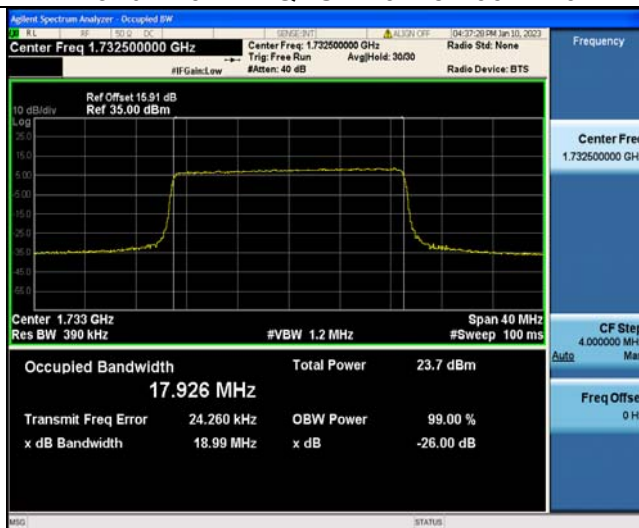




Band4-20MHz-QPSK-20050-100RB#0



Band4-20MHz-QPSK-20175-100RB#0



Band4-20MHz-QPSK-20300-100RB#0

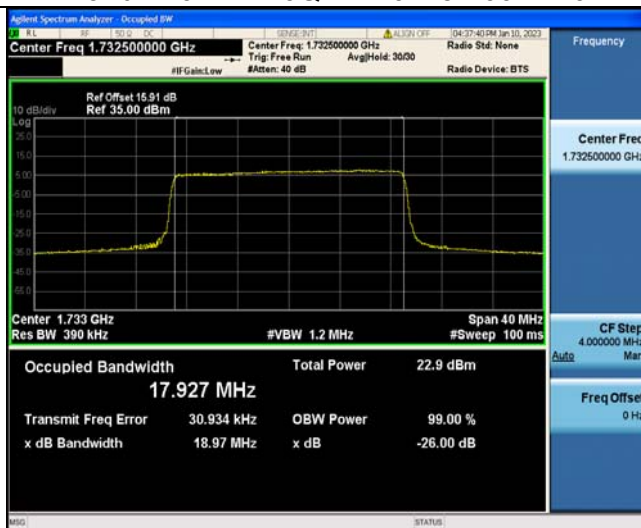




Band4-20MHz-16QAM-20050-100RB#0



Band4-20MHz-16QAM-20175-100RB#0



Band4-20MHz-16QAM-20300-100RB#0





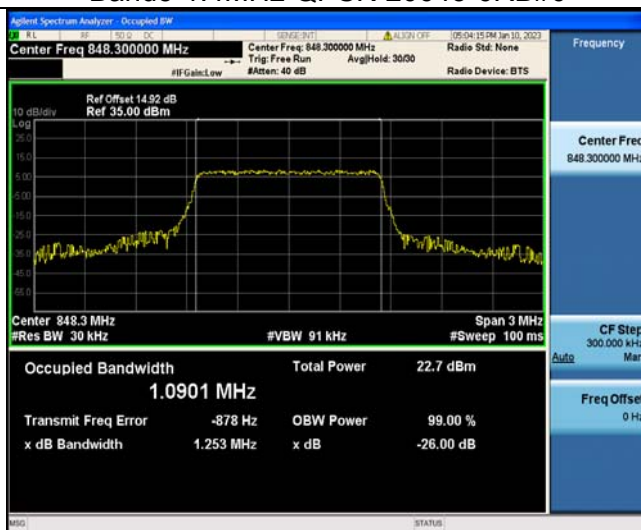
Band5-1.4MHz-QPSK-20407-6RB#0

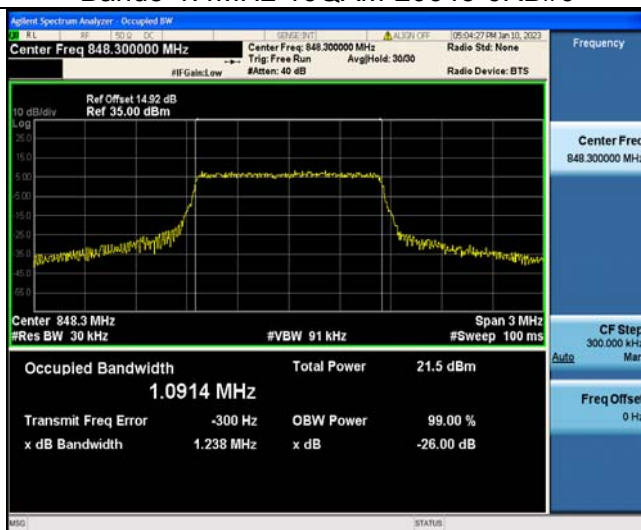


Band5-1.4MHz-QPSK-20525-6RB#0



Band5-1.4MHz-QPSK-20643-6RB#0



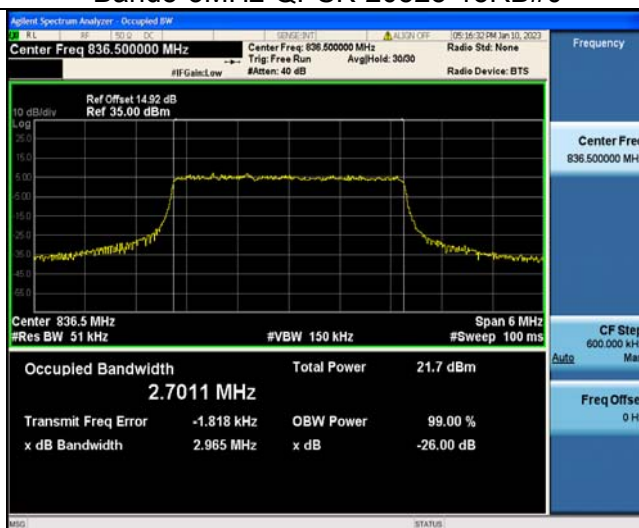




Band5-3MHz-QPSK-20415-15RB#0



Band5-3MHz-QPSK-20525-15RB#0



Band5-3MHz-QPSK-20635-15RB#0





Band5-3MHz-16QAM-20415-15RB#0



Band5-3MHz-16QAM-20525-15RB#0



Band5-3MHz-16QAM-20635-15RB#0









Band5-10MHz-QPSK-20450-50RB#0



Band5-10MHz-QPSK-20525-50RB#0



Band5-10MHz-QPSK-20600-50RB#0





Agilent Spectrum Analyzer - Occupied BW

Center Freq 829.000000 MHz

Ref 35.00 dBm

Span 20 MHz

#Res BW 200 kHz

#VBW 620 kHz

#Sweep 100 ms

Occupied Bandwidth: 8.9559 MHz

Total Power: 20.3 dBm

Transmit Freq Error: 14.603 kHz

OBW Power: 99.00 %

x dB Bandwidth: 9.560 MHz

x dB: -26.00 dB

Frequency: 829.000000 MHz

CF Step: 2.000000 MHz

Freq Offset: 0 Hz

[illegible]

