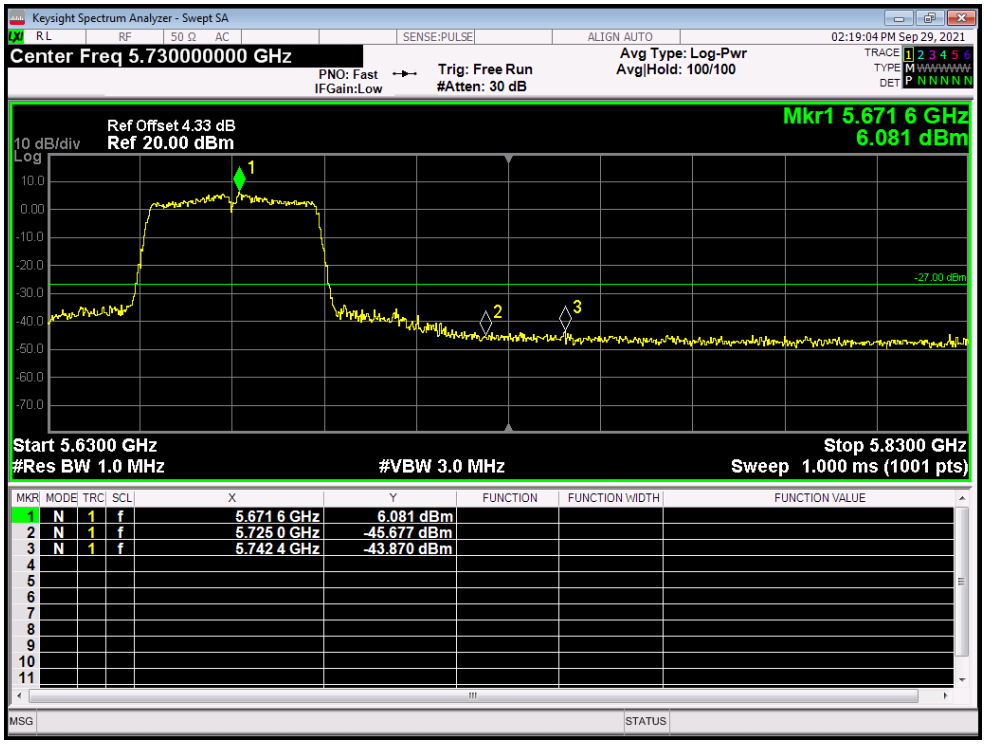
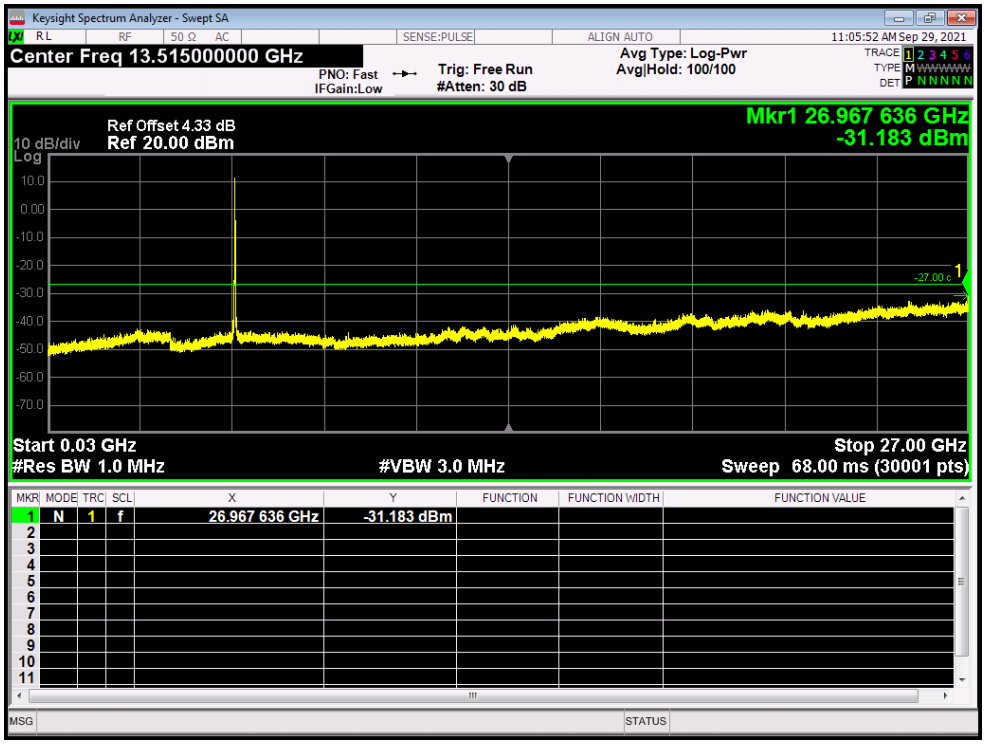

Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
02:19:04 PM Sep 29, 2021
Center Freq 5.730000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 4.33 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 5.671 6 GHz
6.081 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.00 dBm
Start 5.6300 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.8300 GHz
Sweep 1.000 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 5.671 6 GHz 6.081 dBm
2 N 1 f 5.725 0 GHz -45.677 dBm
3 N 1 f 5.742 4 GHz -43.870 dBm
MSG
STATUS

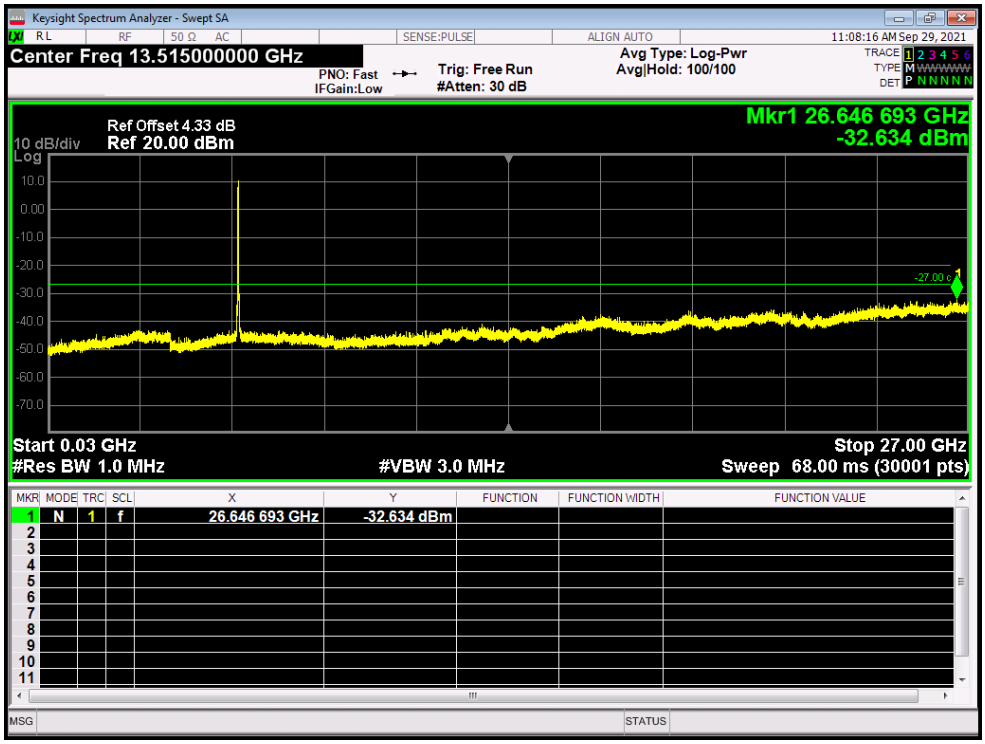
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5500	Ant1	-31.18	-27	Pass
NVNT	a	5600	Ant1	-32.63	-27	Pass
NVNT	a	5700	Ant1	-32.42	-27	Pass
NVNT	ac20	5500	Ant1	-32.96	-27	Pass
NVNT	ac20	5600	Ant1	-32.92	-27	Pass
NVNT	ac20	5700	Ant1	-32.65	-27	Pass
NVNT	ac40	5510	Ant1	-32.26	-27	Pass
NVNT	ac40	5590	Ant1	-32.82	-27	Pass
NVNT	ac40	5670	Ant1	-32.48	-27	Pass
NVNT	ac80	5530	Ant1	-31.86	-27	Pass
NVNT	ac80	5610	Ant1	-32.72	-27	Pass
NVNT	n20	5500	Ant1	-32.07	-27	Pass
NVNT	n20	5600	Ant1	-32.97	-27	Pass
NVNT	n20	5700	Ant1	-32.65	-27	Pass
NVNT	n40	5510	Ant1	-31.68	-27	Pass
NVNT	n40	5590	Ant1	-31.96	-27	Pass
NVNT	n40	5670	Ant1	-32.86	-27	Pass

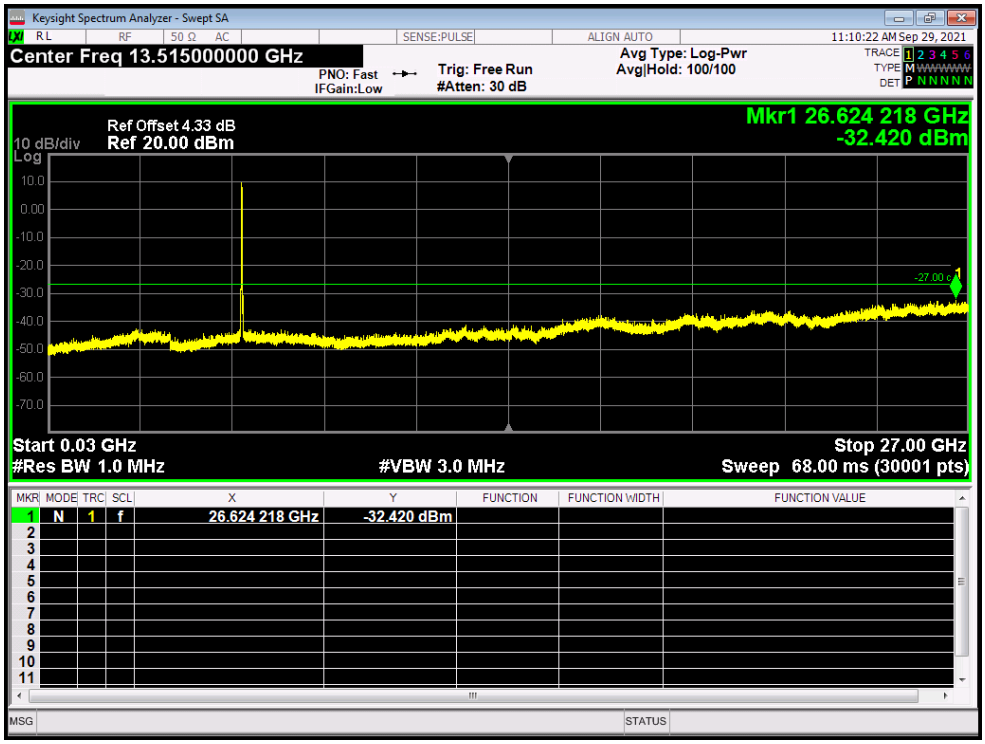
Tx. Spurious NVNT a 5500MHz Ant1 Emission



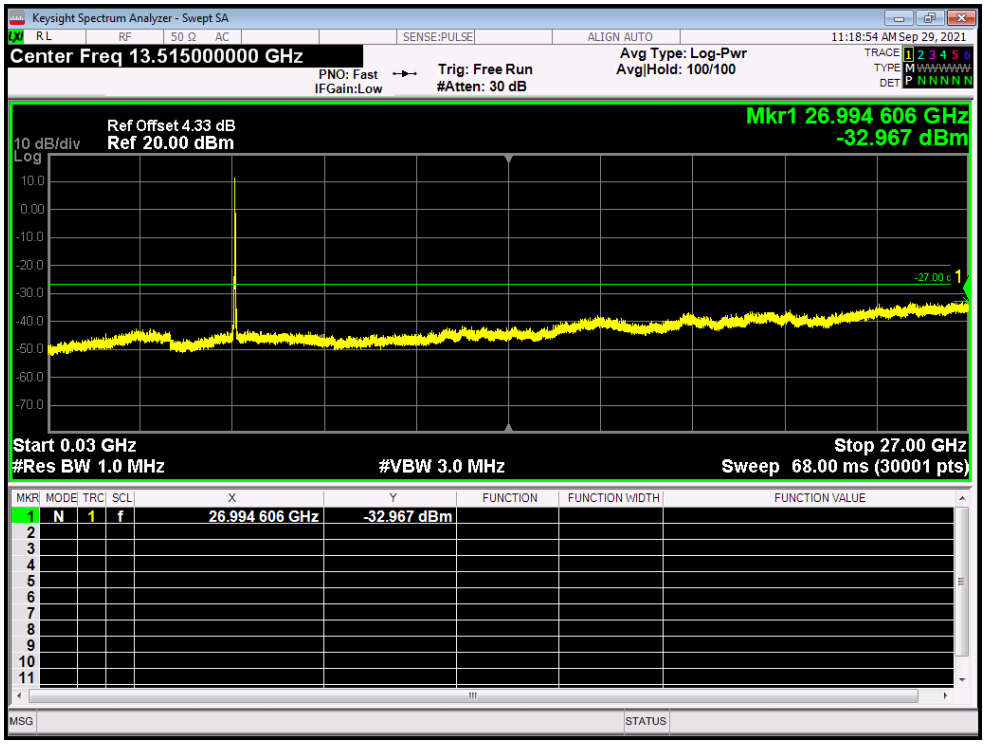
Tx. Spurious NVNT a 5600MHz Ant1 Emission



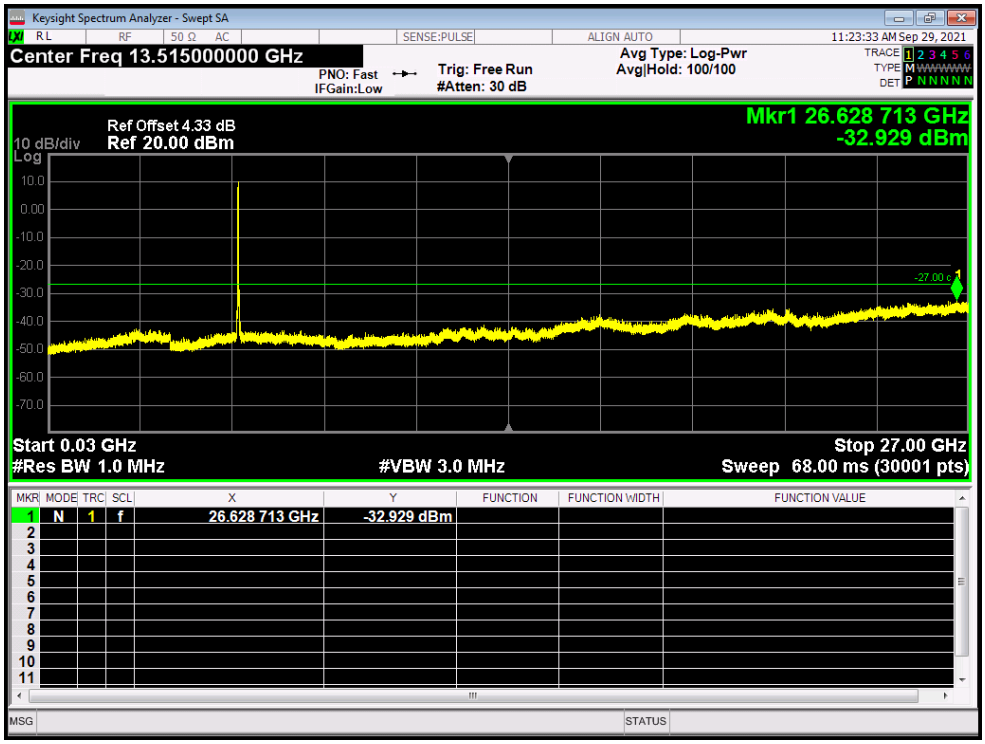
Tx. Spurious NVNT a 5700MHz Ant1 Emission



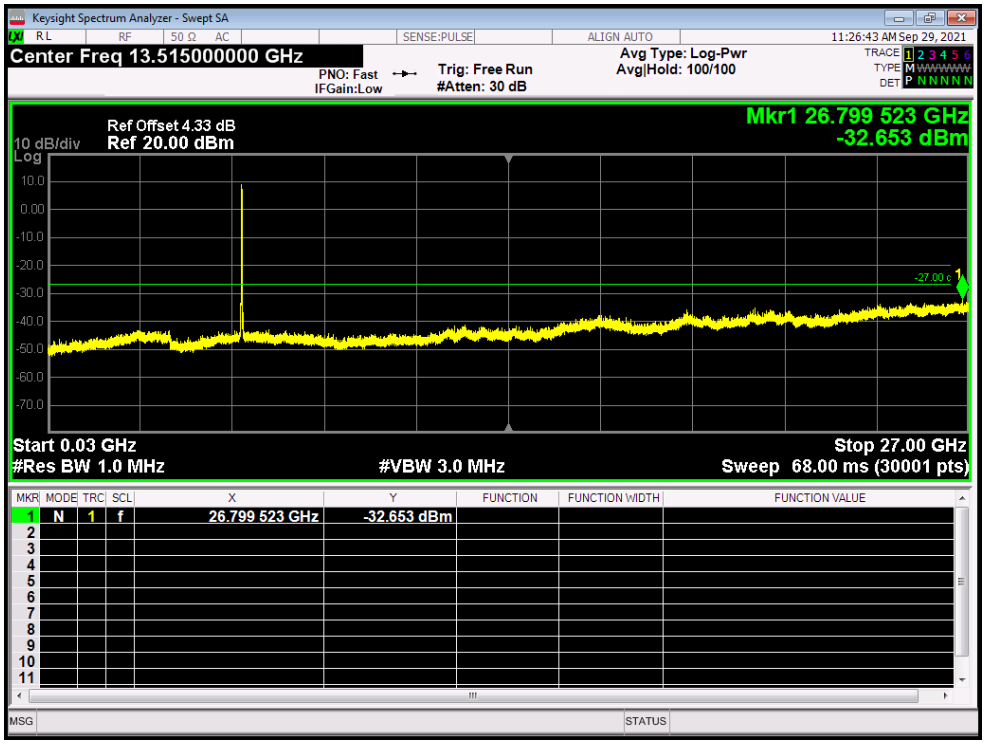
Tx. Spurious NVNT ac20 5500MHz Ant1 Emission



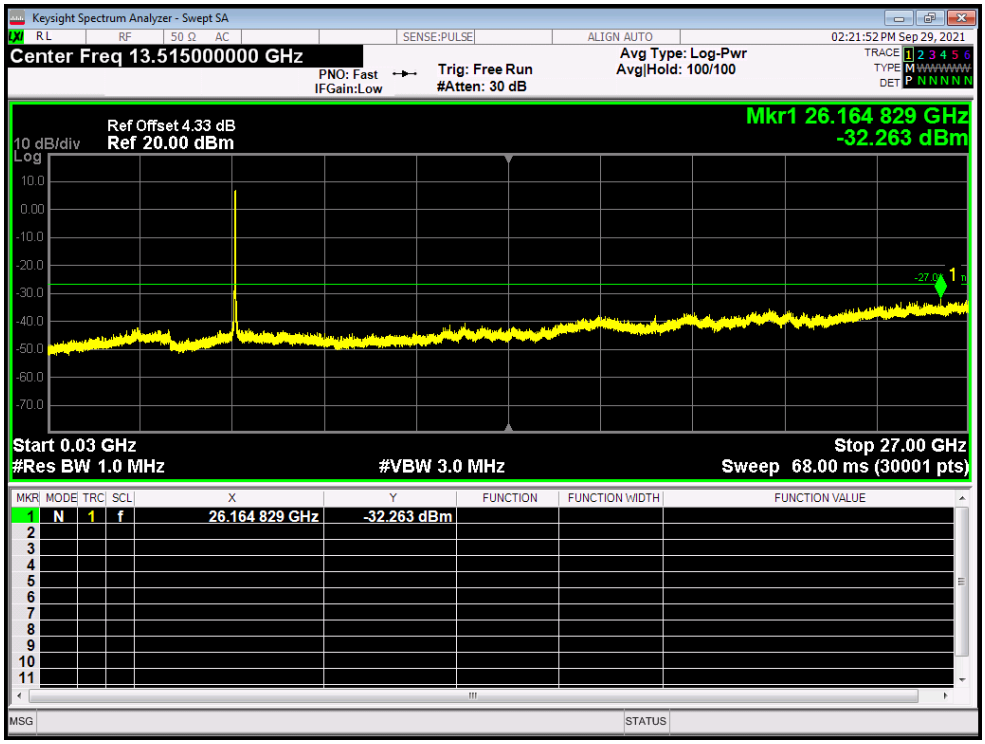
Tx. Spurious NVNT ac20 5600MHz Ant1 Emission



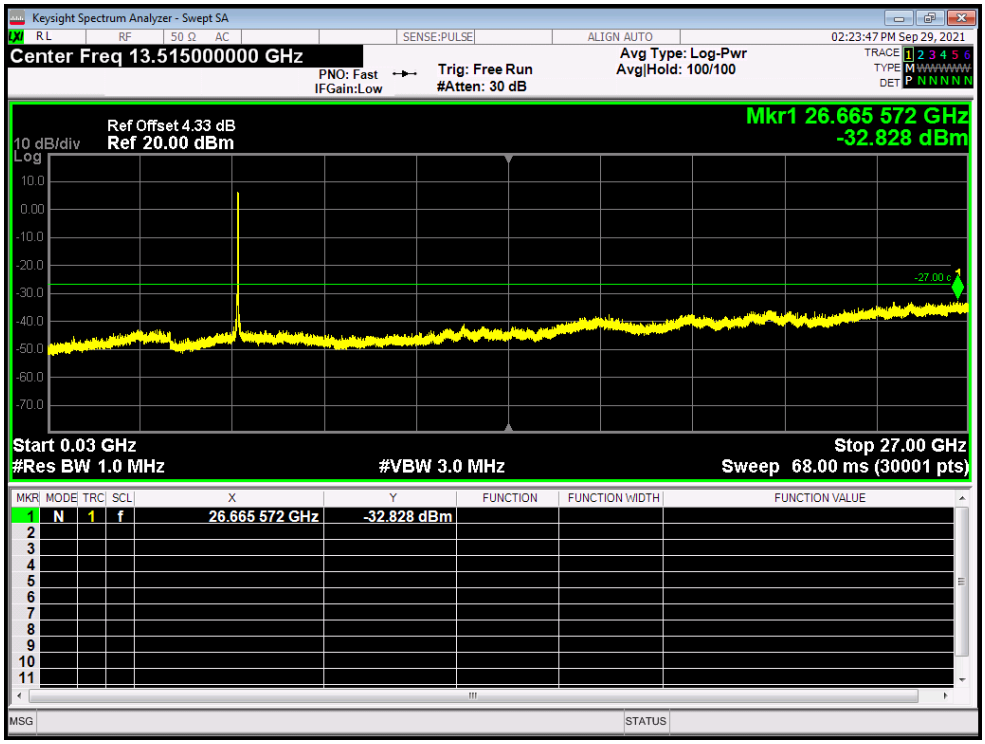
Tx. Spurious NVNT ac20 5700MHz Ant1 Emission



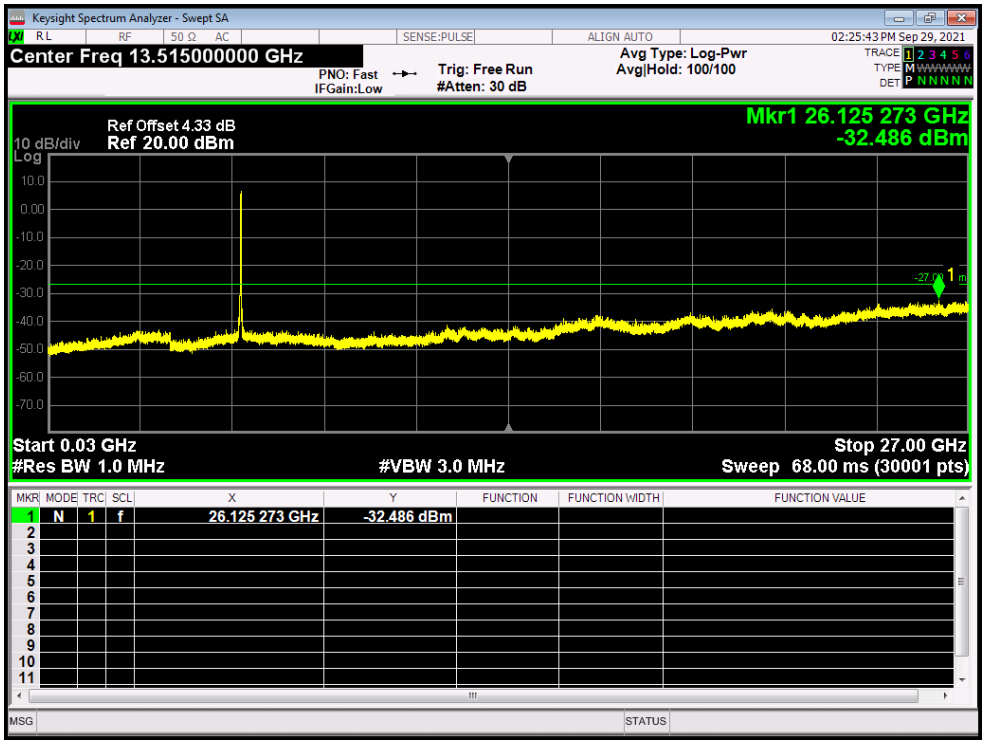
Tx. Spurious NVNT ac40 5510MHz Ant1 Emission



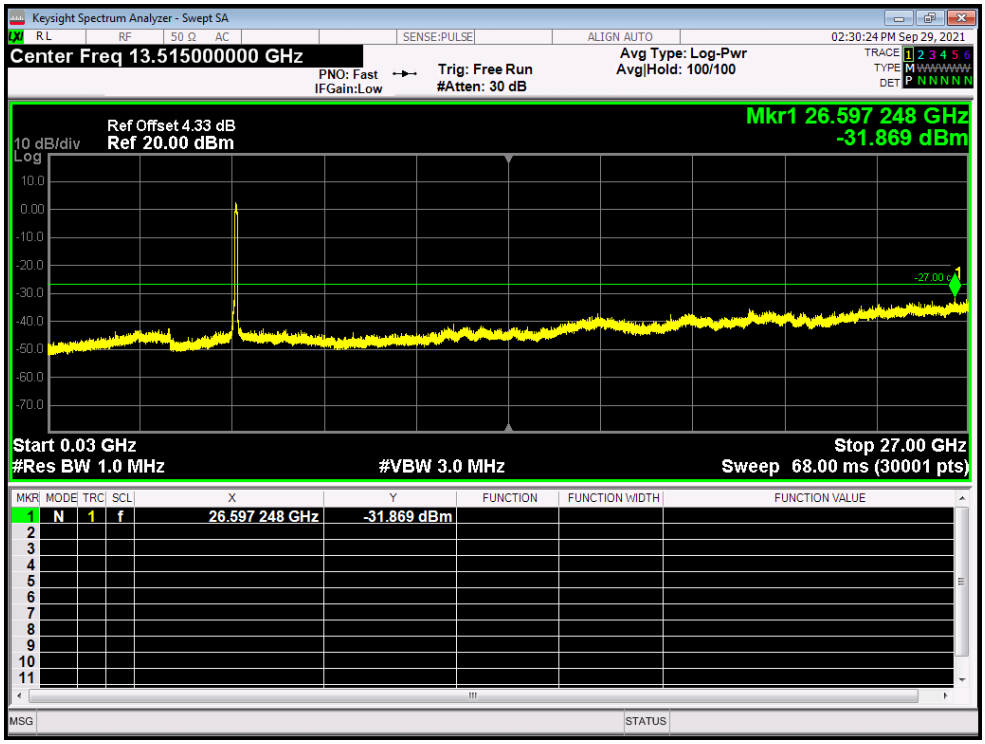
Tx. Spurious NVNT ac40 5590MHz Ant1 Emission



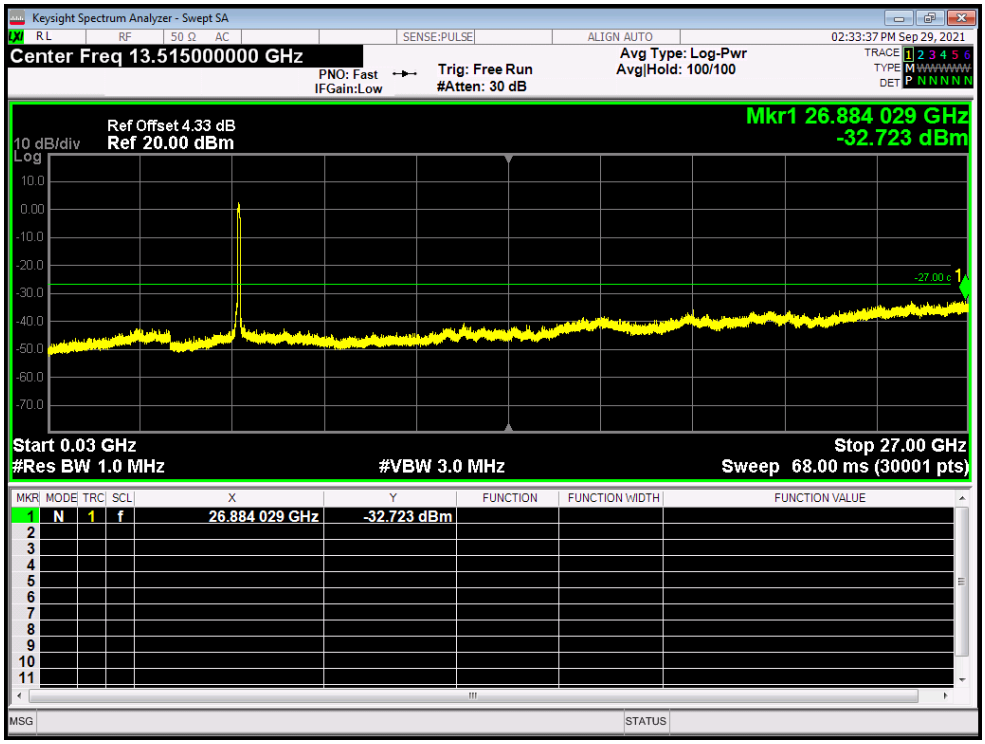
Tx. Spurious NVNT ac40 5670MHz Ant1 Emission



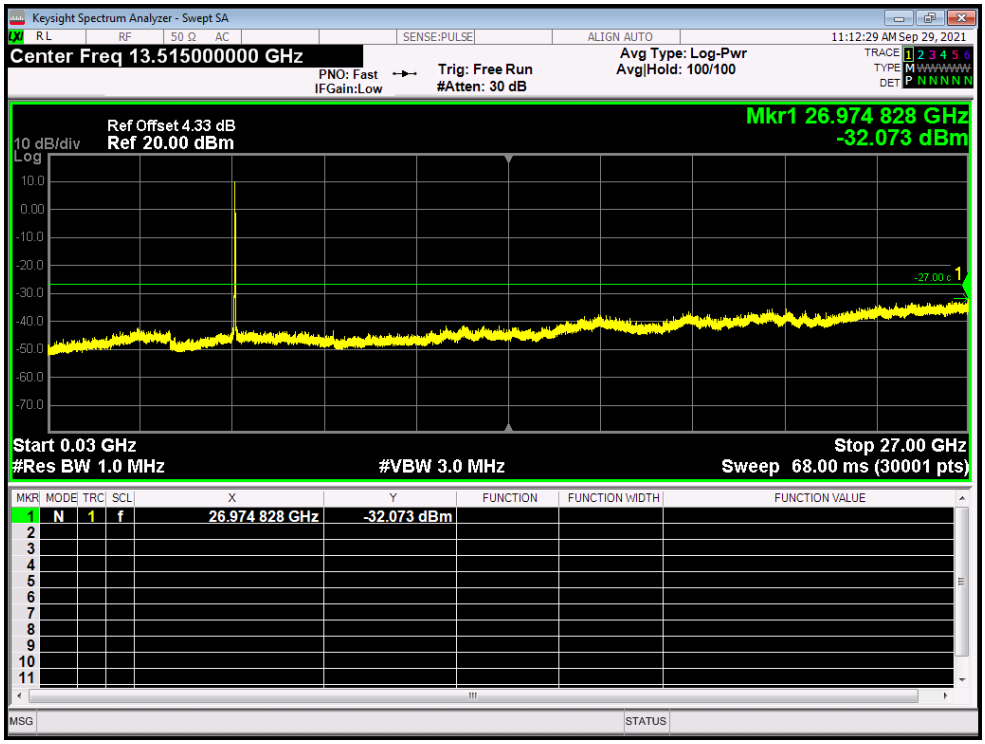
Tx. Spurious NVNT ac80 5530MHz Ant1 Emission



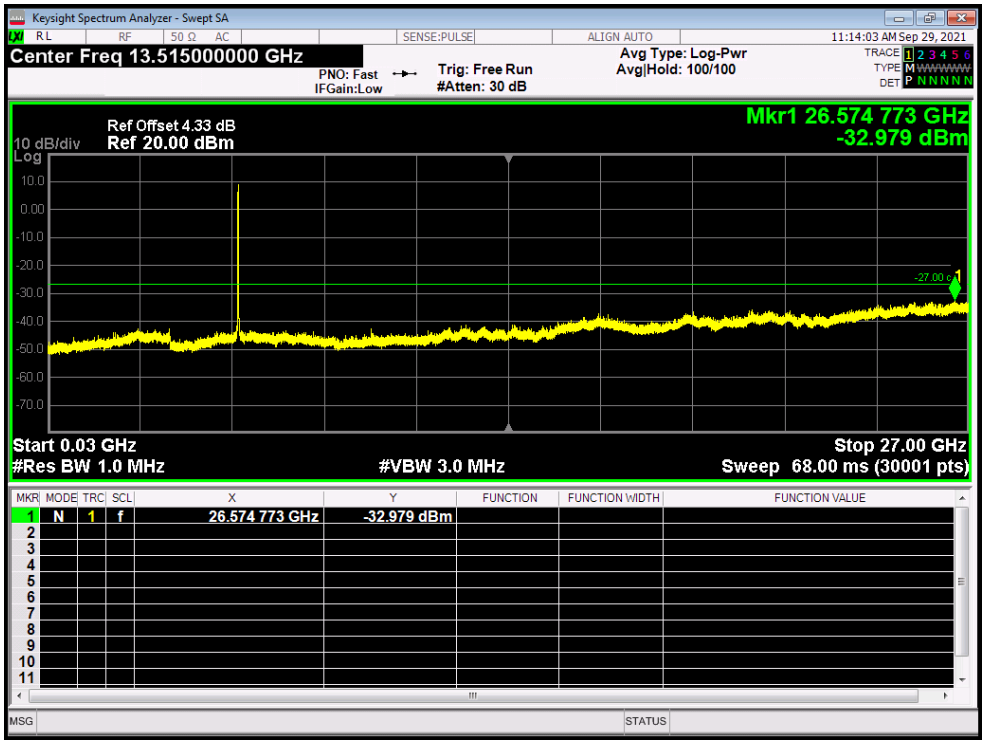
Tx. Spurious NVNT ac80 5610MHz Ant1 Emission



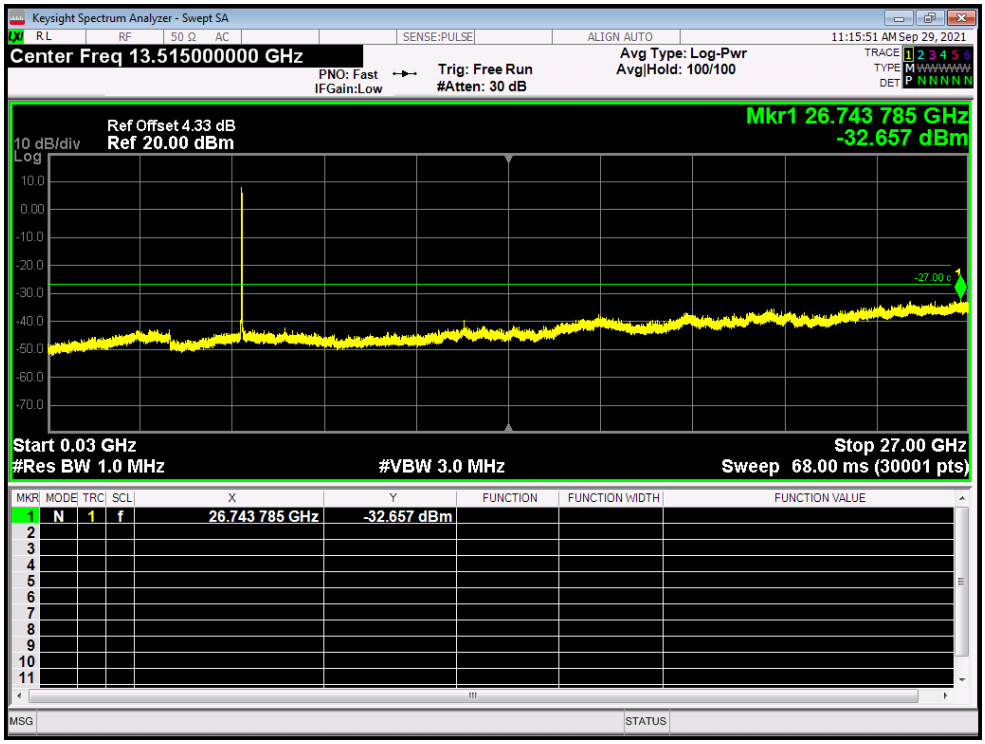
Tx. Spurious NVNT n20 5500MHz Ant1 Emission



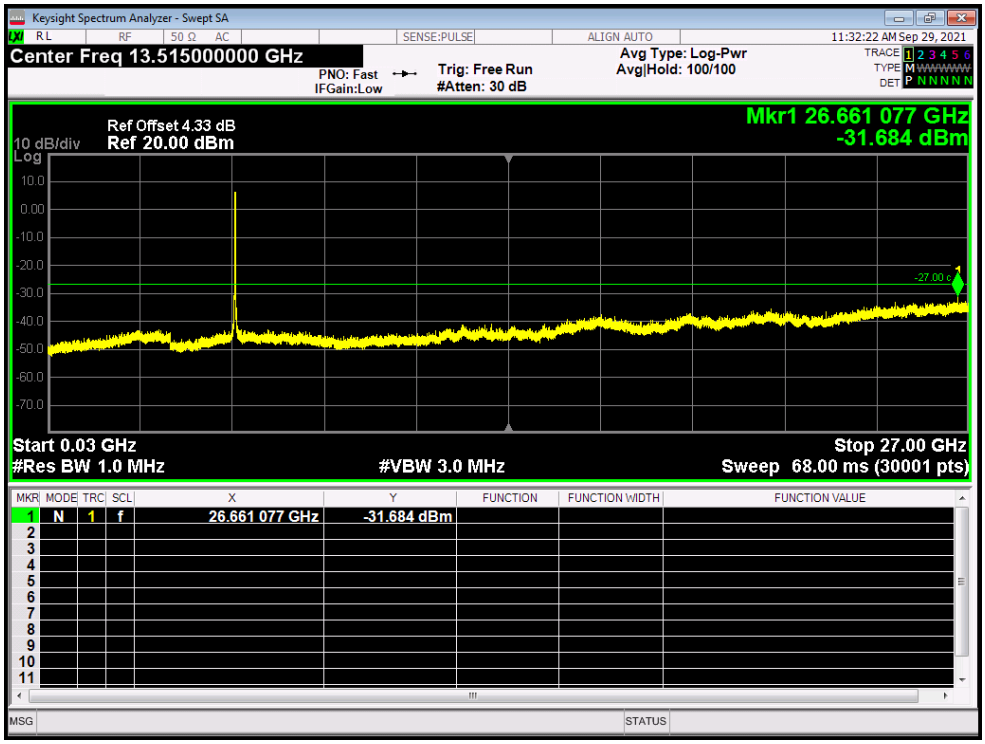
Tx. Spurious NVNT n20 5600MHz Ant1 Emission



