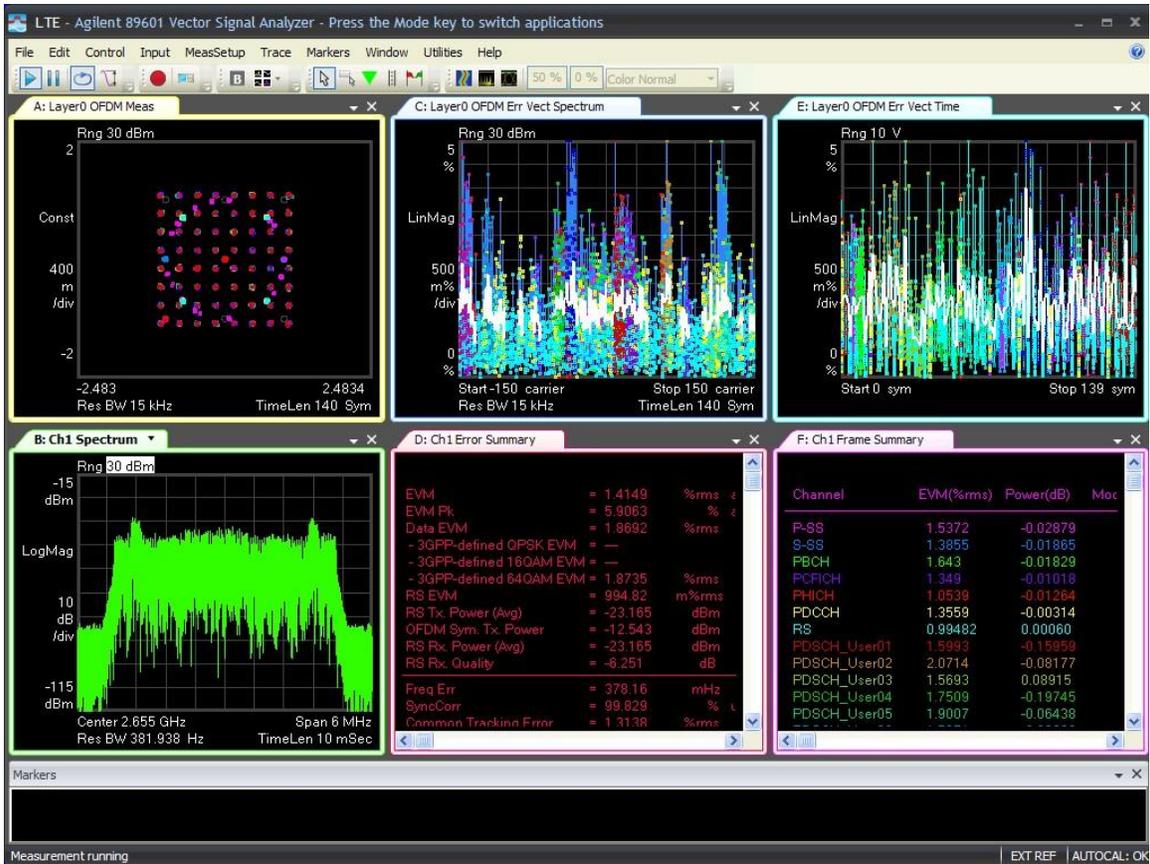
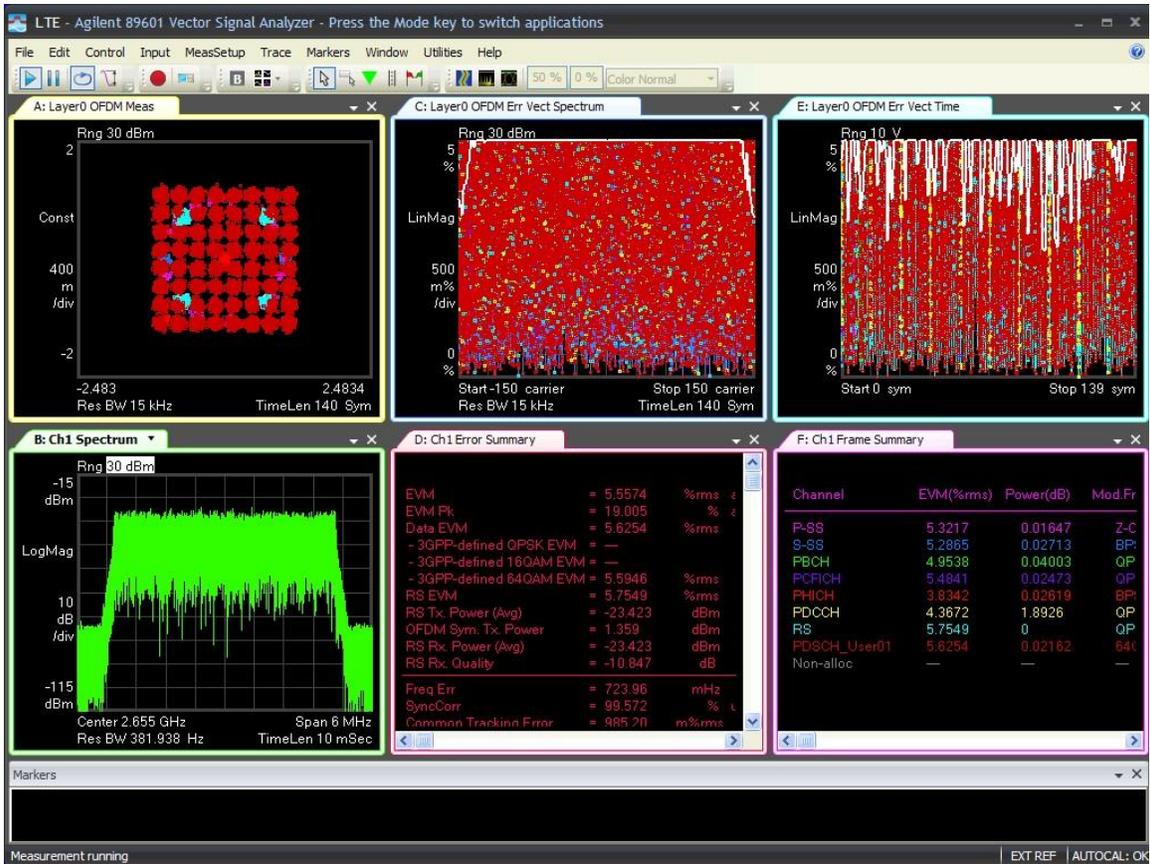


