Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	802.11a CH 149, 157, 165 / Ant. 6

Channel 149

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 @	5739.200	128.69			89.96	34.32	0.00	4.41	PEAK	0	100	VERTICAL
2 @	5743.600	115.94			77.22	34.32	0.00	4.41	AVERAGE	0	100	VERTICAL

Item 1, 2 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 @	5778.200	127.86			89.03	34.43	0.00	4.41	PEAK	0	100	VERTICAL
2 @	5783.000	116.04			77.19	34.43	0.00	4.42	AVERAGE	2	100	VERTICAL

Item 1, 2 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Preamp Factor	Cable Loss	Remark	Table Pos	Ant Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		deg	cm	
1 @	5818.800	130.69			91.73	34.53	0.00	4.42	PEAK	360	100	VERTICAL
2 @	5822.400	117.34			78.34	34.58	0.00	4.42	AVERAGE	360	100	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

Temperature	23℃	Humidity	62%
Test Engineer	Jax Chen	Configurations	802.11a CH 149, 157, 165 / Ant. 7

Channel 149

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5747.000	115.06			73.88	34.35	6.84	0.00	AVERAGE	132	53	VERTICAL
2 @	5751.600	129.13			87.95	34.35	6.84	0.00	PEAK	132	53	VERTICAL

Item 1, 2 are the fundamental frequency at 5745 MHz.

Channel 157

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5783.000	126.86			85.65	34.36	6.86	0.00	PEAK	152	261	VERTICAL
2 @	5787.400	113.10			71.88	34.36	6.86	0.00	AVERAGE	152	261	VERTICAL

Item 1, 2 are the fundamental frequency at 5785 MHz.

Channel 165

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos	Pol/Phase
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		cm	deg	
1 @	5824.400	130.12			88.87	34.37	6.88	0.00	PEAK	128	74	VERTICAL
2 @	5824.600	117.08			75.84	34.37	6.88	0.00	AVERAGE	128	74	VERTICAL

Item 1, 2 are the fundamental frequency at 5825 MHz.

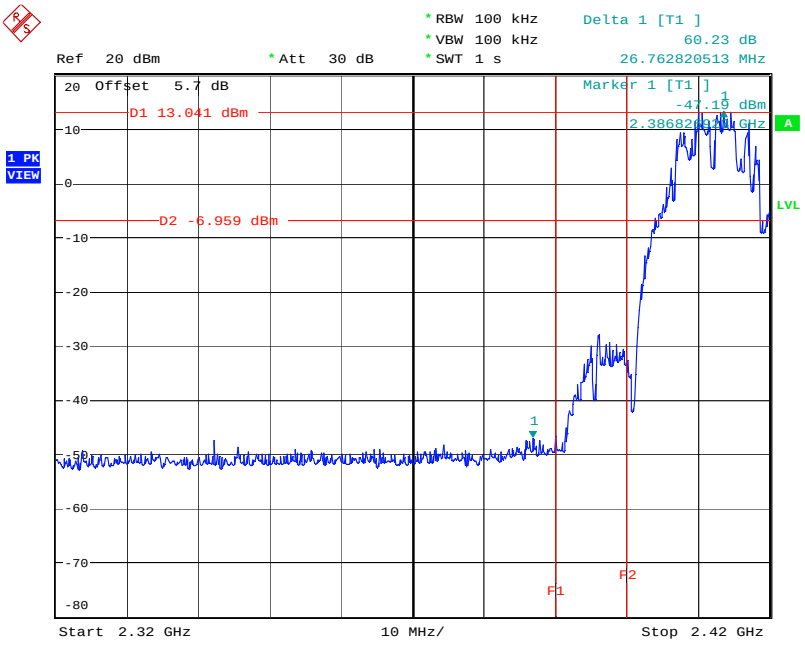
Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

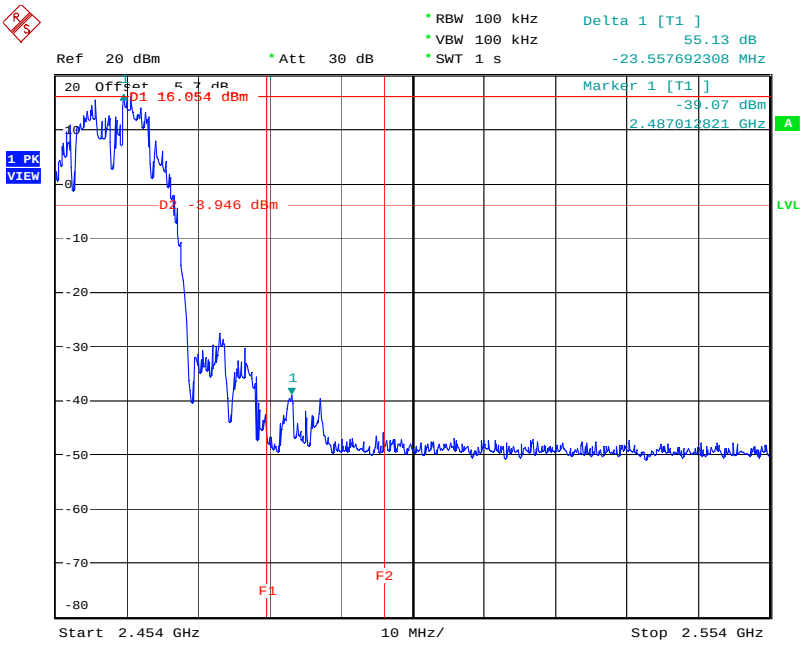
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11b Ant. 1/ 2412 MHz