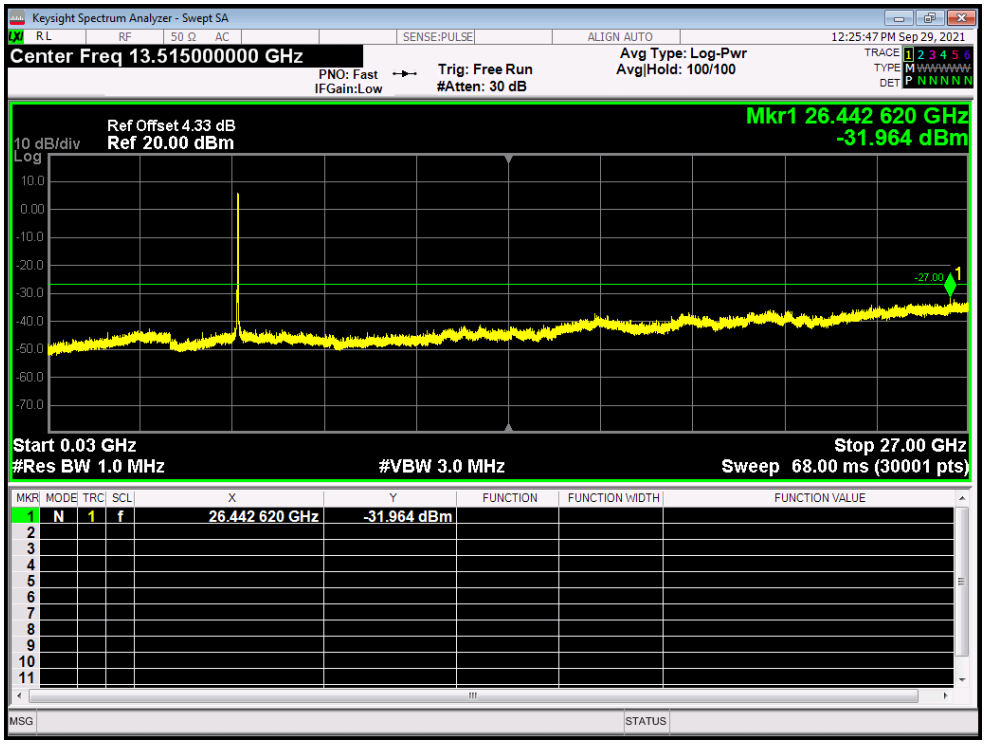
Tx. Spurious NVNT n20 5700MHz Ant1 Emission



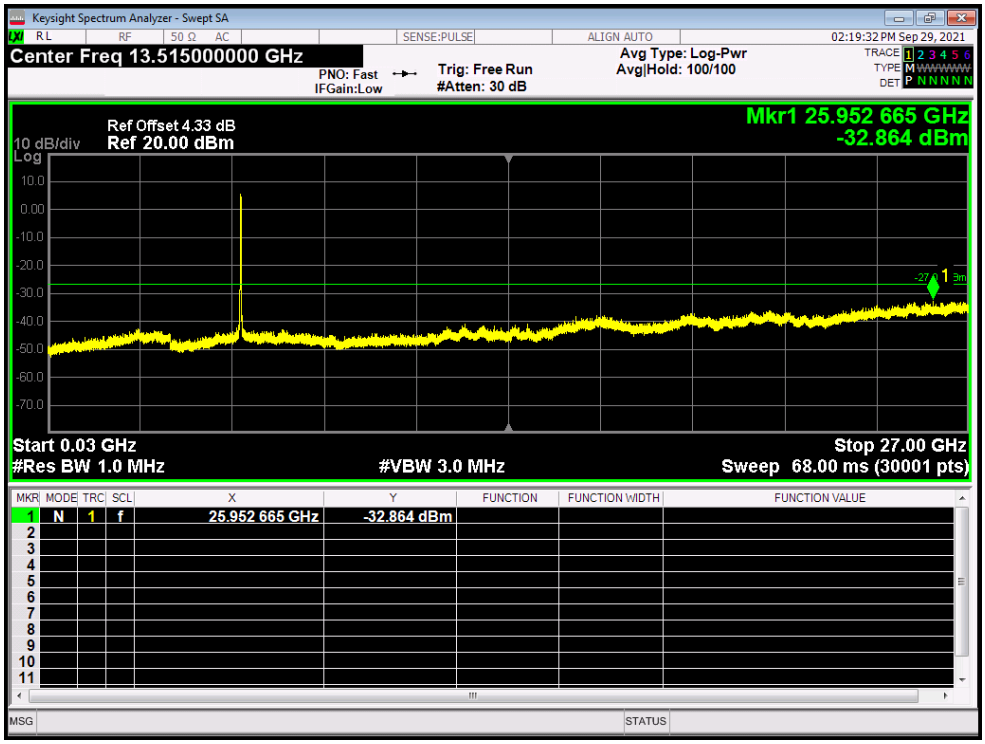
Tx. Spurious NVNT n40 5510MHz Ant1 Emission



Tx. Spurious NVNT n40 5590MHz Ant1 Emission



Tx. Spurious NVNT n40 5670MHz Ant1 Emission

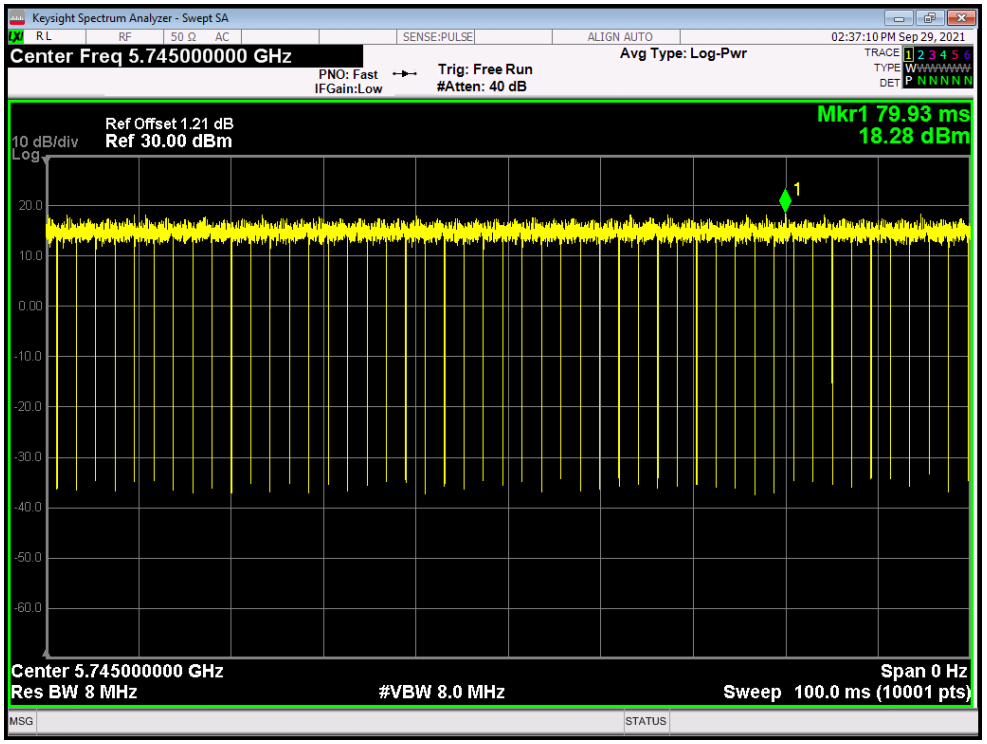


5.8G

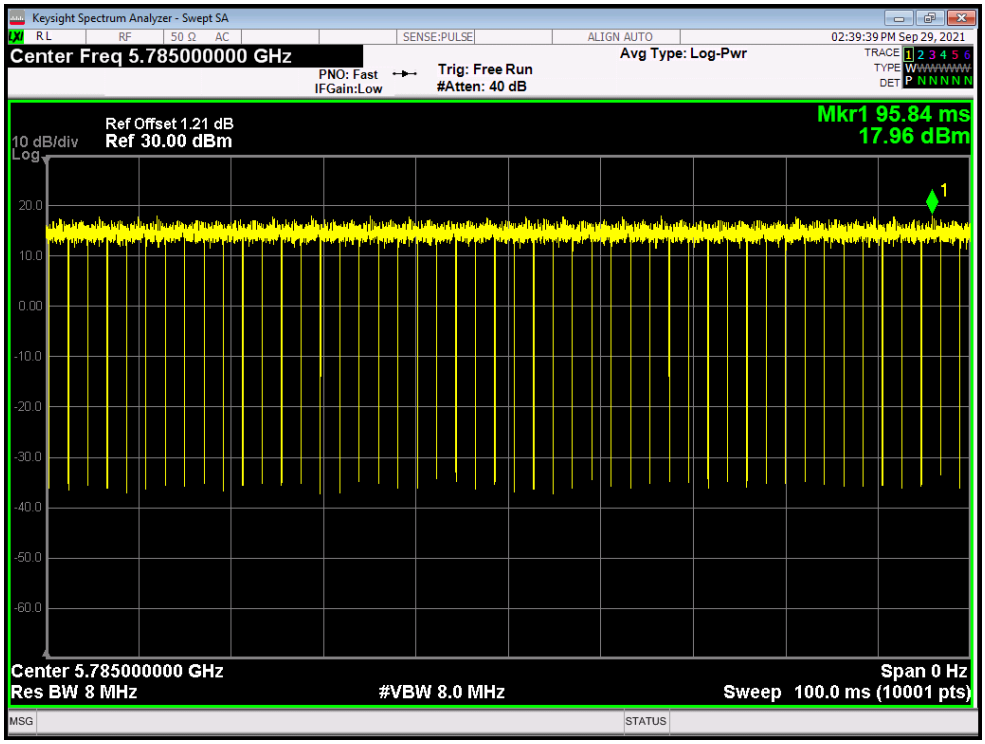
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	a	5745	Ant1	98.95	0.05
NVNT	a	5785	Ant1	98.95	0.05
NVNT	a	5825	Ant1	99	0.04
NVNT	ac20	5745	Ant1	98.9	0.05
NVNT	ac20	5785	Ant1	98.92	0.05
NVNT	ac20	5825	Ant1	98.91	0.05
NVNT	ac40	5755	Ant1	93.88	0.27
NVNT	ac40	5795	Ant1	93.85	0.28
NVNT	ac80	5775	Ant1	94.97	0.22
NVNT	n20	5745	Ant1	98.89	0.05
NVNT	n20	5785	Ant1	98.9	0.05
NVNT	n20	5825	Ant1	98.9	0.05
NVNT	n40	5755	Ant1	98.83	0.05
NVNT	n40	5795	Ant1	98.84	0.05

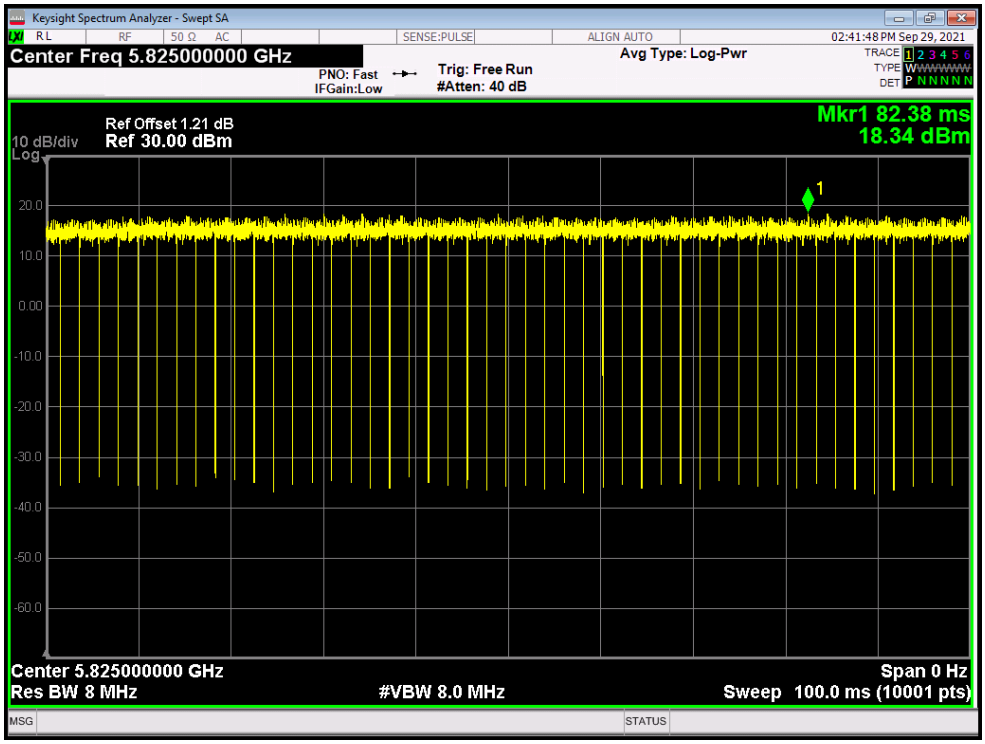
Duty Cycle NVNT a 5745MHz Ant1



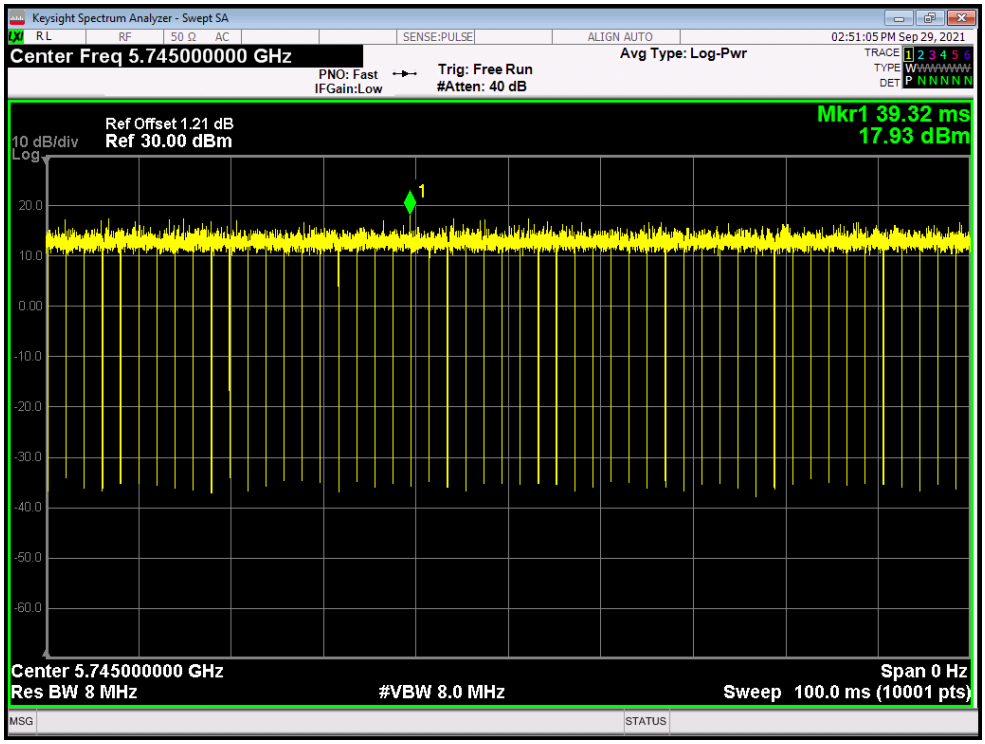
Duty Cycle NVNT a 5785MHz Ant1



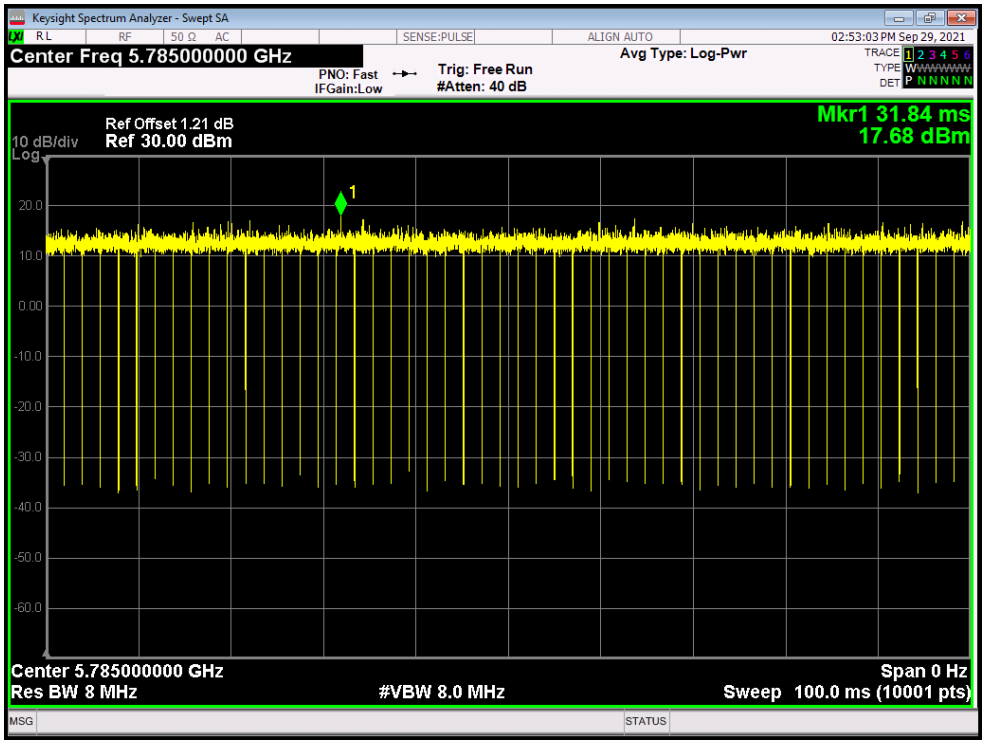
Duty Cycle NVNT a 5825MHz Ant1



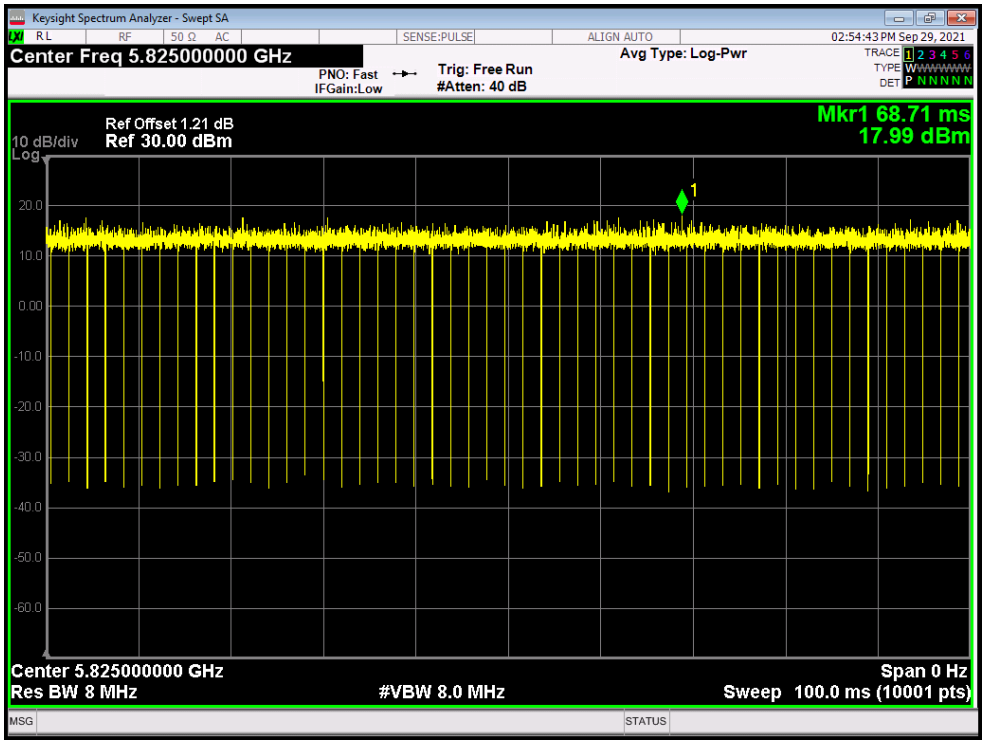
Duty Cycle NVNT ac20 5745MHz Ant1



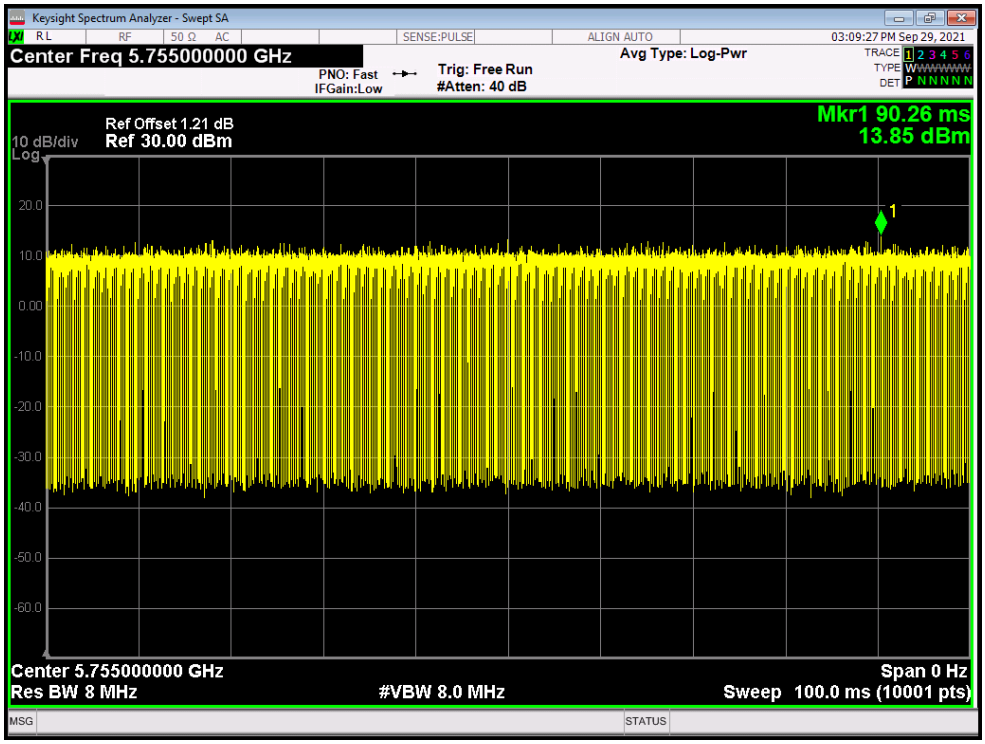
Duty Cycle NVNT ac20 5785MHz Ant1



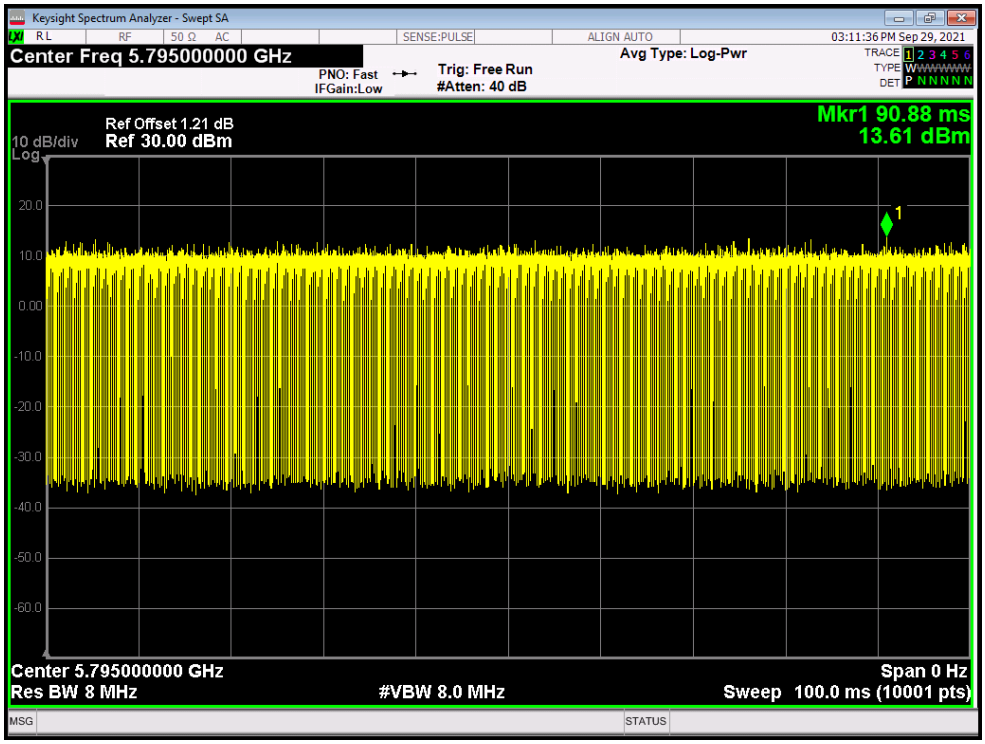
Duty Cycle NVNT ac20 5825MHz Ant1



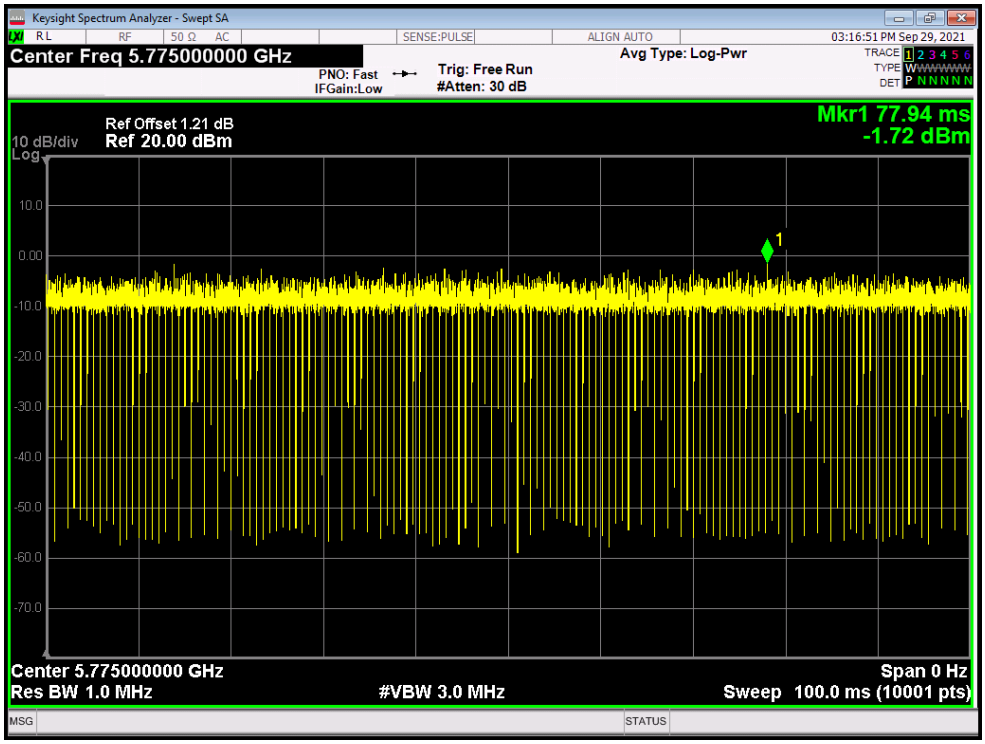
Duty Cycle NVNT ac40 5755MHz Ant1



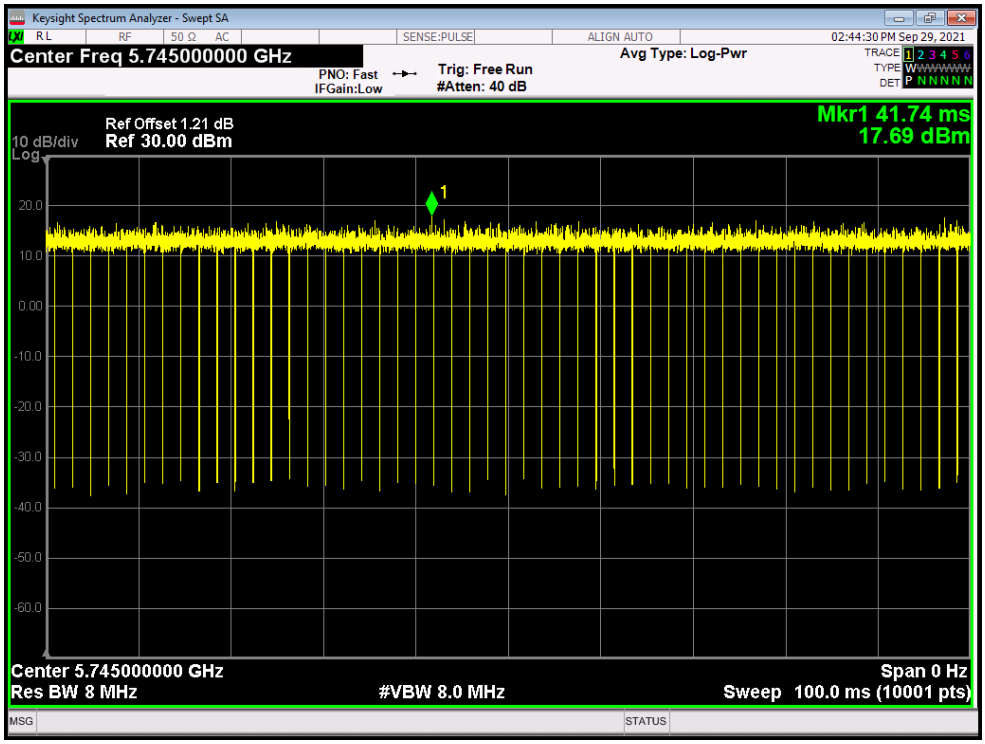
Duty Cycle NVNT ac40 5795MHz Ant1



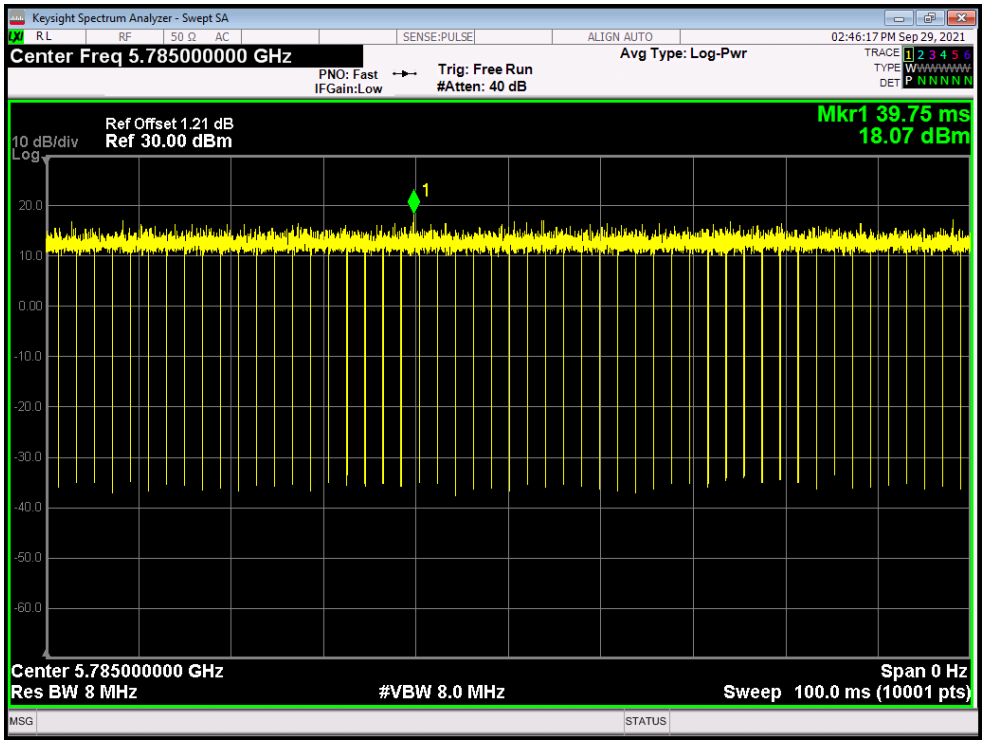
Duty Cycle NVNT ac80 5775MHz Ant1



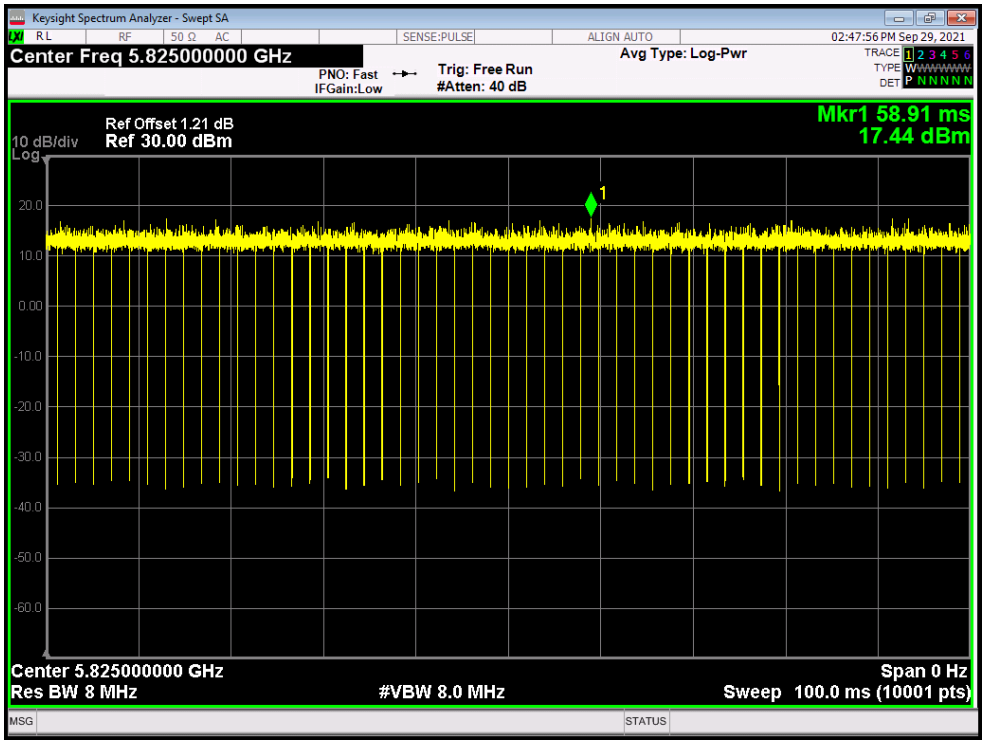
Duty Cycle NVNT n20 5745MHz Ant1



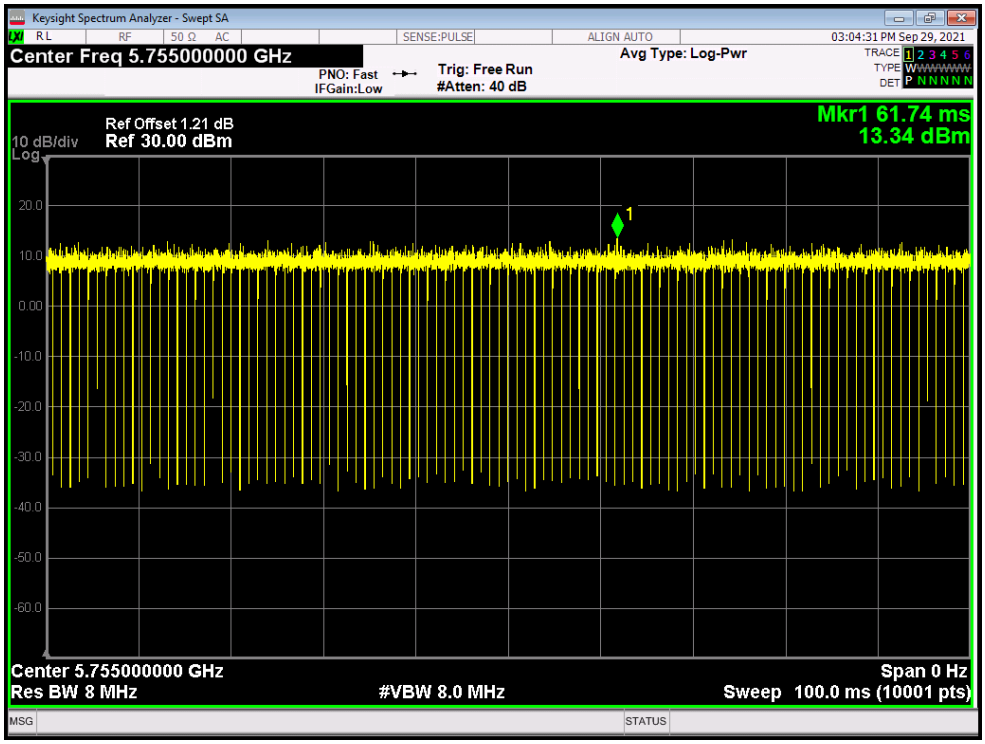
Duty Cycle NVNT n20 5785MHz Ant1



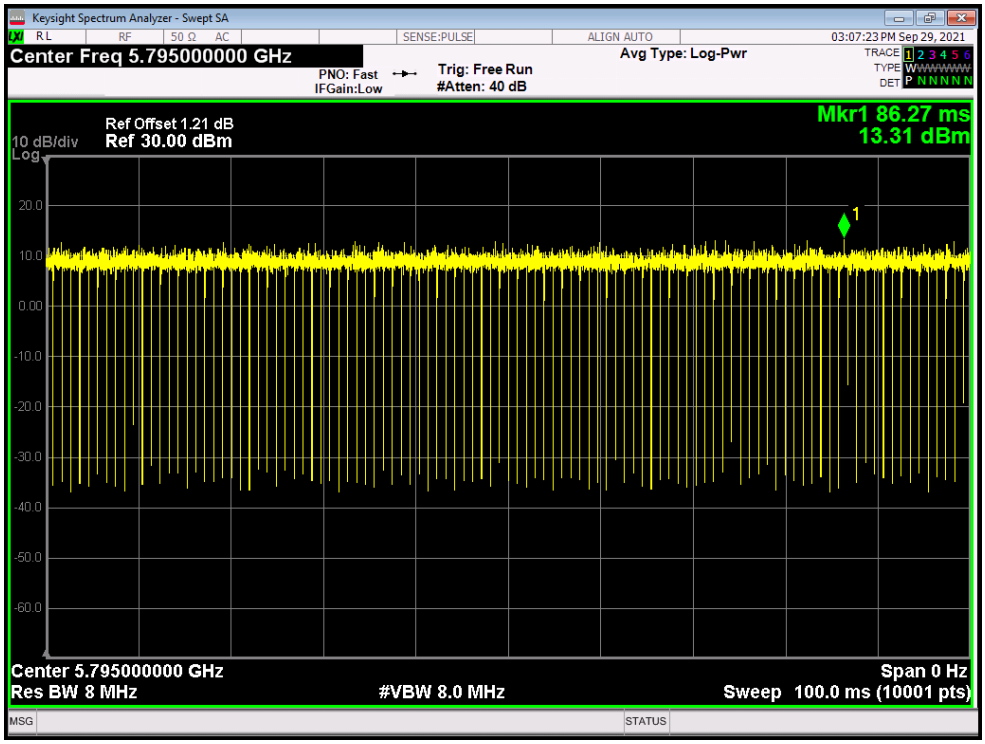
Duty Cycle NVNT n20 5825MHz Ant1



Duty Cycle NVNT n40 5755MHz Ant1



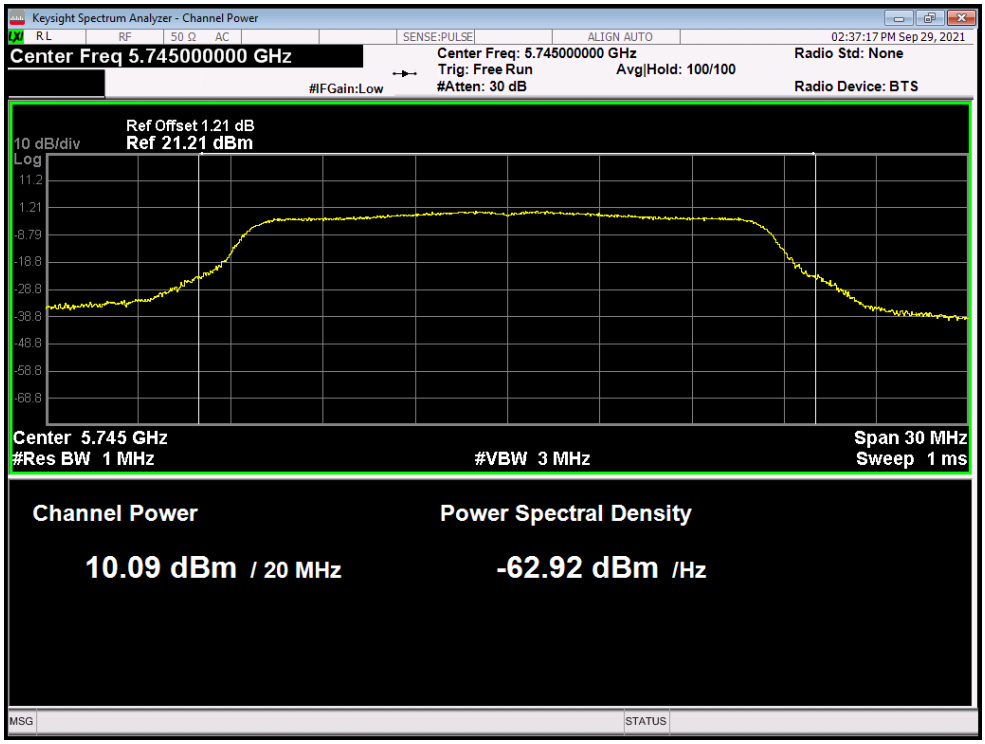
Duty Cycle NVNT n40 5795MHz Ant1


Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:07:23 PM Sep 29, 2021
Center Freq 5.795000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE W W W W W W
DET P N N N N N
Ref Offset 1.21 dB
10 dB/div
Log
Ref 30.00 dBm
Mkr1 86.27 ms
13.31 dBm
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 5.795000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 100.0 ms (10001 pts)
MSG
STATUS

