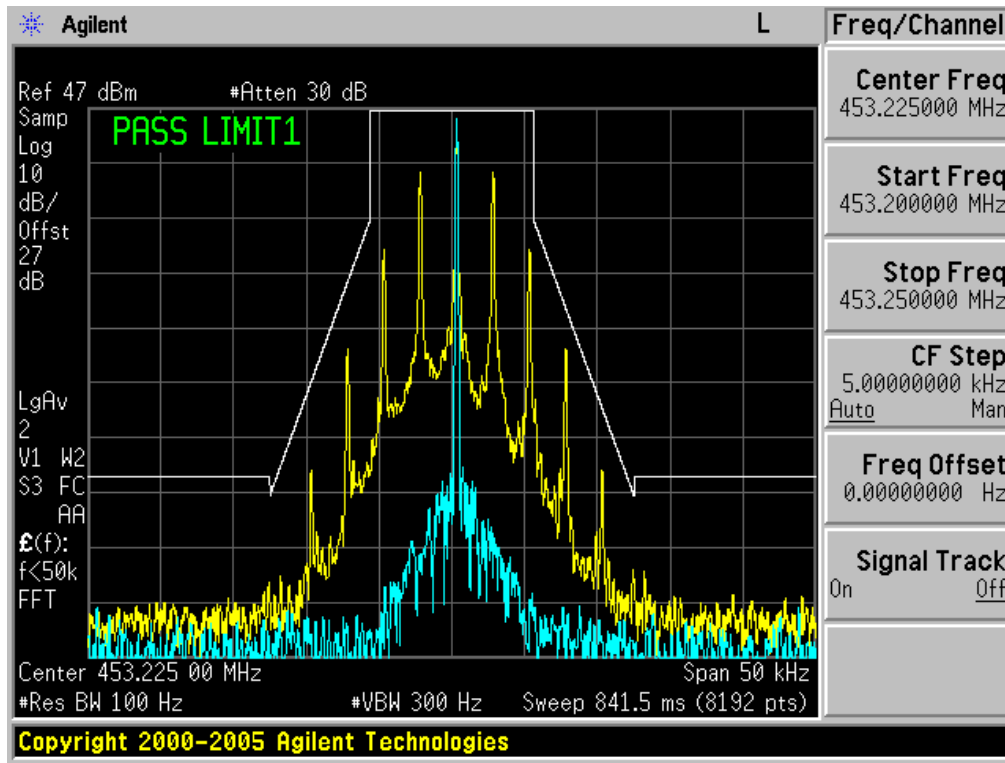
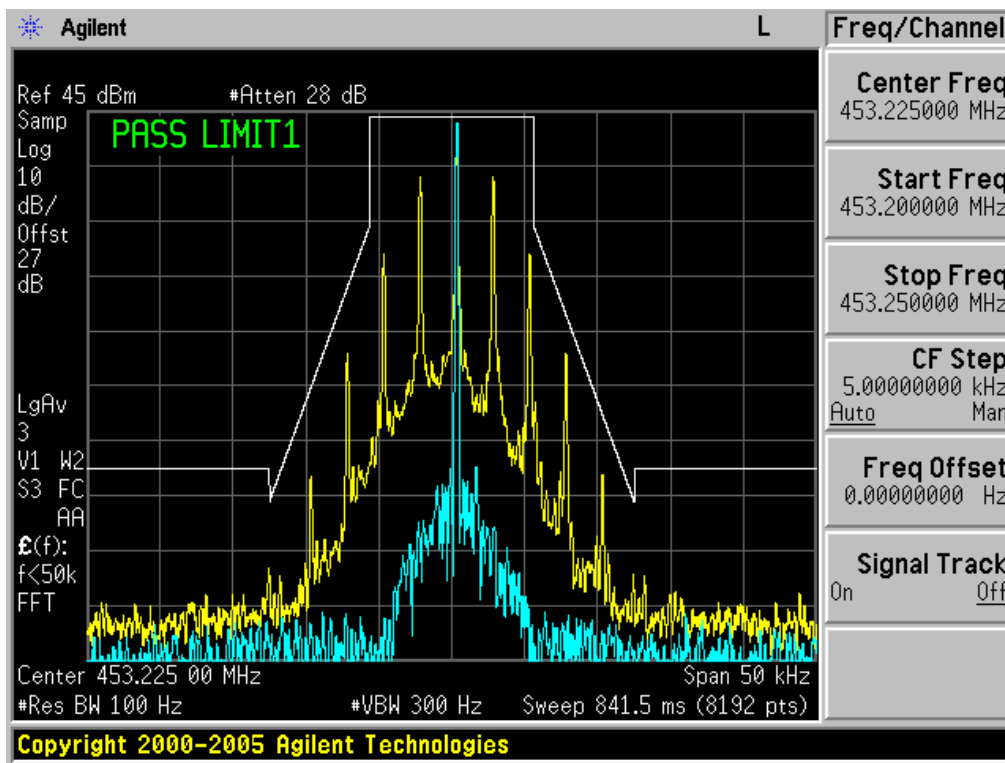


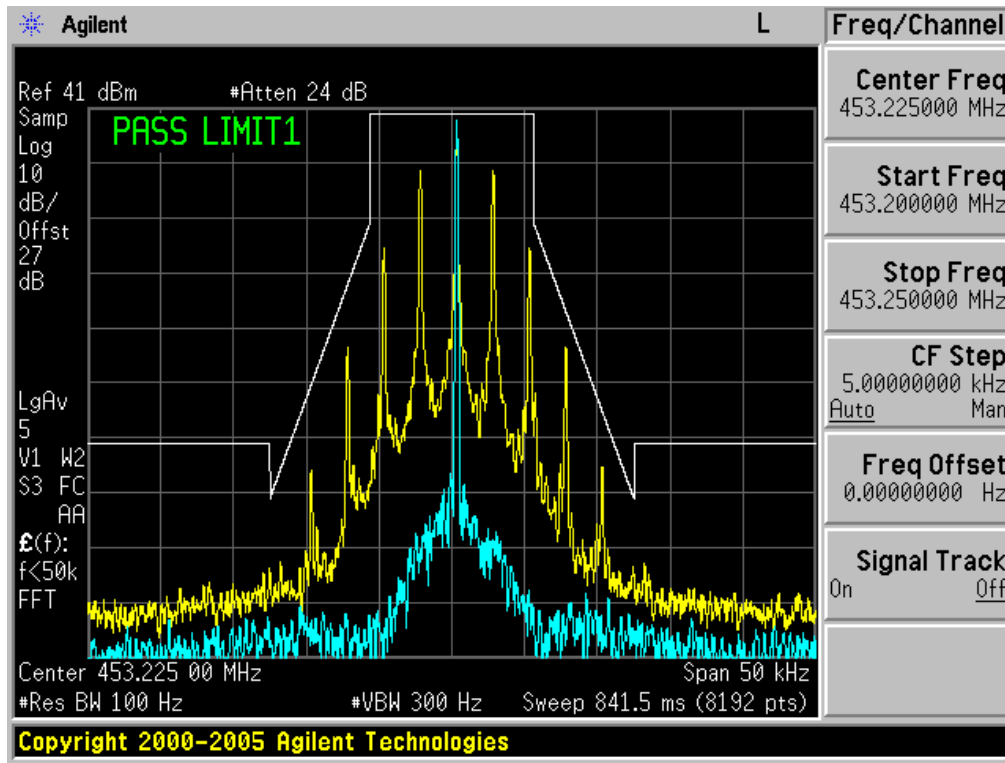
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (45W)**



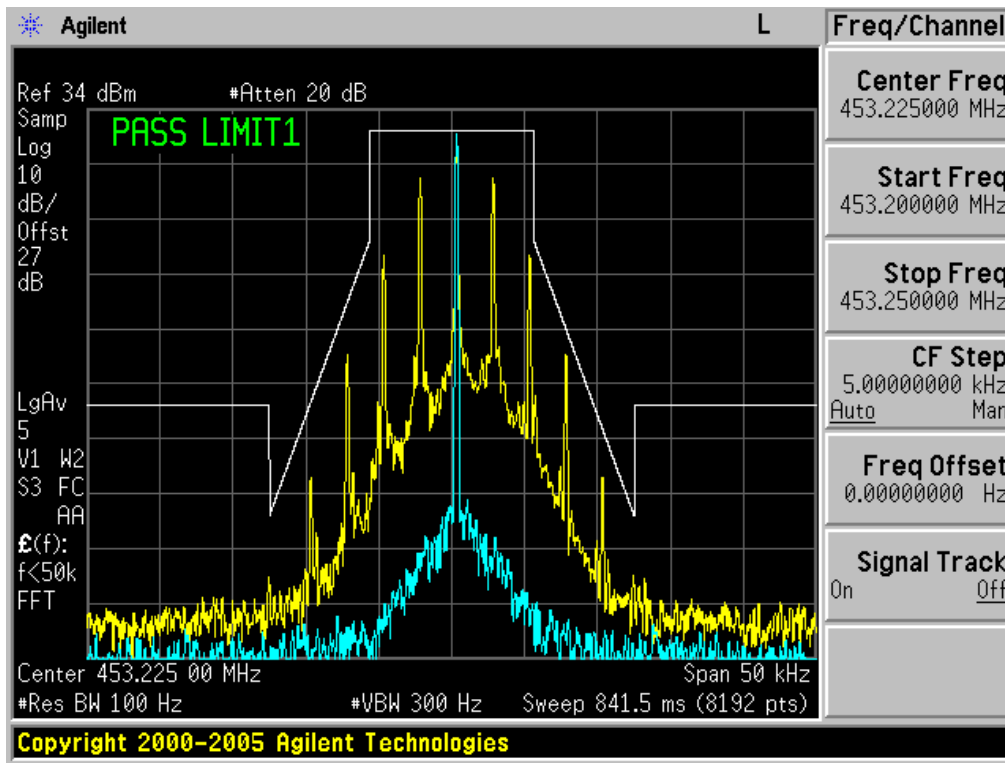
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (25W)**



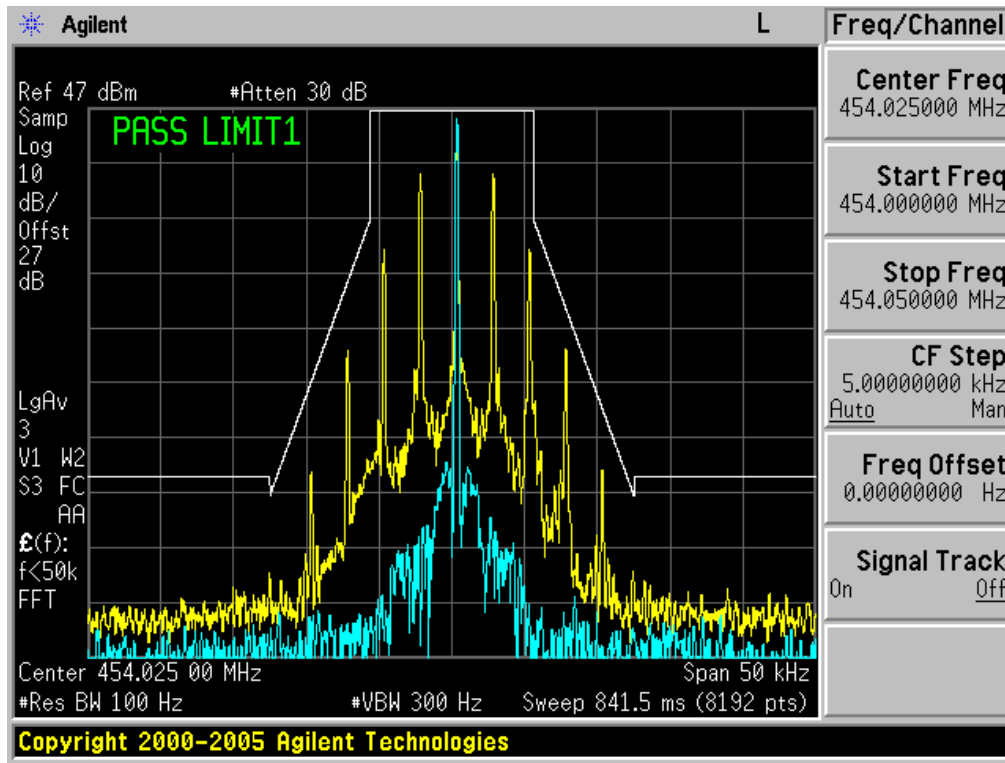
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (10W)**



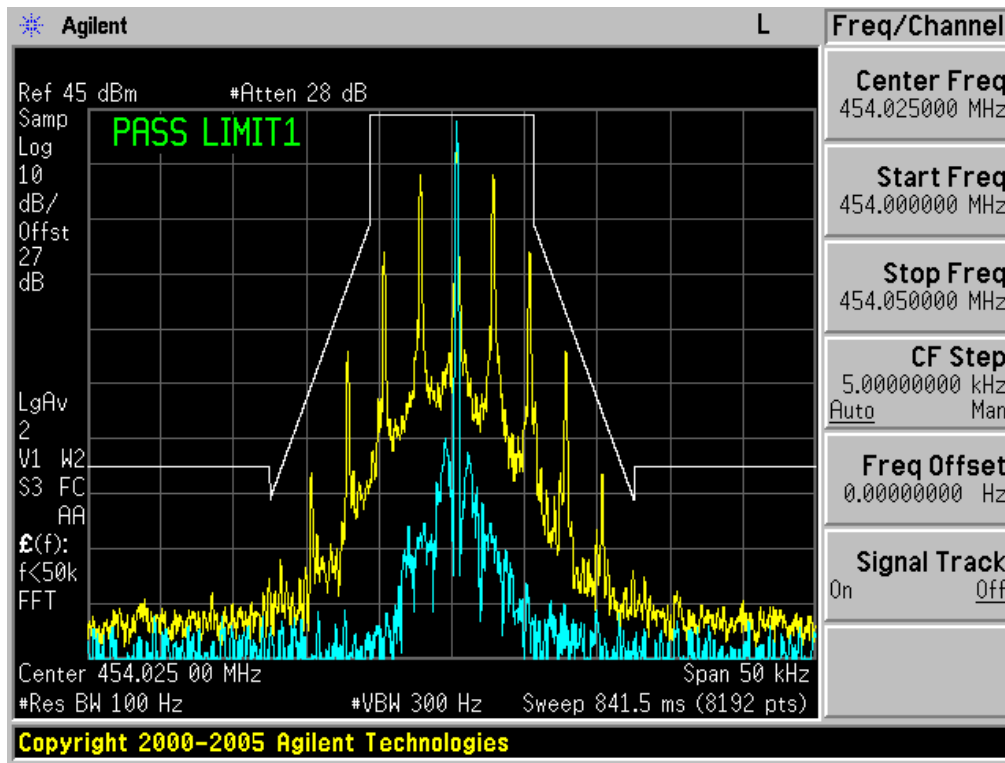
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (1W)**



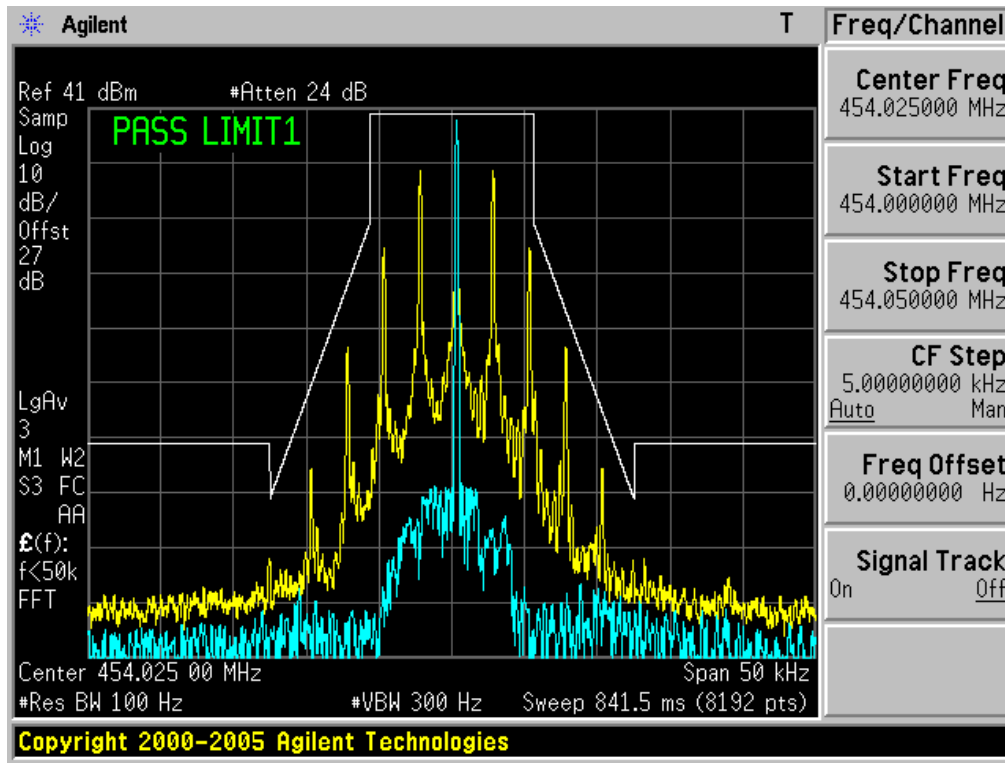
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (45W)**



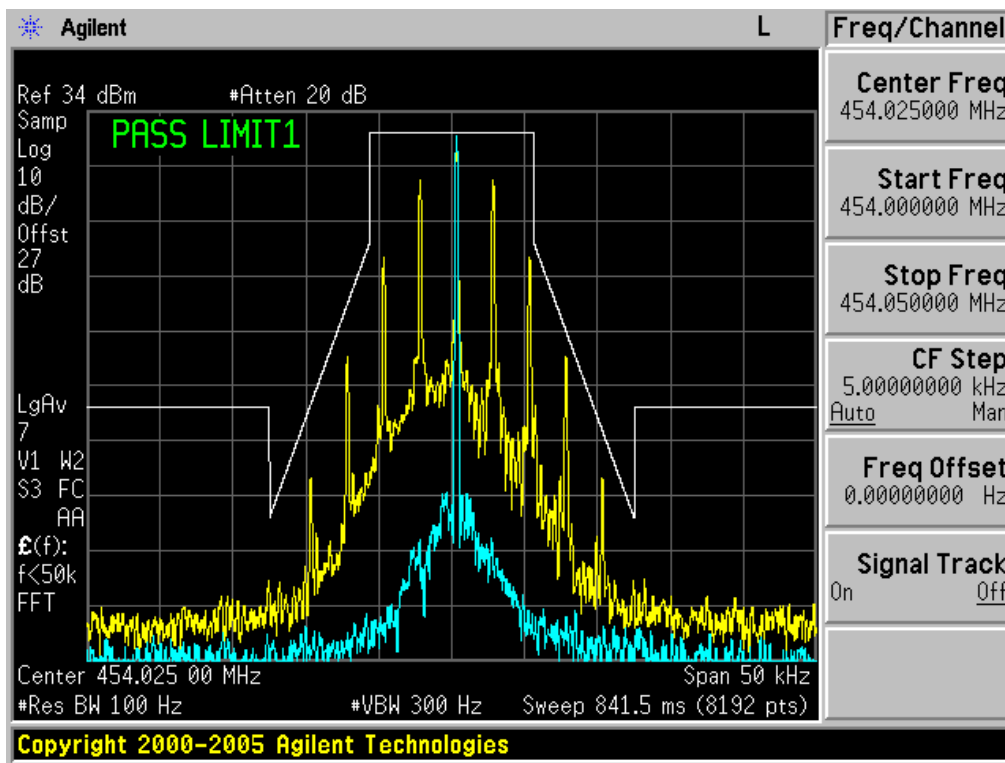
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (25W)**



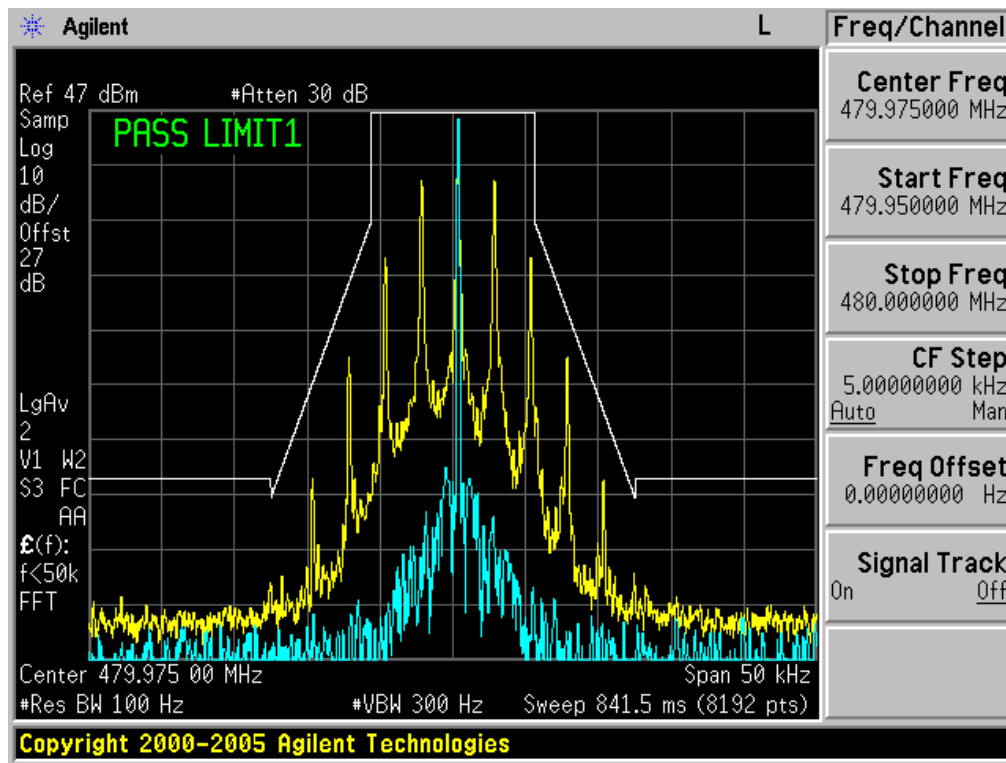
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (10W)**



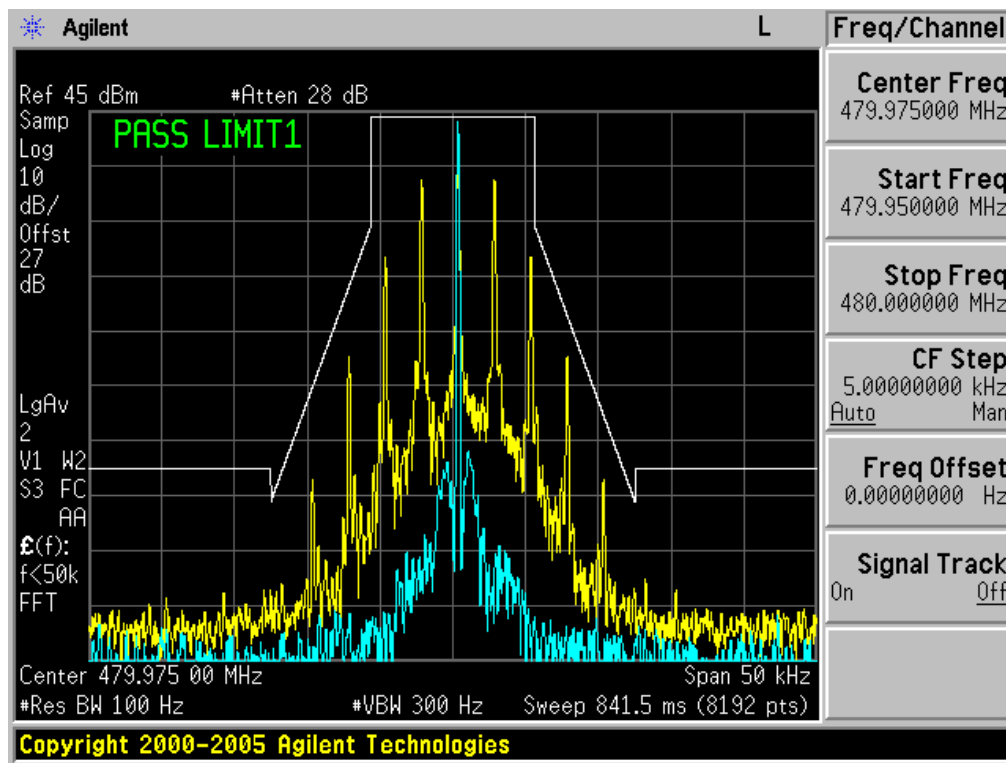
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (1W)**



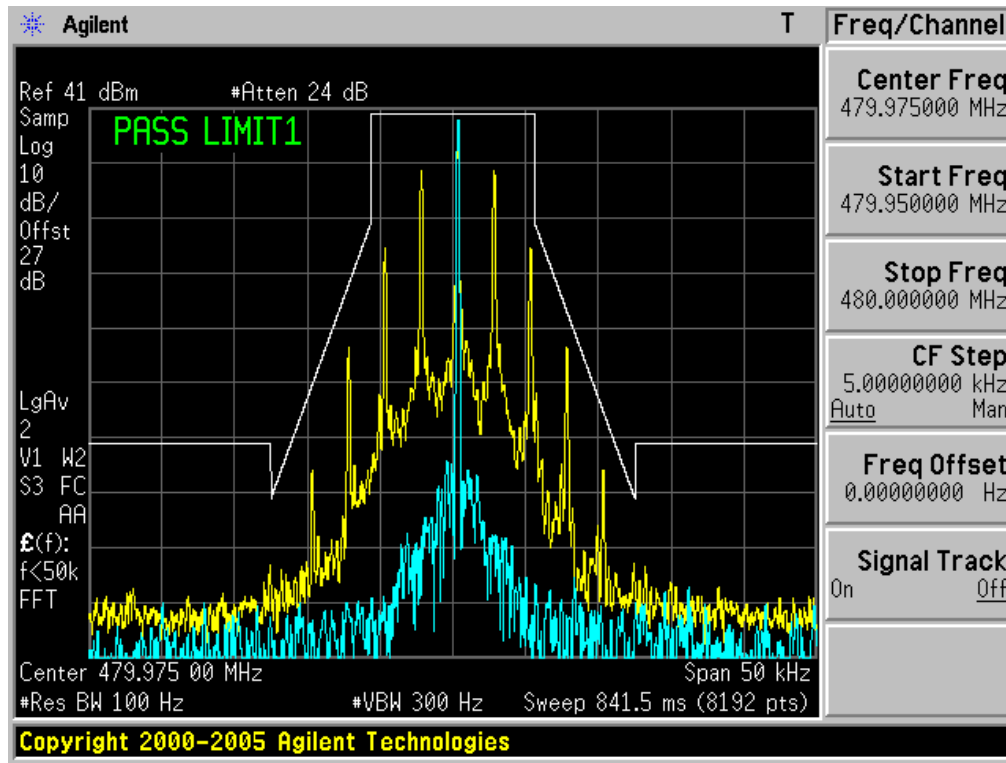
**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (45W)**



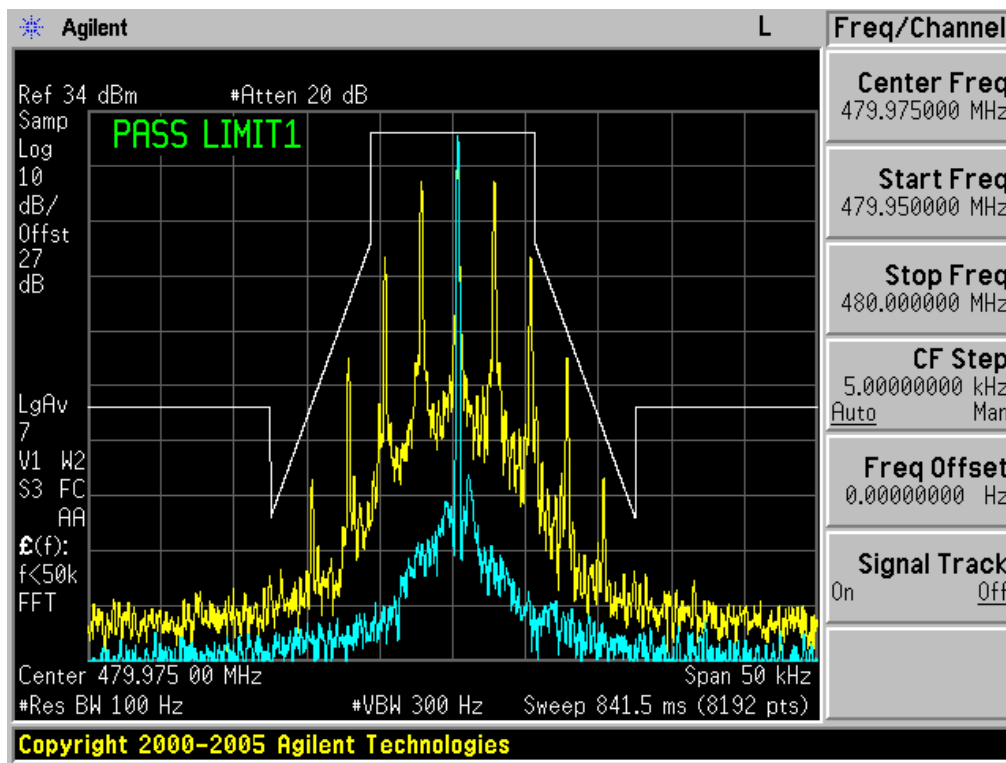
**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (25W)**



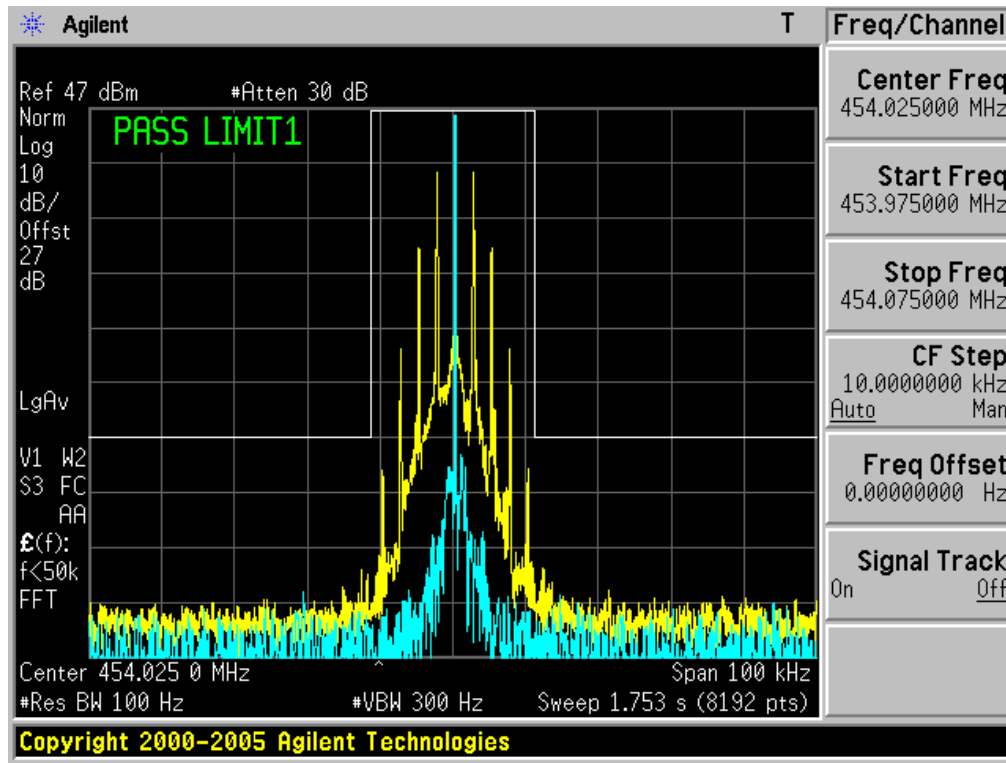
**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (10W)**



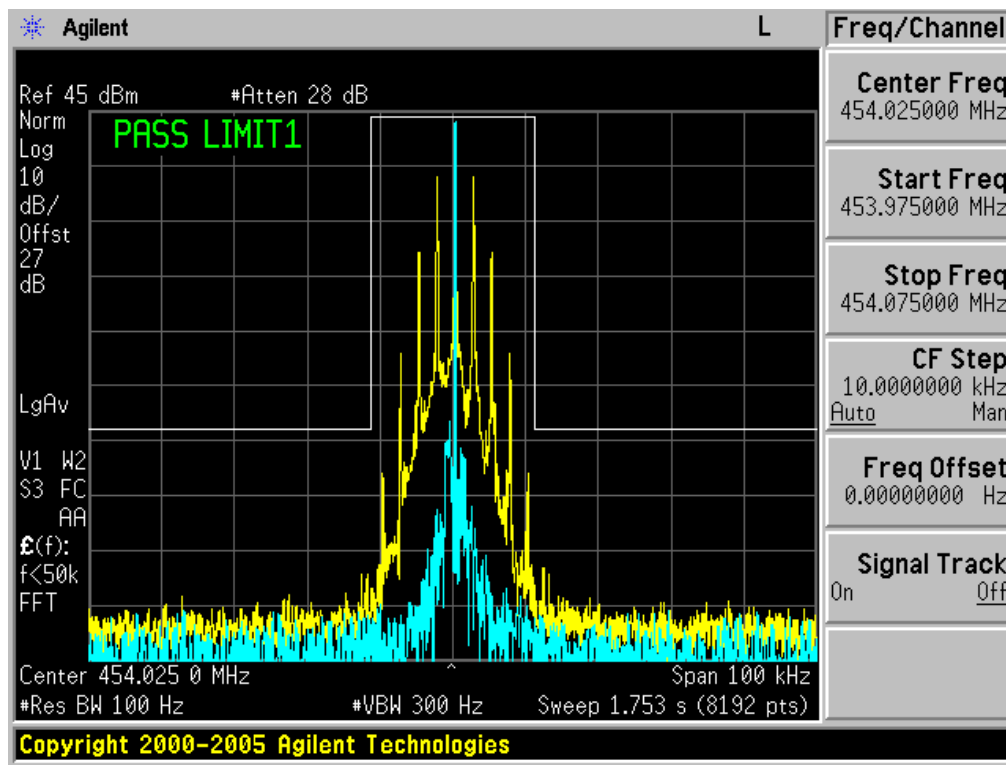
**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (1W)**



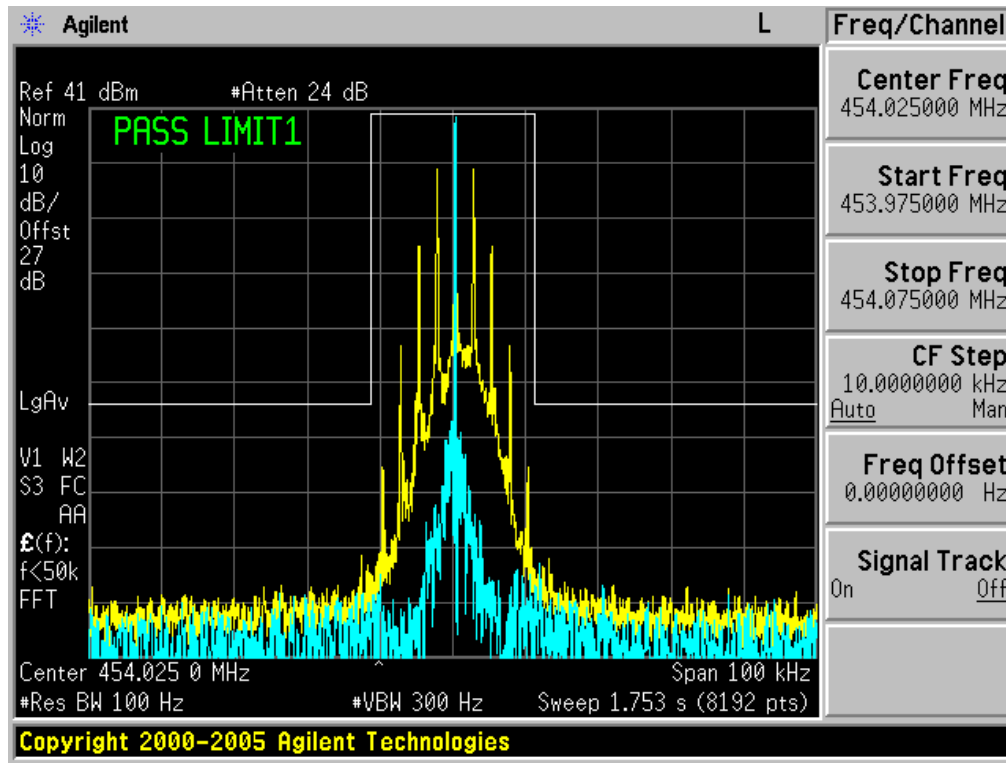
**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (45W)**



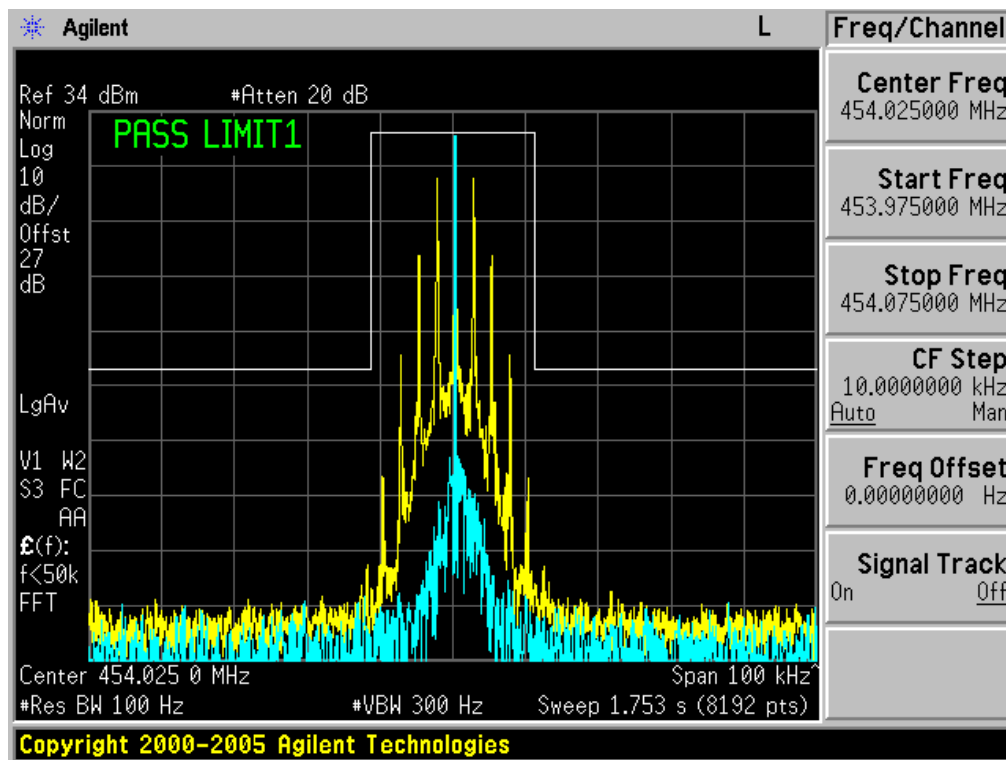
**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (25W)**



**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (10W)**



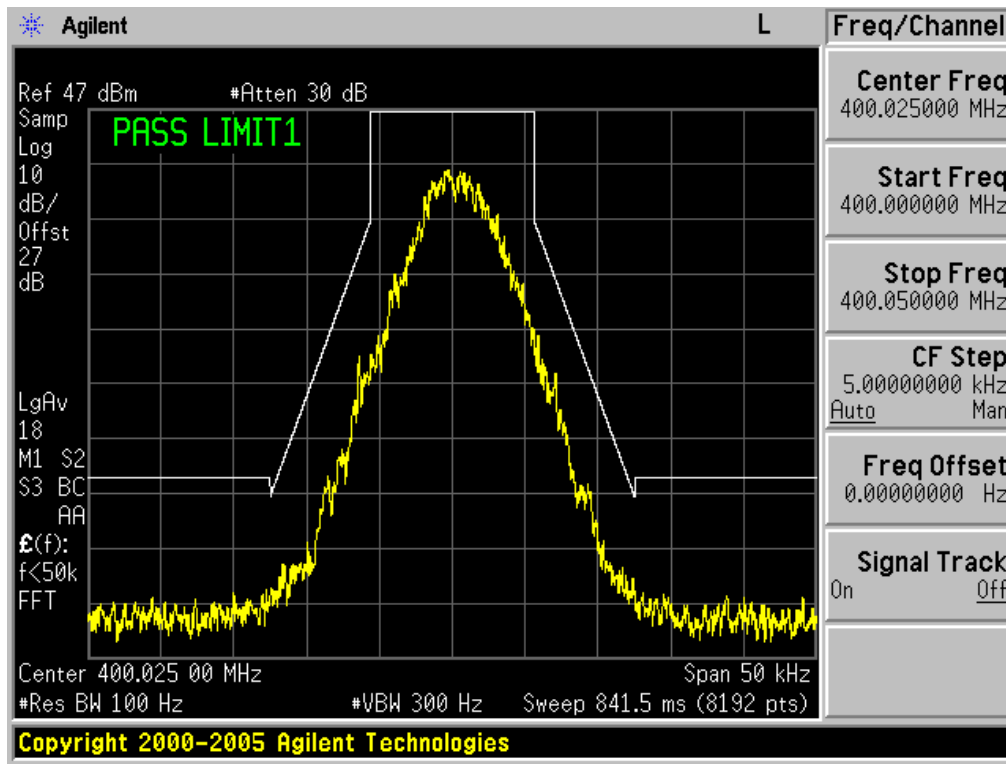
**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (1W)**



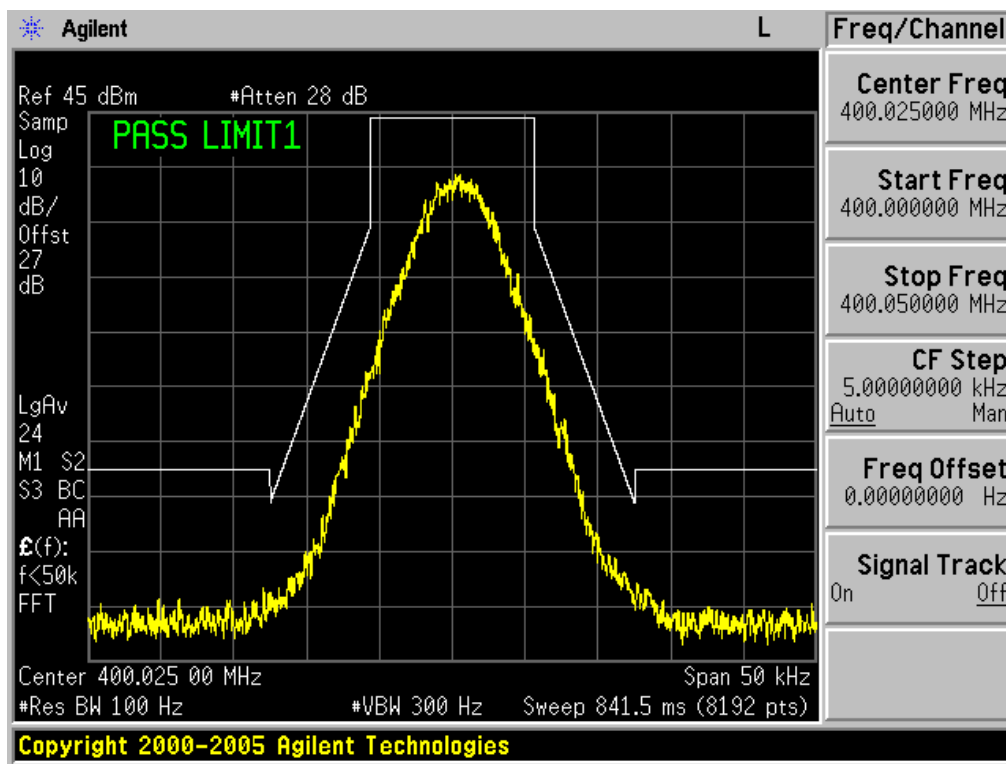


Digital:

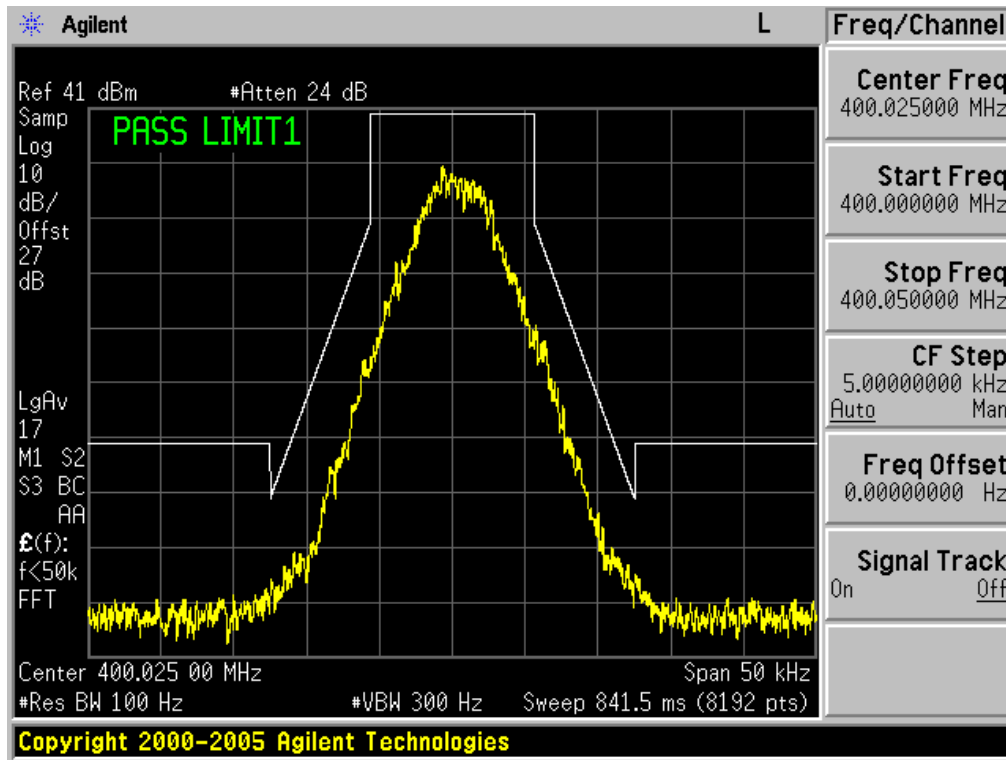
**The Worst Emission Mask D for (400.025 MHz) of 12.5 KHz channel Separation (45W)**



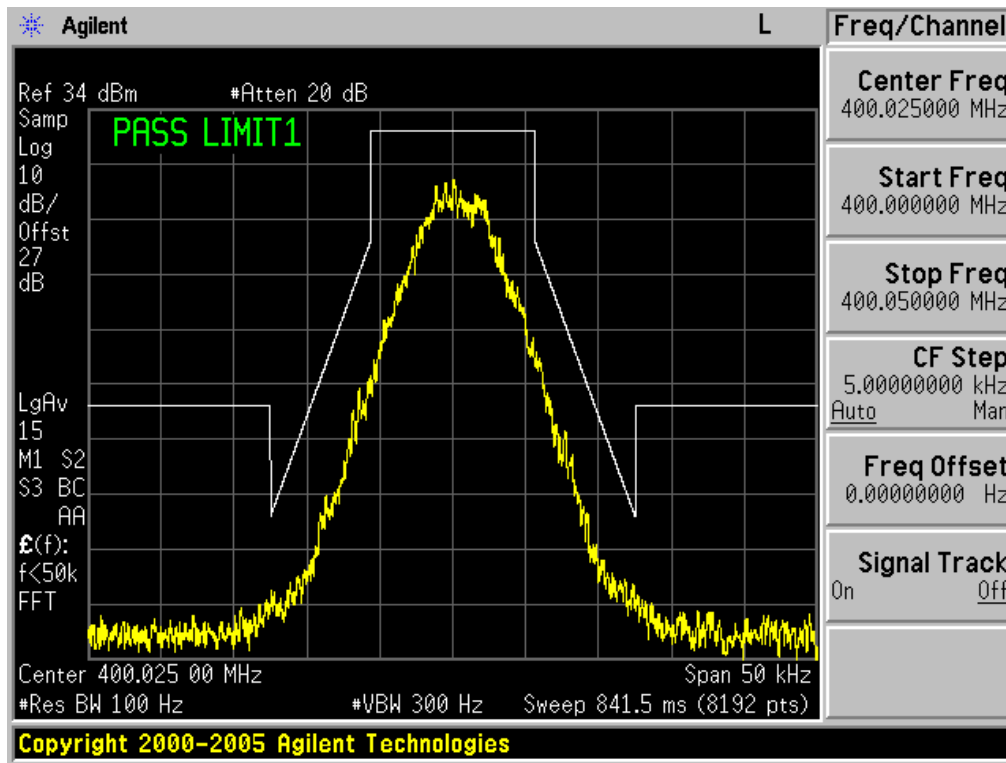
**The Worst Emission Mask D for (400.025 MHz) of 12.5 KHz channel Separation (25W)**



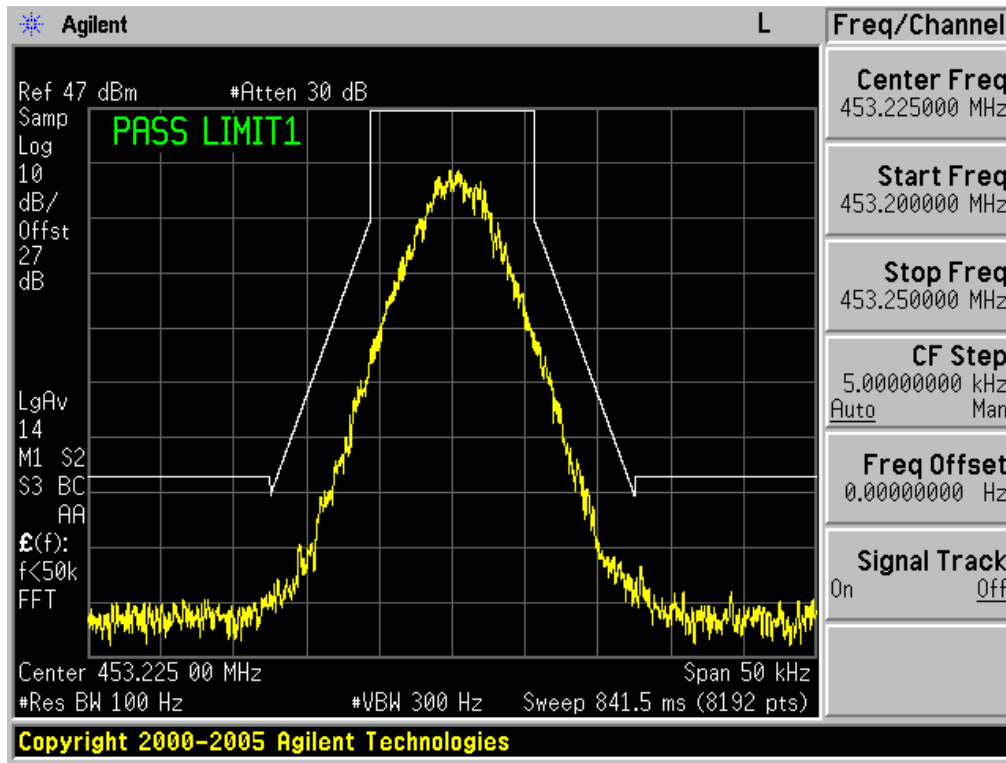
**The Worst Emission Mask D for (400.025 MHz) of 12.5 KHz channel Separation (10W)**



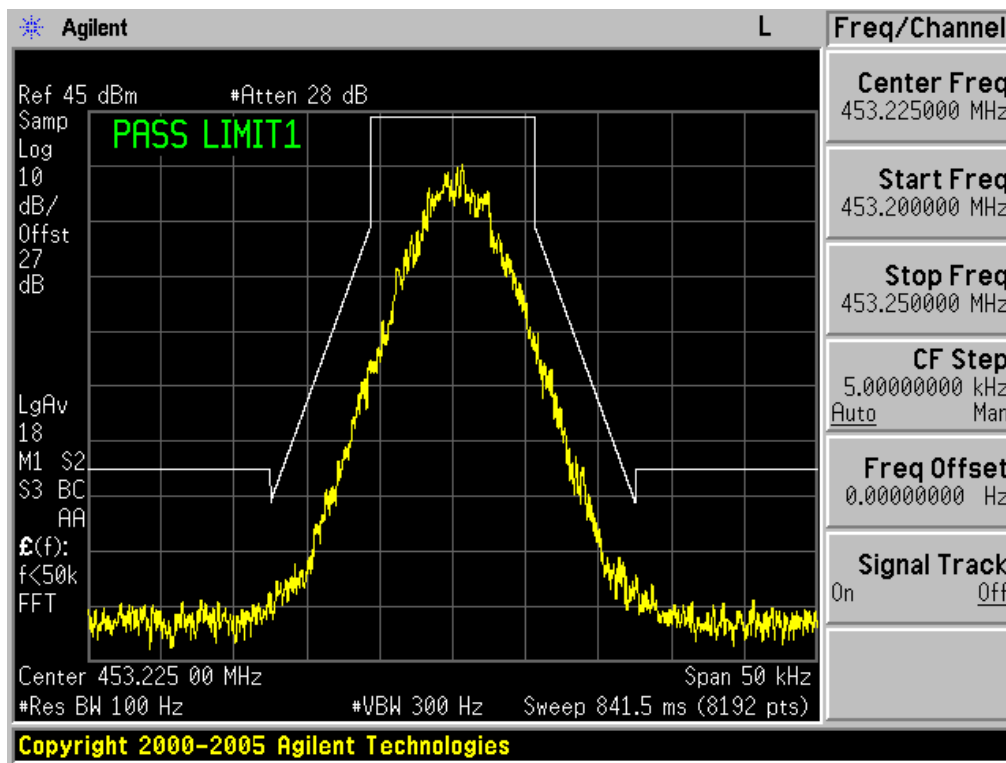
**The Worst Emission Mask D for (400.025 MHz) of 12.5 KHz channel Separation (1W)**



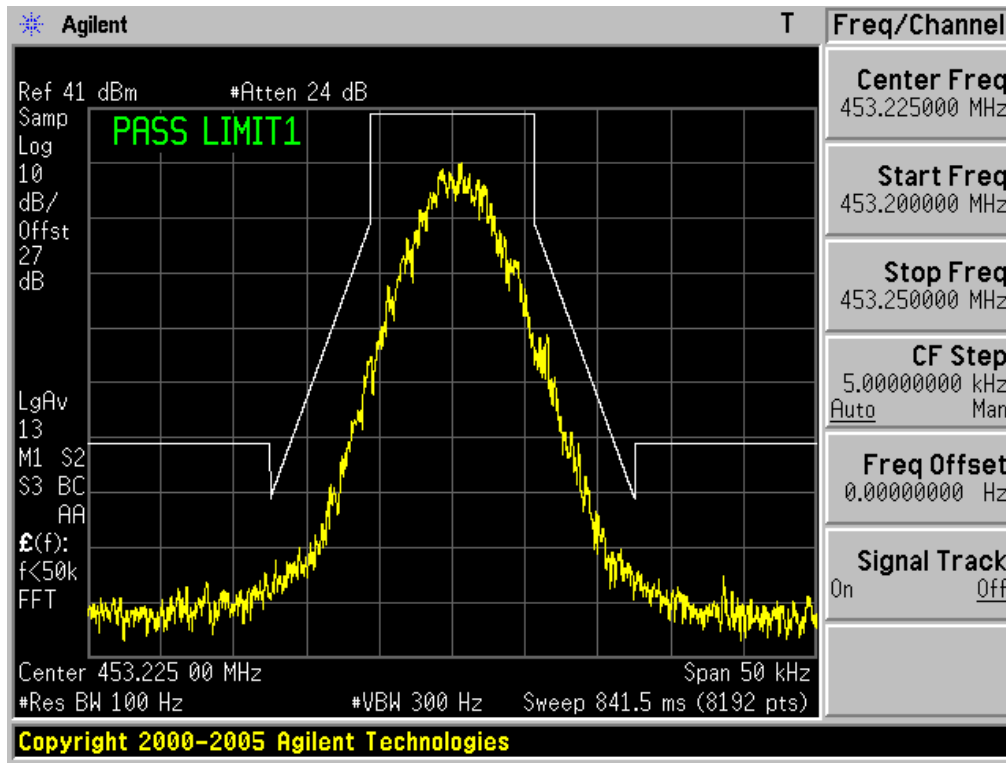
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (45W)**



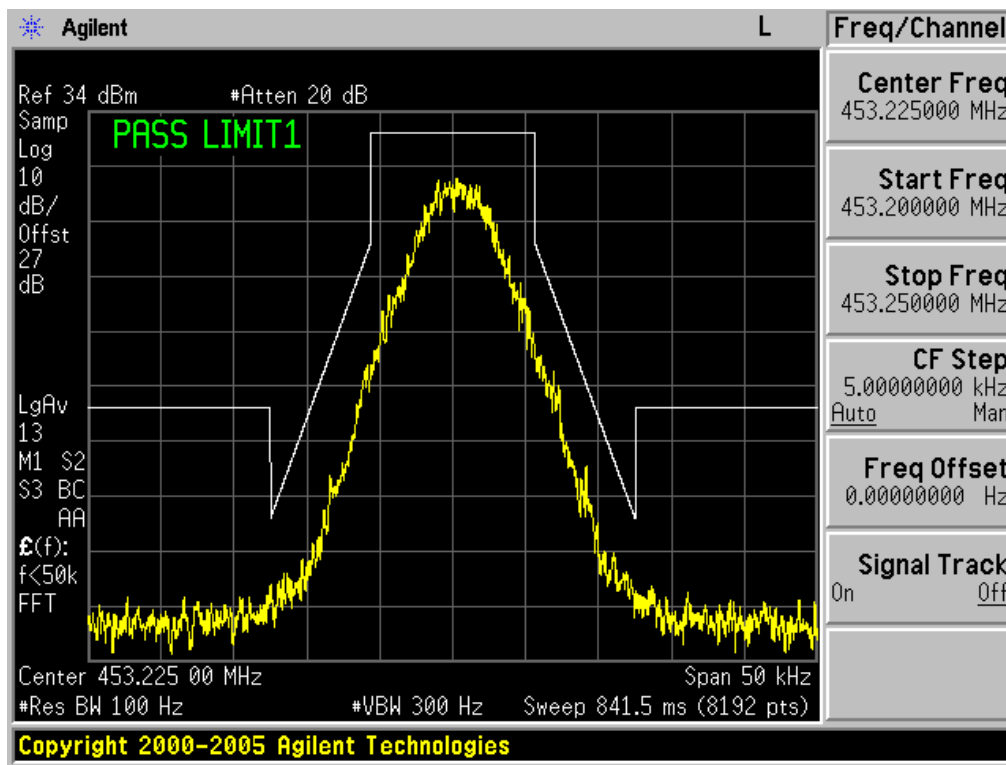
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (25W)**



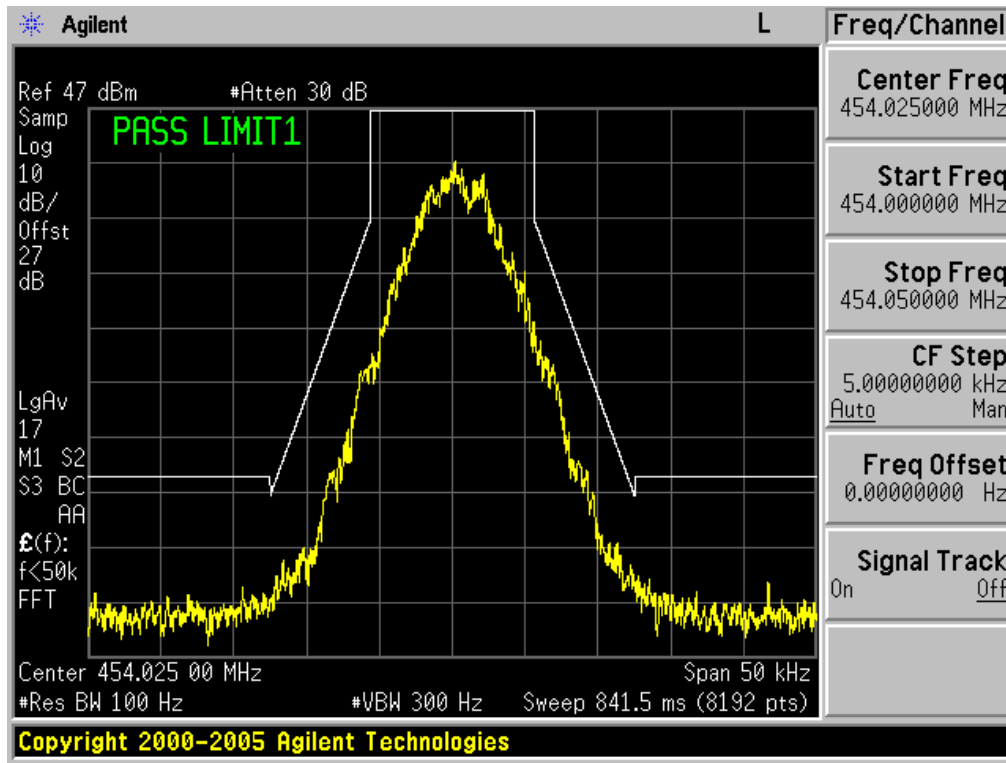
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (10W)**



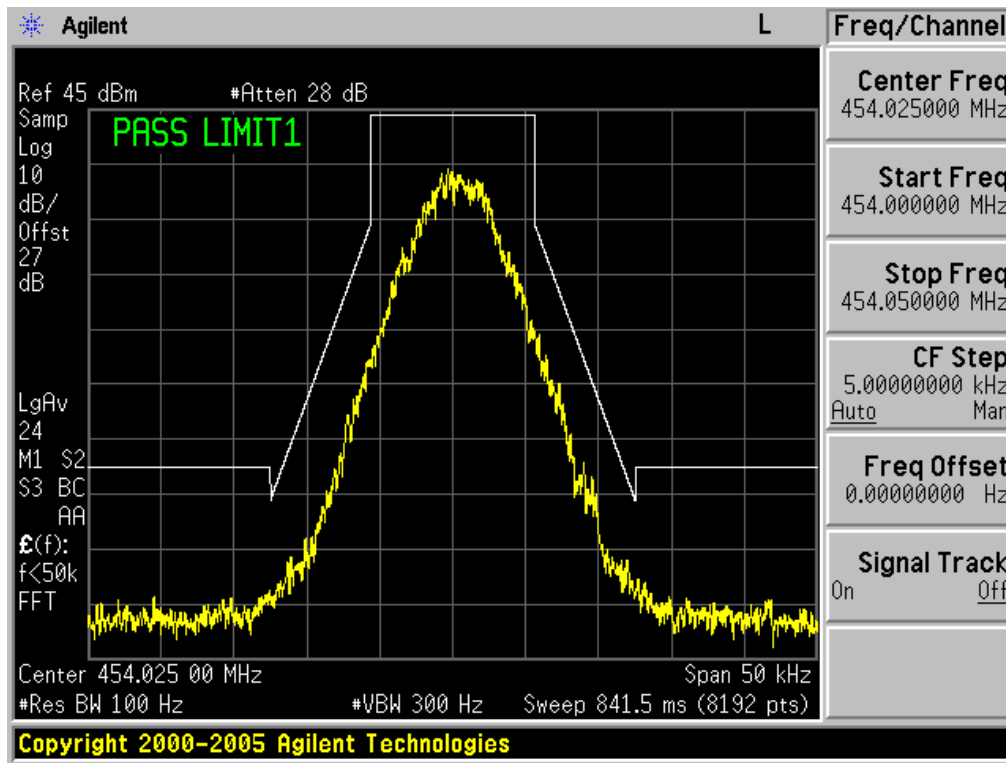
**The Worst Emission Mask D for (453.225 MHz) of 12.5 KHz channel Separation (1W)**