Agilent Spectrum Analyzer - Occupied BW

Center Freq 844.000000 MHz

Span 20 MHz

Res BW 200 kHz

#VBW 620 kHz

#Sweep 100 ms

Total Power 20.2 dBm

Occupied Bandwidth 8.9667 MHz

Transmit Freq Error 14.384 kHz

x dB Bandwidth 9.557 MHz

x dB -26.00 dB

Ref Offset 14.92 dB

Ref 35.00 dBm

Center Freq 844.000000 MHz

Span 20 MHz

Res BW 200 kHz

#VBW 620 kHz

#Sweep 100 ms

Total Power 20.2 dBm

Occupied Bandwidth 8.9667 MHz

Transmit Freq Error 14.384 kHz

x dB Bandwidth 9.557 MHz

x dB -26.00 dB

Ref Offset 14.92 dB

Ref 35.00 dBm



Band7-5MHz-QPSK-20775-25RB#0



Band7-5MHz-QPSK-21100-25RB#0



Band7-5MHz-QPSK-21425-25RB#0





Band7-5MHz-16QAM-20775-25RB#0



Band7-5MHz-16QAM-21100-25RB#0



Band7-5MHz-16QAM-21425-25RB#0





Band7-10MHz-QPSK-20800-50RB#0



Band7-10MHz-QPSK-21100-50RB#0



Band7-10MHz-QPSK-21400-50RB#0





Band7-10MHz-16QAM-20800-50RB#0



Band7-10MHz-16QAM-21100-50RB#0



Band7-10MHz-16QAM-21400-50RB#0





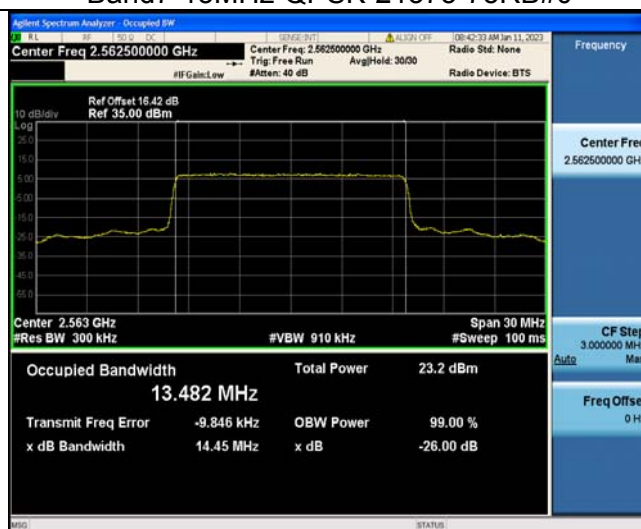
Band7-15MHz-QPSK-20825-75RB#0



Band7-15MHz-QPSK-21100-75RB#0

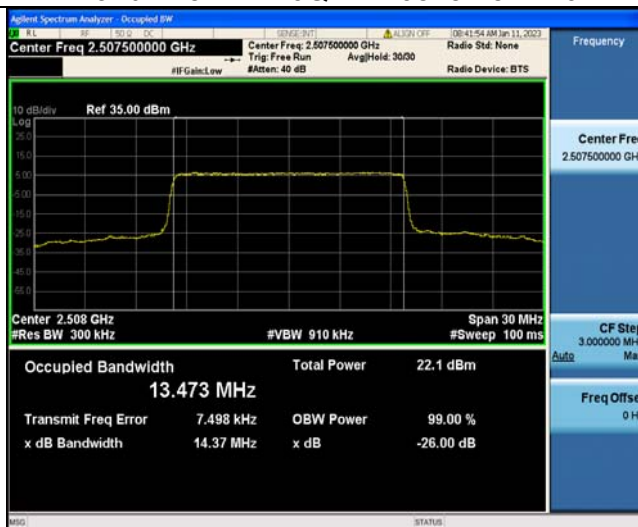


Band7-15MHz-QPSK-21375-75RB#0





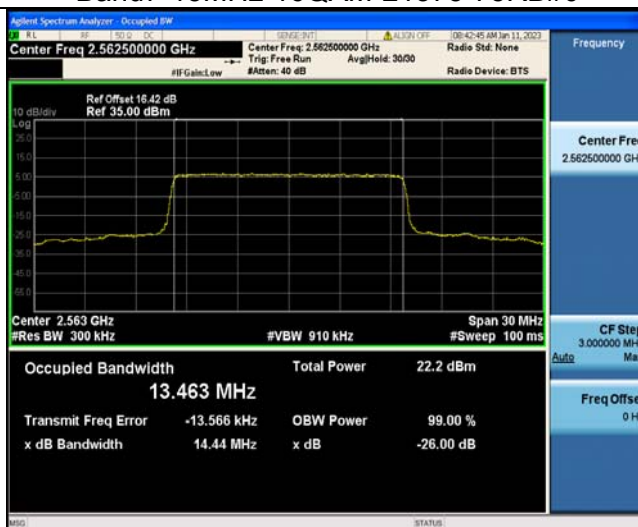
Band7-15MHz-16QAM-20825-75RB#0



Band7-15MHz-16QAM-21100-75RB#0



Band7-15MHz-16QAM-21375-75RB#0





Band7-20MHz-QPSK-20850-100RB#0



Band7-20MHz-QPSK-21100-100RB#0



Band7-20MHz-QPSK-21350-100RB#0





Band7-20MHz-16QAM-20850-100RB#0



Band7-20MHz-16QAM-21100-100RB#0



Band7-20MHz-16QAM-21350-100RB#0







Band12-1.4MHz-16QAM-23017-6RB#0



Band12-1.4MHz-16QAM-23095-6RB#0



Band12-1.4MHz-16QAM-23173-6RB#0







Band12-3MHz-16QAM-23025-15RB#0



Band12-3MHz-16QAM-23095-15RB#0



Band12-3MHz-16QAM-23165-15RB#0





Band12-5MHz-QPSK-23035-25RB#0



Band12-5MHz-QPSK-23095-25RB#0



Band12-5MHz-QPSK-23155-25RB#0





Agilent Spectrum Analyzer - Occupied BW

Center Freq 701.500000 MHz
 #F-Gain: Low
 #Atten: 40 dB
 Radio St: None
 Avg/Hold: 100/100
 Radio Device: BTS

