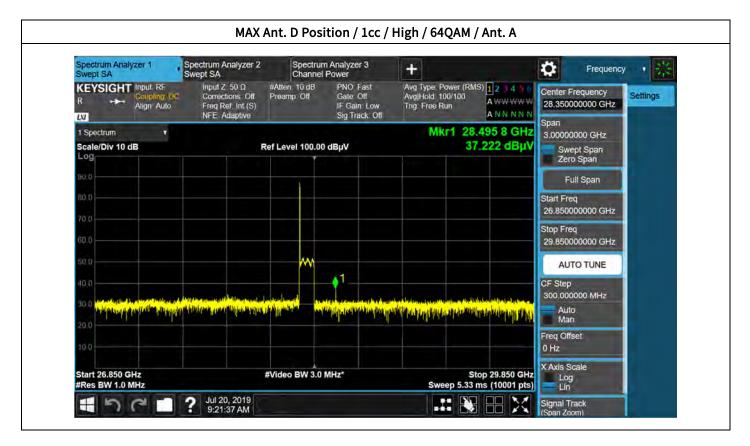
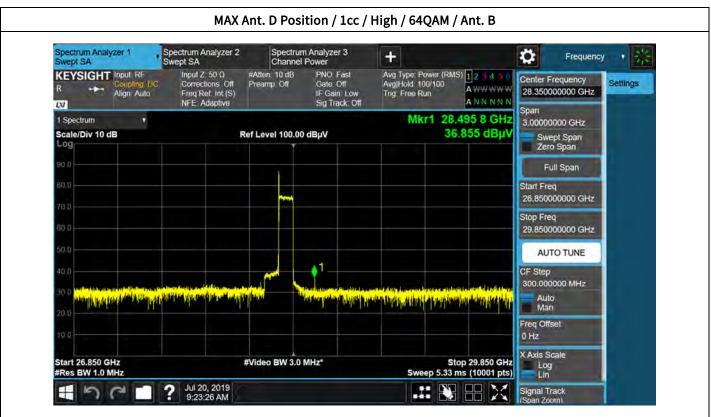


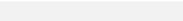
Spectrum Analyzer 1 Swept SA	Spectrum Analyzer 2 Swept SA	Spectrur Channel	n Analyzer 3 Power	+	¢	Frequency	- 器
REYSIGHT Input: RF Coupling: BC Align: Auto	Input Z 50 Q Corrections Off Freq Ref. Int (S) NFE: Adaptive	#Atten: 10 dB Preamp: Off	PNO. Fast Gate: Off IF Gain: Low Sig Track: Off	Trig: Free Run	and the second	enter Frequency 8.350000000 GHz	Settings
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Start 26.850 GHz #Res BW 1.0 MHz		#Video BW 3.0	MHz*	Stop 29.8 Sweep 5.33 ms (100	50 GHz	Axis Scale Log Lin	



