**	Peak(PK) Average (AV)
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH, 991hPa	**TESTED BY**	Match Tsui

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3526.00	47.52 PK	68.30	-20.78	1.25 H	168	11.73	35.79
2	*5290.00	106.85 PK			1.05 H	124	67.72	39.13
2	*5290.00	97.25 AV			1.05 H	124	58.12	39.13
3	#5350.00	61.85 PK	74.00	-12.15	1.05 H	124	22.65	39.20
3	**#5350.00**	**52.25 AV**	**54.00**	**-1.75**	**1.05 H**	**124**	**13.05**	**39.20**
4	10580.00	62.41 PK	68.30	-5.89	1.43 H	196	16.34	46.07

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

No.	Freq. (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3526.00	48.55 PK	68.30	-19.75	1.13 V	227	12.76	35.79
2	*5290.00	103.58 PK			1.17 V	28	64.45	39.13
2	*5290.00	94.84 AV			1.17 V	28	55.71	39.13
3	#5350.00	58.58 PK	74.00	-15.42	1.17 V	28	19.38	39.20
3	#5350.00	49.84 AV	54.00	-4.16	1.17 V	28	10.64	39.20
4	10580.00	64.88 PK	68.30	-3.42	1.25 V	50	18.81	46.07

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

4.3 PEAK TRANSMIT POWER MEASUREMENT

4.3.1 LIMITS OF PEAK TRANSMIT POWER MEASUREMENT

Frequency Band	Limit
5.15 – 5.25GHz	The lesser of 50mW (17dBm) or 4dBm + 10logB
5.25 – 5.35GHz	The lesser of 250mW (24dBm) or 11dBm + 10logB
5.725 – 5.825GHz	The lesser of 1W (30dBm) or 17dBm + 10logB

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

4.3.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
R&S SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.3.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set span to encompass the entire emission bandwidth of the signal.
3. Set RBW to 1MHz, VBW to 300kHz.
4. Using the spectrum analyzer' s channel power measurement function to measure the output power.

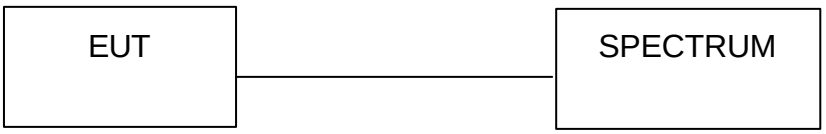
NOTE:
The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 3 is used.

4.3.4 DEVIATION FROM TEST STANDARD

No deviation

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

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

4.3.7 TEST RESULTS

802.11a OFDM modulation

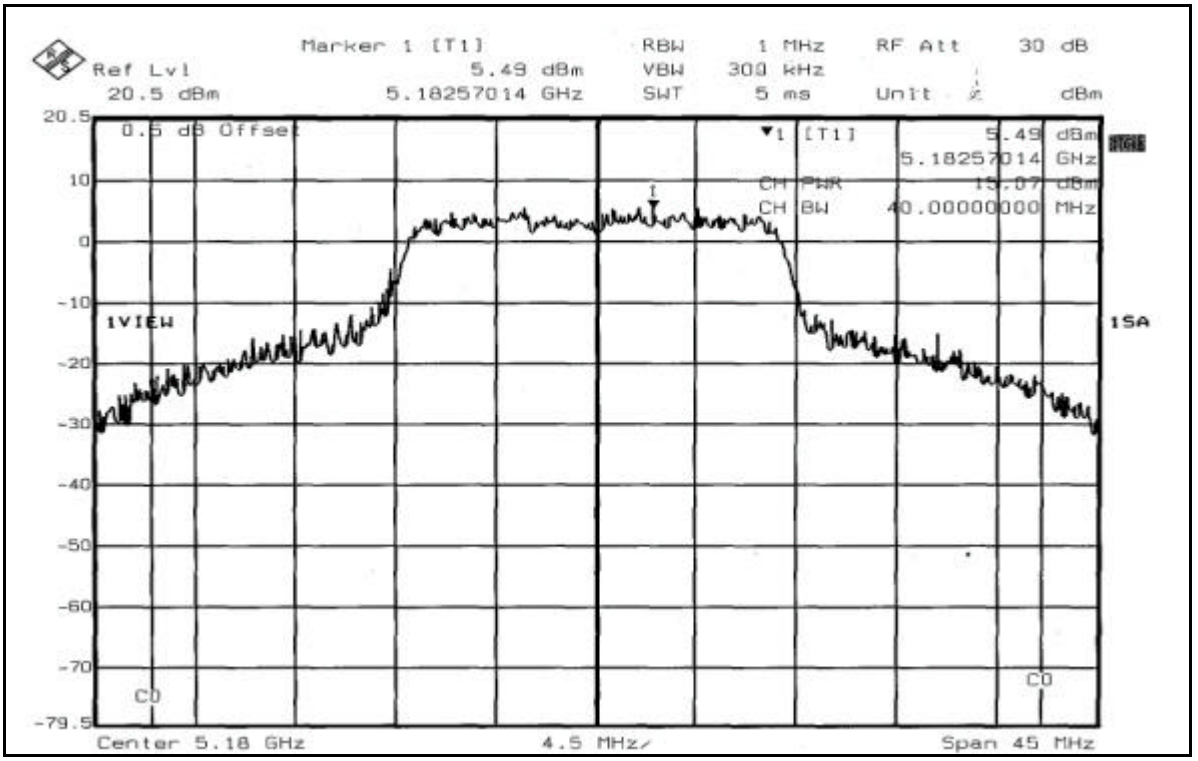
EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5180	32.137	15.07	17.00	39.67	PASS
4	5240	32.584	15.13	17.00	37.67	PASS
5	5260	32.509	15.12	24.00	37.87	PASS
8	5320	32.734	15.15	24.00	36.87	PASS

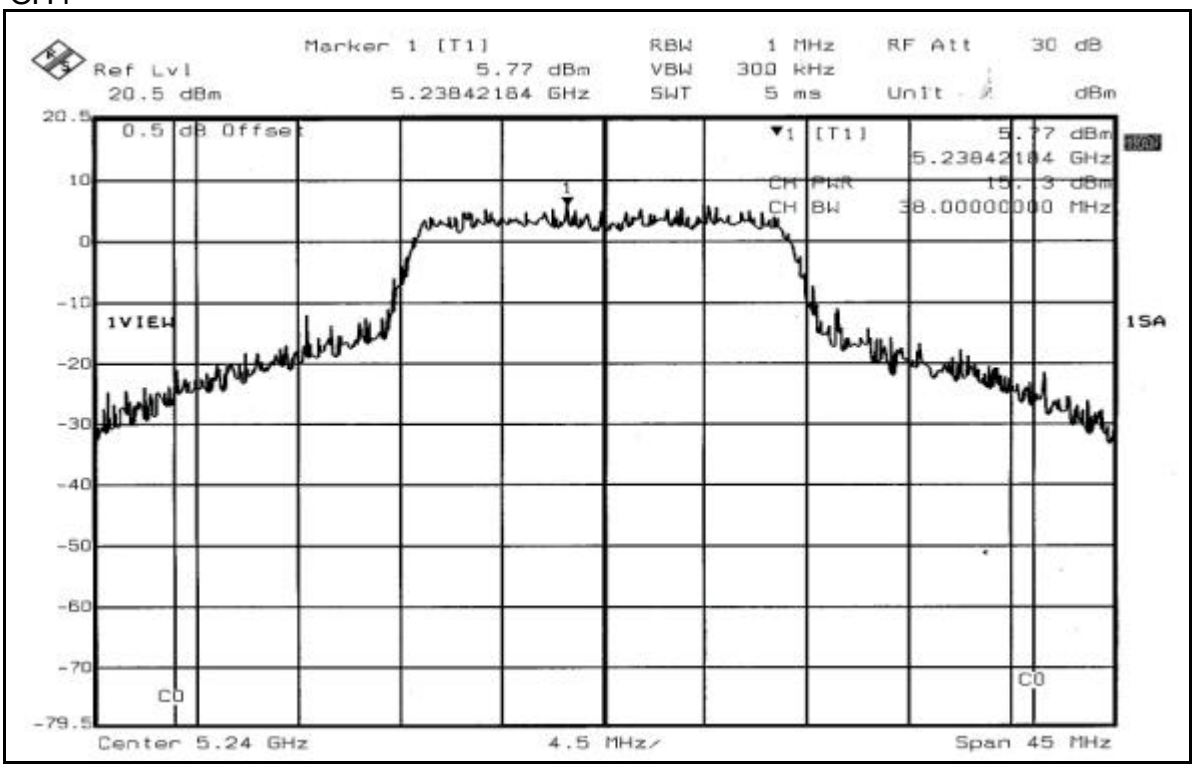
NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

Peak Power Output:

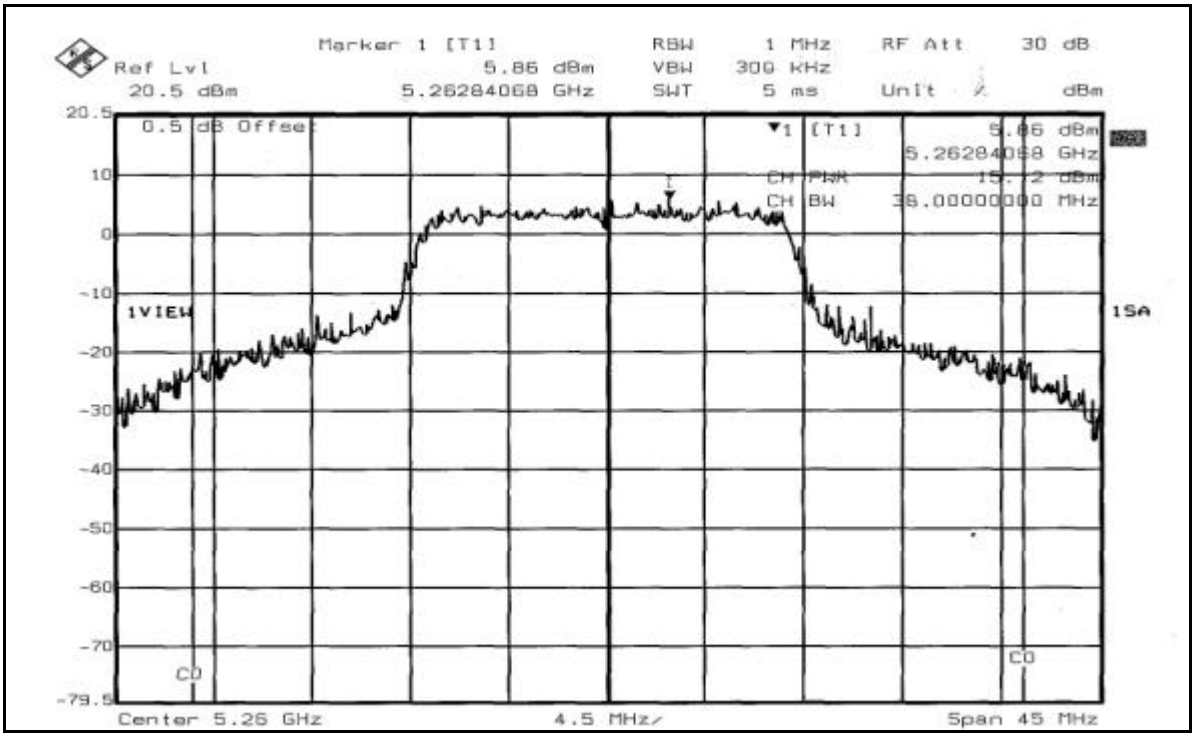
CH1



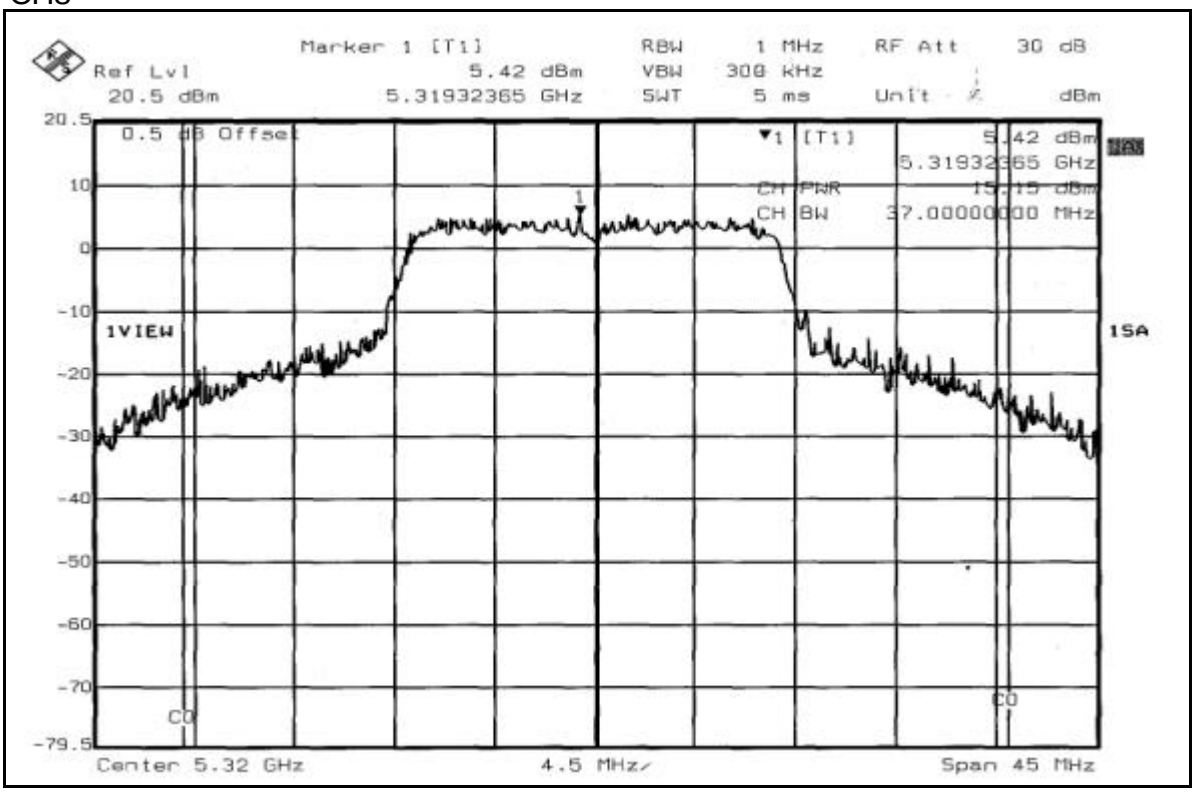
CH4



CH5

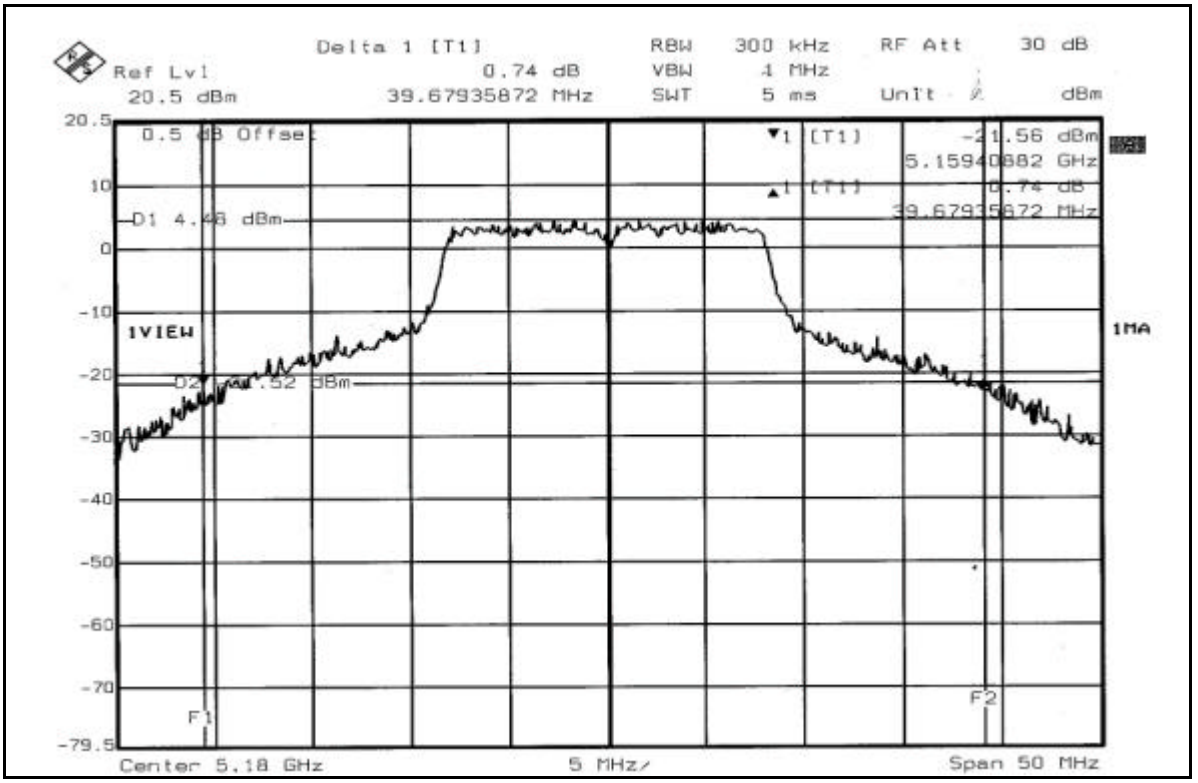

Marker 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
5.86 dBm
VBW 300 kHz
20.5 dBm
5.26284068 GHz
SWT 5 ms
Unit dBm
0.5 dB Offset
▼1 [T1]
5.86 dBm
5.26284068 GHz
CH PWR
CH BW
1VIEW
1SA
C0
Center 5.26 GHz
4.5 MHz/
Span 45 MHz

