CH12_9kHz-150kHz

CH12_150kHz-30MHz

CH12_30MHz-15GHz

CH13_9kHz-150kHz

CH13_150kHz-30MHz

CH13_30MHz-15GHz

CH18_9kHz-150kHz

CH18_150kHz-30MHz

CH18_30MHz-15GHz

CH19_9kHz-150kHz

CH19_150kHz-30MHz

CH19_30MHz-15GHz

SH 2.0 E-WMTS_DBPSK

CH11_9kHz-150kHz

CH11_150kHz-30MHz

CH11_30MHz-15GHz
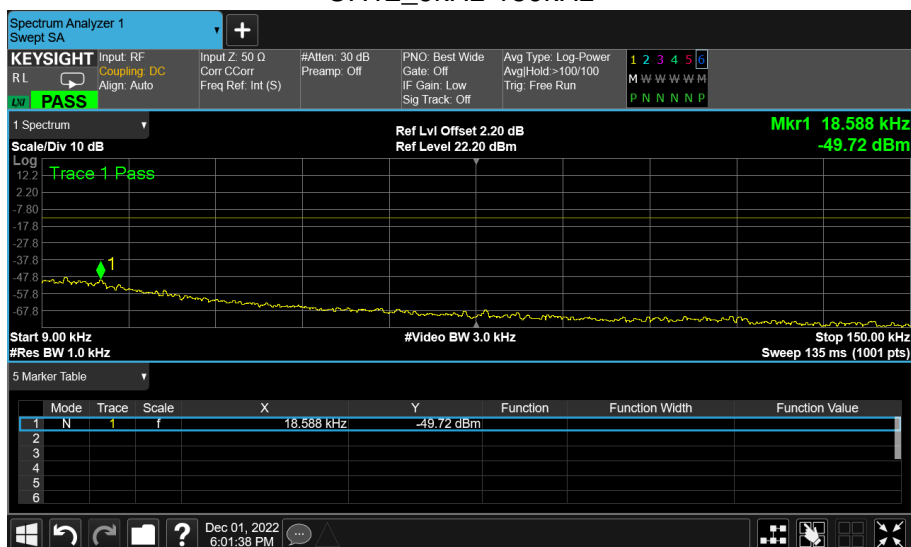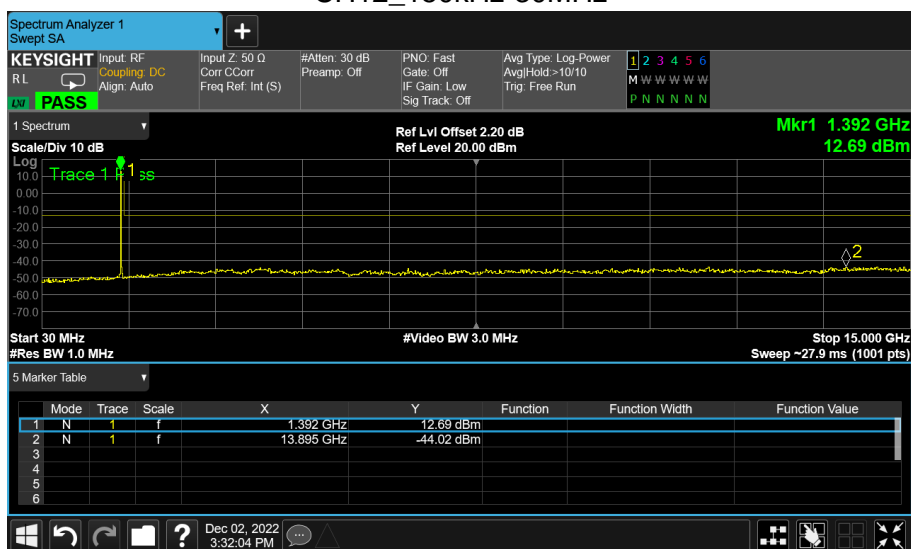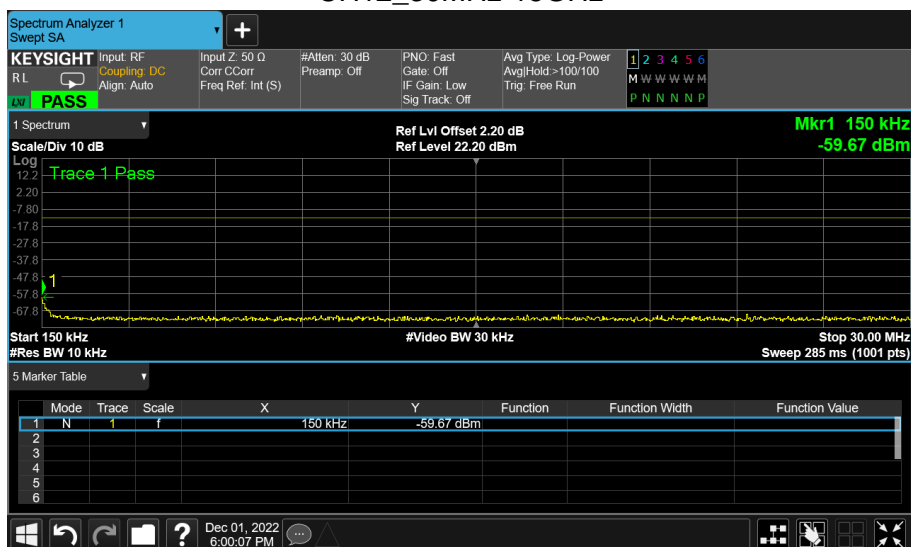
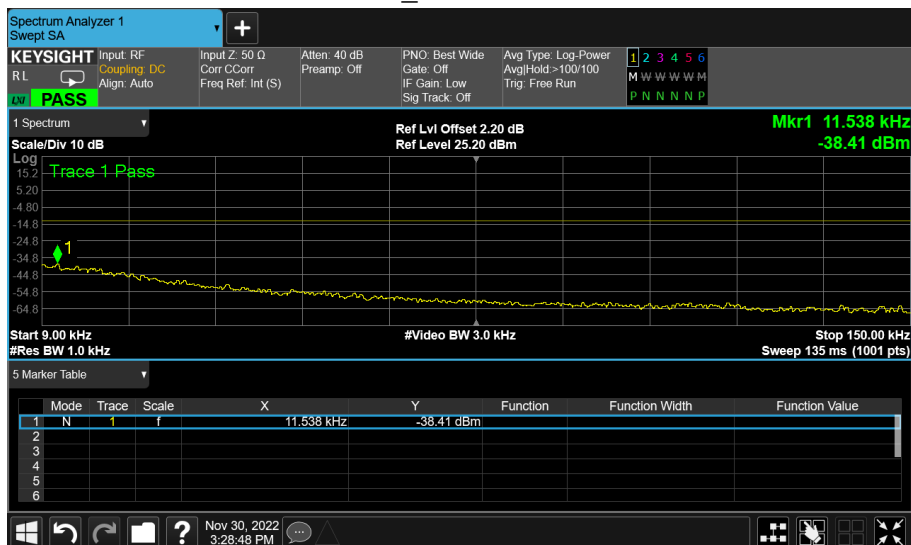## CH12_9kHz-150kHz
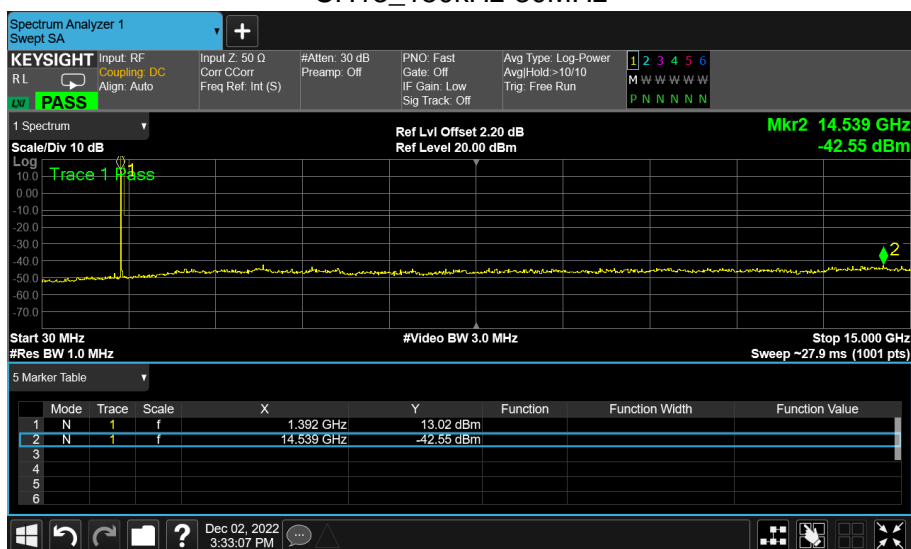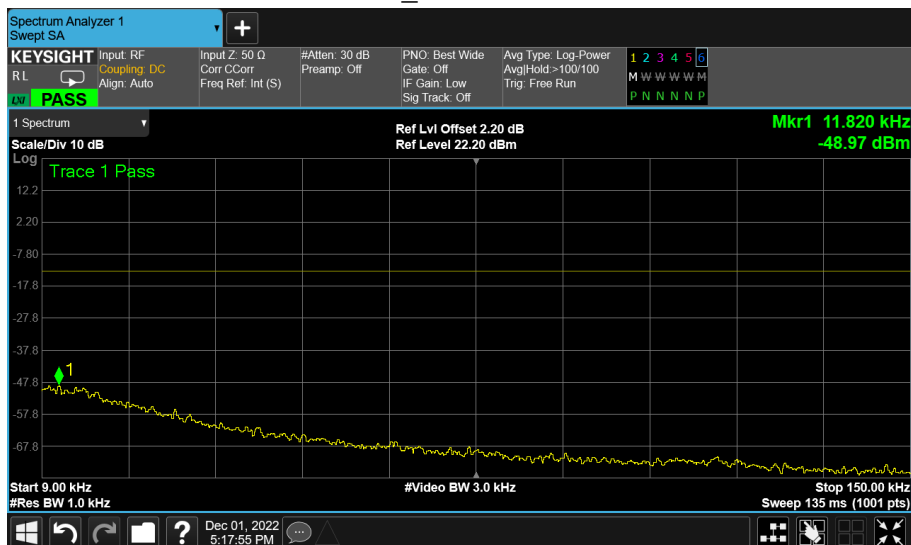

CH12_150kHz-30MHz
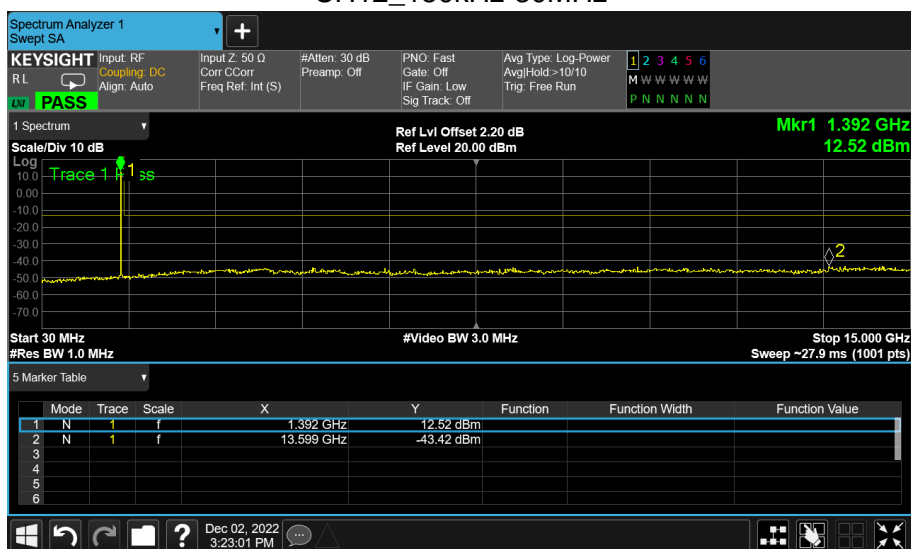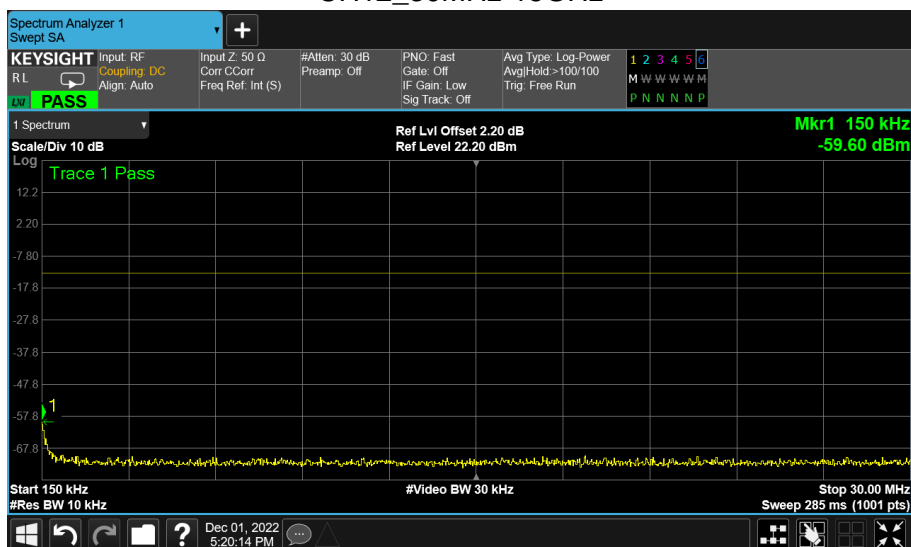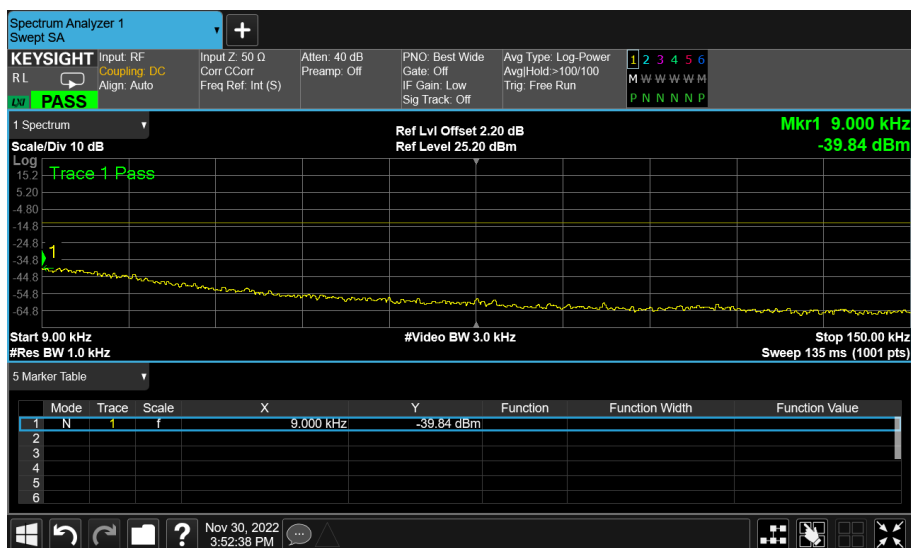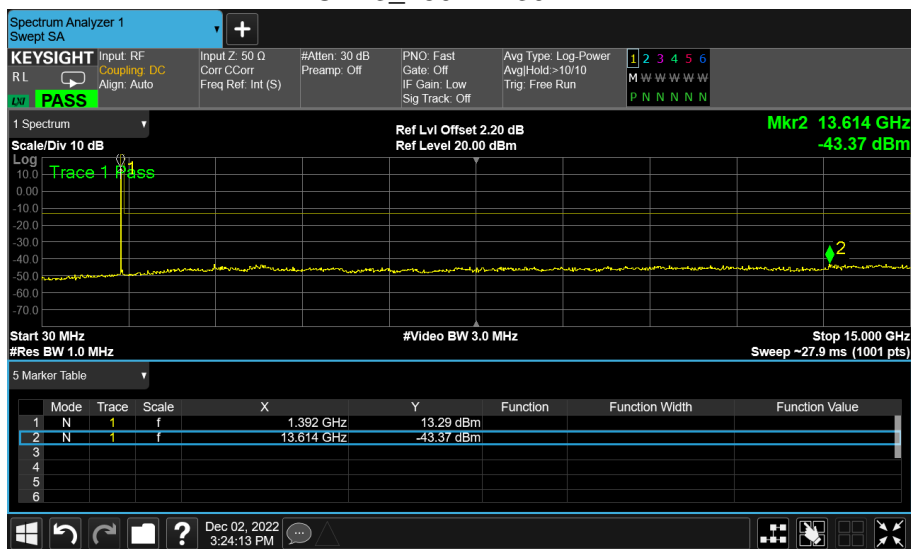
CH12_30MHz-15GHz

