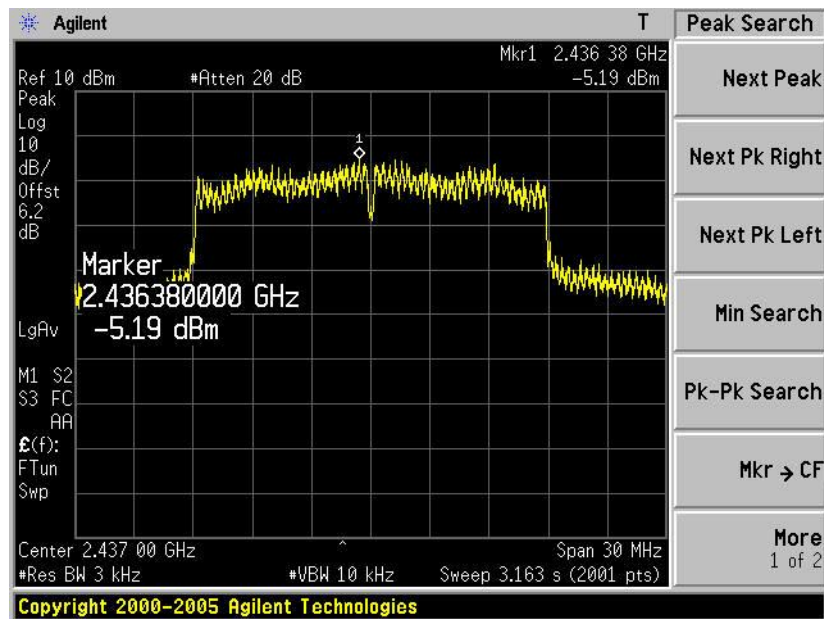
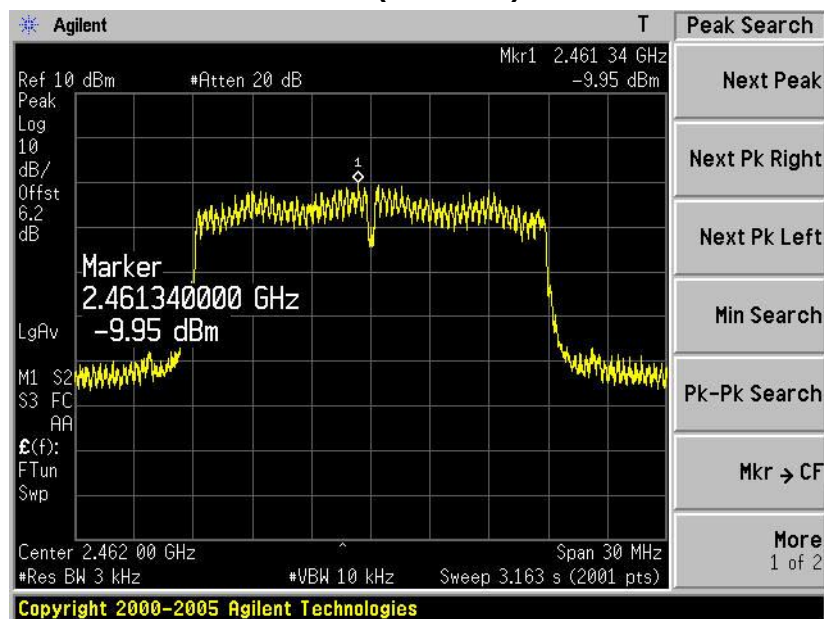


