Test Report for FCC

FCC ID:UDCREM900

Report Number		ESTF150803-010(1)		
Applicant	Company name	CEYON TECHNOLOGY CO.,LTD.		
	Address	14F Samsung Insurance B/D. #942-9, Ingye-Dong, Paldal-Gu, Suwon-City, Gyeonggi-Do, Korea		
	Telephone	82-31-223-0003		
Product	Product name	UHF RFID Reader		
	Model No.	REM900-R01	Manufacturer	CEYON TECHNOLOGY CO.,LTD.
	Serial No.	CYRD08070086	Country of origin	KOREA
Test date	2008-4-7 ~ 2008-4-15		Date of issue	15-Apr-08
Testing location	ESTECH. Co., Ltd. 97-1 Hoiuk-Ri Majang-Myon, Icheon-city, KyungKi-Do, Korea			
Standard	FCC PART 15 2007 , ANSI C 63.4 2003			
Measurement facility registration number	94696			
Tested by	Senior Engineer M.J.Song (Signature)			
Reviewed by	Engineering Manager J.M.Yang (Signature)			
Abbreviation	OK, Pass = Passed, Fail = Failed, N/A = not applicable			

* Note

- This test report is not permitted to copy partly without our permission
- This test result is dependent on only equipment to be used
- This test result based on a single evaluation of one sample of the above mentioned

Contents

1. Laboratory Information

1.1 General

This EUT (Equipment Under Test) has been shown to be capable of compliance with the applicable technical standards and is tested in accordance with the measurement procedures as indicated in this report.
ESTECH Lab attests to accuracy of test data. All measurement reported herein were performed by ESTECH Co., Ltd.
ESTECH Lab assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

1.2 Test Lab.

Corporation Name : ESTECH Co. Ltd

Head Office : Rm 1015, World Venture Center II, 426-5, Gasan-dong, Geumcheon-gu, Seoul, Kor
(Safety & Telecom. Test Lab)

EMC Test Lab : 58-1 Osan-Ri, GaNam-Myon, YeoJoo-Gun, KyungKi-Do, Korea
97-1 Hoiuk-Ri Majang-Myon, Icheon-city, KyungKi-Do, Korea

1.3 Official Qualification(s)

MIC : Granted Accreditation from Ministry of Information & Communication for EMC, Safety and Telecommunication
KOLAS : Accredited Lab By Korea Laboratory Accreditation Schema base on CENELEC requirements
FCC : Filed Laboratory at Federal Communications Commission
VCCI : Granted Accreditation from Voluntary Control Council for Interference from ITE

2. Description of EUT

2.1 Summary of Equipment Under Test

Product Name	: UHF RFID Reader
Model Number	: REM900-R01
Modulation Type	: ASK
Transfer Rate	: 1Mbps
Number of Channel	: 50 ch
Serial Number	: CYRD08070086
Manufacturer	: CEYON TECHNOLOGY CO.,LTD.
Country of origin	: KOREA
Rating	: INPUT:AC 120V,60Hz Output:DC9V,3A
Receipt Date	: 7-Dec-07
X-tal lists	: 20MHz,18.432MHz,7.3728MHz

2.2 General descriptions of EUT

-UHF RFID Reader offers RFID. The RFID frequency hopping transceiver is designed to operate between 902 and 928MHz.

- the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) stream. It is also comply with FHSS requirements in Section 15.247(a)(1).
: Its hopping sequence is pseudo random, all channels used equally on average.
The receiver input bandwidth approximately equal the transmit band bandwidth, and its hop in sequence with the transmit signal.

- the system does not coordinate its channel selection/hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.

3. Test Standards

Test Standard : FCC PART 15 (2007)

This Standard sets out the regulations under which an intentional, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of Part 15 devices.

Test Method : ANSI C 63.4 (2003)

This standard sets forth uniform methods of measurement of radio-frequency (RF) signals and noise emitted from both unintentional and intentional emitters of RF energy in the frequency range 9 kHz to 40 GHz. Methods for the measurement of radiated and AC power-line conducted radio noise are covered and may be applied to any such equipment unless otherwise specified by individual equipment requirements. These methods cover measurement of certain decides that deliberately radiate energy, such as intentional emitters, but does not cover licensed transmitters. This standard is not intended for certification/approval of avionic equipment or for industrial, scientific, and medical (ISM) equipment These method apply to the measurement of individual units or systems comprised of multiple units

Summary of Test Results

Applied Satandard : 47 CFR Part 15, Subpart C				
Standard	Test Type	Result	Remark	Limit
15.207	AC Power Conducted Emission	Pass	Meet the requirement	
15.209	Intentional Radiated Emission	Pass	Meet the requirement	
15.247(a)(1)(i)	Carrier Frequency Separation & 20 Bandwidth	Pass	Meet the requirement	< 500kHz
15.247(b)	Maximum Peak ouput power	Pass	Meet the requirement	30dBm(1W)
15.247(a)(1)(i)	Number of Hopping Frequency	Pass	Meet the requirement	>50
15.247(c)	Transmitter Radiated Emission	Pass	Meet the requirement	
15.247(a)(1)(i)	Time of Occupancy (Dwell Time)	Pass	Meet the requirement	<400ms
15.247(c)	Band Edge Measurement	Pass	Meet the requirement	

4. Measurement Condition

4.1 EUT Operation.

a. Channel

Ch.	Frequency	Ch.	Frequency
0	902.75 MHz	25	915.25 MHz
1	903.25 MHz	26	915.75 MHz
2	903.75 MHz	27	916.25 MHz
3	904.25 MHz	28	916.75 MHz
4	904.75 MHz	29	917.25 MHz
…	…	…	…
24	914.75 MHz	49	927.25 MHz

b. Measurement Channel : Low(902.75MHz), Middle(915.25MHz),High(927.25MHz)

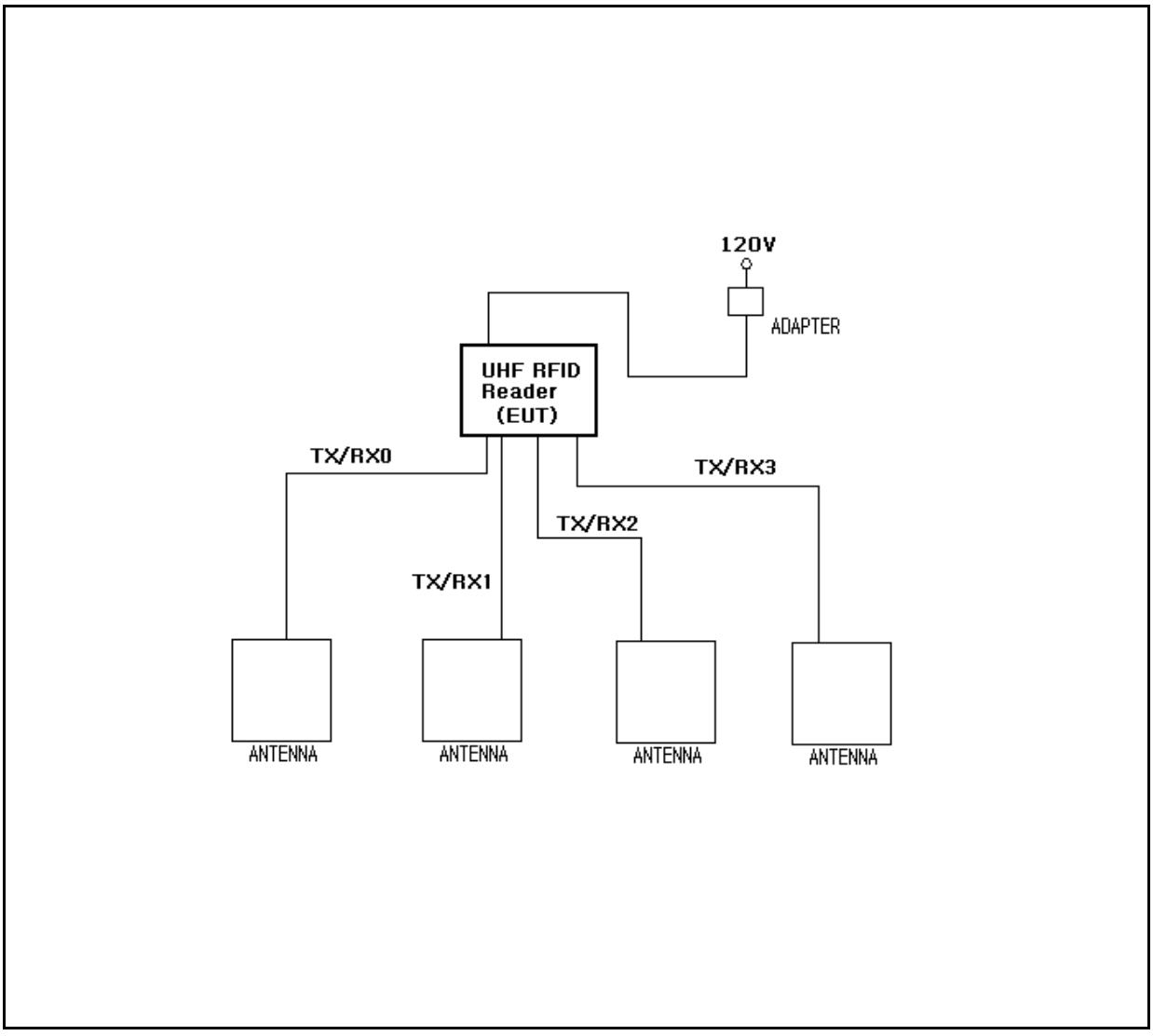
c. Test Mode : ASK

d. Test rate : 1Mbps

4.2 EUT Operation.

* The EUT was in the following operation mode during all testing
* The operational conditions of the EUT was determined by the manufacturer according to the typical use of the EUT with respect to the expected hightest level of emission
* After setting the EUT by the provided Test Program, tested under transmission/receiving condition continuously at specific channel frequency.

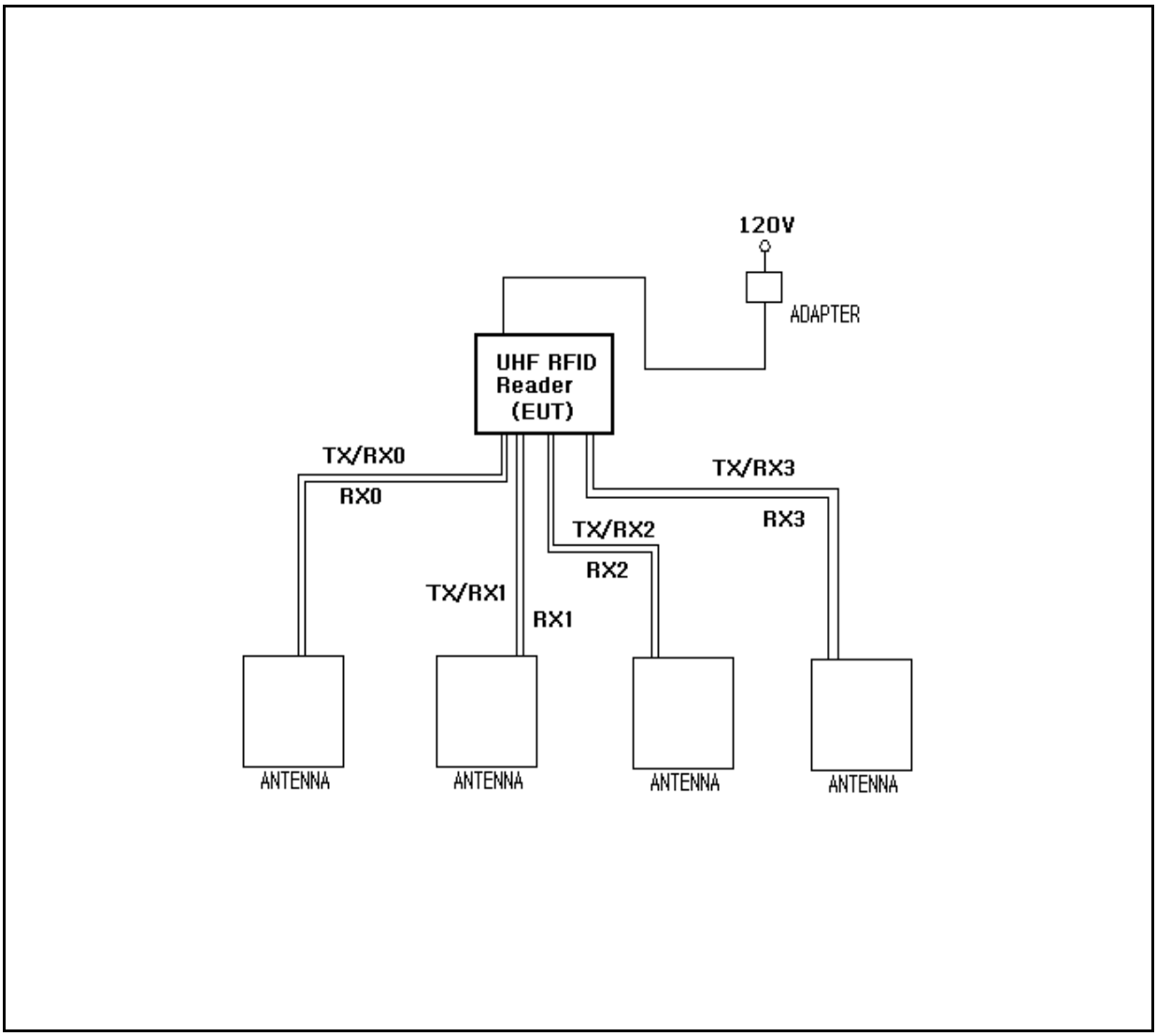
4.3 Configuration and Peripherals (SINGLE ANTENNA)



4.2 EUT Operation.

* The EUT was in the following operation mode during all testing
* The operational conditions of the EUT was determined by the manufacturer according to the typical use of the EUT with respect to the expected hightest level of emission
* After setting the EUT by the provided Test Program, tested under transmission/receiving condition continuously at specific channel frequency.