CH13_9kHz-150kHz
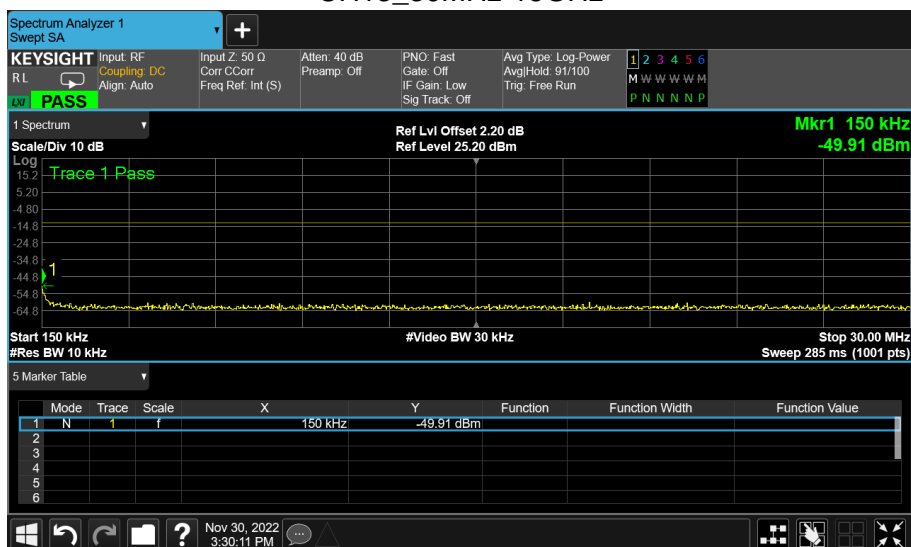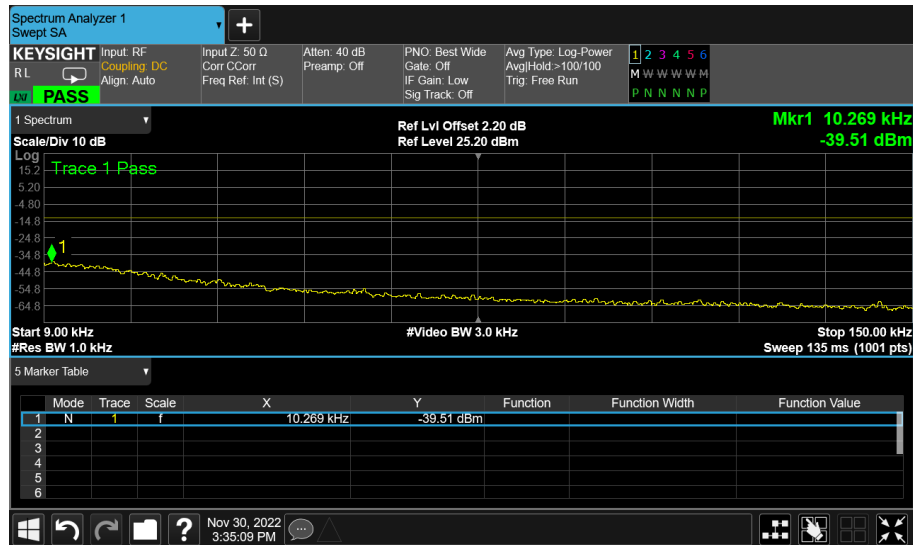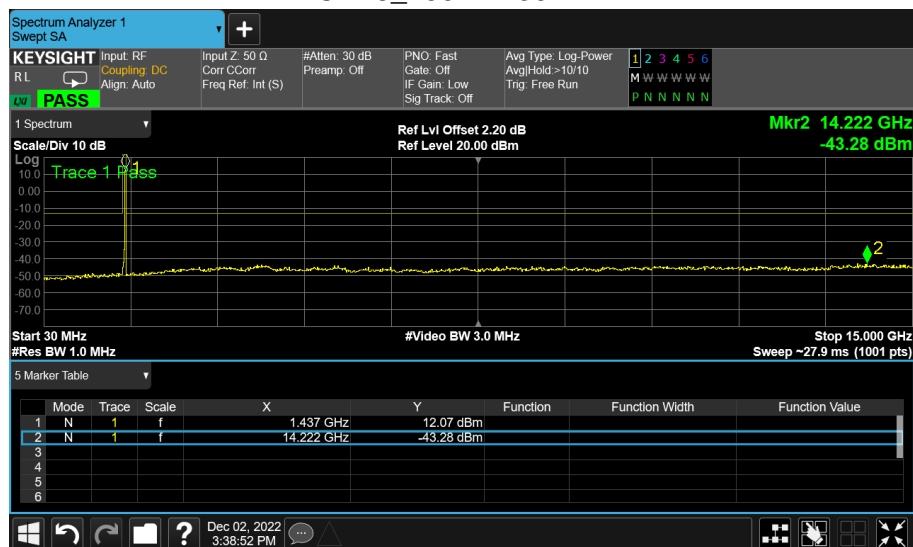
CH13_150kHz-30MHz
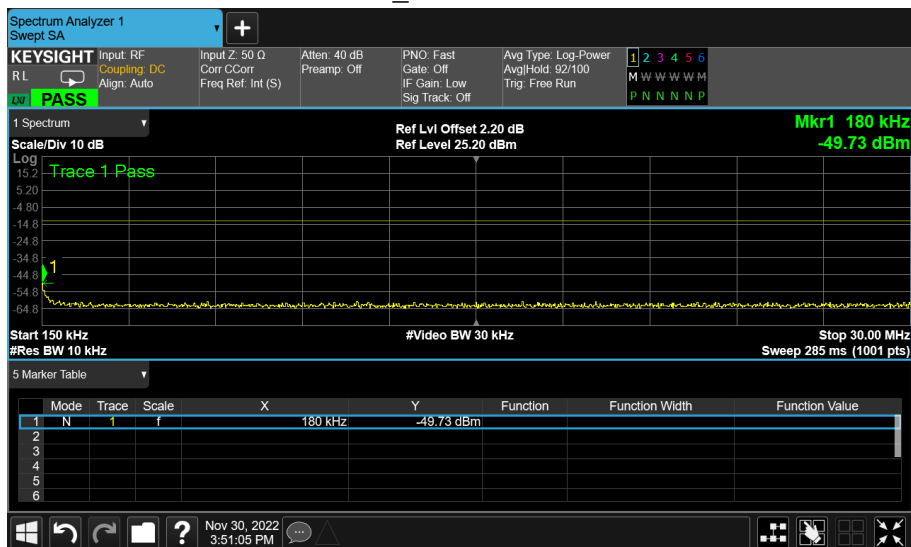
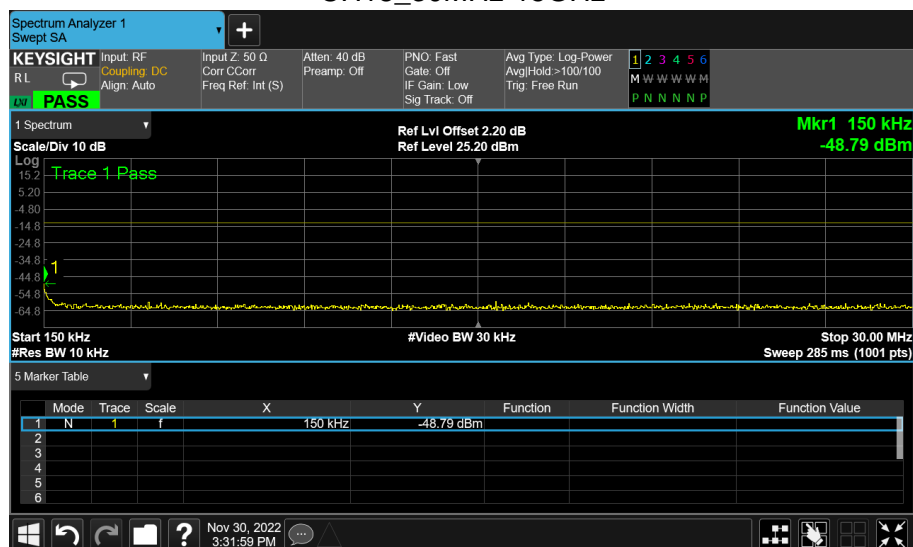CH13_30MHz-15GHz
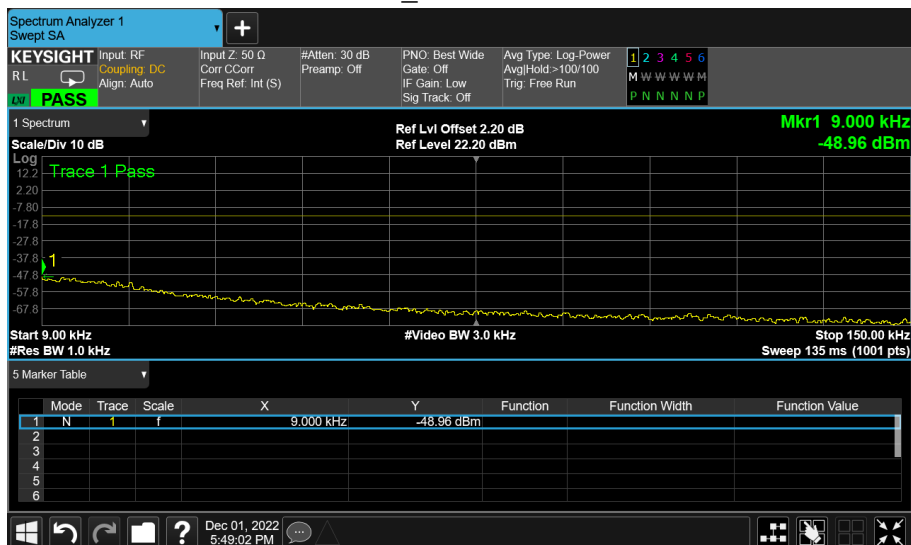
CH18_9kHz-150kHz
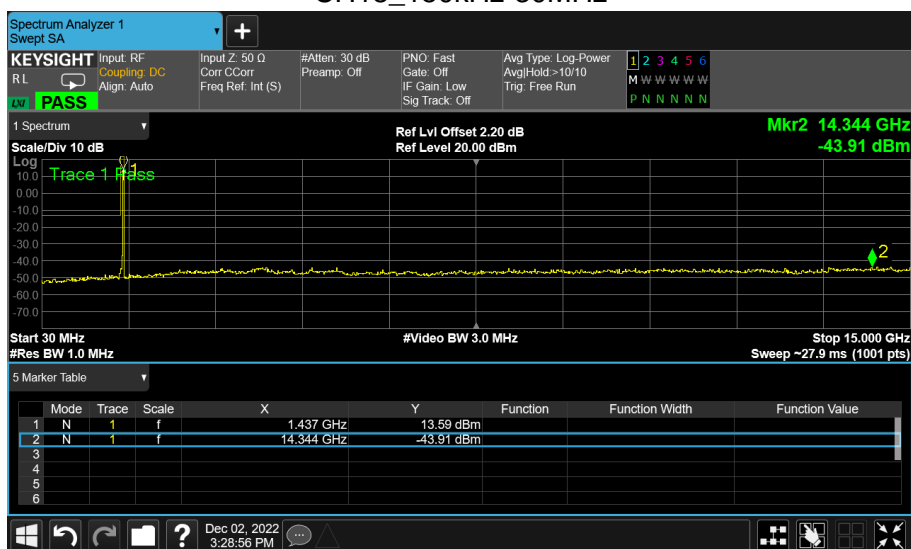
CH18_150kHz-30MHz
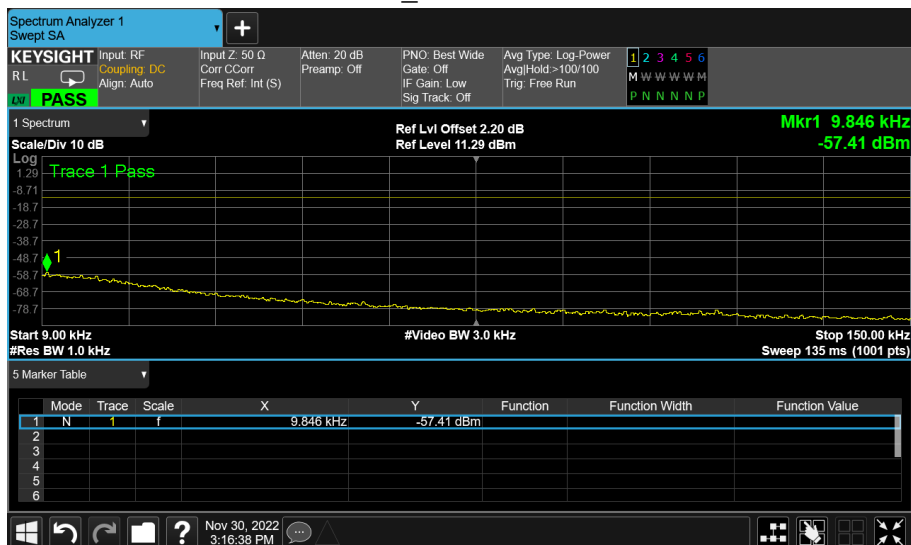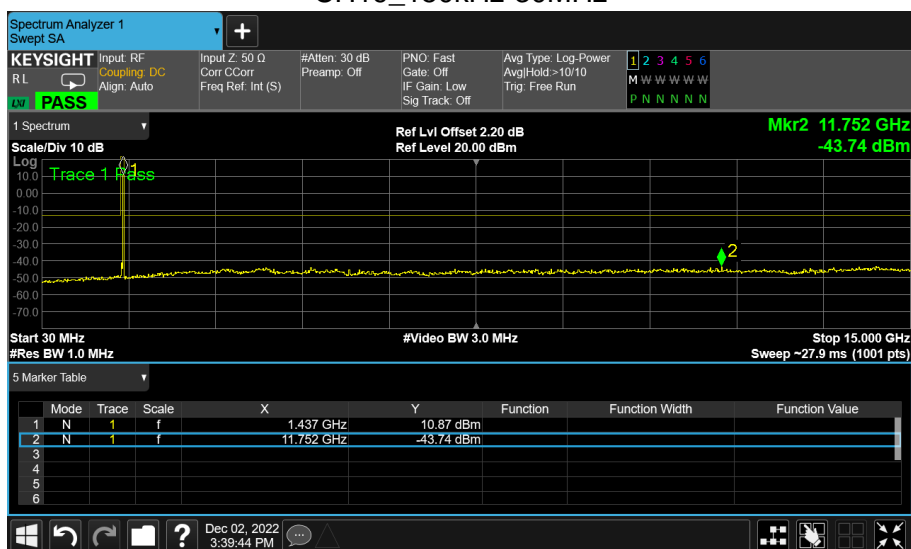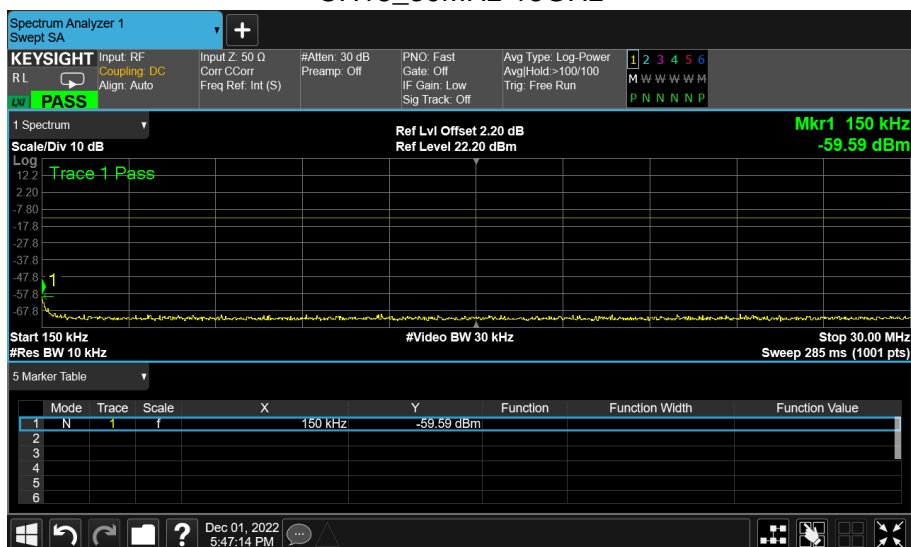