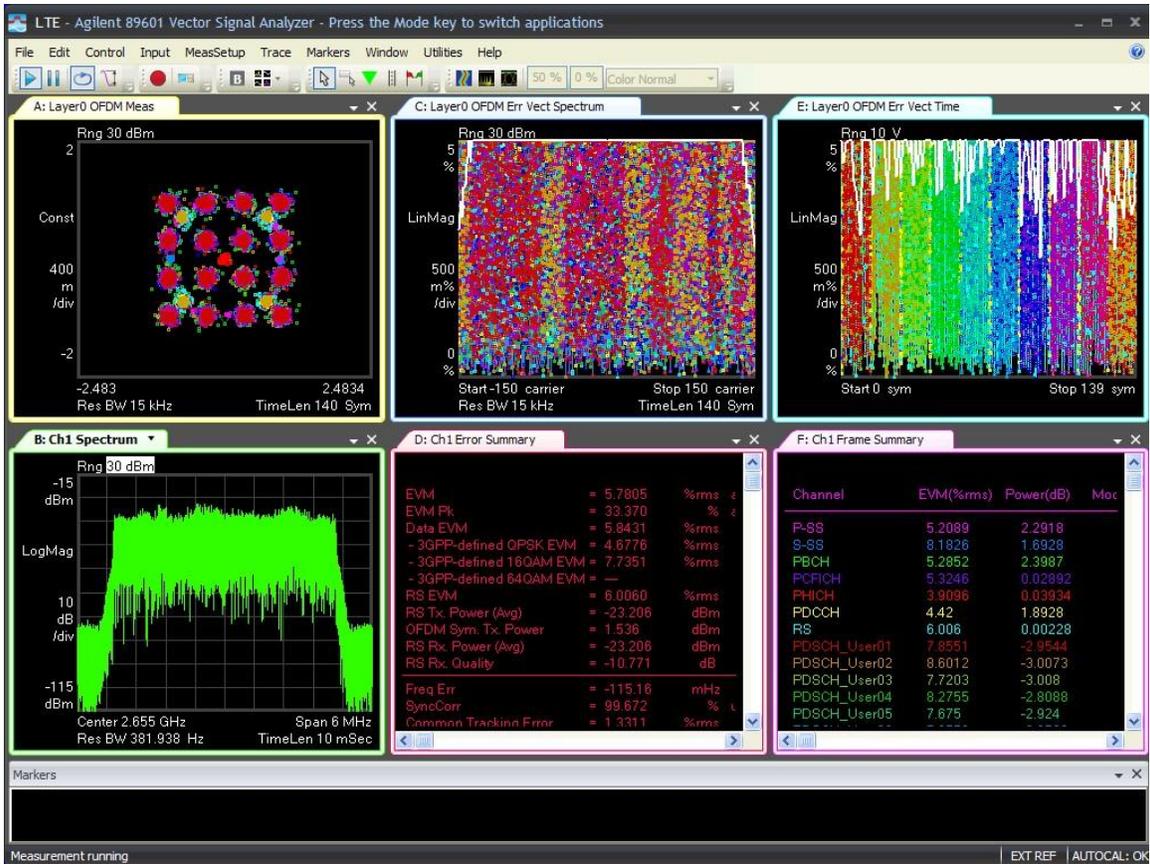
5M-Port 1 -2655MHz-TM2.0



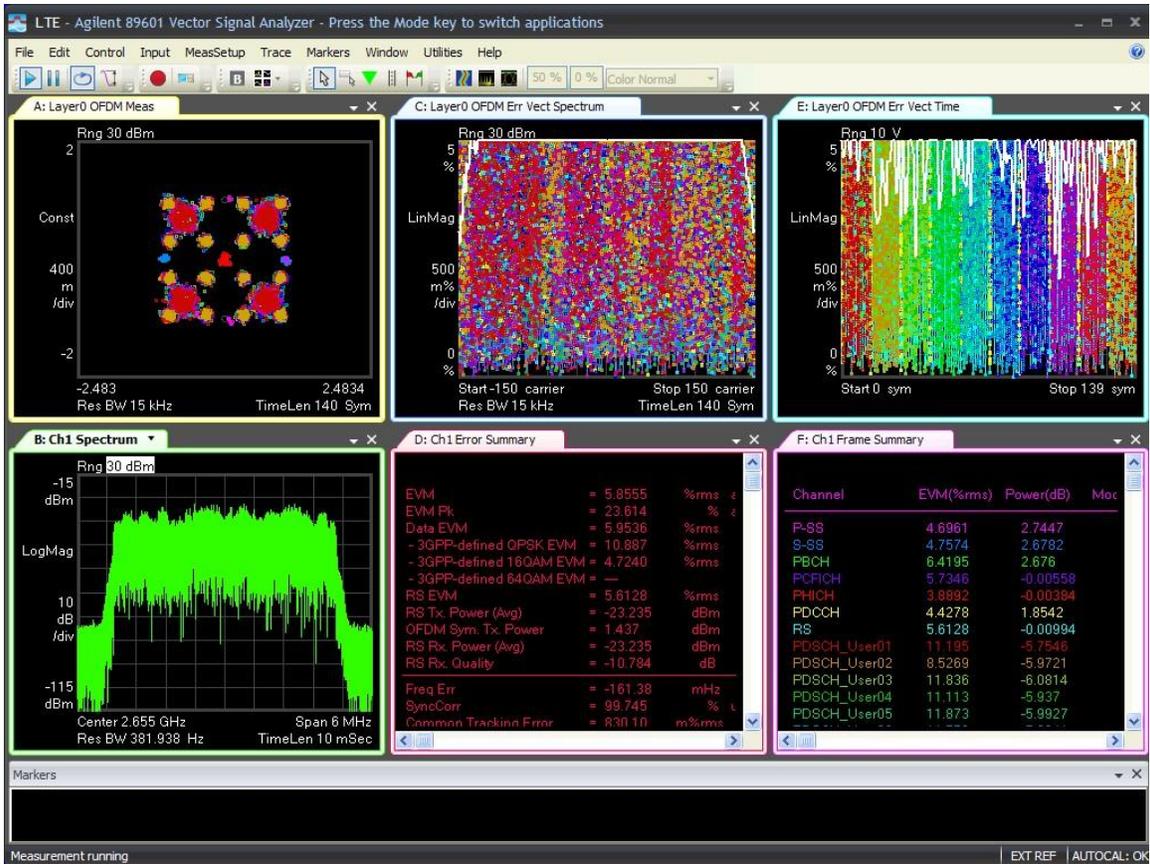
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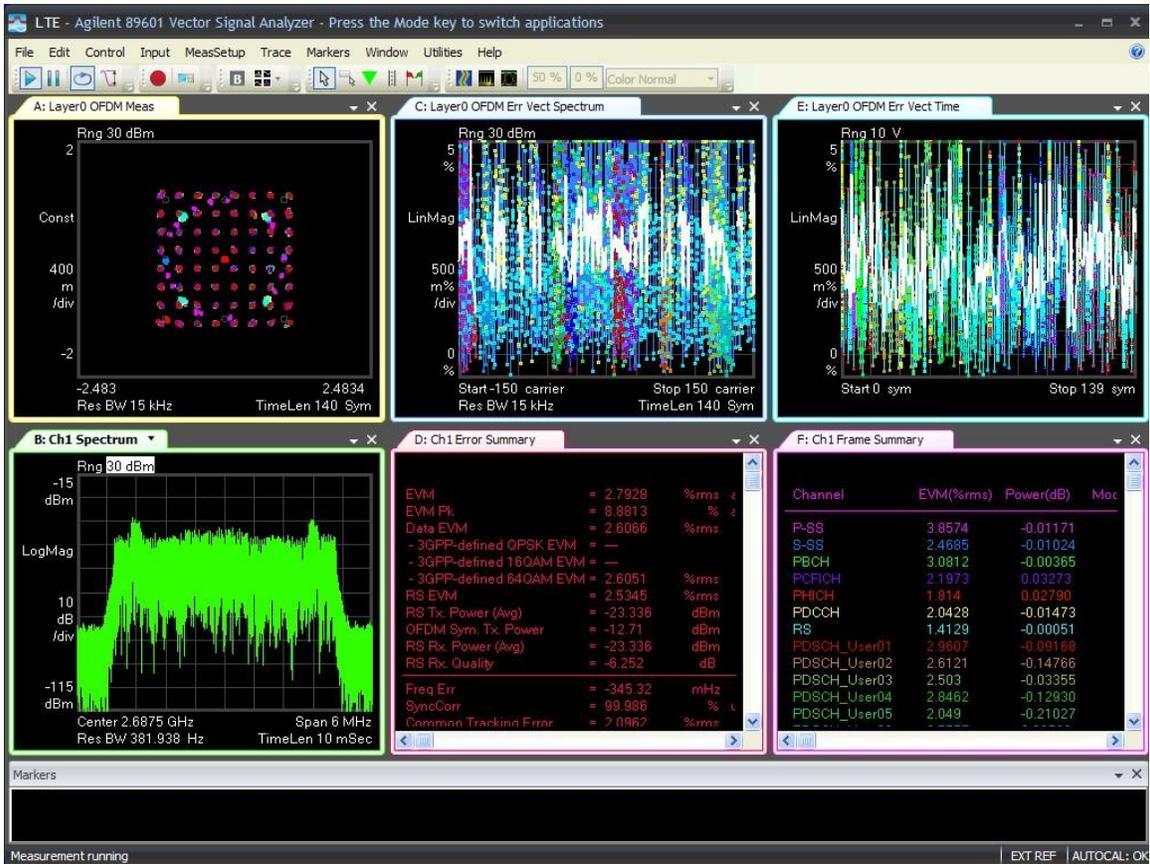
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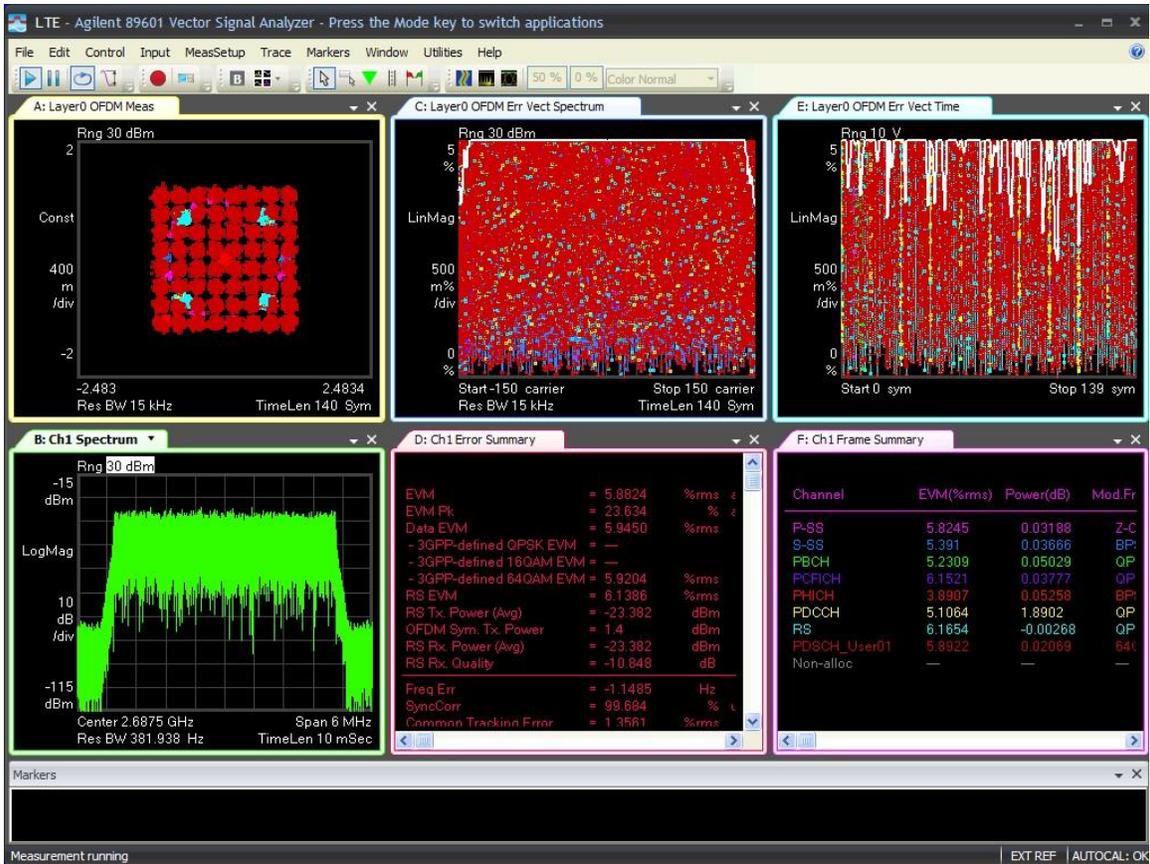
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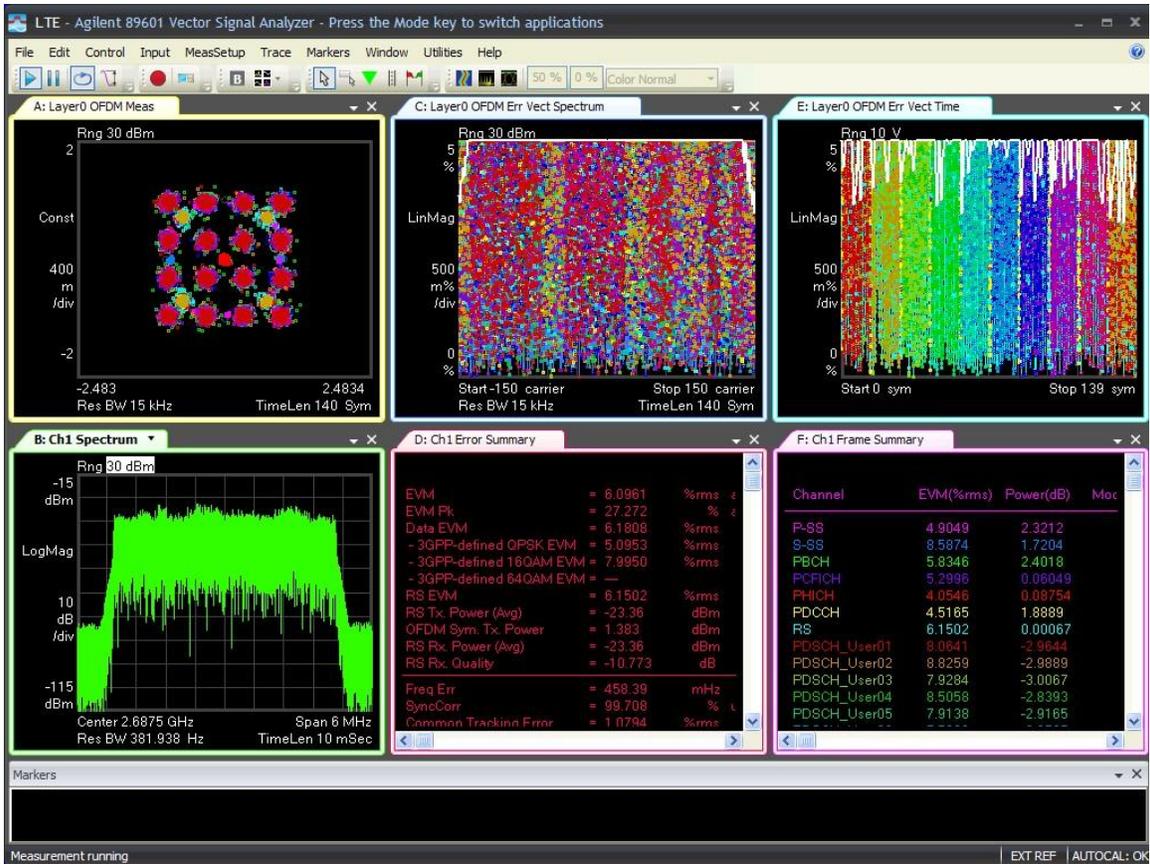
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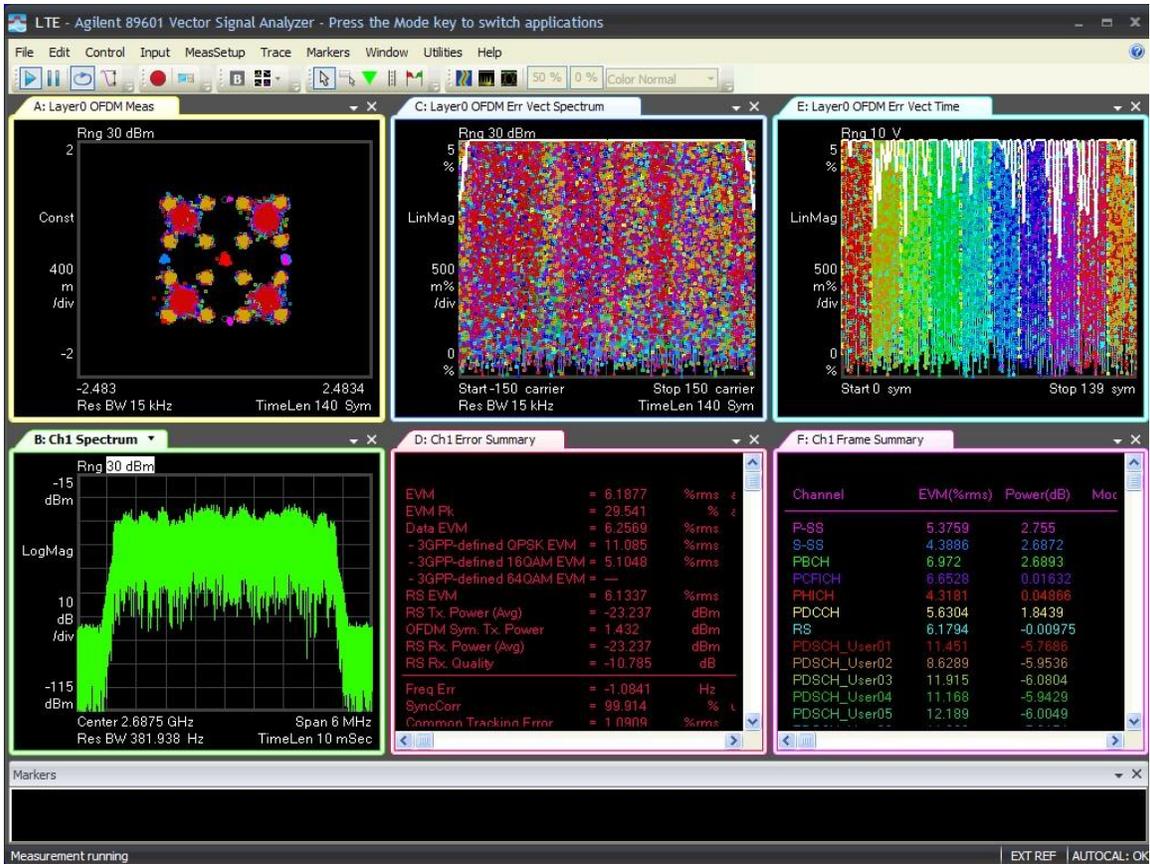
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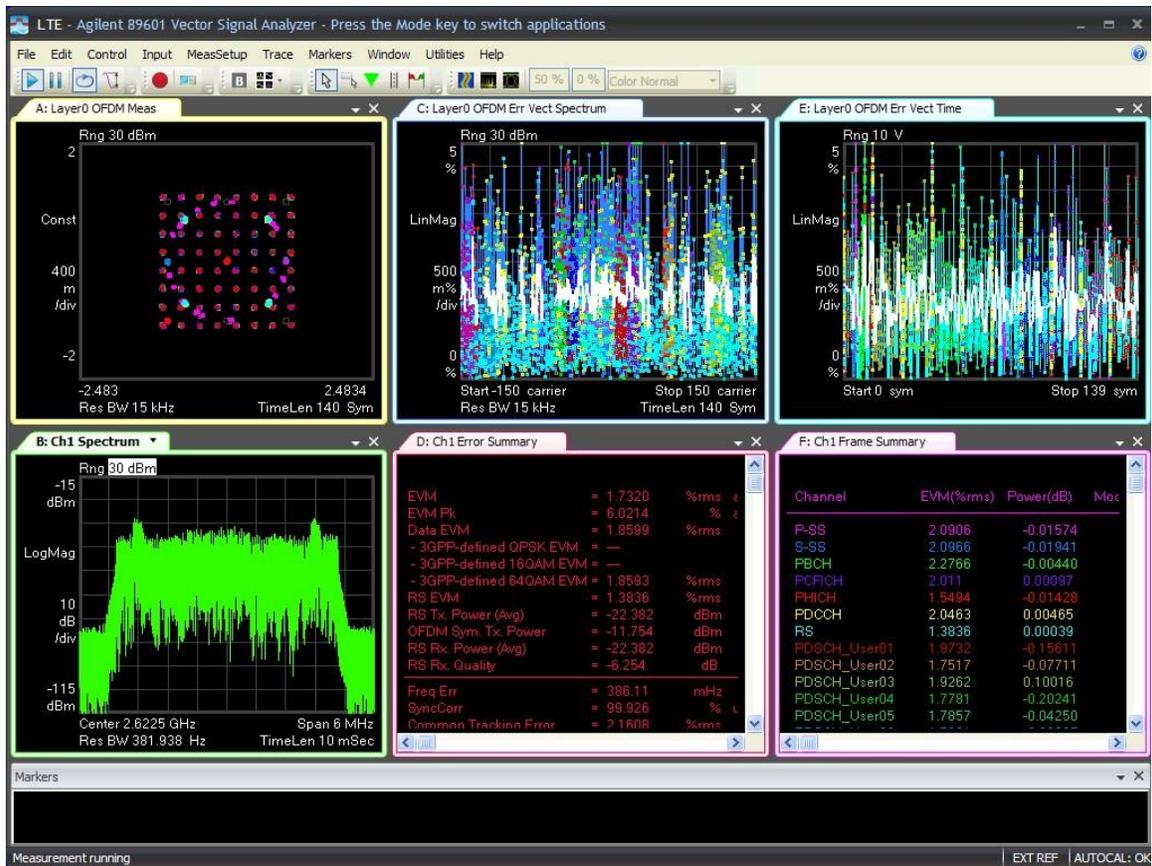