Ref 30.00 dBm

Center 701.5 MHz
 #Res BW 100 kHz
 #VBW 300 kHz
 Span 10 MHz
 #Sweep 100 ms

Occupied Bandwidth	Total Power
4.5206 MHz	24.8 dBm

Transmit Freq Error -5.576 kHz **OBW Power** 99.00 %
x dB Bandwidth 5.243 MHz **x dB** -26.00 dB

Frequency
 Center Freq 701.500000 MHz
 CF Step 1.000000 MHz
 Mar
 Freq Offset 0 Hz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 707.500000 MHz

Ref 30.00 dBm

Center Freq 707.500000 MHz

Trig: Free Run

Avg/Hold: 100/100

Radio Std: None

#FGain: Low

#Atten: 40 dB

Radio Device: BTS

Center Freq 707.5 MHz

#Res BW 100 kHz

#VBW 300 kHz

Span 10 MHz

#Sweep 100 ms

Occupied Bandwidth	Total Power	24.7 dBm
4.5556 MHz		
Transmit Freq Error	-43 Hz	OBW Power
		99.00 %
x dB Bandwidth	5.553 MHz	x dB
		-26.00 dB

Agilent Spectrum Analyzer - Occupied BW

Center Freq 713.500000 MHz

Ref 30.00 dBm

Span 10 MHz

Res BW 100 kHz

VBW 300 kHz

Sweep 100 ms

Occupied Bandwidth: 4.5363 MHz

Total Power: 24.4 dBm

Transmit Freq Error: -11.642 kHz

OBW Power: 99.00 %

x dB Bandwidth: 5.311 MHz

x dB: -26.00 dB



Band12-10MHz-QPSK-23060-50RB#0



Band12-10MHz-QPSK-23095-50RB#0



Band12-10MHz-QPSK-23130-50RB#0





Band12-10MHz-16QAM-23060-50RB#0



Band12-10MHz-16QAM-23095-50RB#0



Band12-10MHz-16QAM-23130-50RB#0





Agilent Spectrum Analyzer - Occupied BW

Center Freq 706.500000 MHz

Span 10 MHz

Ref 30.00 dBm

Occupied Bandwidth: 4.5229 MHz

Total Power: 25.1 dBm

Transmit Freq Error: -1.308 kHz

OBW Power: 99.00 %

x dB Bandwidth: 5.480 MHz

x dB: -26.00 dB

Frequency: 706.500000 MHz

CF Step: 1.000000 MHz

Freq Offset: 0 Hz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 710.000000 MHz

Ref 30.00 dBm

Span 10 MHz

Res BW 100 kHz

VBW 300 kHz

Sweep 100 ms

Occupied Bandwidth: 4.5171 MHz

Total Power: 25.1 dBm

Transmit Freq Error: -611 Hz

OBW Power: 99.00 %

x dB Bandwidth: 5.223 MHz

x dB: -26.00 dB

Frequency: 710.000000 MHz

CF Step: 1.000000 MHz

Freq Offset: 0 Hz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 713.500000 MHz

Ref 30.00 dBm

Span 10 MHz

Res BW 100 kHz

Occupied Bandwidth: 4.5242 MHz

Total Power: 25.0 dBm

Transmit Freq Error: -16.645 kHz

OBW Power: 99.00 %

x dB Bandwidth: 5.275 MHz

x dB: -26.00 dB



Agilent Spectrum Analyzer - Occupied BW

Center Freq 706.500000 MHz
 #F-Gain: Low
 #Att: 40 dB

Center Freq: 706.500000 MHz
 Trig: Free Run
 Avg/Hold: 100/100

Radio St: None
 Radio Device: BTS

Frequency

Center Freq: 706.500000 MHz

CF Step: 1.000000 MHz

Audio: Manual

Freq Offset: 0 Hz

MSG STATUS

Occupied Bandwidth	Total Power	24.2 dBm
4.5526 MHz		
Transmit Freq Error	-3.265 kHz	OBW Power 99.00 %
x dB Bandwidth	5.533 MHz	x dB -26.00 dB

Agilent Spectrum Analyzer - Occupied BW

Center Freq 710.000000 MHz

Ref 30.00 dBm

Span 10 MHz

#Res BW 100 kHz

#VBW 300 kHz

#Sweep 100 ms

Occupied Bandwidth: 4.5514 MHz

Total Power: 24.2 dBm

Transmit Freq Error: 3.051 kHz

OBW Power: 99.00 %

x dB Bandwidth: 5.662 MHz

x dB: -26.00 dB

Frequency: 710.000000 MHz

CF Step: 1.000000 MHz

Auto Man

Freq Offset: 0 Hz

Agilent Spectrum Analyzer - Occupied BW

Center Freq 713.500000 MHz

Ref 30.00 dBm

Span 10 MHz

Occupied BW 4.5158 MHz

Total Power 24.2 dBm

Transmit Freq Error -12.876 kHz

OBW Power 99.00 %

x dB Bandwidth 5.234 MHz

x dB -26.00 dB

Frequency 713.500000 MHz

CF Step 1.000000 MHz

Auto Man

Freq Offset 0 Hz

STATUS



Agilent Spectrum Analyzer - Occupied BW

Center Freq 709.000000 MHz

Center Freq: 709.000000 MHz
Trig: Free Run
#Atten: 40 dB

10:47:03 AM Jan 13, 2023
Radio Stk: None
Avg/Hold: 30/50
Radio Device: BTS

#F Gain: Low

Ref 30.00 dBm

Center 709 MHz
#Res BW 200 kHz
#Sweep 100 ms

Span 20 MHz
#VBW 620 kHz

Occupied Bandwidth	Total Power	25.5 dBm	
8.9913 MHz			
Transmit Freq Error	-892 Hz	OBW Power	99.00 %
x dB Bandwidth	10.10 MHz	x dB	-26.00 dB

Agilent Spectrum Analyzer - Occupied BW

Center Freq 710.000000 MHz
 #F Gain: Low
 #Att: 40 dB

Trig: Free Run
 Avg/Hold: 30/50

Radio Std: None
 Radio Device: BTS

Ref 30.00 dBm

Center 710 MHz
 #Res BW 200 kHz
 #VBW 620 kHz
 Span 20 MHz
 #Sweep 100 ms

Occupied Bandwidth	Total Power	25.7 dBm
8.9868 MHz		
Transmit Freq Error	OBW Power	99.00 %
0.00 kHz		
x dB Bandwidth	x dB	-26.00 dB

