HERMON LABORATORIES

ELECTRICAL TESTING
0839.01

Hermon Laboratories Ltd.
Harakevet Industrial Zone, Binyamina 30500,
Israel
Tel. +972-4-6288001
Fax. +972-4-6288277
E-mail: mail@hermonlabs.com

TEST REPORT

ACCORDING TO: FCC CFR 47 PART 90, section 90.219

FOR:

Axell Wireless Israel Ltd.
Band Selective Repeater
Model: D-MBR 3007-3008-PS-NFPA
FCC ID:NEODMBR30073008PS

Table of contents

1 Applicant information

Client name:	Axell Wireless Israel Ltd.
Address:	6 Bareket street, Petach Tikva 49002, Israel
Telephone:	+972 3918 0180
Fax:	+972 3918 0190
E-mail:	Tamir.BenShoshan@axellwireless.com
Contact name:	Mr. Tamir Ben Shoshan

2 Equipment under test attributes

Product name:	Band Selective Repeater
Product type:	a 90.219 Class B signal booster
Model(s):	D-MBR 3007-3008-PS-NFPA
Serial number:	1403D1001
Hardware version:	B
Software release:	5.9.3
Receipt date	23-Mar-14

3 Manufacturer information

Manufacturer name:	Axell Wireless Israel Ltd.
Address:	6 Bareket street, Petach Tikva 49002, Israel
Telephone:	+972 3918 0180
Fax:	+972 3918 0190
E-Mail:	Tamir.BenShoshan@axellwireless.com
Contact name:	Mr. Tamir Ben Shoshan

4 Test details

Project ID:	25633
Location:	Hermon Laboratories Ltd. Harakevet Industrial Zone, Binyamina 30500, Israel
Test started:	23-Mar-14
Test completed:	27-Apr-14
Test specification(s):	47CFR part 90, section 90.219

5 Tests summary

Test	Status
Transmitter characteristics	
Section 90.219(e)(1), Radiated output power	Pass
Section 90.219(a), Occupied bandwidth	Pass
Section 90.210(b), Emission mask	Pass
Section 90.210(b), Intermodulation product	Pass
Section 90.219(e)(3), Radiated spurious emissions	Pass
Section 90.219(e)(3), Conducted spurious emissions	Pass
Section 2.1091, RF radiation exposure evaluation	Pass, exhibit provided in Application for certification
Section 2.219(e)(2) Noise figure	Pass
Section 90.210(h), Emission mask	Pass

Testing was completed against all relevant requirements of the test standard. The results obtained indicate that the product under test complies in full with the requirements tested.
The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

This test report supersedes the previously issued test report identified by Doc ID:AXERAD_FCC.25633_rev3.

	Name and Title	Date	Signature
Tested by:	Mr. S. Samokha, test engineer	April 27, 2014	
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	September 24, 2014	
Approved by:	Mr. M. Nikishin, EMC and Radio group manager	September 24, 2014	

6 EUT description

6.1 General information

The EUT, Digital Multi Band Repeater for Public Safety, model D-MBR 3007-3008-PS NFPA, is a high-power digital multi-channel signal booster (DCSB) that features an array of up to 12 DSP based, softwarecontrolled, variable bandwidth filters, user-programmable across the 700 and 800 MHz bands.

The D-MBR 3007-3008-PS NFPA supports all public safety technologies. In addition to specifying the centre frequency of each filter, the user can select a filter from a drop down list that has several choices for each pass band that vary in time delay and filter slope. This gives the engineer the unique ability to trade off the adjacent channel rejection and time delay interference for the coverage area permitting the use of the D-MBR 3007-3008-PS NFPA in applications where no other booster solution will work.

Every parameter of D-MBR 3007-3008 PS NFPA including filter tuning and selection, is software controlled via Web management. The patented Axell Wireless' digital RF filter not only enables simple initial setup for any channel plan, but if necessary even permits a simple reconfiguration because of re-banding.

6.2 EUT modules and sub-assemblies

Description	Manufacturer	Model or P/N	Serial number
Booster	Axell Wireless	D-MBP 3007-3008-PS-NFPA	1403D1001
AC/DC adapter	MW	CLG-150-30A	825279200

6.3 EUT options/configurations

Number	Operating mode description	Configuration
1	Transmit 758-775 MHz, Downlink	1
2	Transmit 851-861 MHz, Downlink	2
3	Transmit 788-805 MHz, Uplink	3
4	Transmit 806-816 MHz, Uplink	4

6.4 Ports and lines

Port type	Port description	Connected from	Connected to	Qty.	Cable type	Cable length, m
Power	AC	AC mains	AC/DC adapter	1	Unshielded	1.5
Power	DC	AC/DC adapter	EUT	1	Unshielded	0.3
Signal	Ethernet	EUT	PC	1	UTP	5
Signal	Antenna	EUT	Antenna	2	Coax	NA
Signal	Alarm I/O	EUT	OC	1	Unshielded	3

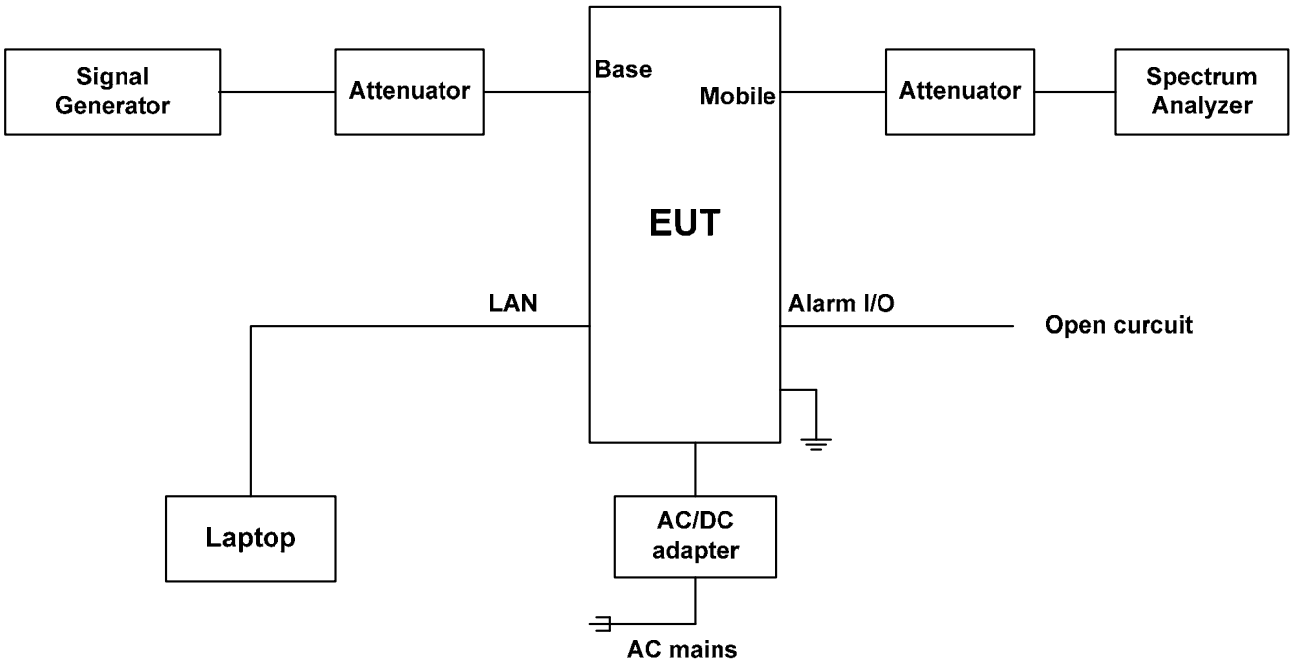
6.5 Support and test equipment

Description	Manufacturer	Model number	Serial number
Laptop	DELL	PP20L	5QXF83G
AC/DC adapter	DELL	LA65N80	0DF263-71615-7QF-E850
Mouse	Logitech	810-001317	NA

6.6 Changes made in EUT

No changes were implemented in the EUT during testing.

6.7 Test configuration



6.8 Transmitter characteristics

Type of equipment	
V	Stand-alone (Equipment with or without its own control provisions)
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)
	Plug-in card (Equipment intended for a variety of host systems)

Intended use		**Condition of use**
V	fixed	Always at a distance more than 2 m from all people
	mobile	Always at a distance more than 20 cm from all people
	portable	May operate at a distance closer than 20 cm to human body

Assigned frequency range	DL 758.0 – 775.0 MHz; UL 788.0 – 805.0 MHz- FCC part 90, subpart R DL 851.0 – 861.0 MHz; UL 806.0 – 816.0 MHz - FCC part 90, section 90.614
Operating frequency range	DL 758.0 – 775.0 MHz; UL 788.0 – 805.0 MHz DL 851.0 – 861.0 MHz; UL 806.0 – 816.0 MHz

Maximum rated output power	At maximum gain, Output port	30 dBm each band
	EIRP density dBm / MHz (aggregate power of both RF chains) with maximum declared antenna gain	NA

Is transmitter output power variable?		No			
	V	Yes		continuous variable	
			V	stepped variable with stepsize	1.0 dB
			minimum RF power		NA
			maximum RF power		30 dBm

Antenna connection				
unique coupling	**V**	standard connector	Integral	with temporary RF connector
				without temporary RF connector

Antenna/s technical characteristics				
Type	Manufacturer	Model number	Antenna gain, dBi	Cable loss, dB
External (Indoor)	NA	NA	NA	NA
External (Outdoor)	NA	NA	NA	NA

Transmitter aggregate data rate/s, Mbps			
Transmitter 99% power bandwidth	Type of modulation		
	C4FM	iDEN QAM	Analog FM
	9.6 kbps	64 kbps	9.6 kbps

Type of multiplexing	
Modulating test signal (baseband)	
Maximum transmitter duty cycle in normal use	

Transmitter power source			
	DC	Nominal rated voltage	
V	AC	Nominal rated voltage	From 120 VAC via AC/DC adapter

Common power source for transmitter and receiver	V	yes	no

Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

7 Transmitter tests according to 47CFR part 90 requirements

7.1 Maximum output power test

7.1.1 General

This test was performed to measure the peak output power at RF antenna connector. Specification test limits are given in Table 7.1.1.

Table 7.1.1 Maximum output power limits

Assigned frequency range, MHz	Maximum output power (ERP)	
	W	dBm
Above 150.0	5.0	37.0

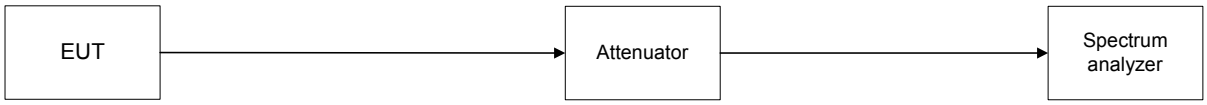
7.1.2 Test procedure

7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.

7.1.2.2 The EUT was adjusted to produce maximum available to the end user RF output power.

7.1.2.3 The peak output power was measured with spectrum analyzer as provided in the associated tables and plots.

Figure 7.1.1 Peak output power test setup



Test specification:	**Section 90.219(e)(1), Maximum output power**		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 51 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.1.2 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
MODULATING SIGNAL: C4FM
CONFIGURATION: Dual Band

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
758.0	Base	28.83	28.46	28.83	37.0	-8.17	Pass
766.0	Base	30.42	29.77	30.42	37.0	-6.58	Pass
775.0	Base	30.55	29.96	28.83	37.0	-8.17	Pass
Uplink transmit mode							
788.0	Mobile	27.06	26.73	27.06	37.0	-9.94	Pass
796.0	Mobile	27.84	27.45	27.84	37.0	-9.16	Pass
805.0	Mobile	27.86	27.51	27.86	37.0	-9.14	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
851.0	Base	30.69	30.65	30.69	37.0	-6.31	Pass
856.0	Base	30.28	30.72	30.32	37.0	-6.68	Pass
861.0	Base	31.52	31.29	31.52	37.0	-5.48	Pass
Uplink transmit mode							
806.0	Mobile	27.82	27.62	27.82	37.0	-9.18	Pass
811.0	Mobile	27.32	27.53	27.53	37.0	-9.47	Pass
816.0	Mobile	26.57	27.09	27.09	37.0	-9.91	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Test specification:	**Section 90.219(e)(1), Maximum output power**		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 51 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.1.3 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
MODULATING SIGNAL: C4FM
CONFIGURATION: Single Band

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
758.0	Base	31.95	30.83	31.95	37.00	-5.05	Pass
766.0	Base	31.75	32.78	32.78	37.00	-4.22	Pass
775.0	Base	32.06	32.36	31.95	37.00	-5.05	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
851.0	Base	32.79	32.62	32.79	37.00	-4.21	Pass
856.0	Base	32.79	32.91	32.91	37.00	-4.09	Pass
861.0	Base	32.04	32.55	32.55	37.00	-4.45	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Test specification:	**Section 90.219(e)(1), Maximum output power**		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 51 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.1.4 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 kHz
VIDEO BANDWIDTH: 10 kHz
MODULATING SIGNAL: iDEN QAM
CONFIGURATION: Dual Band

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
758.0	Base	26.08	26.36	26.36	37.0	-10.64	Pass
766.0	Base	27.91	27.31	27.93	37.0	-9.07	Pass
775.0	Base	27.24	27.02	27.24	37.0	-9.76	Pass
Uplink transmit mode							
788.0	Mobile	25.23	28.74	28.76	37.0	-8.24	Pass
796.0	Mobile	26.92	29.64	29.64	37.0	-7.36	Pass
805.0	Mobile	26.85	29.27	29.29	37.0	-7.71	Pass

OPERATING FREQUENCY RANGE: 861 MHz (downlink)
816 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
851.0	Base	28.46	28.30	28.46	37.0	-8.54	Pass
856.0	Base	28.92	28.01	28.94	37.0	-8.06	Pass
861.0	Base	28.56	28.46	28.56	37.0	-8.44	Pass
Uplink transmit mode							
806.0	Mobile	25.65	29.16	29.18	37.0	-7.82	Pass
811.0	Mobile	26.49	29.21	29.21	37.0	-7.79	Pass
816.0	Mobile	25.06	28.85	28.87	37.0	-8.13	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Table 7.1.5 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 kHz
VIDEO BANDWIDTH: 10 kHz
MODULATING SIGNAL: iDEN QAM
CONFIGURATION: Single Band

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
758.0	Base	29.44	29.57	29.57	37.0	-7.43	Pass
766.0	Base	31.77	30.58	31.77	37.0	-5.23	Pass
775.0	Base	29.55	30.26	30.26	37.0	-6.74	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
851.0	Base	30.83	31.16	31.16	37.0	-5.84	Pass
856.0	Base	30.79	32.71	32.71	37.0	-4.29	Pass
861.0	Base	31.46	31.69	31.69	37.0	-5.31	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Test specification:	**Section 90.219(e)(1), Maximum output power**		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 51 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.1.6 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
MODULATING SIGNAL: Analog FM 10.0 kHz/1 kHz
CONFIGURATION: Dual Band

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
758.0	Base	29.02	28.83	29.02	37.0	-7.98	Pass
766.0	Base	31.45	30.48	31.45	37.0	-5.55	Pass
775.0	Base	30.79	29.43	30.79	37.0	-6.21	Pass
Uplink transmit mode							
788.0	Mobile	27.24	26.78	27.24	37.0	-9.76	Pass
796.0	Mobile	27.82	27.57	27.82	37.0	-9.18	Pass
805.0	Mobile	27.96	27.51	27.96	37.0	-9.04	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
851.0	Base	31.02	30.60	31.02	37.0	-5.98	Pass
856.0	Base	31.47	30.65	31.47	37.0	-5.53	Pass
861.0	Base	31.75	31.14	31.75	37.0	-5.25	Pass
Uplink transmit mode							
806.0	Mobile	27.98	27.48	27.98	37.0	-9.02	Pass
811.0	Mobile	27.58	27.26	27.58	37.0	-9.42	Pass
816.0	Mobile	26.86	27.09	27.09	37.0	-9.91	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Test specification:	**Section 90.219(e)(1), Maximum output power**		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 51 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.1.7 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
MODULATING SIGNAL: Analog FM 10.0 kHz/1 kHz
CONFIGURATION: Single Band

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
758.0	Base	32.40	30.68	30.68	37.0	-6.32	Pass
766.0	Base	32.41	32.92	32.92	37.0	-4.08	Pass
775.0	Base	30.91	32.77	32.77	37.0	-4.23	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
851.0	Base	31.86	32.27	32.27	37.0	-4.73	Pass
856.0	Base	32.79	32.13	32.79	37.0	-4.21	Pass
861.0	Base	31.25	32.66	32.66	37.0	-4.34	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Reference numbers of test equipment used

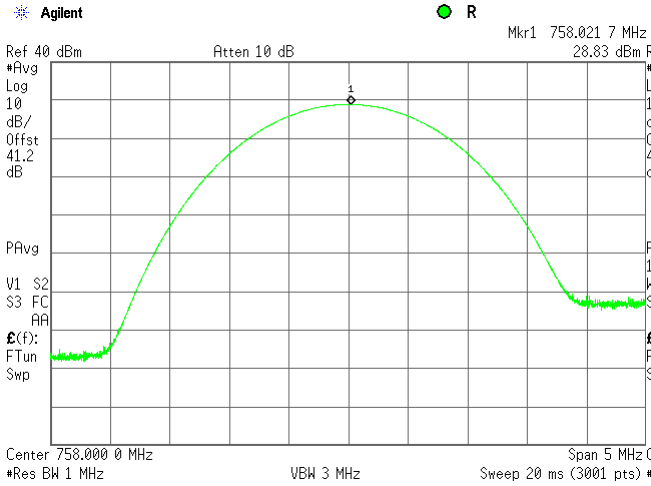
HL 2909	HL 3768	HL 3770	HL 3776	HL 3818	HL 4224	HL 4273	HL 4274

Full description is given in Appendix A.

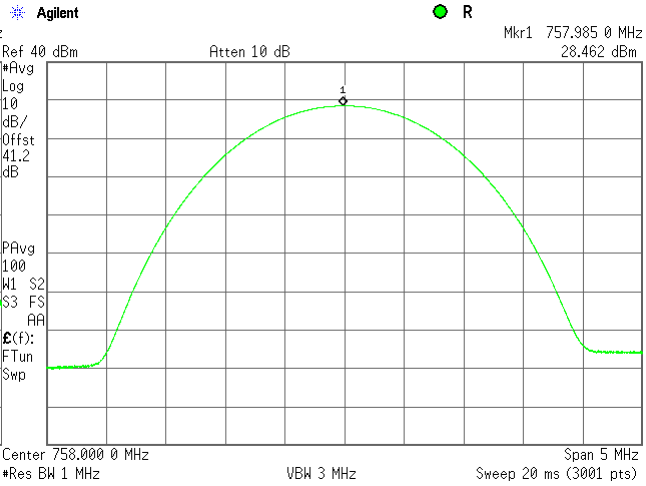
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.1 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm

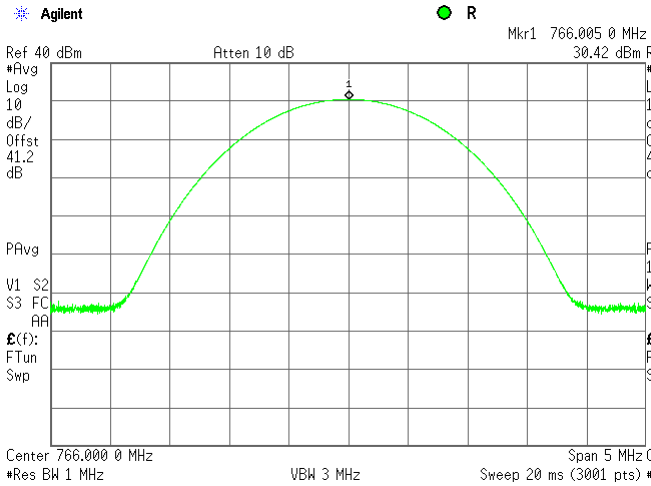


INPUT POWER: -24 dBm

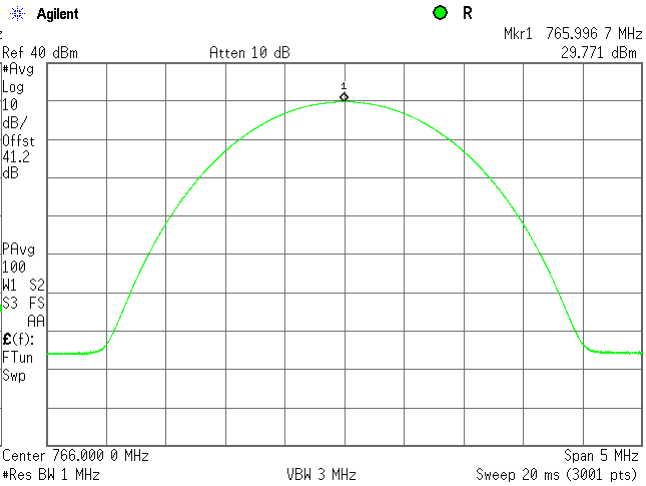


Plot 7.1.2 RF output power measurements at mid frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm



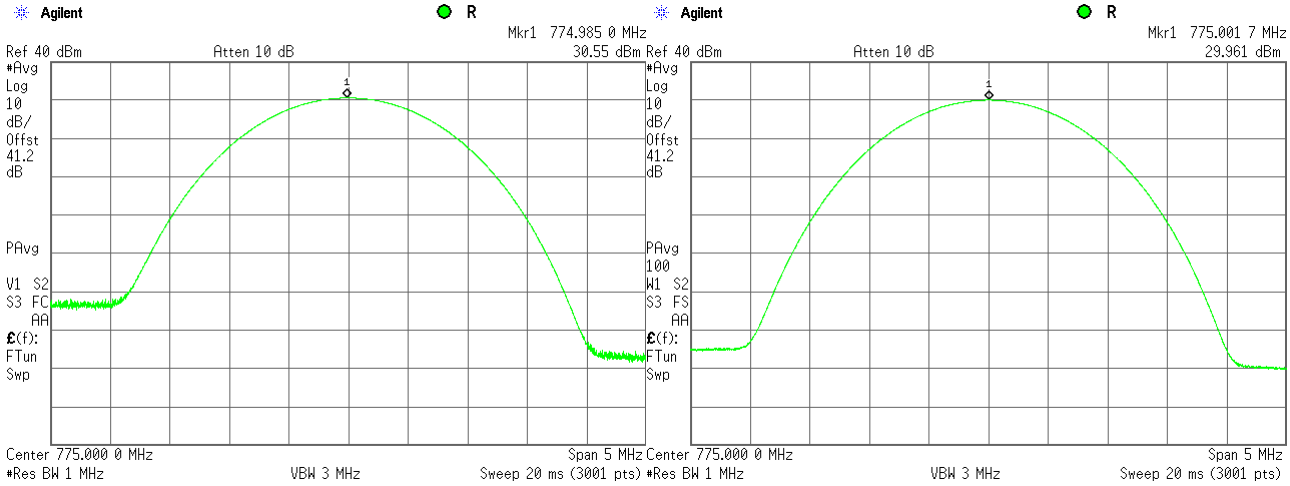
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

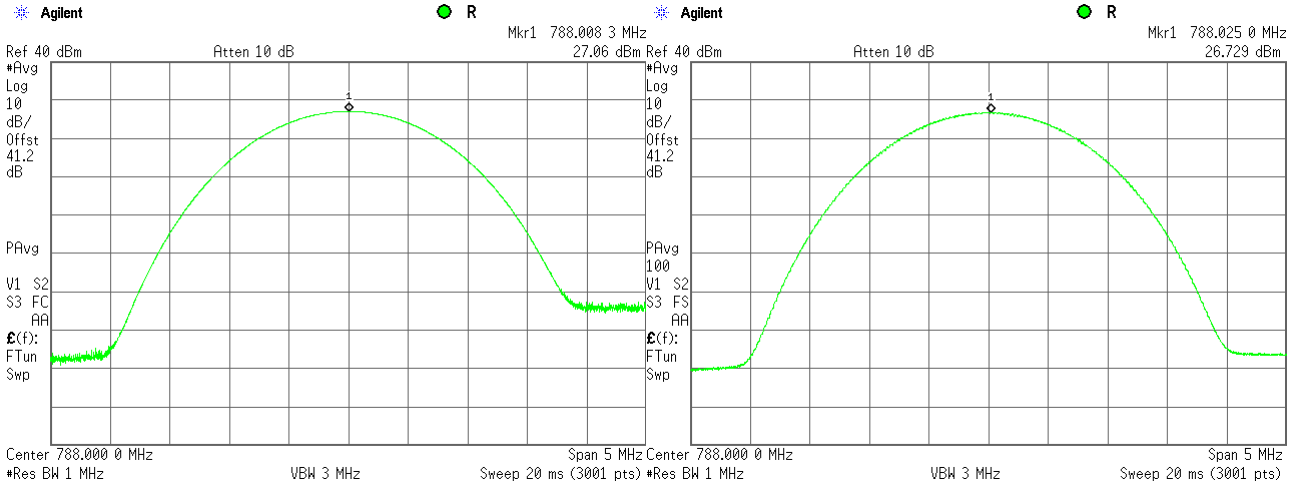
Plot 7.1.3 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm



Plot 7.1.4 RF output power measurements at low frequency carrier, Port 2

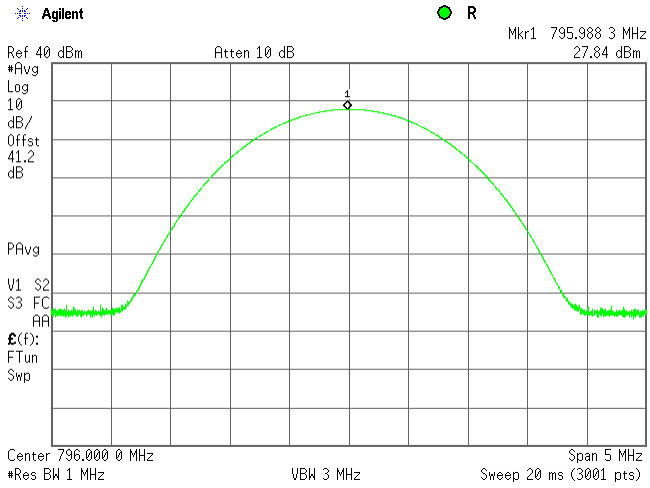
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm



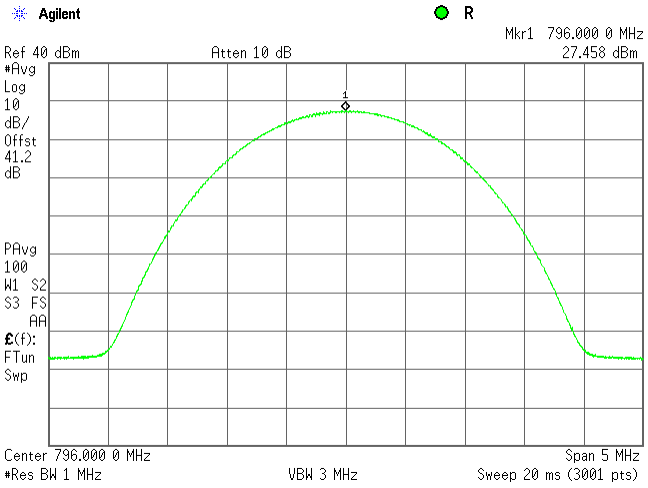
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.5 RF output power measurements at mid frequency carrier, Port 2

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm

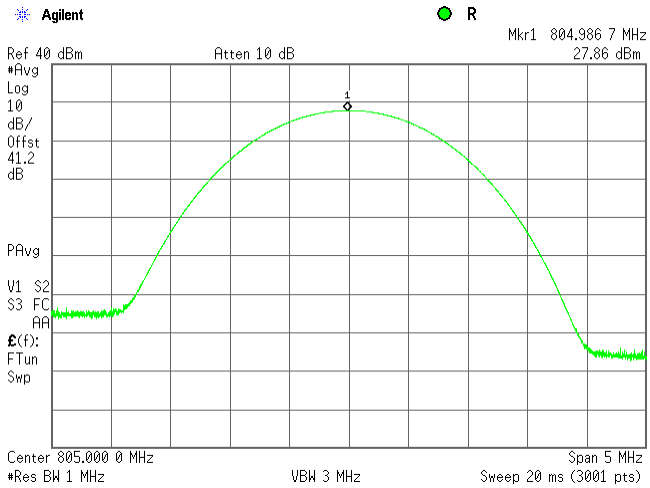


INPUT POWER: -24 dBm

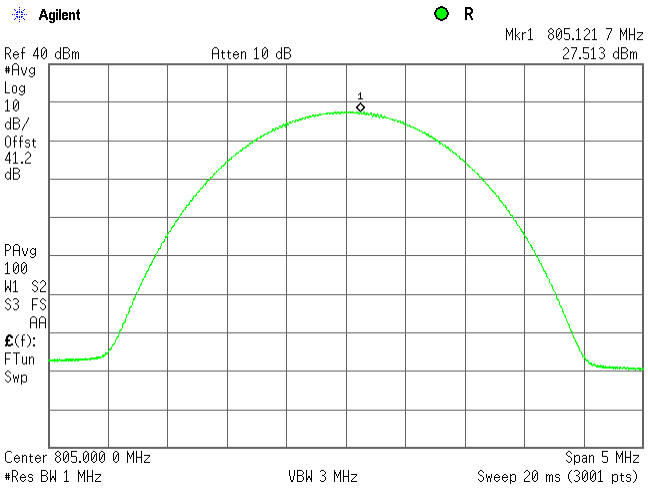


Plot 7.1.6 RF output power measurements at high frequency carrier, Port 2

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm



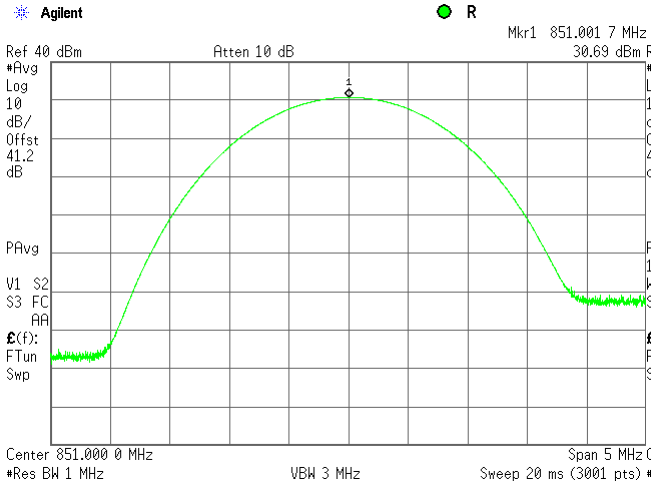
INPUT POWER: -24 dBm



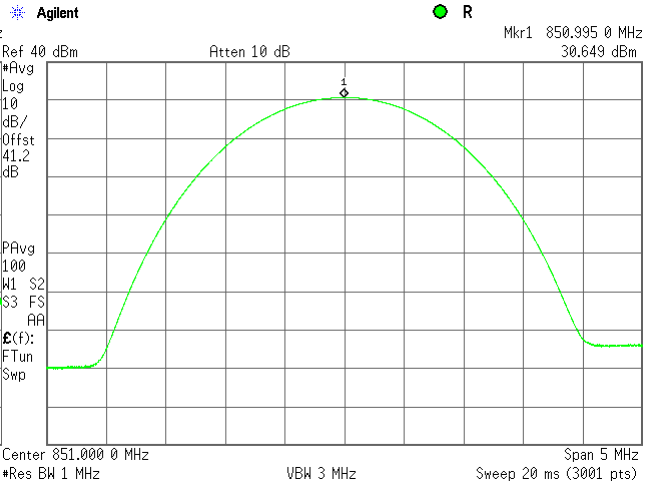
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.7 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm

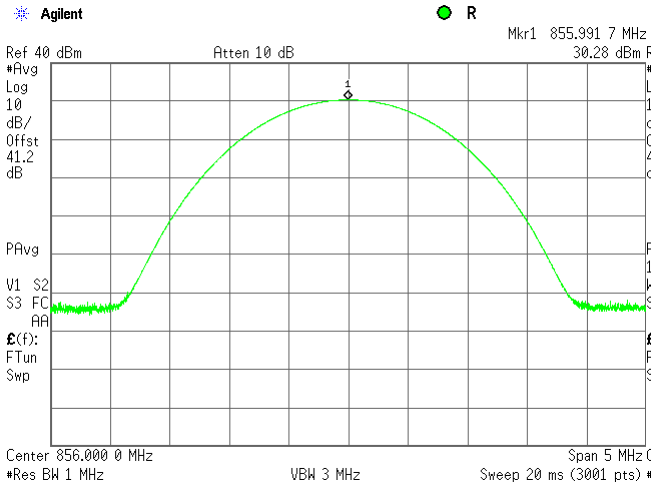


INPUT POWER: -24 dBm

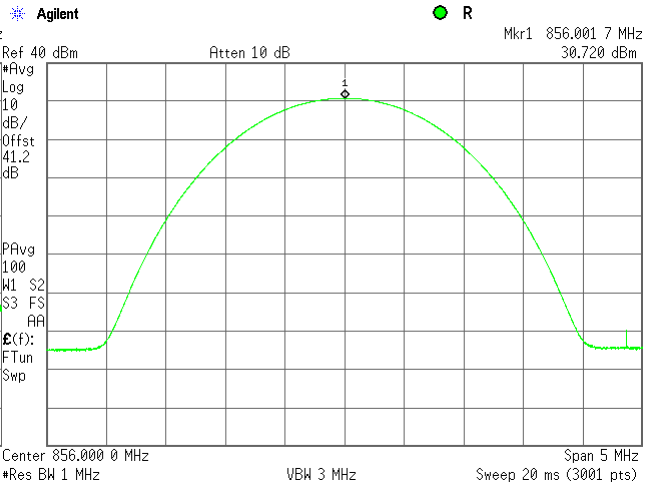


Plot 7.1.8 RF output power measurements at mid frequency carrier, Port 1

FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm



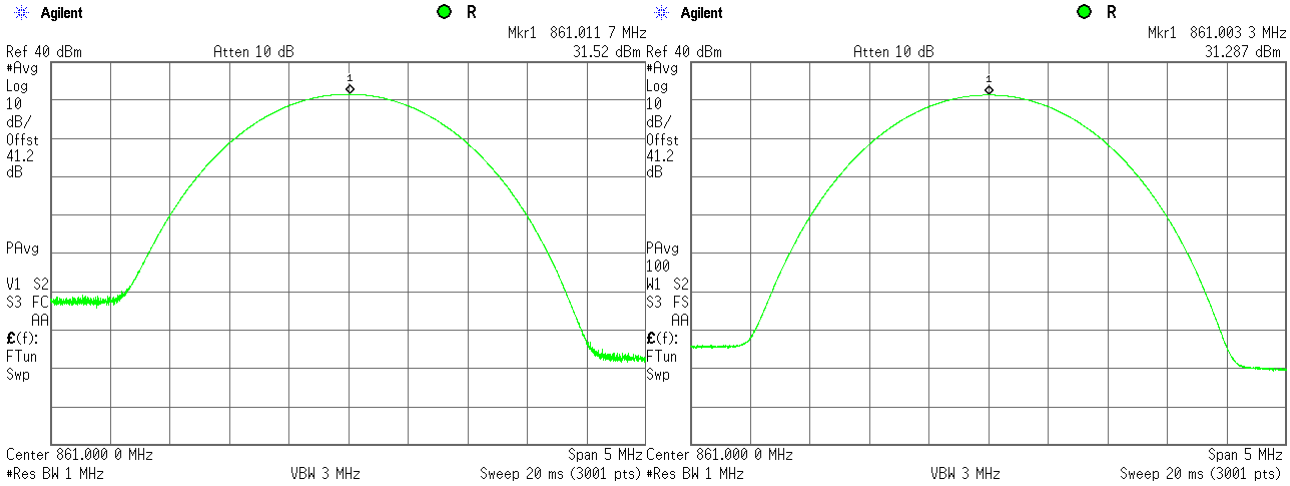
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

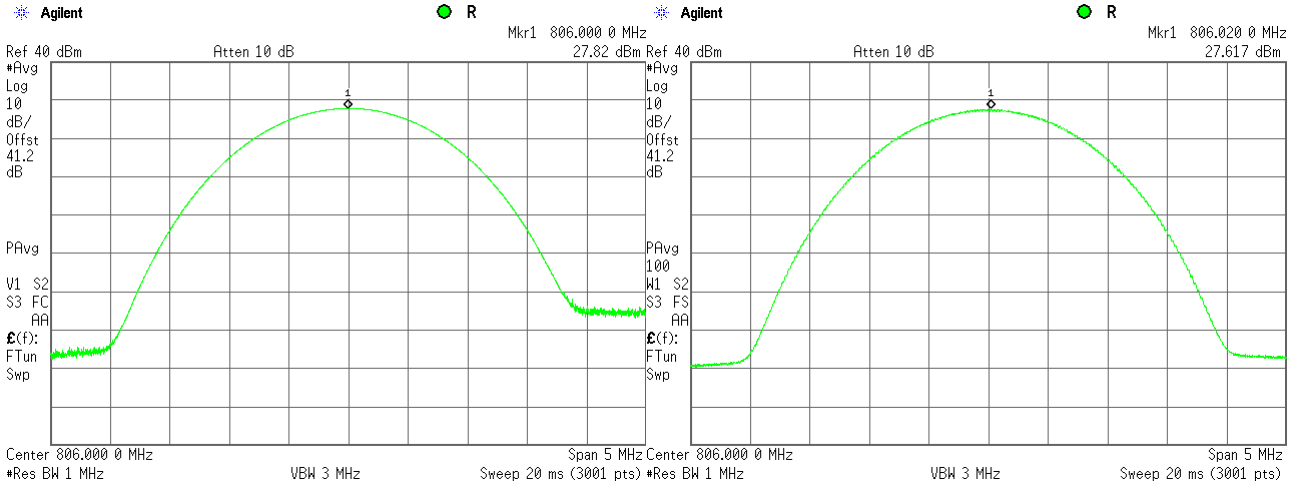
Plot 7.1.9 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.1.10 RF output power measurements at low frequency carrier, Port 2

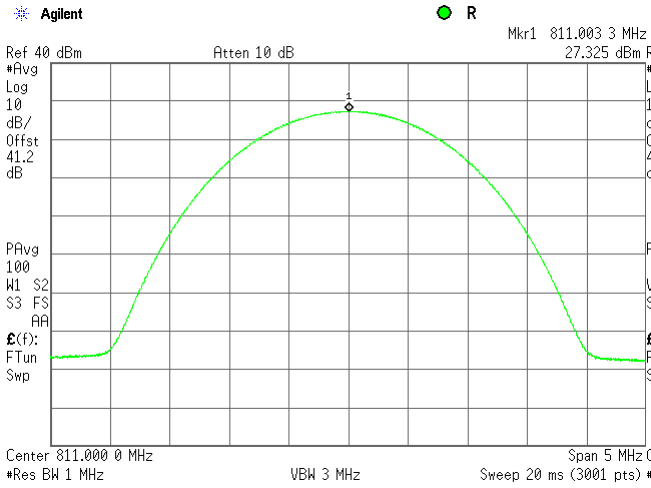
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



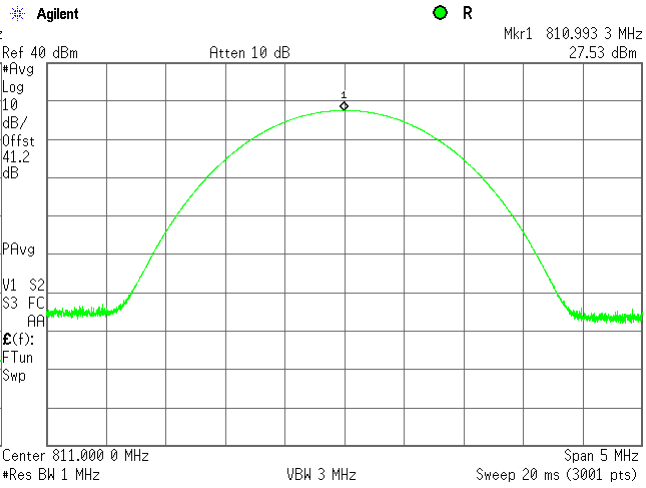
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.11 RF output power measurements at mid frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: C4FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm

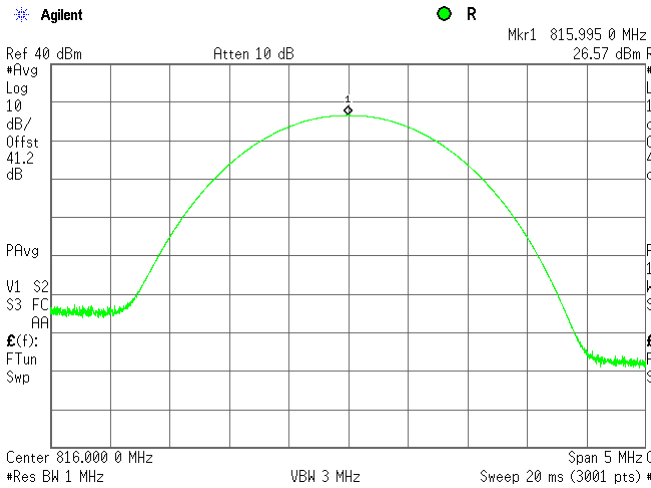


INPUT POWER: -24 dBm

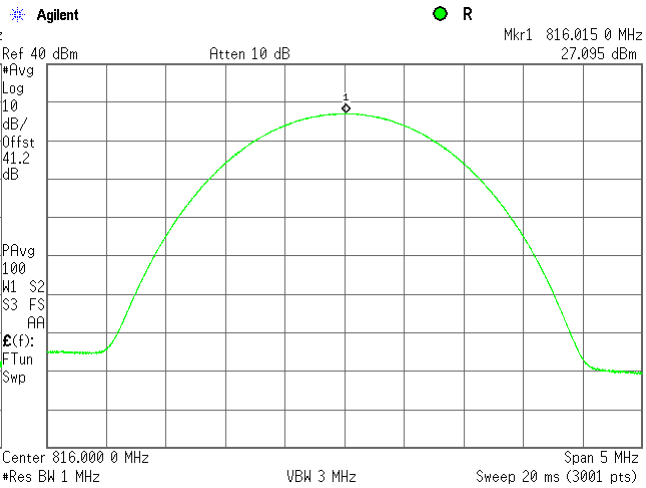


Plot 7.1.12 RF output power measurements at high frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: C4FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm



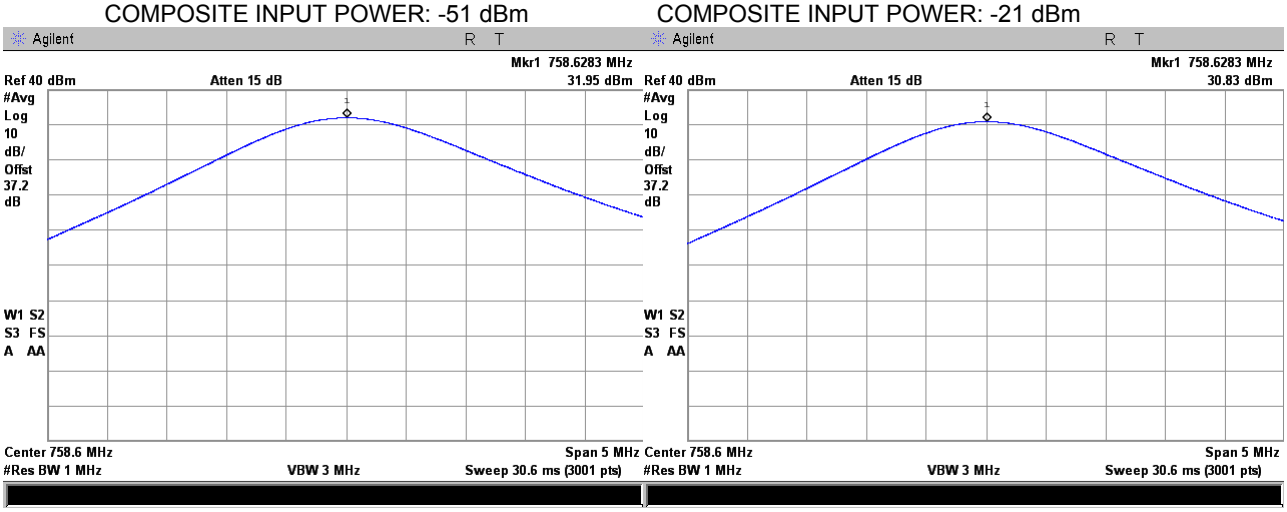
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

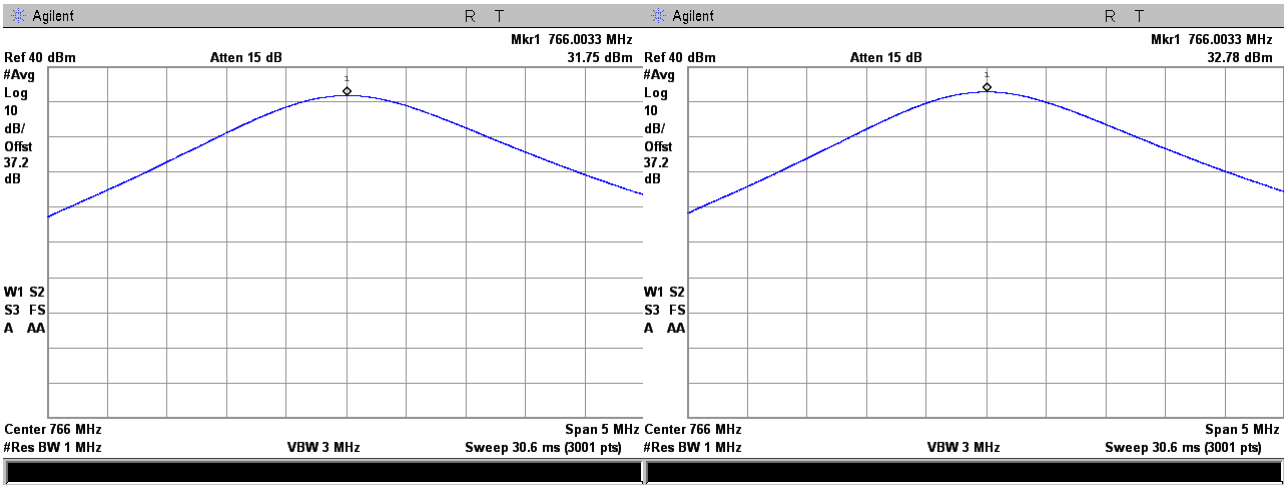
Plot 7.1.13 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.14 RF output power measurements at mid frequency carrier, Port 1

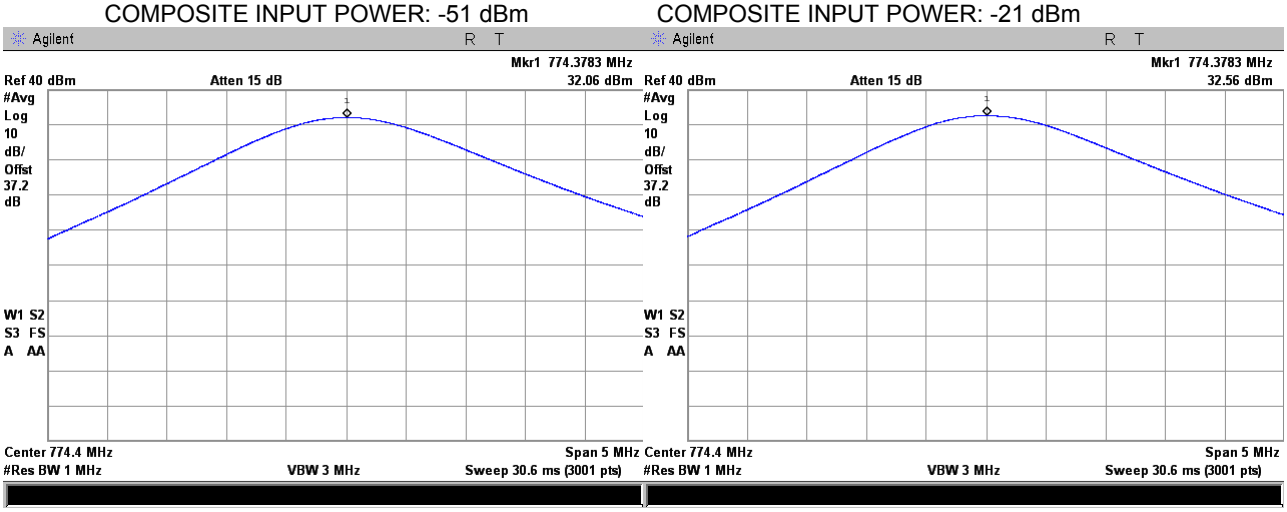
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

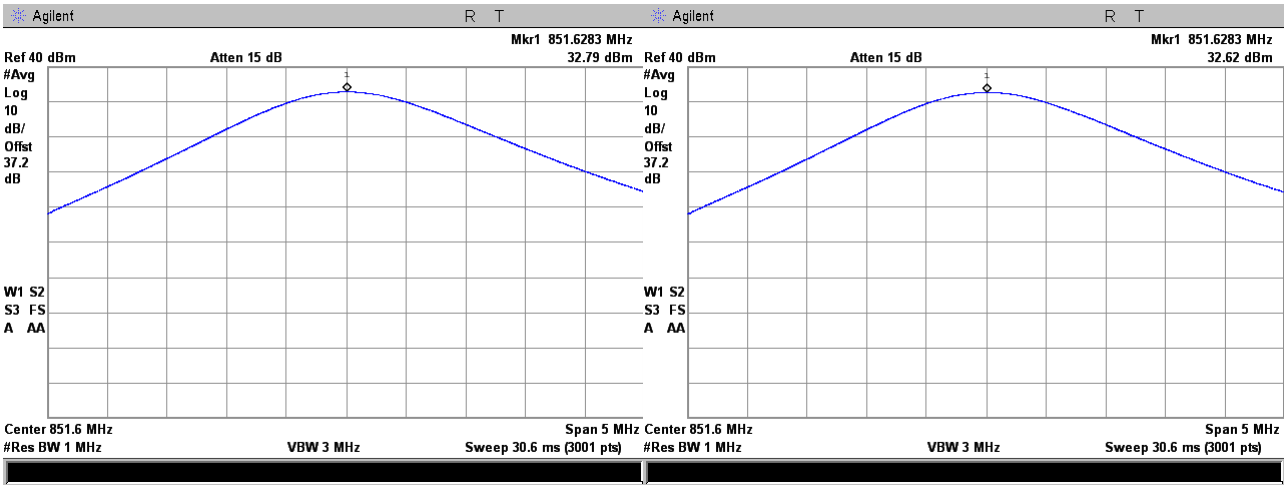
Plot 7.1.15 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.16 RF output power measurements at low frequency carrier, Port 1

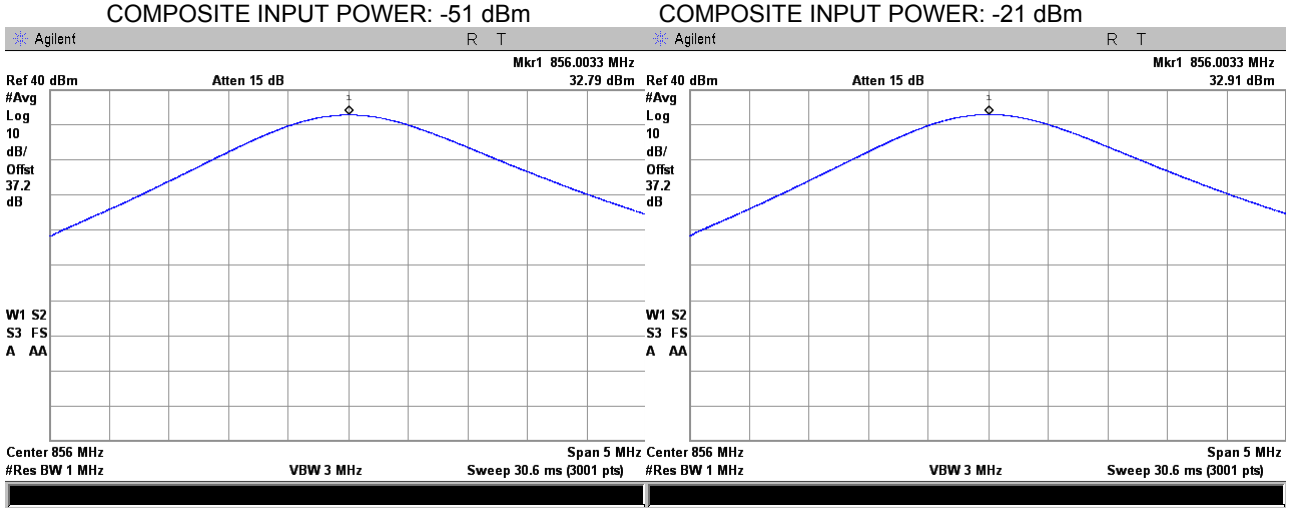
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

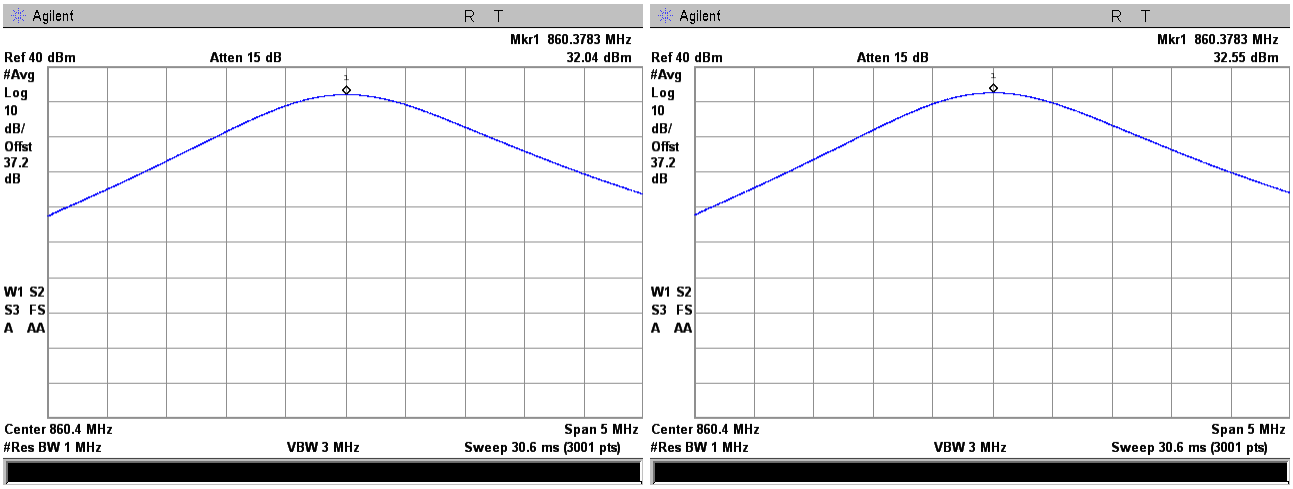
Plot 7.1.17 RF output power measurements at mid frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.18 RF output power measurements at high frequency carrier, Port 1

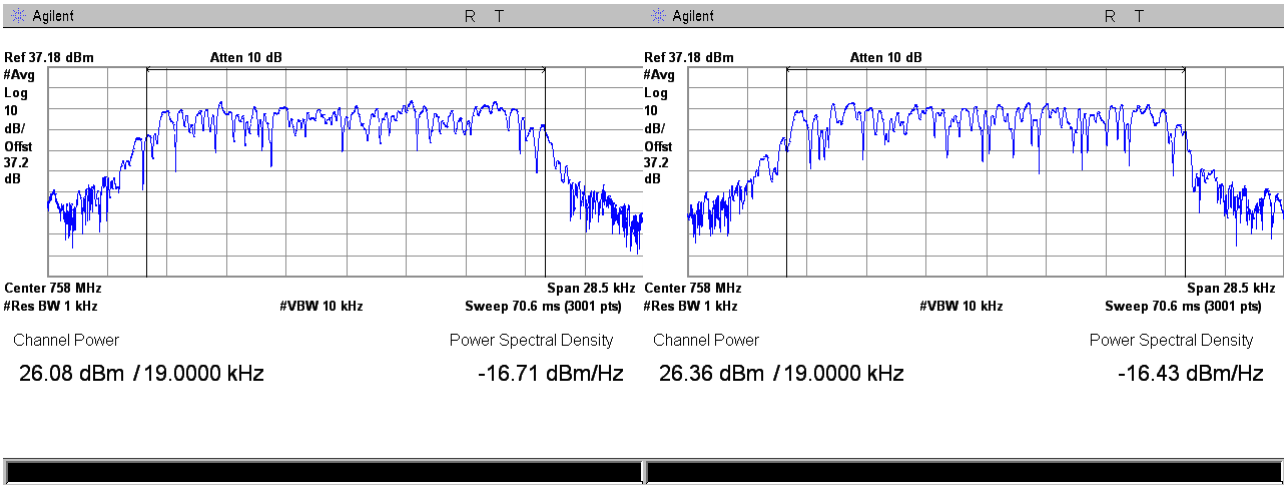
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

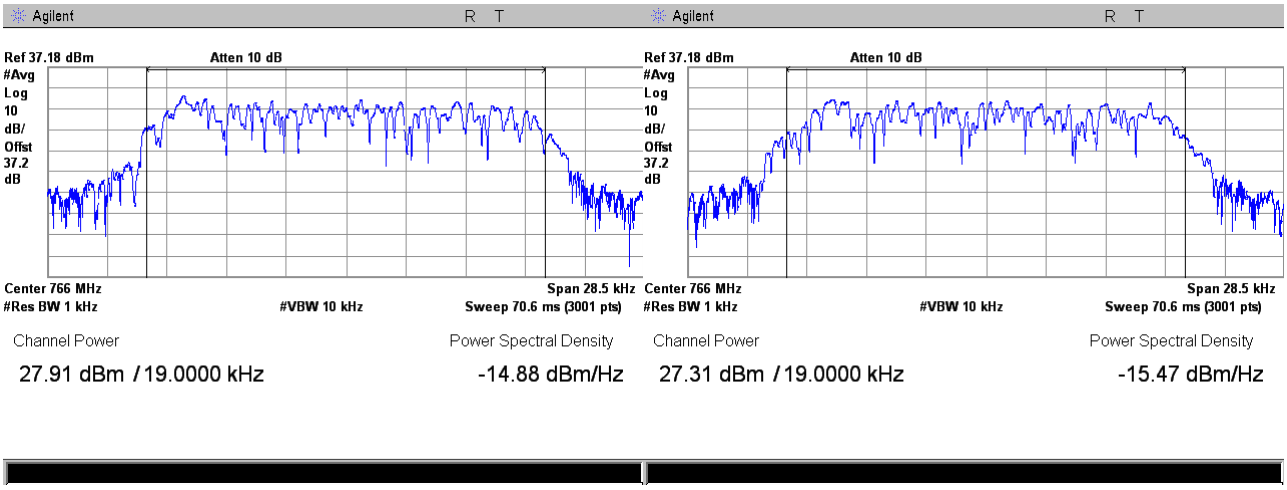
Plot 7.1.19 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.1.20 RF output power measurements at mid frequency carrier, Port 1

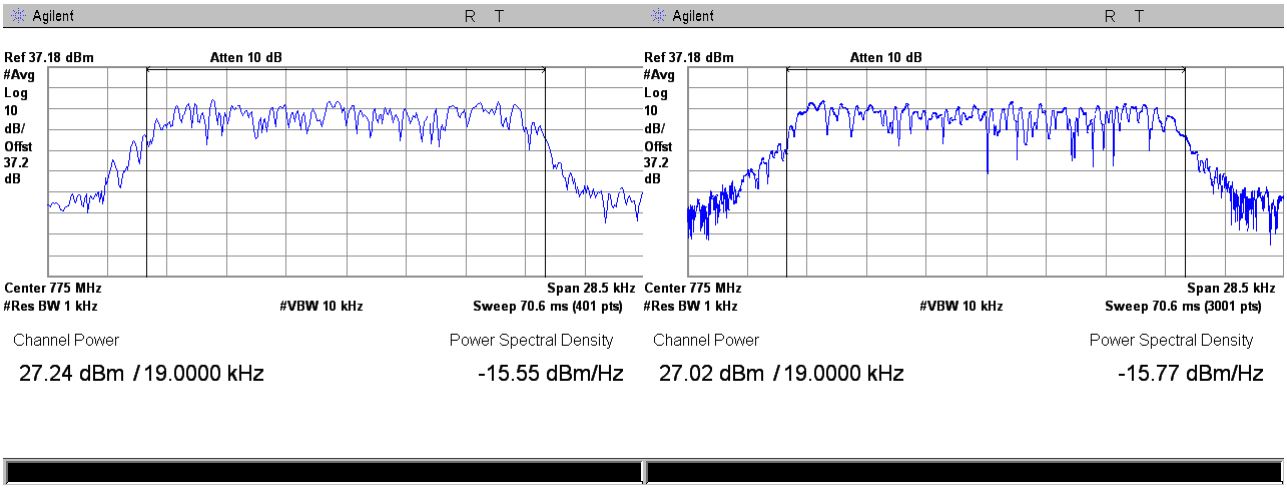
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

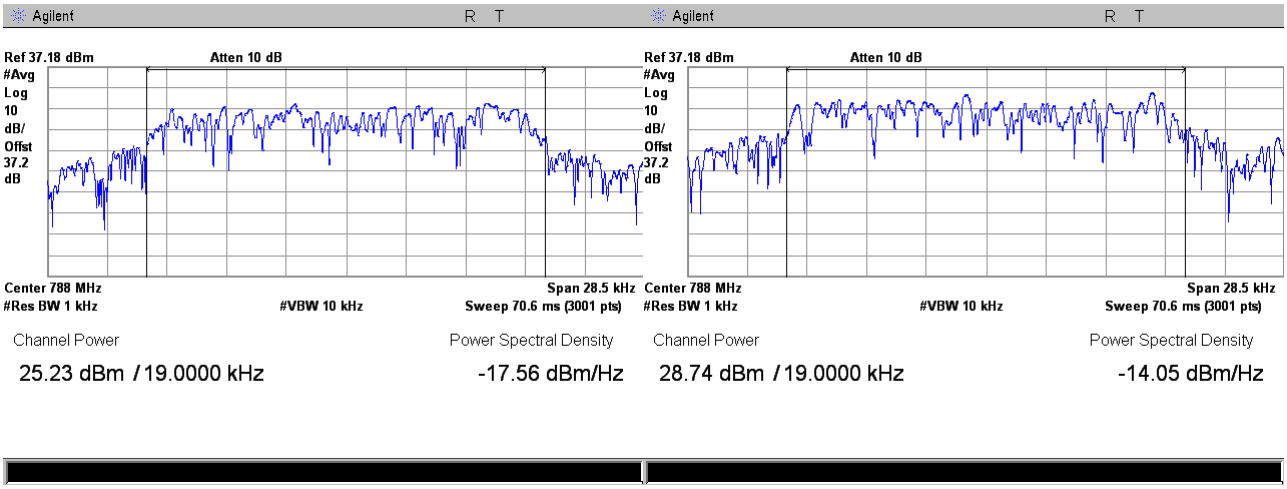
Plot 7.1.21 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.1.22 RF output power measurements at low frequency carrier, Port 2

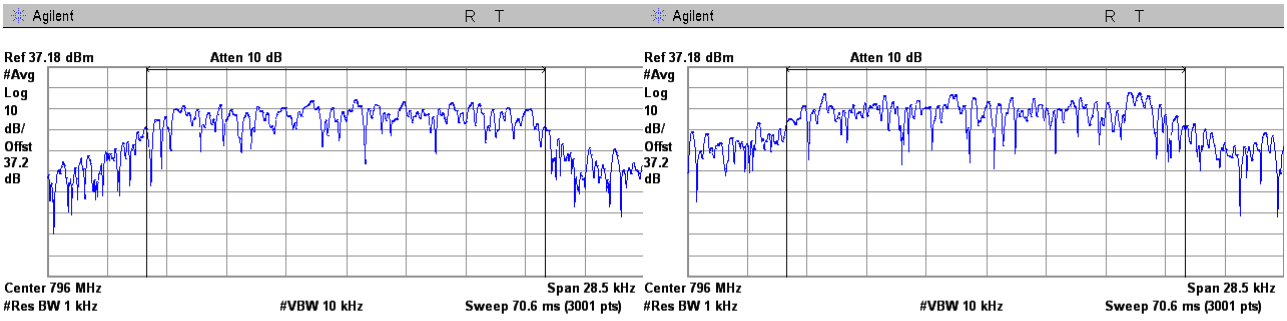
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.23 RF output power measurements at mid frequency carrier, Port 2

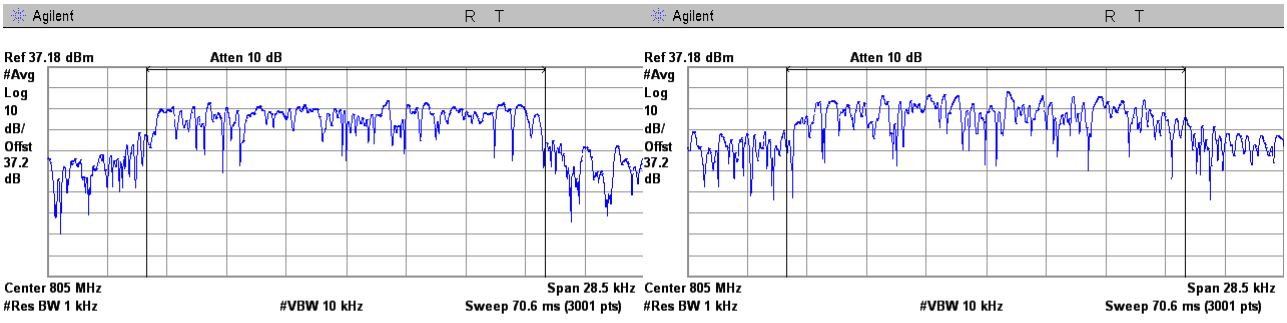
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Channel Power	Power Spectral Density	Channel Power	Power Spectral Density
26.92 dBm / 19.0000 kHz	-15.86 dBm/Hz	29.64 dBm / 19.0000 kHz	-13.15 dBm/Hz

Plot 7.1.24 RF output power measurements at highfrequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -54 dBm	COMPOSITE INPUT POWER: -24 dBm

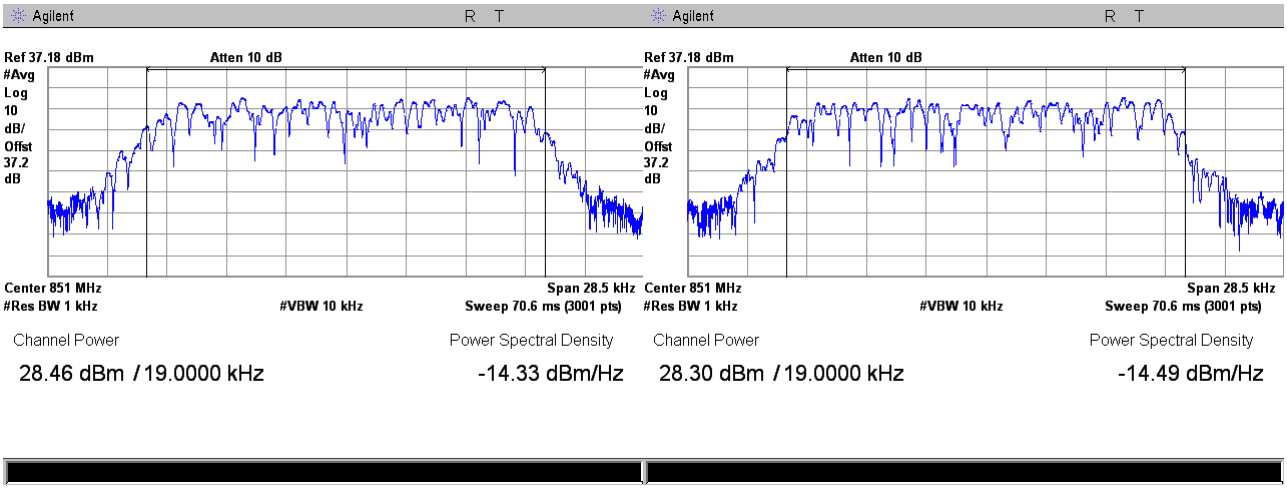


Channel Power	Power Spectral Density	Channel Power	Power Spectral Density
26.85 dBm / 19.0000 kHz	-15.94 dBm/Hz	29.27 dBm / 19.0000 kHz	-13.51 dBm/Hz

Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

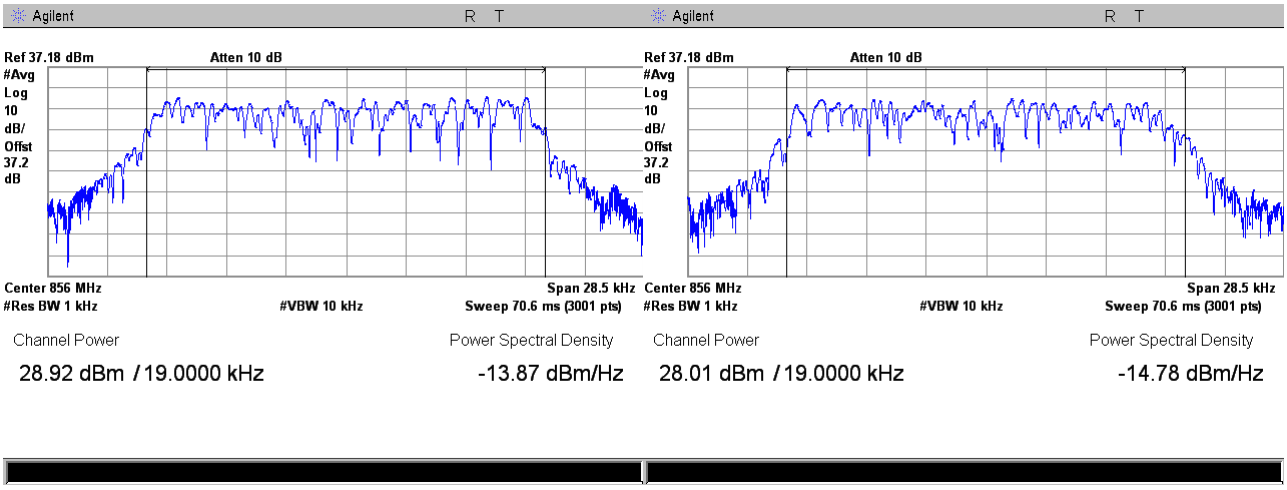
Plot 7.1.25 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.1.26 RF output power measurements at mid frequency carrier, Port 1

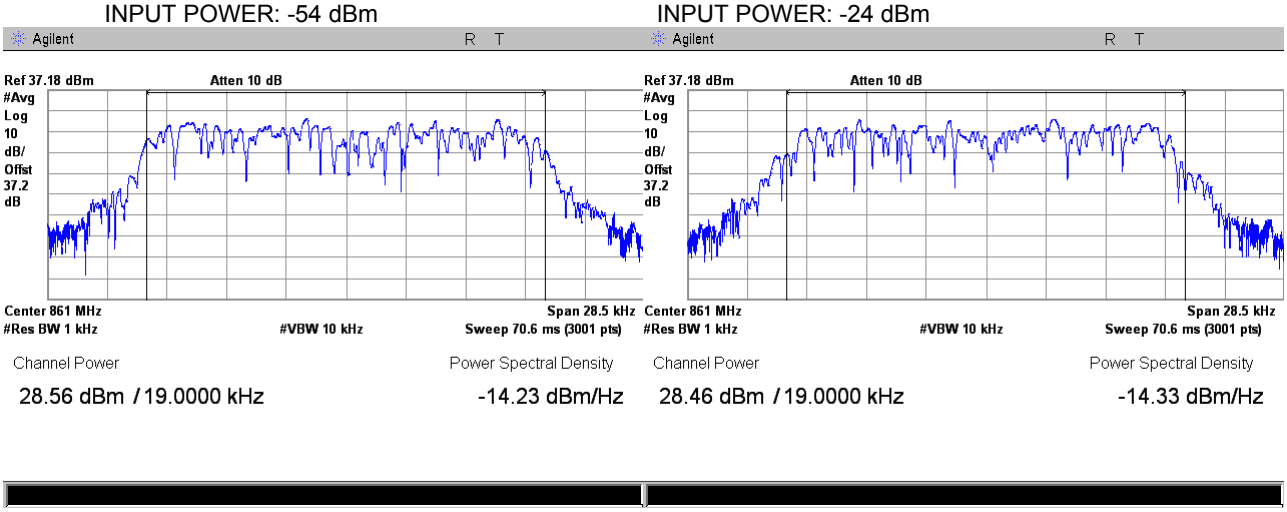
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

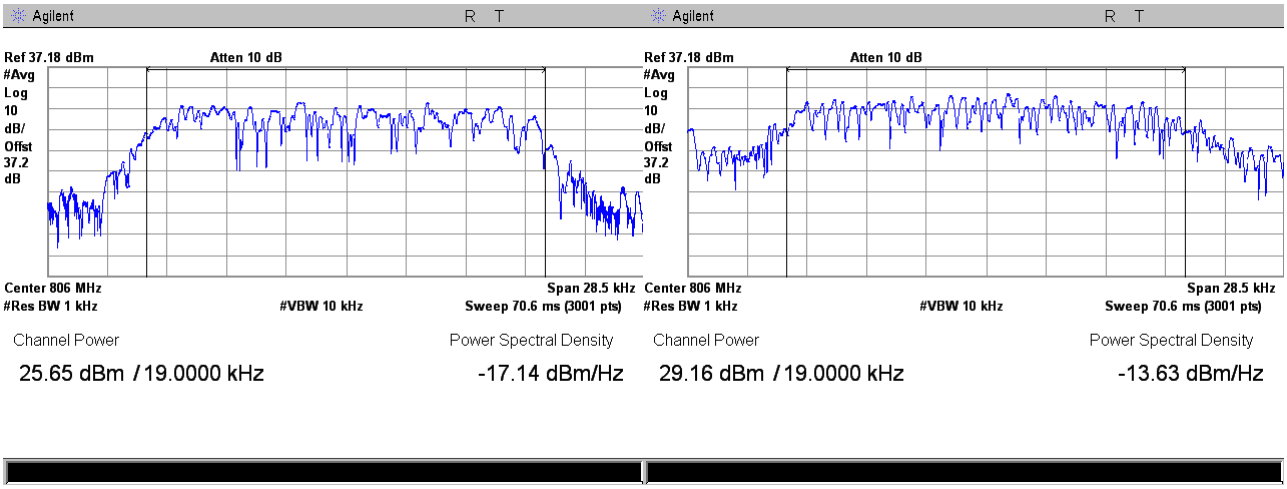
Plot 7.1.27 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.1.28 RF output power measurements at low frequency carrier, Port 2

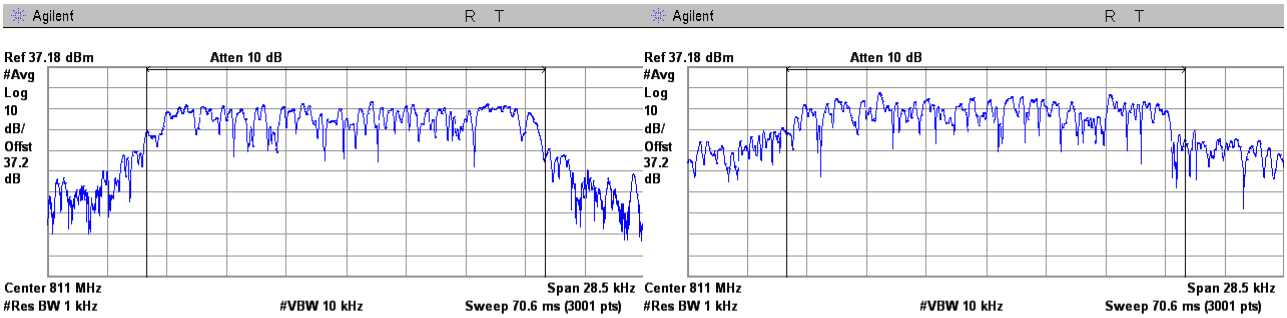
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.29 RF output power measurements at mid frequency carrier, Port 2

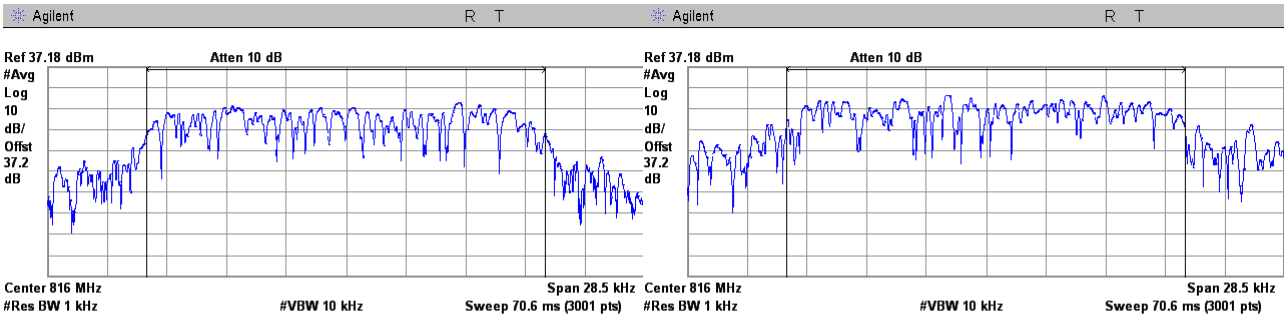
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Channel Power	Power Spectral Density	Channel Power	Power Spectral Density
26.49 dBm / 19.0000 kHz	-16.30 dBm/Hz	29.21 dBm / 19.0000 kHz	-13.58 dBm/Hz

Plot 7.1.30 RF output power measurements at high frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

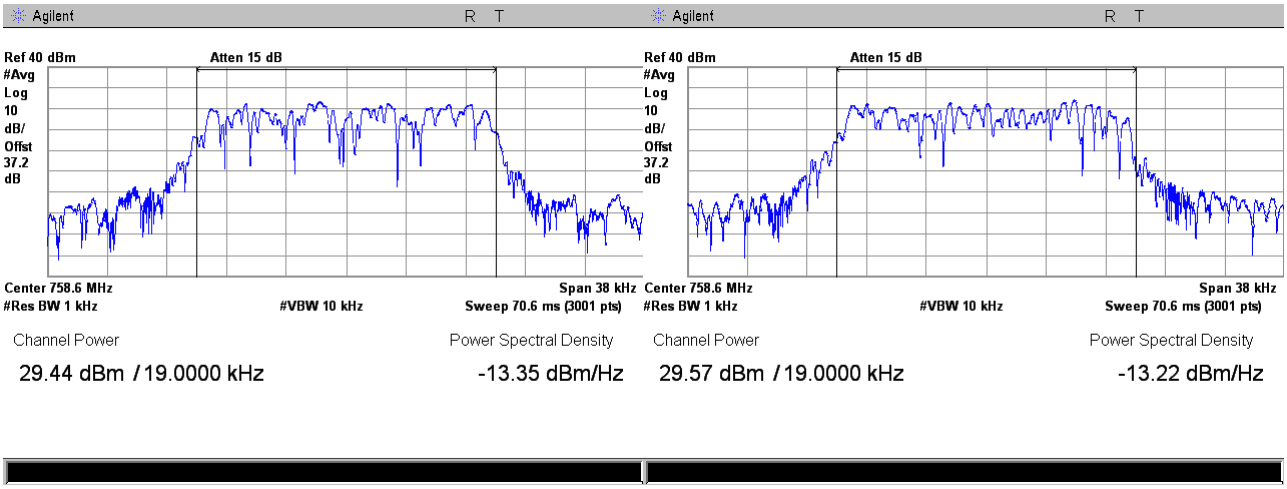


Channel Power	Power Spectral Density	Channel Power	Power Spectral Density
25.06 dBm / 19.0000 kHz	-17.73 dBm/Hz	28.85 dBm / 19.0000 kHz	-13.94 dBm/Hz

Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

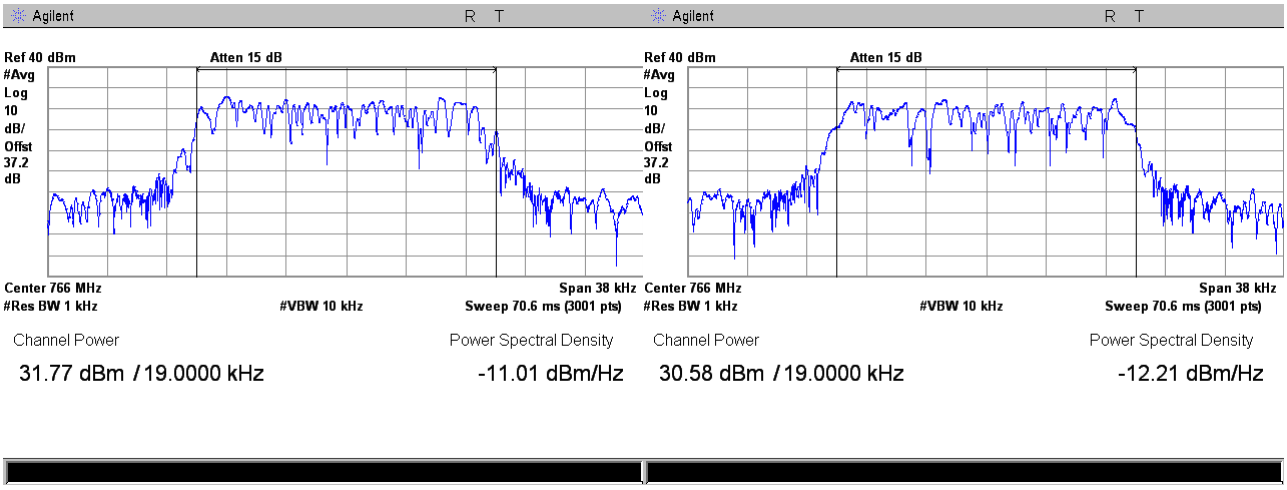
Plot 7.1.31 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.32 RF output power measurements at mid frequency carrier, Port 1

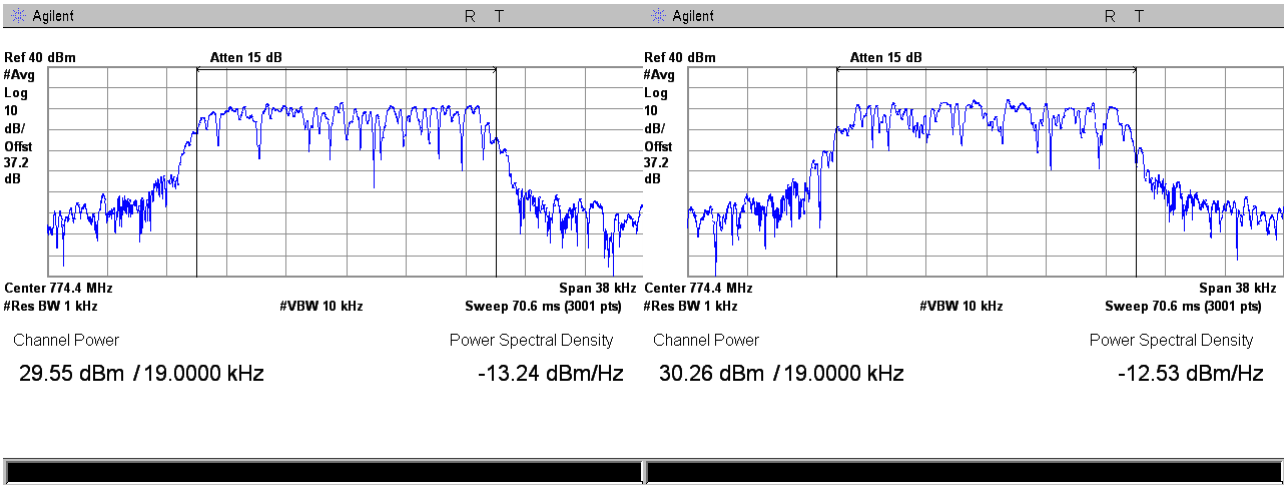
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

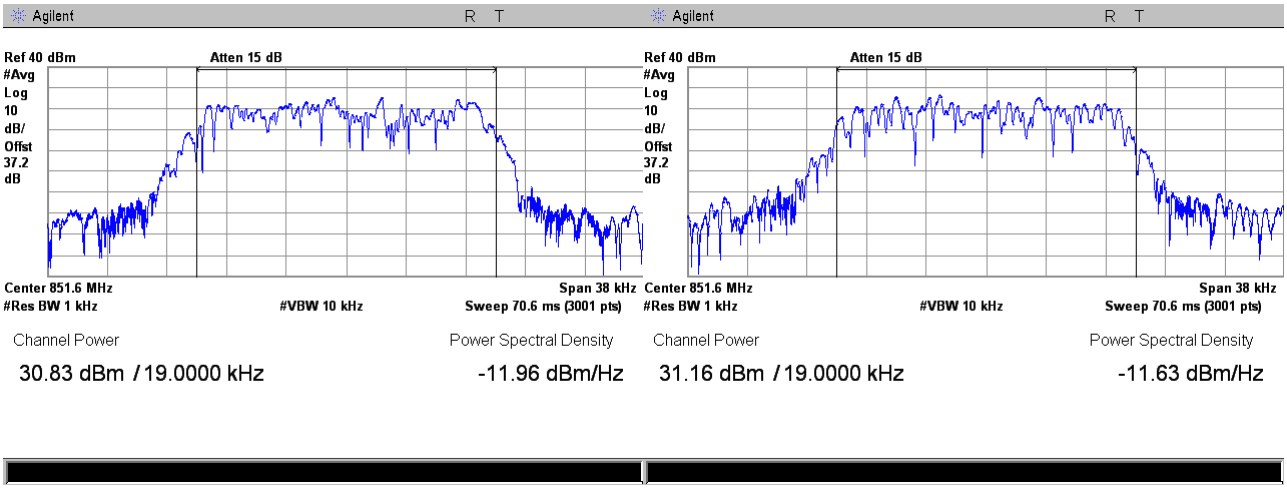
Plot 7.1.33 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.34 RF output power measurements at low frequency carrier, Port 1

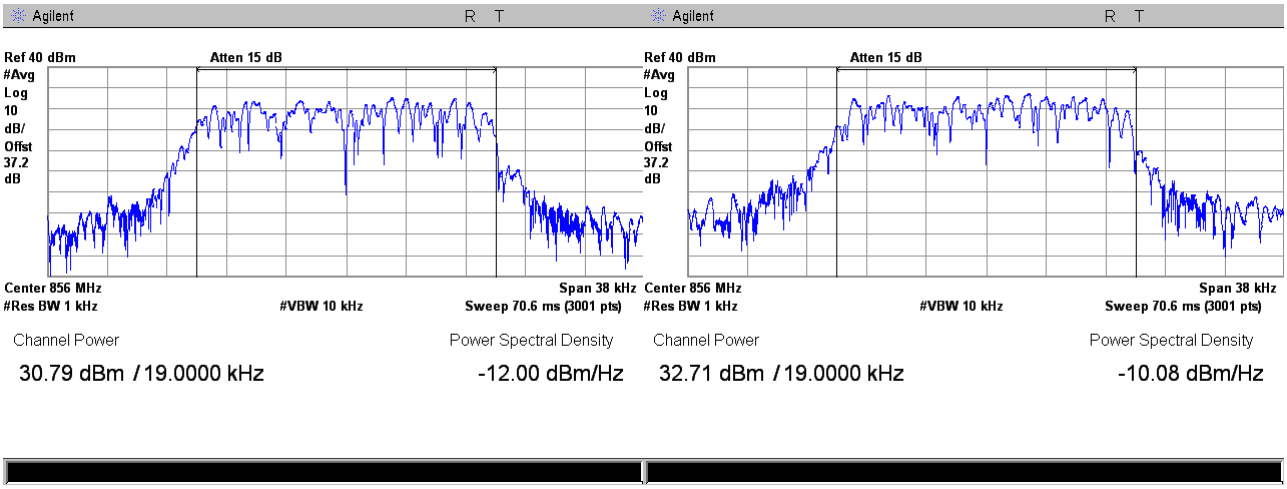
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

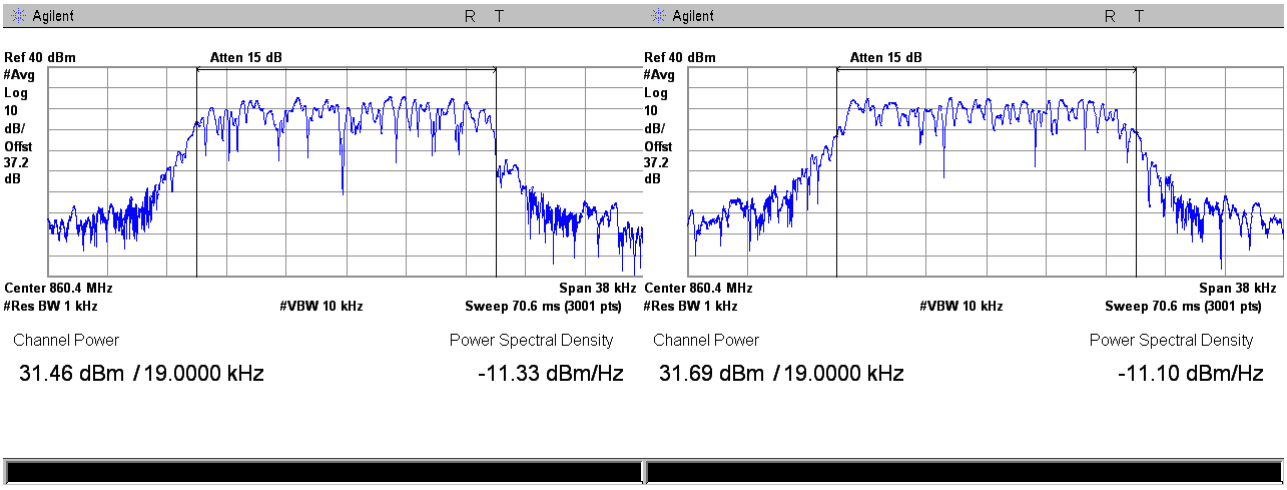
Plot 7.1.35 RF output power measurements at mid frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.36 RF output power measurements at high frequency carrier, Port 1

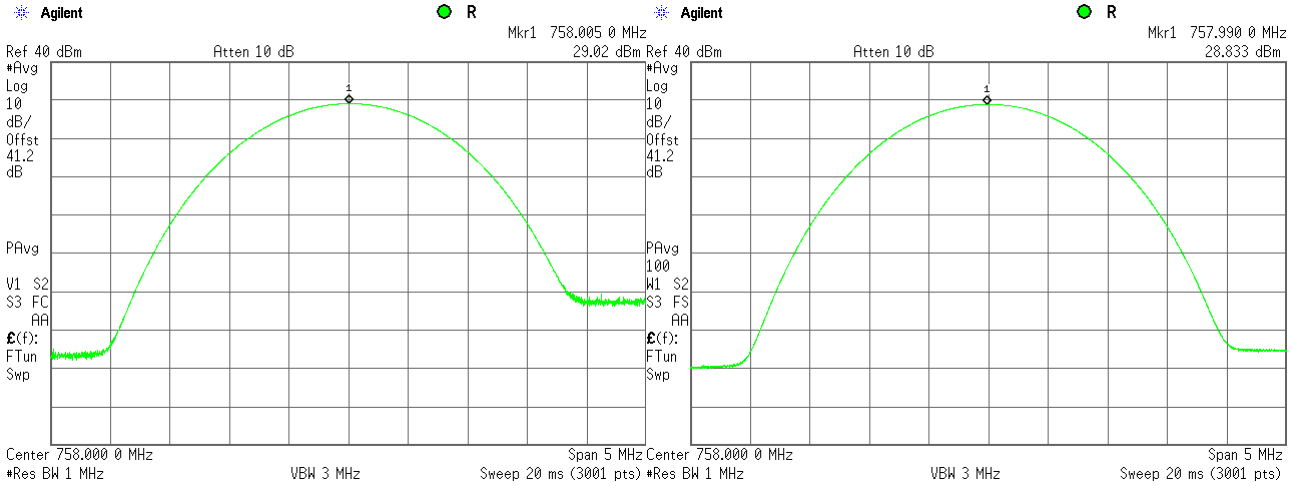
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

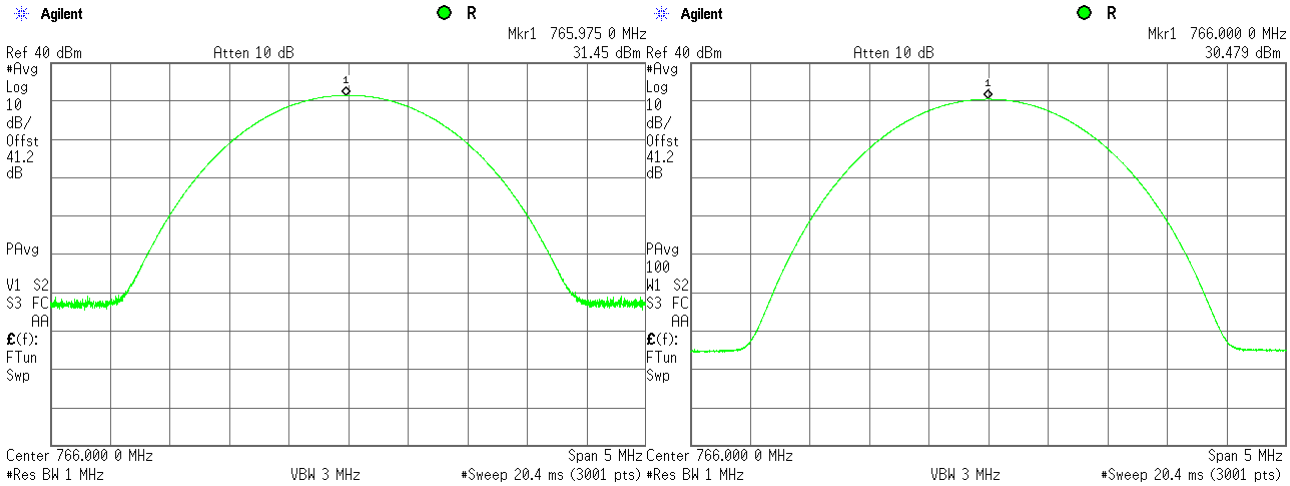
Plot 7.1.37 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



Plot 7.1.38 RF output power measurements at mid frequency carrier, Port 1

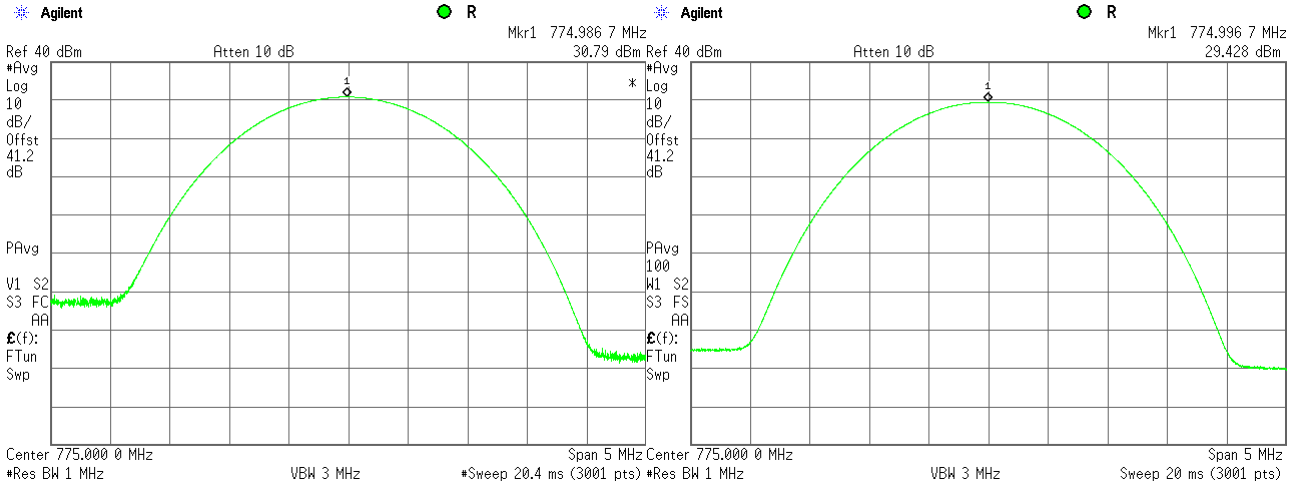
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

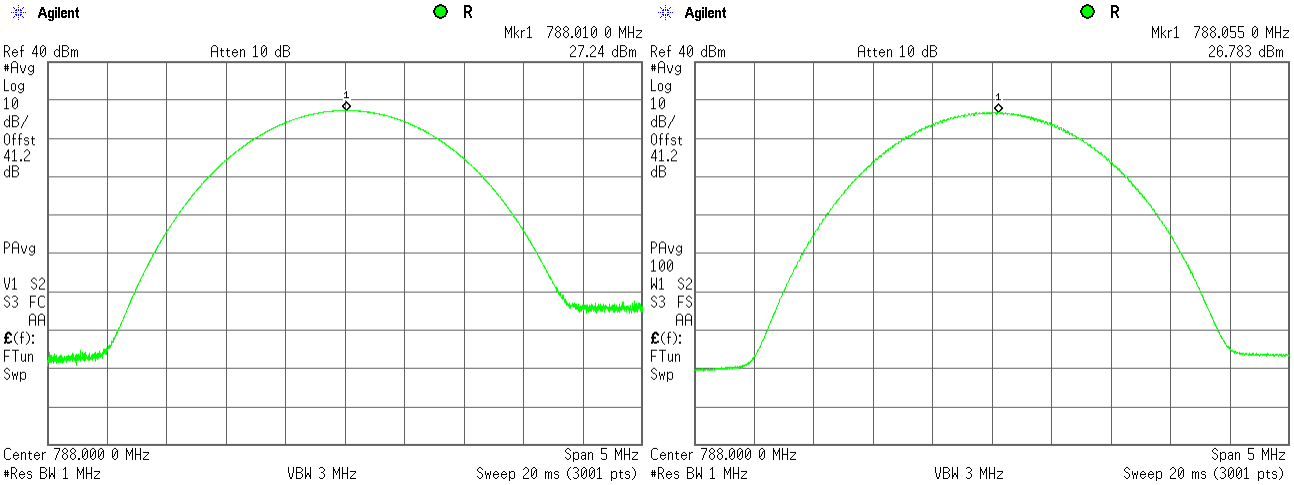
Plot 7.1.39 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



Plot 7.1.40 RF output power measurements at low frequency carrier, Port 2

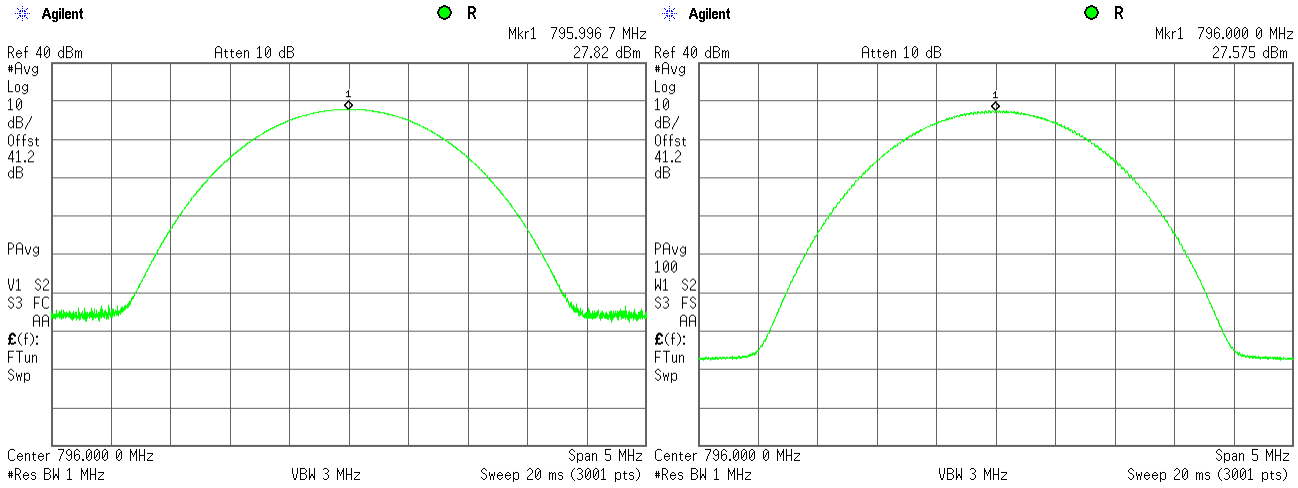
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

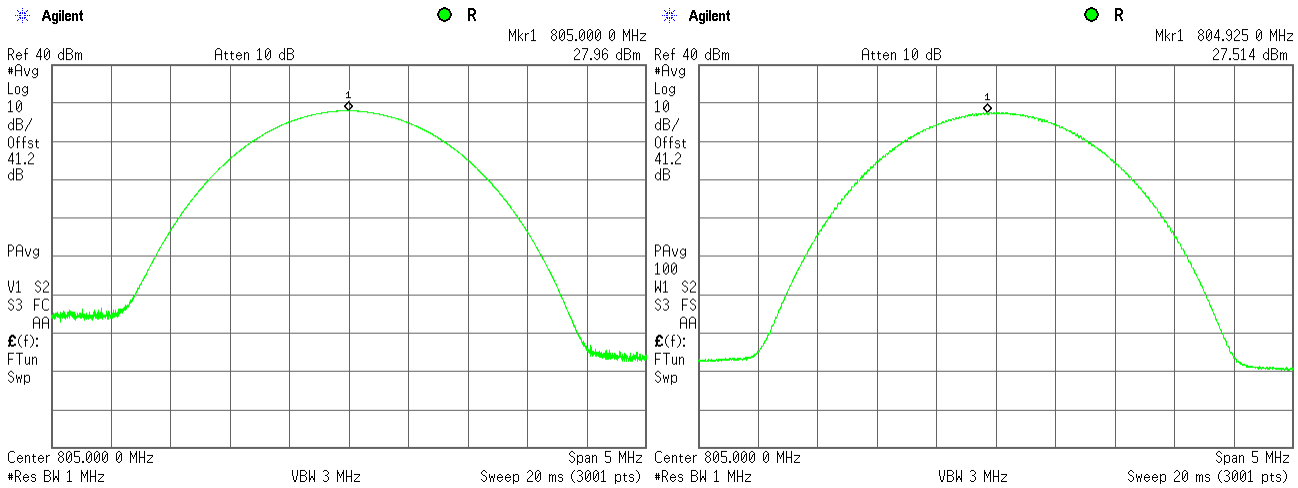
Plot 7.1.41 RF output power measurements at mid frequency carrier, Port 2

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



Plot 7.1.42 RF output power measurements at high frequency carrier, Port 2

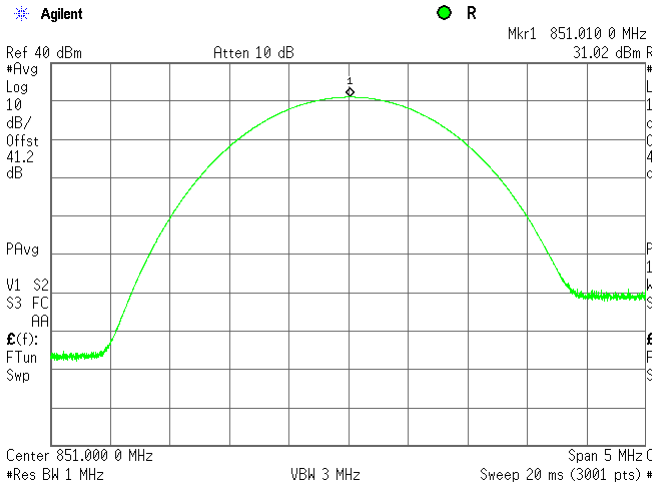
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



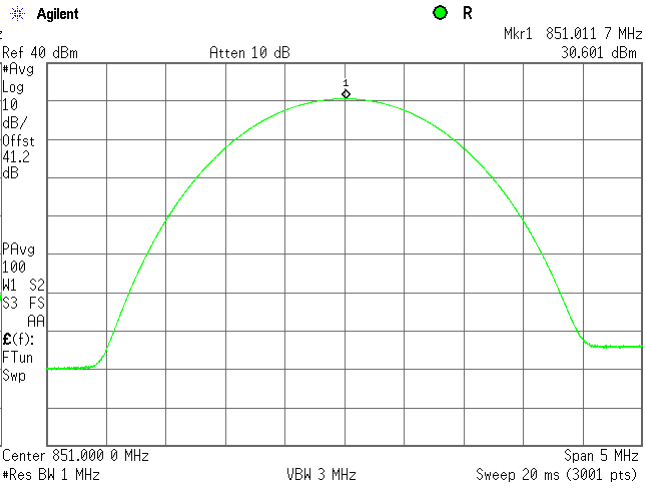
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.43 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm

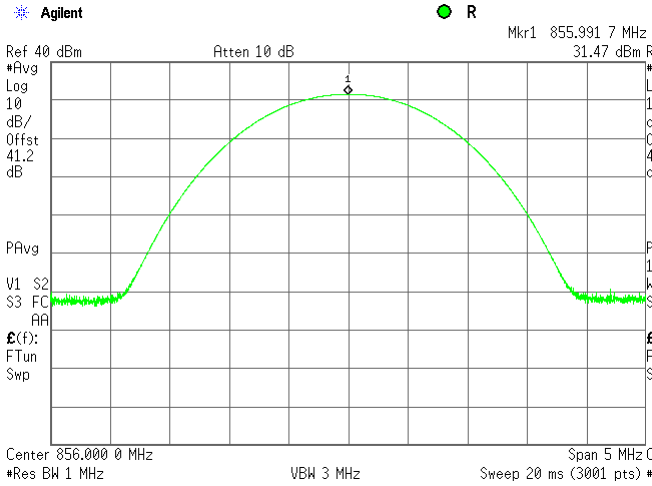


INPUT POWER: -24 dBm

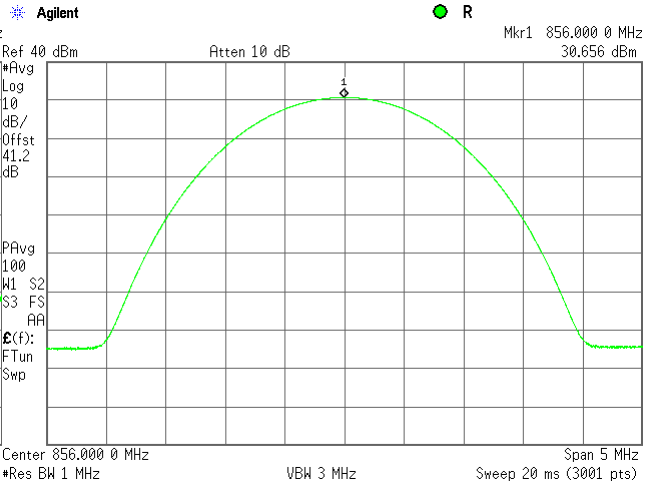


Plot 7.1.44 RF output power measurements at mid frequency carrier, Port 1

FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm



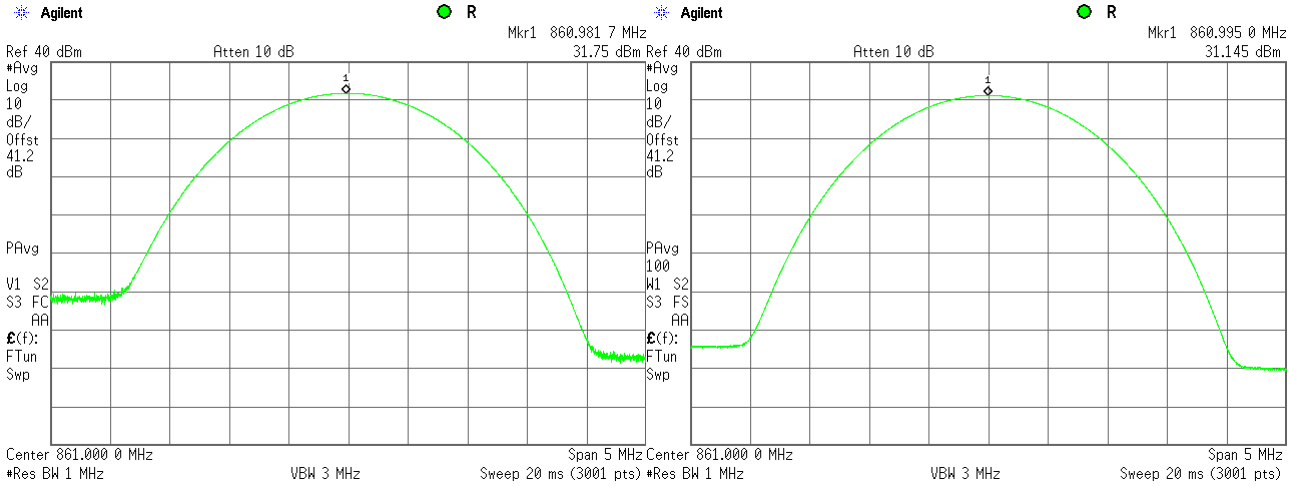
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

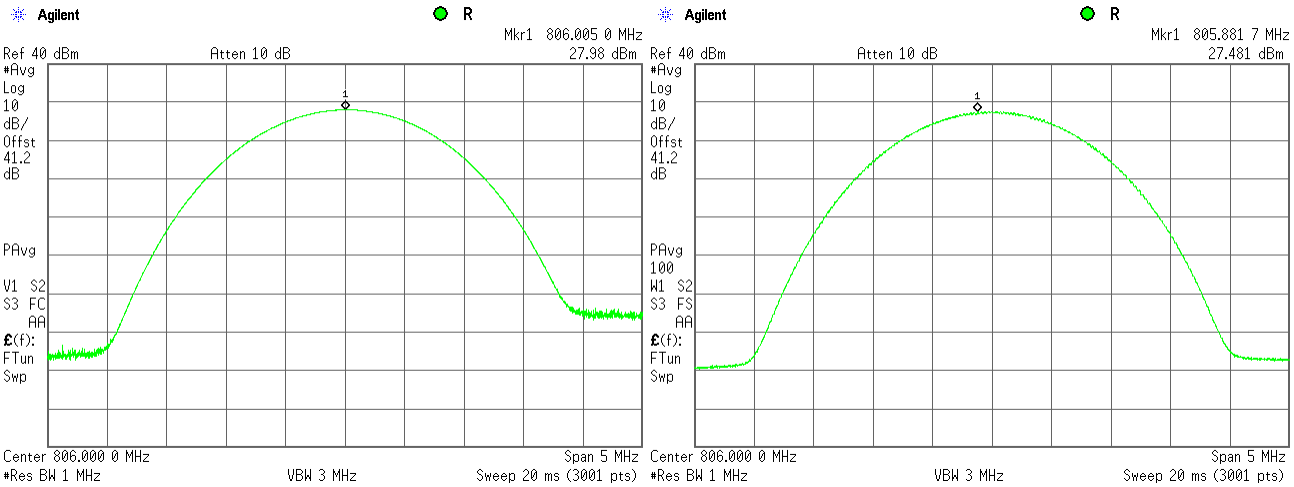
Plot 7.1.45 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Dual Band
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



Plot 7.1.46 RF output power measurements at low frequency carrier, Port 2

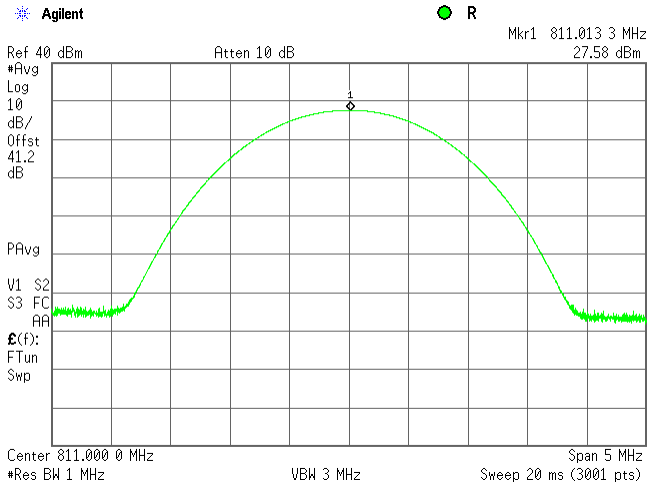
FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: iDEN QAM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm



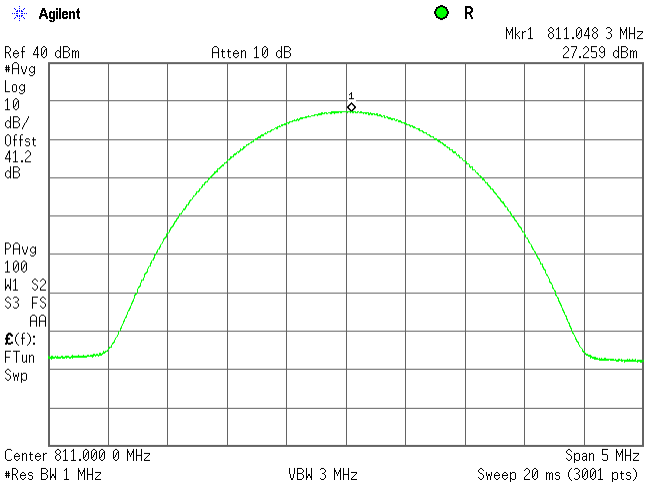
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.47 RF output power measurements at mid frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm

