

6. Conducted Spurious Emission

6.1. Test Equipment

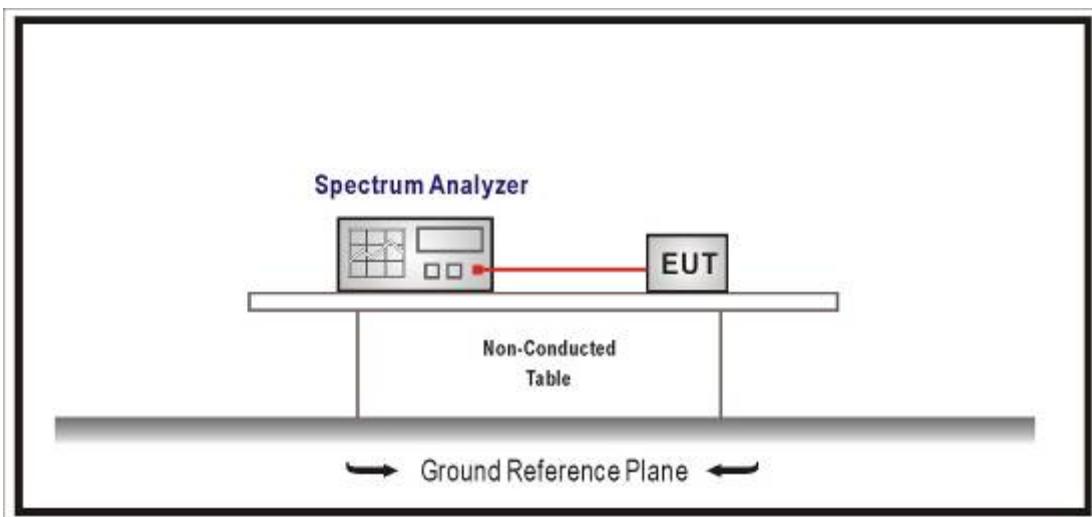
The following test equipments are used during the test:

Conducted Spurious Emission / SR7

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A	US47140172	2012/07/13

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

6.2. Test Setup



6.3. Limits

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or less, but at least one percent of the emission bandwidth of the fundamental emission of the transmitter, provided the measured energy is integrated over a 1 MHz bandwidth.

6.4. Test Procedure

The EUT was set up for the rated peak power. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels: low, middle and high operational frequency range. The spectrum set RBW = 1MHz, VBW = 3MHz. and using peak detection mode.

6.5. Test Specification:

FCC CFR Title 47 Part 90 Subpart Z,

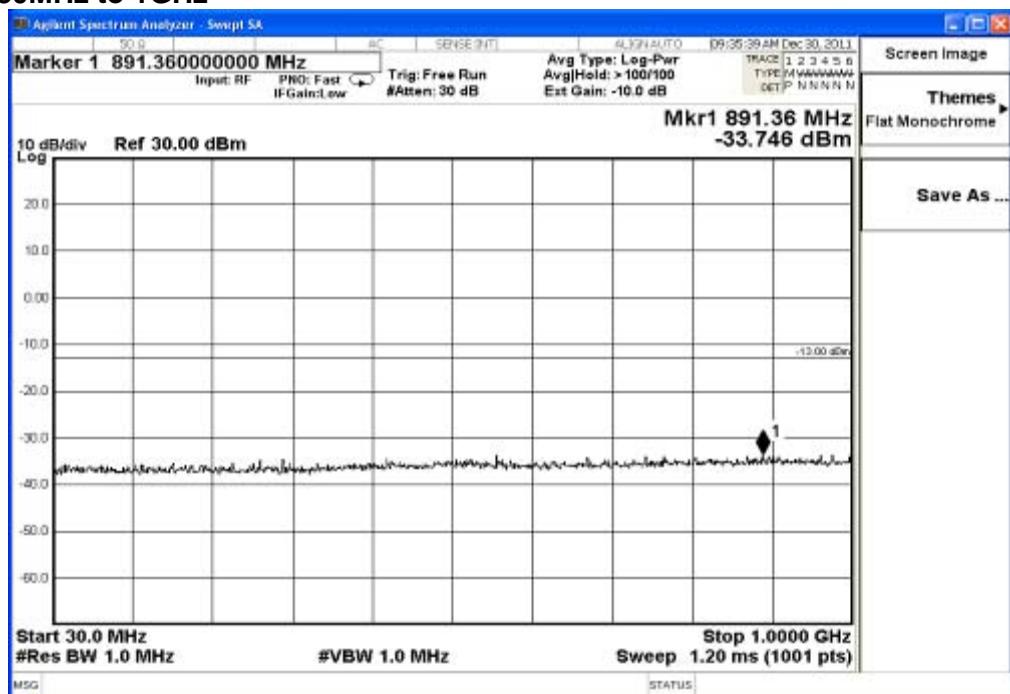
6.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB

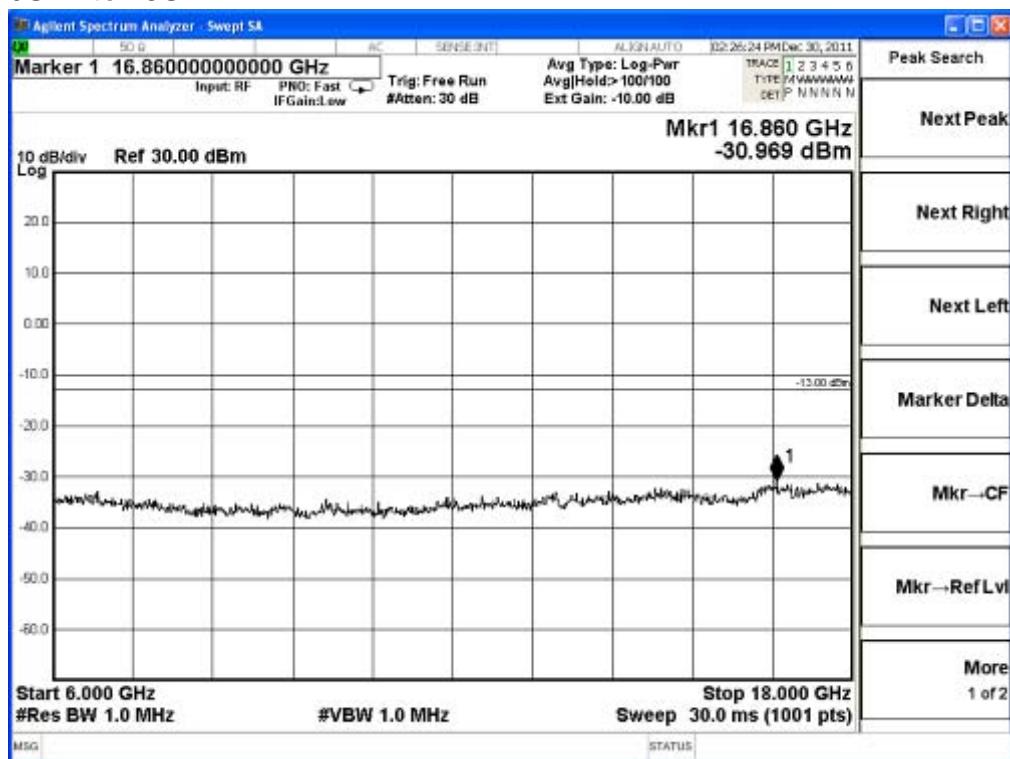
6.7. Test Result

Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 1: Transmit (5MHz BW_QPSK1/2)		
Date of Test	2011/11/19	Test Site	SR7

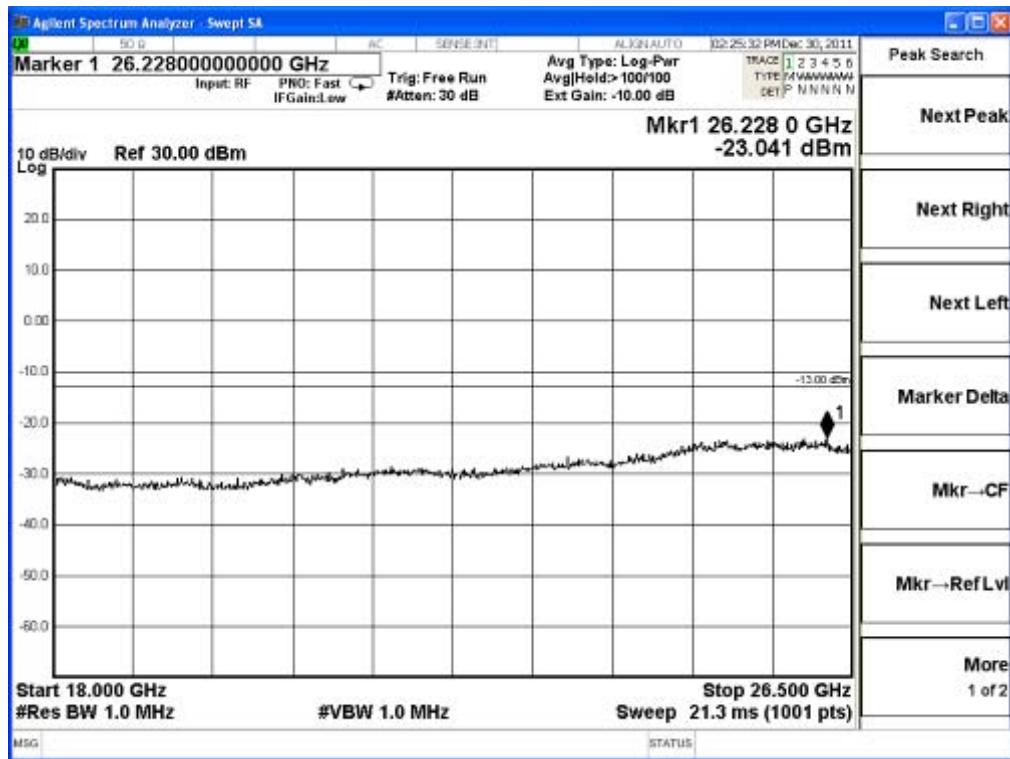
Test Mode: 5MHz QPSK			
Test Frequency: 3652.5MHz			
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	891.36	-33.746	≤-13
1000-6000	5645.00	-30.659	≤-13
6000-18000	16860.00	-30.969	≤-13
18000-26500	26228.00	-23.041	≤-13
Test Frequency: 3662.5MHz			
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	989.33	-34.585	≤-13
1000-6000	5635.00	-31.827	≤-13
6000-18000	17628.00	-30.913	≤-13
18000-26500	25352.50	-23.561	≤-13
Test Frequency: 3672.5MHz			
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	874.87	-33.303	≤-13
1000-6000	5595.00	-31.531	≤-13
6000-18000	17028.00	-30.914	≤-13
18000-26500	25403.50	-23.686	≤-13

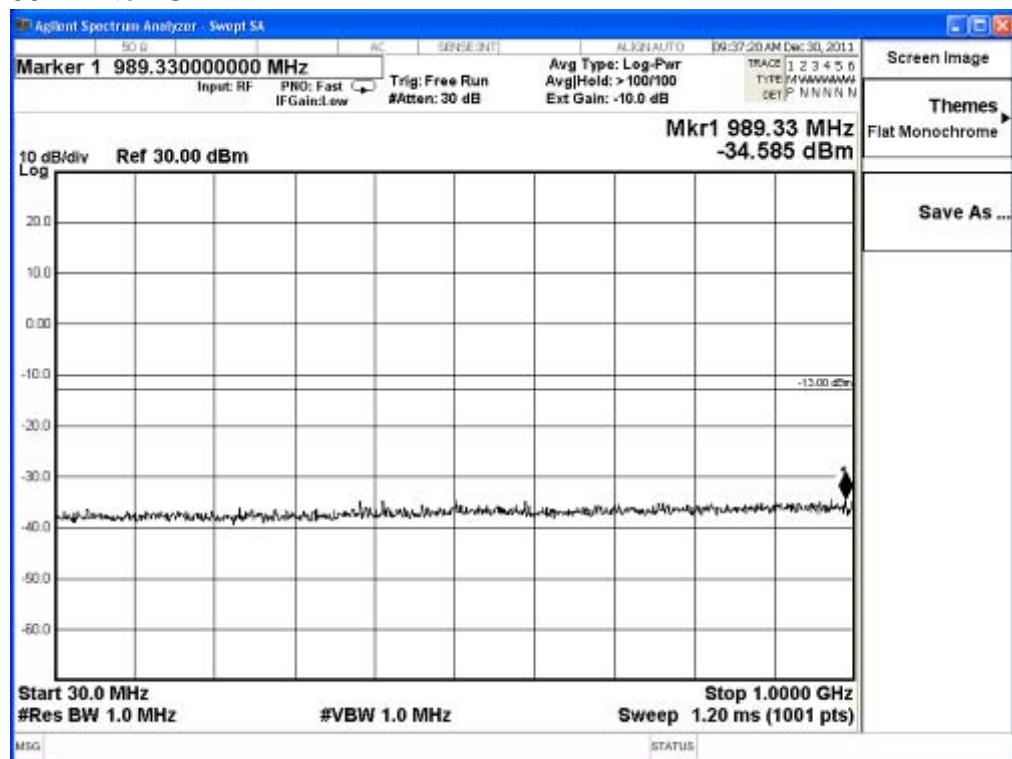
5MHz_3652.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

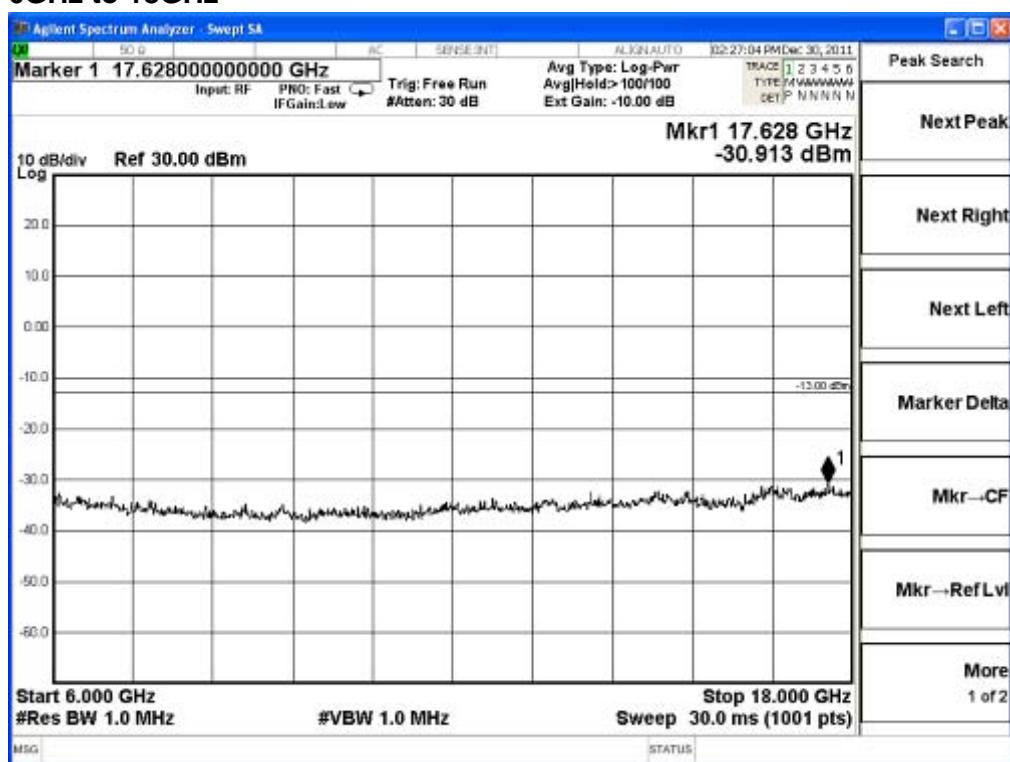


18GHz to 26GHz

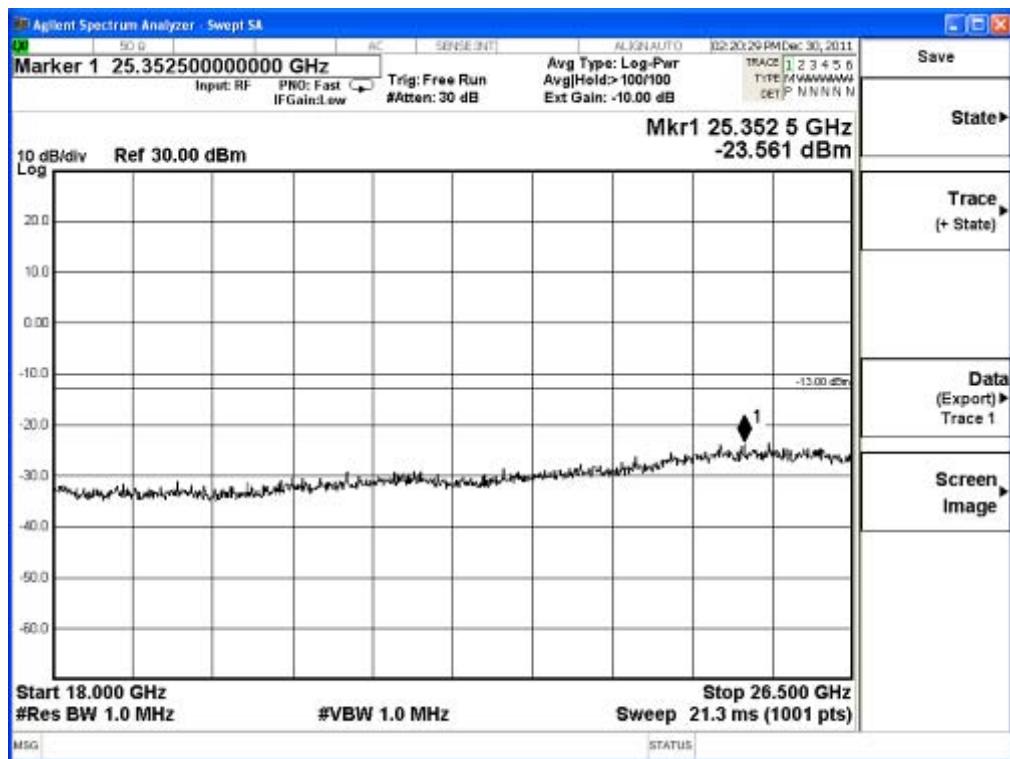


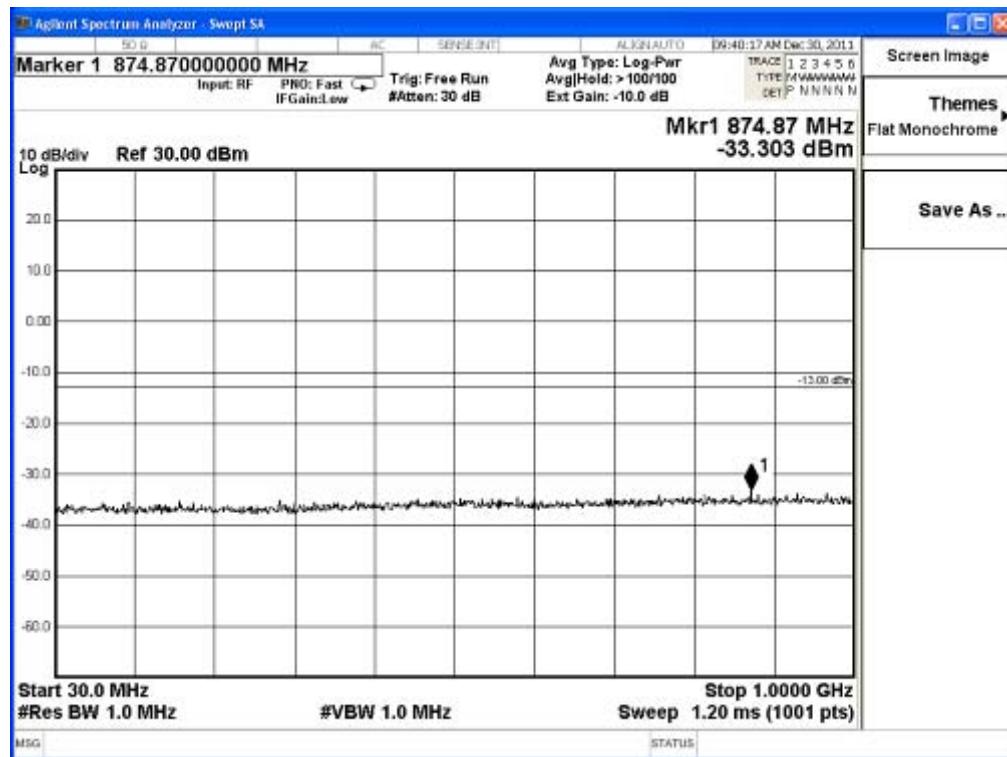
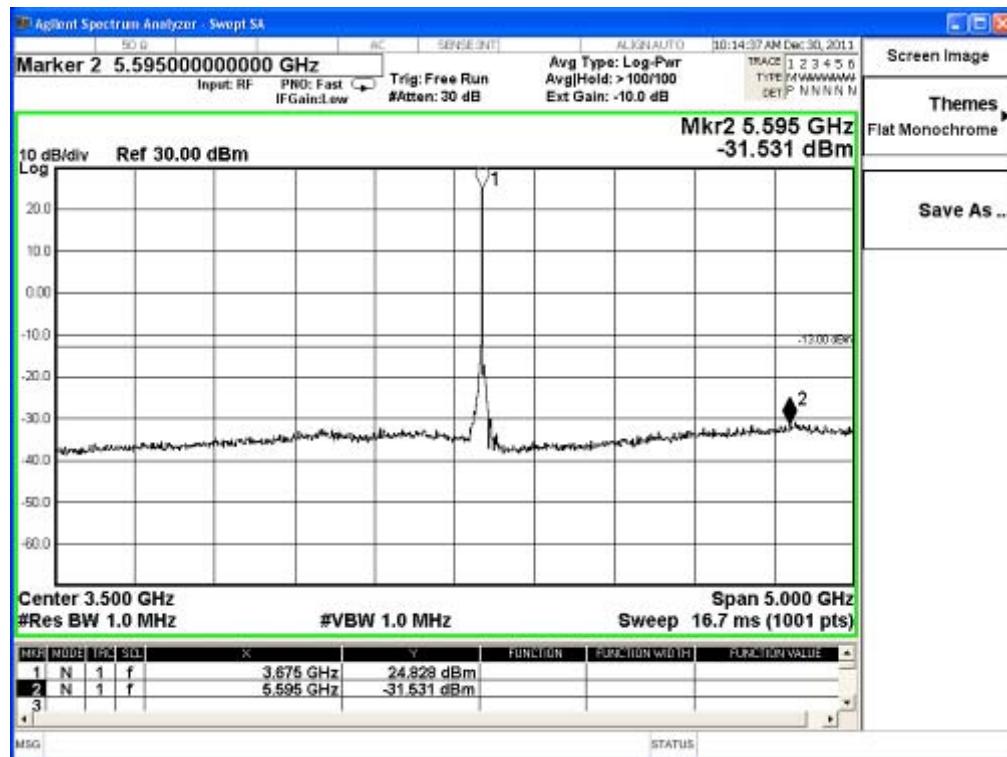
5MHz_3662.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

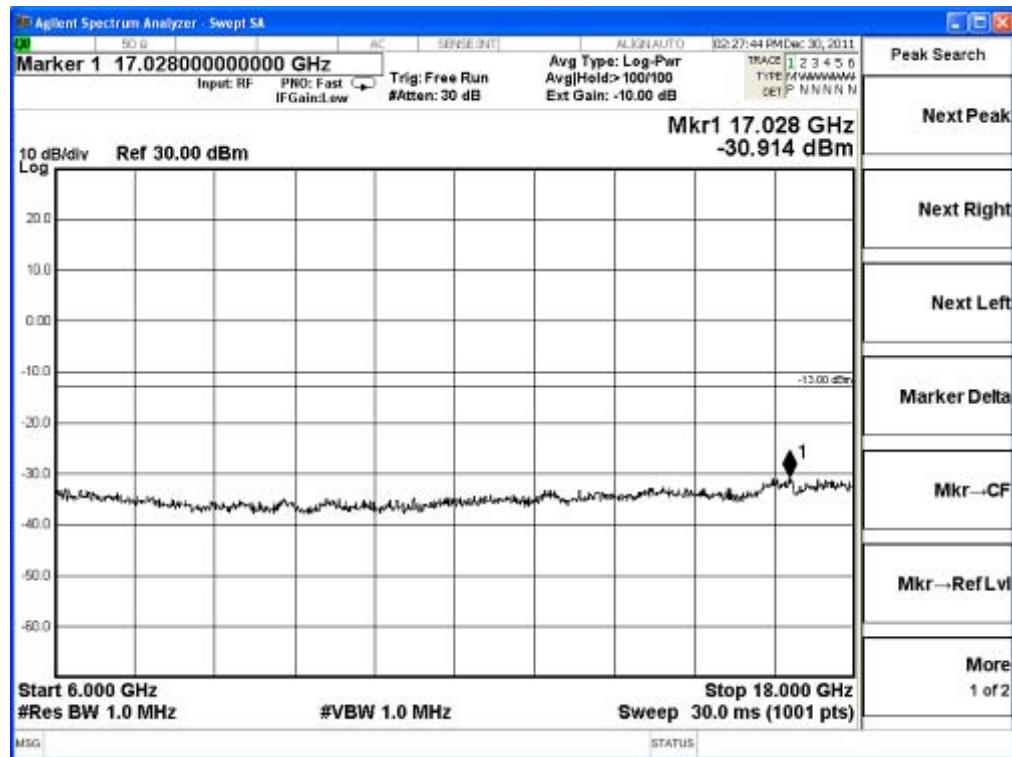


18GHz to 26GHz

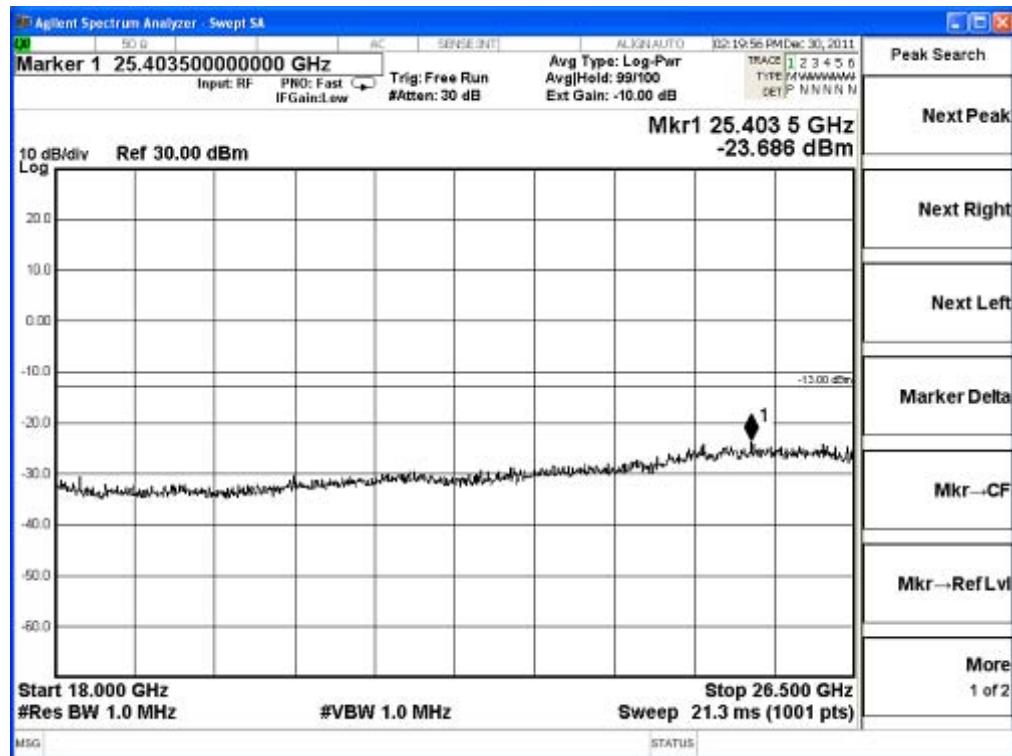


5MHz_3672.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 2: Transmit (5MHz BW_16QAM1/2)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 5MHz 16QAM**Test Frequency: 3652.5MHz**

Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	786.60	-33.685	≤-13
1000-6000	5590.00	-31.256	≤-13
6000-18000	17856.00	-31.318	≤-13
18000-26500	25386.50	-22.660	≤-13

Test Frequency: 3662.5MHz

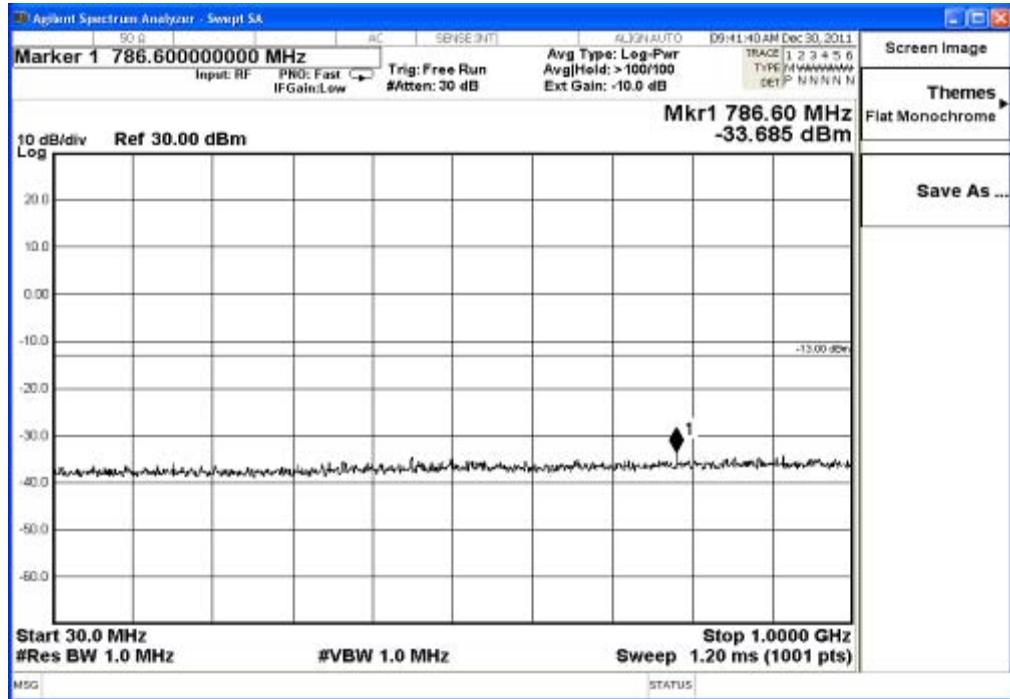
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	721.61	-35.148	≤-13
1000-6000	5640.00	-29.877	≤-13
6000-18000	16728.00	-30.447	≤-13
18000-26500	26466.00	-24.417	≤-13

Test Frequency: 3672.5MHz

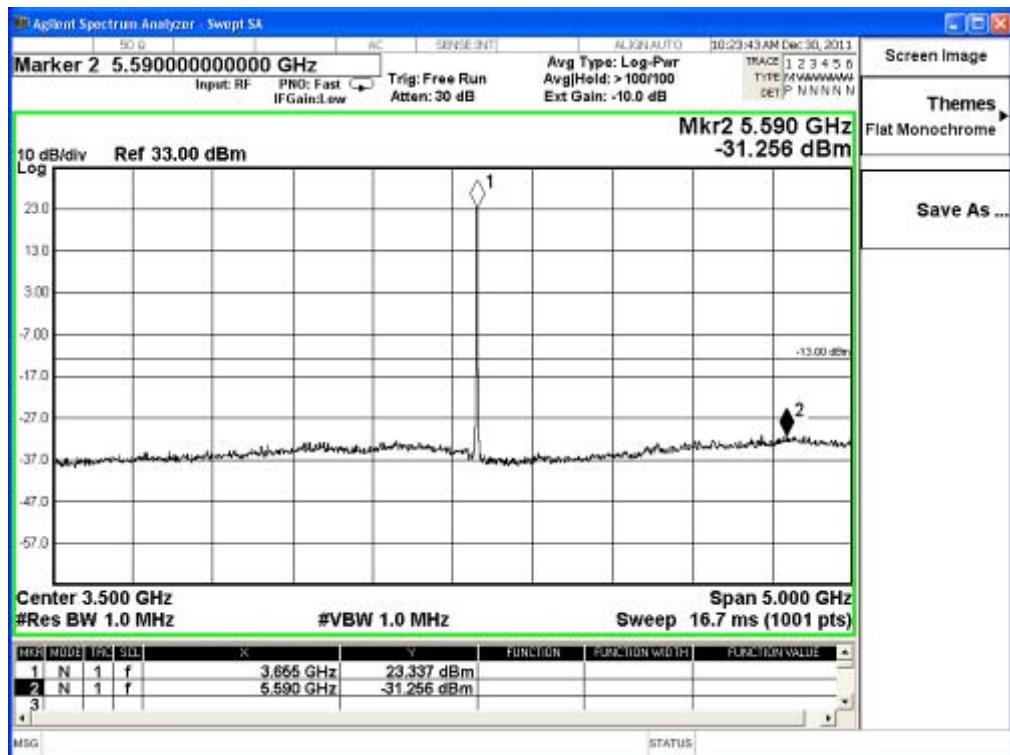
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	907.85	-34.310	≤-13
1000-6000	5625.00	-31.075	≤-13
6000-18000	17076.00	-31.587	≤-13
18000-26500	25879.50	-24.026	≤-13

