

ZTE Corporation FCC ID: Q78- ZXMBW-E9230

FCC PART 27 MEASUREMENT AND TEST REPORT

For

ZTE Corporation

ZTE Plaza, Hi-tech Park, Nanshan District, Shenzhen,
Guangdong, China 518057

FCC ID: Q78-ZXMBW-E9230

Dec 20, 2009

This Report Concerns: <input checked="" type="checkbox"/> Original Report	Equipment Type: ZTE Compact Base station
<p>Test Engineer:  Wei bin</p> <p>Report No.: FCC-2009-034</p> <p>Test Date: Oct 25,2009 to Dec 20, 2009</p> <p>Reviewed By:  Xie yuming</p> <p>Prepared By: ZTE Corporation. ZTE Plaza, Hi-tech Park, Nanshan District, Shenzhen, Guangdong, China 518057, P.R.China Tel: +86-755-26770000 Fax: +86-755-26771999</p>	

Note: The test report is specially limited to the above company and this particular sample only. It may not be duplicated without prior written consent of ZTE Corporation. This report must not be used by the client to claim product certification 、 approval 、 or endorsement by any agency of the US Government.

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2 GENERAL INFORMATION

Product Description for Equipment Under Test (EUT)

ZXMBW E9230 is located in the radio access layer of WiMAX networks and used to provide broadband radio access for users in outdoor hot and blind spots, suburbs, rural areas, railways and highways.

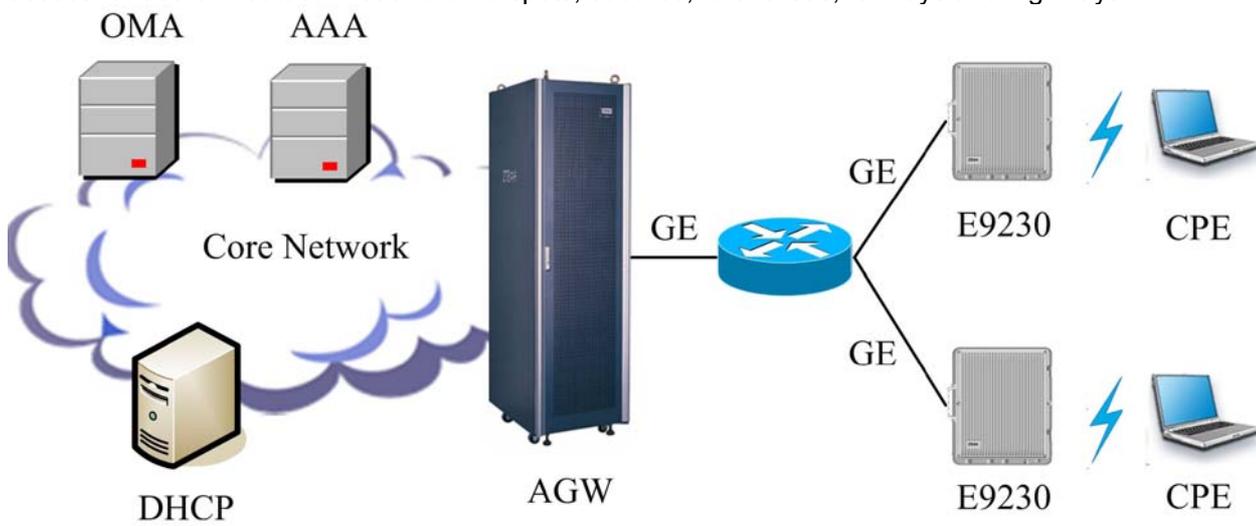


Figure 1: Position of ZXMBW E9230 in typical network

Model number: ZXMBW E9230 or the "EUT" as referred to in this report is a Indoor PICO base station. The EUT is measured approximately 370 mm × 320 mm × 165 mm (W × D × H), Input voltage: -57 to -40Vdc.

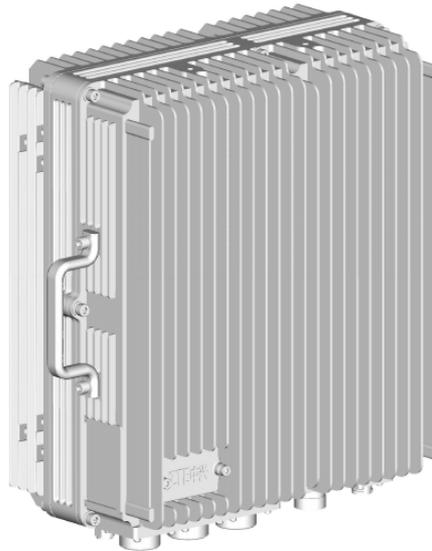


Figure 2: Appearance of ZXMBW E9230

Objective

This Type approval report is prepared on behalf of ZTE Corporation in accordance with Part 2, Part 15, Part 27 of the Federal Communication Commissions rules.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Part 27 Wireless Communication Services

Applicable Standards: TIA EIA 137-A, TIA EIA 97-D, TIA/EIA 603-C, Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

Test Facility

The Test site used by ZTE Corporation to collect test data is located in the ZTE Plaza, Hi-tech Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China, Tel: +86-755-26770000, Fax: +86-755-26771999. Test site at ZTE Corporation has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 0007895832. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

External I/O Cable

Cable Description	Length (M)	From/Port	To
Unshielded Undetachable AC Power Cable	2.0	EUT	AC POWER

3 SYSTEM TEST CONFIGURATION

Description of Test Configuration

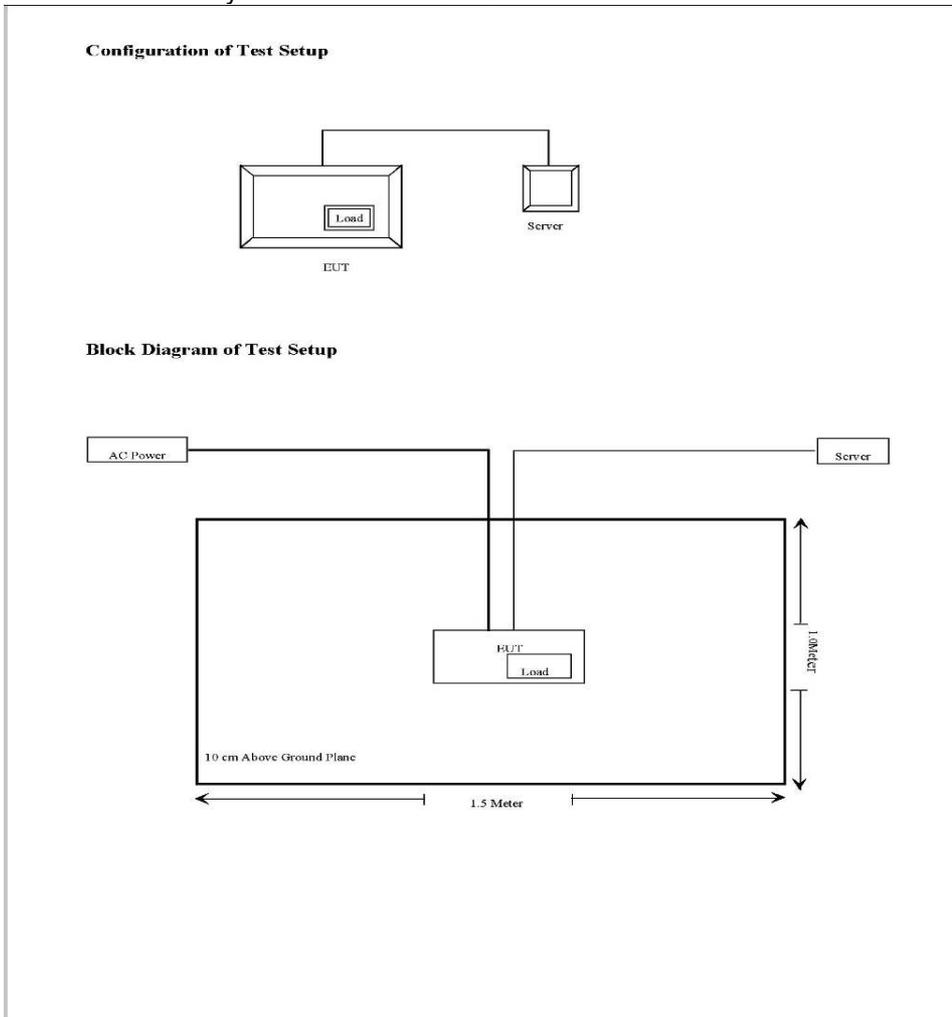
Justification

The EUT was configured for testing according to TIA/ELA-603C.

The final qualification test was performed with EUT operating at normal mode.

Equipment Modifications

ZTE Corporation has not done any modification on the EUT.



4 SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§2.1046&27.50	Effective Radiated Power	Pass
§2.1091	RF Exposure	Pass
§2.1047	Modulation characteristic	Pass
§2.1053	Spurious Radiated Emissions	Pass
§2.1051, §27.53	Spurious Emissions AT Antenna Terminals	Pass
§2.1049	Occupied Bandwidth	Pass
§27.53	Band Edge	Pass
§ 2.1055 (a) § 2.1055 (d) § 27.54	Frequency stability	Pass

5 §2.1046, §27.50(h) - EFFECTIVE RADIATED POWER

Applicable Standard

According to FCC §2.1046&27.50, the conducted power must not exceed 33dBW +10log(x/y)dBW. (To this equipment X=10,y=5.5) So the limitation is about 35.6dBW (3630W)

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9020A	N/A	2009-4-10	2010-4-9
YLT	SN-SJ-150 40dB Attenuator	SN-SJ-150	N/A	N/A	N/A
SWA	SWA Packard RF Cable	RFC1/07-1050	N/A	N/A	N/A

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation. External attenuation Loss is 40dB, Cable Loss is about 4.5dB. For this model ,EUT have two antennas so the limit must be 1/2.

Environmental Conditions

Temperature:	24 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

The testing was performed by Wei bin during Oct 27, 2009 to Dec 18,2009

Test Result: Pass

Test Mode: Transmitting OFDMA 802.16e

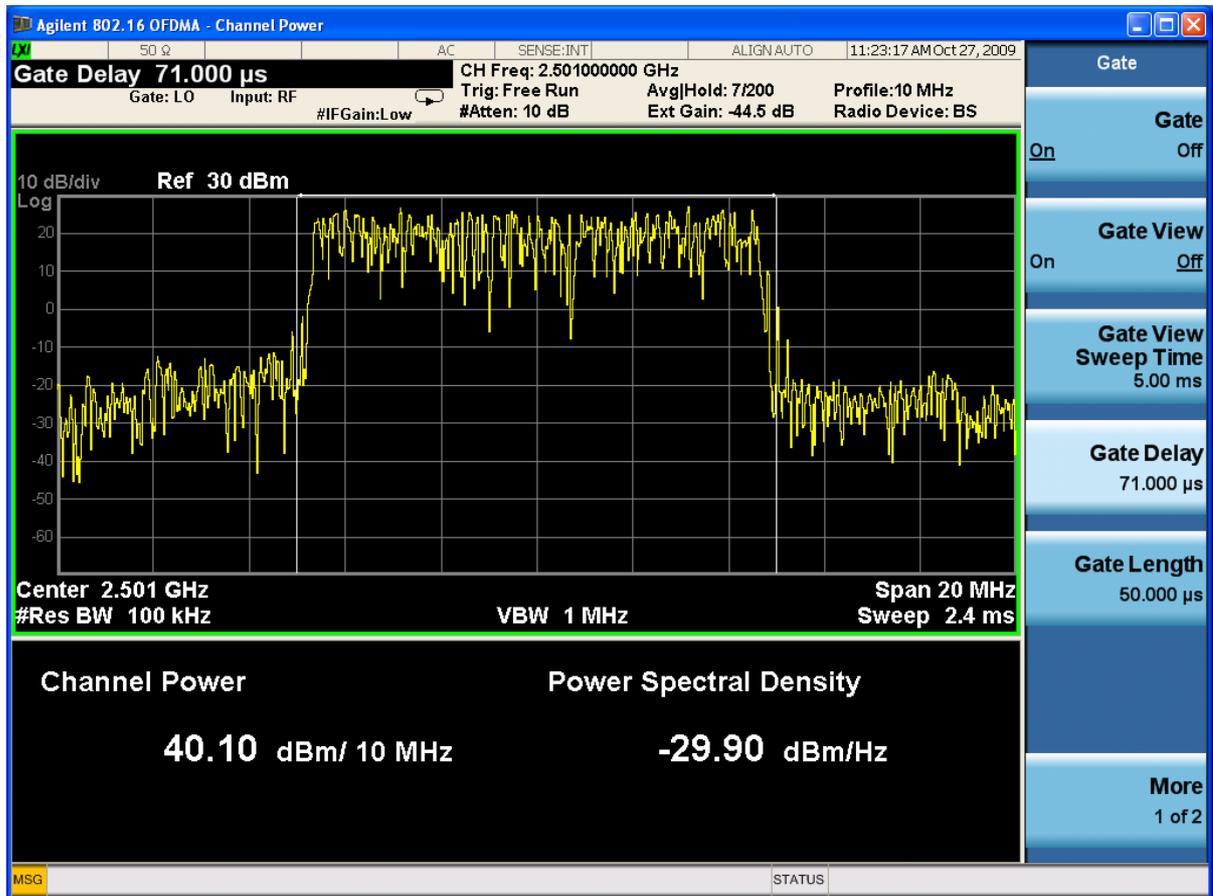
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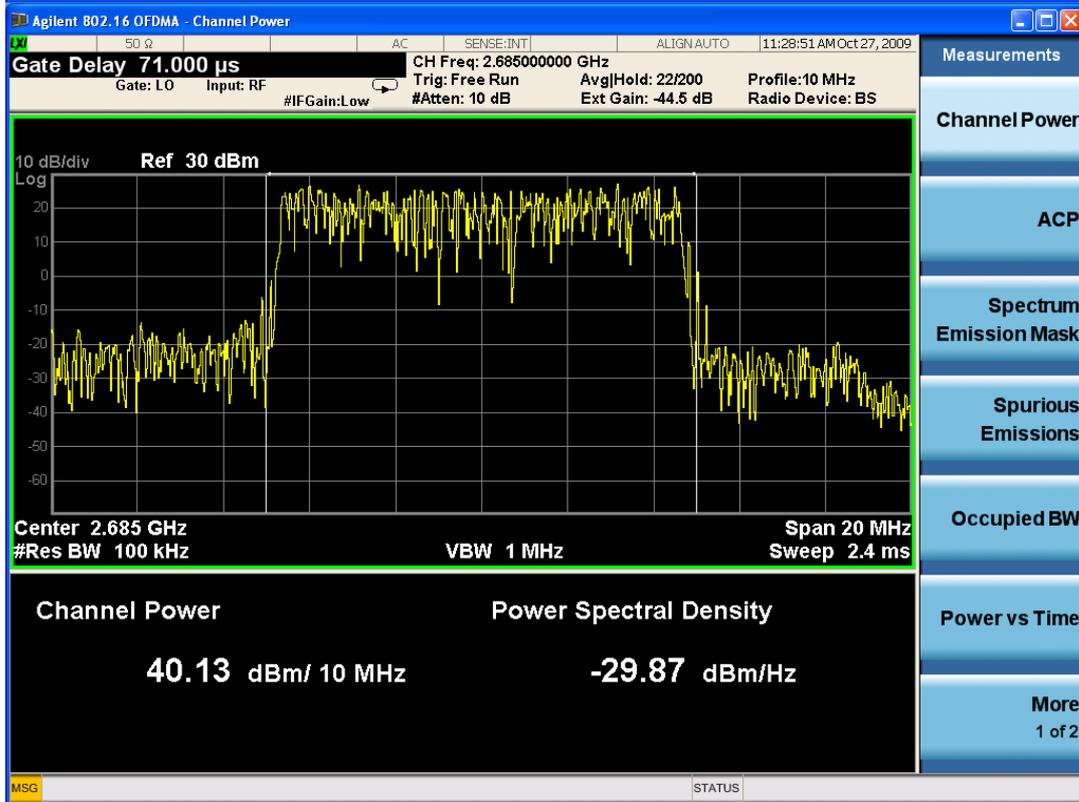
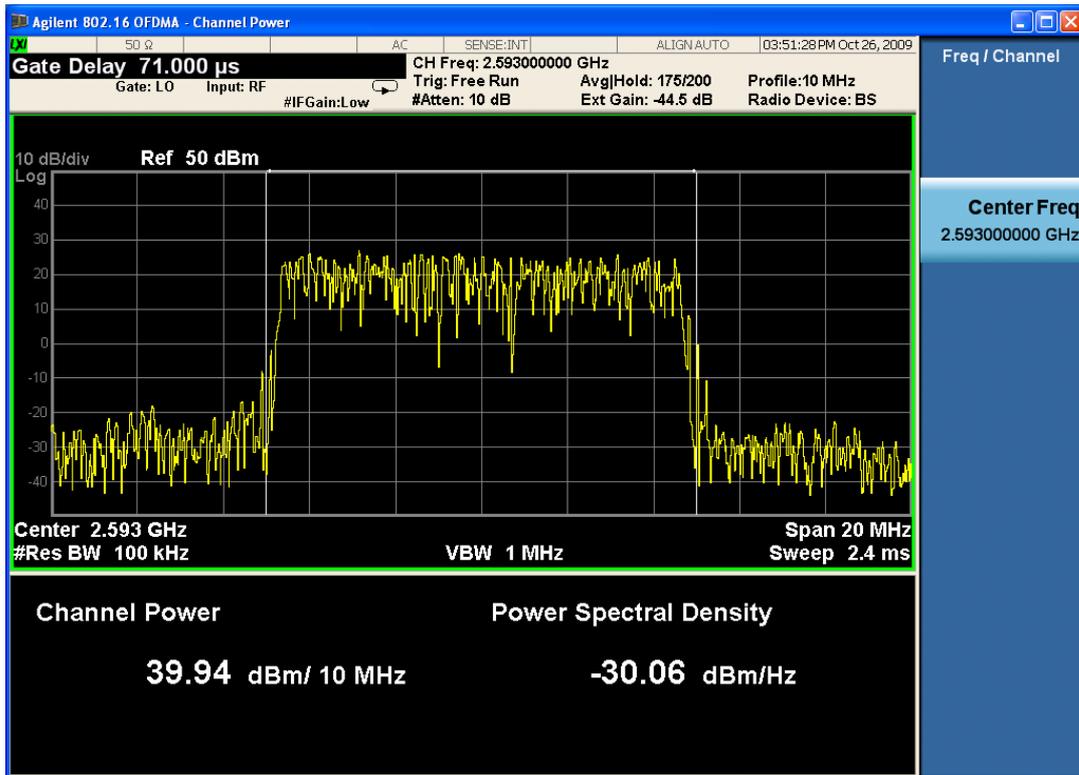
Antenna 1:

Occupied bandwidth is 10MHz

One carrier (QPSK)

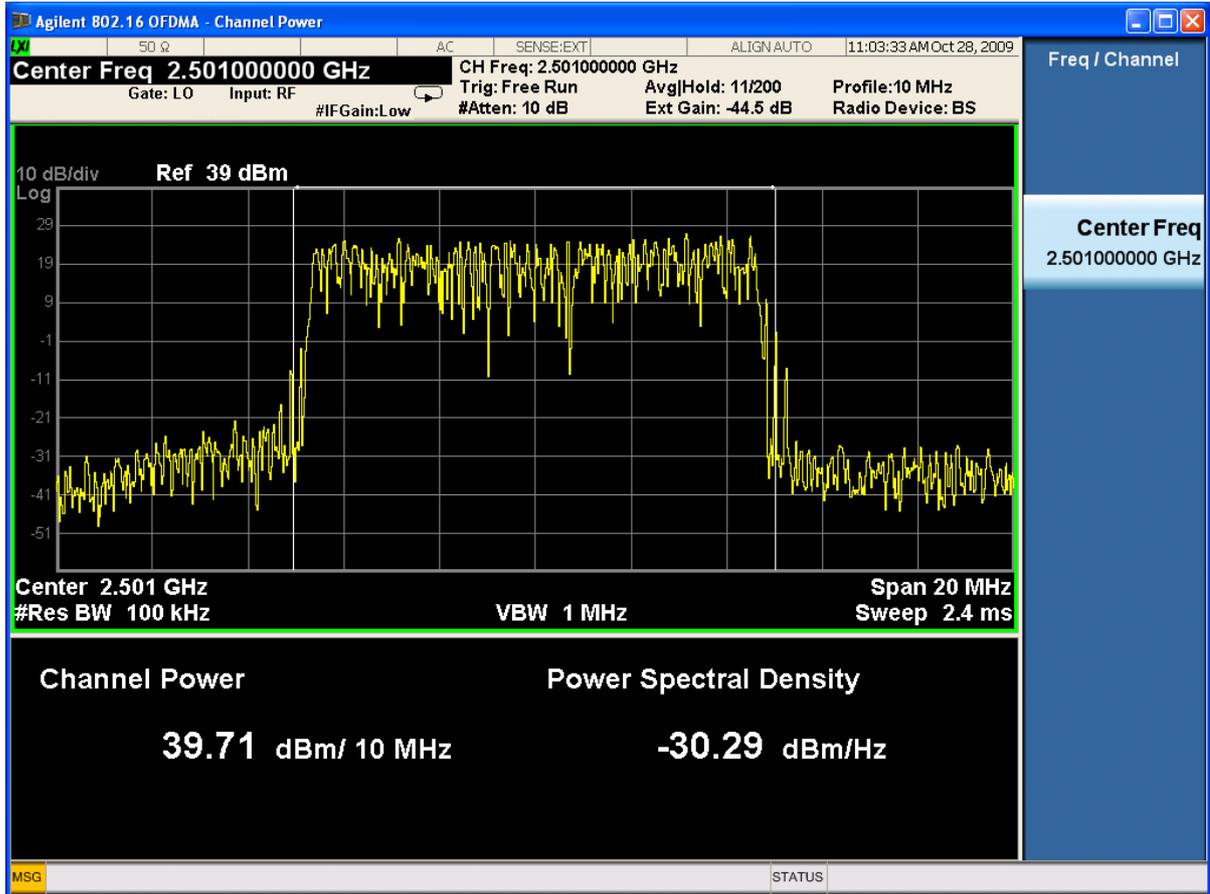
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2501	40.10	19	812.83	1815
2593	39.94	19	783.43	1815
2685	40.13	19	818.46	1815