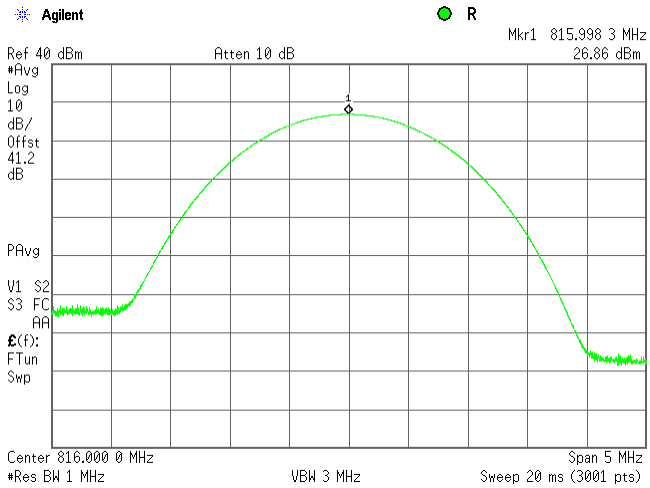


INPUT POWER: -24 dBm

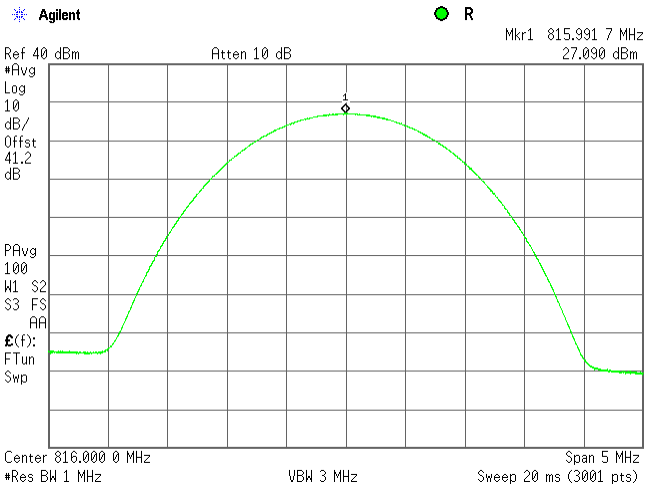


Plot 7.1.48 RF output power measurements at high frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
INPUT POWER: -54 dBm



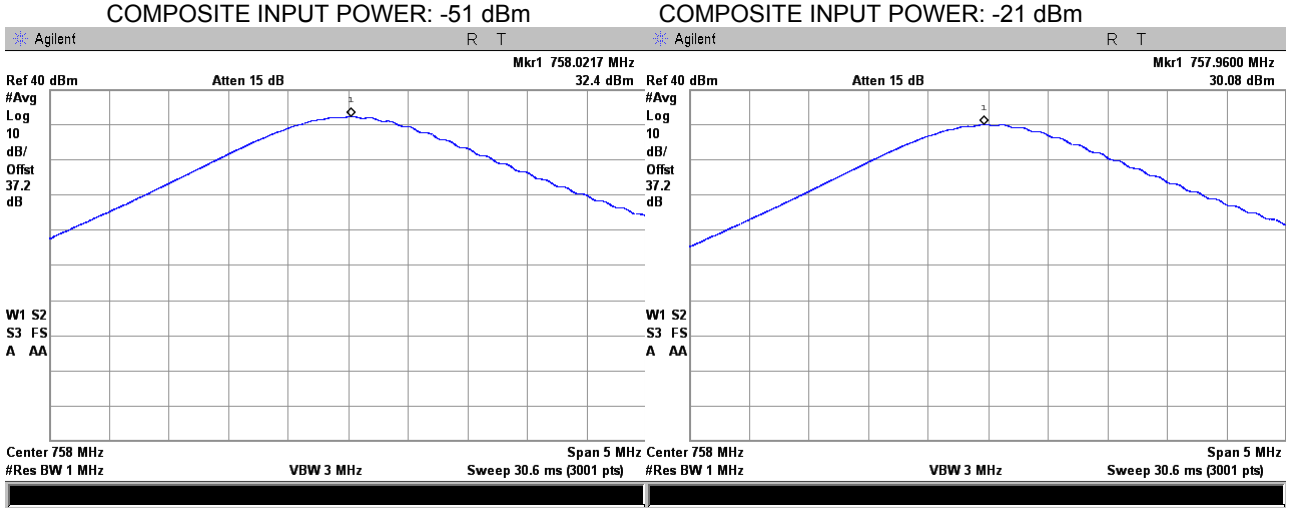
INPUT POWER: -24 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

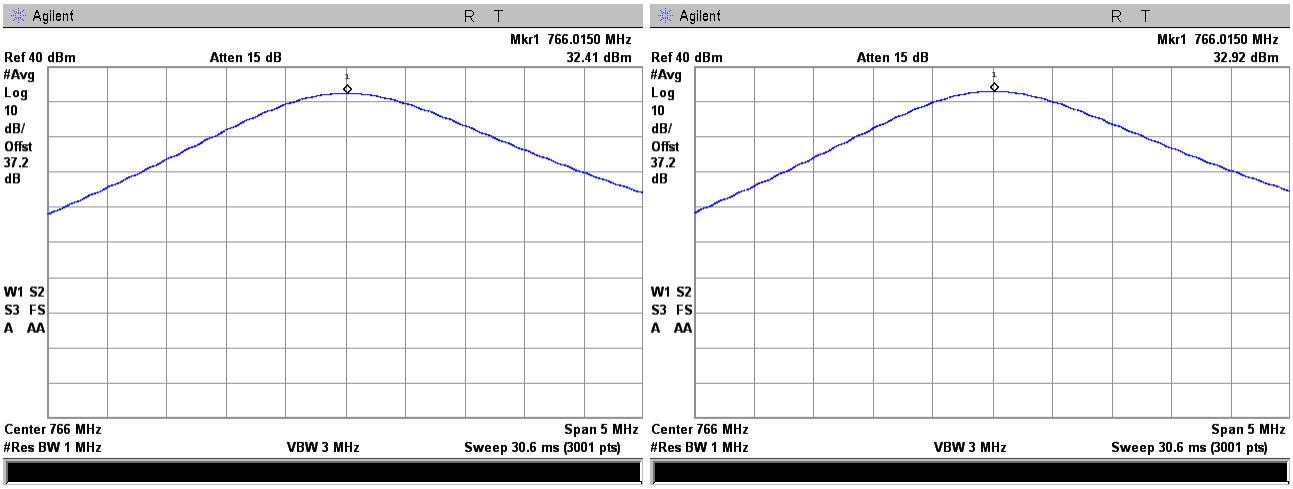
Plot 7.1.49 RF output power measurements at low frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Single Band
INPUT PORT: Base
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.50 RF output power measurements at mid frequency carrier, Port 1

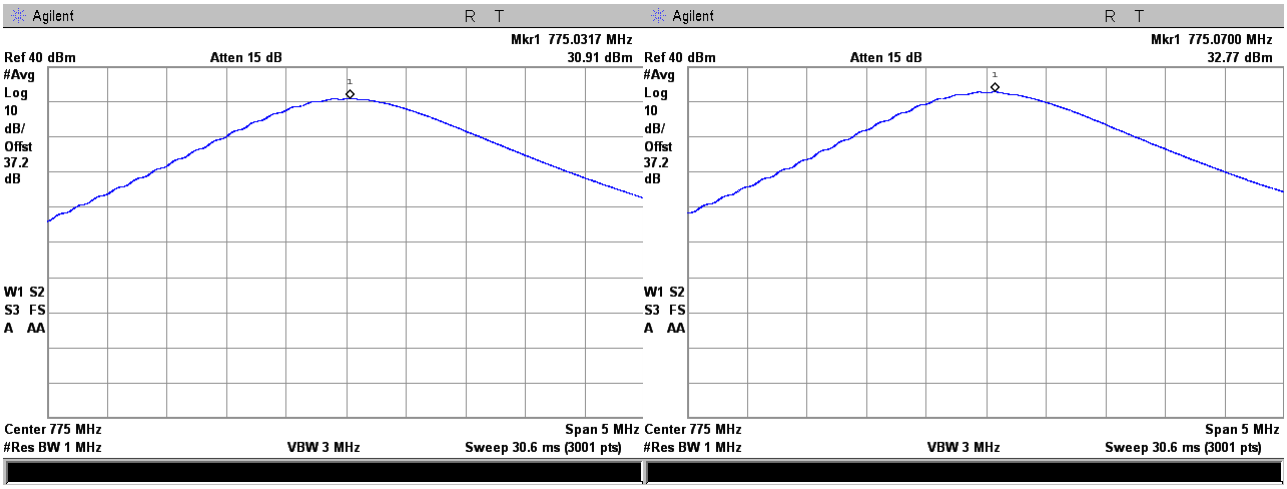
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
CONFIGURATION: Single Band
INPUT PORT: Base
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

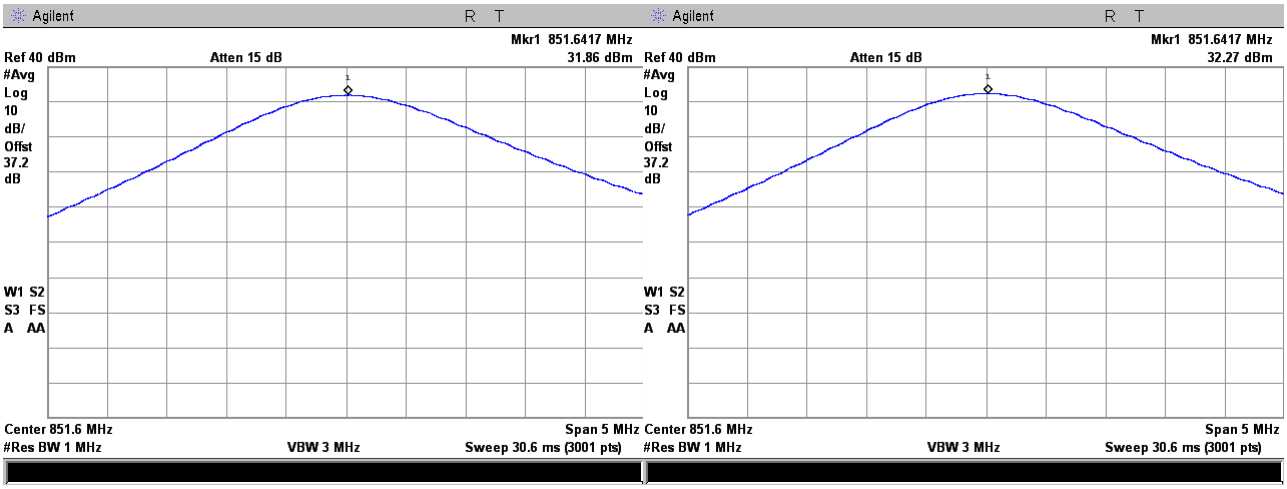
Plot 7.1.51 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Plot 7.1.52 RF output power measurements at low frequency carrier, Port 1

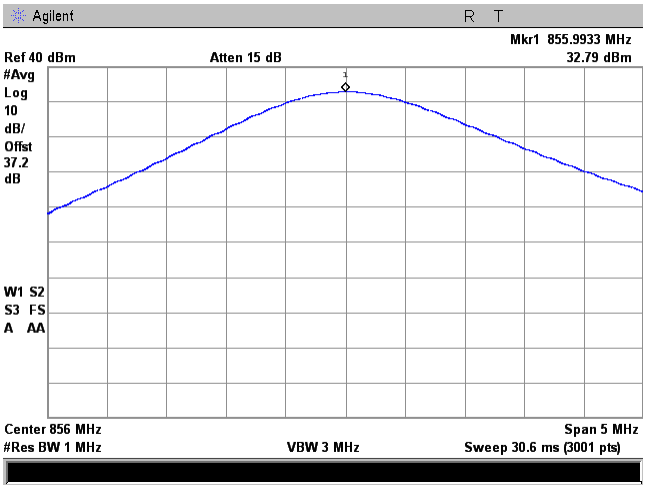
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm

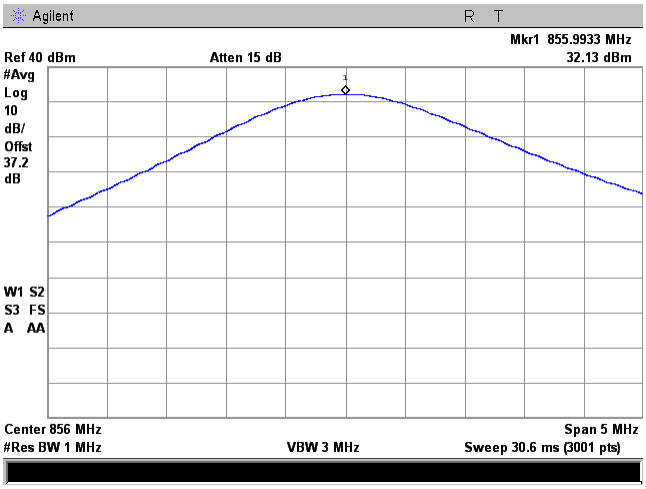


Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.53 RF output power measurements at mid frequency carrier, Port 1

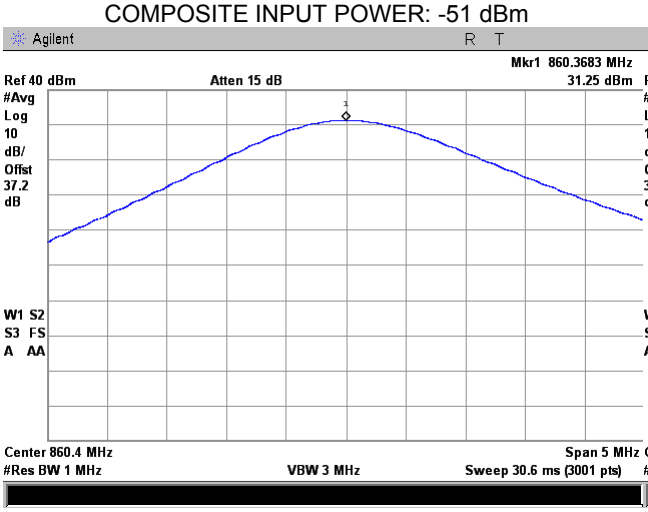
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm

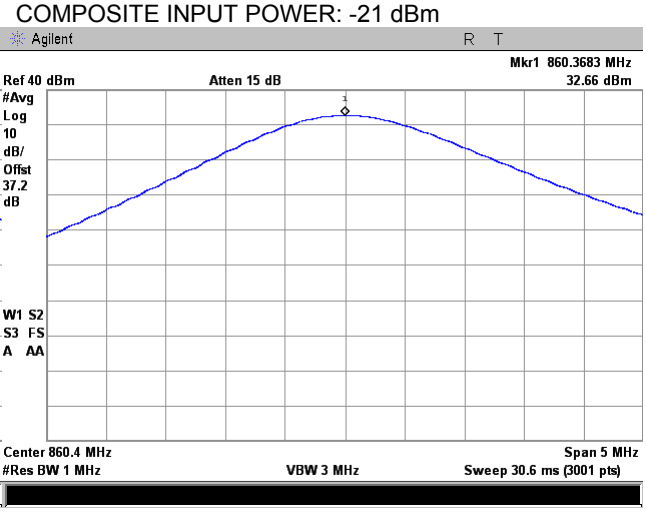




Plot 7.1.54 RF output power measurements at high frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm





Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Table 7.1.8 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATING SIGNAL: OFDMA/CS-FDMA
CONFIGURATION: Dual Band
OPERATING FREQUENCY RANGE: 758 - 768 MHz (downlink)
788 - 798 MHz (uplink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
760.5	Base	29.92	30.04	30.04	37.0	-6.96	Pass
765.5	Base	29.86	29.84	29.86	37.0	-7.14	Pass
Uplink transmit mode							
790.5	Mobile	27.43	27.32	27.43	37.0	-9.57	Pass
795.5	Mobile	27.67	27.65	27.67	37.0	-9.33	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Table 7.1.9 Peak output power test results

DETECTOR USED: Average
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATING SIGNAL: OFDMA
CONFIGURATION: Single Band
OPERATING FREQUENCY RANGE: 758 - 768 MHz (downlink)

Carrier frequency, MHz	Input port	SA reading, dBm		Output power**, dBm	Limit, dBm	Margin*, dB	Verdict
		Without ALC	With ALC				
Downlink transmit mode							
760.5	Base	33.02	32.92	33.02	37.0	-3.98	Pass
765.5	Base	32.96	33.06	33.06	37.0	-3.94	Pass

* - Margin = Maximum ERP – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the power margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Output power = Maximum value from SA reading (Without ALC or With ALC)

Reference numbers of test equipment used

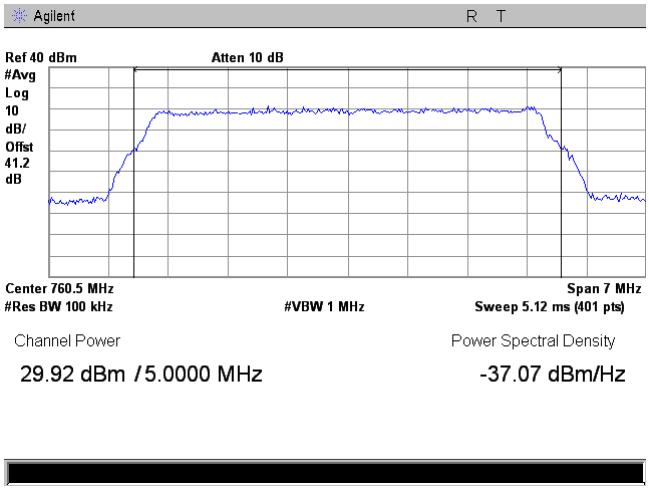
HL 2909	HL 3390	HL 3768	HL 3770	HL 3776	HL 3780	HL 3787	HL 4274
HL 4354							

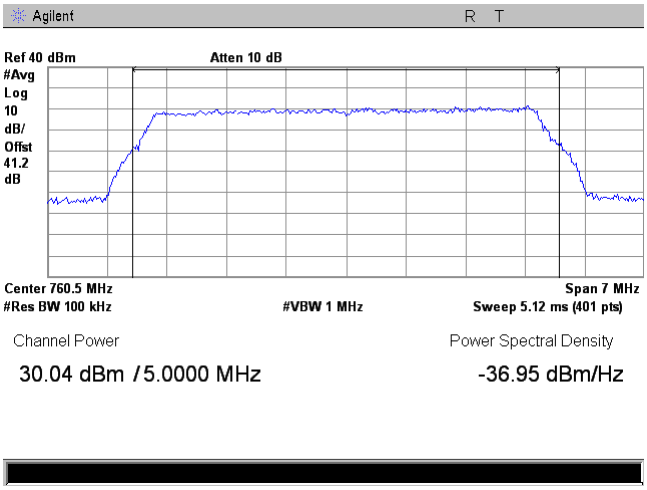
Full description is given in Appendix A.

Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.55 RF output power measurements at low frequency carrier, Port 1

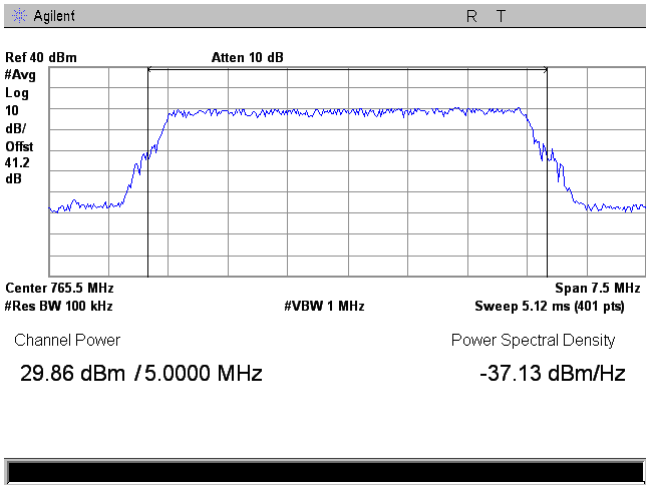
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

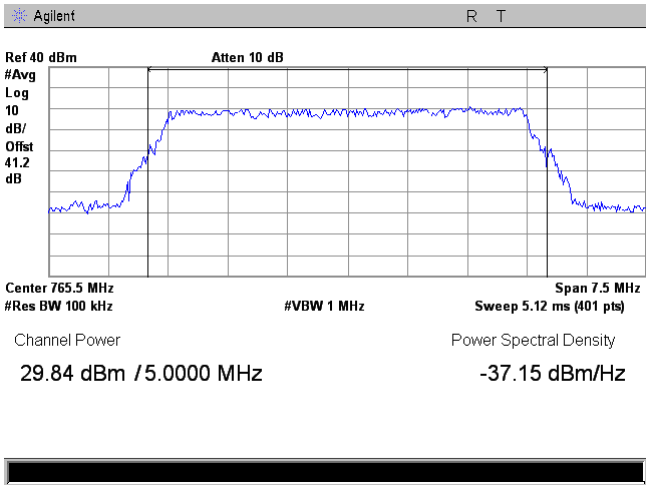




Plot 7.1.56 RF output power measurements at high frequency carrier, Port 1

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

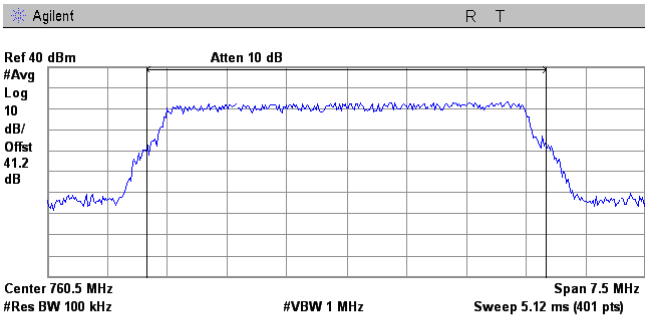




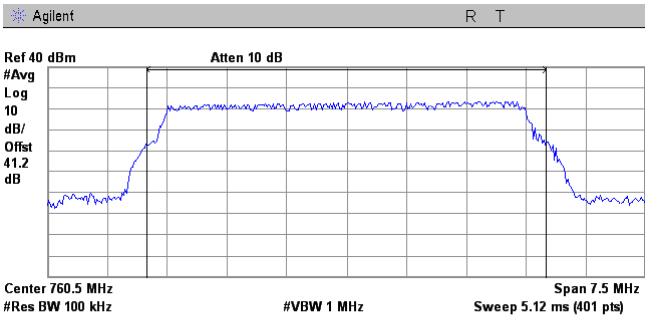
Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.57 RF output power measurements at low frequency carrier, Port 1

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT POWER: -51 dBm	INPUT POWER: -21 dBm



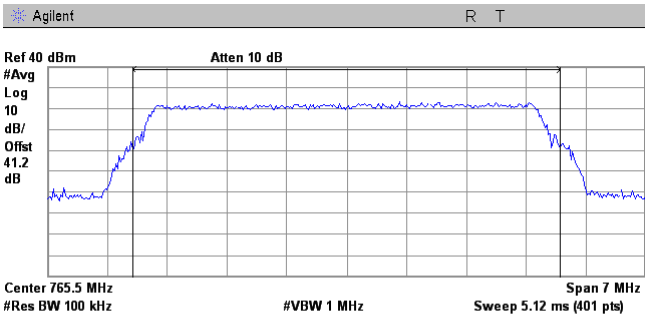
Channel Power: 33.02 dBm / 5.0000 MHz
Power Spectral Density: -33.97 dBm/Hz



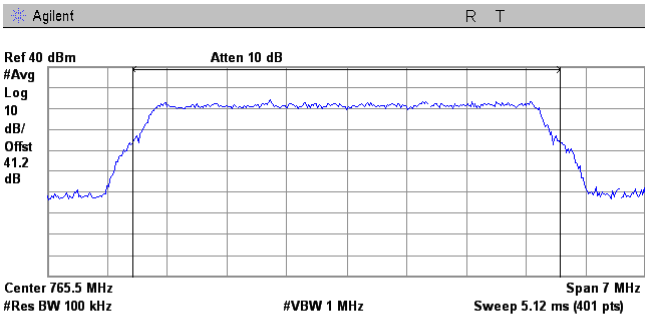
Channel Power: 32.92 dBm / 5.0000 MHz
Power Spectral Density: -34.07 dBm/Hz

Plot 7.1.58 RF output power measurements at high frequency carrier, Port 1

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Single Band
INPUT PORT:	Base
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT POWER: -51 dBm	INPUT POWER: -21 dBm



Channel Power: 32.96 dBm / 5.0000 MHz
Power Spectral Density: -34.03 dBm/Hz

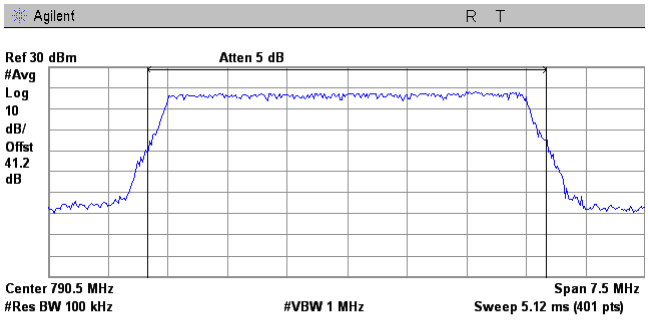


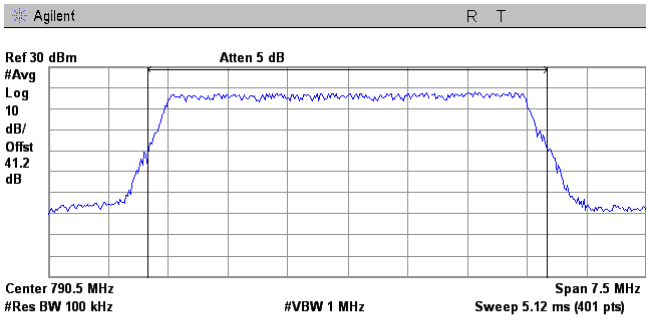
Channel Power: 33.06 dBm / 5.0000 MHz
Power Spectral Density: -33.93 dBm/Hz

Test specification:	Section 90.219(e)(1), Maximum output power		
Test procedure:	47 CFR, Section 2.1046; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	23-Mar-14 - 31-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1009 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.1.59 RF output power measurements at low frequency carrier, Port 2

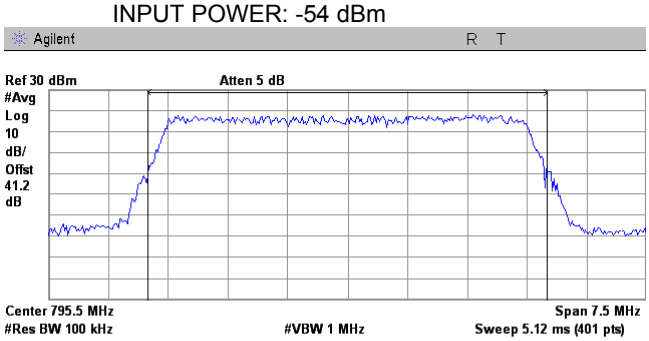
FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	CS-FDMA
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

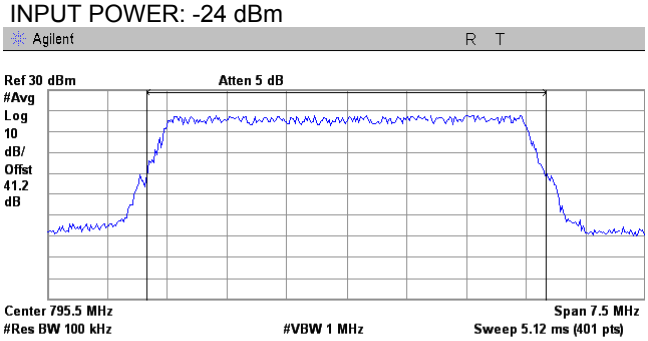




Plot 7.1.60 RF output power measurements at high frequency carrier, Port 2

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	CS-FDMA
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm





Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

7.2 Occupied bandwidth test

7.2.1 General

This test was performed to measure transmitter occupied bandwidth. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Occupied bandwidth limits

Assigned frequency, MHz	Modulation envelope reference points*, dBc	Maximum allowed bandwidth, kHz
758 – 775/778 - 805	26	75.0
806 – 816/851 - 861		75.0

* - Modulation envelope reference points are provided in terms of attenuation below the unmodulated carrier.

7.2.2 Test procedure

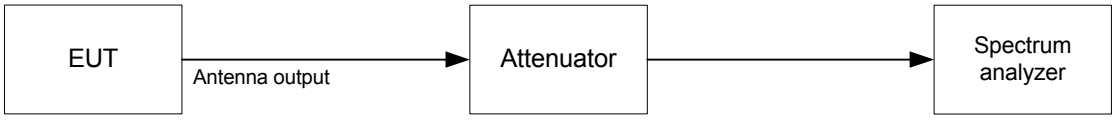
7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.

7.2.2.2 The EUT was set to transmit the unmodulated carrier and the reference peak power level was measured.

7.2.2.3 The EUT was set to transmit the normally modulated carrier.

7.2.2.4 The transmitter occupied bandwidth was measured with spectrum analyzer as a frequency delta between the reference points on modulation envelope and provided in Table 7.2.2, Table 7.2.3 and the associated plots.

Figure 7.2.1 Occupied bandwidth test setup



Test specification:	**Section 90.219(a), Occupied bandwidth**		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	**Air Pressure:** 1011 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.2.2 Occupied bandwidth test results

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)
DETECTOR USED: Peak hold
RESOLUTION BANDWIDTH: 300 Hz
VIDEO BANDWIDTH: 1 kHz
MODULATION ENVELOPE REFERENCE POINTS: 26 dBc
MODULATING SIGNAL: C4FM
BIT RATE: 4 kbps

CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
758.0	Base	8.153	7.717	75.0	-66.847	Pass
766.0	Base	7.820	8.323	75.0	-67.180	Pass
775.0	Base	7.866	7.580	75.0	-67.134	Pass
778.0	Mobile	8.000	6.469	75.0	-67.000	Pass
796.0	Mobile	8.660	7.379	75.0	-66.340	Pass
805.0	Mobile	7.838	7.826	75.0	-67.162	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
758.0	Base	7.300	8.230	75.0	-67.700	Pass
766.0	Base	7.289	8.138	75.0	-67.711	Pass
775.0	Base	7.302	8.371	75.0	-67.698	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)
CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
851.0	Base	8.371	7.899	75.0	-66.629	Pass
856.0	Base	7.923	6.739	75.0	-67.077	Pass
861.0	Base	8.379	8.803	75.0	-66.621	Pass
806.0	Mobile	8.809	7.978	75.0	-66.191	Pass
811.0	Mobile	7.863	7.478	75.0	-67.137	Pass
816.0	Mobile	7.644	7.741	75.0	-67.356	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
851.0	Base	7.969	7.583	75.0	-67.031	Pass
856.0	Base	8.434	7.590	75.0	-66.566	Pass
861.0	Base	8.111	7.789	75.0	-66.889	Pass

Test specification:	**Section 90.219(a), Occupied bandwidth**		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	**Air Pressure:** 1011 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.2.2 Occupied bandwidth test results (continued)

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)
DETECTOR USED: Peak hold
RESOLUTION BANDWIDTH: 300 Hz
VIDEO BANDWIDTH: 1 kHz
MODULATION ENVELOPE REFERENCE POINTS: 26 dBc
MODULATING SIGNAL: iDEN QAM
BIT RATE: 4 kbps

CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
758.0	Base	17.174	17.604	75.0	-57.826	Pass
766.0	Base	17.298	17.462	75.0	-57.702	Pass
775.0	Base	17.087	17.098	75.0	-57.913	Pass
788.0	Mobile	17.223	17.824	75.0	-57.777	Pass
796.0	Mobile	17.164	18.208	75.0	-57.836	Pass
805.0	Mobile	16.931	17.720	75.0	-58.069	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
758.0	Base	17.342	17.194	75.0	-57.658	Pass
766.0	Base	17.380	17.398	75.0	-57.620	Pass
775.0	Base	17.488	17.534	75.0	-57.512	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)
CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
851.0	Base	17.480	17.579	75.0	-57.520	Pass
856.0	Base	17.680	17.215	75.0	-57.320	Pass
861.0	Base	17.515	17.567	75.0	-57.485	Pass
806.0	Mobile	17.247	18.812	75.0	-57.753	Pass
811.0	Mobile	17.009	17.646	75.0	-57.991	Pass
816.0	Mobile	17.517	18.407	75.0	-57.483	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
851.0	Base	17.215	17.274	75.0	-57.785	Pass
856.0	Base	17.211	17.703	75.0	-57.789	Pass
861.0	Base	17.649	17.395	75.0	-57.351	Pass

Test specification:	**Section 90.219(a), Occupied bandwidth**		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	**Air Pressure:** 1011 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.2.2 Occupied bandwidth test results (continued)

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)
DETECTOR USED: Peak hold
RESOLUTION BANDWIDTH: 300 Hz
VIDEO BANDWIDTH: 1 kHz
MODULATION ENVELOPE REFERENCE POINTS: 26 dBc
MODULATING SIGNAL: Analog FM 10.0 kHz/1 kHz
BIT RATE: 4 kbps

CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
758.0	Base	23.520	23.502	75.0	-51.480	Pass
766.0	Base	23.497	23.498	75.0	-51.503	Pass
775.0	Base	23.083	23.426	75.0	-51.917	Pass
778.0	Mobile	23.341	23.945	75.0	-51.659	Pass
796.0	Mobile	23.025	23.780	75.0	-51.975	Pass
805.0	Mobile	23.712	24.255	75.0	-51.288	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
758.0	Base	23.458	23.497	75.0	-51.542	Pass
796.0	Base	23.320	23.505	75.0	-51.680	Pass
775.0	Base	23.453	23.420	75.0	-51.547	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)
CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
851.0	Base	23.840	23.800	75.0	-51.160	Pass
856.0	Base	23.798	24.130	75.0	-51.202	Pass
861.0	Base	24.134	23.926	75.0	-50.866	Pass
806.0	Mobile	23.933	24.052	75.0	-51.067	Pass
811.0	Mobile	23.697	24.068	75.0	-51.303	Pass
816.0	Mobile	23.720	24.111	75.0	-51.280	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
851.0	Base	23.819	23.129	75.0	-51.181	Pass
856.0	Base	24.062	23.861	75.0	-50.938	Pass
861.0	Base	24.142	24.133	75.0	-50.858	Pass

Reference numbers of test equipment used

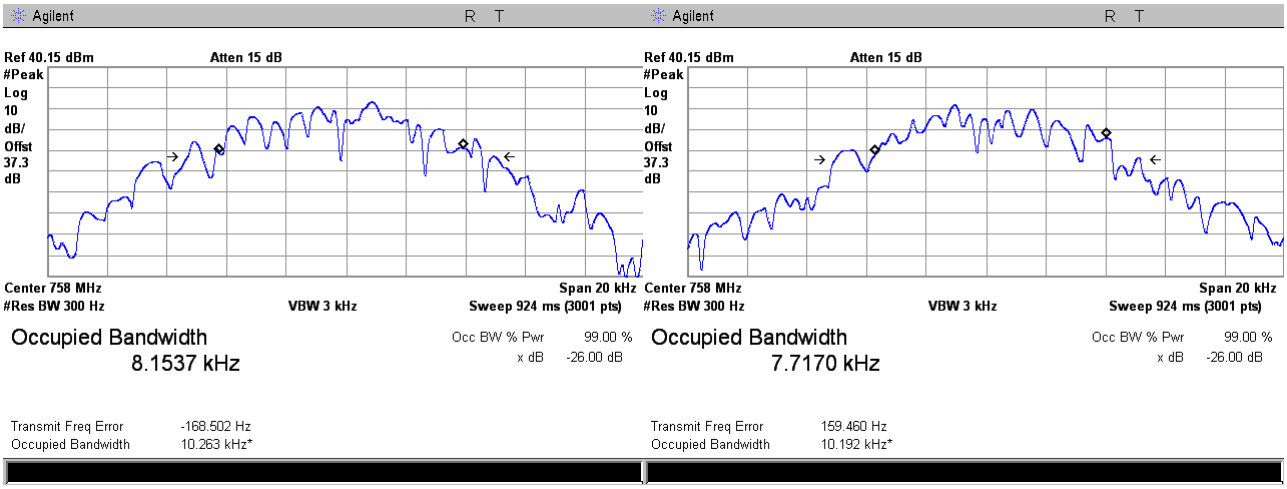
HL 2909	HL 3768	HL 3770	HL 3776	HL 4224	HL 4273	HL 4274	HL 4413

Full description is given in Appendix A.

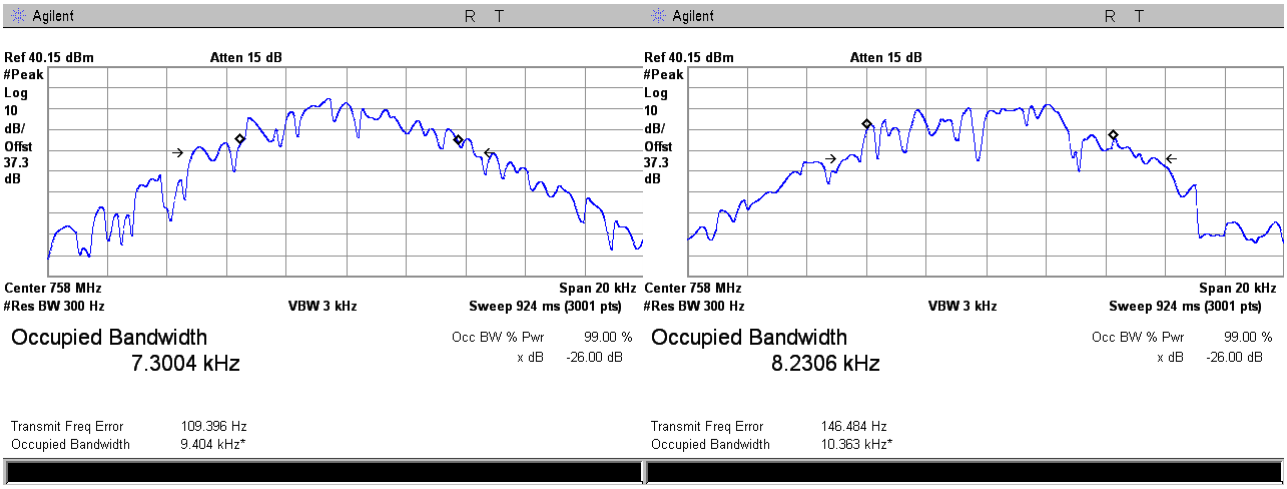
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.1 Occupied bandwidth test result at low frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band



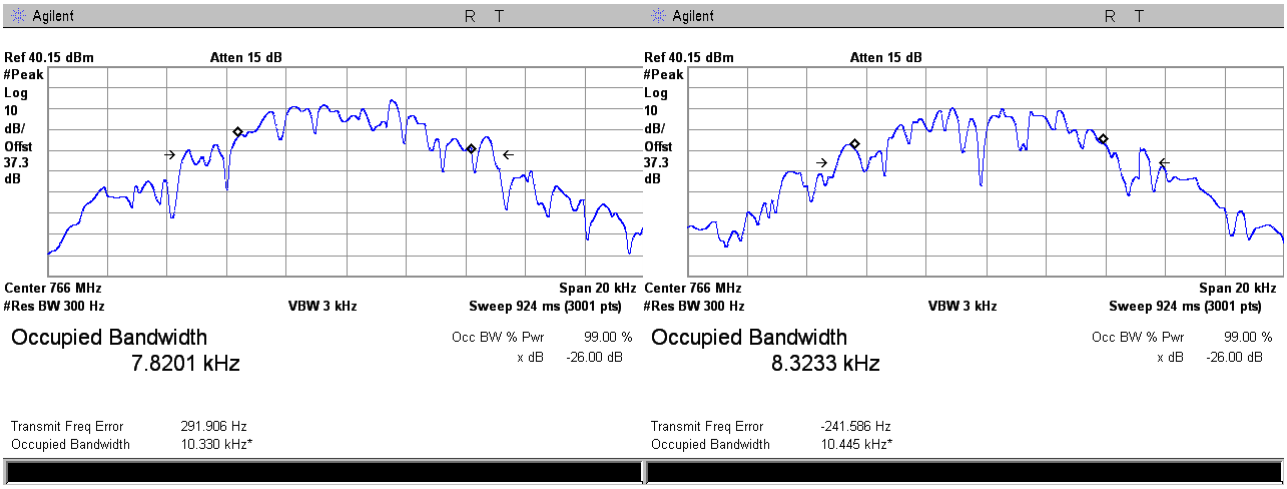
CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm COMPOSITE INPUT POWER: -21 dBm



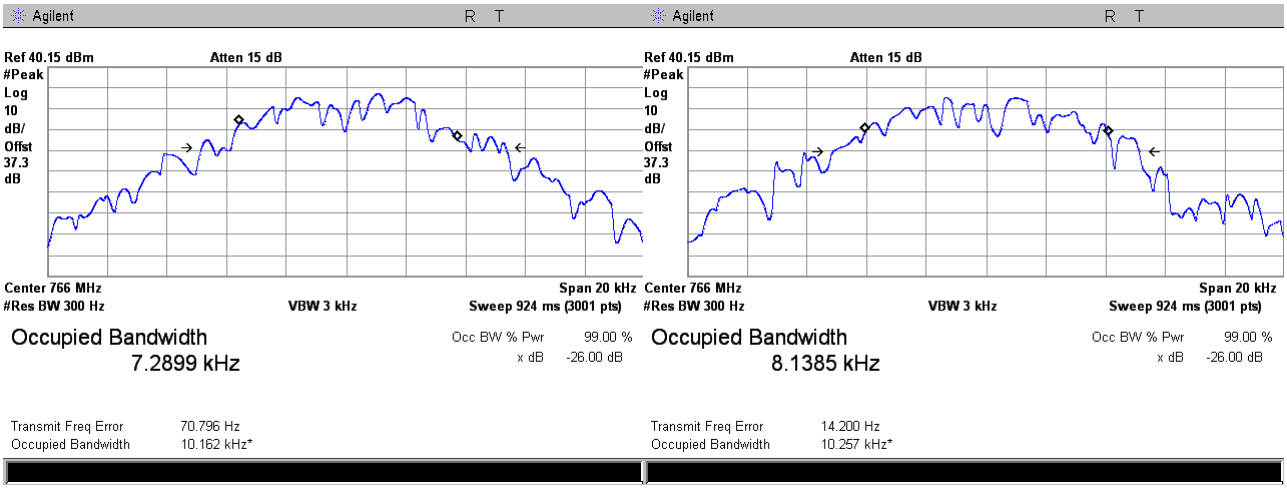
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.2 Occupied bandwidth test result at mid frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band



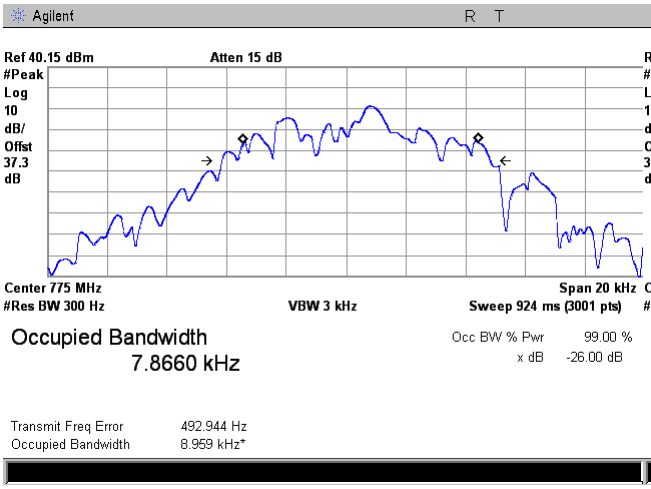
CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm COMPOSITE INPUT POWER: -21 dBm

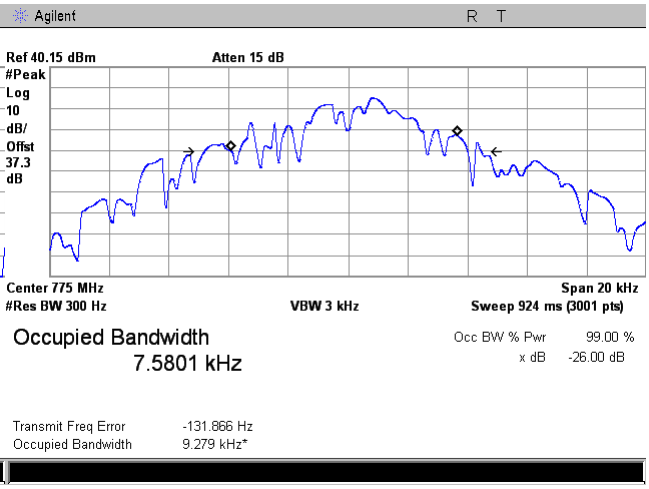


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

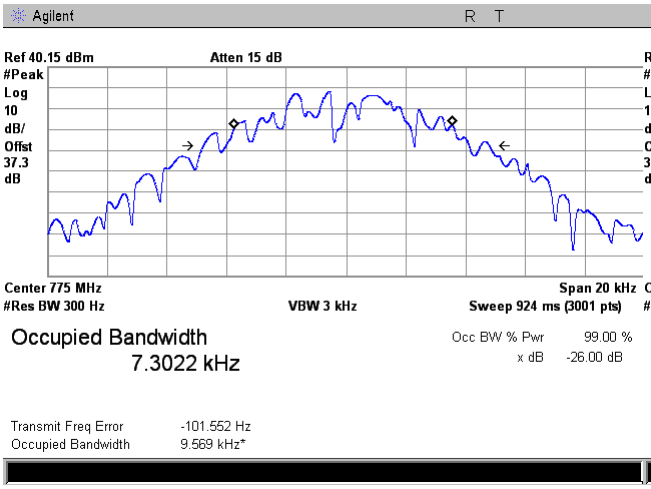
Plot 7.2.3 Occupied bandwidth test result at high frequency carrier, Port 1

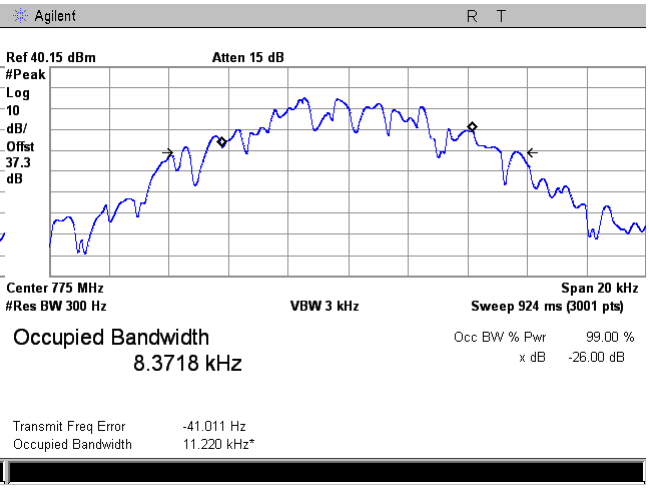
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm COMPOSITE INPUT POWER: -21 dBm

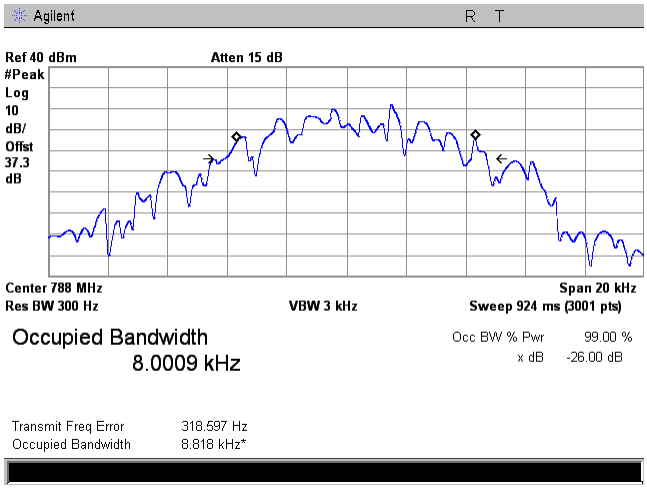


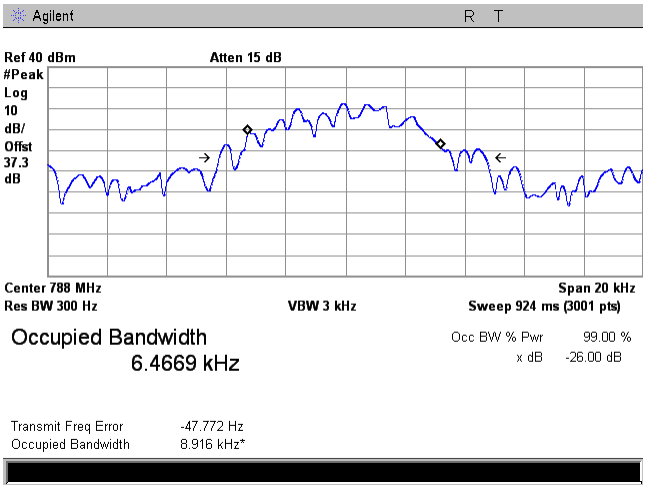


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.4 Occupied bandwidth test result at low frequency carrier, Port 2

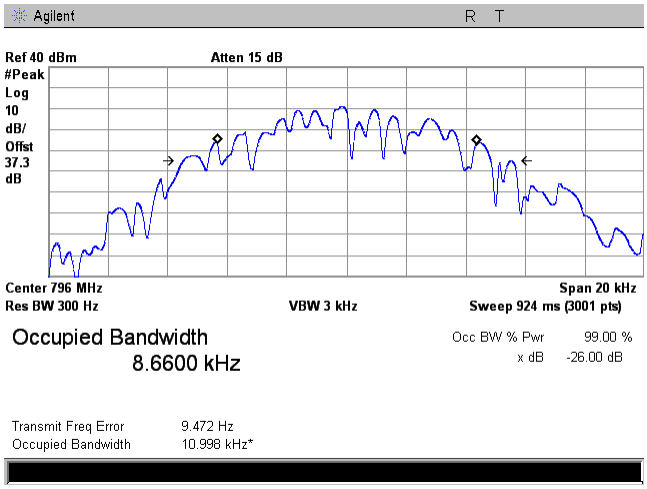
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

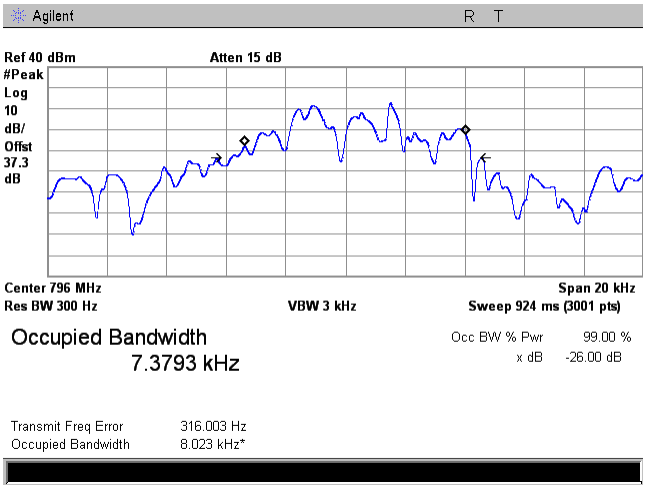




Plot 7.2.5 Occupied bandwidth test result at mid frequency carrier, Port 2

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

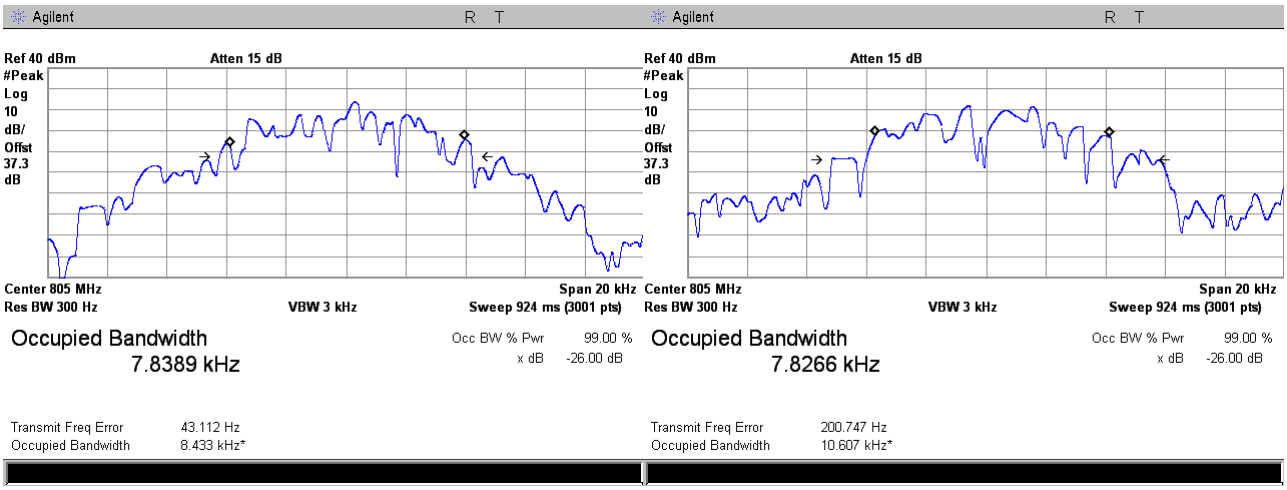




Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.6 Occupied bandwidth test result at high frequency carrier, Port 2

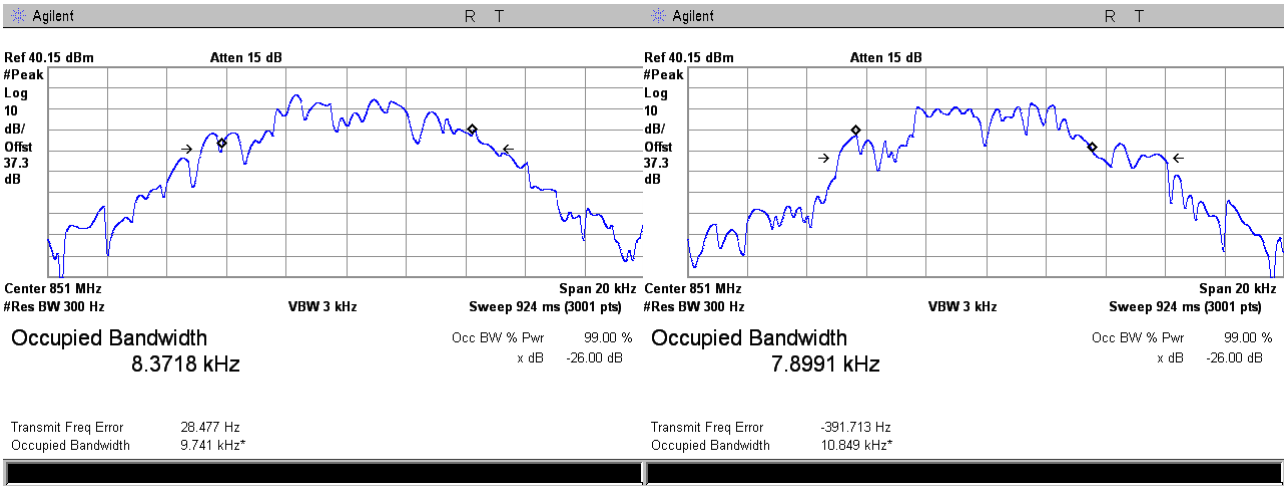
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



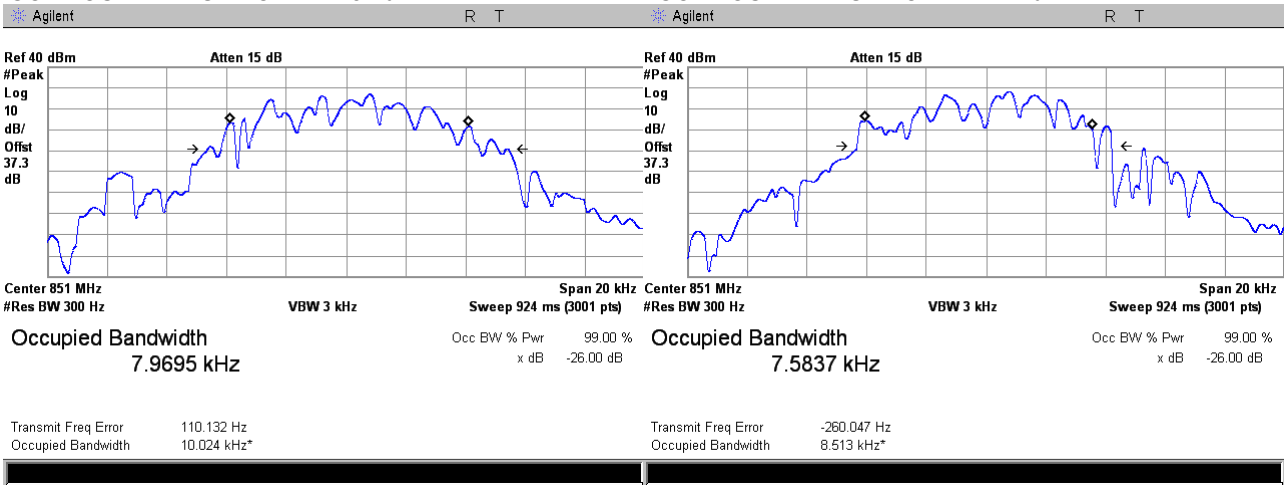
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.7 Occupied bandwidth test result at low frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



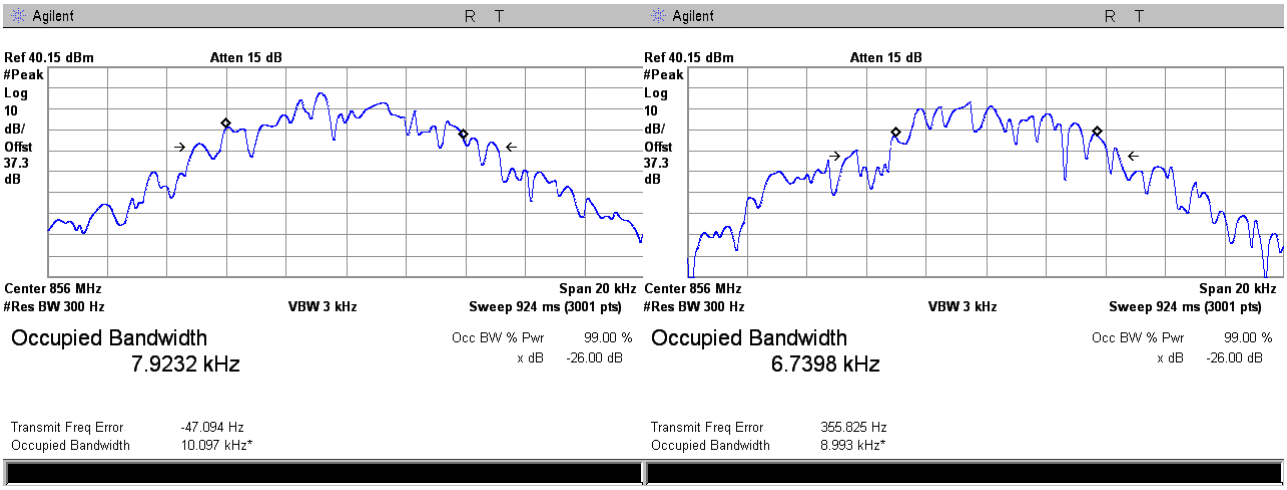
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



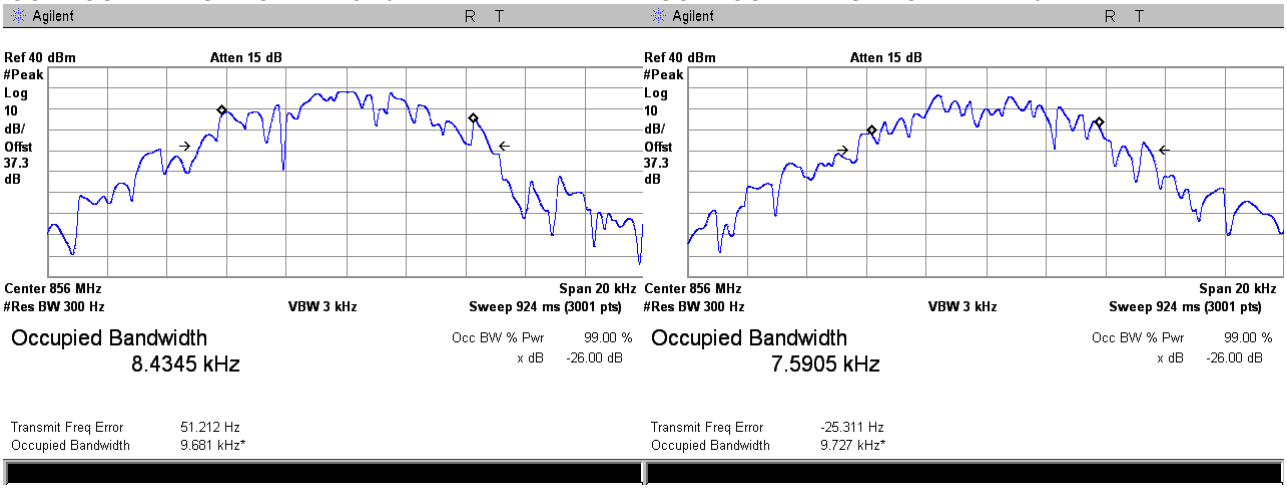
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.8 Occupied bandwidth test result at mid frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



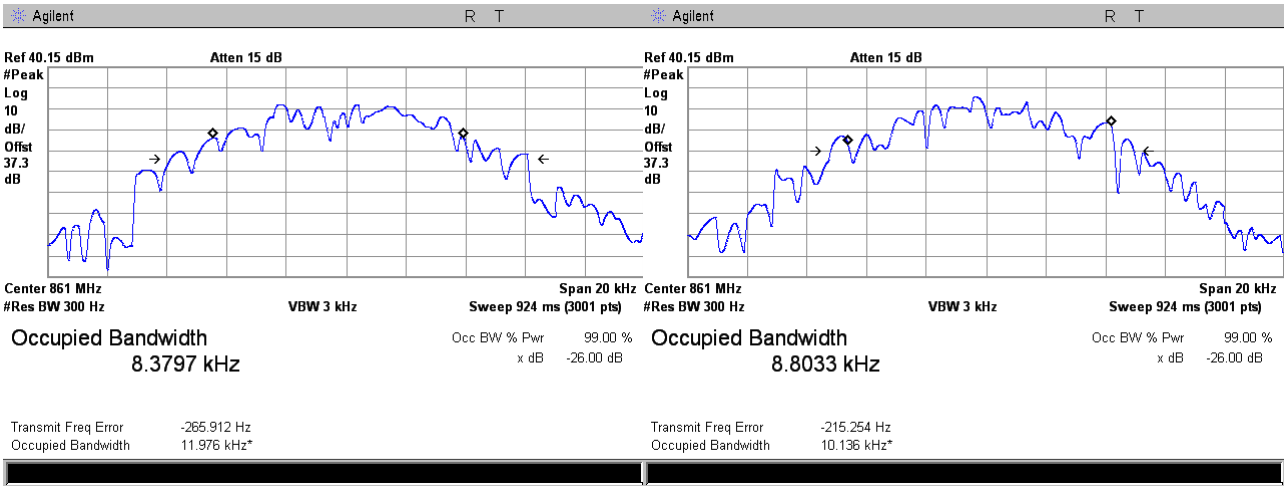
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



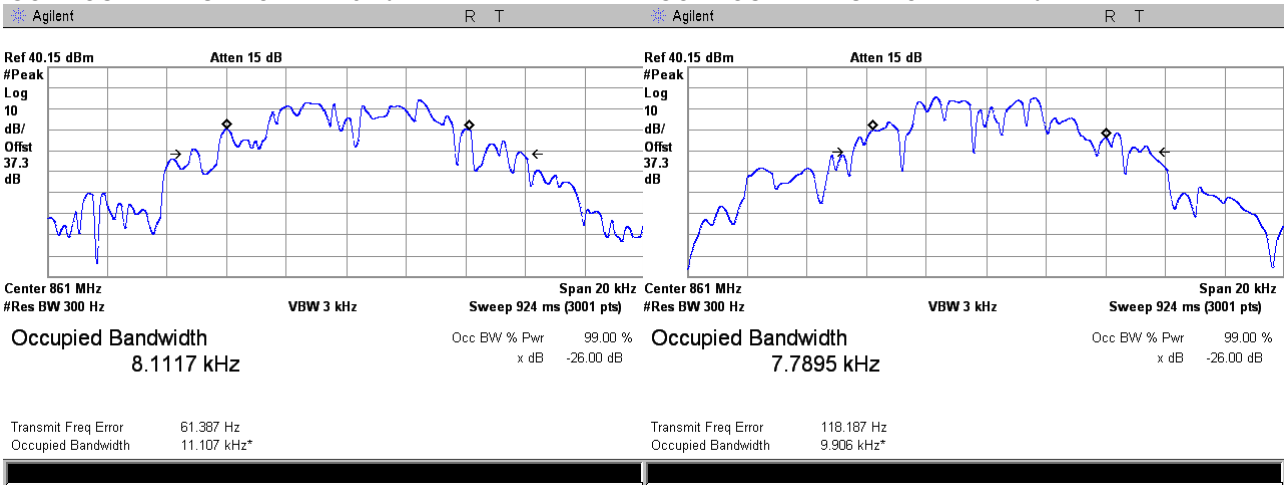
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.9 Occupied bandwidth test result at high frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



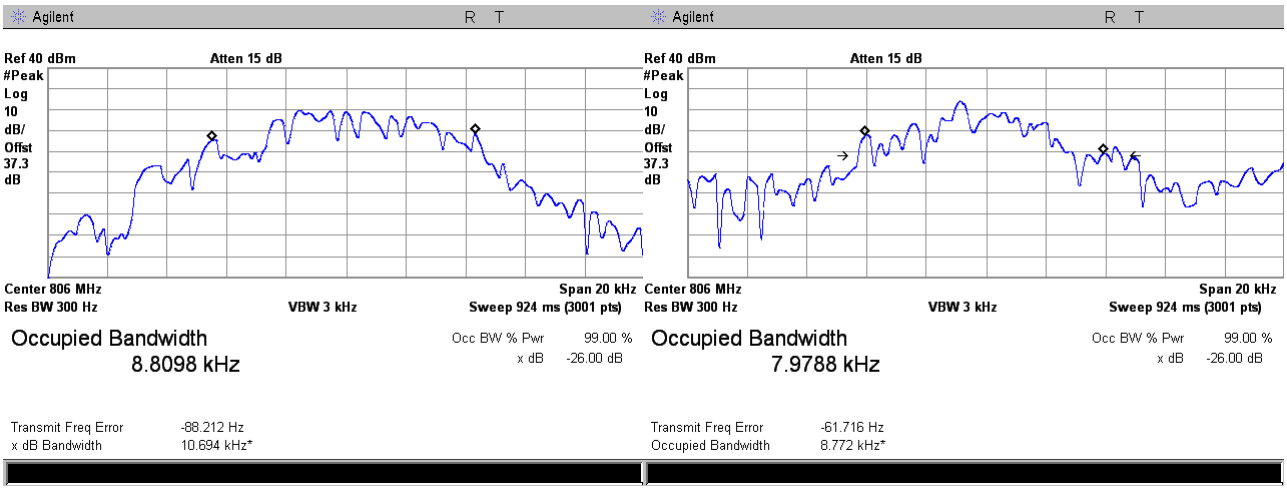
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

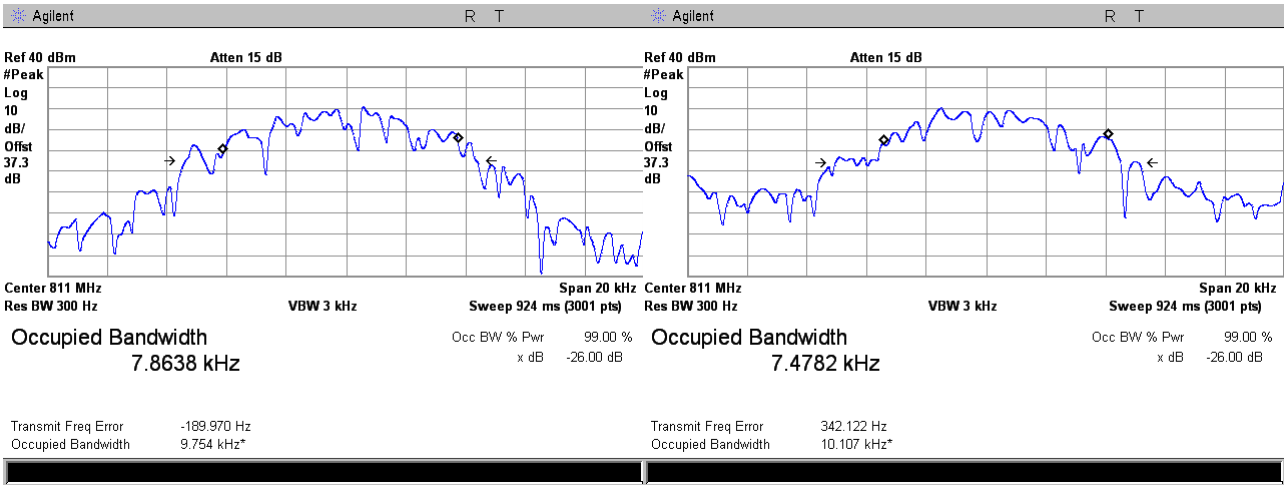
Plot 7.2.10 Occupied bandwidth test result at low frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



Plot 7.2.11 Occupied bandwidth test result at mid frequency carrier, Port 2

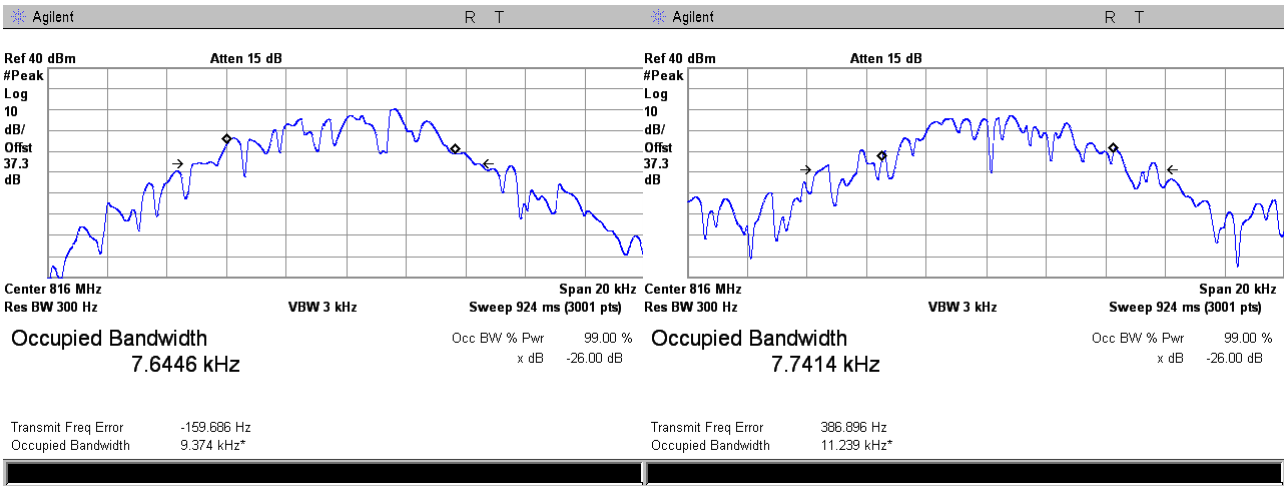
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.12 Occupied bandwidth test result at low frequency carrier, Port 2

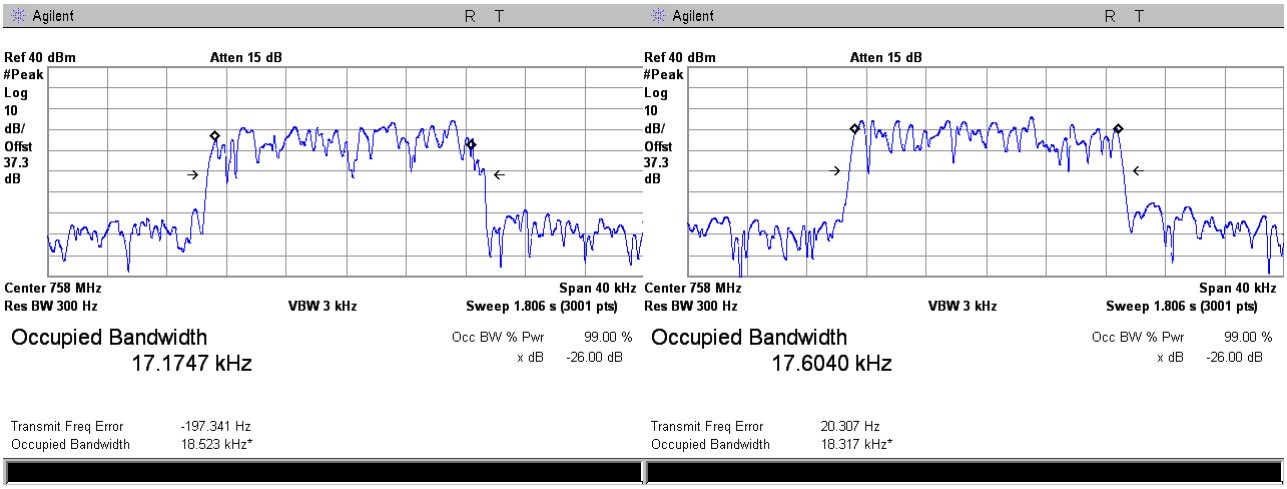
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



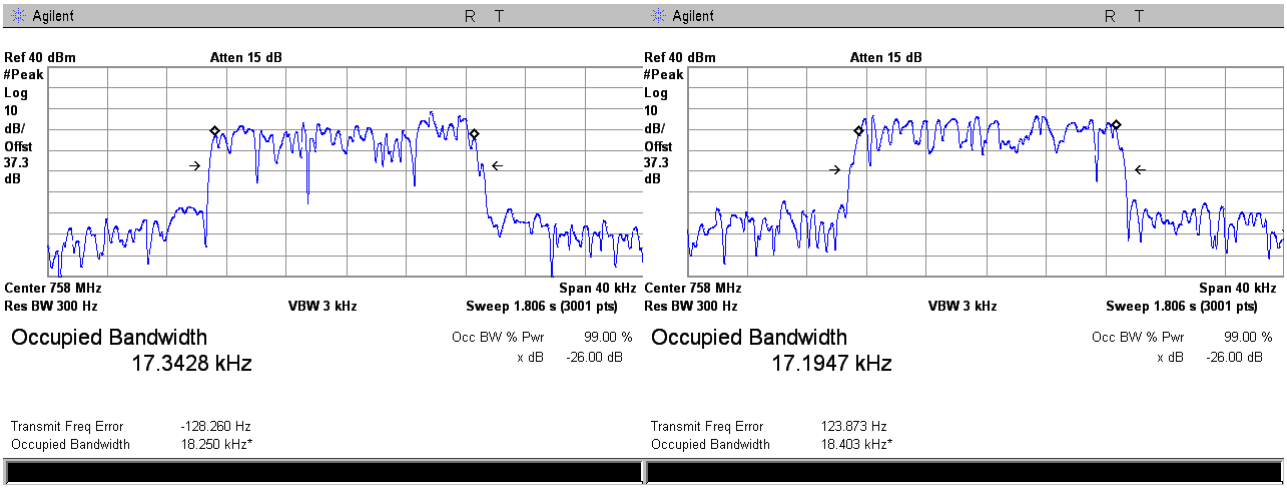
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.13 Occupied bandwidth test result at low frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band



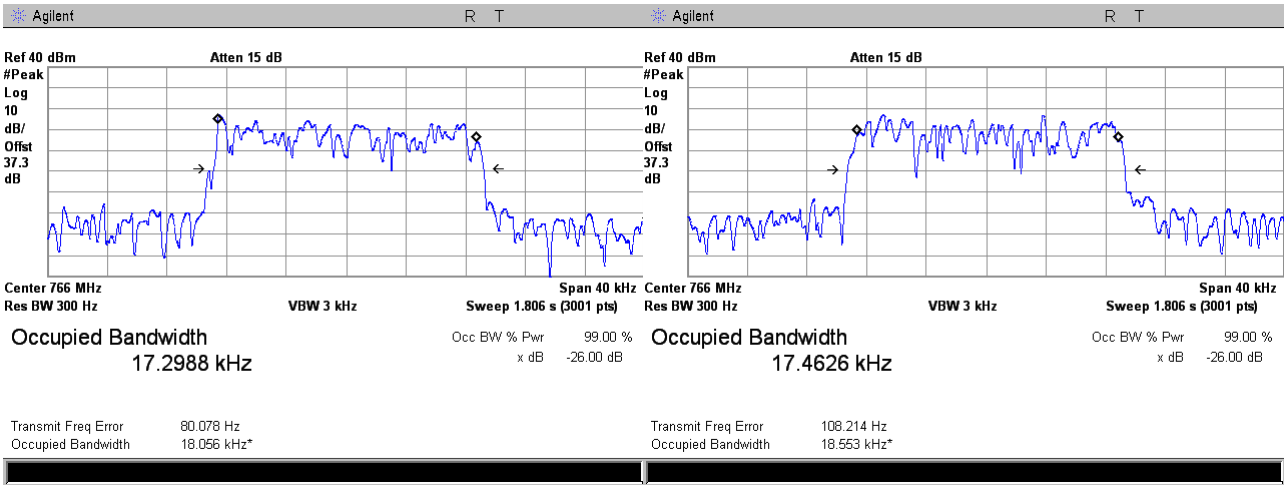
CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm COMPOSITE INPUT POWER: -21 dBm



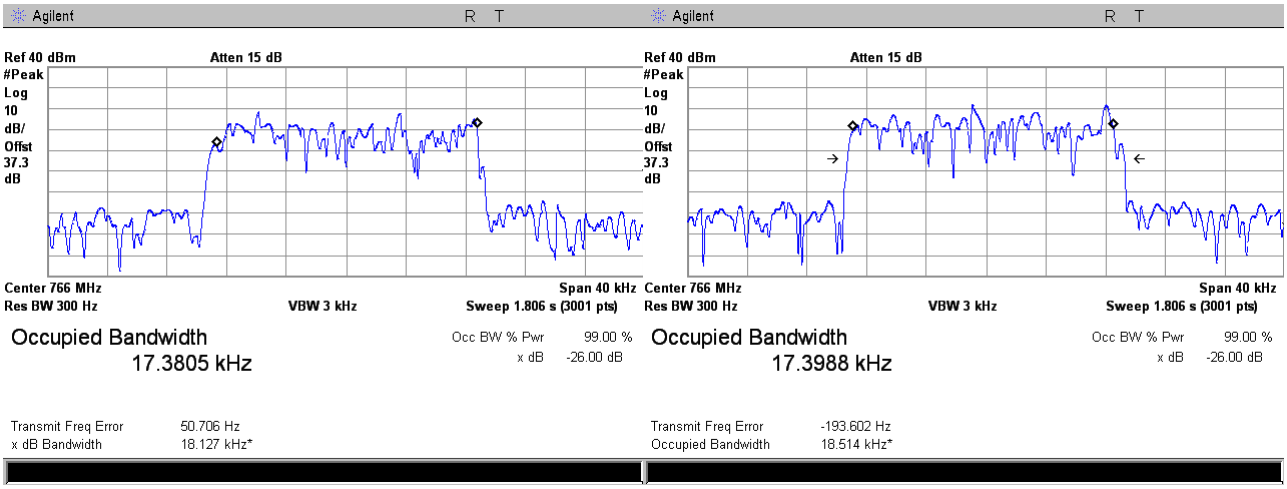
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.14 Occupied bandwidth test result at mid frequency carrier, Port 1

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band



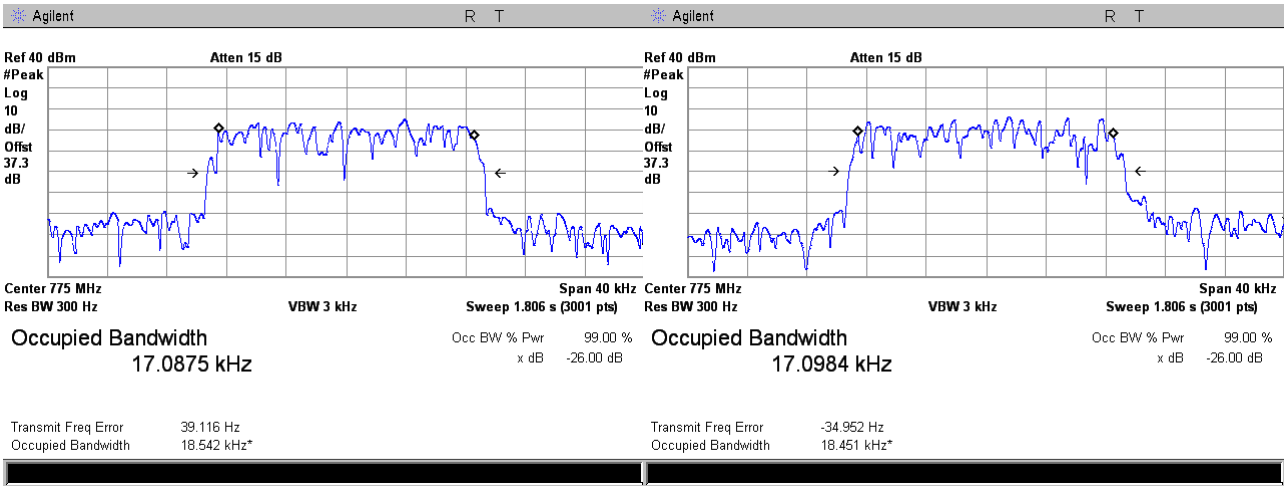
CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm COMPOSITE INPUT POWER: -21 dBm



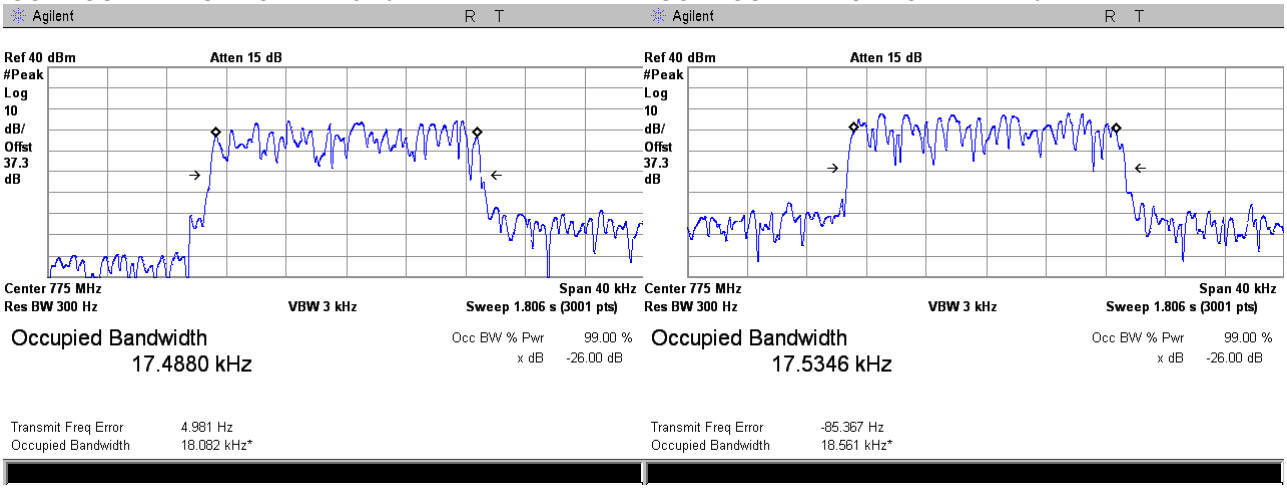
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.15 Occupied bandwidth test result at high frequency carrier, Port 1

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



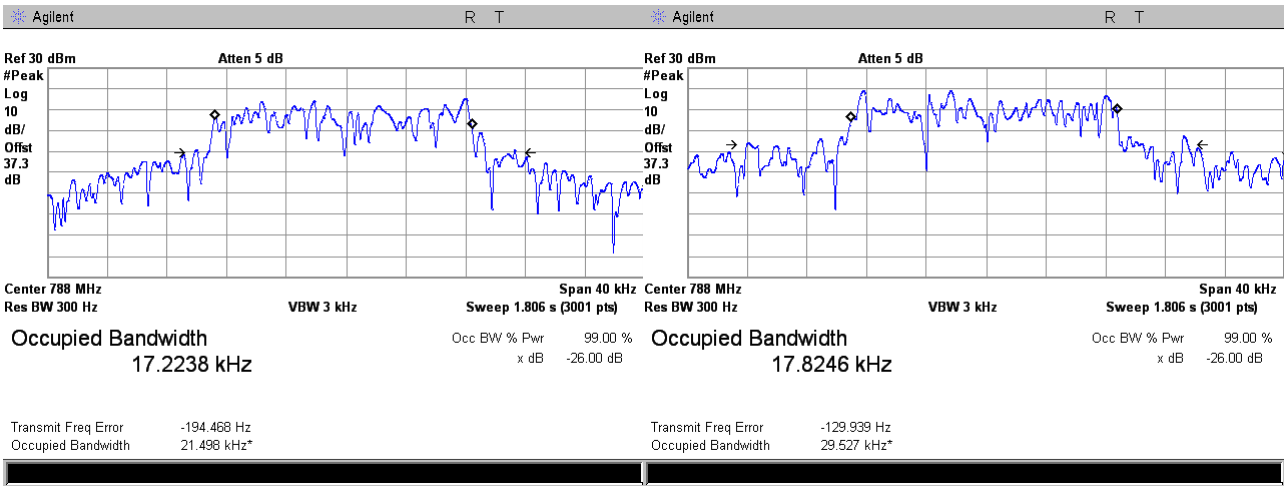
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

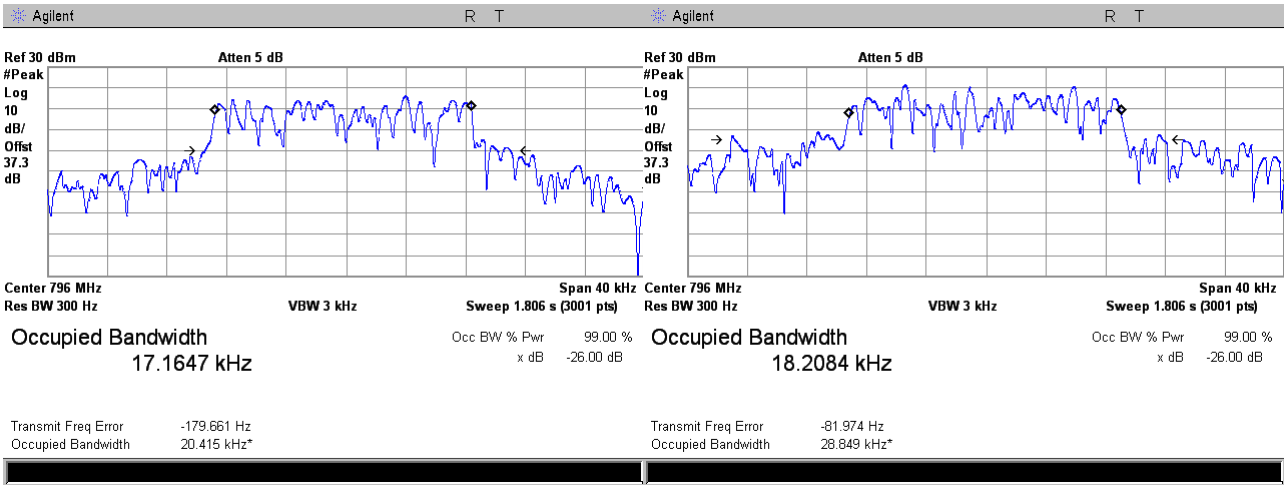
Plot 7.2.16 Occupied bandwidth test result at low frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



Plot 7.2.17 Occupied bandwidth test result at low frequency carrier, Port 2

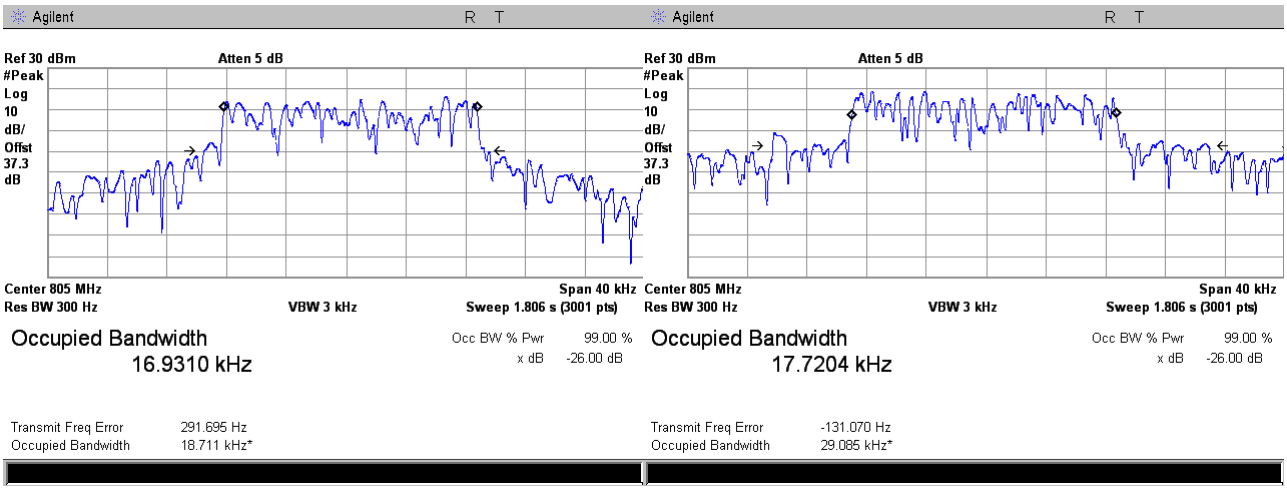
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.18 Occupied bandwidth test result at low frequency carrier, Port 2

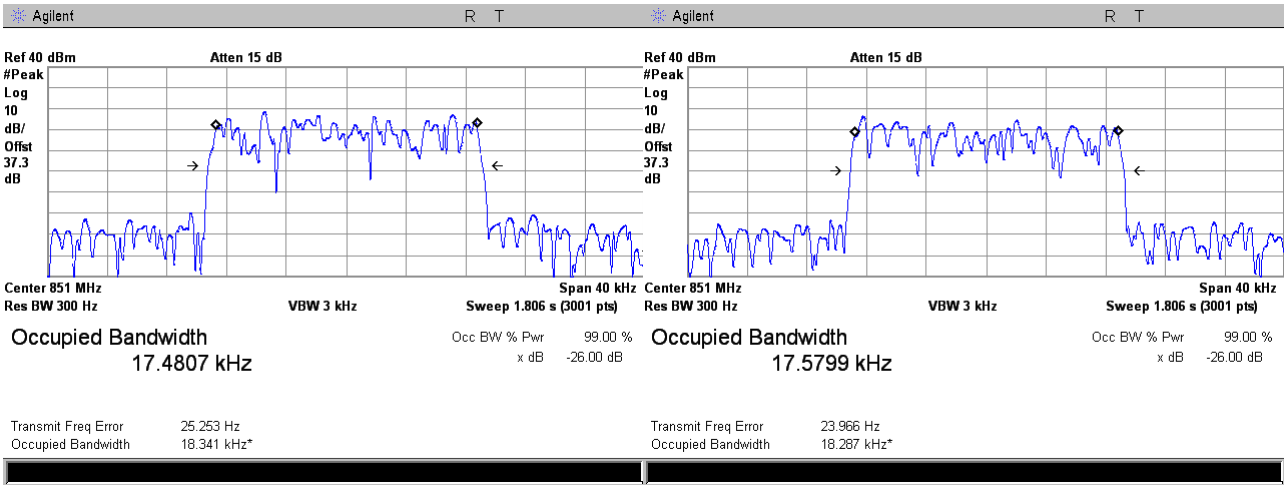
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



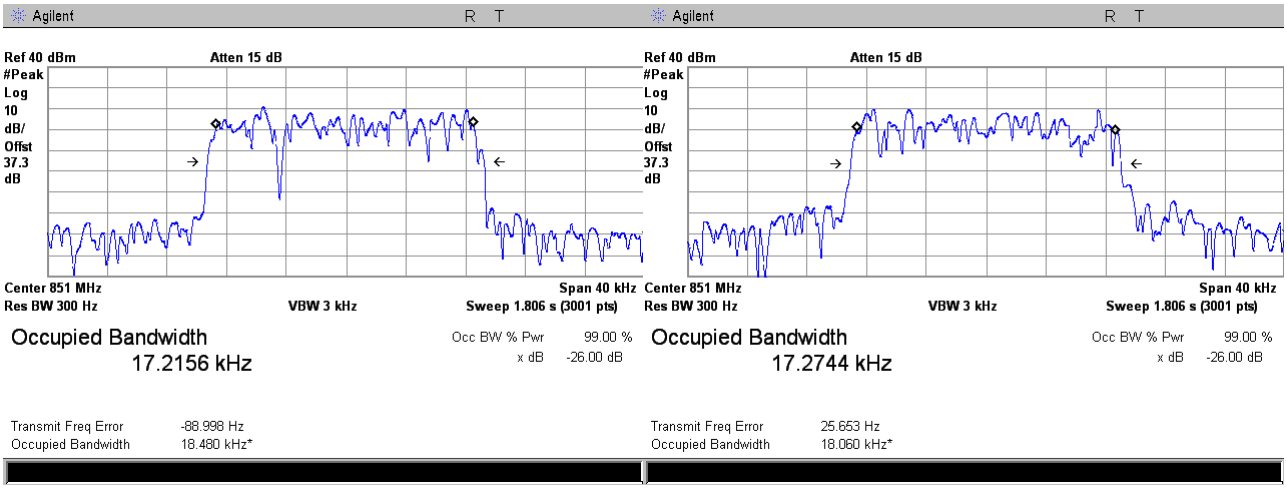
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.19 Occupied bandwidth test result at low frequency carrier, Port 1

FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band



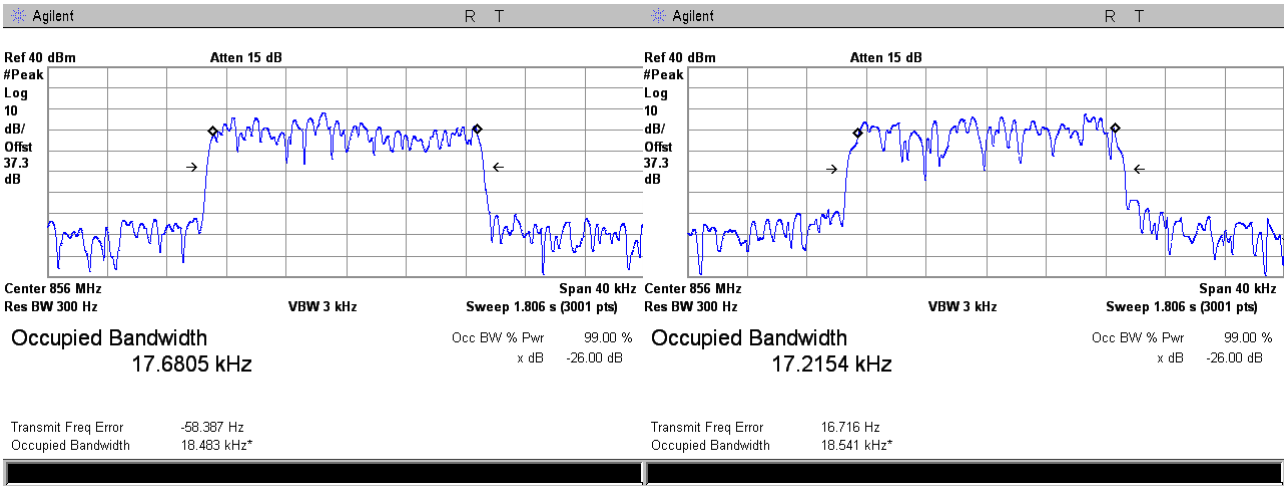
CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm COMPOSITE INPUT POWER: -21 dBm



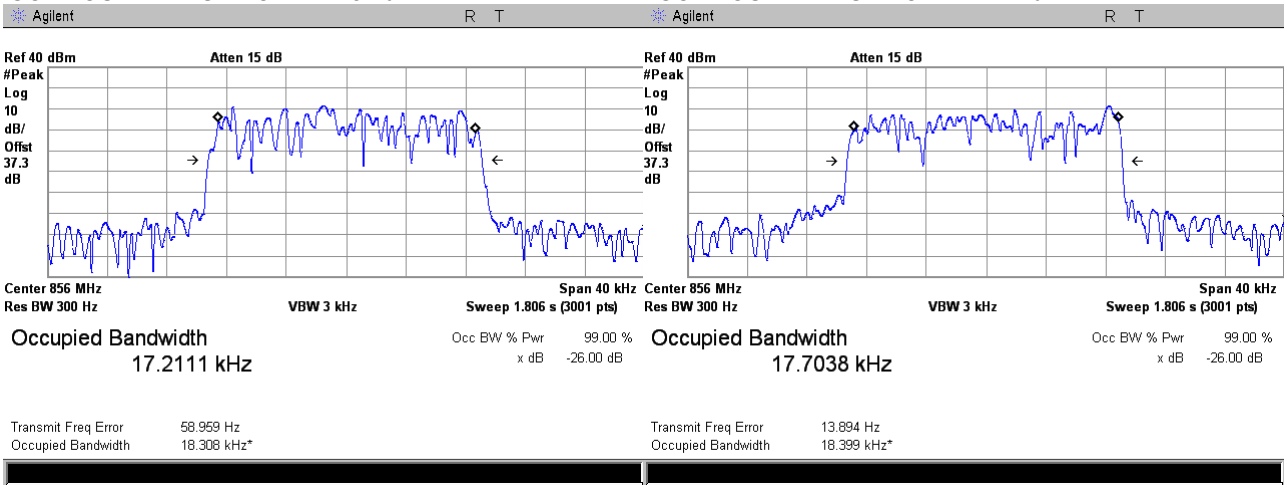
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.20 Occupied bandwidth test result at mid frequency carrier, Port 1

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band



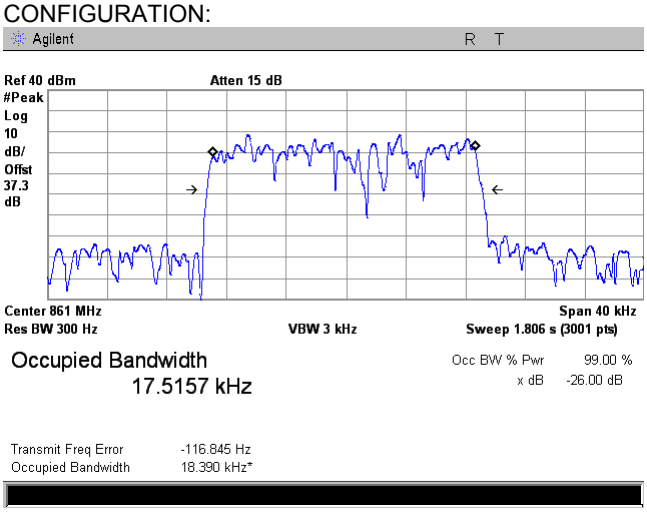
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER: -51 dBm	COMPOSITE INPUT POWER: -21 dBm

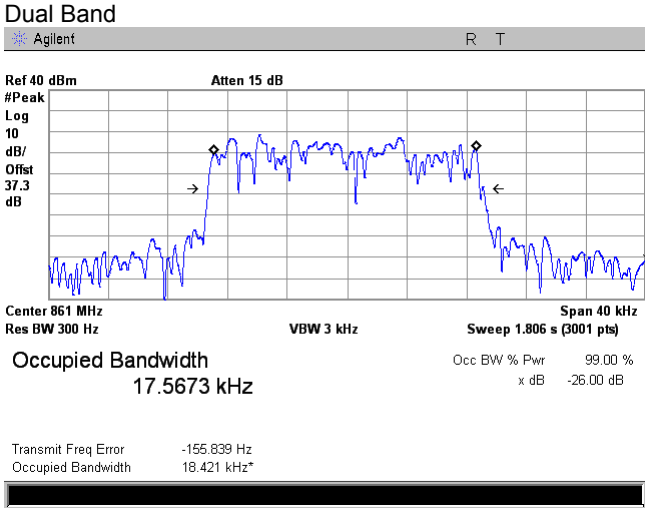


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

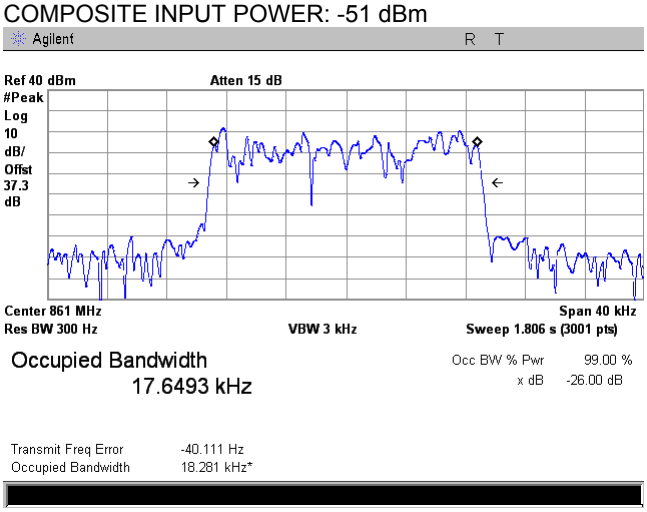
Plot 7.2.21 Occupied bandwidth test result at high frequency carrier, Port 1

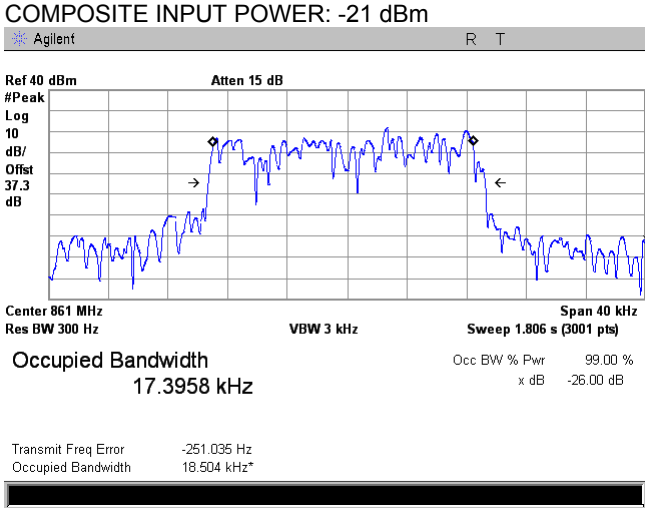
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

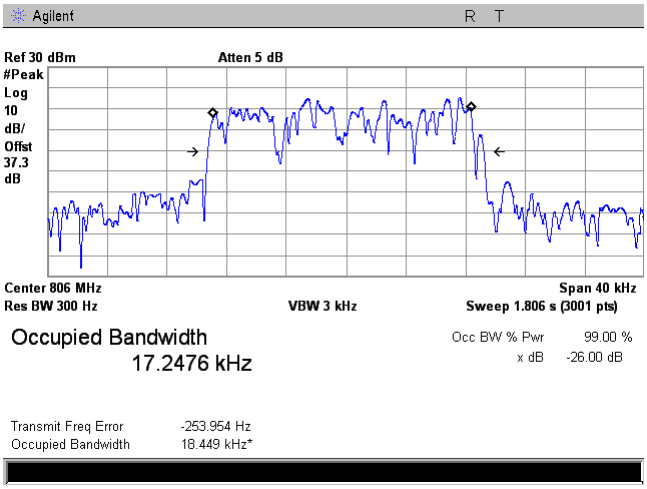


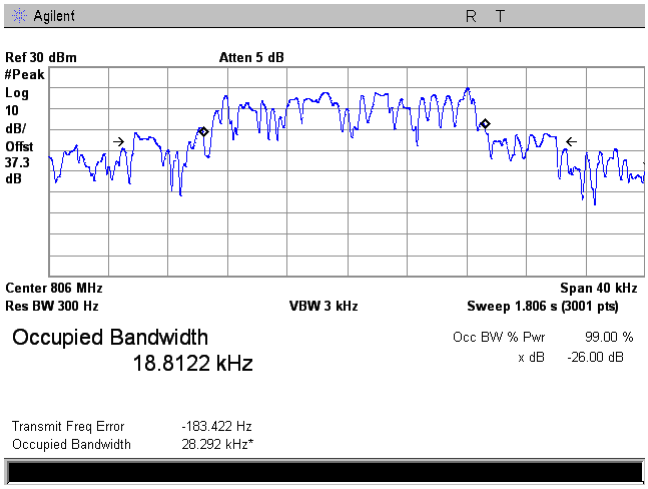


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.22 Occupied bandwidth test result at low frequency carrier, Port 2

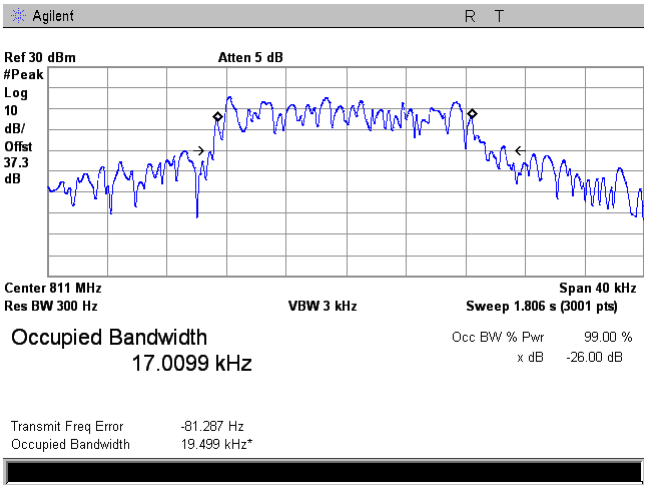
FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: iDEN QAM uplink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

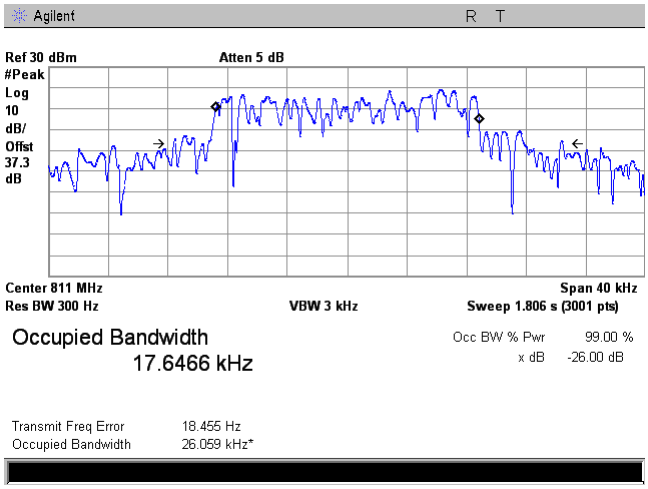




Plot 7.2.23 Occupied bandwidth test result at mid frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: iDEN QAM uplink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

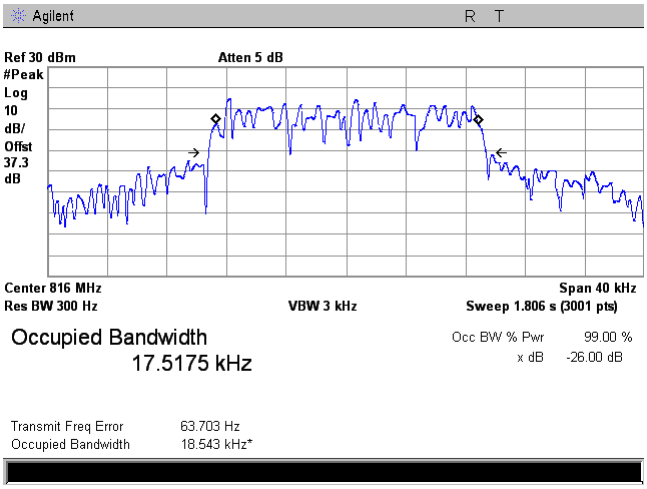


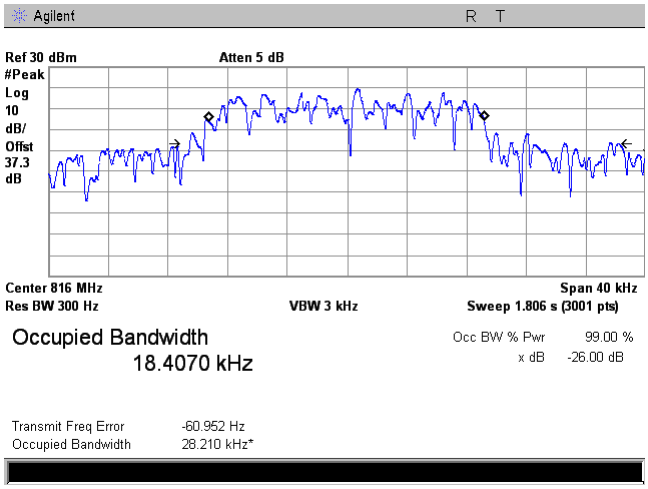


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.24 Occupied bandwidth test result at high frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: iDEN QAM uplink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

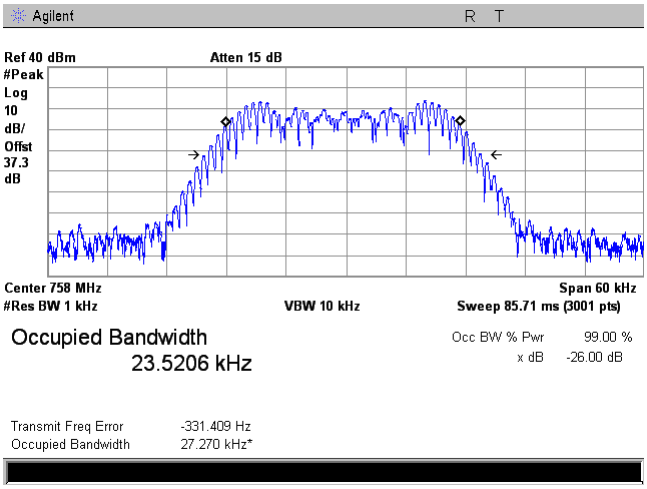


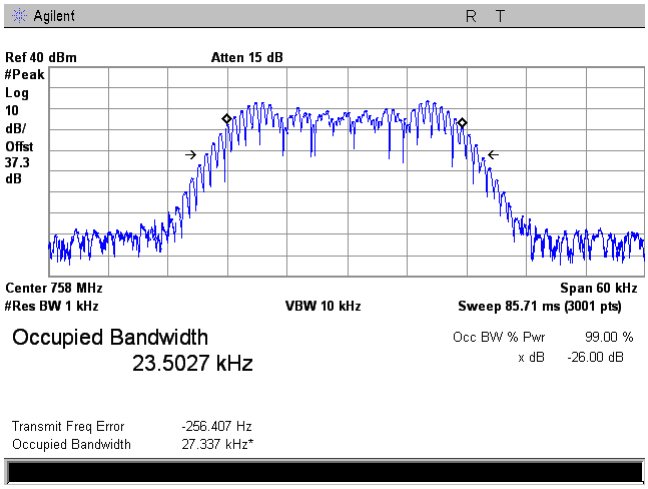


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

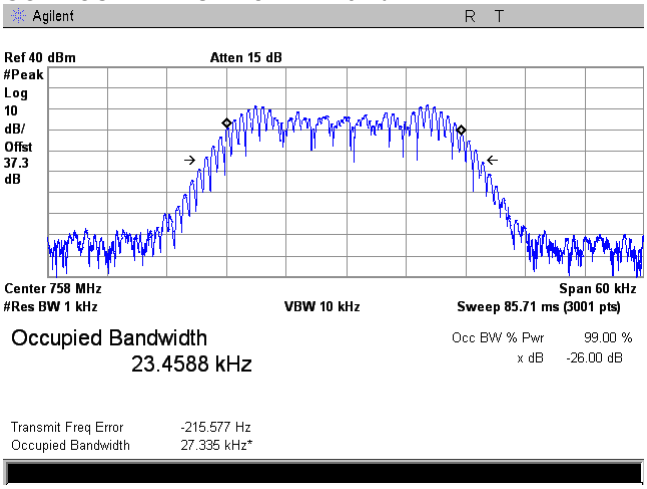
Plot 7.2.25 Occupied bandwidth test result at low frequency carrier, Port 1