5MHz_3652.5MHz_16QAM1/2

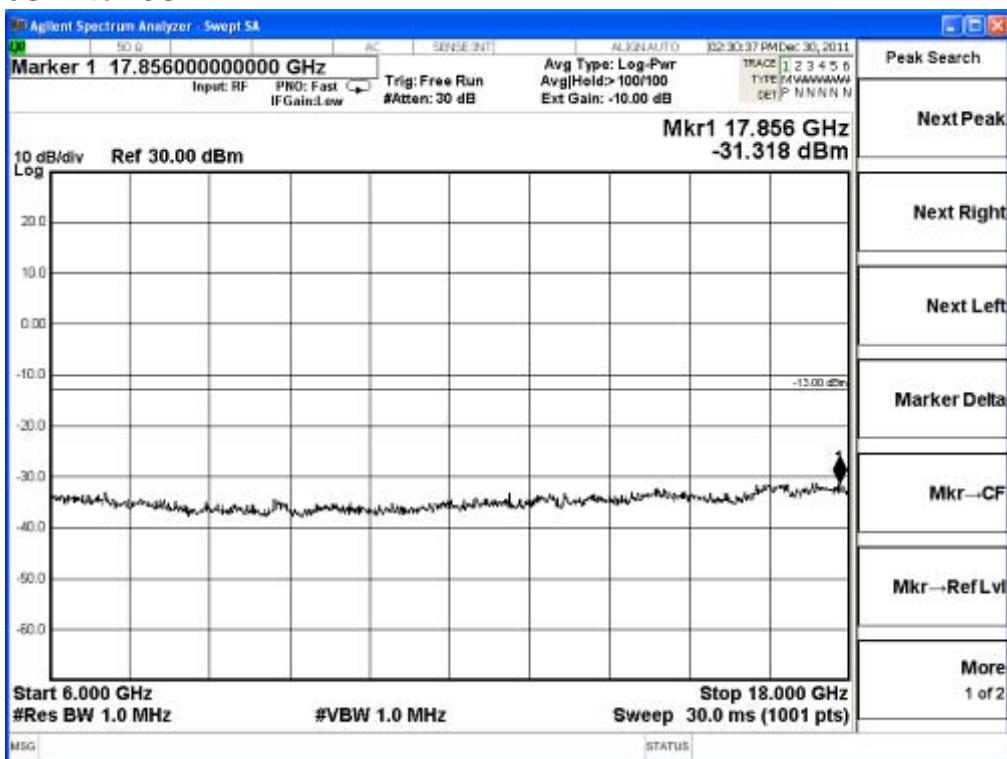
30MHz to 1GHz



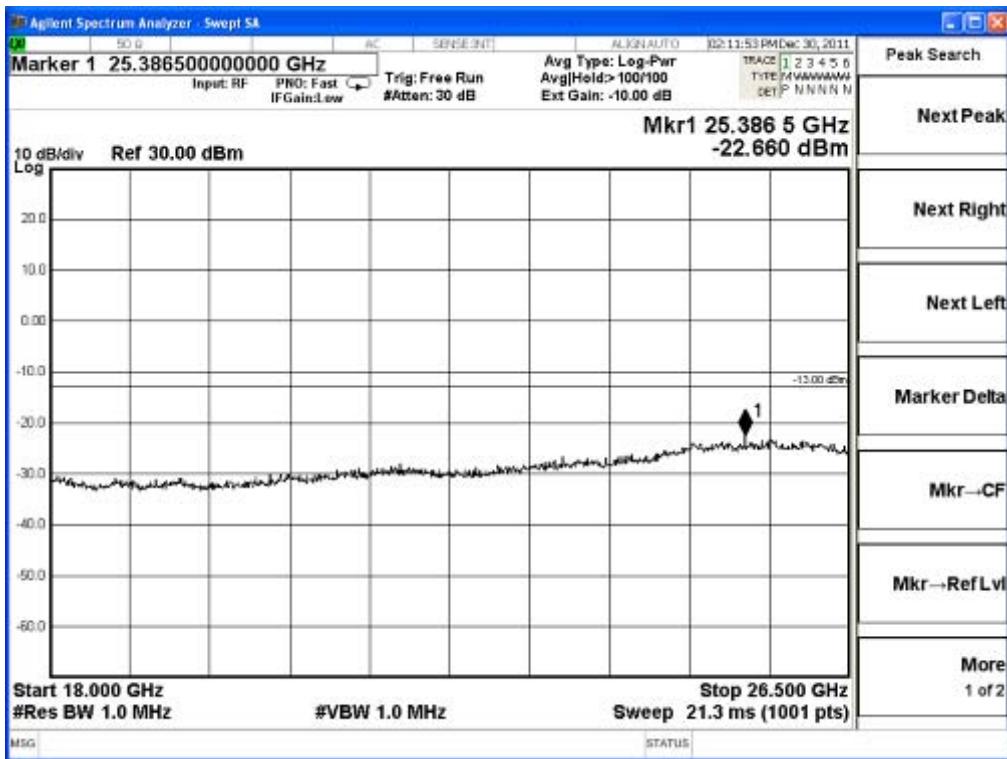
1GHz to 6GHz

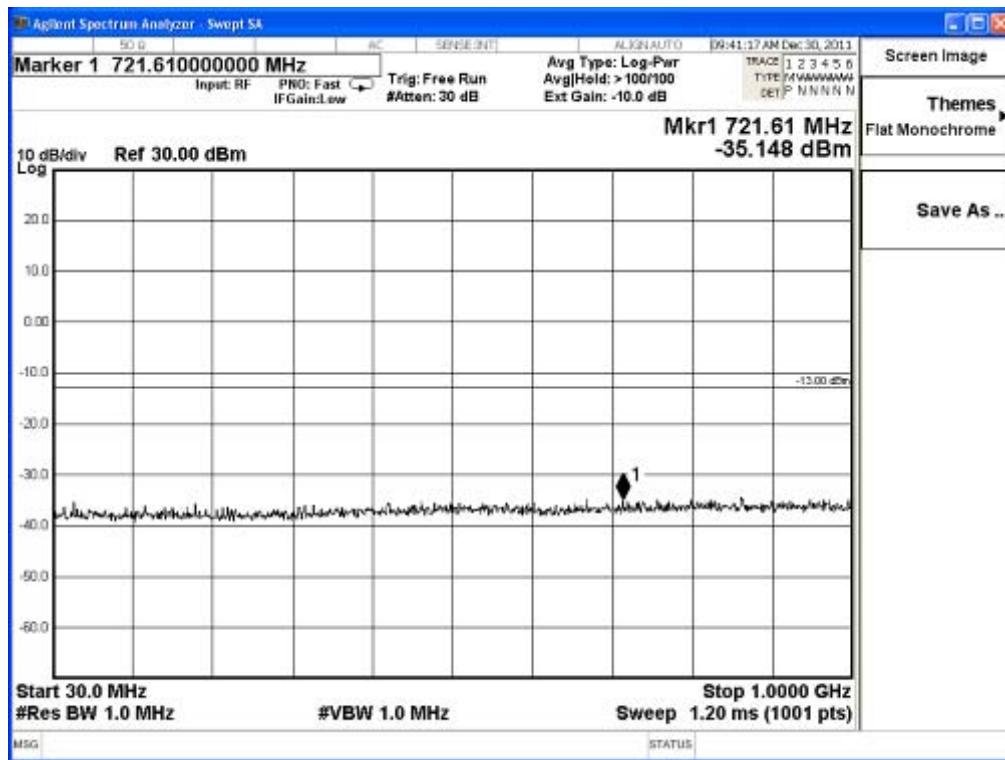
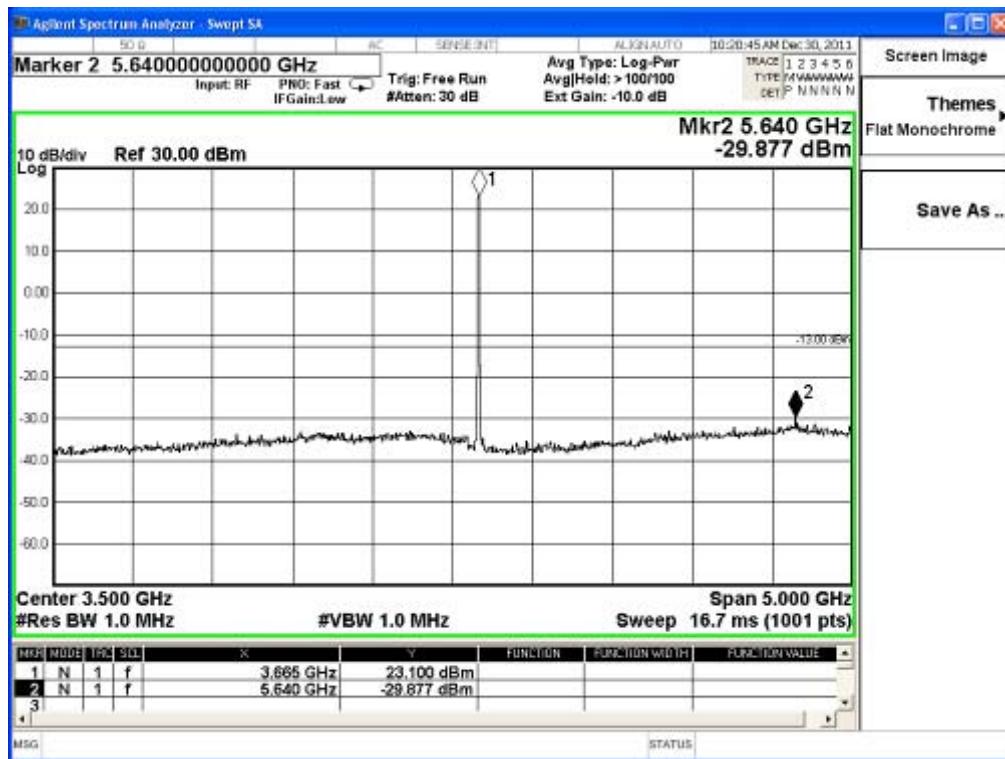


6GHz to 18GHz

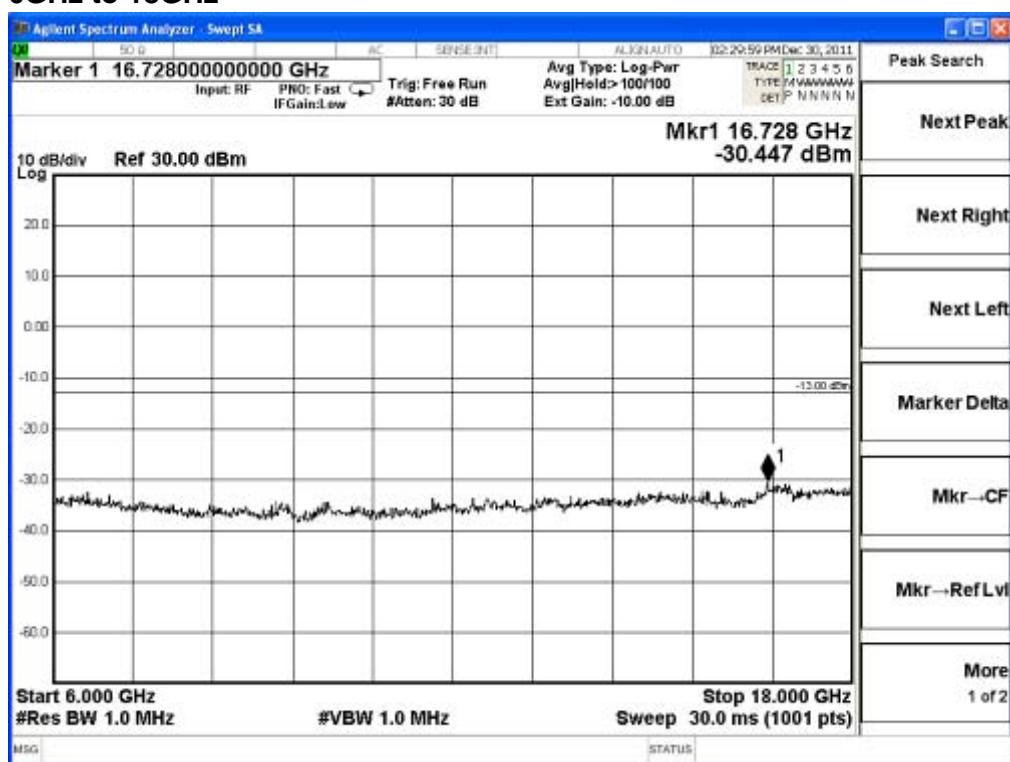


18GHz to 26GHz

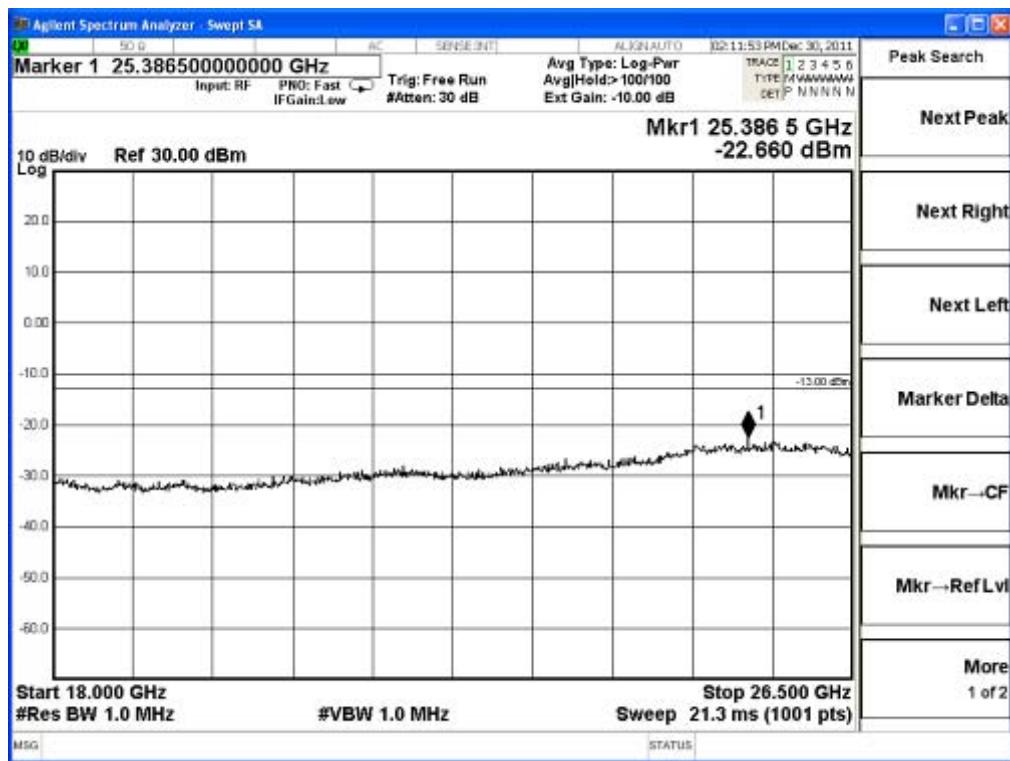


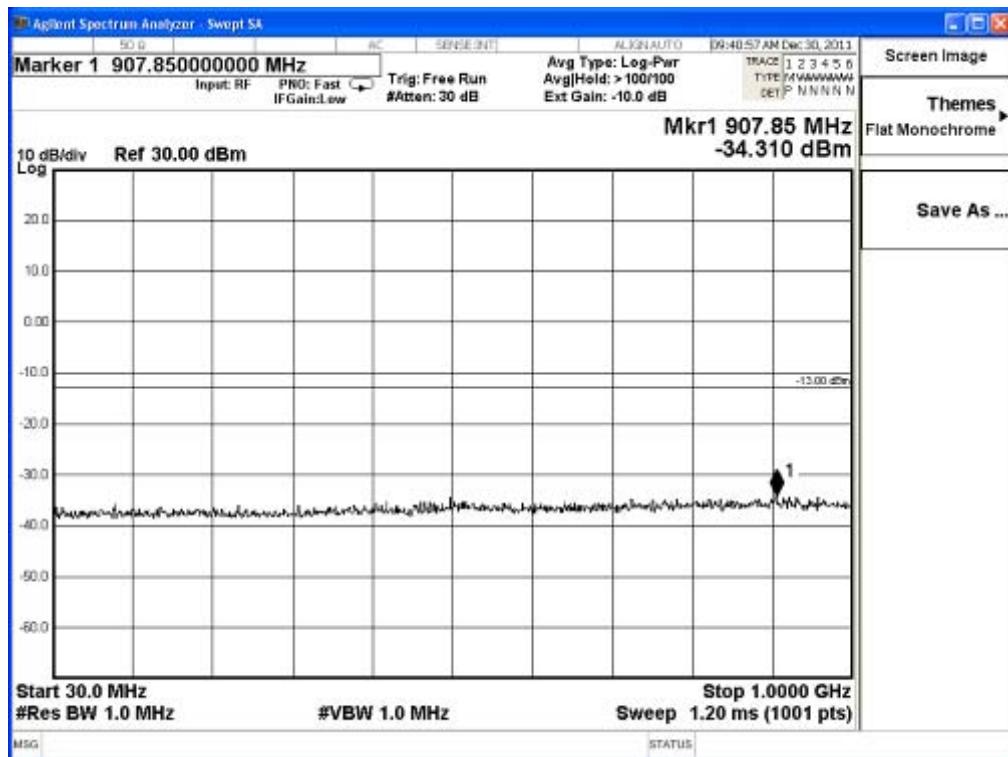
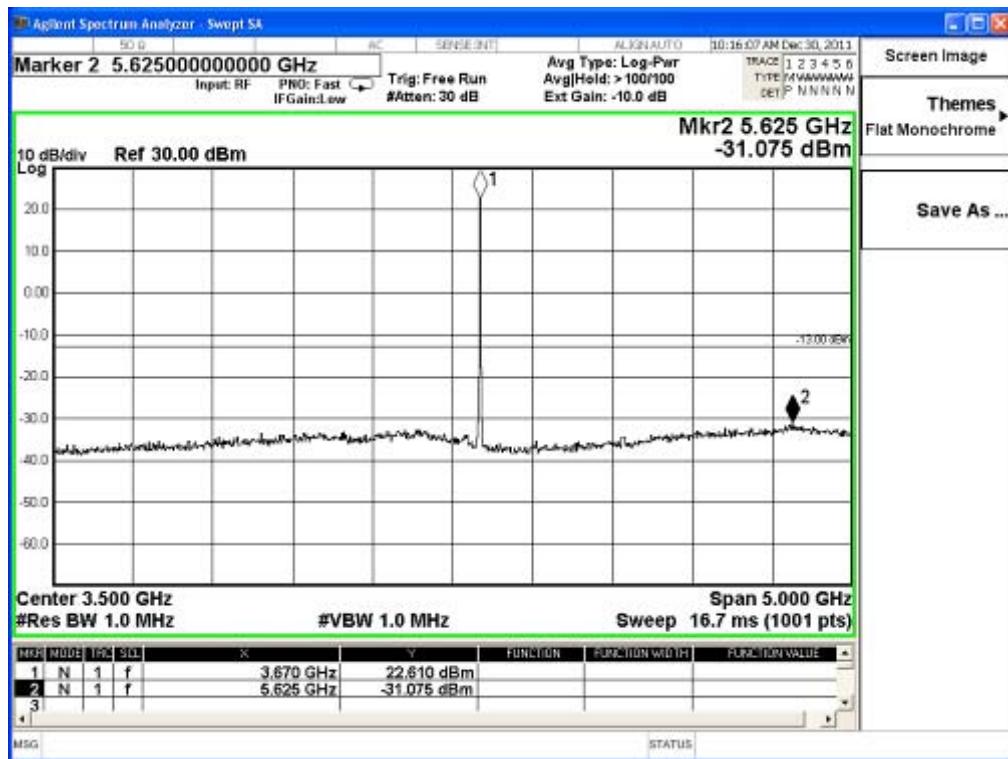
5MHz_3662.5MHz_16QAM1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

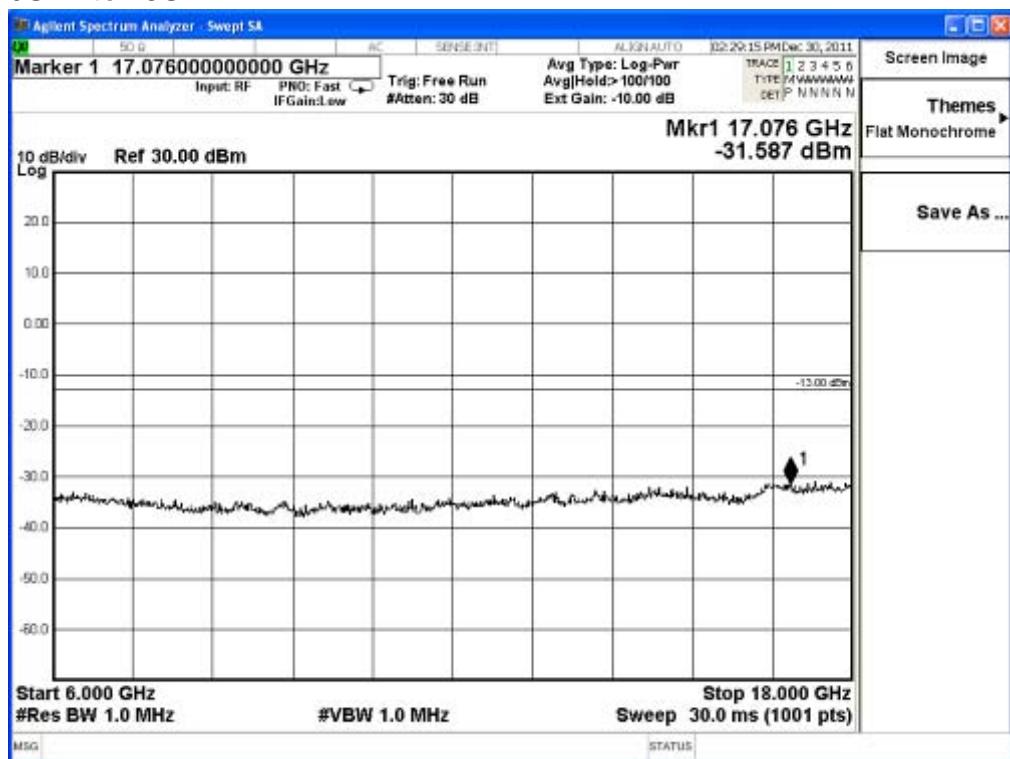


18GHz to 26GHz

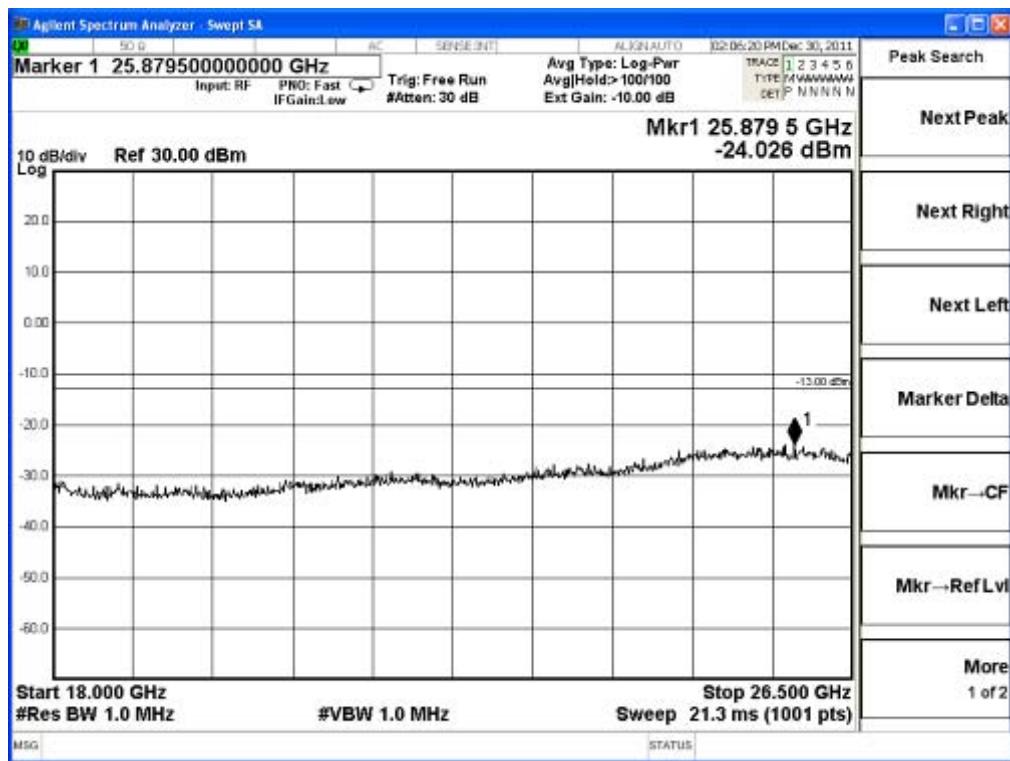


5MHz_3672.5MHz_16QAM1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 3: Transmit (5MHz BW_64QAM2/3)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 5MHz 64QAM**Test Frequency: 3652.5MHz**

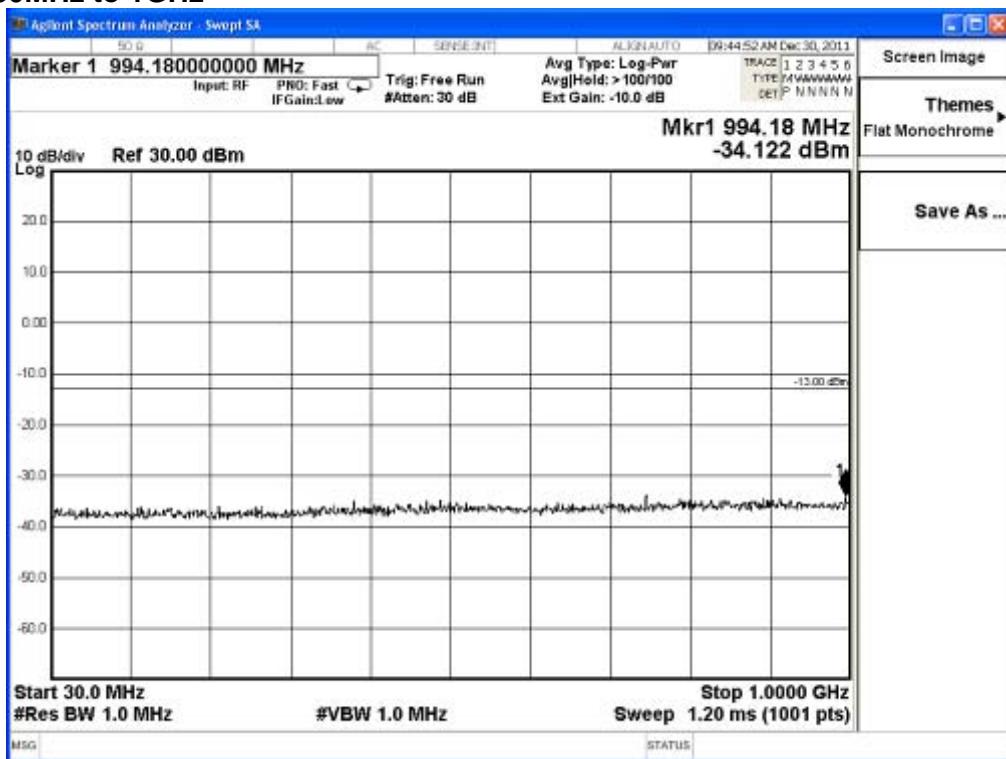
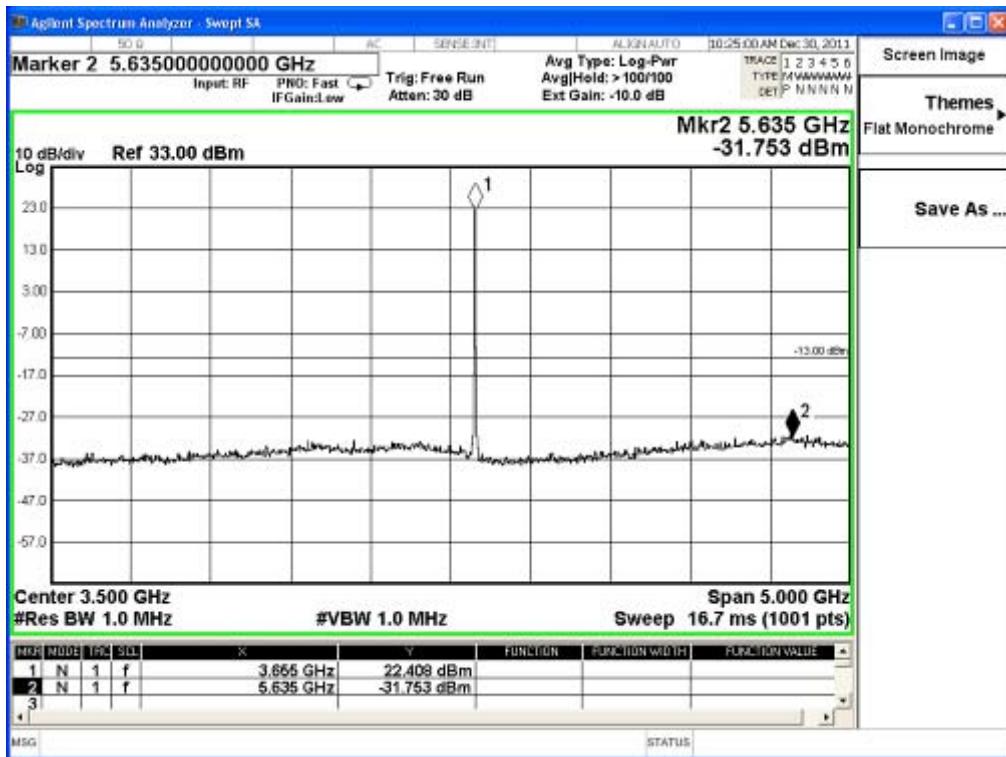
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	994.18	-34.122	≤-13
1000-6000	5635.00	-31.753	≤-13
6000-18000	16836.00	-31.132	≤-13
18000-26500	25454.50	-23.966	≤-13

Test Frequency: 3662.5MHz

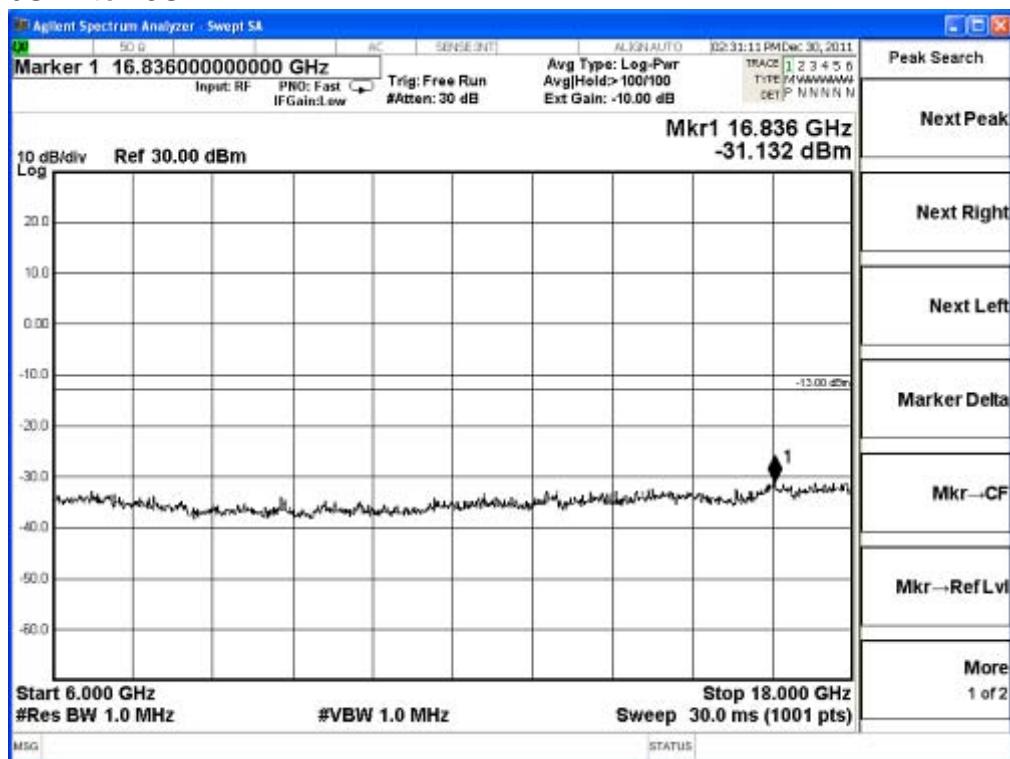
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	894.27	-34.233	≤-13
1000-6000	2755.00	-31.647	≤-13
6000-18000	17592.00	-31.432	≤-13
18000-26500	25973.00	-24.150	≤-13