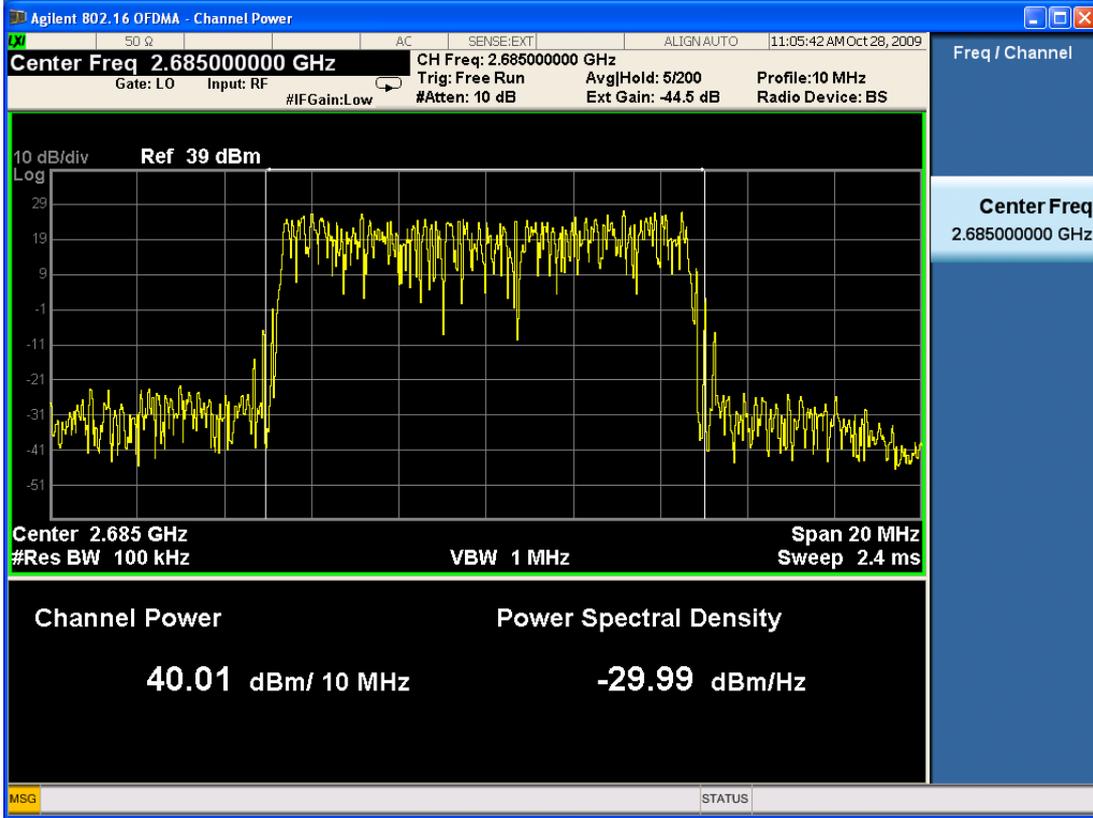




One carrier (16QAM)

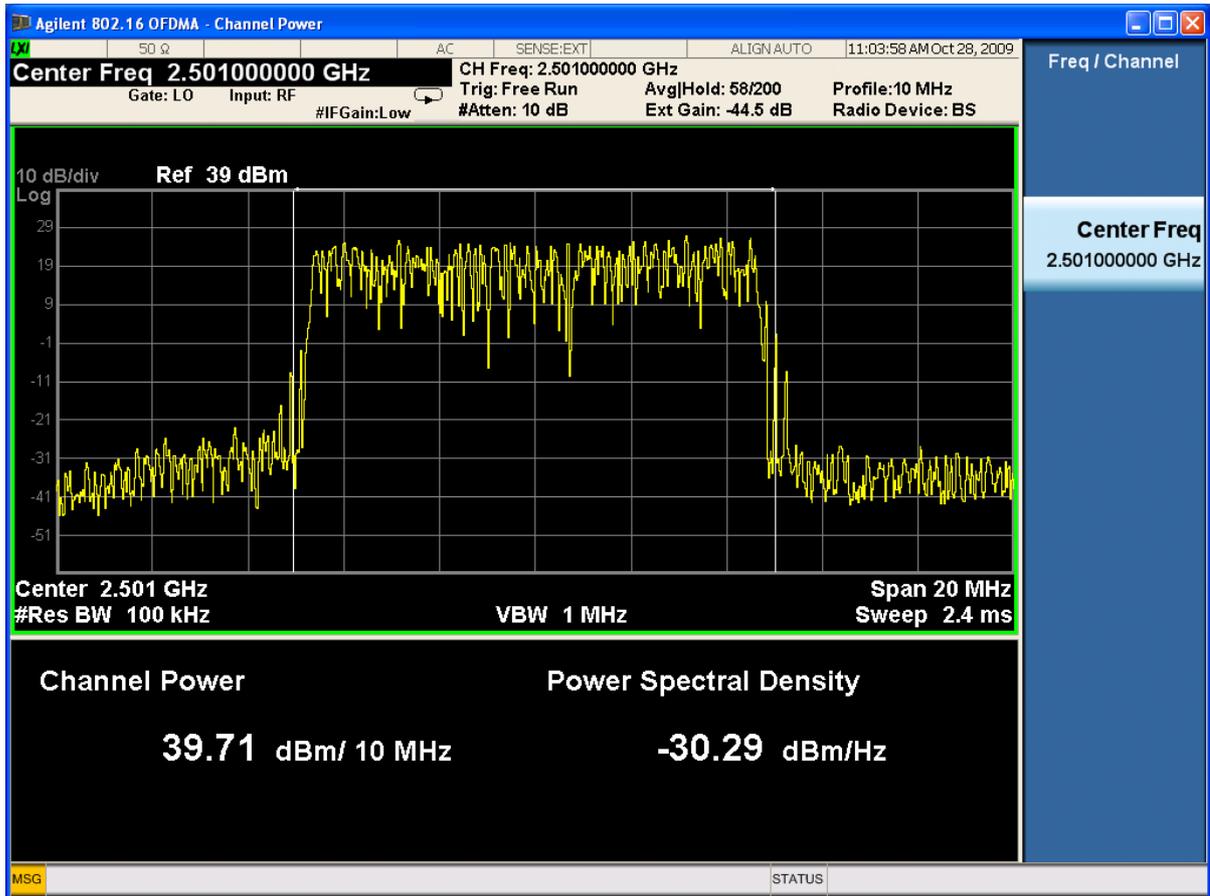
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2501	39.71	19	743.02	1815
2593	39.74	19	748.17	1815
2685	40.01	19	796.16	1815

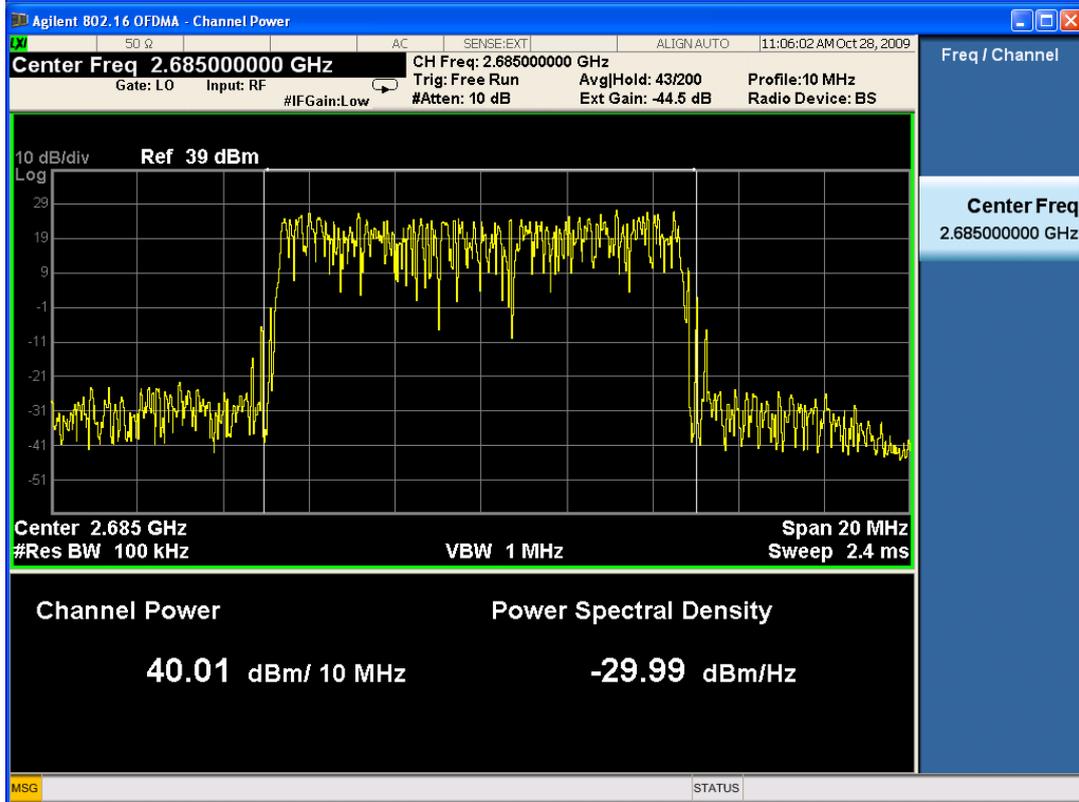




One carrier (64QAM)

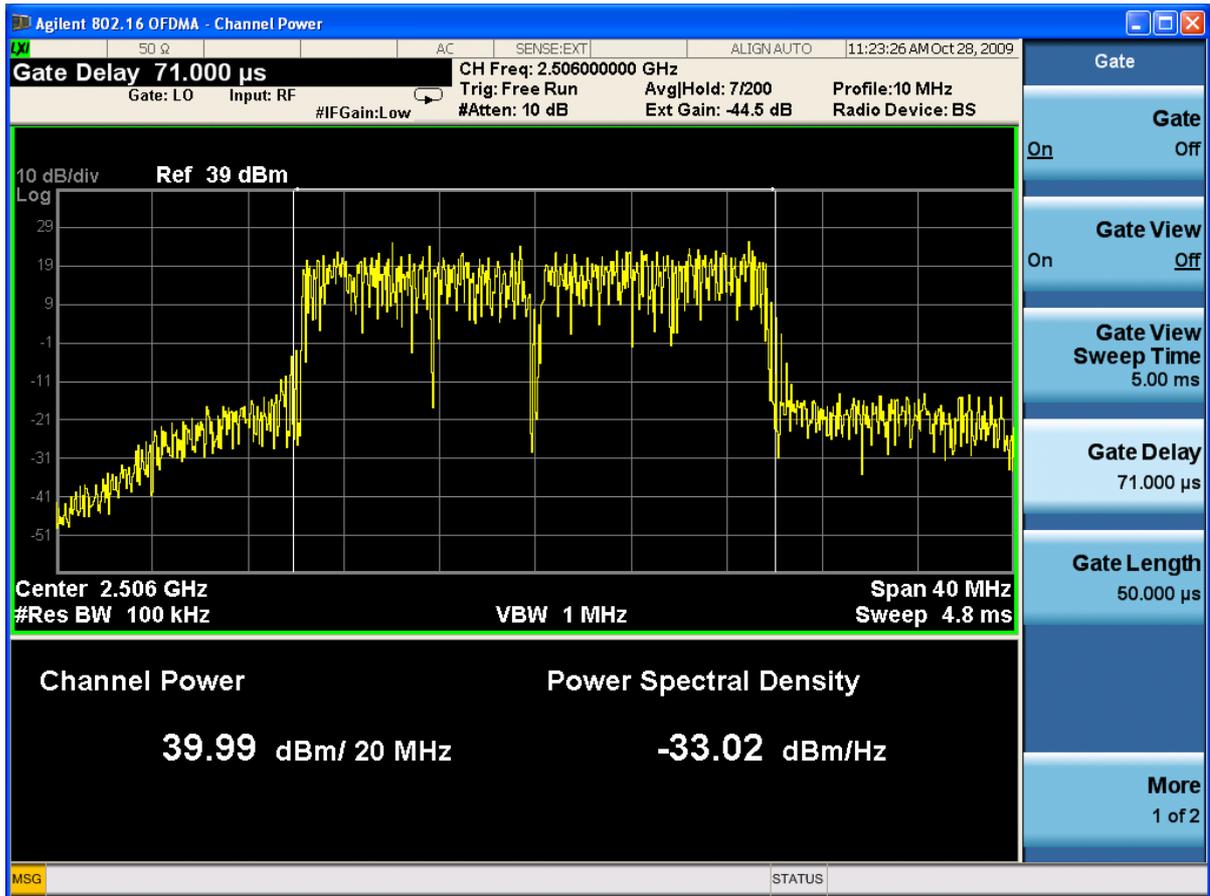
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain (dBi)	Total Power in W (EIRP)	Limit in W
2501	39.71	19	743.02	1815
2593	39.74	19	748.17	1815
2685	40.01	19	796.16	1815

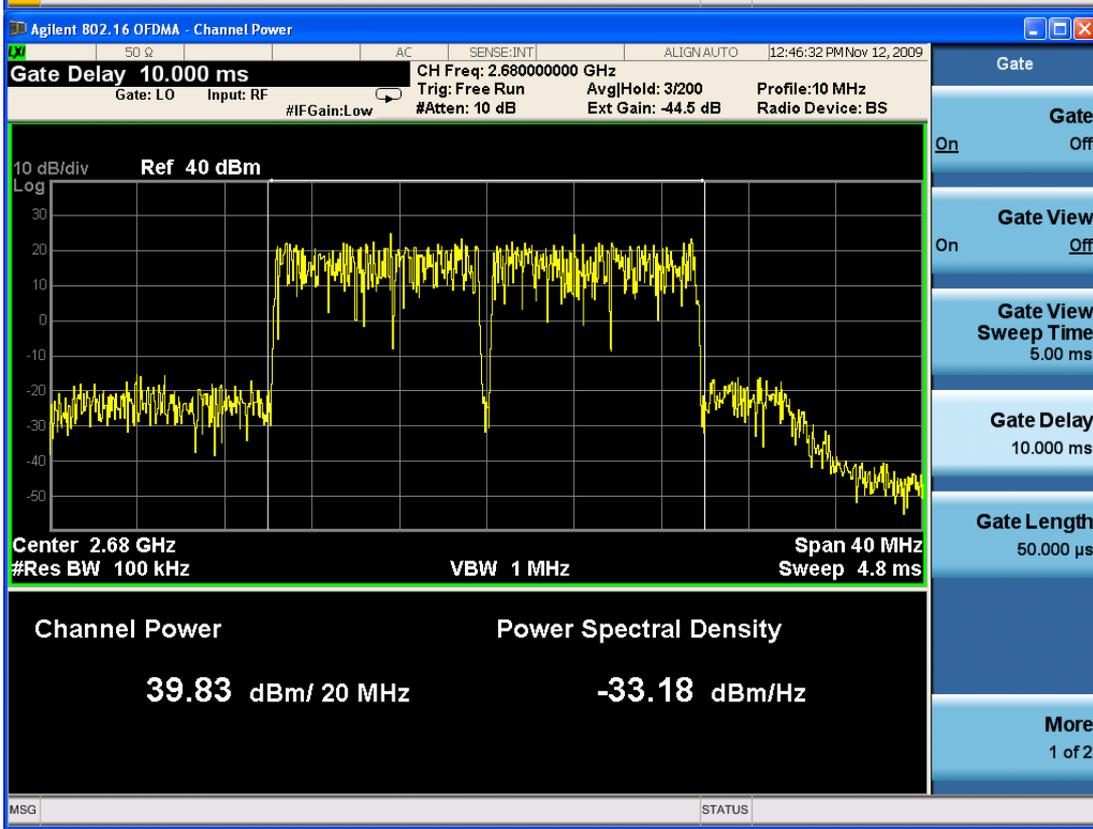
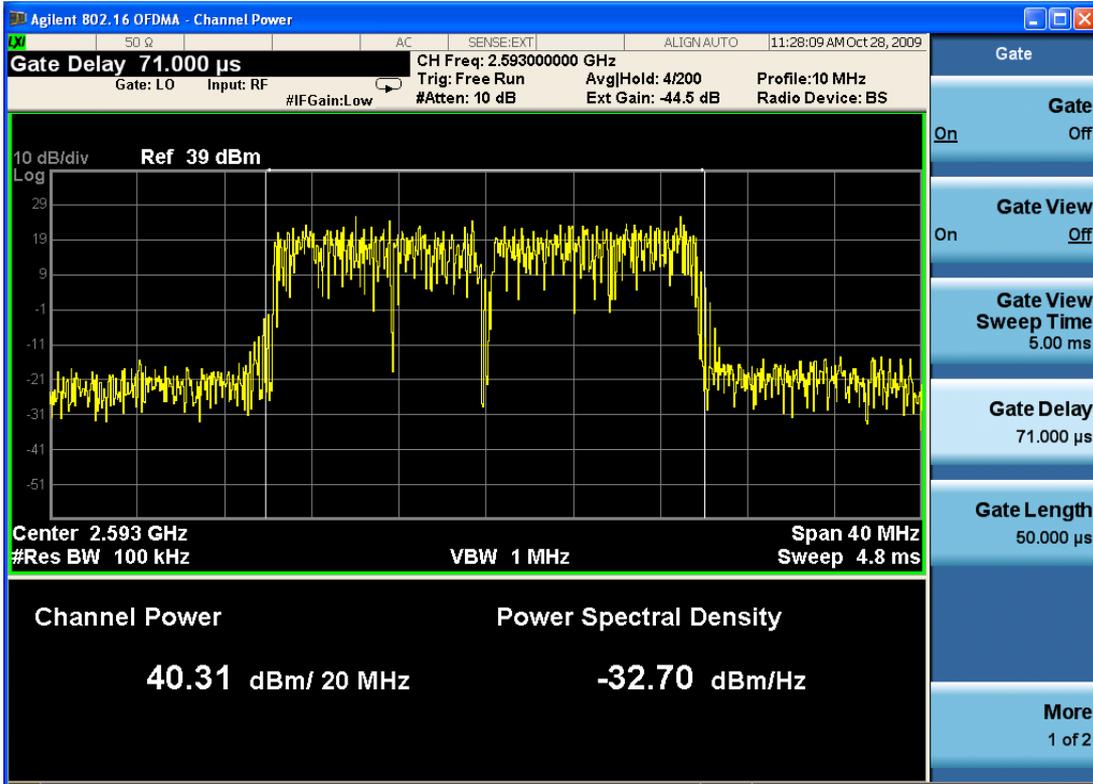




Two carriers (QPSK)

Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2506	39.99	19	792.50	3630
2593	40.31	19	853.10	3630
2680	39.83	19	763.84	3630



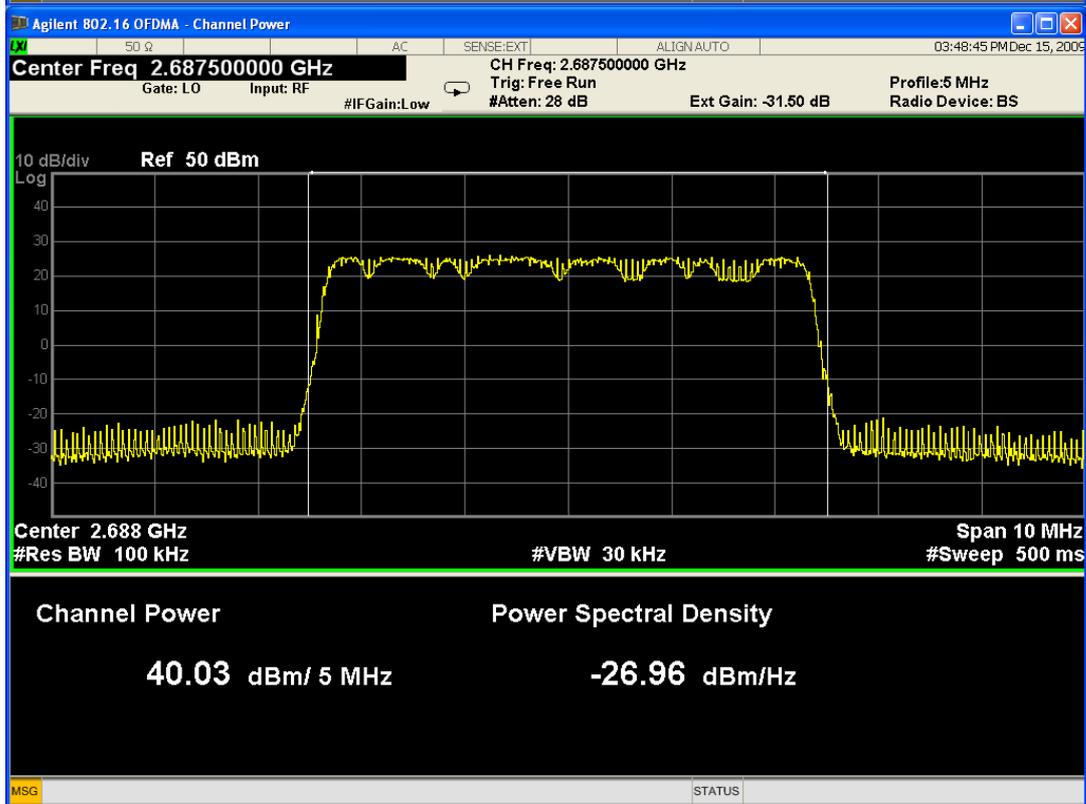
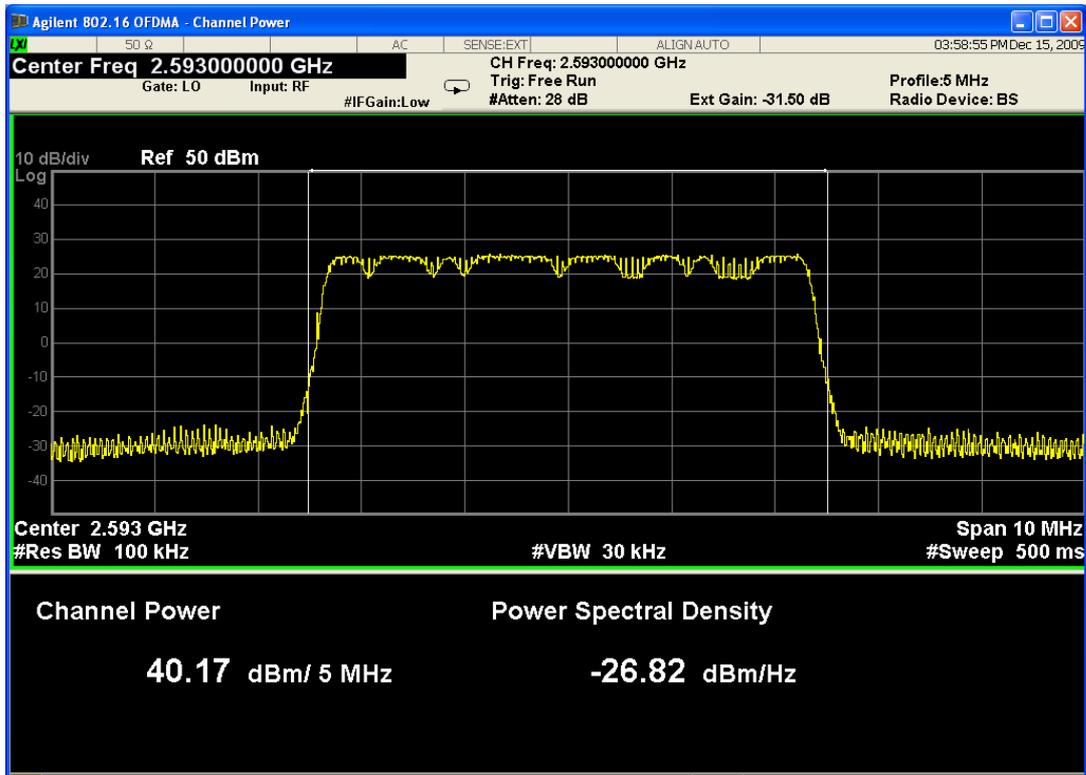