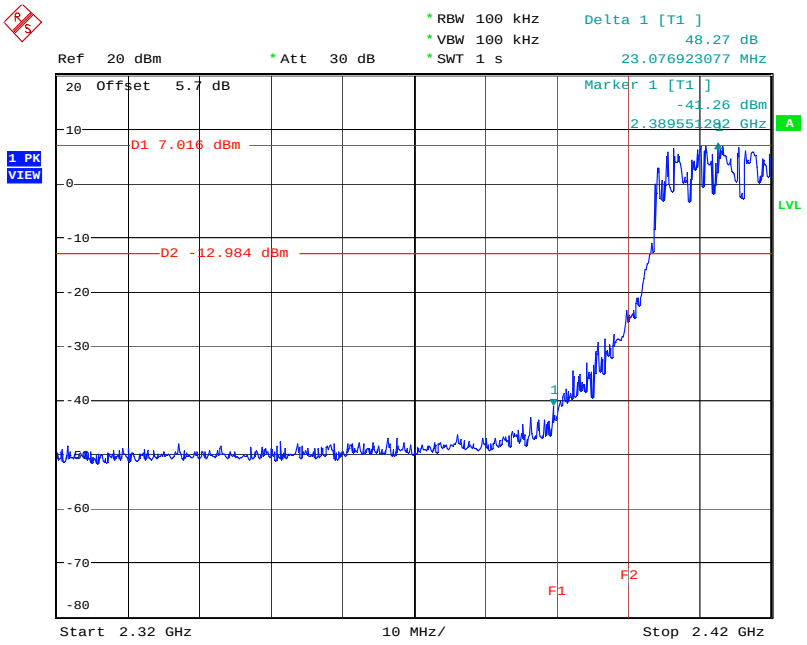
Date: 20.MAR.2008 20:47:55

High Band Edge Plot on Configuration IEEE 802.11b Ant. 1/ 2462 MHz



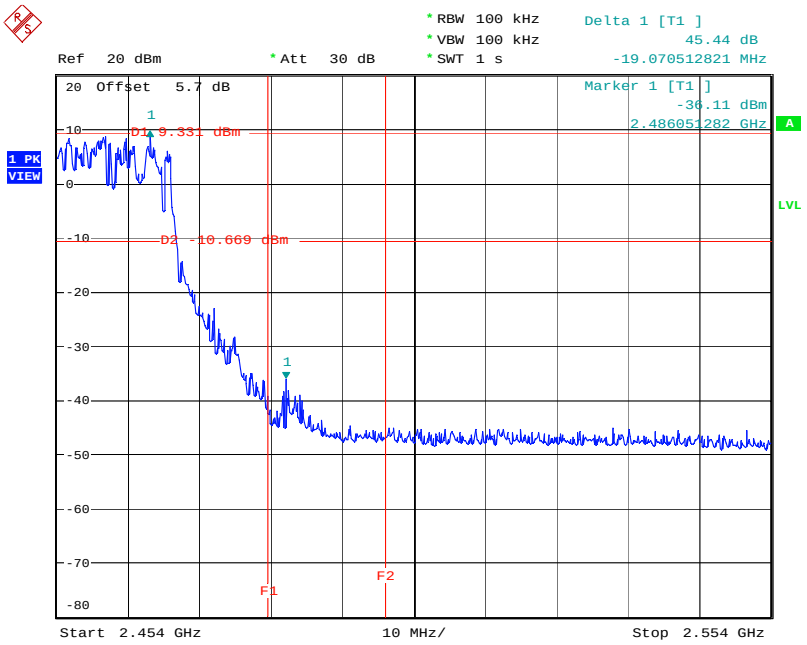
Date: 20.MAR.2008 20:49:41

Low Band Edge Plot on Configuration IEEE 802.11g Ant. 1/ 2412 MHz



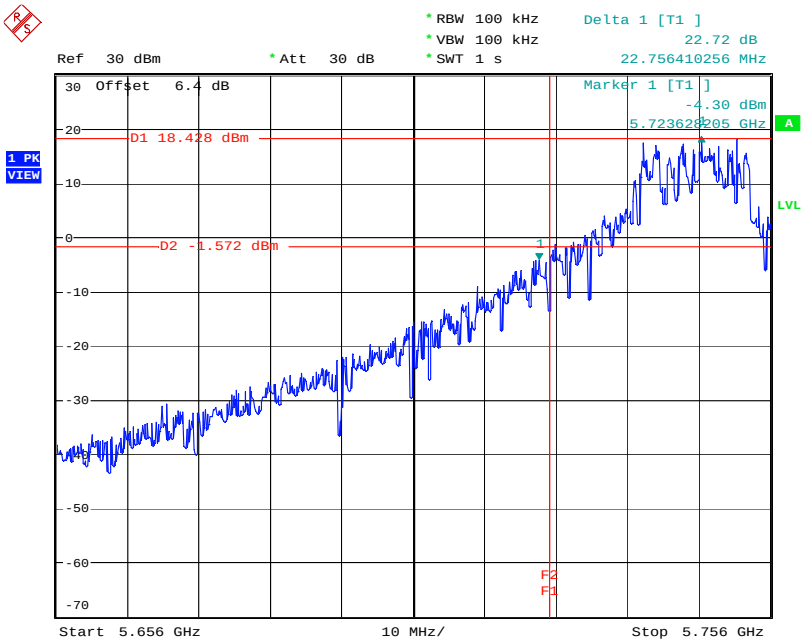
Date: 20.MAR.2008 20:52:49

High Band Edge Plot on Configuration IEEE 802.11g Ant. 1/ 2462 MHz



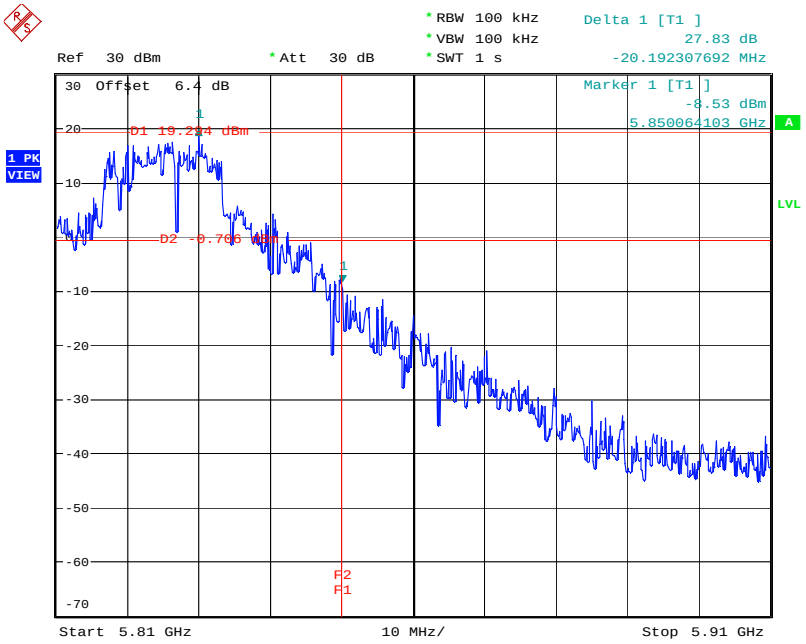
Date: 20.MAR.2008 20:50:50

Low Band Edge Plot on Configuration IEEE 802.11a Ant. 1/ 5745 MHz



Date: 21.MAR.2008 13:28:12

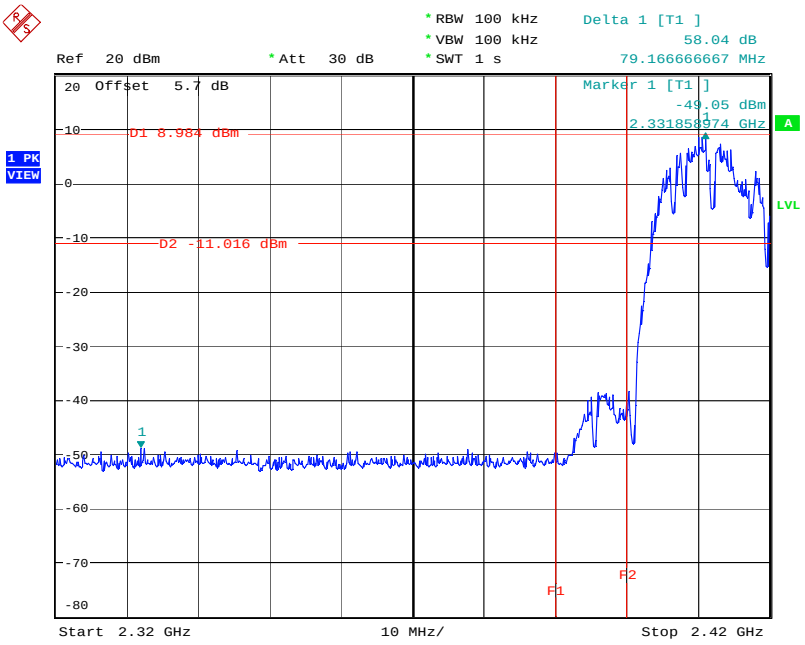
High Band Edge Plot on Configuration IEEE 802.11a Ant. 1/ 5825 MHz