Test Frequency: 3672.5MHz

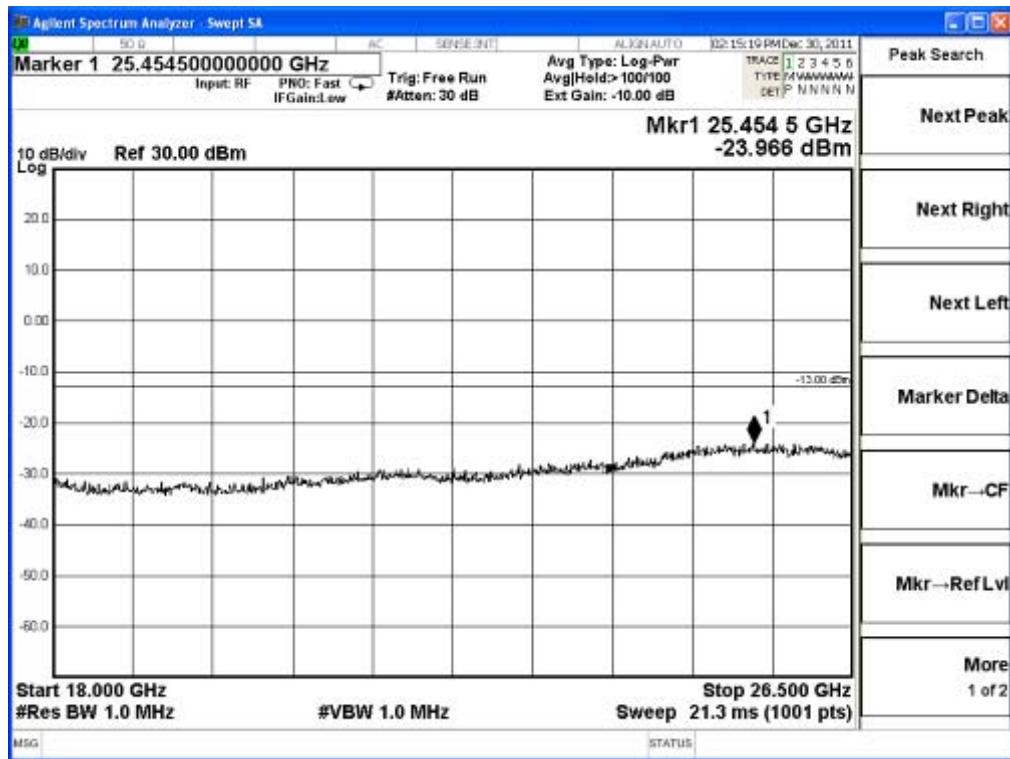
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	918.52	-34.795	≤-13
1000-6000	5635.00	-31.590	≤-13
6000-18000	17640.00	-31.027	≤-13
18000-26500	25658.50	-22.894	≤-13

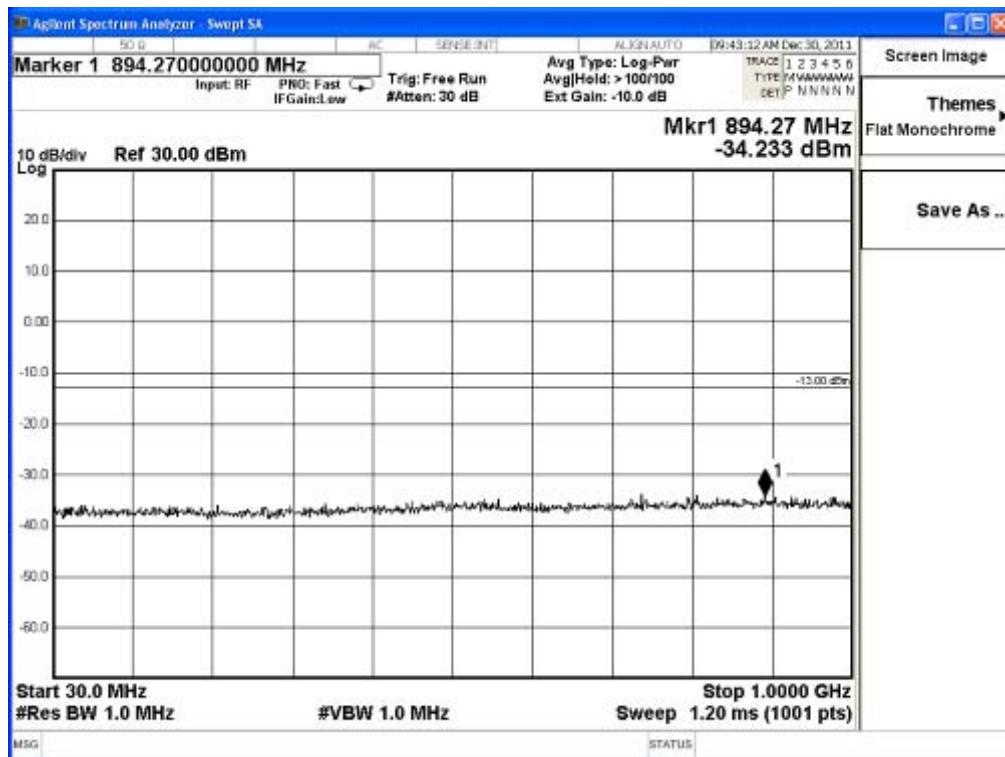
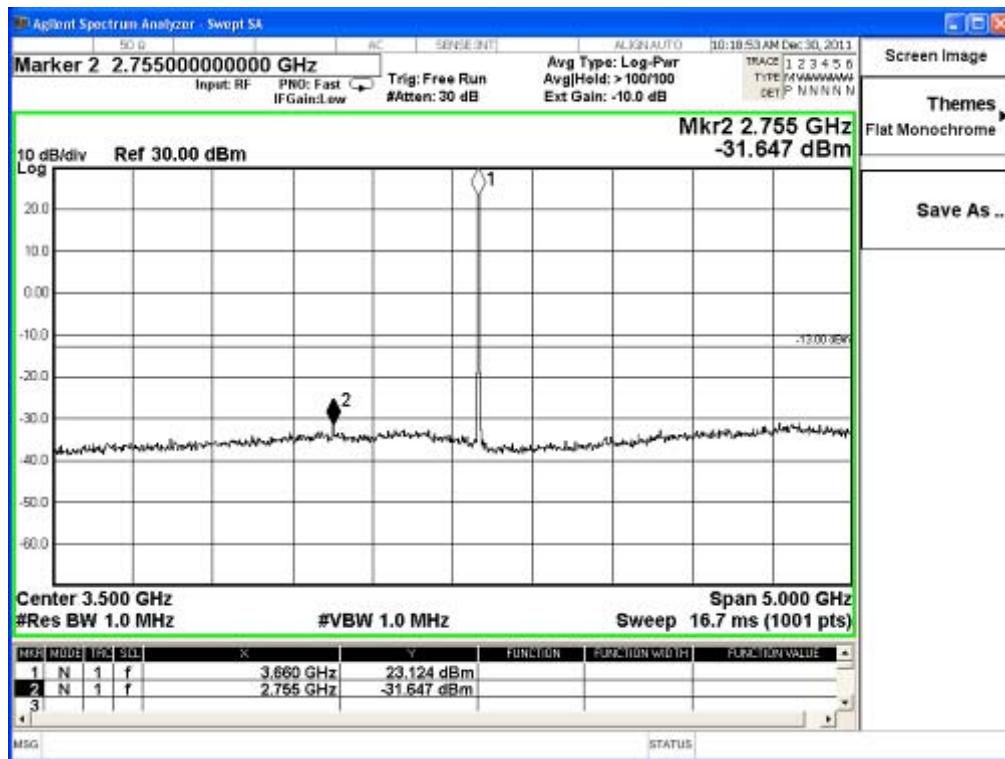
5MHz_3652.5MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

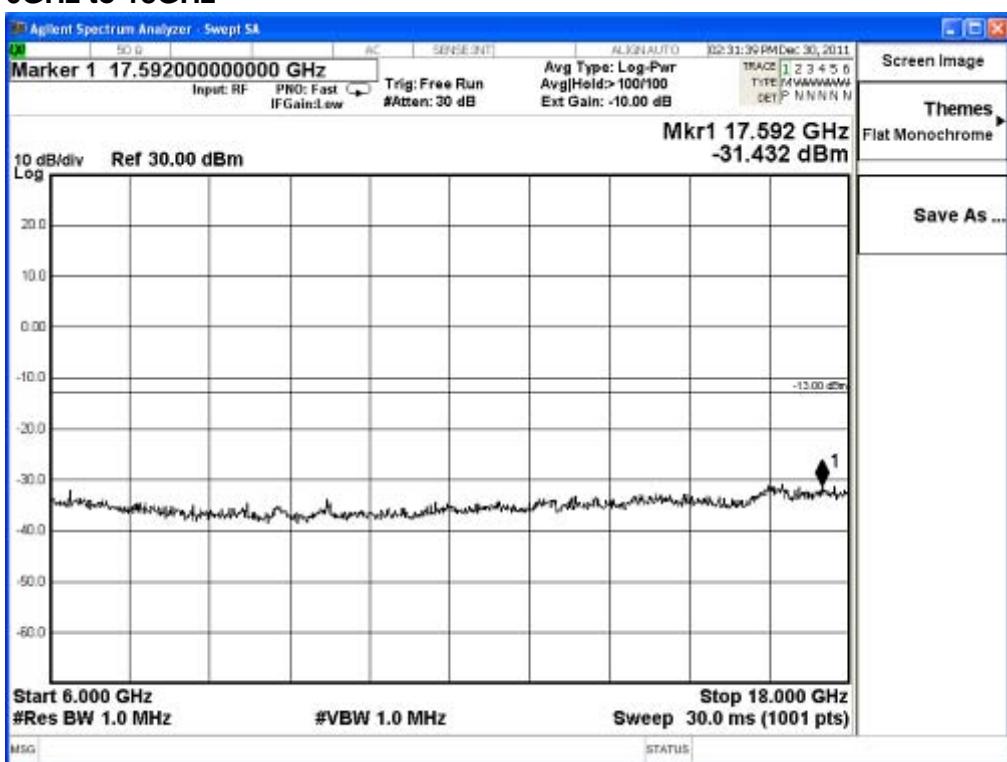


18GHz to 26GHz

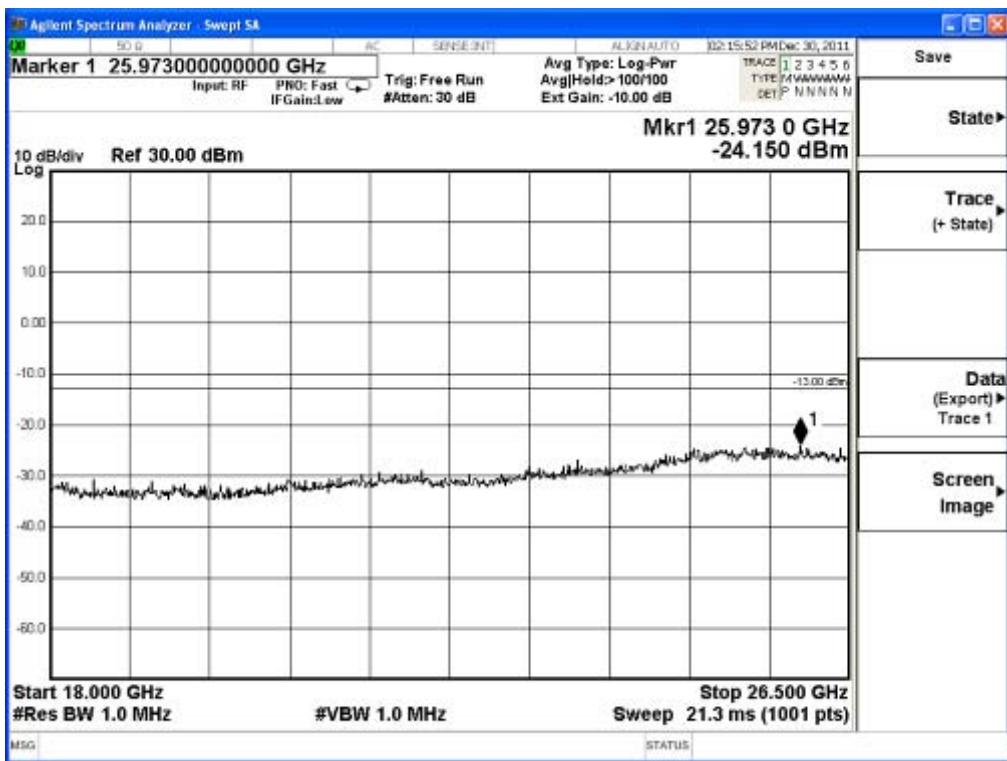


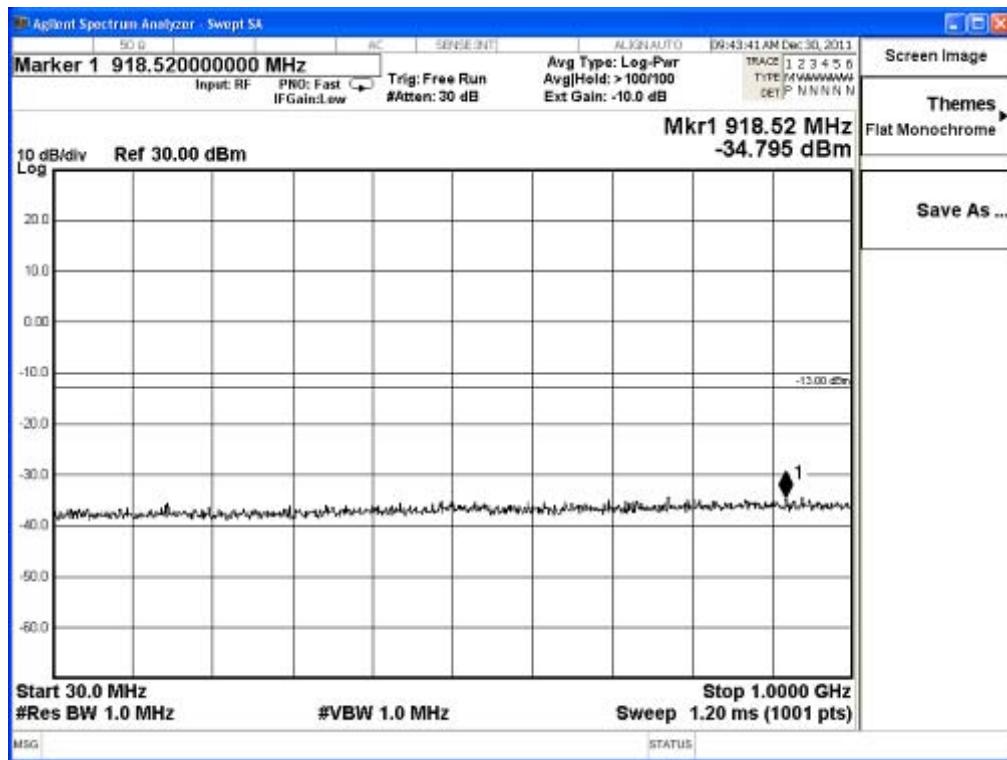
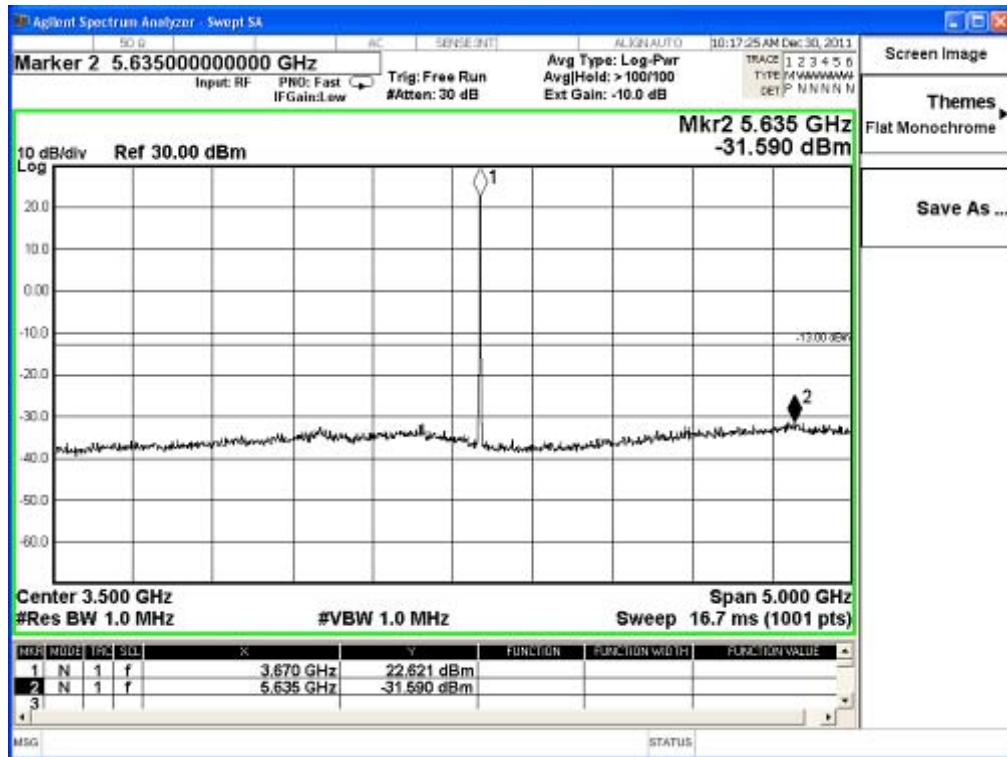
5MHz_3662.5MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

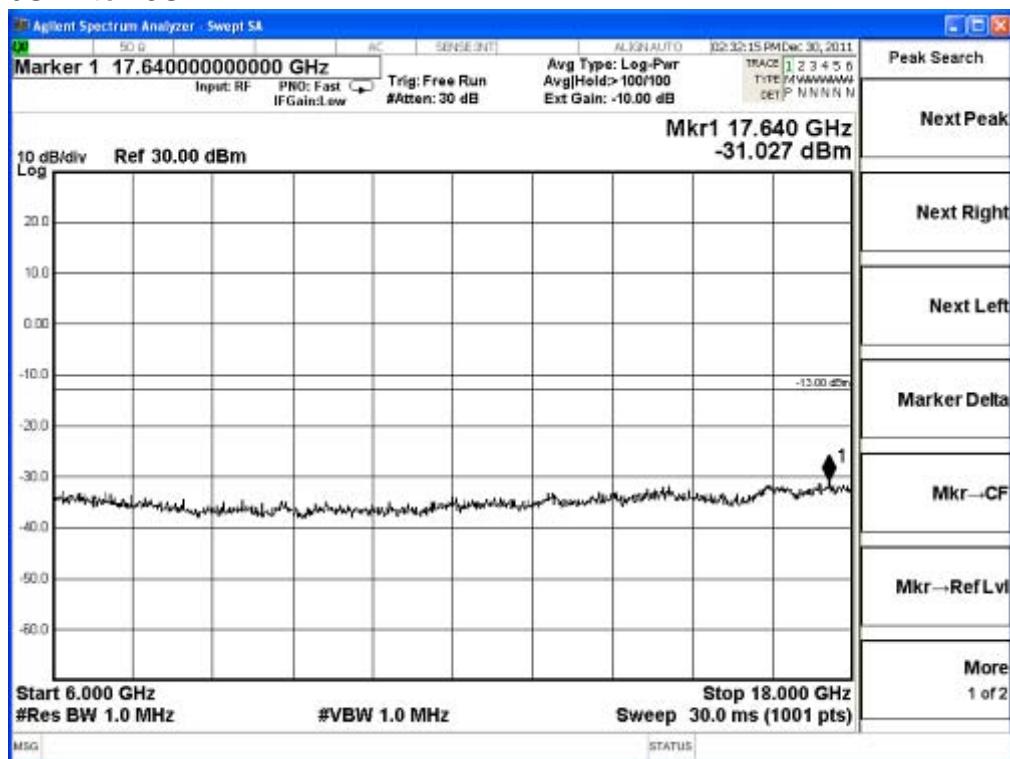


18GHz to 26GHz

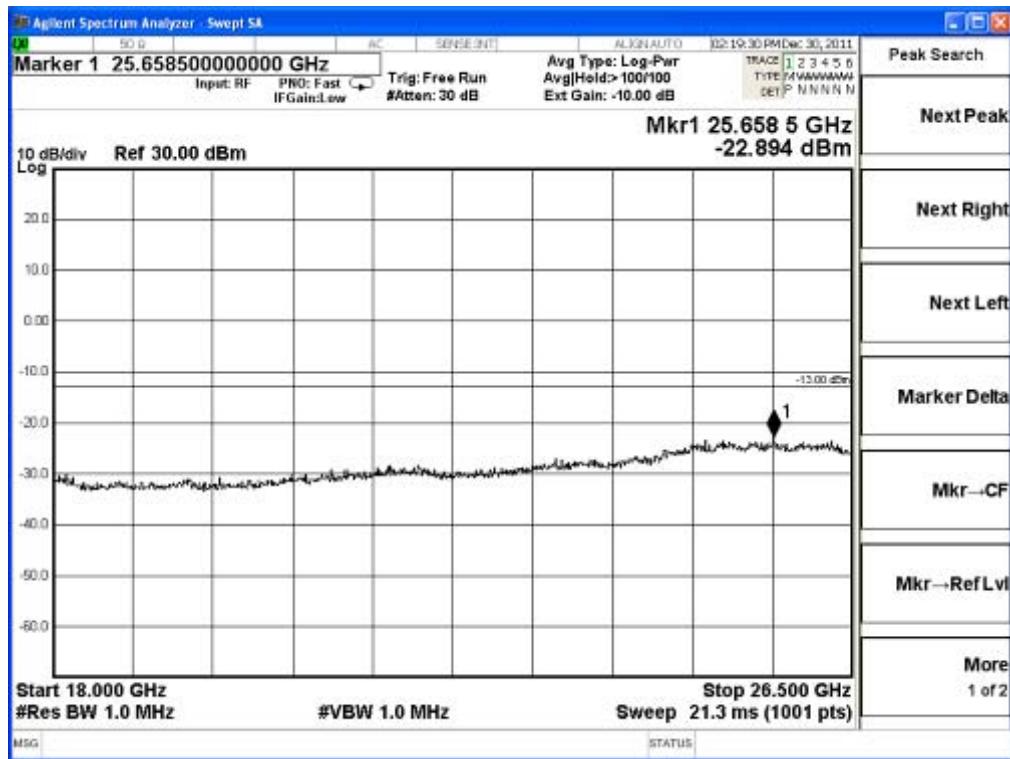


5MHz_3672.5MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 4: Transmit (7MHz BW_QPSK1/2)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 7MHz QPSK**Test Frequency: 3653.5MHz**

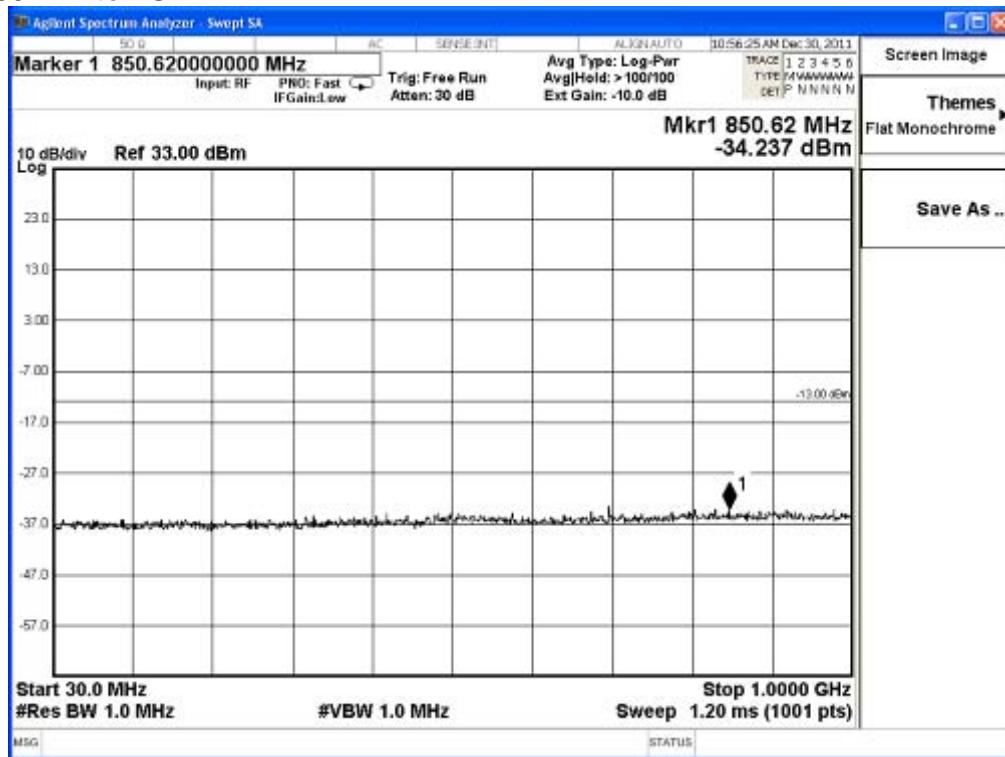
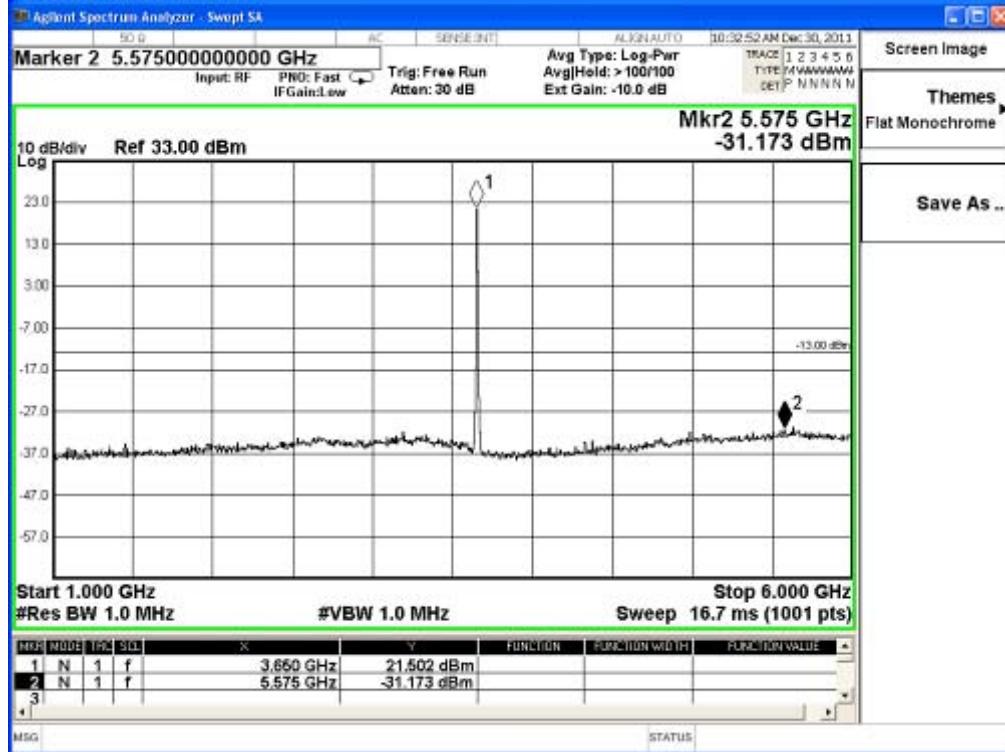
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	850.62	-34.237	≤-13
1000-6000	5575.00	-31.173	≤-13
6000-18000	17472.00	-30.451	≤-13
18000-26500	256500	-23.661	≤-13

Test Frequency: 3662.5MHz

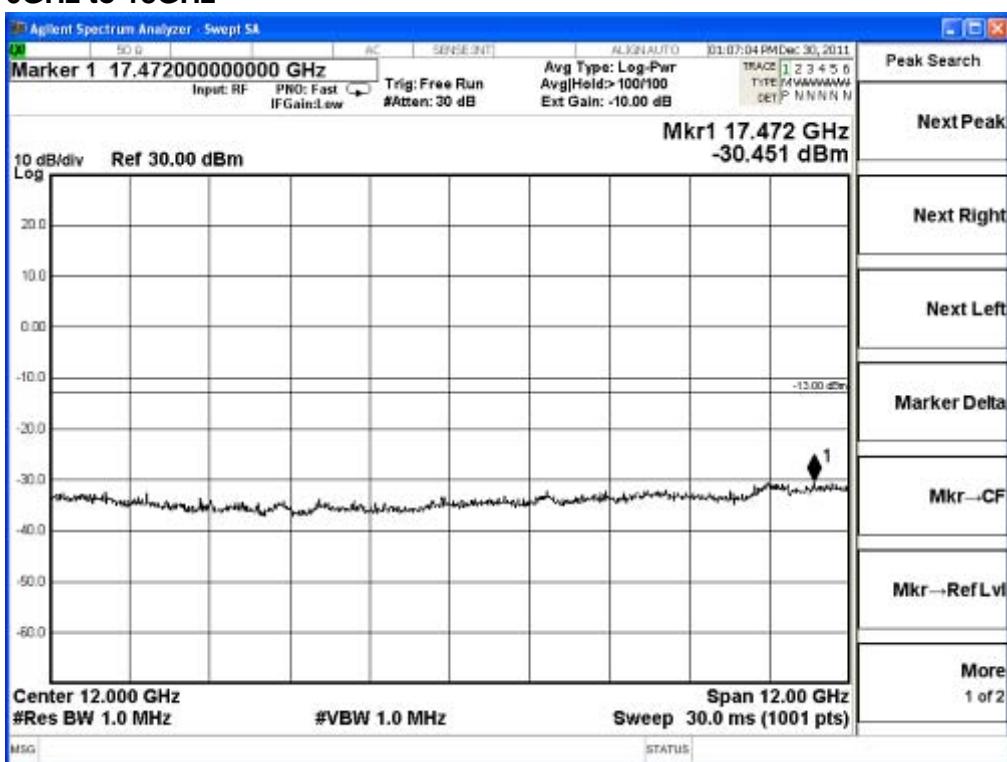
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	957.32	-34.050	≤-13
1000-6000	5790.00	-30.179	≤-13
6000-18000	17916.00	-31.555	≤-13
18000-26500	25726.50	-24.518	≤-13

Test Frequency: 3671.5MHz

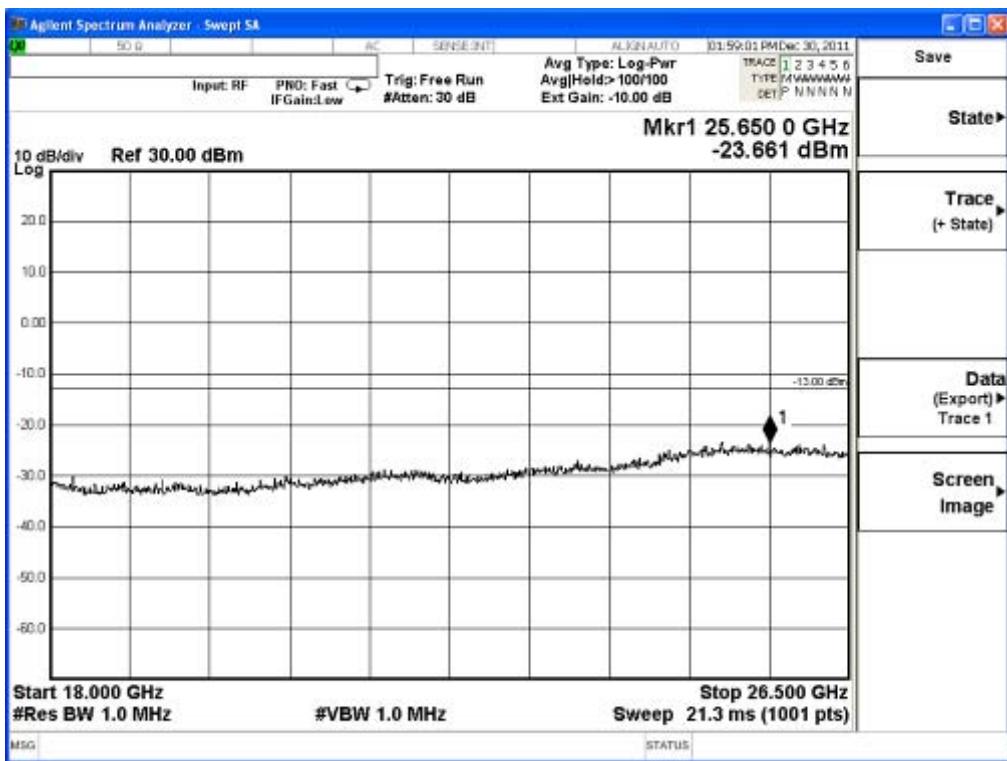
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	114.39	-34.357	≤-13
1000-6000	5625.00	-31.473	≤-13
6000-18000	16944.00	-29.901	≤-13
18000-26500	25641.50	-24.307	≤-13