CH18_30MHz-15GHz

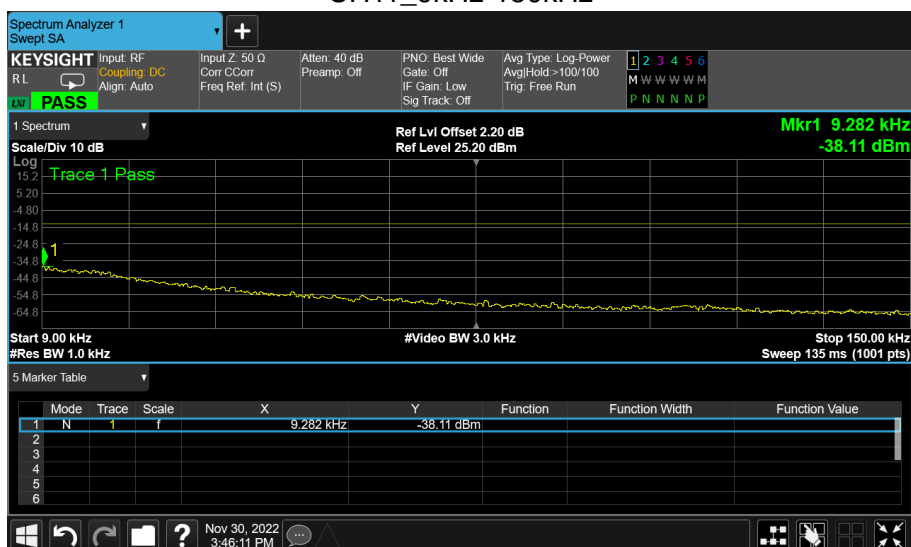## CH19_9kHz-150kHz

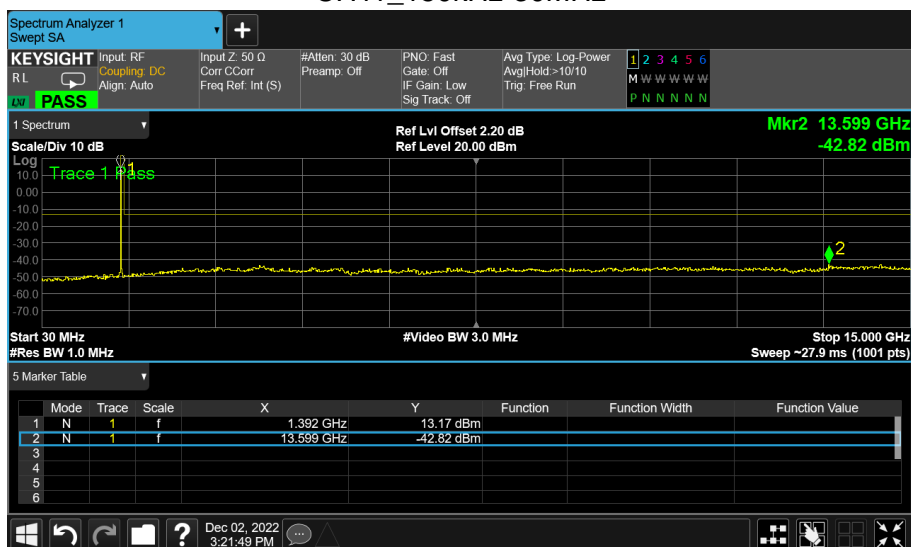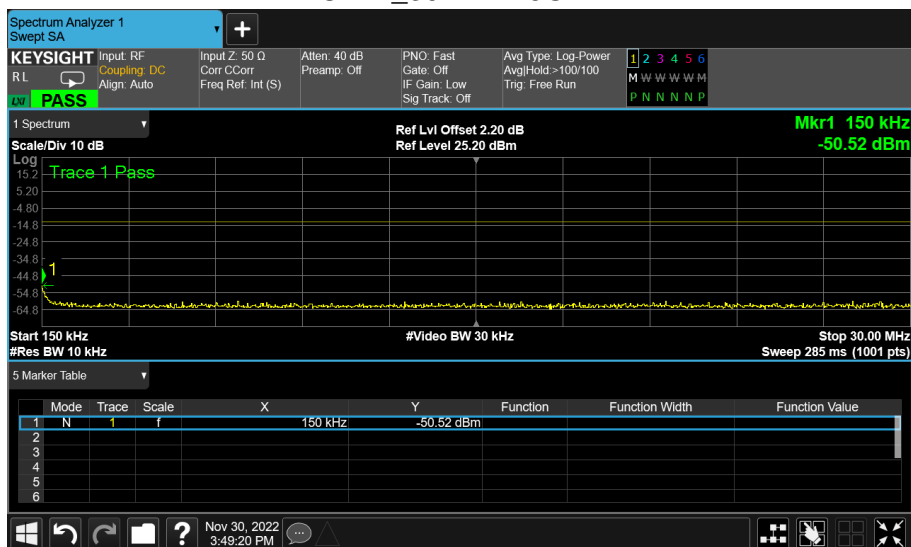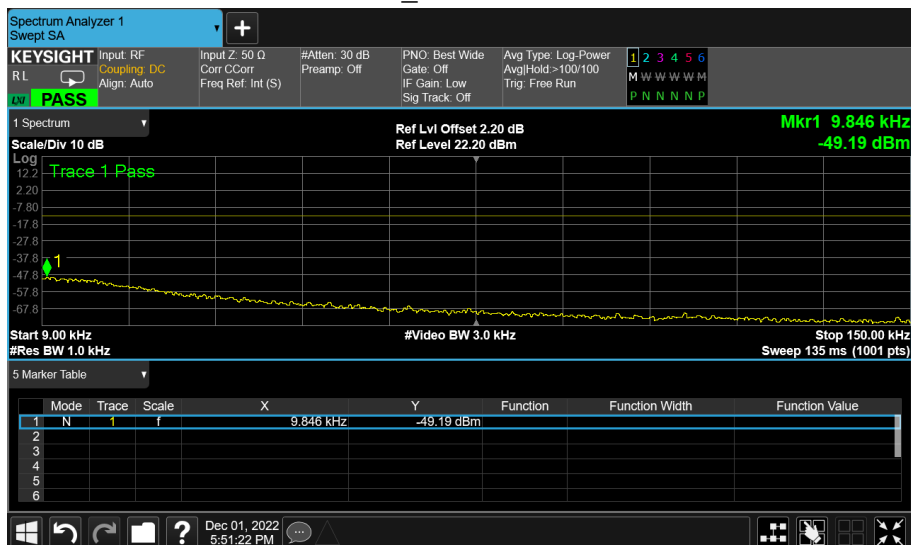

CH19_150kHz-30MHz
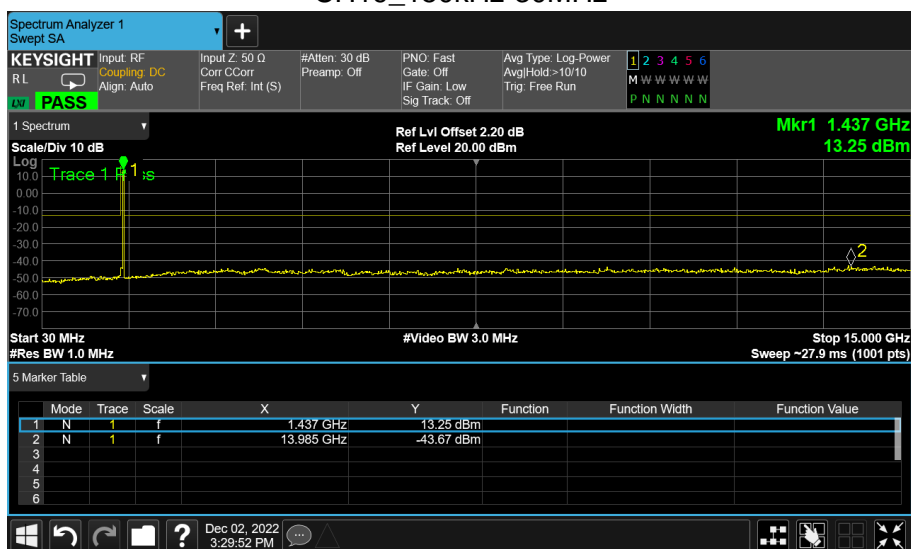
CH19_30MHz-15GHz
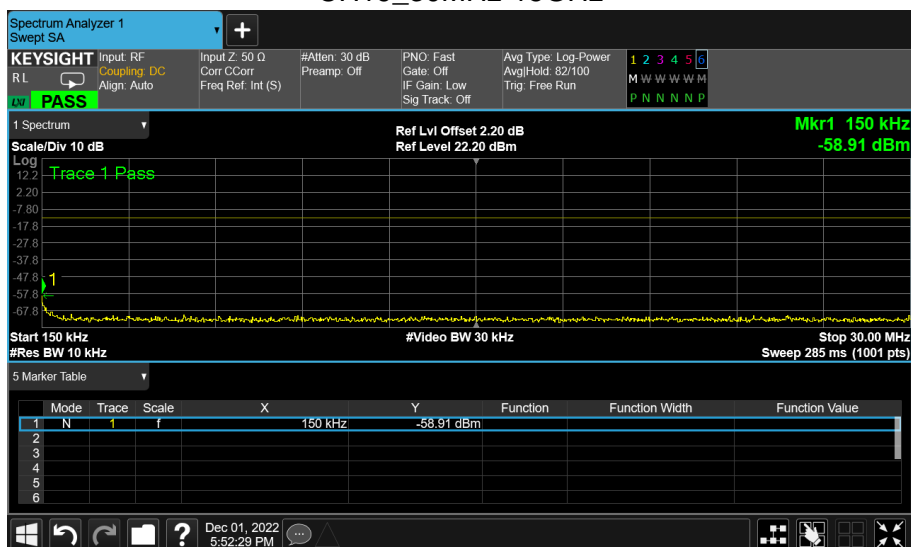
SH 1.0 WMTS_GFSK

CH3_band edge_1.400GHz-1.427GHz
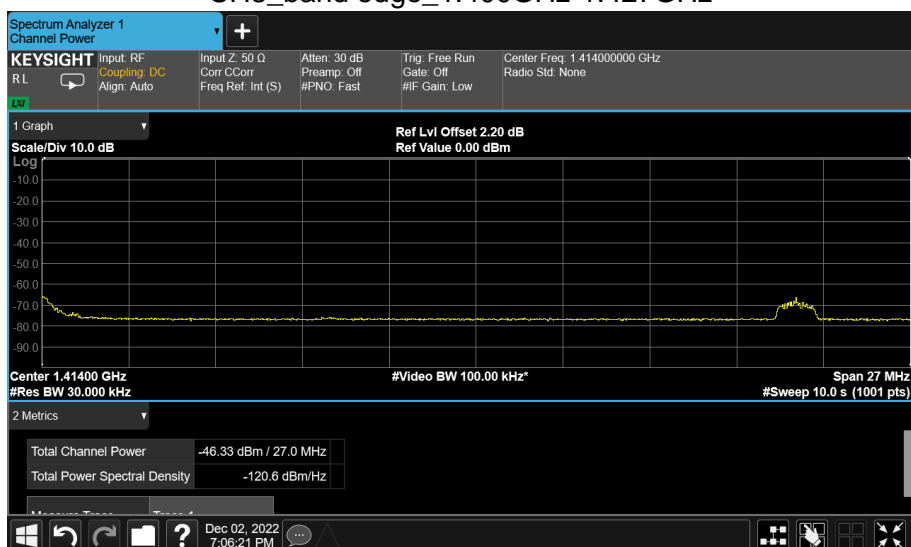
CH3_band edge_1.387 GHz-1.392 GHz
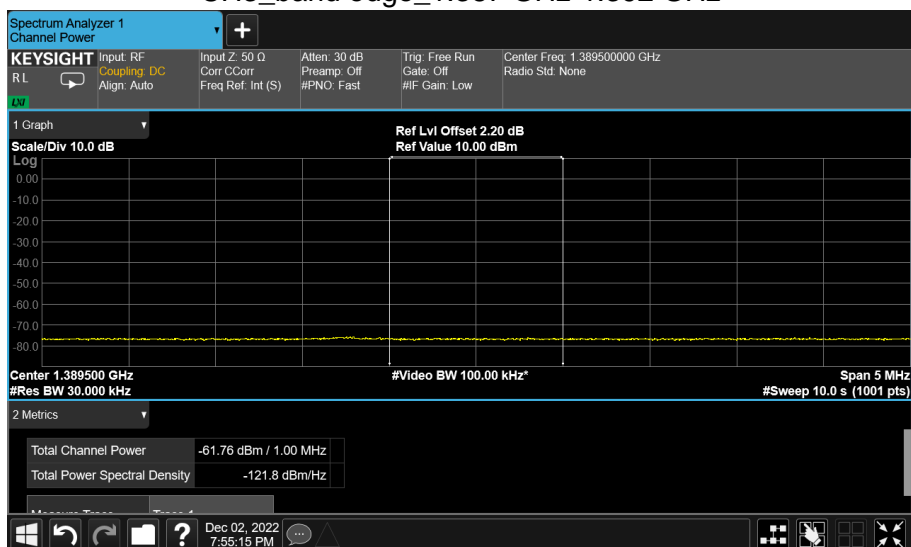
CH3_band edge_1.385 GHz-1.389GHz
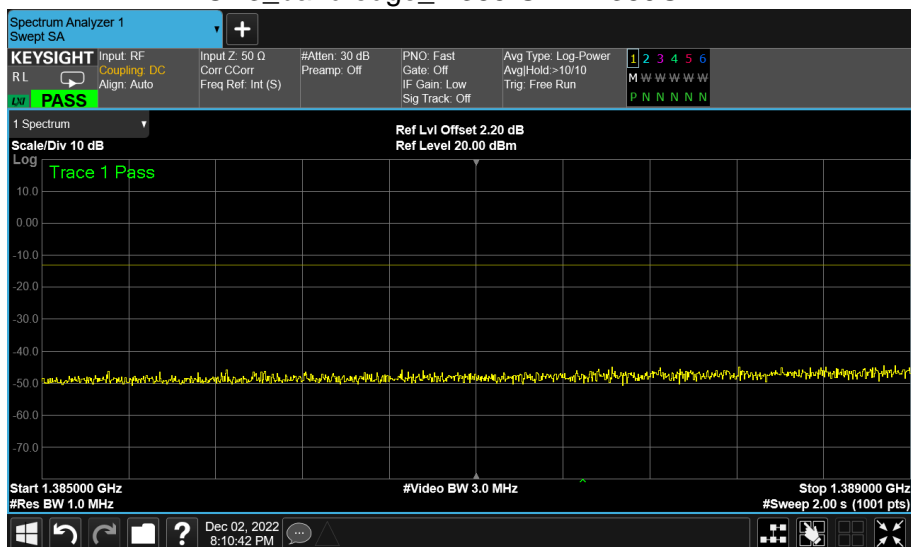
CH3_band edge_1.398 GHz-1.403 GHz

CH3_band edge_1.401 GHz-1.405 GHz

CH4_band edge_1.411 GHz-1.416 GHz

Spectrum Analyzer 1				
Channel Power				
KEYSIGHT	Input: RF	Input Z: 50 Ω	Atten: 30 dB	Trig: Free Run	Center Freq: 1.414000000 GHz
R L	Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Radio Std: None
	Align: Auto	Freq Ref: Int (S)	#PNO: Fast	#IF Gain: Low	

1 Graph
Scale/Div 10.0 dB   Ref Lvl Offset 2.20 dB   Ref Value 0.00 dBm

Center 1.41400 GHz   #Video BW 100.00 kHz*   Span 27 MHz
#Res BW 30.000 kHz   #Sweep 10.0 s (1001 pts)

2 Metrics	
Total Channel Power	-19.63 dBm / 27.0 MHz
Total Power Spectral Density	-93.95 dBm/Hz

Dec 02, 2022 7:07:11 PM

CH4_band edge_1.424 GHz-1.429 GHz

Spectrum Analyzer 1				
Channel Power				
KEYSIGHT	Input: RF	Input Z: 50 Ω	Atten: 30 dB	Trig: Free Run	Center Freq: 1.426500000 GHz
R L	Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Radio Std: None
	Align: Auto	Freq Ref: Int (S)	#PNO: Fast	#IF Gain: Low	

1 Graph
Scale/Div 10.0 dB   Ref Lvl Offset 2.20 dB   Ref Value 10.00 dBm

Center 1.426500 GHz   #Video BW 100.00 kHz*   Span 5 MHz
#Res BW 30.000 kHz   #Sweep 10.0 s (1001 pts)

2 Metrics	
Total Channel Power	-42.76 dBm / 1.00 MHz
Total Power Spectral Density	-102.8 dBm/Hz

Dec 02, 2022 7:56:11 PM

CH4_band edge_1.422 GHz-1.426 GHz

Spectrum Analyzer 1				
Swept SA				
KEYSIGHT	Input: RF	Input Z: 50 Ω	#Atten: 30 dB	PNO: Fast	Avg Type: Log-Power
R L	Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Avg|Hold:>10/10
	Align: Auto	Freq Ref: Int (S)		IF Gain: Low	Trig: Free Run
LXI PASS				Sig Track: Off	

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum
Scale/Div 10 dB   Ref Lvl Offset 2.20 dB   Ref Level 20.00 dBm

Trace 1 Pass

Start 1.422000 GHz   #Video BW 3.0 MHz   Stop 1.426000 GHz
#Res BW 1.0 MHz   #Sweep 2.00 s (1001 pts)

Dec 02, 2022 8:11:38 PM

CH4_band edge_1.433 GHz-1.438 GHz

CH4_band edge_1.436 GHz-1.440 GHz

SH 2.0 WMTS_DBPSK

CH15_band edge_1.411GHz-1.416GHz

CH15_band edge_1.387 GHz-1.392 GHz

CH15_band edge_1.385 GHz-1.389 GHz

CH15_band edge_1.389 GHz-1.403 GHz

Spectrum Analyzer 1
Channel Power

KEYSIGHT
R L
LXI

Input: RF	Input Z: 50 Ω	Atten: 30 dB	Trig: Free Run	Center Freq: 1.400500000 GHz
Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Radio Std: None
Align: Auto	Freq Ref: Int (S)	#PNO: Fast	#IF Gain: Low	

1 Graph
Scale/Div 10.0 dB

Ref Lvl Offset 2.20 dB
Ref Value -10.00 dBm

Mkr1 1.400000000 GHz
-65.98 dBm

Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100

Center 1.400500 GHz
#Res BW 30.000 kHz

#Video BW 100.00 kHz*

Span 5 MHz
#Sweep 10.0 s (1001 pts)

2 Metrics

| Total Channel Power | -55.72 dBm / 1.00 MHz |
| Total Power Spectral Density | -115.7 dBm/Hz |

Dec 01, 2022
7:52:10 PM

CH15_band edge_1.401 GHz-1.405 GHz

Spectrum Analyzer 1
Swept SA

KEYSIGHT
R L
LXI **PASS**

Input: RF	Input Z: 50 Ω	#Atten: 30 dB	PNO: Fast	Avg Type: Log-Power	1 2 3 4 5 6
Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Avg|Hold:>10/10	M W W W W W
Align: Auto	Freq Ref: Int (S)		IF Gain: Low	Trig: Free Run	P N N N N N
			Sig Track: Off		

1 Spectrum
Scale/Div 10 dB

Ref Lvl Offset 2.20 dB
Ref Level 0.00 dBm

Mkr1 1.401 024 GHz
-28.51 dBm

Log
Trace 1 Pass
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0

Start 1.401000 GHz
#Res BW 1.0 MHz

#Video BW 3.0 MHz

Stop 1.405000 GHz
#Sweep 2.00 s (1001 pts)

Dec 02, 2022
3:00:50 PM

CH16_band edge_1.411 GHz-1.416 GHz

CH16_band edge_1.424 GHz-1.429 GHz

CH16_band edge_1.422 GHz-1.426 GHz

CH16_band edge_1.433 GHz-1.438 GHz

Spectrum Analyzer 1 Channel Power	

KEYSIGHT
R L
Coupling: DC
LXI

Input: RF
Coupling: DC
Align: Auto

Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)