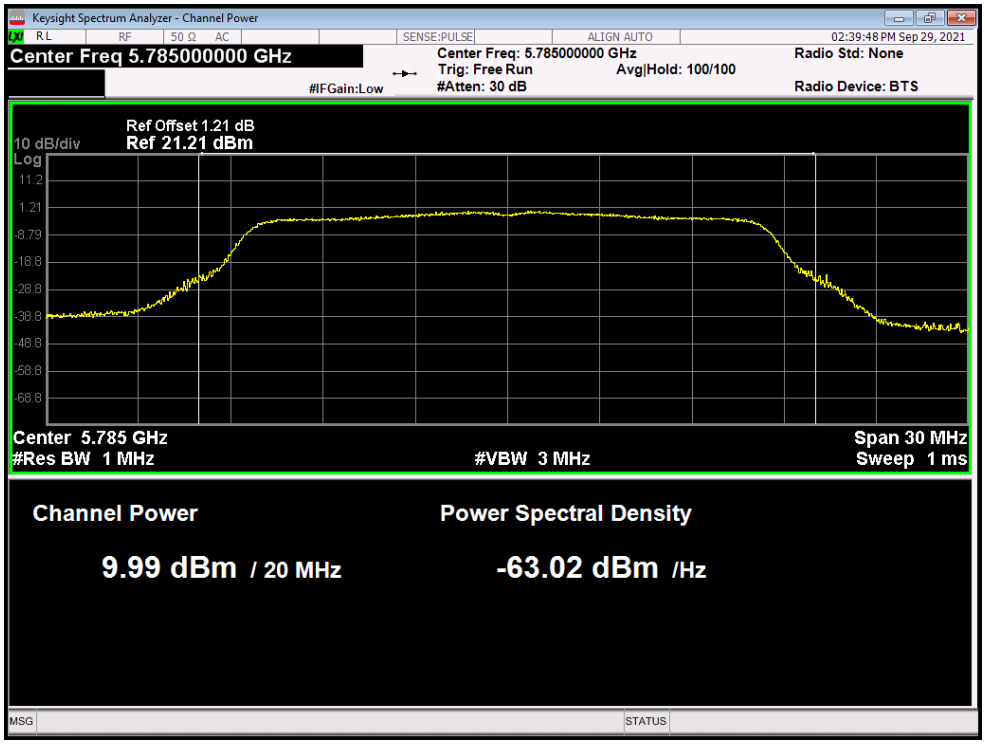
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	10.085	0.05	10.135	30	Pass
NVNT	a	5785	Ant1	9.986	0.05	10.036	30	Pass
NVNT	a	5825	Ant1	10.53	0.04	10.57	30	Pass
NVNT	ac20	5745	Ant1	8.464	0.05	8.514	30	Pass
NVNT	ac20	5785	Ant1	8.33	0.05	8.38	30	Pass
NVNT	ac20	5825	Ant1	9.085	0.05	9.135	30	Pass
NVNT	ac40	5755	Ant1	7.074	0.27	7.344	30	Pass
NVNT	ac40	5795	Ant1	7.093	0.28	7.373	30	Pass
NVNT	ac80	5775	Ant1	7.332	0.22	7.552	30	Pass
NVNT	n20	5745	Ant1	8.622	0.05	8.672	30	Pass
NVNT	n20	5785	Ant1	8.293	0.05	8.343	30	Pass
NVNT	n20	5825	Ant1	8.775	0.05	8.825	30	Pass
NVNT	n40	5755	Ant1	7.524	0.05	7.574	30	Pass
NVNT	n40	5795	Ant1	7.465	0.05	7.515	30	Pass

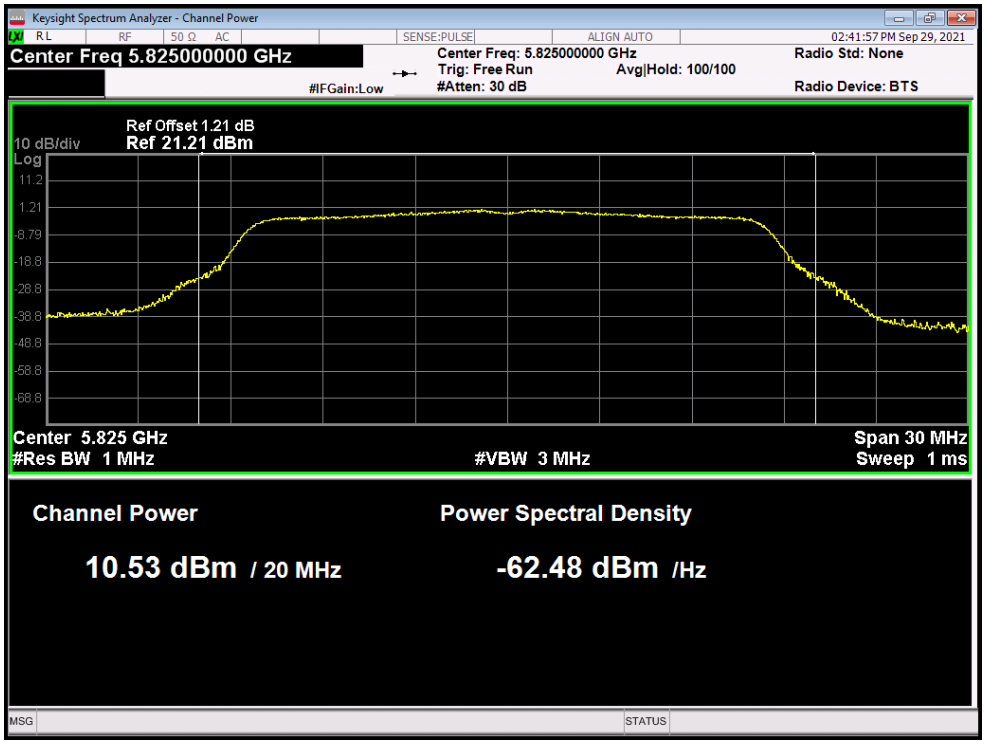
Power NVNT a 5745MHz Ant1



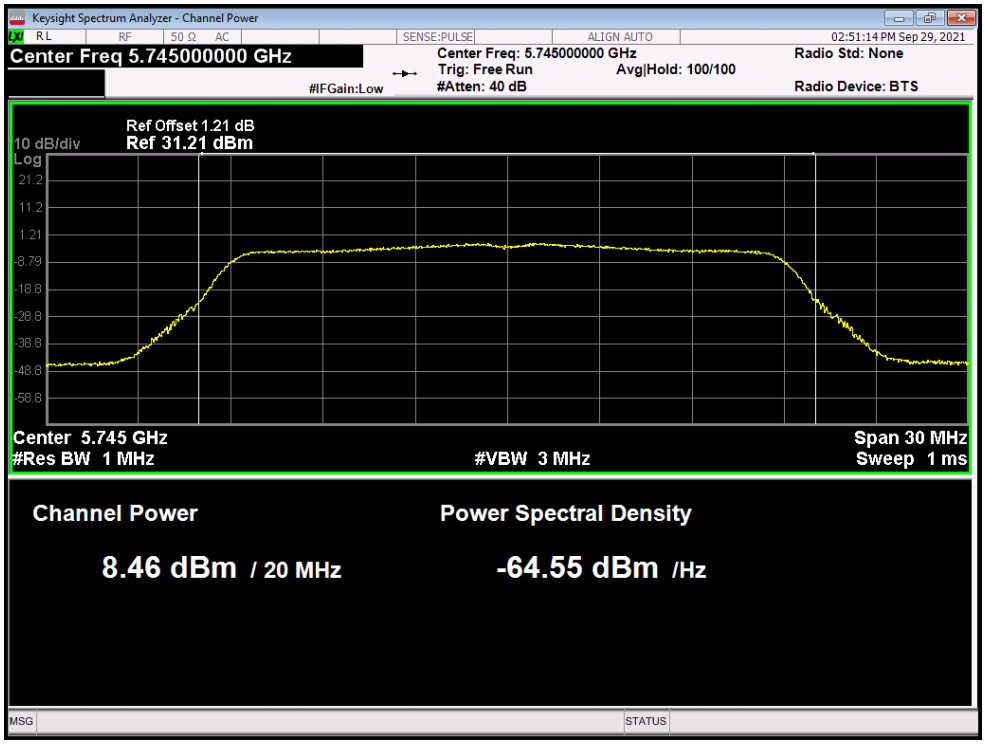
Power NVNT a 5785MHz Ant1



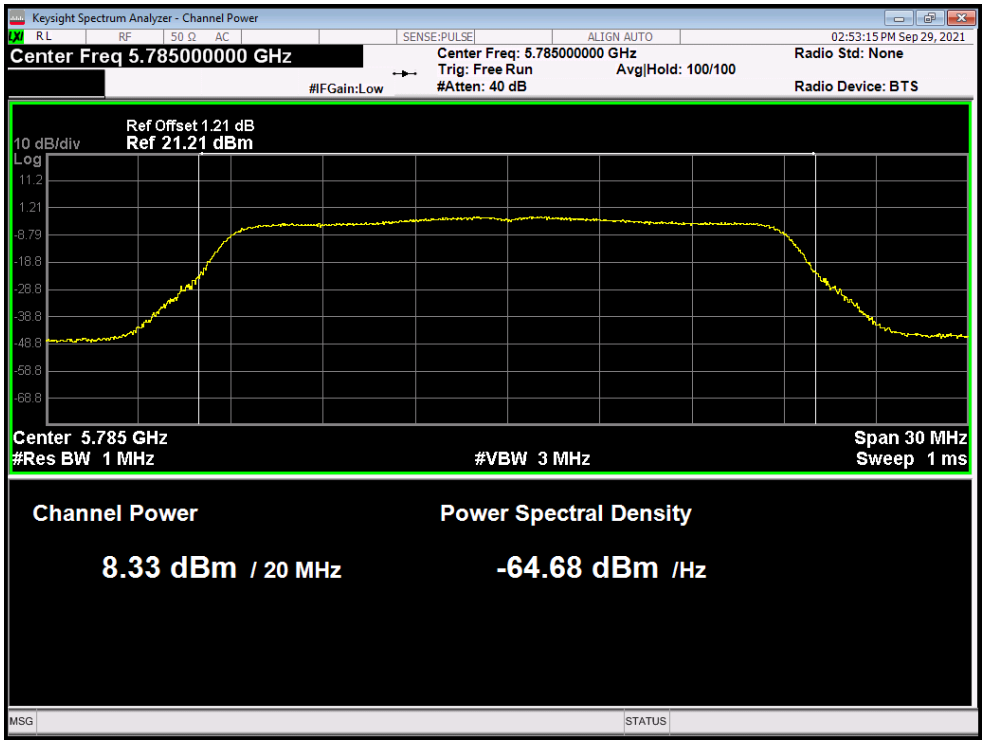
Power NVNT a 5825MHz Ant1



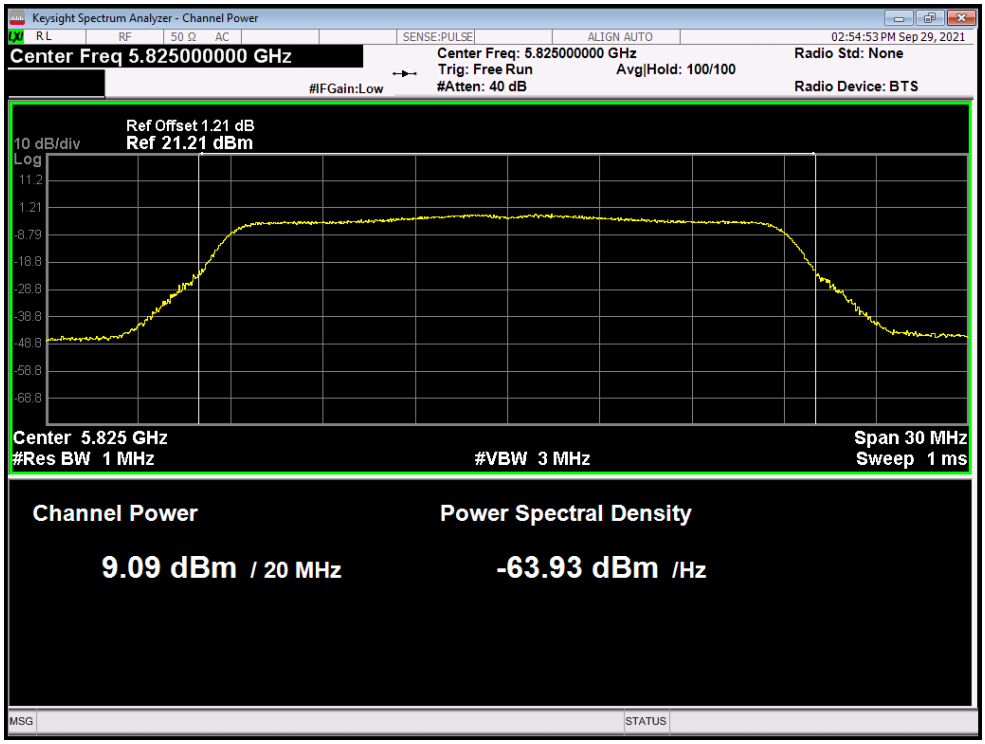
Power NVNT ac20 5745MHz Ant1



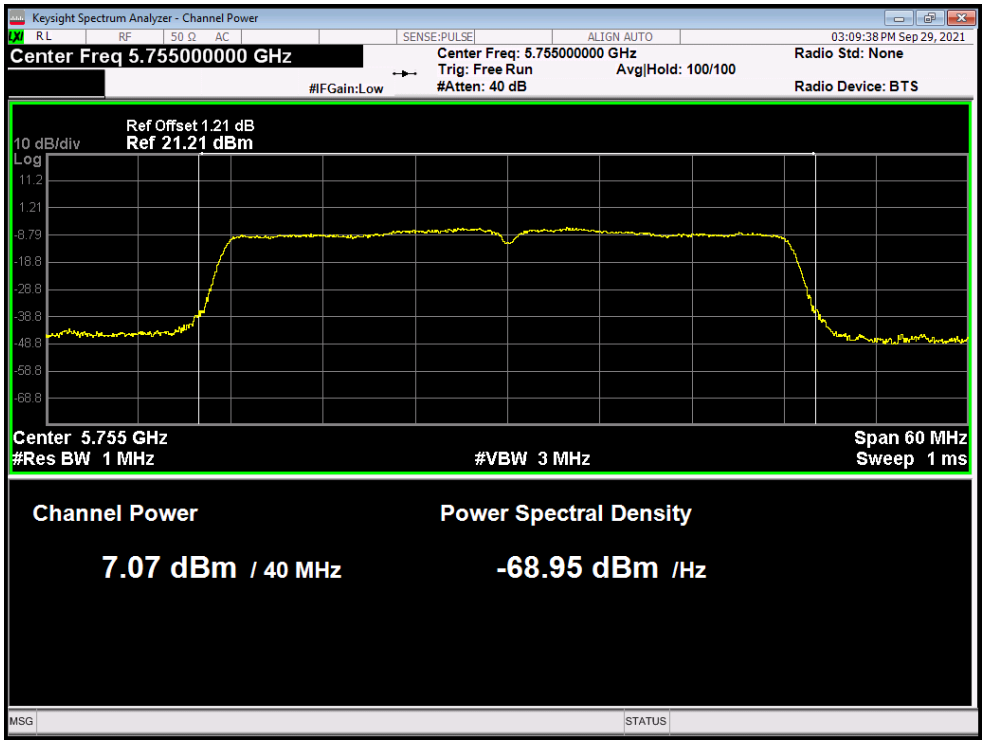
Power NVNT ac20 5785MHz Ant1



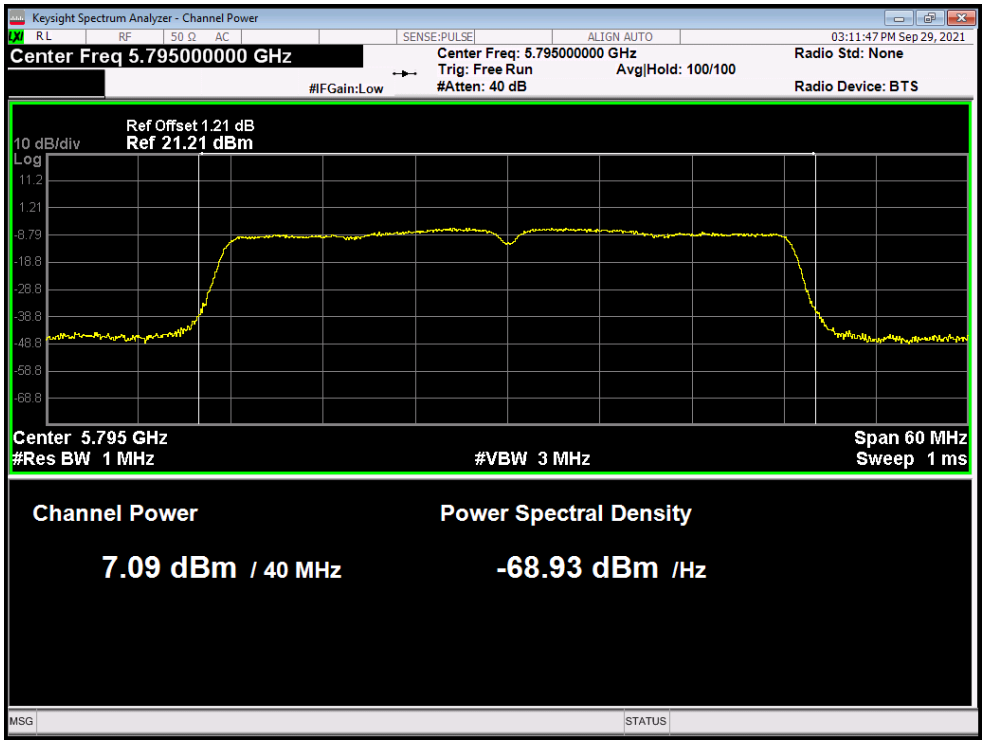
Power NVNT ac20 5825MHz Ant1



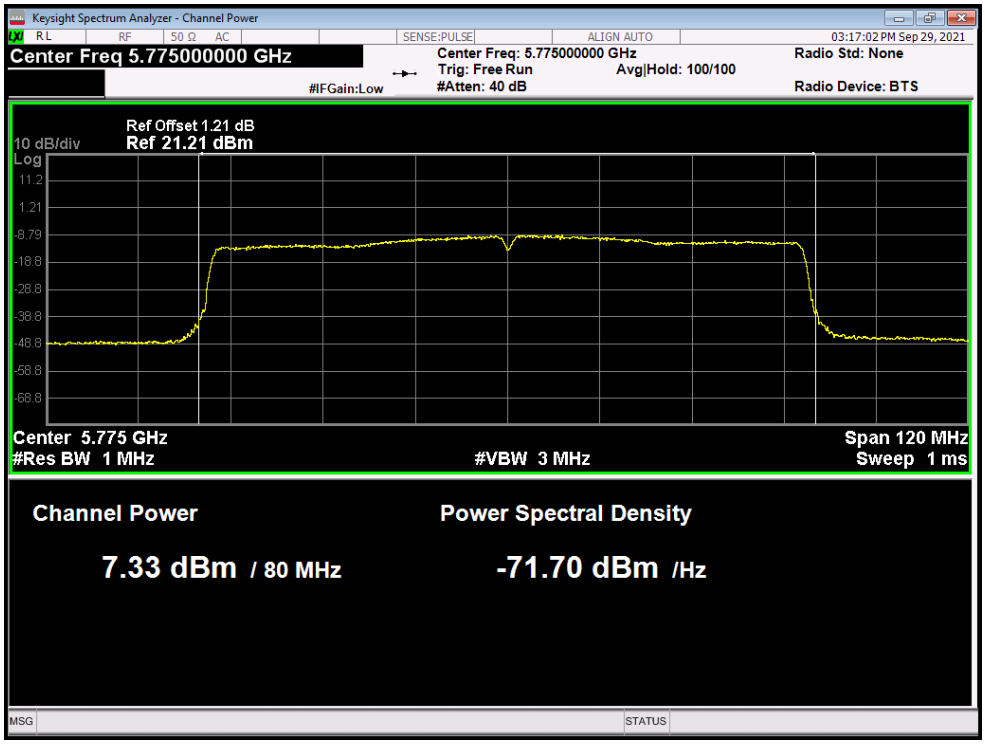
Power NVNT ac40 5755MHz Ant1



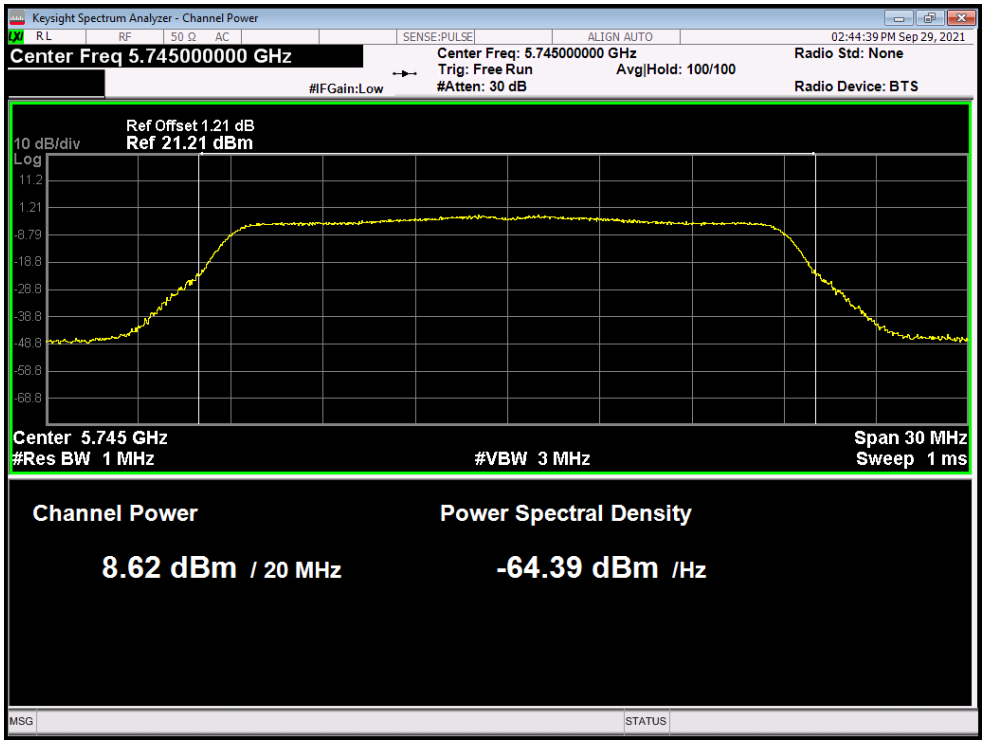
Power NVNT ac40 5795MHz Ant1



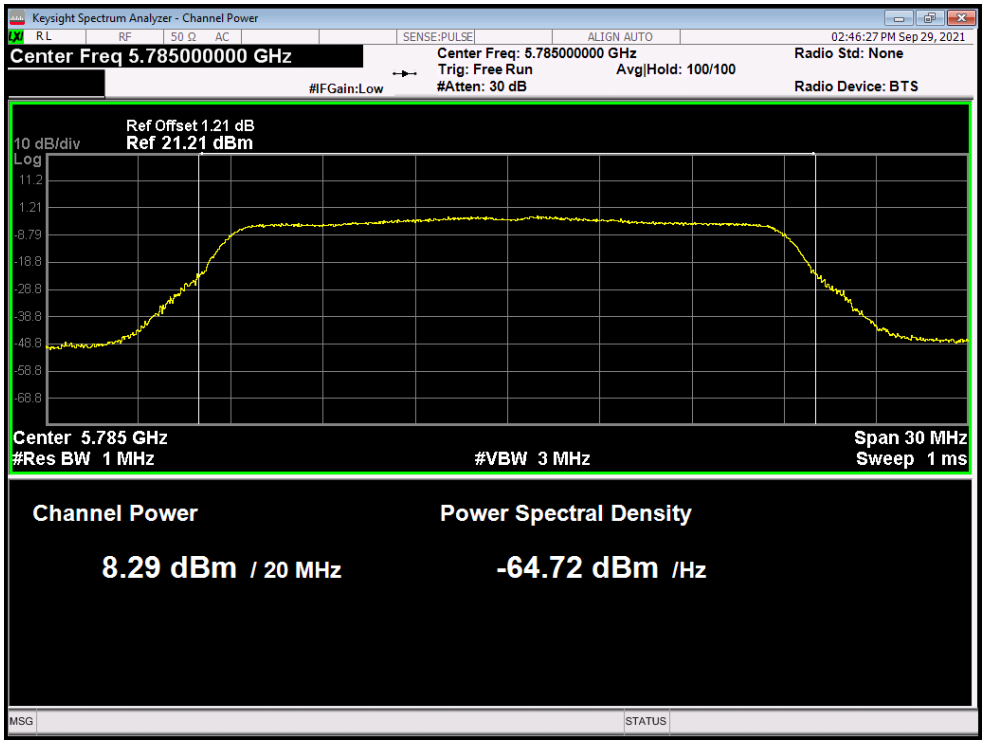
Power NVNT ac80 5775MHz Ant1



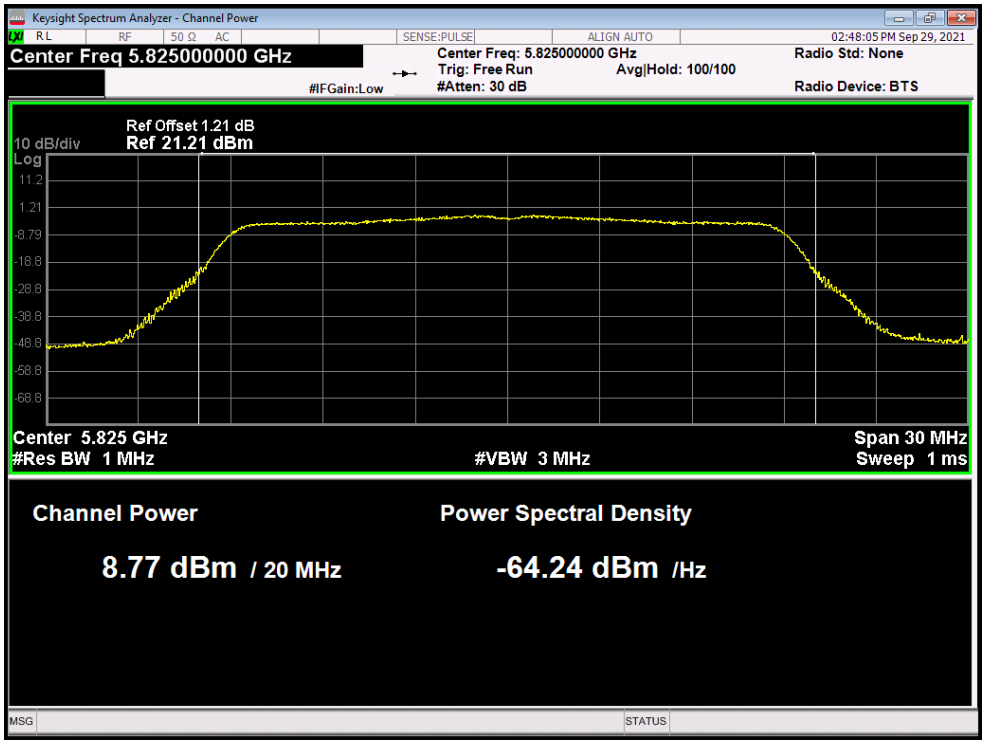
Power NVNT n20 5745MHz Ant1



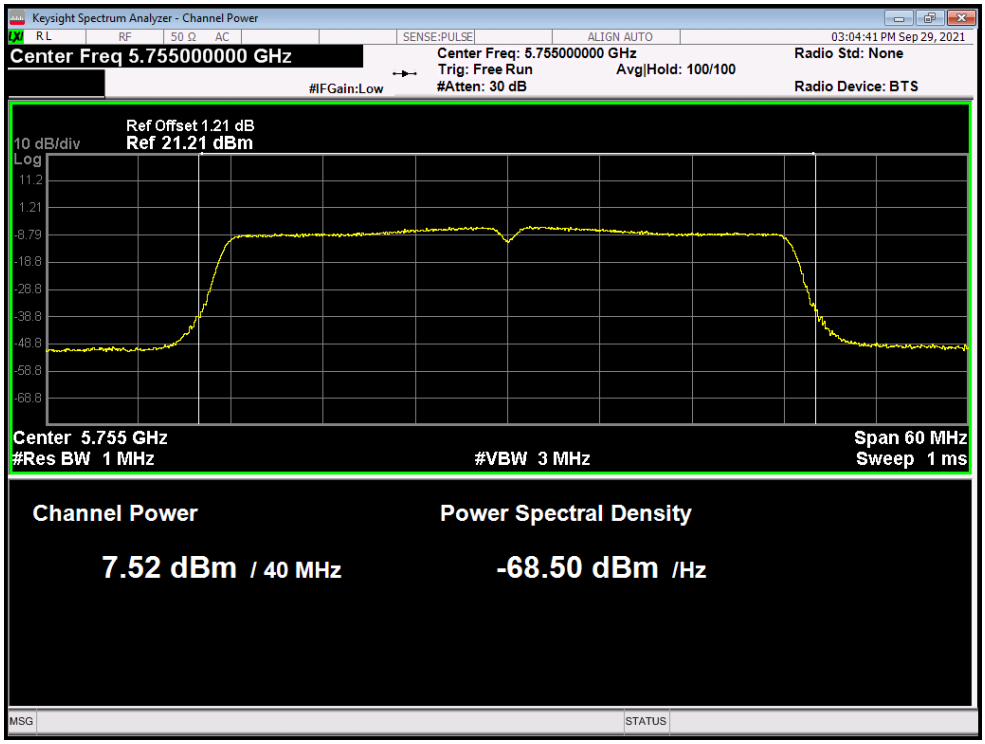
Power NVNT n20 5785MHz Ant1



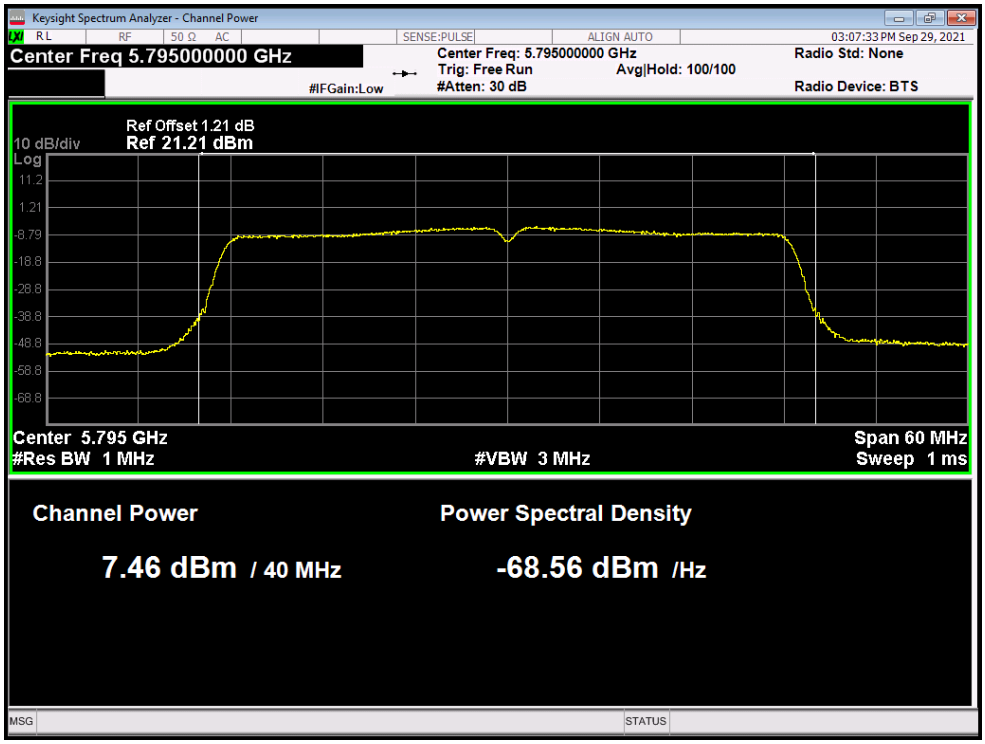
Power NVNT n20 5825MHz Ant1



Power NVNT n40 5755MHz Ant1



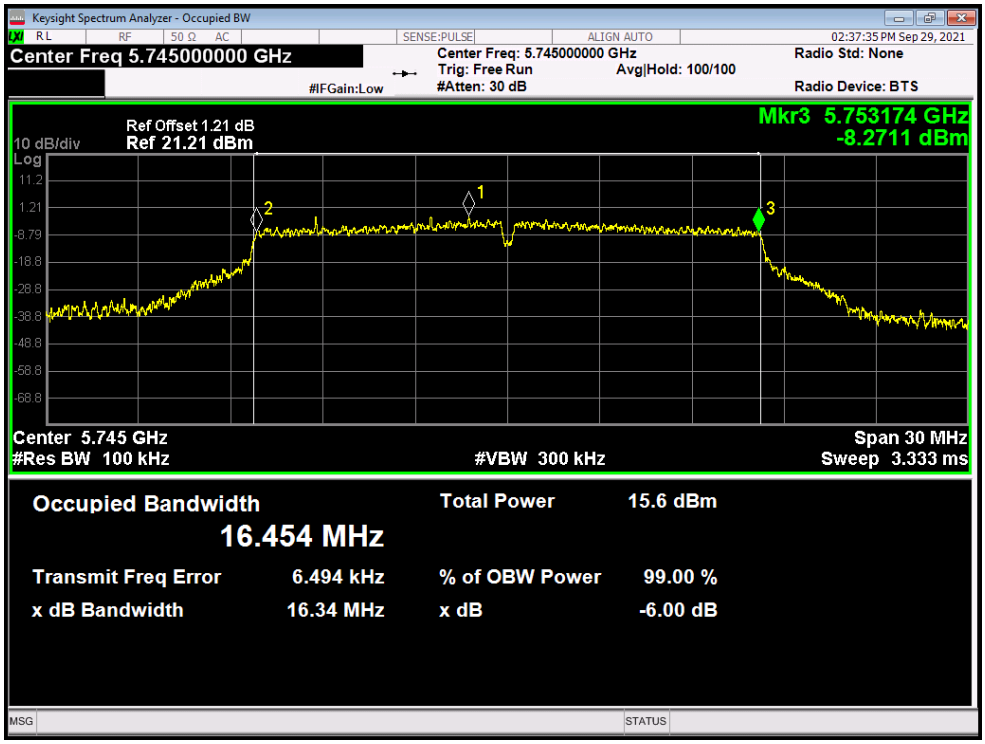
Power NVNT n40 5795MHz Ant1


Keysight Spectrum Analyzer - Channel Power
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:07:33 PM Sep 29, 2021
Center Freq 5.795000000 GHz
Center Freq: 5.795000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 1.21 dB
10 dB/div
Ref 21.21 dBm
Log
11.2
1.21
-8.79
-18.8
-28.8
-38.8
-48.8
-58.8
-68.8
Center 5.795 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 60 MHz
Sweep 1 ms
Channel Power
7.46 dBm / 40 MHz
Power Spectral Density
-68.56 dBm /Hz
MSG
STATUS

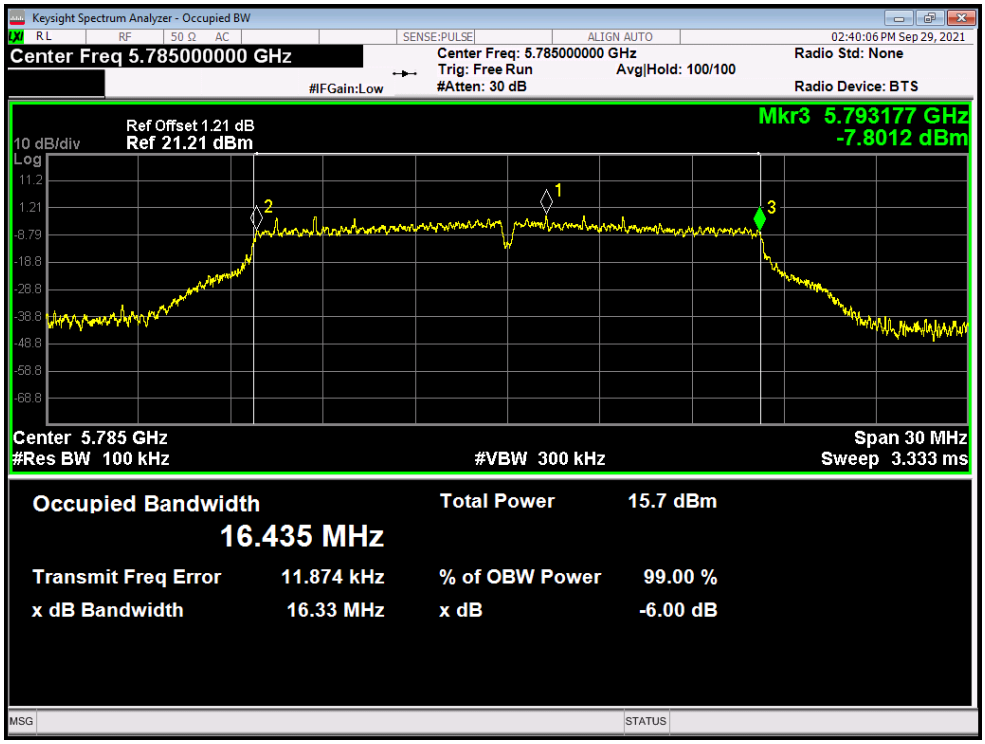
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	16.336	0.5	Pass
NVNT	a	5785	Ant1	16.331	0.5	Pass
NVNT	a	5825	Ant1	16.328	0.5	Pass
NVNT	ac20	5745	Ant1	17.279	0.5	Pass
NVNT	ac20	5785	Ant1	17.32	0.5	Pass
NVNT	ac20	5825	Ant1	17.122	0.5	Pass
NVNT	ac40	5755	Ant1	36.326	0.5	Pass
NVNT	ac40	5795	Ant1	36.088	0.5	Pass
NVNT	ac80	5775	Ant1	75.329	0.5	Pass
NVNT	n20	5745	Ant1	17.538	0.5	Pass
NVNT	n20	5785	Ant1	17.542	0.5	Pass
NVNT	n20	5825	Ant1	17.005	0.5	Pass
NVNT	n40	5755	Ant1	36.136	0.5	Pass
NVNT	n40	5795	Ant1	35.466	0.5	Pass