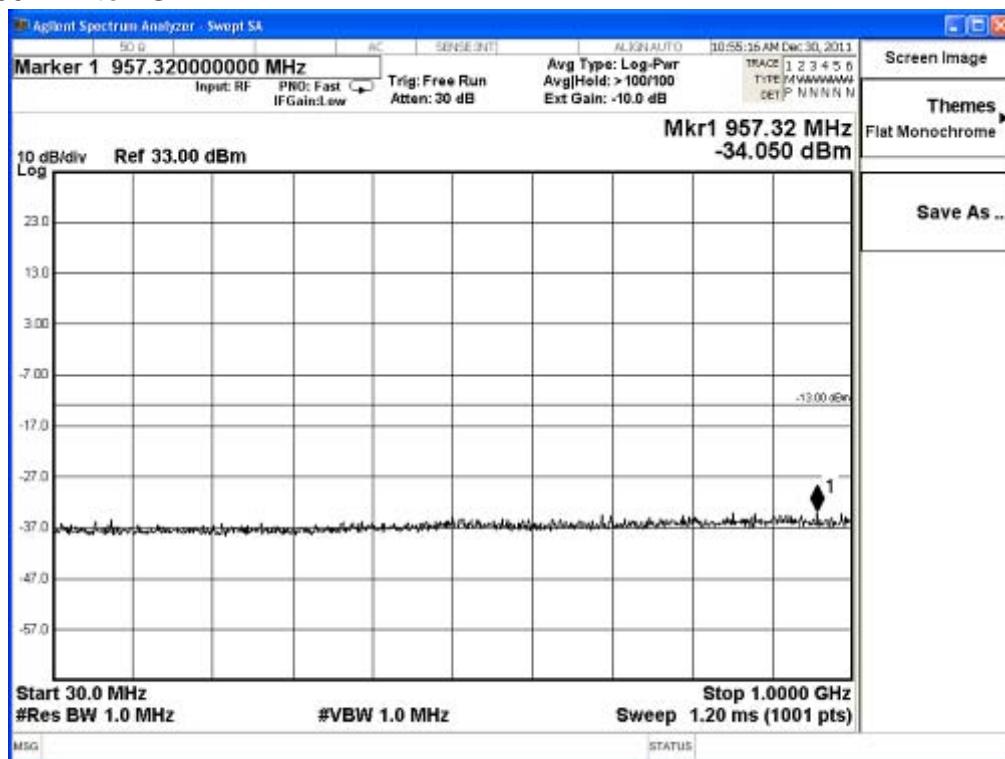
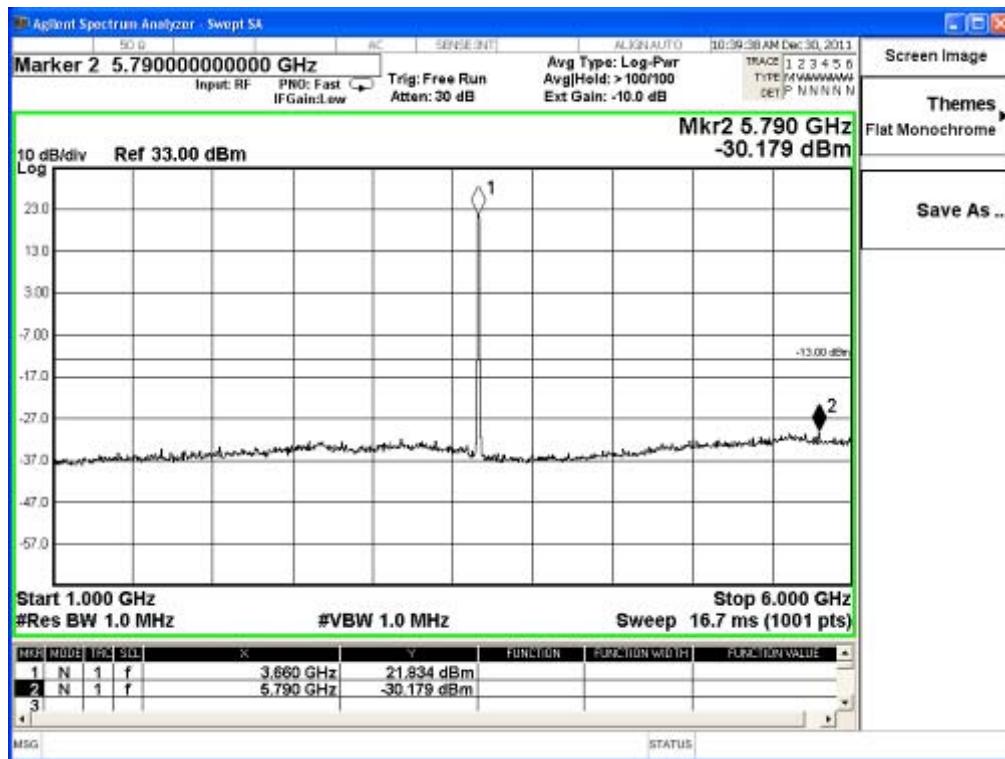
7MHz_3653.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

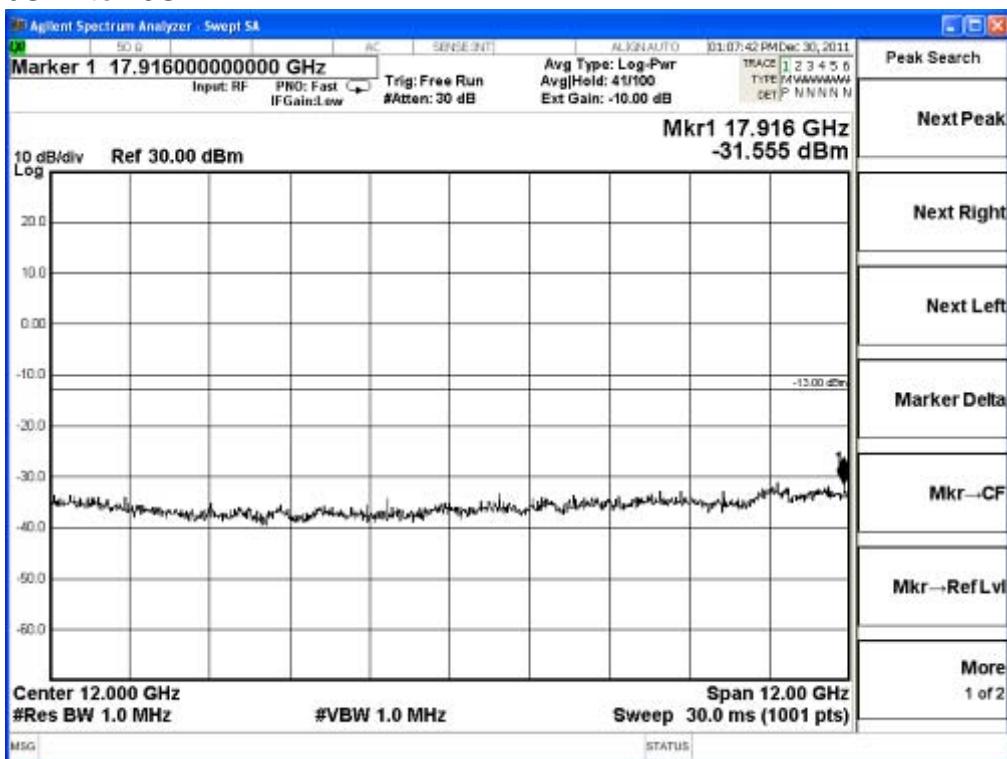


18GHz to 26GHz

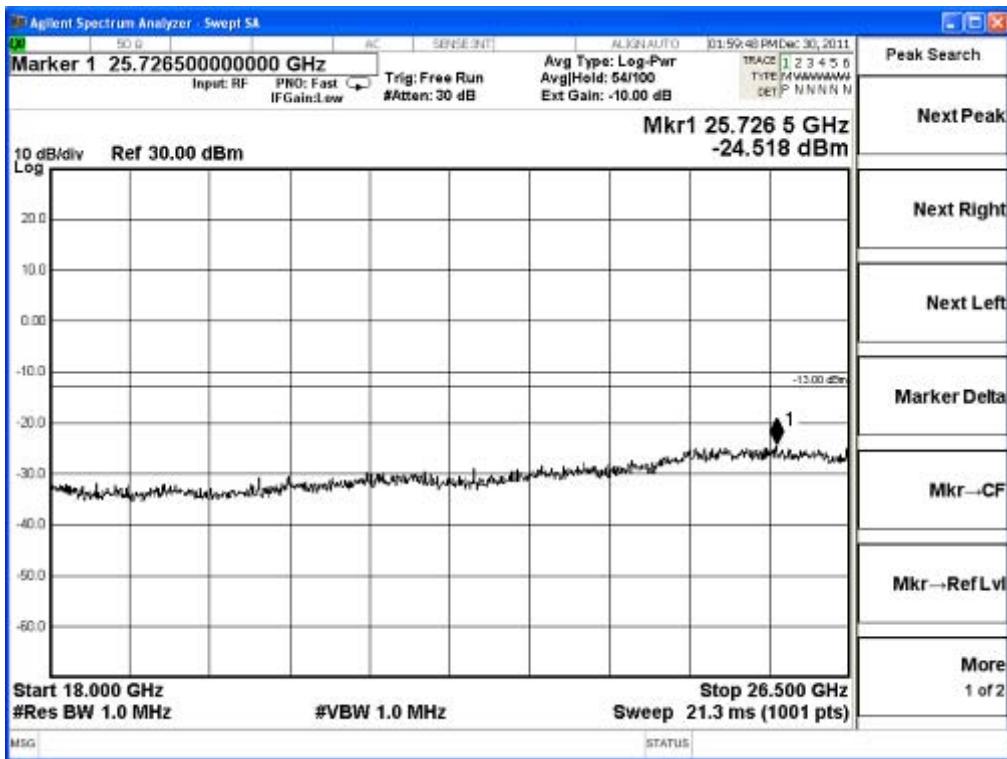


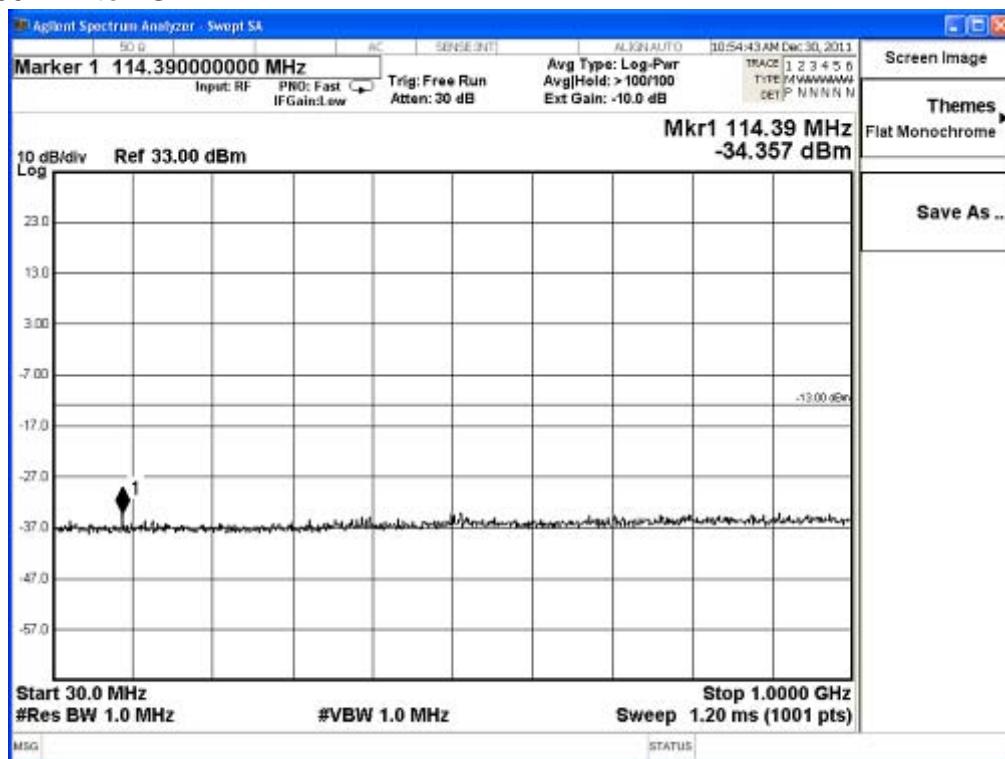
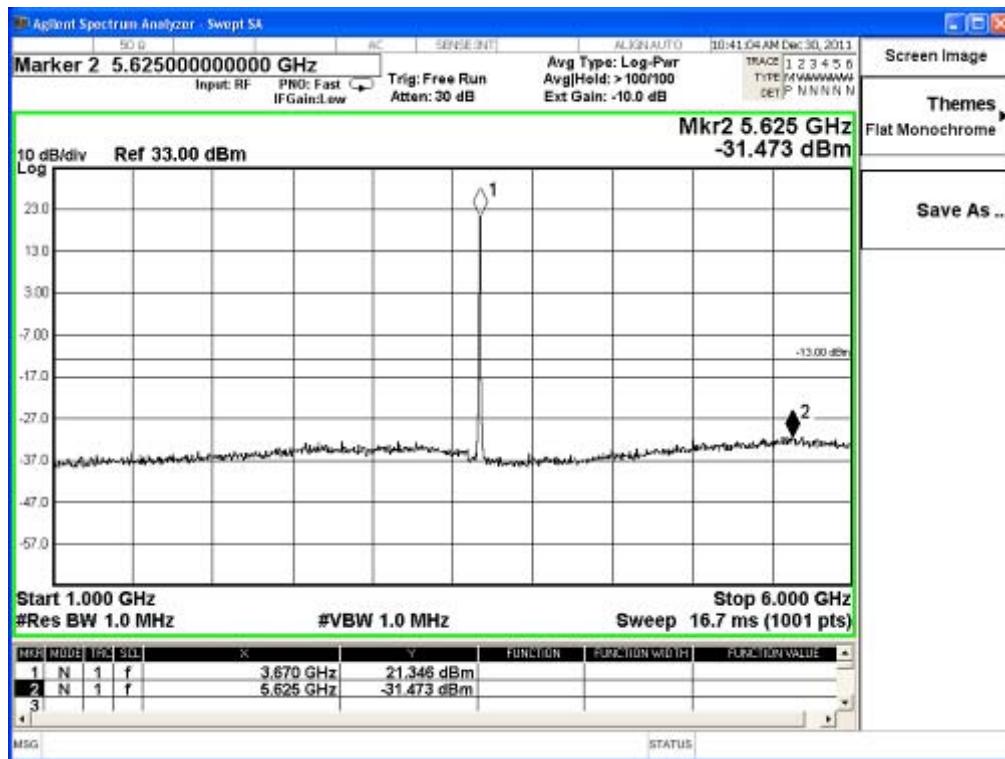
7MHz_3662.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

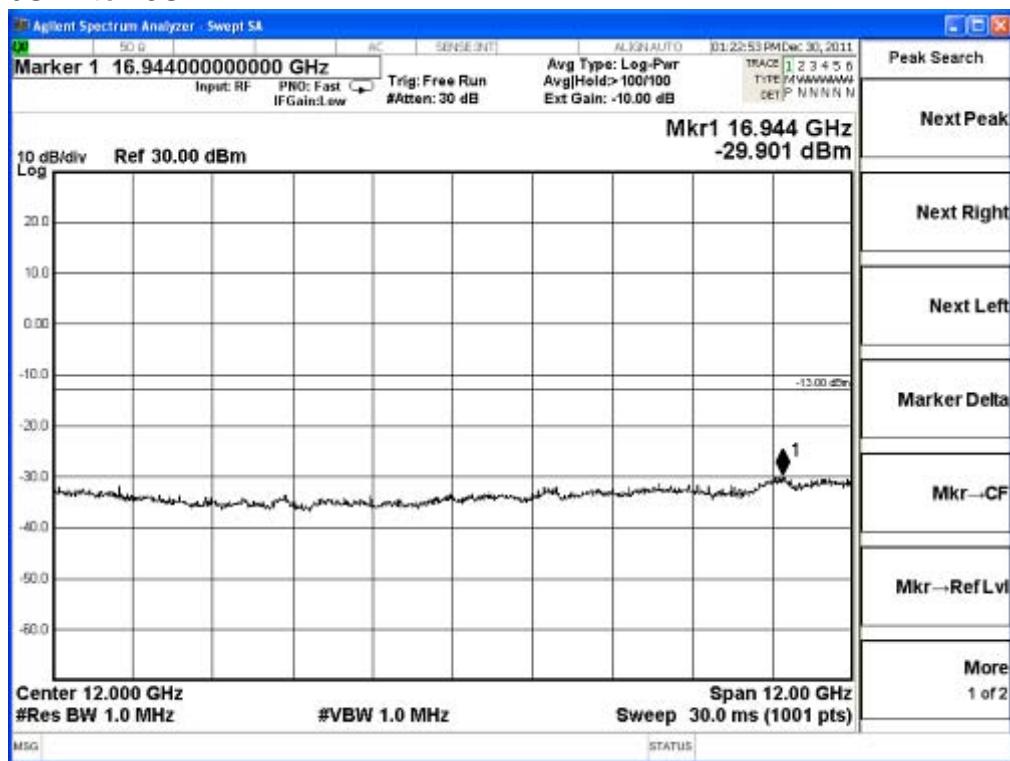


18GHz to 26GHz

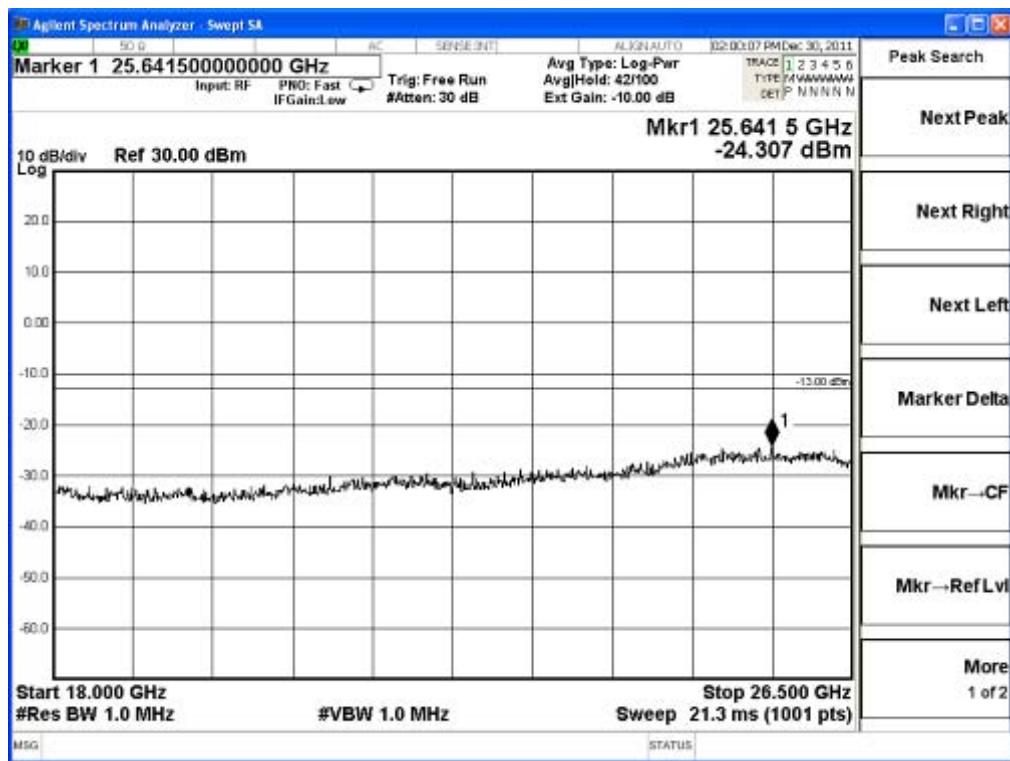


7MHz_3671.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 5: Transmit (7MHz BW_16QAM1/2)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 7MHz 16QAM**Test Frequency: 3653.5MHz**

Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	852.56	-33.815	≤-13
1000-6000	5565.00	-30.510	≤-13
6000-18000	17568.00	-30.705	≤-13
18000-26500	25403.50	-24.148	≤-13

Test Frequency: 3662.5MHz

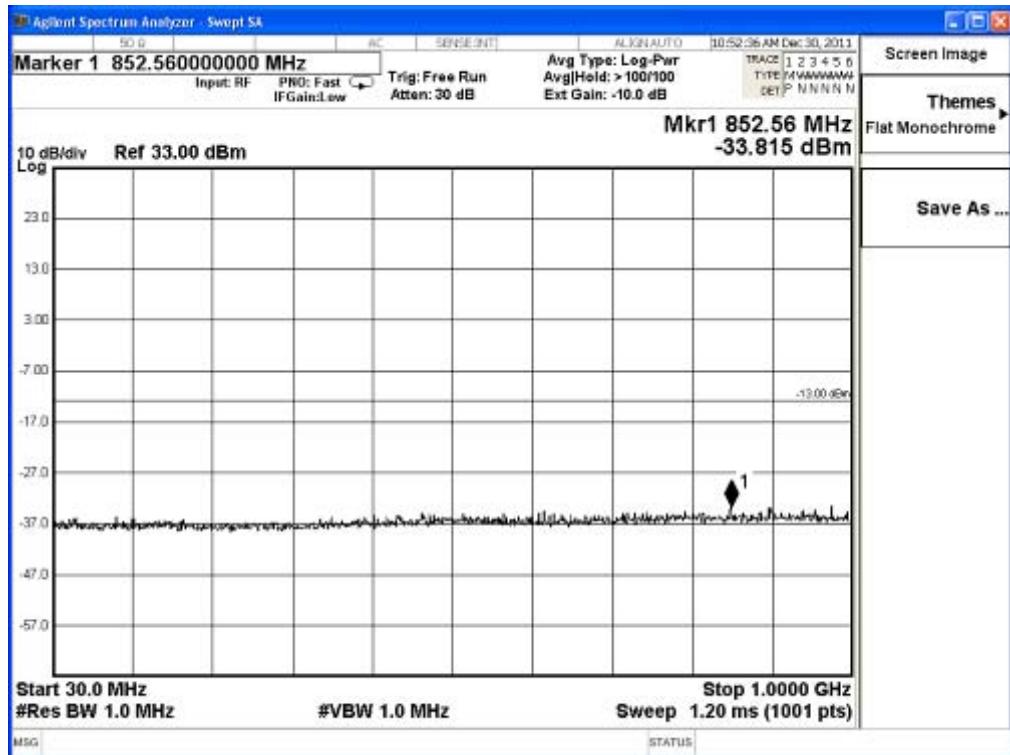
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	721.61	-33.868	≤-13
1000-6000	5590.00	-31.719	≤-13
6000-18000	17808.00	-31.667	≤-13
18000-26500	25480.00	-24.332	≤-13

Test Frequency: 3671.5MHz

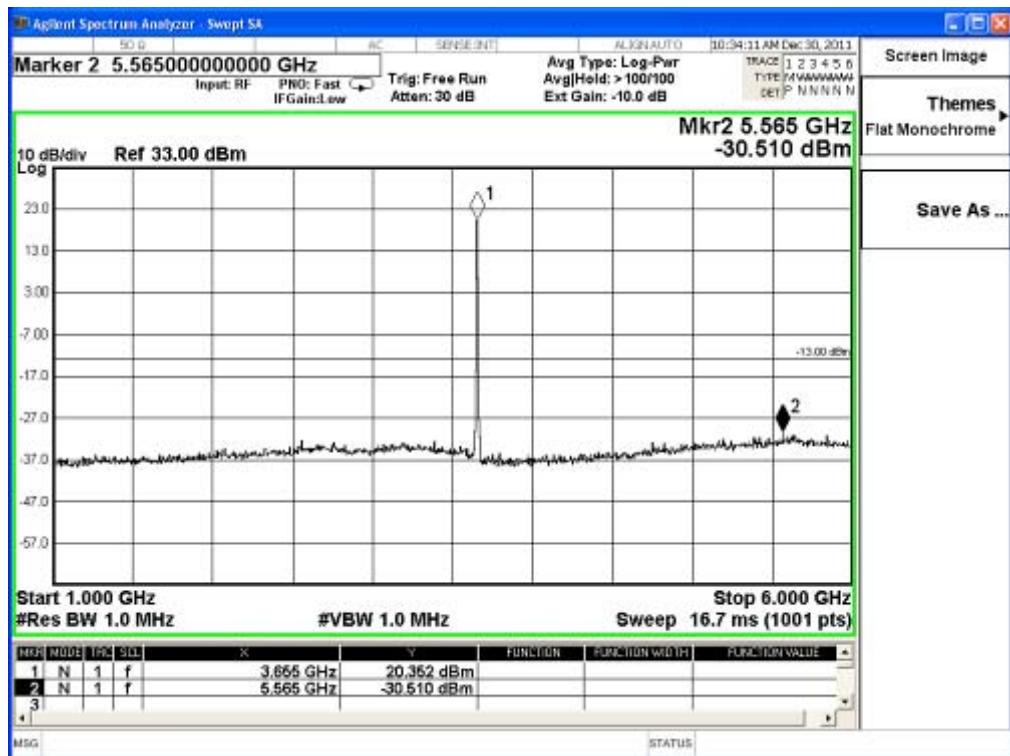
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	685.72	-34.647	≤-13
1000-6000	5580.00	-31.329	≤-13
6000-18000	16752.00	-30.012	≤-13
18000-26500	25361.00	-24.639	≤-13

7MHz_3653.5MHz_16QAM1/2

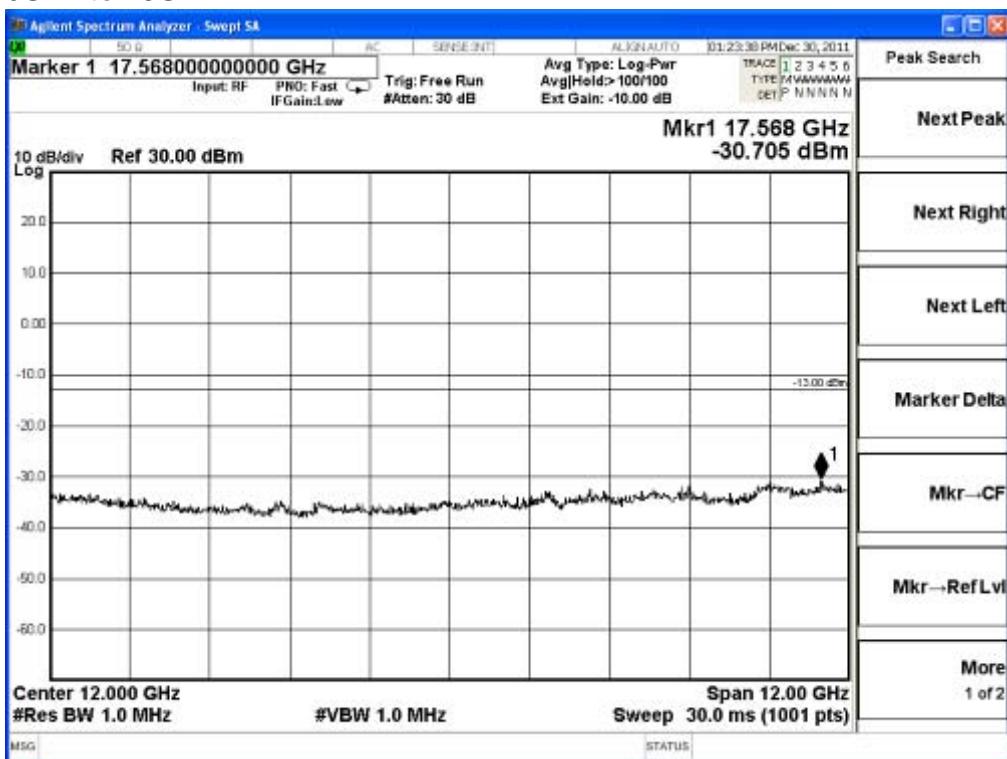
30MHz to 1GHz



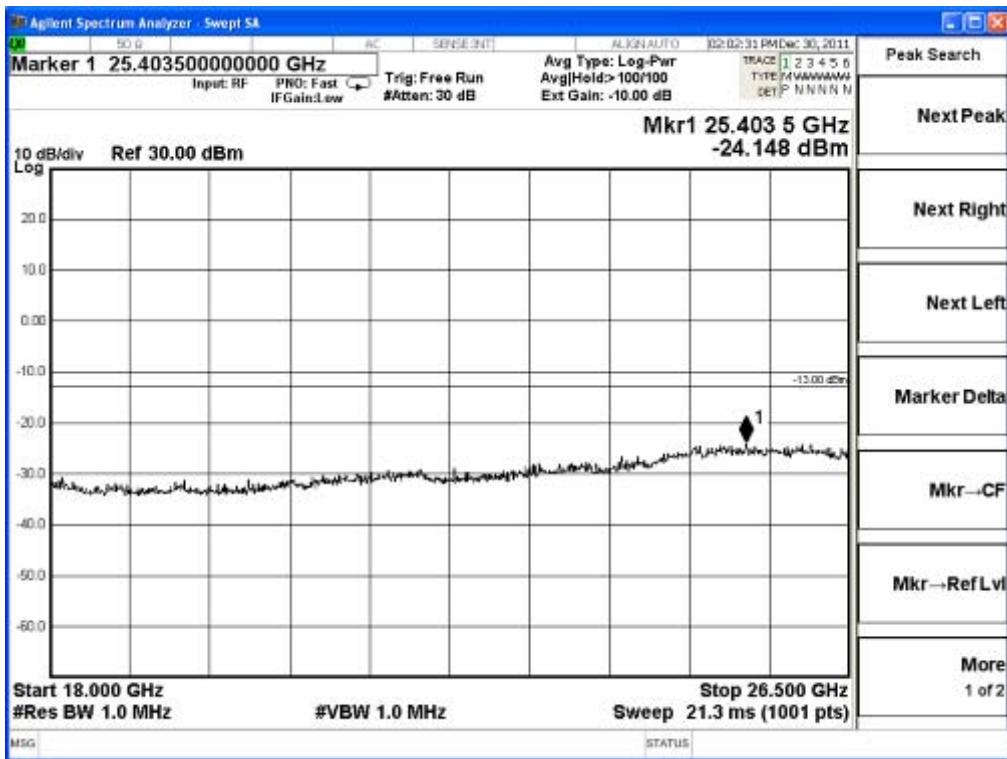
1GHz to 6GHz

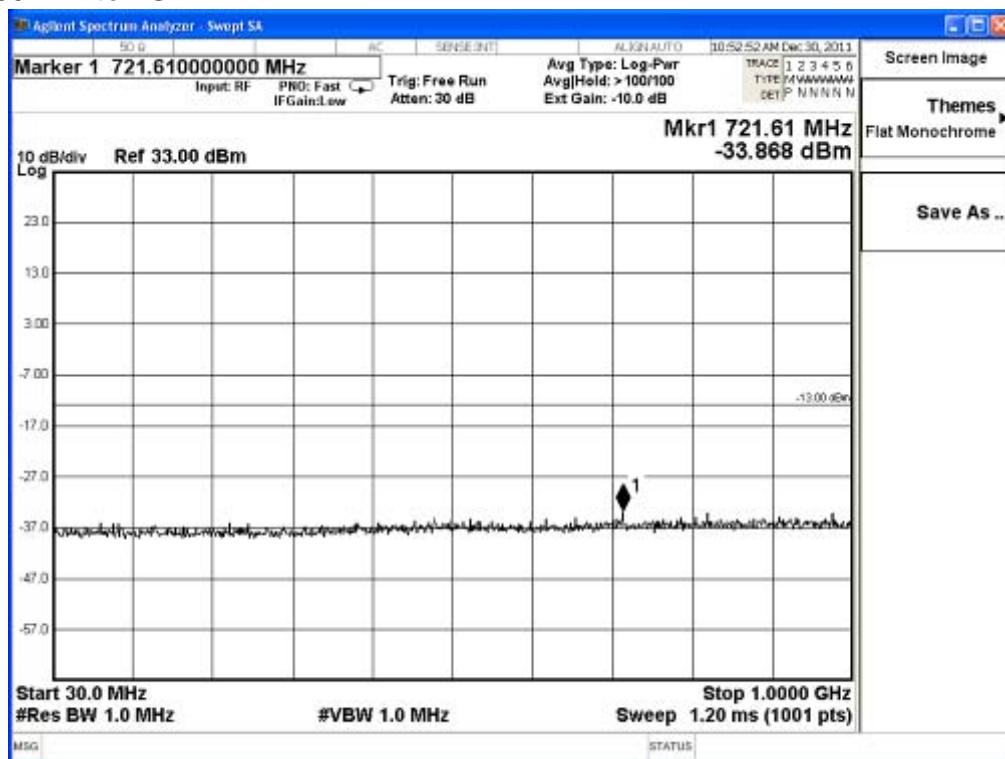
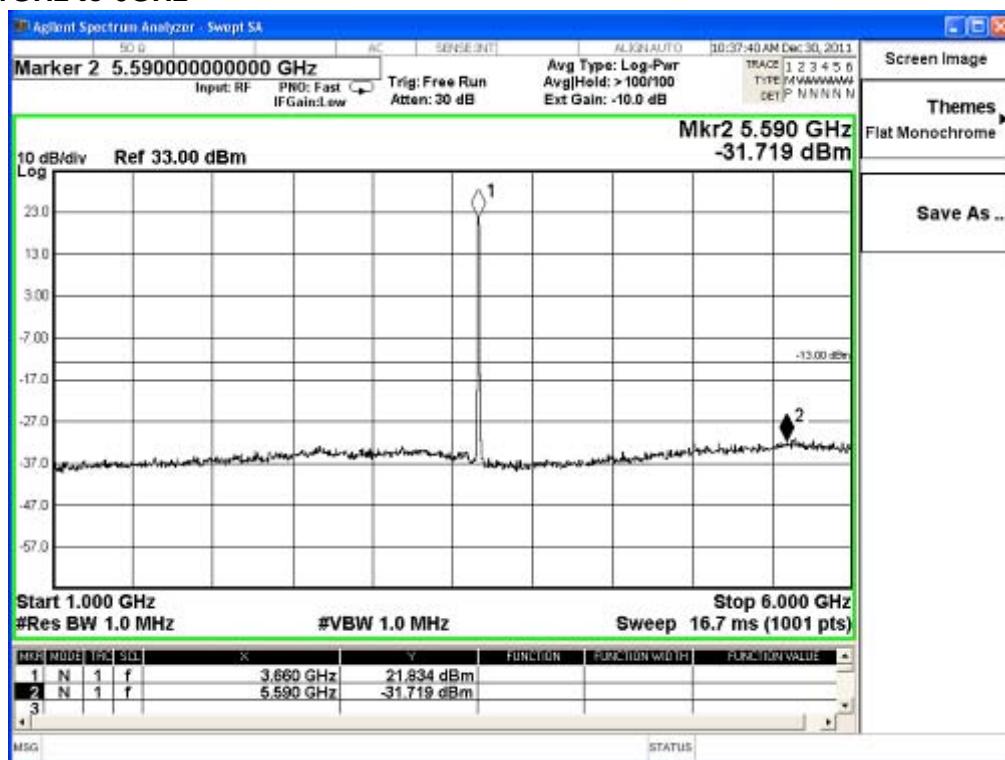