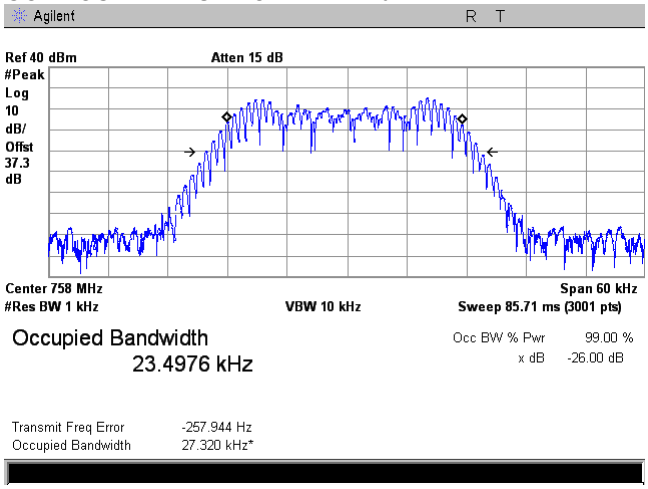
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
COMPOSITE INPUT POWER: -54 dBm
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

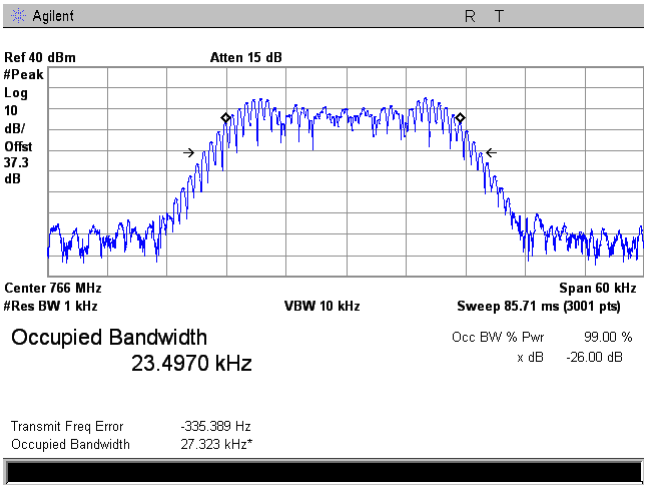


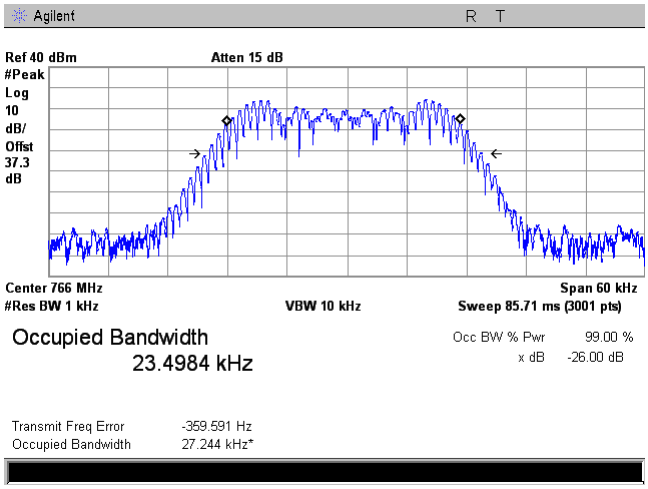


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

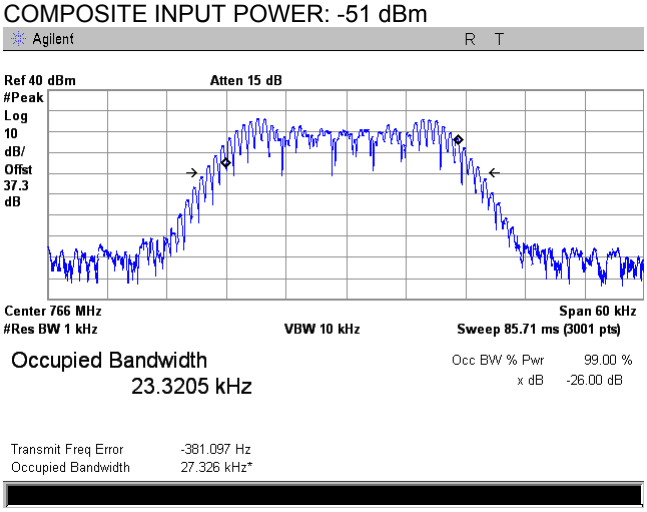
Plot 7.2.26 Occupied bandwidth test result at mid frequency carrier, Port 1

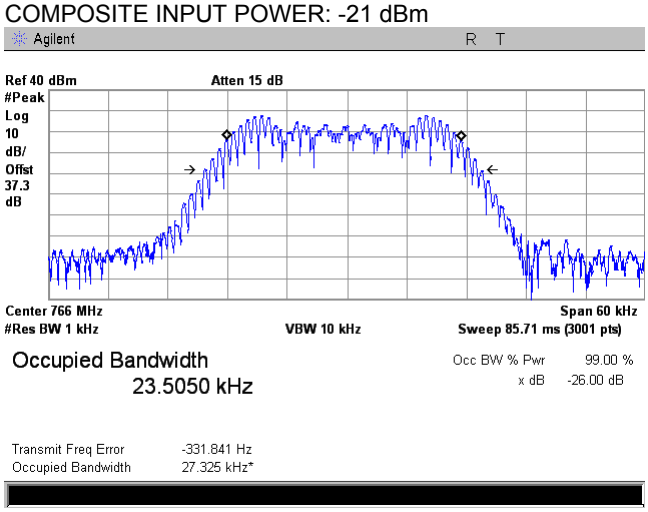
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

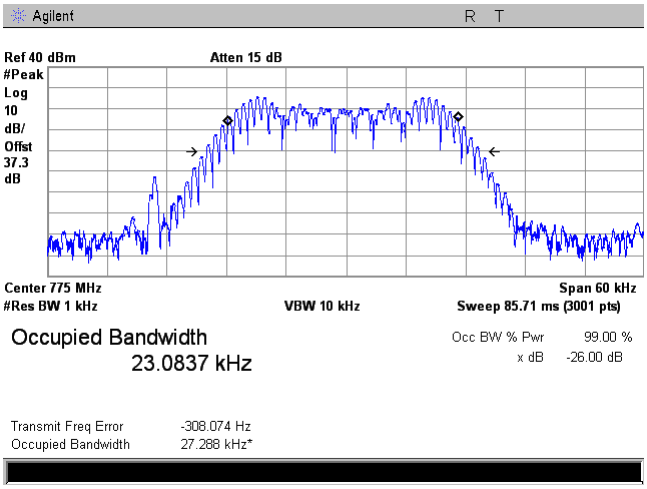


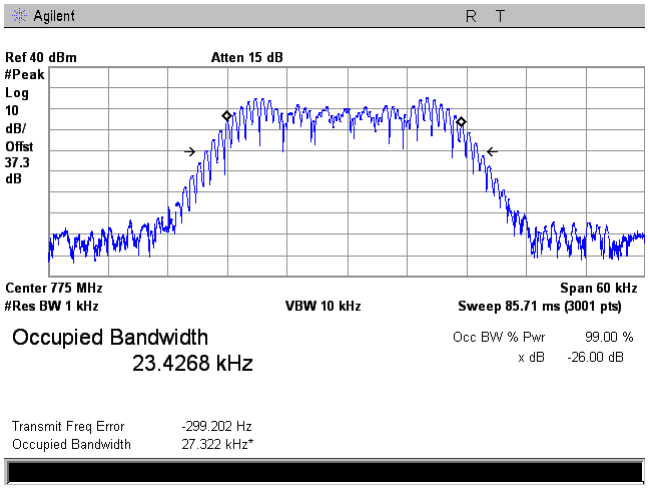


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.27 Occupied bandwidth test result at high frequency carrier, Port 1

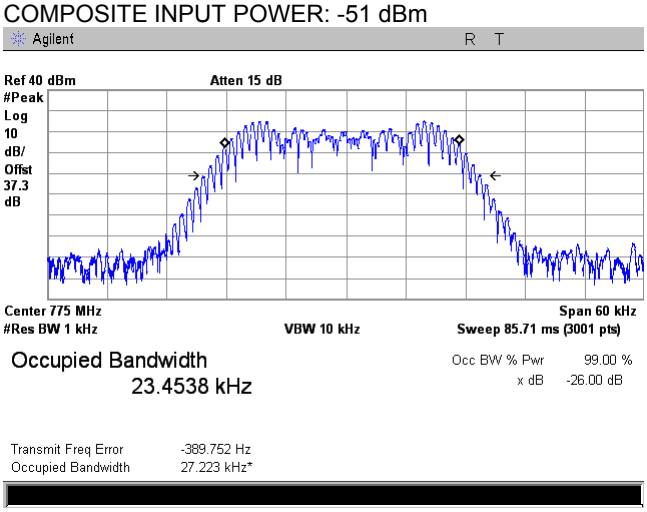
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

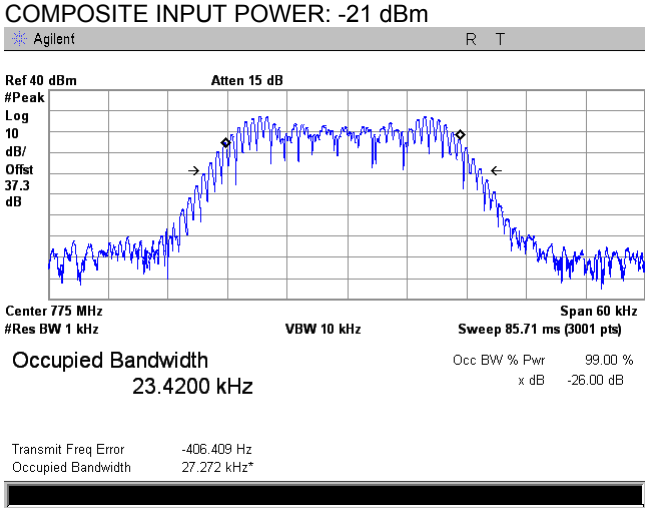




CONFIGURATION:
COMPOSITE INPUT POWER: -51 dBm

CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -21 dBm

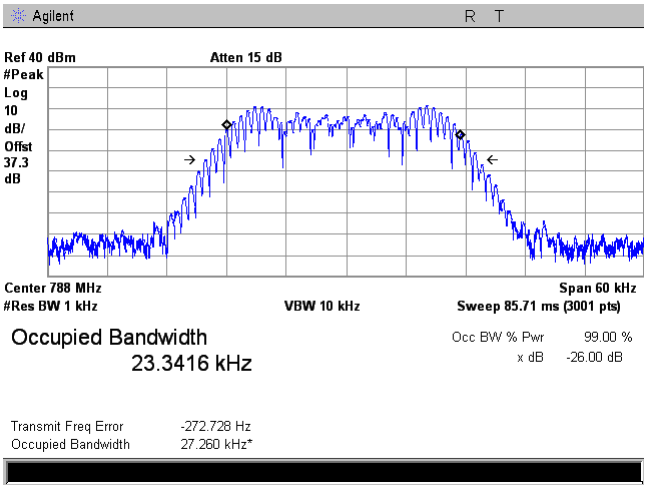


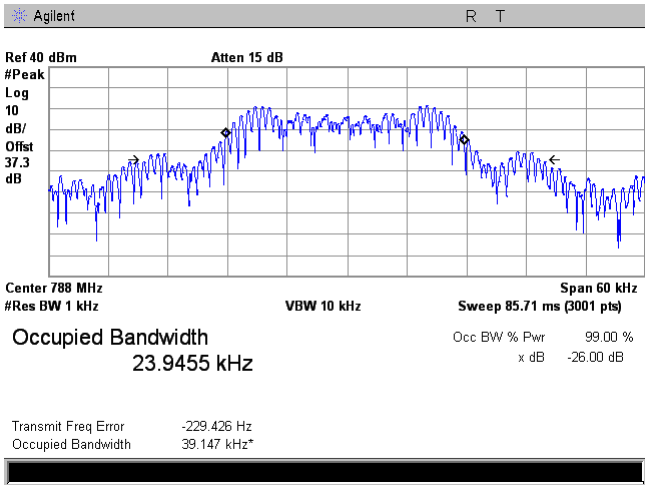


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.28 Occupied bandwidth test result at low frequency carrier, Port 2

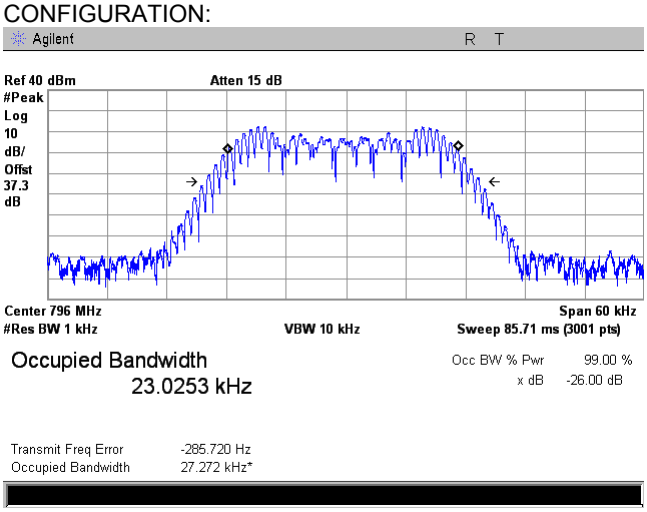
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

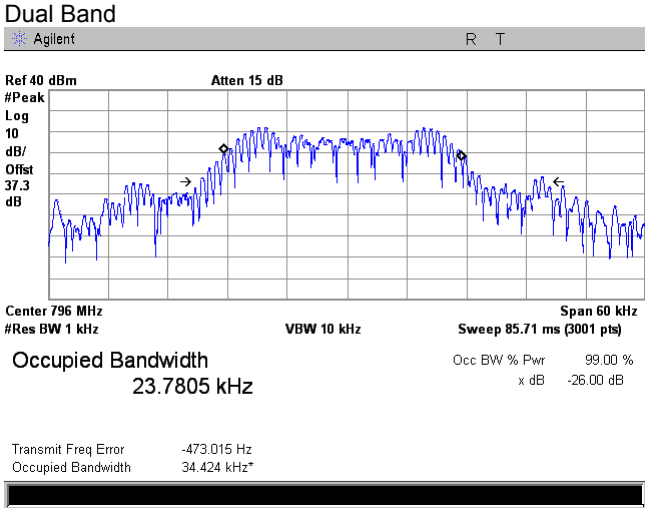




Plot 7.2.29 Occupied bandwidth test result at mid frequency carrier, Port 2

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

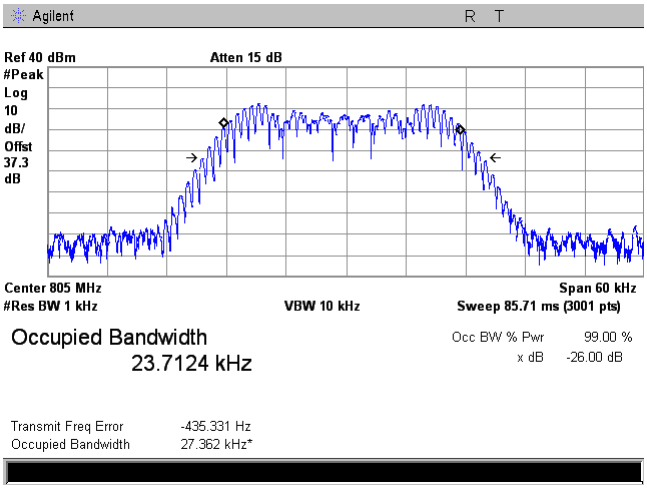


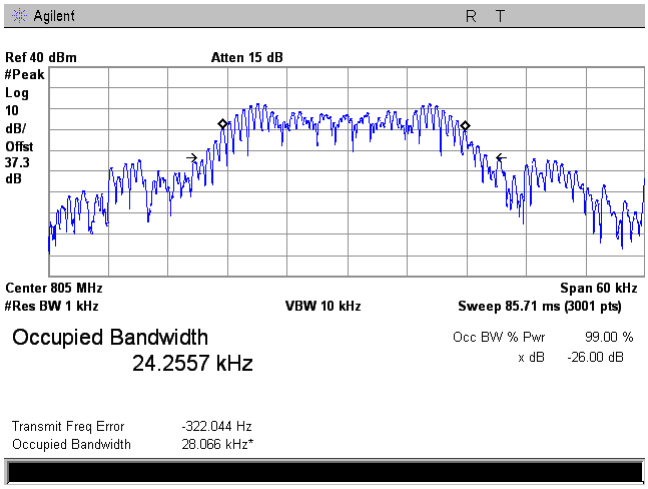


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.30 Occupied bandwidth test result at high frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm
CONFIGURATION:	Dual Band

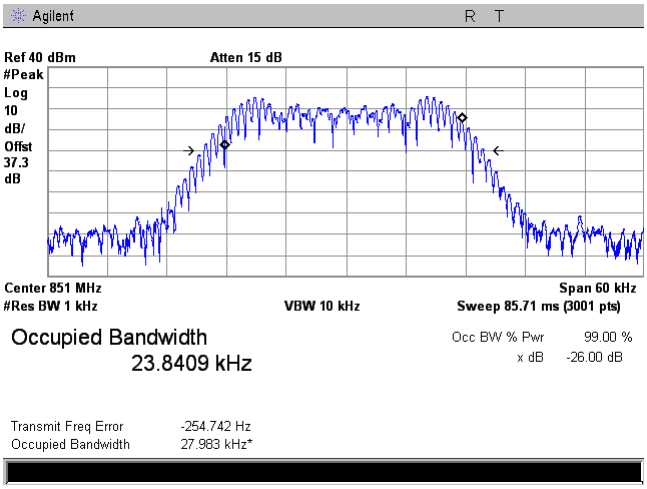


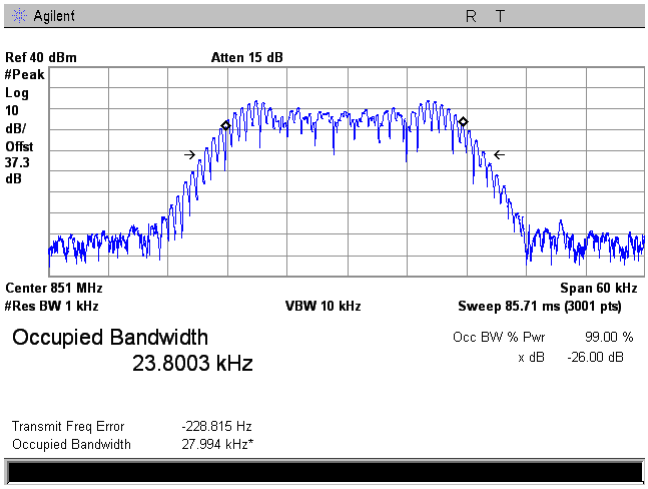


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

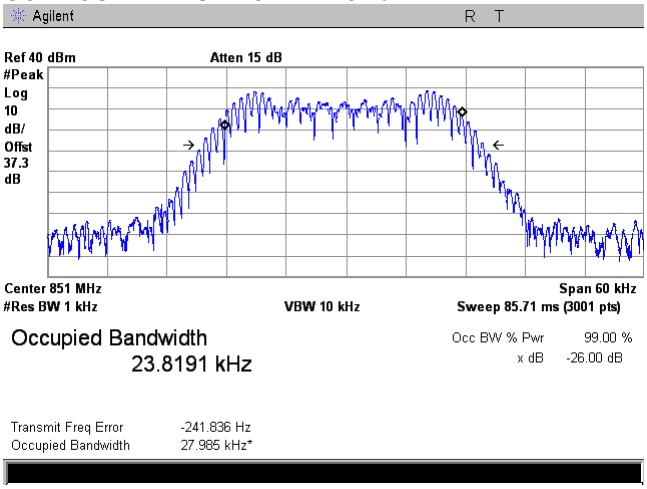
Plot 7.2.31 Occupied bandwidth test result at low frequency carrier, Port 1

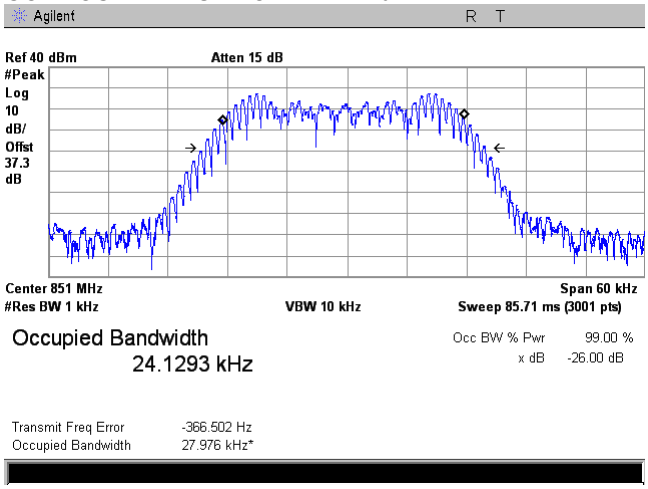
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

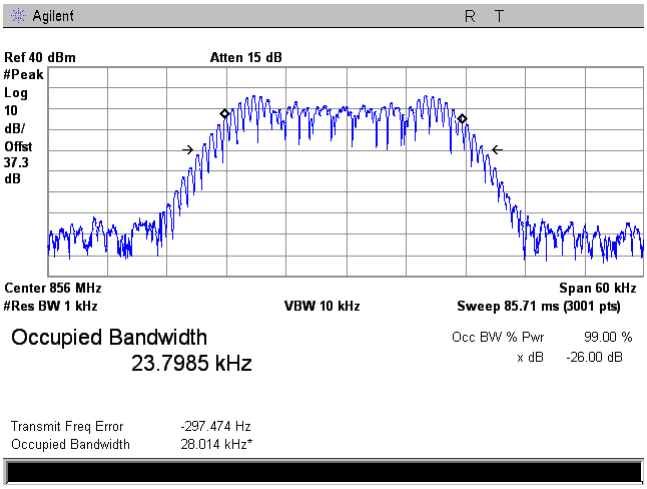


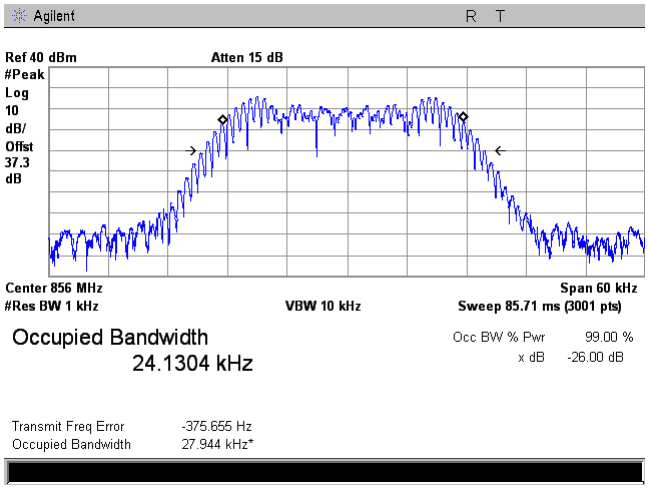


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

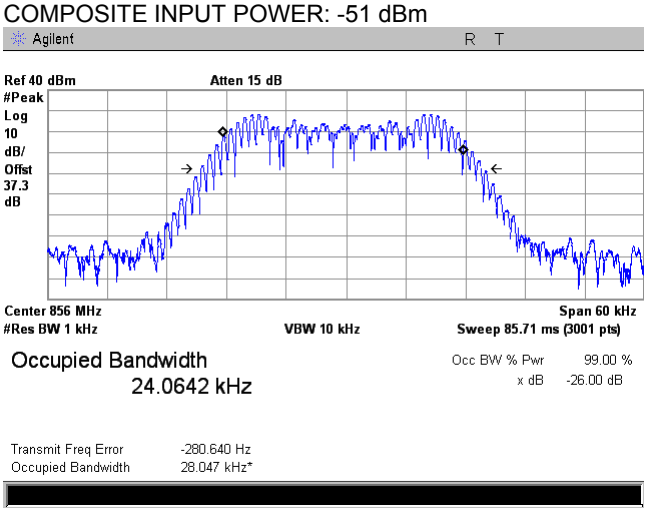
Plot 7.2.32 Occupied bandwidth test result at mid frequency carrier, Port 1

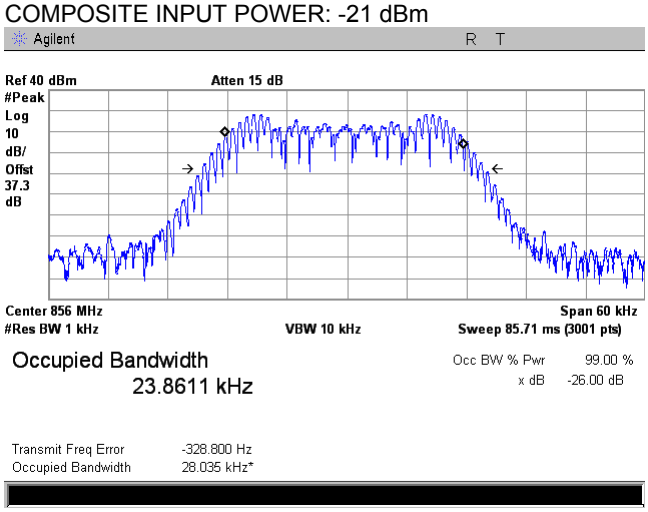
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

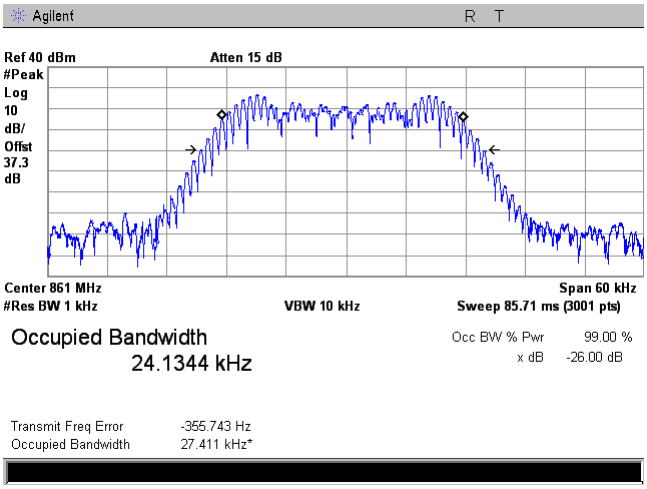


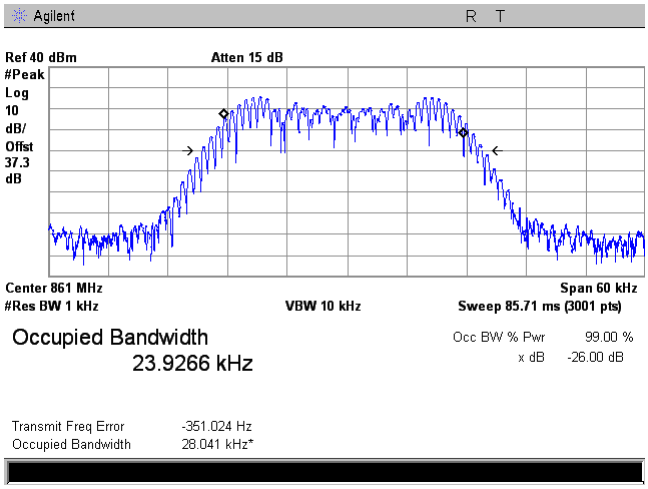


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

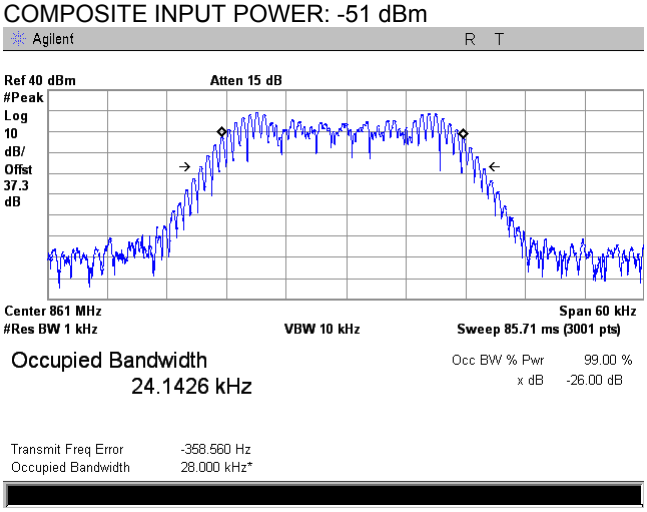
Plot 7.2.33 Occupied bandwidth test result at high frequency carrier, Port 1

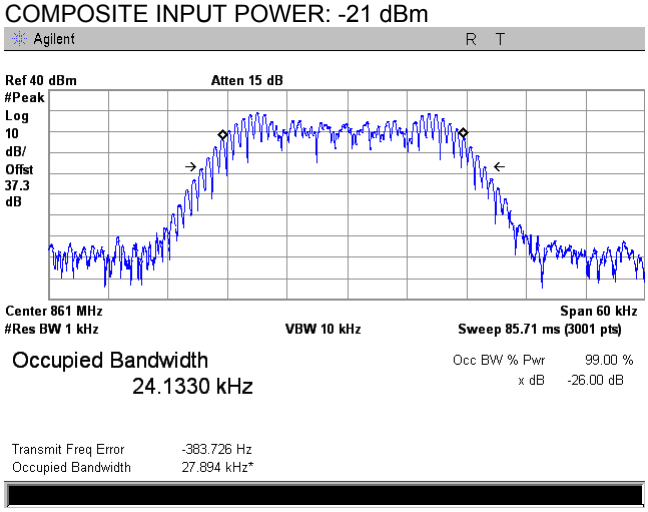
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

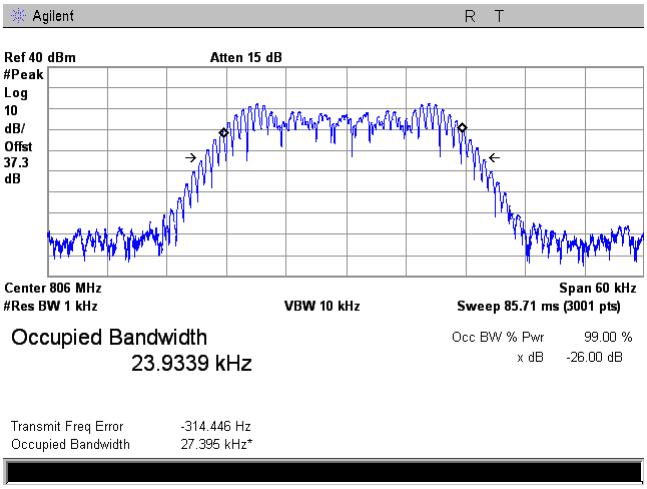


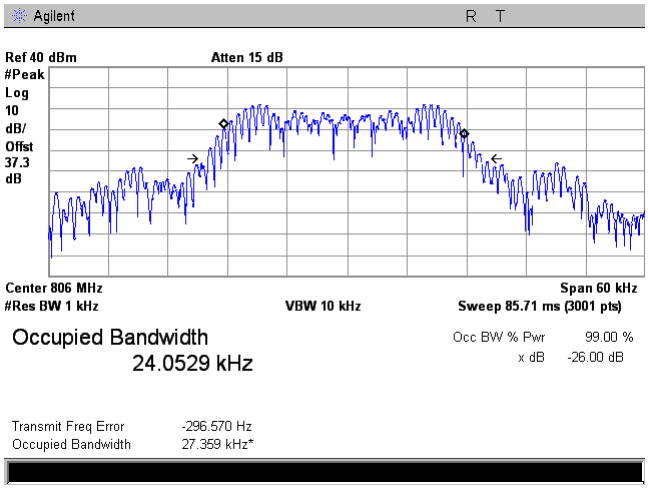


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.34 Occupied bandwidth test result at low frequency carrier, Port 2

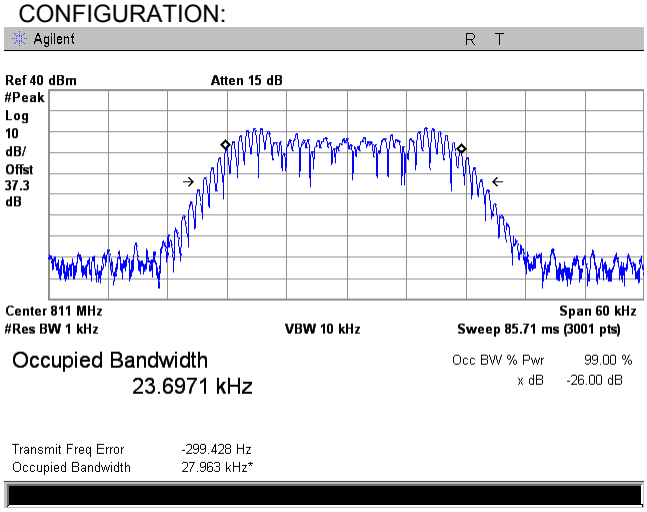
FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

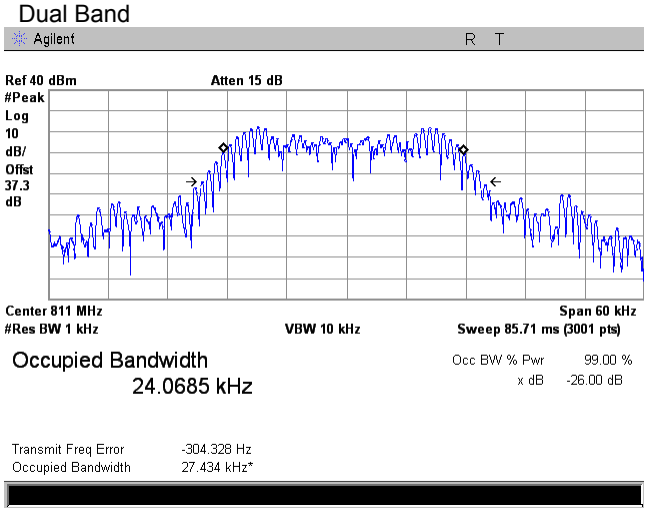




Plot 7.2.35 Occupied bandwidth test result at mid frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm INPUT POWER: -24 dBm
CONFIGURATION: Dual Band

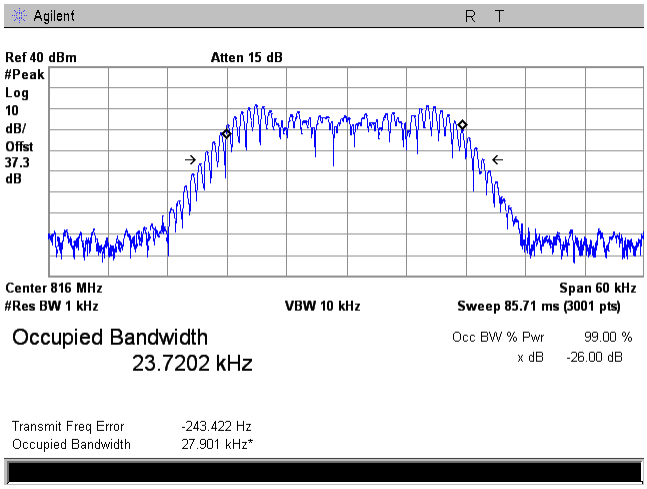


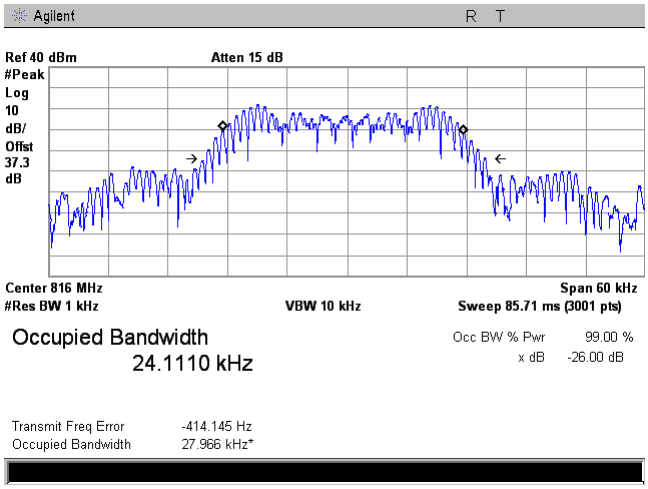


Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.36 Occupied bandwidth test result at high frequency carrier, Port 2

FREQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
INPUT POWER: -24 dBm
CONFIGURATION: Dual Band





Test specification:	**Section 90.219(a), Occupied bandwidth**		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	**Air Pressure:** 1011 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.2.3 Occupied bandwidth test results

OPERATING FREQUENCY RANGE: 758 - 768 MHz (downlink)
788 - 798 MHz (uplink)
DETECTOR USED: Peak hold
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATION ENVELOPE REFERENCE POINTS: 99%
MODULATING SIGNAL: O
CHANNEL BANDWIDTH: 5 MHz
CONFIGURATION: Dual Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
Downlink						
Modulation SC-FDMA						
760.5	Base	4519.1	4488.7	5000.0	-480.9	Pass
765.5	Base	4489.8	4496.7	5000.0	-503.3	Pass
Uplink						
Modulation OFDMA						
790.5	Mobile	4479.2	4484.4	5000.0	-515.6	Pass
795.5	Mobile	4482.7	4456.8	5000.0	-517.3	Pass

CONFIGURATION: Single Band

Carrier frequency, MHz	Output port	Occupied bandwidth, kHz		Limit, kHz	Margin, kHz	Verdict
		Without ALC	With ALC			
Downlink						
Modulation OFDMA						
760.5	Base	4484.8	4494.8	5000.0	-505.2	Pass
765.5	Base	4511.2	4500.5	5000.0	-488.8	Pass

Reference numbers of test equipment used

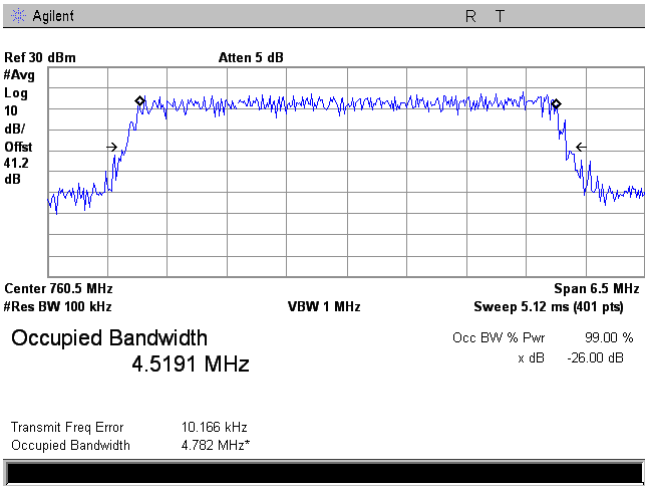
HL 2909	HL 3390	HL 3768	HL 3770	HL 3776	HL 3780	HL 3787	HL 4274
HL 4354							

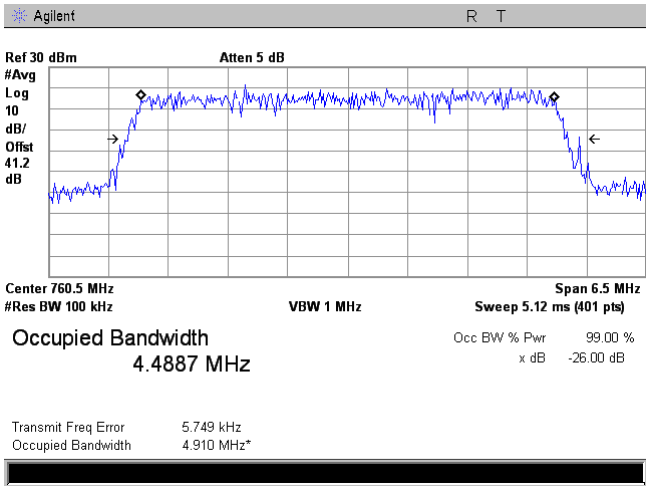
Full description is given in Appendix A.

Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.37 Occupied bandwidth test result at low frequency carrier, Port 1

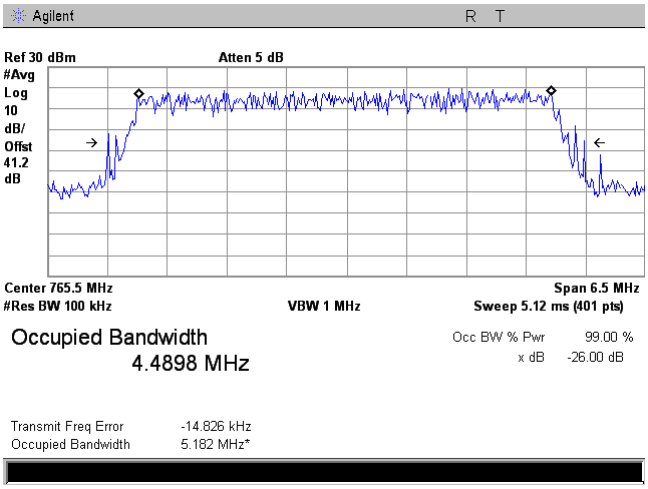
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

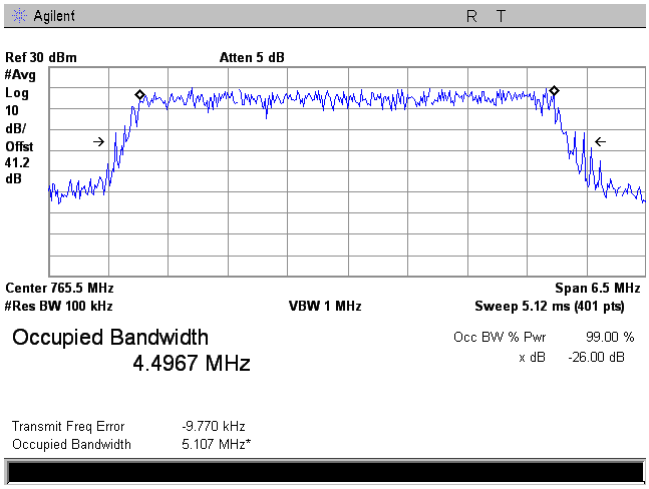




Plot 7.2.38 Occupied bandwidth test result at high frequency carrier, Port 1

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Dual Band
INPUT PORT:	Base
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

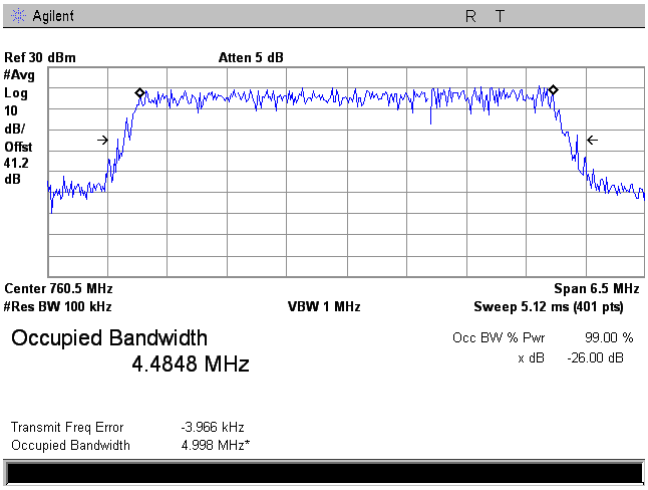




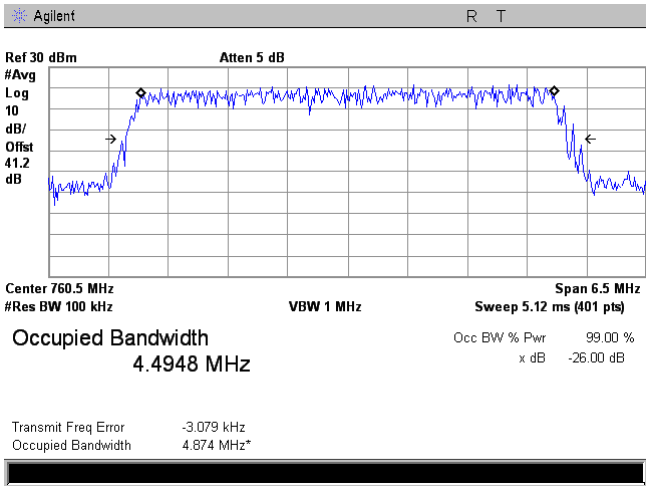
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 °C	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.39 Occupied bandwidth test result at low frequency carrier, Port 1

FRQUENCY RANGE: 758 - 768 MHz
OPERATIONAL MODE: LTE downlink transmit
CONFIGURATION: Single Band
INPUT PORT: Base
CHANNEL BANDWIDTH: 5 MHz
MODULATION: OFDMA
INPUT POWER: -51 dBm

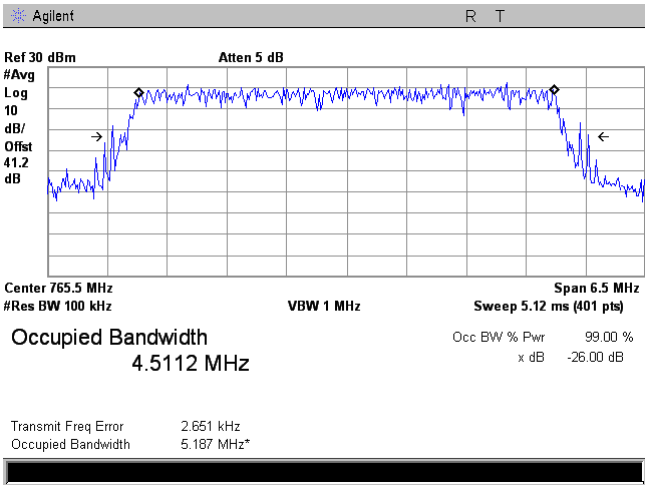


INPUT POWER: -21 dBm

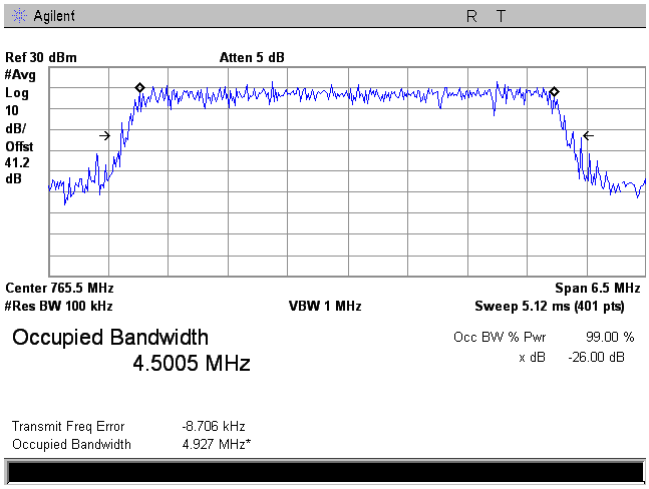


Plot 7.2.40 Occupied bandwidth test result at high frequency carrier, Port 1

FRQUENCY RANGE: 758 - 768 MHz
OPERATIONAL MODE: LTE downlink transmit
CONFIGURATION: Single Band
INPUT PORT: Base
CHANNEL BANDWIDTH: 5 MHz
MODULATION: OFDMA
INPUT POWER: -51 dBm



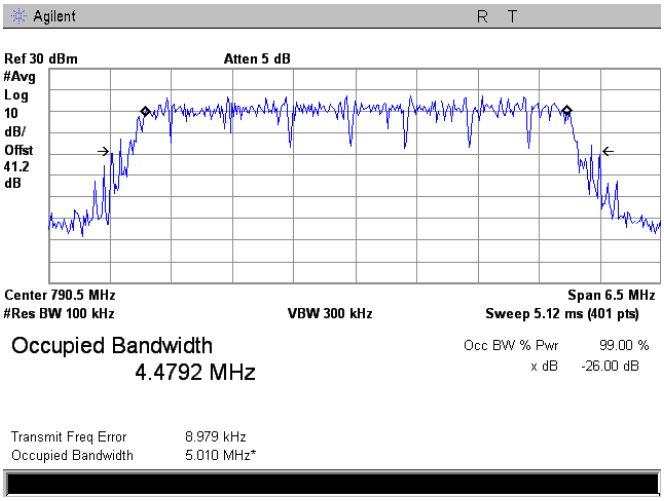
INPUT POWER: -21 dBm



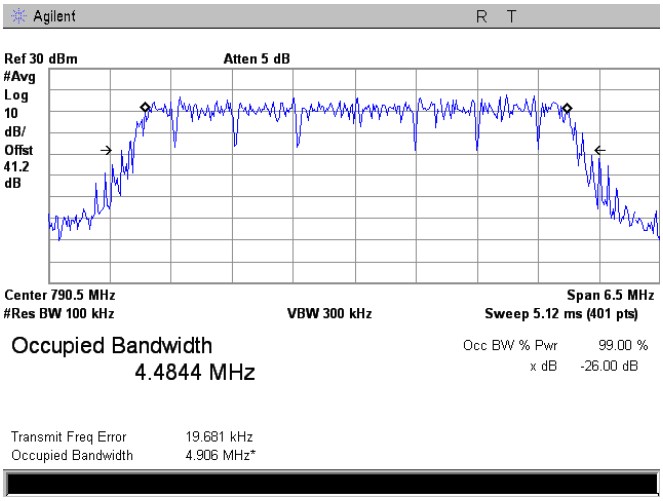
Test specification:	Section 90.219(a), Occupied bandwidth		
Test procedure:	47 CFR, Section 2.1049		
Test mode:	Compliance	Verdict:	PASS
Date(s):	25-Mar-14 - 31-Mar-14		
Temperature: 23.5 ºC	Air Pressure: 1011 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

Plot 7.2.41 Occupied bandwidth test result at low frequency carrier, Port 2

FRQUENCY RANGE: 788 - 798 MHz
OPERATIONAL MODE: LTE uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
CHANNEL BANDWIDTH: 5 MHz
MODULATION: CS-FDMA
INPUT POWER: -54 dBm

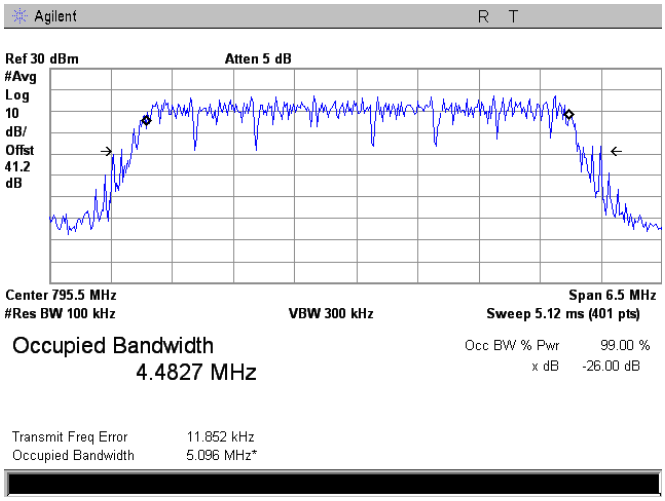


INPUT POWER: -24 dBm

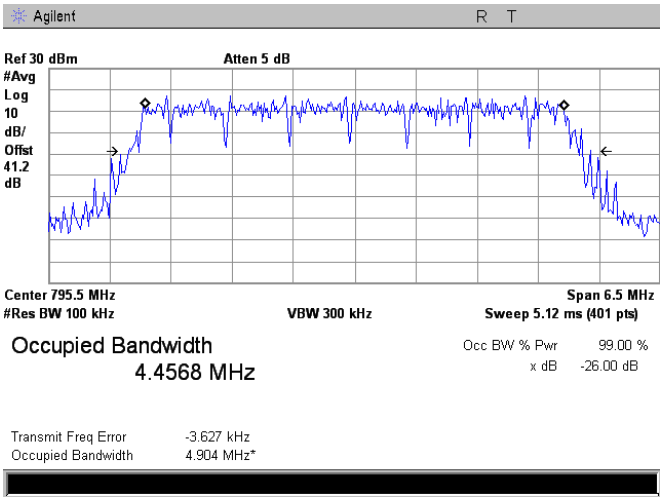


Plot 7.2.42 Occupied bandwidth test result at high frequency carrier, Port 2

FRQUENCY RANGE: 788 - 798 MHz
OPERATIONAL MODE: LTE uplink transmit
CONFIGURATION: Dual Band
INPUT PORT: Mobile
CHANNEL BANDWIDTH: 5 MHz
MODULATION: CS-FDMA
INPUT POWER: -54 dBm



INPUT POWER: -24 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

7.3 Emission mask test

7.3.1 General

This test was performed to measure emission mask at RF antenna connector. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Emission mask limits

Frequency displacement from carrier	Attenuation below carrier, dBc
Emission mask B (Channel bandwidth 10 kHz, authorized bandwidth 8 kHz) with audio low pass filter	
0 – 4.0 kHz	0
4.0 – 8.0 kHz	25.0
8.0 – 20.0 kHz	35.0
More than 20.0 kHz	43+10logP(W)
Emission mask B (Channel bandwidth 20.0 kHz, authorized bandwidth 18.0 kHz)	
0 – 9.0 kHz	0
9.0 – 18.0 kHz	25.0
18.0 – 45.0 kHz	35.0
More than 45.0 kHz	43+10logP(W)
Emission mask B (Channel bandwidth 25.0 kHz, authorized bandwidth 23.0 kHz)	
0 – 11.5 kHz	0
11.5 – 23.0 kHz	25.0
23.0 – 11.5 kHz	35.0
More than 23.0 kHz	43+10logP(W)
Emission mask B (Channel bandwidth 5 MHz) with audio low pass filter	
0 – 10.0 kHz	0
10.0 – 20.0 kHz	25.0
20.0 – 50.0 kHz	35.0
More than 50.0 kHz	43+10logP(W)

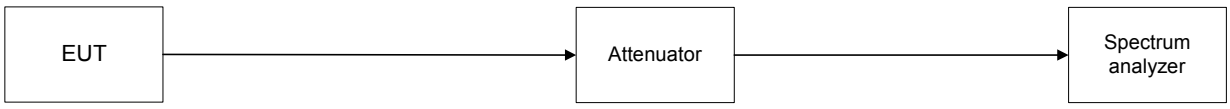
* - linearly increase with frequency
** - emission mask includes carrier modulation envelope within ± 250 % of the authorized bandwidth; the frequency range removed beyond ± 250 % of the authorized bandwidth from carrier was investigated as spurious emission

7.3.2 Test procedure

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and its proper operation was checked.

7.3.2.2 The emission mask was measured with spectrum analyzer as provided in Table 7.3.2 and the associated plots.

Figure 7.3.1 Emission mask test setup



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Table 7.3.2 Emission mask test results

Carrier frequency, MHz	Limit	Verdict
Downlink 758 – 775 MHz		
758.0	Emission mask B	Pass
766.0		
775.0		
Uplink 788 – 805 MHz		
788.0	Emission mask B	Pass
796.0		
805.0		
Downlink 851 – 861 MHz		
851.0	Emission mask B	Pass
856.0		
861.0		
Uplink 806 – 816 MHz		
806.0	Emission mask B	Pass
811.0		
816.0		

Reference numbers of test equipment used

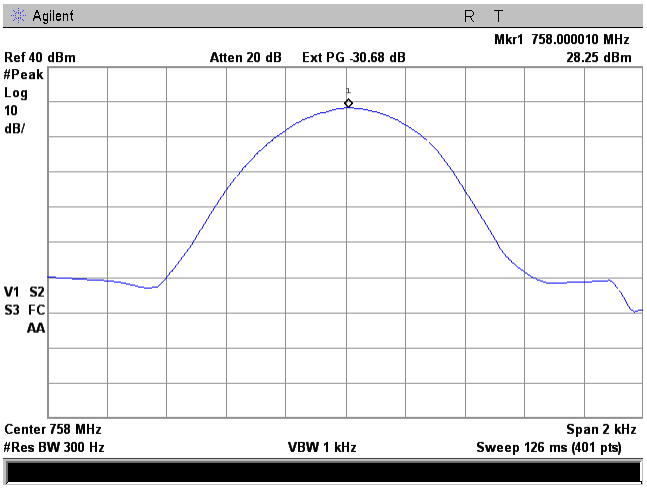
HL 0539	HL 2909	HL 3301	HL 3302	HL 3768	HL 3770	HL 3776	HL 4273
HL 4275	HL 4354	HL 4413					

Full description is given in Appendix A.

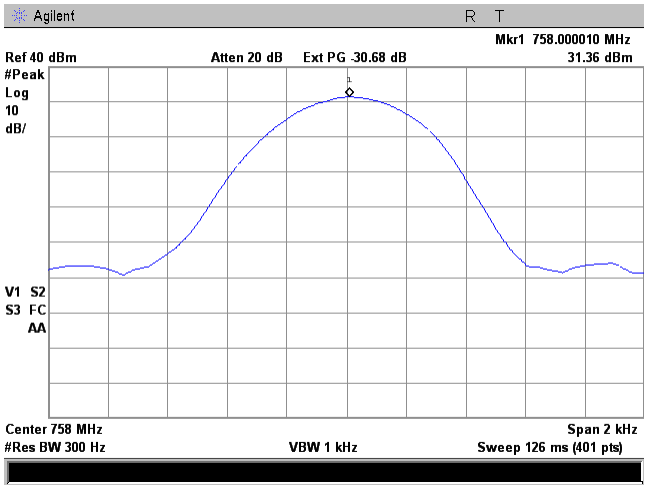
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.1 Reference level test results at low carrier frequency, Port 1

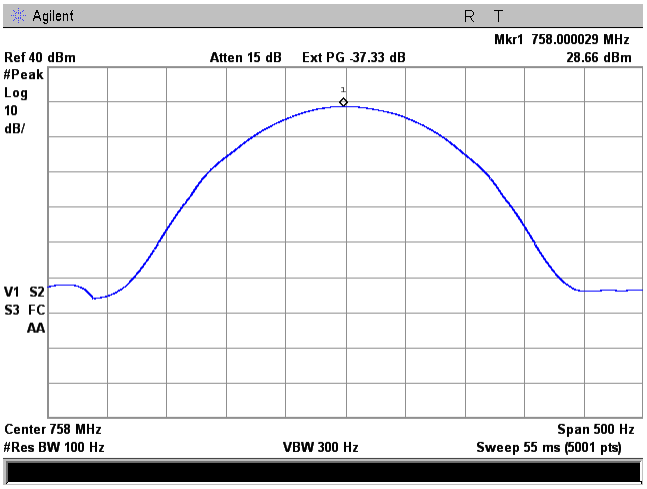
FREQUENCY RANGE: 758 - 775 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



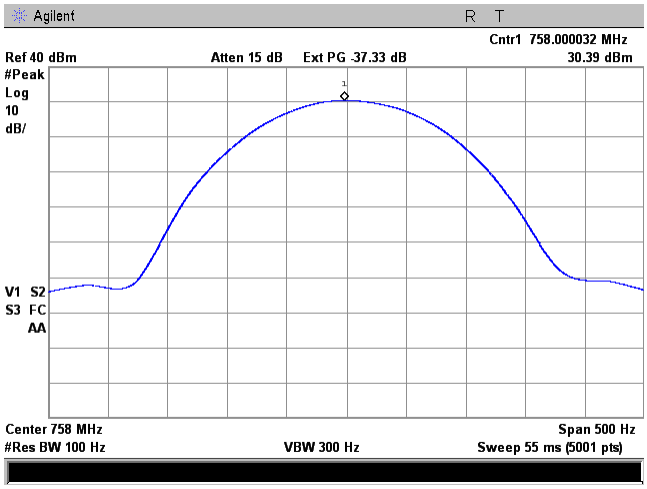
CONFIGURATION: Single Band
INPUT POWER: -51 dBm



INPUT POWER: -24 dBm



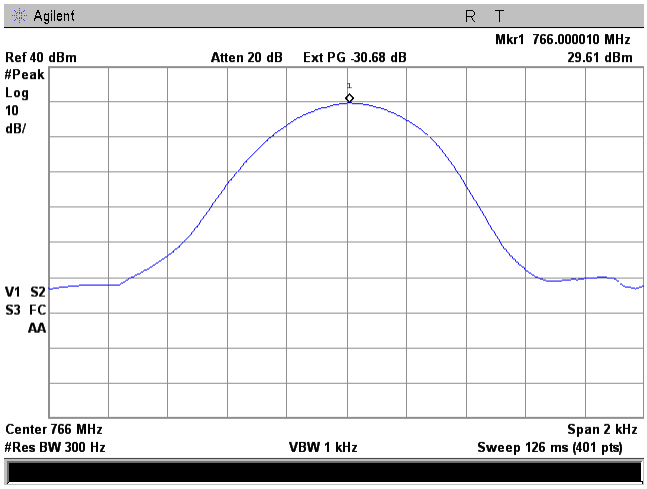
INPUT POWER: -21 dBm

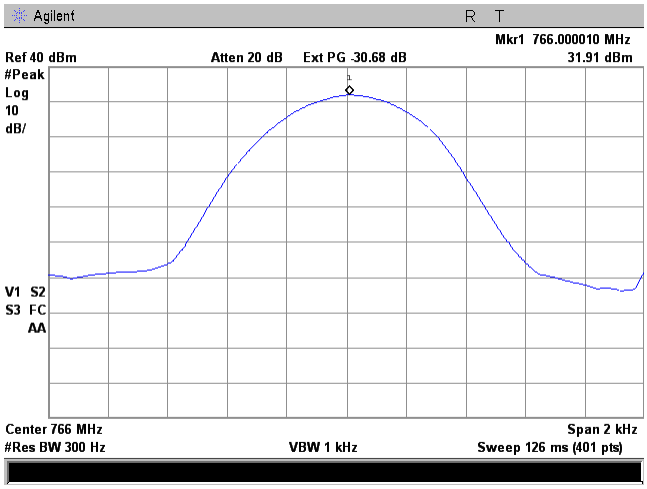


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

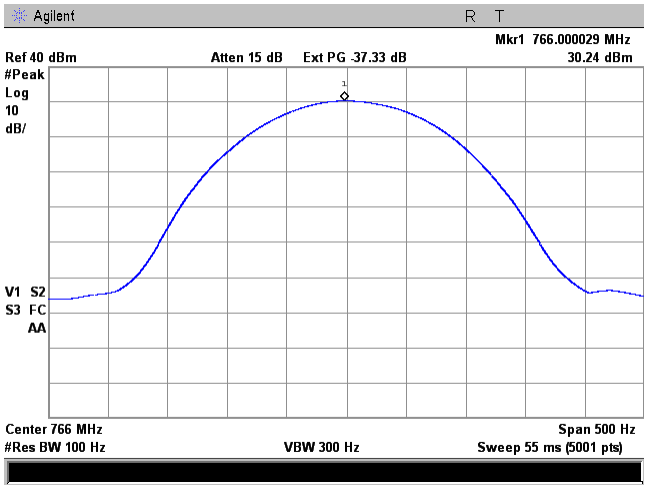
Plot 7.3.2 Reference level test results at mid carrier frequency, Port 1

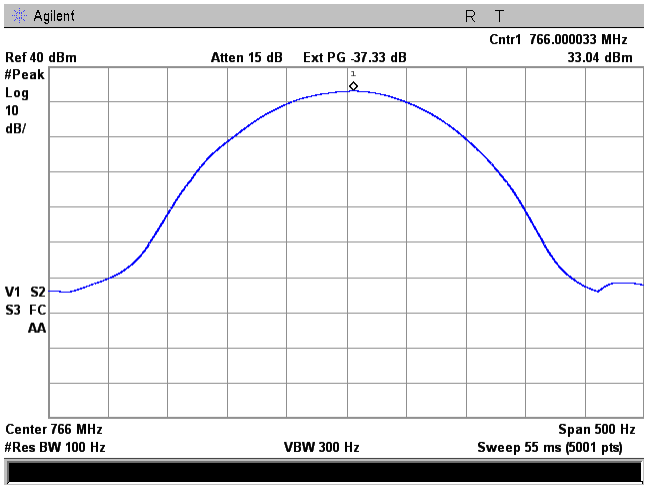
FREQUENCY RANGE: 758 - 775 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
CONFIGURATION: Single Band
INPUT POWER: -54 dBm
INPUT POWER: -51 dBm





INPUT POWER: -24 dBm
INPUT POWER: -21 dBm

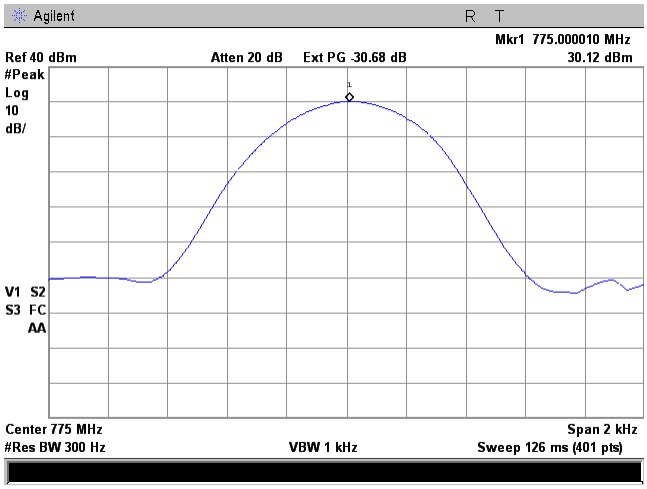




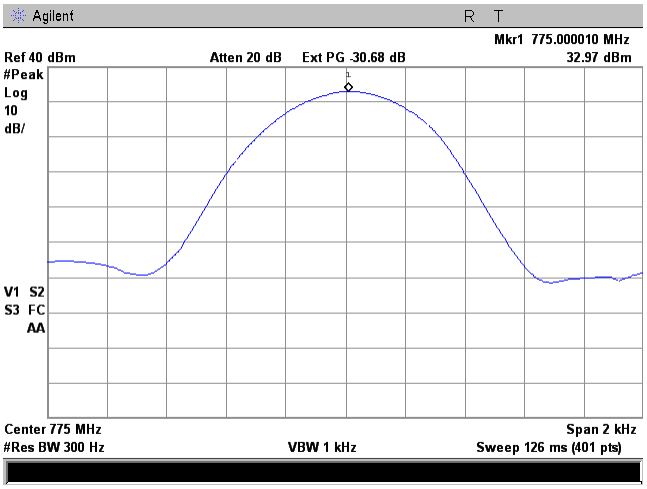
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.3 Reference level test results at high carrier frequency, Port 1

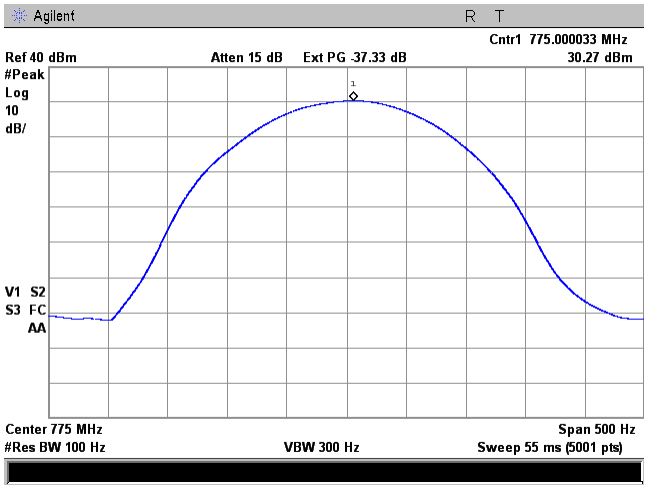
FREQUENCY RANGE: 758 - 775 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



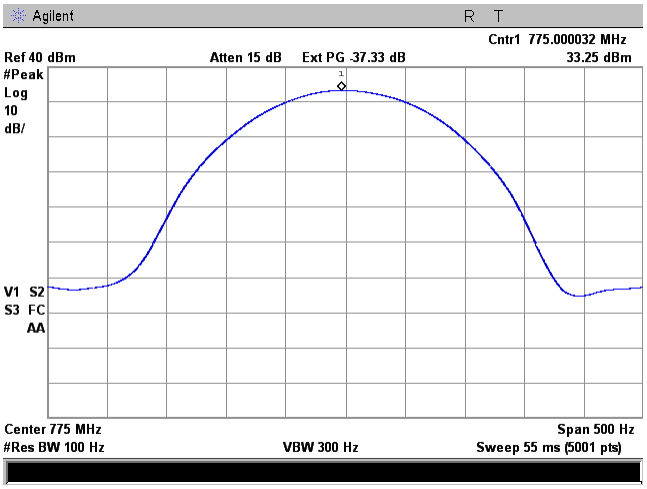
CONFIGURATION: Single Band
INPUT POWER: -51 dBm



INPUT POWER: -24 dBm



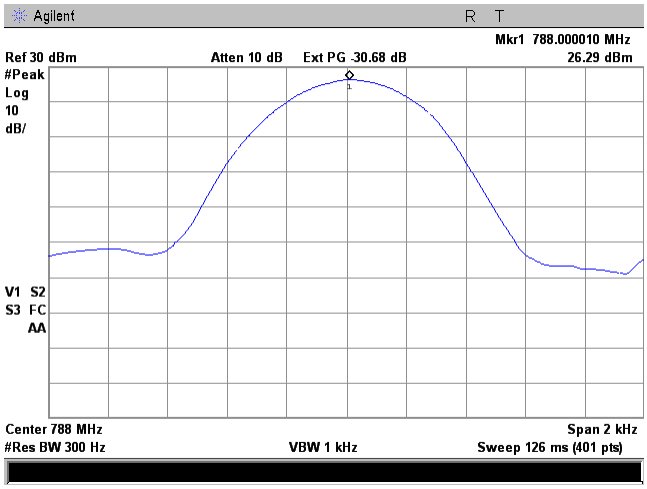
INPUT POWER: -21 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

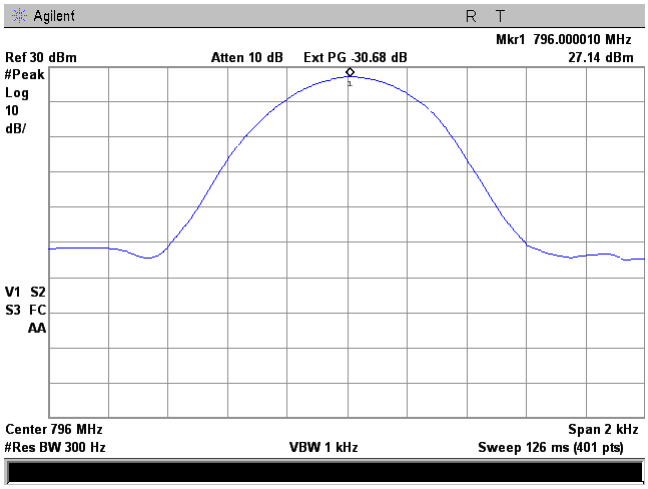
Plot 7.3.4 Reference level test results at low carrier frequency, Port 1

FREQUENCY RANGE: 788 - 805 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band CONFIGURATION: Single Band
INPUT POWER: -54 dBm



Plot 7.3.5 Reference level test results at mid carrier frequency, Port 1

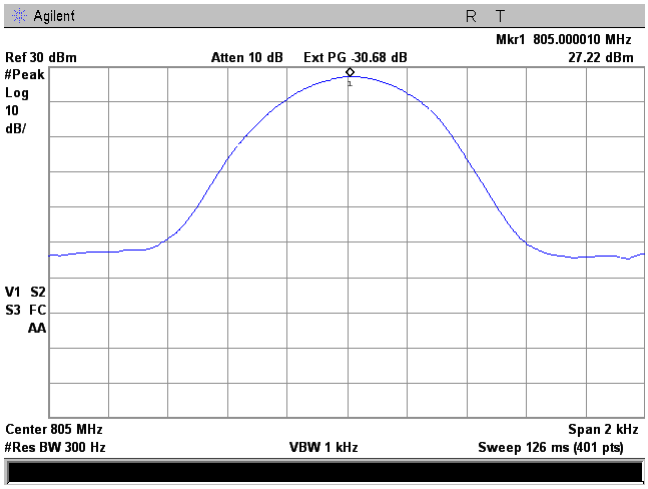
FREQUENCY RANGE: 788 - 805 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band CONFIGURATION: Single Band
INPUT POWER: -54 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.6 Reference level test results at high carrier frequency, Port 1

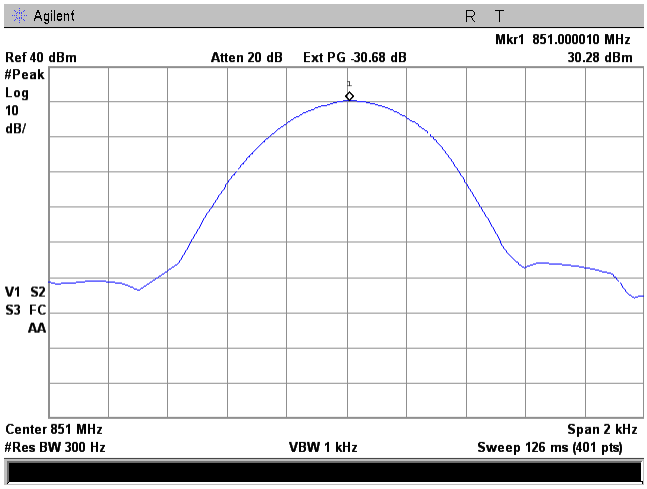
FREQUENCY RANGE:	788 - 805 MHz
REFERENCE LEVEL:	Unmodulated power
CONFIGURATION: Dual Band	CONFIGURATION: Single Band
INPUT POWER:	-54 dBm

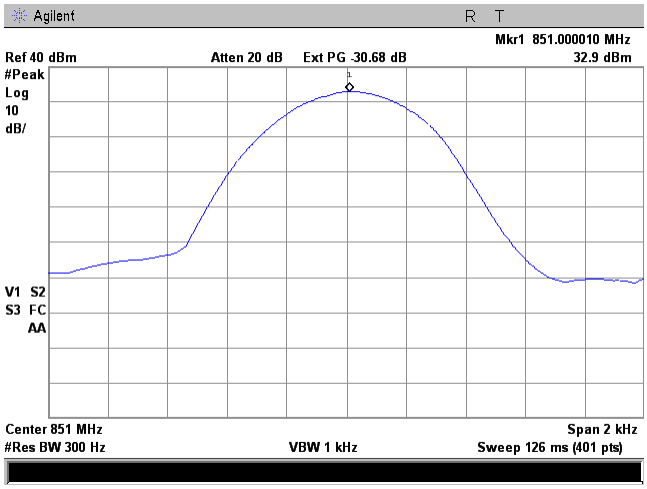


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

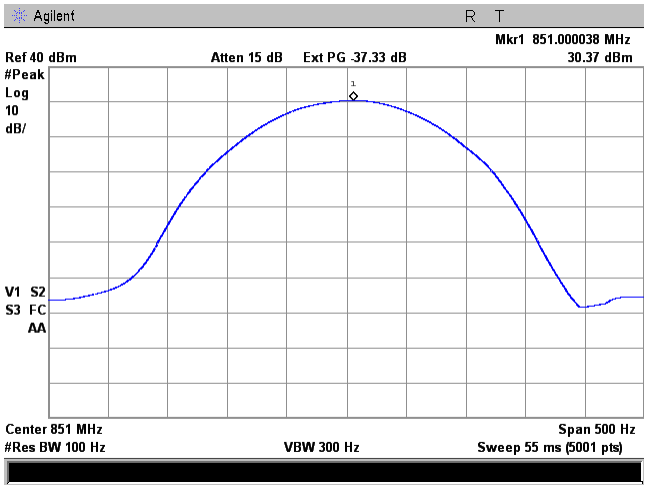
Plot 7.3.7 Reference level test results at low carrier frequency, Port 1

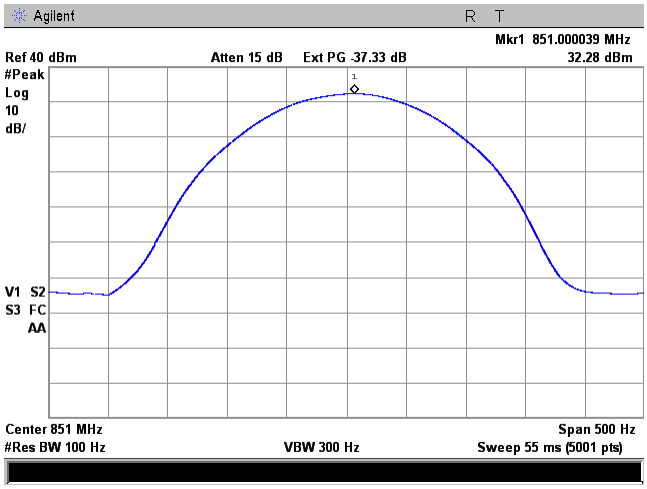
FREQUENCY RANGE: 851 - 861 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
CONFIGURATION: Single Band
INPUT POWER: -54 dBm
INPUT POWER: -51 dBm





INPUT POWER: -24 dBm
INPUT POWER: -21 dBm

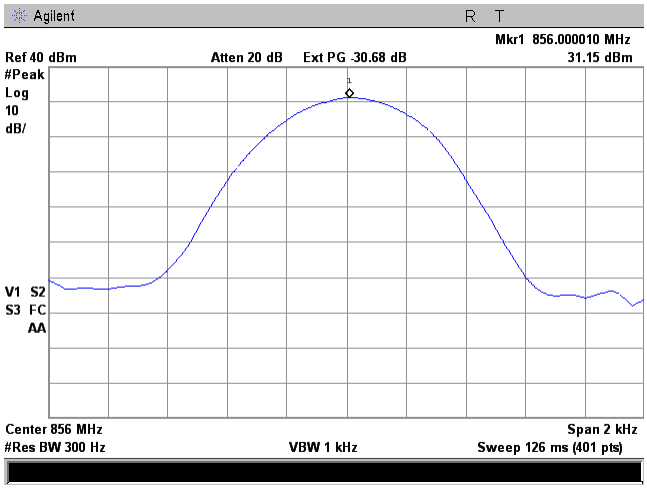


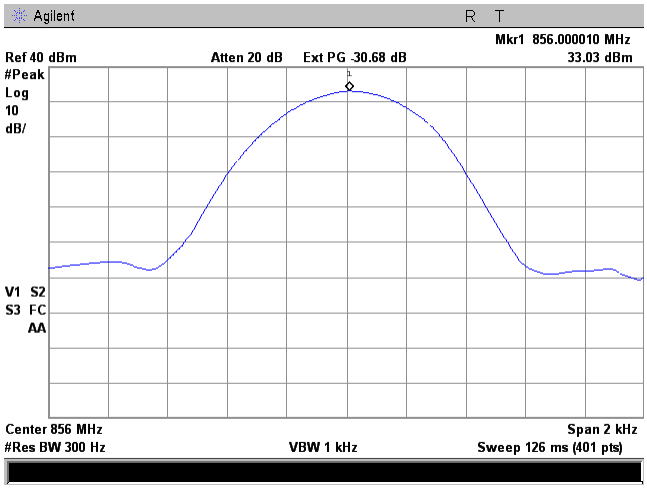


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

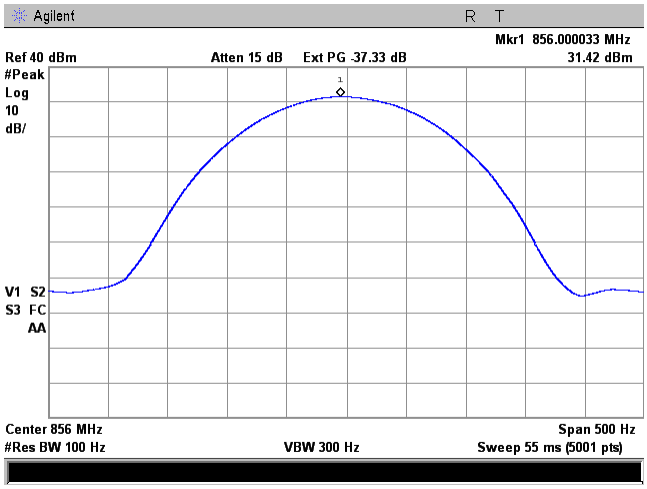
Plot 7.3.8 Reference level test results at mid carrier frequency, Port 1

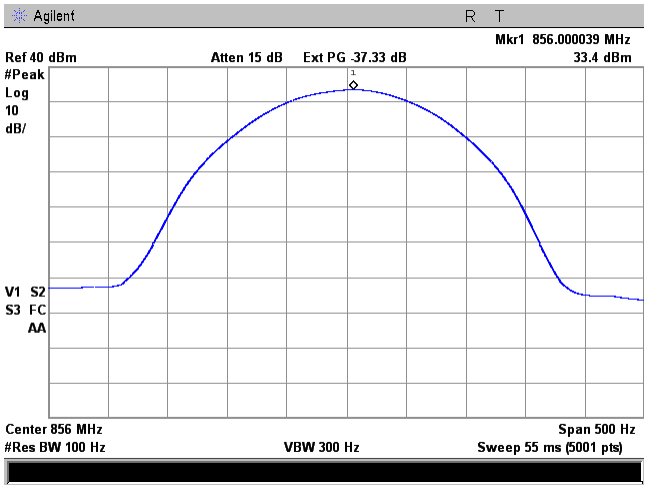
FREQUENCY RANGE: 851 - 861 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
CONFIGURATION: Single Band
INPUT POWER: -54 dBm
INPUT POWER: -51 dBm





INPUT POWER: -24 dBm
INPUT POWER: -21 dBm

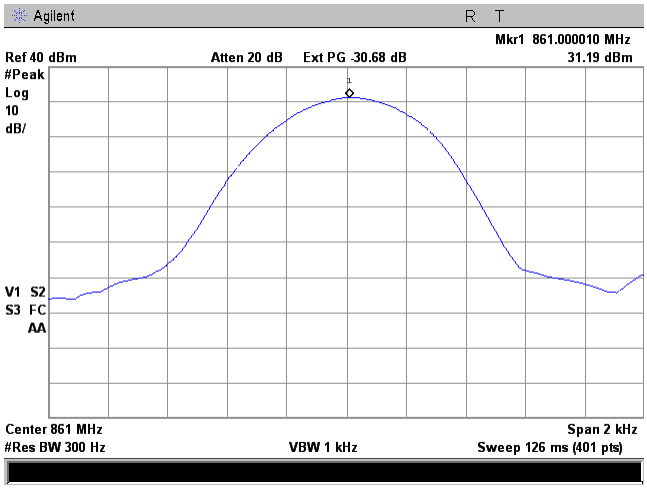




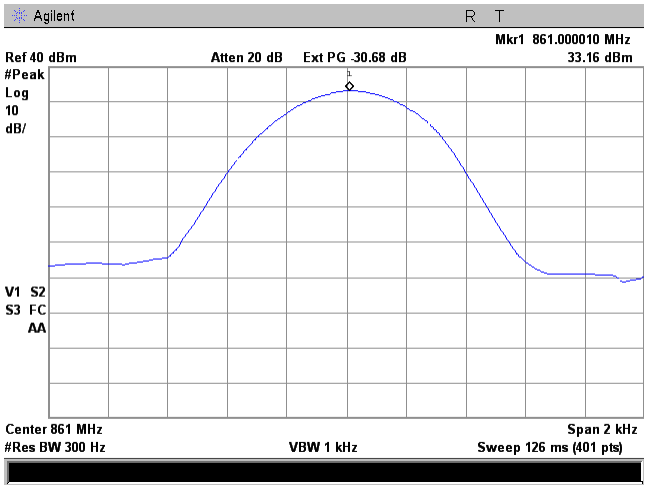
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.9 Reference level test results at high carrier frequency, Port 1

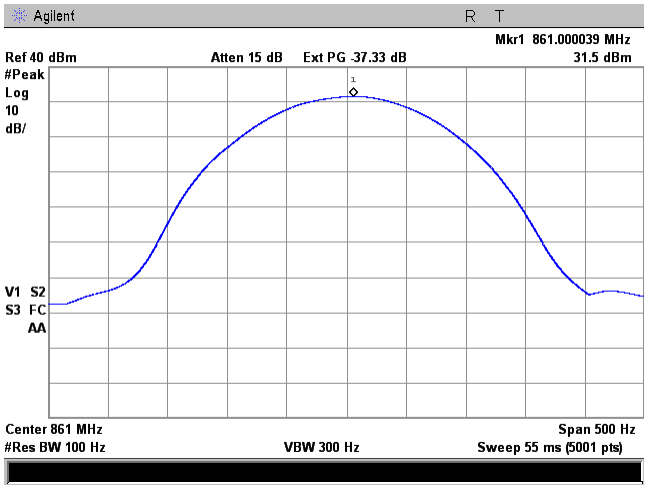
FREQUENCY RANGE: 851 - 861 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



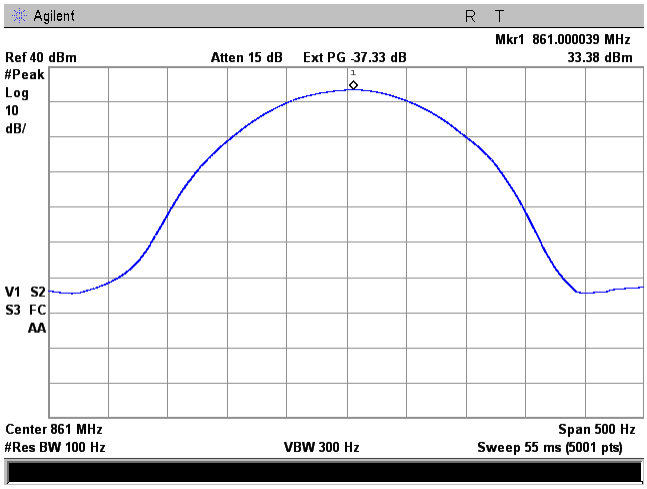
CONFIGURATION: Single Band
INPUT POWER: -51 dBm



INPUT POWER: -24 dBm



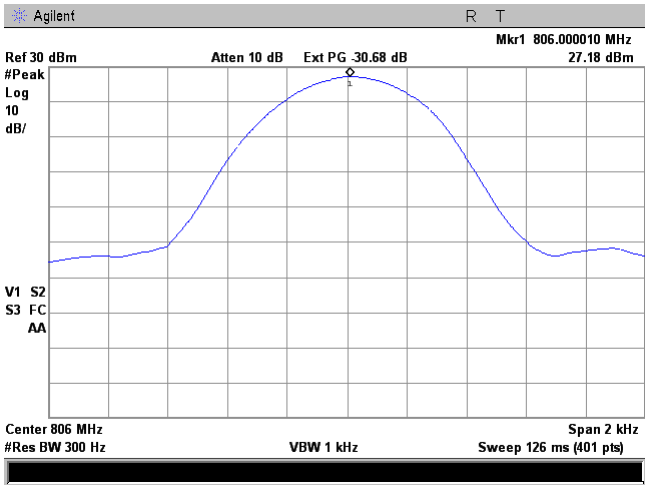
INPUT POWER: -21 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

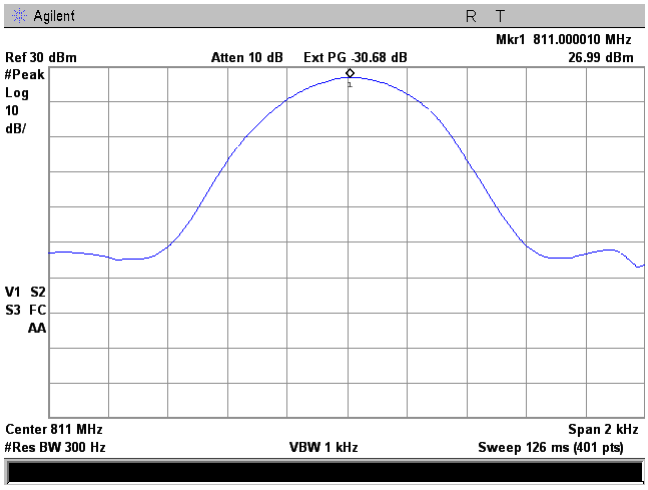
Plot 7.3.10 Reference level test results at low carrier frequency, Port 1

FREQUENCY RANGE:	806 - 816 MHz
REFERENCE LEVEL:	Unmodulated power
CONFIGURATION: Dual Band	CONFIGURATION: Single Band
INPUT POWER:	-54 dBm



Plot 7.3.11 Reference level test results at mid carrier frequency, Port 1

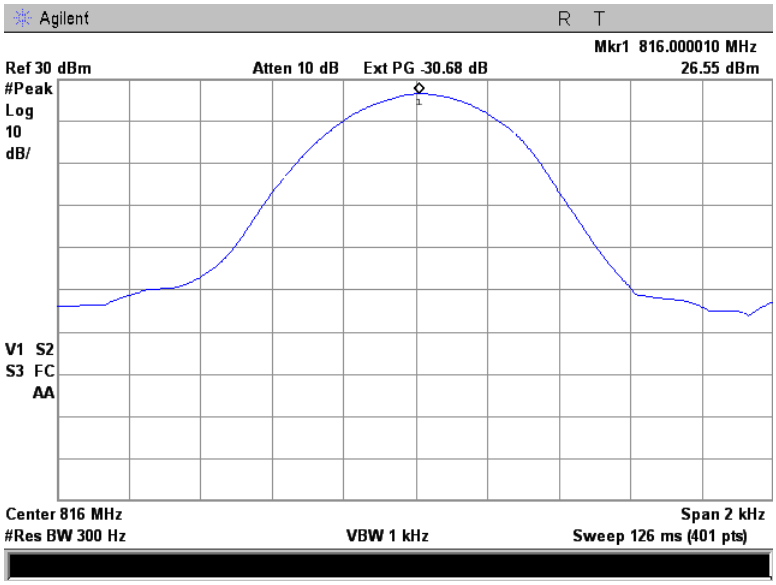
FREQUENCY RANGE:	806 - 816 MHz
REFERENCE LEVEL:	Unmodulated power
CONFIGURATION: Dual Band	CONFIGURATION: Single Band
INPUT POWER:	-54 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.12 Reference level test results at high carrier frequency, Port 1

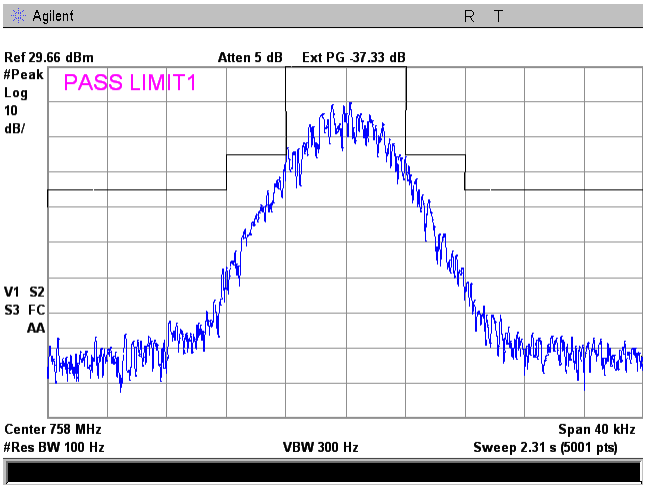
FREQUENCY RANGE:	806 - 816 MHz
REFERENCE LEVEL:	Unmodulated power
CONFIGURATION: Dual Band	CONFIGURATION: Single Band
INPUT POWER:	-54 dBm



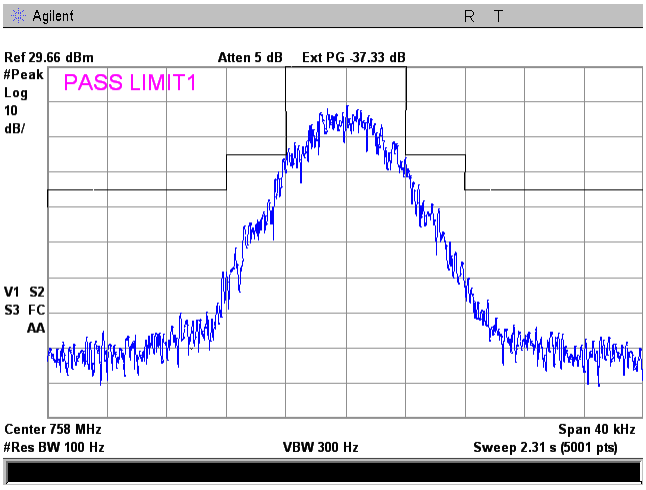
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.13 Emission mask test results at low carrier frequency, Port 1

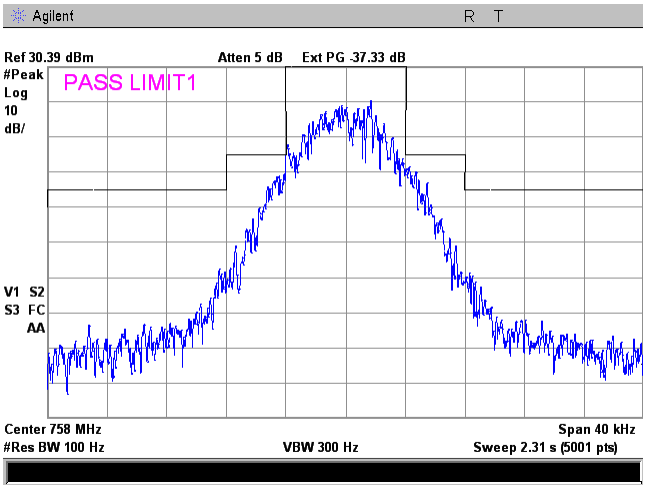
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



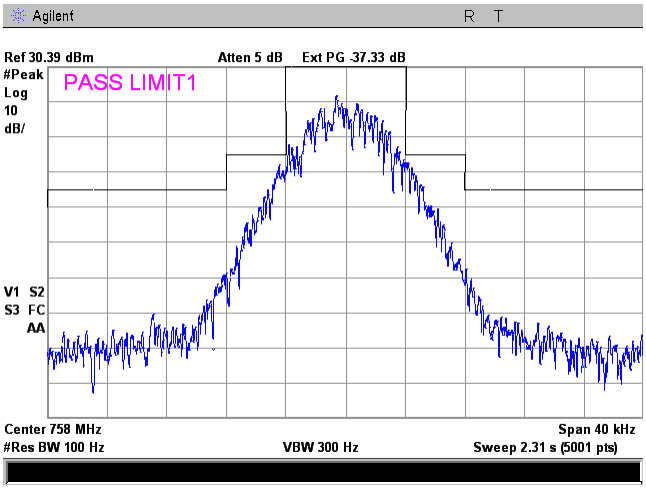
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



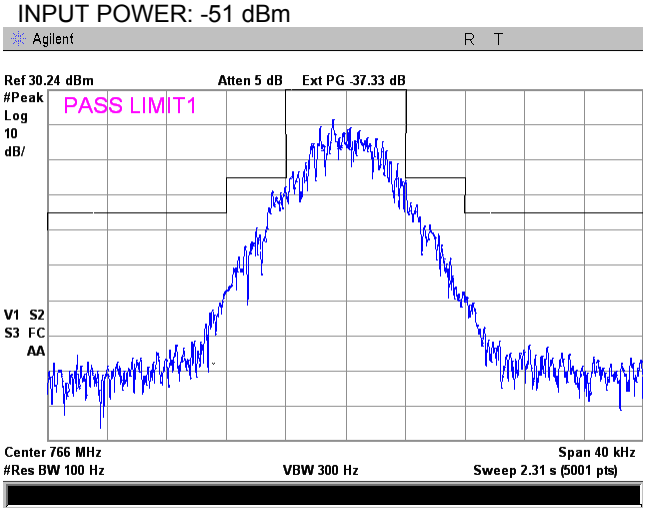
COMPOSITE INPUT POWER: -21 dBm



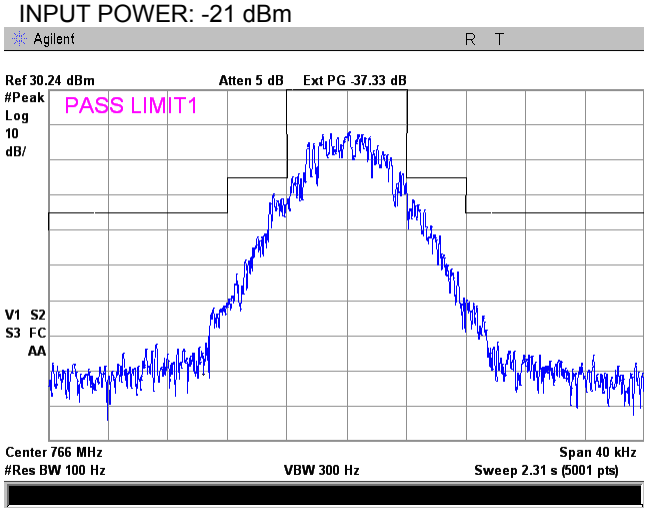
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.14 Emission mask test result at mid frequency carrier, Port 1

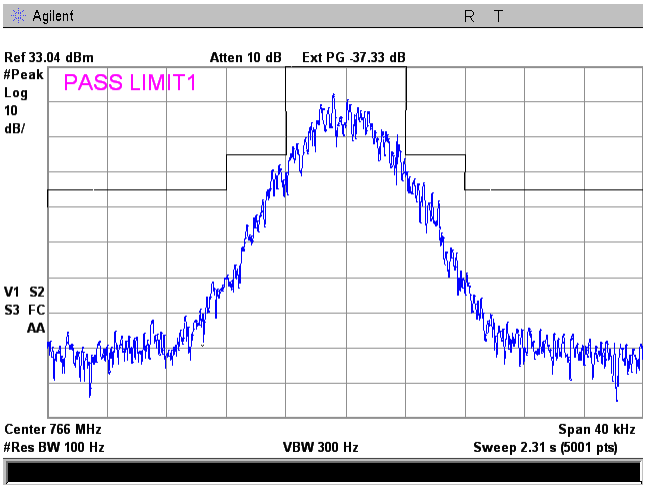
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -51 dBm



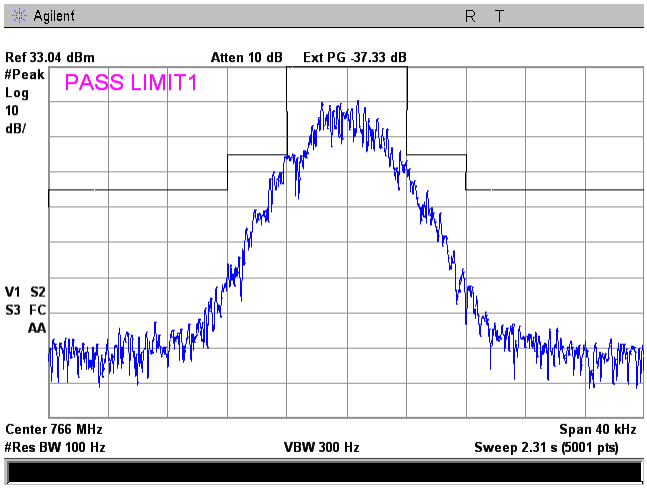
INPUT POWER: -21 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



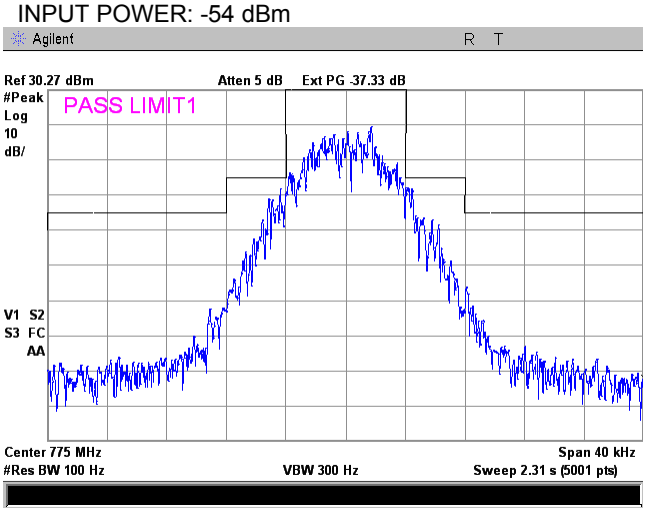
COMPOSITE INPUT POWER: -21 dBm



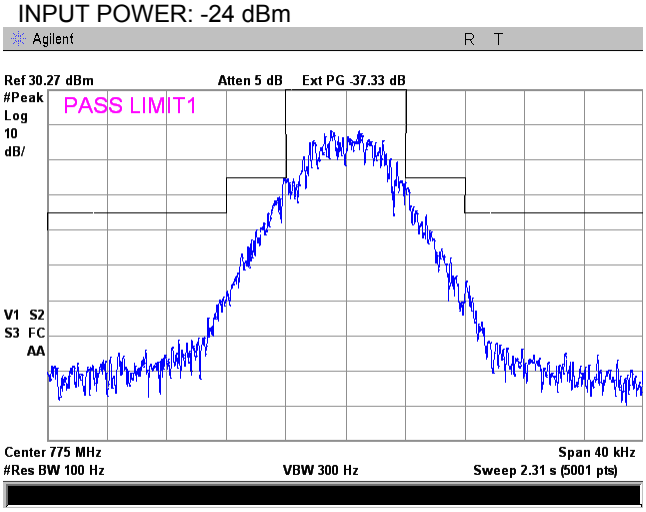
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.15 Emission mask test result at high frequency carrier, Port 1

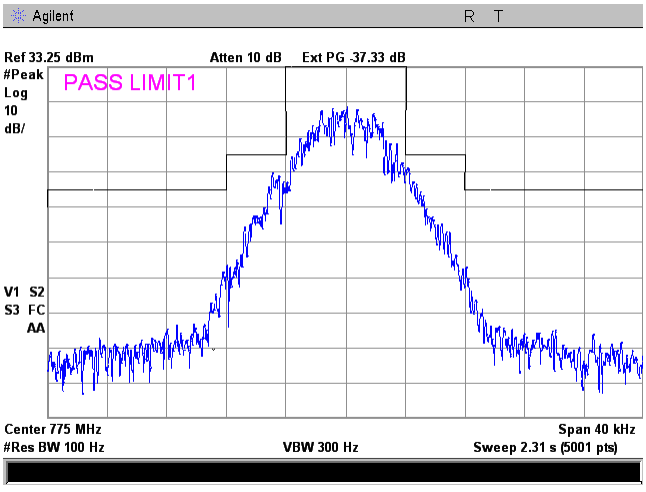
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



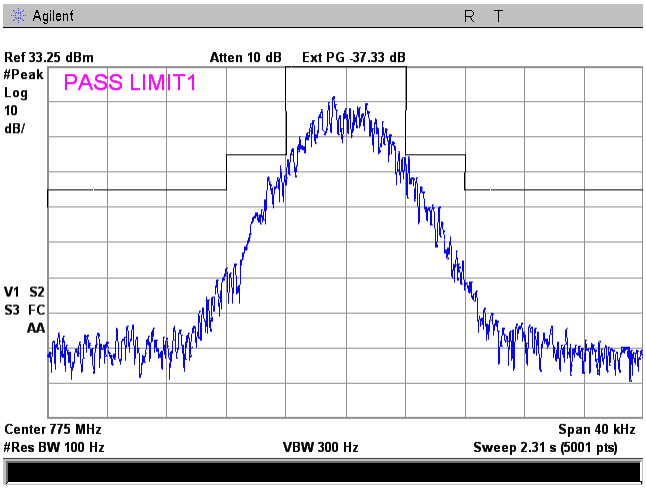
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



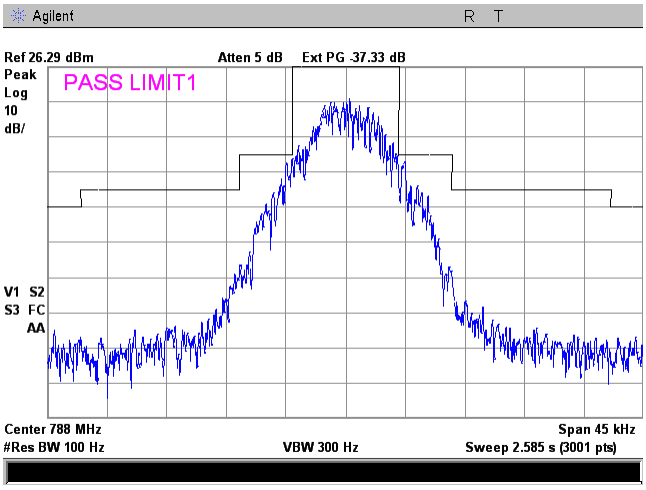
COMPOSITE INPUT POWER: -21 dBm

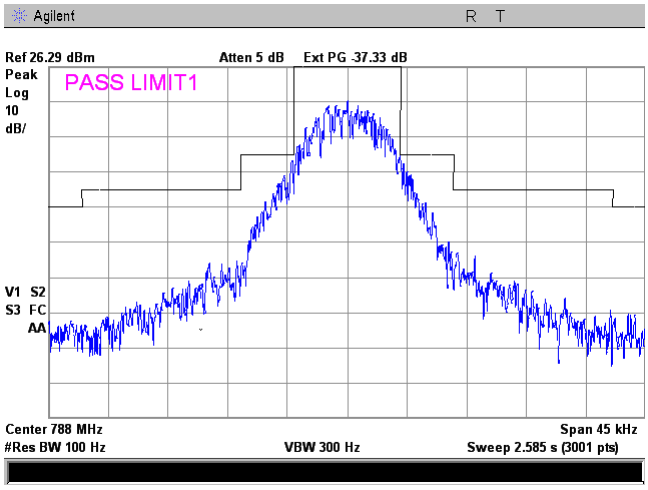


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.16 Emission mask test result at low frequency carrier, Port 2

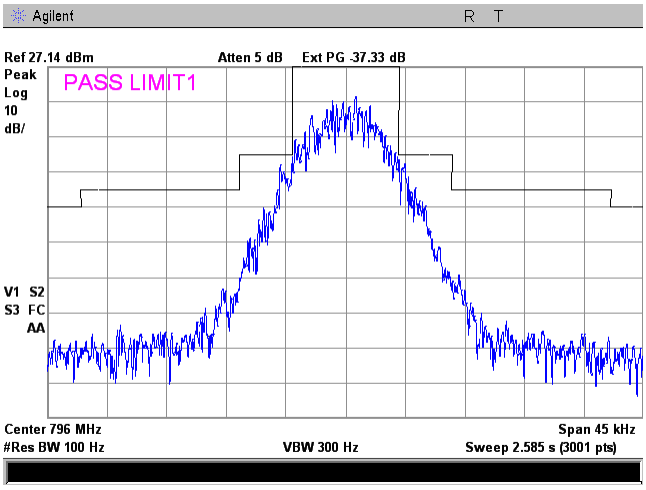
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

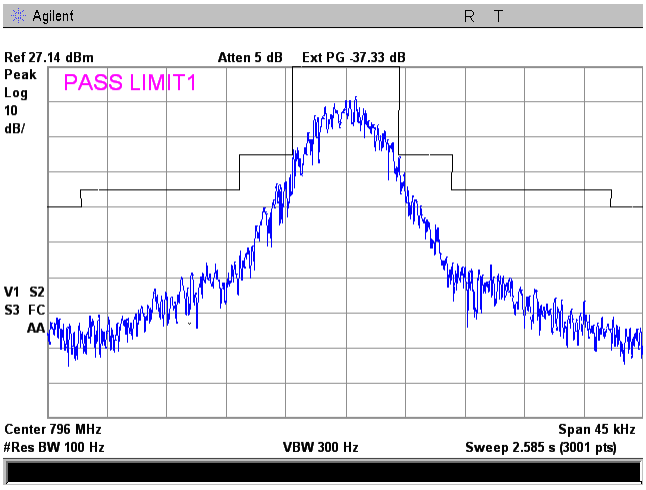




Plot 7.3.17 Occupied bandwidth test result at mid frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

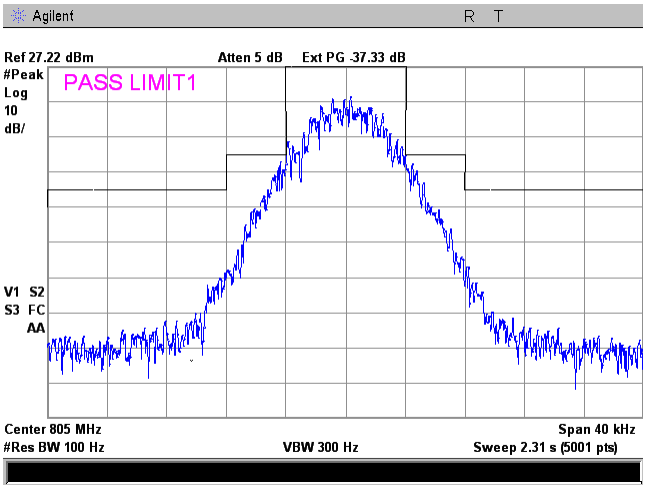


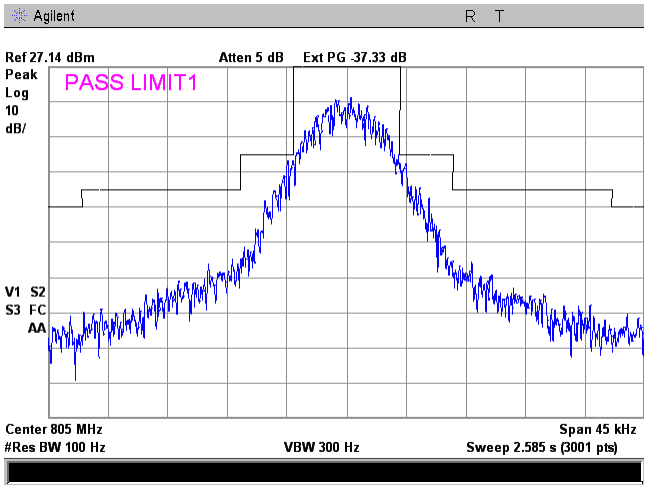


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.18 Emission mask test result at high frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

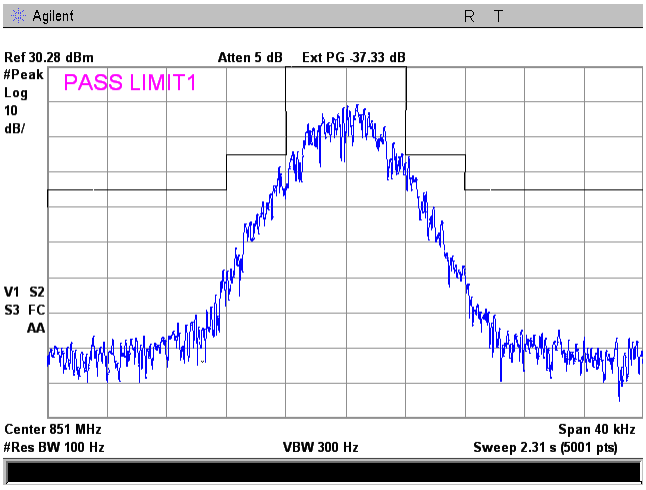




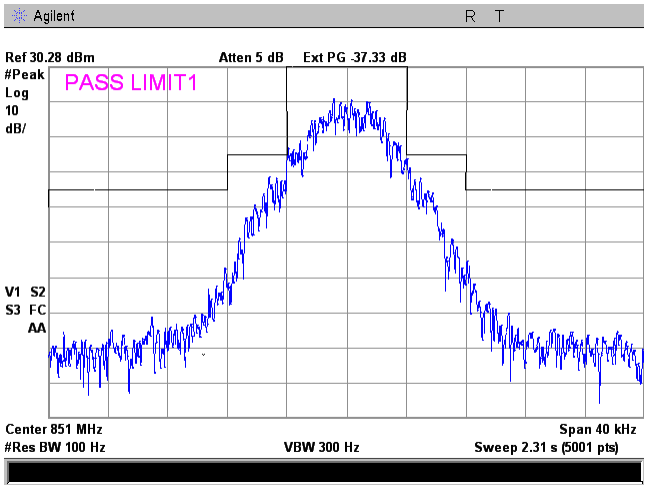
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.19 Emission mask test result at low frequency carrier, Port 1

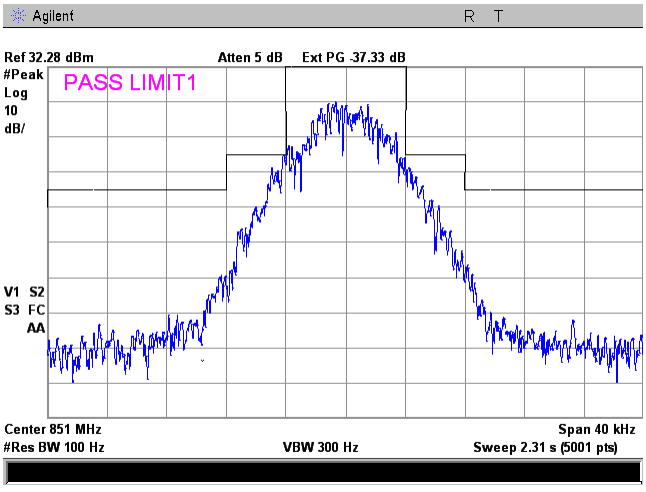
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



