MOTOROLA SOLUTIONS

MS ISO/IEC 17025
TESTING
SAMM No. 0825

MOTOROLA PENANG ADV. COMM. LABORATORY
Motorola Solutions Malaysia Sdn Bhd
Innoplex Plot 2A, Medan Bayan Lepas,
Mukim 12 S.W.D, 11900 Bayan Lepas,
Penang, Malaysia.

FCC / ISED TEST REPORT
Report Revision : Rev.A

Date/s Tested	:	6-MAY-2019 - 10-MAY-2019
Report Issue Date	:	18-JUL-2019
Manufacturer/Location	:	Motorola Solutions Malaysia Sdn Bhd
Requestor	:	SZE KEAT NG
Product Type	:	Portable
Model Number	:	H98UCH9PW7BN
Frequency Band	:	806-824 MHz, 851-870MHz
Low / Max RF Output Power	:	1Watts /3.6Watts
Application Name	:	Motorola Solutions Inc
Manufacturer Address	:	Plot 2, Bayan Lepas Technoplex, 11900 Bayan Lepas, Penang, Malaysia
ISED Registrations	:	109AK
FCC Registrations	:	461337
Firmware Version	:	C23.22.46A

The equipment was tested accordance to the requirement listed below:

(LMR)
FCC 47 CFR Part 22/74/90 **PASS**
ISED RSS119

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Prepared By:

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Test Personnel

Approved By:

Vincent Foong Chuen Kit
Responsible Engineer

Table of Contents

Report Revision History 3
1.0 General Information 4
2.0 Summary of Test Results 5
3.0 Measurement Uncertainty 6
4.0 Equipment List 7
5.0 Test Condition 10
5.1. Transmitter Test Conditions 10
6.0 Transmitter Test Parameters 11
6.1. RF Output Power 11
6.1.1. Test Setup 11
6.1.2. Test Result 11
6.2. Frequency Stability 12
6.2.1. Test Setup 12
6.2.2. Test Result 13
6.2.3. Test Limit 14
6.3. Audio Frequency Response 15
6.3.1. Test Setup 15
6.3.2. Test Result 16
6.3.3. Test Limit 17
6.4. Audio Low Pass Filter Response 18
6.4.1. Test Setup 18
6.4.2. Test Result 19
6.4.3. Test Limit 20
6.5. Modulation Limiting 21
6.5.1. Test Setup 21
6.5.2. Test Result 22
6.5.3. Test Limit 22
6.6. Occupied Bandwidth 23
6.6.1. Test Setup (Analog) 23
6.6.2. Test Result (Analog) 24
6.6.3. Test Setup (Digital) 40
6.6.4. Test Result (Digital) 41
6.6.5. Test Limit 61
6.7. Band Edge Conducted Spurious Emission (Part 22) 62
6.7.1. Test Setup (Analog) 62
6.7.2. Test Result (Analog) 62
6.7.3. Test Setup (Digital) 63
6.7.4. Test Result (Digital) 63
6.7.5. Test Limit 63
6.8. Transient Frequency Behavior 64
6.8.1. Test Setup 64
6.8.2. Test Result 64
6.8.3. Test Limit 65

6.9. Adjacent Channel Power 66
6.9.1. Test Setup (Analog) 66
6.9.2. Test Result 66
6.9.3. Test Setup (Digital) 67
6.9.4. Test result 67
6.9.5. Test limit 68
6.10. Conducted Spurious Emission 70
6.10.1. Test Setup 70
6.10.1. Test Result (Analog) 71
6.10.2. Test Result (Digital) 77
6.10.3. Test Result (PHASE 2) 83
6.10.4. Test Limit 89
6.11. Radiated Spurious Emission 90
6.11.1. Test Setup 90
6.11.1. Test Result (Analog) 91
6.11.2. Test Result (Digital) 97
SAC Transmitter Radiated Emission: 97
6.11.3. Test Result (Phase 2) 109
6.11.4. Test Limit 121
6.12. Effective Radiated Power (ERP) 122
6.12.1. Test Setup 122
6.12.2. Test Result 122
6.12.3. Test Limit 122
6.13. GNSS (EIRP for 1559 - 1610MHz) 123
6.13.1. Test Setup 123
6.13.1. Test Result 123
6.13.2. Test Limit 124

Report Revision History

Revision History	Description	Date	Originator
Rev. A	Initial Report	13-MAY-2019	SZE KHAI TAN

1.0 General Information

EUT Description:

Technologies	Land Mobile Radio (LMR)
Modulation Type	Analog

General Description of Applied Standards
The EUT is a RF Product. According to the specifications of the manufacturer, the EUT is to comply with the requirements of the following standards:

ANSI C63.4-2014
ANSI C63.26-2015

2.0 Summary of Test Results

FCC General Rules Part (47CFR)	ISED General Rules Part	Test Item	Result	Remark
2.1046	RSS-119	RF Power Output	Pass	-
2.1055, 90.213	RSS-119	Frequency Stability	Pass	-
2.1047	RSS-119	Audio Frequency Response	Pass	-
2.1047	RSS-119	Audio Low Pass Filter Response	Pass	-
2.1047	RSS-119	Modulation limiting	Pass	-
2.1049,90.210, 90.691	RSS-119	Occupied Bandwidth	Pass	16K0F3E-15.0232kHz 20K0F1E-10.5935kHz 11K0F3E -9.9760kHz 8K10F1D-8.0184 kHz 8K10F1E-7.1215kHz 8K10F1W-7.9945kHz
-	-	Band Edge Conducted Spurious Emission	NA	-
-	-	Transient Frequency Behavior	NA	-
-	RSS-119	Adjacent Channel Power	NA	-
90.210	RSS-119	Conducted Spurious Emissions	Pass	Highest Spur Level -29.4410dBm
90.210	RSS-119	Radiated Spurious Emission	Pass	Highest Radiated Emission Level -41.1221dBm
-	-	GNSS (EIRP for 1559 – 1610MHz)	Pass	-
-	-	Effective Radiated Power (ERP)	Pass	-

NA → **Not Applicable**

3.0 Measurement Uncertainty

Measurement	Frequency	Expended Uncertainty (k=1.96) (±)
AC Power Line Conducted Spurious Emission	150KHz ~ 30MHz	3.43
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	5.01
	200MHz ~ 1000MHz	5.01
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.01
	18GHz ~ 25GHz	5.01

4.0 Equipment List

FCC Analog ATE#1: (SW version: 2.4.5 & FCC_Frequency Stability 1.0.3 rev.)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
Audio Analyzer	8903B	3011A10475	9-Jul-18	9-Jul-19
SIGNAL GENERATOR	2042	203002/747	22-Jan-19	22-Jan-20
MODULATION ANALYZER	8901B	3216A03889	9-Jul-18	9-Jul-19
DSA	36570A	MY42506781	6-Jul-18	6-Jul-19
POWER SENSOR	E9031A	MY41502652	19-Nov-18	19-Nov-19
POWER METER	E4412A	MY41293855	27-Jul-18	27-Jul-19
POWER SUPPLY	E4416A	GB41293747	11-Apr-19	11-Apr-20
CHAMBER	SH-641	92009188	29-Mar-2019	29-Mar-2020
N to N RF Cable # 1	M17/128-RG400	NA	NA	NA
BNC to N RF Cable # 1	RG 58	NA	NA	NA
BNC to BNC RF Cable # 1	RG 58	NA	NA	NA
BNC to BNC RF Cable # 2	RG 58	NA	NA	NA
BNC to BNC RF Cable # 3	RG 58	NA	NA	NA
BNC to BNC RF Cable # 4	RG 58	NA	NA	NA
BNC to BNC RF Cable # 5	RG 58	NA	NA	NA
BNC to BNC RF Cable # 6	RG 58	NA	NA	NA
BNC to BNC RF Cable # 7	RG 58	NA	NA	NA
N to SMA RF Cable # 1	RG 58	NA	NA	NA
N to SMA RF Cable # 2	RG 58	NA	NA	NA
N to SMA RF Cable # 3	RG 58	NA	NA	NA
Aeroflex Attenuator 30dB	49-30-34-LIM	NA	NA	NA

FCC Transient ATE #1: (SW version: FCC Transient ATE_R1.1.2)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
POWER SUPPLY	6032A	2818A03549	11-Jul-18	11-Jul-19
POWER SENSOR	E4412A	MY41498918	29-Jul-18	29-Jul-19
POWER METER	E4416A	GB41293866	26-Feb-19	26-Feb-21
ATTENUATORS/SWITCH DRIVER	11713A	2508A10141	CNR	CNR
STEP ATTENUATOR/11dB	8494G	MY52300223	26-Jul-18	26-Jul-19
STEP ATTENUATOR/110dB	8496G	MY52300176	26-Jul-18	26-Jul-19
OSCILLOSCOPE	MSO8104A	MY45002372	26-Jun-18	26-Jun-19
AUDIO ANALYZER	8903B	3729A17409	18-Jul-18	18-Jul-19
AUDIO ANALYZER	8903B	3413A14586	7-Jul-18	7-Jul-19
MODULATION ANALYZER	8901B	3616A03889	9-Jul-18	9-Jul-19
SIGNAL GENERATOR	8657A	3039A3205	5-Jul-18	5-Jul-19
SPECTRUM ANAYLYZER	E4440A	MY46185415	16-Aug-17	16-Aug-19
N to N RF Cable # 1	SF126/11N/11N	NA	NA	NA

N to N RF Cable # 2	M17/128-RG400	NA	NA	NA
N to N RF Cable # 3	M17/128-RG400	NA	NA	NA
N to N RF Cable # 4	M17/128-RG400	NA	NA	NA
N to N RF Cable # 5	M17/128-RG400	NA	NA	NA
N to N RF Cable # 6	M17/128-RG400	NA	NA	NA
N to N RF Cable # 7	M17/128-RG400	NA	NA	NA
N to N RF Cable # 8	M17/128-RG400	NA	NA	NA
N to N RF Cable # 9	M17/128-RG400	NA	NA	NA
BNC to BNC RF Cable # 1	RG 58	NA	NA	NA
BNC to BNC RF Cable # 2	RG 58	NA	NA	NA
BNC to BNC RF Cable # 3	RG 58	NA	NA	NA
BNC to BNC RF Cable # 4	RG 58	NA	NA	NA
BNC to BNC RF Cable # 5	RG 58	NA	NA	NA
BNC to BNC RF Cable # 6	RG 58	NA	NA	NA
BNC to N RF Cable # 1	RG 58	NA	NA	NA
Aeroflex Attenuator 10dB	49-10-43-LIM	NA	NA	NA
Aeroflex Attenuator 10dB	33-10-34-LIM	NA	NA	NA
SWITCH CONTROL UNIT	3488A	2719A36210	CNR	CNR

CONDUCTED SPUR EMISSION ATE # 1 (SW version: Conducted Spur ATE_rev 1.23.02)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
SWITCH CONTROL UNIT	3488A	2719A32735	CNR	CNR
PSA Series Spectrum Analyzer	E4445A	MY46181732	12-Mar-19	12-Mar-21
POWER SUPPLY	6032A	MY41002067	11-Jul-18	11-Jul-19
HIGH PASS FILTER SWITCH BOX	-	CS001	5-Jul-18	5-Jul-19
N to N RF Cable # 1	SF126/11N/11N	NA	NA	NA
N to N RF Cable # 2	SF126/11N/11N	NA	NA	NA
BNC to BNC RF Cable # 1	RG 58	NA	NA	NA
Aeroflex Attenuator 30dB	49-30-43-LIM	NA	NA	NA
Aeroflex Attenuator 10dB	33-10-34-LIM	NA	NA	NA
Vector Signal Generator	SMU200A	103537	22-Jul-17	22-Jul-20

EMC Chamber 1

DESCRIPTION	MODEL	SERIAL NUMBER	CALIBRATION DATE	CALIBRATION DUE DATE
DRG HORN FREQ.	SAS-571	719	18-Jul-17	18-Jul-19
DRG HORN FREQ.	SAS-571	1143	14-Feb-19	14-Feb-21
POWER SUPPLY	6032A	MY41001736	25-May-19	25-May-20
SIGNAL GENERATOR	SMB 100A	181117	8-Nov-18	8-Nov-21
EMI TEST RECEIVER	ESW44	101750	25-Jun-18	25-Jun-19
5m Semi-anechoic Chamber	S800-HX	J2308	No Cal. Req'd	No Cal. Req'd
BILOG ANTENNA	CBL6112D	30991	23-Apr-18	23-Jul-19
BILOG ANTENNA	CBL6112B	2964	16-Feb-18	16-Feb-20
DATA LOGGER	SDL500	A.016800	19-Mar-19	18-Mar-20
SYSTEM CONTROLLER	SC104V	050806-1	No Cal. Req'd	No Cal. Req'd
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	No Cal. Req'd	No Cal. Req'd
ANTENNA POSITIONING TOWER	TLT2	NA	No Cal. Req'd	No Cal. Req'd
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170255	21-Dec-18	21-Dec-19
18 - 40GHz PREAMPLIFIER	Miteq Hi Gain Sucoflex	001	No Cal. Req'd	No Cal. Req'd
PREAMPLIFIER	PAM-0118P	361	No Cal. Req'd	No Cal. Req'd
LOOP ANTENNA	6502	00208416	17-Aug-18	17-Aug-19
AUDIO ANALYZER	8903B	3011A09202	3-Sep-2018	3-Sep-2019
Test Software	EMC_FCC_IC_Bluetooth_RE_Test			
Version	EMC_FCC_RE_v1.5.2			

CNR → Calibration Not Require

5.0 Test Condition

5.1. Transmitter Test Conditions

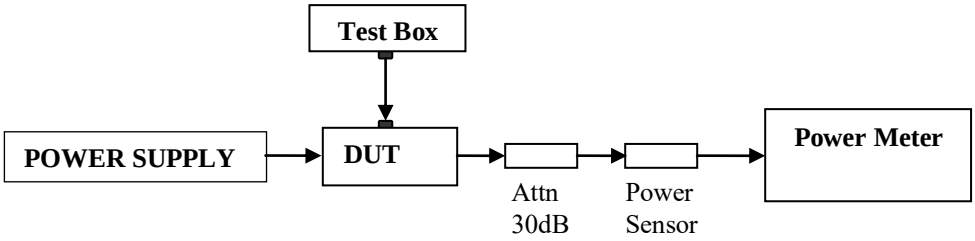
Test Item, (Channel Spacing)	Power (W)	Modulation	Test Frequency (MHz)	Tested By
RF Output Power	**Low & Max**	**Analog**	**806.0125,814.9875, 823.9875,851.0125, 860.0125,868.8875**	TAN SZE KHAI
Frequency Stability	**Max**	**Analog**	**823.9875**	**NA**
Audio Frequency Response (12.5kHz / 25kHz)	**Max**	**Analog**	**823.9875**	**NA**
Audio Low Pass Filter Response (12.5kHz / 25kHz)	**Max**	**Analog**	**823.9875**	**NA**
Modulation limiting (12.5kHz / 25kHz)	**Max**	**Analog**	**823.9875**	**NA**
Occupied Bandwidth (12.5kHz / 25kHz)	**Max**	**Analog**	**806.0125,814.9875, 823.9875,851.0125, 853.9875,860.0125, 868.8875**	TAN SZE KHAI
Band Edge Conducted Spurious Emissions (Part 22) (12.5kHz / 20kHz / 25kHz)	**Max**	**Analog**	**NA**	**NA**
Transient Frequency Behavior *(UHF & VHF Band)* (12.5kHz / 25kHz)	**Max**	**Analog**	**NA**	**NA**
Adjacent Channel Power *(700MHz Band)* (12.5kHz)	**Max**	**Analog**	**NA**	**NA**
Conducted Spurious Emissions- (12.5kHz / 25kHz)	**Low / Max**	**Analog**	**806.0125,814.9875, 823.9875,851.0125. 860.0125,868.8875**	TAN SZE KHAI
Radiated Spurious Emission (12.5kHz / 25kHz)	**Low / Max**	**Analog**	**806.0125,814.9875, 823.9875,851.0125. 860.0125,868.8875**	Nazrin& Qawiman
GNSS (EIRP for 1559 - 1610MHz) (12.5kHz / 25kHz)	**Max**	**Analog**	**NA**	**NA**
Effective Radiated Power (ERP) (12.5kHz / 25kHz)	**Max**	**Analog**	**NA**	**NA**

NA → Not Applicable

6.0 Transmitter Test Parameters

6.1. RF Output Power

6.1.1. Test Setup



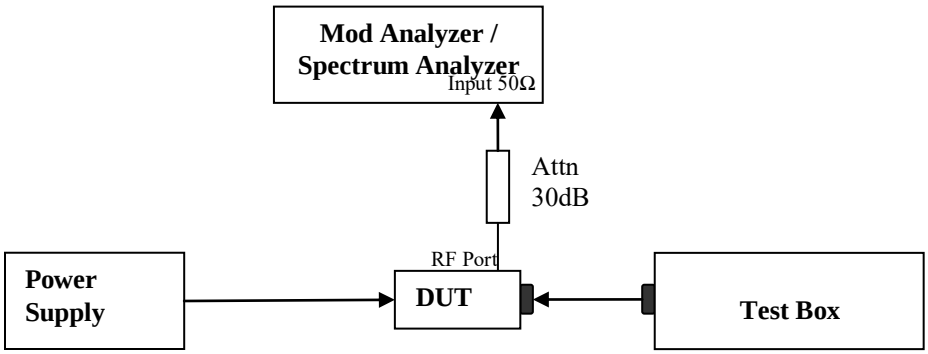
1) The DUT transmitter connected to Power Meter using the 30 dB attenuator and power sensor with above setup.
2) Path loss for the measurement included.
3) All the measurement was done at low, mid, high frequency for each band.
4) Record the power into the test report.

6.1.2. Test Result

Temperature	25˚C				
Voltage (V)	7.2V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	Remarks
806.0125	1.01	1.49	3.52	2.46	
814.9875	1	1.31	3.54	2.21	
823.9875	0.99	1.20	3.52	1.91	
851.0125	1	0.70	3.56	0.98	
860.0125	0.99	0.62	3.57	0.95	
868.8875	1	0.65	3.56	1.30	

6.2. Frequency Stability

6.2.1. Test Setup



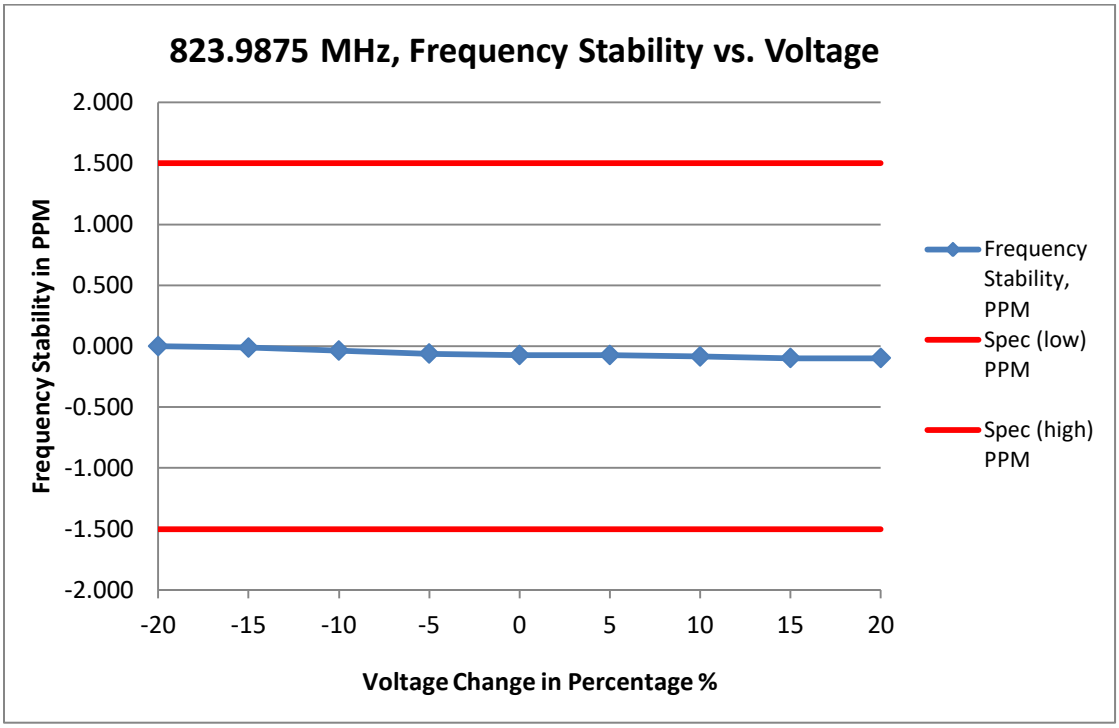
1) The DUT transmitter output port was connected to Modulation / Spectrum Analyzer.
2) Path loss for the measurement included.
3) Transmit the DUT and record the freq in MCF_{MHz}.
4) Test in 2 conditions:
   - Temperature: The frequency of the transmitter was measured from -30°C to 50°C.
   - Supply Voltage:
     -Mobile: The frequency of the transmitter was measured from 85% to 115% of the nominal operating input voltage.
     -Portable: The frequency of the transmitter was measured from nominal ± x % as specified by the manufacturer

5) Calculate the ppm frequency error by the following:

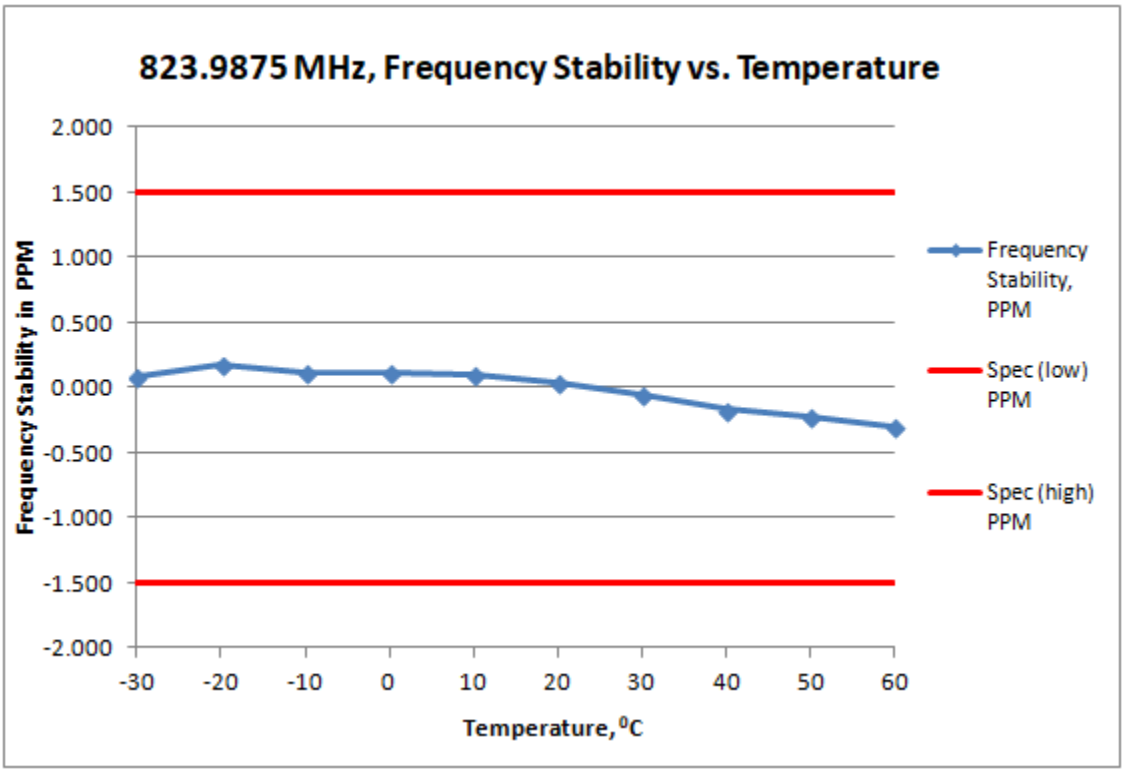
$$ppm\ error = \left(\frac{MCF_{MHz}}{ACF_{MHz}} - 1\right) * 10^6$$

Where: MCF_{MHz} is the Measured Carrier Frequency in MHz
ACF_{MHz} is the Assigned Carrier Frequency in MHz

6.2.2. Test Result



Frequency / Channel Spacing	823.9875 MHz / 12.5 kHz				
Temperature, ^{0}C	25				
Voltage %	Voltage, V	Frequency, MHz	Frequency Stability, PPM	Spec (low) PPM	Spec (high) PPM
-20	6.370	823.987500	0.000	-1.500	1.500
-15	6.750	823.987490	-0.012	-1.500	1.500
-10	7.120	823.987470	-0.036	-1.500	1.500
-5	7.500	823.987450	-0.061	-1.500	1.500
0	7.870	823.987440	-0.073	-1.500	1.500
5	8.250	823.987440	-0.073	-1.500	1.500
10	8.620	823.987430	-0.085	-1.500	1.500
15	9.000	823.987420	-0.097	-1.500	1.500
20	9.000	823.987420	-0.097	-1.500	1.500



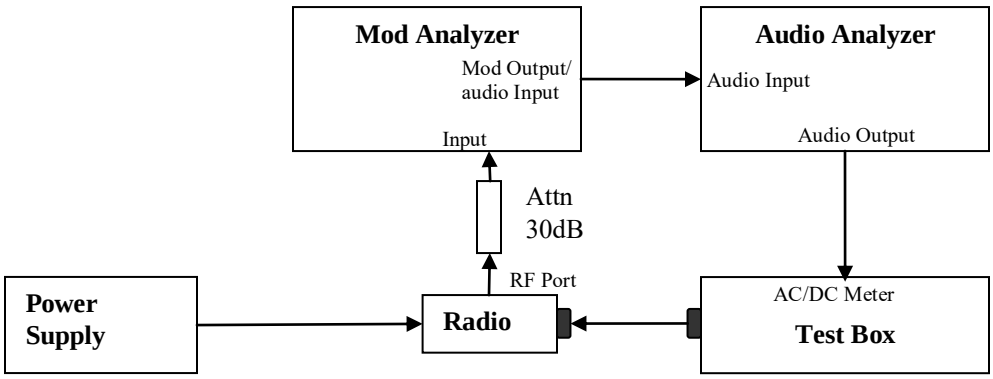
Frequency / Channel Spacing	823.9875 MHz / 12.5 kHz			
Voltage, V	7.5			
Temperature, ^{0}C	Frequency, MHz	Frequency Stability, PPM	Spec (low) PPM	Spec (high) PPM
-30	823.987570	0.085	-1.500	1.500
-20	823.987640	0.170	-1.500	1.500
-10	823.987590	0.109	-1.500	1.500
0	823.987600	0.121	-1.500	1.500
10	823.987580	0.097	-1.500	1.500
20	823.987530	0.036	-1.500	1.500
30	823.987460	-0.049	-1.500	1.500
40	823.987360	-0.170	-1.500	1.500
50	823.987320	-0.218	-1.500	1.500
60	823.987250	-0.303	-1.500	1.500

6.2.3. Test Limit

As per manufacturer declared spec +/- 1.5ppm

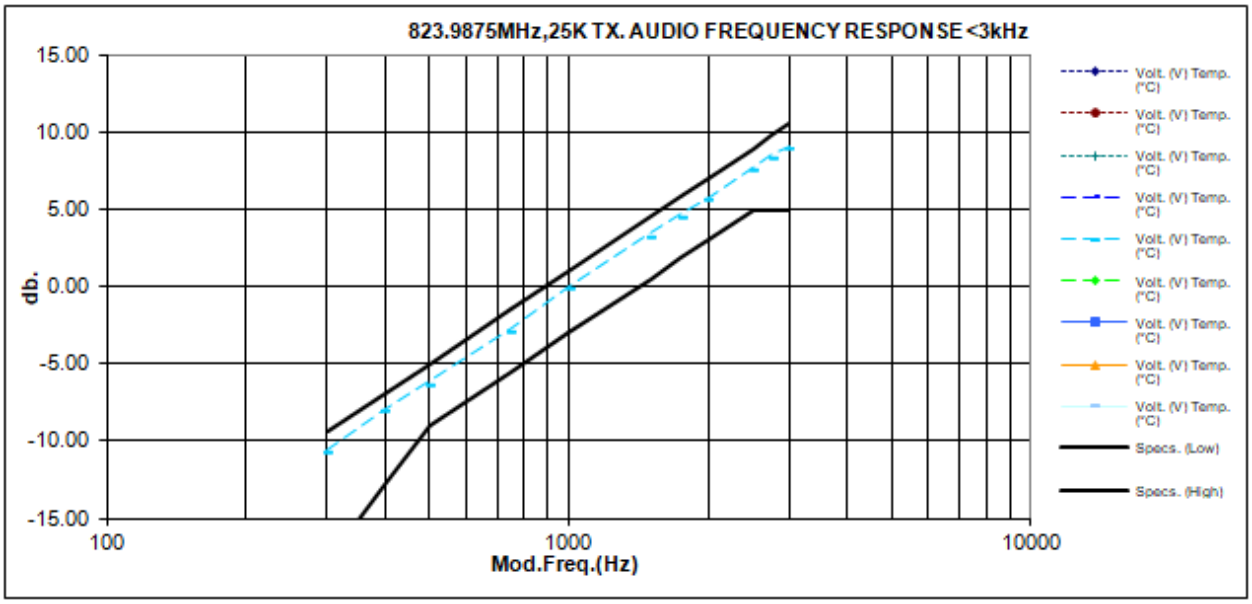
6.3. Audio Frequency Response

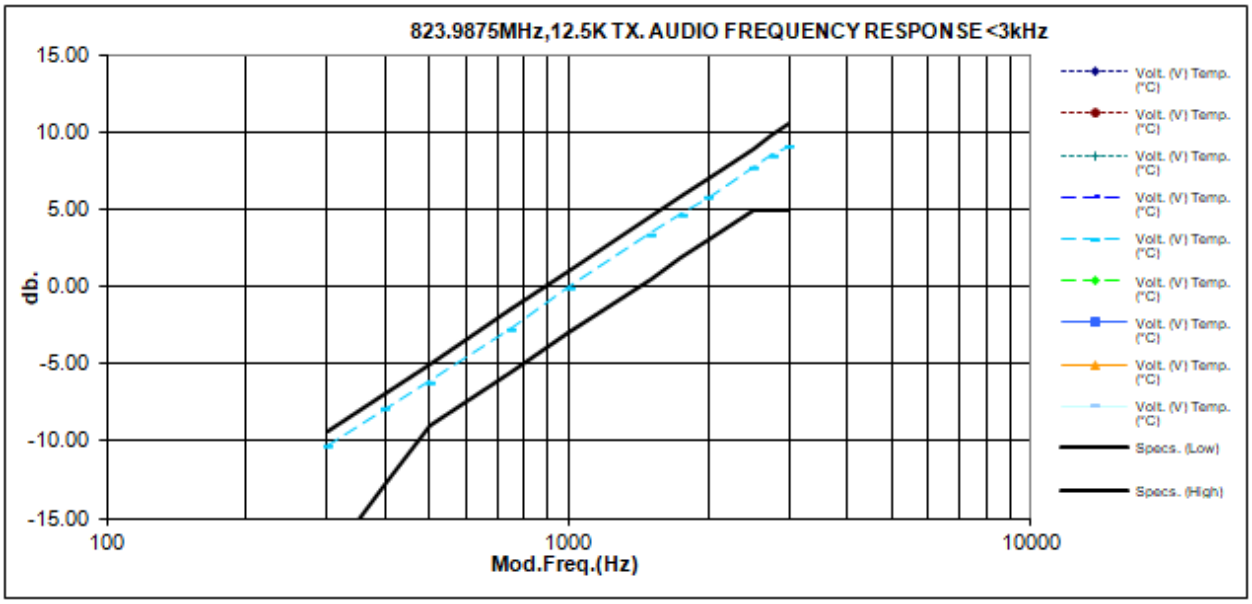
6.3.1. Test Setup



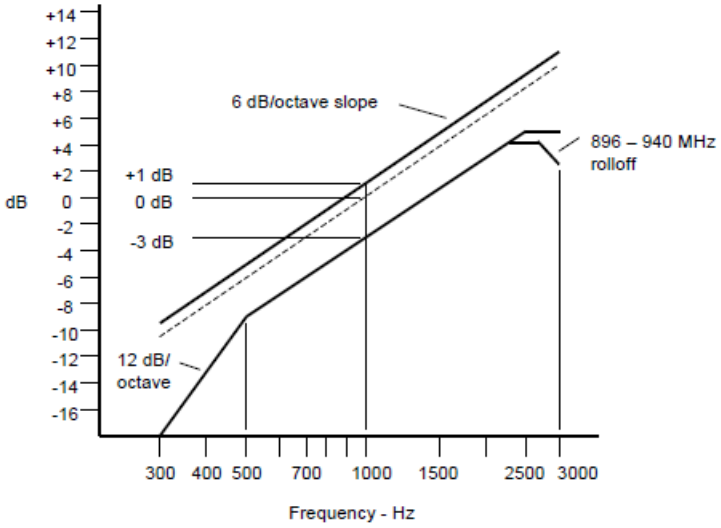
1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Path loss for the measurement included.
3) Set the audio bandwidth filter to 15 kHz and 50 kHz.
4) Transmit the radio and set the audio analyzer to 1 kHz audio frequency and 20% of the Full rated system deviation.
5) On audio analyzer, set the rated level as reference to zero.
6) Vary the audio frequency from 300 Hz to 3 kHz. Record the change in dB on the audio analyzer.

