RC-032-PTE-13-105155-2-A

E.M.C Test Report

According to the standards:

FCC PART 15 : 2013
RSS-210 Issue 8 : 2010
RSS-Gen Issue 3 : 2010

Equipment under test:

Wireless handheld payment terminal
Type: IWL257
FCC ID: XKB-IWL2XXWBCL
IC: 2586D-IWL2WBCL

Company:

INGENICO

FCC listed: 910 701
IC listed: 4379

DISTRIBUTION: Mr GOBION

(Company: INGENICO)

Number of pages: 86 with 4 annexes

Ed.	Date	Modified page(s)	Written by Name / Visa	Technical Verification and Quality Approval Name / Visa
0	12/11/13	Creation	F. LHEUREUX FL	B. Pellegri

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This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of the whole production of the item tested.

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TEST CERTIFICATION FOR:	FCC Certification
NAME OF THE EQUIPMENT UNDER TEST:	Wireless handheld payment terminal Type: IWL257
Serial number:	13086WL00000509
Reference / model (P/N):	IWL257 – 01T2293A
Software version:	SDK 9.14
NAME OF THE MANUFACTURER:	INGENICO
ADDRESS OF THE APPLICANT:	
Company:	INGENICO
Address:	Bâtiment M2 Parc Innolin 10, rue du Golf 33700 MERIGNAC
Person in charge:	Mr GOBION
DATES OF TESTS:	29/11/2013 02, 03 and 04/11/2013
TESTS LOCATION:	Open area test site in Aunainville (28) - FRANCE
TESTS OPERATOR:	F. LHEUREUX

TABLE OF CONTENTS

1. *INTRODUCTION*

This document presents the results of Electromagnetic Compatibility tests performed on the equipment «Wireless handheld payment terminal type: IWL257» according to references documents listed below.

2. *REFERENCES DOCUMENTS*

FCC Part 15: 2013
Code of Federal Regulations
Title 47- Telecommunication
Chapter 1- Federal Communication Commission
Part 15- Radio frequency devices

ANSI C63.4: 2003
Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronics Equipment in the range of 9 kHz to 40 GHz.

RSS-210 Issue 8: 2010
Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment

RSS-Gen Issue 3: 2010
General Requirements and Information for the Certification of Radio Apparatus

3. *PRODUCT DESCRIPTION*

Class: B (residential environment)

Antenna type and gain: internal PCB antenna: 2.5 dBi

Modulation: CCK, OFDM and MCS

Power source: 3.6 Vdc

Software power setting: RTTT (The power is not adjustable, only the channels and a mode)

Operating frequency range: From 5150 MHz to 5250 MHz
From 5250 MHz to 5350 MHz and 5470 MHz to 5725 MHz
From 5725 MHz to 5825 MHz

Operating mode: Client device without radar detection

Table for carrier frequency: 802.11 a and n (20 MHz)

Channel No.	J34	40	44	52	60	64	100	120	140	149	157	161
CF (MHz)	5170	5200	5240	5260	5300	5320	5500	5600	5700	5745	5785	5805

802.11 n (40 MHz)

Channel No.	36	40	52	60	100	120	136	149	157
CF (MHz)	5180	5200	5260	5300	5500	5600	5680	5745	5785

Modification of the equipment during the tests: No

4. *TESTS AND CONCLUSION*

The following tables summarize test results of the EUT.

Subpart B of the standard FCC part 15 – Unintentional radiators

Test procedure	Designation of test	Test results				Comments
		Pass	Fail	N.A.	N.P.	
15.107	Measurement of conducted emission on AC mains ports			X		
15.109	Radiated emission limits	X				

Subpart C of the standard FCC part 15 – Intentional radiators

Test procedure	Designation of test	Test results				Comments
		Pass	Fail	N.A.	N.P.	
15.205	Restricted bands of operation	X				
15.207	Measurement of conducted emission on AC mains ports			X		
15.209	Radiated emission limits; general requirements	X				
15.215	Additional provisions to the general radiated emission limitations					
	(a) Alternative to general radiated emission limits	X				
	(b) Unwanted emissions outside of § 15.247 frequency bands	X				
	(c) 20 dB bandwidth and band-edge compliance			X		
15.407	Intentional radiated emissions					
	a) Power limits					
	a) (1) in the bands 5150–5250 MHz					
	- maximum conducted output power	X				
	- 26 dB bandwidth	X				
	- peak power spectral density	X				
	a) (2) in the bands 5250–5350 MHz and 5470-5725 MHz					
	- maximum conducted output power	X				
	- 26 dB bandwidth	X				
	- peak power spectral density	X				
	a) (3) in the bands 5725–5825 MHz					
	- maximum conducted output power	X				
	- 26 dB bandwidth	X				
	- peak power spectral density	X				
	a) (6) peak excursion ratio	X				
	b) Undesirable emission limits					
	b) (1) outside of the bands 5150–5250 MHz	X				
	b) (2) outside of the bands 5250–5350 MHz	X				
	b) (3) outside of the bands 5470-5725 MHz	X				
	b) (4) outside of the bands 5725–5825 MHz	X				
	c) Operation in the absence of information to transmit	X				
	g) Frequency Stability	X				
	h) Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS)					
	h) (1) TPC operating in the bands 5250-5350 MHz and 5470-5725MHz			X		output power < 500mW
	h) (2) DFS operating in the bands 5250-5350 MHz and 5470-5725MHz	X				

N.A.: Not Applicable N.P.: Not Performed

Standard RSS-210 Issue 8: 2010

Designation of test	Test results				Comments
	Pass	Fail	N.A.	N.P.	
1. Scope					
2. General Certification Requirements and Specifications					
2.1 RSS-gen compliance			X		*See RSS-Gen*
2.2 Emissions Falling Within Restricted Frequency Bands			X		*See RSS-Gen*
2.3 Receivers			X		*See RSS-Gen*
2.4 Cordless Telephones (General Conditions)			X		*See CS-03*
2.5 General Field Strength Limits			X		*See RSS-Gen*
Annex 9 – Local Aera Network Devices Operating in the Bands 5150-5250 MHz, 5250-5350 MHz 5650-5725 MHz and 5725-5825 MHz					
9.2 Power limits					
9.2 (1) in the bands 5150–5250 MHz					
- maximum conducted output power	X				
- power spectral density	X				
- outside of the band 5150–5250 MHz	X				
9.2 (2) in the bands 5250–5350 MHz					
- maximum conducted output power	X				
- power spectral density	X				
- outside of the band 5250–5350 MHz	X				
- if EIRP>200mW -> elevation mask with the angle			X		EIRP < 200 mW
9.2 (3) in the bands 5470-5600 MHz and 5650–5725 MHz					
- maximum conducted output power	X				
- power spectral density	X				
- outside of the band 5470-5600 MHz and 5650–5725 MHz	X				
- if EIRP>200mW -> elevation mask with the angle			X		EIRP < 200 mW
9.2 (4) in the bands 5725–5825 MHz					
- maximum conducted output power	X				
- power spectral density	X				
- outside of the band 5725–5825 MHz	X				
9.3 TPC operating in the bands 5250-5350 MHz, 5470-5600 and 5650-5725MHz			X		output power < 500mW
- (a) Minimum DFS radar signal detection					
- (b) (i) In-service monitoring			X		
- (b) (ii) Channel availability check time			X		
- (b) (iii) Channel move time	X				
- (b) (iv) Channel closing time	X				
- (b) (v) Non occupancy period	X				
9.4 (6) User Manuel					

Standard RSS-Gen Issue 3: 2010

Designation of test	Test results				Comments
	Pass	Fail	N.A.	N.P.	
1. Scope					
2. General Information					
2.1 Categories of radio Equipment	X				*Category I II radio Equipment*
2.2 Receivers	X				*Category I II Receiver*
2.3 Licence-exempt Radio Apparatus			X		*See §7*
2.4 Licensing of Radio Apparatus			X		
3. Equipment Certification of Radio Apparatus					
3.1 Application for equipment Certification					*See RSP-100*
3.2 Modular Approval	X				*Note 1*
3.3 Connection with the Public Switched Network			X		*See CS-03 The device must be registered in accordance with DC-01.*
4. Measurement Methods					
4.1 Methods, Instrumentation and Facilities for the Measurement of RF Signals and Noise Emitted from Radio Apparatus					*See ANSI C63.4*
4.2 Open Area Test Site and Alternative Site Registration					*Emitech OATS registration number: 4379A/B/C*
4.3 Compliance Testing and Reporting					
4.4 CISPR Quasi-peak Detector					
4.5 Pulsed Operation			X		
4.6 Bandwidth	X				26 dB
4.7 Transmitter Frequency Stability			X		*See §7*
4.8 Transmitter output Power	X				*See §7*
4.9 Transmitter Unwanted Emissions	X				*See §7 ; Note 2*
4.10 Receiver Spurious Emissions	X				*See §6 ; Note 3*
4.11 Near-field Measurement Method Below 30 MHz			X		
5. General Requirements					
5.1 Quality Control and Post-certification Investigation/Audits					*Note 4*
5.2 Equipment Certification Numbers and Labels					*Note 5*
5.3 required Notices to the User					*Note 6*
5.4 External Controls					*Note 7*
5.5 multiple Band Operation					*Note 8*
5.6 Exposure of Humans to RF Fields			X		*See RSS-102*
5.7 Radiocommunication Antenna Systems			X		*See CPC-2-0-03*
6. Receiver Spurious Emission Limits					
6.1 Radiated Limits	X				
6.2 Antenna Conducted Limits			X		

Designation of test	Test results				Comments
	Pass	Fail	N.A.	N.P.	
7. Licence-exempt Radio Apparatus					
7.1 General Informations					
7.1.1 External Amplifiers			X		
7.1.2 Transmitter Antenna			X		
7.1.3 User manual Notice					*User manual shall include the required statements*
7.1.4 Radio Apparatus Containing Digital Circuits			X		*See ICES-003*
7.1.5 Measurement After Installation			X		
7.1.6 operating Frequency range of Devices in Master/Slave Networks			X		
7.1.7 Home-built Devices			X		
7.1.8 RFID Devices			X		
7.2 Measurement Methods and Standard Specifications					
7.2.1 Measurement Bandwidths and Detector Functions					
7.2.2 Emissions Falling Within Restricted Frequency Bands	X				
7.2.3 Devices Employing Pulsed Operation			X		
7.2.4 AC Power Line Conducted Emissions Limits			X		
7.2.5 Transmitter Spurious Emission Limits	X				
7.2.6 Transmitter Frequency Stability			X		
7.2.7 Measurement Distance					

Note 1: *Single / Split / limited modular transmitter.*
The host devices of the certified module(s) shall be properly labeled to identify the module(s) within.

Note 2: Spectrum investigated from 30 MHz or the lowest radio frequency signal generated in the equipment, whichever is lower, without going below 9 kHz to the 10th harmonic of the highest fundamental frequency or 40 GHz, whichever is lower (F<10 GHz) or to the 5th harmonic of the highest fundamental frequency or 100 GHz, whichever is lower (F≥10 GHz).

Note 3: Spectrum investigated from the lowest frequency internally generated or used in the receiver or 30 MHz, whichever is higher to at least 3 times the highest tuneable or local oscillator frequency, whichever is higher without exceeding 40 GHz.

Note 4: *The certificate holder shall be able to demonstrate a quality control process used for production. Inspection and testing in accordance with good engineering practices.*

Note 5: *The device must be properly identified and labeled.*

Note 6: *Suppliers of radio apparatus shall provide notices and user information in both English and French.*

Note 7: *The device shall not have any external controls accessible to the user.*

Note 8: *When transitioning between bands, the equipment shall not actively transmit*

Conclusion:

The tested sample " Payment terminal type: IWL250 " submitted to the tests complies with the requirements of the standards:

- FCC PART 15: 2013
- RSS-210 Issue 8 : 2010
- RSS-Gen Issue 3 : 2010

According to the limits specified in this report.

5. *26 dB BANDWIDTH AND 99 % OCCUPIED BANDWIDTH*

Standards: FCC PART 15 : 2013
RSS-210 Issue 8 : 2010

Sections: 15.407 a) (1); (2); (3)
Annex 9.2 (1); (2); (3) of RSS-210

Test configuration:

The system is tested in an open area test site (OATS).