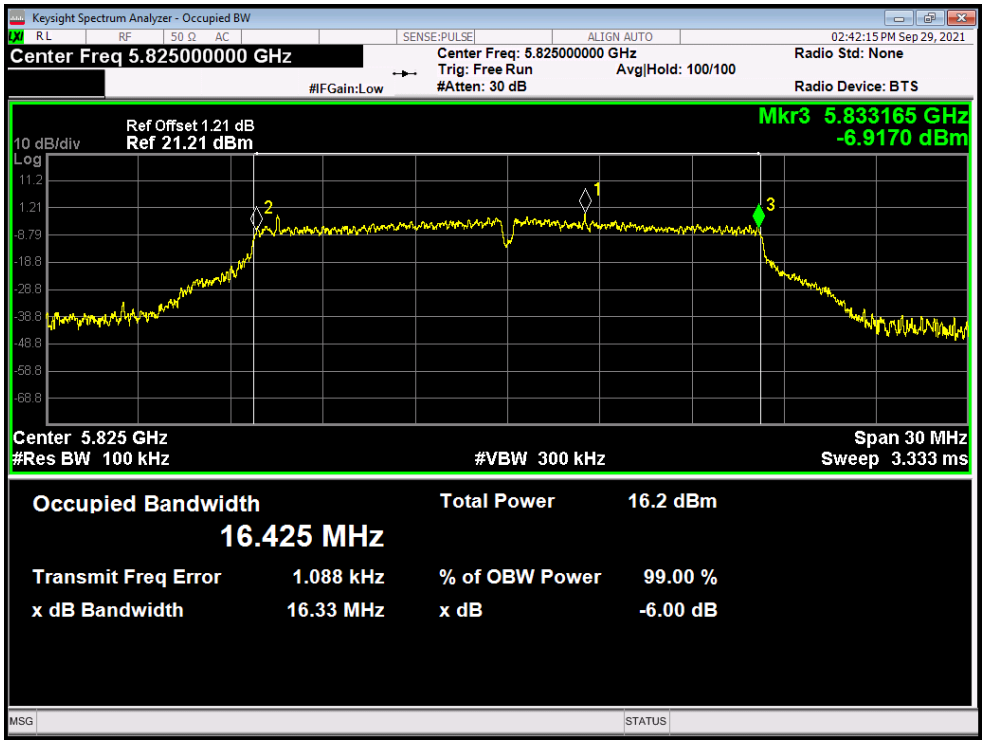
-6dB Bandwidth NVNT a 5745MHz Ant1



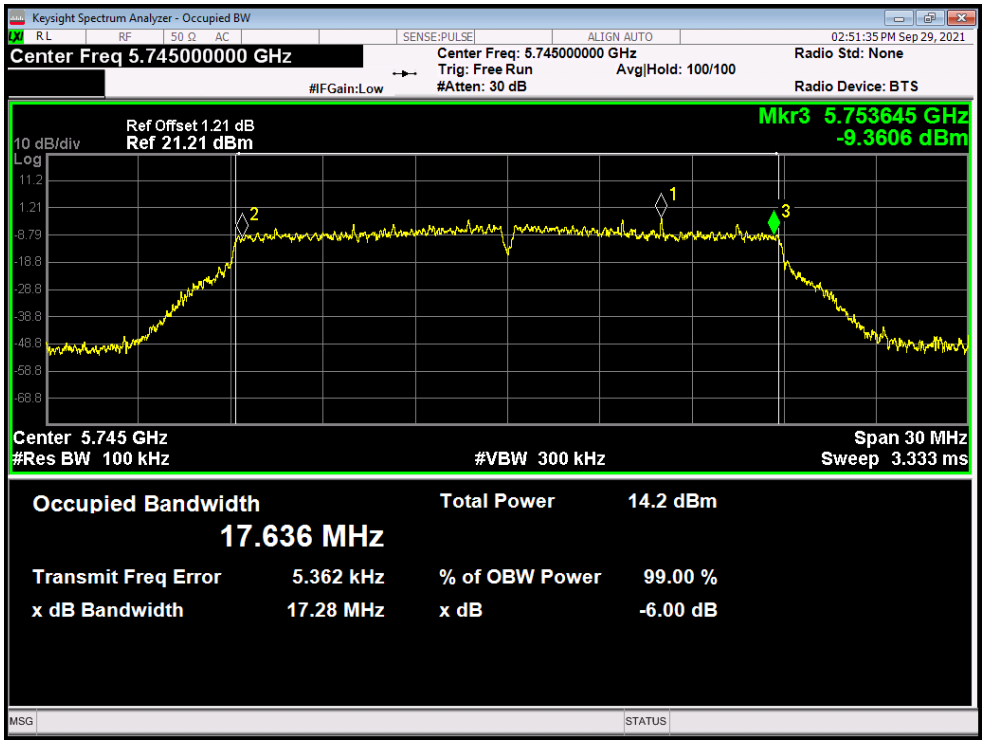
-6dB Bandwidth NVNT a 5785MHz Ant1



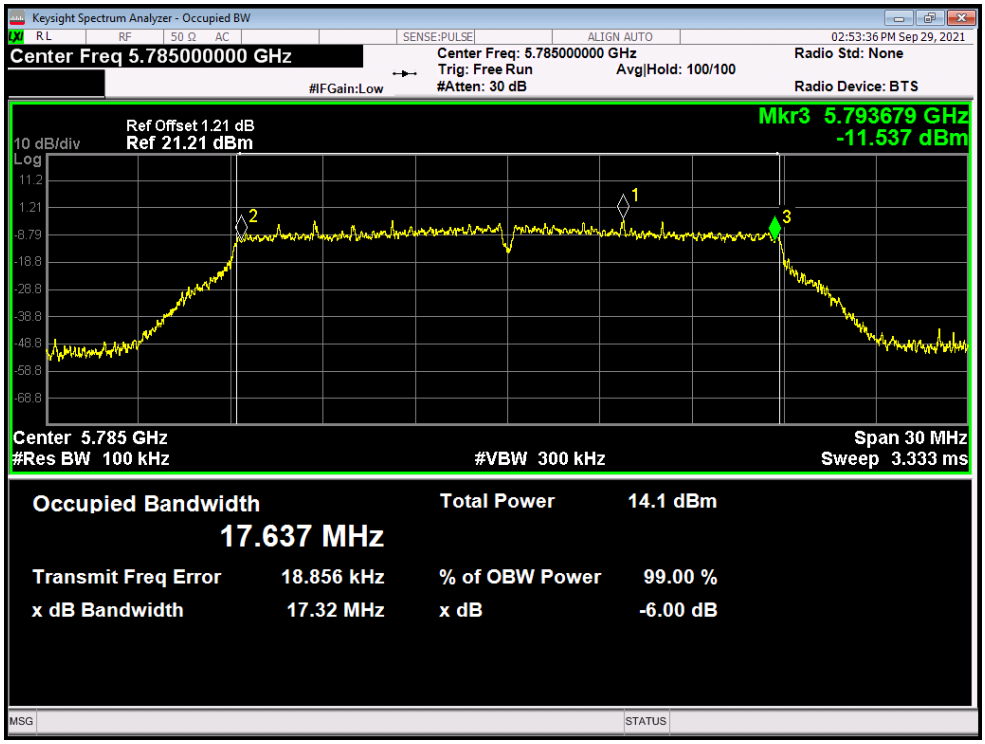
-6dB Bandwidth NVNT a 5825MHz Ant1



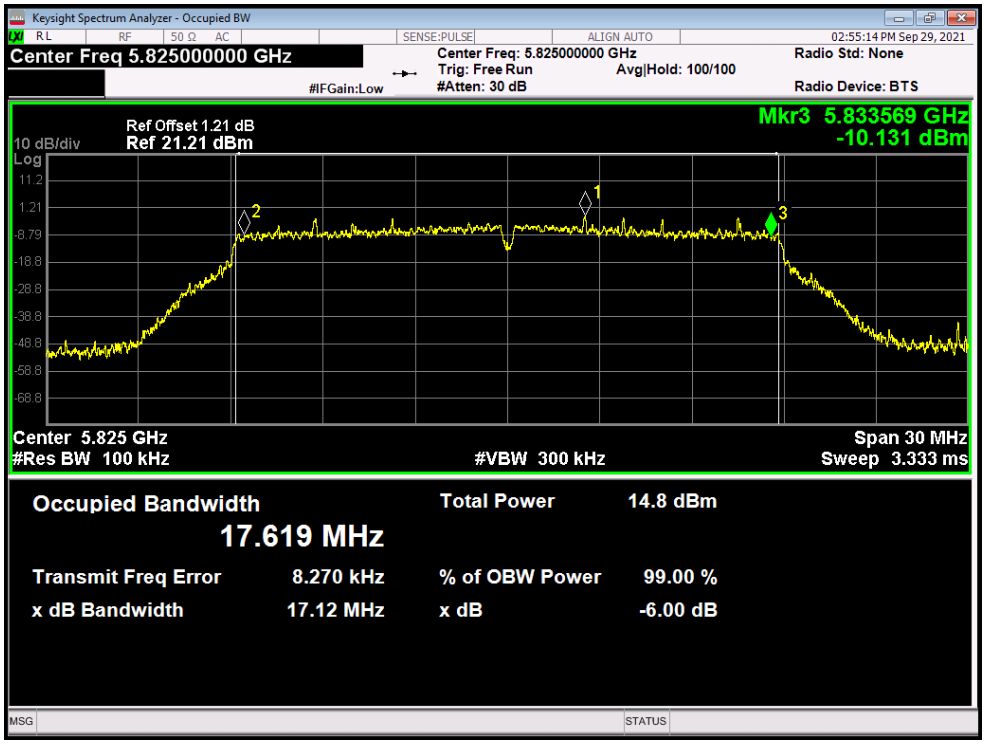
-6dB Bandwidth NVNT ac20 5745MHz Ant1



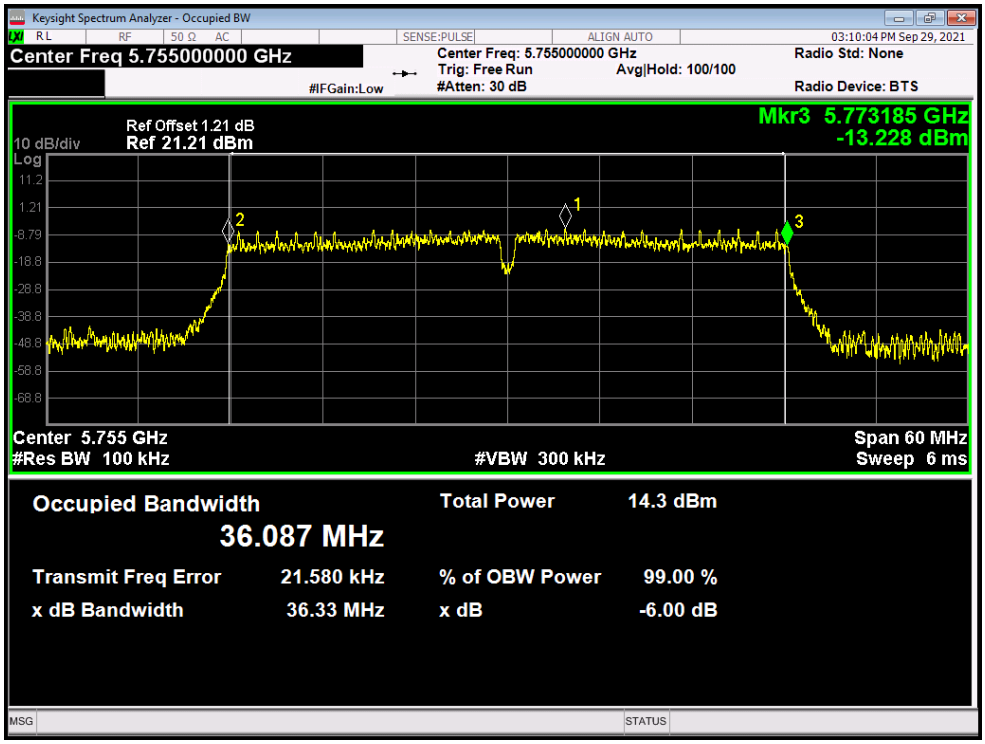
-6dB Bandwidth NVNT ac20 5785MHz Ant1



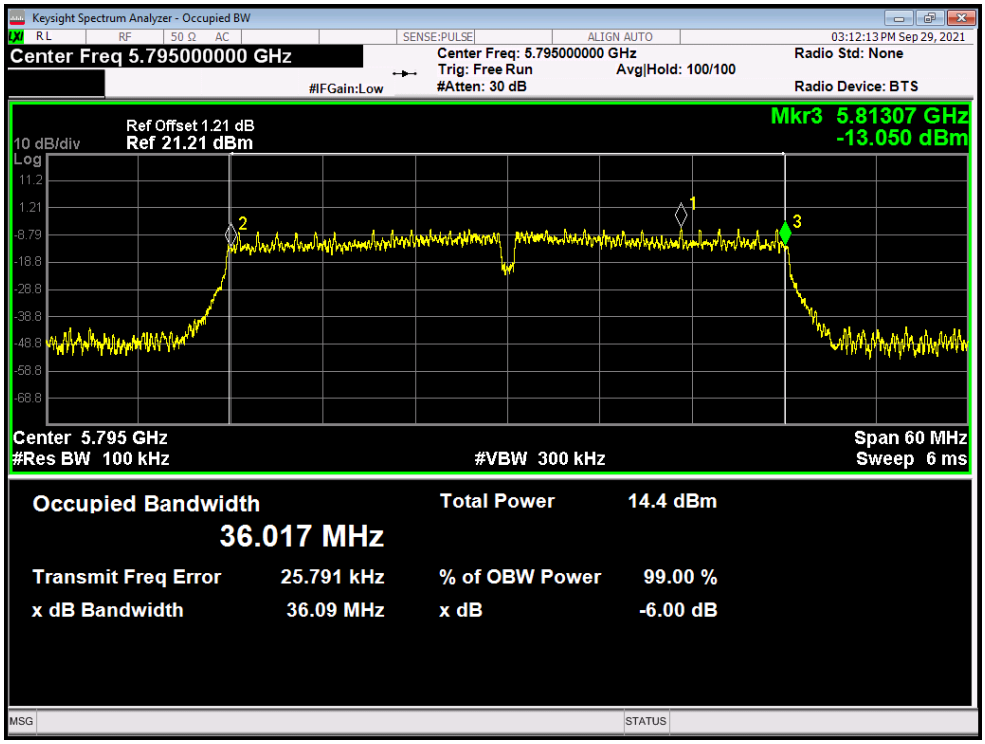
-6dB Bandwidth NVNT ac20 5825MHz Ant1



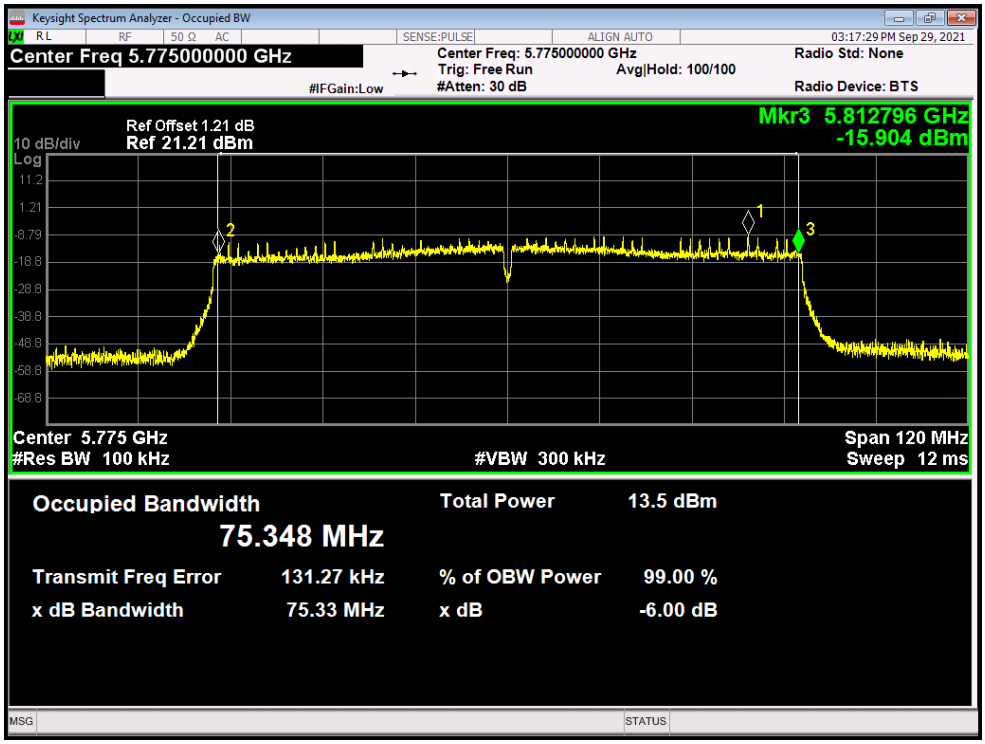
-6dB Bandwidth NVNT ac40 5755MHz Ant1



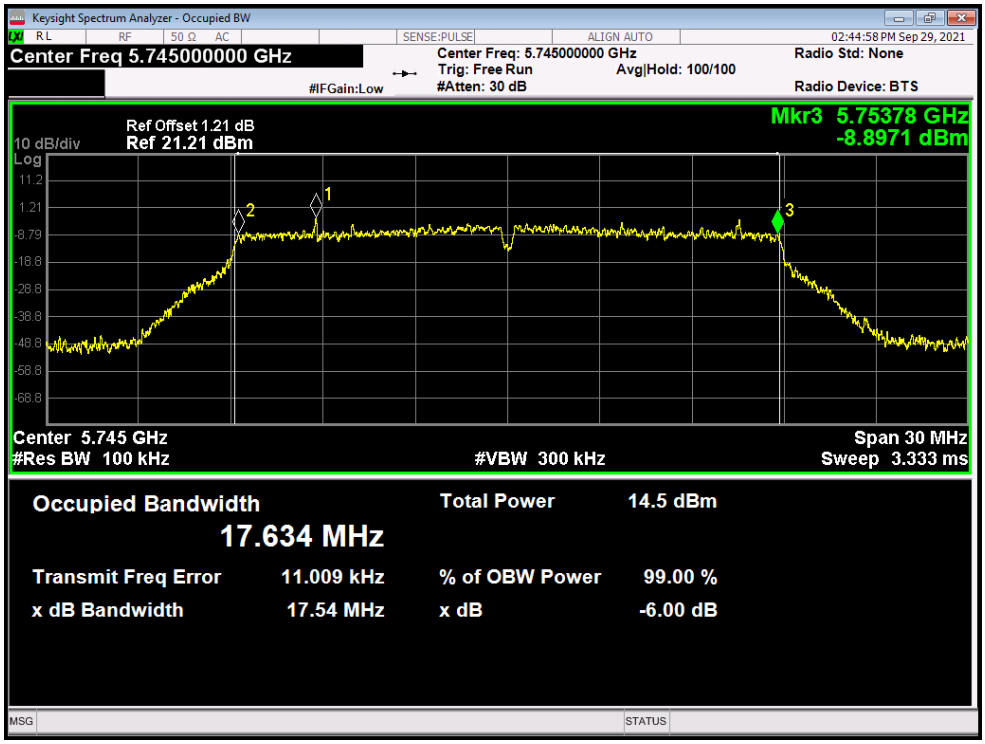
-6dB Bandwidth NVNT ac40 5795MHz Ant1



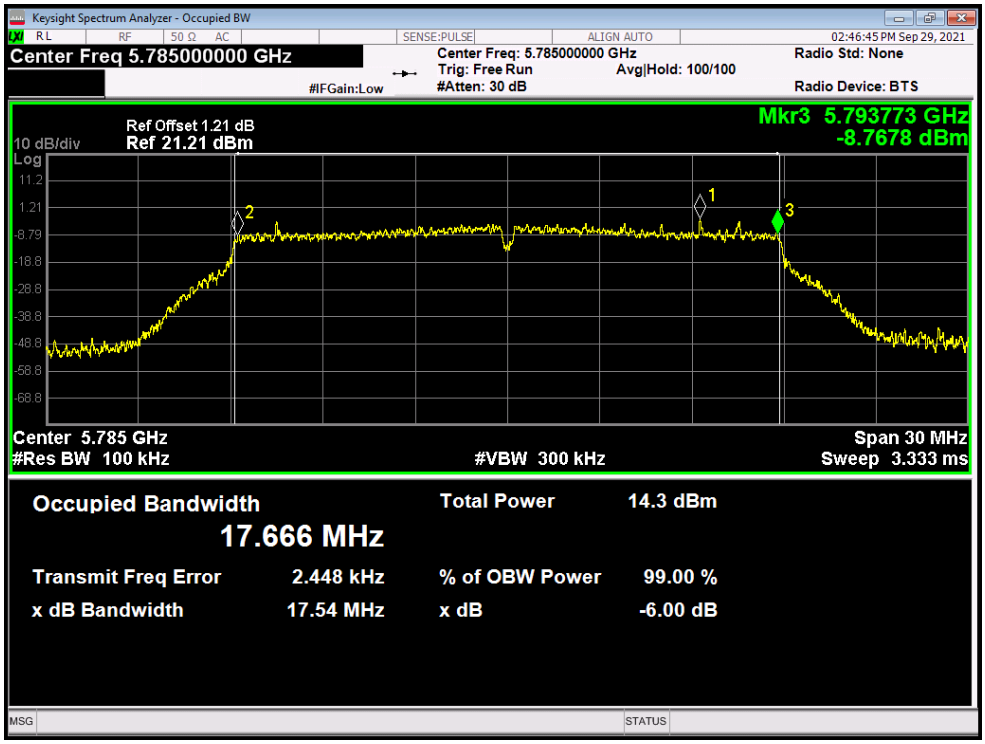
-6dB Bandwidth NVNT ac80 5775MHz Ant1



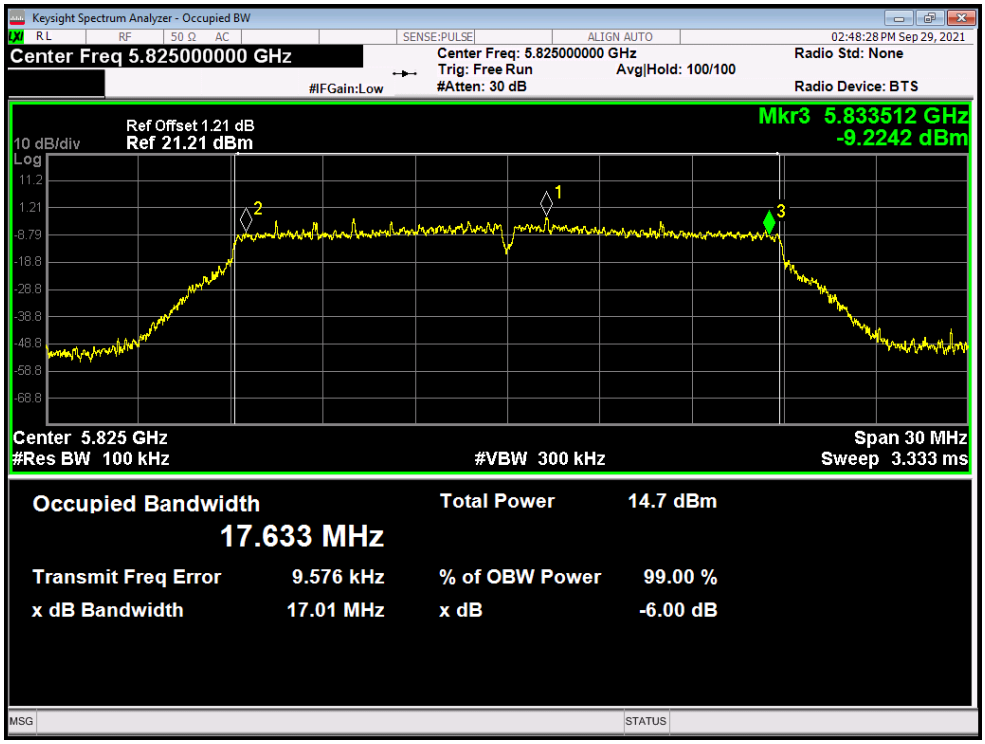
-6dB Bandwidth NVNT n20 5745MHz Ant1



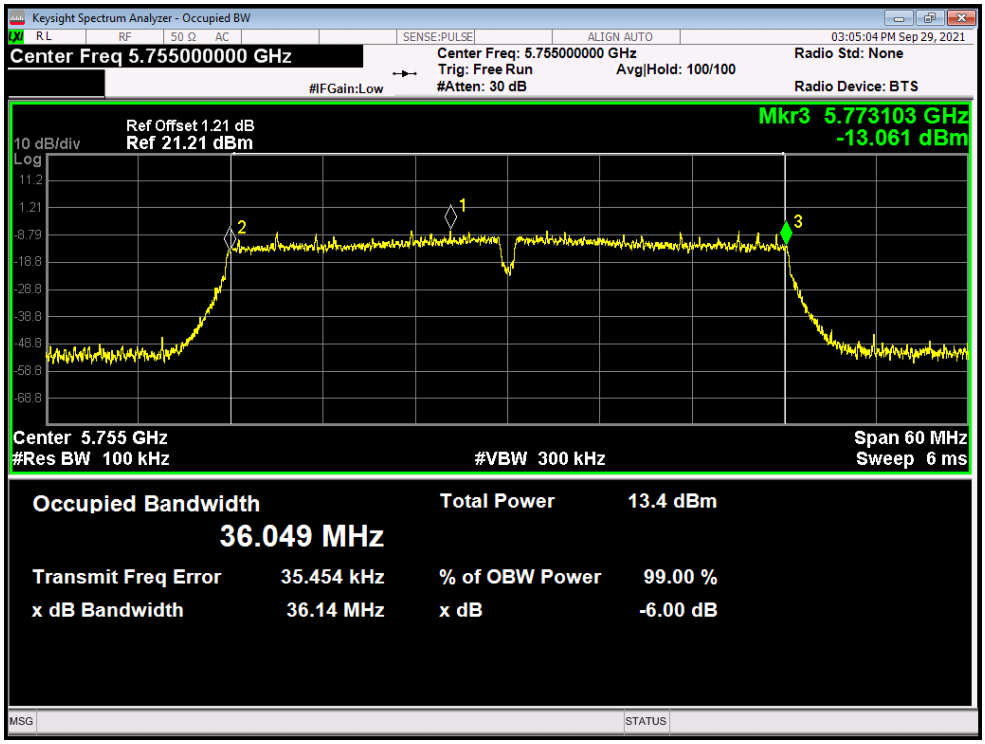
-6dB Bandwidth NVNT n20 5785MHz Ant1



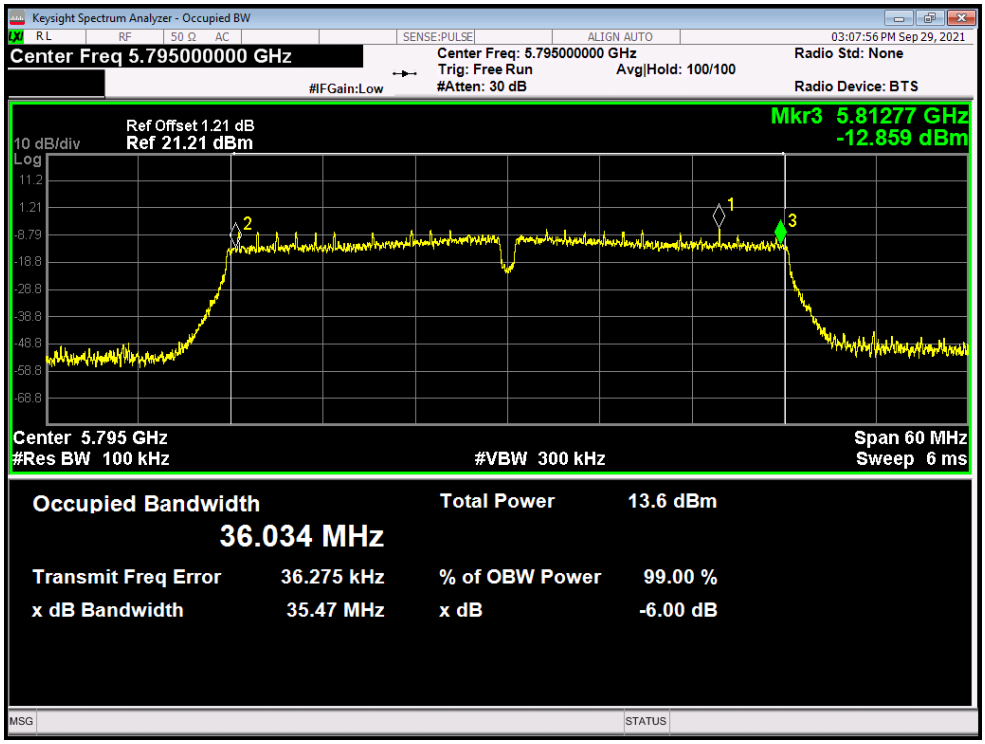
-6dB Bandwidth NVNT n20 5825MHz Ant1



-6dB Bandwidth NVNT n40 5755MHz Ant1



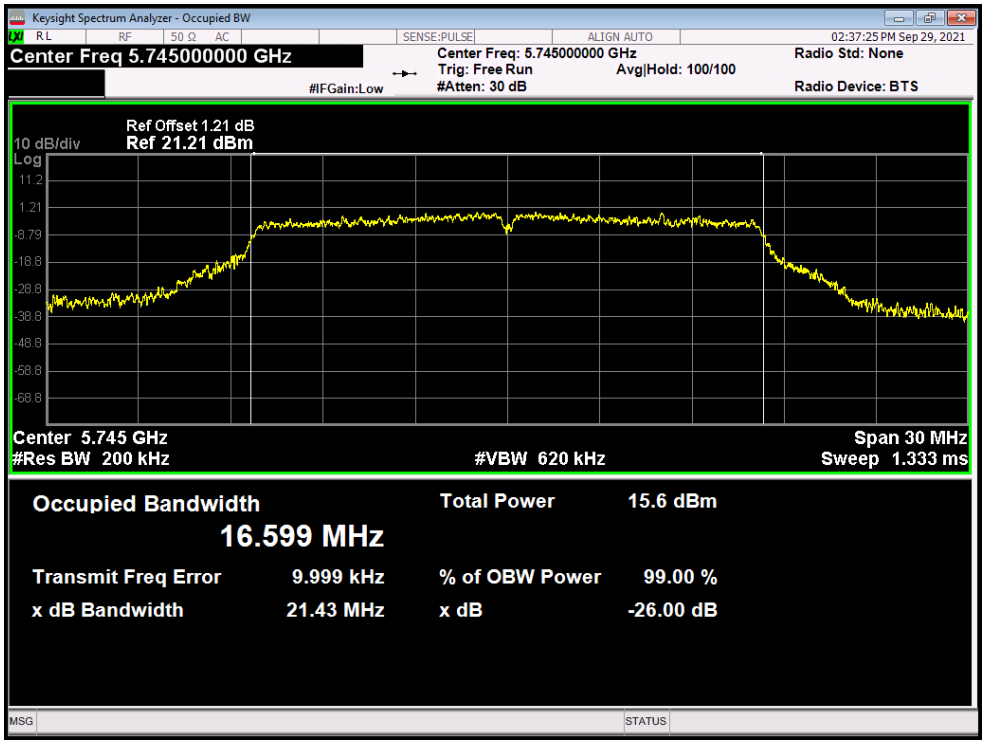
-6dB Bandwidth NVNT n40 5795MHz Ant1


Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:07:56 PM Sep 29, 2021
Center Freq 5.795000000 GHz
Center Freq: 5.795000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 1.21 dB
10 dB/div
Ref 21.21 dBm
Log
11.2
1.21
-8.79
-18.8
-28.8
-38.8
-48.8
-58.8
-68.8
Mkr3 5.81277 GHz
-12.859 dBm
Center 5.795 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60 MHz
Sweep 6 ms
Occupied Bandwidth
36.034 MHz
Total Power 13.6 dBm
Transmit Freq Error 36.275 kHz
% of OBW Power 99.00 %
x dB Bandwidth 35.47 MHz
x dB -6.00 dB
MSG
STATUS

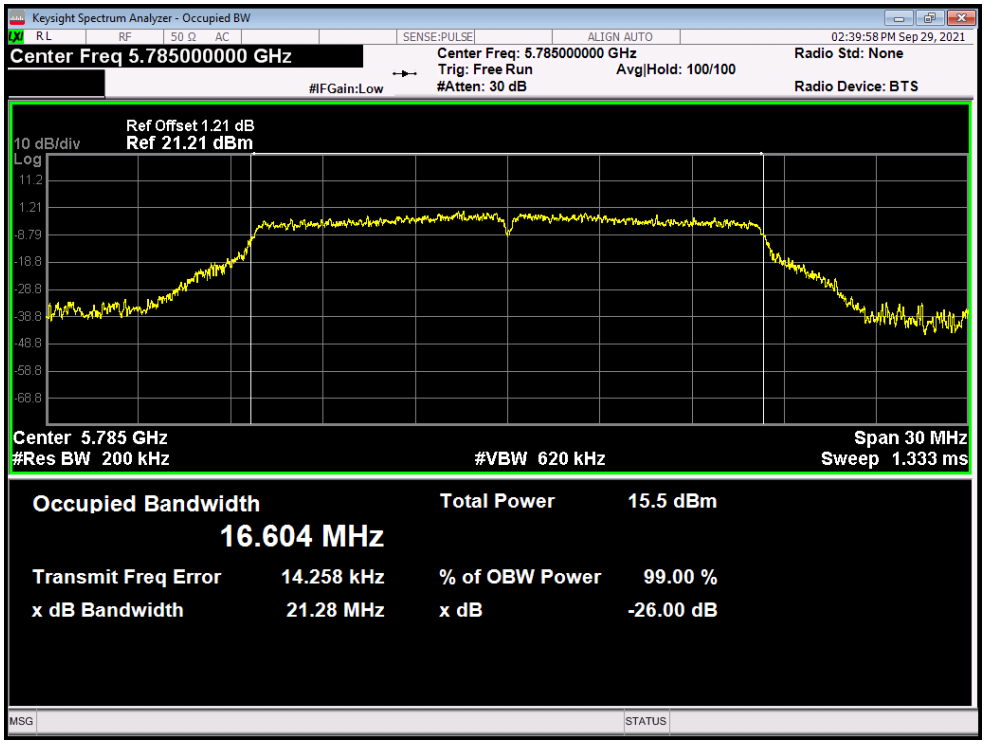
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5745	Ant1	16.599
NVNT	a	5785	Ant1	16.604
NVNT	a	5825	Ant1	16.592
NVNT	ac20	5745	Ant1	17.748
NVNT	ac20	5785	Ant1	17.729
NVNT	ac20	5825	Ant1	17.75
NVNT	ac40	5755	Ant1	36.26
NVNT	ac40	5795	Ant1	36.194
NVNT	ac80	5775	Ant1	75.476
NVNT	n20	5745	Ant1	17.713
NVNT	n20	5785	Ant1	17.694
NVNT	n20	5825	Ant1	17.711
NVNT	n40	5755	Ant1	36.13
NVNT	n40	5795	Ant1	36.192