4.3 Configuration and Peripherals (DUAL ANTENNA)



4.4 EUT and Support equipment (Single Antenna Model : FDC-08)

Equipment Name	Model Name	S/N	Manufacturer	Remark (FCC ID)
UHF RFID Reader	REM900-R01	CYRD08070086	CEYON TECHNOLOGY CO.,LTD.	EUT
Adapter	PA-090250S	FS-0610094	Perfect Power	
UHF Fixed RFID Antenna	FDC-08	FD-0801011	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FDC-08	FD-0801021	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FDC-08	FD-0801008	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FDC-08	FD-0801019	Electro Megnetic Wave	

4.5 Cable Connecting (Single Antenna Model : FDC-08)

Start Equipment		End Equipment		Cable Standard		Remark
Name	I/O port	Name	I/O port	Length	Shielded	
UHF RFID Reader	TX/RX0	UHF Fixed RFID	-	1.5	Shielded	
UHF RFID Reader	TX/RX1	UHF Fixed RFID	-	1.5	Shielded	
UHF RFID Reader	TX/RX2	UHF Fixed RFID	-	1.5	Shielded	
UHF RFID Reader	TX/RX3	UHF Fixed RFID	-	1.5	Shielded	
UHF RFID Reader	DC POWER	ADAPTER	-	2	Unshielded	

4.4 EUT and Support equipment (Single Antenna Model : FSC-06)

Equipment Name	Model Name	S/N	Manufacturer	Remark (FCC ID)
UHF RFID Reader	REM900-R01	CYRD08070086	CEYON TECHNOLOGY CO.,LTD.	EUT
Adapter	PA-090250S	FS-0610094	Perfect Power	
UHF Fixed RFID Antenna	FSC-06	FS-0712100	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FSC-06	FS-0712096	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FSC-06	FS-0610094	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FSC-06	FS-0712053	Electro Megnetic Wave	

4.5 Cable Connecting (Single Antenna Model : FSC-06)

Start Equipment		End Equipment		Cable Standard		Remark
Name	I/O port	Name	I/O port	Length	Shielded	
UHF RFID Reader	TX/RX0	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	TX/RX1	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	TX/RX2	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	TX/RX3	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	DC POWER	adapter	-	2	Unshielded	

4.4 EUT and Support equipment (Dual Antenna Model : FSDC-07)

Equipment Name	Model Name	S/N	Manufacturer	Remark (FCC ID)
UHF RFID Reader	REM900-R01	CYRD08070086	CEYON TECHNOLOGY CO.,LTD.	EUT
Adapter	PA-090250S	FS-0610094	Perfect Power	
UHF Fixed RFID Antenna	FSDC-07	FS-0710076	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FSDC-07	FS-0710079	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FSDC-07	FS-0710080	Electro Megnetic Wave	
UHF Fixed RFID Antenna	FSDC-07	FS-0710077	Electro Megnetic Wave	

4.5 Cable Connecting (Dual Antenna Model : FSDC-07)

Start Equipment		End Equipment		Cable Standard		Remark
Name	I/O port	Name	I/O port	Length	Shielded	
UHF RFID Reader	TX/RX0	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	TX/RX1	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	TX/RX2	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	TX/RX3	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	RX0	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	RX1	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	RX2	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	RX3	UHF Fixed RFID Antenna	-	1.5	Shielded	
UHF RFID Reader	DC POWER	Adapter	-	2	Unshielded	

5. Carrier Frequency Separation and 20dB Bandwidth

5.1 Test procedure

According to §15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by minimum of 25kHz or the 20dB bandwidth of the hopping channel, whichever is greater.

5.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

. RBW= 10KHz

. VBW= 100KHz

. Span= 500kHz

. Sweep= suitable duration based on the EUT specification.

20dB Bandwidth Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4440A	US41421291	2009-01-11
Attenuator	8491A	54309	2009-01-14
-Spectrum Analyzer <=> EUT	Loss: 20dB	-	

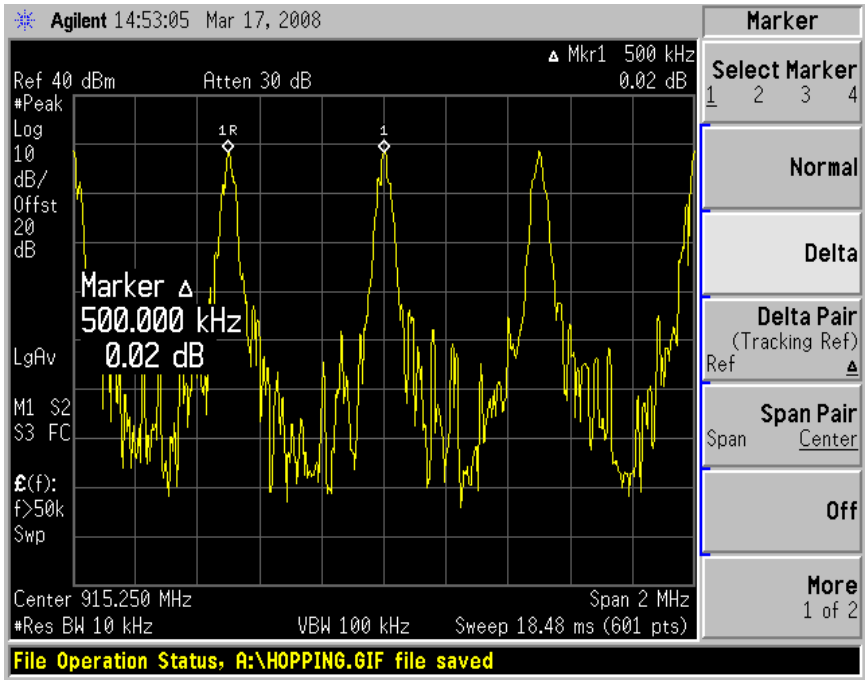
5.3 Measurement results

EUT	UHF RFID Reader	MODEL	REM900-R01
MODE	ASK	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	DC 9V		

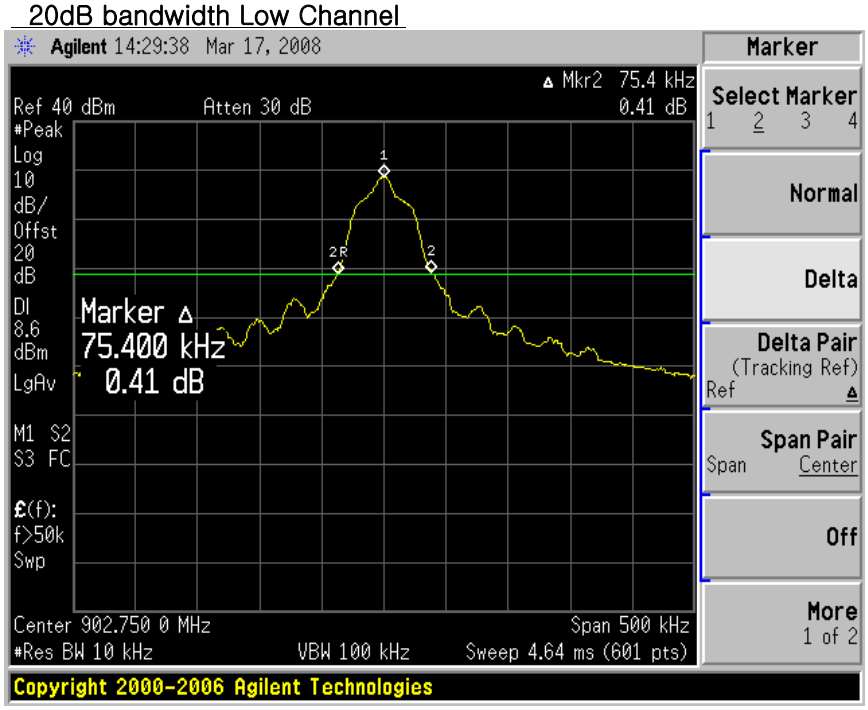
CHANNEL	Channel Frequency (MHz)	Bandwidth at 20dB below(kHz)	Channel Separation (MHz)	Limit (kHz)	PASS/FAIL
0	902.75	75.40	0.5	<500	PASS
25	915.25	78.80	0.5	<500	PASS
49	927.25	78.90	0.5	<500	PASS

5.4 Trace data

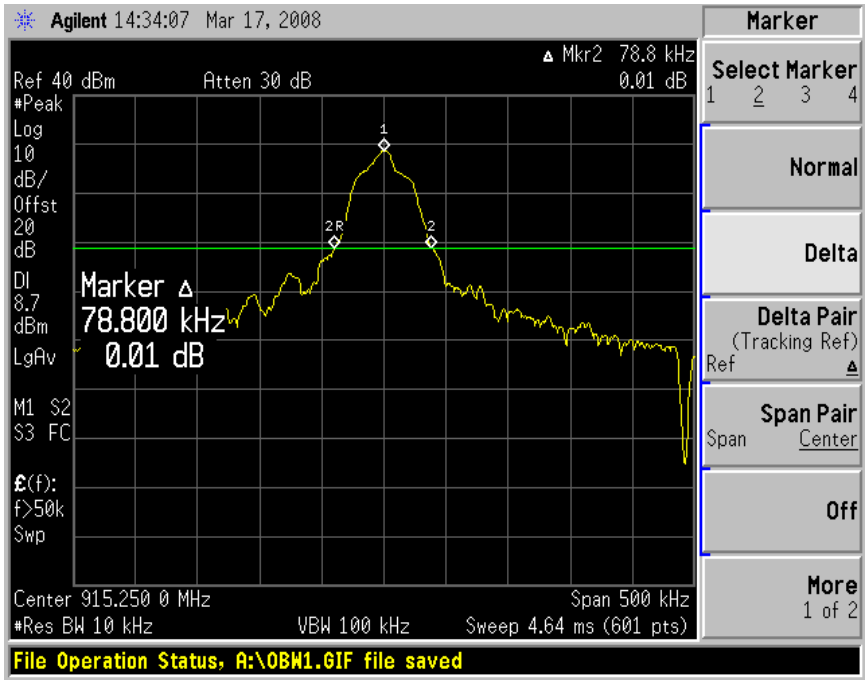
Channel Separation



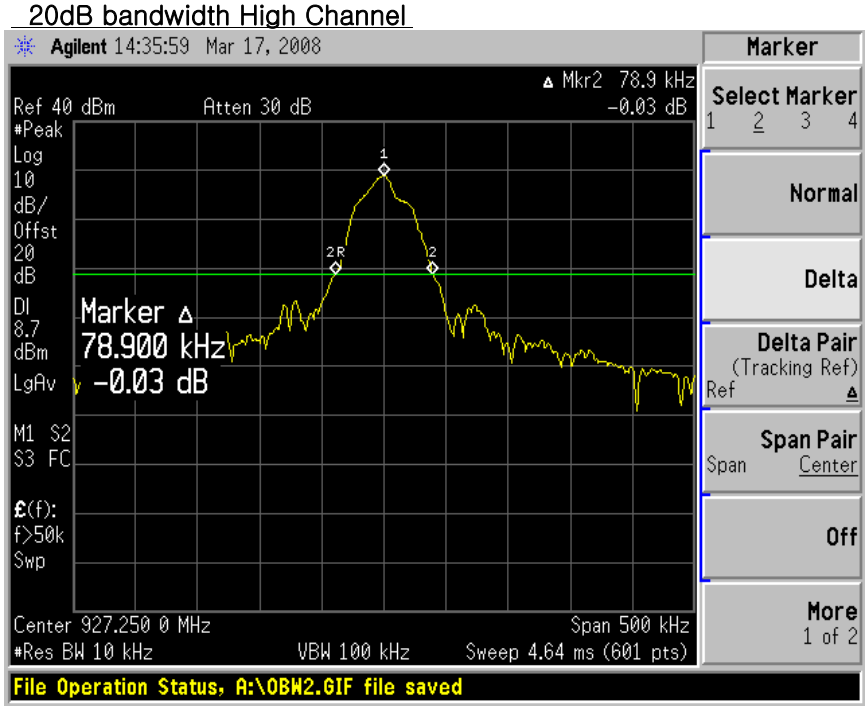
20dB bandwidth Low Channel



20dB bandwidth Mid Channel



20dB bandwidth High Channel



6. MAXIMUM PEAK OUTPUT POWER

6.1 Test procedure

The transmitter antenna terminal is connected to the input of a Spectrum Analyzer. Measurement is made while EUT is operating in transmission mode at the appropriate center frequency. The maximum peak output power measurement is 30dBm.

The spectrum analyzer is set to as following.

. RBW= 1MHz

. VBW= 3MHz

. Span= 2MHz

. Sweep= 1ms

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4440A	US41421291	2009-01-11
Attenuator	8491A	54309	2009-01-14
-Spectrum Analyzer <=> EUT	Loss: 20dB	-	

6.2 Measurement results

EUT	UHF RFID Reader	MODEL	REM900-R01
MODE	ASK	ENVIRONMENTAL CONDITION	24℃, 43%RH
INPUT POWER	DC 9V		

CHANNEL	Channel Frequency (MHz)	Peak Power Output(dBm)		Limit[1W] (dBm)	PASS/ FAIL
		(dBm)	(W)		
0	902.75	28.58	0.7211	30.0	PASS
25	915.25	28.68	0.7379	30.0	PASS
49	927.25	28.35	0.6839	30.0	PASS

7. Number of Hopping Frequency

7.1 Test procedure

According to §15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

7.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

. RBW= 100KHz

. VBW= 1MHz

. Span= the frequency band of operation

. Sweep= suitable duration based on the EUT specification.

The Number of Hopping Frequency Test Instruments

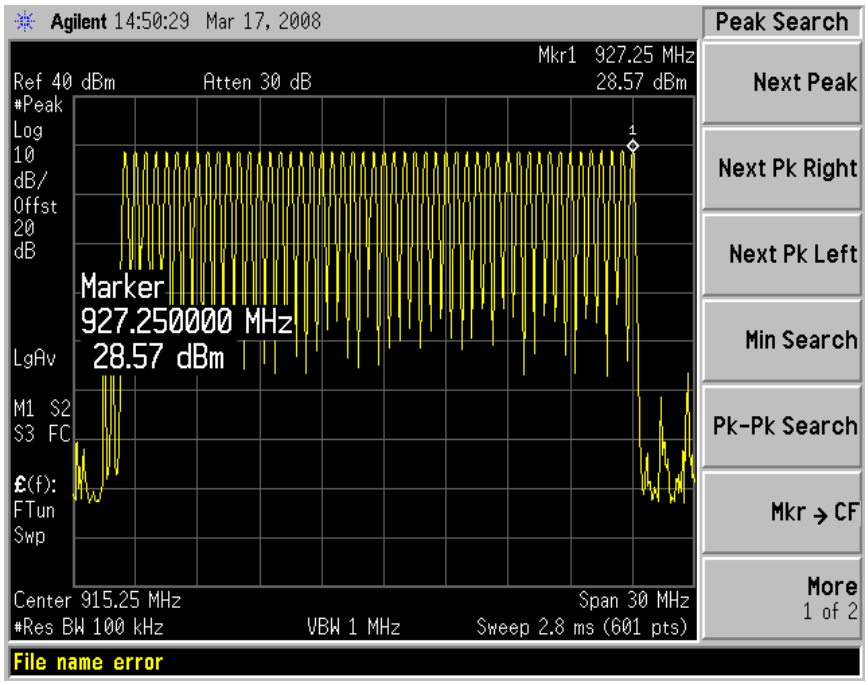
Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4440A	US41421291	2009-01-11
Attenuator	8491A	54309	2009-01-14
-Spectrum Analyzer <=> EUT	Loss: 20dB		