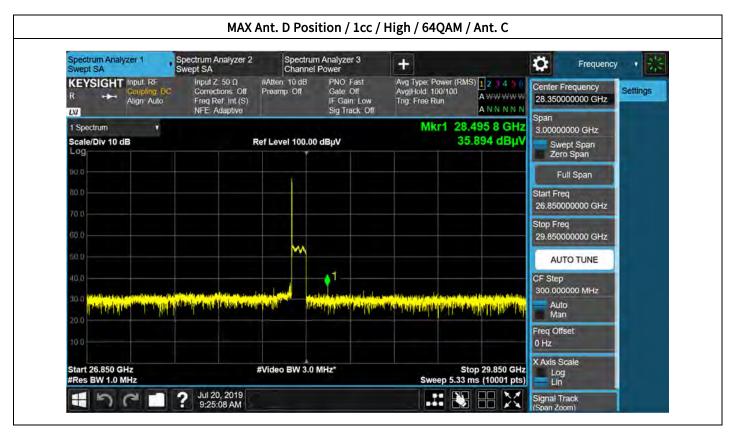


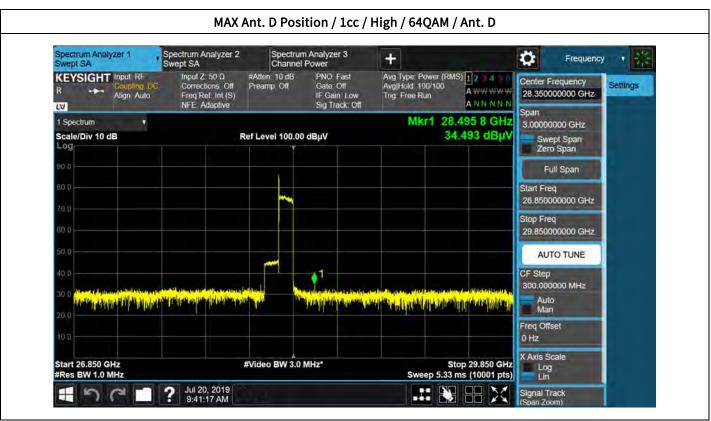




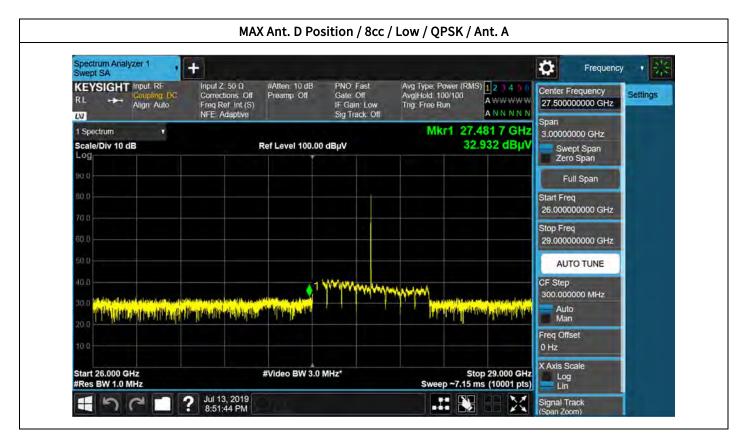


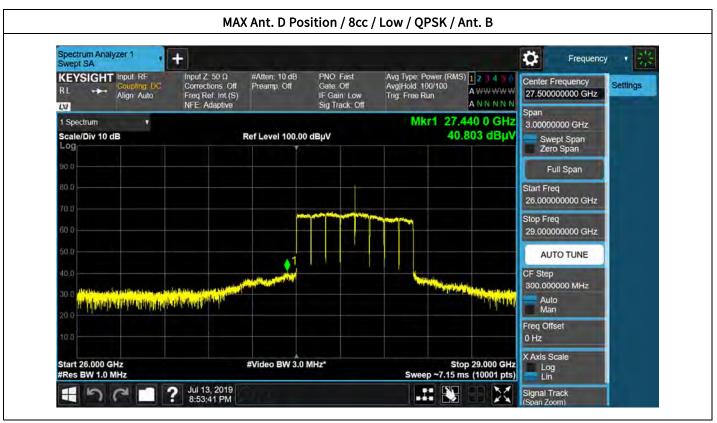




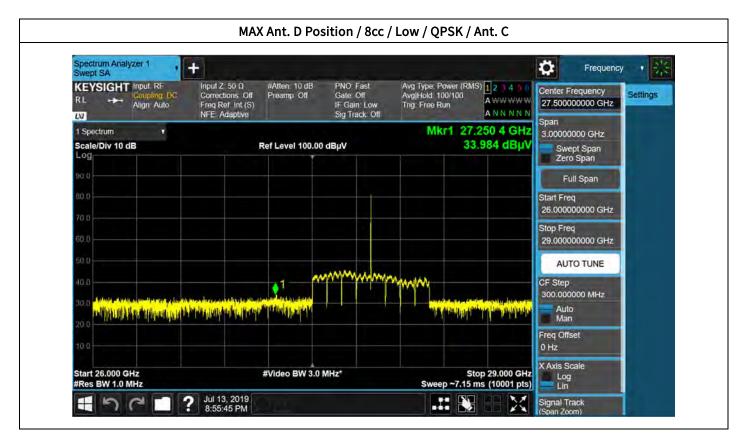


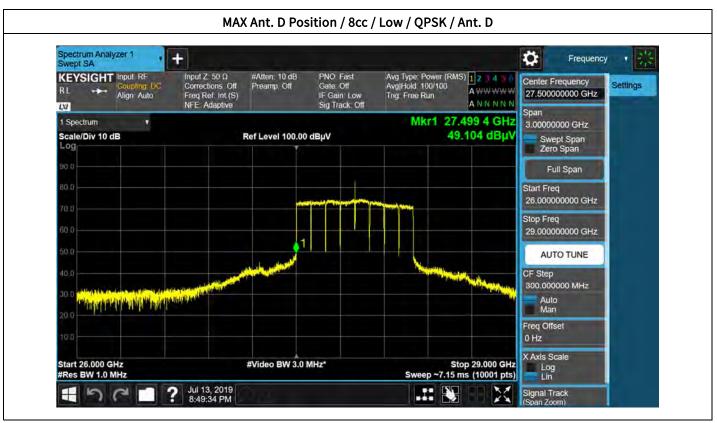




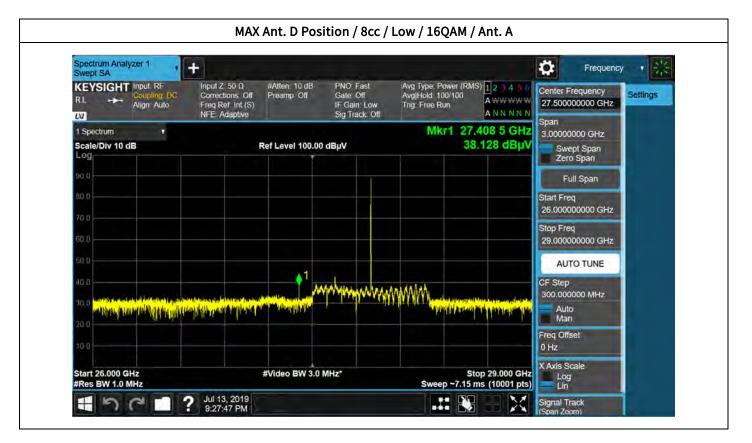






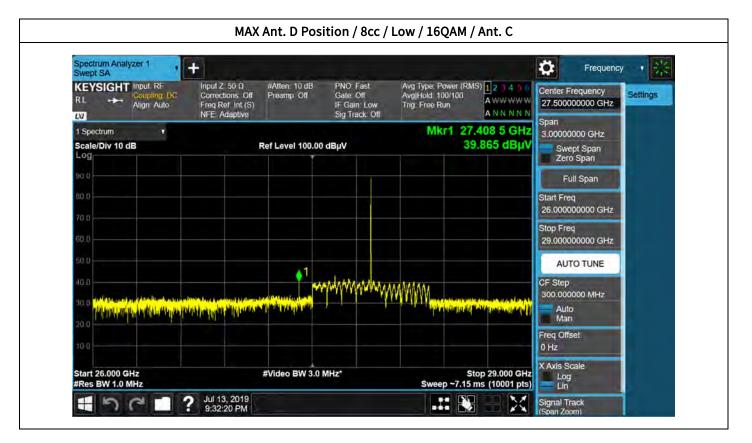


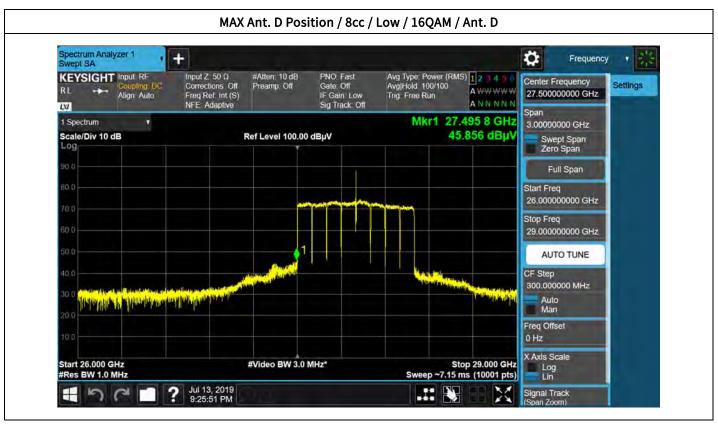




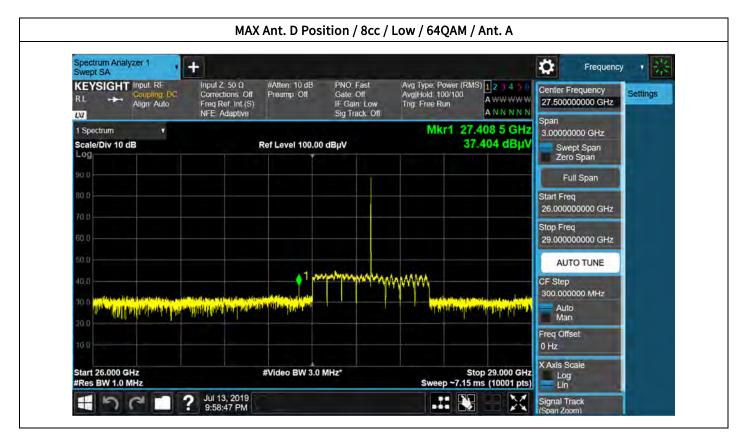


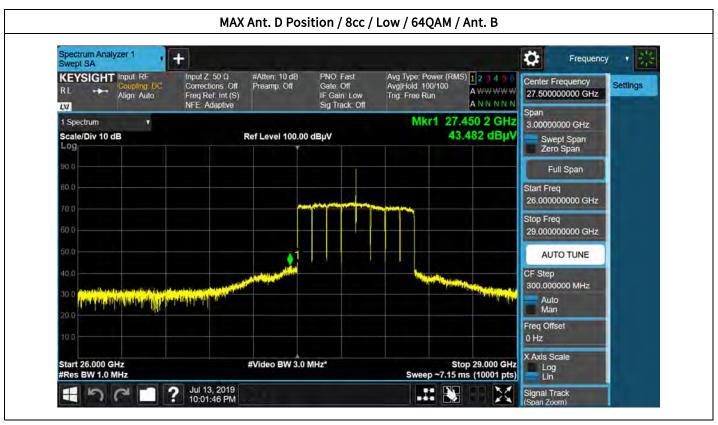




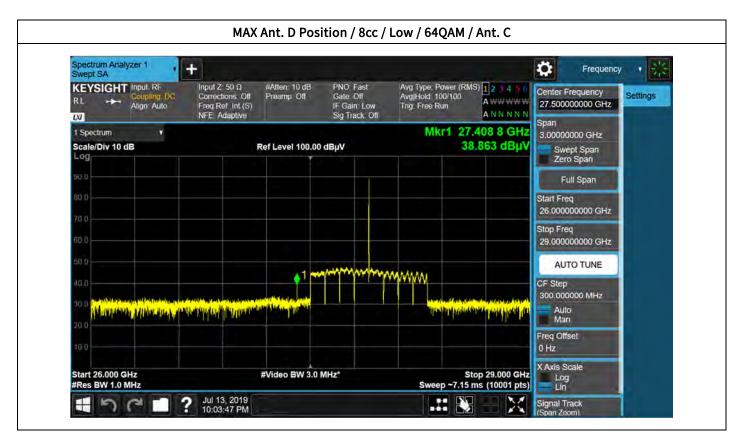


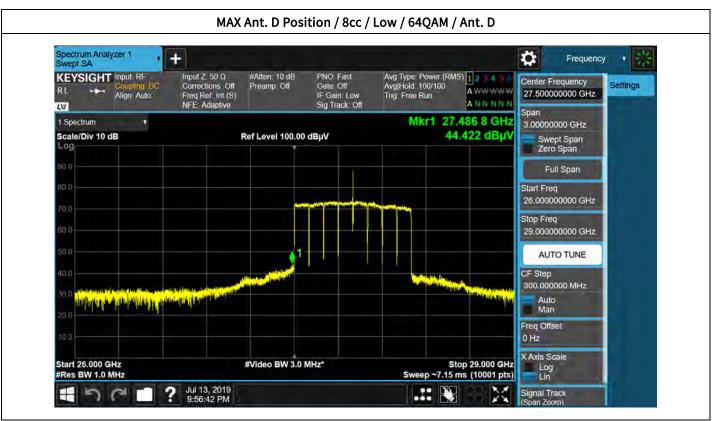




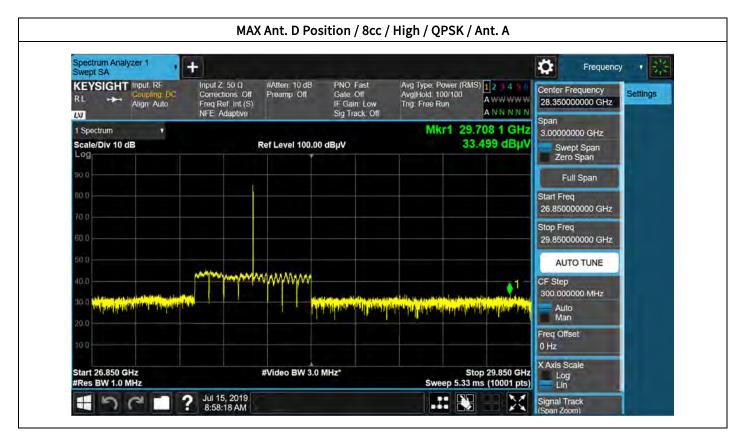


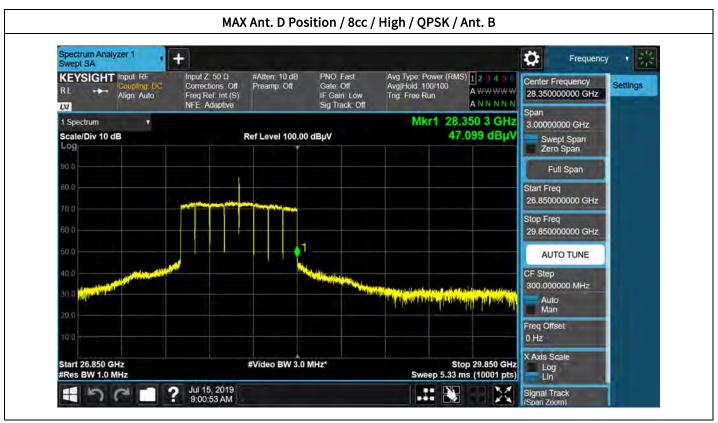




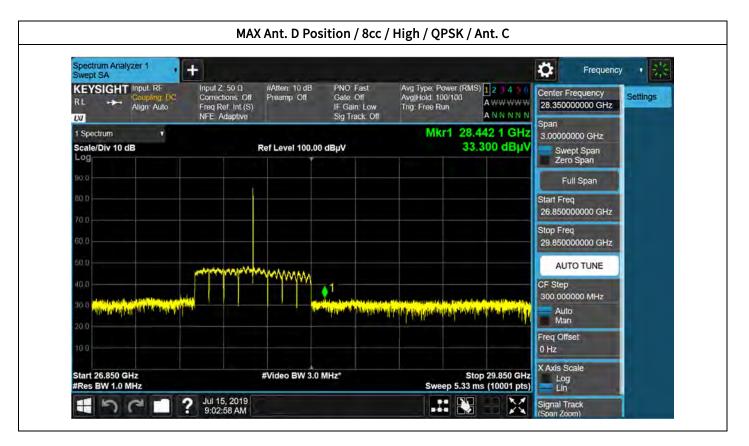








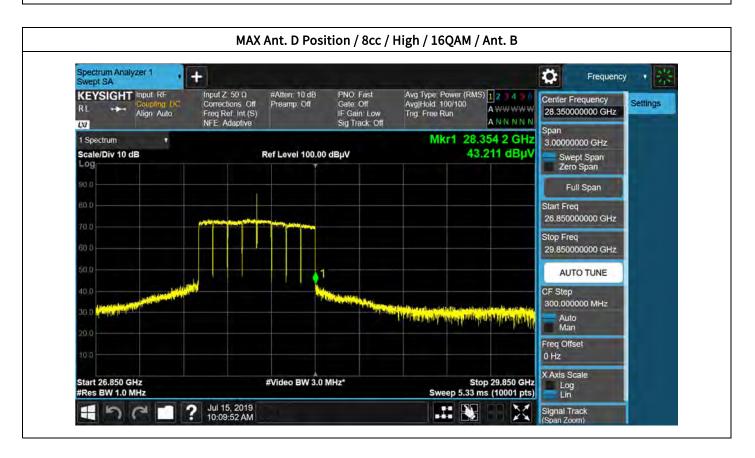




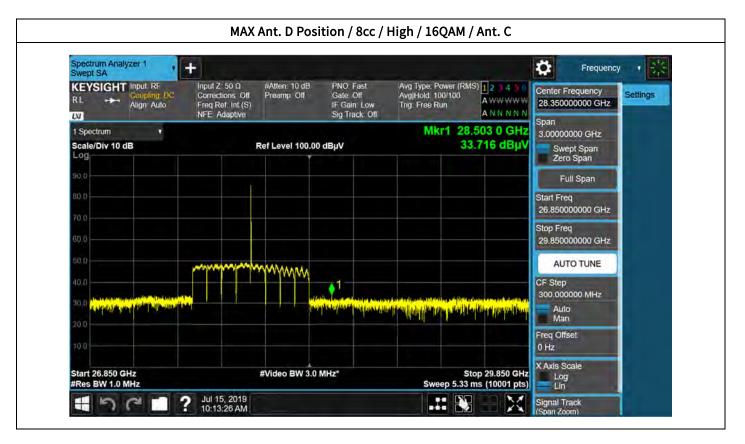


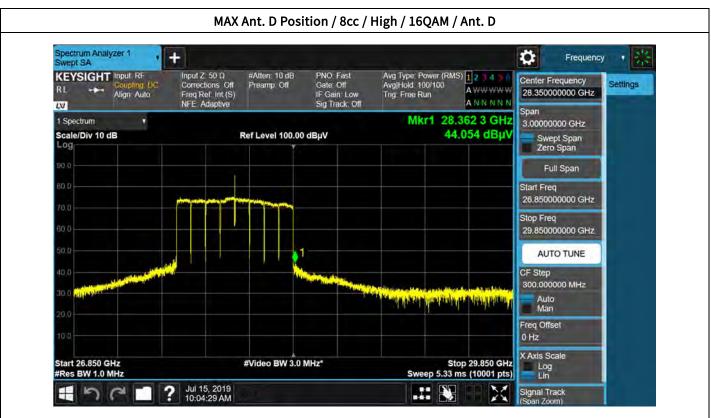




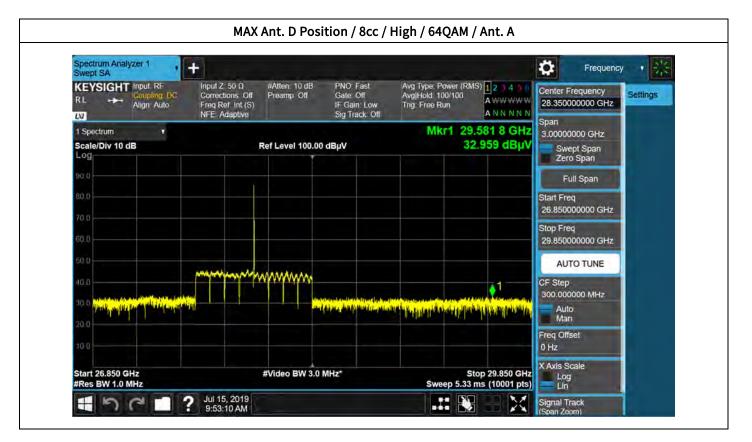


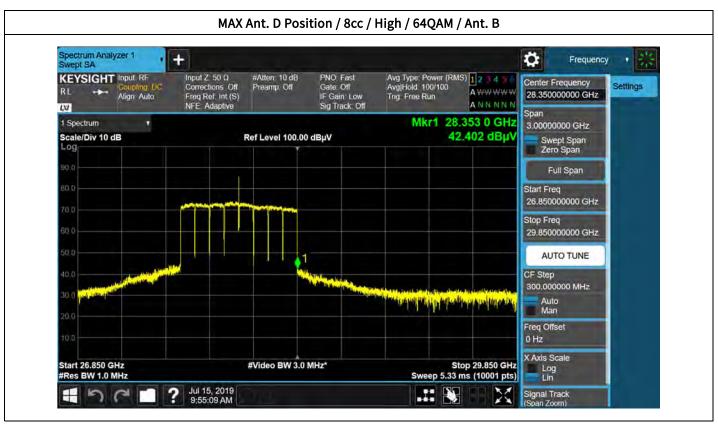




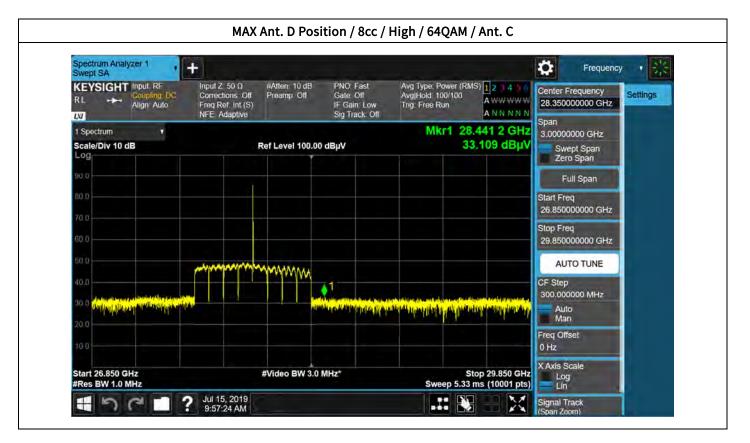


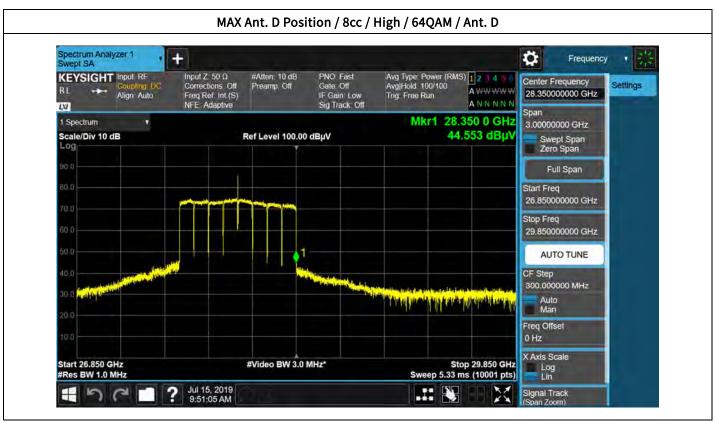














5.5. RADIATED SPURIOUS EMISSIONS

FCC Rules

Test Requirements:

§ 2.1051 Measurements required: Spurious emissions at antenna terminals.

