

4x4MIMO antenna 6XD Appendix

Report No.: BCTC2407217909-2E

Applicant: Vivid-Hosting, LLC

Product Name: FRC Radio

Test Model: VH-109

Tested Date: 2024-07-15 to 2024-08-13

Issued Date: 2024-09-09

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Appendix 1: Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ax20	5955	Ant1	97.03	0.13	0.19
		6175		96.85	0.14	0.19
		6415		97.94	0.09	0.19
		6435		96.67	0.15	0.19
		6475		97.39	0.11	0.19
		6515		97.57	0.11	0.19
		6535		96.69	0.15	0.19
		6695		98.68	0	0.19
		6855		98.86	0	0.19
		6875		98.49	0	0.19
		6895		97.39	0.11	0.19
		6995		98.68	0	0.19
		7115		98.68	0	0.19
		5955	Ant2	97.39	0.11	0.19
		6175		97.94	0.09	0.19
		6415		97.21	0.12	0.19
		6435		98.87	0	0.19
		6475		98.49	0	0.19
		6515		97.01	0.13	0.19
		6535		97.03	0.13	0.19
		6695		96.85	0.14	0.19
		6855		97.03	0.13	0.19
		6875		98.31	0	0.19
		6895		96.85	0.14	0.19
		6995		98.86	0	0.19
		7115		96.85	0.14	0.19
		5955	Ant3	98.86	0	0.19
		6175		98.31	0	0.19
		6415		98.49	0	0.19
		6435		98.49	0	0.19
		6475		98.86	0	0.19
		6515		98.87	0	0.19
		6535		97.94	0.09	0.19
		6695		98.68	0	0.19
		6855		98.12	0	0.19
		6875		98.68	0	0.19
		6895		98.86	0	0.19
		6995		98.12	0	0.19
		7115		98.49	0	0.19

		5955	Ant4	97.03	0.13	0.19
		6175		97.21	0.12	0.19
		6415		98.68	0	0.19
		6435		98.49	0	0.19
		6475		96.85	0.14	0.19
		6515		97.39	0.11	0.19
		6535		98.49	0	0.19
		6695		98.87	0	0.19
		6855		96.85	0.14	0.19
		6875		97.57	0.11	0.19
		6895		97.94	0.09	0.19
		6995		98.68	0	0.19
		7115		98.49	0	0.19
		5955	Sum	96.85	0.14	0.19
		6175		98.49	0	0.19
		6415		96.85	0.14	0.19
		6435		97.94	0.09	0.19
		6475		98.49	0	0.19
		6515		98.49	0	0.19
		6535		98.68	0	0.19
		6695		98.49	0	0.19
		6855		97.39	0.11	0.19
		6875		98.68	0	0.19
		6895		97.03	0.13	0.19
		6995		98.31	0	0.19
		7115		98.49	0	0.19
	ax40	5965	Ant1	98.71	0	0.19
		6165		96.93	0.14	0.19
		6405		97.64	0.1	0.19
		6445		97.64	0.1	0.19
		6485		97.1	0.13	0.19
		6525		98.71	0	0.19
		6565		97.11	0.13	0.19
		6685		96.93	0.14	0.19
		6845		98.17	0	0.19
		6885		98.17	0	0.19
		6925		97.1	0.13	0.19
		6965		97.1	0.13	0.19
		7085		98.71	0	0.19
		5965	Ant2	96.75	0.14	0.19
		6165		97.99	0.09	0.19
		6405		97.81	0.1	0.19
		6445		97.28	0.12	0.19
		6485		98.17	0	0.19

		6525		96.93	0.14	0.19
		6565		98.53	0	0.19
		6685		97.45	0.11	0.19
		6845		97.81	0.1	0.19
		6885		97.64	0.1	0.19
		6925		98.35	0	0.19
		6965		96.93	0.14	0.19
		7085		97.1	0.13	0.19
		5965	Ant3	96.76	0.14	0.19
		6165		97.46	0.11	0.19
		6405		97.63	0.1	0.19
		6445		98.54	0	0.19
		6485		98.53	0	0.19
		6525		97.99	0.09	0.19
		6565		97.99	0.09	0.19
		6685		98.35	0	0.19
		6845		97.45	0.11	0.19
		6885		96.76	0.14	0.19
		6925		98.35	0	0.19
		6965		98.9	0	0.19
		7085		96.93	0.14	0.19
		5965	Ant4	98.53	0	0.19
		6165		97.45	0.11	0.19
		6405		98.71	0	0.19
		6445		96.93	0.14	0.19
		6485		98.9	0	0.19
		6525		98.71	0	0.19
		6565		97.99	0.09	0.19
		6685		97.63	0.1	0.19
		6845		97.28	0.12	0.19
		6885		96.93	0.14	0.19
		6925		98.71	0	0.19
		6965		97.28	0.12	0.19
		7085		97.99	0.09	0.19
		5965	Sum	97.45	0.11	0.19
		6165		98.9	0	0.19
		6405		98.53	0	0.19
		6445		96.75	0.14	0.19
		6485		96.93	0.14	0.19
		6525		98.71	0	0.19
		6565		97.99	0.09	0.19
		6685		98.35	0	0.19
		6845		97.64	0.1	0.19
		6885		98.89	0	0.19

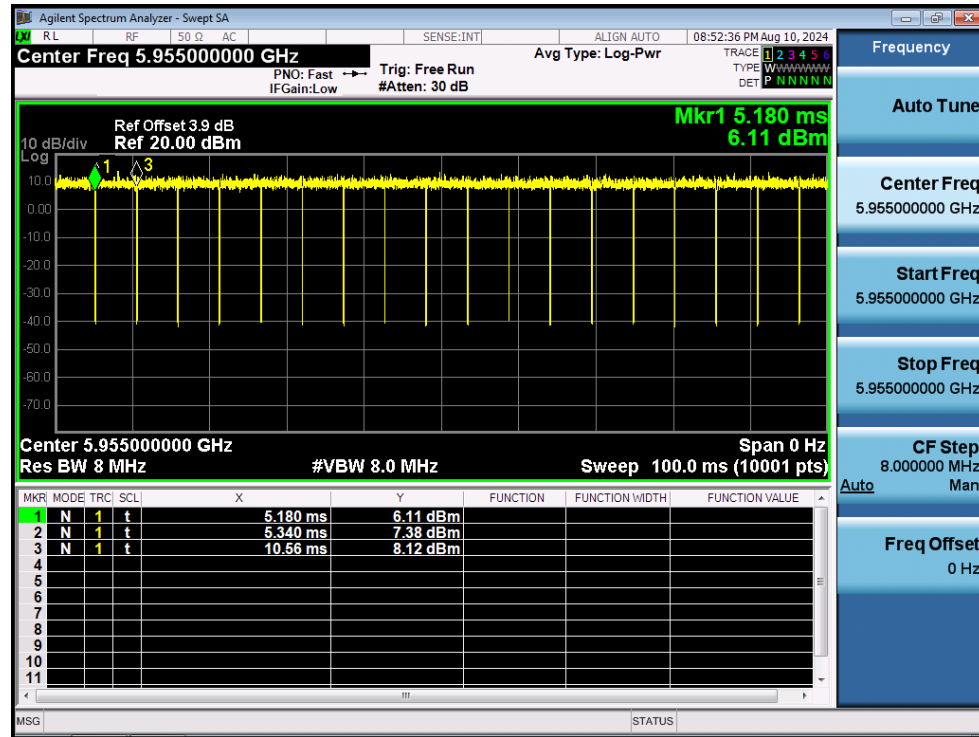
		6925		98.53	0	0.19
		6965		98.35	0	0.19
		7085		98.9	0	0.19
	ax80	5985	Ant1	98.9	0	0.19
		6145		98.9	0	0.18
		6385		98.72	0	0.19
		6465		98.54	0	0.19
		6545		96.77	0.14	0.19
		6625		97.12	0.13	0.19
		6705		97.3	0.12	0.18
		6785		97.65	0.1	0.19
		6865		97.65	0.1	0.19
		6945		97.3	0.12	0.19
		7025		98.72	0	0.19
		5985	Ant2	98.54	0	0.19
		6145		96.95	0.13	0.19
		6385		98.72	0	0.18
		6465		98.36	0	0.19
		6545		97.83	0.1	0.19
		6625		97.93	0.09	0.19
		6705		97.13	0.13	0.18
		6785		98.9	0	0.18
		6865		98.01	0	0.18
		6945		98.72	0	0.19
		7025		98.9	0	0.18
		5985	Ant3	97.13	0.13	0.18
		6145		97.12	0.13	0.19
		6385		98.18	0	0.19
		6465		98.54	0	0.19
		6545		98.18	0	0.19
		6625		98.72	0	0.19
		6705		97.65	0.1	0.19
		6785		98.19	0	0.18
		6865		98	0	0.19
		6945		97.83	0.1	0.19
		7025		96.95	0.13	0.19
		5985	Ant4	96.95	0.13	0.19
		6145		96.95	0.13	0.19
		6385		98.18	0	0.19
		6465		98.9	0	0.19
		6545		97.12	0.13	0.19
		6625		98.9	0	0.18
		6705		98.9	0	0.19
		6785		98.18	0	0.19

		6865		98.9	0	0.19
		6945		97.3	0.12	0.18
		7025		98	0	0.19
		5985	Sum	98.54	0	0.19
		6145		98.19	0	0.18
		6385		98.36	0	0.19
		6465		98.9	0	0.19
		6545		97.13	0.13	0.18
		6625		98.18	0	0.19
		6705		96.95	0.13	0.19
		6785		97.83	0.1	0.19
		6865		96.77	0.14	0.19
		6945		97.83	0.1	0.19
		7025		98.72	0	0.18
	ax160	6025	Ant1	96.1	0.17	0.23
		6185		96.31	0.16	0.23
		6345		98.23	0	0.23
		6505		98.67	0	0.22
		6665		96.53	0.15	0.22
		6825		97.37	0.12	0.22
		6985		98.01	0	0.23
		6025	Ant2	97.37	0.12	0.22
		6185		97.8	0.1	0.22
		6345		97.16	0.13	0.22
		6505		98.02	0	0.22
		6665		98.67	0	0.23
		6825		98.01	0	0.23
		6985		96.95	0.13	0.22
		6025	Ant3	96.1	0.17	0.23
		6185		98.02	0	0.22
		6345		98.45	0	0.23
		6505		97.37	0.12	0.23
		6665		98.67	0	0.22
		6825		98.67	0	0.23
		6985		98.45	0	0.23
		6025	Ant4	98.23	0	0.23
		6185		98.45	0	0.23
		6345		96.95	0.13	0.22
		6505		98.23	0	0.22
		6665		98.67	0	0.22
		6825		97.8	0.1	0.22
		6985		97.37	0.12	0.22
		6025	Sum	98.45	0	0.22
		6185		96.53	0.15	0.22

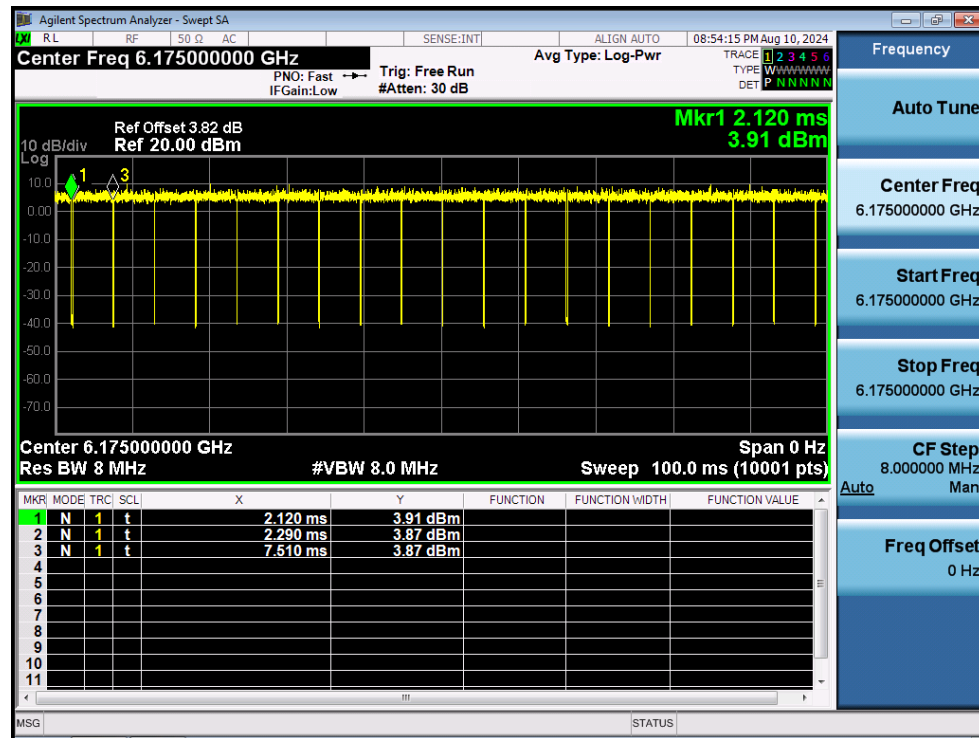
		6345		98.45	0	0.23
		6505		97.8	0.1	0.22
		6665		97.37	0.12	0.23
		6825		96.53	0.15	0.22
		6985		97.37	0.12	0.23

Test Graphs

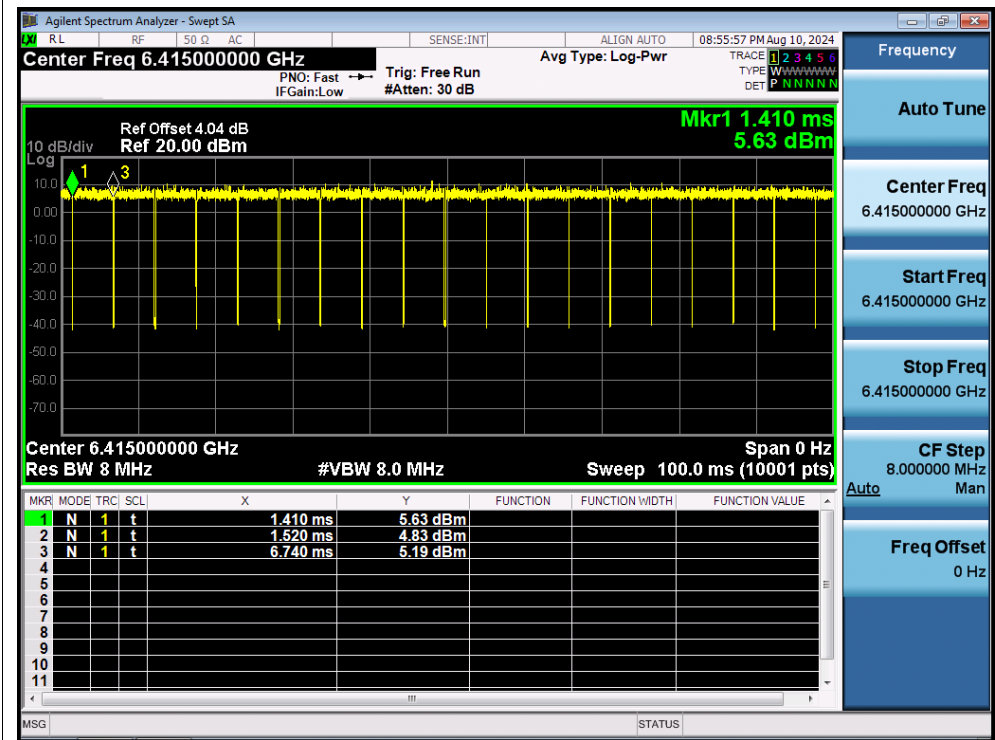
Duty Cycle NVNT ax20 5955MHz Ant1



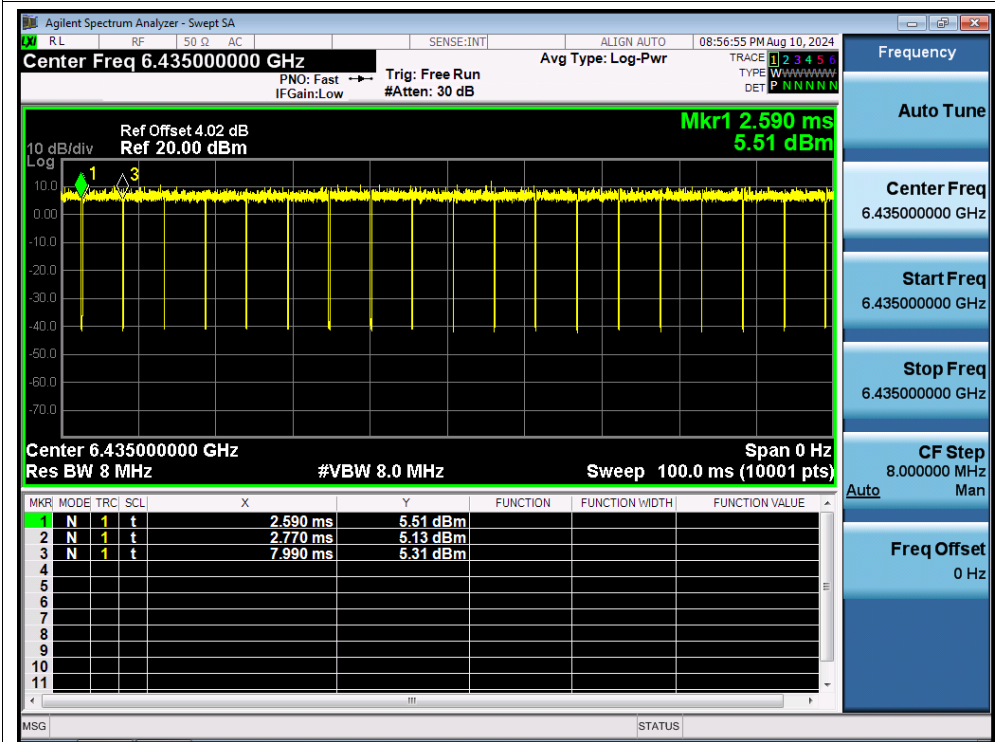
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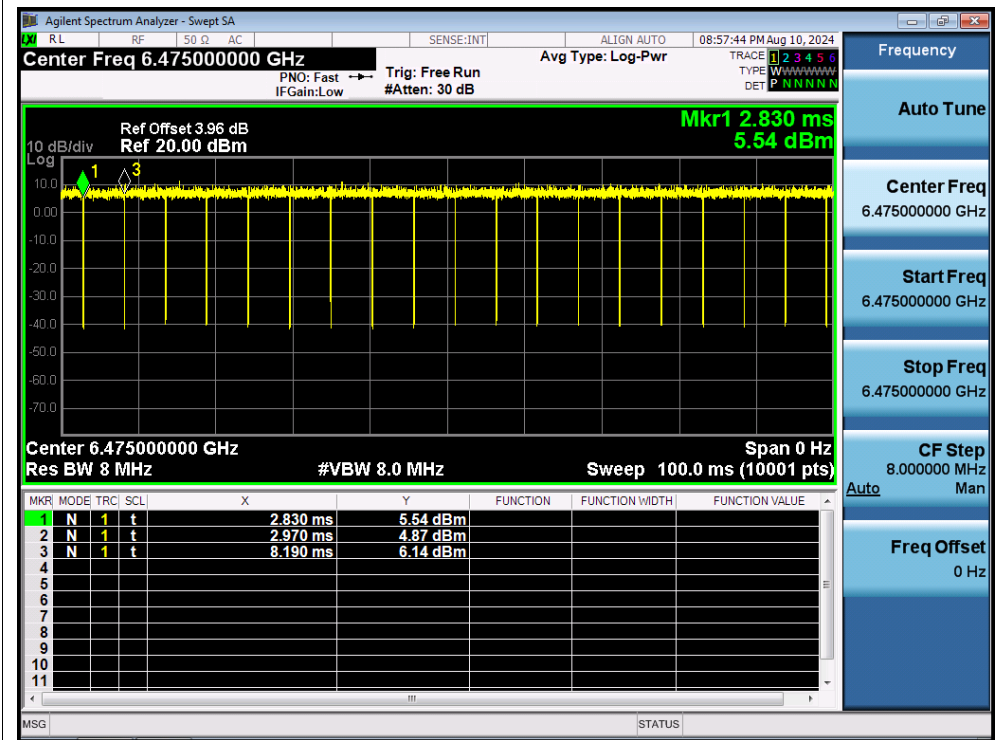
Duty Cycle NVNT ax20 6415MHz Ant1



