

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

Product Name: 5.8GHZ WIRELESS IPOD VIDEO TO TV

Brand Name: N/A

Model Name: WIV-8000

FCC ID: U7HWIV8000

Report No.: ER/2007/30026

Issue Date: Apr. 29, 2007

FCC Rule Part: §15.249

Prepared for Q-MARK TECHNOLOGY CORP.

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Prepared by SGS Taiwan Ltd.

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VERIFICATION OF COMPLIANCE

Applicant: Q-MARK TECHNOLOGY CORP.
13F-3, No. 47, Pao Chung Road, Hsintien City, Taipei, Taiwan, R.O.C.

Product Description: 5.8GHZ WIRELESS IPOD VIDEO TO TV

Brand Name: N/A

FCC ID Number: U7HWIV8000

Model No.: WIV-8000

Model Difference: N/A

File Number: ER/2007/30026




Date of test: Apr. 01, 2007 ~ Apr. 27, 2007

Date of EUT Received: Mar. 30, 2007

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.249.

The test results of this report relate only to the tested sample identified in this report.

Test By:		Date	Apr. 29, 2007
	_____ Jason Wu / Sr. Engineer		_____
Prepared By:		Date	Apr. 29, 2007
	_____ Eva Kao / Sr. Engineer		_____
Approved By:		Date	Apr. 29, 2007
	_____ Vincent Su / Manager		_____

Version

Version No.	Date
00	Apr. 29, 2007

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1. GENERAL INFORMATION

1.1 Product Description

The Q-MARK TECHNOLOGY CORP., Model: WIV-8000 (referred to as the EUT in this report) is 5.8GHZ WIRELESS IPOD VIDEO TO TV, the major technical descriptions of EUT is described as following:

- A). Operation Frequency: 5740-5820MHz, (CH1:5820MHz, CH2:5780MHz, CH3:5760MHz, CH4:5740MHz) channels.
- B). Modulation Type: FM
- C). Antenna Designation: Non-User Replaceable (Fixed)
- D). Power Supply: 3.7 Vdc re-charge battery or 9V AC/DC Adapter, model: DV-9300S.

1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: U7HWIV8000 filing to comply with Section 15.249 of the FCC Part 15, Subpart C Rules. The composite system (digital device) is compliance with Subpart B is authorized under a DoC procedure.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the address of SGS Taiwan Ltd. No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003 and CISPR 22/EN 55022 requirements. Site No. 1(3 &10 meters) Registration Number: 94644, Both OATS and Anechoic chamber (3 meters) was accredited by TAF (0513).

1.5 Special Accessories

Not available for this EUT intended for grant.

1.6 Equipment Modifications

Not available for this EUT intended for grant.

2. System Test Configuration

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The Transmitter was operated in the engineering operating mode. the Tx frequency was fixed which was for the purpose of the measurements.

2.3 Test Procedure

2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

2.4 Limitation

(1) Conducted Emission

According to section 15.207(a) Conducted Emission Limits is as following.

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 – 0.5	66 - 56	56 - 46
0.5 – 5	56	46
5 - 30	60	50

(2) Radiated Emission 15.249(a)

The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following.

Frequency (MHz)	Field strength of Fundamental	Field strength of Harmonics	Distance (m)
902 - 928	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
2400 – 2483.5	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
5725 – 5875	50 mV/m (94dBuV/m)	500 uV/m (54dBuV/m)	3
24.0 – 24.25 GHz	250 mV/m (107.95dBuV/m)	2500 uV/m (67.95dBuV/m)	3

(3) Radiated Emission 15.249 (d)

Emission Radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in Section 15.209 as below, whichever is the lesser attenuation.

Frequency (MHz)	Field strength $\mu\text{V/m}$	Distance (m)	Field strength at 3m dB $\mu\text{V/m}$
1.705-30	30	30	69.54
30-88	100	3	40
88-216	150	3	43.5
216-960	200	3	46
Above 960	500	3	54

(4) Radiated Emission 15.249(e)

For frequencies above 1000MHz, the above field strength limits are based on average limits. 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.

Remark: 1. Emission level in dB $\mu\text{V/m}$ = 20 log ($\mu\text{V/m}$)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. Only spurious frequency is permitted to locate within the Restricted Bands specified in provision of § 15.205

4. Emission spurious frequency which appearing within the Restricted Bands specified in provision of § 15.205, then the general radiated emission limits in § 15.209 apply.