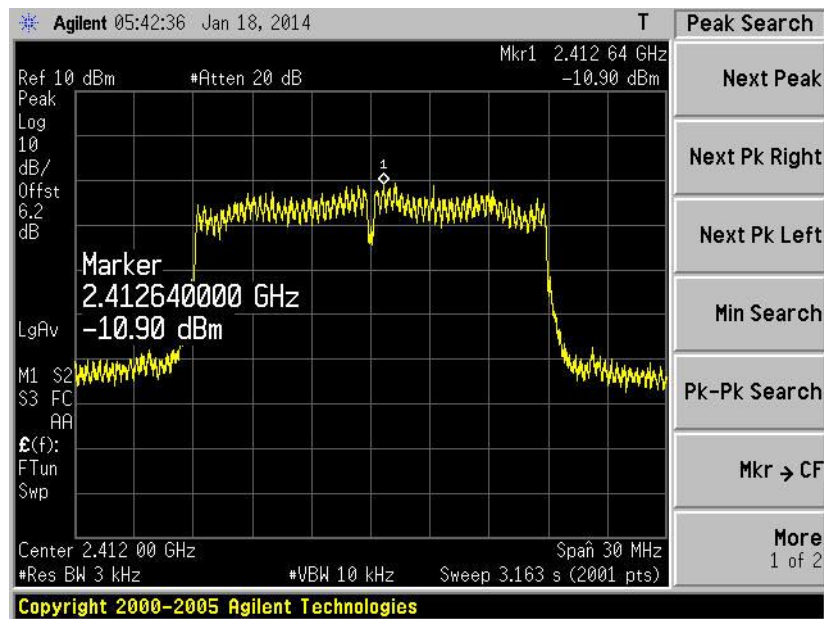
Channel 06 (2437MHz) – Ant 0



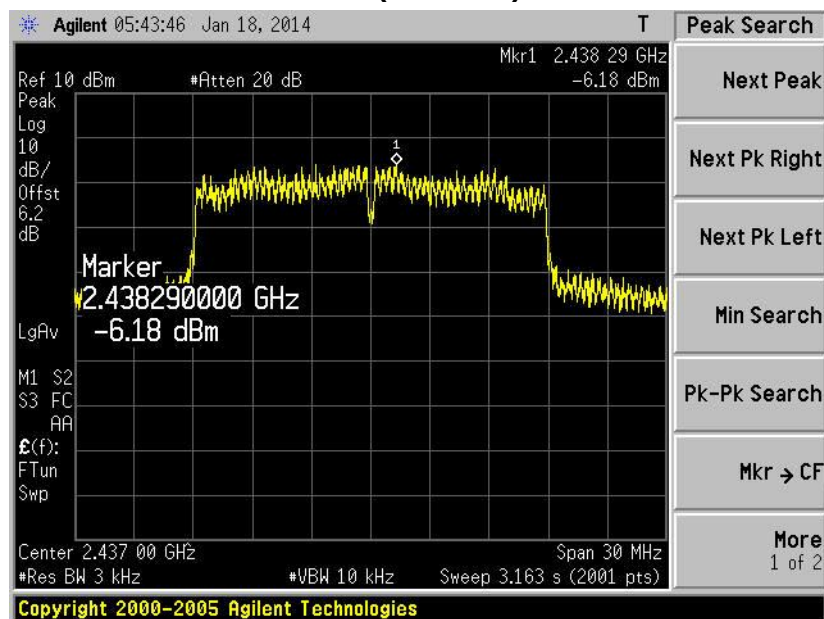
Channel 11 (2462MHz) – Ant 0



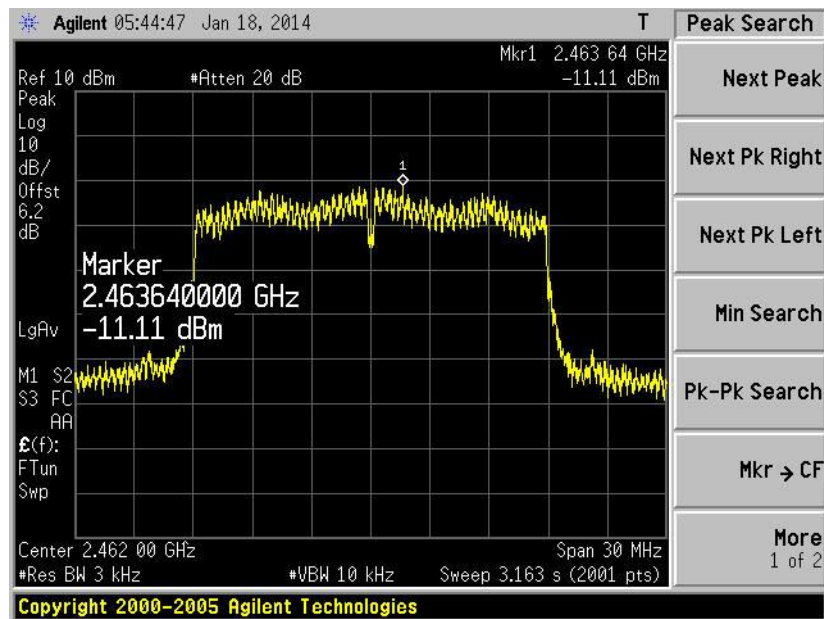
Channel 01 (2412MHz) – Ant 1



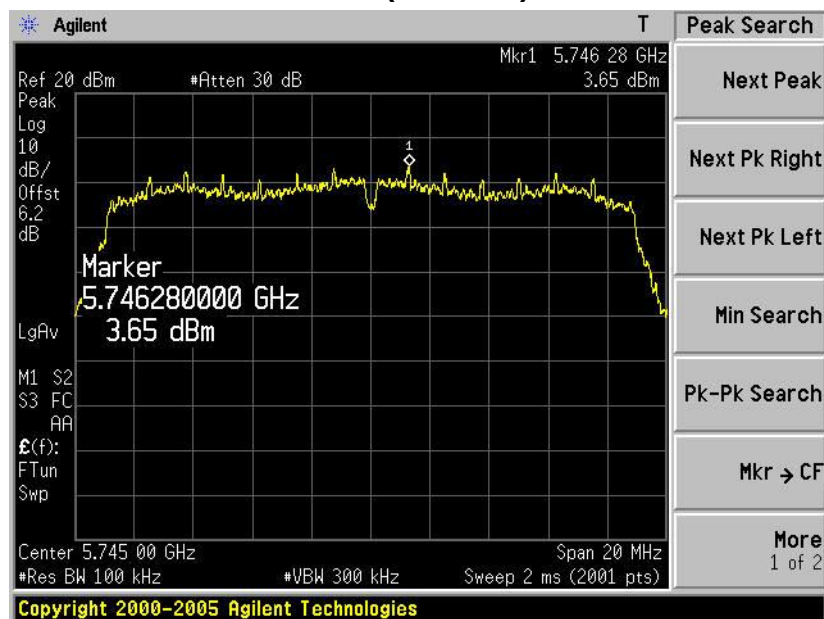
Channel 06 (2437MHz) – Ant 1



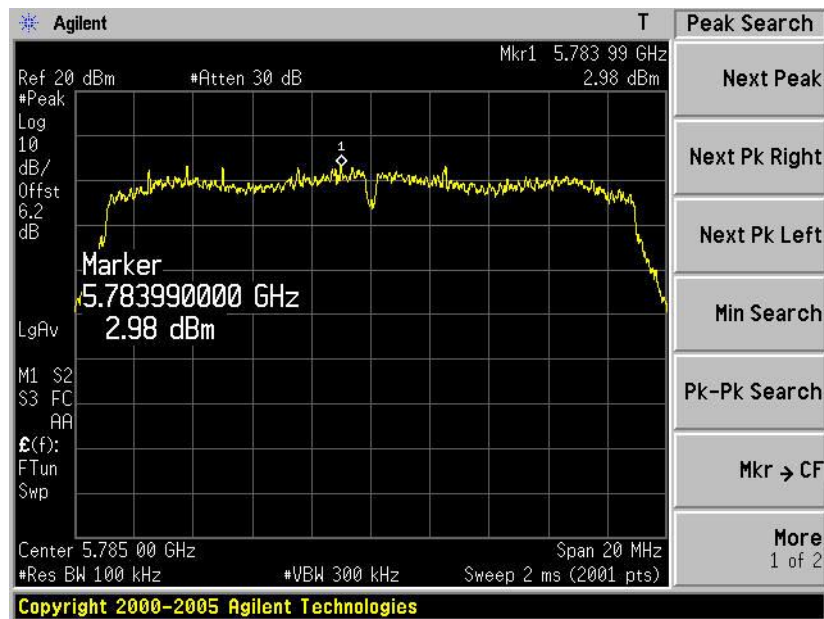
Channel 11 (2462MHz) – Ant 1



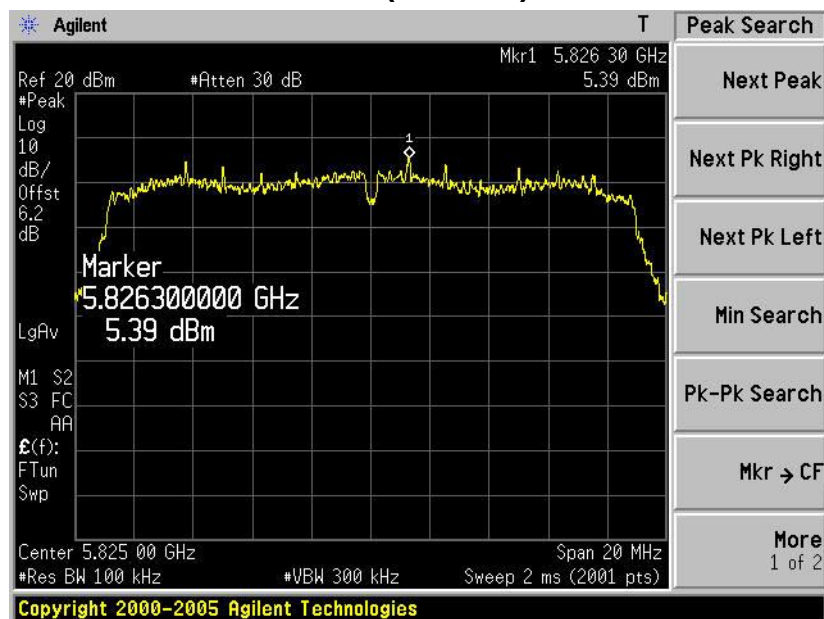