Atten: 30 dB
Preamp: Off
#PNO: Fast

Trig: Free Run
Gate: Off
#IF Gain: Low

Center Freq: 1.435000000 GHz
Radio Std: None

1 Graph
Scale/Div 10.0 dB

Ref Lvl Offset 2.20 dB
Ref Value -10.00 dBm

Mkr1 1.435000000 GHz
-76.69 dBm

Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100

Center 1.435500 GHz
#Res BW 30.000 kHz

#Video BW 100.00 kHz*

Span 5 MHz
#Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-61.43 dBm / 1.00 MHz
Total Power Spectral Density	-121.4 dBm/Hz

Dec 01, 2022
7:56:22 PM

CH16_band edge_1.436 GHz-1.440 GHz

Spectrum Analyzer 1
Swept SA

KEYSIGHT
R L
Coupling: DC
LXI PASS

Input: RF
Coupling: DC
Align: Auto

Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)

#Atten: 30 dB
Preamp: Off

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

Avg Type: Log-Power
Avg|Hold:>10/10
Trig: Free Run

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum
Scale/Div 10 dB

Ref Lvl Offset 2.20 dB
Ref Level 0.00 dBm

Mkr1 1.438 756 GHz
-43.55 dBm

Log
Trace 1 Pass
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0

Start 1.436000 GHz
#Res BW 1.0 MHz

#Video BW 3.0 MHz

Stop 1.440000 GHz
#Sweep 2.00 s (1001 pts)

Dec 02, 2022
3:04:26 PM

SH 2.0 WMTS_D8PSK

CH15_band edge_1.411 GHz-1.416 GHz

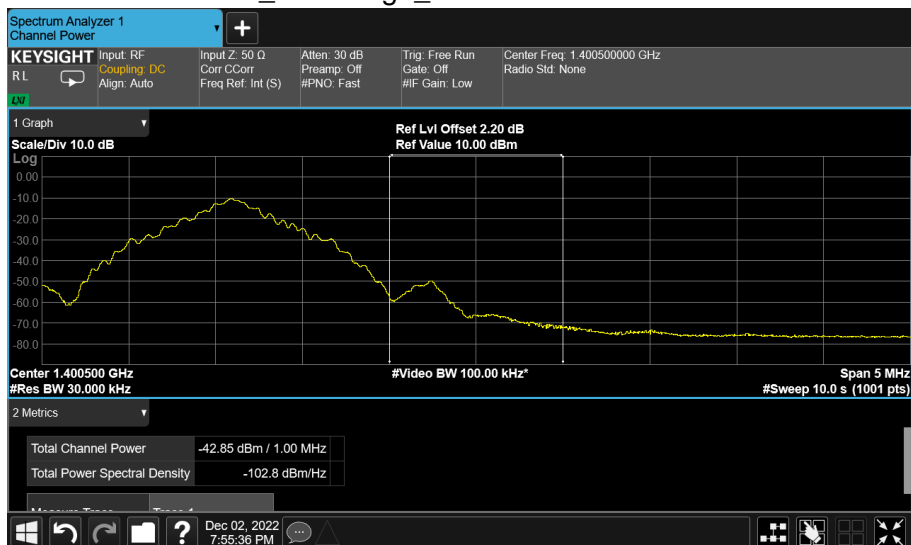### CH15_band edge_1.387 GHz-1.392 GHz

CH15_band edge_1.388 GHz-1.389 GHz

CH15_band edge_1.398 GHz-1.403 GHz
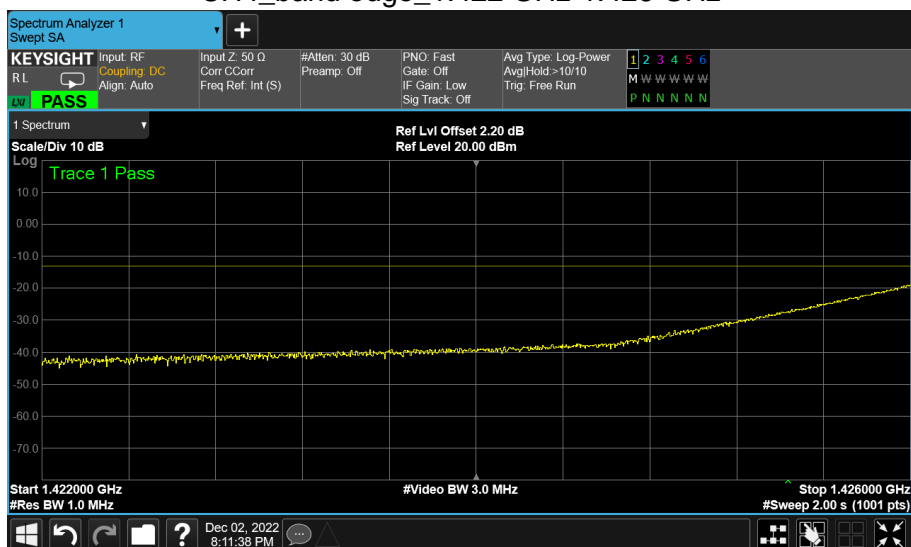

CH15_band edge_1.401 GHz-1.405 GHz

CH16_band edge_1.414 GHz-1.416 GHz

Spectrum Analyzer 1	
Channel Power	

KEYSIGHT — Input: RF / Coupling: DC / Align: Auto — Input Z: 50 Ω / Corr CCorr / Freq Ref: Int (S) — Atten: 30 dB / Preamp: Off / #PNO: Fast — Trig: Free Run / Gate: Off / #IF Gain: Low — Center Freq: 1.414000000 GHz / Radio Std: None

R L / LNI

1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 2.20 dB
Ref Value 10.00 dBm
Log

Center 1.41400 GHz   #Video BW 100.00 kHz*   Span 27 MHz
#Res BW 30.000 kHz   #Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-44.10 dBm / 27.0 MHz
Total Power Spectral Density	-118.4 dBm/Hz

Dec 02, 2022 10:54:03 AM

CH16_band edge_1.424 GHz-1.429 GHz

Spectrum Analyzer 1
Channel Power

KEYSIGHT — Input: RF / Coupling: DC / Align: Auto — Input Z: 50 Ω / Corr CCorr / Freq Ref: Int (S) — Atten: 30 dB / Preamp: Off / #PNO: Fast — Trig: Free Run / Gate: Off / #IF Gain: Low — Center Freq: 1.426500000 GHz / Radio Std: None

R L / LNI

1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 2.20 dB
Ref Value -10.00 dBm
Mkr1 1.427000000 GHz
-65.12 dBm
Log

Center 1.426500 GHz   #Video BW 100.00 kHz*   Span 5 MHz
#Res BW 30.000 kHz   #Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-53.32 dBm / 1.00 MHz
Total Power Spectral Density	-113.3 dBm/Hz

Dec 01, 2022 8:11:54 PM

CH16_band edge_1.422 GHz-1.426 GHz

Spectrum Analyzer 1
Swept SA

KEYSIGHT — Input: RF / Coupling: DC / Align: Auto — Input Z: 50 Ω / Corr CCorr / Freq Ref: Int (S) — #Atten: 30 dB / Preamp: Off — PNO: Fast / Gate: Off / IF Gain: Low / Sig Track: Off — Avg Type: Log-Power / Avg|Hold:>10/10 / Trig: Free Run

R L / LNI PASS

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.20 dB
Ref Level 0.00 dBm
Mkr1 1.425 996 GHz
-28.65 dBm
Log

Trace 1 Pass

Start 1.422000 GHz   #Video BW 3.0 MHz   Stop 1.426000 GHz
#Res BW 1.0 MHz   #Sweep 2.00 s (1001 pts)

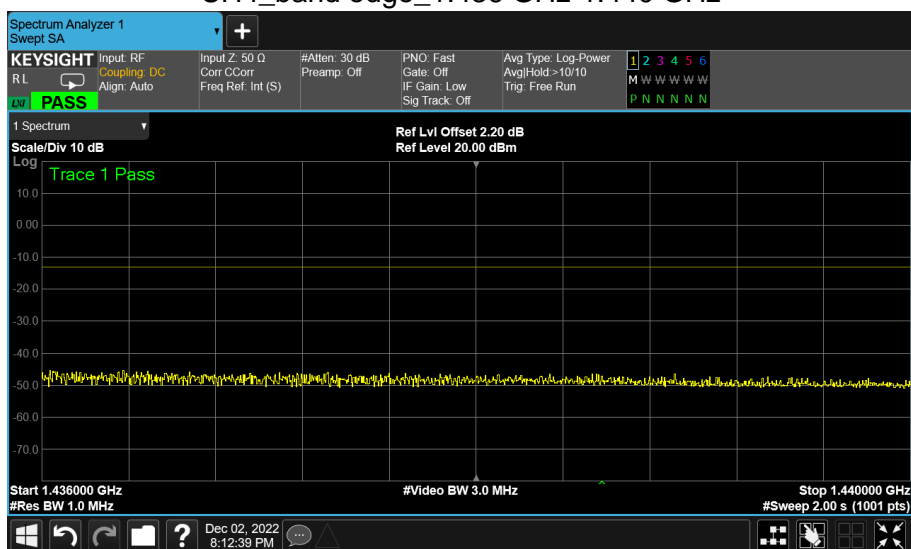Dec 02, 2022 11:33:53 AM

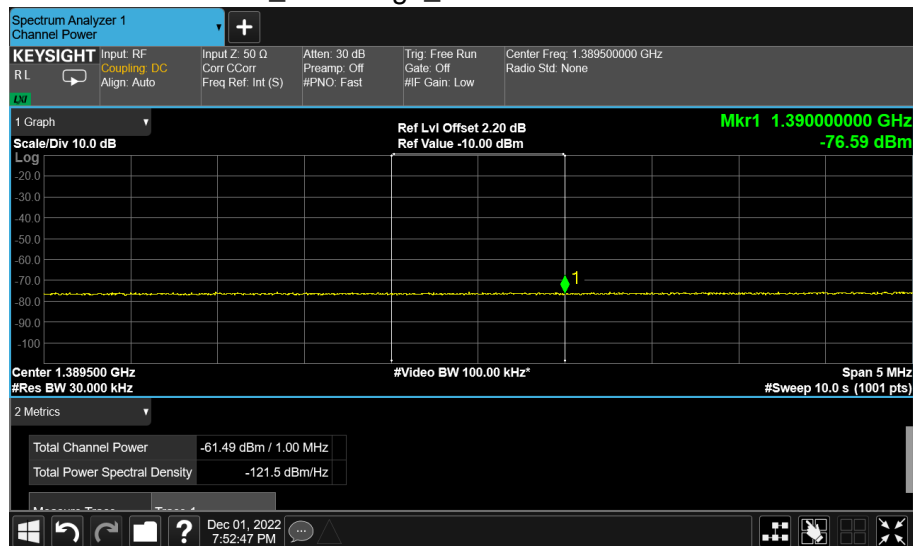## CH16_band edge_1.433 GHz-1.438 GHz

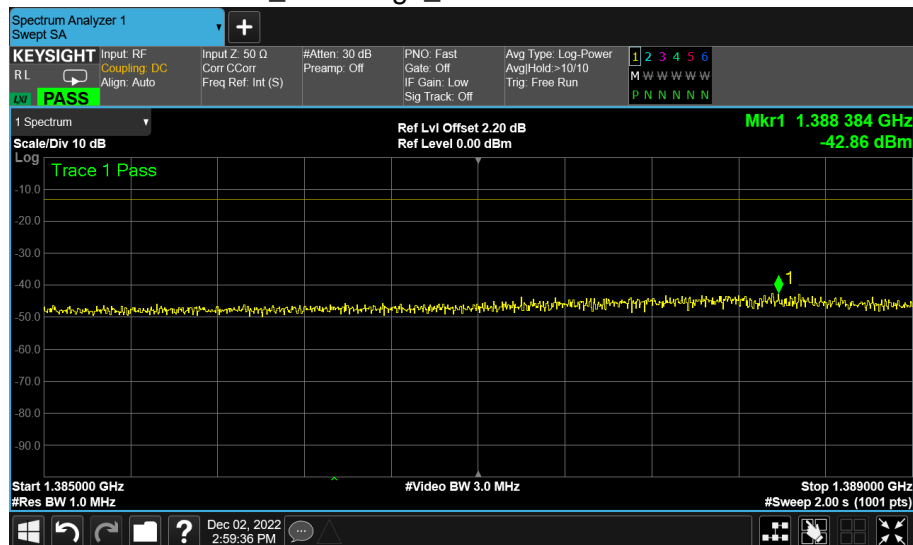## CH16_band edge_1.436 GHz-1.440 GHz

SH 2.0 E-WMTS_DBPSK

CH11_band edge_1.411 GHz-1.416 GHz
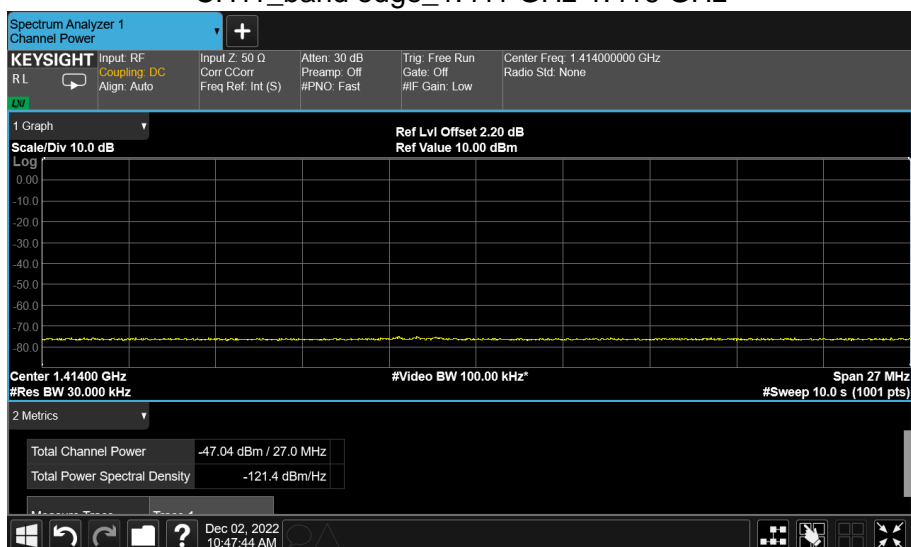
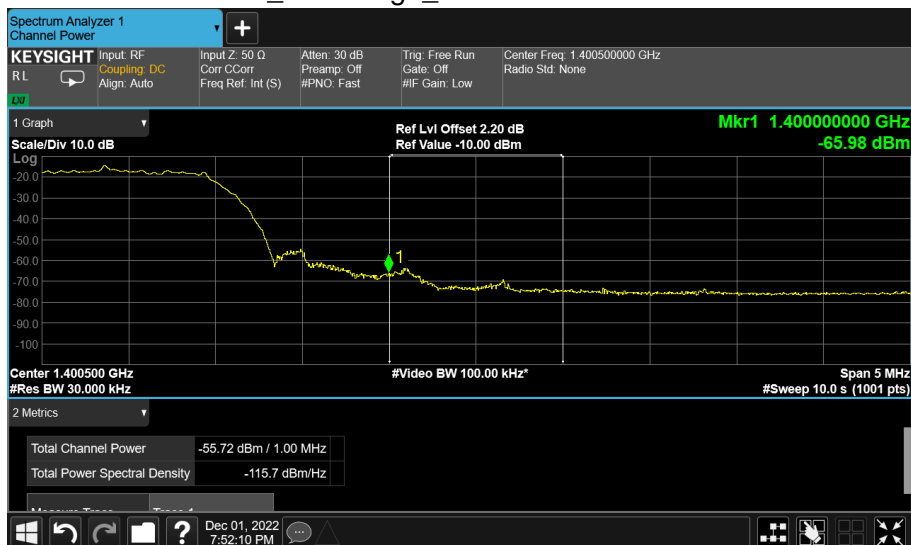### CH11_band edge_1.387 GHz-1.392 GHz
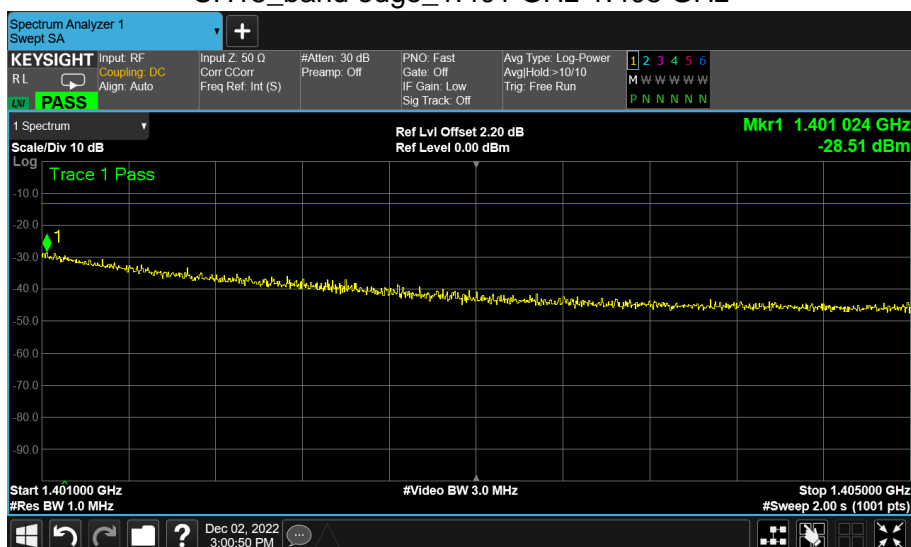