6GHz to 18GHz

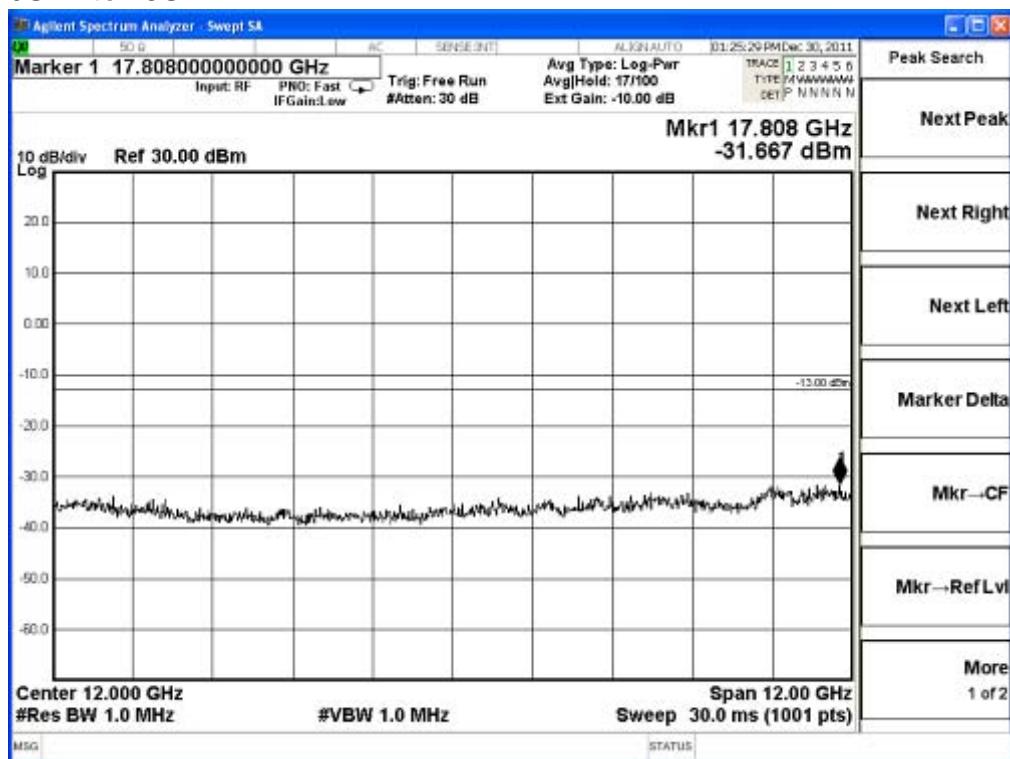


18GHz to 26GHz

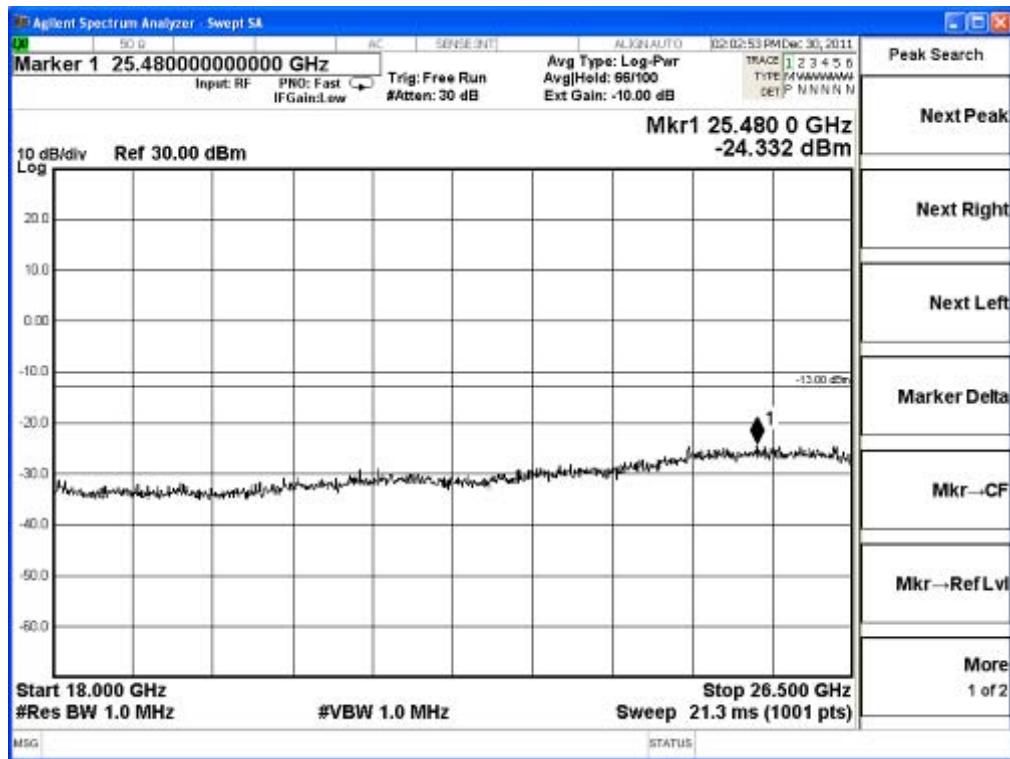


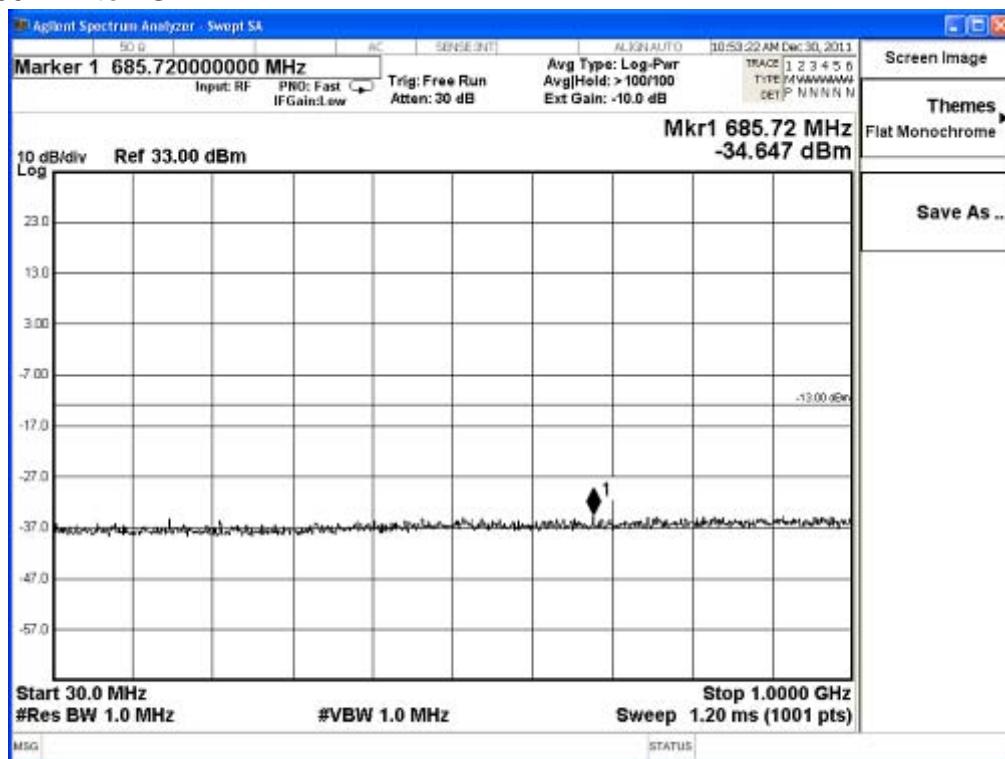
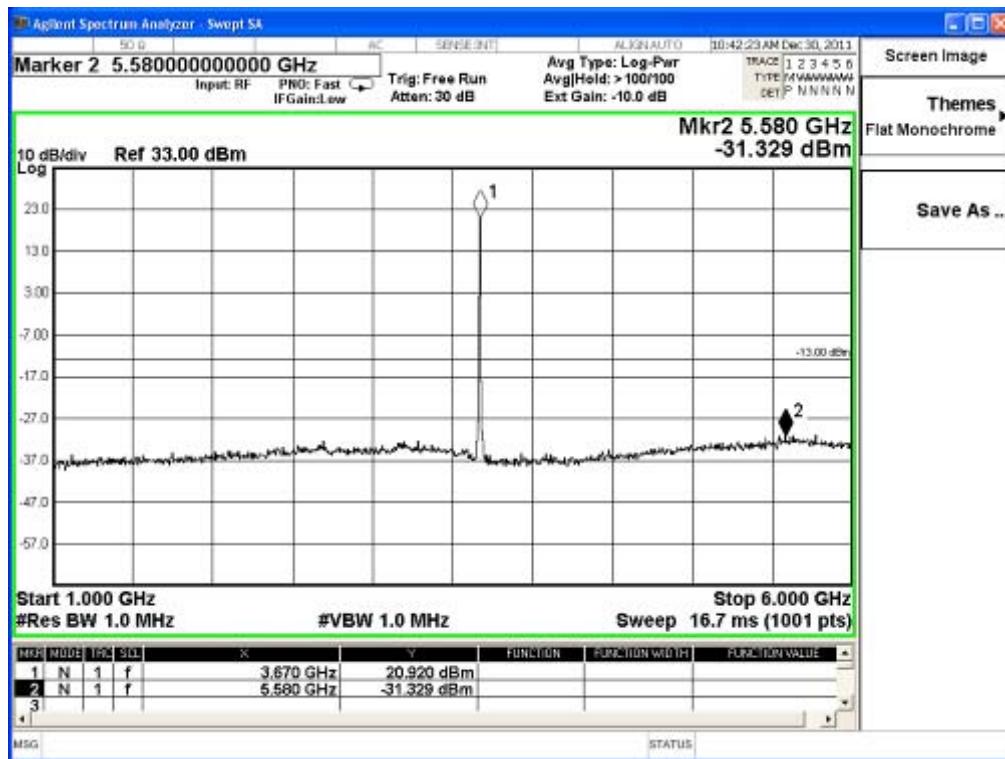
7MHz_3662.5MHz_16QAM1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

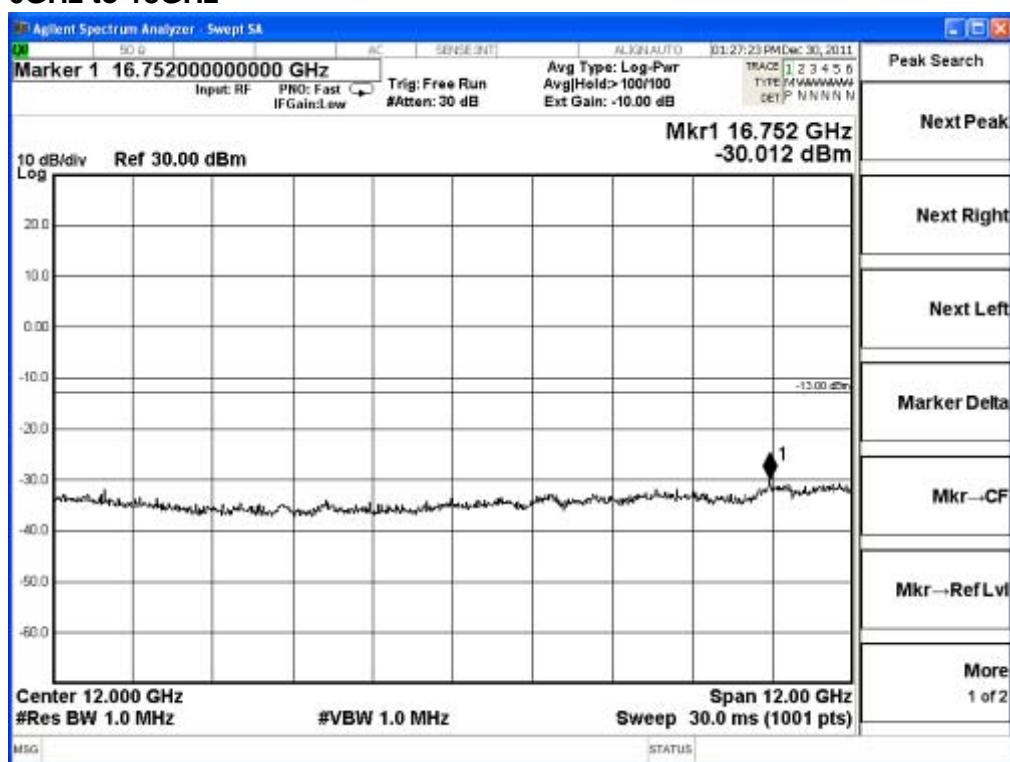


18GHz to 26GHz

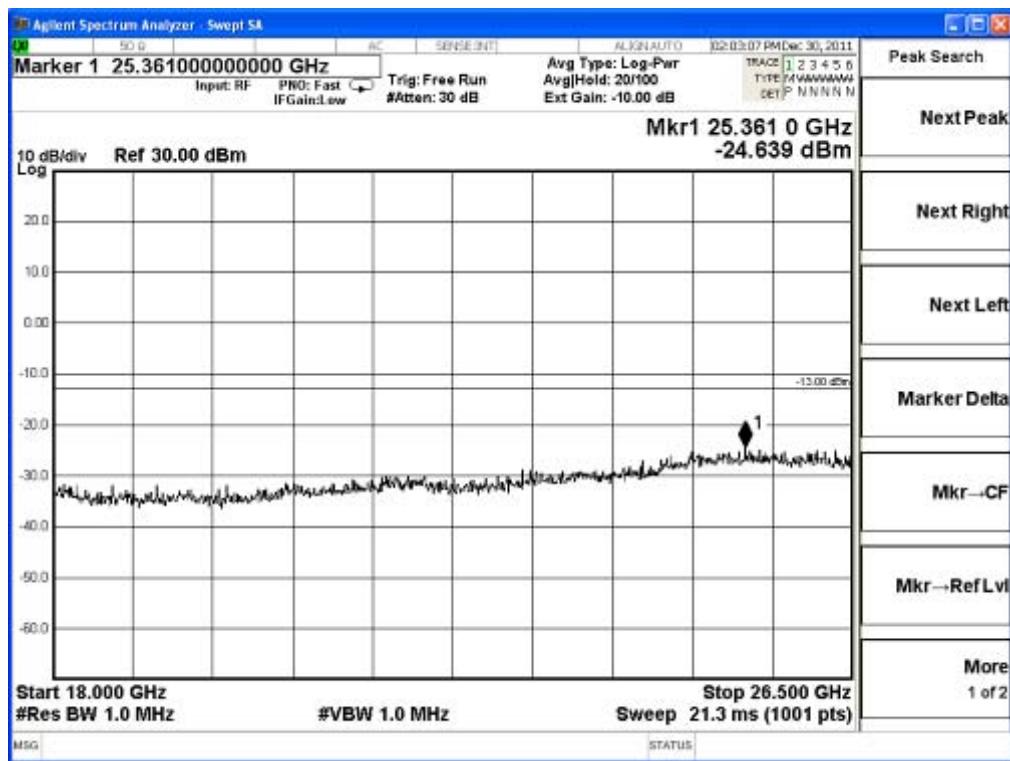


7MHz_3671.5MHz_16QAM1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 6: Transmit (7MHz BW_64QAM2/3)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 7MHz 64QAM**Test Frequency: 3653.5MHz**

Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	987.39	-33.931	≤-13
1000-6000	5725.00	-31.494	≤-13
6000-18000	17064.00	-31.166	≤-13
18000-26500	25157.00	-23.442	≤-13

Test Frequency: 3662.5MHz

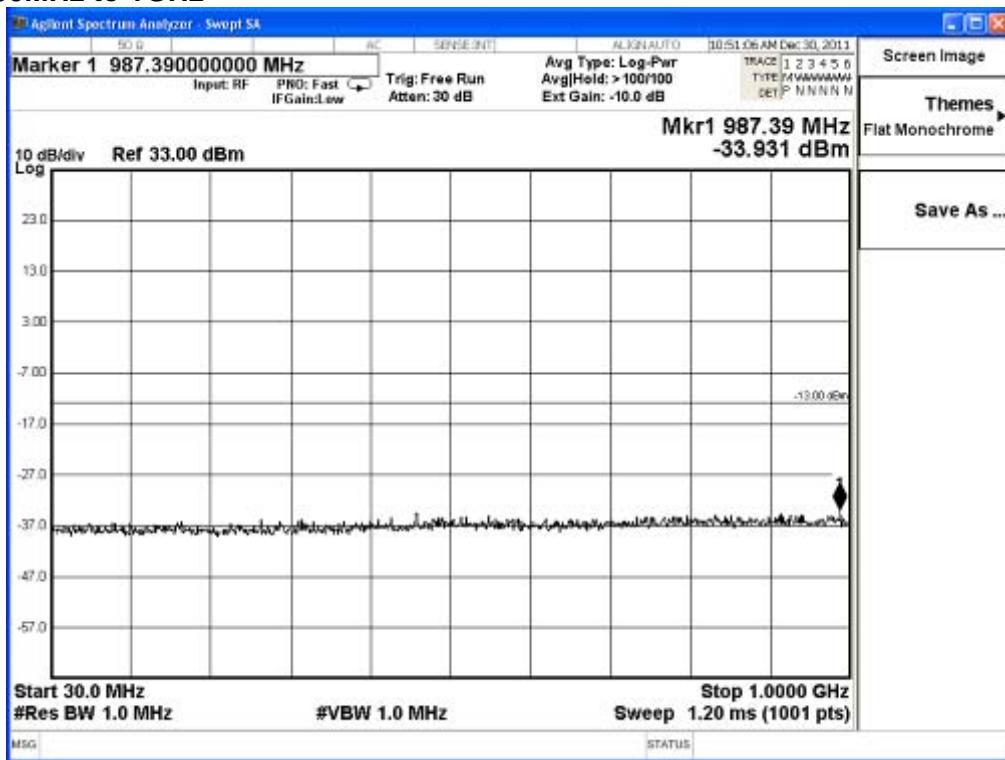
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	791.45	-35.399	≤-13
1000-6000	5545.00	-31.742	≤-13
6000-18000	17016.00	-31.099	≤-13
18000-26500	25709.50	-24.034	≤-13

Test Frequency: 3671.5MHz

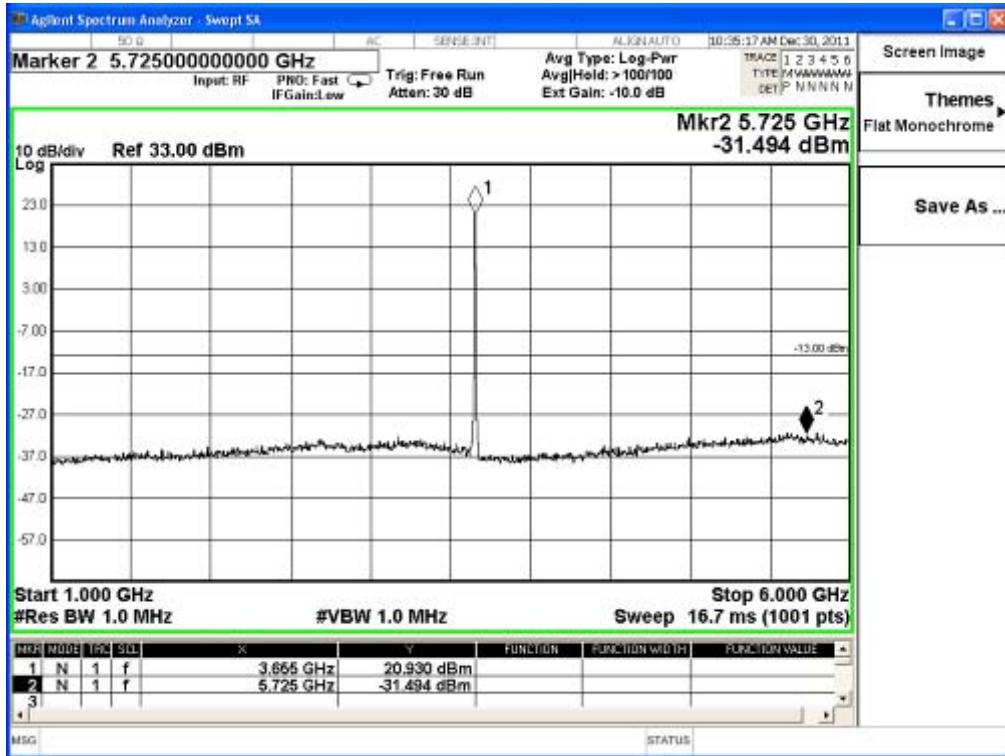
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	951.50	-34.422	≤-13
1000-6000	5560.00	-30.048	≤-13
6000-18000	17064.00	-31.313	≤-13
18000-26500	26151.50	-23.602	≤-13

7MHz_3653.5MHz_64QAM2/3

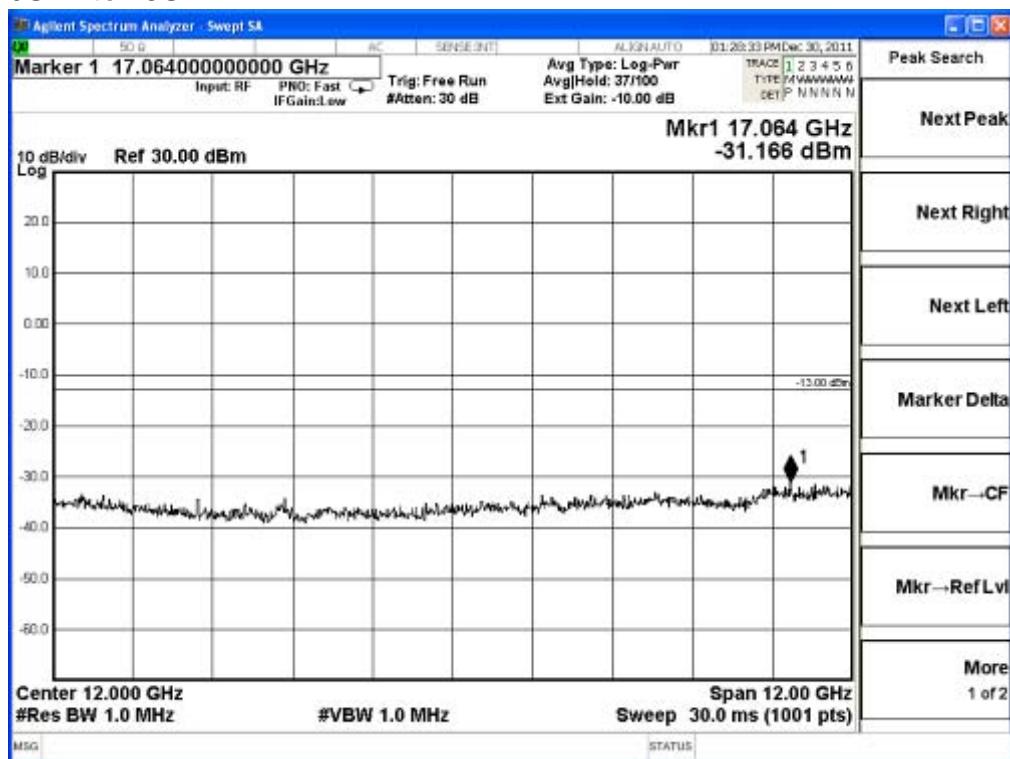
30MHz to 1GHz



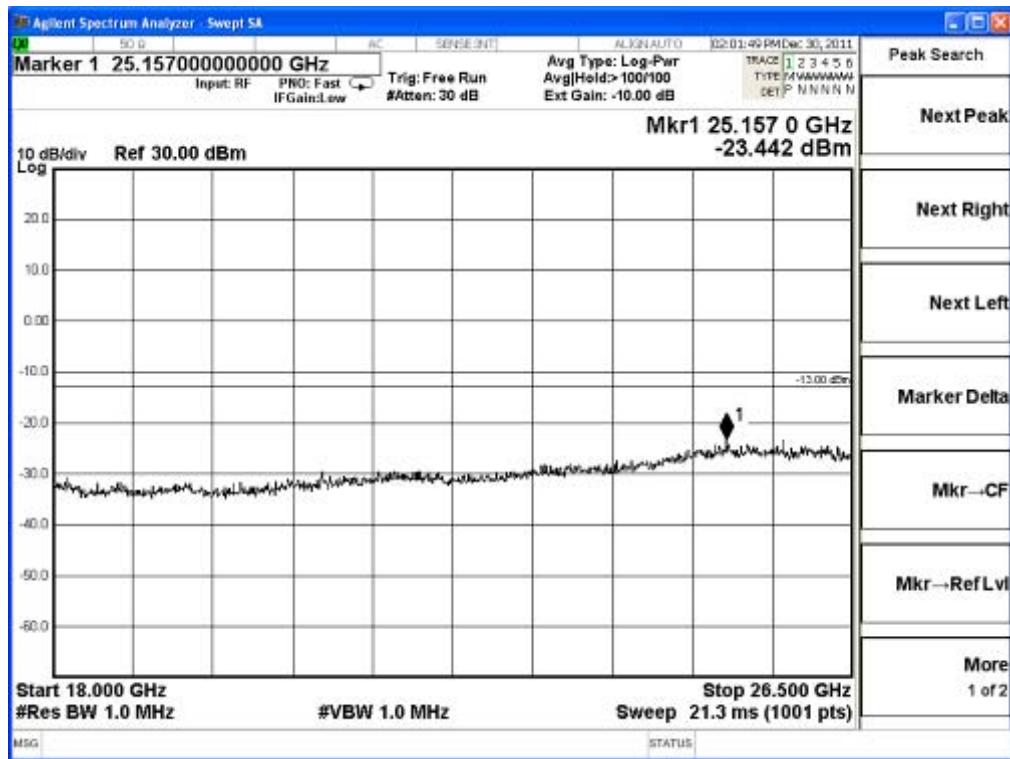
1GHz to 6GHz

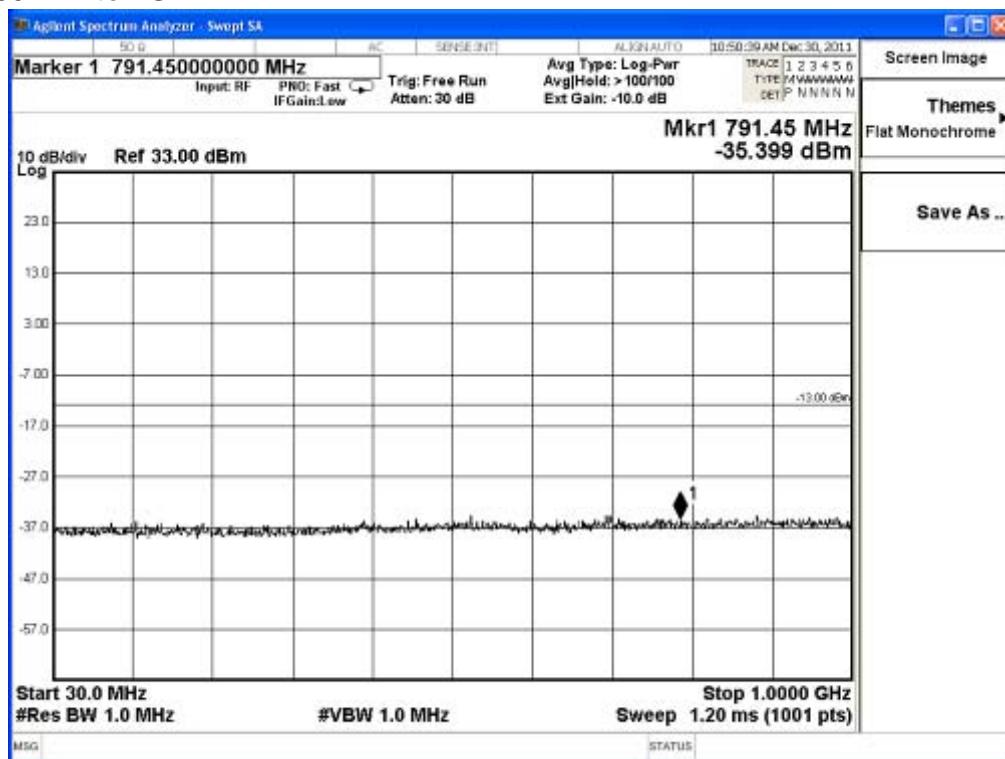
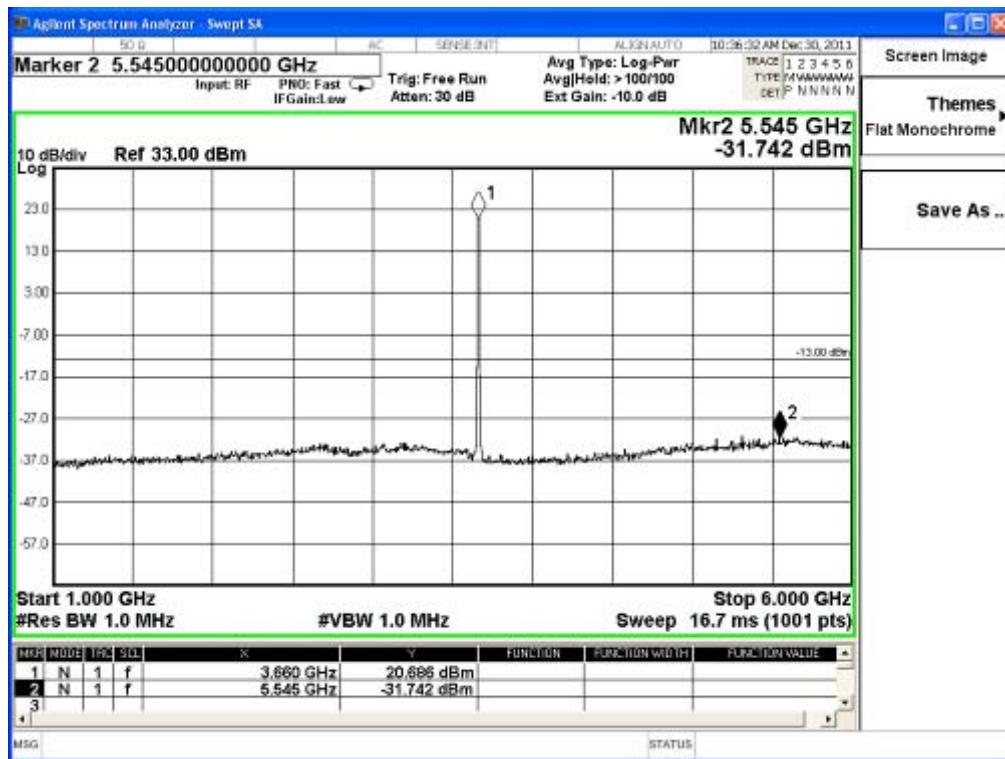