6.3.2. Test Result





6.3.3. Test Limit

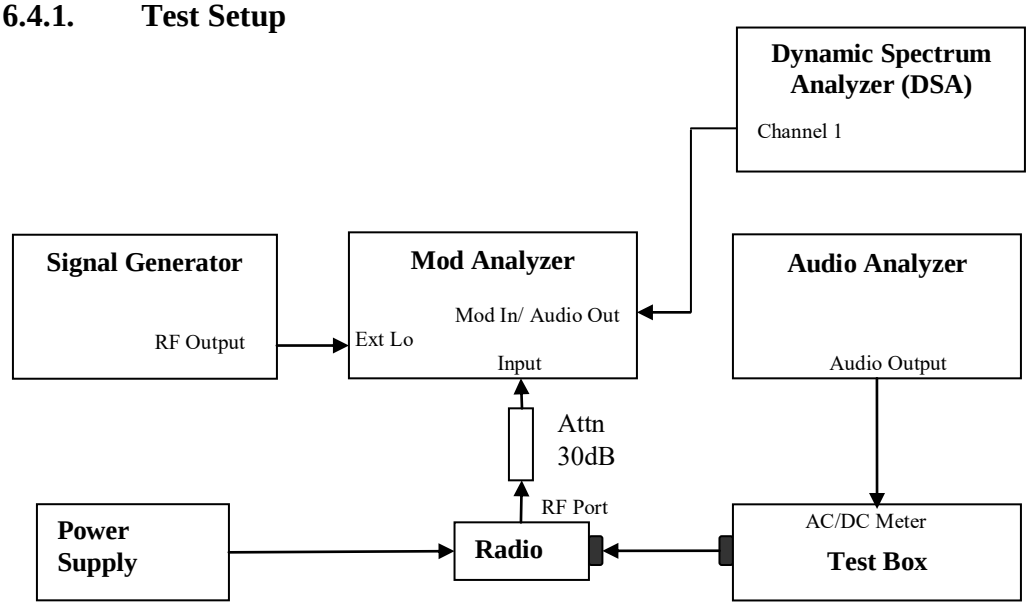


Note:

- *There are additional 6 dB per octave attenuation is allowed from 2.5KHz to 3KHz in equipment 25MHz to 869MHz radio.*
- *Additional 6 dB per octave attenuation is allowed from 2.3KHz to 2.7KHz & additional 12 dB per octave attenuation is allowed from 2.7KHz to 3KHz in equipment 896MHz to 940MHz radio.*

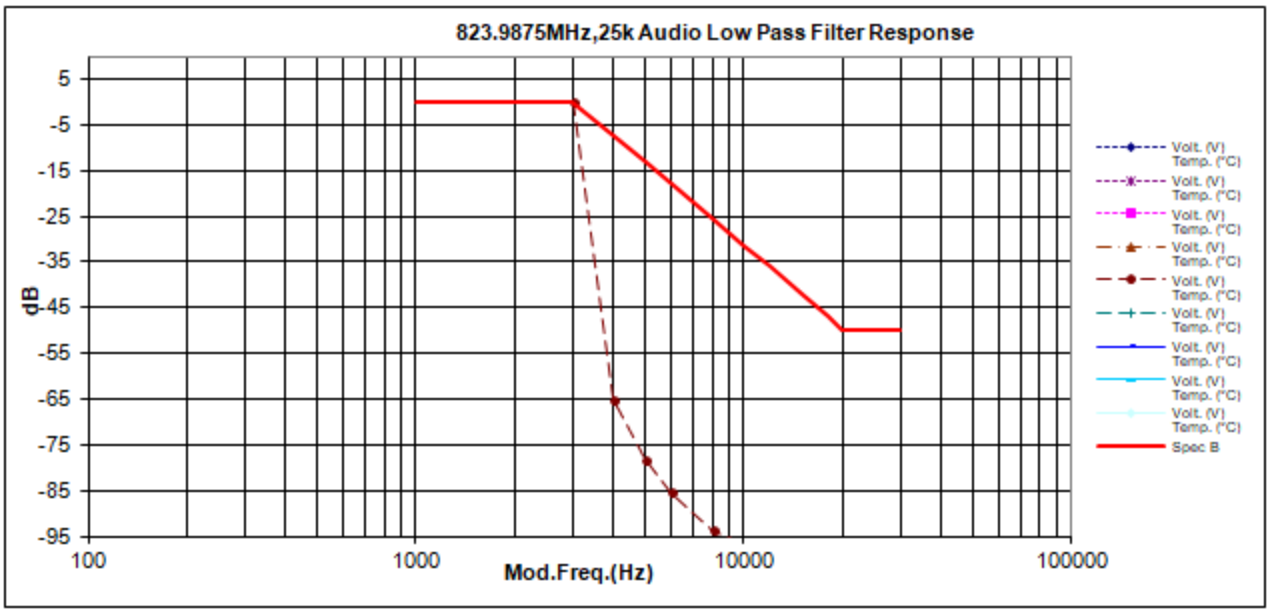
6.4. Audio Low Pass Filter Response

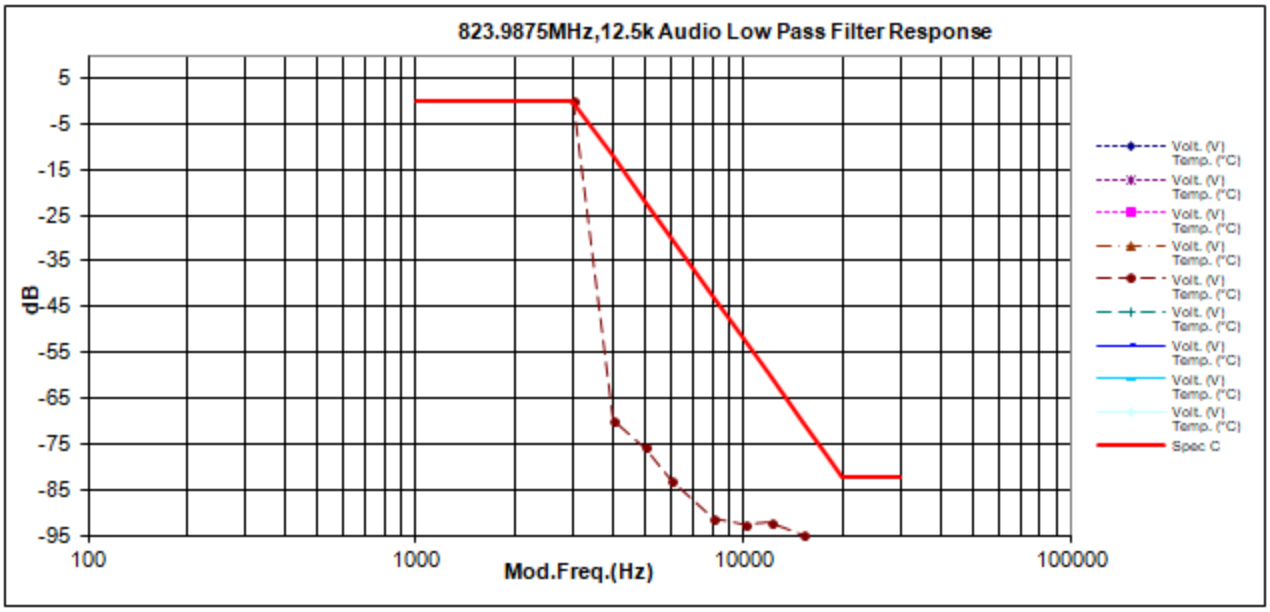
6.4.1. Test Setup



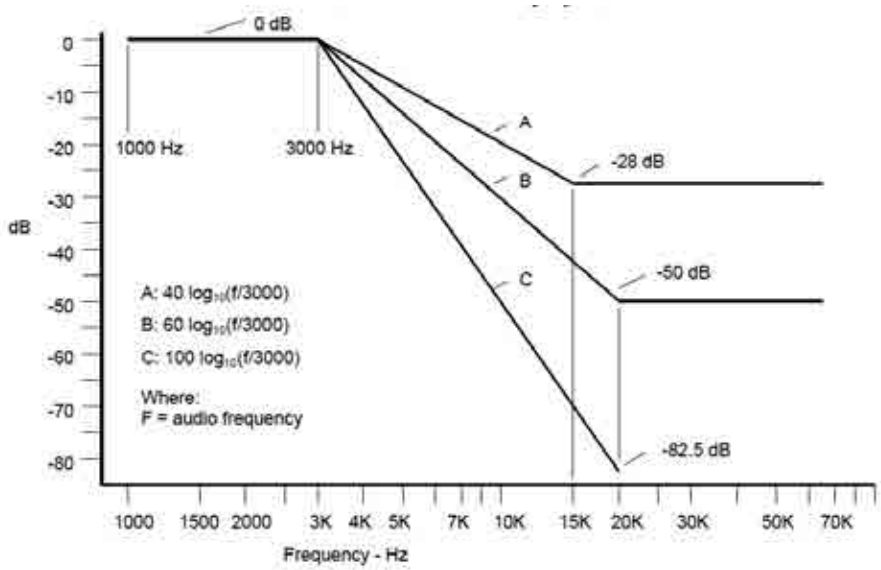
1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Path loss for the measurement included.
3) Press 23.1SPCL on modulation analyzer to enable the external LO from Sigen.
4) Set the Sigen frequency to Fc + 1.5 MHz, RF output level to 0dBm without modulation.
5) Transmit the radio and set the audio analyzer to 1 kHz audio frequency and 60% of the Full rated system deviation.
6) Up the amplitude by 20dB.
7) On DSA, get the reference point to 0dB.
8) Vary the frequency on audio analyzer from 3 kHz to 20 kHz, record the audio tone from DSA.

6.4.2. Test Result





6.4.3. Test Limit



For audio frequencies above 3000 Hz, the audio response of the post limiter low-pass filter shall meet or exceed the following requirements:

a) For equipment operating on 20, 25 or 30 kHz channel bandwidth in the 25 MHz to 174 MHz range:

   At frequencies from 3000 Hz through 15,000 Hz the attenuation shall be greater than the attenuation at 1000 Hz by at least: 40 $\log_{10}(f / 3000)$ dB

   where: f is the audio frequency in Hz.

   At frequencies above 15,000 Hz, the attenuation shall be greater than the attenuation at 1000 Hz, by at least: 28 dB.

b) For equipment operating with 25 kHz bandwidth channels between 406 and 512 MHz through 896 MHz, and between 929 MHz through 930 MHz:

   At frequencies from 3000 Hz through 20,000 Hz, the attenuation shall be greater than the attenuation at 1000 Hz by at least: 60 $\log_{10}(f / 3000)$ dB

   where: f is the audio frequency in Hz.

   At frequencies above 20,000 Hz the attenuation shall be greater than the attenuation at 1000 Hz by at least: 50 dB.

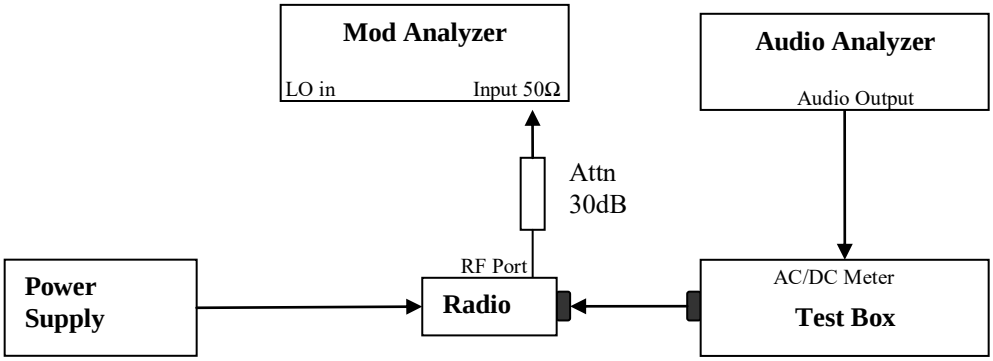
c) For equipment operating on channels between 896 MHz through 901 MHz, between 935 MHz through 940 MHz, and 12.5 or 15 kHz spaced channels in the frequency range 138-174 MHz and 406-512 MHz.

   At frequencies from 3000 Hz through 20,000 Hz the attenuation shall be greater than the attenuation at 1000 Hz by at least: 100 $\log_{10}(f / 3000)$ dB

   where: f is the audio frequency in Hz.

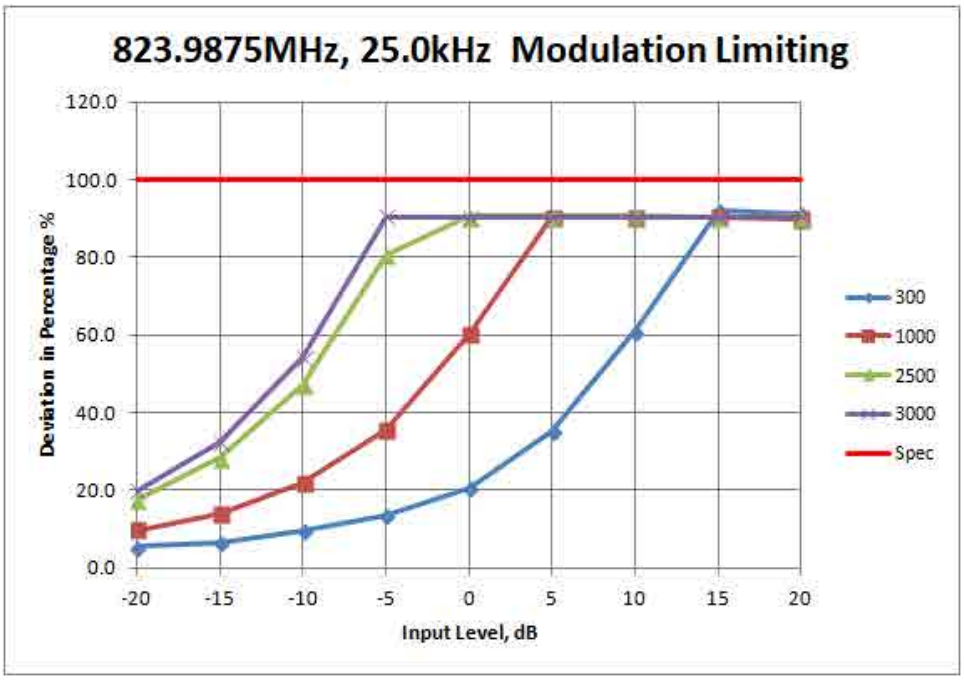
6.5. Modulation Limiting

6.5.1. Test Setup



1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Path loss for the measurement included.
3) Set the audio bandwidth filter to 15 kHz.
4) Transmit the radio and set the audio analyzer to 1 kHz audio frequency and 60% of the Full rated system deviation.
5) Record the frequency deviation as 0dB input level at 1kHz audio frequency.
6) Repeat the step and record the frequency deviation from -20 dB to 20dB by 5 dB increments and different audio freq 300 Hz, 2.5 kHz and 3 kHz.

6.5.2. Test Result



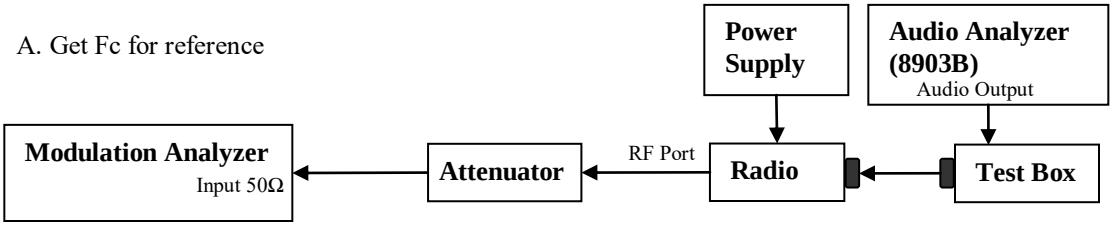
6.5.3. Test Limit

Modulation Limiting shall not exceed 100 percent.

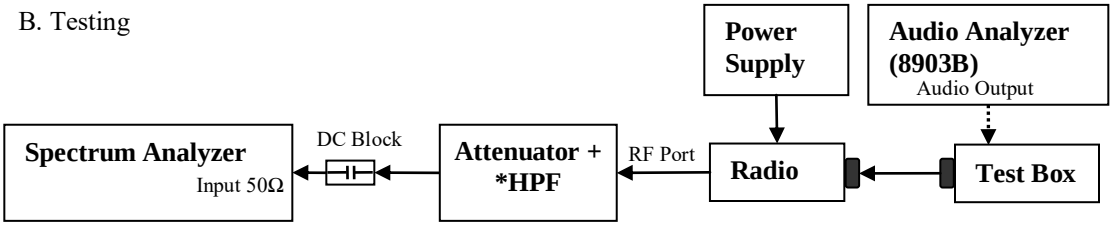
6.6. Occupied Bandwidth

6.6.1. Test Setup (Analog)

A. Get Fc for reference



B. Testing

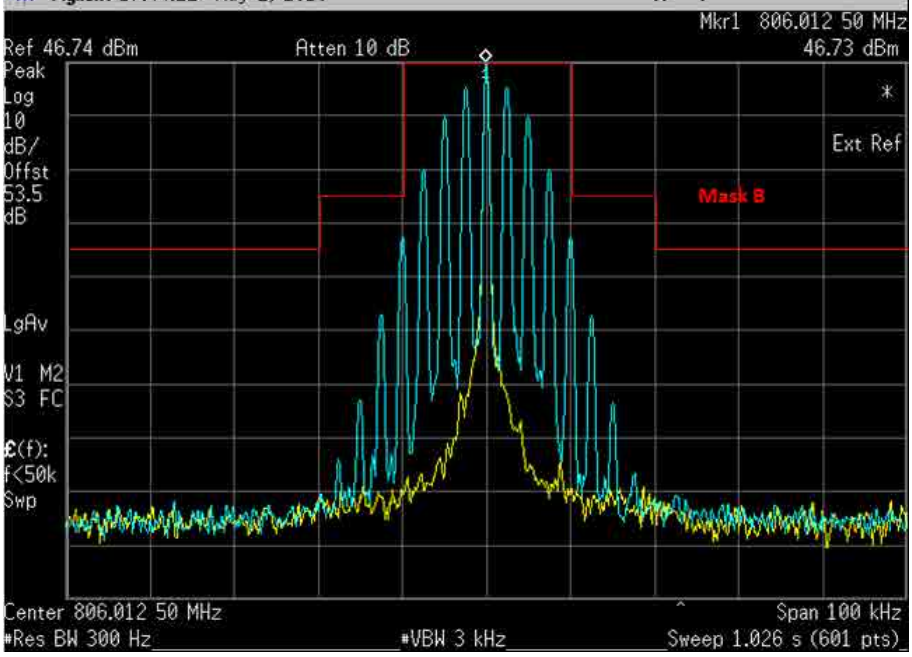


1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Set the audio bandwidth filter to 15 kHz low pass filter and 50 kHz high pass filter.
3) Transmit the radio and set the audio analyzer to 2.5 kHz audio frequency and 50% of the rated deviation. Up the amplitude by 16 dB. Dekey the DUT.
4) Path loss for the measurement included.
5) Select the Occupied Bandwidth measurement for 99% Emissions Bandwidth Measurement.
6) Key in the Fc and Resolution Bandwidth (1 ~ 5 % of emission designator).
7) Transmit the DUT and record the occupied Bandwidth frequency.
8) Preset the spectrum analyzer for sideband spectrum measurement.
9) Set the span and Resolution Bandwidth (according to FCC/ ISED standard).
10) Save the screen shot as modulated signal
11) Remove the audio tone from audio analyzer to capture unmodulated signal.

* Only HPF added for Mask 80.211 measurement with attenuator.

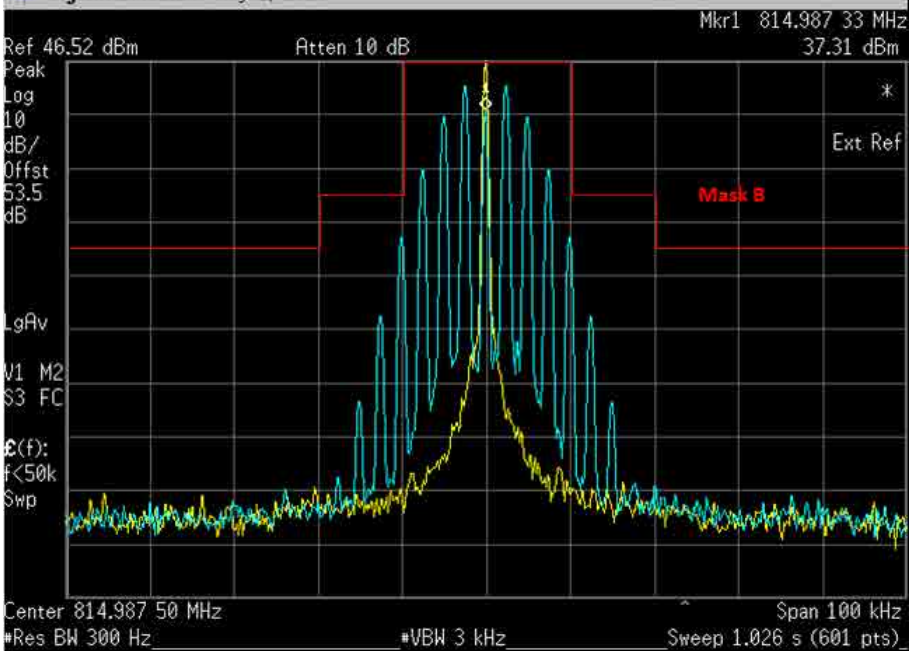
6.6.2. Test Result (Analog)

Modulation		Rules Part	
Analog Voice		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
806.0125	25.0	15.0098	16K0F3E

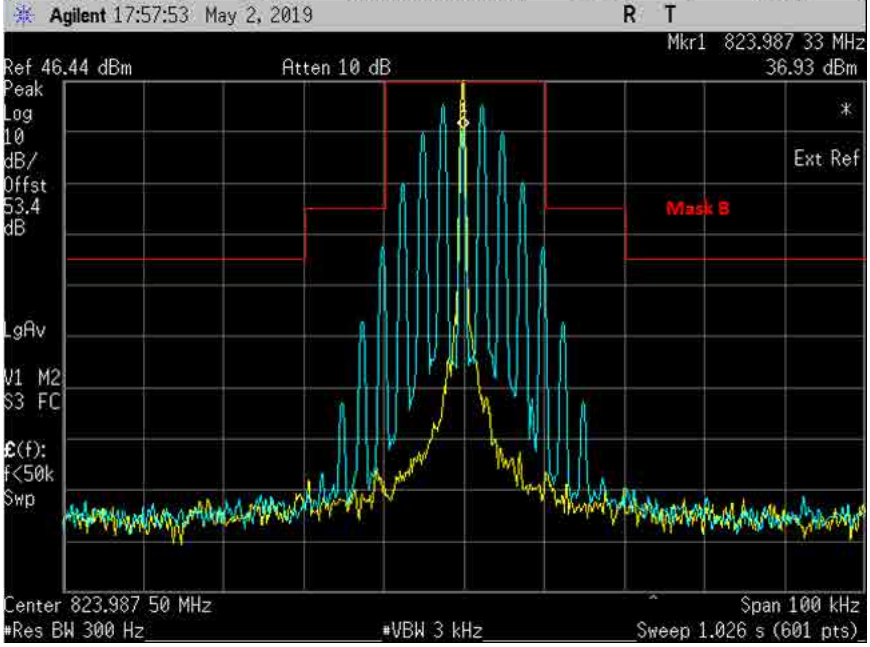


NOT FOR FCC REVIEW

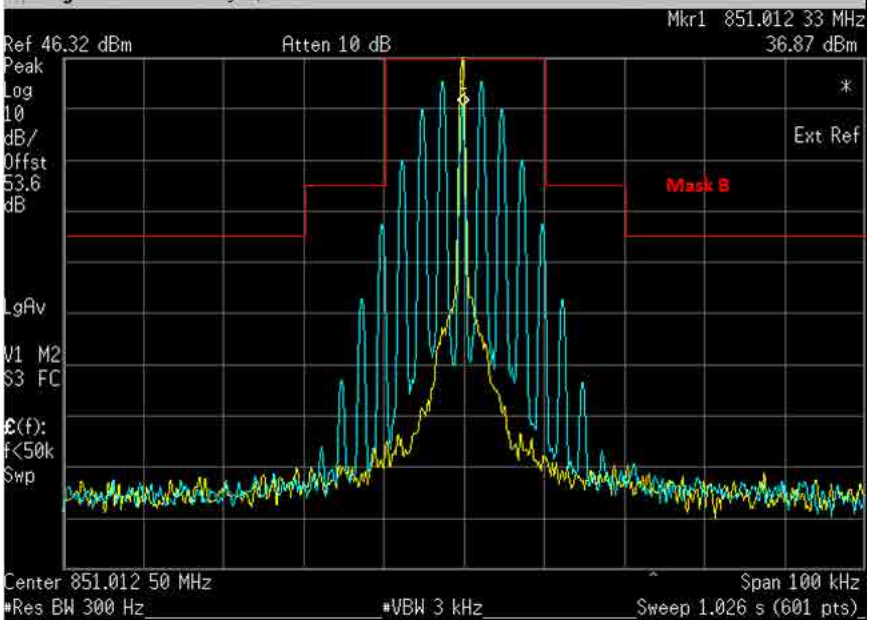
Modulation		Rules Part	
Analog Voice		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
814.9875	25.0	14.9986	16K0F3E



Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	25.0		15.0203	16K0F3E

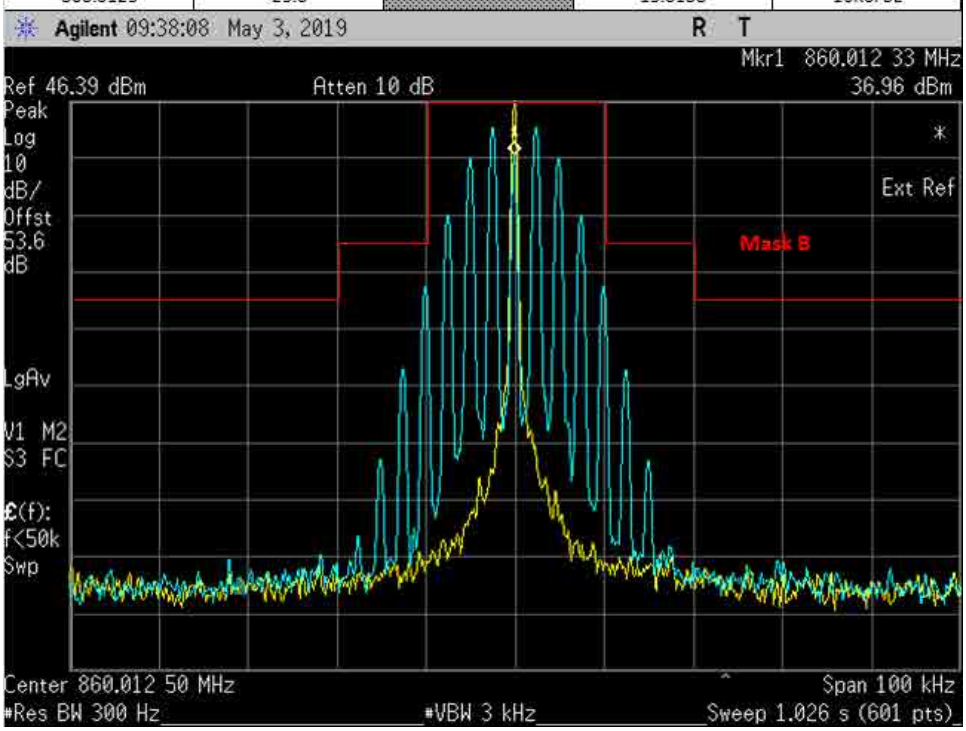


Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
851.0125	25.0		15.0162	16K0F3E

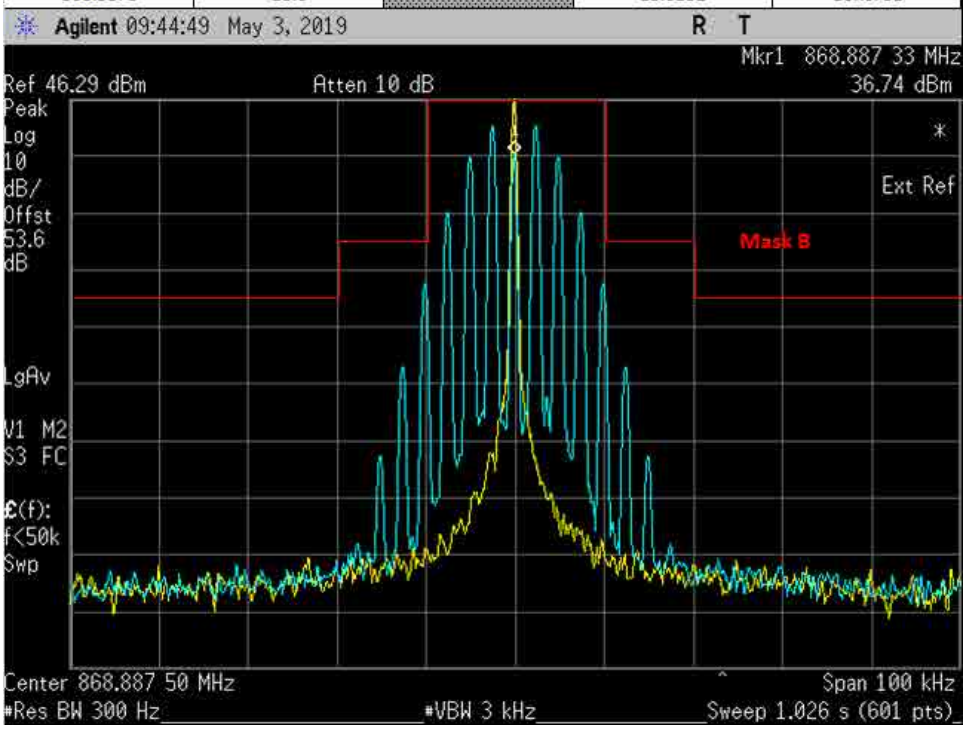


NOT FOR FCC REVIEW

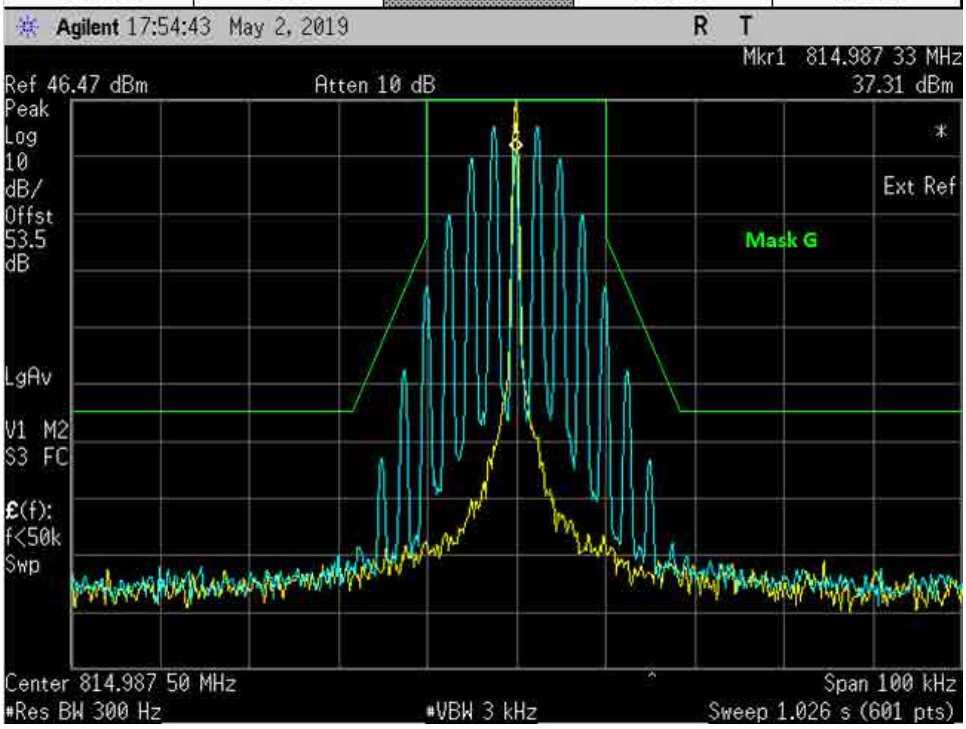
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	25.0		15.0138	16K0F3E