7.3 Measurement results

EUT	UHF RFID Reader	MODEL	REM900-R01
MODE	ASK	ENVIRONMENTAL CONDITION	24℃, 44%RH
INPUT POWER	DC 9V		

Number of CH	Limit (Number of CH)	PASS/FAIL
50	>50	PASS

7.4 Trace data



8. Time of Occupancy (Dwell Time)

8.1 Test procedure

According to §15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

8.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

. RBW= 30kHz

. VBW= 30kHz

. Span= zero span, centered on a hoppong channel

. Sweep= as necessary to capture the entire dwell time per hoppong channel

The Time of Occupancy Test Instruments

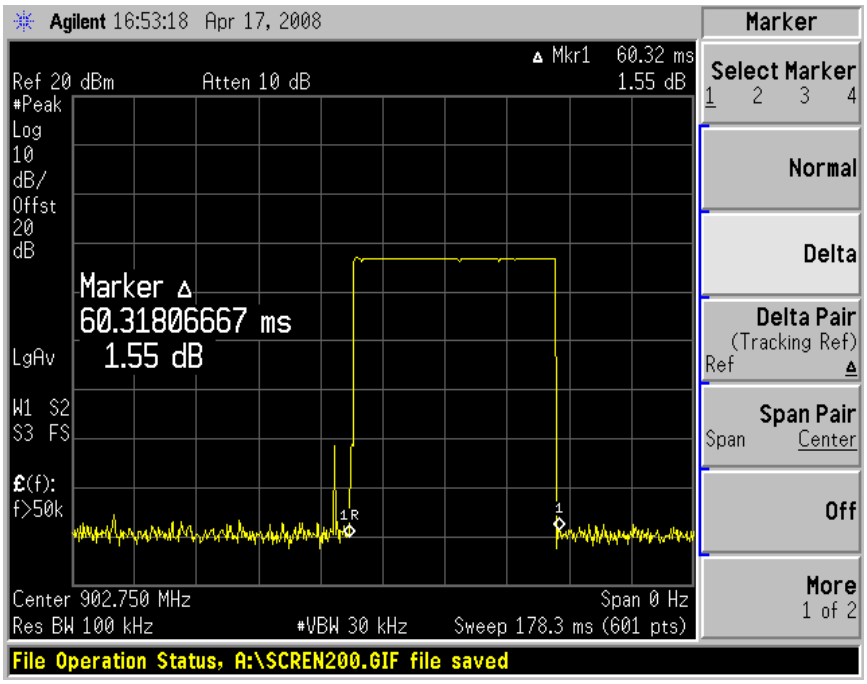
Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4440A	US41421291	2009-01-11
Attenuator	8491A	54309	2009-01-14
-Spectrum Analyzer <=> EUT	Loss: 20dB	-	

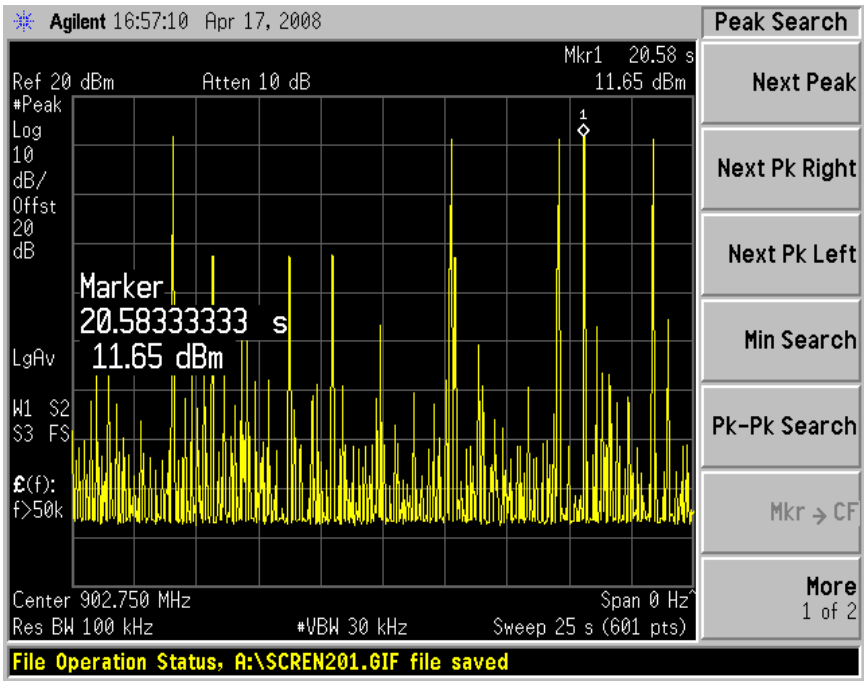
8.3 Measurement results

EUT	UHF RFID Reader	MODEL	REM900-R01
MODE	ASK	ENVIRONMENTAL CONDITION	25℃, 43%RH
INPUT POWER	DC 9V		

Channel	Pulse Time(ms)	Limit (ms)	PASS/FAIL
25	60.31	400	PASS

8.4 Trace data





9. Band-Edge and Out of Band Emissions.

9.1 Test procedure

The radio frequecy power at 20dB down from the highest inband power level is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The band edge&out of band emission shall be at least 20dB below of the highest inband power level.

9.2 Test instruments and measurement setup

The spectrum analyzer is set to as following.

. RBW= 100KHz

. VBW= 100KHz

. Span= suitable frequency span

. Sweep= suitable duration based on the EUT specification.

Out of Emission Test Instruments

Description	Model	Serial Number	Cal. Due Date
Spectrum Analyzer	E4440A	US41421291	2009-01-11
Attenuator	8491A	54309	2009-01-14
-Spectrum Analyzer <=> EUT	Loss: 20dB		

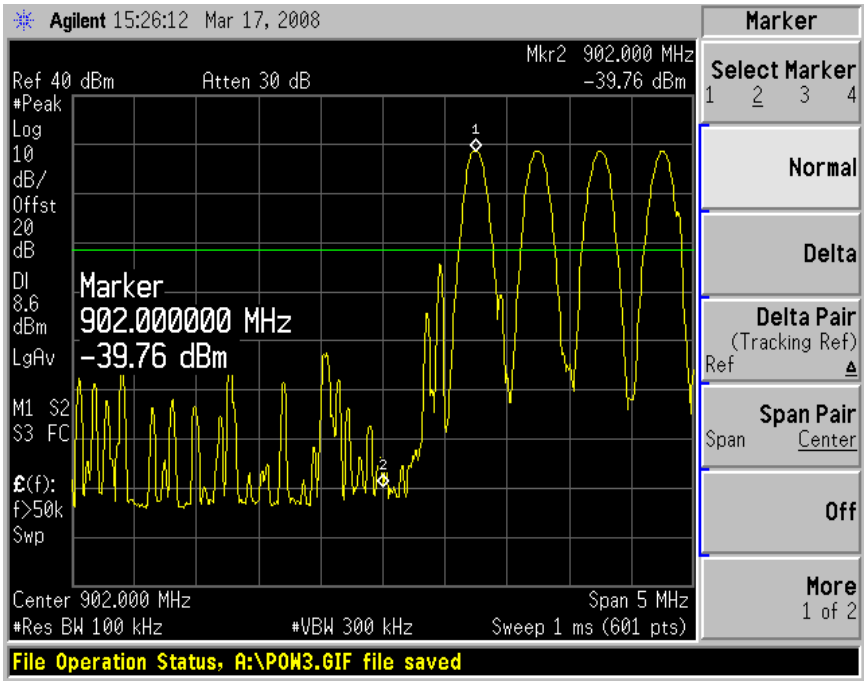
9.3 Measurement results of out of emission

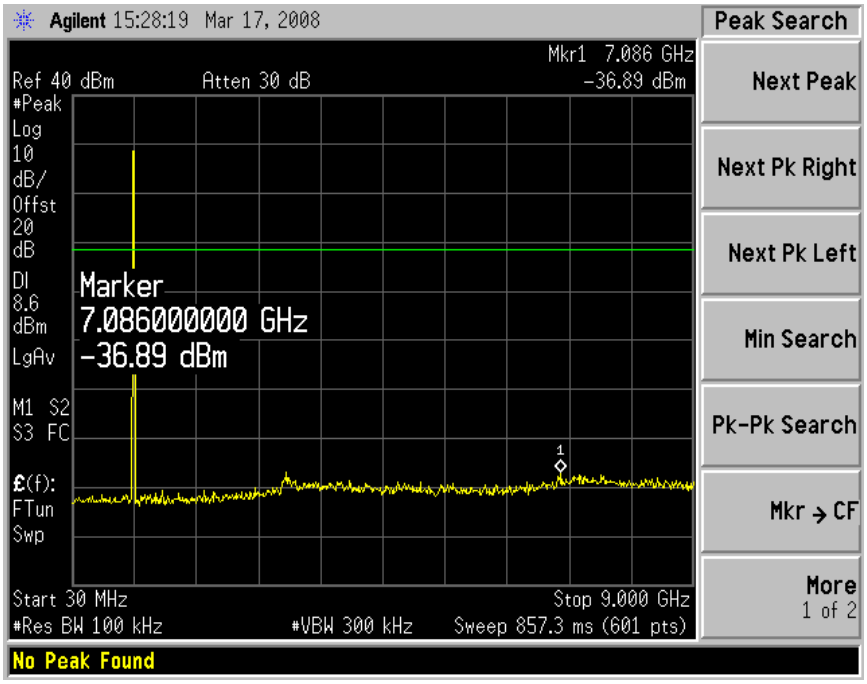
EUT	UHF RFID Reader	MODEL	REM900-R01
MODE	ASK	ENVIRONMENTAL CONDITION	24℃, 44%RH
INPUT POWER	DC 9V		

* Refer to attach spectrum analyzer data chart.

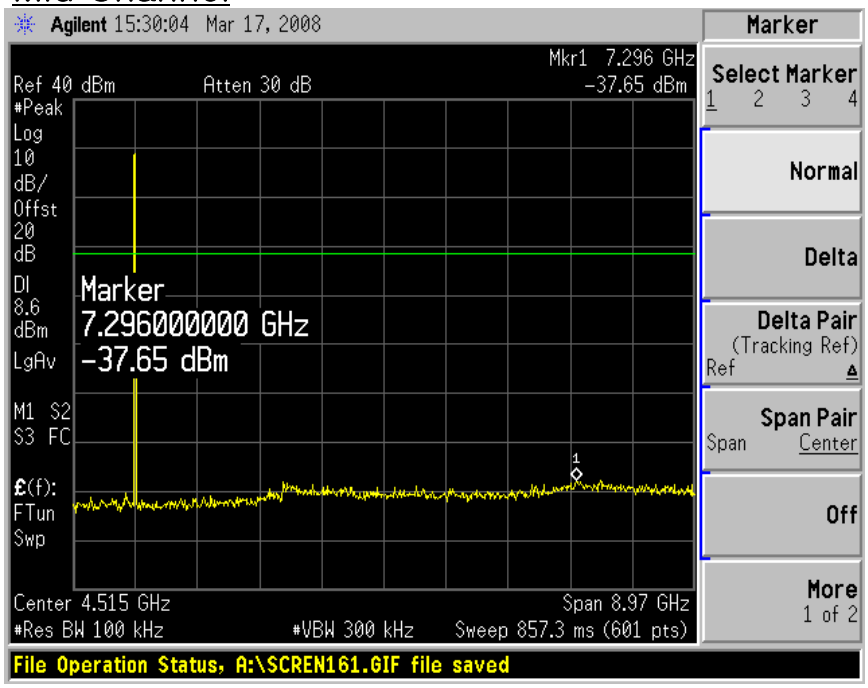
9.4 Trace data

Low Channel





Mid Channel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Marker
Mkr1 7.296 GHz
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Atten 30 dB
-37.65 dBm
#Peak
Log
10
dB/
Offst
20
dB
Marker
7.296000000 GHz
-37.65 dBm
Center 4.515 GHz
Span 8.97 GHz
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#VBW 300 kHz
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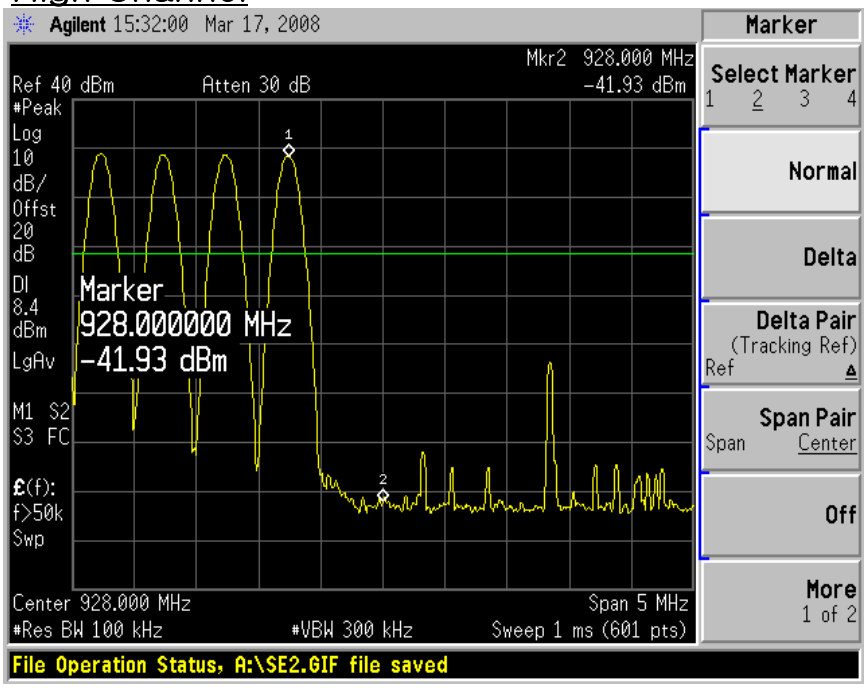
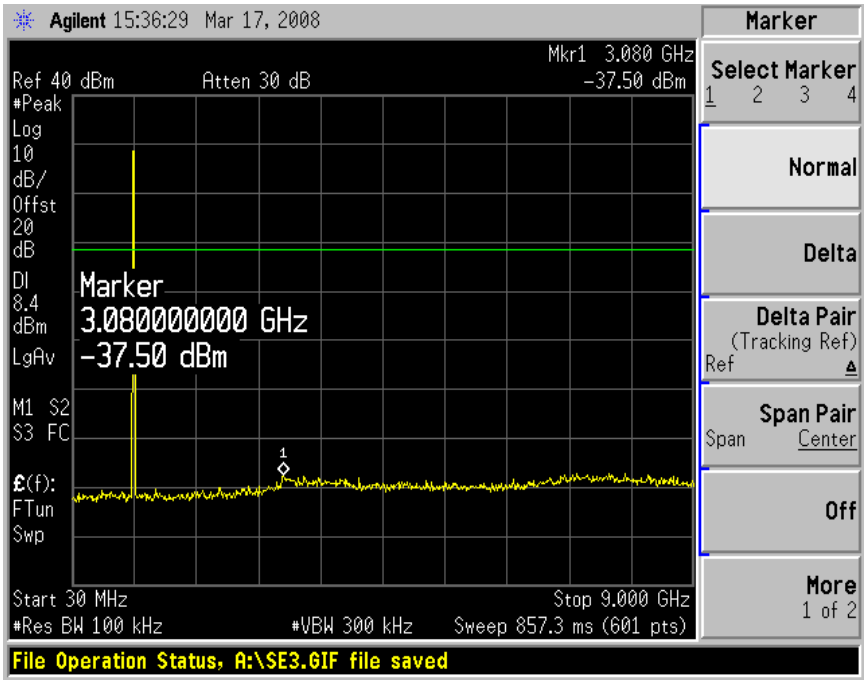
High Channel





10. Measurement of radiated disturbance (Single Antenna Model : FDC-08)

Above 30 MHz Electric Field strength was measured in accordance with FCC Part 15 (2007) & ANSI C 63.4 (2003). The test setup was made according to FCC Part 15 (2007) & ANSI C 63.4 (2003) on an open test site, which allows a 3m distance measurement. The EUT was placed in the center of wooden turntable. The height of this table was 0.8m. The measurement was conducted with both horizontal and vertical antenna polarization. The turntable has fully rotated. For further description of the configuration refer to the picture of the test setup.