CH8

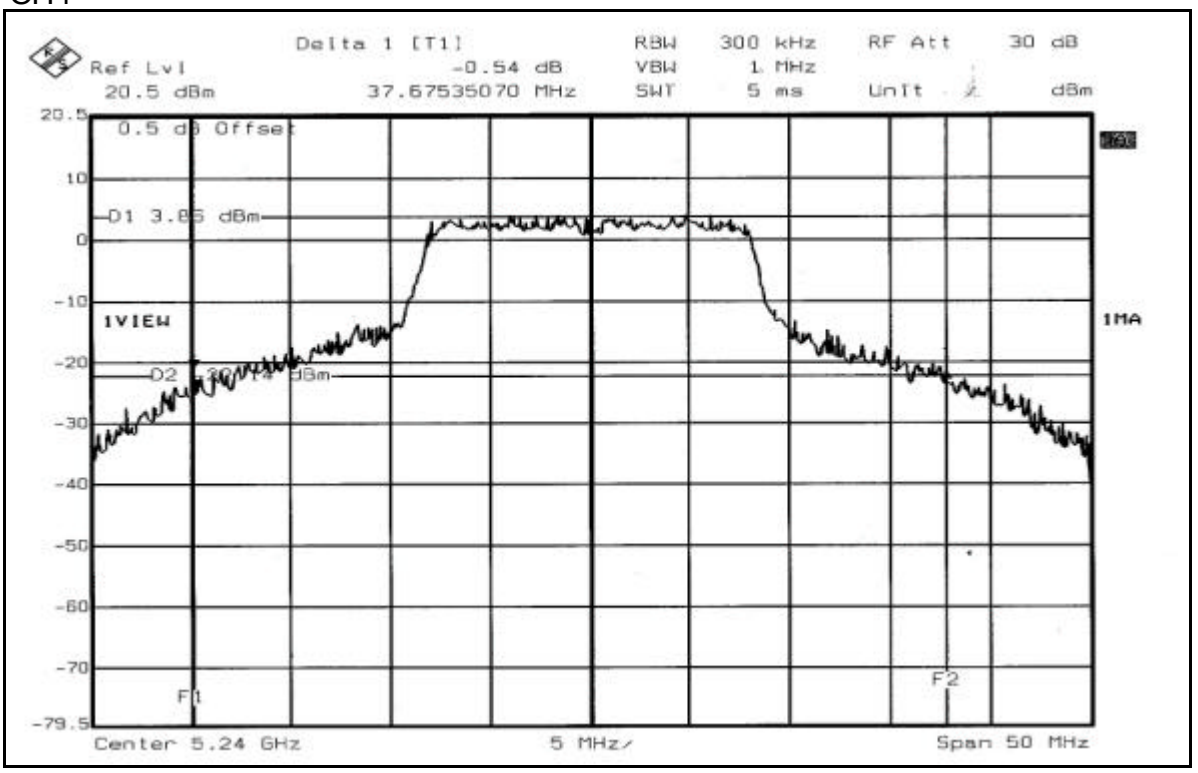

Marker 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
5.42 dBm
VBW 300 kHz
20.5 dBm
5.31932365 GHz
SWT 5 ms
Unit dBm
0.5 dB Offset
▼1 [T1]
5.42 dBm
5.31932365 GHz
CH PWR
CH BW
37.00000000 MHz
1VIEW
1SA
C0
Center 5.32 GHz
4.5 MHz/
Span 45 MHz

26dB Occupied Bandwidth:

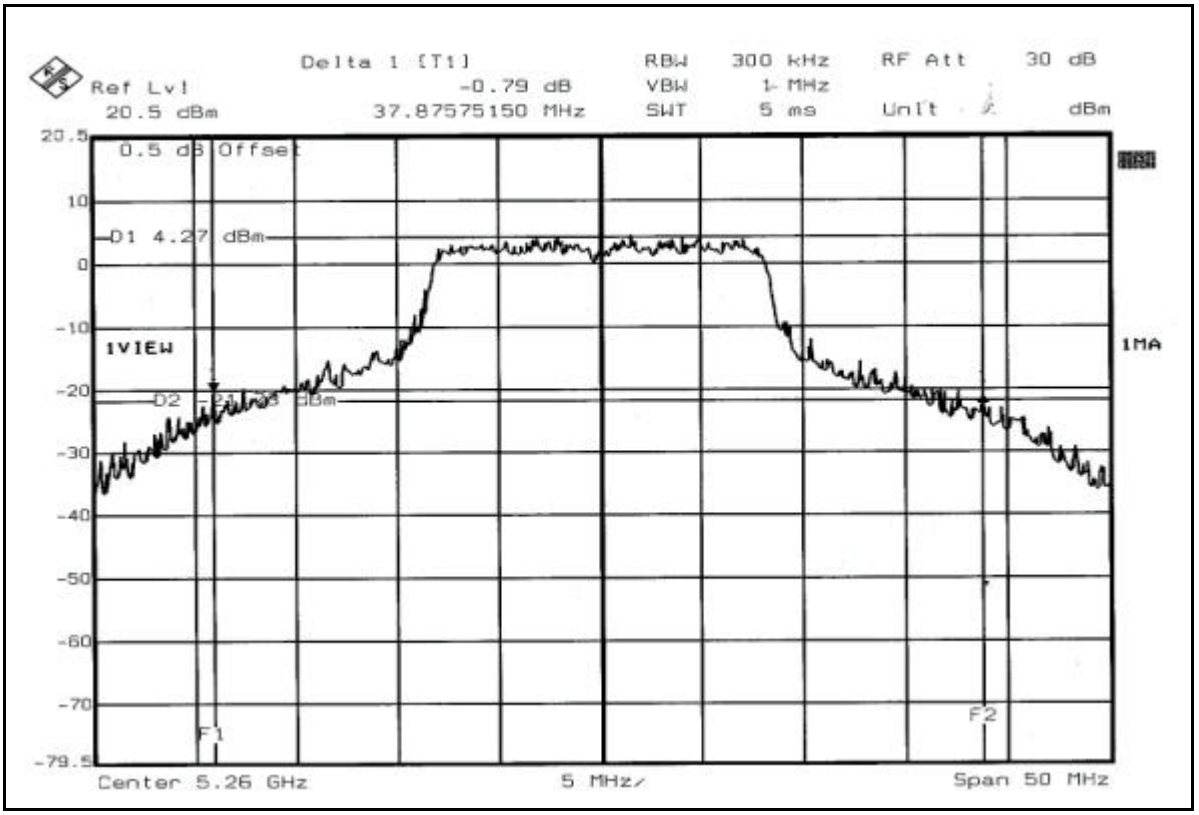
CH1



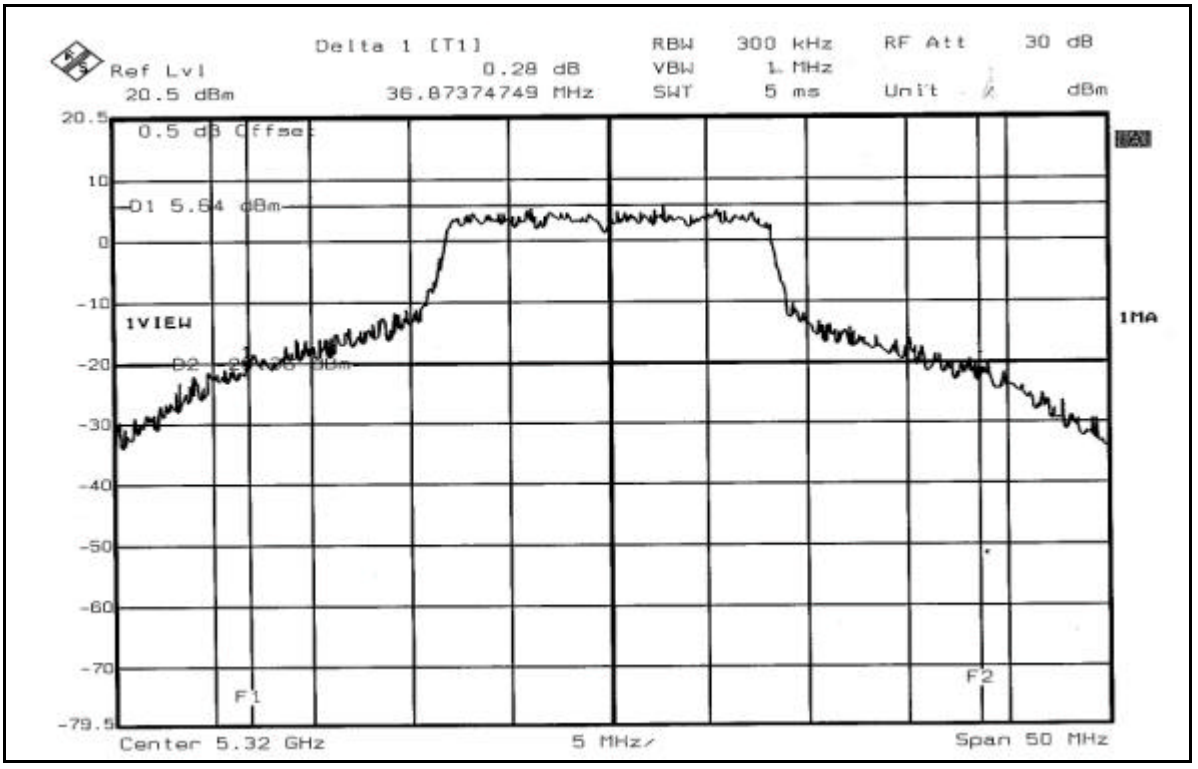
CH4



CH5


Delta 1 [T1]
-0.79 dB
37.87575150 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 4.27 dBm
1VIEW
1MA
F1
F2
Center 5.26 GHz
5 MHz/
Span 50 MHz