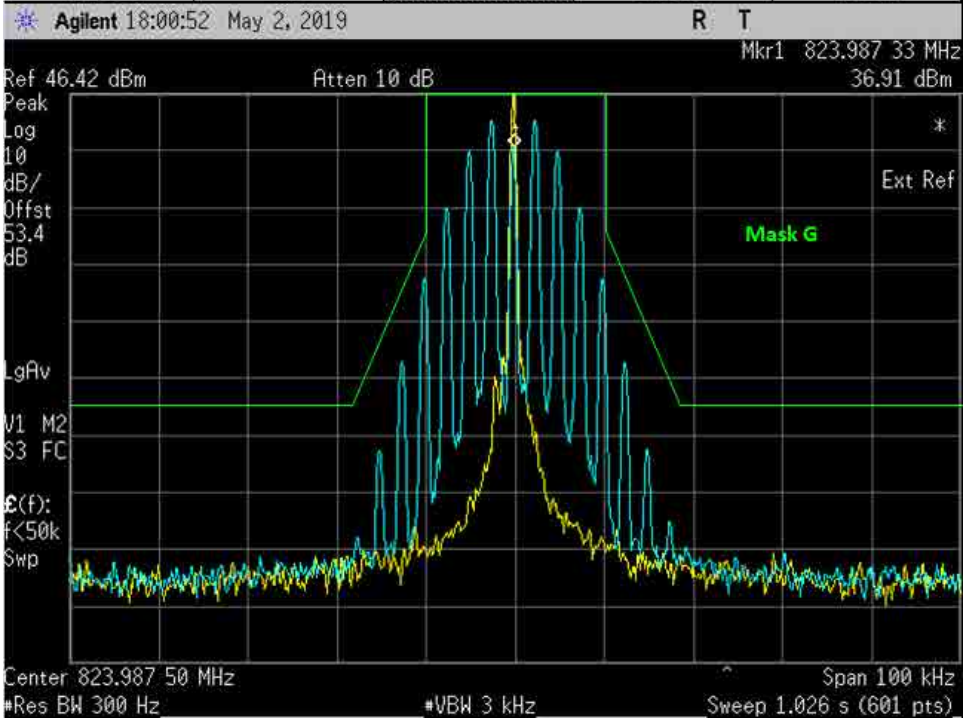
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	25.0		15.0232	16K0F3E



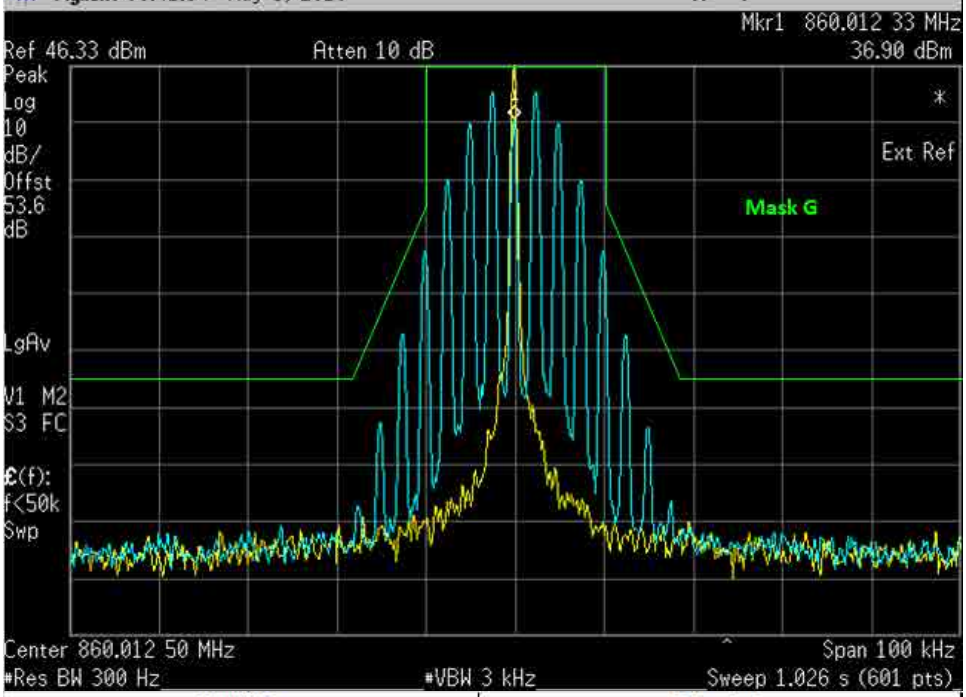
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	25.0		14.9960	16K0F3E



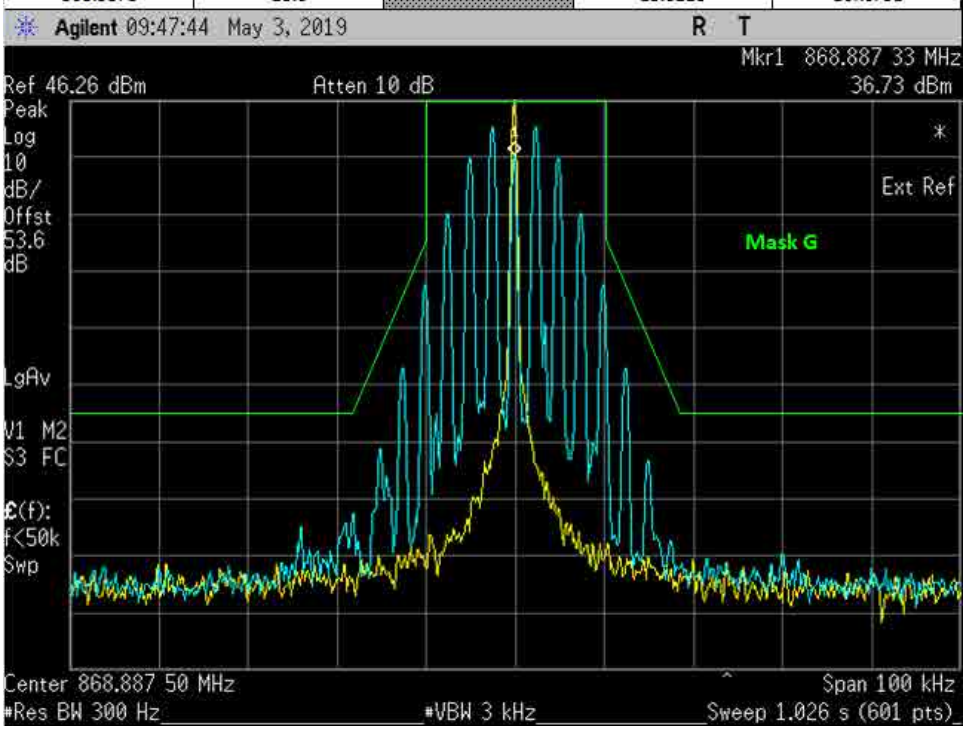
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	25.0		15.0138	16K0F3E



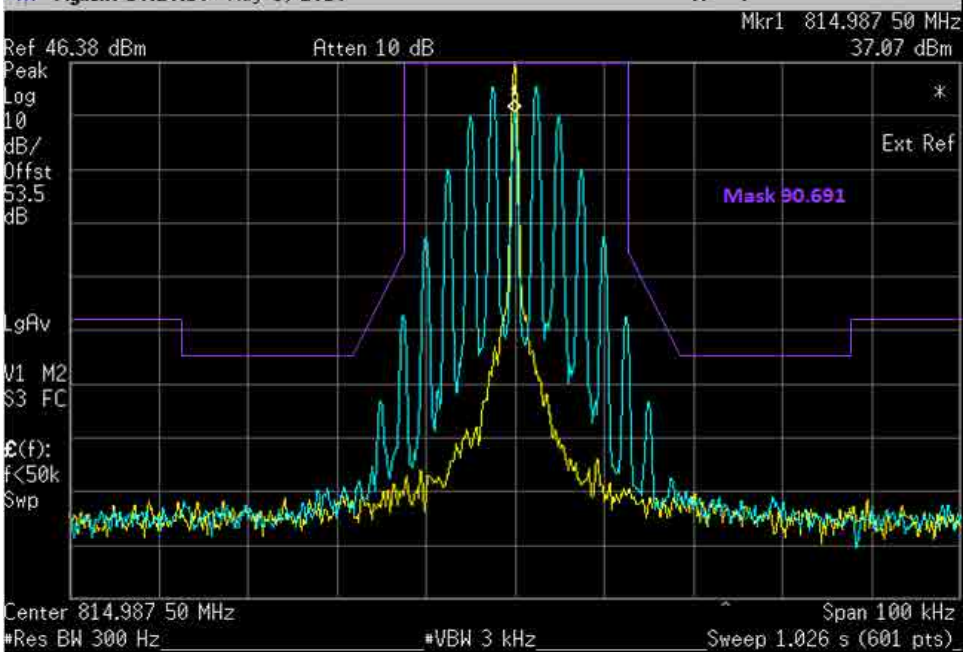
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	25.0		15.0140	16K0F3E



Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	25.0		15.0223	16K0F3E

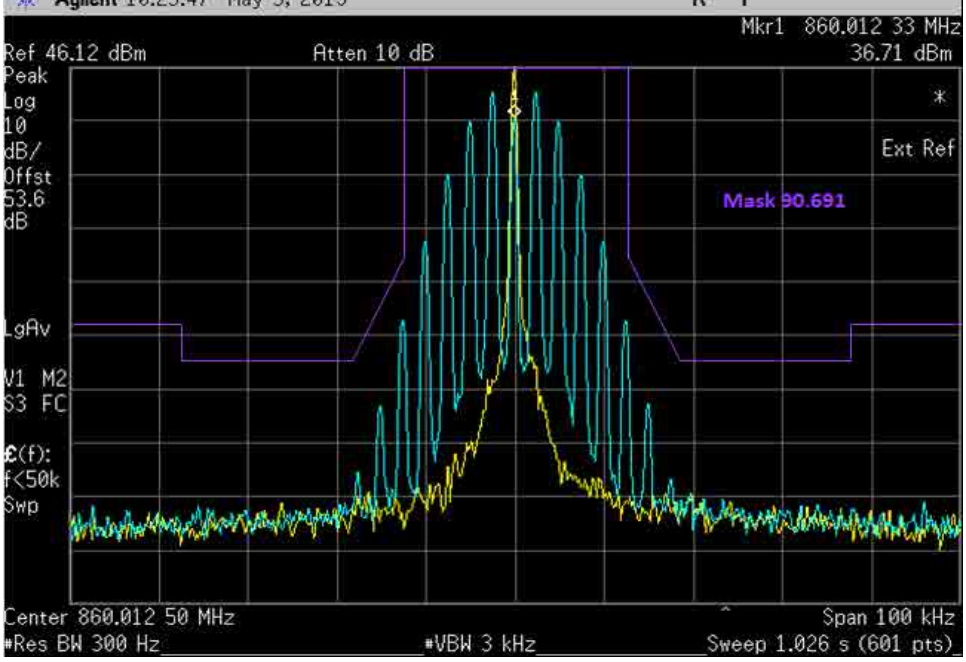


Modulation		Rules Part		
Analog Voice		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	25.0		15.0069	16K0F3E



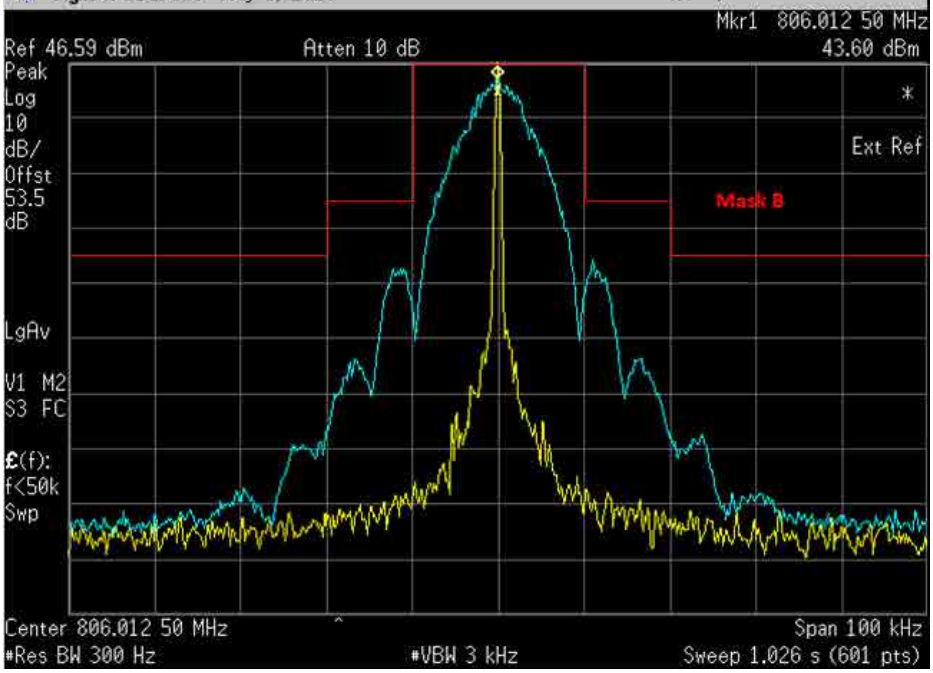
NOT FOR IC REVIEW

Modulation		Rules Part		
Analog Voice		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	25.0		15.0136	16K0F3E



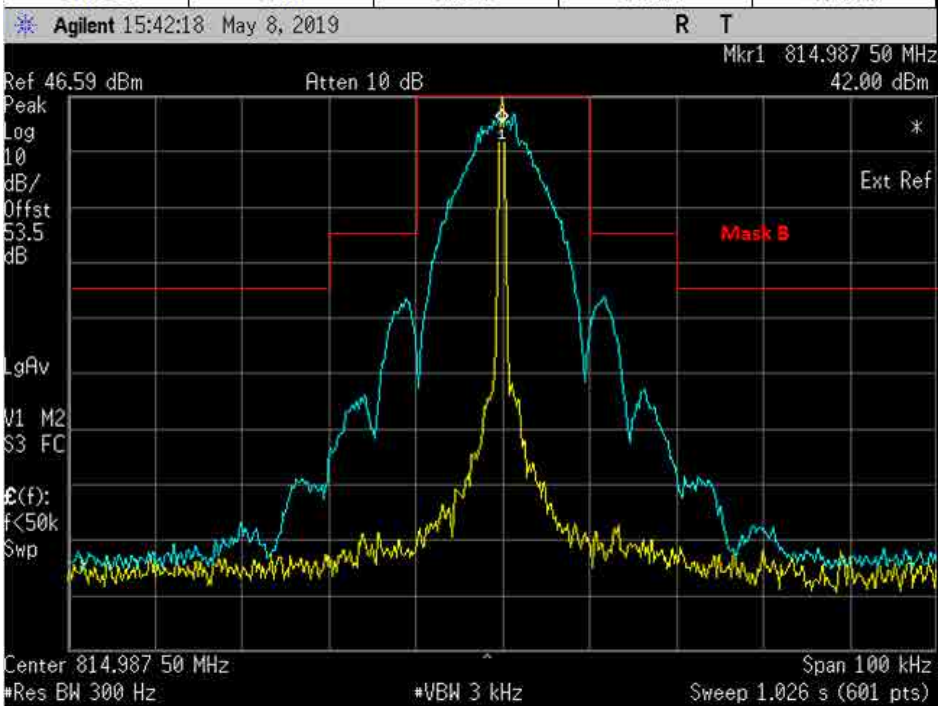
NOT FOR IC REVIEW

Modulation		Rules Part		
Analog Voice Encyption		90.210,RSS119		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
806.0125	20.0	15.2650	10.4758	20K0F1E

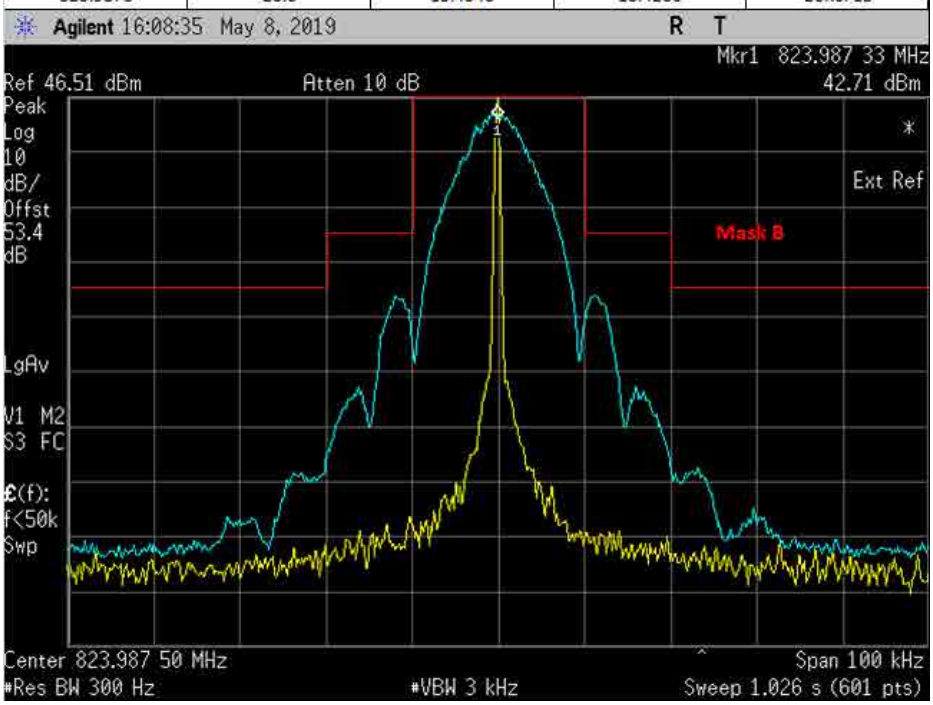


NOT FOR FCC REVIEW

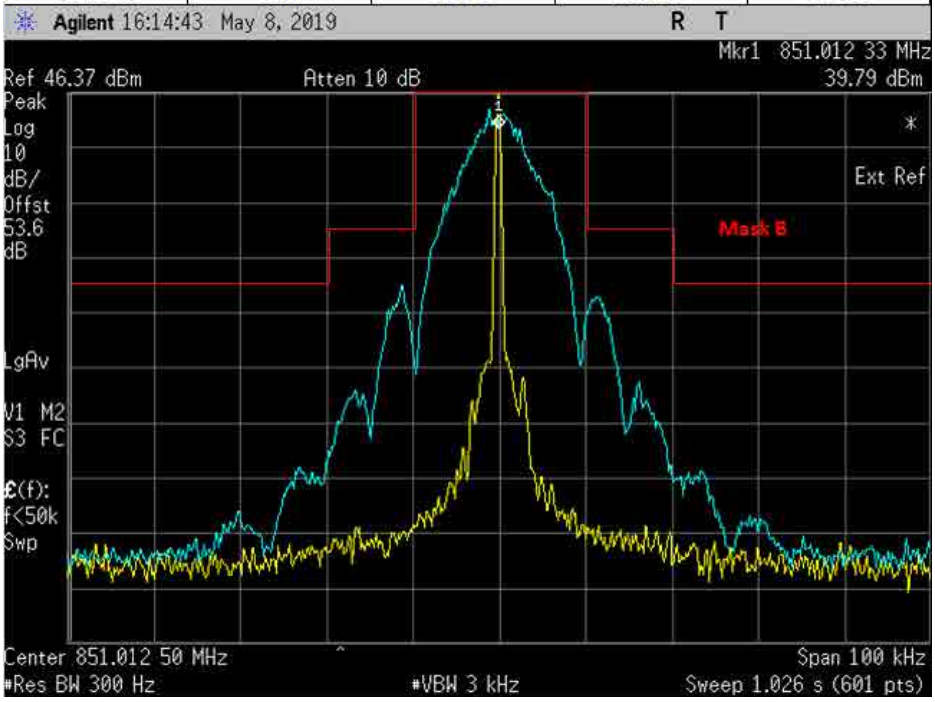
Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
814.9875	20.0	15.3220	10.4277	20K0F1E



Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
823.9875	20.0	15.4340	10.4266	20K0F1E

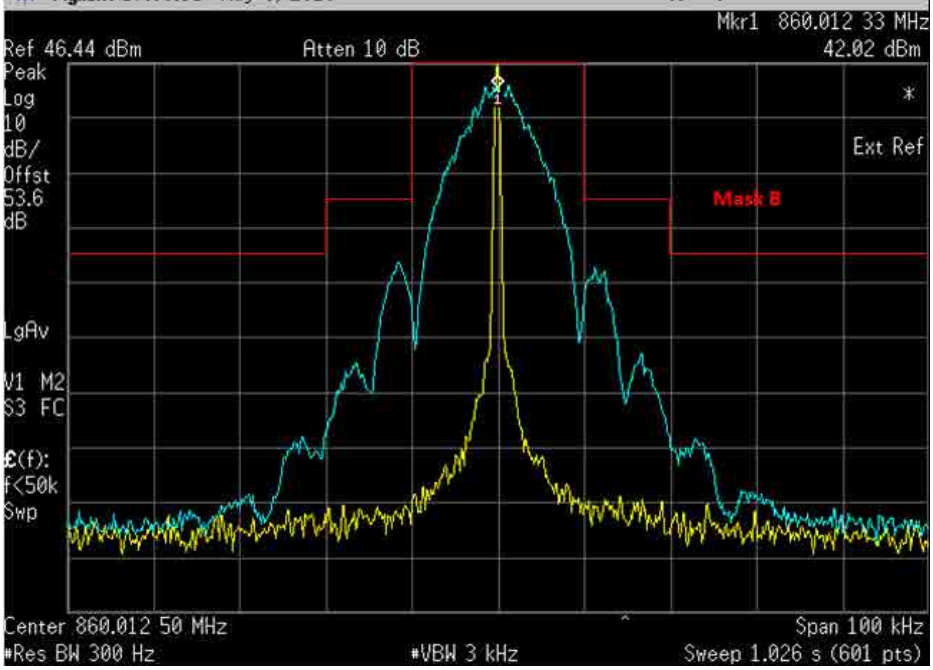


Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
851.0125	20.0	15.4300	10.4214	20K0F1E

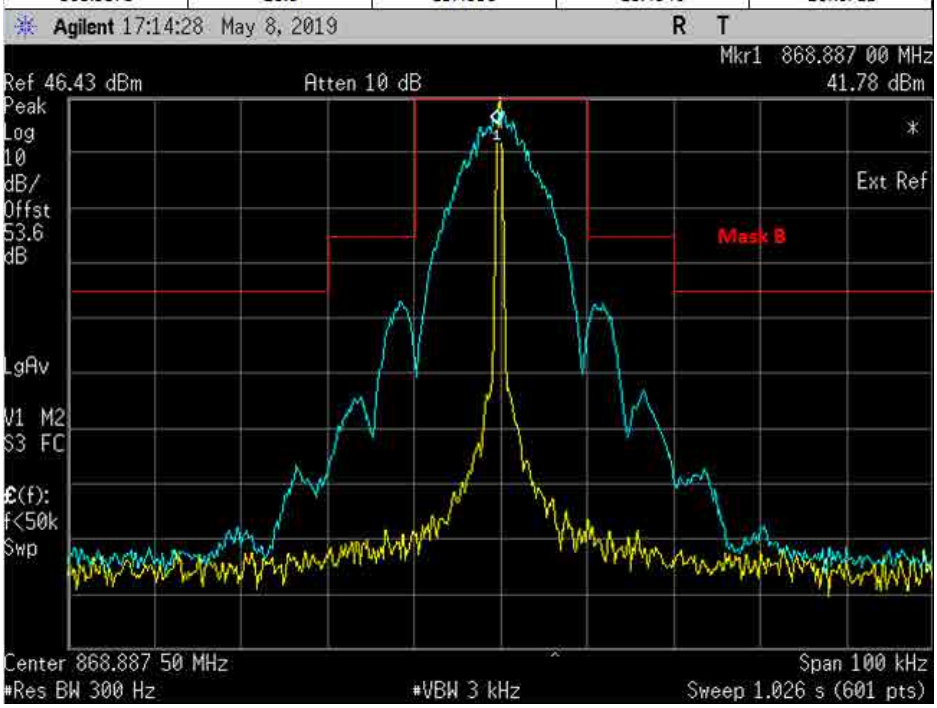


NOT FOR FCC REVIEW

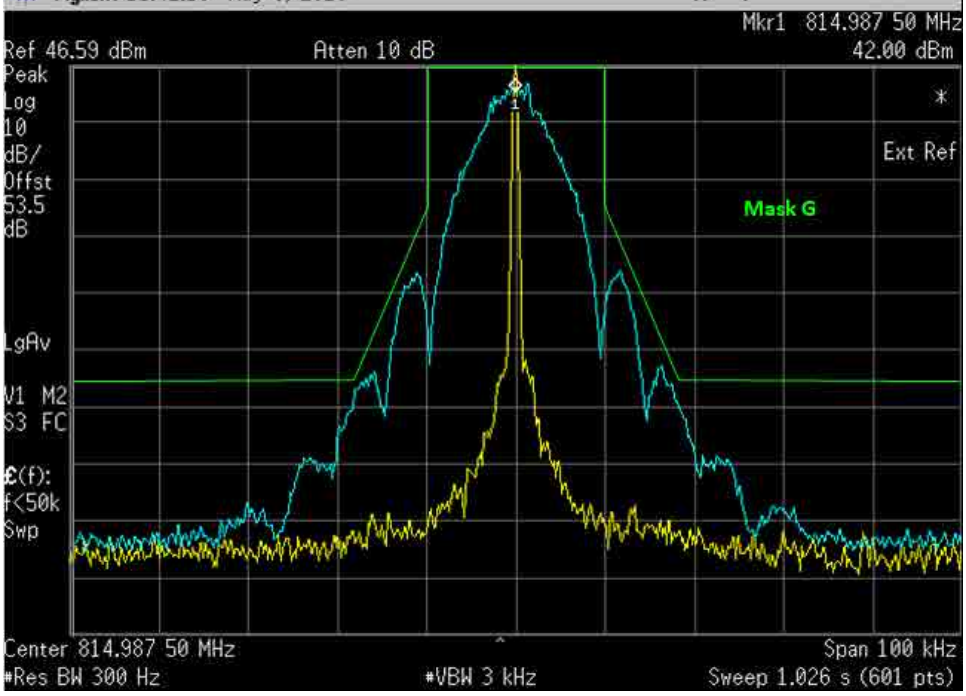
Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
860.0125	20.0	15.4320	10.4282	20K0F1E



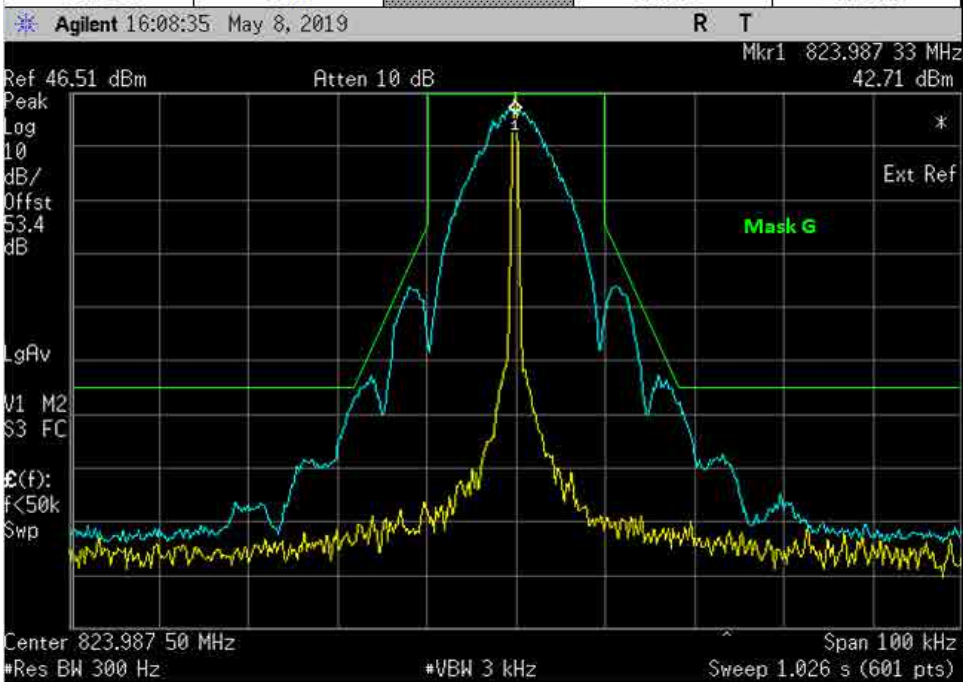
Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
868.8875	20.0	15.4350	10.4346	20K0F1E



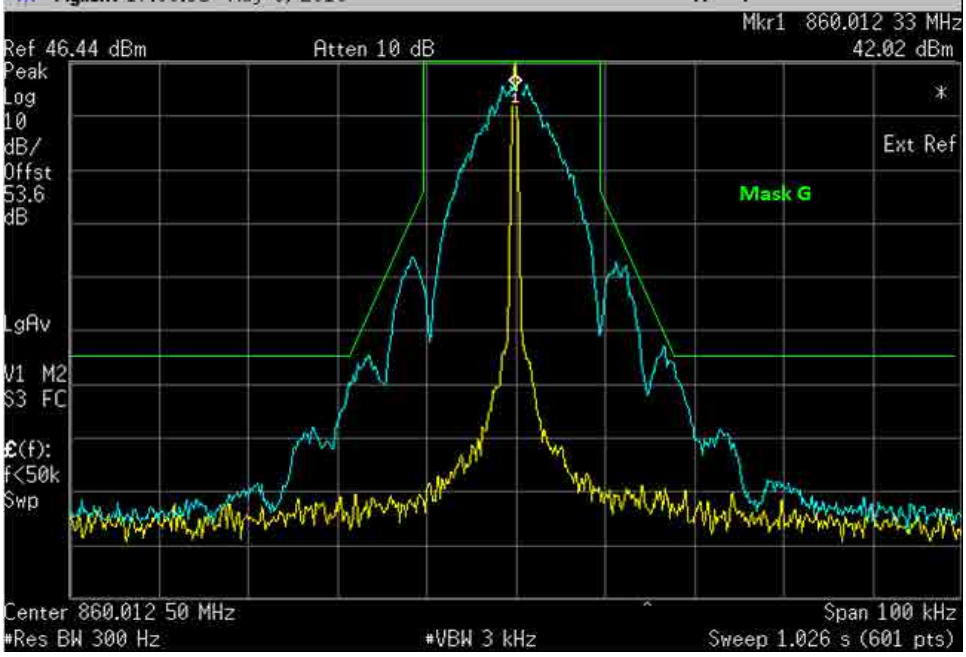
Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	20.0		10.4275	20K0F1E



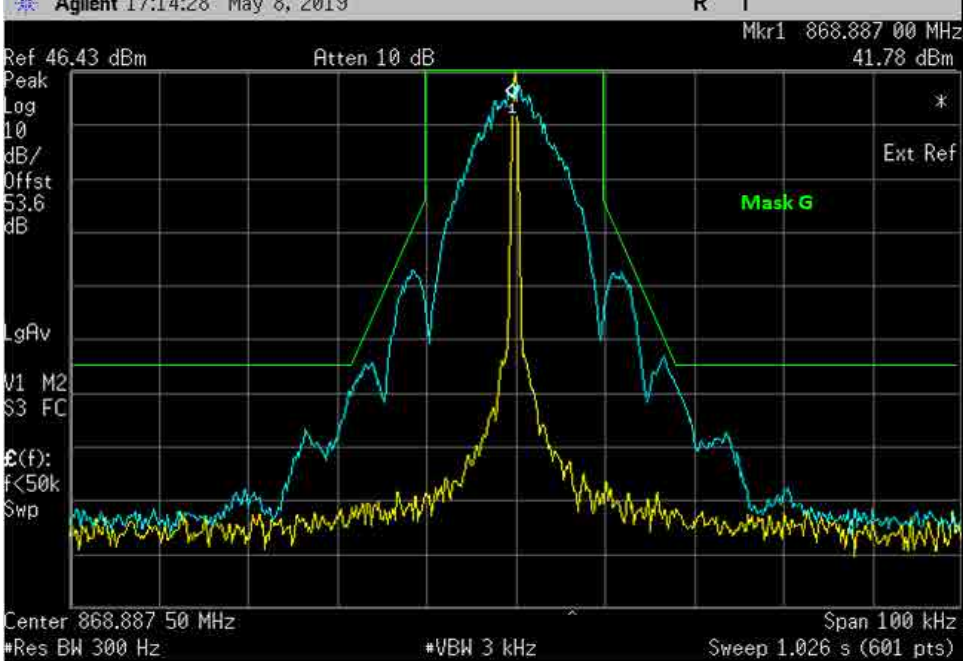
Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	20.0		10.4263	20K0F1E



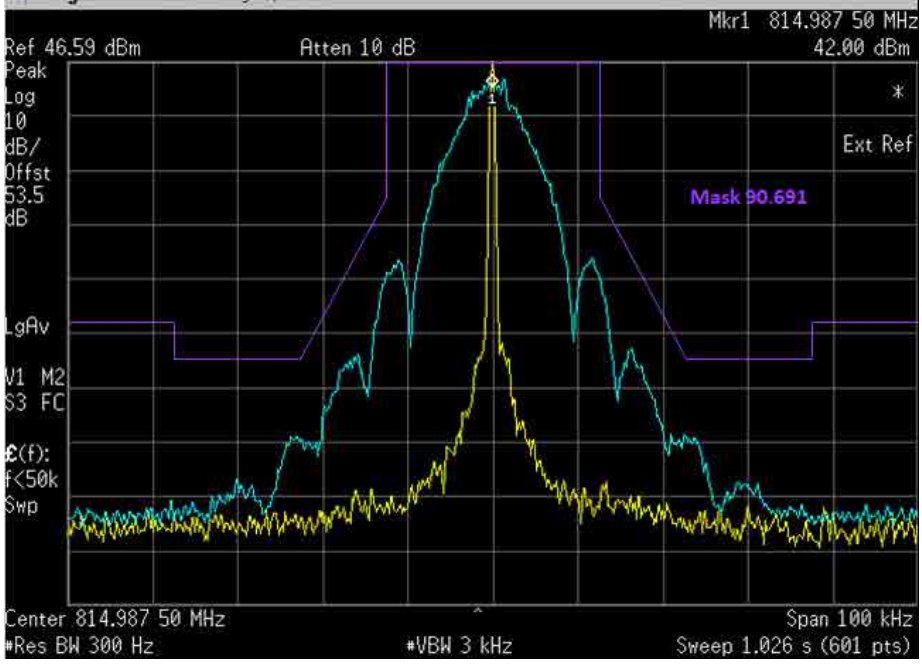
Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	20.0		10.4271	20K0F1E



Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	20.0		10.5935	20K0F1E

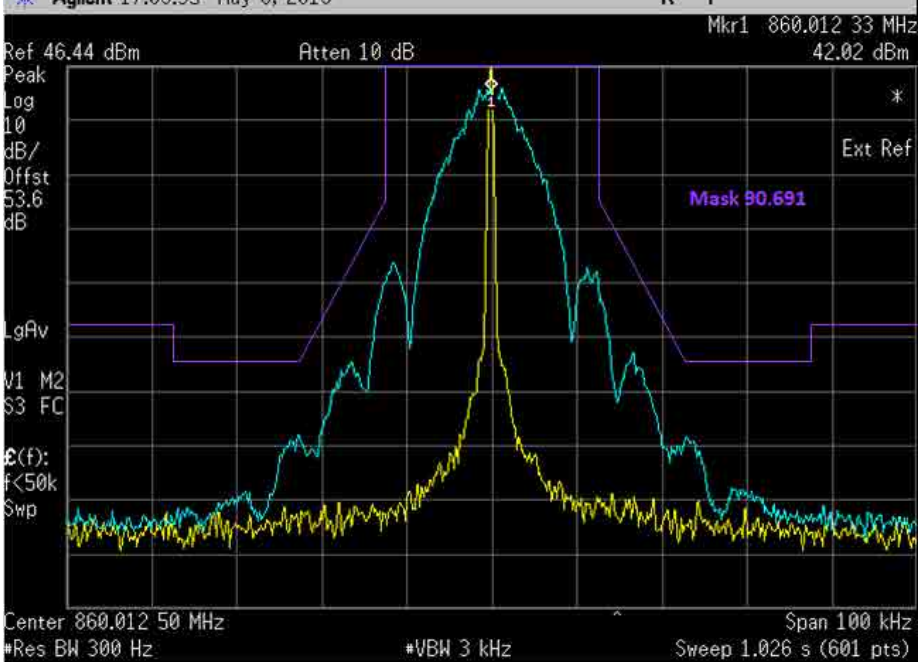


Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90.691		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
814.9875	20.0	15.4350	10.4385	20K0F1E



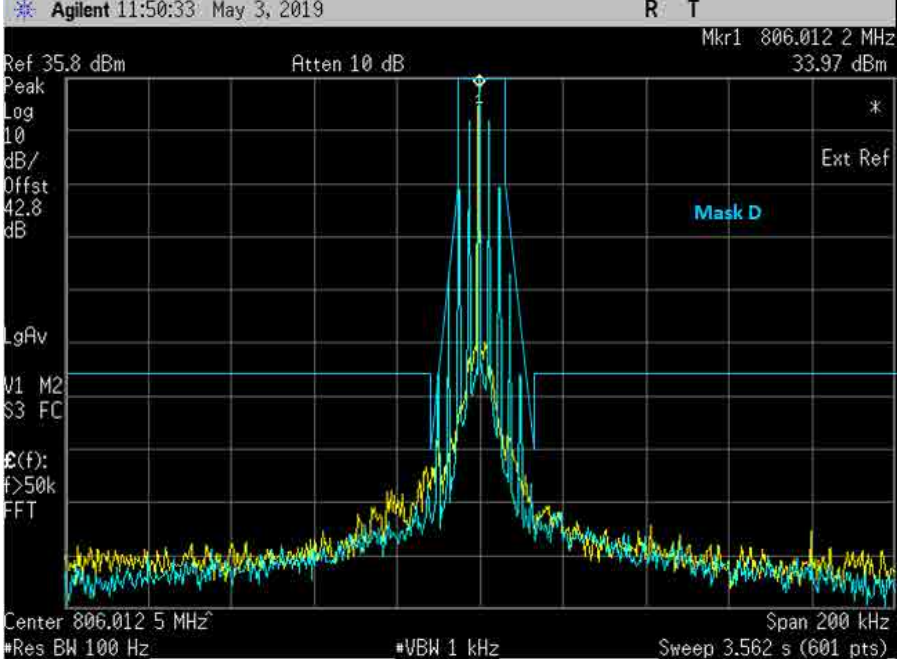
NOT FOR IC REVIEW

Modulation		Rules Part		
Analog Voice Encyption		FCC Part 90.691		
Channel Frequency (MHz)	Channel Spacing (kHz)	-26 dB Point (kHz)	99% OCB (kHz)	Emission Designator
860.0125	20.0	15.4320	10.4305	20K0F1E

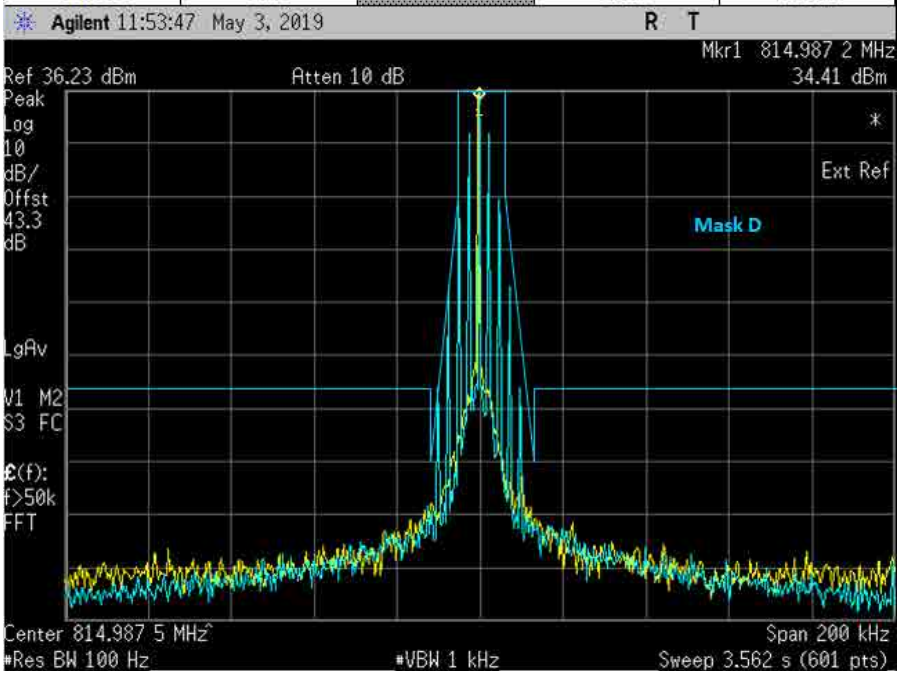


NOT FOR IC REVIEW

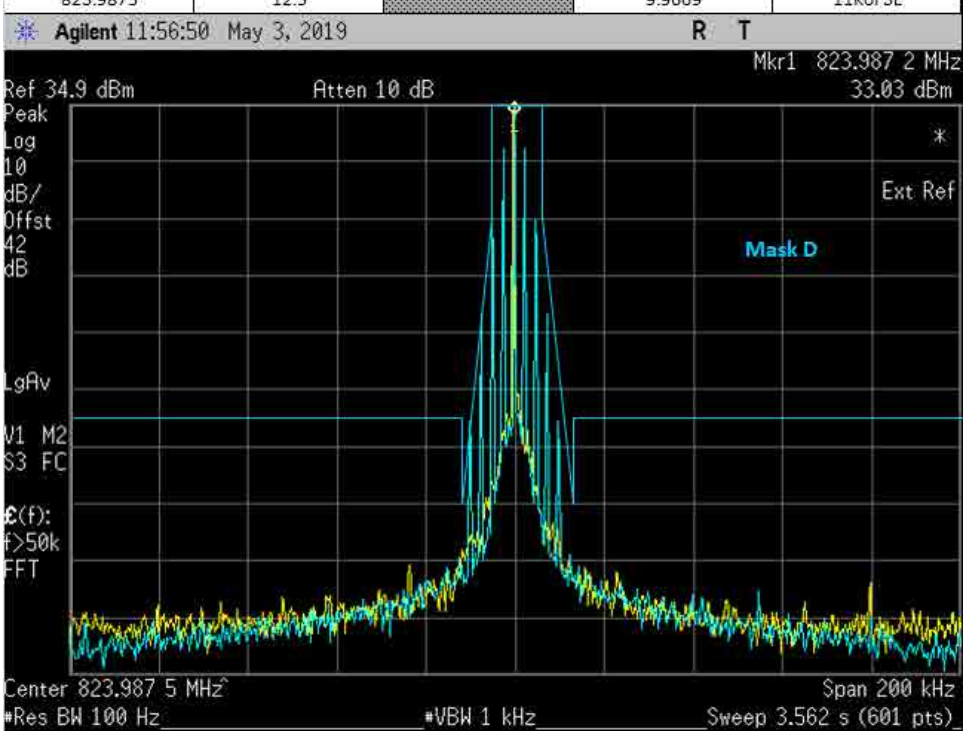
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		9.9488	11K0F3E



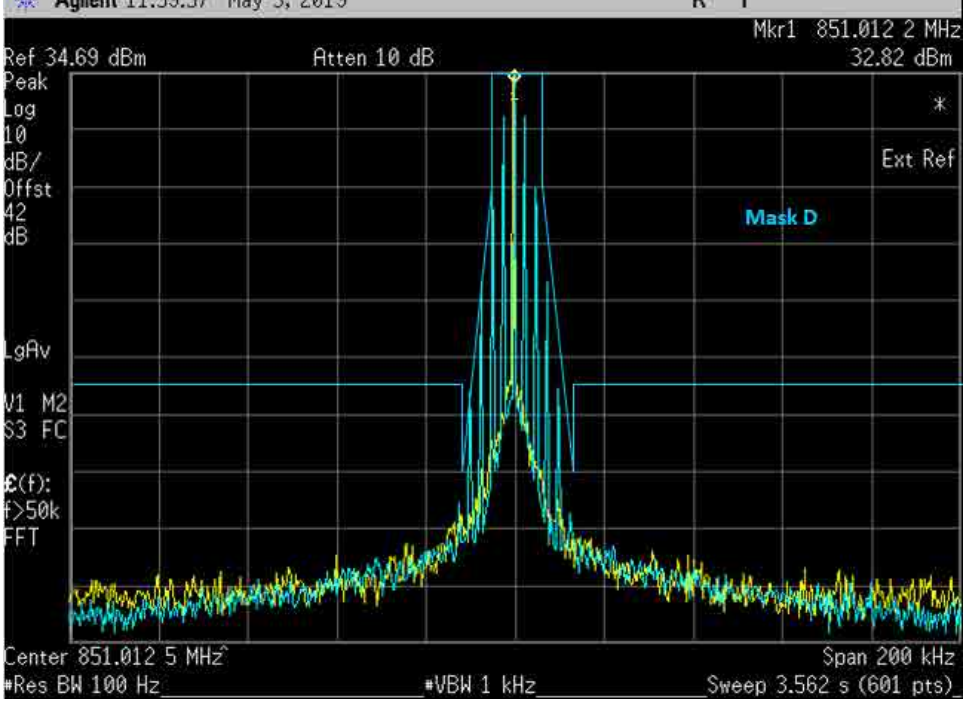
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		9.9514	11K0F3E



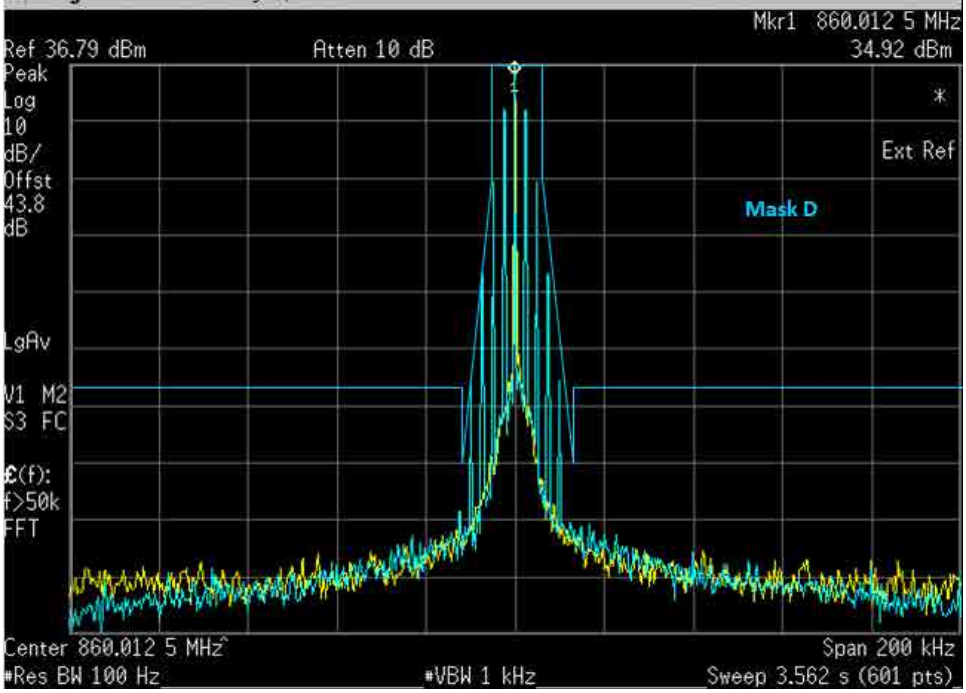
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	12.5		9.9669	11K0F3E



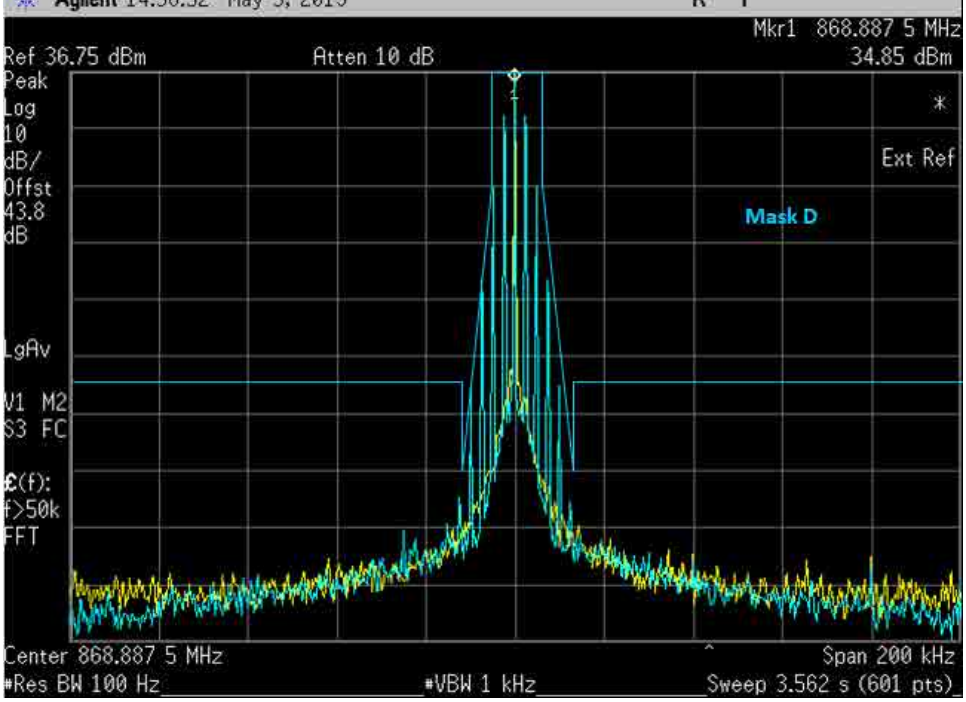
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
851.0125	12.5		9.9682	11K0F3E



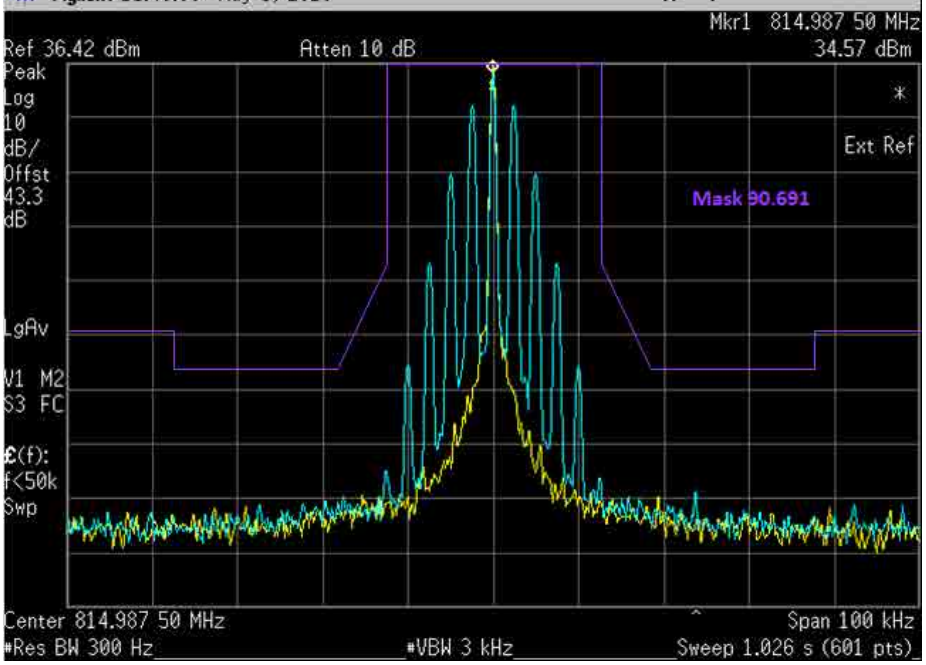
Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		9.9641	11K0F3E



Modulation		Rules Part		
Analog Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	12.5		9.9760	11K0F3E

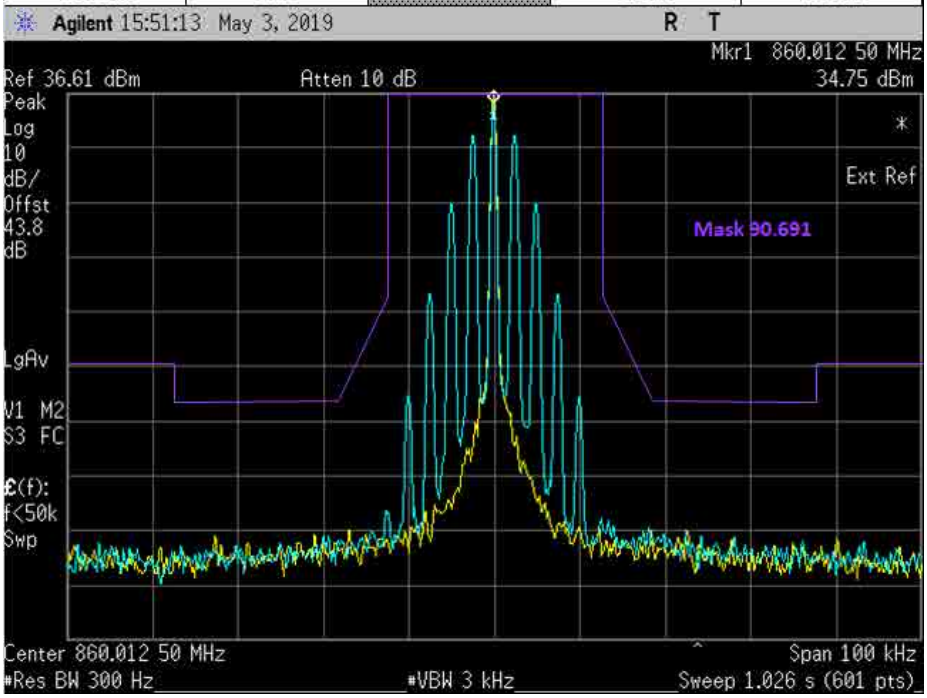


Modulation		Rules Part		
Analog Voice		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		9.9643	11K0F3E



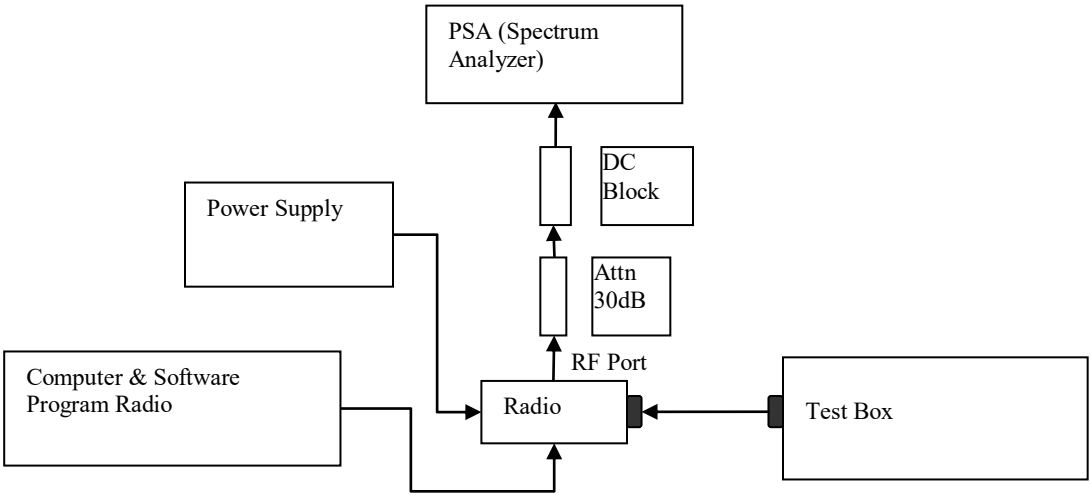
NOT FOR IC REVIEW

Modulation		Rules Part		
Analog Voice		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		9.9633	11K0F3E



NOT FOR IC REVIEW

6.6.3. Test Setup (Digital)



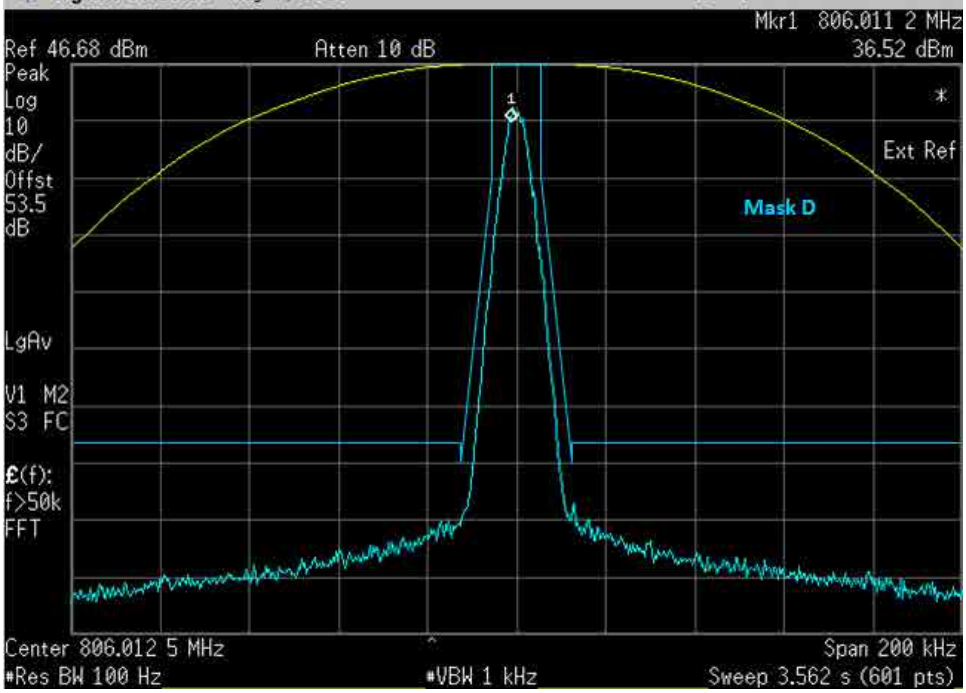
1) Program and set radio to operate in desire test frequency and digital mode with modulation. (*4FSK, C4FM or other digital modulation form).
2) Path loss for the measurement included.
3) Select the Occupied Bandwidth measurement for 99% Emissions Bandwidth Measurement.
4) Key in the Fc and Resolution Bandwidth (1 ~ 5 % of emission designator).
5) Transmit the DUT and record the occupied Bandwidth frequency.
6) Preset the spectrum analyzer for modulation emission spectrum measurement.
7) Set the span and Resolution Bandwidth (according to FCC/ ISED standard).
8) Capture the screen shot as modulated signal.

*Note:

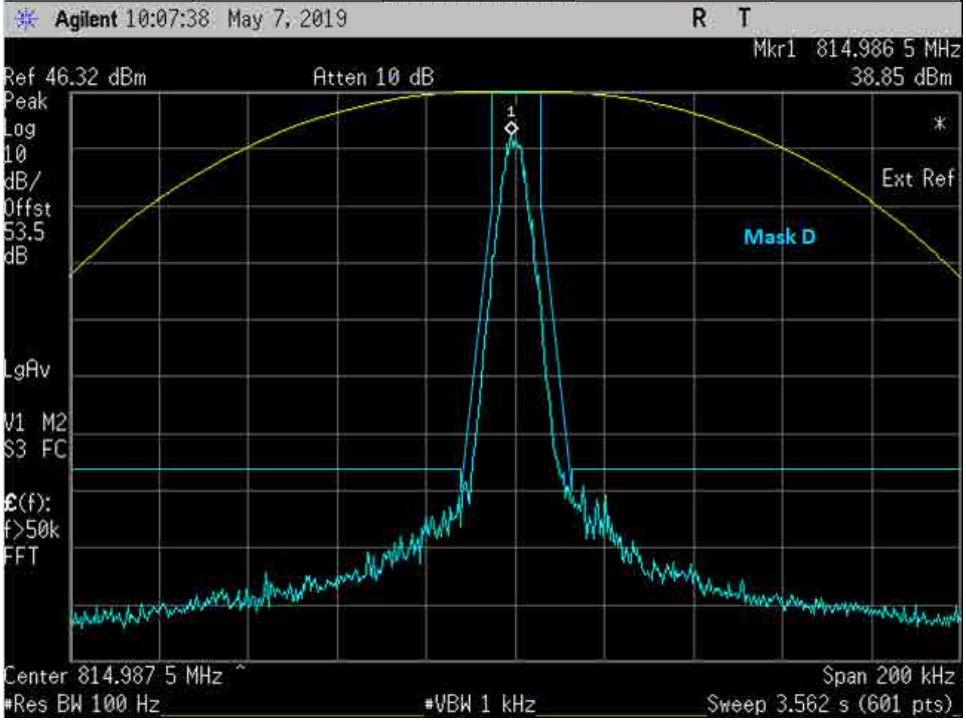
- For Digital Modulation, 12.5 kHz Data F1D & FXD would be the same. Therefore only measurements with F1D modulation shown below.
- For Digital Modulation, 12.5 kHz Data F1E & FXE would be the same. Therefore only measurements with F1E modulation shown below.

6.6.4. Test Result (Digital)

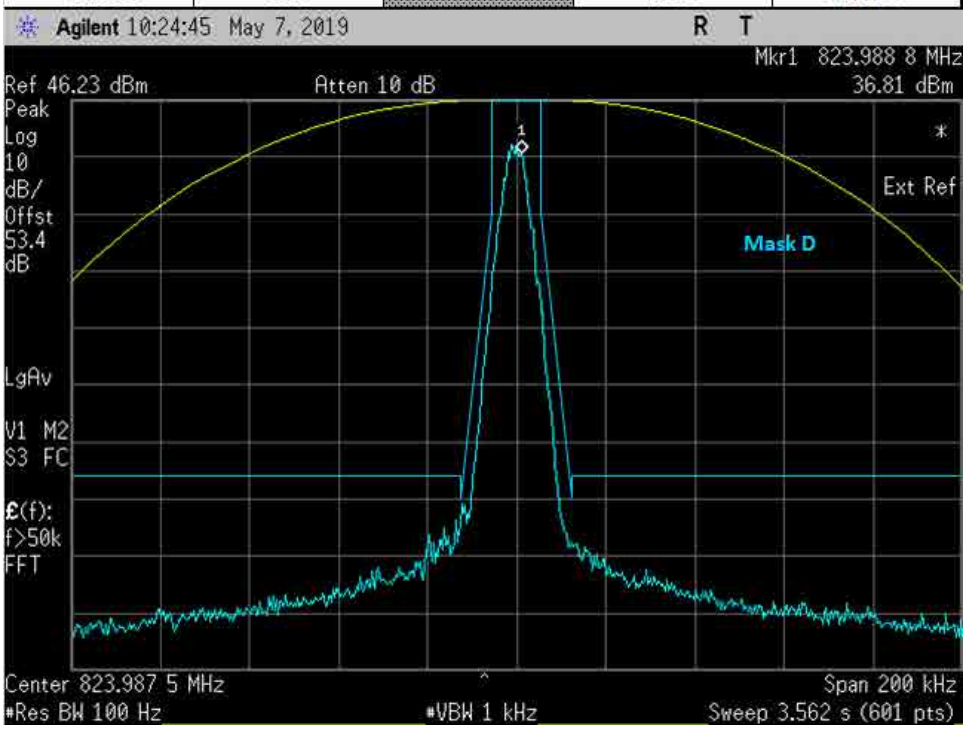
Modulation		Rules Part		
Digital Data		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		7.7672	8K10F1D



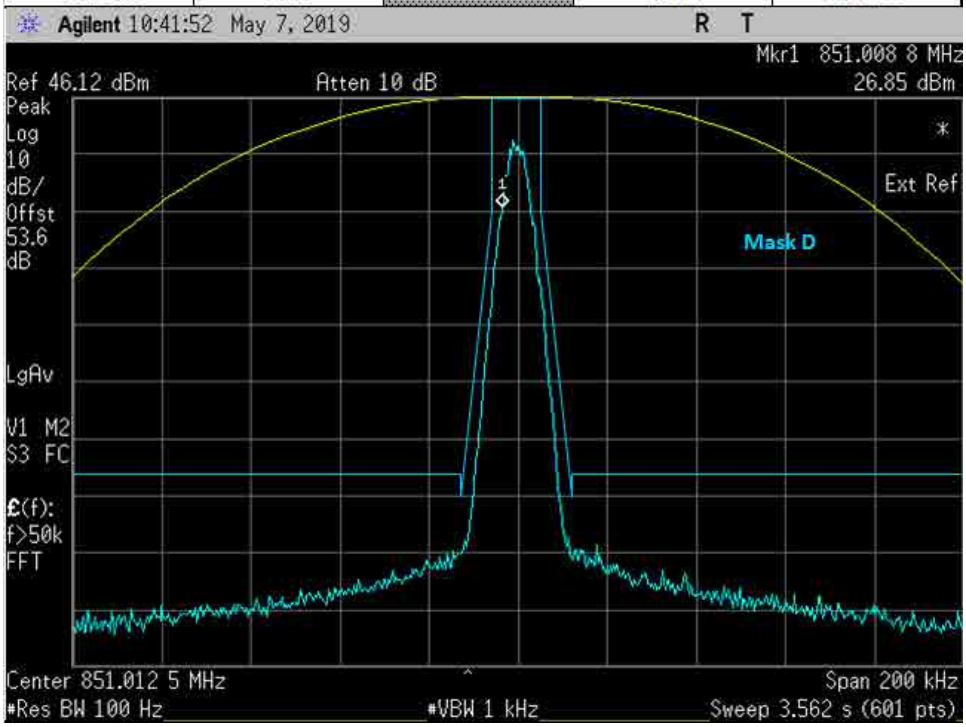
Modulation		Rules Part		
Digital Data		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		7.9152	8K10F1D



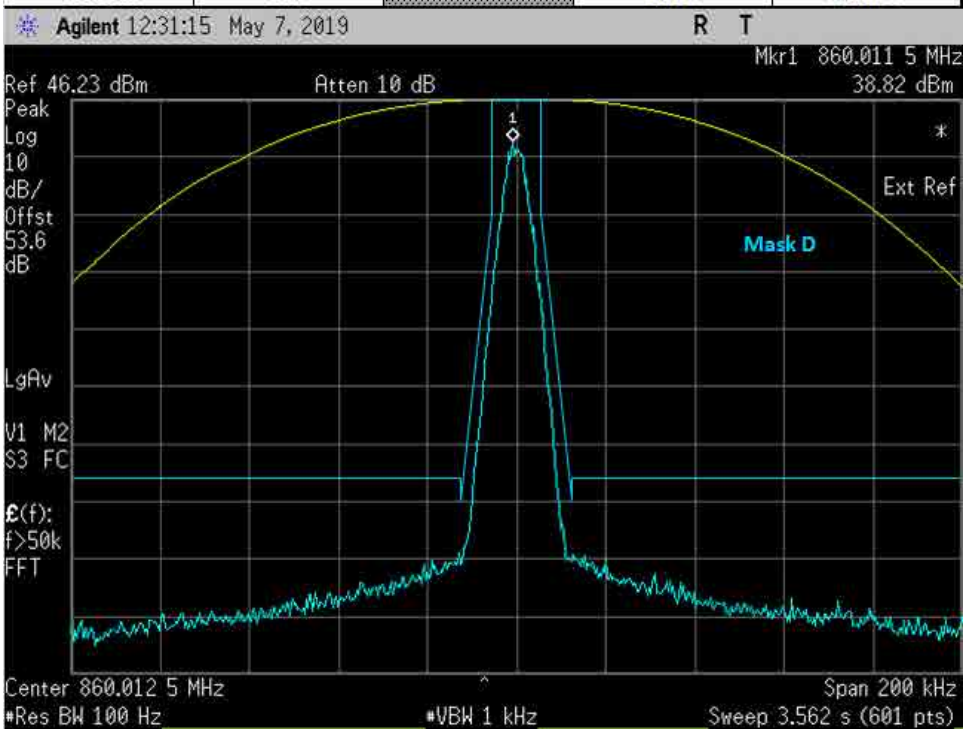
Modulation			Rules Part	
Digital Data			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	12.5		7.9666	8K10F1D