The radio frequency voltage or powers generated within the equipment and appearing on a spurious frequency shall be checked at the equipment output terminals when properly loaded with a suitable artificial antenna. Curves or equivalent data shall show the magnitude of each harmonic and other spurious emission that can be detected when the equipment is operated under the conditions specified in § 2.1049 as appropriate. The magnitude of spurious emissions which are attenuated more than 20 dB below the permissible value need not be specified.

§ 30.203 Emission limits.

(a) The conductive power or the total radiated power of any emission outside a licensee's frequency block shall be -13 dBm/MHz or lower. However, in the bands immediately outside and adjacent to the licensee's frequency block, having a bandwidth equal to 10 percent of the channel bandwidth, the conductive power or the total radiated power of any emission shall be -5 dBm/MHz or lower.

(b)(1) Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater.

(2) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges as the design permits.

(3) The measurements of emission power can be expressed in peak or average values.

EIRP Test Procedures:

The measurement is performed in accordance with Section 5.7.4 of ANSI C63.26.

5.7.4 Spurious unwanted emission measurements

a) Set the spectrum analyzer start frequency to the lowest frequency generated by the EUT, without going below 9 kHz, and the stop frequency to the lower frequency covered by the measurements previously performed in 5.7.3. As an alternative, the stop frequency can be set to the value specified in 5.1.1, depending on the EUT operating range, if the resulting plot can clearly demonstrate compliance for all frequencies not addressed by the out-of-band emissions measurements performed as per 5.7.3.

b) When using an average power (rms) detector, ensure that the number of points in the sweep ≥ 2 × (span / RBW). This may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the spectrum analyzer capabilities. This requirement does not apply to peak-detected power measurements. When average power is specified by the applicable regulation, a peak-detector can be utilized for preliminary measurements to accommodate wider frequency spans. Any emissions found in the preliminary measurement to exceed the applicable limit(s) shall be further examined using a power averaging (rms) detector with the minimum number of measurement points as defined above. c) The sweep time should be set to auto-couple for performing peak-detector measurements. For measurements that use a



power averaging (rms) detector, the sweep time shall be set as described for out-of-band emissions measurements in item d) of 5.7.3.

d) Identify and measure the highest spurious emission levels in each frequency range. It is not necessary to re-measure the out-of-band emissions as a part of this test. Record the frequencies and amplitudes corresponding to the measured emissions and capture the data plots.

e) Repeat step b) through step d) for the upper spurious emission frequency range if not already captured by a wide span measurement performed as per the alternative provided in step a). The upper frequency for this measurement is defined in 5.1.1 as a function of the EUT operating range.

f) Compare the results with the corresponding limit in the applicable regulation.

g) The test report shall include the data plots of the measuring instrument display and the measured data.

TRP Test Procedures:

The measurement is performed in accordance with Section 4.4.3.3.2 of KDB 842590 v01 (2019-04).

- a) Align the EUT with a chosen xy-plane and the xz-plane of the antenna measurement coordinate system.
 NOTE 1 For harmonics and spurious emission frequencies which are beamforming as identified in exploratory scan, it may be required to align the orthogonal cuts to include the peak based on exploratory scans.
- b) Measure the EUT dimensions, i.e., depth (d), width (w), and height (h); see Figure A.1 in Appendix A.
- c) Calculate the spherical and cylindrical diameters (D and Dcyl) using Equations (A.1) and (A.2) (see Appendix A).
- d) For the highest frequency (smallest wavelength) of the frequency band measured, calculate the reference angular steps $\Delta\theta$ ref and $\Delta\phi$ ref using Equations (A.3) and (A.4).
- e) Set the grid spatial sampling step $\Delta \theta \leq \Delta \theta$ ref for the vertical angle and $\Delta \phi \leq \Delta \phi$ ref for the horizontal cut.
- f) For each emission frequency, measure the EIRP (as a sum of two orthogonal polarizations) at each spatial sampling step on the selected grid.
- g) For each emission frequency, calculate the average EIRP for both the cuts separately, and then take the average of these two average values.
- h) Add 2 dB as a correction factor to the averaged value computed in step g).
- i) If the TRP limit is exceeded, a third orthogonal cut in the yz-plane and using the Δθ angular step, can be added. Now, calculate the average values in all three cuts separately, and then take the average value of these three average values.
- j) Add 1.5 dB as a correction factor to the averaged value computed in step i).
- k) Evaluate the pass/fail decision by comparing TRP from step h) or step j) against the applicable TRP limit.





Note:

- 1) Spurious emission test is performed up to 100 GHz frequency according to section 5.1.1 of ANSI C63.26 -2015.
- 2) Measurement distance is 3 m at frequency below 18 GHz and other frequencies applied far field condition on page 8.
- 3) In case of 9 kHz to 30 MHz, the reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
- 4) Emissions in 26.5 GHz to 29.35 GHz band can be founded in section 5.1 through 5.4 of this report
- 5) Test plot doesn't include any factors and all factors such as AFCL is calculated in tabular data.
- 6) In this test, AFCL factor consists of antenna factor, cable loss, mixer loss, amplifier gain and duty correction.
- 7) Emissions value is first converted by distance factor as follow.

Converted value (dBm) = Measured Value (dBuV) + 20 LOG(D)-104.77

8) Final spurious emissions result is calculated as follows.

Spurious Emissions = Converted Value (dBm) + AFCL

- 9) Refer to conducted output power test, spurious emissions test is performed about the worst case of modulation type (QPSK).
- 10) Sample calculations30 MHz ~ 1 GHz

9.82 dBμV (measured) + 11.48 (distance) - 104.77 + 16.01(AFCL) = -67.46dBm

1 GHz ~ 18 GHz

```
19.158 dBμV (measured) + 11.48 (distance) - 104.77 + 43.92 (AFCL) = -30.21 dBm
```

18 GHz ~ 26.5 GHz

24.995 dBμV (measured) + 11.48 (distance) - 104.77 + 45.82 (AFCL) = -22.48 dBm

29.35 GHz ~ 40 GHz

25.000 dBμV (measured) + 11.48 (distance) - 104.77 + 48.10 (AFCL) = -20.19 dBm





40 GHz ~ 60 GHz

9.65 dBμV (measured) + 11.48 (distance) - 104.77 + 47.70 (AFCL) = -35.94 dBm

60 GHz ~ 90 GHz

6.99 dBμV (measured) + 11.48 (distance) - 104.77 + 60.06 (AFCL) = -26.24 dBm

90 GHz ~ 100 GHz

7.581 dBμV (measured) + 11.48 (distance) - 104.77 + 57.85 (AFCL) = -27.86 dBm



Test Results:

Tabular Data of Radiated Spurious Emissions

E ven	CU	Mad	Distance	Ant.	Frequency	Measured	Converted	AFCL	Limit	Result
Freq.	СН	Mod	(m)	Pol.	(MHz)	(dBuV)	(dBm)	(dB)	(dBm)	(dBm)
				Н	38.366	9.82	-83.47	16.01		-67.46
20 MU	L			V	38.366	9.71	-83.58	16.01		-67.57
30 MHz ~1 GHz	М			Н	38.366	10.43	-82.86	16.01		-66.85
~1 GH2 (1cc)	IVI			V	38.366	10.12	-83.17	16.01		-67.16
(100)				Н	38.366	10.07	-83.22	16.01		-67.21
	Н			V	38.366	10.35	-82.94	16.01		-66.93
				Н	38.366	10.22	-83.07	16.01		-67.06
20 MU	L			V	143.975	10.2	-83.09	14.85		-68.24
30 MHz ~1 GHz	м			Н	38.366	10.66	-82.63	16.01		-66.62
~1 GH2 (8cc)	IVI			V	38.366	10.09	-83.20	16.01		-67.19
(800)	н			Н	38.366	9.99	-83.30	16.01		-67.29
	п	QPSK	3.75	V	38.366	9.78	-83.51	16.01	-13	-67.50
	L	QPSN	5.75	Н	16243	19.158	-74.13	43.92	-15	-30.21
1 10	L			V	14180	18.801	-74.49	46.21		-28.28
1~18 GHz	М			Н	14567	18.541	-74.75	47.01		-27.74
(1cc)	IVI			V	17980	18.488	-74.80	52.53		-22.28
(100)	н			Н	17293	18.701	-74.59	46.79		-27.80
	п			V	17686	18.592	-74.70	49.38		-25.32
				Н	17120	18.636	-74.65	46.06		-28.60
1 10	L			V	15186	18.977	-74.31	45.45		-28.87
1~18	14			Н	13699	18.75	-74.54	45.39		-29.15
GHz	М			V	14666	19.273	-74.02	46.66		-27.36
(8cc)				Н	14580	18.709	-74.58	46.53		-28.06
	Н			V	14361	18.931	-74.36	46.40		-27.96

Note:

1. Because of no critical emissions are detected in the test, only peak value is recorded in this report.





Гиод	<u></u>	Mad	Distance	Ant.	Frequency	Measured	Converted	AFCL	Limit	Result
Freq.	СН	Mod.	(m)	Angle	(GHz)	(dBuV)	(dBm)	(dB)	(dBm)	(dBm)
				45	25.985	24.995	-68.29	45.82		-22.48
	L			135	25.872	25.186	-68.10	45.82		-22.29
18~26.5				45	25.986	24.169	-69.12	45.82		-23.31
GHz (1cc)	М			135	25.828	24.56	-68.73	45.82		-22.91
				45	25.991	23.834	-69.46	45.82		-23.64
	Н			135	25.994	24.572	-68.72	45.82		-22.90
				45	*25.934	30.6	-62.69	45.82		-16.87
	L			135	*25.934	35.63	-57.66	45.82		-11.84
18~26.5				45	*25.959	35.72	-57.57	45.82		-11.75
GHz (8cc)	М			135	*25.959	35.63	-57.66	45.82		-11.84
				45	26.494	26.676	-66.61	46.00		-20.62
	Н	3.75	135	*25.984	36.97	-56.32	45.82	ł	-10.50	
			3.15	45	*33.120	40.050	-53.24	48.10		-5.14
20.25	L			135	*33.120	43.59	-49.70	48.10		-1.60
29.35	м	QPSK		45	*33.450	35.41	-57.88	48.10	-13	-9.78
~40 GHz	М	QPSN		135	*33.450	40.82	-52.47	48.10		-4.37
(1cc)				45	*33.900	31.44	-61.85	48.41		-13.44
	Н			135	*33.900	34.640	-58.65	48.41		-10.24
				45	*33.480	38.380	-54.91	48.10		-6.81
20.25	L			135	*33.480	39.36	-53.93	48.10]	-5.83
29.35	м			45	*33.510	39.36	-53.93	48.10		-5.83
~40 GHz (8cc)	М			135	*33.510	39.27	-54.02	48.10]	-5.92
(800)				45	*33.540	34.02	-59.27	48.10		-11.17
	Н			135	*33.540	37.86	-55.43	48.10		-7.33
				45	43.567	9.65	-83.64	47.70		-35.94
40.00	L			135	43.424	9.48	-83.81	47.70		-36.11
40~60	N.4		2.75	45	43.292	9.60	-83.69	47.70		-35.99
GHz	М		3.75	135	43.279	9.44	-83.85	47.70]	-36.15
(1cc)				45	43.427	9.37	-83.92	47.70		-36.22
	Н			135	43.422	9.59	-83.70	47.70		-36.00

Note:

1. Because of no critical emissions are detected in the test, only peak value is recorded in this report.

2. ** This checked frequency is measured by TRP, because it is EIRP fail



TRP Results.