CH8


Delta 1 [T1]
0.28 dB
36.87374749 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 5.84 dBm
1VIEW
1MA
F1
F2
Center 5.32 GHz
5 MHz/
Span 50 MHz

802.11a Turbo OFDM modulation

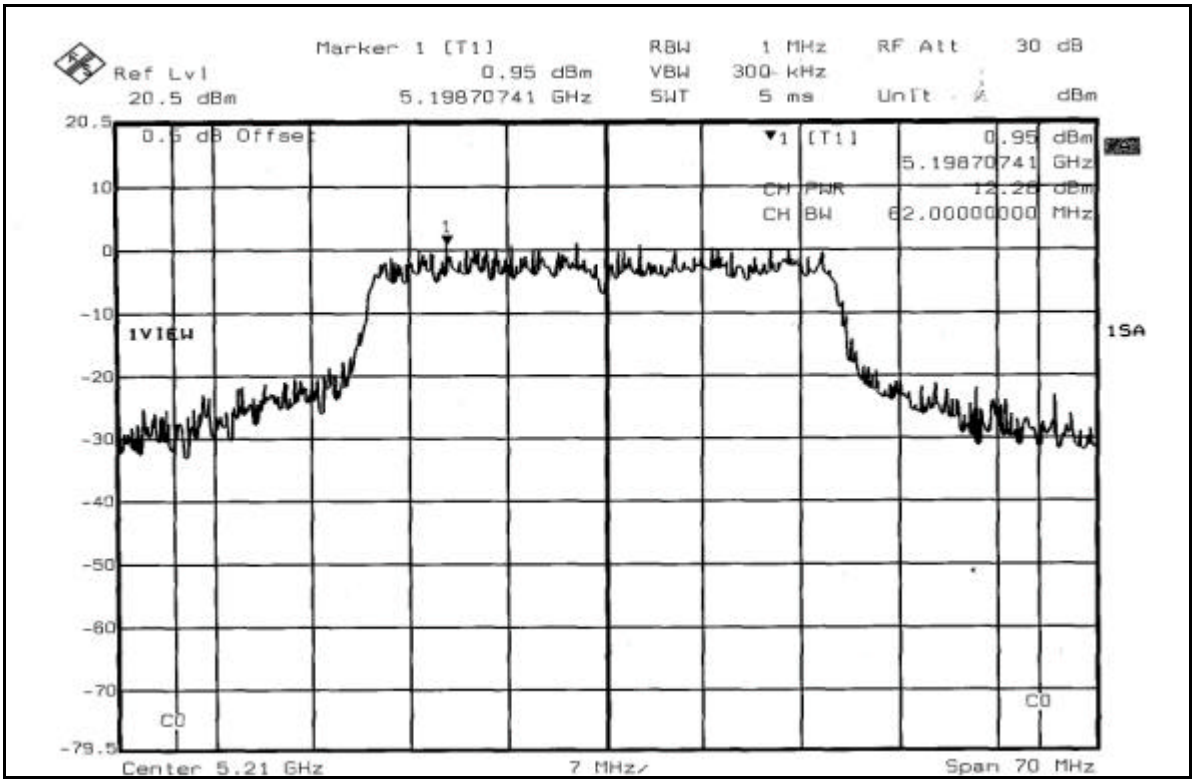
EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (mW)	PEAK POWER OUTPUT (dBm)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)	PASS/FAIL
1	5210	16.827	12.26	17.00	61.86	PASS
2	5250	32.285	15.09	17.00	65.65	PASS
3	5290	32.211	15.08	24.00	61.86	PASS

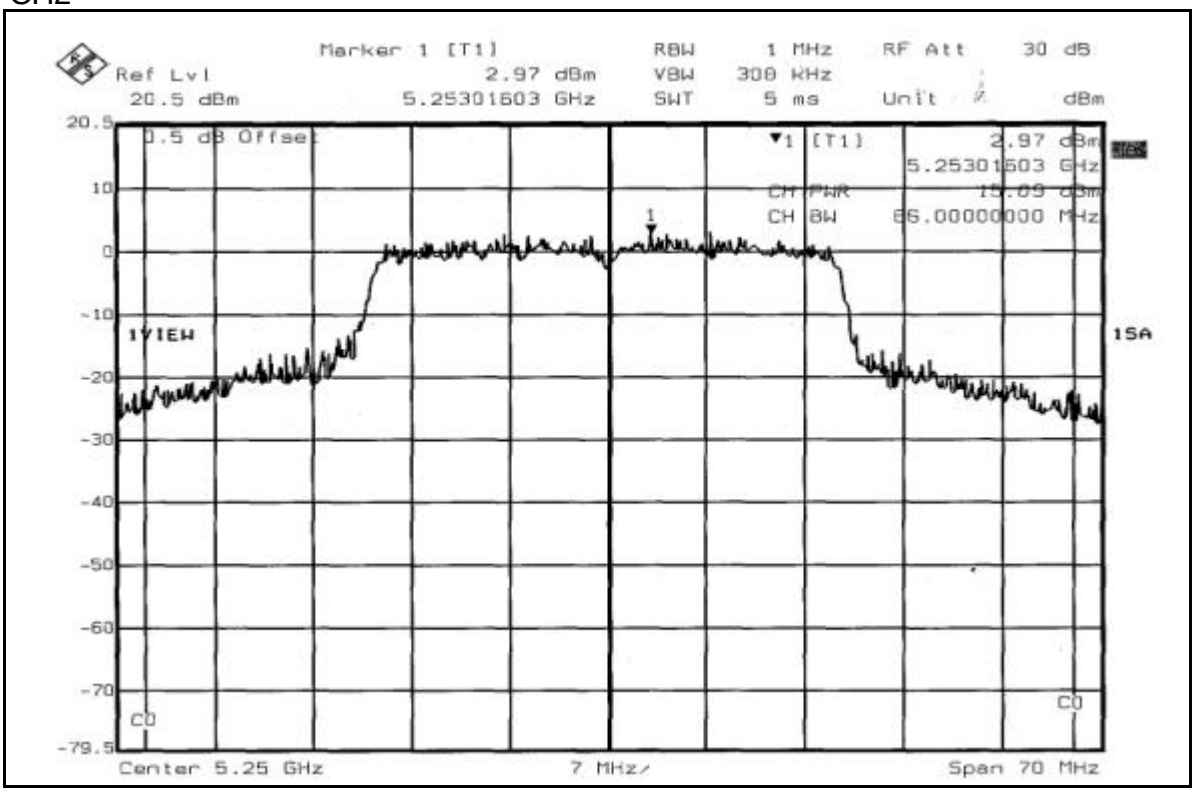
NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

Peak Power Output:

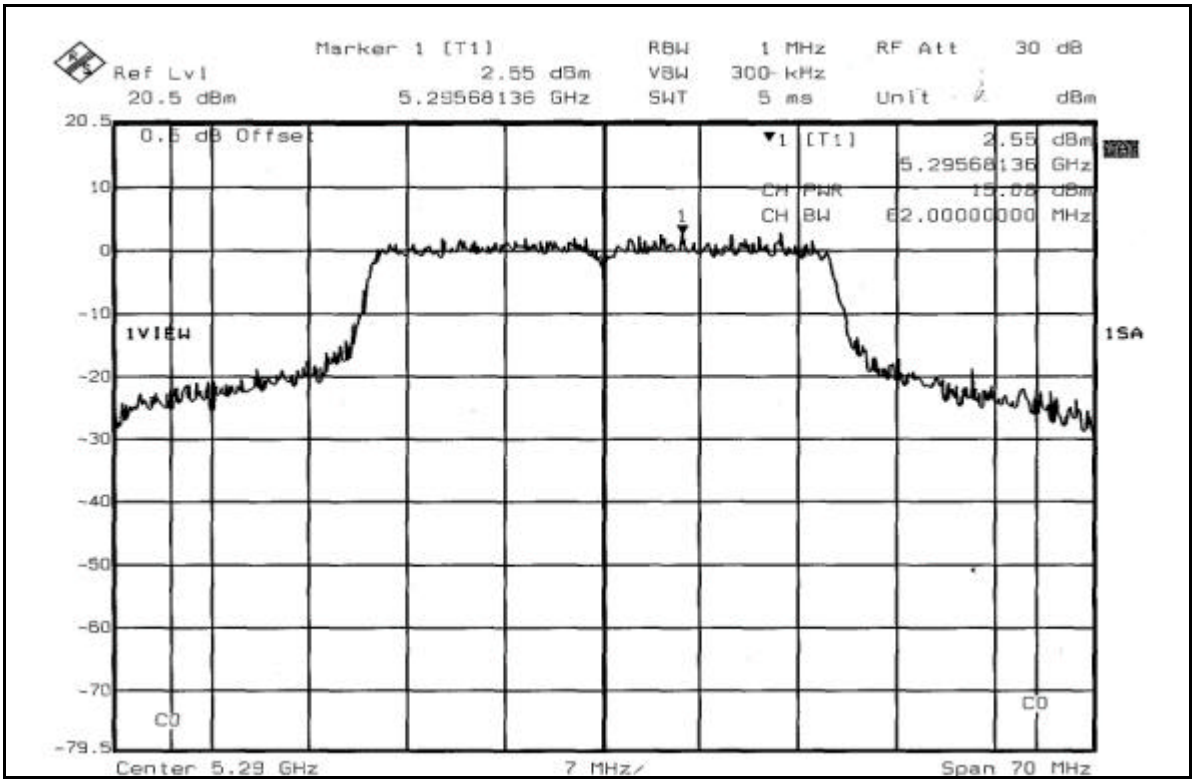
CH1



CH2

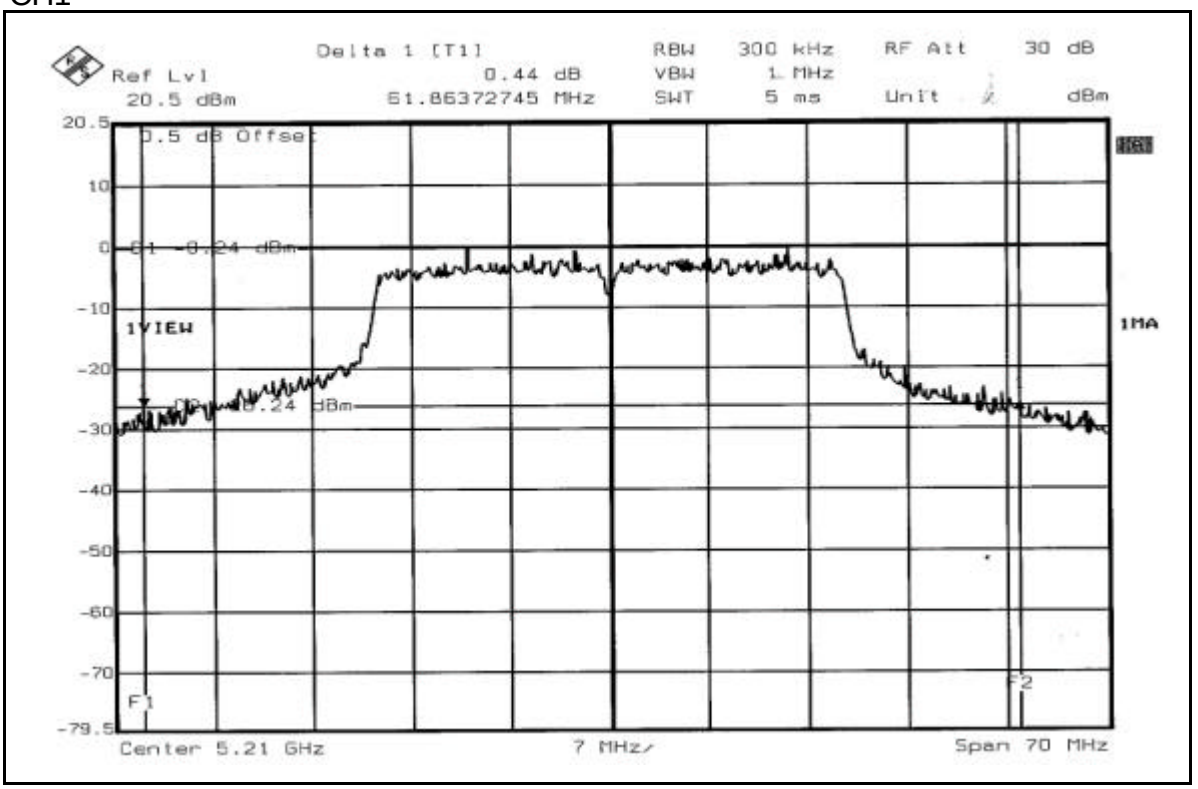


CH3

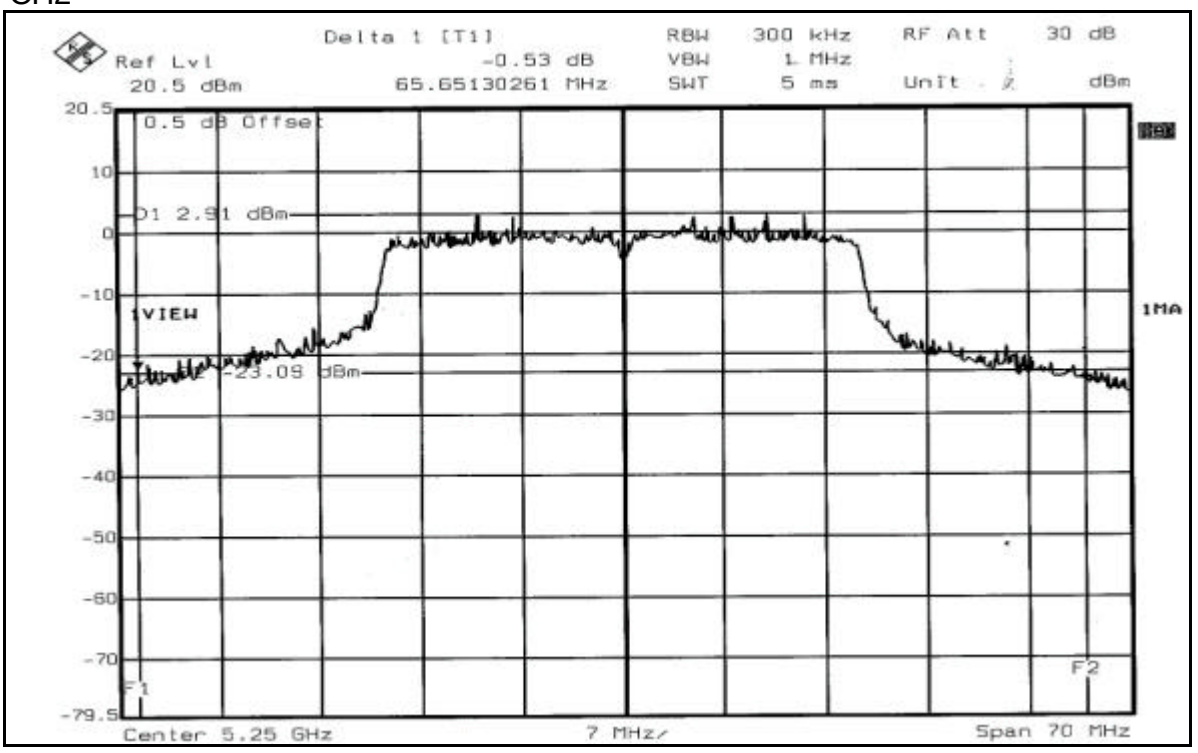


26dB Occupied Bandwidth:

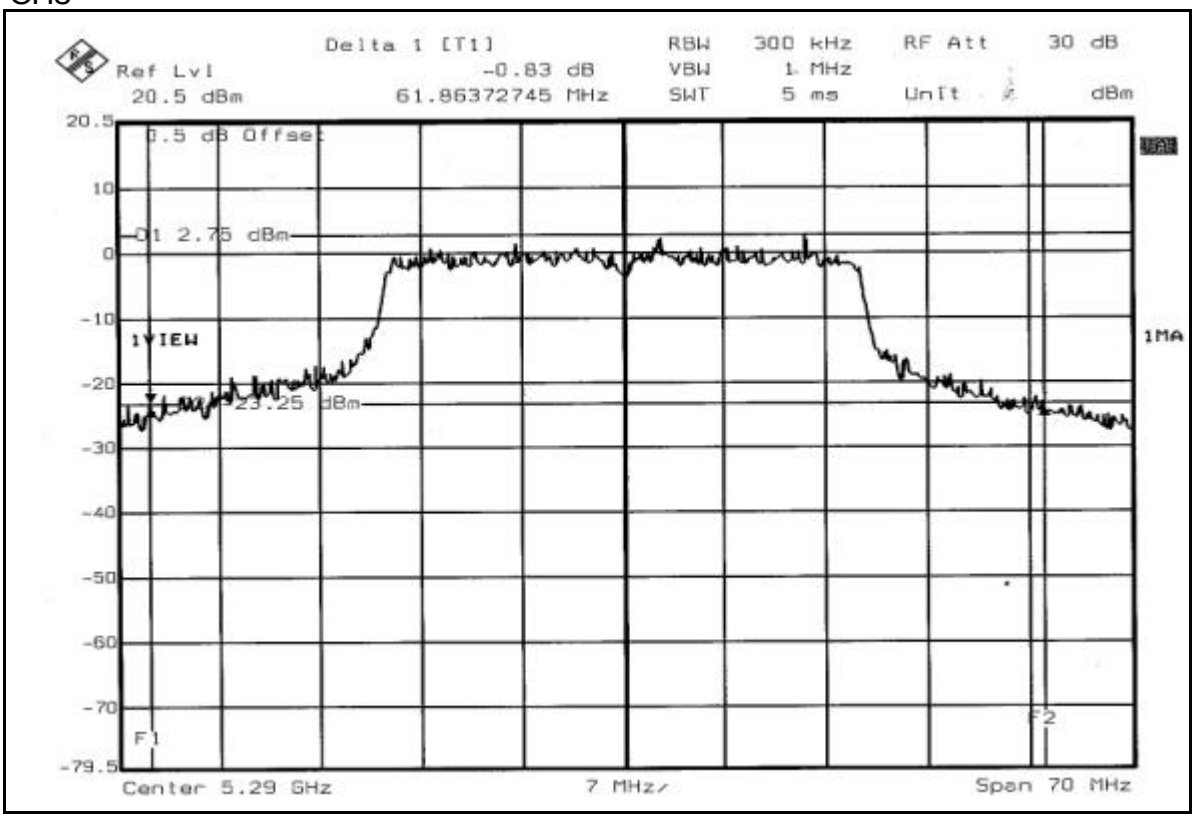
CH1



CH2


Delta 1 [T1]
-0.53 dB
65.65130261 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 2.91 dBm
1VIEW
-23.09 dBm
1MA
F1
F2
Center 5.25 GHz
7 MHz/
Span 70 MHz

CH3


Delta 1 [T1]
-0.83 dB
61.86372745 MHz
RBW 300 kHz
VBW 1 MHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
D1 2.75 dBm
1VIEW
-23.25 dBm
1MA
F1
F2
Center 5.29 GHz
7 MHz/
Span 70 MHz

4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.725 – 5.825 GHz	13dB

4.4.2 TEST INSTRUMENTS

Description & Manufacturer	Model No.	Serial No.	Calibrated Until
SPECTRUM ANALYZER	FSEK30	100049	Aug. 12, 2005

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

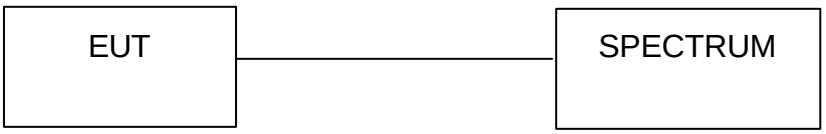
4.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=300KHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

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

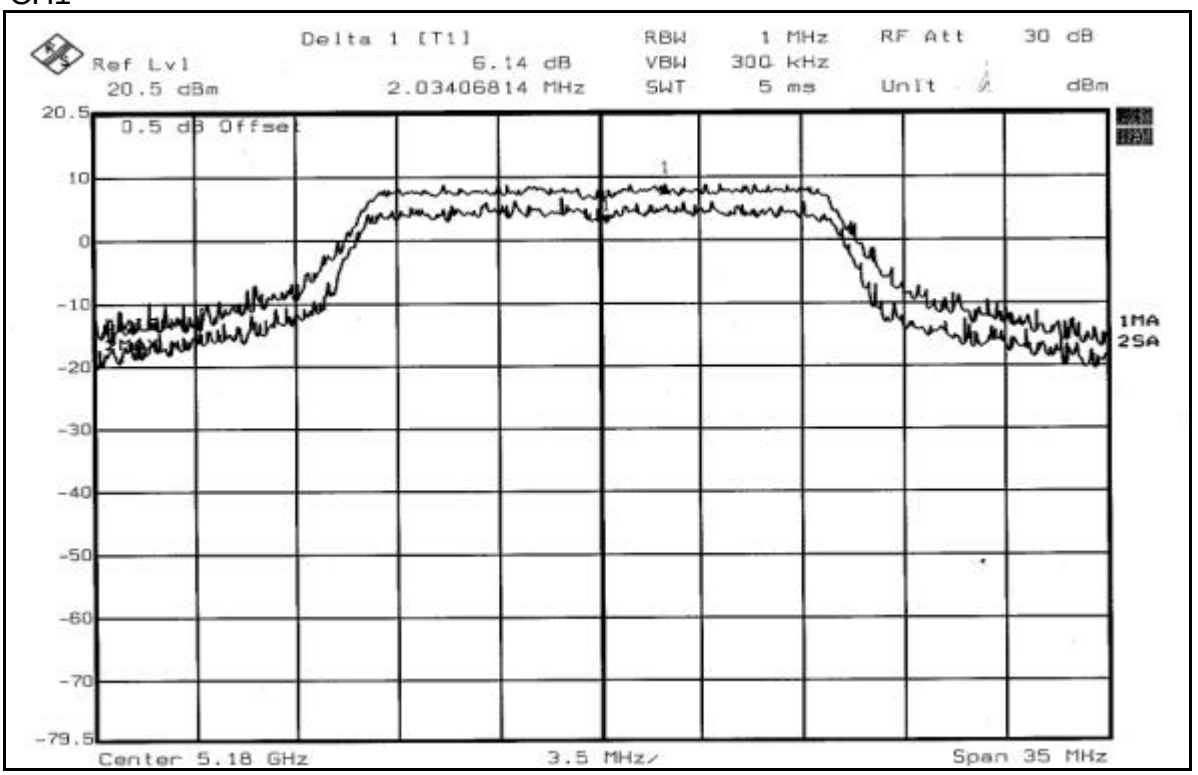
4.4.7 TEST RESULTS

802.11a OFDM modulation

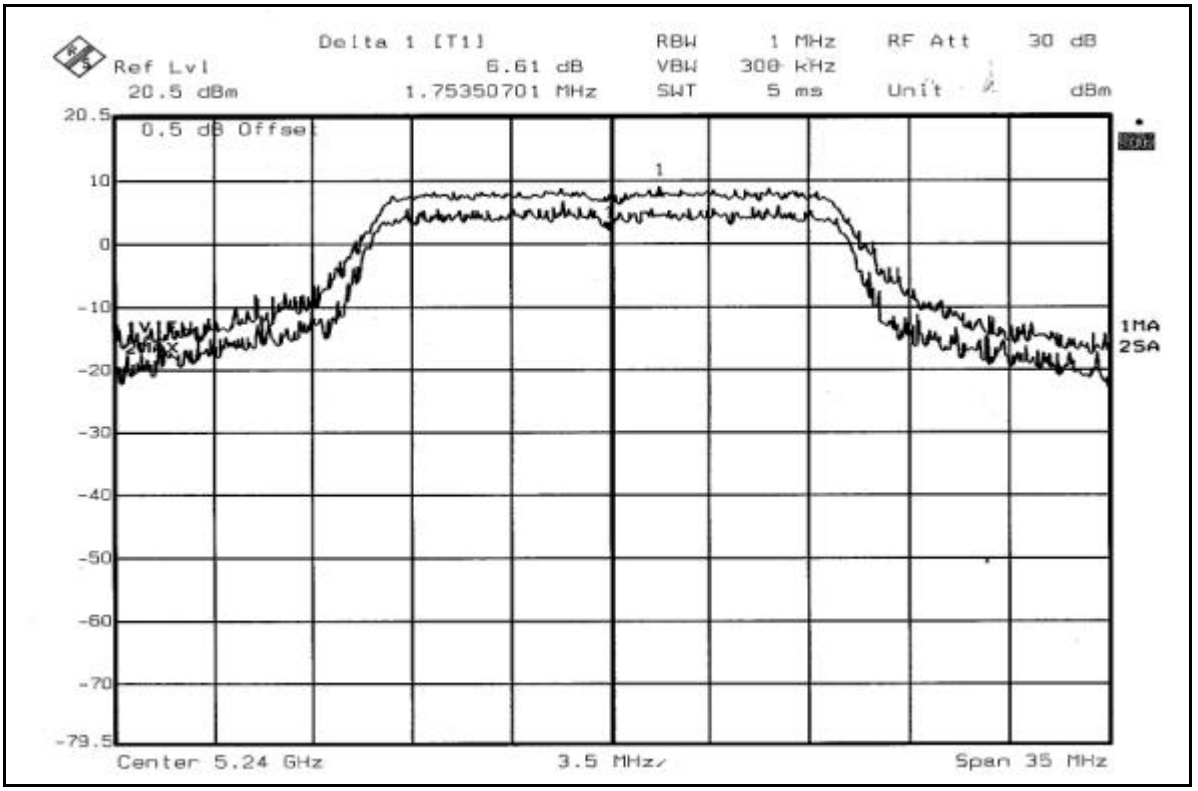
EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
MODULATION TYPE	BPSK	**TRANSFER RATE**	6Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	6.14	13	PASS
4	5240	6.61	13	PASS
5	5260	6.99	13	PASS
8	5320	6.79	13	PASS