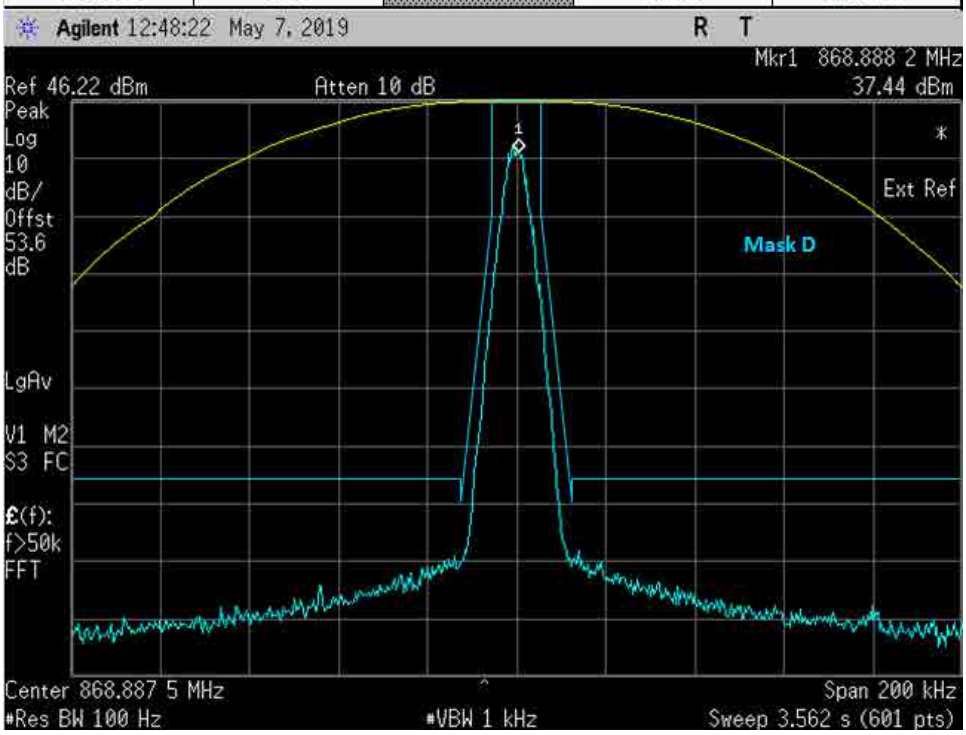
Modulation			Rules Part	
Digital Data			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
851.0125	12.5		7.9127	8K10F1D



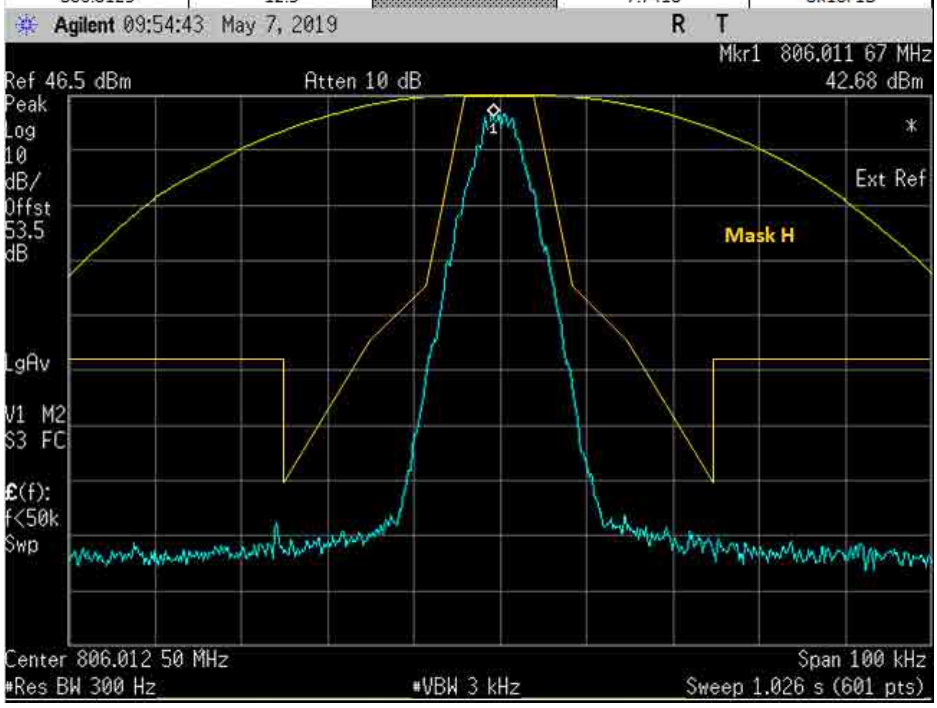
Modulation		Rules Part		
Digital Data		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		8.0184	8K10F1D



Modulation		Rules Part		
Digital Data		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	12.5		7.9267	8K10F1D

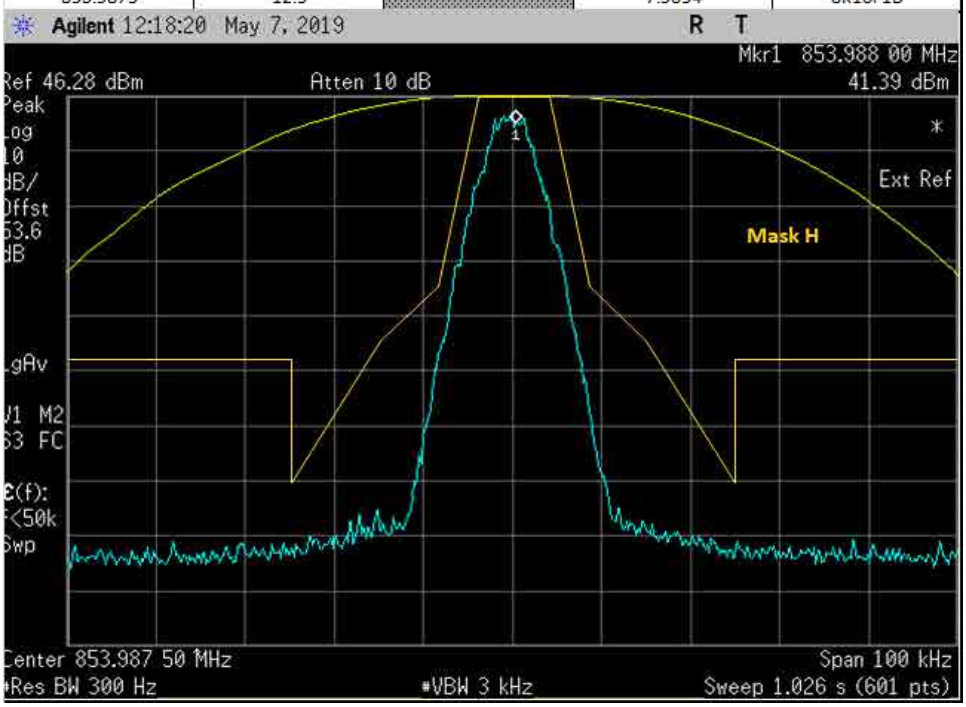


Modulation		Rules Part		
Digital Data		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		7.7410	8K10F1D



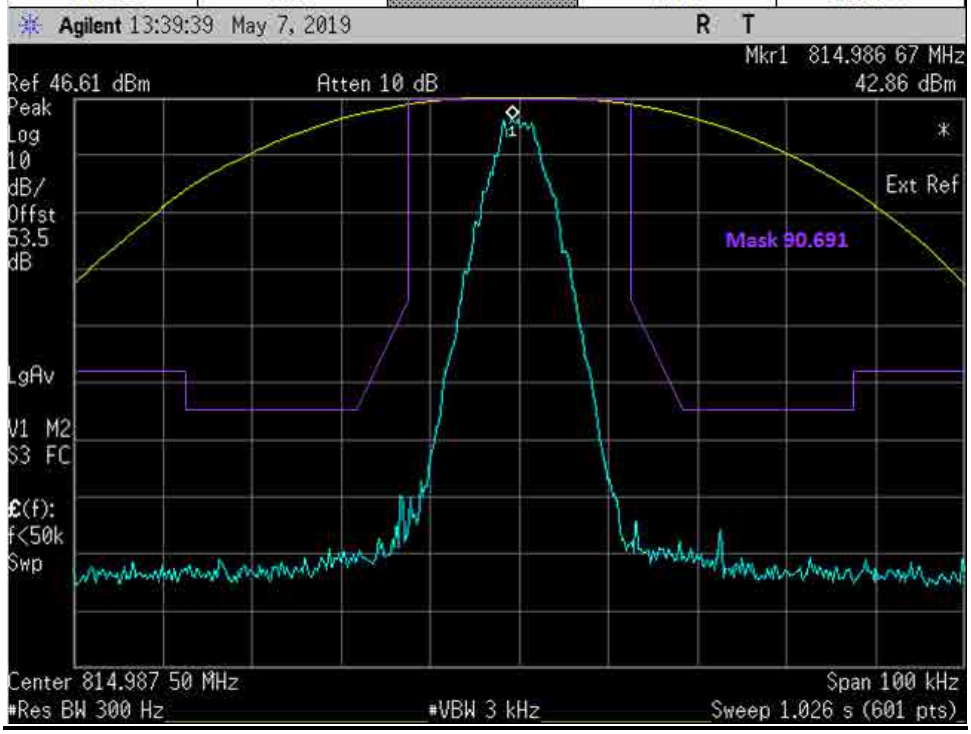
NOT FOR IC REVIEW

Modulation		Rules Part		
Digital Data		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
853.9875	12.5		7.9054	8K10F1D



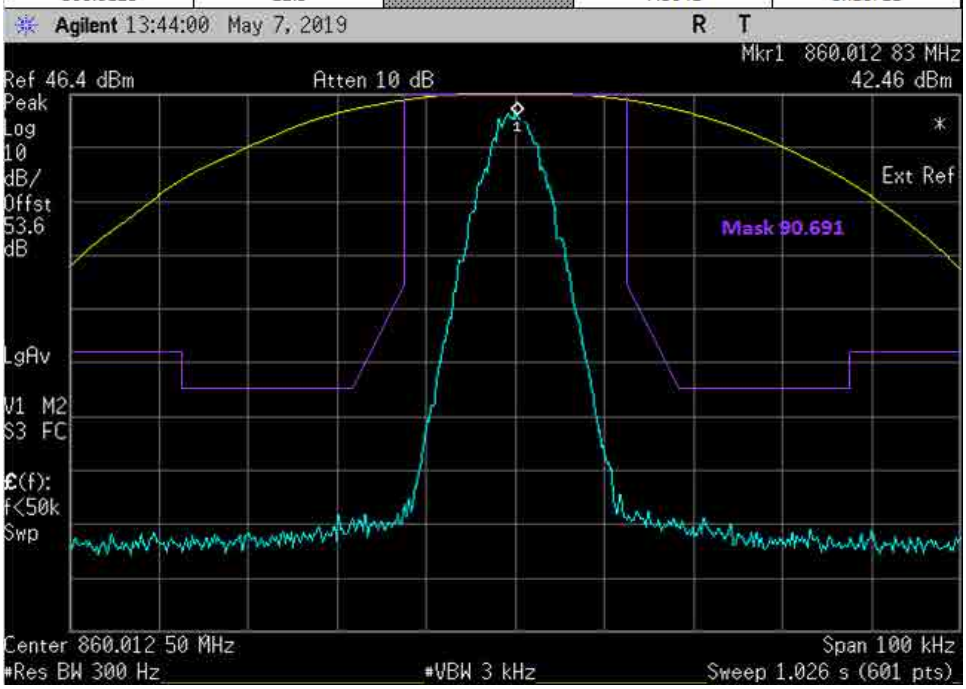
NOT FOR IC REVIEW

Modulation		Rules Part	
Digital Data		FCC Part 90.691 (EA)	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
814.9875	12.5	7.7128	8K10F1D



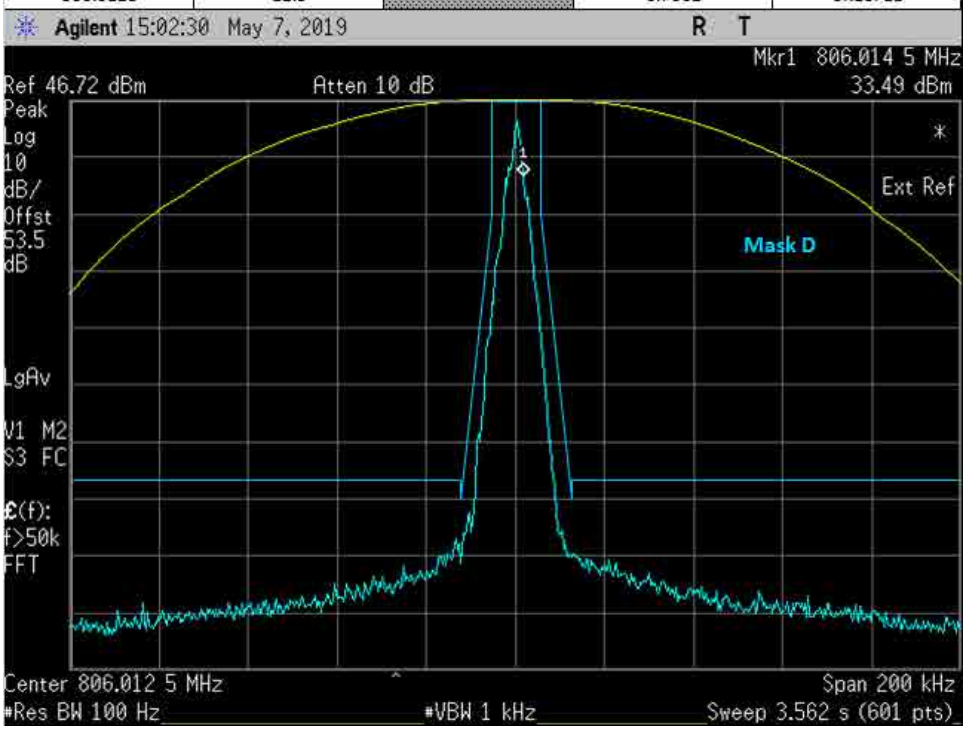
NOT FOR IC REVIEW

Modulation		Rules Part	
Digital Data		FCC Part 90.691 (EA)	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
860.0125	12.5	7.8641	8K10F1D

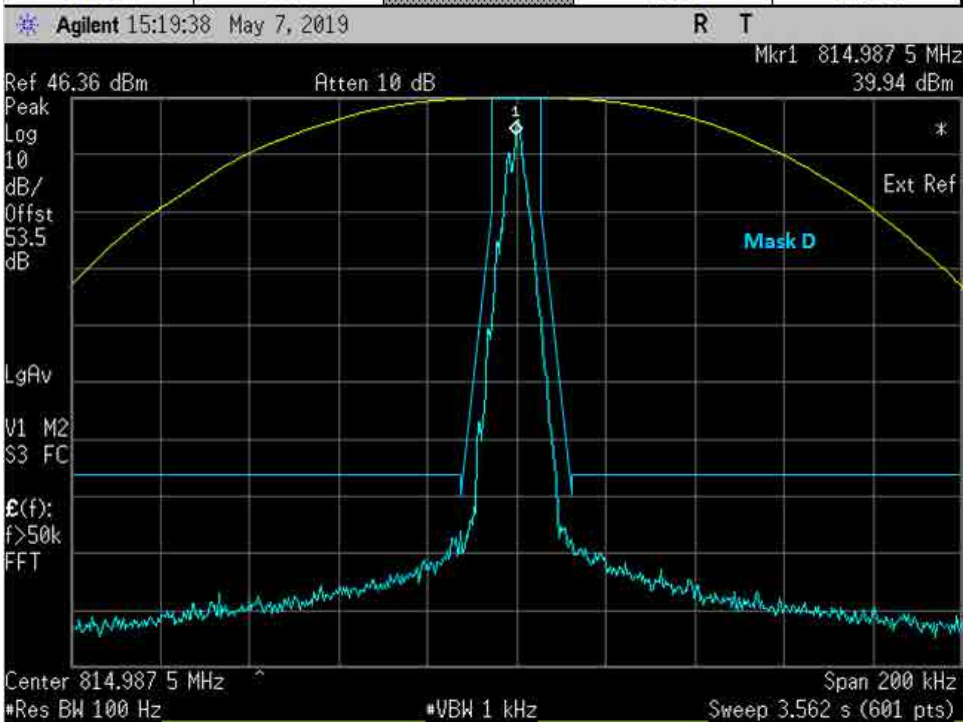


NOT FOR IC REVIEW

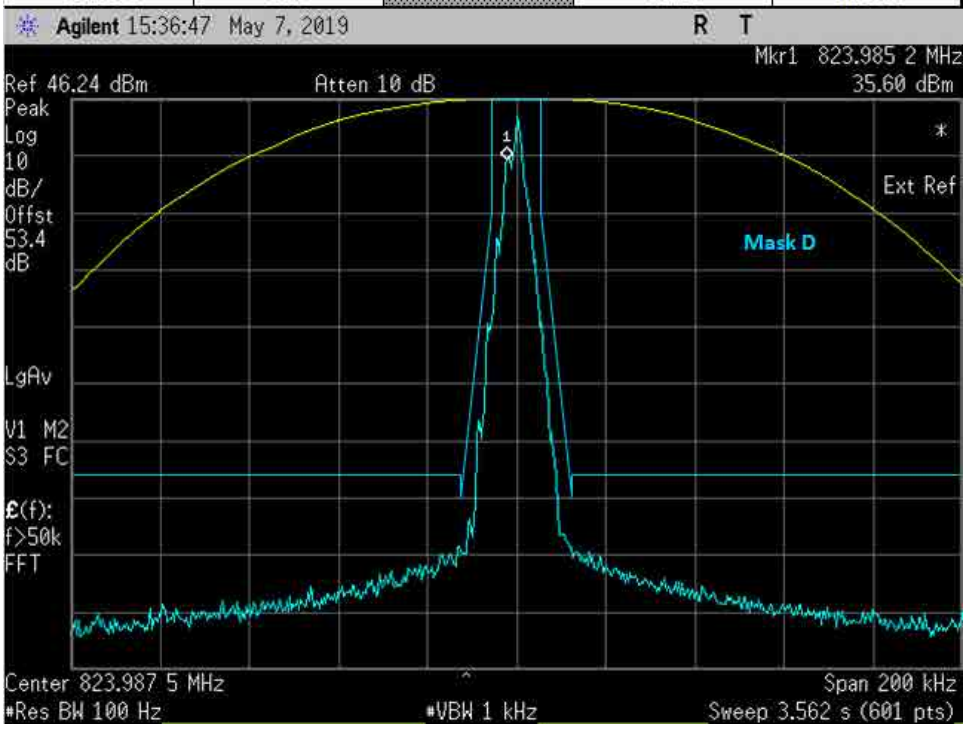
Modulation		Rules Part		
Digital Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		6.7662	8K10F1E



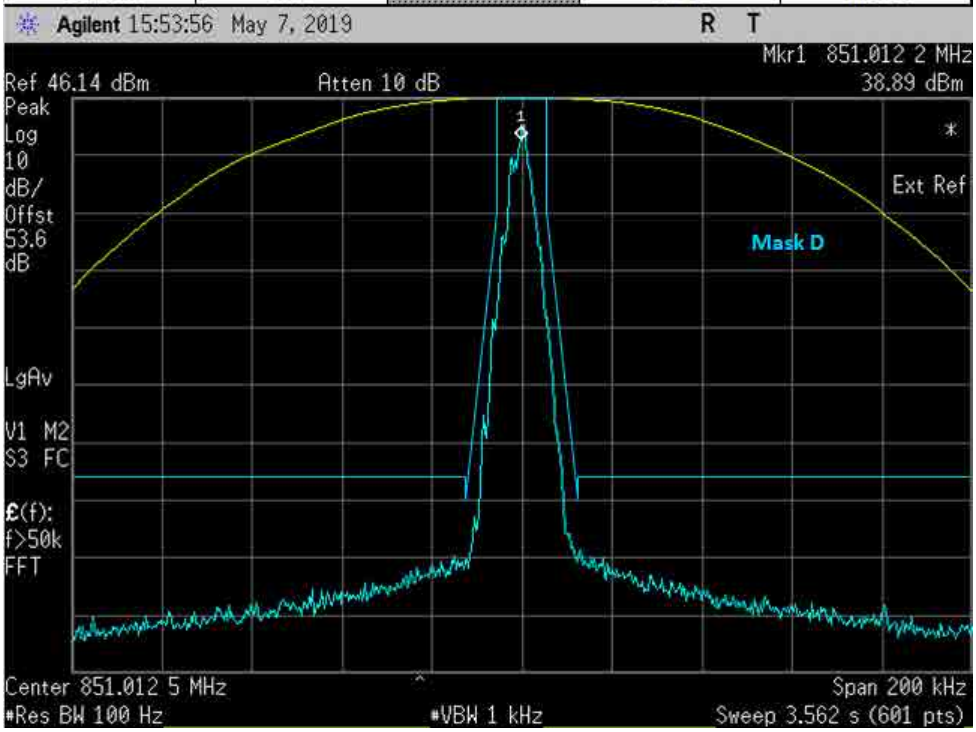
Modulation		Rules Part		
Digital Voice		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		7.0531	8K10F1E



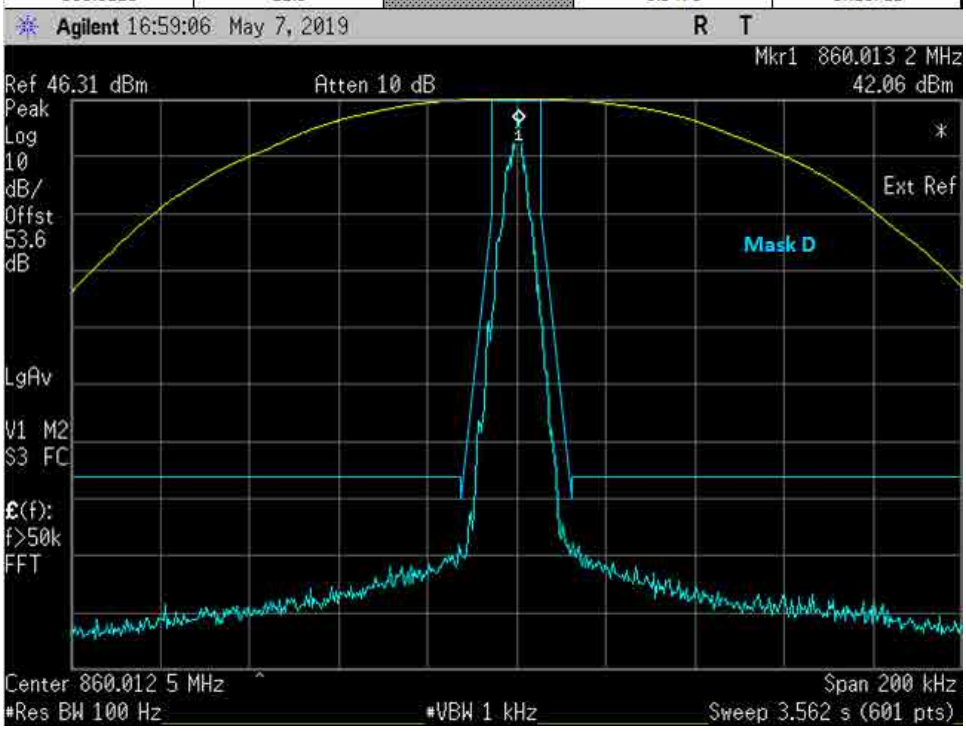
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	12.5		6.6732	8K10F1E



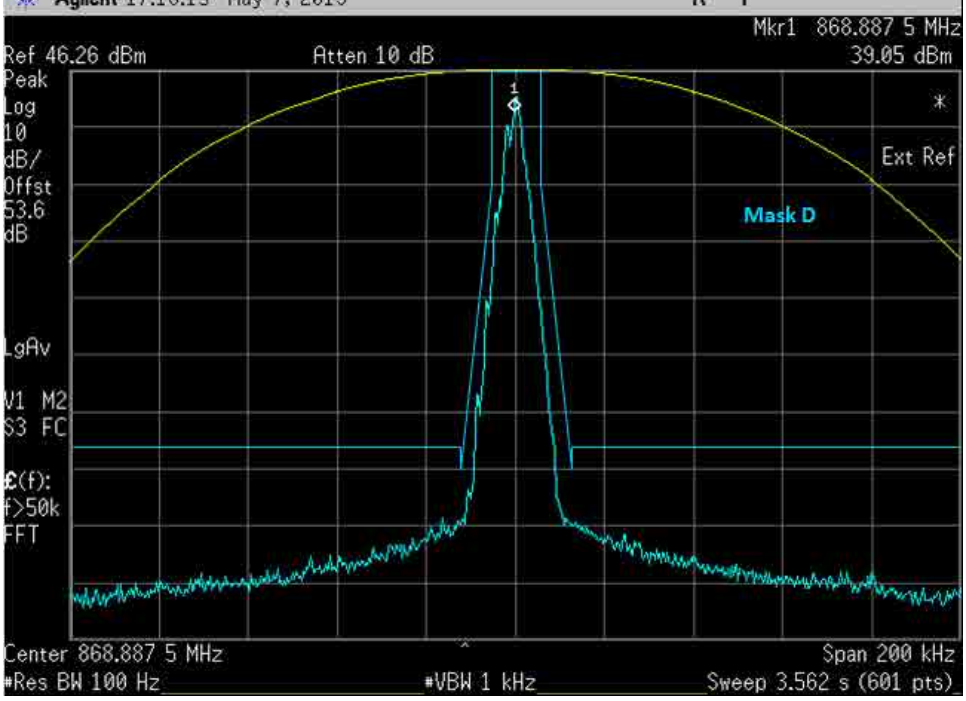
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
851.0125	12.5		6.3432	8K10F1E



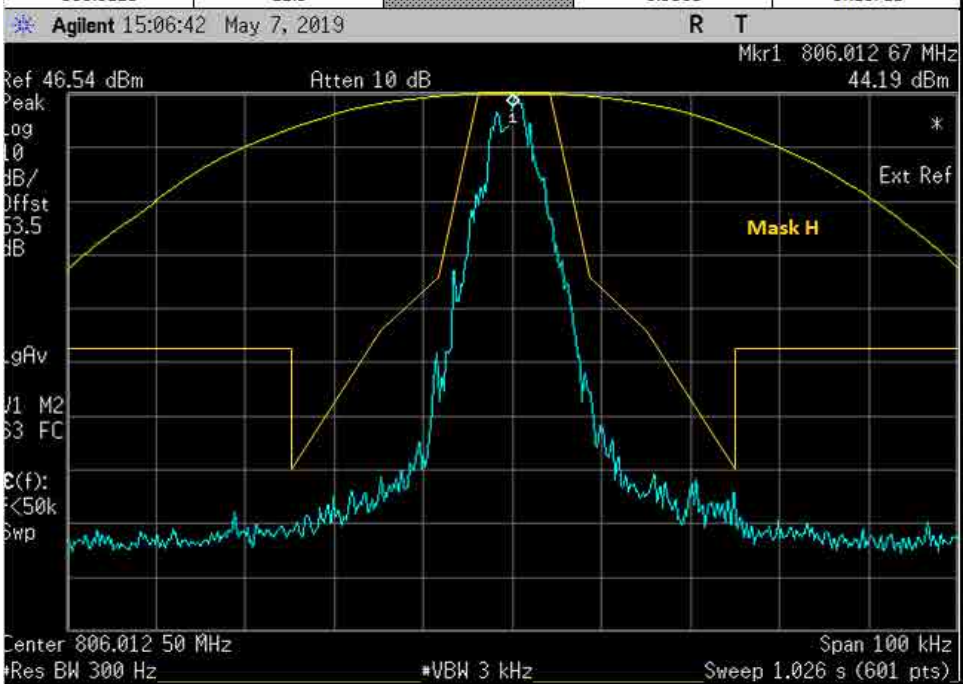
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		6.5470	8K10F1E



Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	12.5		6.7636	8K10F1E

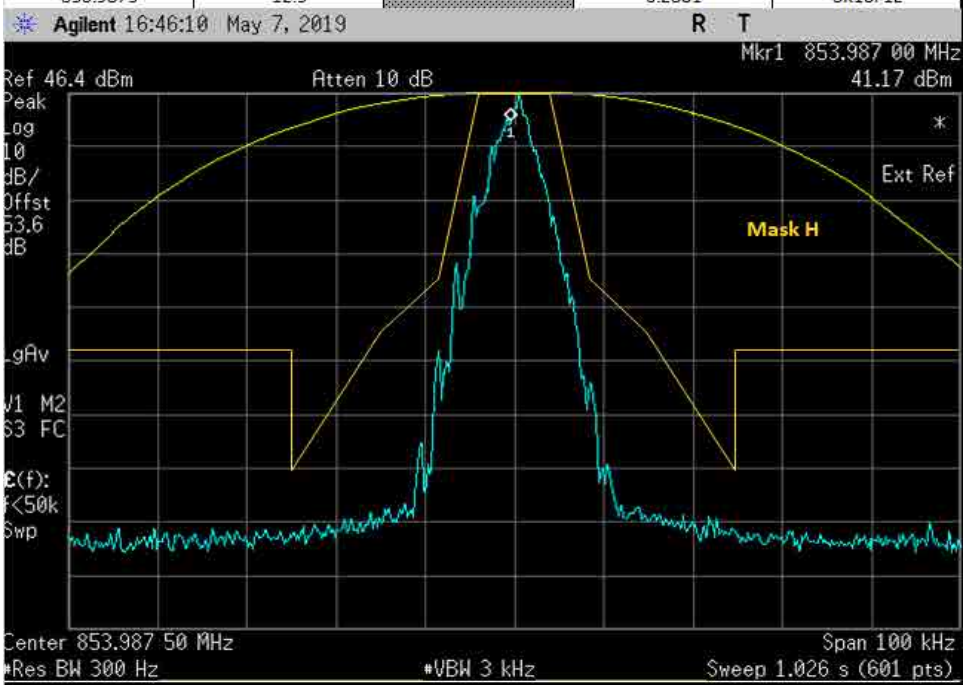


Modulation		Rules Part	
Digital Voice		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
806.0125	12.5	6.3868	8K10F1E



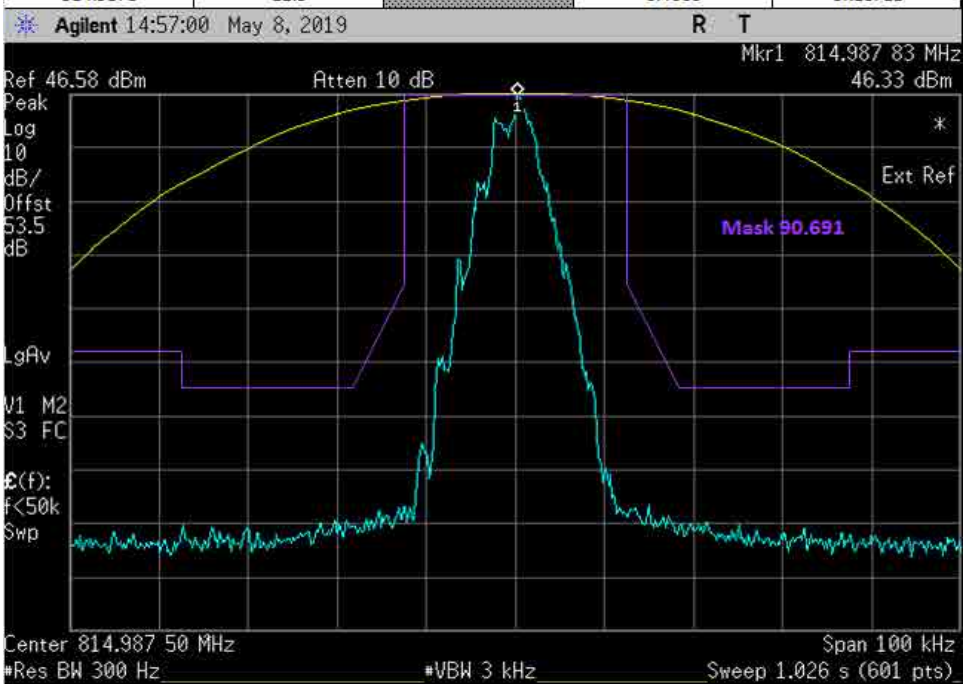
NOT FOR IC REVIEW

Modulation		Rules Part	
Digital Voice		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
853.9875	12.5	6.2801	8K10F1E