Date: 21.MAR.2008 13:26:47

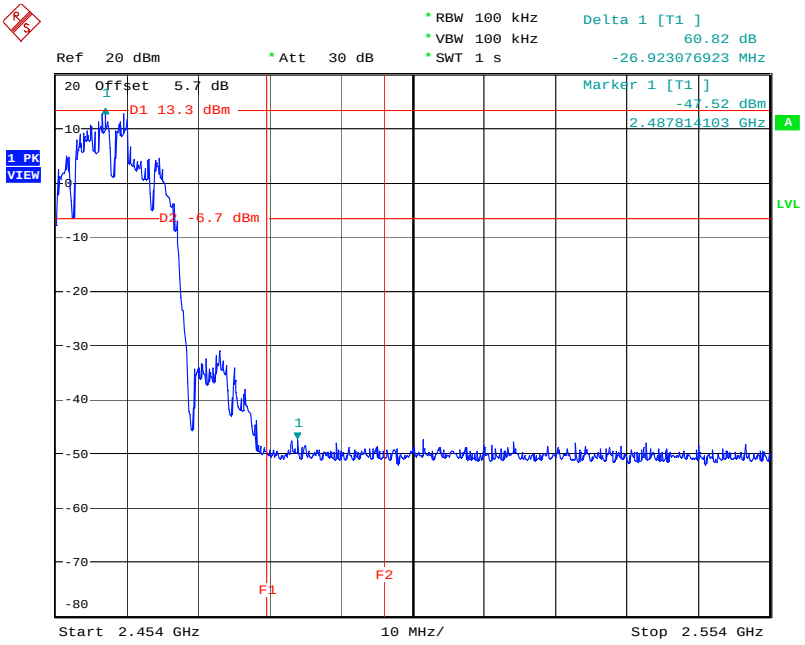
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11b Ant. 2/ 2412 MHz



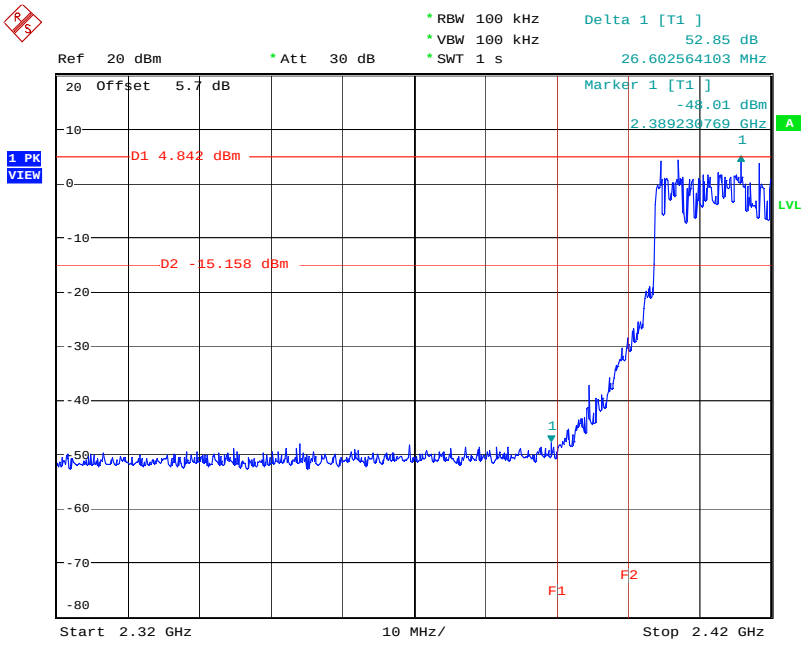
Date: 22.MAR.2008 16:36:17

High Band Edge Plot on Configuration IEEE 802.11b Ant. 2/ 2462 MHz



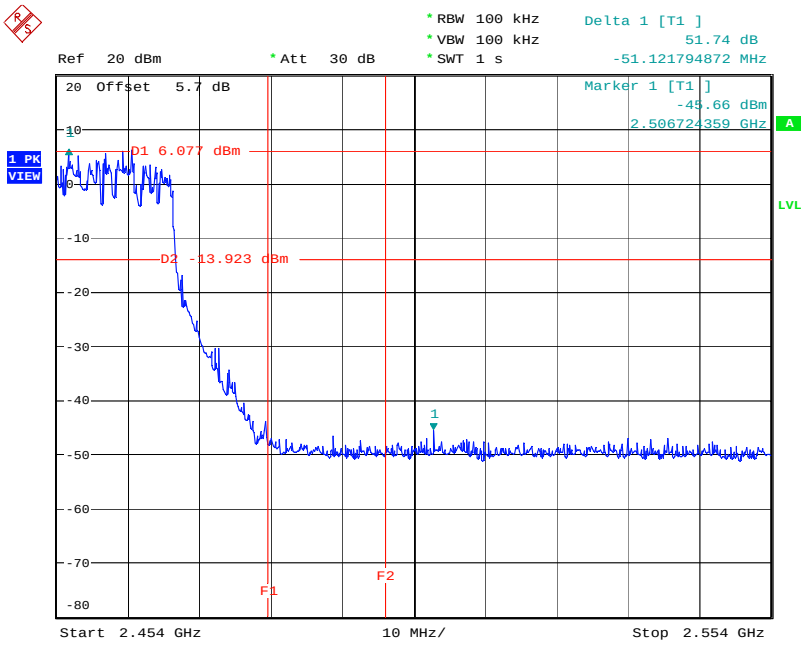
Date: 21.MAR.2008 19:25:37

Low Band Edge Plot on Configuration IEEE 802.11g Ant. 2/ 2412 MHz



Date: 22.MAR.2008 16:34:45

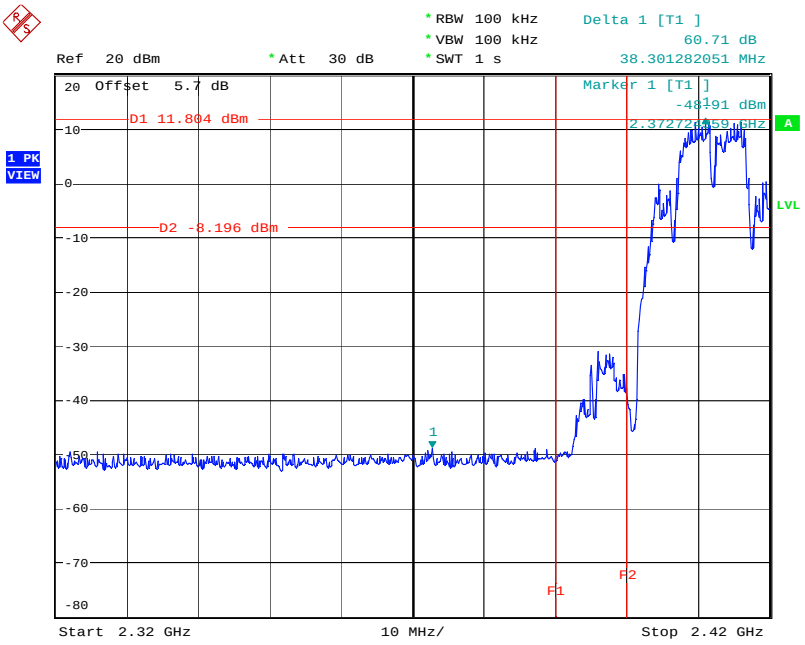
High Band Edge Plot on Configuration IEEE 802.11g Ant. 2/ 2462 MHz