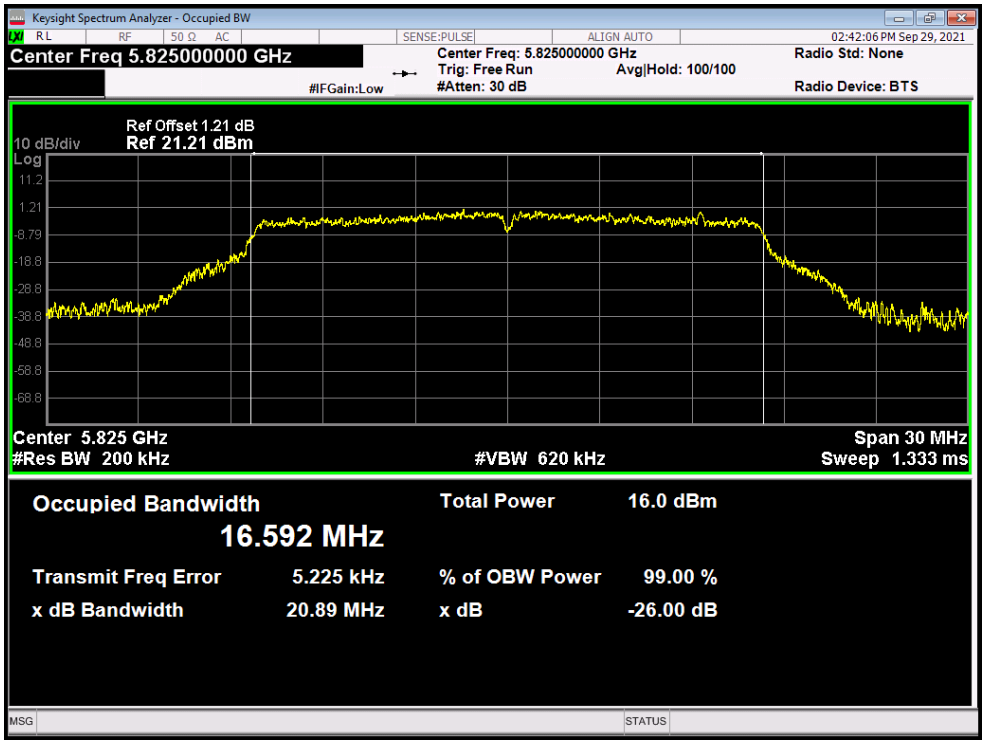
OBW NVNT a 5745MHz Ant1



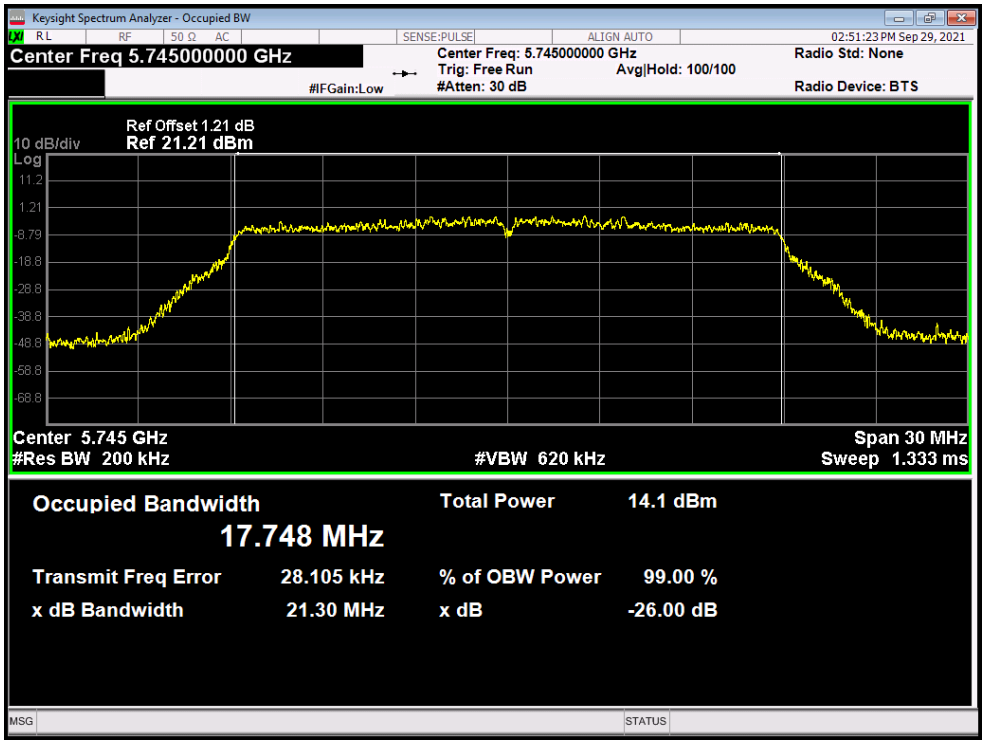
OBW NVNT a 5785MHz Ant1



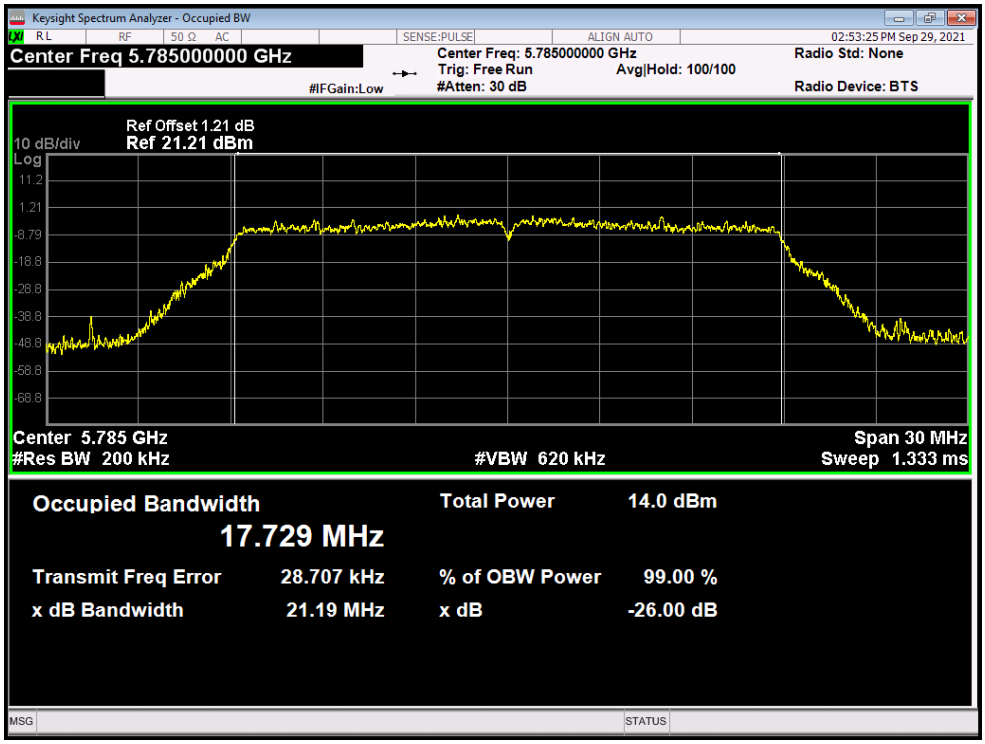
OBW NVNT a 5825MHz Ant1



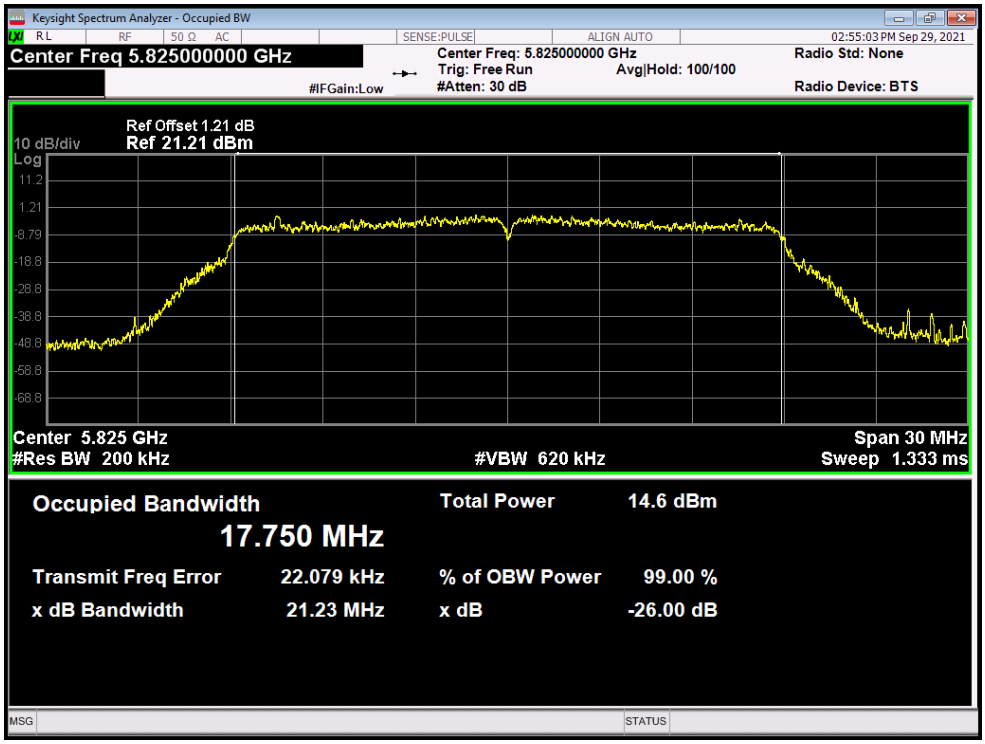
OBW NVNT ac20 5745MHz Ant1



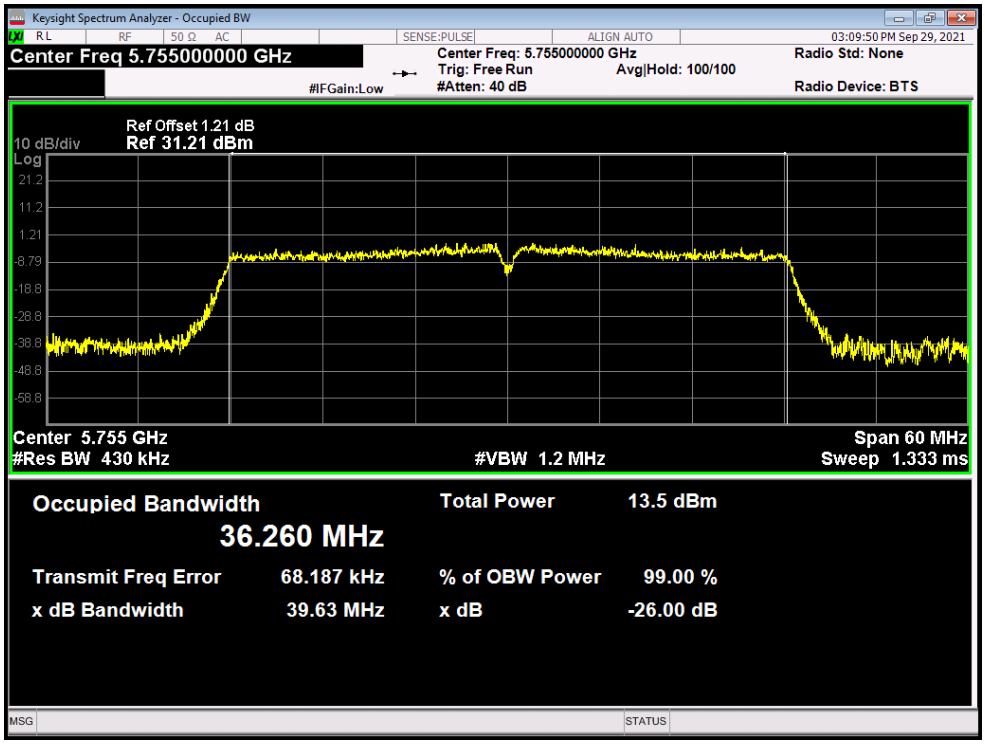
OBW NVNT ac20 5785MHz Ant1



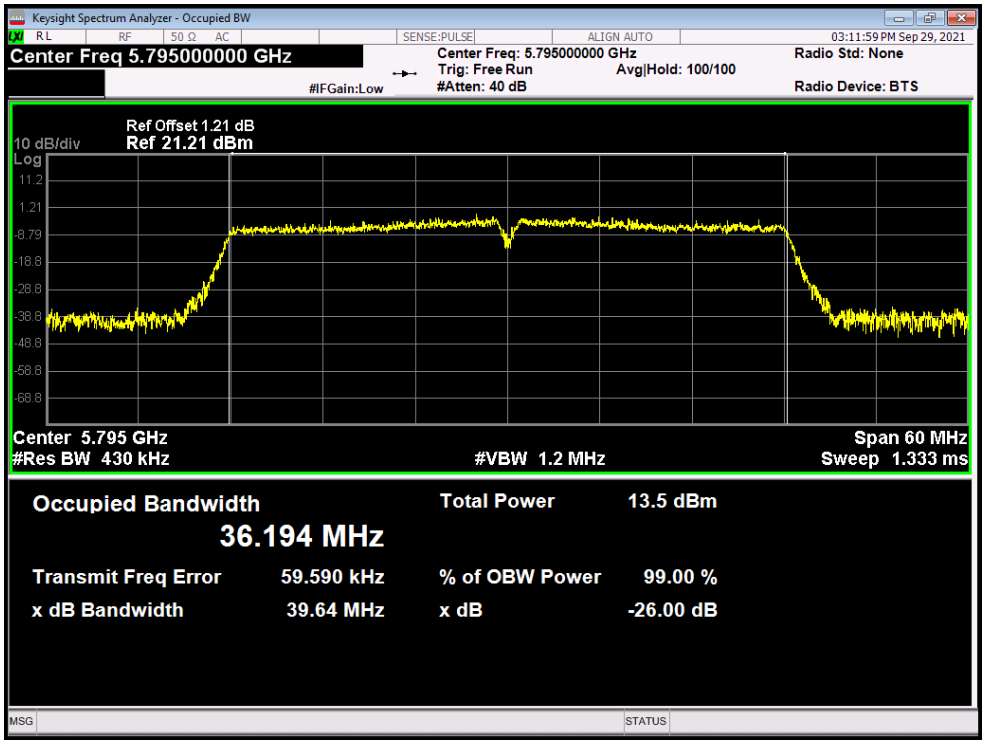
OBW NVNT ac20 5825MHz Ant1



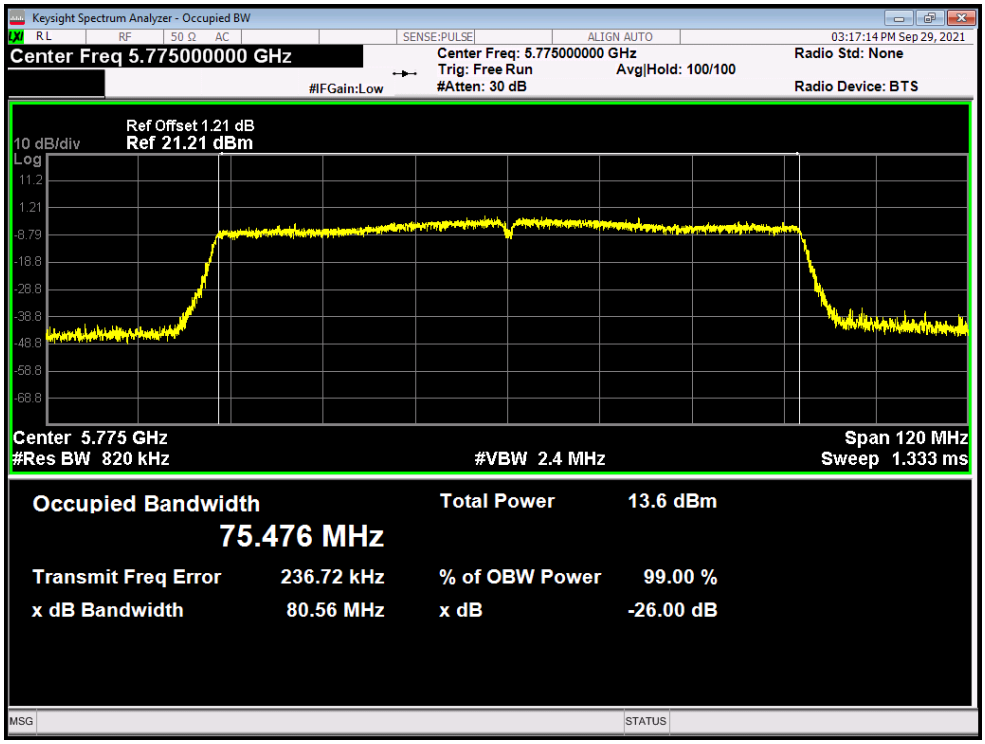
OBW NVNT ac40 5755MHz Ant1



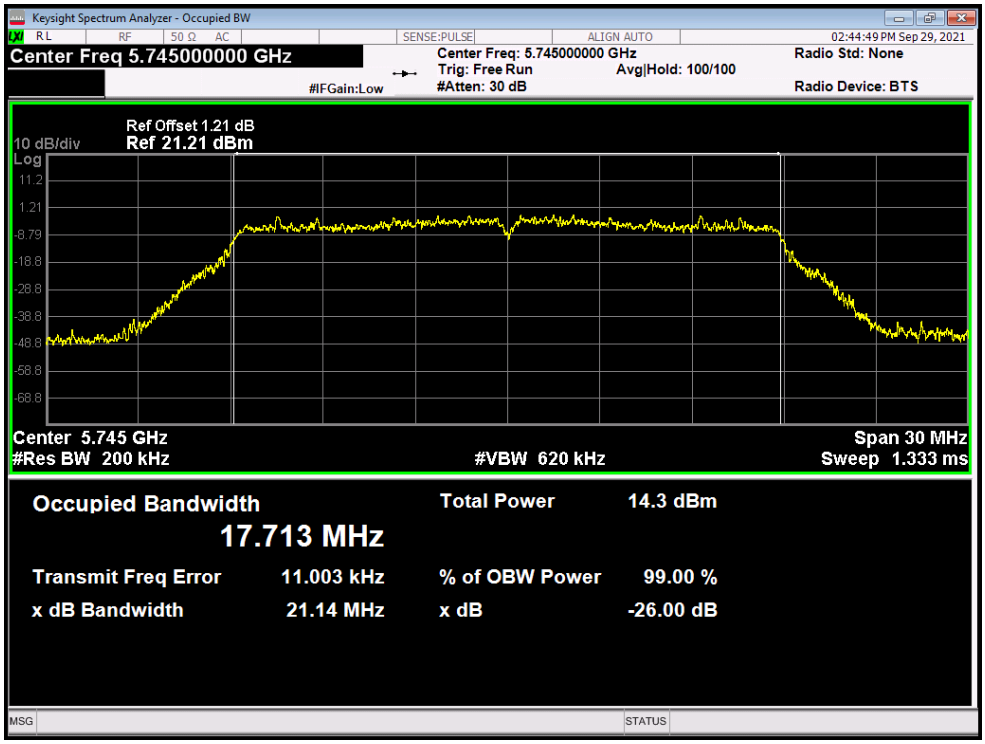
OBW NVNT ac40 5795MHz Ant1



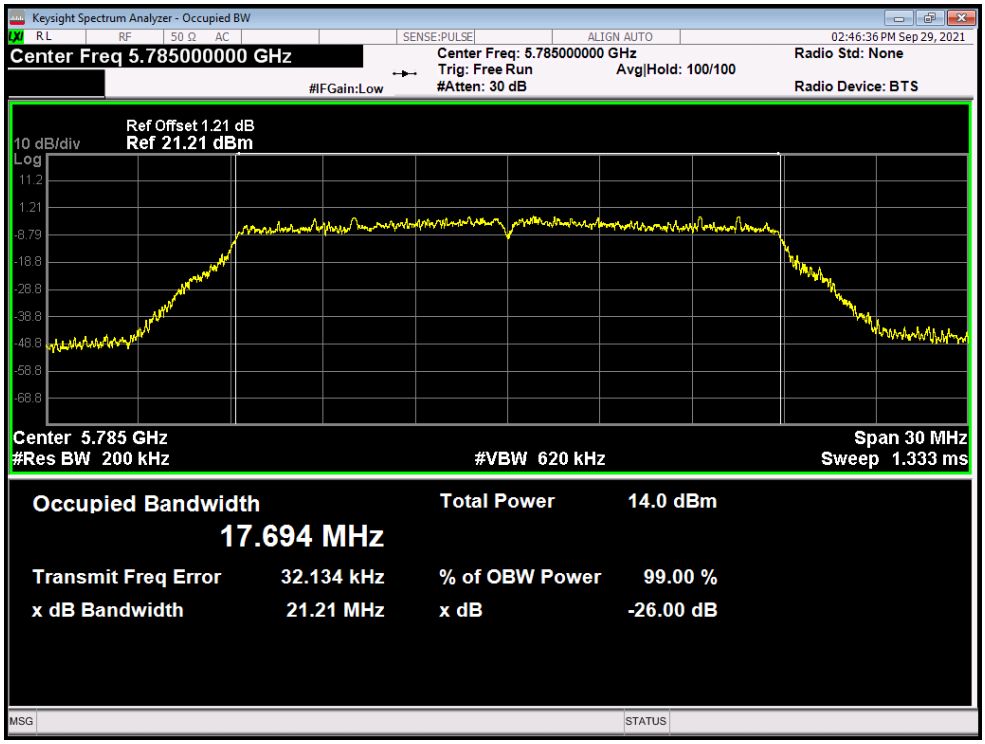
OBW NVNT ac80 5775MHz Ant1



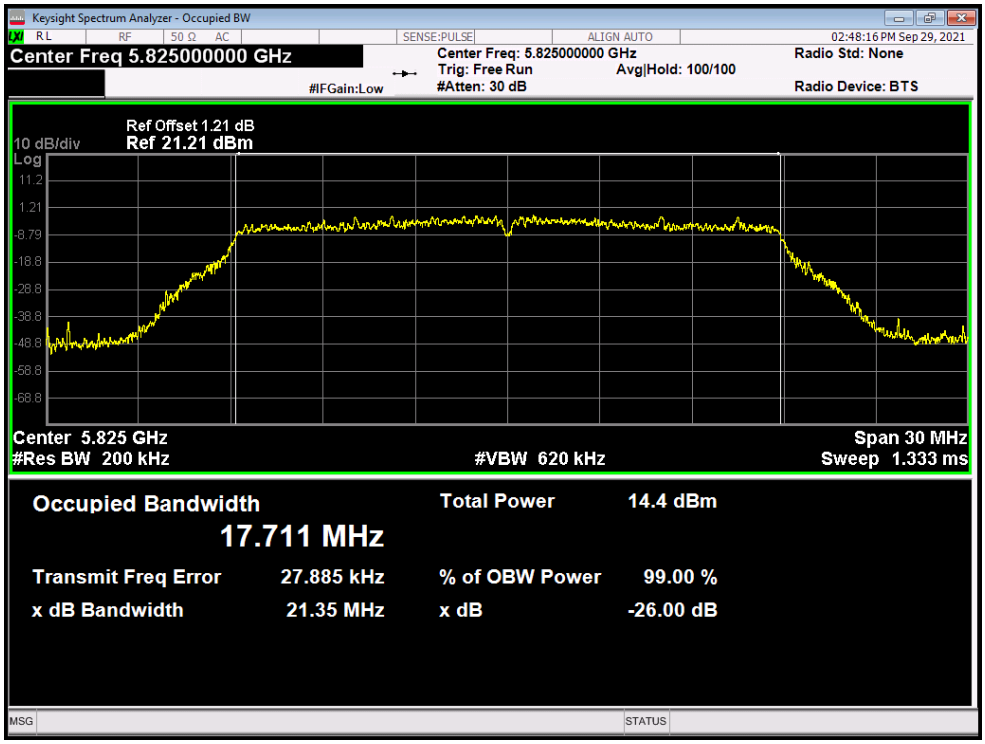
OBW NVNT n20 5745MHz Ant1



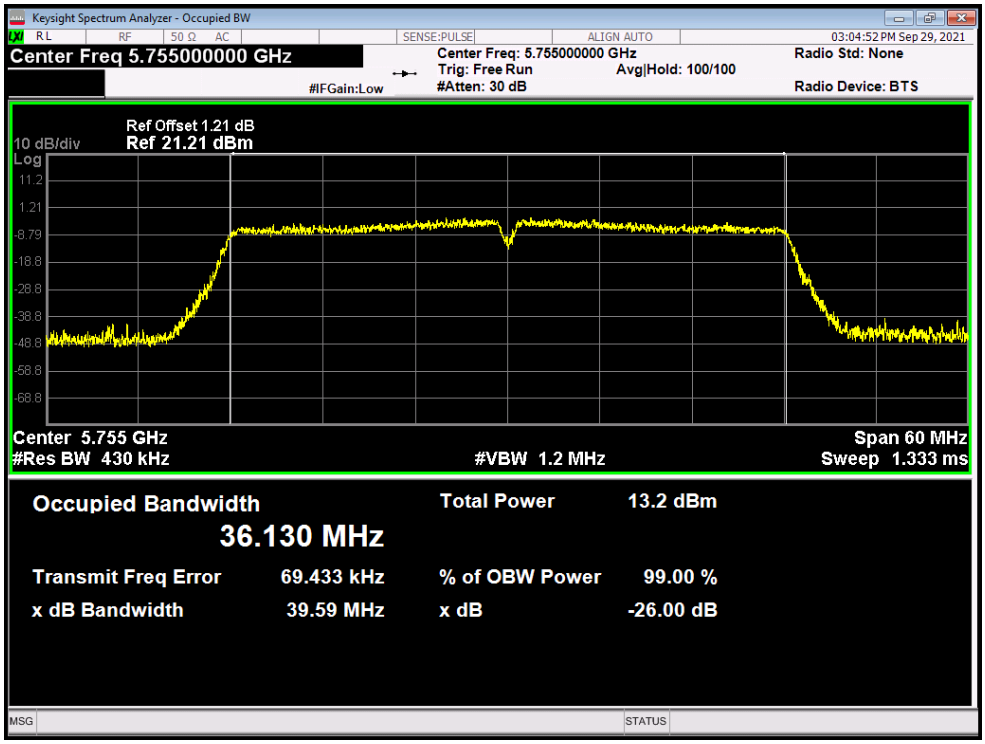
OBW NVNT n20 5785MHz Ant1



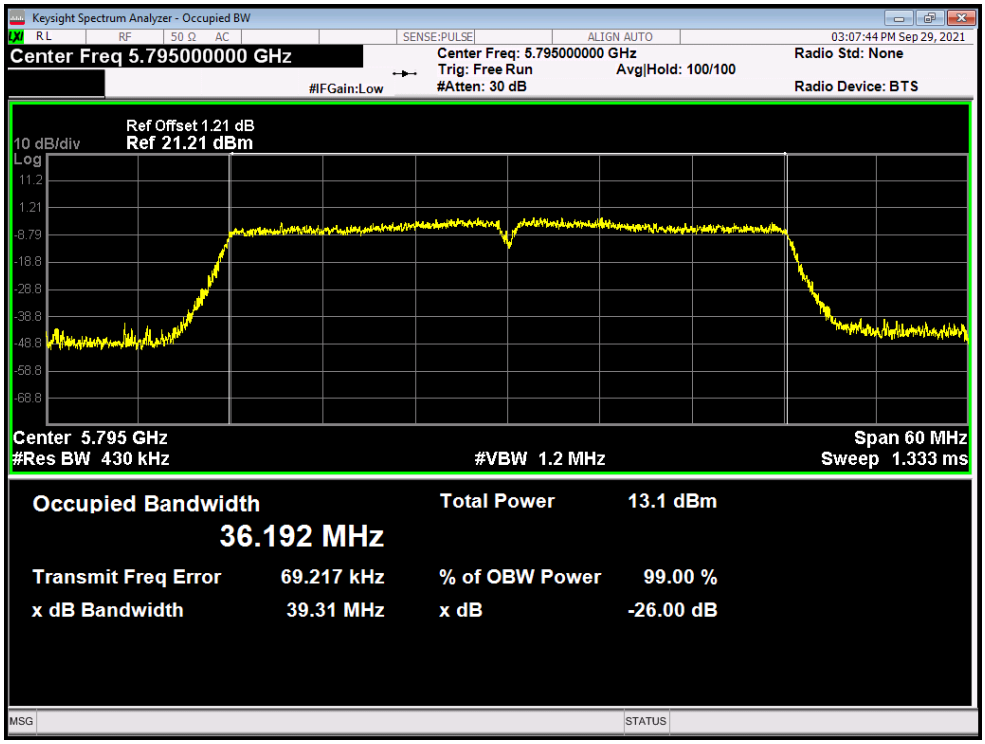
OBW NVNT n20 5825MHz Ant1



OBW NVNT n40 5755MHz Ant1



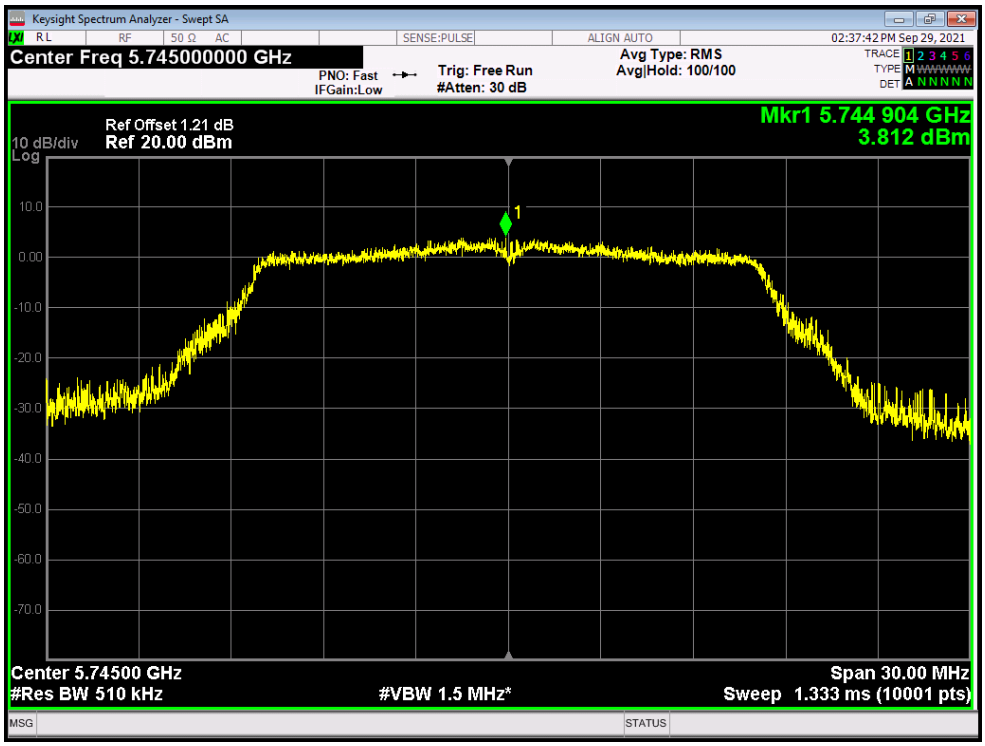
OBW NVNT n40 5795MHz Ant1


Keysight Spectrum Analyzer - Occupied BW
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:07:44 PM Sep 29, 2021
Center Freq 5.795000000 GHz
Center Freq: 5.795000000 GHz
Trig: Free Run
Avg|Hold: 100/100
#IFGain:Low
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Ref Offset 1.21 dB
10 dB/div
Ref 21.21 dBm
Log
11.2
1.21
-8.79
-18.8
-28.8
-38.8
-48.8
-58.8
-68.8
Center 5.795 GHz
#Res BW 430 kHz
#VBW 1.2 MHz
Span 60 MHz
Sweep 1.333 ms
Occupied Bandwidth
36.192 MHz
Total Power
13.1 dBm
Transmit Freq Error
69.217 kHz
% of OBW Power
99.00 %
x dB Bandwidth
39.31 MHz
x dB
-26.00 dB
MSG
STATUS

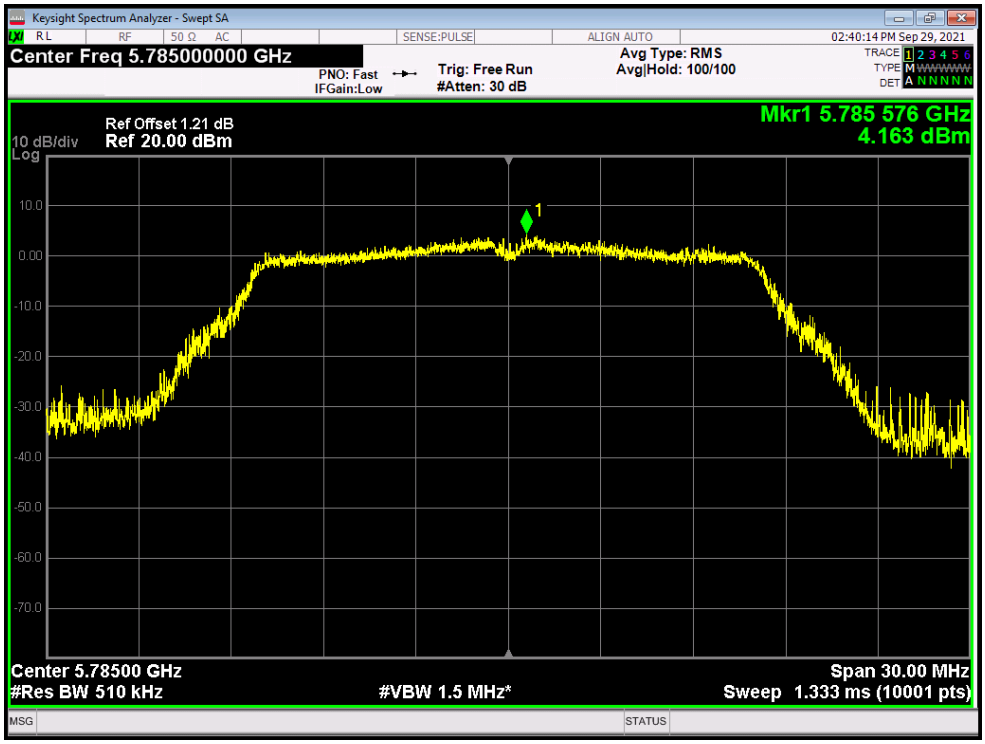
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/500kHz)	Limit (dBm500/kHz)	Verdict
NVNT	a	5745	Ant1	3.812	30	Pass
NVNT	a	5785	Ant1	4.163	30	Pass
NVNT	a	5825	Ant1	4.752	30	Pass
NVNT	ac20	5745	Ant1	2.718	30	Pass
NVNT	ac20	5785	Ant1	2.556	30	Pass
NVNT	ac20	5825	Ant1	3.311	30	Pass
NVNT	ac40	5755	Ant1	0.042	30	Pass
NVNT	ac40	5795	Ant1	-0.625	30	Pass
NVNT	ac80	5775	Ant1	-11.19	30	Pass
NVNT	n20	5745	Ant1	2.865	30	Pass
NVNT	n20	5785	Ant1	2.014	30	Pass
NVNT	n20	5825	Ant1	2.67	30	Pass
NVNT	n40	5755	Ant1	-1.706	30	Pass
NVNT	n40	5795	Ant1	-1.32	30	Pass