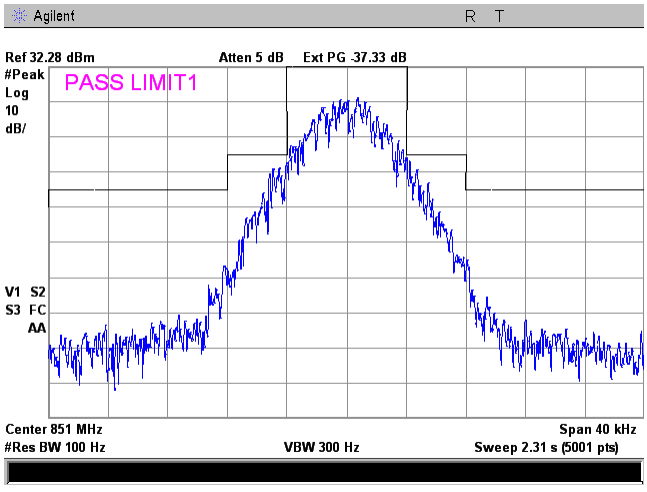
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



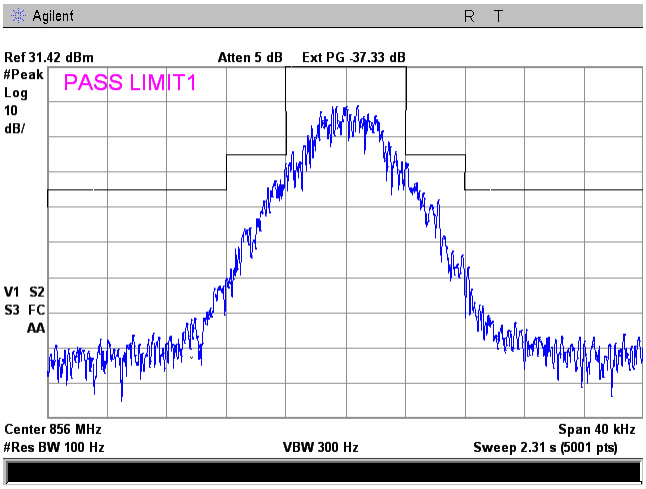
COMPOSITE INPUT POWER: -21 dBm



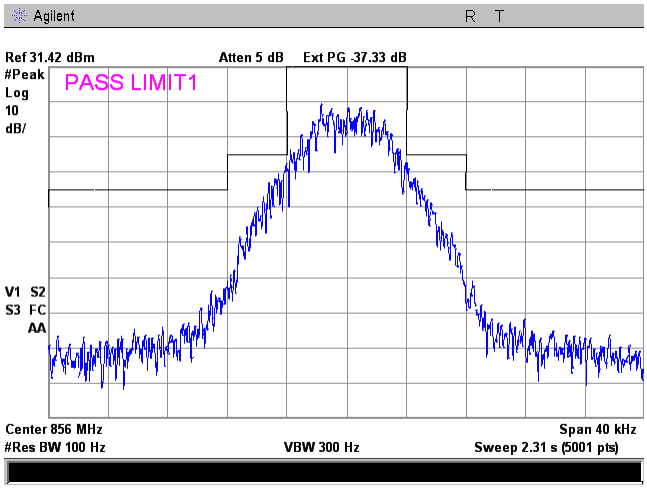
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.20 Emission mask test result at mid frequency carrier, Port 1

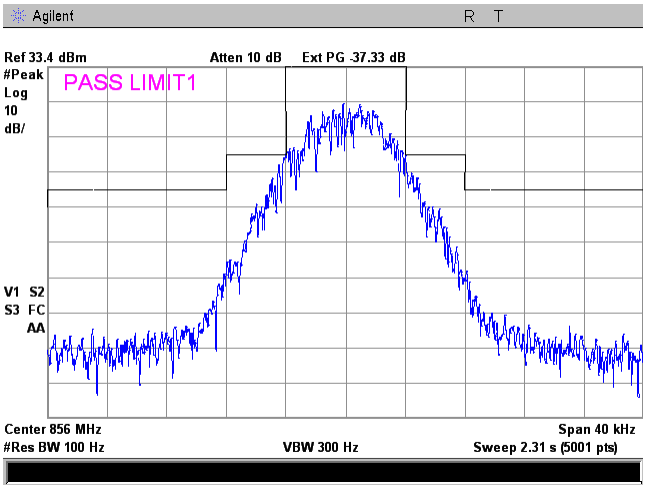
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



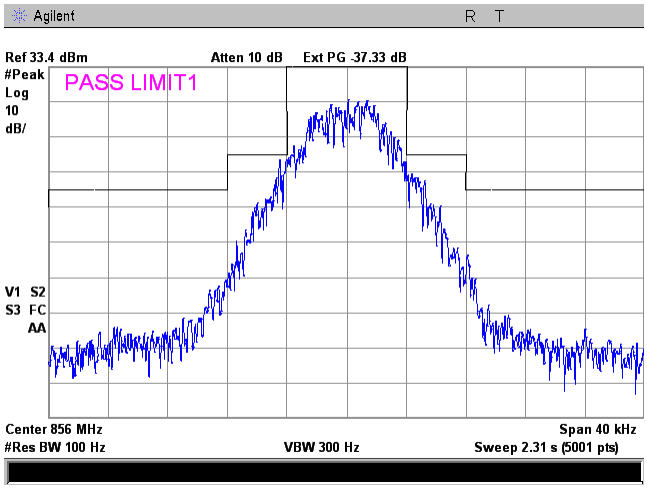
INPUT POWER: -24 dBm



CONFIGURATION:
COMPOSITE INPUT POWER: -51 dBm



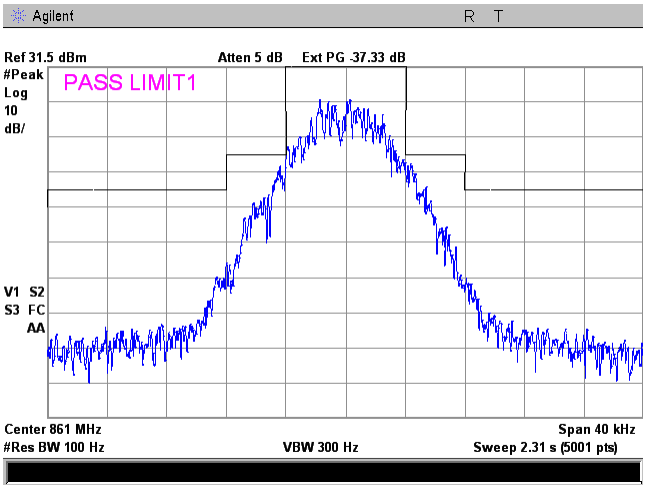
Single Band
COMPOSITE INPUT POWER: -21 dBm



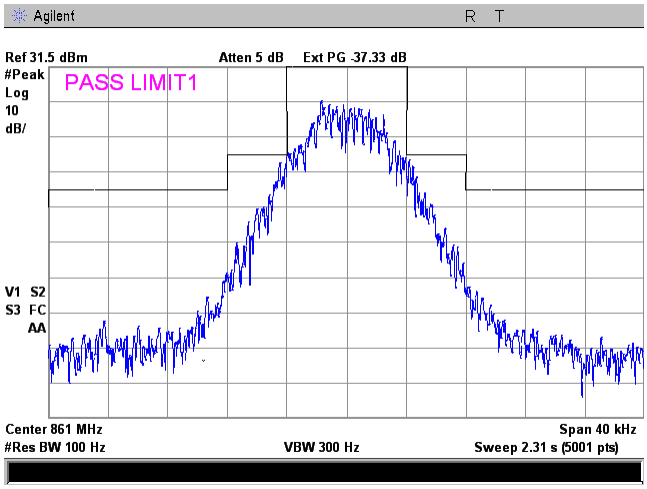
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.21 Emission mask test result at high frequency carrier, Port 1

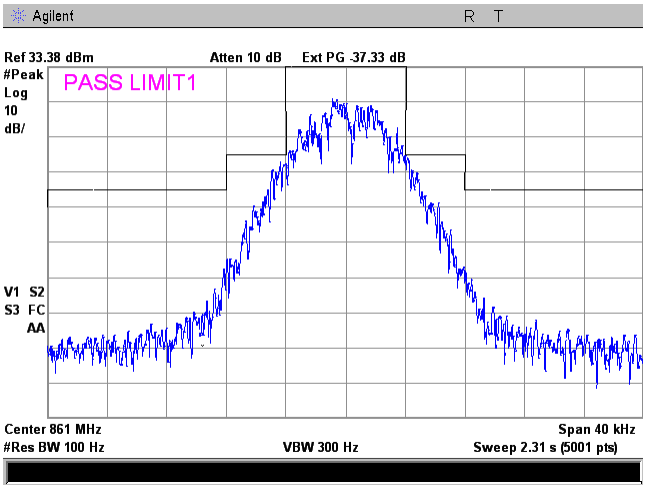
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



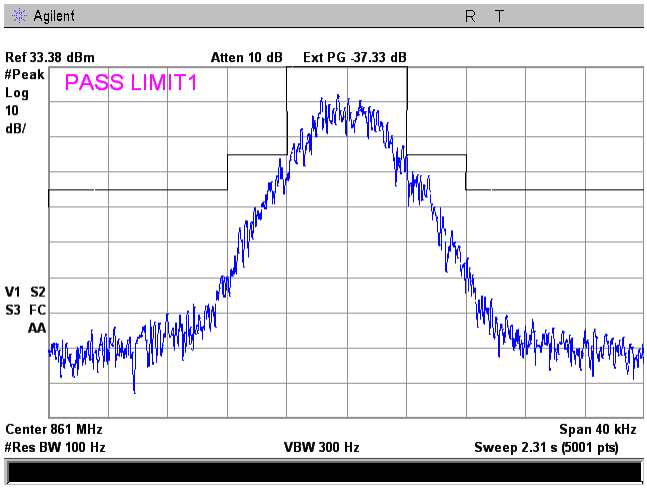
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



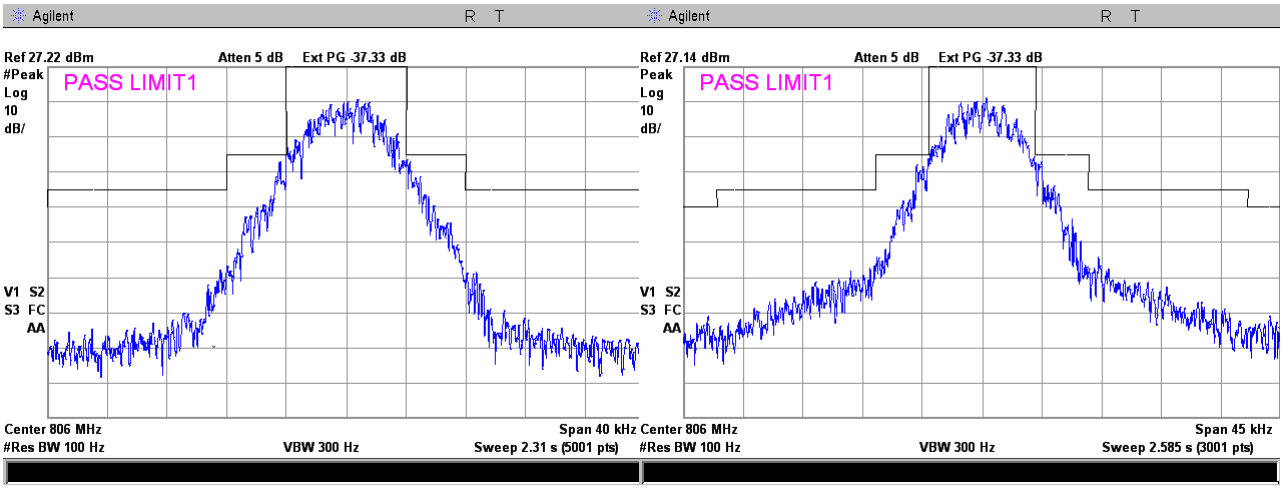
COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

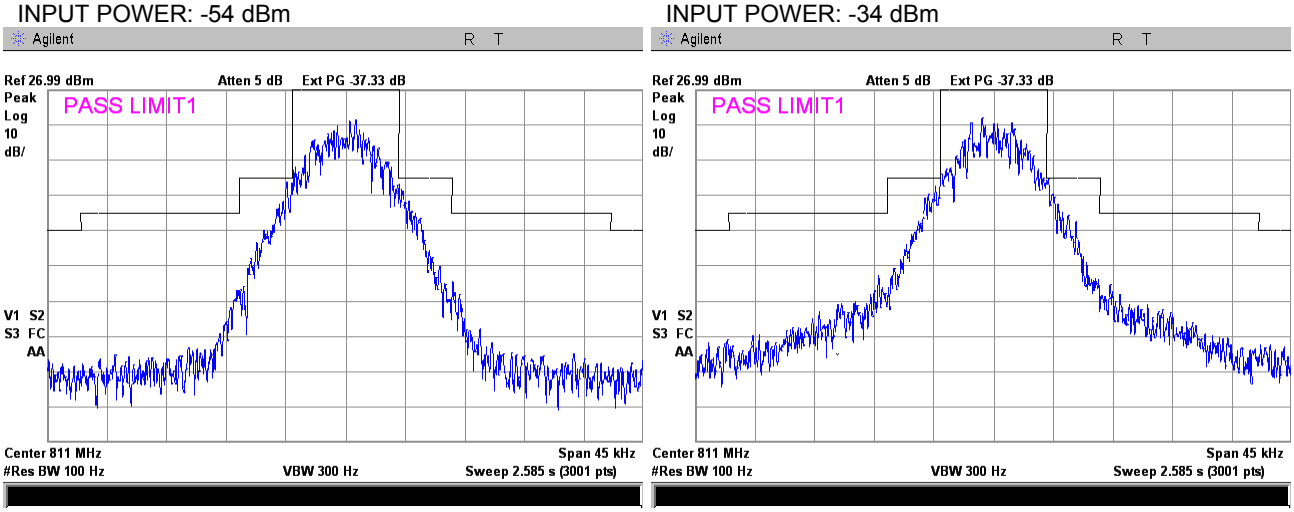
Plot 7.3.22 Emission mask test result at low frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm



Plot 7.3.23 Occupied bandwidth test result at mid frequency carrier, Port 2

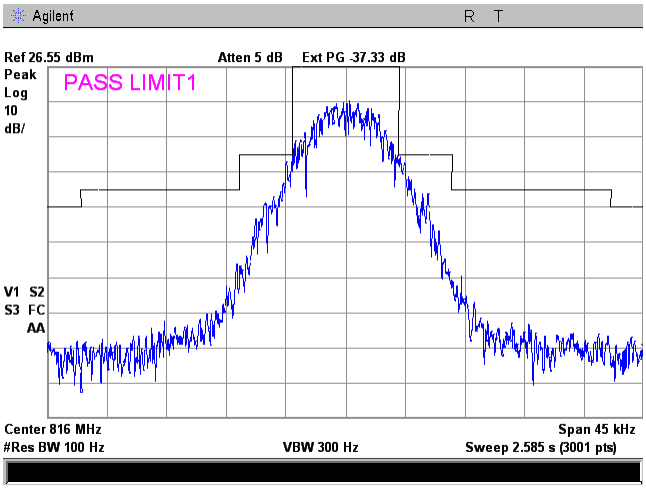
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

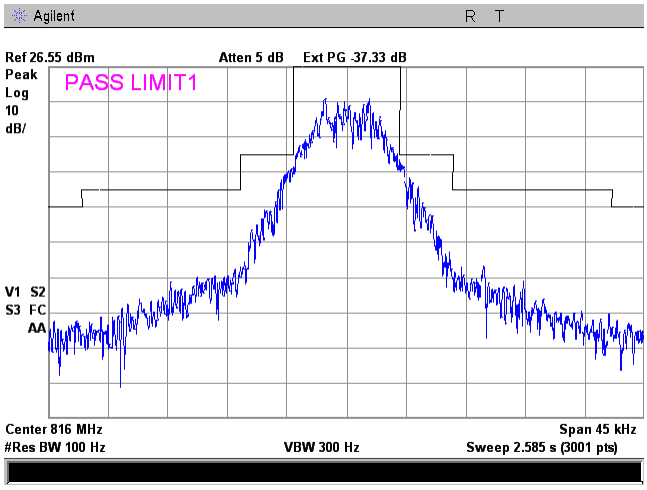


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.24 Emission mask test result at high frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

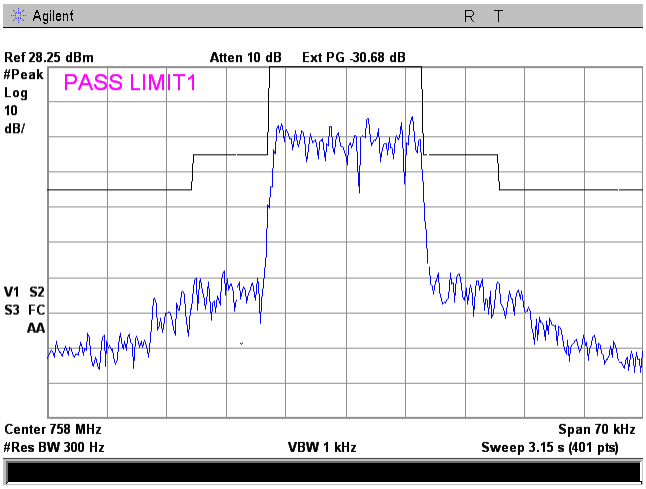




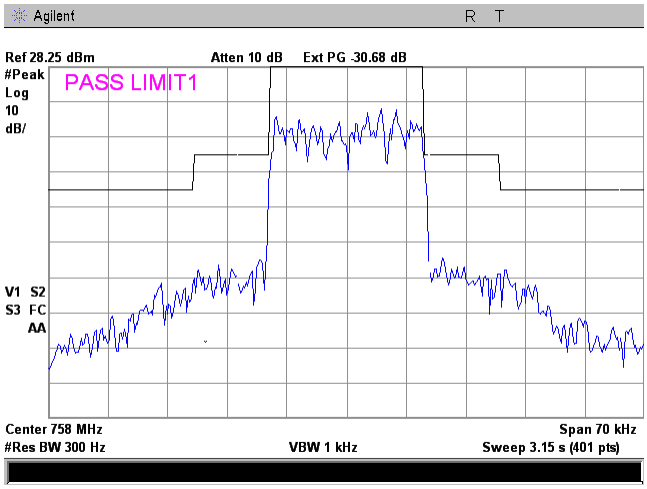
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.25 Emission mask test result at low frequency carrier, Port 1

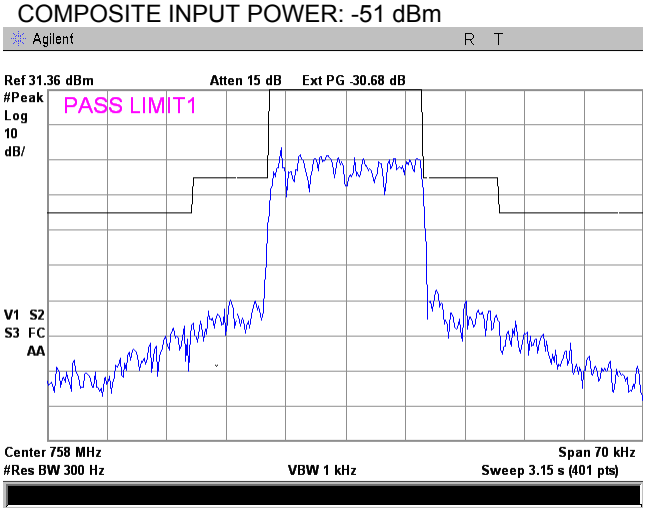
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



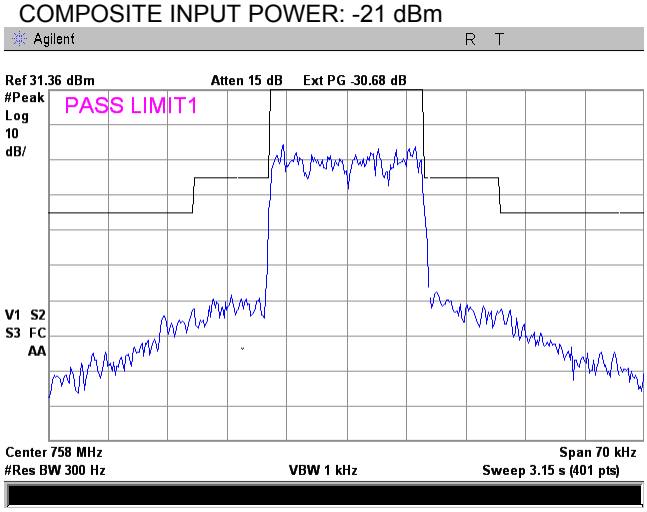
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



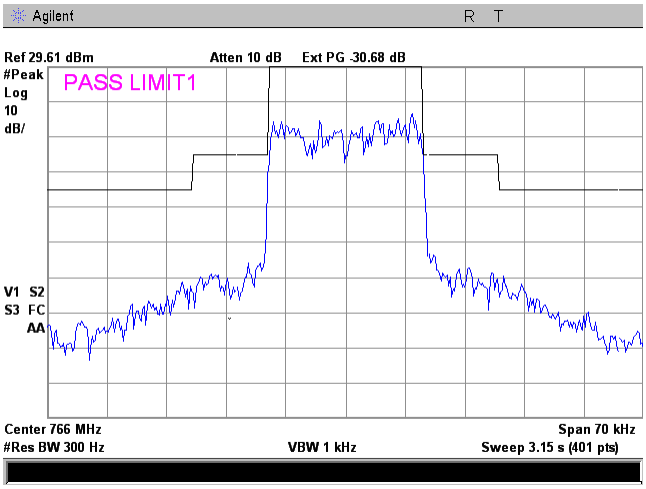
COMPOSITE INPUT POWER: -21 dBm



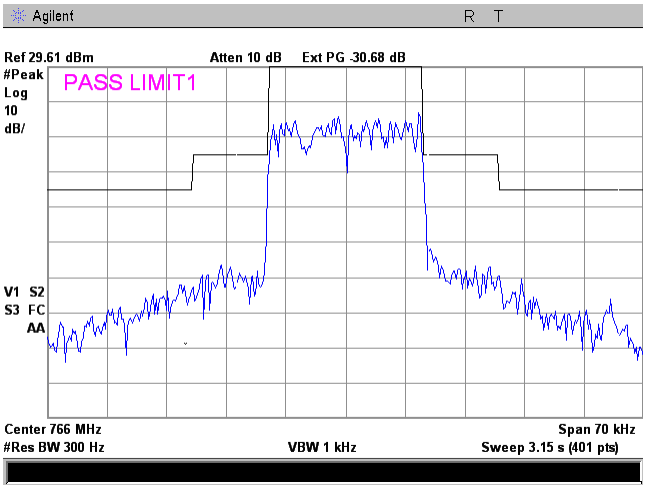
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.26 Emission mask test result at mid frequency carrier, Port 1

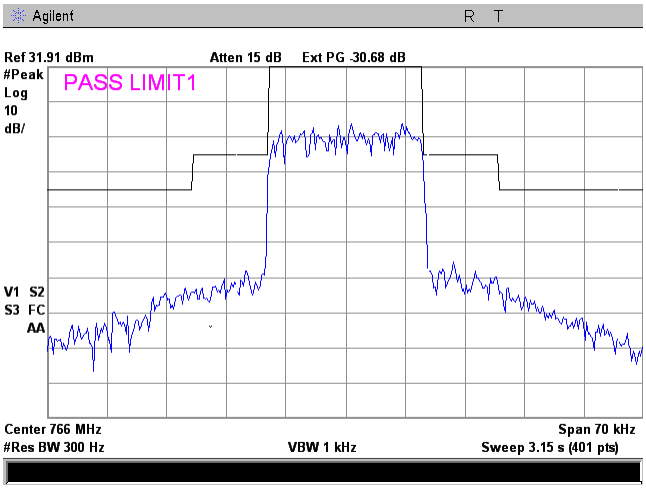
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



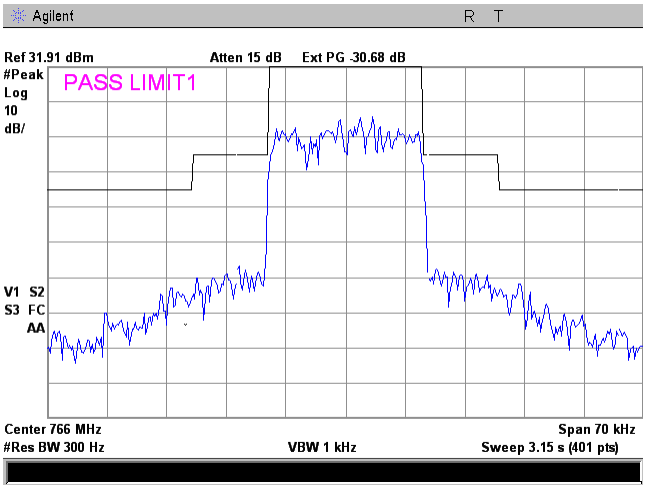
INPUT POWER: -24 dBm



CONFIGURATION:
COMPOSITE INPUT POWER: -51 dBm



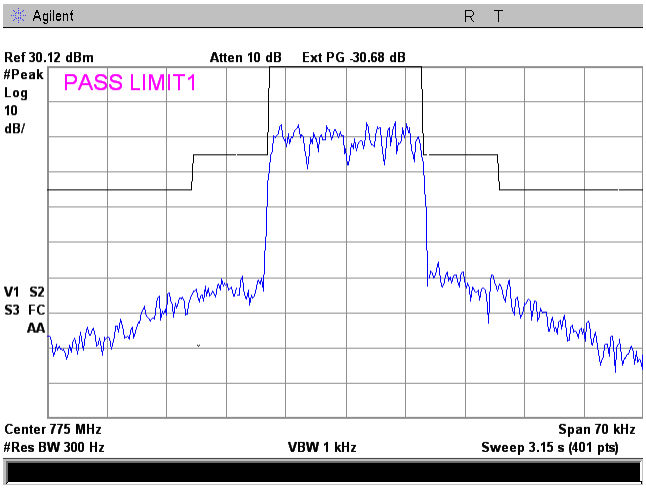
Single Band
COMPOSITE INPUT POWER: -21 dBm



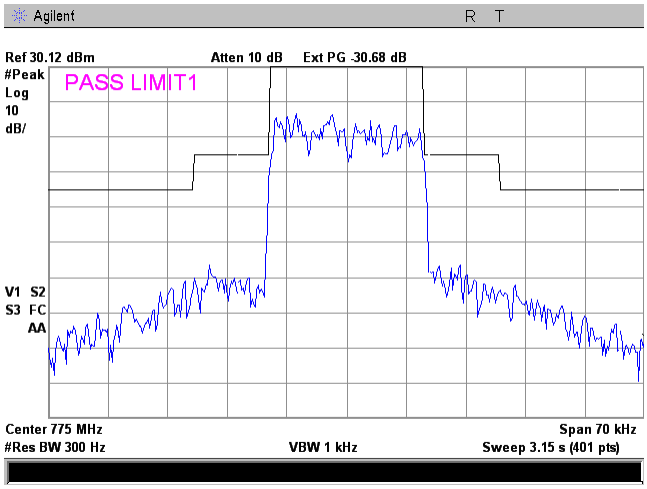
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.27 Emission mask test result at high frequency carrier, Port 1

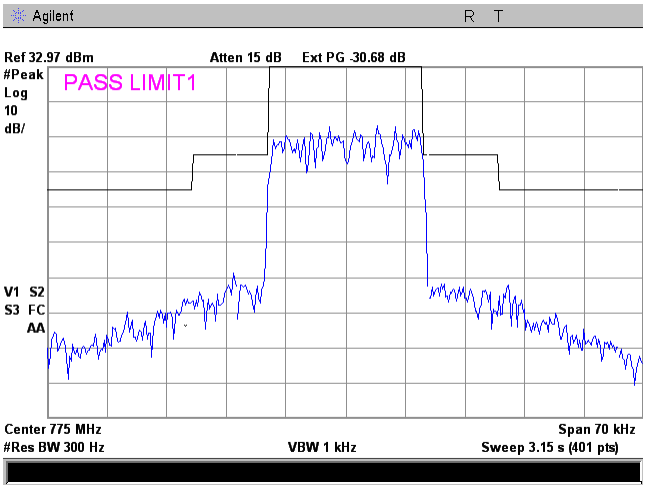
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



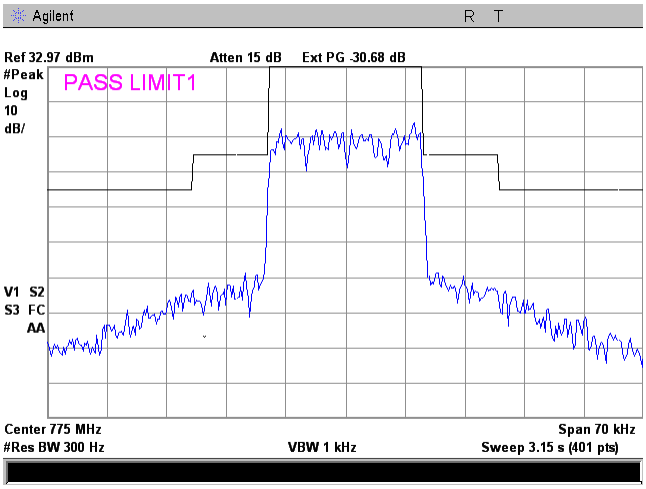
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



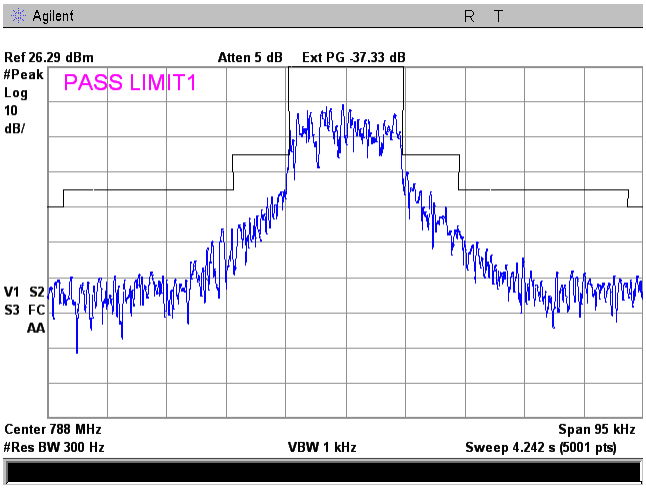
COMPOSITE INPUT POWER: -21 dBm

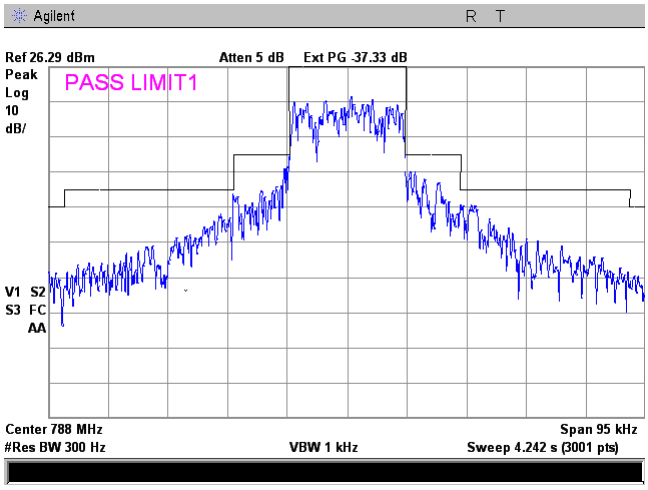


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.28 Emission mask test result at low frequency carrier, Port 2

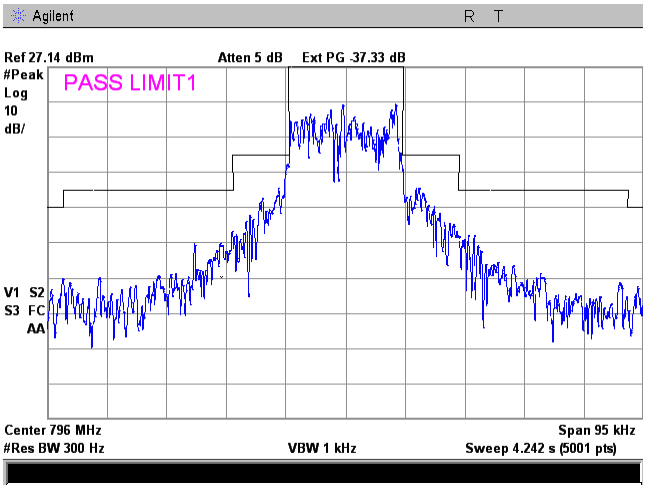
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

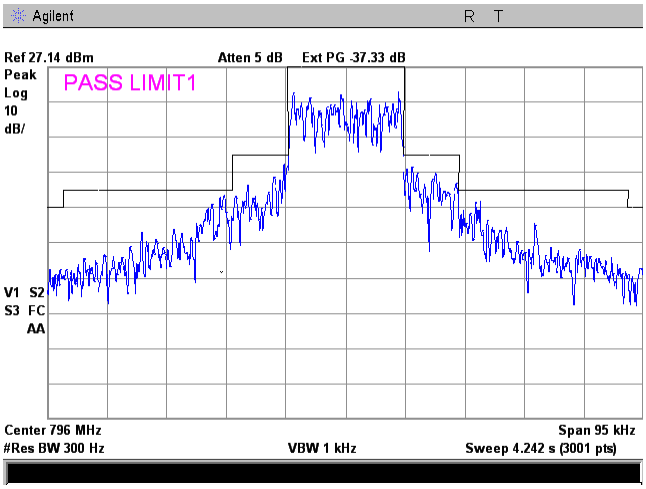




Plot 7.3.29 Emission mask test result at mid frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

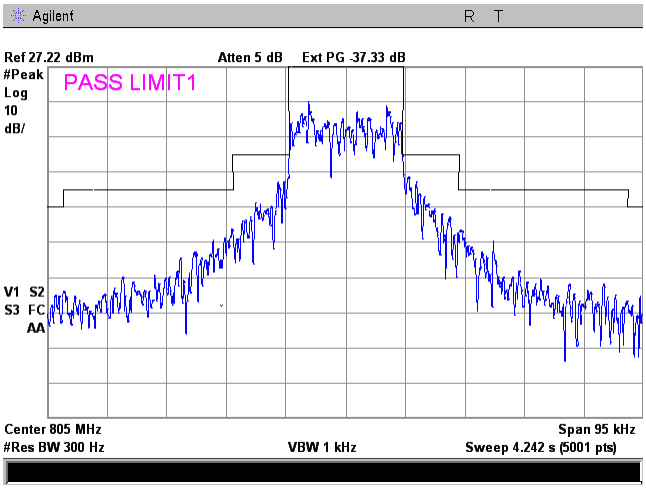


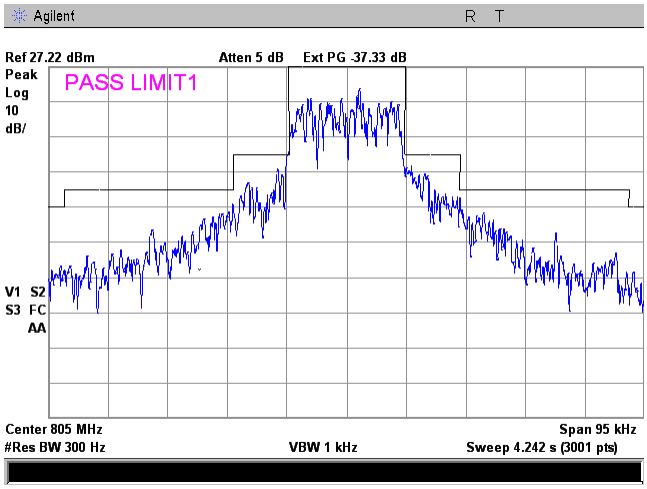


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.30 Emission mask test result at high frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
COMPOSITE INPUT POWER: -52 dBm	COMPOSITE INPUT POWER: -22 dBm
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

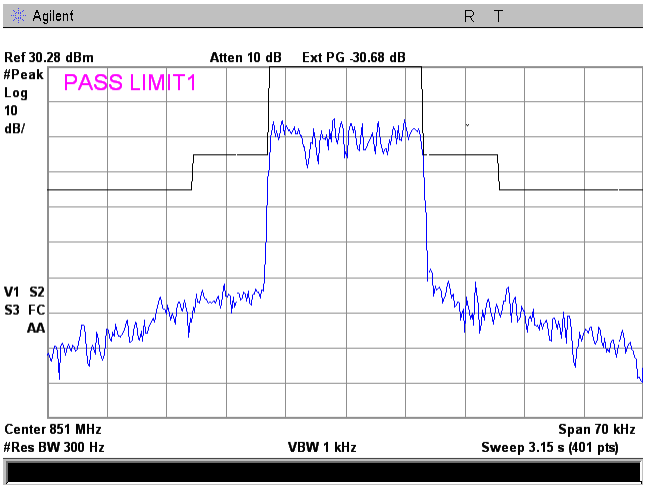




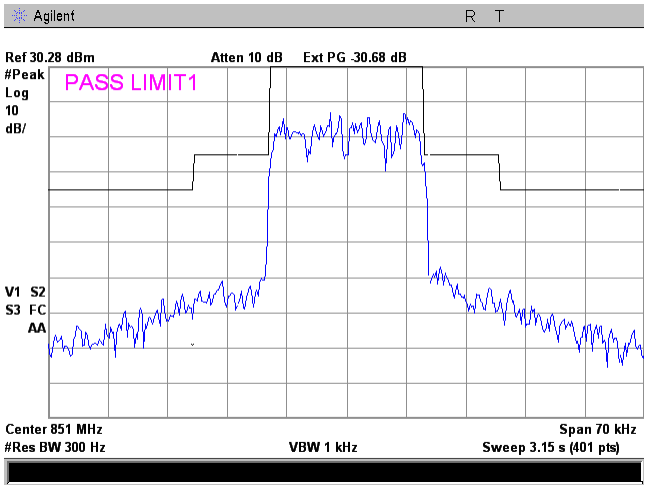
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.31 Emission mask test result at low frequency carrier, Port 1

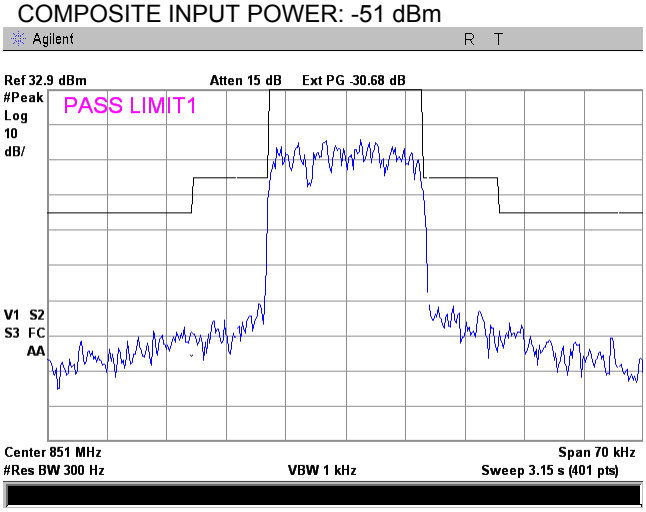
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



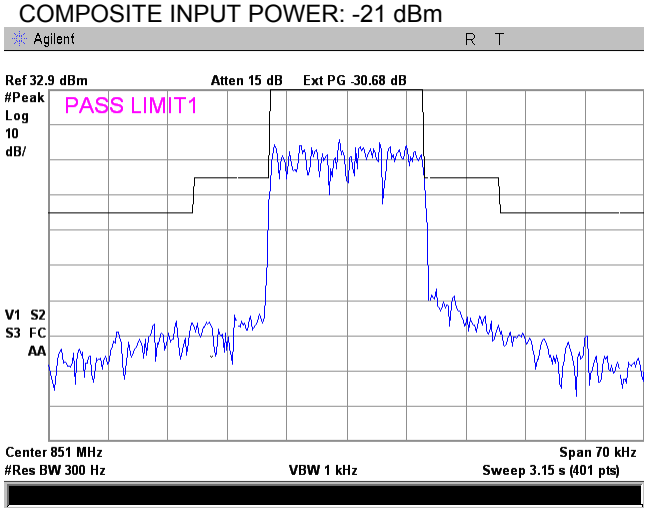
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



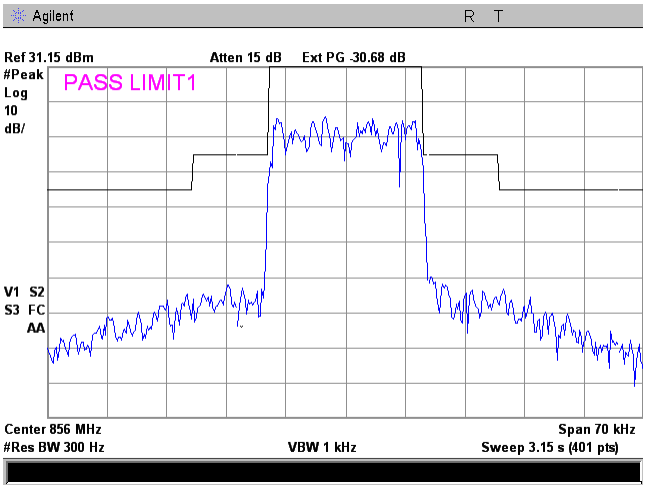
COMPOSITE INPUT POWER: -21 dBm



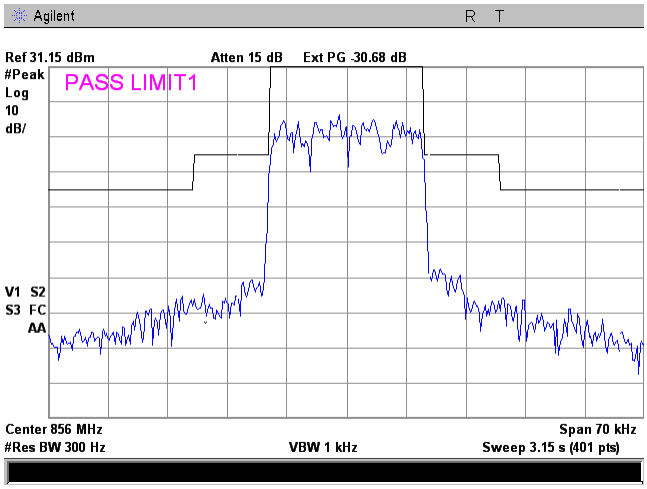
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.32 Emission mask test result at mid frequency carrier, Port 1

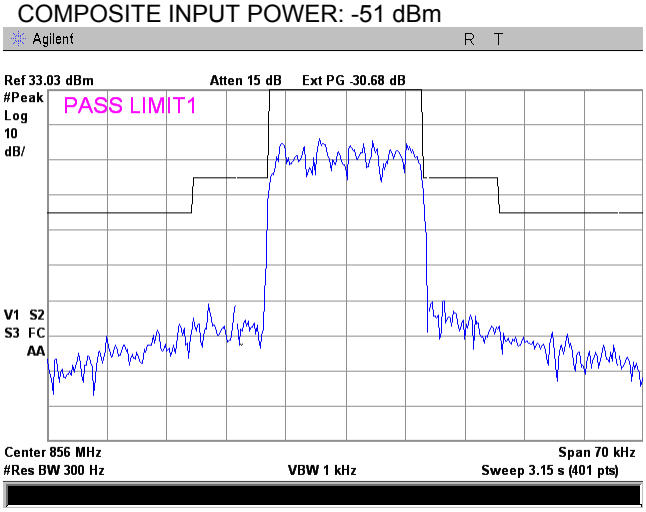
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



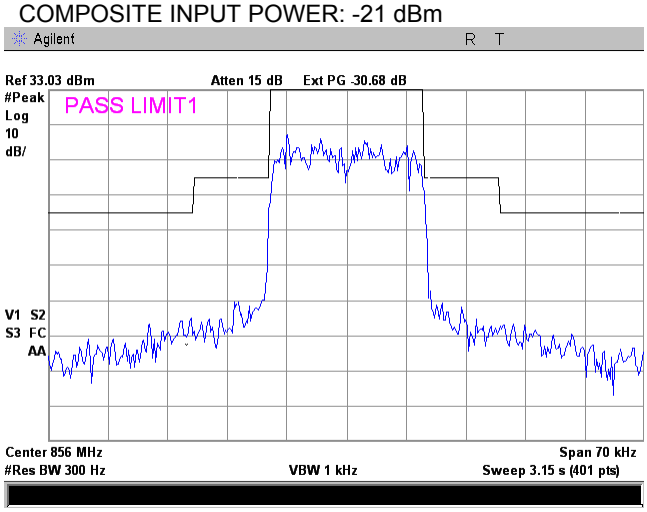
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



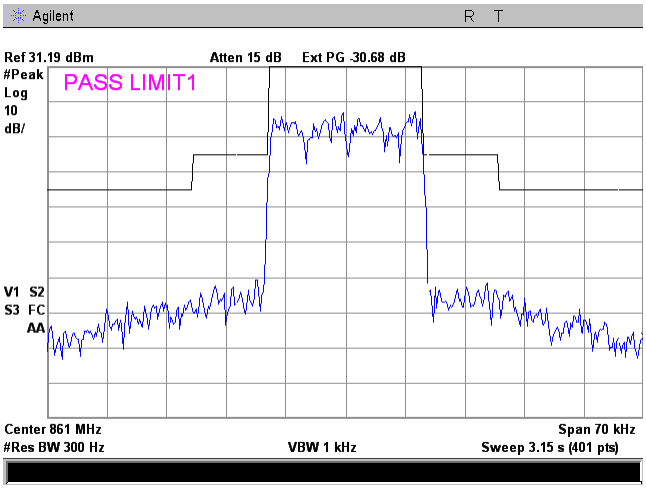
COMPOSITE INPUT POWER: -21 dBm



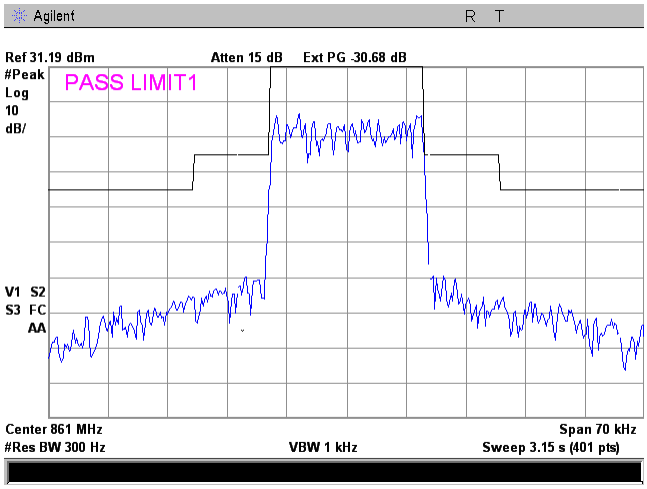
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.33 Emission mask test result at high frequency carrier, Port 1

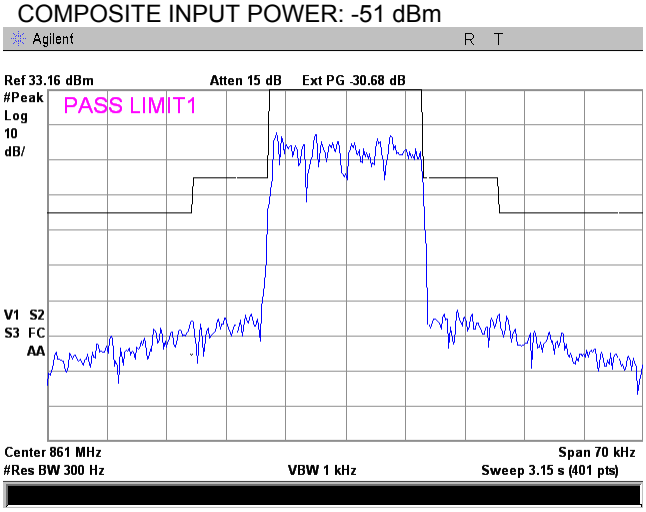
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: iDEN QAM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



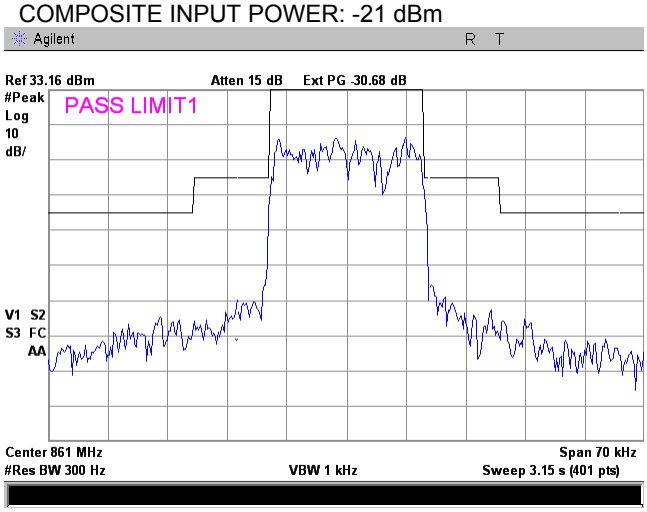
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



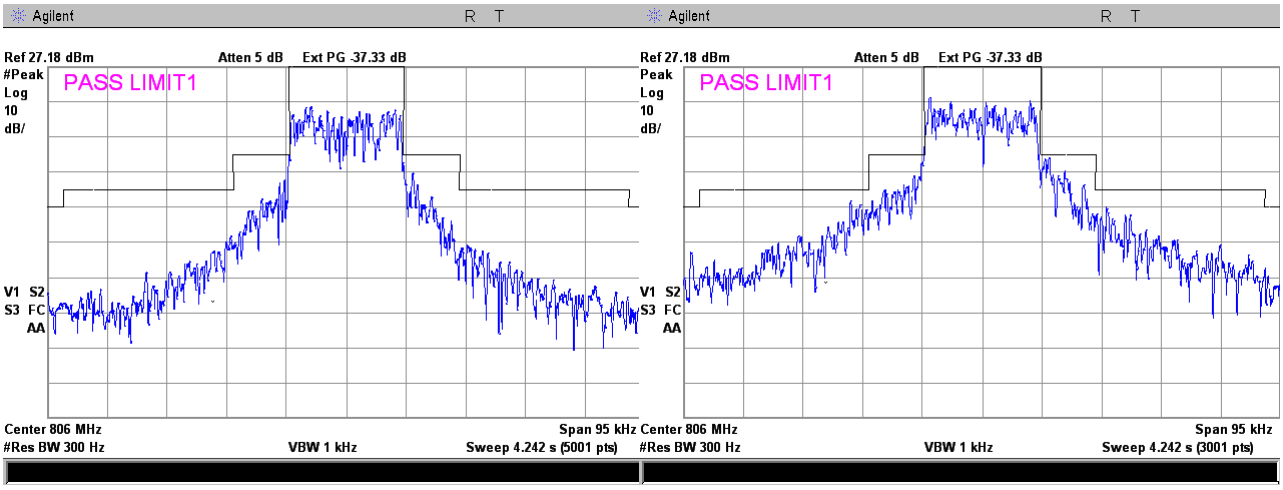
COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

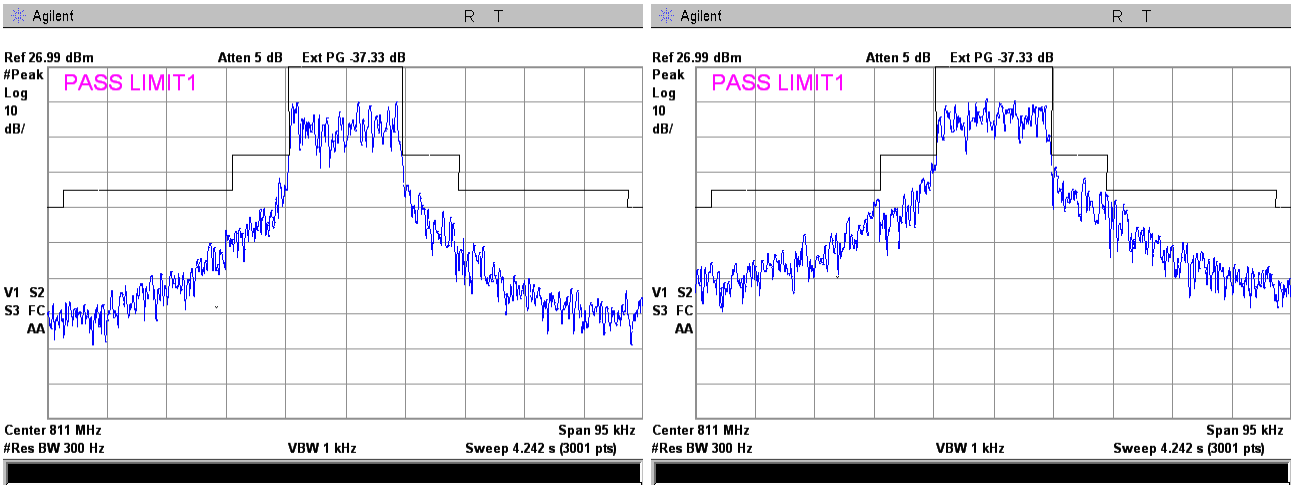
Plot 7.3.34 Emission mask test result at low frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm



Plot 7.3.35 Emission mask test result at mid frequency carrier, Port 2

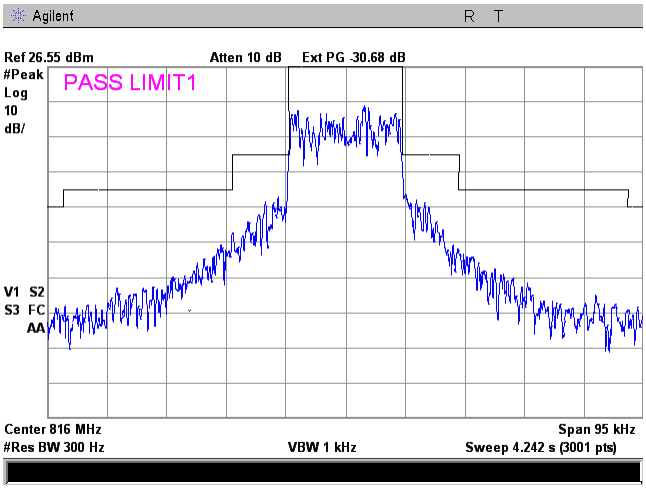
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

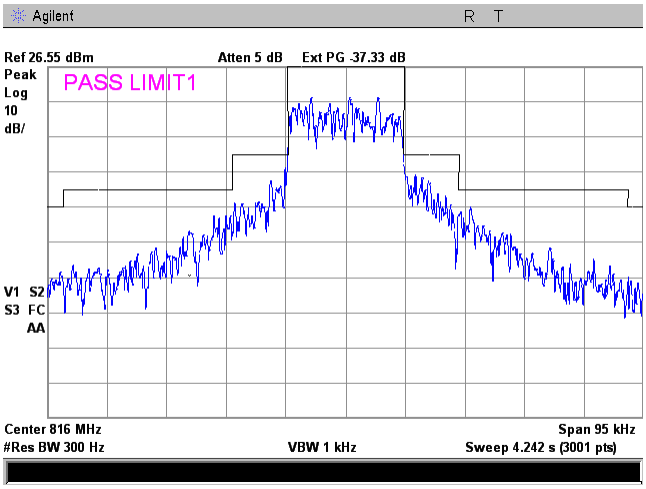


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.36 Emission mask test result at high frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

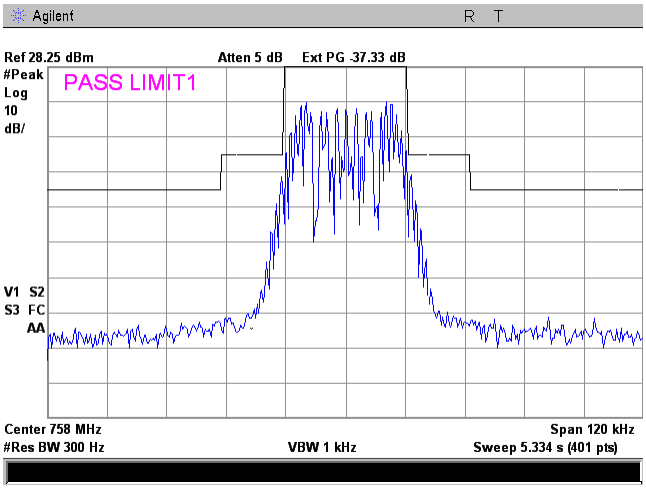




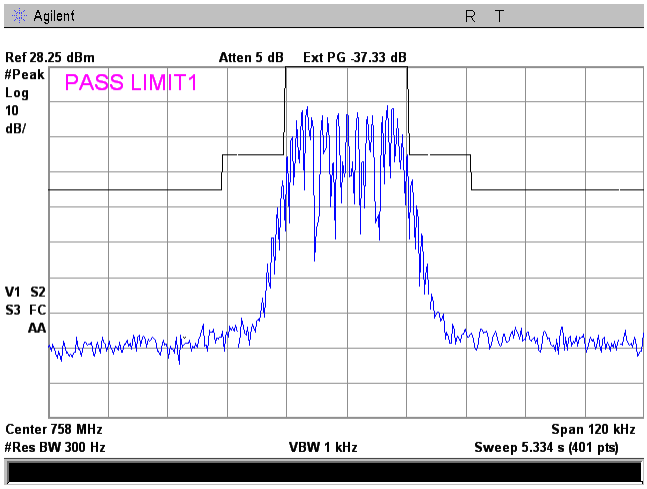
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.37 Emission mask test result at low frequency carrier, Port 1

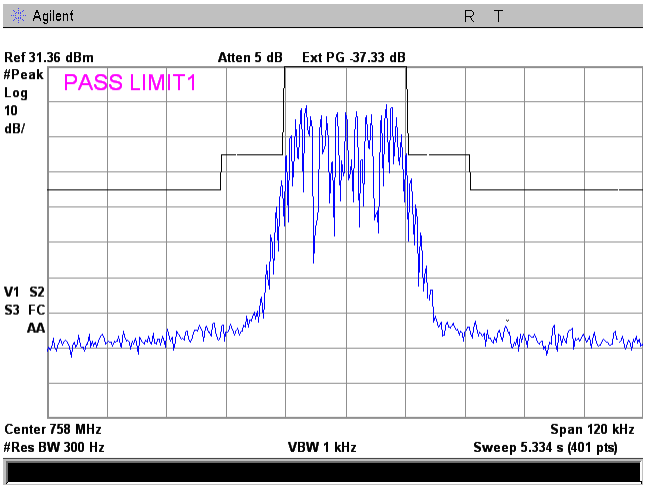
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



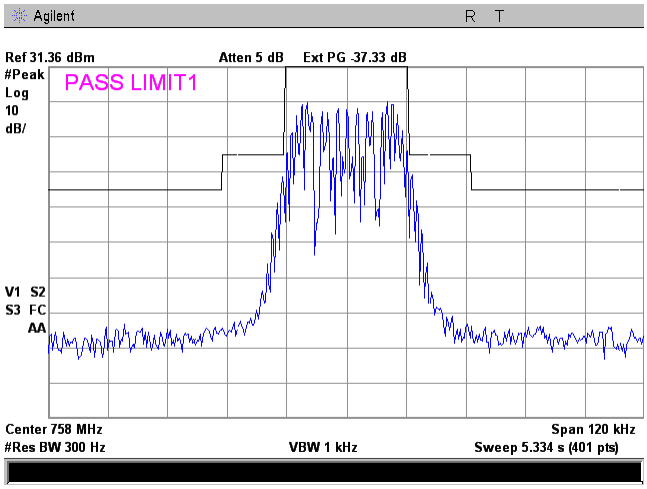
INPUT POWER: -24 dBm



CONFIGURATION: Dual Band
COMPOSITE INPUT POWER: -51 dBm



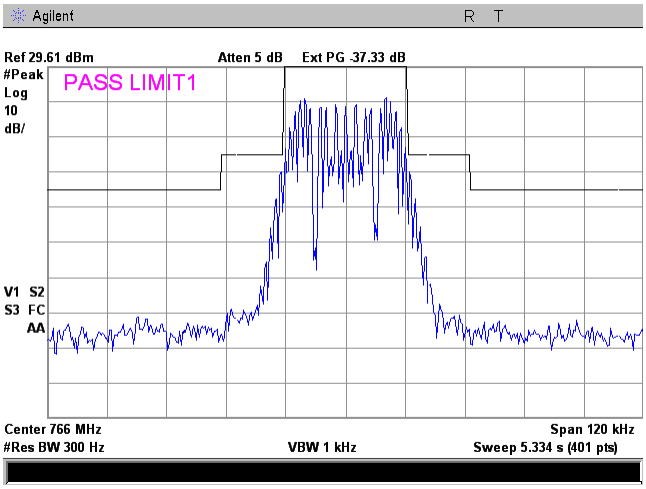
COMPOSITE INPUT POWER: -21 dBm



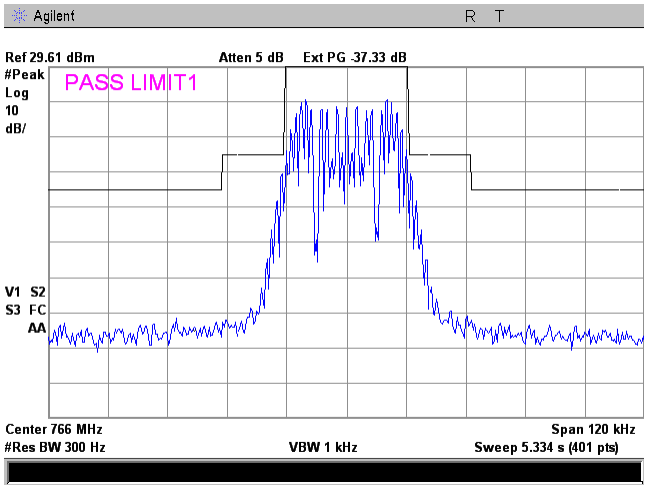
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.38 Emission mask test result at mid frequency carrier, Port 1

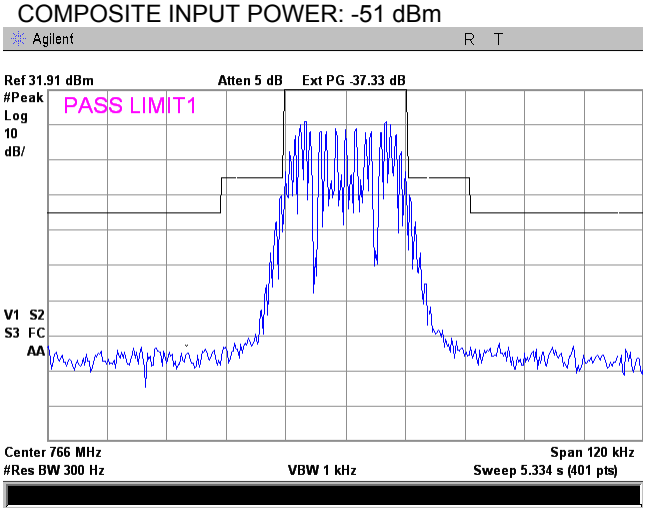
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



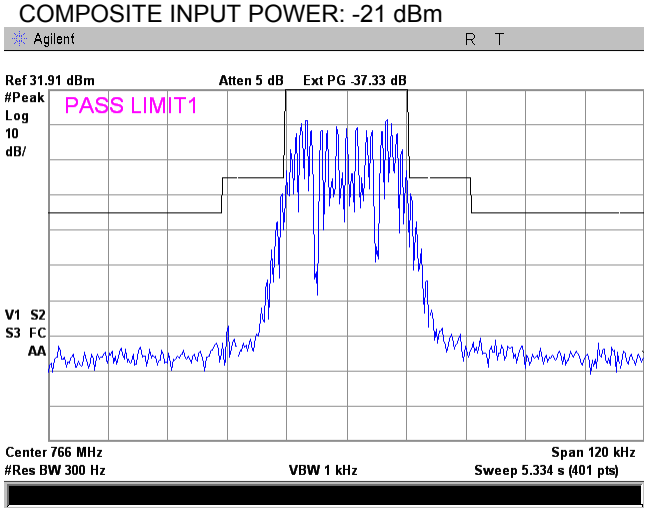
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



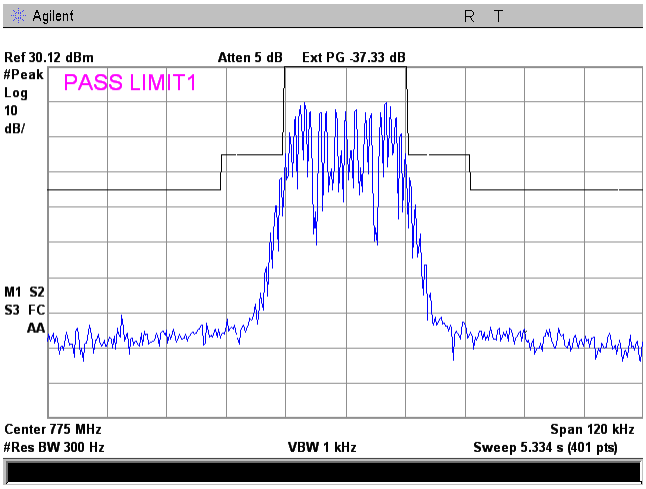
COMPOSITE INPUT POWER: -21 dBm



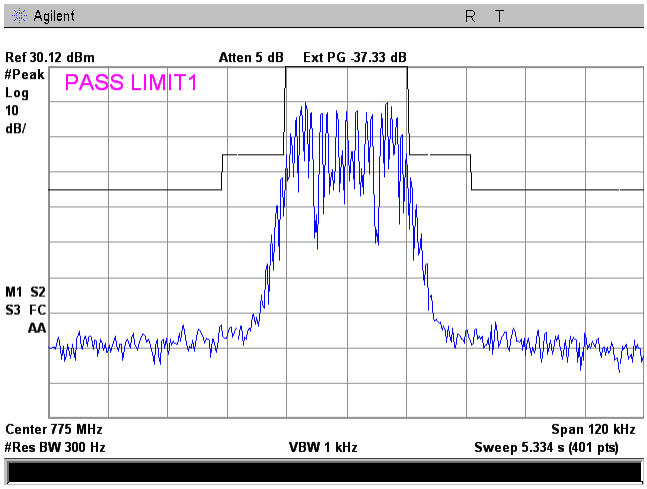
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.39 Emission mask test result at high frequency carrier, Port 1

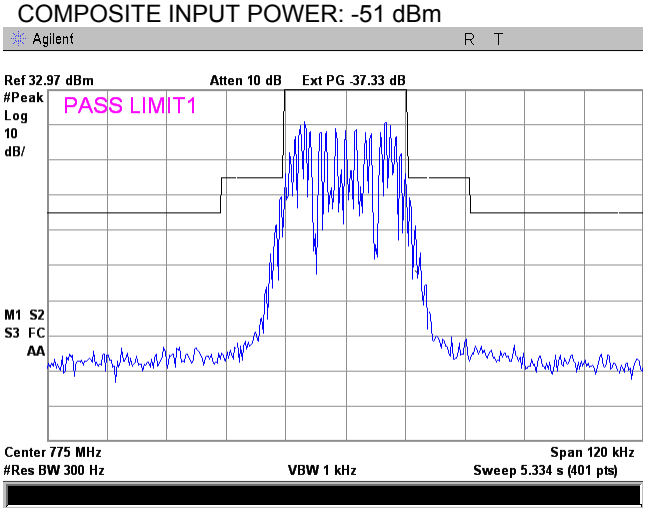
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



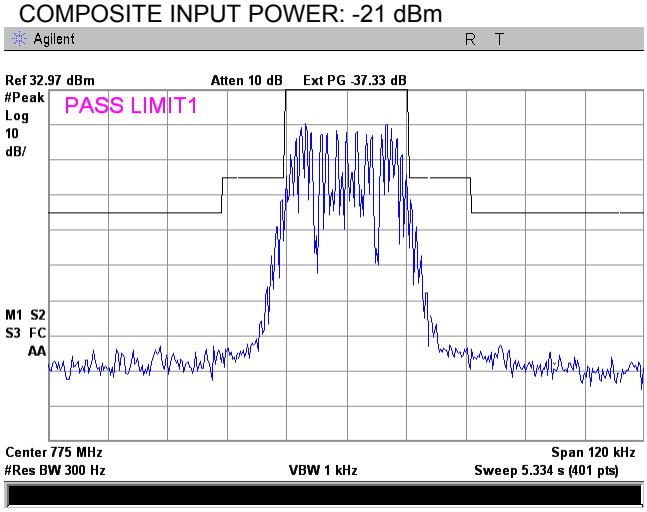
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



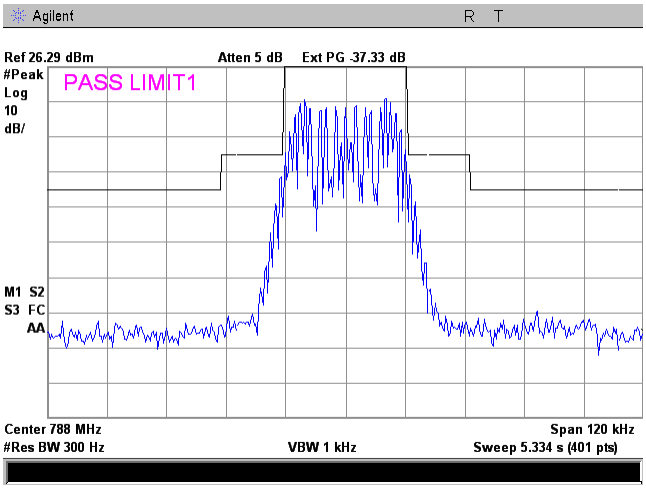
COMPOSITE INPUT POWER: -21 dBm

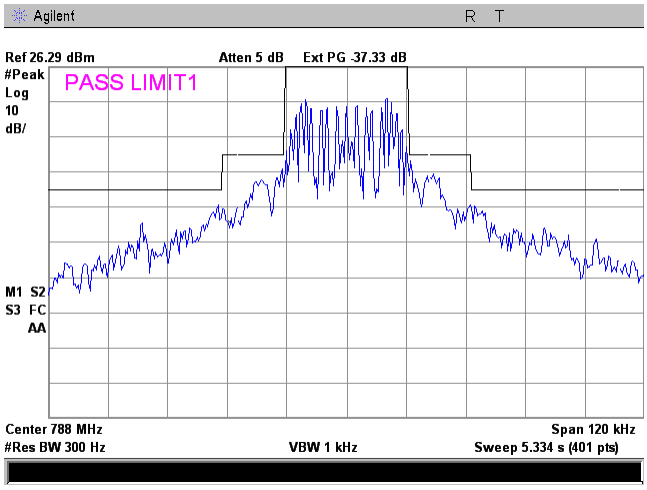


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.40 Emission mask test result at low frequency carrier, Port 2

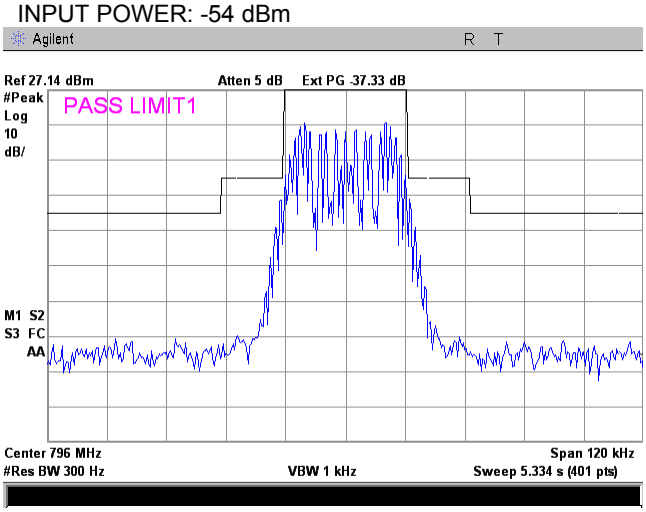
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

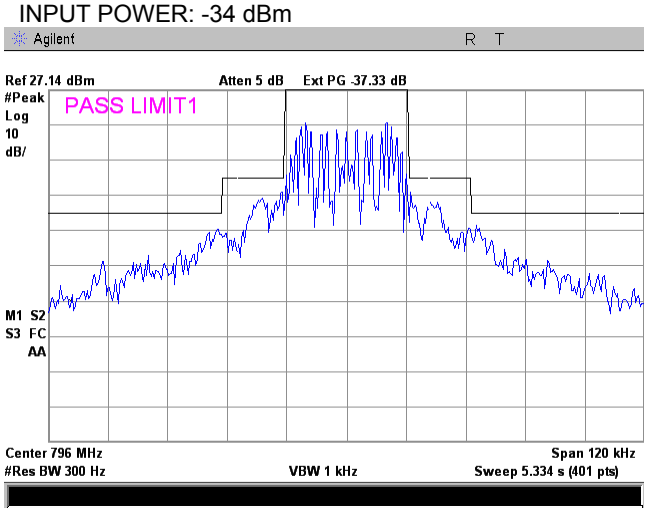




Plot 7.3.41 Emission mask test result at mid frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

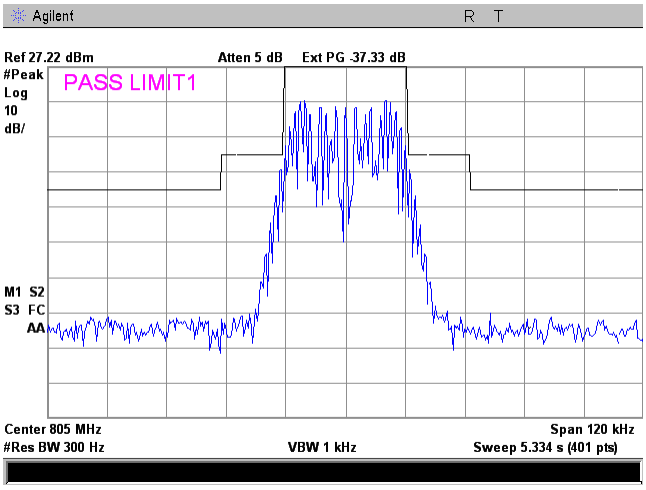


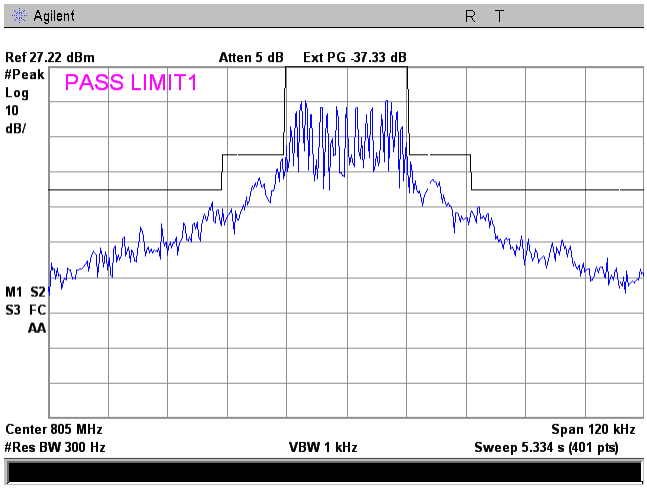


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.42 Emission mask test result at high frequency carrier, Port 2

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

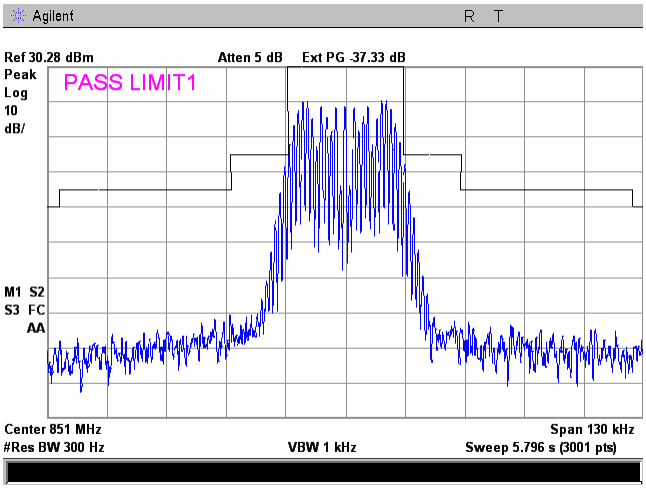




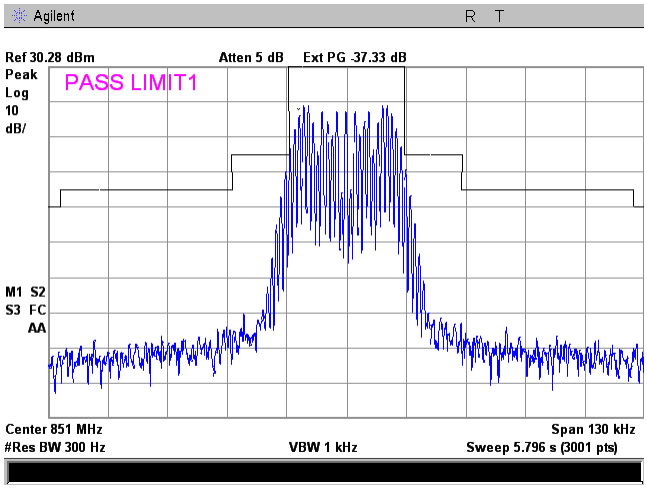
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.43 Emission mask test result at low frequency carrier, Port 1

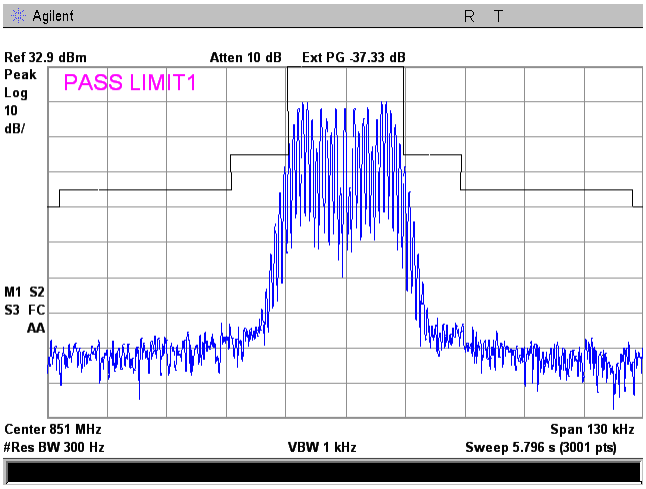
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



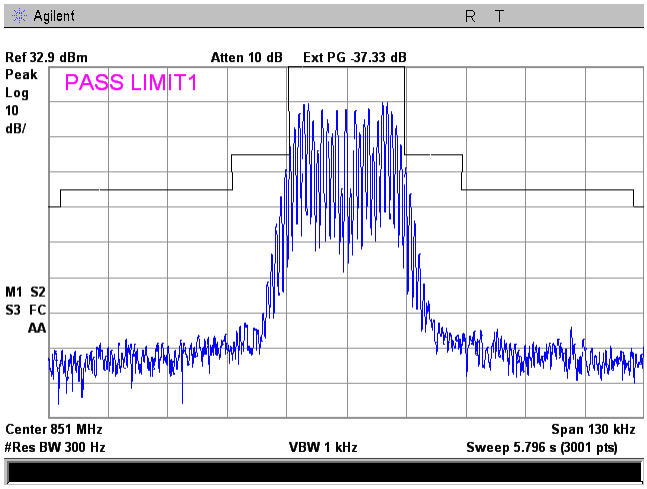
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



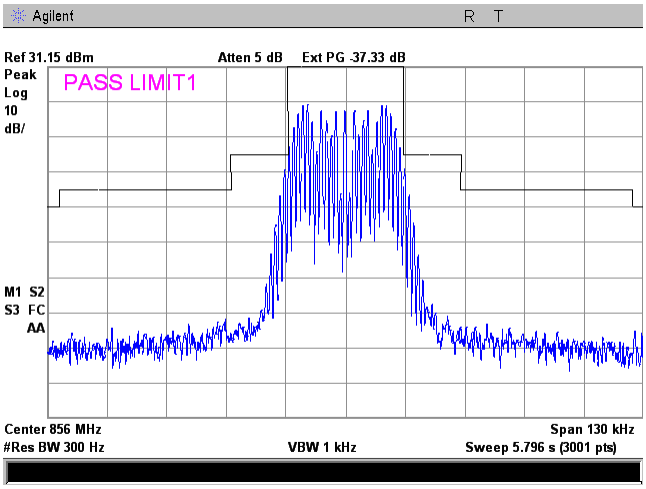
COMPOSITE INPUT POWER: -21 dBm



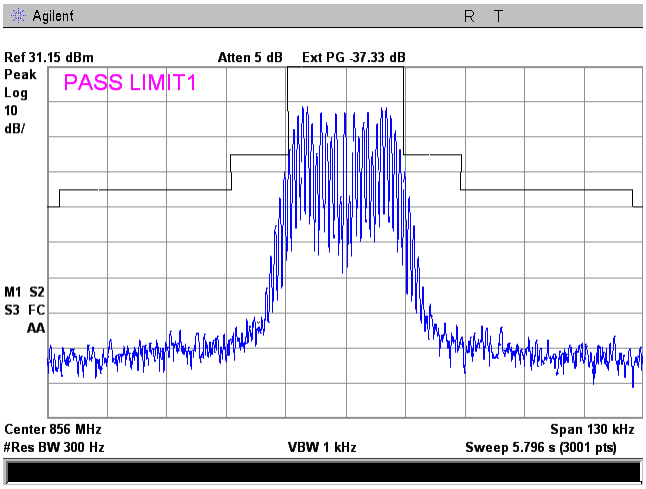
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.44 Emission mask test result at mid frequency carrier, Port 1

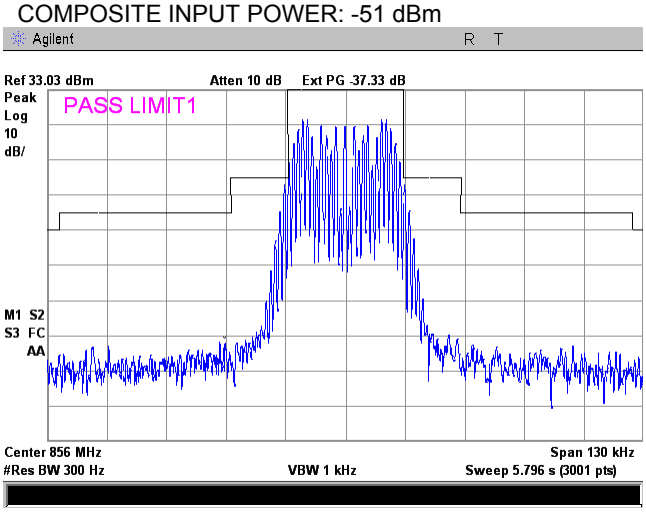
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



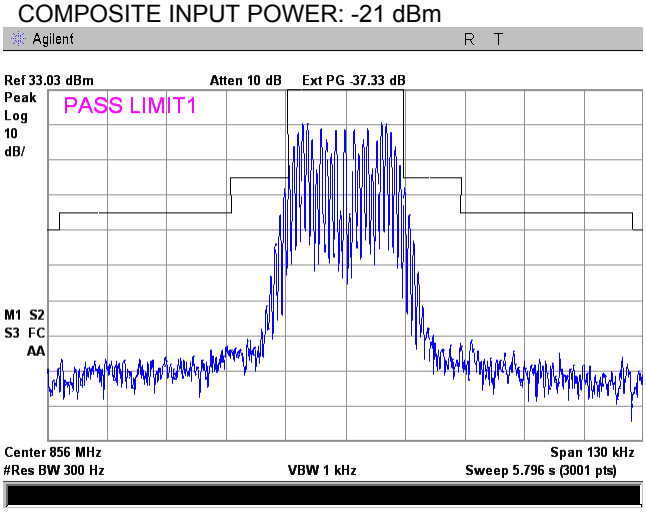
INPUT POWER: -24 dBm



CONFIGURATION:
COMPOSITE INPUT POWER: -51 dBm



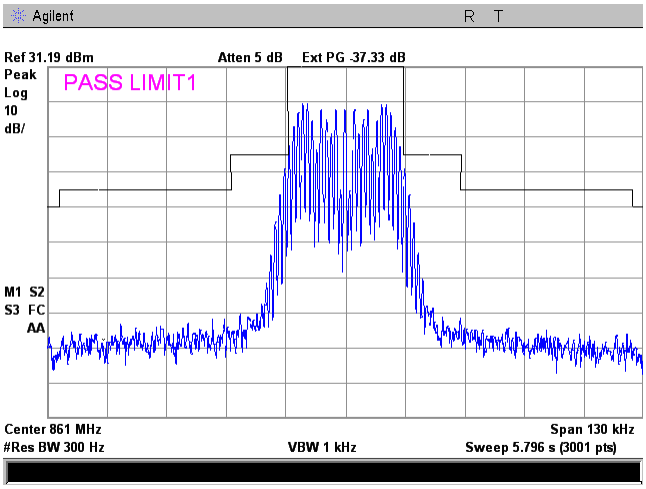
Single Band
COMPOSITE INPUT POWER: -21 dBm



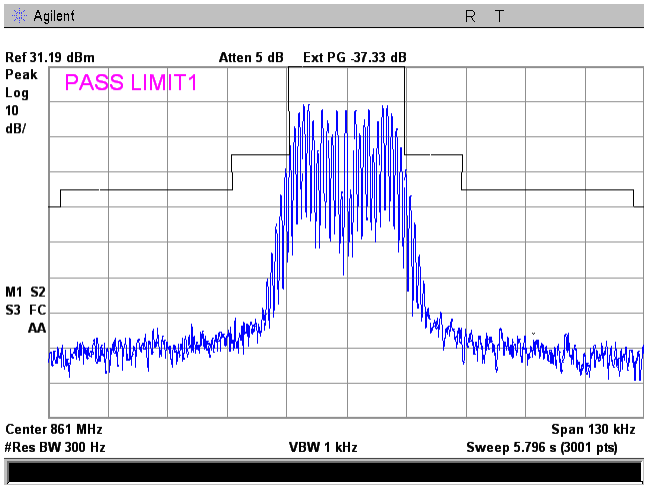
Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.45 Emission mask test result at high frequency carrier, Port 1

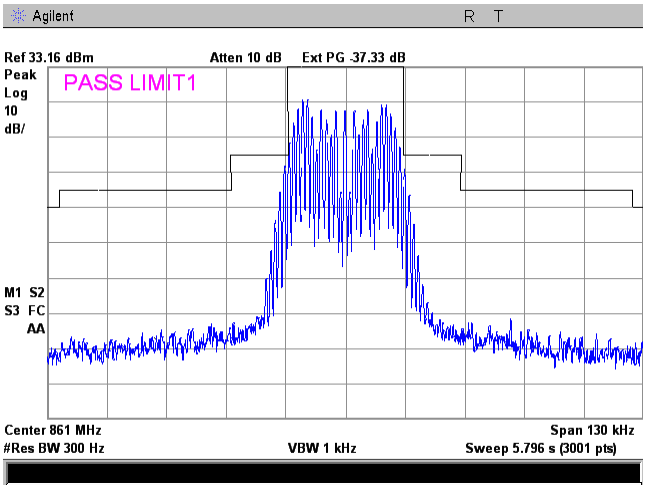
FREQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(B)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



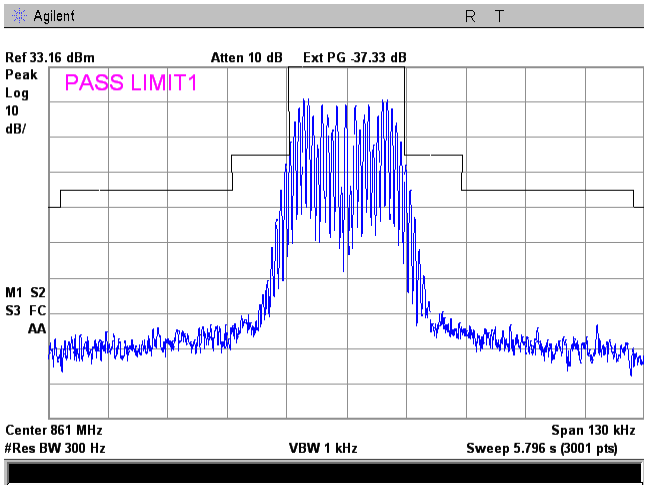
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



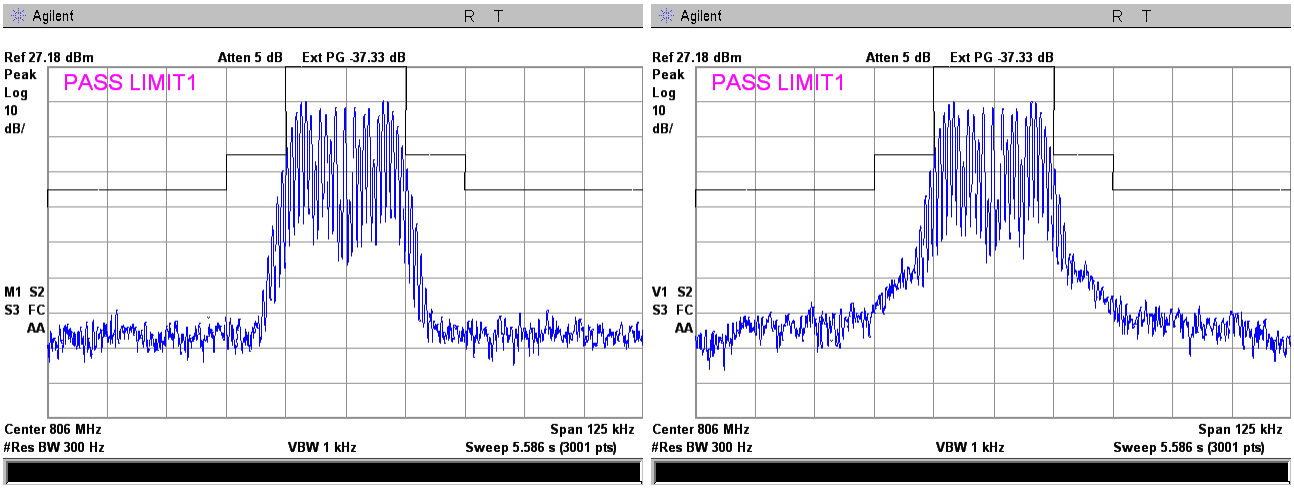
COMPOSITE INPUT POWER: -21 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

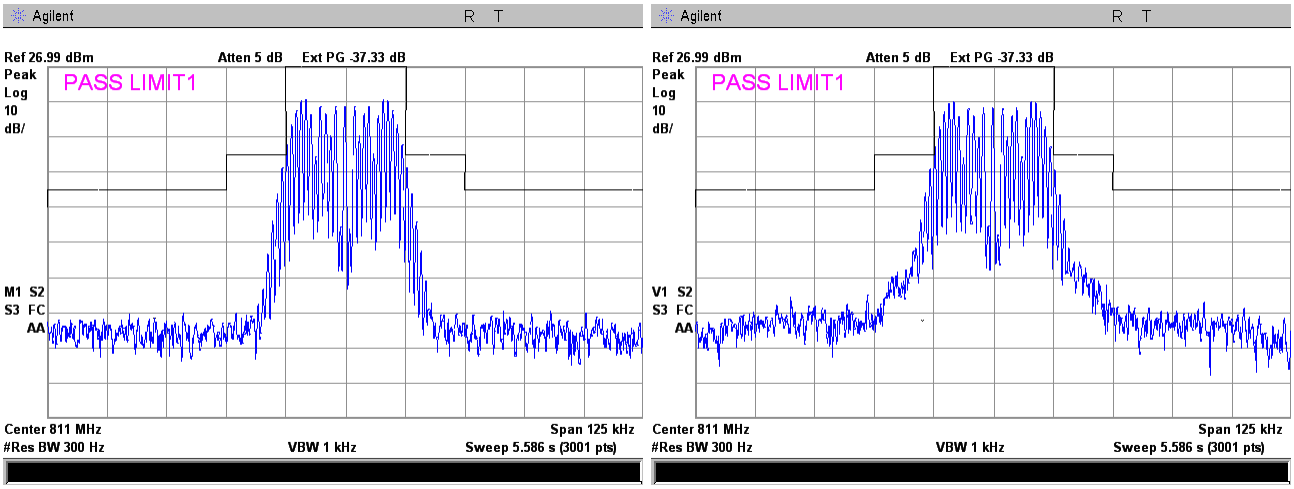
Plot 7.3.46 Emission mask test result at low frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm



Plot 7.3.47 Emission mask test result at mid frequency carrier, Port 2

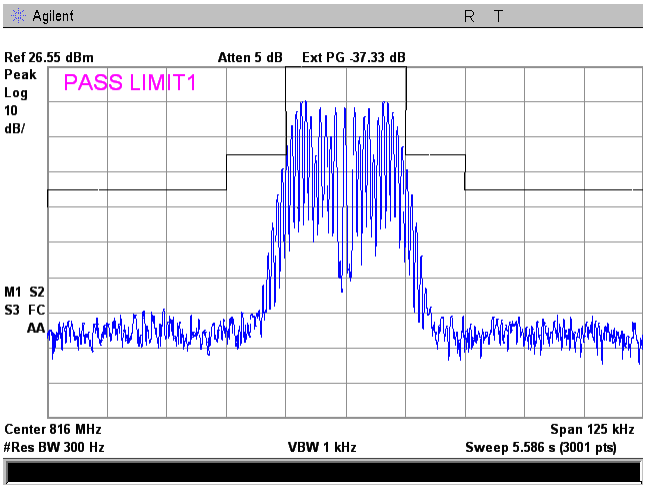
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm

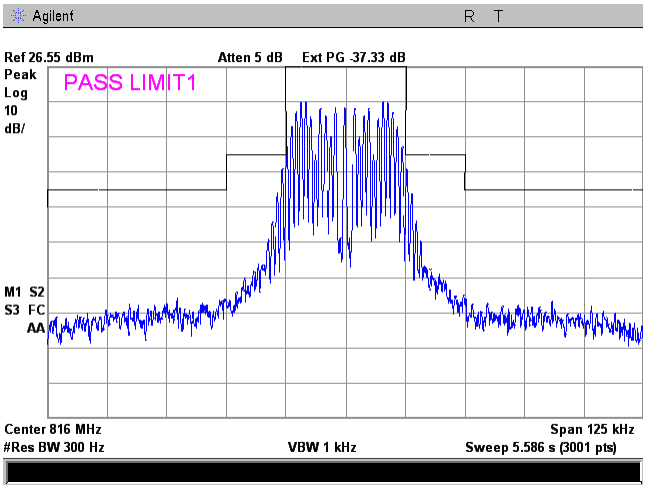


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.48 Emission mask test result at high frequency carrier, Port 2

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-54 dBm
EMISSION MASK:	90.210(B)
INPUT POWER: -54 dBm	INPUT POWER: -34 dBm





Test specification:	**Section 90.210(b), Emission mask**		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	**Air Pressure:** 1016 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.3.3 Emission mask test results

OPERATING FREQUENCY RANGE:	758 - 768 MHz (downlink) 788 - 798 MHz (uplink)
DETECTOR USED:	Peak hold
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATING SIGNAL:	OFDMA/CS-FDMA

Carrier frequency, MHz	Limit	Verdict
Dual Band		
Downlink		
760.5	Emission mask B	Pass
765.5		
Uplink		
790.5	Emission mask B	Pass
795.5		
Single Band		
Downlink		
760.5	Emission mask B	Pass
765.5		

Reference numbers of test equipment used

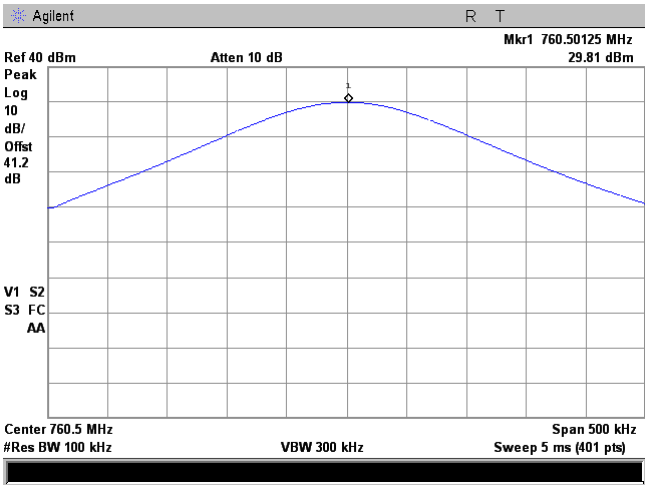
HL 2909	HL 3390	HL 3768	HL 3770	HL 3776	HL 3780	HL 3787	HL 4274
HL 4354							

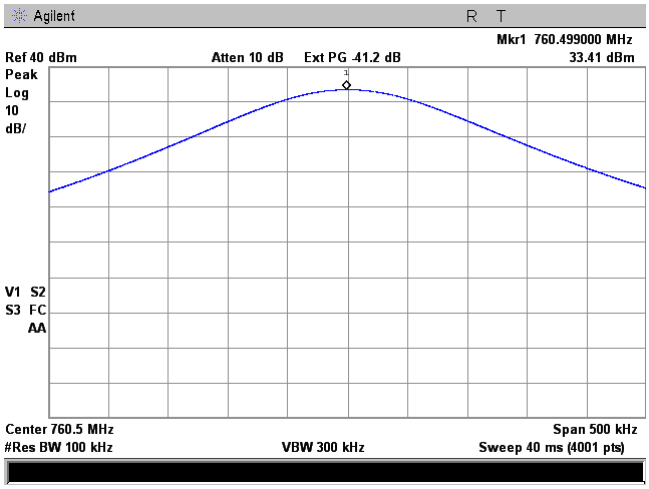
Full description is given in Appendix A.

Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

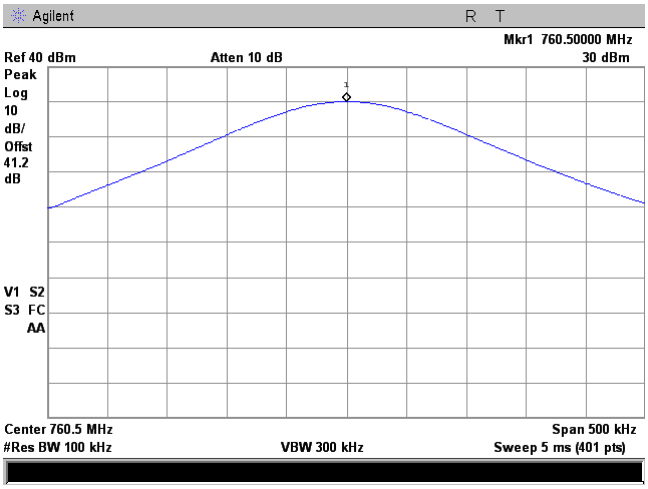
Plot 7.3.49 Reference level test results at low carrier frequency, Port 1

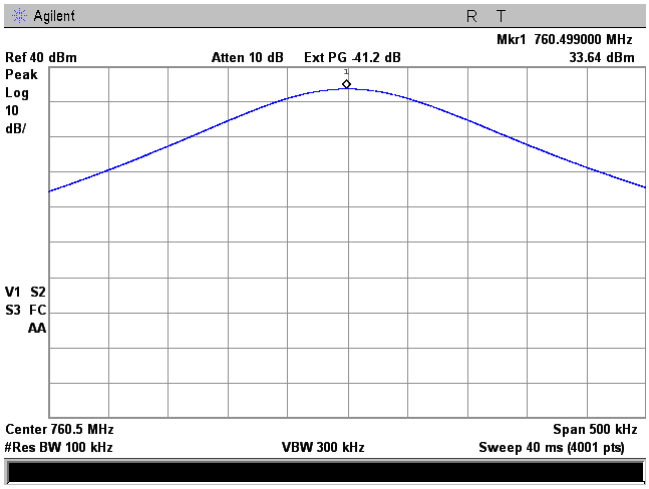
FRQUENCY RANGE: 758 - 768 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
CONFIGURATION: Single Band
INPUT PORT: Base
INPUT POWER: -54 dBm
COMPOSITE INPUT POWER: -51 dBm





INPUT POWER: -24 dBm
COMPOSITE INPUT POWER: -21 dBm

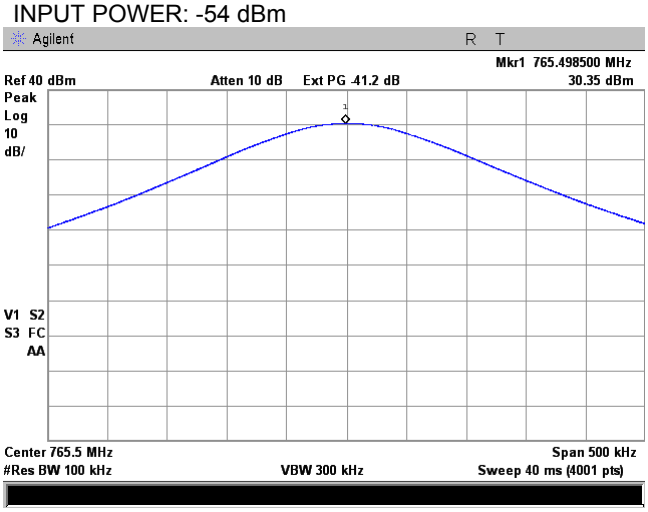


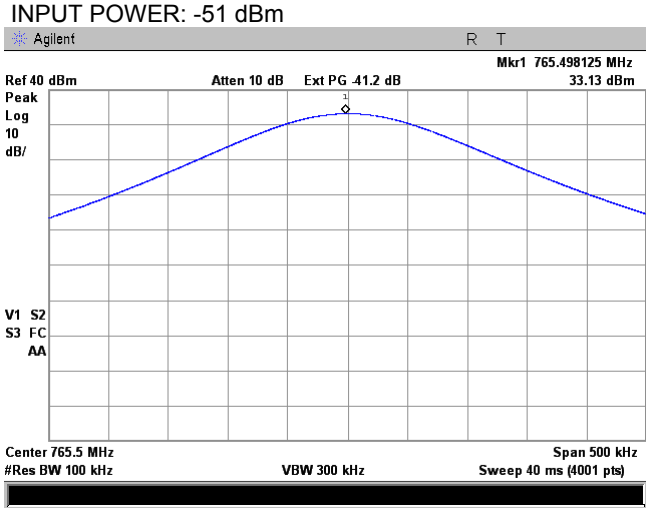


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

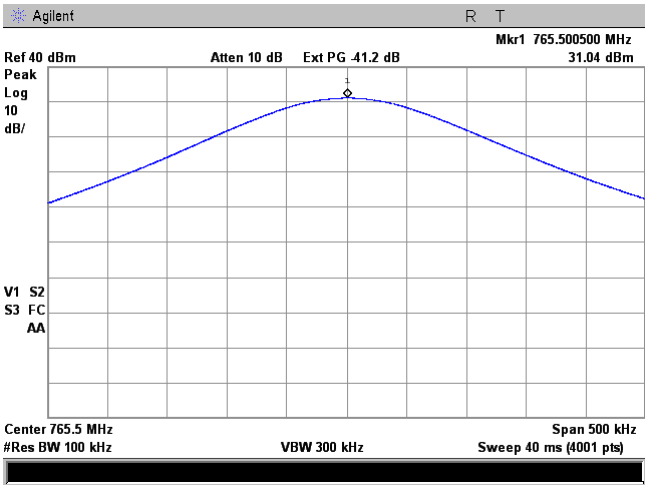
Plot 7.3.50 Reference level test results at high carrier frequency, Port 1

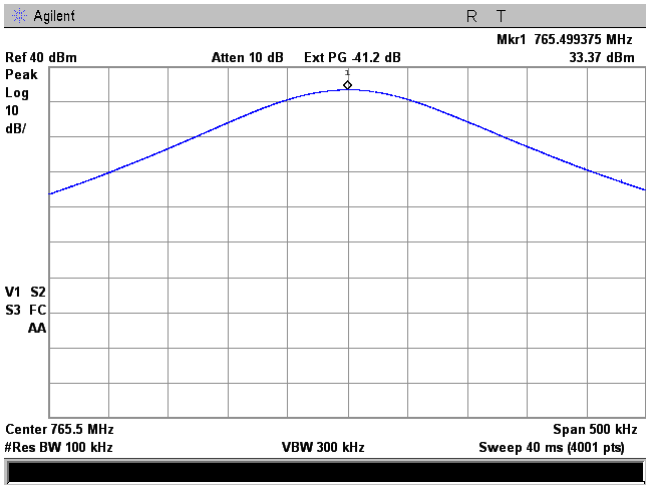
FRQUENCY RANGE: 758 - 768 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band CONFIGURATION: Single Band
INPUT PORT: Base
INPUT POWER: -54 dBm INPUT POWER: -51 dBm





INPUT POWER: -24 dBm INPUT POWER: -21 dBm

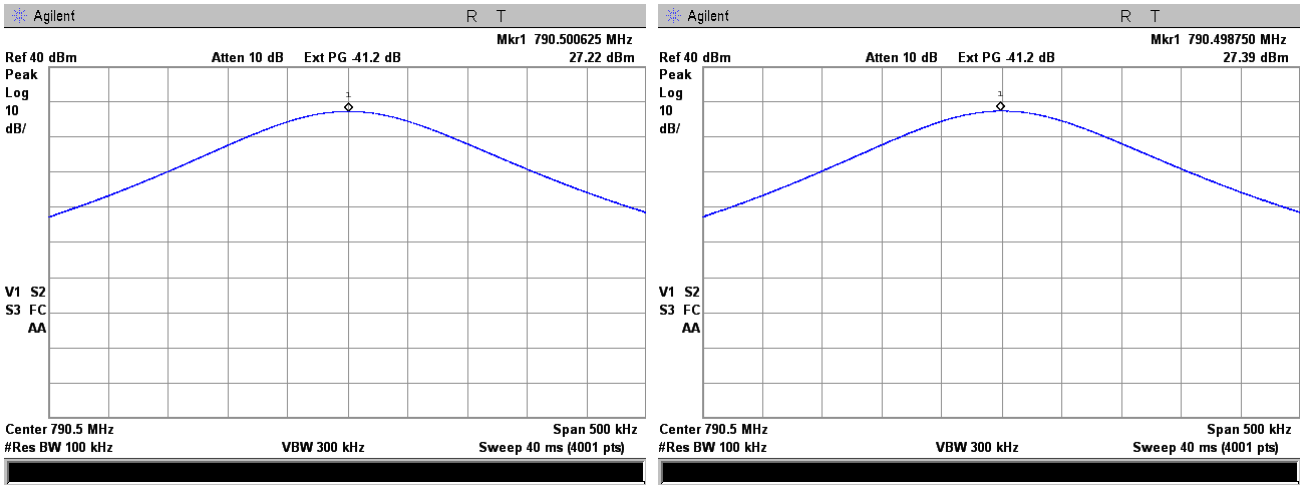




Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

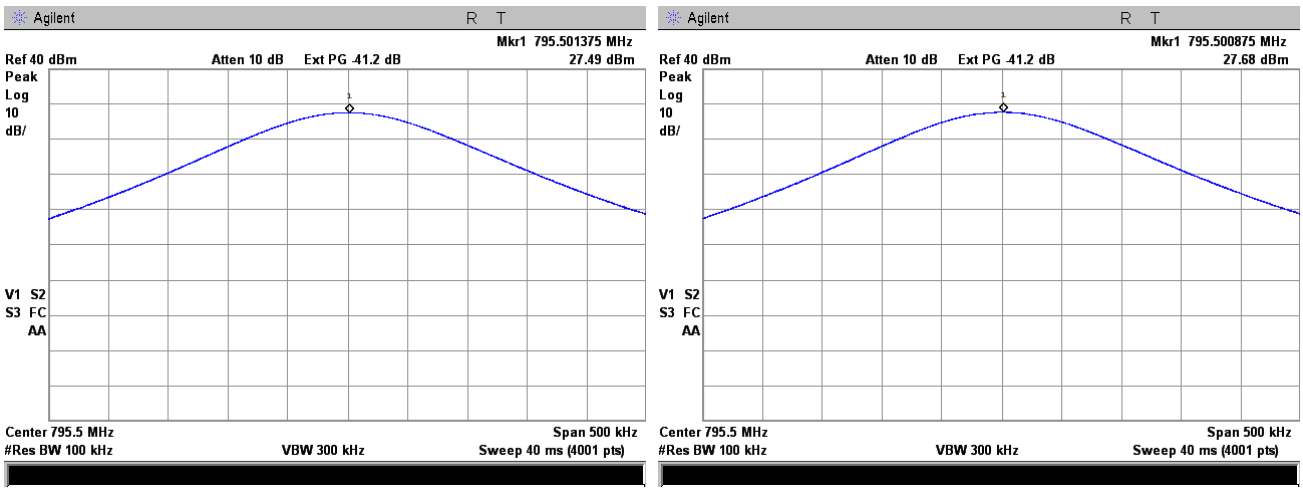
Plot 7.3.51 Reference level test results at low carrier frequency, Port 1

FRQUENCY RANGE:	788 - 798 MHz
REFERENCE LEVEL:	Unmodulated power
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.3.52 Reference level test results at high carrier frequency, Port 1

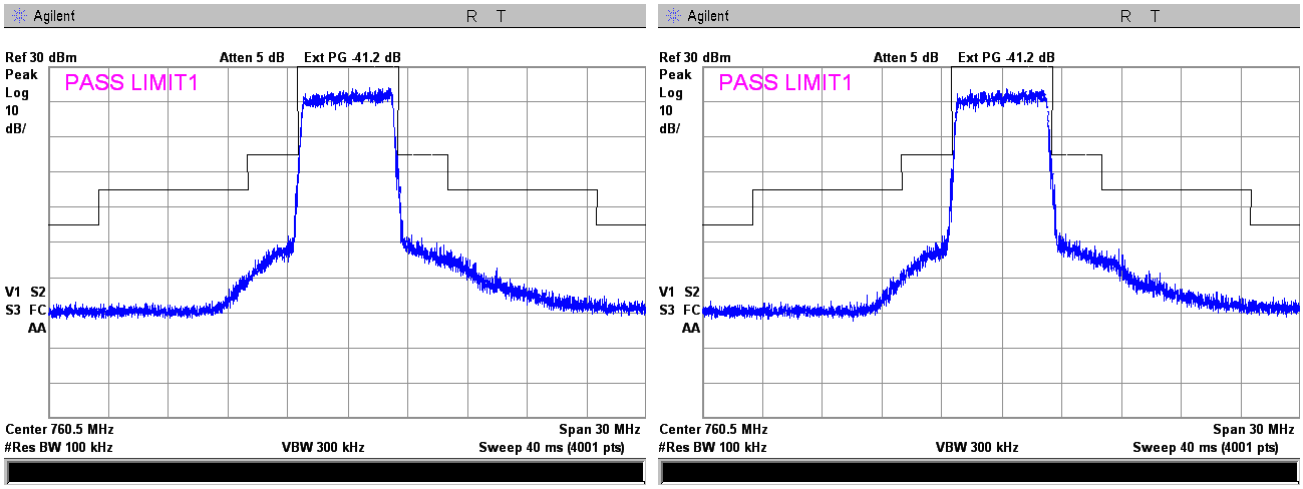
FRQUENCY RANGE:	788 - 798 MHz
REFERENCE LEVEL:	Unmodulated power
CONFIGURATION:	Dual Band
INPUT PORT:	Mobile
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

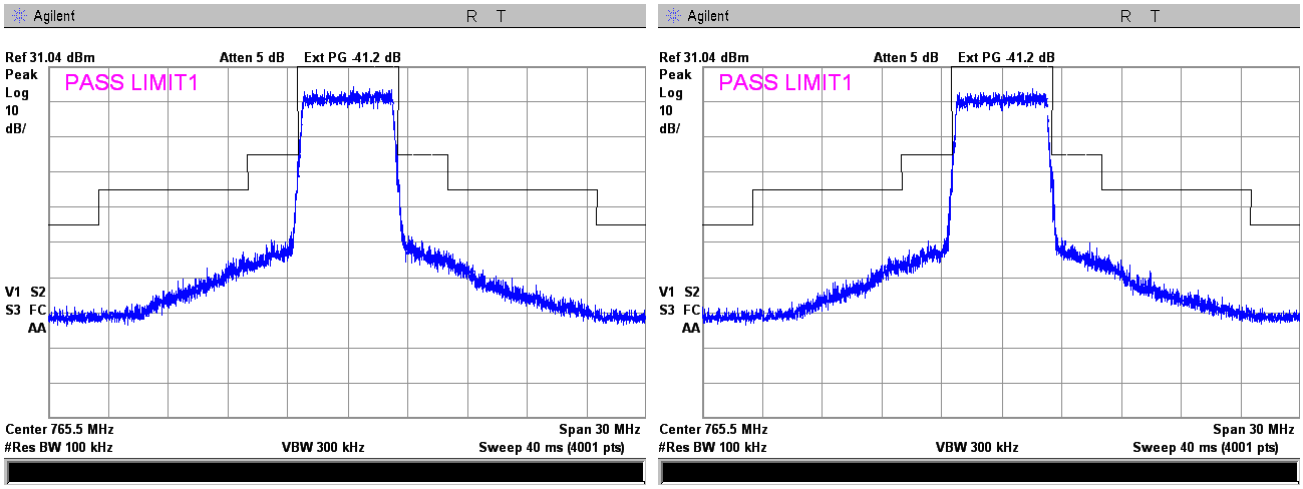
Plot 7.3.53 Reference level test results at low carrier frequency, Port 1

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Dual Band
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm



Plot 7.3.54 Reference level test results at high carrier frequency, Port 1

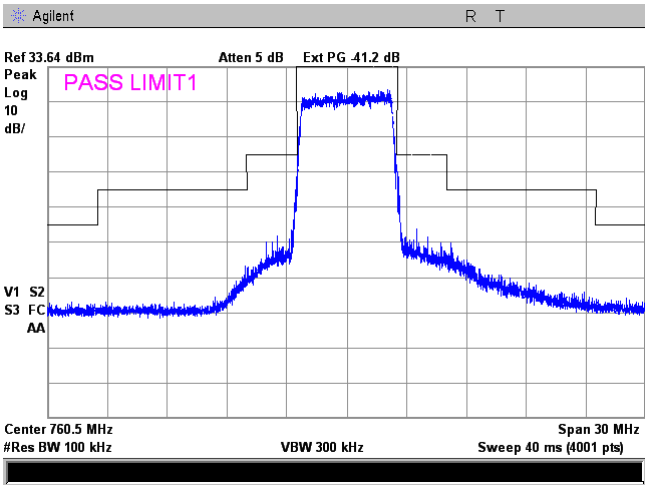
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
CONFIGURATION:	Dual Band
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	OFDMA
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

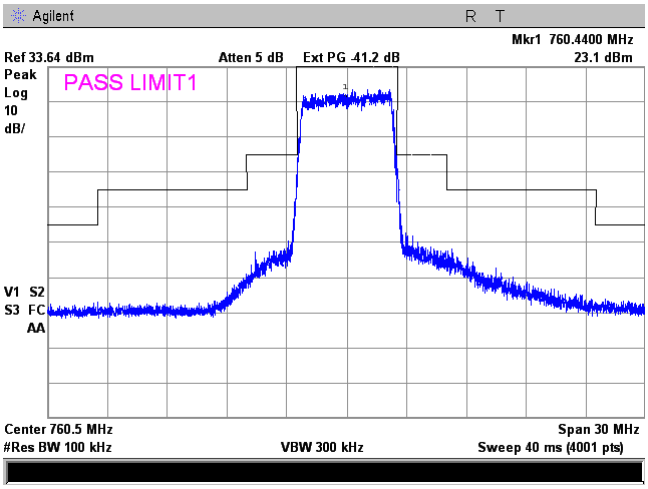


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.55 Reference level test results at low carrier frequency, Port 1

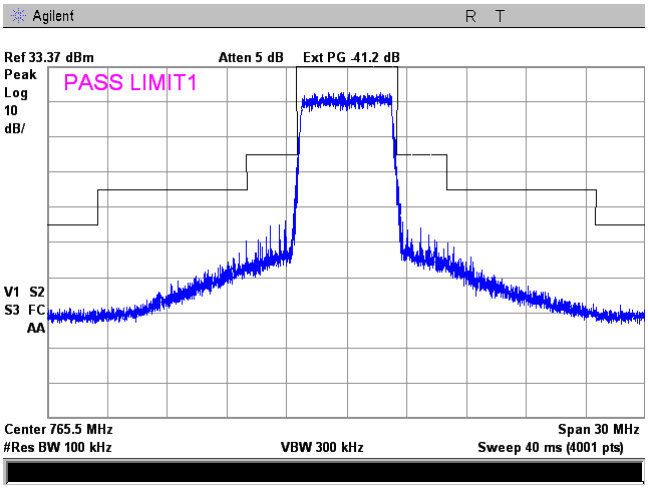
FRQUENCY RANGE: 758 - 768 MHz
OPERATIONAL MODE: LTE downlink transmit
CONFIGURATION: Singlel Band
CHANNEL BANDWIDTH: 5 MHz
MODULATION: OFDMA
INPUT PORT: Base
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

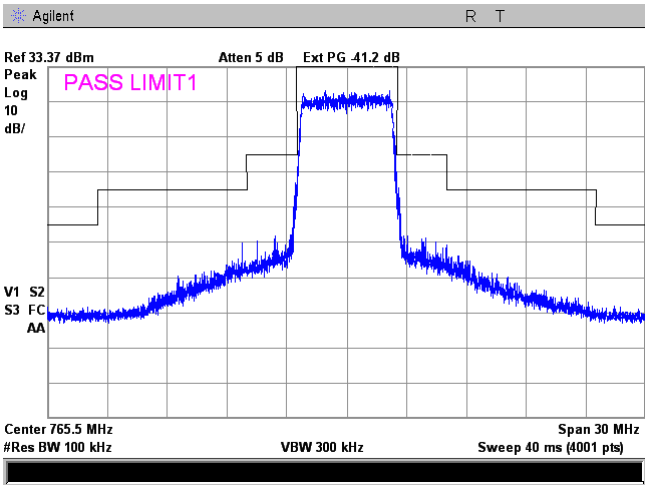




Plot 7.3.56 Reference level test results at high carrier frequency, Port 1

FRQUENCY RANGE: 758 - 768 MHz
OPERATIONAL MODE: LTE downlink transmit
CONFIGURATION: Singlel Band
CHANNEL BANDWIDTH: 5 MHz
MODULATION: OFDMA
INPUT PORT: Base
COMPOSITE INPUT POWER: -51 dBm
COMPOSITE INPUT POWER: -21 dBm

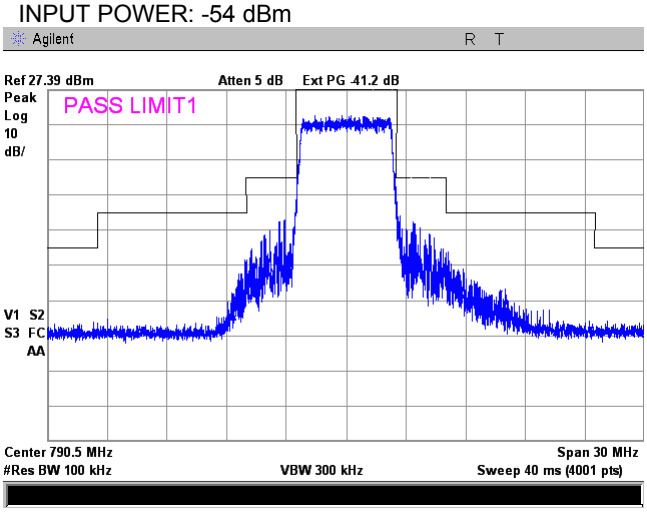


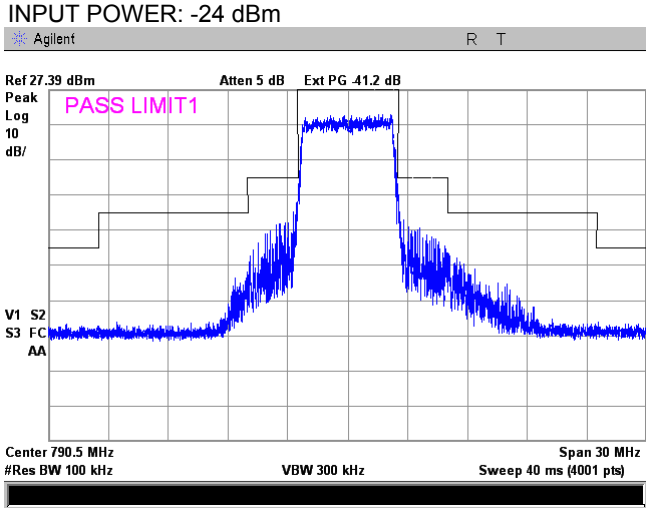


Test specification:	Section 90.210(b), Emission mask		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b)		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 °C	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.3.57 Reference level test results at low carrier frequency, Port 1

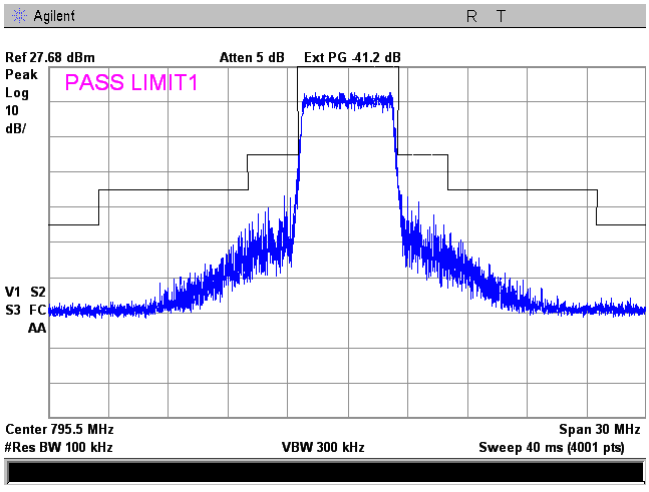
FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
CONFIGURATION:	Dual Band
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	CS-FDMA
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm

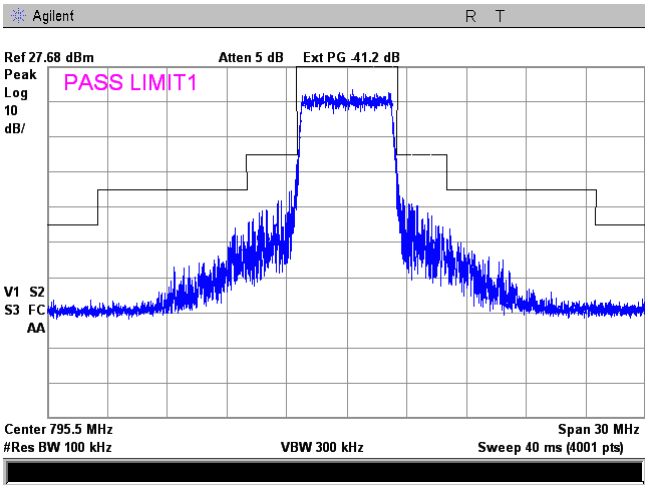




Plot 7.3.58 Reference level test results at high carrier frequency, Port 1

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
CONFIGURATION:	Dual Band
CHANNEL BANDWIDTH:	5 MHz
MODULATION:	CS-FDMA
INPUT PORT:	Base
INPUT POWER: -54 dBm	INPUT POWER: -24 dBm





Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

7.4 Intermodulation product test

7.4.1 General

This test was performed to measure to demonstrate compliance to the intermodulation limit at RF antenna connectors. Specification test limits are given in Table 7.4.1.