CH11_band edge_1.385 GHz-1.389 GHz
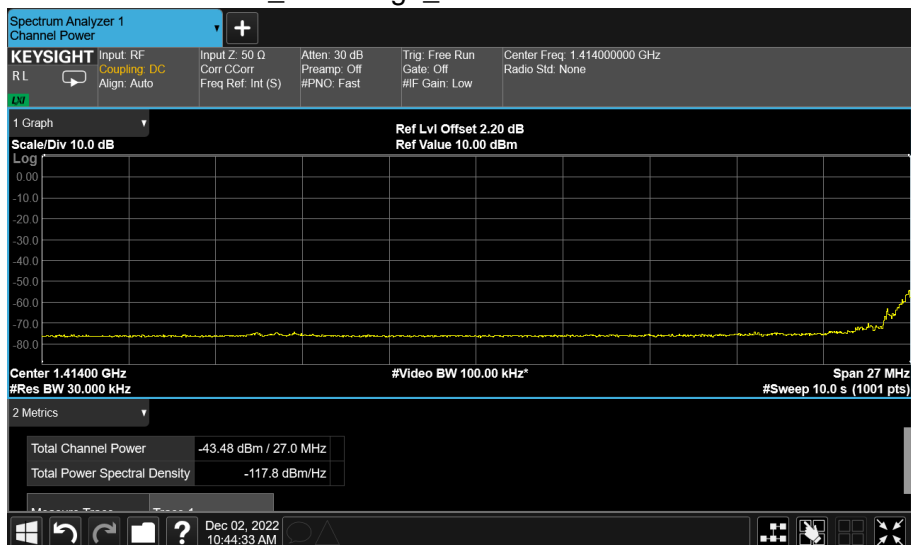
CH11_band edge_1.398 GHz-1.403 GHz
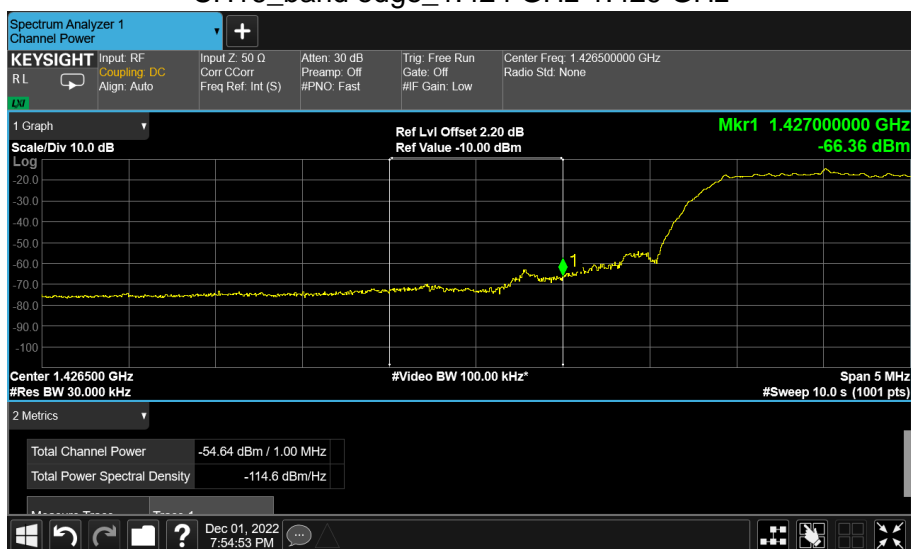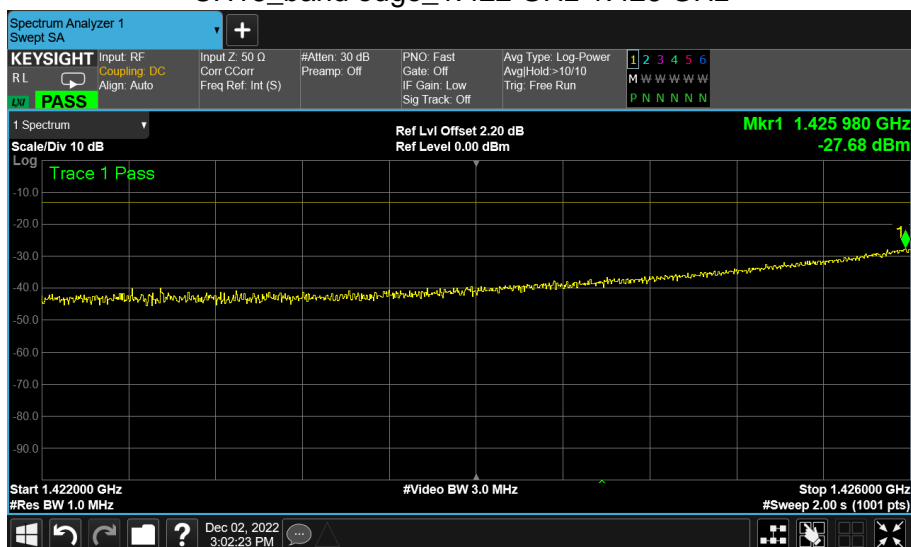

CH11_band edge_1.401 GHz-1.405 GHz
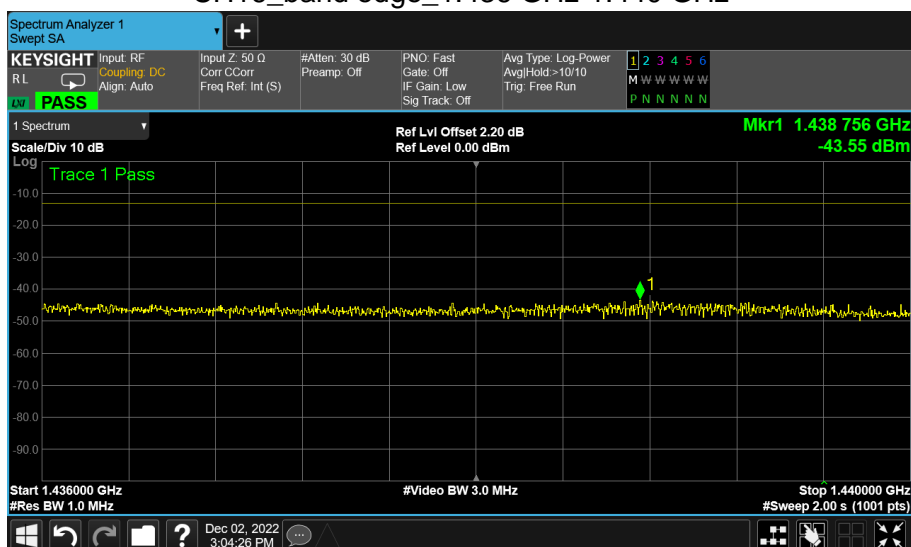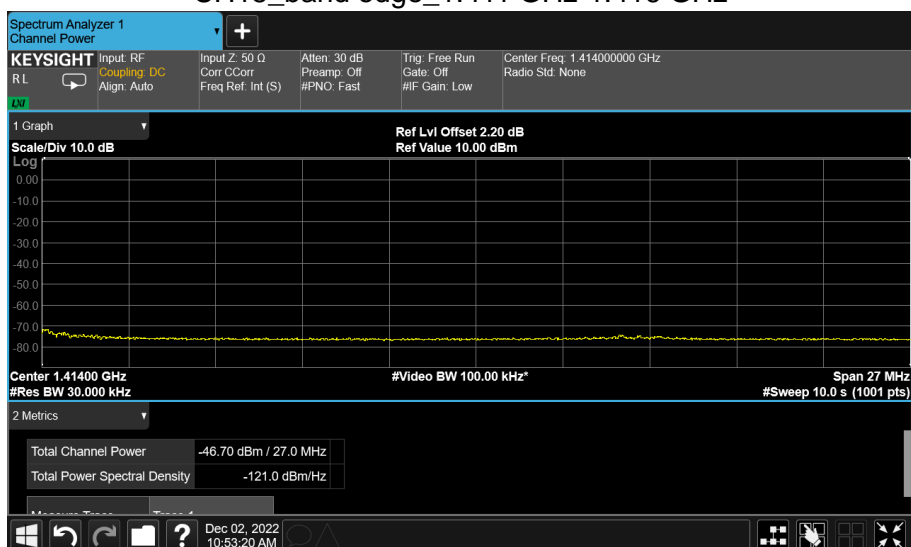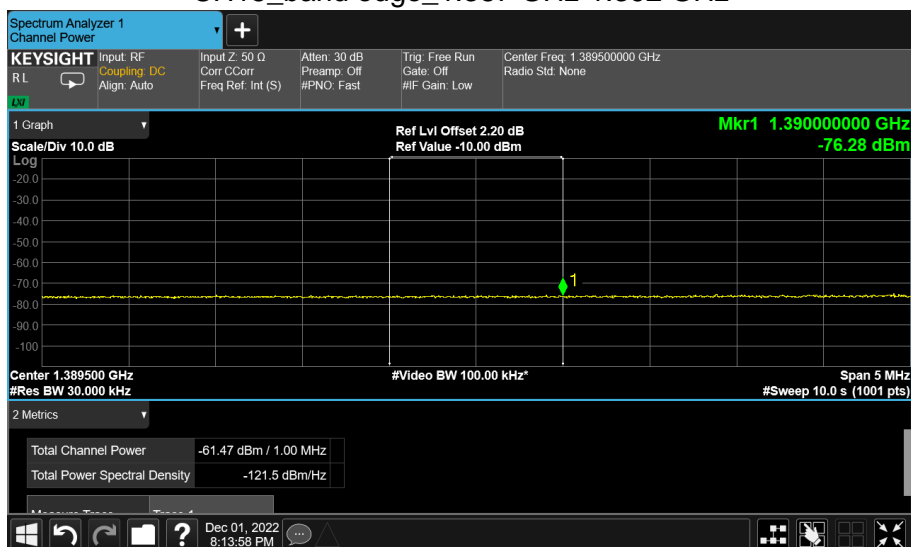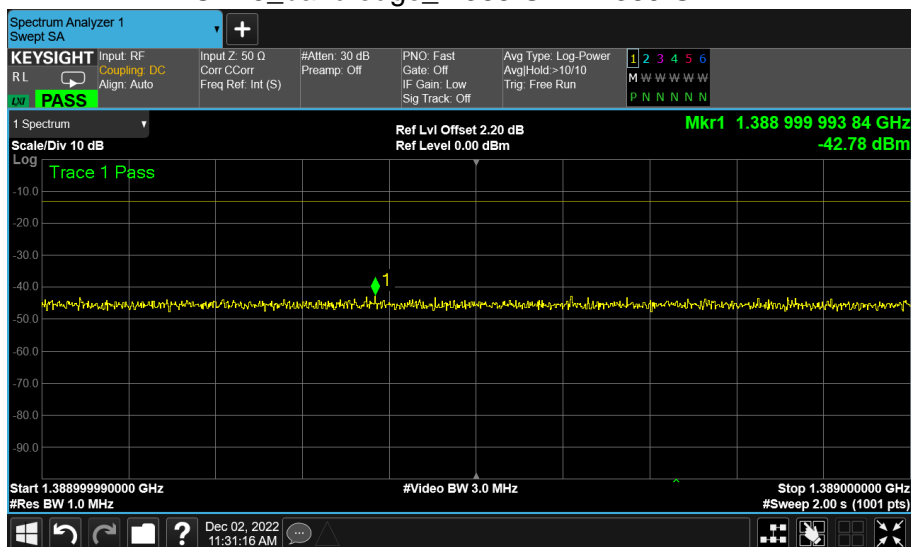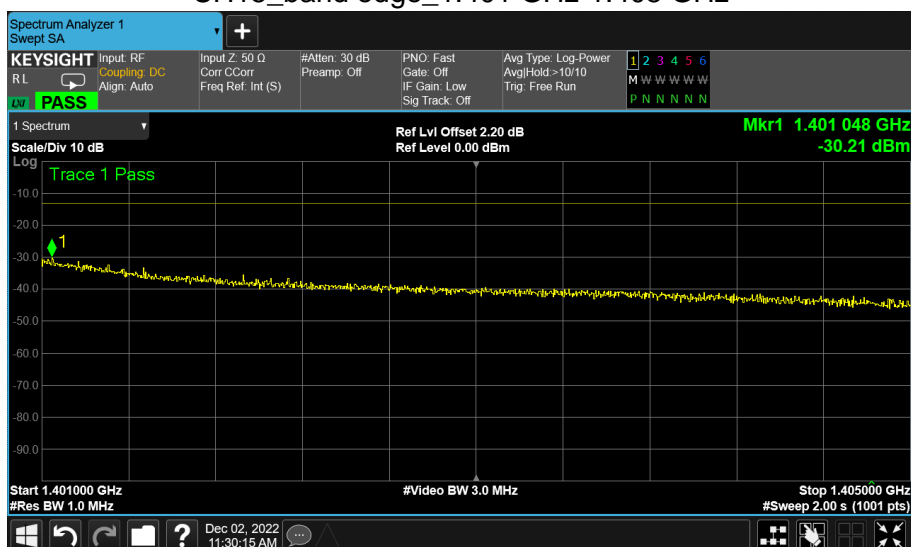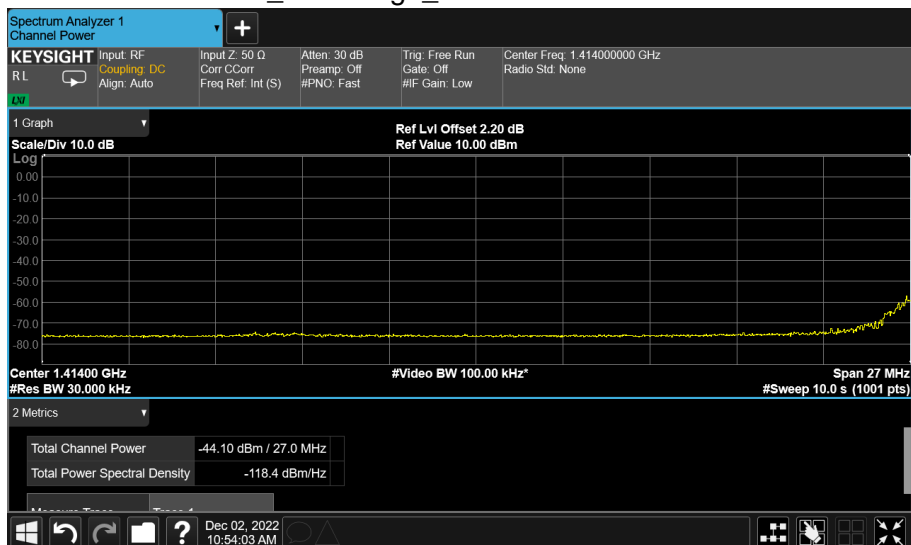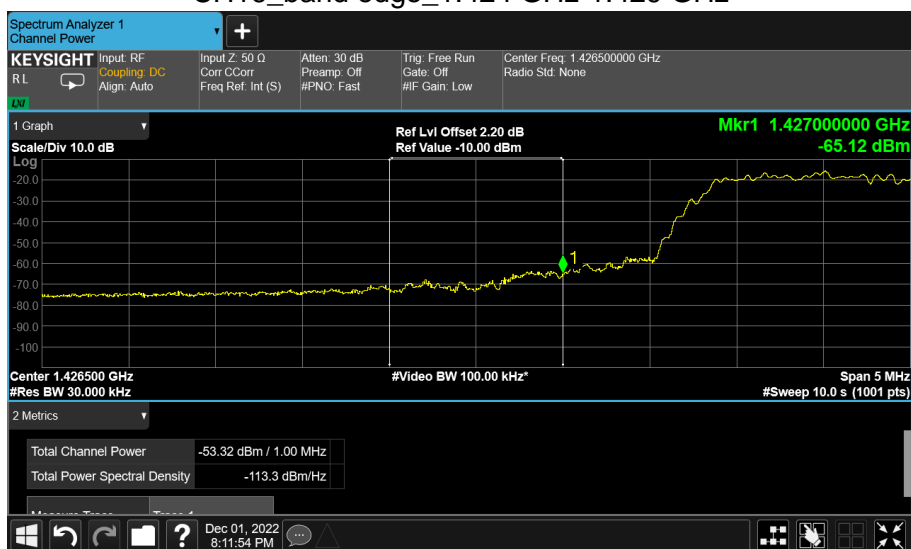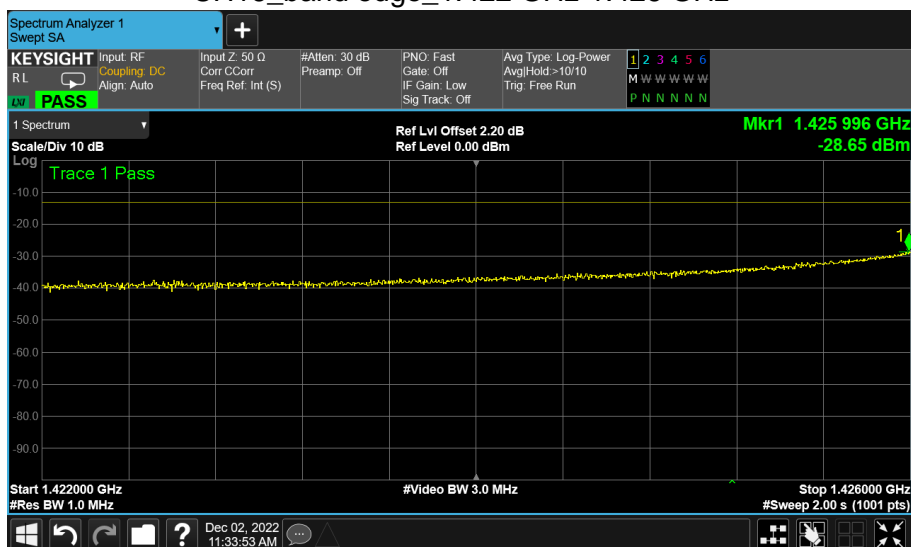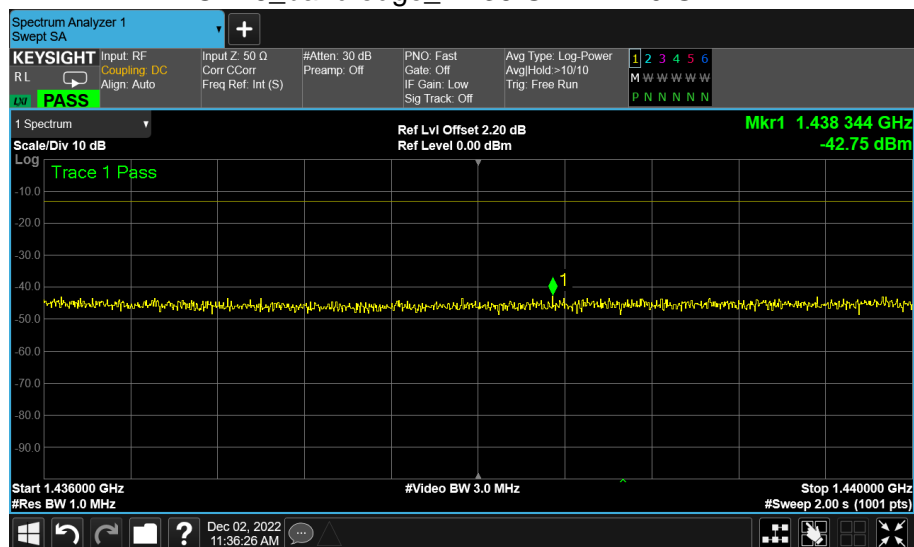
CH19_band edge_1.411 GHz-1.416 GHz