Date: 22.MAR.2008 16:26:07

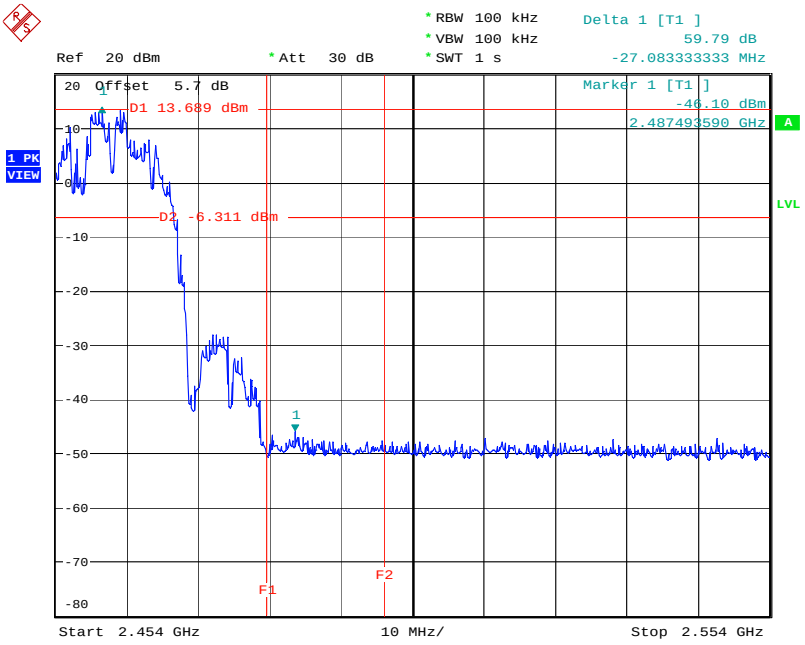
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11b Ant. 3/ 2412 MHz



Date: 22.MAR.2008 16:38:34

High Band Edge Plot on Configuration IEEE 802.11b Ant. 3/ 2462 MHz



Date: 22.MAR.2008 16:40:54

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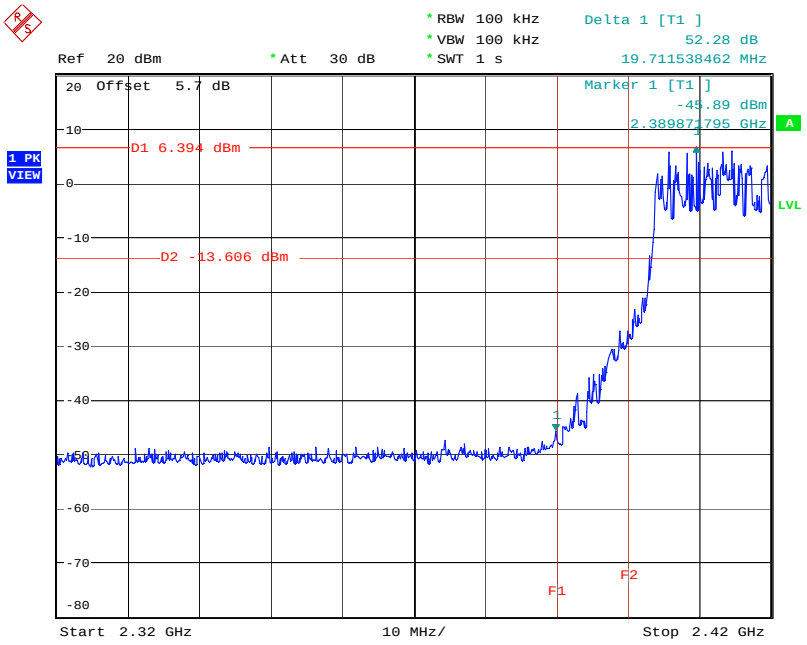
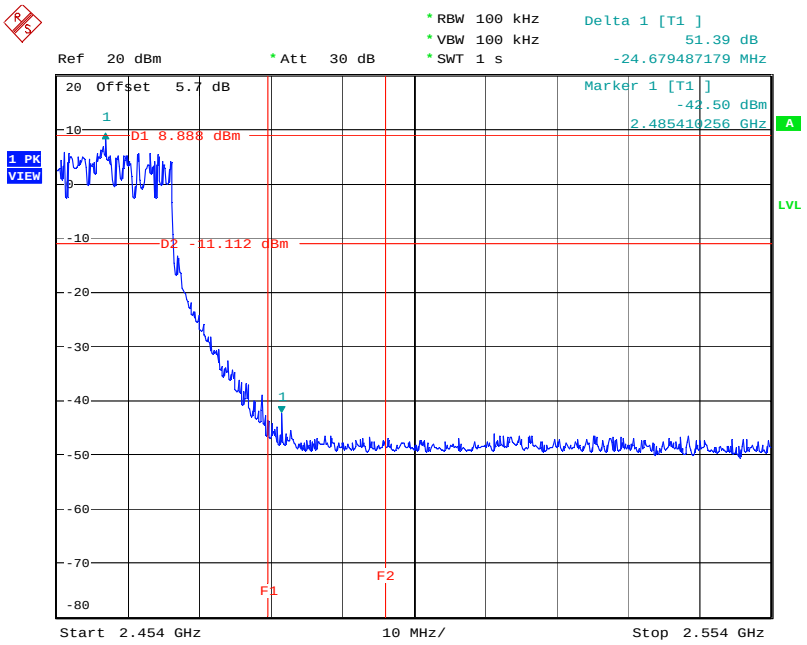


Date: 22.MAR.2008 16:33:19

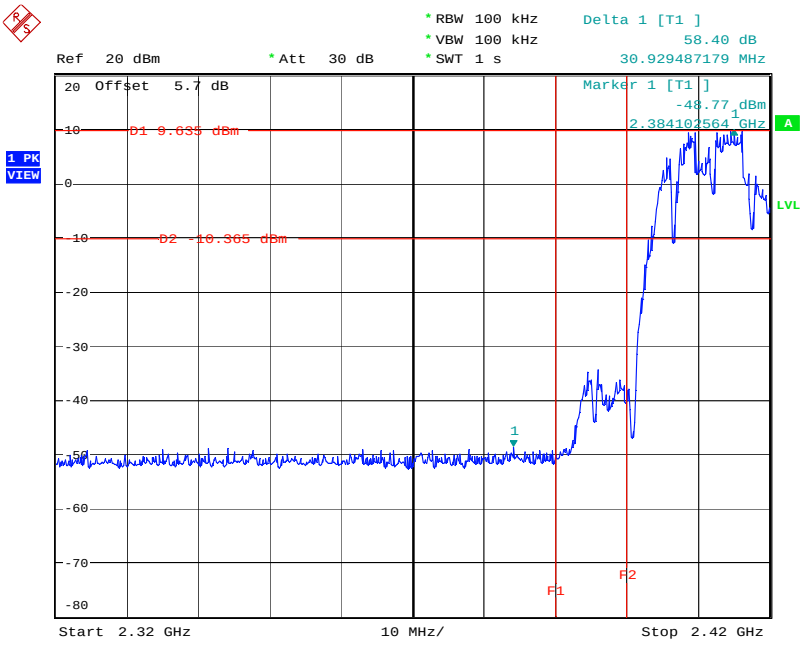
High Band Edge Plot on Configuration IEEE 802.11g Ant. 3/ 2462 MHz