10.1 Measurement equipments (Single Antenna Model : FDC-08)

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receiver	ESVS10	Rohde & Schwarz	838562/002	2009. 1. 24
Spectrum Analyzer	R3262C	ADVANTEST	61720116	2008. 4. 20
LogBicon Antenna	VULB 9160	Schwarzbeck	3142	2008. 5. 07
Turn Table	2087	EMCO	2129	-
Antenna Mast	2070-01	EMCO	9702-203	-
ANT Mast Controller	2090	EMCO	1535	-
Horn Antenna	BBHA 9120 D	Schwarzbeck	469	2008. 6. 05
Amplifier	8447F	HP	2805A02972	2008. 6. 26
Turn Table Controller	2090	EMCO	1535	-
Spectrum Analyzer	R3273	ADVANTEST	121200664	2008. 11. 27
PREAMPLIFIER	8449B	HP	3008A00581	2009. 3. 07

10.2 Environmental Condition (Single Antenna Model : FDC-08)

Test Place : Open site(3m)
Temperature (°C) : 15 ℃
Humidity (%) : 68 %

10. Measurement of radiated disturbance (Single Antenna Model : FSC-06)

Above 30 MHz Electric Field strength was measured in accordance with FCC Part 15 (2007) & ANSI C 63.4 (2003). The test setup was made according to FCC Part 15 (2007) & ANSI C 63.4 (2003) on an open test site, which allows a 3m distance measurement. The EUT was placed in the center of wooden turntable. The height of this table was 0.8m. The measurement was conducted with both horizontal and vertical antenna polarization. The turntable has fully rotated. For further description of the configuration refer to the picture of the test setup.

10.1 Measurement equipments (Single Antenna Model : FSC-06)

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receiver	ESVS10	Rohde & Schwarz	838562/002	2009. 1. 24
Spectrum Analyzer	R3262C	ADVANTEST	61720116	2008. 4. 20
LogBicon Antenna	VULB 9160	Schwarzbeck	3142	2008. 5. 07
Turn Table	2087	EMCO	2129	-
Antenna Mast	2070-01	EMCO	9702-203	-
ANT Mast Controller	2090	EMCO	1535	-
Horn Antenna	BBHA 9120 D	Schwarzbeck	469	2008. 6. 05
Amplifier	8447F	HP	2805A02972	2008. 6. 26
Turn Table Controller	2090	EMCO	1535	-
Spectrum Analyzer	R3273	ADVANTEST	121200664	2008. 11. 27
PREAMPLIFIER	8449B	HP	3008A00581	2009. 3. 07

10.2 Environmental Condition (Single Antenna Model : FSC-06)

Test Place : Open site(3m)

Temperature (°C) : 18 ℃

Humidity (%) : 67 %

10. Measurement of radiated disturbance (Dual Antenna Model : FSDC-07)

Above 30 MHz Electric Field strength was measured in accordance with FCC Part 15 (2007) & ANSI C 63.4 (2003). The test setup was made according to FCC Part 15 (2007) & ANSI C 63.4 (2003) on an open test site, which allows a 3m distance measurement. The EUT was placed in the center of wooden turntable. The height of this table was 0.8m. The measurement was conducted with both horizontal and vertical antenna polarization. The turntable has fully rotated. For further description of the configuration refer to the picture of the test setup.

10.1 Measurement equipments (Dual Antenna Model : FSDC-07)

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receiver	ESVS10	Rohde & Schwarz	838562/002	2009. 1. 24
Spectrum Analyzer	R3262C	ADVANTEST	61720116	2008. 4. 20
LogBicon Antenna	VULB 9160	Schwarzbeck	3142	2008. 5. 07
Turn Table	2087	EMCO	2129	-
Antenna Mast	2070-01	EMCO	9702-203	-
ANT Mast Controller	2090	EMCO	1535	-
Horn Antenna	BBHA 9120 D	Schwarzbeck	469	2008. 6. 05
Amplifier	8447F	HP	2805A02972	2008. 6. 26
Turn Table Controller	2090	EMCO	1535	-
Spectrum Analyzer	R3273	ADVANTEST	121200664	2008. 11. 27
PREAMPLIFIER	8449B	HP	3008A00581	2009. 3. 07

10.2 Environmental Condition (Dual Antenna Model : FSDC-07)

Test Place : Open site(3m)

Temperature (°C) : 15 ℃

Humidity (%) : 48 %

10.3-1 Test data (Single Antenna Model : FDC-08)

Test Date : 14-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
30.40	20.10	V	1.0	11.12	0.2	40.0	31.42	-8.58
68.98	24.20	V	1.0	10.72	0.9	40.0	35.81	-4.19
70.64	24.30	H	3.0	9.86	0.9	40.0	35.06	-4.94
77.20	23.00	H	2.5	8.93	0.8	40.0	32.72	-7.28
107.89	20.70	H	3.0	9.36	1.2	43.5	31.25	-12.25
126.20	19.80	V	1.0	11.18	1.4	43.5	32.37	-11.13
240.02	10.40	V	1.0	11.14	2.6	46.0	24.14	-21.86
279.99	8.60	H	1.1	12.18	2.8	46.0	23.56	-22.44
372.37	7.80	H	1.0	14.47	3.4	46.0	25.65	-20.35
384.40	11.90	H	1.0	14.89	3.6	46.0	30.38	-15.62
420.43	11.20	H	1.0	15.86	3.8	46.0	30.86	-15.14
444.46	10.10	H	1.0	16.41	4.0	46.0	30.51	-15.49

Remark	H : Horizontal, V : Vertical *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz) *Checked in max located antenna and the maximum measured data were reported. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120KHz for Quasi-peak detection at frequency below 1GHz.

10.3-1 Test data (Single Antenna Model : FSC-06)

Test Date : 7-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
32.04	17.80	V	1.0	11.12	0.2	40.0	29.12	-10.88
67.79	23.20	V	1.0	10.72	0.9	40.0	34.81	-5.19
70.32	24.10	H	3.0	9.86	0.9	40.0	34.86	-5.14
77.40	22.80	H	2.5	8.93	0.8	40.0	32.52	-7.48
108.11	21.80	H	3.0	9.36	1.2	43.5	32.35	-11.15
120.36	18.10	V	1.0	11.17	1.4	43.5	30.67	-12.83
134.86	16.50	H	2.4	11.96	1.4	43.5	29.85	-13.65
139.44	17.60	V	1.0	11.97	1.4	43.5	30.96	-12.54
240.04	10.30	V	1.0	11.14	2.6	46.0	24.04	-21.96
280.00	8.40	H	1.2	12.47	2.8	46.0	23.67	-22.33
372.38	8.00	H	1.0	14.47	3.4	46.0	25.85	-20.15
384.41	12.00	H	1.0	14.89	3.6	46.0	30.48	-15.52
420.43	11.00	H	1.0	15.86	3.8	46.0	30.66	-15.34
444.45	9.90	H	1.0	16.41	4.0	46.0	30.31	-15.69

Remark	H : Horizontal, V : Vertical *CL = Cable Loss-Amplifier Gain(In case of above1000Mhz) *CL = Cable Loss(In case of below1000Mhz) *Checked in max located antenna and the maximum measured data were reported. *The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120KHz for Quasi-peak detection at frequency below 1GHz.

10.3-1 Test data (Dual Antenna Model : FSDC-07)

Test Date : 7-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
32.03	19.10	V	1.0	11.12	0.2	40.0	30.42	-9.58
65.80	18.40	V	1.0	10.71	0.9	40.0	30.01	-9.99
70.90	23.80	H	3.0	9.86	0.9	40.0	34.56	-5.44
75.20	21.90	H	2.4	8.92	0.8	40.0	31.62	-8.38
105.44	21.80	H	2.9	9.35	1.2	43.5	32.35	-11.15
133.64	16.70	H	2.3	11.96	1.4	43.5	30.05	-13.45
240.04	10.50	V	1.0	11.14	2.6	46.0	24.24	-21.76
280.01	8.50	H	1.3	12.47	2.8	46.0	23.77	-22.23
372.37	8.10	H	1.0	14.47	3.4	46.0	25.95	-20.05
384.40	11.80	H	1.0	14.89	3.6	46.0	30.28	-15.72
420.44	11.20	H	1.0	15.86	3.8	46.0	30.86	-15.14
444.46	10.10	H	1.0	16.41	4.0	46.0	30.51	-15.49

Remark

H : Horizontal, V : Vertical
*CL = Cable Loss-Amplifier Gain(In case of above1000Mhz)
*CL = Cable Loss(In case of below1000Mhz)
*Checked in max located antenna and the maximum measured data were reported.
*The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120KHz for Quasi-peak detection at frequency below 1GHz.

10.3-2 Test data (CH0) - (Single Antenna Model : FDC-08)

Test Date : 15-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
902.75	100.20	H	2.0	23.21	6.5	*OB	129.91	-
902.75	100.60	V	1.0	23.21	6.5	*OB	130.31	-
PEAK(RBW / VBW-1MHz)								
1805.50	49.81	H	1.6	25.15	-28.0	74.0	46.96	-27.04
1805.50	52.00	V	1.2	25.15	-28.0	74.0	49.15	-24.85
2708.25	44.40	H	2.0	27.68	-29.2	74.0	42.88	-31.12
2708.25	44.46	V	1.2	27.68	-29.2	74.0	42.94	-31.06
3611.00	44.99	H	1.2	28.72	-28.8	74.0	44.91	-29.09
3611.00	45.62	V	1.5	28.72	-28.8	74.0	45.54	-28.46
AV(RBW 1MHz / VBW 10Hz)								
1805.50	42.55	H	1.6	25.15	-28.0	54.0	39.70	-14.30
1805.50	46.34	V	1.2	25.15	-28.0	54.0	43.49	-10.51
2708.25	32.23	H	2.0	27.68	-29.2	54.0	30.71	-23.29
2708.25	33.80	V	1.2	27.68	-29.2	54.0	32.28	-21.72
3611.00	34.20	H	1.2	28.72	-28.8	54.0	34.12	-19.88
3611.00	36.80	V	1.5	28.72	-28.8	54.0	36.72	-17.28
Remark	H : Horizontal, V : Vertical TEST MODE : CH 0 (902.75MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-2 Test data (CH0) - (Single Antenna Model : FSC-06)

Test Date : 8-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
902.75	100.10	H	1.6	23.21	6.5	*OB	129.81	-
902.75	99.20	V	1.2	23.21	6.5	*OB	128.91	-
PEAK(RBW / VBW-1MHz)								
1805.50	47.81	H	1.8	25.15	-28.0	74.0	44.96	-29.04
1805.50	49.64	V	1.7	25.15	-28.0	74.0	46.79	-27.21
2708.25	44.05	H	1.4	27.68	-29.2	74.0	42.53	-31.47
2708.25	44.22	V	2.0	27.68	-29.2	74.0	42.70	-31.30
3611.00	44.46	H	1.6	27.68	-29.2	74.0	42.94	-31.06
3611.00	45.59	V	1.4	27.68	-29.2	74.0	44.07	-29.93
AV(RBW 1MHz / VBW 10Hz)								
1805.50	40.50	H	1.8	25.15	-28.0	54.0	37.65	-16.35
1805.50	43.25	V	1.7	25.15	-28.0	54.0	40.40	-13.60
2708.25	33.30	H	1.4	27.68	-29.2	54.0	31.78	-22.22
2708.25	32.31	V	2.0	27.68	-29.2	54.0	30.79	-23.21
3611.00	33.16	H	1.6	27.68	-29.2	54.0	31.64	-22.36
3611.00	35.65	V	1.4	27.68	-29.2	54.0	34.13	-19.87
Remark	H : Horizontal, V : Vertical TEST MODE : CH 0 (902.75MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-2 Test data (CH0) - (Dual Antenna Model : FSDC-07)

Test Date : 8-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
902.75	100.80	H	1.6	23.21	6.5	*OB	130.51	-
902.75	100.50	V	1.2	23.21	6.5	*OB	130.21	-
PEAK(RBW / VBW-1MHz)								
1805.50	46.52	H	1.5	25.15	-28.0	74.0	43.67	-30.33
1805.50	46.74	V	1.0	25.15	-28.0	74.0	43.89	-30.11
2708.25	45.50	H	1.4	27.68	-29.2	74.0	43.98	-30.02
2708.25	47.09	V	1.7	27.68	-29.2	74.0	45.57	-28.43
3611.00	45.40	H	1.6	27.68	-29.2	74.0	43.88	-30.12
3611.00	46.60	V	1.4	27.68	-29.2	74.0	45.08	-28.92
AV(RBW 1MHz / VBW 10Hz)								
1805.50	33.90	H	1.5	25.15	-28.0	54.0	31.05	-22.95
1805.50	34.09	V	1.0	25.15	-28.0	54.0	31.24	-22.76
2708.25	33.32	H	1.4	27.68	-29.2	54.0	31.80	-22.20
2708.25	34.84	V	1.7	27.68	-29.2	54.0	33.32	-20.68
3611.00	34.42	H	1.6	27.68	-29.2	54.0	32.90	-21.10
3611.00	36.70	V	1.4	27.68	-29.2	54.0	35.18	-18.82
Remark	H : Horizontal, V : Vertical TEST MODE : CH 0 (902.75MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-3 Test data (CH25) - (Single Antenna Model : FDC-08)

Test Date : 15-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
915.25	97.80	H	2.0	23.23	6.5	*OB	127.53	-
915.25	100.40	V	1.0	23.23	6.5	*OB	130.13	-
PEAK(RBW / VBW-1MHz)								
1830.50	48.04	H	1.0	25.21	-29.1	74.0	44.15	-29.85
1830.50	49.66	V	1.7	25.21	-29.1	74.0	45.77	-28.23
2745.75	44.09	H	1.2	27.77	-29.9	74.0	41.96	-32.04
2745.75	44.64	V	1.0	27.77	-29.9	74.0	42.51	-31.49
3661.00	44.46	H	1.8	28.82	-29.5	74.0	43.78	-30.22
3661.00	45.66	V	1.3	28.82	-29.5	74.0	44.98	-29.02
AV(RBW 1MHz / VBW 10Hz)								
1830.50	39.95	H	1.0	25.21	-29.1	54.0	36.06	-17.94
1830.50	42.65	V	1.7	25.21	-29.1	54.0	38.76	-15.24
2745.75	32.00	H	1.2	27.77	-29.9	54.0	29.87	-24.13
2745.75	33.12	V	1.0	27.77	-29.9	54.0	30.99	-23.01
3661.00	33.10	H	1.8	28.82	-29.5	54.0	32.42	-21.58
3661.00	35.22	V	1.3	28.82	-29.5	54.0	34.54	-19.46
Remark	H : Horizontal, V : Vertical TEST MODE : CH 25 (915.25MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-3 Test data (CH25) - (Single Antenna Model : FSC-06)