Spectrum Analyzer 1
Channel Power

KEYSIGHT — Input: RF, Coupling: DC, Align: Auto | Input Z: 50 Ω, Corr CCorr, Freq Ref: Int (S) | Atten: 30 dB, Preamp: Off, #PNO: Fast | Trig: Free Run, Gate: Off, #IF Gain: Low | Center Freq: 1.414000000 GHz, Radio Std: None

R L
LXI

1 Graph
Scale/Div 10.0 dB — Ref Lvl Offset 2.20 dB / Ref Value 10.00 dBm

Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0

Center 1.41400 GHz — #Video BW 100.00 kHz* — Span 27 MHz
#Res BW 30.000 kHz — #Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-46.75 dBm / 27.0 MHz
Total Power Spectral Density	-121.1 dBm/Hz

Dec 02, 2022 10:46:42 AM

CH19_band edge_1.424 GHz-1.429 GHz

Spectrum Analyzer 1
Channel Power

KEYSIGHT — Input: RF, Coupling: DC, Align: Auto | Input Z: 50 Ω, Corr CCorr, Freq Ref: Int (S) | Atten: 30 dB, Preamp: Off, #PNO: Fast | Trig: Free Run, Gate: Off, #IF Gain: Low | Center Freq: 1.426500000 GHz, Radio Std: None

R L
LXI

1 Graph
Scale/Div 10.0 dB — Ref Lvl Offset 2.20 dB / Ref Value -10.00 dBm

Mkr1 1.427000000 GHz
-76.13 dBm

Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100

Center 1.426500 GHz — #Video BW 100.00 kHz* — Span 5 MHz
#Res BW 30.000 kHz — #Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-61.10 dBm / 1.00 MHz
Total Power Spectral Density	-121.1 dBm/Hz

Dec 01, 2022 8:03:38 PM

CH19_band edge_1.422 GHz-1.426 GHz

Spectrum Analyzer 1
Swept SA

KEYSIGHT — Input: RF, Coupling: DC, Align: Auto | Input Z: 50 Ω, Corr CCorr, Freq Ref: Int (S) | #Atten: 30 dB, Preamp: Off | PNO: Fast, Gate: Off, IF Gain: Low, Sig Track: Off | Avg Type: Log-Power, Avg|Hold:>10/10, Trig: Free Run

R L
LXI **PASS**

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum
Scale/Div 10 dB — Ref Lvl Offset 2.20 dB / Ref Level 0.00 dBm

Mkr1 1.423 156 GHz
-40.62 dBm

Log
Trace 1 Pass
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-90.0

Start 1.422000 GHz — #Video BW 3.0 MHz — Stop 1.426000 GHz
#Res BW 1.0 MHz — #Sweep 2.00 s (1001 pts)

Dec 02, 2022 3:14:48 PM

CH19_band edge_1.433 GHz-1.438 GHz

Spectrum Analyzer 1	Channel Power

KEYSIGHT
R L
LXI

Input: RF	Input Z: 50 Ω	Atten: 30 dB	Trig: Free Run	Center Freq: 1.435500000 GHz
Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Radio Std: None
Align: Auto	Freq Ref: Int (S)	#PNO: Fast	#IF Gain: Low	

1 Graph
Scale/Div 10.0 dB

Ref Lvl Offset 2.20 dB
Ref Value -10.00 dBm

Mkr1 1.435000000 GHz
-64.75 dBm

Center 1.435500 GHz
#Res BW 30.000 kHz
#Video BW 100.00 kHz*
Span 5 MHz
#Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-54.97 dBm / 1.00 MHz
Total Power Spectral Density	-115.0 dBm/Hz

Dec 01, 2022
8:02:20 PM

CH19_band edge_1.436 GHz-1.440 GHz

Spectrum Analyzer 1	Swept SA

KEYSIGHT
R L
LXI **PASS**

Input: RF	Input Z: 50 Ω	#Atten: 30 dB	PNO: Fast	Avg Type: Log-Power	1 2 3 4 5 6
Coupling: DC	Corr CCorr	Preamp: Off	Gate: Off	Avg|Hold: 10/10	M W W W W W
Align: Auto	Freq Ref: Int (S)		IF Gain: Low	Trig: Free Run	P N N N N N
			Sig Track: Off		

1 Spectrum
Scale/Div 10 dB

Ref Lvl Offset 2.20 dB
Ref Level 0.00 dBm

Mkr1 1.436 000 GHz
-25.50 dBm

Trace 1 Pass

Start 1.436000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz
Stop 1.440000 GHz
#Sweep 2.00 s (1001 pts)

Dec 02, 2022
3:12:54 PM

SH 2.0 E-WMTS_D8PSK

CH11_band edge_1.411 GHz-1.416 GHz

CH11_band edge_1.387 GHz-1.392 GHz

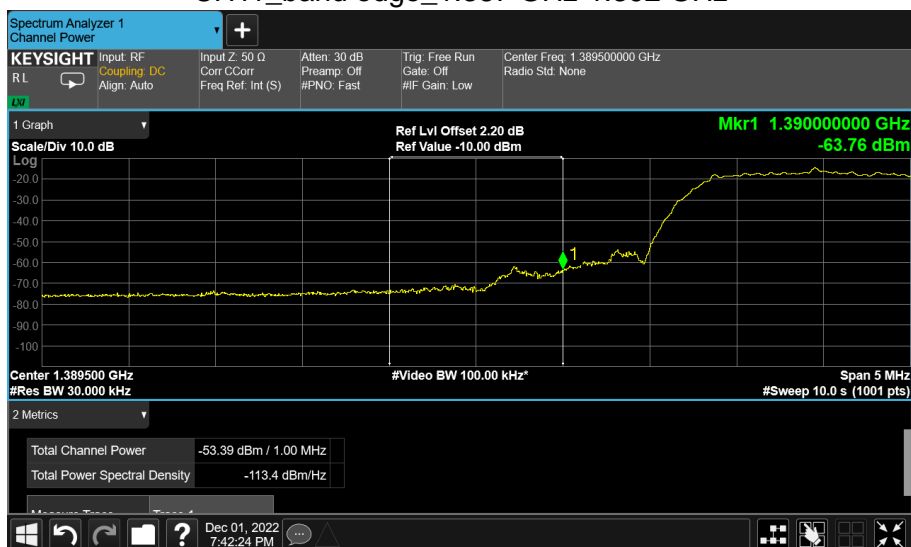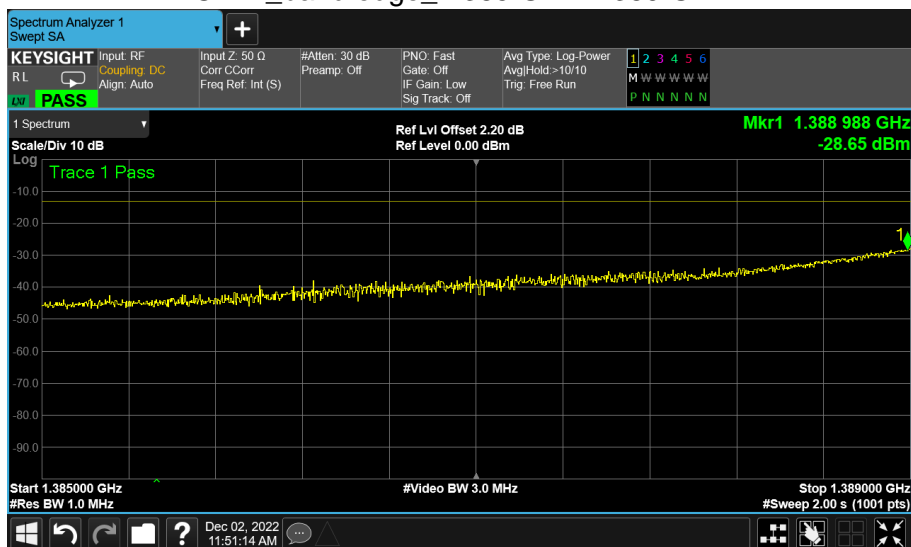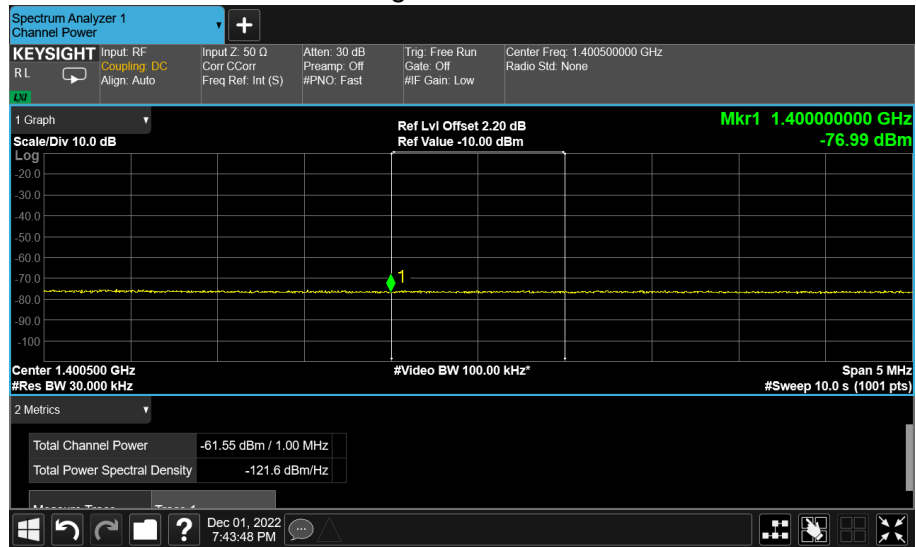## CH11_band edge_1.385 GHz-1.389 GHz
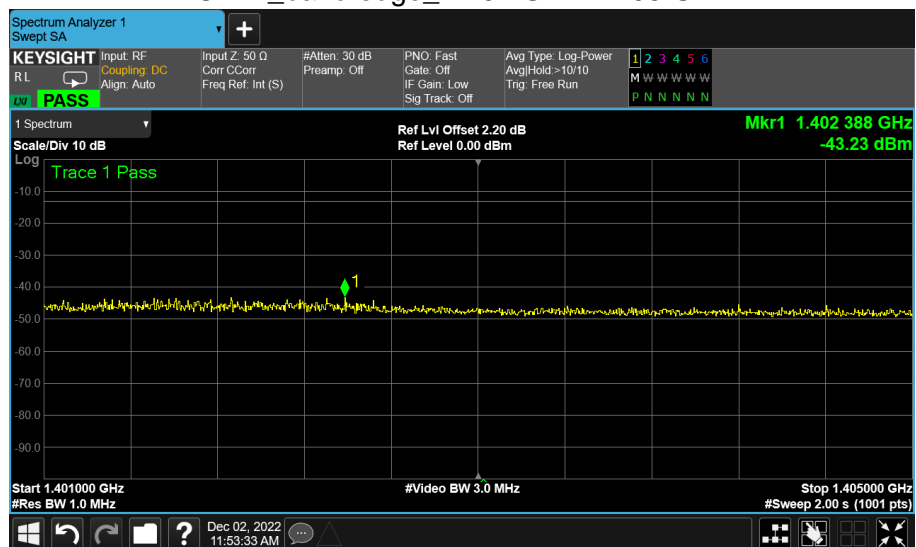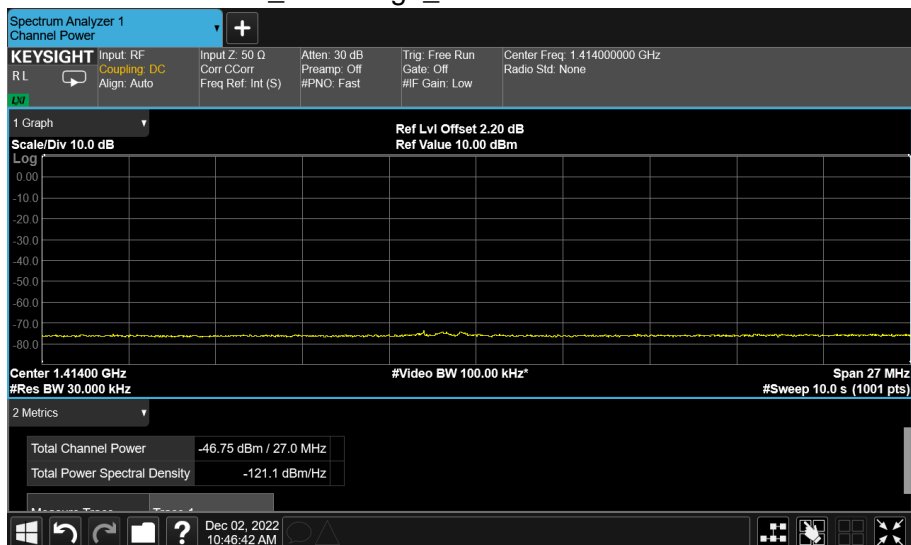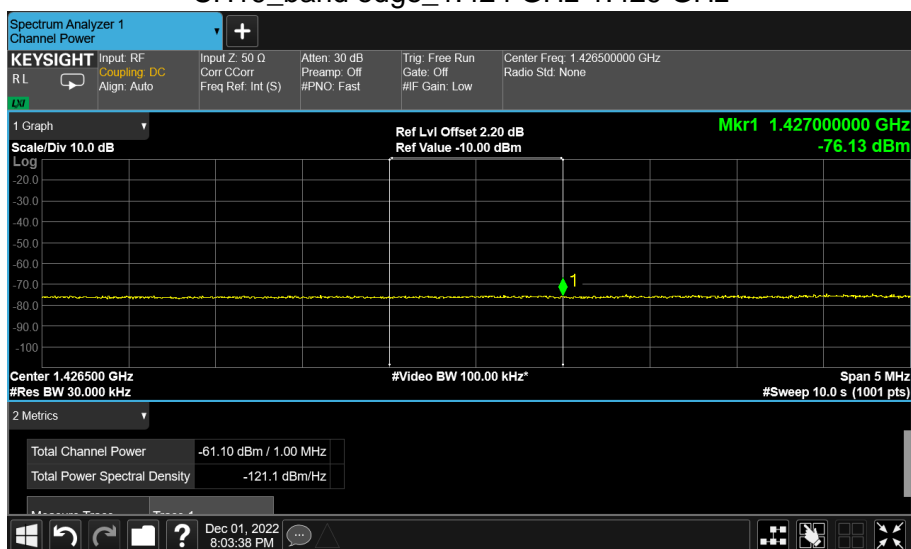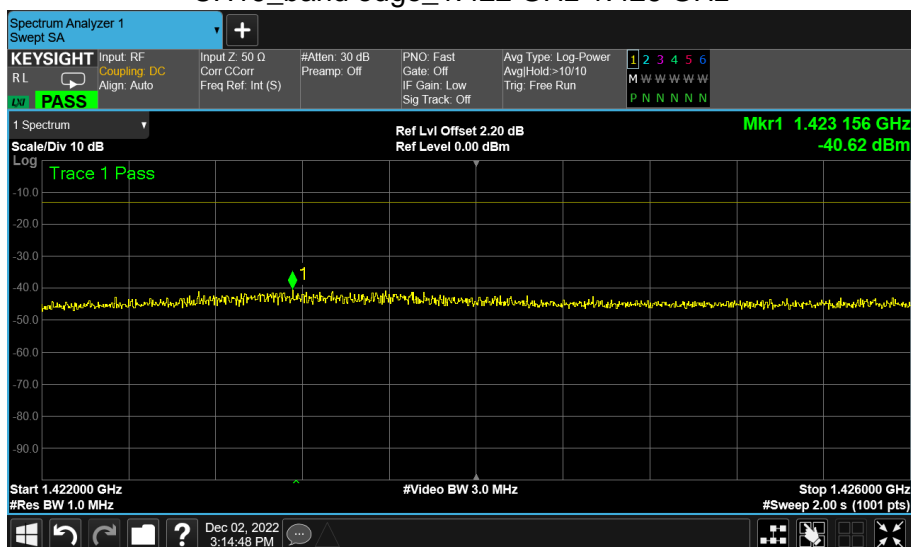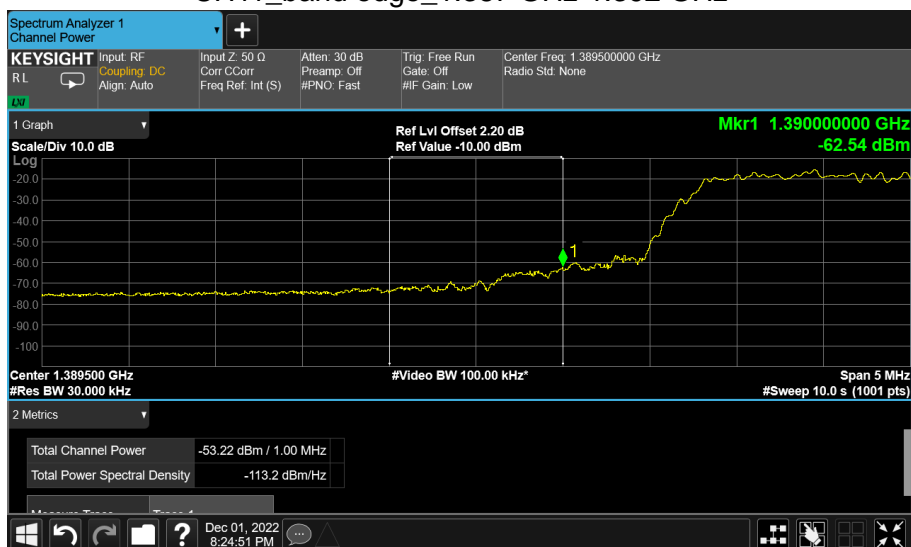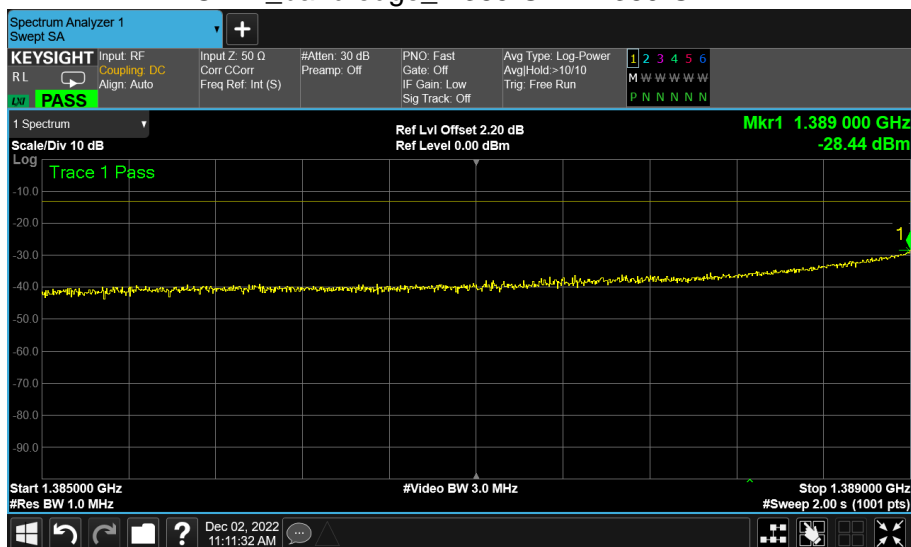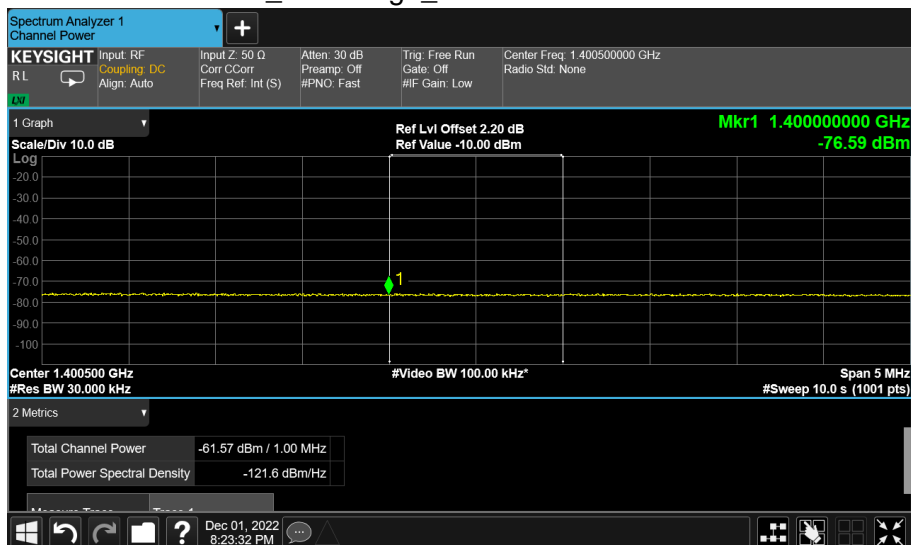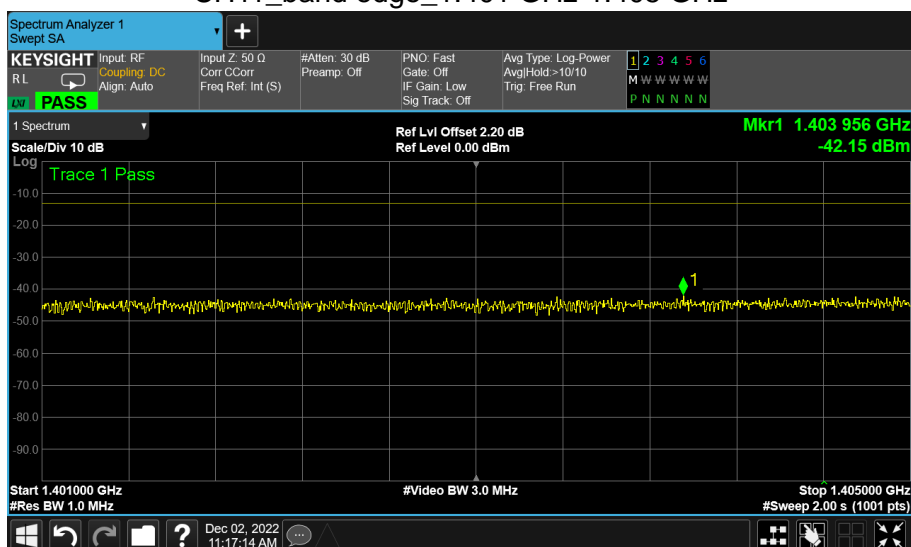
CH11_band edge_1.398 GHz-1.403 GHz