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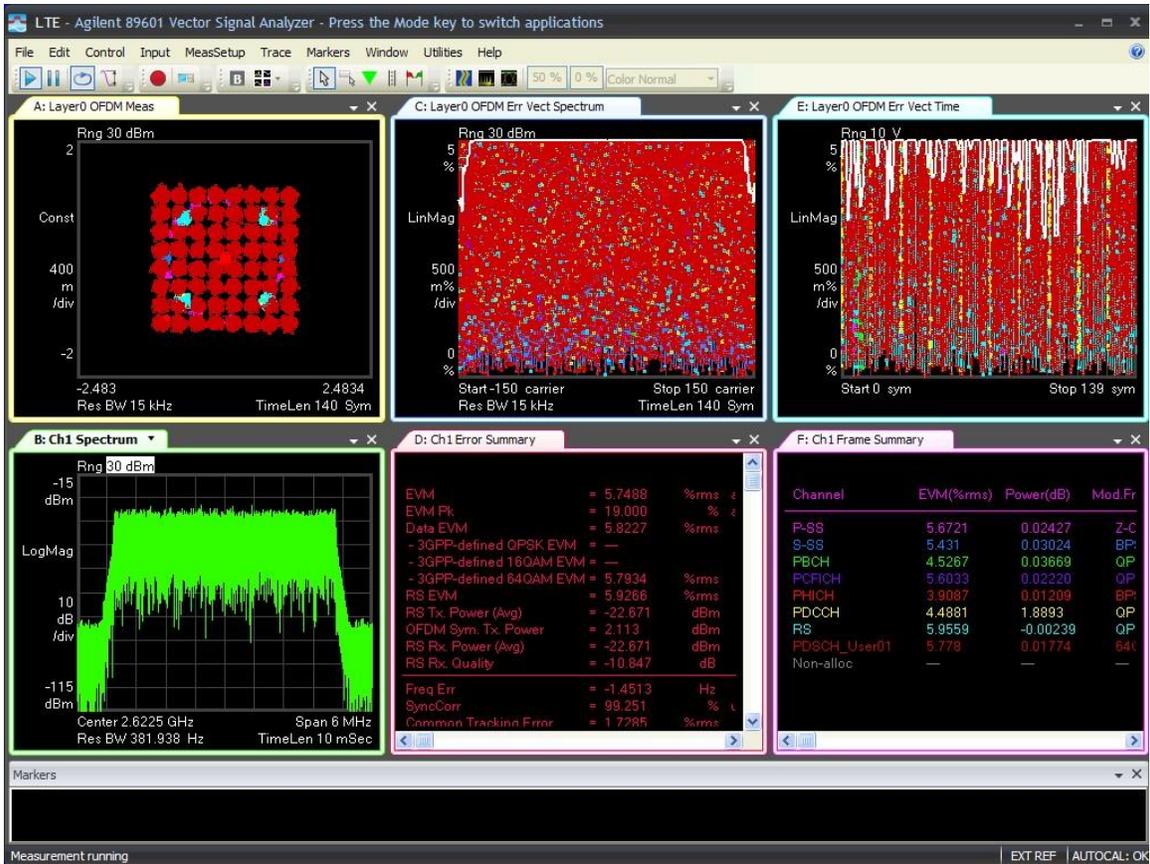
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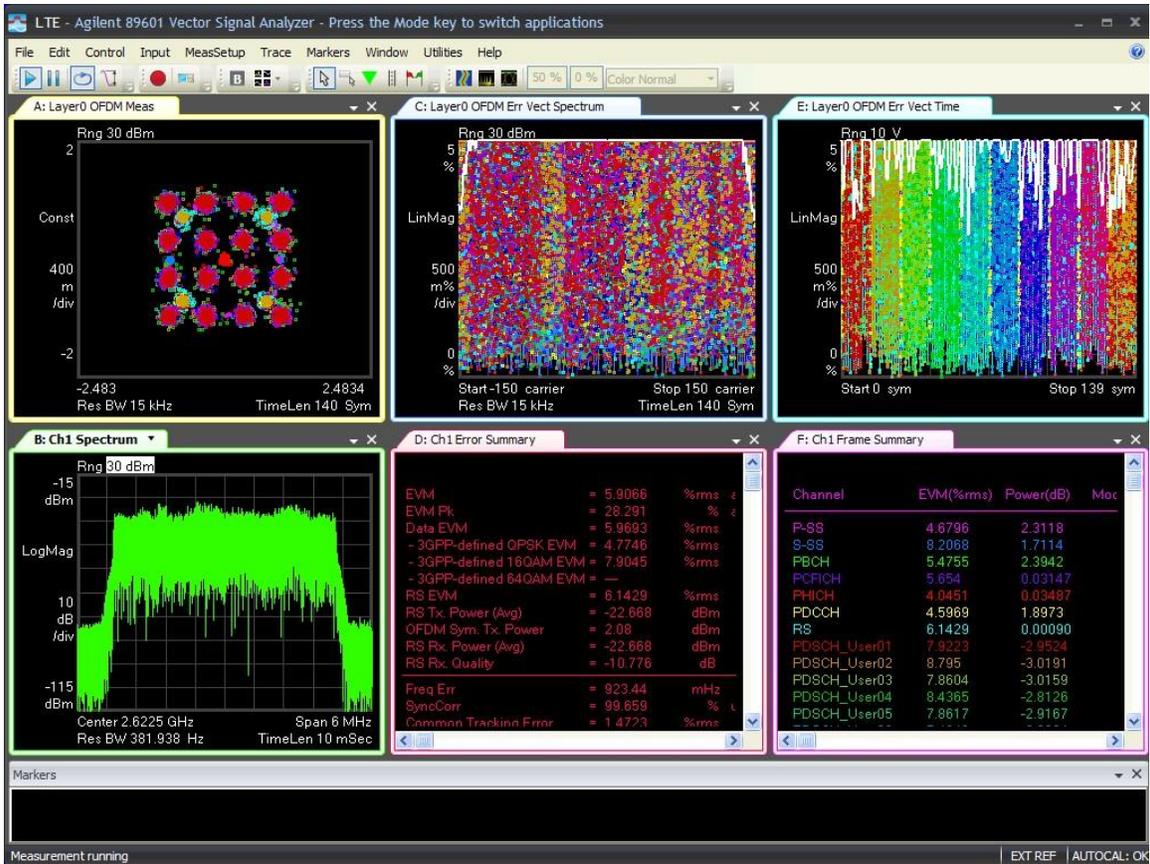
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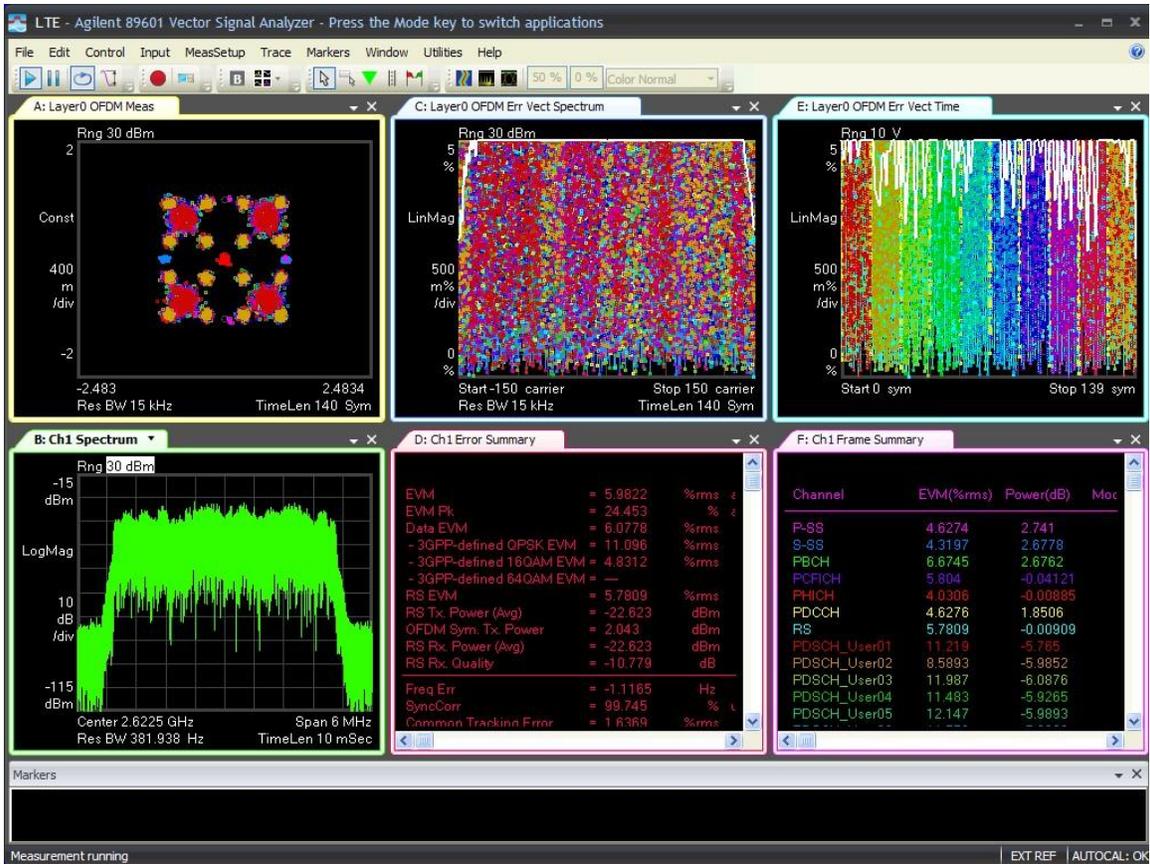
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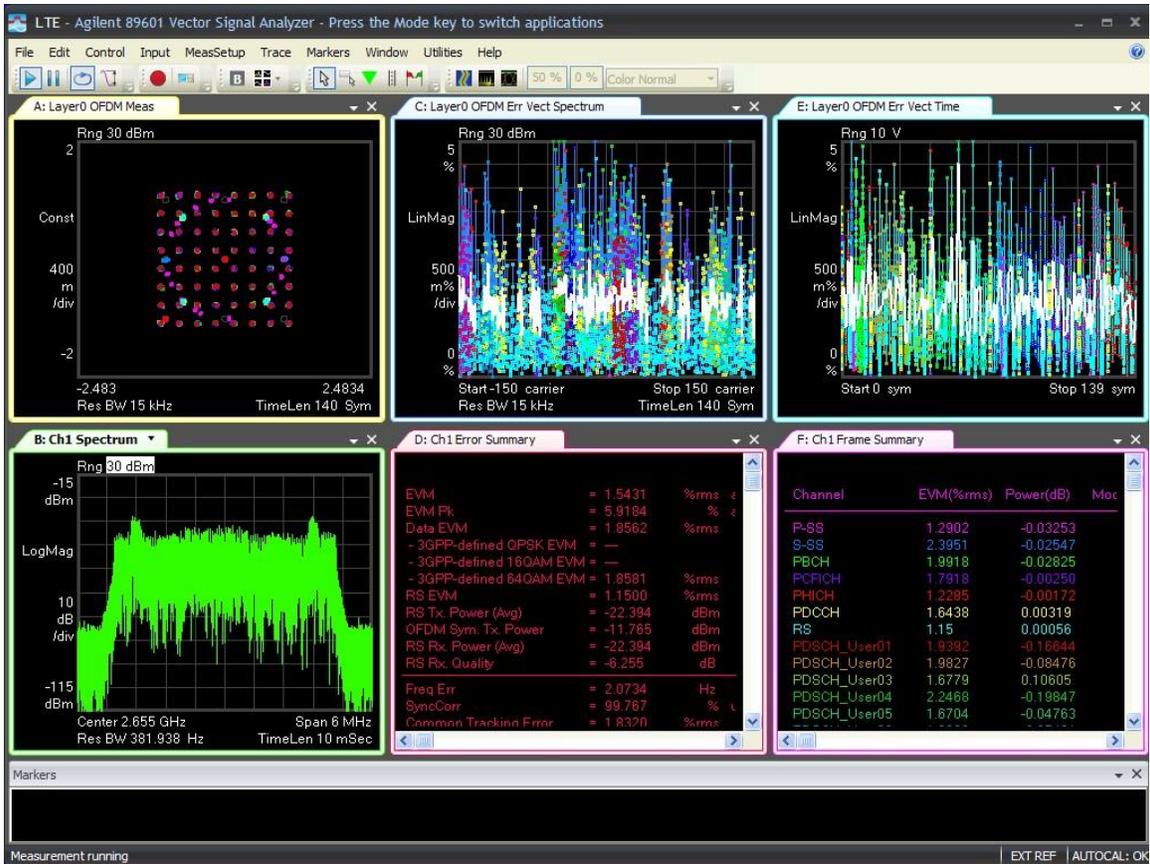
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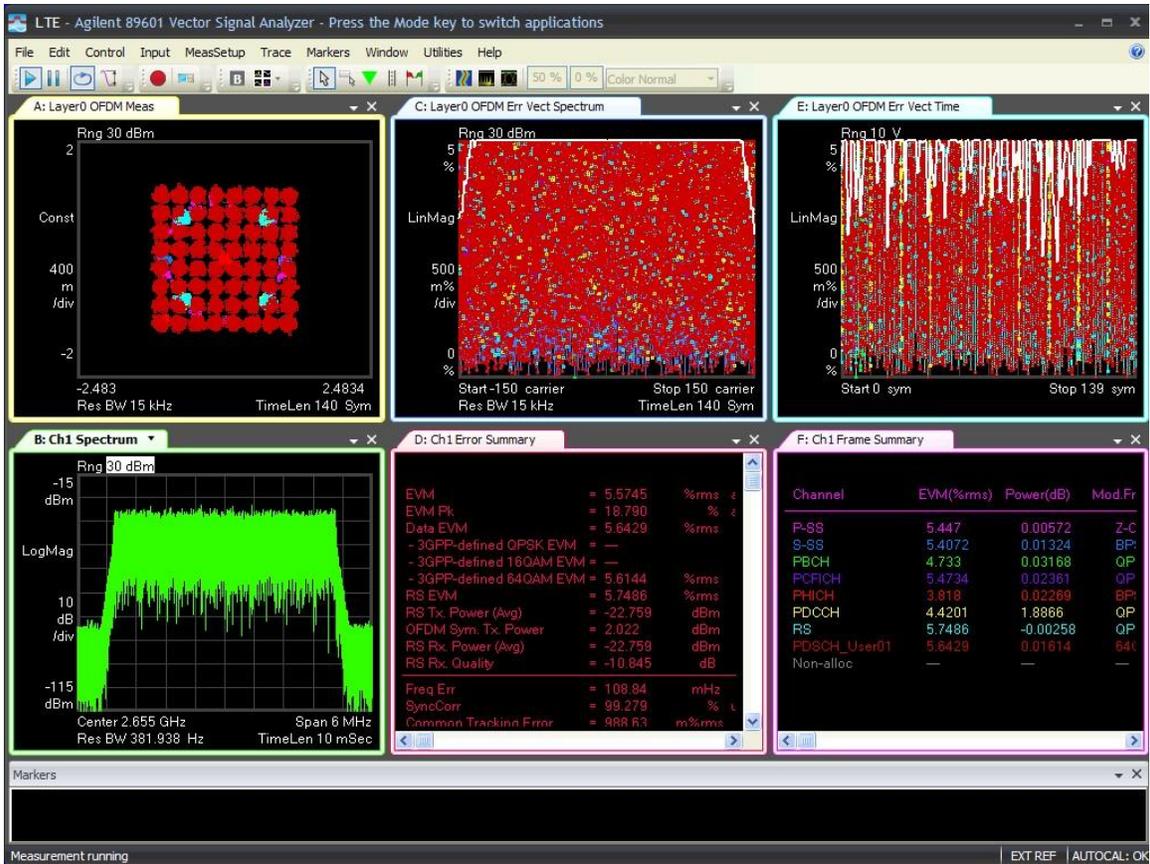