Test Date : 8-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
915.25	100.10	H	1.5	23.23	6.5	*OB	129.83	-
915.25	99.30	V	1.1	23.23	6.5	*OB	129.03	-
PEAK(RBW / VBW-1MHz)								
1830.50	47.55	H	1.6	25.21	-29.1	74.0	43.66	-30.34
1830.50	48.59	V	1.2	25.21	-29.1	74.0	44.70	-29.30
2745.75	44.48	H	1.0	27.77	-29.9	74.0	42.35	-31.65
2745.75	43.30	V	1.3	27.77	-29.9	74.0	41.17	-32.83
3661.00	44.70	H	1.8	27.77	-29.9	74.0	42.57	-31.43
3661.00	46.07	V	1.1	27.77	-29.9	74.0	43.94	-30.06
AV(RBW 1MHz / VBW 10Hz)								
1830.50	39.90	H	1.6	25.21	-29.1	54.0	36.01	-17.99
1830.50	42.30	V	1.2	25.21	-29.1	54.0	38.41	-15.59
2745.75	33.10	H	1.0	27.77	-29.9	54.0	30.97	-23.03
2745.75	32.31	V	1.3	27.77	-29.9	54.0	30.18	-23.82
3661.00	33.09	H	1.8	27.77	-29.9	54.0	30.96	-23.04
3661.00	37.15	V	1.1	27.77	-29.9	54.0	35.02	-18.98

Remark	H : Horizontal, V : Vertical TEST MODE : CH 25 (915.25MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)

10.3-3 Test data (CH25) - (Dual Antenna Model : FSDC-07)

Test Date : 8-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
915.25	100.20	H	1.5	23.23	6.5	*OB	129.93	-
915.25	100.80	V	1.1	23.23	6.5	*OB	130.53	-
PEAK(RBW / VBW-1MHz)								
1830.50	47.70	H	1.2	25.21	-29.1	74.0	43.81	-30.19
1830.50	48.60	V	1.1	25.21	-29.1	74.0	44.71	-29.29
2745.75	46.40	H	1.5	27.77	-29.9	74.0	44.27	-29.73
2745.75	46.20	V	1.7	27.77	-29.9	74.0	44.07	-29.93
3661.00	45.80	H	1.8	27.77	-29.9	74.0	43.67	-30.33
3661.00	47.21	V	1.1	27.77	-29.9	74.0	45.08	-28.92
AV(RBW 1MHz / VBW 10Hz)								
1830.50	36.90	H	1.2	25.21	-29.1	54.0	33.01	-20.99
1830.50	36.20	V	1.1	25.21	-29.1	54.0	32.31	-21.69
2745.75	33.80	H	1.5	27.77	-29.9	54.0	31.67	-22.33
2745.75	33.80	V	1.7	27.77	-29.9	54.0	31.67	-22.33
3661.00	35.10	H	1.8	27.77	-29.9	54.0	32.97	-21.03
3661.00	39.80	V	1.1	27.77	-29.9	54.0	37.67	-16.33
Remark	H : Horizontal, V : Vertical TEST MODE : CH 25 (915.25MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-4 Test data (CH49) - (Single Antenna Model : FDC-08)

Test Date : 15-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
927.25	98.80	H	2.0	23.54	6.6	*OB	128.94	-
927.25	99.10	V	1.0	23.54	6.6	*OB	129.24	-
PEAK(RBW / VBW-1MHz)								
1001.08	45.20	H	1.1	23.57	-34.0	74.0	34.82	-39.18
1001.08	44.40	V	1.0	23.57	-34.0	74.0	34.02	-39.98
1854.50	46.58	H	1.1	25.26	-30.1	74.0	41.74	-32.26
1854.50	47.88	V	1.5	25.26	-30.1	74.0	43.04	-30.96
2781.75	44.26	H	2.0	27.86	-30.7	74.0	41.42	-32.58
2781.75	45.05	V	1.2	27.86	-30.7	74.0	42.21	-31.79
3709.00	45.75	H	1.1	28.89	-28.9	74.0	45.74	-28.26
3709.00	48.94	V	1.4	28.89	-28.9	74.0	48.93	-25.07
AV(RBW 1MHz / VBW 10Hz)								
1001.08	35.30	H	1.1	23.57	-34.0	54.0	24.92	-29.08
1001.08	33.40	V	1.0	23.57	-34.0	54.0	23.02	-30.98
1854.50	37.58	H	1.1	25.26	-30.1	54.0	32.74	-21.26
1854.50	40.00	V	1.5	25.26	-30.1	54.0	35.16	-18.84
2781.75	32.74	H	2.0	27.86	-30.7	54.0	29.90	-24.10
2781.75	34.36	V	1.2	27.86	-30.7	54.0	31.52	-22.48
3709.00	36.59	H	1.1	28.89	-28.9	54.0	36.58	-17.42
3709.00	41.20	V	1.4	28.89	-28.9	54.0	41.19	-12.81
Remark	H : Horizontal, V : Vertical TEST MODE : CH 49 (927.25MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-4 Test data (CH49) - (Single Antenna Model : FSC-06)

Test Date : 8-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
927.25	99.58	H	1.1	23.54	6.6	*OB	129.72	-
927.25	98.60	V	1.5	23.54	6.6	*OB	128.74	-
PEAK(RBW / VBW-1MHz)								
1001.16	44.30	H	1.3	23.57	-34.0	74.0	33.92	-40.08
1001.16	44.10	V	1.2	23.57	-34.0	74.0	33.72	-40.28
1854.50	45.34	H	1.9	25.26	-30.1	74.0	40.50	-33.50
1854.50	47.04	V	1.7	25.26	-30.1	74.0	42.20	-31.80
2781.75	44.21	H	1.1	27.86	-30.7	74.0	41.37	-32.63
2781.75	44.42	V	1.5	27.86	-30.7	74.0	41.58	-32.42
3709.00	45.48	H	1.8	25.26	-30.1	74.0	40.64	-33.36
3709.00	47.02	V	1.1	25.26	-30.1	74.0	42.18	-31.82
AV(RBW 1MHz / VBW 10Hz)								
1001.16	34.20	H	1.3	23.57	-34.0	54.0	23.82	-30.18
1001.16	33.40	V	1.2	23.57	-34.0	54.0	23.02	-30.98
1854.50	34.57	H	1.9	25.26	-30.1	54.0	29.73	-24.27
1854.50	39.80	V	1.7	25.26	-30.1	54.0	34.96	-19.04
2781.75	32.98	H	1.1	27.86	-30.7	54.0	30.14	-23.86
2781.75	32.85	V	1.5	27.86	-30.7	54.0	30.01	-23.99
3709.00	34.81	H	1.8	27.86	-30.7	54.0	31.97	-22.03
3709.00	38.12	V	1.1	27.86	-30.7	54.0	35.28	-18.72
Remark	H : Horizontal, V : Vertical TEST MODE : CH 49 (927.25MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.3-4 Test data (CH49) - (Dual Antenna Model : FSDC-07)

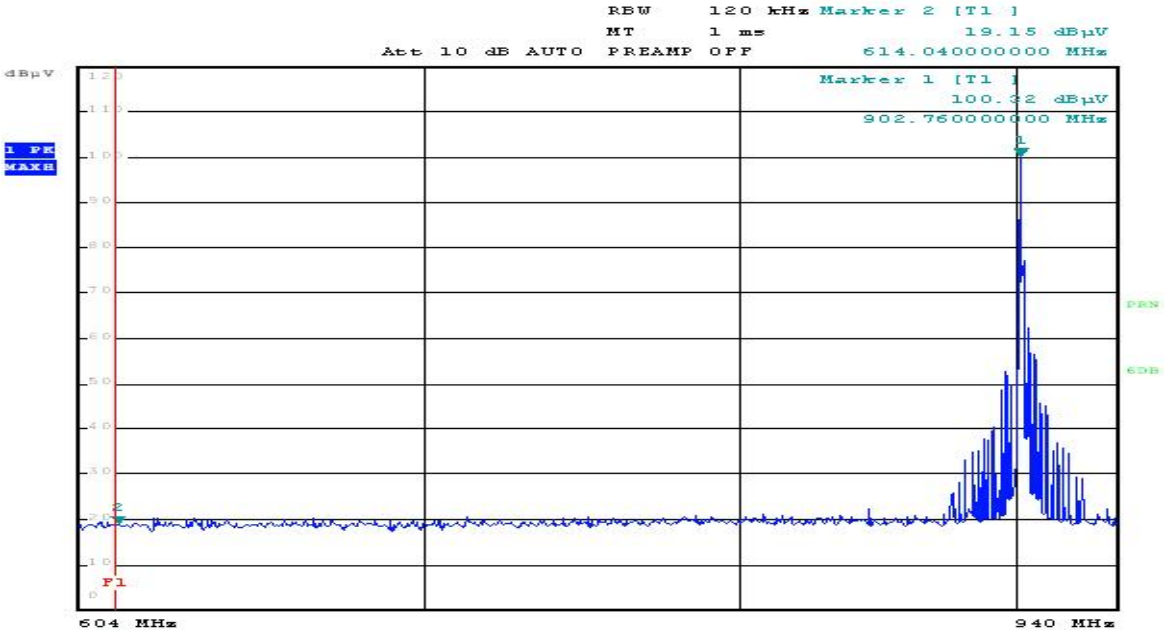
Test Date : 8-Apr-08 Measurement Distance : 3 m

Frequency (MHz)	Reading (dBμV)	Position (V/H)	Height (m)	Correction Factor		Result Value		
				Ant Factor (dB)	Cable (dB)	Limit (dBμV/m)	Result (dBμV/m)	Margin (dB)
Quasi-peak								
927.25	99.20	H	1.1	23.54	6.6	*OB	129.34	-
927.25	99.70	V	1.4	23.54	6.6	*OB	129.84	-
PEAK(RBW / VBW-1MHz)								
1001.68	45.30	H	1.1	23.57	-34.0	74.0	34.92	-39.08
1001.68	44.20	V	1.0	23.57	-34.0	74.0	33.82	-40.18
1854.50	46.30	H	1.1	25.26	-30.1	74.0	41.46	-32.54
1854.50	44.80	V	1.0	25.26	-30.1	74.0	39.96	-34.04
2781.75	55.50	H	1.0	27.86	-30.7	74.0	52.66	-21.34
2781.75	52.80	V	1.0	27.86	-30.7	74.0	49.96	-24.04
3709.00	46.48	H	1.8	28.89	-28.9	74.0	46.47	-27.53
3709.00	49.06	V	1.1	28.89	-28.9	74.0	49.05	-24.95
AV(RBW 1MHz / VBW 10Hz)								
1001.68	35.40	H	1.1	23.57	-34.0	54.0	25.02	-28.98
1001.68	34.20	V	1.0	23.57	-34.0	54.0	23.82	-30.18
1854.50	38.20	H	1.1	25.26	-30.1	54.0	33.36	-20.64
1854.50	34.23	V	1.0	25.26	-30.1	54.0	29.39	-24.61
2781.75	51.02	H	1.0	27.86	-30.7	54.0	48.18	-5.82
2781.75	47.40	V	1.0	27.86	-30.7	54.0	44.56	-9.44
3709.00	36.98	H	1.8	28.89	-28.9	54.0	36.97	-17.03
3709.00	42.16	V	1.1	28.89	-28.9	54.0	42.15	-11.85
Remark	H : Horizontal, V : Vertical TEST MODE : CH 49 (927.25MHz) *The TX signal isn't detected from 5th harmonics. *OB = Operating band *Checked in max located antenna and the maximum measured data were reported. *CL = Cable Loss-Amplifier Gain(In case of above 1000Mhz) *CL = Cable Loss(In case of below 1000Mhz) *Reading (dBμV) = Quasi-peak Value (In Case of below 1000Mhz)							

10.4 Restricted Band Edges (Single Antenna Model : FDC-08)

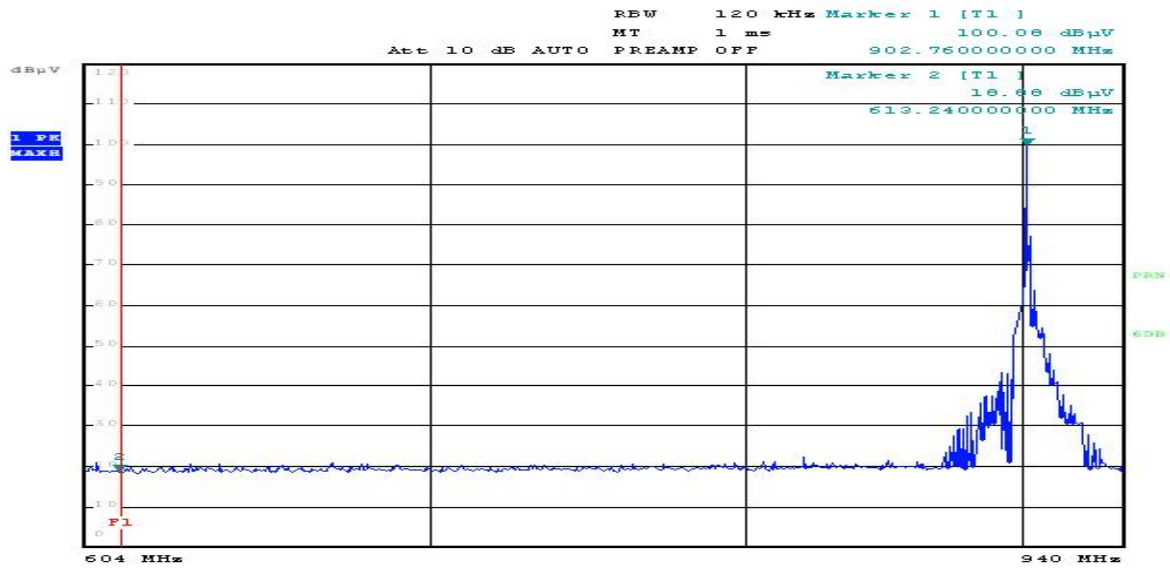
Band Edges(CH Low)

Detector mode:Peak Polarity:Horizontal



Comment: REM900-R01 SINGLE ANTENNA (FDC-08) HOR
Date: 10.APR.2008 18:53:10

Detector mode:Peak Polarity:Vertical

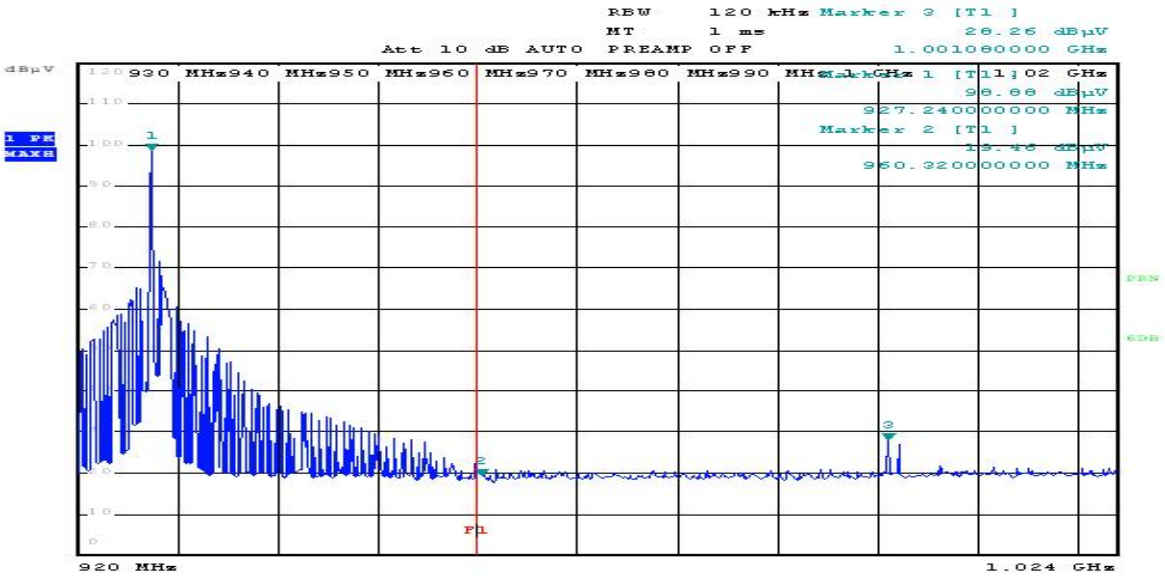


Comment: REM900-R01 SINGLE ANTENNA (FDC-08) VER
Date: 10.APR.2008 18:54:50

(Single Antenna Model : FDC-08)