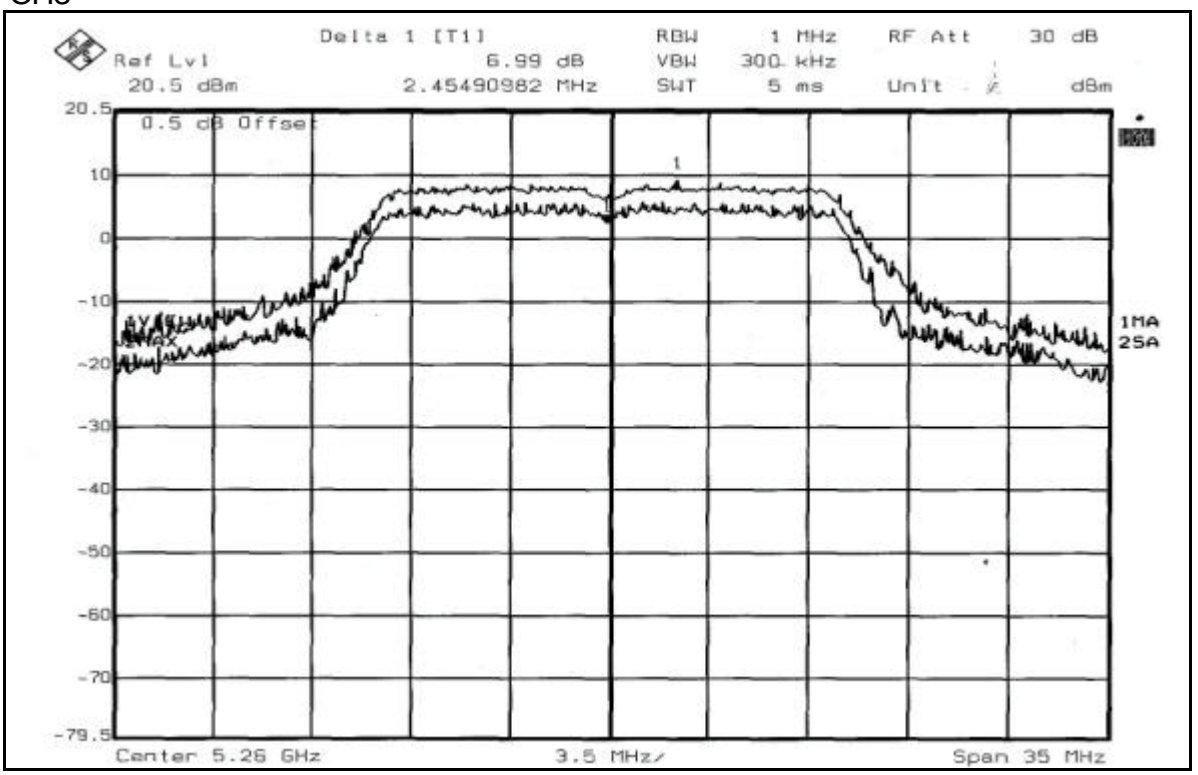
CH1


Delta 1 [T1]
6.14 dB
2.03406814 MHz
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
1MA
2SA
Center 5.18 GHz
3.5 MHz/
Span 35 MHz

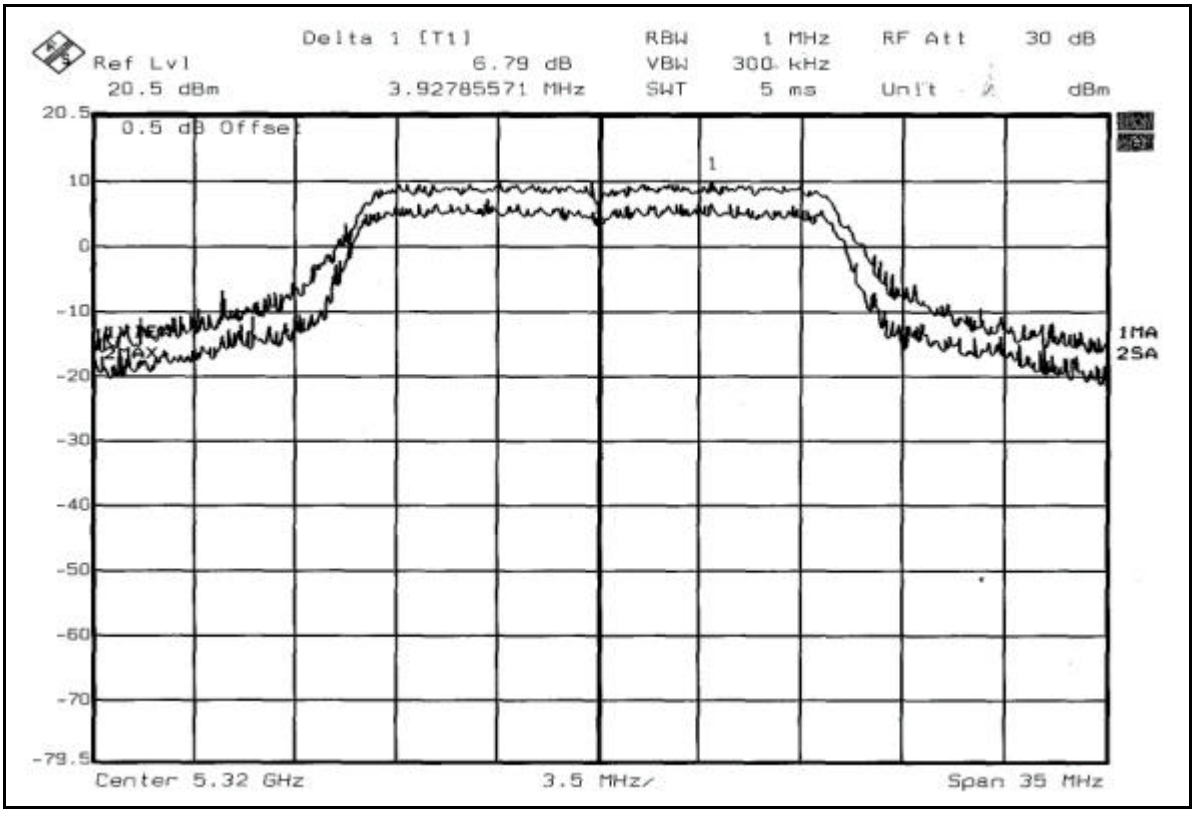
CH4


Delta 1 [T1]
6.61 dB
1.75350701 MHz
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
1MA
2SA
Center 5.24 GHz
3.5 MHz/
Span 35 MHz

CH5


Delta 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
6.99 dB
VBW 300 kHz
20.5 dBm
2.45490982 MHz
SWT 5 ms
Unit dBm
0.5 dB Offset
1MA
2SA
Center 5.26 GHz
3.5 MHz/
Span 35 MHz