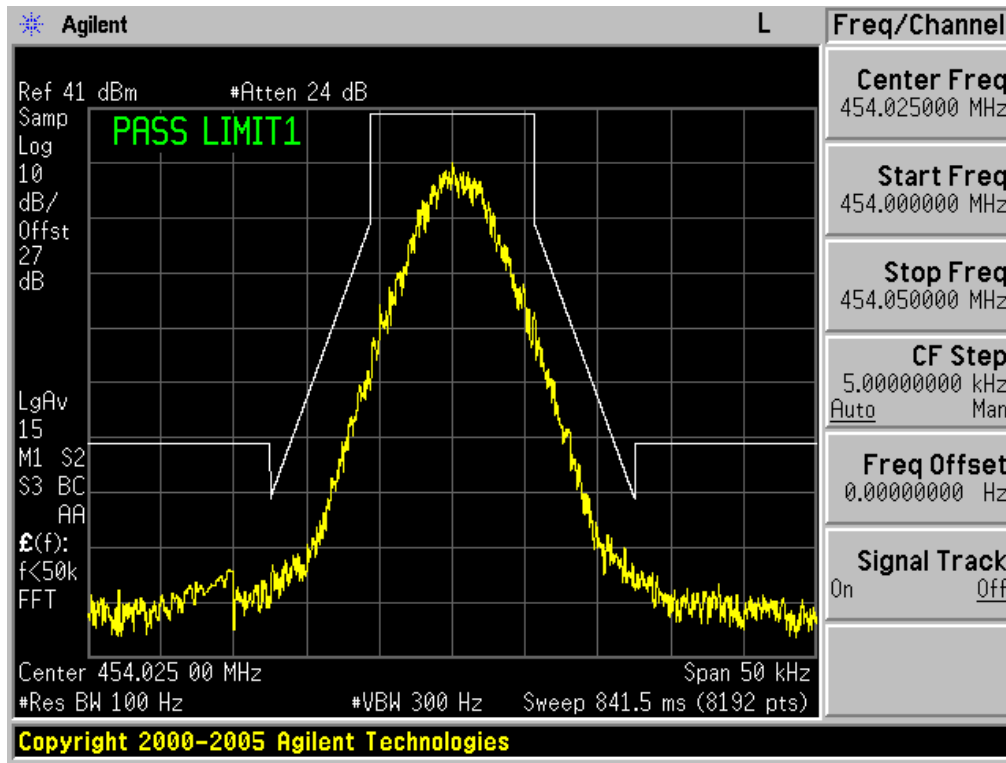
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (45W)**



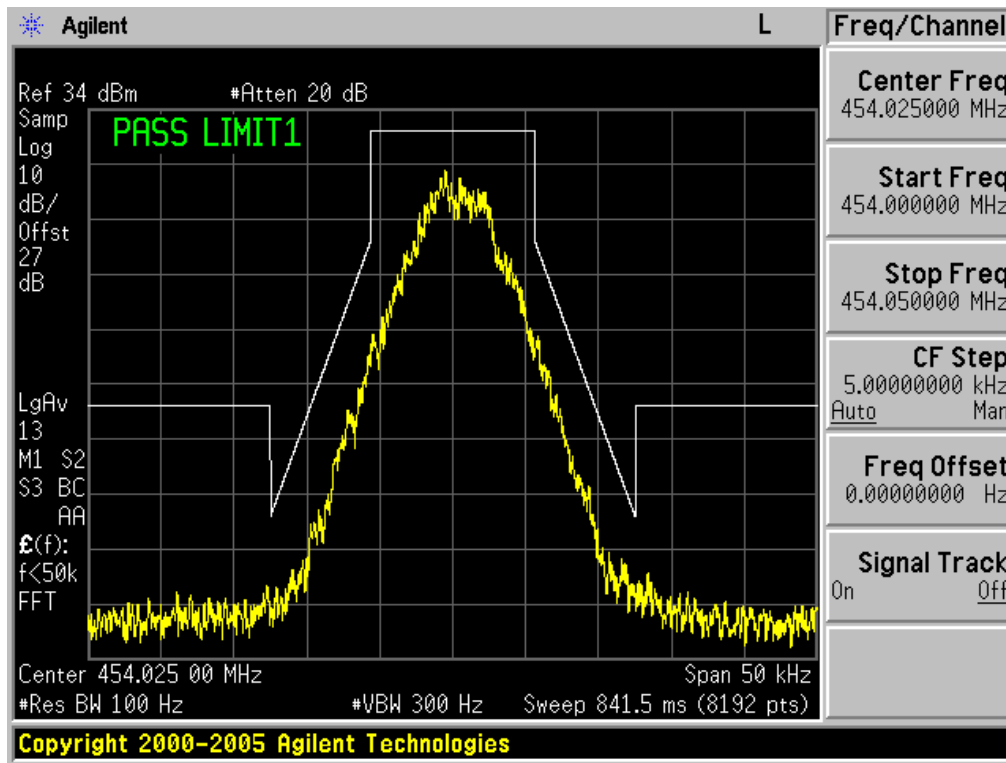
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (25W)**



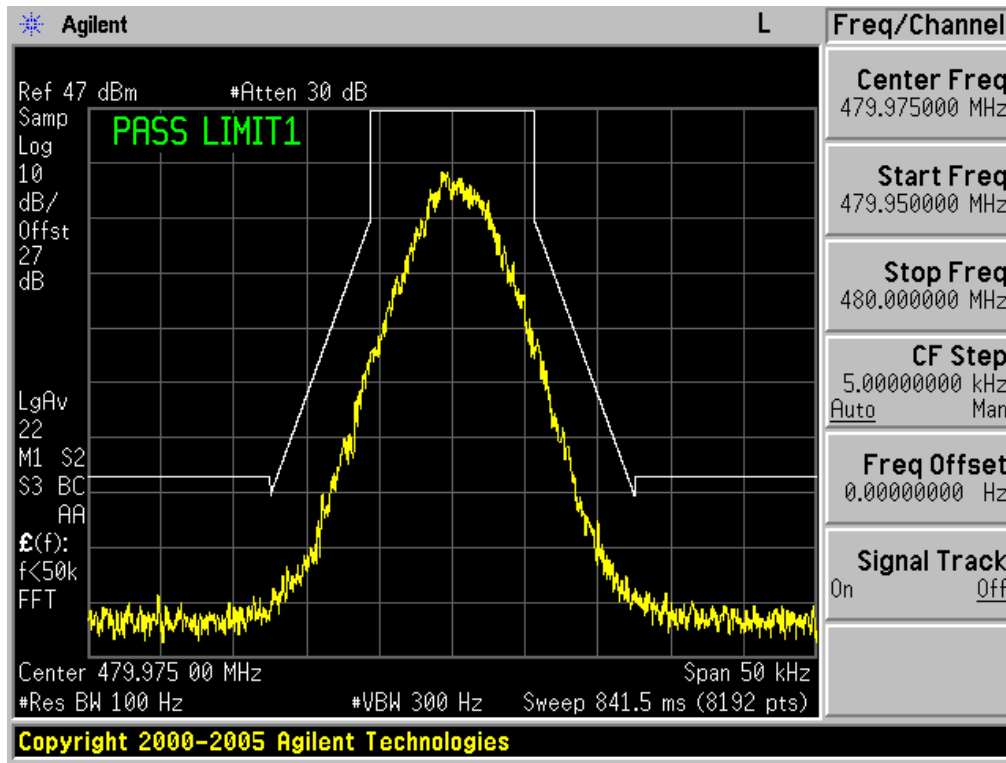
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (10W)**



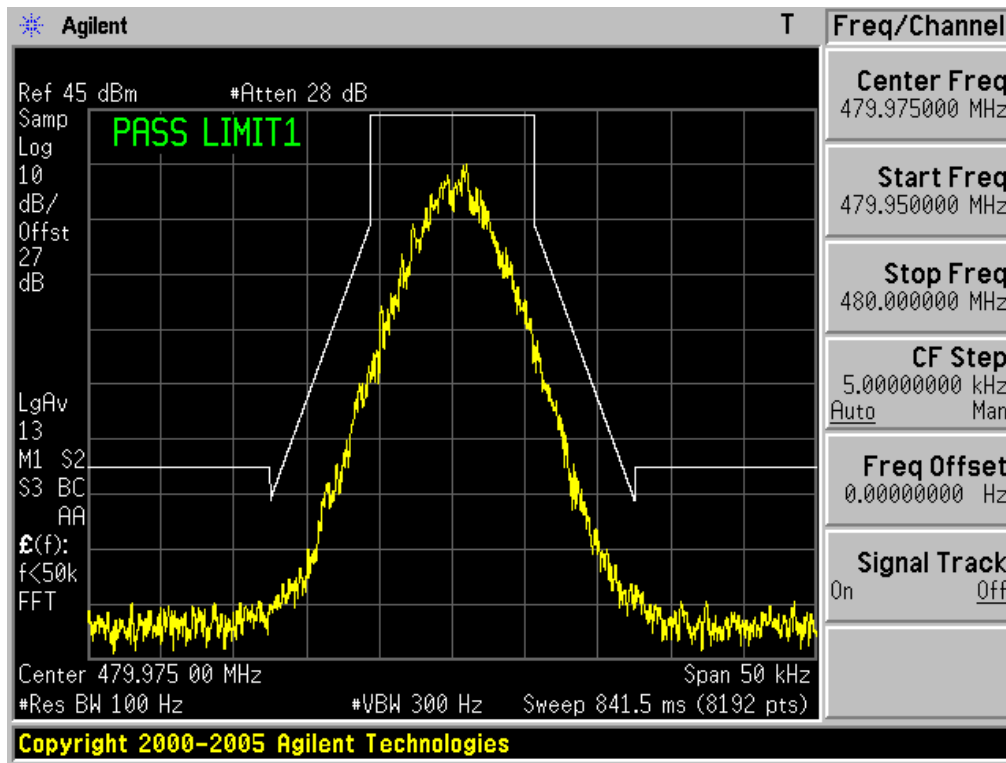
**The Worst Emission Mask D for (454.025 MHz) of 12.5 KHz channel Separation (1W)**



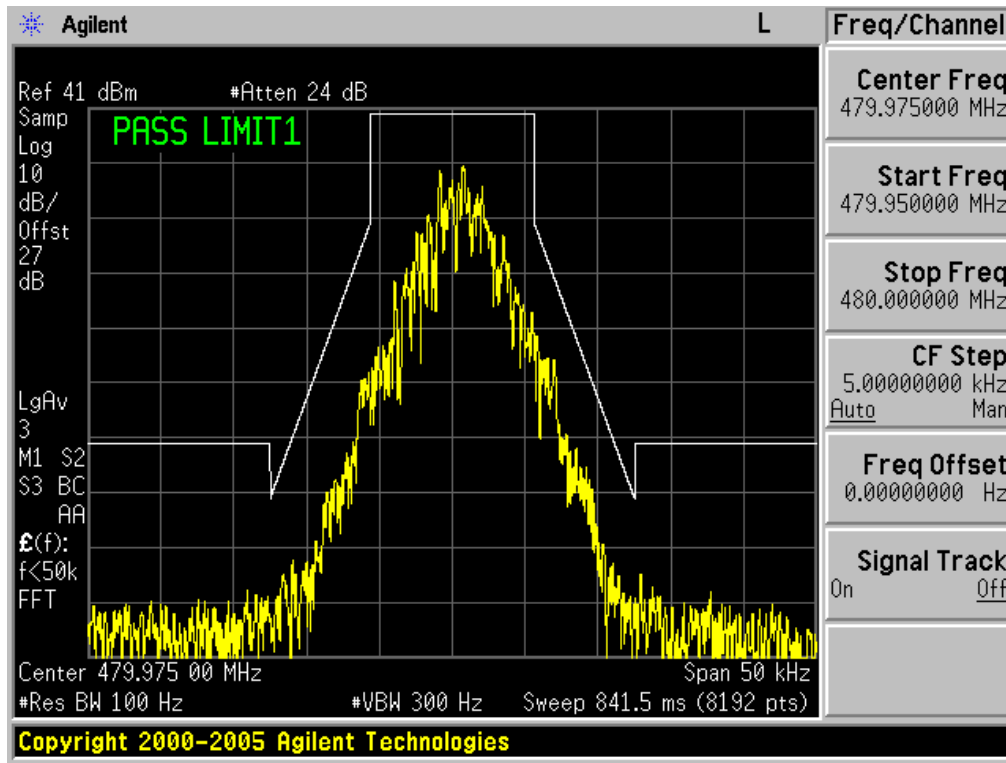
**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (45W)**



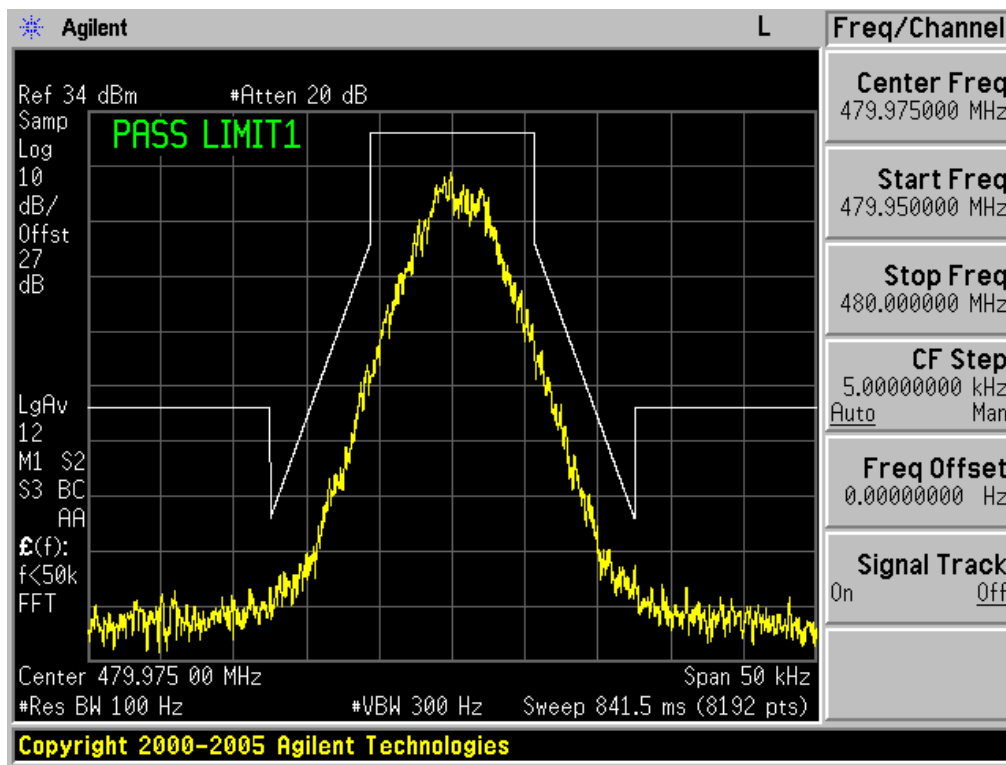
**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (25W)**



**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (10W)**

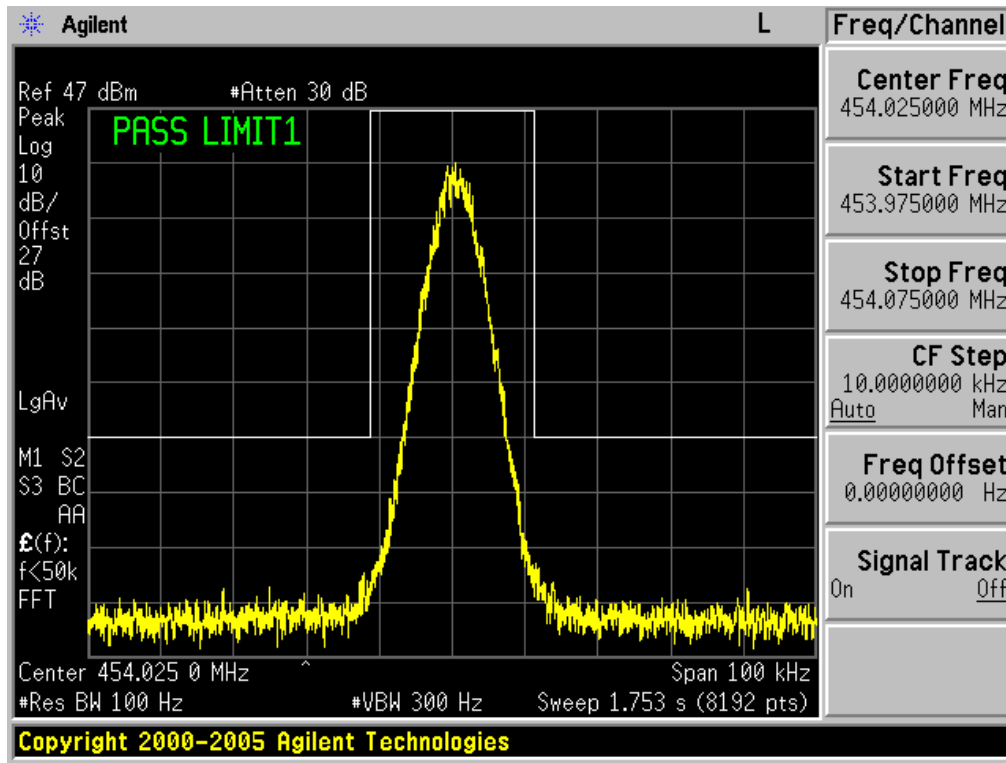


**The Worst Emission Mask D for (479.975 MHz) of 12.5 KHz channel Separation (1W)**

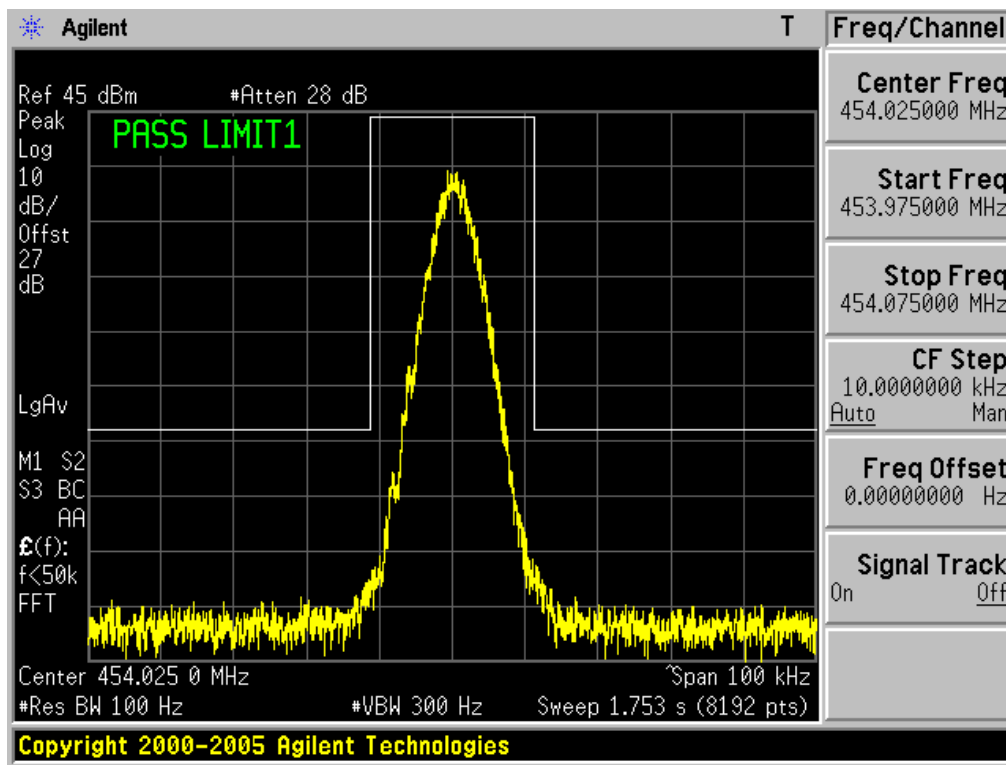




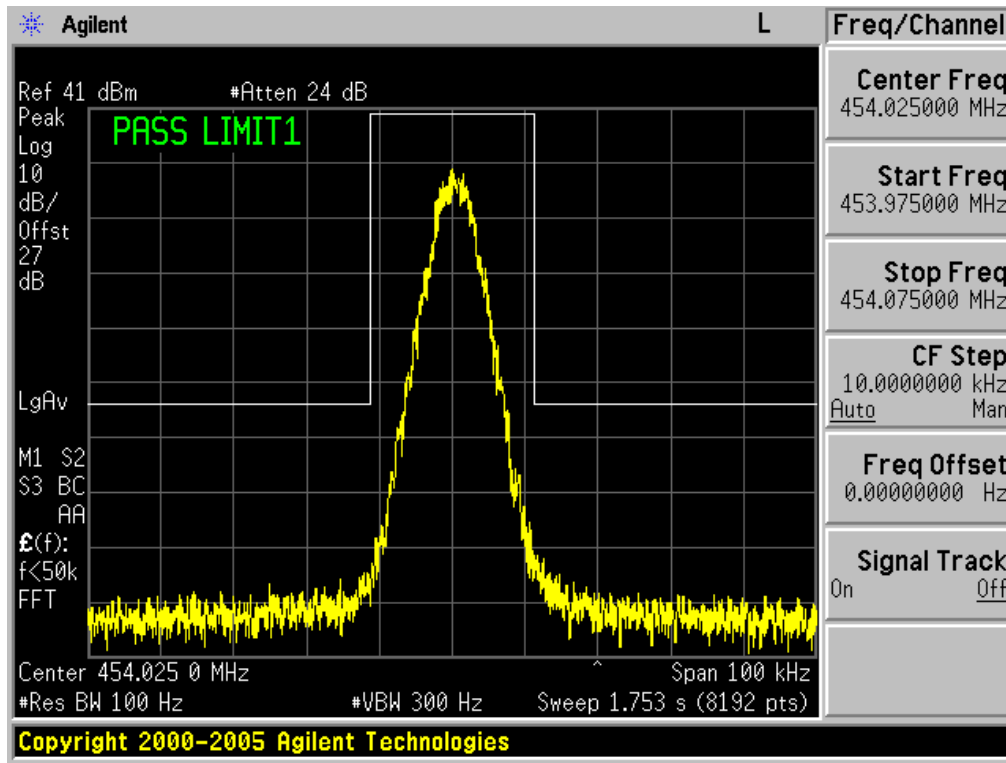
**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (45W)**



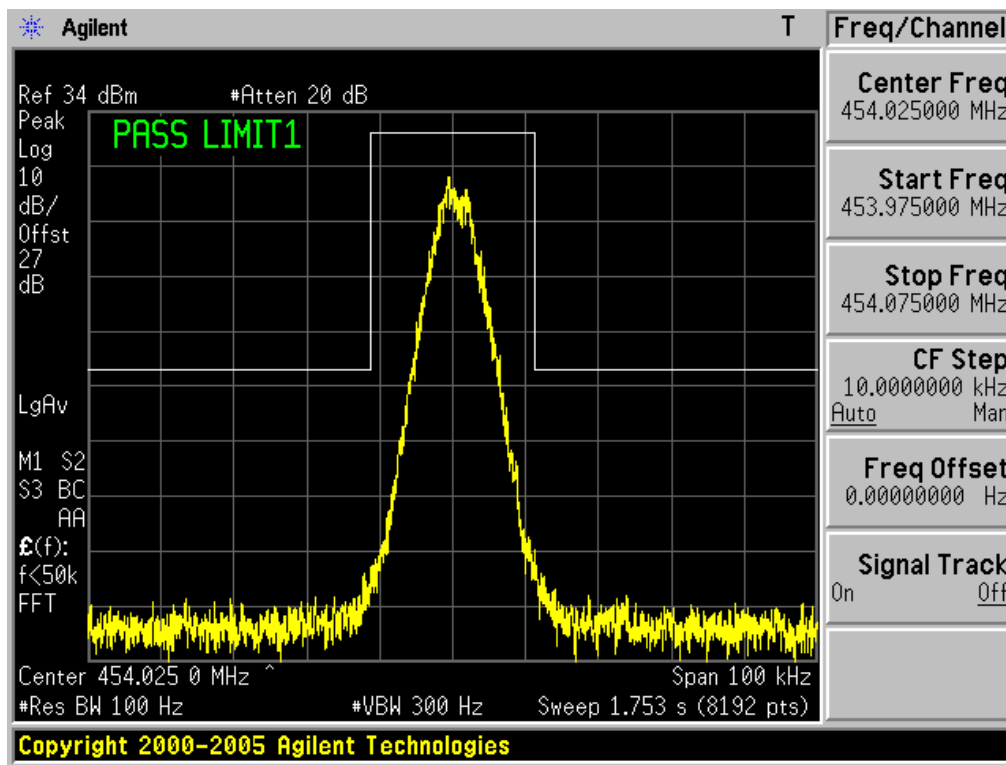
**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (25W)**



**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (10W)**



**The Worst Emission Mask § 22.359 for (454.025 MHz) of 12.5 KHz channel Separation (1W)**



## 9. MODULATION CHARACTERISTICS

### 9.1 PROVISIONS APPLICABLE

According to FCC§2.1047 and §90.207, for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.

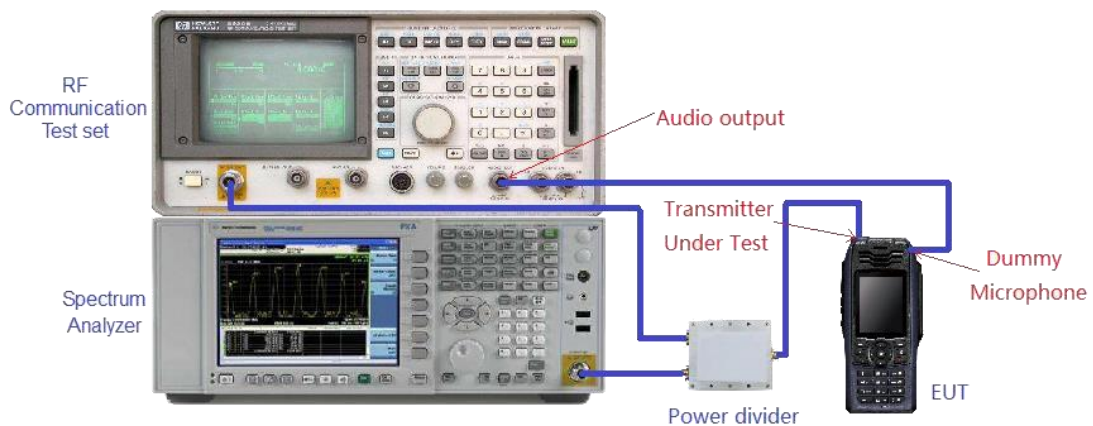
### 9.2 MEASUREMENT METHOD

#### 9.2.1 Modulation Limit

- (1). Configure the EUT as shown in figure 1, adjust the audio input for 60% of rated system deviation at 1KHz using this level as a reference (0dB) and vary the input level from -20 to +20dB. Record the frequency deviation obtained as a function of the input level.
- (2). Repeat step 1 with input frequency changing to 300, 1000, 1500 and 3000Hz in sequence.

#### 9.2.2 Audio Frequency Response

- (1). Configure the EUT as shown in figure 1.
- (2). Adjust the audio input for 20% of rated system deviation at 1 KHz using this level as a reference (0 dB).
- (3). Vary the Audio frequency from 100 Hz to 10 KHz and record the frequency deviation.
- (4). Audio Frequency Response =  $20\log_{10}(\text{Deviation of test frequency}/\text{Deviation of 1 KHz reference})$ .



**9.3 MEASUREMENT RESULT**

VHF:

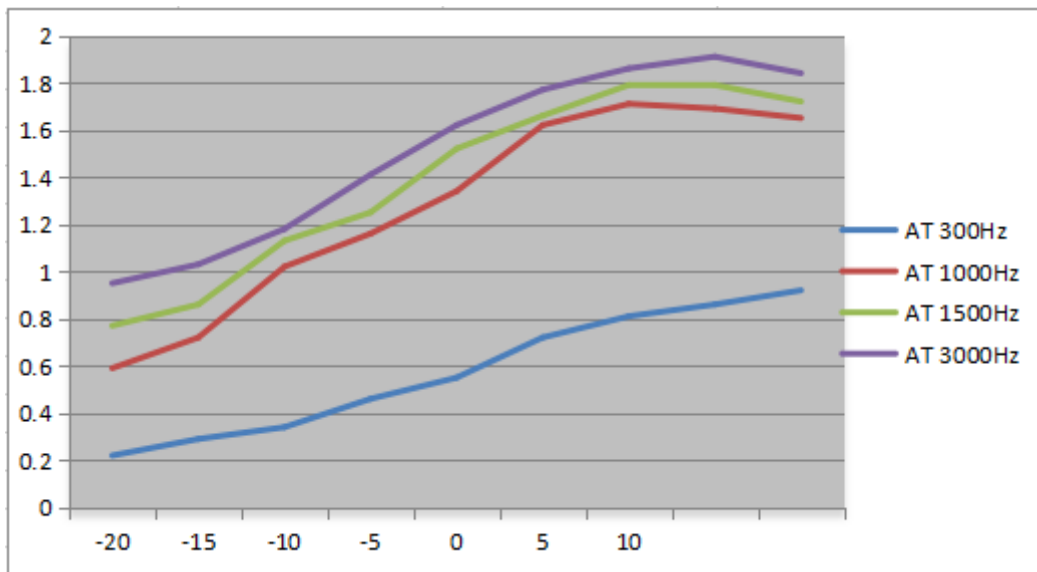
Analog:

**TEST RESULTS FOR H POWER**

**(A). MODULATION LIMIT:**

**Middle Channel @ 12.5 KHz Channel Separations-60W**

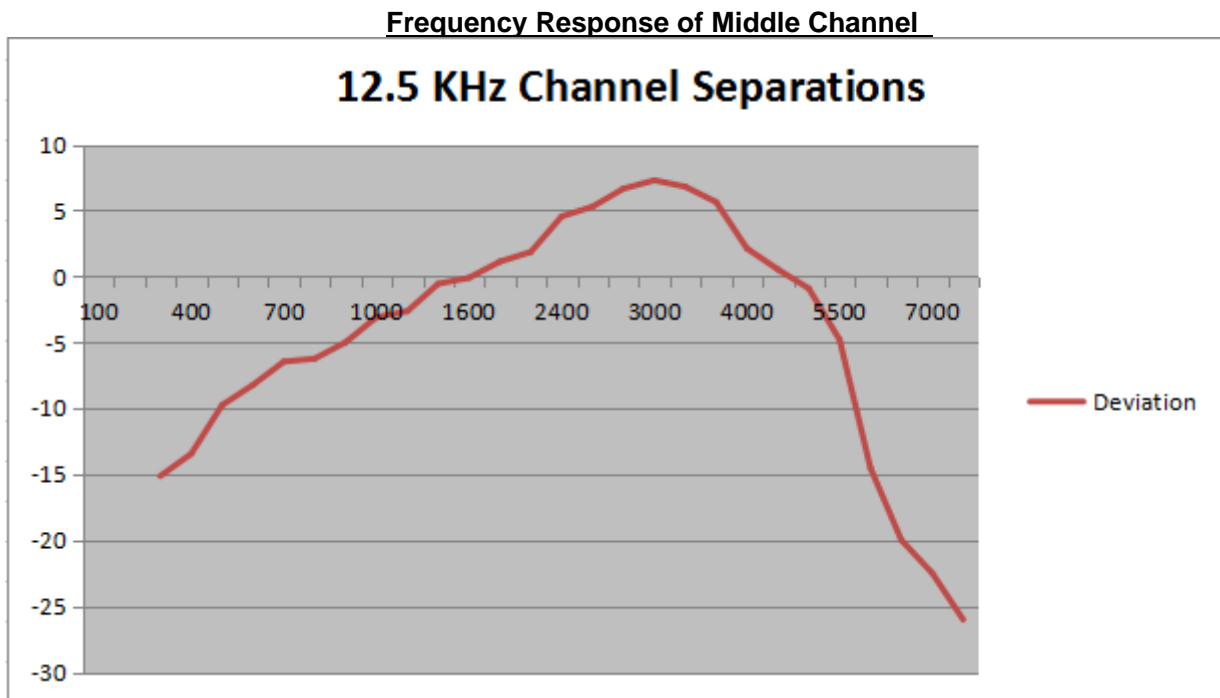
Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.22	0.59	0.77	0.95
-15	0.29	0.72	0.86	1.03
-10	0.34	1.02	1.13	1.18
-5	0.46	1.16	1.25	1.41
0	0.55	1.34	1.52	1.62
+5	0.72	1.62	1.66	1.77
+10	0.81	1.71	1.79	1.86
+15	0.86	1.69	1.79	1.91
+20	0.92	1.65	1.72	1.84



Note: All the modes had been tested, but only the worst data recorded in the report.

**(B). AUDIO FREQUENCY RESPONSE:****Middle Channel @ 12.5 KHz Channel Separations-60W**

<b>Frequency (Hz)</b>	<b>Deviation (KHz)</b>	<b>Audio Frequency Response(dB)</b>
100	--	--
200	--	--
300	0.14	-15.14
400	0.17	-13.45
500	0.26	-9.76
600	0.31	-8.23
700	0.38	-6.47
800	0.39	-6.24
900	0.45	-5.00
1000	0.56	-3.10
1200	0.59	-2.64
1400	0.75	-0.56
1600	0.79	-0.11
1800	0.91	1.12
2000	0.99	1.85
2400	1.35	4.54
2500	1.47	5.28
2800	1.72	6.65
3000	1.85	7.28
3200	1.75	6.80
3600	1.53	5.63
4000	1.02	2.11
4500	0.85	0.53
5000	0.72	-0.92
5500	0.46	-4.81
6000	0.15	-14.54
6500	0.08	-20.00
7000	0.06	-22.50
7500	0.04	-26.02
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

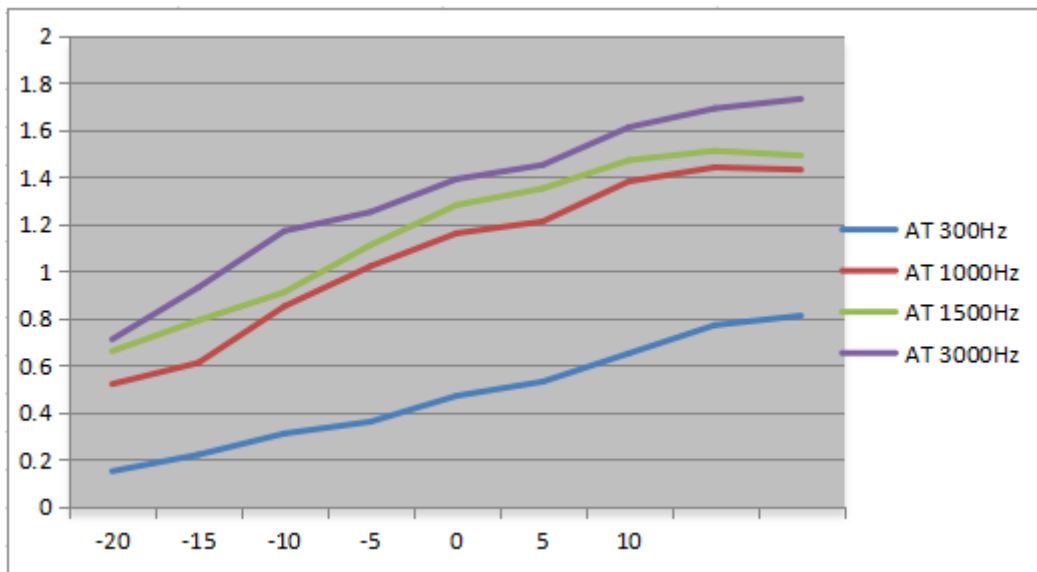


Note: All the modes had been tested, but only the worst data recorded in the report.

Digital:  
(A). MODULATION LIMIT:

Middle Channel @ 12.5 KHz Channel Separations-60W

Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.15	0.52	0.66	0.71
-15	0.22	0.61	0.79	0.93
-10	0.31	0.85	0.91	1.17
-5	0.36	1.02	1.11	1.25
0	0.47	1.16	1.28	1.39
+5	0.53	1.21	1.35	1.45
+10	0.65	1.38	1.47	1.61
+15	0.77	1.44	1.51	1.69
+20	0.81	1.43	1.49	1.73

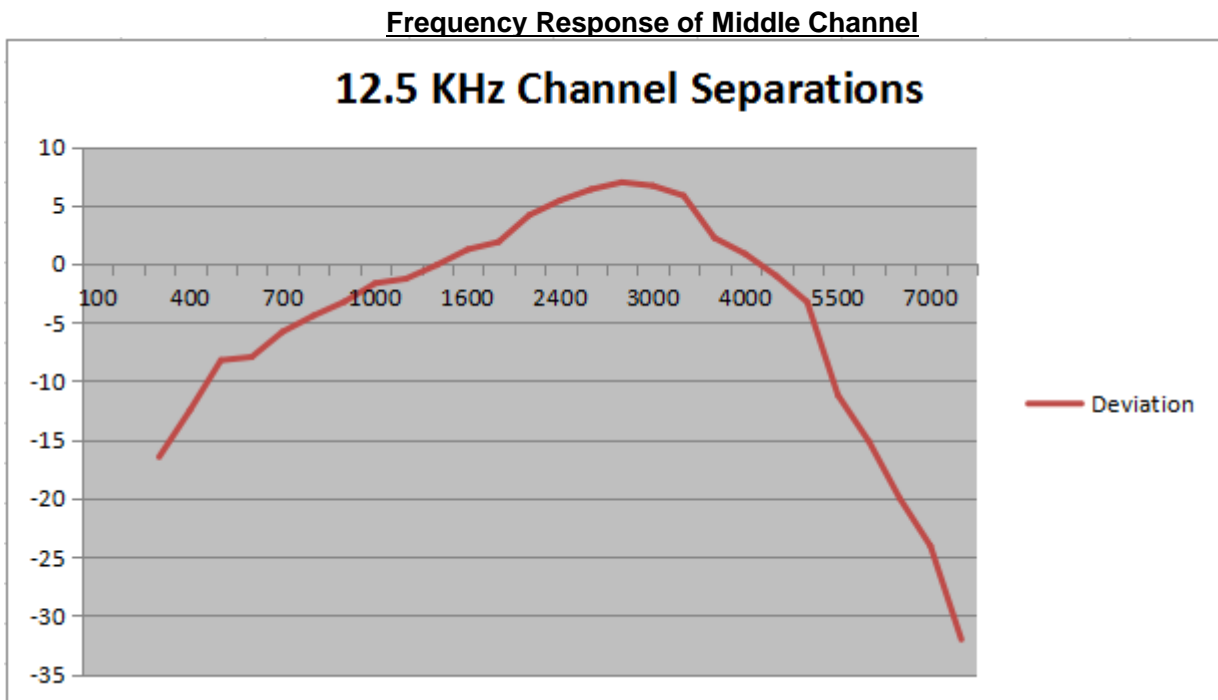


Note: All the modes had been tested, but only the worst data recorded in the report.

**(B). AUDIO FREQUENCY RESPONSE:****Middle Channel @ 12.5 KHz Channel Separations-60W**

<b>Frequency (Hz)</b>	<b>Deviation (KHz)</b>	<b>Audio Frequency Response(dB)</b>
100	--	--
200	--	--
300	0.12	-16.48
400	0.19	-12.49
500	0.31	-8.23
600	0.32	-7.96
700	0.41	-5.81
800	0.48	-4.44
900	0.55	-3.25
1000	0.66	-1.67
1200	0.69	-1.28
1400	0.79	-0.11
1600	0.92	1.21
1800	0.99	1.85
2000	1.29	4.15
2400	1.49	5.40
2500	1.66	6.34
2800	1.78	6.95
3000	1.72	6.65
3200	1.56	5.80
3600	1.03	2.19
4000	0.88	0.83
4500	0.71	-1.04
5000	0.55	-3.25
5500	0.22	-11.21
6000	0.14	-15.14
6500	0.08	-20.00
7000	0.05	-24.08
7500	0.02	-32.04
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--



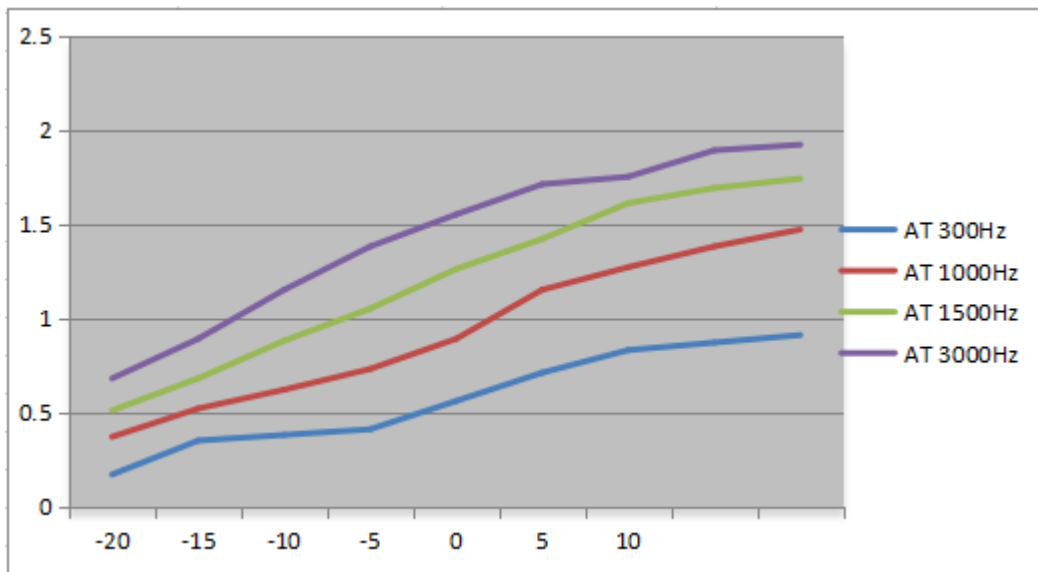


Note: All the modes had been tested, but only the worst data recorded in the report.

**UHF:**  
**Analog:**  
**TEST RESULT TS FOR H POWER H LEVEL**  
**(A). MODULATION LIMIT:**

**Middle Channel @ 12.5 KHz Channel Separations-45W**

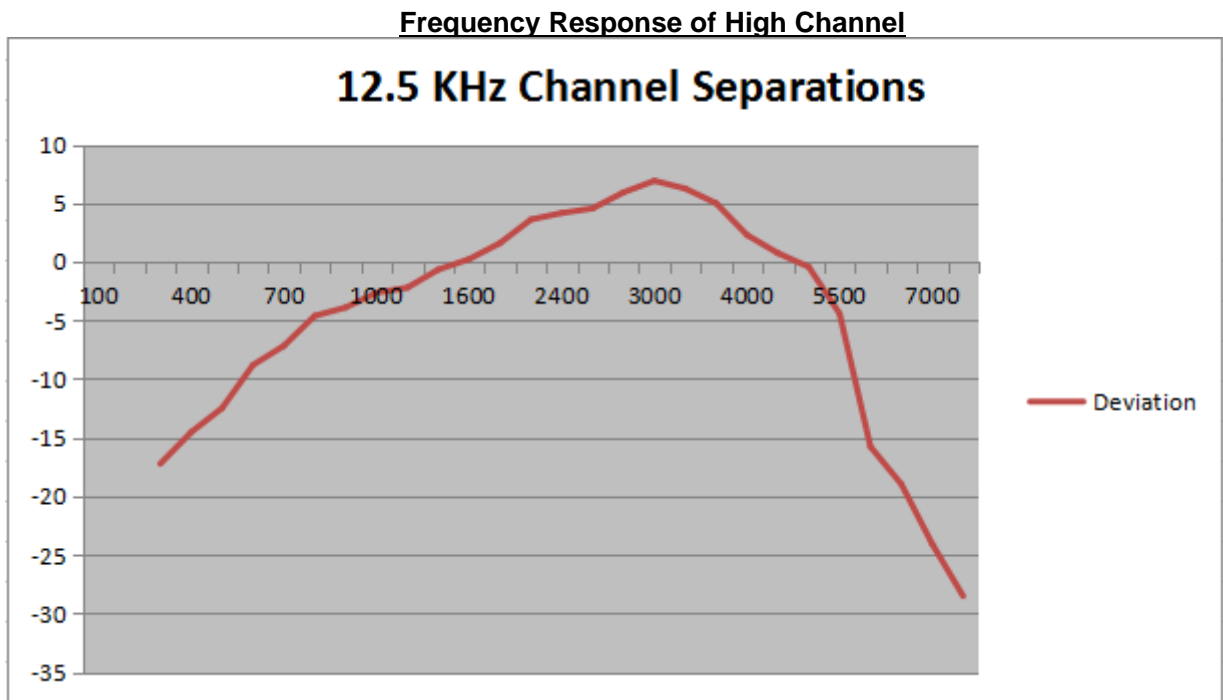
Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.17	0.37	0.51	0.68
-15	0.35	0.52	0.68	0.89
-10	0.38	0.62	0.88	1.15
-5	0.41	0.73	1.05	1.38
0	0.56	0.89	1.26	1.55
+5	0.71	1.15	1.42	1.71
+10	0.83	1.27	1.61	1.75
+15	0.87	1.38	1.69	1.89
+20	0.91	1.47	1.74	1.92



Note: All the modes had been tested, but only the worst data recorded in the report.

**(B). AUDIO FREQUENCY RESPONSE:****Middle Channel @ 12.5 KHz Channel Separations-45W**

<b>Frequency (Hz)</b>	<b>Deviation (KHz)</b>	<b>Audio Frequency Response(dB)</b>
100	--	--
200	--	--
300	0.11	-17.23
400	0.15	-14.54
500	0.19	-12.49
600	0.29	-8.81
700	0.35	-7.18
800	0.47	-4.62
900	0.51	-3.91
1000	0.59	-2.64
1200	0.62	-2.21
1400	0.74	-0.68
1600	0.82	0.21
1800	0.96	1.58
2000	1.21	3.59
2400	1.29	4.15
2500	1.35	4.54
2800	1.58	5.91
3000	1.77	6.90
3200	1.64	6.24
3600	1.42	4.98
4000	1.04	2.28
4500	0.87	0.73
5000	0.76	-0.45
5500	0.48	-4.44
6000	0.13	-15.78
6500	0.09	-18.98
7000	0.05	-24.08
7500	0.03	-28.52
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

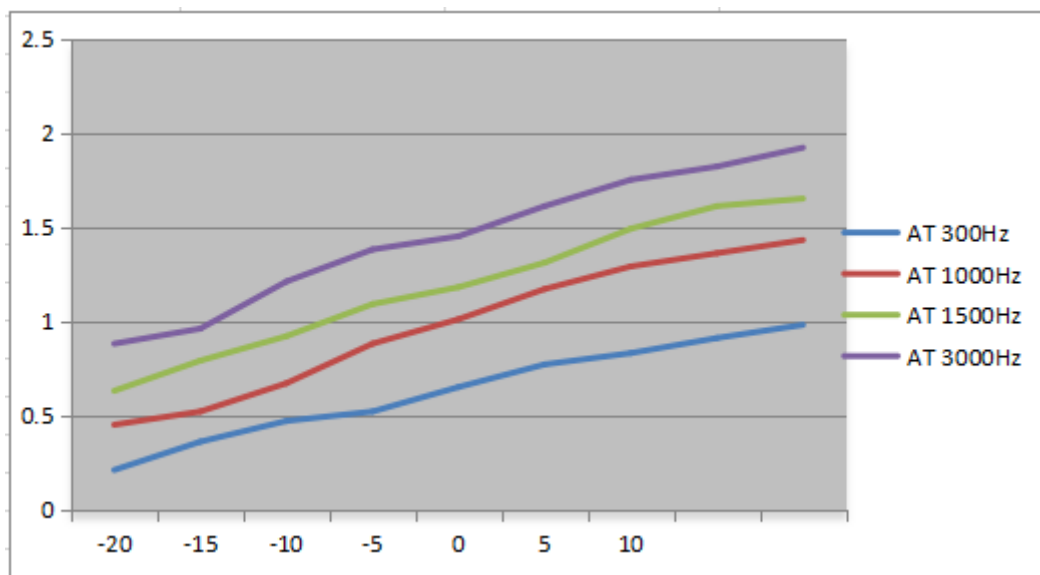


Note: All the modes had been tested, but only the worst data recorded in the report.

**Digital:**  
**(A). MODULATION LIMIT:**

**Middle Channel @ 12.5 KHz Channel Separations-45W**

Modulation Level (dB)	Peak Freq. Deviation At 300 Hz	Peak Freq. Deviation At 1000 Hz	Peak Freq. Deviation At 1500 Hz	Peak Freq. Deviation At 3000 Hz
-20	0.21	0.45	0.63	0.88
-15	0.36	0.52	0.79	0.96
-10	0.47	0.67	0.92	1.21
-5	0.52	0.88	1.09	1.38
0	0.65	1.01	1.18	1.45
+5	0.77	1.17	1.31	1.61
+10	0.83	1.29	1.49	1.75
+15	0.91	1.36	1.61	1.82
+20	0.98	1.43	1.65	1.92

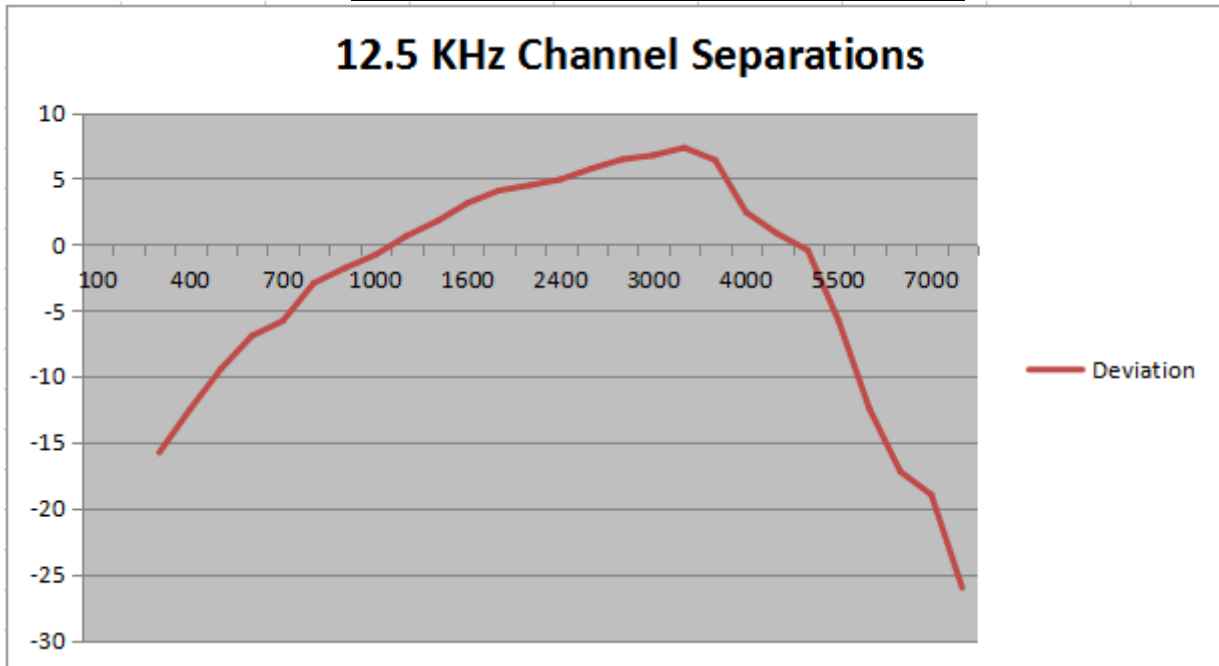


Note: All the modes had been tested, but only the worst data recorded in the report.

**(B). AUDIO FREQUENCY RESPONSE:****Middle Channel @ 12.5 KHz Channel Separations-45W**

<b>Frequency (Hz)</b>	<b>Deviation (KHz)</b>	<b>Audio Frequency Response(dB)</b>
100	--	--
200	--	--
300	0.13	-15.78
400	0.19	-12.49
500	0.27	-9.43
600	0.36	-6.94
700	0.41	-5.81
800	0.57	-2.94
900	0.65	-1.80
1000	0.73	-0.80
1200	0.86	0.63
1400	0.98	1.76
1600	1.15	3.15
1800	1.28	4.08
2000	1.34	4.48
2400	1.41	4.92
2500	1.55	5.74
2800	1.68	6.44
3000	1.74	6.75
3200	1.86	7.33
3600	1.67	6.39
4000	1.06	2.44
4500	0.88	0.83
5000	0.76	-0.45
5500	0.41	-5.81
6000	0.19	-12.49
6500	0.11	-17.23
7000	0.09	-18.98
7500	0.04	-26.02
9000	--	--
10000	--	--
14000	--	--
18000	--	--
20000	--	--
30000	--	--

**Frequency Response of Middle Channel-45W**



Note: All the modes had been tested, but only the worst data recorded in the report.

## 10. MAXIMUM TRANSMITTER POWER (CONDUCTED OUTPUT POWER) PEAK POWER

### 10.1 PROVISIONS APPLICABLE

Per FCC §2.1046 § 22.565 and §90.205: Maximum ERP is dependent upon the station's antenna HAAT and required service area.

### 10.2 TEST PROCEDURE

The RF output of Two-way Radio was conducted to a spectrum analyzer through an appropriate attenuator.

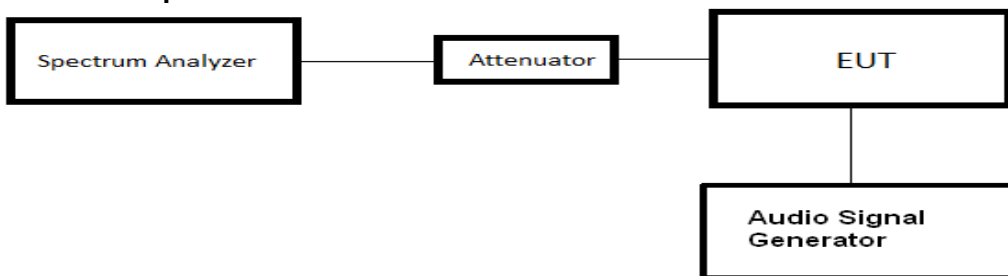
In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The "Read Value" is the spectrum reading of maximum power value.