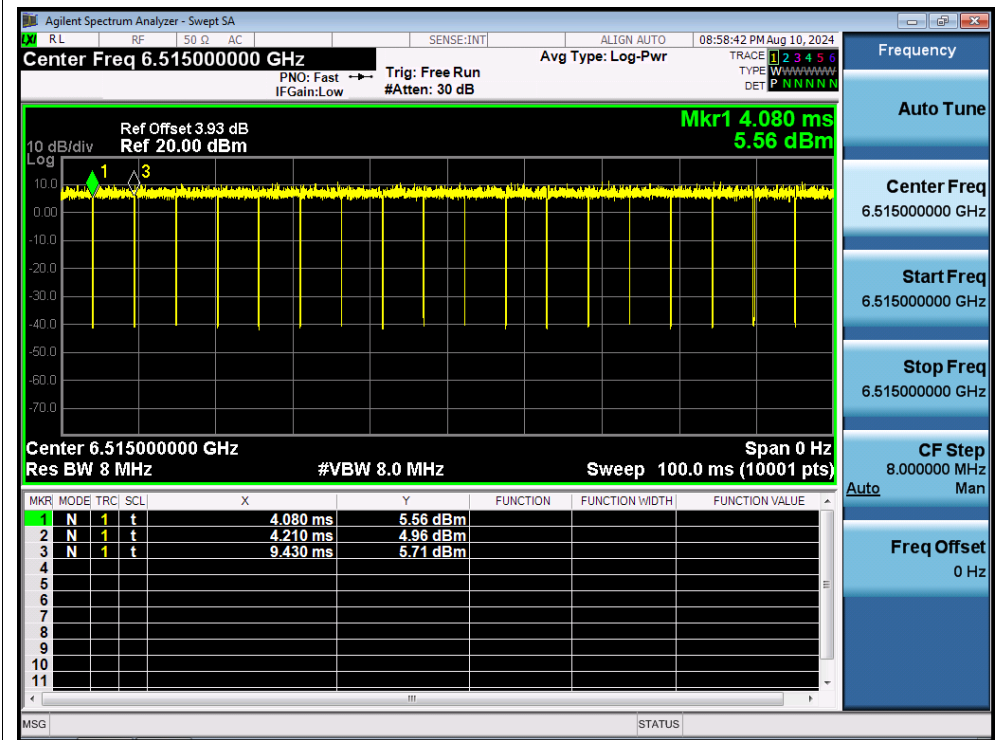
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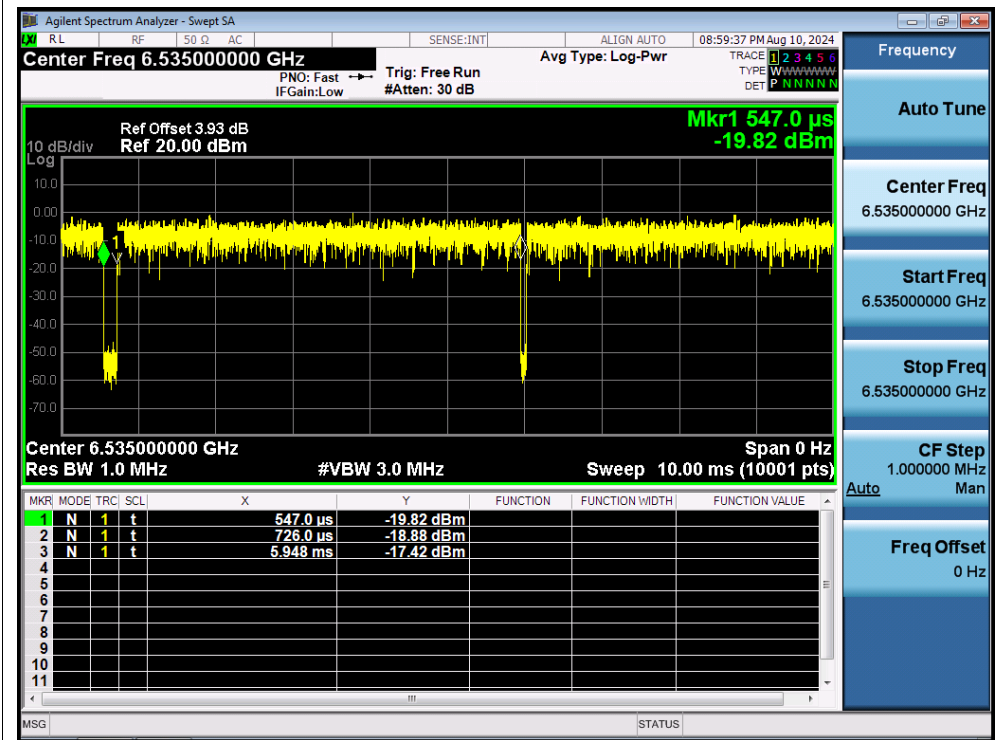
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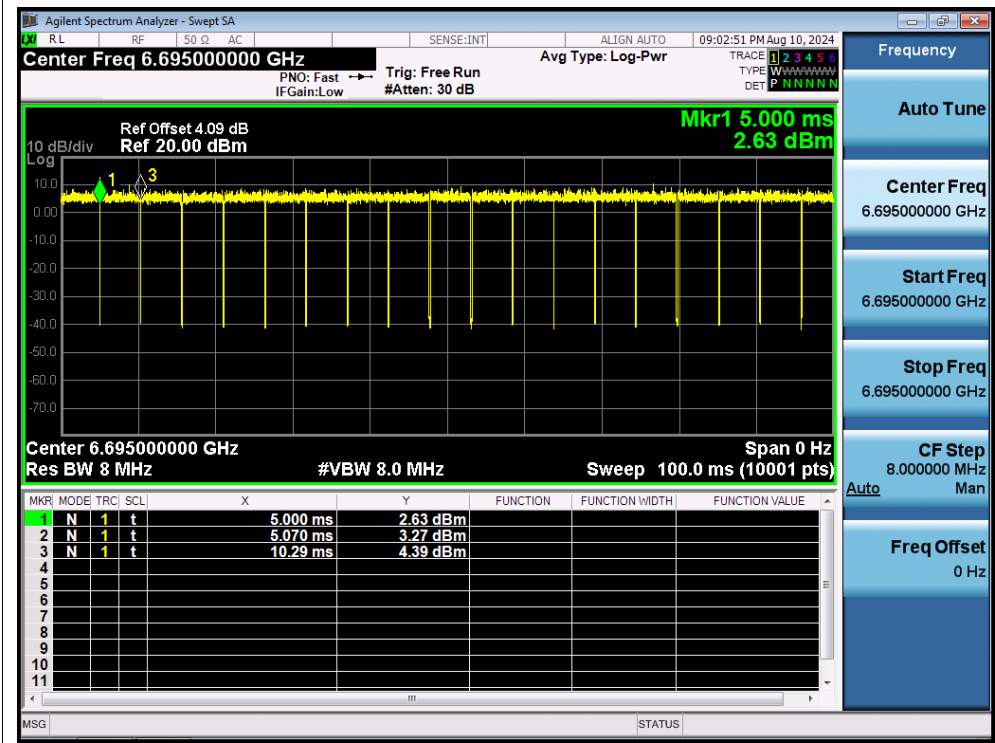
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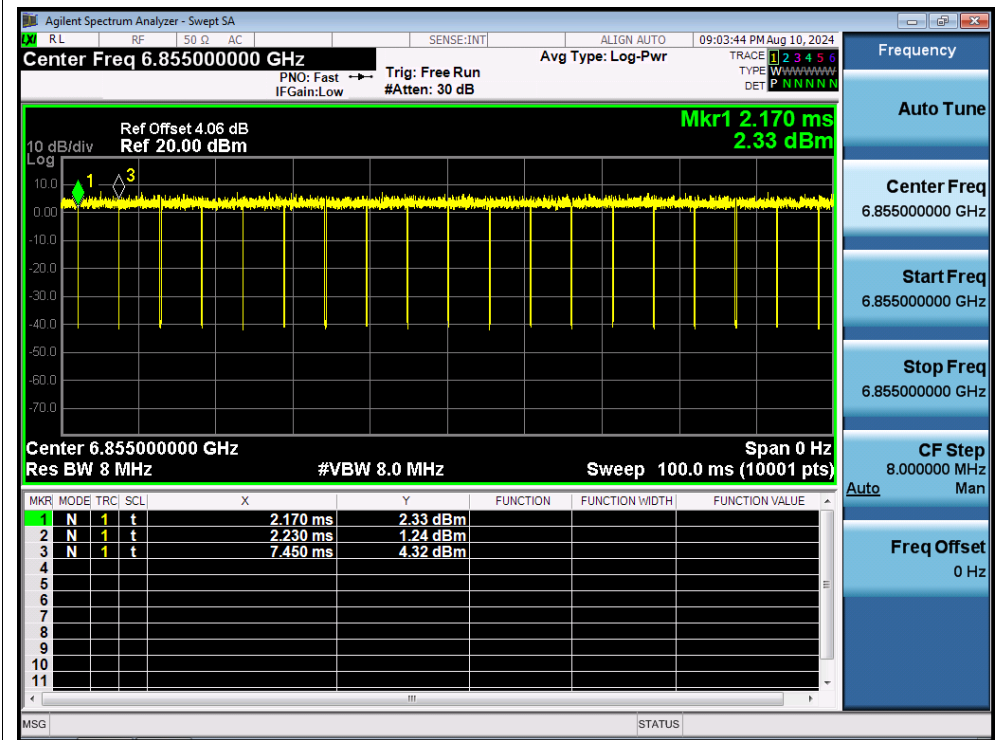
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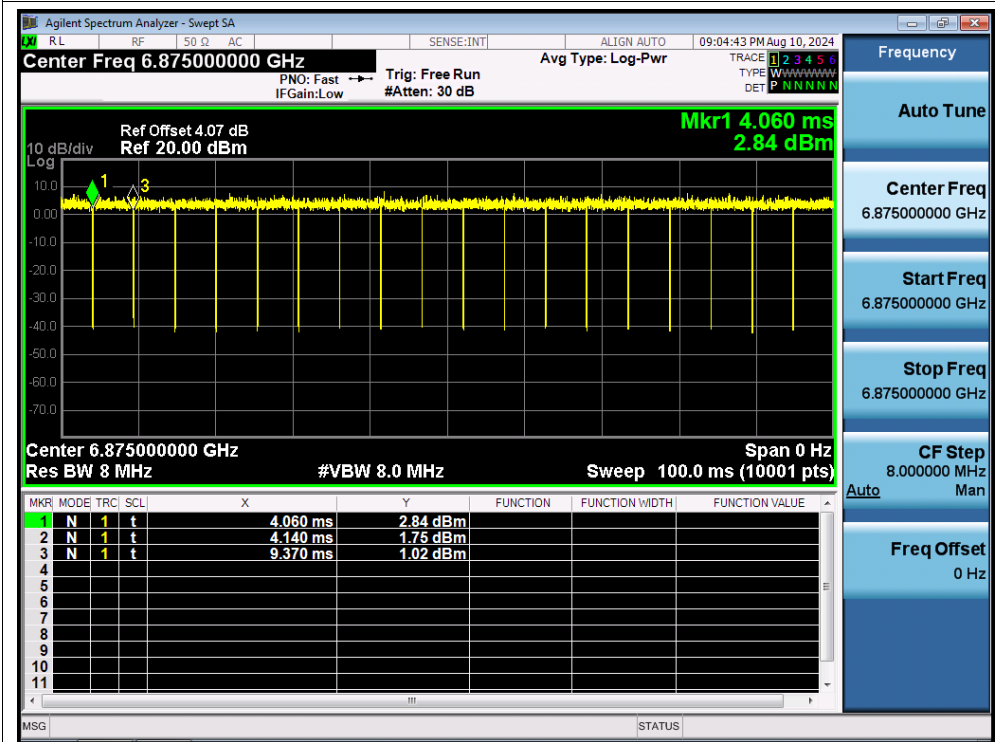
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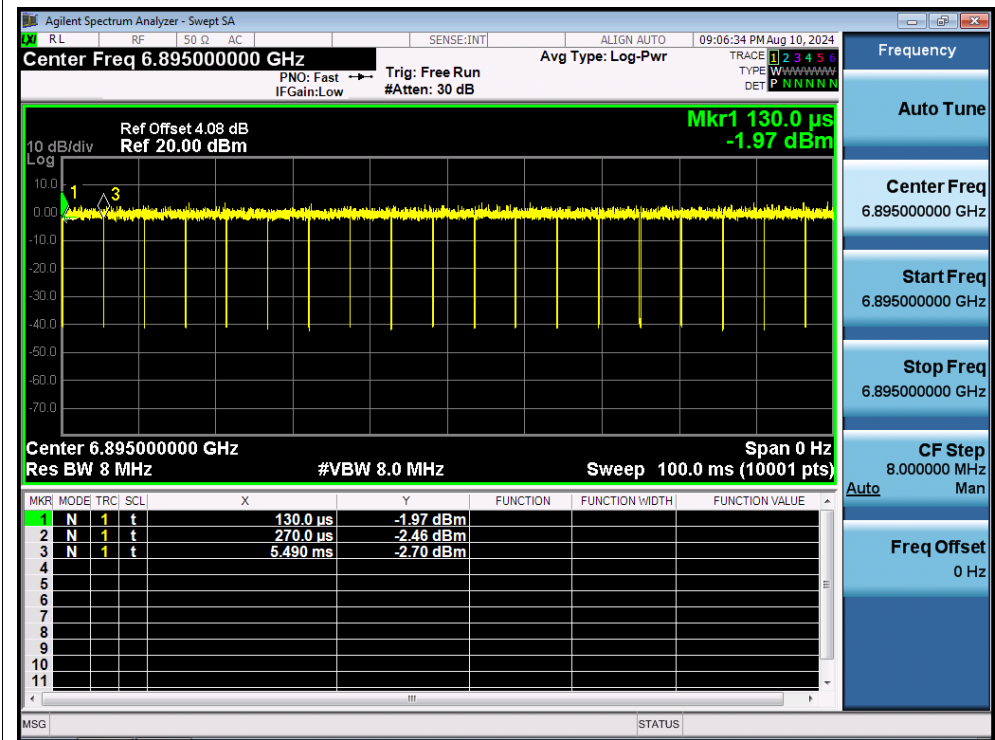
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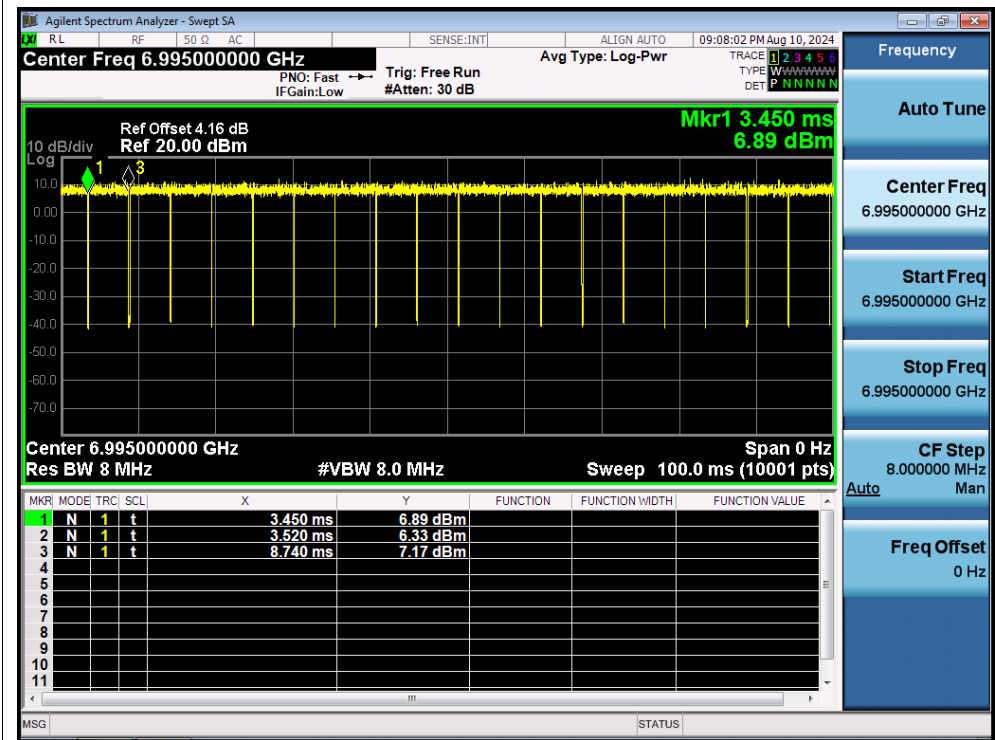
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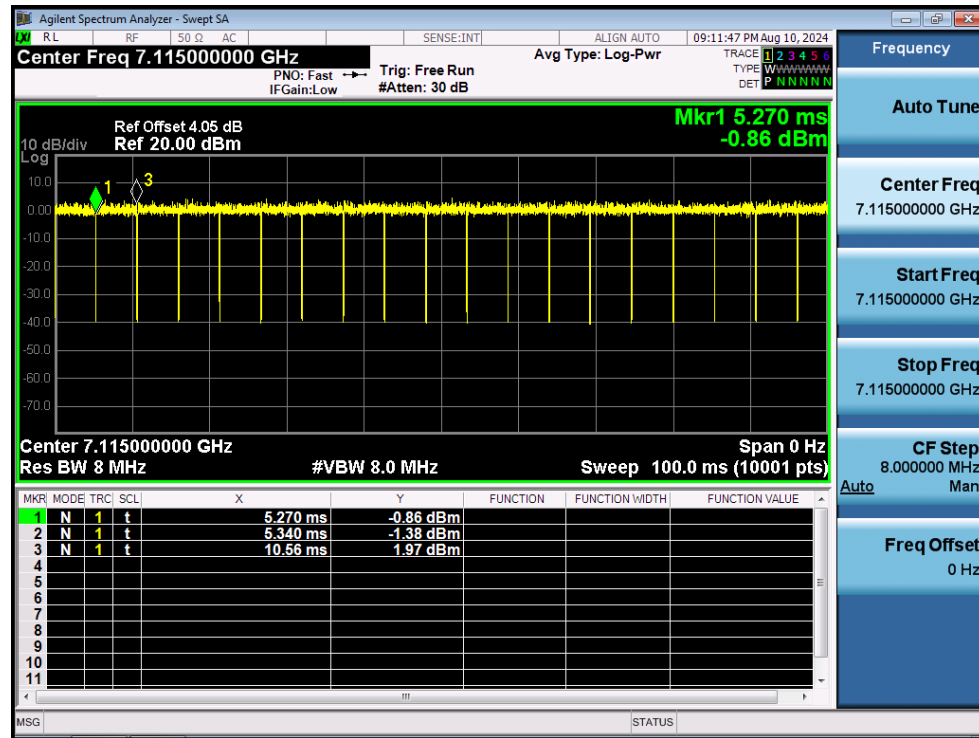
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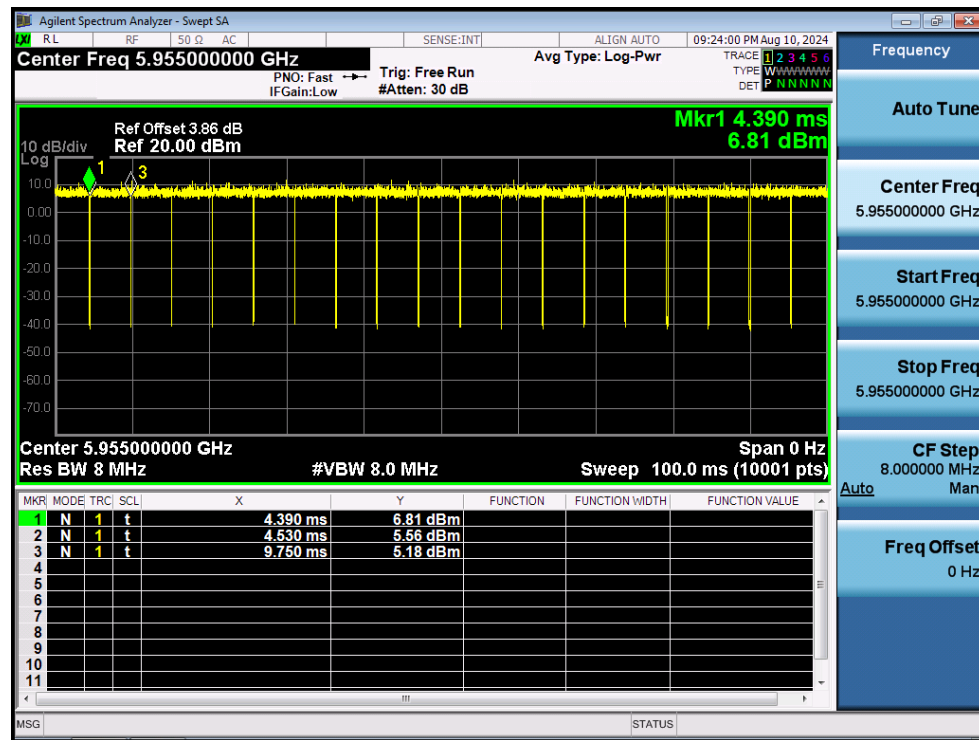
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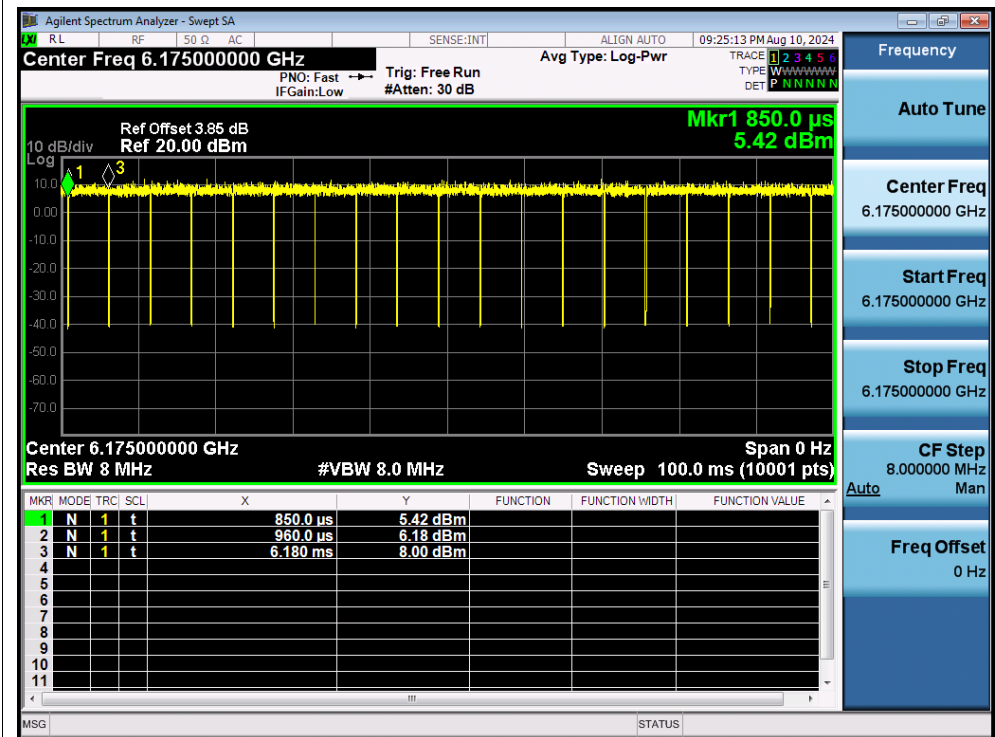
Duty Cycle NVNT ax20 7115MHz Ant1