6GHz to 18GHz

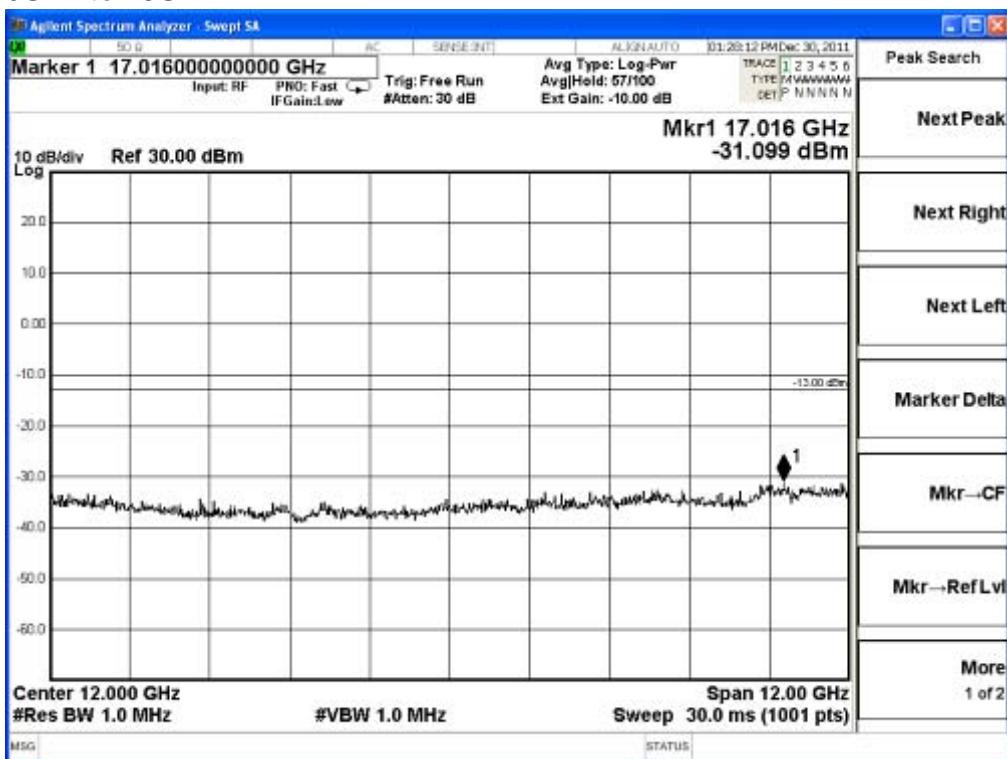


18GHz to 26GHz

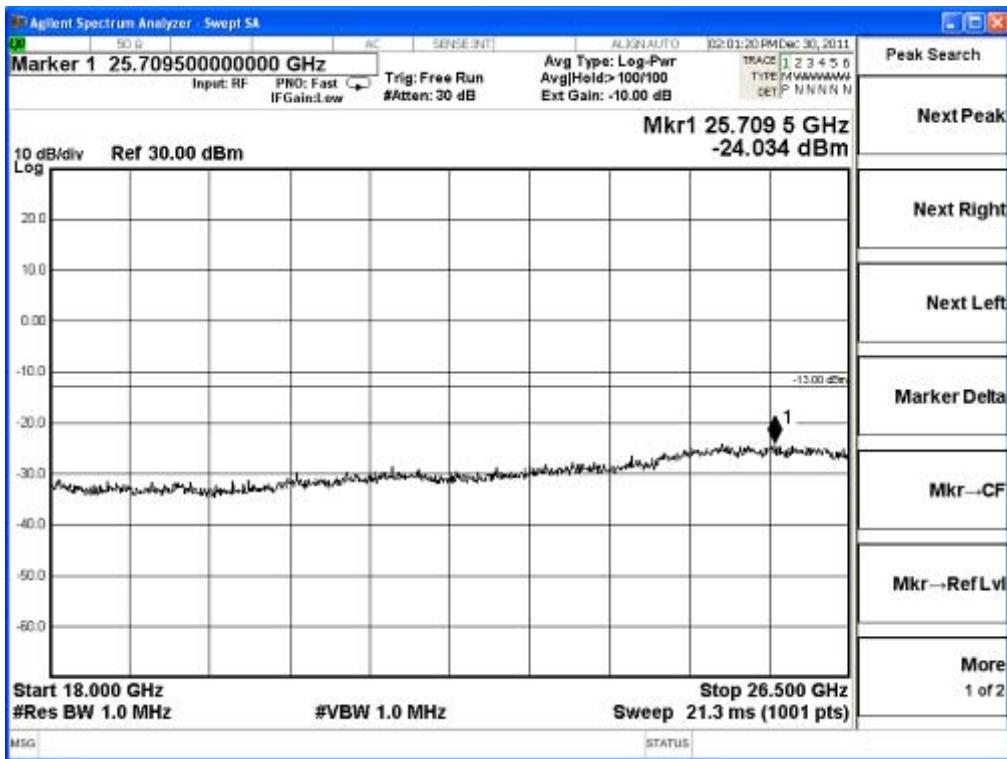


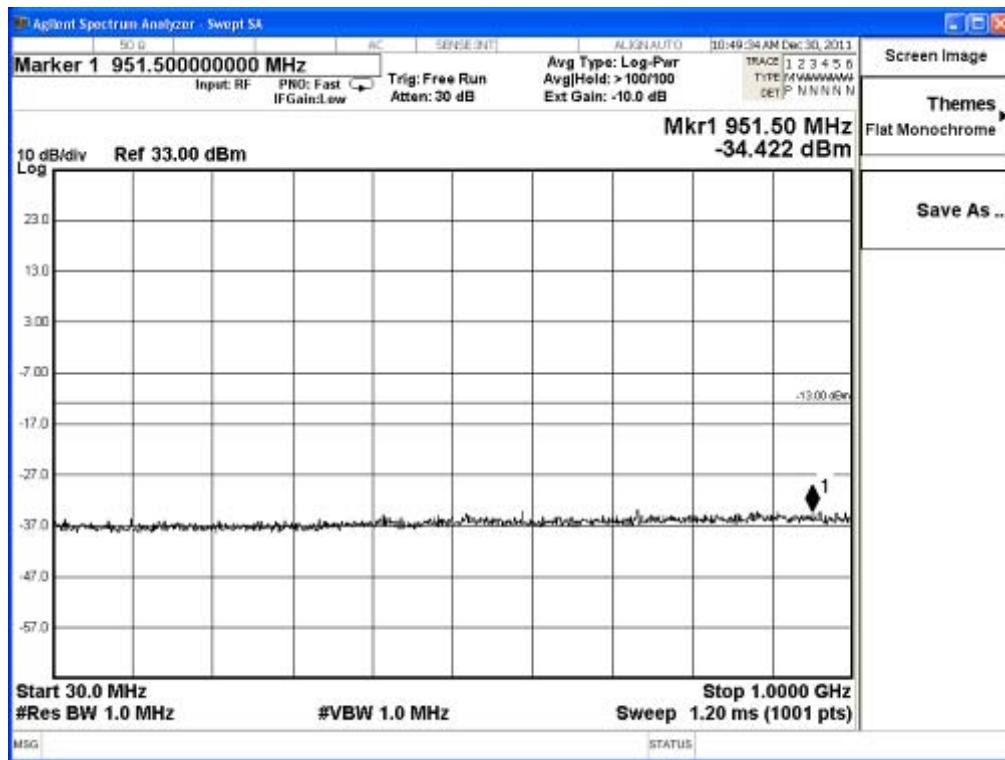
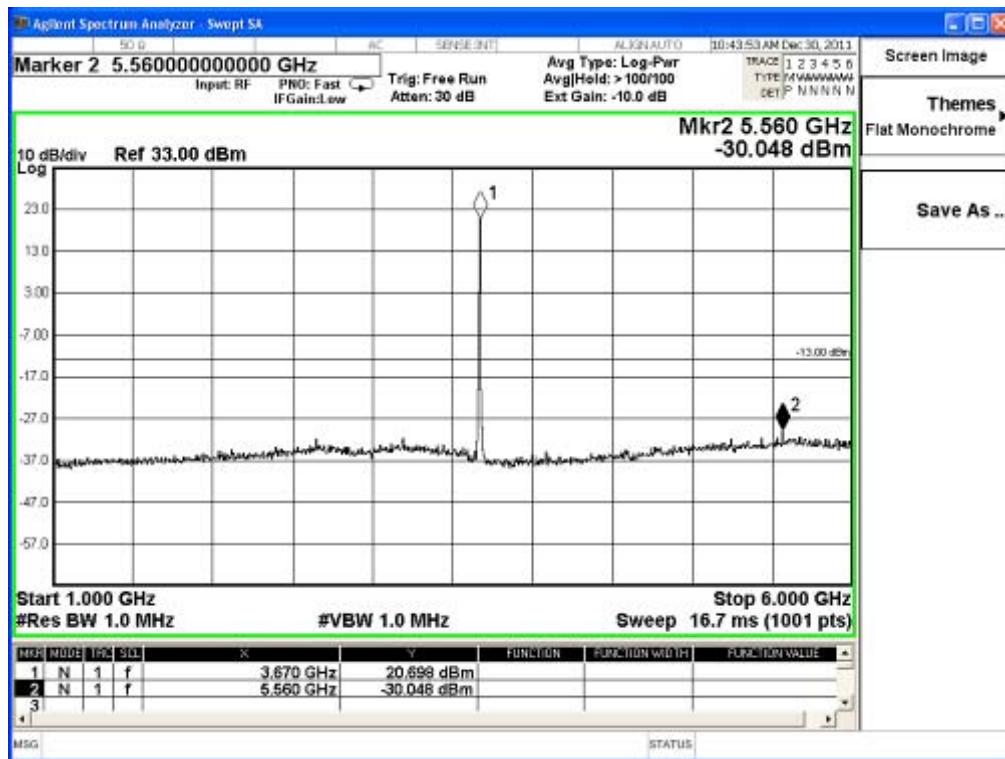
7MHz_3662.5MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

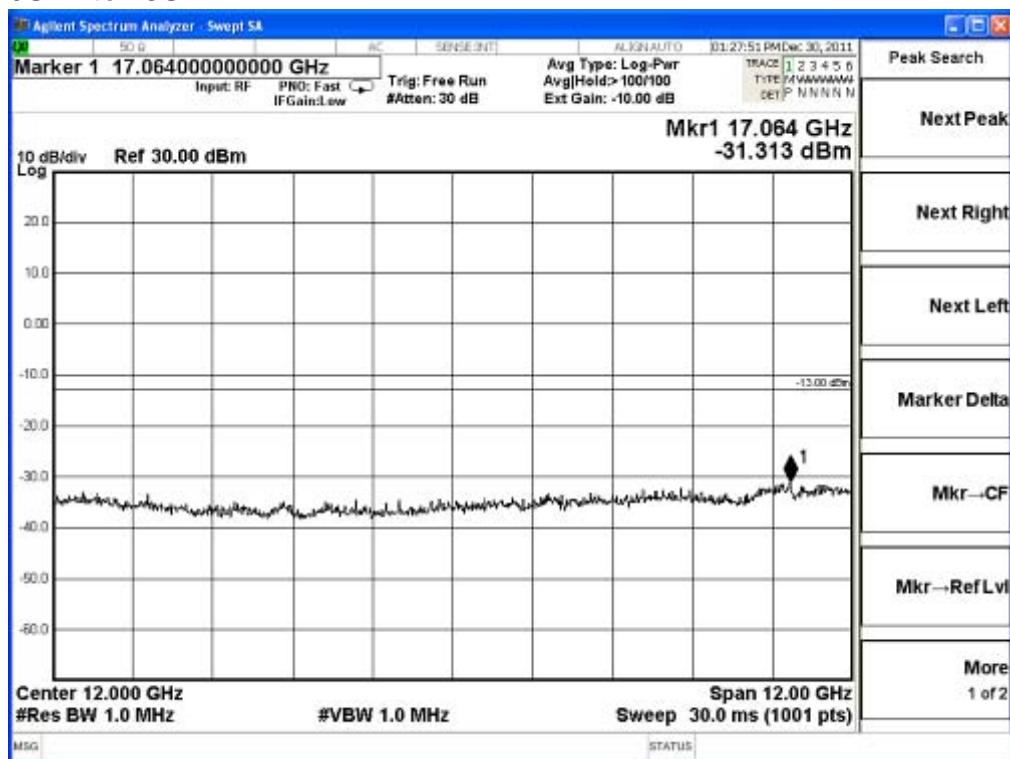


18GHz to 26GHz

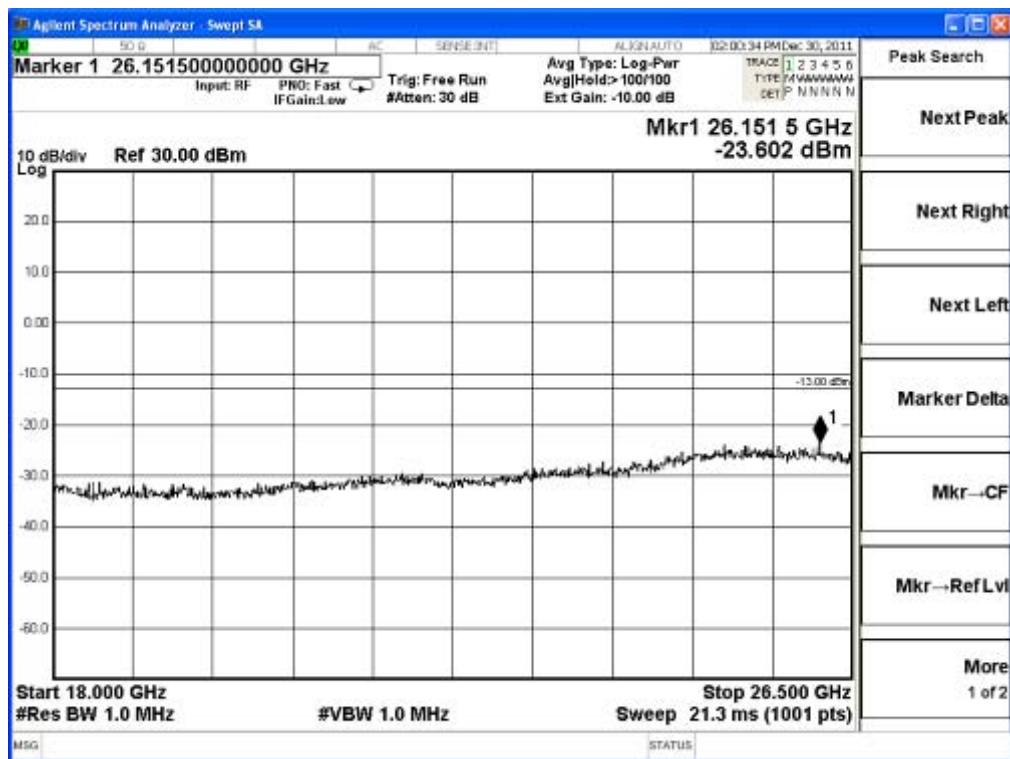


7MHz_3671.5MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 7: Transmit (10MHz BW_QPSK1/2)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 10MHz QPSK**Test Frequency: 3655MHz**

Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	880.69	-33.959	≤-13
1000-6000	5420.00	-31.323	≤-13
6000-18000	14628.00	-30.703	≤-13
18000-26500	24740.50	-24.266	≤-13

Test Frequency: 3662.5MHz

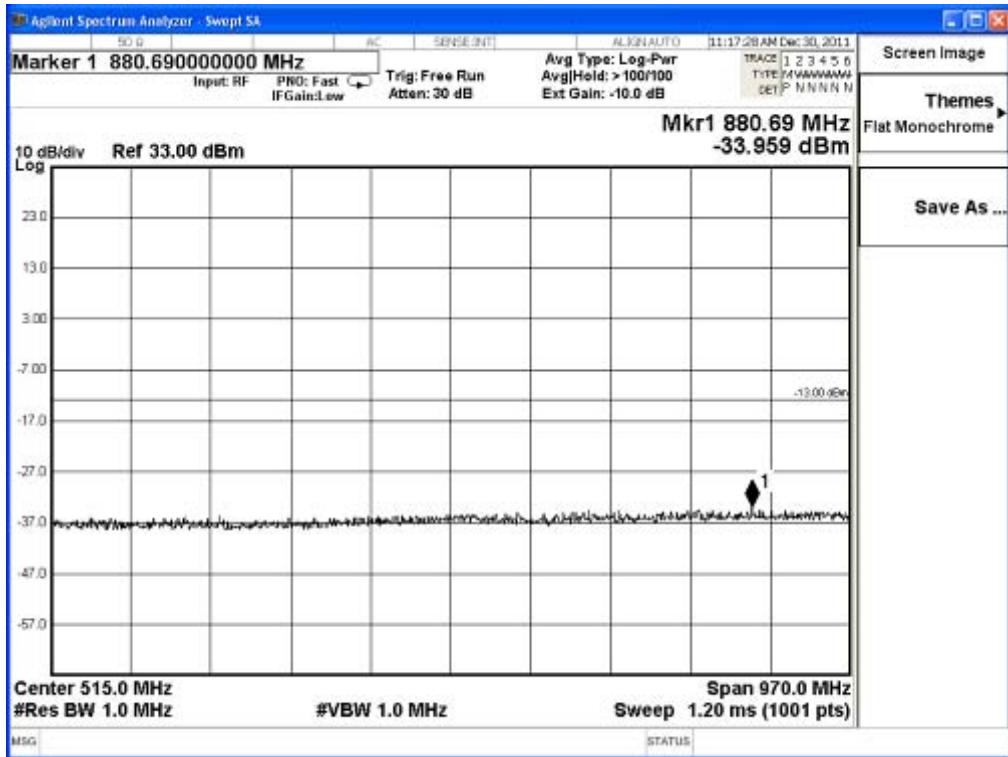
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	990.30	-34.156	≤-13
1000-6000	5555.00	-30.786	≤-13
6000-18000	16800.00	-29.435	≤-13
18000-26500	25191.00	-24.031	≤-13

Test Frequency: 3670MHz

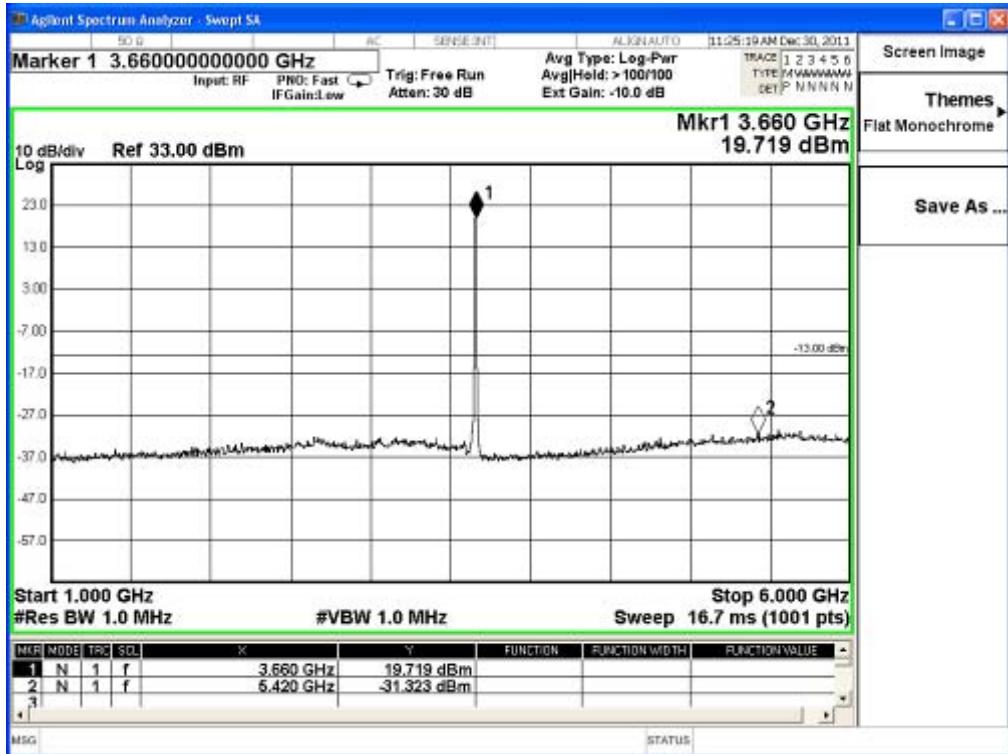
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	845.77	-33.877	≤-13
1000-6000	5605.00	-31.471	≤-13
6000-18000	17976.00	-31.285	≤-13
18000-26500	26075.00	-24.263	≤-13

10MHz_3655MHz_QPSK1/2

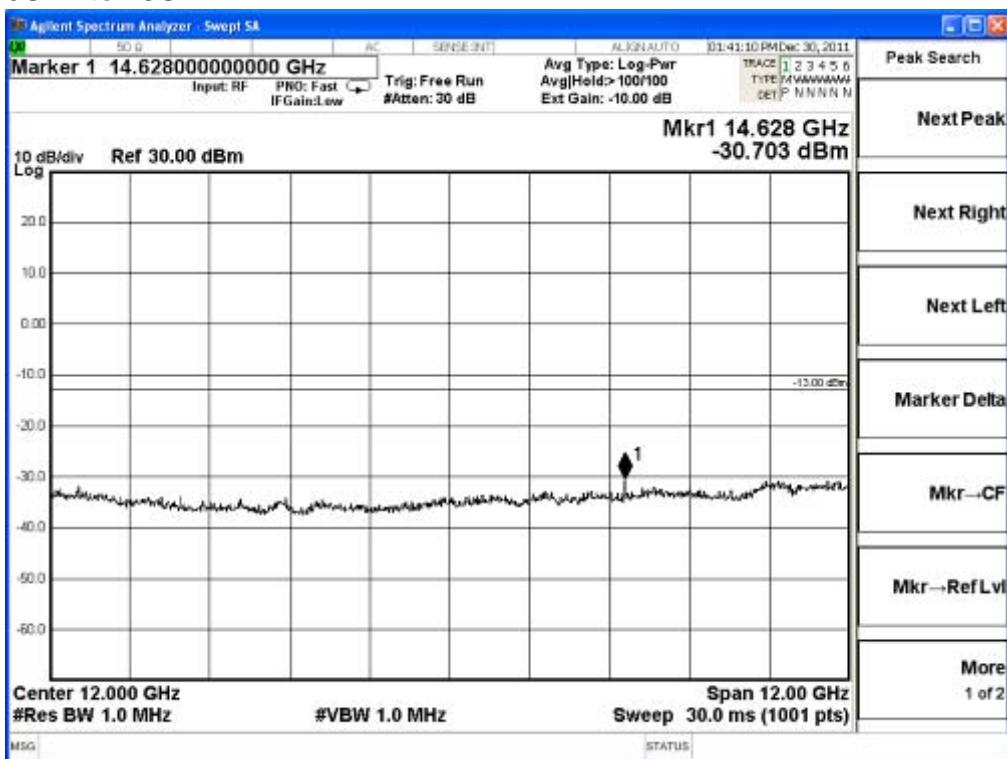
30MHz to 1GHz



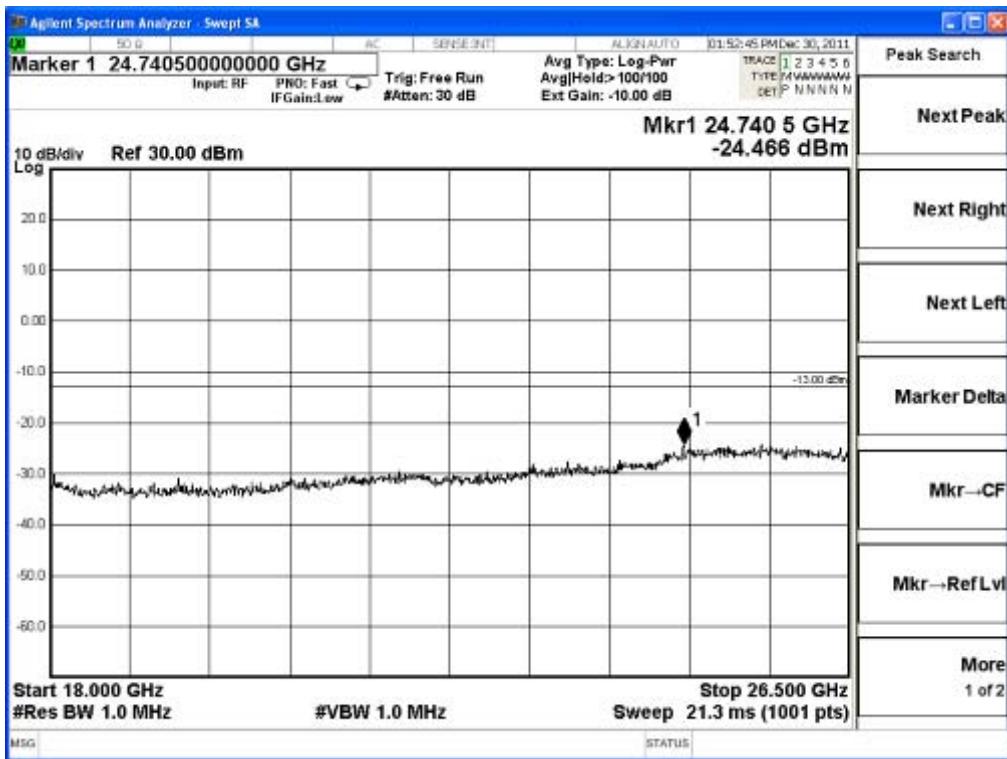
1GHz to 6GHz

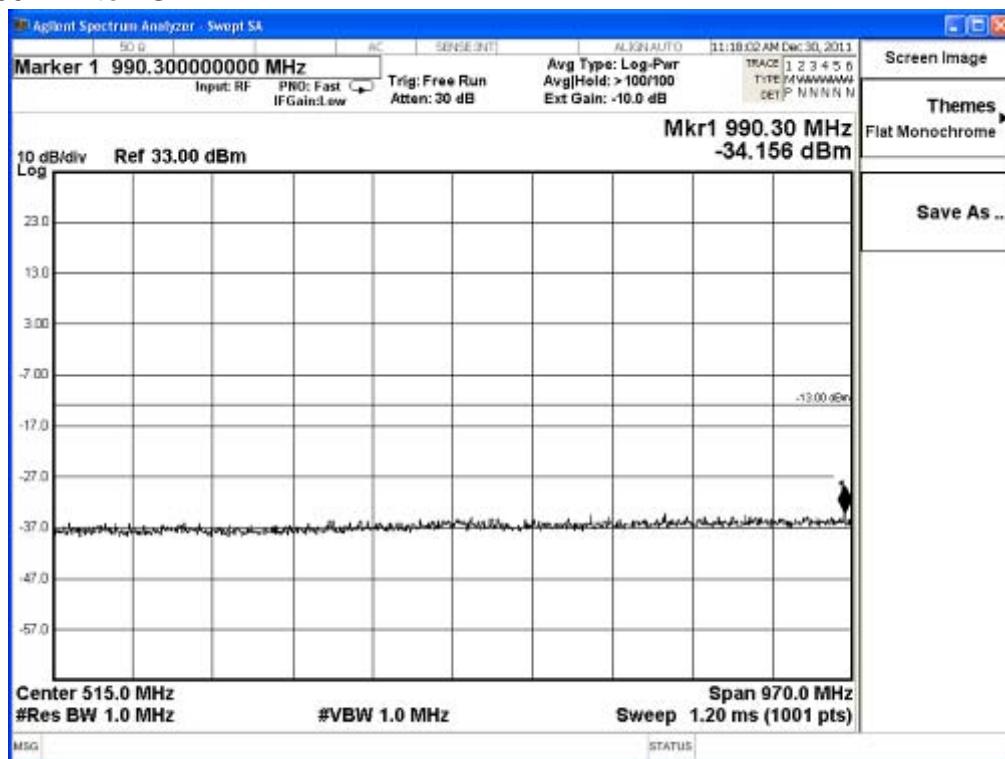
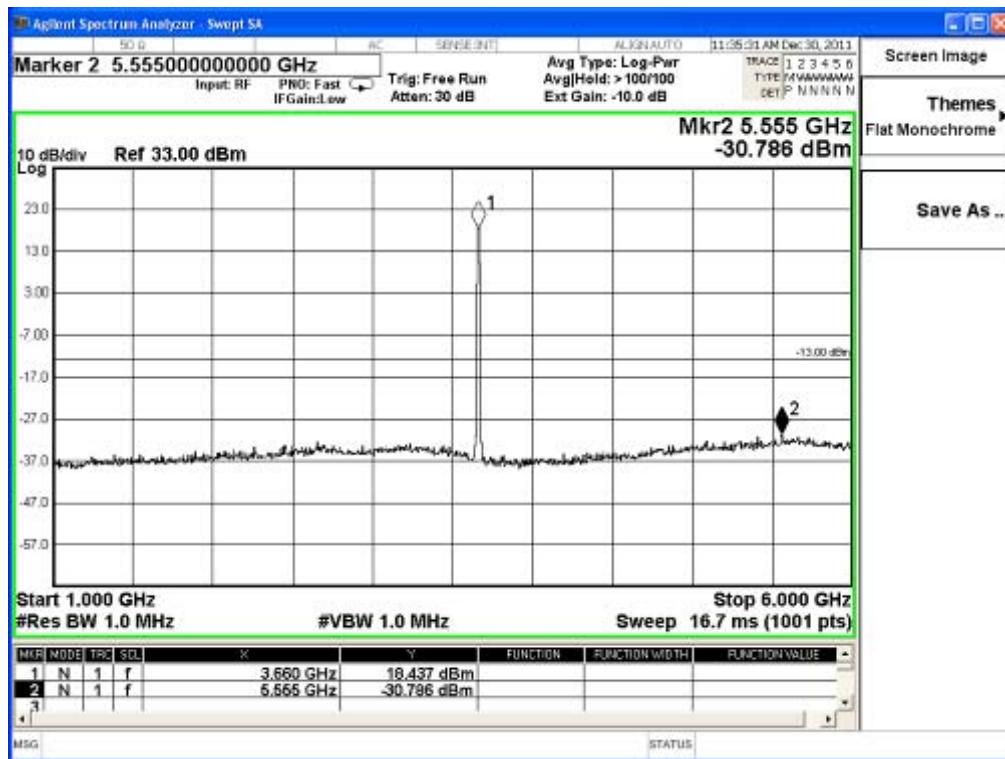


6GHz to 18GHz

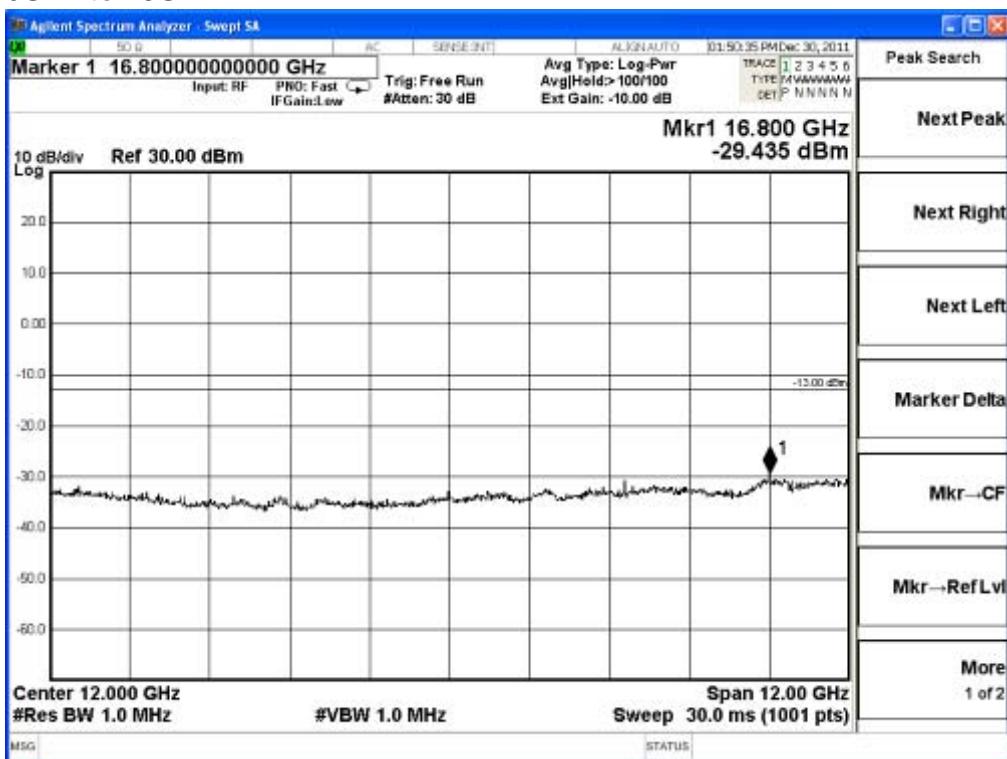


18GHz to 26GHz

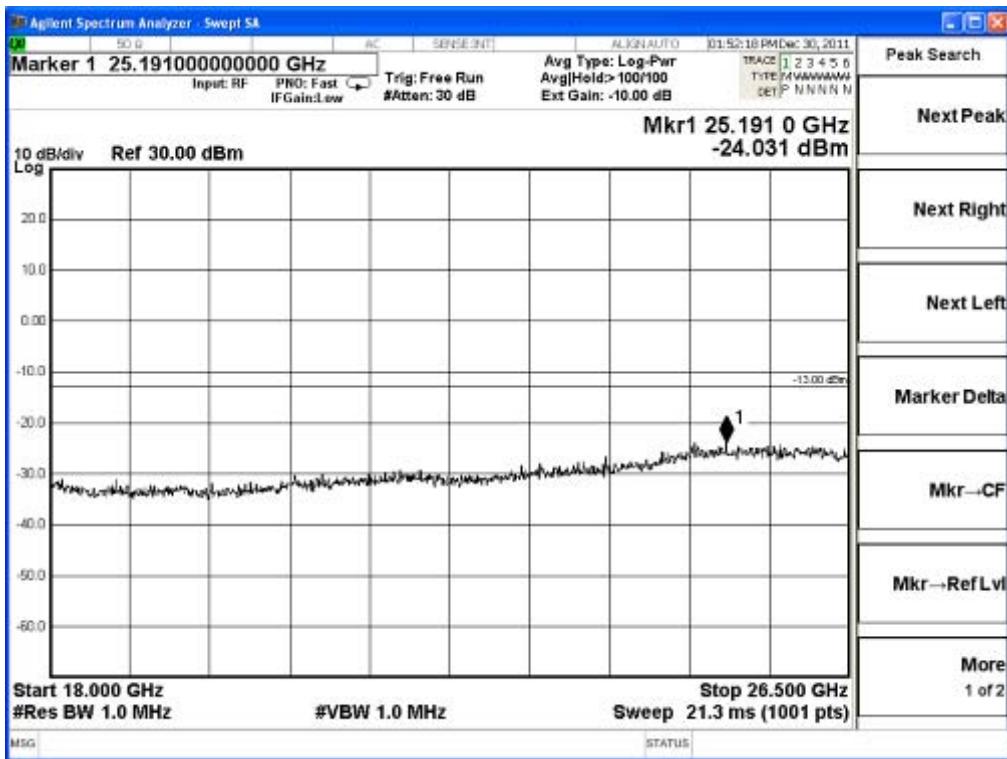


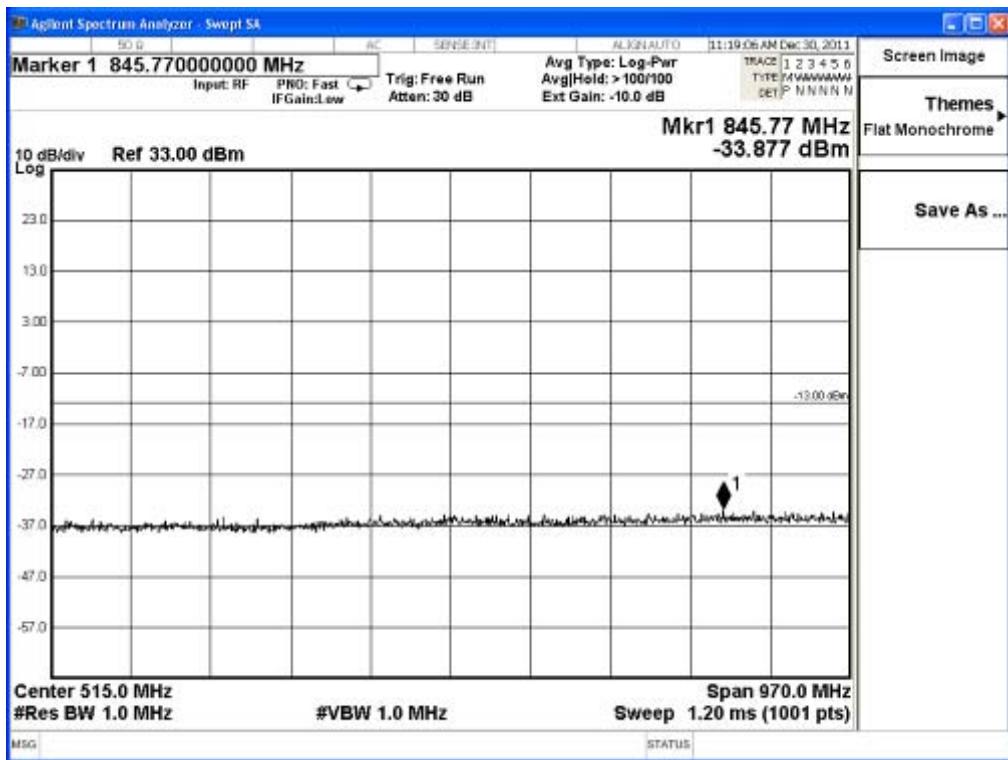
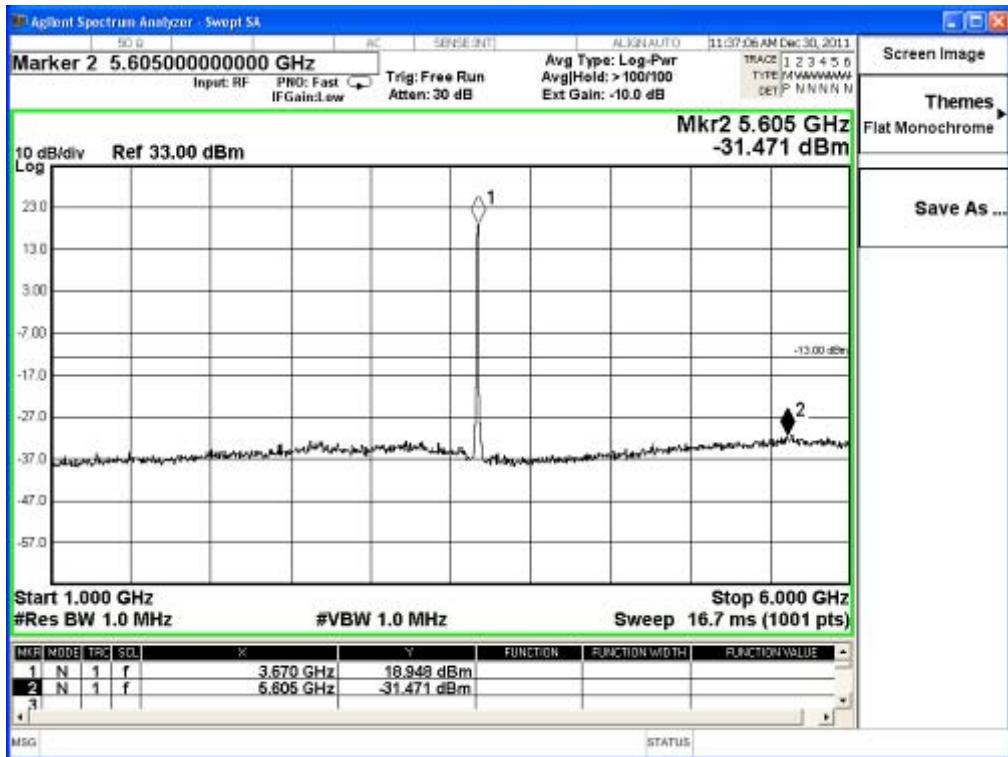
10MHz_3662.5MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