The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.

$$\text{EIRP} = \text{"Read Value"} + \text{Measured substitution value} + 2.15.$$

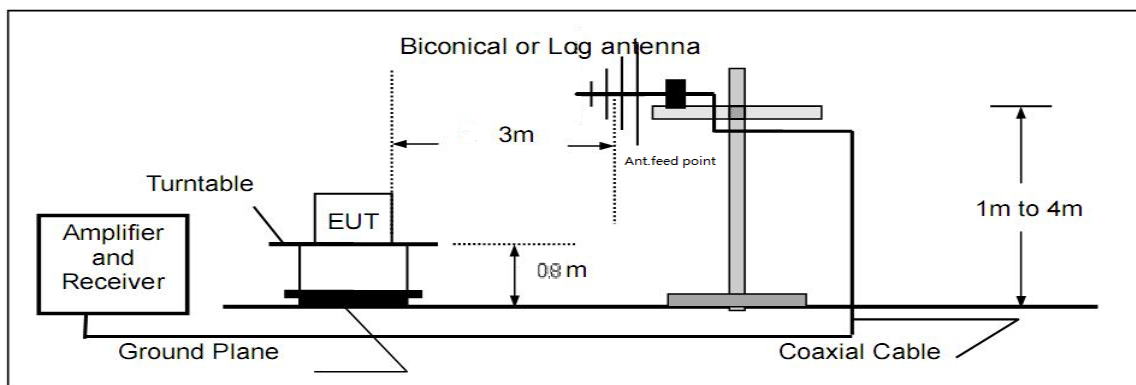
### 10.3 TEST CONFIGURATION

#### Conducted Output Power:

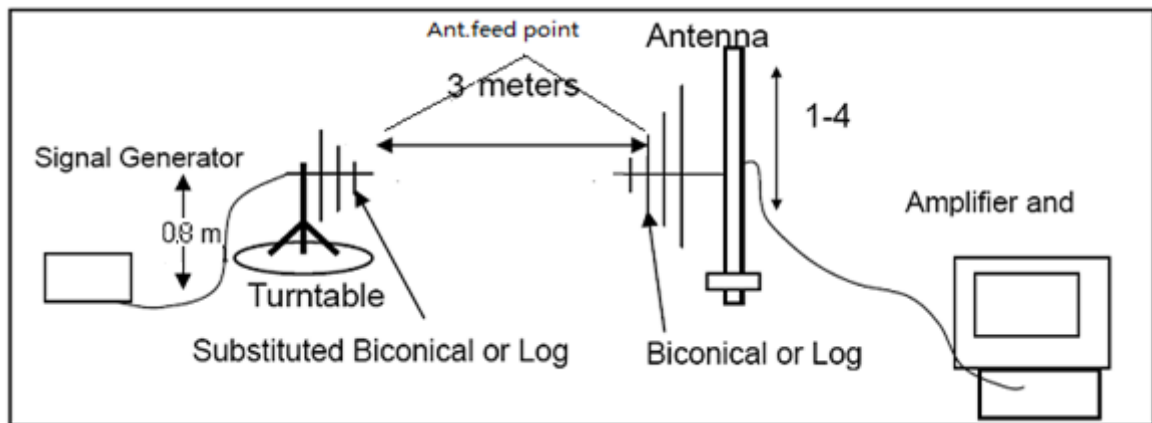


#### Effective Radiated Power

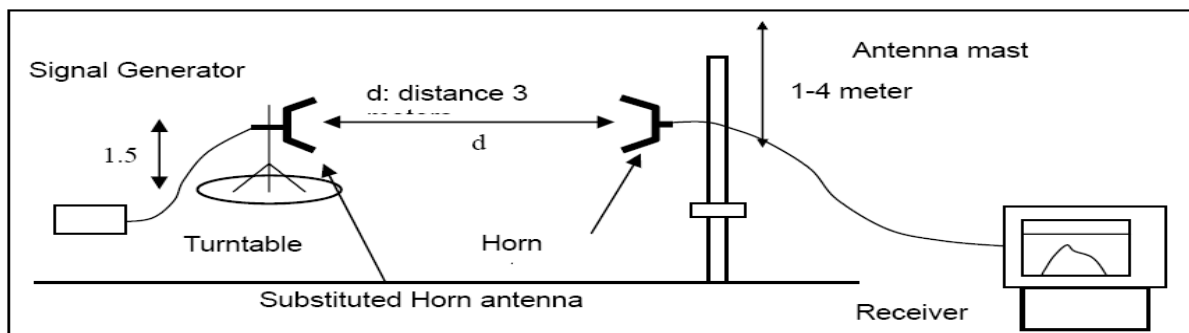
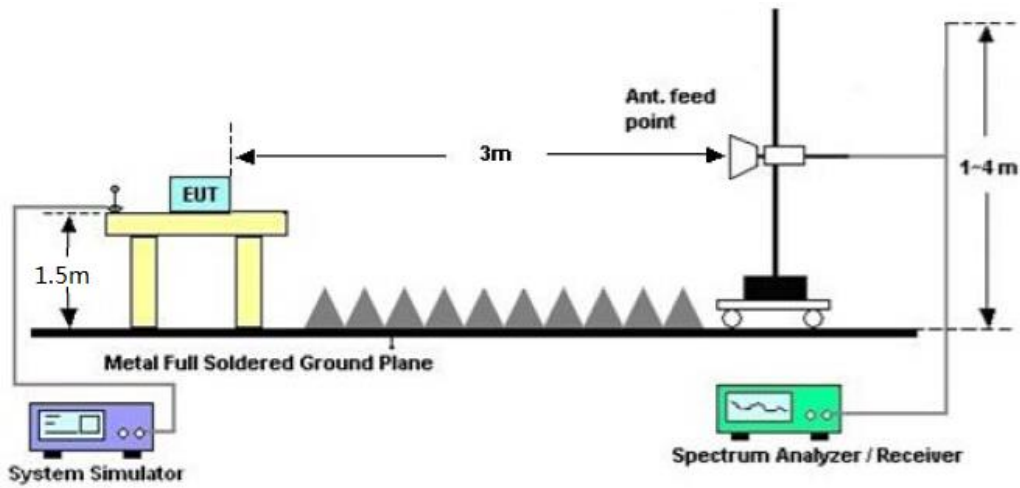
##### Radiated Below 1GHz







**Radiated Above 1 GHz**



### 10.4 TEST RESULT

The maximum Conducted Power (CP) for VHF/UHF is  
Analog: 60W/25W/10W/1W for 12.5 KHz Channel Separation VHF  
Analog: 45W/25W/10W/1W for 12.5 KHz Channel Separation UHF  
Digital: 60W/25W/10W/1W for 12.5 KHz Channel Separation VHF  
Digital: 45W/25W/10W/1W for 12.5 KHz Channel Separation UHF  
Calculation Formula:  $CP = R + A + L$

Note:

- CP: The final Conducted Power
- R : The reading value from spectrum analyzer
- A : The attenuation value of the used attenuator
- L : The loss of all connection cables

**VHF:**

**Analog:**

Conducted Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 47.78dBm(60W)
12.5 KHz	Bottom(136.025MHz)	47.53
	Middle(151.850MHz)	47.56
	Middle(155.025MHz)	47.65
	Middle(161.610MHz)	47.60
	Top (173.975MHz)	47.52

Radiated Power Measurement Results		
Channel Separation	Channel	Measurement Result (dBm)
		For 47.78dBm(60W)
12.5 KHz	Bottom(136.025MHz)	47.45
	Middle(151.850MHz)	47.47
	Middle(155.025MHz)	47.56
	Middle(161.610MHz)	47.51
	Top (173.975MHz)	47.42

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(136.025MHz)	43.86
	Middle(151.850MHz)	43.77
	Middle(155.025MHz)	43.79
	Middle(161.610MHz)	43.88
	Top (173.975MHz)	43.82

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(136.025MHz)	43.75
	Middle(151.850MHz)	43.66
	Middle(155.025MHz)	43.69
	Middle(161.610MHz)	43.78
	Top (173.975MHz)	43.71

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(136.025MHz)	39.59
	Middle(151.850MHz)	39.62
	Middle(155.025MHz)	39.66
	Middle(161.610MHz)	39.67
	Top (173.975MHz)	39.55

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(136.025MHz)	39.43
	Middle(151.850MHz)	39.57
	Middle(155.025MHz)	39.45
	Middle(161.610MHz)	39.49
	Top (173.975MHz)	39.41

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(136.025MHz)	29.87
	Middle(151.850MHz)	29.91
	Middle(155.025MHz)	29.92
	Middle(161.610MHz)	29.88
	Top (173.975MHz)	29.89

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(136.025MHz)	29.75
	Middle(151.850MHz)	29.80
	Middle(155.025MHz)	29.82
	Middle(161.610MHz)	29.78
	Top (173.975MHz)	29.79

Digital:  
Data + voice:

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 47.78dBm(60W)</b>
12.5 KHz	Bottom(136.025MHz)	47.42
	Middle(151.850MHz)	47.35
	Middle(155.025MHz)	47.33
	Middle(161.610MHz)	47.45
	Top (173.975MHz)	47.39

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 47.78dBm(60W)</b>
12.5 KHz	Bottom(136.025MHz)	47.33
	Middle(151.850MHz)	47.28
	Middle(155.025MHz)	47.25
	Middle(161.610MHz)	47.35
	Top (173.975MHz)	47.29

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(136.025MHz)	43.65
	Middle(151.850MHz)	43.68
	Middle(155.025MHz)	43.61
	Middle(161.610MHz)	43.72
	Top (173.975MHz)	43.70

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(136.025MHz)	43.58
	Middle(151.850MHz)	43.57
	Middle(155.025MHz)	43.55
	Middle(161.610MHz)	43.48
	Top (173.975MHz)	43.61

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(136.025MHz)	39.42
	Middle(151.850MHz)	39.47
	Middle(155.025MHz)	39.50
	Middle(161.610MHz)	39.45
	Top (173.975MHz)	36.44

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(136.025MHz)	39.33
	Middle(151.850MHz)	39.38
	Middle(155.025MHz)	39.35
	Middle(161.610MHz)	39.40
	Top (173.975MHz)	39.41



<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(136.025MHz)	29.73
	Middle(151.850MHz)	29.80
	Middle(155.025MHz)	29.83
	Middle(161.610MHz)	29.76
	Top (173.975MHz)	29.74

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(136.025MHz)	29.67
	Middle(151.850MHz)	29.72
	Middle(155.025MHz)	29.75
	Middle(161.610MHz)	29.68
	Top (173.975MHz)	29.65

**Data transmission mode:**

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 47.78dBm(60W)</b>
12.5 KHz	Bottom(136.025MHz)	47.51
	Middle(151.850MHz)	47.47
	Middle(155.025MHz)	47.43
	Middle(161.610MHz)	47.50
	Top (173.975MHz)	47.38

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 47.78dBm(60W)</b>
12.5 KHz	Bottom(136.025MHz)	47.44
	Middle(151.850MHz)	47.37
	Middle(155.025MHz)	47.39
	Middle(161.610MHz)	47.40
	Top (173.975MHz)	47.35

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(136.025MHz)	43.56
	Middle(151.850MHz)	43.59
	Middle(155.025MHz)	43.53
	Middle(161.610MHz)	43.64
	Top (173.975MHz)	43.62

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(136.025MHz)	43.47
	Middle(151.850MHz)	43.53
	Middle(155.025MHz)	43.46
	Middle(161.610MHz)	43.51
	Top (173.975MHz)	43.49

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(136.025MHz)	39.40
	Middle(151.850MHz)	39.45
	Middle(155.025MHz)	39.46
	Middle(161.610MHz)	39.39
	Top (173.975MHz)	36.38

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(136.025MHz)	39.32
	Middle(151.850MHz)	39.38
	Middle(155.025MHz)	39.37
	Middle(161.610MHz)	39.34
	Top (173.975MHz)	36.32

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(136.025MHz)	29.69
	Middle(151.850MHz)	29.70
	Middle(155.025MHz)	29.66
	Middle(161.610MHz)	29.63
	Top (173.975MHz)	29.64

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(136.025MHz)	29.63
	Middle(151.850MHz)	29.65
	Middle(155.025MHz)	29.61
	Middle(161.610MHz)	29.59
	Top (173.975MHz)	29.56

**UHF:**  
**Analog:**

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 46.53dBm(45W)</b>
12.5 KHz	Bottom(400.025MHz)	46.40
	Middle(453.225MHz)	46.42
	Middle(454.025MHz)	46.39
	Top (479.975MHz )	46.37

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 46.53dBm(45W)</b>
12.5 KHz	Bottom(400.025MHz)	46.35
	Middle(453.225MHz)	46.37
	Middle(454.025MHz)	46.31
	Top (479.975MHz )	46.30

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(400.025MHz)	43.85
	Middle(453.225MHz)	43.79
	Middle(454.025MHz)	43.84
	Top (479.975MHz )	43.80

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(400.025MHz)	43.78
	Middle(453.225MHz)	43.71
	Middle(454.025MHz)	43.77
	Top (479.975MHz )	43.73

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(400.025MHz)	39.84
	Middle(453.225MHz)	39.77
	Middle(454.025MHz)	39.81
	Top (479.975MHz )	39.86

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(400.025MHz)	39.75
	Middle(453.225MHz)	39.71
	Middle(454.025MHz)	39.76
	Top (479.975MHz )	39.79



<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(400.025MHz)	29.78
	Middle(453.225MHz)	29.84
	Middle(454.025MHz)	29.91
	Top (479.975MHz )	29.85

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(400.025MHz)	29.72
	Middle(453.225MHz)	29.77
	Middle(454.025MHz)	29.86
	Top (479.975MHz )	29.79

Digital:  
Data + voice:

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 46.53dBm(45W)</b>
12.5 KHz	Bottom(400.025MHz)	46.34
	Middle(453.225MHz)	46.30
	Middle(454.025MHz)	46.29
	Top (479.975MHz )	46.37

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 46.53dBm(45W)</b>
12.5 KHz	Bottom(400.025MHz)	46.30
	Middle(453.225MHz)	46.25
	Middle(454.025MHz)	46.27
	Top (479.975MHz )	46.31

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(400.025MHz)	43.77
	Middle(453.225MHz)	43.69
	Middle(454.025MHz)	43.66
	Top (479.975MHz )	43.74

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(400.025MHz)	43.72
	Middle(453.225MHz)	43.61
	Middle(454.025MHz)	43.59
	Top (479.975MHz )	43.67

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(400.025MHz)	39.77
	Middle(453.225MHz)	39.75
	Middle(454.025MHz)	39.76
	Top (479.975MHz )	39.80

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(400.025MHz)	39.71
	Middle(453.225MHz)	39.68
	Middle(454.025MHz)	39.71
	Top (479.975MHz )	39.73

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(400.025MHz)	29.79
	Middle(453.225MHz)	29.74
	Middle(454.025MHz)	29.77
	Top (479.975MHz )	29.81

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(400.025MHz)	29.74
	Middle(453.225MHz)	29.68
	Middle(454.025MHz)	29.75
	Top (479.975MHz )	29.77

**Data transmission mode:**

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 46.53dBm(45W)</b>
12.5 KHz	Bottom(400.025MHz)	46.31
	Middle(453.225MHz)	46.28
	Middle(454.025MHz)	46.25
	Top (479.975MHz )	46.30

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 46.53dBm(45W)</b>
12.5 KHz	Bottom(400.025MHz)	46.25
	Middle(453.225MHz)	46.22
	Middle(454.025MHz)	46.21
	Top (479.975MHz )	46.24

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(400.025MHz)	43.65
	Middle(453.225MHz)	43.69
	Middle(454.025MHz)	43.67
	Top (479.975MHz )	43.63

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 43.98dBm(25W)</b>
12.5 KHz	Bottom(400.025MHz)	43.56
	Middle(453.225MHz)	43.62
	Middle(454.025MHz)	43.57
	Top (479.975MHz )	43.54

<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(400.025MHz)	39.71
	Middle(453.225MHz)	39.72
	Middle(454.025MHz)	39.79
	Top (479.975MHz )	39.74

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 40dBm(10W)</b>
12.5 KHz	Bottom(400.025MHz)	39.60
	Middle(453.225MHz)	39.62
	Middle(454.025MHz)	39.66
	Top (479.975MHz )	39.63



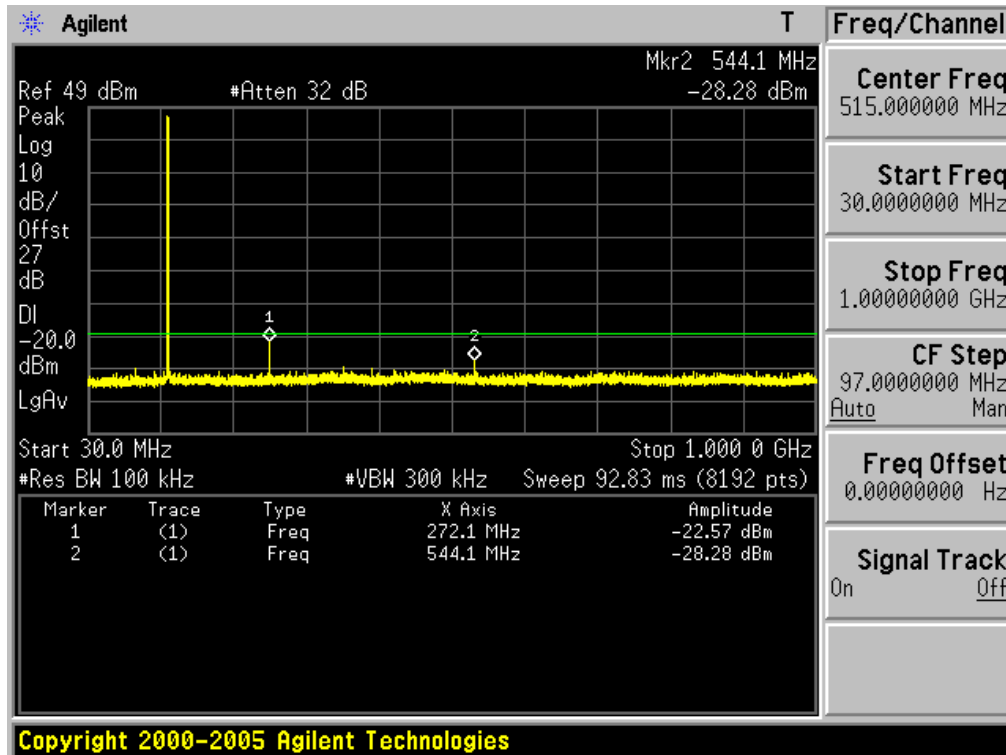
<b>Conducted Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(400.025MHz)	29.76
	Middle(453.225MHz)	29.74
	Middle(454.025MHz)	29.72
	Top (479.975MHz )	29.69

<b>Radiated Power Measurement Results</b>		
<b>Channel Separation</b>	<b>Channel</b>	<b>Measurement Result (dBm)</b>
		<b>For 30dBm(1W)</b>
12.5 KHz	Bottom(400.025MHz)	29.66
	Middle(453.225MHz)	29.64
	Middle(454.025MHz)	29.62
	Top (479.975MHz )	29.60

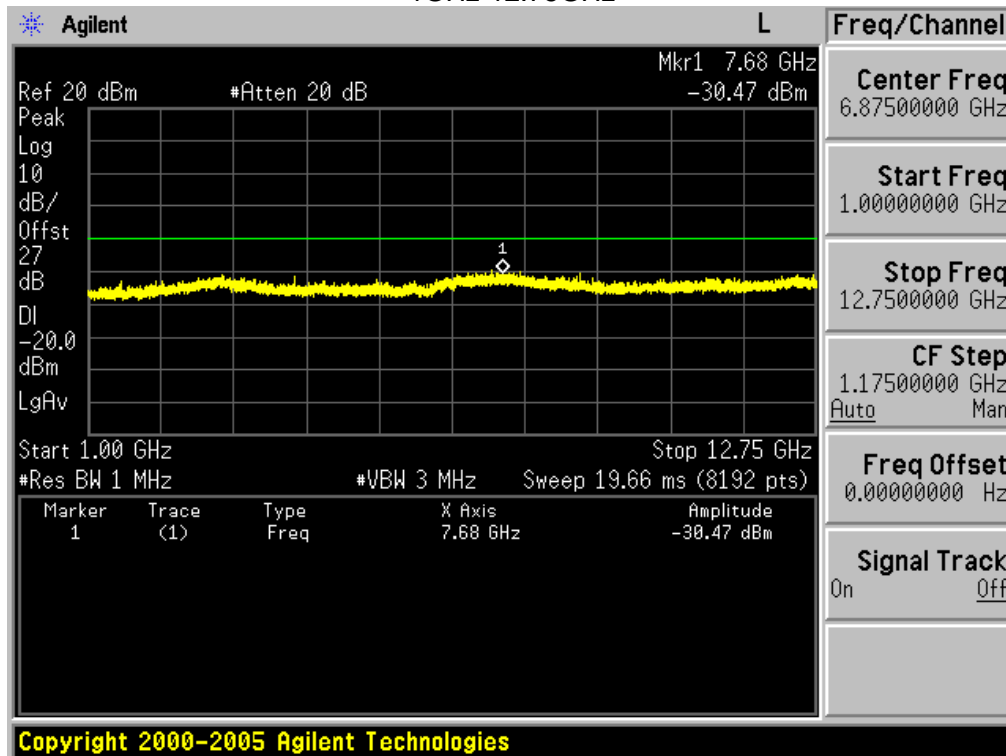
10.5 CONDUCT SPURIOUS PLOT

VHF:Analog:

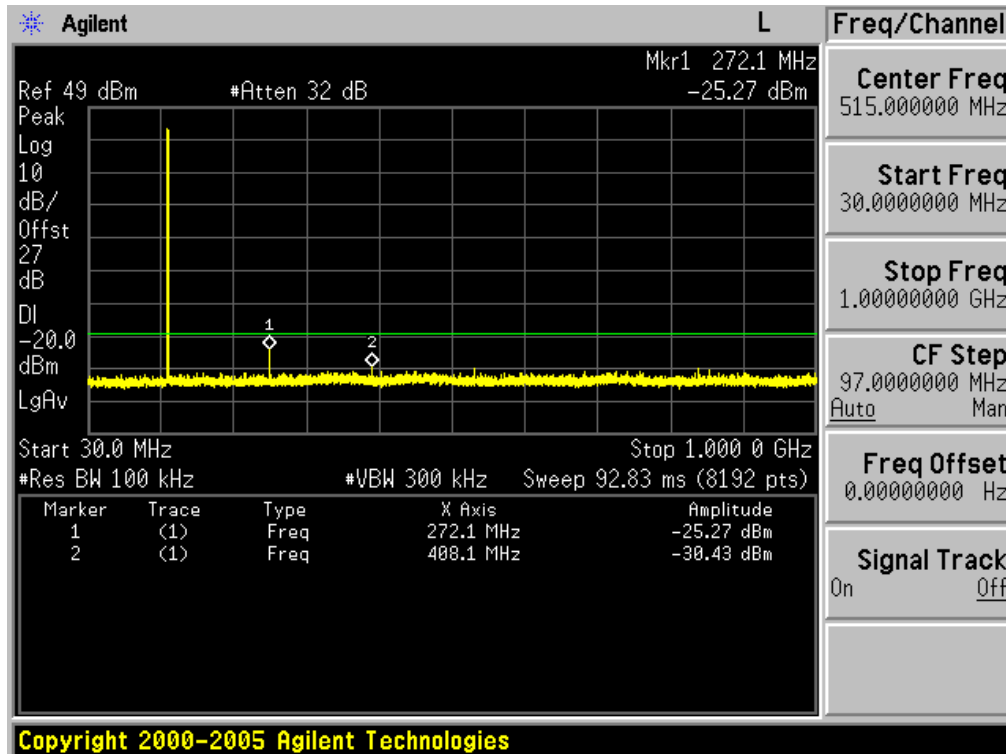
Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-60W  
 30MHz-1GHz



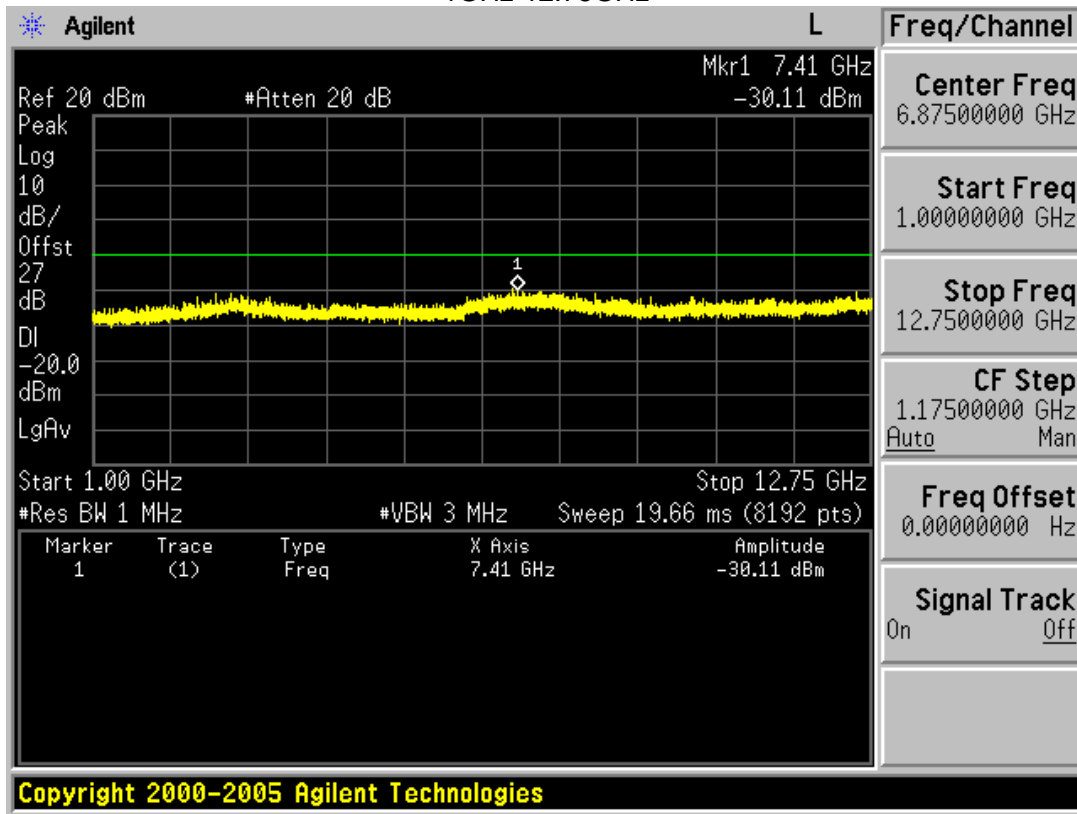
Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-60W  
 1GHz-12.75GHz



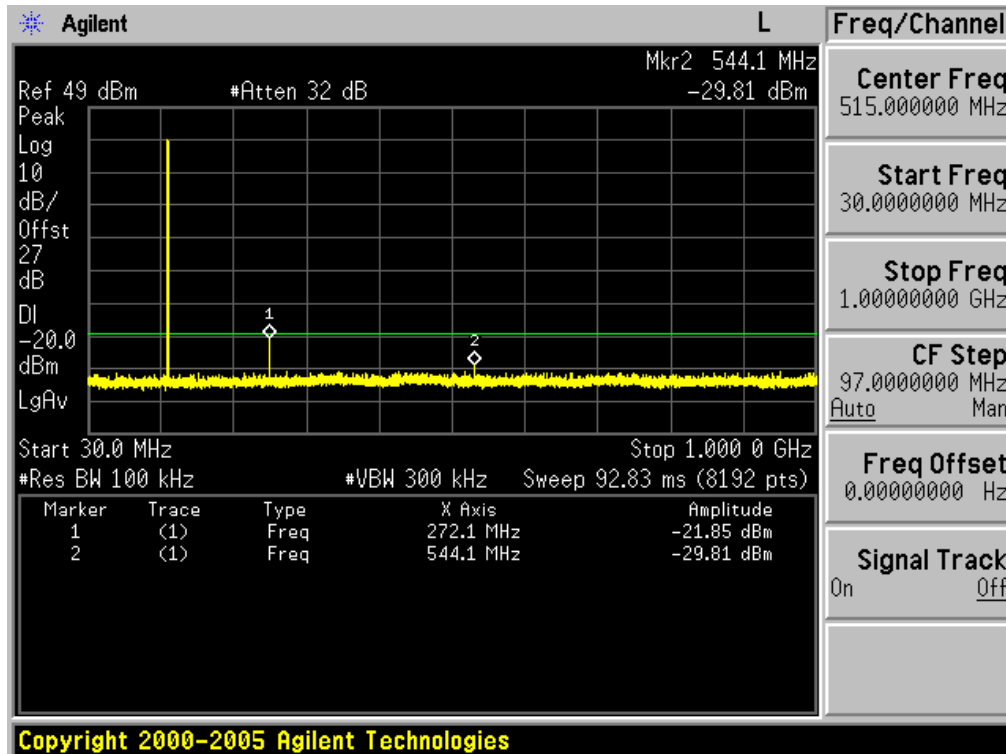
**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



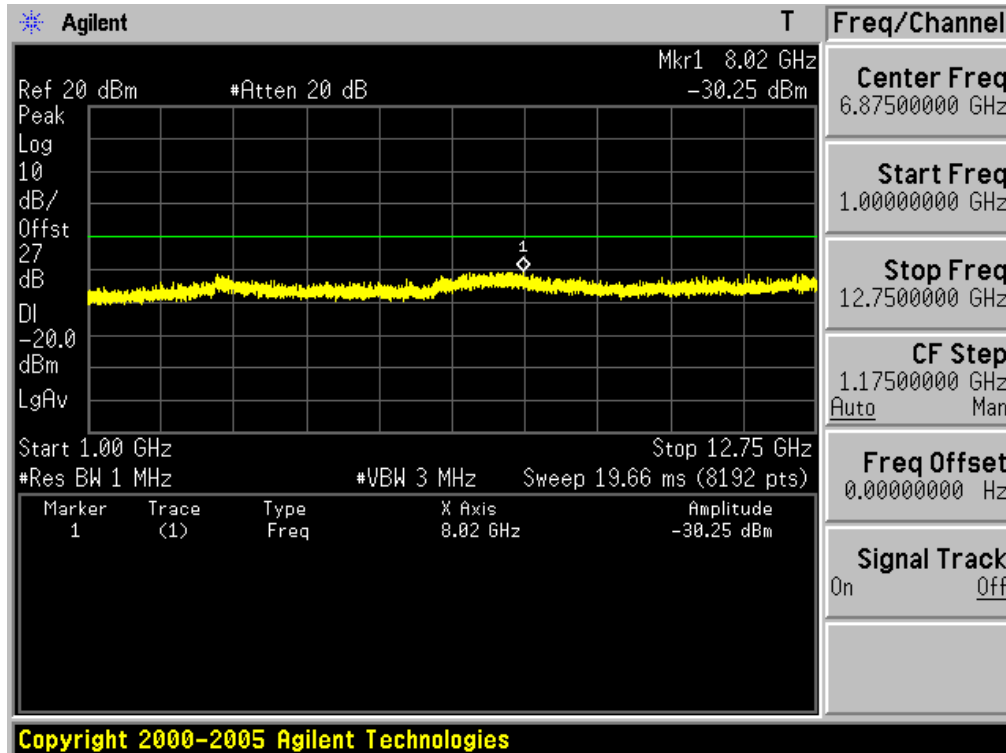
**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



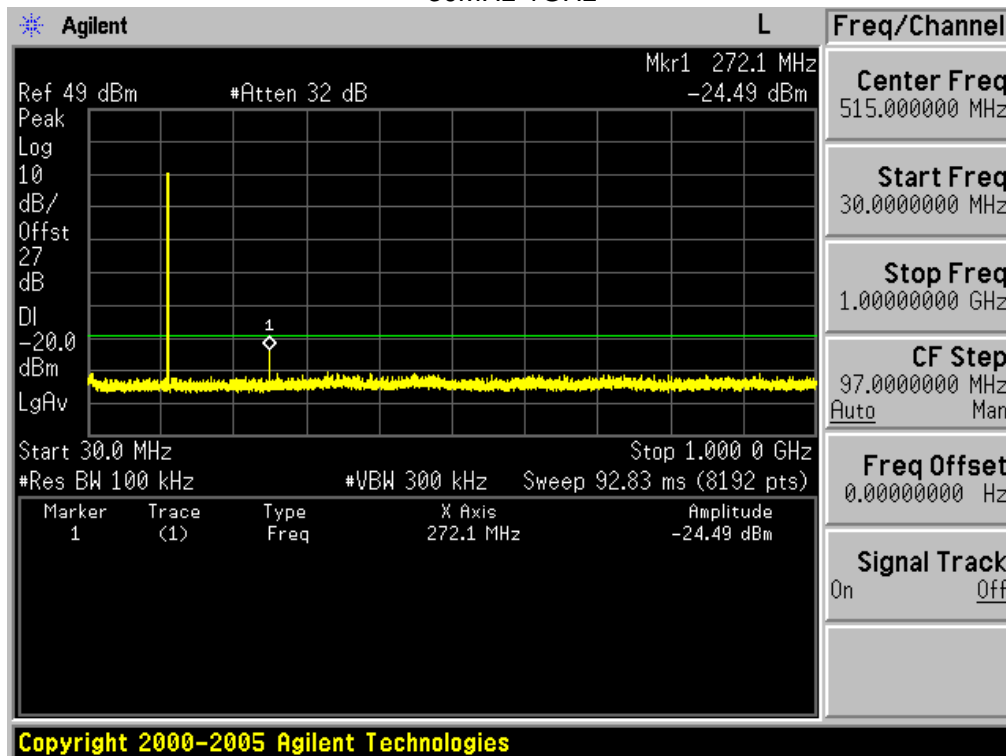
**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



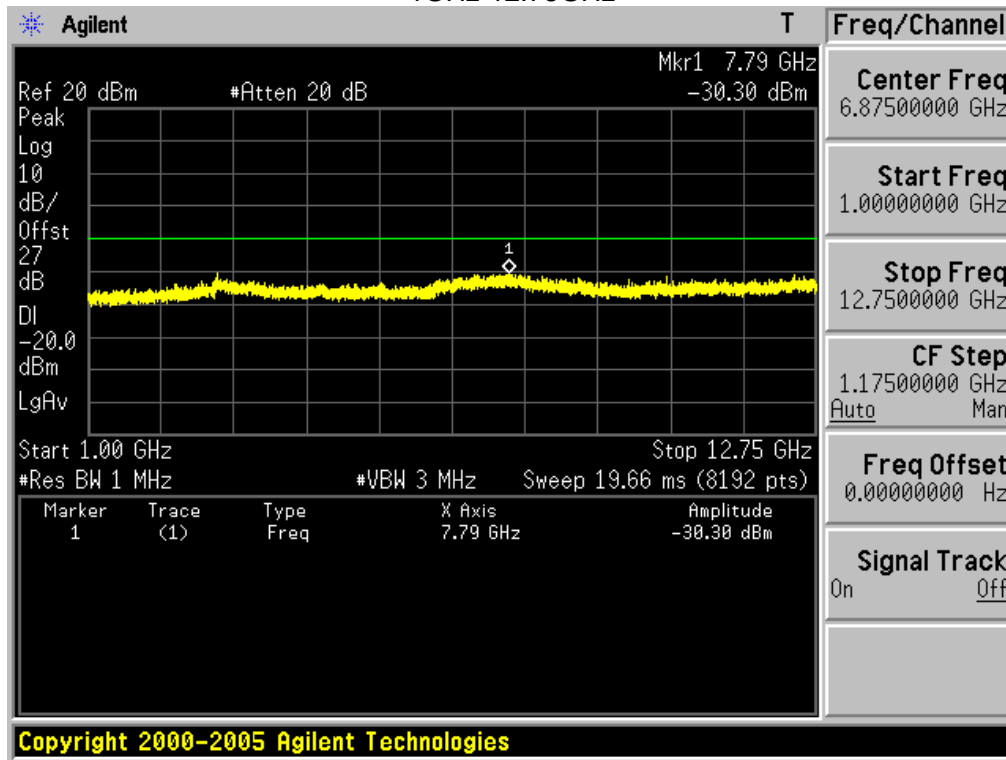
**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



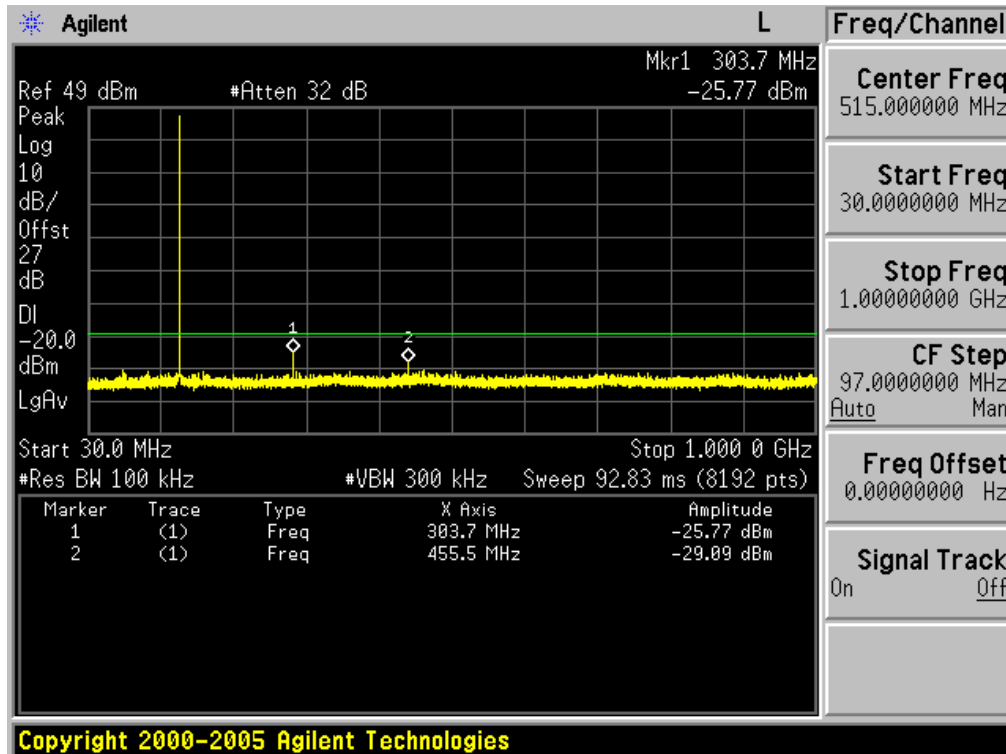
**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



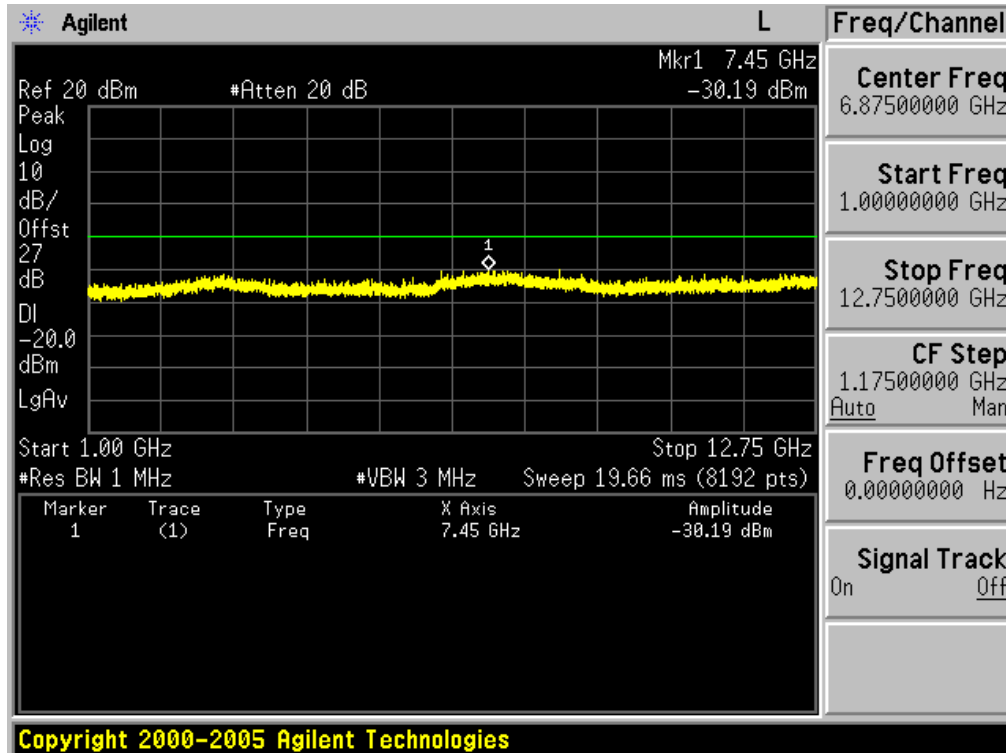
**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



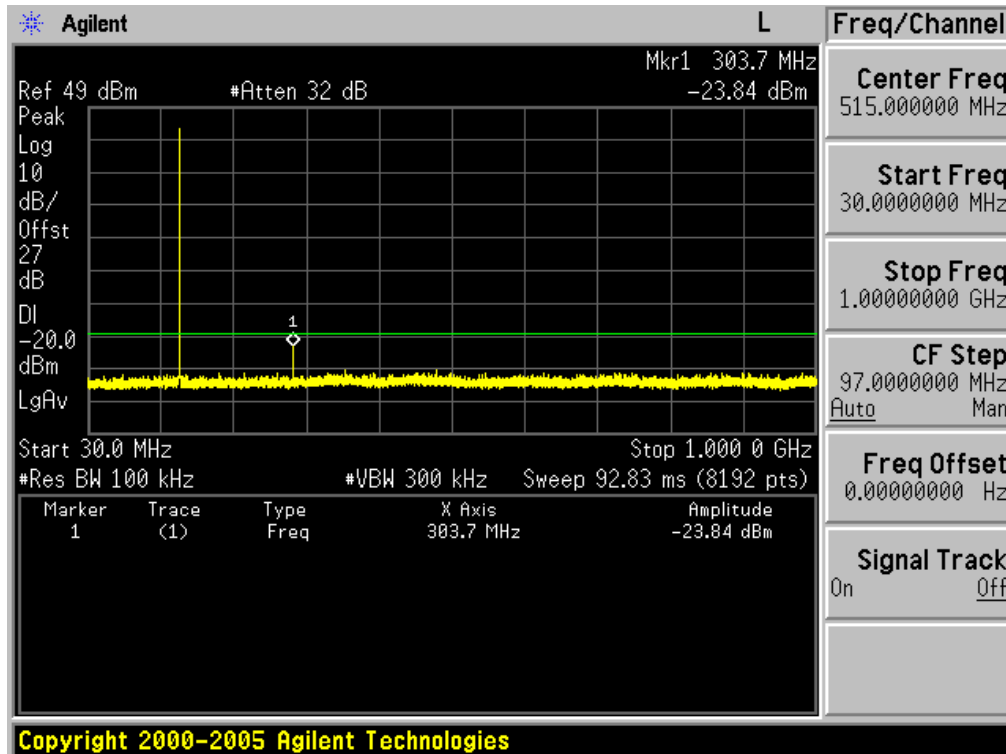
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-60W**  
30MHz-1GHz



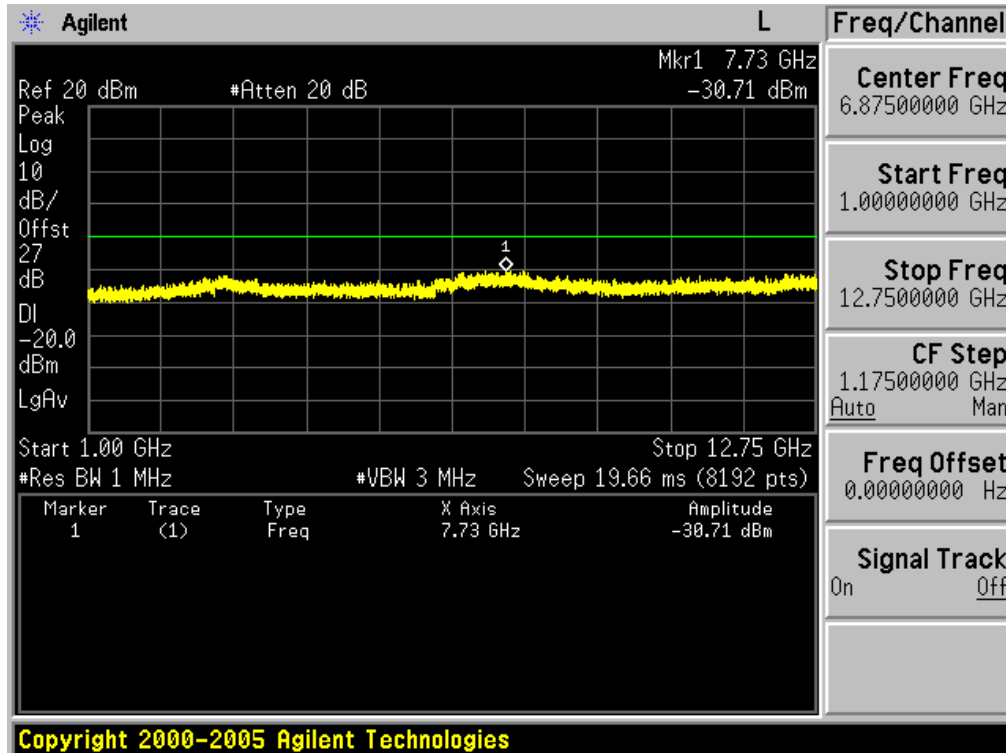
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-60W**  
1GHz-12.75GHz



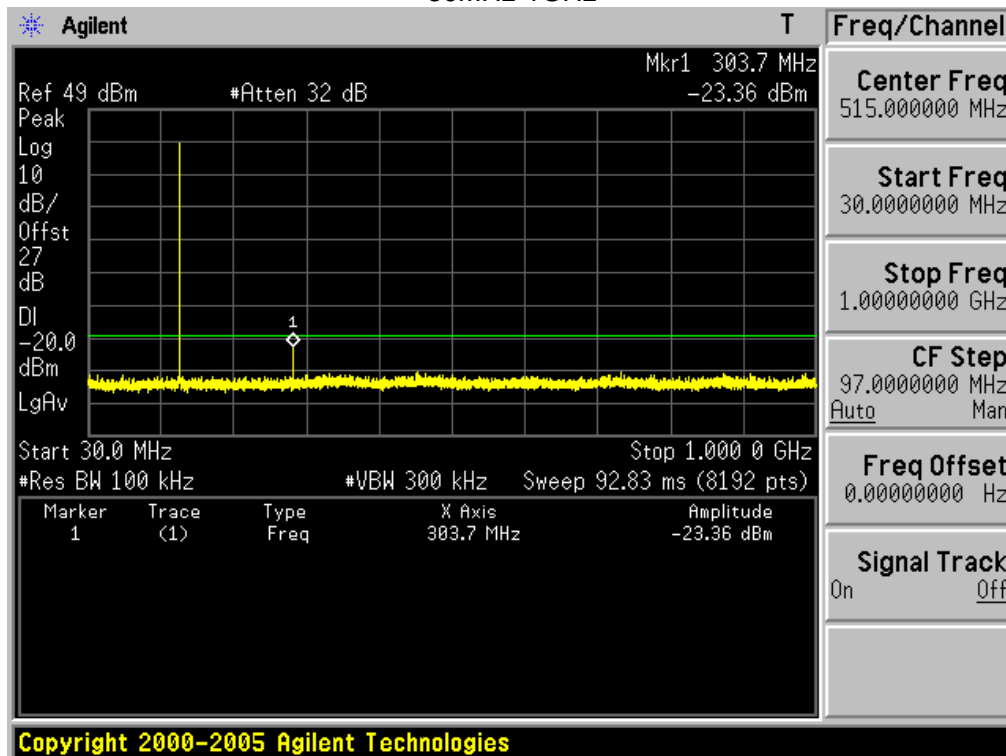
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-25W**  
30MHz-1GHz



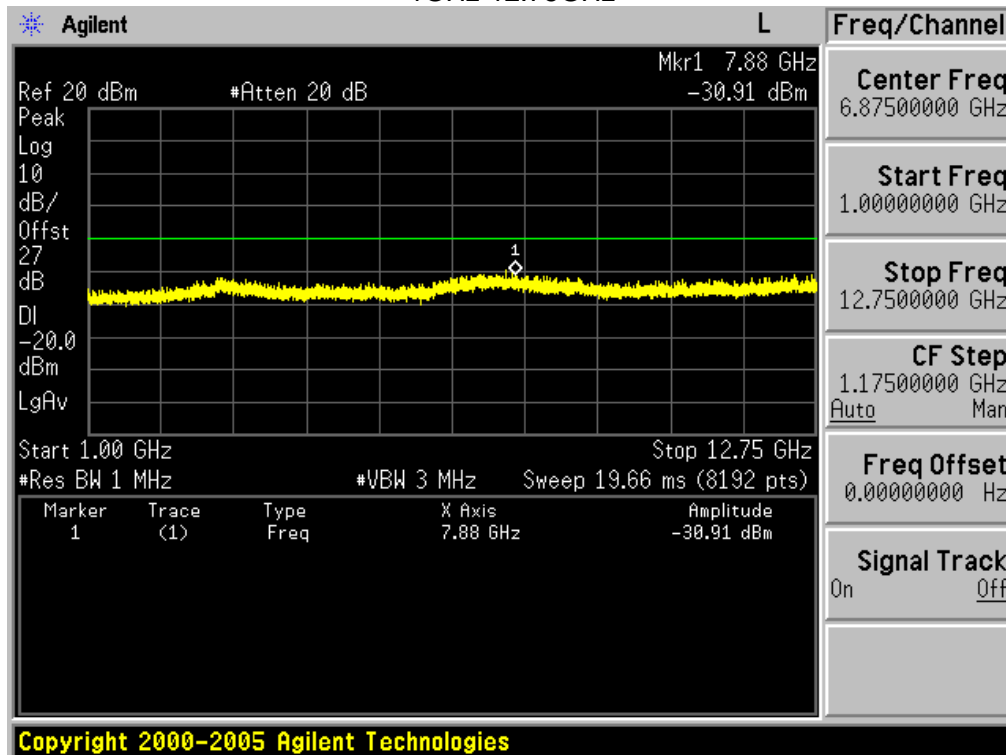
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-25W**  
1GHz-12.75GHz



**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-10W**  
30MHz-1GHz

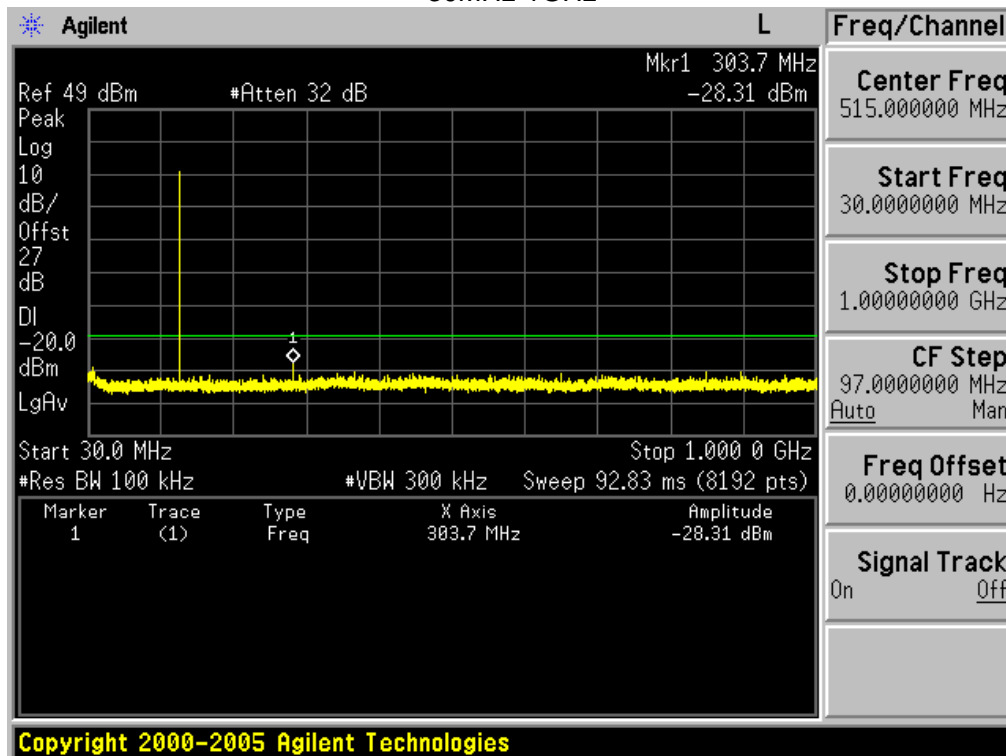


**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-10W**  
1GHz-12.75GHz

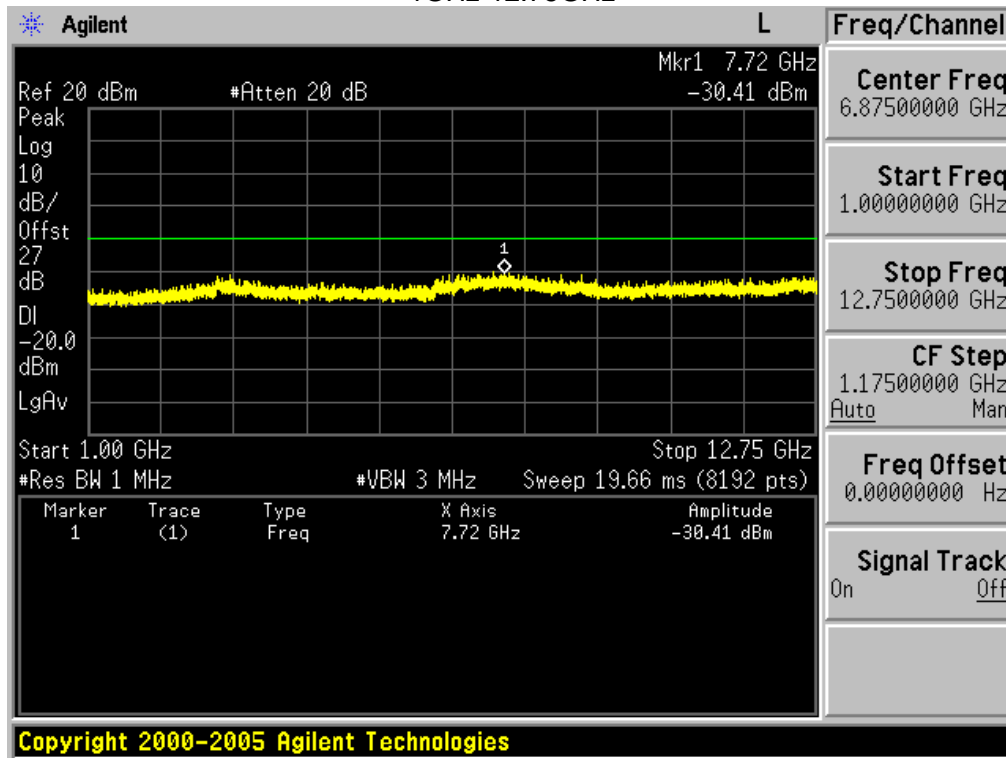




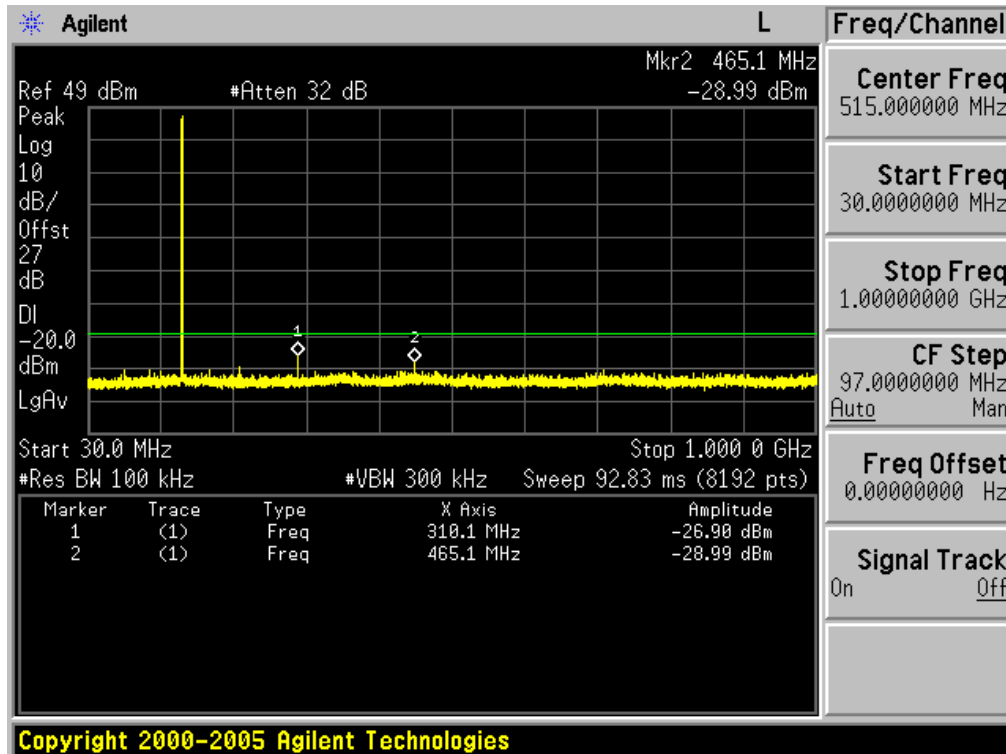
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



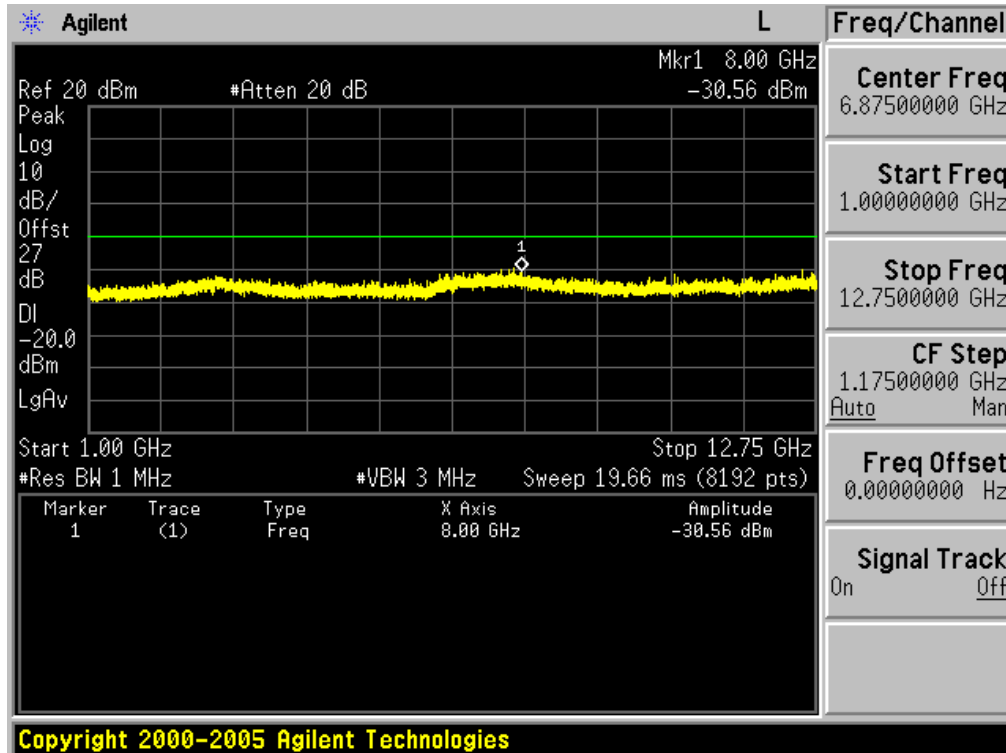
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



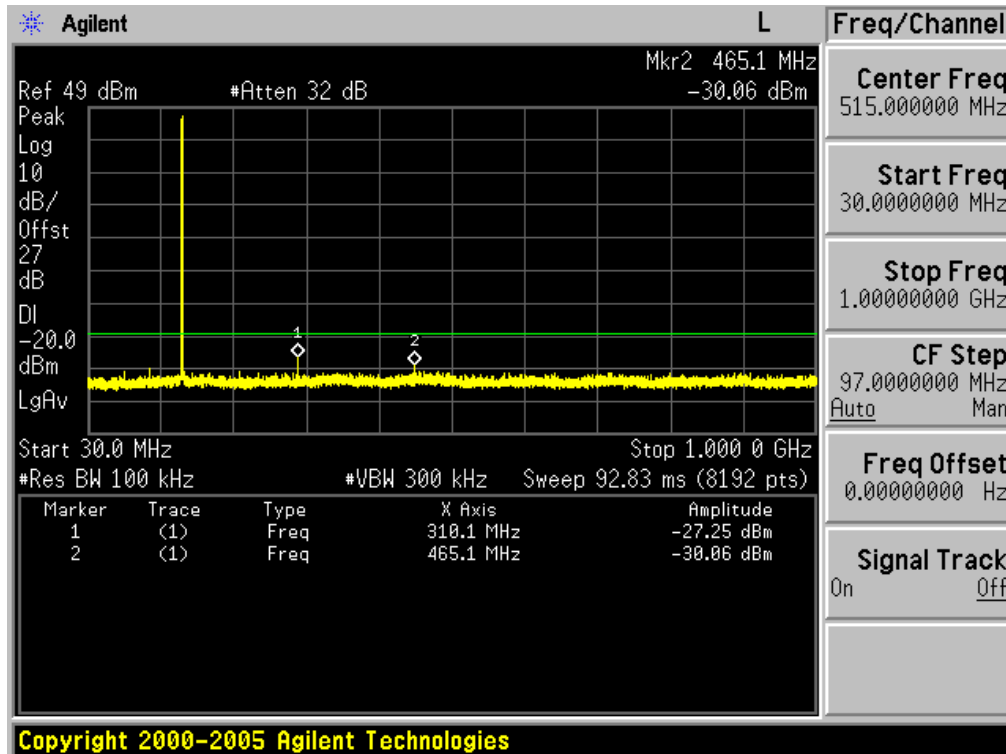
**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz



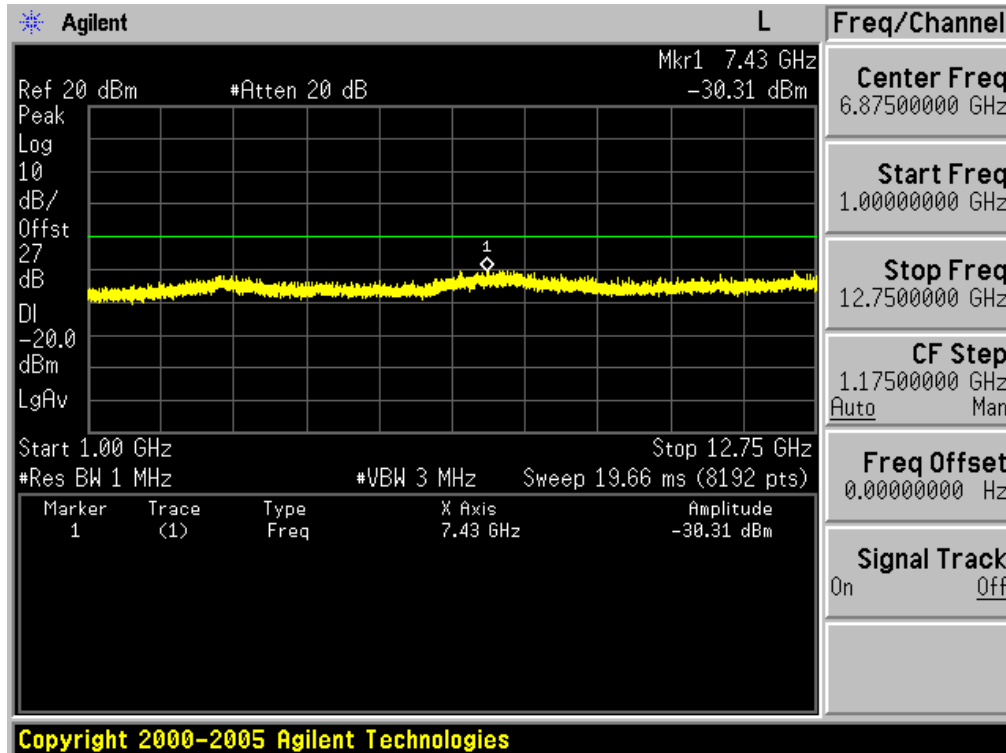
**Conduct Spurious Emission (worst) @ 155.025 MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz



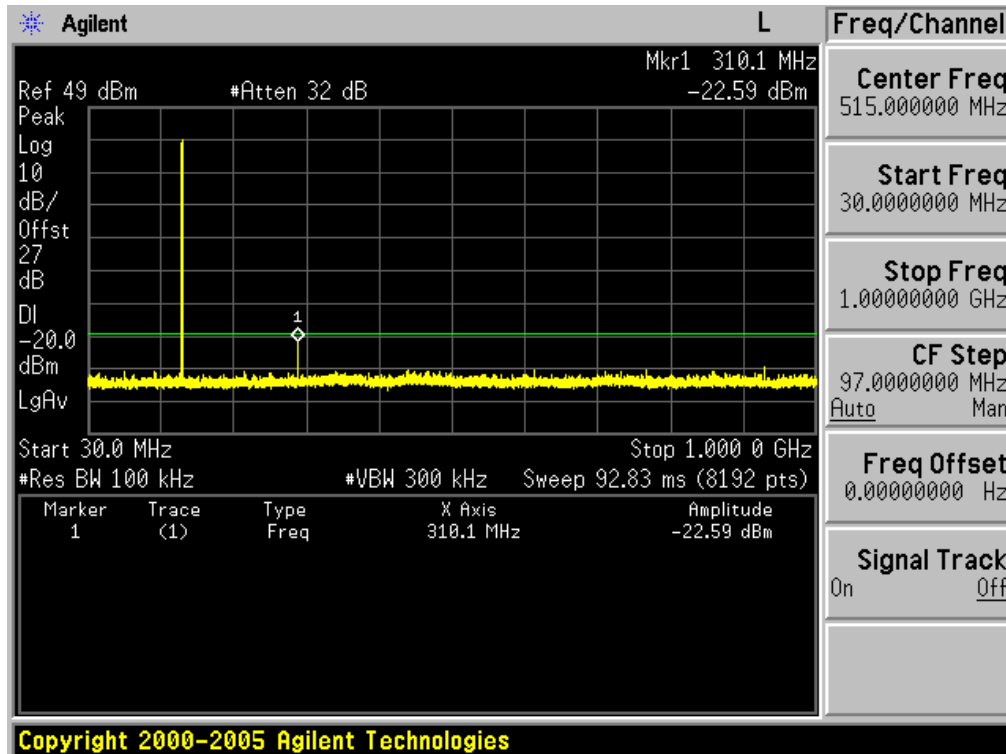
**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



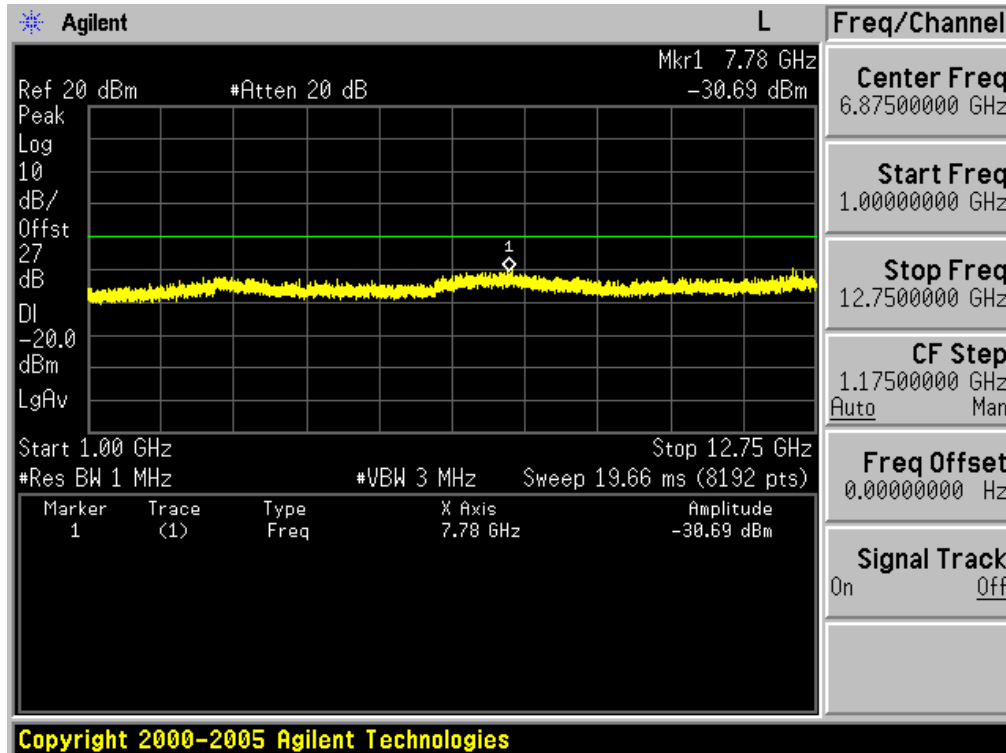
**Conduct Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



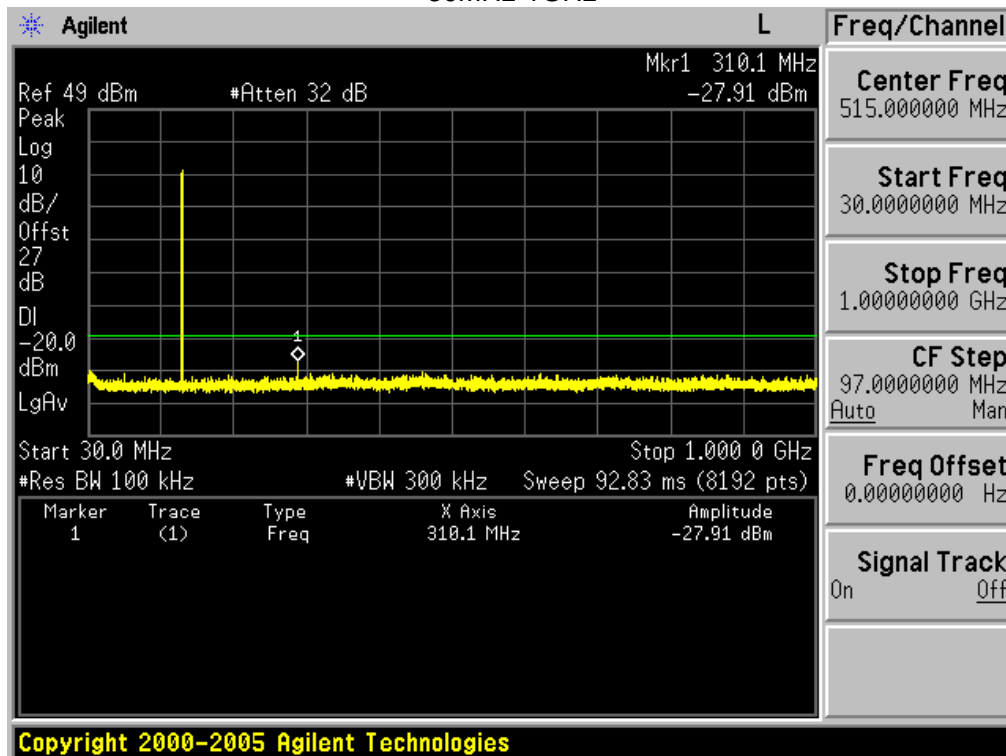
**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