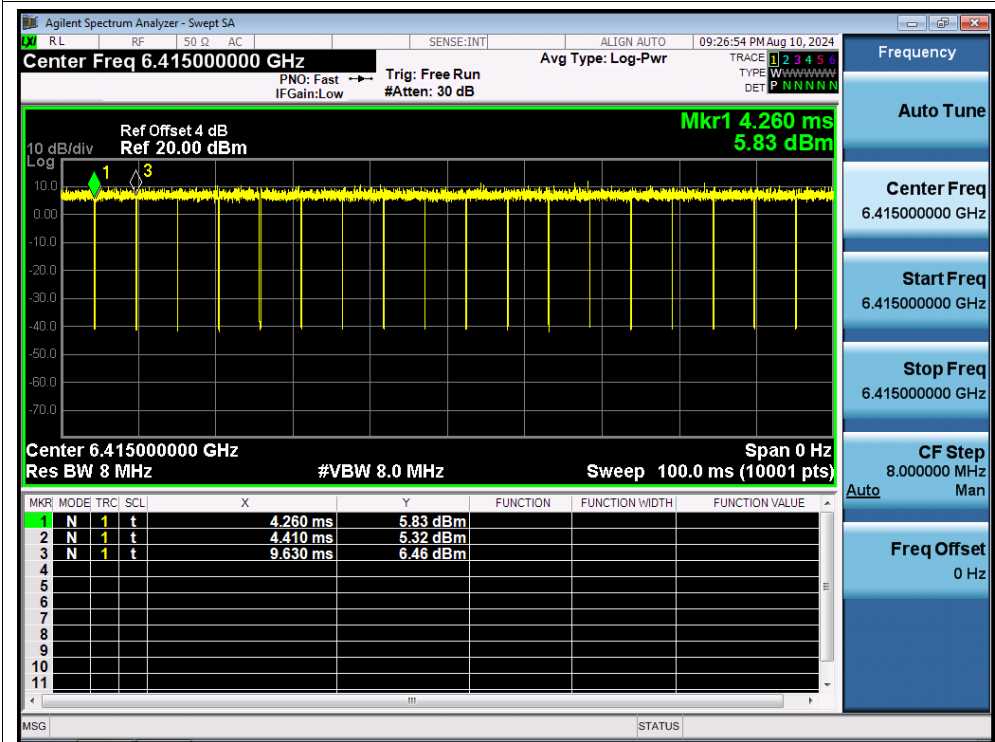
Duty Cycle NVNT ax20 5955MHz Ant2



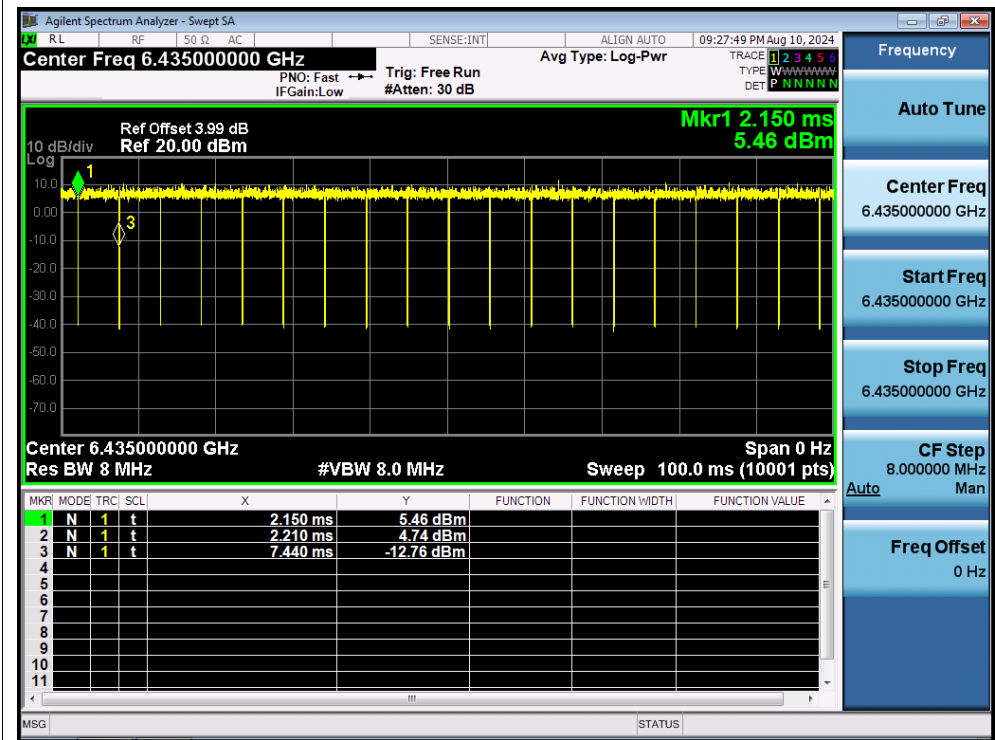
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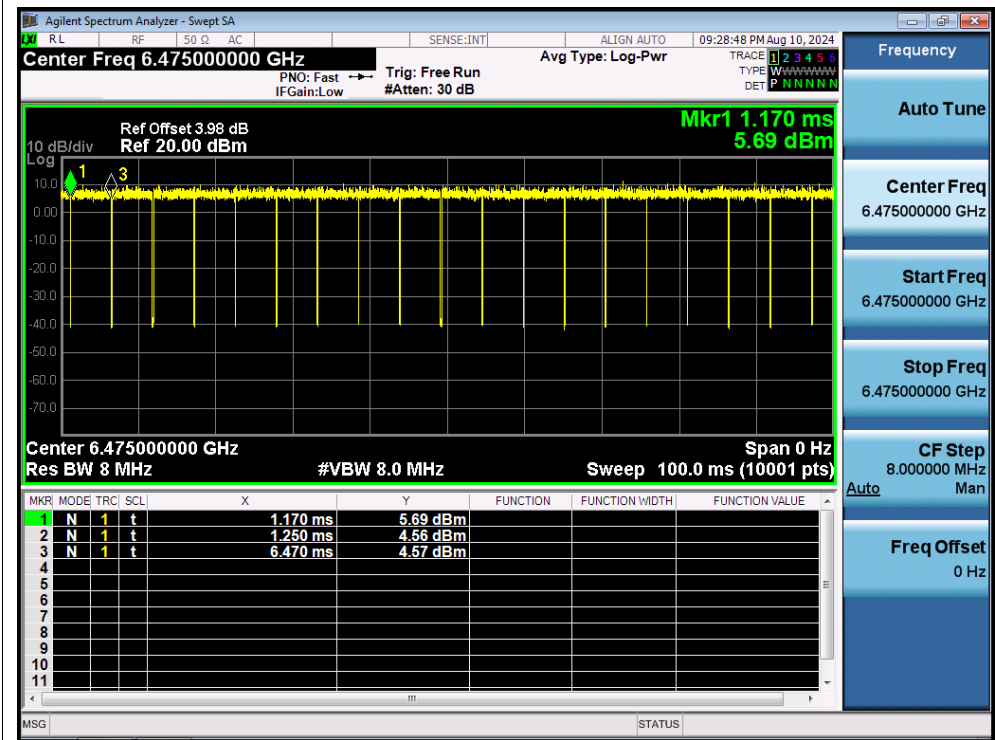
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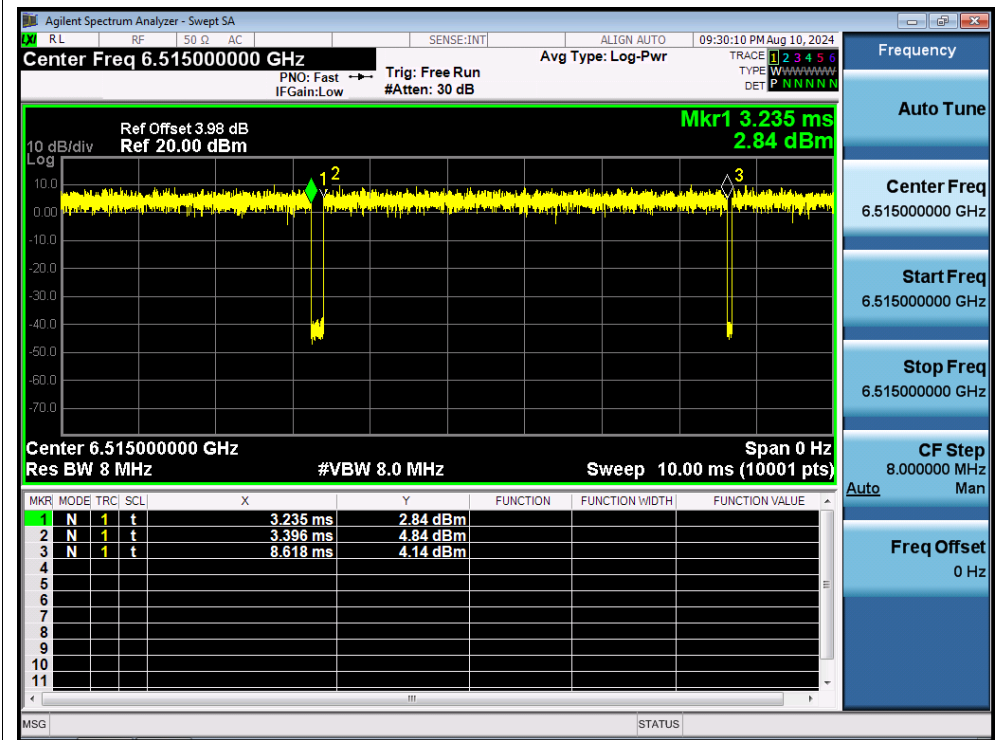
Duty Cycle NVNT ax20 6435MHz Ant2



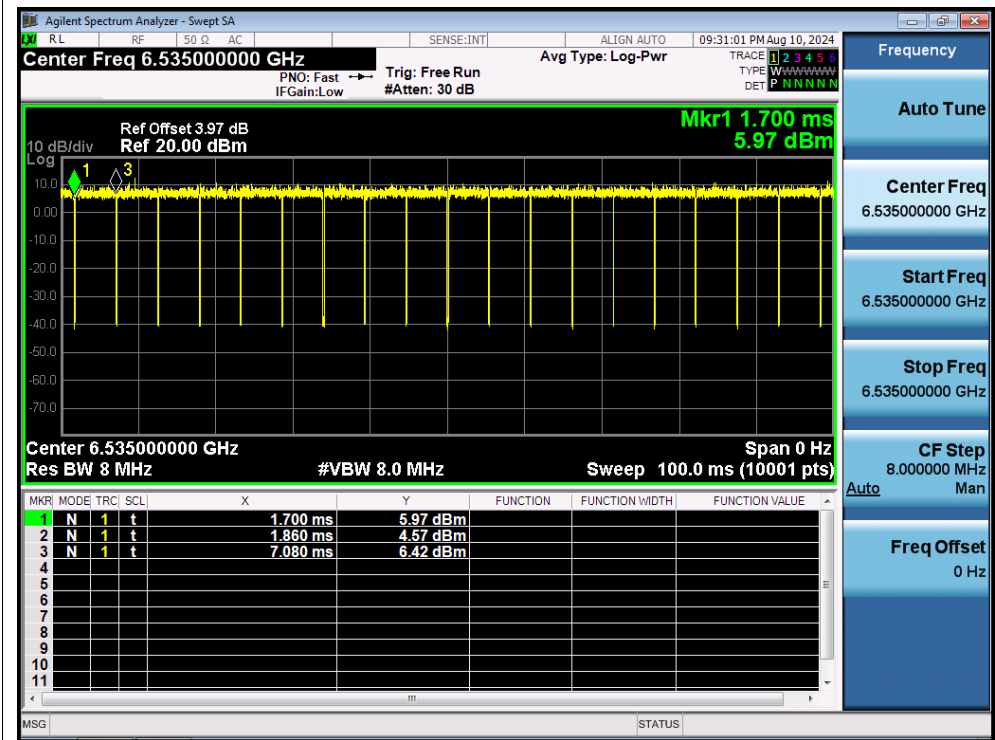
Duty Cycle NVNT ax20 6475MHz Ant2



Duty Cycle NVNT ax20 6515MHz Ant2



Duty Cycle NVNT ax20 6535MHz Ant2



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 09:33:44 PM Aug 10, 2024

Center Freq 6.695000000 GHz Avg Type: Log-Pwr

PNO: Fast Trig: Free Run
IFGain:Low #Atten: 30 dB

Ref Offset 4.11 dB
Ref 20.00 dBm

Mkr1 1.880 ms
6.34 dBm

10 dB/div
Log

Center 6.695000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.880 ms	6.34 dBm			
2	N	1	t	2.050 ms	5.55 dBm			
3	N	1	t	2.270 ms	6.97 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
6.695000000 GHz

Start Freq
6.695000000 GHz

Stop Freq
6.695000000 GHz

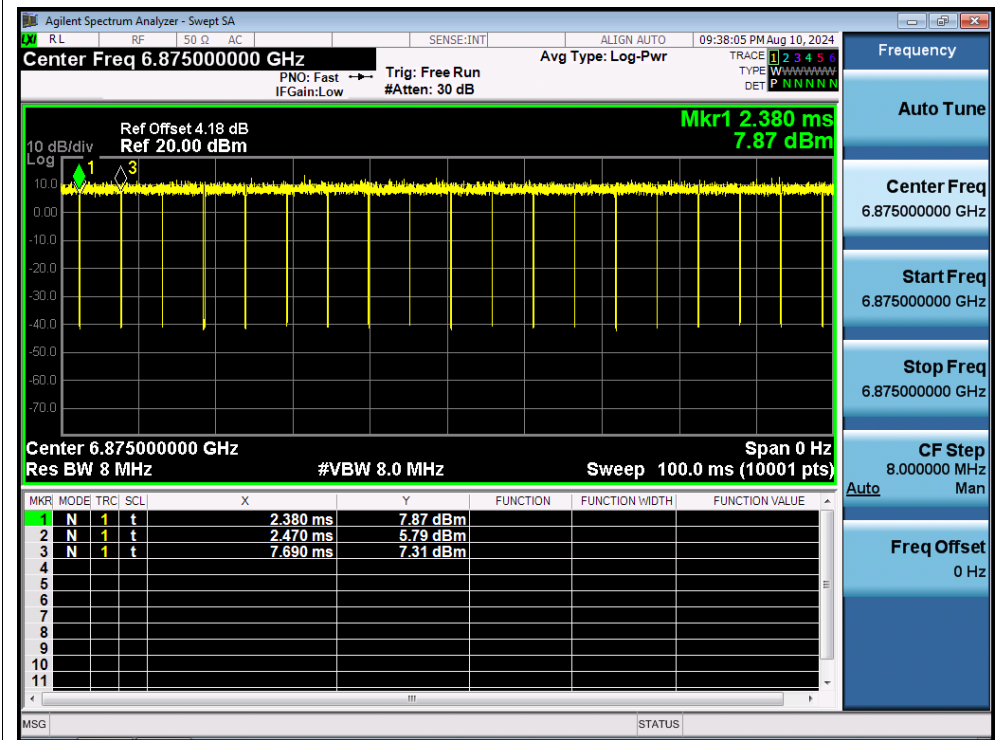
CF Step
8.000000 MHz
Man

Auto

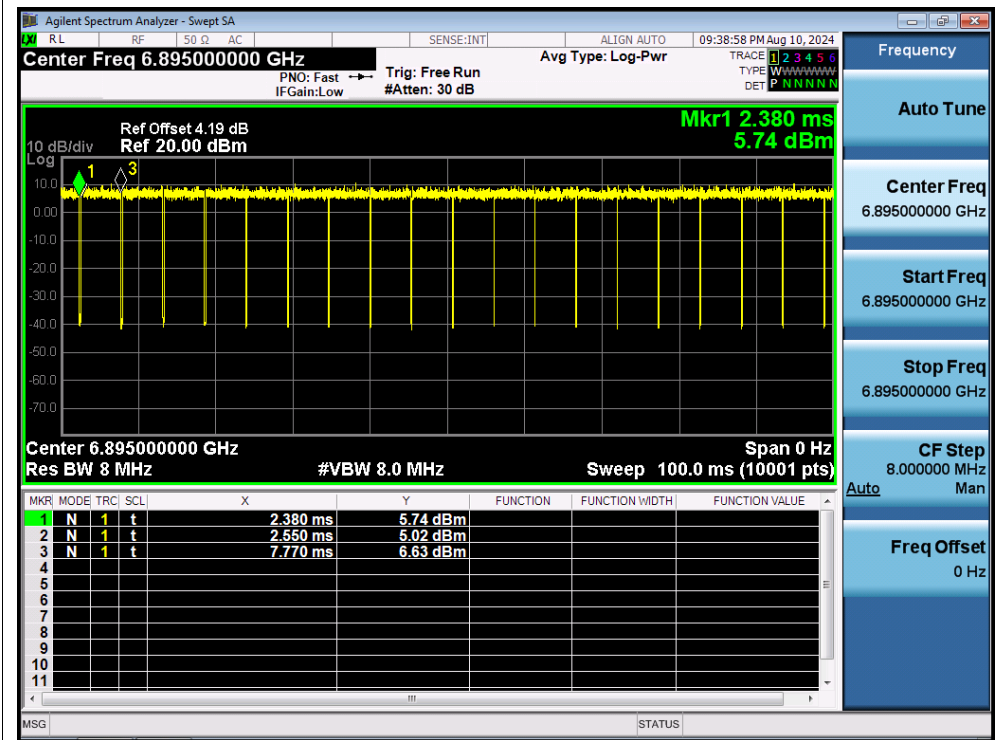
Freq Offset
0 Hz

[illegible]