2.5 Configuration of Tested System

Fig. 2-1 Configuration of TX

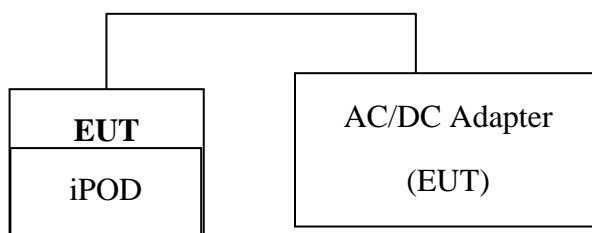


Table 2-2 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	iPod	apply	A1136	8K641P14V9P	N/A	N/A

Note: All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

Grounding: Grounding was in accordance with the manufacturer's requirements and conditions for the intended use.

3. Summary Of Test Results

FCC Rules	Description Of Test	Result
§ 15.207	Conducted Emission	Compliant
§ 15.249(a)(e)	Radiated Emission	Compliant
§ 15.249(d)	26dB band width Measurement	Compliant

Description of test modes

The EUT has been tested under engineering testing condition.

EUT is staying in continuous transmitting mode is programmed.

Channel low (5740MHz)、mid (5780MHz) and high (5820MHz) with highest data rate are chosen for full testing.

4.3 Measurement Equipment Used:

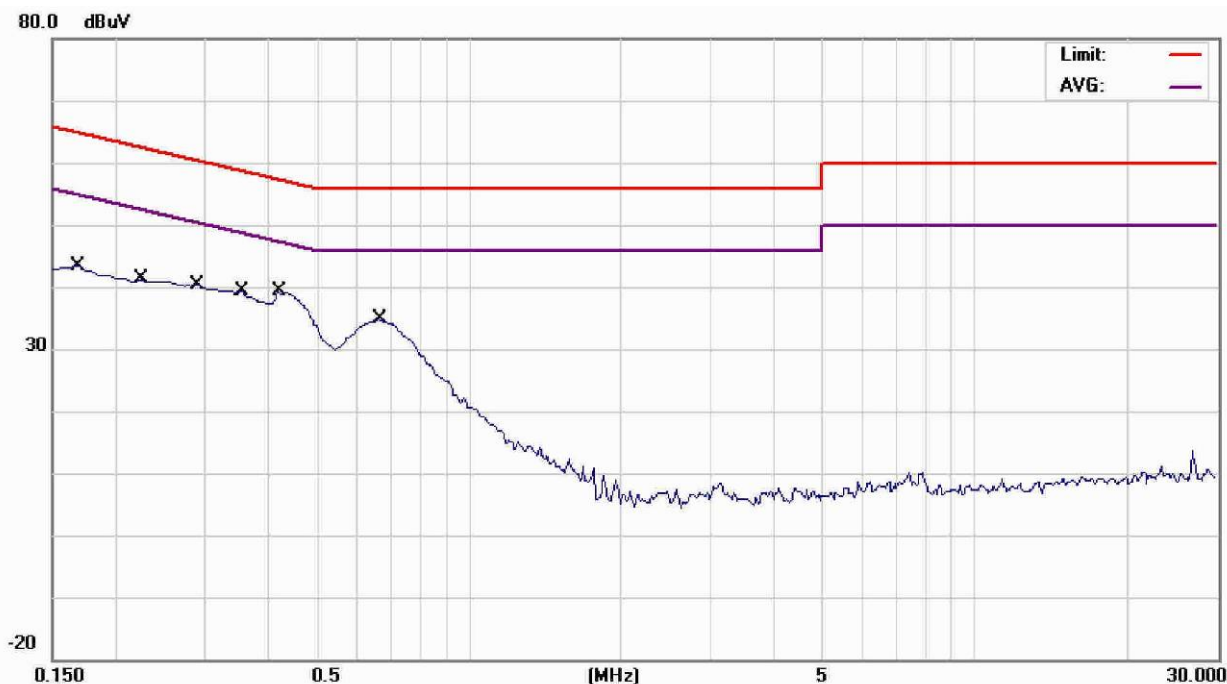
Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMC Analyzer	HP	8594EM	3624A00203	09/02/2006	09/03/2007
EMI Test Receiver	R&S	ESCS30	828985/004	06/09/2006	06/10/2007
Transient Limiter	HP	11947A	3107A02062	09/02/2006	09/03/2007
LISN	Rolf-Heine	NNB-2/16Z	99012	12/31/2006	12/30/2007
LISN	Rolf-Heine	NNB-2/16Z	99013	12/24/2006	12/23/2007
Coaxial Cables	N/A	No. 3, 4	N/A	12/01/2006	12/01/2207

4.4 Measurement Result:

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	, Channel Low			Test Date:	Apr. 02, 2007
Temperature:	25 °C	Humidity:	62%	Test By:	Jason



Site SGS CONDUCTED #1

Phase: L1

Temperature: 25 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 62 %

EUT: 5.8GHz WIRELESS IPOD VIDEO TO TV

Distance:

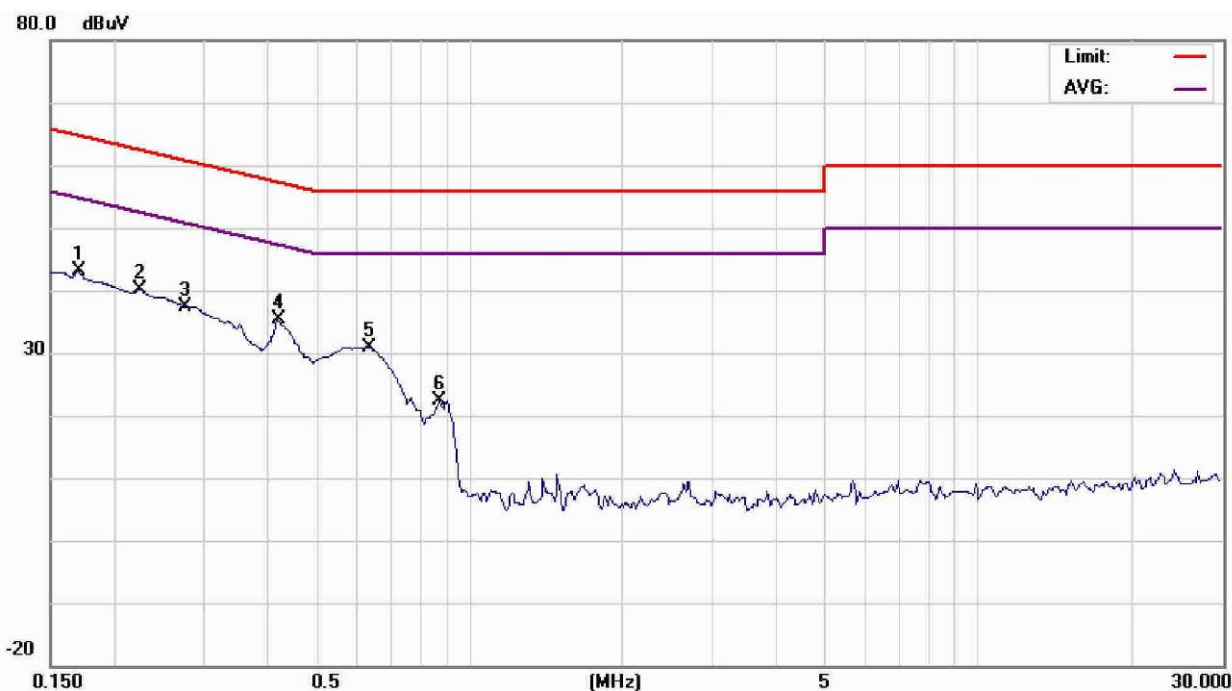
Air Pressure: hpa

M/N: WIV-8000

Note: Linking + Charging

No.	Mk.	Freq. MHz	Reading Level dBuV	Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1700	42.81	0.48	43.29	64.96	-21.67	QP	
2		0.2250	40.77	0.53	41.30	62.63	-21.33	QP	
3		0.2900	39.93	0.56	40.49	60.52	-20.03	QP	
4		0.3550	38.88	0.60	39.48	58.84	-19.36	QP	
5	*	0.4200	38.71	0.63	39.34	57.45	-18.11	QP	
6		0.6650	34.14	0.71	34.85	56.00	-21.15	QP	

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Site SGS CONDUCTED #1

Phase: **N**

Temperature: 25 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 62 %

EUT: 5.8GHz WIRELESS IPOD VIDEO TO TV

Distance:

Air Pressure: hpa

M/N: WIV-8000

Note: Linking + Charging

No.	Mk.	Freq. MHz	Reading Level dBuV	Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1700	42.67	0.48	43.15	64.96	-21.81	peak	
2		0.2250	39.72	0.53	40.25	62.63	-22.38	peak	
3		0.2759	36.93	0.56	37.49	60.94	-23.45	peak	
4		0.4200	34.71	0.63	35.34	57.45	-22.11	peak	
5		0.6350	30.26	0.70	30.96	56.00	-25.04	peak	
6		0.8750	21.62	0.77	22.39	56.00	-33.61	peak	