Agilent Spectrum Analyzer - Occupied BW

Center Freq 711.000000 MHz
 #Res BW 200 kHz
 #Sweep 100 ms

Trig: Free Run
 #Atten: 40 dB
 Avg/Hold: 30/50

Radio Std: Jern 13, 2003
 Radio Device: BTS

Frequency

Center Freq 711.000000 MHz

CF Step 2.000000 MHz

Auto Man

Freq Offset 0 Hz

Occupied Bandwidth	Total Power	25.4 dBm
8.9541 MHz		
Transmit Freq Error	-3.669 kHz	OBW Power 99.00 %
x dB Bandwidth	9.909 MHz	x dB -26.00 dB



Band17-10MHz-16QAM-23780-50RB#0



Band17-10MHz-16QAM-23790-50RB#0



Band17-10MHz-16QAM-23800-50RB#0





5.5 Spurious emissions at antenna terminal

5.5.1 Limit

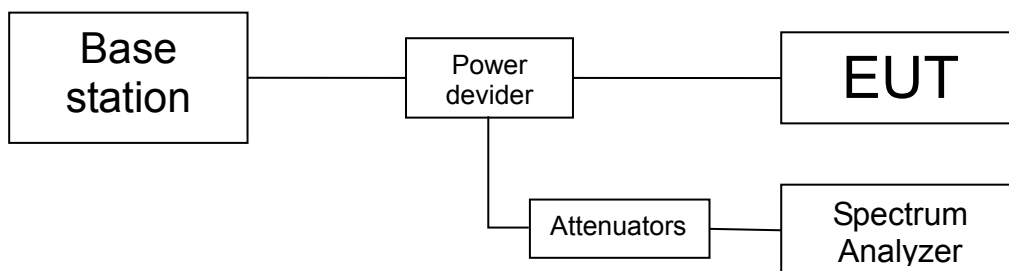
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB (-13 dBm).

Band7: For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log(P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log(P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log(P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log(P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log(P)$ dB at or below 2490.5 MHz.

5.5.2 Test procedure

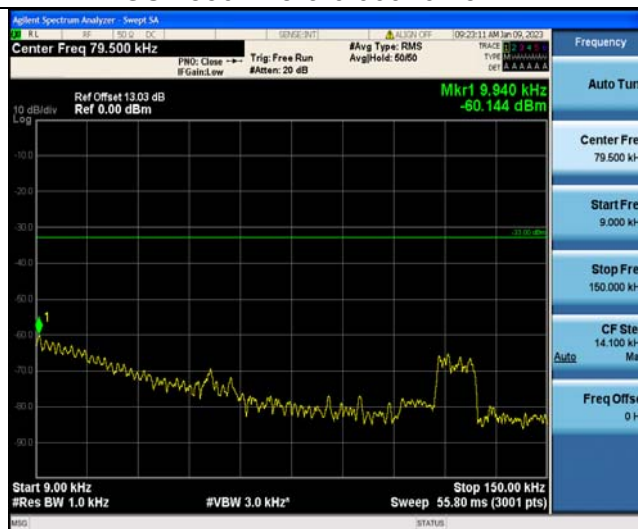
1. The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 100 kHz when below 1GHz, 1MHz when above 1 GHz; sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.
3. For the out of band: Set the RBW=100 kHz, VBW=300 kHz when below 1 GHz, RBW =1 MHz, VBW=3 MHz when above 1 GHz, Start=30MHz, Stop= 10th harmonic.
4. Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.