Duty Cycle NVNT ax20 6875MHz Ant2



Duty Cycle NVNT ax20 6895MHz Ant2



Duty Cycle NVNT ax20 6995MHz Ant2

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 09:40:05 PM Aug 10, 2024

Center Freq 6.995000000 GHz Avg Type: Log-Pwr

PNO: Fast → Trig: Free Run
IFGain:Low #Atten: 30 dB

Ref Offset 4.13 dB
Ref 20.00 dBm

Mkr1 2.450 ms
3.84 dBm

10 dB/div
Log

Center 6.995000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	2.450 ms	3.84 dBm			
2	N	1	t	2.510 ms	3.10 dBm			
3	N	1	t	7.730 ms	4.65 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 6.995000000 GHz

Start Freq 6.995000000 GHz

Stop Freq 6.995000000 GHz

CF Step 8.000000 MHz

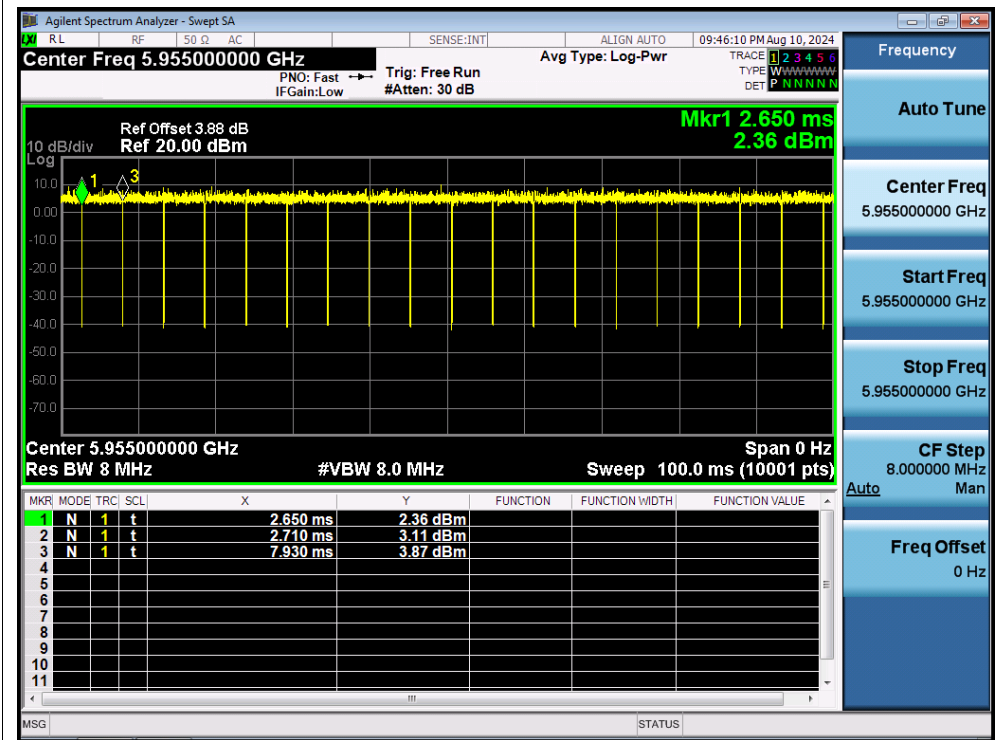
Man

Auto

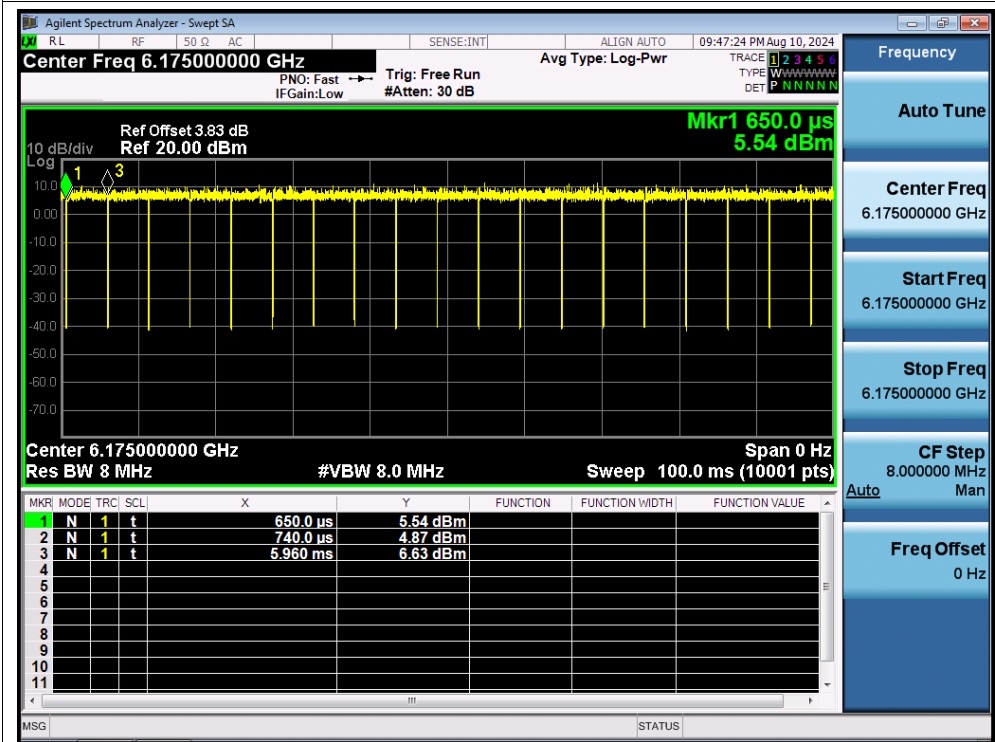
Freq Offset 0 Hz

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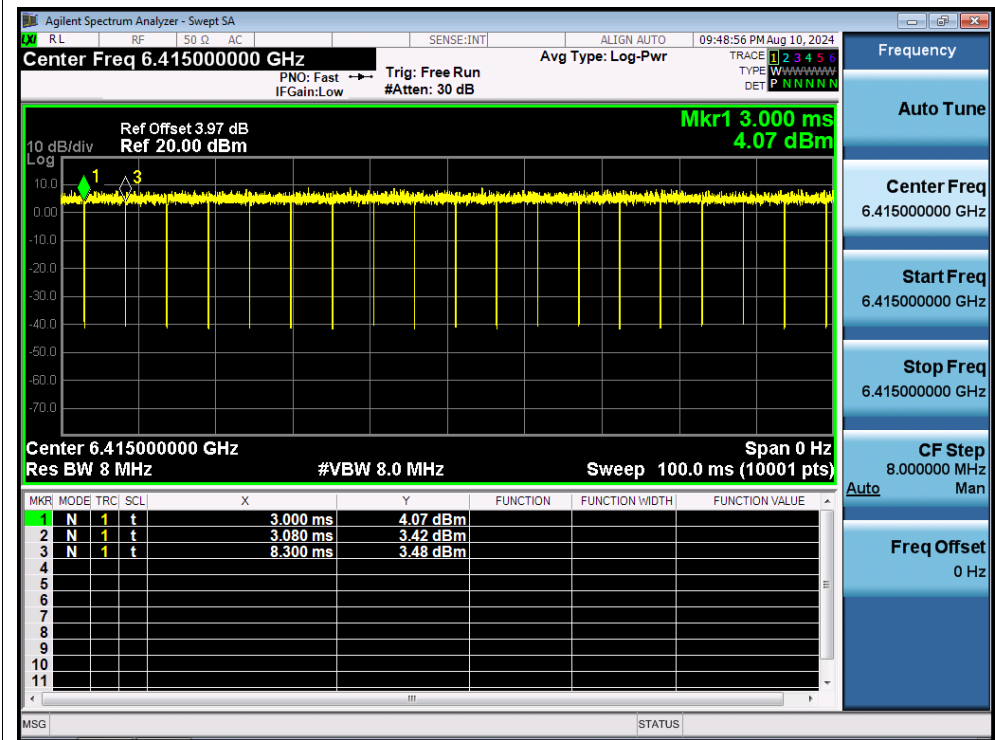
Duty Cycle NVNT ax20 5955MHz Ant3



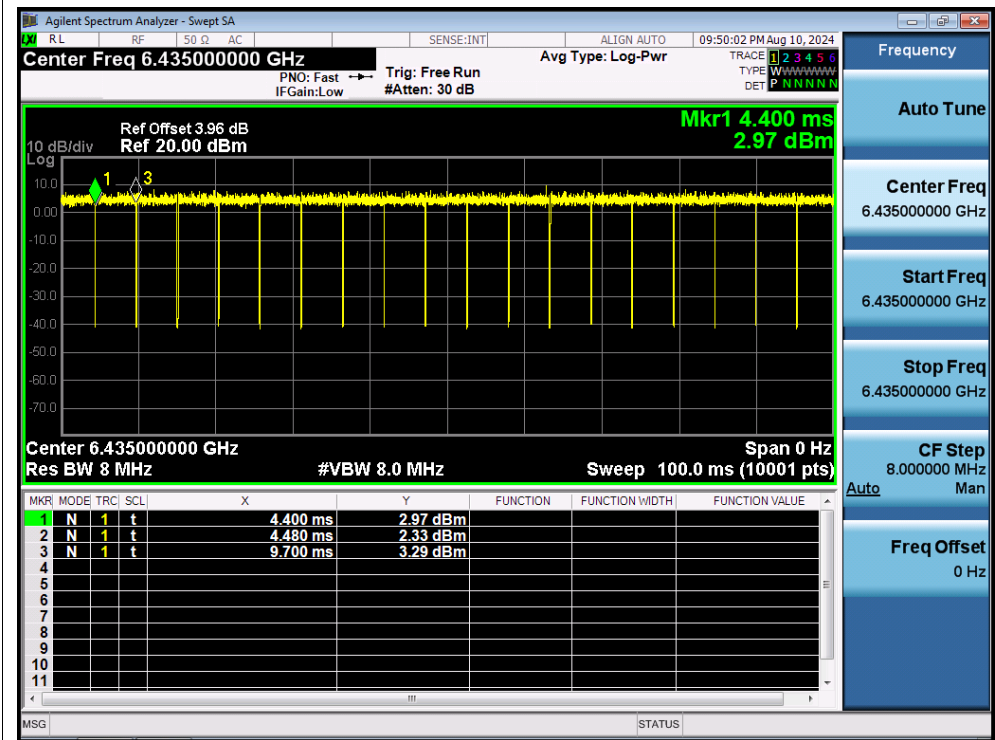
Duty Cycle NVNT ax20 6175MHz Ant3



Duty Cycle NVNT ax20 6415MHz Ant3



Duty Cycle NVNT ax20 6435MHz Ant3



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 09:50:54 PM Aug 10, 2024

Center Freq 6.47500000 GHz PNO: Fast → Trig: Free Run Avg Type: Log-Pwr TRACE 1 2 3 4 5 6
IF Gain: Low #Atten: 30 dB TYPE WWWWWW DET P N N N N N

Ref Offset 3.97 dB Mkr1 4.420 ms
Ref 20.00 dB 3.10 dBm

10 dB/div Log

Center 6.47500000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	4.420 ms	3.10 dBm			
2	N	1	t	4.480 ms	2.77 dBm			
3	N	1	t	9.700 ms	4.50 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 6.47500000 GHz

Start Freq 6.47500000 GHz

Stop Freq 6.47500000 GHz

CF Step 8.000000 MHz Man

Auto

Freq Offset 0 Hz

Duty Cycle NVNT ax20 6515MHz Ant3

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 09:51:48 PM Aug 10, 2024

Center Freq 6.515000000 GHz Avg Type: Log-Pwr

PNO: Fast Trg: Free Run
IF Gain: Low #Atten: 30 dB

Ref Offset 3.96 dB
Ref 20.00 dBm

Mkr1 1.740 ms
5.08 dBm

10 dB/div
Log

Center 6.515000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz
Sweep 100.0 ms (10001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.740 ms	5.08 dBm			
2	N	1	t	1.800 ms	2.53 dBm			
3	N	1	t	7.030 ms	3.67 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
6.515000000 GHz