The test unit is placed on a rotating table, 0.8 m from a ground plane. Zero degree azimuth corresponds to the front of the equipment under test.

The level was maximised in antenna height, azimuth and polarization. The maximum level measured on the spectrum analyser was recorded.

Test procedure:

789033 D01 General UNII test Procedures v01r03

Distance of antenna: 3 meters

Instrumentation test list:

CATEGORY	BRAND	TYPE	Nr EMITECH
Antenna	Emco	3115	3374
Antenna mast	Maturo	AM 4.0-O	7625
Cable	Micro-Coax	N-13m	8063
Open area test site	Emitech	Aunainville	0187
Receiver	Rohde & Schwarz	FSU8	9129
Turntable	Maturo	MCU	7626

Equipment under test operating condition:

EUT is in continuous transmission mode with the RTTT software.

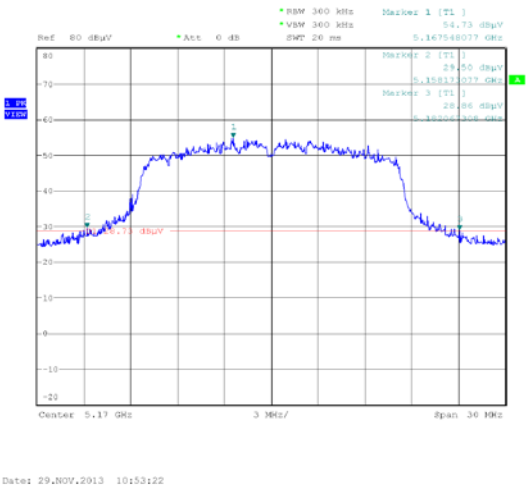
Measure conditions:

Ambient temperature (°C): 9
Relative humidity (%): 90
Power source: 3.6 Vd.c

Results:

26 dB Bandwidth

Channel	Mode	Results	Comments
J34 (5170 MHz)	802.11a	23.9 MHz	See curve n°1
40 (5200 MHz)		19.6 MHz	See curve n°2
48 (5240 MHz)		19.0 MHz	See curve n°3
52 (5260 MHz)	802.11a	22.0 MHz	See curve n°4
60 (5300 MHz)		19.2 MHz	See curve n°5
64 (5320 MHz)		19.3 MHz	See curve n°6
100 (5500 MHz)	802.11a	22.1 MHz	See curve n°7
120 (5600 MHz)		19.5 MHz	See curve n°8
140 (5700 MHz)		19.4 MHz	See curve n°9
149 (5745 MHz)	802.11a	19.2 MHz	See curve n°10
157 (5785 MHz)		19.2 MHz	See curve n°11
161 (5805 MHz)		19.7 MHz	See curve n°12
J34 (5170 MHz)	802.11n (20 MHz)	22.6 MHz	See curve n°13
40 (5200 MHz)		20.4 MHz	See curve n°14
48 (5240 MHz)		20.1 MHz	See curve n°15
52 (5260 MHz)	802.11n (20 MHz)	22.8 MHz	See curve n°16
60 (5300 MHz)		21.5 MHz	See curve n°17
64 (5320 MHz)		19.7 MHz	See curve n°18
100 (5500 MHz)	802.11n (20 MHz)	23.7 MHz	See curve n°19
120 (5600 MHz)		19.6 MHz	See curve n°20
140 (5700 MHz)		21.0 MHz	See curve n°21
149 (5745 MHz)	802.11n (20 MHz)	20.4 MHz	See curve n°22
157 (5785 MHz)		20.0 MHz	See curve n°23
161 (5805 MHz)		20.0 MHz	See curve n°24
36 (5180 MHz)	802.11n (40 MHz)	40.8 MHz	See curve n°25
40 (5200 MHz)		42.4 MHz	See curve n°26
52 (5260 MHz)	802.11n (40 MHz)	44.1 MHz	See curve n°27
60 (5300 MHz)		40.7 MHz	See curve n°28
100 (5500 MHz)	802.11n (40 MHz)	44.3 MHz	See curve n°29
120 (5600 MHz)		40.8 MHz	See curve n°30
136 (5680 MHz)		41.3 MHz	See curve n°31
149 (5745 MHz)	802.11n (40 MHz)	40.2 MHz	See curve n°32
157 (5785 MHz)		40.5 MHz	See curve n°33



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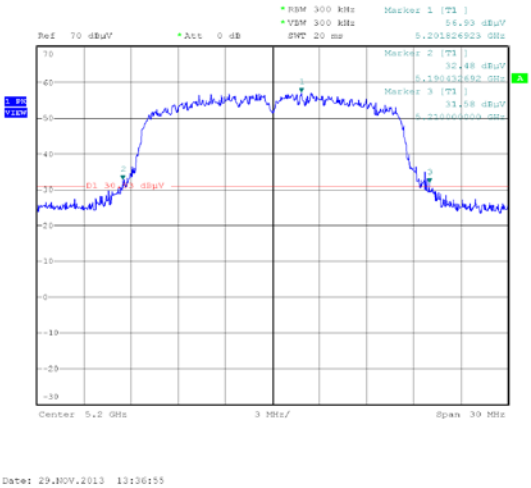

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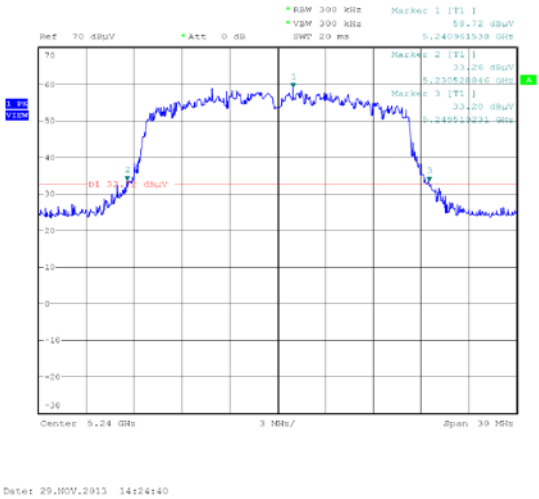

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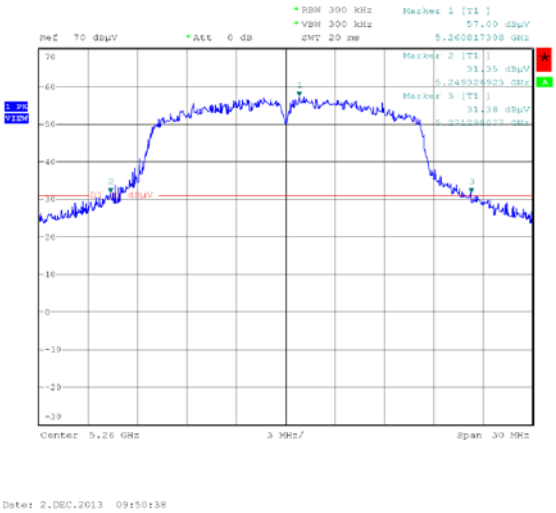

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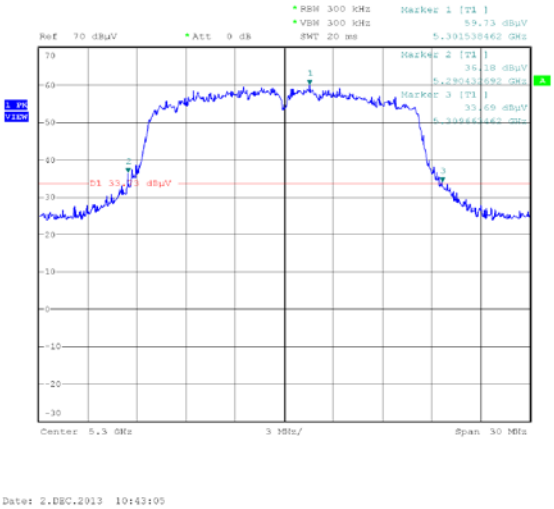

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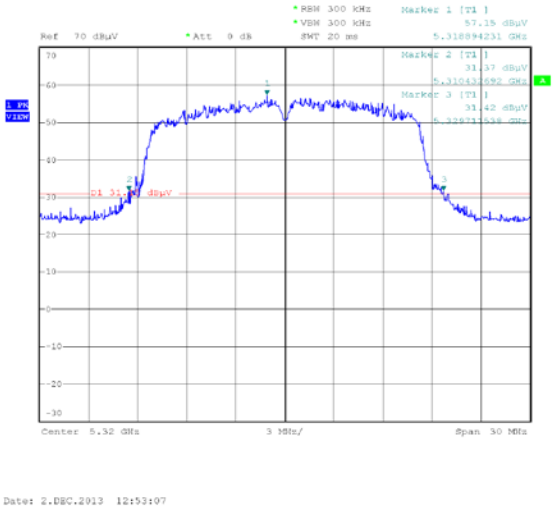

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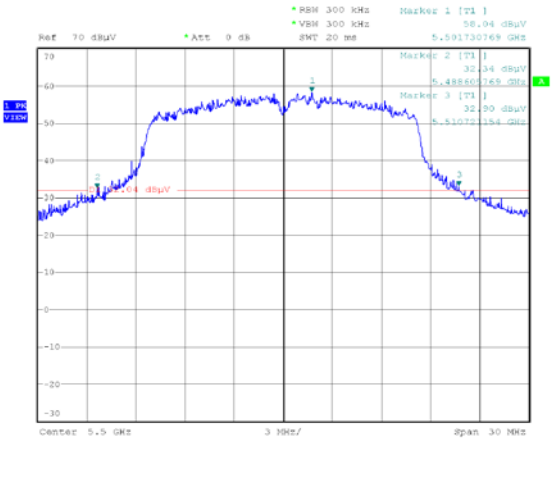

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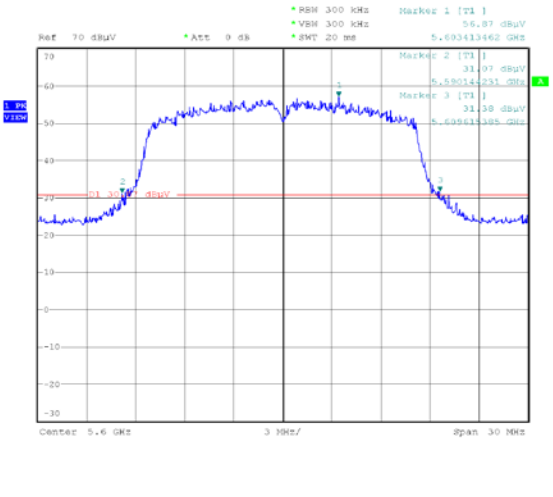

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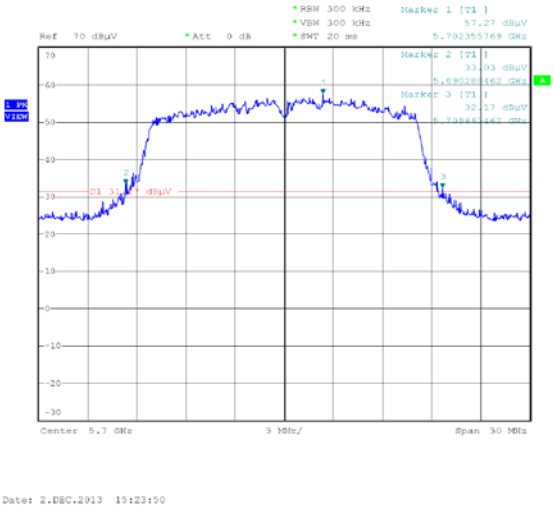

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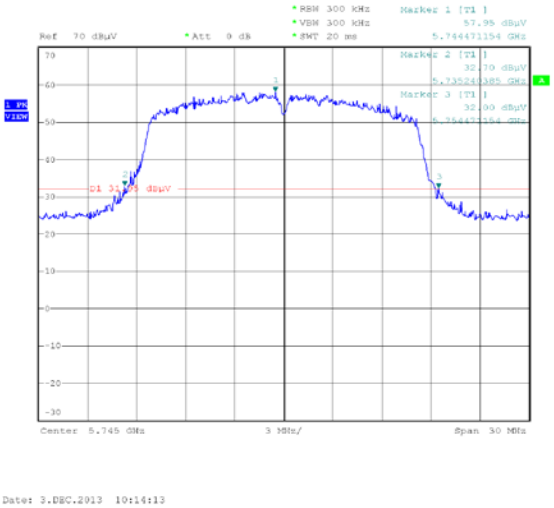