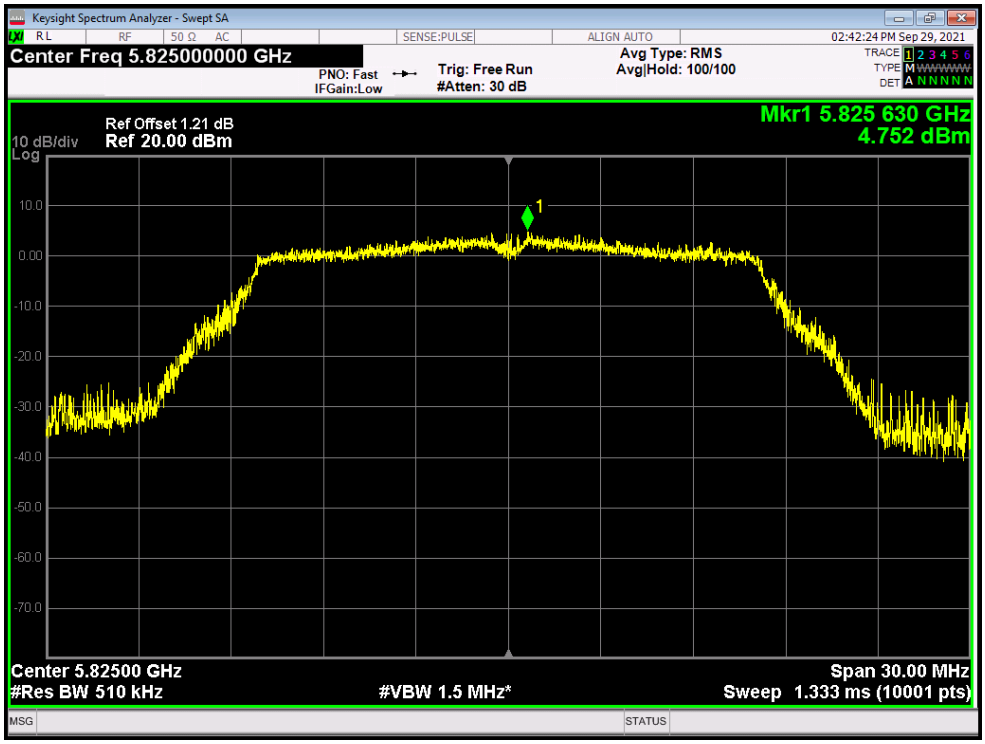
PSD NVNT a 5745MHz Ant1



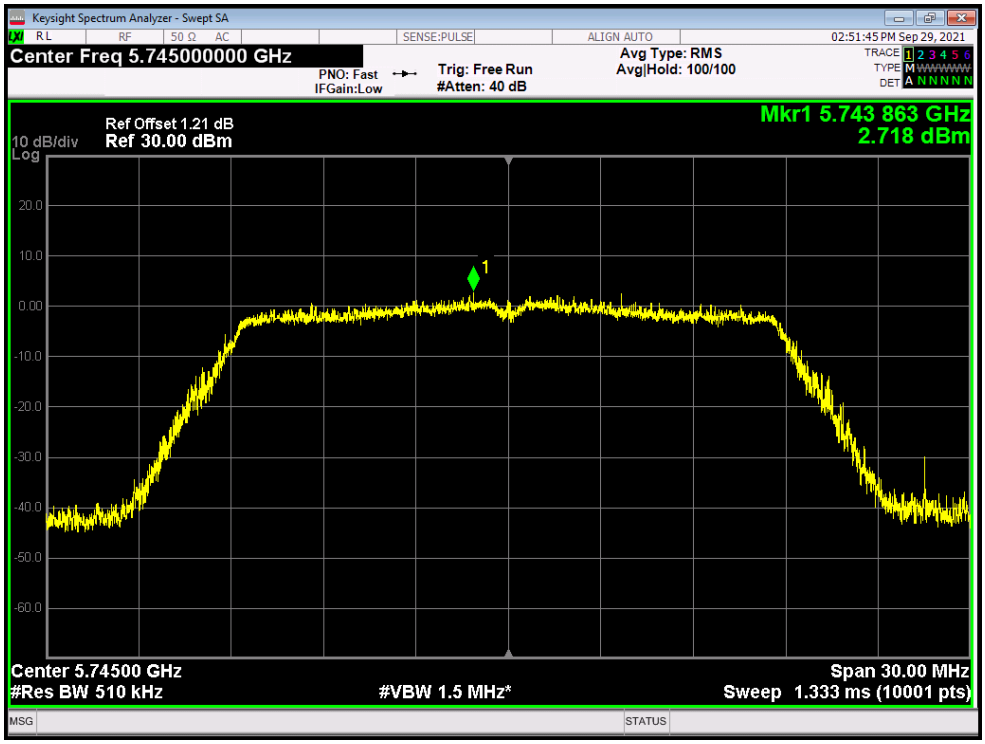
PSD NVNT a 5785MHz Ant1



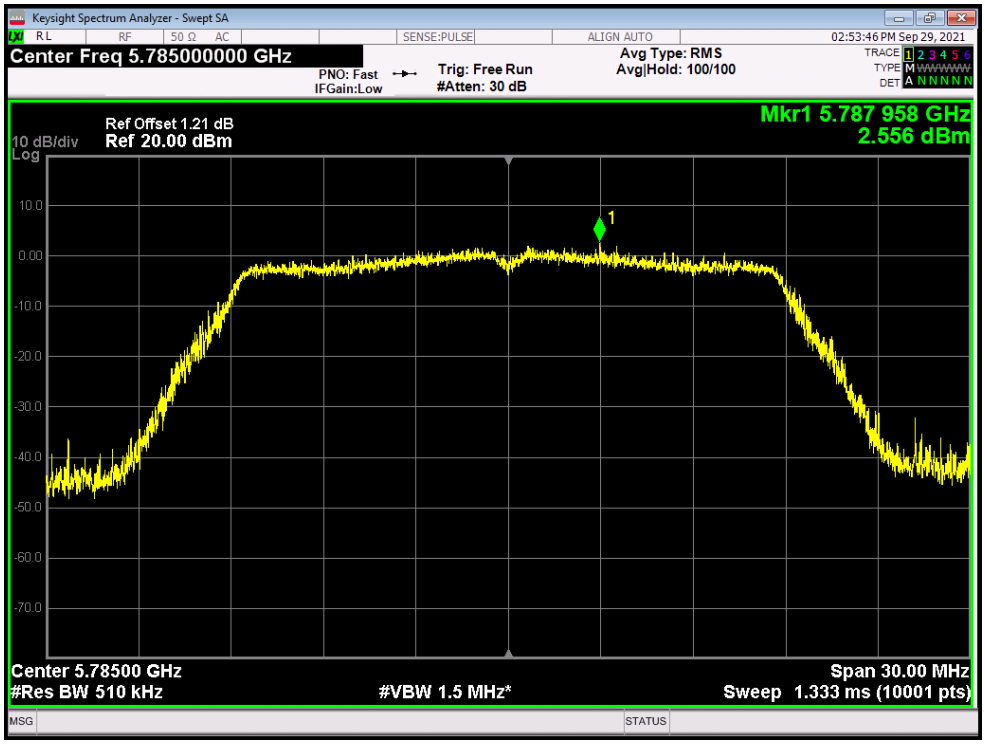
PSD NVNT a 5825MHz Ant1



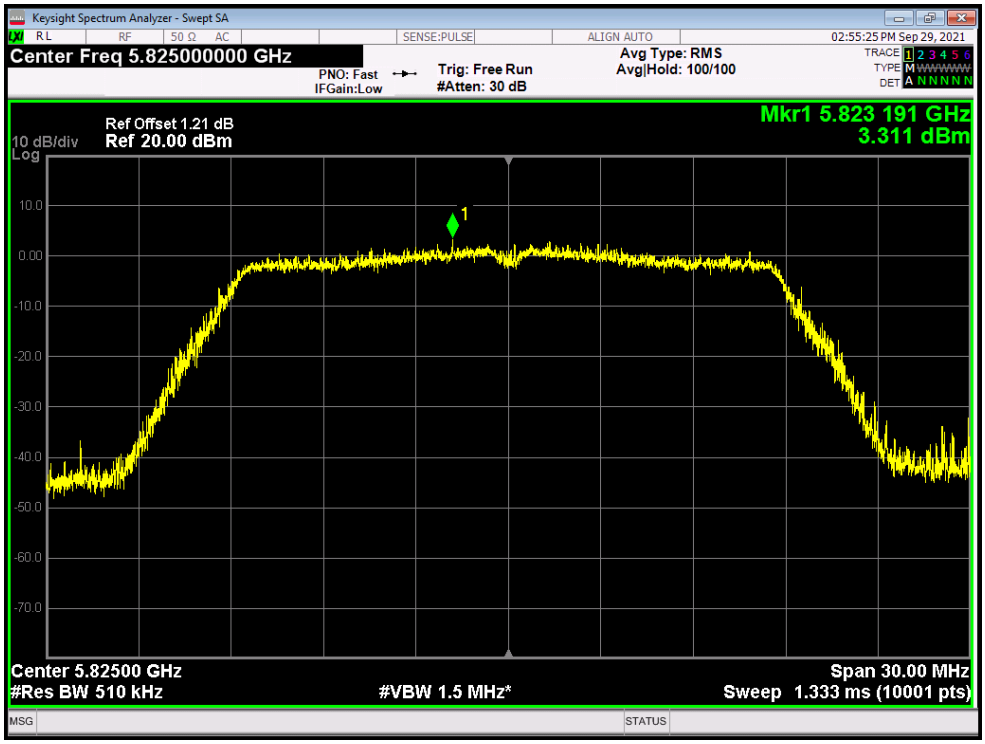
PSD NVNT ac20 5745MHz Ant1



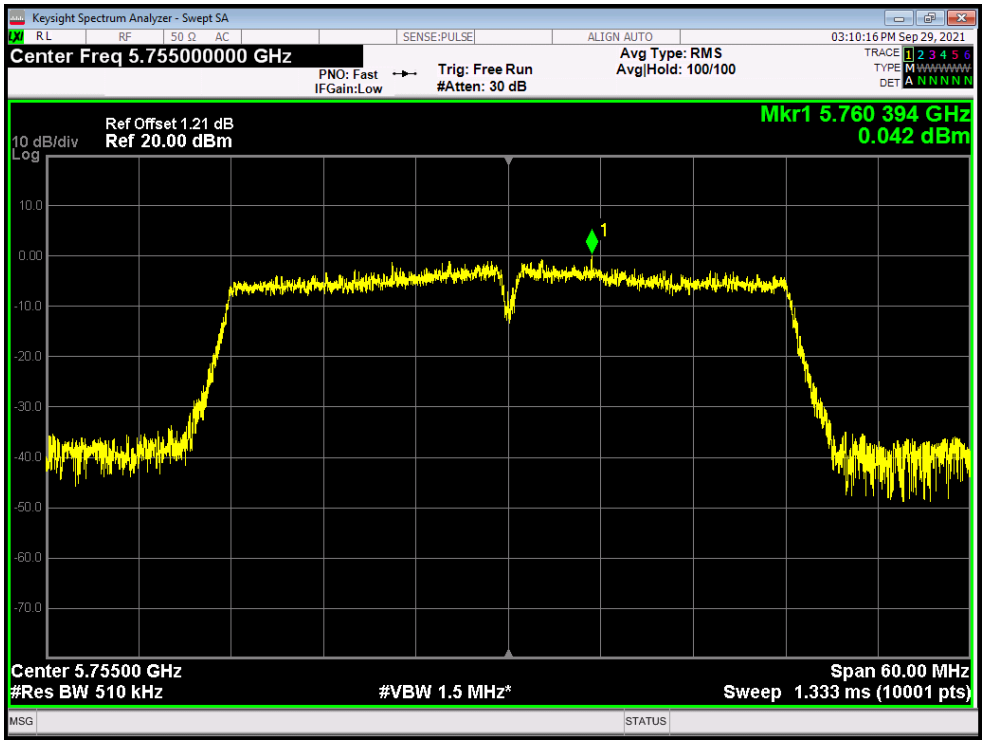
PSD NVNT ac20 5785MHz Ant1



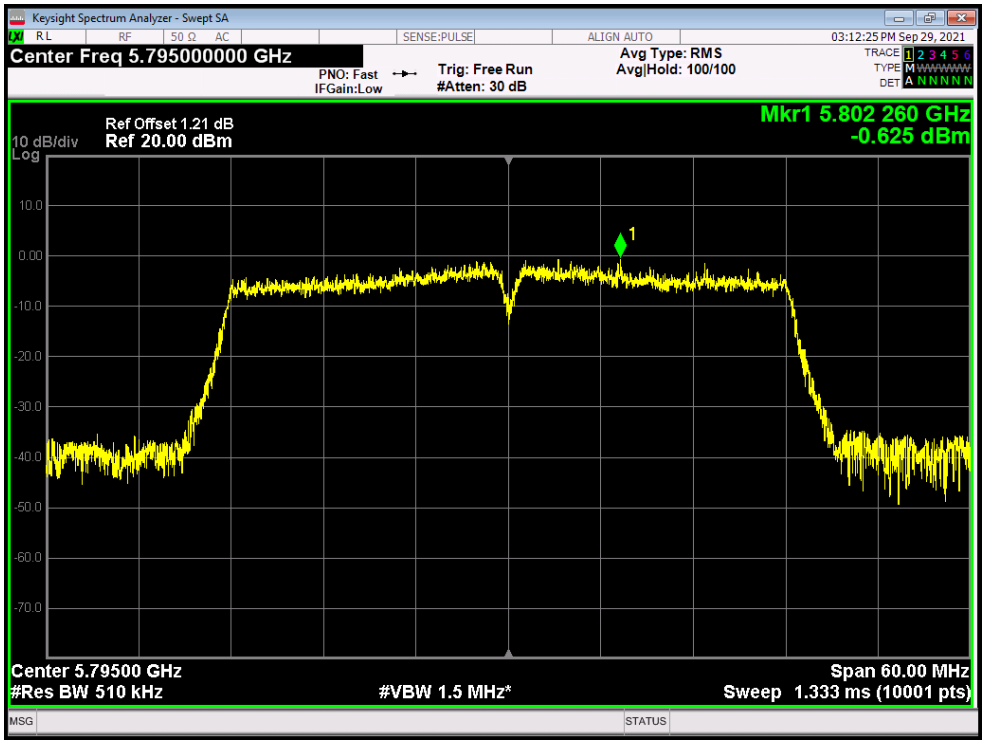
PSD NVNT ac20 5825MHz Ant1



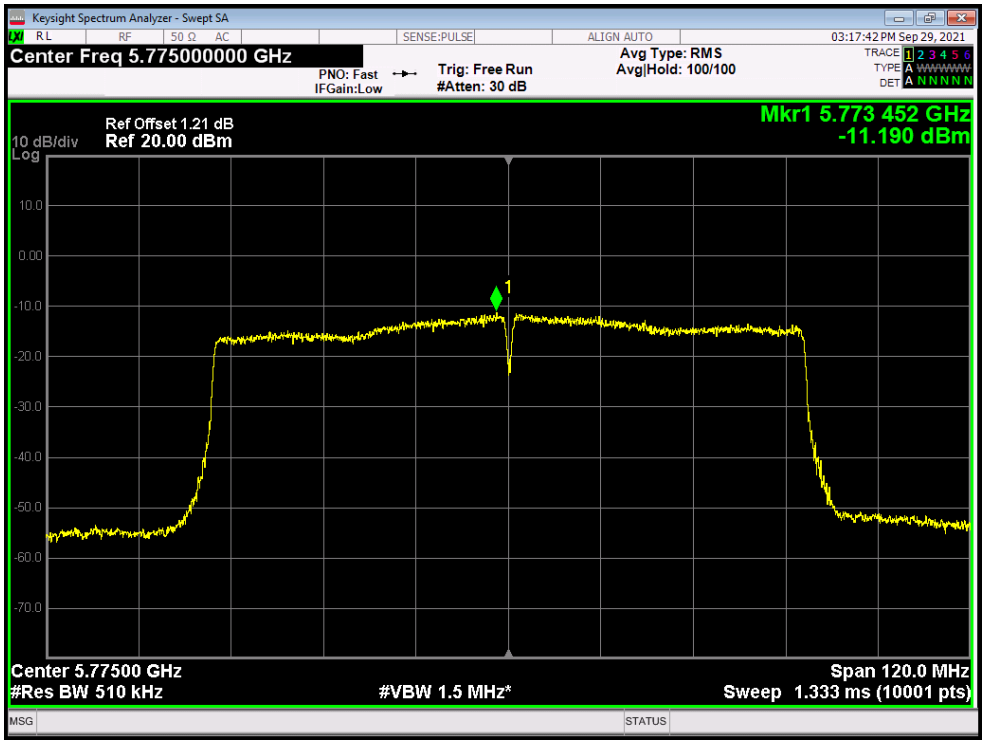
PSD NVNT ac40 5755MHz Ant1



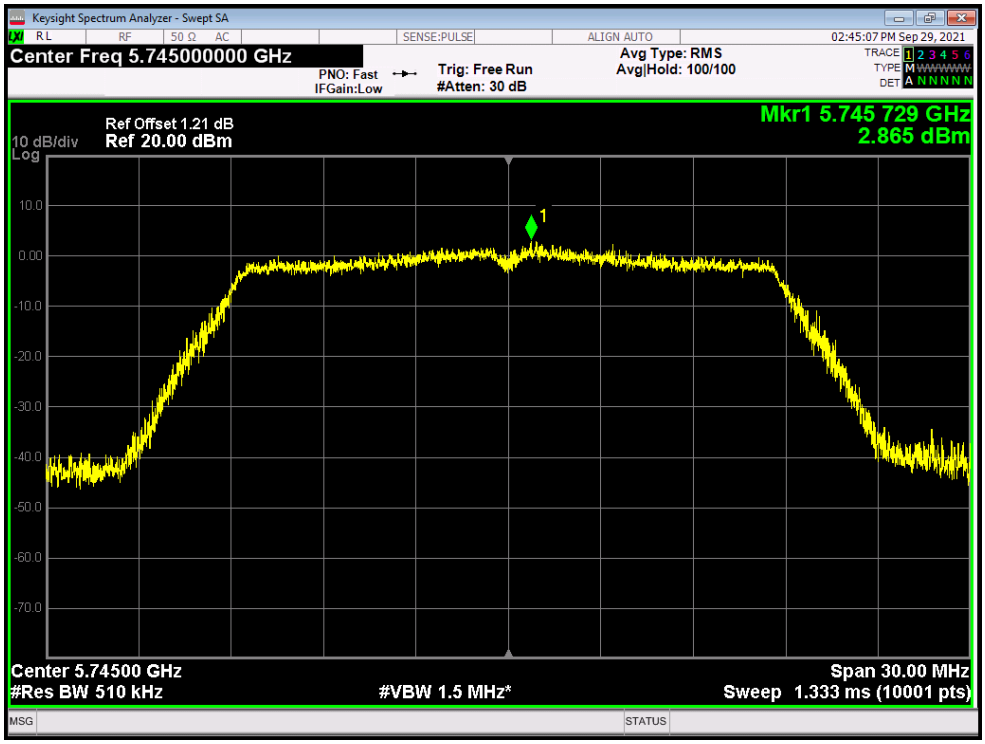
PSD NVNT ac40 5795MHz Ant1



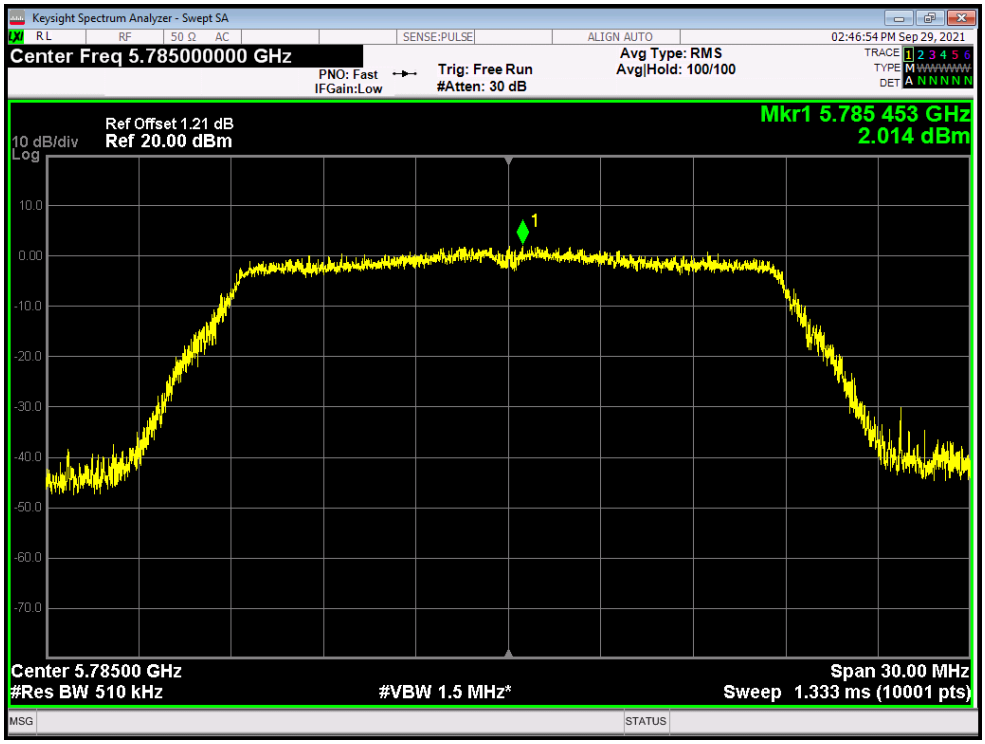
PSD NVNT ac80 5775MHz Ant1



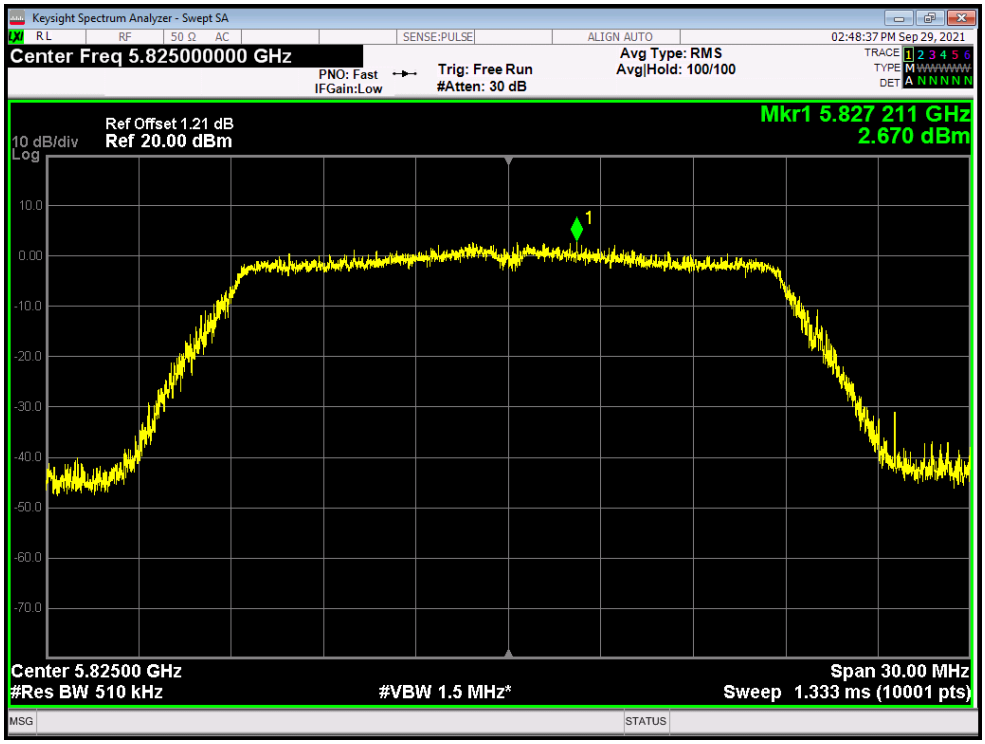
PSD NVNT n20 5745MHz Ant1



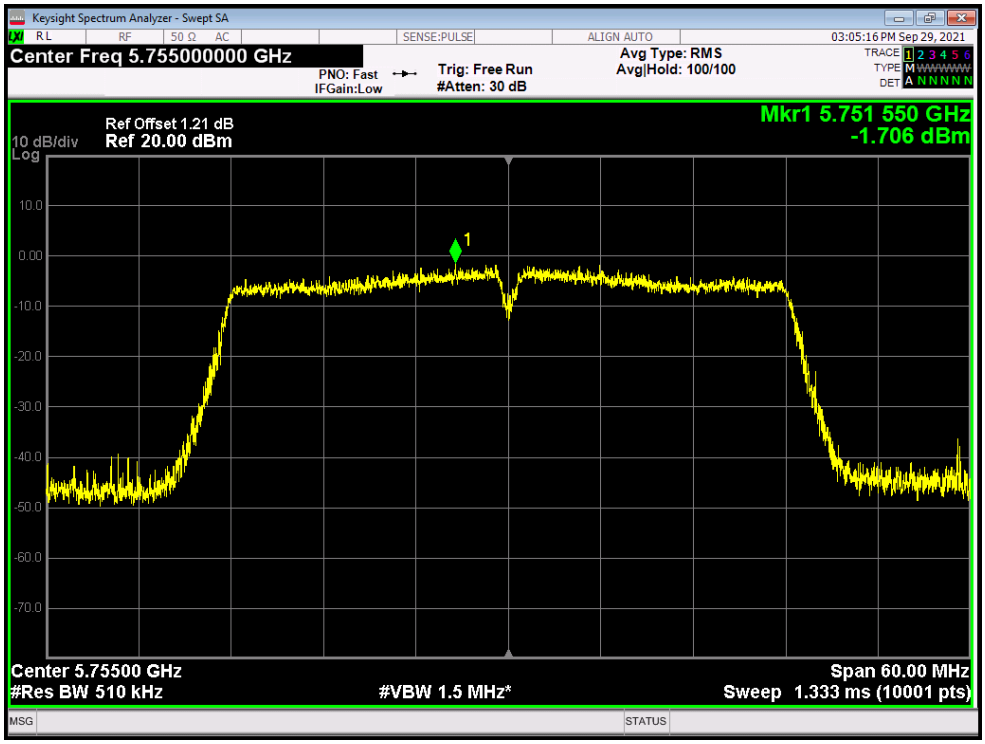
PSD NVNT n20 5785MHz Ant1



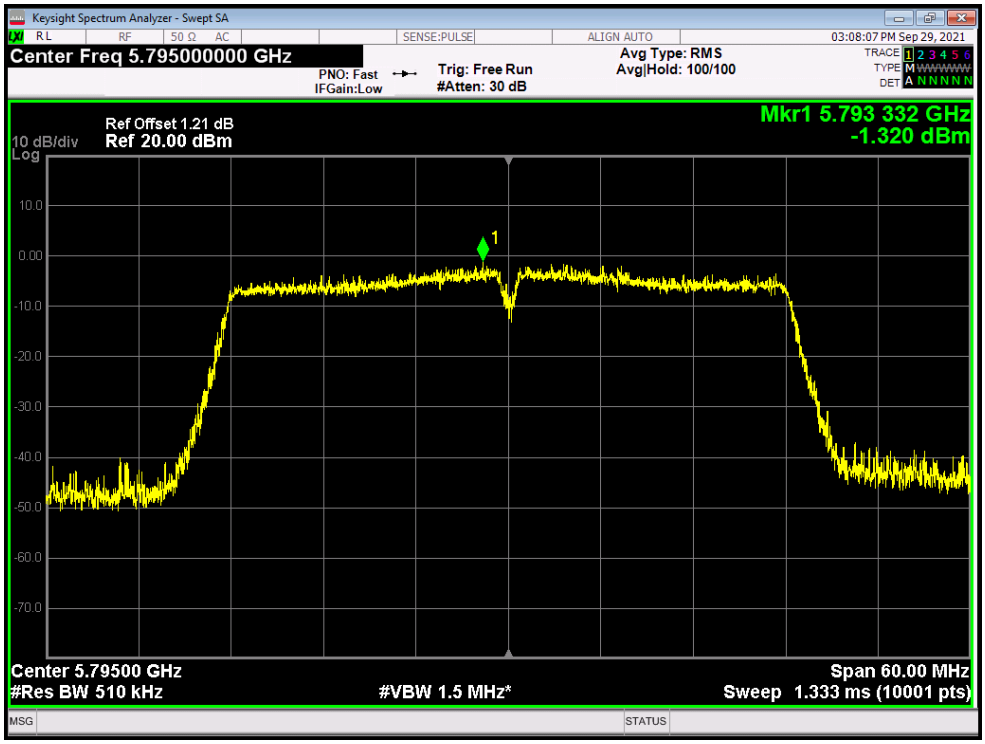
PSD NVNT n20 5825MHz Ant1



PSD NVNT n40 5755MHz Ant1



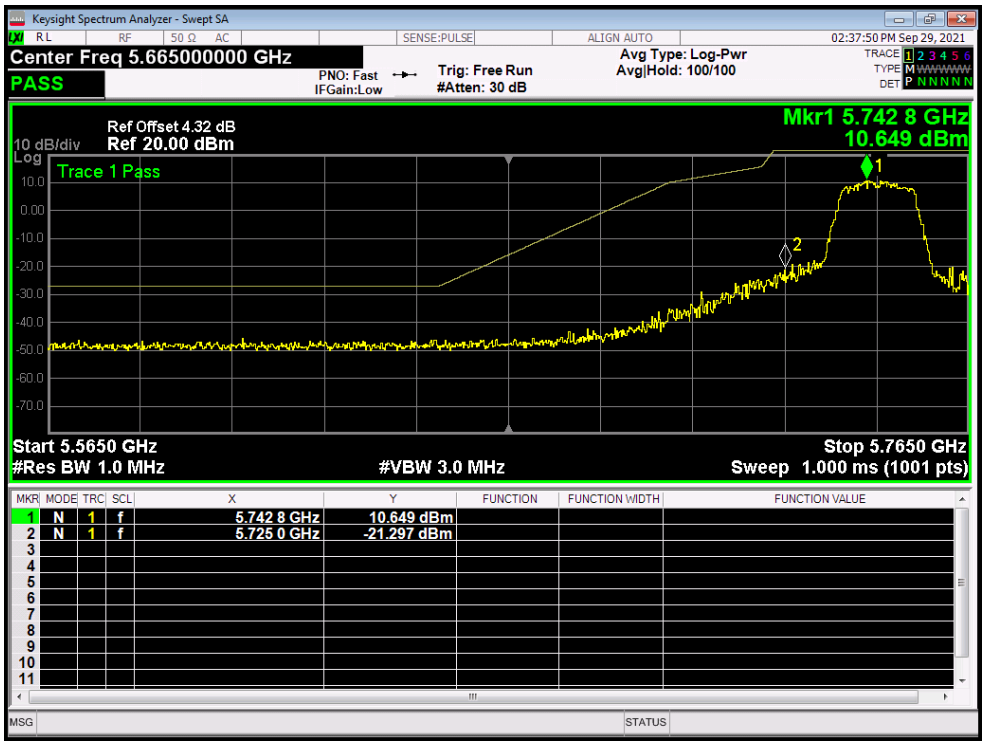
PSD NVNT n40 5795MHz Ant1


Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:08:07 PM Sep 29, 2021
Center Freq 5.795000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: RMS
Avg|Hold: 100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET A N N N N N
Ref Offset 1.21 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 5.793 332 GHz
-1.320 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Center 5.79500 GHz
#Res BW 510 kHz
#VBW 1.5 MHz*
Span 60.00 MHz
Sweep 1.333 ms (10001 pts)
MSG
STATUS

Band Edge

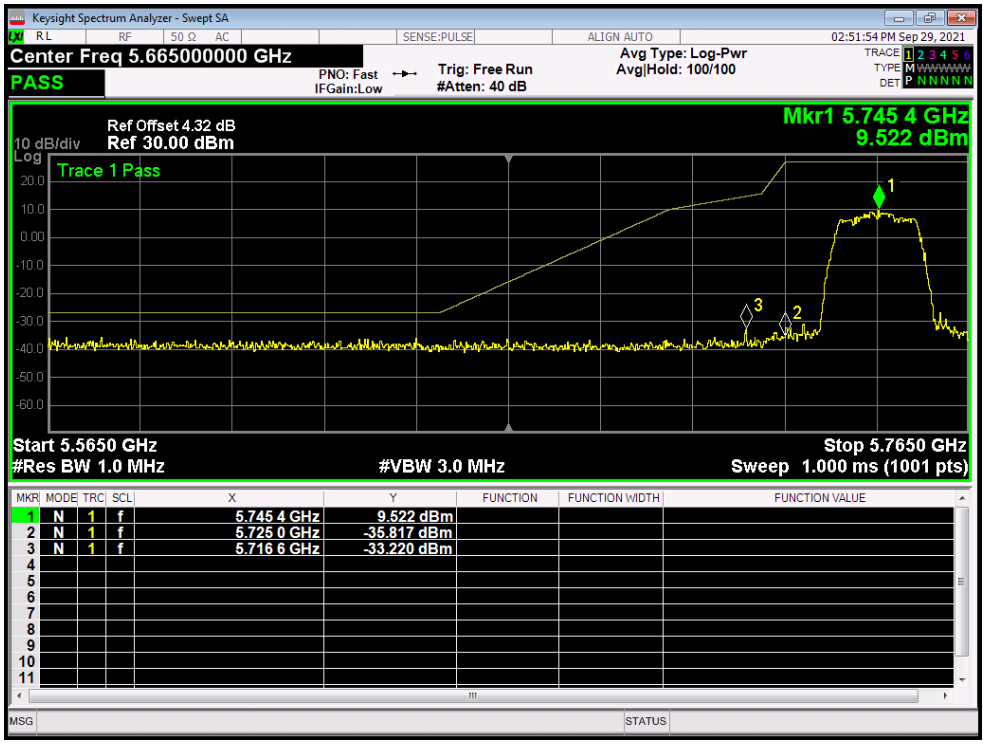
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Verdict
NVNT	a	5745	Ant1	-21.29	Pass
NVNT	a	5825	Ant1	-29.09	Pass
NVNT	ac20	5745	Ant1	-33.21	Pass
NVNT	ac20	5825	Ant1	-33.84	Pass
NVNT	ac40	5755	Ant1	-27.01	Pass
NVNT	ac40	5795	Ant1	-32.6	Pass
NVNT	ac80	5775	Ant1	-39.77	Pass
NVNT	n20	5745	Ant1	-35.97	Pass
NVNT	n20	5825	Ant1	-35.36	Pass
NVNT	n40	5755	Ant1	-32.7	Pass
NVNT	n40	5795	Ant1	-41.25	Pass