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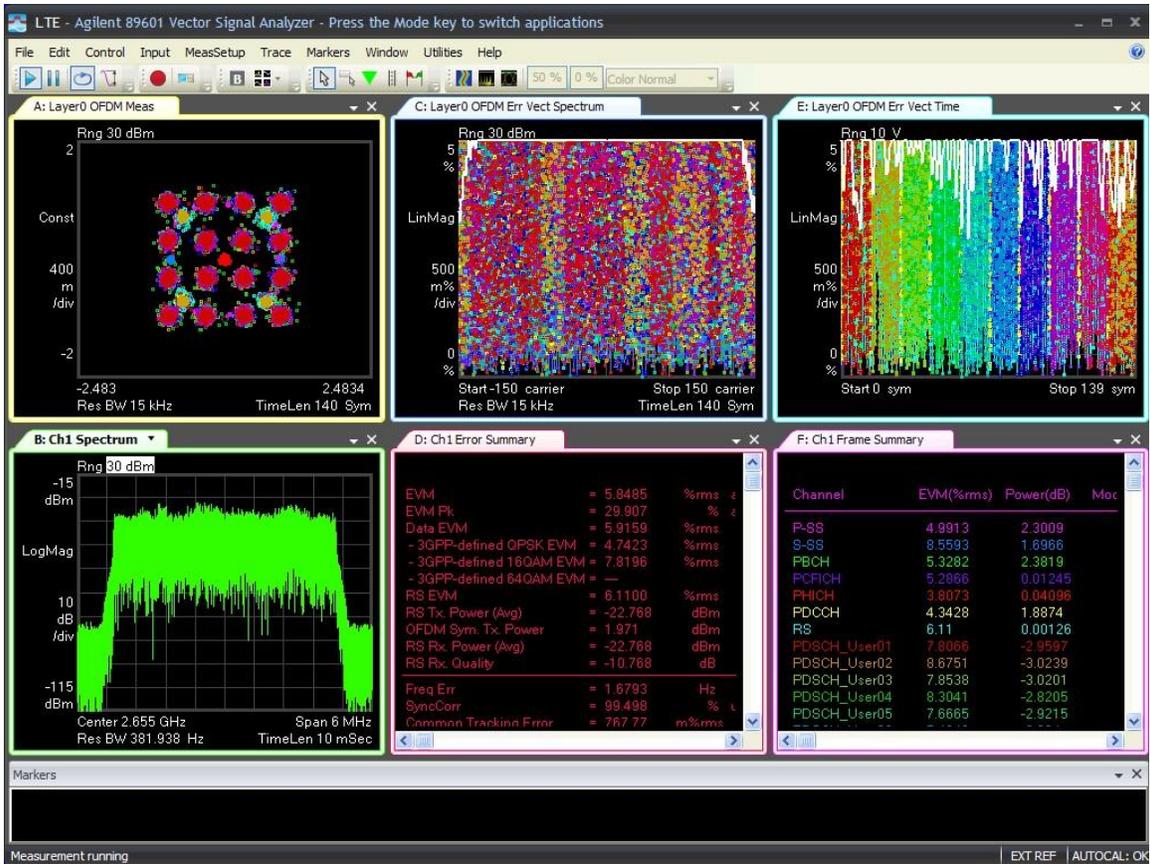
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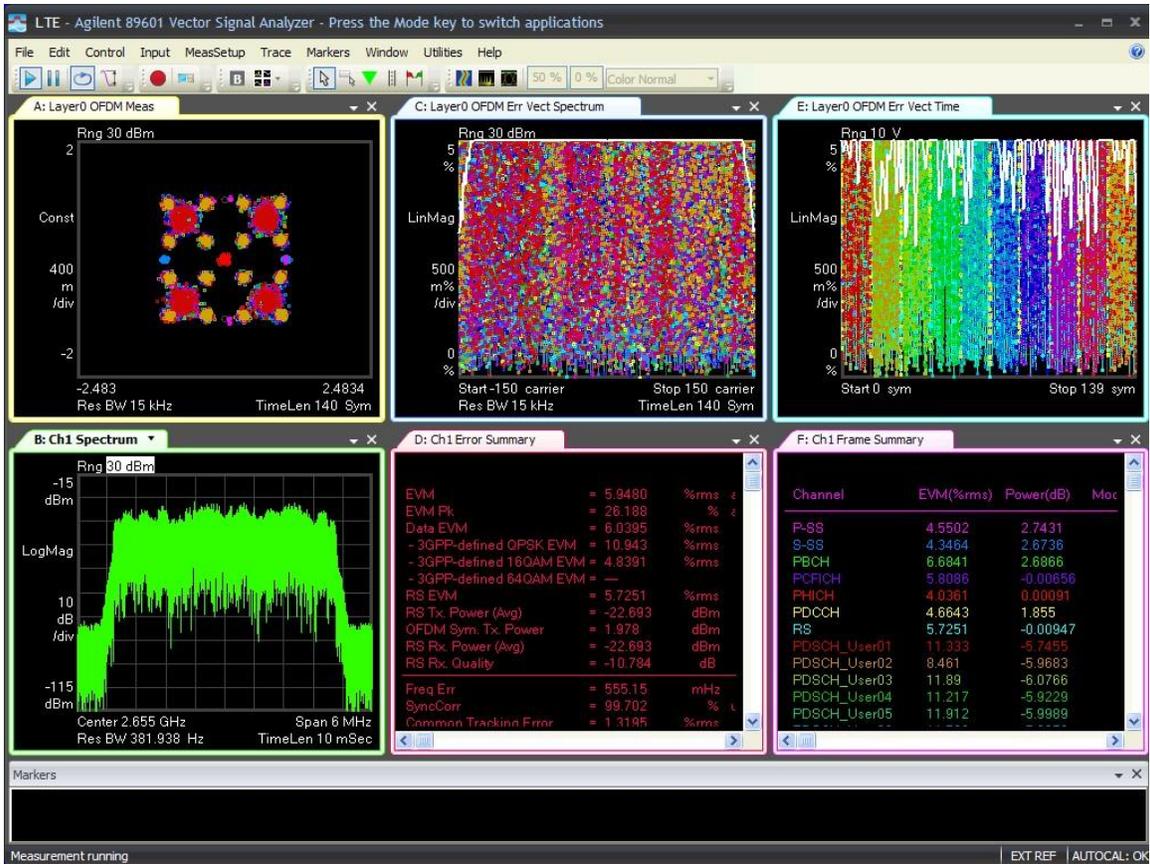
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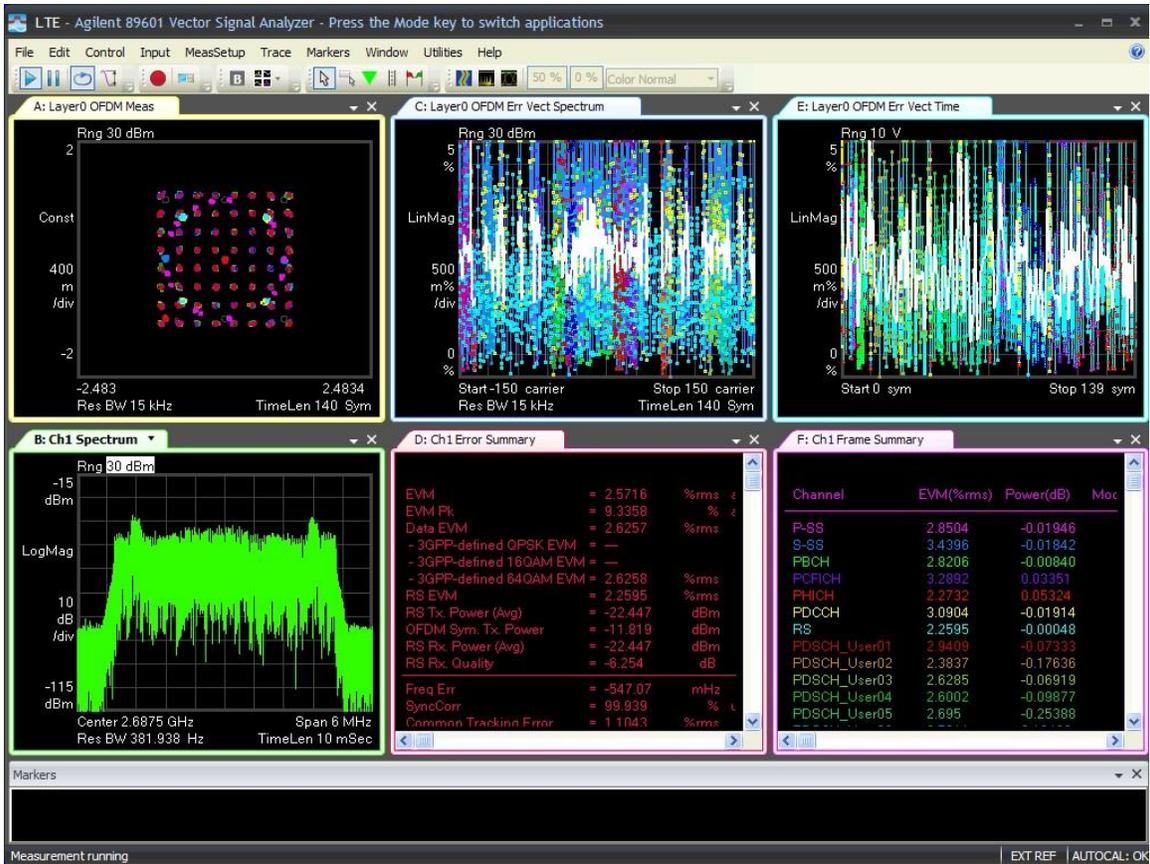
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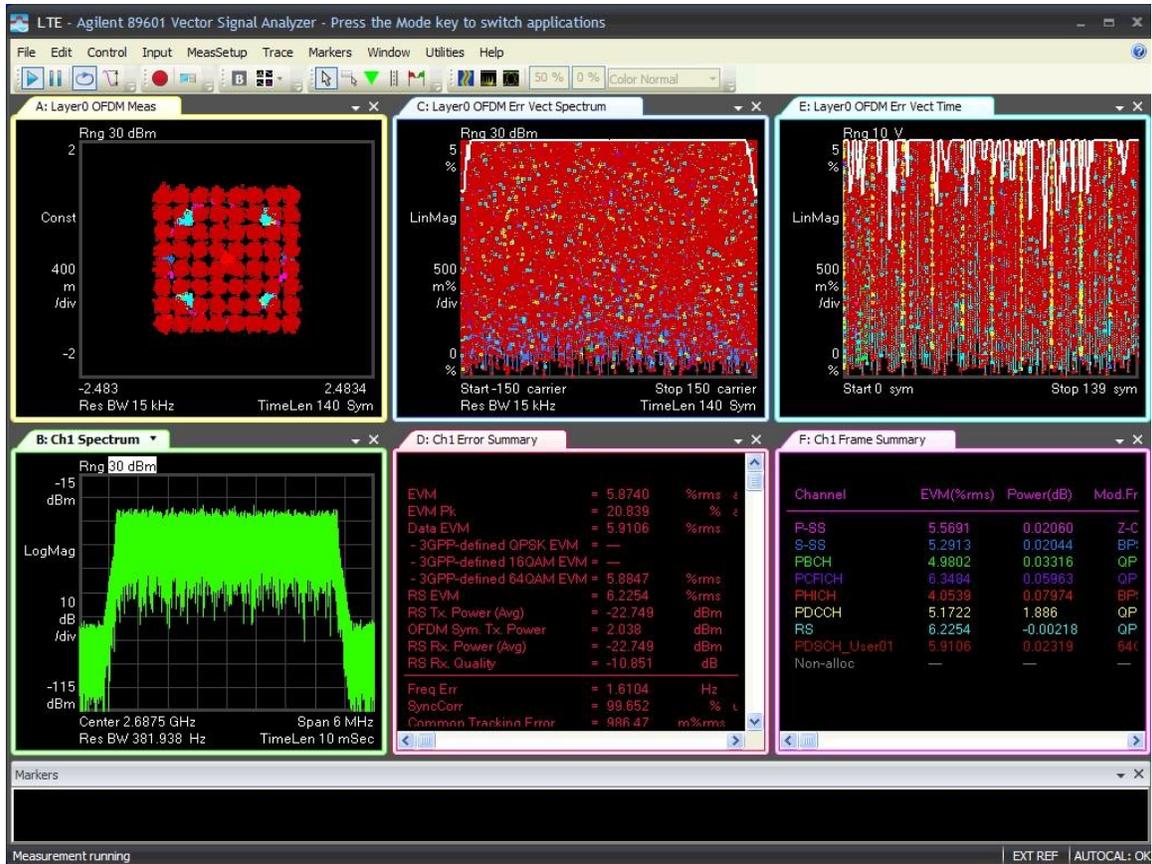
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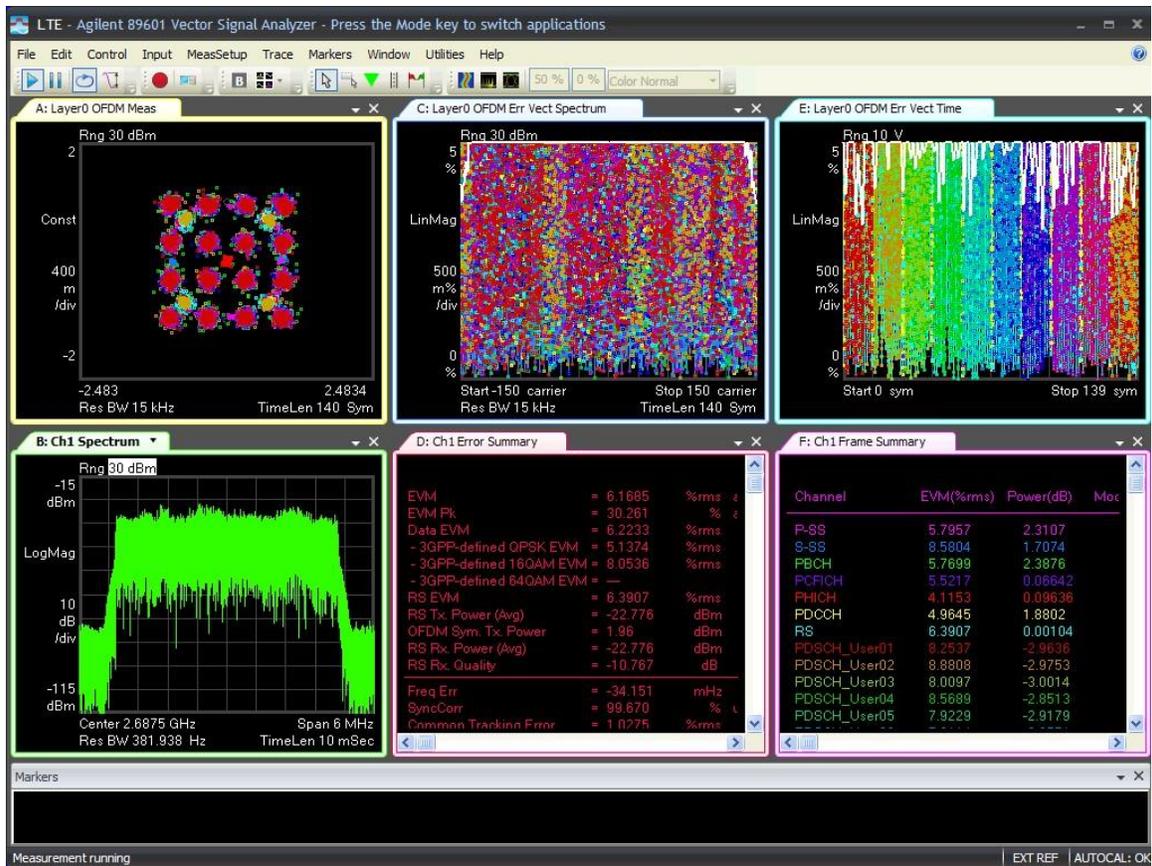
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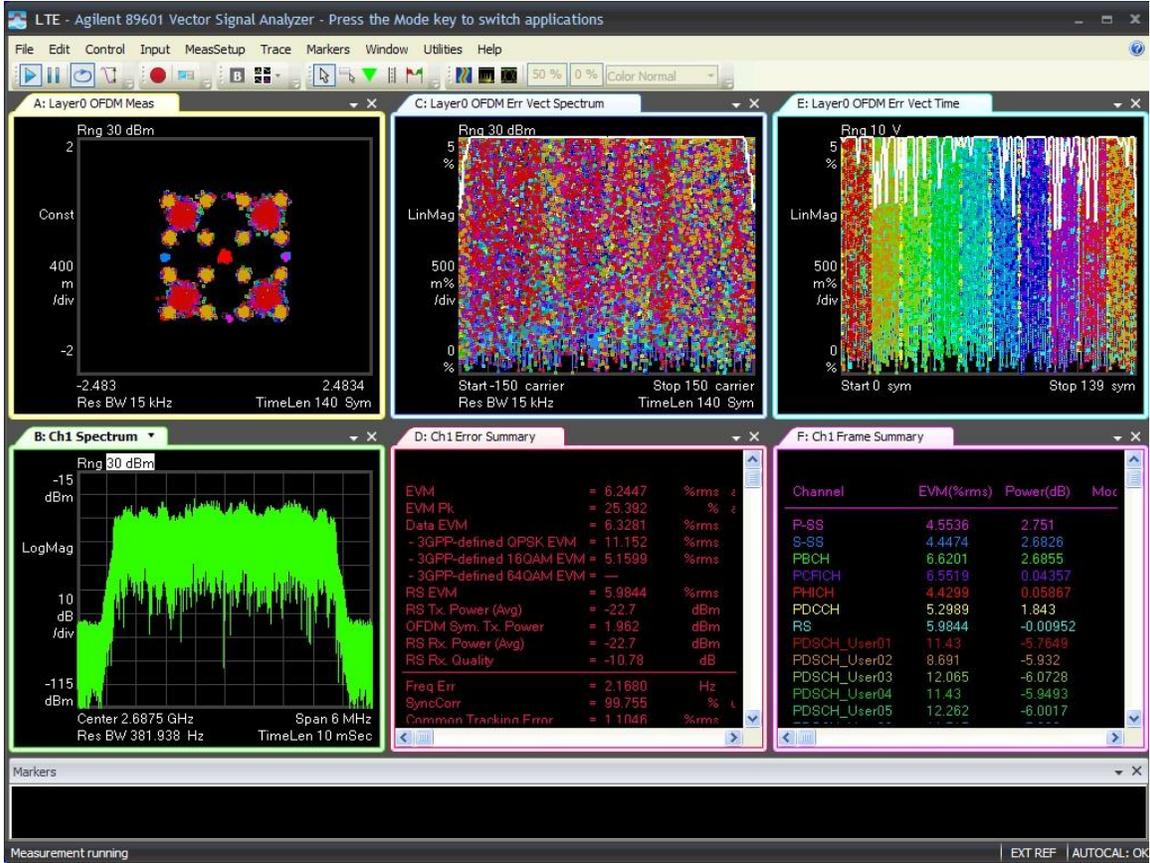
5M-Port 2 -2687.5MHz-TM3.1