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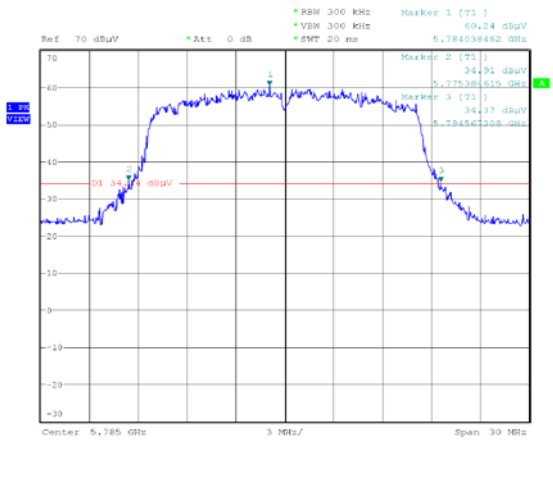

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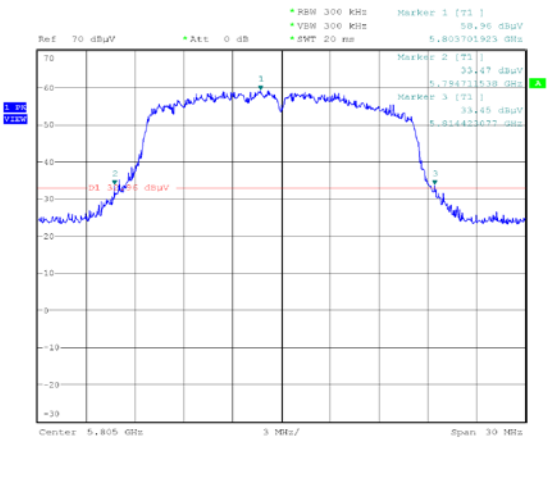

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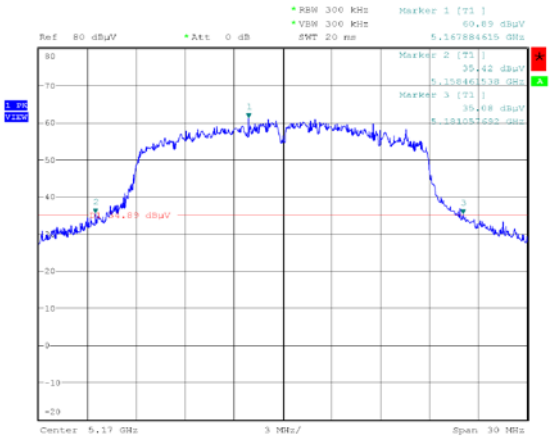

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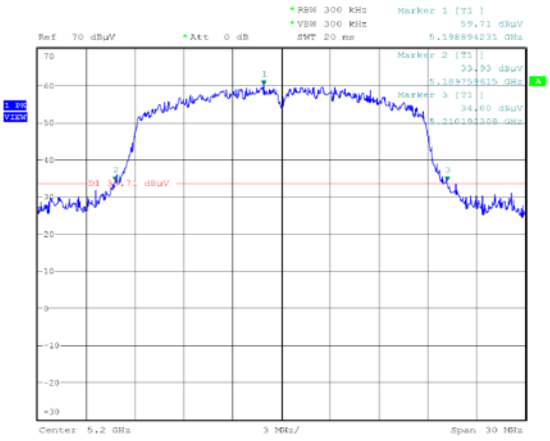

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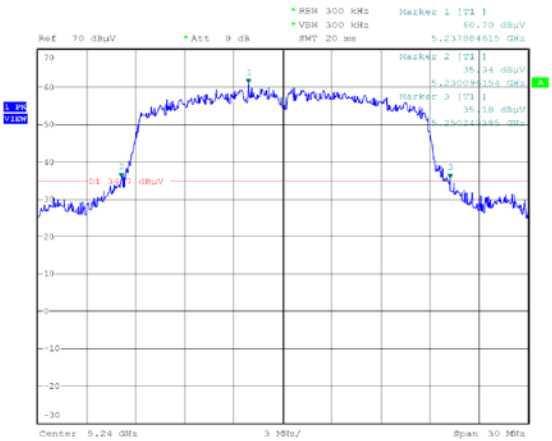

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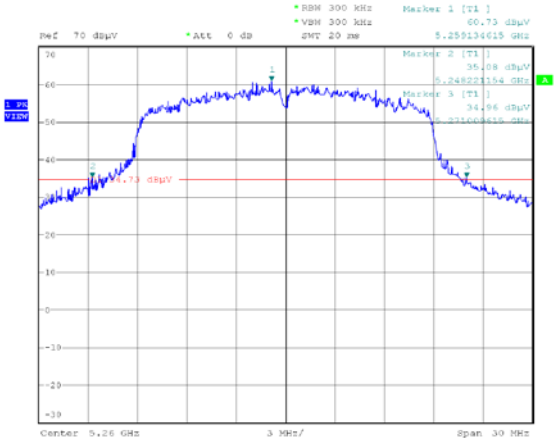

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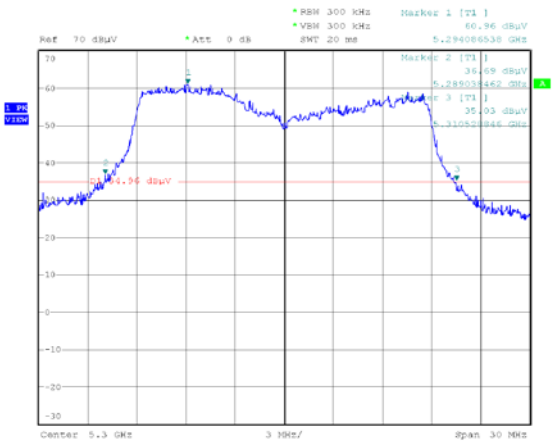

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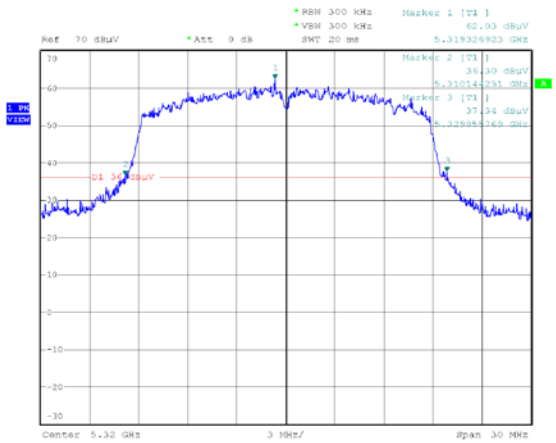

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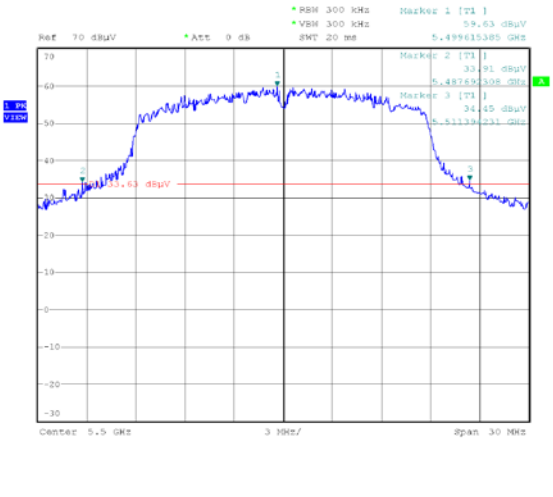

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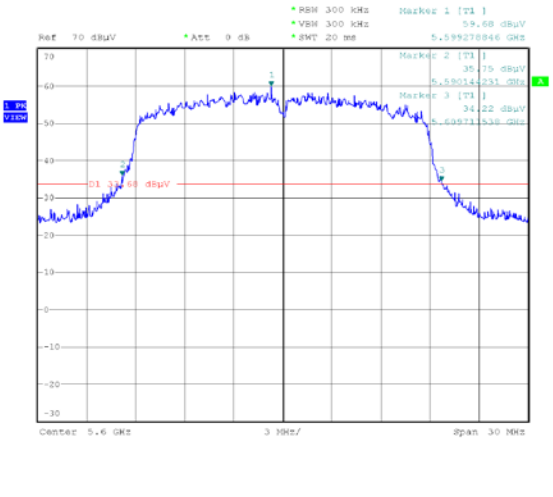

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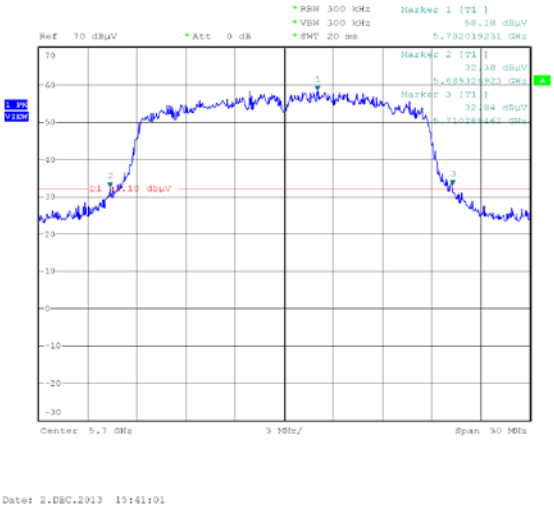

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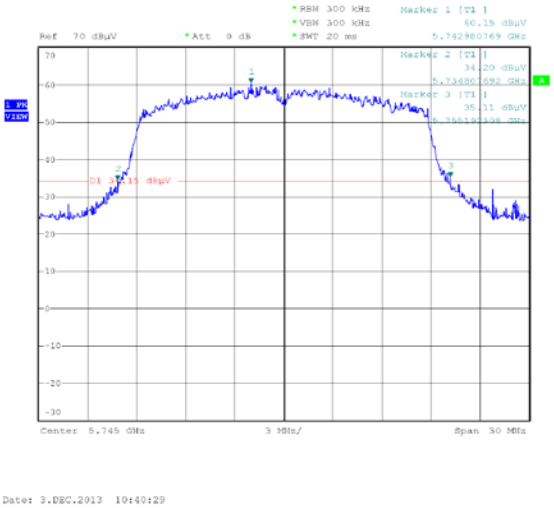

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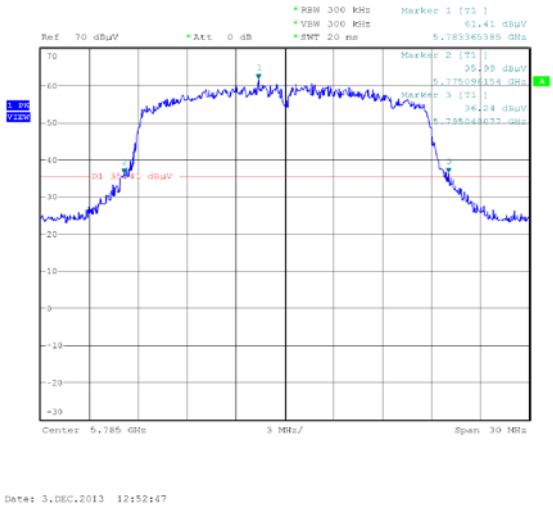