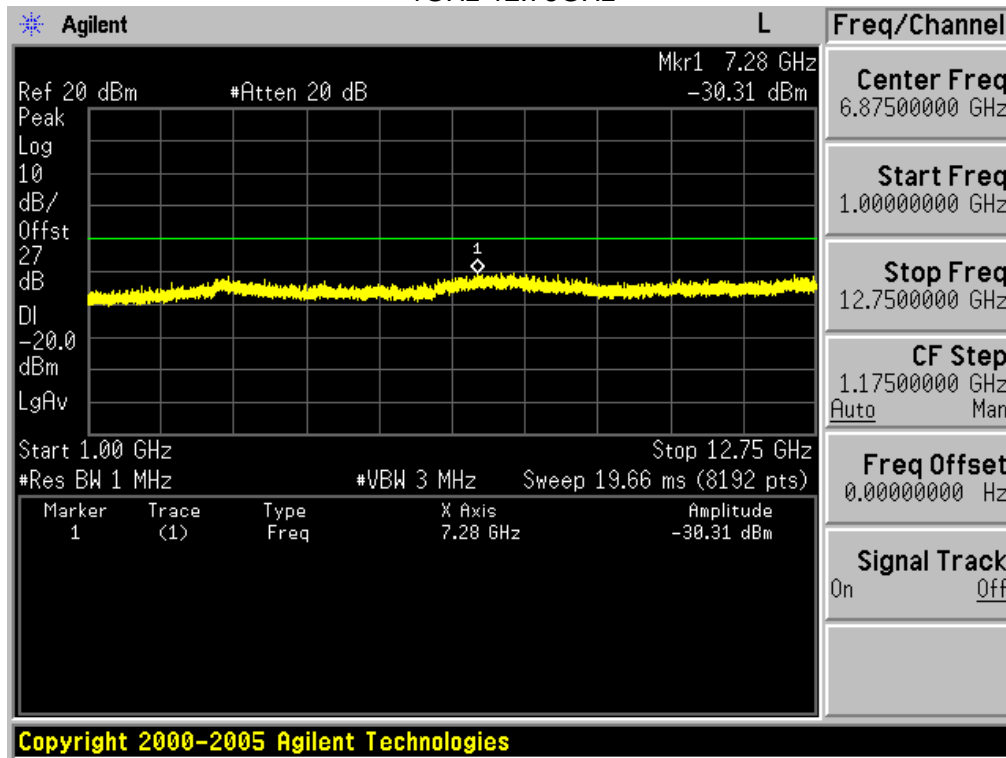
**Conduct Spurious Emission (worst) @ 155.025 MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



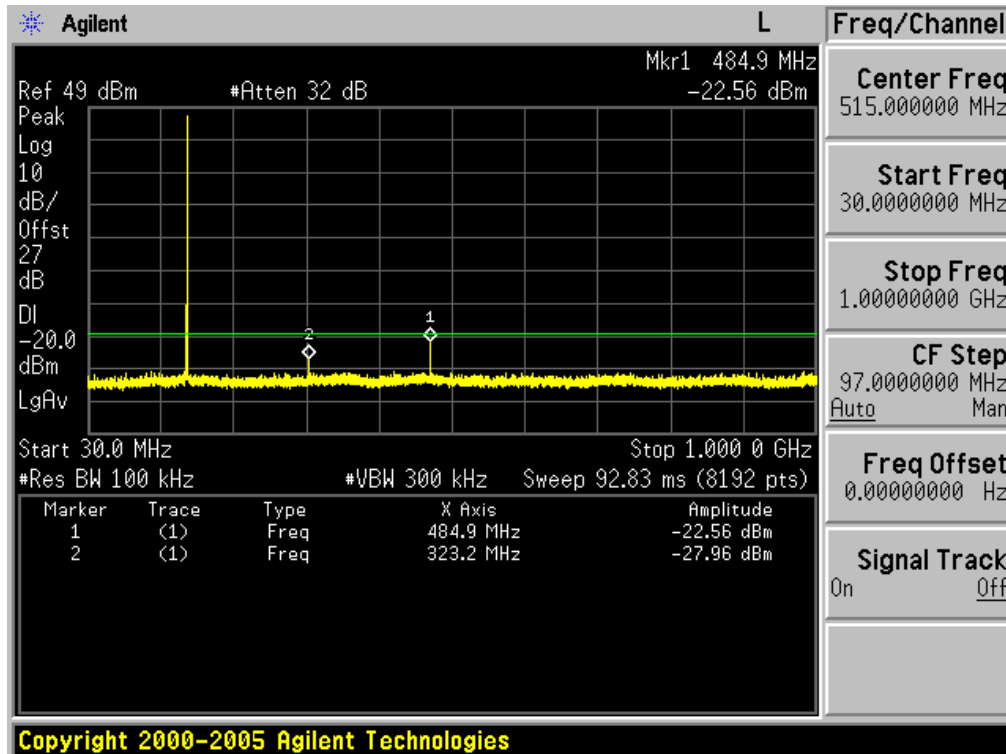
**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



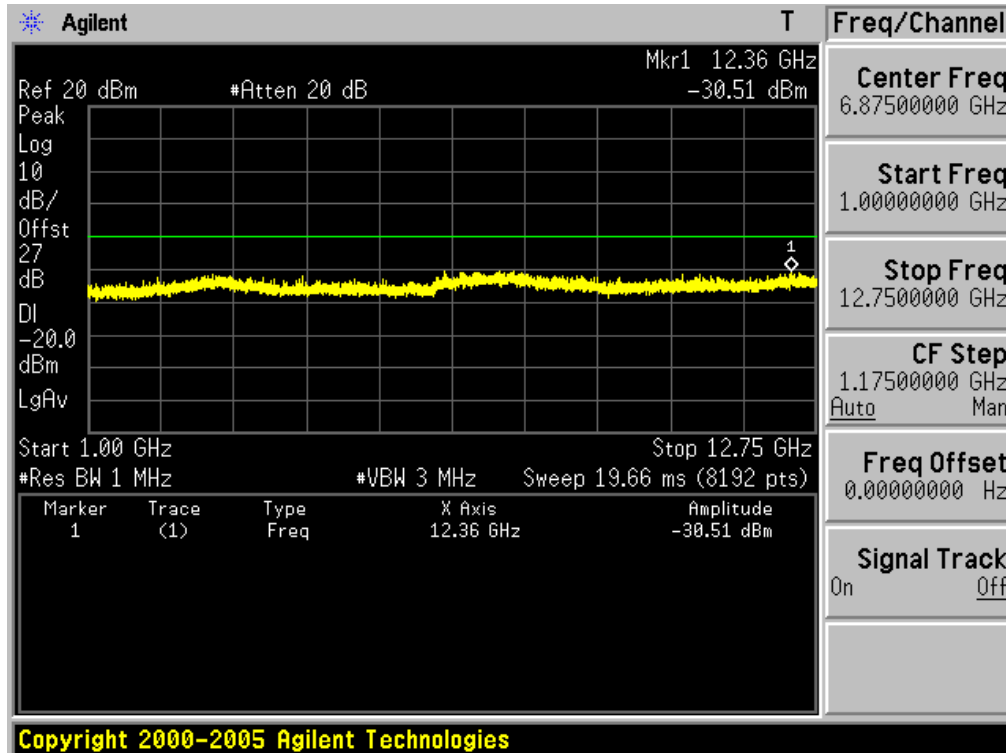
**Conduct Spurious Emission (worst) @ 155.025 MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



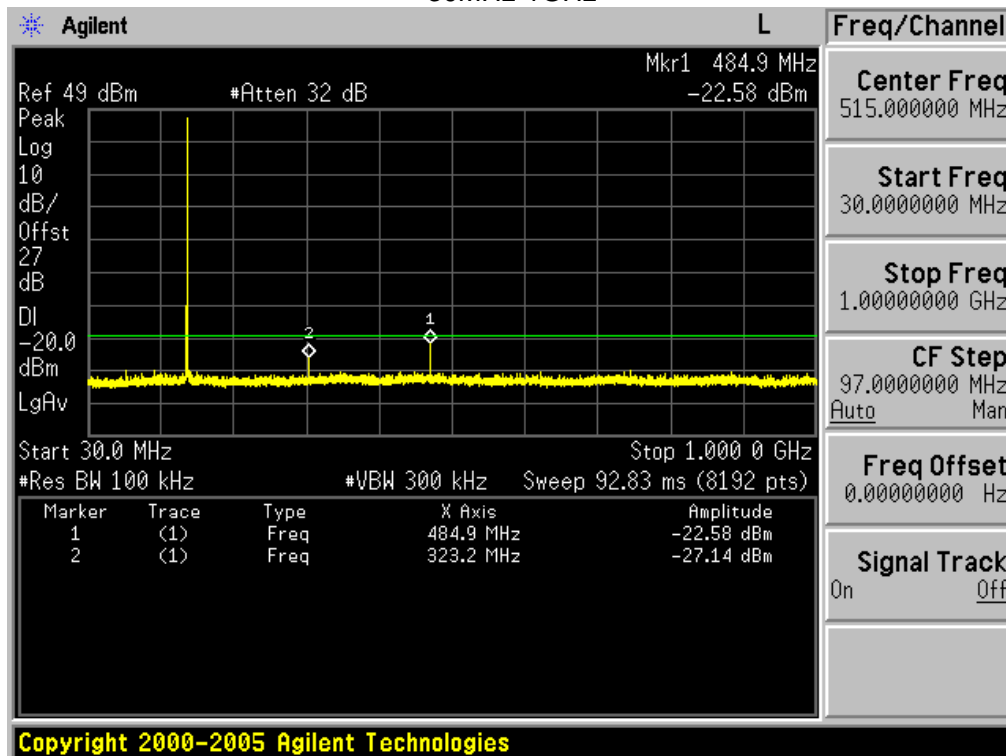
**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz



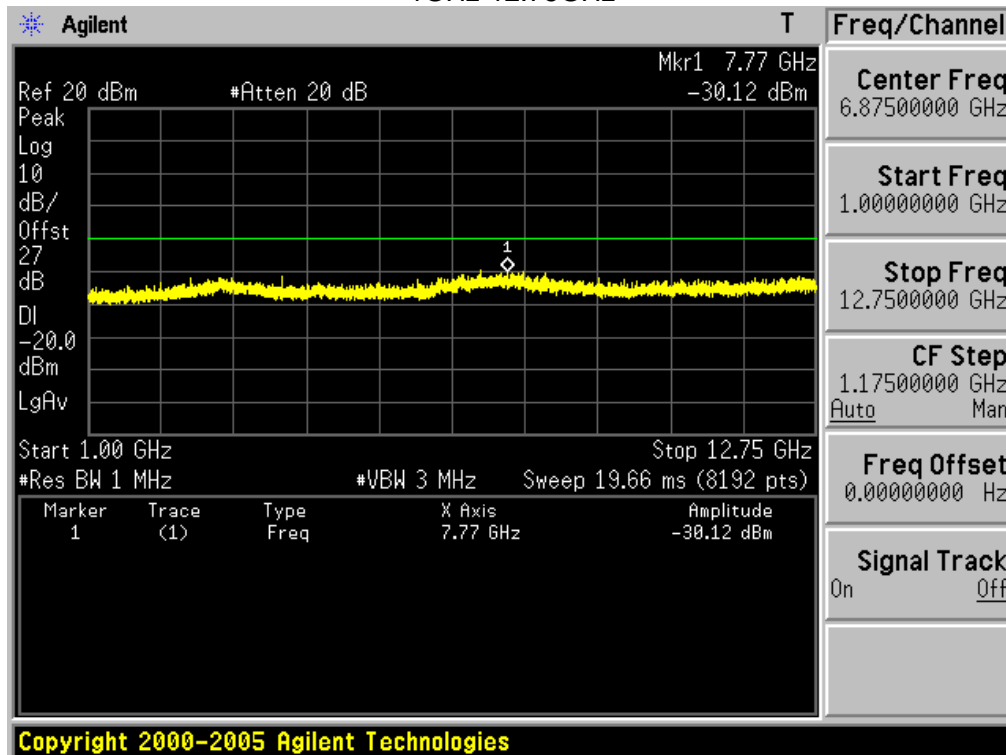
**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz



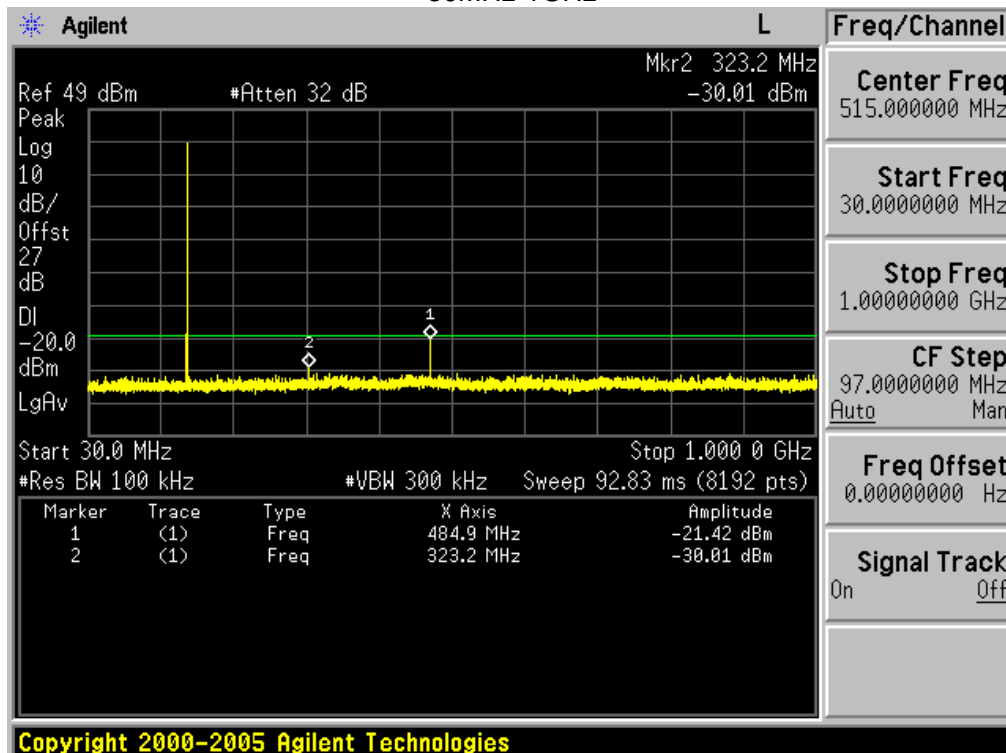
**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



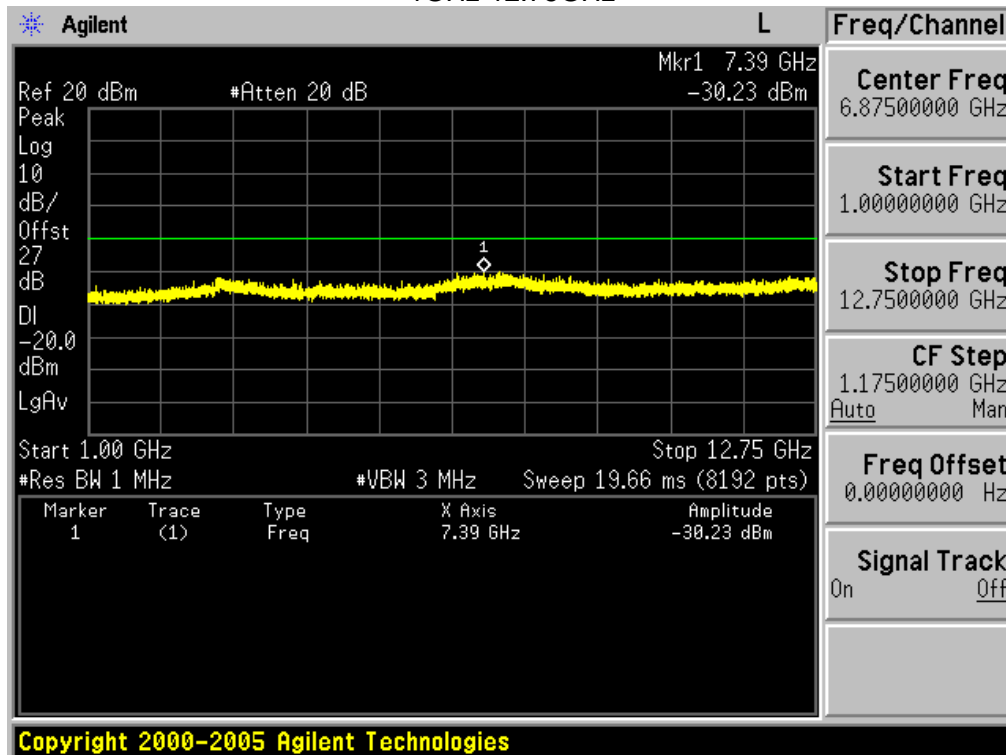
**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

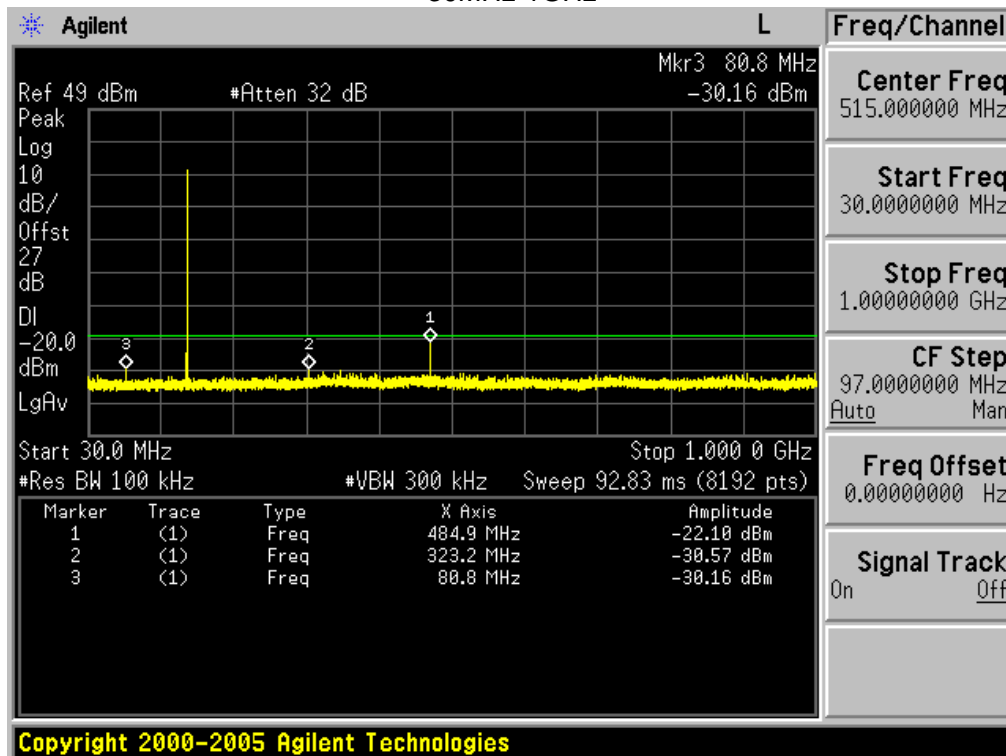


**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

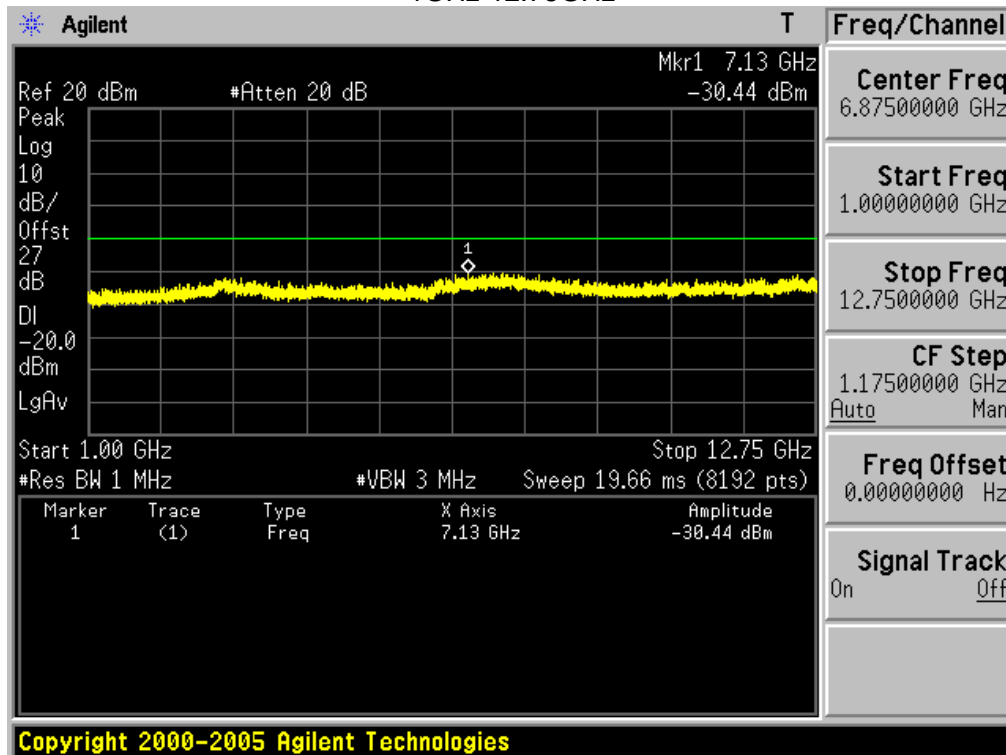




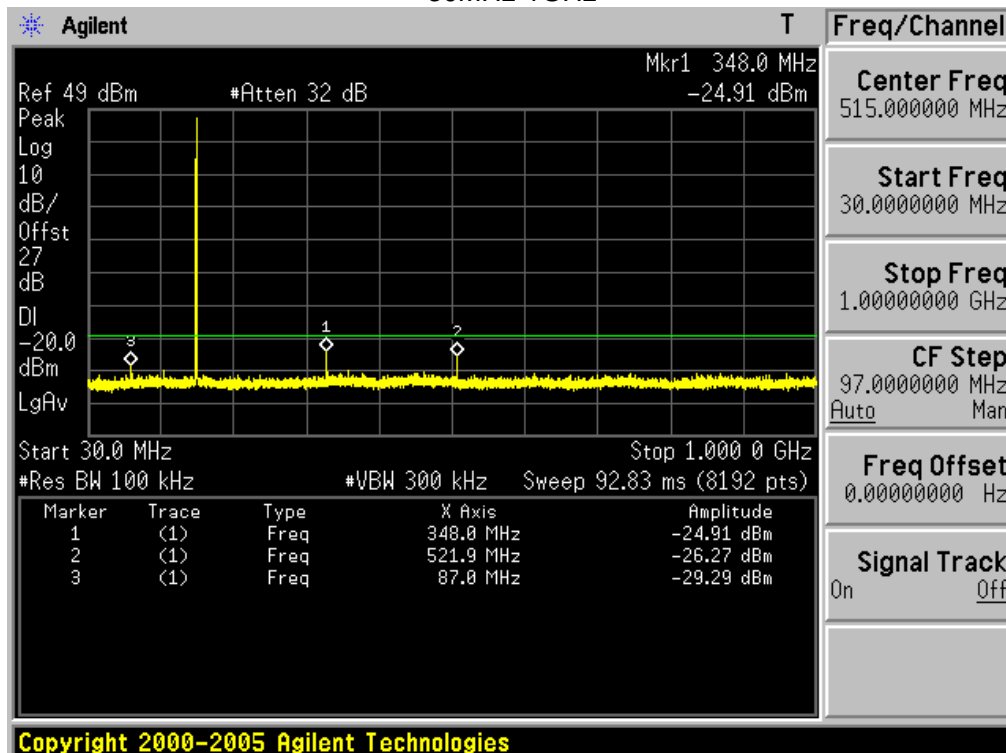
**Conducted Spurious Emission (worst) @161.610MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



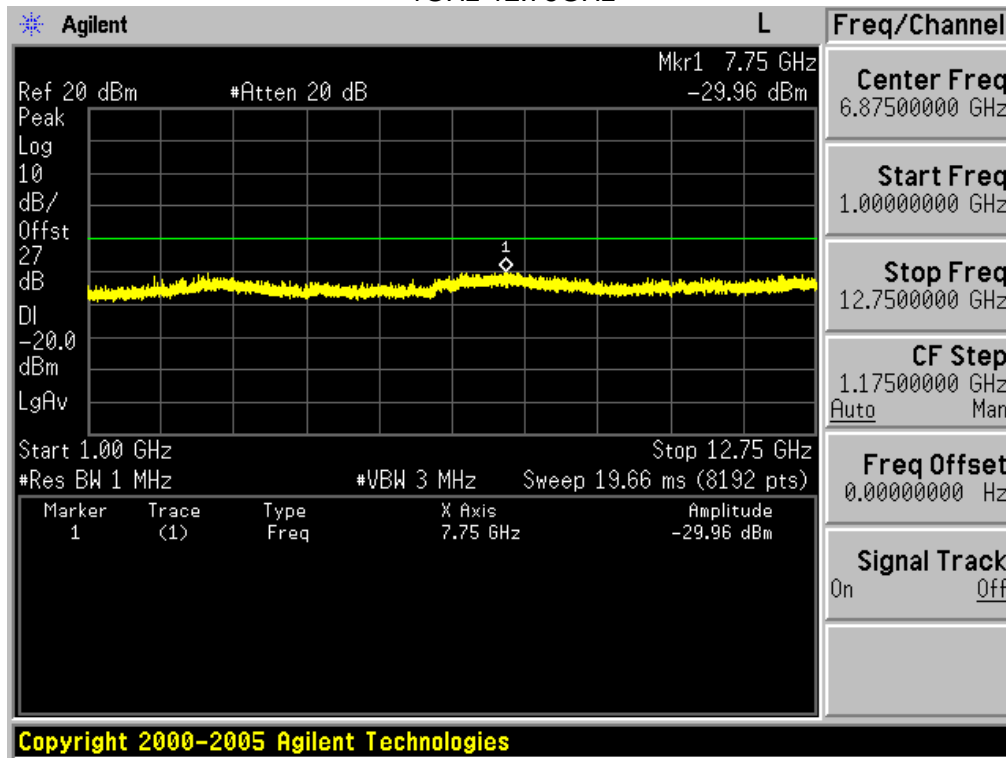
**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



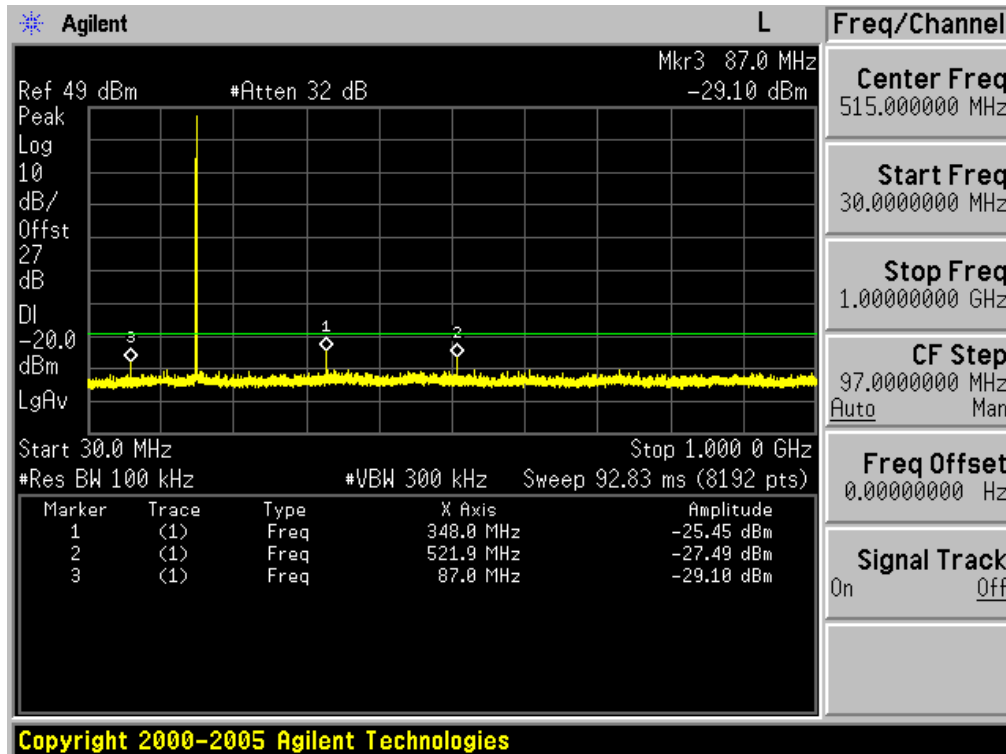
**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-60W**  
30MHz-1GHz



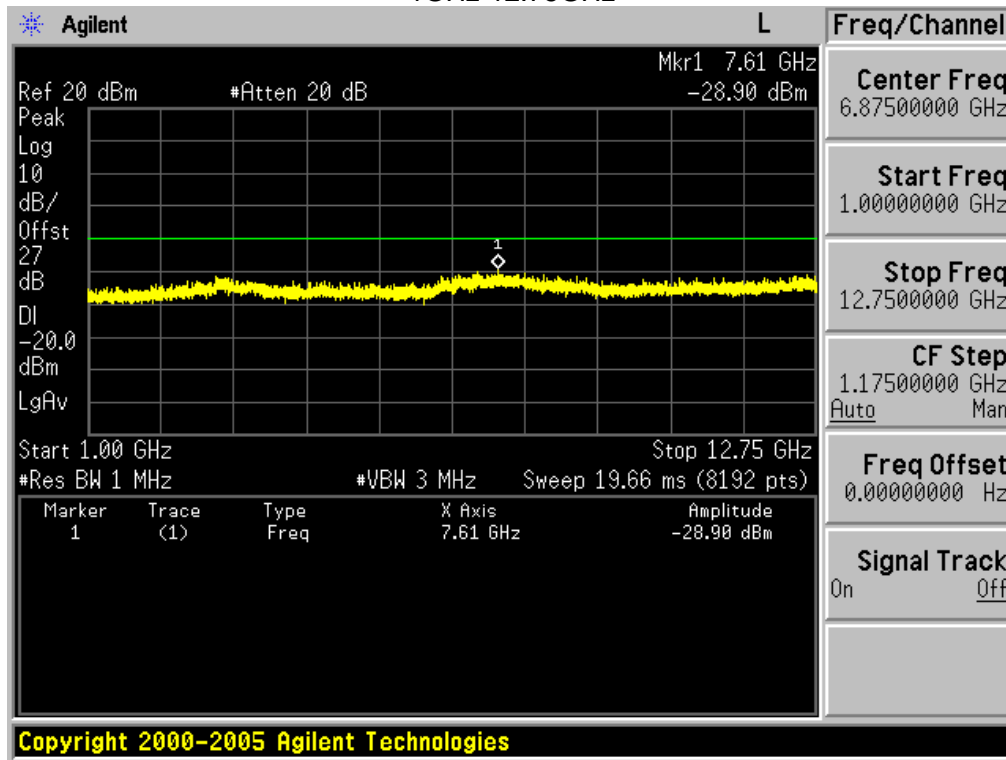
**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-60W**  
1GHz-12.75GHz



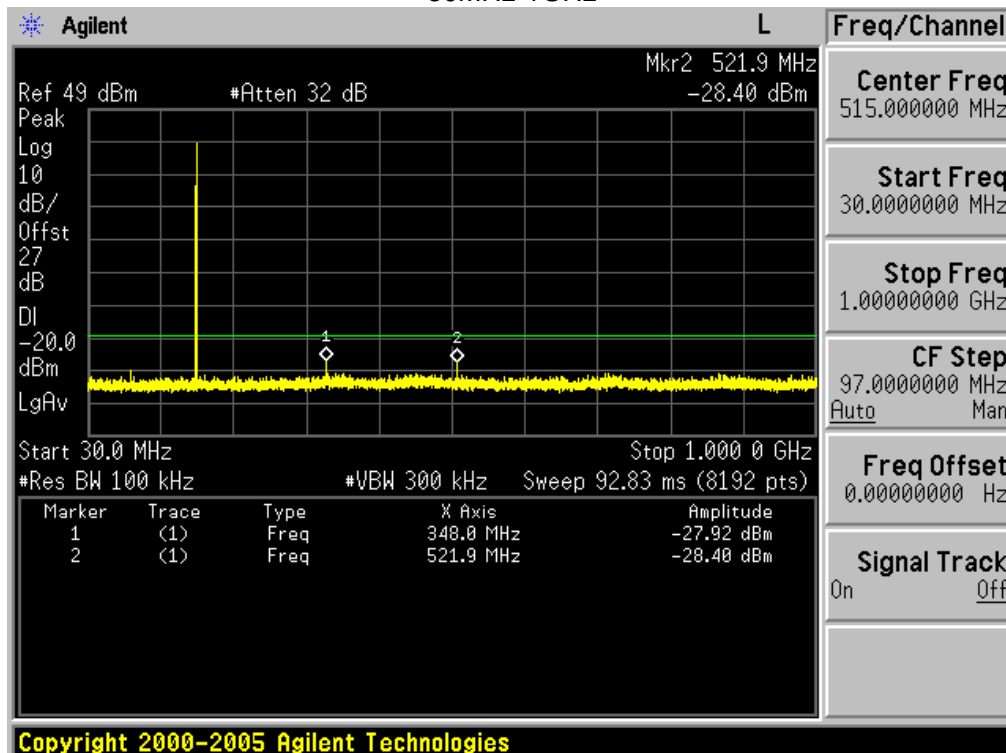
**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz

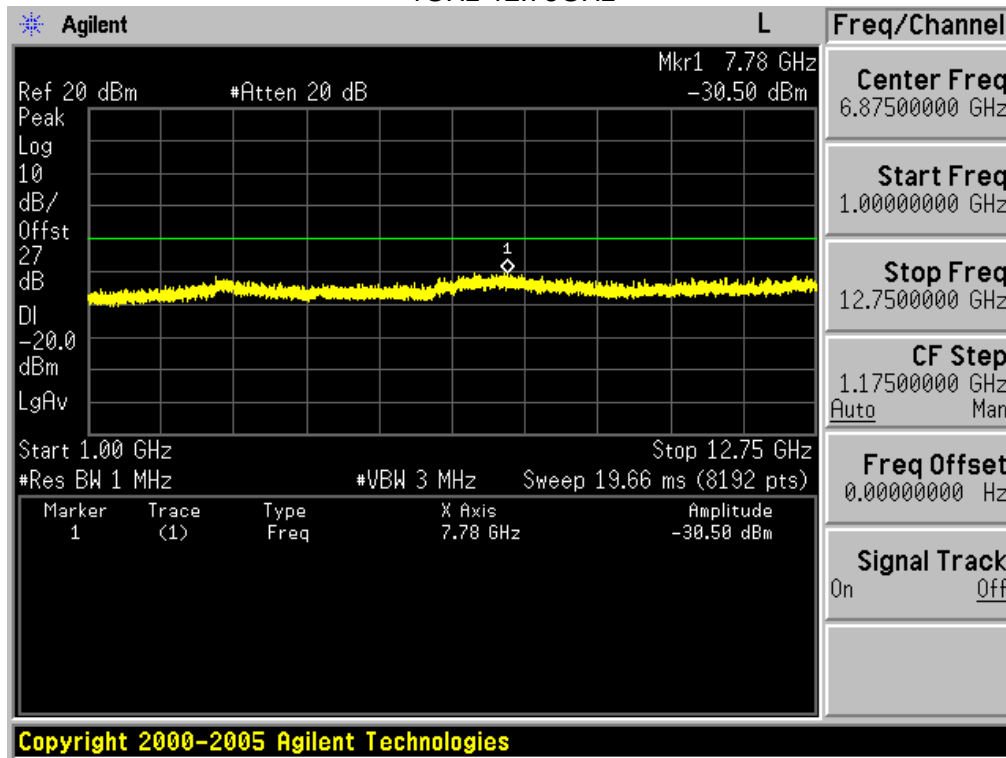


**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



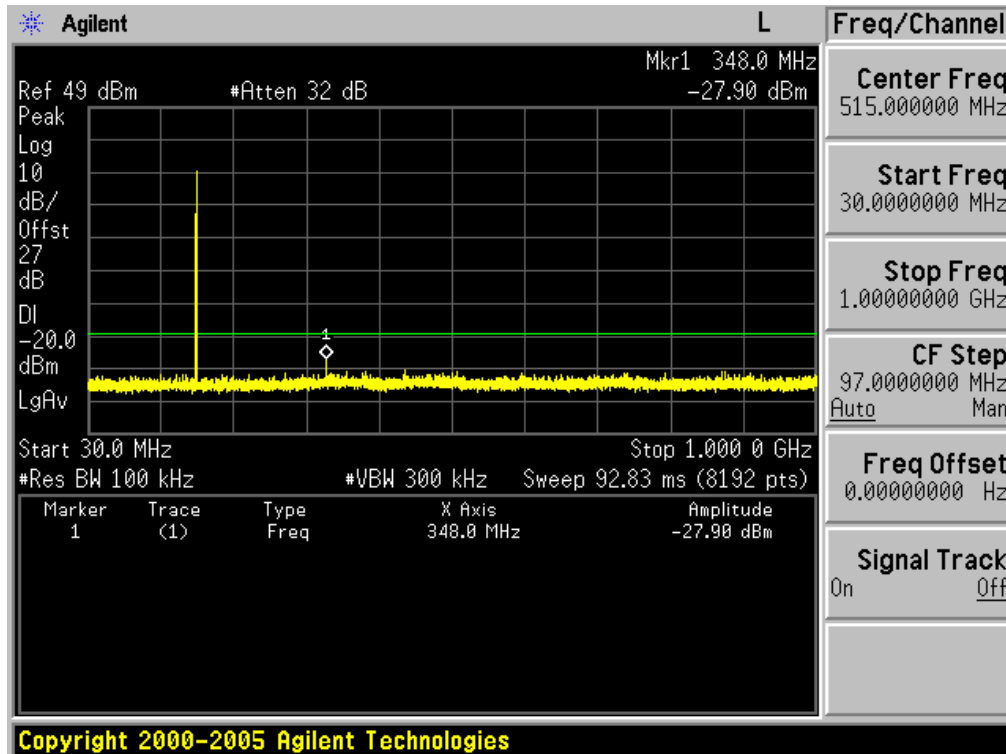
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**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

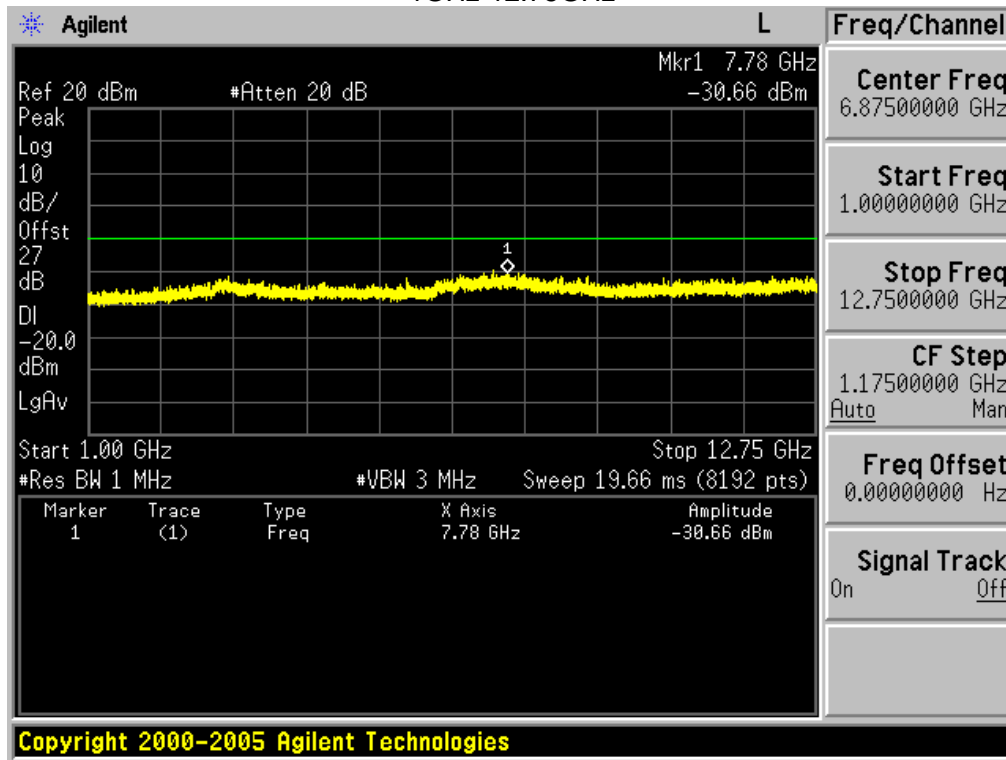


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**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz

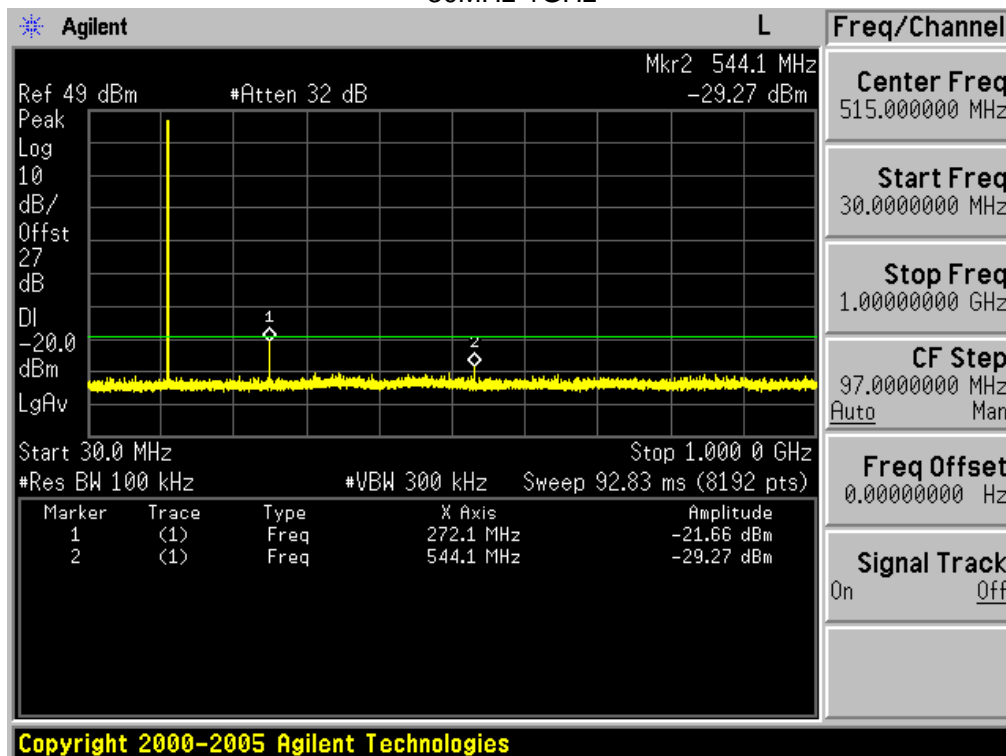


**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz

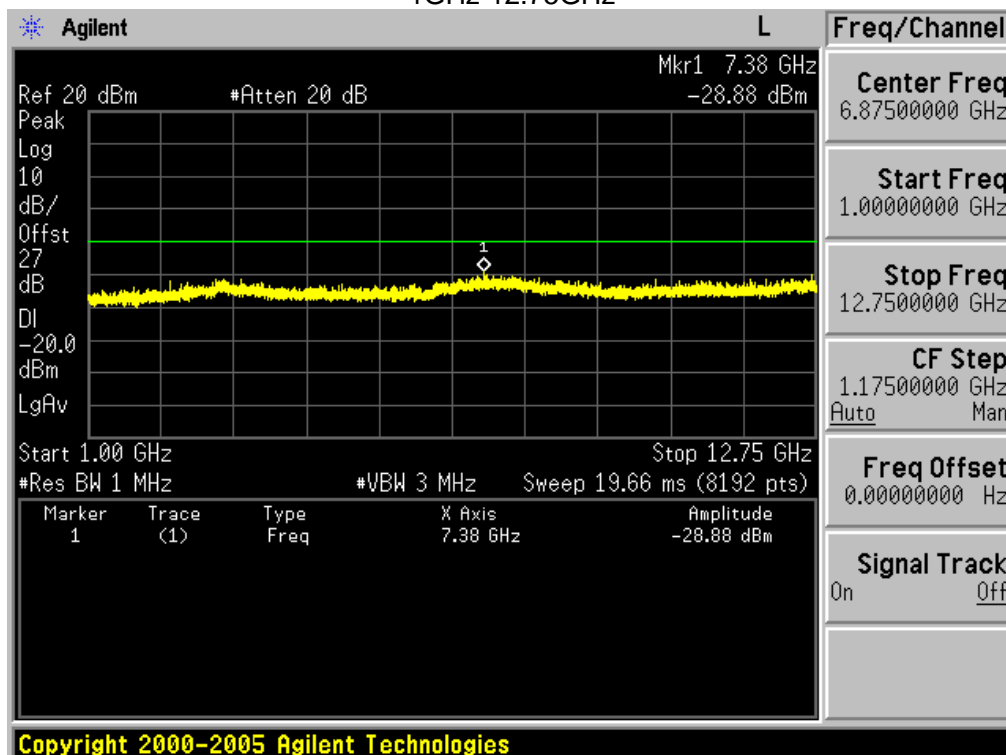


Digital:

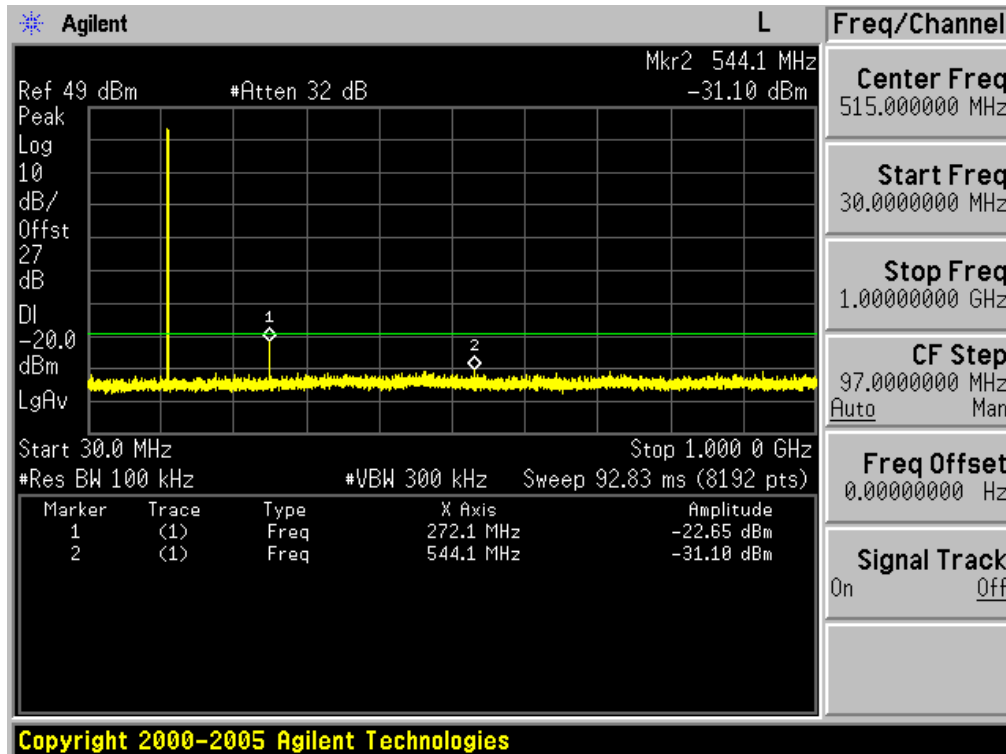
**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz



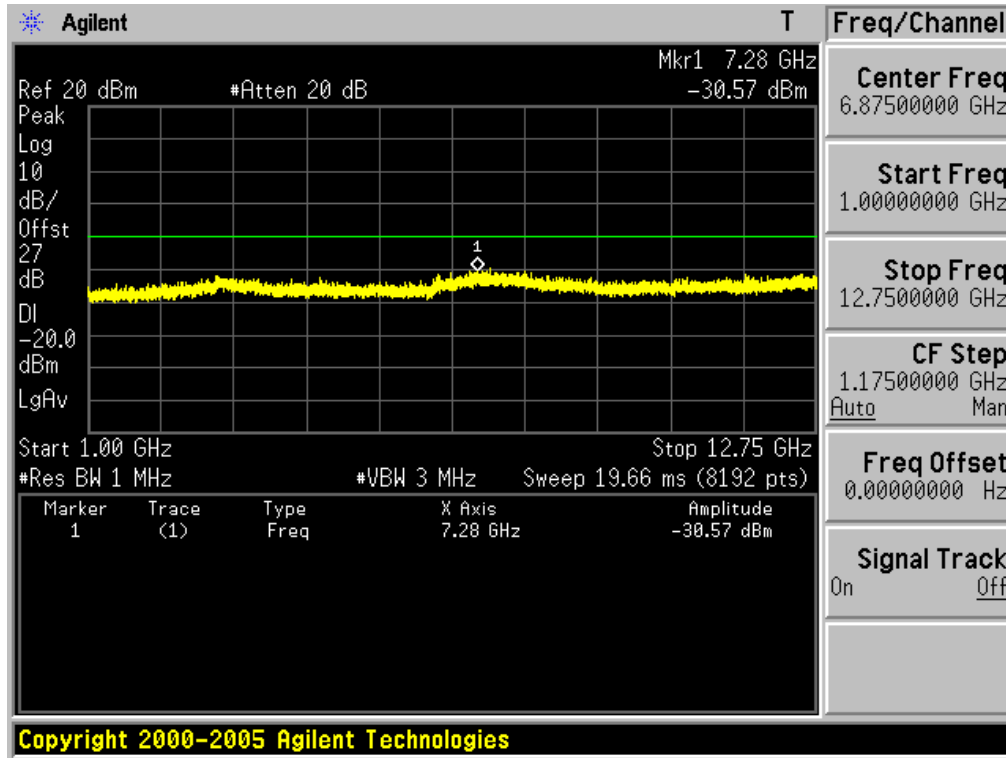
**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz



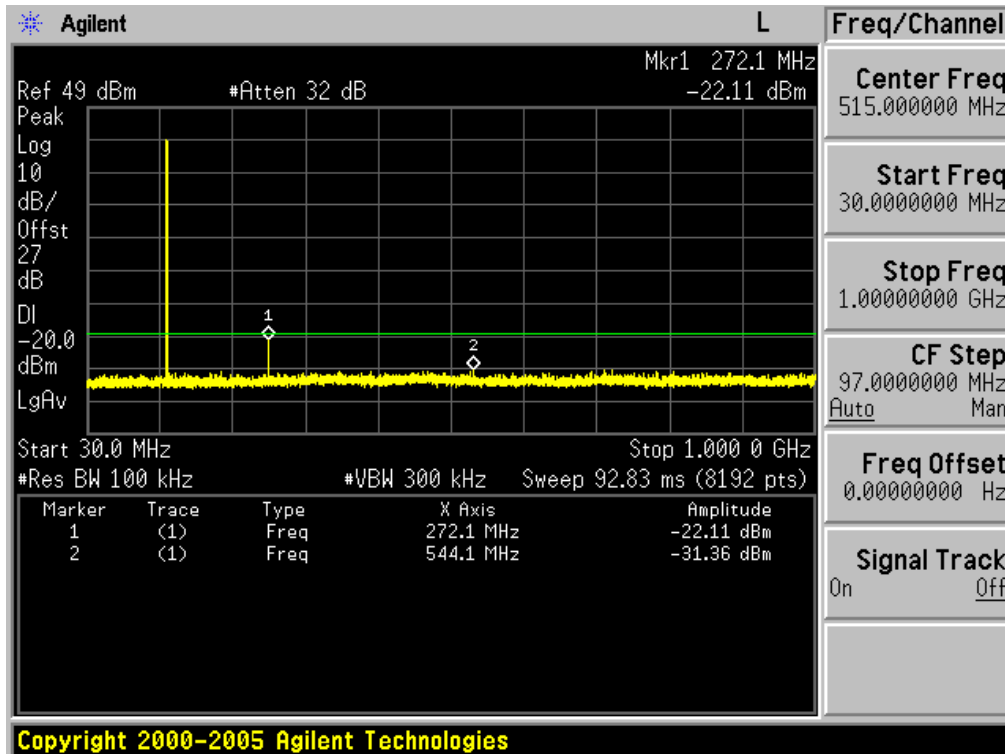
**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-25W**  
30MHz-1GHz



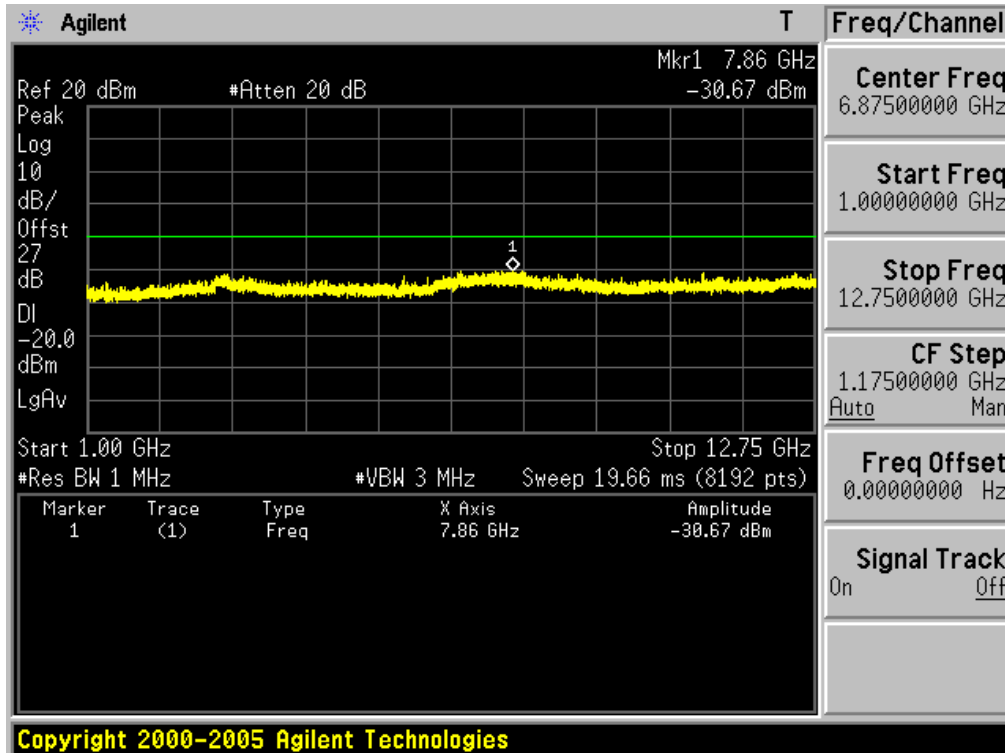
**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-25W**  
1GHz-12.75GHz



**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-10W**  
30MHz-1GHz

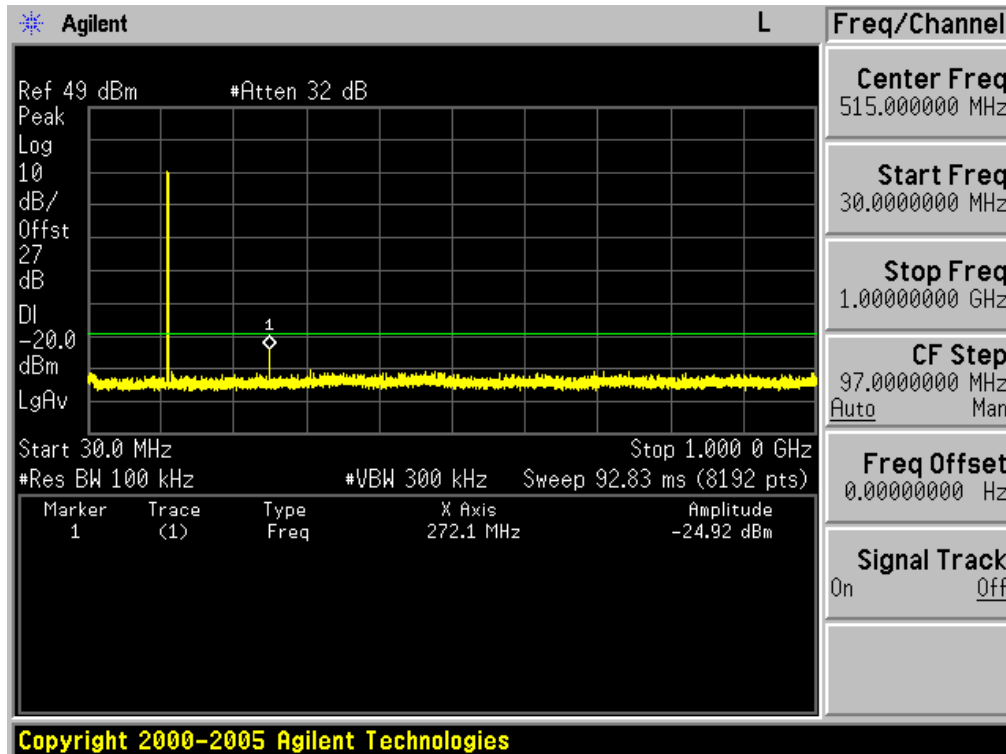


**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-10W**  
1GHz-12.75GHz

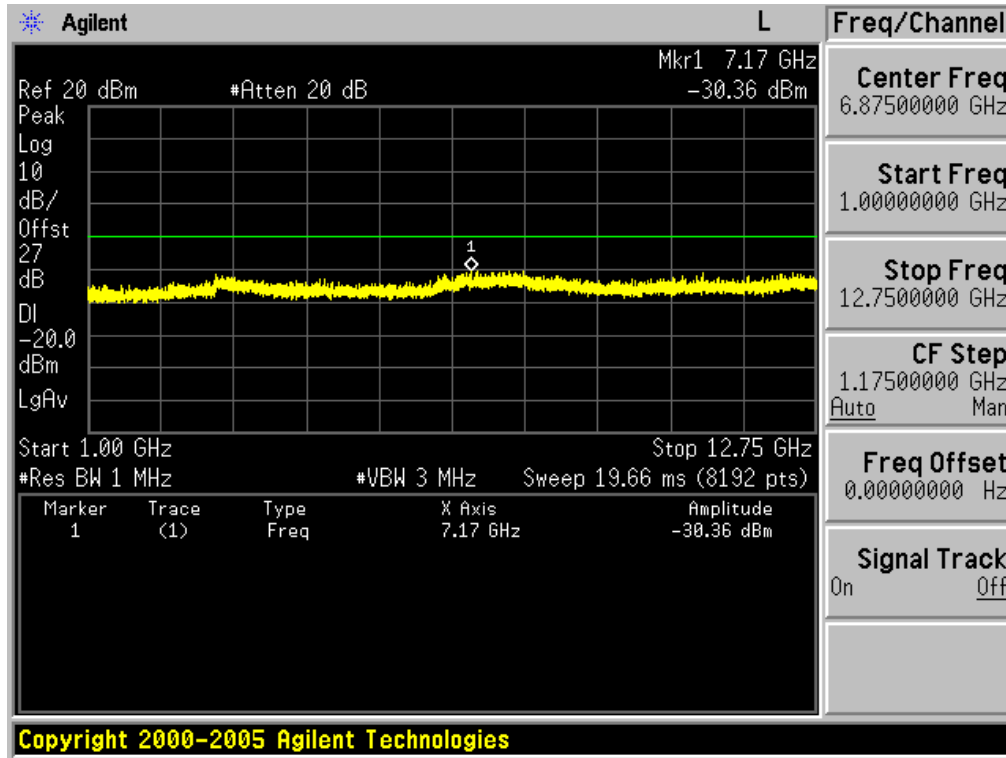




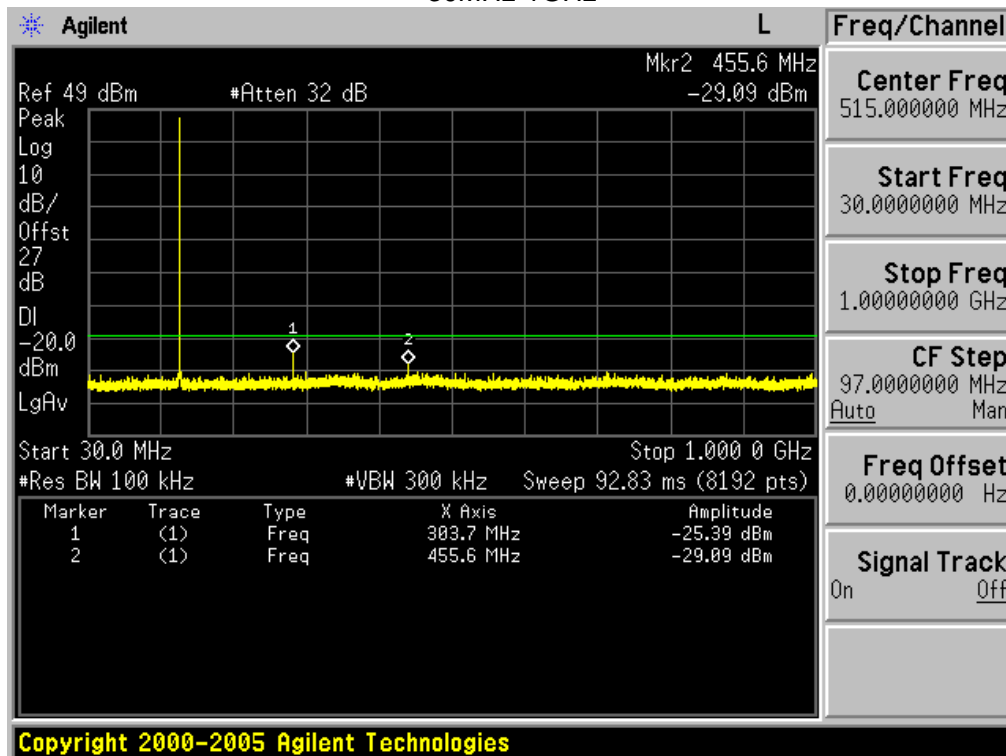
**Conducted Spurious Emission (worst) @136.025MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