Occupied bandwidth is 5MHz

One carrier (QPSK)

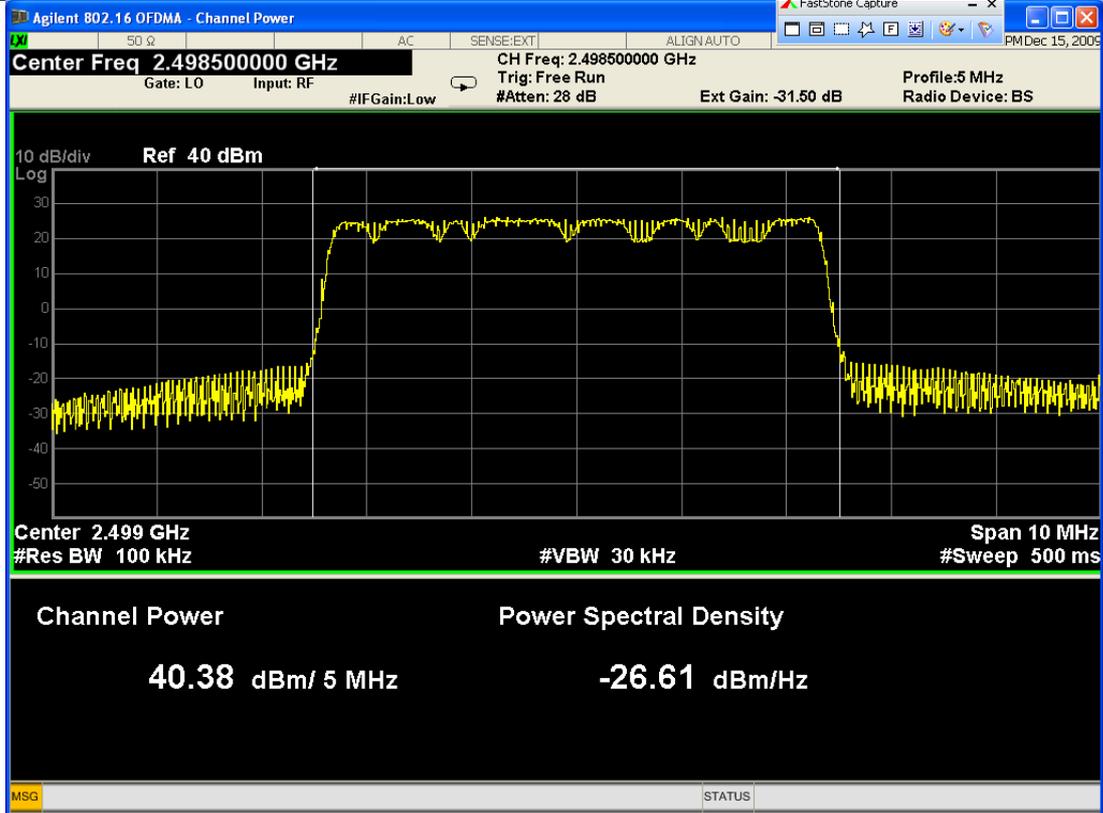
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2498.5	40.50	19	891.25	910
2593	40.17	19	826.04	910
2687.5	40.03	19	799.83	910

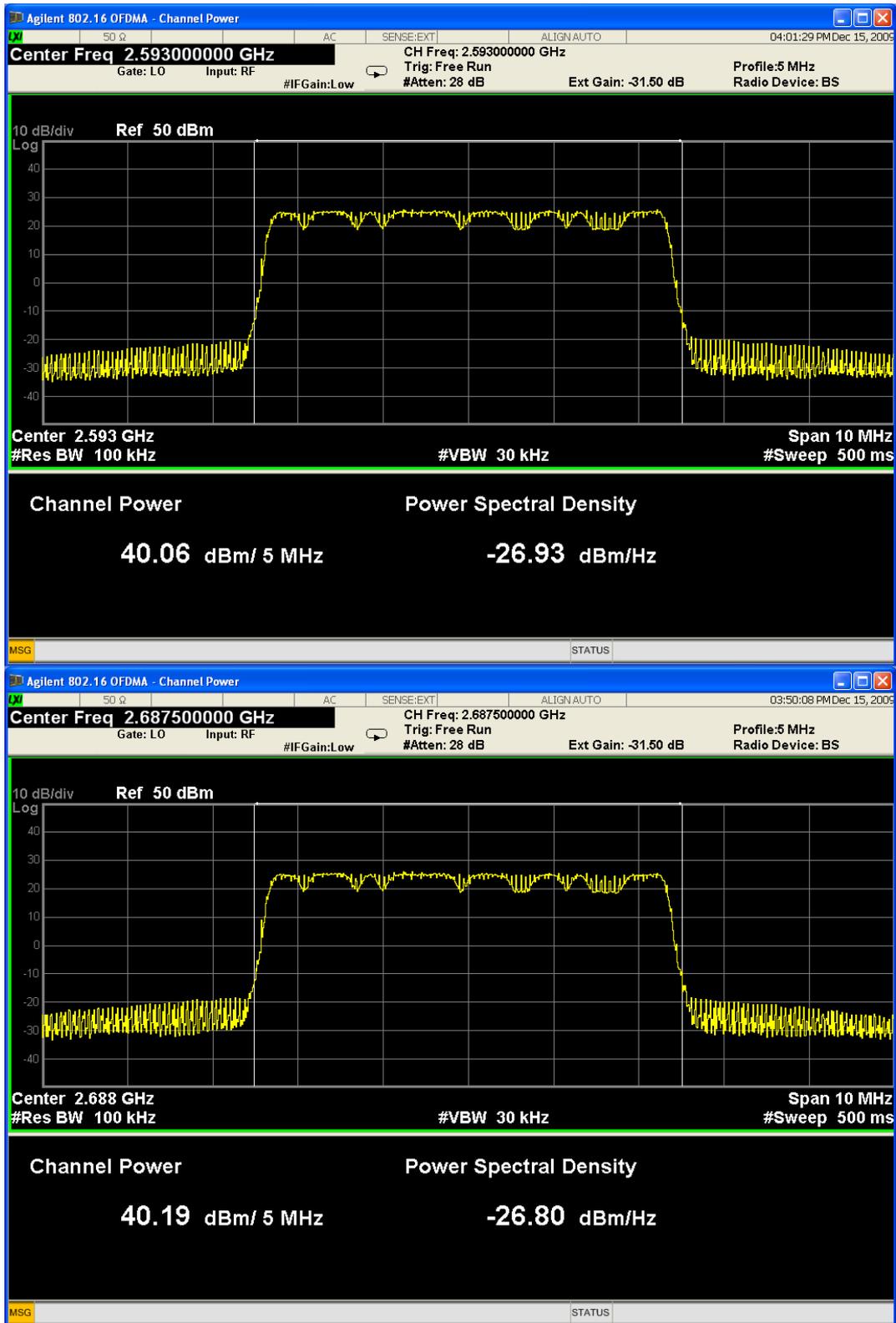




One carrier (16QAM)

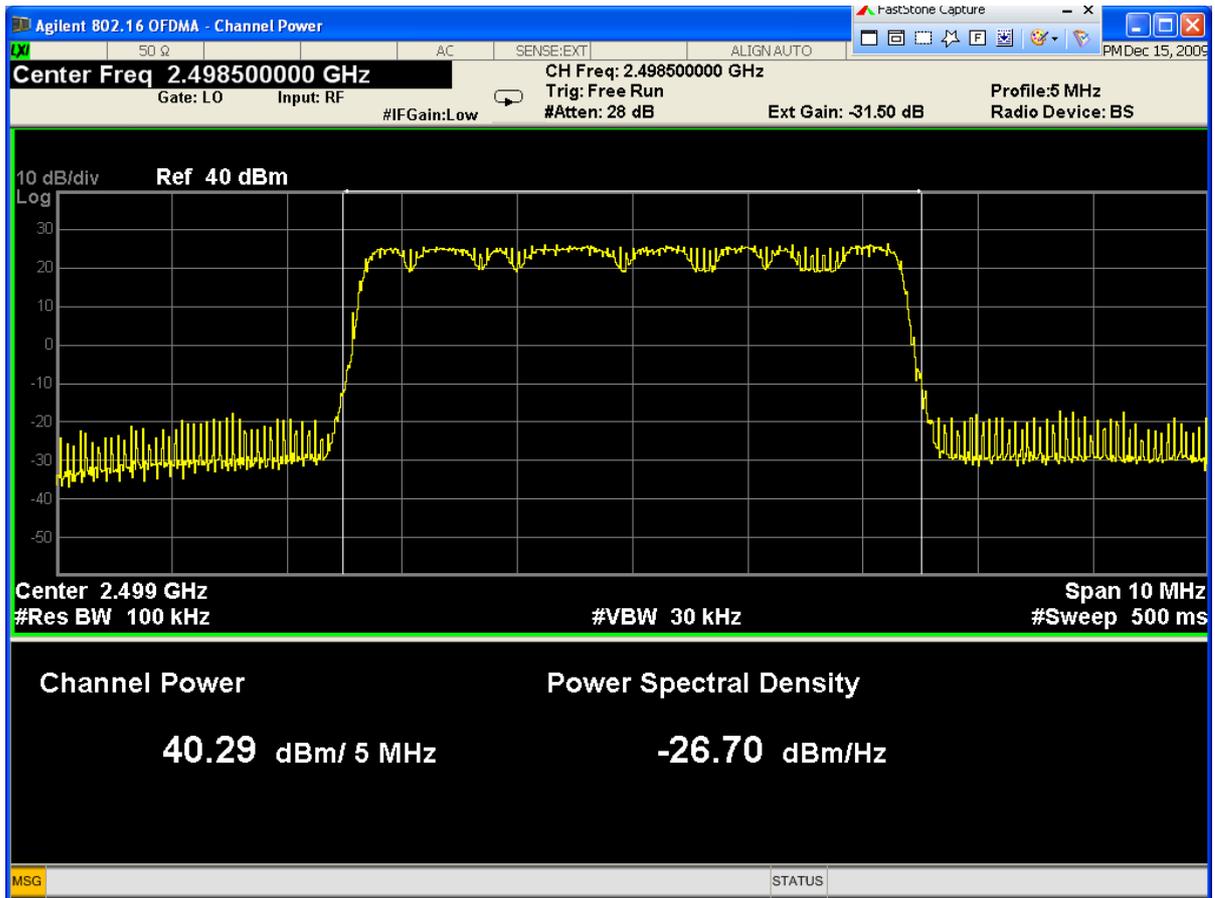
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2498.5	40.38	19	866.96	910
2593	40.06	19	805.38	910
2687.5	40.19	19	829.85	910

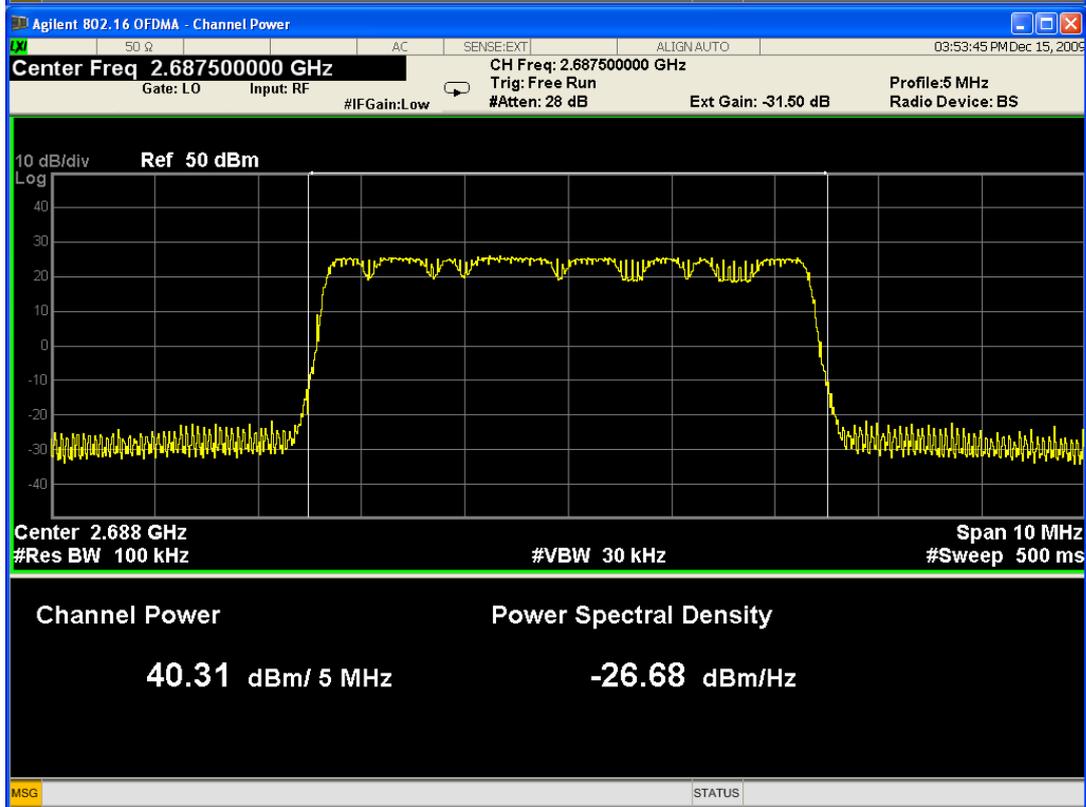
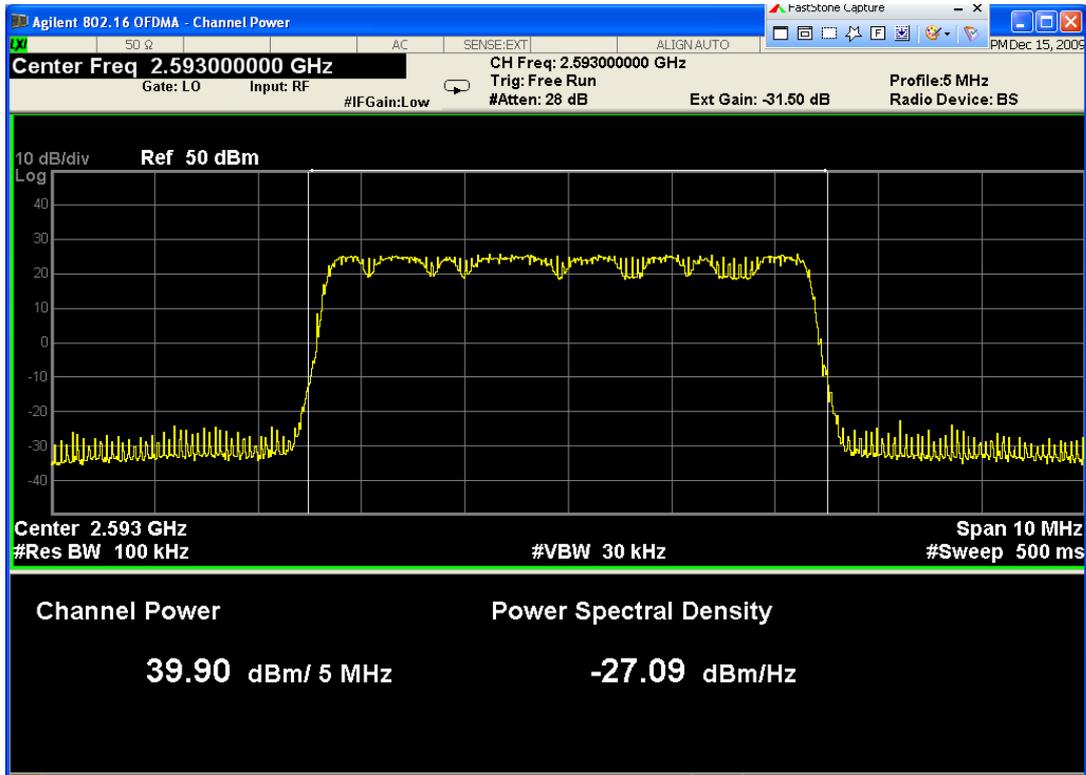




One carrier (64QAM)

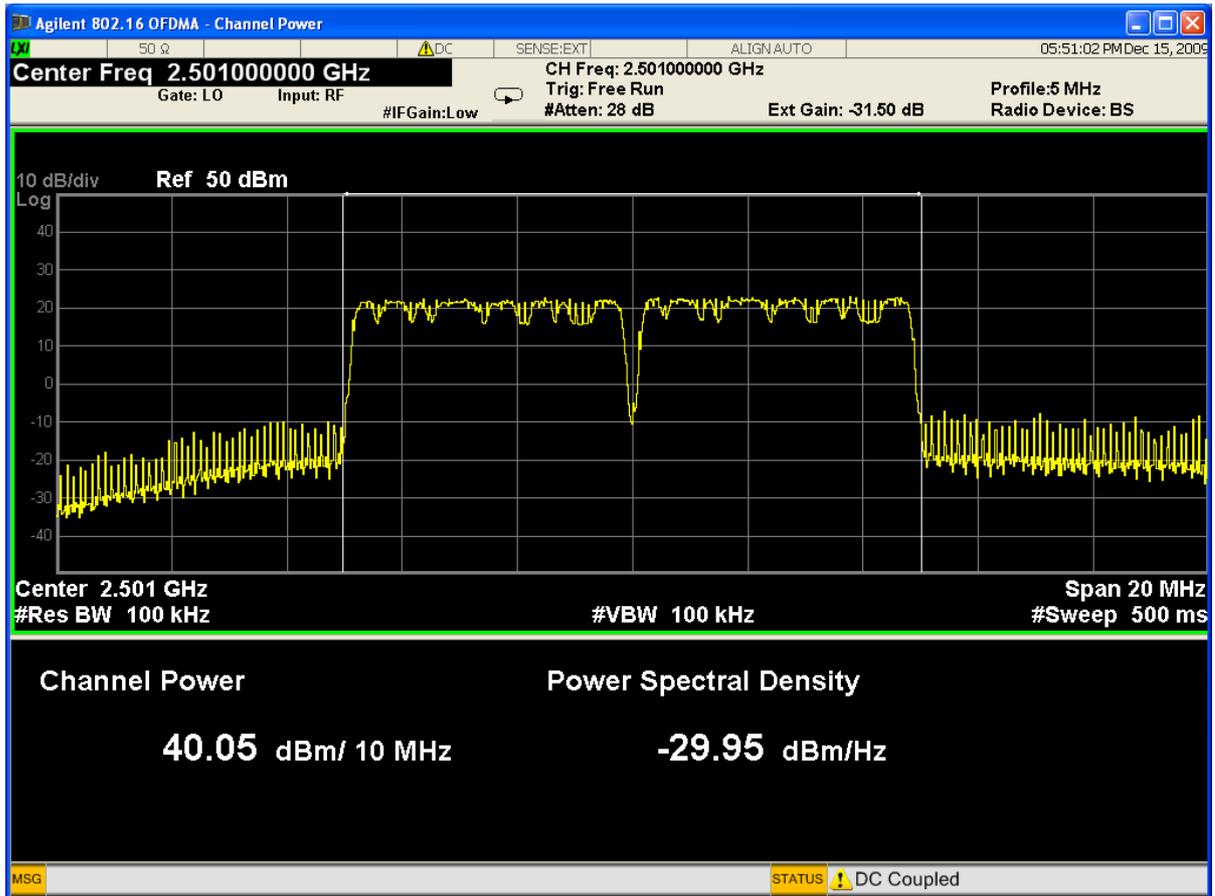
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain (dBi)	Total Power in W (EIRP)	Limit in W
2498.5	40.29	19	849.18	910
2593	39.90	19	776.25	910
2687.5	40.31	19	853.10	910