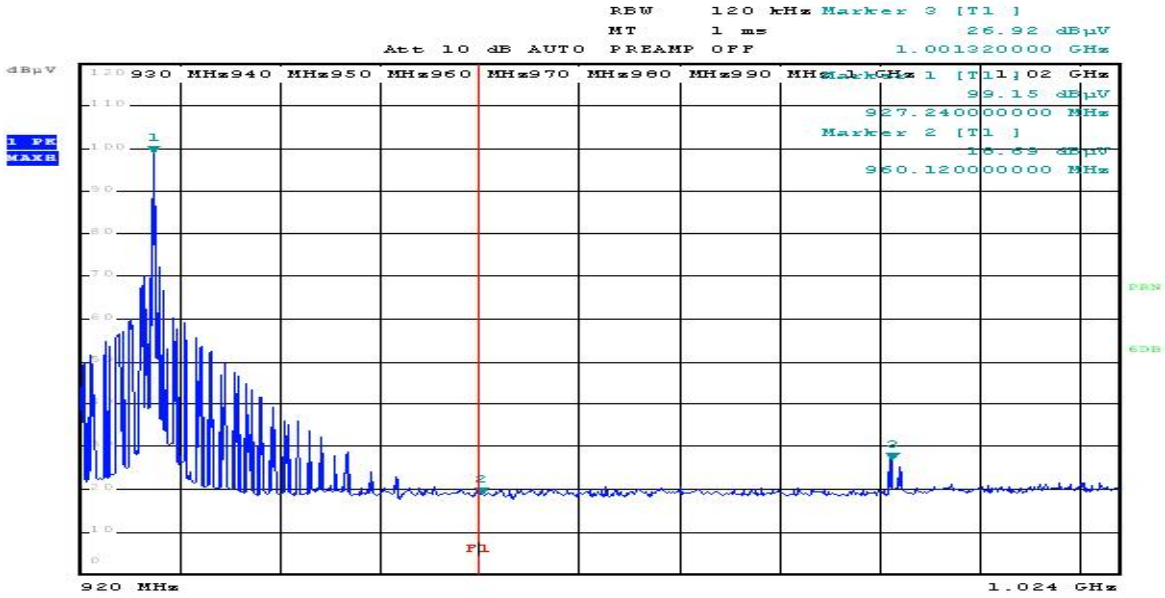
Band Edges(CH High)

Detector mode:Peak Polarity:Horizontal



Comment: REM900-R01 SINGLE ANTENNA (FDC-08) HOR
Date: 10.APR.2008 18:30:23

Detector mode:Peak Polarity:Vertical

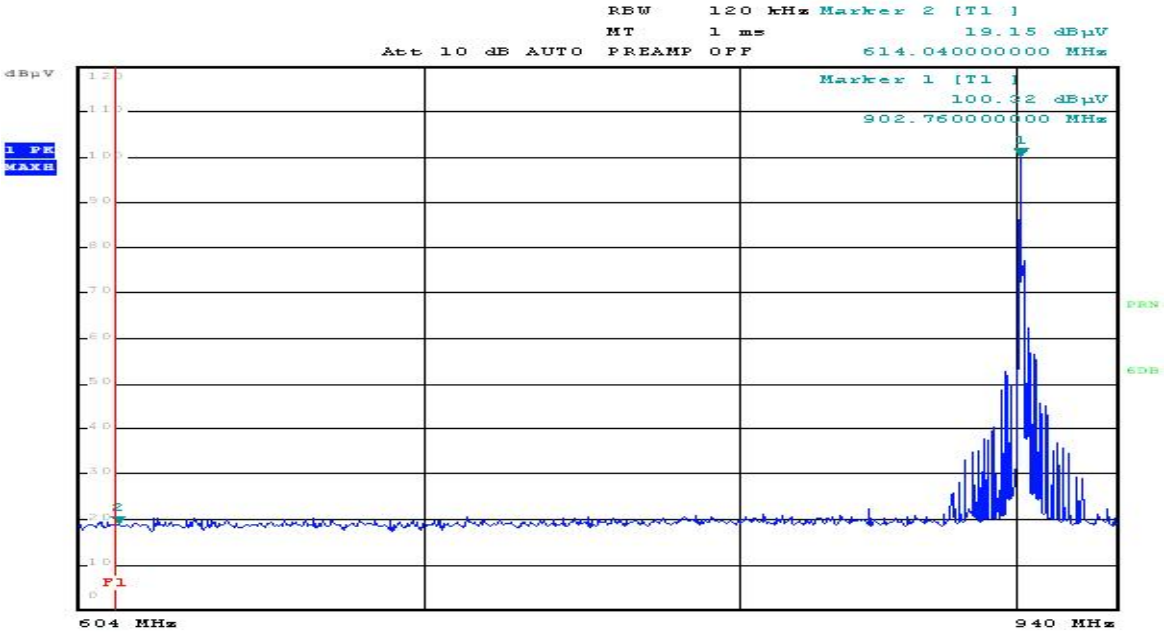


Comment: REM900-R01 SINGLE ANTENNA (FDC-08) VER
Date: 10.APR.2008 18:32:09

(Single Antenna Model : FSC-06)

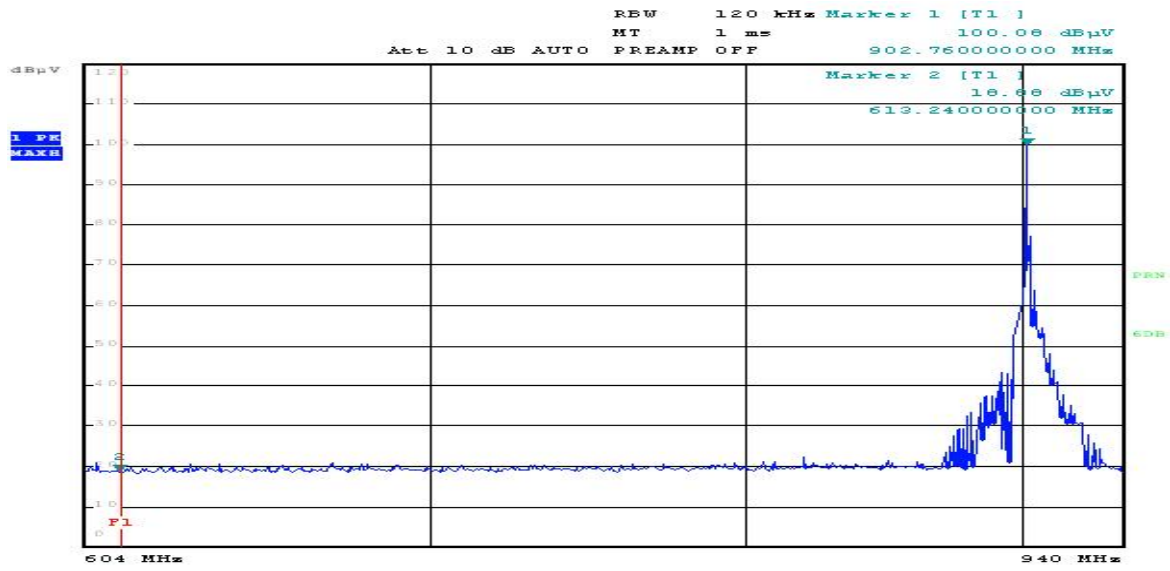
Band Edges(CH Low)

Detector mode:Peak Polarity:Horizontal



Comment: REM900-R01 SINGLE ANTENNA (FDC-06) HOR
Date: 10.APR.2008 18:53:10

Detector mode:Peak Polarity:Vertical

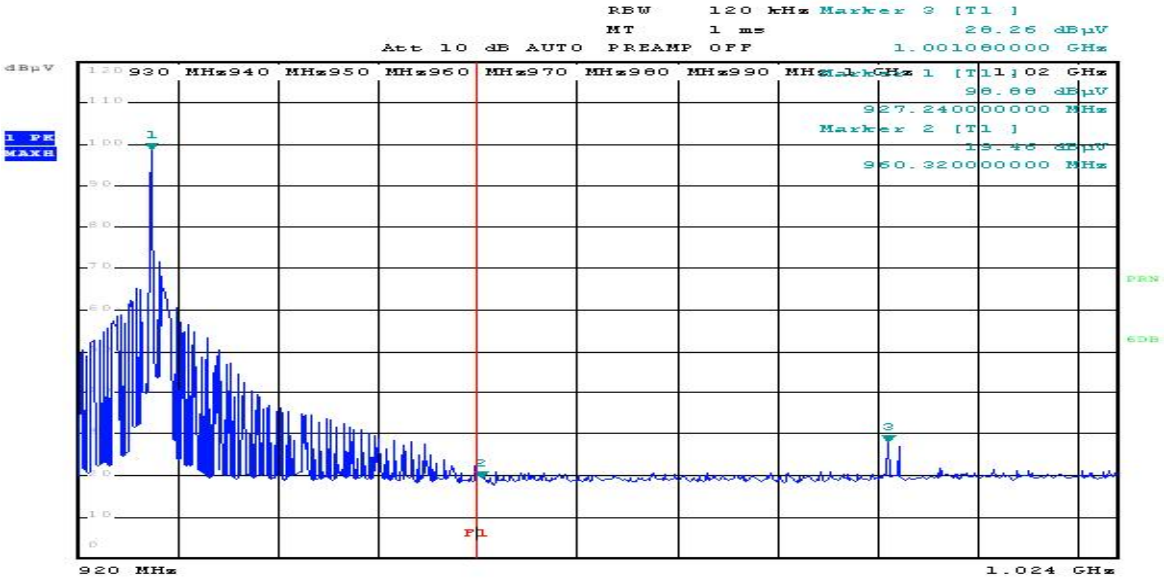


Comment: REM900-R01 SINGLE ANTENNA (FDC-06) VER
Date: 10.APR.2008 18:54:50

(Single Antenna Model : FSC-06)

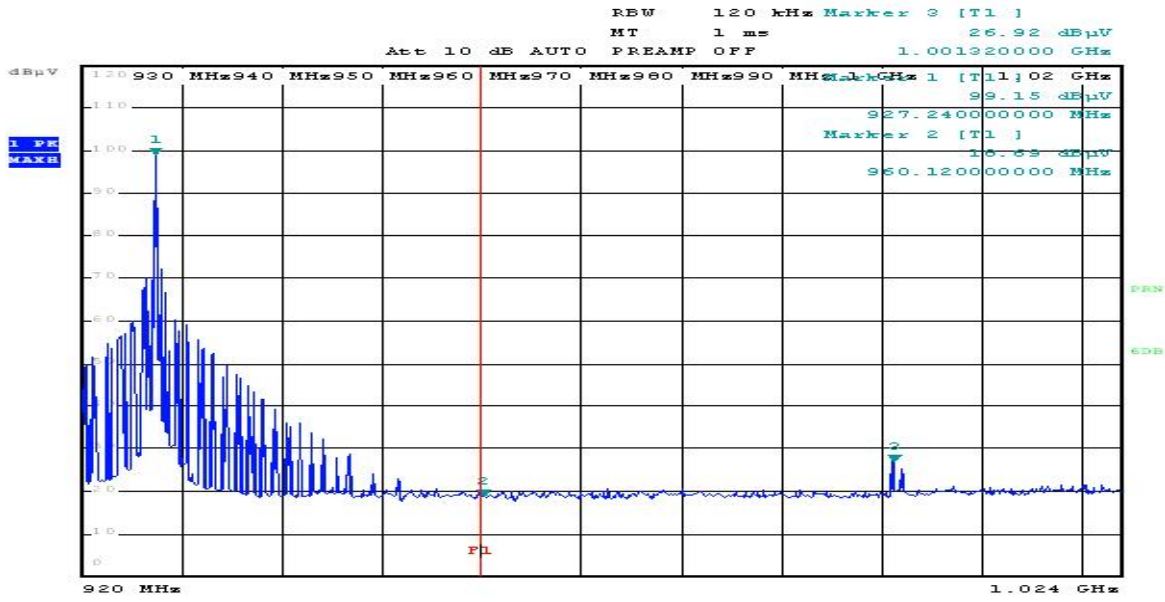
Band Edges(CH High)

Detector mode:Peak Polarity:Horizontal



Comment: REM900-R01 SINGLE ANTENNA (FDC-06) HOR
Date: 10.APR.2008 18:30:23

Detector mode:Peak Polarity:Vertical

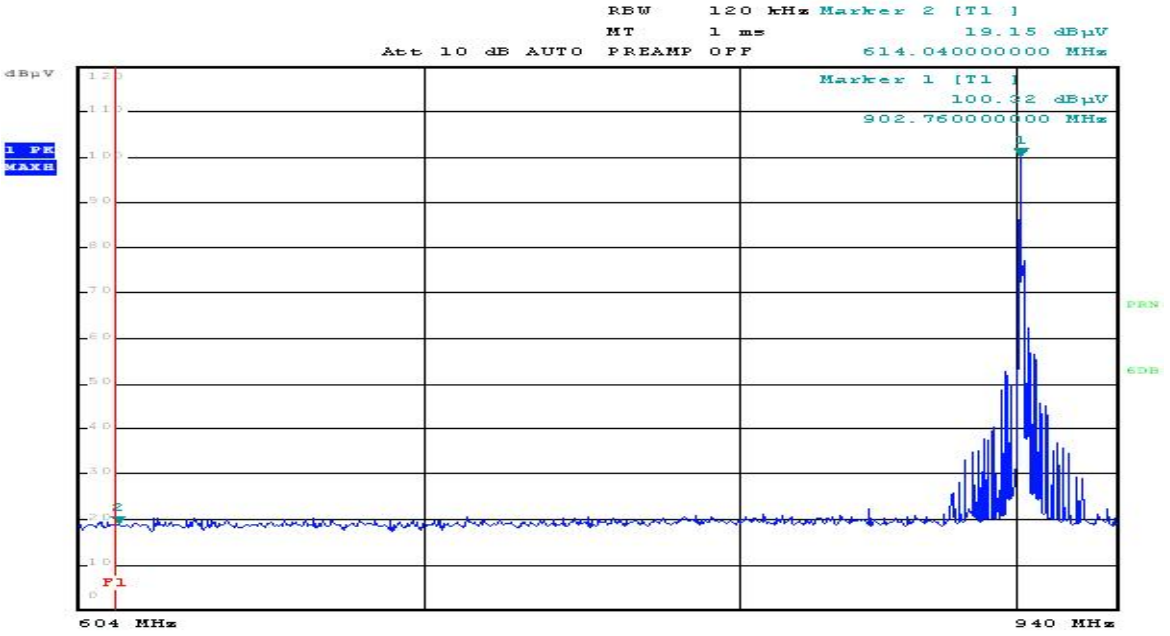


Comment: REM900-R01 SINGLE ANTENNA (FDC-06) VER
Date: 10.APR.2008 18:32:09

(Dual Antenna Model : FSDC-07)