5M-Port 2 -2687.5MHz-TM3.2



5M-Port 2 -2687.5MHz-TM3.3



## 8 SPURIOUS RADIATED EMISSIONS

**Applicable Standard:** FCC CFR 47 §2.1053

### Test Equipment List and Details

Manufacturer	Equipment	Model	Serial Number	Last Cal.	Cal. Interval
R&S	SIGNAL GENERATOR	SMR20	A00017351		1 year
Albatross	Anechoic Chamber	3m Site	A00017354		1 year
R&S	EMI Test Receiver	ESIB26	100058		1 year
R&S	Ultra Breitband Antennas	HL562	100022		1 year
R&S	Double-Ridged	HF906	100032		1 year

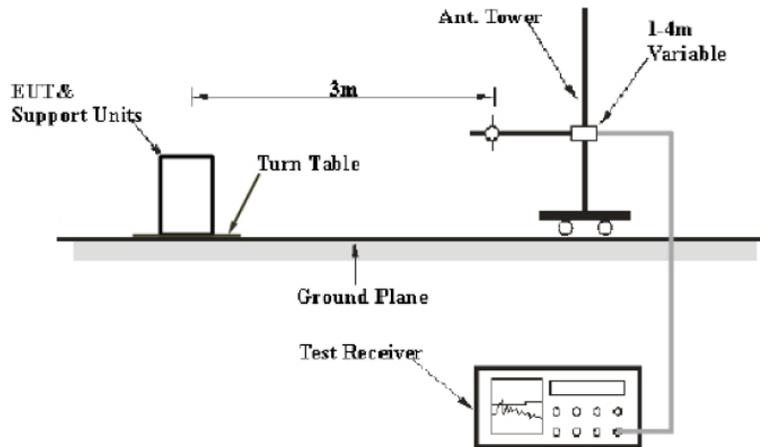
	Waveguide Horn Antenna			
R&S	Double-Ridged Waveguide Horn Antenna	HF906	100446	1 year
SCHWARZ-BECK	Biconical Antenna	VUBA9117	9117-122	1 year

**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. is 3.6dB.

**EUT Setup**



The radiated emission tests were performed in the 3-meter Chamber, using the setup accordance with the FCC part 2.1053. The specification used was the FCC 2.1053 limits.

**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 (TX pwr in Watts/0.001)-the absolute level

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

The resolution bandwidth of the spectrum analyzer was set at 1 percent as specified for

30MHz to 1GHz scanning, set at 1MHz for 1GHz to 20GHz scanning.

## Test Results Summary: PASS

### Environmental Conditions

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

### Test data

Frequency MHz	Field strength dBmV/m	Output power of the signal generator PS (dBm)	Cable loss C(dB)	Isotropic gain of the substitution antenna G (dBi)	Measurement result erp (dBm)	Limit erp(dBm)	Margin (dB)
31.943888	23.97	-33.11	0.3	-43.49	-79.05	-36	43.05
154.408818	30.42	-55.53	1	-5.7	-64.38	-36	28.38
587.895792	27.26	-68.73	2	-1.21	-74.09	-36	38.09
828.937876	37.53	-58.3	2.4	-1.11	-63.96	-36	27.96
1384.769539	45.71	-58.08	3.1	4.25	-59.08	-30	29.08
2651.302605	79.88	-27.65	4.3	7.95	-26.15	-30	-3.85

Radiation emission spurious below 3GHz

Frequency MHz	Field strength dBmV/m	Output power of the signal generator PS (dBm)	Cable loss C(dB)	Isotropic gain of the substitution antenna G (dBi)	Measurement result erp (dBm)	Limit erp(dBm)	Margin (dB)
3929.85972	40.02	-64.09	5.2	7.75	-63.69	-30	33.69
5300.6012	44.76	-58.63	6.2	8.55	-58.43	-30	28.43
5877.75551	41.65	-60.12	6.6	9.05	-59.82	-30	29.82
7783.56713	42.38	-66.25	7.8	9.25	-66.95	-30	36.95
9846.19239	48.12	-60.82	8.9	9.95	-61.92	-30	31.92
12646.2926	48.01	-61.61	9.9	12.15	-61.51	-30	31.51

Radiation emission spurious above 3GHz

## 9 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

**Applicable Standard:** FCC§2.1051, §27.53

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified.

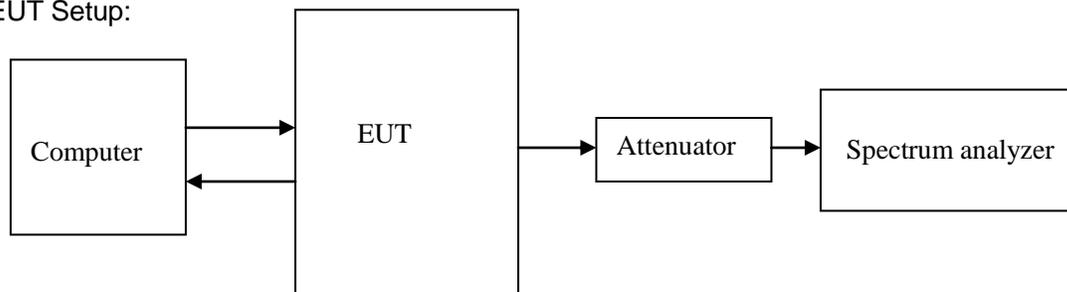
### Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	MXA Series Spectrum Analyzer	N9030A	MY49431143	2012.09.25	2013.09.25
DTS	DTS 40dB Attenuator	DTS100-40-3-1	09112005	2012.09.26	2013.09.26

**\*statement of traceability:** ZTE Corporation Reliability Testing Center attest that all calibration have been performed per the NVLAP requirements, traceable to NIST.

### Test Procedure

EUT Setup:



REMARKS: Attenuator loss (dB)=40dB, Cable Loss (dB)=1.5dB.