Date: 22.MAR.2008 16:23:17

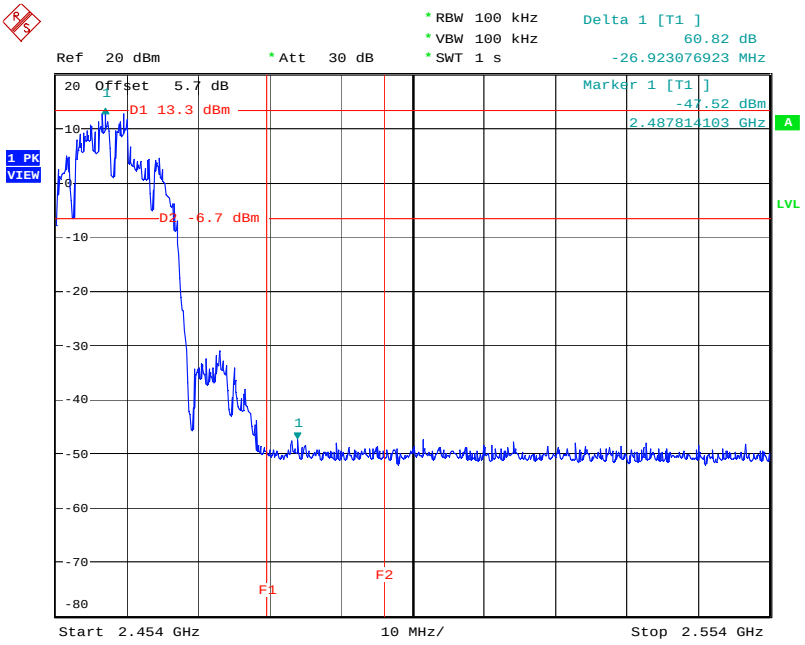
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11b Ant. 4/ 2412 MHz



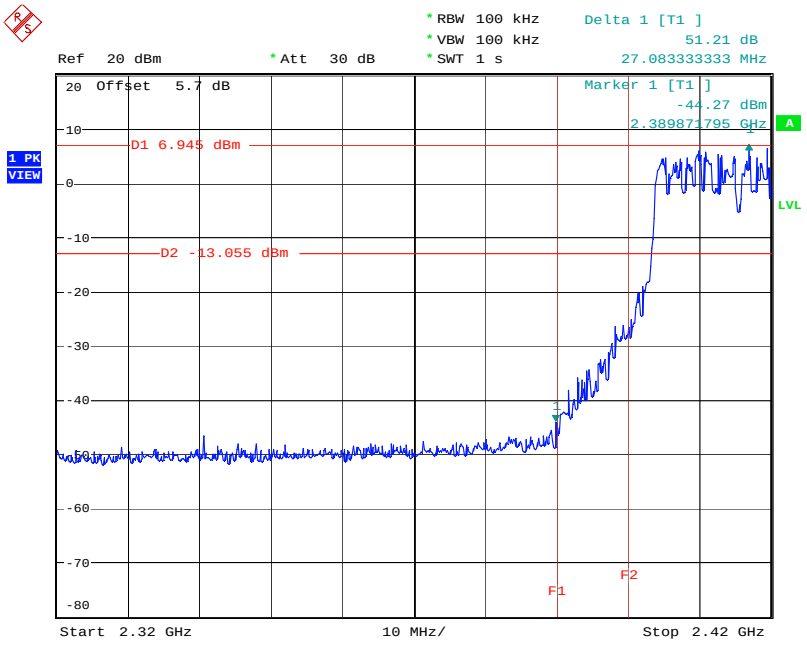
Date: 21.MAR.2008 19:27:18

High Band Edge Plot on Configuration IEEE 802.11b Ant. 4/ 2462 MHz



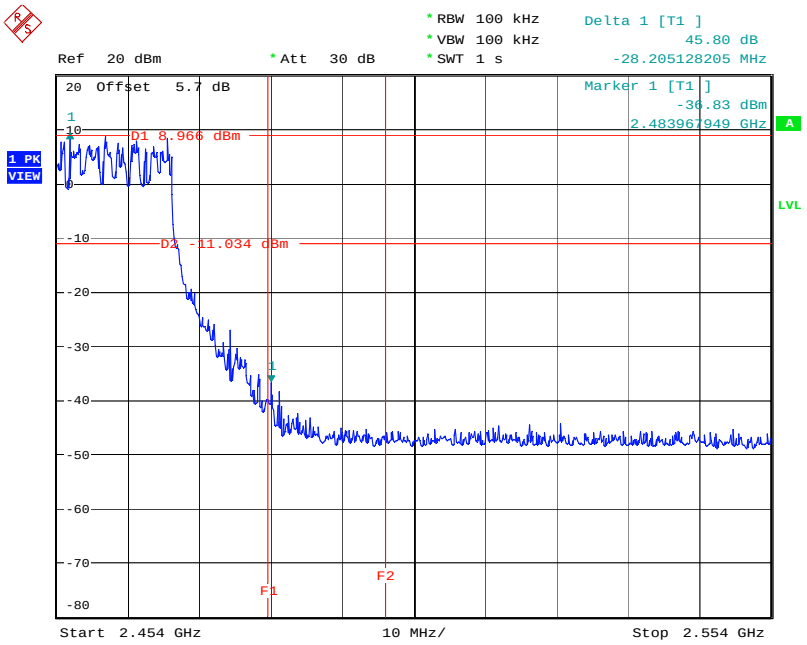
Date: 21.MAR.2008 19:25:37

Low Band Edge Plot on Configuration IEEE 802.11g Ant. 4/ 2412 MHz



Date: 21.MAR.2008 19:20:33

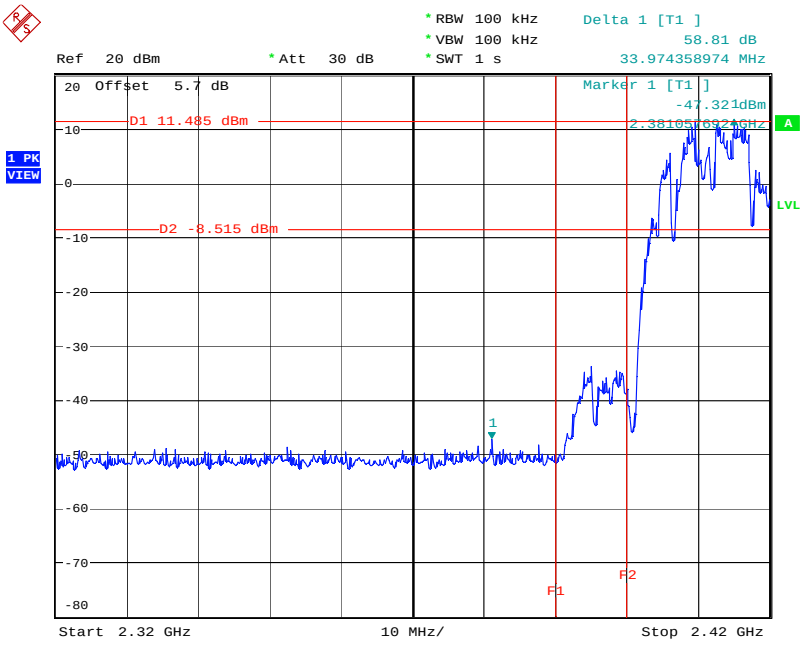
High Band Edge Plot on Configuration IEEE 802.11g Ant. 4/ 2462 MHz