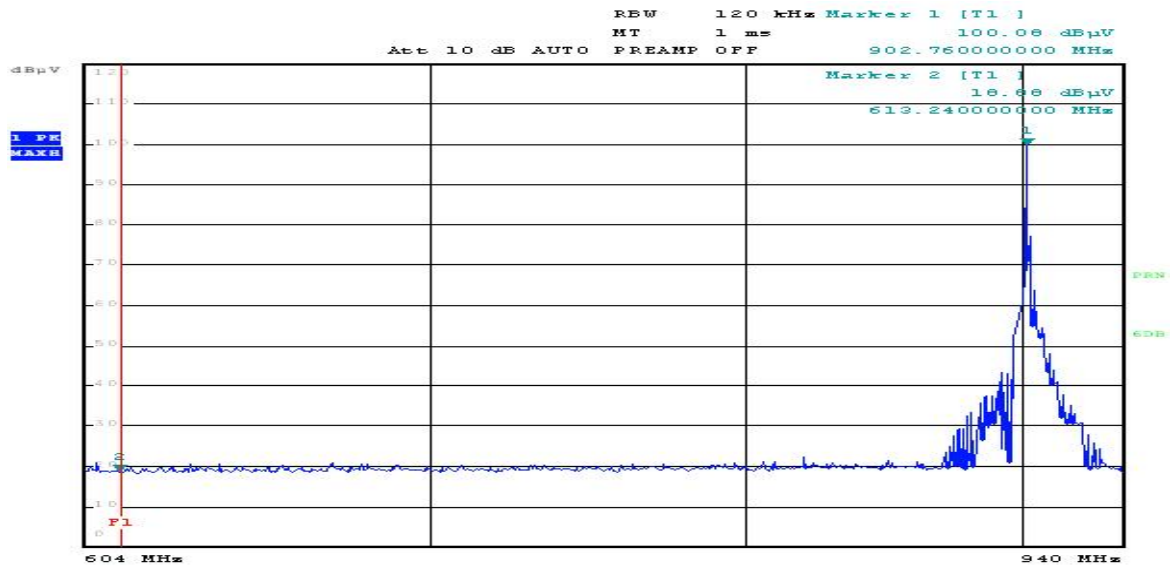
Band Edges(CH Low)

Detector mode:Peak Polarity:Horizontal



Comment: REM900-R01 SINGLE ANTENNA (FDC-08) HOR
Date: 10.APR.2008 18:53:10

Detector mode:Peak Polarity:Vertical

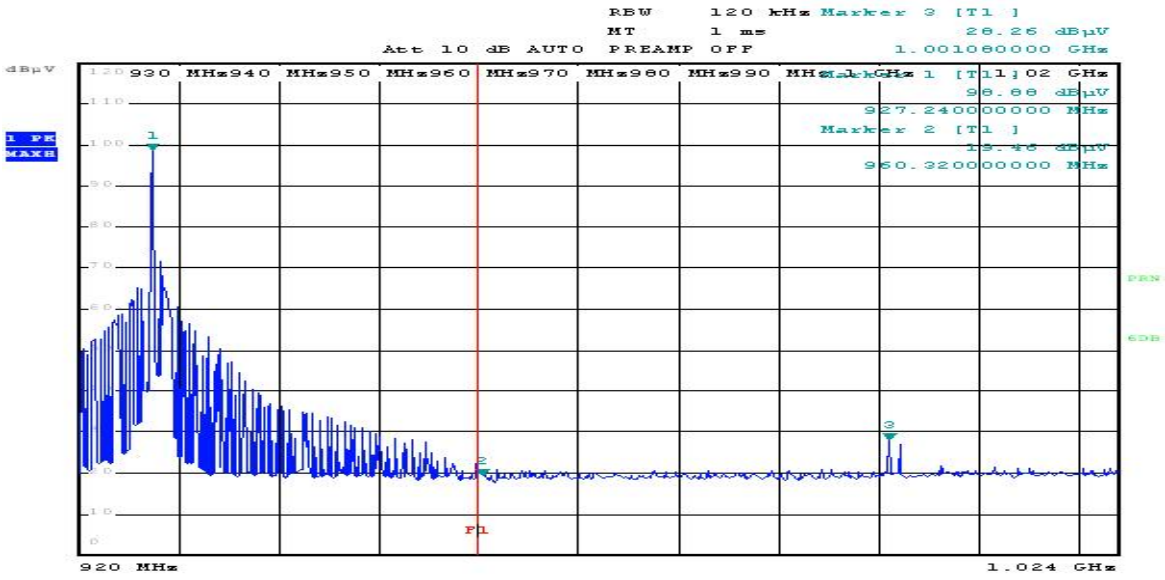


Comment: REM900-R01 SINGLE ANTENNA (FDC-08) VER
Date: 10.APR.2008 18:54:50

(Dual Antenna Model : FSDC-07)

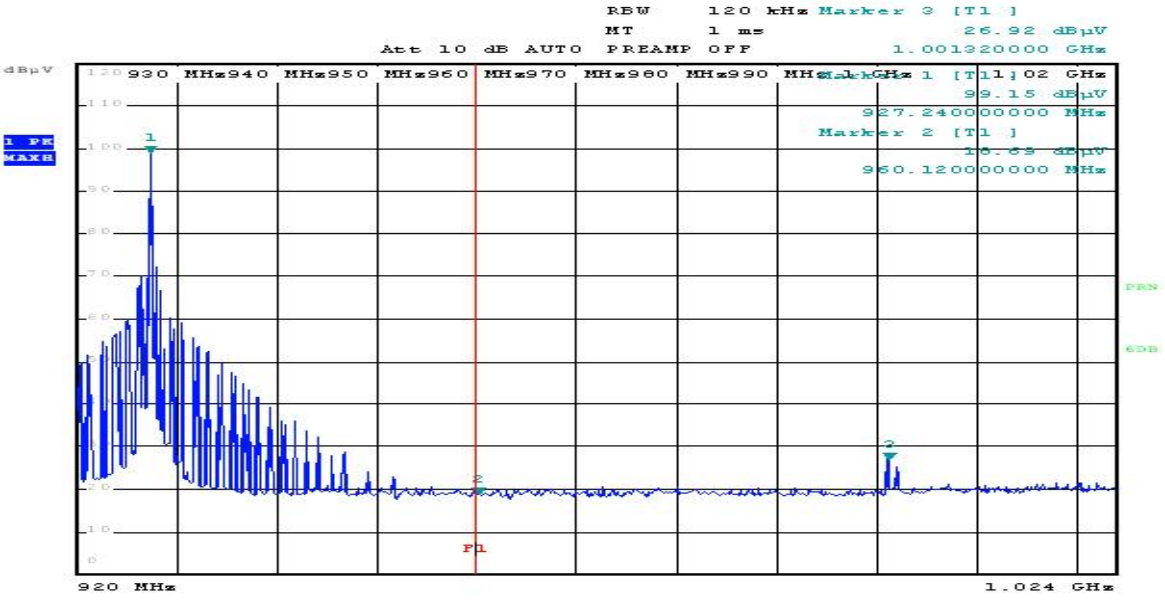
Band Edges(CH High)

Detector mode:Peak Polarity:Horizontal



Comment: REM900-R01 SINGLE ANTENNA (FDC-08) HOR
Date: 10.APR.2008 18:30:23

Detector mode:Peak Polarity:Vertical



Comment: REM900-R01 SINGLE ANTENNA (FDC-08) VER
Date: 10.APR.2008 18:32:09

11. Measurement of conducted disturbance (Single Antenna Model : FDC-08)

The continuous disturbance voltage of AC Mains in the frequency from 0.15 to 30 MHz was measured in accordance to FCC Part 15 (2007) & ANSI C 63.4 (2003) The test setup was made according to FCC Part 15 (2007) & ANSI C 63.4 (2003) in a shielded. The EUT was placed on a non-conductive table at least 80 above the ground plan. A grounded vertical reference plane was positioned in a distance of 40cm from the EUT. The distance from the EUT to other metal surfaces was at least 0.8m. The EUT was only earthen by its power cord through the line impedance stabilizing network. The power cord has been bundled to a length of 1.0m.. The test receiver with Quasi Peak detector complies with CISPR 16.

11.1 Measurement equipments (Single Antenna Model : FDC-08)

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receive	ESPI7	Rohde & Schwarz	100185	2008. 8. 26
Pulse Limiter	ESH3Z2	Rohde & Schwarz	NONE	-
LISN	ESH3-Z5	Schwarzbeck	838979/010	2009. 2. 29
LISN	NNLA8120A	Schwarzbeck	8120161	2009. 2. 29

11.2 Environmental Condition (Single Antenna Model : FDC-08)

Test Place : Shield Room
Temperature (°C) : 18 ℃
Humidity (%) : 48 %

11. Measurement of conducted disturbance (Single Antenna Model : FSC-06)

The continuous disturbance voltage of AC Mains in the frequency from 0.15 to 30 MHz was measured in accordance to FCC Part 15 (2007) & ANSI C 63.4 (2003) The test setup was made according to FCC Part 15 (2007) & ANSI C 63.4 (2003) in a shielded. The EUT was placed on a non-conductive table at least 80 above the ground plan. A grounded vertical reference plane was positioned in a distance of 40cm from the EUT. The distance from the EUT to other metal surfaces was at least 0.8m. The EUT was only earthen by its power cord through the line impedance stabilizing network. The power cord has been bundled to a length of 1.0m.. The test receiver with Quasi Peak detector complies with CISPR 16.

11.1 Measurement equipments (Single Antenna Model : FSC-06)

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receive	ESPI7	Rohde & Schwarz	100185	2008. 8. 26
Pulse Limiter	ESH3Z2	Rohde & Schwarz	NONE	-
LISN	ESH3-Z5	Schwarzbeck	838979/010	2009. 2. 29
LISN	NNLA8120A	Schwarzbeck	8120161	2009. 2. 29

11.2 Environmental Condition (Single Antenna Model : FSC-06)

Test Place : Shield Room
Temperature (°C) : 21 ℃
Humidity (%) : 48 %

11. Measurement of conducted disturbance (Dual Antenna Model : FSDC-07)

The continuous disturbance voltage of AC Mains in the frequency from 0.15 to 30 MHz was measured in accordance to FCC Part 15 (2007) & ANSI C 63.4 (2003) The test setup was made according to FCC Part 15 (2007) & ANSI C 63.4 (2003) in a shielded. The EUT was placed on a non-conductive table at least 80 above the ground plan. A grounded vertical reference plane was positioned in a distance of 40cm from the EUT. The distance from the EUT to other metal surfaces was at least 0.8m. The EUT was only earthen by its power cord through the line impedance stabilizing network. The power cord has been bundled to a length of 1.0m.. The test receiver with Quasi Peak detector complies with CISPR 16.

11.1 Measurement equipments (Dual Antenna Model : FSDC-07)

Equipment Name	Type	Manufacturer	Serial No.	Next Calibration date
TEST Receive	ESPI7	Rohde & Schwarz	100185	2008. 8. 26
Pulse Limiter	ESH3Z2	Rohde & Schwarz	NONE	-
LISN	ESH3-Z5	Schwarzbeck	838979/010	2009. 2. 29
LISN	NNLA8120A	Schwarzbeck	8120161	2009. 2. 29

11.2 Environmental Condition (Dual Antenna Model : FSDC-07)

Test Place : Shield Room
Temperature (°C) : 20 ℃
Humidity (%) : 39 %

11.3 Test data (CH 25)-(Single Antenna Model : FDC-08)

Test Date : 14-Apr-08

Frequency (MHz)	Correction Factor		Line (H/N)	Quasi-peak Value			Average Value		
	Lisn (dB)	Cable (dB)		Limit (dBμV)	Reading (dBμV)	Result (dBμV)	Limit (dBμV)	Reading (dBμV)	Result (dB)
0.15	0.15	0.8	N	66.00	50.44	51.34	56.00	39.22	40.12
0.20	0.17	0.8	H	63.74	46.14	47.10	53.74	34.25	35.21
0.25	0.19	0.8	H	61.92	39.65	40.67	51.92	29.23	30.25
0.29	0.21	0.9	N	60.41	34.23	35.31	50.41	24.85	25.93
0.35	0.21	0.9	H	59.06	28.07	29.13	49.06	20.16	21.22
0.49	0.20	0.8	N	56.13	31.72	32.70	46.13	25.25	26.23
1.18	0.19	0.8	H	56.00	29.00	29.99	46.00	21.16	22.15
1.72	0.22	0.8	H	56.00	28.75	29.79	46.00	28.57	29.61
1.82	0.20	0.7	N	56.00	27.17	28.10	46.00	20.76	21.69
2.06	0.23	0.8	H	56.00	28.80	29.87	46.00	22.97	24.04
2.40	0.24	0.9	H	56.00	28.06	29.16	46.00	22.25	23.35
4.66	0.32	0.9	H	56.00	28.48	29.75	46.00	22.62	23.89
5.69	0.38	1.0	H	60.00	35.27	36.66	50.00	31.92	33.31
22.34	0.87	1.8	N	60.00	36.48	39.10	50.00	29.53	32.15
24.78	0.91	2.0	H	60.00	35.02	37.95	50.00	23.37	26.30
25.23	0.91	2.1	N	60.00	36.29	39.28	50.00	30.81	33.80
26.51	0.93	2.2	N	60.00	36.36	39.54	50.00	29.83	33.01
26.60	0.94	2.3	H	60.00	36.27	39.46	50.00	24.43	27.62
Remark	H : Hot Line, N : Neutral Line TEST MODE : CH 25 (915.25MHz)								

11.3 Test data (CH 25)-(Single Antenna Model : FSC-06)

Test Date : 7-Apr-08

Frequency (MHz)	Correction Factor		Line (H/N)	Quasi-peak Value			Average Value		
	Lisn (dB)	Cable (dB)		Limit (dBμV)	Reading (dBμV)	Result (dBμV)	Limit (dBμV)	Reading (dBμV)	Result (dB)
0.15	0.15	0.8	H	66.00	49.78	50.68	56.00	40.06	40.96
0.18	0.16	0.8	N	64.39	40.20	41.14	54.39	30.40	31.34
0.20	0.17	0.8	H	63.74	41.60	42.56	53.74	31.79	32.75
0.21	0.12	0.3	N	63.41	37.75	38.19	53.41	31.91	32.35
0.23	0.18	0.8	H	62.60	35.46	36.46	52.60	28.23	29.23
0.49	0.20	0.8	H	56.10	34.23	35.21	46.10	28.79	29.77
1.09	0.18	0.8	H	56.00	33.34	34.32	46.00	28.05	29.03
1.29	0.19	0.8	H	56.00	33.41	34.41	46.00	27.20	28.20
1.83	0.22	0.8	H	56.00	33.60	34.65	46.00	28.29	29.34
1.93	0.23	0.8	H	56.00	33.46	34.52	46.00	27.64	28.70
2.07	0.23	0.8	N	56.00	32.51	33.59	46.00	25.53	26.61
2.32	0.24	0.9	H	56.00	33.50	34.59	46.00	26.10	27.19
20.16	0.84	1.5	H	60.00	37.27	39.62	50.00	26.02	28.37
21.88	0.87	1.7	H	60.00	44.69	47.26	50.00	34.46	37.03
21.98	0.87	1.7	N	60.00	44.02	46.60	50.00	34.19	36.77
23.51	0.89	1.9	N	60.00	42.14	44.91	50.00	36.78	39.55
23.61	0.89	1.9	H	60.00	43.22	46.00	50.00	33.49	36.27
26.28	0.93	2.2	H	60.00	36.70	39.84	50.00	31.05	34.19
Remark	H : Hot Line, N : Neutral Line TEST MODE : CH 25 (915.25MHz)								