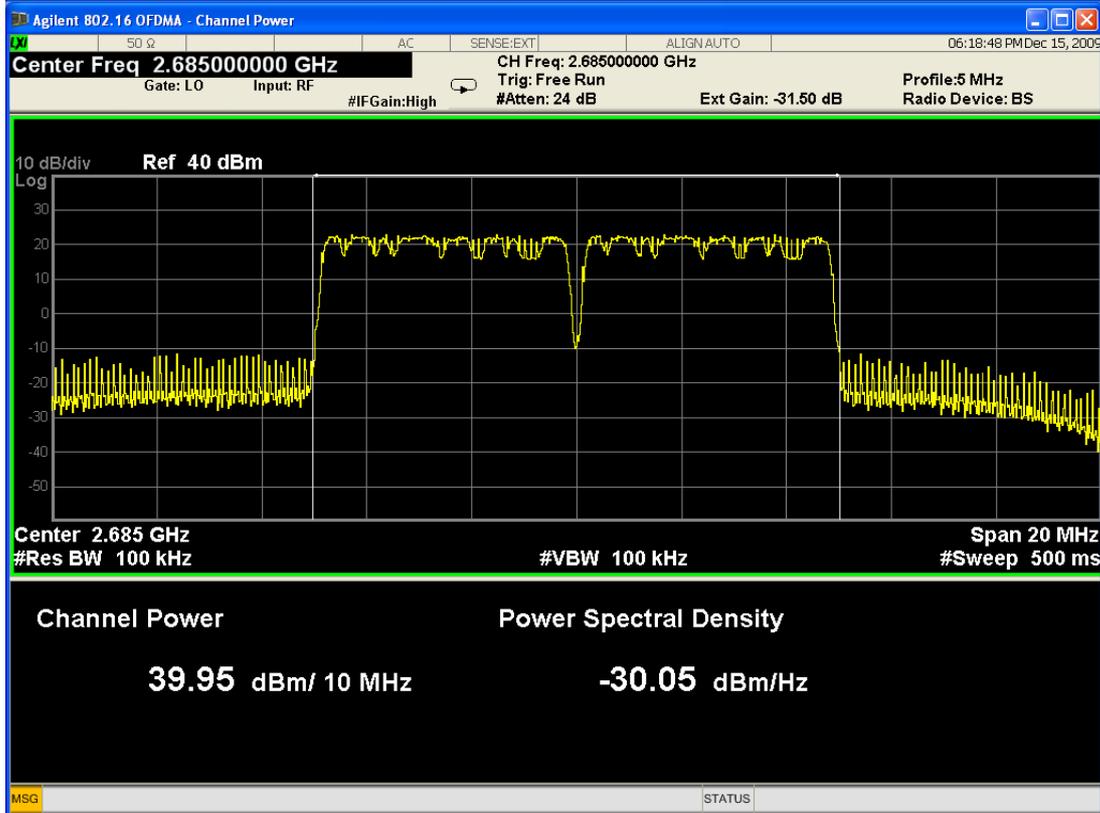
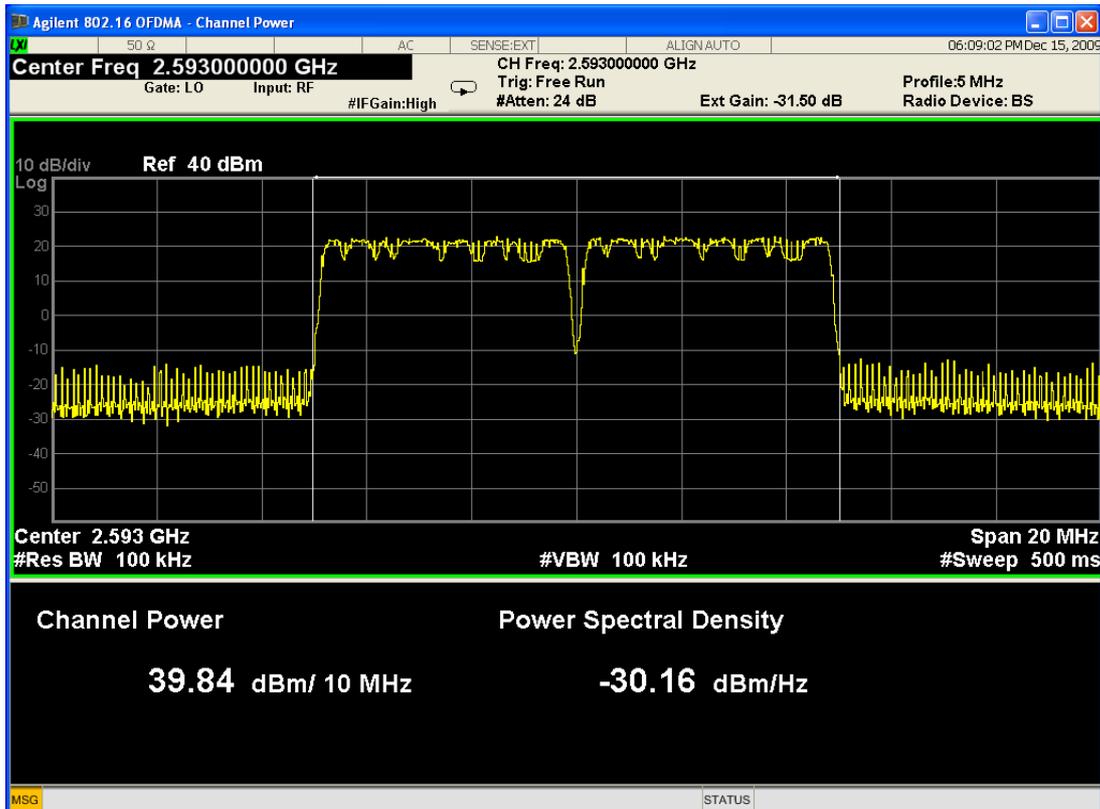




Two carriers (QPSK)

Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2501	40.05	19	803.53	1815
2593	39.84	19	765.60	1815
2685	39.95	19	785.24	1815



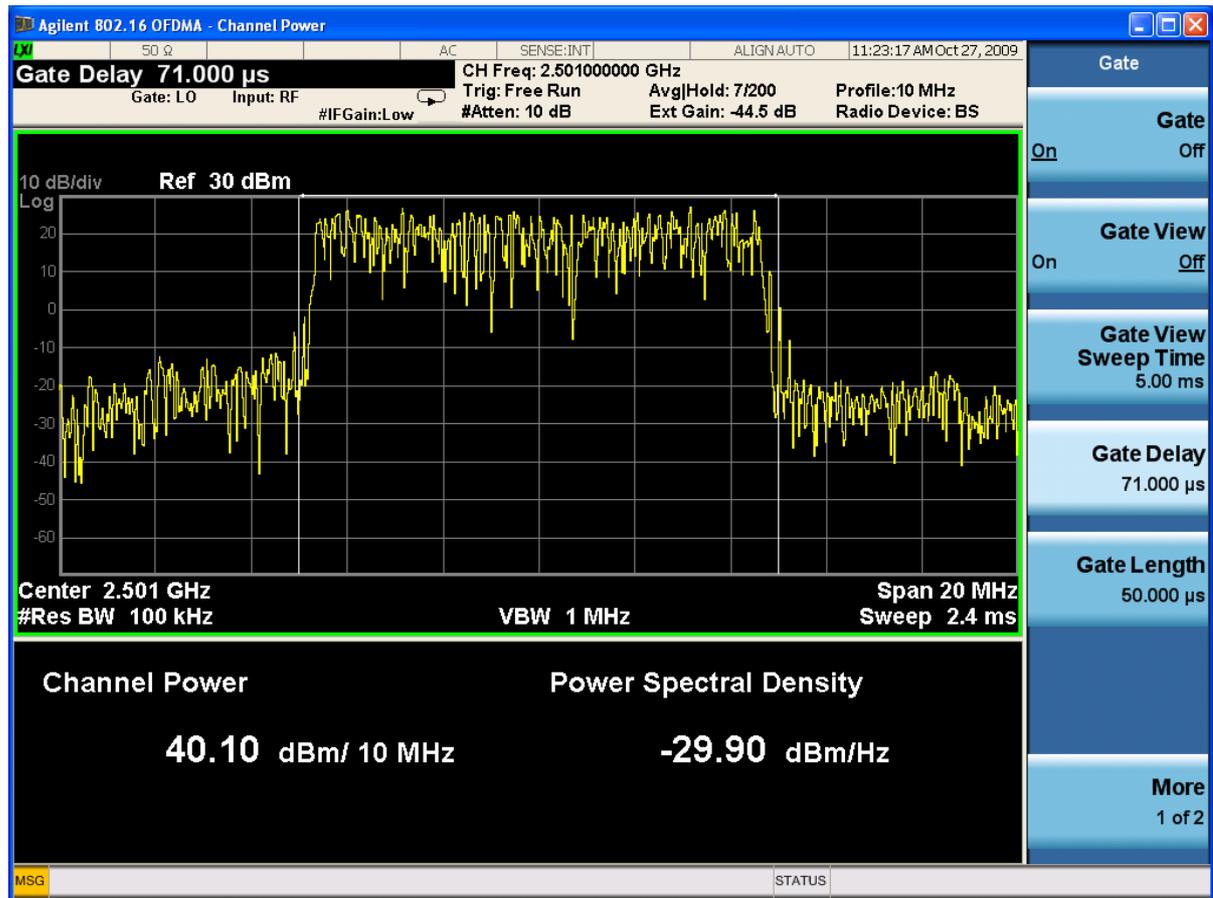


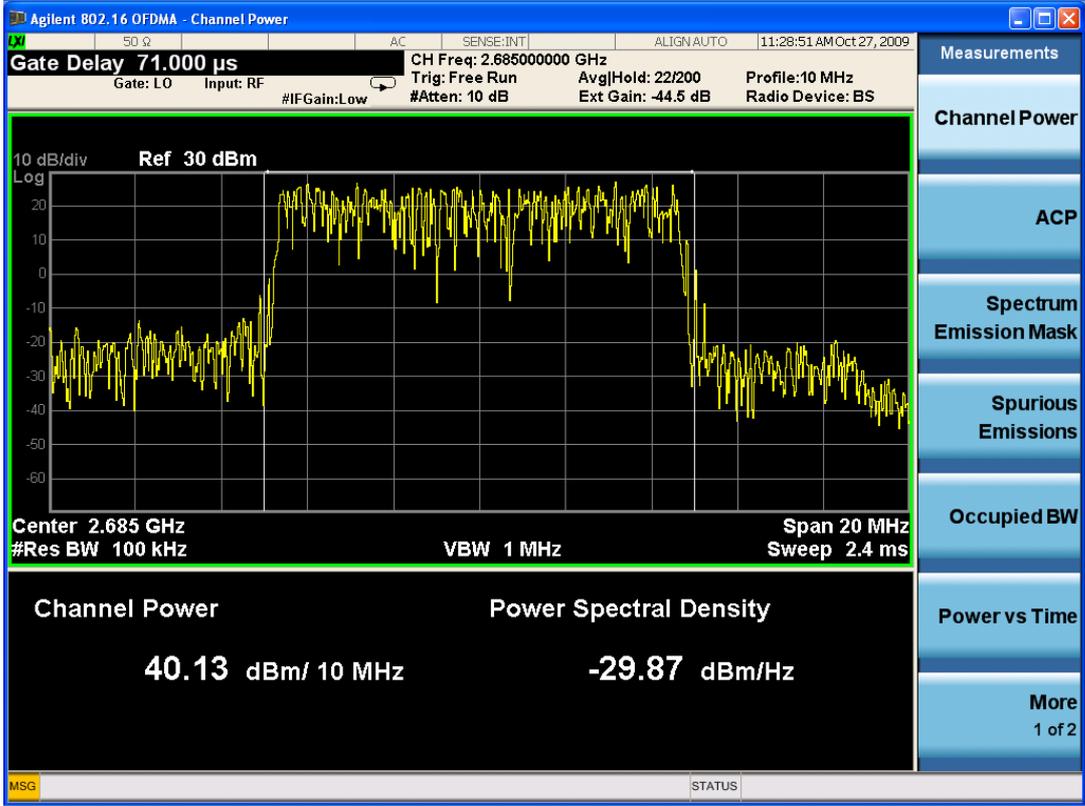
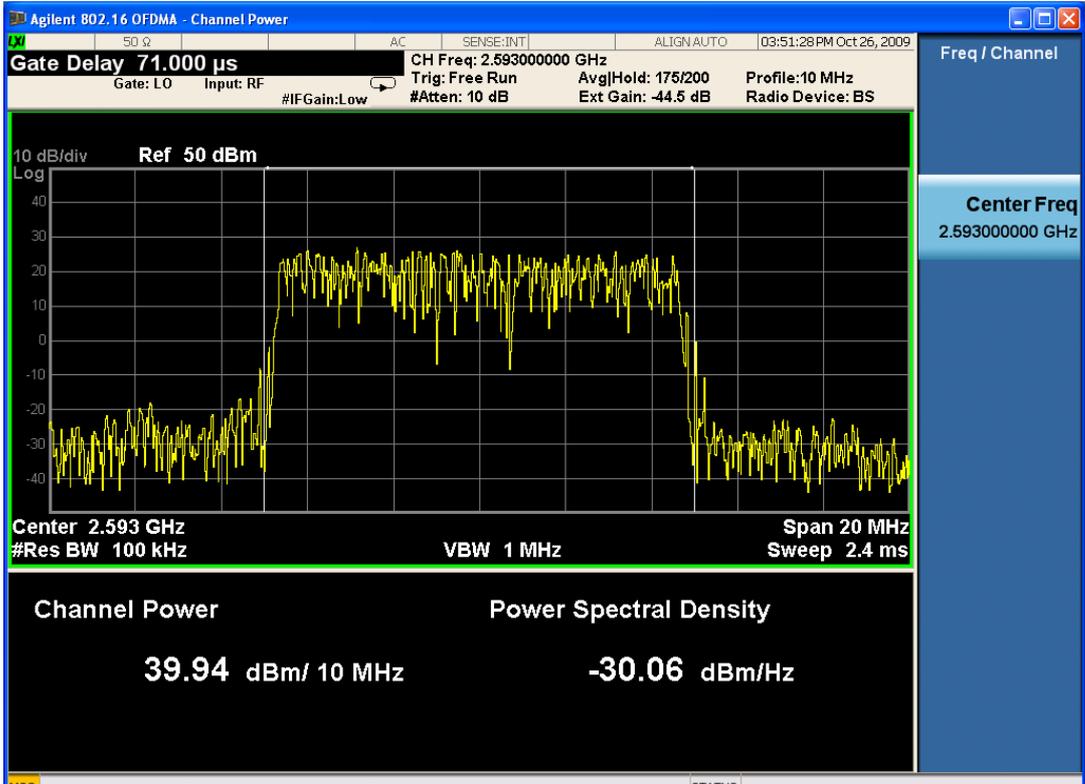
Antenna 2:

Occupied bandwidth is 10MHz

One carrier (QPSK)

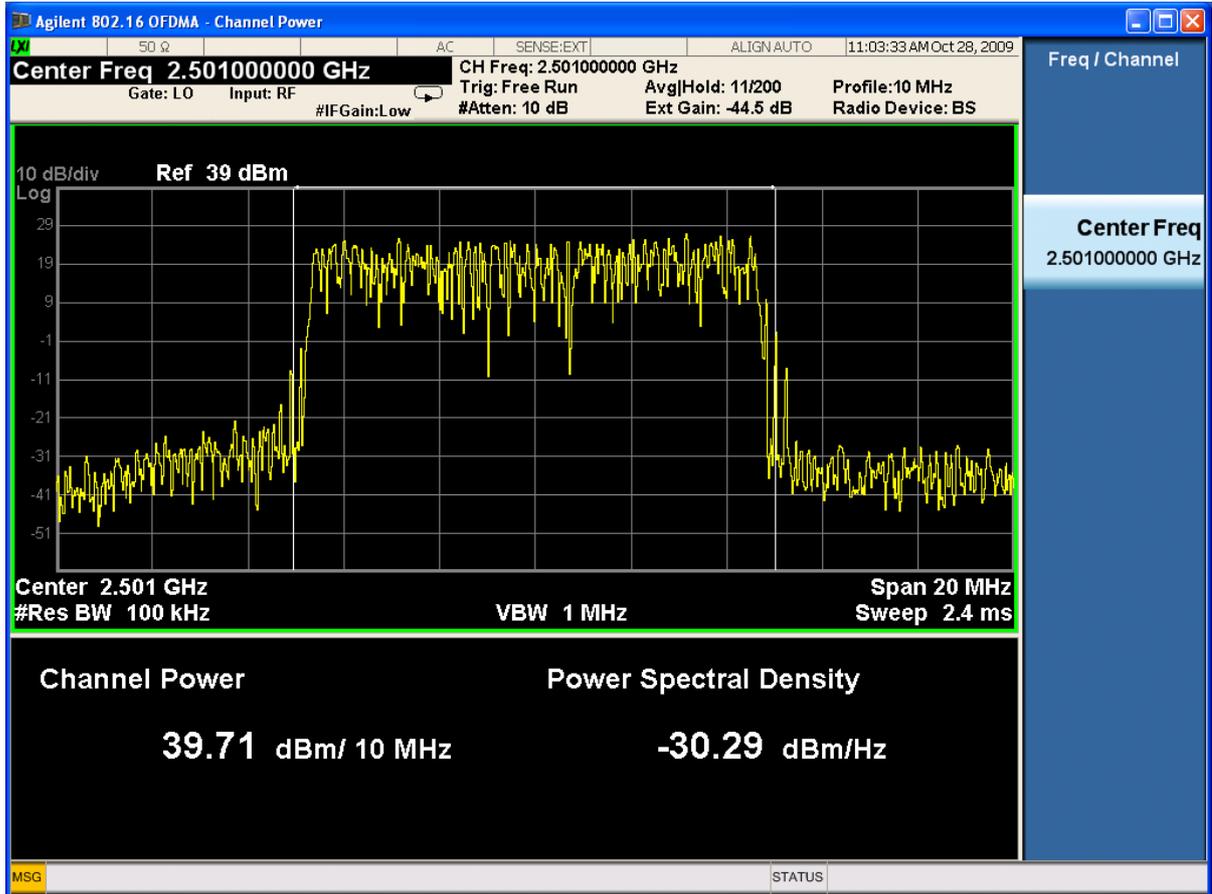
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2501	40.10	19	812.83	1815
2593	39.94	19	783.43	1815
2685	40.13	19	818.46	1815

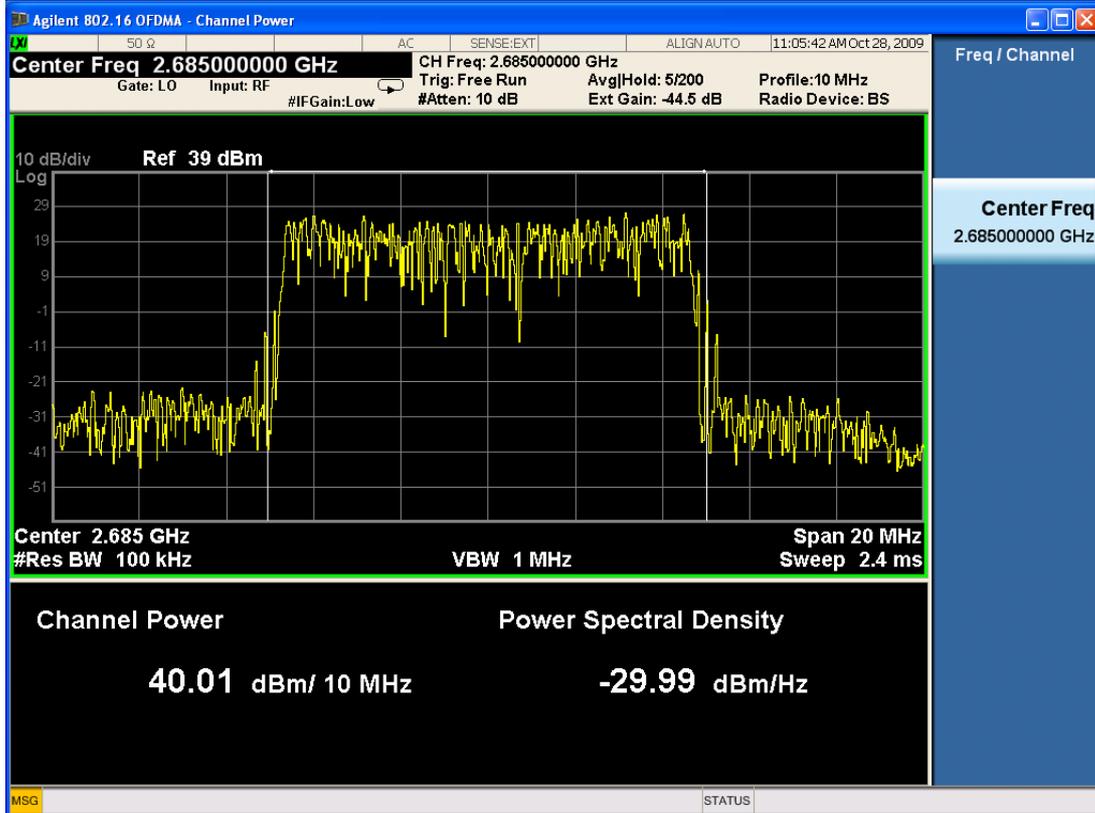




One carrier (16QAM)

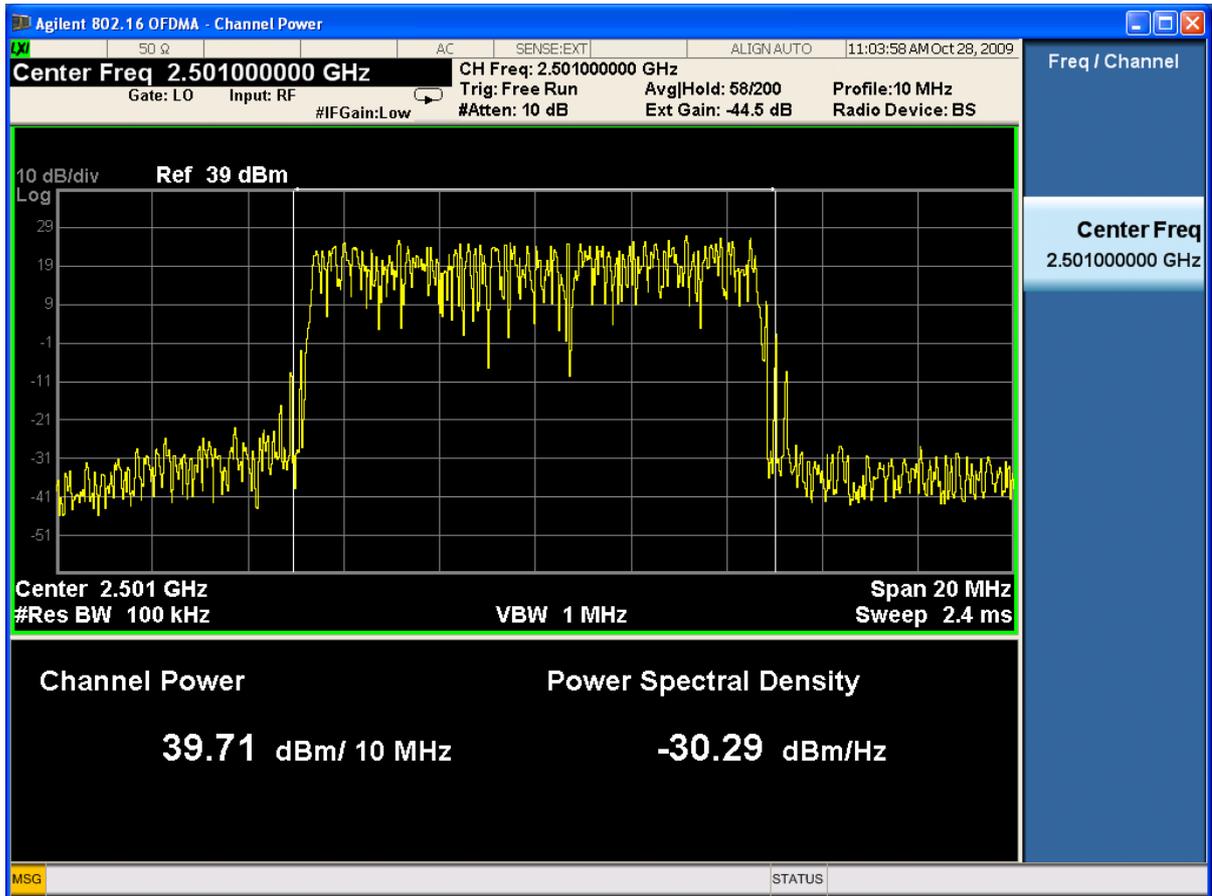
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2501	39.71	19	743.02	1815
2593	39.74	19	748.17	1815
2685	40.01	19	796.16	1815