CC / CH / Mod	Frequency [GHz]	Result [dBm]	Limit [dBm]	Margin [dB]
8CC / L / QPSK	25.934	-19.39	-13	6.39
8CC / M / QPSK	25.959	-19.33	-13	6.33
8CC / H / QPSK	25.984	-19.28	-13	6.28
1CC / L / QPSK	33.120	-15.31	-13	2.31
1CC / M / QPSK	33.450	-16.36	-13	3.36
1CC / H / QPSK	33.900	-17.16	-13	4.16
8CC / L / QPSK	33.480	-16.10	-13	3.10
8CC / M / QPSK	33.510	-16.27	-13	3.27
8CC / H / QPSK	33.540	-16.60	-13	3.60



Report No. HCT-RF-1907-FC011-R2

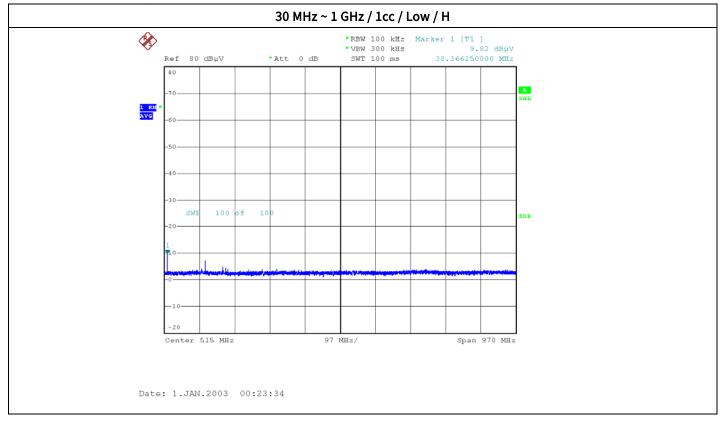
1			Distance	Ant.	Frequency	Measured	Converted	AFCL	Limit	Result
Freq.	СН	Mod.	(m)	Angle	(GHz)	(dBuV)	(dBm)	(dB)	(dBm)	(dBm)
				45	43.154	11.64	-81.65	47.30		-34.35
	L			135	43.837	11.71	-81.58	47.96		-33.62
40~60				45	43.566	11.72	-81.57	47.70		-33.87
GHz	М		3.75	135	43.841	11.65	-81.64	47.96		-33.68
(8cc)				45	41.492	11.60	-81.69	47.61		-34.08
	Н			135	43.983	11.71	-81.58	47.99		-33.59
				45	64.726	6.99	-86.30	60.06		-26.24
	L			135	64.703	6.94	-86.35	60.06		-26.29
60~90				45	64.726	6.92	-86.37	60.06		-26.31
GHz (1cc)	М			135	64.938	7.11	-86.18	59.84		-26.34
				45	68.456	7.01	-86.28	54.07		-32.21
	Н	3.75	2.75	135	64.501	7.02	-86.27	60.06		-26.21
			3.15	45	64.279	7.08	-86.21	61.18		-25.03
	L			135	64.504	6.99	-86.30	60.06		-26.24
60~90	М	QPSK		45	64.109	6.97	-86.32	61.18	-13	-25.14
GHz (8cc)	М	QPSK		135	64.509	7.02	-86.27	60.06	-15	-26.21
	Н			45	64.721	6.91	-86.38	60.06		-26.32
	п			135	64.925	7.08	-86.21	60.04		-26.17
	L			45	98.393	7.581	-85.71	57.85		-27.86
	L			135	98.768	7.623	-85.67	57.85		-27.82
90~100	М			45	99.597	7.591	-85.70	53.18		-32.52
GHz (1cc)	IVI			135	99.531	7.571	-85.72	52.99		-32.73
	н			45	98.807	7.578	-85.71	57.85		-27.86
	11		3.75	135	99.517	7.798	-85.49	52.99		-32.50
			5.15	45	99.511	7.672	-85.62	52.99		-32.63
	L			135	99.940	7.421	-85.87	53.03		-32.84
90~100	М			45	99.566	7.696	-85.59	52.99		-32.60
GHz (8cc)	IVI			135	99.525	7.620	-85.67	52.99		-32.68
	Н			45	98.775	7.643	-85.65	57.85		-27.80
	11			135	99.237	7.516	-85.77	52.99		-32.78

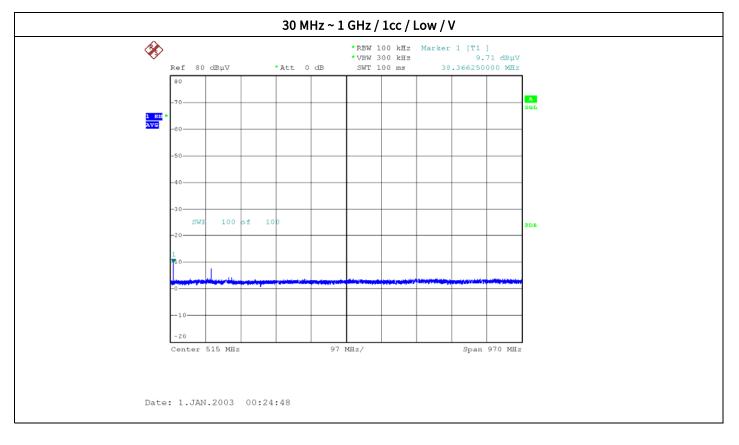
Note:

1. Because of no critical emissions are detected in the test, only peak value is recorded in this report.

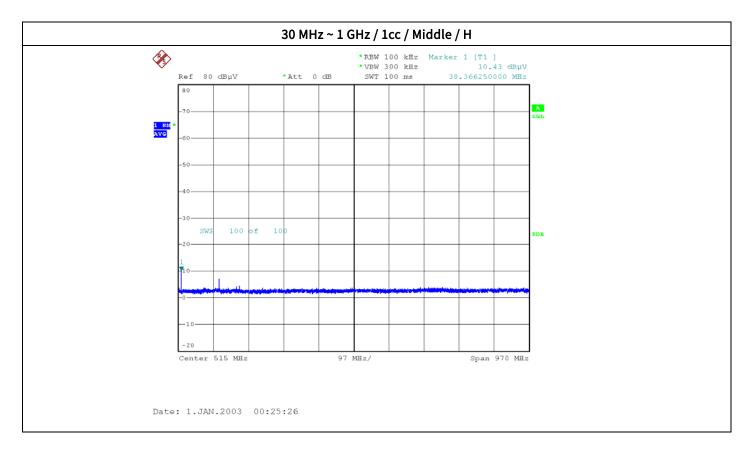


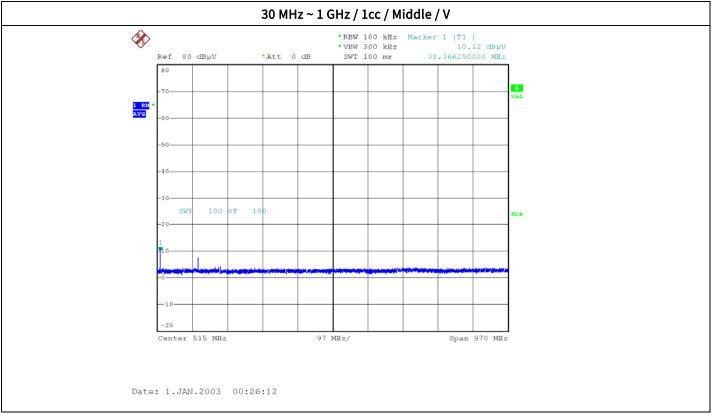
Plot data of Radiated Spurious Emissions