Table 7.4.1 Emission mask limits

Frequency range, MHz	ERP Intermodlation product limit, dBm
758 – 775 / 788 - 805	-13.0
851 – 861 / 806 - 816	-13.0

7.4.2 Test procedure

7.4.2.1 The EUT was set up as shown in Figure 7.4.1, energized and its proper operation was checked.

7.4.2.2 Signal generator A was configured for CW operation at the low frequency of appropriate frequency band, Signal generator C was configured for CW operation at the high frequency of the same frequency band.

7.4.2.3 Signal generator B was configured for CW operation tuned 600 kHz above the low frequency or below the high frequencyof the same frequency band.

7.4.2.4 The generator amplitudes were set so that the power from each into RF combiner was equivalent.

7.4.2.5 The signal generator's amplitudes were increased equally until just before the EUT ALC was begun and all intermodulation products were measured.

7.4.2.6 Signal generator B was varied in frequency to check if intermodulation products were produced.

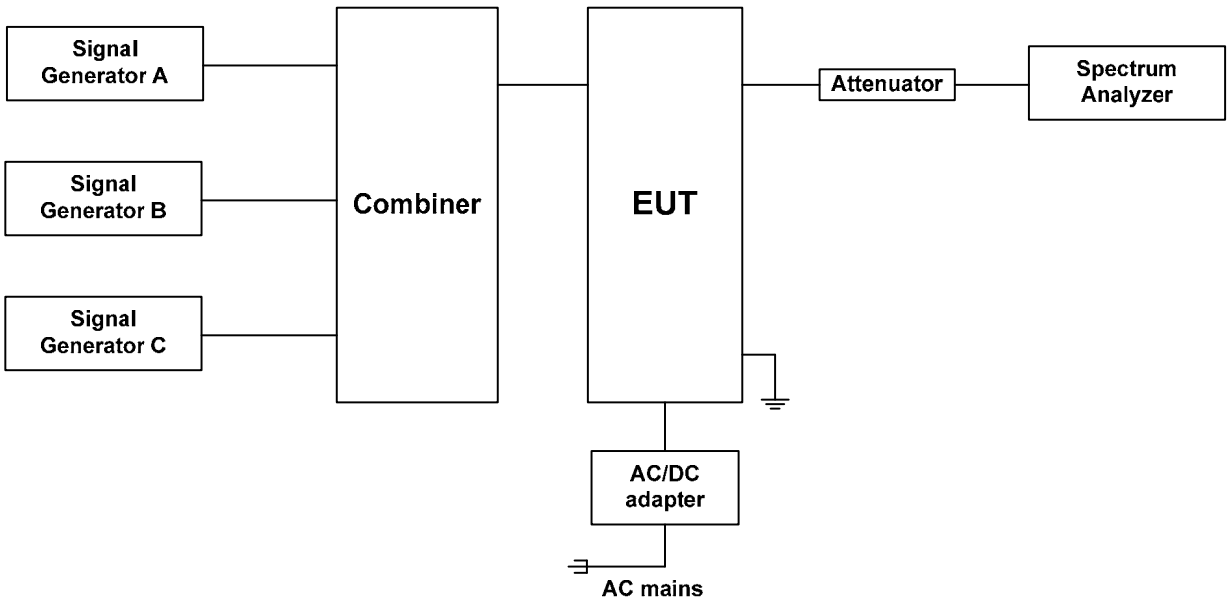
7.4.2.7 The intermodulation products were measured with spectrum analyzer as provided in the associated plots.

7.4.2.8 The EUT was tested at the compression and 10 dB into compression to show ALC operation, worst case results taken.

7.4.2.9 The test was repeated for all uplink and downlink operational bands.

Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Figure 7.4.1 Intermodulation mask test setup



Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Table 7.4.2 Intermodulation product test results

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)
DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
MODULATING SIGNAL: Unmodulated
CONFIGURATION: Dual Band

Frequency, MHz	SA reading, dBm/10kHz	ERP**, dBm/10kHz	ERP Limit, dBm/10kHz	Margin, dB*	Verdict
Frequency range, 758 – 775 MHz Downlink					
775.597	-19.22	-19.22	-13.0	-6.22	Pass
774.397	-19.32	-19.32	-13.0	-6.32	Pass
758.602	-18.01	-18.01	-13.0	-5.01	Pass
757.403	-18.56	-18.56	-13.0	-5.56	Pass
Frequency range, 788 – 805 MHz Uplink					
805.597	-23.83	-24.34	-13.0	-11.34	Pass
804.397	-24.17	-25.33	-13.0	-12.33	Pass
788.602	-25.03	-24.63	-13.0	-11.63	Pass
787.403	-25.28	-25.19	-13.0	-12.19	Pass

FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)
CONFIGURATION: Dual Band

Frequency, MHz	SA reading, dBm/10kHz	ERP**, dBm/10kHz	ERP Limit, dBm/10kHz	Margin, dB*	Verdict
Frequency range, 851 – 861 MHz Downlink					
860.398	-25.07	-25.07	-13.0	-12.07	Pass
859.798	-26.47	-26.47	-13.0	-13.47	Pass
851.601	-25.78	-25.78	-13.0	-12.78	Pass
852.201	-26.81	-26.81	-13.0	-13.81	Pass
Frequency range, 806 –816 MHz Uplink					
815.398	-24.34	-24.34	-13.0	-11.34	Pass
816.598	-25.33	-25.33	-13.0	-12.33	Pass
806.601	-24.63	-24.63	-13.0	-11.63	Pass
805.401	-25.19	-25.19	-13.0	-12.19	Pass

* - Margin = ERP of intermodulation product – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the ERP margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Maximum ERP of intermodulation product = Worst case from SA reading (Without ALC or With ALC)

Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Table 7.4.3 Intermodulation product test results

OPERATING FREQUENCY RANGE: 758 - 775 MHz (downlink)
788 - 805 MHz (uplink)
DETECTOR USED: Average
RESOLUTION BANDWIDTH: 1 MHz
VIDEO BANDWIDTH: 3 MHz
MODULATING SIGNAL: Unmodulated
CONFIGURATION: Single Band

Frequency, MHz	SA reading, dBm/10kHz	ERP**, dBm/10kHz	ERP Limit, dBm/10kHz	Margin, dB*	Verdict
Frequency range, 758 – 775 MHz Downlink					
775.597	-18.99	-18.99	-13.0	-5.99	Pass
774.397	-19.00	-19.00	-13.0	-6.00	Pass
758.602	-18.33	-18.33	-13.0	-5.33	Pass
757.403	-18.75	-18.75	-13.0	-5.75	Pass

OPERATING FREQUENCY RANGE: 851 - 861 MHz (downlink)
806 - 816 MHz (uplink)
CONFIGURATION: Single Band

Frequency, MHz	SA reading, dBm/10kHz	ERP**, dBm/10kHz	ERP Limit, dBm/10kHz	Margin, dB*	Verdict
Frequency range, 758 – 775 MHz Downlink					
860.398	-18.19	-18.19	-13.0	-5.19	Pass
861.598	-19.18	-19.18	-13.0	-6.18	Pass
851.601	-17.07	-17.07	-13.0	-4.07	Pass
850.401	-17.84	-17.84	-13.0	-4.84	Pass

* - Margin = ERP of intermodulation product – specification limit
** - There are no specific antennas supplied as a part of the unit that is why the maximum antenna assembly gain in dBd shall not exceed the ERP margin in dB.
Antenna Assembly Gain (dBd) = Antenna Gain (dBd) – Feeder Loss (dB) = Antenna Gain (dBi) – 2.15 – Feeder Loss (dB)
Note: Maximum ERP of intermodulation product = Worst case from SA reading (Without ALC or With ALC)

Reference numbers of test equipment used

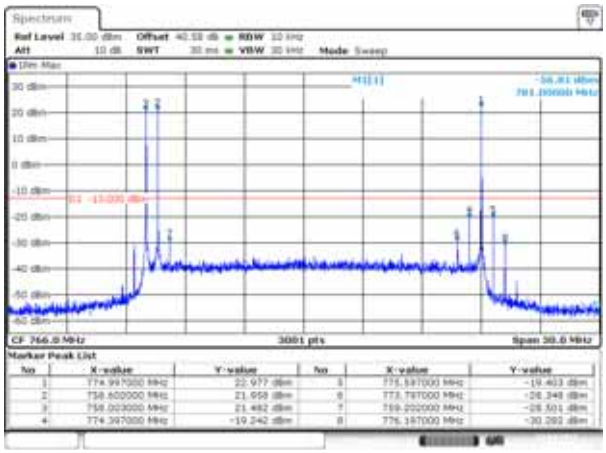
HL 0539	HL 0661	HL 2667	HL 3634	HL 4273	HL 4274	HL 4355	HL 4369
HL 4384							

Full description is given in Appendix A.

Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

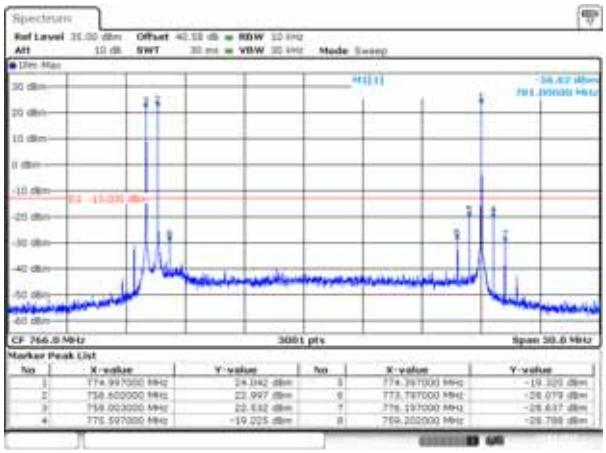
Plot 7.4.1 Intermodulation test results in the 758 - 775 MHz frequency range

OPERATING FREQUENCY RANGE: 758 – 775 MHz
DETECTOR USED: Average
NOISE FIGURE: Within and outside the passband
CONFIGURATION: Downlink
POWER SETTING: 30 dBm
OPERATION FREQUENCES: F_{low}, F_{low}+600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



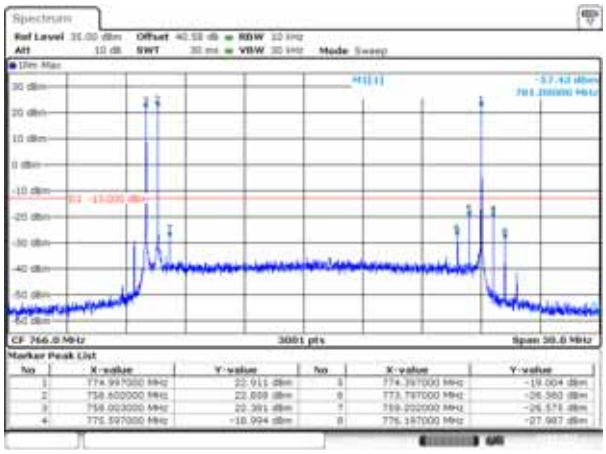
Date: 23.APR.2014 14:24:07

INPUT POWER: -44 dBm



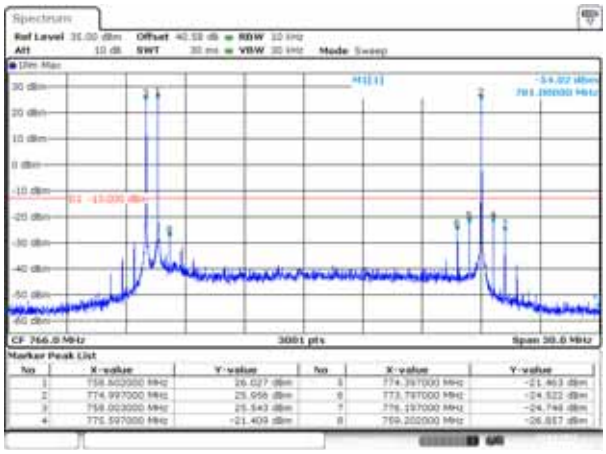
Date: 23.APR.2014 14:25:31

CONFIGURATION: Single Band
INPUT POWER: -51 dBm



Date: 23.APR.2014 14:54:10

INPUT POWER: -41 dBm

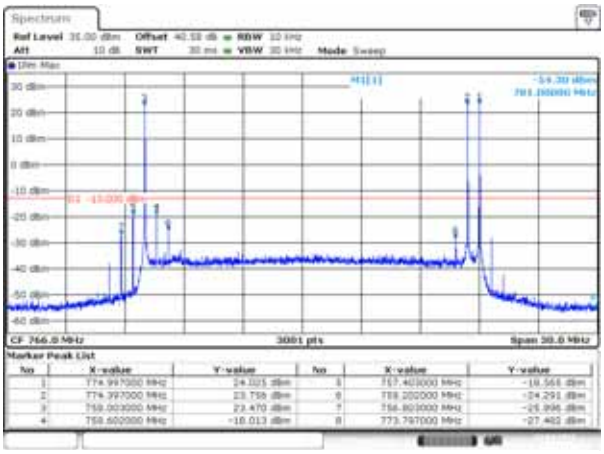


Date: 23.APR.2014 14:55:16

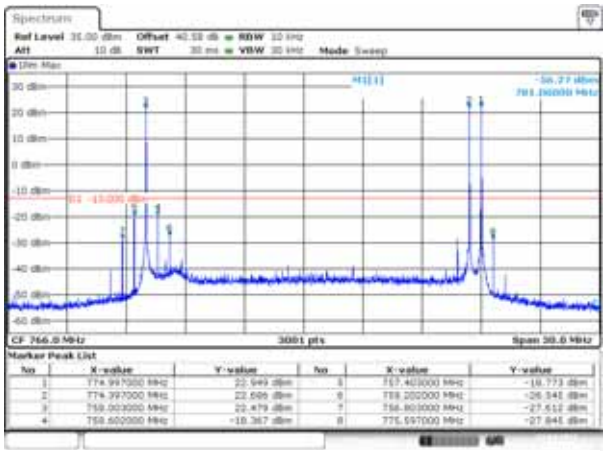
Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.4.2 Intermodulation test results in the 758 - 775 MHz frequency range

OPERATION FREQUENCES: F_{low}, F_{high}-600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm
INPUT POWER: -44 dBm

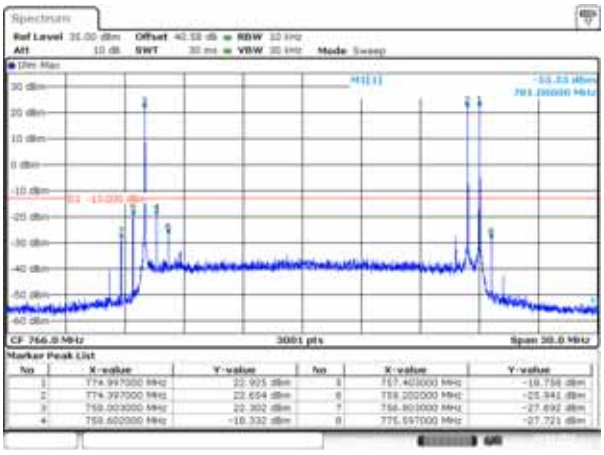


Date: 23.APR.2014 14:30:09

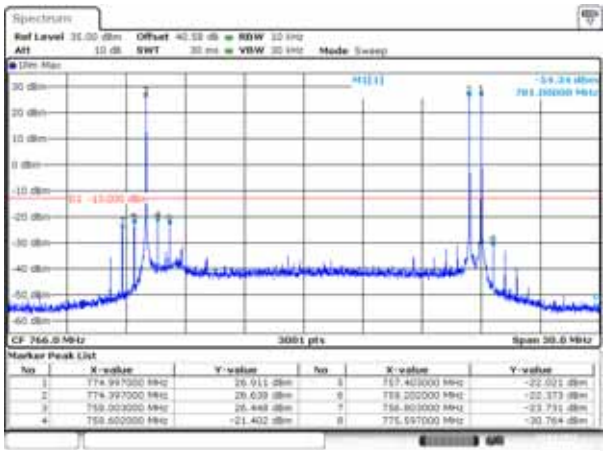


Date: 23.APR.2014 14:36:04

CONFIGURATION: Single Band
INPUT POWER: -51 dBm
INPUT POWER: -41 dBm



Date: 23.APR.2014 14:48:36

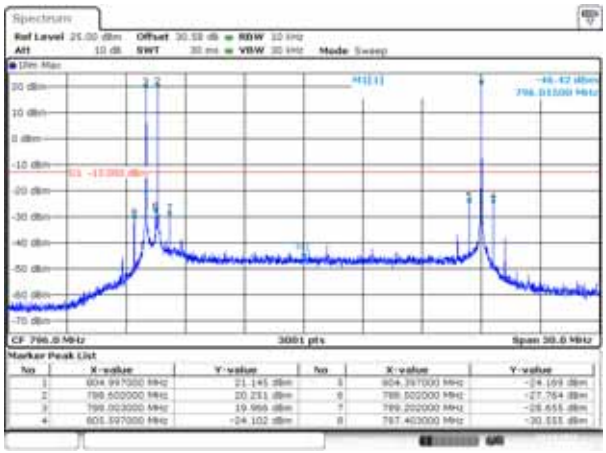


Date: 23.APR.2014 14:38:35

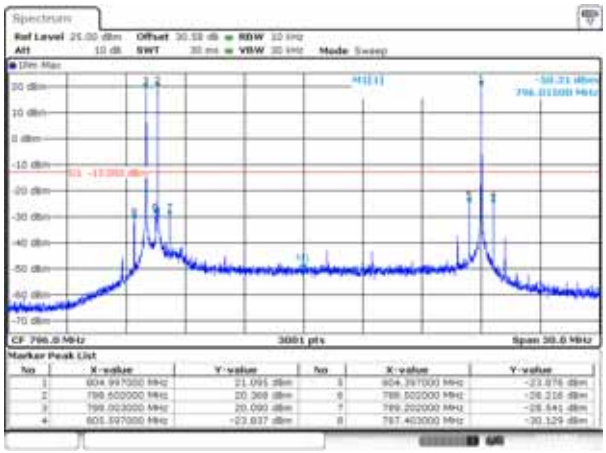
Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.4.3 Intermodulation test results in the 788 - 805 MHz frequency range

OPERATING FREQUENCY RANGE: 788 – 805 MHz
DETECTOR USED: Average
AVERAGING: On, 100 traces
CONFIGURATION: Uplink
OPERATION FREQUENCES: F_{low}, F_{low}+600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm
INPUT POWER: -44 dBm

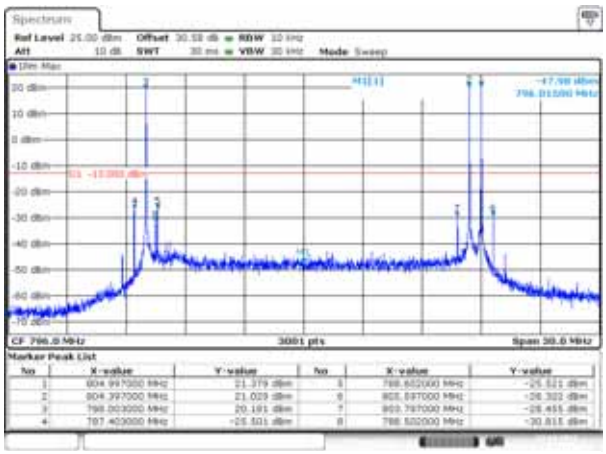


Date: 23.APR.2014 13:51:05

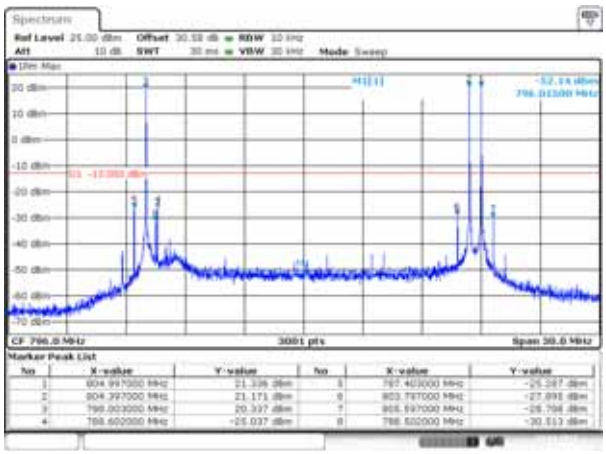


Date: 23.APR.2014 13:52:25

OPERATION FREQUENCES: F_{low}, F_{high}-600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm
INPUT POWER: -44 dBm



Date: 23.APR.2014 13:40:59

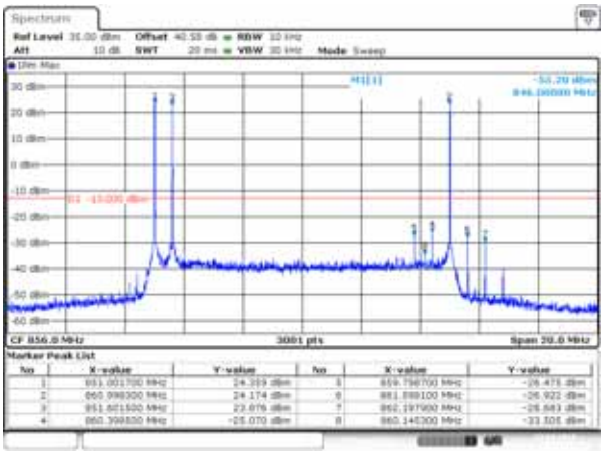


Date: 23.APR.2014 13:41:49

Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

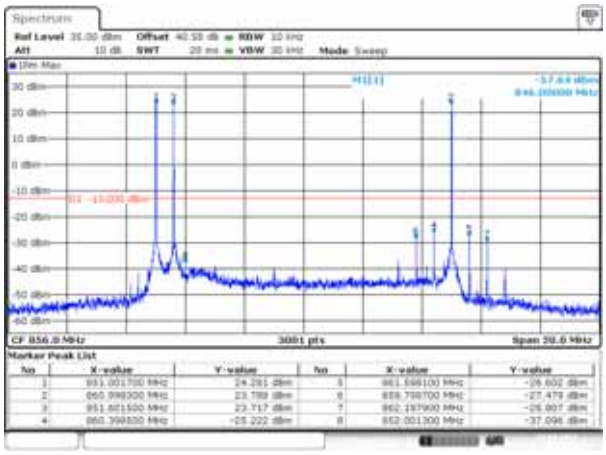
Plot 7.4.4 Intermodulation results in the 851 - 861 MHz frequency range

OPERATING FREQUENCY RANGE: 851 – 861 MHz
DETECTOR USED: Average
CONFIGURATION: Downlink
POWER SETTING: 30dBm
OPERATION FREQUENCES: F_{low}, F_{low}+600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



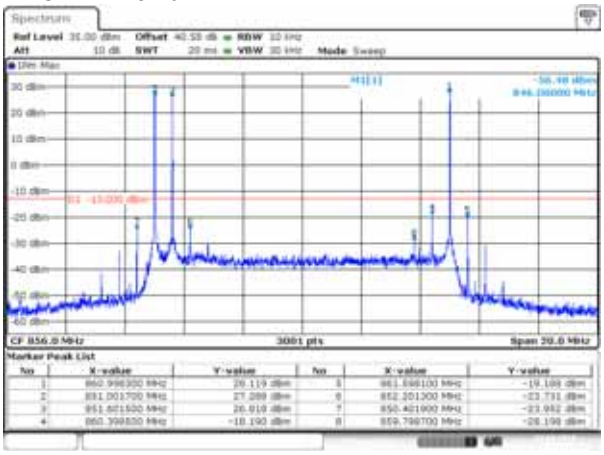
Date: 23.APR.2014 15:10:17

INPUT POWER: -44 dBm



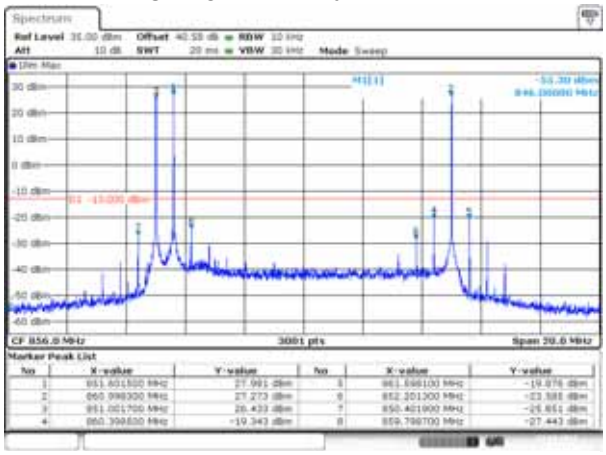
Date: 23.APR.2014 15:12:01

CONFIGURATION: Single Band
INPUT POWER: -51 dBm



Date: 23.APR.2014 15:33:07

INPUT POWER: -41 dBm

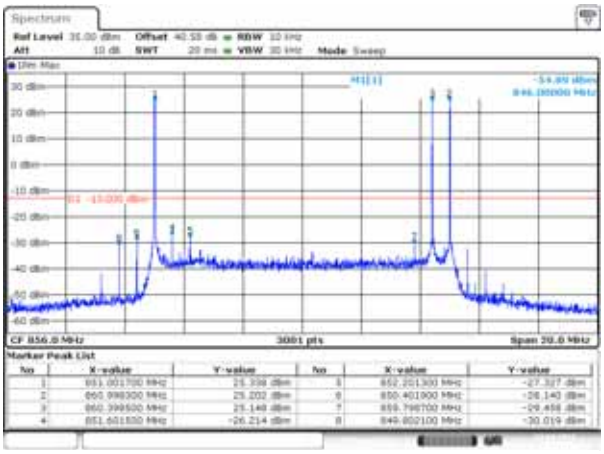


Date: 23.APR.2014 15:31:26

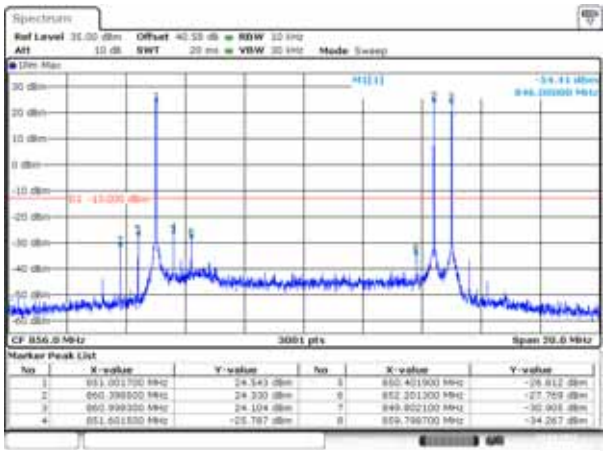
Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

Plot 7.4.5 Intermodulation results in the 851 - 861 MHz frequency range

OPeRATION FREQUENCES: F_{low}, F_{high}-600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm
INPUT POWER: -44 dBm

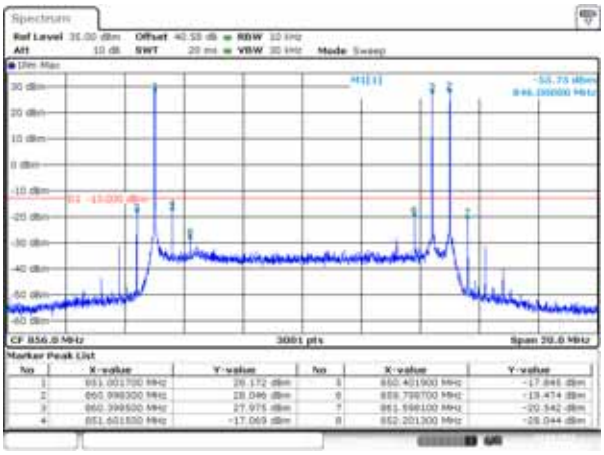


Date: 23.APR.2014 15:19:20

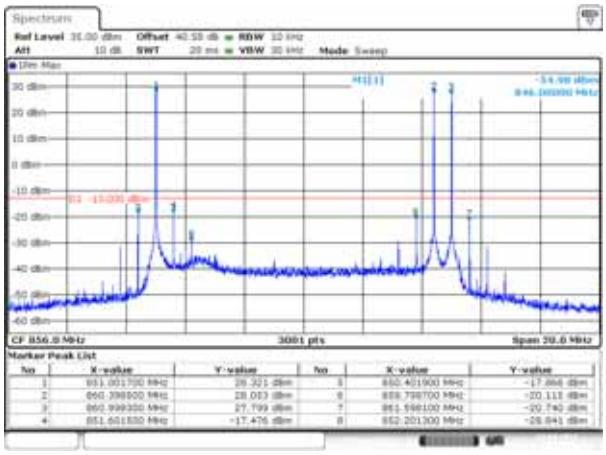


Date: 23.APR.2014 15:17:58

CONFIGURATION: Single Band
INPUT POWER: -51 dBm
INPUT POWER: -41 dBm



Date: 23.APR.2014 15:24:18

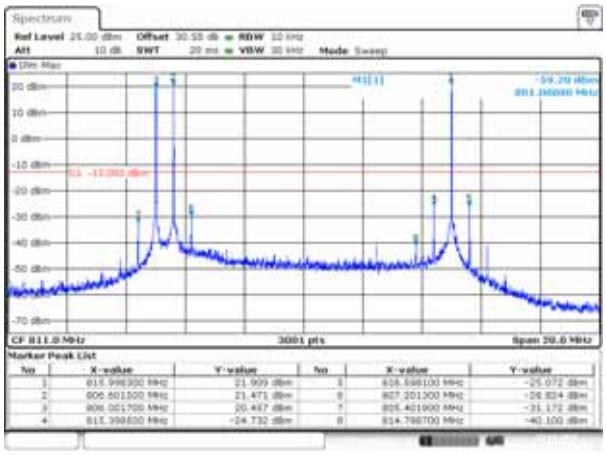


Date: 23.APR.2014 15:25:47

Test specification:	Section 90.210(b), Intermodulation product test		
Test procedure:	47 CFR, Sections 2.1051, 2.1047 and 90.210(b); KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	02-Apr-14 - 03-Apr-14		
Temperature: 23.1 ºC	Air Pressure: 1016 hPa	Relative Humidity: 50 %	Power Supply: 120 VAC
Remarks:			

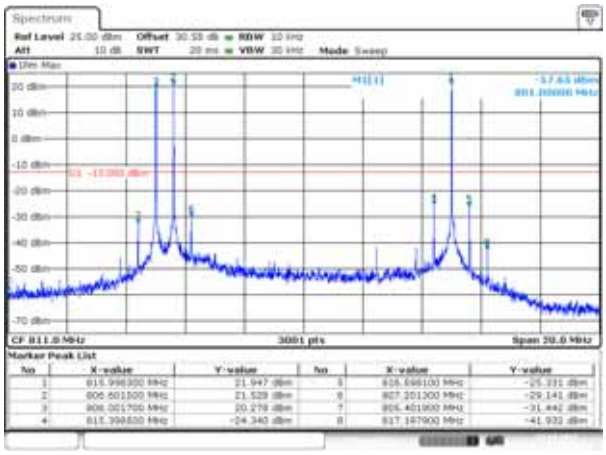
Plot 7.4.6 Intermodulation test results in the 806 - 816 MHz frequency range

OPERATING FREQUENCY RANGE: 806 – 816 MHz
DETECTOR USED: Average
AVERAGING: On, 100 traces
CONFIGURATION: Uplink
OPERATION FREQUENCES: F_{low}, F_{low}+600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



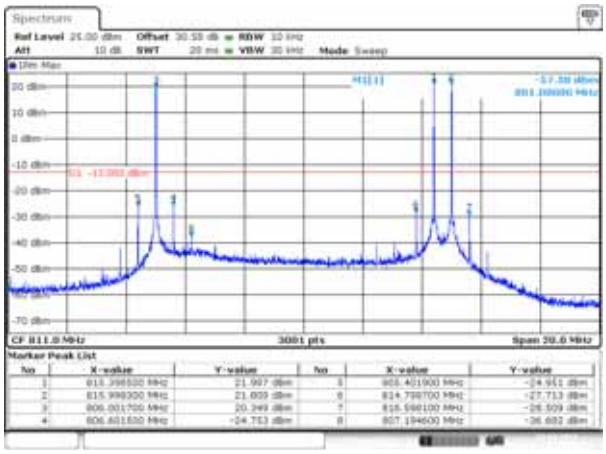
Date: 23.APR.2014 13:19:13

INPUT POWER: -44 dBm



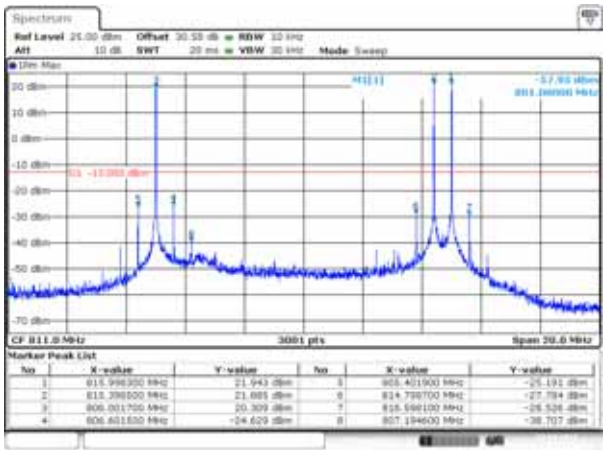
Date: 23.APR.2014 13:20:24

OPERATION FREQUENCES: F_{low}, F_{high}-600 kHz, F_{high}
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



Date: 23.APR.2014 13:14:35

INPUT POWER: -44 dBm



Date: 23.APR.2014 13:11:39

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

7.5 Radiated spurious emission measurements

7.5.1 General

This test was performed to measure radiated spurious emissions from the EUT. Specification test limits are given in Table 7.5.1.

Table 7.5.1 Radiated spurious emission test limits

Frequency, MHz	Attenuation below carrier, dBc	ERP of spurious, dBm	Equivalent field strength limit @ 3m, dB(µV/m)***
0.009 – 10th harmonic*	43+10logP**	-13	84.4

* - Excluding the in band emission within ± 250 % of the authorized bandwidth from the carrier
** - P is transmitter output power in Watts
*** - Equivalent field strength limit was calculated from maximum allowed ERP of spurious as follows: E=sqrt(30×P×1.64)/r, where P is ERP in Watts, 1.64 is numeric gain of ideal dipole and r is antenna to EUT distance in meters

7.5.2 Test procedure for spurious emission field strength measurements in 9 kHz to 30 MHz band

7.5.2.1 The EUT was set up as shown in Figure 7.5.1, energized and the performance check was conducted.

7.5.2.2 The specified frequency range was investigated with antenna connected to spectrum analyzer. To find maximum radiation the turntable was rotated 360^0 and the measuring antenna was rotated around its vertical axis.

7.5.2.3 The worst test results (the lowest margins) were recorded in Table 7.5.2 and shown in the associated plots.

7.5.3 Test procedure for spurious emission field strength measurements above 30 MHz

7.5.3.1 The EUT was set up as shown in Figure 7.5.2, energized and the performance check was conducted.

7.5.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer. To find maximum radiation the turntable was rotated 360^0 and the measuring antenna height was swept from 1 to 4 m in both, vertical and horizontal, polarizations.

7.5.3.3 The worst test results (the lowest margins) were recorded in Table 7.5.2 and shown in the associated plots..

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Figure 7.5.1 Setup for spurious emission field strength measurements in 9 kHz to 30 MHz band

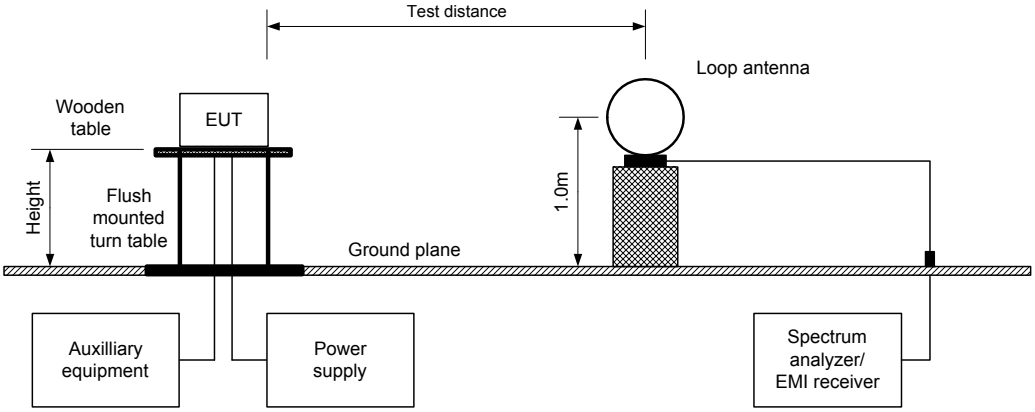
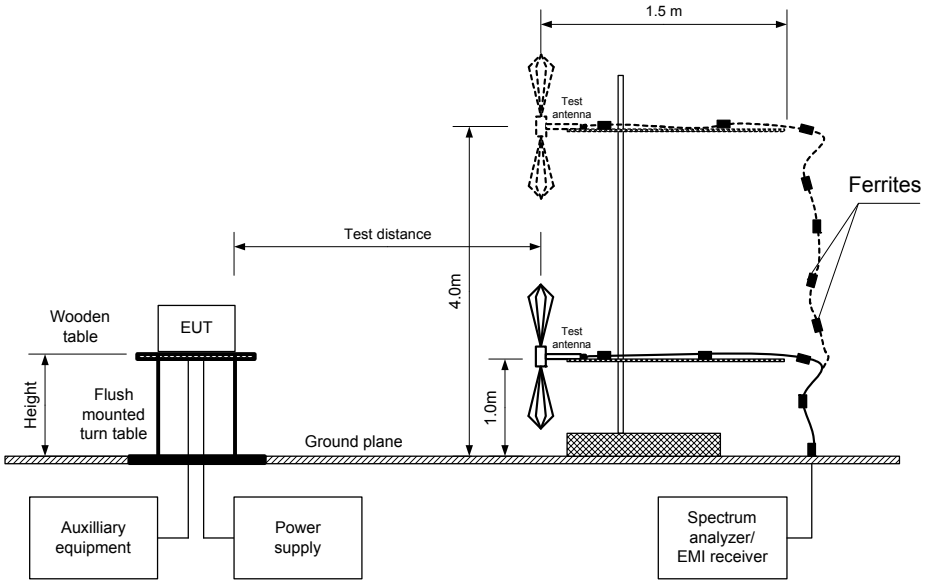


Figure 7.5.2 Setup for spurious emission field strength measurements above 30 MHz



Test specification:	**Section 90.219(e)(3), Radiated spurious emissions**		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 51 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.5.2 Spurious emission field strength test results, dual band

ASSIGNED FREQUENCY RANGE:	758 - 775 MHz Downlink 788 – 805 MHz Uplink 851 – 861 MHz Downlink 806 – 816 MHz Uplink
TEST DISTANCE:	3 m
TEST SITE:	Semi anechoic chamber
EUT HEIGHT:	0.8 m
INVESTIGATED FREQUENCY RANGE:	0.009 – 9000 MHz
DETECTOR USED:	Peak
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz) Double ridged guide (above 1000 MHz)
MODULATION:	Unmodulated
CONFIGURATION:	Dual Band
BOOSTER OUTPUT POWER SETTINGS:	30 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20 dB below the limit									Pass

*****- Margin = Field strength of spurious – calculated field strength limit.
******- EUT front panel refers to 0 degrees position of turntable.

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Table 7.5.3 Spurious emission field strength test results, single band

ASSIGNED FREQUENCY RANGES: 758 - 775 MHz Downlink
788 – 805 MHz Uplink
INVESTIGATED FREQUENCY RANGE: 0.009 – 8000 MHz
MODULATION: Unmodulated
CONFIGURATION: Single Band
DOWNLINK OUTPUT POWER SETTINGS: 33 dBm

Frequency, MHz	Field strength, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*	RBW, kHz	Antenna polarization	Antenna height, m	Turn-table position**, degrees	
Low carrier frequency MHz								
All emissions were found more than 20 dB below the limit								Pass
Mid carrier frequency MHz								
All emissions were found more than 20 dB below the limit								Pass
High carrier frequency MHz								
889.902	63.94	84.4	-20.46	120	Vert	1.2	28	Pass

*****- Margin = Spurious emission – specification limit.

ASSIGNED FREQUENCY RANGES: 851 – 861 MHz Downlink
806 – 816 MHz Uplink
INVESTIGATED FREQUENCY RANGE: 0.009 – 9000 MHz
MODULATION: Unmodulated
CONFIGURATION: Single Band
DOWNLINK OUTPUT POWER SETTINGS: 33 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20 dB below the limit									Pass

*****- Margin = Spurious emission – specification limit.

Reference numbers of test equipment used

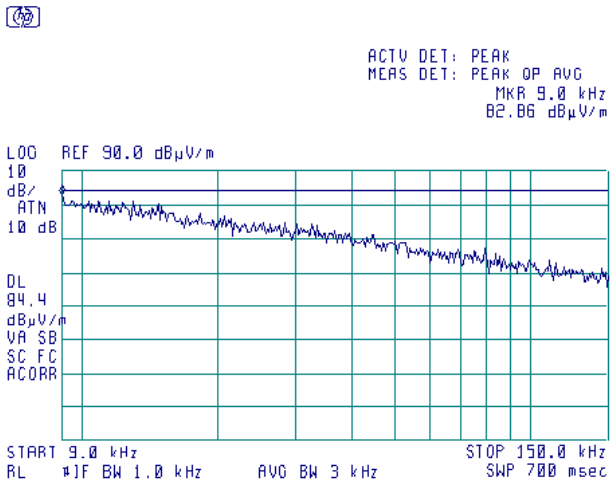
HL 0446	HL 0521	HL 0604	HL 1984	HL 2871	HL 2909	HL 4150	HL 4353

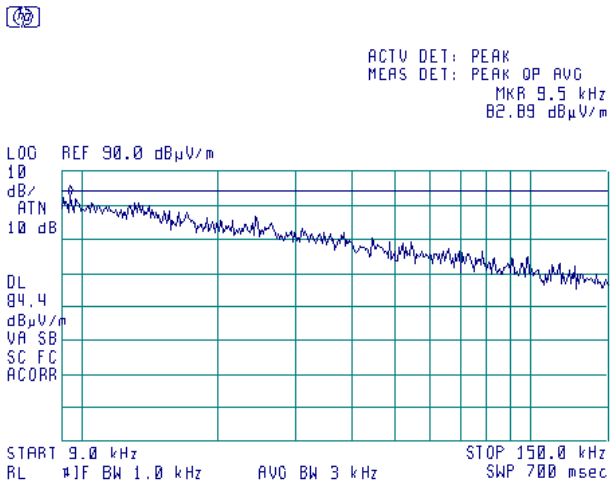
Full description is given in Appendix A.

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

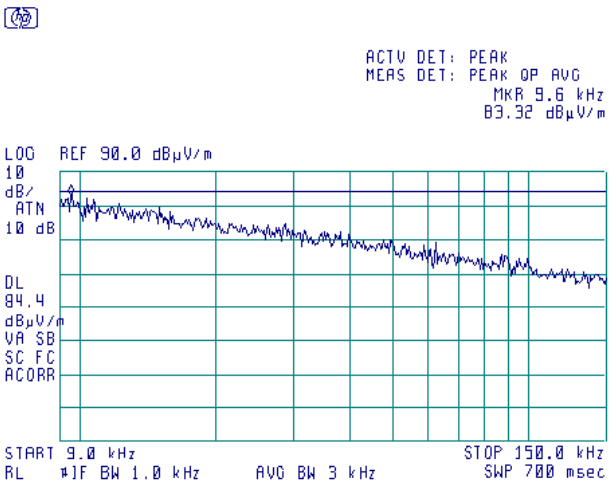
Plot 7.5.1 Radiated emission measurements in 9 - 150 kHz range

TEST SITE: Semi anechoic chamber
CONFIGURATION: Dual Band
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low





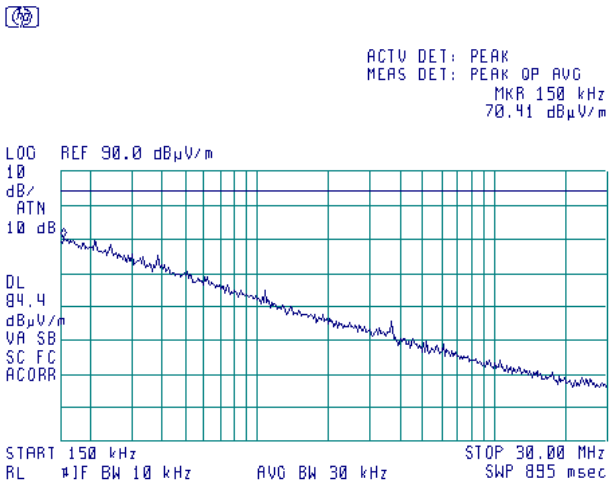
CARRIER FREQUENCY: High



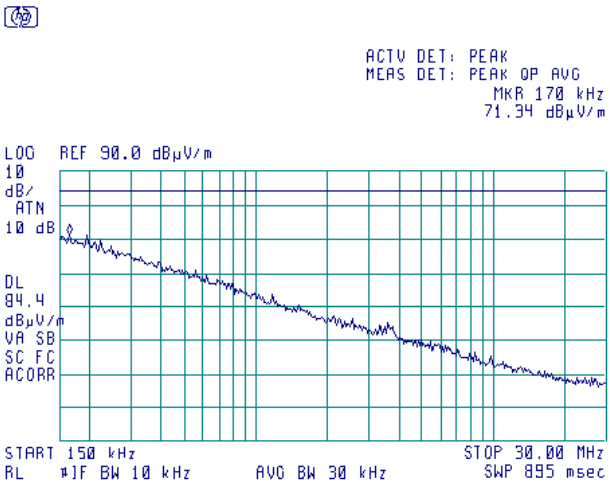
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.2 Radiated emission measurements in 0.15 - 30 MHz range

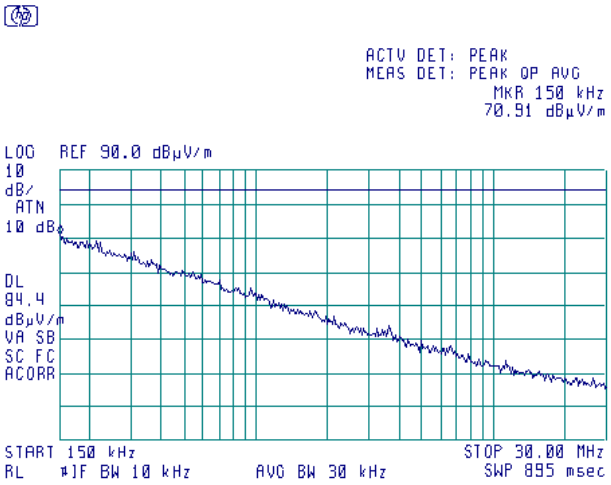
TEST SITE: Semi anechoic chamber
CONFIGURATION: Dual Band
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



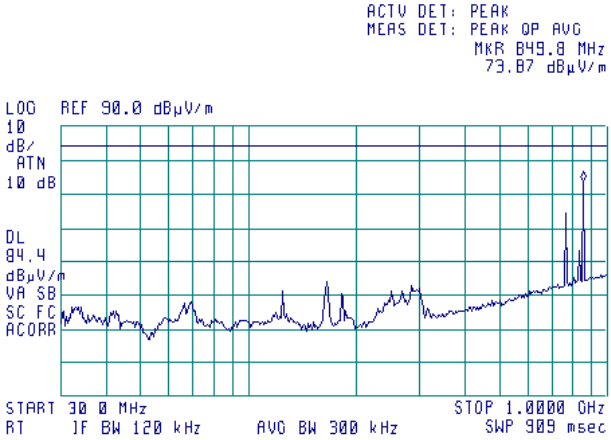
CARRIER FREQUENCY: High



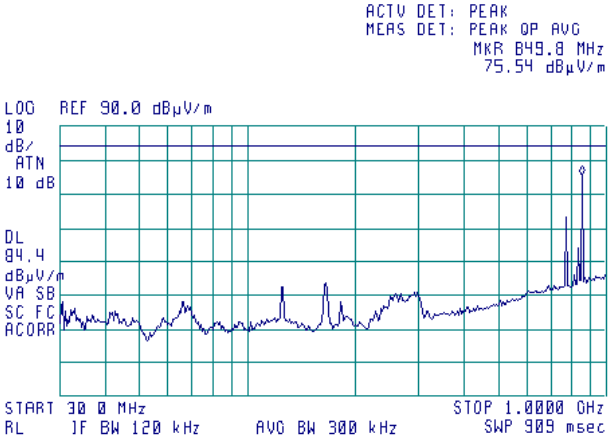
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.3 Radiated emission measurements in 30 - 1000 MHz range

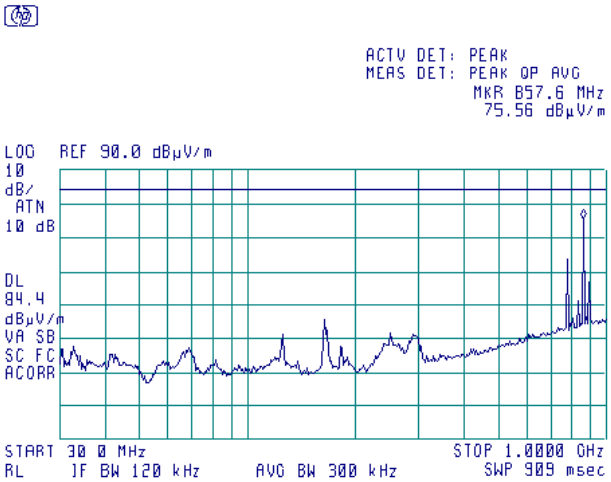
TEST SITE: Semi anechoic chamber
CONFIGURATION: Dual Band
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



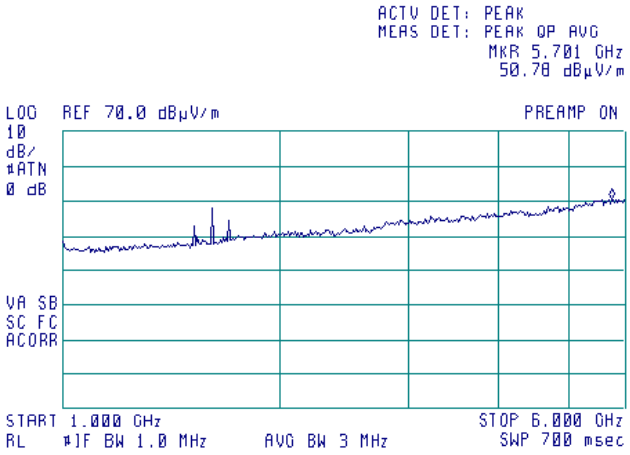
CARRIER FREQUENCY: High



Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.4 Radiated emission measurements in 1000 – 6000 MHz range

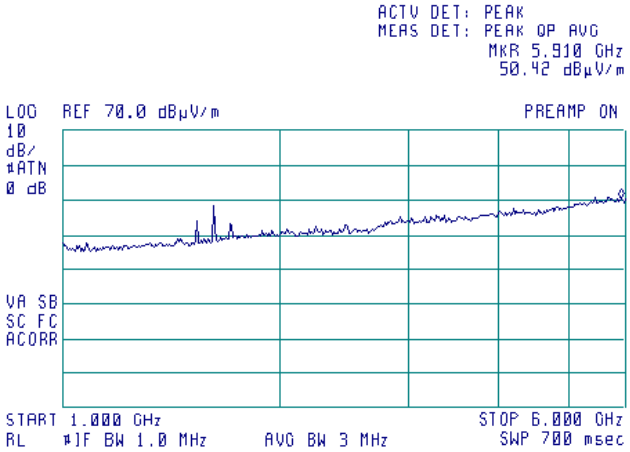
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Dual Band
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Low



Limit 84.4 dBuV/m was applied

Plot 7.5.5 Radiated emission measurements in 1000 – 6000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Dual Band
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Mid

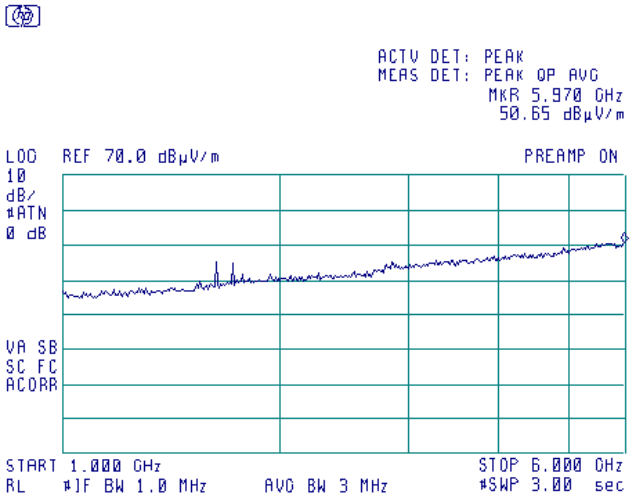


Limit 84.4 dBuV/m was applied

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.6 Radiated emission measurements in 1000 – 6000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Dual Band
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	High

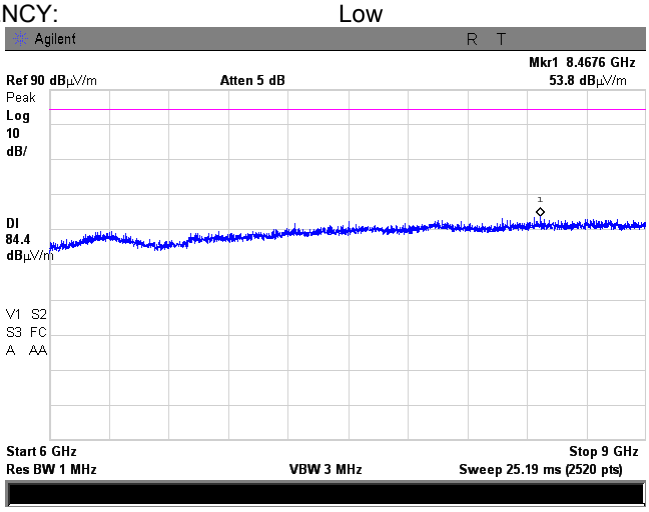


Limit 84.4 dBuV/m was applied

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

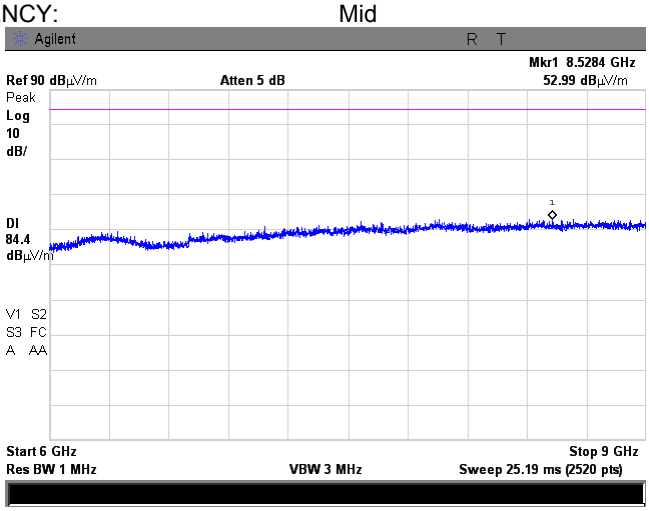
Plot 7.5.7 Radiated emission measurements in 6000 – 9000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Dual Band
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Low



Plot 7.5.8 Radiated emission measurements in 6000 – 9000 MHz range

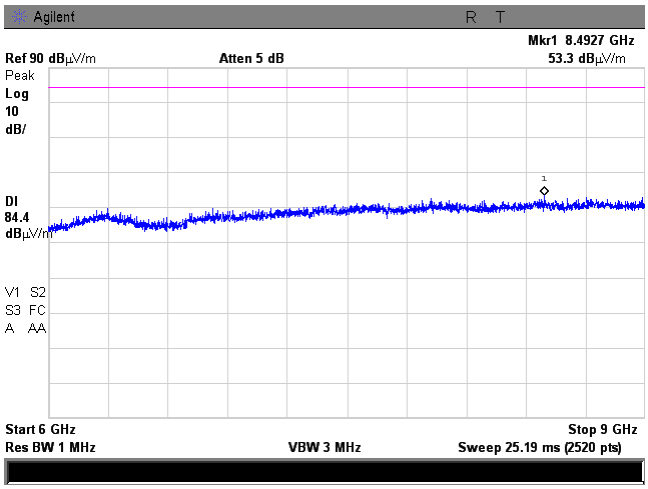
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Dual Band
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Mid



Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.9 Radiated emission measurements in 6000 – 9000 MHz range

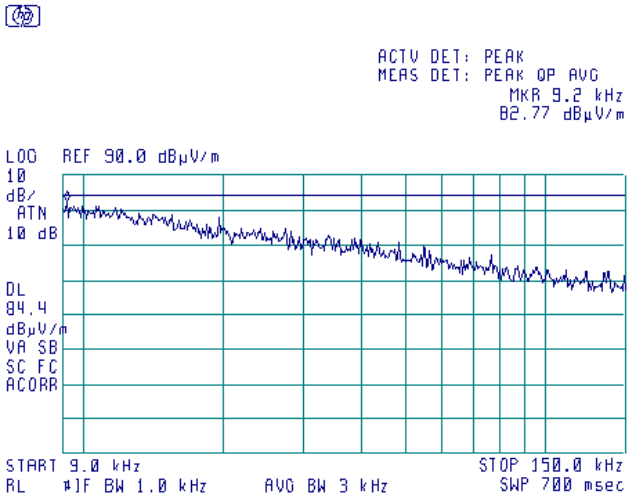
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Dual Band
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	High

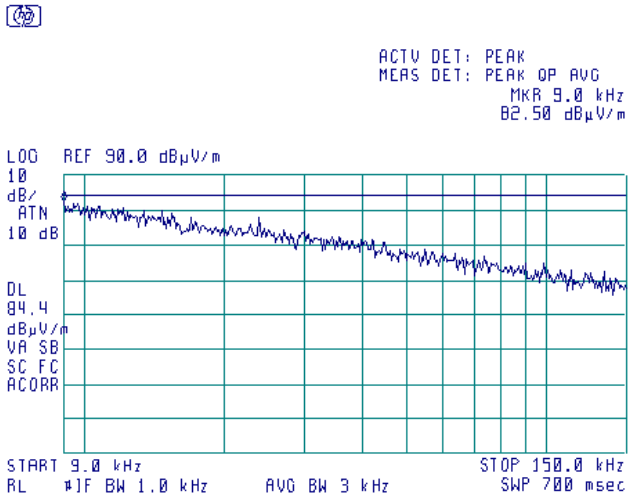


Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

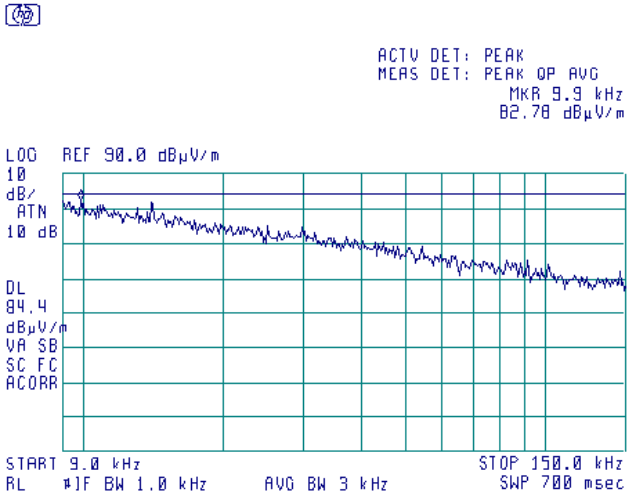
Plot 7.5.10 Radiated emission measurements in 9 - 150 kHz range

TEST SITE: Semi anechoic chamber
CONFIGURATION: Single Band 758-775MHz
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low





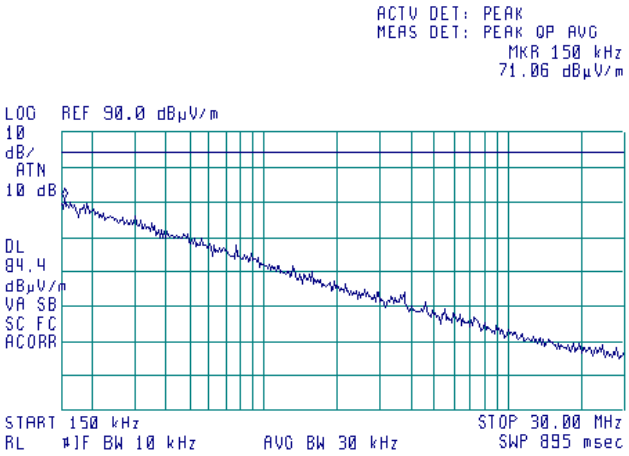
CARRIER FREQUENCY: High



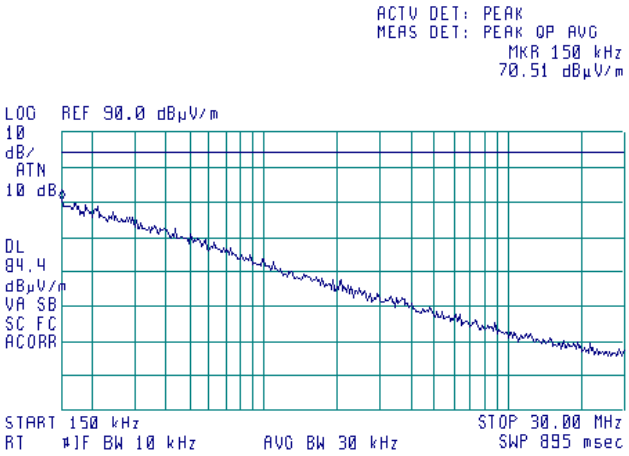
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.11 Radiated emission measurements in 0.15 - 30 MHz range

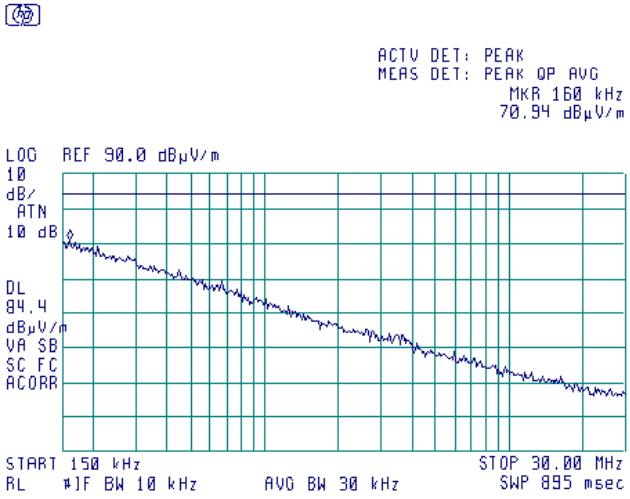
TEST SITE: Semi anechoic chamber
CONFIGURATION: Single Band 758-775MHz
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



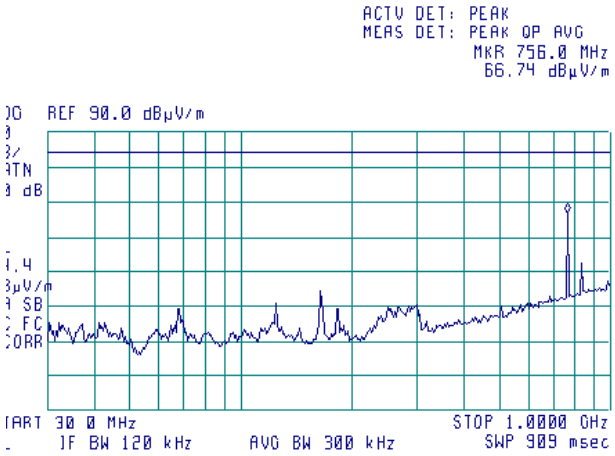
CARRIER FREQUENCY: High



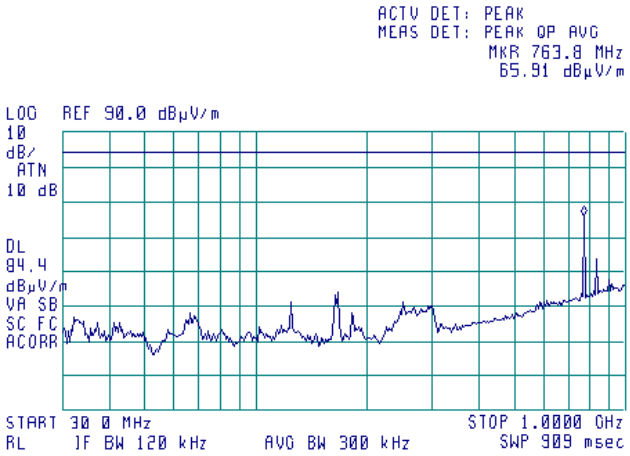
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.12 Radiated emission measurements in 30 - 1000 MHz range

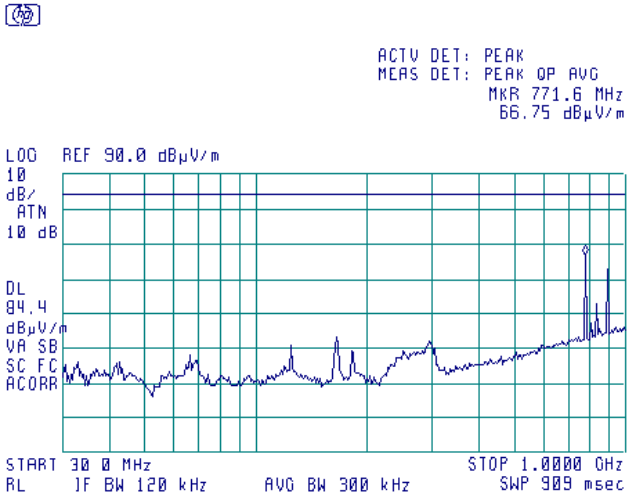
TEST SITE: Semi anechoic chamber
CONFIGURATION: Single Band 758-775MHz
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



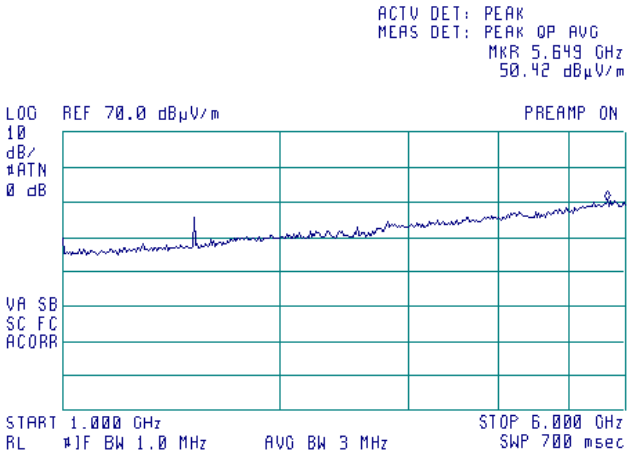
CARRIER FREQUENCY: High



Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.13 Radiated emission measurements in 1000 – 6000 MHz range

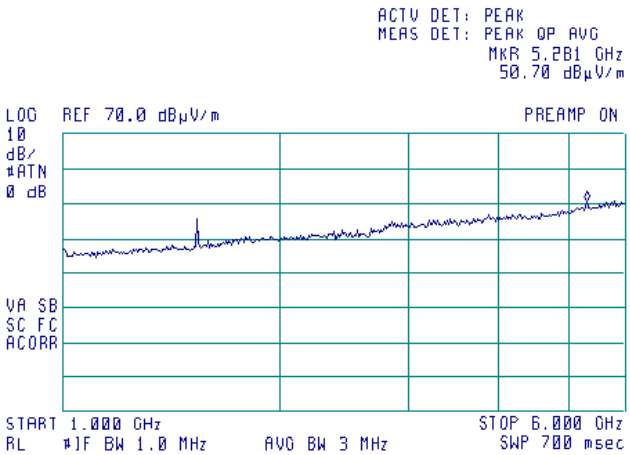
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 758-775MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Low



Limit 84.4 dBuV/m was applied

Plot 7.5.14 Radiated emission measurements in 1000 – 6000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 758-775MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Mid

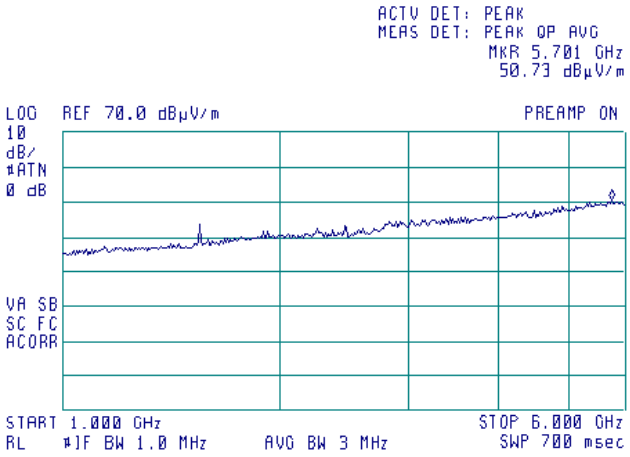


Limit 84.4 dBuV/m was applied

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.15 Radiated emission measurements in 1000 – 6000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 758-775MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	High

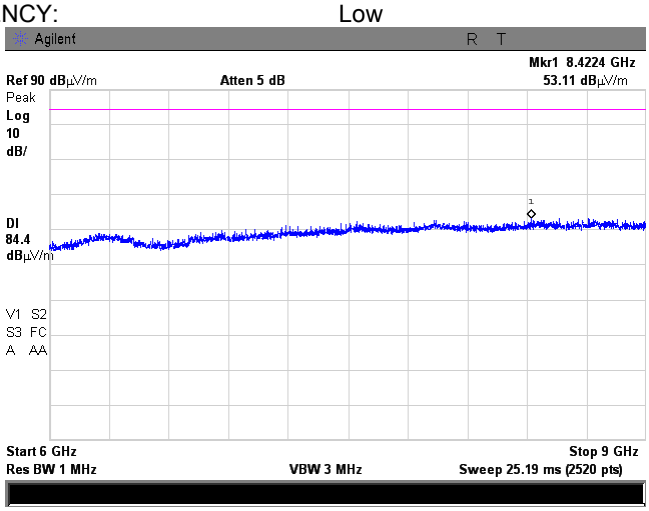


Limit 84.4 dBuV/m was applied

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

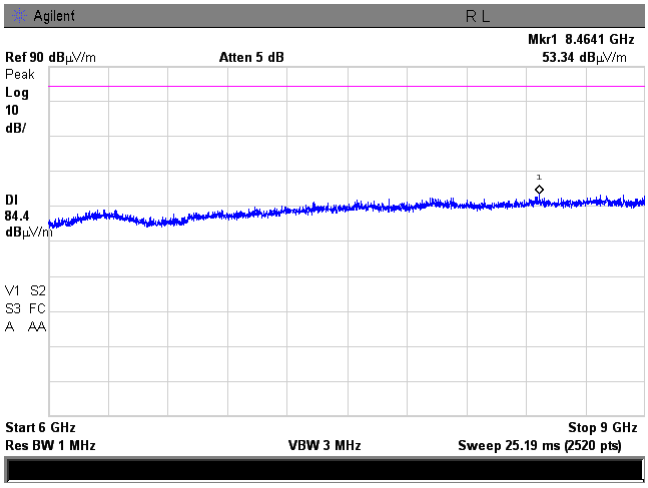
Plot 7.5.16 Radiated emission measurements in 6000 – 9000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 758-775MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Low



Plot 7.5.17 Radiated emission measurements in 6000 – 9000 MHz range

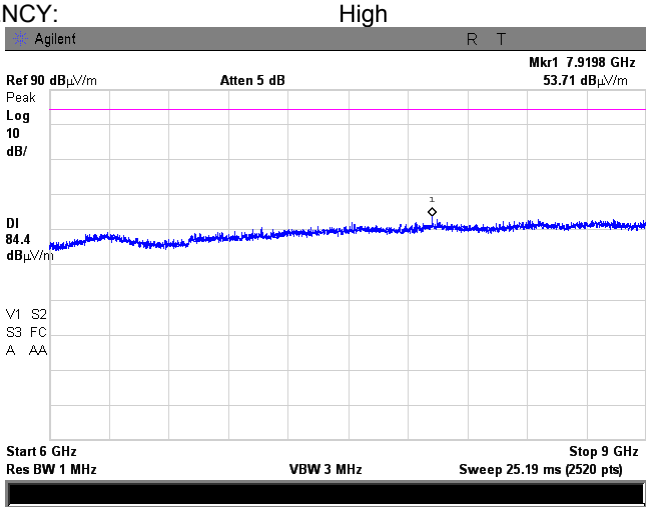
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 758-775MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Mid



Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.18 Radiated emission measurements in 6000 – 9000 MHz range

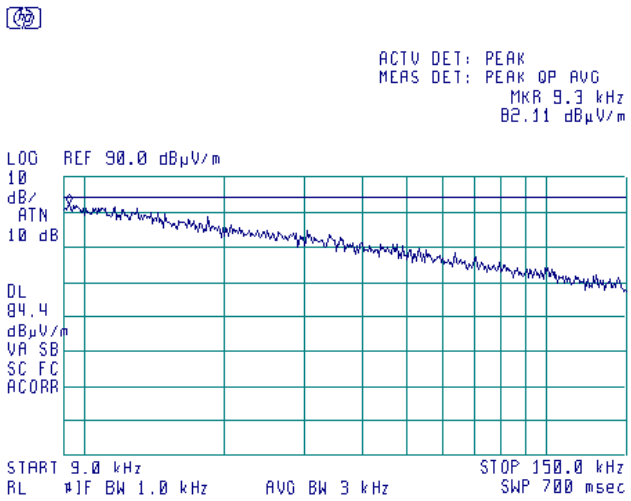
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 758-775MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	High



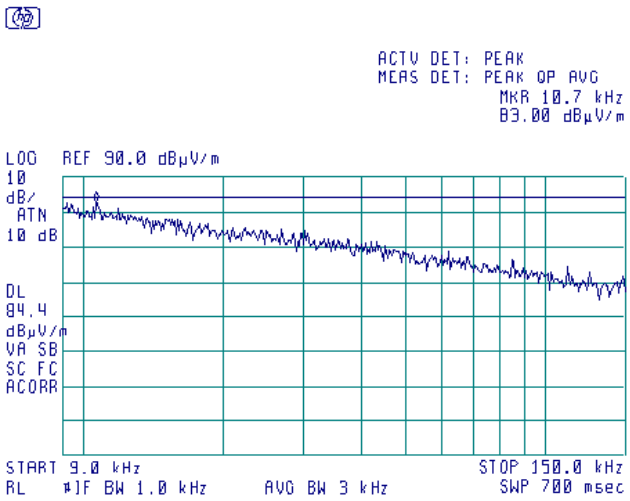
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.19 Radiated emission measurements in 9 - 150 kHz range

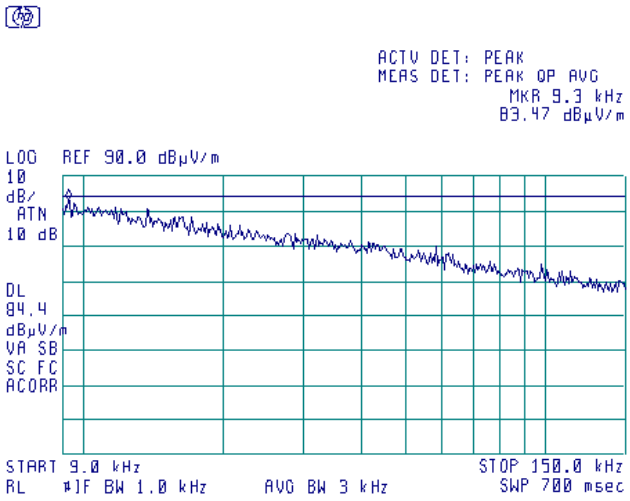
TEST SITE: Semi anechoic chamber
CONFIGURATION: Single Band 851-861MHz
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



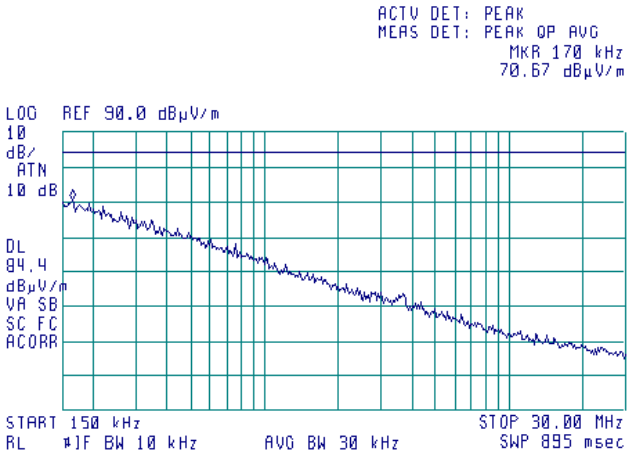
CARRIER FREQUENCY: High



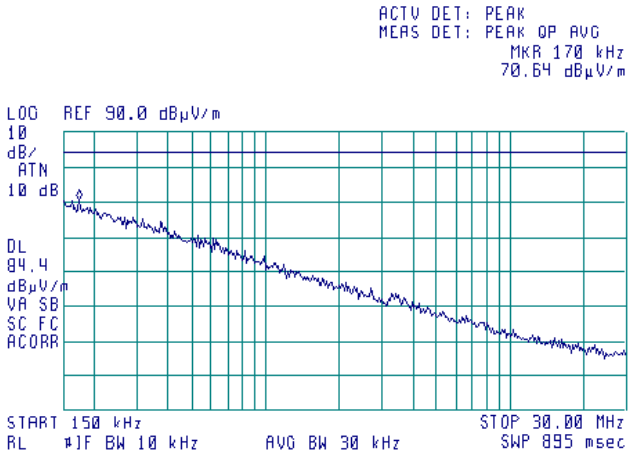
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.20 Radiated emission measurements in 0.15 - 30 MHz range

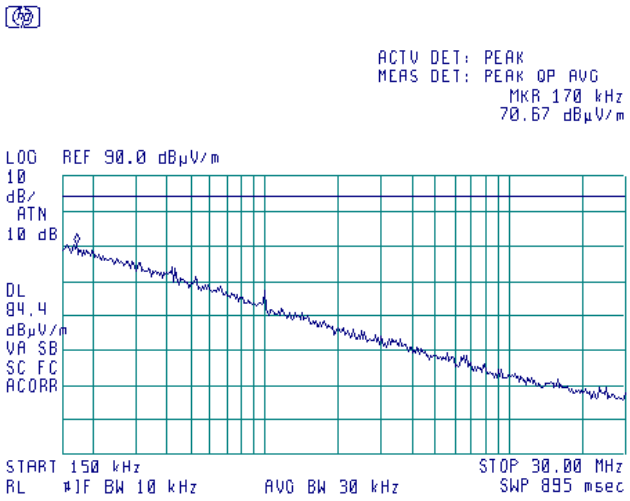
TEST SITE: Semi anechoic chamber
CONFIGURATION: Single Band 851-861MHz
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



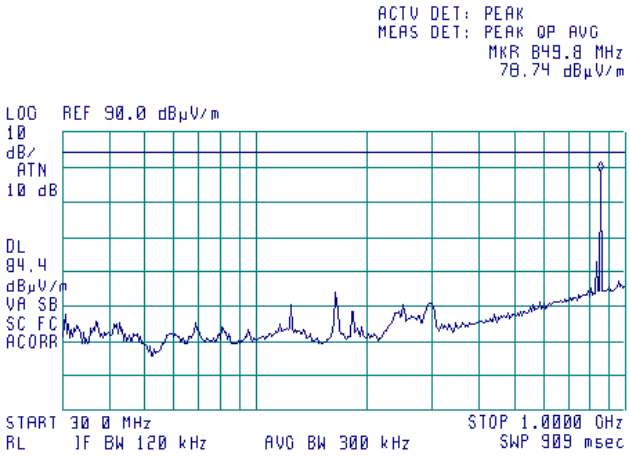
CARRIER FREQUENCY: High



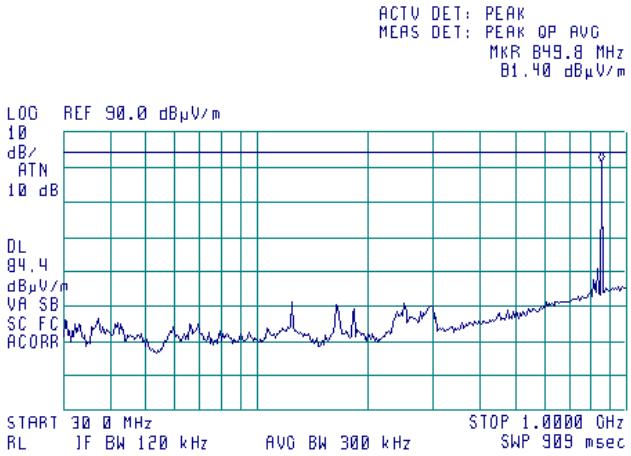
Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.21 Radiated emission measurements in 30 - 1000 MHz range

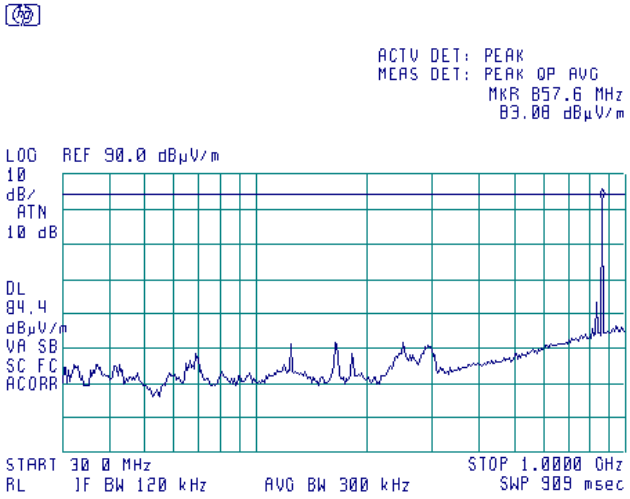
TEST SITE: Semi anechoic chamber
CONFIGURATION: Single Band 851-861MHz
ANTENNA POLARIZATION: Vertical and Horizontal
TEST DISTANCE: 3 m
CARRIER FREQUENCY: Low



CARRIER FREQUENCY: Mid



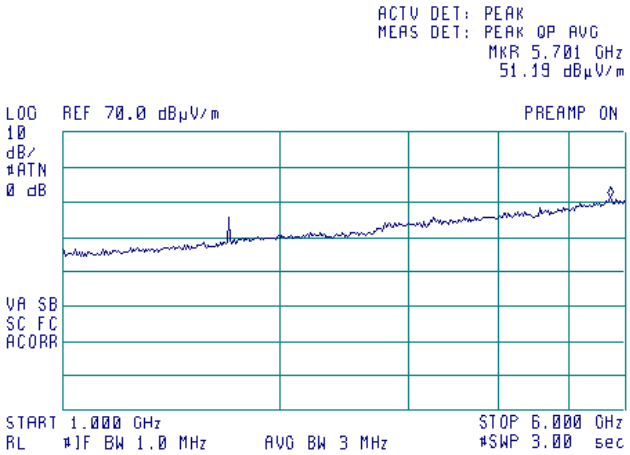
CARRIER FREQUENCY: High



Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.22 Radiated emission measurements in 1000 – 6000 MHz range

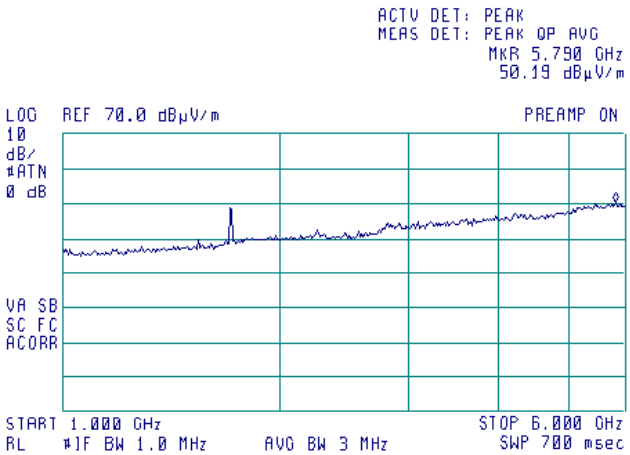
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 851-861MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Low



Limit 84.4 dBuV/m was applied

Plot 7.5.23 Radiated emission measurements in 1000 – 6000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 851-861MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Mid

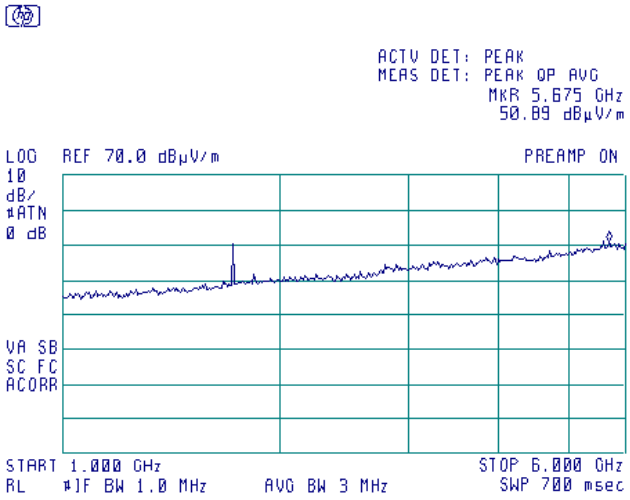


Limit 84.4 dBuV/m was applied

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.24 Radiated emission measurements in 1000 – 6000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 851-861MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	High

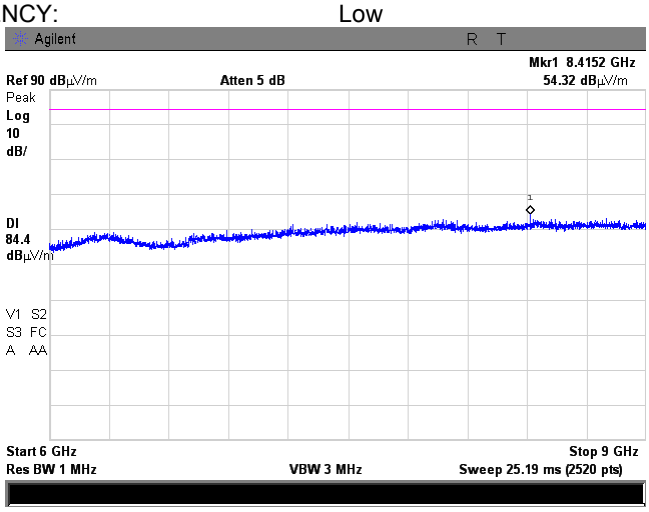


Limit 84.4 dBuV/m was applied

Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

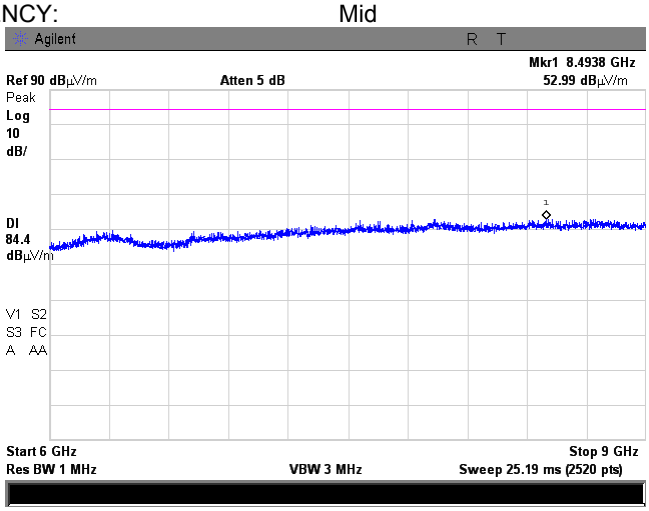
Plot 7.5.25 Radiated emission measurements in 6000 – 9000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 851-861MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Low



Plot 7.5.26 Radiated emission measurements in 6000 – 9000 MHz range

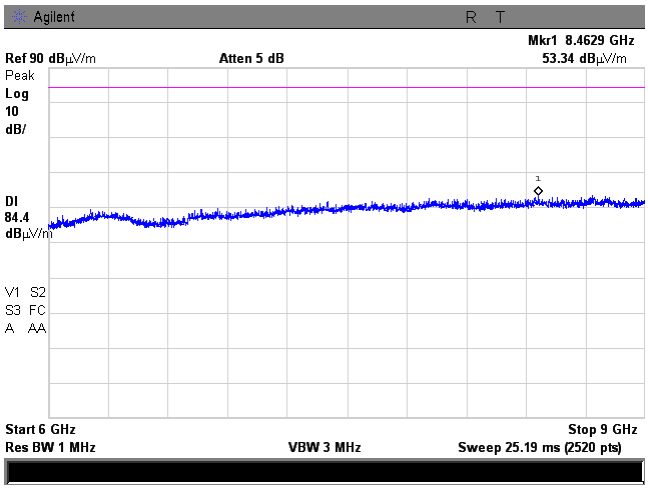
TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 851-861MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	Mid



Test specification:	Section 90.219(e)(3), Radiated spurious emissions		
Test procedure:	47 CFR, Sections 2.1053; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	24-Mar-14 - 30-Mar-14		
Temperature: 23.4 ºC	Air Pressure: 1007 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Plot 7.5.27 Radiated emission measurements in 6000 – 9000 MHz range

TEST SITE:	Semi anechoic chamber
CONFIGURATION:	Single Band 851-861MHz
ANTENNA POLARIZATION:	Vertical and Horizontal
TEST DISTANCE:	3 m
CARRIER FREQUENCY:	High



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

7.6 Spurious emissions at RF antenna connector test

7.6.1 General

This test was performed to measure spurious emissions at RF antenna connector. Specification test limits are given in Table 7.6.1.

Table 7.6.1 Spurious emission limits

Frequency, MHz	Attenuation below carrier, dBc	ERP of spurious, dBm
0.009 – 10th harmonic*	43+10logP** (mask B)	-13.0

* - spurious emission limits do not apply to the in band emission within ± 250 % of the authorized bandwidth from the carrier; investigated in course of emission mask testing
** - P is transmitter output power in Watts

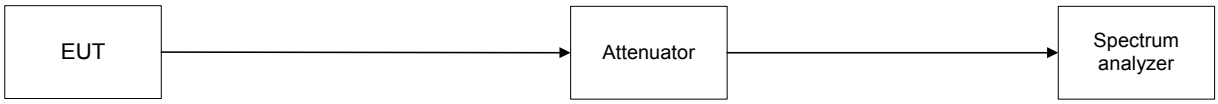
7.6.2 Test procedure

7.6.2.1 The EUT was set up as shown in Figure 7.6.1, energized and its proper operation was checked.

7.6.2.2 The EUT was adjusted to produce maximum available for end user RF output power.

7.6.2.3 The spurious emission was measured with spectrum analyzer as provided in Table 7.6.2, Table 7.6.3 and the associated plots.

Figure 7.6.1 Spurious emission test setup



Test specification:	**Section 90.219(e)(3), Conducted spurious emissions**		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 49 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.6.2 Spurious emission test results, dual band

ASSIGNED FREQUENCY RANGES: 758 - 775 MHz Downlink
778 – 805 MHz Uplink
851 – 861 MHz Downlink
806 – 816 MHz Uplink
INVESTIGATED FREQUENCY RANGE: 0.009 – 9000 MHz
DETECTOR USED: Peak
VIDEO BANDWIDTH: ≥ Resolution bandwidth
MODULATION: C4FM/iDEN/Analog FM
CONFIGURATION: Dual Band
BOOSTER OUTPUT POWER SETTINGS: 30 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20 dB below the limit									Pass

*****- Margin = Spurious emission – specification limit.

Test specification:	**Section 90.219(e)(3), Conducted spurious emissions**		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 49 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.6.3 Spurious emission test results, single band

ASSIGNED FREQUENCY RANGES: 758 - 775 MHz Downlink
778 – 805 MHz Uplink
INVESTIGATED FREQUENCY RANGE: 0.009 – 8000 MHz
DETECTOR USED: Peak
VIDEO BANDWIDTH: ≥ Resolution bandwidth
MODULATION: C4FM/iDEN/Analog FM
CONFIGURATION: Single Band
BOOSTER OUTPUT POWER SETTINGS: 33 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20 dB below the limit									Pass

*****- Margin = Spurious emission – specification limit.

ASSIGNED FREQUENCY RANGES: 851 – 861 MHz MHz Downlink
806 – 816 MHz Uplink
INVESTIGATED FREQUENCY RANGE: 0.009 – 9000 MHz
DETECTOR USED: Peak
VIDEO BANDWIDTH: ≥ Resolution bandwidth
MODULATION: C4FM/iDEN/Analog FM
CONFIGURATION: Single Band
BOOSTER OUTPUT POWER SETTINGS: 33 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20 dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20 dB below the limit									Pass

*****- Margin = Spurious emission – specification limit.

Reference numbers of test equipment used

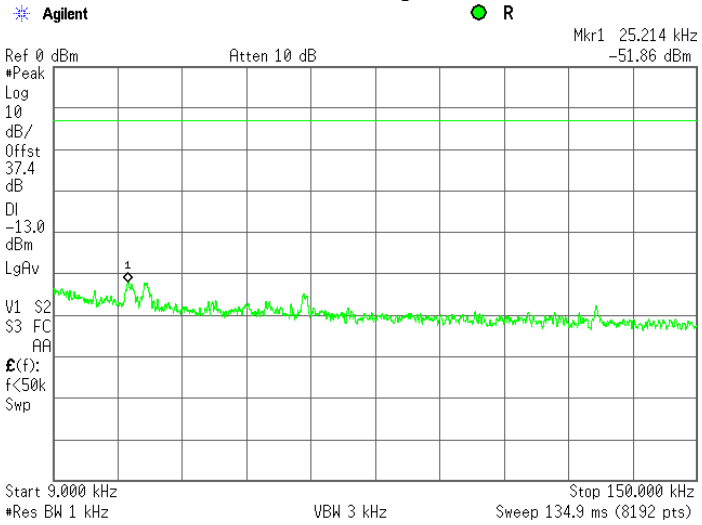
HL 0539	HL 2909	HL 3301	HL 3302	HL 3768	HL 3770	HL 3776	HL 4273
HL 4275	HL 4354	HL 4413					

Full description is given in Appendix A.

Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

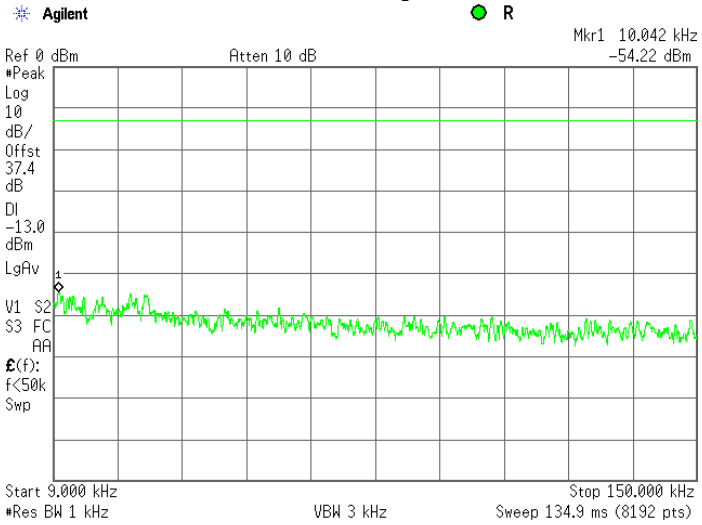
Plot 7.6.1 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.2 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

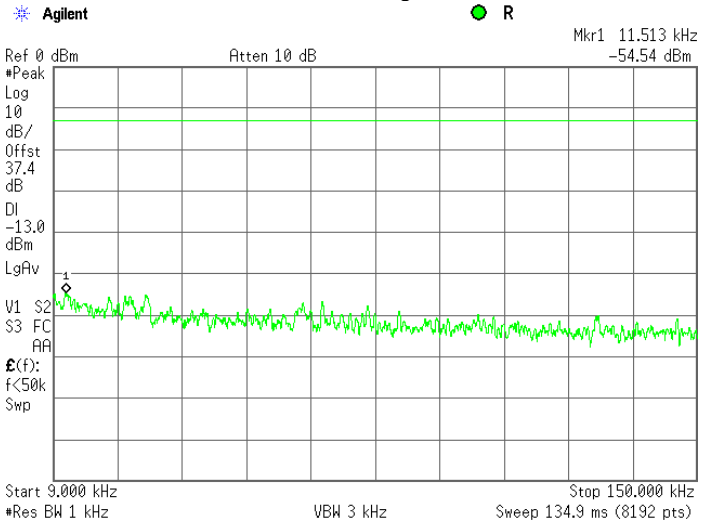
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

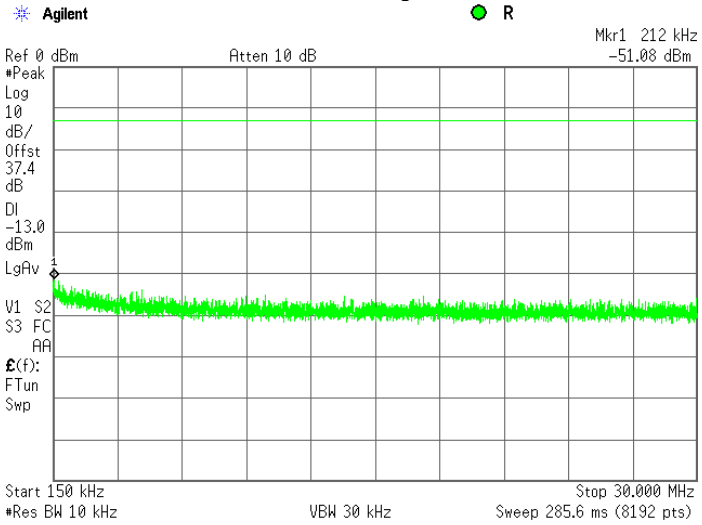
Plot 7.6.3 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.4 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

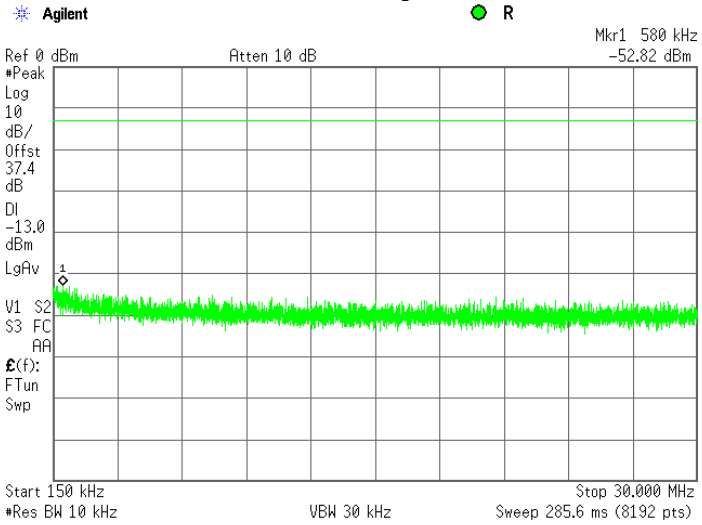
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

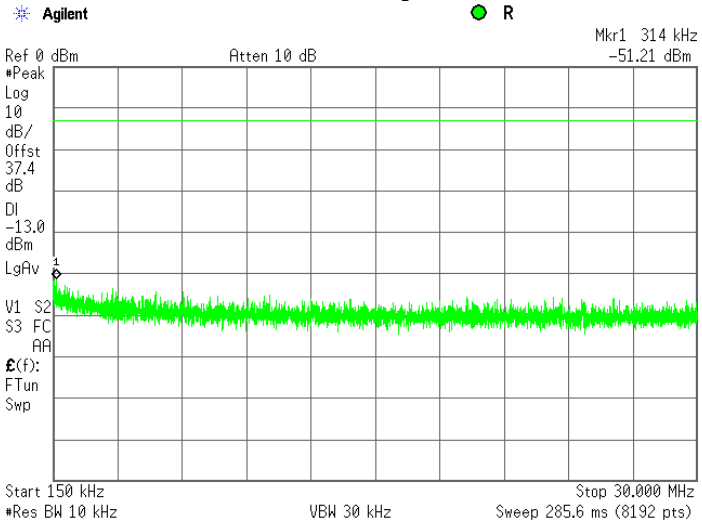
Plot 7.6.5 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.6 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

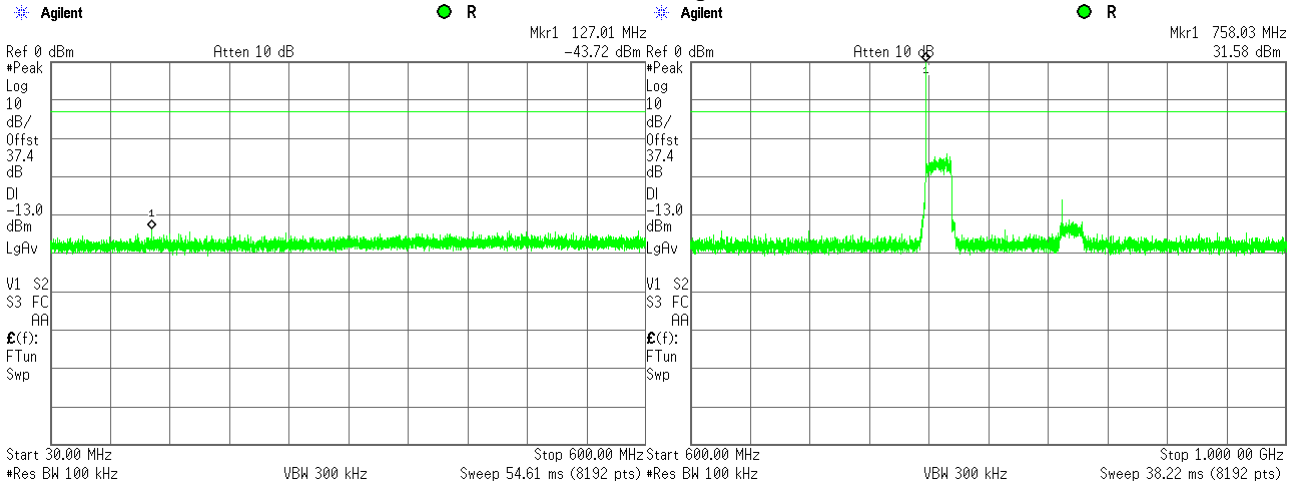
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

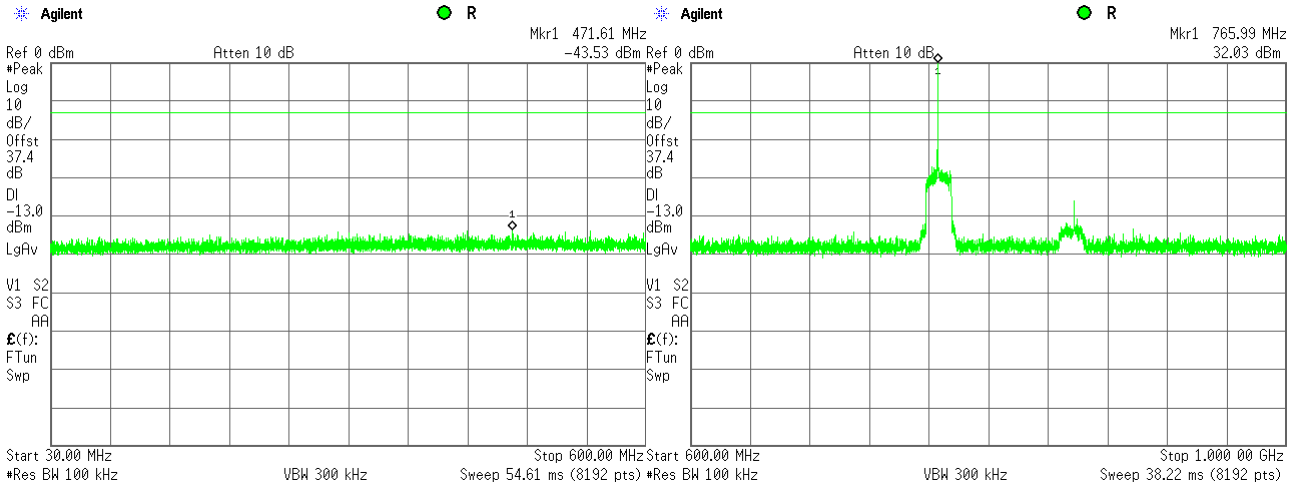
Plot 7.6.7 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.8 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

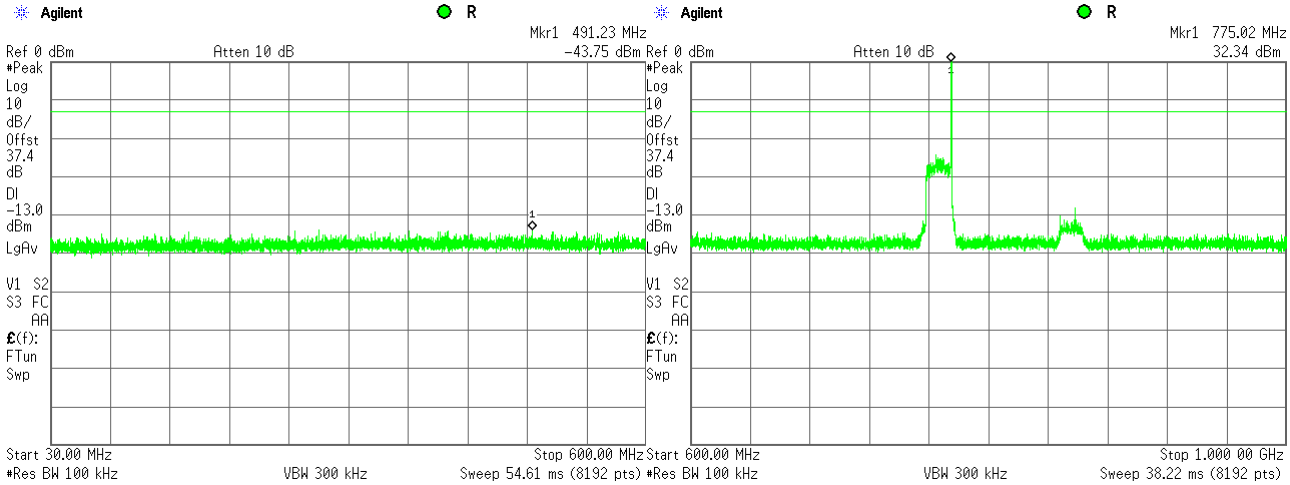
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

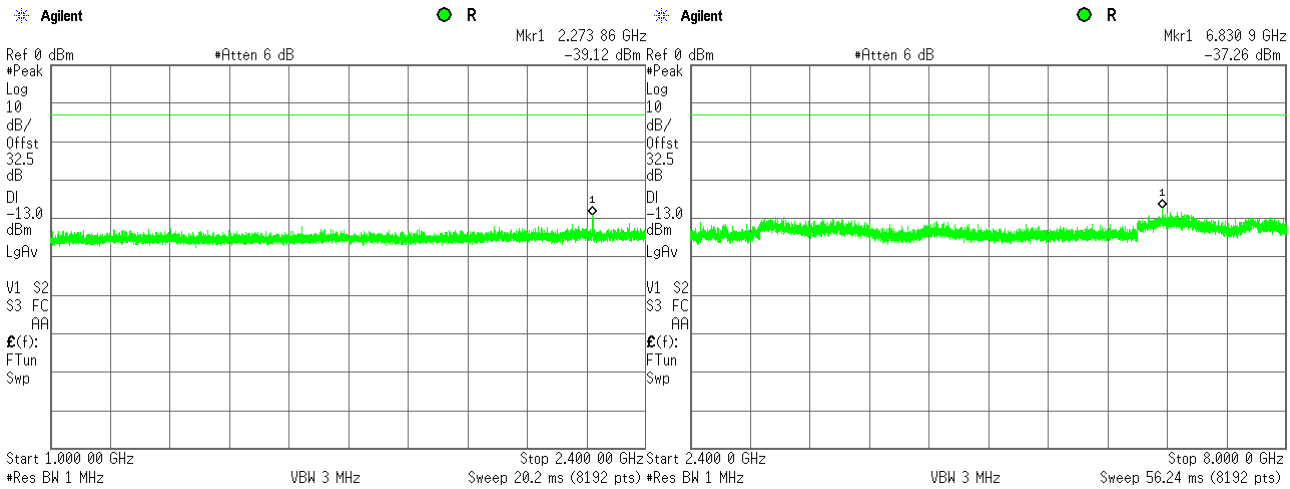
Plot 7.6.9 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.10 Spurious emission measurements in 1000 - 8000 MHz range at low carrier frequency

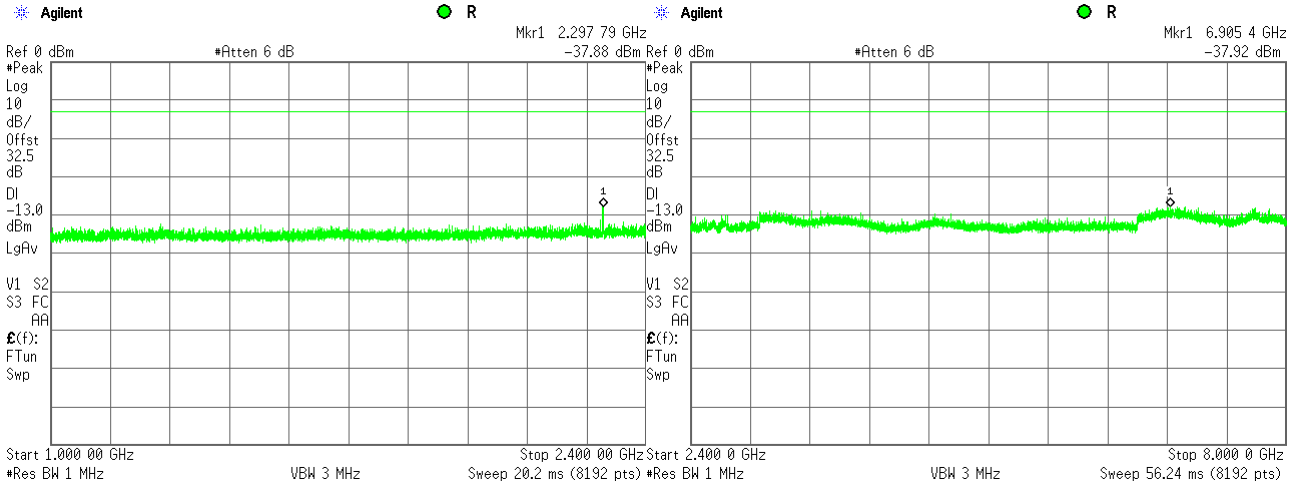
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

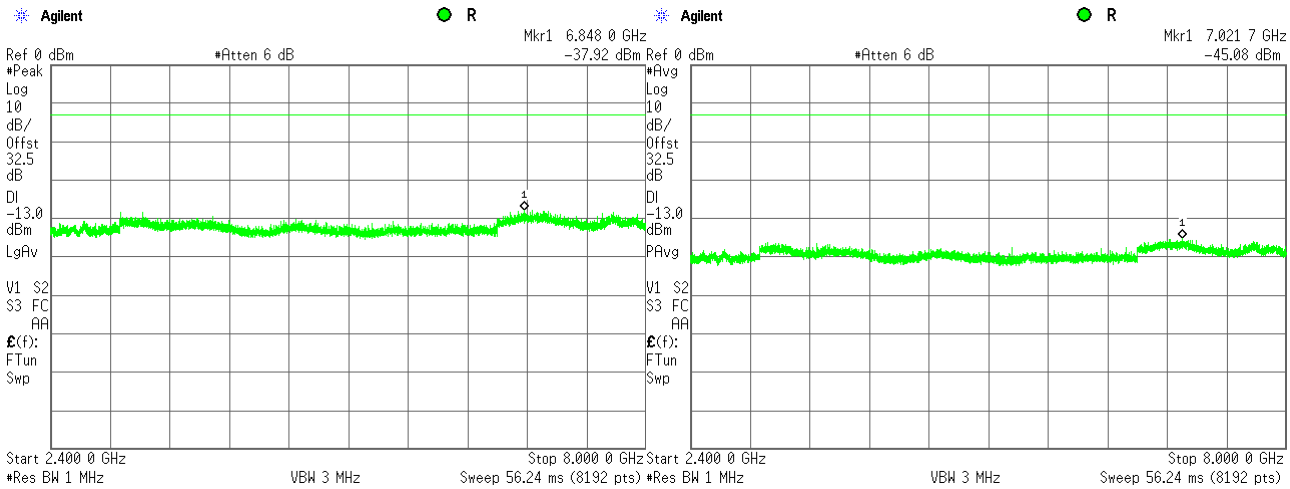
Plot 7.6.11 Spurious emission measurements in 1000 - 8000 MHz at mid carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.12 Spurious emission measurements in 1000 - 8000 MHz at high carrier frequency

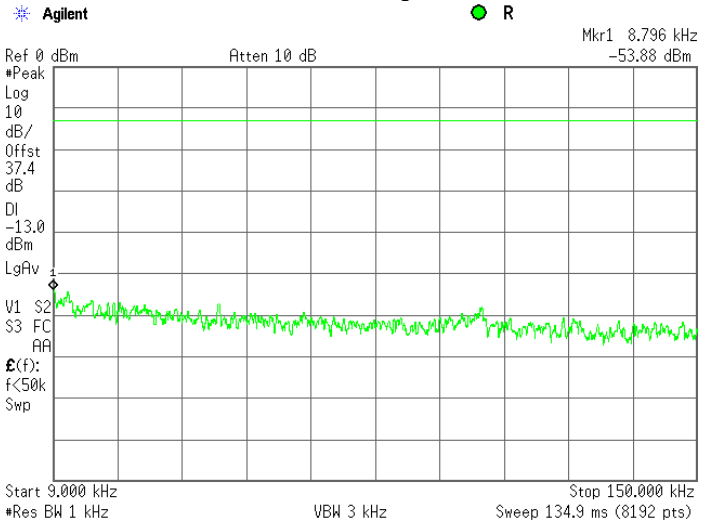
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

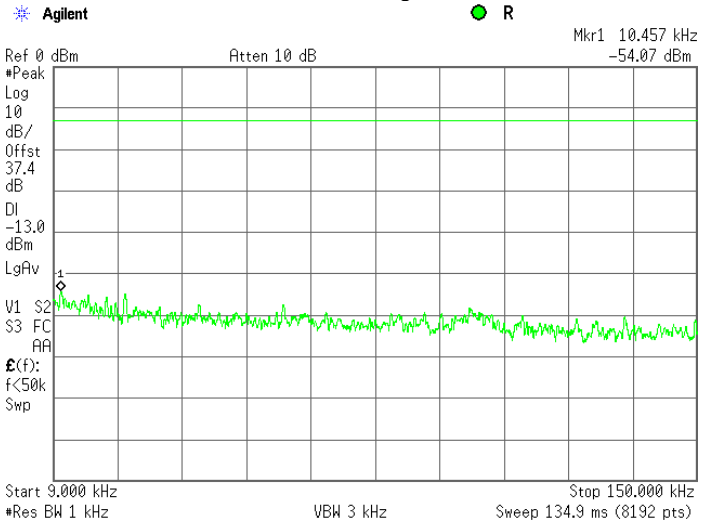
Plot 7.6.13 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.14 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

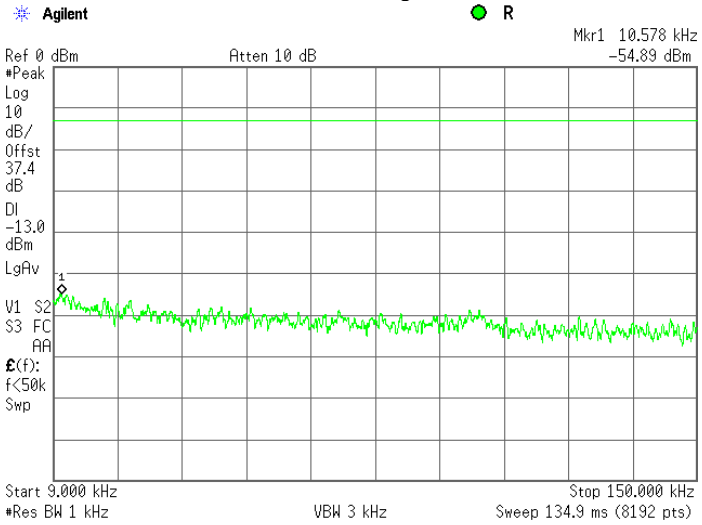
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

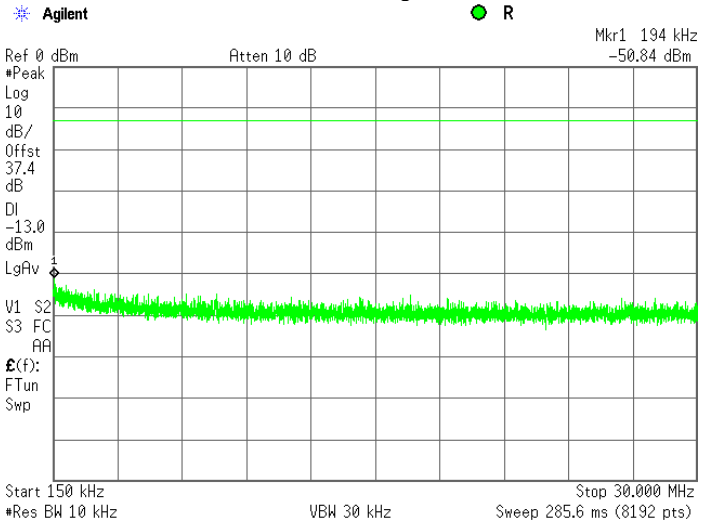
Plot 7.6.15 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.16 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

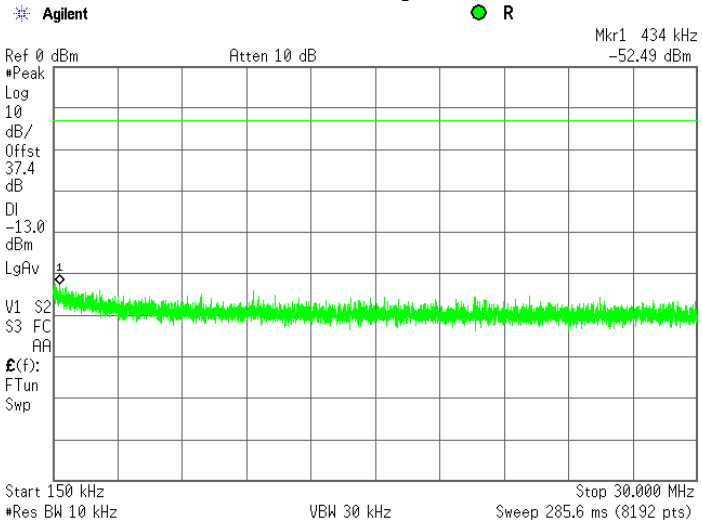
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

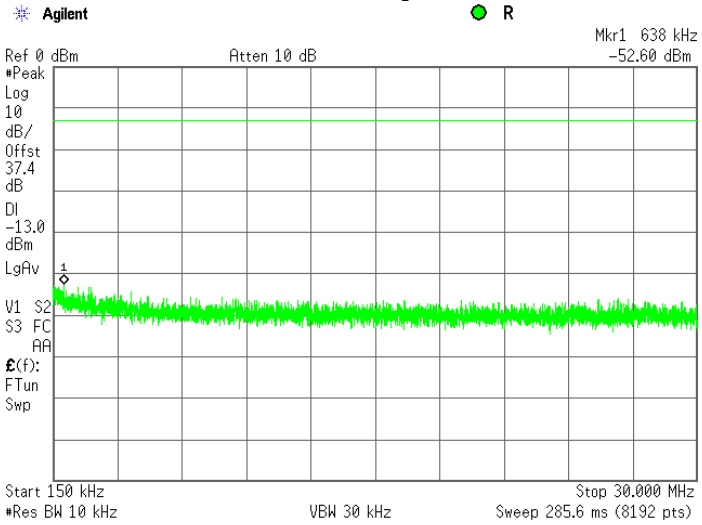
Plot 7.6.17 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.18 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

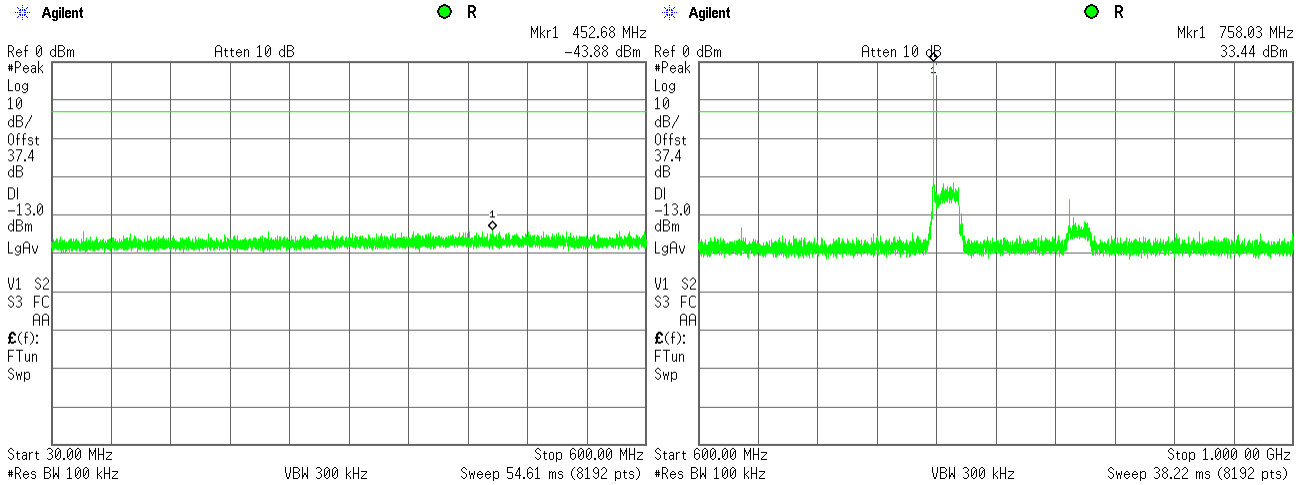
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

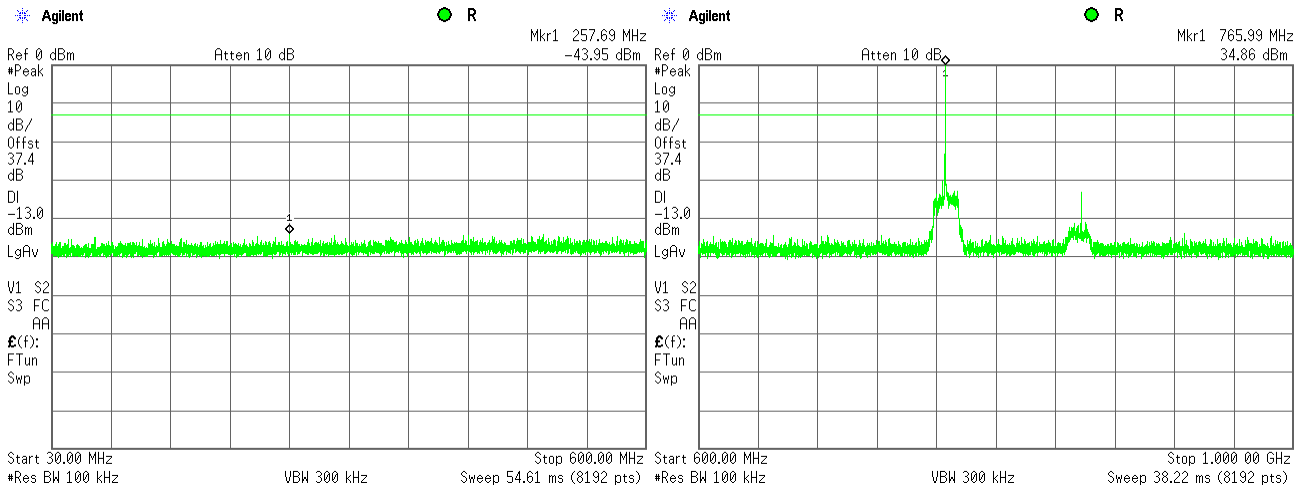
Plot 7.6.19 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.20 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

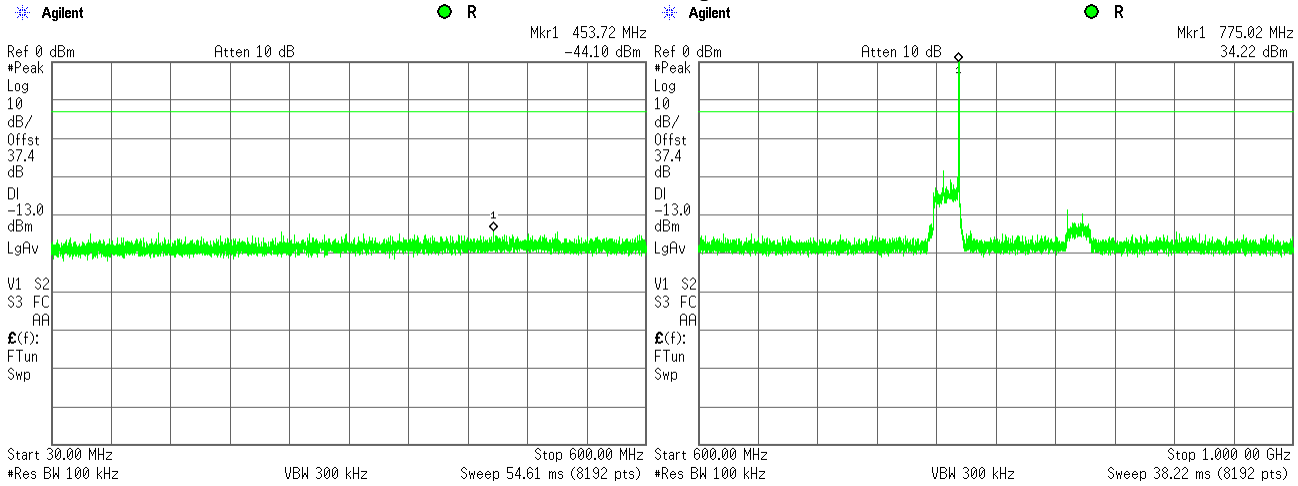
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

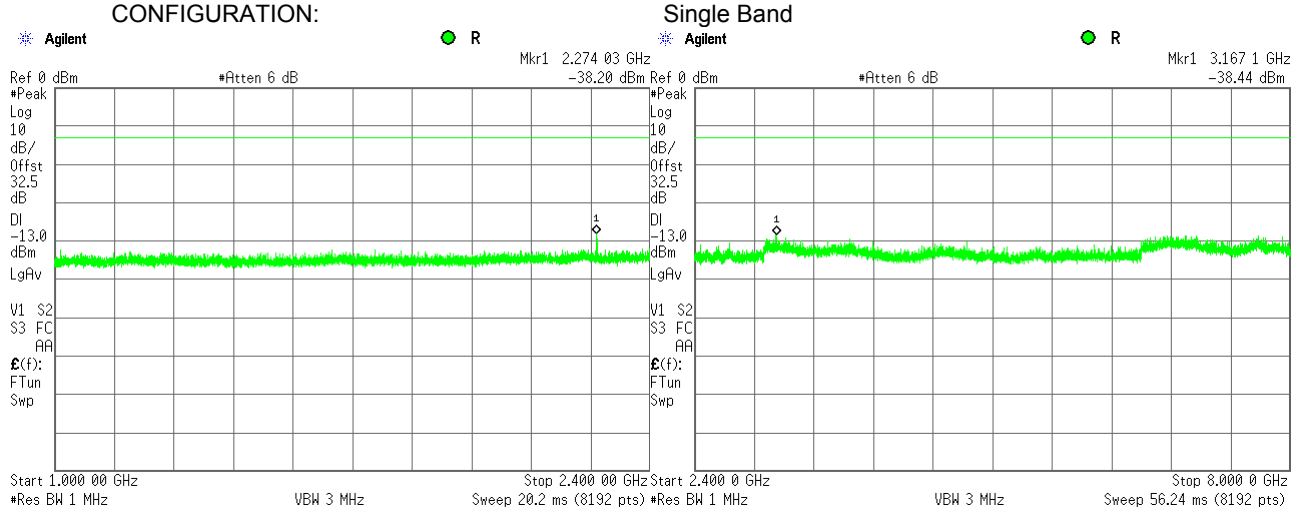
Plot 7.6.21 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.22 Spurious emission measurements in 1000 - 8000 MHz range at low carrier frequency

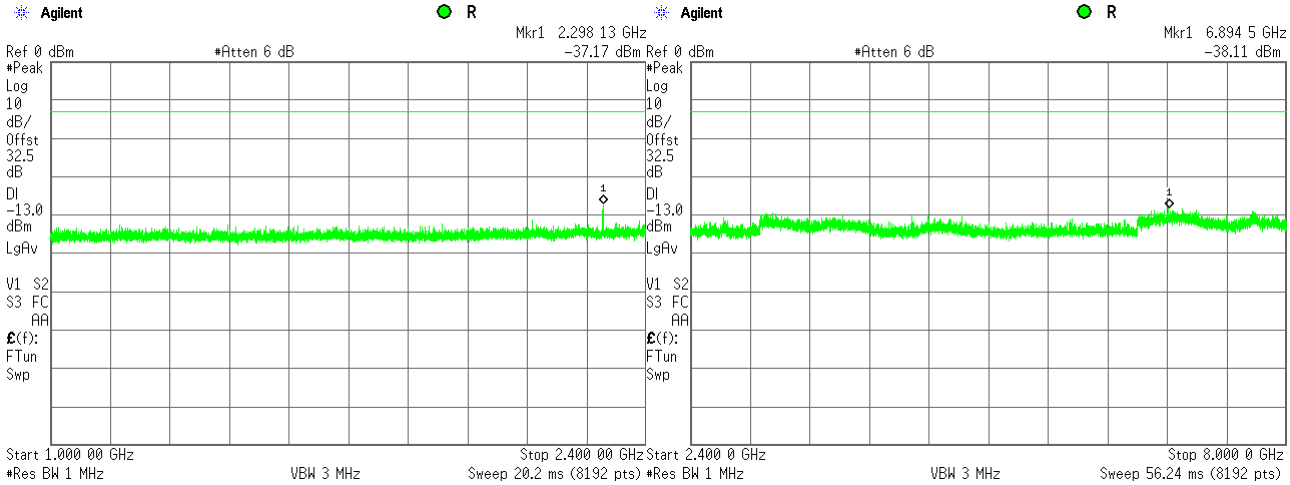
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

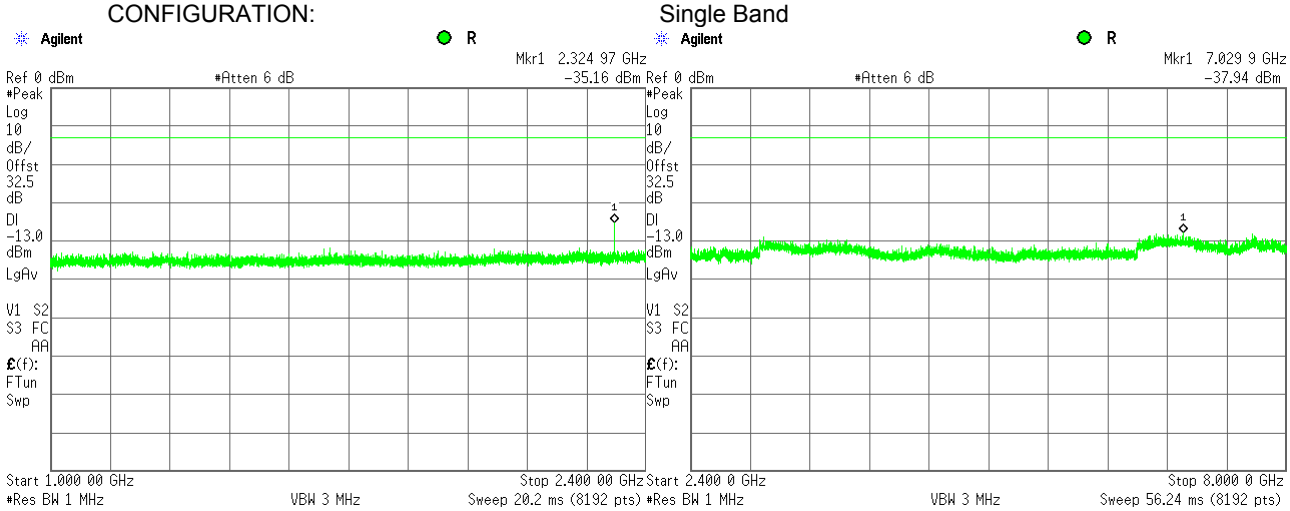
Plot 7.6.23 Spurious emission measurements in 1000 - 8000 MHz at mid carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.24 Spurious emission measurements in 1000 - 8000 MHz at high carrier frequency

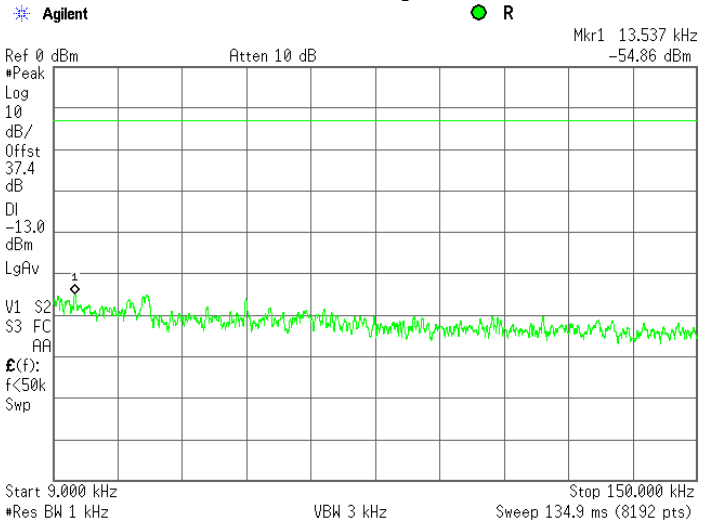
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

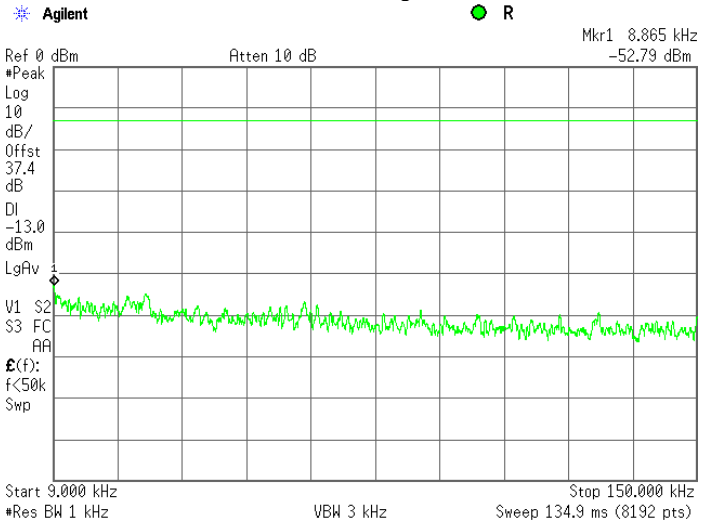
Plot 7.6.25 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.26 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

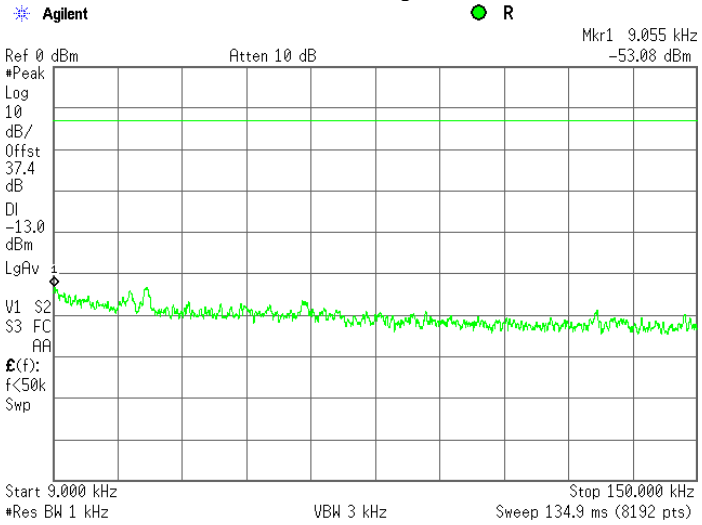
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

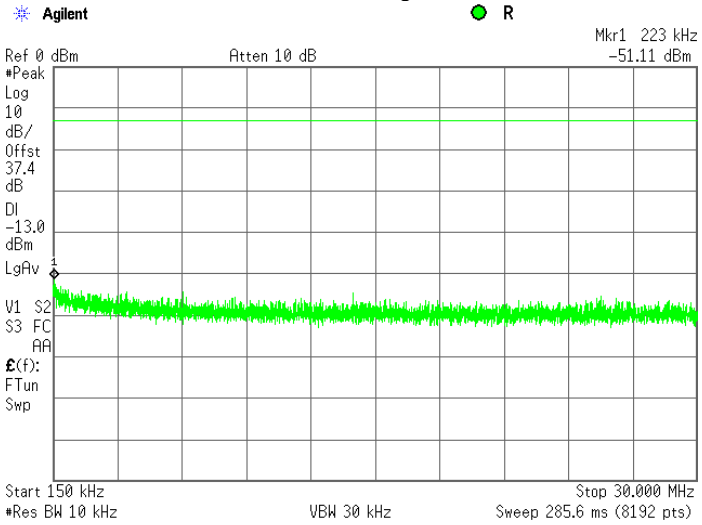
Plot 7.6.27 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.28 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

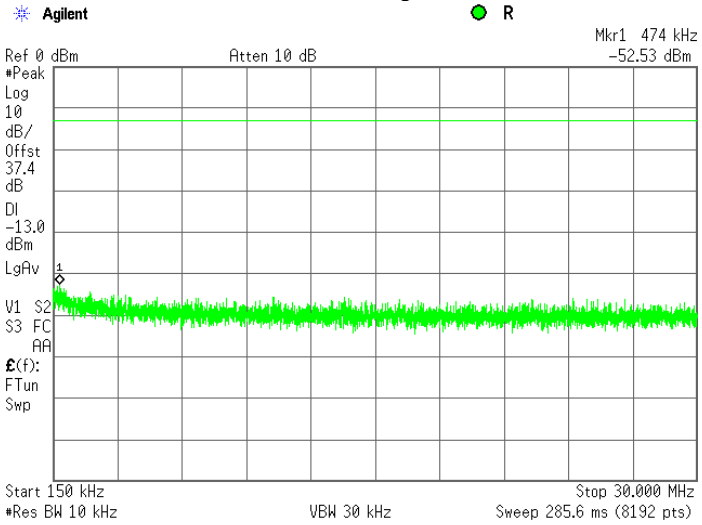
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

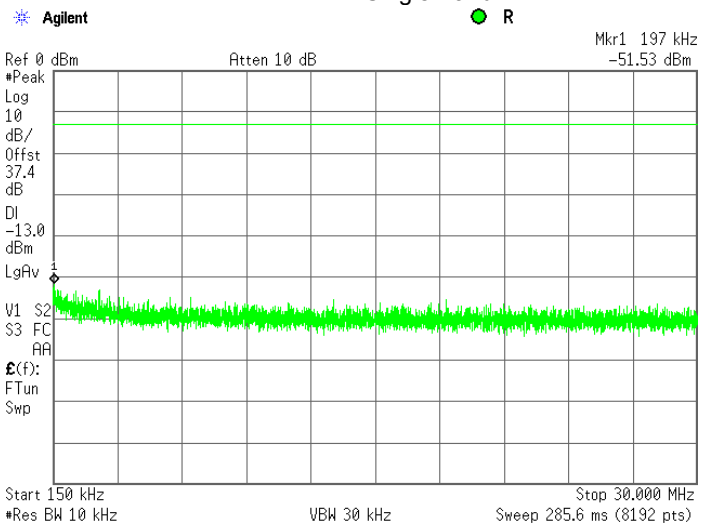
Plot 7.6.29 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
COMPOSITE INPUT POWER: -51 dBm
CONFIGURATION: Single Band



Plot 7.6.30 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

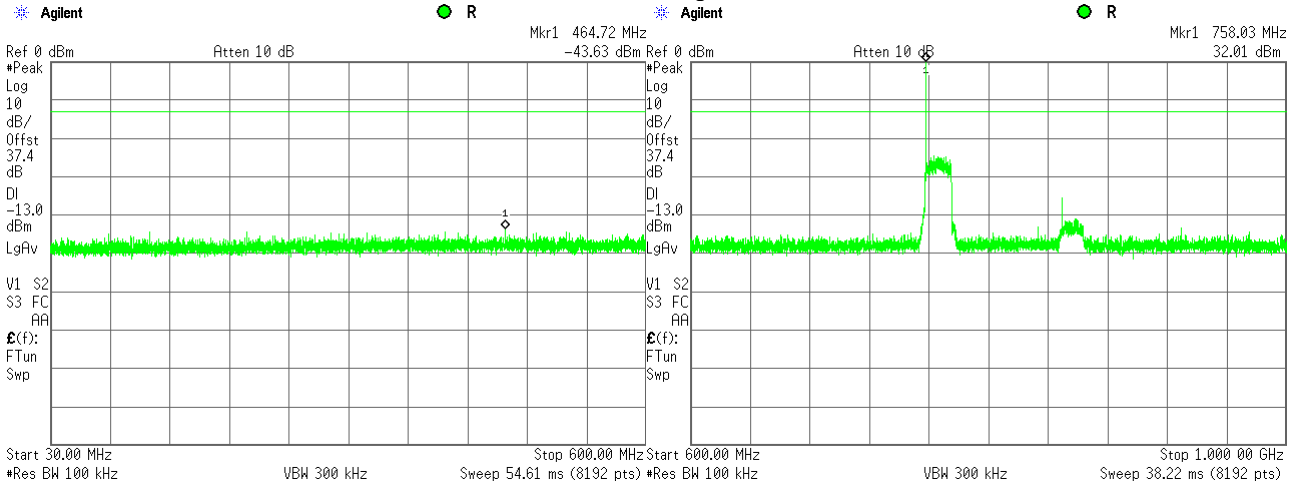
FREQUENCY RANGE: 758 - 775 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
COMPOSITE INPUT POWER: -51 dBm
CONFIGURATION: Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

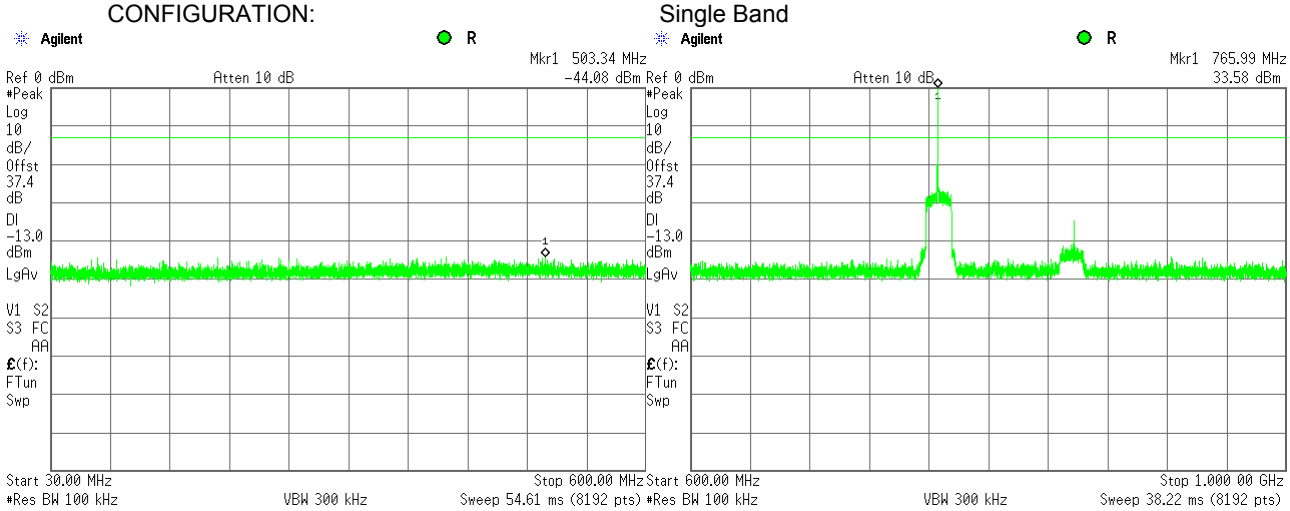
Plot 7.6.31 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.32 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

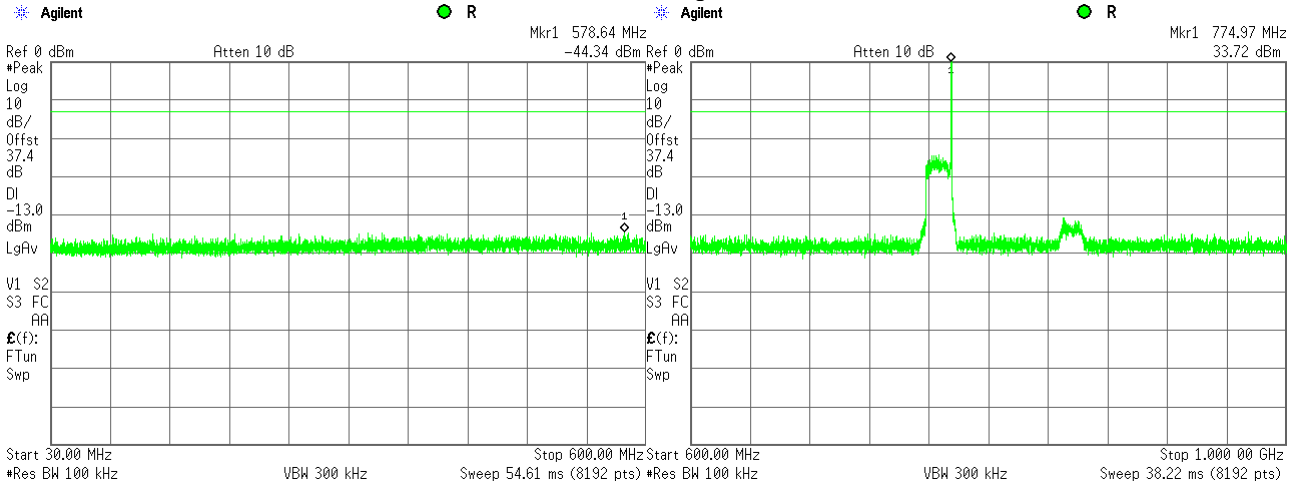
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

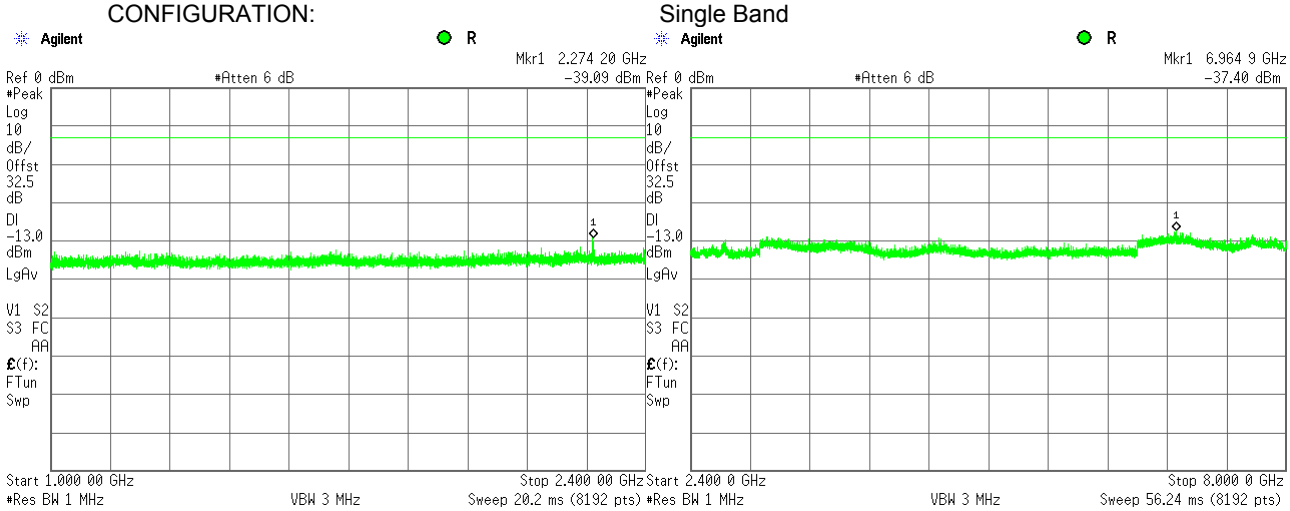
Plot 7.6.33 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.34 Spurious emission measurements in 1000 - 8000 MHz range at low carrier frequency

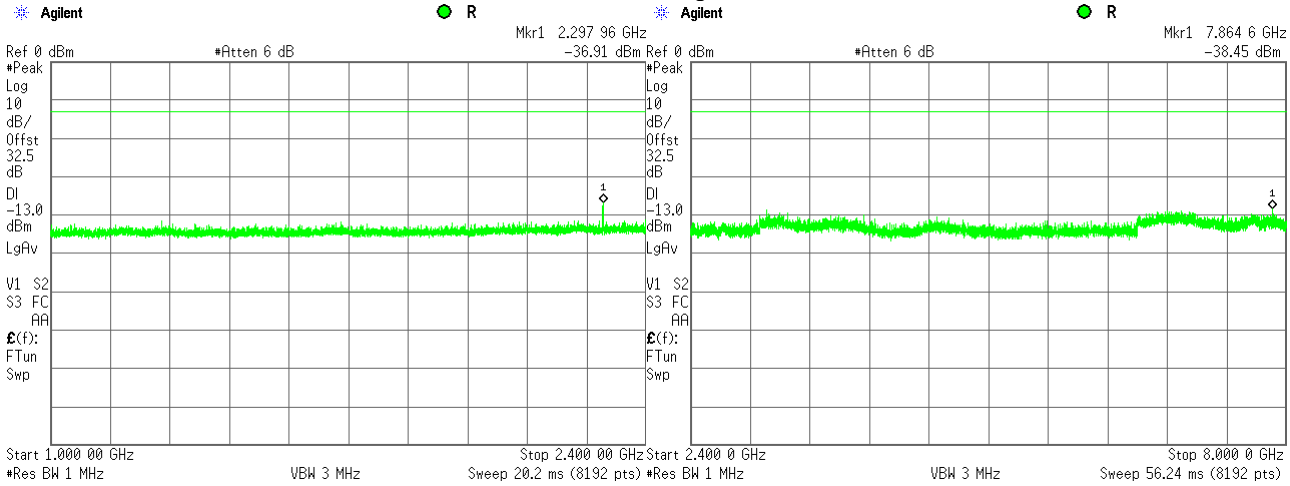
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

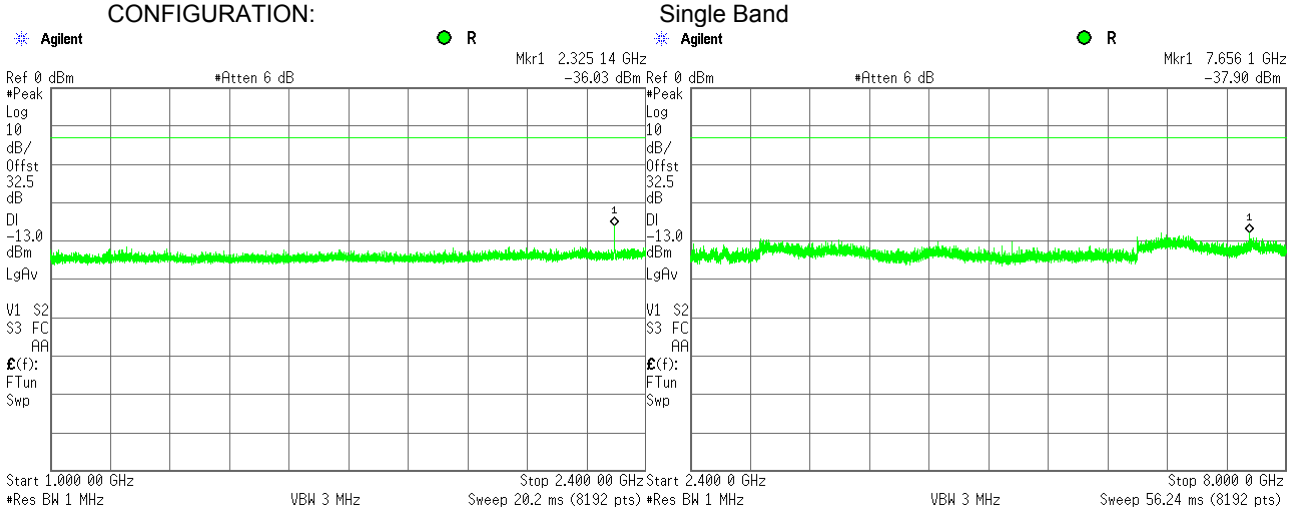
Plot 7.6.35 Spurious emission measurements in 1000 – 8000 MHz at mid carrier frequency

FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.36 Spurious emission measurements in 1000 – 8000 MHz at high carrier frequency

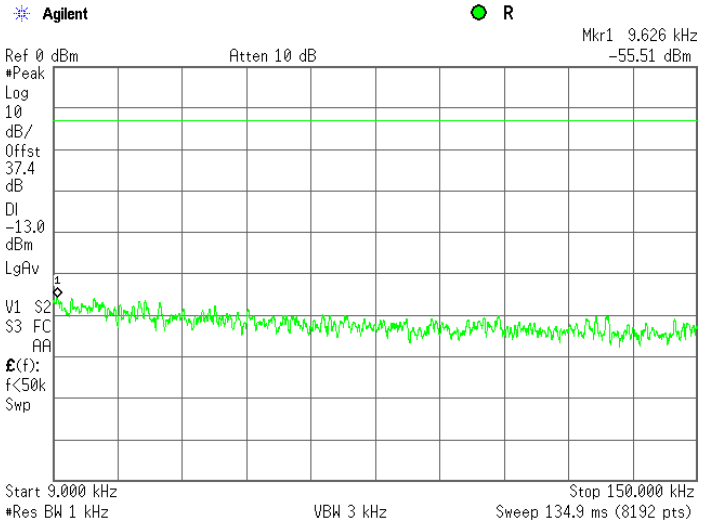
FREQUENCY RANGE:	758 - 775 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

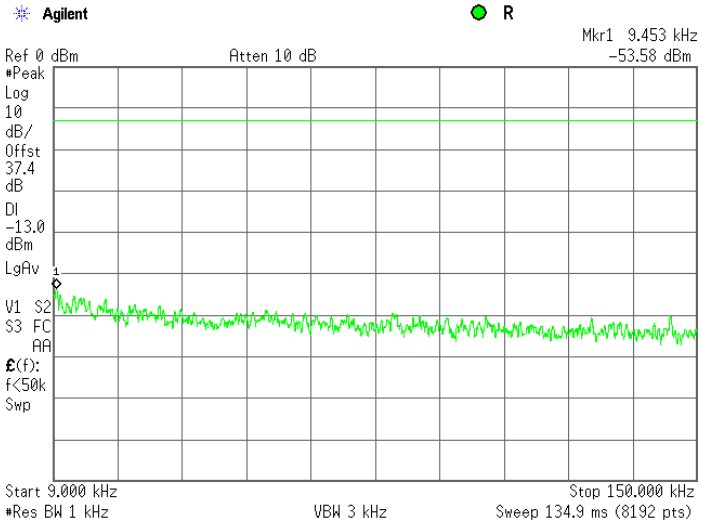
Plot 7.6.37 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.38 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

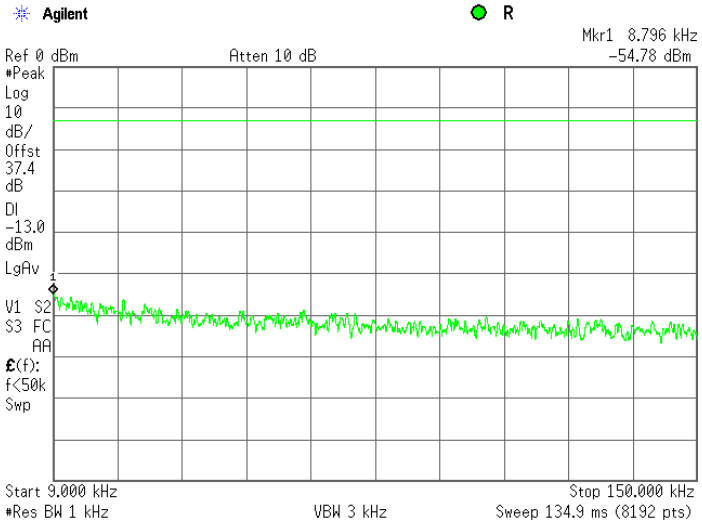
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

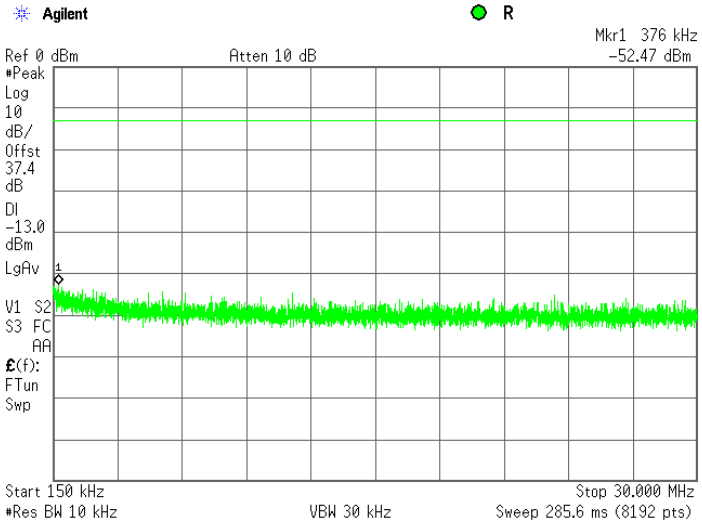
Plot 7.6.39 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.40 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

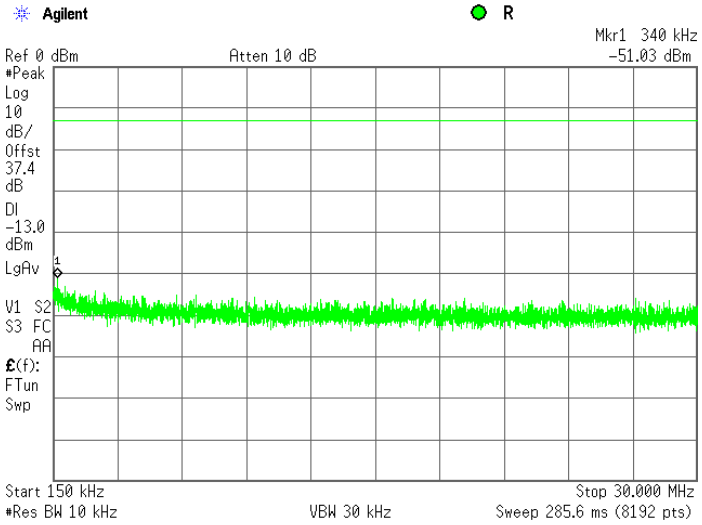
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

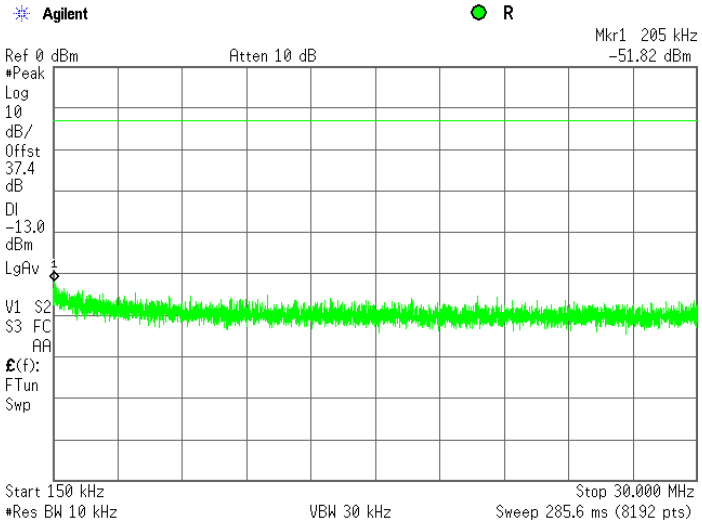
Plot 7.6.41 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band



Plot 7.6.42 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

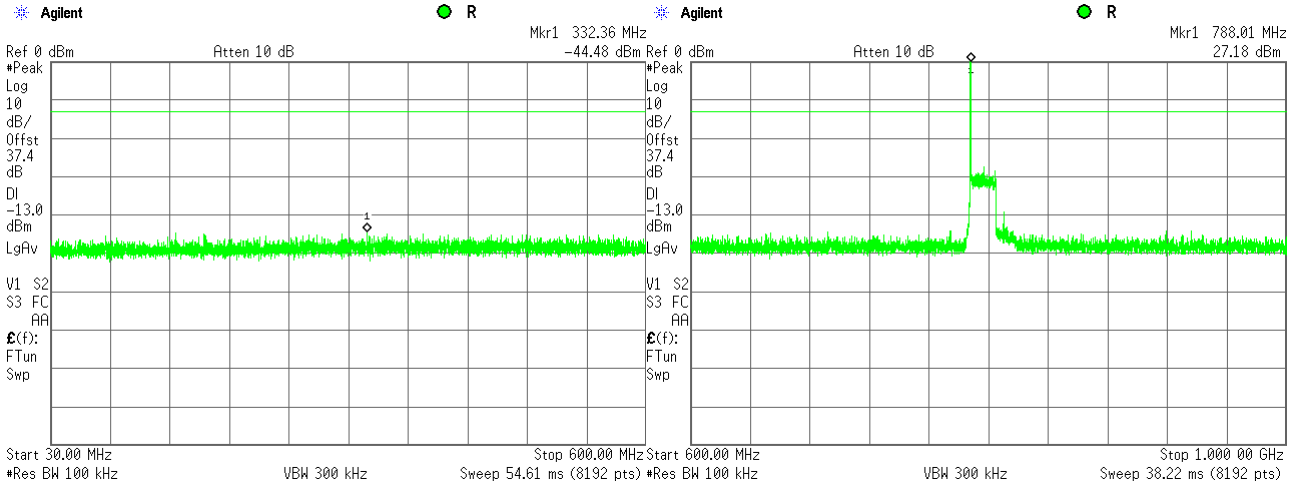
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: C4FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

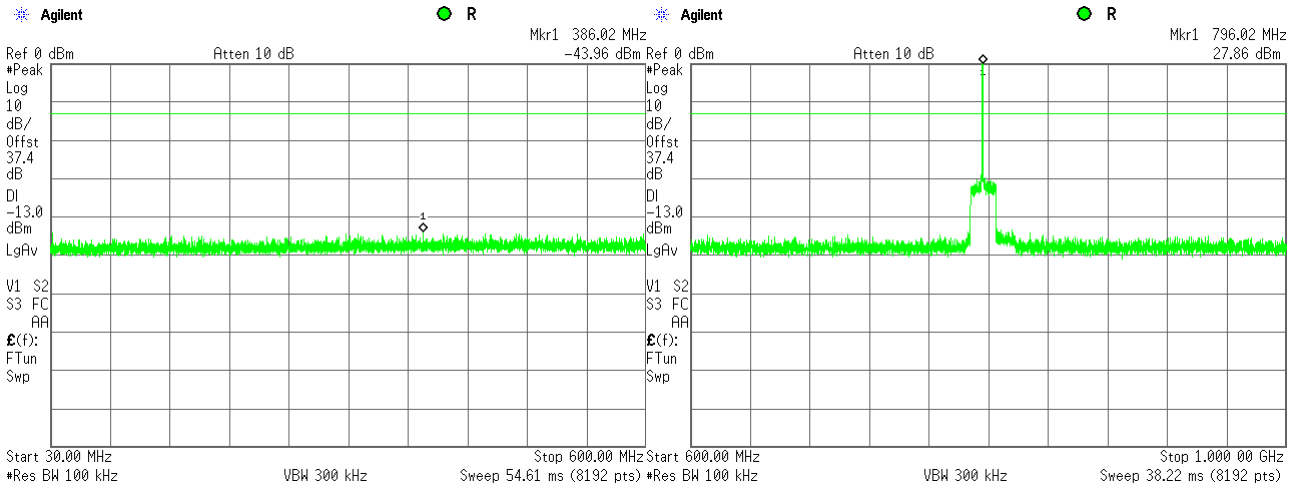
Plot 7.6.43 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.44 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

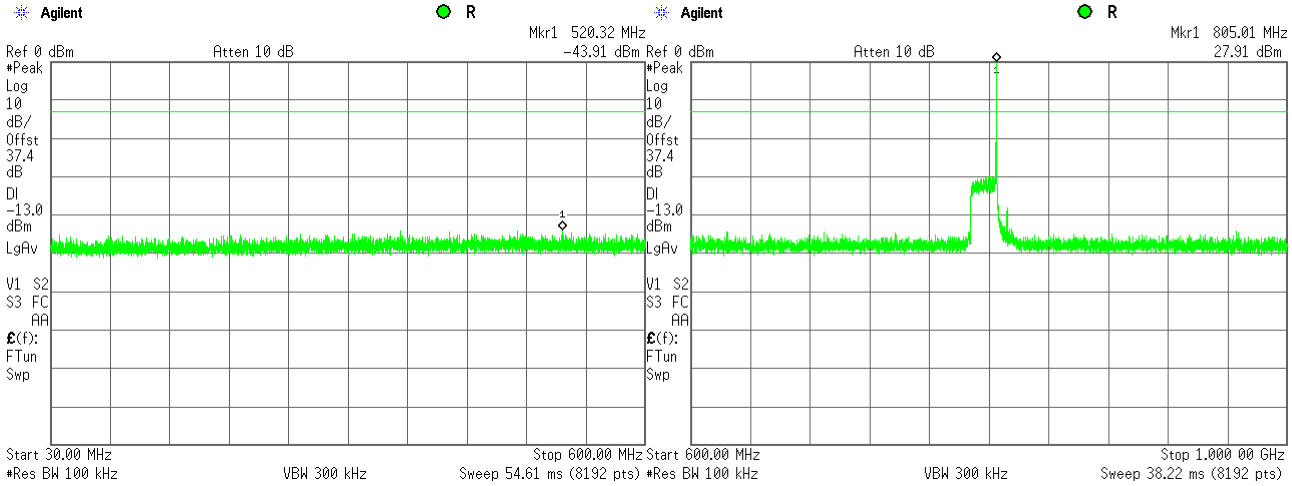
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

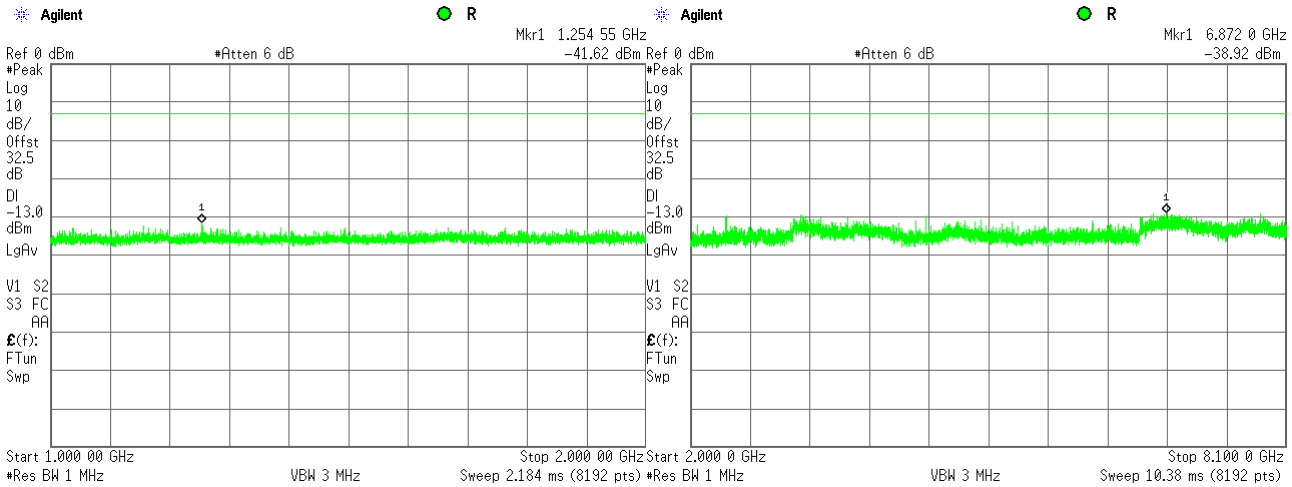
Plot 7.6.45 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.46 Spurious emission measurements in 1000 - 8100 MHz range at low carrier frequency

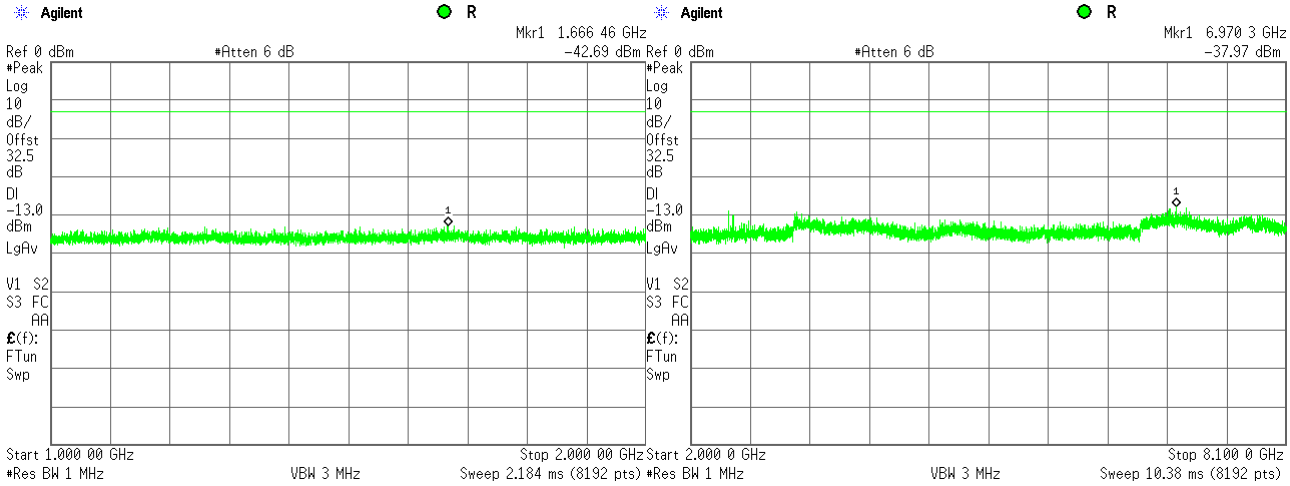
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

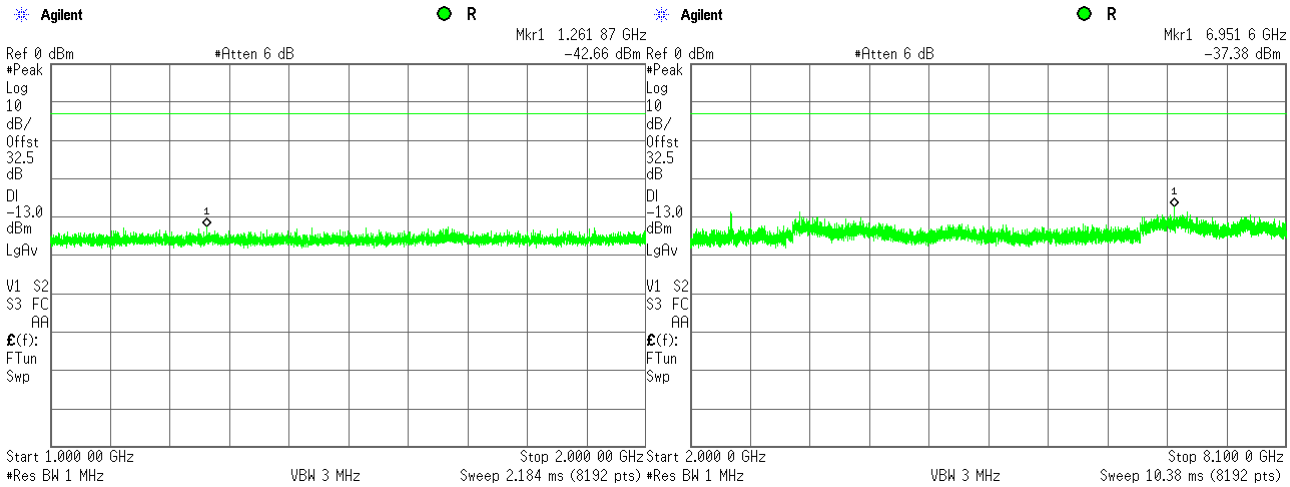
Plot 7.6.47 Spurious emission measurements in 1000 - 8100 MHz at mid carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.48 Spurious emission measurements in 1000 - 8100 MHz at high carrier frequency

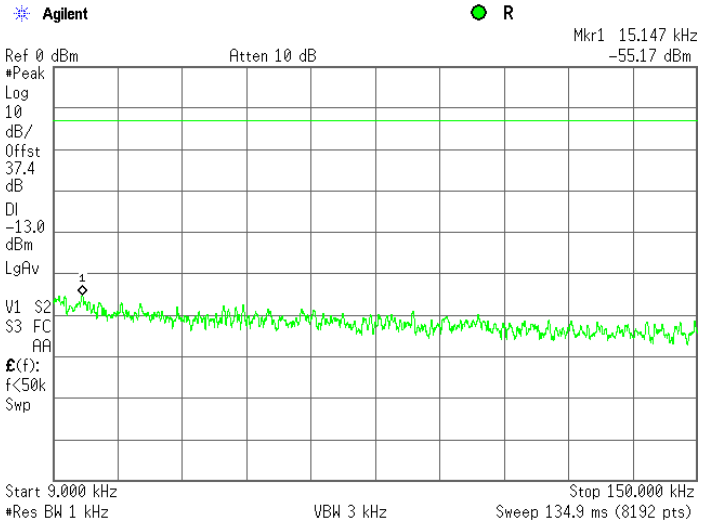
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

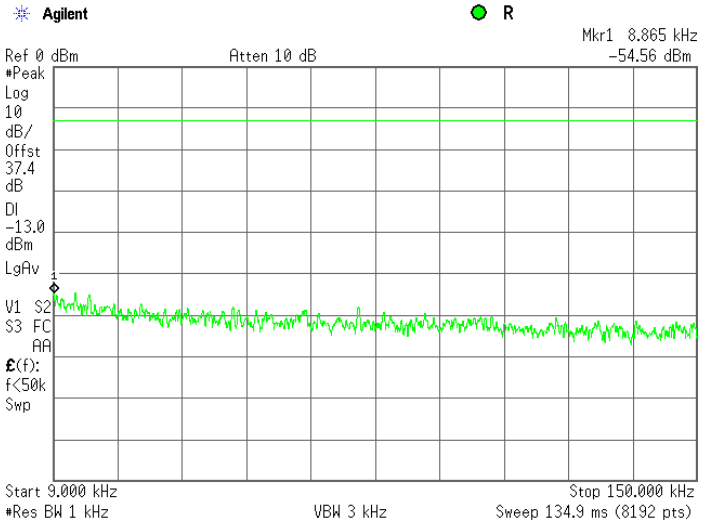
Plot 7.6.49 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.50 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

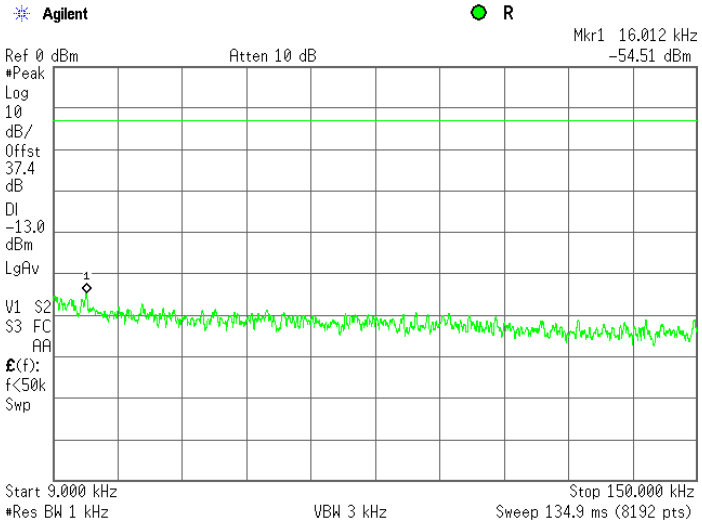
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

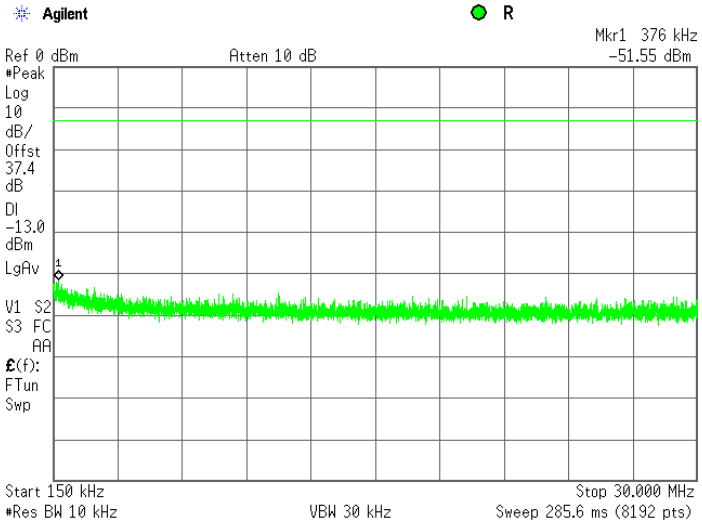
Plot 7.6.51 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.52 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

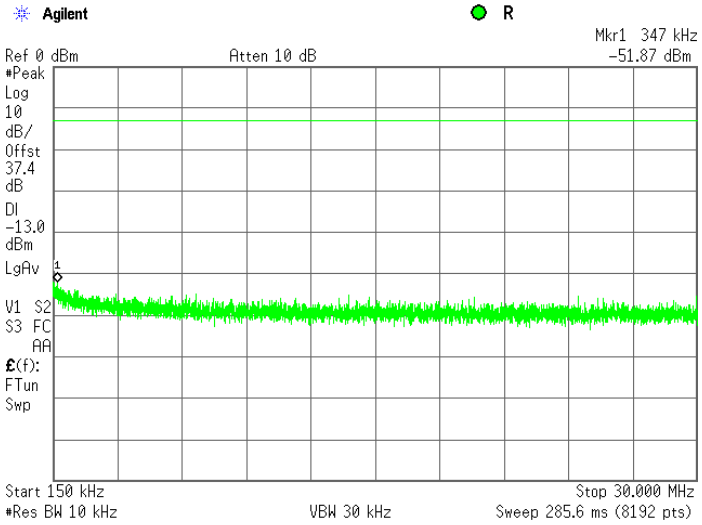
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

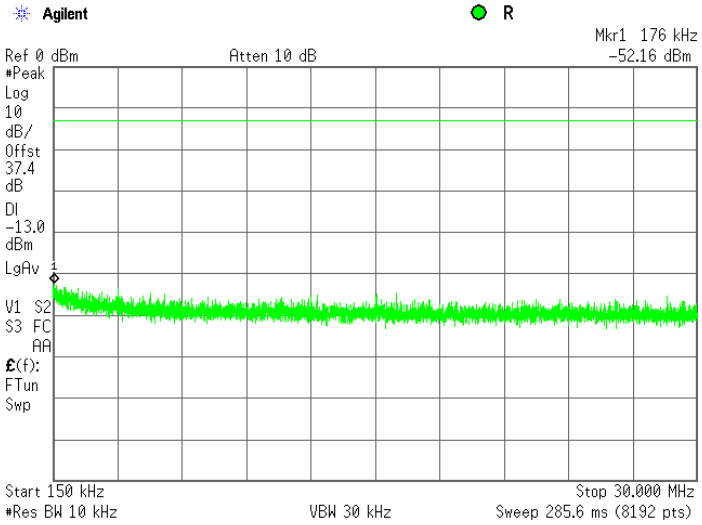
Plot 7.6.53 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: iDEN QAM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band



Plot 7.6.54 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

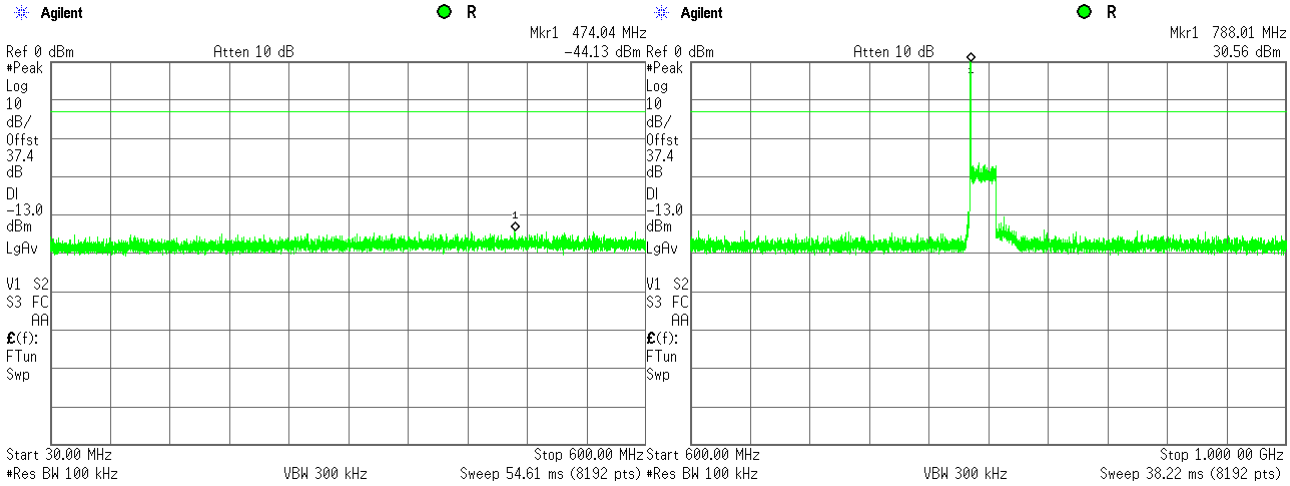
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: iDEN QAM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

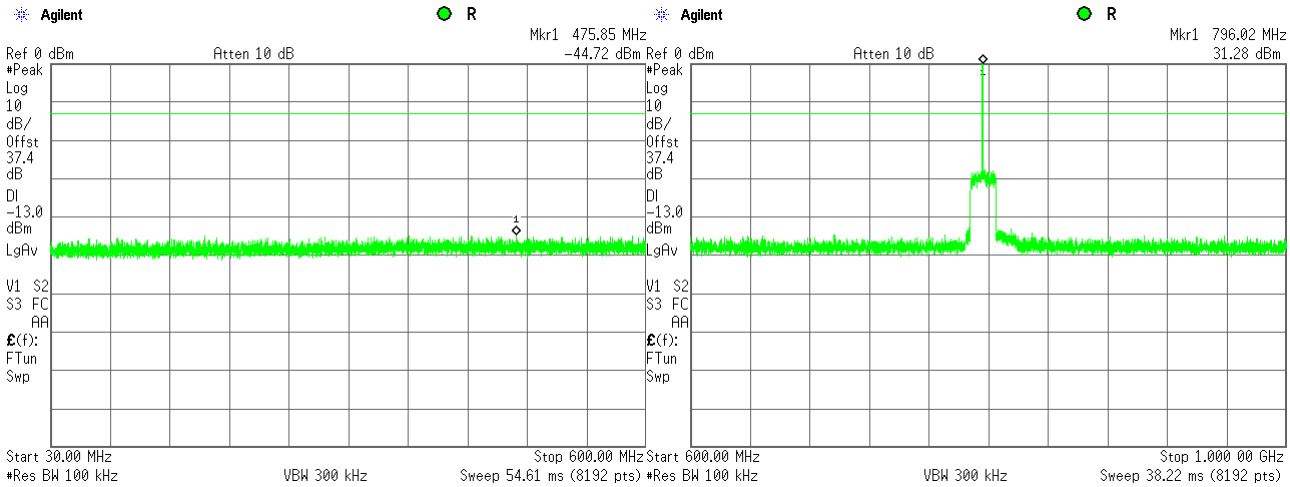
Plot 7.6.55 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.56 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

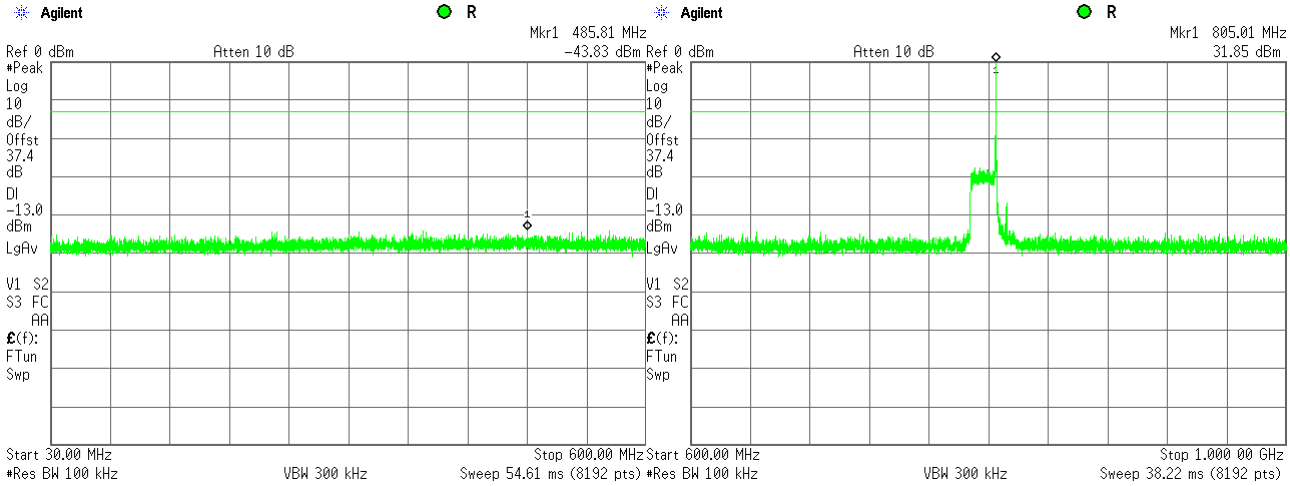
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

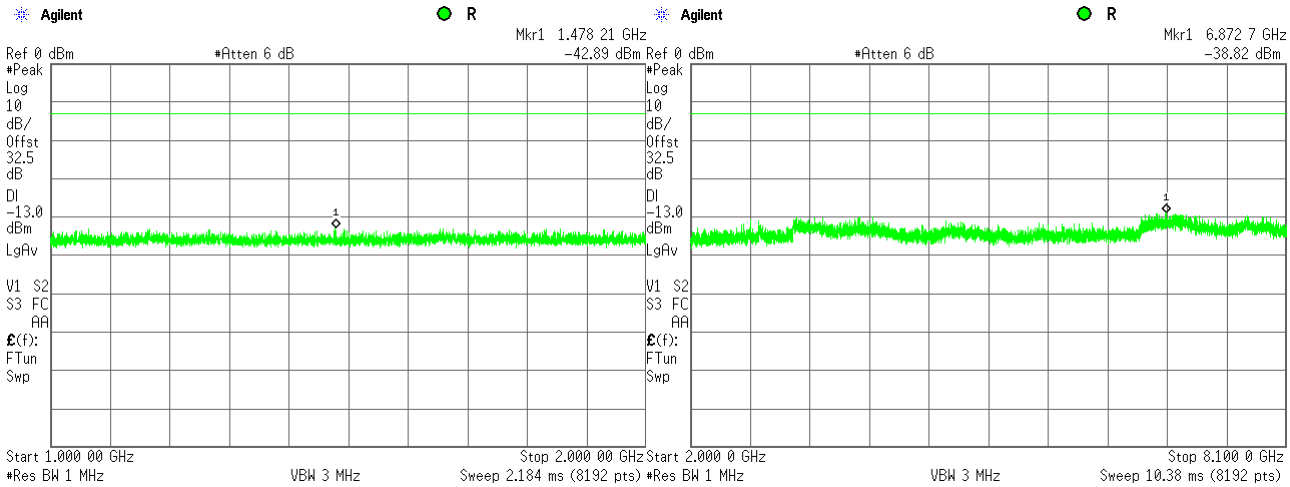
Plot 7.6.57 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.58 Spurious emission measurements in 1000 - 8100 MHz range at low carrier frequency

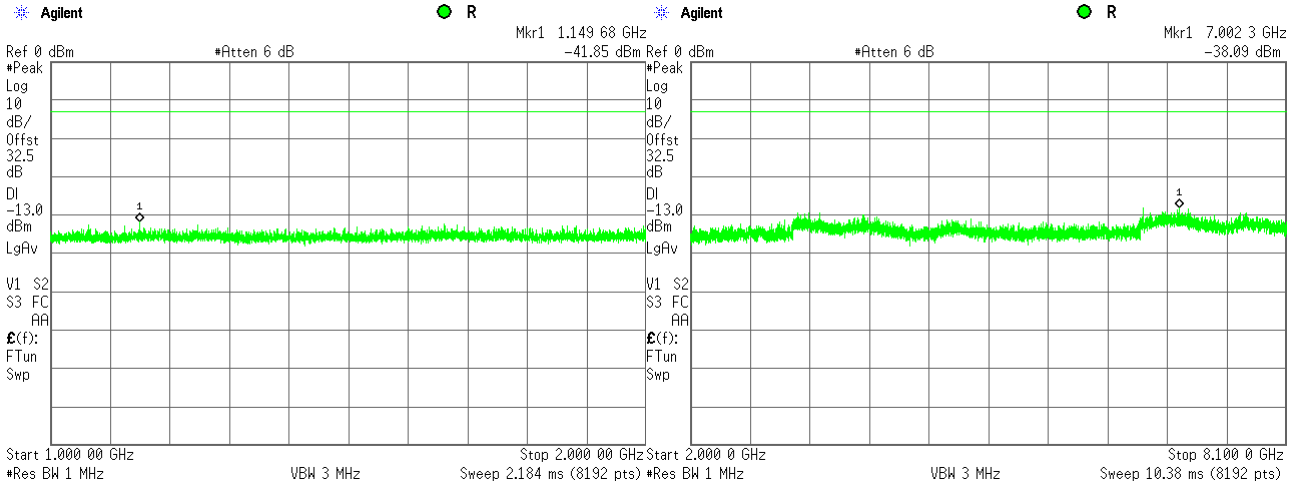
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

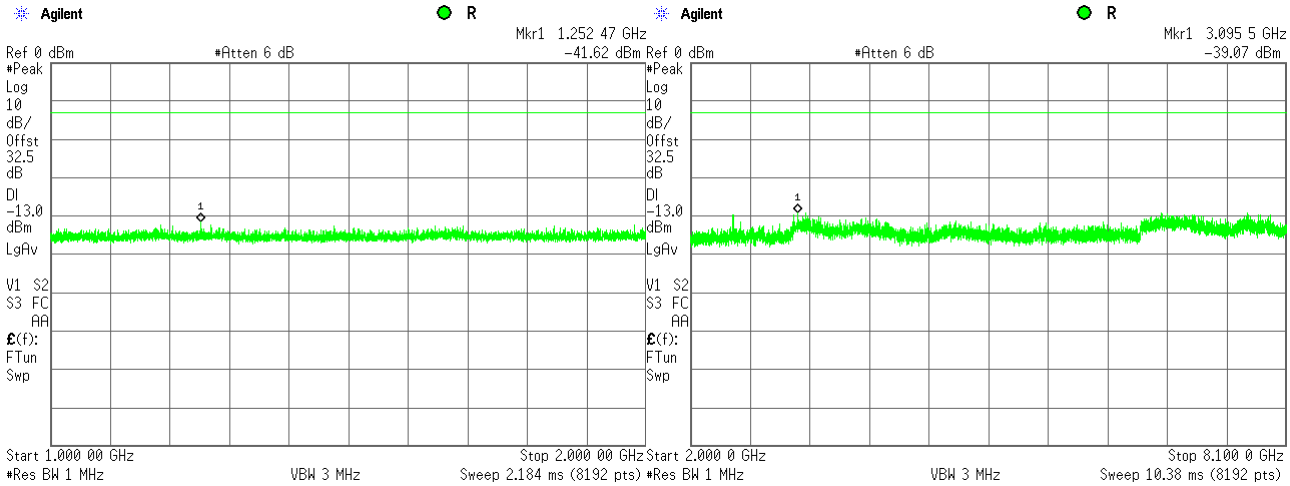
Plot 7.6.59 Spurious emission measurements in 1000 - 8100 MHz at mid carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink k transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.60 Spurious emission measurements in 1000 - 8100 MHz at high carrier frequency

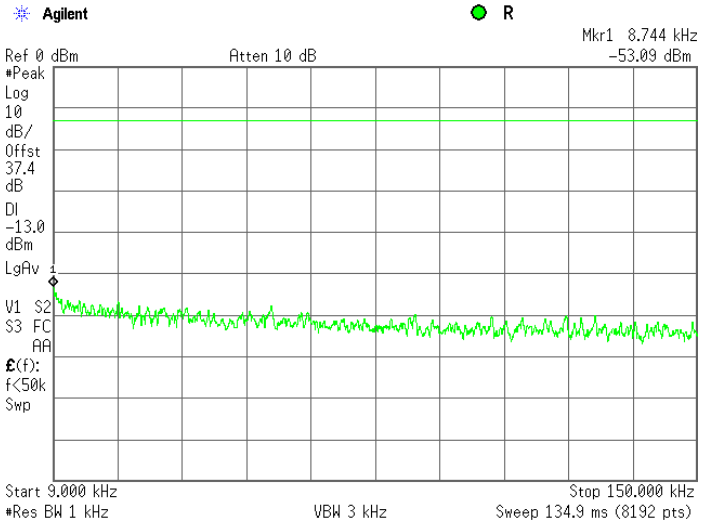
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

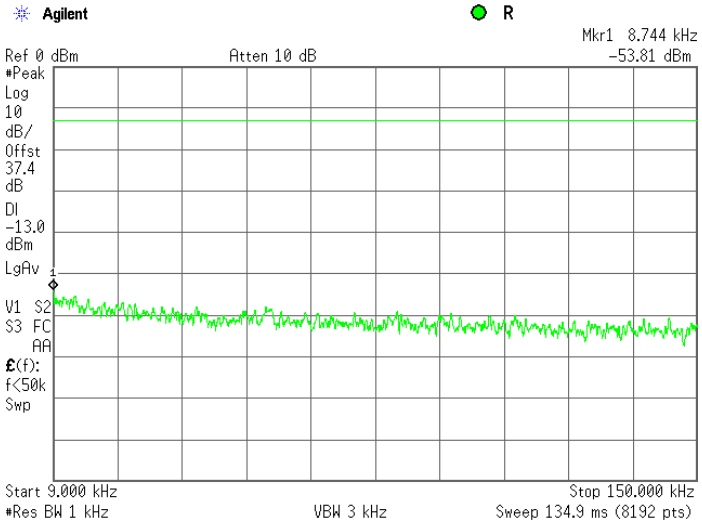
Plot 7.6.61 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.62 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

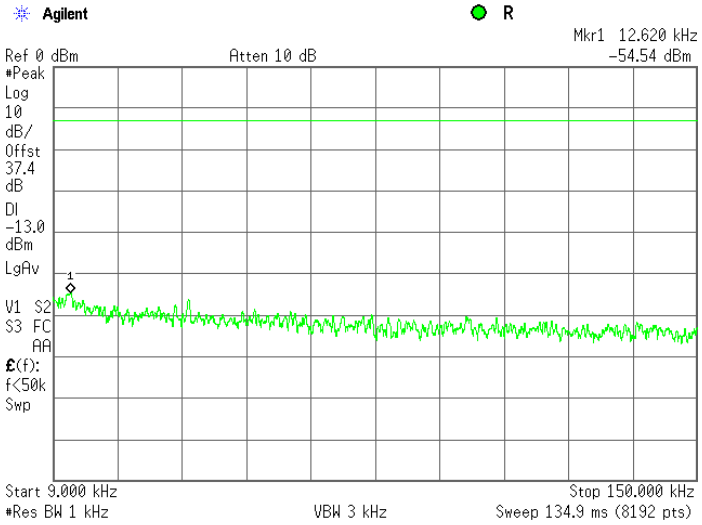
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

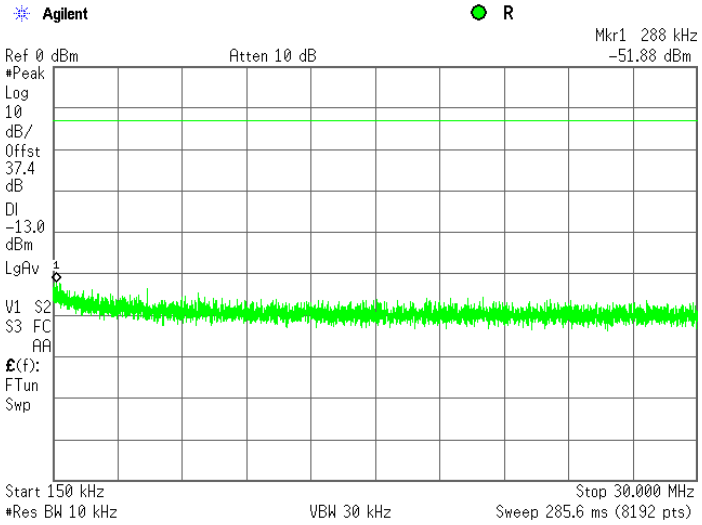
Plot 7.6.63 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.64 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

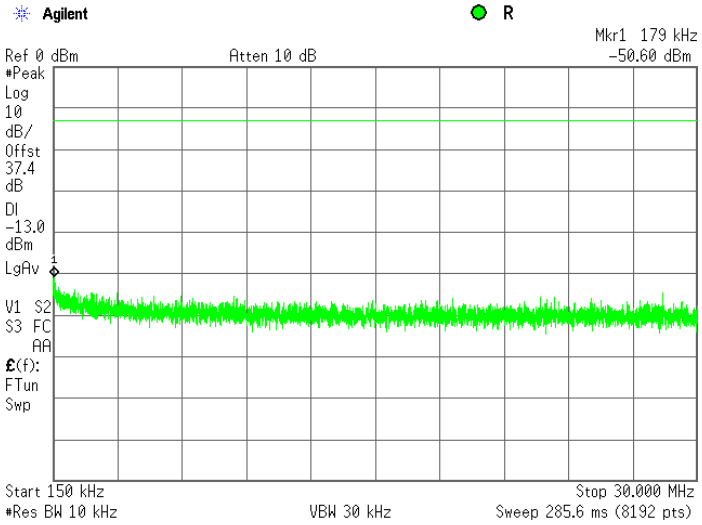
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

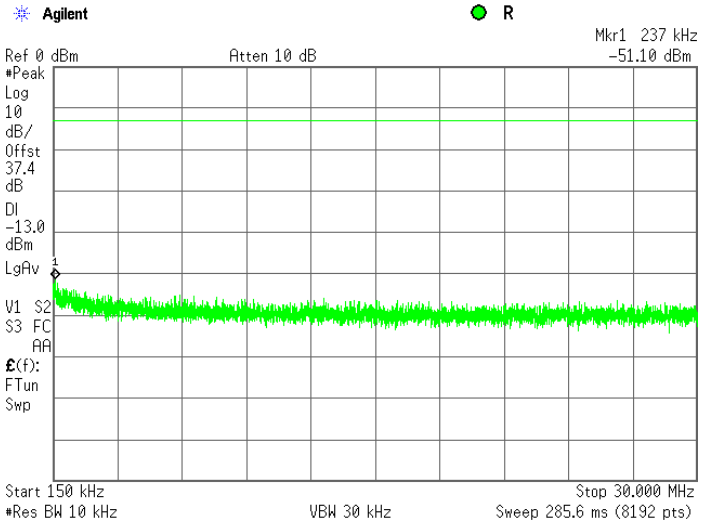
Plot 7.6.65 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band



Plot 7.6.66 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

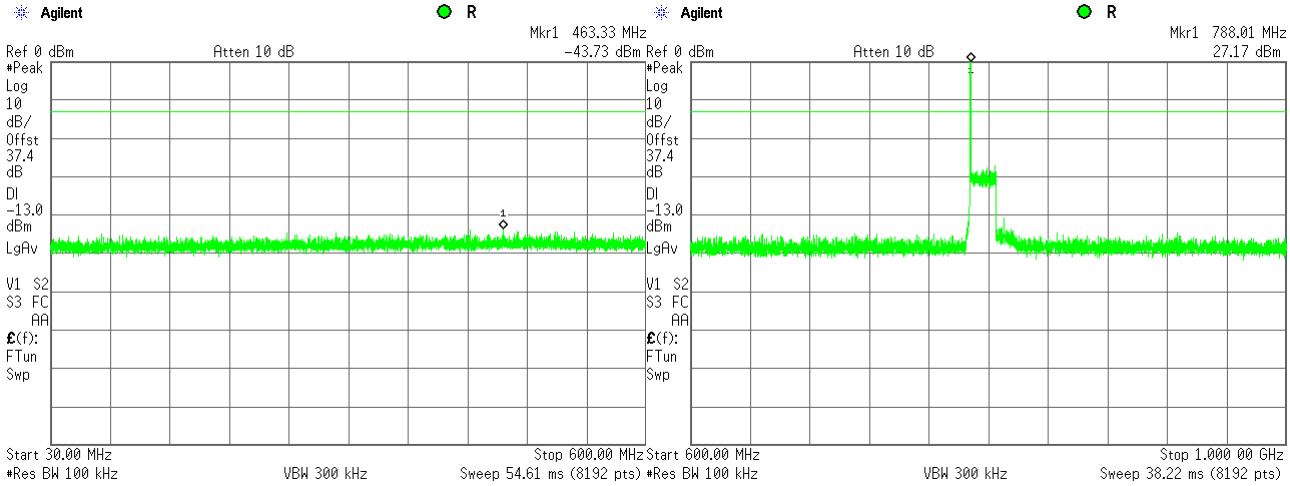
FREQUENCY RANGE: 788 - 805 MHz
OPERATIONAL MODE: Analog FM uplink transmit
INPUT PORT: Mobile
INPUT POWER: -54 dBm
CONFIGURATION: Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

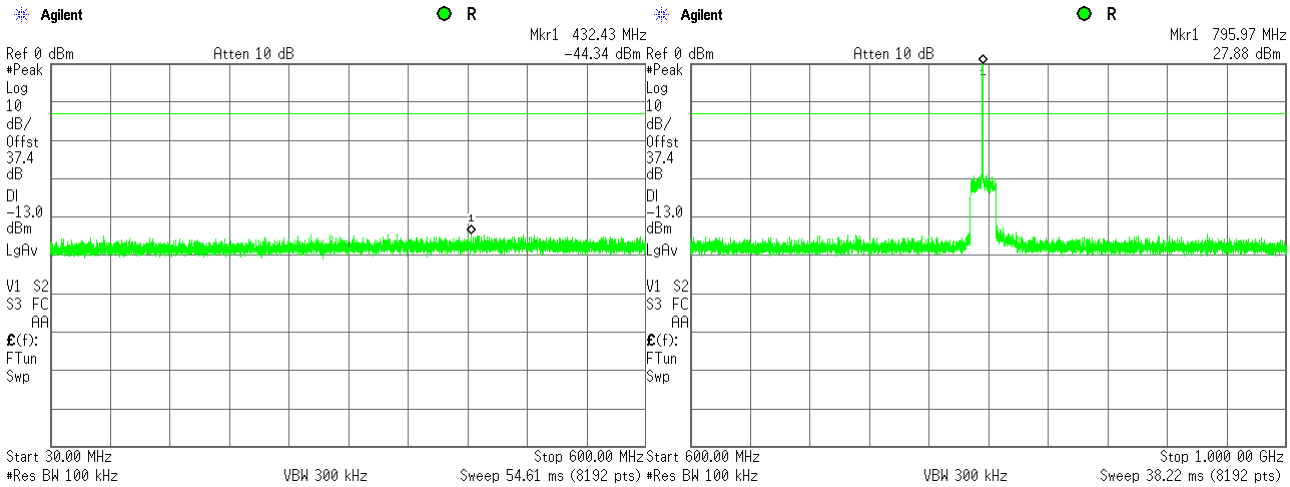
Plot 7.6.67 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.68 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

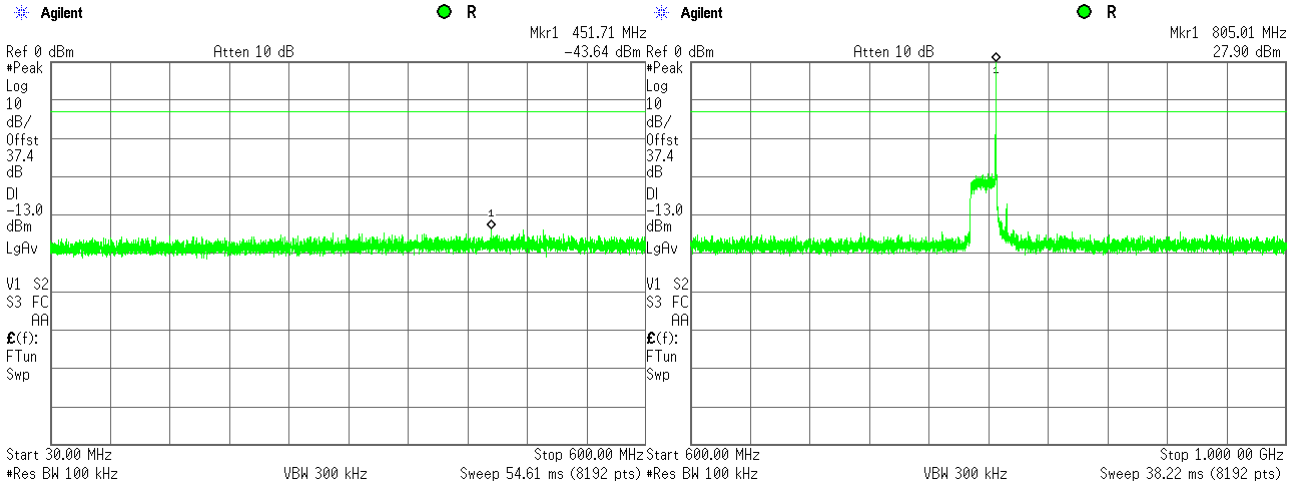
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

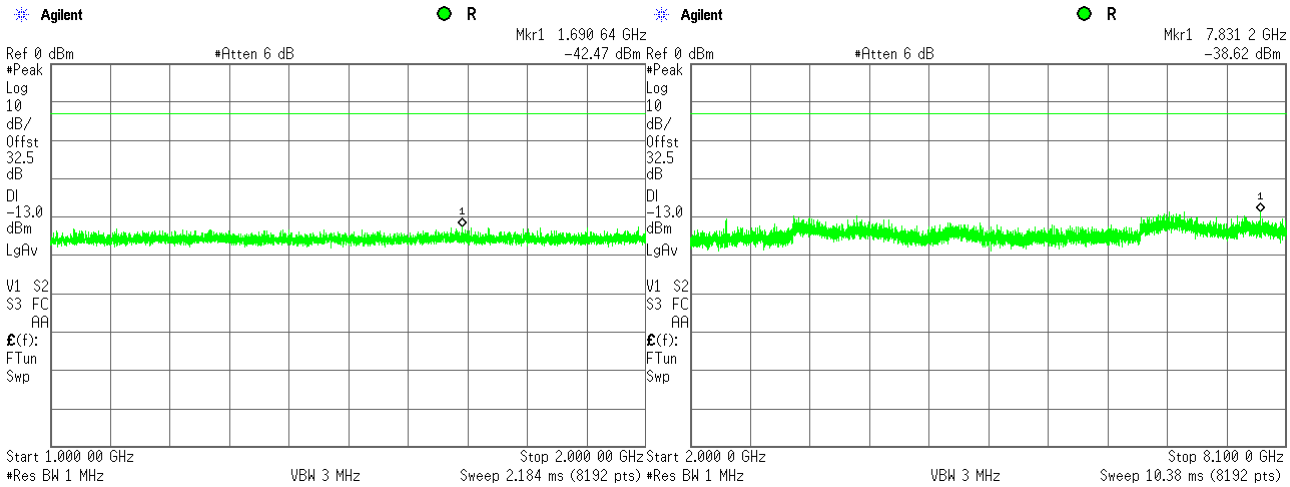
Plot 7.6.69 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.70 Spurious emission measurements in 1000 - 8100 MHz range at low carrier frequency

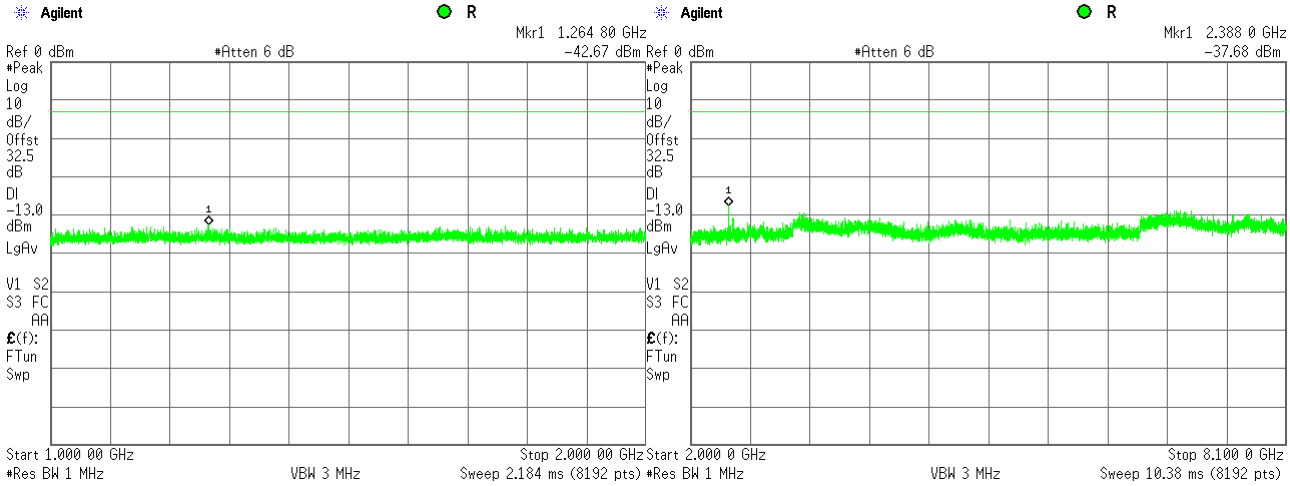
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

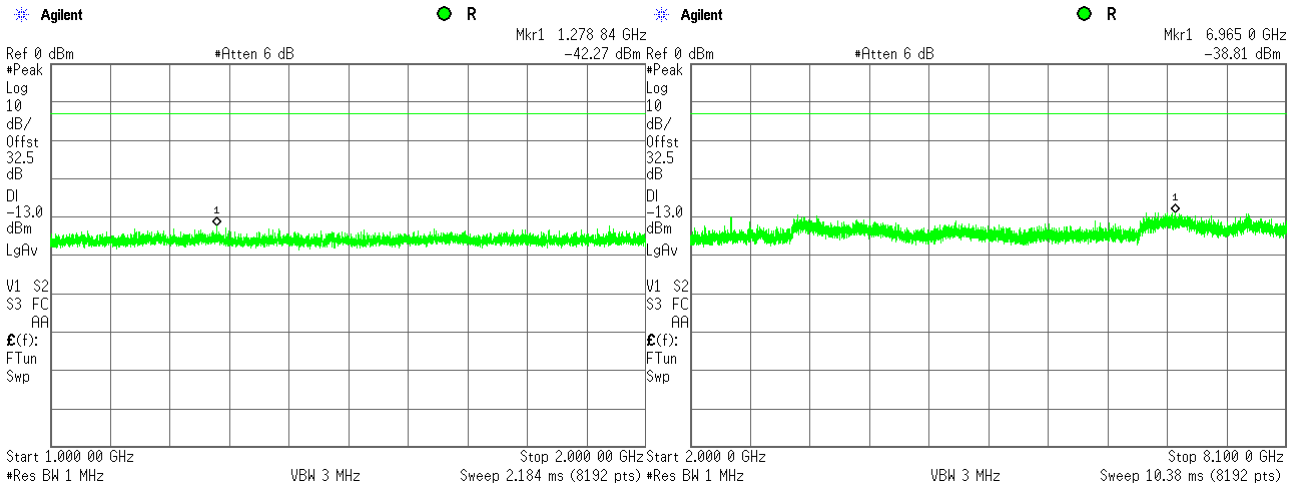
Plot 7.6.71 Spurious emission measurements in 1000 - 8100 MHz at mid carrier frequency

FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.72 Spurious emission measurements in 1000 - 8100 MHz at high carrier frequency

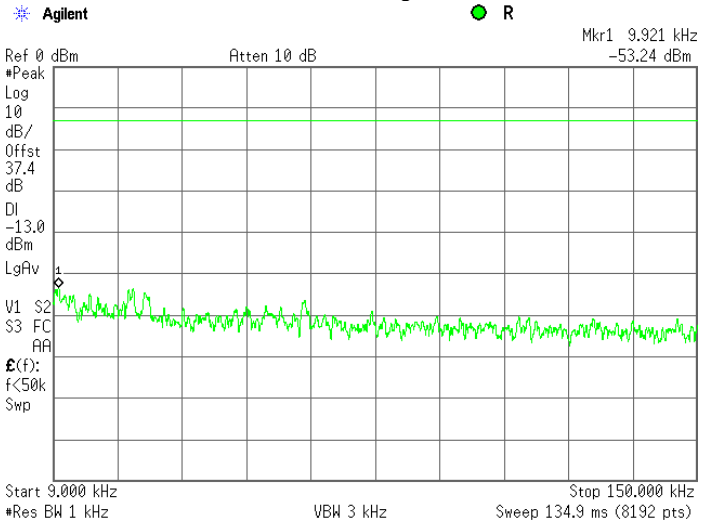
FREQUENCY RANGE:	788 - 805 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

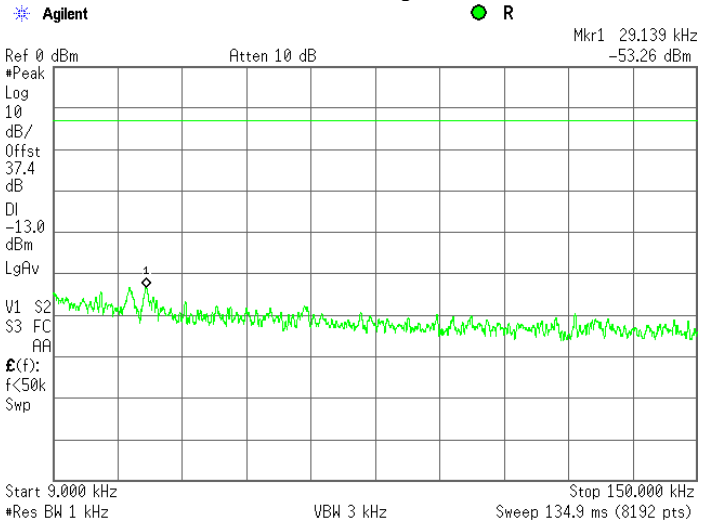
Plot 7.6.73 Spurious emission measurements in 9 - 100 kHz range at low carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.74 Spurious emission measurements in 9 - 100 kHz range at mid carrier frequency