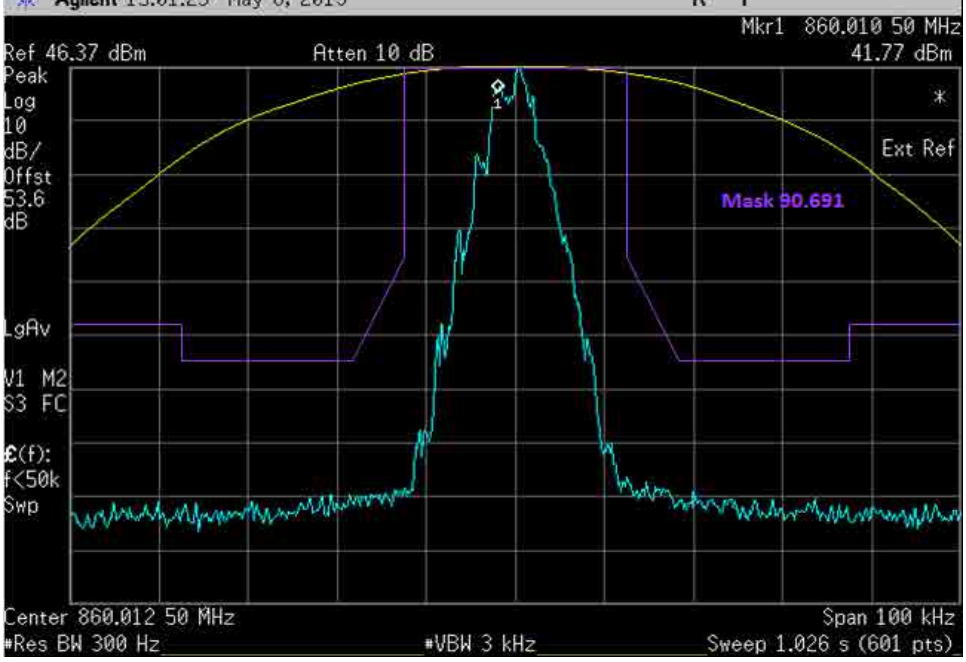
NOT FOR IC REVIEW

Modulation		Rules Part	
Digital Voice Encryption		FCC Part 90.691 (EA)	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
814.9875	12.5	6.4663	8K10F1E



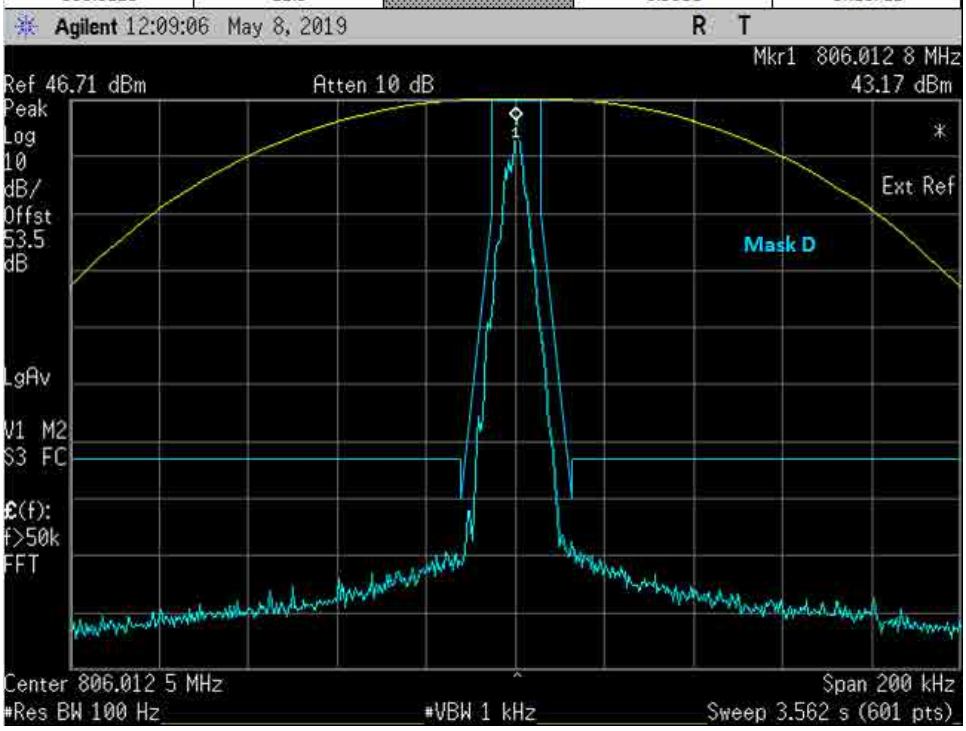
NOT FOR IC REVIEW

Modulation		Rules Part	
Digital Voice Encryption		FCC Part 90.691 (EA)	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
860.0125	12.5	6.5899	8K10F1E

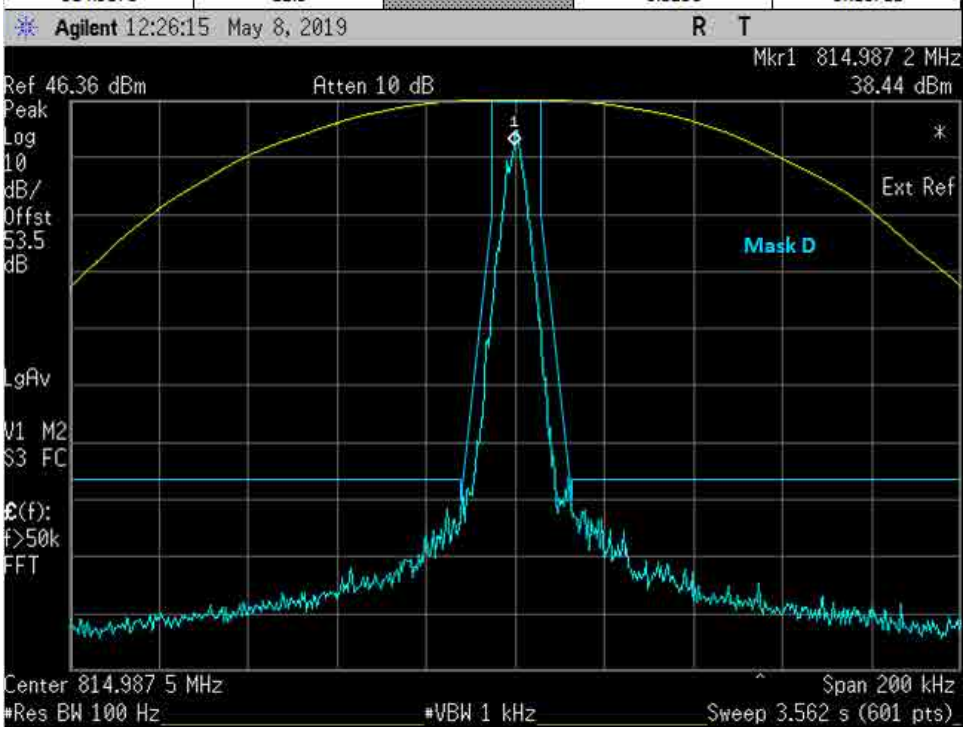


NOT FOR IC REVIEW

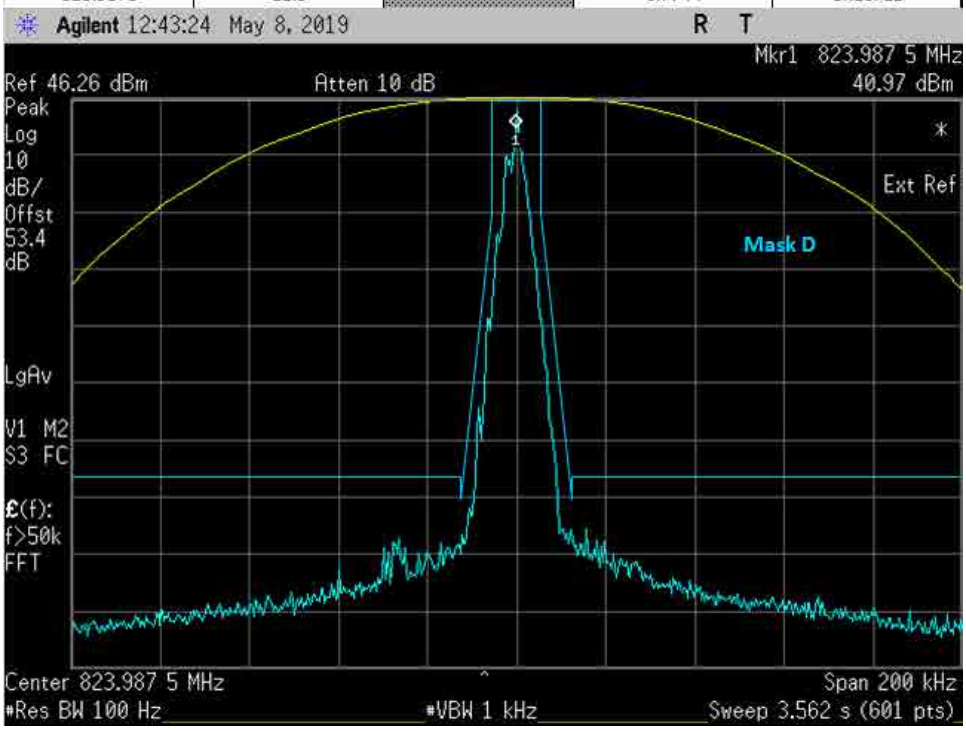
Modulation		Rules Part		
Digital Voice Encryption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		6.5681	8K10F1E



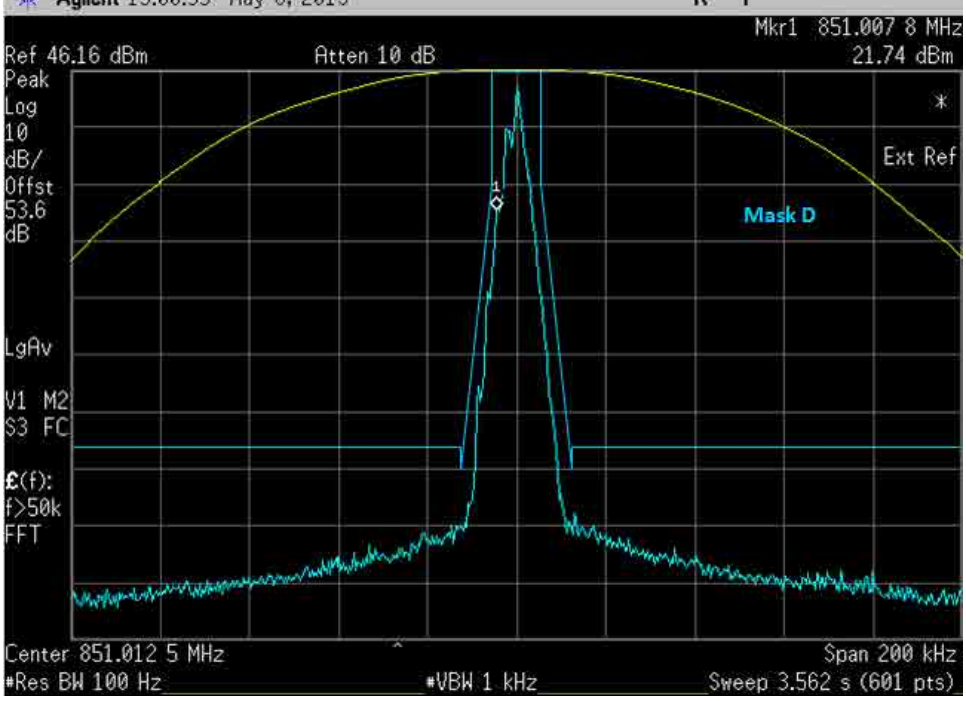
Modulation		Rules Part		
Digital Voice Encryption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		6.8290	8K10F1E



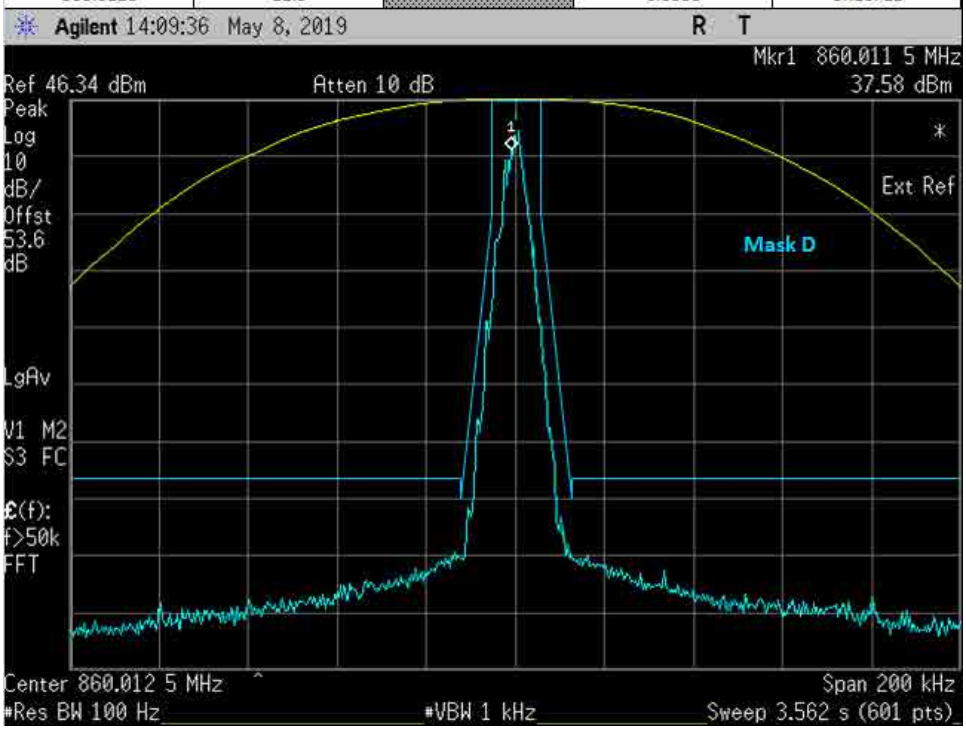
Modulation		Rules Part		
Digital Voice Encryption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	12.5		6.7744	8K10F1E



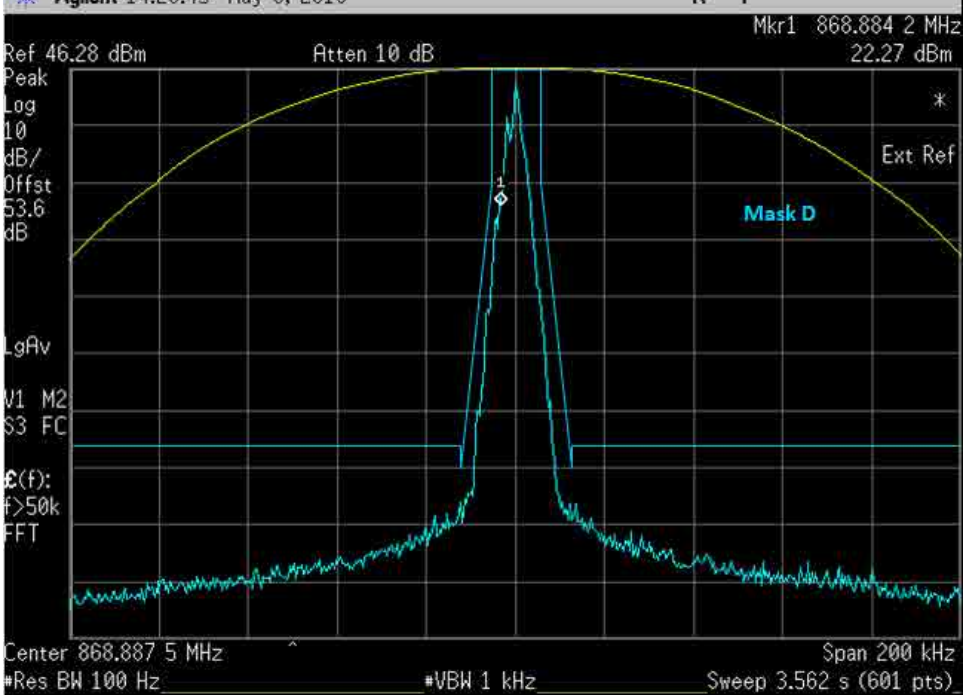
Modulation		Rules Part		
Digital Voice Encryption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
851.0125	12.5		6.2711	8K10F1E



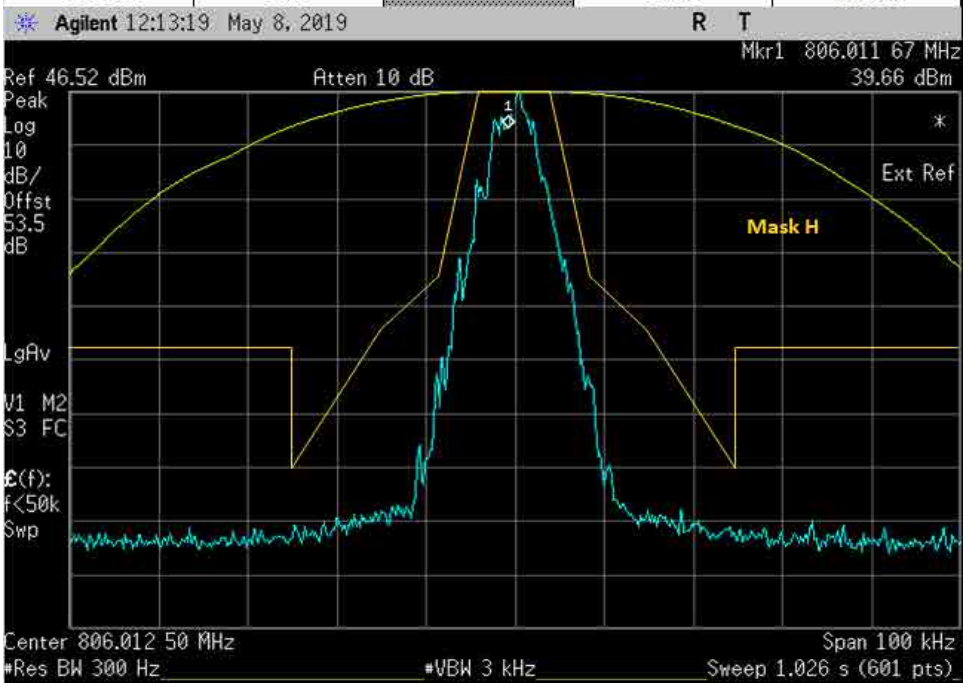
Modulation		Rules Part		
Digital Voice Encryption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		6.6335	8K10F1E



Modulation		Rules Part		
Digital Voice Encryption		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	12.5		6.5530	8K10F1E

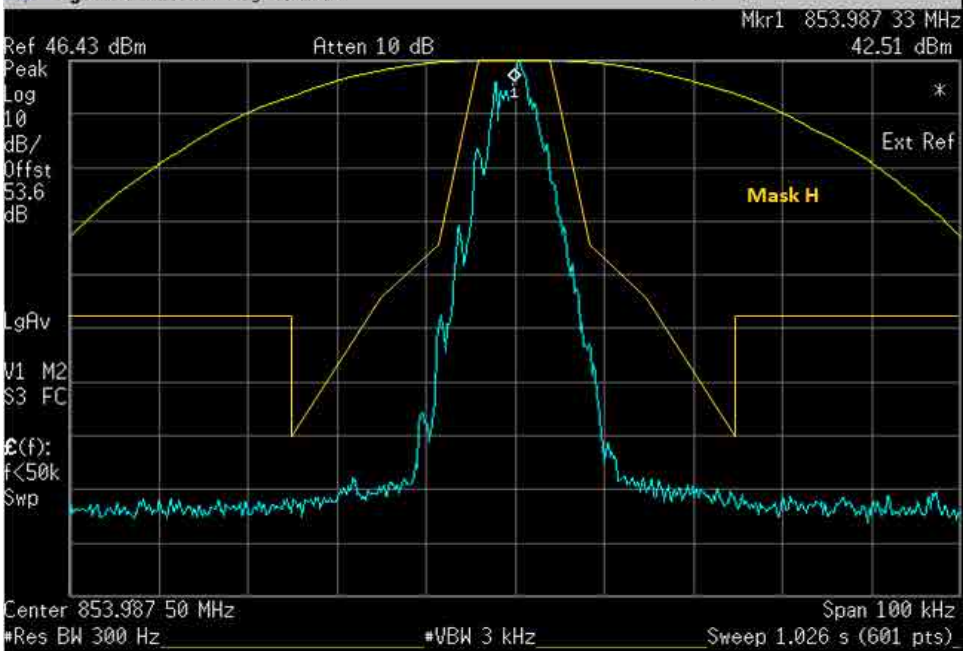


Modulation		Rules Part	
Digital Voice Encryption		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
806.0125	12.5	6.2824	8K10F1E



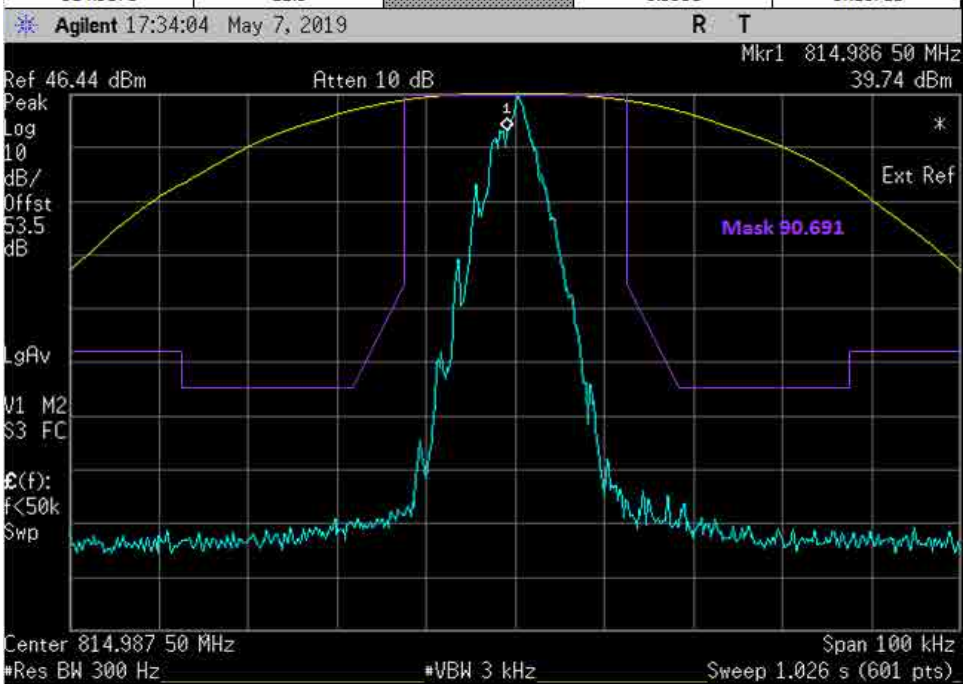
NOT FOR IC REVIEW

Modulation		Rules Part	
Digital Voice Encryption		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
853.9875	12.5	7.1215	8K10F1E



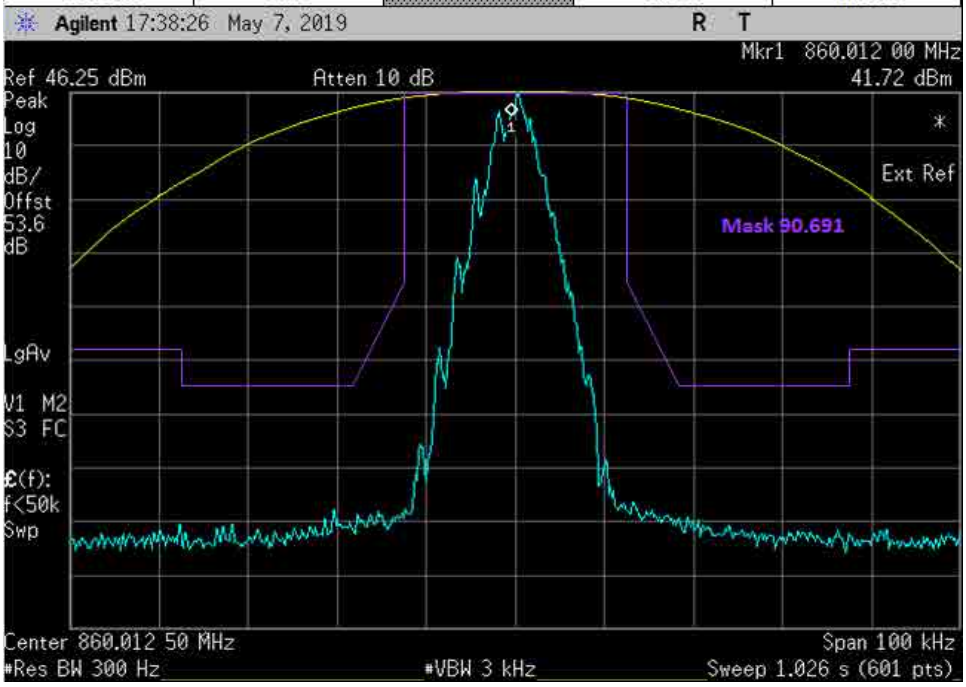
NOT FOR IC REVIEW

Modulation		Rules Part		
Digital Voice		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		6.5938	8K10F1E



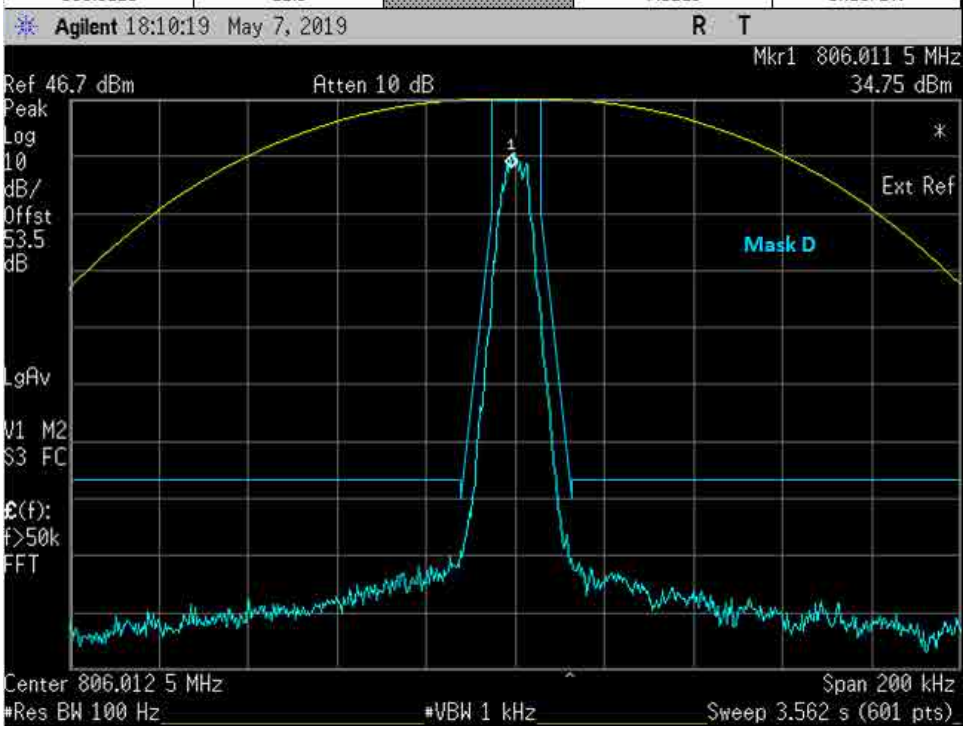
NOT FOR IC REVIEW

Modulation		Rules Part		
Digital Voice		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		6.5605	8K10F1E

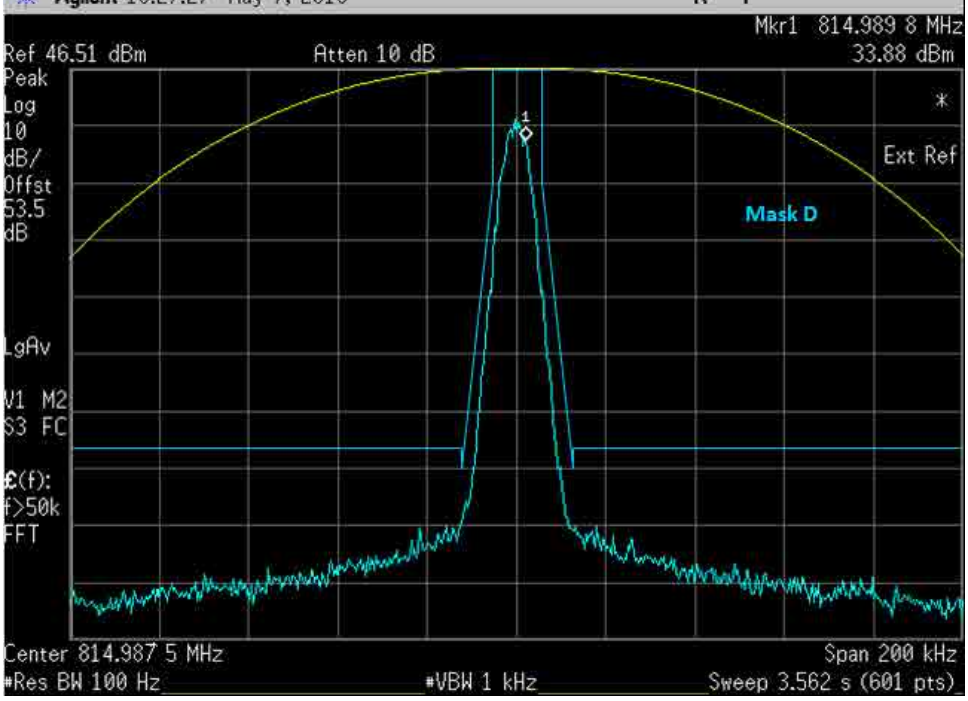


NOT FOR IC REVIEW

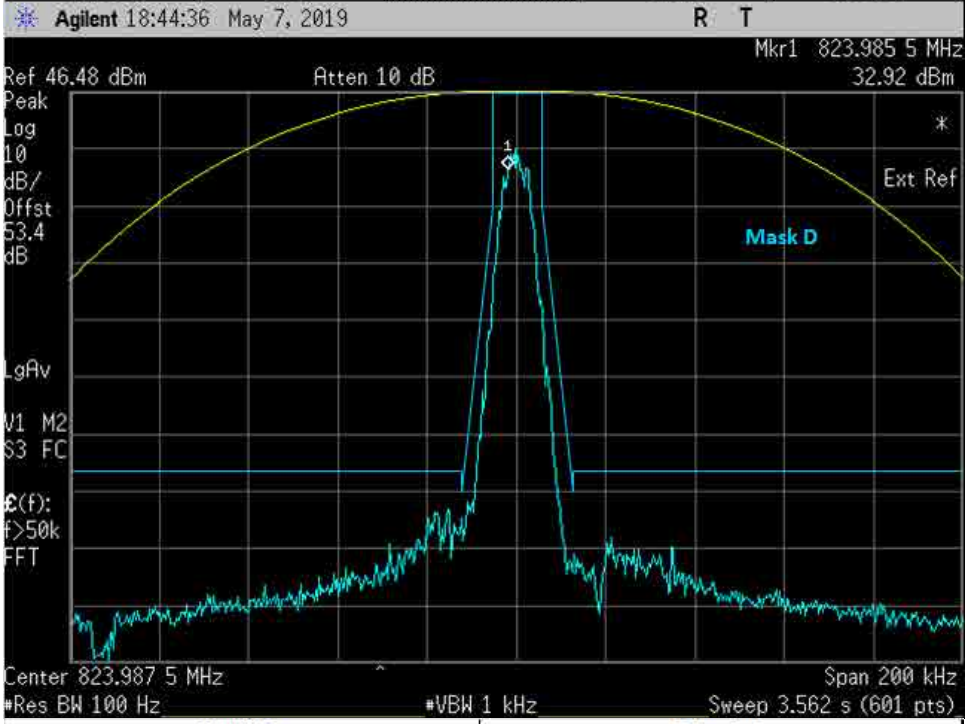
Modulation		Rules Part		
Phase II		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		7.8219	8K10F1W



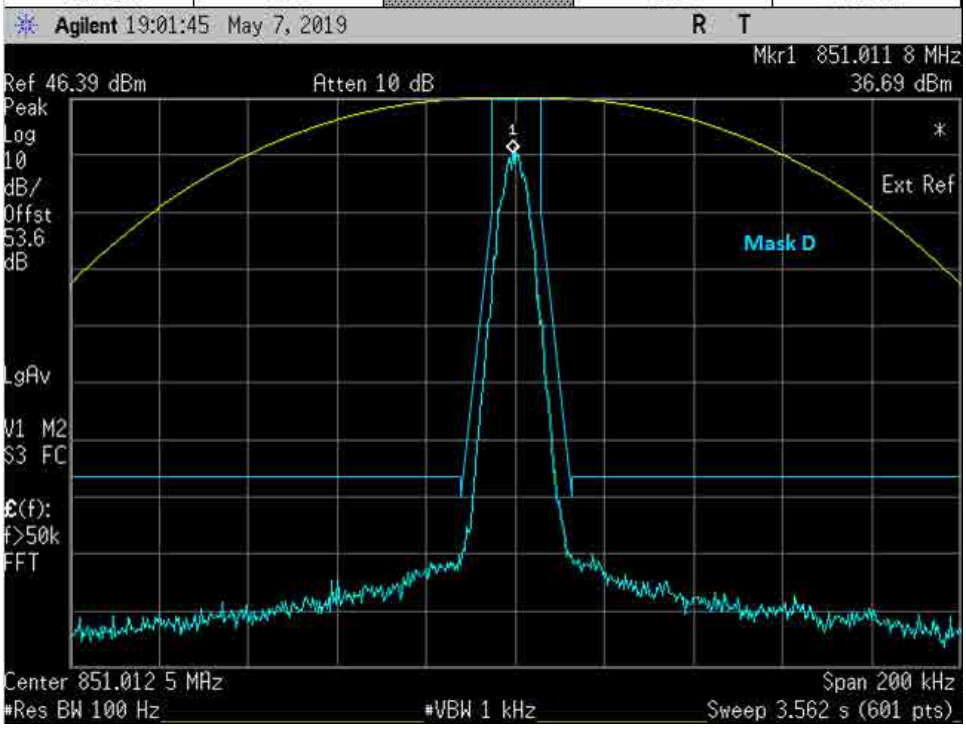
Modulation		Rules Part		
Phase II		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		7.9945	8K10F1W