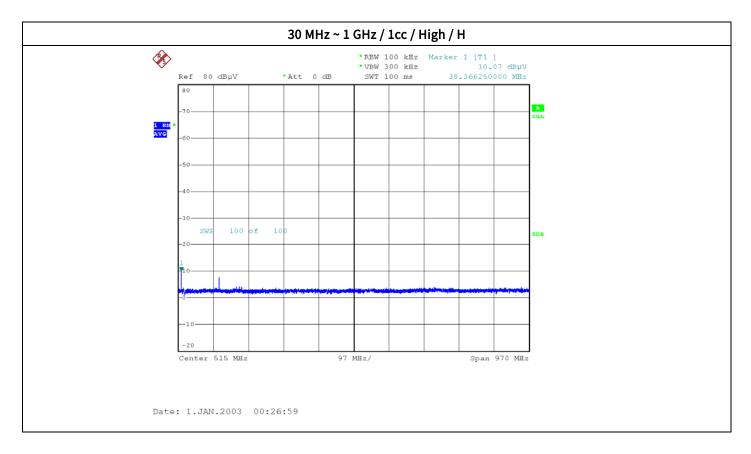


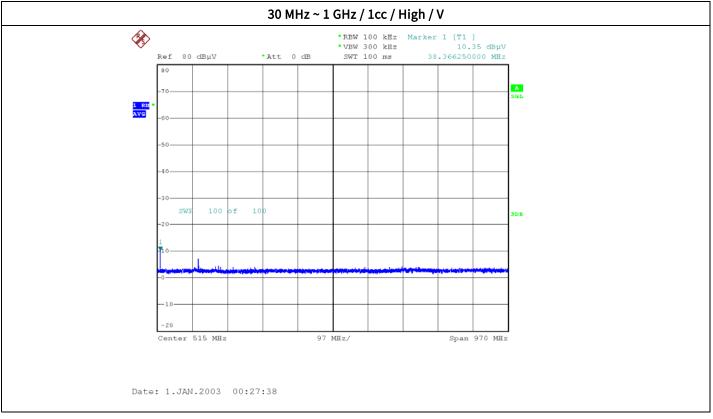




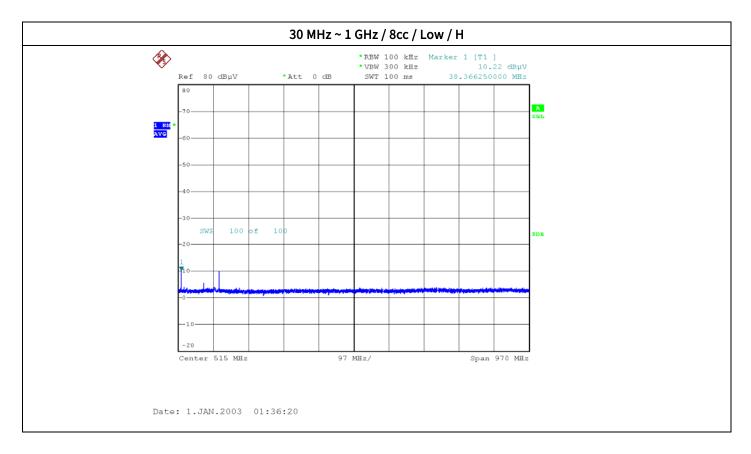


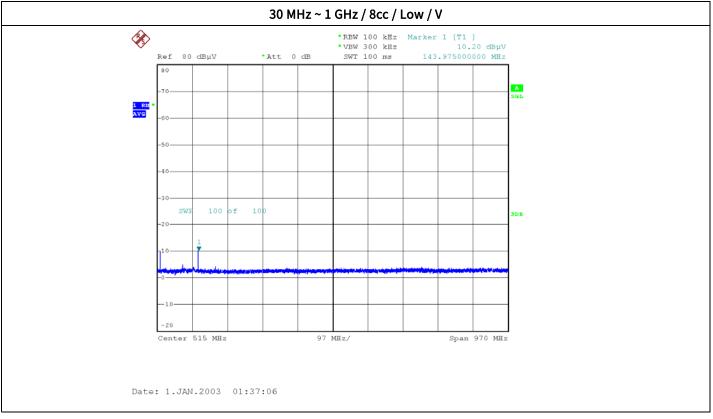




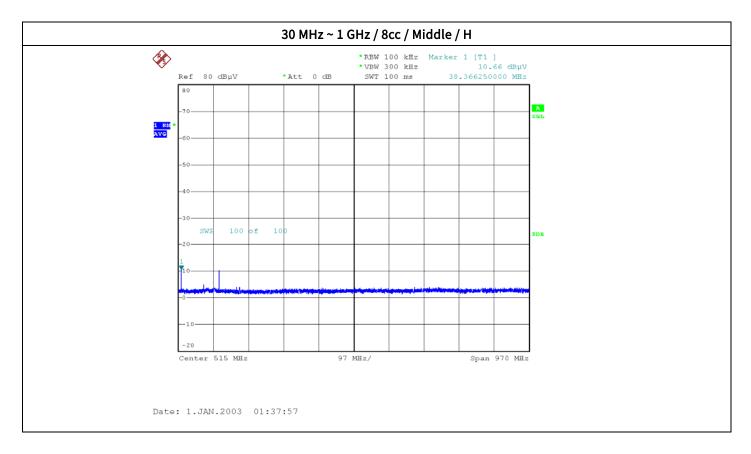


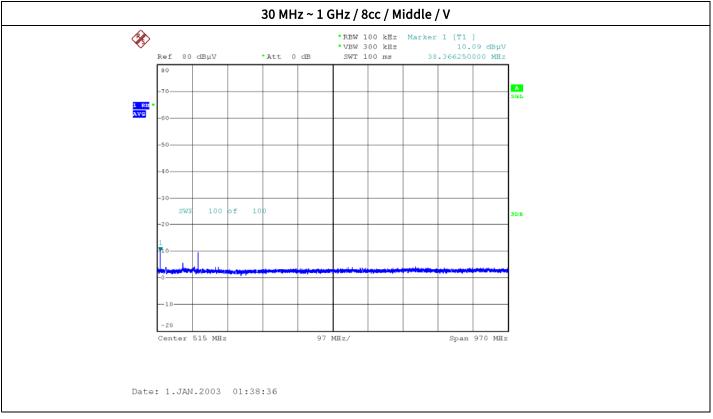




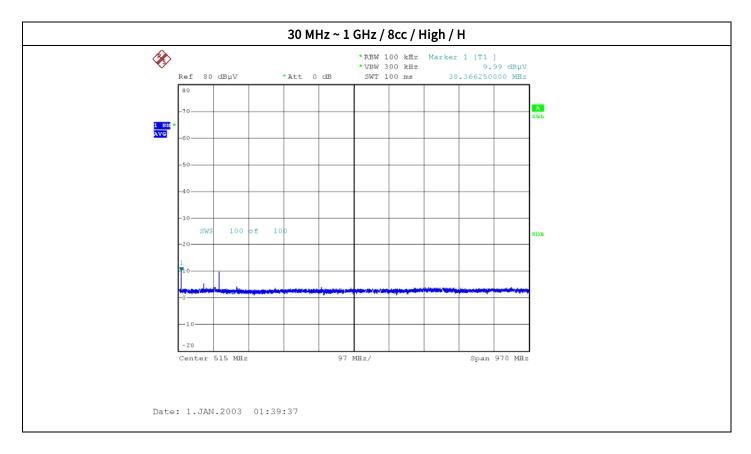


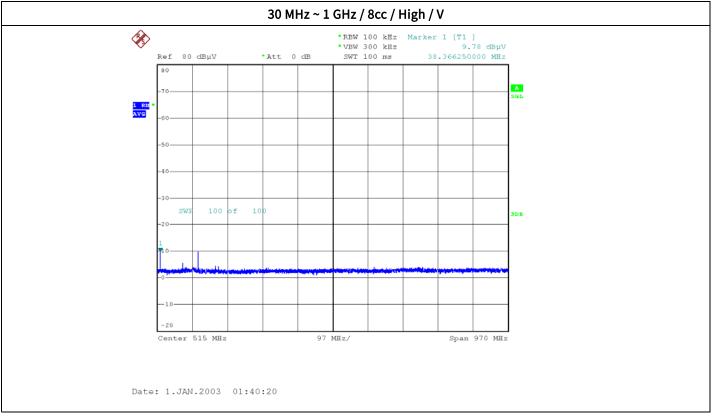












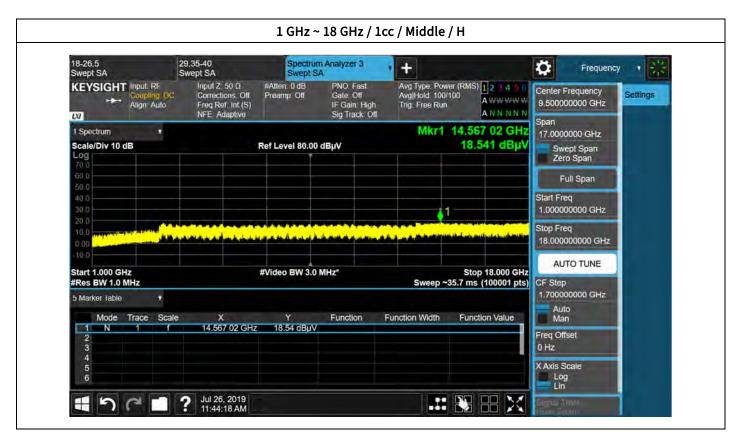




18-26.5 Swept SA	29.35-40 Swept SA	Spectrum An Swept SA	alyzer 3	, +		Frequenc	y , 😤
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z 50 Q Corrections: Off Freq Ref. Int (S) NFE: Adaptive	Preamp Off O	PNO: Fast Sale: Off F Gain: High Sig Track: Off	Avg Type: Powe Avg Hold: 100/1 Trig: Free Run	r (RMS) 1 2 3 4 5 0 00 A WW WW W A N N N N N	Center Frequency 9.500000000 GHz	Settings
1 Spectrum Scale/Div 10 dB Log 70.0		Ref Level 80.00 dBµ	IV	Mkr1	14.180 44 GHz 18.801 dBµV	Span 17.0000000 GHz Swept Span Zero Span	
60.0						Full Span	
50 0 40 0 30.0				<u>-</u>		Start Freq 1.000000000 GHz	
20.0	A MARANA BANK MAR	LA LA LA LA LA LA LA	A de la desidad	and the second designed			
0.00	addition at 1923	and a set of the set	State of southing of a	2 . D. G. M. Handson	ramente que a como o presentari	Stop Freq 18.000000000 GHz	
-10.0		#Video BW 3.0 MHz			Stop 18.000 GHz	A CARE CONTRACTOR AND A CONTRACT OF A CARE OF	
0.00 -10.0 Start 1.000 GHz #Res BW 1.0 MHz					Stop 18.000 GHz 5.7 ms (100001 pts)	18.00000000 GHz AUTO TUNE CF Step	
0 00 -10 0 Start 1.000 GHz #Res BW 1.0 MHz 5 Marker Table T Mode Trace Scal	e X	#Video BW 3.0 MHz Y F	2*			18.000000000 GHz	
0 00 -10 0 Start 1.000 GHz #Res BW 1.0 MHz 5 Marker Table T		#Video BW 3.0 MHz Y F	2*	Sweep ~3	5.7 ms (100001 pts)	18.00000000 GHz AUTO TUNE CF Step 1.700000000 GHz Auto	

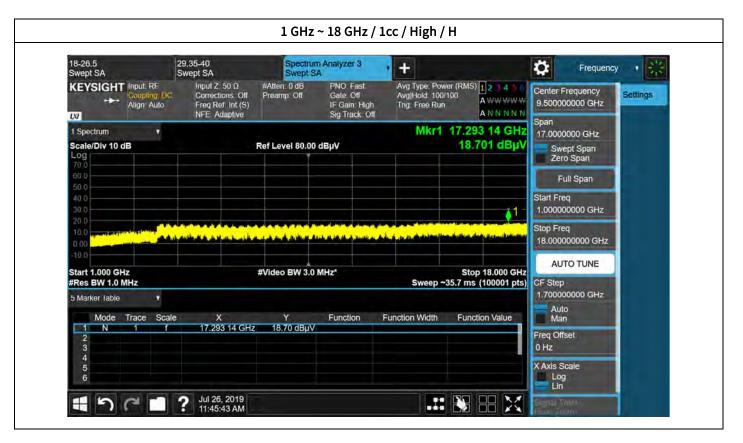
F-TP22-03 (Rev. 01)





18-26.5 Swept SA	29.35-40 Swept SA	Spectrun Swept S	n Analyzer 3 A	• +		Ö	requency , 😽
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z 50 Q Corrections: Off Freq Ref. Int (S) NFE: Adaptive	#Atten: 0 dB Preamp, Off	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Power (F Avg Hold 100/100 Trig: Free Run	2MS) 1 2 3 4 5 0 A WW WW W A N N N N N	Center Frequ 9.500000000	ocumya
1 Spectrum V Scale/Div 10 dB		Ref Level 80.00	dBµV		.979 77 GHz 18.488 dBµV	Span 17.0000000 Swept Sj Zero Spa	pan
60 0 50 0 40 0						Full Sp Start Freq	
30.0 20.0 10.0					The day production of the second	1.000000000 Stop Freq 18.00000000	
0.00							
-10.0 Start 1.000 GHz		#Video BW 3.0	MHz*		Stop 18.000 GHz ms (100001 pts)	AUTO T	UNE
-10.0		#Video BW 3.0		Sweep ~35.7	Stop 18.000 GHz ms (100001 pts)	AUTO TO CF Step 1.7000000000 Auto Man	
-10.0 Start 1.000 GHz #Res BW 1.0 MHz 5 Marker Table v				Sweep ~35.7	ms (100001 pts)	CF Step 1.700000000	





Align Auto Freq F	2:50 0 #Atten: 0 dB PNO. Fast dions: Off Preamp. Off Gale: Off IF Gain: High Adaptive Sig Track: Of Ref Level 80.00 dBµV		Span 17.0000000 GHz
1 Spectrum v Scale/Div 10 dB Log 70 0 60 0	Ref Level 80.00 dBµV		17.0000000 GHz
			Zero Span
40.0			Full Span Start Freq 1.000000000 GHz
10.0			Stop Freq 18.000000000 GHz
Start 1.000 GHz #Res BW 1.0 MHz	#Video BW 3.0 MHz*	Stop 18.000 GHz Sweep ~35.7 ms (100001 pts)	CF Step
	X Y Function	Function Width Function Value	1.70000000 GHz Auto Man
2 3	86 35 GHz 18.59 dBµV		Freq Offset 0 Hz
4 5 6			X Axis Scale





18-26.5 Swept SA	29.35-40 Swept SA	Spectrum Swept SA	Analyzer 3	, +		Frequency	y , 影
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z 50 Q Corrections: Off Freq Ref. Int (S) NFE: Adaptive	#Atten: 0 dB Preamp, Off	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Pow Avg Hold 100/ Trig: Free Run	er (RMS) 1 2 3 4 5 0 A WW WW W A N N N N N	Center Frequency 9.500000000 GHz	Settings
1 Spectrum v Scale/Div 10 dB Log 70.0		Ref Level 80.00 d	1BμV	Mkr1	15.186 33 GHz 18.977 dBµV	Span 17.0000000 GHz Swept Span Zero Span	
60 0 50 0						Full Span	
40.0					<u>_1</u>	Start Freq 1.000000000 GHz	
20.0	A CONSTRUCTION		a sector of the sector of	and the second second		Stop Freq	
0.00	A dia	al Allahar Ada	advice a spinic a	*	want if dat for a subscriber	18.000000000 GHz	
0.00 -10.0 Start 1.000 GHz		#Video BW 3.0 N			Stop 18.000 GHz	18.000000000 GHz	
0 00 -10 0 Start 1.000 GHz #Res BW 1.0 MHz 5 Marker Table T			NHz*	Sweep ~:	Stop 18.000 GHz 35.7 ms (100001 pts)	18.00000000 GHz AUTO TUNE CF Step 1.700000000 GHz Auto	
0.00 -10.0 Start 1.000 GHz #Res BW 1.0 MHz		#Video BW 3.0 N Y	NHz*		Stop 18.000 GHz	18.00000000 GHz AUTO TUNE CF Step 1.700000000 GHz	

F-TP22-03 (Rev. 01)





18-26.5 Swept SA	29.35-40 Swept SA	Spectrum Analyzer 3 Swept SA	• +	Frequency	, , 梁
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z 50 Ω Corrections: Off Freq Ref: Int (S) NFE: Adaptive	#Atten:0 dB PNO:Fast Preamp Off Gate Off IF Gain:Hi Sig Track	Avg Hold 100/100 A WW WW W	9.0000000 GHz	Settings
1 Spectrum Scale/Div 10 dB Log 70.0		Ref Level 80.00 dBµV	Mkr1 14.665 96 GHz 19.273 dBµV	11.000000000112	
G0 0 50 0 40 0 30 0 20 0			1	Full Span Start Freq 1.000000000 GHz	
10.0 0.00 -10.0				Stop Freq 18.000000000 GHz	
		#Video BW 3.0 MHz*	Stop 18.000 GHz Sweep ~35.7 ms (100001 pts)		
Start 1.000 GHz #Res BW 1.0 MHz					
#Res BW 1.0 MHz 5 Marker Table • Mode Trace Scal		Y Function	Function Width Function Value	Auto	
#Res BW 1.0 MHz 5 Marker Table T	e X 14.665 96 GHz		Function Width Function Value	Auto	





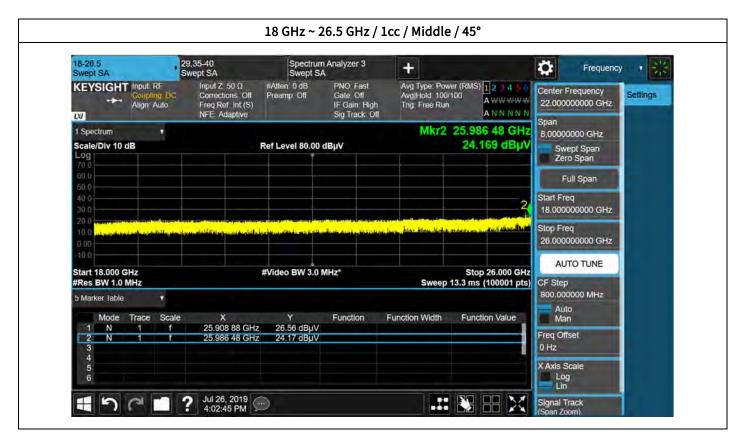
18-26.5 Swept SA	29.35-40 Spectrum Anal Swept SA Swept SA	lyzer 3 , 🕂	Frequency	- **
KEYSIGHT Input: RF Coupling: DC Align: Auto	Corrections Off Preamp Off Ga Freq Ref: Int (S) IF	NO. Fast Avg Type: Power (RMS) 123450 ate: Off Avg Hold: 100/100 A www.www Gain: High Trig: Free Run A N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N.N	9.50000000 GHz	ettings
1 Spectrum v Scale/Div 10 dB Log 70.0	Ref Level 80.00 dBµV	Mkr1 14.360 64 GHz 18.931 dBμV	Span 17.0000000 GHz Swept Span Zero Span	
60.0			Full Span	
50 0 40 0 30.0		1	Start Freq 1.000000000 GHz	
20.0 10.0		the second s	Stop Freq 18.000000000 GHz	
0.00			Teacher and the second second second	
-10.0 Start 1.000 GHz	#Video BW 3.0 MHz*	Stop 18.000 GHz		
-10.0 Start 1.000 GHz #Res BW 1.0 MHz				
Start 1.000 GHz #Res BW 1.0 MHz 5 Marker Table T Mode Trace Scal	#Video BW 3.0 MHz*	Stop 18.000 GHz	CF Step	
Start 1.000 GHz #Res BW 1.0 MHz 5 Marker Table T	#Video BW 3.0 MHz*	Stop 18.000 GHz Sweep ~35.7 ms (100001 pts)	CF Step 1.700000000 GHz	