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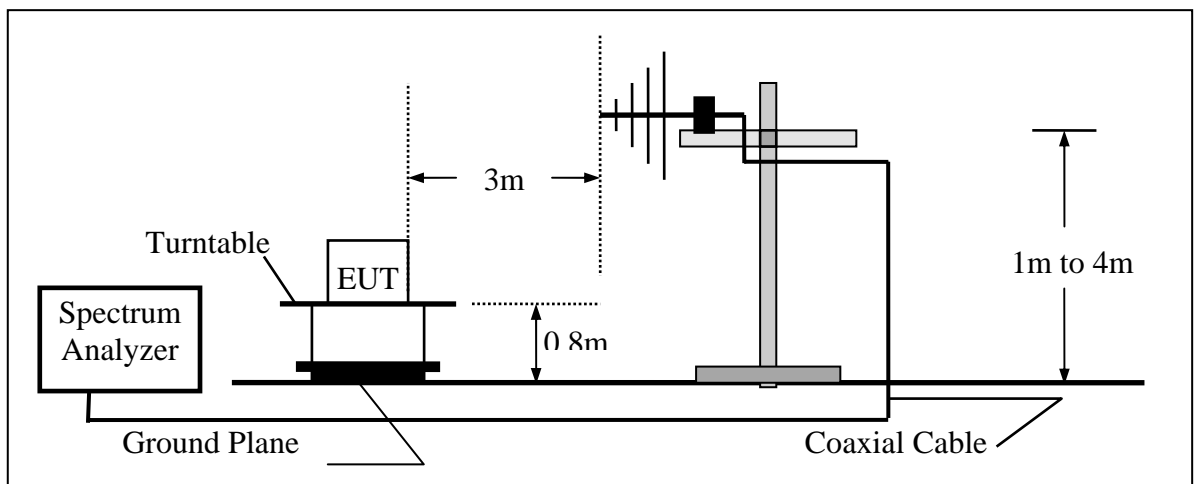
5. Radiated Emission Test

5.1 Measurement Procedure

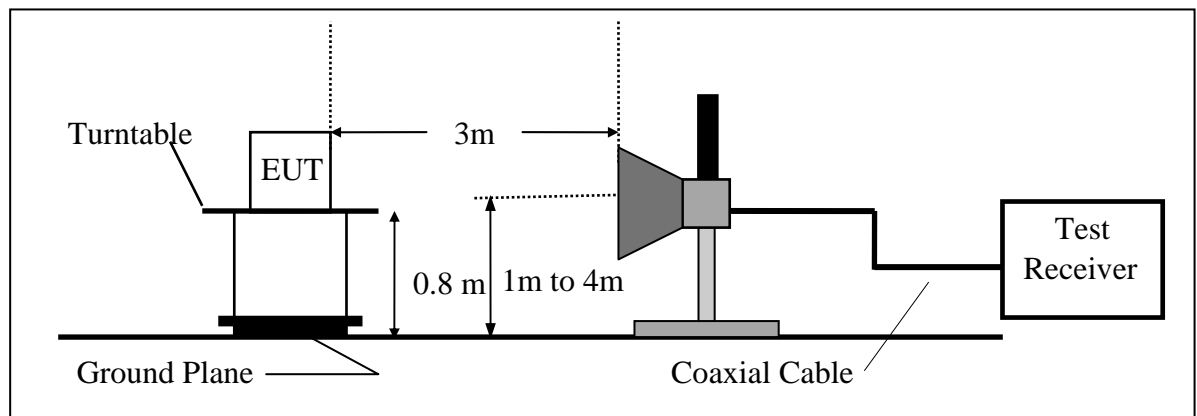
1. The EUT was placed on a turntable that is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
4. Repeat above procedures until all frequency measured were complete.

5.2 Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



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5.3 Measurement Equipment Used:

966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	R&S	FSP 40	100034	05/27/2006	05/26/2007
Bilog Antenna	SCHWAZBECK	VULB9163	152	06/03/2006	06/02/2007
Bilog Antenna	SCHWAZBECK	VULB9160		06/03/2006	06/02/2007
Horn Antenna	SCHWAZBECK	BBHA 9120D	309/320	08/16/2006	08/15/2007
Horn Antenna	SCHWAZBECK	BBHA 9170	BBHA9170185	12/13/2006	12/12/2007
Pre-Amplifier	HP	8447D	2944A09469	07/19/2006	07/18/2007
Pre-Amplifier	HP	8449B	3008A00578	02/26/2007	02/25/2008
Pre-Amplifier	Miteq	AMF-6F-26004 00-40-8P	971576	01/05/2007	01/04/2007
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	10/09/2006	10/08/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	10/09/2006	10/08/2007
Site NSA	SGS	966 chamber	N/A	11/17/2006	11/16/2007

5.4 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

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5.5 Measurement Result

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	TX	Test Date	Apr. 26, 2007
Fundamental Frequency	CH Low / 5740MHz	Test By	Jason
Temperature	25 °C	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
43.58	V	Peak	47.44	-13.78	33.66	40.00	-6.34
56.19	V	Peak	46.42	-14.63	31.79	40.00	-8.21
101.78	V	Peak	46.43	-16.87	29.56	43.50	-13.94
36.79	H	Peak	51.42	-14.36	37.06	40.00	-2.94
43.58	H	Peak	47.88	-13.78	34.10	40.00	-5.90
61.04	H	Peak	44.79	-14.75	30.04	40.00	-9.96

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- (3) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	TX	Test Date	Apr. 26, 2007
Fundamental Frequency	CH Mid / 5780MHz	Test By	Jason
Temperature	25 °C	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
30.00	V	Peak	52.95	-14.97	37.98	40.00	-2.02
43.58	V	Peak	49.29	-13.78	35.51	40.00	-4.49
101.78	V	Peak	45.69	-16.87	28.82	43.50	-14.68
31.94	H	Peak	50.55	-14.82	35.73	40.00	-4.27
53.28	H	Peak	45.43	-14.40	31.03	40.00	-8.97
75.59	H	Peak	42.51	-17.13	25.38	40.00	-14.62

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz °
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- (3) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.