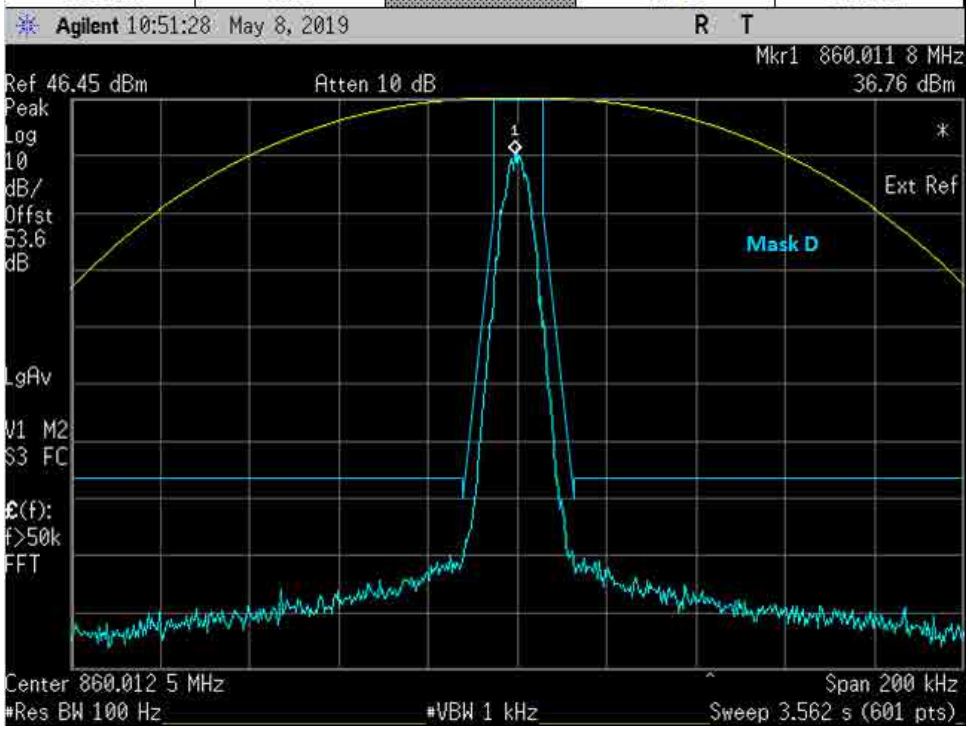
Modulation		Rules Part		
Phase II		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
823.9875	12.5		6.7057	8K10F1W



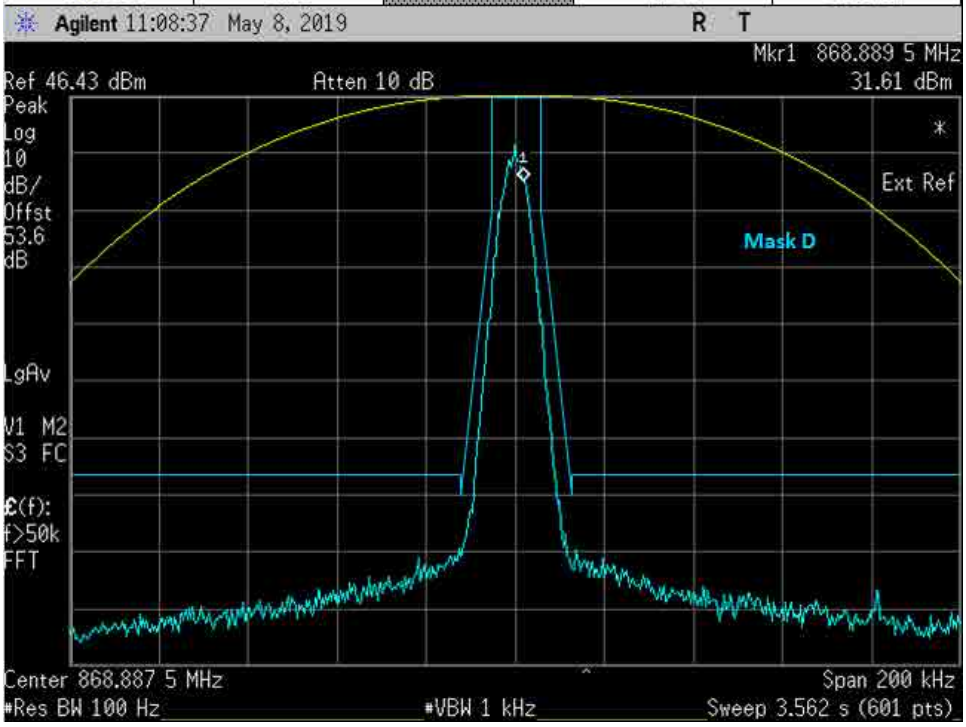
Modulation		Rules Part		
Phase II		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
851.0125	12.5		7.6598	8K10F1W



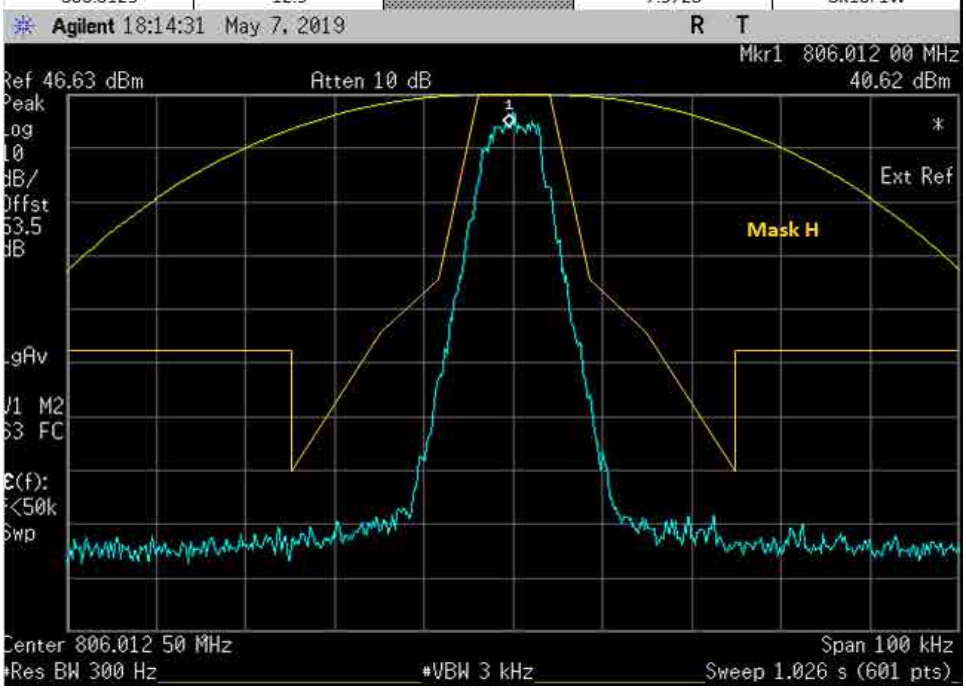
Modulation		Rules Part		
Phase II		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		7.7469	8K10F1W



Modulation		Rules Part		
Phase II		FCC Part 90 / RSS 119		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
868.8875	12.5		7.7447	8K10F1W

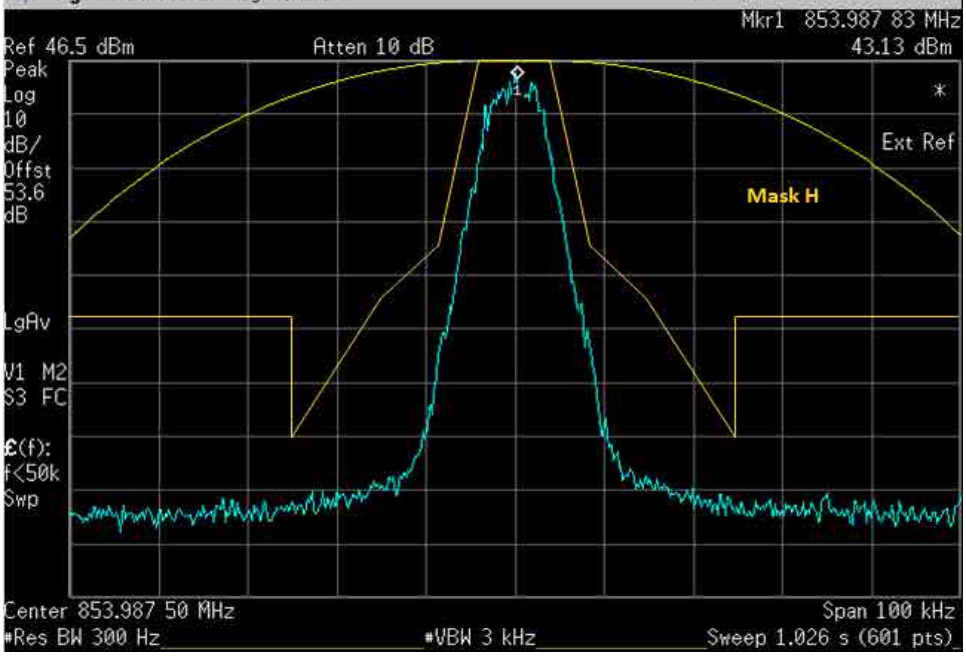


Modulation		Rules Part	
Phase II		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
806.0125	12.5	7.5723	8K10F1W



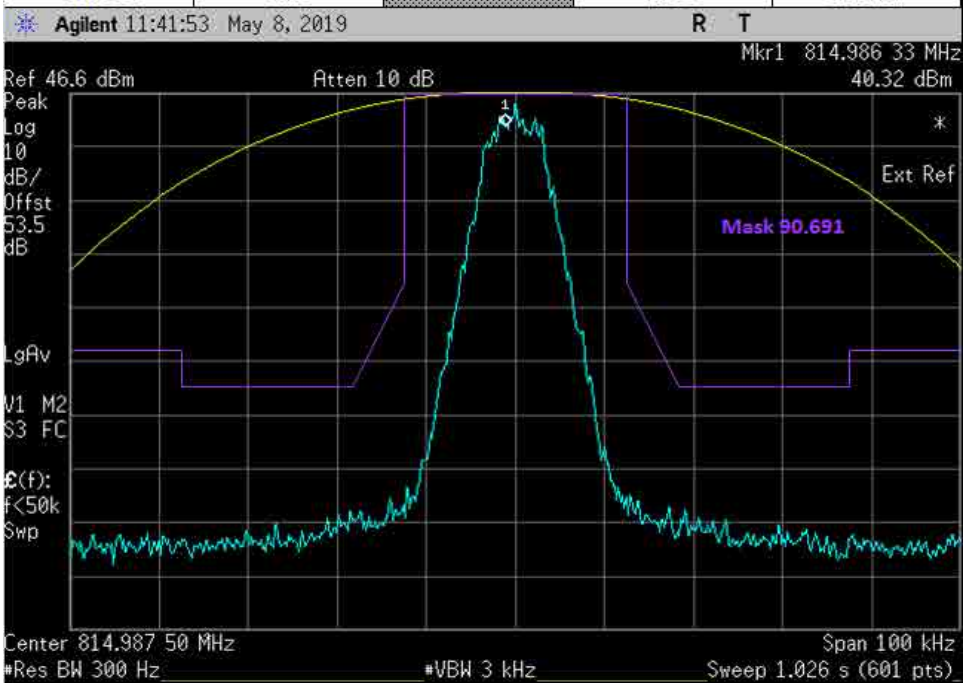
NOT FOR IC REVIEW

Modulation		Rules Part	
Phase II		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
853.9875	12.5	7.8776	8K10F1W



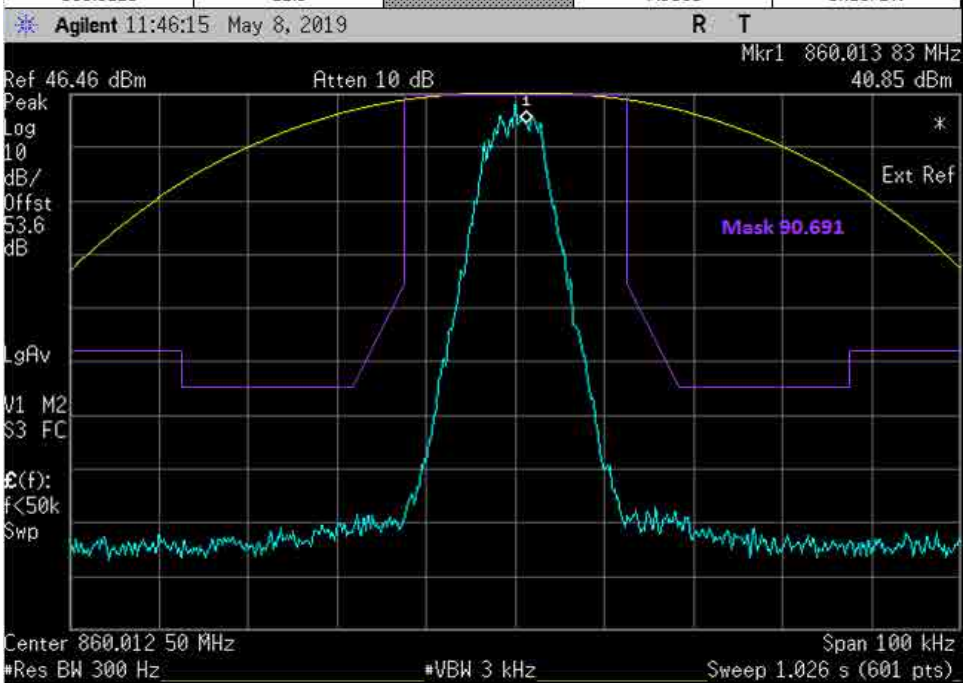
NOT FOR IC REVIEW

Modulation		Rules Part		
Phase II		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
814.9875	12.5		7.9690	8K10F1W



NOT FOR IC REVIEW

Modulation		Rules Part		
Phase II		FCC Part 90.691 (EA)		
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
860.0125	12.5		7.9868	8K10F1W



NOT FOR IC REVIEW

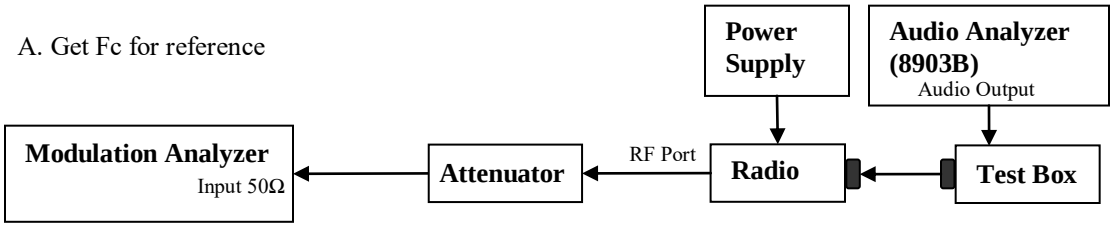
6.6.5. Test Limit

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

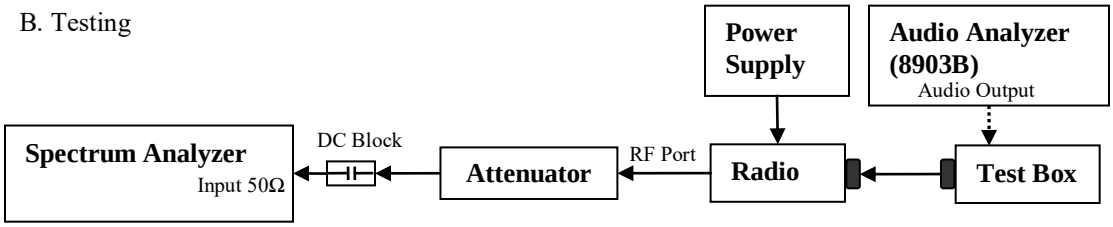
6.7. Band Edge Conducted Spurious Emission (Part 22)

6.7.1. Test Setup (Analog)

A. Get Fc for reference



B. Testing



1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Set the audio bandwidth filter to 15 kHz low pass filter and 50 kHz high pass filter.
3) Transmit the radio and set the audio analyzer to 2.5 kHz audio frequency and 50% of the rated deviation. Up the amplitude by 16 dB. Dekey the DUT.
4) Path loss for the measurement included.
5) Select the Occupied Bandwidth measurement for 99% and 26dB Emissions Bandwidth Measurement.
6) Key in the Fc and Resolution Bandwidth.
7) Transmit the DUT and record the occupied Bandwidth frequencies.
8) Preset the spectrum analyzer for band edge measurement.
9) The band edges of lowest and highest channels were measured.
10) Key in the Lowest and highest channel frequency, span is 60 kHz and Resolution Bandwidth is at least 1% of Emission Bandwidth.
11) Save the screen shot as modulated signal.
12) Remove the audio tone from audio analyzer to capture unmodulated signal.

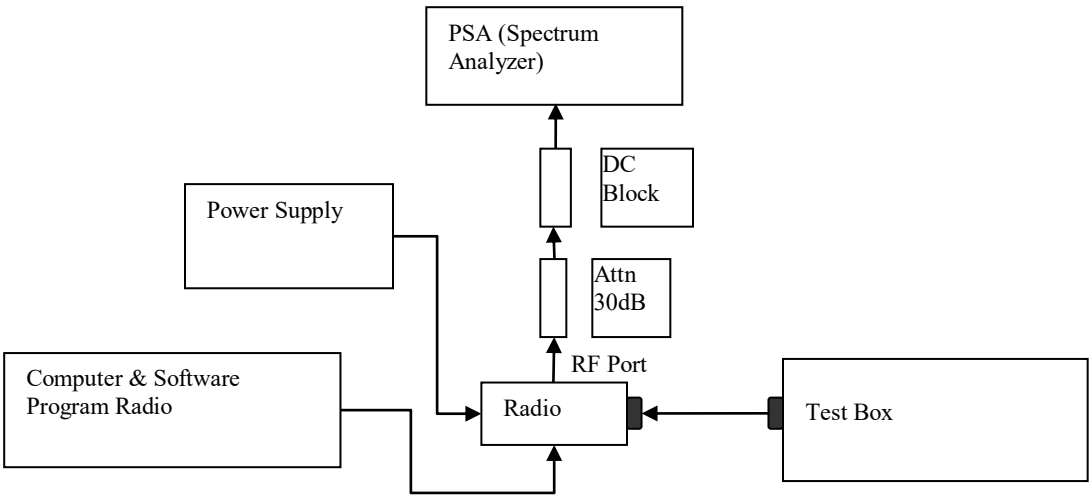
*Note:

- For emission designator ending with F3E, 16K0F3E is the worst case and therefore only 16K0F3E will be shown.

6.7.2. Test Result (Analog)

NA → Not Applicable

6.7.3. Test Setup (Digital)



1) Program and set radio to operate in desire test frequency and digital mode with modulation. (*4FSK, C4FM or other digital modulation form).
2) Path loss for the measurement included.
3) Select the Occupied Bandwidth measurement for 99% and 26dB Emissions Bandwidth Measurement.
4) Key in the Fc and Resolution Bandwidth.
5) Transmit radio record the occupied Bandwidth frequencies.
6) Preset the spectrum analyzer for band edge measurement.
7) Key in the lowest and highest channels frequency, span is 60 kHz and Resolution Bandwidth is at least 1% of Emission Bandwidth.
8) Save the screen shot.

*Note:

- All digital modulation modes utilize the same high deviation test pattern, and they are therefore identical. Hence, only F1D plots will be shown.

6.7.4. Test Result (Digital)

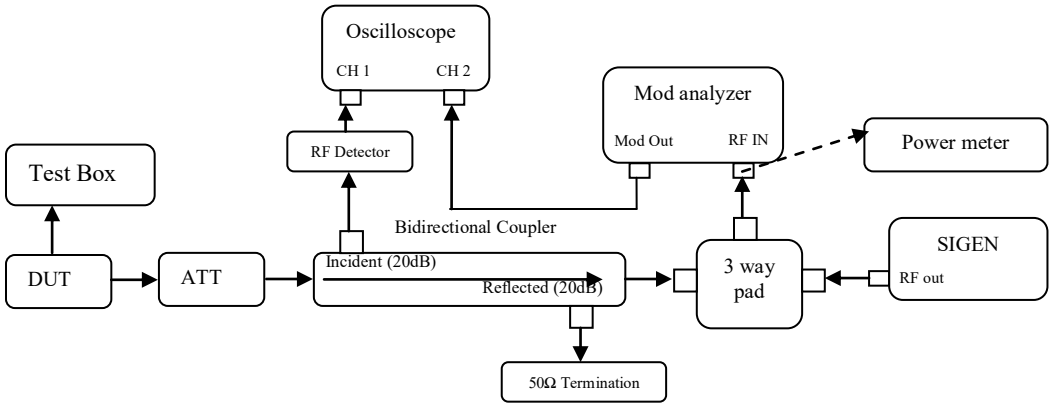
NA → Not Applicable

6.7.5. Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

6.8. Transient Frequency Behavior

6.8.1. Test Setup



1) Connect the setup as figure above.
2) Path loss for the measurement included.
3) Set on Sigen with the assigned center frequency, internal 1 kHz FM tone.
   FM Deviation: Analog 25kHz Channel Spacing = 25 kHz
   Analog 12.5 kHz Channel Spacing = 12.5 kHz
   C4FM = 12.5 kHz
4) Turn on 50 kHz high pass filter and 15 kHz low pass filter on modulation analyzer.
5) Supply sufficient attenuation ATT to provide the output power of ≤ -11dBm into power meter when DUT is keying up.
6) Note the power level on power meter and dekey the DUT.
7) Adjust the amplitude of the signal generator to the level power meter, maintained the amplitude throughout the rest of the measurement.
8) Connect the output to modulation analyzer.
9) Reduce 30dB attenuation and transmit the radio to get the trigger line.
10) Capture the screen shot for key-up (rising edge) and de-key (falling edge) mode.

6.8.2. Test Result

NA → Not Applicable

6.8.3. Test Limit

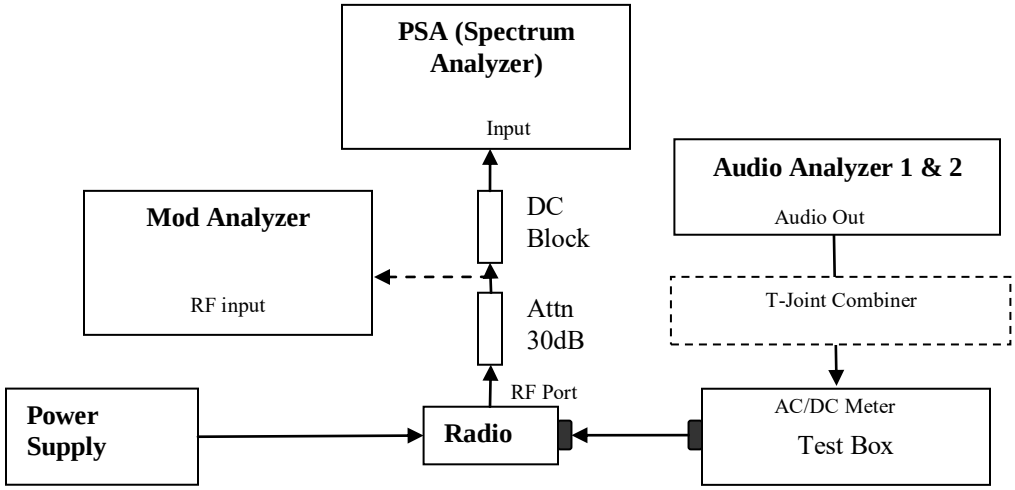
Transmitters designed to operate in the 150-174 MHz and 421-512 MHz frequency bands must maintain transient frequencies within the maximum frequency difference limits during the time intervals indicated:

Time intervals[1 2]	**Maximum frequency difference**[3]	**All equipment**	
		150 to 174 MHz	**421 to 512 MHz**
Transient Frequency Behavior for Equipment Designed to Operate on 25 kHz Channels			
t_1[4]	±25.0 kHz	5.0 ms	10.0 ms
t_2	±12.5 kHz	20.0 ms	25.0 ms
t_3[4]	±25.0 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 12.5 kHz Channels			
t_1[4]	±12.5 kHz	5.0 ms	10.0 ms
t_2	±6.25 kHz	20.0 ms	25.0 ms
t_3[4]	±12.5 kHz	5.0 ms	10.0 ms
Transient Frequency Behavior for Equipment Designed to Operate on 6.25 kHz Channels			
t_1[4]	±6.25 kHz	5.0 ms	10.0 ms
t_2	±3.125 kHz	20.0 ms	25.0 ms
t_3[4]	±6.25 kHz	5.0 ms	10.0 ms

[1] t_{on} is the instant when a 1 kHz test signal is completely suppressed, including any capture time due to phasing.
t_1 is the time period immediately following t_{on}.
t_2 is the time period immediately following t_1.
t_3 is the time period from the instant when the transmitter is turned off until t_{off}.
t_{off} is the instant when the 1 kHz test signal starts to rise.
[2] During the time from the end of t_2 to the beginning of t_3, the frequency difference must not exceed the limits specified in §90.213.
[3] Difference between the actual transmitter frequency and the assigned transmitter frequency.
[4] If the transmitter carrier output power rating is 6 watts or less, the frequency difference during this time period may exceed the maximum frequency difference for this time period.

6.9. Adjacent Channel Power

6.9.1. Test Setup (Analog)

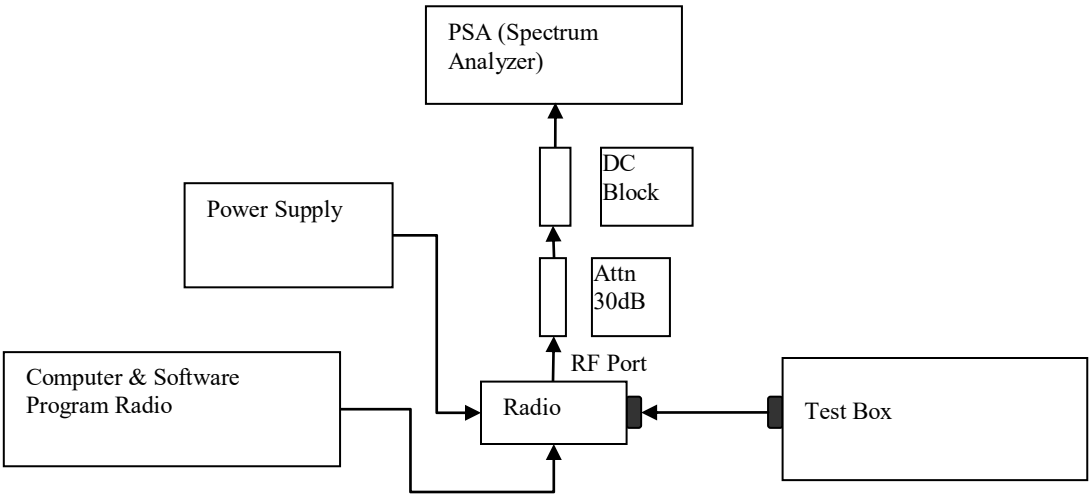


1) The DUT transmitter output port was connected to modulation analyzer.
2) Transmit the radio and turn on 1st audio analyzer with audio frequency 650Hz, 50% rated deviation, and record the amplitude value as AmpT1.
3) Turn off Audio analyzer 1 and turn on audio analyzer 2, set the audio frequency to 2.2 kHz and 50% deviation. Record the amplitude as AmpT2.
4) Turn both audio analyzers ON and up 10dB amplitude level.
5) Connect the output to PSA and set to assigned center frequency.
6) Set Span, Resolution Bandwidth and Video Bandwidth per rules part.
7) Transmit the radio and record the Adjacent Channel Power value in dBc.

6.9.2. Test Result

NA → Not Applicable

6.9.3. Test Setup (Digital)



1) Program and set radio to operate in desire test frequency and digital mode with modulation. (4FSK, C4FM or other digital modulation form).
2) Prepare setup as per picture.
3) Turn on the ACP Measurement – Press Measure, ACP.
4) Set Span, Resolution Bandwidth and Video Bandwidth as per rules part.
5) Transmit the radio and record the Adjacent Channel Power value in dBc.

6.9.4. Test result

NA → Not Applicable

6.9.5. Test limit

12.5 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
9.375	6.25	−40
15.625	6.25	−60
21.875	6.25	−60
37.50	25.00	−60
62.50	25.00	−65
87.50	25.00	−65
150.00	100	−65
250.00	100	−65
350.00	100	−65
>400 to 12 MHz	30 (s)	−75
12 MHz to paired receive band	30 (s)	−75
In the paired receive band	30 (s)	−100

25 kHz Mobile Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP relative (dBc)
15.625	6.25	−40
21.875	6.25	−60
37.50	25	−60
62.50	25	−65
87.50	25	−65
150.00	100	−65
250.00	100	−65
350.00	100	−65
>400 kHz to 12 MHz	30 (s)	−75
12 MHz to paired receive band	30 (s)	−75
In the paired receive band	30 (s)	−100

12.5 kHz Base Transmitter ACP Requirements

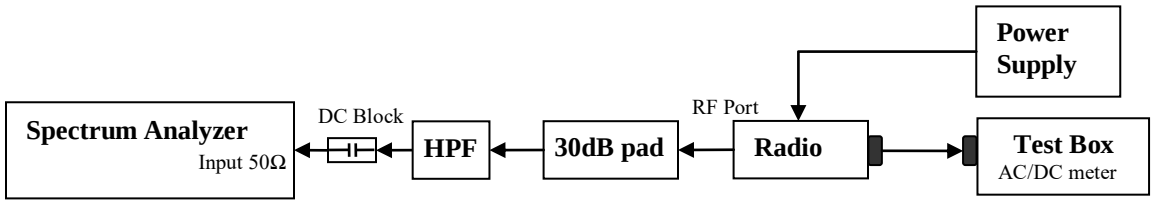
Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
9.375	6.25	−40
15.625	6.25	−60
21.875	6.25	−60
37.5	25	−60
62.5	25	−65
87.5	25	−65
150	100	−65
250	100	−65
350.00	100	−65
>400 kHz to 12 MHz	30 (s)	−80
12 MHz to paired receive band	30 (s)	−80
In the paired receive band	30 (s)	[1]-85

25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
15.625	6.25	−40
21.875	6.25	−60
37.5	25	−60
62.5	25	−65
87.5	25	−65
150	100	−65
250	100	−65
350	100.00	−65
>400 kHz to 12 MHz	30 (s)	−80
12 MHz to paired receive band	30 (s)	−80
In the paired receive band	30 (s)	[1]-85

6.10. Conducted Spurious Emission

6.10.1. Test Setup

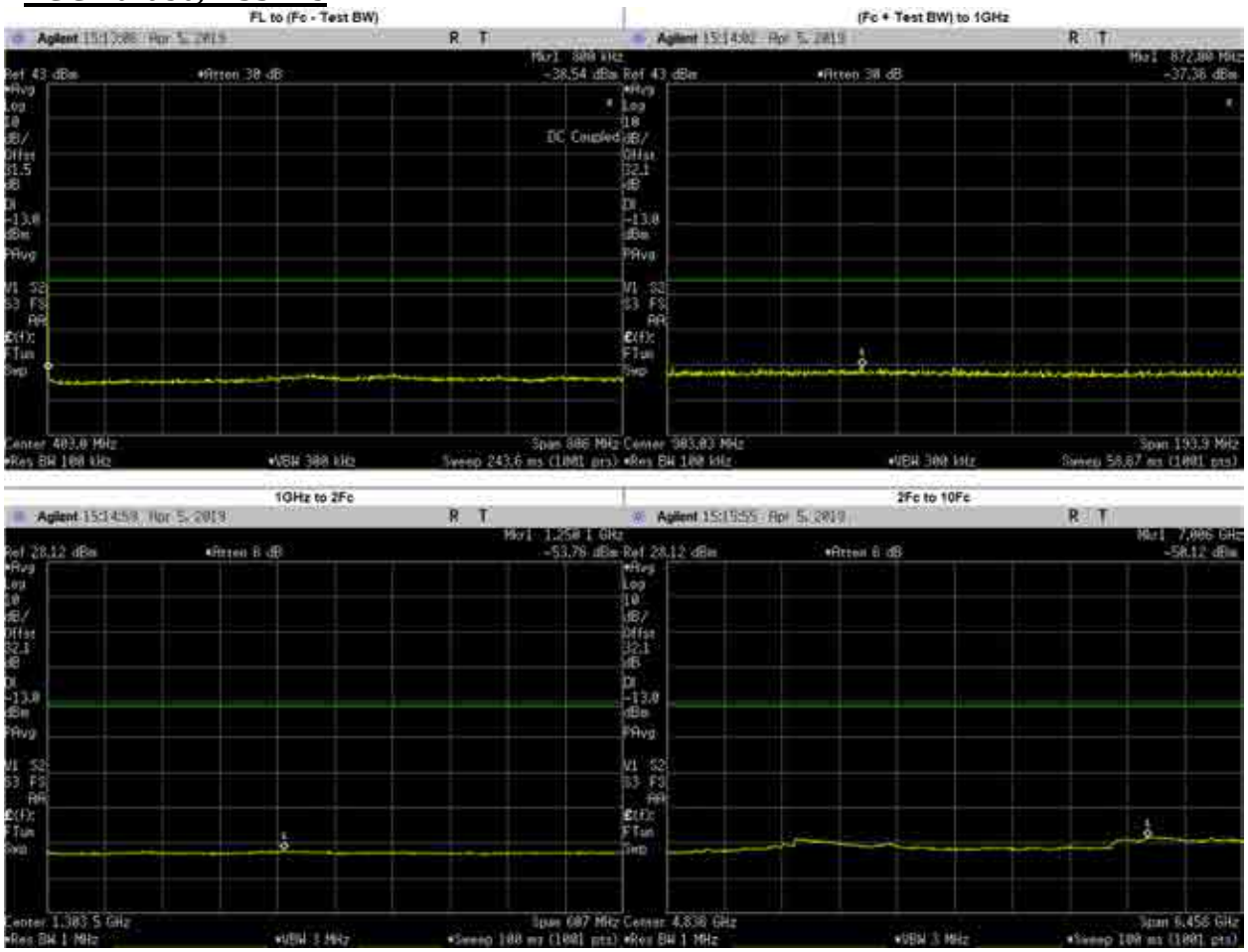


1) The DUT transmitter output port was connected to Spectrum Analyzer with above setup.
2) Program and set radio to operate in desire test frequency and mode. (Analog / digital modulation form).
3) Path loss for the measurement included.
4) Set the PSA Resolution Bandwidth as per rules part.
5) Set the Ref offset from the pathloss offset calibration file.
6) Adjust the center frequency of the spectrum analyzer for incremental coverage of the range from:
    a. 9 KHz to Fc – Test Bandwidth
    b. Fc + Test Bandwidth to 2Fc – 5MHz.
7) Key up the DUT, Peak Search the highest Spur and record the levels of spurious emissions
8) Dekey the DUT.
9) Turn On High Pass Filter path and Key up the DUT.
10) Adjust the PSA Freq for incremental coverage of range from 2Fc to 10Fc
11) Key up the DUT and record the highest spur levels of spurious emissions.