CH8

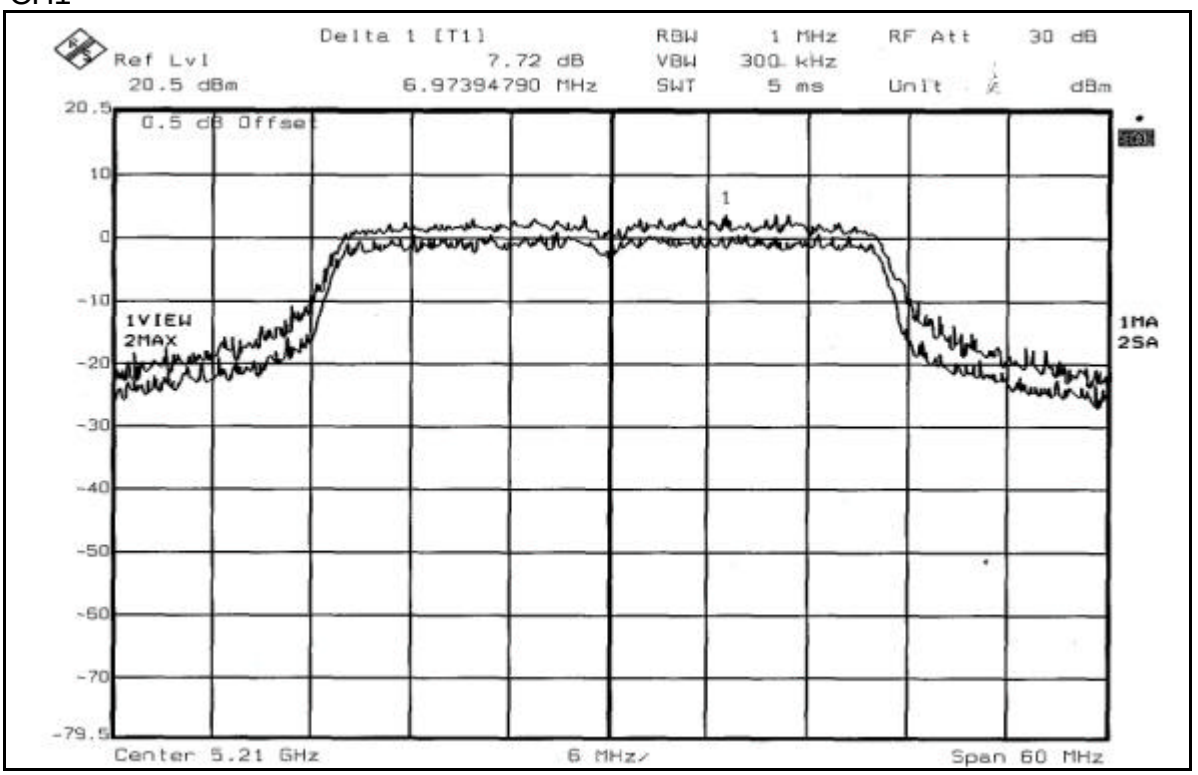

Delta 1 [T1]
RBW 1 MHz
RF Att 30 dB
Ref Lvl
6.79 dB
VBW 300 kHz
20.5 dBm
3.92785571 MHz
SWT 5 ms
Unit dBm
0.5 dB Offset
1MA
2SA
Center 5.32 GHz
3.5 MHz/
Span 35 MHz

802.11a Turbo OFDM modulation

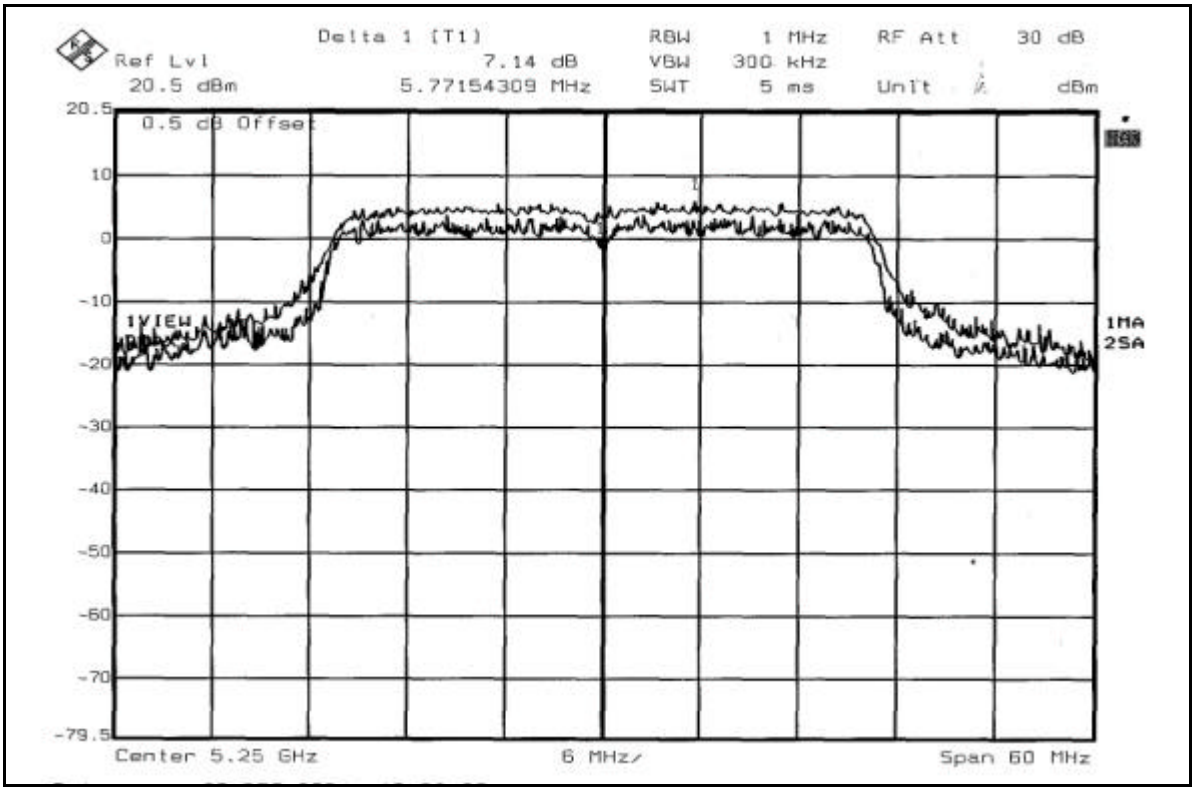
EUT	Wireless A/G USB Adapter	**MODEL**	F6D3050
MODULATION TYPE	BPSK	**TRANSFER RATE**	12Mbps
INPUT POWER (SYSTEM)	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	24deg.C, 64%RH, 991hPa
TESTED BY	Leo Hung		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5210	7.72	13	PASS
2	5250	7.14	13	PASS
3	5290	7.54	13	PASS

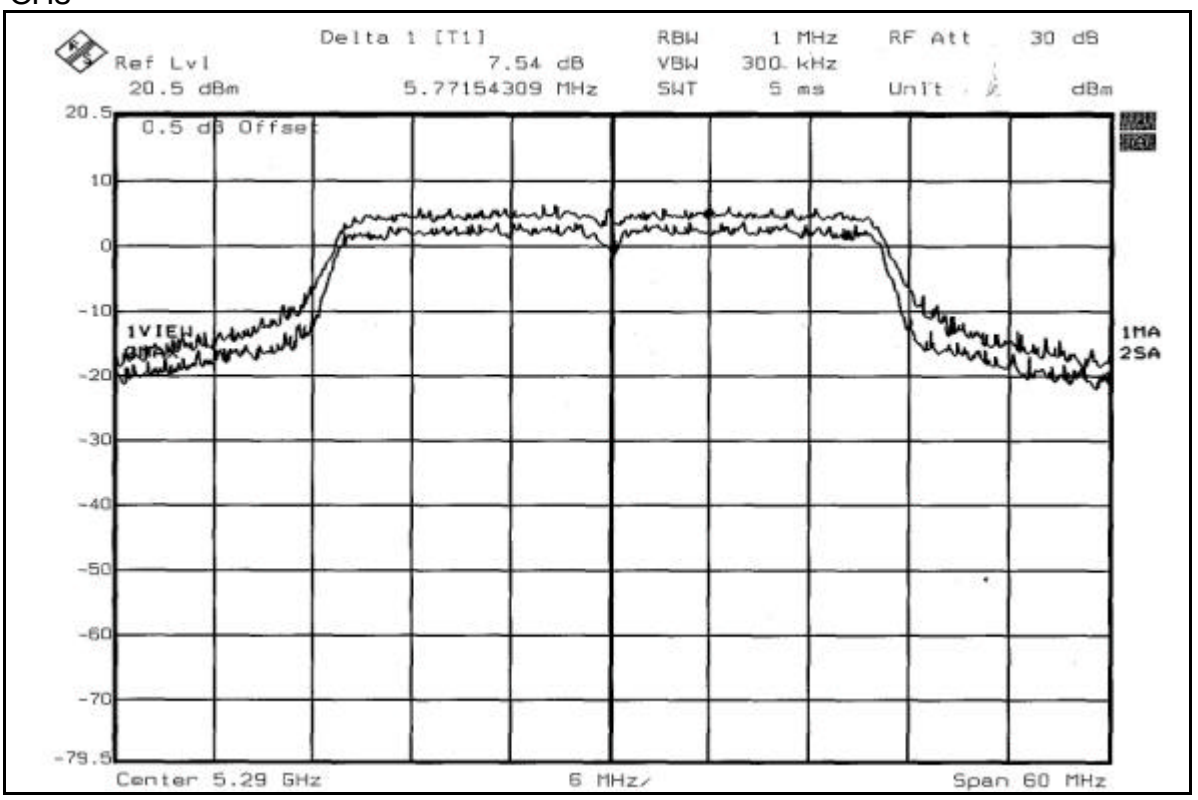
CH1


Delta 1 [T1]
7.72 dB
6.97394790 MHz
Ref Lvl
20.5 dBm
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
0.5 dB Offset
1VIEW
2MAX
1MA
2SA
Center 5.21 GHz
6 MHz/
Span 60 MHz

CH2


Delta 1 [T1]
7.14 dB
5.77154309 MHz
Ref Lvl
20.5 dBm
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
0.5 dB Offset
1VIEW
1MA
2SA
Center 5.25 GHz
6 MHz/
Span 60 MHz

CH3


Delta 1 [T1]
7.54 dB
5.77154309 MHz
RBW 1 MHz
VBW 300 kHz
SWT 5 ms
RF Att 30 dB
Unit dBm
Ref Lvl
20.5 dBm
0.5 dB Offset
20.5
10
0
-10
-20
-30
-40
-50
-60
-70
-79.5
1VIEW
1MA
2SA
Center 5.29 GHz
6 MHz/
Span 60 MHz