Radiated Spurious Emission Measurement Result (below 1GHz)

Operation Mode	TX	Test Date	Apr. 26, 2007
Fundamental Frequency	CH High / 5820MHz	Test By	Jason
Temperature	25 °C	Pol	Ver./Hor
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
31.94	V	Peak	50.13	-14.82	35.31	40.00	-4.69
41.64	V	Peak	50.18	-13.76	36.42	40.00	-3.58
51.34	V	Peak	48.31	-14.19	34.12	40.00	-5.88
32.91	H	Peak	52.27	-14.73	37.54	40.00	-2.46
43.58	H	Peak	50.97	-13.78	37.19	40.00	-2.81

Remark :

- (1) Measuring frequencies from 30 MHz to the 1GHz .
- (2) Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- (3) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz, VBW=300KHz.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX
 Fundamental Frequency: CH Low / 5740MHz
 Temperature : 25 °C
 Humidity : 65 %

Test Date : Apr. 26, 2007
 Test By: Jason
 Pol: Vertical

Freq.	Ant.Pol	Peak Reading	AV Reading	Factor	Actual Peak FS	Actual AV FS	Peak Limit at 3m	AV Limit at 3m	Margin		
(MHz)	H/V	(dBuV)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)		
5740.0	V	100.86	91.31	0.17	101.03	91.48	114.00	94.00	-2.52	F	AV
2670.0	V	55.41	--	-6.54	48.87	--	74.00	54.00	-5.13	S	Peak
5725.0	V	69.86	46.93	0.14	70.00	47.07	74.00	54.00	-6.93	S	AV
11480.0	V	39.04	--	12.10	51.14	--	74.00	54.00	-2.86	H	Peak
17220.0	V	43.46	36.68	14.24	57.70	50.92	74.00	54.00	-3.08	H	AV
22960.0	V	--	--			--	74.00	54.00		H	
28700.0	V	--	--			--	74.00	54.00		H	
34440.0	V	--	--			--	74.00	54.00		H	

Remark :

- (1) Measuring frequencies from 30MHz to the 40GHz of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX
 Fundamental Frequency: CH Low / 5740MHz
 Temperature : 25 °C
 Humidity : 68 %

Test Date : Apr. 26, 2007
 Test By: Jason
 Pol: Horizontal

Freq.	Ant.Pol .	Peak	AV	Factor	Actual	Actual	Peak	AV	Margin		
		Reading	Reading		Peak FS	AV FS	Limit	Limit			
		(dBuV)	(dBuV)		(dB)	(dBuV/m)	(dBuV/m)	at 3m			
(MHz)	H/V	(dBuV)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dB)		
5740.0	H	93.51	83.69	0.17	93.68	83.86	114.00	94.00	-10.14	F	AV
2670.0	H	54.29	--	-6.54	47.75	--	74.00	54.00	-6.25	S	Peak
5725.0	H	95.10	45.88	0.14	95.24	46.02	74.00	54.00	-7.98	S	AV
11480.0	H	37.74	--	12.10	49.84	--	74.00	54.00	-4.16	H	Peak
17220.0	H	39.70	33.68	14.24	53.94	47.92	74.00	54.00	-6.08	H	AV
22960.0	H	--	--			--	74.00	54.00		H	
28700.0	H	--	--			--	74.00	54.00		H	
34440.0	H	--	--			--	74.00	54.00		H	

Remark :

- (1) Measuring frequencies from 30MHz to the 40GHz of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX
Fundamental Frequency: CH Mid / 5780MHz
Temperature : 25 °C
Humidity : 65 %

Test Date : Apr. 26, 2007
Test By: Jason
Pol: Vertical

Freq. (MHz)	Ant.Pol H/V	Peak Reading	AV Reading	Factor (dB)	Actual Peak FS	Actual AV FS	Peak Limit	AV Limit	Margin (dB)		
		(dBuV)	(dBuV)		(dBuV/m)	(dBuV/m)	at 3m (dBuV/m)	at 3m (dBuV/m)			
5780.0	V	100.85	90.66	0.26	101.11	90.92	114.00	94.00	-3.08	F	AV
2870.0	V	56.90	--	-6.54	50.36	--	74.00	54.00	-3.64	S	Peak
11560.0	V	38.78	--	12.22	51.00	--	74.00	54.00	-3.00	H	Peak
17340.0	V	43.61	35.56	14.77	58.38	50.33	74.00	54.00	-3.67	H	AV
23120.0	V	--	--			--	74.00	54.00		H	
28900.0	V	--	--			--	74.00	54.00		H	
34680.0	V	--	--			--	74.00	54.00		H	