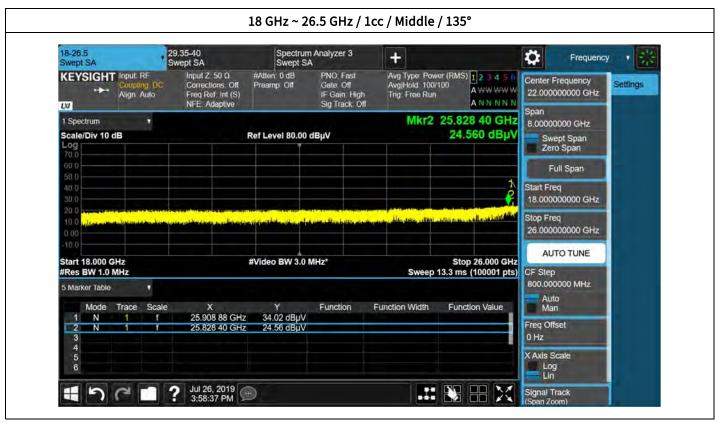




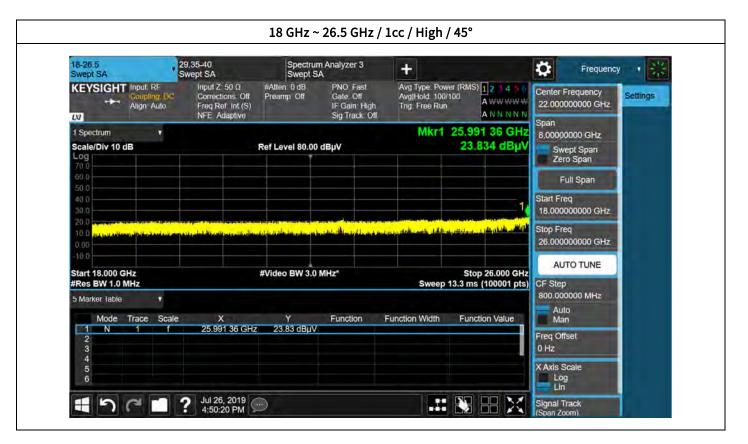
18-26.5 Swept SA	29.35-40 Spectrur Swept SA Swept S	n Analyzer 3 A	+	Frequency	• 影
KEYSIGHT Input: RF Coupling: DC Align: Auto	Input Z 50 Ω #Atten: 0 dB Corrections: Off Preamp Off Freq Ref: Int (S) NFE: Adaptive	PNO: Fast Gate: Off IF Gain: High Sig Track: Off	Avg Type: Power (RMS) 12 14 5 Avg Hold 100/100 Trig: Free Run A N N N N	N	Settings
1 Spectrum Scale/Div 10 dB Log	Ref Level 80.00	dBµV	Mkr2 25.871 68 GH 25.186 dBµ		
70.0				Full Span	
40.0			Q1	Start Freq 18.00000000 GHz	
20.0 10.0 .000 .10.0	warre die readministration for the former plan to the device of the	an para da kana	and all the product with the state of the state (184	Stop Freq 26.000000000 GHz	
Start 18.000 GHz	#Video BW 3.0	MHz*	Stop 26.000 GH		
#Res BW 1.0 MHz 5 Marker Table T Mode Trace Scale		Function F	Sweep 13.3 ms (100001 pt:	S) CF Step 800.000000 MHz Auto Man	
1 N 1 f 2 N 1 f 3	25.633 92 GHz 29.23 dBµV 25.871 68 GHz 25.19 dBµV			Freq Offset 0 Hz	
4 5 6				X Axis Scale	

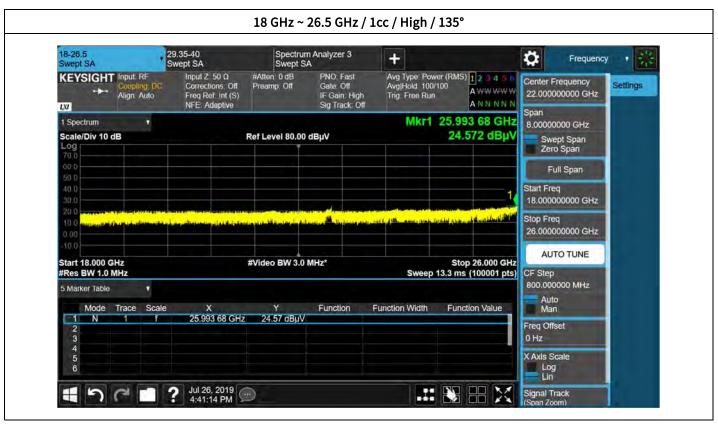




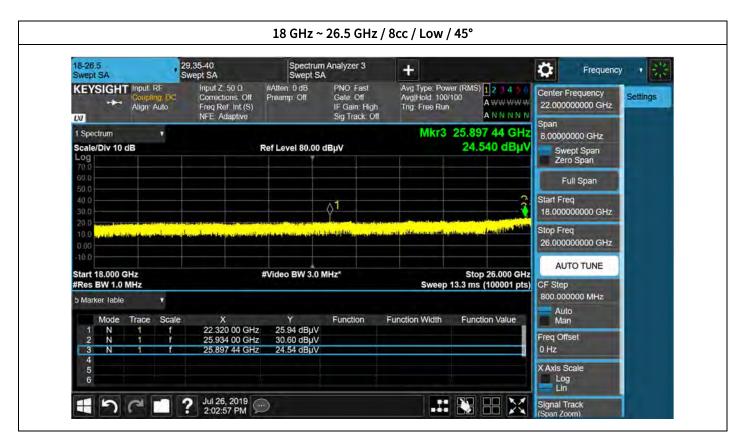


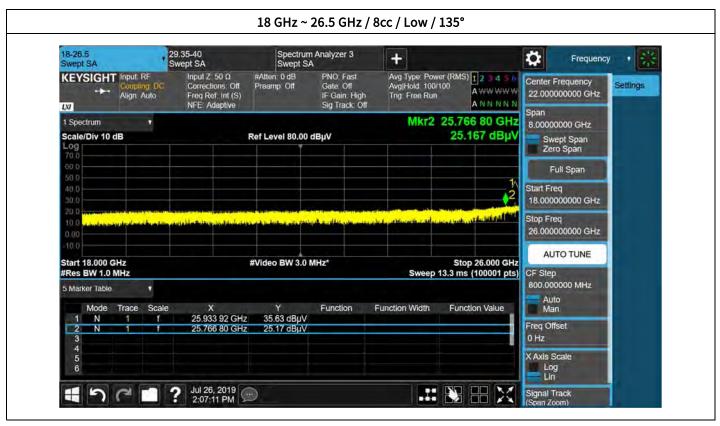




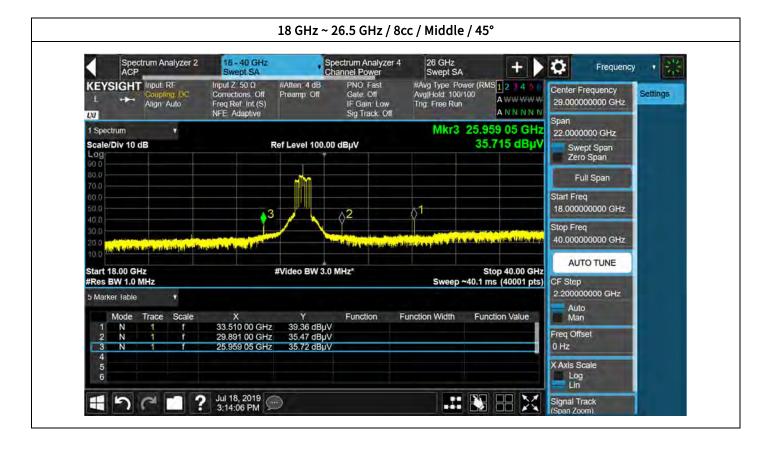












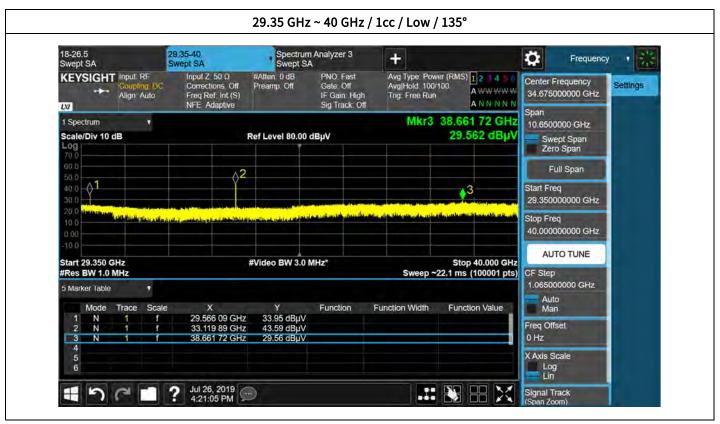




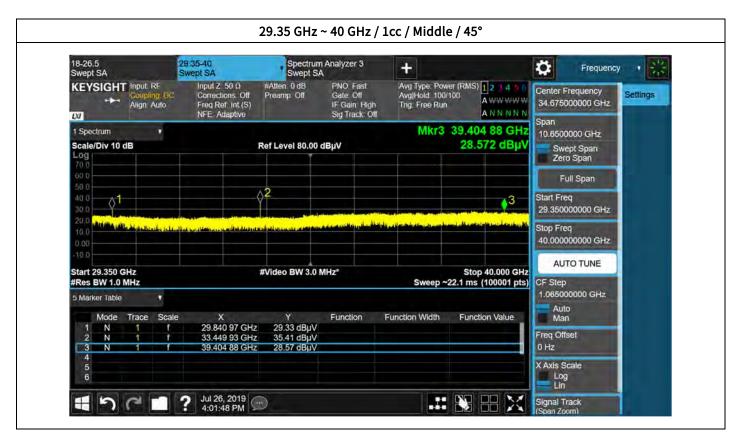
Spectrum Analyzer 1 Swept SA	+		🗘 Frequency , 💥
KEYSIGHT Input RF Coupling, DC Align: Auto	Input Z 50 0 #Atten 0 dB PNO. Fast Corrections: Off Preamp. Off Gate: Off Freq Ref. Int (S) IF Gain: High NFE: Adaptive Sig Track: Off	Avg Type: Power (RMS) 1 2 3 4 5 0 Avg Hold: 100/100 A WW WWW A WW WWW Trig: Free Run A N N N N	Center Frequency 22.250000000 GHz
1 Spectrum Scale/Div 10 dB	Ref Level 80.00 dBµV	Mkr2 26.463 025 GHz 26.869 dBµV	Span 8.50000000 GHz Swept Span Zero Span Full Span Start Freq 18.00000000 GHz
10 0 10 0 10 0 10 0 Start 18.000 GHz #Res BW 1.0 MHz 5 Marker Table	#Video BW 3.0 MHz*	Stop 26.500 GHz Stop 20.0 ms (100001 pts)	Stop Freq 26.50000000 GHz AUTO TUNE CF Step 850.000000 MHz
Mode Trace Scale 1 N 1 f 2 N 1 f 3	X Y Function Fi 25.984 050 GHz 36.97 dByV 26.463 025 GHz 26.87 dByV	Inction Width Function Value	Auto Man Freq Offset 0 Hz X Axis Scale