Date: 21.MAR.2008 19:24:38

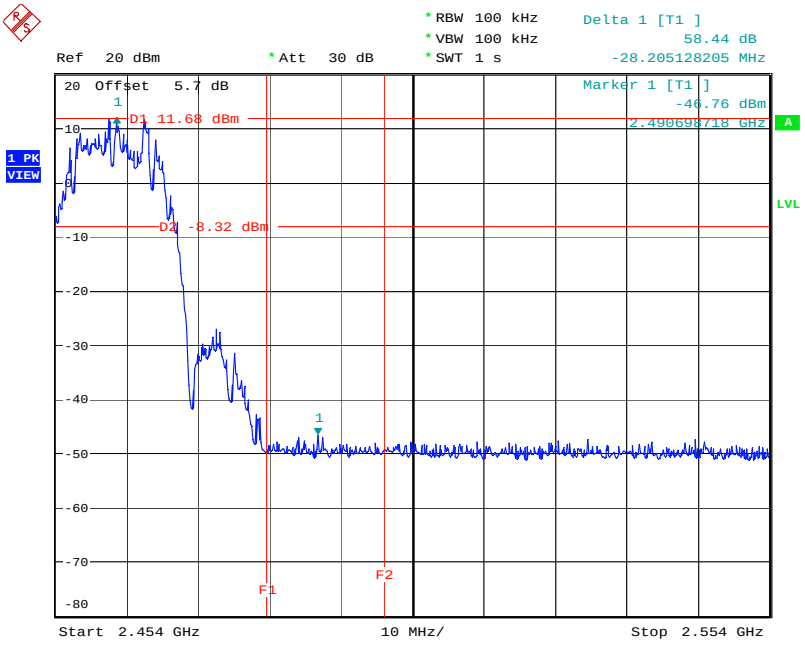
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11b Ant. 5/ 2412 MHz