Spectrum Analyzer 1 Channel Power					
KEYSIGHT R L	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	Atten: 30 dB Preamp: Off #PNO: Fast	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 1.400500000 GHz Radio Std: None

1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 2.20 dB
Ref Value -10.00 dBm
Mkr1 1.400000000 GHz
-76.59 dBm

Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100

Center 1.400500 GHz
#Res BW 30.000 kHz
#Video BW 100.00 kHz*
Span 5 MHz
#Sweep 10.0 s (1001 pts)

2 Metrics

Total Channel Power	-61.57 dBm / 1.00 MHz
Total Power Spectral Density	-121.6 dBm/Hz

Dec 01, 2022
8:23:32 PM

CH11_band edge_1.401 GHz-1.405 GHz

Spectrum Analyzer 1 Swept SA					
KEYSIGHT R L PASS	Input: RF Coupling: DC Align: Auto	Input Z: 50 Ω Corr CCorr Freq Ref: Int (S)	#Atten: 30 dB Preamp: Off	PNO: Fast Gate: Off IF Gain: Low Sig Track: Off	Avg Type: Log-Power Avg|Hold:>10/10 Trig: Free Run

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.20 dB
Ref Level 0.00 dBm
Mkr1 1.403 956 GHz
-42.15 dBm

Log
Trace 1 Pass
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0

Start 1.401000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz
Stop 1.405000 GHz
#Sweep 2.00 s (1001 pts)

Dec 02, 2022
11:17:14 AM

CH19_band edge_1.411 GHz-1.416 GHz

Spectrum Analyzer 1	
Channel Power	

KEYSIGHT
R L
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Preamp: Off
#PNO: Fast
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 1.414000000 GHz
Radio Std: None

1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 2.20 dB
Ref Value 10.00 dBm

Log
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0

Center 1.41400 GHz
#Res BW 30.000 kHz
#Video BW 100.00 kHz*
Span 27 MHz
#Sweep 10.0 s (1001 pts)

2 Metrics

| Total Channel Power | -46.66 dBm / 27.0 MHz |
| Total Power Spectral Density | -121.0 dBm/Hz |

Dec 02, 2022
10:56:02 AM

CH19_band edge_1.424 GHz-1.429 GHz

Spectrum Analyzer 1	
Channel Power	

KEYSIGHT
R L
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
Atten: 30 dB
Preamp: Off
#PNO: Fast
Trig: Free Run
Gate: Off
#IF Gain: Low
Center Freq: 1.426500000 GHz
Radio Std: None

1 Graph
Scale/Div 10.0 dB
Ref Lvl Offset 2.20 dB
Ref Value -10.00 dBm
Mkr1 1.427000000 GHz
-75.81 dBm

Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100

Center 1.426500 GHz
#Res BW 30.000 kHz
#Video BW 100.00 kHz*
Span 5 MHz
#Sweep 10.0 s (1001 pts)

2 Metrics

| Total Channel Power | -61.05 dBm / 1.00 MHz |
| Total Power Spectral Density | -121.1 dBm/Hz |

Dec 01, 2022
8:05:02 PM

CH19_band edge_1.422 GHz-1.426 GHz

Spectrum Analyzer 1	
Swept SA	

KEYSIGHT
R L
PASS
Input: RF
Coupling: DC
Align: Auto
Input Z: 50 Ω
Corr CCorr
Freq Ref: Int (S)
#Atten: 30 dB
Preamp: Off
PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off
Avg Type: Log-Power
Avg|Hold:>10/10
Trig: Free Run

1 Spectrum
Scale/Div 10 dB
Ref Lvl Offset 2.20 dB
Ref Level 0.00 dBm
Mkr1 1.425 896 GHz
-39.71 dBm

Log
Trace 1 Pass
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0

Start 1.422000 GHz
#Res BW 1.0 MHz
#Video BW 3.0 MHz
Stop 1.426000 GHz
#Sweep 2.00 s (1001 pts)

Dec 02, 2022
11:49:03 AM

CH19_band edge_1.433 GHz-1.438 GHz

CH19_band edge_1.436 GHz-1.440 GHz

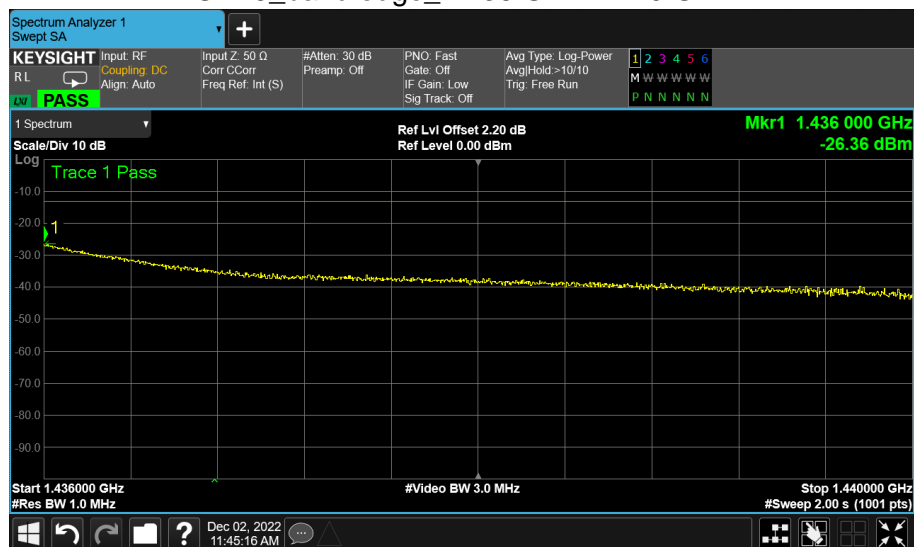# 6. RADIATED SPURIOUS EMISSION (PART 27)

6.1 LIMIT

According to FCC PART 27.53 (j)
(1) For operations in the unpaired 1390-1392 MHz band and the paired 1392-1395 MHz and 1432-1435 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB.

6.2 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

6.3 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, RSE=Rx(dBuV)+CL(dB)+SA(dB)+Gain(dBi)-95.2(dBuV/m to dBm)The SA is calibrated using following setup.
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.
Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.
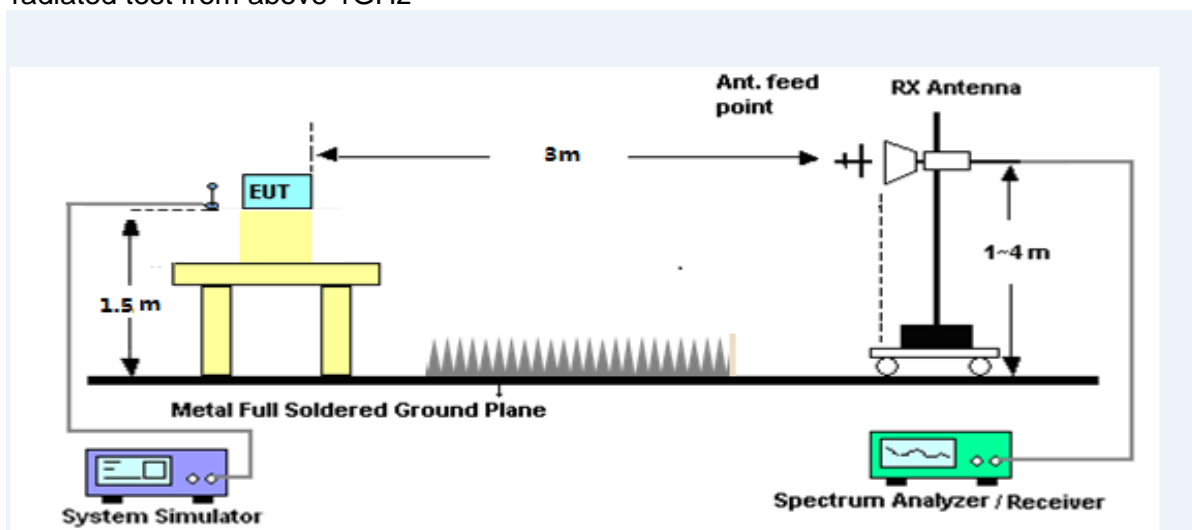
For radiated test from below 30MHz
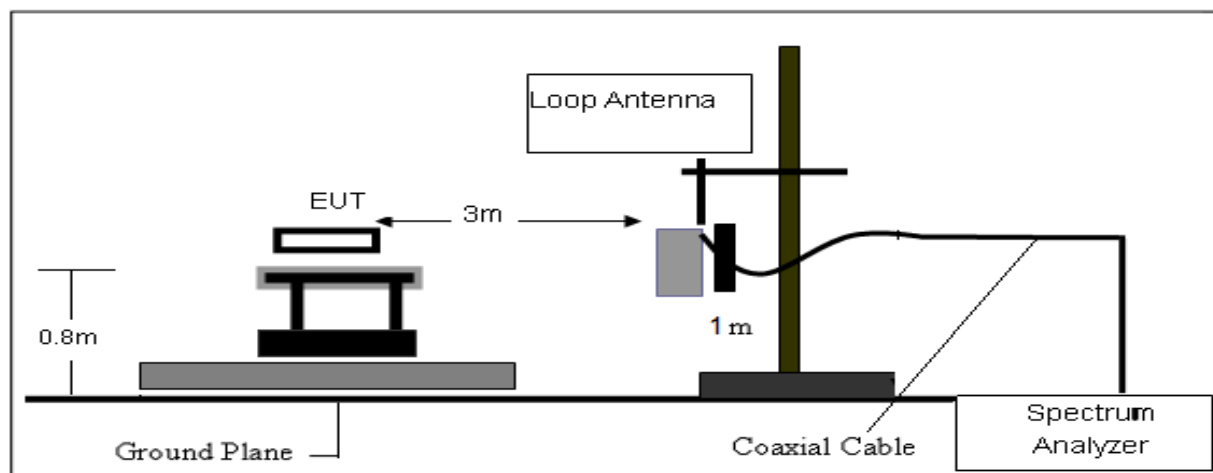
For radiated test from 30MHz to 1GHz
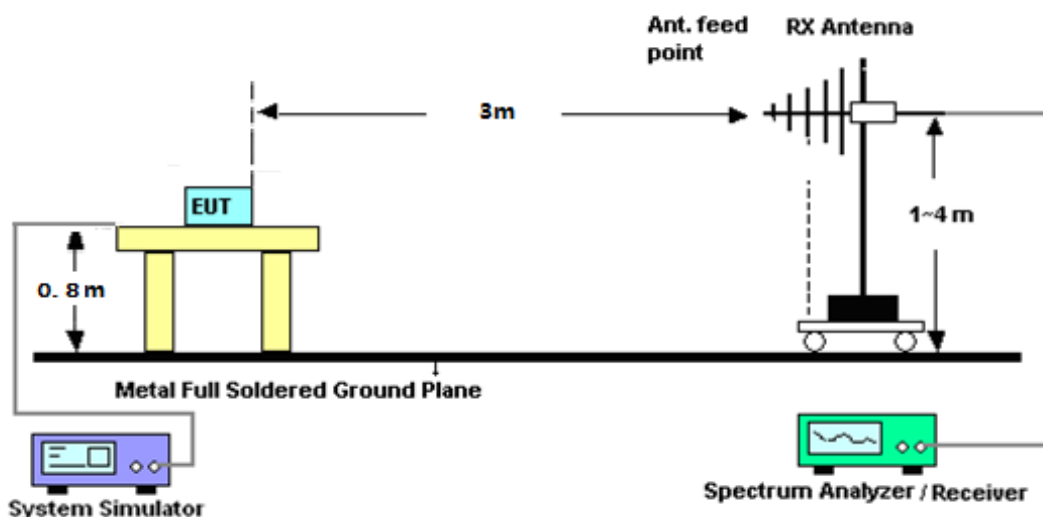
For radiated test from above 1GHz

6.4 TEST PROCEDURES

1. The testing follows C63.26:2015 Section 5.5.

2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.