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

## Test Data Environmental Conditions

Temperature:	20 °C
Relative Humidity:	53 %
ATM Pressure:	1009 mbar

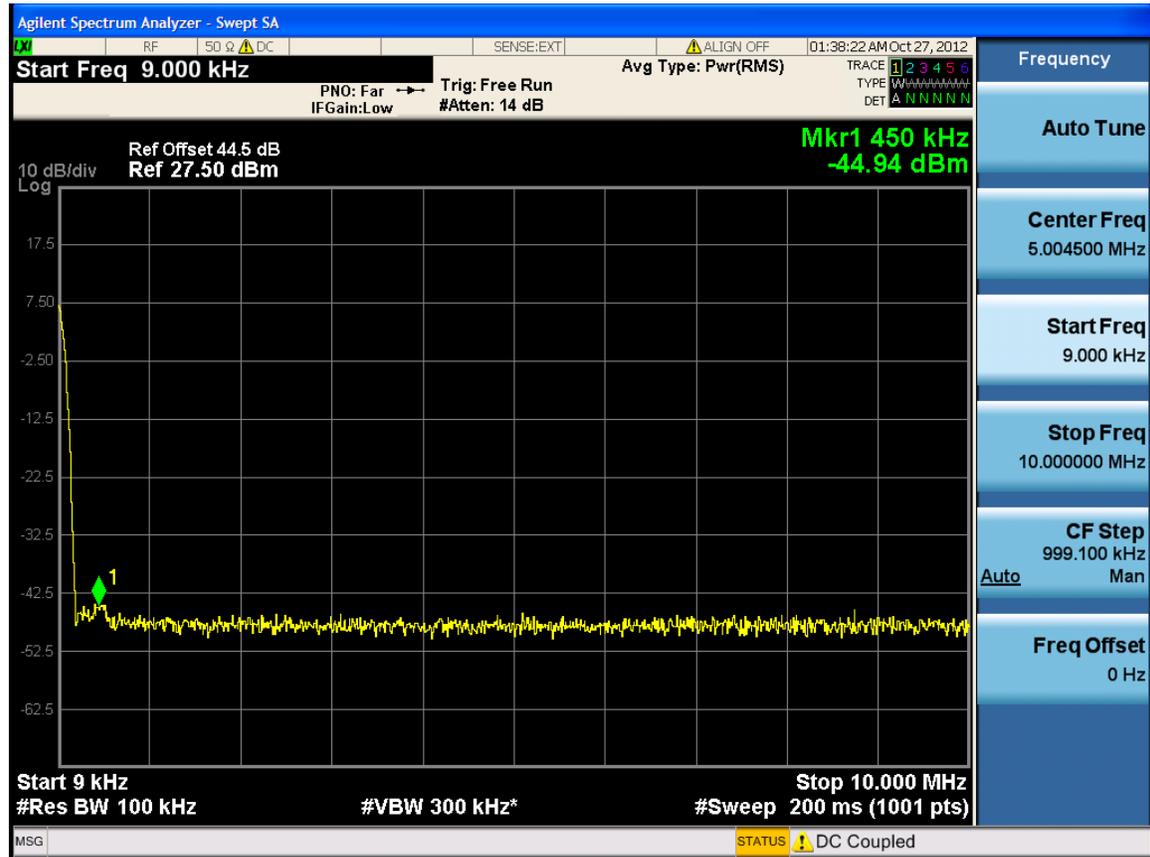
**Test Result:** Pass

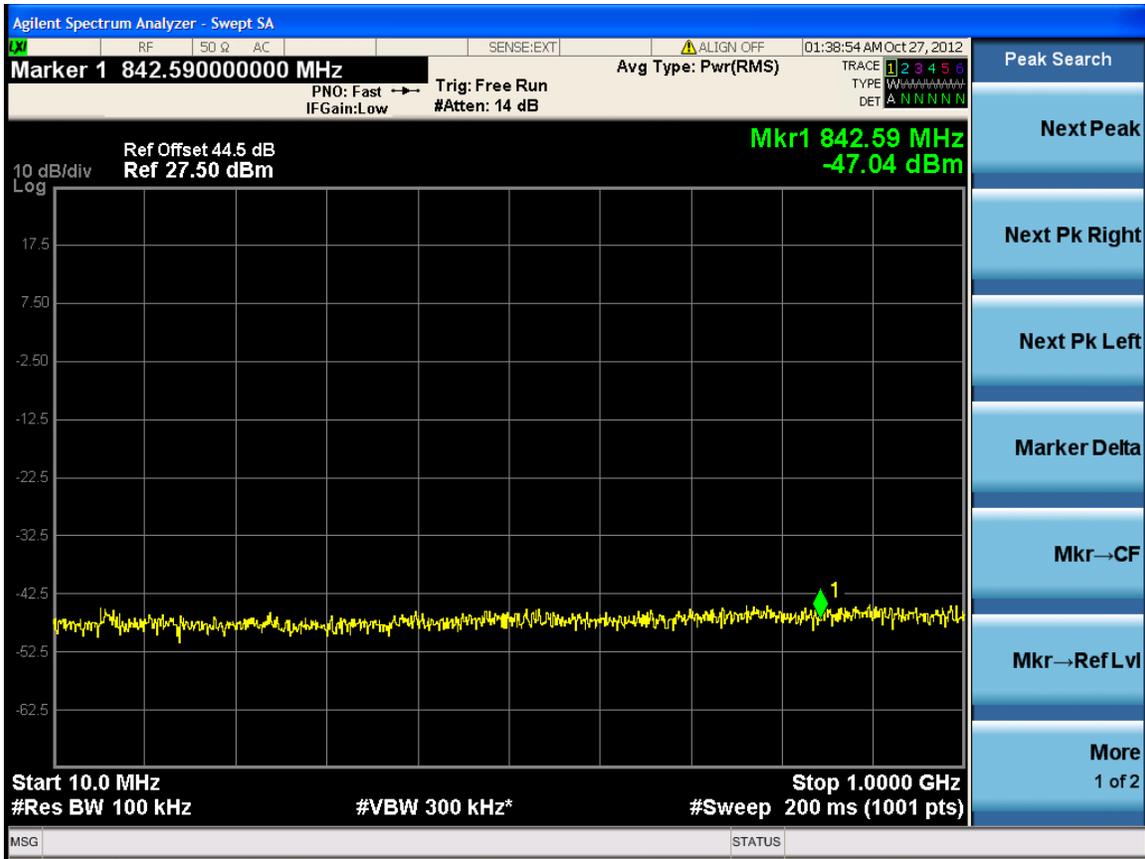
**Test Mode:** Transmitting LTE

## Test Data:

Channel Bandwidth :20M

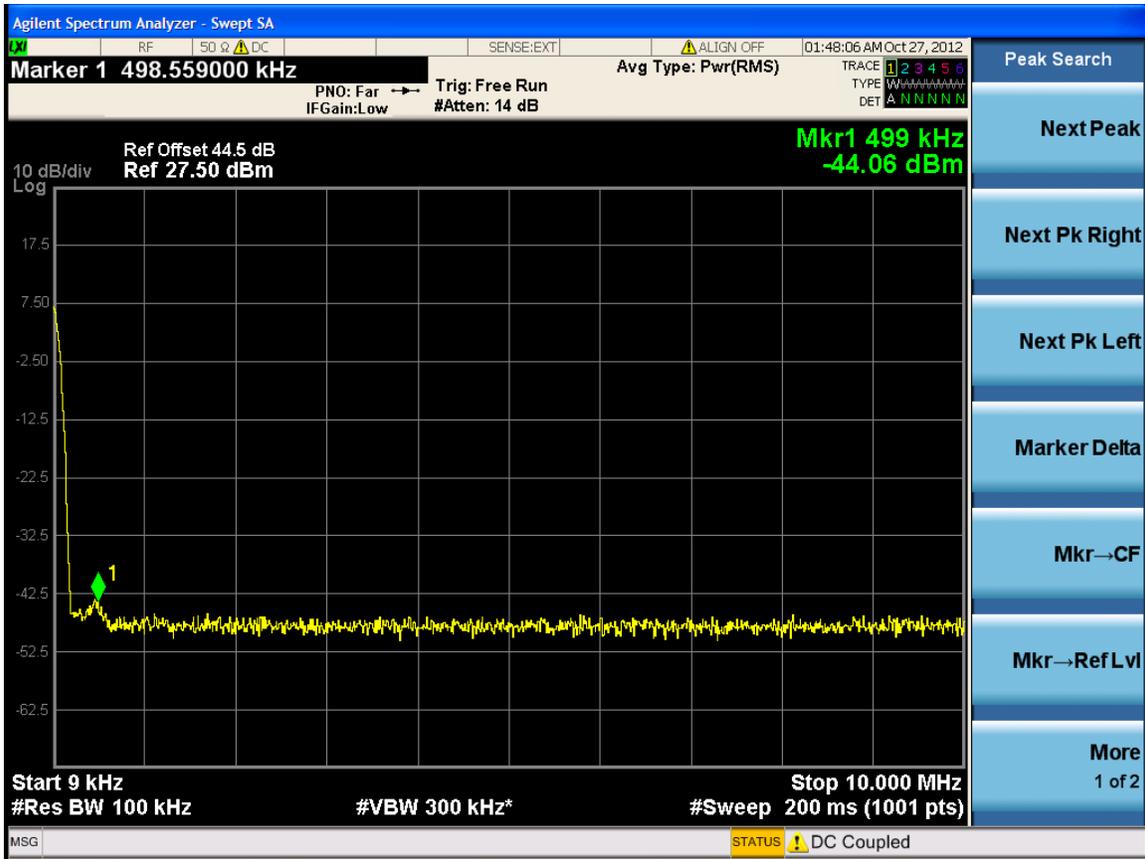