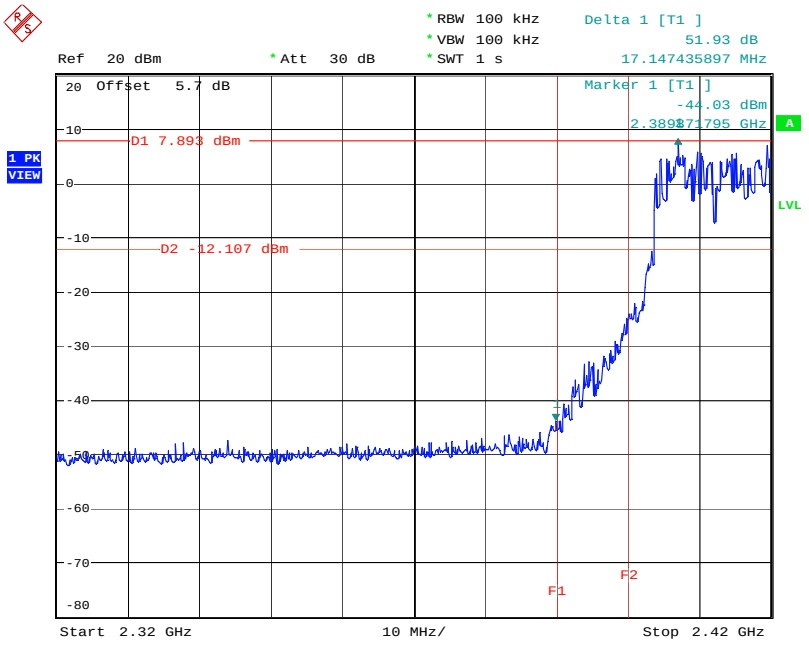
Date: 21.MAR.2008 16:12:59

High Band Edge Plot on Configuration IEEE 802.11b Ant. 5/ 2462 MHz



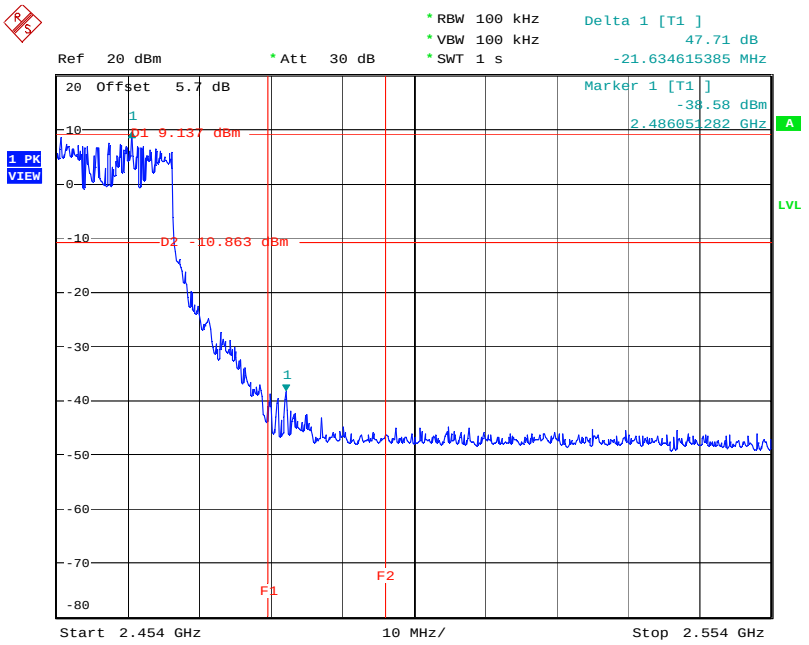
Date: 21.MAR.2008 16:15:52

Low Band Edge Plot on Configuration IEEE 802.11g Ant. 5/ 2412 MHz



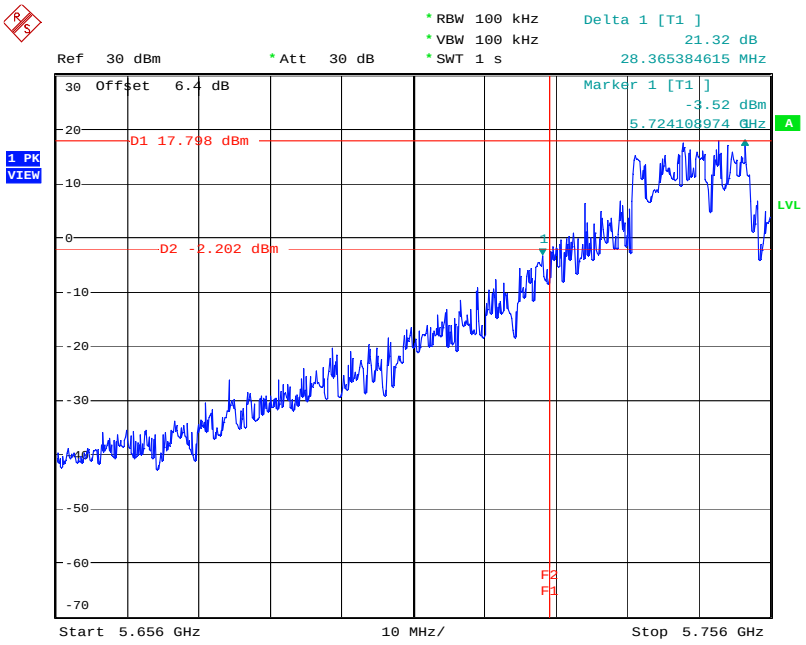
Date: 21.MAR.2008 16:18:43

High Band Edge Plot on Configuration IEEE 802.11g Ant. 5/ 2462 MHz



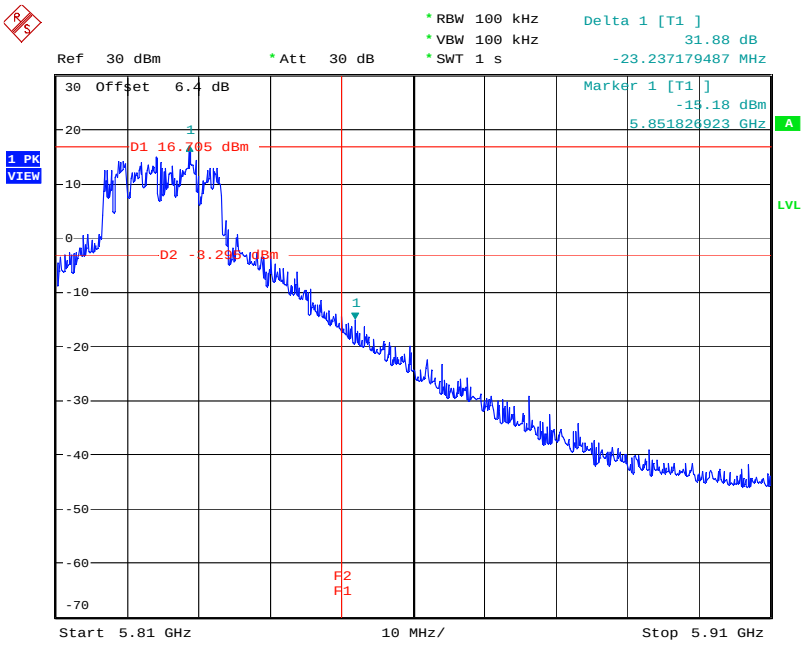
Date: 21.MAR.2008 16:16:46

Low Band Edge Plot on Configuration IEEE 802.11a Ant. 5/ 5745 MHz



Date: 21.MAR.2008 16:00:57

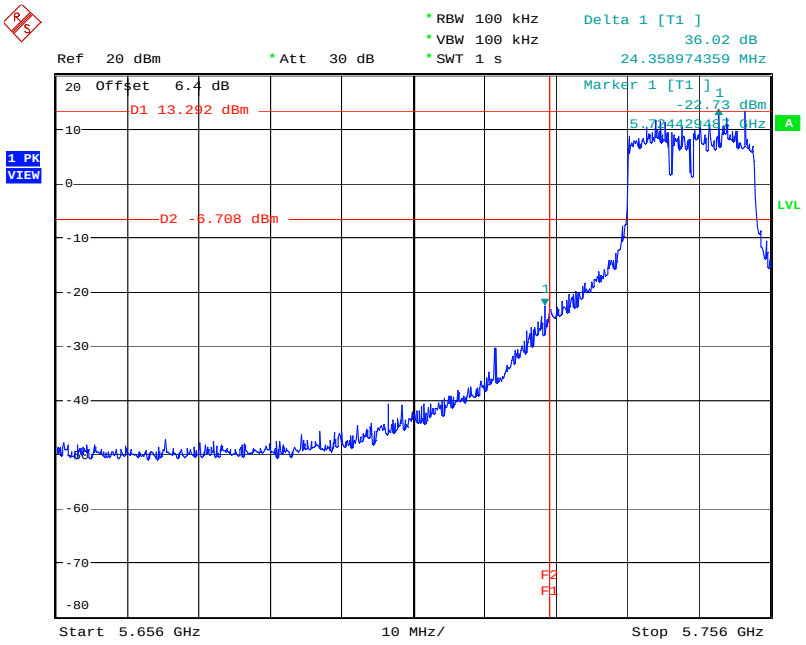
High Band Edge Plot on Configuration IEEE 802.11a Ant. 5/ 5825 MHz



Date: 21.MAR.2008 16:08:56

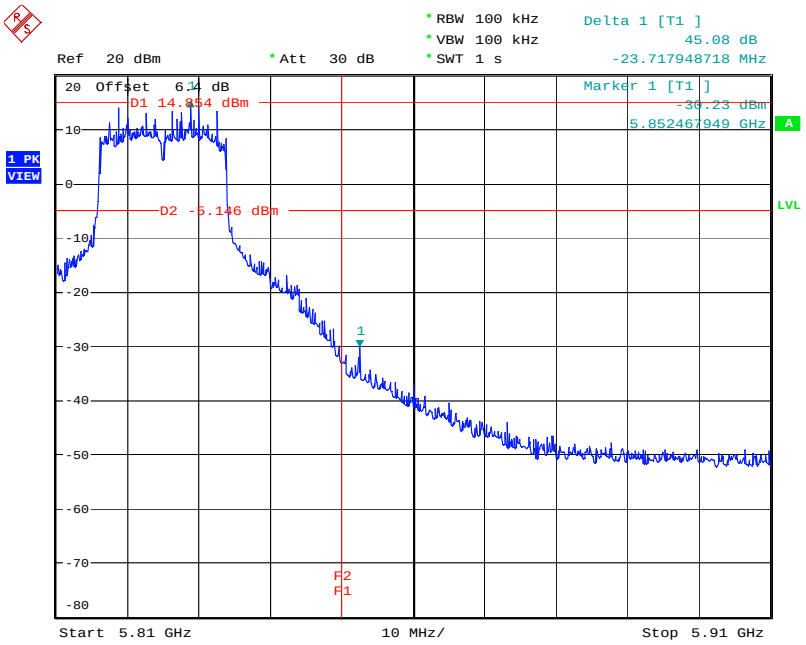
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11a Ant. 6/ 5745 MHz