Band Edge NVNT a 5745MHz Low Ant1

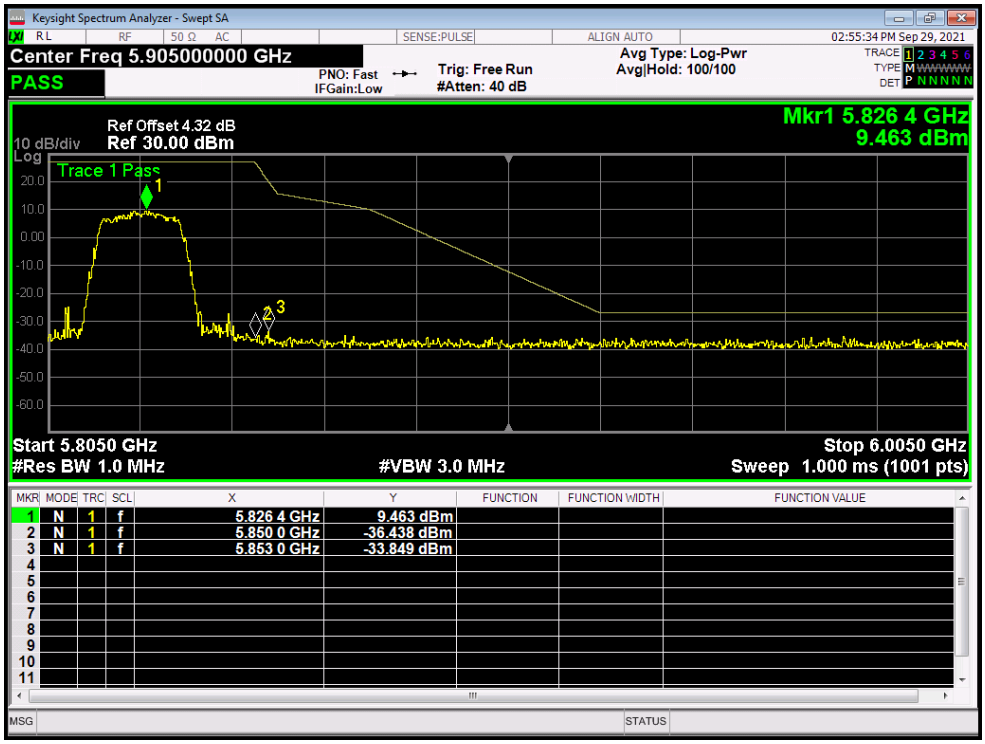


Band Edge NVNT a 5825MHz High Ant1

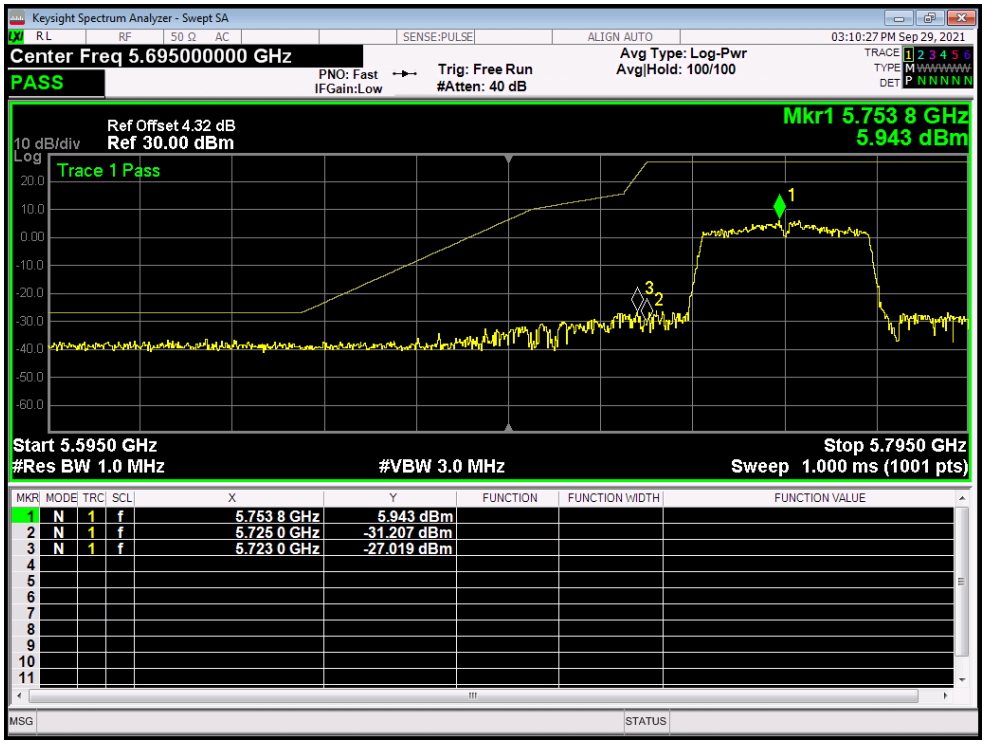
Band Edge NVNT ac20 5745MHz Low Ant1



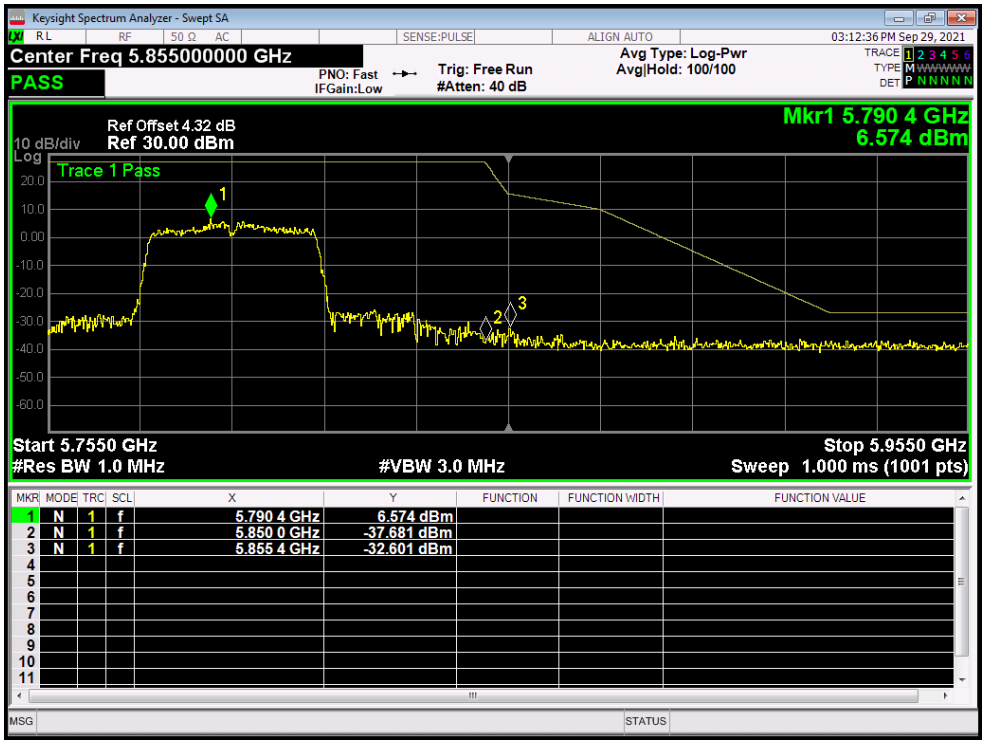
Band Edge NVNT ac20 5825MHz High Ant1



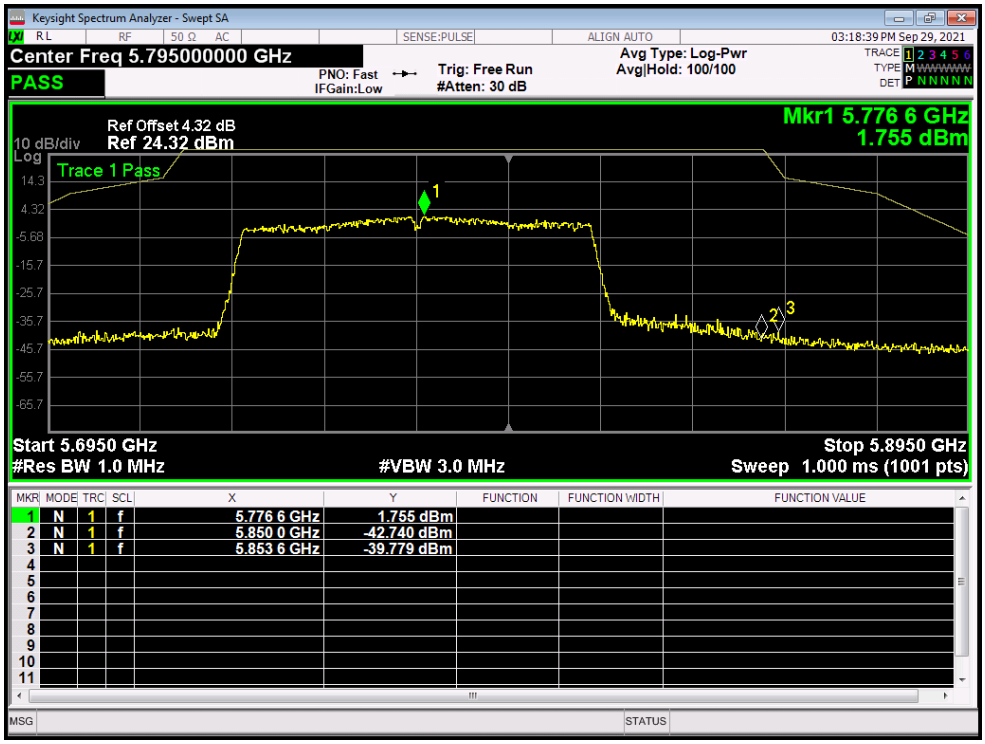
Band Edge NVNT ac40 5755MHz Low Ant1



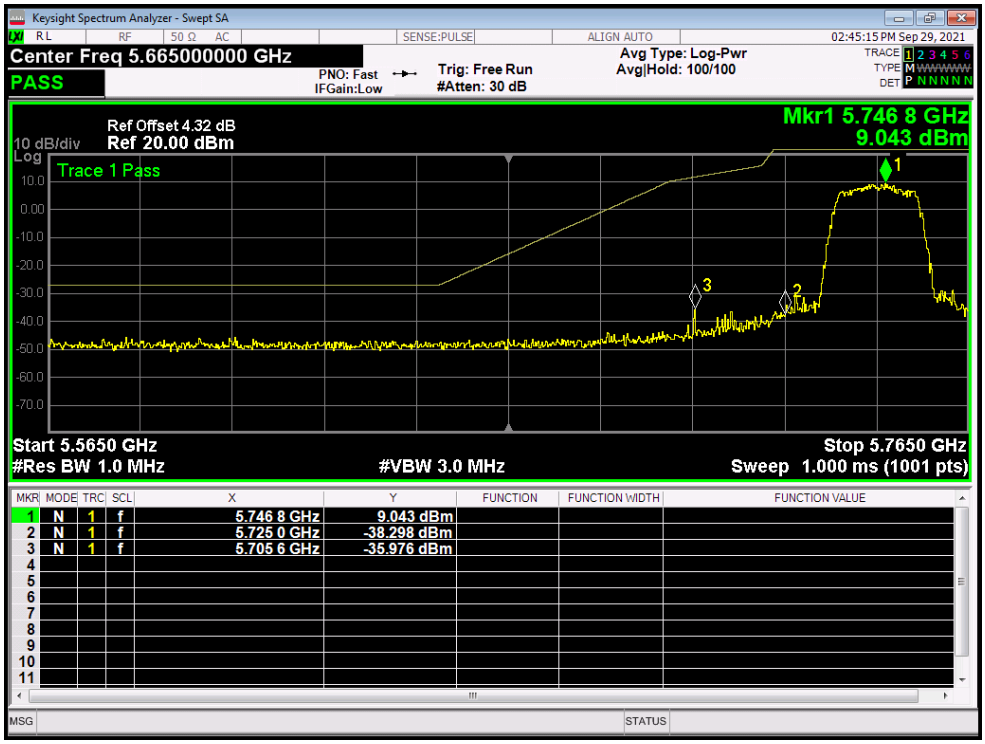
Band Edge NVNT ac40 5795MHz High Ant1



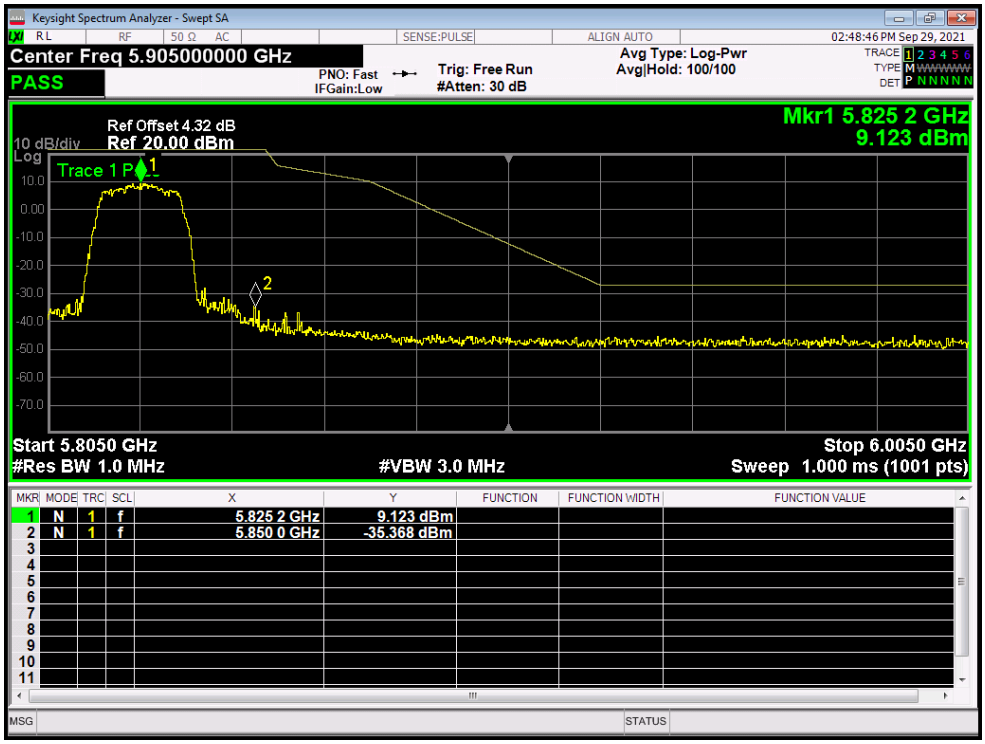
Band Edge NVNT ac80 5775MHz High Ant1



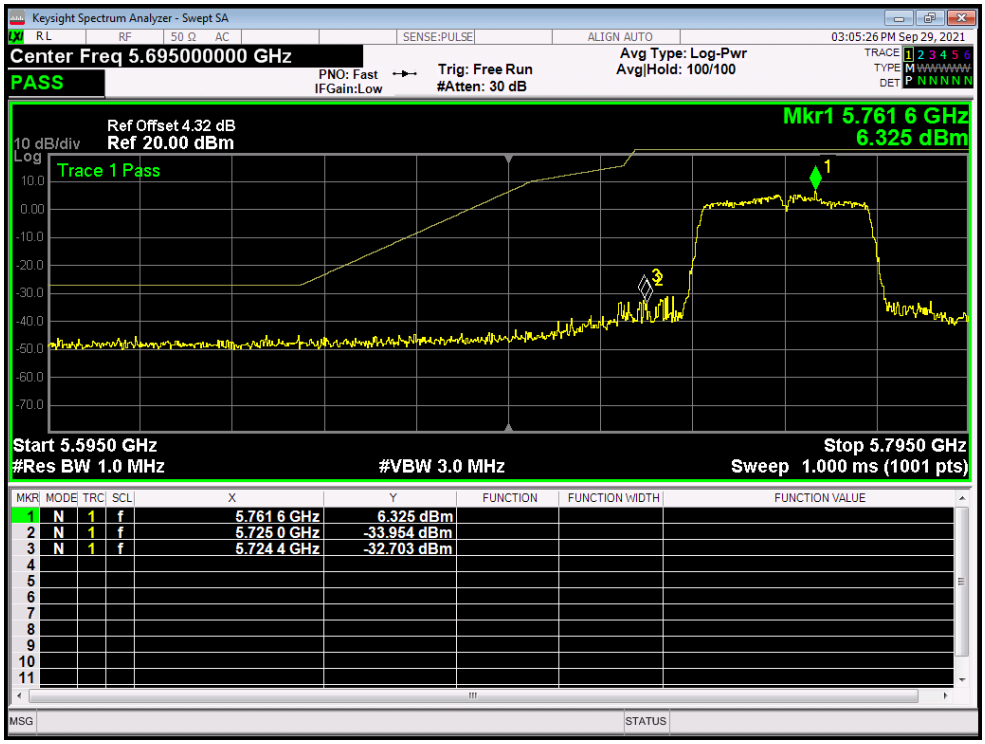
Band Edge NVNT n20 5745MHz Low Ant1



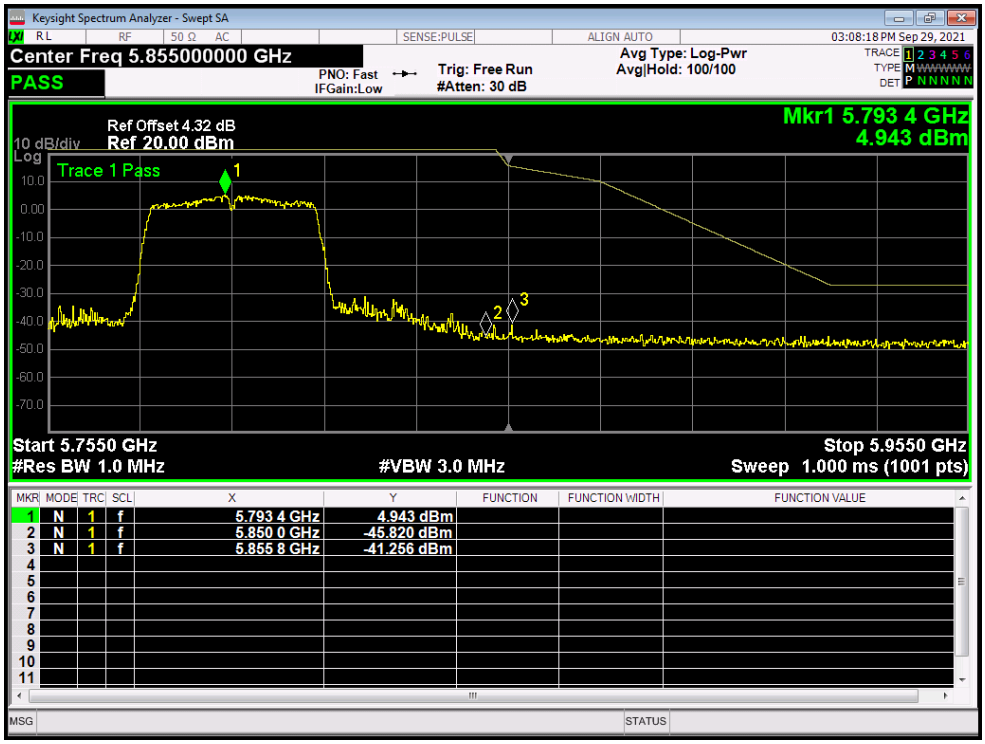
Band Edge NVNT n20 5825MHz High Ant1



Band Edge NVNT n40 5755MHz Low Ant1



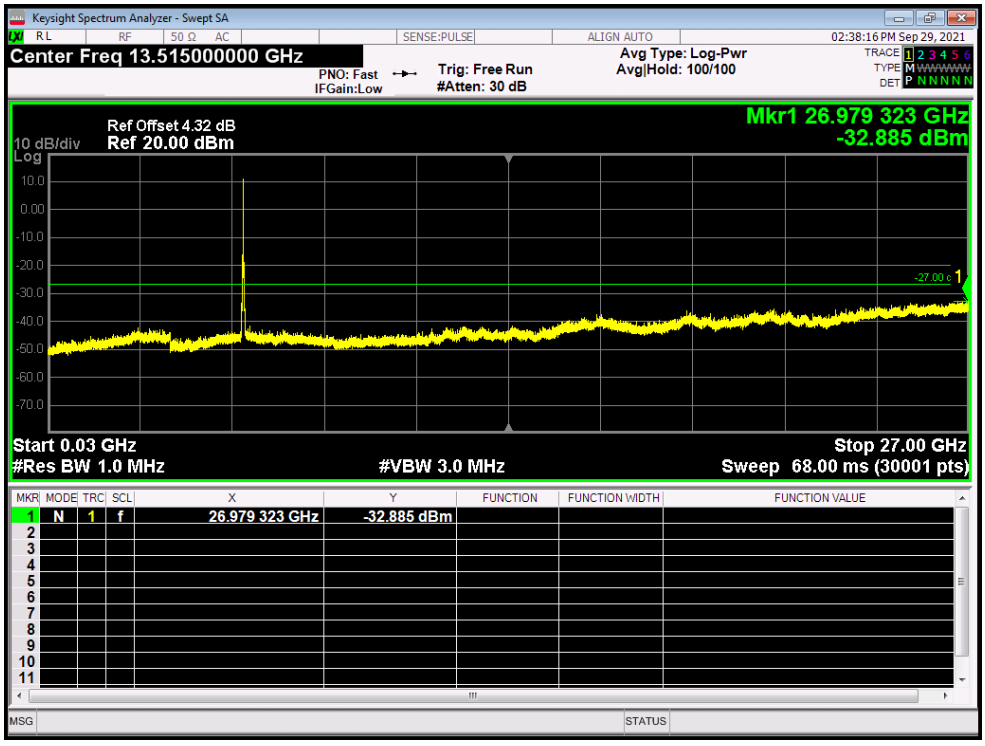
Band Edge NVNT n40 5795MHz High Ant1



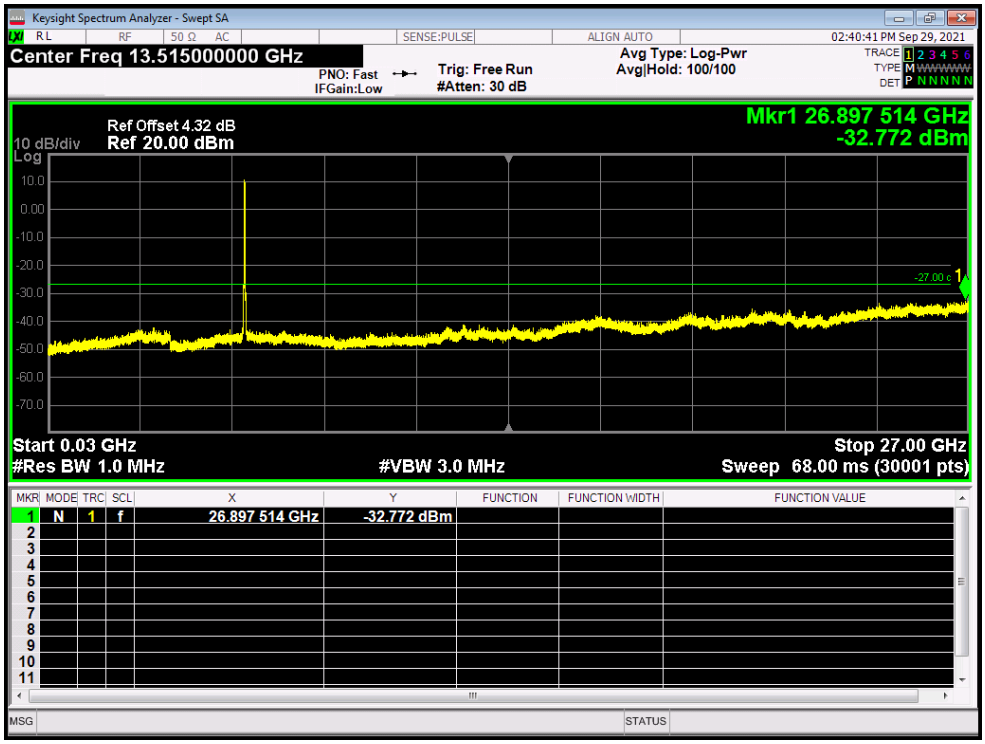
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5745	Ant1	-32.88	-27	Pass
NVNT	a	5785	Ant1	-32.77	-27	Pass
NVNT	a	5805	Ant1	-31.56	-27	Pass
NVNT	ac20	5745	Ant1	-32.39	-27	Pass
NVNT	ac20	5785	Ant1	-32.88	-27	Pass
NVNT	ac20	5825	Ant1	-32.83	-27	Pass
NVNT	ac40	5755	Ant1	-31.87	-27	Pass
NVNT	ac40	5795	Ant1	-32.71	-27	Pass
NVNT	ac80	5775	Ant1	-32.93	-27	Pass
NVNT	n20	5745	Ant1	-33	-27	Pass
NVNT	n20	5785	Ant1	-32.58	-27	Pass
NVNT	n20	5825	Ant1	-32.87	-27	Pass
NVNT	n40	5755	Ant1	-33.02	-27	Pass
NVNT	n40	5795	Ant1	-32.41	-27	Pass

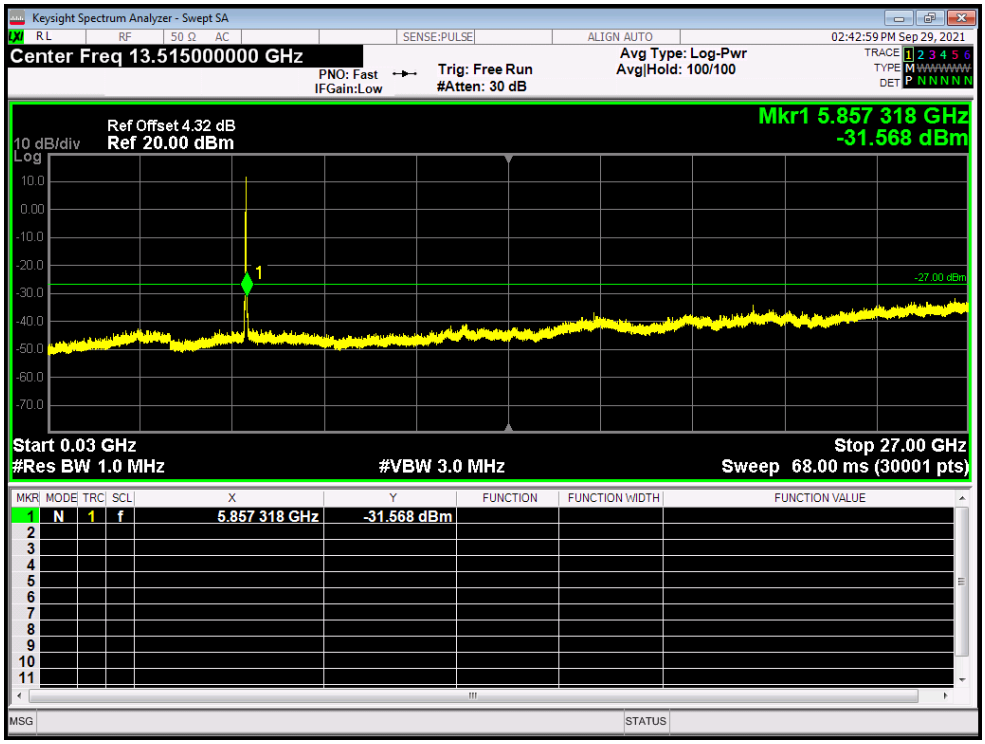
Tx. Spurious NVNT a 5745MHz Ant1 Emission



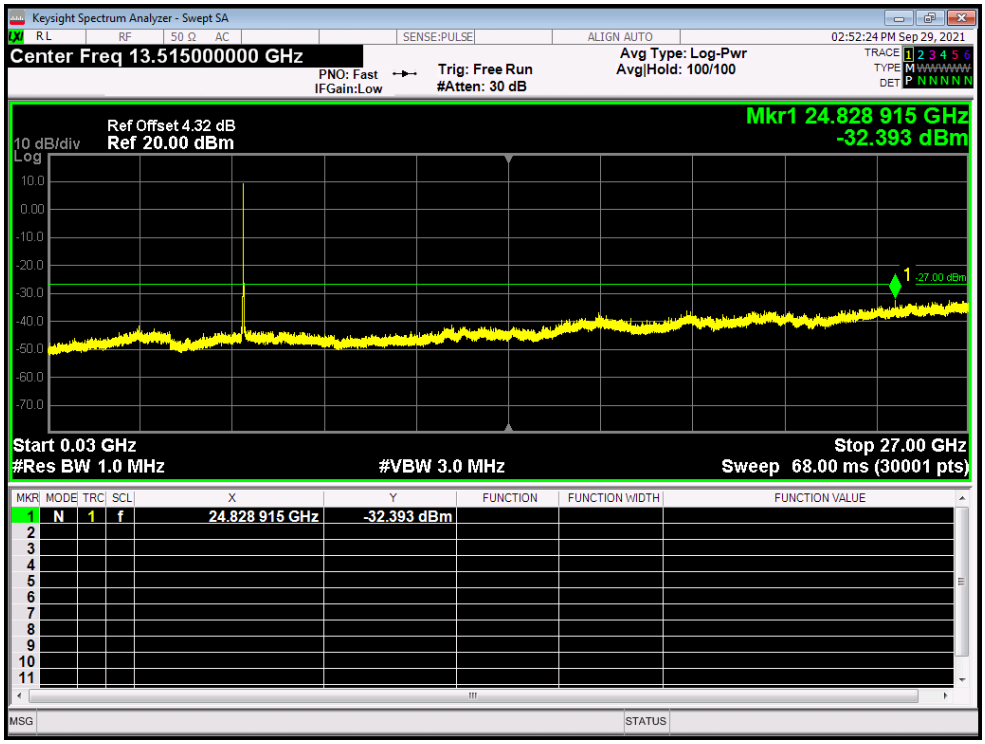
Tx. Spurious NVNT a 5785MHz Ant1 Emission



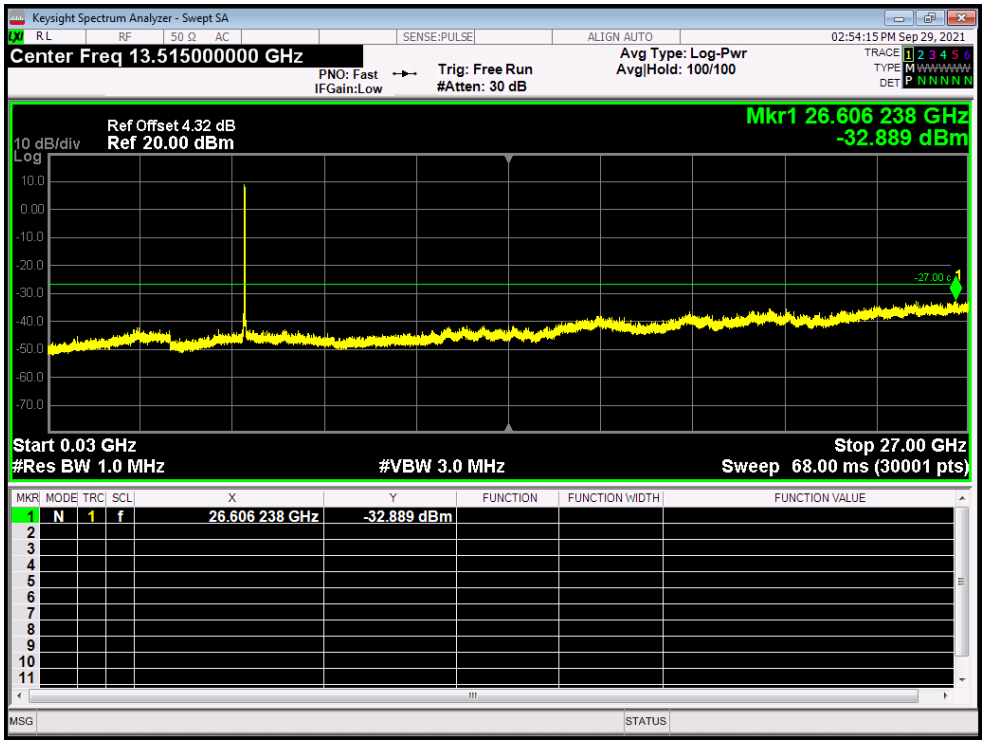
Tx. Spurious NVNT a 5805MHz Ant1 Emission



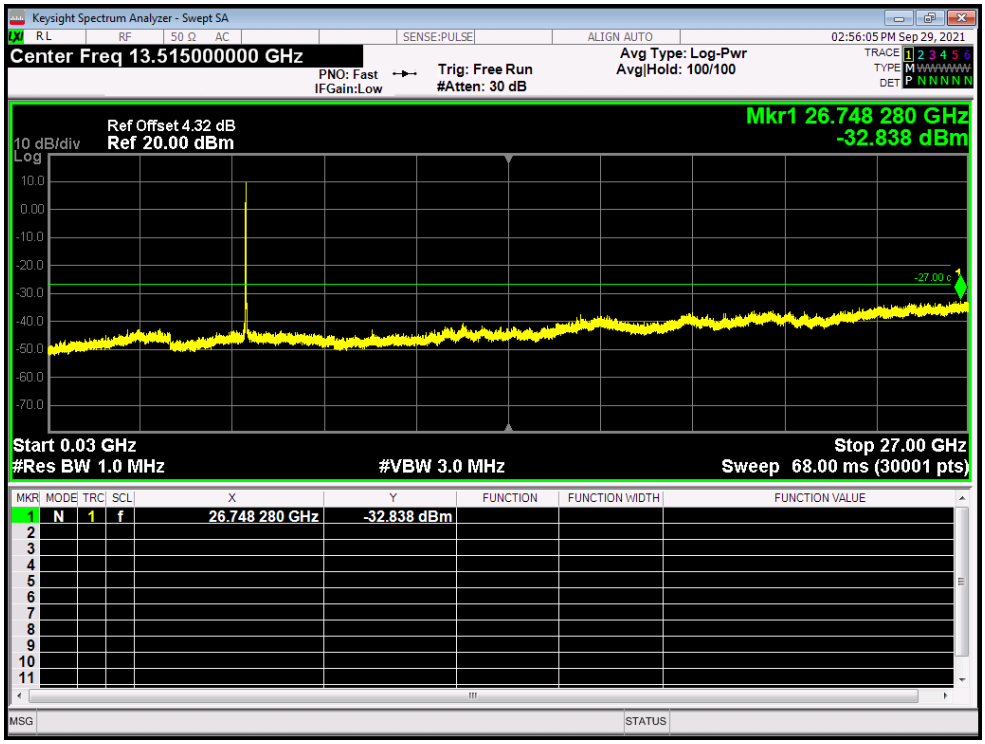
Tx. Spurious NVNT ac20 5745MHz Ant1 Emission



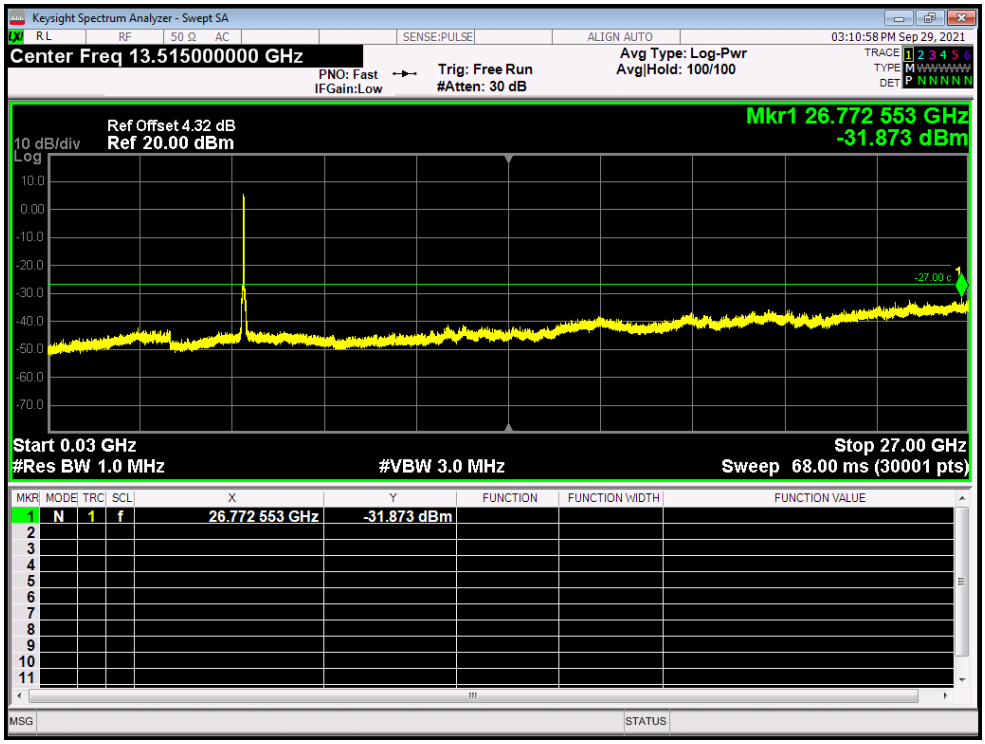
Tx. Spurious NVNT ac20 5785MHz Ant1 Emission



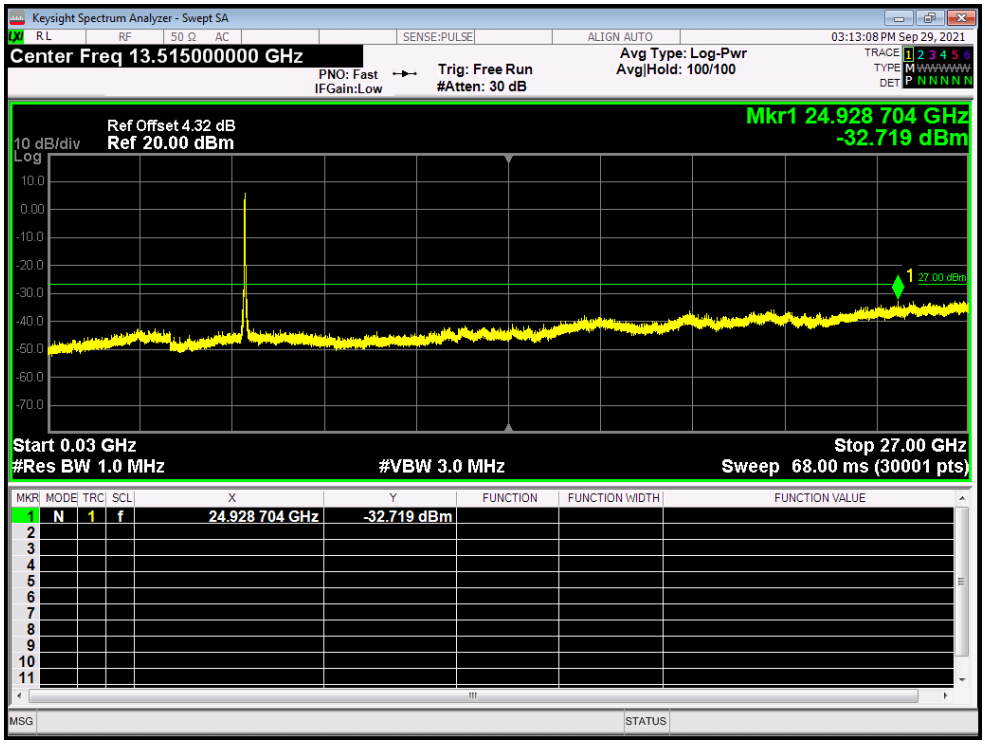
Tx. Spurious NVNT ac20 5825MHz Ant1 Emission



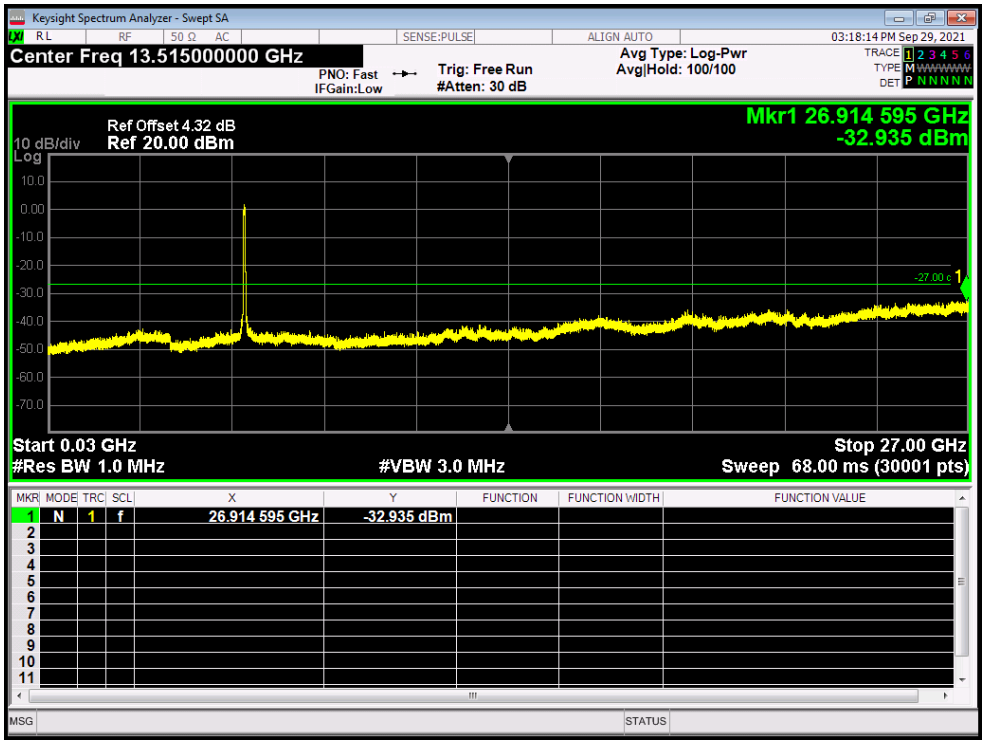
Tx. Spurious NVNT ac40 5755MHz Ant1 Emission



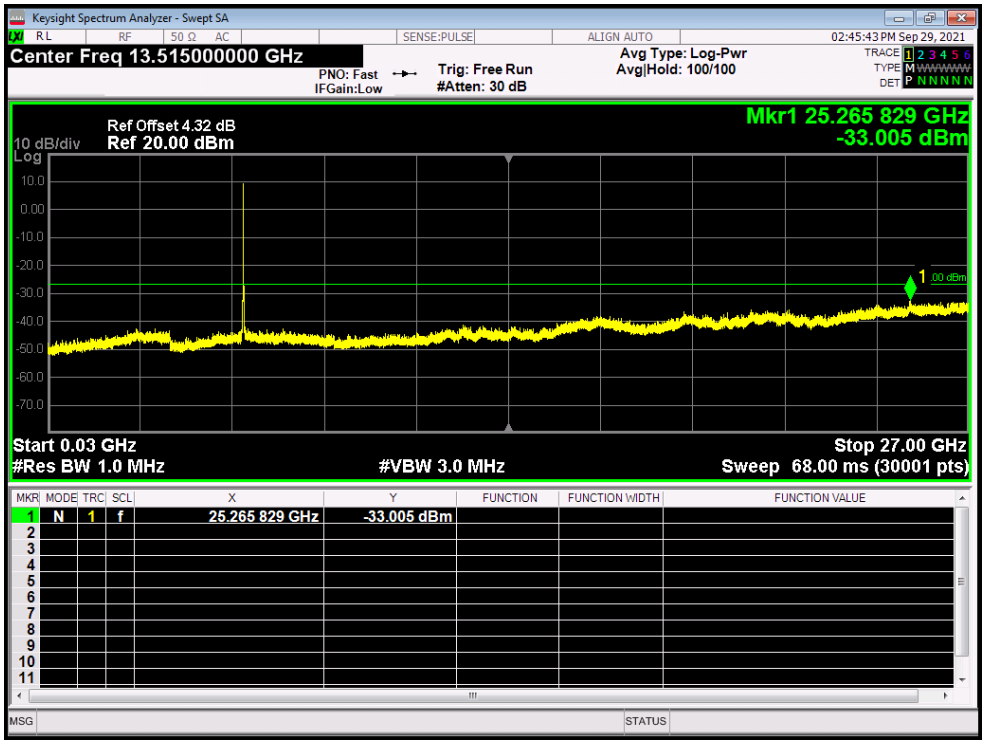
Tx. Spurious NVNT ac40 5795MHz Ant1 Emission



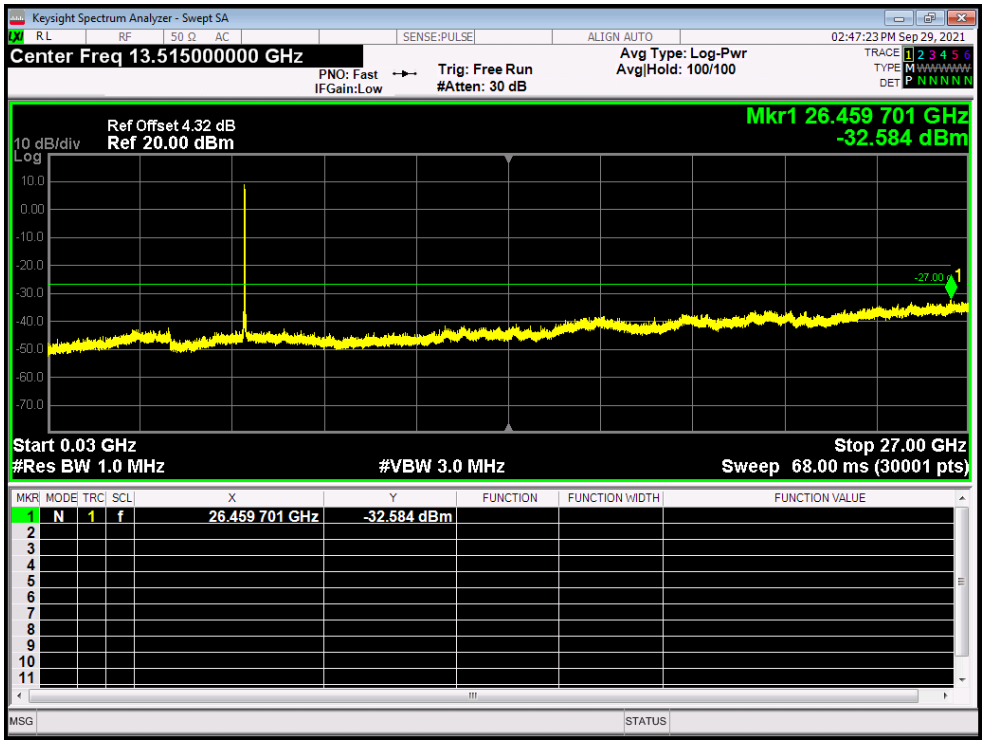
Tx. Spurious NVNT ac80 5775MHz Ant1 Emission



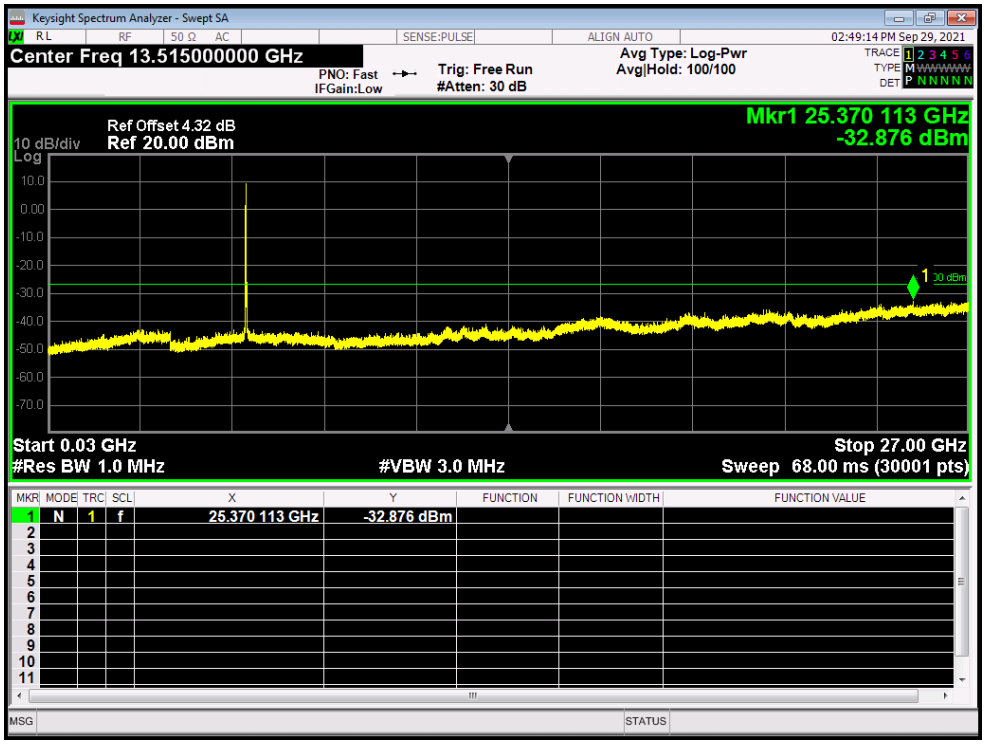
Tx. Spurious NVNT n20 5745MHz Ant1 Emission



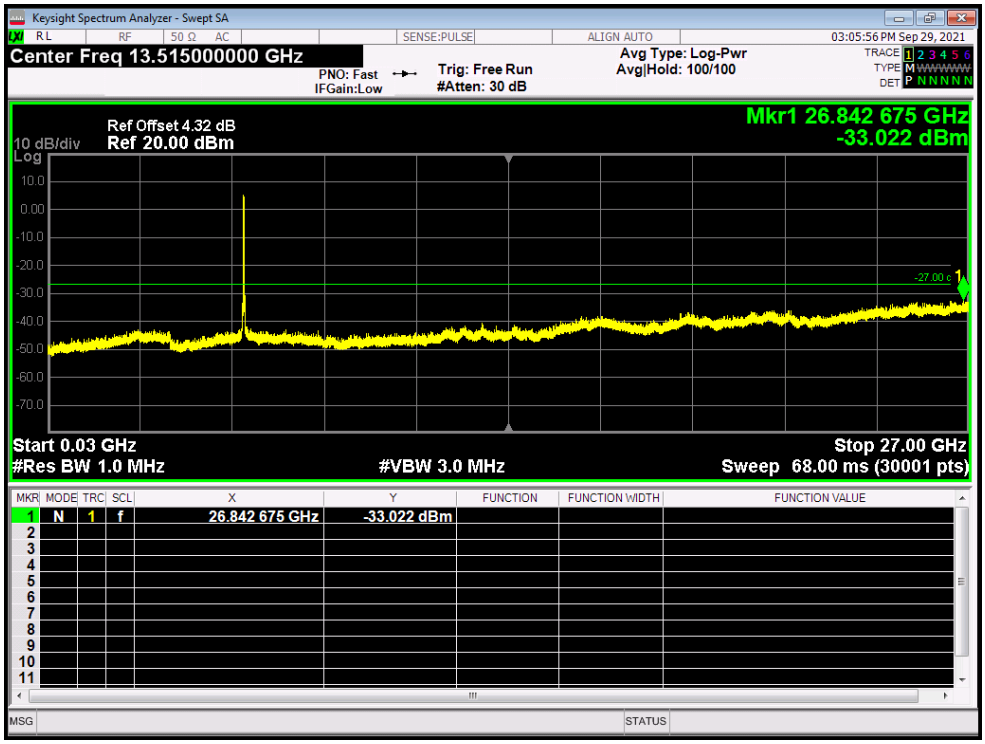
Tx. Spurious NVNT n20 5785MHz Ant1 Emission



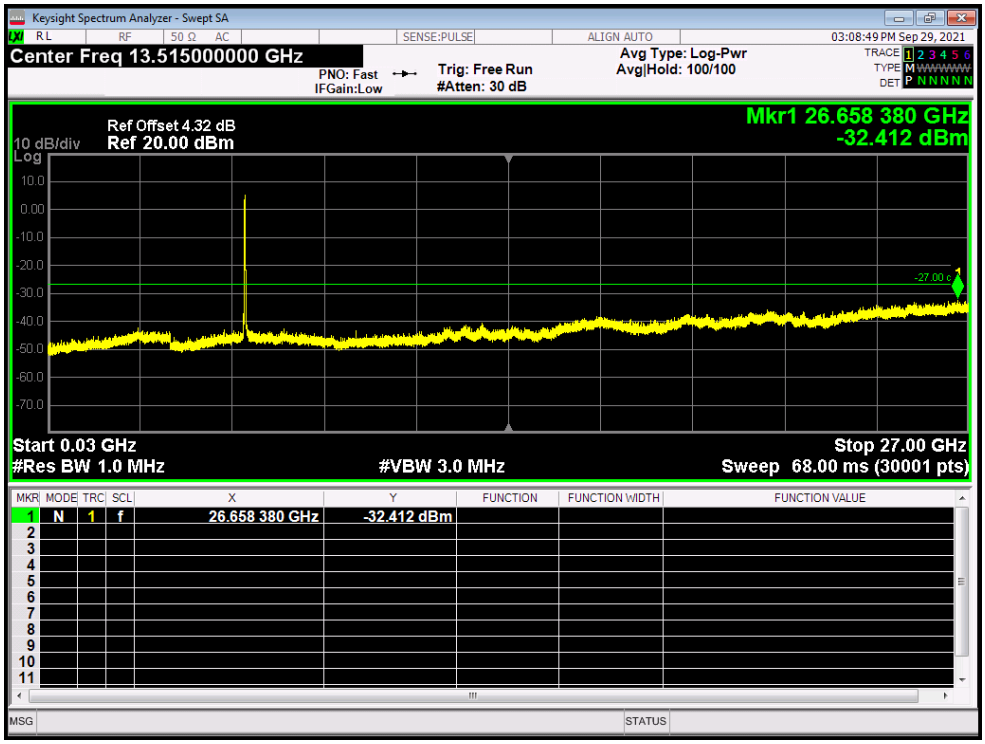
Tx. Spurious NVNT n20 5825MHz Ant1 Emission



Tx. Spurious NVNT n40 5755MHz Ant1 Emission



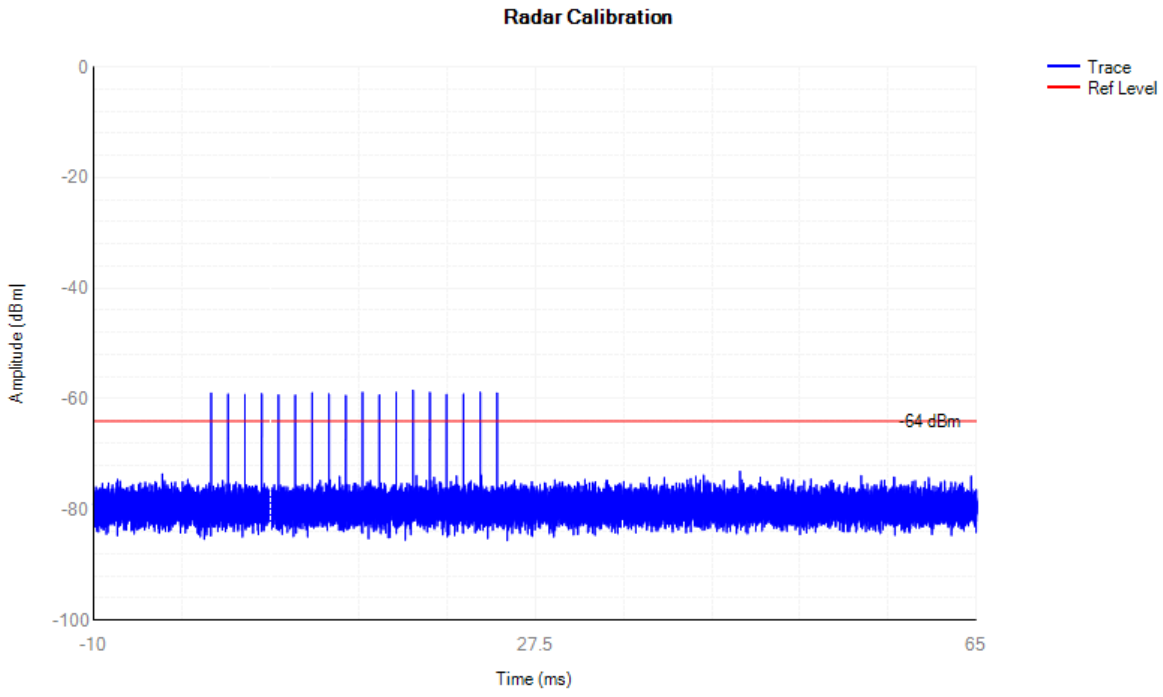
Tx. Spurious NVNT n40 5795MHz Ant1 Emission


Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:PULSE
ALIGN AUTO
03:08:49 PM Sep 29, 2021
Center Freq 13.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Ref Offset 4.32 dB
10 dB/div
Log
Ref 20.00 dBm
Mkr1 26.658 380 GHz
-32.412 dBm
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-27.00 dBm
Start 0.03 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 27.00 GHz
Sweep 68.00 ms (30001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 26.658 380 GHz -32.412 dBm
2
3
4
5
6
7
8
9
10
11
MSG
STATUS