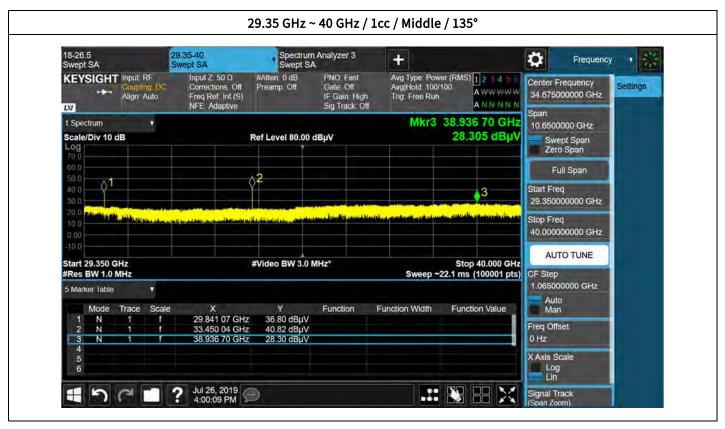






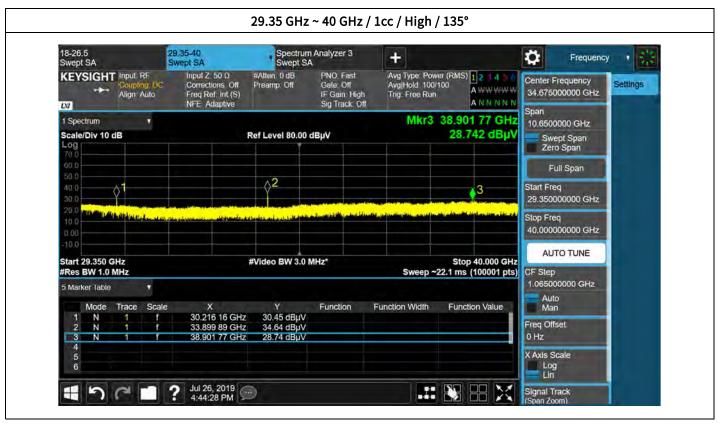






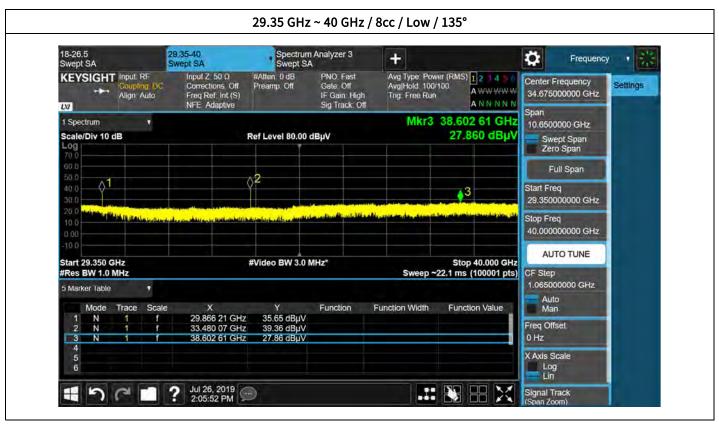










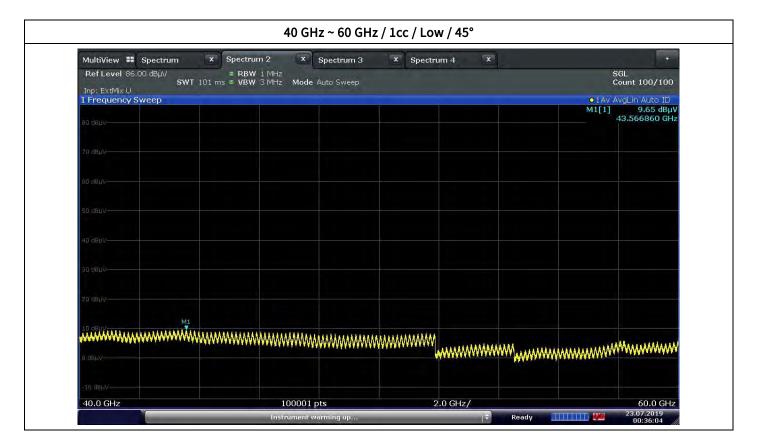






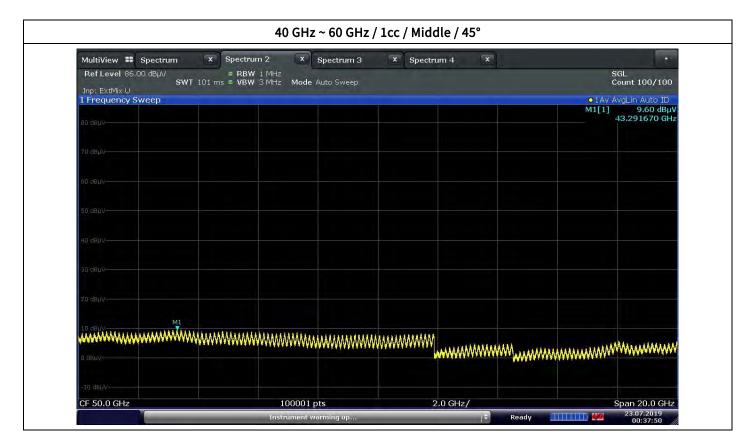






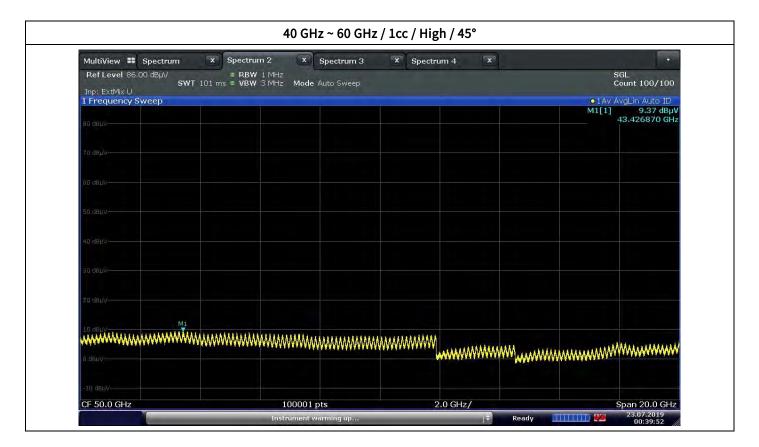
MultiView 🎫 Spectrum	x Spectrum 2	× Spectrum 3	X Spectrum 4 X	
Ref Level 86.00 dBµV SW	= RBW 1 MHz T 101 ms = VBW 3 MHz	Mode Auto Sweep		SGL Count 100/100
1 Frequency Sweep				•1Av AvgLin Auto ID
				M1[1] 9.48 dBµ 43.424270 Gł
		ALL		
0.980A	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa			MMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
-10 dB//V		00001 pts	2.0 GHz/	Span 20.0 GH





MultiView 📰 Spectrum	X Spectrum 2	Spectrum 3	× Spectrum 4	x		
Ref Level 86.00 dBµV Inp: ExtMix U	= RBW 1 MHz WT 101 ms = VBW 3 MHz	Mode Auto Sweep				GL Count 100/100
1 Frequency Sweep						vgLin Auto ID
					M1[1]	9,44 dBµ\ 43.279470 GH
70 dBuV-						
10 dBµV						
******		NMMMMMMMMM	WWWWWW	AAAAAAAA	******	www.www
	·····		HANTY YYYYYYYYYYY	MMAAAAAAA	1444444444444	





Ref Level 86.00 dBµV = RE SWT 101 ms = VE Inp: ExtMix U 1 Frequency Sweep	W 1 MHz W 3 MHz Mode Auto Sweep		SGL
			Count 100/100
			•1Av AvgLin Auto ID
BO deuv			M1[1] 9.59 dBµ 43.421870 GH
20 dBuV-			
BO dBUV-			
M1			
10 BBW	***	*****	
	aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa		AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
-10 dBiV-			



40 GHz ~ 60 GHz / 8cc / Low / 45°						
MultiView 🖹 Spectrum			\ ₹			
Ref Level 86.00 dBµV SWT 101 r Inp: ExtMix U	■ RBW 1 MHz ns ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100			
1 Frequency Sweep			💿 1 Rm Avg			
80 dBµV			M1[1] 11.64 dBµ\ 43,154470 GH:			
70 dBµV						
60 dBµV						
50 dBµV						
40 dBµV						
30 dBµV						
20 dBµV						
MI						
	******		······································			
0 dBµV						
-10 dBµV						
CF 50.0 GHz	100001 pts	2.0 GHz/	Span 20.0 GHz			

40 GHz ~ 60 GHz / 8cc / Low / 135°					
MultiView Spectrum			×		
Ref Level 86.00 dBμV SWT 10 Inp: ExtMix U	■ RBW 1 MHz 1 ms ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100		
1 Frequency Sweep			1Rm Avg		
80 dBµV-			M1[1] 11.71 dBµ 43.837260 GH		
70 dBµV					
60 dBµV					
50 dBµV					
40 dBµV					
30 dBµV					
20 dBµV	P				
MI					
0 d8µV	······	MANNA WANNA WA			
-10 dBµV					
CF 50.0 GHz	100001 pts	2.0 GHz/	Span 20.0 GHz		



40 GHz ~ 60 GHz / 8cc / Middle / 45°					
MultiView 🖹 Spectrum					
Ref Level 86.00 dBµV Inp: ExtMix U	■ RBW 1 MHz t ms ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100		
1 Frequency Sweep			1Rm Avg		
80 dBµV			M1[1] 11.72 dBµ 43.566060 GH		
70 dBµV					
60 dBuV					
50 dBµV-					
40 dBµV					
30 dBµV					
20 dBµV					
MI	·······	**************************************			
0 dBµV		WW	·····		
-10 dBµV					
CF 50.0 GHz	100001 pts	2.0 GHz/	Span 20.0 GHz		

			cc / Middle / 135		
MultiView Spectrun	1				V
Ref Level 86.00 dBµV Inp: ExtMix U	■ RBW 1 MHz 101 ms ■ VBW 3 MHz Md	ode Auto Sweep			SGL Count 100/100
1 Frequency Sweep					iRm Avg
80 dBµV					M1[1] 11.65 dBµ\ 43.841460 GH:
70 dBµV					
60 dBµV					
50 dBµV			1		
40 dBµV					
30 dBµV					
20 dBµV					

	·····	****	~~~~~	wwwww	······
0 dBµV-					
-10 dBµV					
CF 50.0 GHz	1000	01 pts	2.0 GHz/		Span 20.0 GHz 26.07.2019



40 GHz ~ 60 GHz / 8cc / High / 45°						
MultiView Spectrum	7		\ ₹			
Ref Level 86.00 dBµV Inp: ExtMix U	■ RBW 1 MHz ms ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100			
1 Frequency Sweep			●1Rm Avg			
80 dBµV			M1[1] 11.60 dBµ\ 41.492090 GH:			
70 dBuV						
70 dbpv						
60 dBµV						
50 dBµV						
40 dBµV						
30 dBµV						
20 dBµV			· · · · ·			
M1						
	······		······			
0 dBµV						
-10 d8µV						
CF 50.0 GHz	100001 pts	2.0 GHz/	Span 20.0 GHz			

	40 GHz ~ 60 GHz / 8cc / High / 135°					
MultiView 🖹 Spectrum					~	
Ref Level 86.00 dBµV SWT 10 Inp: ExtMix U	■ RBW 1 MHz D1 ms ■ VBW 3 MHz Mode	Auto Sweep			SGL Count 100/100	
1 Frequency Sweep					1Rm Avg	
80 dBµV					M1[1] 11.71 dBµ 43.982660 GH	
70 d8µV	11 2 1 1 1 2	12 2 1				
60 dBµV						
50 dBµV		·				
40 dBµV		·				
30 dBµV						
20 dBµV	0. 0. J. 000					
MIL	*****					
	******	*****	·····	www.		
0 dBµV						
-10 dBµV						
CF 50.0 GHz	100001	ots	2.0 GHz/		Span 20.0 GHz	



60 GHz ~ 90 GHz / 1cc / Low / 45°								
MultiView	Spectrum		62°					~
Ref Level 86.00	dBμV SWT 120	■ RBW 1) ms ■ VBW 3		Auto Sweep				SGL Count 100/100
1 Frequency Sw	еер							1Rm Avg
80 dBµV		<u></u>				1	 M1[1]	6,99 dBµ' 64.725700 GH
70 dBµV		i i i i						
70 dbpv				1				1.
60 dBµV								
50 dBµV				-			 	
40 dBµV							 	
30 dBµV								
				la conti				
20 dBµV								
10 dBµV	MI							
		wwwwww	www.	******	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
0 dBµV							an a	
-10 dBµV							 _	
CF 75.0 GHz			100001 p	nts	3	.0 GHz/	 	Span 30.0 GH:

	60 GHz ~ 90 GHz /	100 / 100 / 155	
MultiView 🗄 Spectrum			~
Ref Level 86.00 dBµV Inp: ExtMix E	■ RBW 1 MHz ms ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100
1 Frequency Sweep			1Rm Avg
80 dBµV			M1[1] 6,94 dBµ\ 64,703200 GH:
70 dBµV			
60 dBµV			
50 dBµV			
40 dBuV			
30 dBuV			
20 dBµV			
10 dBµV			
0 dBµV	······	·····	
-10 dBµV			
CF 75.0 GHz	100001 pts	3.0 GHz/	Span 30.0 GHz



· · · · ·			
MultiView 🖹 Spectrum			4
Ref Level 86.00 dBµV SWT 12 Inp: ExtMix E	■ RBW 1 MHz 20 ms ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100
1 Frequency Sweep			1Rm Avg
80 dBµV			M1[1] 6,92 dBµ 64.726000 GH
70 dBµV			
60 dBµV			
50 dBµV			
40 dBµV			
30 dBµV			
20 dBµV			
10 dBµV			
	······	************************	and the second
0 dBµV-			
-10 dBµV			
CF 75.0 GHz	100001 pts	3.0 GHz/	Span 30.0 GHz

MultiView	pectrum					V
Ref Level 86.00 dE	6μV SWT 120 ms	■ RBW 1 MHz ■ VBW 3 MHz Mode	: Auto Sweep			SGL Count 100/100
1 Frequency Swee	p					💿 1 Rm Avg
80 dBµV						M1[1] 7.11 dBµ 64.938100 GH
70 dBuV	ii:					
60 dBµV						
50 dBµV						
40 dBµV				-		
30 dBµV						
20 dBµV						
10 dBµV	Mi					
0 dBµV	*****	·····	·····	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	w	
-10 dBµV						
CF 75.0 GHz		100001		3.0 GHz/		Span 30.0 GHz