3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.

4. The table was rotated 360 degrees to determine the position of the highest spurious emission.

5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations

6. Repeat step 2 to step 5 for another polarization.

7. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
= P(W)- [43 + 10log(P)] (dB)
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm

6.5 TEST RESULTS

Note:
1. 9KHz-30MHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Test is divided into three directions, X/Y/Z. X pattern is the worst.
3. Pre-test with remote antenna and without remote antenna modes, find the worst case is with remote antenna mode and recorded in this report.

Below 1GHz

Project: LGT22K037	Test Engineer: Dylan.shi
EUT: Access Point	Temperature: 22.1℃
M/N: ITS867216A	Humidity: 42%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-12-03
Test Mode: SH 2.0 E-WMTS_DBPSK_CH11_1391.452 (worst case)	
Note:	
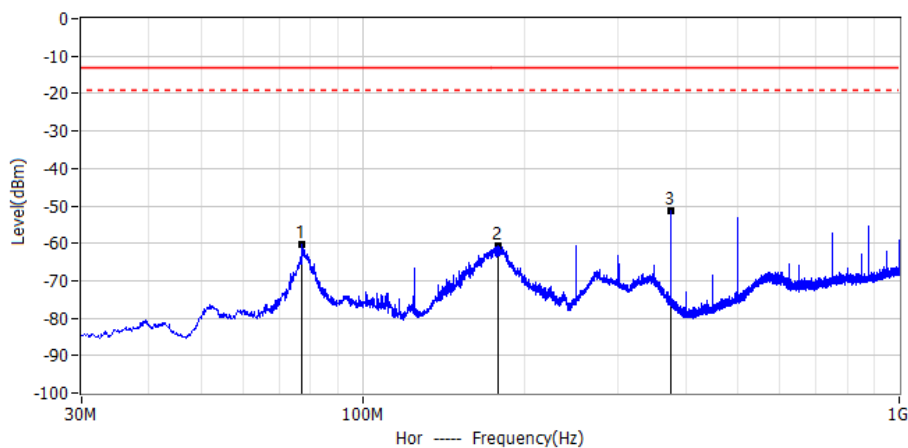
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	77.166MHz	-60.29	-13.00	-47.29	PK	Hor
2*	178.653MHz	-60.56	-13.00	-47.56	PK	Hor
3*	374.956MHz	-51.19	-13.00	-38.19	PK	Hor
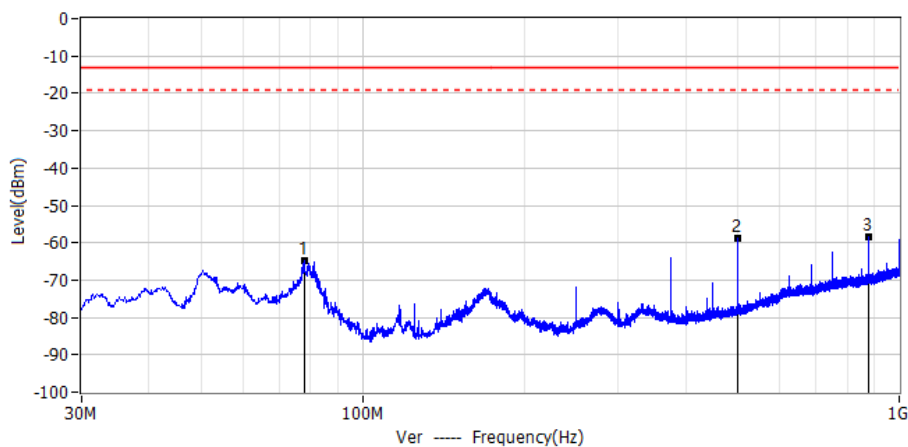
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	77.894MHz	-64.64	-13.00	-51.64	PK	Ver
2*	499.965MHz	-58.83	-13.00	-45.83	PK	Ver
3*	875.113MHz	-58.26	-13.00	-45.26	PK	Ver

Above 1GHz

SH 2.0 E-WMTS_DBPSK

| Project: LGT22K037	Test Engineer: Dylan.shi
EUT: Access Point	Temperature: 22.1℃
M/N: ITS867216A	Humidity: 42%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-12-03
Test Mode: SH 2.0 E-WMTS_DBPSK_CH11_1391.452	
Note: with remote antenna	
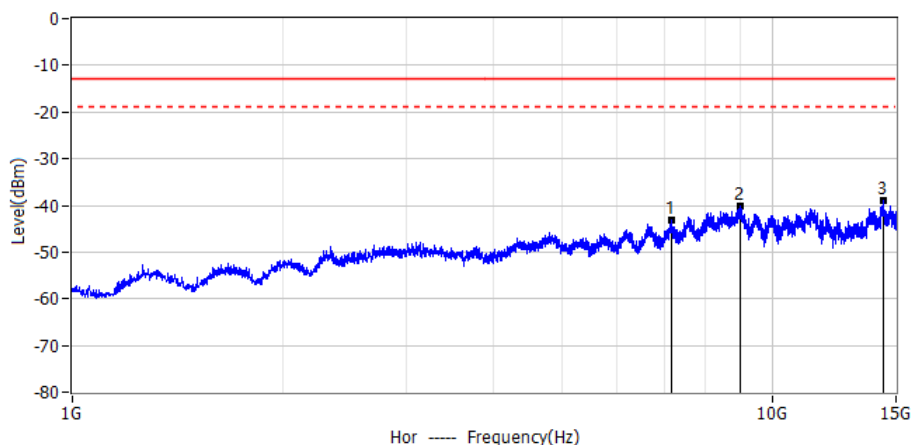
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	7.176GHz	-43.17	-13.00	-30.17	PK	Hor
2*	8.989GHz	-40.13	-13.00	-27.13	PK	Hor
3*	14.400GHz	-39.07	-13.00	-26.07	PK	Hor
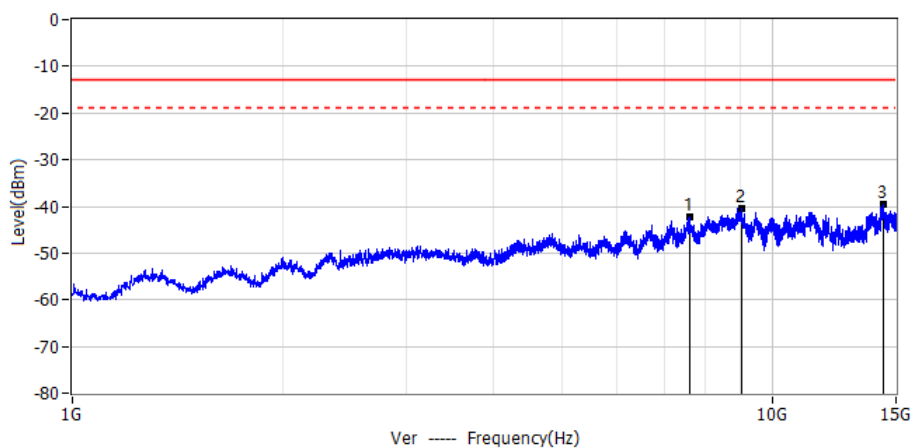
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	7.601GHz	-42.34	-13.00	-29.34	PK	Ver
2*	9.010GHz	-40.49	-13.00	-27.49	PK	Ver
3*	14.402GHz	-39.47	-13.00	-26.47	PK	Ver

| Project: LGT22K037	Test Engineer: Dylan.shi
EUT: Access Point	Temperature: 22.1℃
M/N: ITS867216A	Humidity: 42%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-12-03
Test Mode: SH 2.0 E-WMTS_DBPSK_CH13_1394.908	
Note: with remote antenna	
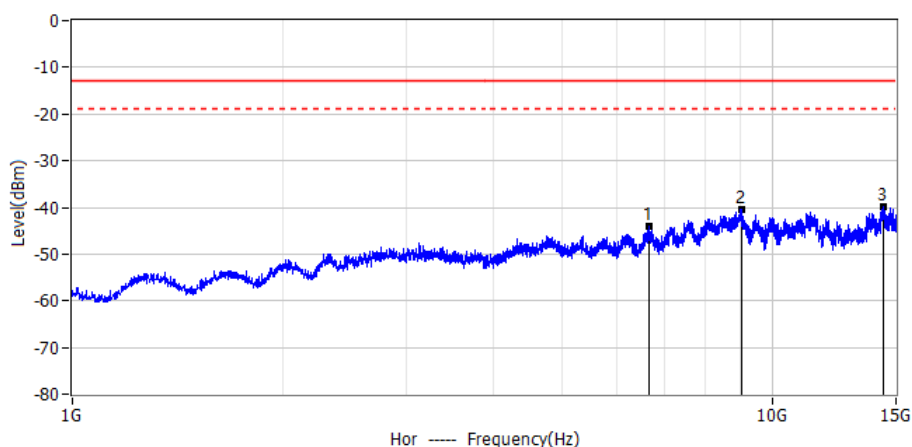
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	6.656GHz	-43.97	-13.00	-30.97	PK	Hor
2*	9.010GHz	-40.32	-13.00	-27.32	PK	Hor
3*	14.363GHz	-39.75	-13.00	-26.75	PK	Hor
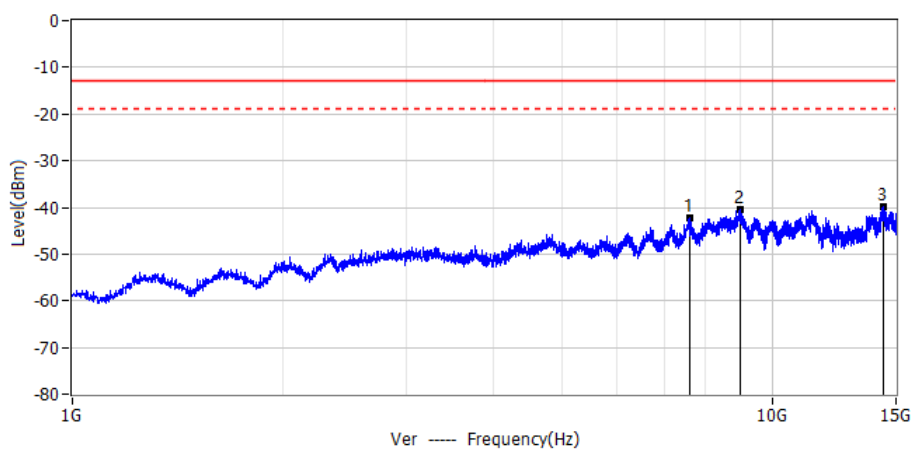
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	7.601GHz	-42.22	-13.00	-29.22	PK	Ver
2*	8.994GHz	-40.34	-13.00	-27.34	PK	Ver
3*	14.409GHz	-39.91	-13.00	-26.91	PK	Ver

| Project: LGT22K037	Test Engineer: Dylan.shi
EUT: Access Point	Temperature: 22.1℃
M/N: ITS867216A	Humidity: 42%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-12-03
Test Mode: SH 2.0 E-WMTS_DBPSK_CH18_1431.969	
Note: with remote antenna	
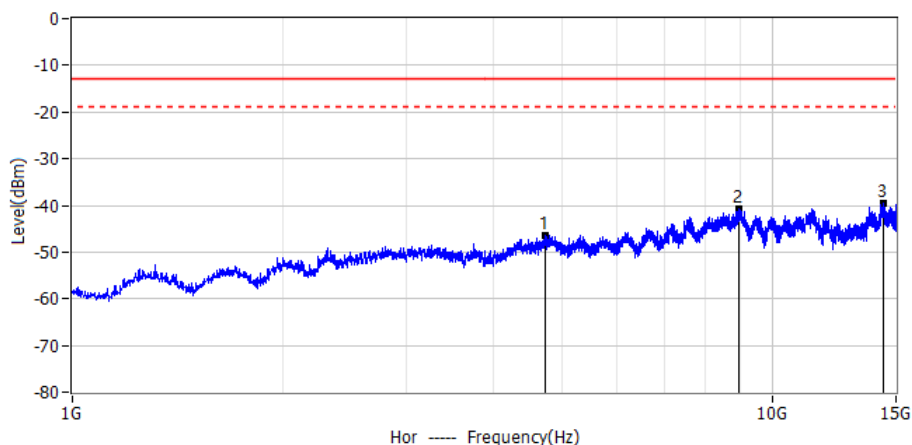
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	4.731GHz	-46.42	-13.00	-33.42	PK	Hor
2*	8.936GHz	-40.74	-13.00	-27.74	PK	Hor
3*	14.414GHz	-39.51	-13.00	-26.51	PK	Hor
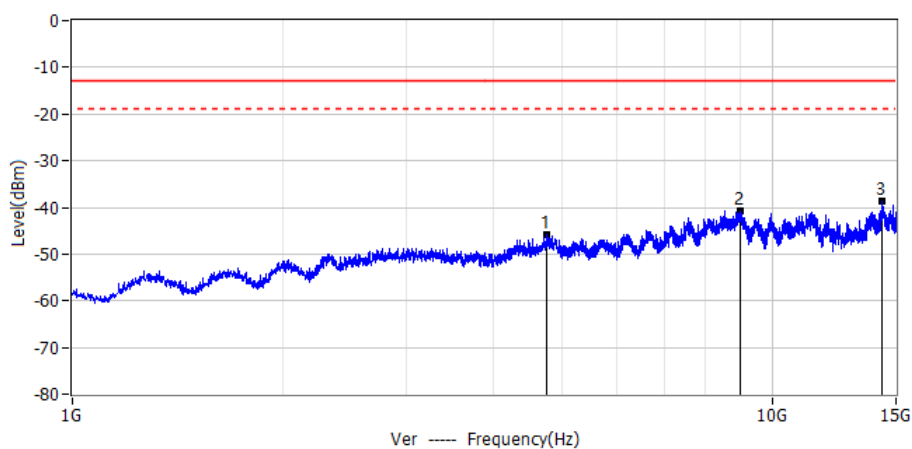
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	4.763GHz	-45.85	-13.00	-32.85	PK	Ver
2*	8.996GHz	-40.60	-13.00	-27.60	PK	Ver
3*	14.304GHz	-38.55	-13.00	-25.55	PK	Ver

Project: LGT22K037	Test Engineer: Dylan.shi
EUT: Access Point	Temperature: 22.1℃
M/N: ITS867216A	Humidity: 42%RH
Test Voltage: AC 120V/60Hz	Test Data: 2022-12-03
Test Mode: SH 2.0 E-WMTS_DBPSK_CH19_1433.697	
Note: with remote antenna	
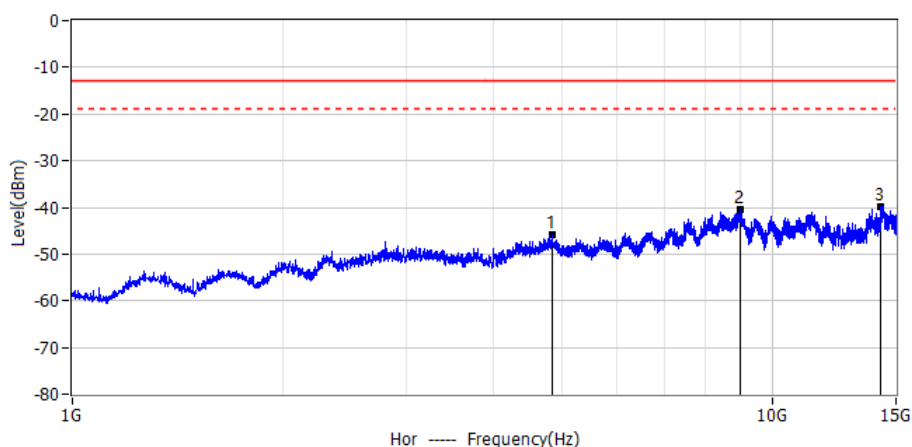
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	4.843GHz	-45.95	-13.00	-32.95	PK	Hor
2*	9.006GHz	-40.54	-13.00	-27.54	PK	Hor
3*	14.290GHz	-39.83	-13.00	-26.83	PK	Hor
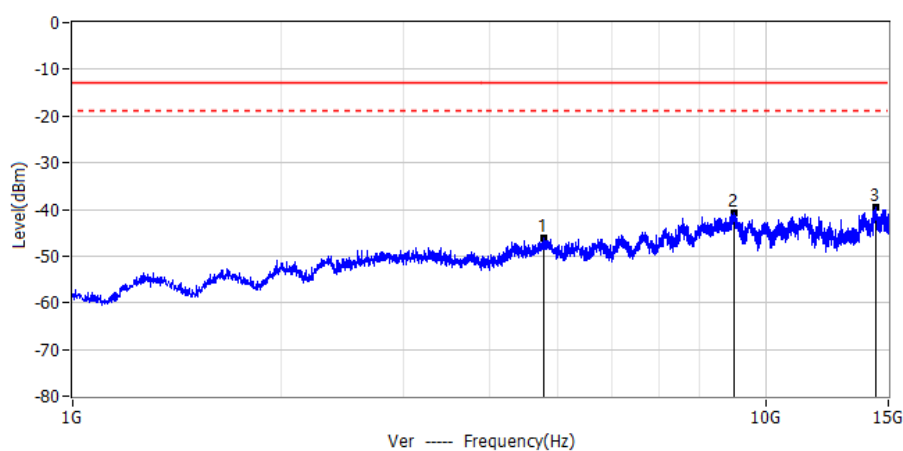
No.	Frequency	Level dBm	Limit dBm	Margin dB	Detector	Polar
1*	4.784GHz	-46.05	-13.00	-33.05	PK	Ver
2*	9.008GHz	-40.64	-13.00	-27.64	PK	Ver
3*	14.410GHz	-39.41	-13.00	-26.41	PK	Ver