Date: 25.MAR.2008 15:33:25

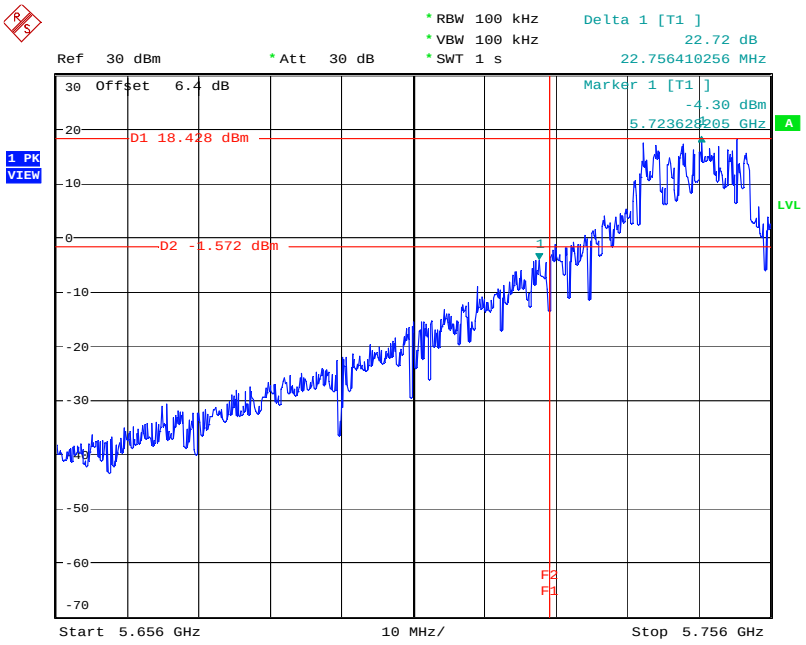
High Band Edge Plot on Configuration IEEE 802.11a Ant. 6/ 5825 MHz



Date: 25.MAR.2008 15:37:17

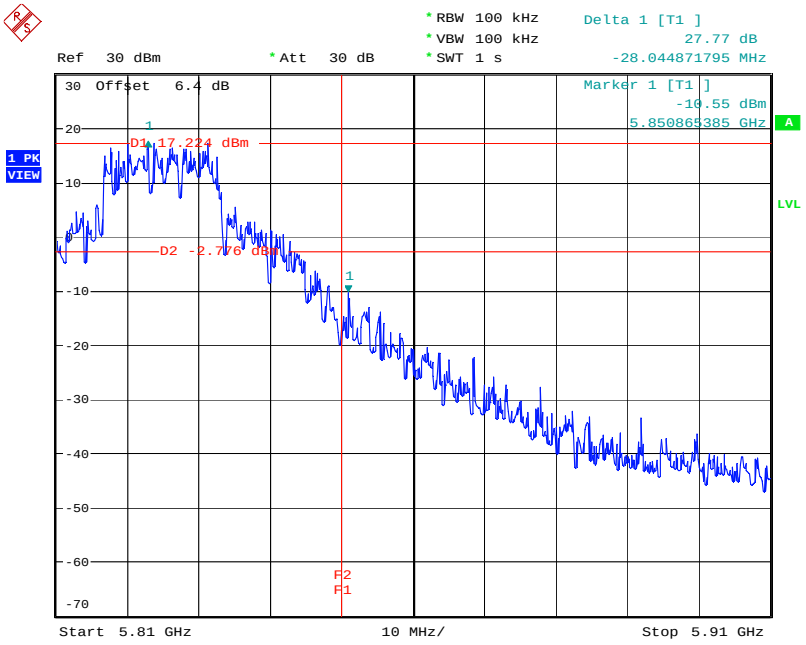
For Emission not in Restricted Band

Low Band Edge Plot on Configuration IEEE 802.11a Ant. 7/ 5745 MHz



Date: 21.MAR.2008 13:28:12

High Band Edge Plot on Configuration IEEE 802.11a Ant. 7/ 5825 MHz



Date: 26.MAR.2008 17:31:52

4.7. Antenna Requirements

4.7.1. Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

4.7.2. Antenna Connector Construction

Please refer to section 3.3 in this test report; antenna connector complied with the requirements.

5. LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz – 2.75GHz	Mar. 03, 2008	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 31, 2008	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2008	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2007	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	Mar. 27, 2008	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	Conduction (CO04-HY)
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30 MHz - 1 GHz 3m	Jun. 14, 2007	Radiation (03CH03-HY)
Amplifier	SCHAFFNER	COA9231A	18667	9 kHz - 2 GHz	Jan. 14, 2008	Radiation (03CH03-HY)
Amplifier	Agilent	8449B	3008A02120	1 GHz - 26.5 GHz	Jun. 07, 2007	Radiation (03CH03-HY)
Amplifier	MITEQ	AMF-6F-260400	9121372	26.5 GHz - 40 GHz	Jan. 22, 2007*	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP40	100305	9 kHz - 40 GHz	Sep. 27, 2007	Radiation (03CH03-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz - 30 MHz	May 23, 2006*	Radiation (03CH03-HY)
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30 MHz – 1 GHz	Jul. 21, 2007	Radiation (03CH03-HY)
Horn Antenna	EMCO	3115	6741	1GHz ~ 18GHz	May 04, 2007	Radiation (03CH03-HY)
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15 GHz - 40 GHz	Jan.18, 2008	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30 MHz - 1 GHz	Dec. 03, 2007	Radiation (03CH03-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	1 GHz - 40 GHz	Dec. 03, 2007	Radiation (03CH03-HY)
Turn Table	HD	DS 420	420/650/00	0 – 360 degree	N/A	Radiation (03CH03-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation (03CH03-HY)
Spectrum Analyzer	R&S	FSP30	100023	9kHz ~ 30GHz	Jan. 10, 2008	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jun. 27, 2007	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100458	DC ~ 30GHz	Jun. 27, 2007	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jun. 27, 2007	Conducted (TH01-HY)
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	May 04, 2007*	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 13, 2008	Conducted (TH01-HY)
Temp. and Humidity Chamber	KSON	THS-C3L	612	N/A	Oct. 01, 2007	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 01, 2007	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 01, 2007	Conducted (TH01-HY)
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Nov. 14, 2007	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 10, 2008	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

Note: *Calibration Interval of instruments listed above is two year.

6. TEST LOCATION

SHIJR	ADD	:	6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C.
	TEL	:	886-2-2696-2468
	FAX	:	886-2-2696-2255
HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
	TEL	:	886-3-327-3456
	FAX	:	886-3-318-0055
LINKOU	ADD	:	No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C
	TEL	:	886-2-2601-1640
	FAX	:	886-2-2601-1695
DUNGHU	ADD	:	No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C.
	TEL	:	886-2-2631-4739
	FAX	:	886-2-2631-9740
JUNGHE	ADD	:	7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C.
	TEL	:	886-2-8227-2020
	FAX	:	886-2-8227-2626
NEIHU	ADD	:	4Fl., No. 339, Hsin Hu 2nd Rd., Taipei 114, Taiwan, R.O.C.
	TEL	:	886-2-2794-8886
	FAX	:	886-2-2794-9777
JHUBEI	ADD	:	No.8, Lane 728, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C.
	TEL	:	886-3-656-9065
	FAX	:	886-3-656-9085

7. TAF CERTIFICATE OF ACCREDITATION

Certificate No. : L1190-070110

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	:	ISO/IEC 17025:2005
Accreditation Number	:	1190
Originally Accredited	:	December 15, 2003
Effective Period	:	January 10, 2007 to January 09, 2010
Accredited Scope	:	Testing Field, see described in the Appendix
Specific Accreditation Program	:	Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory

Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 10, 2007

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The Appendix forms an integral part of this Certificate, which shall be invalid when used without the Appendix.