Start Freq
6.515000000 GHz

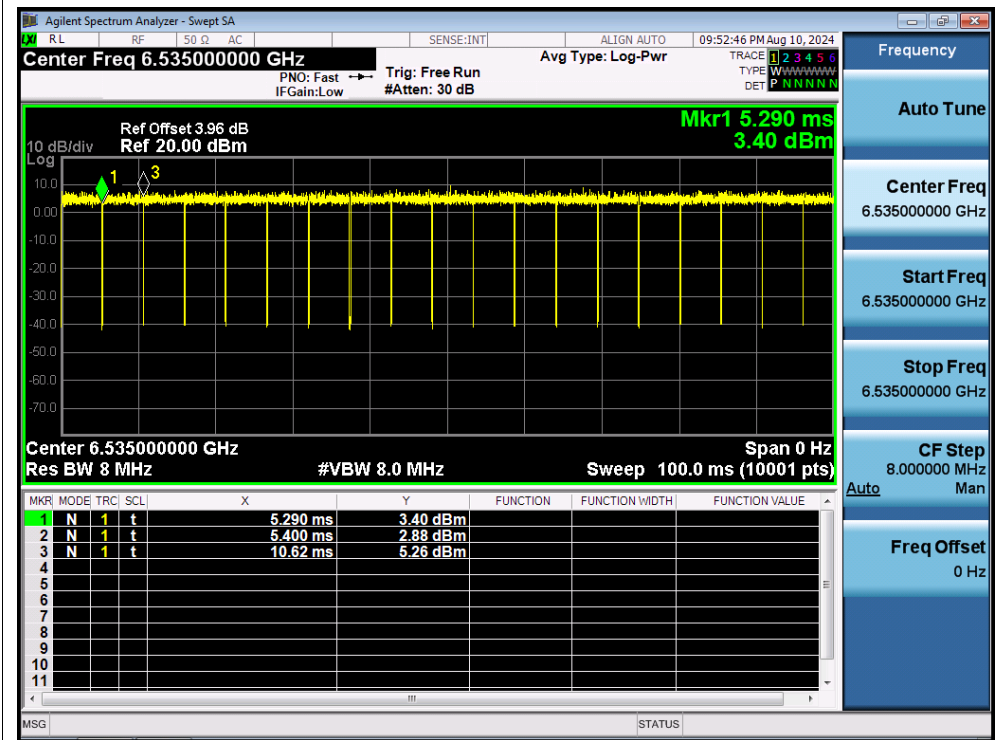
Stop Freq
6.515000000 GHz

CF Step
8.000000 MHz
Man

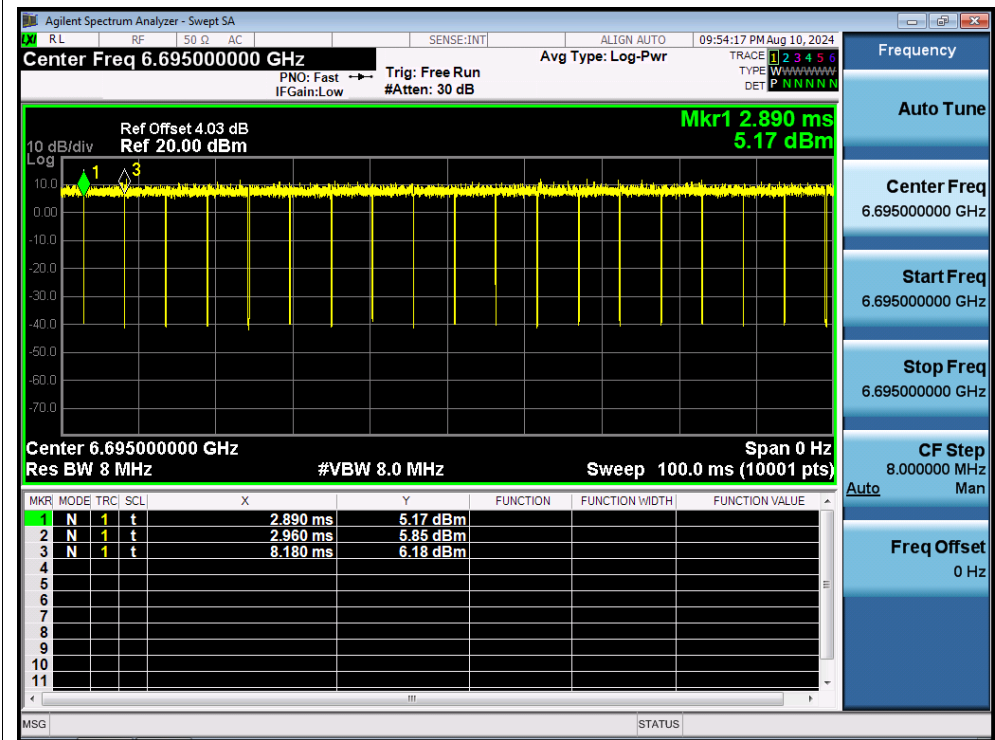
Auto

Freq Offset
0 Hz

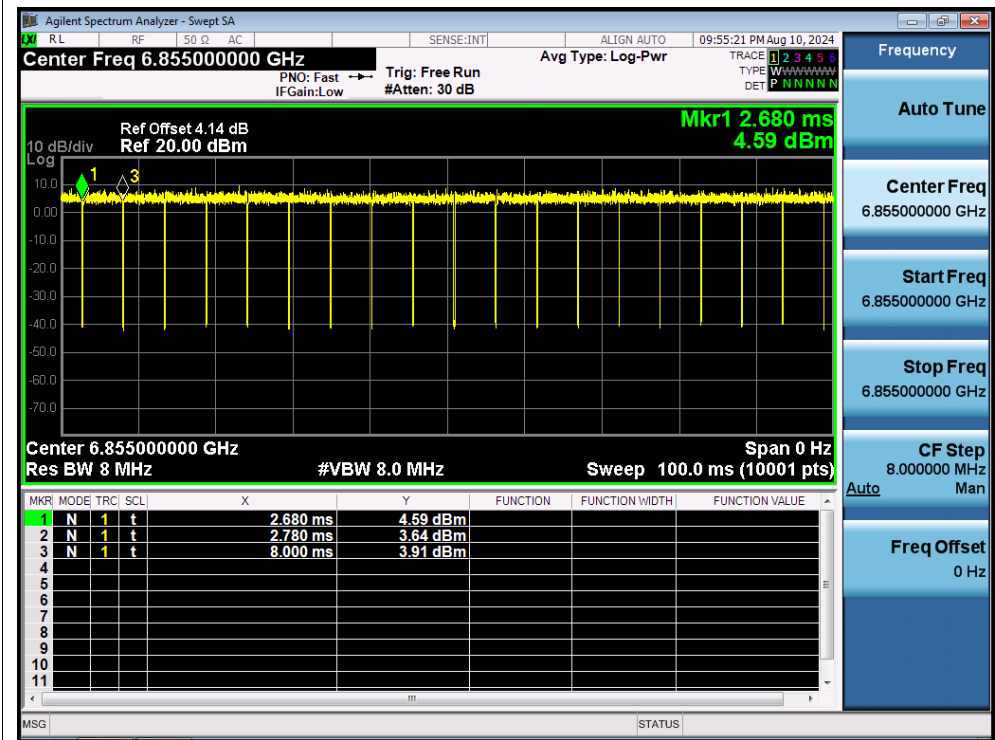
Duty Cycle NVNT ax20 6535MHz Ant3



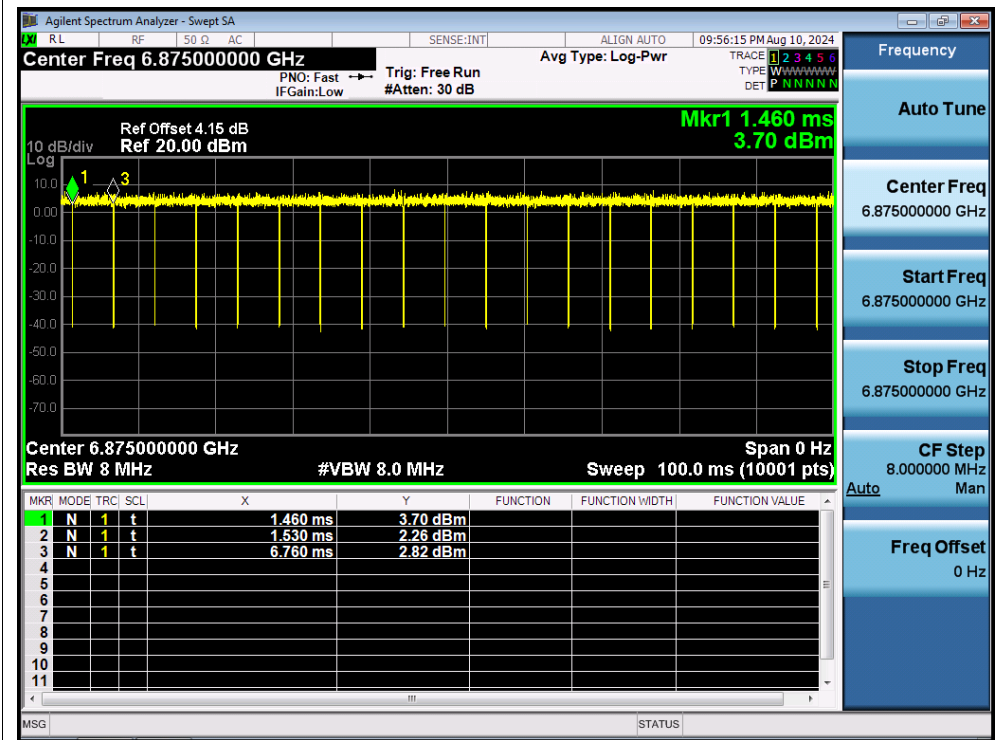
Duty Cycle NVNT ax20 6695MHz Ant3



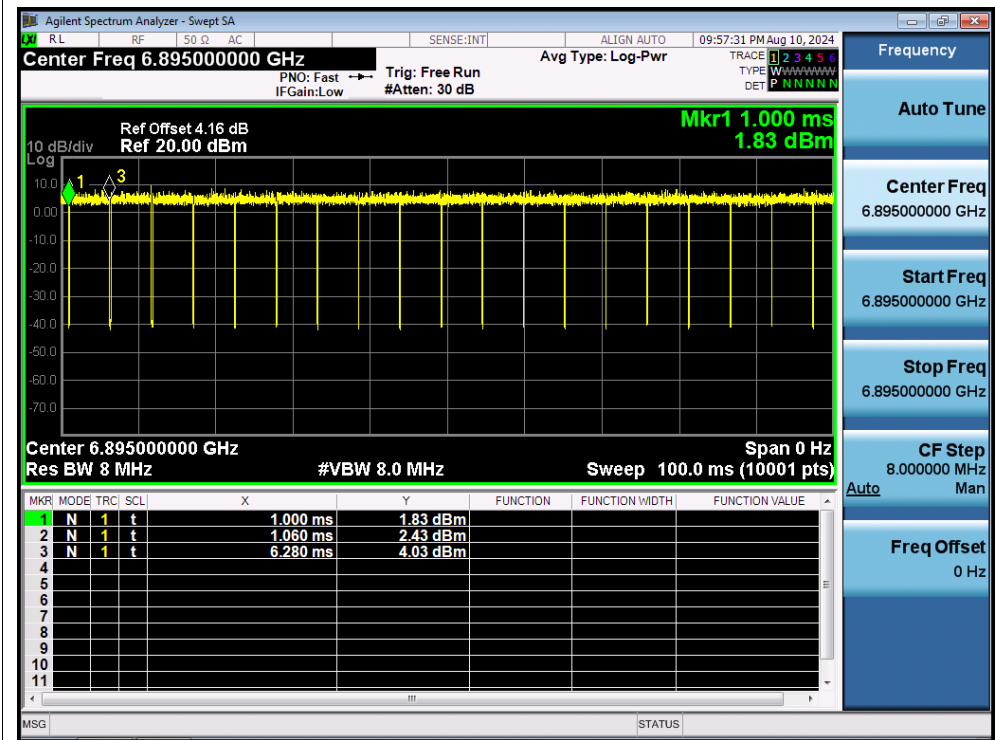
Duty Cycle NVNT ax20 6855MHz Ant3



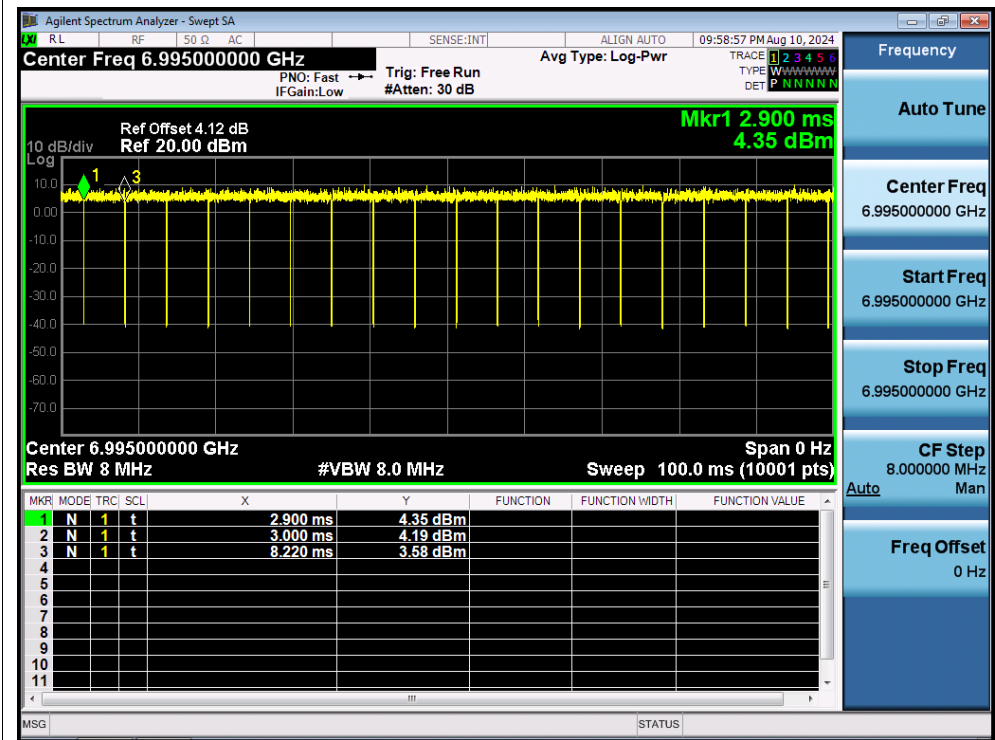
Duty Cycle NVNT ax20 6875MHz Ant3



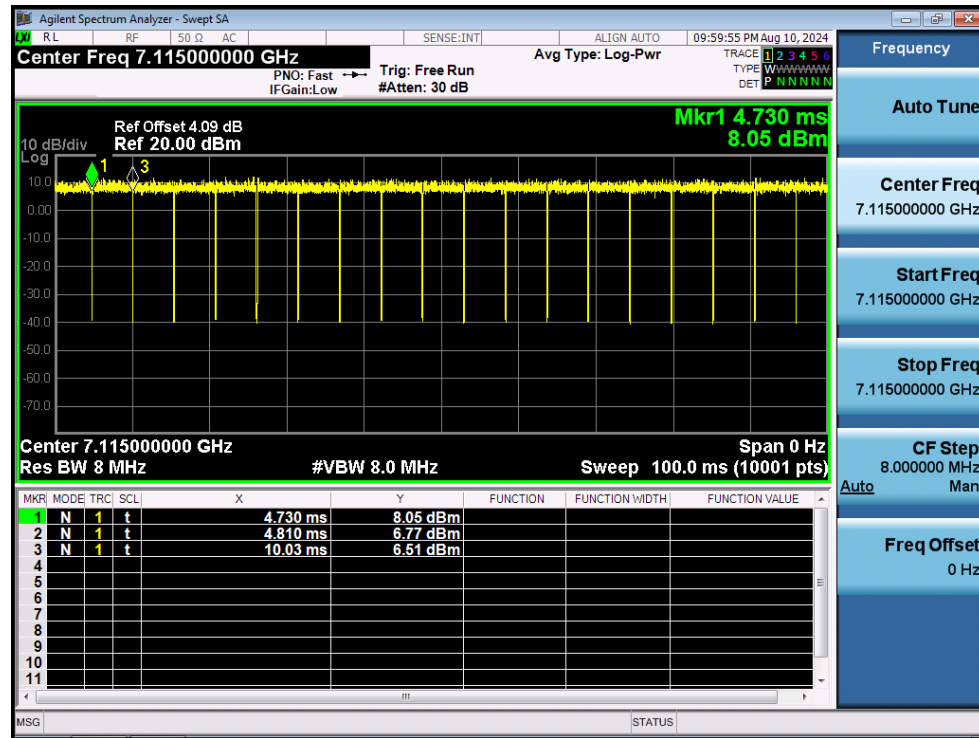
Duty Cycle NVNT ax20 6895MHz Ant3



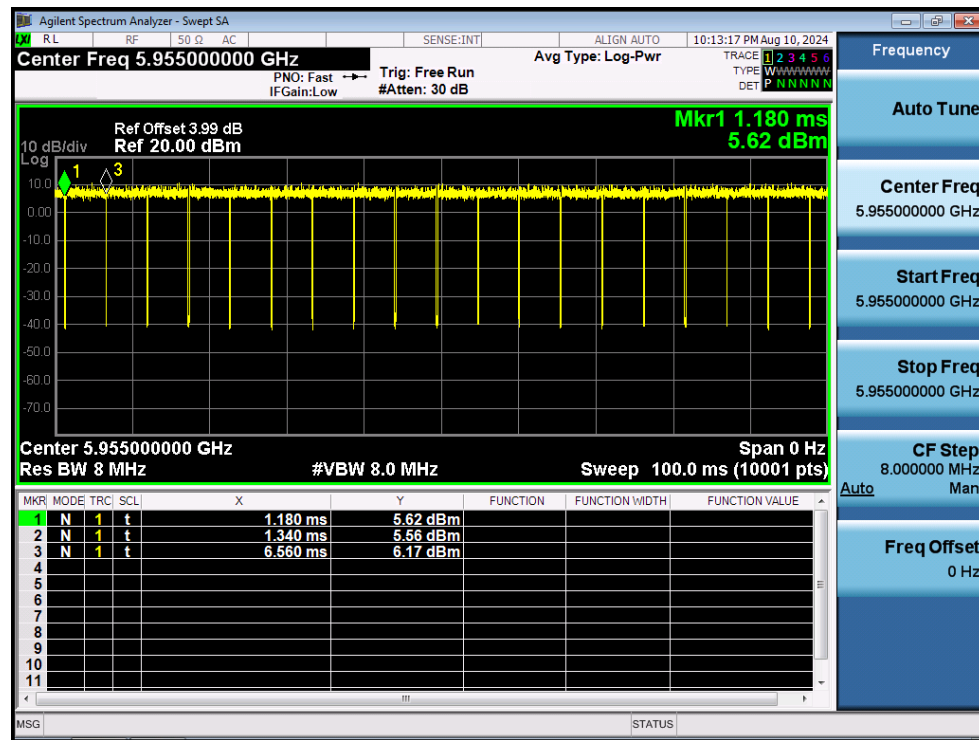
Duty Cycle NVNT ax20 6995MHz Ant3



Duty Cycle NVNT ax20 7115MHz Ant3



Duty Cycle NVNT ax20 5955MHz Ant4



Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:15:11 PM Aug 10, 2024

Center Freq 6.17500000 GHz PNO: Fast Trig: Free Run Avg Type: Log-Pwr TRACE 1 2 3 4 5 6
IF Gain: Low #Atten: 30 dB TYPE W W W W W W W W
DET P N N N N N

Ref Offset 4.01 dB Mkr1 2.030 ms
Ref 20.00 dBm 7.08 dBm

10 dB/div Log

Center 6.17500000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	2.030 ms	7.08 dBm			
2	N	1	t	2.180 ms	6.43 dBm			
3	N	1	t	7.400 ms	7.59 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 6.17500000 GHz

Start Freq 6.17500000 GHz

Stop Freq 6.17500000 GHz

CF Step 8.000000 MHz Man

Freq Offset 0 Hz

[illegible]

Duty Cycle NVNT ax20 6435MHz Ant4

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:31:06 PM Aug 10, 2024

Center Freq 6.435000000 GHz Avg Type: Log-Pwr PNO: Fast → Trig: Free Run IF Gain: Low #Atten: 30 dB

TRACE 1 2 3 4 5 6 TYPE W W W W W W W W DET P N N N N N N

Ref Offset 4.24 dB
Ref 20.00 dBm

Mkr1 2.290 ms
4.27 dBm

10 dB/div
Log

Center 6.435000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	2.290 ms	4.27 dBm			
2	N	1	t	2.370 ms	5.25 dBm			
3	N	1	t	7.590 ms	4.84 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
6.435000000 GHz

Start Freq
6.435000000 GHz

Stop Freq
6.435000000 GHz

CF Step
8.000000 MHz
Man

Auto

Freq Offset
0 Hz

MSG STATUS

[illegible]

Duty Cycle NVNT ax20 6515MHz Ant4

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:32:36 PM Aug 10, 2024

Center Freq 6.515000000 GHz Avg Type: Log-Pwr

PNO: Fast → Trig: Free Run
IF Gain: Low #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

Ref Offset 4.11 dB
Ref 20.00 dBm

**Mkr1 4.740 ms
5.95 dBm**

10 dB/div
Log

Center 6.515000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	4.740 ms	5.95 dBm			
2	N	1	t	4.880 ms	4.68 dBm			
3	N	1	t	10.10 ms	6.40 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
6.515000000 GHz

Start Freq
6.515000000 GHz

Stop Freq
6.515000000 GHz

CF Step
8.000000 MHz
Man

Auto

Freq Offset
0 Hz

Duty Cycle NVNT ax20 6535MHz Ant4

Agilent Spectrum Analyzer - Sweep SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:33:32 PM Aug 10, 2024

Center Freq 6.535000000 GHz Avg Type: Log-Pwr

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

PN0: Fast → Trig: Free Run
IFGain:Low #Atten: 30 dB

Ref Offset 4.1 dB
Ref 20.00 dBm

Mkr1 5.120 ms
7.92 dBm

10 dB/div
Log

Center 6.535000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	5.120 ms	7.92 dBm			
2	N	1	t	5.200 ms	4.67 dBm			
3	N	1	t	10.43 ms	-1.80 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
6.535000000 GHz

Start Freq
6.535000000 GHz

Stop Freq
6.535000000 GHz

CF Step
8.000000 MHz
Man

Auto

Freq Offset
0 Hz

Duty Cycle NVNT ax20 6695MHz Ant4

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:34:30 PM Aug 10, 2024

Center Freq 6.695000000 GHz Avg Type: Log-Pwr

PNO: Fast $\leftrightarrow$ Trig: Free Run
IF Gain: Low #Atten: 30 dB

Ref Offset 4.2 dB
Ref 20.00 dBm

Mkr1 4.170 ms
8.67 dBm

10 dB/div
Log

Center 6.695000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	4.170 ms	8.67 dBm			
2	N	1	t	4.230 ms	6.67 dBm			
3	N	1	t	9.460 ms	4.99 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency: 6.695000000 GHz

Auto Tune

Center Freq: 6.695000000 GHz

Start Freq: 6.695000000 GHz

Stop Freq: 6.695000000 GHz

CF Step: 8.000000 MHz

Freq Offset: 0 Hz

Auto

MSG STATUS

Duty Cycle NVNT ax20 6855MHz Ant4

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:35:44 PM Aug 10, 2024

Center Freq 6.855000000 GHz Avg Type: Log-Pwr

TRAC 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

PN0: Fast → Trig: Free Run
IFGain:Low #Atten: 30 dB

Ref Offset 4.21 dB
Ref 20.00 dBm

Mkr1 2.060 ms
5.65 dBm

10 dB/div
Log

Center 6.855000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	2.060 ms	5.65 dBm			
2	N	1	t	2.230 ms	5.15 dBm			
3	N	1	t	7.450 ms	5.38 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
6.855000000 GHz