5.5.3 Test setup

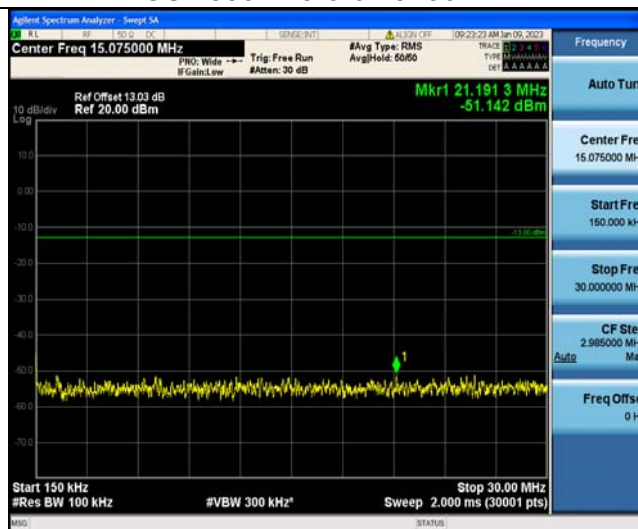


5.5.4 Test results

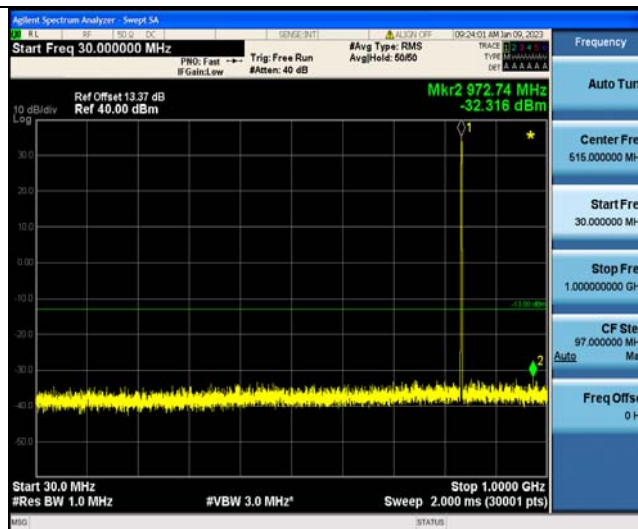
GSM850-128-3-0.009~0.15MHz



GSM850-128-3-0.15~30MHz



GSM850-128-3-30~1000MHz





GSM850-128-3-1000~3000MHz



GSM850-128-3-3000~10000MHz

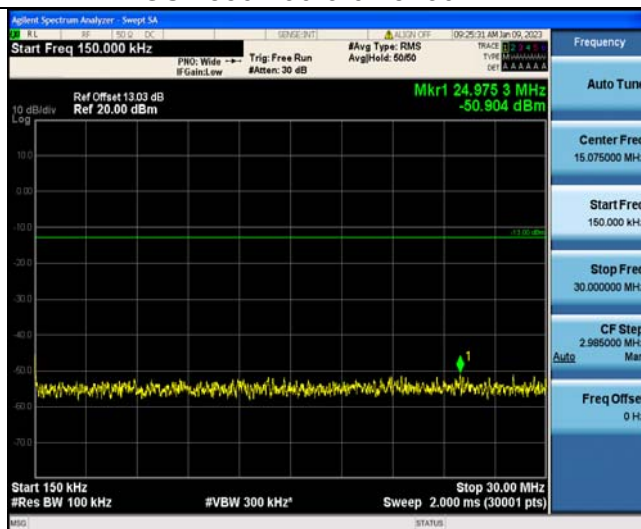


GSM850-190-3-0.009~0.15MHz

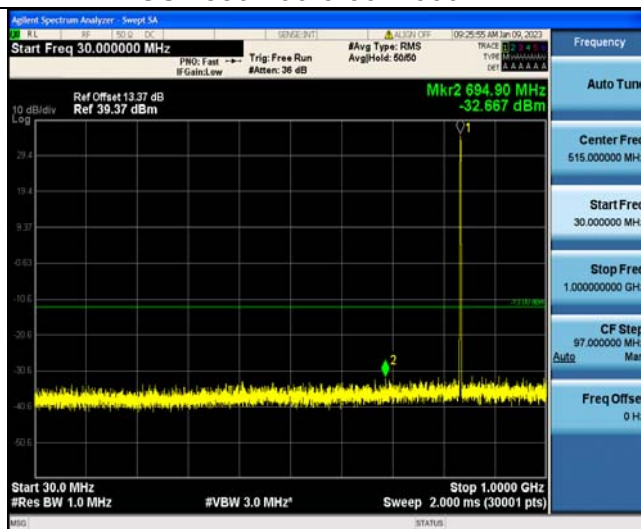




GSM850-190-3-0.15~30MHz



GSM850-190-3-30~1000MHz



GSM850-190-3-1000~3000MHz





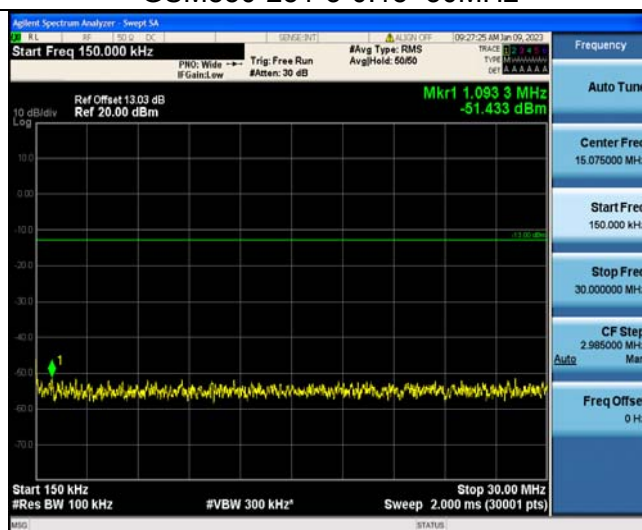
GSM850-190-3-3000~10000MHz



GSM850-251-3-0.009~0.15MHz

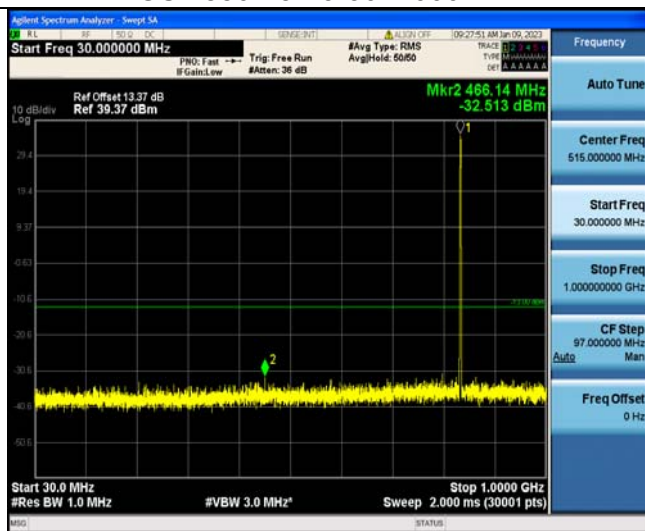


GSM850-251-3-0.15~30MHz





GSM850-251-3-30~1000MHz



GSM850-251-3-1000~3000MHz