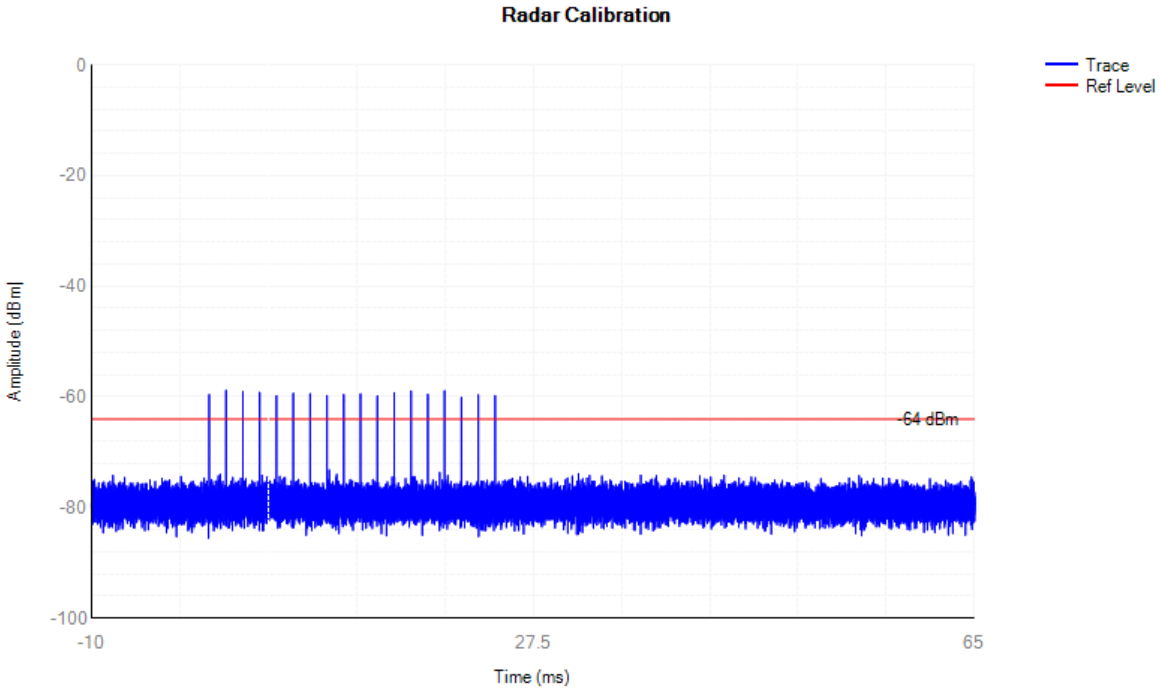
DFS

Calibration

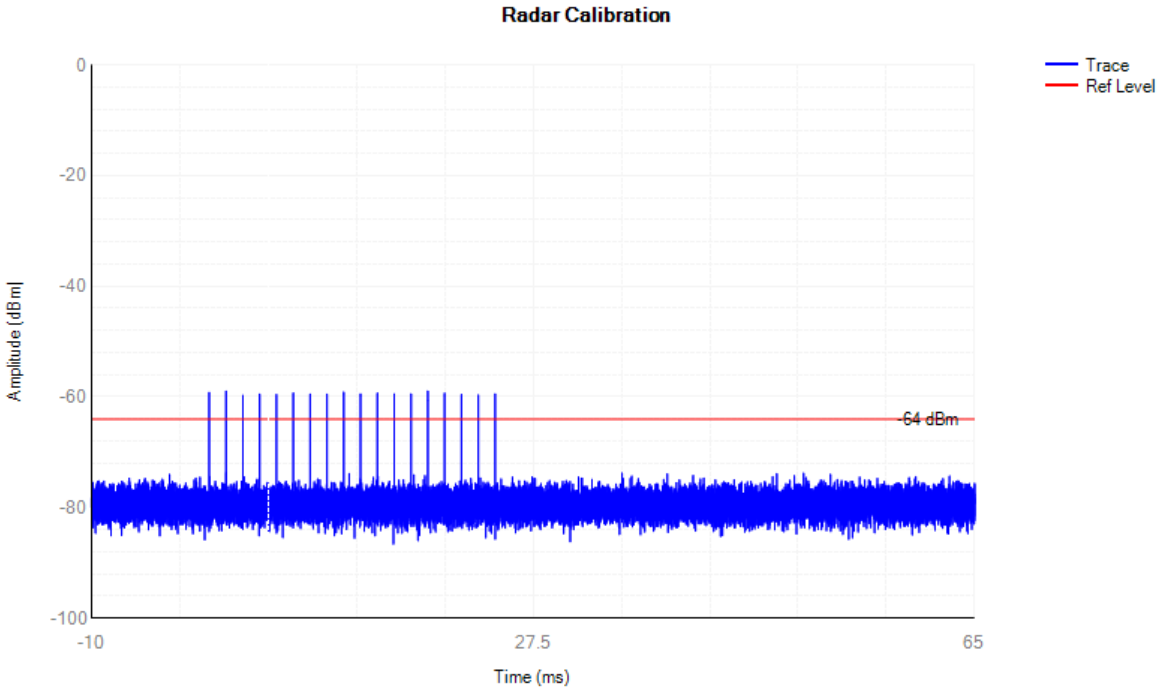
5290MHz ac80 DFS_FCC_T0



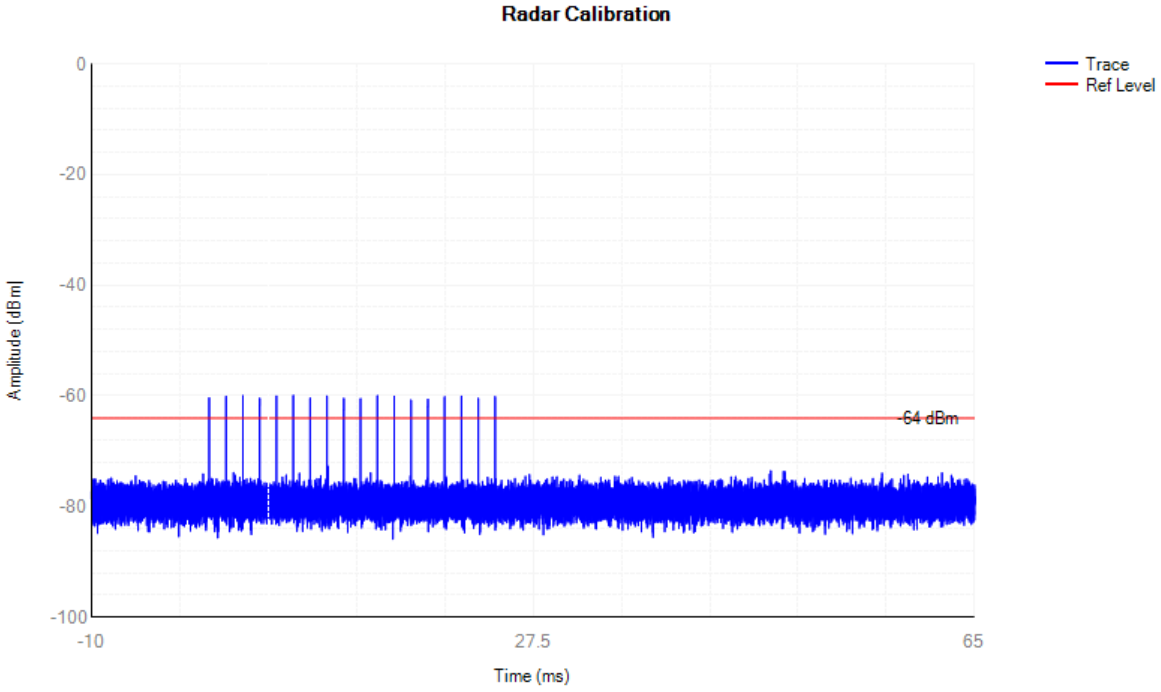
5530MHz ac80 DFS_FCC_T0



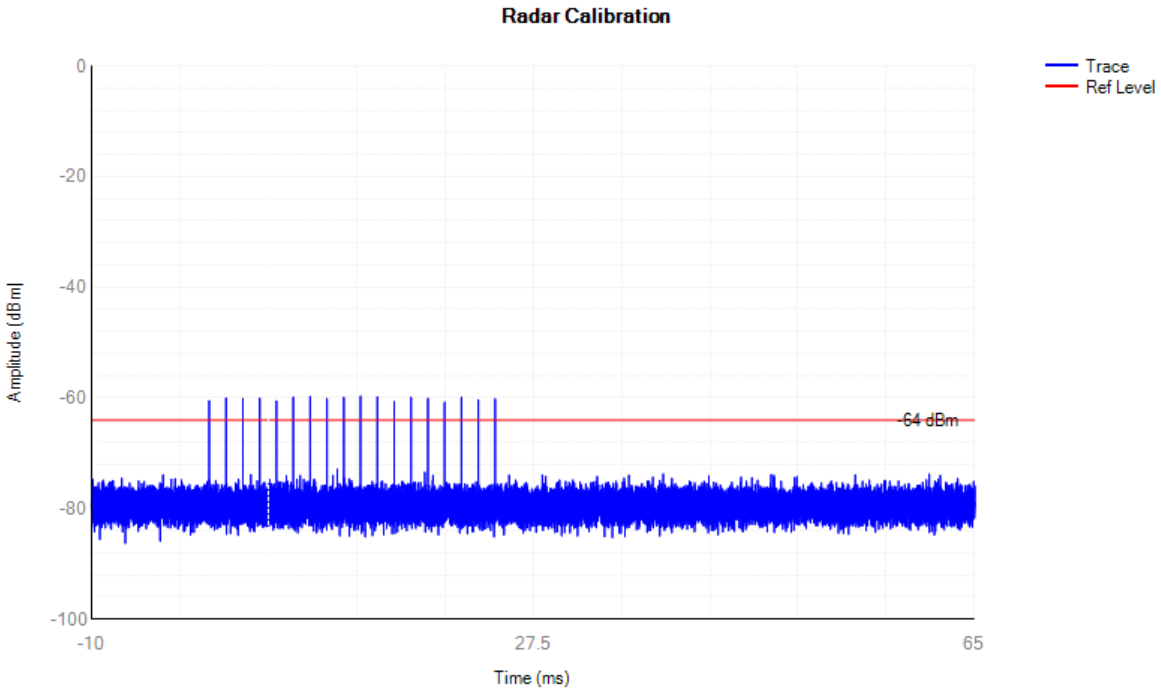
5310MHz n40 DFS_FCC_T0



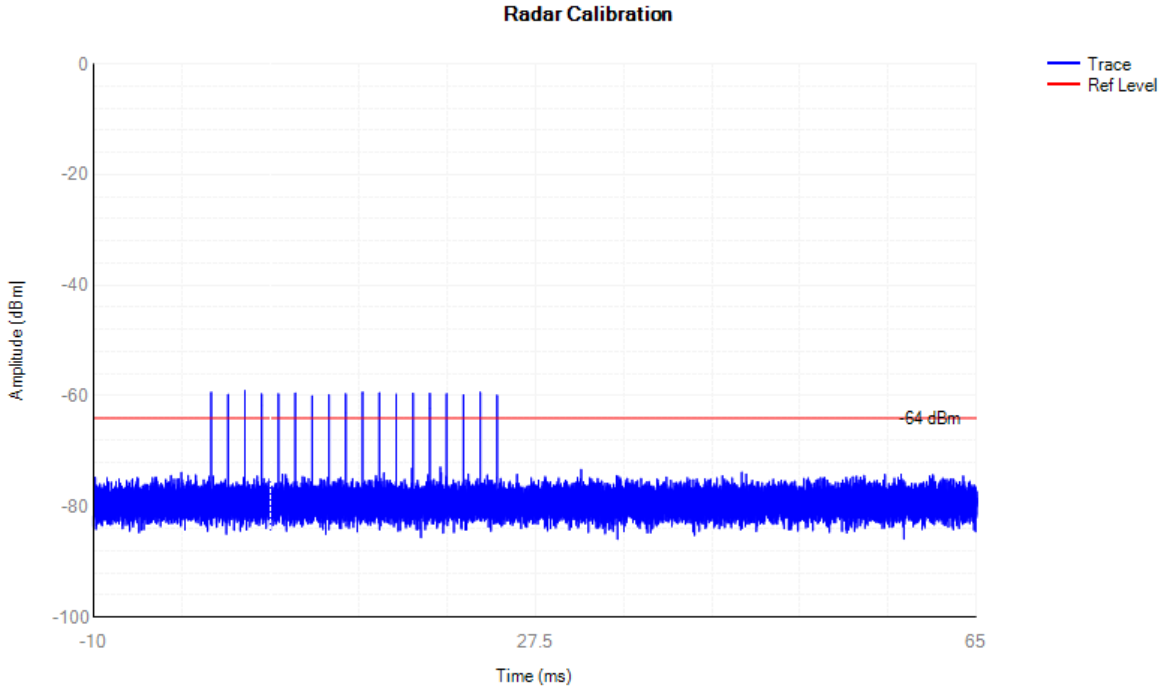
5510MHz n40 DFS_FCC_T0



5320MHz a DFS_FCC_T0

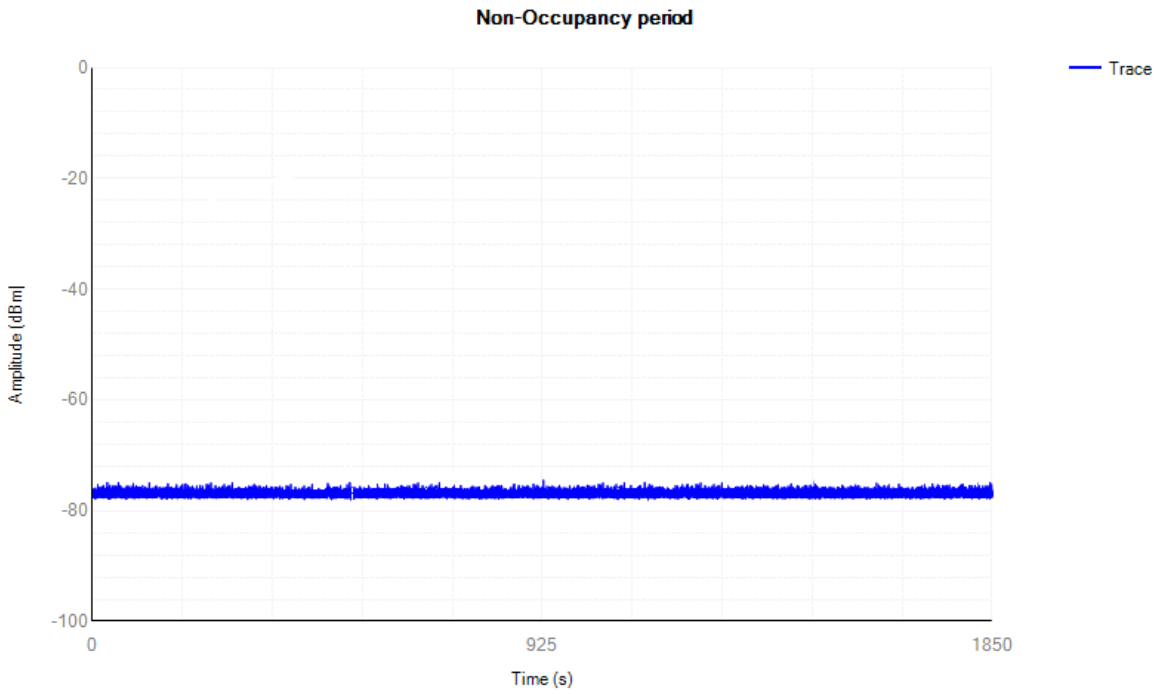


5500MHz a DFS_FCC_T0

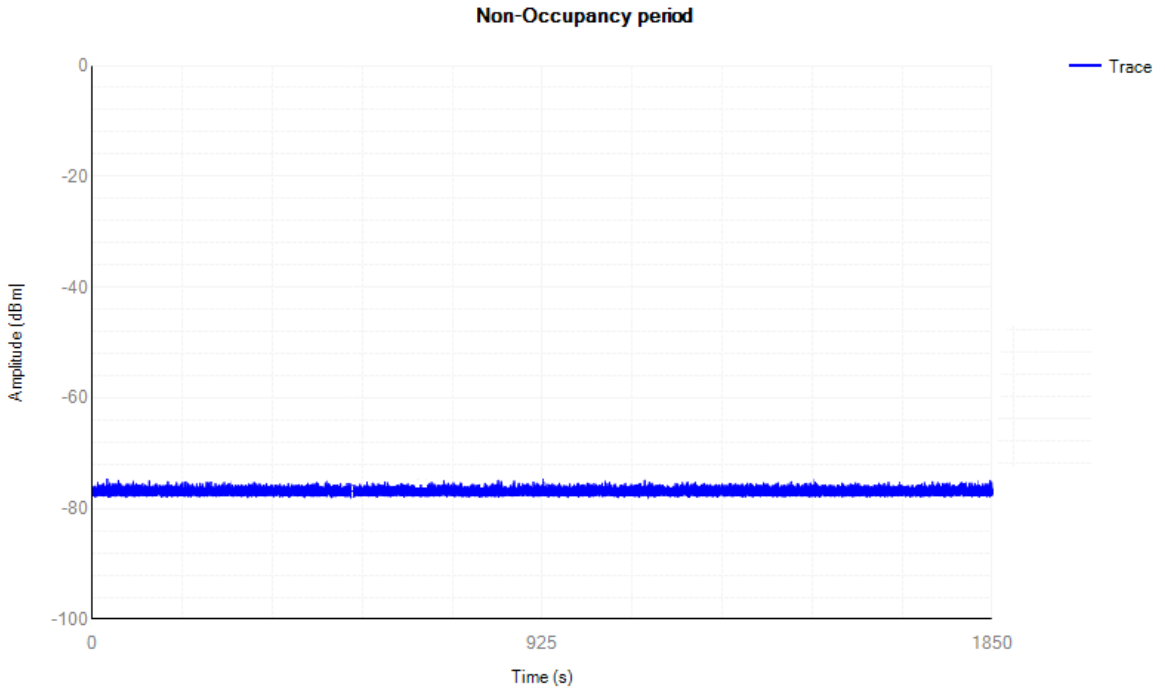

Radar Calibration
Trace
Ref Level
0
-20
-40
-60
-80
-100
Amplitude [dBm]
-64 dBm
-10
27.5
65
Time (ms)

Non-Occupancy

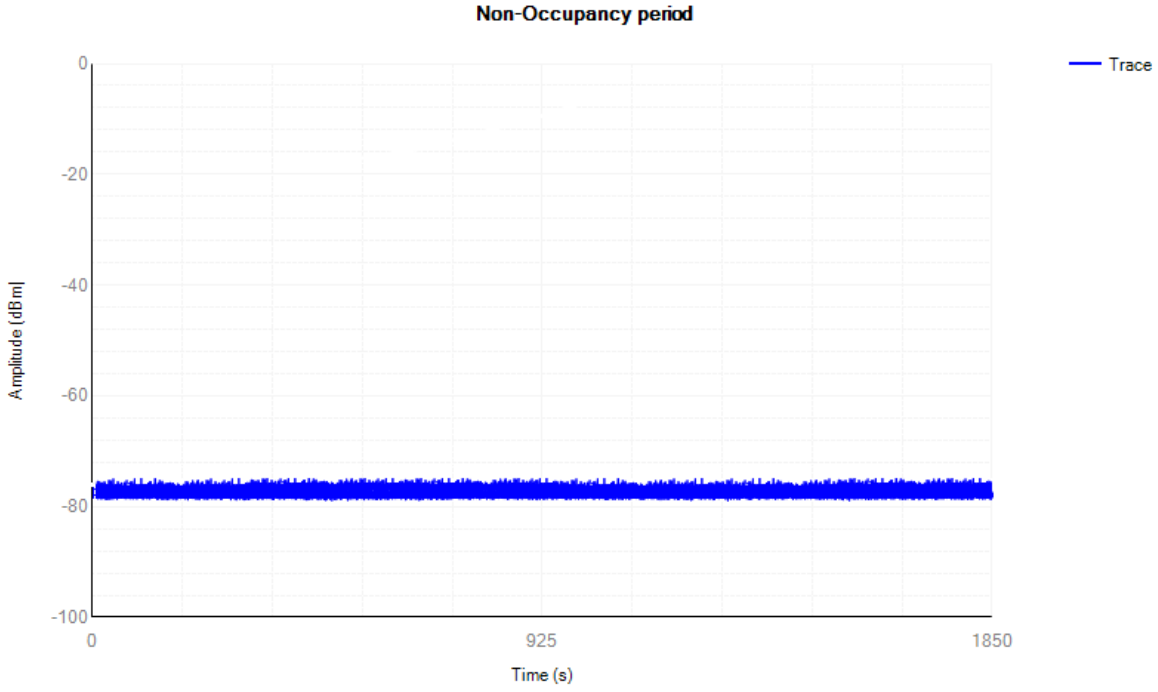
5290MHz ac80 Non-Occupancy



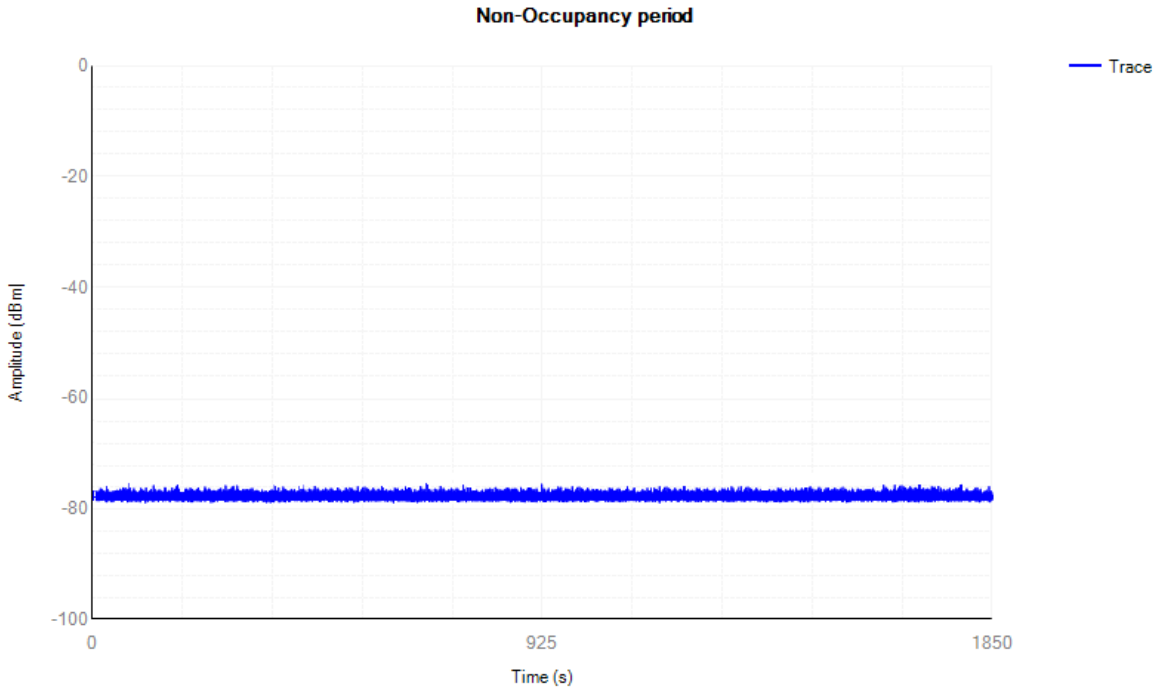
5530MHz ac80 Non-Occupancy



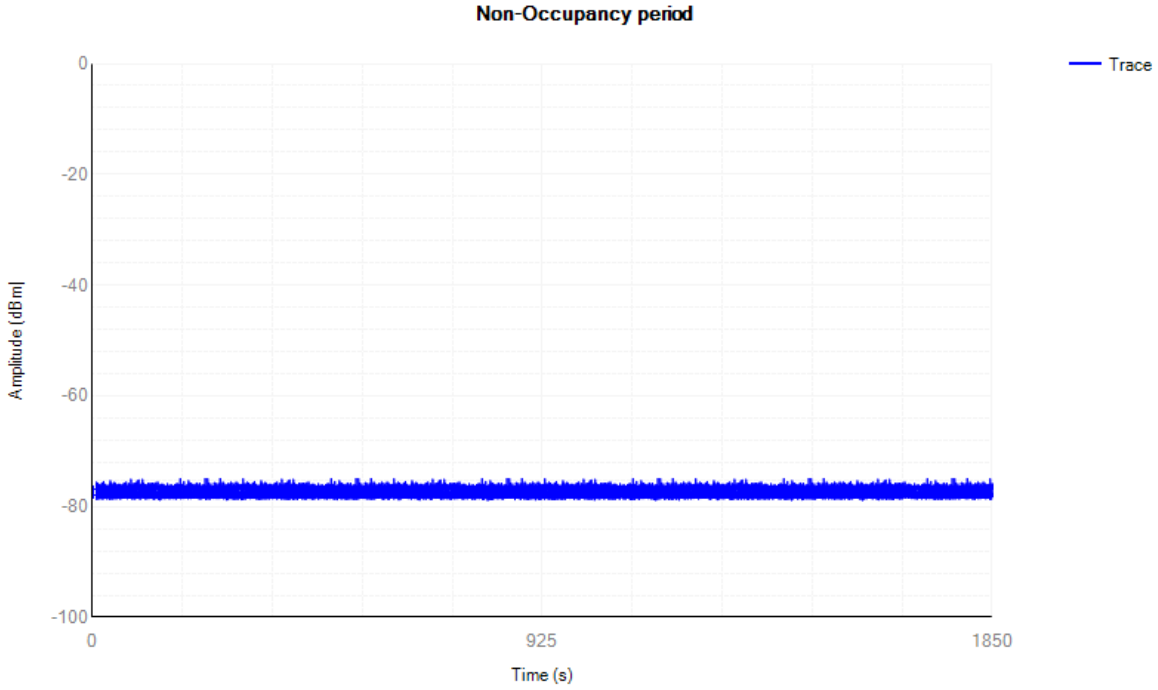
5310MHz n40 Non-Occupancy



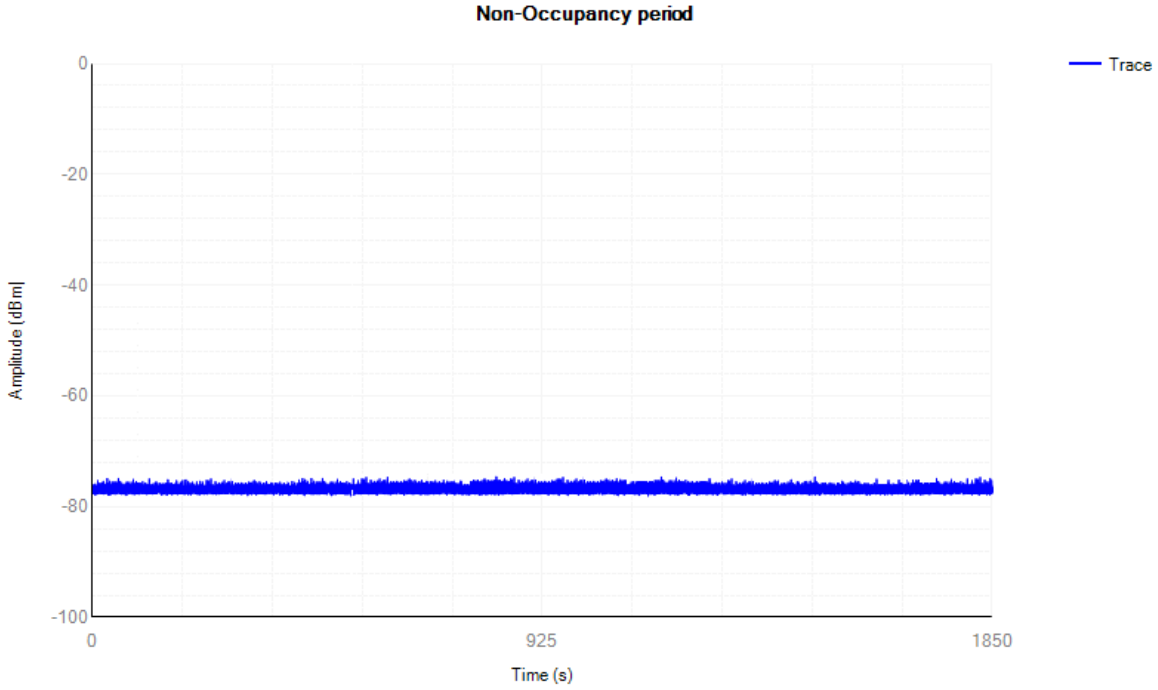
5510MHz n40 Non-Occupancy



5320MHz a Non-Occupancy



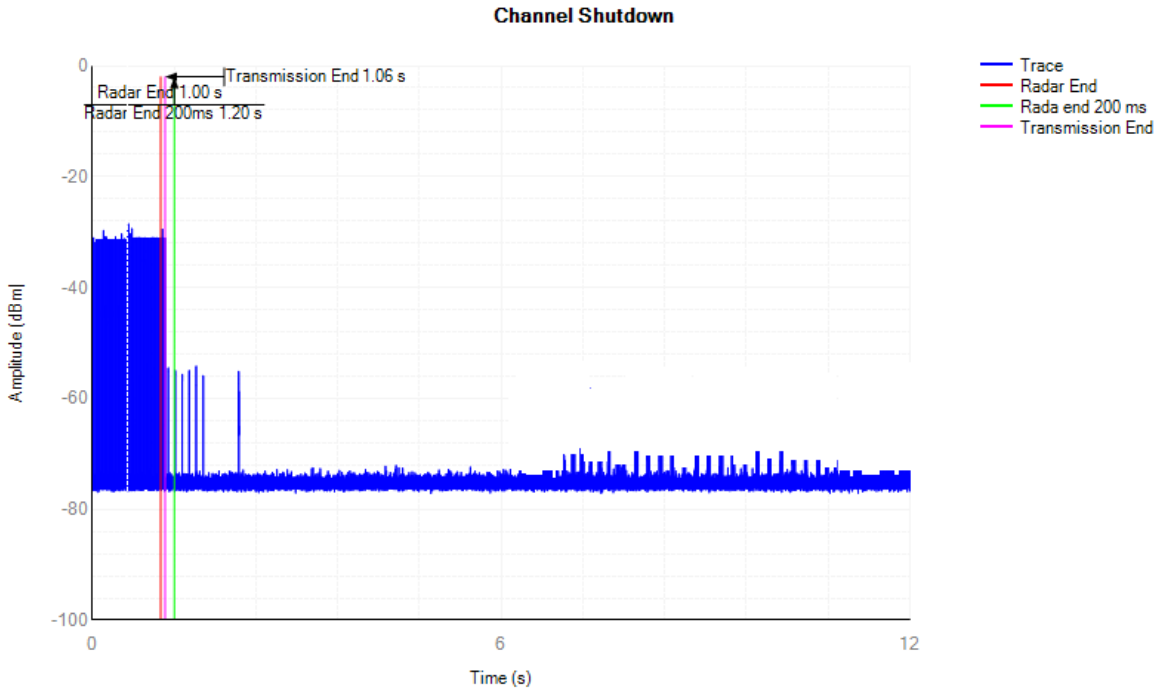
5500MHz a Non-Occupancy



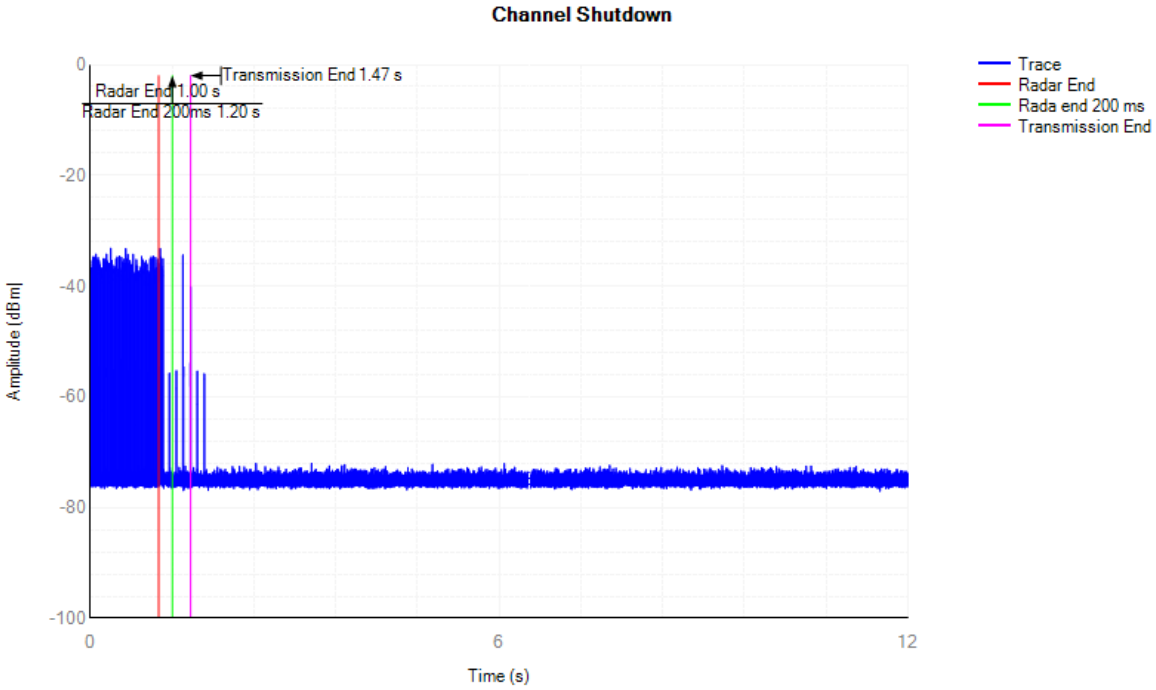
Shutdown Time

Mode	Frequency (MHz)	Channel Move Time (s)	Limit Channel Move Time (s)	Close Transmission Time (s)	Limit Close Transmission Time (s)	Close Transmission Time after 200ms(s)	Limit Close Transmission Time after 200ms (s)	Verdict
ac80	5290	0.0648	10	0.0036	0.26	0	0.06	Pass
ac80	5530	0.4692	10	0.0072	0.26	0.0008	0.06	Pass
n40	5310	0.53	10	0.0084	0.26	0.0036	0.06	Pass
n40	5510	0.466	10	0.004	0.26	0.0024	0.06	Pass
a	5320	0.4284	10	0.0084	0.26	0.002	0.06	Pass
a	5500	0.6684	10	0.0072	0.26	0.002	0.06	Pass

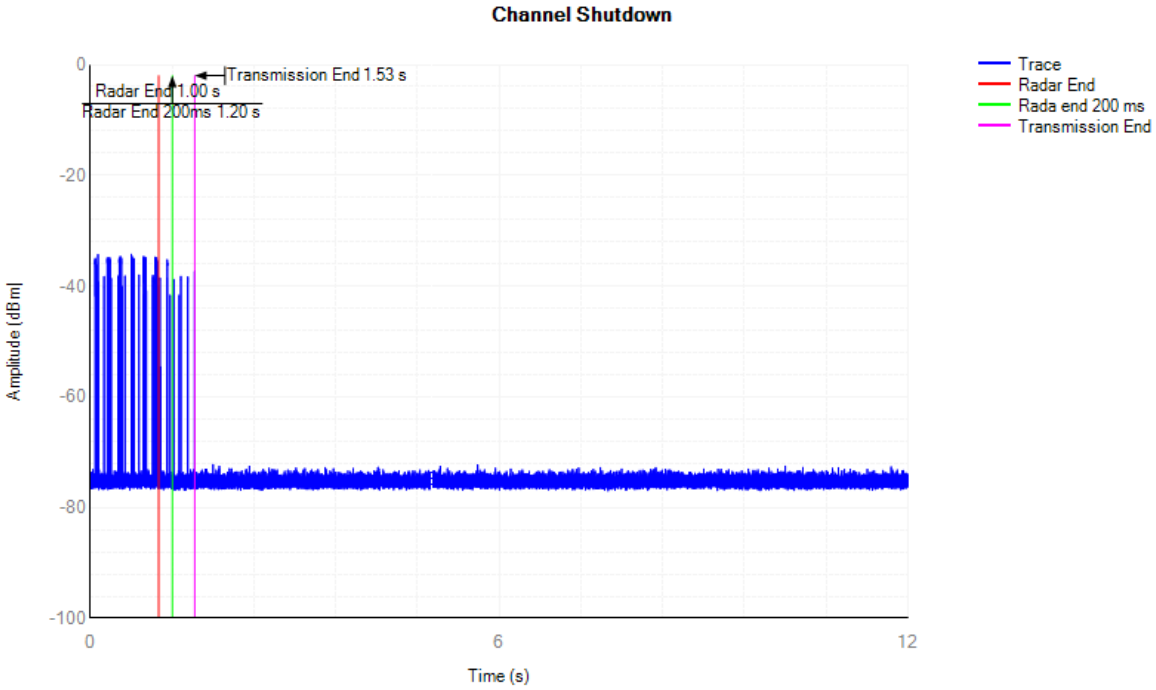
5290MHz ac80 Shutdown



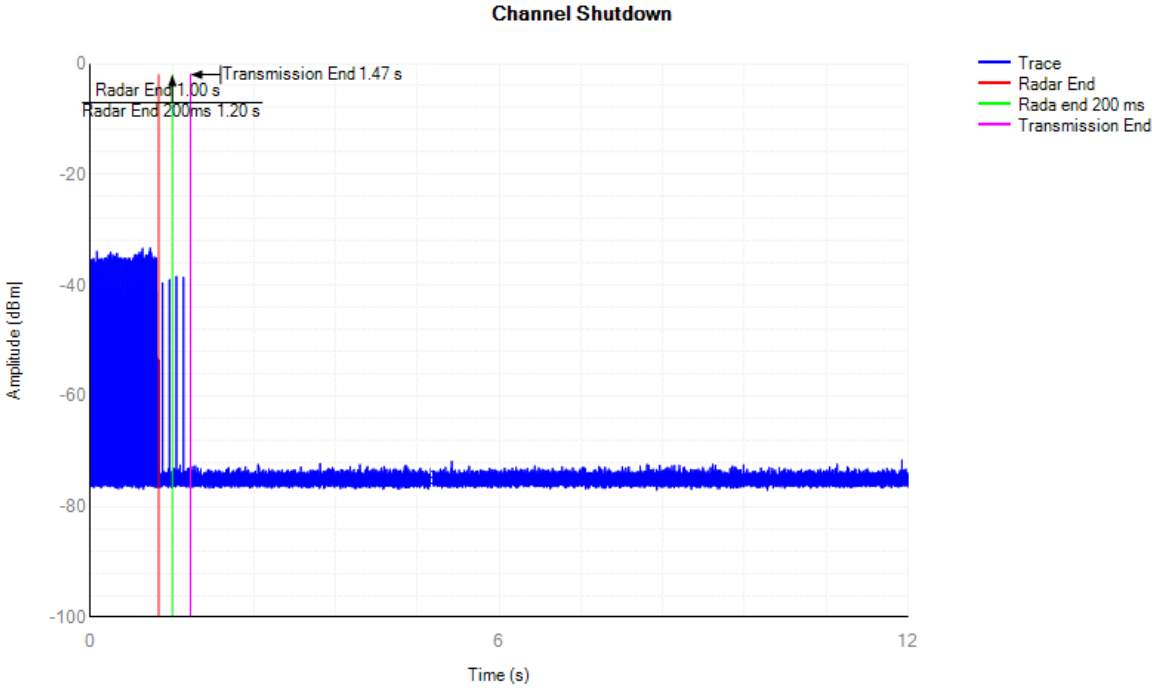
5530MHz ac80 Shutdown



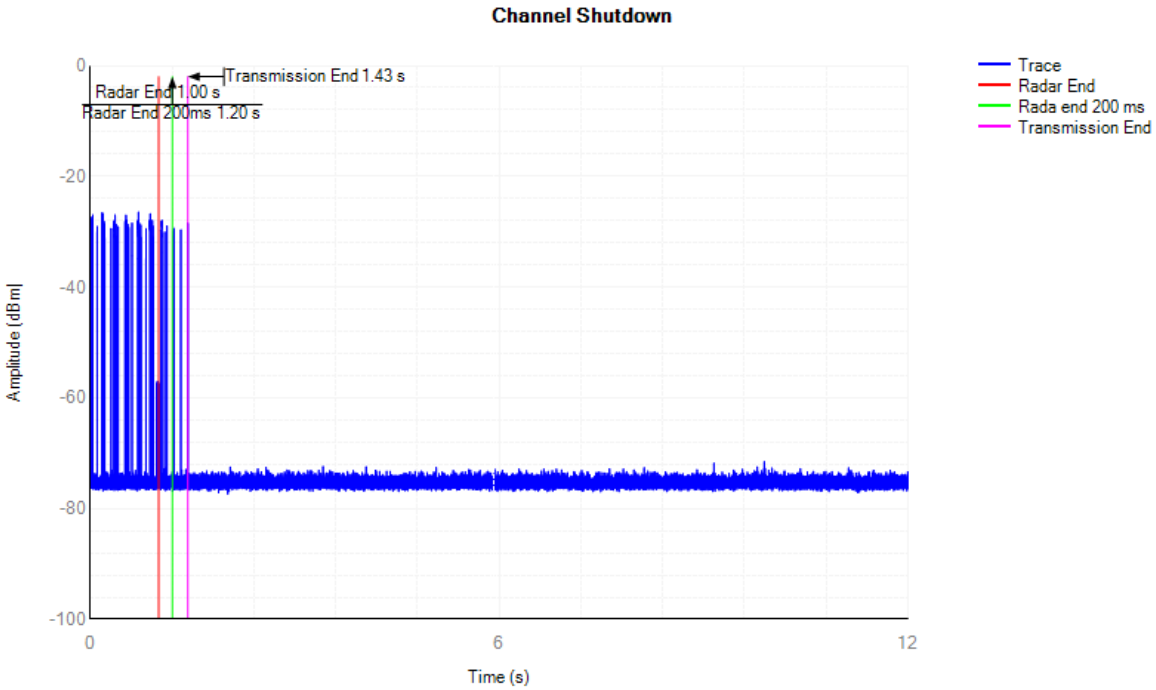
5310MHz n40 Shutdown



5510MHz n40 Shutdown



5320MHz a Shutdown



5500MHz a Shutdown