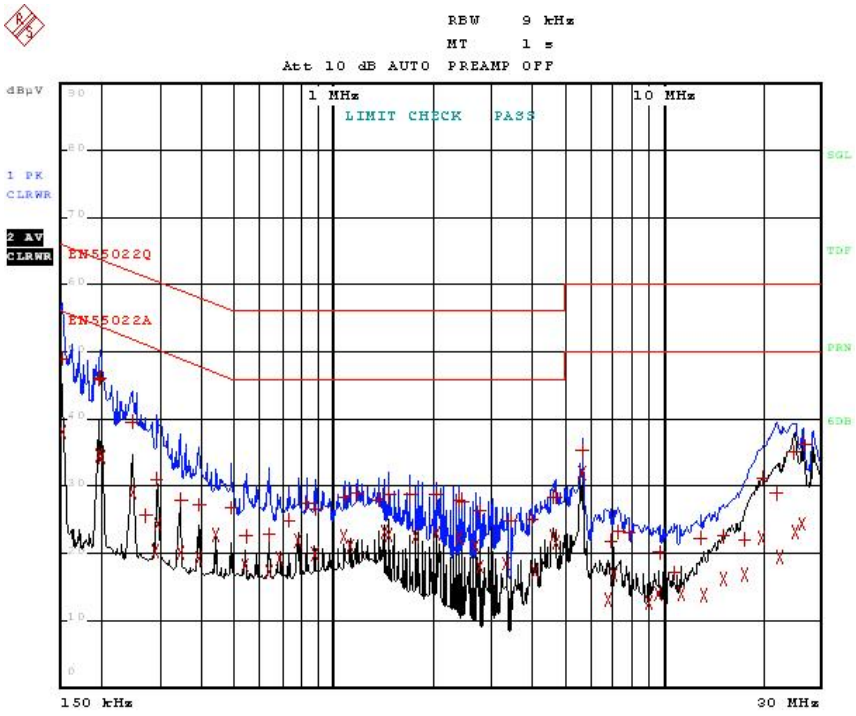
11.3 Test data (CH 25)-(Dual Antenna Model : FSDC-07)

Test Date : 7-Apr-08

Frequency (MHz)	Correction Factor		Line (H/N)	Quasi-peak Value			Average Value		
	Lisn (dB)	Cable (dB)		Limit (dBμV)	Reading (dBμV)	Result (dBμV)	Limit (dBμV)	Reading (dBμV)	Result (dB)
0.15	0.15	0.8	H	66.00	53.31	54.21	56.00	38.91	39.81
0.19	0.17	0.8	N	63.86	44.46	45.42	53.86	34.06	35.02
0.20	0.17	0.8	H	63.78	44.57	45.53	53.78	34.48	35.44
0.24	0.19	0.8	N	61.96	39.76	40.78	51.96	30.21	31.23
0.25	0.19	0.8	H	61.76	36.21	37.24	51.76	30.40	31.43
0.29	0.21	0.9	N	60.41	36.42	37.50	50.41	27.88	28.96
0.84	0.20	0.8	N	56.00	30.25	31.26	46.00	24.61	25.62
0.89	0.19	0.8	N	56.00	29.75	30.75	46.00	23.03	24.03
1.33	0.20	0.8	N	56.00	30.13	31.13	46.00	24.85	25.85
1.62	0.21	0.8	N	56.00	31.16	32.19	46.00	25.36	26.39
1.83	0.22	0.8	H	56.00	30.08	31.13	46.00	21.68	22.73
2.02	0.11	0.3	N	56.00	31.56	31.98	46.00	24.51	24.93
22.61	0.88	1.8	N	60.00	44.21	46.87	50.00	30.17	32.83
22.68	0.88	1.8	H	60.00	42.19	44.86	50.00	35.58	38.25
23.04	0.88	1.8	H	60.00	43.85	46.56	50.00	36.05	38.76
24.19	0.90	2.0	N	60.00	45.02	47.88	50.00	30.66	33.52
26.29	0.93	2.2	H	60.00	41.51	44.66	50.00	33.93	37.08
26.30	0.93	2.2	N	60.00	39.45	42.60	50.00	29.58	32.73
Remark	H : Hot Line, N : Neutral Line TEST MODE : CH 25 (915.25MHz)								

Appendix 1-1. Spectral diagram (Single Antenna Model : FDC-08)

*HOT



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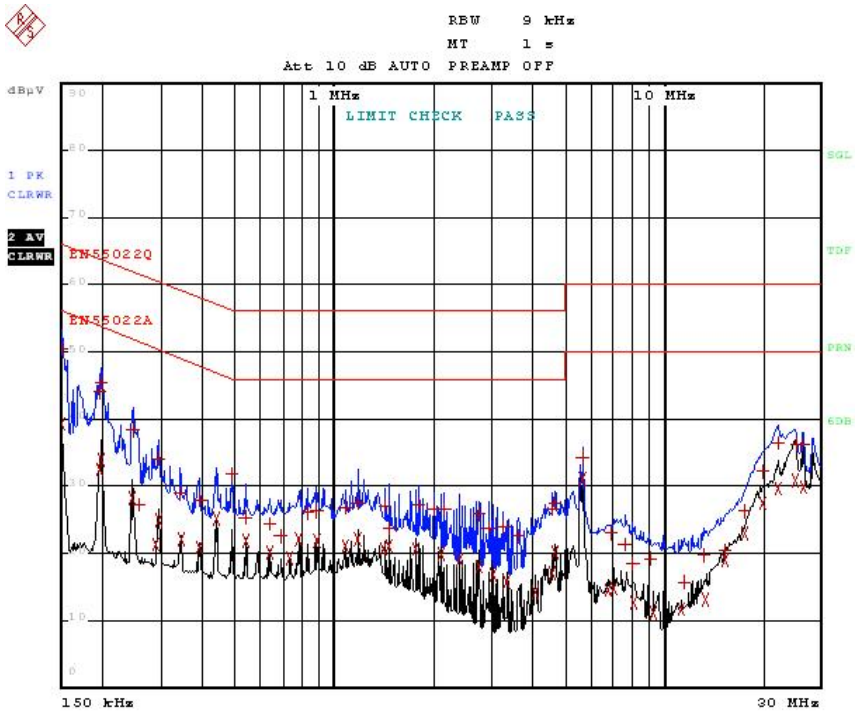
Date: 14.APR.2008 11:07:57

*NEUTRAL



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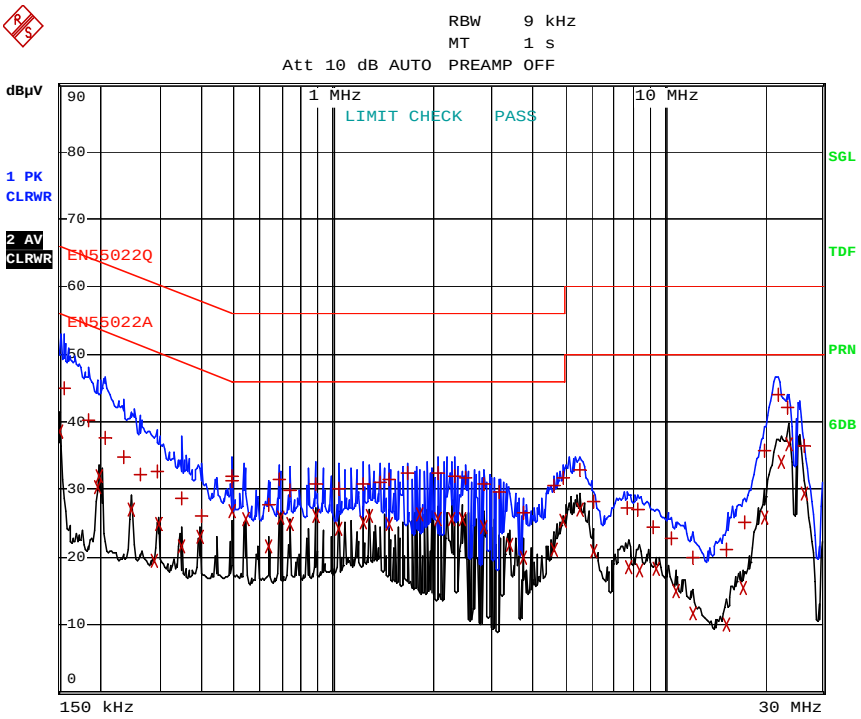
Appendix 1-2. Spectral diagram (Single Antenna Model : FSC-06)

*HOT



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Date: 7.APR.2008 21:41:18

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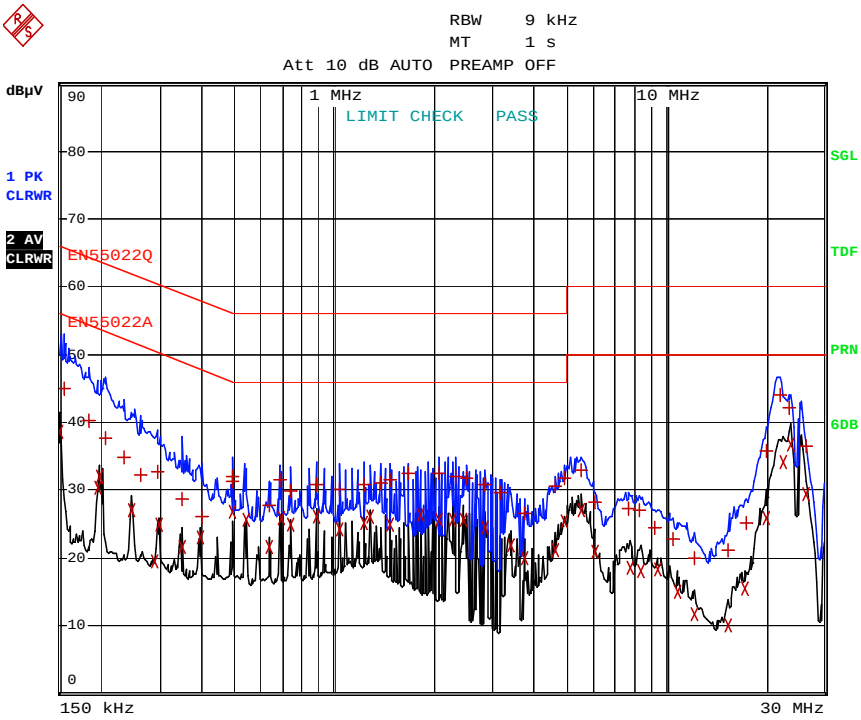

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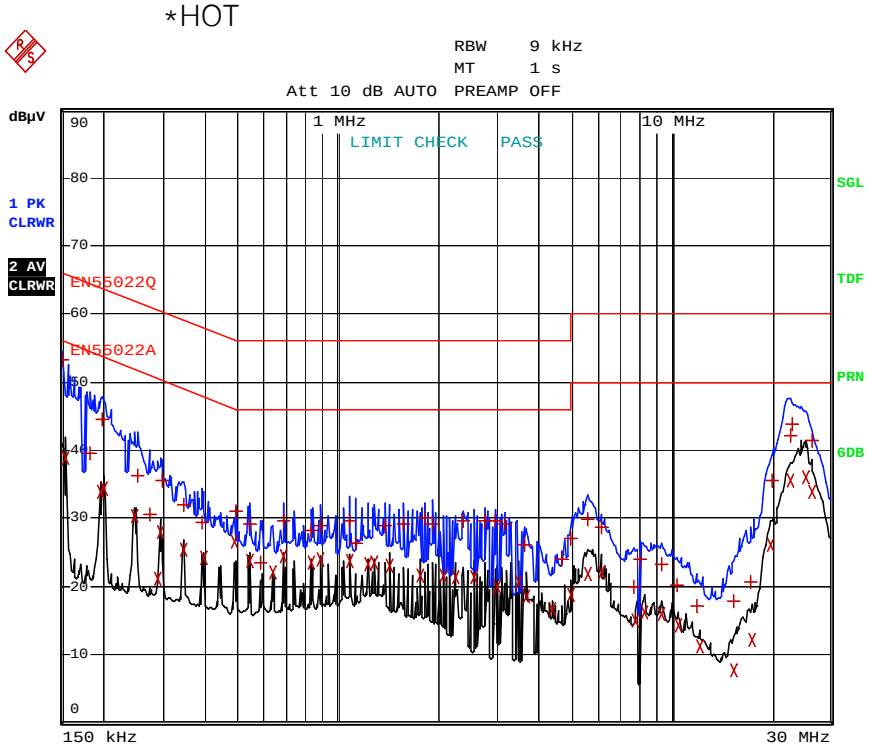
Date: 7.APR.2008 21:41:18

Appendix 1-3. Spectral diagram (Dual Antenna Model : FSDC-07)

*HOT



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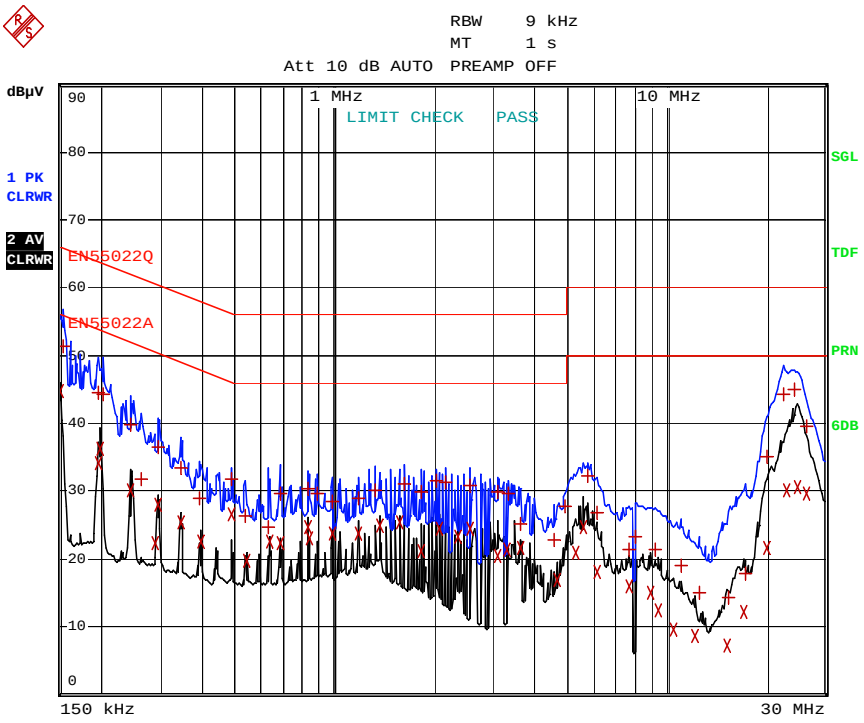

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