60 GHz ~ 90 GHz / 1cc / High / 45°								
MultiView	Spectrum	1						V
Ref Level 86.00 d	BμV SWT 120 ms	■ RBW 1 MHz ■ VBW 3 MHz Mo	de Auto Sweep					GL Count 100/100
1 Frequency Swee	ер				1			1Rm Avg
80 dBµV					1		M1[1]	7.01 dBµ 68.456470 GH
70 dBµV			- iž i 1.					
70 UBHV			-					
60 dBµV				-				
50 dBµV								4. <u></u> 6
40 dBµV								
30 dBµV								
20 dBµV		- <u>P.</u> <u>P.</u> <u>P</u>					- 4	h Past
10 dBµV							-	
****	mmmmmm	min	mmmm		mmm			
0 dвµV			2 · · · · · · · · · · · · · · · · · · ·	1	- Contractor of Contractor	AAAAAAAAAAA		
-10 dBµV			_				-	
CF 75.0 GHz	i.	10000	1 pts	-	3.0 GHz/			Span 30.0 GHz

MultiView Spectrum			\bigtriangledown
Ref Level 86.00 dBµV Inp: ExtMix E SWT 120 ms	■ RBW 1 MHz ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100
1 Frequency Sweep			1Rm Avg
80 dBµV-			M1[1] 7.02 dBµ\ 64.501300 GH;
70 dBµV			
60 dBµV			
50 dBµV			
40 dBµV			
30 dBµV			
20 dBµV			
10 dBµV			
	······	······	
O dBµV			
-10 d8µV			



60 GHz ~ 90 GHz / 8cc / Low / 45°							
MultiView B Spectrum			\ ∀				
Ref Level 86.00 dBµV	■ RBW 1 MHz 0 ms ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100				
1 Frequency Sweep			1Rm Avg				
80 dBµV			M1[1] 7.08 dBµ 64.279010 GH				
70 dBµV							
У0 06µV							
60 dBµV							
50 dBµV							
40 dBµV							
30 dBµV							
20 dBµV							
10 dBµV							

0 dBµV-		A00445346404					
-10 dBµV							
CF 75.0 GHz	100001 pts	3.0 GHz/	Span 30.0 GHz				

MultiView 🖹 Spectrum			V
Ref Level 86.00 dBµV	■ RBW 1 MHz s ■ VBW 3 MHz Mode Auto Sweep		SGL Count 100/100
1 Frequency Sweep			1Rm Avg
80 dBµV			M1[1] 6,99 dBµ\ 64.504000 GH:
70 dBµV			
60 dBµV			
00 0000			
50 dBµV			
40 dBµV			
30 dBµV			
20 dBµV			
10 dBµV			
	······································	······	and the second
0 dBµV-			
-10 d8µV			



	6	50 GHz ~ 90 GHz	z / 8cc / Mido	lle / 45°			
MultiView 🖹 Spectr	um						V
Ref Level 86.00 dBµV Inp: ExtMix E	■ RBW 1 MHz WT 120 ms ■ VBW 3 MHz						GL Count 100/100
1 Frequency Sweep				,			1Rm Avg
80 dBµV			1	1	-	M1[1]	6,97 dBµ 64,109210 GH
70 dBµV							
60 dBµV							
50 dBµV							
40 dBμV							
30 dBµV							
20 dBµV							
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www.www.www.www.www.	www.www.www.www.www.www.	*****	www	*******	here and the second second		
					-		
-10 d8µV							
CF 75.0 GHz		100001 pts	3	.0 GHz/			Span 30.0 GHz

MultiView Spectr	um				~
Ref Level 86.00 dBµV	■ RBW 1 MHz WT 120 ms ■ VBW 3 MHz Mo	ode Auto Sweep			SGL Count 100/100
1 Frequency Sweep			, · · · · · · · · · · · · · · · · · · ·		💿 1 Rm Avg
80 dBµV				M1	[1] 7.02 dBμ\ 64.509100 GH;
70 d8µV				1	
60 dBµV					
50 dBµV					
40 dBµV					
30 dBµV					
20 dBµV					
10 dBµV		_			
0 dbµv		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
-10 dBµV					
CF 75.0 GHz		01 pts	3.0 GHz/		Span 30.0 GHz



MHz MHz Mode Auto Sweep		SGL Count 100/100 1Rm Avg M1[1] 6.91 dBµ 64.721200 GH
MHz MHz Mode Auto Sweep		Count 100/100 1Rm Avg M1[1] 6.91 dBµ
MH2 MOOB Auto Sweep		1Rm Avg M1[1] 6.91 dBµ
		M1[1] 6.91 dBµ
		64.721200 GH
	11	
1		
		ana
		the second se
		Span 30.0 GH:
		100001 pts 3.0 GHz/

60 GHz ~ 90 GHz / 8cc / High / 135°						
MultiView B Spectrur	11					\bigtriangledown
Ref Level 86.00 dBµV SW1 Inp: ExtMix E	■ RBW 1 MHz 120 ms ■ VBW 3 MHz Mod	le Auto Sweep				GL ount 100/100
1 Frequency Sweep						💿 1 Rm Avg
80 dBuV				·	M1[1]	7,08 dBµ' 54,924600 GH
70 d8µV						
60 dBµV						
50 dBµV						
40 dBµV						
30 dBµV						
20 dBµV						
10 dBµV M1						
10 dBµV	······	mmmmm	mmmmmm	~		
о авру-						NAME AND ADDRESS OF ADD
-10 dBµV						
CF 75.0 GHz	10000	1 pts	3.0 GHz/		S	pan 30.0 GHz





18-26.5 Swept SA		.35-40 vept SA	Spectru Swept	um Analyzer 3 SA	Spectrum Analyzer Swept SA		🔅 Marke	r + 😤
-	Input: Ext Mixer Signal ID: Off Align: Auto	Corrections Off Freq Ref. Int (S) NFE Adaptive		PNO. Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Power (R Avg Hold: 100/100 Trig: Free Run	MS) 1 2 3 4 5 0 A WWWWW A N N N N N	Select Marker Marker 1	
1 Spectrum	*			Jig Hack Oa	Mkr1 9	8.767 5 GHz	Marker Frequency 98.767500000 GHz	Settings
Scale/Div 10 di	3		Ref Level 80.0	0 dBµV		7.623 dBµV	Peak Search	Peak Search
70.0							Next Peak	Pk Search Config
60.0							Next Pk Right	Properties
50,0							Next Pk Left	Marker Function
40.0							Minimum Peak	Marker→
20.0							Pk-Pk Search	Counter
10.0						•1	Marker Delta	
0.00							Mkr→CF	
							Mkr→Ref Lvi	
Start 90.000 GH #Res BW 1.0 M			#Video BW 3.	0 MHz*		top 100.000 GHz ms (100001 pts)		

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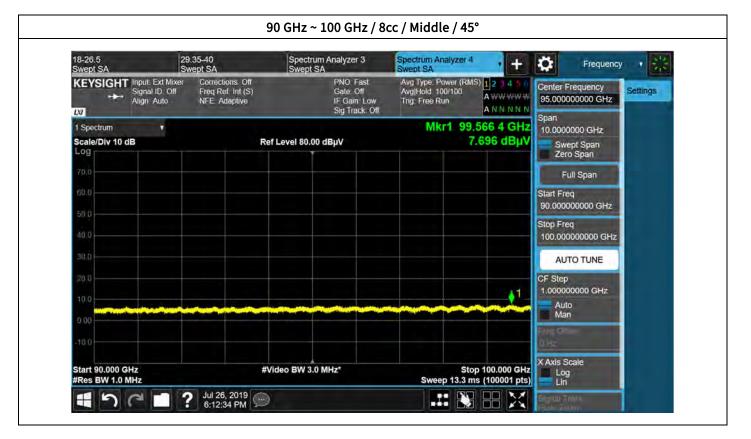
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5.6. FREQUENCY STABILTY

FCC Rules

Test Requirements:

§ 2.1055 Measurements required: Frequency stability.

(a) The frequency stability shall be measured with variation of ambient temperature as follows:

(1) From -30° to $+50^{\circ}$ centigrade for all equipment except that specified in paragraphs (a) (2) and (3) of this section.

Test Procedures:

The measurement is performed in accordance with Section 5.6.4 and 5.6.5 of ANSI C63.26.

5.6.4 Frequency stability over variations in temperature

a) Supply the EUT with a nominal 60 Hz ac voltage, dc voltage, or install a new or fully charged battery in the EUT.

b) If possible a dummy load should be connected to the EUT because an antenna near the metallic walls of an environmental test chamber could affect the output frequency of the EUT. If the EUT is equipped with a permanently attached, adjustable-length antenna, the EUT should be placed in the center of the chamber with the antenna adjusted to the shortest length possible.

c) Turn on the EUT, and tune it to the center frequency of the operating band.

d) Couple the transmitter output to the measuring instrument through a suitable attenuator and coaxial cable. If connection to the EUT output is not possible, make the measurement by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away).

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory authority is the recommended measuring instrument.

e) Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument, but is strong enough to allow measurement of the operating or fundamental frequency of the EUT). Adjust the detector bandwidth and span settings to achieve a resolution capable of accurate frequency measurements over the applicable frequency stability limits.

f) Turn the EUT off, and place it inside the environmental temperature chamber. For devices that have oscillator heaters, energize only the heater circuit.

g) Set the temperature control on the chamber to the highest temperature specified in the regulatory requirements for the type of device, and allow the oscillator heater and the chamber temperature to stabilize. Unless otherwise instructed by the regulatory authority, this temperature should be 50 °C.

h) While maintaining a constant temperature inside the environmental chamber, turn on the EUT and allow sufficient time for the EUT temperature to stabilize.

i) Measure the frequency.

j) Switch off the EUT, but do not switch off the oscillator heater.

k) Lower the chamber temperature to the next level that is required by the standard and allow the temperature inside the chamber to stabilize. Unless otherwise instructed by the regulators, this temperature step should be 10 °C.

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l) Repeat step h) through step k) down to the lowest specified temperature. Unless otherwise instructed by the regulators, this temperature should be -30 °C. When the frequency stability limit is stated as being sufficient such that the fundamental emissions stay within the authorized bands of operation, a reference point shall be established at the applicable unwanted emissions limit using a RBW equal to the RBW required by the unwanted emissions specification of the applicable regulatory standard. These reference points measured using the lowest and highest channel of operation shall be identified as f_L and f_H respectively. The worst-case frequency offset determined in the above methods shall be added or subtracted from the values of f_L and f_H and the resulting frequencies must remain within the band. m) Omitted

5.6.5 Frequency stability when varying supply voltage

a) Couple the transmitter output to the measuring instrument through a suitable attenuator and coaxial cable. If connection to the EUT output is not possible make the measurement by connecting an antenna to the measuring instrument with a suitable length of coaxial cable and placing the measuring antenna near the EUT (e.g., 15 cm away)

b) Supply the EUT with nominal ac or dc voltage. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided. Effects on frequency of transmitter keying (except for broadcast transmitters) and any heating element cycling at the nominal supply voltage and at each extreme also shall be shown.

c) Turn on the EUT, and couple its output to a frequency counter or other frequency-measuring instrument.

d) Tune the EUT to the center frequency of the operating band. Adjust the location of the measurement antenna and the controls on the measurement instrument to obtain a suitable signal level (i.e., a level that will not overload the measurement instrument, but is strong enough to allow measurement of the operating or fundamental frequency of the EUT). Adjust the detector bandwidth and span settings to achieve a resolution capable of accurate frequency measurements over the applicable frequency stability limits.

NOTE—An instrument that has an adequate level of accuracy as specified by the procuring or regulatory authority is the recommended measuring instrument.

e) Measure the frequency.

f) Unless otherwise specified, vary primary supply voltage from 85% to 115% of the nominal value for other than hand carried battery equipment.

g) For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

h) Repeat the frequency measurement.

NOTE—For band-edge compliance, it can be required to make these measurements at the low and high channel of the operating band.

Note:

- 1) The results of the frequency stability test shown above the frequency deviation measured values are very small and similar trend for each path, so we are attached only the worst case data.
- 2) Test signal is CW signal for frequency stability.



Test Results:

Reference: Voltage = 100 ~ 240 VAC at 20°C, Frequency = 27 925.0 MHz

Voltage (%)	Temp.(°C)	Frequency Error (Hz)	Deviation (Hz)	ppm
	+20(Ref)	27925.02405	0	0
	-30	27925.0239	-146.7000002	-0.005253353
	-20	27925.0239	-154.5999985	-0.005536254
	-10	27925.02385	-204.1999978	-0.007312439
100%	0	27925.02386	-188.1999997	-0.006739476
	10	27925.02385	-196.2999995	-0.007029538
	30	27925.02382	-234.6000001	-0.008401068
	40	27925.02382	-228.6999988	-0.008189788
	50	27925.0238	-253.8000008	-0.009088624
115%	20	27925.02405	208.1000021	-0.000164727
85%	20	27925.02402	-0.299998646	-0.001131602



6. Annex A_Test Equipment CERTIFIED DOCUMENTS

Please refer to test equipment certified documents.



7. Annex B_EUT AND TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-1907-FC011-P