Remark :

- (1) Measuring frequencies from 30MHz to the 40GHz of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX
Fundamental Frequency: CH Mid / 5780MHz
Temperature : 25 °C
Humidity : 68 %

Test Date : Apr. 26, 2007
Test By: Jason
Pol: Horizontal

Freq. (MHz)	Ant.Pol H/V	Peak	AV	Factor (dB)	Actual	Actual	Peak	AV	Margin (dB)		
		Reading (dBuV)	Reading (dBuV)		Peak FS (dBuV/m)	AV FS (dBuV/m)	Limit at 3m (dBuV/m)	Limit at 3m (dBuV/m)			
5780.0	H	94.20	83.24	0.26	94.46	83.50	114.00	94.00	-10.50	F	AV
2870.0	H	55.32	--	-6.54	48.78	--	74.00	54.00	-5.22	S	Peak
11560.0	H	34.53	--	12.22	46.75	--	74.00	54.00	-7.25	H	Peak
17340.0	H	41.21	32.74	14.77	55.98	47.51	74.00	54.00	-6.49	H	AV
23120.0	H	--	--			--	74.00	54.00		H	
28900.0	H	--	--			--	74.00	54.00		H	
34680.0	H	--	--			--	74.00	54.00		H	

Remark :

- (1) Measuring frequencies from 30MHz to the 40GHz of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX
 Fundamental Frequency: CH High / 5820MHz
 Temperature : 25 °C
 Humidity : 65 %

Test Date : Apr. 26, 2007
 Test By: Jason
 Pol: Vertical

Freq. (MHz)	Ant. Pol H/V	Peak Reading	AV Reading	Factor	Actual Peak FS	Actual AV FS	Peak Limit	AV Limit	Margin	
		(dBuV)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	at 3m (dBuV/m)	at 3m (dBuV/m)	(dB)	
5820.0	V	99.67	89.61	0.39	100.06	90.00	114.00	94.00	-4.00	F AV
2887.0	V	57.77	--	-6.48	51.29	--	74.00	54.00	-2.71	S Peak
5875.0	V	56.63	47.68	0.54	57.17	48.22	74.00	54.00	-5.78	S AV
11640.0	V	37.74	--	12.25	49.99	--	74.00	54.00	-4.01	H Peak
17460.0	V	43.02	35.38	15.45	58.47	50.83	74.00	54.00	-3.17	H AV
23280.0	V	--	--			--	74.00	54.00		H
29100.0	V	--	--			--	74.00	54.00		H
34920.0	V	--	--			--	74.00	54.00		H

Remark :

- (1) Measuring frequencies from 30MHz to the 40GHz of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

Radiated Spurious Emission Measurement Result (above 1GHz)

Operation Mode: TX
 Fundamental Frequency: CH High / 5820MHz
 Temperature : 25 °C
 Humidity : 68 %

Test Date : Apr. 26, 2007
 Test By: Jason
 Pol: Horizontal

Freq. (MHz)	Ant.Pol H/V	Peak	AV	Factor (dB)	Actual	Actual	Peak	AV	Margin (dB)		
		Reading (dBuV)	Reading (dBuV)		Peak FS (dBuV/m)	AV FS (dBuV/m)	Limit at 3m (dBuV/m)	Limit at 3m (dBuV/m)			
5820.0	H	99.67	89.61	0.39	100.06	90.00	114.00	94.00	-4.00	F	AV
2887.0	H	56.50	--	-6.48	50.02	--	74.00	54.00	-3.98	S	Peak
5875.0	H	56.72	45.32	0.54	57.26	45.86	74.00	54.00	-8.14	S	AV
11506.0	H	35.66	--	12.19	47.85	--	74.00	54.00	-6.15	S	Peak
11640.0	H	--	--			--	74.00	54.00		H	
17460.0	H	40.93	36.22	15.45	56.38	51.67	74.00	54.00	-2.33	H	AV
23280.0	H	--	--			--	74.00	54.00		H	
29100.0	H	--	--			--	74.00	54.00		H	
34920.0	H	--	--			--	74.00	54.00		H	

Remark :

- (1) Measuring frequencies from 30MHz to the 40GHz of fundamental frequency .
- (2) Field strength limits for frequency above 1000MHz are based on average limits. However, Peak mode field strength shall not exceed the average limits specified plus 20dB
- (3) "F" denotes fundamental frequency; "H" denotes harmonics frequency. "S" denotes spurious frequency.
- (4) Datas of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) Spectrum Peak mode IF bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, Sweep time= 200 ms., the VBW setting was 3 MHz.
- (6) Spectrum AV mode IF B bandwidth Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

6. 26 dB Band Width Measurement

6.1 Measurement Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set ETU normal operating mode.
3. Set SPA Center Frequency = fundamental frequency, RBW, VBW = 100KHz, Span = 3MHz.
4. Set SPA Max hold. Mark peak, -26dB.