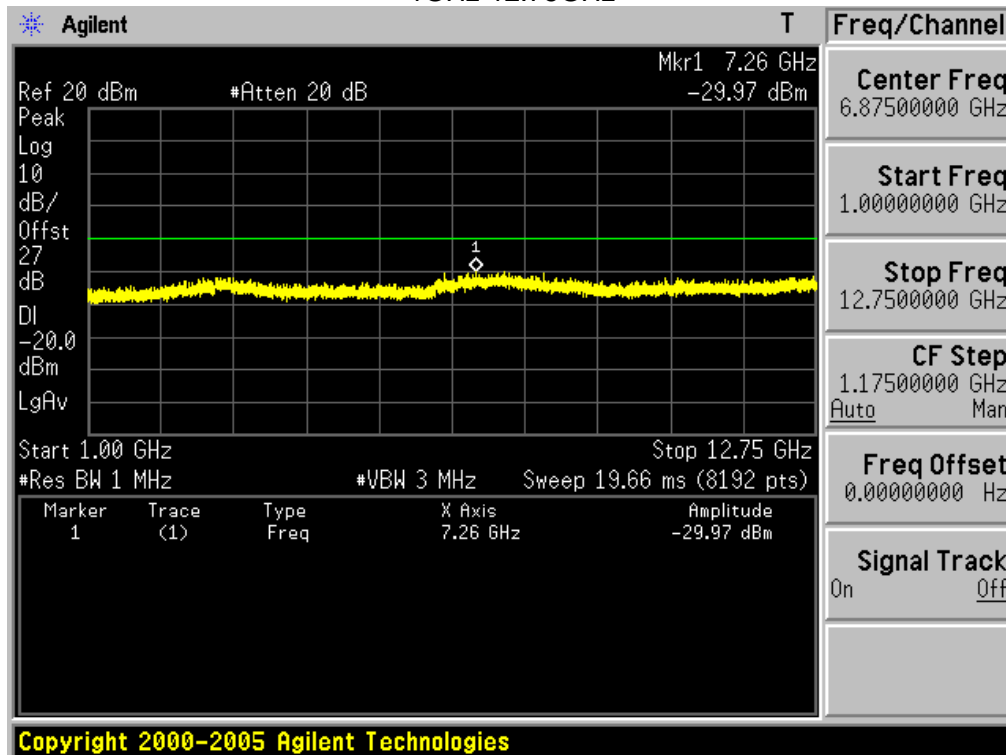
**Conduct Spurious Emission (worst) @ 136.025MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



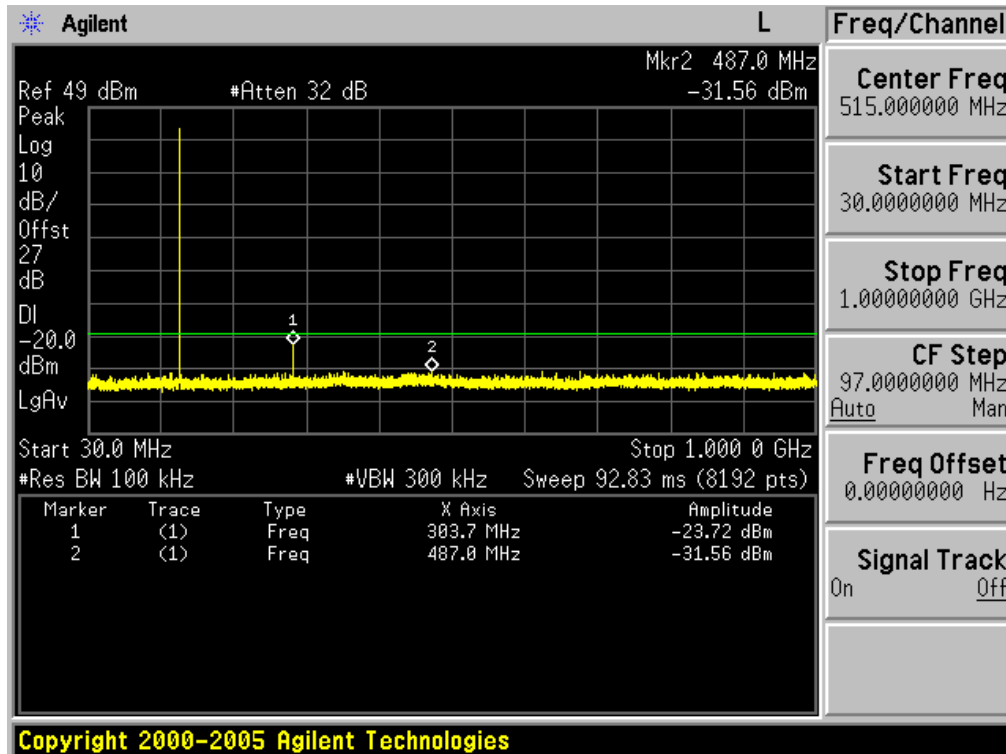
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz



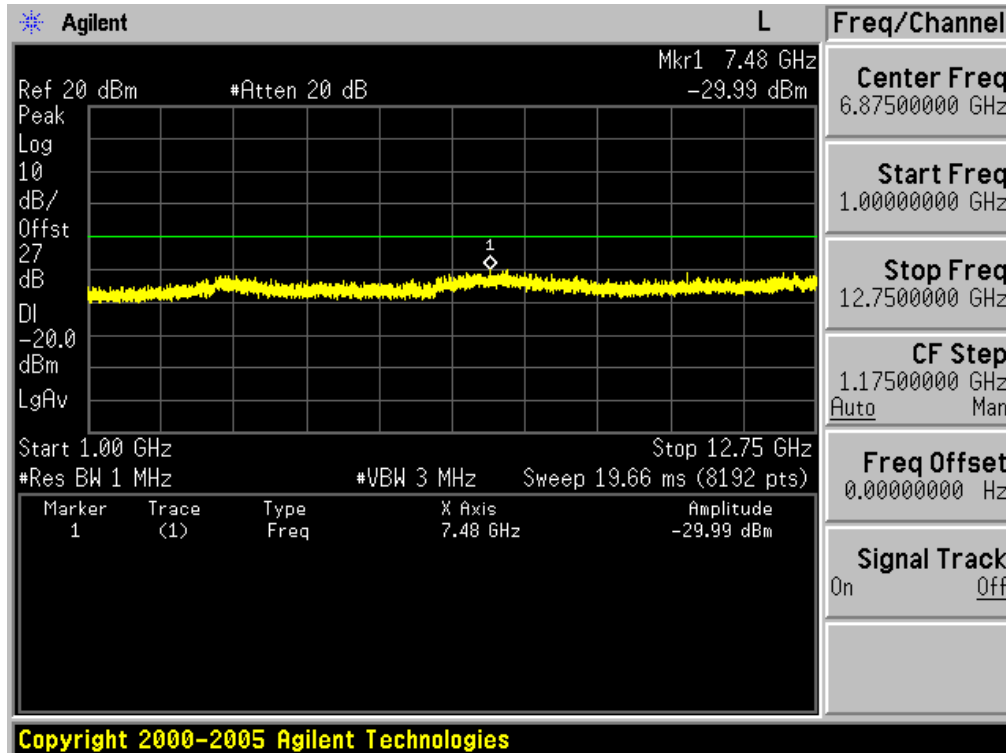
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz



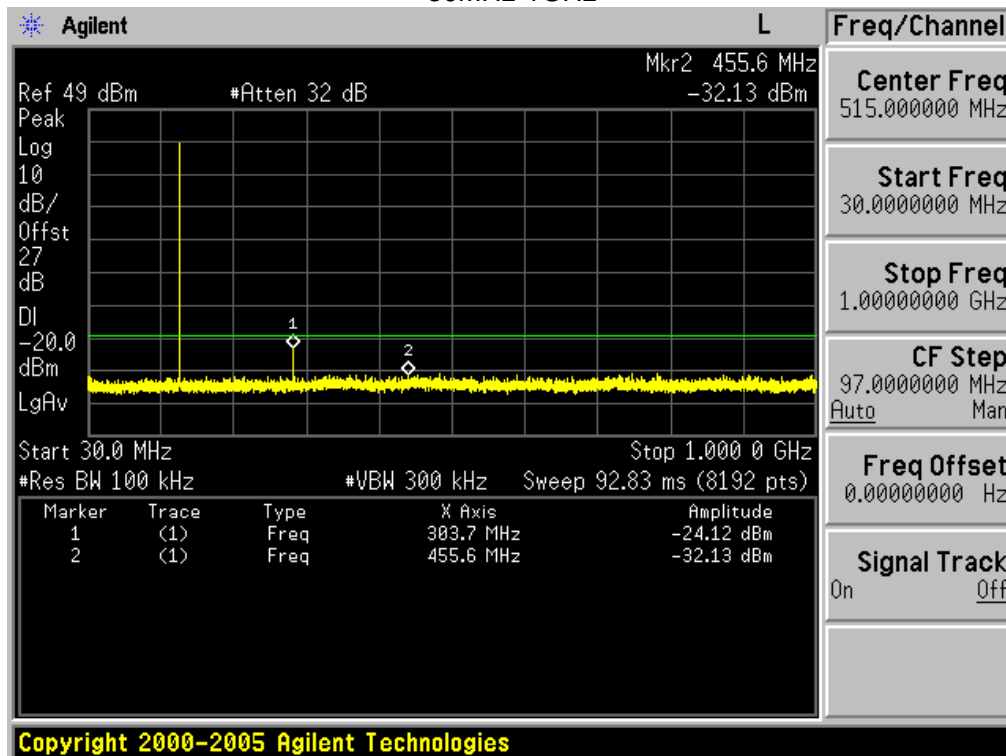
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



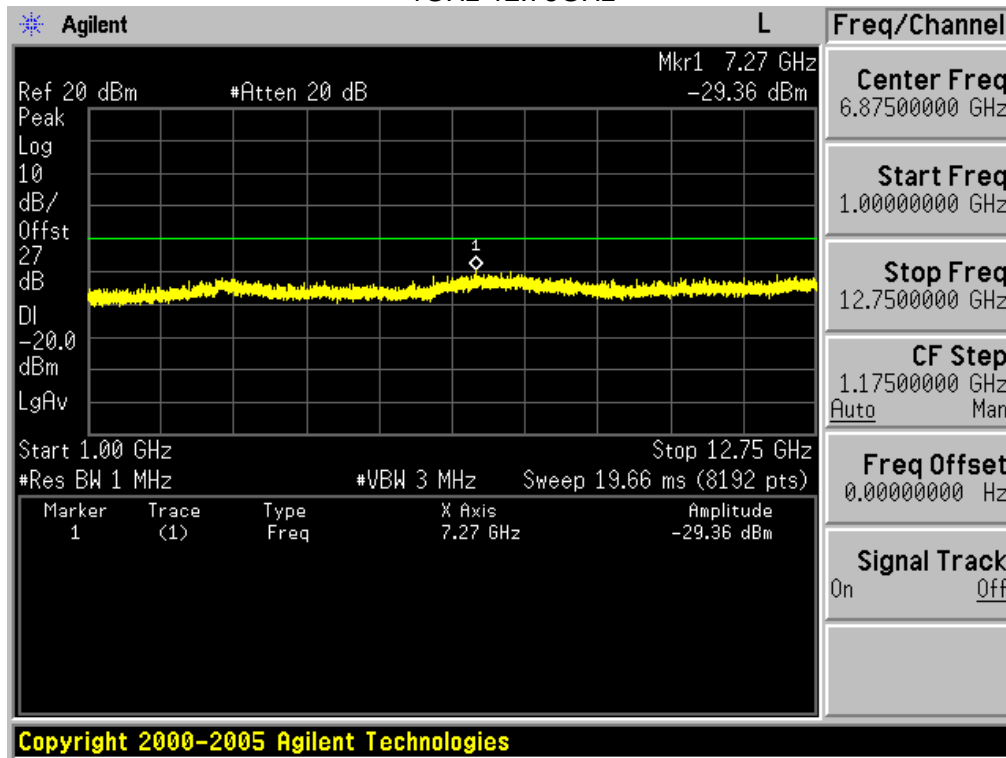
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



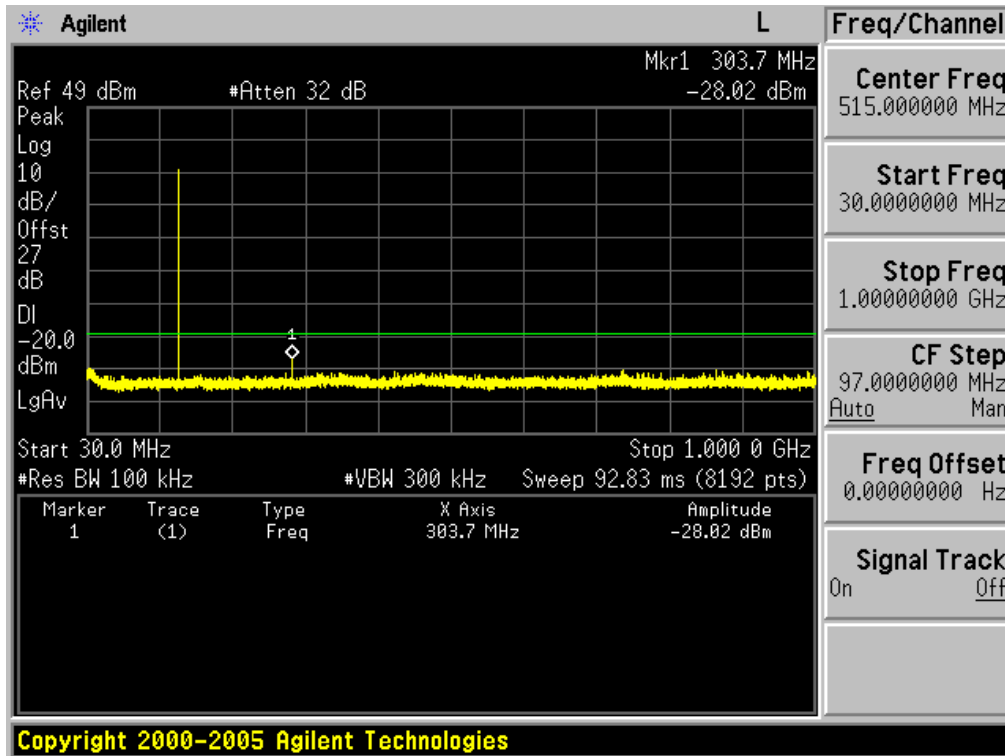
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



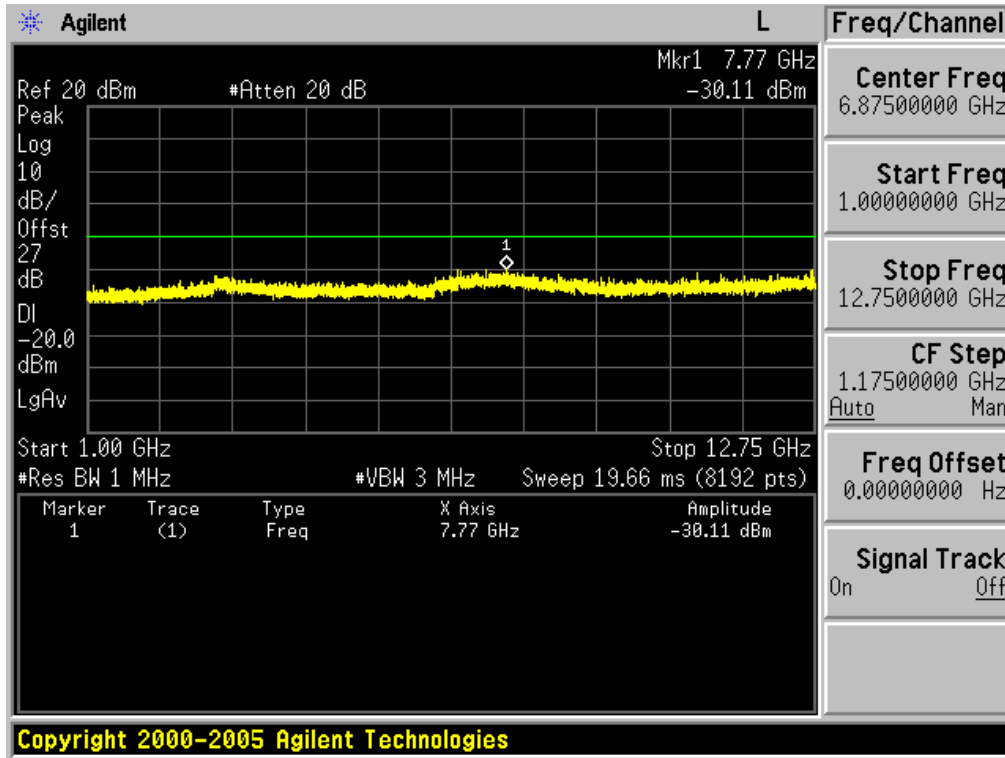
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



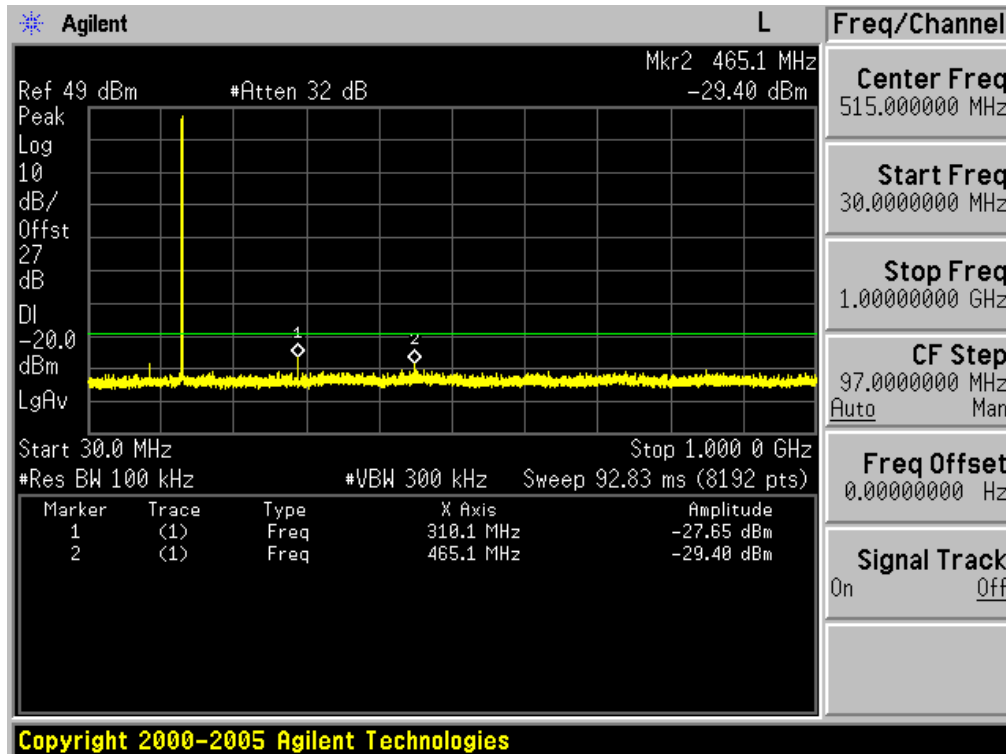
**Conducted Spurious Emission (worst) @151.850 MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



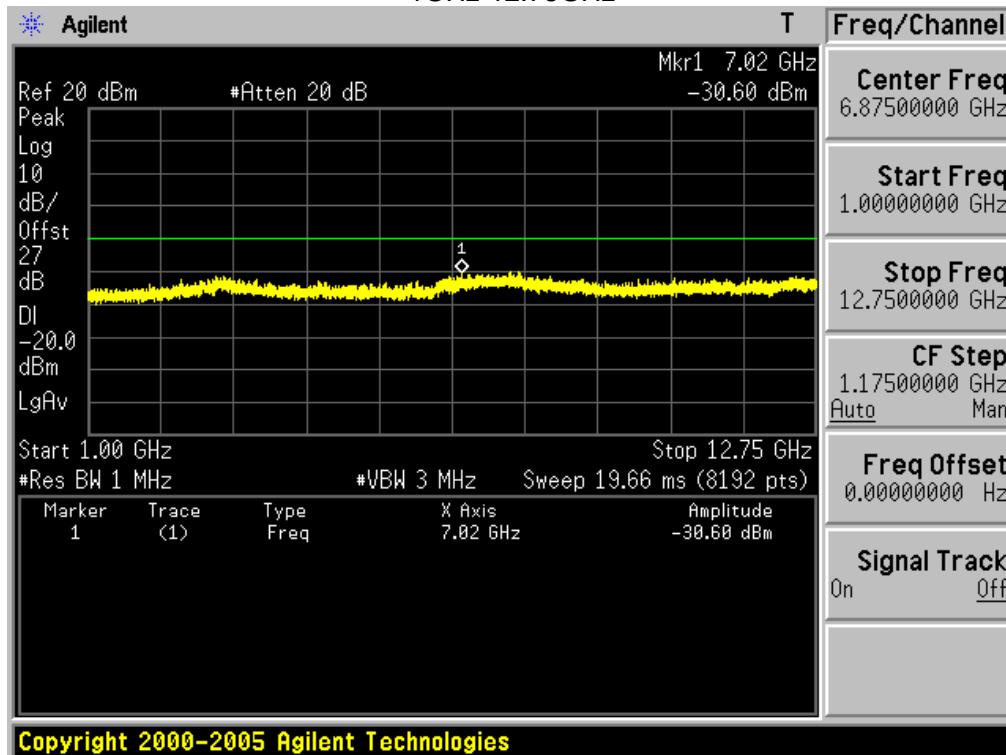
**Conduct Spurious Emission (worst) @ 151.850MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



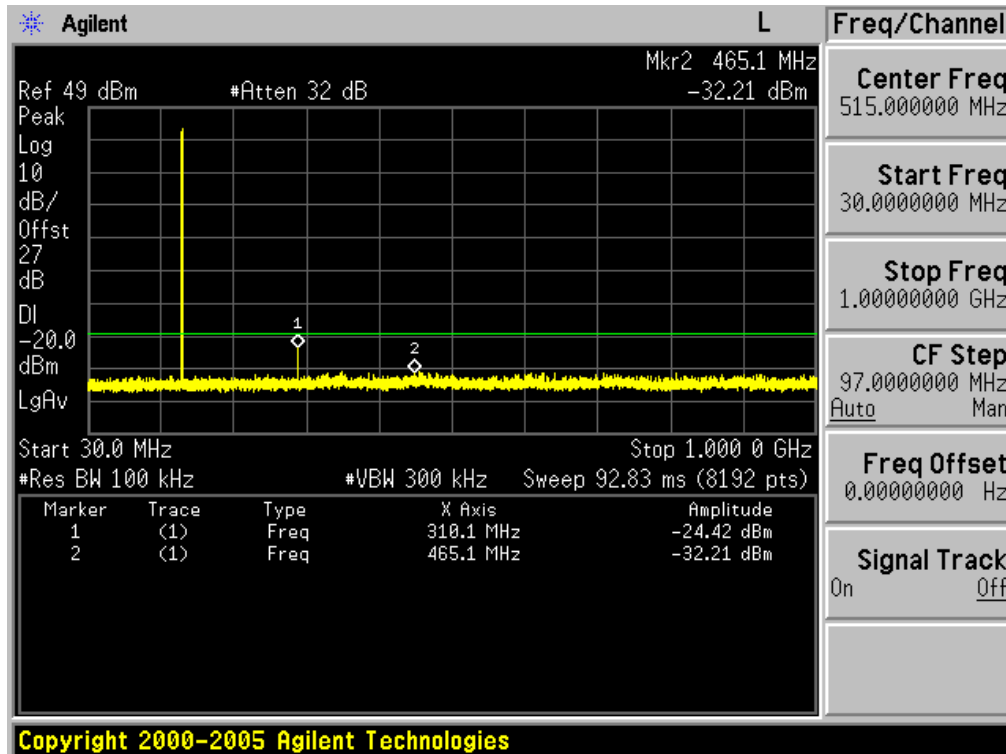
**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz



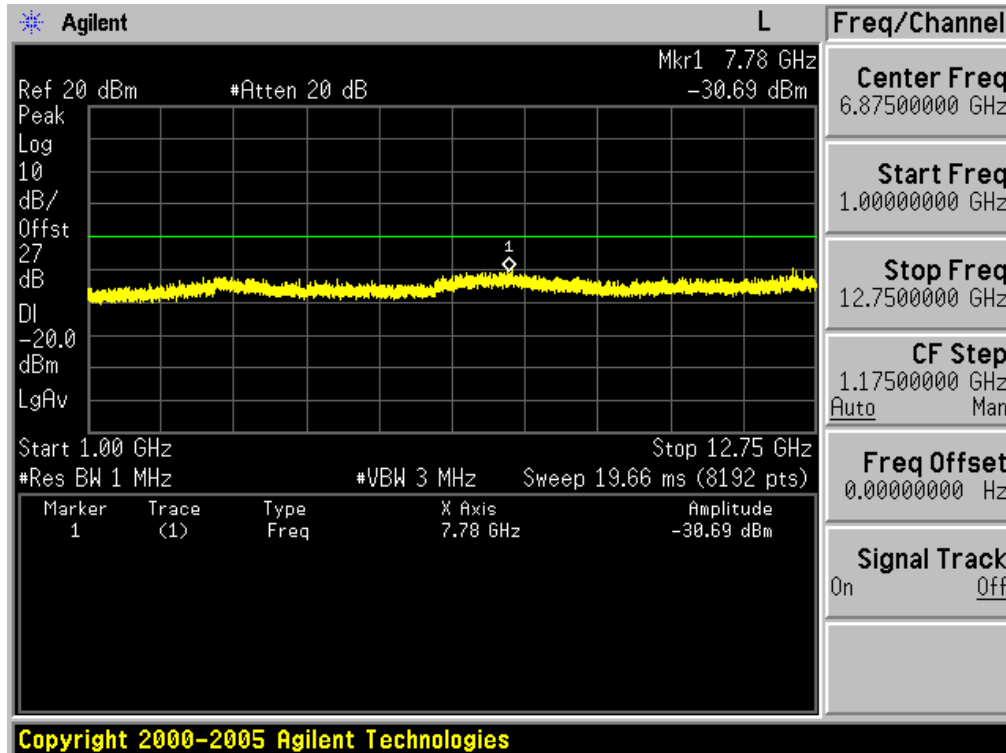
**Conduct Spurious Emission (worst) @ 155.025 MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz



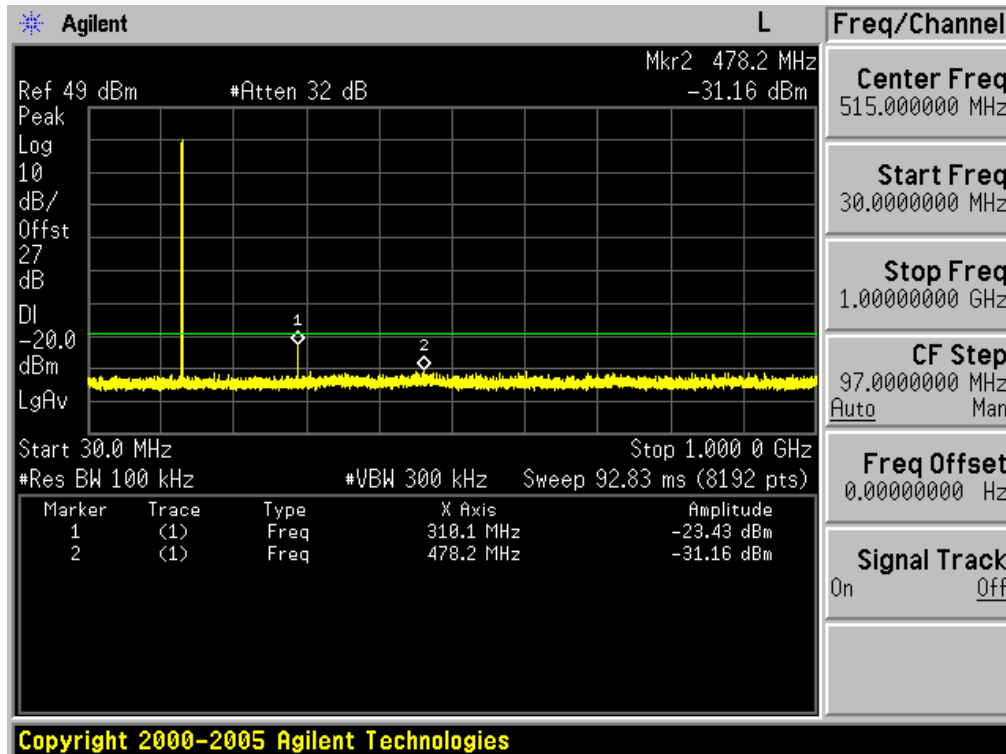
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 30MHz-1GHz



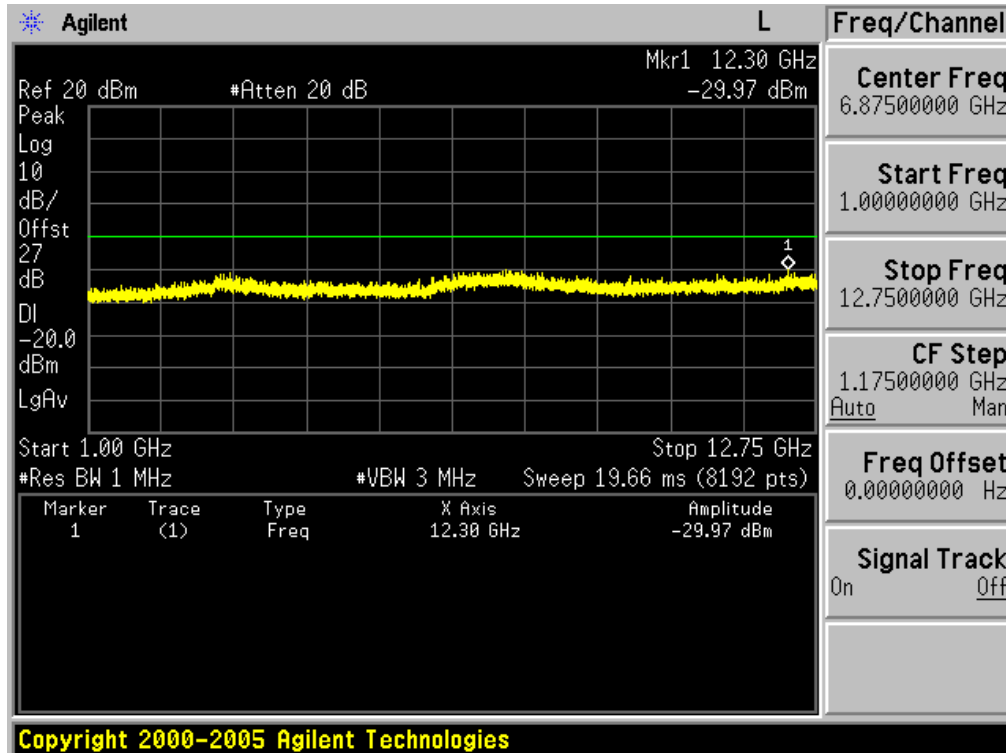
**Conduct Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-25W**  
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**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

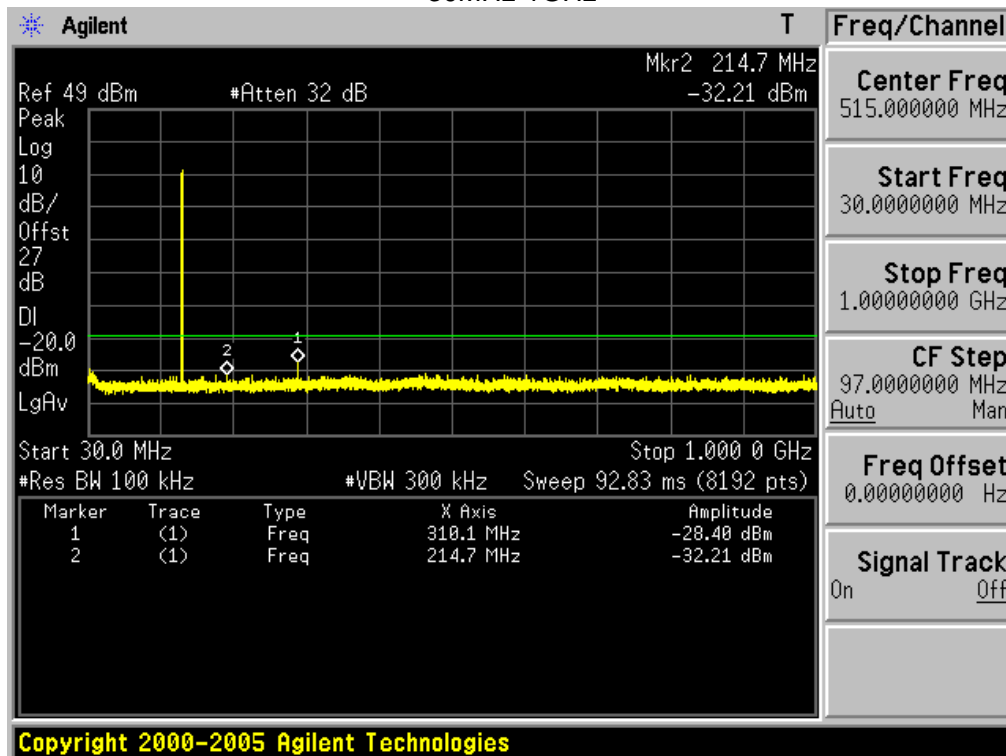


**Conduct Spurious Emission (worst) @ 155.025 MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

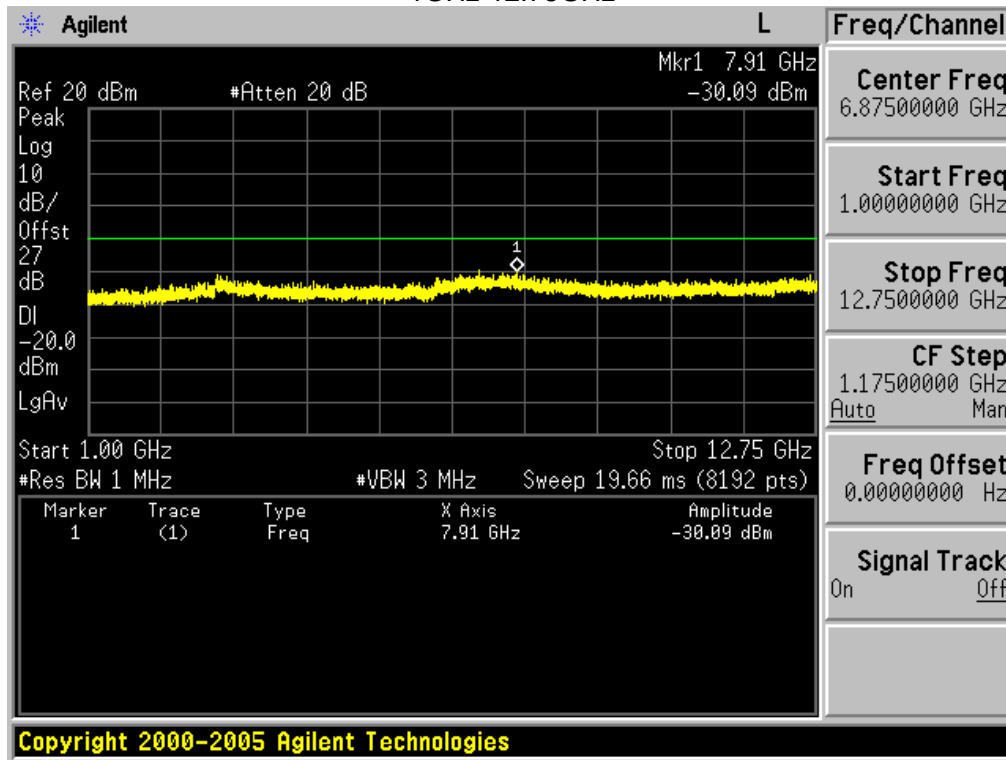




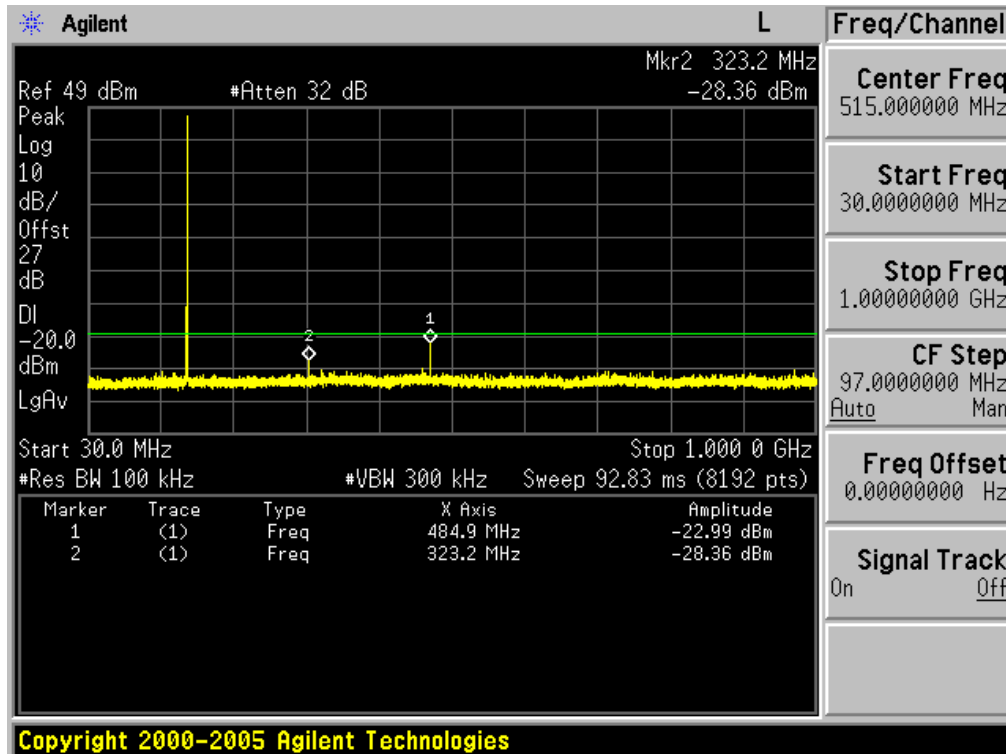
**Conducted Spurious Emission (worst) @155.025 MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



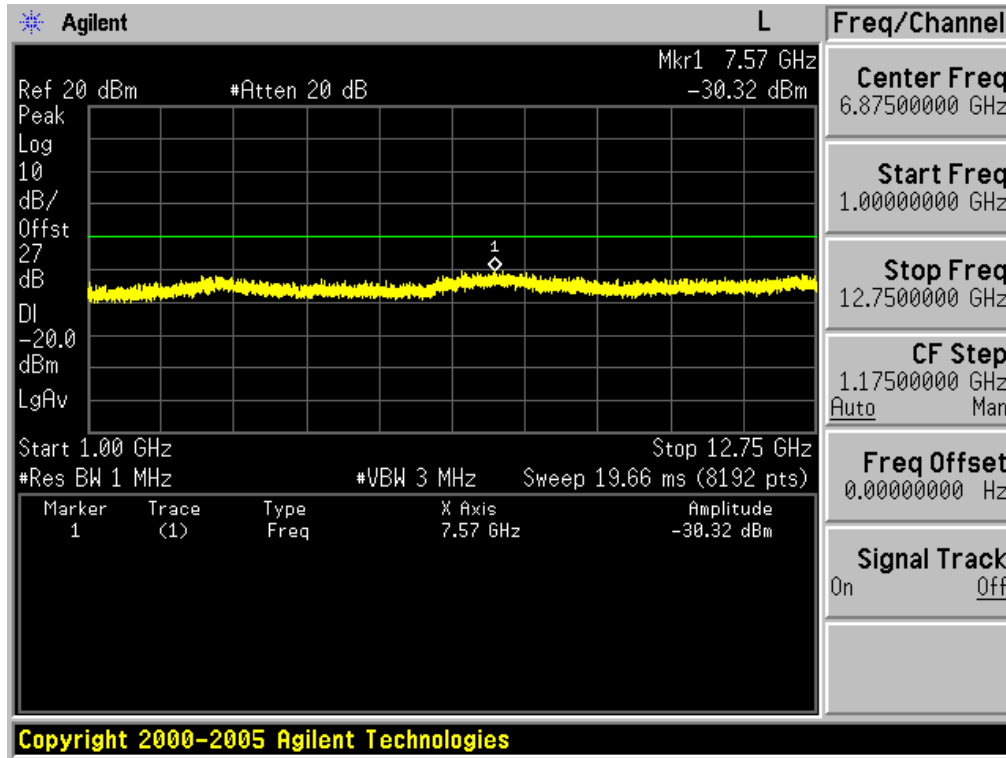
**Conduct Spurious Emission (worst) @155.025MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



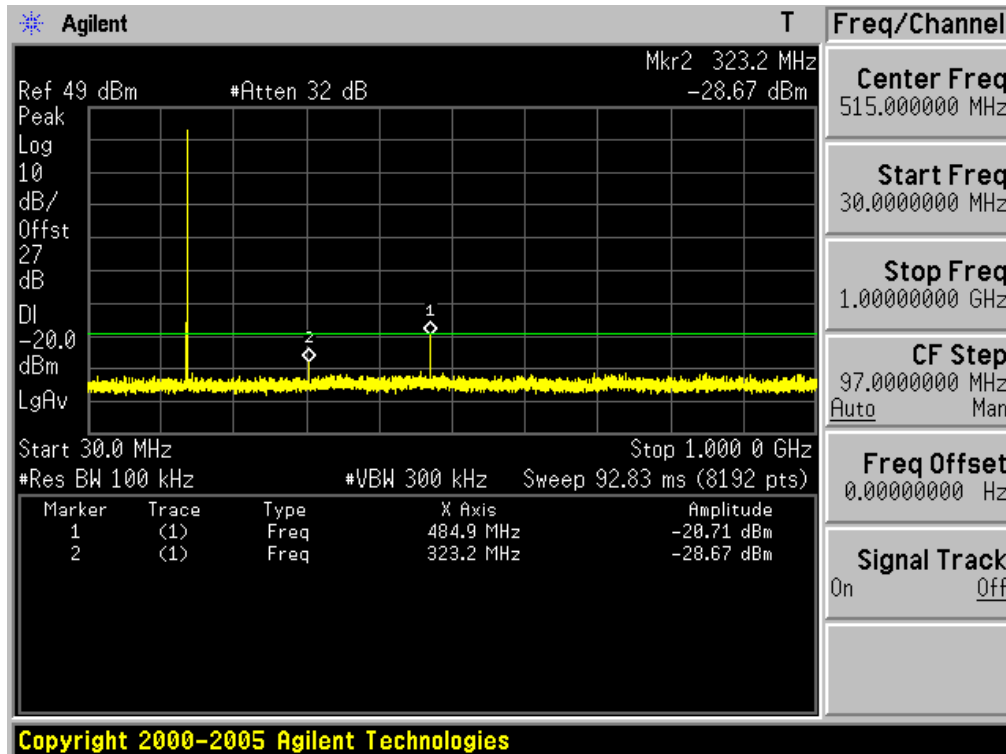
**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz



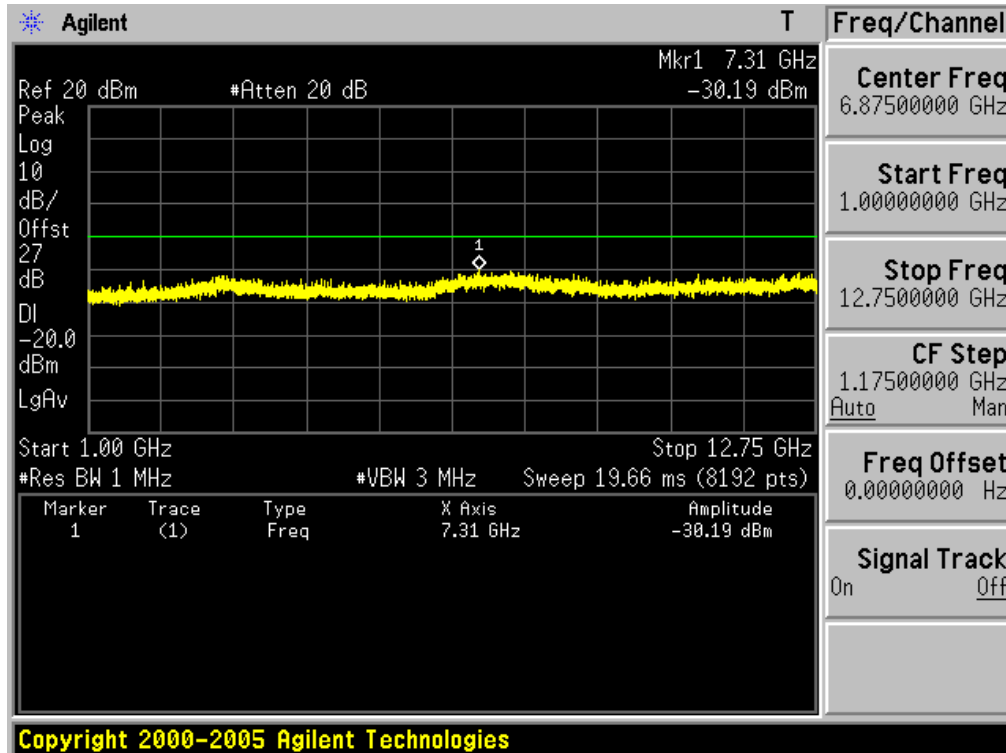
**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz



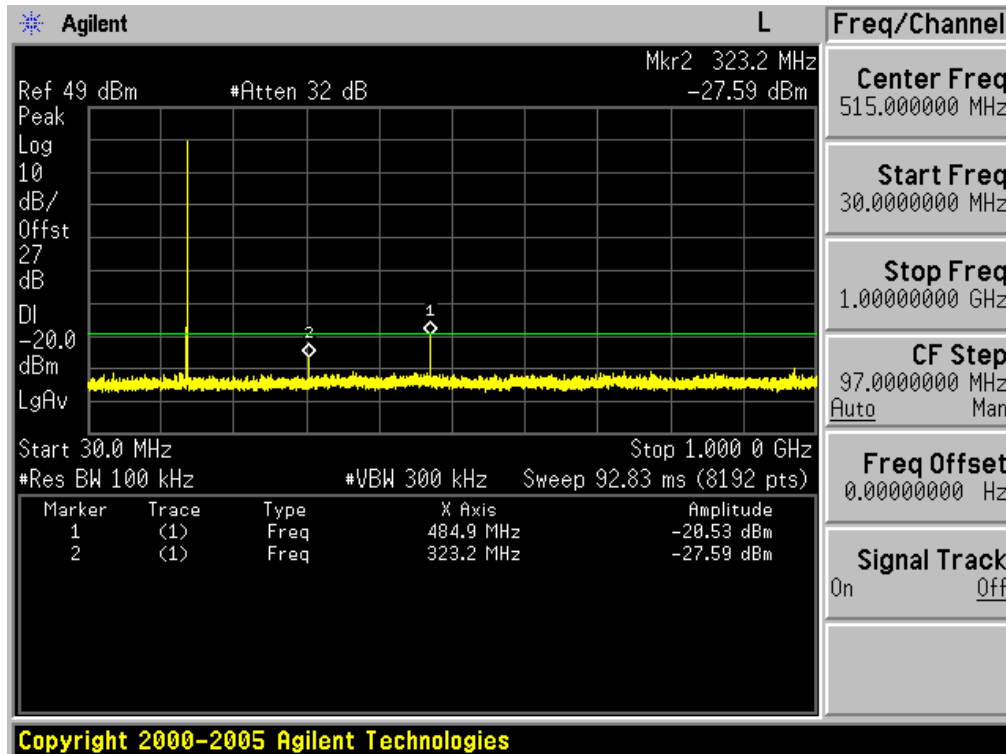
**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



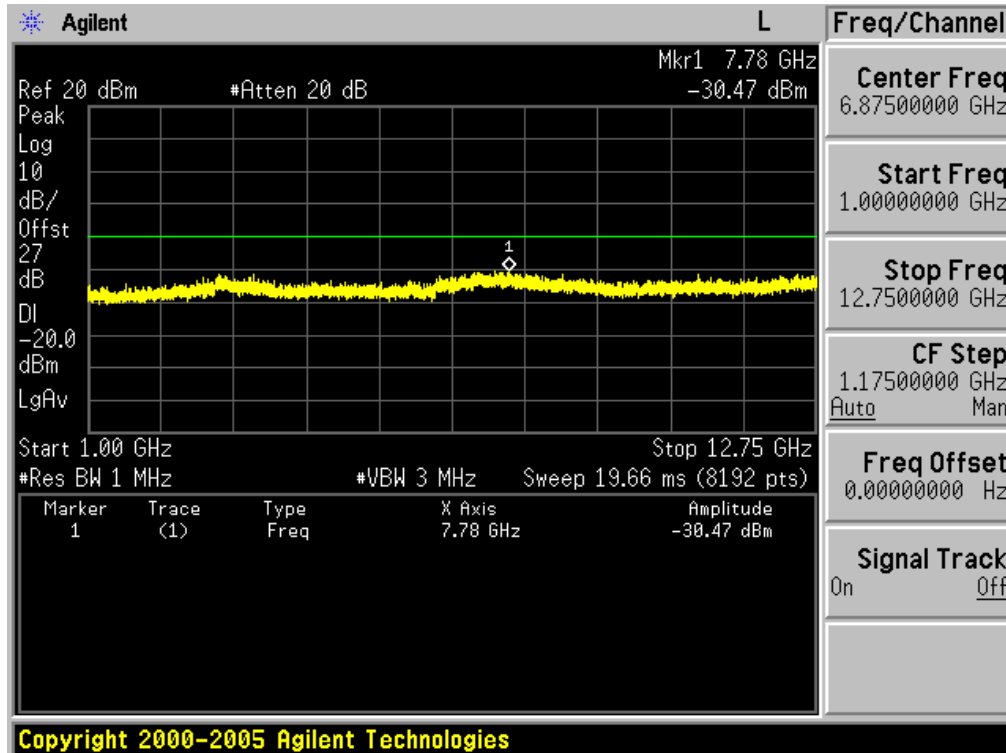
**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

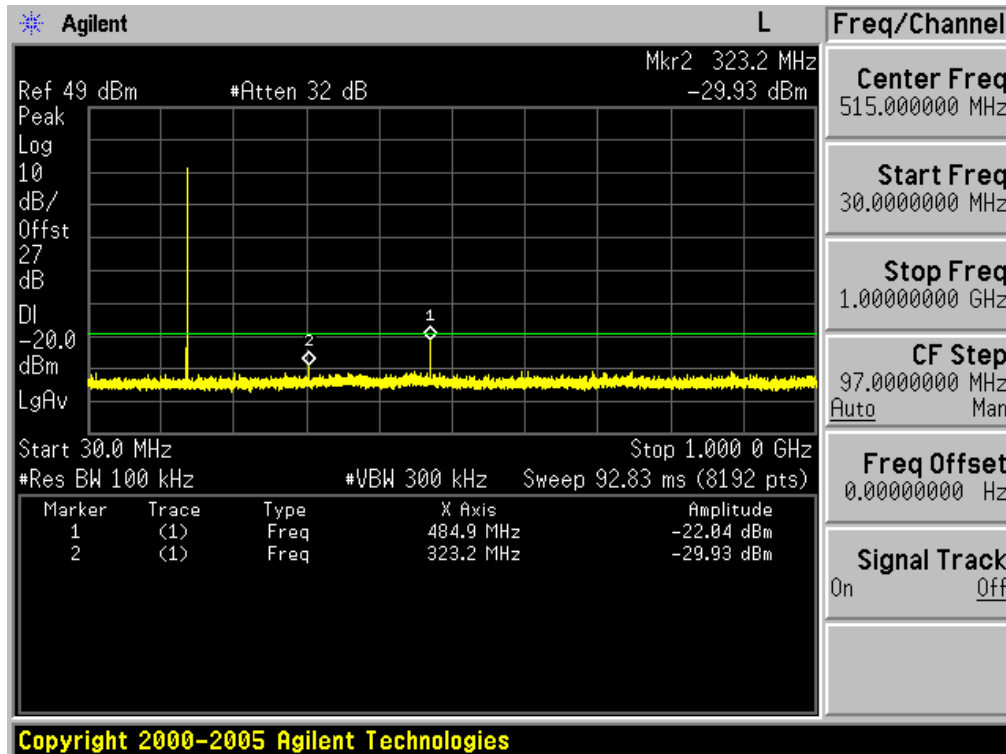


**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

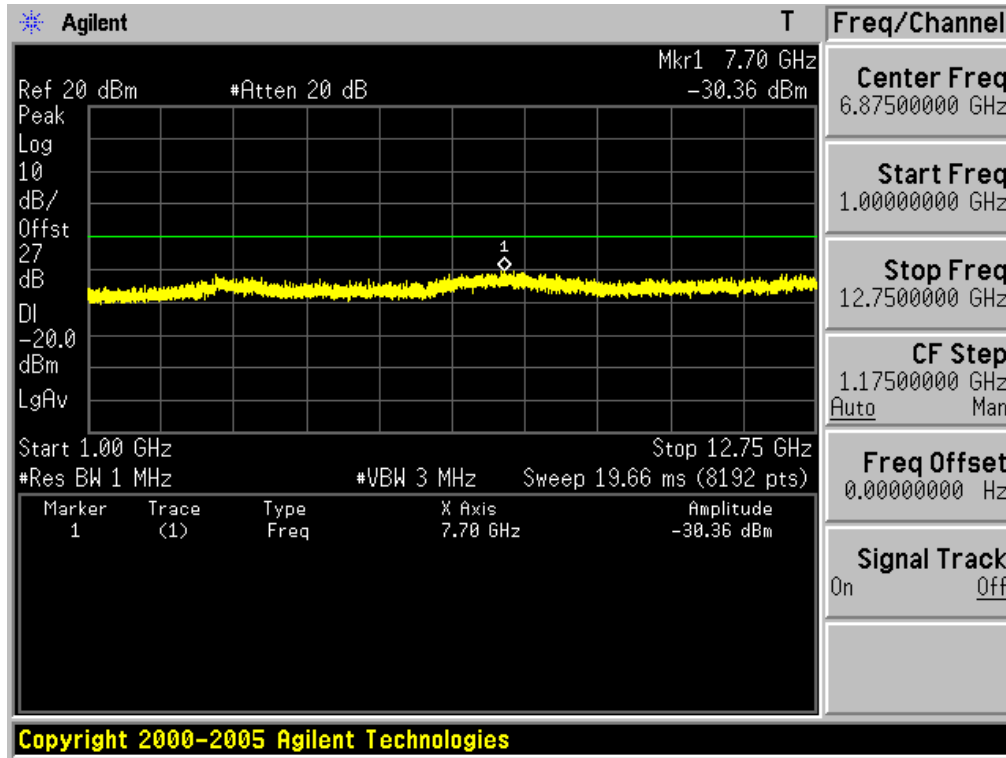


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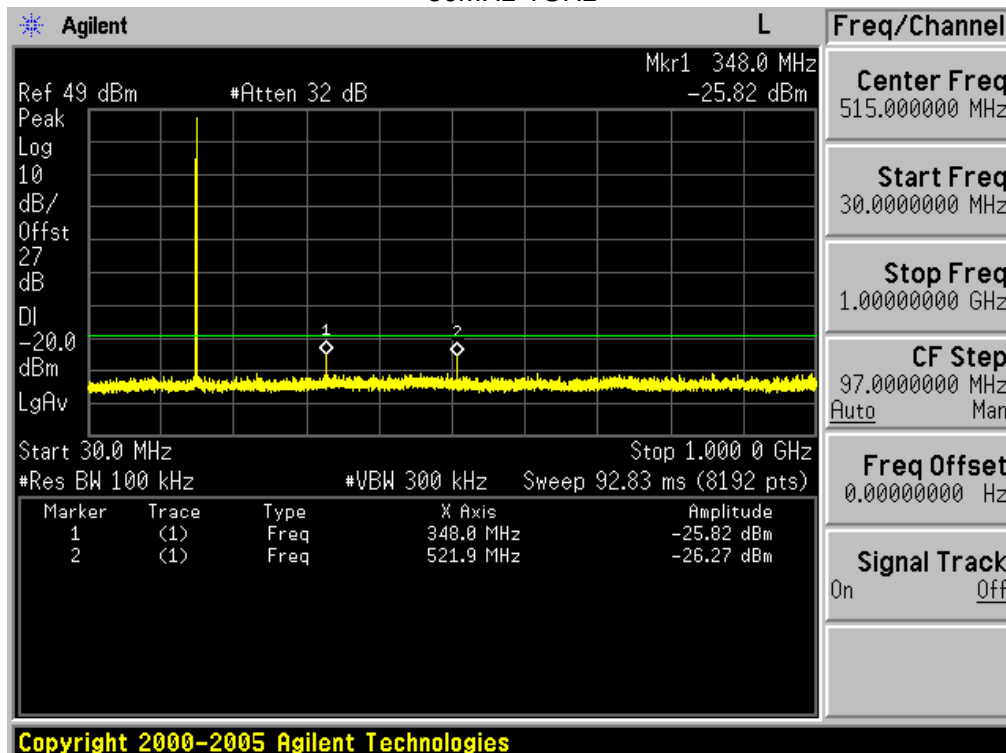
**Conducted Spurious Emission (worst) @161.610 MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



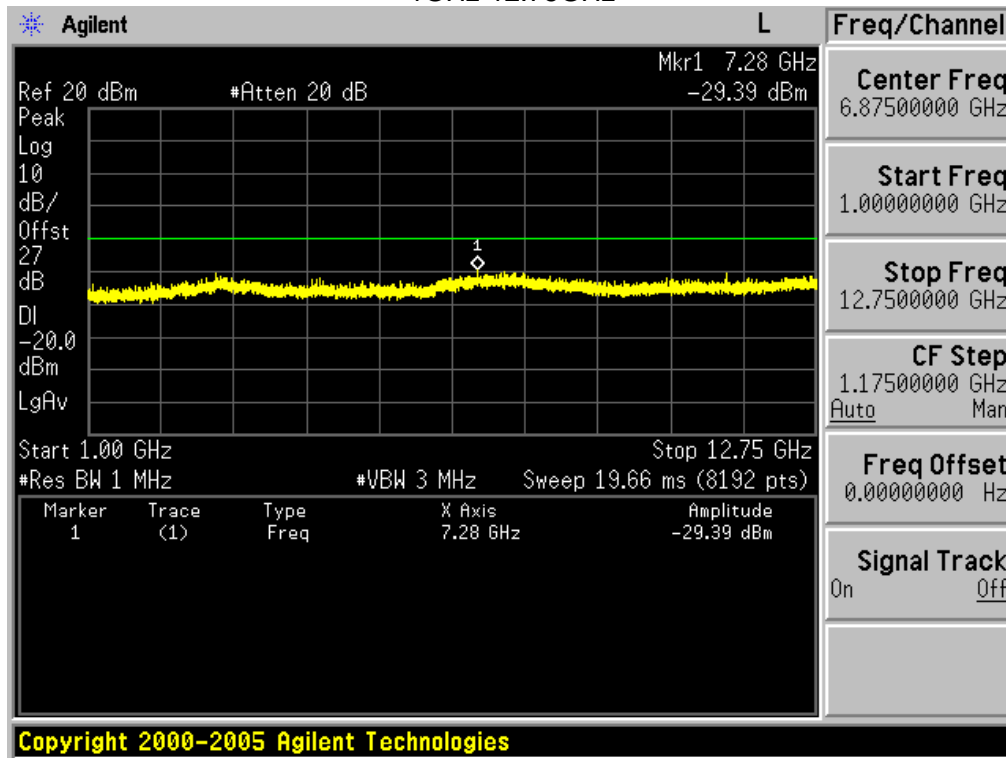
**Conduct Spurious Emission (worst) @ 161.610MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-60W**  
 30MHz-1GHz