Start Freq
6.855000000 GHz

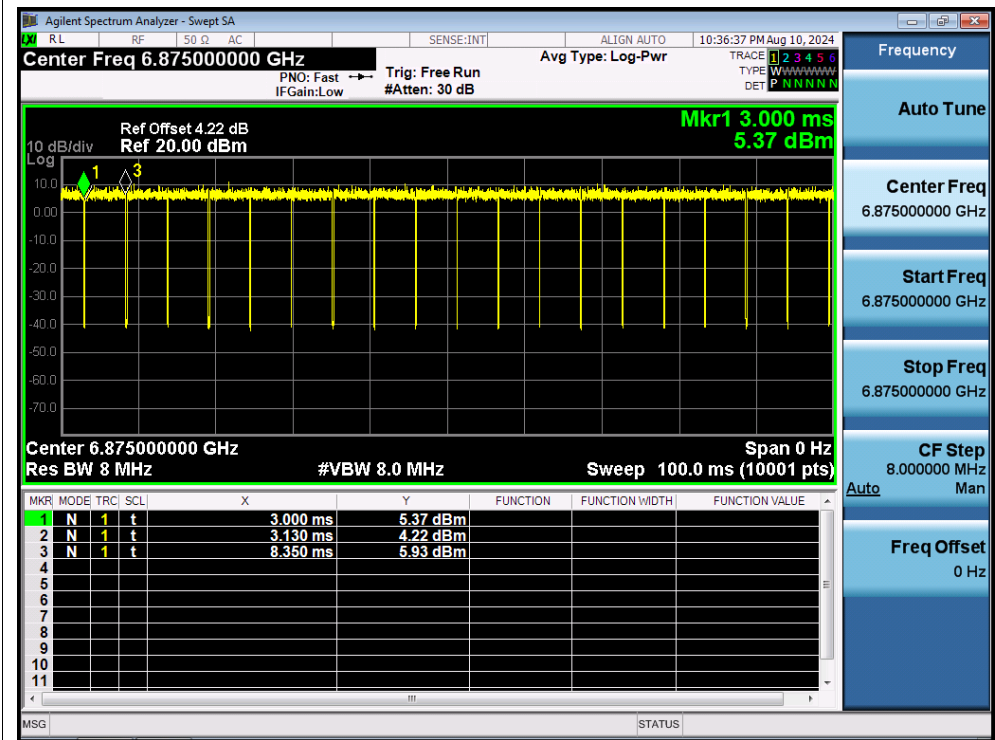
Stop Freq
6.855000000 GHz

CF Step
8.000000 MHz
Man

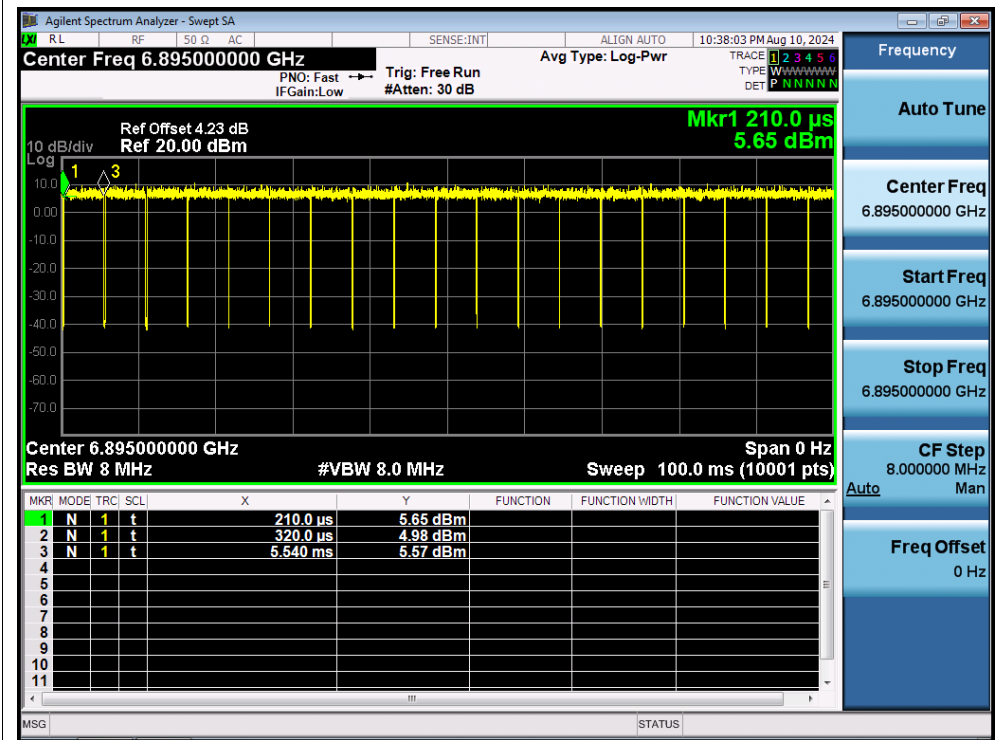
Auto

Freq Offset
0 Hz

Duty Cycle NVNT ax20 6875MHz Ant4



Duty Cycle NVNT ax20 6895MHz Ant4



Duty Cycle NVNT ax20 6995MHz Ant4

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:39:07 PM Aug 10, 2024

Center Freq 6.995000000 GHz Avg Type: Log-Pwr

PNO: Fast → Trig: Free Run
IFGain:Low #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N N

Ref Offset 4.32 dB
Ref 20.00 dBm

Mkr1 1.250 ms
5.33 dBm

10 dB/div
Log

Center 6.995000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	1.250 ms	5.33 dBm			
2	N	1	t	1.320 ms	6.30 dBm			
3	N	1	t	6.540 ms	6.12 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
6.995000000 GHz

Start Freq
6.995000000 GHz

Stop Freq
6.995000000 GHz

CF Step
8.000000 MHz
Man

Auto

Freq Offset
0 Hz

Duty Cycle NVNT ax20 7115MHz Ant4

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:41:27 PM Aug 10, 2024

Center Freq 7.115000000 GHz Avg Type: Log-Pwr

PN0: Fast Trig: Free Run
IFGain:Low #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W W W
DET P N N N N N N

Ref Offset 4.28 dB
Ref 20.00 dBm

**Mkr1 2.150 ms
6.35 dBm**

10 dB/div
Log

Center 7.115000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	2.150 ms	6.35 dBm			
2	N	1	t	2.230 ms	6.47 dBm			
3	N	1	t	7.450 ms	7.40 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
7.115000000 GHz