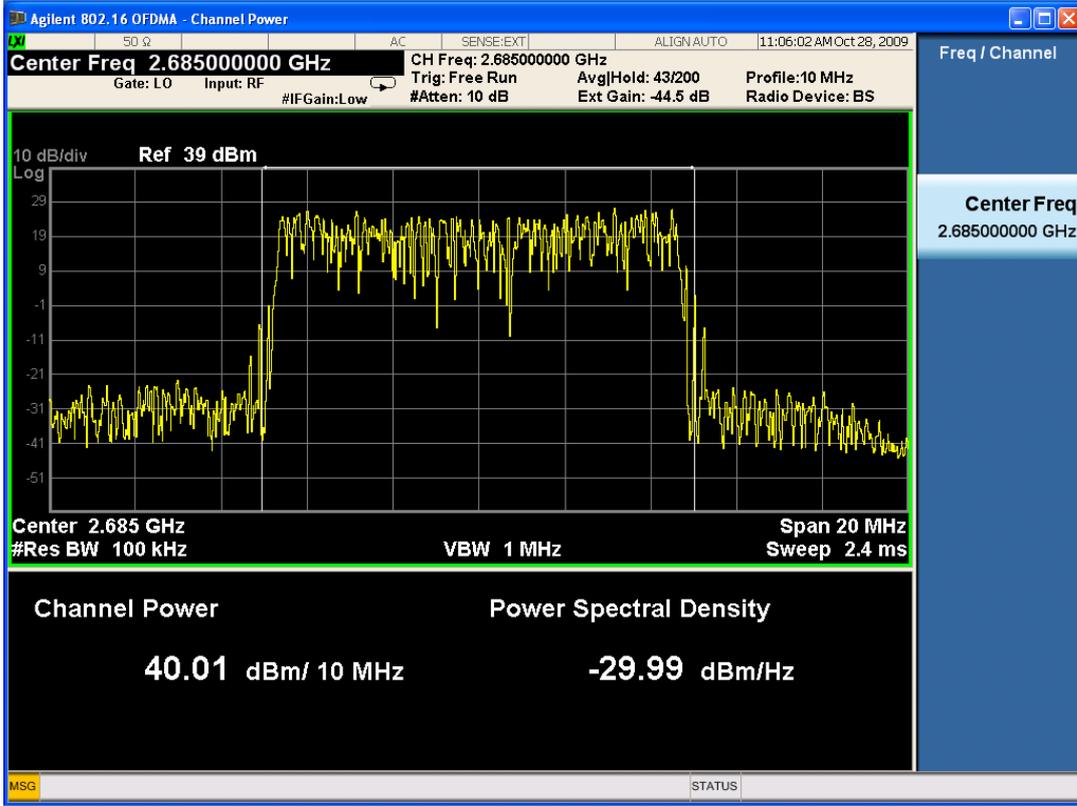
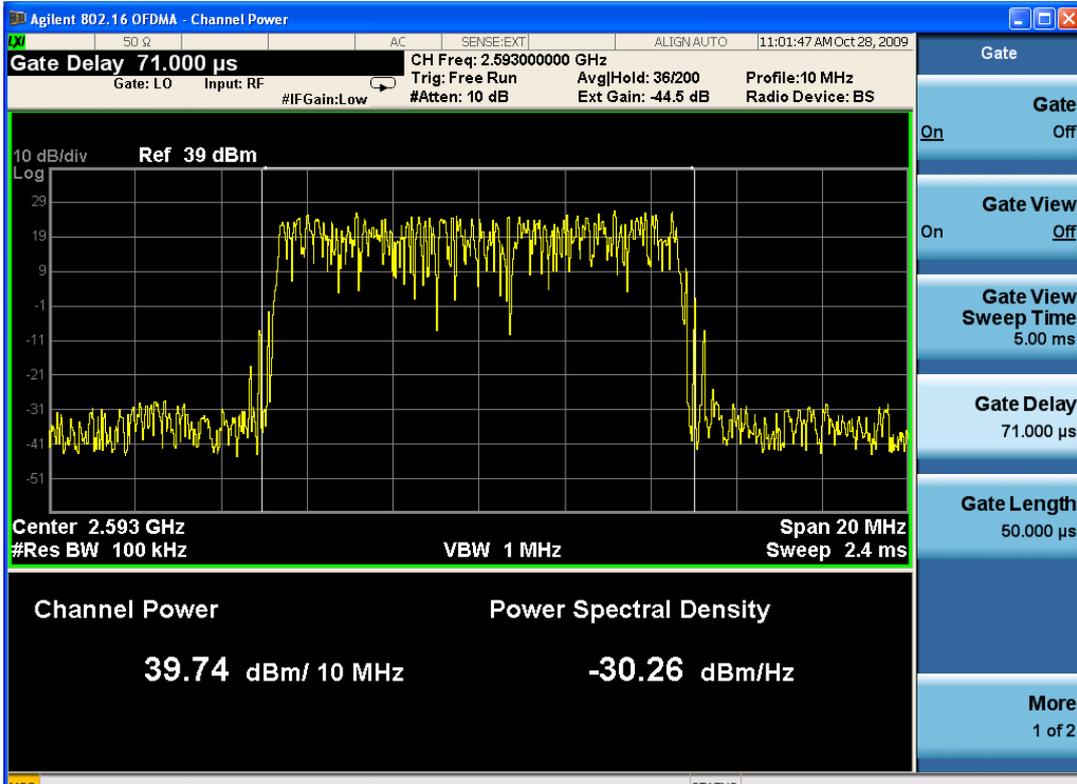




One carrier (64QAM)

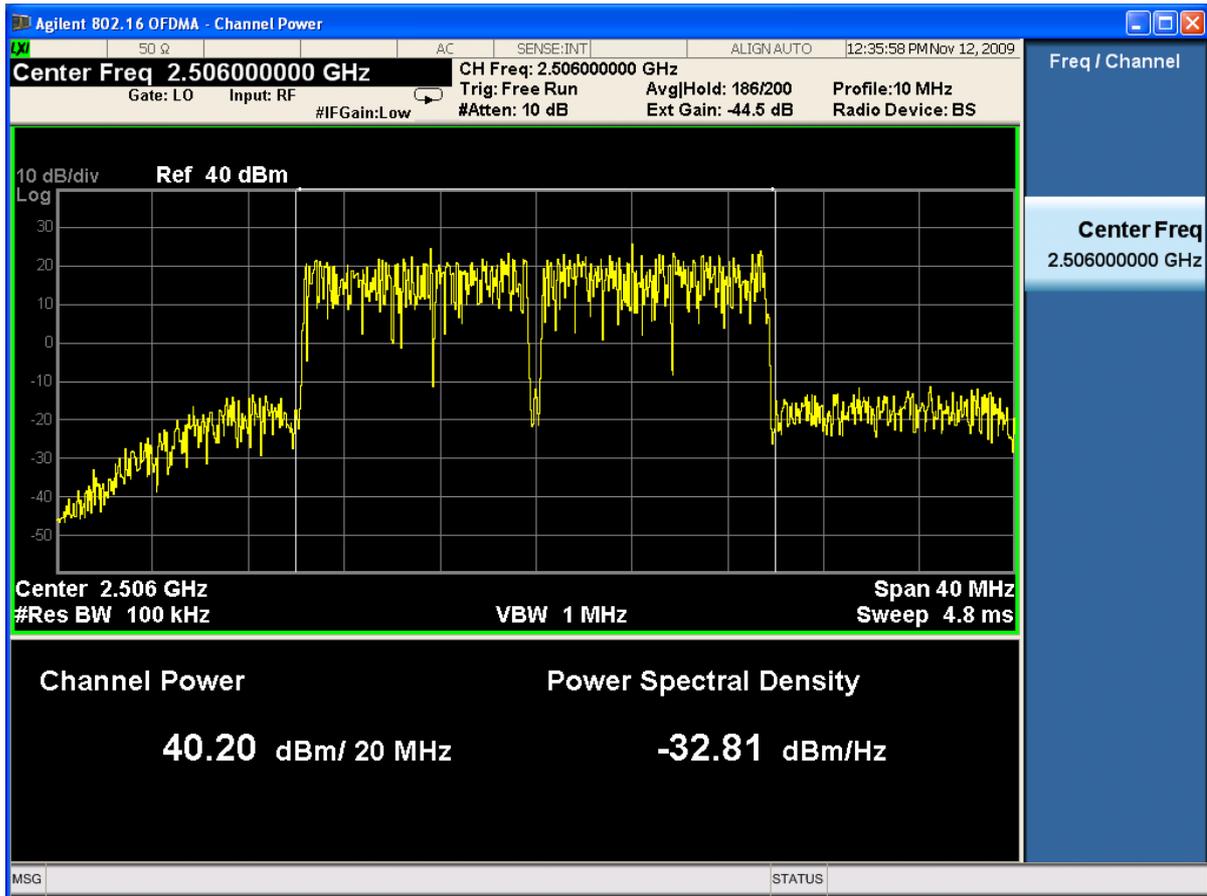
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain (dBi)	Total Power in W (EIRP)	Limit in W
2501	39.71	19	743.02	1815
2593	39.74	19	748.17	1815
2685	40.01	19	796.16	1815

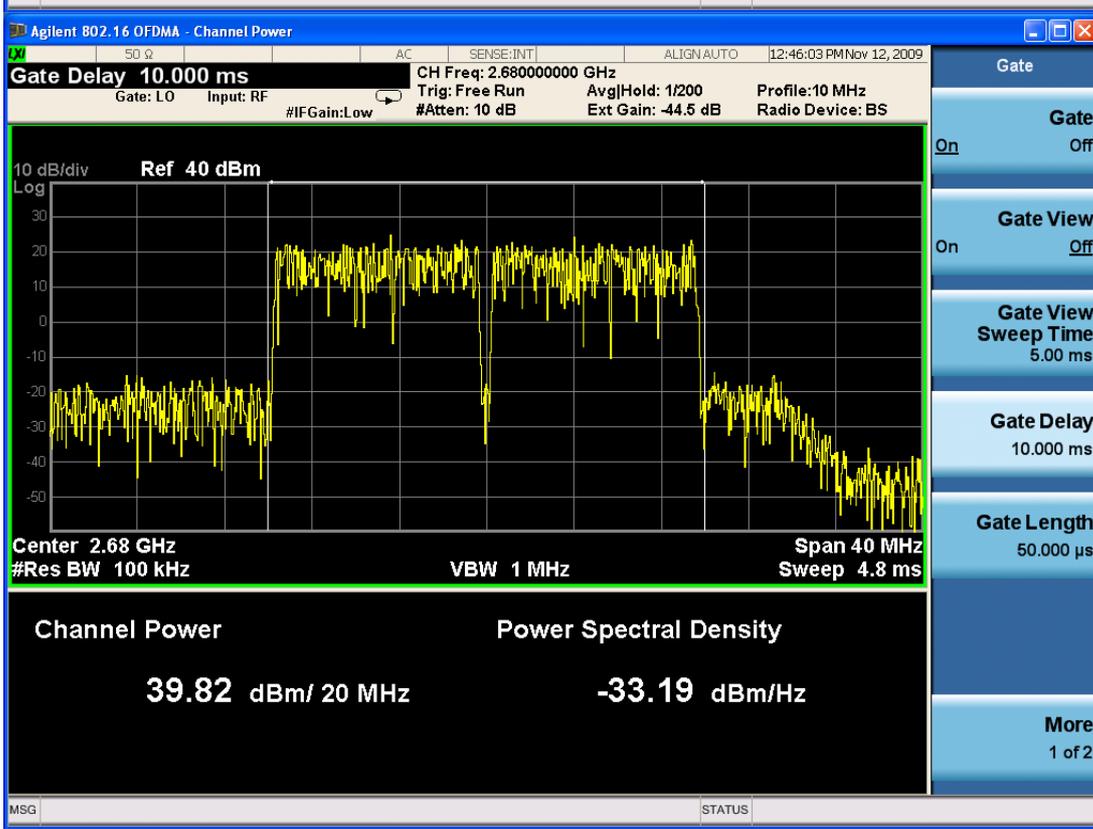
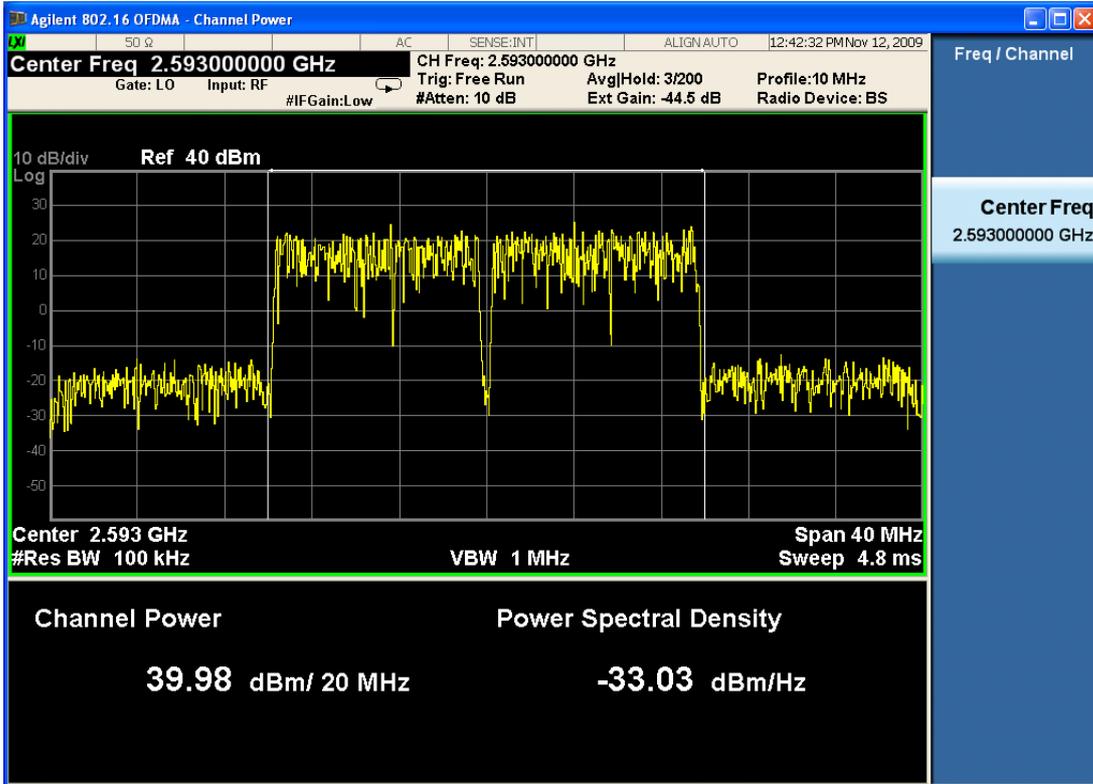




Two carriers (QPSK)

Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2506	40.20	19	831.76	3630
2593	39.98	19	790.68	3630
2680	39.82	19	762.08	3630

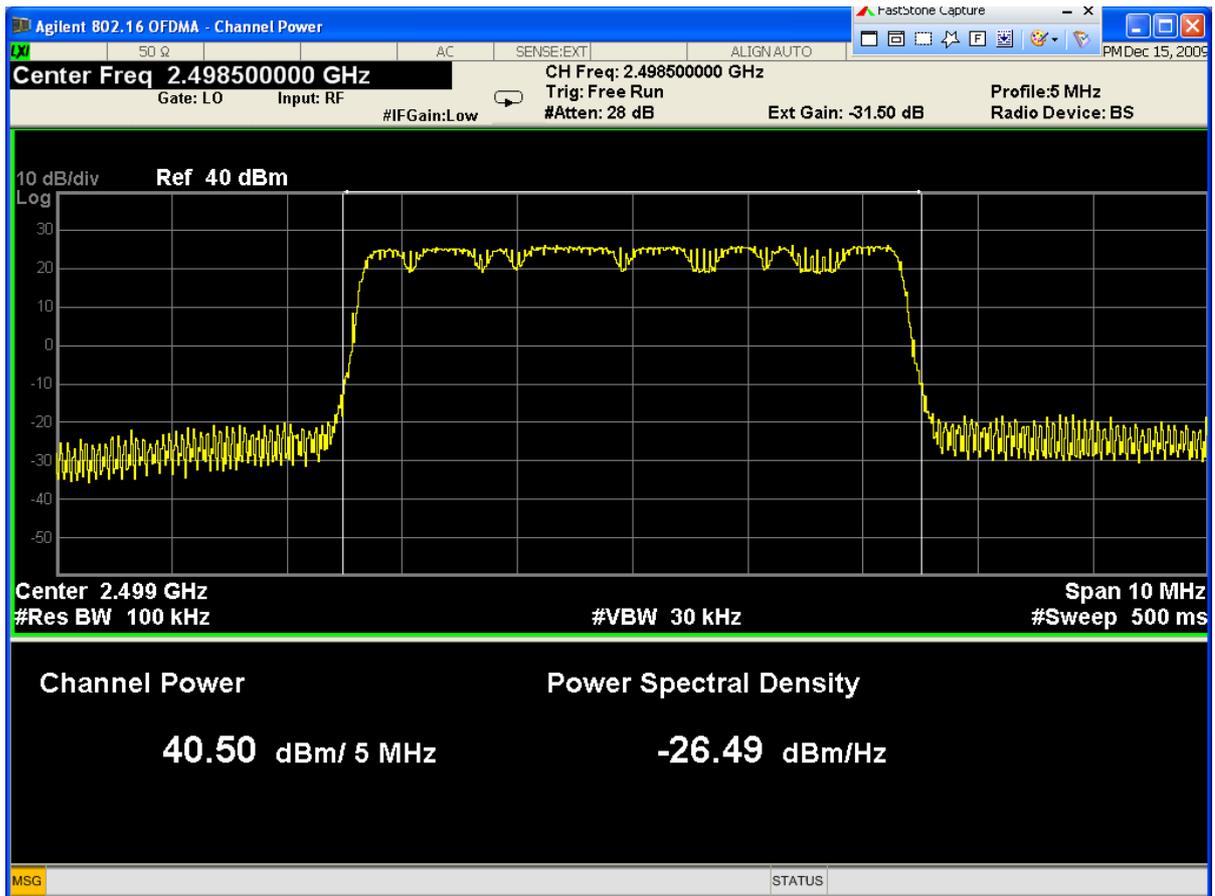


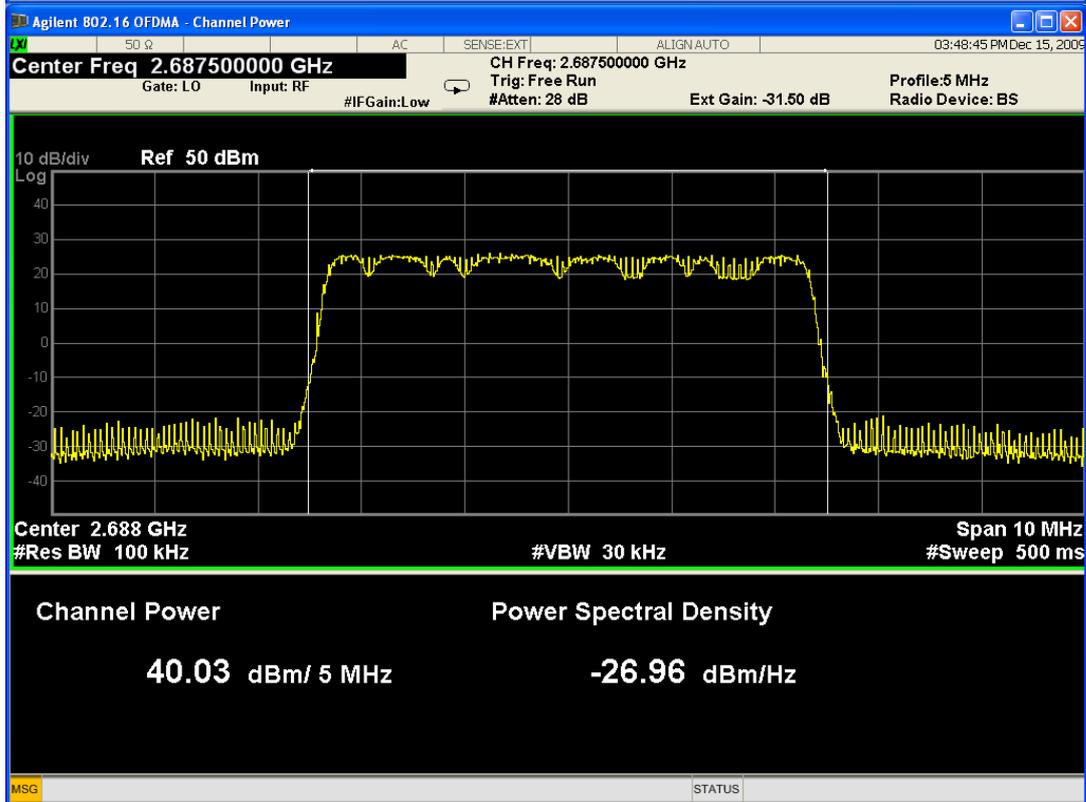
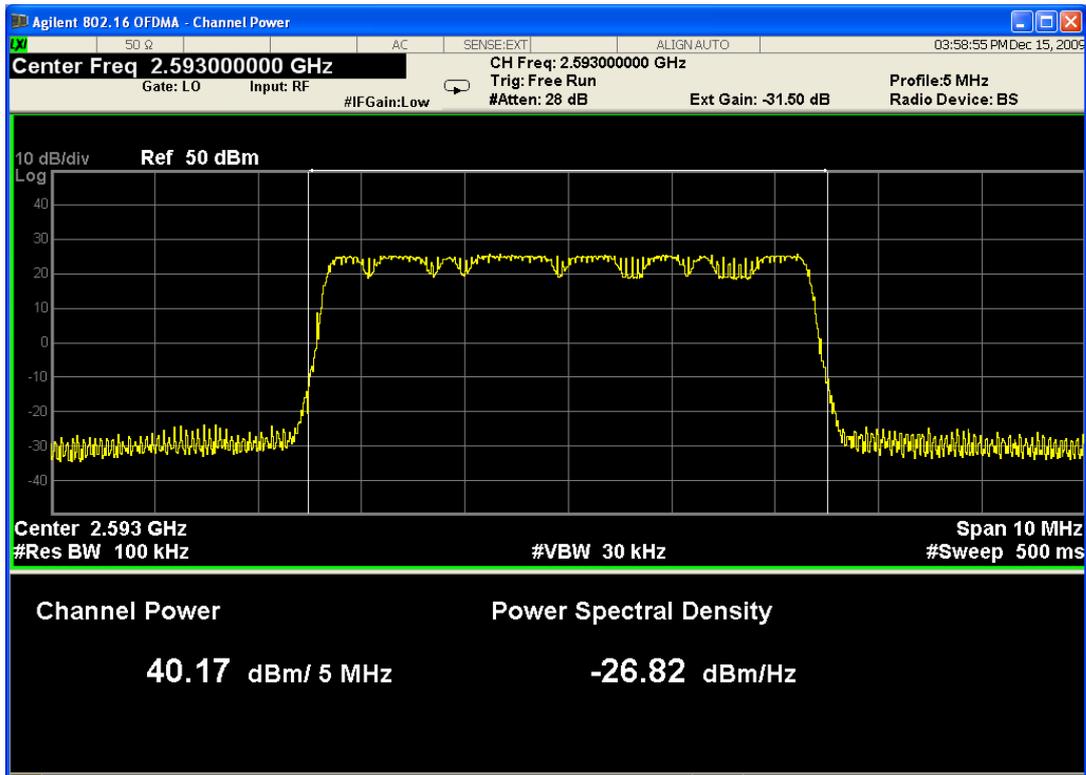