Channel 149 (5745MHz) – Ant 0



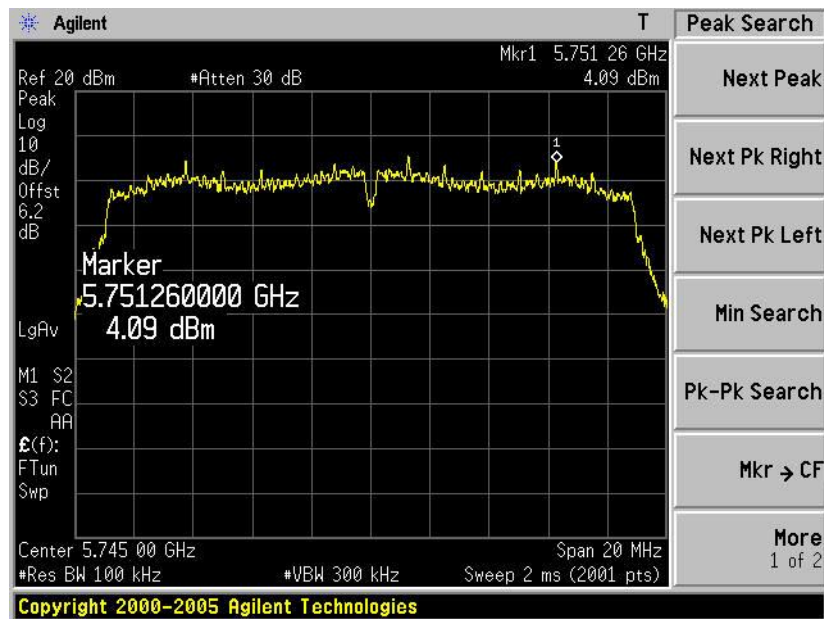
Channel 157 (5785MHz) – Ant 0



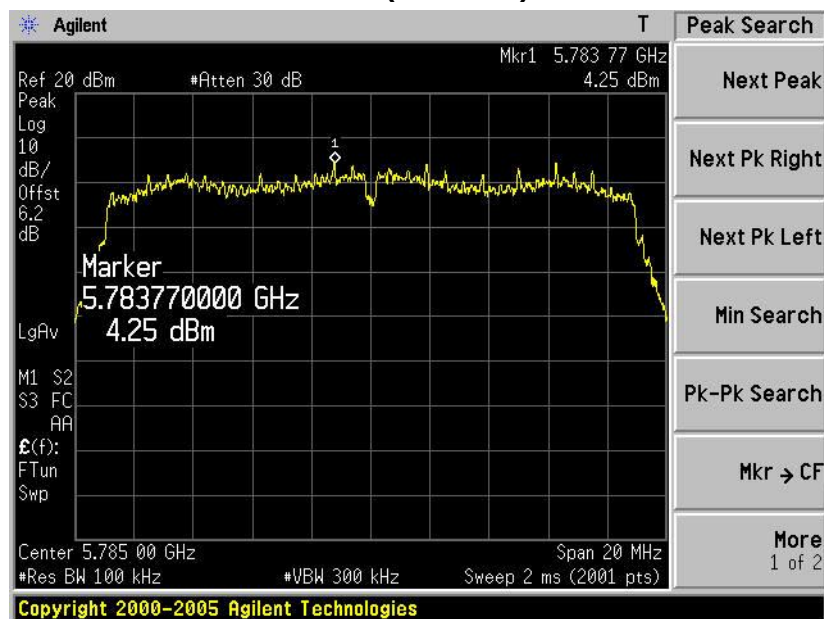
Channel 165 (5825MHz) – Ant 0



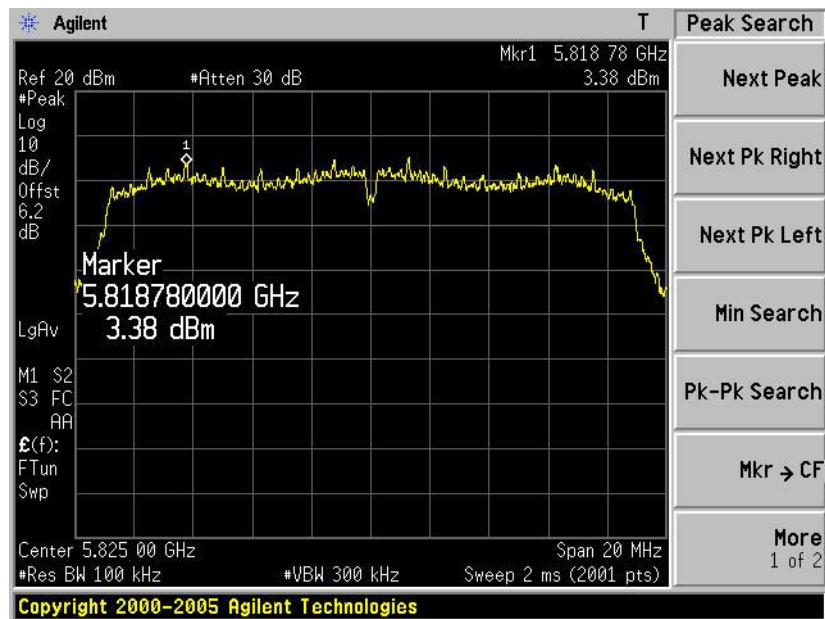
Channel 149 (5745MHz) – Ant 1



Channel 157 (5785MHz) – Ant 1



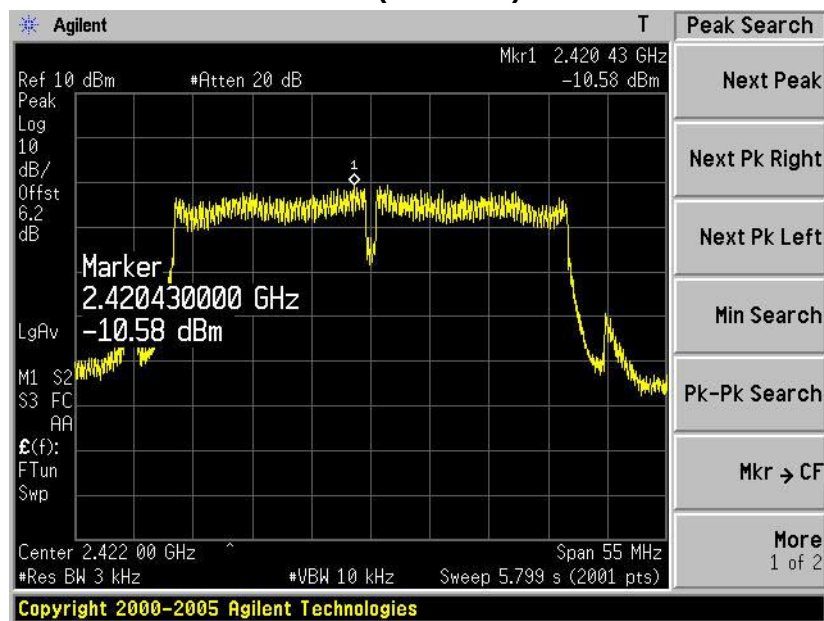
Channel 165 (5825MHz) – Ant 1



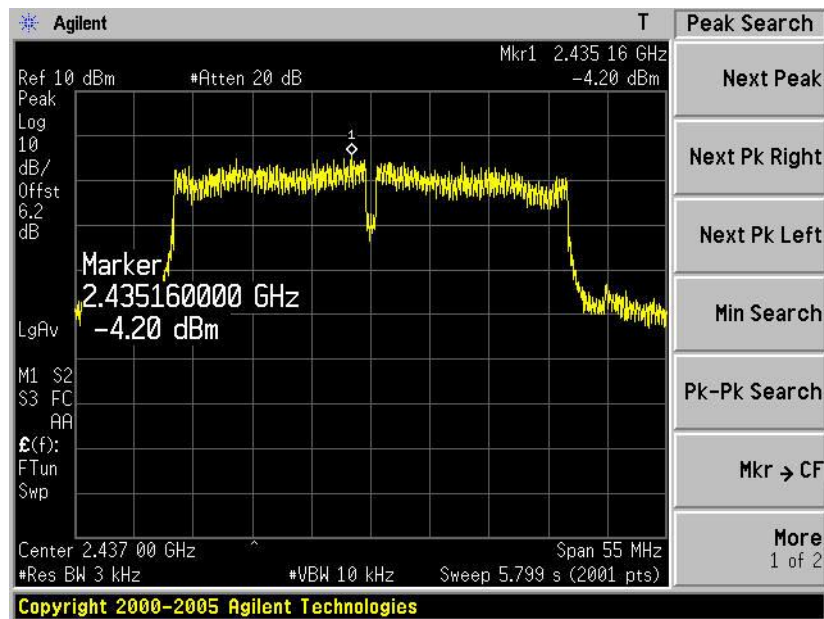
Product	:	IP-STB
Test Item	:	Power Spectral Density
Test Site	:	TR-8
Test Mode	:	Mode 6: Transmit by 802.11n(40MHz) (Ant 0+1)

Channel No.	Frequency (MHz)	Measurement PPSD (dBm)		Total PPSD (dBm)	Limit (dBm)	Result
		Ant 0	Ant 1			
03	2422	-10.58	-17.12	-9.71	8	Pass
06	2437	-4.20	-11.65	-3.48	8	Pass
09	2452	-9.56	-15.68	-8.61	8	Pass
151	5755	2.84	2.08	5.49	8	Pass
159	5795	2.50	2.21	5.37	8	Pass