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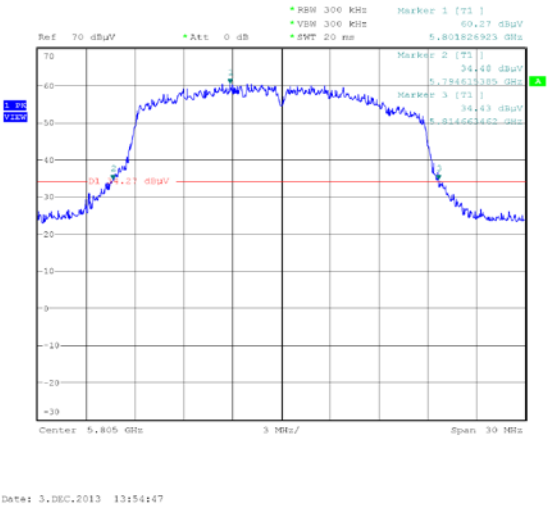
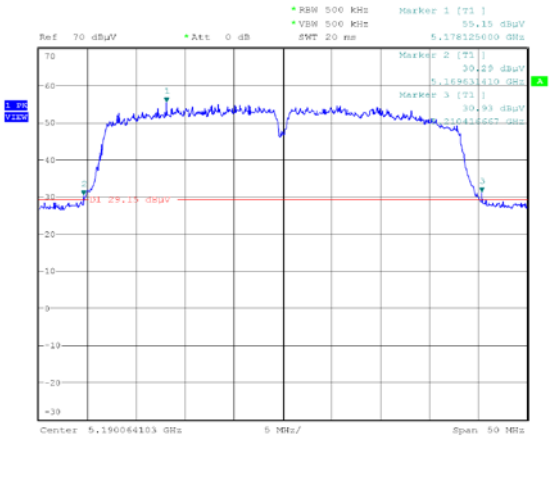
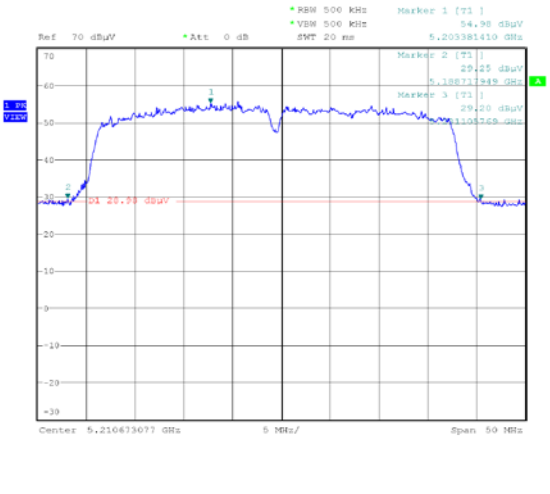


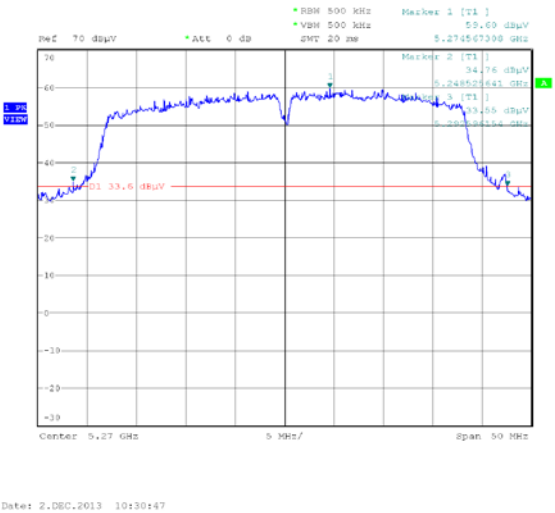
Curve 24



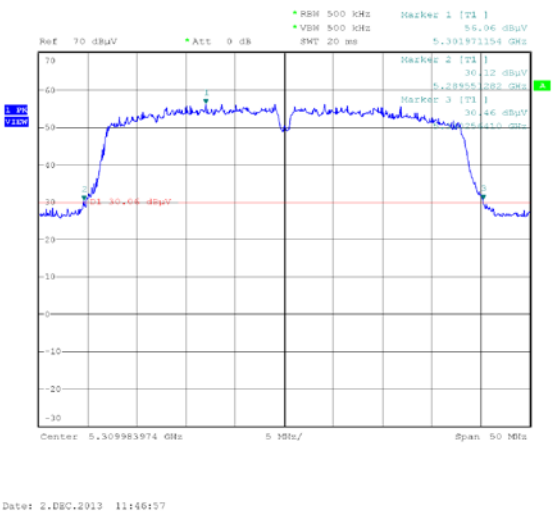
Curve 25



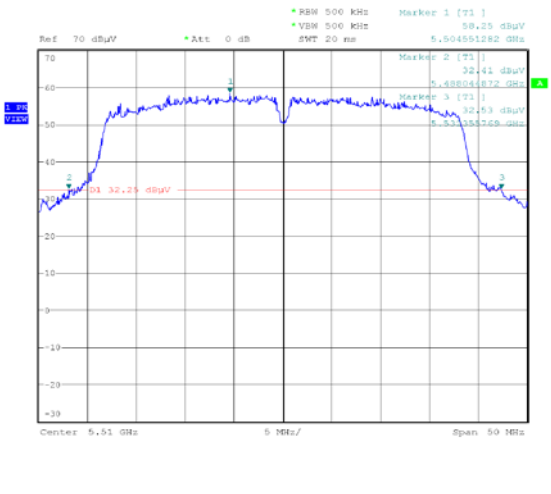
Curve 26



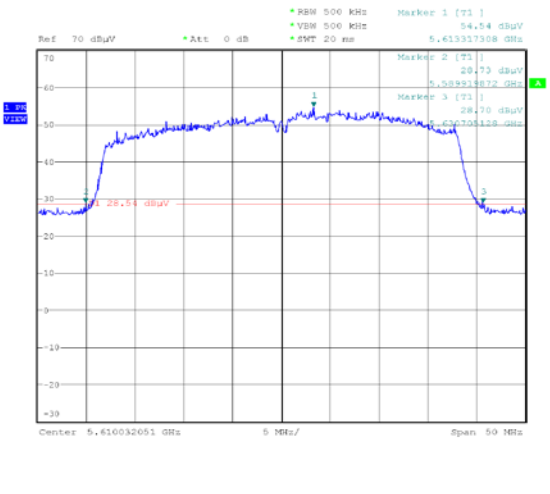
Curve 27



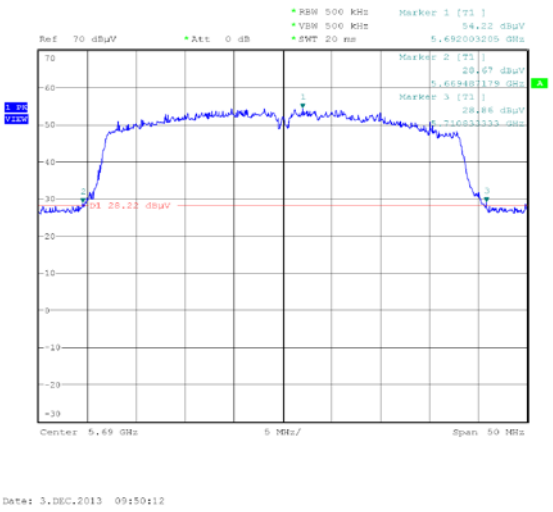
Curve 28



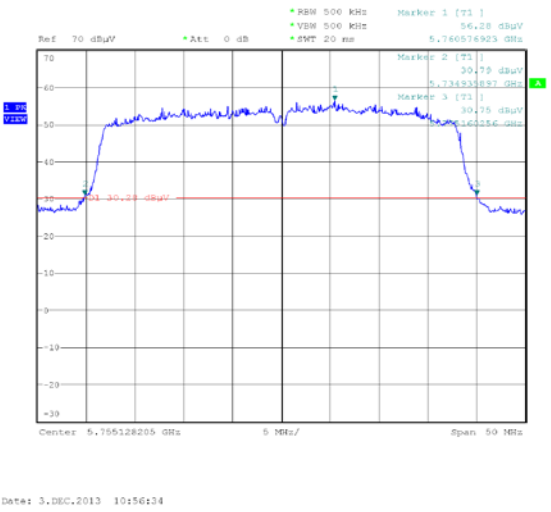
Curve 29



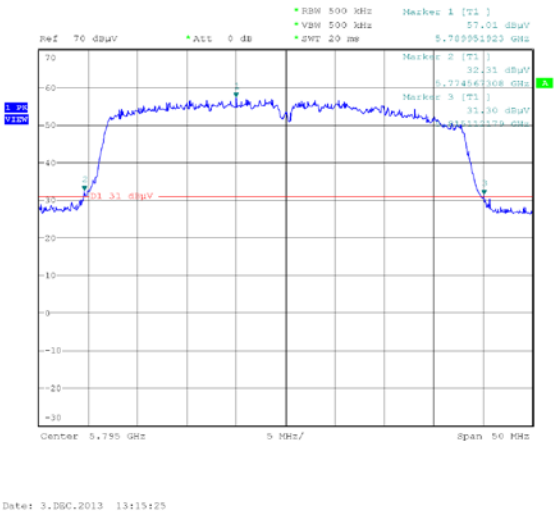
Curve 30



Curve 31



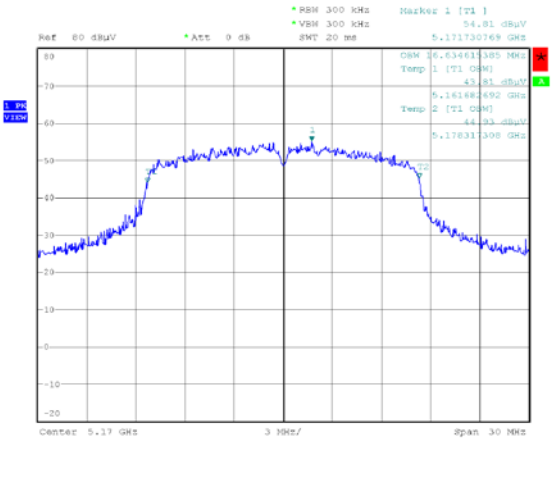
Curve 32



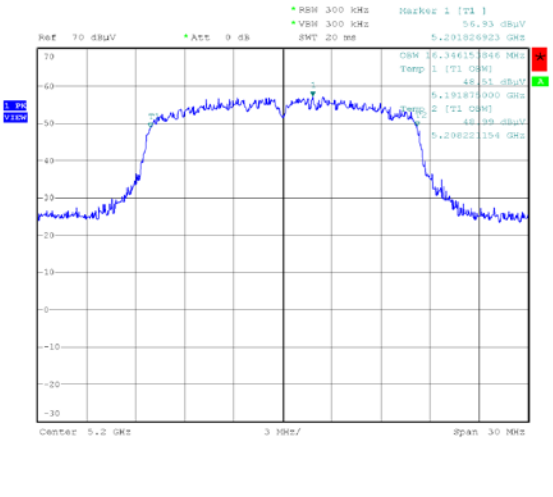
Curve 33

99 % Occupied bandwidth

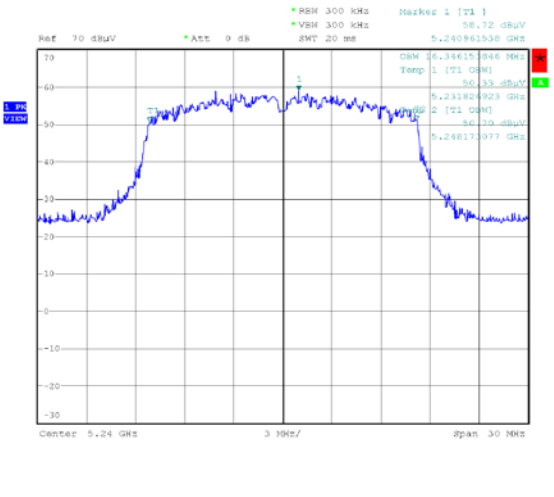
Channel	Mode	Results	Comments
J34 (5170 MHz)	802.11a	16.6 MHz	See curve n°34
40 (5200 MHz)		16.4 MHz	See curve n°35
48 (5240 MHz)		16.3 MHz	See curve n°36
52 (5260 MHz)	802.11a	16.4 MHz	See curve n°37
60 (5300 MHz)		16.4 MHz	See curve n°38
64 (5320 MHz)		16.4 MHz	See curve n°39
100 (5500 MHz)	802.11a	16.5 MHz	See curve n°40
120 (5600 MHz)		16.4 MHz	See curve n°41
140 (5700 MHz)		16.4 MHz	See curve n°42
149 (5745 MHz)	802.11a	16.3 MHz	See curve n°43
157 (5785 MHz)		16.4 MHz	See curve n°44
161 (5805 MHz)		16.3 MHz	See curve n°45
J34 (5170 MHz)	802.11n (20 MHz)	17.6 MHz	See curve n°46
40 (5200 MHz)		17.5 MHz	See curve n°47
48 (5240 MHz)		17.6 MHz	See curve n°48
52 (5260 MHz)	802.11n (20 MHz)	17.6 MHz	See curve n°49
60 (5300 MHz)		18.1 MHz	See curve n°50
64 (5320 MHz)		17.6 MHz	See curve n°51
100 (5500 MHz)	802.11n (20 MHz)	17.6 MHz	See curve n°52
120 (5600 MHz)		17.6 MHz	See curve n°53
140 (5700 MHz)		17.6 MHz	See curve n°54
149 (5745 MHz)	802.11n (20 MHz)	17.6 MHz	See curve n°55
157 (5785 MHz)		17.5 MHz	See curve n°56
161 (5805 MHz)		17.5 MHz	See curve n°57
36 (5180 MHz)	802.11n (40 MHz)	36.1 MHz	See curve n°58
40 (5200 MHz)		36.2 MHz	See curve n°59
52 (5260 MHz)	802.11n (40 MHz)	36.2 MHz	See curve n°60
60 (5300 MHz)		36.0 MHz	See curve n°61
100 (5500 MHz)	802.11n (40 MHz)	36.1 MHz	See curve n°62
120 (5600 MHz)		35.8 MHz	See curve n°63
136 (5680 MHz)		35.9 MHz	See curve n°64
149 (5745 MHz)	802.11n (40 MHz)	36.2 MHz	See curve n°65
157 (5785 MHz)		35.9 MHz	See curve n°66