Occupied bandwidth is 5MHz

One carrier (QPSK)

Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2498.5	40.50	19	891.25	910
2593	40.17	19	826.04	910
2687.5	40.03	19	799.83	910

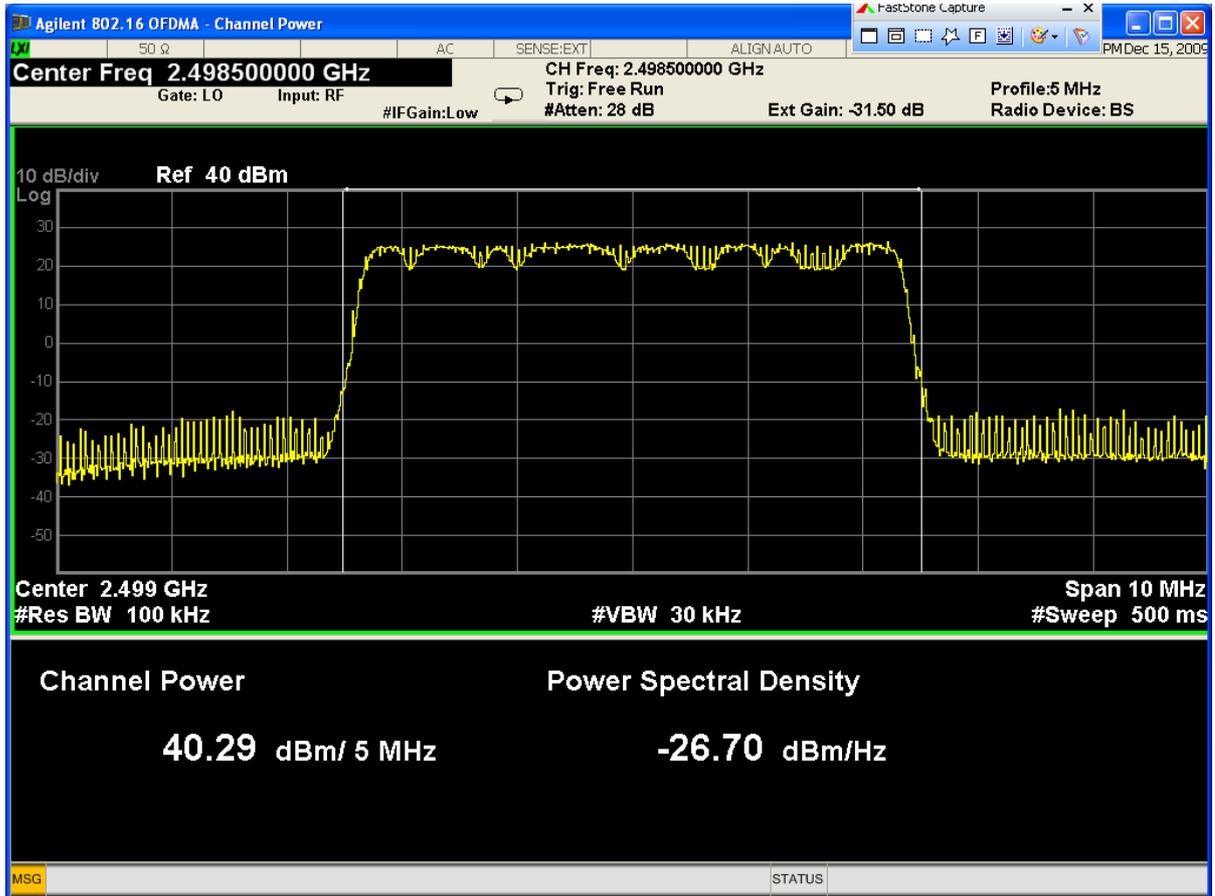


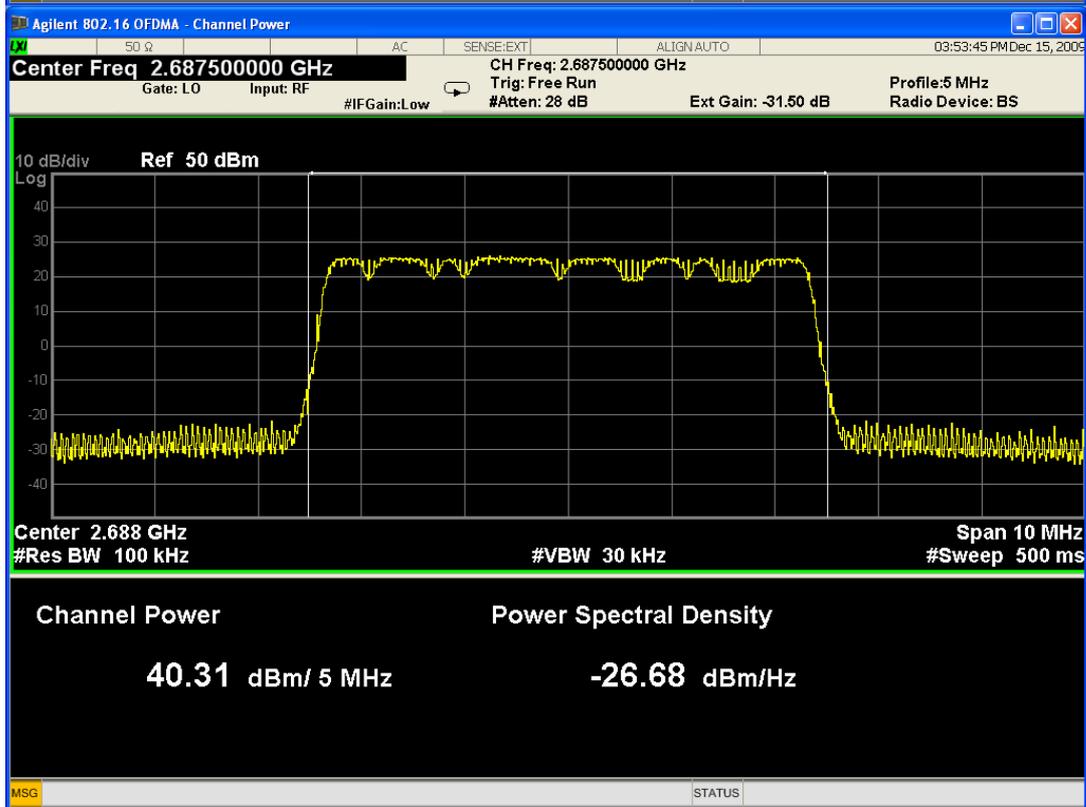
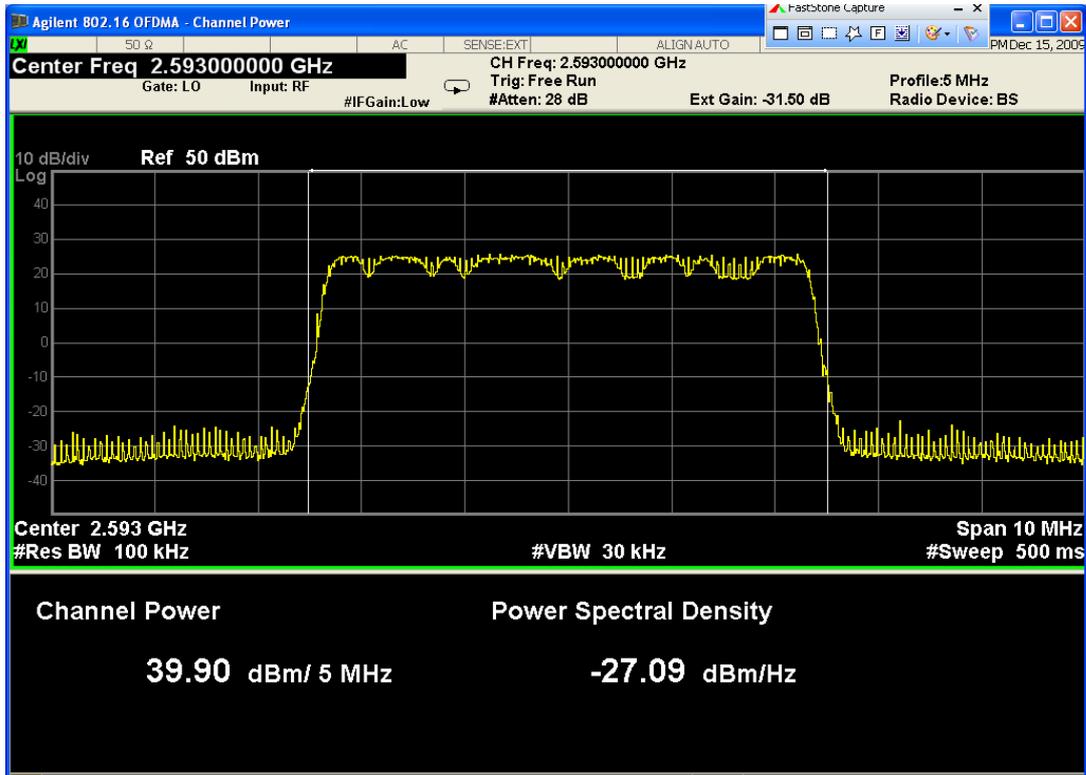




One carrier (64QAM)

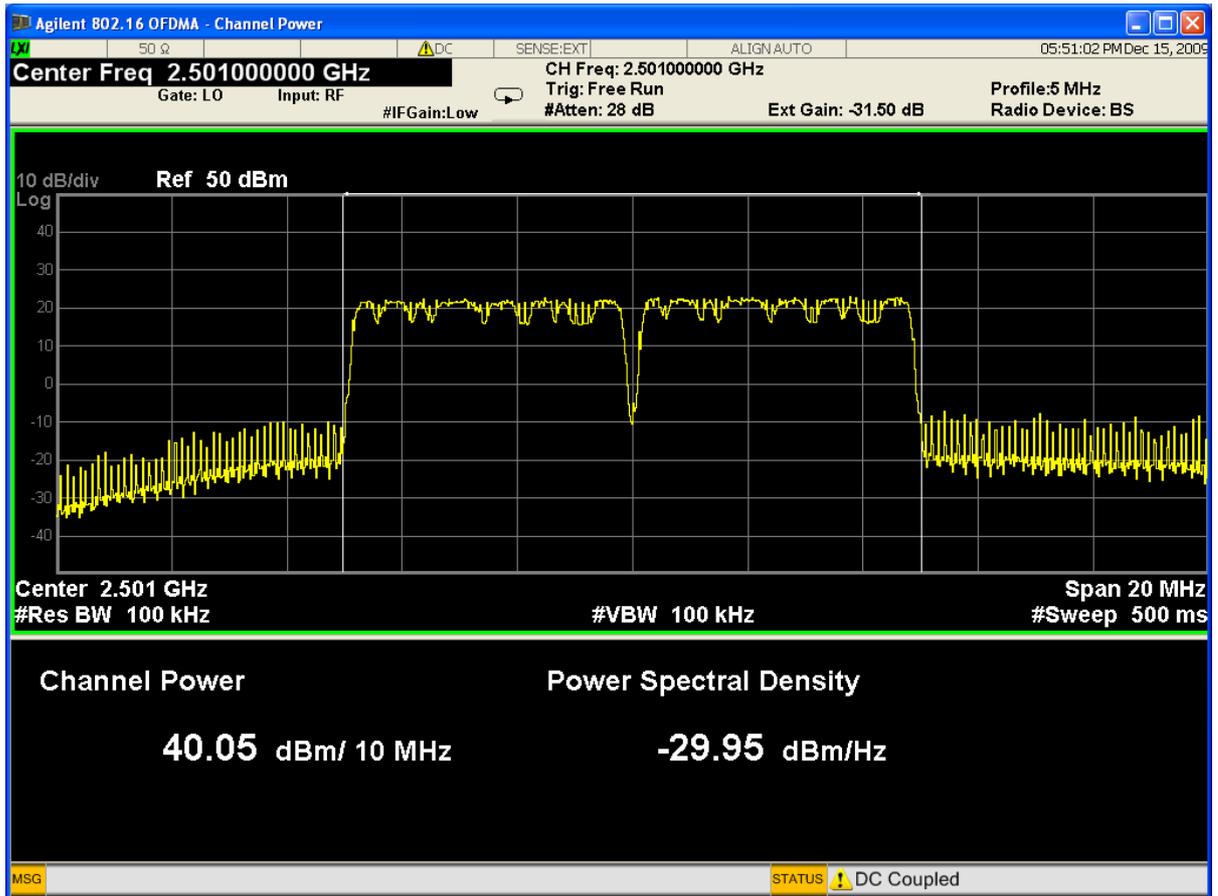
Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain (dBi)	Total Power in W (EIRP)	Limit in W
2498.5	40.29	19	849.18	910
2593	39.90	19	776.25	910
2687.5	40.31	19	853.10	910

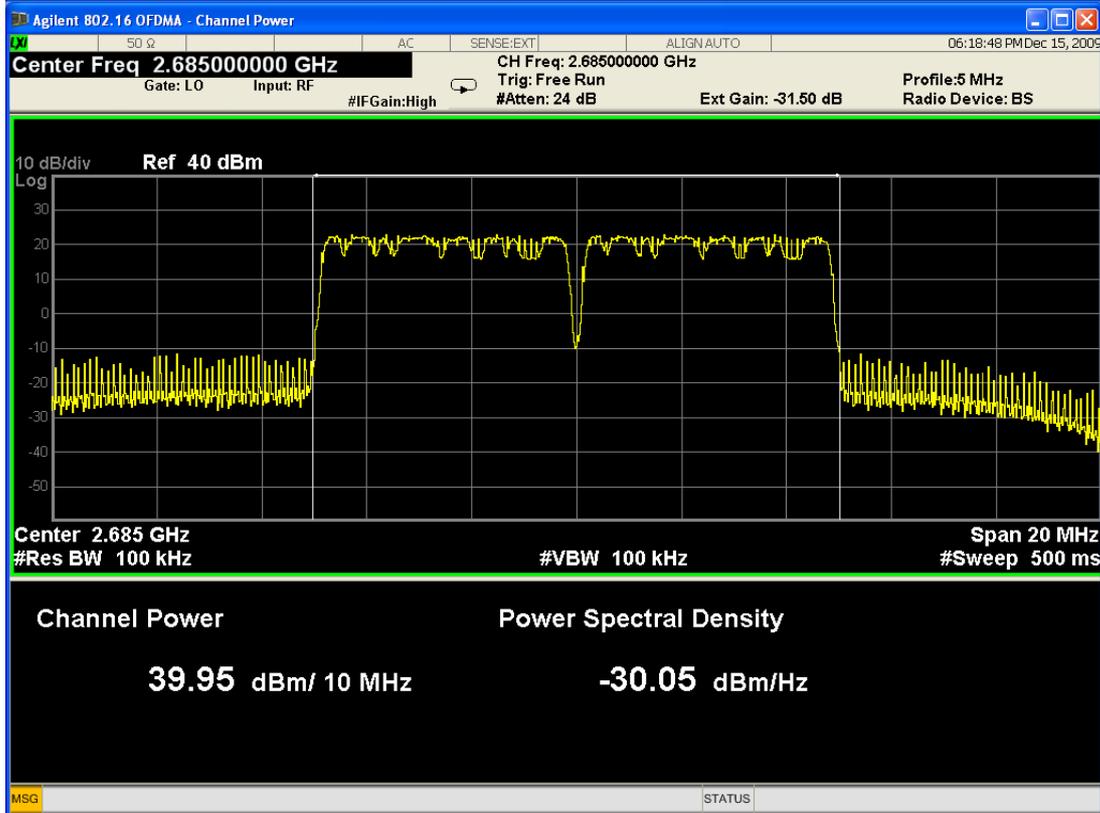
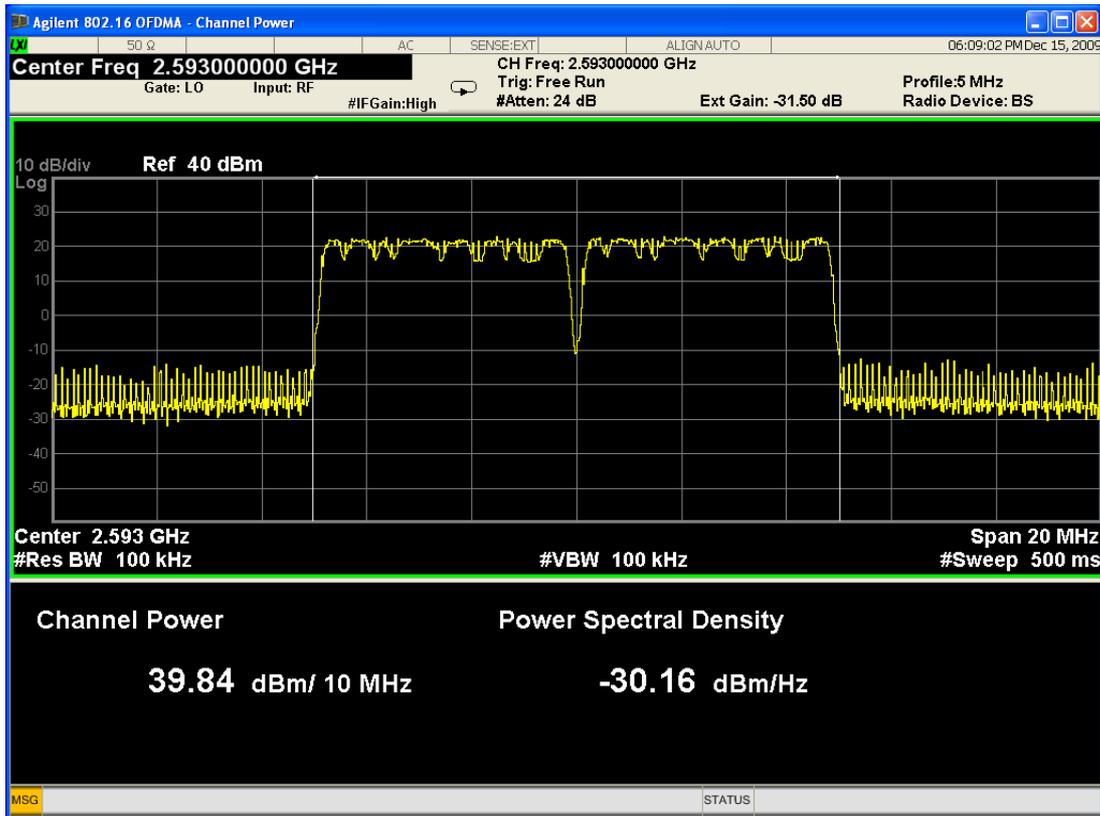




Two carriers (QPSK)

Center Freq. (MHz)	Total Power in dBm (Max)	Antenna gain(dBi)	Total Power in W (EIRP)	Limit in W
2501	40.05	19	803.53	1815
2593	39.84	19	765.60	1815
2685	39.95	19	785.24	1815





6 §2.1091 – RF EXPOSURE

Limit

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated. Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

Test Data

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4\pi R^2$$

Where: S = power density

P = power input to antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal: 40.50 (dBm) (about 112.2Watt)

Maximum peak output power at antenna (with antenna gain)

Prediction distance: at least 261 (cm)

Predication frequency: 2498.5 (MHz)

Antenna Gain (typical): 19 (dBi)

Power density at predication frequency at 261 cm: 1.00(mW/cm²)

MPE limit for uncontrolled exposure at prediction frequency: 1.00 (mW/cm²)

Test Result: pass(261cm>20cm)

7 §2.1053-SPURIOUS RADIATED EMISSIONS

Applicable Standard Requirements: CFR 47, §2.1053

Test Equipment List and Details

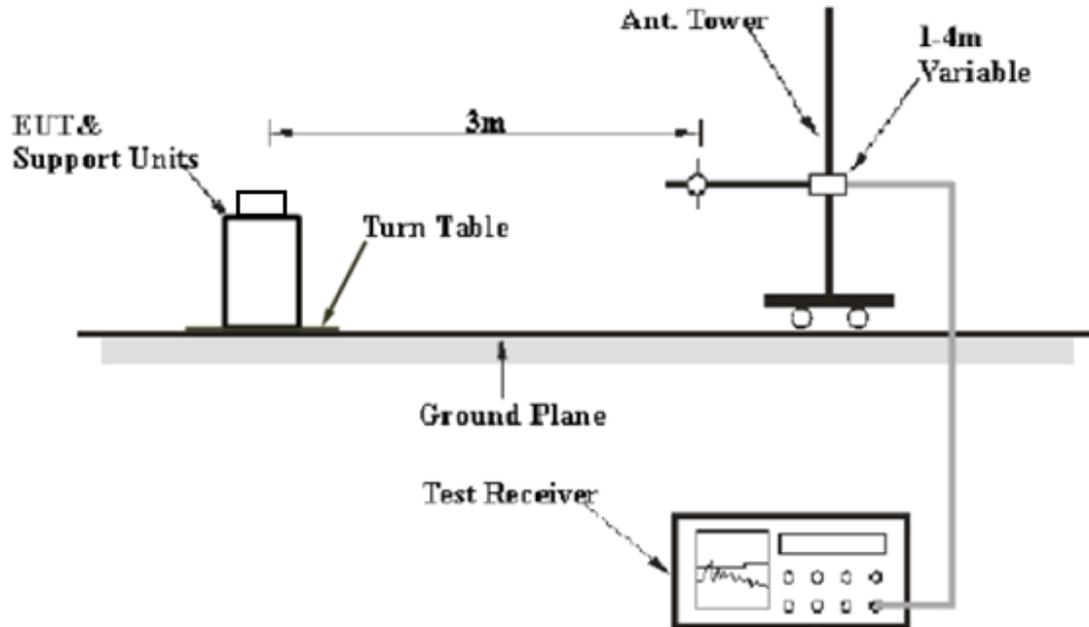
Item	Equipment	Manufacturer	Mode	Serial	Last Cal.	Cal. Interval
1	EMI Test Receiver	R&S	ESI26	100058	2009-10-15	1 Year
2	Ultra Broadband Antenna	R&S	HL562	100022	2009-3-5	3 Years
3	Double-Ridged Waveguide Horn Antenna	R&S	HF906	100032	2007-10-10	3 Years
4	Anechoic Chamber	Albatross	3m Site	N/A	2007-7-15	3 Year
5	Cable Set	R&S	RE Cable	N/A	2009-8-16	1Year
6	Cable set II	R&S	Substitution Tx Cable	N/A	2009-8-16	1Year
7	Cable set III	R&S	Hi-freq RX Antenna Cable	N/A	2009-8-16	1Year
8	Software	R&S	ES-K1	N/A	N/A	N/A
9	Double-Ridged Waveguide Horn Antenna	R&S	HF906	100013	2008-8-11	3 Years
10	VHF-UHF Broad band Antenna	SCHWARZBEC K	VUBA 9117	SB3174	2007-11-17	3 Years
11	Signal Generator	R&S	SMR20	100098	2008-12-17	1Year

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiated emissions measurement at the EMC lab of ZTE Corp. is 3.6dB.