20M-Port 1 -2630MHz







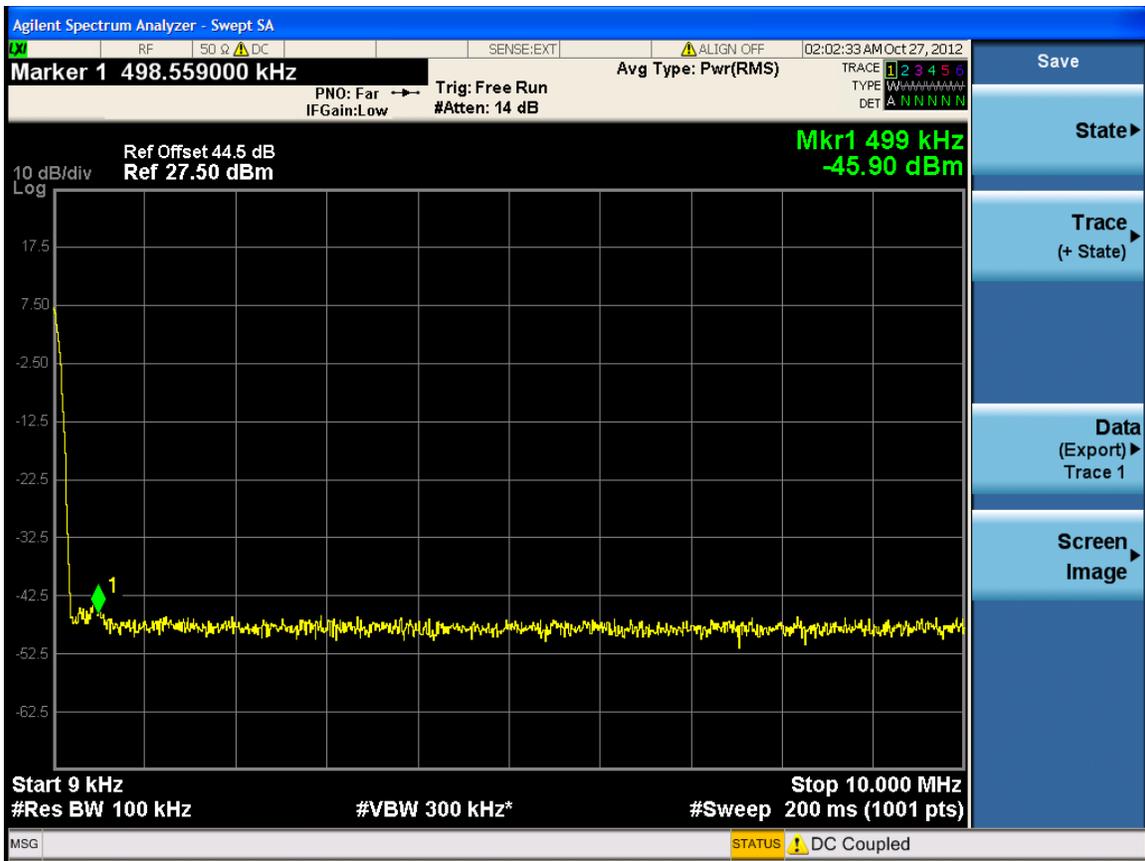
20M-Port 1 -2655MHz

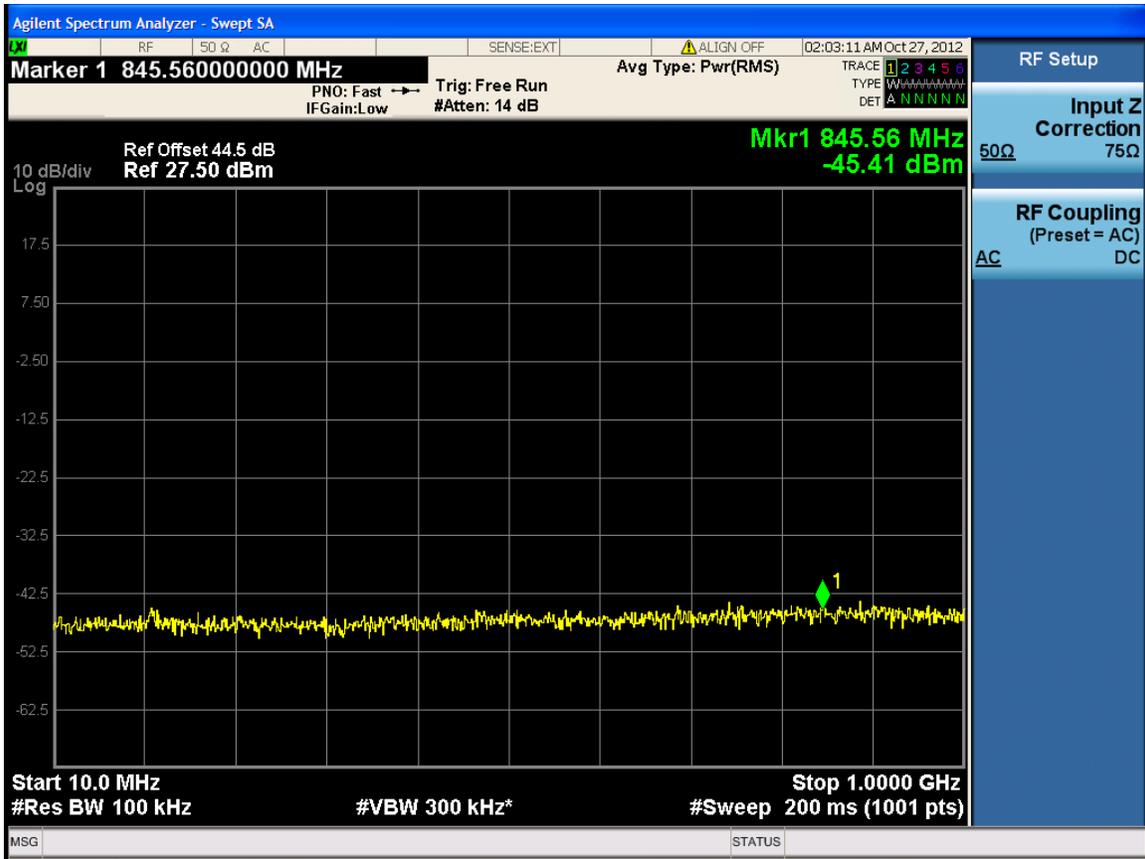






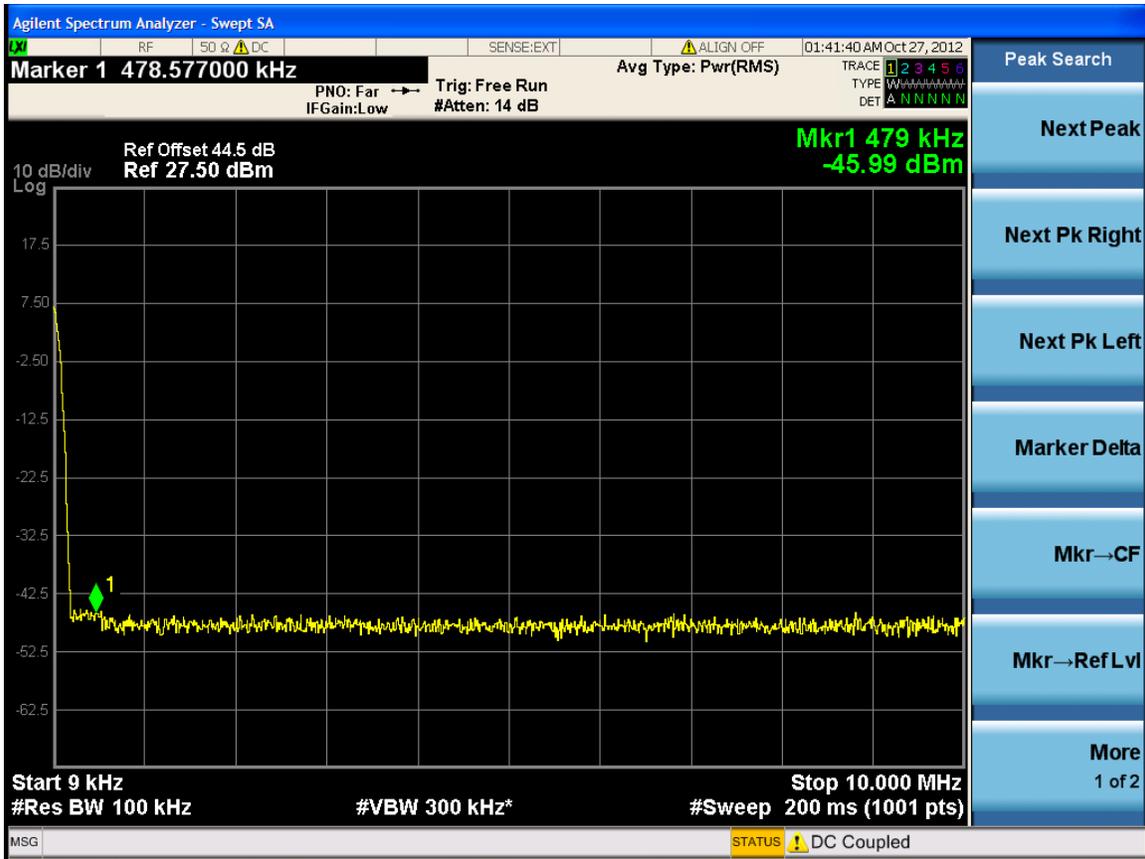
20M-Port 1 -2680MHz

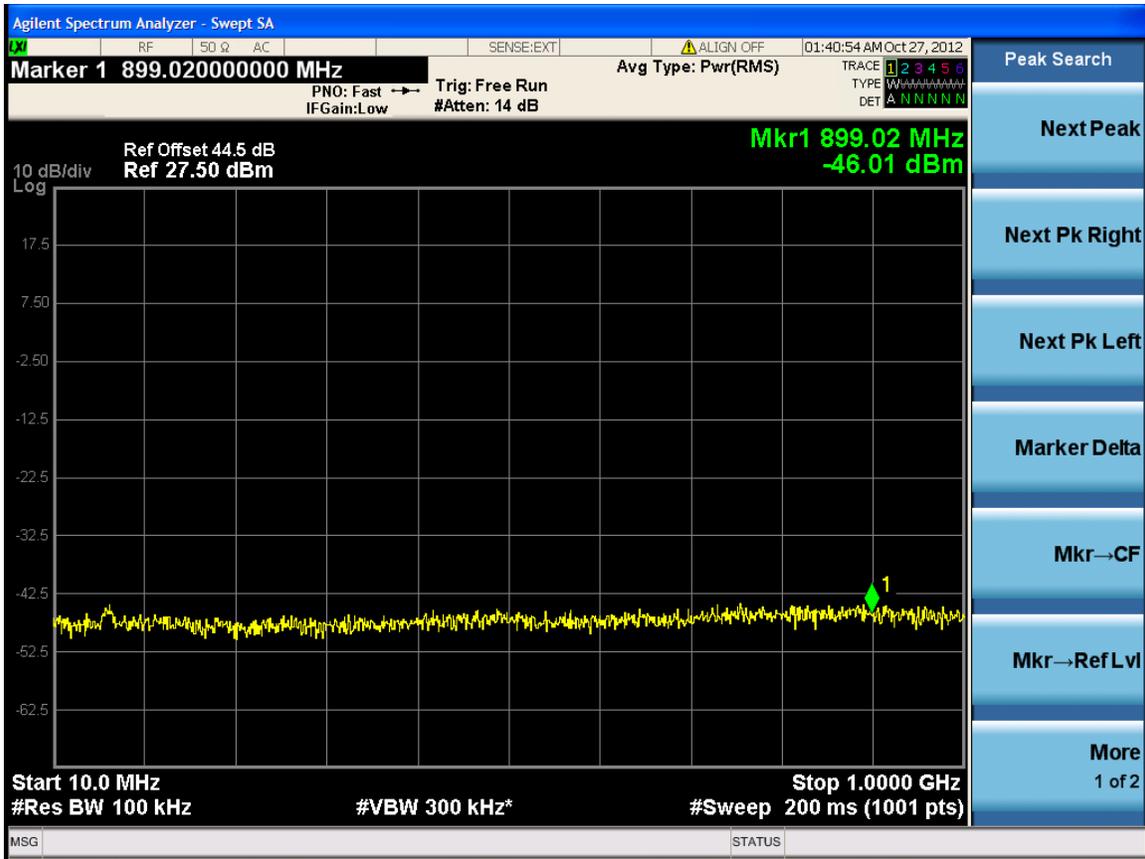






20M-Port 2 -2630MHz

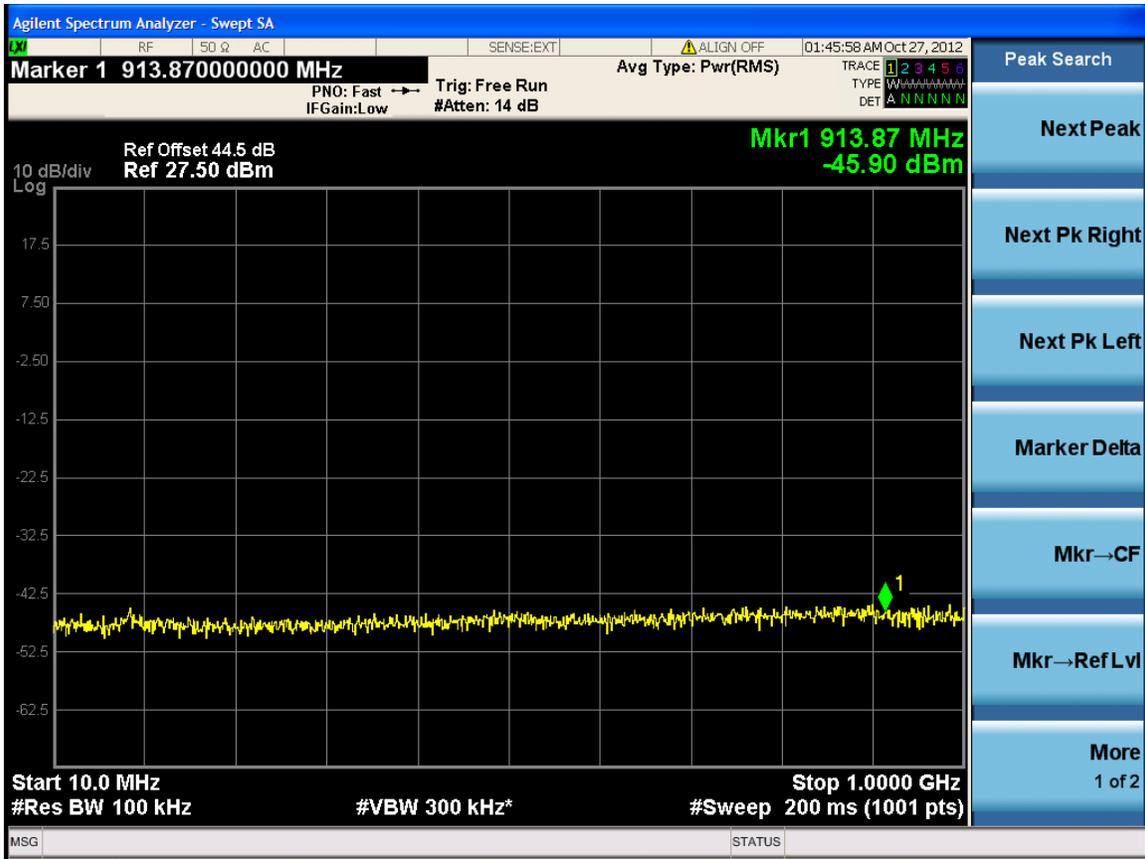


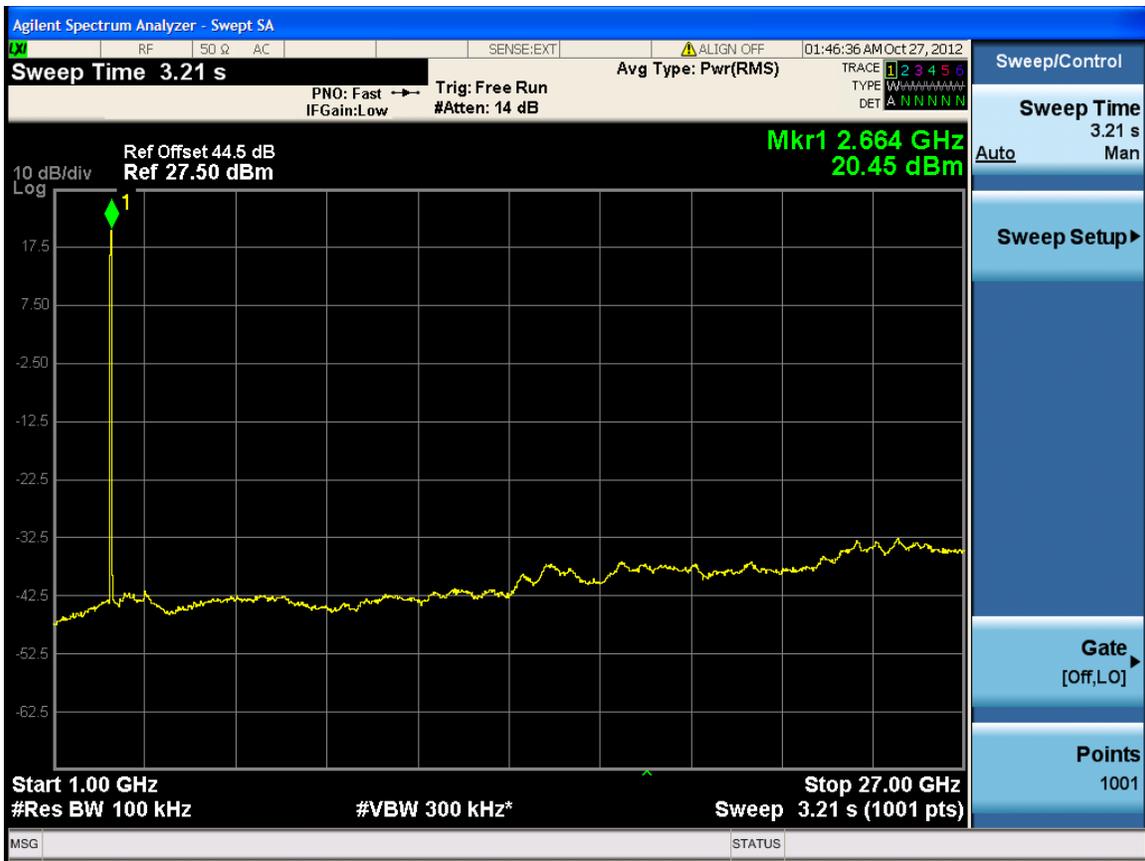




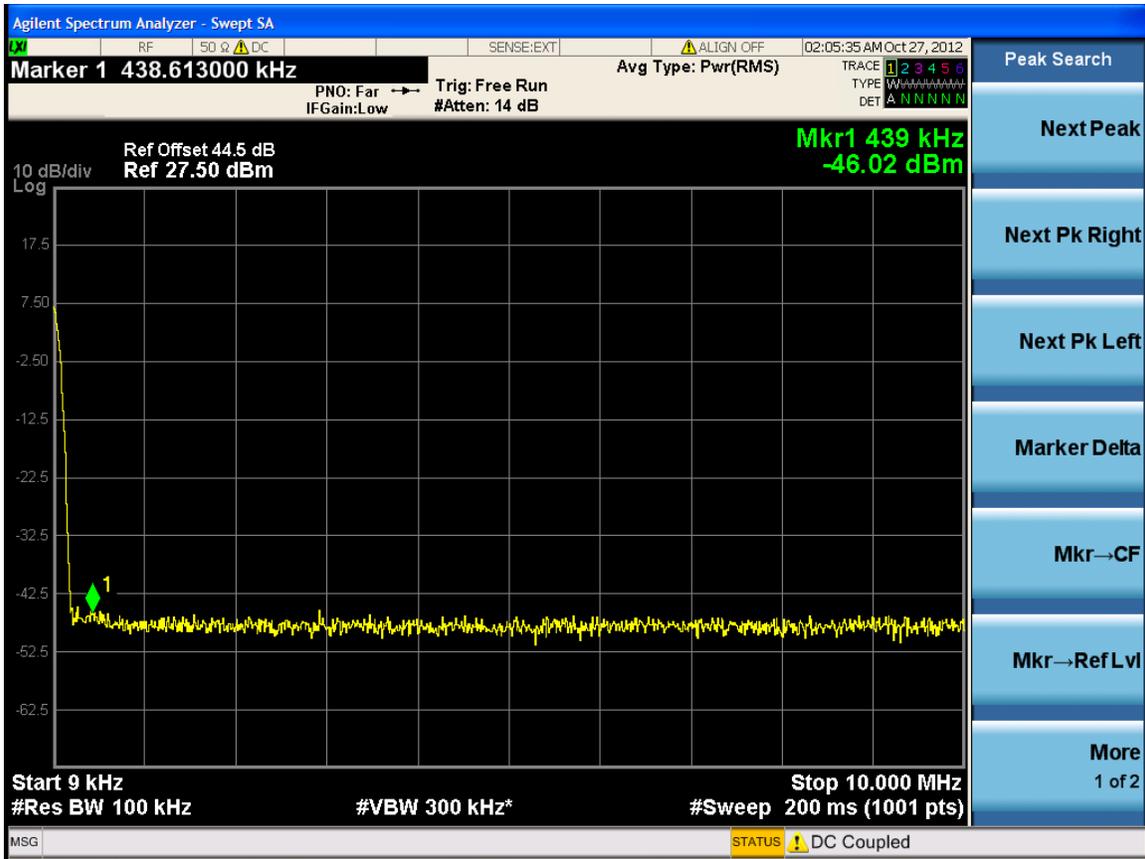