6.2 Test SET-UP (Block Diagram of Configuration)

Same as 4.2 Radiated Emission Measurement.

6.3 Measurement Equipment Used:

Same as 4.2 Radiated Emission Measurement.

6.4 Measurement Results:

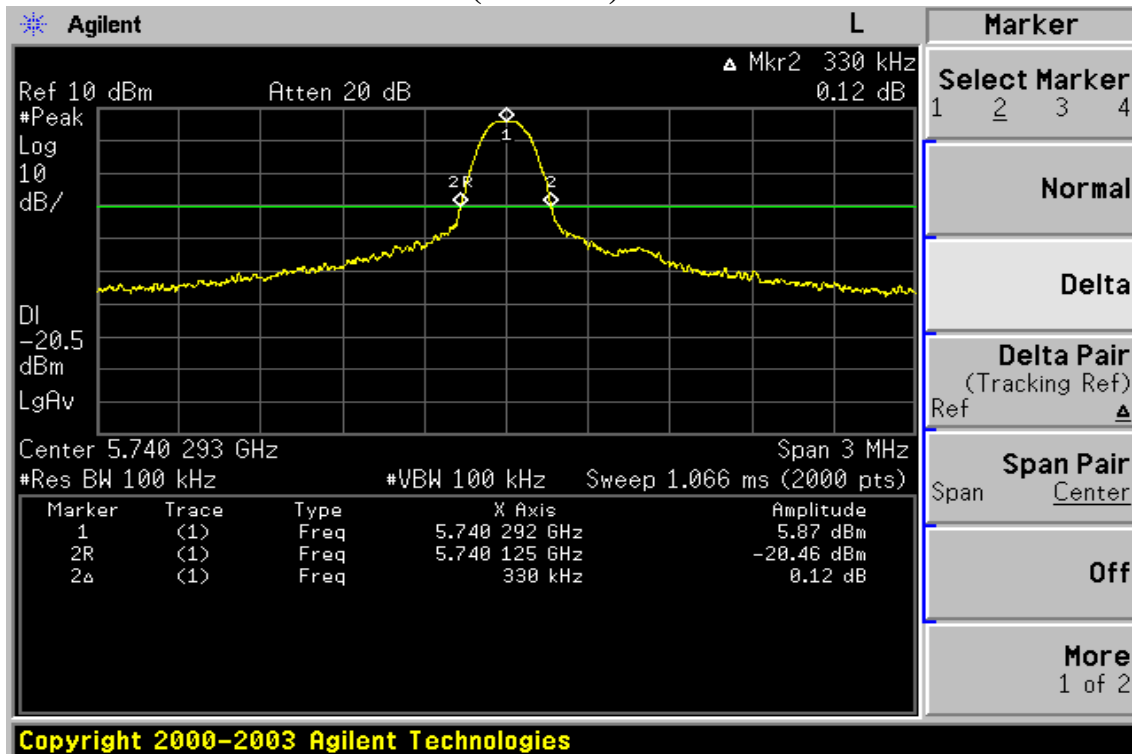
Ch Low 26dB Bandwidth = 330kHz

Ch Mid 26dB Bandwidth = 332kHz

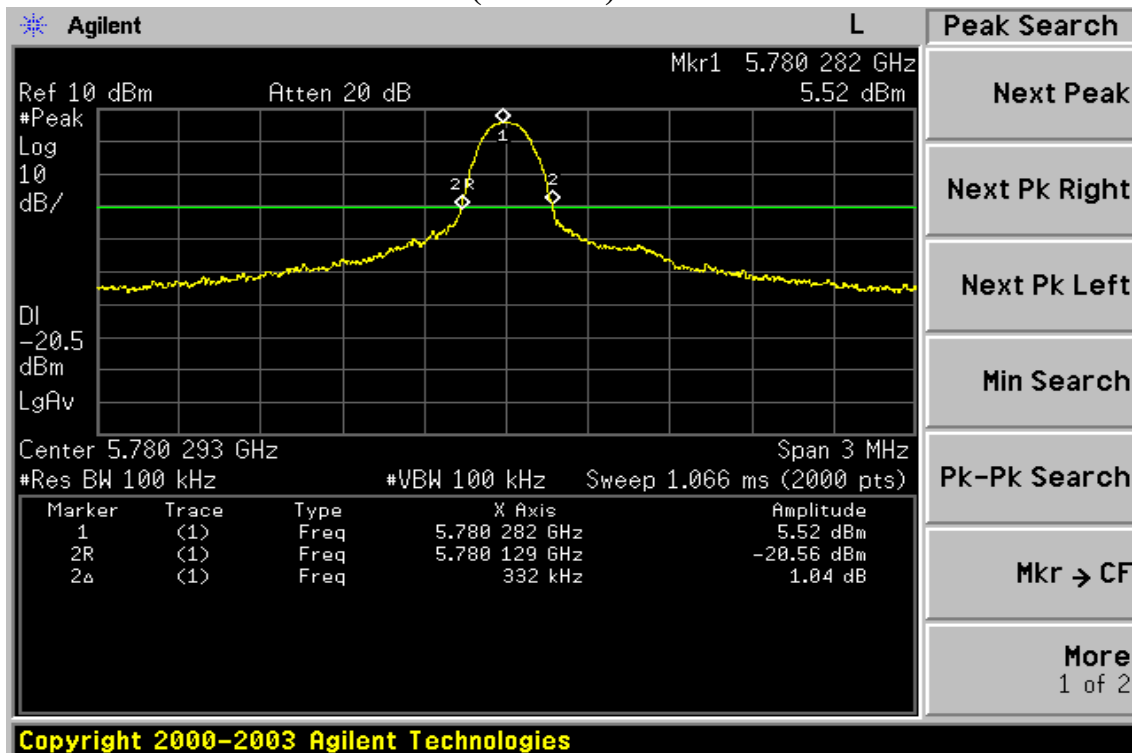