Start Freq
7.115000000 GHz

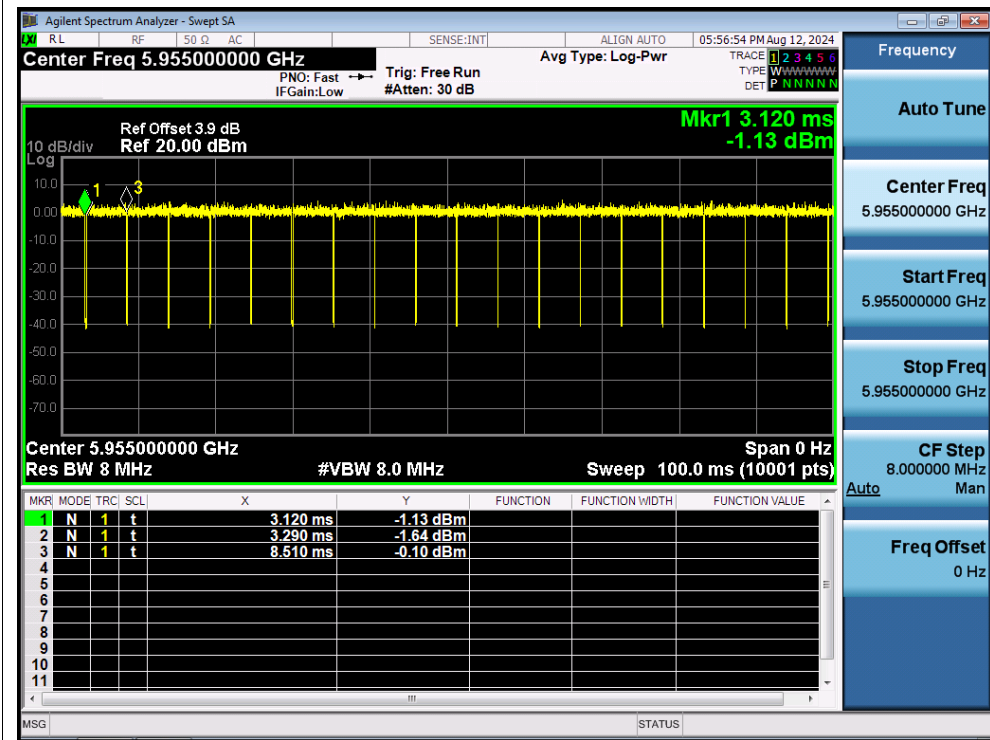
Stop Freq
7.115000000 GHz

CF Step
8.000000 MHz
Man

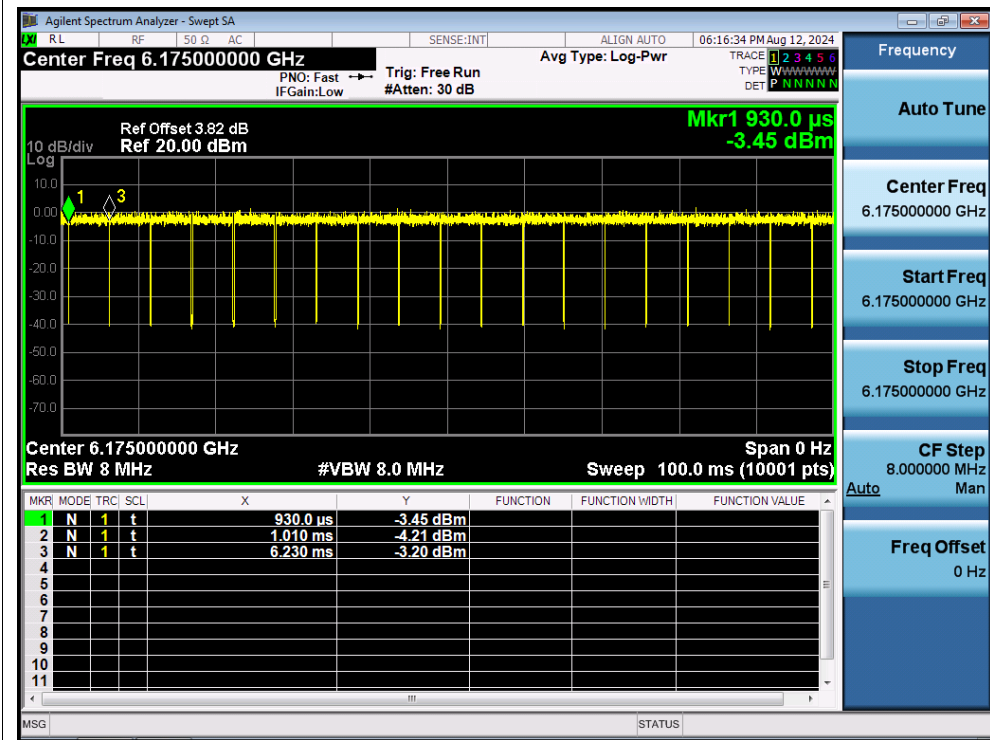
Auto

Freq Offset
0 Hz

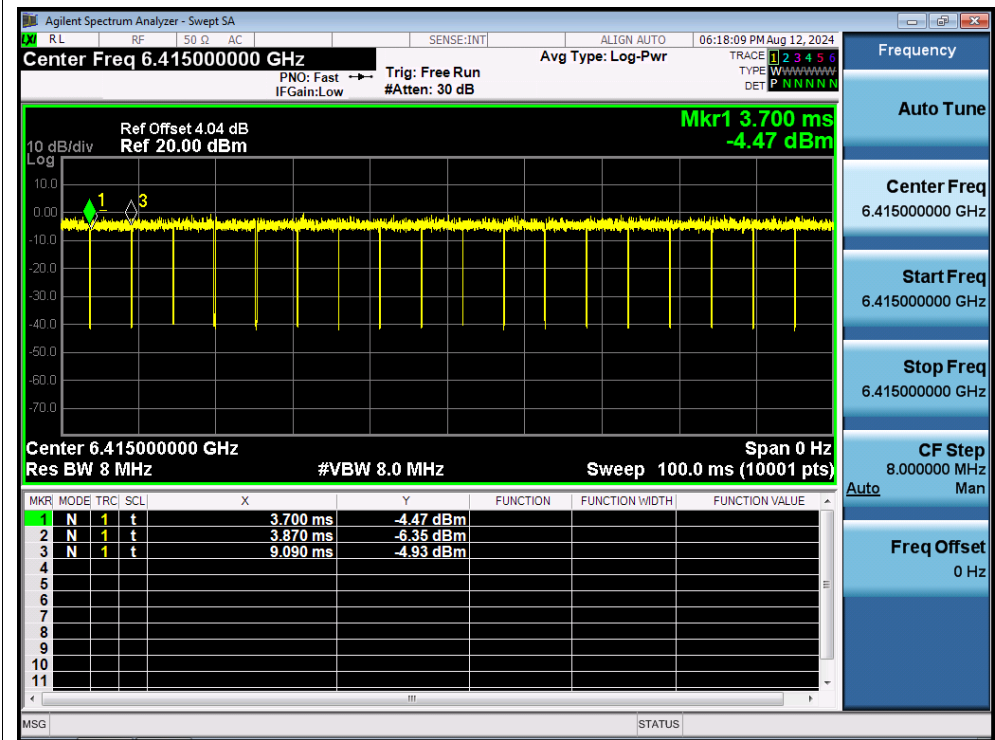
Duty Cycle NVNT ax20 5955MHz Sum



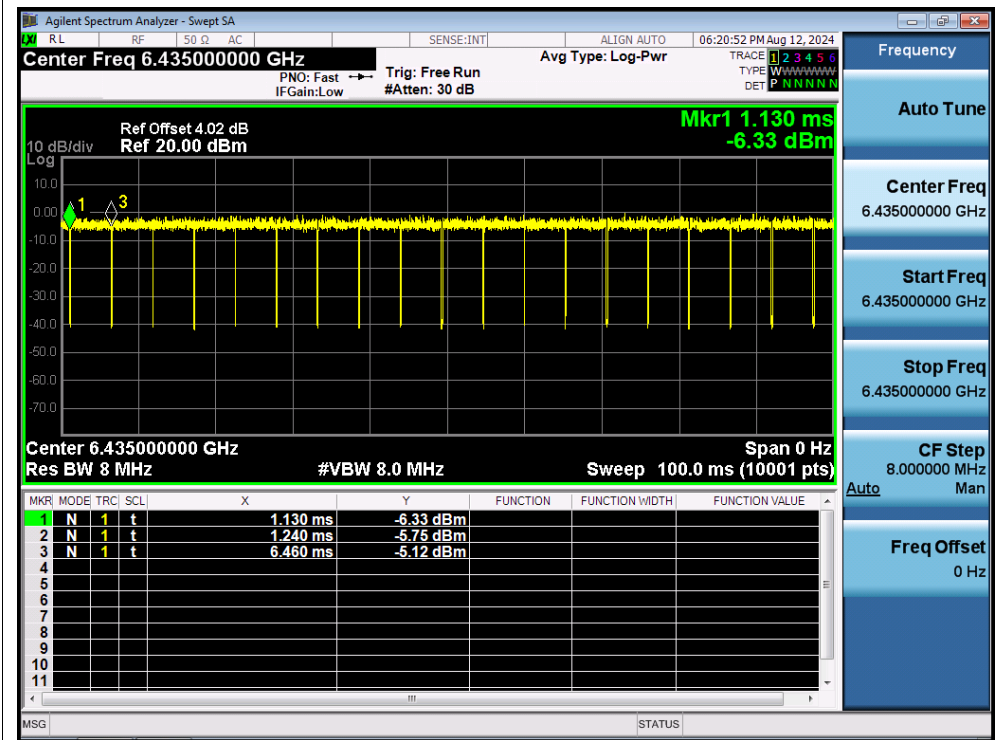
Duty Cycle NVNT ax20 6175MHz Sum



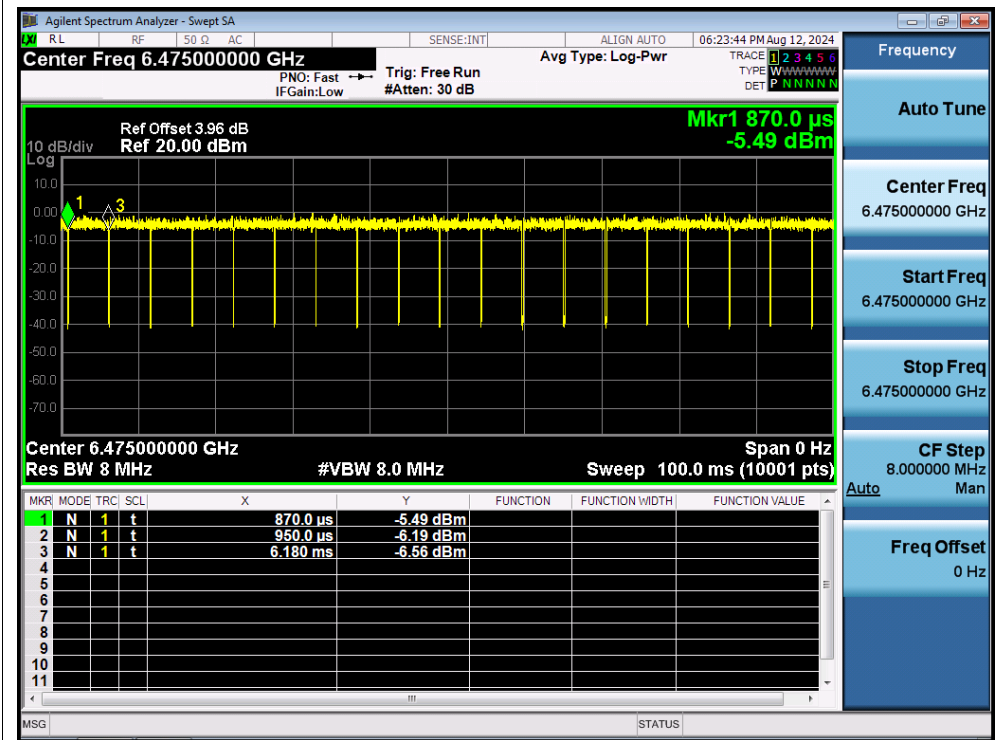
Duty Cycle NVNT ax20 6415MHz Sum



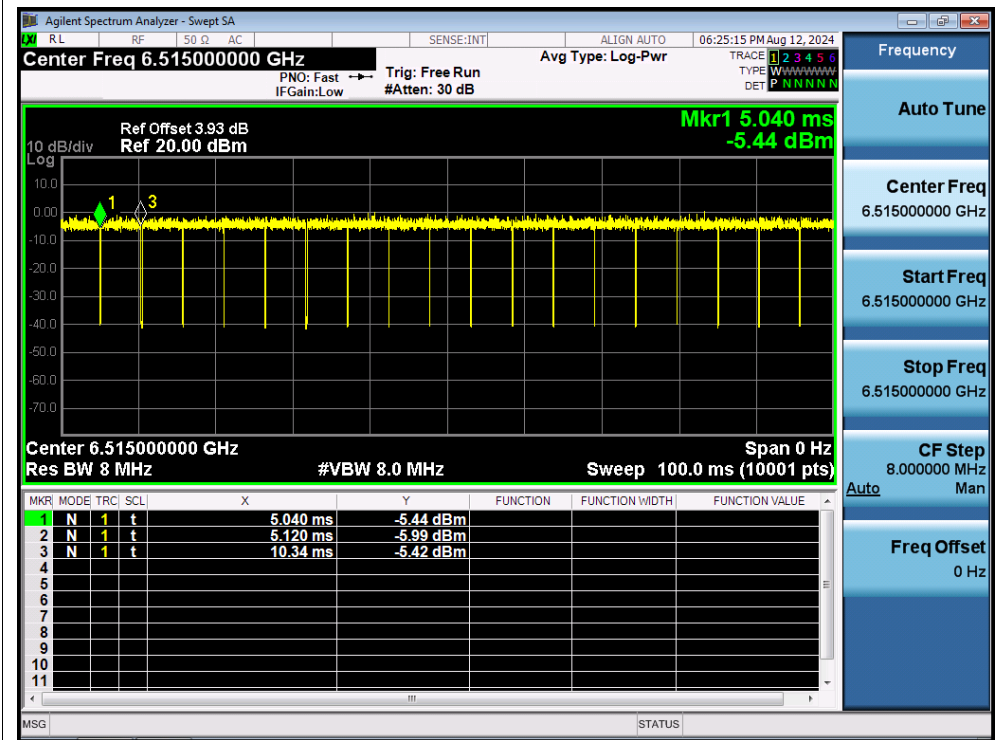
Duty Cycle NVNT ax20 6435MHz Sum



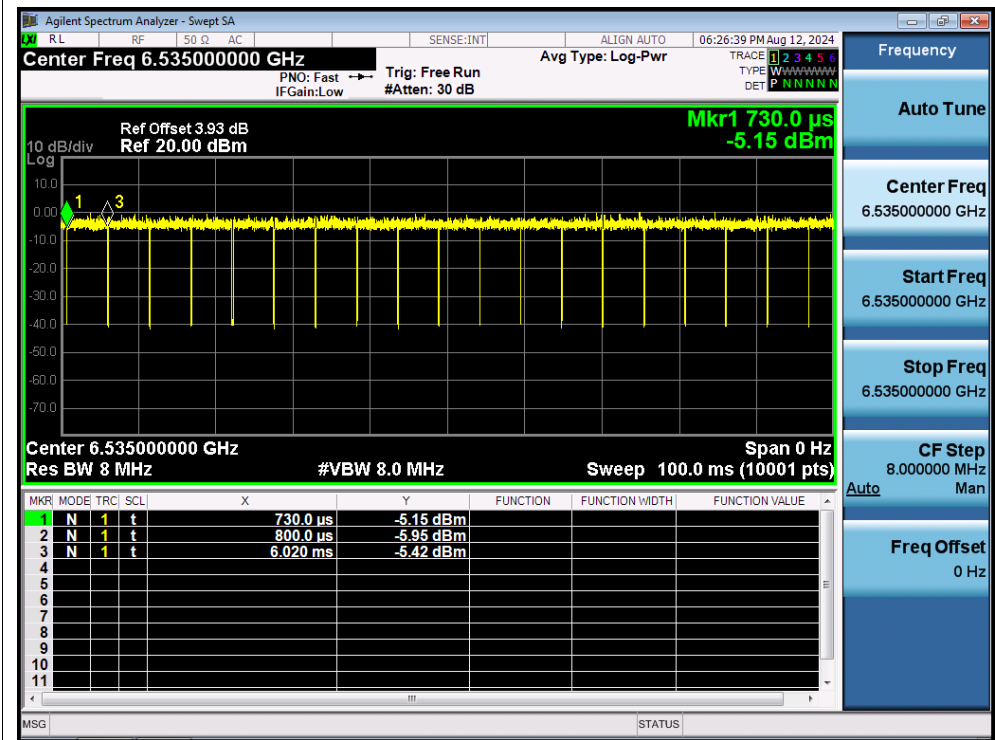
Duty Cycle NVNT ax20 6475MHz Sum



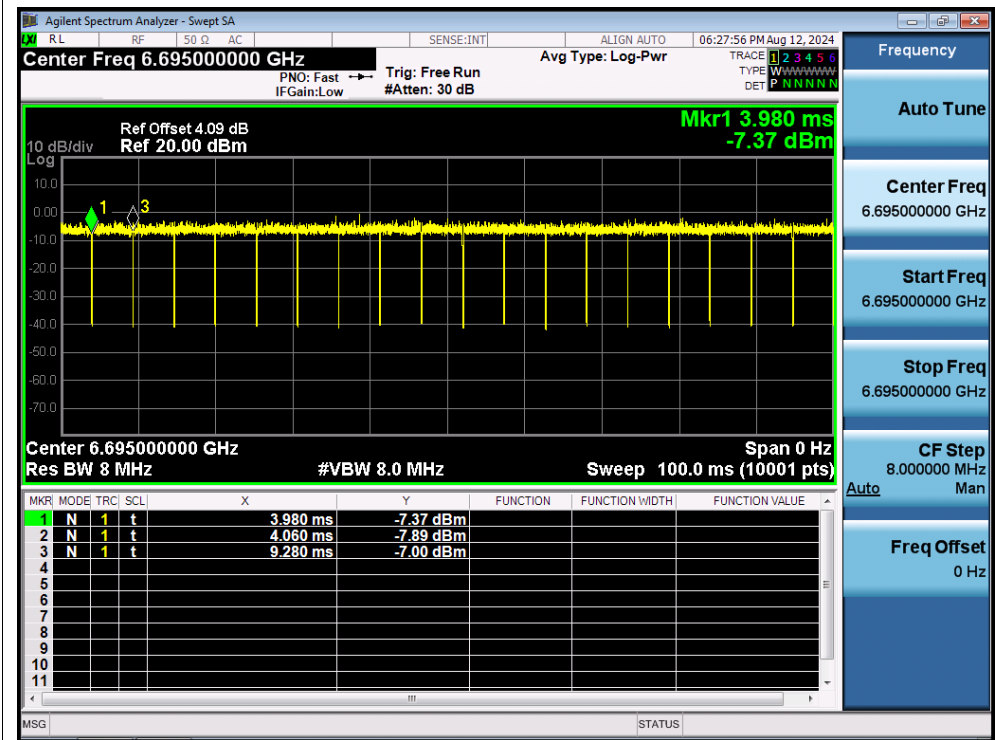
Duty Cycle NVNT ax20 6515MHz Sum



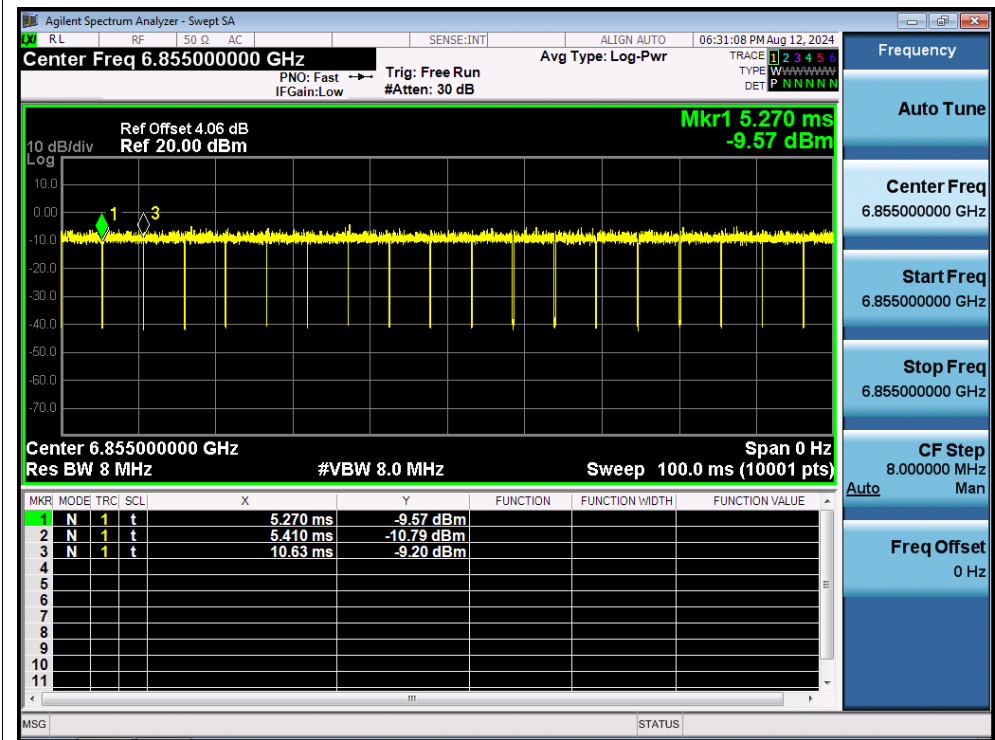
Duty Cycle NVNT ax20 6535MHz Sum



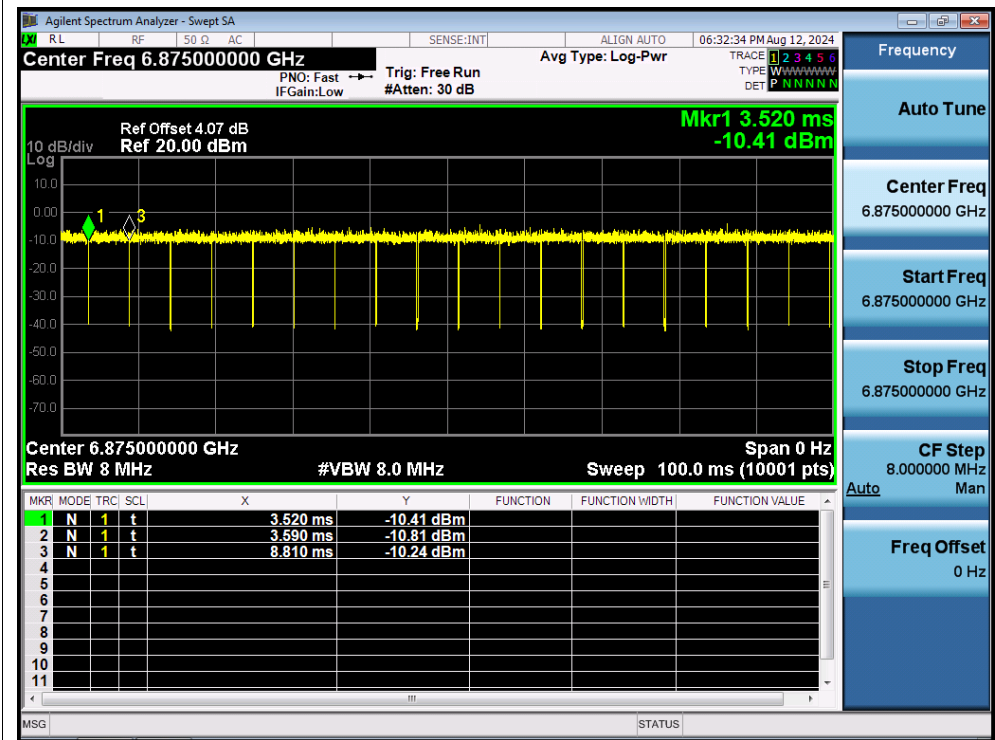
Duty Cycle NVNT ax20 6695MHz Sum



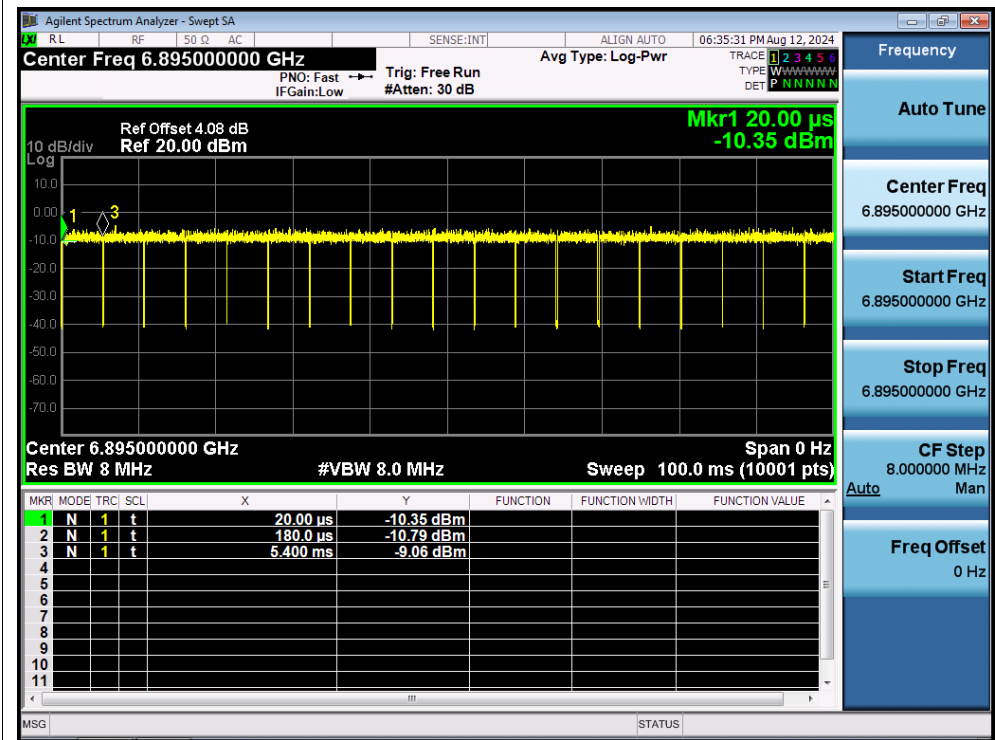
Duty Cycle NVNT ax20 6855MHz Sum



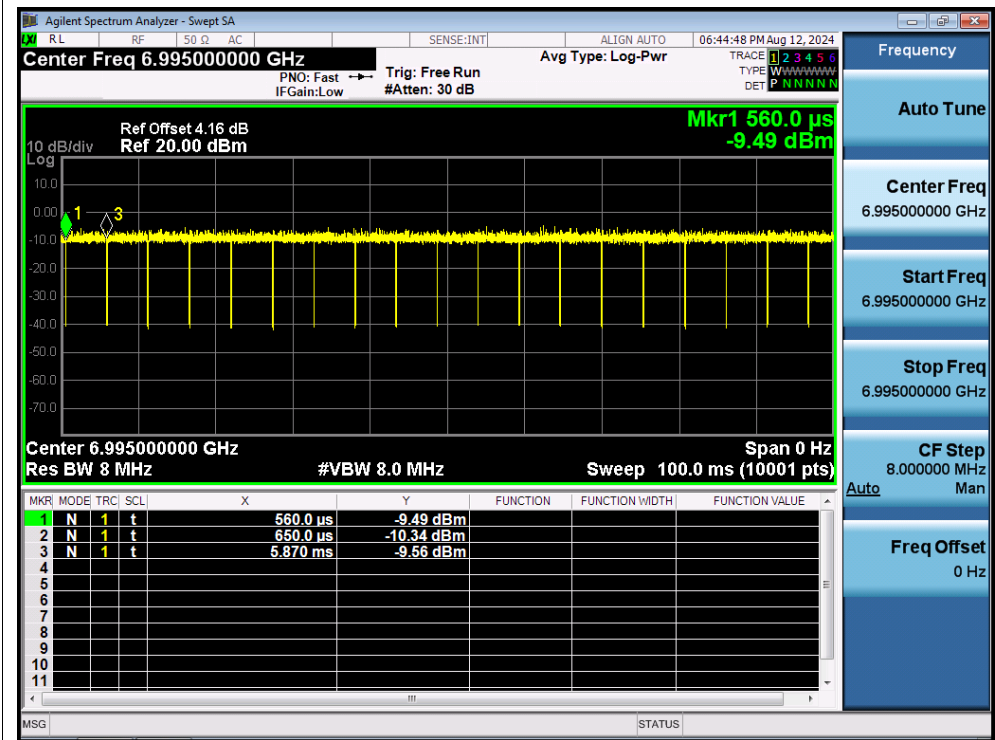
Duty Cycle NVNT ax20 6875MHz Sum



Duty Cycle NVNT ax20 6895MHz Sum



Duty Cycle NVNT ax20 6995MHz Sum



Duty Cycle NVNT ax20 7115MHz Sum

The screenshot displays an Agilent Spectrum Analyzer interface. The main plot shows a signal at 7.115 GHz with a peak level of -10.50 dBm. A green trace highlights the signal. The frequency range is from 7.115 GHz to 7.115 GHz. The resolution bandwidth (RBW) is 8 MHz. The video bandwidth (VBW) is 8.0 MHz. The sweep time is 100.0 ms. The reference offset is 4.05 dB. The reference level is 20.00 dBm. The marker 1 is at 2.050 ms and -10.50 dBm. The marker 2 is at 2.130 ms and -11.12 dBm. The marker 3 is at 2.350 ms and -10.95 dBm.

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 06:46:00 PM Aug 12, 2024

Center Freq 7.115000000 GHz Avg Type: Log-Pwr PNO: Fast Trig: Free Run IF Gain: Low #Atten: 30 dB TRACE 1 2 3 4 5 6 TYPE W W W W W W W DET P N N N N N

Ref Offset 4.05 dB Mkr1 2.050 ms
Ref 20.00 dBm -10.50 dBm

10 dB/div Log

Span 0 Hz

Center Freq 7.115000000 GHz Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	2.050 ms	-10.50 dBm			
2	N	1	t	2.130 ms	-11.12 dBm			
3	N	1	t	2.350 ms	-10.95 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency Auto Tune Center Freq 7.115000000 GHz Start Freq 7.115000000 GHz Stop Freq 7.115000000 GHz CF Step 8.000000 MHz Man Auto Freq Offset 0 Hz

Duty Cycle NVNT ax40 5965MHz Ant1

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:45:40 PM Aug 10, 2024

Center Freq 5.965000000 GHz Avg Type: Log-Pwr

TRAC 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

Ref Offset 3.92 dB
Ref 20.00 dBm

PN0: Fast → Trig: Free Run
IFGain:Low #Atten: 30 dB

10 dB/div
Log

Mkr1 4.020 ms
4.83 dBm

Center 5.965000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	4.020 ms	4.83 dBm			
2	N	1	t	4.090 ms	2.15 dBm			
3	N	1	t	9.450 ms	3.79 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
5.965000000 GHz

Start Freq
5.965000000 GHz

Stop Freq
5.965000000 GHz

CF Step
8.000000 MHz
Man

Auto

Freq Offset
0 Hz

The screenshot displays the Agilent Spectrum Analyzer interface. The main plot shows a signal at 6.165 GHz with a noise floor around -40 dBm. Key measurements include:

- Center Freq:** 6.16500000 GHz
- Ref Offset:** 3.83 dB
- Ref:** 20.00 dBm
- Mkr1:** 130.0 μs, 0.95 dBm
- Span:** 0 Hz
- Res BW:** 8 MHz
- #VBW:** 8.0 MHz
- Sweep:** 100.0 ms (10001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t		130.0 μs			0.95 dBm
2	N	1	t		300.0 μs			-3.64 dBm
3	N	1	t		5.670 ms			0.21 dBm

Duty Cycle NVNT ax40 6405MHz Ant1

Agilent Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 10:48:11 PM Aug 10, 2024

Center Freq 6.405000000 GHz Avg Type: Log-Pwr

PNO: Fast → Trig: Free Run
IF Gain: Low #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W
DET P N N N N N

Ref Offset 4.05 dB
Ref 20.00 dBm

Mkr1 3.700 ms
1.17 dBm

10 dB/div
Log

Center 6.405000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 8.0 MHz Sweep 100.0 ms (10001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	t	3.700 ms	1.17 dBm			
2	N	1	t	3.830 ms	-1.07 dBm			
3	N	1	t	9.200 ms	-24.89 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
6.405000000 GHz