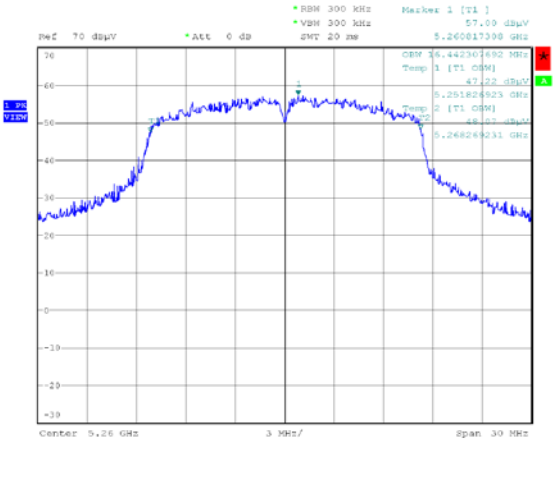
Curve 34



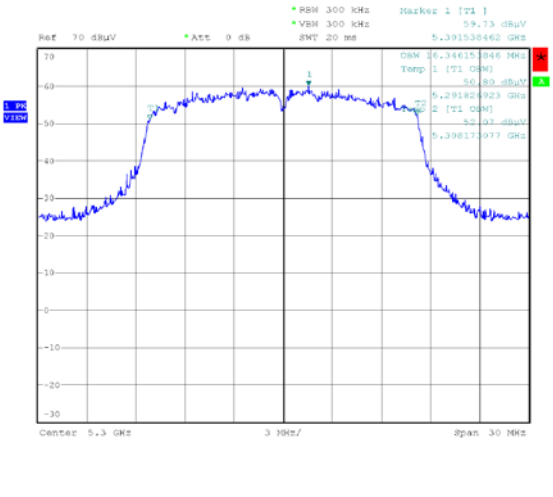
Curve 35



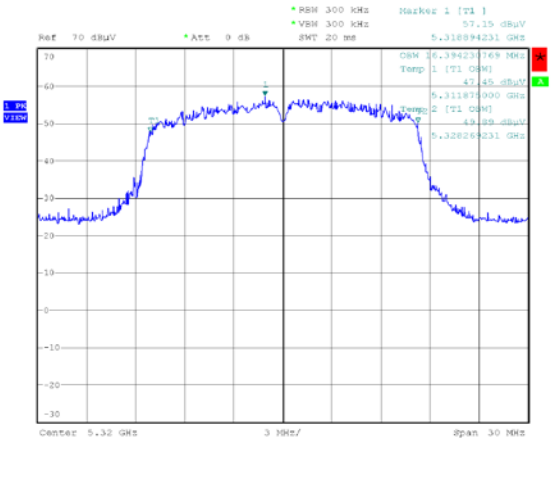
Curve 36



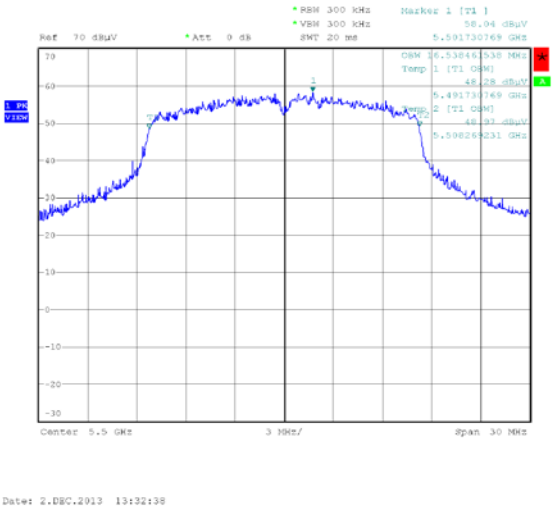
Curve 37



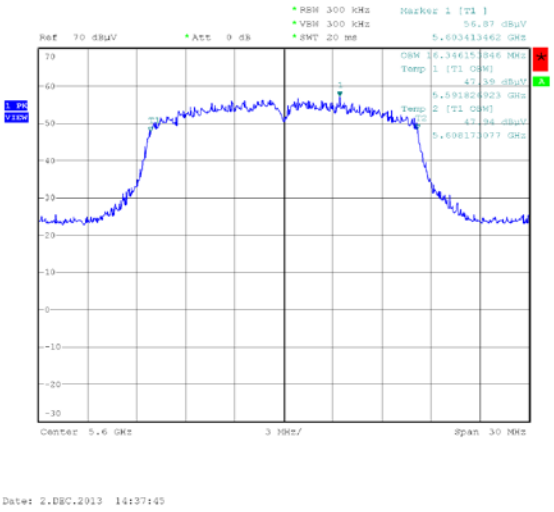
Curve 38



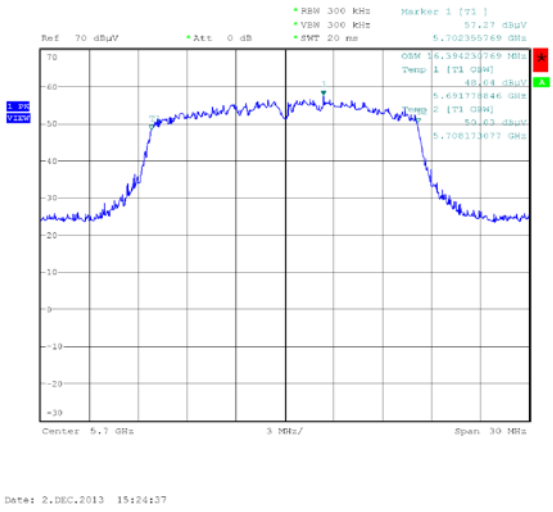
Curve 39



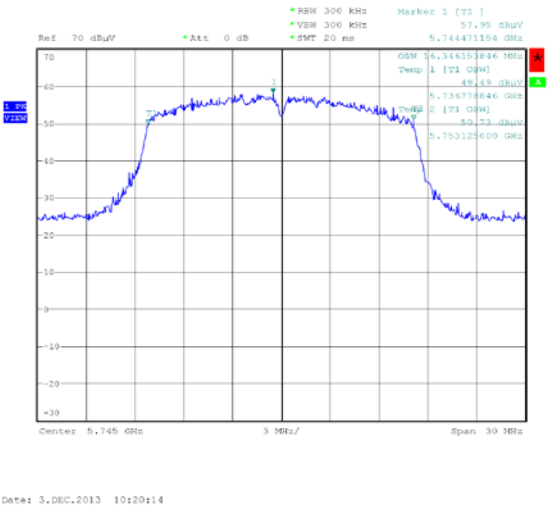
Curve 40



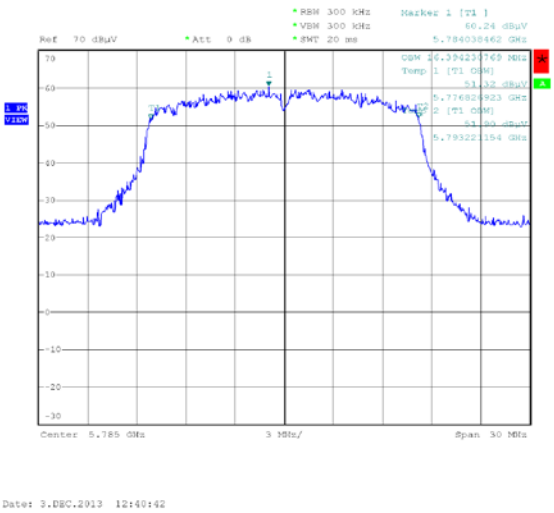
Curve 41



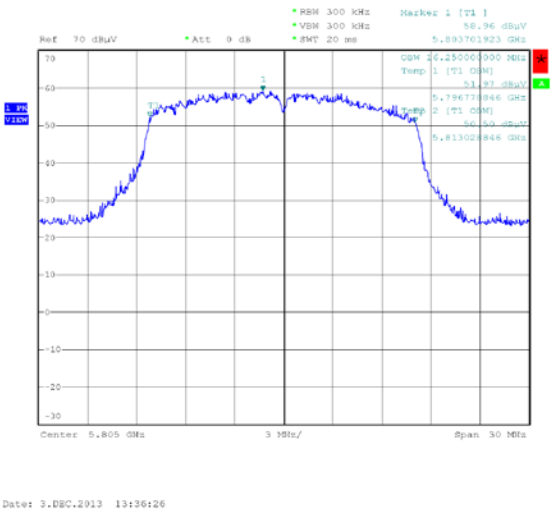
Curve 42



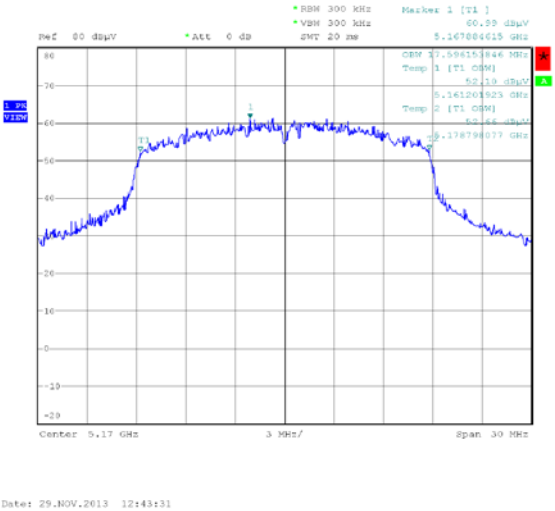
Curve 43



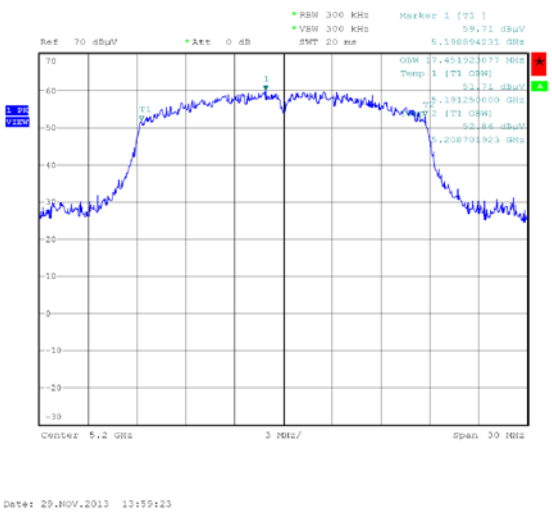
Curve 44



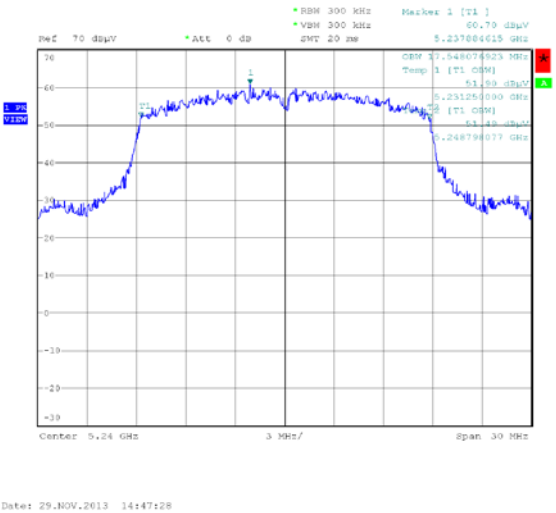
Curve 45



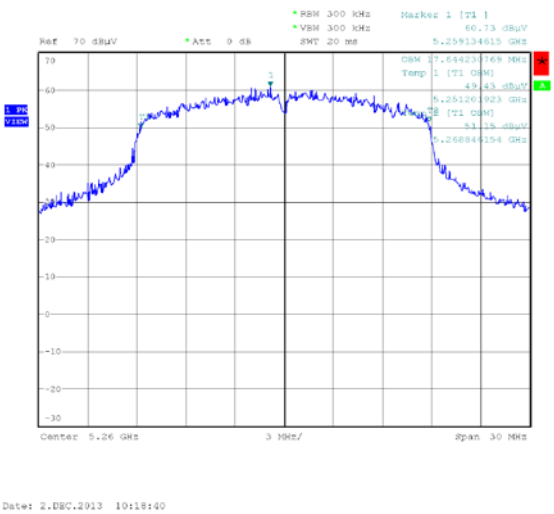
Curve 46



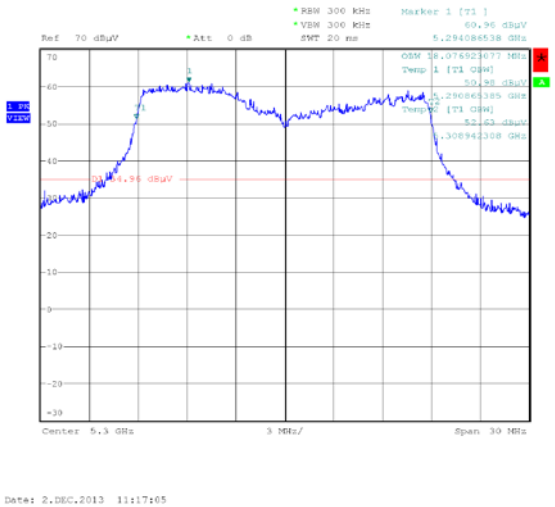
Curve 47



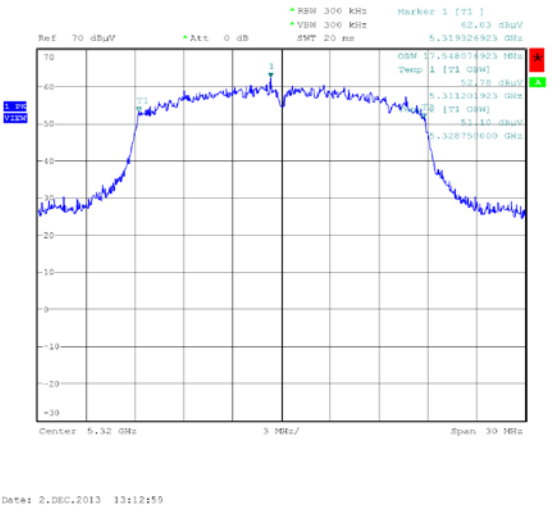
Curve 48



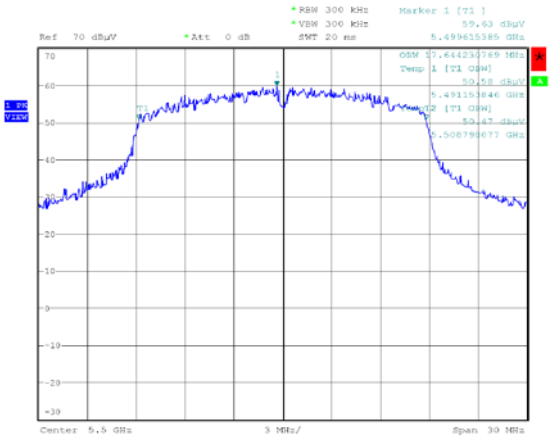
Curve 49



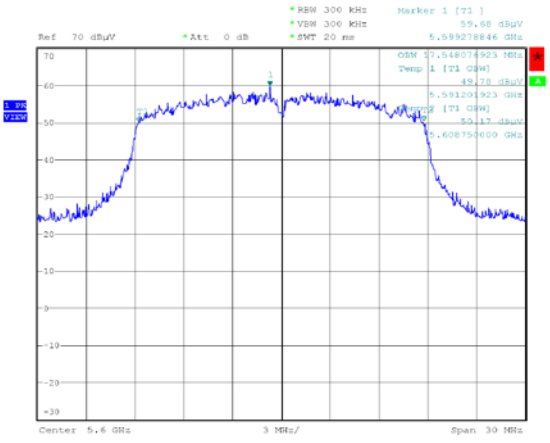
Curve 50



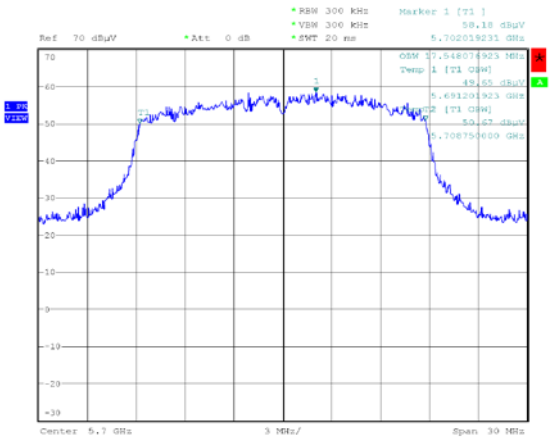
Curve 51



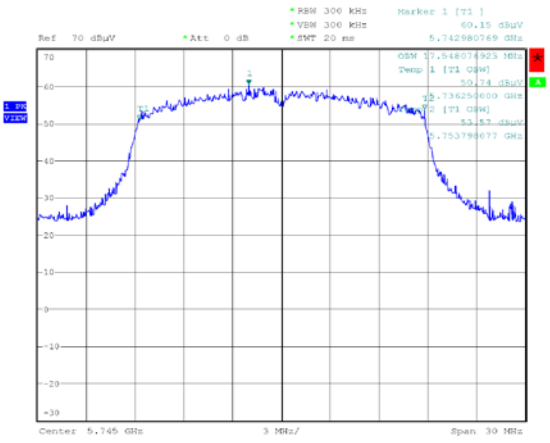
Curve 52



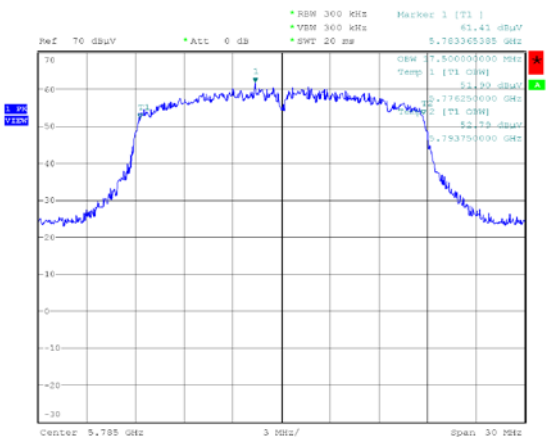
Curve 53



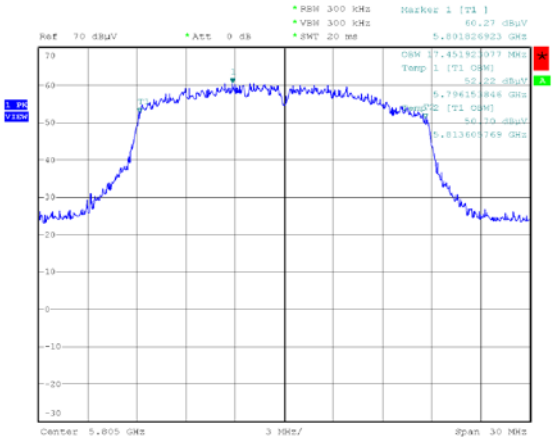
Curve 54



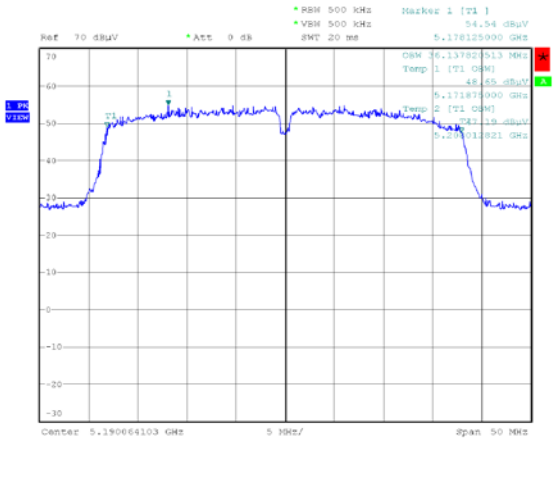
Curve 55



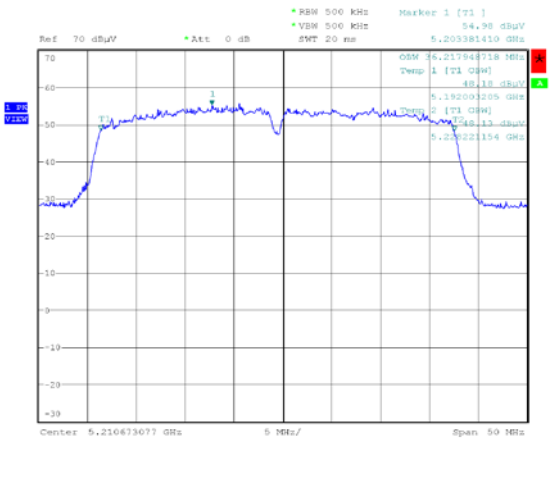
Curve 56



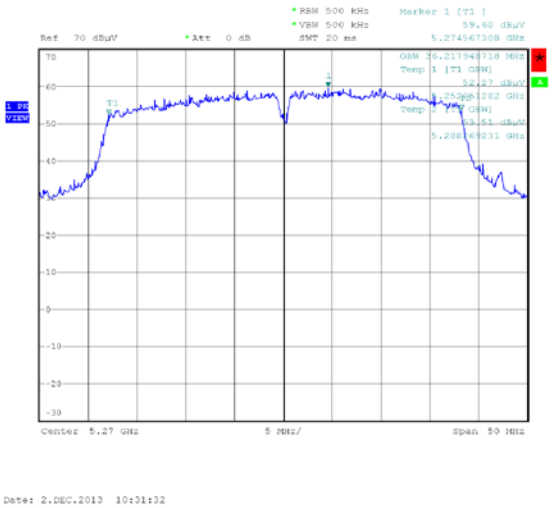
Curve 57



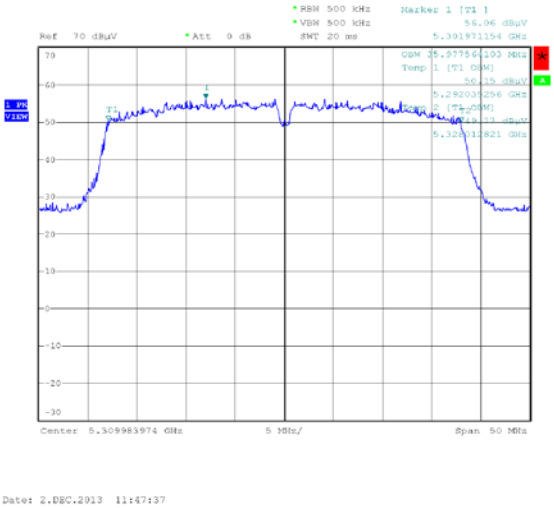
Curve 58



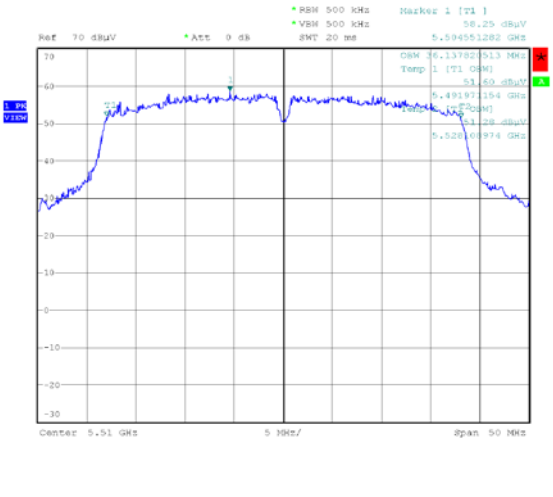
Curve 59



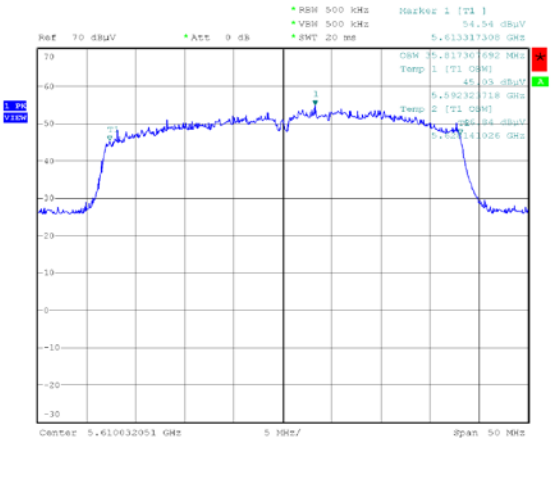
Curve 60



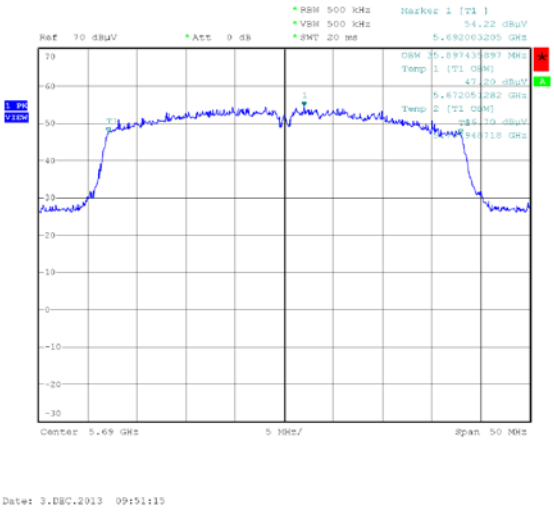
Curve 61



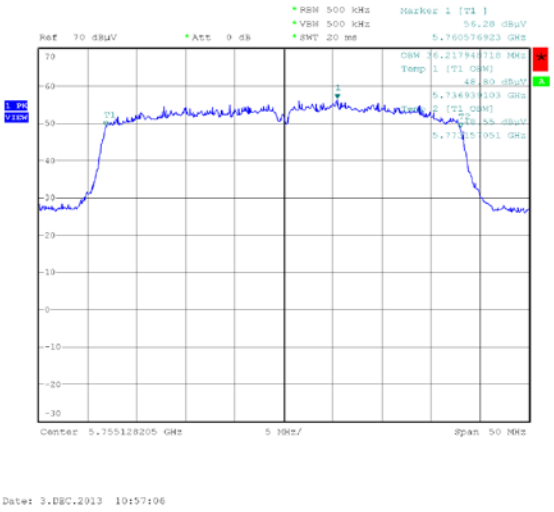
Curve 62



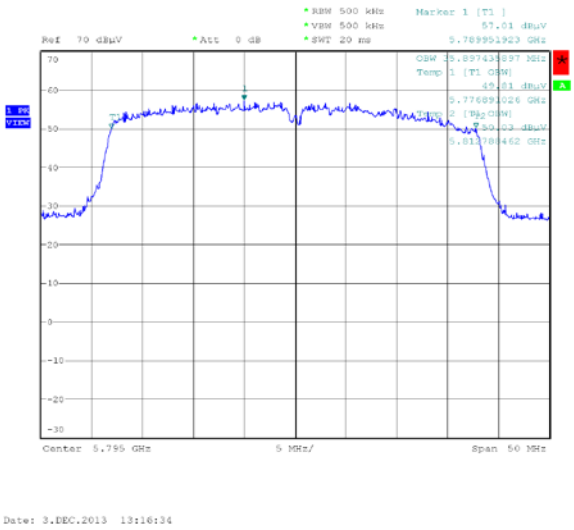