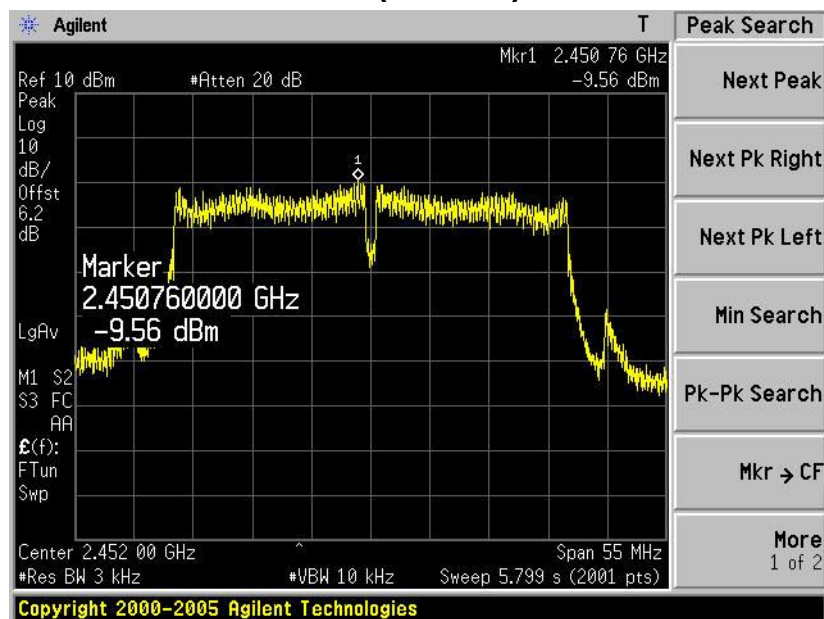
Channel 03 (2422MHz) – Ant 0



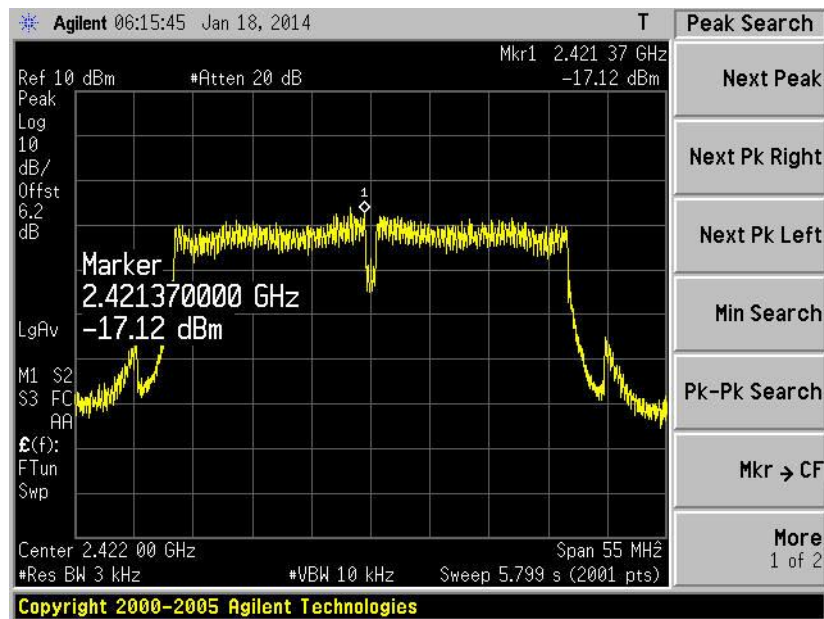
Channel 06 (2437MHz) – Ant 0



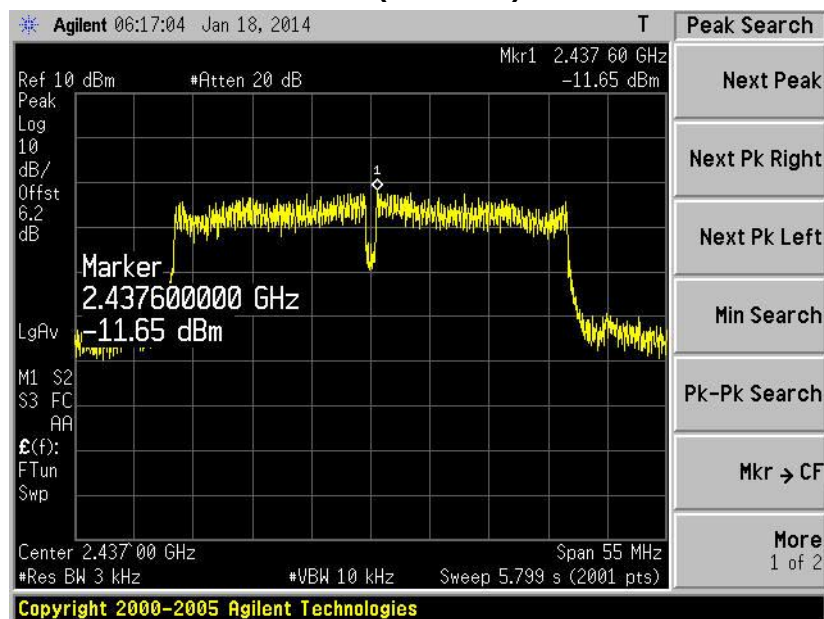
Channel 09 (2452MHz) – Ant 0



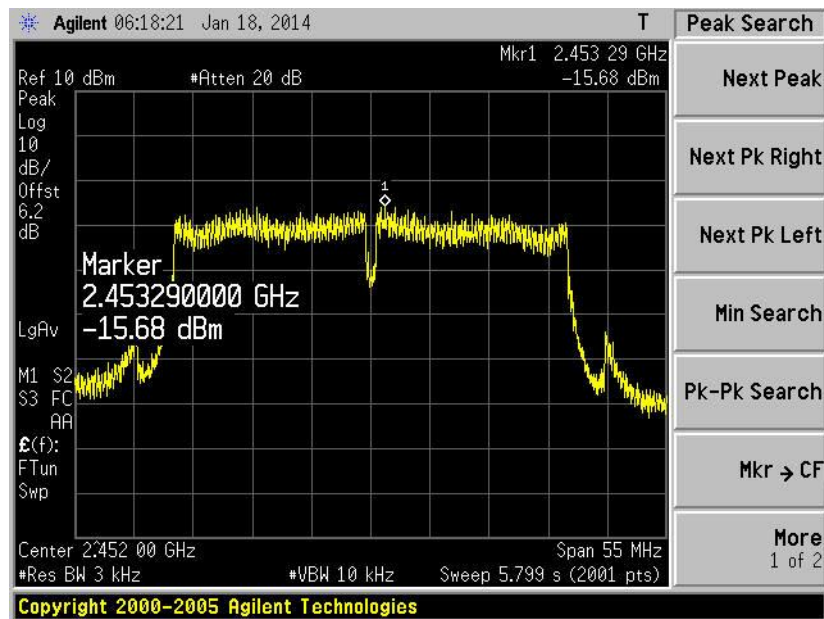
Channel 03 (2422MHz) – Ant 1



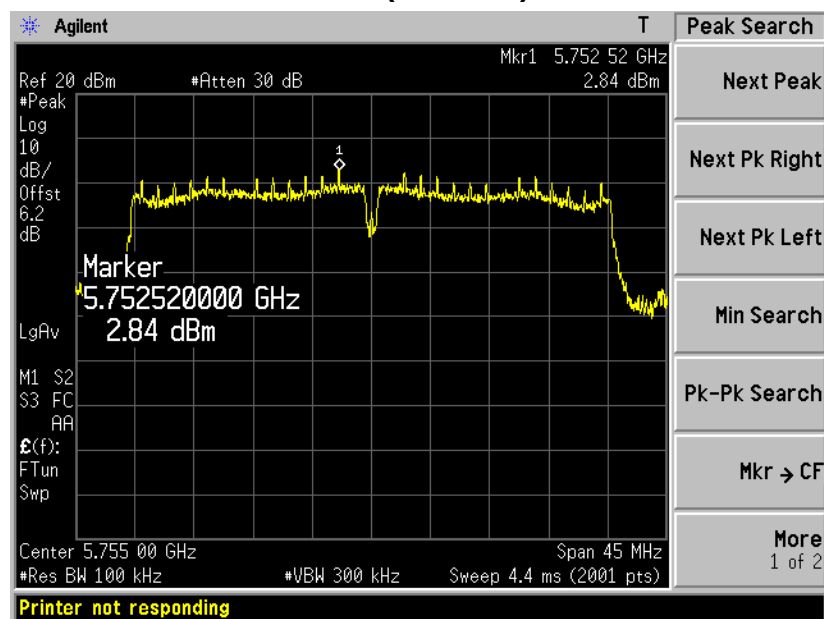
Channel 06 (2437MHz) – Ant 1



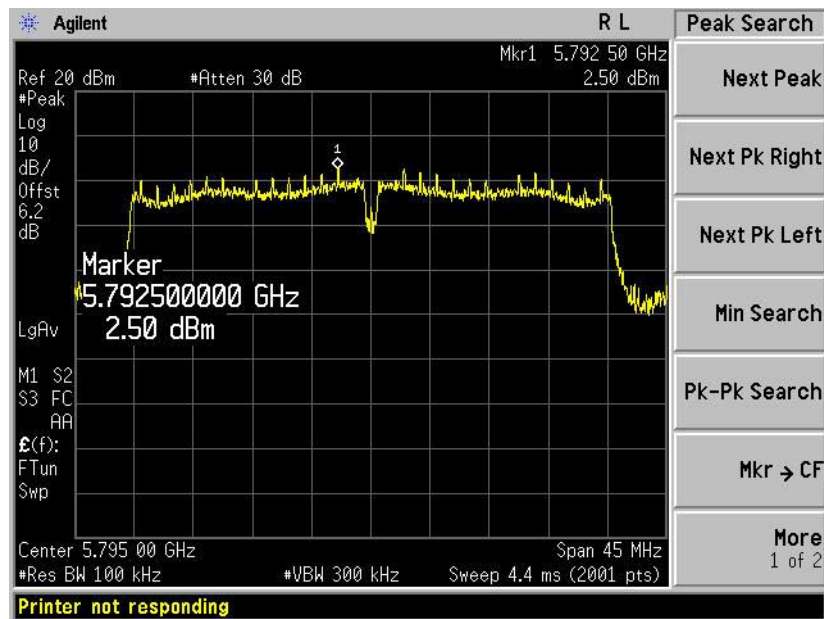
Channel 09 (2452MHz) – Ant 1



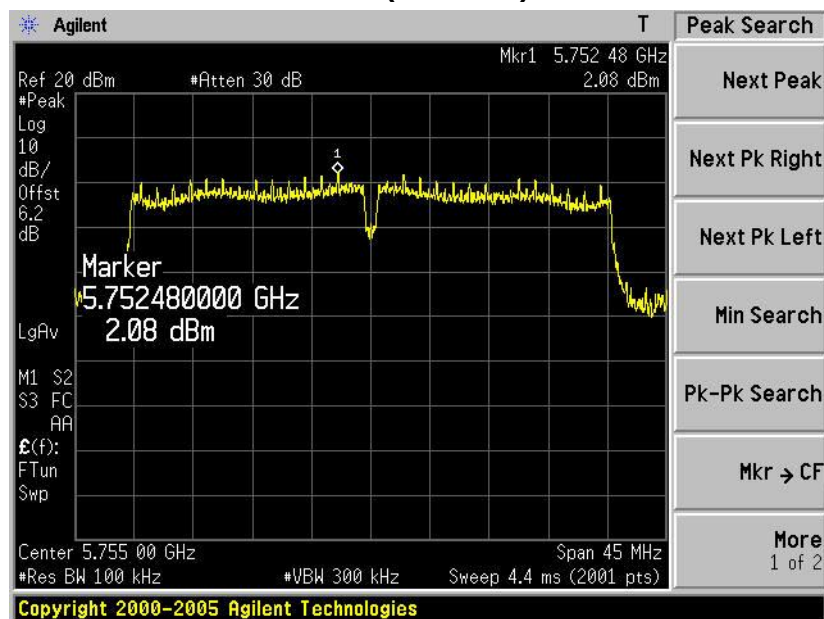
Channel 151 (5755MHz) – Ant 0



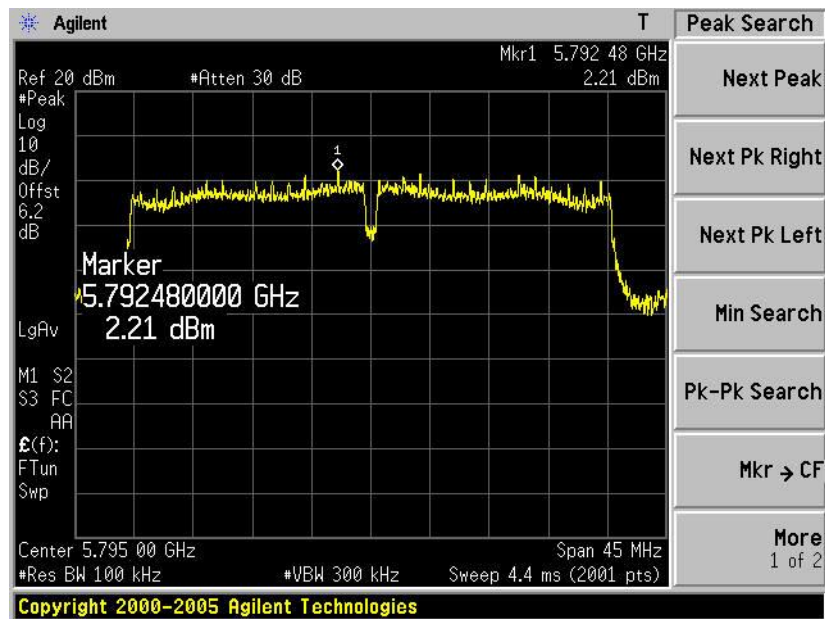
Channel 159 (5795MHz) – Ant 0



Channel 151 (5755MHz) – Ant 1