EUT Setup



The radiated emission tests were performed in the 3-meter Chamber, using the setup accordance with the TIA/EIA 603-C. The specifications used were the FCC part15.109, part 27.53 & part 2.1053 limits.

Environmental Conditions

Temperature:	26°C
Relative Humidity:	60 %
ATM Pressure:	1009 mbar

The testing was performed by Wang tieshan on Oct 20 2009

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load, which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT .The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to teeth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB =10 lg (TXpwr in Watts/0.001)-the absolute level

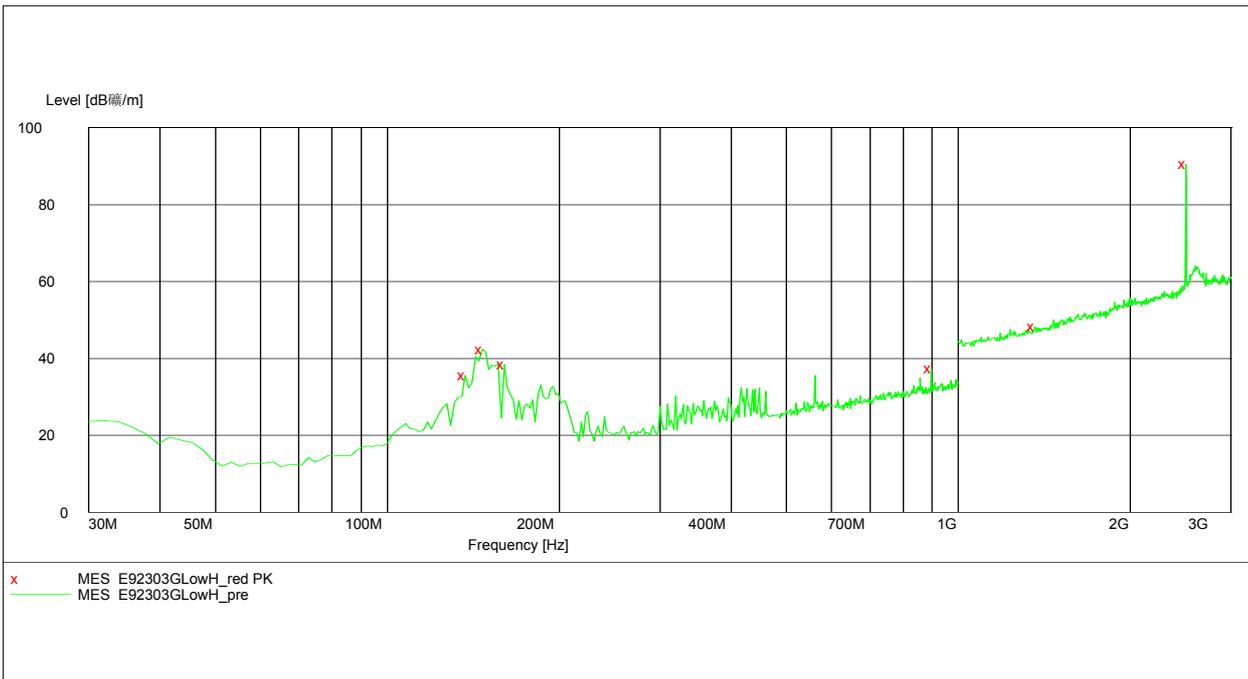
Spurious attenuation limit in dB =43+10 Log10 (power out in Watts)

We choose the worst case of the maximum RF output power, occupied bandwidth is 5MHz,with QPSK modulation, two antennas are in maximum working mode.

Test Results: PASS

Test Data

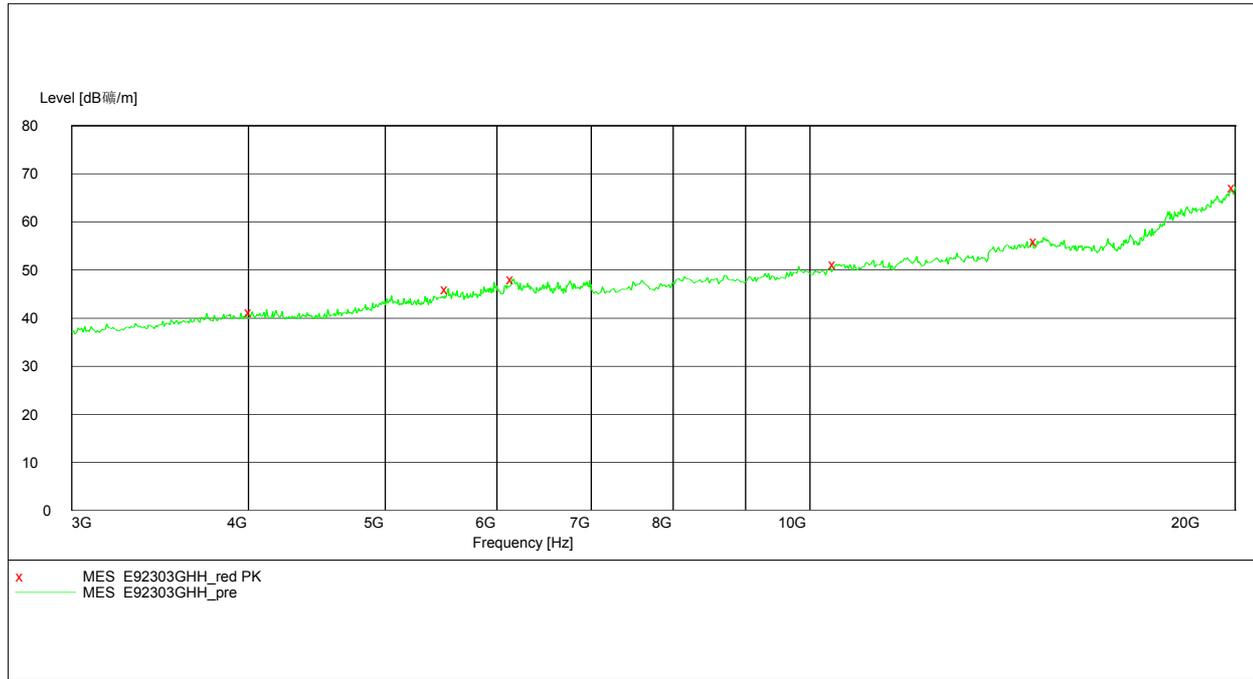
Horizontal 2498.5MHZ(30MHz to 3GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
136.913828	35.62	-56.42	1	-8.42	-67.99	-13	54.99
146.633267	42.41	-49.63	1	-6.46	-59.24	-13	46.24
160.240481	38.48	-57.35	1.1	-3.84	-64.44	-13	51.44
896.973948	37.35	-59.74	2.5	-1.56	-65.95	-13	52.95
1360.72144	48.29	-57.81	3.1	4.25	-58.81	-13	45.81
*2503.00601	90.51	-14.71	4.2	7.95	-13.11	--	--

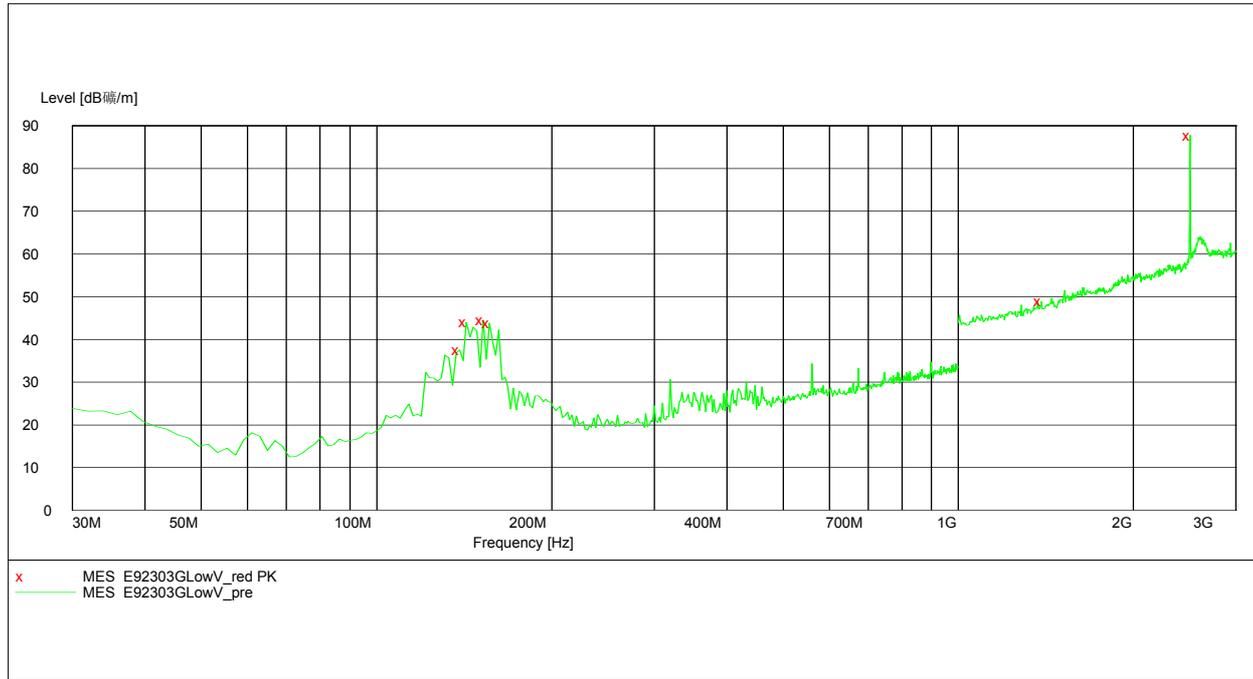
* the marked frequency is in working block

Horizontal 2498.5 MHz(3GHz to 20GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
4026.0521	41.32	-63.33	5.3	7.95	-62.83	-13	49.83
5541.08216	46.11	-52.5	6.4	9.05	-52	-13	39
6166.33267	48.12	-55.27	6.9	9.05	-55.27	-13	42.27
10438.8778	51.25	-57.69	9.1	11.35	-57.59	-13	44.59
14476.9539	56.01	-49.31	10.9	9.65	-52.71	-13	39.71
20000	67.25	-37.97	12.2	6.45	-45.87	-13	32.87

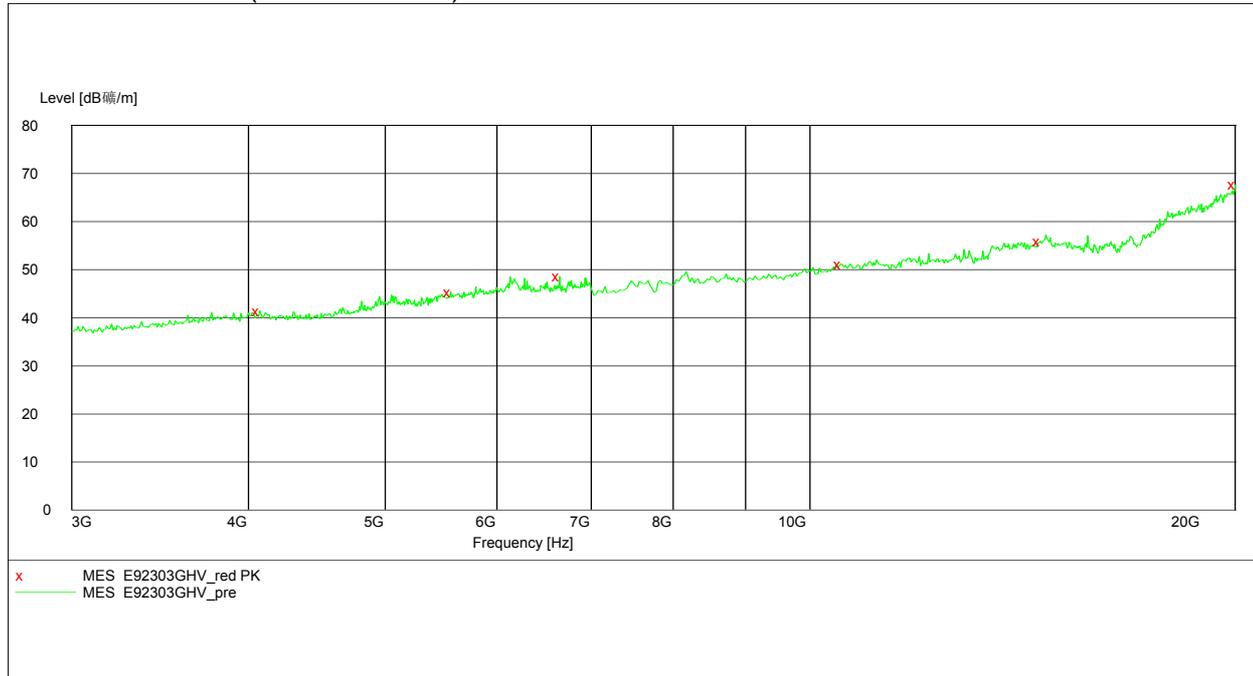
Vertical 2498.5MHZ(30MHz to 3GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
138.857715	37.6	-48.35	1	-8.42	-59.92	-13	46.92
142.745491	43.98	-41.97	1	-7.29	-52.41	-13	39.41
152.46493	44.51	-41.44	1	-5.7	-50.29	-13	37.29
156.352705	43.85	-48.38	1	-4.87	-56.4	-13	43.4
1388.77756	48.91	-54.88	3.1	4.25	-55.88	-13	42.88
2503.00601	87.77	-19.76	4.2	7.95	-18.16	--	--

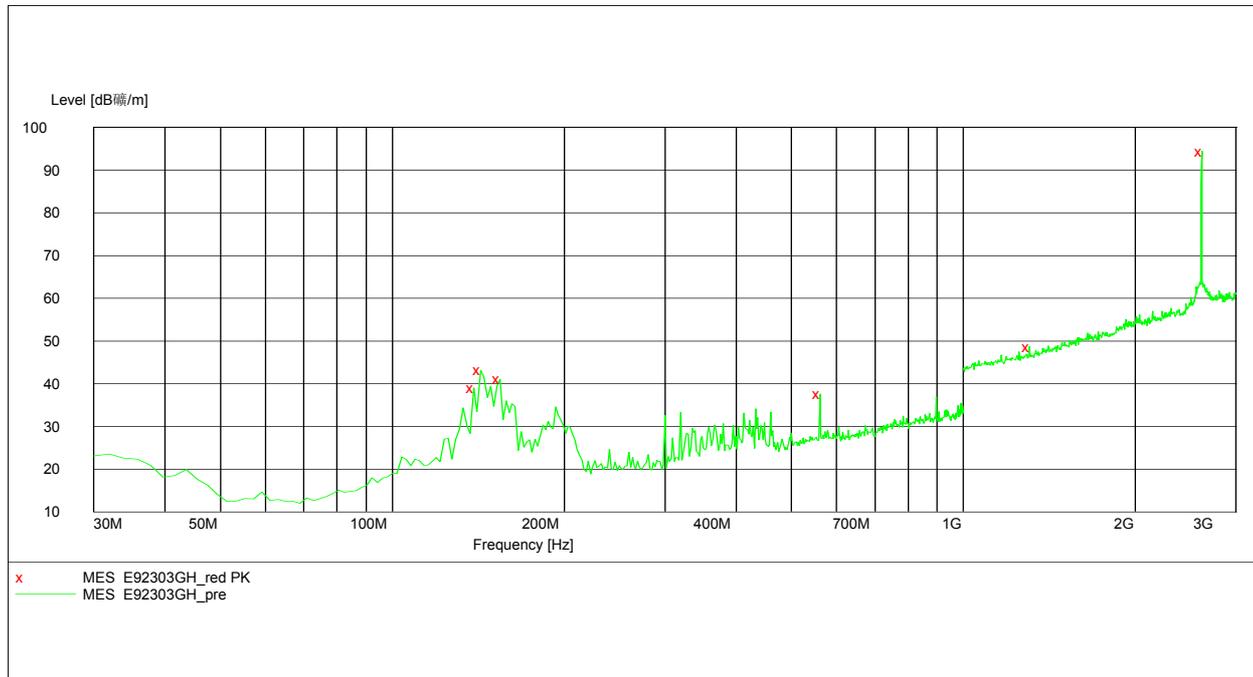
* the marked frequency in working block

Vertical 2498.5MHZ(3GHz to 20GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
4074.1483	41.43	-64.66	5.4	7.95	-64.26	-13	51.26
5565.13026	45.43	-61.2	6.4	9.05	-60.7	-13	47.7
6647.29459	48.62	-59.55	7.1	9.25	-59.55	-13	46.55
10517.0341	51.21	-57.02	9.1	11.75	-56.52	-13	43.52
14555.1102	55.93	-55.53	11	9.15	-59.53	-13	46.53
20000	67.67	-43.47	12.2	6.45	-51.37	-13	38.37

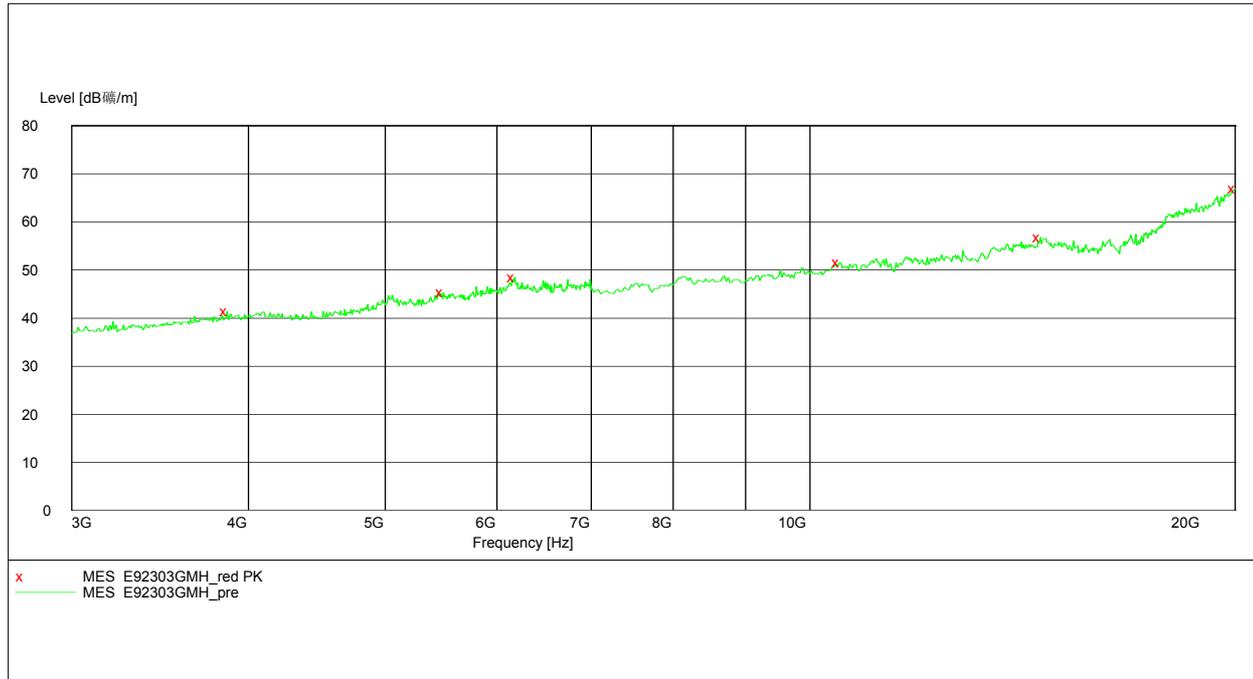
Horizontal 2593MHZ(30MHz to 3GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
138.857715	39.01	-53.03	1	-8.42	-64.6	-13	51.6
142.745491	43.16	-48.88	1	-7.29	-59.32	-13	46.32
154.408818	41.1	-50.94	1	-5.7	-59.79	-13	46.79
560.681363	37.63	-59.14	2	-1.46	-64.75	-13	51.75
1304.60922	48.68	-57.47	3	4.25	-58.37	-13	45.37
* 2597.23046	94.39	-10.83	4.3	7.95	-9.33	--	--