Curve 63



Curve 64



Curve 65



Curve 66

6. *MAXIMUM OUTPUT POWER*

Standards: FCC PART 15 : 2013
RSS-210 Issue 8 : 2010

Sections: 15.407 a) (1); (2); (3)
Annex 9.2 (1); (2); (3) of RSS-210

Test configuration:

The system is tested in an open area test site (OATS).

The test unit is placed on a rotating table, 0.8 m from a ground plane. Zero degree azimuth corresponds to the front of the equipment under test.

The level was maximised in antenna height, azimuth and polarization. The maximum level measured on the spectrum analyser was recorded.

Test procedure:

789033 D01 General UNII test Procedures v01r03 method SA-3

Distance of antenna: 3 meters

Instrumentation test list:

CATEGORY	BRAND	TYPE	Nr EMITECH
Antenna	Emco	3115	3374
Antenna mast	Maturo	AM 4.0-O	7625
Cable	Micro-Coax	N-13m	8063
Open area test site	Emitech	Aunainville	0187
Receiver	Rohde & Schwarz	FSU8	9129
Turntable	Maturo	MCU	7626

Equipment under test operating condition:

EUT is in continuous transmission mode with the RTTT software.

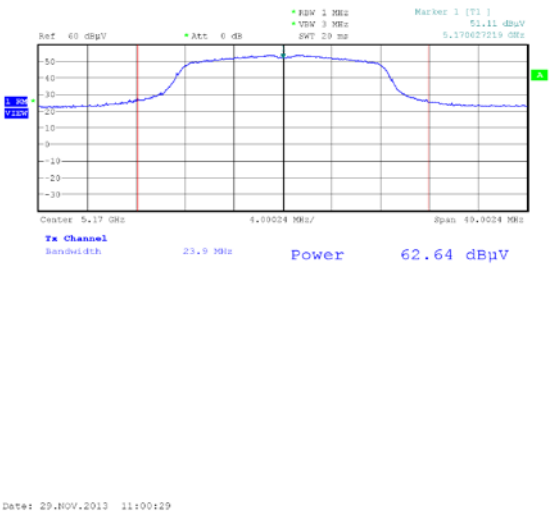
Measure conditions:

Ambient temperature (°C): 09
Relative humidity (%): 90
Resolution bandwidth: 1 MHz
Power source: 3.6 Vd.c

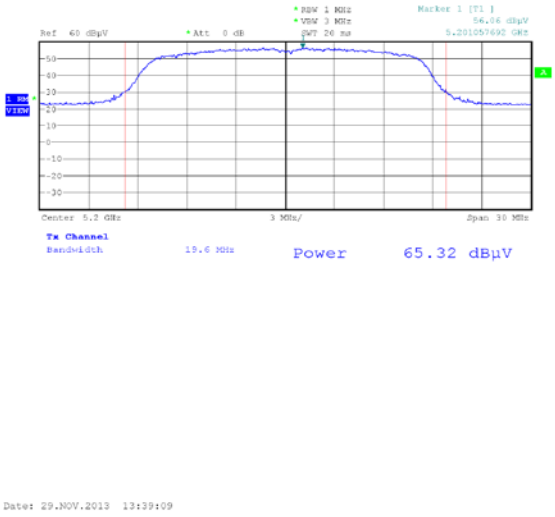
Results:

Channel	Mode	Electro-magnetic field (dBµV/m)	Maximum output power* (mW)	Comments
J34 (5170 MHz)	802.11a	103.2	6.268	See curve n°67
40 (5200 MHz)		106.0	19.953	See curve n°68
48 (5240 MHz)		107.5	16.870	See curve n°69
52 (5260 MHz)	802.11a	106.4	13.095	See curve n°70
60 (5300 MHz)		108.4	20.755	See curve n°71
64 (5320 MHz)		105.6	10.892	See curve n°72