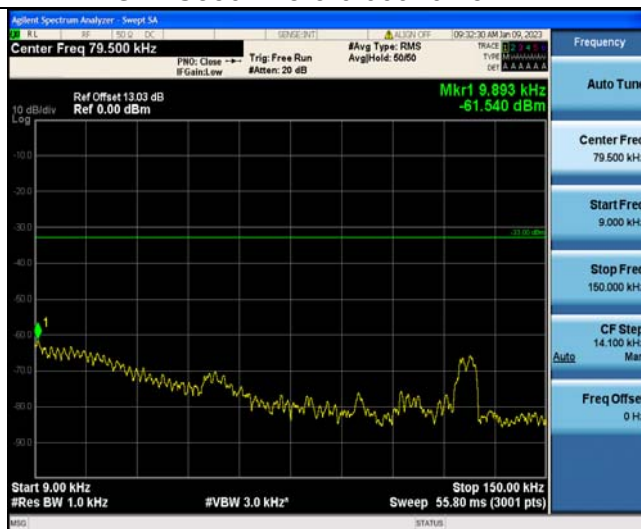


GSM850-251-3-3000~10000MHz

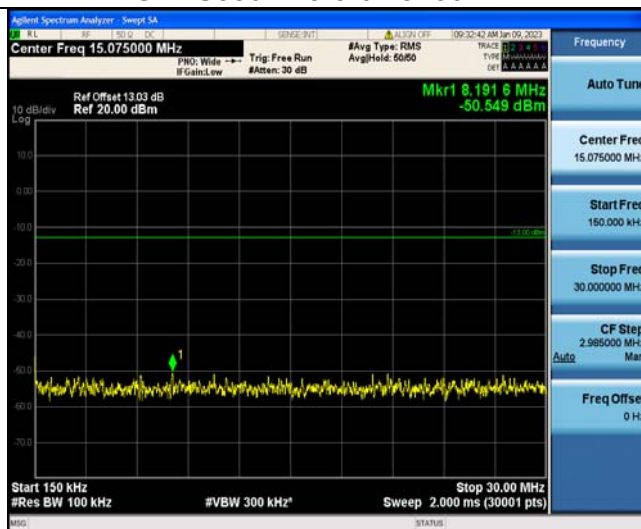




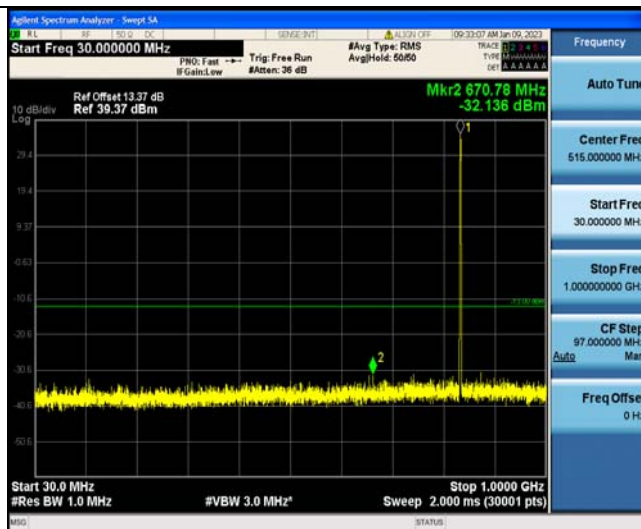
GPRS850-128-3-0.009~0.15MHz



GPRS850-128-3-0.15~30MHz



GPRS850-128-3-30~1000MHz





GPRS850-128-3-1000~3000MHz



GPRS850-128-3-3000~10000MHz

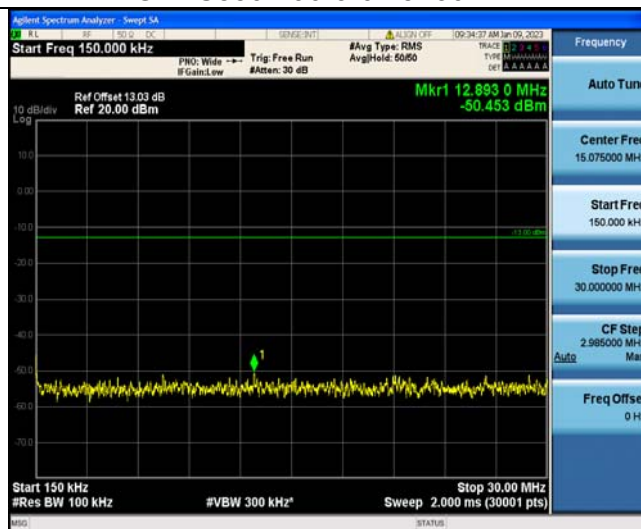


GPRS850-190-3-0.009~0.15MHz

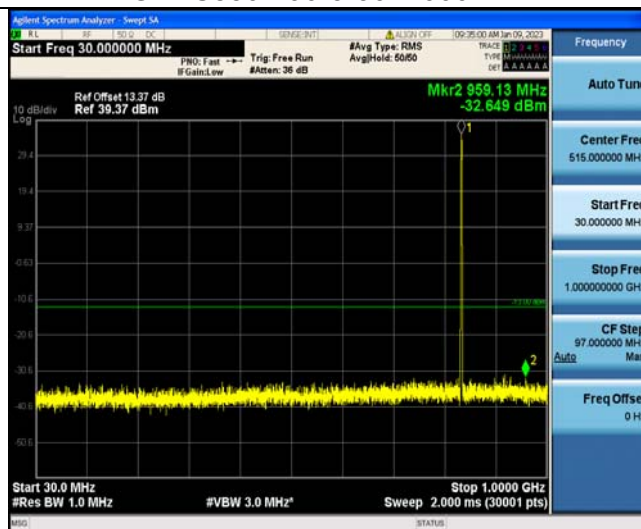




GPRS850-190-3-0.15~30MHz



GPRS850-190-3-30~1000MHz



GPRS850-190-3-1000~3000MHz





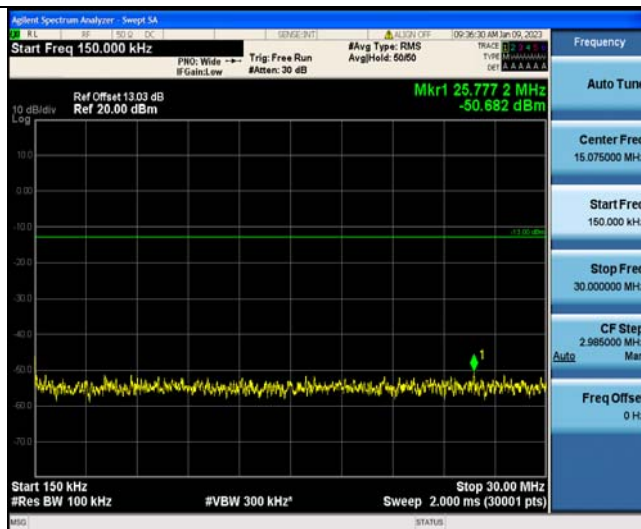
GPRS850-190-3-3000~10000MHz



GPRS850-251-3-0.009~0.15MHz

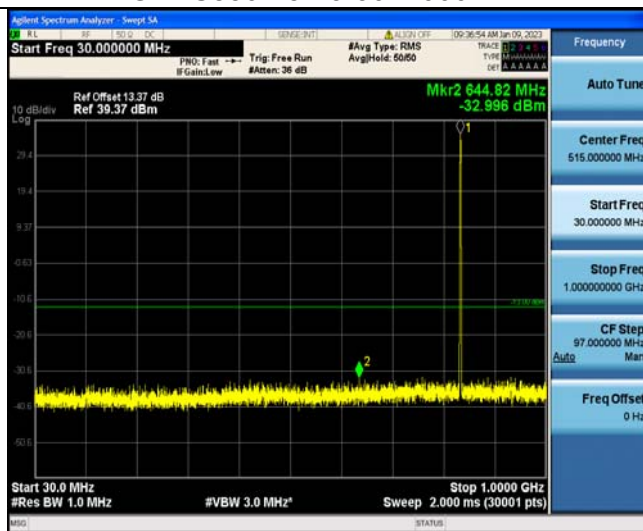


GPRS850-251-3-0.15~30MHz





GPRS850-251-3-30~1000MHz