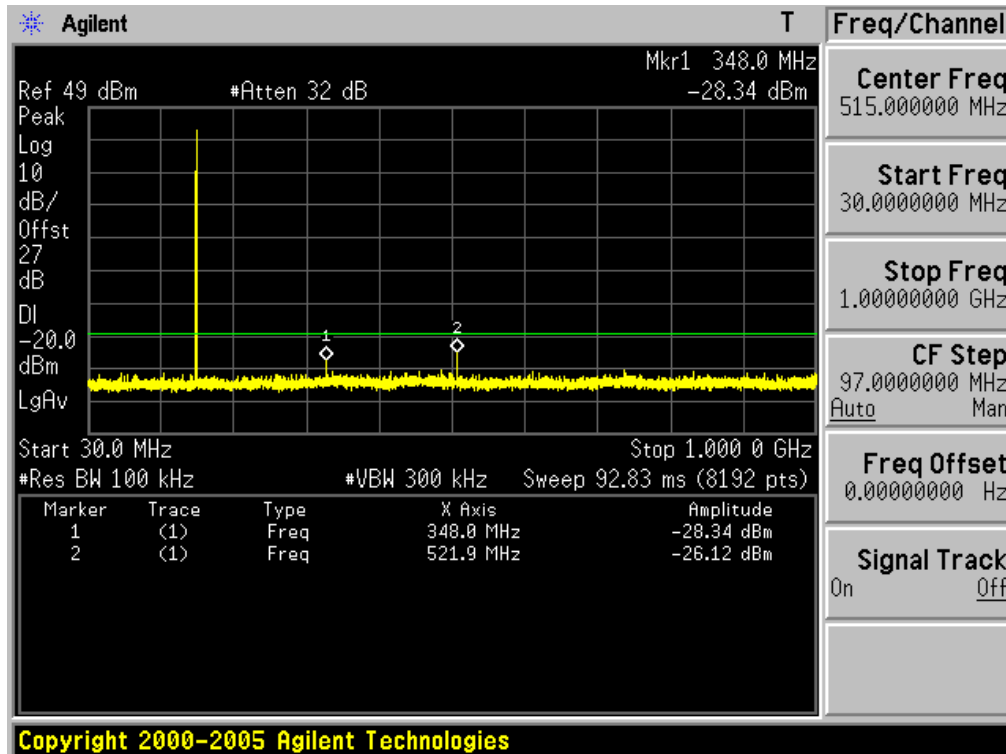


**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-60W**  
 1GHz-12.75GHz

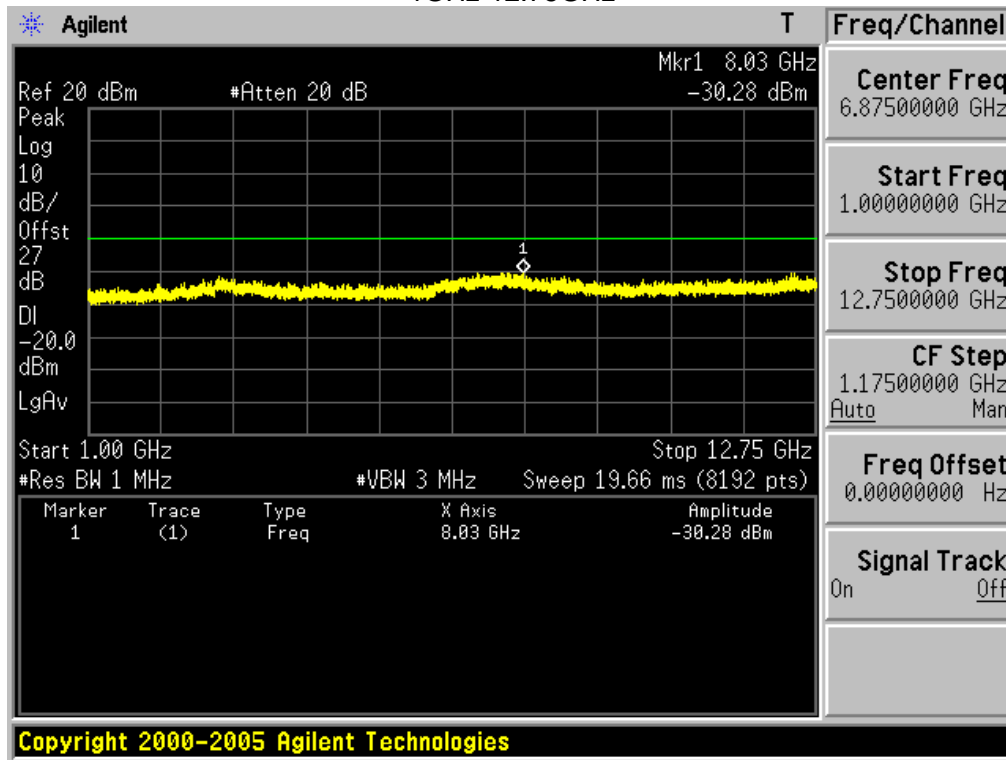


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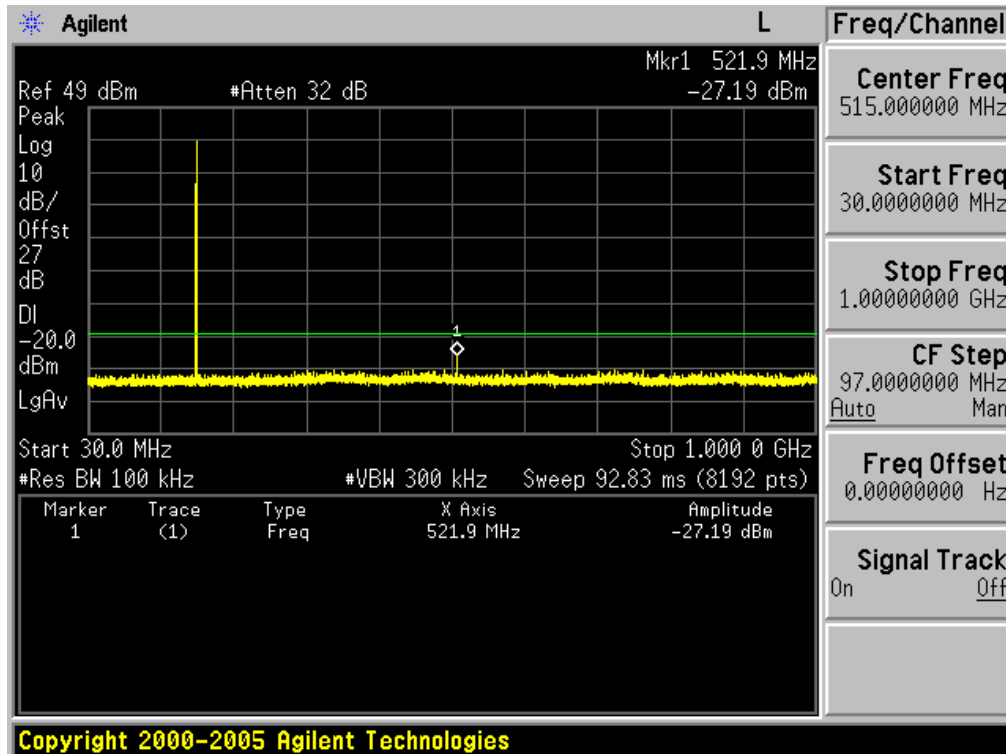
**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



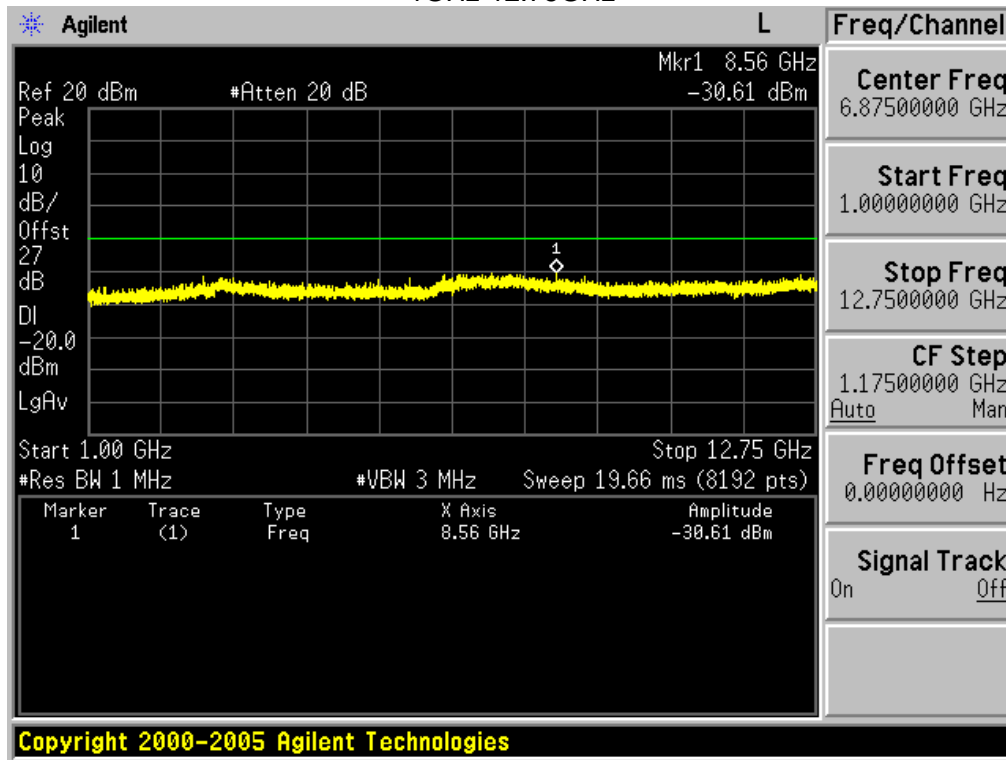
**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

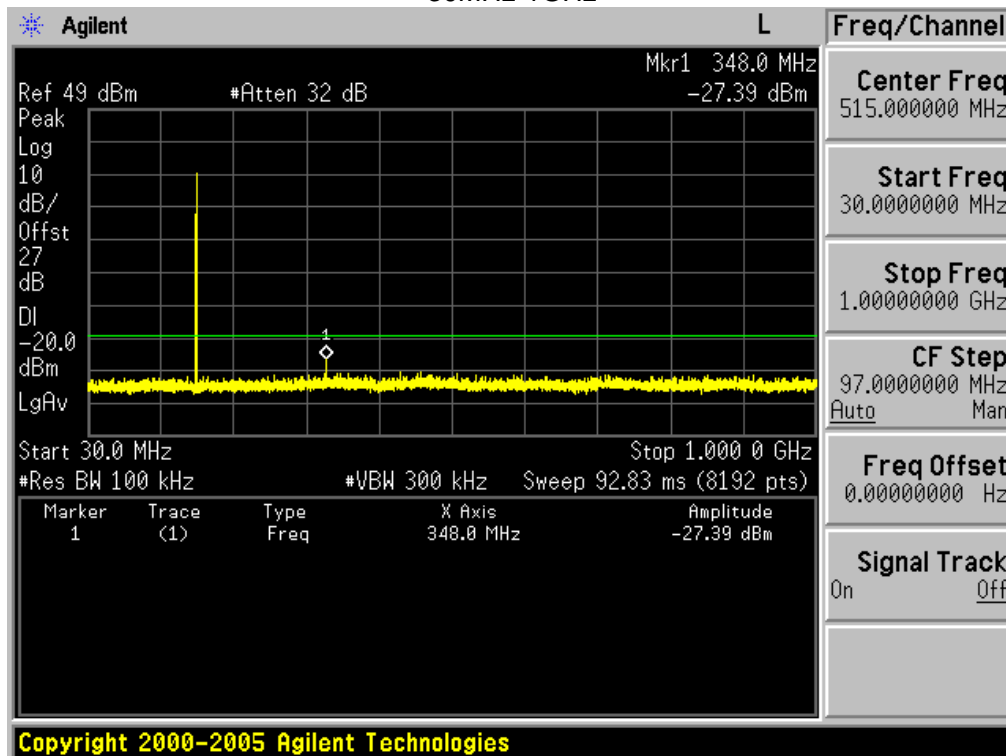


**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

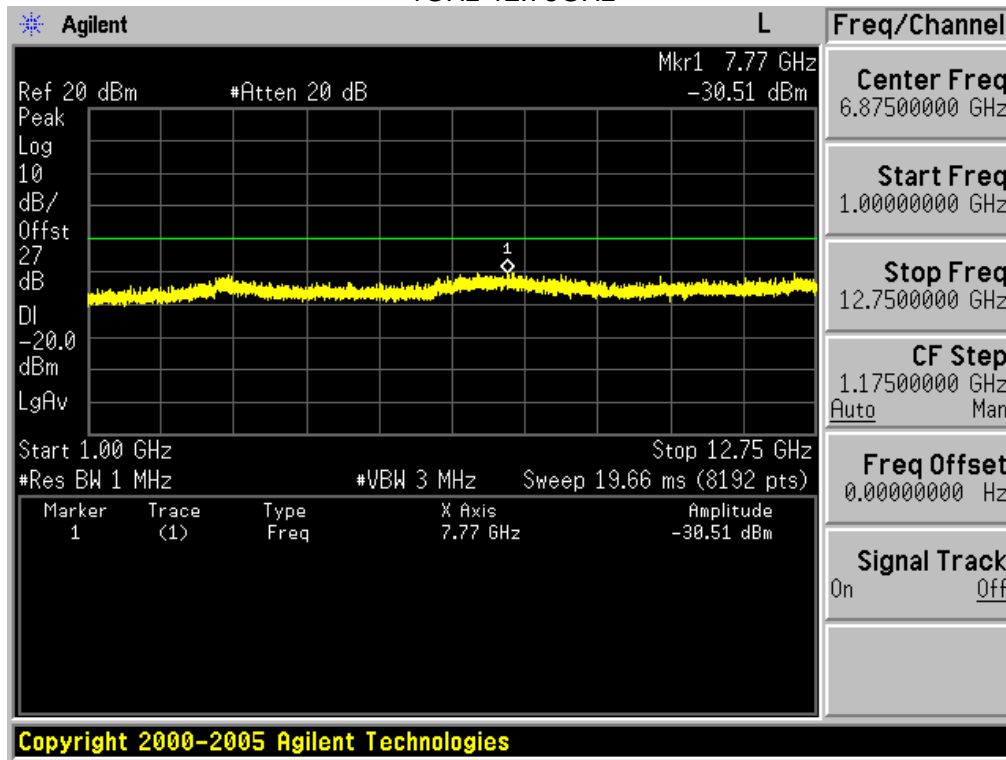




**Conducted Spurious Emission (worst) @173.975 MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



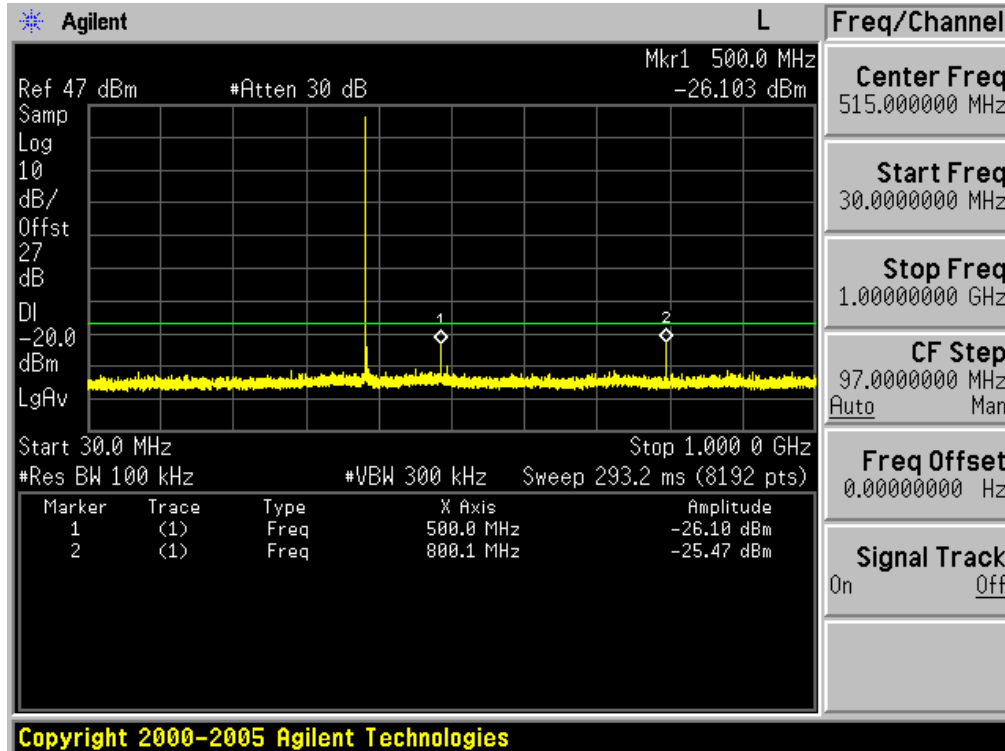
**Conduct Spurious Emission (worst) @ 173.975MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



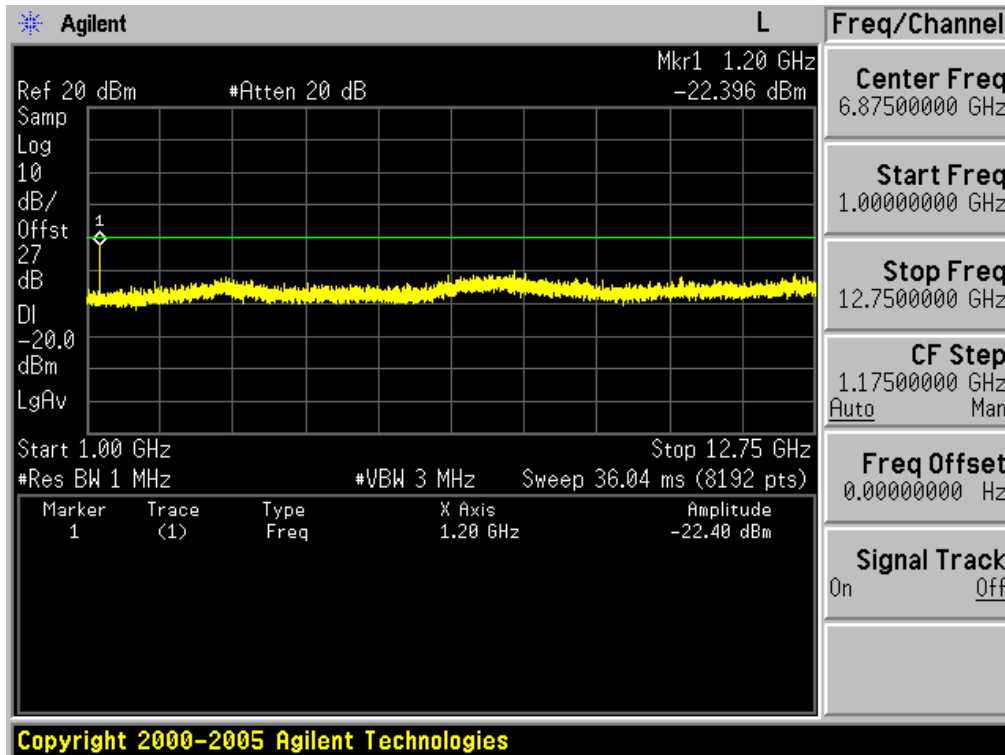
**Note:** only result the worst case in this part.

UHF:  
 Analog:

**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-45W**  
 30MHz-1GHz

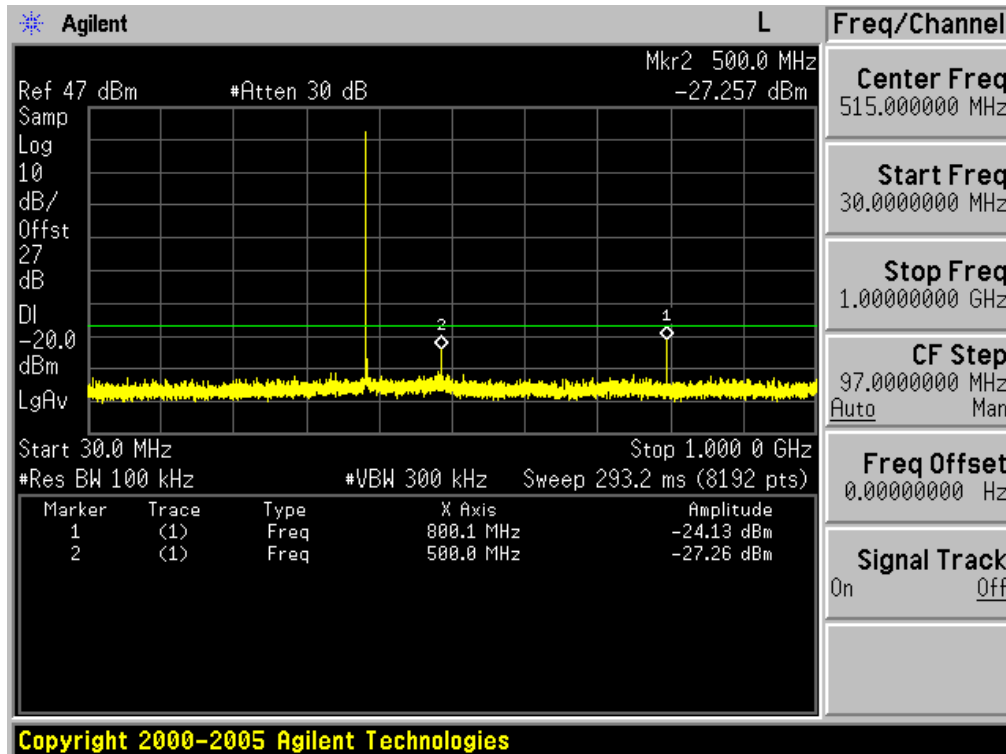


**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-45W**  
 1GHz-12.75GHz

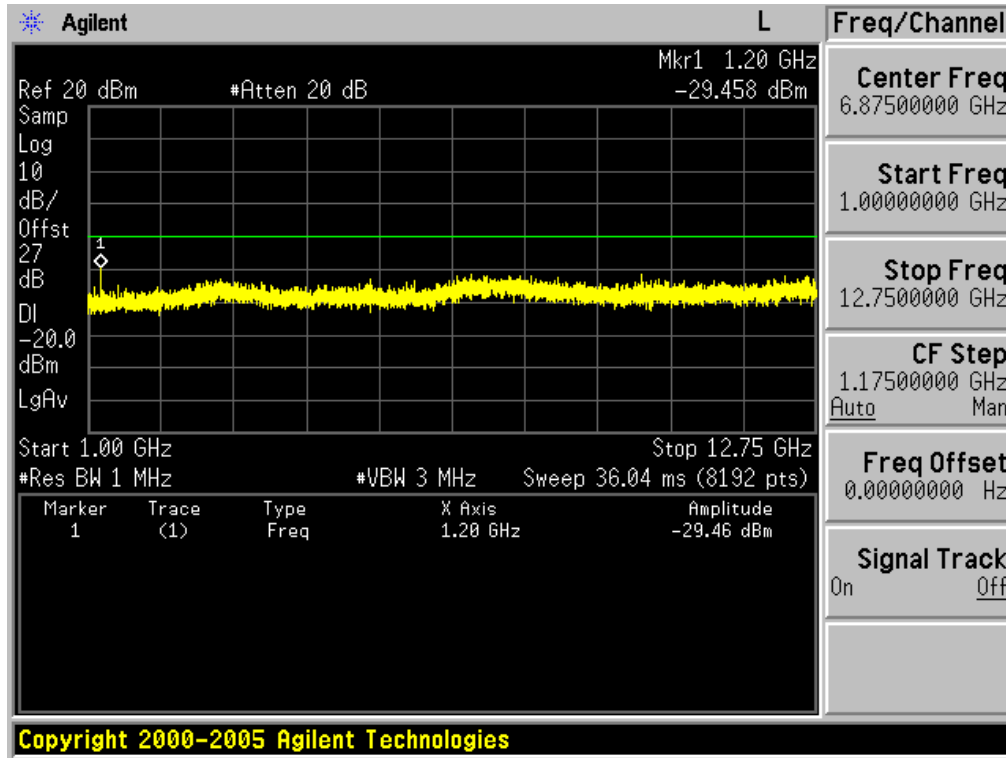


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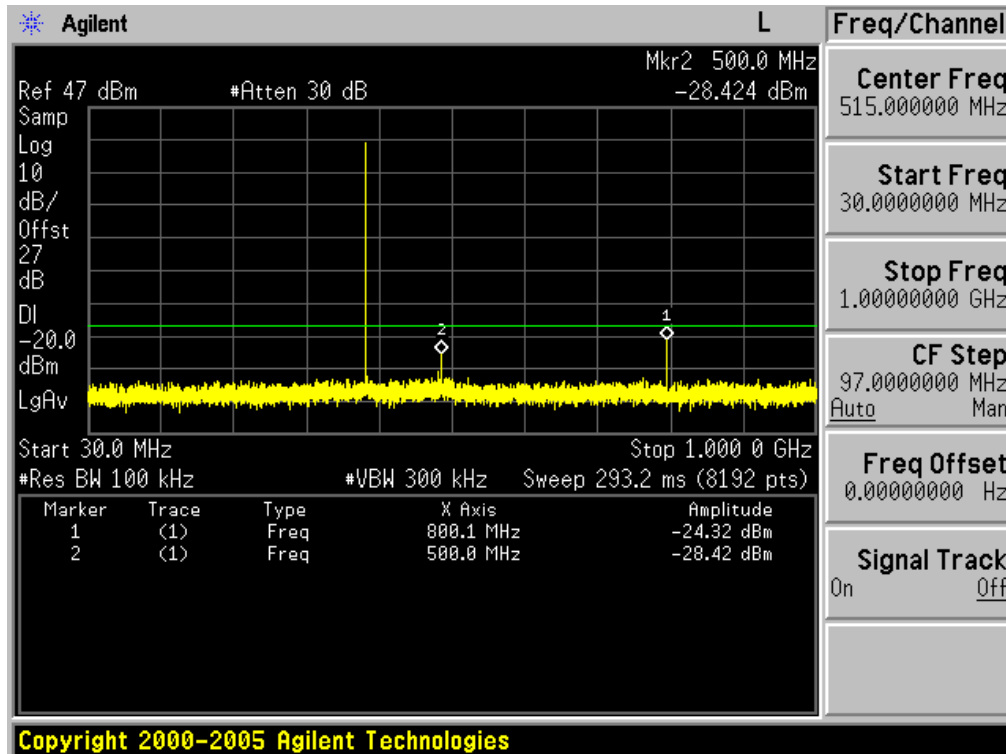
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



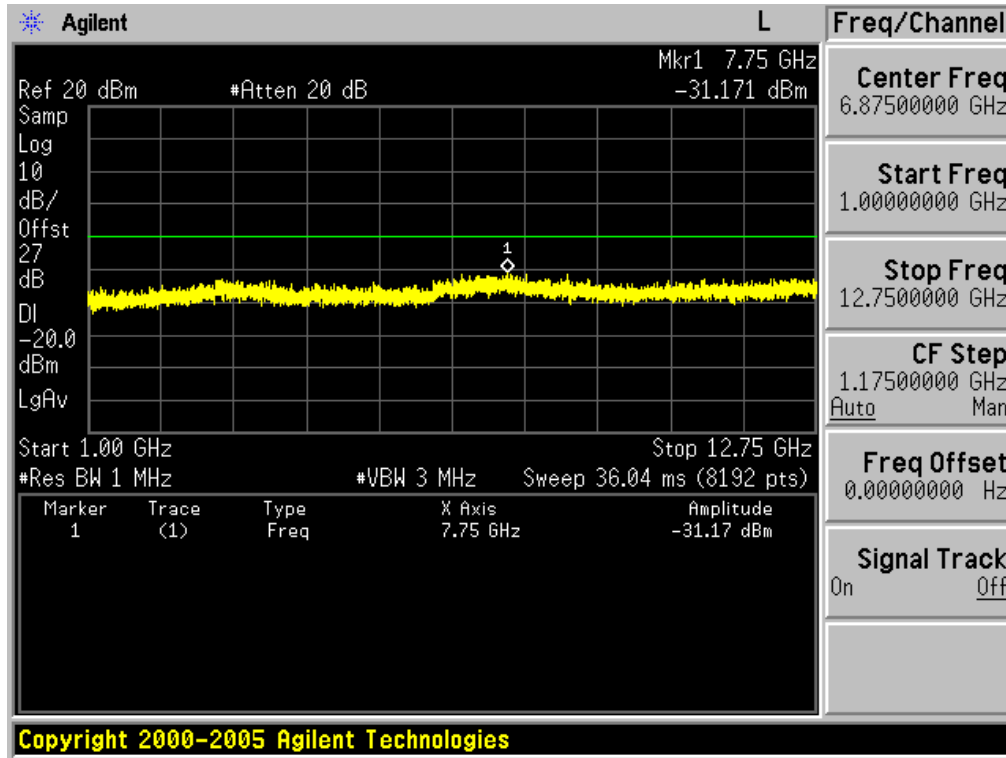
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



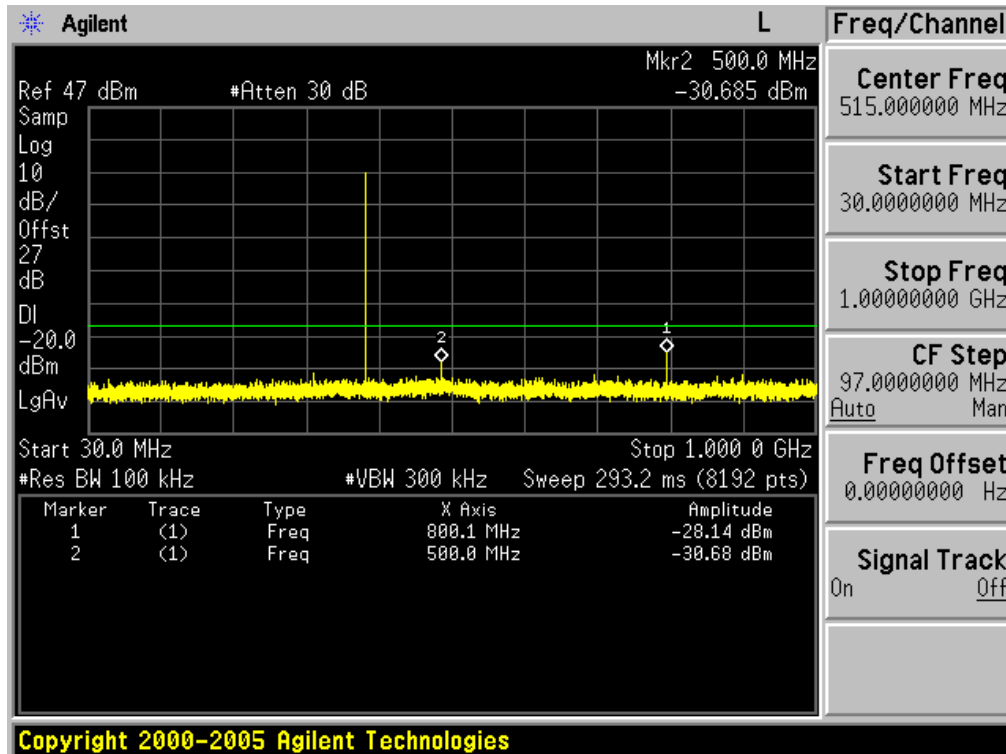
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



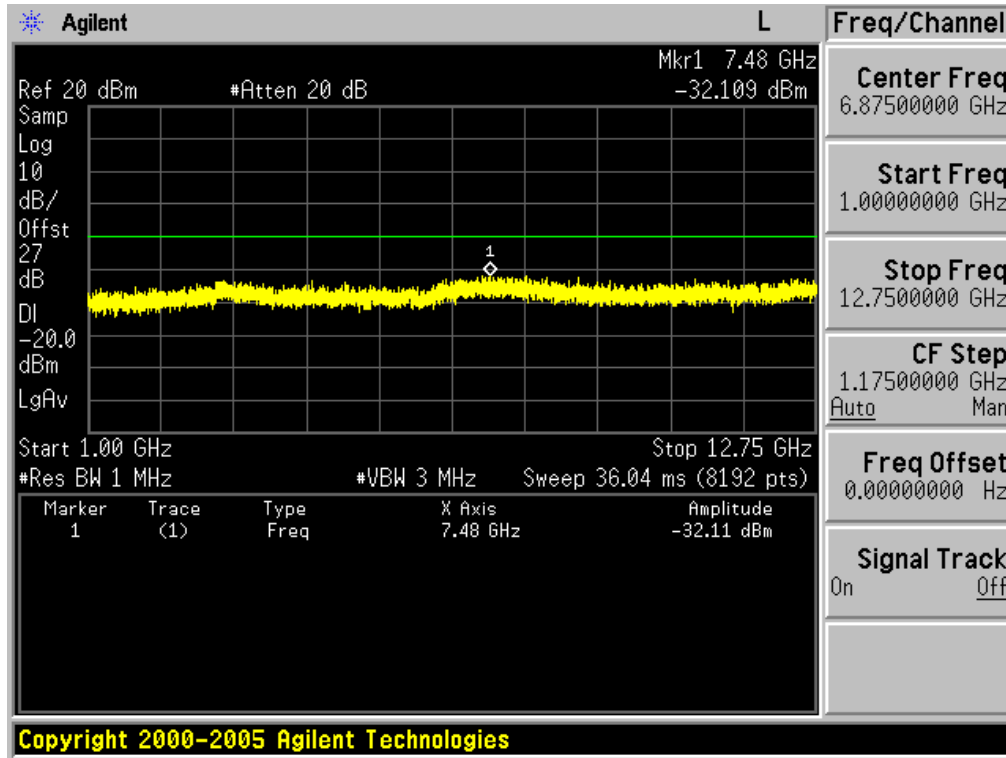
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



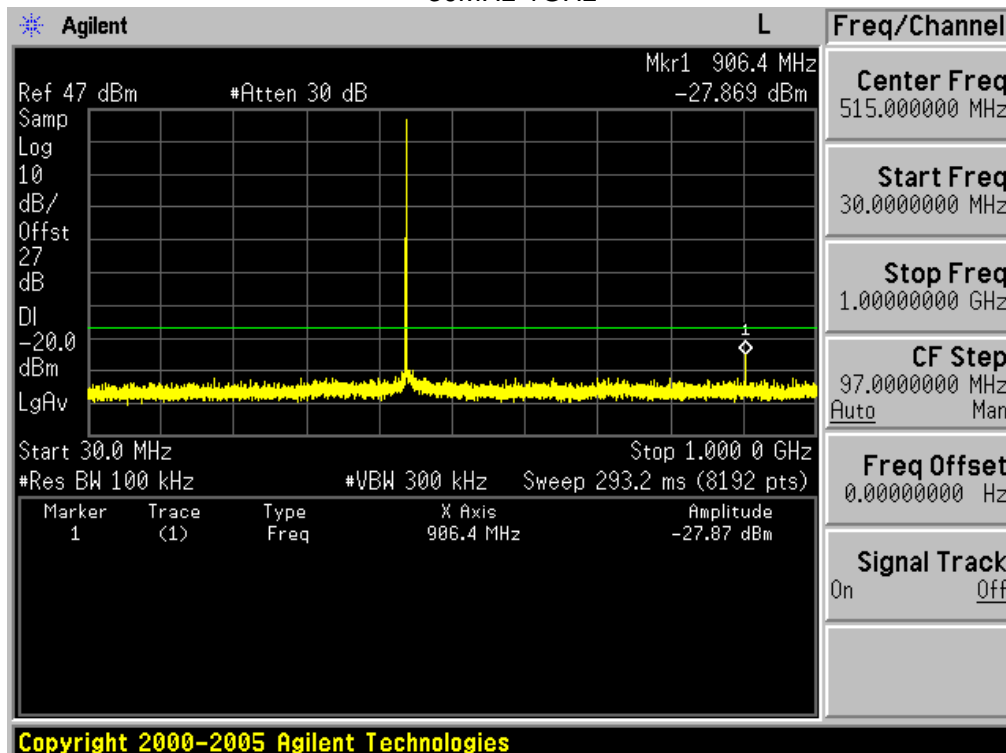
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



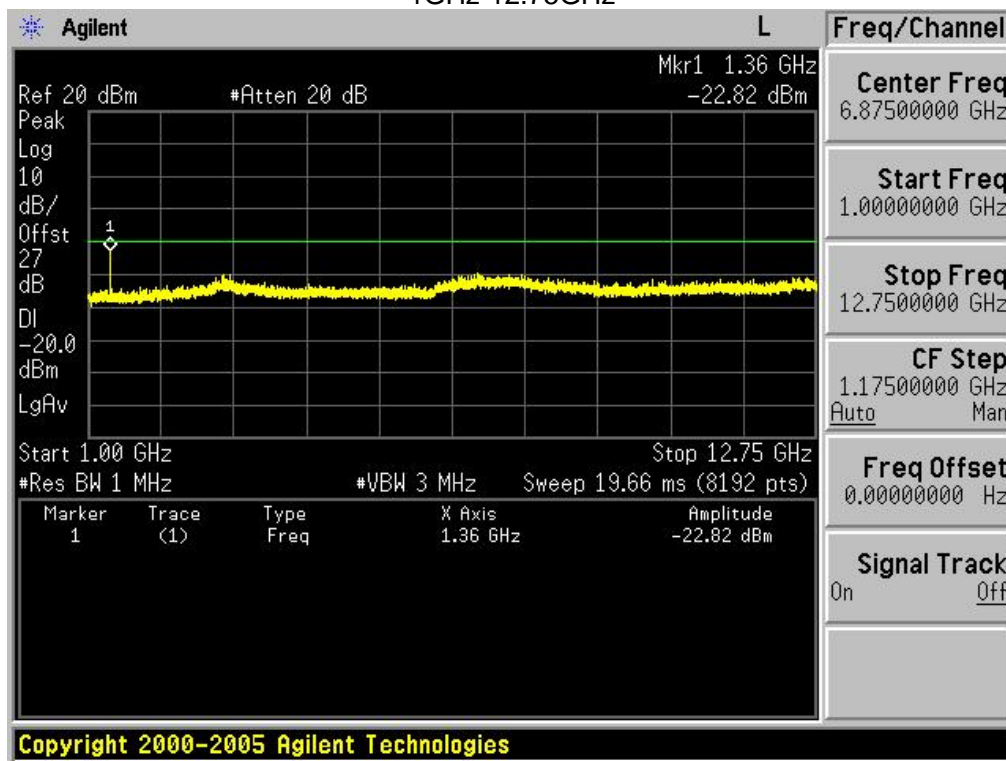
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



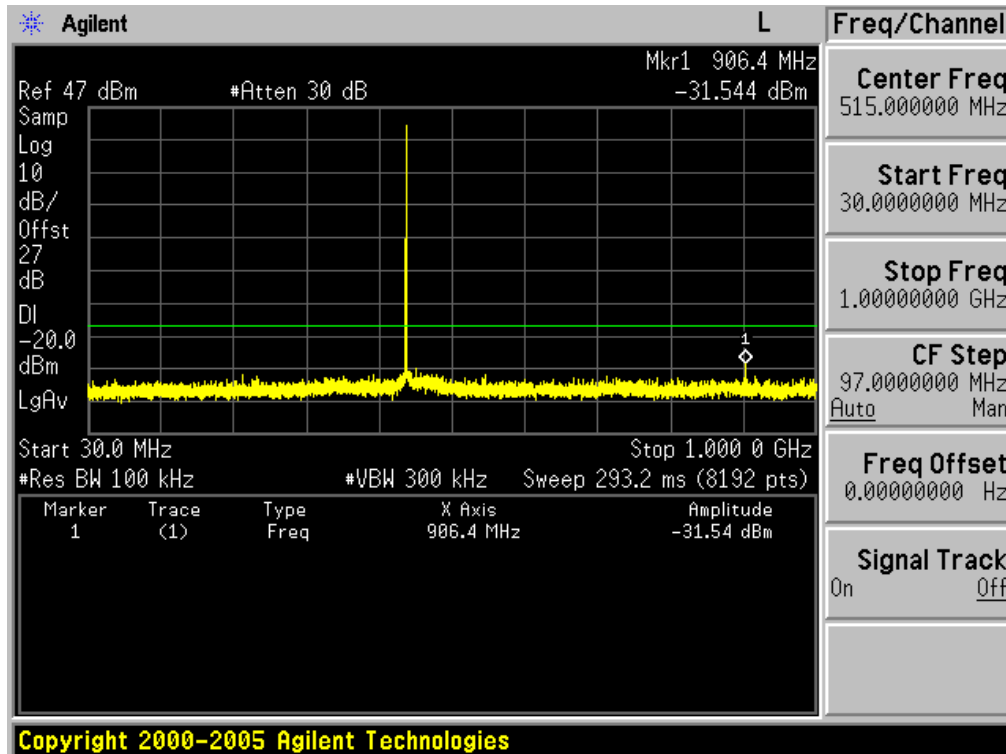
**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-45W**  
30MHz-1GHz



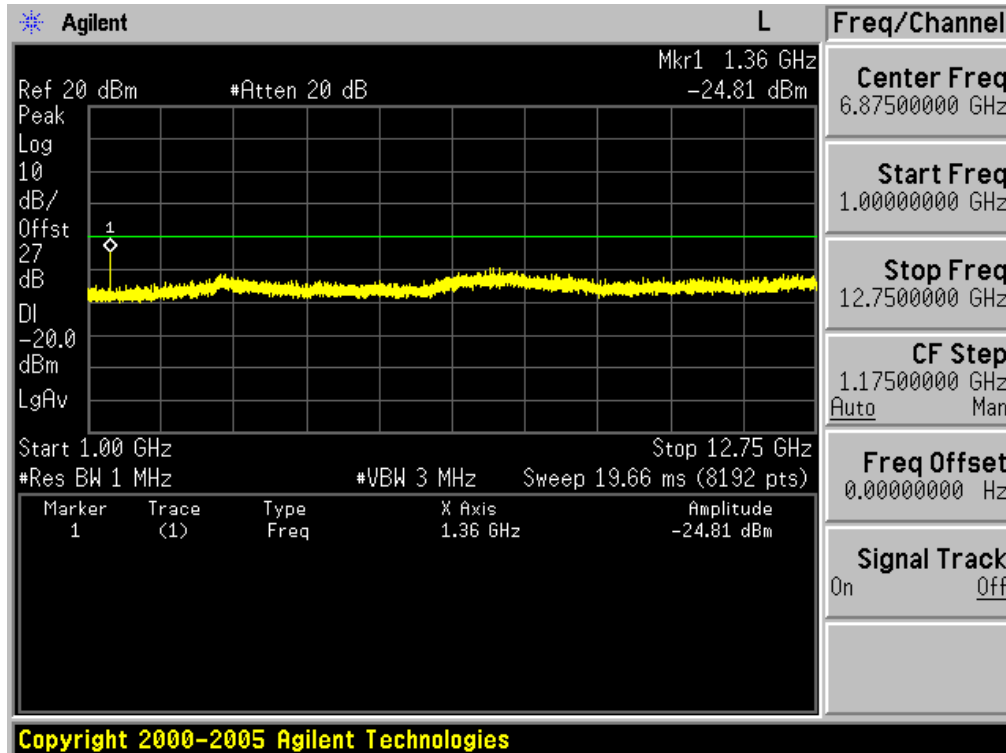
**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-45W**  
1GHz-12.75GHz



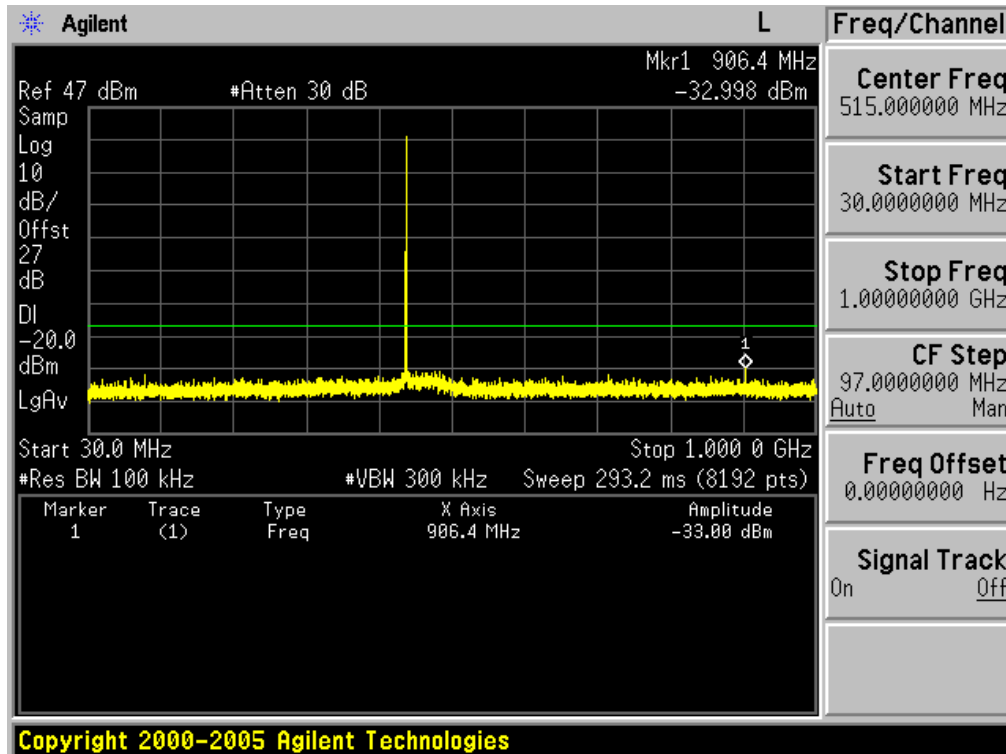
**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



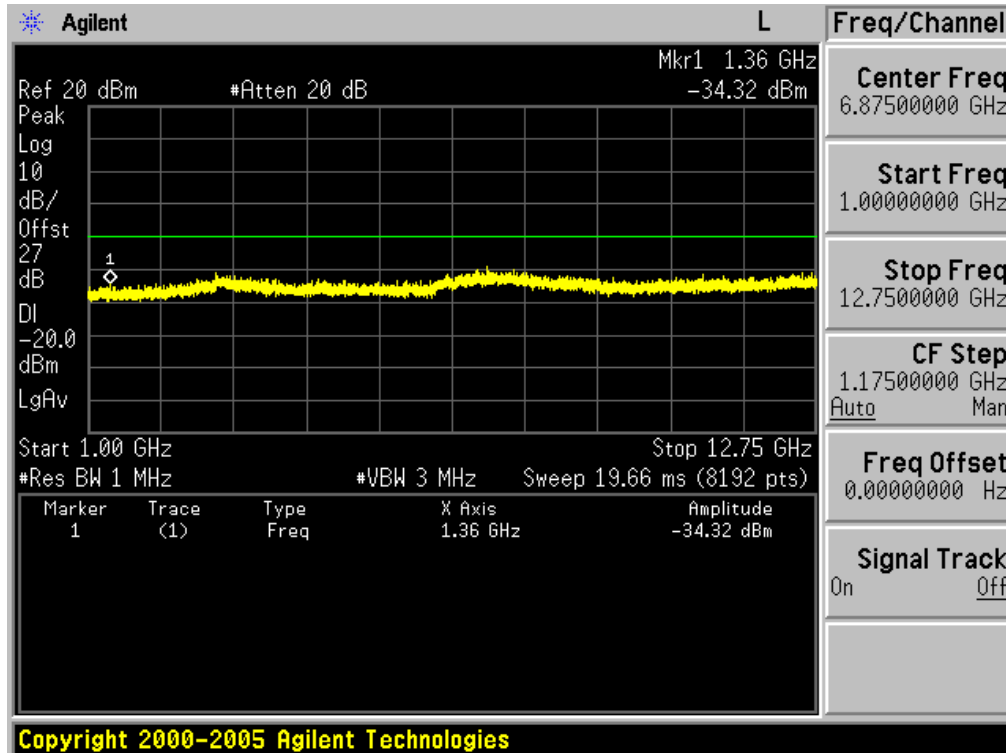
**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

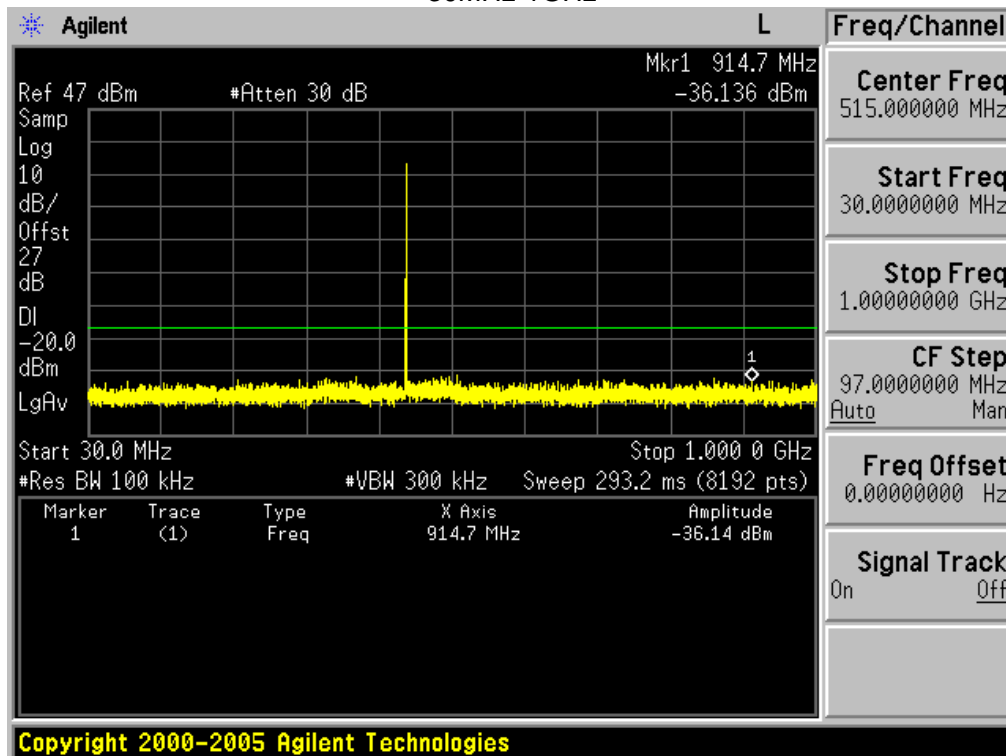


**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

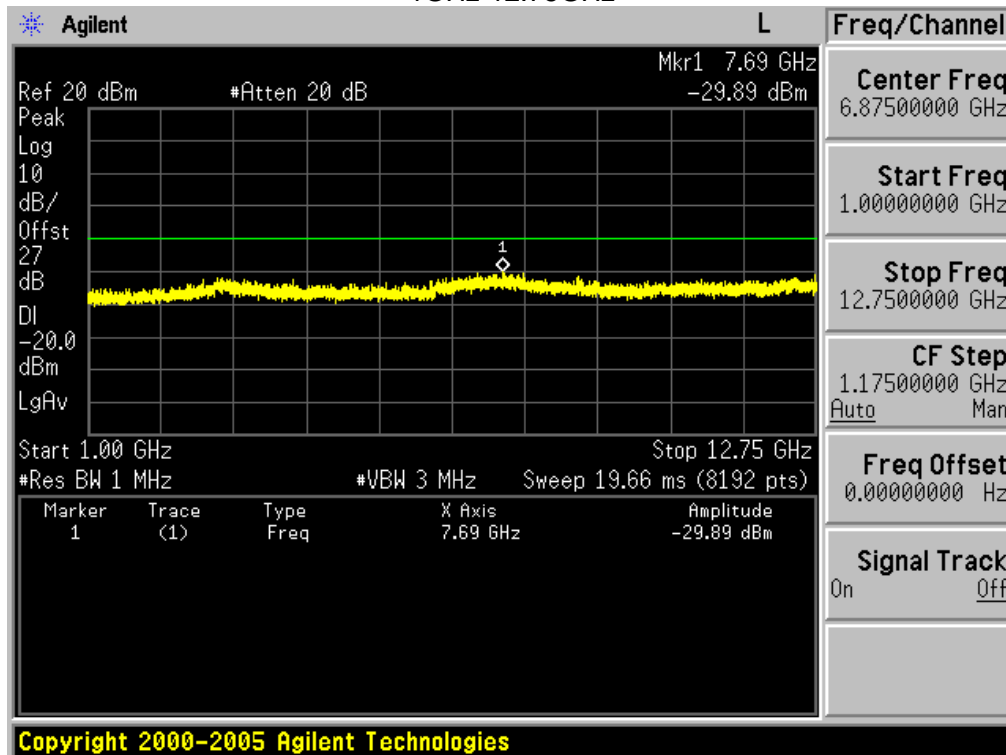




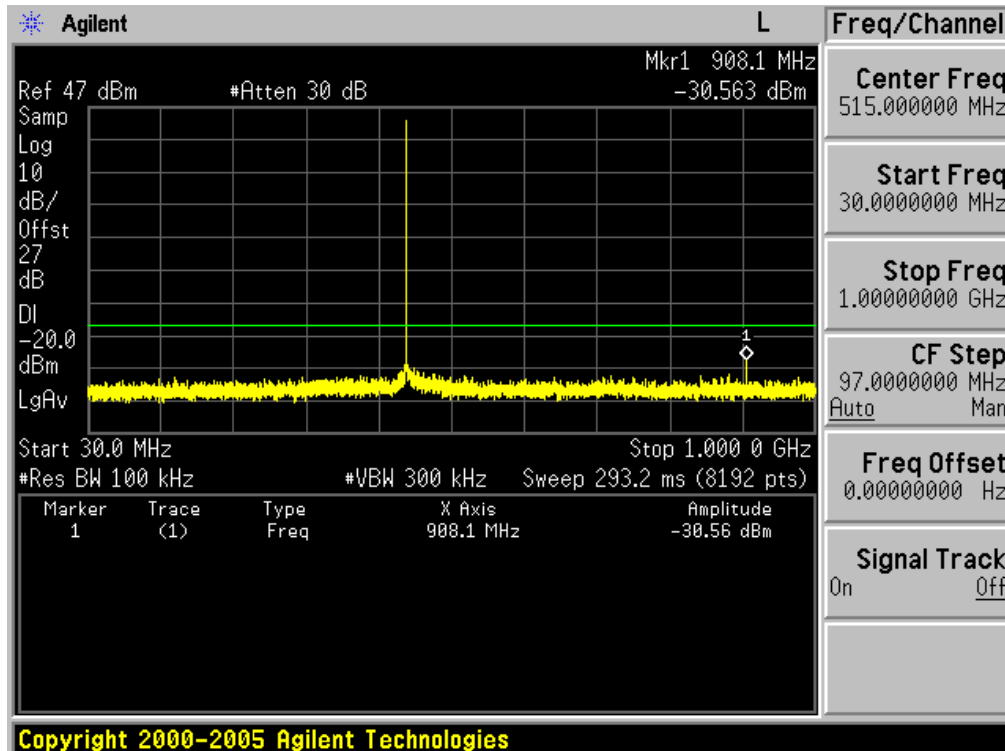
**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



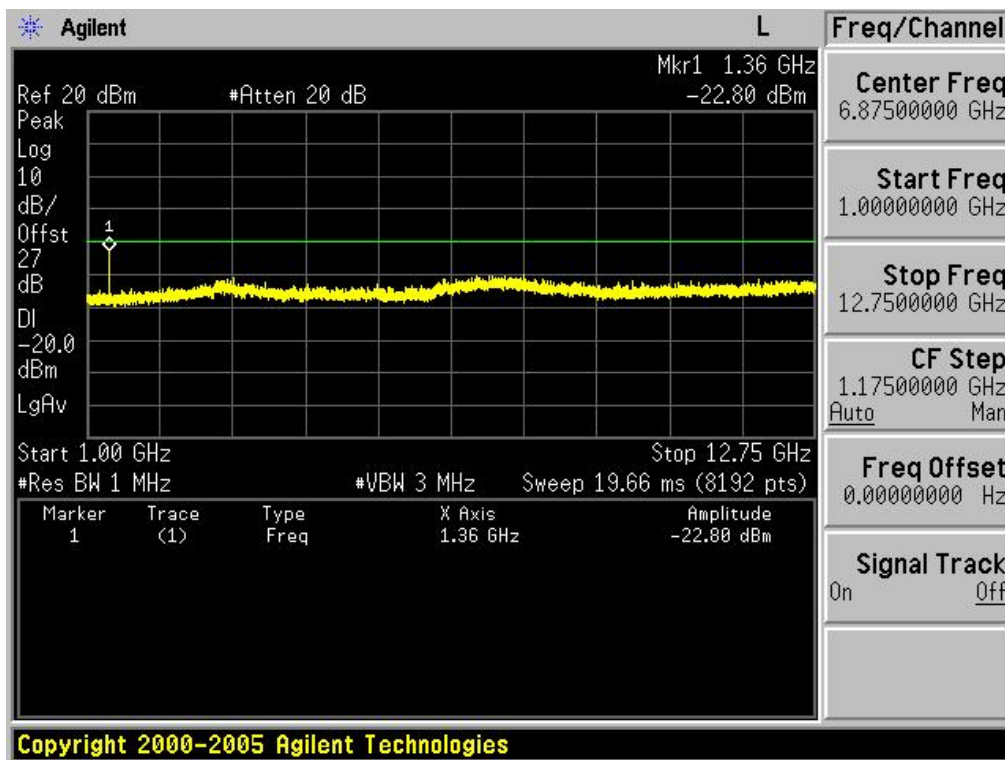
**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



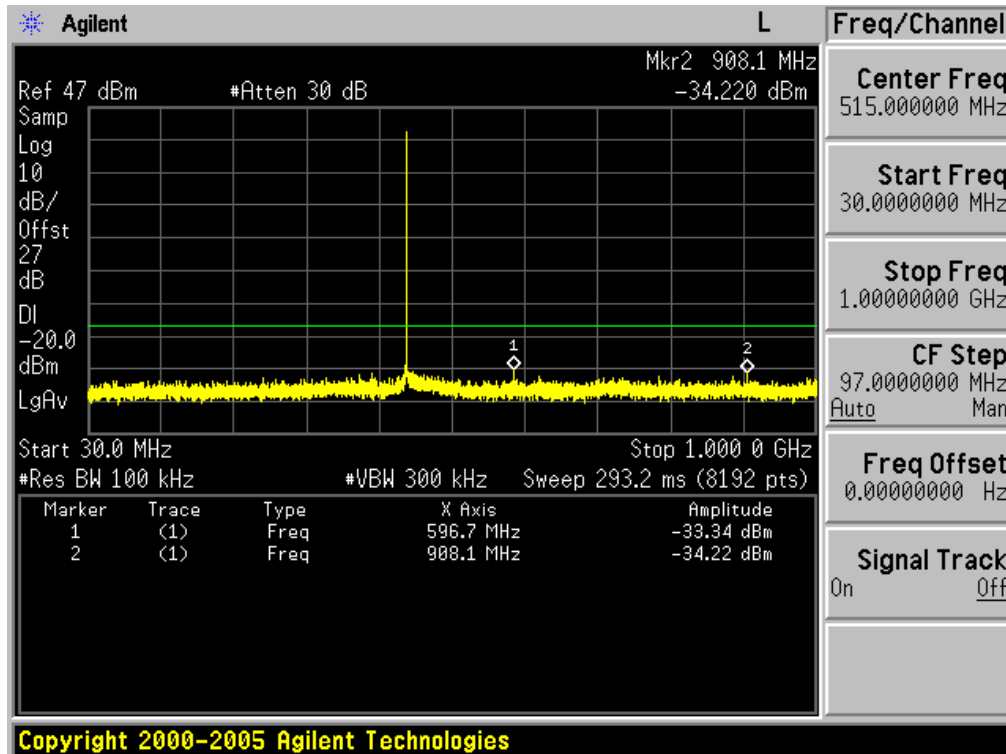
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-45W**  
 30MHz-1GHz



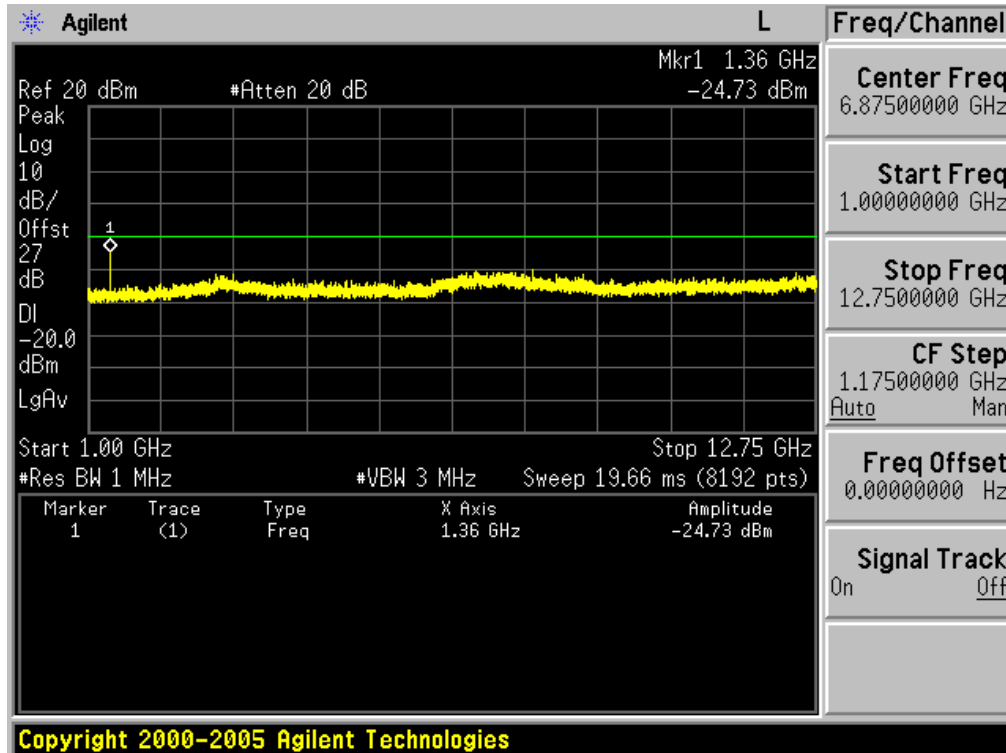
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-45W**  
 1GHz-12.75GHz



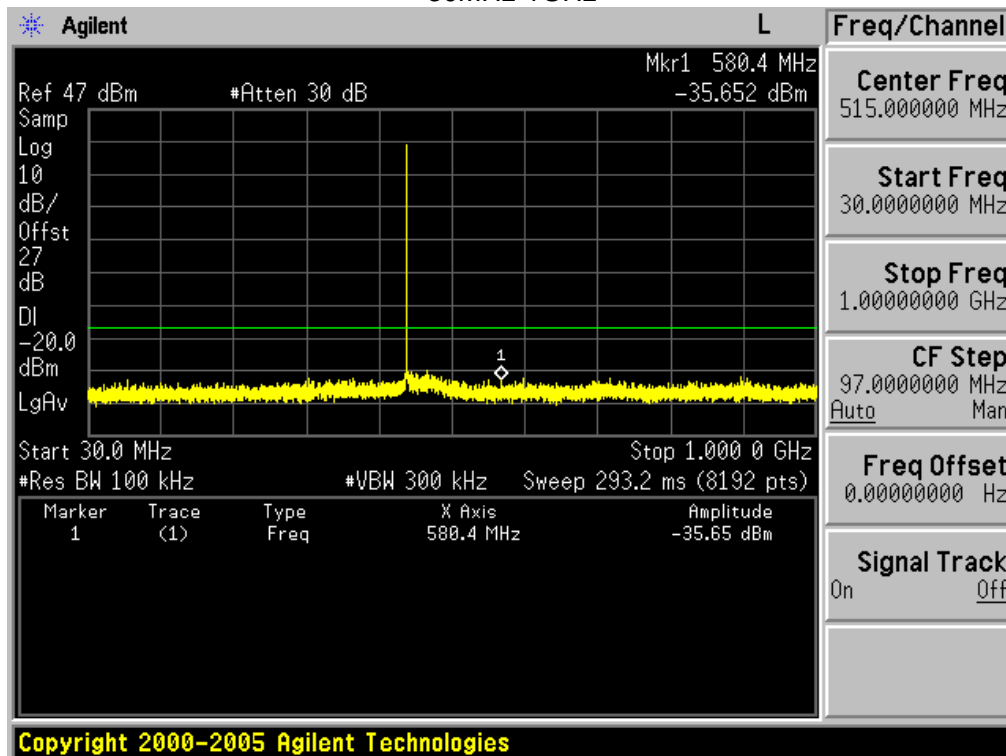
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