Channel 159 (5795MHz) – Ant 1



11. Receiver Spurious Emission for Industry Canada RSS-Gen Requirement

11.1. Test Equipment

Radiated Emission / AC-2

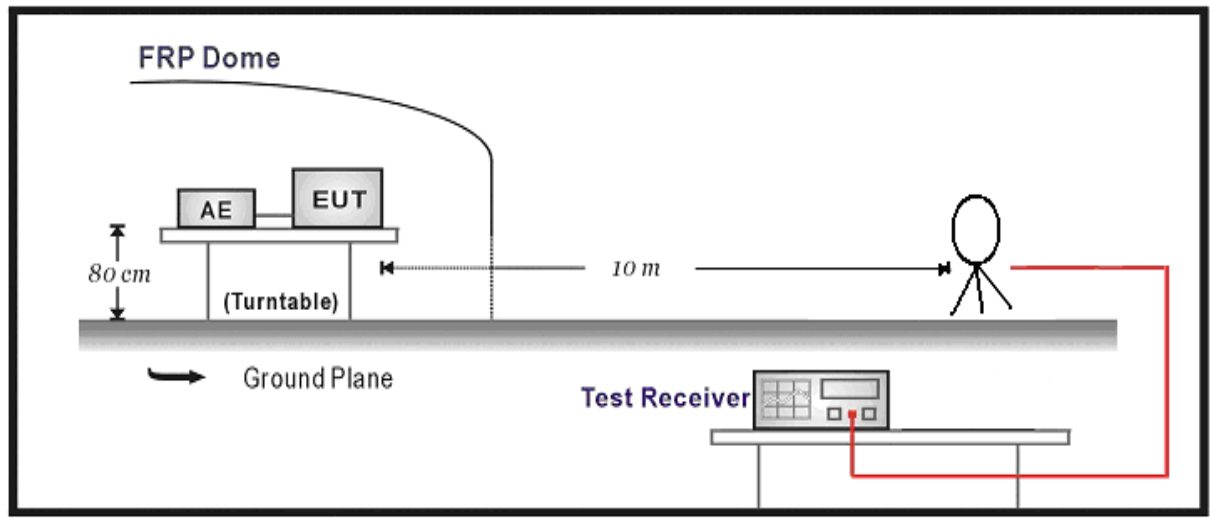
Instrument	Manufacturer	Type No.	Serial No.	Cali. Due Date
EMI Test Receiver	R&S	ESCI	100573	2014.03.30
Loop Antenna	R&S	HFH2-Z2	833799/003	2014.11.22
Bilog Antenna	Teseq GmbH	CBL6112D	27611	2014.10.15
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC2-C	2014.03.01
Temperature/Humidity Meter	Zhicheng	ZC1-2	AC2-TH	2015.01.08

Radiated Emission / AC-5

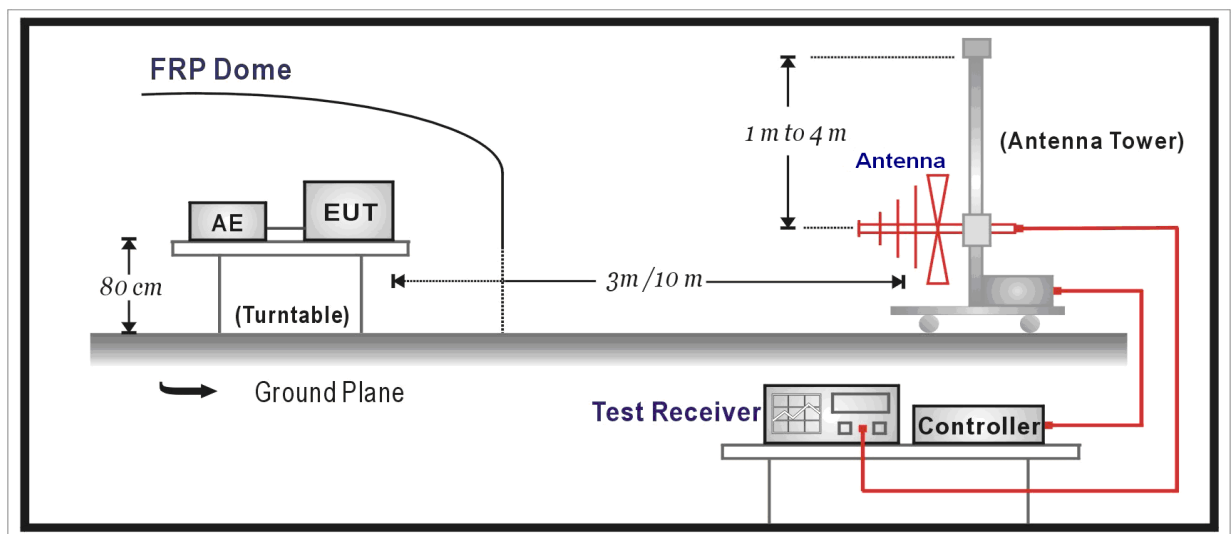
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
Spectrum Analyzer	Agilent	N9020A	MY49100159	2014.03.30
Spectrum Analyzer	Agilent	E4446A	MY45300103	2014.01.21
Preamplifier	Miteq	NSP1800-25	1364185	2014.05.04
Preamplifier	QuieTek	AP-040G	CHM-0906001	2014.05.04
DRG Horn	ETS-Lindgren	3117	00123988	2014.01.21
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2014.11.24
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C1	2014.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 106	AC5-C2	2014.03.01
Coaxial Cable	Huber+Suhner	SUCOFLEX 102	AC5-C3	2014.03.01
EMI Receiver	Agilent	N9038A	MY51210196	2014.06.09
Temperature/Humidity Meter	Zhichen	ZC1-2	AC5-TH	2015.01.08