GPRS850-251-3-1000~3000MHz

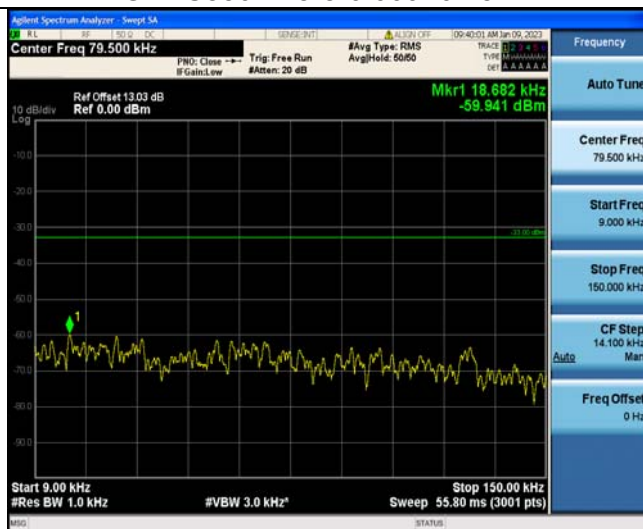


GPRS850-251-3-3000~10000MHz

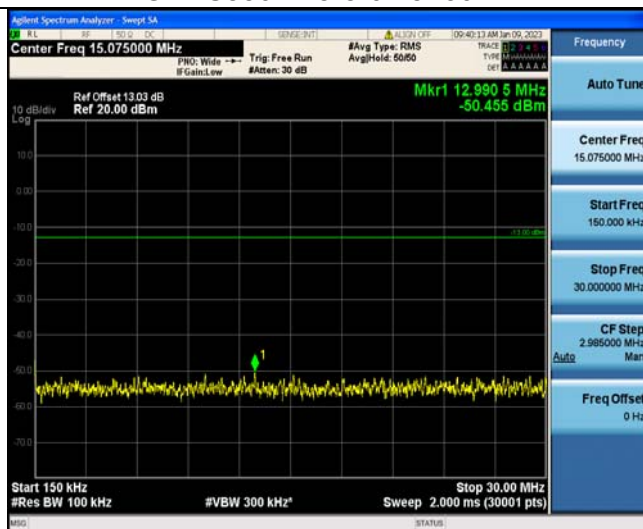




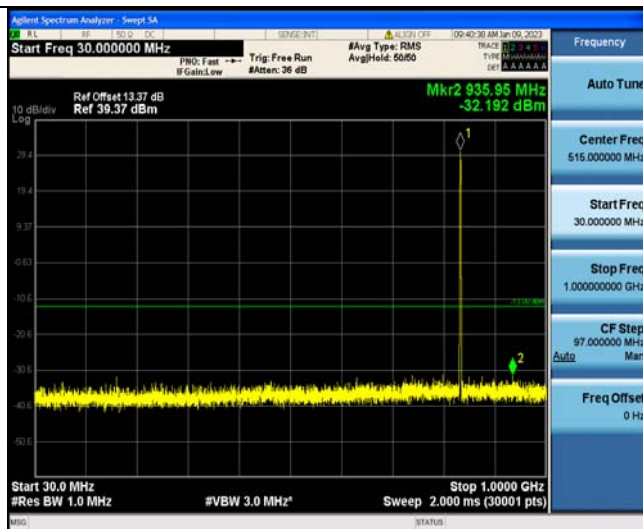
EGPRS850-128-8-0.009~0.15MHz



EGPRS850-128-8-0.15~30MHz



EGPRS850-128-8-30~1000MHz





EGPRS850-128-8-1000~3000MHz



EGPRS850-128-8-3000~10000MHz

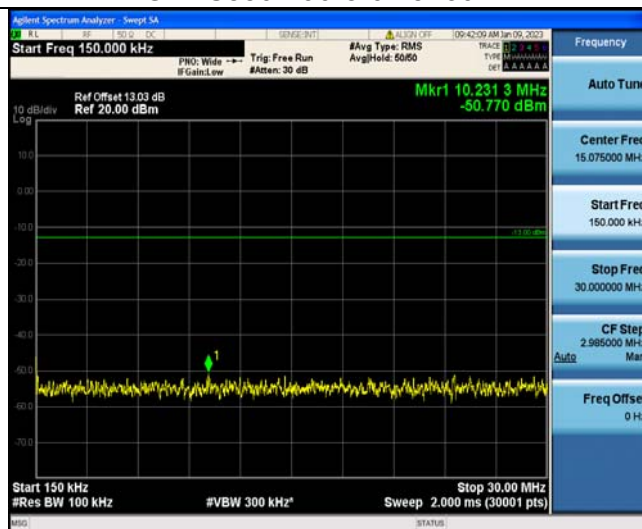


EGPRS850-190-8-0.009~0.15MHz

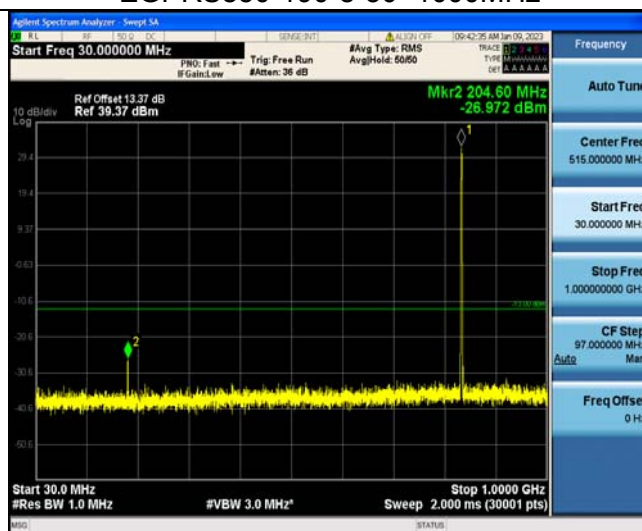




EGPRS850-190-8-0.15~30MHz



EGPRS850-190-8-30~1000MHz



EGPRS850-190-8-1000~3000MHz





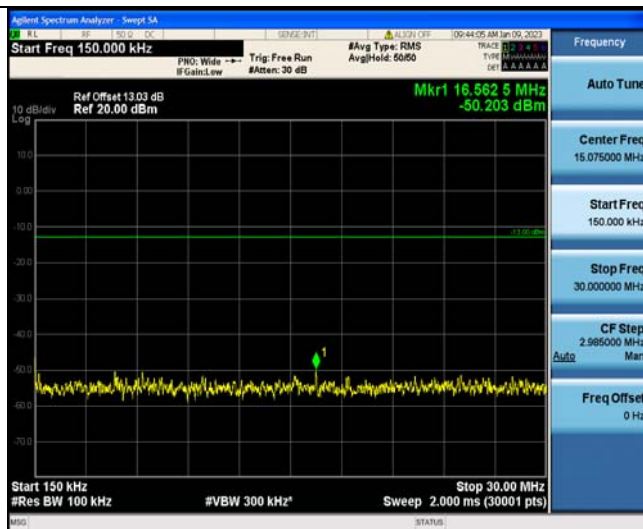
EGPRS850-190-8-3000~10000MHz



EGPRS850-251-8-0.009~0.15MHz

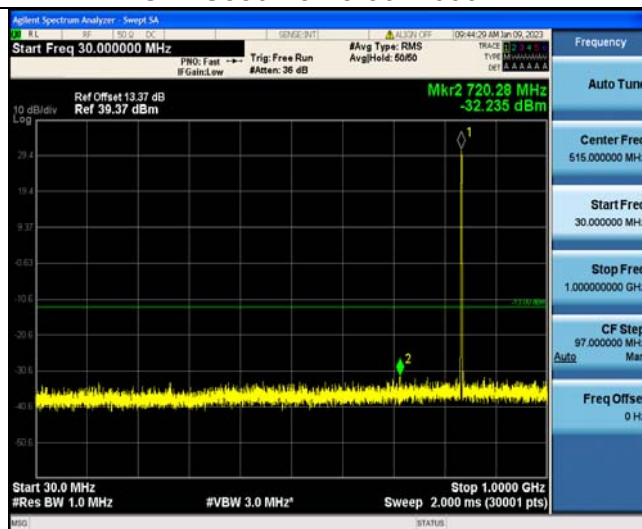