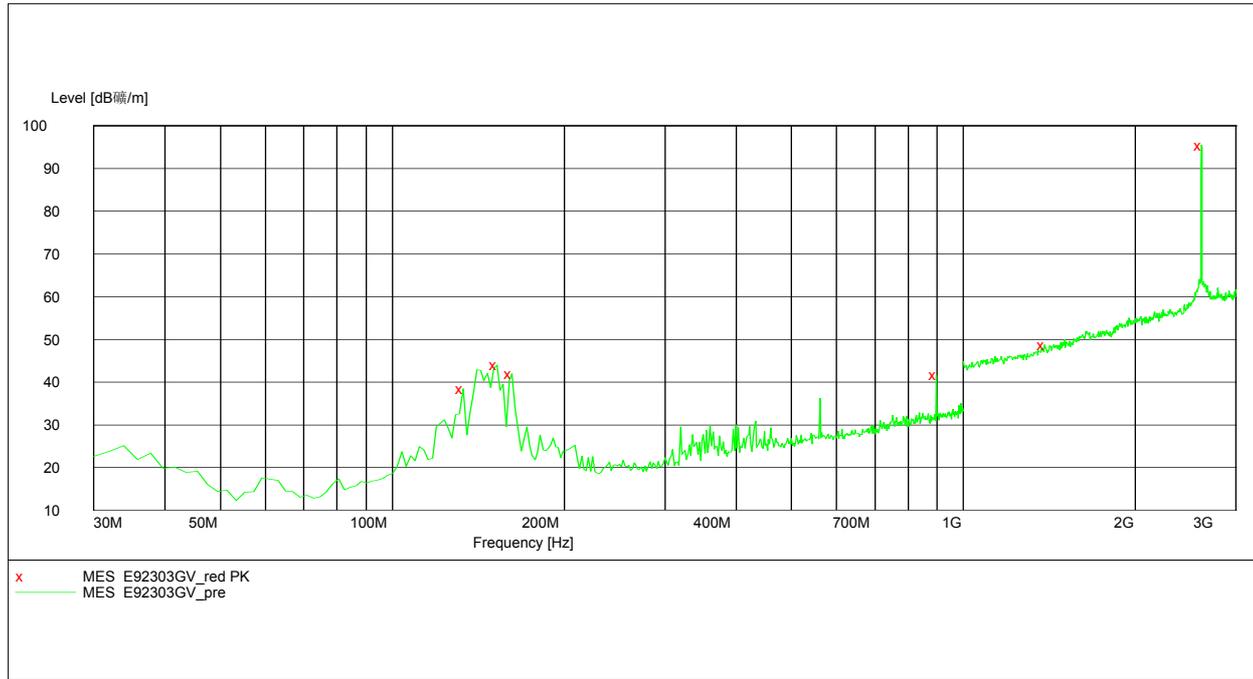
* the frequency is in working block

Horizontal 2593MHZ(3GHz to 20GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
3865.73146	41.43	-60.13	5.2	7.75	-59.73	-13	46.73
5501.002	45.32	-55.58	6.4	9.05	-55.08	-13	42.08
6174.3487	48.5	-54.89	6.9	9.05	-54.89	-13	41.89
10490.982	51.55	-57.39	9.1	11.35	-57.29	-13	44.29
14555.1102	56.82	-51.53	11	9.15	-55.53	-13	42.53
20000	66.89	-38.33	12.2	6.45	-46.23	-13	33.23

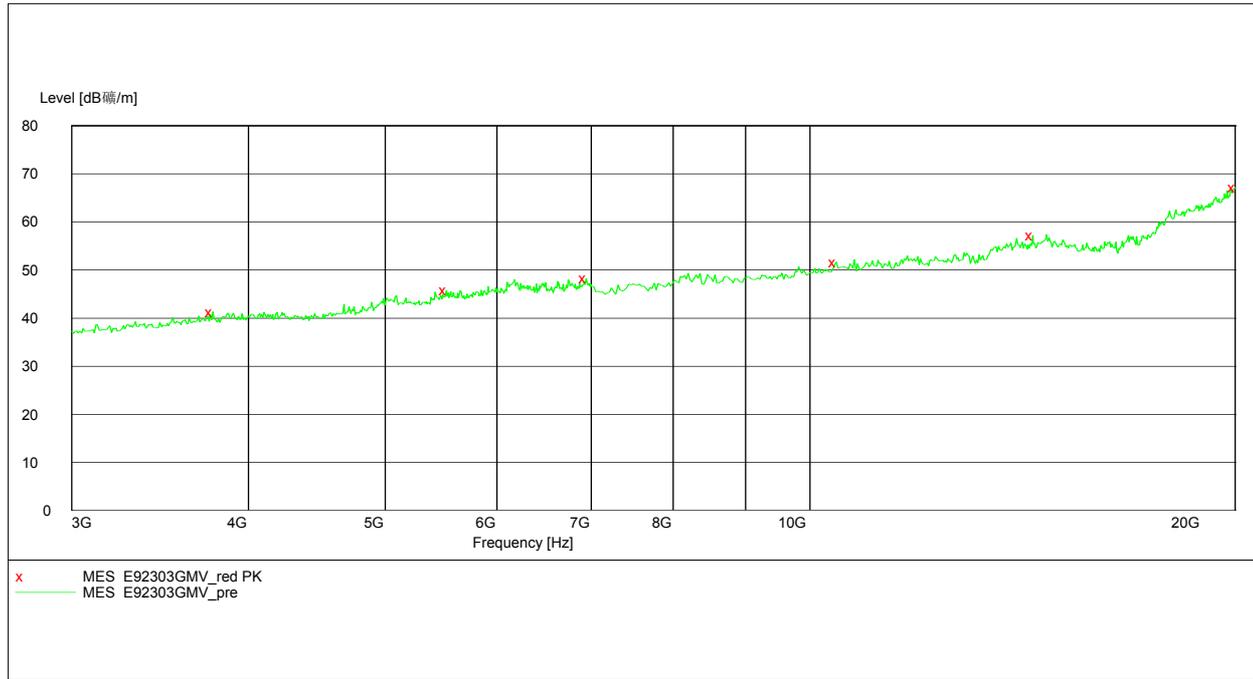
Vertical 2593MHZ(30MHz to 3GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
133.026052	38.42	-47.38	0.8	-9.59	-59.92	-13	46.92
152.46493	44.02	-41.93	1	-5.7	-50.78	-13	37.78
162.184369	42	-50.23	1.1	-3.84	-57.32	-13	44.32
896.973948	41.64	-55.55	2.5	-1.56	-61.76	-13	48.76
1388.77756	48.78	-55.01	3.1	4.25	-56.01	-13	43.01
*2594.22245	95.46	-12.07	4.3	7.95	-10.57	--	--

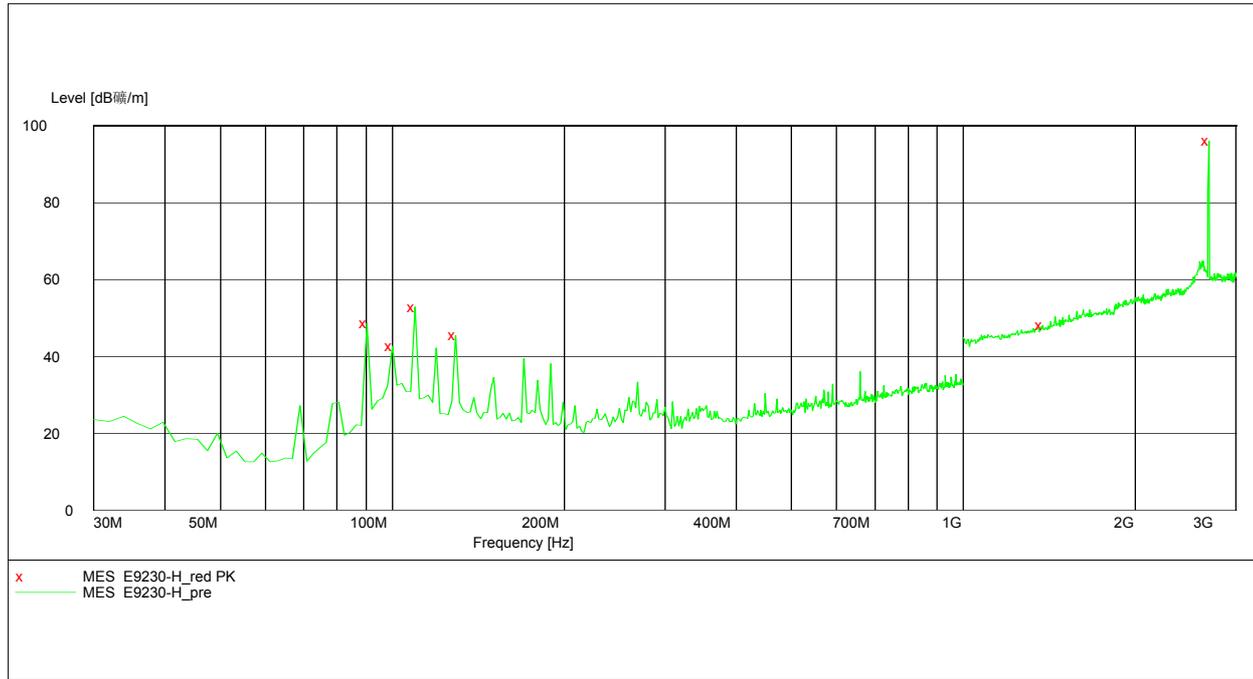
* the marked frequency is in working block

Vertical 2593MHZ(3GHz to 20GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
3777.55511	41.3	-66.71	5.2	7.75	-66.31	-13	53.31
5525.0501	45.71	-60.92	6.4	9.05	-60.42	-13	47.42
6943.88778	48.2	-59.97	7.3	9.25	-60.17	-13	47.17
10438.8778	51.65	-56.58	9.1	11.35	-56.48	-13	43.48
14372.7455	57.18	-52.34	10.8	9.65	-55.64	-13	42.64
20000	67.21	-43.93	12.2	6.45	-51.83	-13	38.83

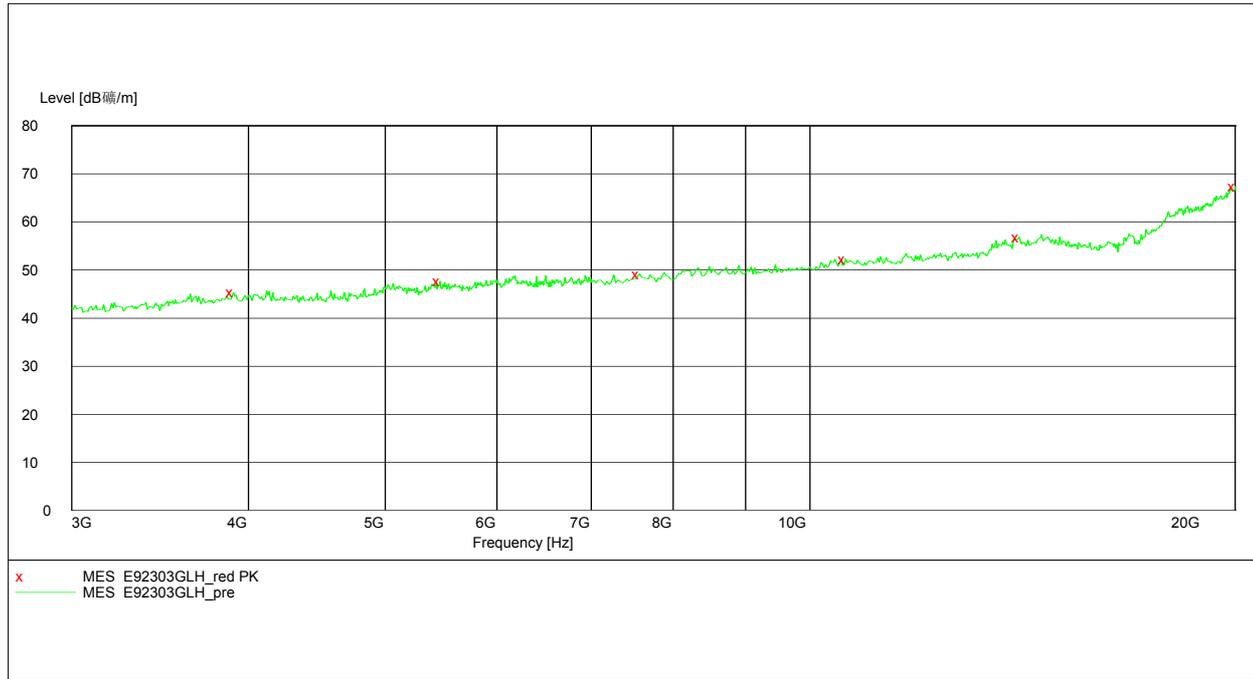
Horizontal 2687.5MHZ(30MHz to 3GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
90.260521	48.63	-30.72	0.8	-17.82	-51.49	-13	38.49
99.97996	42.74	-40.36	0.8	-16.61	-59.92	-13	46.92
109.699399	52.91	-31.74	0.8	-14.5	-49.19	-13	36.19
129.138277	45.53	-40.63	0.8	-10.46	-54.04	-13	41.04
1376.75351	48.08	-58.02	3.1	4.25	-59.02	-13	46.02
*2691.38277	96.06	-8.68	4.4	7.95	-7.28	--	--

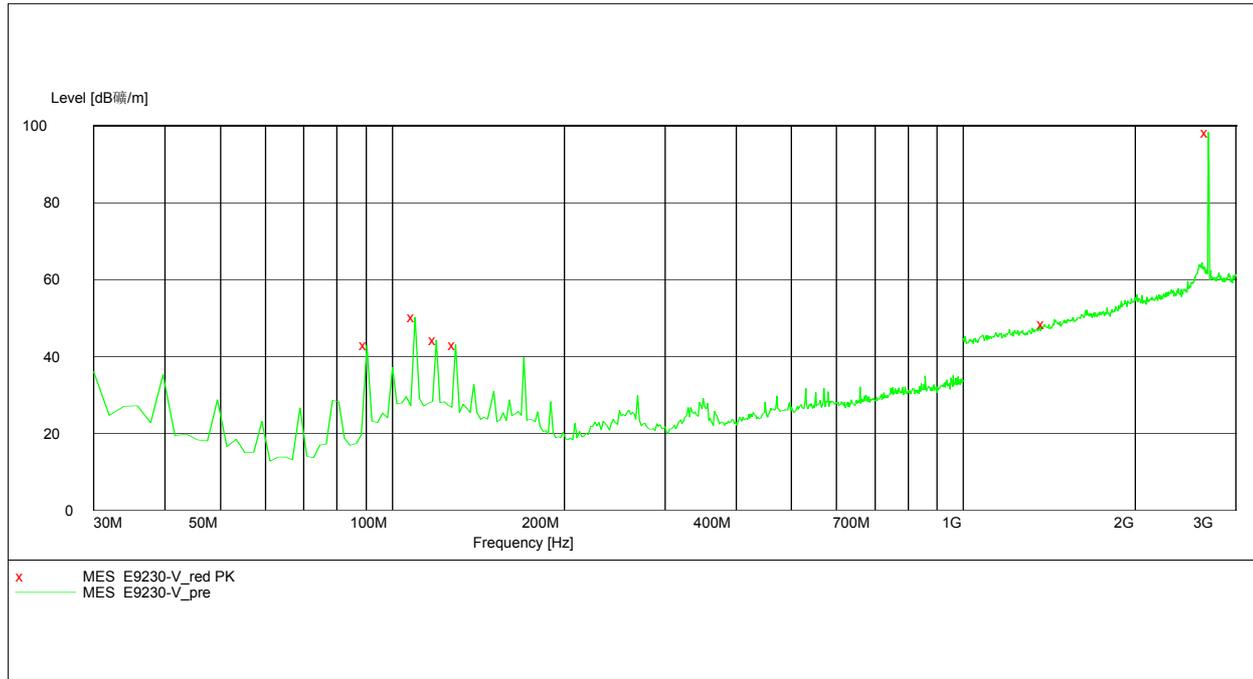
* the marked frequency is in working block

Horizontal 2687.5MHZ(3GHz to 20GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
3905.81162	45.31	-58.55	5.2	7.75	-58.15	-13	45.15
5468.93788	47.67	-53.23	6.4	8.55	-53.23	-13	40.23
7573.14629	49.22	-59.41	7.8	9.25	-60.11	-13	47.11
10595.1904	52.27	-56.83	9.1	11.75	-56.33	-13	43.33
14060.1202	56.86	-48.46	10.8	9.65	-51.76	-13	38.76
20000	67.39	-37.35	12.2	6.45	-45.25	-13	32.25

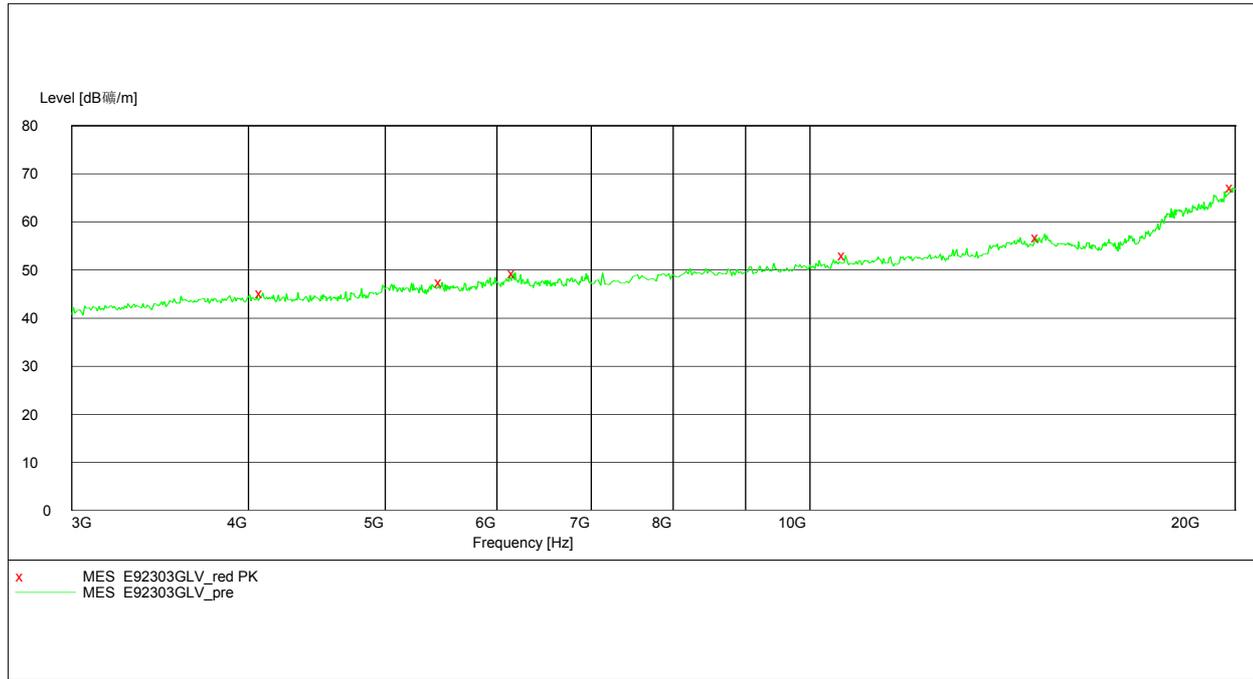
Vertical 2687.5MHZ(30MHz to 3GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
90.260521	42.98	-36.17	0.8	-17.82	-56.94	-13	43.94
109.699399	50.18	-30.68	0.8	-14.5	-48.13	-13	35.13
119.418838	44.3	-40.62	0.8	-12.48	-56.05	-13	43.05
129.138277	43.1	-44.76	0.8	-10.46	-58.17	-13	45.17
1388.77756	48.33	-55.46	3.1	4.25	-56.46	-13	43.46
*2683.36673	98.34	-9.19	4.4	7.95	-7.79	---	---

* the marked frequency is in working block

Vertical 2687.5MHZ(3GHz to 20GHz)



Frequency MHz	Field dBuV/m	Output power of the signal generator (dBm)	Cable loss (dB)	Isotropic gain of the substitution antenna (dBi)	Measurement result (dBm)	Limit (dBm)	Margin (dB)
4098.19639	45.21	-60.88	5.4	7.95	-60.48	-13	47.48
5484.96994	47.48	-59.15	6.4	8.55	-59.15	-13	46.15
6182.36473	49.39	-59.66	6.9	9.05	-59.66	-13	46.66
10595.1904	53.02	-55.21	9.1	11.75	-54.71	-13	41.71
14529.0581	56.72	-56.53	11	9.15	-60.53	-13	47.53
19947.8958	67.14	-44	12.2	6.45	-51.9	-13	38.9

20GHz to 27GHz

Indicated		Table	Test Antenna		Substituted			Cable Loss dB	Absolute Level (dBm)	Limit (dBm)	Margin (dB)
Frequency (MHz)	Amp. (dBuV)	Angle Degree	Height (M)	Polar H/V	Frequency (MHz)	Level (dBm)	Antenna Gain Correction				
21133.26	44.46	332	2.0	V	21133.26	-32.3	11.4	3.84	-24.74	-13	11.74
22383.77	43.59	319	1.0	V	22383.77	-32.6	11.5	3.93	-25.03	-13	12.03
24793.50	42.28	117	1.5	V	24793.50	-33.4	11.9	4.29	-25.79	-13	12.79
26083.16	42.66	153	2.0	V	26083.16	-33.2	11.8	4.37	-25.77	-13	12.77
21029.05	44.06	135	1.0	H	21029.05	-33.1	11.2	3.82	-25.72	-13	12.72
22331.66	43.44	216	1.5	H	22331.66	-33.8	11.5	3.93	-26.23	-13	13.23
24832.65	42.56	117	2.0	H	24832.65	-34.4	11.9	4.30	-26.80	-13	13.80
26109.21	42.41	214	1.5	H	26109.21	-34.6	11.7	4.39	-27.29	-13	14.29