20M-Port 2 -2655MHz

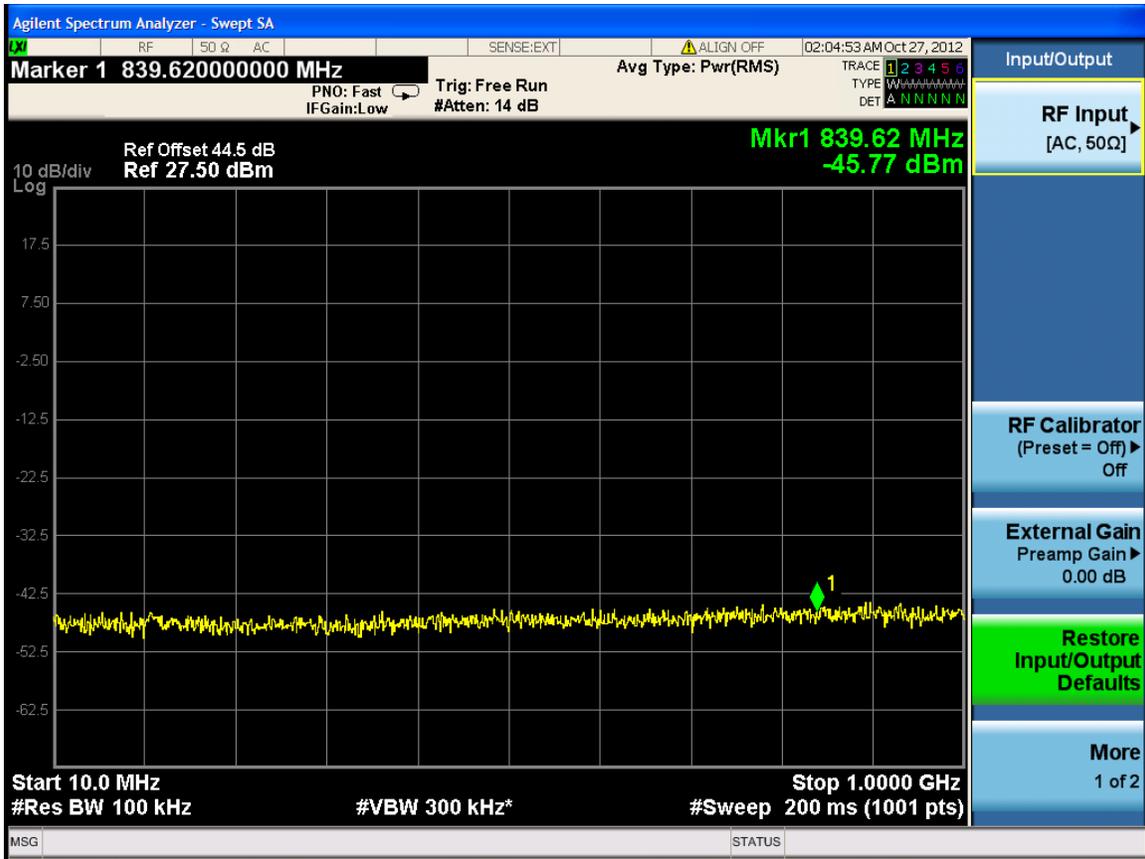


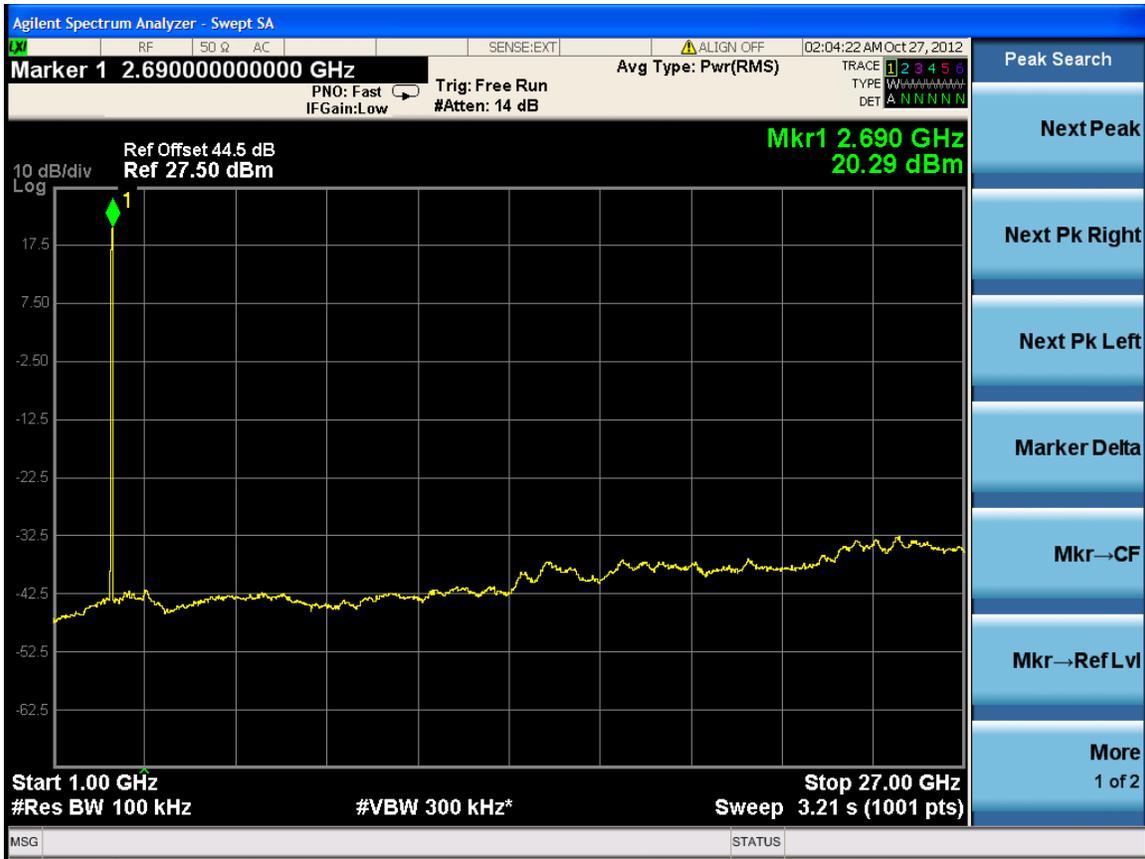




20M-Port 2 -2680MHz

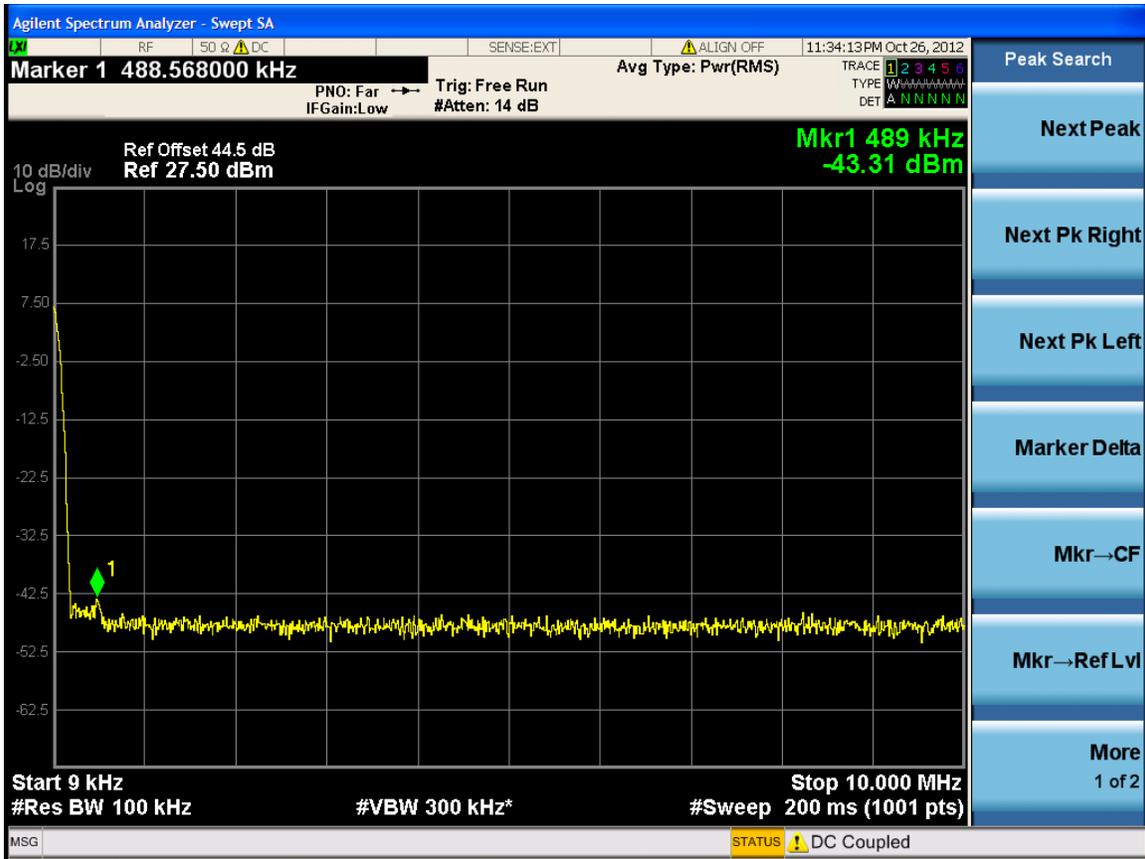


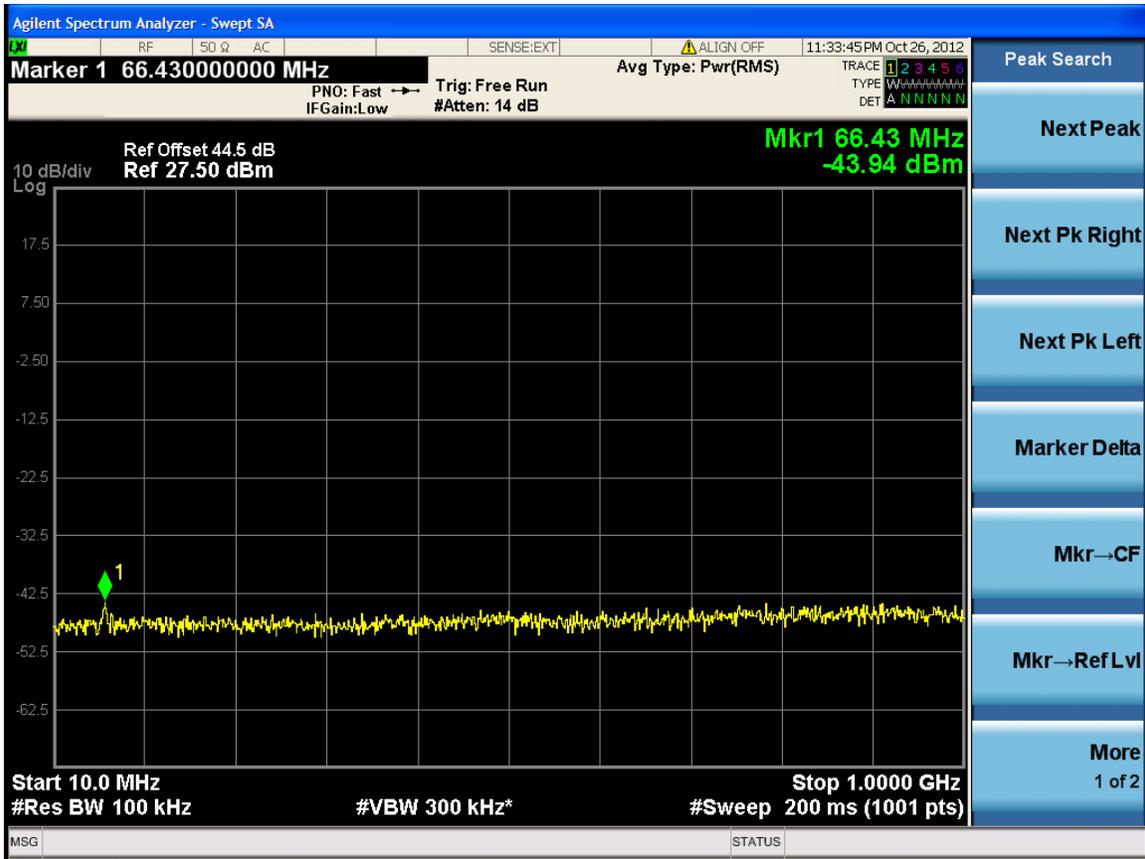




15M-Port 1 -2627.5MHz

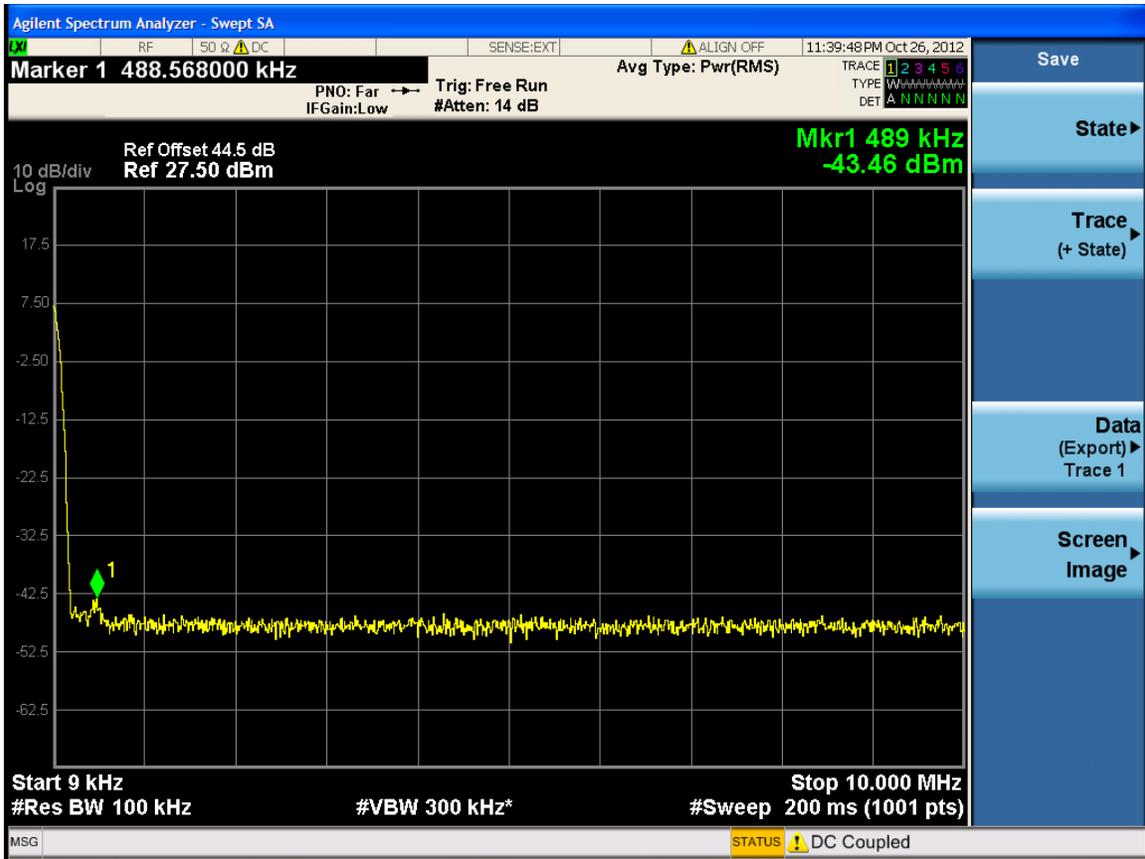
Channel Bandwidth :15M

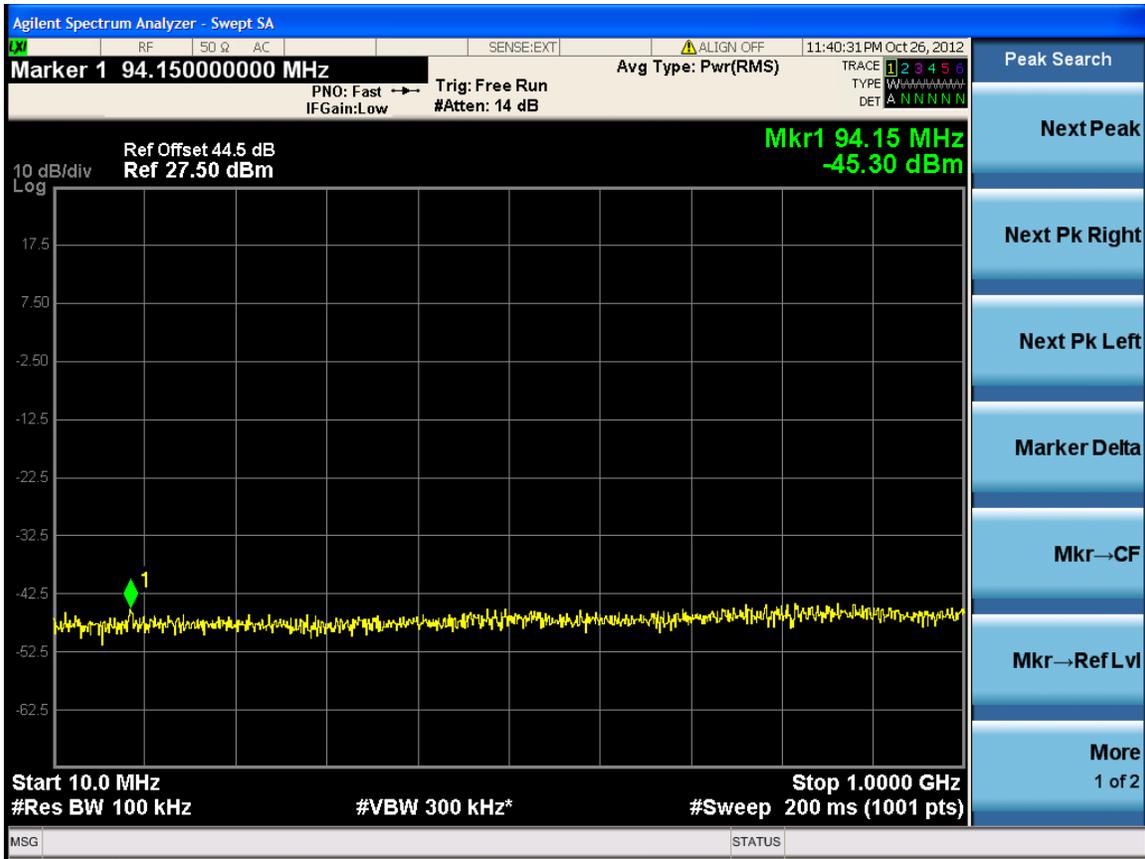






15M-Port 1 -2655MHz







15M-Port 1 -2682.5MHz