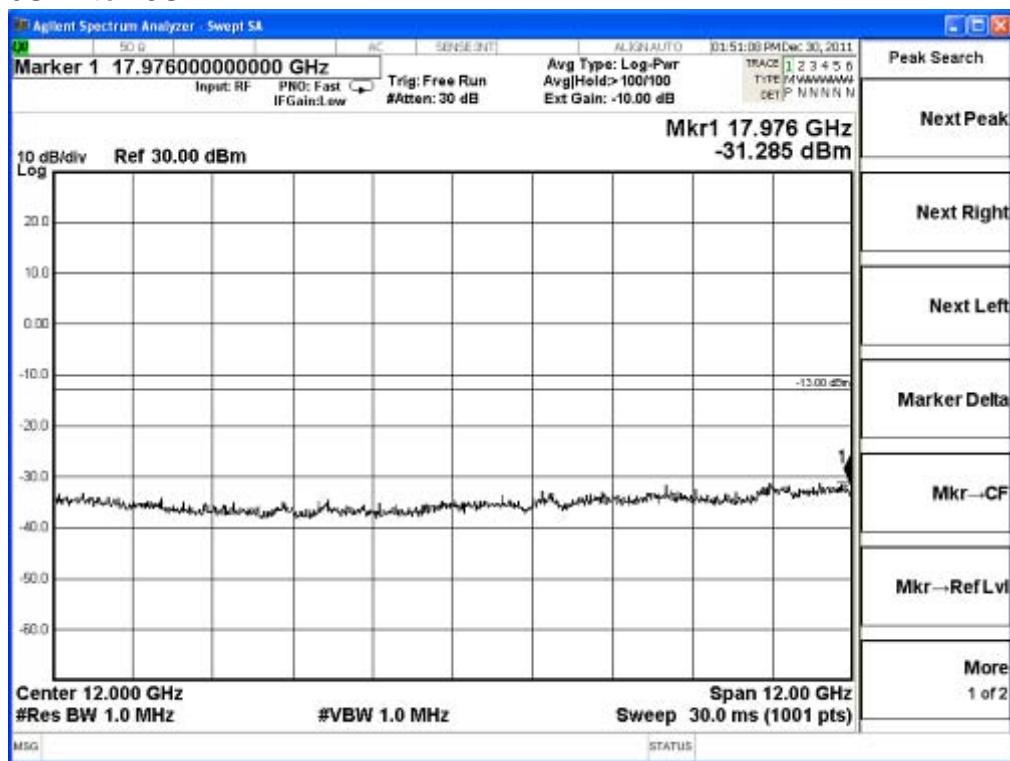


18GHz to 26GHz

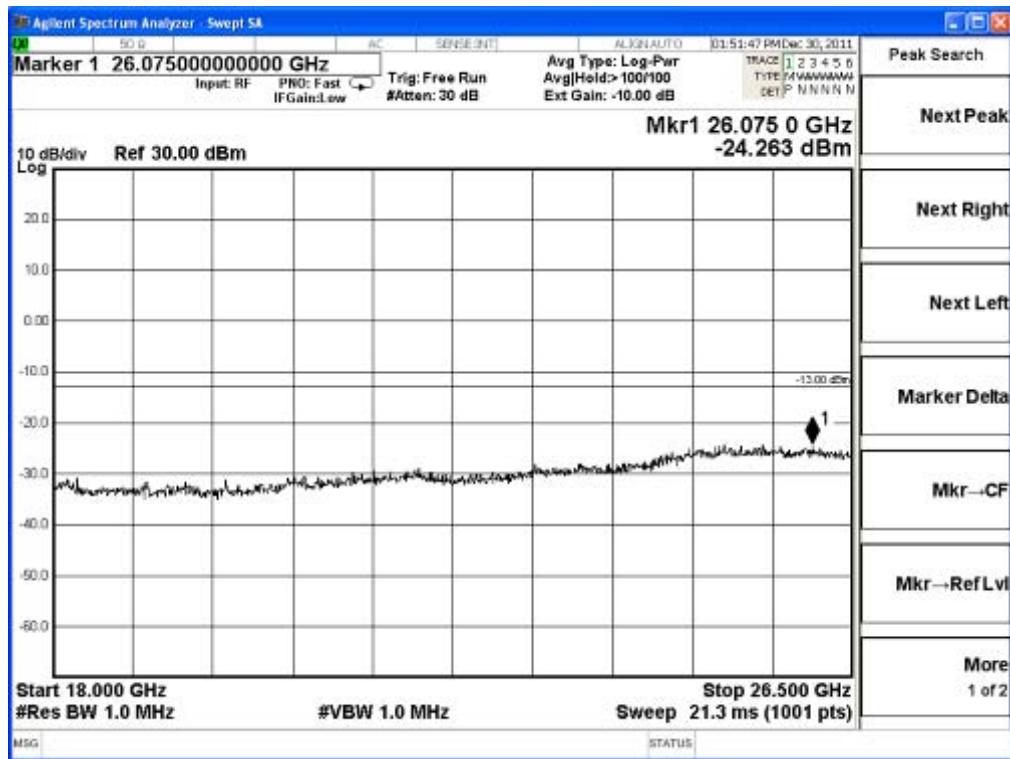


10MHz_3670MHz_QPSK1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 8: Transmit (10MHz BW_16QAM1/2)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 10MHz 16QAM**Test Frequency: 3655MHz**

Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	989.33	-34.695	≤-13
1000-6000	5620.00	-30.856	≤-13
6000-18000	16788.00	-29.628	≤-13
18000-26500	25743.50	-24.248	≤-13

Test Frequency: 3662.5MHz

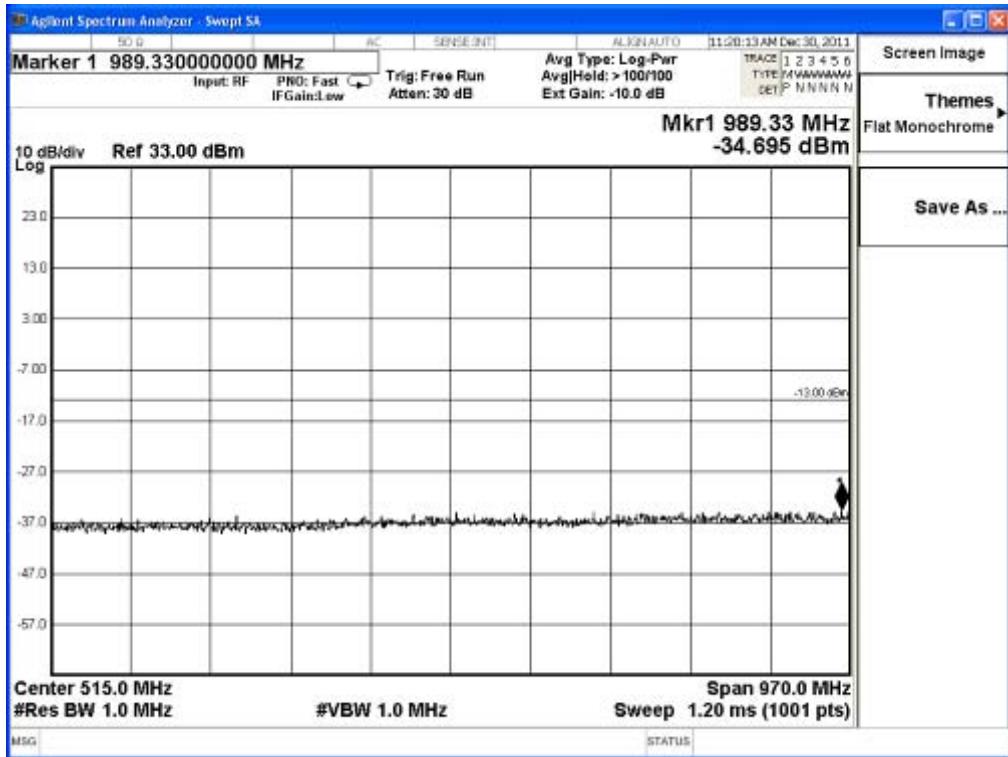
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	550.89	-34.724	≤-13
1000-6000	5580.00	-31.262	≤-13
6000-18000	16680.00	-30.366	≤-13
18000-26500	25956.00	-23.985	≤-13

Test Frequency: 3670MHz

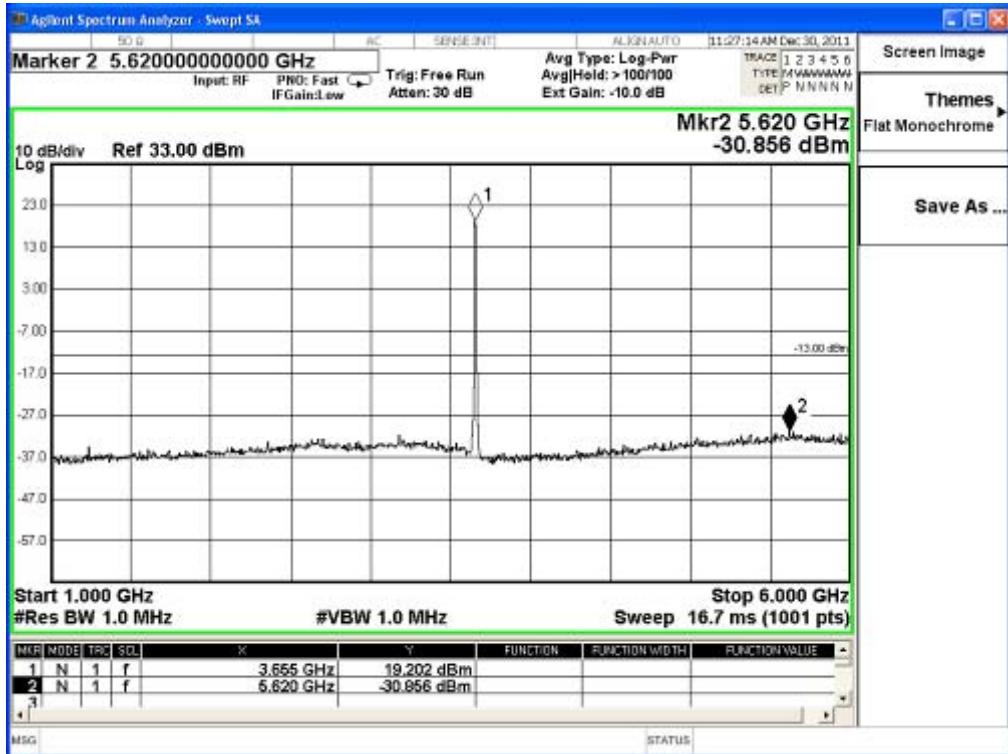
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	982.54	-34.118	≤-13
1000-6000	5580.00	-30.993	≤-13
6000-18000	17460.00	-30.715	≤-13
18000-26500	25752.00	-23.590	≤-13

10MHz_3655MHz_16QAM1/2

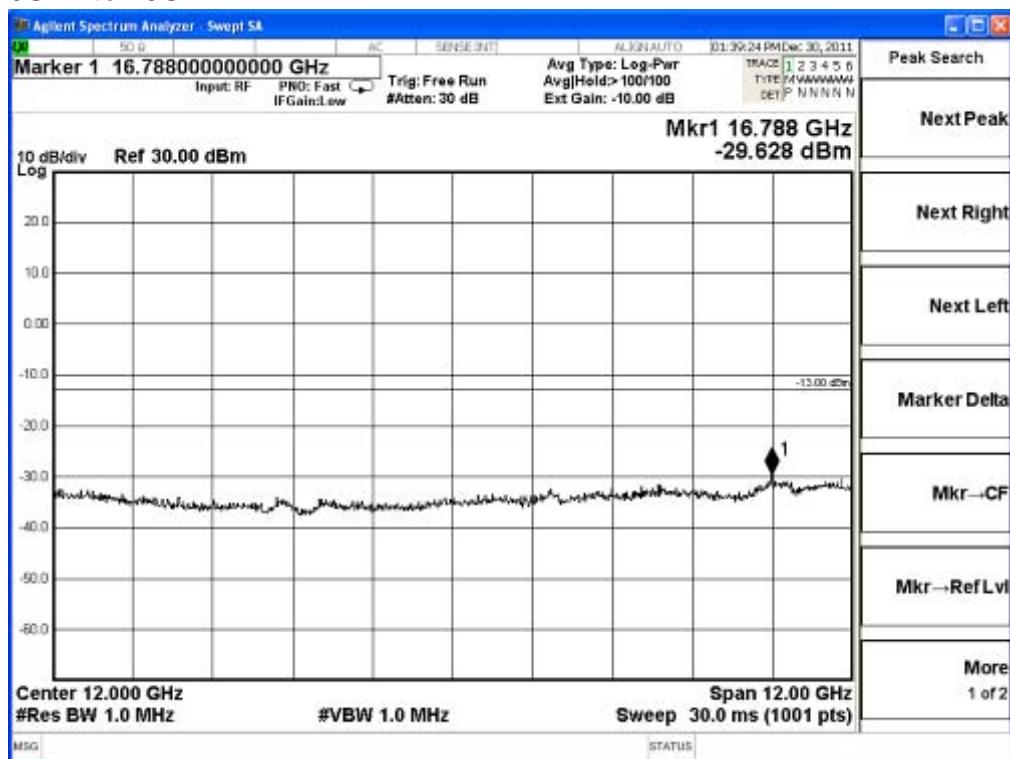
30MHz to 1GHz



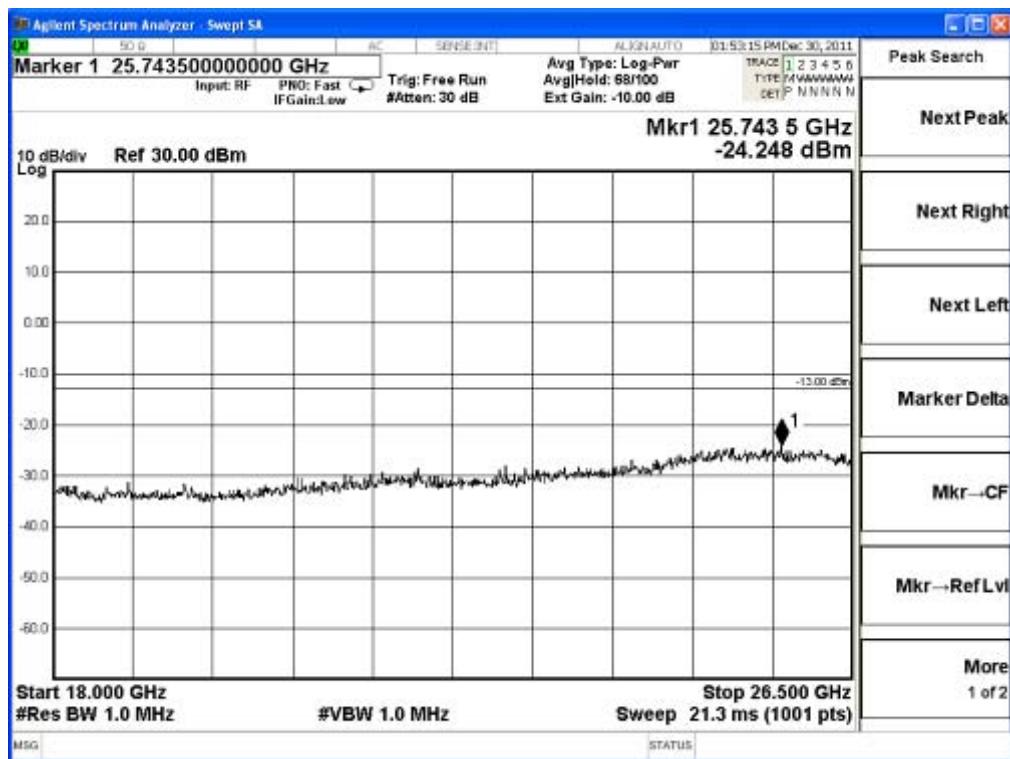
1GHz to 6GHz

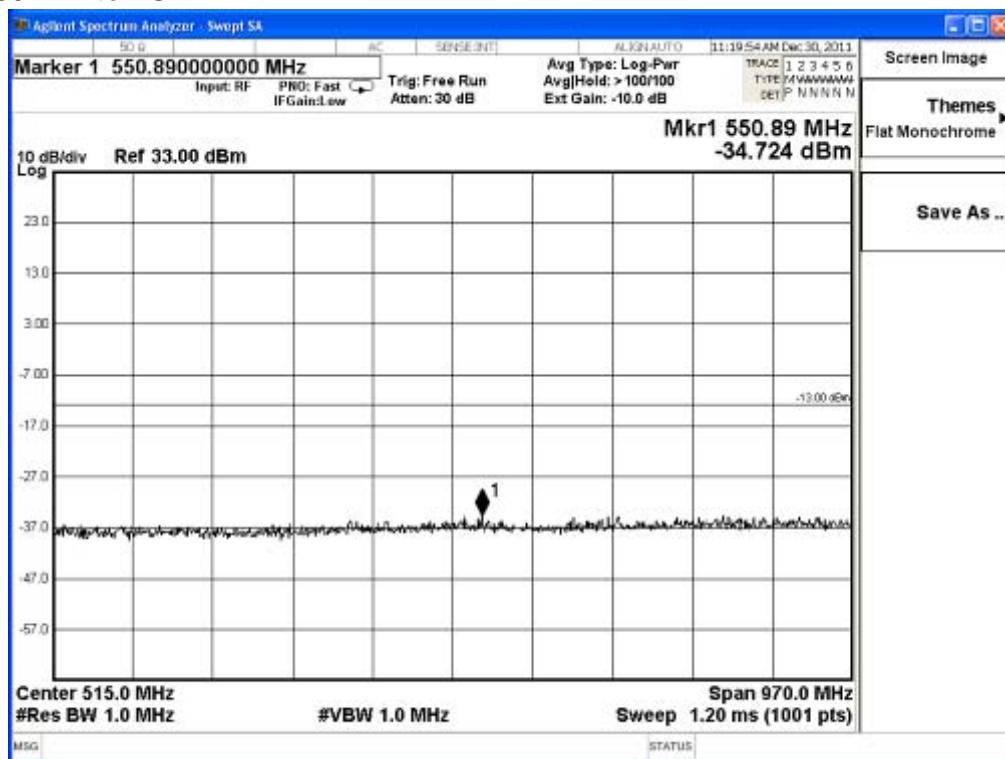
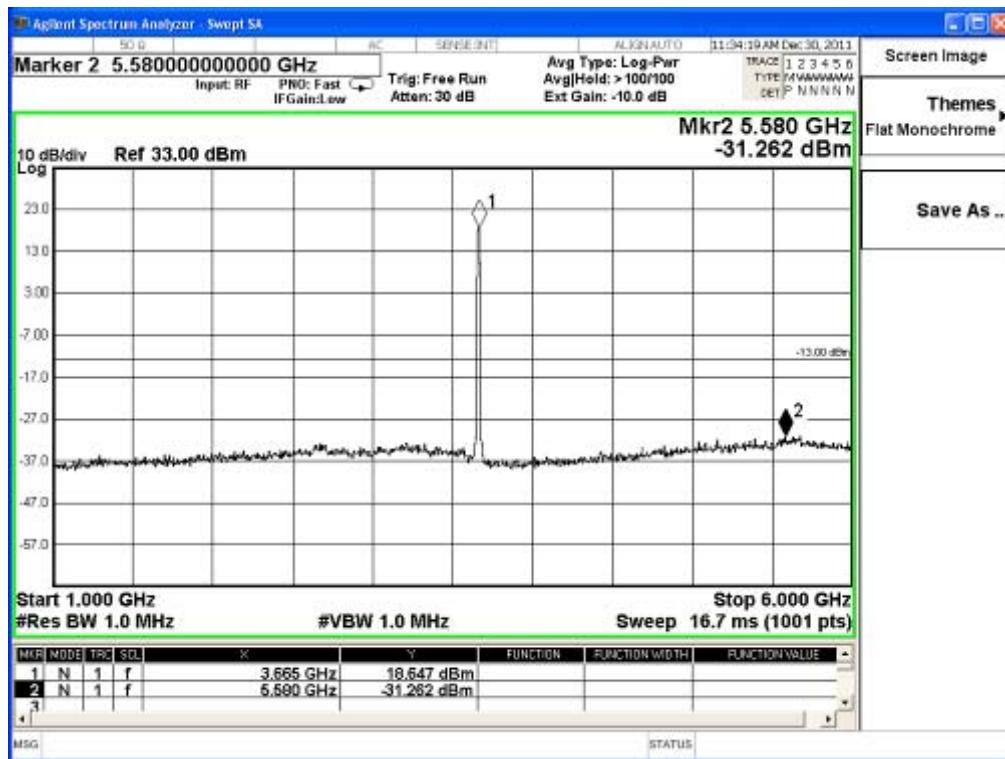


6GHz to 18GHz

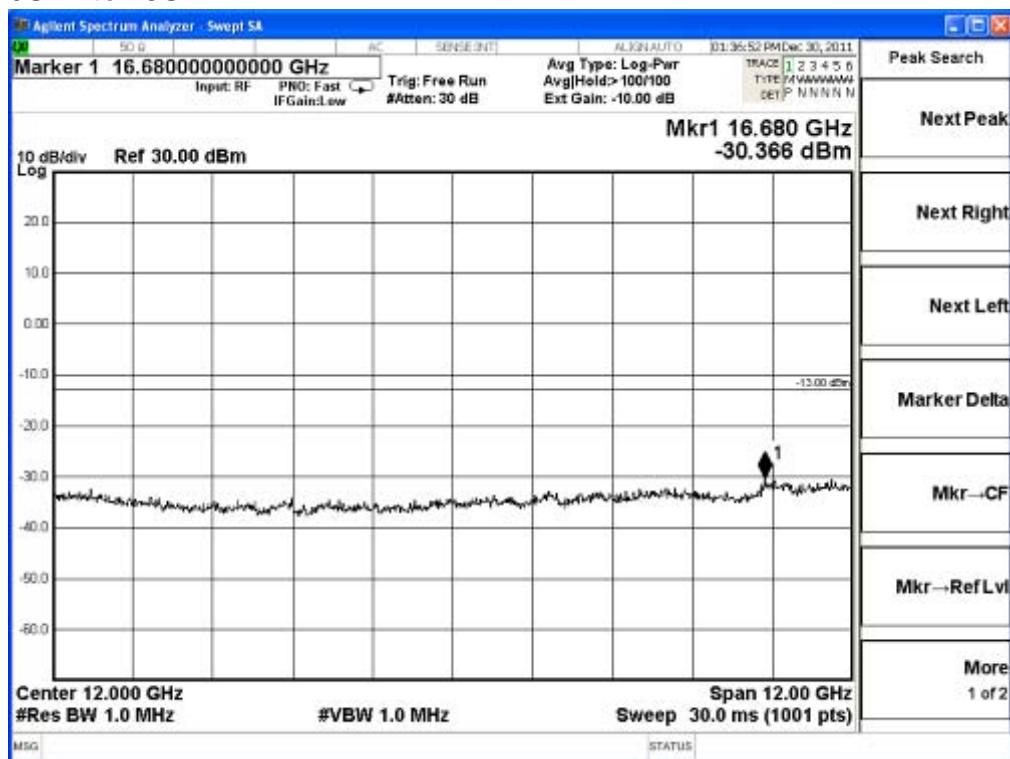


18GHz to 26GHz

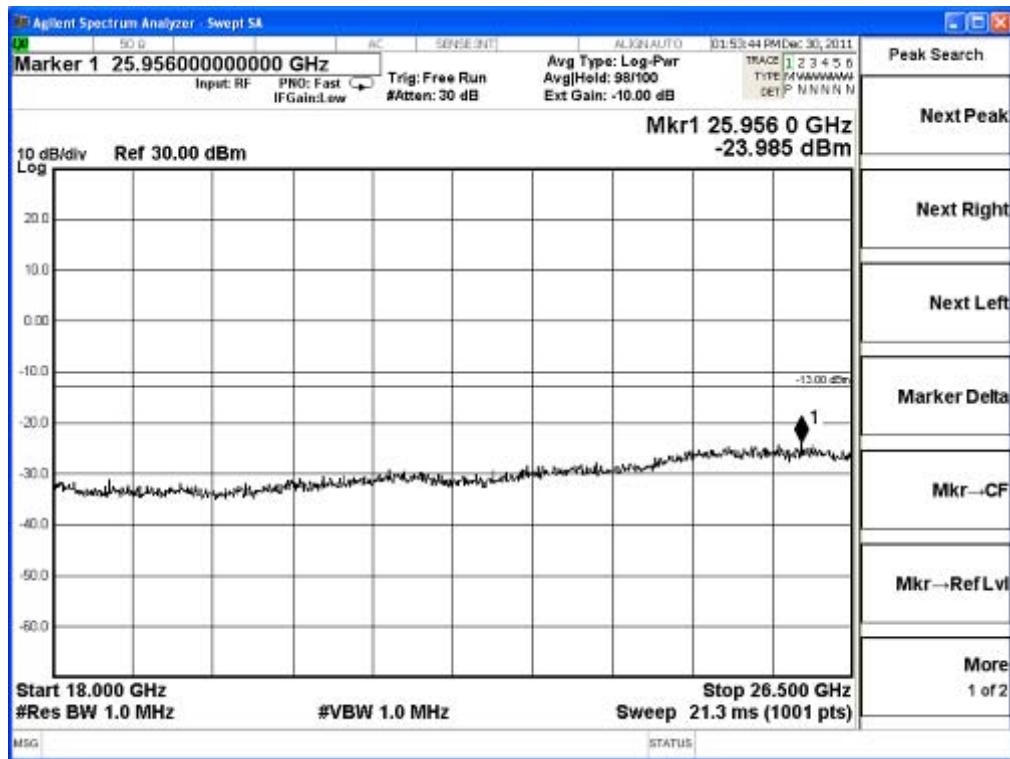


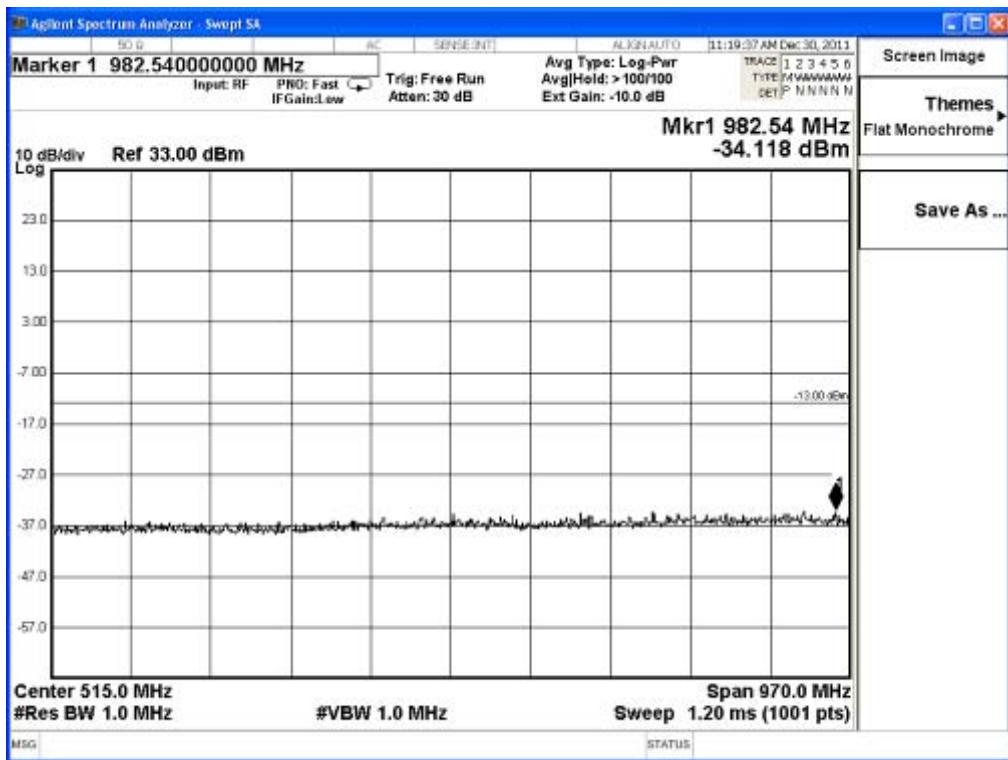
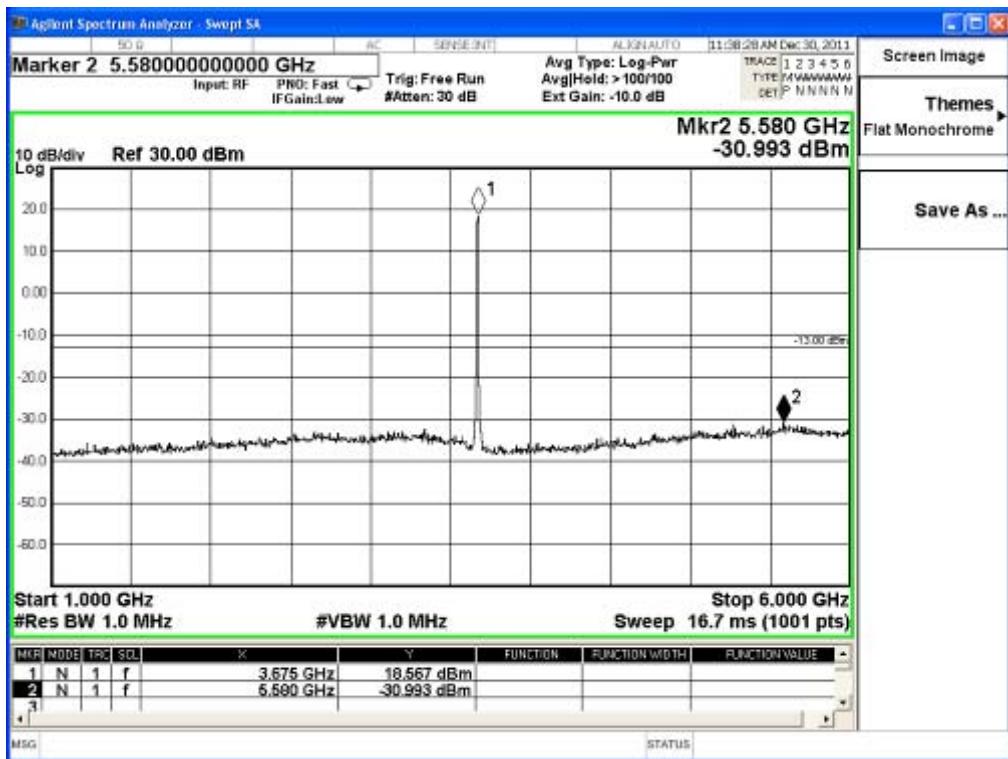
10MHz_3662.5MHz_16QAM1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