Start Freq
6.405000000 GHz

Stop Freq
6.405000000 GHz

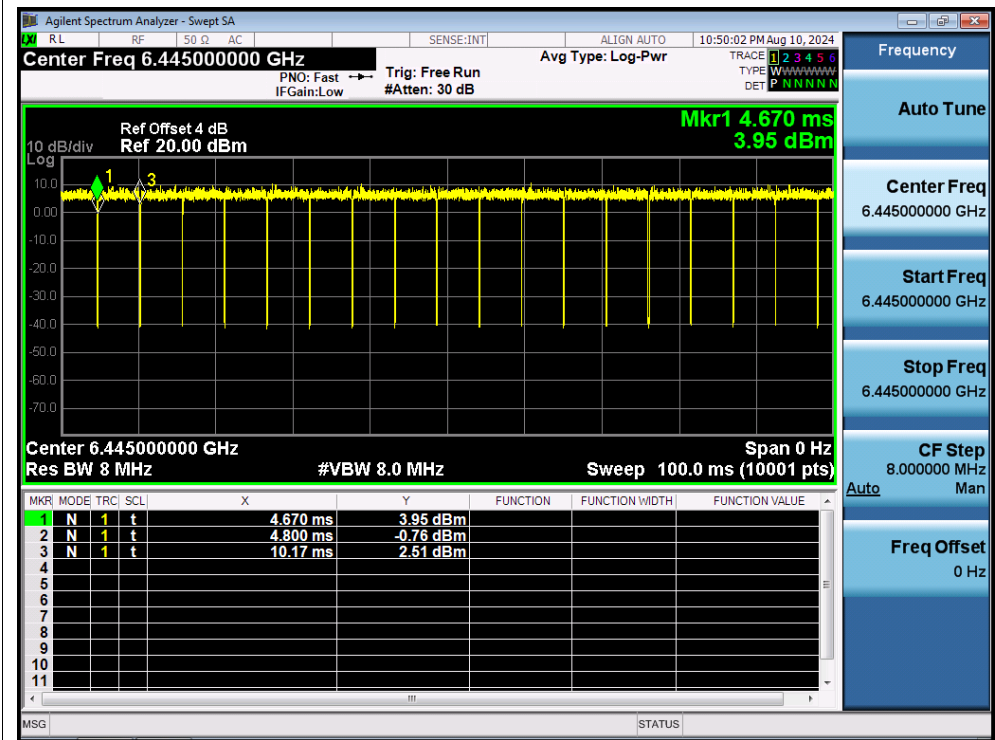
CF Step
8.000000 MHz
Man

Auto

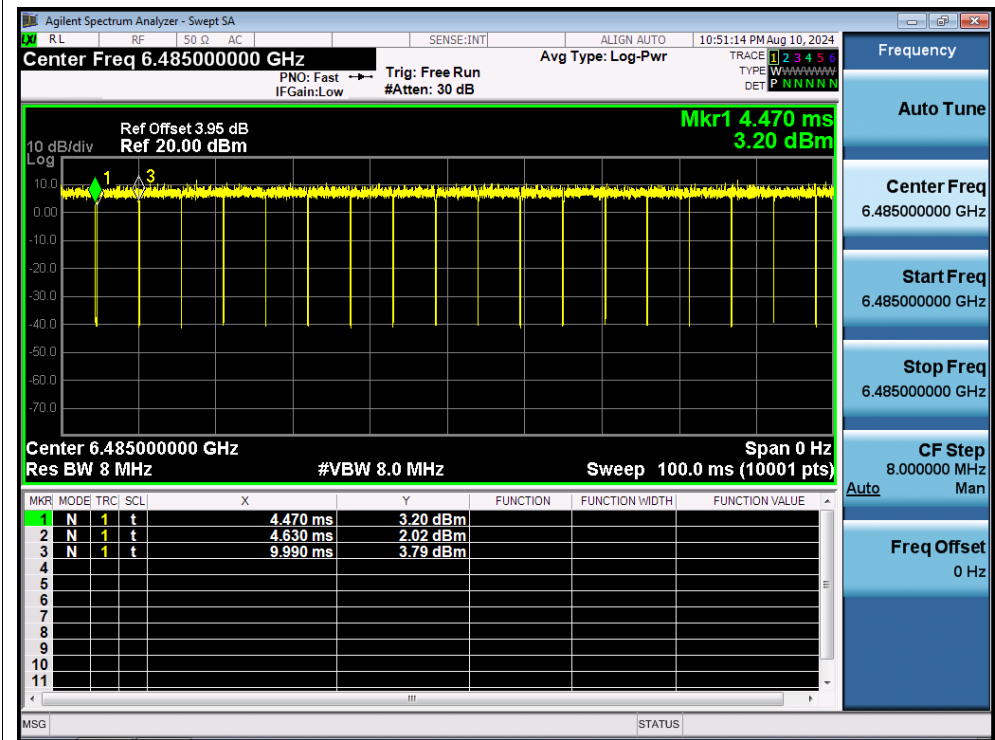
Freq Offset
0 Hz

MSG STATUS

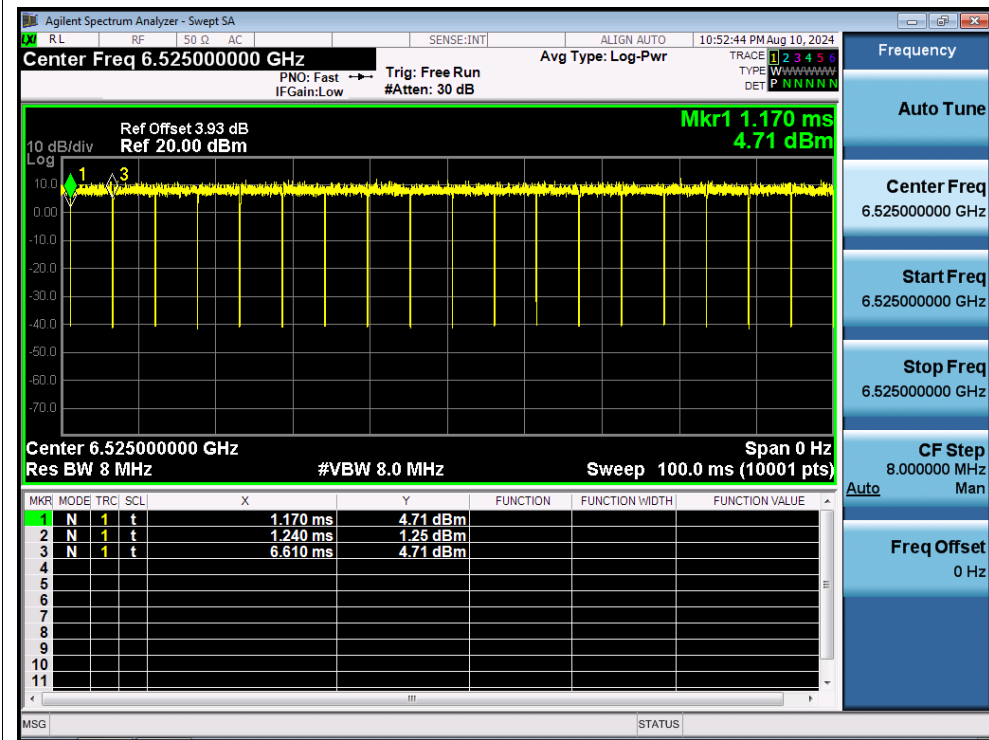
Duty Cycle NVNT ax40 6445MHz Ant1



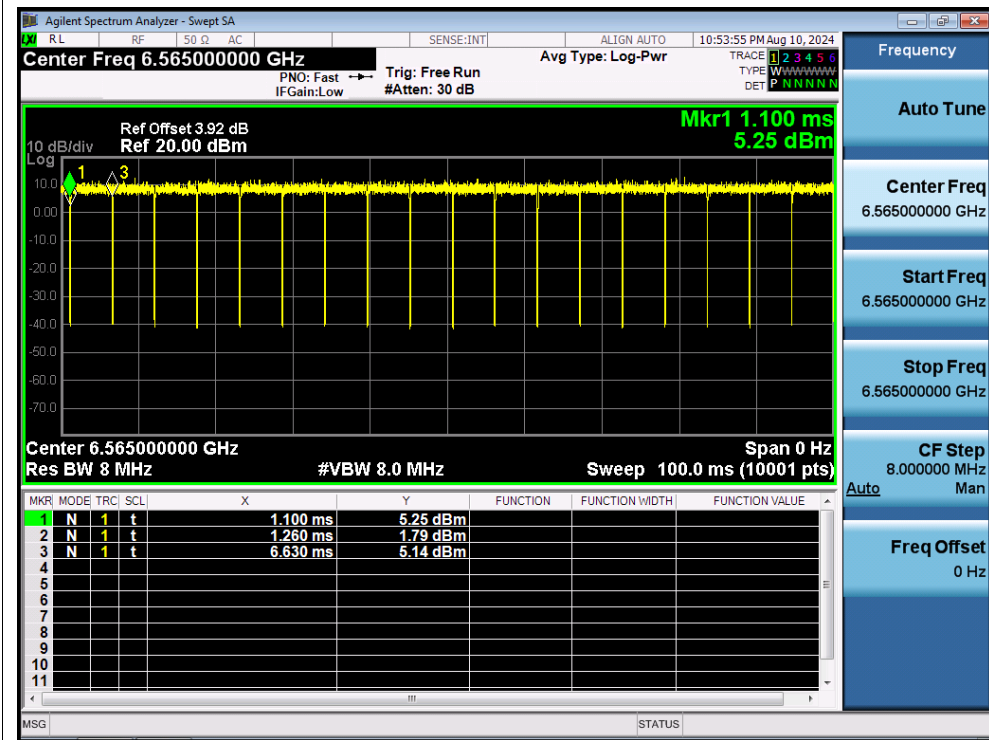
Duty Cycle NVNT ax40 6485MHz Ant1



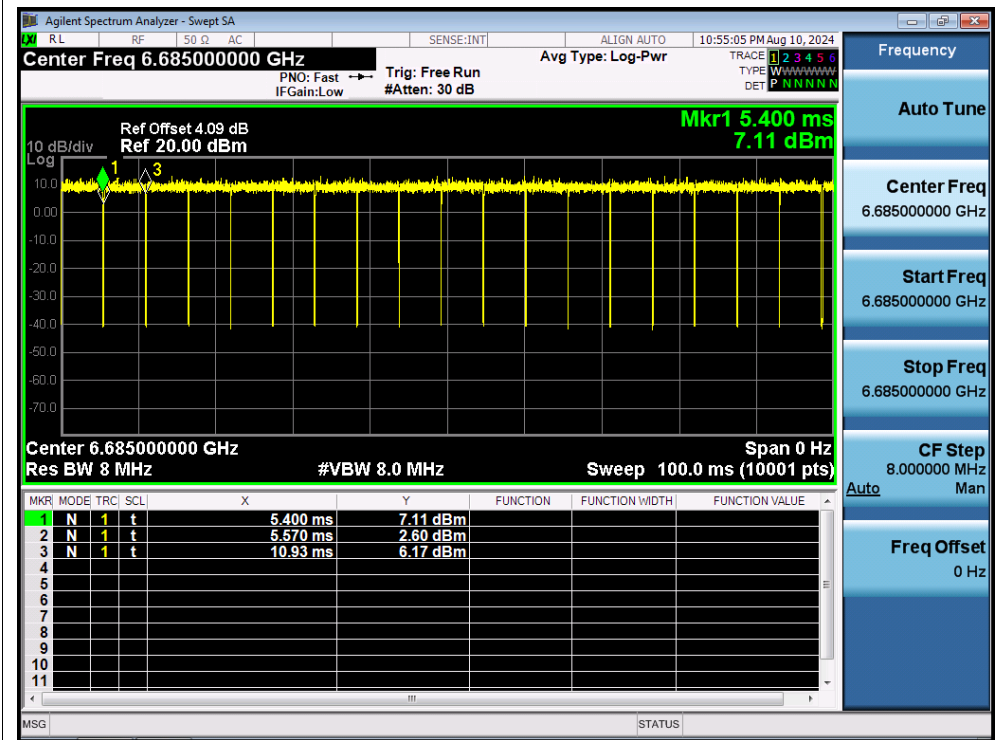
Duty Cycle NVNT ax40 6525MHz Ant1



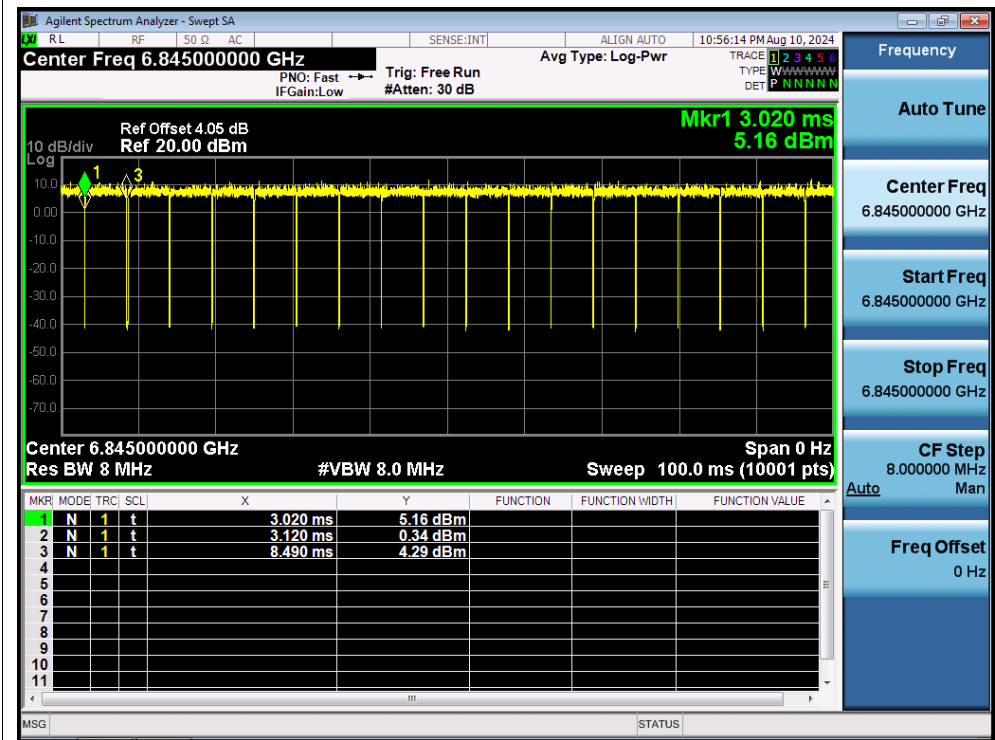
Duty Cycle NVNT ax40 6565MHz Ant1



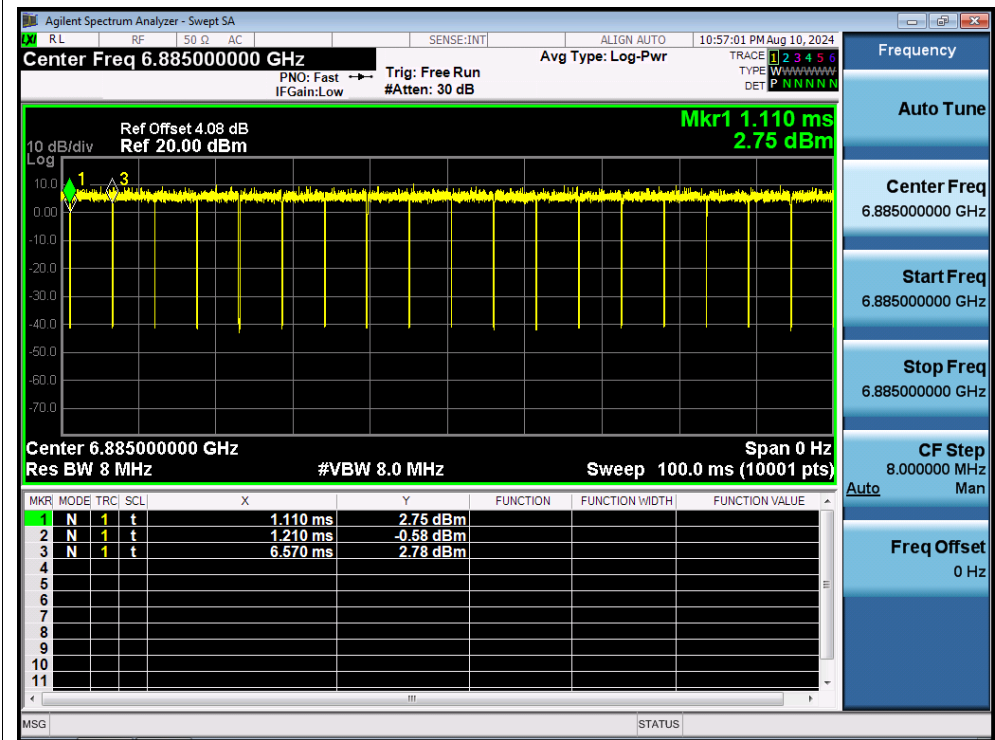
Duty Cycle NVNT ax40 6685MHz Ant1



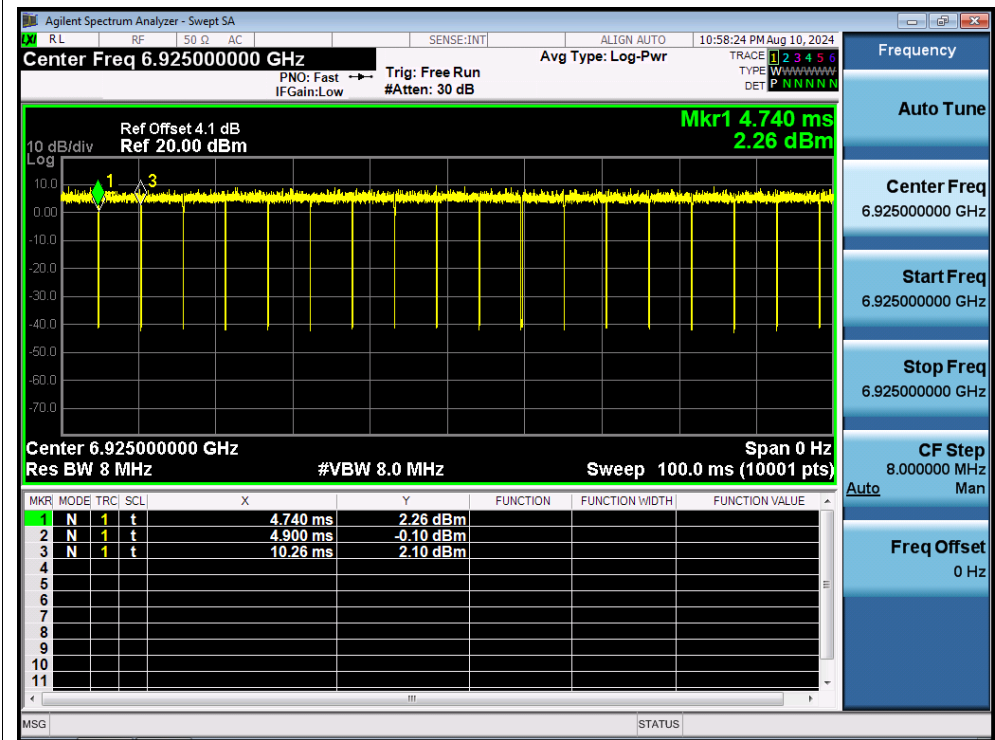
Duty Cycle NVNT ax40 6845MHz Ant1



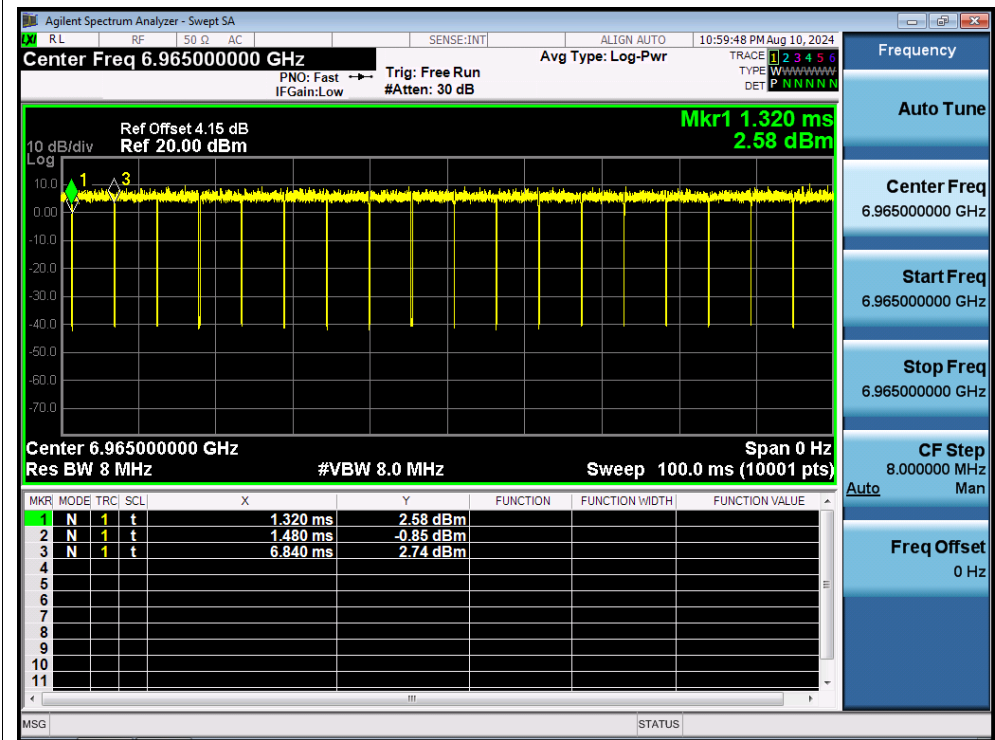
Duty Cycle NVNT ax40 6885MHz Ant1



Duty Cycle NVNT ax40 6925MHz Ant1



Duty Cycle NVNT ax40 6965MHz Ant1



Duty Cycle NVNT ax40 7085MHz Ant1