100 (5500 MHz)	802.11a	106.8	14.359	See curve n°73
120 (5600 MHz)		106.1	12.221	See curve n°74
140 (5700 MHz)		106.3	12.797	See curve n°75
149 (5745 MHz)	802.11a	107.4	16.486	See curve n°76
157 (5785 MHz)		109.7	27.998	See curve n°77
161 (5805 MHz)		109.2	24.953	See curve n°78
J34 (5170 MHz)	802.11n (20 MHz)	109.3	25.534	See curve n°79
40 (5200 MHz)		109.0	23.830	See curve n°80
48 (5240 MHz)		109.0	23.830	See curve n°81
52 (5260 MHz)	802.11n (20 MHz)	109.1	24.385	See curve n°82
60 (5300 MHz)		108.7	22.239	See curve n°83
64 (5320 MHz)		109.5	26.738	See curve n°84
100 (5500 MHz)	802.11n (20 MHz)	108.9	23.287	See curve n°85
120 (5600 MHz)		108.0	18.929	See curve n°86
140 (5700 MHz)		108.1	19.370	See curve n°87
149 (5745 MHz)	802.11n (20 MHz)	109.4	26.129	See curve n°88
157 (5785 MHz)		110.5	33.661	See curve n°89
161 (5805 MHz)		110.2	31.414	See curve n°90
36 (5180 MHz)	802.11n (40 MHz)	104.4	16.596	See curve n°91
40 (5200 MHz)		104.3	8.0746	See curve n°92
52 (5260 MHz)	802.11n (40 MHz)	109.0	23.830	See curve n°93
60 (5300 MHz)		106.2	12.506	See curve n°94
100 (5500 MHz)	802.11n (40 MHz)	108.4	20.755	See curve n°95
120 (5600 MHz)		103.5	6.7162	See curve n°96
136 (5680 MHz)		104.6	8.6521	See curve n°97
149 (5745 MHz)	802.11n (40 MHz)	106.1	12.221	See curve n°98
157 (5785 MHz)		107.2	15.744	See curve n°99

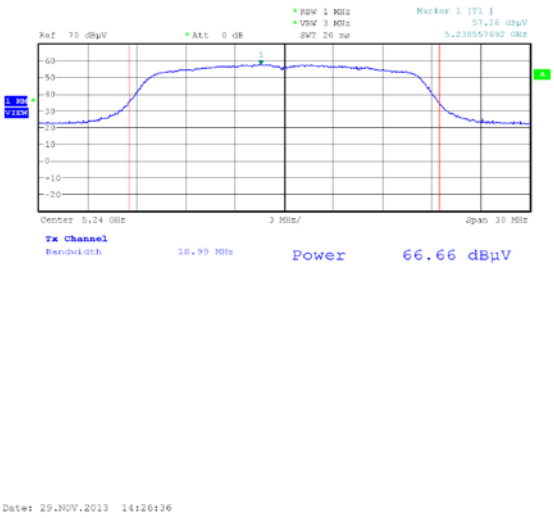
* Maximum output power = $(FS \times d)^2 / 30$ with d = 3 m and FS = V/m



Curve 67



Curve 68



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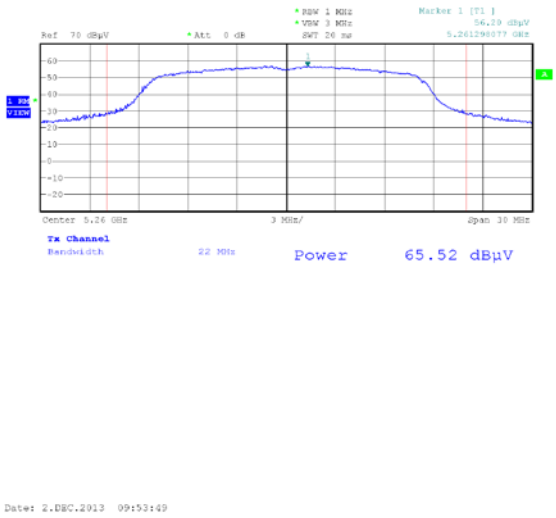