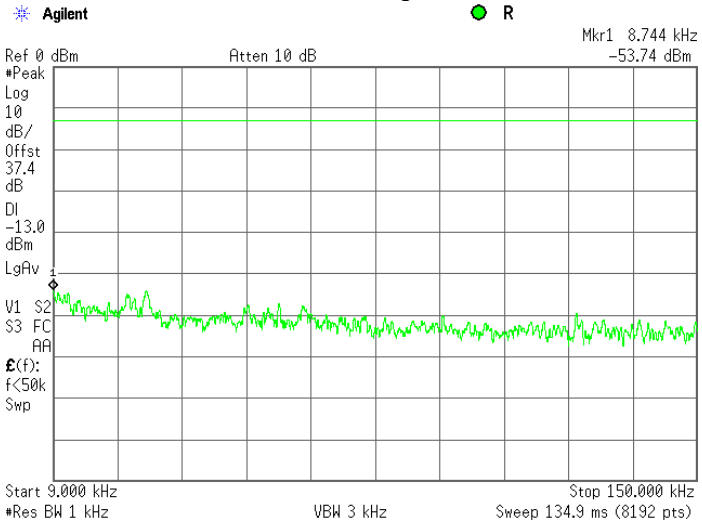
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

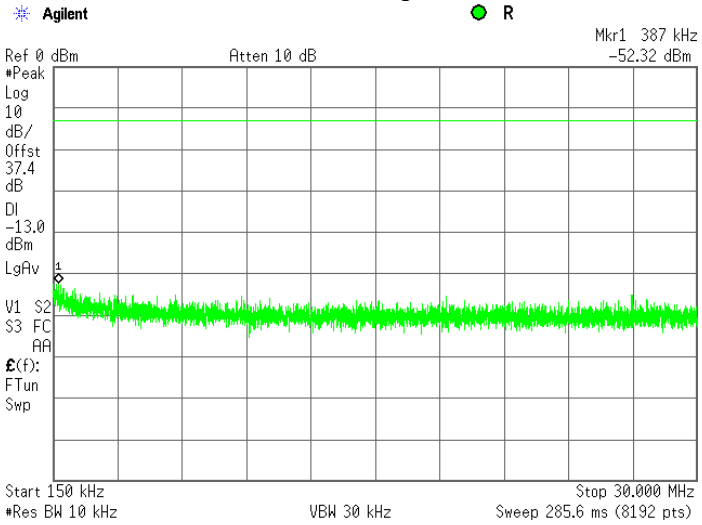
Plot 7.6.75 Spurious emission measurements in 9 - 100 kHz range at high carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.76 Spurious emission measurements in 0.15 – 30.0 MHz range at low carrier frequency

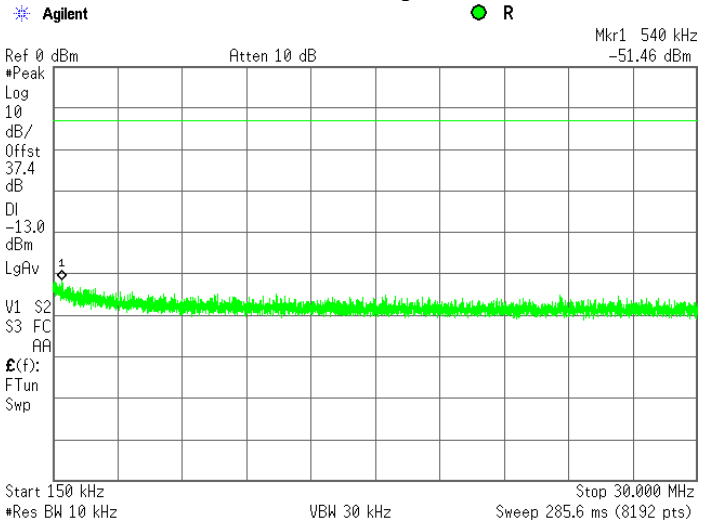
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

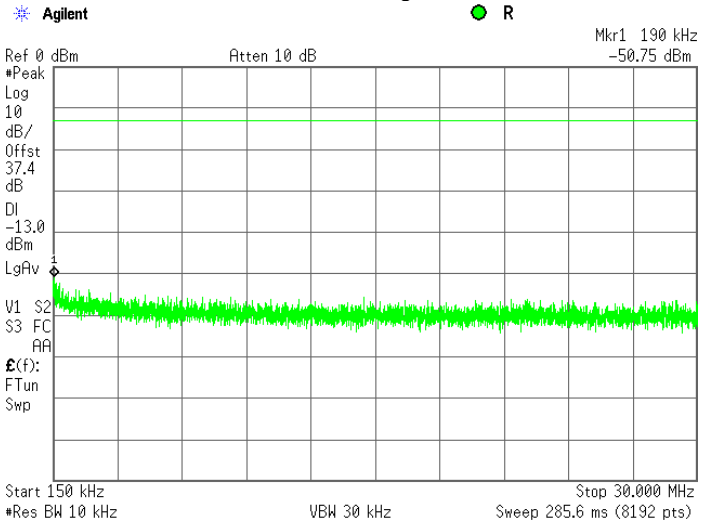
Plot 7.6.77 Spurious emission measurements in 0.15 – 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.78 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

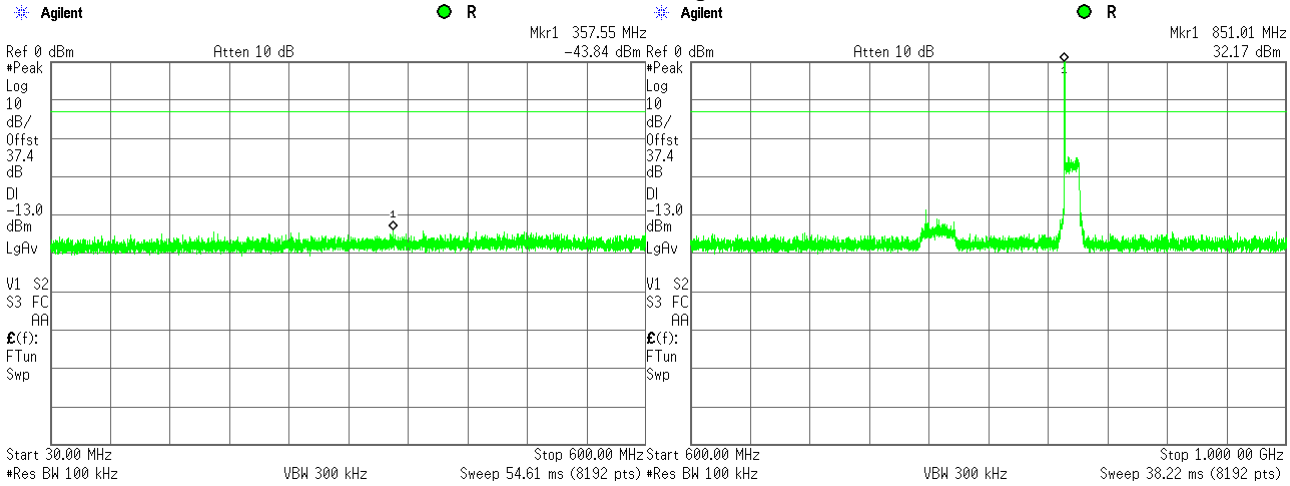
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

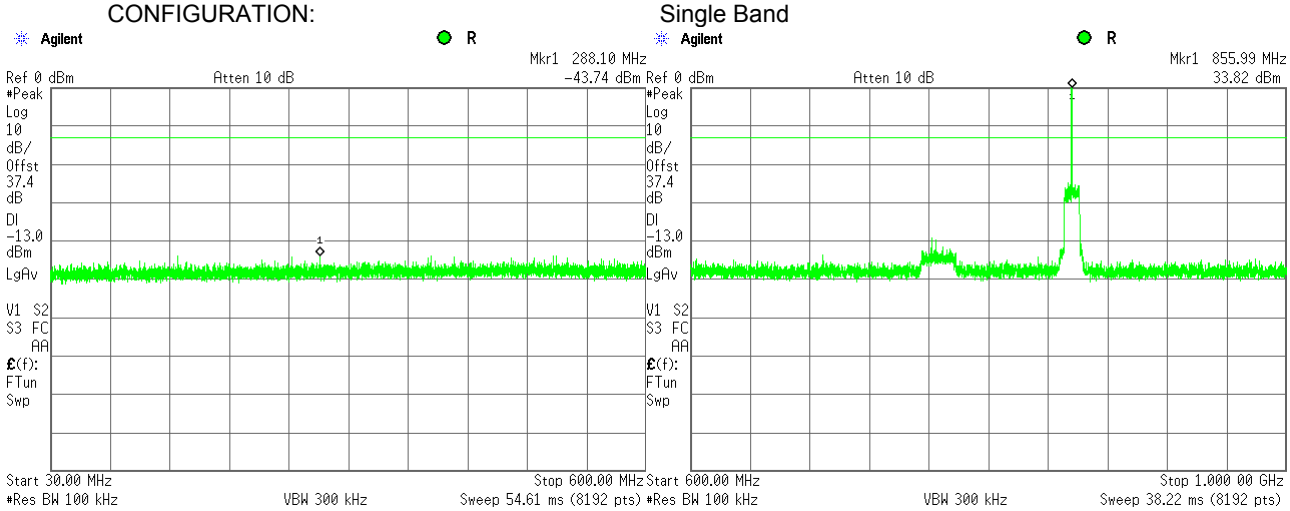
Plot 7.6.79 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.80 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

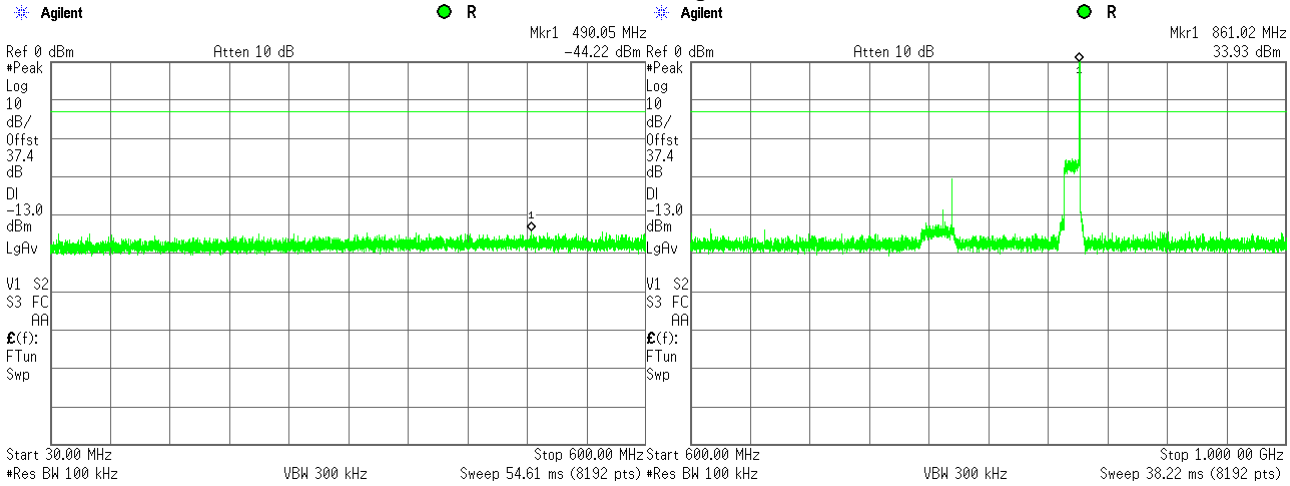
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

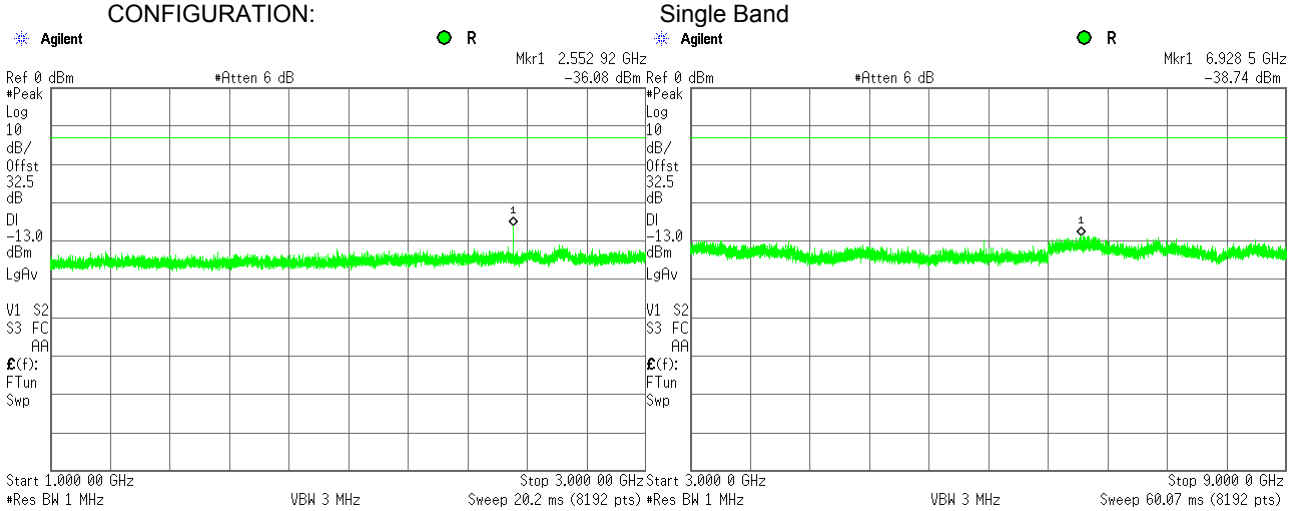
Plot 7.6.81 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.82 Spurious emission measurements in 1000 - 9000 MHz range at low carrier frequency

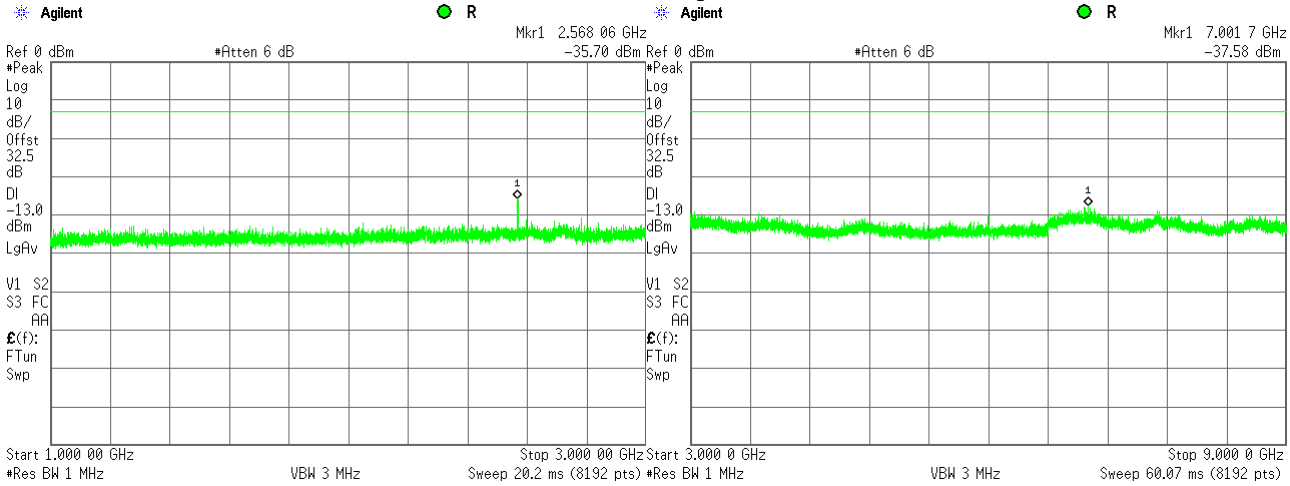
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

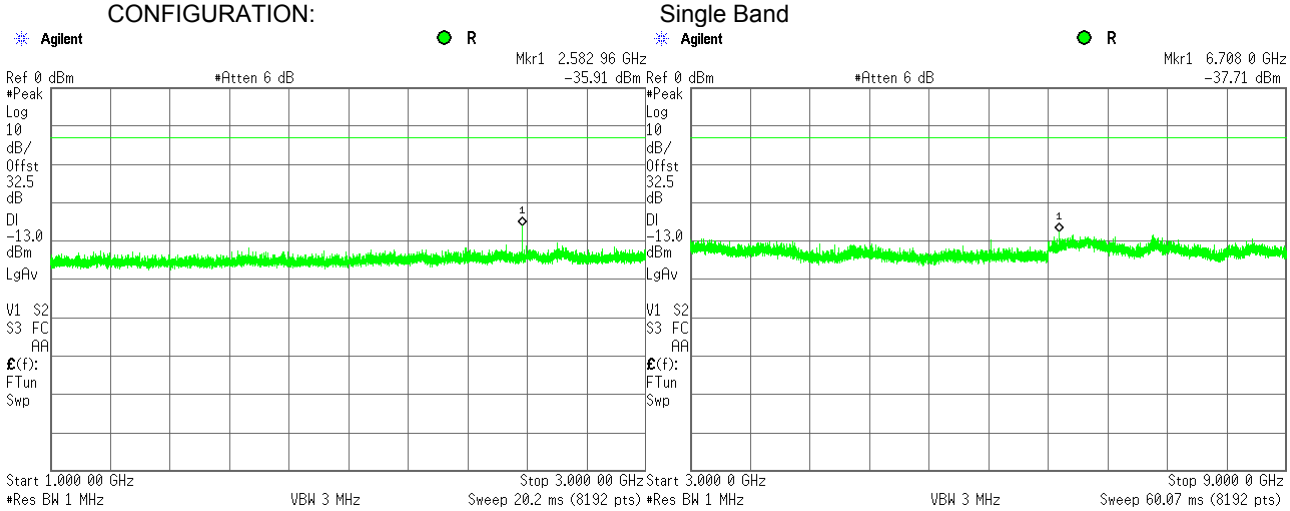
Plot 7.6.83 Spurious emission measurements in 1000 - 9000 MHz at mid carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.84 Spurious emission measurements in 1000 - 9000 MHz at high carrier frequency

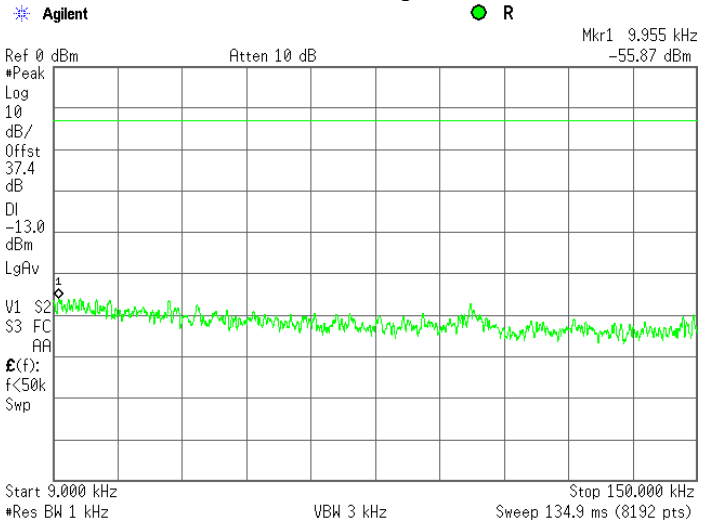
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	C4FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

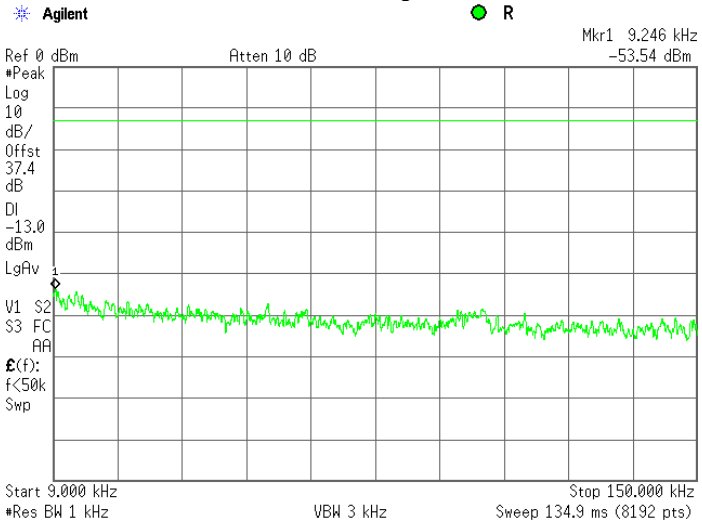
Plot 7.6.85 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.86 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

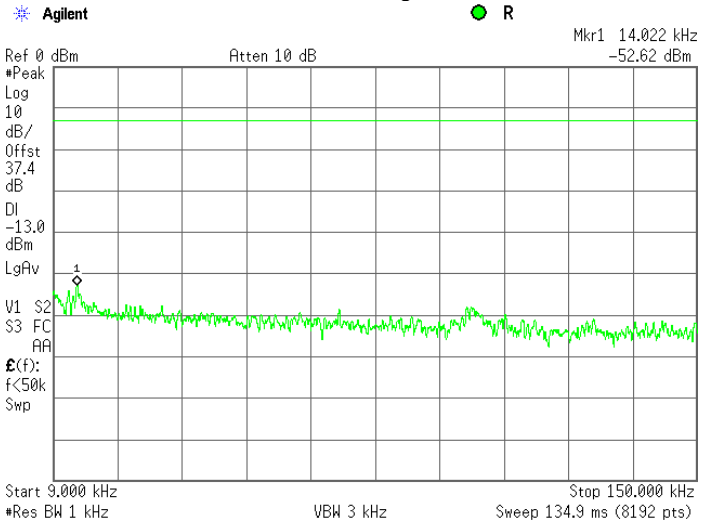
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

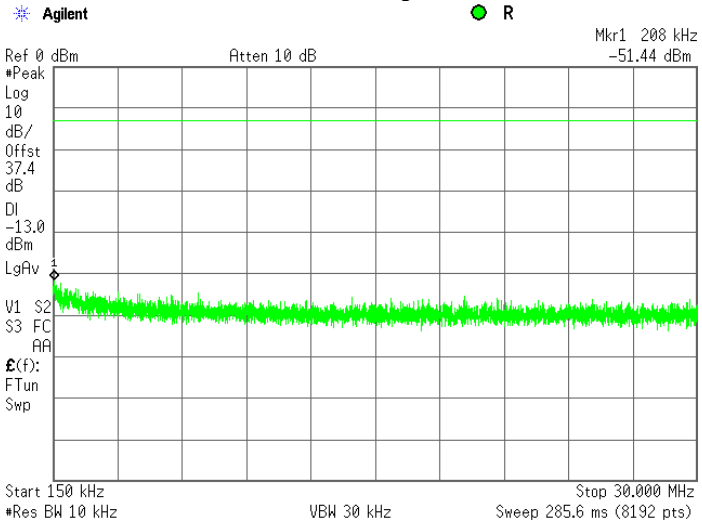
Plot 7.6.87 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.88 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

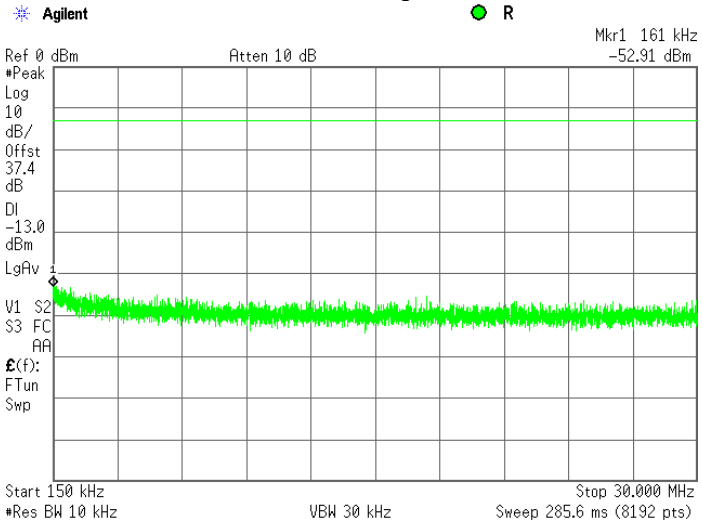
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

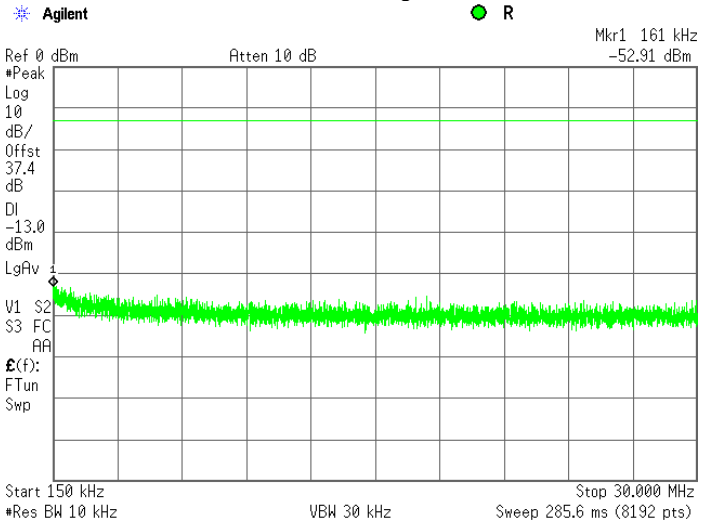
Plot 7.6.89 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.90 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

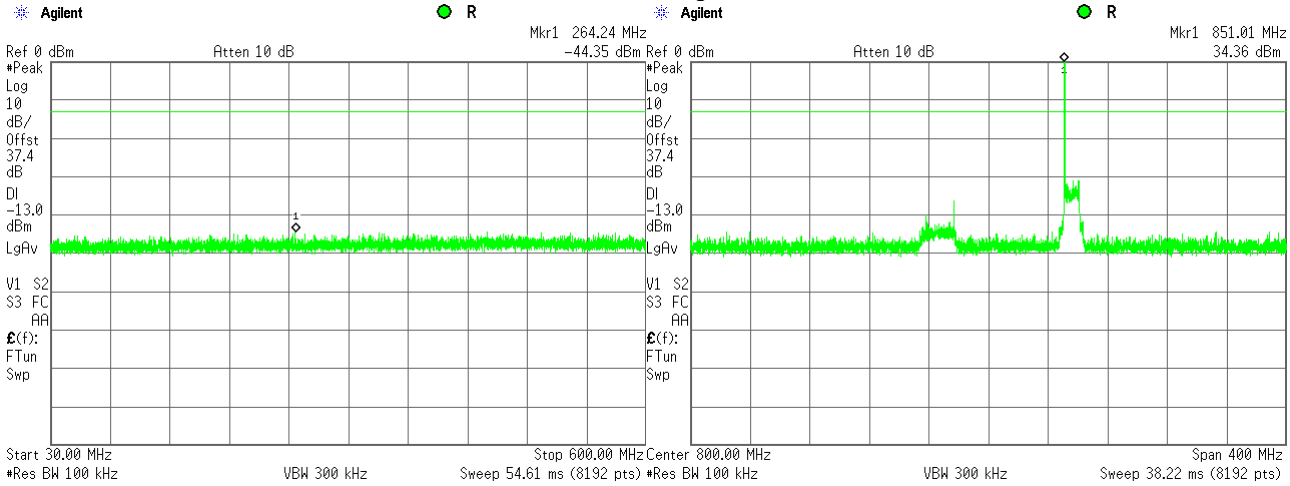
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

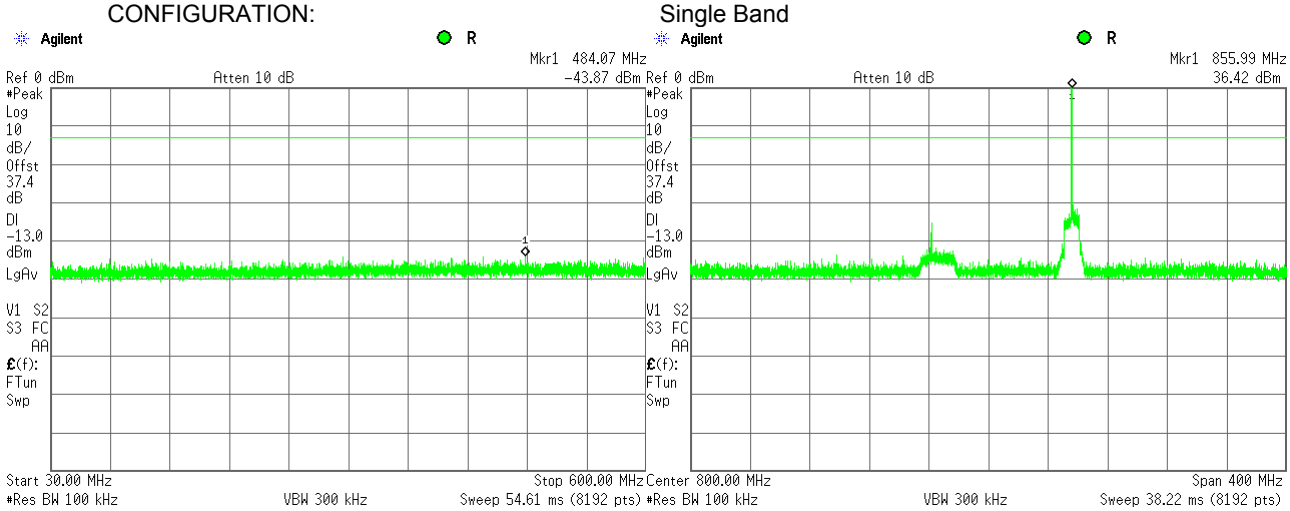
Plot 7.6.91 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.92 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

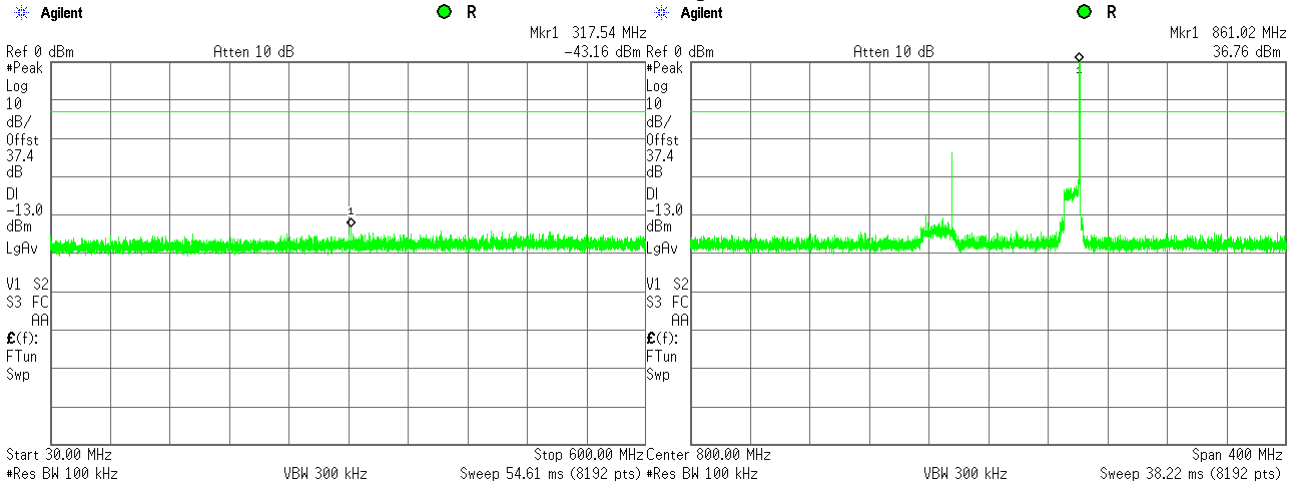
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

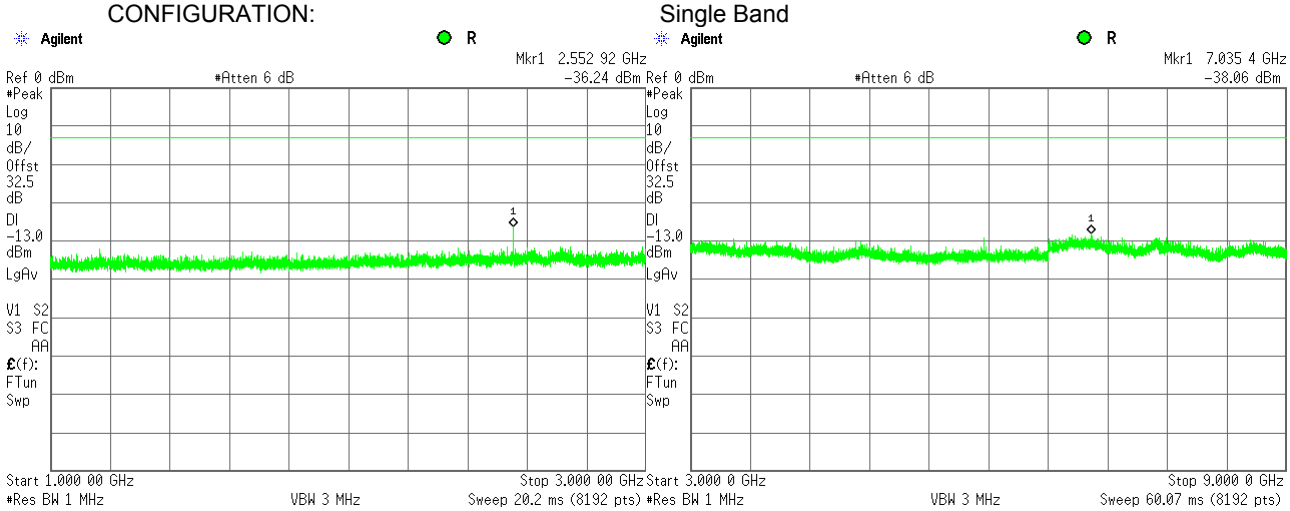
Plot 7.6.93 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.94 Spurious emission measurements in 1000 - 9000 MHz range at low carrier frequency

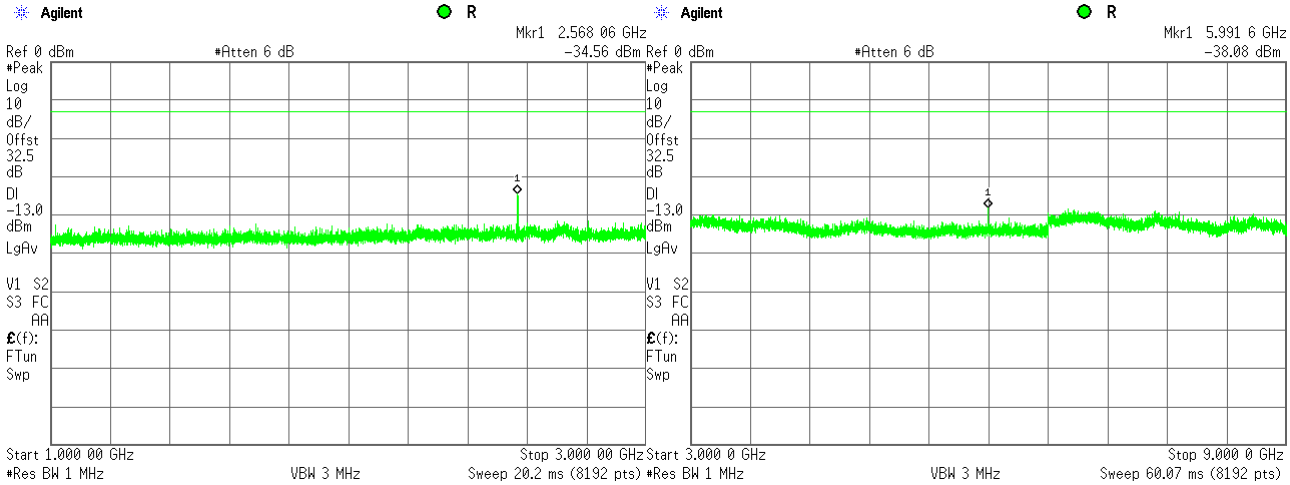
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

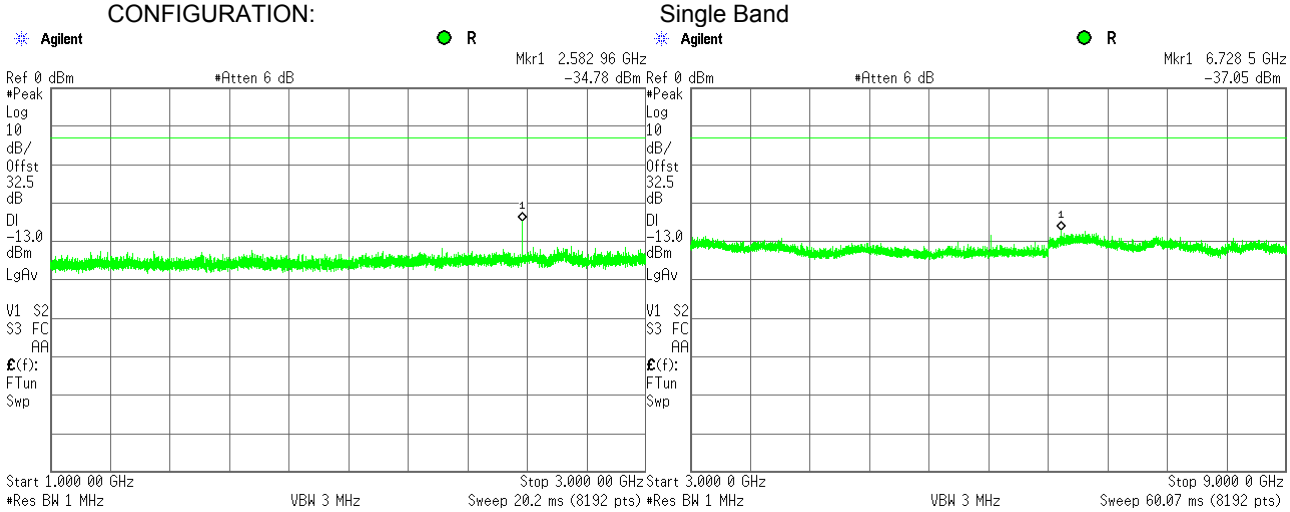
Plot 7.6.95 Spurious emission measurements in 1000 - 9000 MHz at mid carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.96 Spurious emission measurements in 1000 - 9000 MHz at high carrier frequency

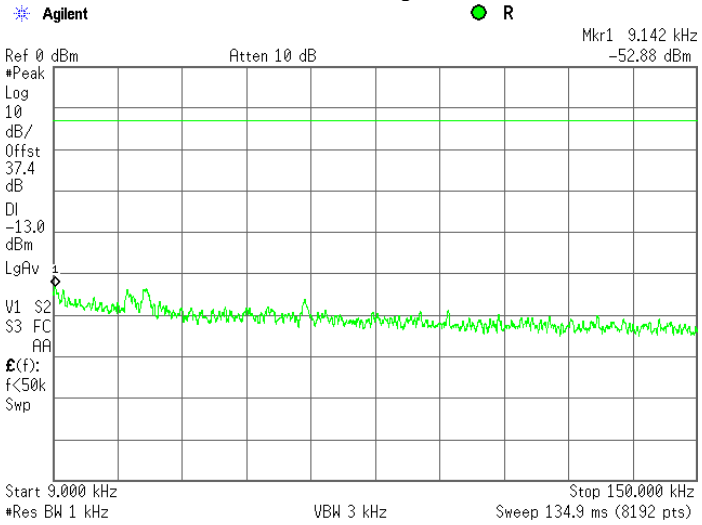
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	iDEN QAM downlink transmit
INPUT PORT:	Mobile
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

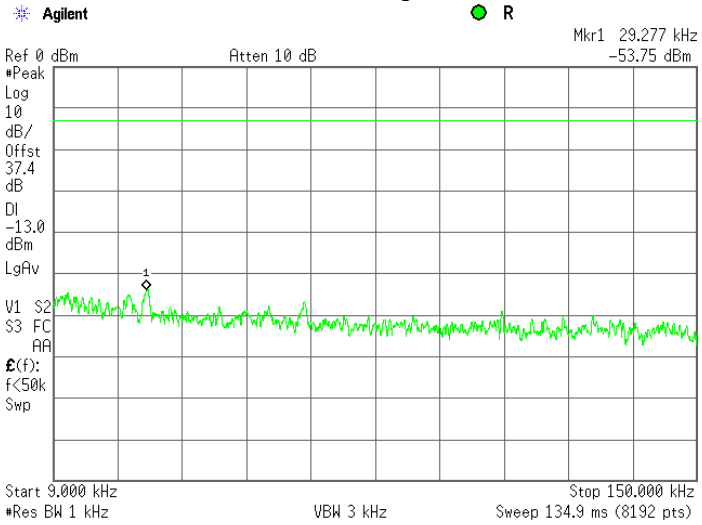
Plot 7.6.97 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.98 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

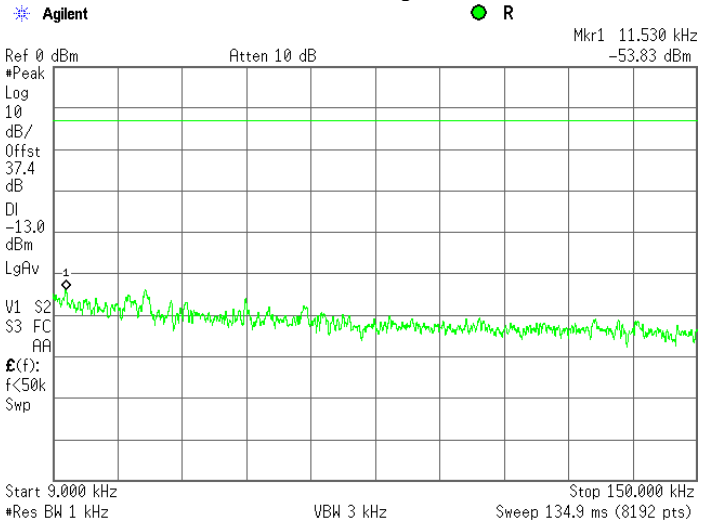
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

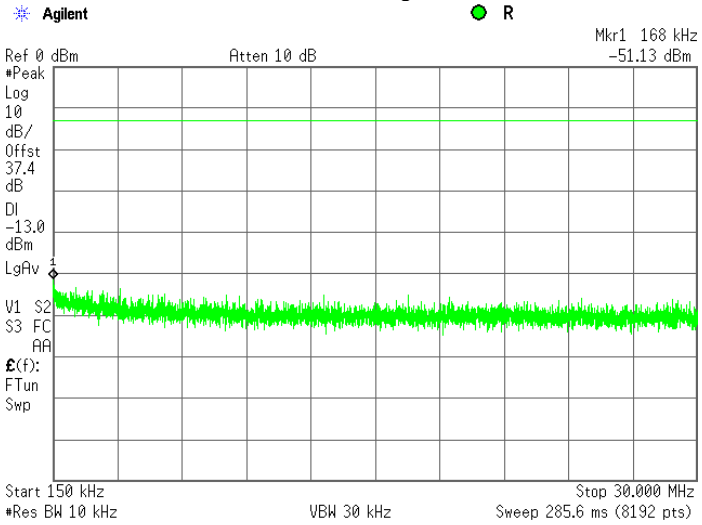
Plot 7.6.99 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.100 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

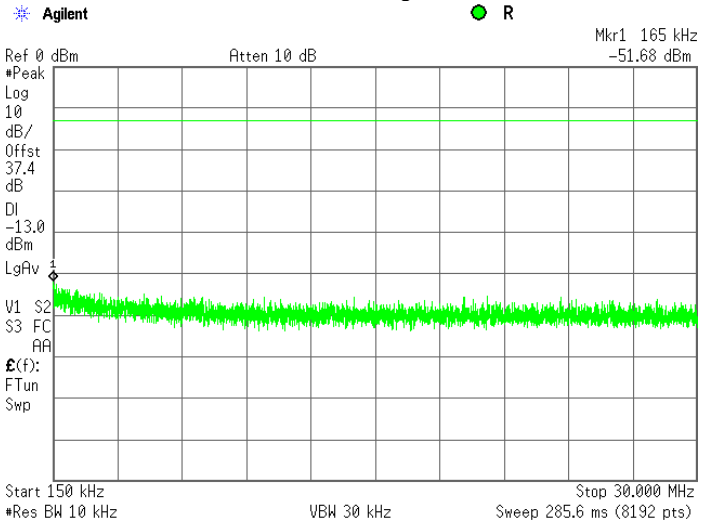
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

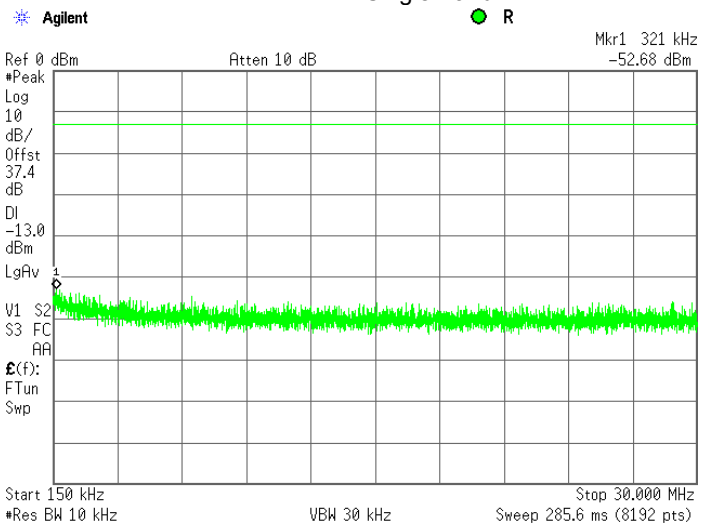
Plot 7.6.101 Spurious emission measurements in 0.15 - 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.102 Spurious emission measurements in 0.15 - 30.0 MHz range at high carrier frequency

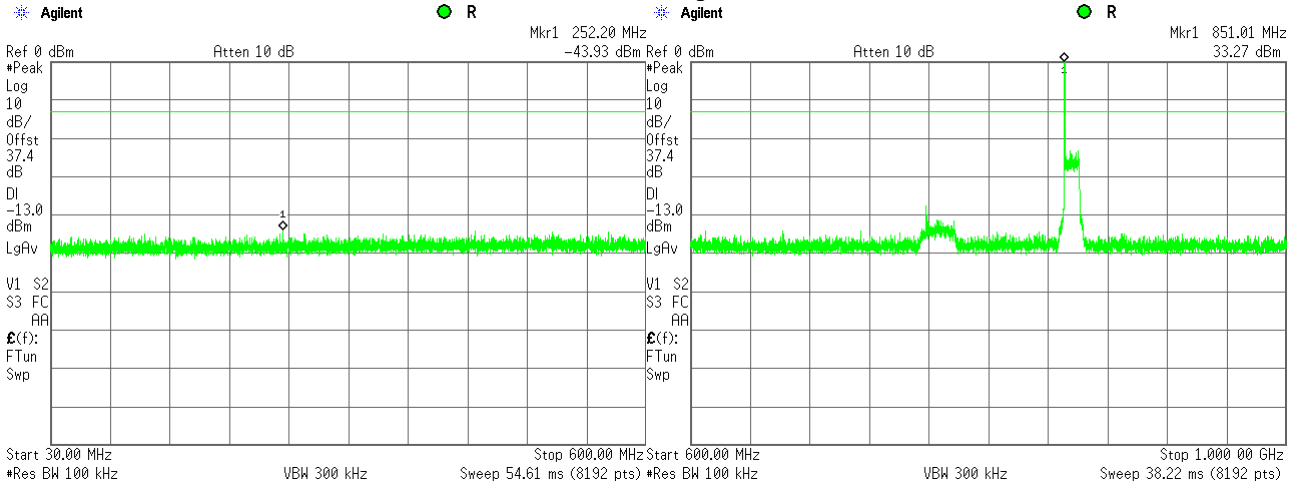
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

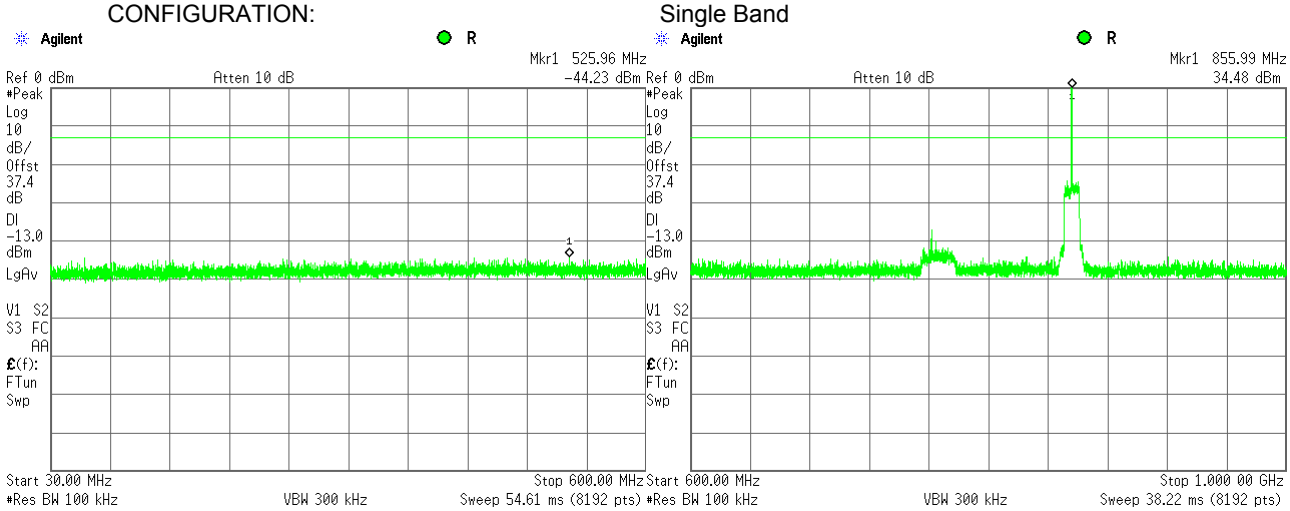
Plot 7.6.103 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.104 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

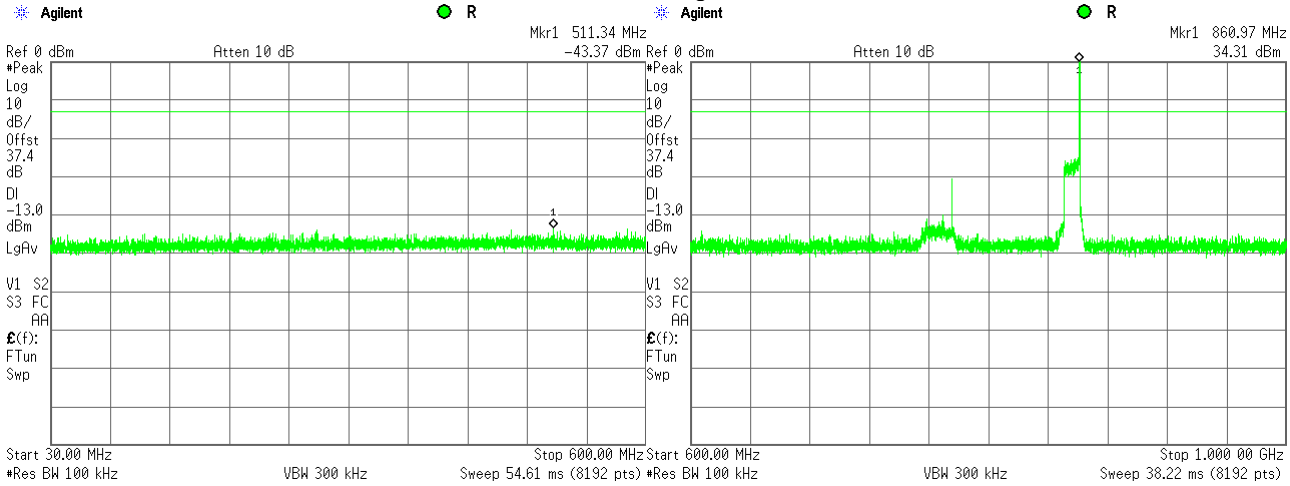
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

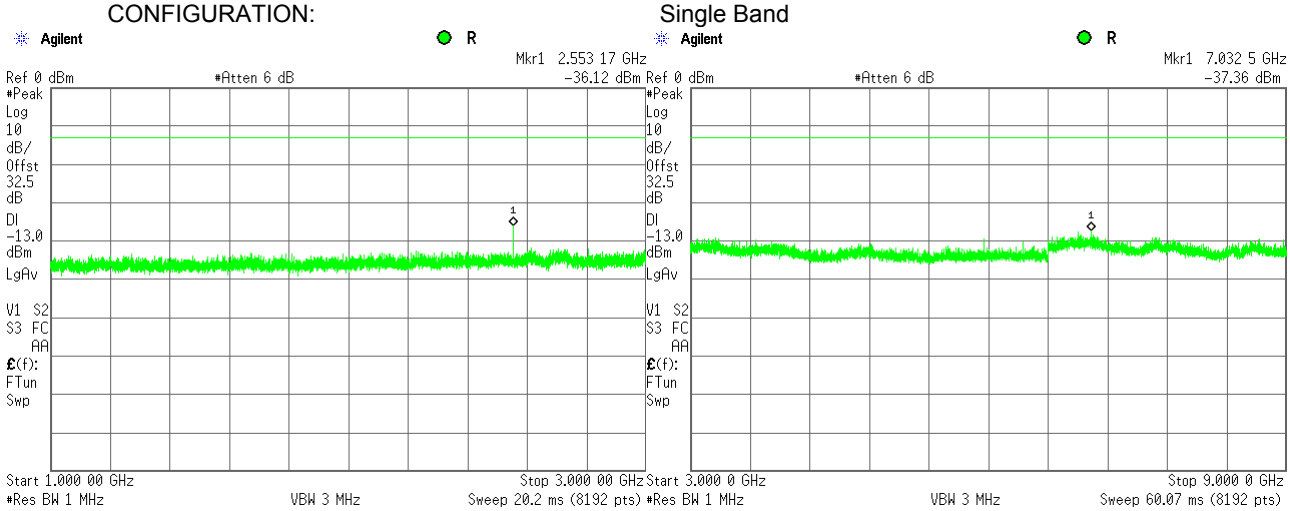
Plot 7.6.105 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.106 Spurious emission measurements in 1000 - 9000 MHz range at low carrier frequency

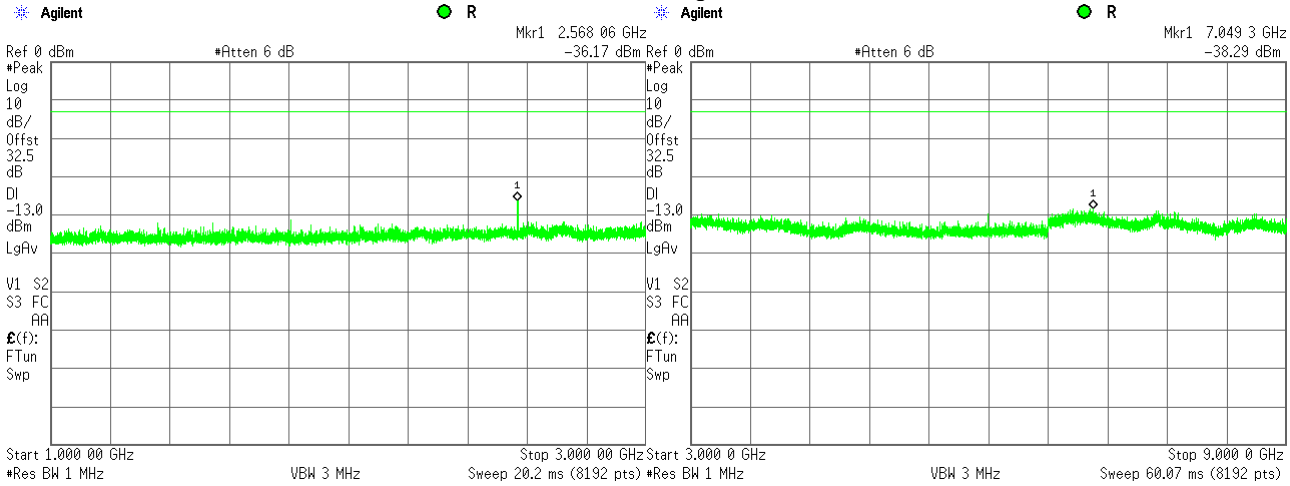
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

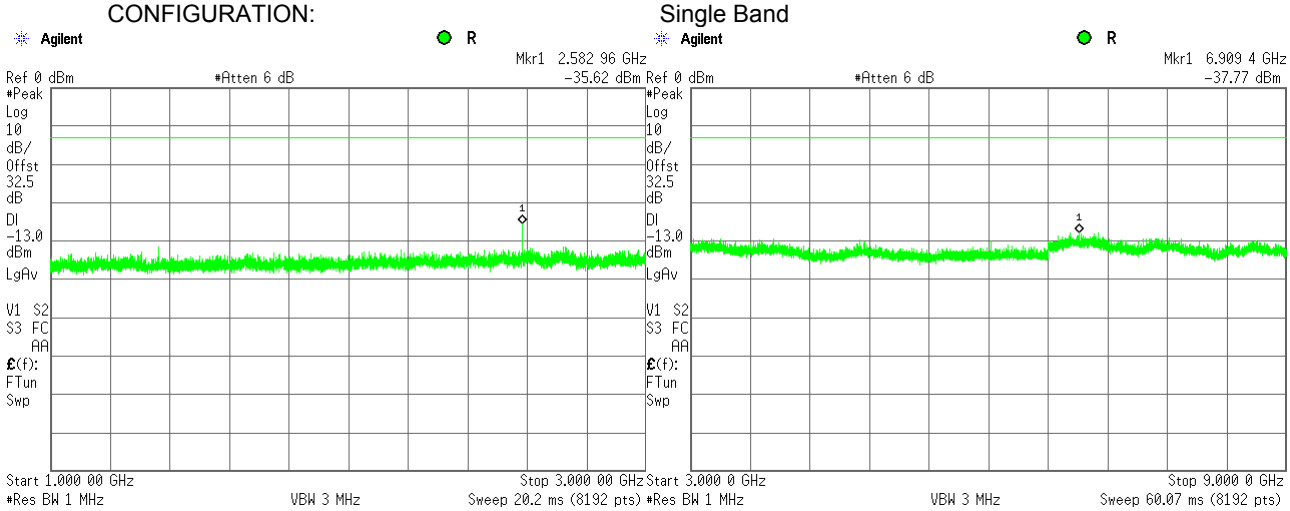
Plot 7.6.107 Spurious emission measurements in 1000 - 9000 MHz at mid carrier frequency

FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.108 Spurious emission measurements in 1000 - 9000 MHz at high carrier frequency

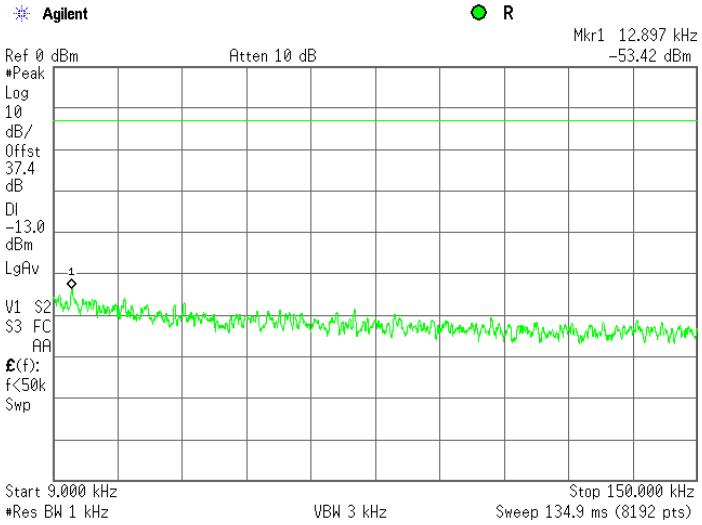
FREQUENCY RANGE:	851 - 861 MHz
OPERATIONAL MODE:	Analog FM downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

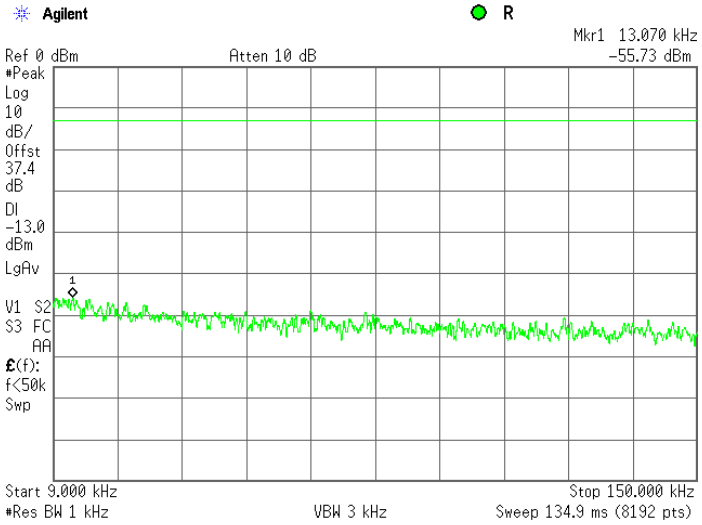
Plot 7.6.109 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.110 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

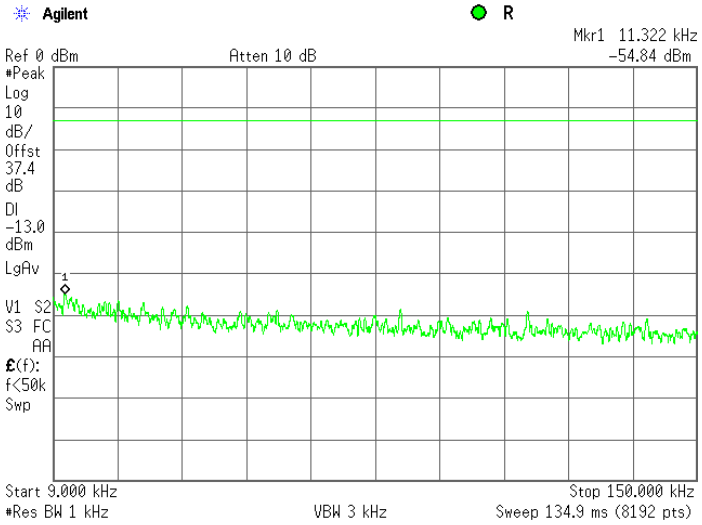
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

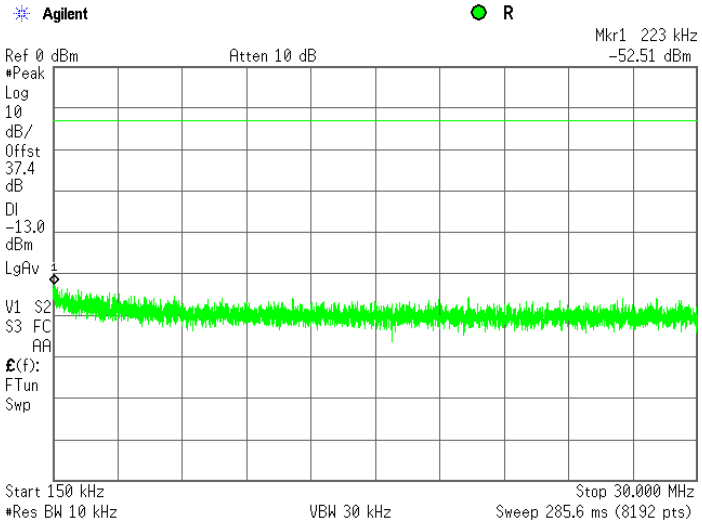
Plot 7.6.111 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.112 Spurious emission measurements 0.15 – 30.0 MHz range at low carrier frequency

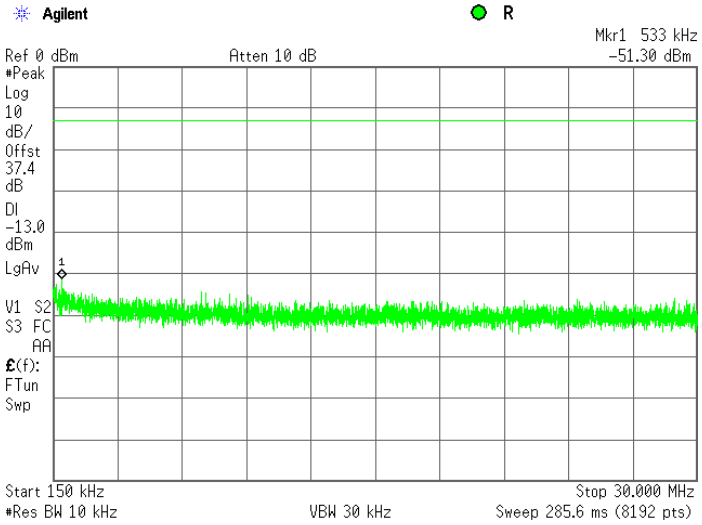
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

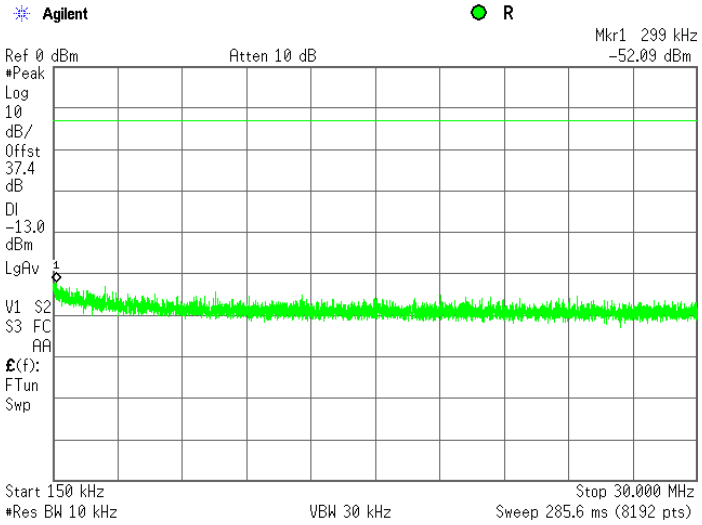
Plot 7.6.113 Spurious emission measurements 0.15 – 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.114 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

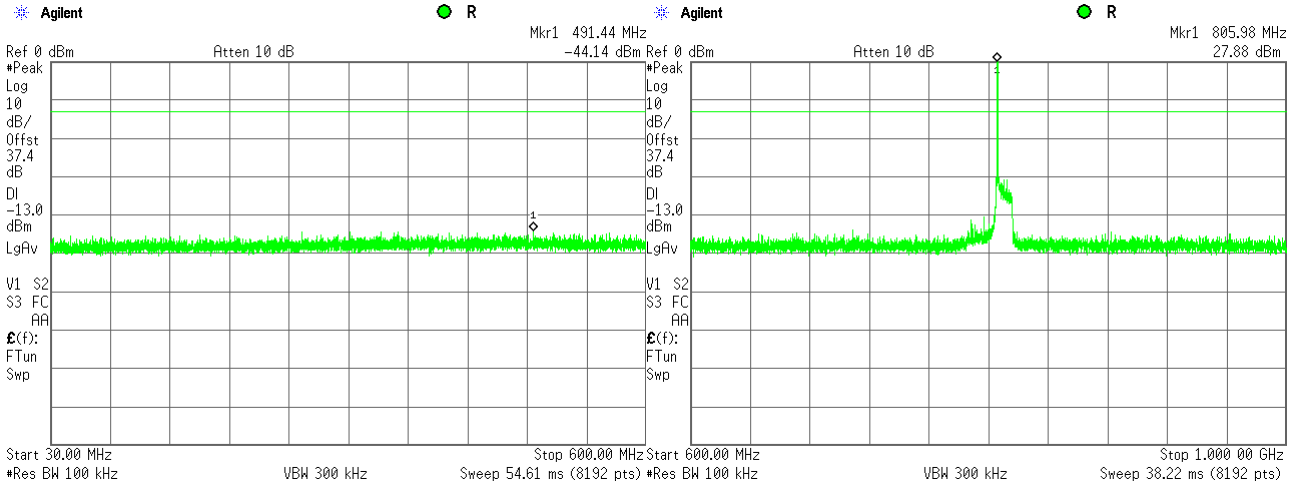
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

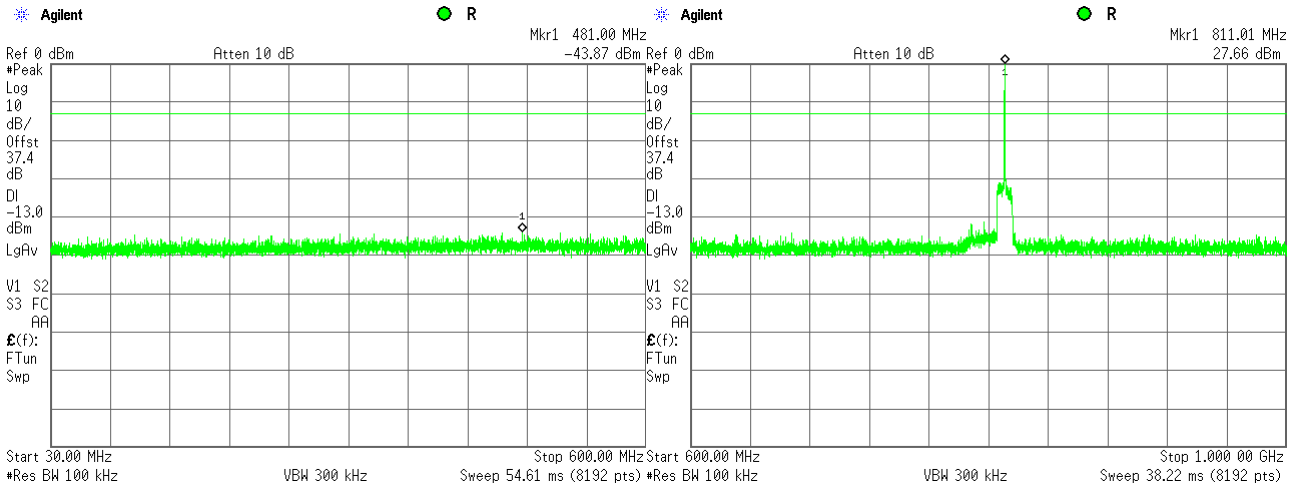
Plot 7.6.115 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.116 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

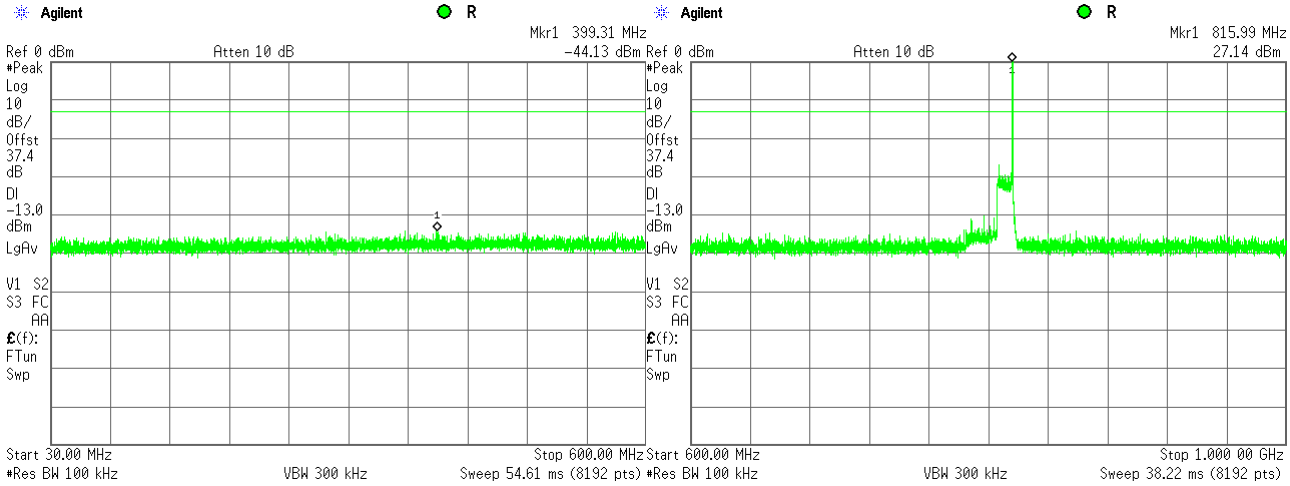
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

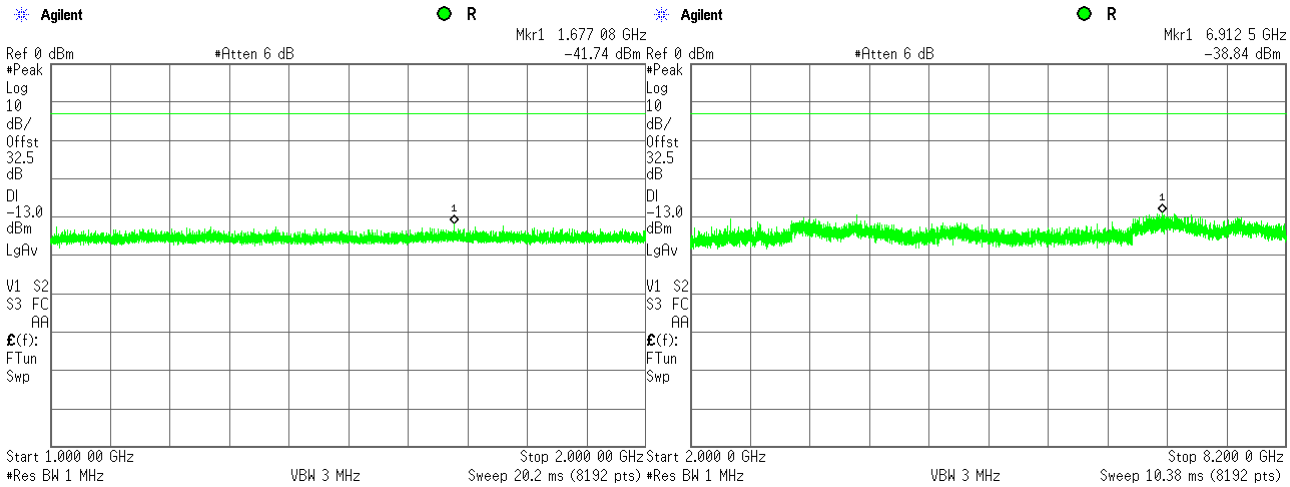
Plot 7.6.117 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.118 Spurious emission measurements in 1000 - 8200 MHz range at low carrier frequency

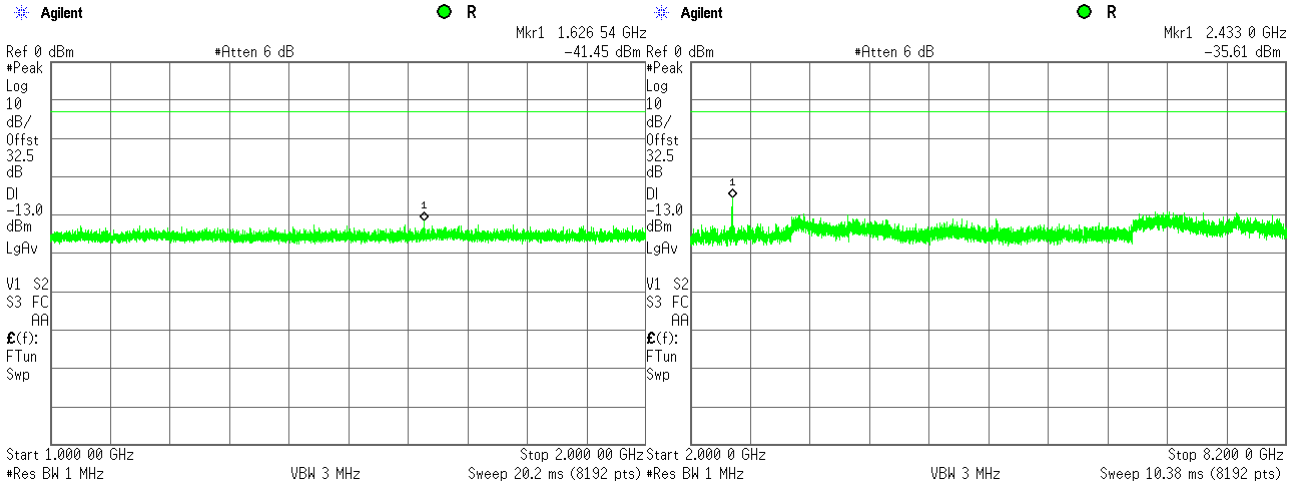
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

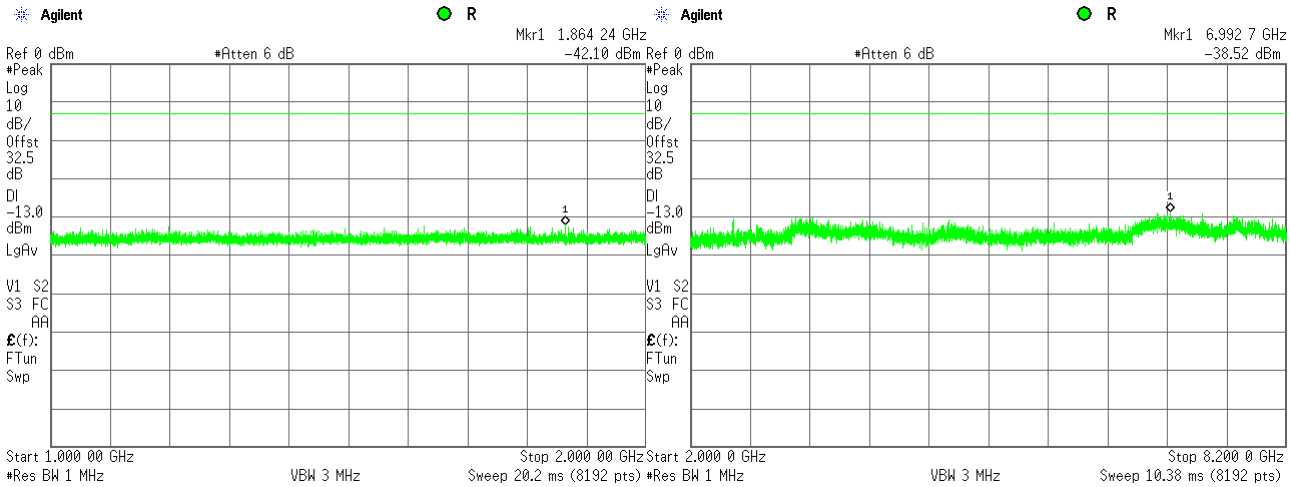
Plot 7.6.119 Spurious emission measurements in 1000 - 8200 MHz at mid carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.120 Spurious emission measurements in 1000 - 8200 MHz at high carrier frequency

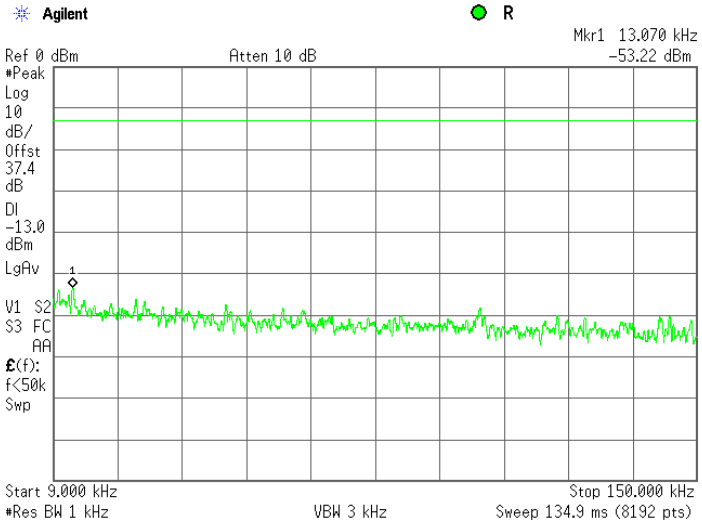
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	C4FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

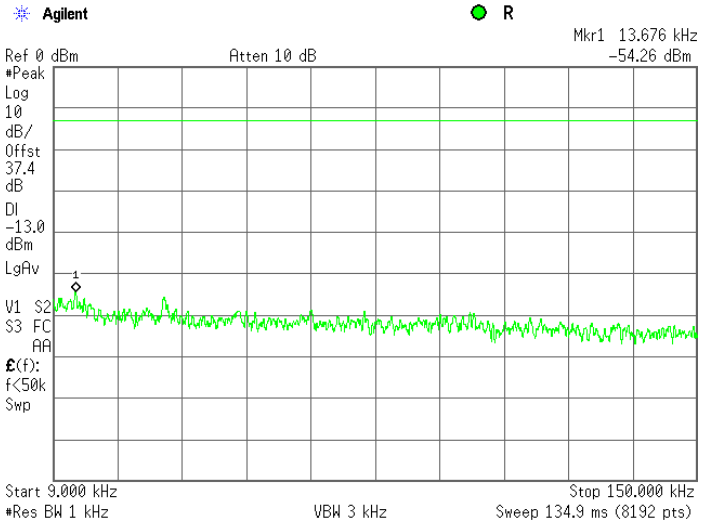
Plot 7.6.121 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.122 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

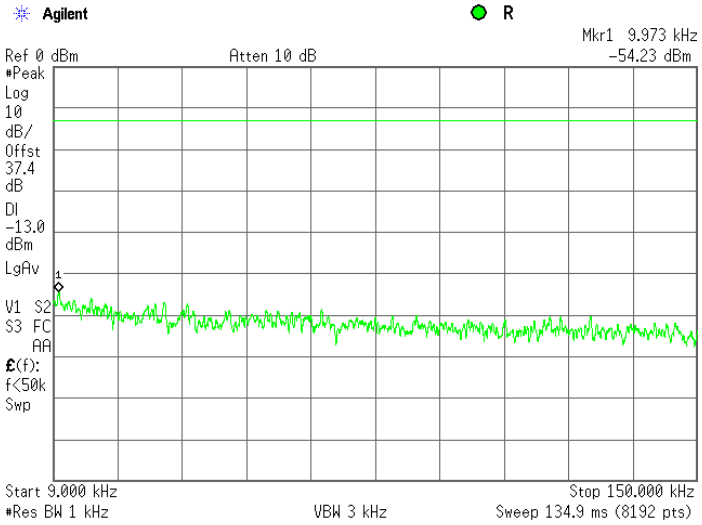
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

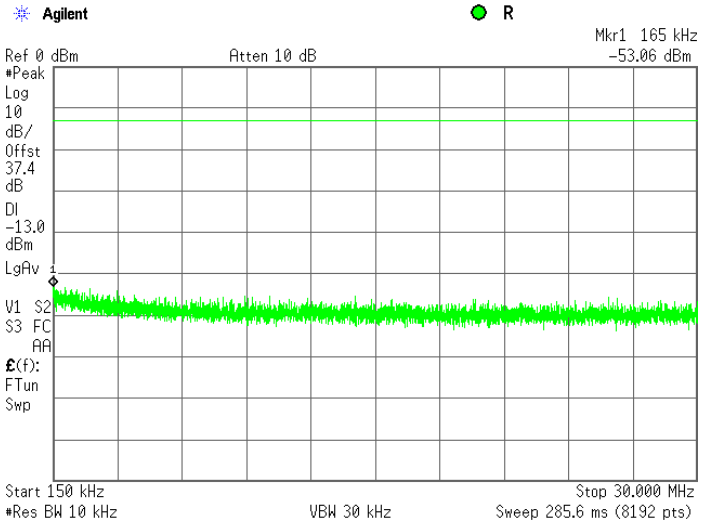
Plot 7.6.123 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.124 Spurious emission measurements in 0.15 – 30.0 MHz range at low carrier frequency

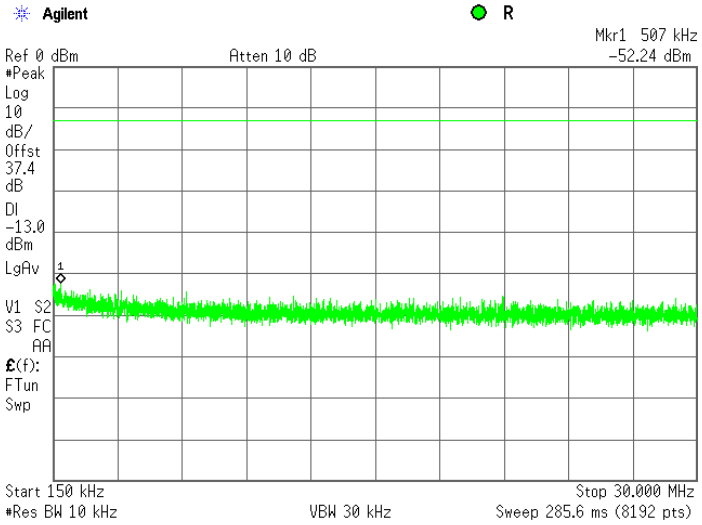
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

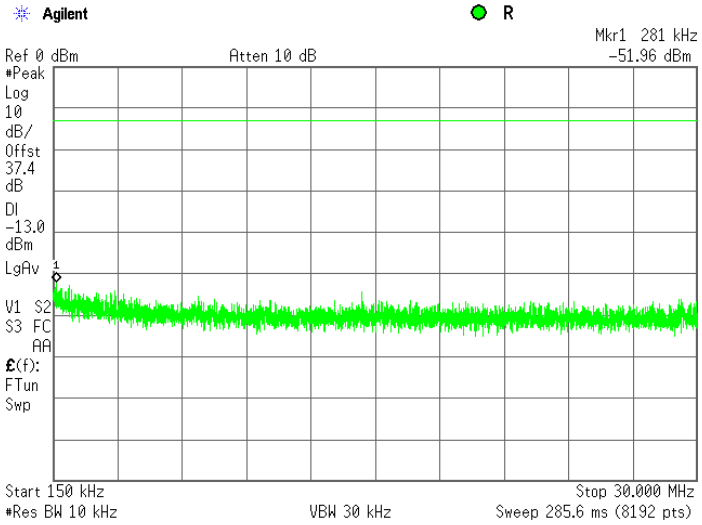
Plot 7.6.125 Spurious emission measurements in 0.15 – 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.126 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

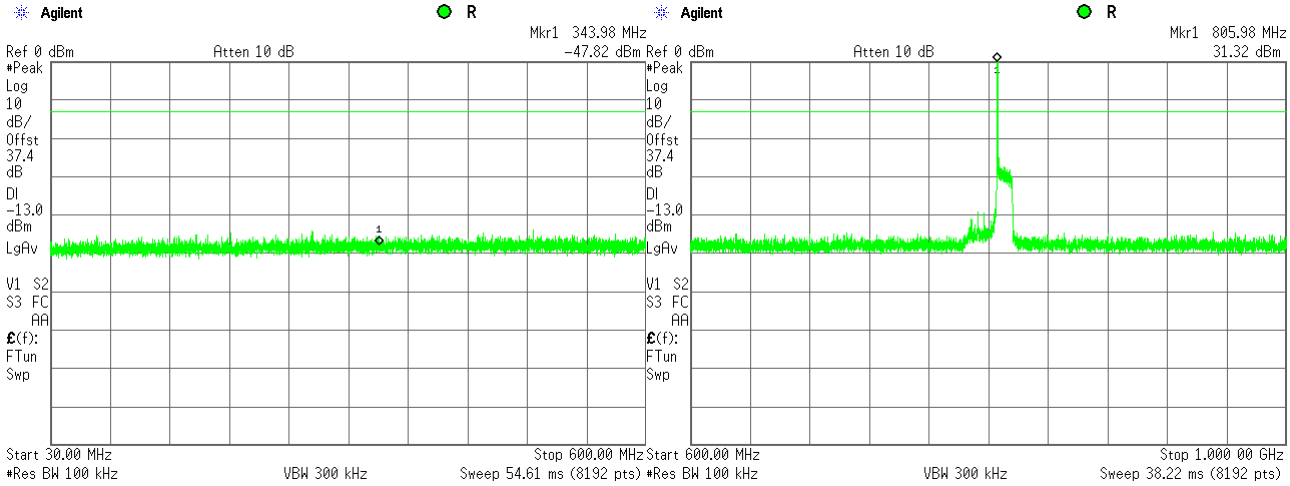
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

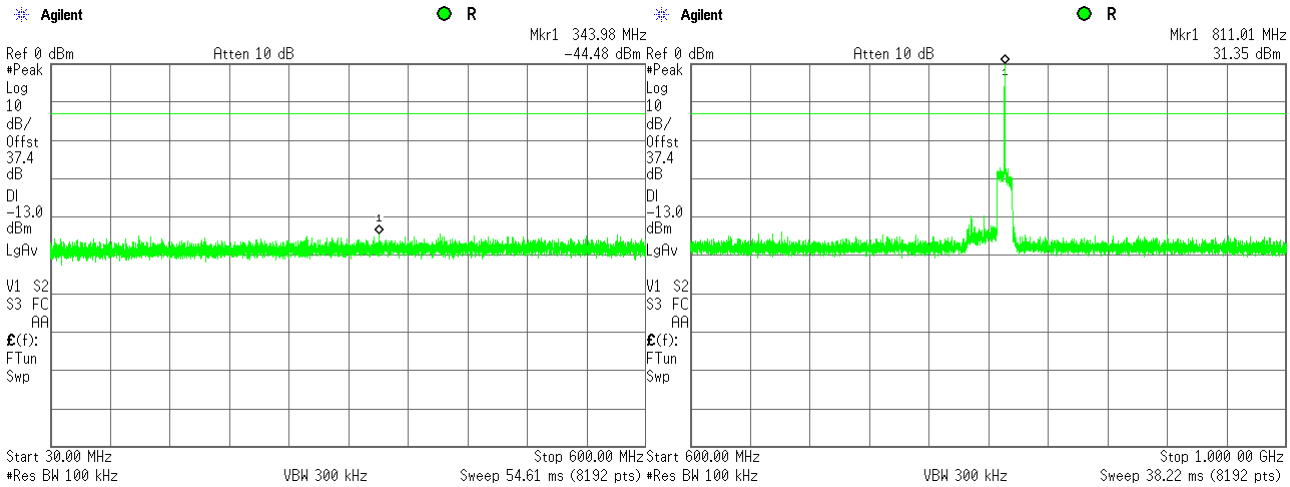
Plot 7.6.127 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.128 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

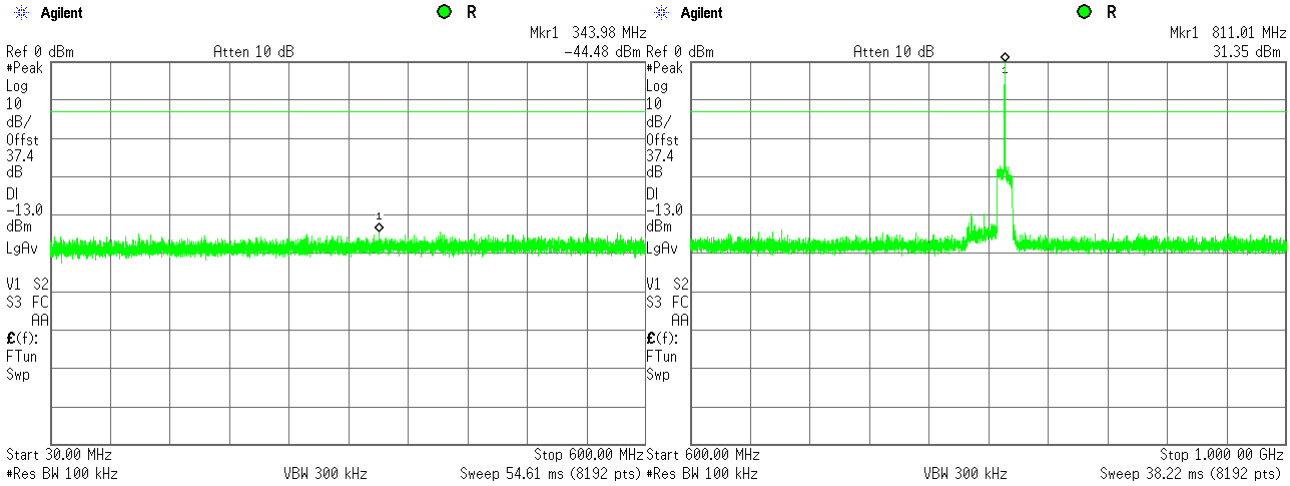
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

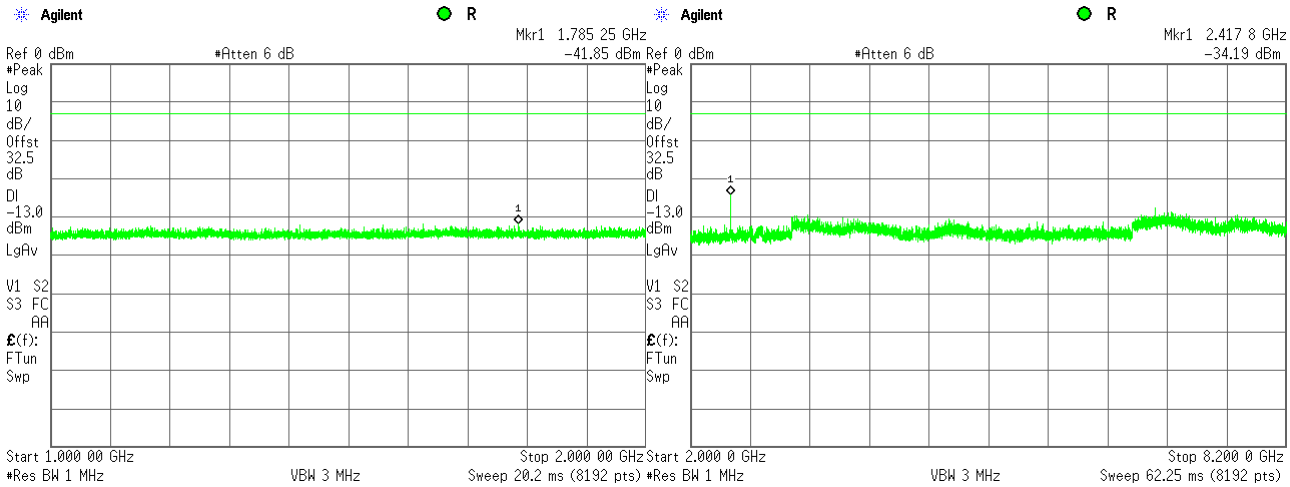
Plot 7.6.129 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.130 Spurious emission measurements in 1000 - 8200 MHz range at low carrier frequency

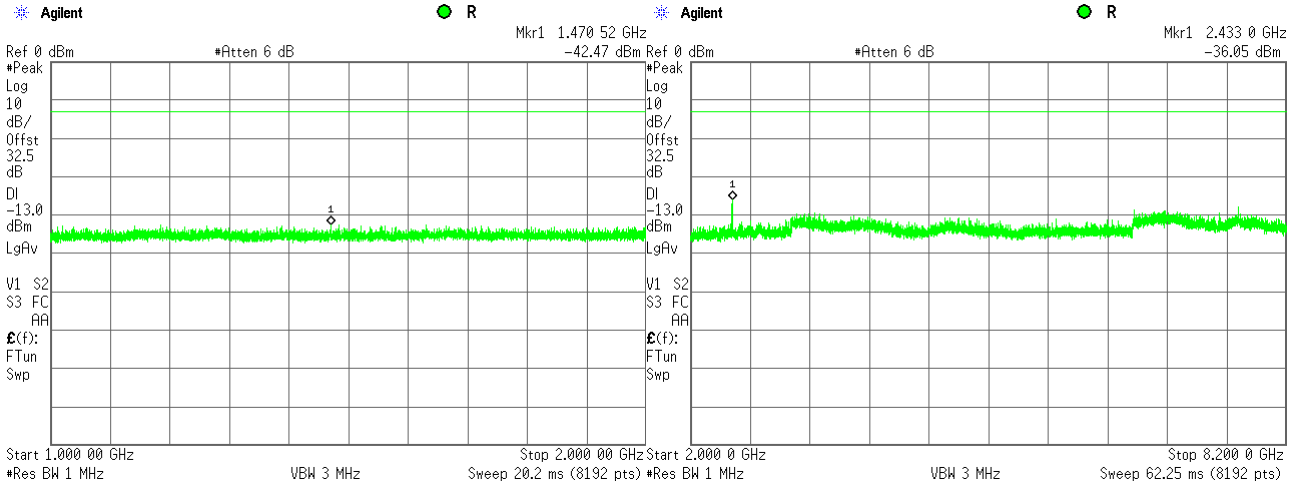
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

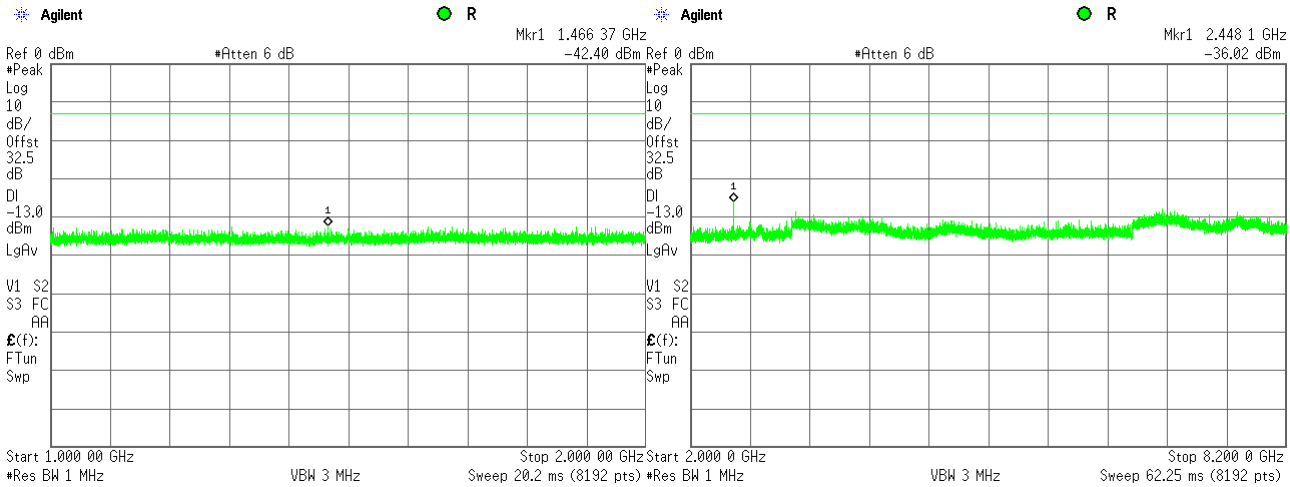
Plot 7.6.131 Spurious emission measurements in 1000 - 8200 MHz at mid carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.132 Spurious emission measurements in 1000 - 8200 MHz at high carrier frequency

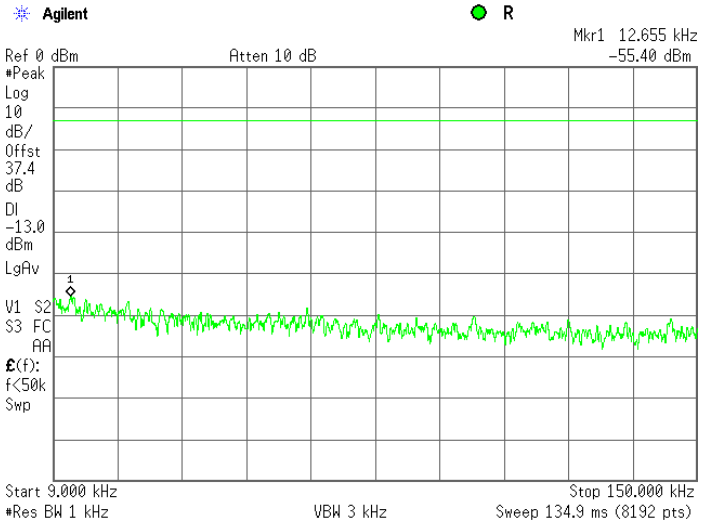
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	iDEN QAM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

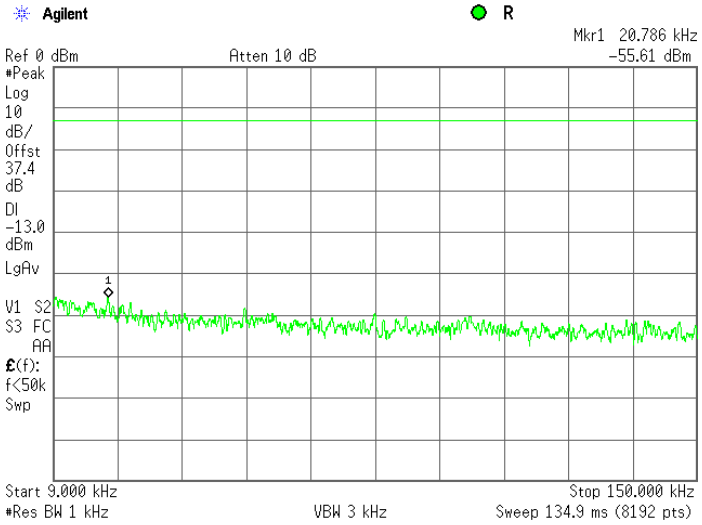
Plot 7.6.133 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.134 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency

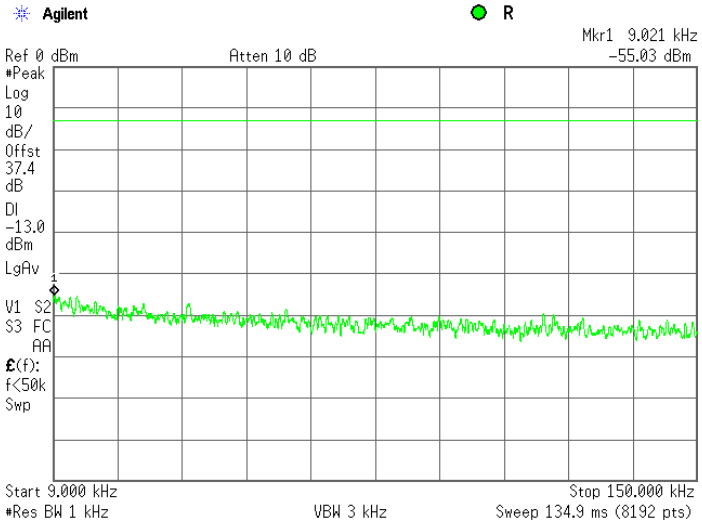
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

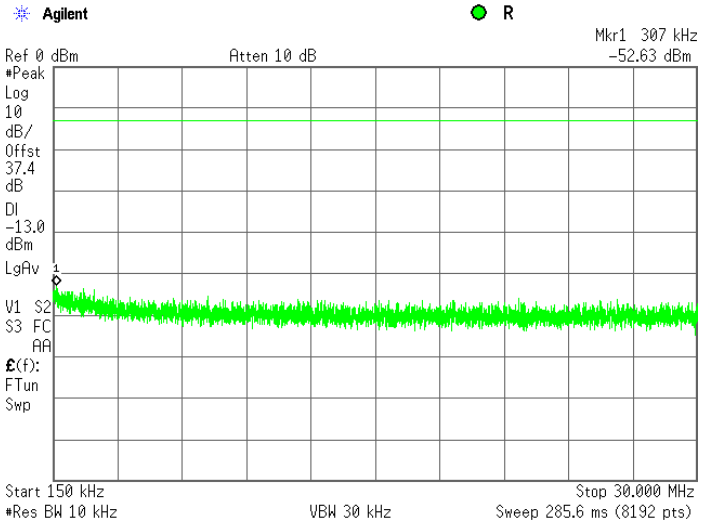
Plot 7.6.135 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.136 Spurious emission measurements in 0.15 – 30.0 MHz range at low carrier frequency

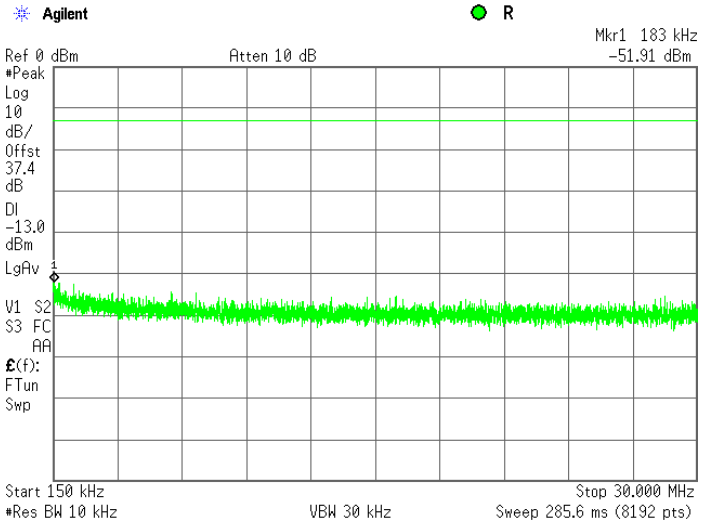
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

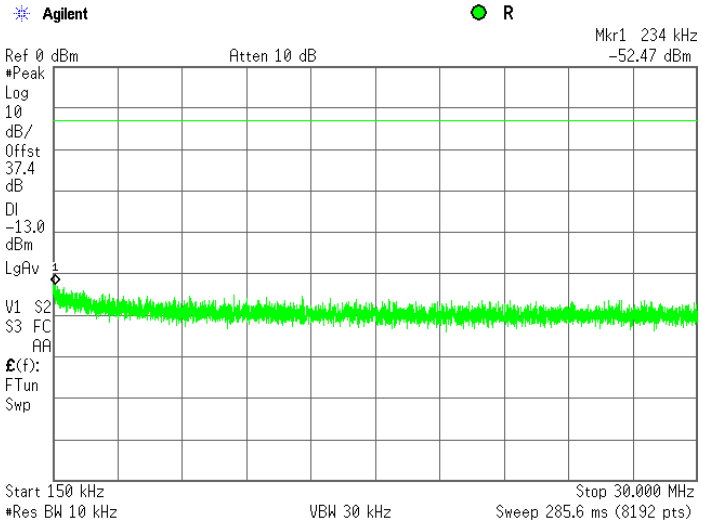
Plot 7.6.137 Spurious emission measurements in 0.15 – 30.0 MHz range at mid carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.138 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

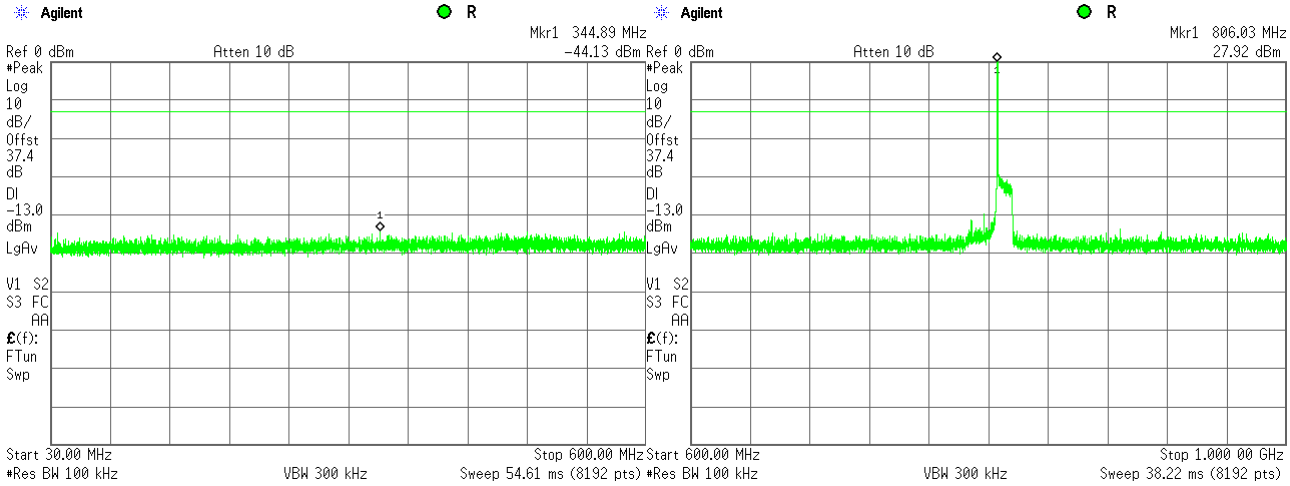
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

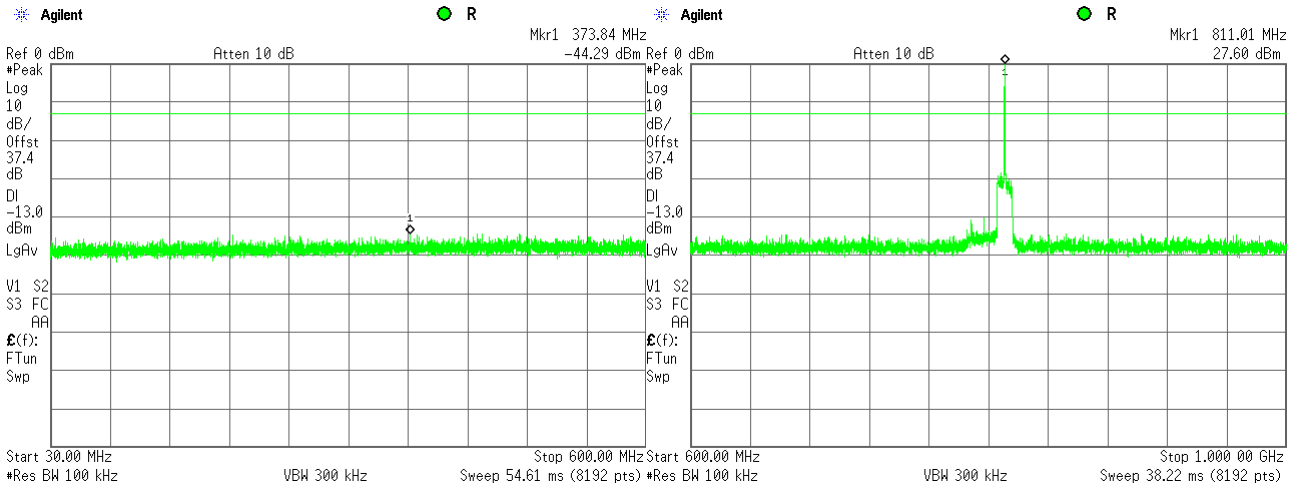
Plot 7.6.139 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.140 Spurious emission measurements in 30.0 - 1000 MHz range at mid carrier frequency

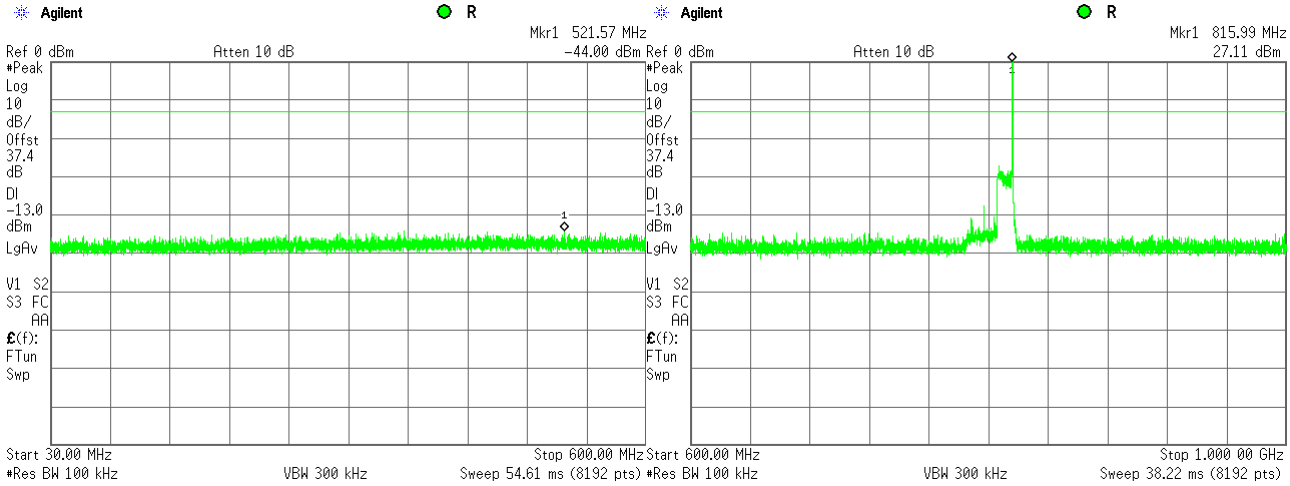
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

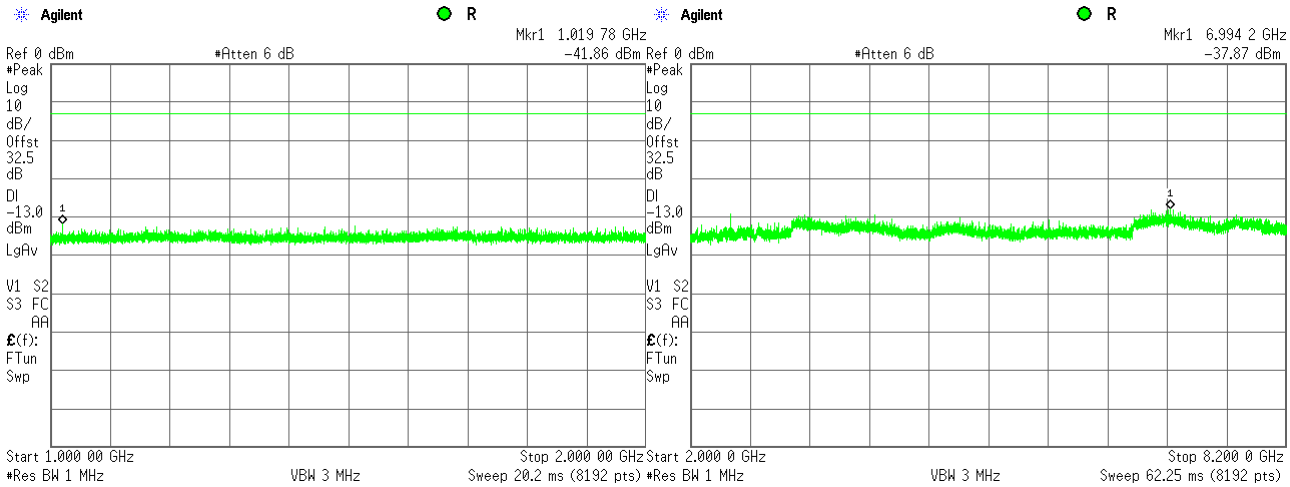
Plot 7.6.141 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.142 Spurious emission measurements in 1000 - 8200 MHz range at low carrier frequency

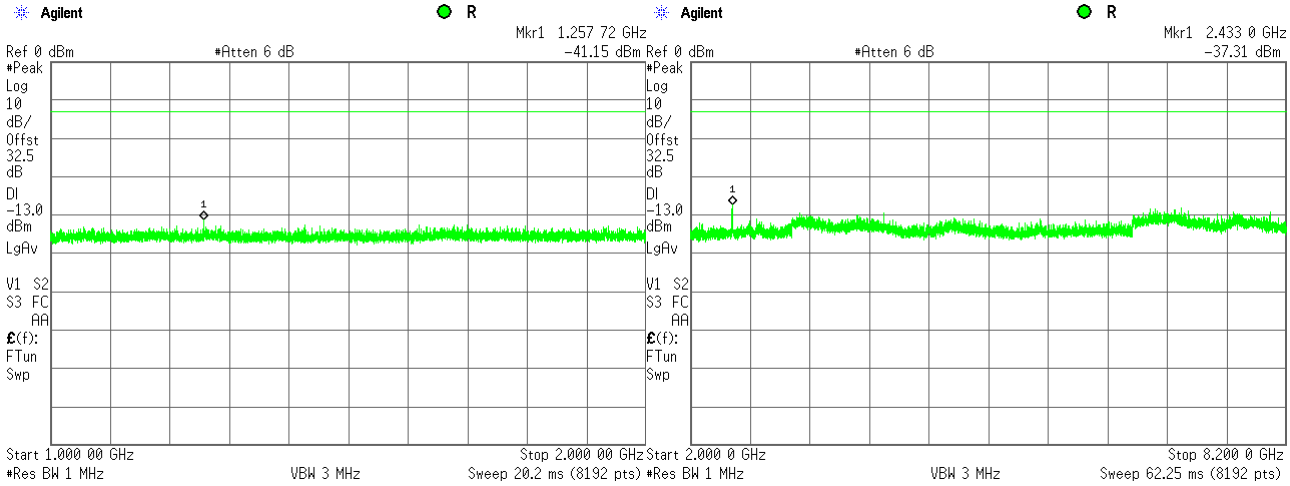
FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

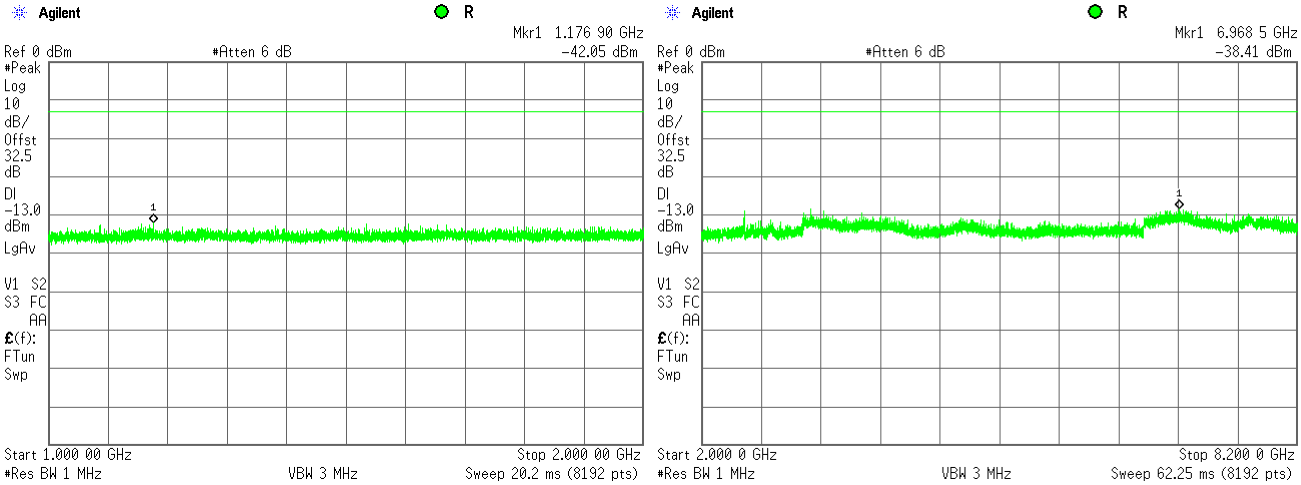
Plot 7.6.143 Spurious emission measurements in 1000 - 8200 MHz at mid carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.144 Spurious emission measurements in 1000 -8200 MHz at high carrier frequency

FREQUENCY RANGE:	806 - 816 MHz
OPERATIONAL MODE:	Analog FM uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Table 7.6.4 Spurious emission test results

ASSIGNED FREQUENCY RANGES: 758 - 768 MHz Downlink
INVESTIGATED FREQUENCY RANGE: 0.009 – 8000 MHz
DETECTOR USED: Peak
VIDEO BANDWIDTH: ≥ Resolution bandwidth
MODULATION: OFDMA
CONFIGURATION: Single Band
BOOSTER OUTPUT POWER SETTINGS: 33 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20dB below the limit									Pass

ASSIGNED FREQUENCY RANGES: 778 – 798 MHz Uplink
MODULATION: CS-FDMA
CONFIGURATION: Dual Band
BOOSTER OUTPUT POWER SETTINGS: 27 dBm

Frequency, MHz	SA reading, dBm	Attenuator, dB	Cable loss, dB	RBW, kHz	Spurious emission, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency									
All emissions were found more than 20dB below the limit									Pass
Mid carrier frequency									
All emissions were found more than 20dB below the limit									Pass
High carrier frequency									
All emissions were found more than 20dB below the limit									Pass

*****- Margin = Spurious emission – specification limit.

Reference numbers of test equipment used

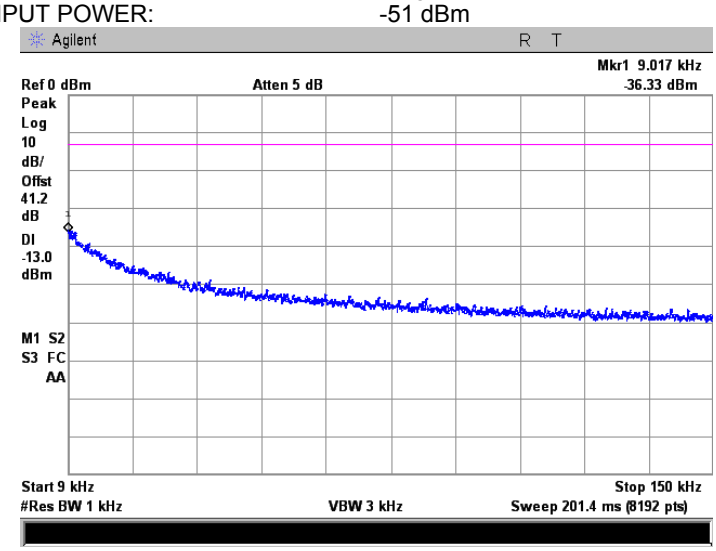
HL 2909	HL 3390	HL 3768	HL 3770	HL 3776	HL 3780	HL 3787	HL 4274
HL 4354							

Full description is given in Appendix A.

Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

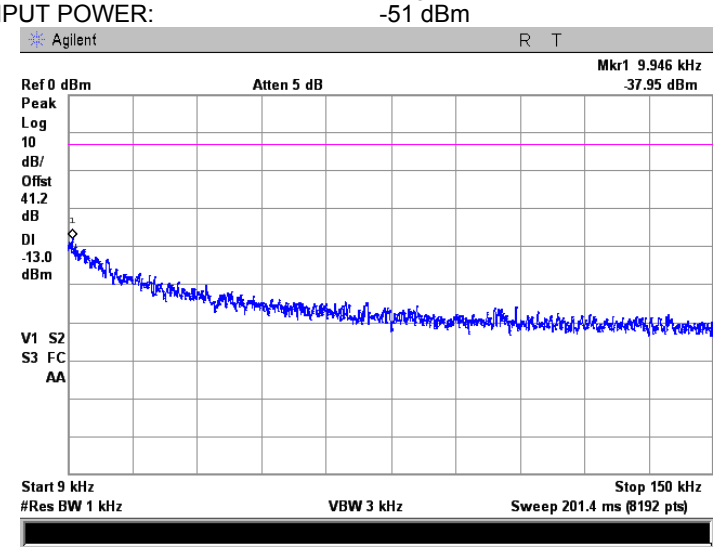
Plot 7.6.145 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER:	-51 dBm



Plot 7.6.146 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

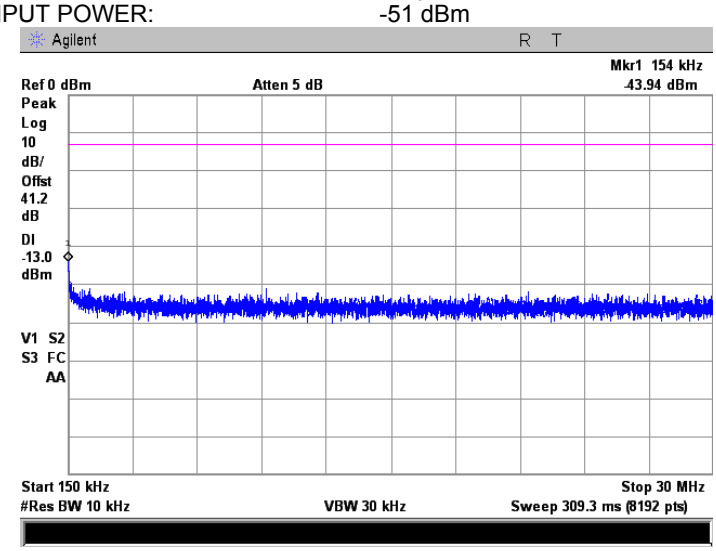
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER:	-51 dBm



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

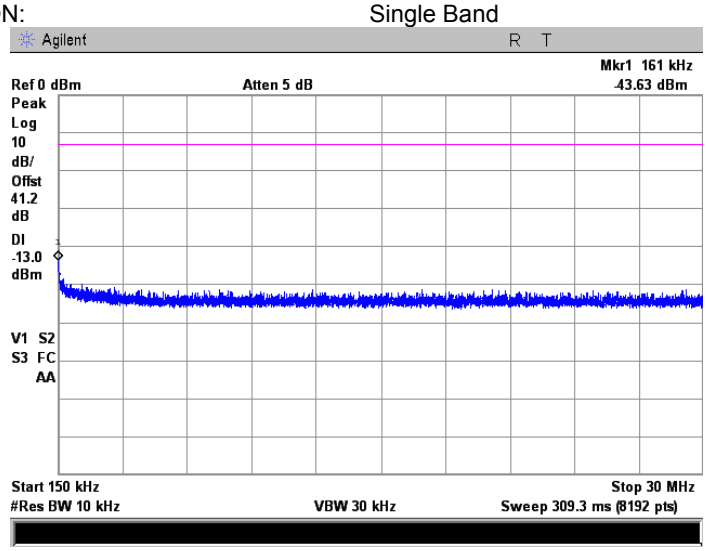
Plot 7.6.147 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
CONFIGURATION:	Single Band
COMPOSITE INPUT POWER:	-51 dBm



Plot 7.6.148 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

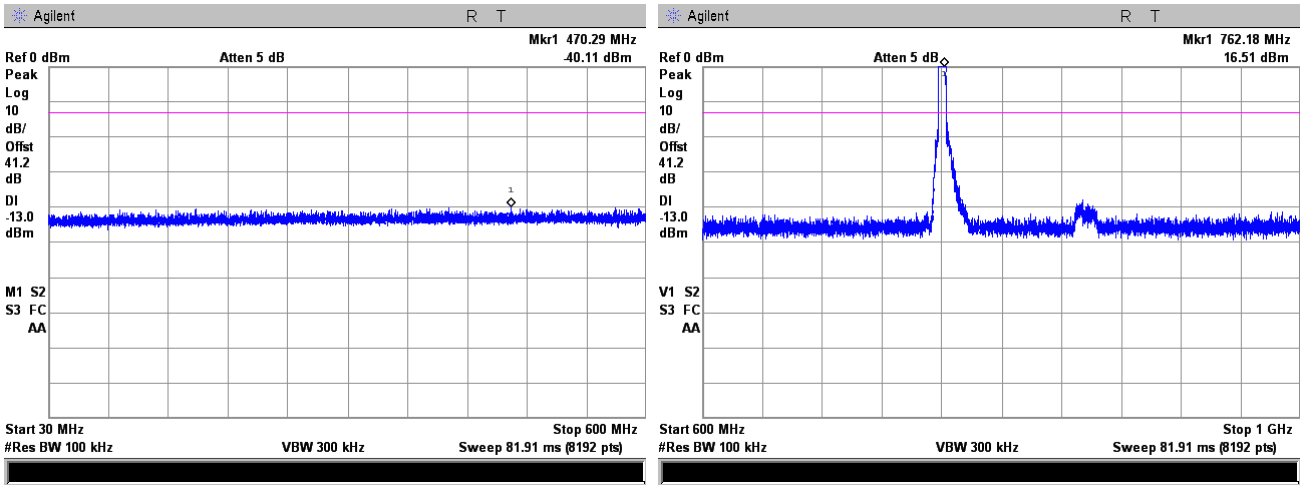
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

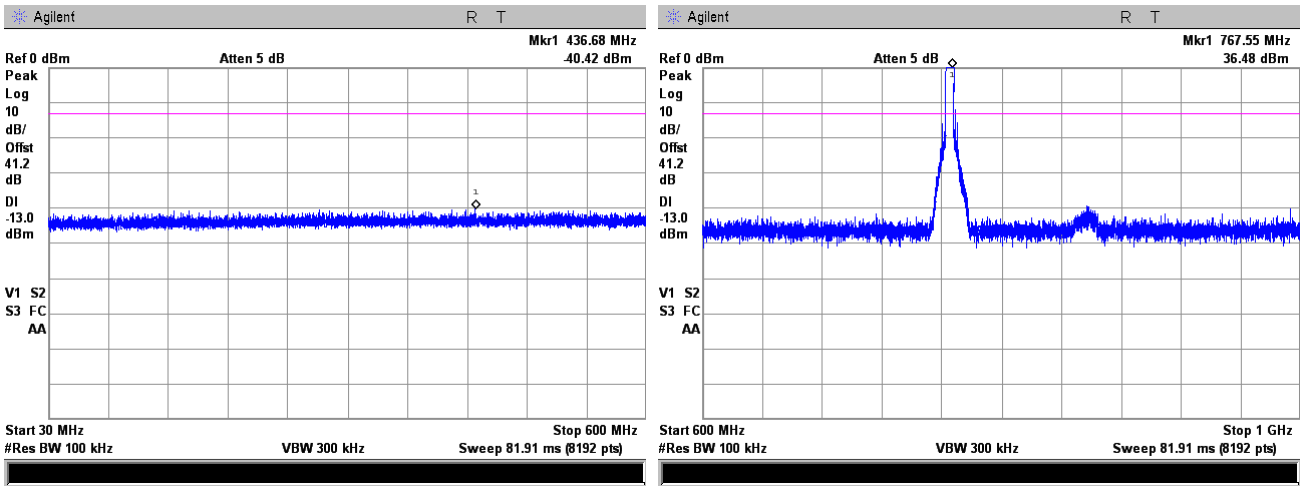
Plot 7.6.149 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.150 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

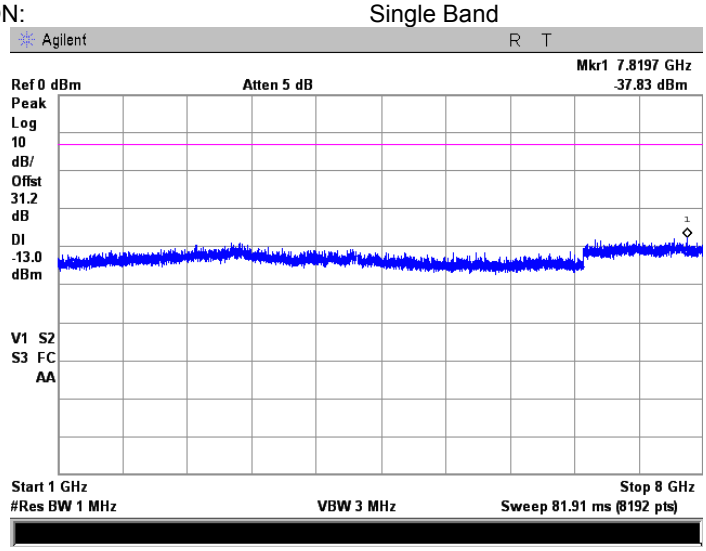
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

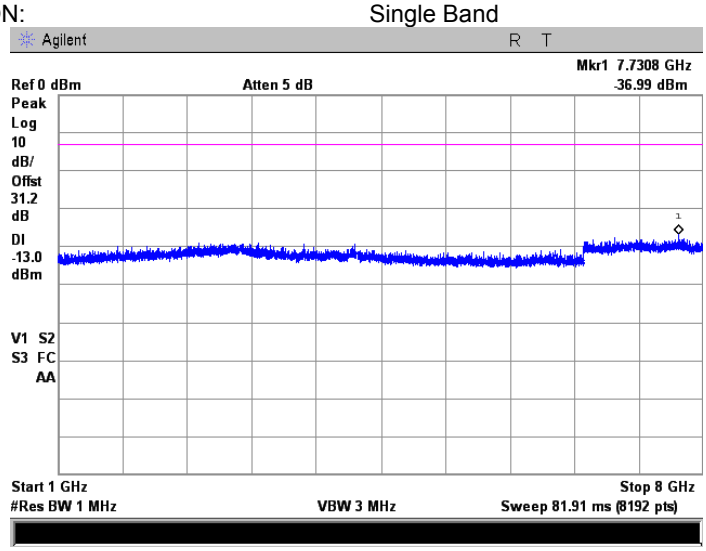
Plot 7.6.151 Spurious emission measurements in 1000 - 8000 MHz range at low carrier frequency

FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Plot 7.6.152 Spurious emission measurements in 1000 - 8000 MHz at high carrier frequency

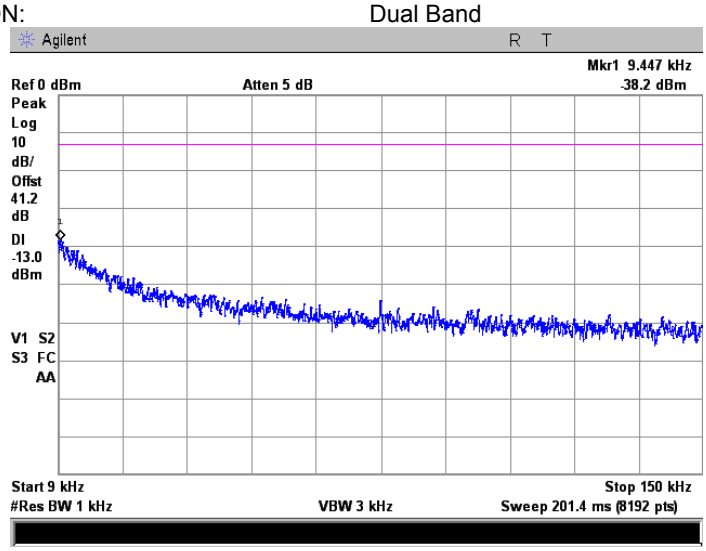
FRQUENCY RANGE:	758 - 768 MHz
OPERATIONAL MODE:	LTE downlink transmit
INPUT PORT:	Base
COMPOSITE INPUT POWER:	-51 dBm
CONFIGURATION:	Single Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

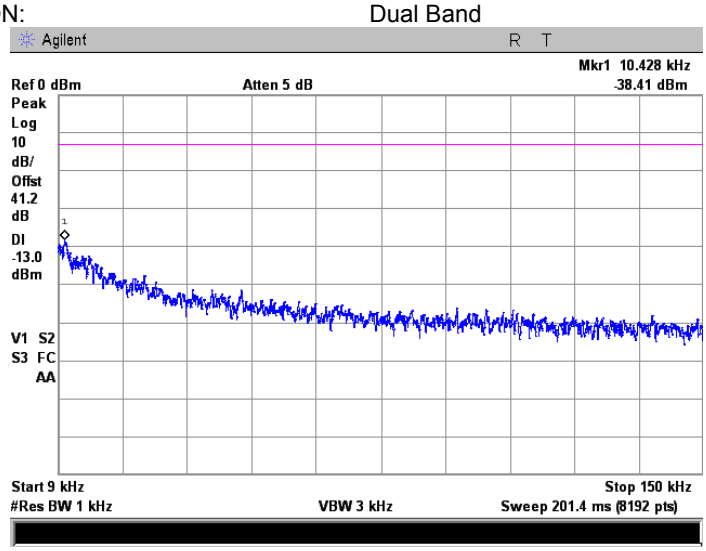
Plot 7.6.153 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.154 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency

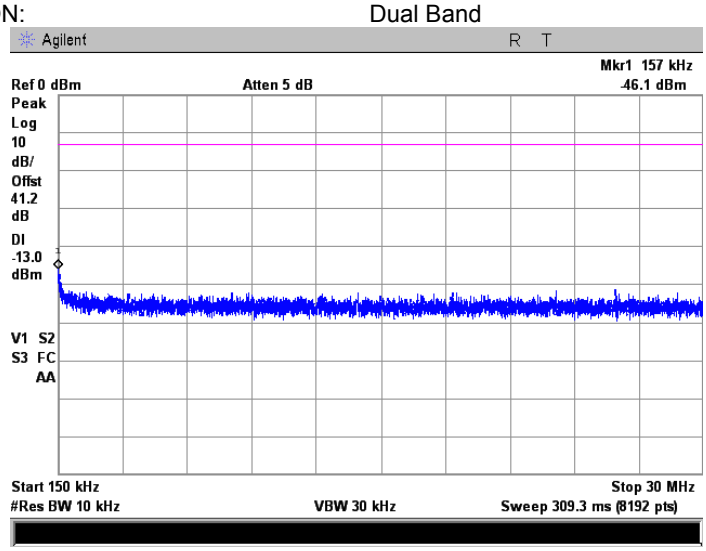
FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

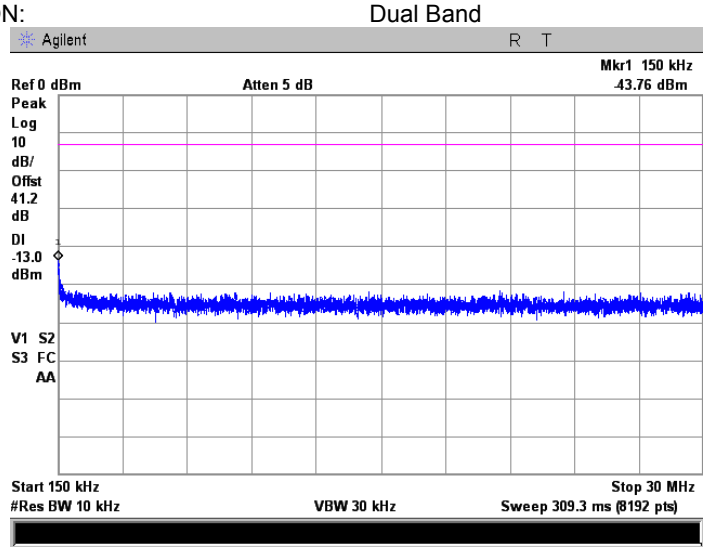
Plot 7.6.155 Spurious emission measurements in 0.15 - 30.0 MHz range at low carrier frequency

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.156 Spurious emission measurements in 0.15 – 30.0 MHz range at high carrier frequency

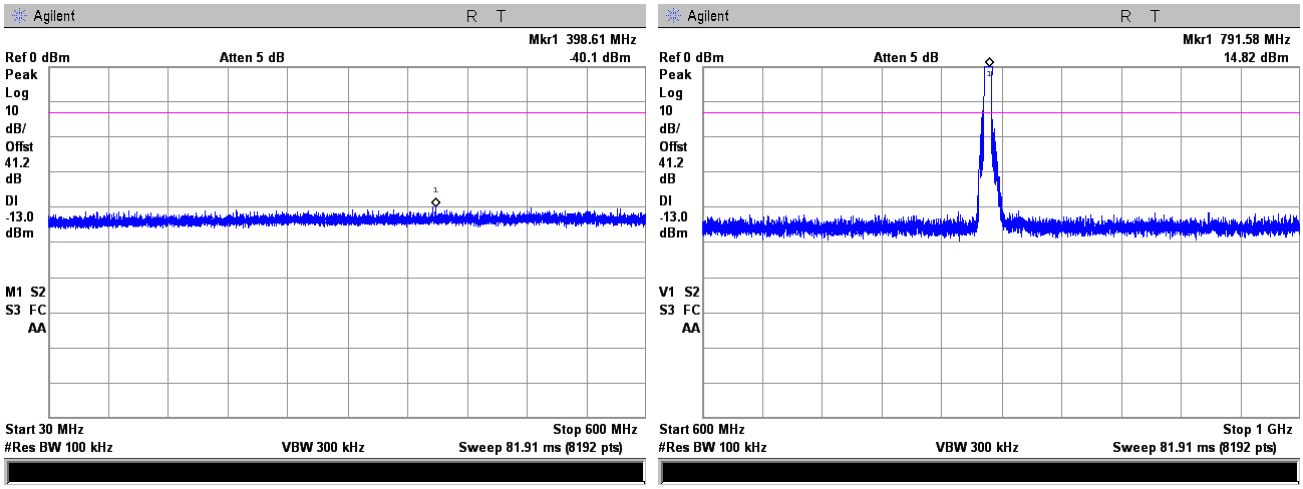
FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

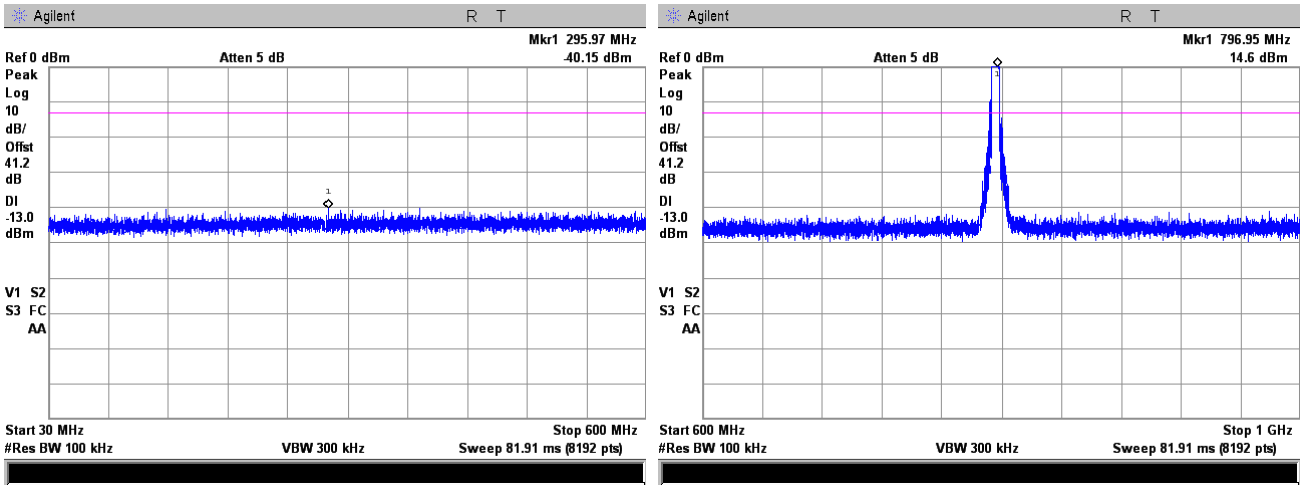
Plot 7.6.157 Spurious emission measurements in 30.0 - 1000 MHz range at low carrier frequency

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.158 Spurious emission measurements in 30.0 - 1000 MHz range at high carrier frequency

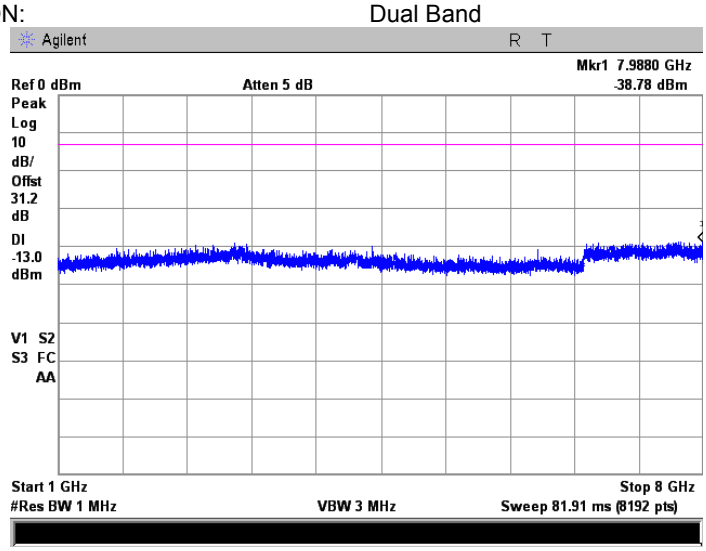
FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.219(e)(3), Conducted spurious emissions		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

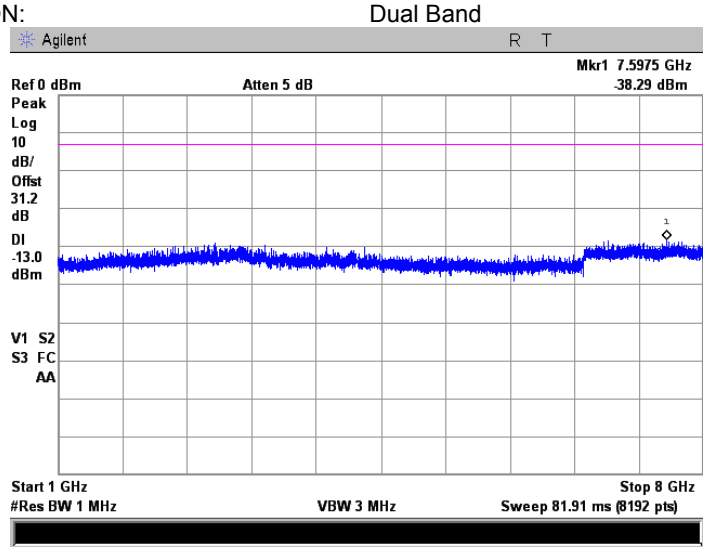
Plot 7.6.159 Spurious emission measurements in 1000 - 8000 MHz range at low carrier frequency

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Plot 7.6.160 Spurious emission measurements in 1000 - 8000 MHz at high carrier frequency

FRQUENCY RANGE:	788 - 798 MHz
OPERATIONAL MODE:	LTE uplink transmit
INPUT PORT:	Mobile
INPUT POWER:	-54 dBm
CONFIGURATION:	Dual Band



Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 ºC	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

7.7 Emission mask test

7.7.1 General

This test was performed to measure emission mask at RF antenna connector. Specification test limits are given in Table 7.7.1.

Table 7.7.1 Emission mask limits

Frequency displacement from carrier	Attenuation below carrier, dBc
Emission mask H (Channel bandwidth 8 kHz, authorized bandwidth 8 kHz)	
0 – 4.0 kHz	0
4.0 – 8.5 kHz	107 log (fd/4)
8.5 – 15.0 kHz	40.5 log (fd/1.16)
15.0 – 25.0 kHz	116 log (fd/6.1)
More than 25.0 kHz	43+10logP(W)

* - linearly increase with frequency

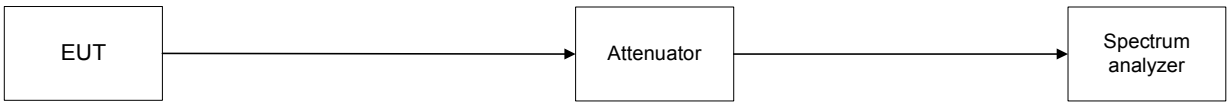
** - emission mask includes carrier modulation envelope within ± 250 % of the authorized bandwidth; the frequency range removed beyond ± 250 % of the authorized bandwidth from carrier was investigated as spurious emission

7.7.2 Test procedure

7.7.2.1 The EUT was set up as shown in Figure 7.7.1, energized and its proper operation was checked.

7.7.2.2 The emission mask was measured with spectrum analyzer as provided in the associated plots.

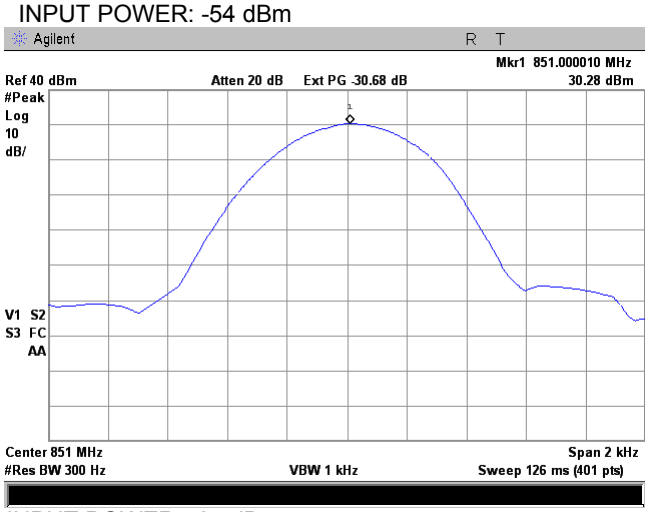
Figure 7.7.1 Emission mask test setup



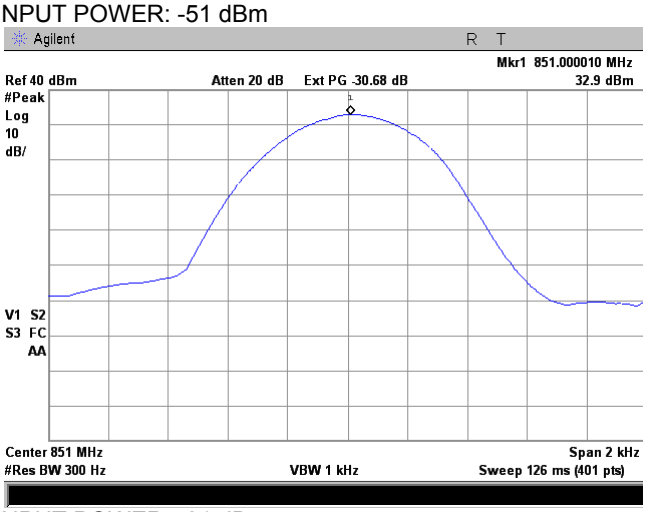
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.1 Reference level test results at low carrier frequency, Port 1

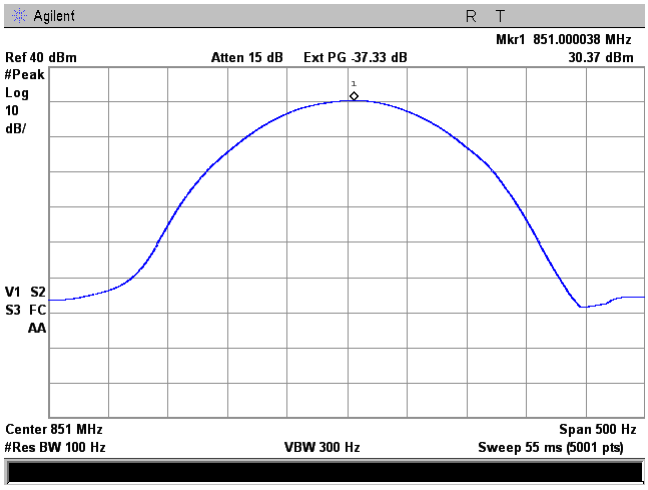
FRQUENCY RANGE: 851 - 861 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



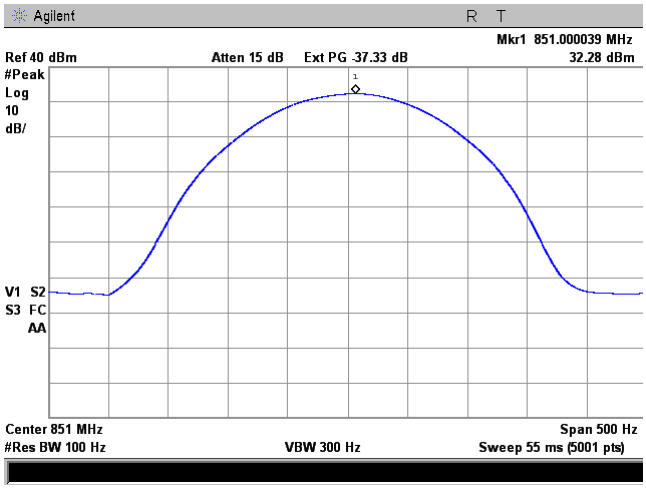
CONFIGURATION: Single Band
INPUT POWER: -51 dBm



INPUT POWER: -24 dBm



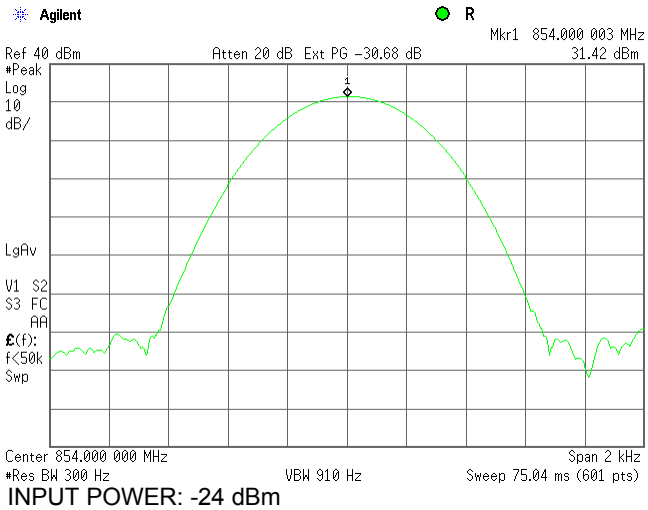
INPUT POWER: -21 dBm



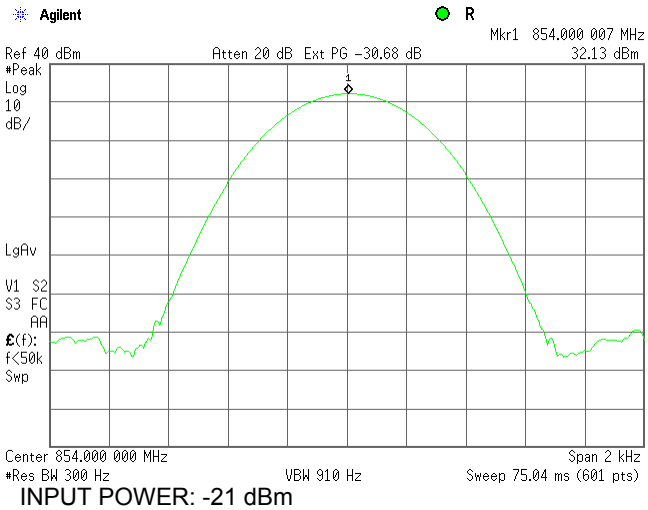
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.2 Reference level test results at mid carrier frequency, Port 1

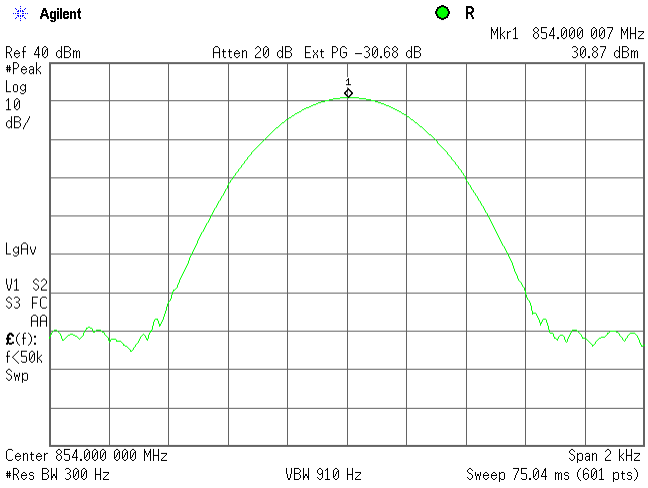
FRQUENCY RANGE: 851 - 861 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



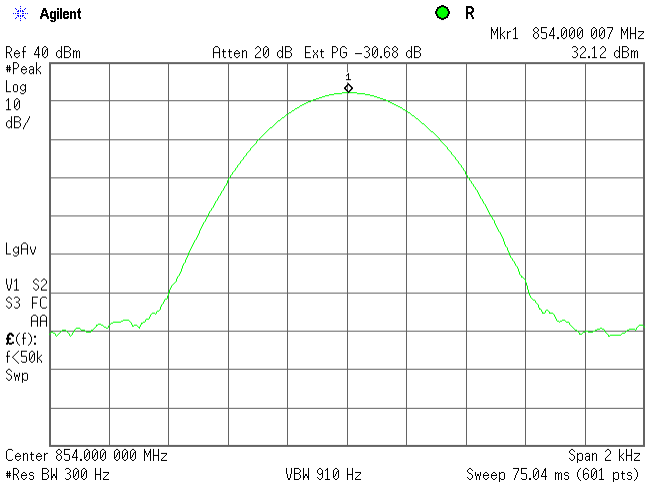
CONFIGURATION: Single Band
INPUT POWER: -51 dBm



INPUT POWER: -24 dBm



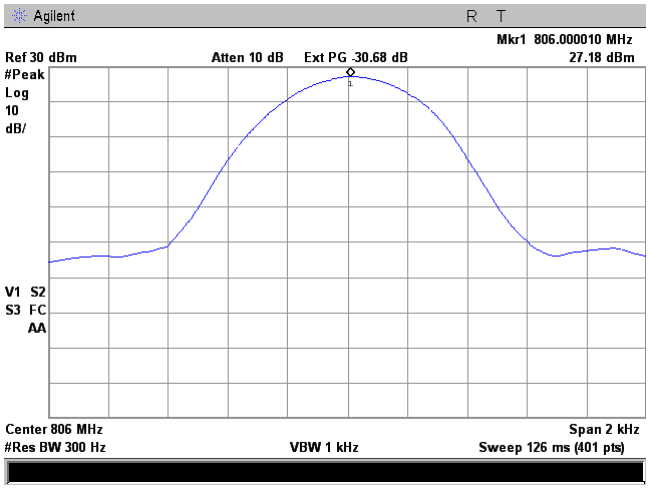
INPUT POWER: -21 dBm



Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

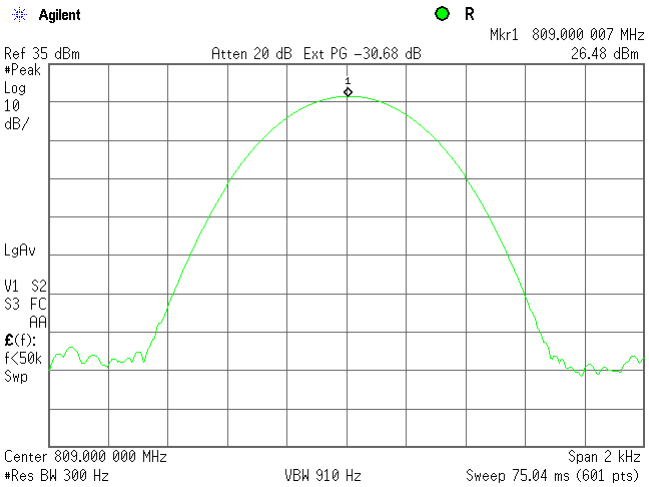
Plot 7.7.3 Reference level test results at low carrier frequency, Port 1

FRQUENCY RANGE: 806 - 816 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



Plot 7.7.4 Reference level test results at mid carrier frequency, Port 1

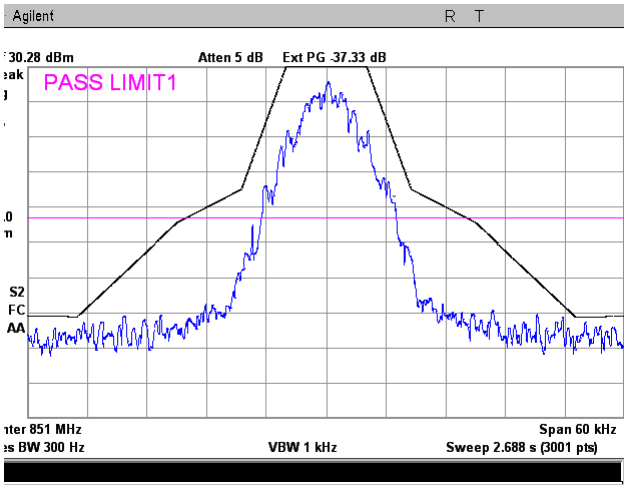
FRQUENCY RANGE: 806 - 816 MHz
REFERENCE LEVEL: Unmodulated power
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



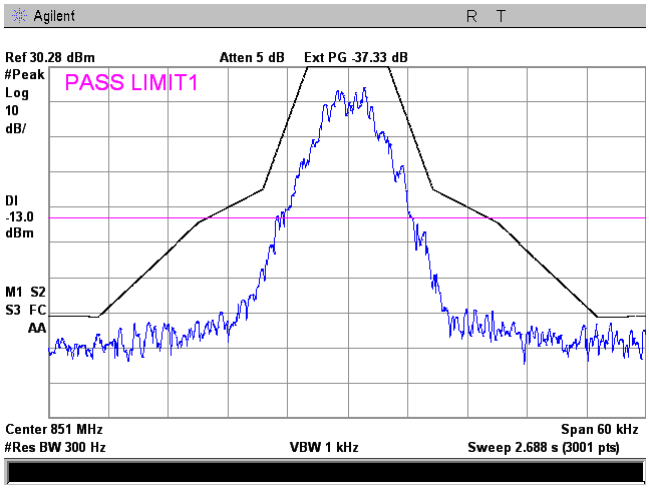
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.5 Occupied bandwidth test result at low frequency carrier, Port 1

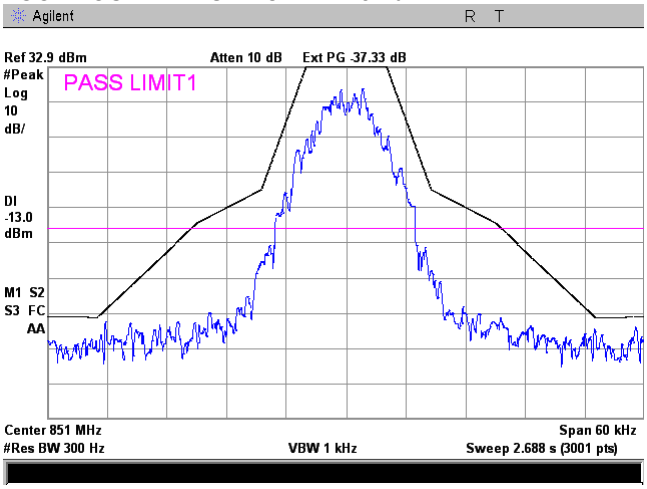
FRQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(h)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



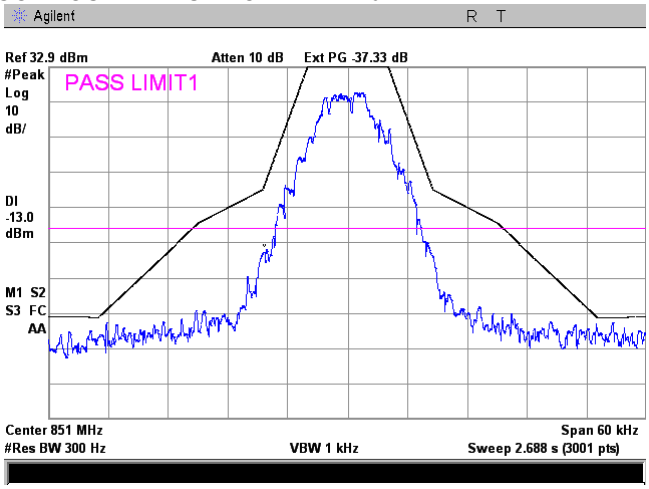
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



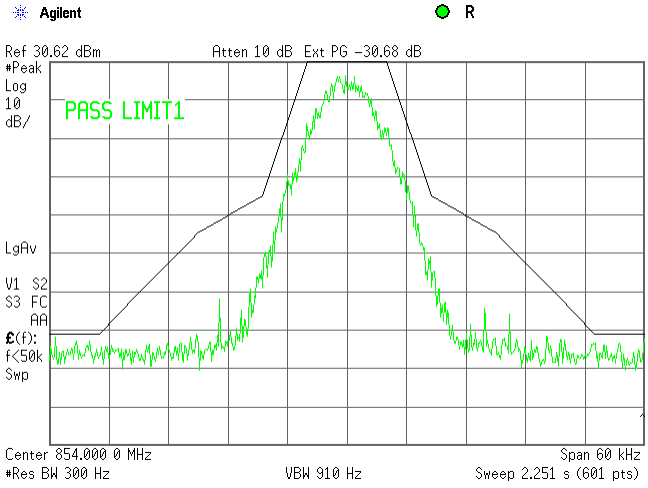
COMPOSITE INPUT POWER: -21 dBm



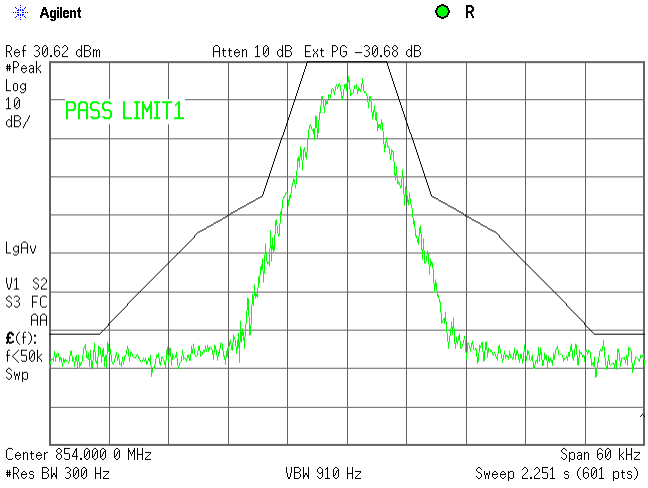
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.6 Occupied bandwidth test result at mid frequency carrier, Port 1

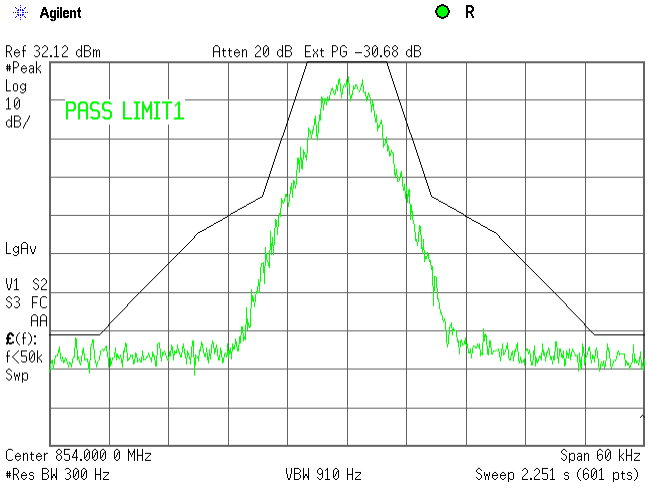
FRQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: C4FM downlink transmit
INPUT PORT: Mobile
EMISSION MASK: 90.210(h)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



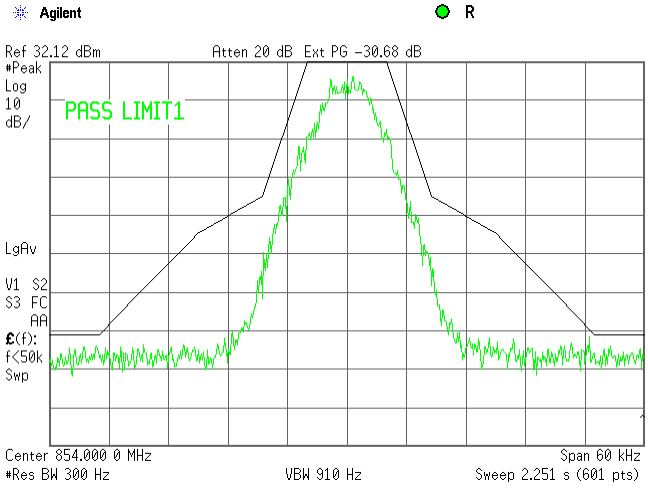
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



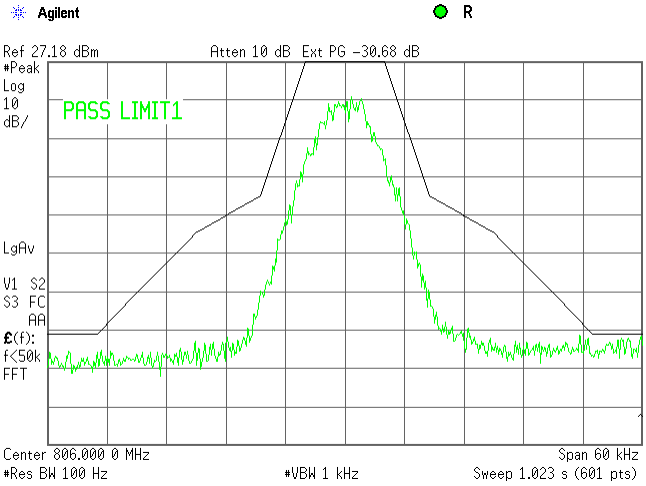
COMPOSITE INPUT POWER: -21 dBm



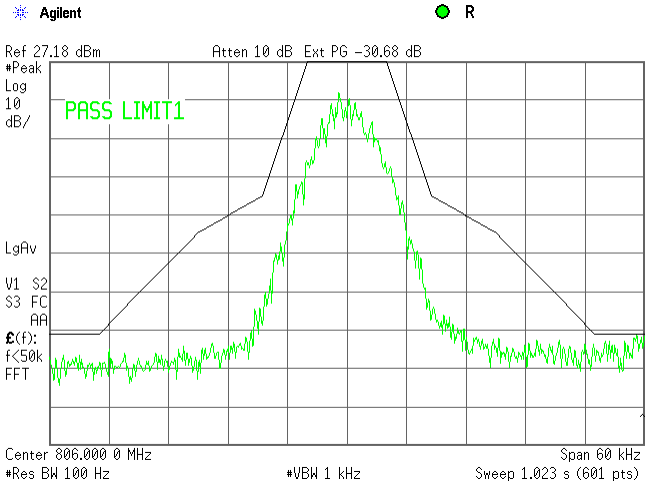
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.7 Occupied bandwidth test result at low frequency carrier, Port 2

FRQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: C4FM uplink transmit
INPUT PORT: Base
COMPOSITE INPUT POWER: -54 dBm
EMISSION MASK: 90.210(H)
INPUT POWER: -54 dBm

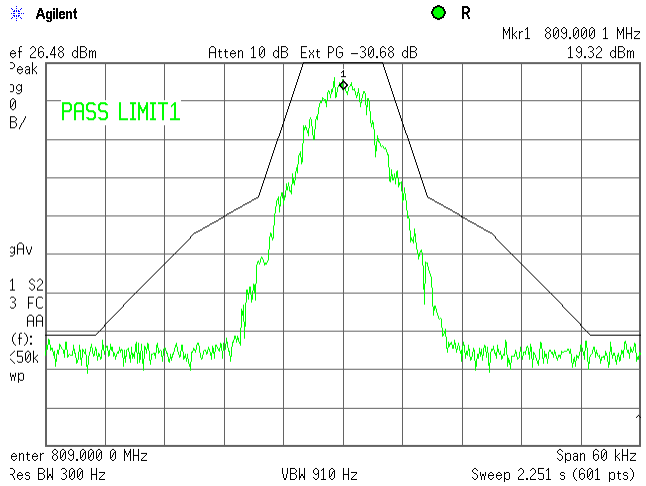


INPUT POWER: -34 dBm

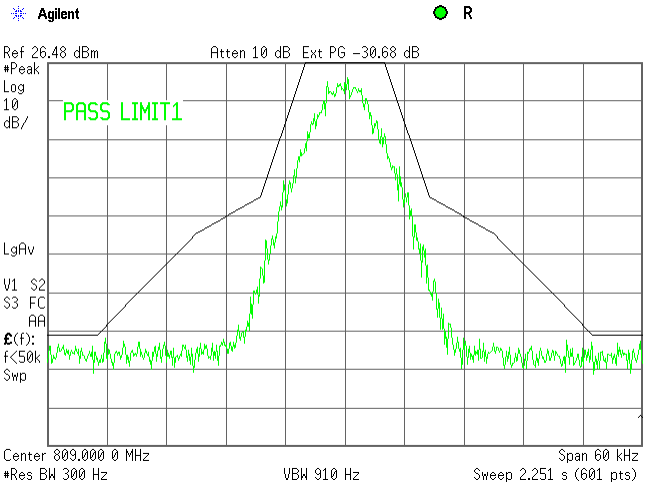


Plot 7.7.8 Occupied bandwidth test result at mid frequency carrier, Port 2

FRQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: C4FM uplink transmit
INPUT PORT: Base
COMPOSITE INPUT POWER: -54 dBm
EMISSION MASK: 90.210(h)
INPUT POWER: -54 dBm



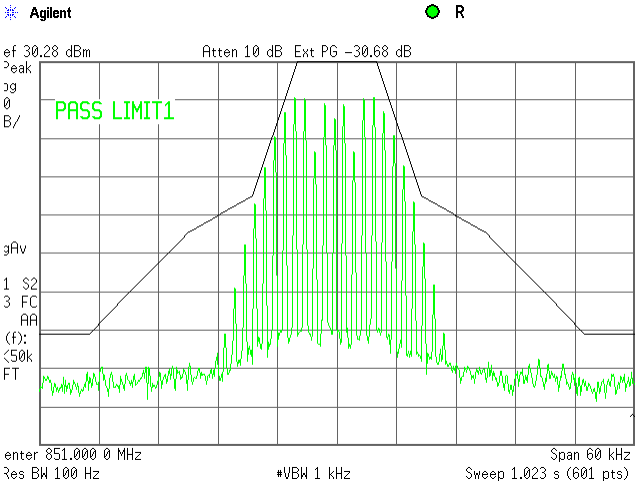
INPUT POWER: -34 dBm



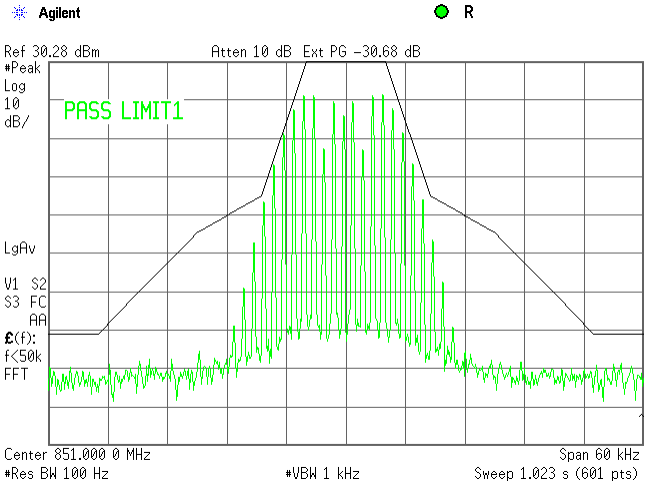
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.9 Occupied bandwidth test result at low frequency carrier, Port 1

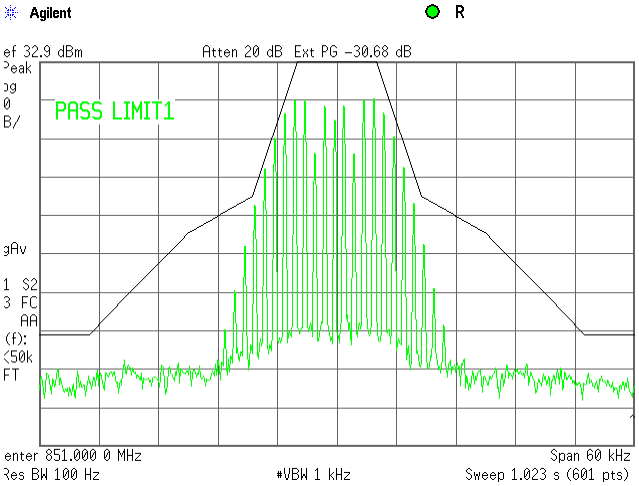
FRQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(h)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



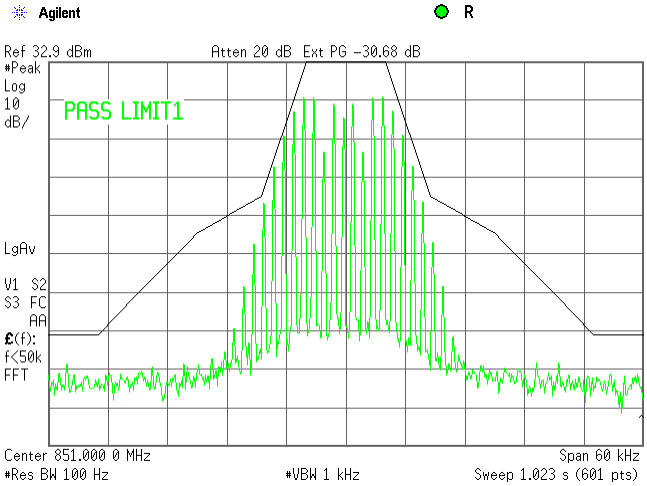
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



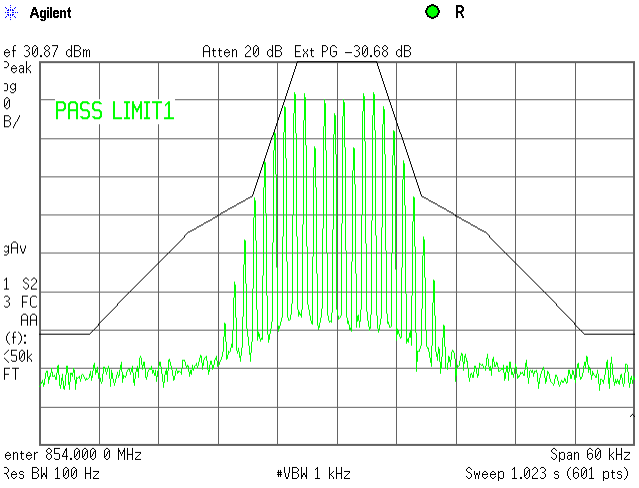
COMPOSITE INPUT POWER: -21 dBm



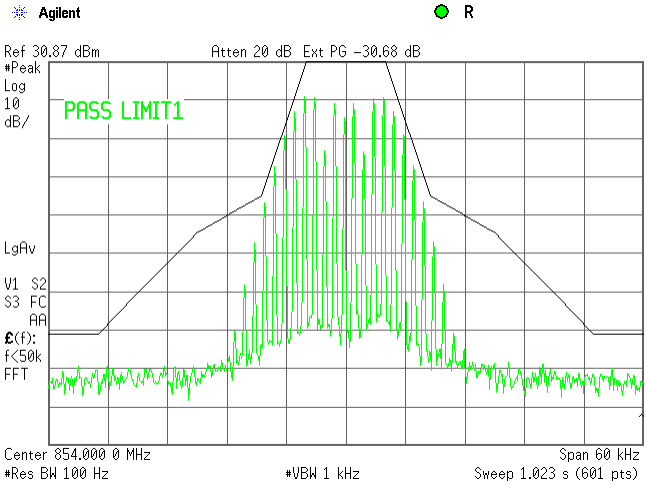
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.10 Occupied bandwidth test result at mid frequency carrier, Port 1

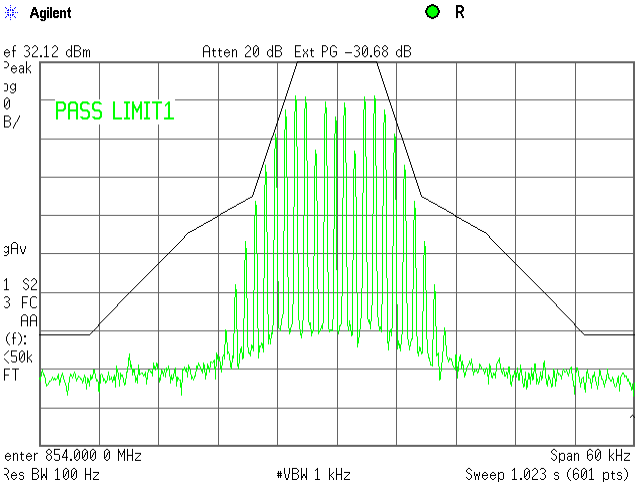
FRQUENCY RANGE: 851 - 861 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Base
EMISSION MASK: 90.210(h)
CONFIGURATION: Dual Band
INPUT POWER: -54 dBm



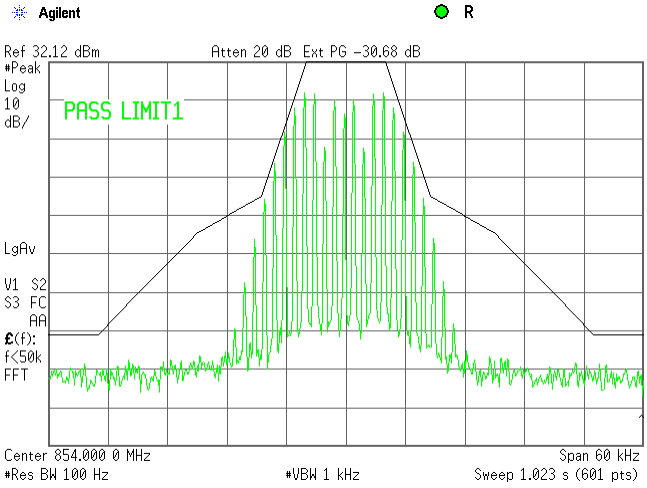
INPUT POWER: -24 dBm



CONFIGURATION: Single Band
COMPOSITE INPUT POWER: -51 dBm



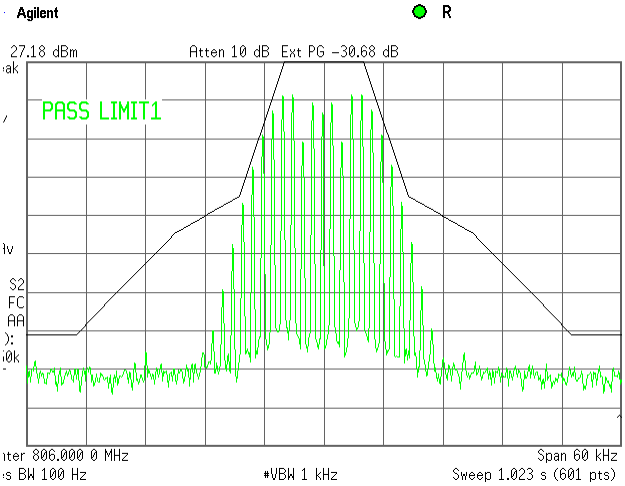
COMPOSITE INPUT POWER: -21 dBm



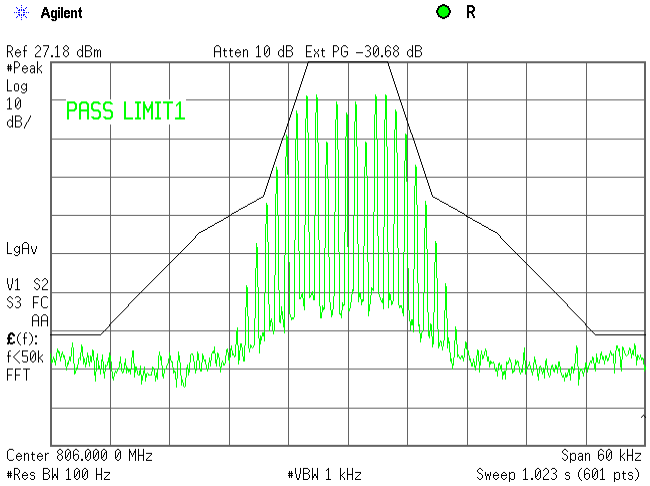
Test specification:	Section 90.210(h), Emission mask		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	27-Mar-14 - 30-Mar-14		
Temperature: 23.2 °C	Air Pressure: 1007 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.11 Occupied bandwidth test result at low frequency carrier, Port 2

FRQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Mobile
COMPOSITE INPUT POWER: -54 dBm
EMISSION MASK: 90.210(h)
INPUT POWER: -54 dBm

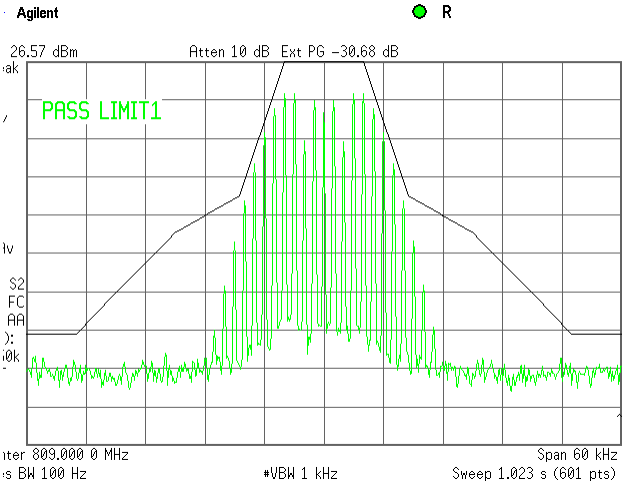


INPUT POWER: -24 dBm

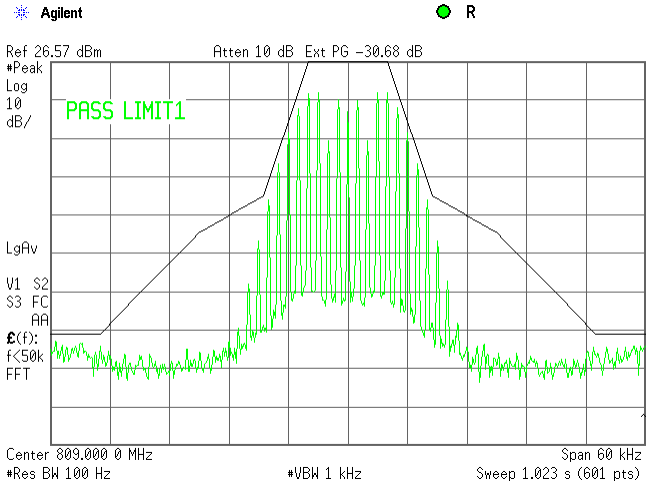


Plot 7.7.12 Occupied bandwidth test result at mid frequency carrier, Port 2

FRQUENCY RANGE: 806 - 816 MHz
OPERATIONAL MODE: Analog FM downlink transmit
INPUT PORT: Mobile
COMPOSITE INPUT POWER: -54 dBm
EMISSION MASK: 90.210(h)
INPUT POWER: -54 dBm



INPUT POWER: -24 dBm



Test specification:	**Section 90.219(e)(2), Noise figure**		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	**Verdict:**	PASS
Date(s):	28-Aug-14		
Temperature: 25 ºC	**Air Pressure:** 1012 hPa	**Relative Humidity:** 55%	**Power Supply:** 120 VAC
Remarks:			

7.8 Noise figure test

7.8.1 General

This test was performed to measure the noise figure at RF antenna connector. Specification test limits are given inTable 7.8.1. The test results are provided in the associated plots.

Table 7.8.1 Noise figure limits

Frequency range	Noise figure limit, dB
Class B Booster	
758.0 – 775.0 / 788.0 – 805.0	9.0
851.0 – 861.0 / 806.0 – 816.0	

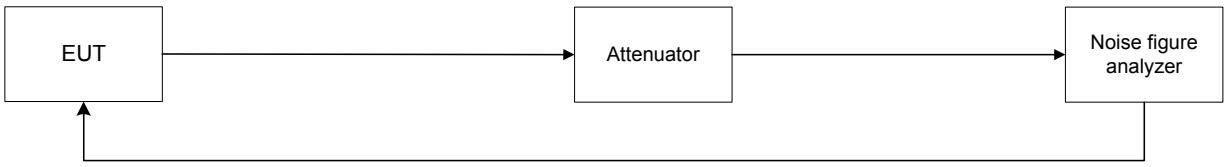
7.8.2 Test procedure

7.8.2.1 The EUT was set up as shown inFigure 7.8.1, energized and its proper operation was checked.

7.8.2.2 The noise figure was measured with Noise Figure Analyzer as provided in the associated plots.

Test specification:	Section 90.219(e)(2), Noise figure		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	28-Aug-14		
Temperature: 25 ºC	Air Pressure: 1012 hPa	Relative Humidity: 55%	Power Supply: 120 VAC
Remarks:			

Figure 7.8.1 Noise figure test setup



Photograph 7.8.1 Noise figure test setup

Test specification:	Section 90.219(e)(2), Noise figure		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	28-Aug-14		
Temperature: 25 ºC	Air Pressure: 1012 hPa	Relative Humidity: 55%	Power Supply: 120 VAC
Remarks:			

Table 7.8.2 Noise figure test results

Frequency, MHz	Noise figure, dB	Limit, dB	Margin, dB	Verdict
Frequency range, 758 – 775 MHz Downlink				
775.00	3.68	9.0	-5.32	Pass
Frequency range, 788 – 805 MHz Uplink				
788.04	2.12	9.0	-6.88	Pass
799.04	0.97	9.0	-8.03	Pass
804.94	0.93	9.0	-8.07	Pass
Frequency range, 851 – 861 MHz Downlink				
851.00	3.65	9.0	-5.35	Pass
Frequency range, 806 –816 MHz Uplink				
806.04	0.83	9.0	-8.17	Pass
811.00	0.74	9.0	-8.26	Pass
815.95	1.51	9.0	-7.49	Pass

Reference numbers of test equipment used

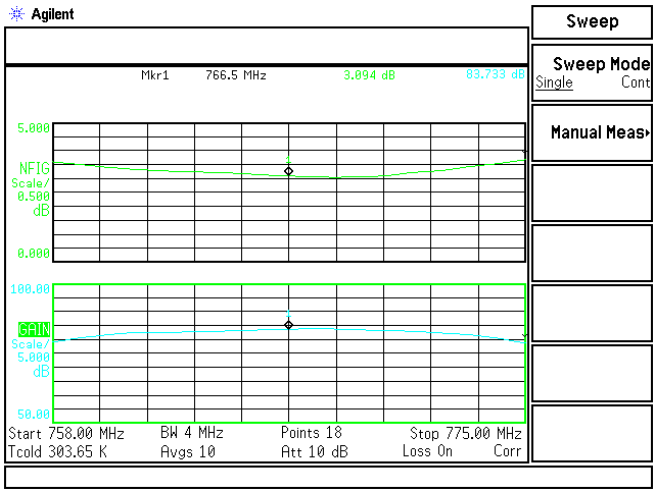
HL 3901	HL 3994	HL 4274					

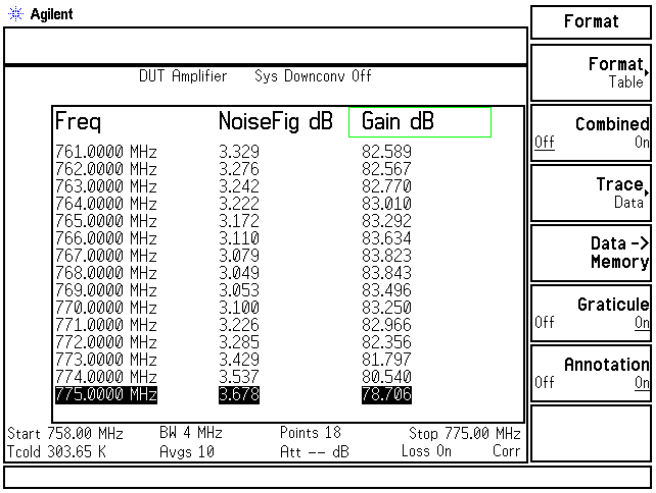
Full description is given in Appendix A.

Test specification:	Section 90.219(e)(2), Noise figure		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	28-Aug-14		
Temperature: 25 ºC	Air Pressure: 1012 hPa	Relative Humidity: 55%	Power Supply: 120 VAC
Remarks:			

Plot 7.8.1 Noise figure test results at frequency range 758 - 775 MHz

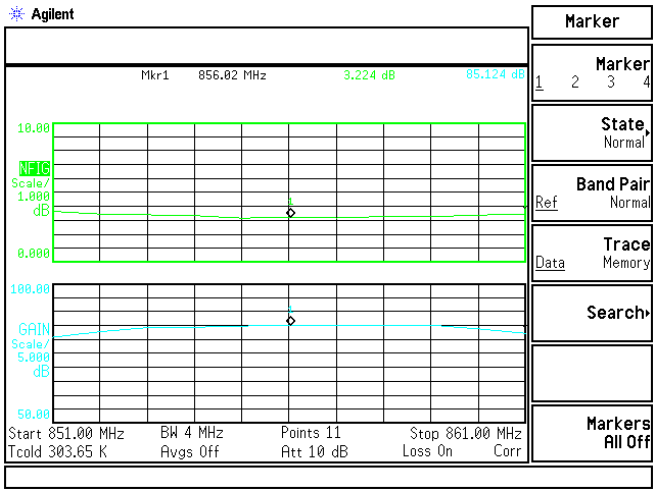
OPERATING FREQUENCY RANGE: 758 – 775 MHz
DETECTOR USED: Average
NOISE FIGURE: Within the passband
CONFIGURATION: Downlink
POWER SETTING: 33dBm

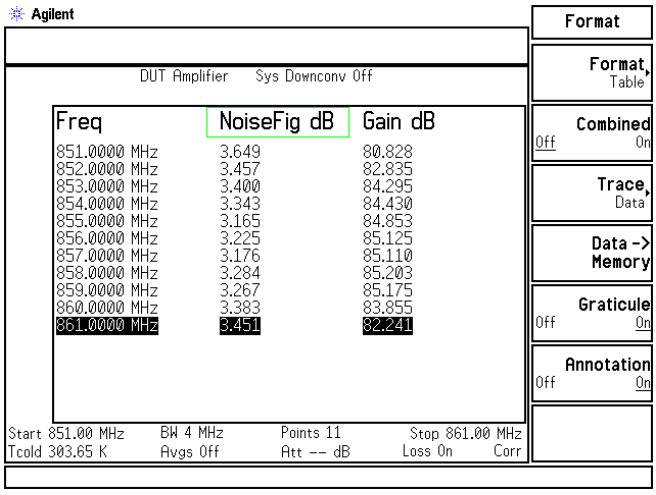




Plot 7.8.2 Noise figure test results at frequency range 851 - 861 MHz

OPERATING FREQUENCY RANGE: 851 – 861 MHz
DETECTOR USED: Average
NOISE FIGURE: Within the passband
CONFIGURATION: Downlink
POWER SETTING: 33dBm

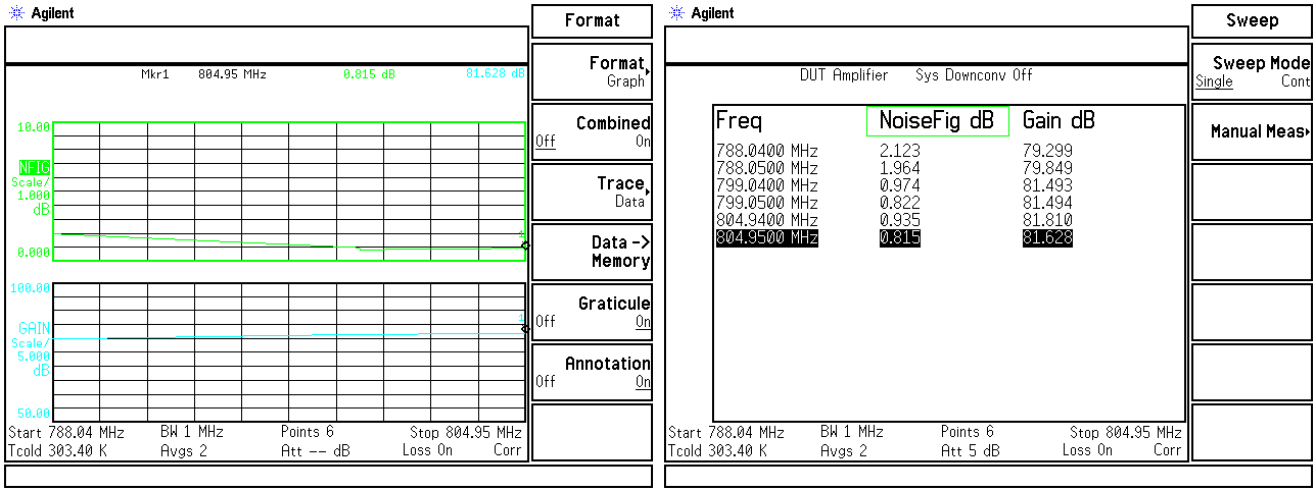




Test specification:	Section 90.219(e)(2), Noise figure		
Test procedure:	47 CFR, Sections 2.1051; KDB 935210 D02 v02, Appendix D		
Test mode:	Compliance	Verdict:	PASS
Date(s):	28-Aug-14		
Temperature: 25 ºC	Air Pressure: 1012 hPa	Relative Humidity: 55%	Power Supply: 120 VAC
Remarks:			

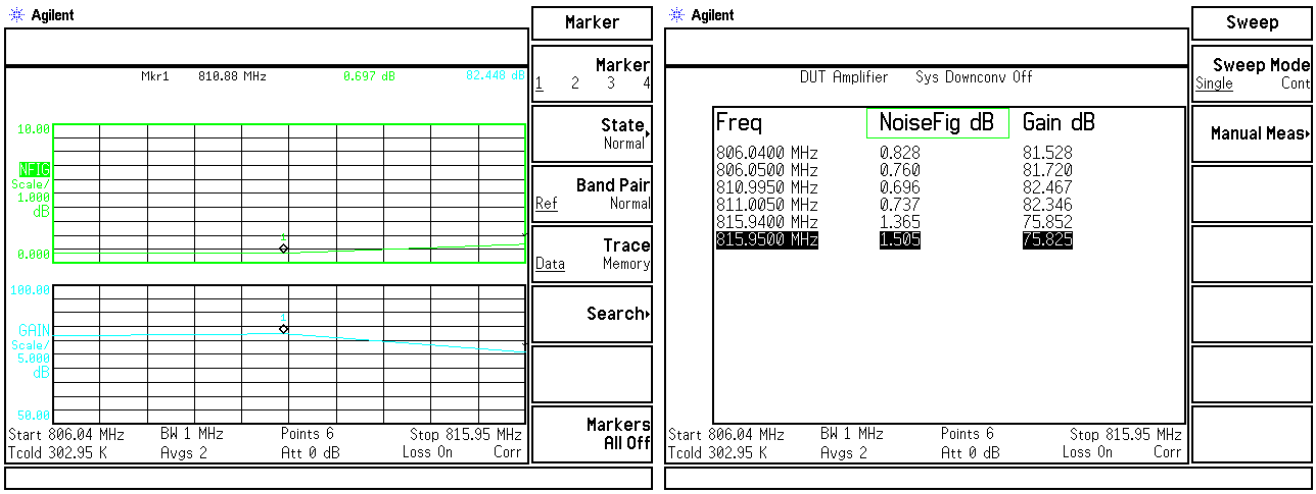
Plot 7.8.3 Noise figure test results at frequency range 788 - 805 MHz

OPERATING FREQUENCY RANGE:	788 – 805 MHz
DETECTOR USED:	Average
NOISE FIGURE:	Within the passband
CONFIGURATION:	Uplink
AMLIFIER GAIN SETTING:	85 dB



Plot 7.8.4 Noise figure test results at frequency range 806 - 816 MHz

OPERATING FREQUENCY RANGE:	806 – 816 MHz
DETECTOR USED:	Average
NOISE FIGURE:	Within the passband
CONFIGURATION:	Uplink
AMLIFIER GAIN SETTING:	85 dB



8 APPENDIX A Test equipment and ancillaries used for tests

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal./ Check	Due Cal./ Check
0446	Antenna, Loop, Active, 10 kHz - 30 MHz	EMCO	6502	2857	21-Jan-14	21-Jan-15
0521	EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz	Hewlett Packard	8546A	3617A 00319, 3448A002 53	28-Oct-13	28-Oct-14
0539	Generator Signal, 10 kHz - 1.2 GHz	Marconi Instruments	2023	112121/04 1	31-Aug-14	31-Aug-15
0604	Antenna BiconiLog Log-Periodic/T Bow-TIE, 26 - 2000 MHz	EMCO	3141	9611-1011	22-May-14	22-May-15
0661	Generator Swept Signal, 10 MHz to 40 GHz, + 10 dBm	Hewlett Packard	83640B	3614A002 66	07-Apr-14	07-Apr-15
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W	EMC Test Systems	3115	9911-5964	03-Jan-14	03-Jan-15
2667	Signal generator, 9 kHz - 3.3 GHz	Rohde & Schwarz	SML03	101909	01-Sep-14	01-Sep-15
2871	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-8155-00	2871	04-Dec-13	04-Dec-14
2909	Spectrum analyzer, ESA-E, 100 Hz to 26.5 GHz	Agilent Technologies	E4407B	MY414447 62	23-Dec-13	23-Dec-14
3301	Power Meter, P-series, 50 MHz to 40 GHz	Agilent Technologies	N1911A	MY451010 57	12-Feb-14	12-Feb-15
3302	Power sensor, P-Series, 50 MHz to 40 GHz, -35/30 to 20 dBm	Agilent Technologies	N1922A	MY452405 86	12-Feb-14	12-Feb-15
3634	Cable RF, 5.5 m, N type-N type, DC-6.5 GHz	Alpha Wire	RG 214/U	NA	11-May-14	11-May-15
3768	Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N20W5+	NA	17-Aug-14	17-Aug-15
3770	Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N20W5+	NA	17-Aug-14	17-Aug-15
3776	Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N10W5+	NA	17-Aug-14	17-Aug-15
3818	PSA Series Spectrum Analyzer, 3 Hz- 44 GHz	Agilent Technologies	E4446A	MY482502 88	20-May-14	20-May-15
3901	Microwave Cable Assembly, 40.0 GHz, 3.5 m, SMA/SMA	Huber-Suhner	SUCOFLEX 102A	1225/2A	06-Feb-14	06-Feb-15
3994	Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N20W5+	NA	17-Aug-14	17-Aug-15
4150	Preamplifier, 0.1 to 18 GHz, Gain 25 dB, N-type(f) in, N-type(m) out.	Agilent Technologies	87405C	MY470105 91	01-Jan-14	01-Jan-15
4224	Precision Fixed Attenuator, 50 Ohm, 5W, 10dB, DC to 18000 MHz	Mini-Circuits	BW-N10W5+	NA	09-Mar-14	09-Mar-15
4273	Test Cable , DC-18 GHz, 1.8 m, SMA/M - N/M	Mini-Circuits	CBL-6FT-SMNM+	70045	27-Nov-13	27-Nov-14
4274	Test Cable , DC-18 GHz, 1.8 m, SMA/M - N/M	Mini-Circuits	CBL-6FT-SMNM+	70047	27-Nov-13	27-Nov-14
4275	Test Cable , DC-18 GHz, 1.8 m, SMA/M - N/M	Mini-Circuits	CBL-6FT-SMNM+	70050	27-Nov-13	27-Nov-14
4353	Low Loss Armored Test Cable, DC - 18 GHz, 6.2 m, N type-M/N type-M	MegaPhase	NC29-N1N1-244	12025101 003	16-Mar-14	16-Mar-15
4354	Vector Signal Generator,100 kHz to 6.0 GHz	Rohde & Schwarz	SMJ 100A	1403.4507 K02-101777-rc	27-Jun-14	27-Jun-15
4355	Signal and Spectrum Analyzer, 9 kHz to 7 GHz	Rohde & Schwarz	FSV 7	191000086 881	10-Apr-14	10-Apr-15

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal./ Check	Due Cal./ Check
4369	4-way Power Divider, 1.0 to 18.0 GHz, 50 Ohm, SMA-FM	Tiger Micro-Electronics Institute	TGP-A0411	11-JSPE902-019	18-May-14	18-May-16
4384	Cable RF 3.6 m N type-N type, up to 2.0 GHz	Times Microwave Systems	M17-164/RG 214	NA	11-May-14	11-May-15
4413	Resistive divider, DC to 1.5 GHz, 2 W	Microlab	DA-3FN	NA	15-Jul-14	15-Jul-16

8.1 Test equipment and ancillaries used for tests

HL No.	Description	Manufacturer	Model	Ser. No.	Last Cal./ Check	Due Cal./ Check
NA	Noise Figure Analyzer	Agilent	N8973A	GB39490364	11-Jun-13	10-Jun-15
NA	Noise Source	Agilent	N4000A	MY44420199	11-Jun-13	10-Jun-15

9 APPENDIX B Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

Test description	Expanded uncertainty
Transmitter tests	
Carrier power conducted at antenna connector	± 1.7 dB
Carrier power radiated (substitution method)	± 4.5 dB
Occupied bandwidth	±8%
Conducted emissions at RF antenna connector	9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB
Spurious emissions radiated 30 MHz – 40 GHz (substitution method)	± 4.5 dB
Frequency error	30 – 300 MHz: ± 50.5 Hz (1.68 ppm) 300 – 1000 MHz: ± 168 Hz (0.56 ppm)
Transient frequency behaviour	187 Hz ± 13.9 %
Duty cycle, timing (Tx ON / OFF) and average factor measurements	± 1.0 %

Hermon Laboratories is accredited by A2LA for calibration according to present requirements of ISO/IEC 17025 and NCSL Z540-1. The accreditation is granted to perform calibration of parameters that are listed in the Scope of Hermon Laboratories Accreditation.
Hermon Laboratories calibrates its reference and transfer standards by calibration laboratories accredited to ISO/IEC 17025 by a mutually recognized Accreditation Body or by a recognized national metrology institute. All reference and transfer standards used in the calibration system are traceable to national or international standards.
In-house calibration of all test and measurement equipment is performed on a regular basis according to Hermon Laboratories calibration procedures, manufacturer calibration/verification procedures or procedures defined in the relevant standards. The Hermon Laboratories test and measurement equipment is calibrated within the tolerances specified by the manufacturers and/or by the relevant standards.

10 APPENDIX C Test facility description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility.
Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47), Registration Numbers 90624 for OATS and 90623 for the anechoic chamber; by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS, IC 2186A-2 for anechoic chamber, IC 2186A-3 for full-anechoic chamber for RE measurements above 1 GHz), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, G-27 for full-anechoic chamber for RE measurements above 1 GHz, C-845 for conducted emissions site, T-1606 for conducted emissions at telecommunication ports), has a status of a Telefication - Listed Testing Laboratory, Certificate No. L138/00. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01). The FCC Designation Number is US1003.

Address: P.O. Box 23, Binyamina 30500, Israel.
Telephone: +972 4628 8001
Fax: +972 4628 8277
e-mail: mail@hermonlabs.com
website: www.hermonlabs.com

Person for contact: Mr. Alex Usoskin, CEO.

11 APPENDIX D Specification references

47CFR part 90: 2013	Private land mobile radio services
47CFR part 2: 2013	Frequency allocations and radio treaty matters; general rules and regulations
ANSI C63.2: 1996	American National Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz-Specifications.
ANSI C63.4: 2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
ANSI/TIA/EIA-603-C:2004	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
KDB 935210 D02 v02:4.04.2014	Signal BoostersCertification

12 APPENDIX E Test equipment correction factors

Antenna factor
Active loop antenna
Model 6502, S/N 2857, HL 0446

Frequency, MHz	Magnetic antenna factor, dB	Electric antenna factor, dB
0.009	-32.8	18.7
0.010	-33.8	17.7
0.020	-38.3	13.2
0.050	-41.1	10.4
0.075	-41.3	10.2
0.100	-41.6	9.9
0.150	-41.7	9.8
0.250	-41.6	9.9
0.500	-41.8	9.8
0.750	-41.9	9.7
1.000	-41.4	10.1
2.000	-41.5	10.0
3.000	-41.4	10.2
4.000	-41.4	10.1
5.000	-41.5	10.1
10.000	-41.9	9.6
15.000	-41.9	9.6
20.000	-42.2	9.3
25.000	-42.8	8.7
30.000	-44.0	7.5

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μV) to convert it into field strength in dB(μV/m).

Antenna factor
Biconilog antenna EMCO Model 3141
Ser.No.1011, HL 0604

Frequency, MHz	Antenna factor, dB(1/m)	Frequency, MHz	Antenna factor, dB(1/m)	Frequency, MHz	Antenna factor, dB(1/m)
26	7.8	580	20.6	1320	27.8
28	7.8	600	21.3	1340	28.3
30	7.8	620	21.5	1360	28.2
40	7.2	640	21.2	1380	27.9
60	7.1	660	21.4	1400	27.9
70	8.5	680	21.9	1420	27.9
80	9.4	700	22.2	1440	27.8
90	9.8	720	22.2	1460	27.8
100	9.7	740	22.1	1480	28.0
110	9.3	760	22.3	1500	28.5
120	8.8	780	22.6	1520	28.9
130	8.7	800	22.7	1540	29.6
140	9.2	820	22.9	1560	29.8
150	9.8	840	23.1	1580	29.6
160	10.2	860	23.4	1600	29.5
170	10.4	880	23.8	1620	29.3
180	10.4	900	24.1	1640	29.2
190	10.3	920	24.1	1660	29.4
200	10.6	940	24.0	1680	29.6
220	11.6	960	24.1	1700	29.8
240	12.4	980	24.5	1720	30.3
260	12.8	1000	24.9	1740	30.8
280	13.7	1020	25.0	1760	31.1
300	14.7	1040	25.2	1780	31.0
320	15.2	1060	25.4	1800	30.9
340	15.4	1080	25.6	1820	30.7
360	16.1	1100	25.7	1840	30.6
380	16.4	1120	26.0	1860	30.6
400	16.6	1140	26.4	1880	30.6
420	16.7	1160	27.0	1900	30.6
440	17.0	1180	27.0	1920	30.7
460	17.7	1200	26.7	1940	30.9
480	18.1	1220	26.5	1960	31.2
500	18.5	1240	26.5	1980	31.6
520	19.1	1260	26.5	2000	32.0
540	19.5	1280	26.6		
560	19.8	1300	27.0		

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μV) to convert it into field strength in dB(μV/m).

Antenna factor
Double-ridged wave guide horn antenna
Model 3115, S/N 9911-5964, HL1984

Frequency, MHz	Antenna factor, dB(1/m)
1000.0	24.7
1500.0	25.7
2000.0	27.6
2500.0	28.9
3000.0	31.2
3500.0	32.0
4000.0	32.5
4500.0	32.7
5000.0	33.6
5500.0	35.1
6000.0	35.4
6500.0	34.9
7000.0	36.1
7500.0	37.8
8000.0	38.0
8500.0	38.1
9000.0	39.1
9500.0	38.3
10000.0	38.6
10500.0	38.2
11000.0	38.7
11500.0	39.5
12000.0	40.0
12500.0	40.4
13000.0	40.5
13500.0	41.1
14000.0	41.6
14500.0	41.7
15000.0	38.7
15500.0	38.2
16000.0	38.8
16500.0	40.5
17000.0	42.5
17500.0	45.9
18000.0	49.4

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μV) to convert it into field strength in dB(μV/m).

Cable loss
Cable coaxial, Huber-Suhner, 18 GHz, 6.4 m, SMA - SMA, model 198-8155-00, HL 2871

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.12	5750	2.34	12000	3.55
30	0.14	6000	2.39	12250	3.61
100	0.27	6250	2.46	12500	3.67
250	0.45	6500	2.52	12750	3.74
500	0.63	6750	2.58	13000	3.79
750	0.76	7000	2.64	13250	3.82
1000	0.89	7250	2.68	13500	3.83
1250	1.01	7500	2.73	13750	3.83
1500	1.12	7750	2.78	14000	3.88
1750	1.23	8000	2.83	14250	3.93
2000	1.32	8250	2.88	14500	3.96
2250	1.41	8500	2.94	14750	4.01
2500	1.49	8750	2.97	15000	4.00
2750	1.58	9000	3.02	15250	4.01
3000	1.66	9250	3.07	15500	4.00
3250	1.73	9500	3.13	15750	4.13
3500	1.80	9750	3.18	16000	4.22
3750	1.87	10000	3.21	16250	4.29
4000	1.93	10250	3.26	16500	4.29
4250	2.01	10500	3.30	16750	4.32
4500	2.06	10750	3.36	17000	4.37
4750	2.12	11000	3.39	17250	4.45
5000	2.17	11250	3.44	17500	4.49
5250	2.24	11500	3.48	17750	4.53
5500	2.29	11750	3.52	18000	4.55

Cable loss
Cable coaxial, RG-214/U, N type-N type, 5.5 m
Alpha Wire, HL 3634

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.05	1750	2.12	3550	3.43	5350	4.66
30	0.18	1800	2.16	3600	3.50	5400	4.70
50	0.24	1850	2.17	3650	3.53	5450	4.76
100	0.36	1900	2.23	3700	3.55	5500	4.80
150	0.47	1950	2.25	3750	3.57	5550	4.86
200	0.55	2000	2.33	3800	3.63	5600	4.87
250	0.64	2050	2.34	3850	3.67	5650	4.91
300	0.70	2100	2.41	3900	3.73	5700	4.97
350	0.77	2150	2.44	3950	3.73	5750	5.02
400	0.83	2200	2.49	4000	3.78	5800	5.07
450	0.91	2250	2.52	4050	3.79	5850	5.07
500	0.95	2300	2.55	4100	3.90	5900	5.15
550	1.02	2350	2.56	4150	3.88	5950	5.20
600	1.08	2400	2.60	4200	3.88	6000	5.25
650	1.15	2450	2.68	4250	3.98	6050	5.26
700	1.19	2500	2.67	4300	4.00	6100	5.30
750	1.25	2550	2.73	4350	4.02	6150	5.37
800	1.31	2600	2.74	4400	4.03	6200	5.40
850	1.35	2650	2.77	4450	4.06	6250	5.45
900	1.39	2700	2.84	4500	4.14	6300	5.47
950	1.45	2750	2.85	4550	4.16	6350	5.50
1000	1.49	2800	2.89	4600	4.17	6400	5.57
1050	1.56	2850	2.91	4650	4.19	6450	5.62
1100	1.57	2900	2.99	4700	4.21	6500	5.61
1150	1.64	2950	3.00	4750	4.26		
1200	1.66	3000	3.03	4800	4.29		
1250	1.71	3050	3.06	4850	4.30		
1300	1.73	3100	3.14	4900	4.33		
1350	1.80	3150	3.20	4950	4.36		
1400	1.81	3200	3.20	5000	4.45		
1450	1.87	3250	3.22	5050	4.44		
1500	1.94	3300	3.24	5100	4.49		
1550	1.96	3350	3.33	5150	4.53		
1600	1.97	3400	3.35	5200	4.62		
1650	2.03	3450	3.38	5250	4.63		
1700	2.05	3500	3.39	5300	4.64		

Cable loss
Microwave Cable Assembly, Huber-Suhner, 40 GHz, 3.5 m, SMA-SMA, S/N 1225/2A
HL 3901

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.09	9500	4.29	21000	6.67
100	0.41	10000	4.40	22000	6.92
500	0.93	10500	4.52	23000	7.00
1000	1.33	11000	4.64	24000	7.18
1500	1.63	11500	4.76	25000	7.29
2000	1.90	12000	4.87	26000	7.55
2500	2.12	12500	4.99	27000	7.70
3000	2.33	13000	5.11	28000	7.88
3500	2.50	13500	5.20	29000	8.02
4000	2.67	14000	5.31	30000	8.15
4500	2.82	14500	5.42	31000	8.35
5000	2.99	15000	5.51	32000	8.40
5500	3.16	15500	5.58	33000	8.62
6000	3.32	16000	5.68	34000	8.73
6500	3.51	16500	5.78	35000	8.78
7000	3.65	17000	5.91	36000	8.94
7500	3.79	17500	5.99	37000	9.21
8000	3.92	18000	6.07	38000	9.37
8500	4.04	19000	6.36	39000	9.45
9000	4.18	20000	6.49	40000	9.52

Cable loss
Test cable, Mini-Circuits, S/N 70045, 18 GHz, 1.8 m, SMA/M - N/M
CBL-6FT-SMNM+, HL 4273

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.09	4800	1.76	9800	2.70	14800	3.59
30	0.11	4900	1.78	9900	2.71	14900	3.59
50	0.14	5000	1.81	10000	2.73	15000	3.60
100	0.20	5100	1.82	10100	2.75	15100	3.63
200	0.30	5200	1.86	10200	2.76	15200	3.67
300	0.38	5300	1.89	10300	2.79	15300	3.70
400	0.45	5400	1.92	10400	2.81	15400	3.68
500	0.50	5500	1.96	10500	2.82	15500	3.70
600	0.55	5600	2.00	10600	2.83	15600	3.71
700	0.60	5700	2.03	10700	2.87	15700	3.77
800	0.65	5800	2.04	10800	2.87	15800	3.75
900	0.69	5900	2.07	10900	2.88	15900	3.77
1000	0.73	6000	2.10	11000	2.89	16000	3.79
1100	0.77	6100	2.10	11100	2.91	16100	3.85
1200	0.80	6200	2.11	11200	2.92	16200	3.82
1300	0.84	6300	2.11	11300	2.94	16300	3.83
1400	0.88	6400	2.14	11400	2.95	16400	3.88
1500	0.92	6500	2.15	11500	2.98	16500	3.89
1600	0.95	6600	2.15	11600	3.00	16600	3.92
1700	0.98	6700	2.16	11700	3.02	16700	3.88
1800	1.01	6800	2.19	11800	3.04	16800	3.95
1900	1.04	6900	2.22	11900	3.08	16900	3.91
2000	1.07	7000	2.24	12000	3.09	17000	3.97
2100	1.09	7100	2.26	12100	3.12	17100	3.92
2200	1.13	7200	2.29	12200	3.13	17200	3.94
2300	1.15	7300	2.32	12300	3.16	17300	3.94
2400	1.18	7400	2.36	12400	3.17	17400	3.98
2500	1.21	7500	2.39	12500	3.19	17500	3.93
2600	1.24	7600	2.41	12600	3.20	17600	3.95
2700	1.27	7700	2.43	12700	3.21	17700	3.96
2800	1.30	7800	2.46	12800	3.21	17800	3.97
2900	1.34	7900	2.49	12900	3.22	17900	3.96
3000	1.36	8000	2.52	13000	3.22	18000	3.97
3100	1.38	8100	2.52	13100	3.24		
3200	1.41	8200	2.54	13200	3.24		
3300	1.45	8300	2.59	13300	3.27		
3400	1.46	8400	2.61	13400	3.28		
3500	1.49	8500	2.60	13500	3.31		
3600	1.51	8600	2.63	13600	3.31		
3700	1.55	8700	2.65	13700	3.35		
3800	1.34	8800	2.65	13800	3.37		
3900	1.36	8900	2.65	13900	3.40		
4000	1.38	9000	2.66	14000	3.43		
4100	1.41	9100	2.66	14100	3.45		
4200	1.45	9200	2.67	14200	3.46		
4300	1.46	9300	2.67	14300	3.46		
4400	1.49	9400	2.67	14400	3.49		
4500	1.51	9500	2.68	14500	3.50		
4600	1.55	9600	2.69	14600	3.50		
4700	1.34	9700	2.69	14700	3.52		

Cable loss
Test cable, Mini-Circuits, S/N 70047, 18 GHz, 1.8 m, SMA/M - N/M
CBL-6FT-SMNM+, HL 4274

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.07	4800	1.69	9800	2.62	14800	3.42
30	0.11	4900	1.70	9900	2.63	14900	3.39
50	0.14	5000	1.72	10000	2.64	15000	3.38
100	0.21	5100	1.75	10100	2.64	15100	3.40
200	0.26	5200	1.76	10200	2.66	15200	3.41
300	0.30	5300	1.77	10300	2.67	15300	3.40
400	0.37	5400	1.79	10400	2.68	15400	3.39
500	0.44	5500	1.82	10500	2.68	15500	3.41
600	0.49	5600	1.85	10600	2.70	15600	3.44
700	0.54	5700	1.86	10700	2.71	15700	3.46
800	0.58	5800	1.87	10800	2.73	15800	3.45
900	0.63	5900	1.91	10900	2.74	15900	3.47
1000	0.67	6000	1.94	11000	2.76	16000	3.51
1100	0.71	6100	1.97	11100	2.77	16100	3.56
1200	0.75	6200	1.98	11200	2.78	16200	3.55
1300	0.78	6300	1.99	11300	2.79	16300	3.54
1400	0.81	6400	2.02	11400	2.80	16400	3.57
1500	0.85	6500	2.05	11500	2.82	16500	3.62
1600	0.88	6600	2.06	11600	2.83	16600	3.61
1700	0.91	6700	2.06	11700	2.84	16700	3.60
1800	0.94	6800	2.08	11800	2.85	16800	3.62
1900	0.97	6900	2.10	11900	2.87	16900	3.68
2000	1.00	7000	2.12	12000	2.88	17000	3.70
2100	1.03	7100	2.12	12100	2.89	17100	3.68
2200	1.06	7200	2.13	12200	2.90	17200	3.70
2300	1.08	7300	2.16	12300	2.92	17300	3.80
2400	1.11	7400	2.19	12400	2.94	17400	3.84
2500	1.14	7500	2.22	12500	2.95	17500	3.83
2600	1.16	7600	2.23	12600	2.96	17600	3.83
2700	1.19	7700	2.26	12700	2.98	17700	3.86
2800	1.21	7800	2.30	12800	3.00	17800	3.86
2900	1.27	7900	2.33	12900	3.02	17900	3.80
3000	1.29	8000	2.35	13000	3.03	18000	3.79
3100	1.32	8100	2.37	13100	3.06		
3200	1.35	8200	2.41	13200	3.08		
3300	1.37	8300	2.44	13300	3.09		
3400	1.38	8400	2.47	13400	3.10		
3500	1.41	8500	2.48	13500	3.13		
3600	1.43	8600	2.51	13600	3.17		
3700	1.46	8700	2.53	13700	3.17		
3800	1.47	8800	2.55	13800	3.18		
3900	1.49	8900	2.56	13900	3.22		
4000	1.52	9000	2.57	14000	3.26		
4100	1.55	9100	2.58	14100	3.28		
4200	1.56	9200	2.59	14200	3.30		
4300	1.58	9300	2.59	14300	3.35		
4400	1.60	9400	2.60	14400	3.39		
4500	1.63	9500	2.60	14500	3.39		
4600	1.65	9600	2.61	14600	3.39		
4700	1.67	9700	2.61	14700	3.41		

Cable loss
Test cable, Mini-Circuits, S/N 70050, 18 GHz, 1.8 m, SMA/M - N/M
CBL-6FT-SMNM+, HL 4275

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.08	5000	1.71	10200	2.64	15400	3.46
30	0.11	5100	1.73	10300	2.65	15500	3.47
50	0.14	5200	1.75	10400	2.66	15600	3.52
100	0.21	5300	1.76	10500	2.67	15700	3.55
200	0.30	5400	1.77	10600	2.70	15800	3.55
300	0.37	5500	1.82	10700	2.71	15900	3.55
400	0.43	5600	1.84	10800	2.72	16000	3.61
500	0.49	5700	1.86	10900	2.73	16100	3.62
600	0.54	5800	1.86	11000	2.75	16200	3.63
700	0.58	5900	1.89	11100	2.77	16300	3.62
800	0.62	6000	1.94	11200	2.78	16400	3.66
900	0.66	6100	1.95	11300	2.80	16500	3.71
1000	0.70	6200	1.96	11400	2.82	16600	3.71
1100	0.74	6300	1.97	11500	2.83	16700	3.67
1200	0.78	6400	2.01	11600	2.84	16800	3.69
1300	0.81	6500	2.03	11700	2.86	16900	3.74
1400	0.84	6600	2.02	11800	2.88	17000	3.73
1500	0.88	6700	2.02	11900	2.89	17100	3.71
1600	0.91	6800	2.05	12000	2.90	17200	3.73
1700	0.94	6900	2.06	12100	2.92	17300	3.77
1800	0.97	7000	2.07	12200	2.93	17400	3.77
1900	1.00	7100	2.07	12300	2.94	17500	3.76
2000	1.02	7200	2.08	12400	2.96	17600	3.76
2100	1.05	7300	2.11	12500	2.98	17700	3.78
2200	1.07	7400	2.13	12600	2.99	17800	3.80
2300	1.10	7500	2.15	12700	3.01	17900	3.79
2400	1.13	7600	2.16	12800	3.03	18000	3.78
2500	1.15	7700	2.18	12900	3.05		
2600	1.18	7800	2.21	13000	3.07		
2700	1.20	7900	2.24	13100	3.09		
2800	1.24	8000	2.25	13200	3.12		
2900	1.26	8100	2.26	13300	3.13		
3000	1.28	8200	2.29	13400	3.14		
3100	1.30	8300	2.31	13500	3.16		
3200	1.33	8400	2.33	13600	3.18		
3300	1.36	8500	2.33	13700	3.19		
3400	1.37	8600	2.34	13800	3.21		
3500	1.39	8700	2.36	13900	3.23		
3600	1.42	8800	2.38	14000	3.25		
3700	1.45	8900	2.39	14100	3.26		
3800	1.46	9000	2.40	14200	3.27		
3900	1.48	9100	2.42	14300	3.30		
4000	1.50	9200	2.45	14400	3.32		
4100	1.53	9300	2.46	14500	3.33		
4200	1.55	9400	2.48	14600	3.34		
4300	1.57	9500	2.50	14700	3.36		
4400	1.59	9600	2.52	14800	3.39		
4500	1.61	9700	2.54	14900	3.40		
4600	1.64	9800	2.56	15000	3.41		
4700	1.66	9900	2.58	15100	3.41		
4800	1.67	10000	2.60	15200	3.44		
4900	1.69	10100	2.61	15300	3.46		

Cable loss
Low Loss Armored Test Cable, MegaPhase, 18 GHz, 6.2 m, N type-M/N type-M,
NC29-N1N1-244S/N 12025101 003,
HL 4353

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
50	0.20	9000	2.71
100	0.27	9500	2.81
300	0.47	10000	2.90
500	0.61	10500	2.97
1000	0.87	11000	3.06
1500	1.07	11500	3.13
2000	1.24	12000	3.20
2500	1.39	12500	3.26
3000	1.53	13000	3.34
3500	1.65	13500	3.39
4000	1.77	14000	3.47
4500	1.89	14500	3.54
5000	1.99	15000	3.62
5500	2.07	15500	3.69
6000	2.20	16000	3.76
6500	2.30	16500	3.83
7000	2.39	17000	3.86
7500	2.51	17500	3.94
8000	2.58	18000	4.02
8500	2.65		

13 APPENDIX F Abbreviations and acronyms

A	ampere
AC	alternating current
AM	amplitude modulation
AVRG	average (detector)
BB	broad band
cm	centimeter
dB	decibel
dBm	decibel referred to one milliwatt
dB(μV)	decibel referred to one microvolt
dB(μV/m)	decibel referred to one microvolt per meter
dB(μA)	decibel referred to one microampere
DC	direct current
EIRP	equivalent isotropically radiated power
ERP	effective radiated power
EUT	equipment under test
F	frequency
GHz	gigahertz
GND	ground
H	height
HL	Hermon laboratories
Hz	hertz
k	kilo
kHz	kilohertz
LO	local oscillator
m	meter
MHz	megahertz
min	minute
mm	millimeter
ms	millisecond
μs	microsecond
NA	not applicable
NB	narrow band
OATS	open area test site
Ω	Ohm
QP	quasi-peak
RE	radiated emission
RF	radio frequency
rms	root mean square
Rx	receive
s	second
T	temperature
Tx	transmit
V	volt

END OF DOCUMENT