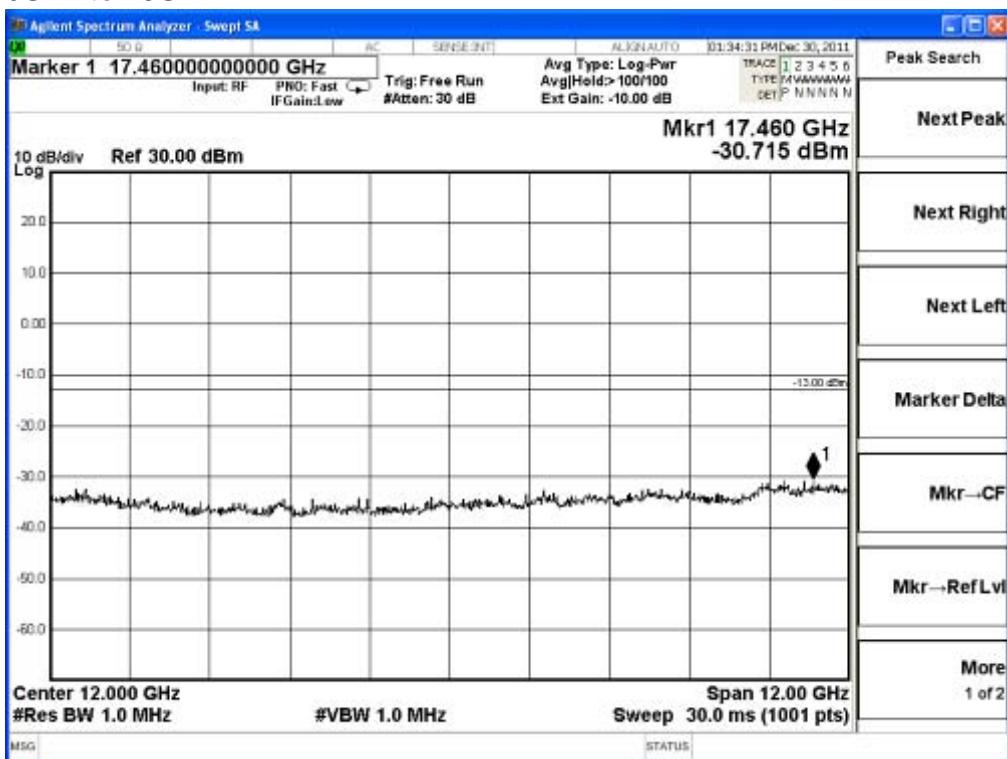


18GHz to 26GHz

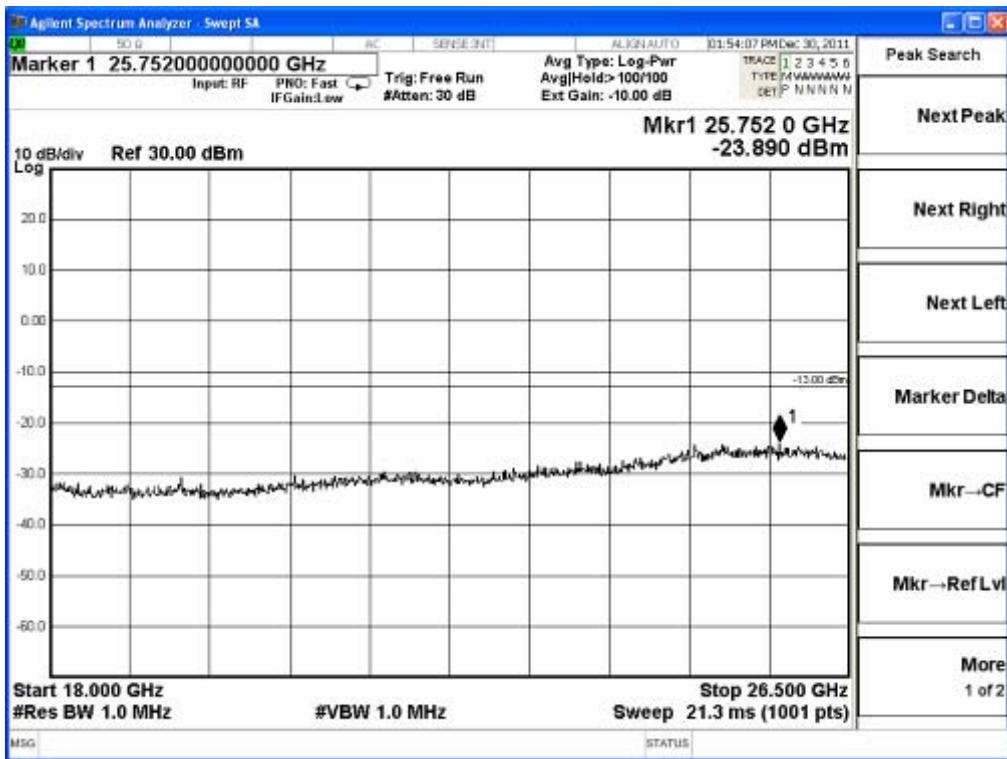


10MHz_3670MHz_16QAM1/2**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz



Product	CPE 3.65GHz Outdoor		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 9: Transmit (10MHz BW_64QAM2/3)		
Date of Test	2011/11/19	Test Site	SR7

Test Mode: 10MHz 64QAM**Test Frequency: 3655MHz**

Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	490.75	-35.234	≤-13
1000-6000	5630.00	-30.932	≤-13
6000-18000	16908.00	-30.298	≤-13
18000-26500	25454.00	-23.738	≤-13

Test Frequency: 3662.5MHz

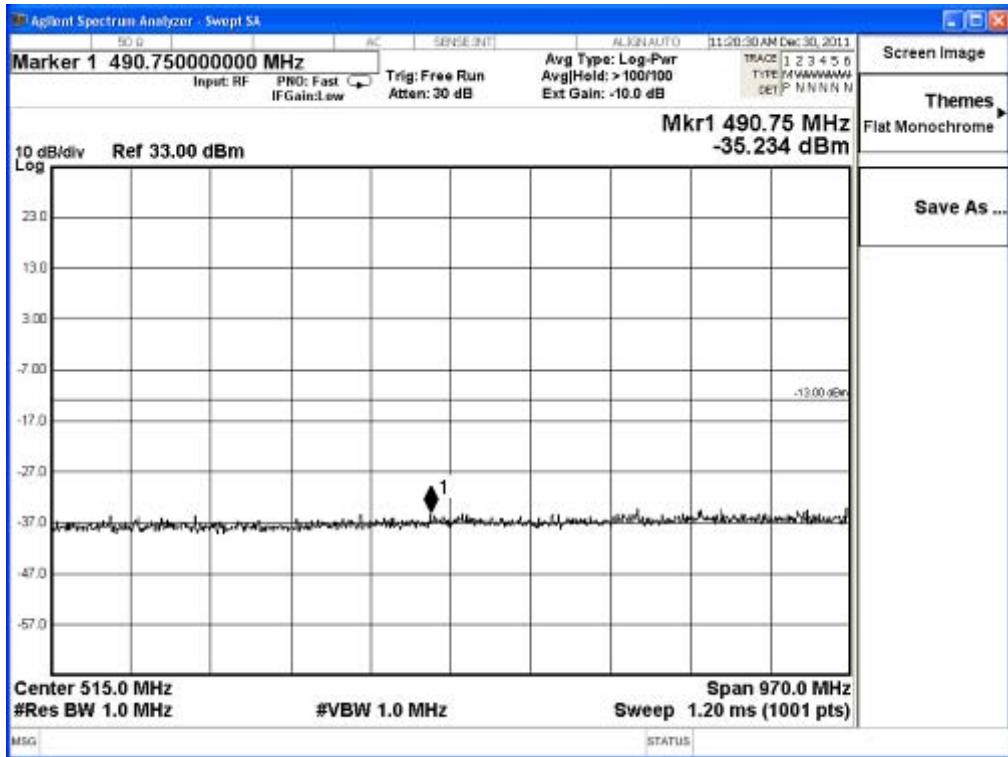
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	848.68	-34.521	≤-13
1000-6000	5615.00	-31.027	≤-13
6000-18000	16992.00	-30.383	≤-13
18000-26500	25259.00	-24.008	≤-13

Test Frequency: 3670MHz

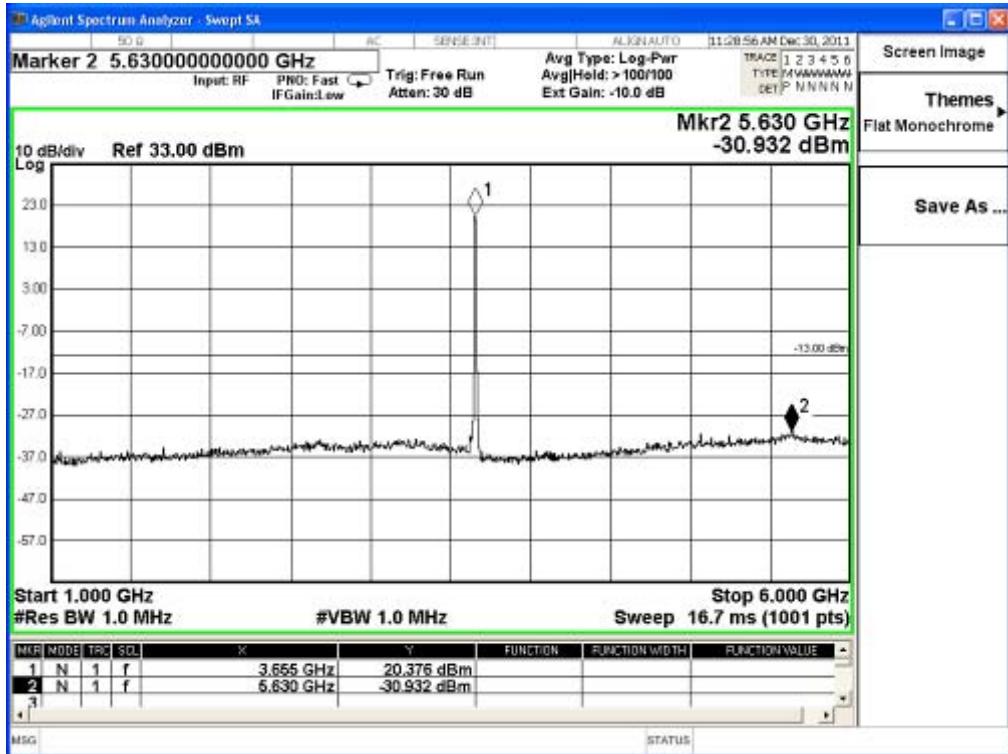
Frequency Band (MHz)	Frequency (MHz)	Measured Value (dBm)	Limit (dBm)
30-1000	807.94	-33.883	≤-13
1000-6000	5745.00	-31.275	≤-13
6000-18000	17004.00	-30.448	≤-13
18000-26500	25454.50	-23.741	≤-13

10MHz_3655MHz_64QAM2/3

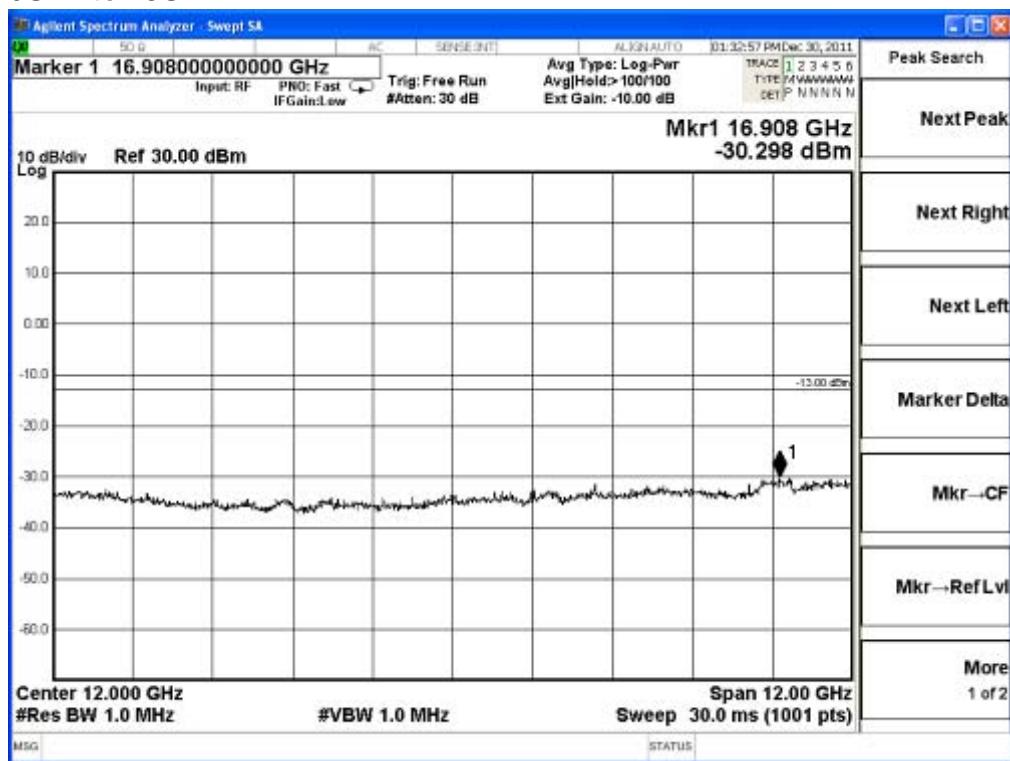
30MHz to 1GHz



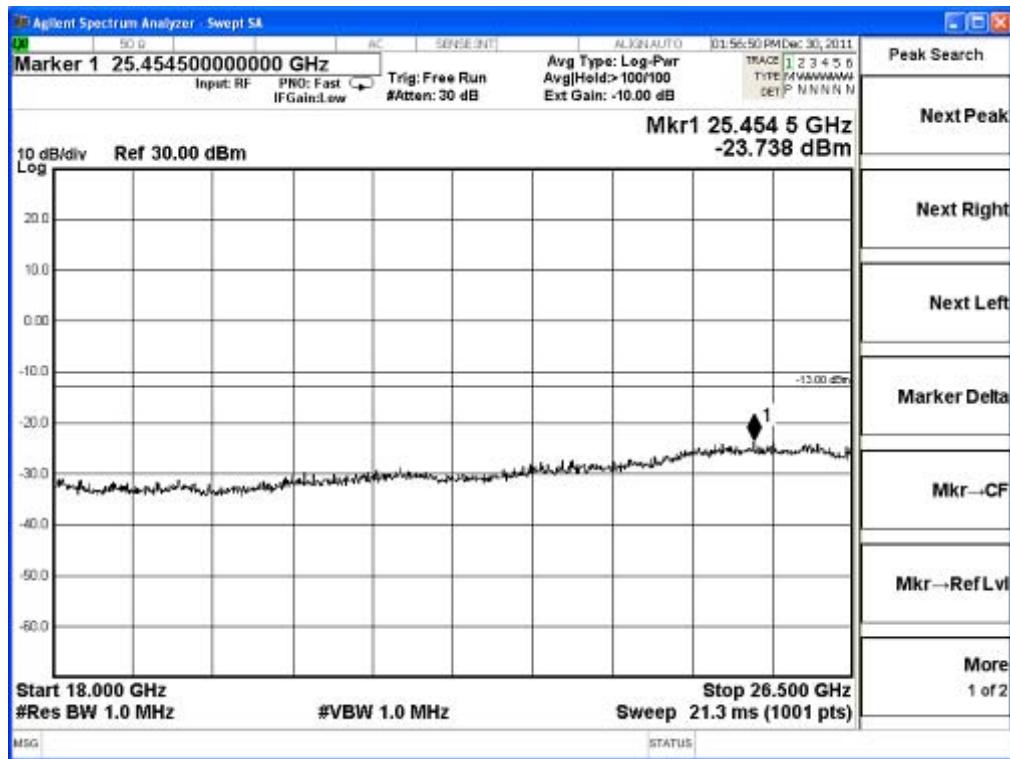
1GHz to 6GHz

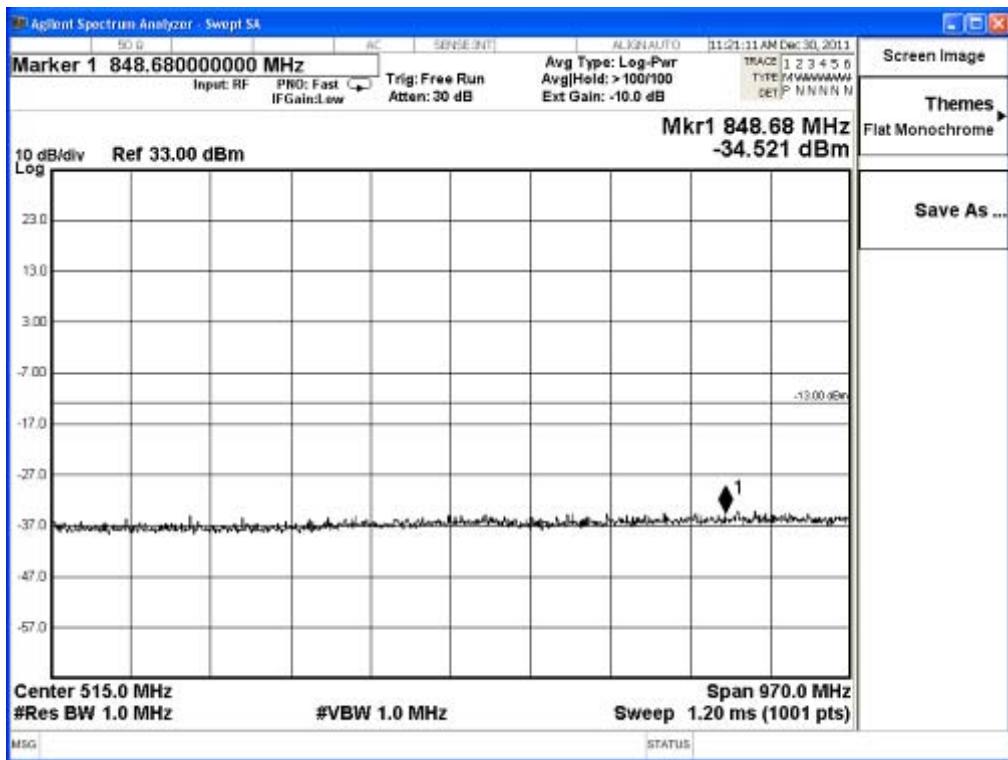
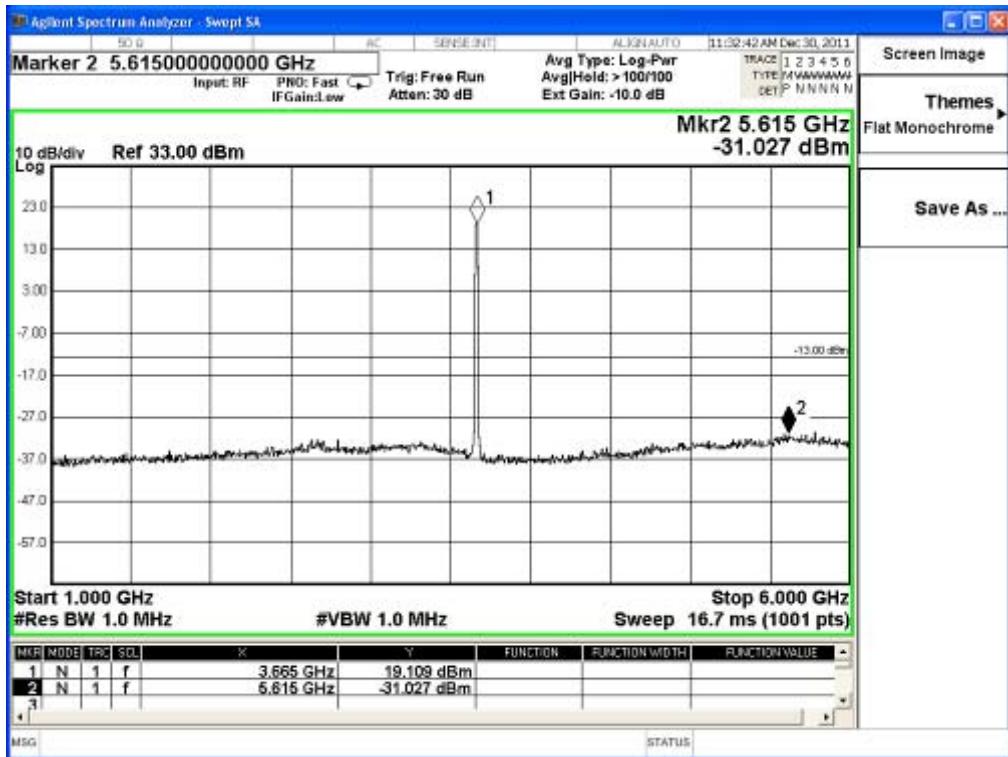


6GHz to 18GHz

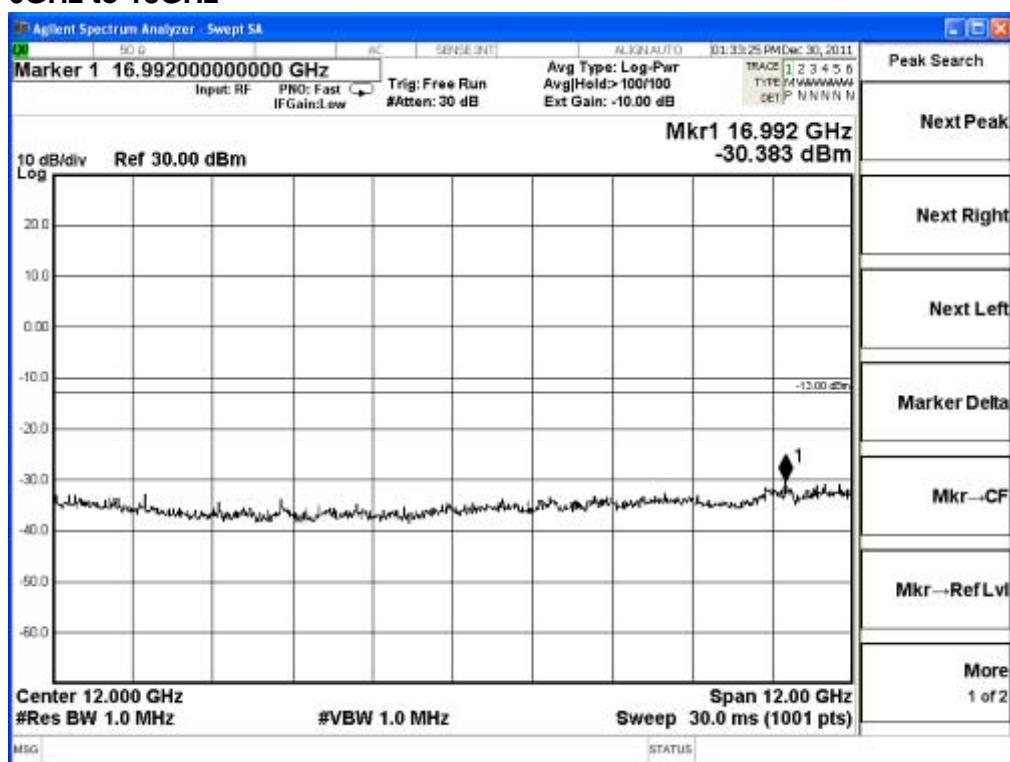


18GHz to 26GHz

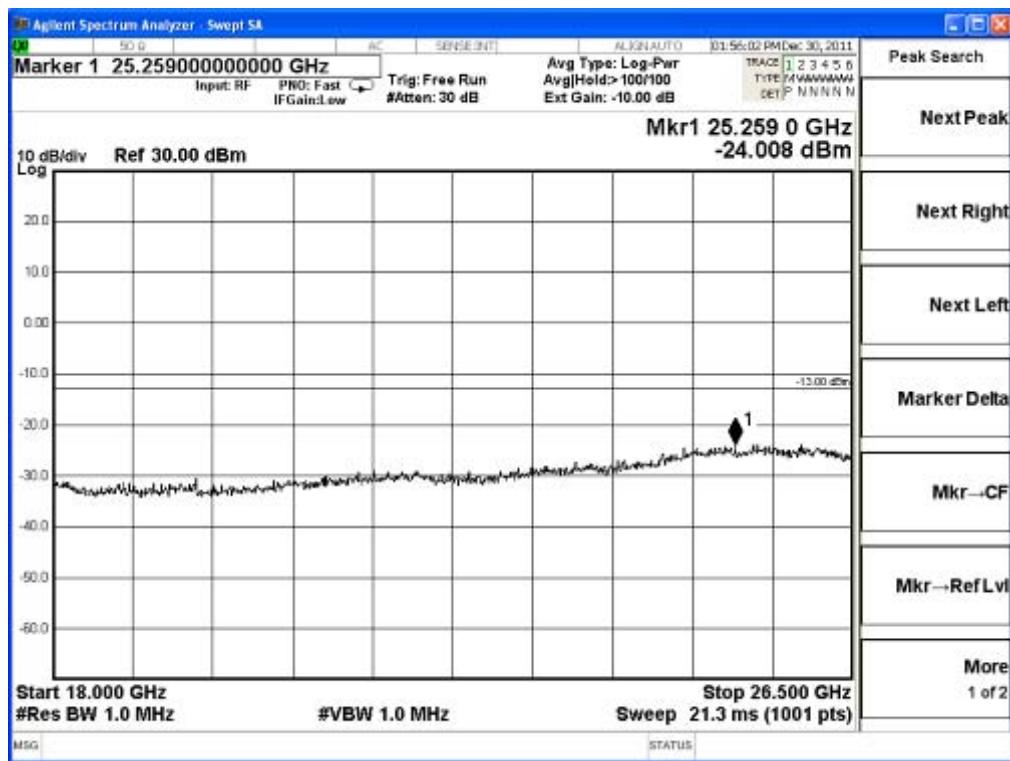


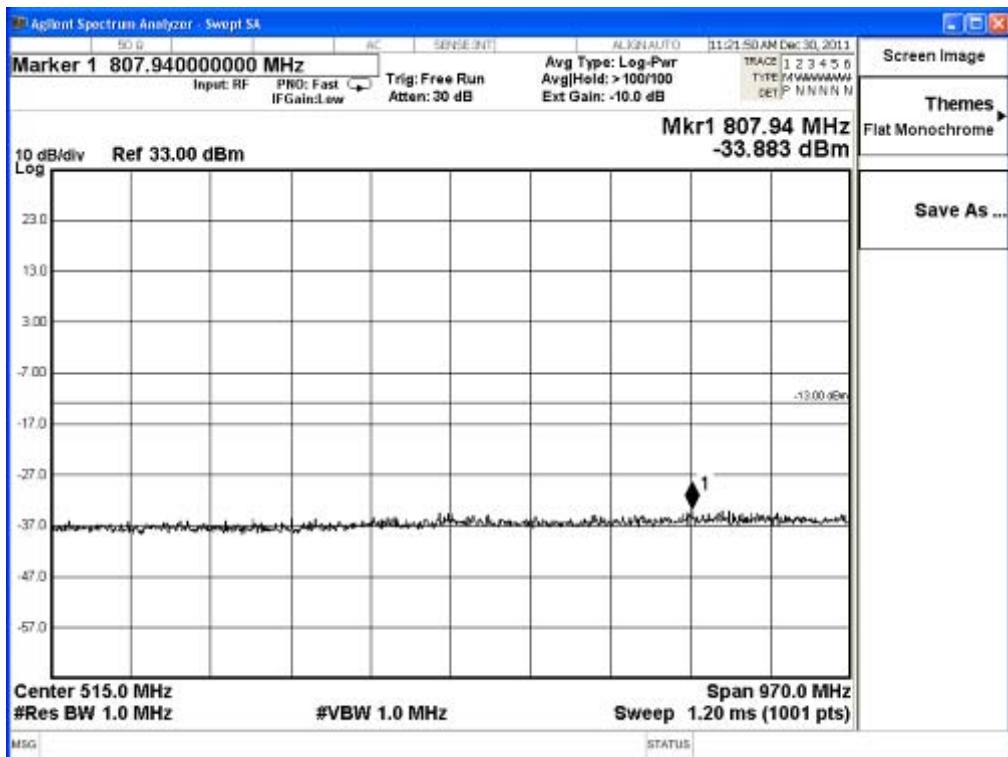
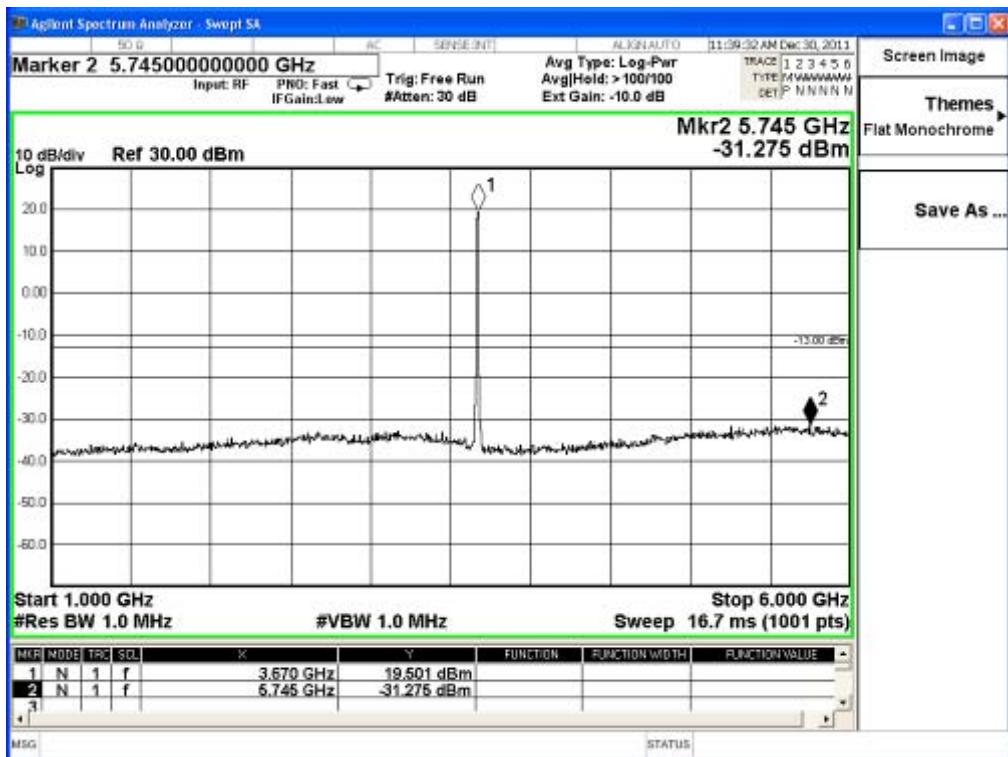
10MHz_3662.5MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz

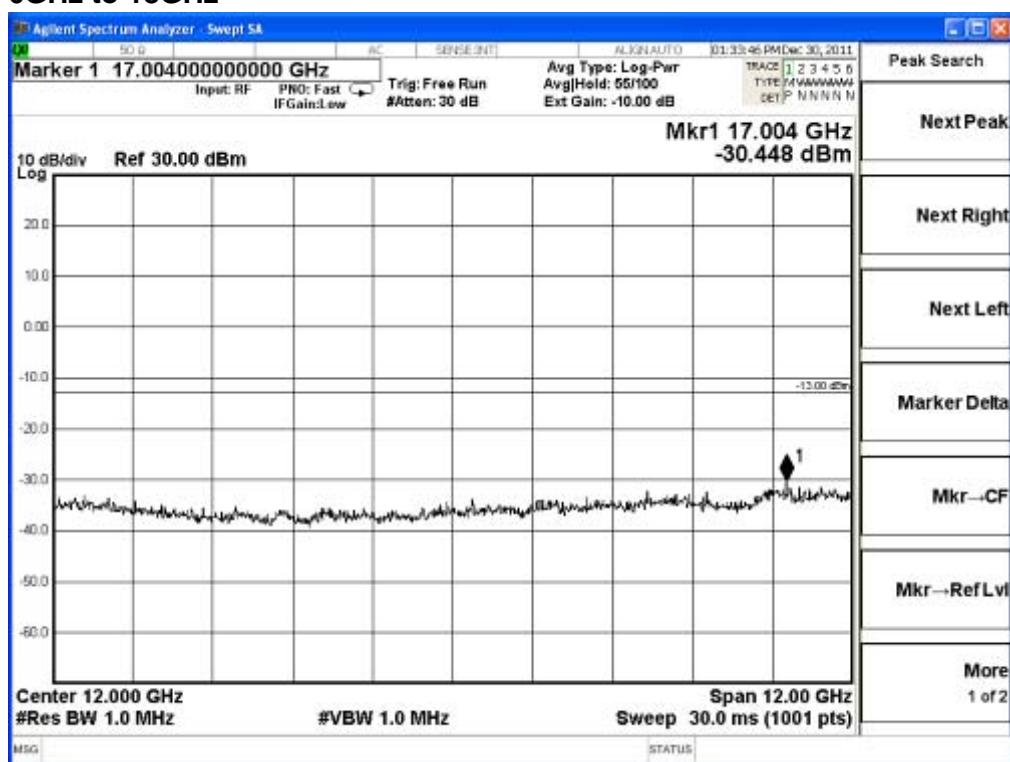


18GHz to 26GHz



10MHz_3670MHz_64QAM2/3**30MHz to 1GHz****1GHz to 6GHz**

6GHz to 18GHz



18GHz to 26GHz