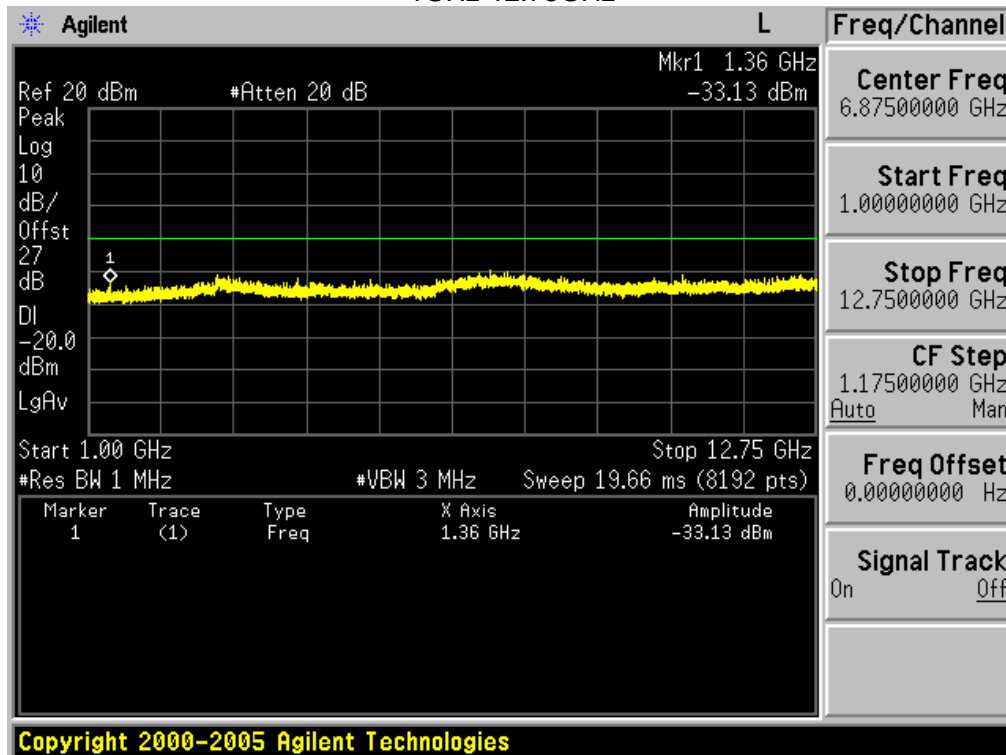
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



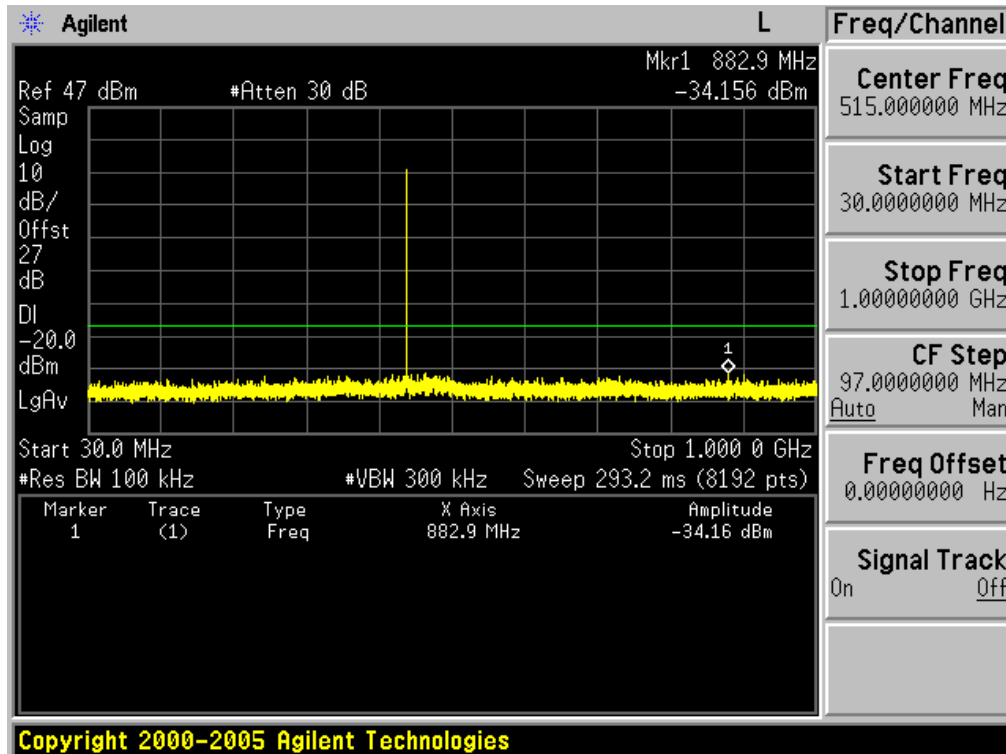
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



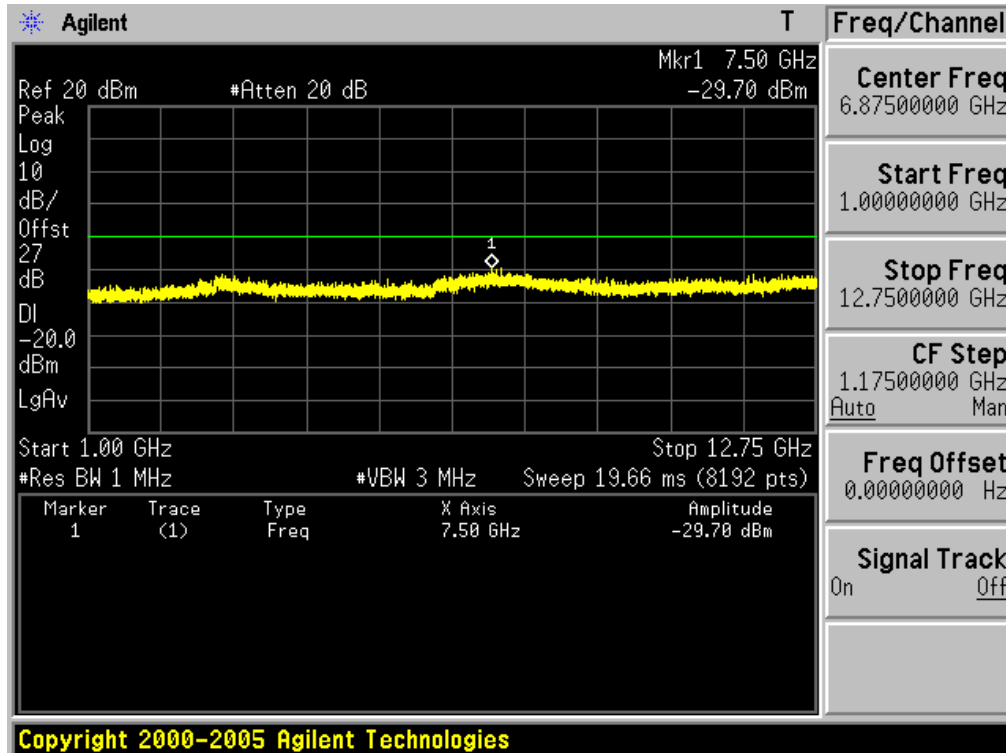
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



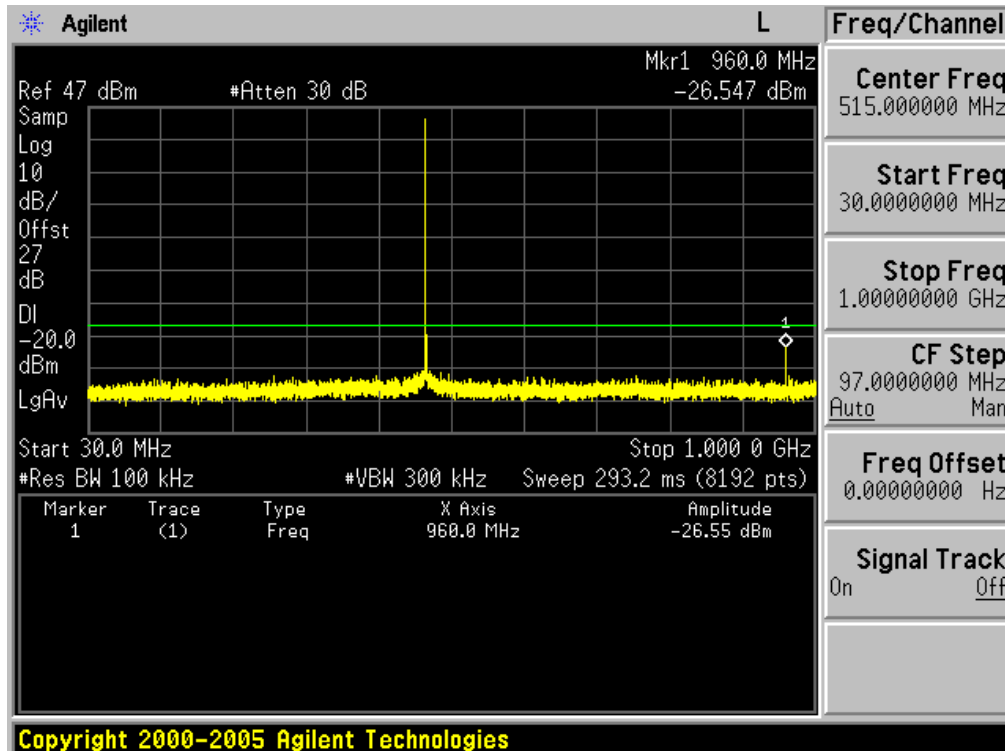
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



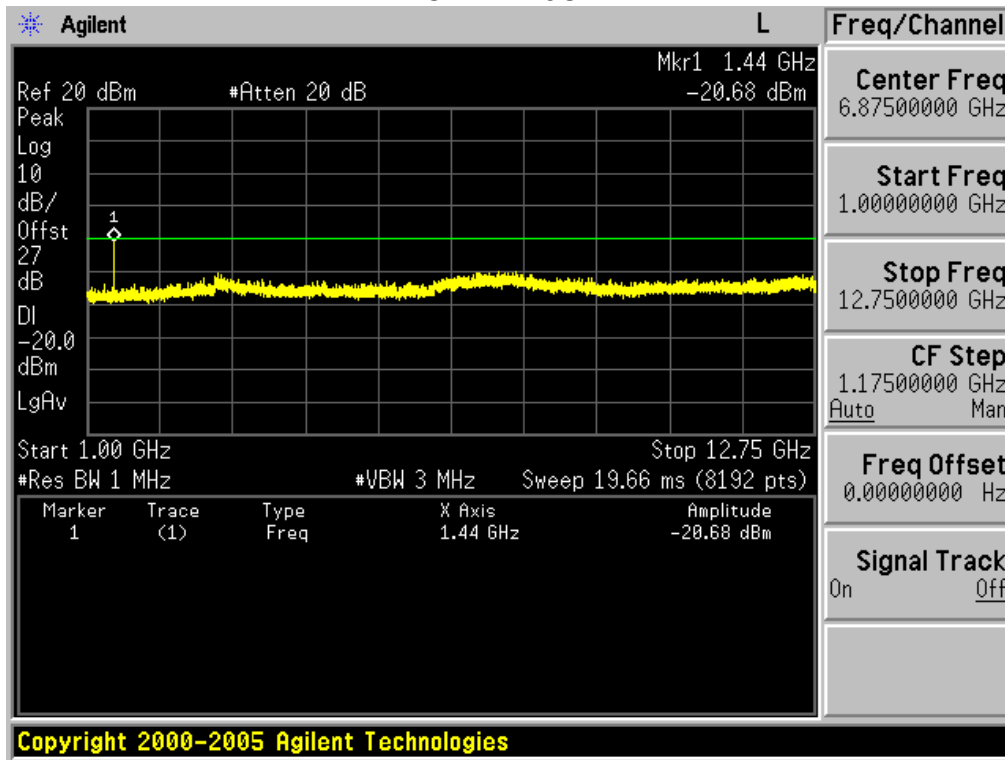
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



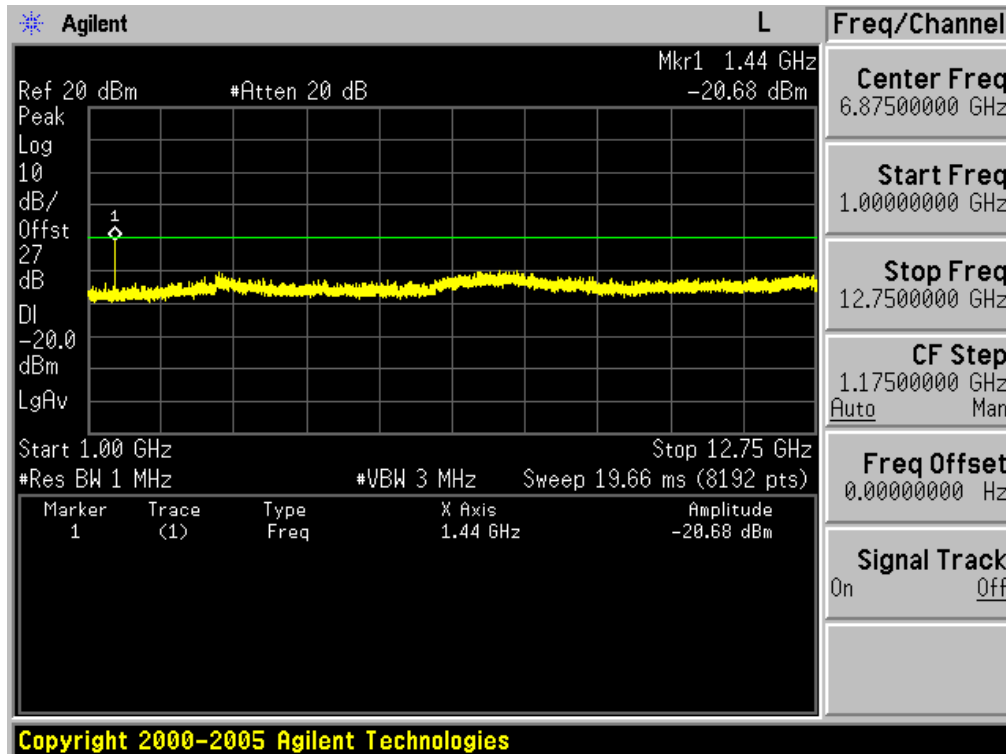
**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-45W**  
 30MHz-1GHz



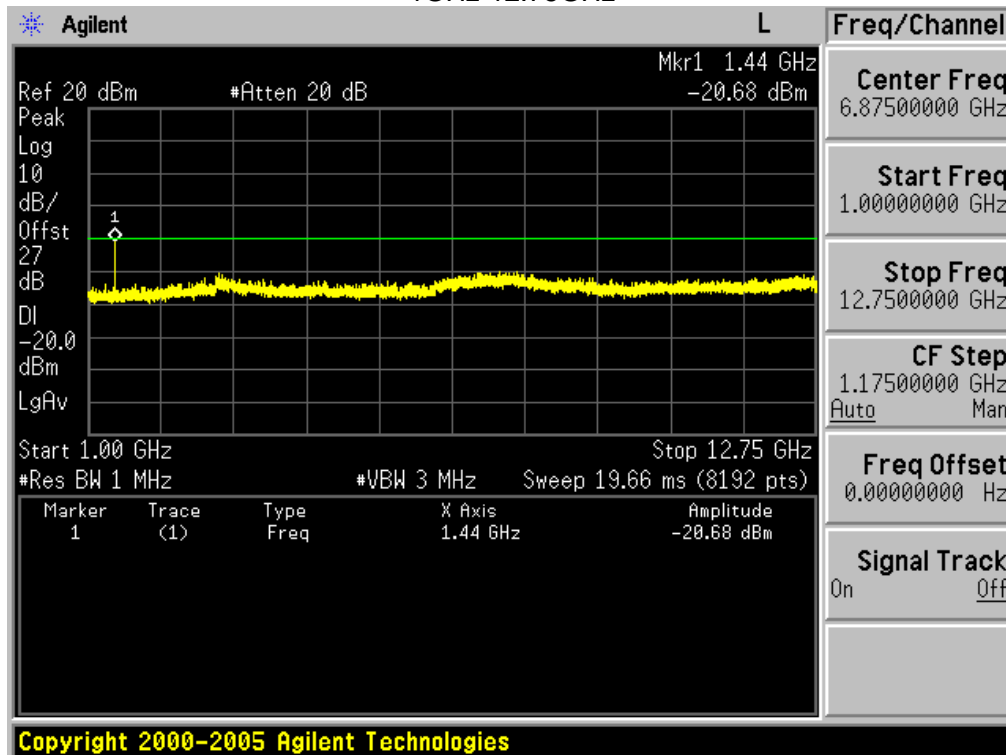
**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-45W**  
 1GHz-12.75GHz



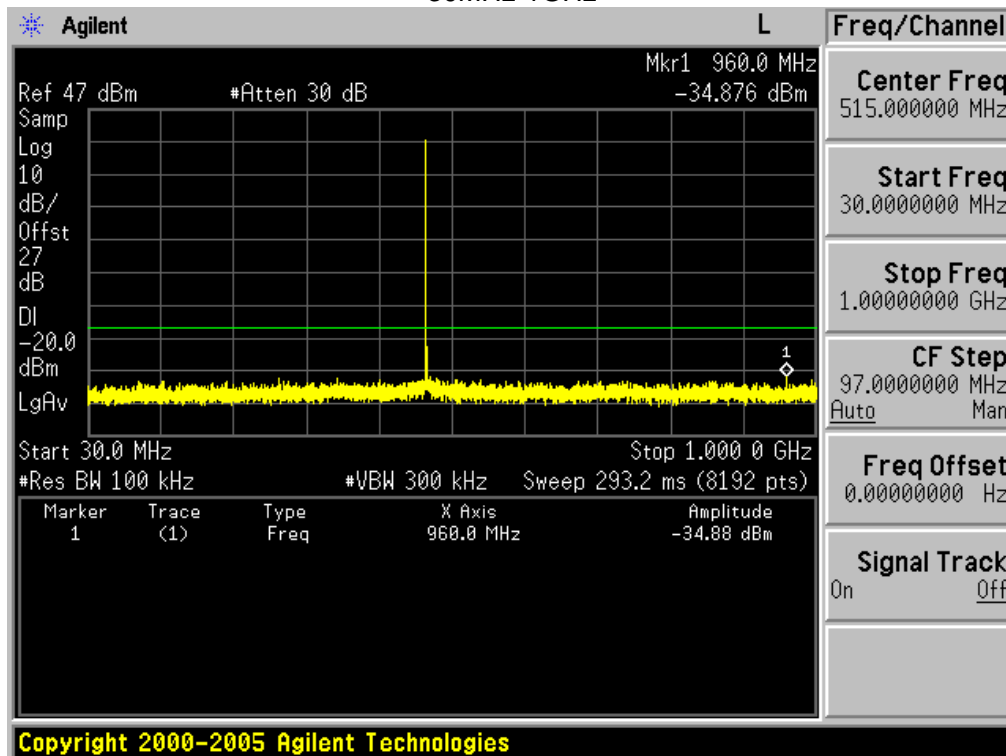
**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



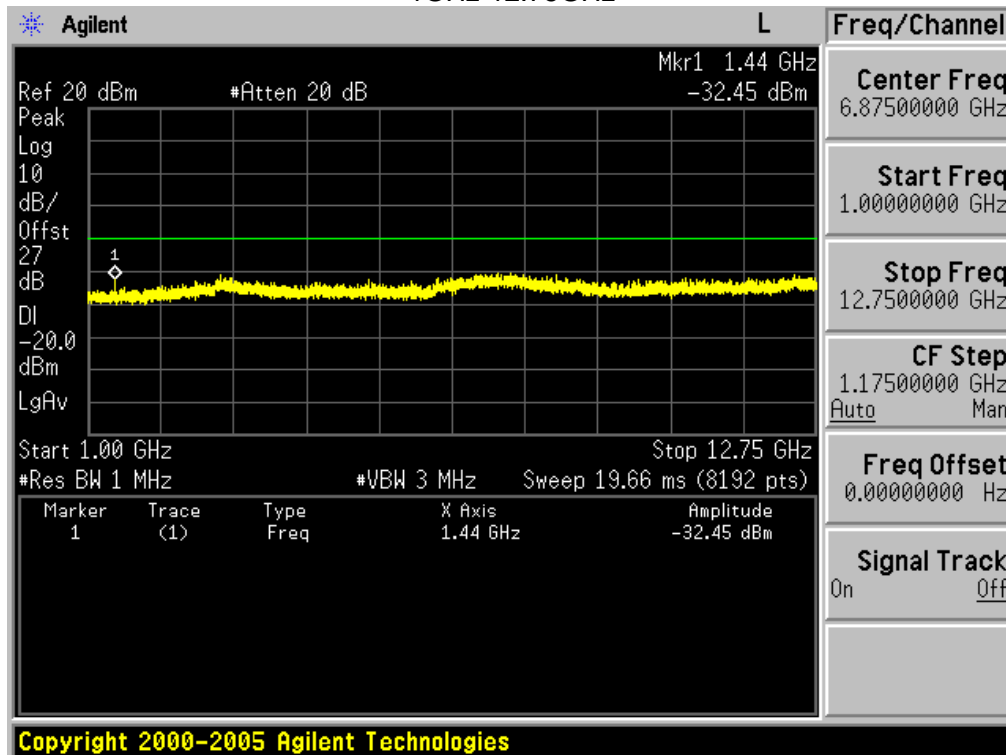
**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

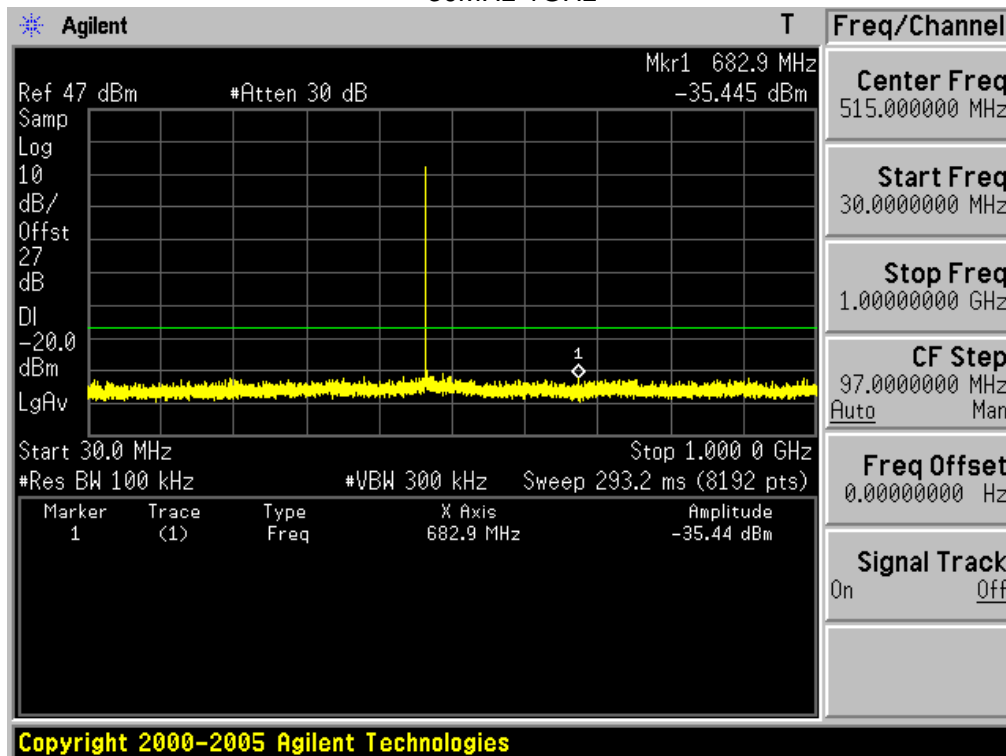


**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

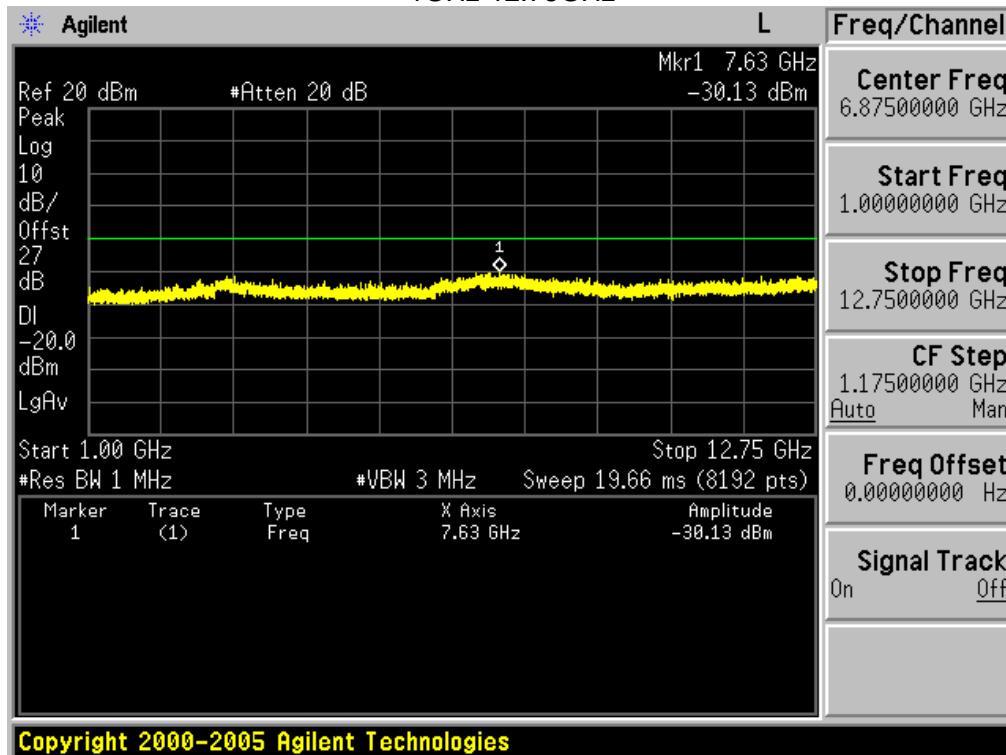




**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



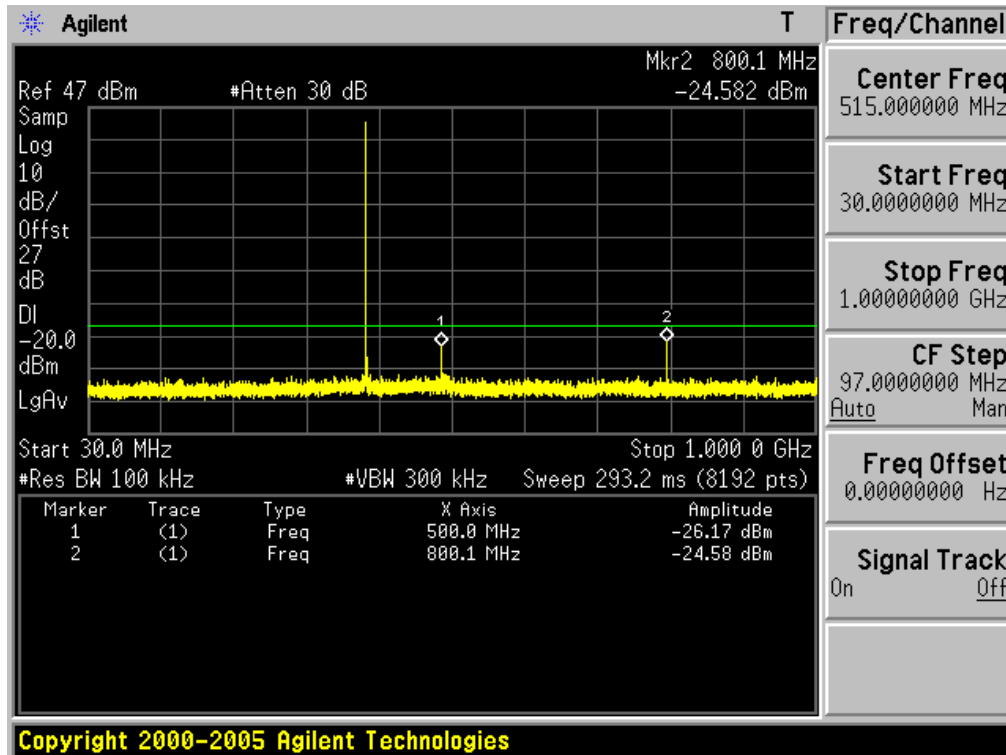
**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



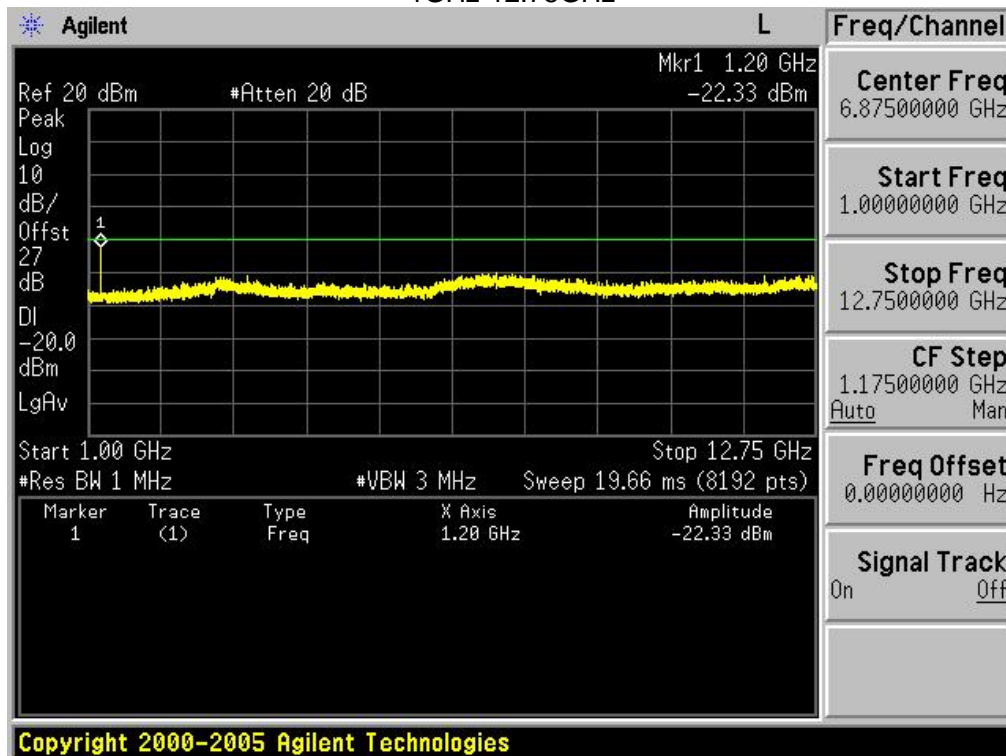
Note: All the test frequencies was tested, but only the worst data be recorded in this part.

**Digital:**

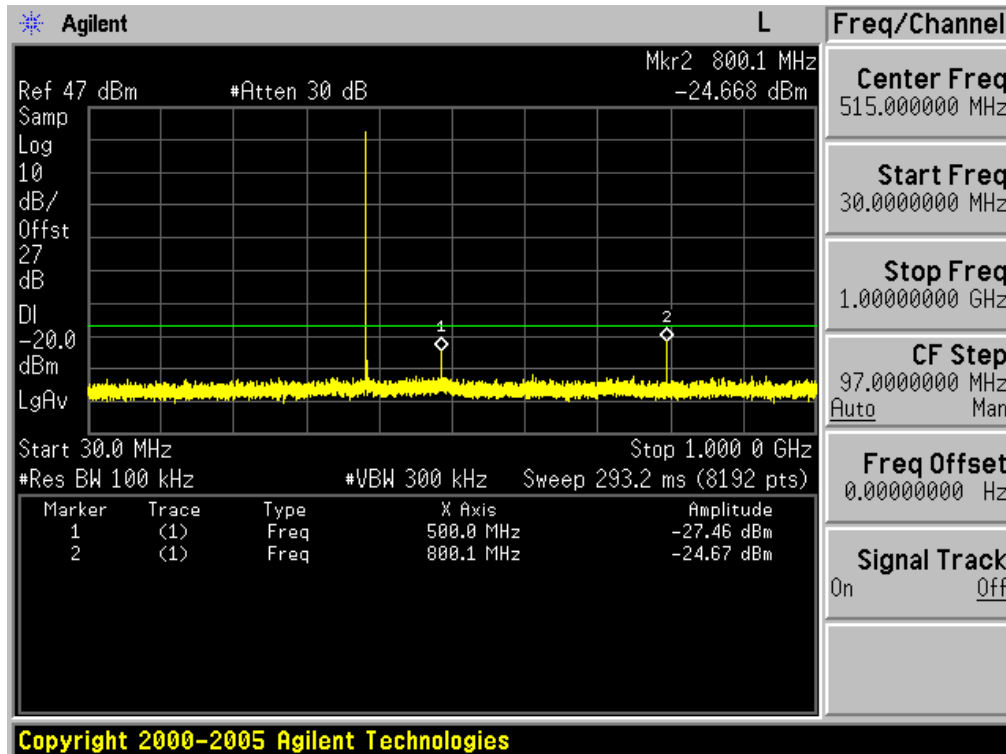
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-45W**  
30MHz-1GHz



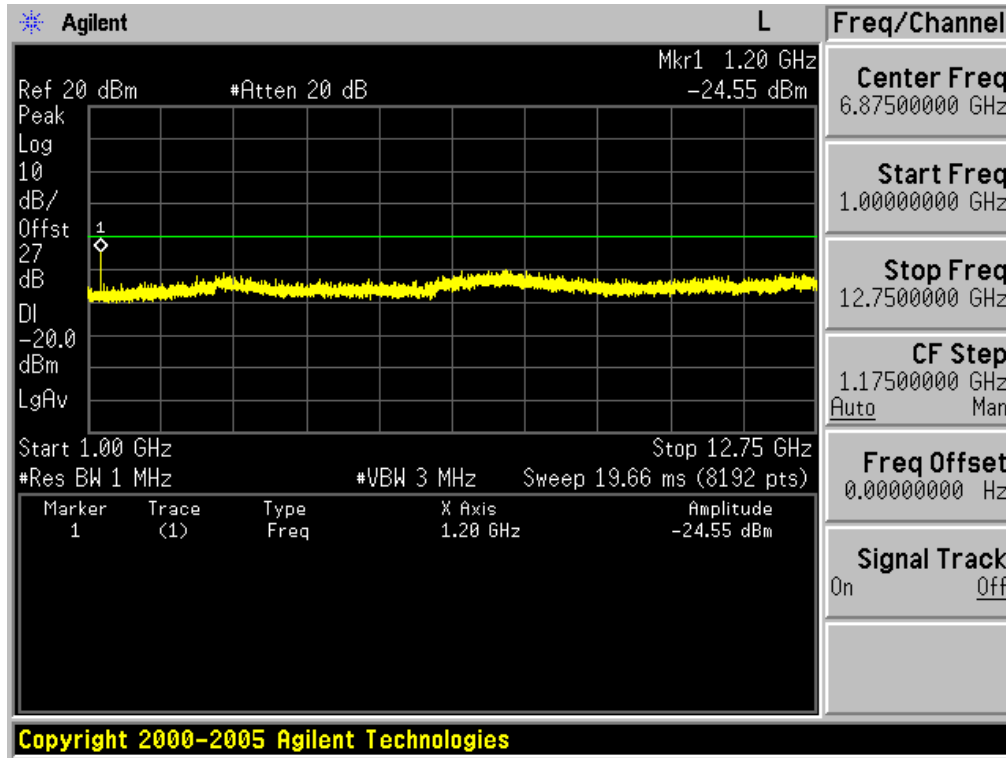
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-45W**  
1GHz-12.75GHz



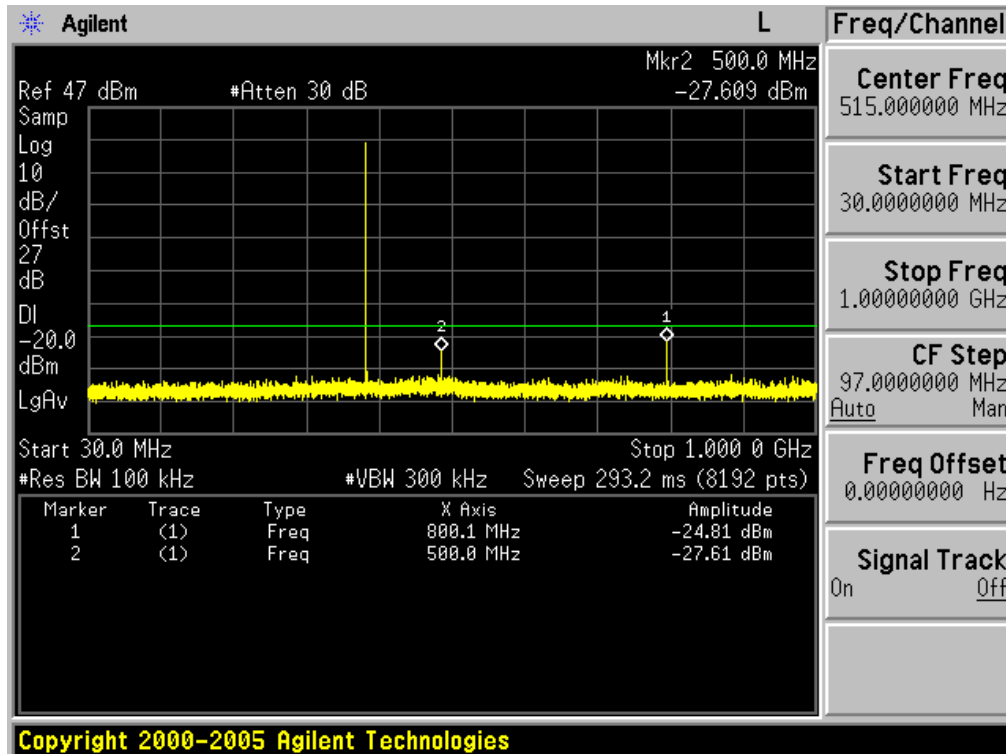
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



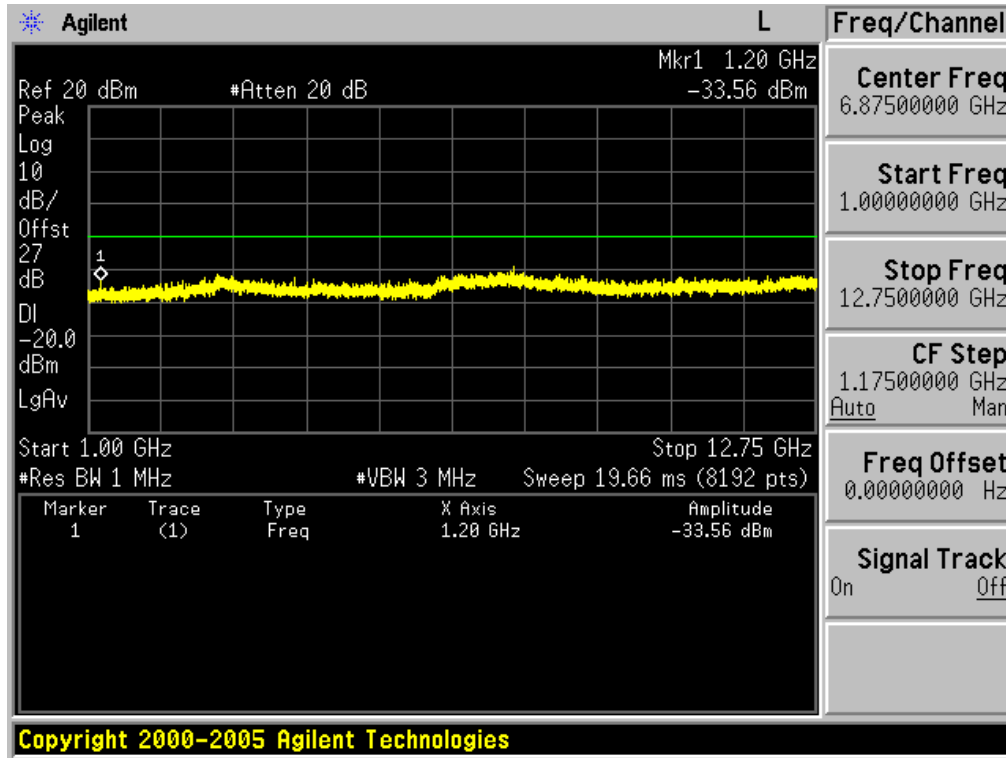
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



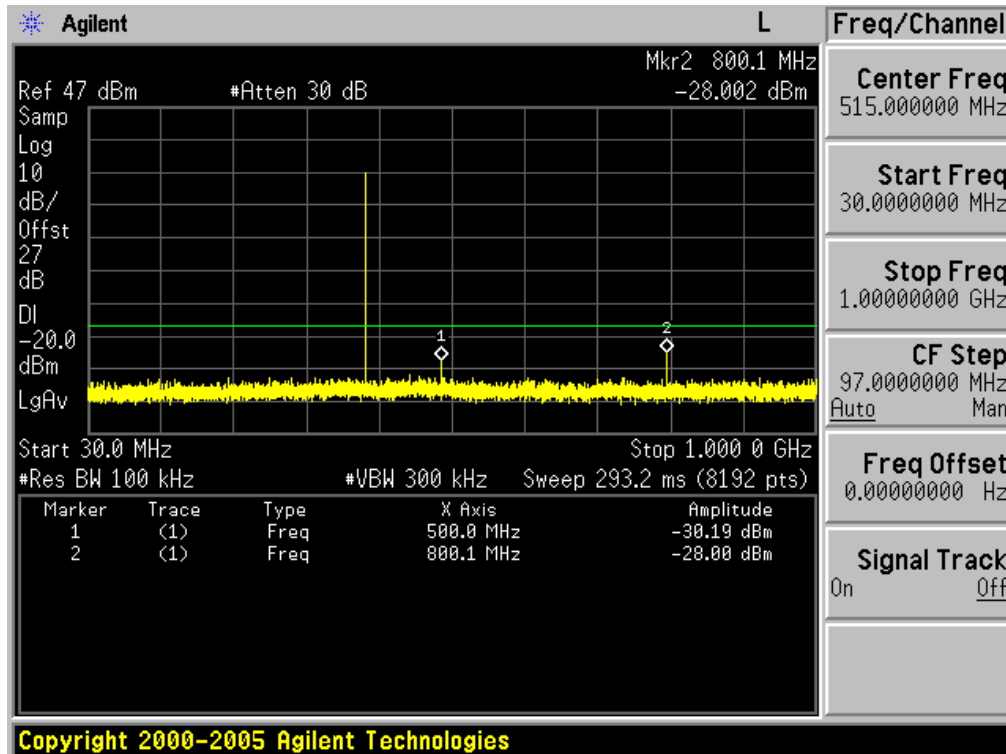
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



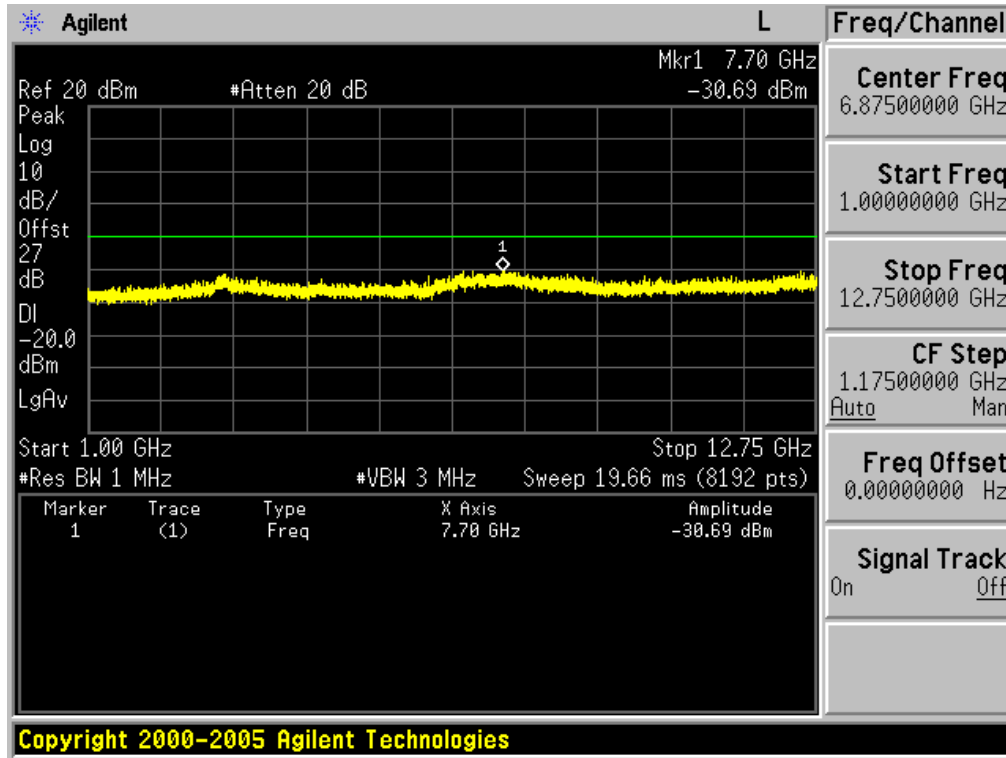
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



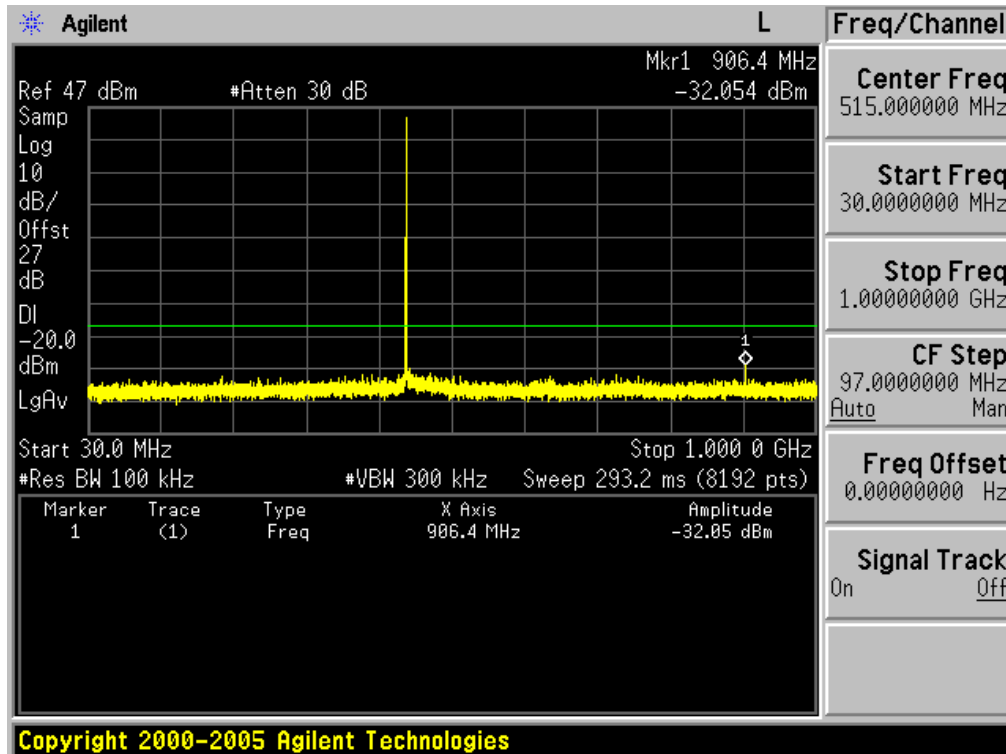
**Conducted Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



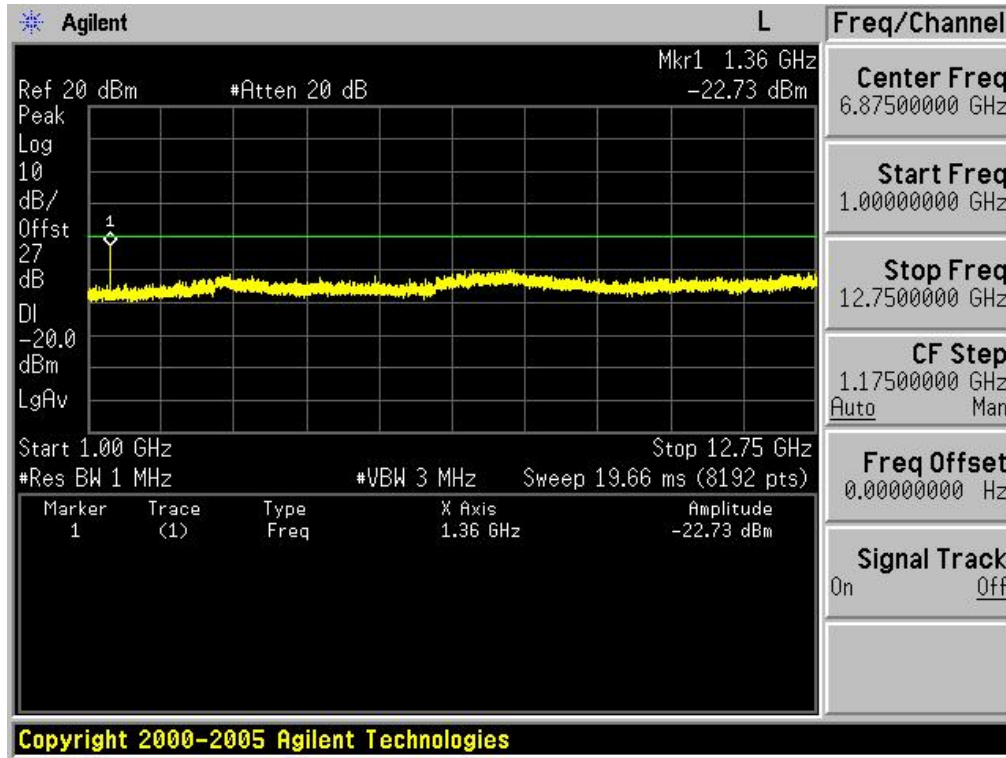
**Conduct Spurious Emission (worst) @ 400.025MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



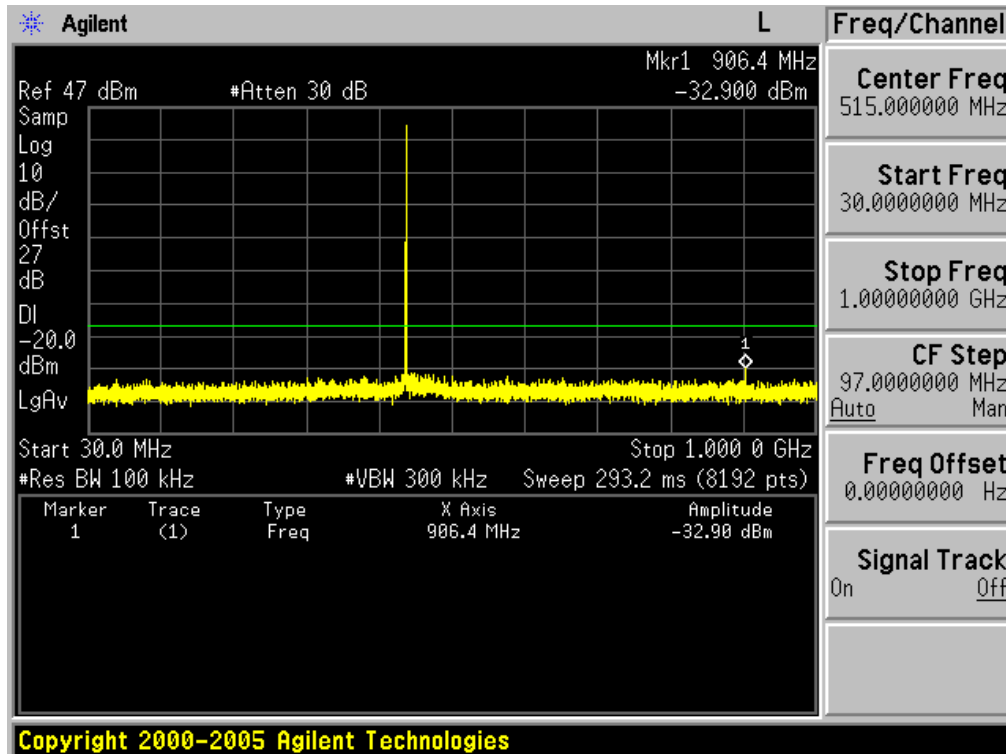
**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-45W**  
 30MHz-1GHz



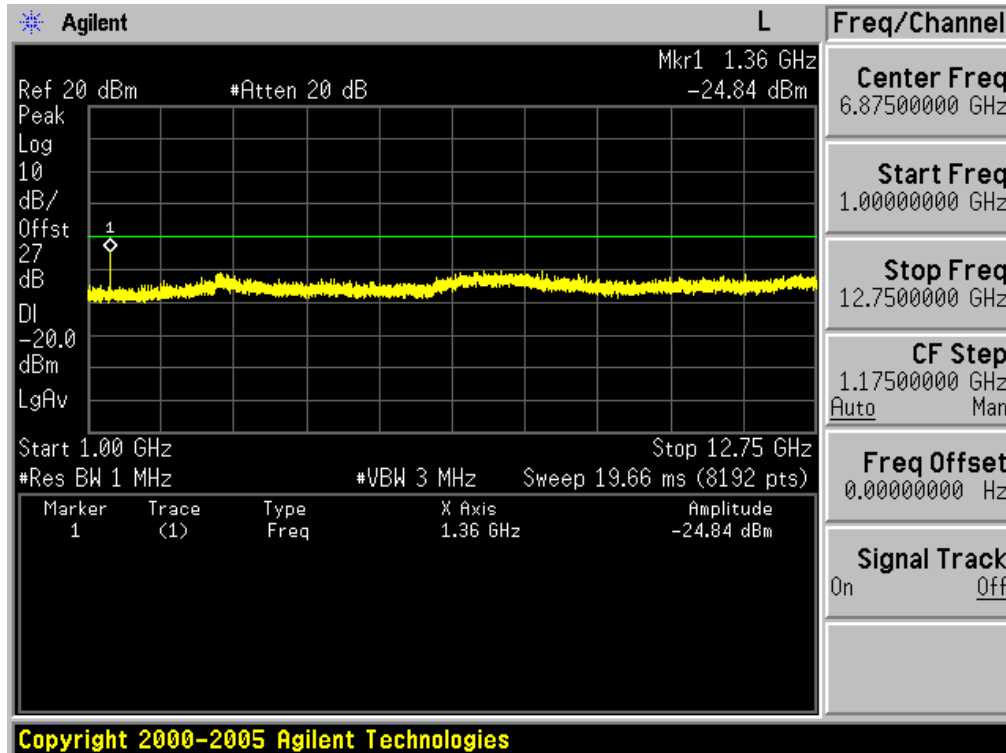
**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-45W**  
 1GHz-12.75GHz



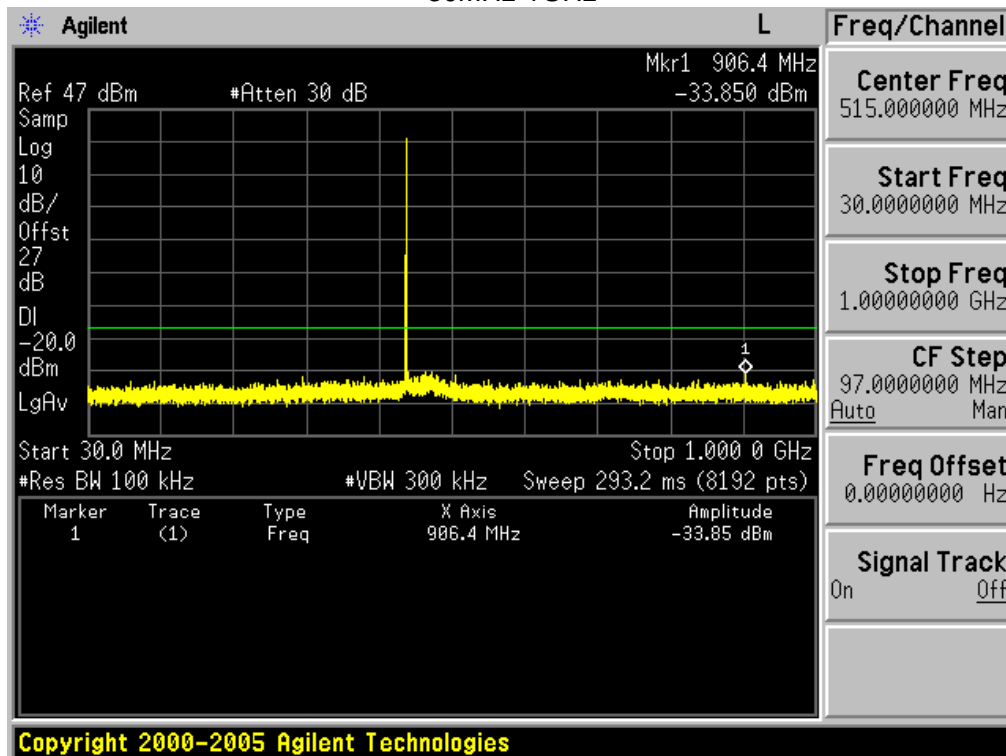
**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



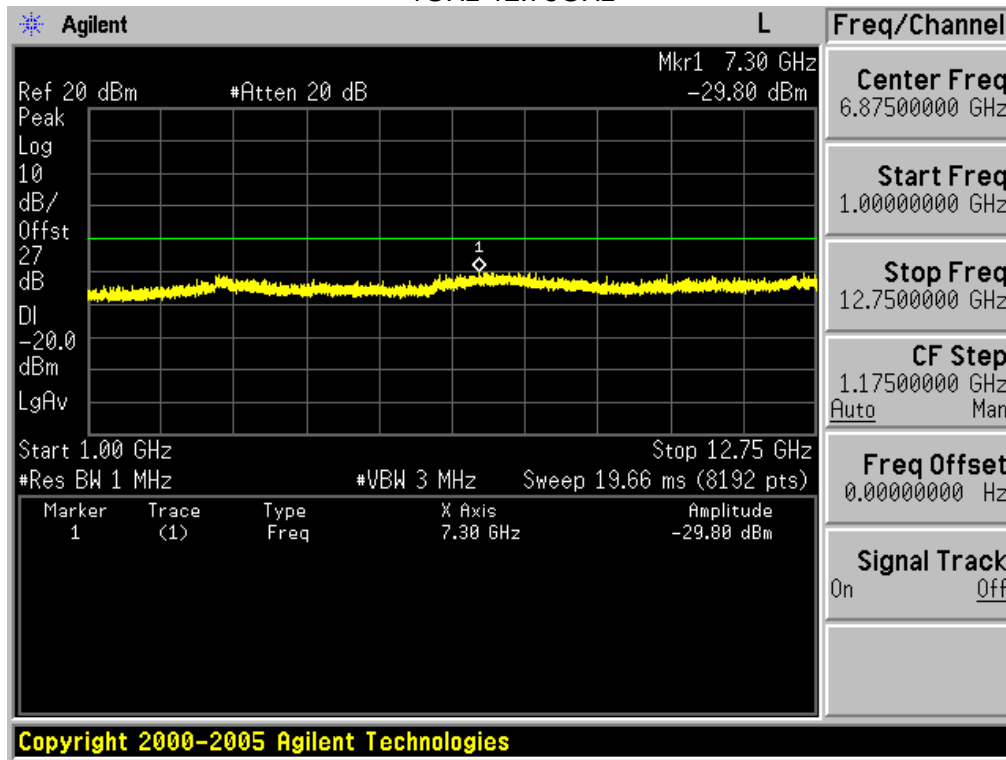
**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-10W**  
30MHz-1GHz

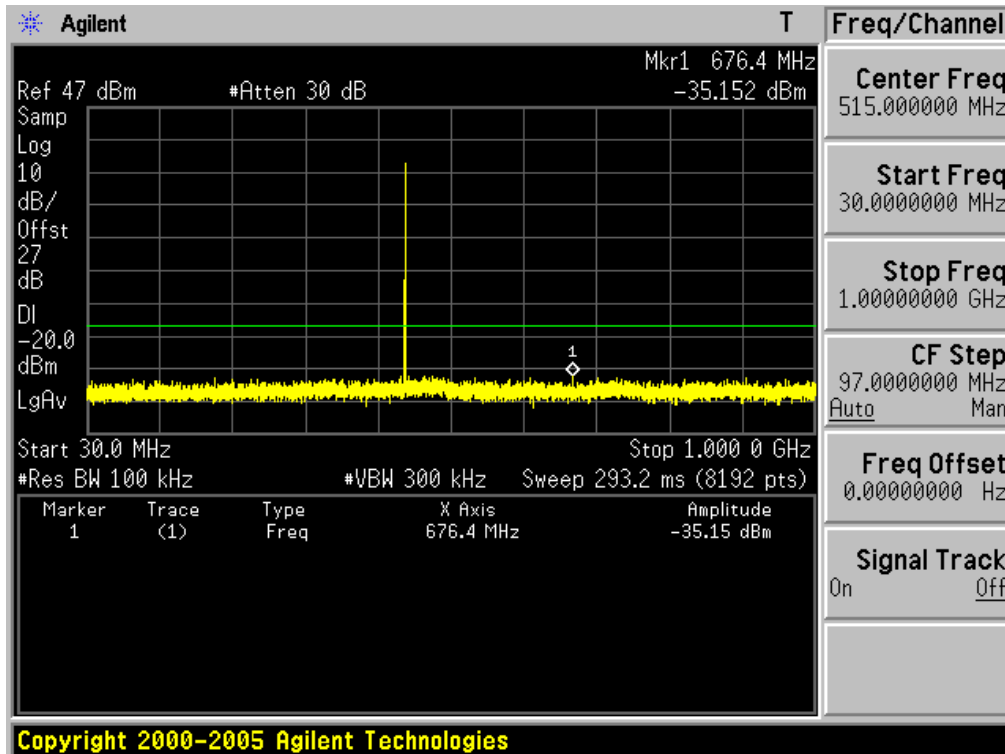


**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-10W**  
1GHz-12.75GHz

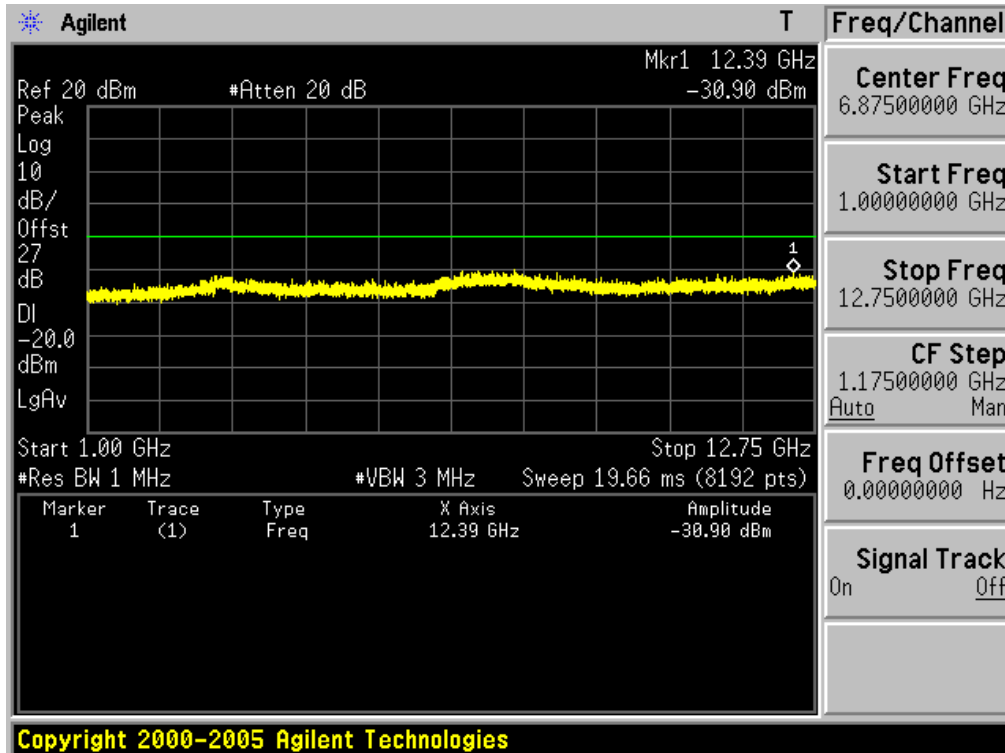




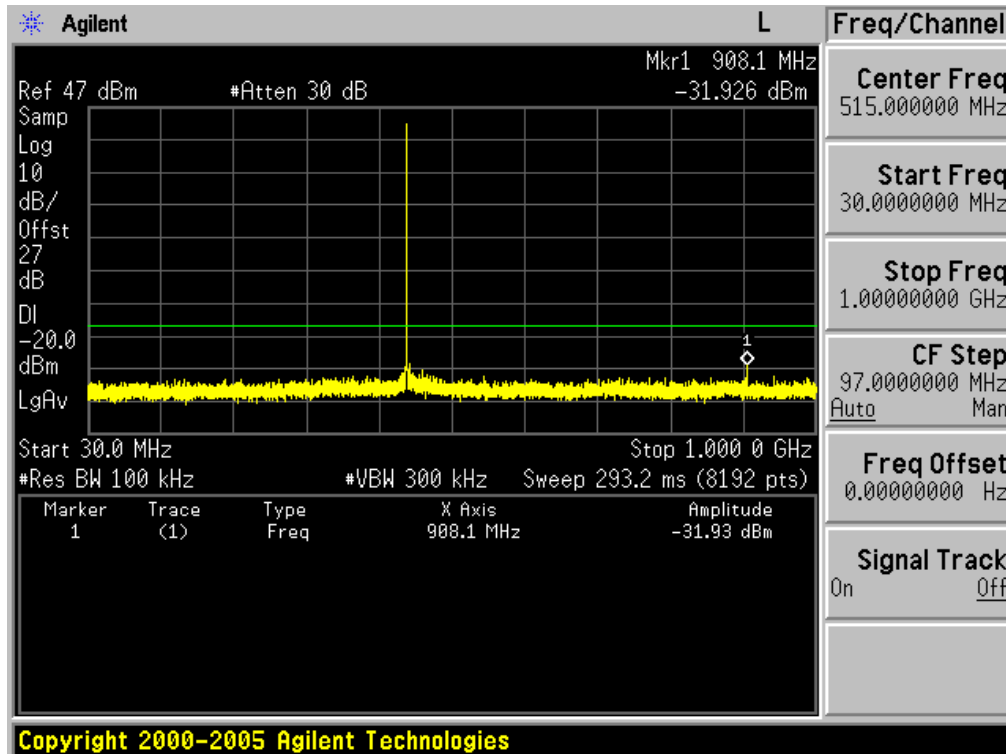
**Conducted Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