EGPRS850-251-8-0.15~30MHz





EGPRS850-251-8-30~1000MHz



EGPRS850-251-8-1000~3000MHz



EGPRS850-251-8-3000~10000MHz

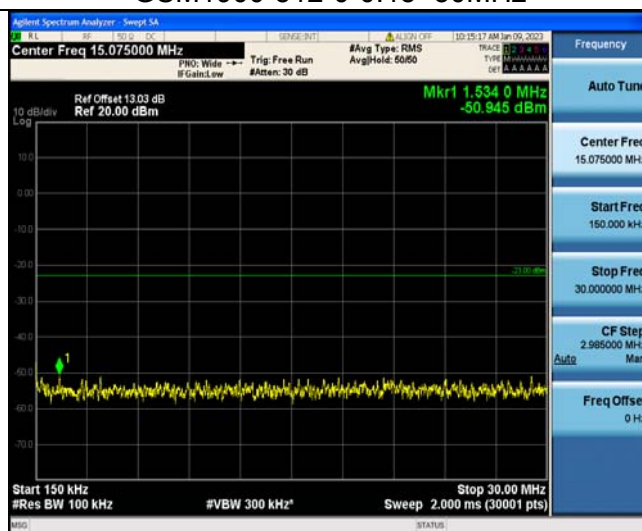




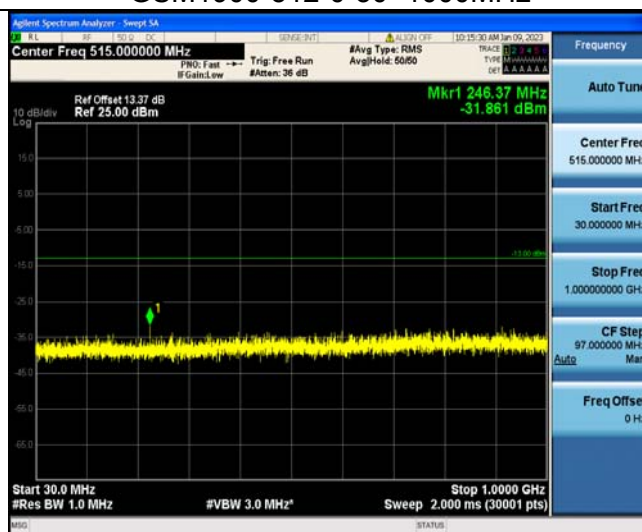
GSM1900-512-0-0.009~0.15MHz



GSM1900-512-0-0.15~30MHz



GSM1900-512-0-30~1000MHz





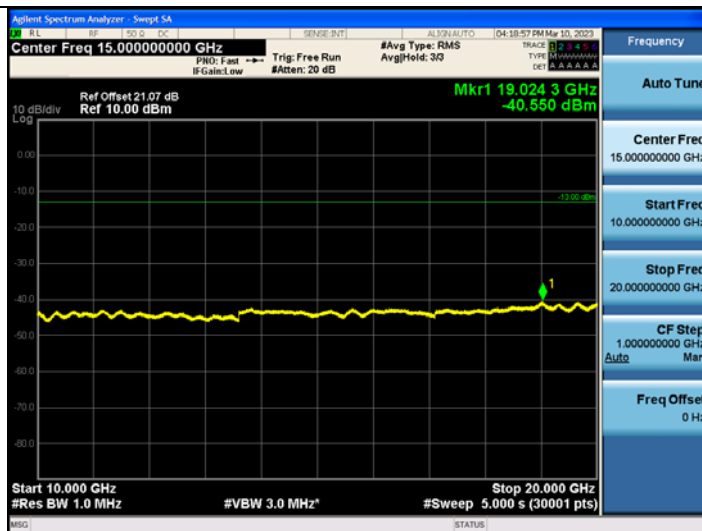
GSM1900-512-0-1000~3000MHz



GSM1900-512-0-3000~10000MHz



GSM1900-512-0-10000~20000MHz

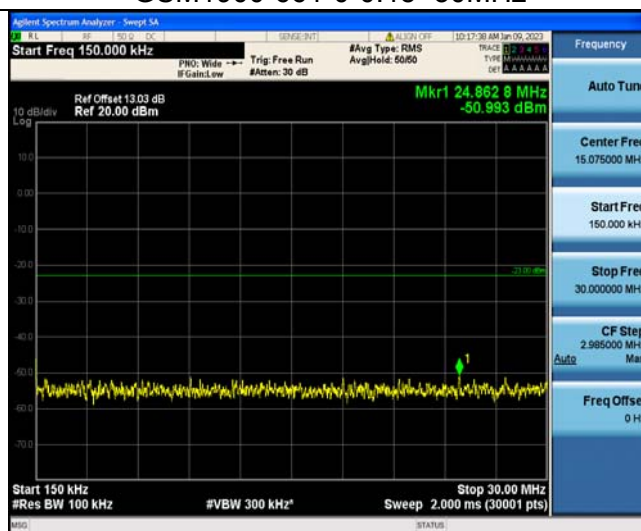




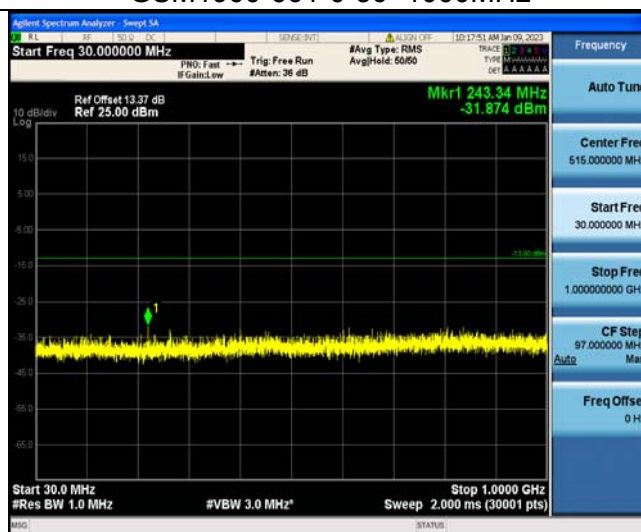
GSM1900-661-0-0.009~0.15MHz



GSM1900-661-0-0.15~30MHz



GSM1900-661-0-30~1000MHz





GSM1900-661-0-1000~3000MHz



GSM1900-661-0-3000~10000MHz



GSM1900-661-0-10000~20000MHz