Ch High 26dB Bandwidth = 353kHz

Refer to attached data chart.

26 dB Band Width test Plot (Ch Low)

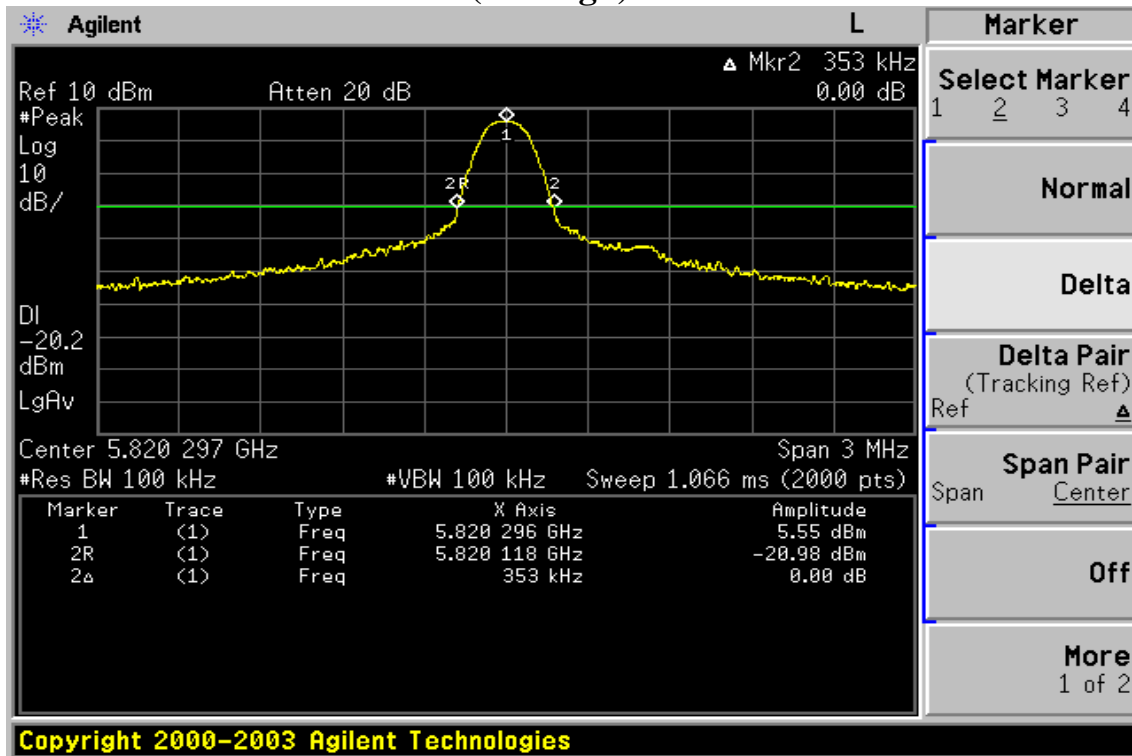


26 dB Band Width test Plot (Ch Mid)



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26 dB Band Width test Plot (Ch High)



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