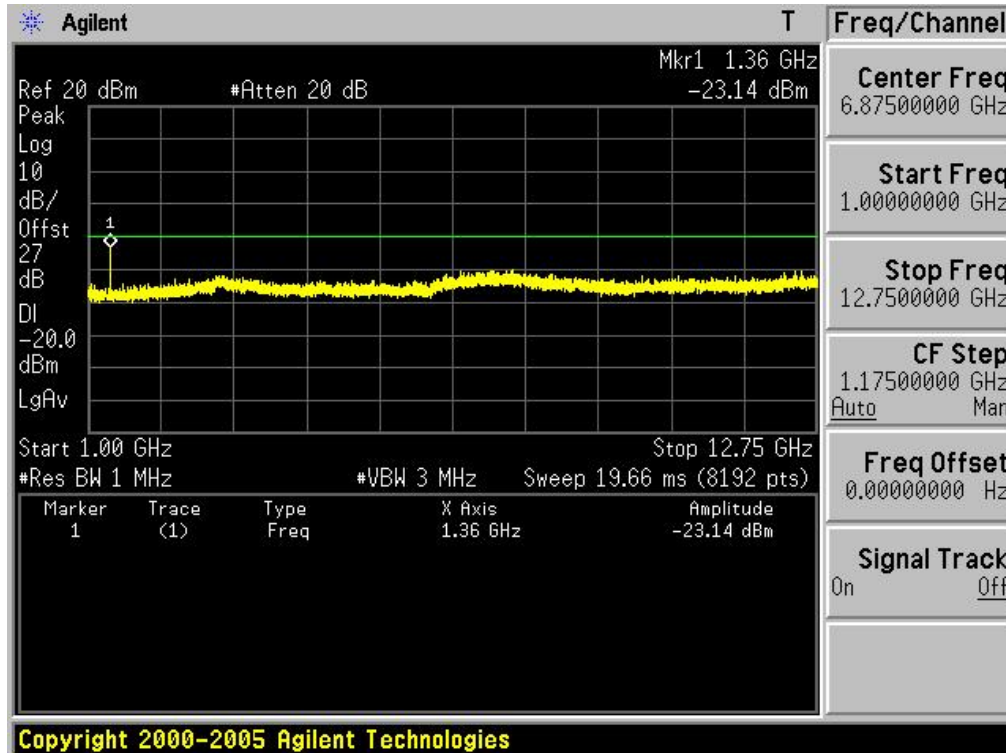
**Conduct Spurious Emission (worst) @ 453.225MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



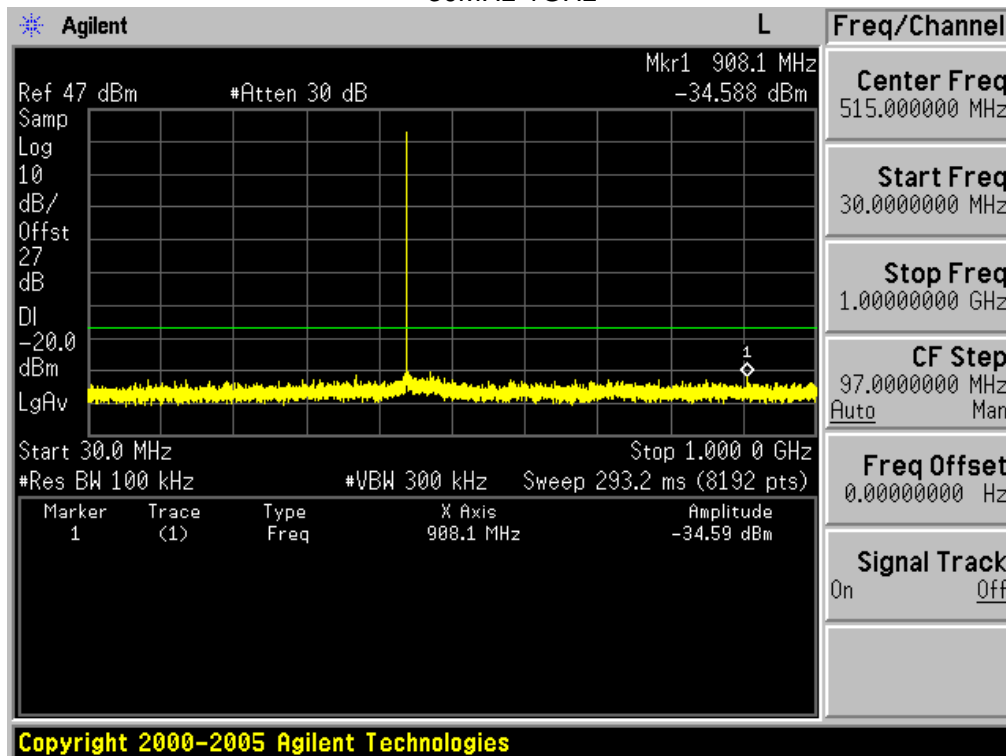
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-45W**  
 30MHz-1GHz



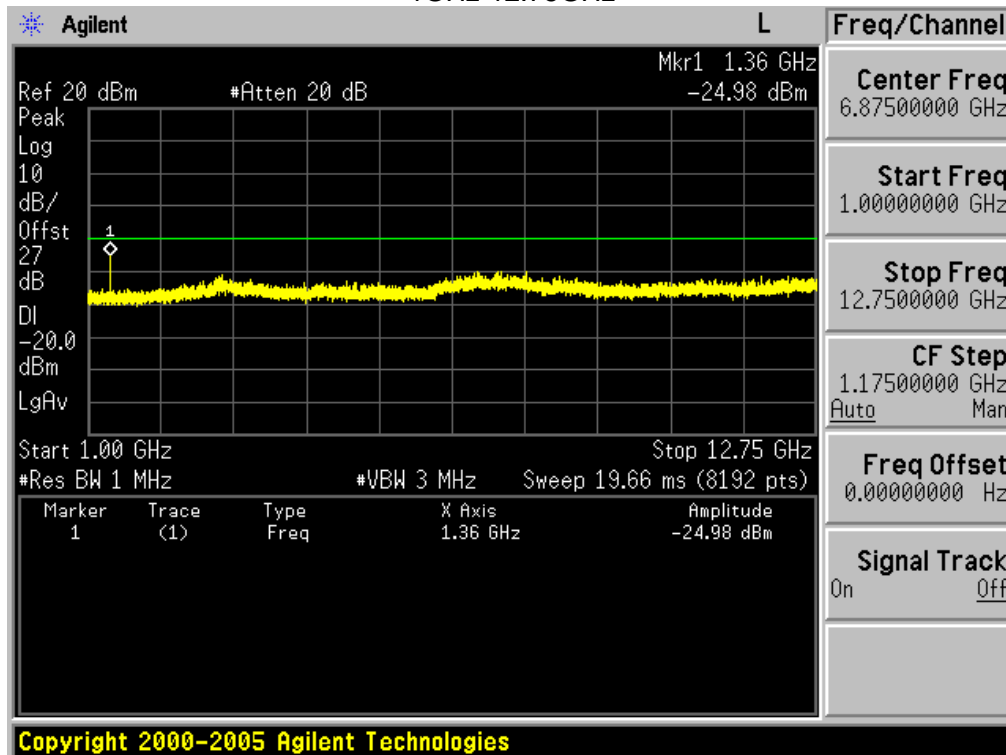
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-45W**  
 1GHz-12.75GHz



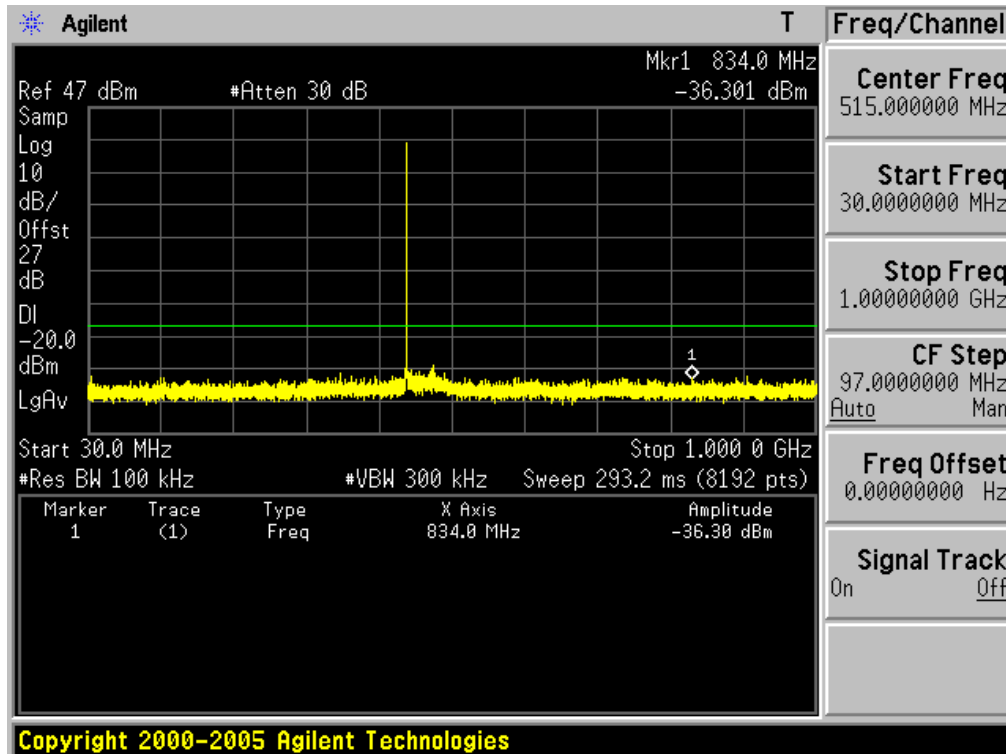
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



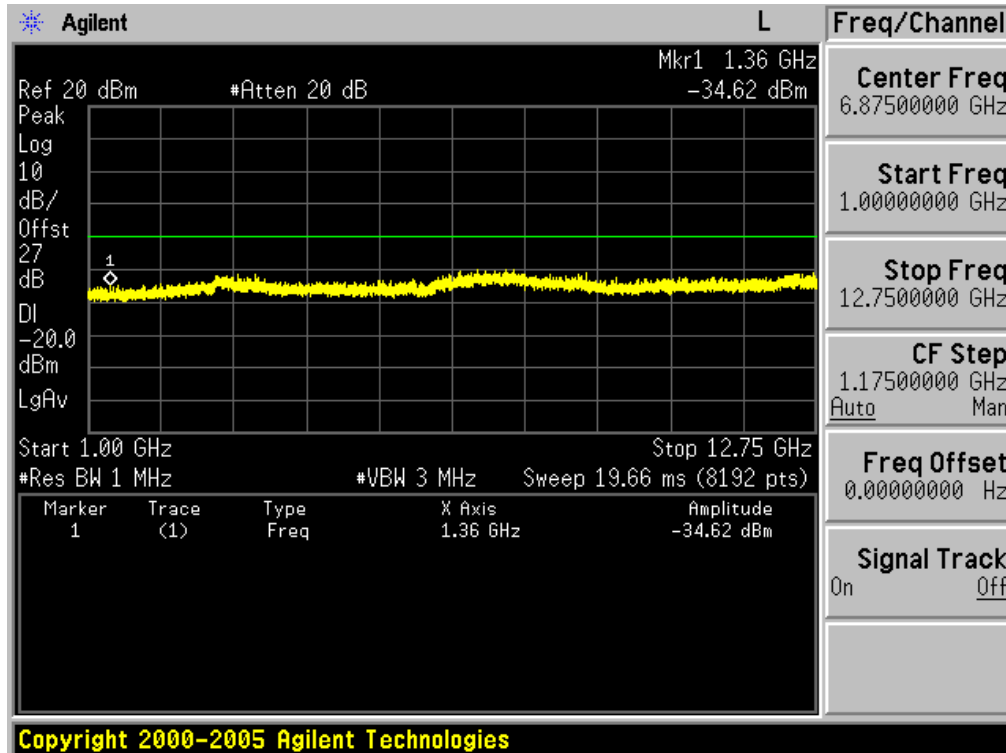
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



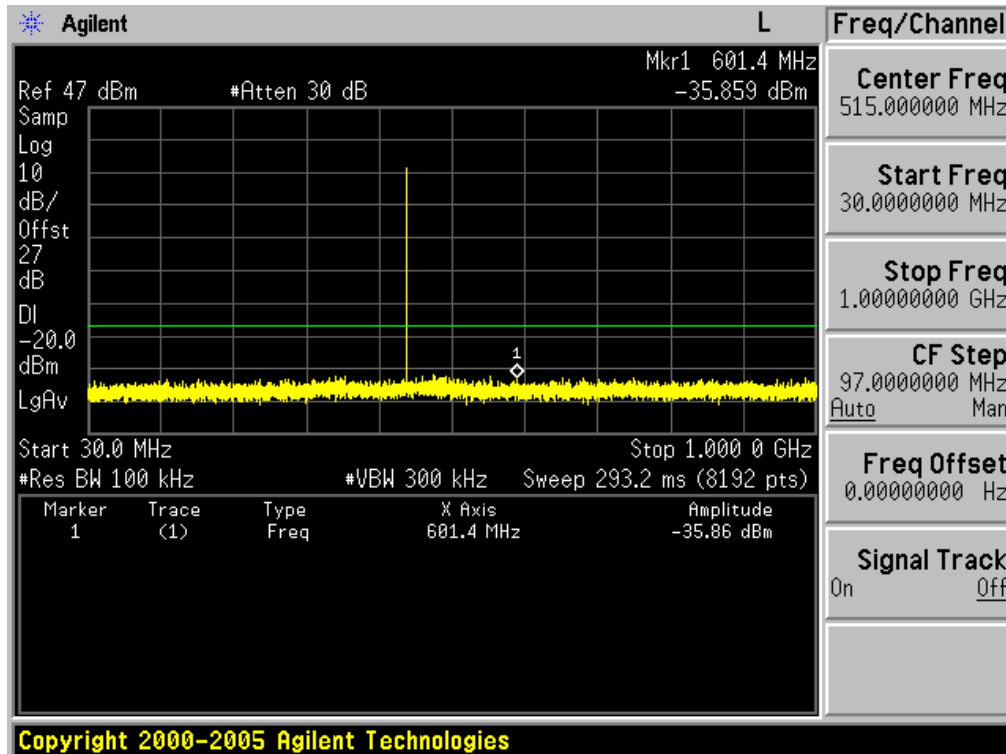
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz



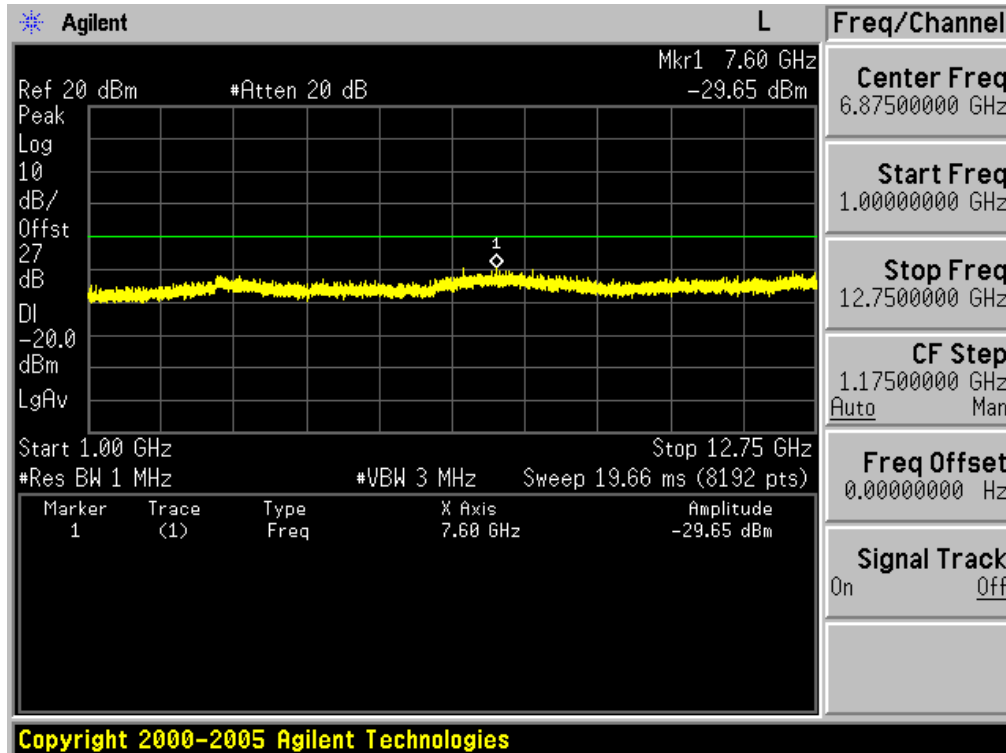
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz



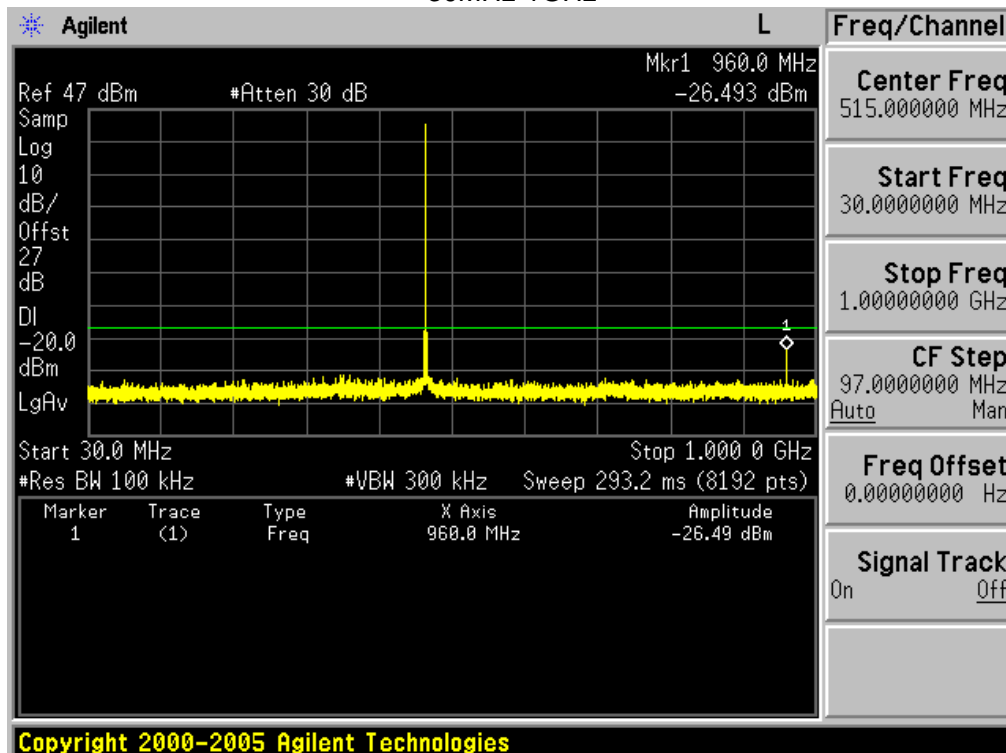
**Conducted Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-1W**  
30MHz-1GHz



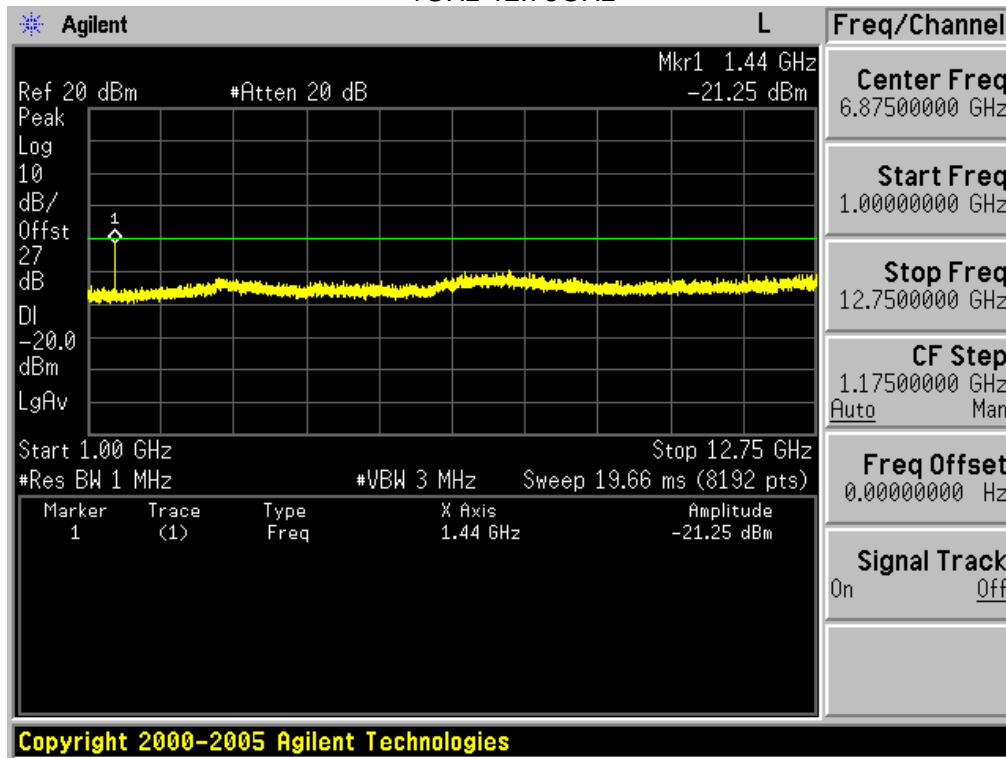
**Conduct Spurious Emission (worst) @ 454.025MHz With 12.5 KHz Channel Separation-1W**  
1GHz-12.75GHz



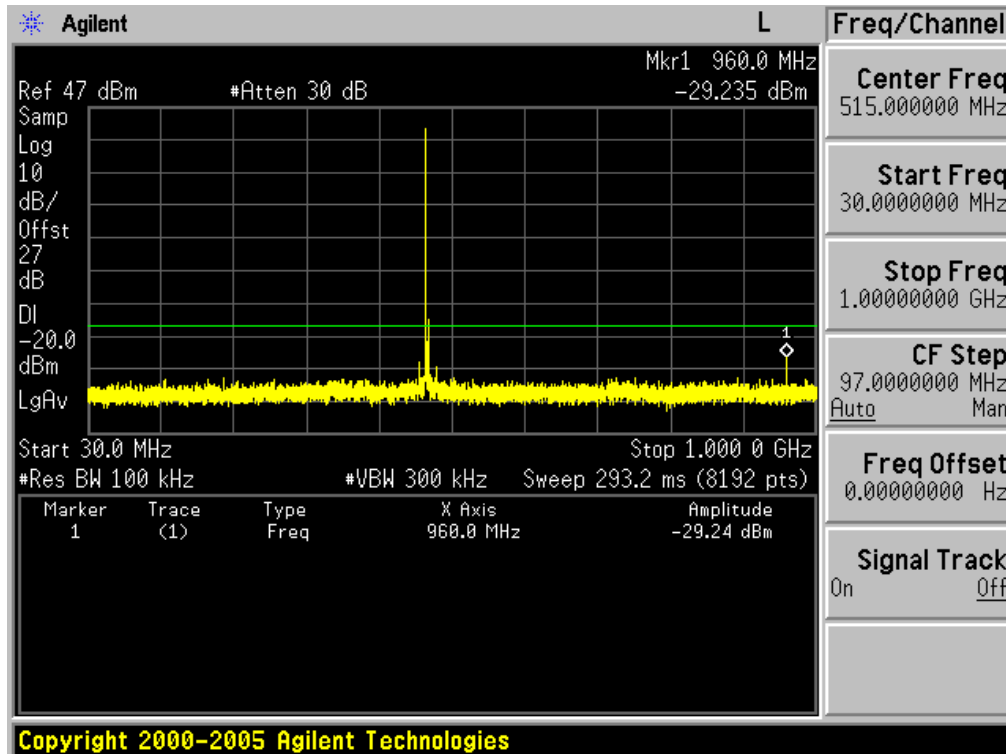
**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-45W**  
 30MHz-1GHz



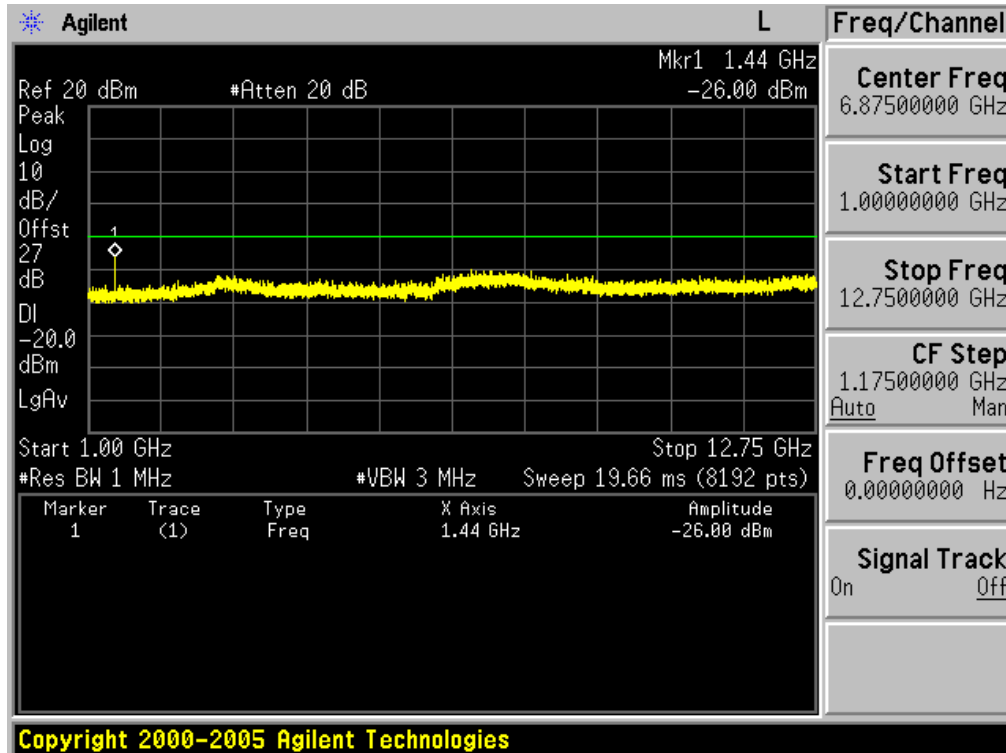
**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-45W**  
 1GHz-12.75GHz



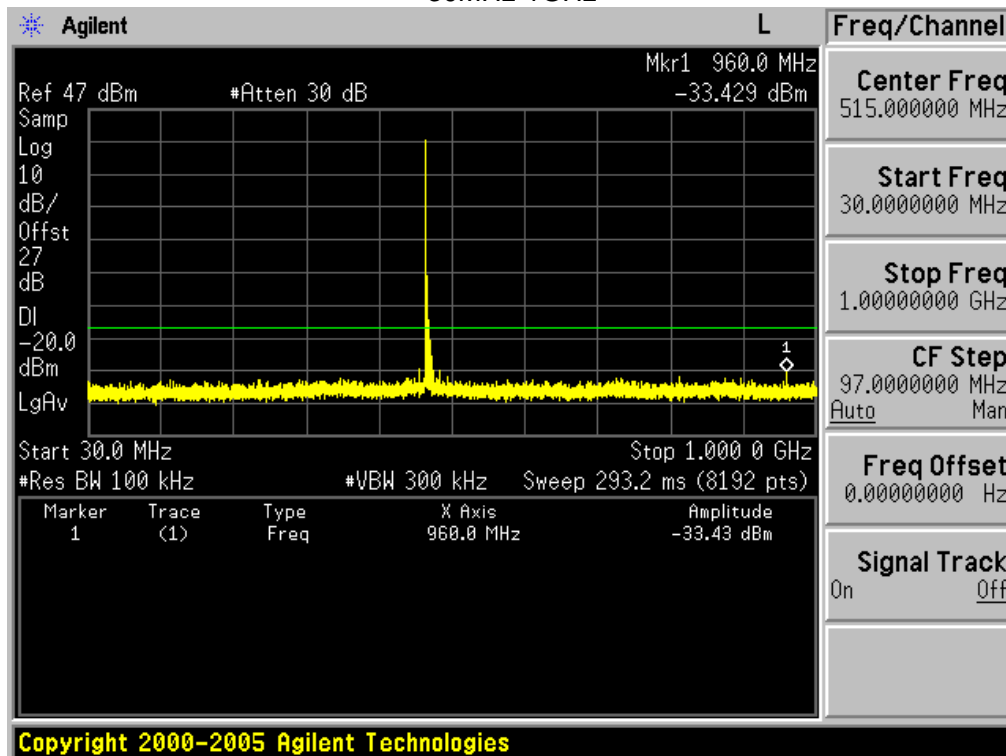
**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-25W**  
 30MHz-1GHz



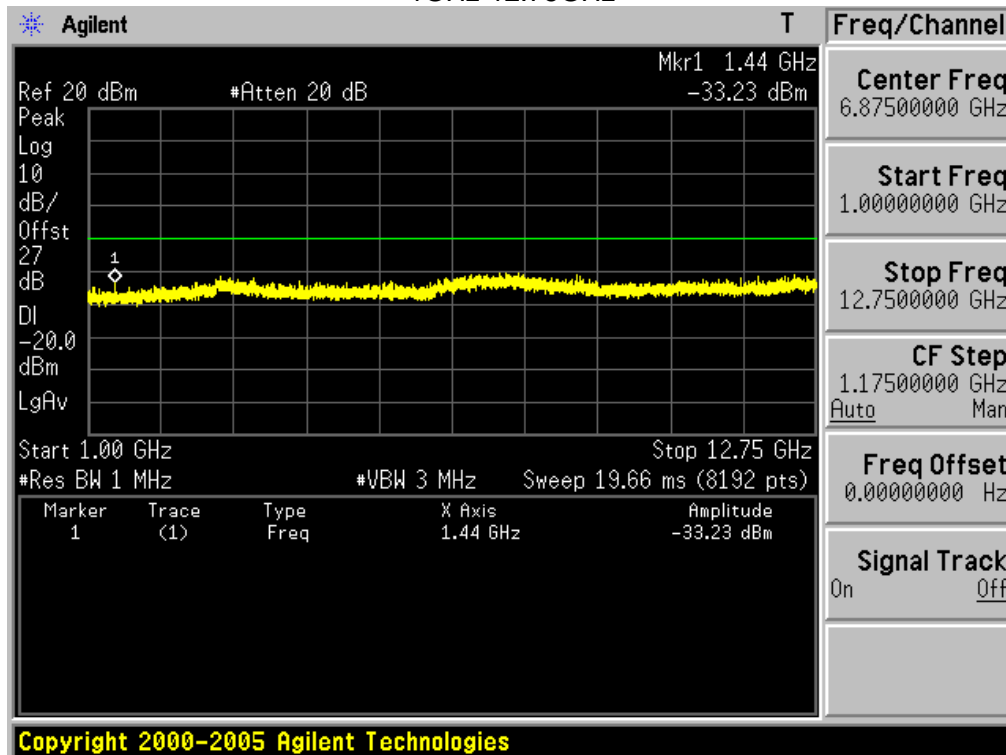
**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-25W**  
 1GHz-12.75GHz



**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-10W**  
 30MHz-1GHz

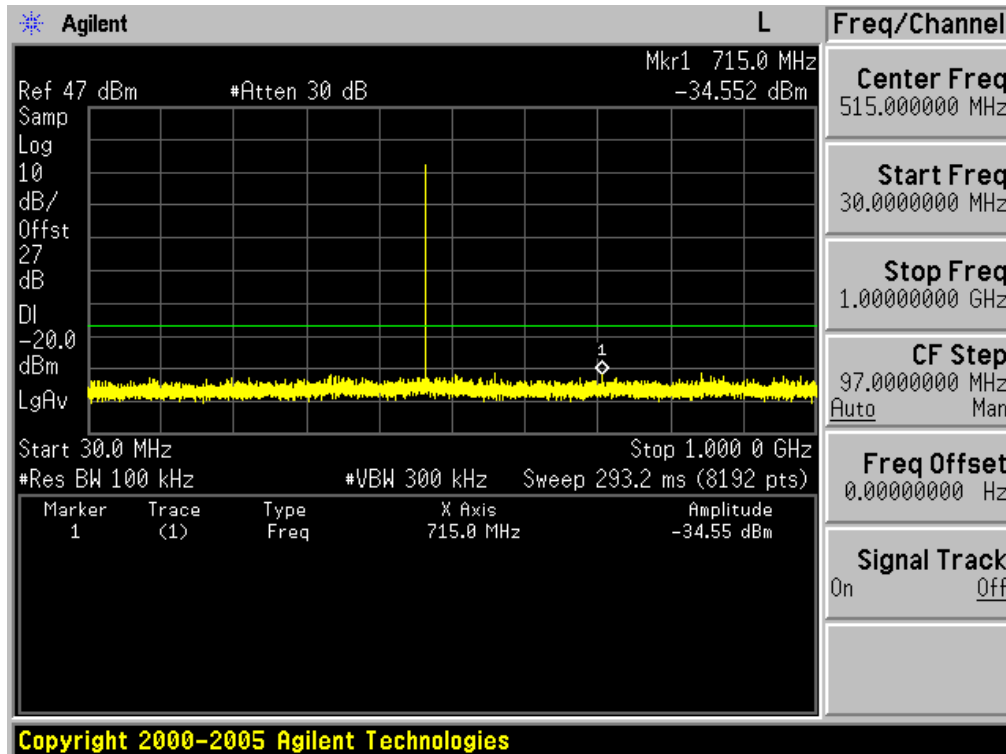


**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-10W**  
 1GHz-12.75GHz

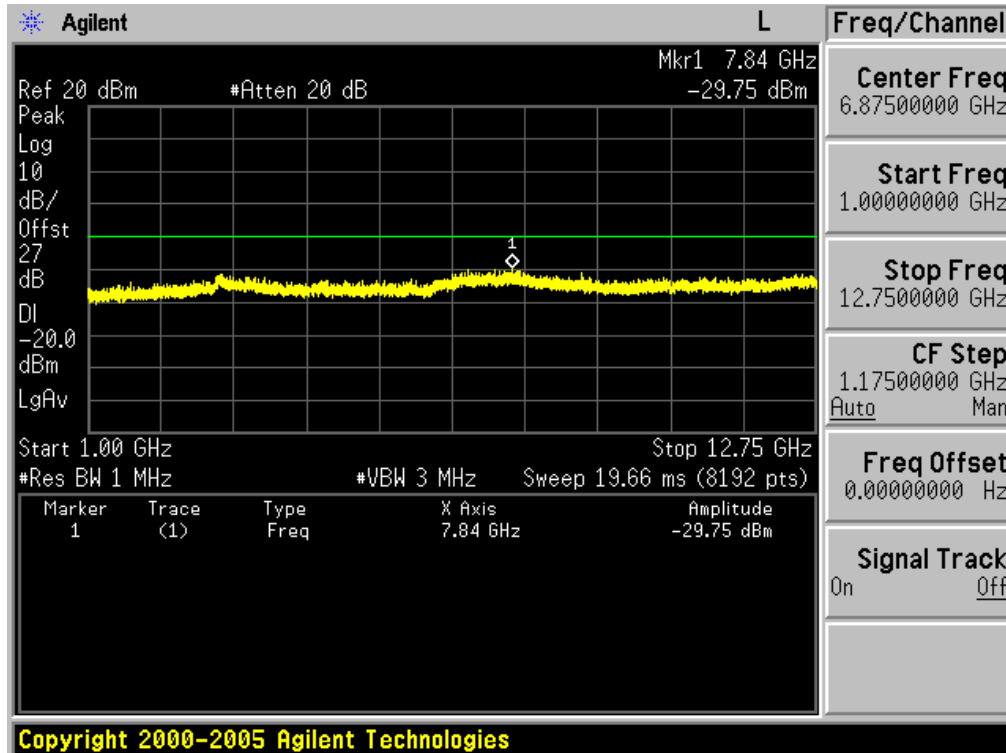




**Conducted Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-1W**  
 30MHz-1GHz



**Conduct Spurious Emission (worst) @ 479.975MHz With 12.5 KHz Channel Separation-1W**  
 1GHz-12.75GHz



**Note:**

1. In this case, Part 22 (-13 dBm) is less than the limit of Part 90 (-20 dBm), so we do not need to test Part 22, which meets the spurious limits of PART 90+22.
2. All the test frequencies was tested, but only the worst data be recorded in this part.

## 11. TRANSMITTER FREQUENCY BEHAVIOR

### 11.1 PROVISIONS APPLICABLE

FCC §90.214

Time intervals <sup>1, 2</sup>	Maximum frequency difference <sup>3</sup>	All equipment	
		150 to 174 MHz	421 to 512 MHz
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels			
t <sub>1</sub> <sup>4</sup> .....	± 25.0 kHz	5.0 ms	10.0 ms
t <sub>2</sub> .....	± 12.5 kHz	20.0 ms	25.0 ms
t <sub>3</sub> <sup>4</sup> .....	± 25.0 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels			
t <sub>1</sub> <sup>4</sup> .....	± 12.5 kHz	5.0 ms	10.0 ms
t <sub>2</sub> .....	± 6.25 kHz	20.0 ms	25.0 ms
t <sub>3</sub> <sup>4</sup> .....	± 12.5 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 6.25 kHz Channels			
t <sub>1</sub> <sup>4</sup> .....	± 6.25 kHz	5.0 ms	10.0 ms
t <sub>2</sub> .....	± 3.125 kHz	20.0 ms	25.0 ms
t <sub>3</sub> <sup>4</sup> .....	± 6.25 kHz	5.0 ms	10.0 ms

<sup>1</sup> t<sub>on</sub> is the instant when a 1 kHz test signal is completely suppressed, including any capture time due to phasing.

t<sub>1</sub> is the time period immediately following t<sub>on</sub>.

t<sub>2</sub> is the time period immediately following t<sub>1</sub>.

t<sub>3</sub> is the time period from the instant when the transmitter is turned off until t<sub>off</sub>.

t<sub>off</sub> is the instant when the 1 kHz test signal starts to rise.

<sup>2</sup> During the time from the end of t<sub>2</sub> to the beginning of t<sub>3</sub>, the frequency difference must not exceed the limits specified in §90.213.

<sup>3</sup> Difference between the actual transmitter frequency and the assigned transmitter frequency.

<sup>4</sup> If the transmitter carrier output power rating is 6 watts or less, the frequency difference during this time period may exceed the maximum frequency difference for this time period.

### 11.2 TEST METHOD

TIA/EIA-603 2.2.19.3

### 11.3 DESCRIBE LIMIT LINE OF TRANSMITTER FREQUENCY BEHAVIOR

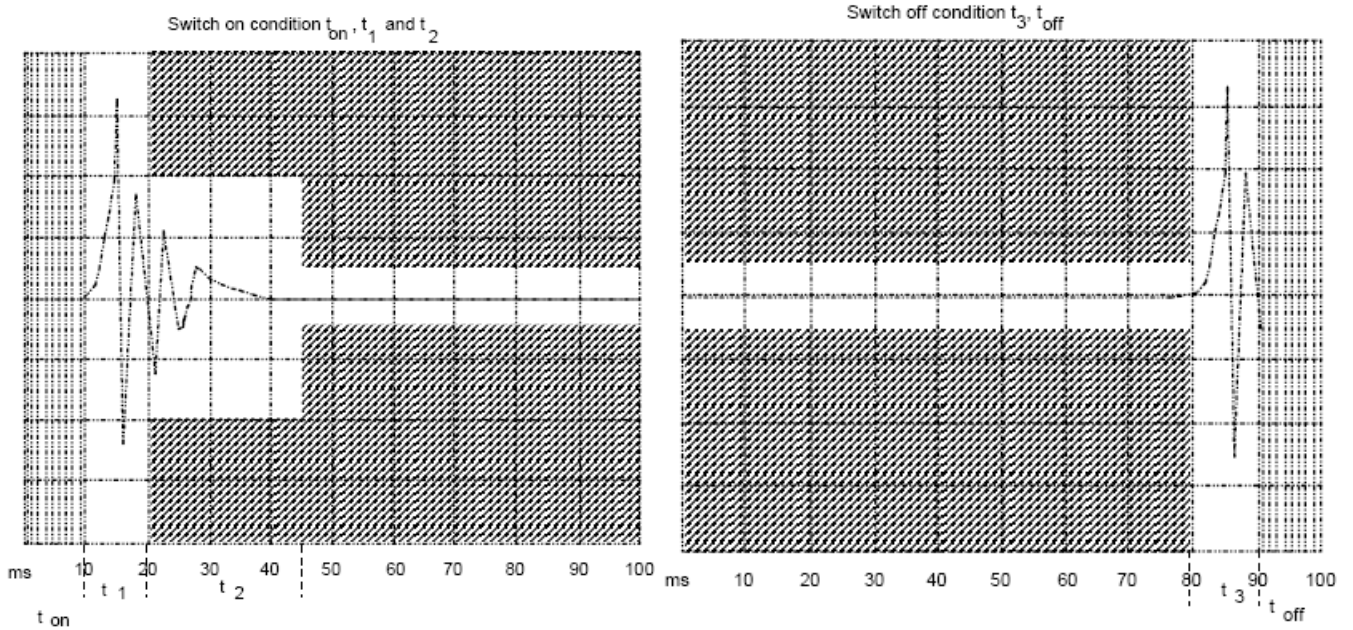
**t<sub>on</sub>**: The switch-on instant t<sub>on</sub> of a transmitter is defined by the condition when the output power, measured at the antenna terminal, exceeds 0,1 % of the full output power (-30 dBc).

**t<sub>1</sub>**: period of time starting at t<sub>on</sub> and finishing according to above 11.1

**t<sub>2</sub>**: period of time starting at the end of t<sub>1</sub> and finishing according to above 11.1

**t<sub>off</sub>**: switch-off instant defined by the condition when the output power falls below 0,1 % of the full output power (-30 dBc).

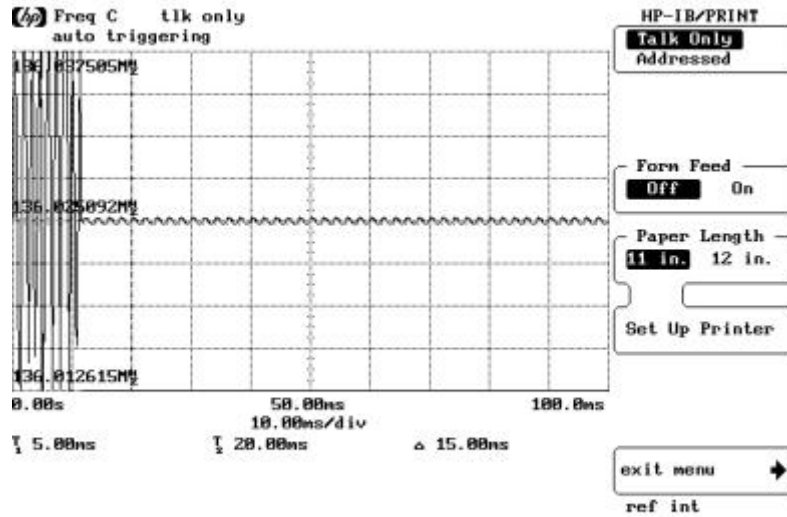
**t<sub>3</sub>**: period of time that finishing at t<sub>off</sub> and starting according to above 11.1



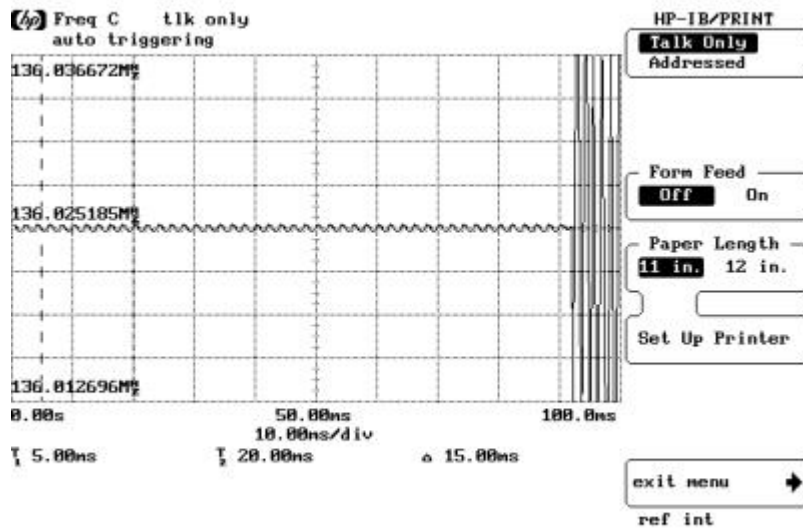
### 11.4 MEASURE RESULT

VHF:

Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--Off to On

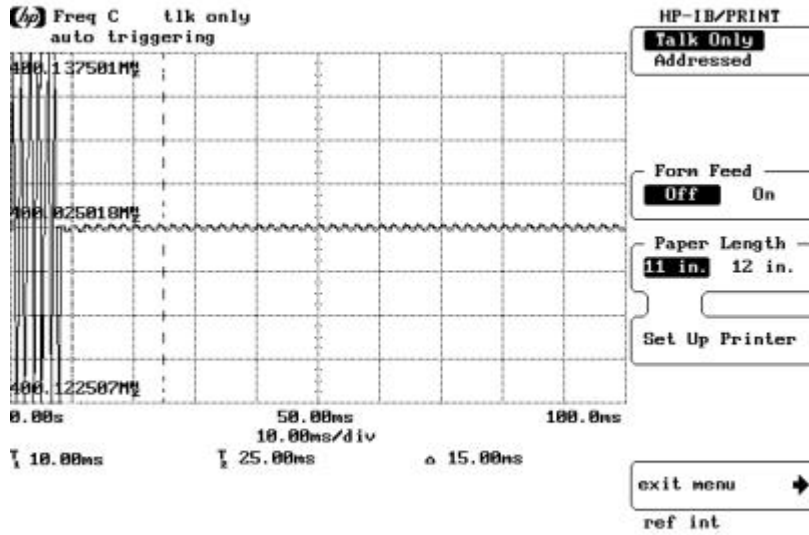


Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--On to Off

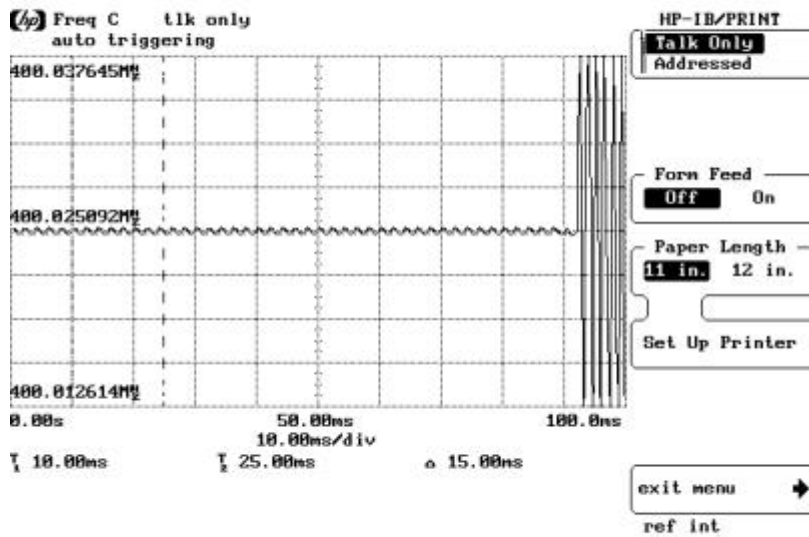


UHF:

Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--Off to On



Transmitter Frequency Behavior @ 12.5 KHz Channel Separation--On to Off



## 12. AUDIO LOW PASS FILTER RESPONSE

### 12.1. TEST LIMITS

**2.1047(a):** Voice modulated communication equipment. A curve or equivalent data showing the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted. For equipment required to have an audio low-pass filter, a curve showing the frequency response of the filter or of all circuitry installed between the modulation limiter and the modulated stage shall be submitted.

**90.242(b)(8):** Recommended audio filter attenuation characteristics are given below:

Audio band	Minimum Attenuation Rel. to 1 KHz Attenuation
3 –20 KHz	$60 \log_{10}(f/3)$ dB where f is in KHz
20 – 30 KHz	50dB

### 12.2. METHOD OF MEASUREMENTS

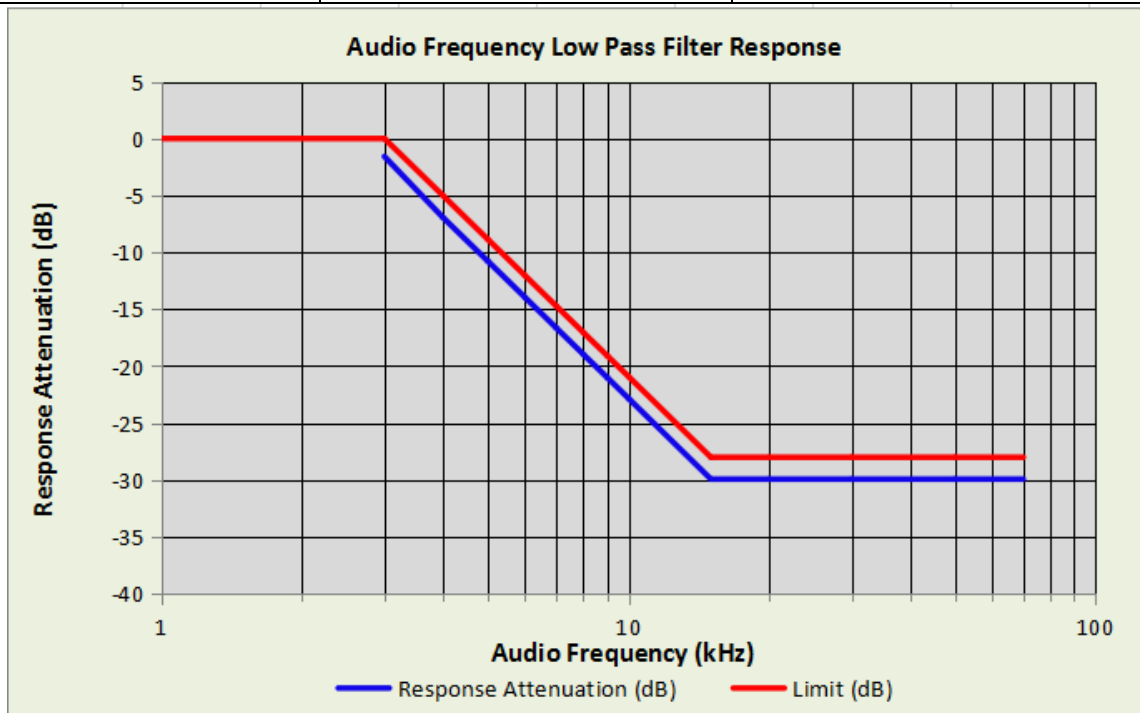
The rated audio input signal was applied to the input of the audio low-pass filter (or of all modulation stages) using an audio oscillator, this input signal level and its corresponding output signal were then measured and recorded using the FFT Digital Spectrum Analyzer. Tests were repeated at different audio signal frequencies from 0 to 50 KHz.

**12.3.MEASURE RESULT**

Analog:

**12.5 KHZ CHANNEL SPACING, F3E, FREQUENCY OF ALL MODULATION STATES (TEST RESULT FOR UHF)-45W**

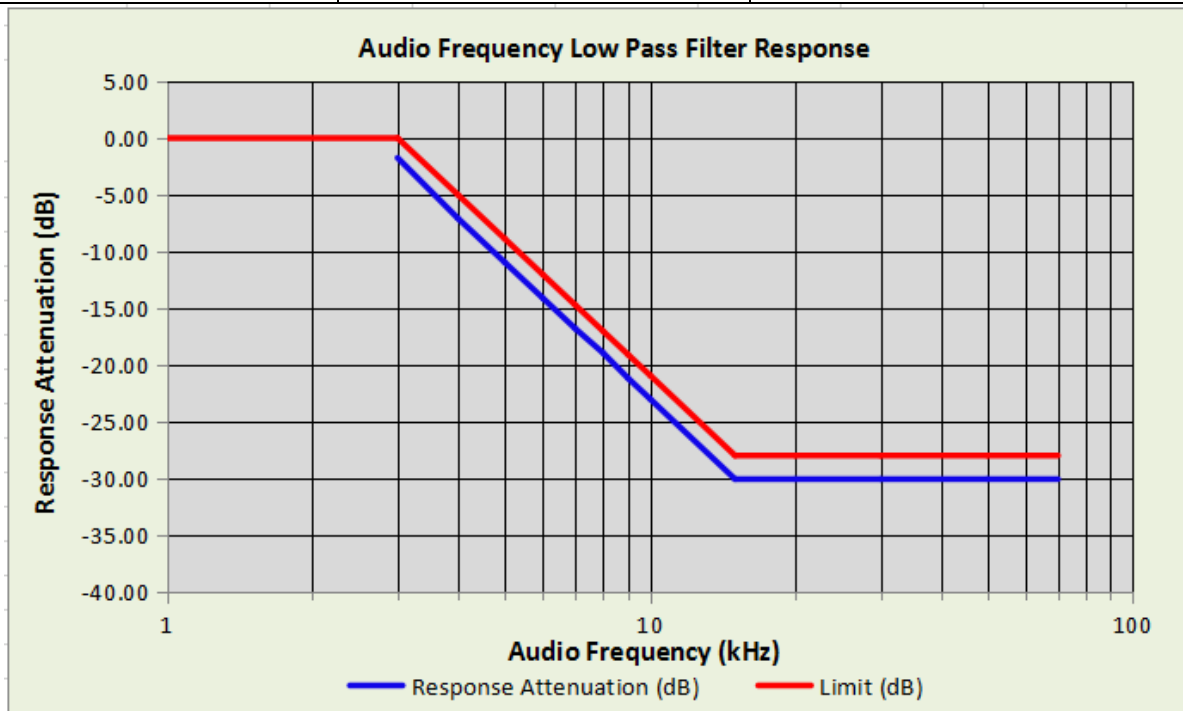
Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
1	0	/
3	-1.58	0.00
4	-6.92	-5.00
5	-10.79	-8.87
6	-13.96	-12.04
7	-16.64	-14.72
8	-18.96	-17.04
9	-21.00	-19.08
10	-22.84	-20.92
15	-29.92	-28.00
20	-29.92	-28.00
30	-29.92	-28.00
50	-29.92	-28.00
70	-29.92	-28.00



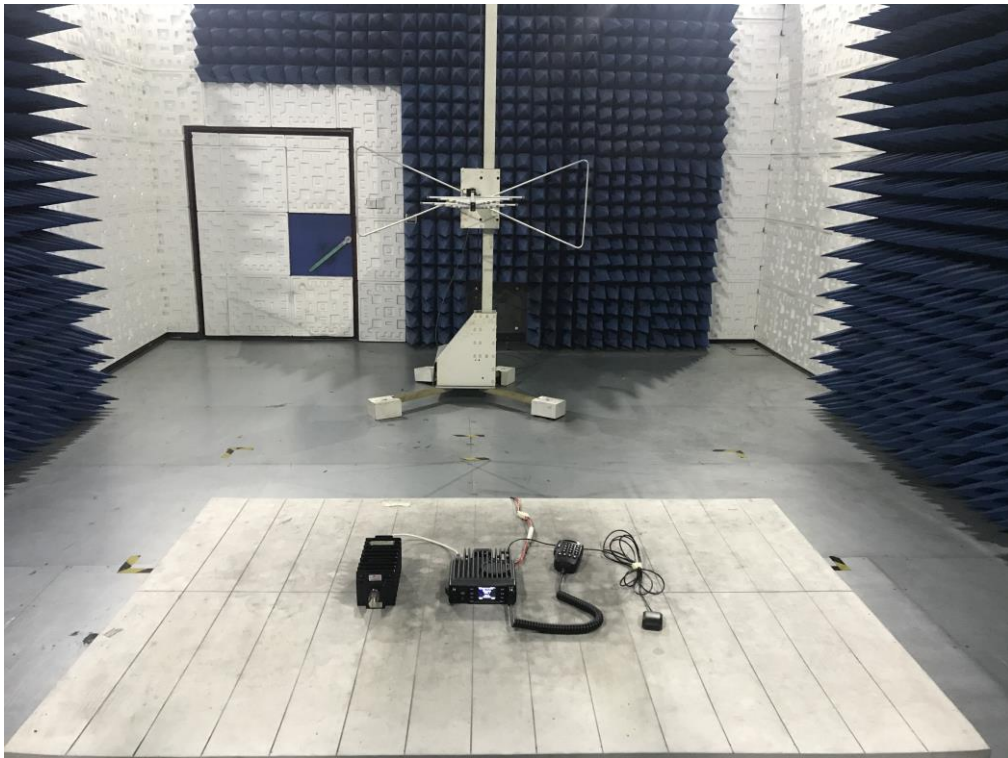


**12.5 KHZ CHANNEL SPACING, F3E, FREQUENCY OF ALL MODULATION STATES (TEST RESULT FOR VHF)-60W**

Audio Frequency (kHz)	Response Attenuation (dB)	Limit (dB)
1	0	/
3	-1.74	0.00
4	-7.08	-5.00
5	-10.95	-8.87
6	-14.12	-12.04
7	-16.80	-14.72
8	-18.96	-17.04
9	-21.16	-19.08
10	-23.00	-20.92
15	-30.08	-28.00
20	-30.08	-28.00
30	-30.08	-28.00
50	-30.08	-28.00
70	-30.08	-28.00



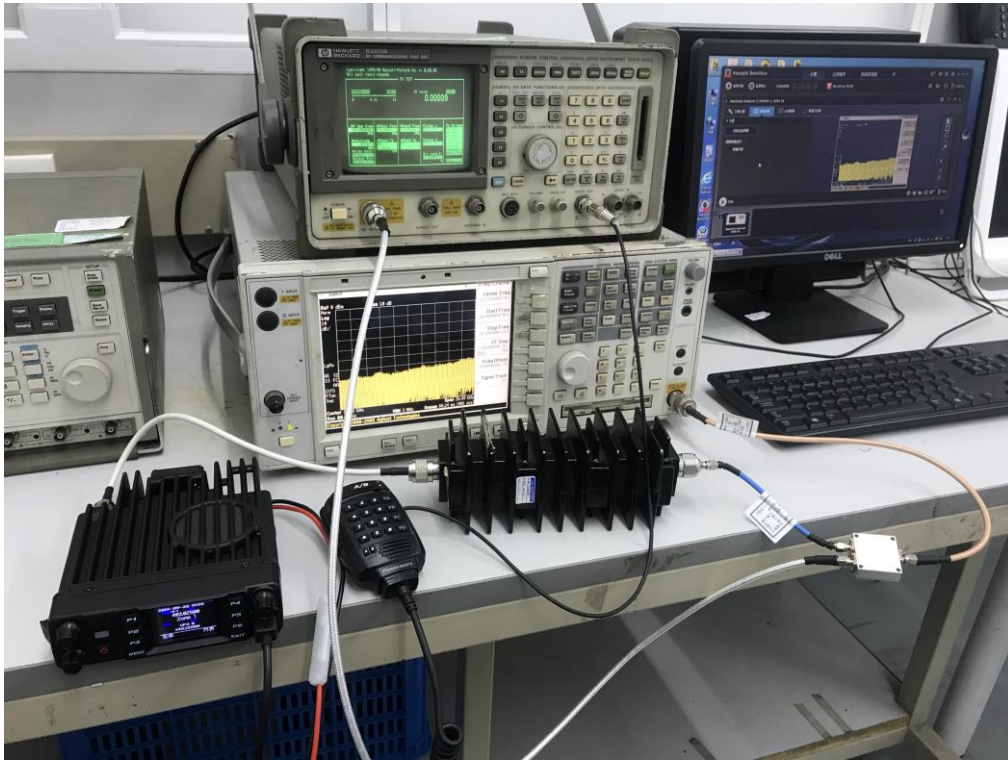
**APPENDIX I: PHOTOGRAPHS OF SETUP**  
**RADIATED EMISSION TEST SETUP**



**RADIATED EMISSION ABOVE 1G TEST SETUP**



**CONDUCTED TEST SETUP**



**----END OF REPORT----**