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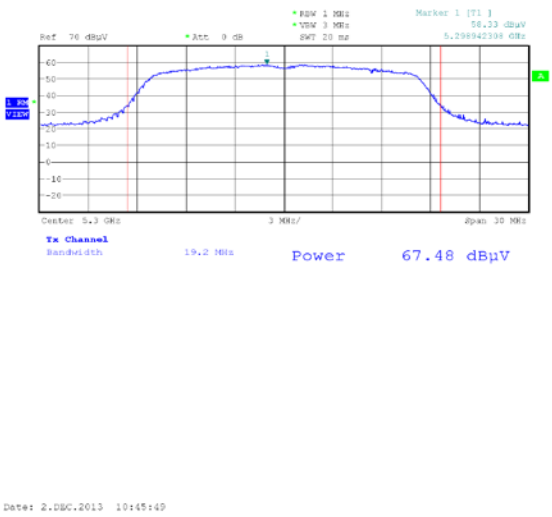

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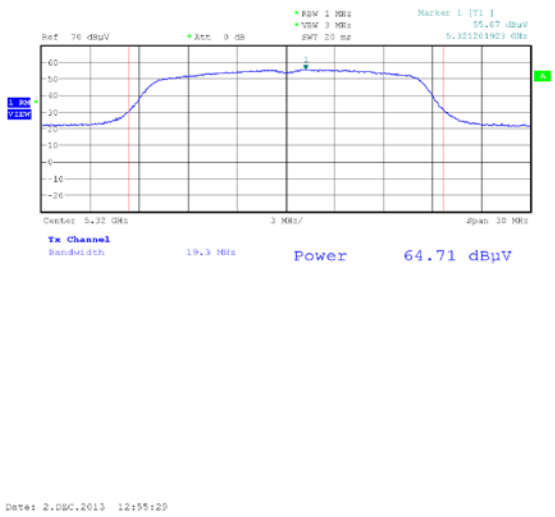
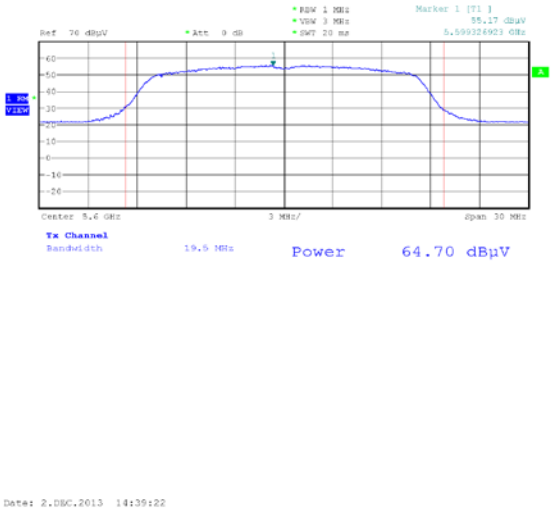


Curve 72

Curve 73



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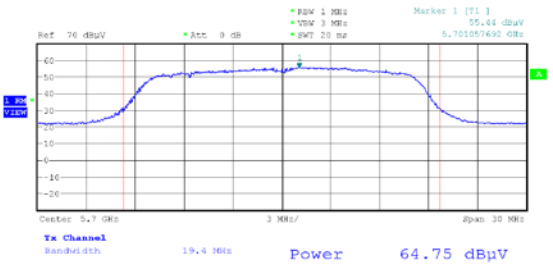

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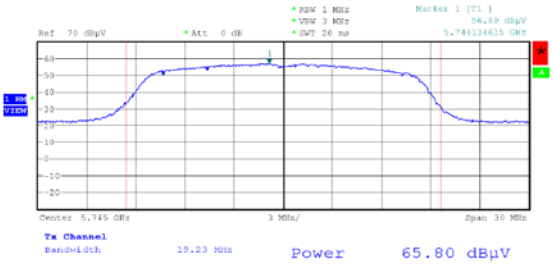

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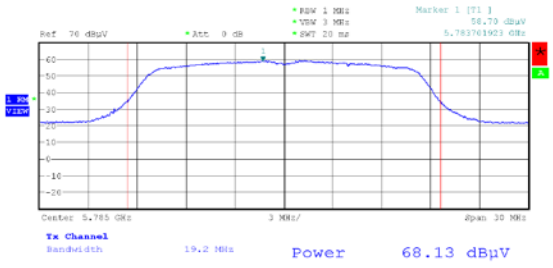

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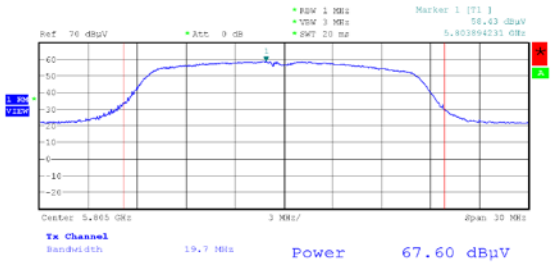

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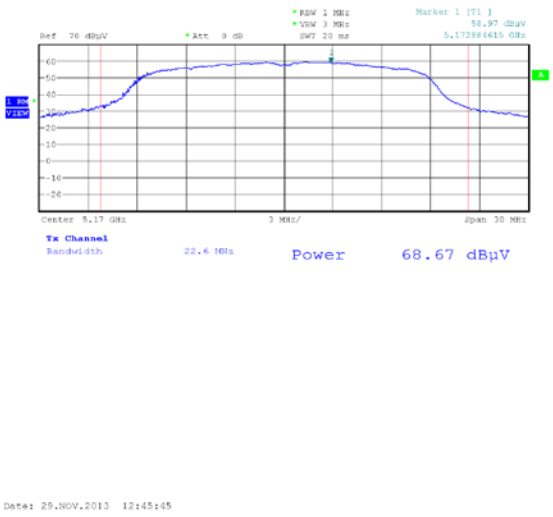

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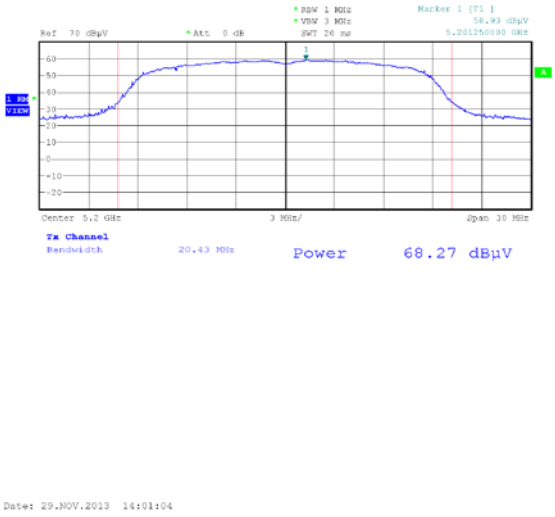

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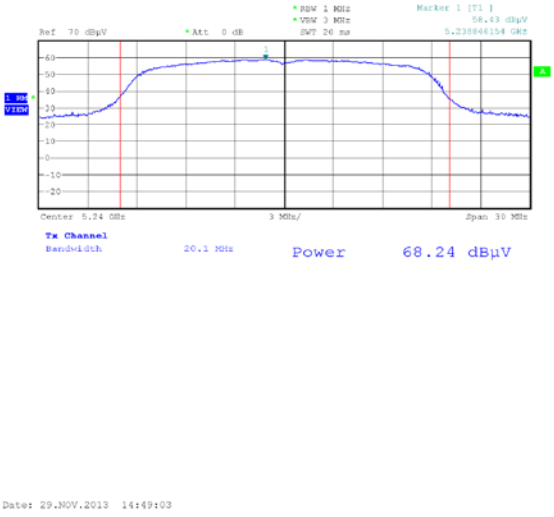
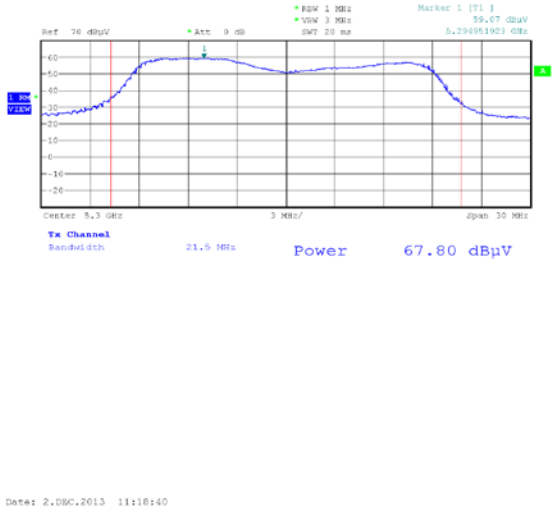


Curve 81

Curve 82



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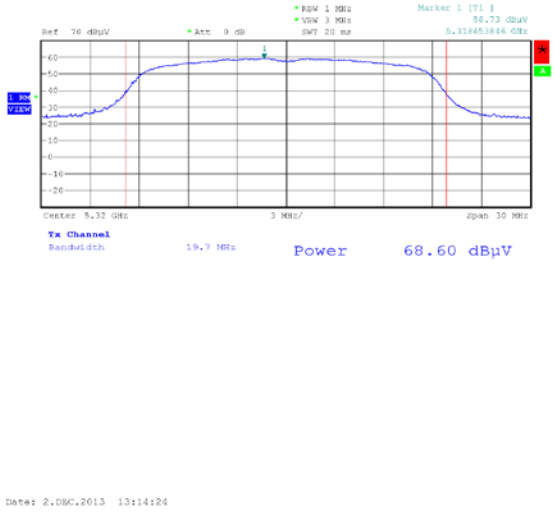
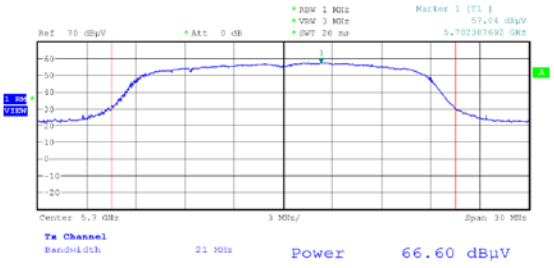


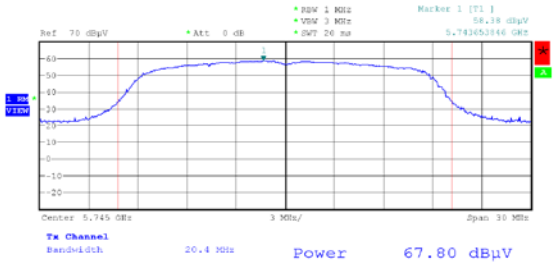
Curve 84

Curve 85

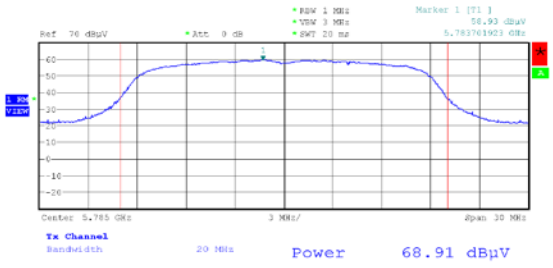
Curve 86



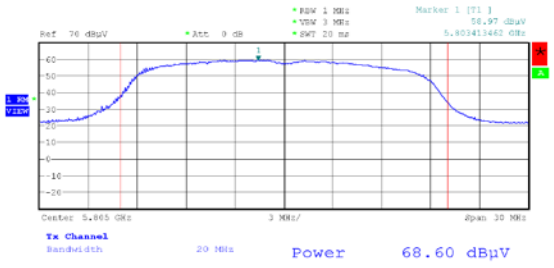
Curve 87



Curve 88



Curve 89



Curve 90