11.2. Test Setup

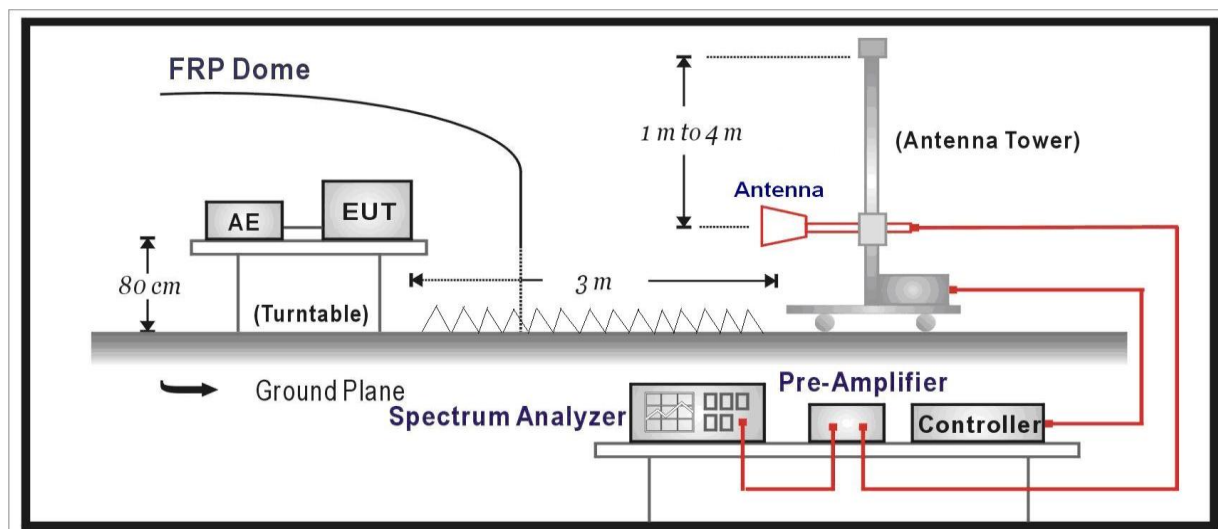
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



11.3. Limit

FCC Part 15 Subpart B Paragraph 15.109		
Frequency (MHz)	Distance (m)	Level (dBuV/m)
30 - 88	3	40
88 - 216	3	43.5
216 - 960	3	46
Above 960	3	54

Note 1: The lower limit shall apply at the transition frequency.

Note 2: Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

Note 3: E field strength (dBuV/m) = 20 log E field strength (uV/m)

11.4. Test Procedure

According to ANSI C63.10: 2009.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the

maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2009 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 9kHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn antenna will be bended down a little (as horn antenna has the narrow beamwidth) in order to keeping the antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 60~10 degrees for H-plane and 90~10 degrees for E-plane.

11.5. Uncertainty

The measurement uncertainty above 1G is defined as ± 3.9 dB
below 1G is defined as ± 3.8 dB

11.6. Test Result

All of the test result shown indicates the worst case, and spectrum analyzer parameters setting as shown below:

Peak detector: RBW = 1MHz, VBW = 3MHz, sweep time = 200ms;

Average detector: RBW = 1MHz, VBW = 10Hz, sweep time = auto.

Measure Level = Reading Level + Cable Loss + Antenna Factor - Preamplifier Gain

Mode 1: Receive by 802.11n (20MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0+1	1	H	238.2	4.7	24.1	28.8	46	-17.2	QP
		V	253.3	5.3	24.8	30.1	46	-15.9	QP
		H	1246.5	39.1	-5.1	34.1	54(Note1)	-39.9	PK
		V	1450.5	38.4	-5.5	33.0	54(Note1)	-41.0	PK
	6	H	272.7	5.3	25.3	30.7	46	-15.3	QP
		V	288.4	3.7	26.8	30.5	46	-15.5	QP
		H	1994.5	38.8	-1.0	37.8	54(Note1)	-36.2	PK
		V	2224.0	38.2	-0.7	37.5	54(Note1)	-36.5	PK
	11	H	316.9	4.6	25.1	29.7	46	-16.3	QP
		V	340.6	5.4	24.8	30.2	46	-15.8	QP
		H	1144.5	39.4	-6.0	33.4	54(Note1)	-40.6	PK
		V	1195.5	38.9	-5.9	33.0	54(Note1)	-41.0	PK
	149	H	433.2	4.7	26.8	31.5	46	-14.5	QP
		V	468.2	4.7	28.2	32.9	46	-13.1	QP
		H	2071.0	38.0	-0.8	37.2	54(Note1)	-36.8	PK
		V	2147.5	38.2	-0.7	37.5	54(Note1)	-36.5	PK
	157	H	505.5	5.0	26.8	31.8	46	-14.2	QP
		V	539.9	4.9	27.6	32.4	46	-13.6	QP
		H	1391.0	38.5	-5.5	33.0	54(Note1)	-41.0	PK
		V	1527.0	38.7	-5.0	33.7	54(Note1)	-40.3	PK
	165	H	704.3	5.5	29.6	35.1	46	-10.9	QP
		V	751.8	6.0	31.2	37.2	46	-8.8	QP
		H	1348.5	39.9	-5.2	34.7	54(Note1)	-39.3	PK
		V	1467.5	40.6	-5.5	35.1	54(Note1)	-38.9	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

Mode 2: Receive by 802.11n (40MHz)

Chain	CH	Antenna	Frequency (MHz)	Reading Level (dBuV/m)	Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Ant 0+1	3	H	231.3	11.6	19.3	30.9	46	-15.1	QP
		V	266.7	12.7	20.9	33.5	46	-12.5	QP
		H	1833.0	39.3	-2.2	37.1	54(Note1)	-36.9	PK
		V	2054.0	40.0	-0.8	39.2	54(Note1)	-34.8	PK
	6	H	299.8	10.9	22.5	33.4	46	-12.6	QP
		V	331.8	6.5	23.9	30.4	46	-15.6	QP
		H	2572.5	39.8	1.4	41.2	54(Note1)	-32.8	PK
		V	2878.5	38.8	1.4	40.2	54(Note1)	-33.8	PK
	9	H	456.0	5.5	30.5	36.0	46	-10.0	QP
		V	540.6	12.4	28.3	40.6	46	-5.4	QP
		H	1561.0	39.6	-5.0	34.6	54(Note1)	-39.4	PK
		V	1765.0	40.1	-2.7	37.4	54(Note1)	-36.6	PK
	151	H	617.6	5.9	32.1	38.0	46	-8.0	QP
		V	666.7	9.2	29.8	39.1	46	-6.9	QP
		H	2181.5	39.3	-0.7	38.6	54(Note1)	-35.4	PK
		V	2343.0	39.2	-0.2	39.0	54(Note1)	-35.0	PK
	159	H	157.6	9.0	18.4	27.4	43.5	-16.1	QP
		V	168.0	5.9	18.8	24.7	43.5	-18.8	QP
		H	1578.0	39.8	-4.0	35.8	54(Note1)	-38.2	PK
		V	1960.5	41.1	-2.0	39.1	54(Note1)	-34.9	PK

Note1: This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

The End