6.10.1. Test Result (Analog)

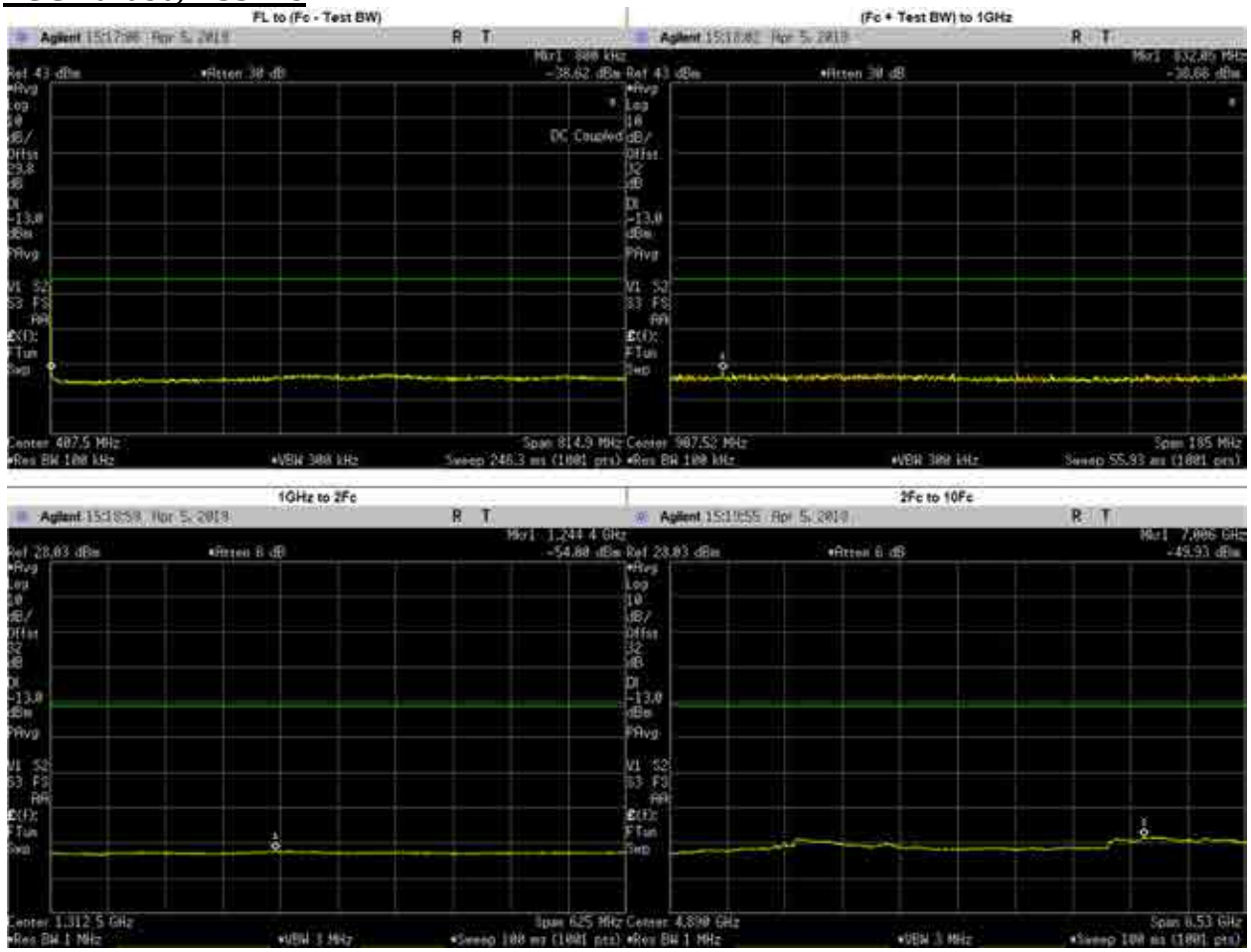
<u>Analog:</u> 806.0125 MHz, 12.5kHz Channel Spacing, Max Power

<u>FCC Part 90, RSS 119</u>



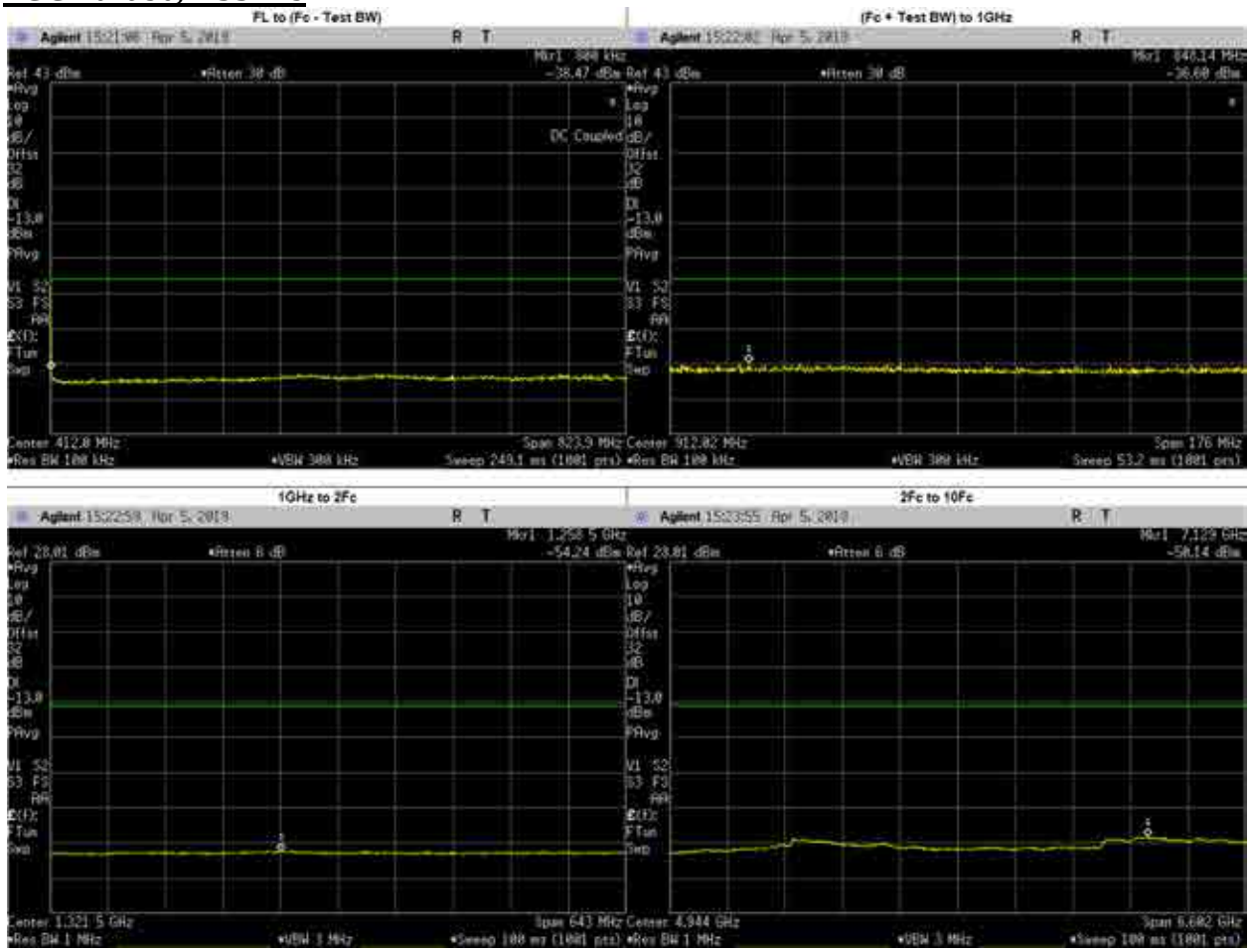
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	372.3595	-39.0800	-13	PASS
(Fc + Test BW) to 1GHz	872.0013	-37.3600	-13	PASS
1GHz to 2Fc	1250.0940	-53.7600	-13	PASS
2Fc to 10Fc	7005.9970	-50.1200	-13	PASS
	1612.0250	-54.7288	-13	PASS
	2418.0370	-53.7317	-13	PASS
	3224.0500	-51.3028	-13	PASS
	4030.0620	-52.3106	-13	PASS
	4836.0750	-53.7250	-13	PASS
	5642.0870	-53.5904	-13	PASS
	6448.1000	-53.3590	-13	PASS
	7254.1130	-50.6849	-13	PASS
	8060.1250	-51.4946	-13	PASS

<u>Analog:</u> 814.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



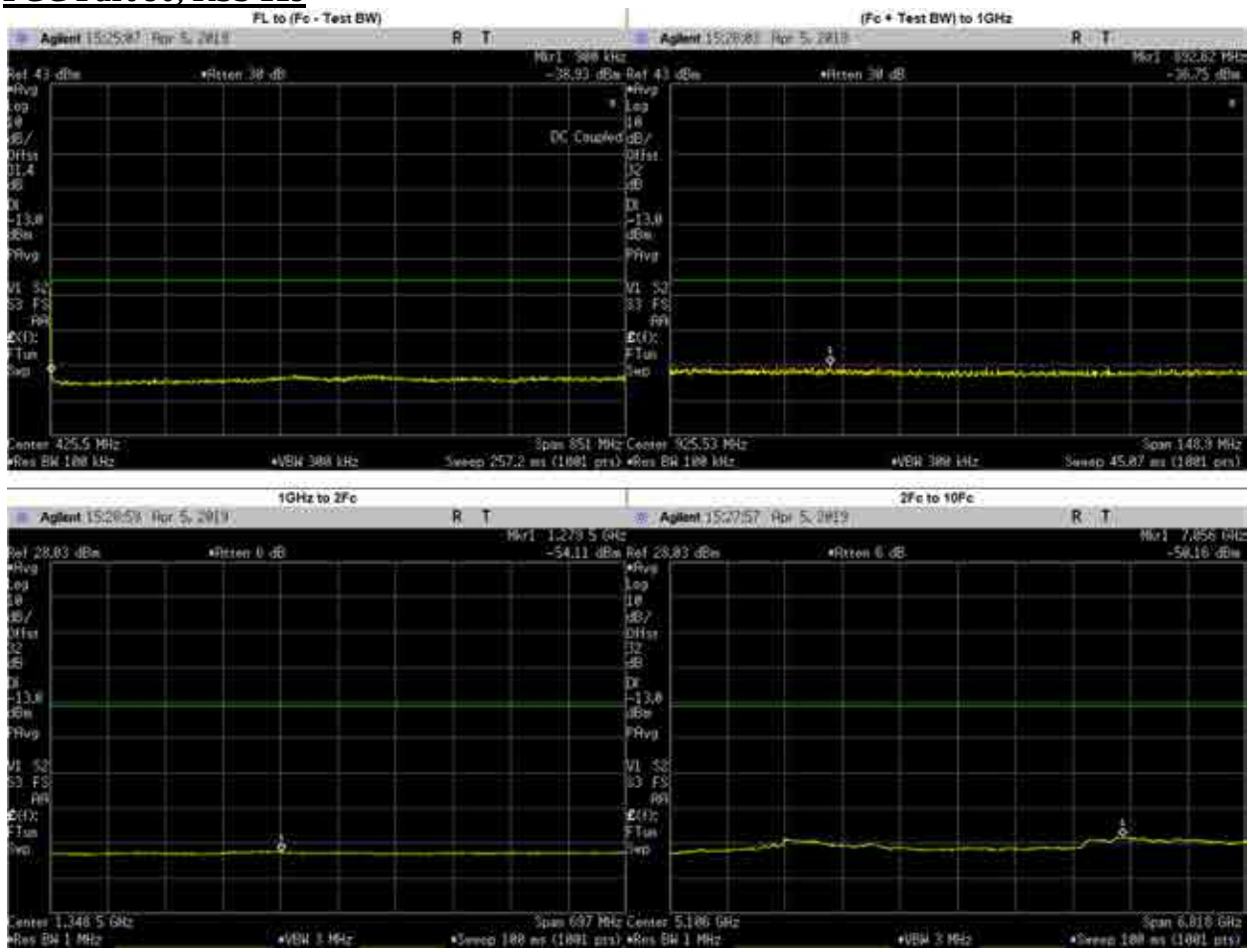
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	454.7391	-39.6900	-13	PASS
(Fc + Test BW) to 1GHz	832.0540	-38.6600	-13	PASS
1GHz to 2Fc	1244.3650	-54.0000	-13	PASS
2Fc to 10Fc	7005.6130	-49.9300	-13	PASS
	1629.9750	-54.8599	-13	PASS
	2444.9630	-53.8542	-13	PASS
	3259.9500	-51.5396	-13	PASS
	4074.9370	-52.0517	-13	PASS
	4889.9250	-53.8030	-13	PASS
	5704.9130	-53.4973	-13	PASS
	6519.9000	-53.3092	-13	PASS
	7334.8870	-50.9695	-13	PASS
	8149.8750	-51.7365	-13	PASS

<u>Analog:</u> 823.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



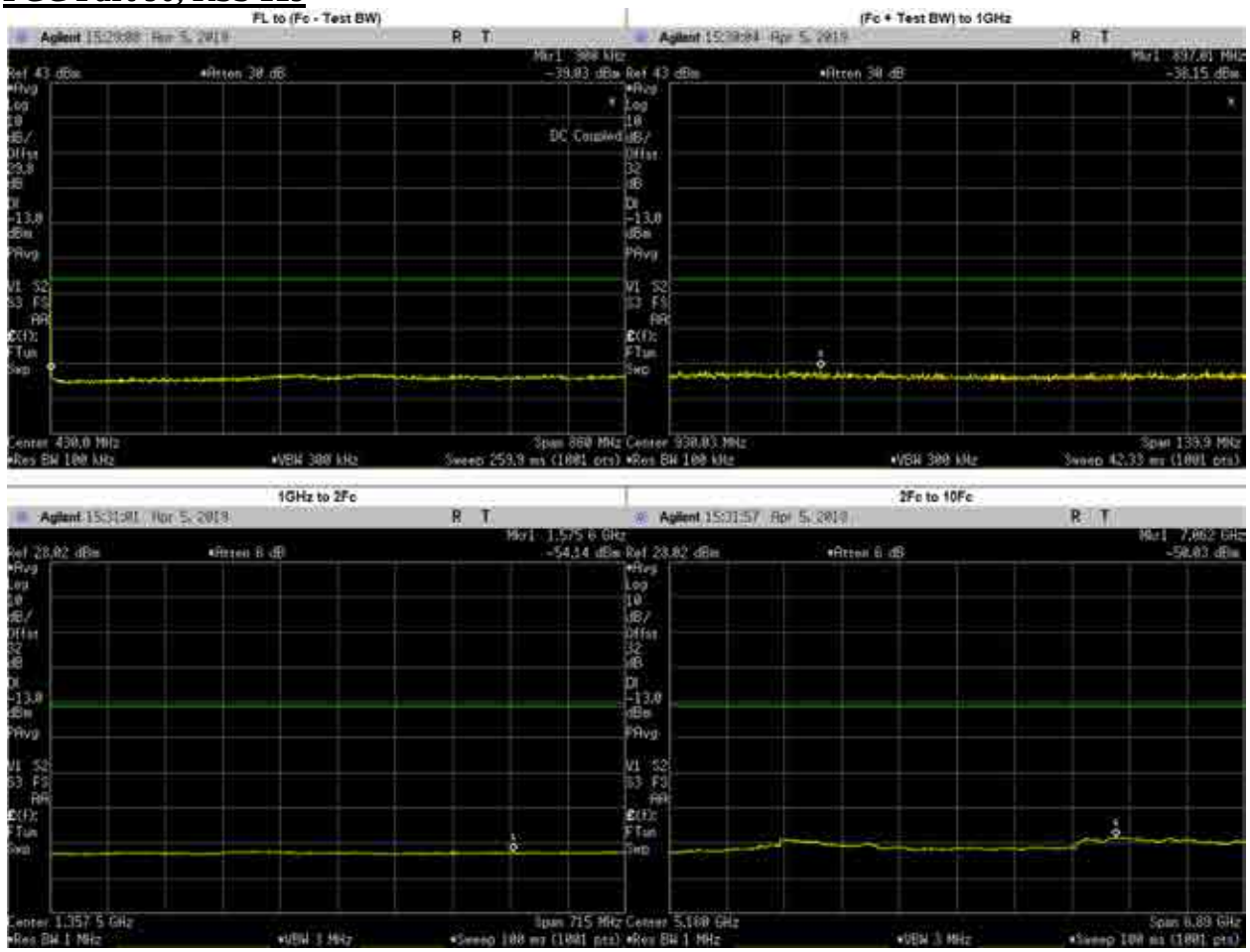
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	795.1000	-39.8300	-13	PASS
(Fc + Test BW) to 1GHz	848.1444	-36.6000	-13	PASS
1GHz to 2Fc	1258.4760	-54.2400	-13	PASS
2Fc to 10Fc	7129.1540	-50.1400	-13	PASS
	1647.9750	-54.9554	-13	PASS
	2471.9630	-53.7628	-13	PASS
	3295.9500	-51.3309	-13	PASS
	4119.9370	-52.2075	-13	PASS
	4943.9250	-53.4950	-13	PASS
	5767.9130	-53.2164	-13	PASS
	6591.9000	-52.9960	-13	PASS
	7415.8870	-51.3644	-13	PASS
	8239.8750	-51.9332	-13	PASS

<u>Analog:</u> 851.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



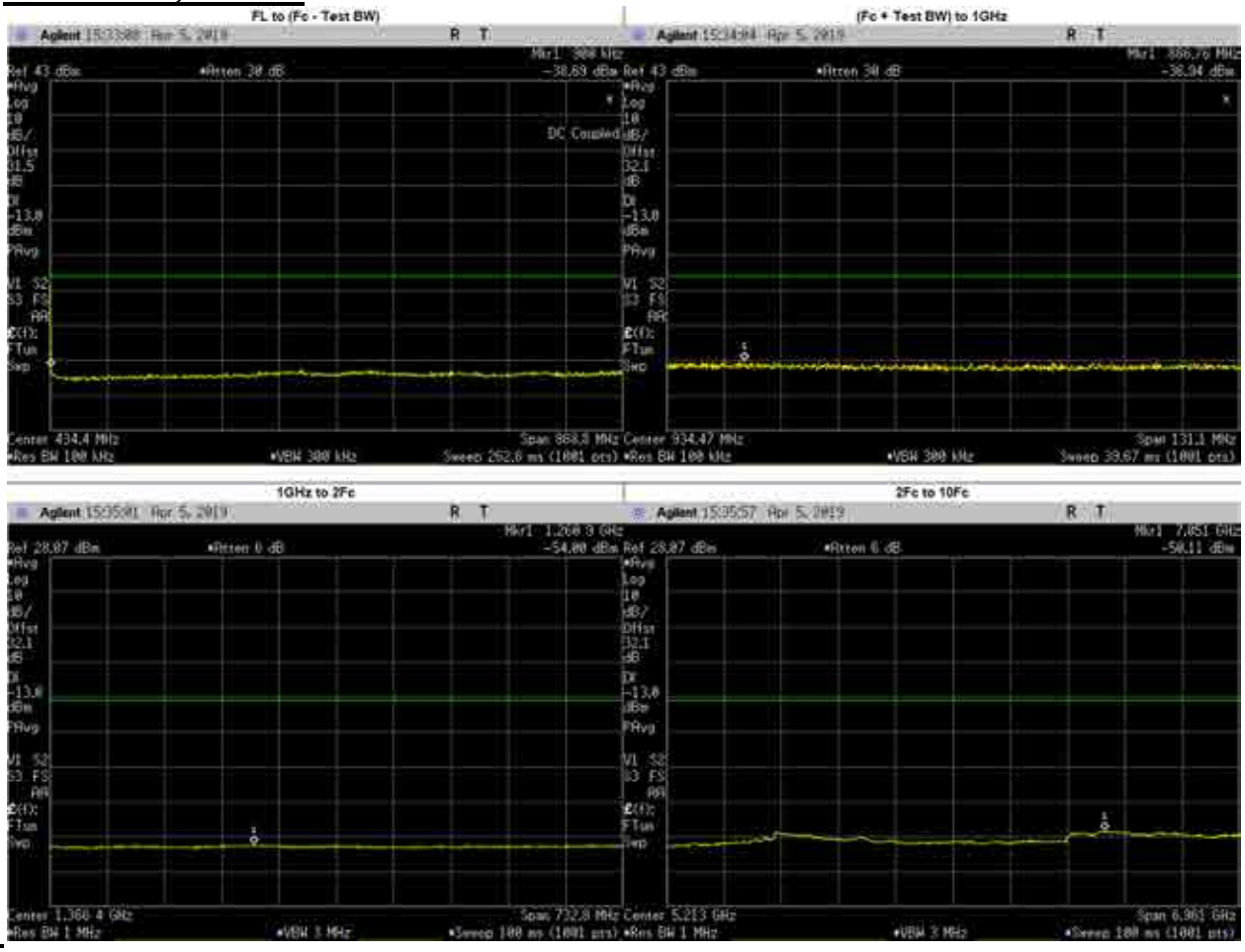
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	360.8133	-39.5000	-13	PASS
(Fc + Test BW) to 1GHz	892.6161	-36.7500	-13	PASS
1GHz to 2Fc	1279.5070	-54.1100	-13	PASS
2Fc to 10Fc	7056.0520	-50.1600	-13	PASS
	1702.0250	-54.7094	-13	PASS
	2553.0370	-53.6994	-13	PASS
	3404.0500	-51.6111	-13	PASS
	4255.0620	-53.0583	-13	PASS
	5106.0750	-53.5040	-13	PASS
	5957.0870	-53.5244	-13	PASS
	6808.1000	-51.2067	-13	PASS
	7659.1130	-51.2229	-13	PASS
	8510.1250	-51.5812	-13	PASS

<u>Analog:</u> 860.0125 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	483.3029	-39.8900	-13	PASS
(Fc + Test BW) to 1GHz	897.0060	-38.1500	-13	PASS
1GHz to 2Fc	1575.5950	-54.1400	-13	PASS
2Fc to 10Fc	7061.7430	-50.0300	-13	PASS
	1720.0250	-54.6529	-13	PASS
	2580.0370	-53.5876	-13	PASS
	3440.0500	-51.8557	-13	PASS
	4300.0620	-53.4135	-13	PASS
	5160.0750	-53.5650	-13	PASS
	6020.0870	-53.3700	-13	PASS
	6880.1000	-51.4459	-13	PASS
	7740.1130	-50.9811	-13	PASS

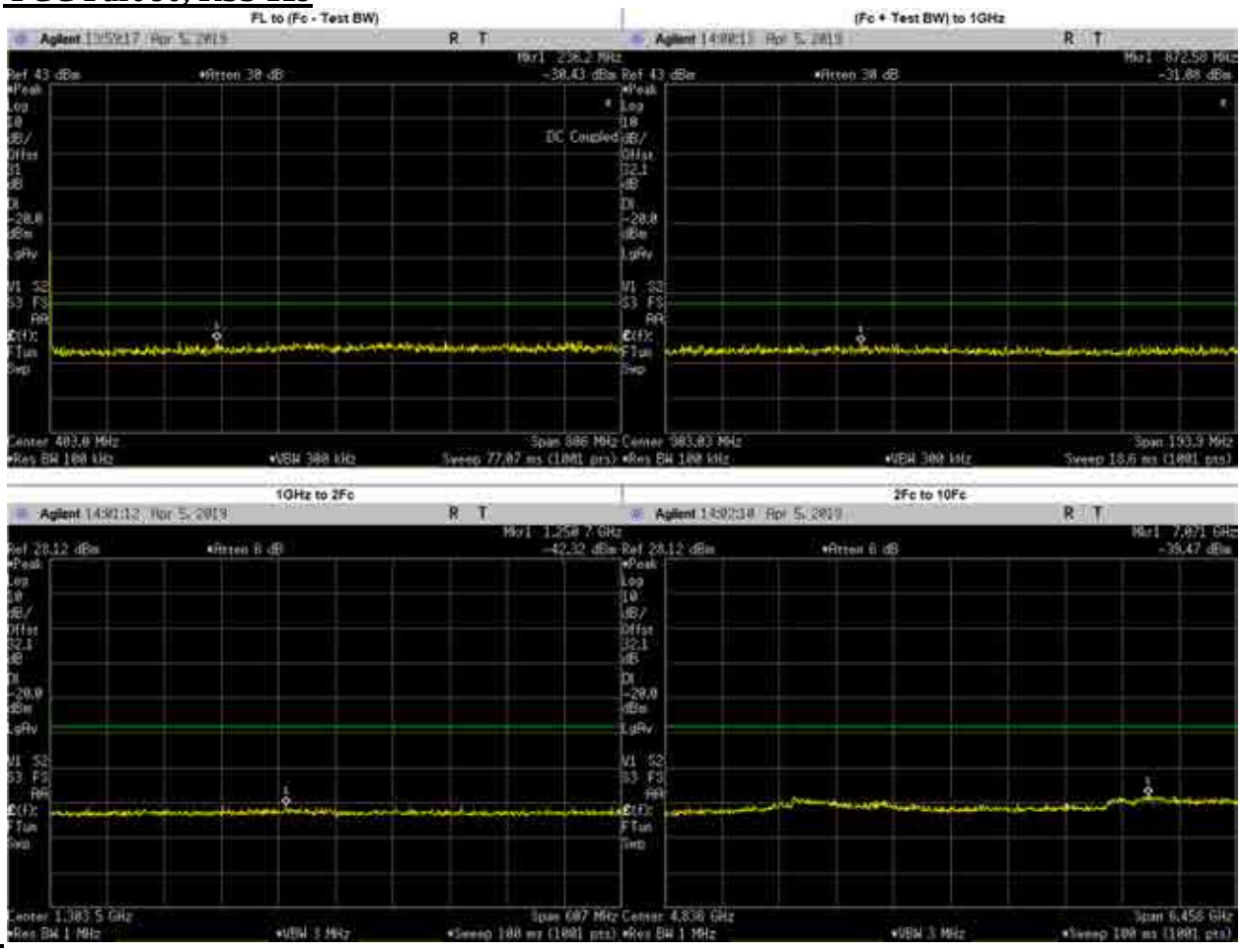
<u>Analog:</u> 868.8875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	380.5559	-39.5700	-13	PASS
(Fc + Test BW) to 1GHz	886.7620	-36.9400	-13	PASS
1GHz to 2Fc	1260.8680	-54.0000	-13	PASS
2Fc to 10Fc	7051.0550	-50.1100	-13	PASS
	1737.7750	-54.7024	-13	PASS
	2606.6620	-53.5612	-13	PASS
	3475.5500	-51.5733	-13	PASS
	4344.4370	-53.3554	-13	PASS
	5213.3250	-53.4330	-13	PASS
	6082.2120	-53.3299	-13	PASS
	6951.1000	-50.9992	-13	PASS
	7819.9880	-51.1689	-13	PASS
	8688.8750	-51.3107	-13	PASS

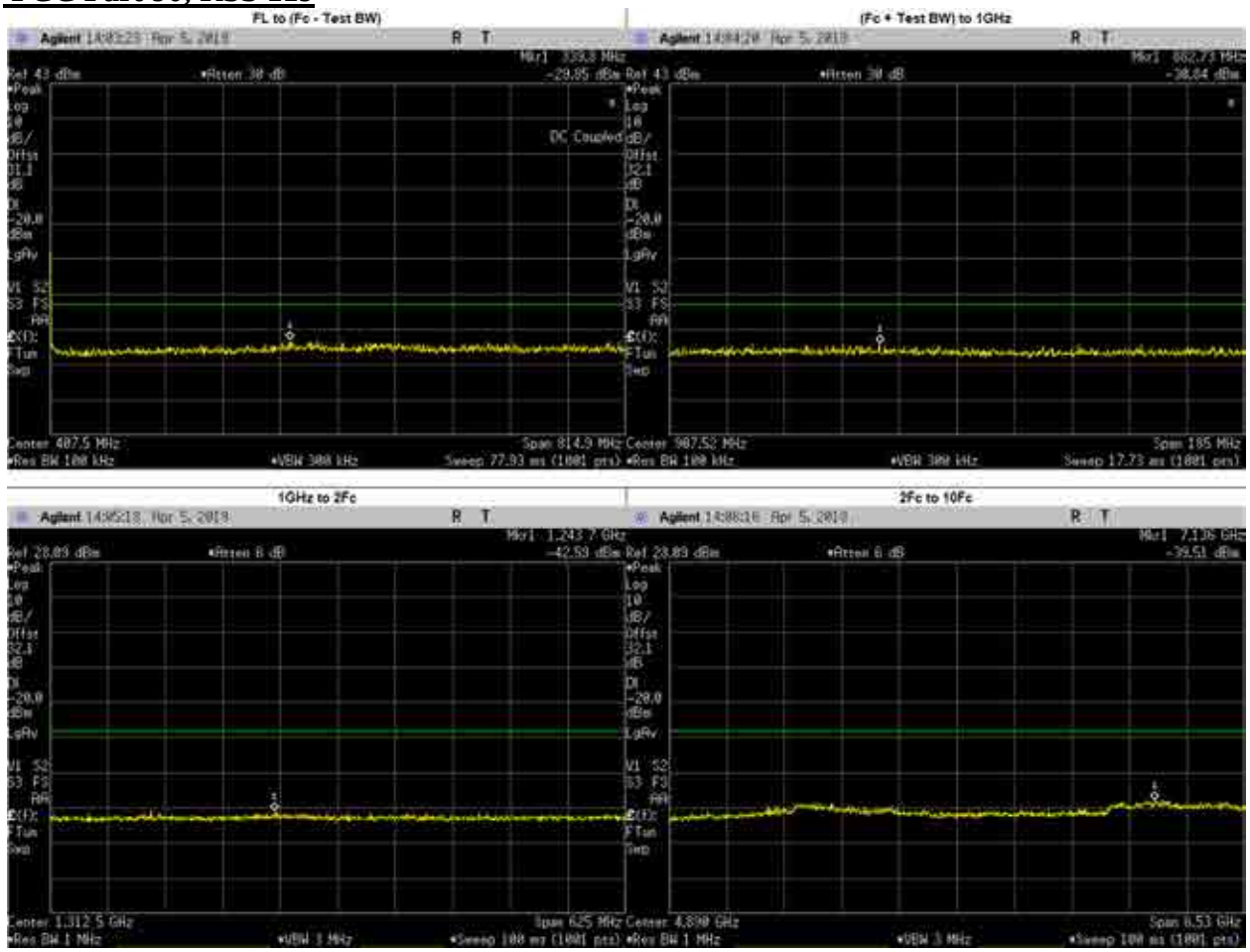
6.10.2. Test Result (Digital)

<u>Digital</u>: 806.0125 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



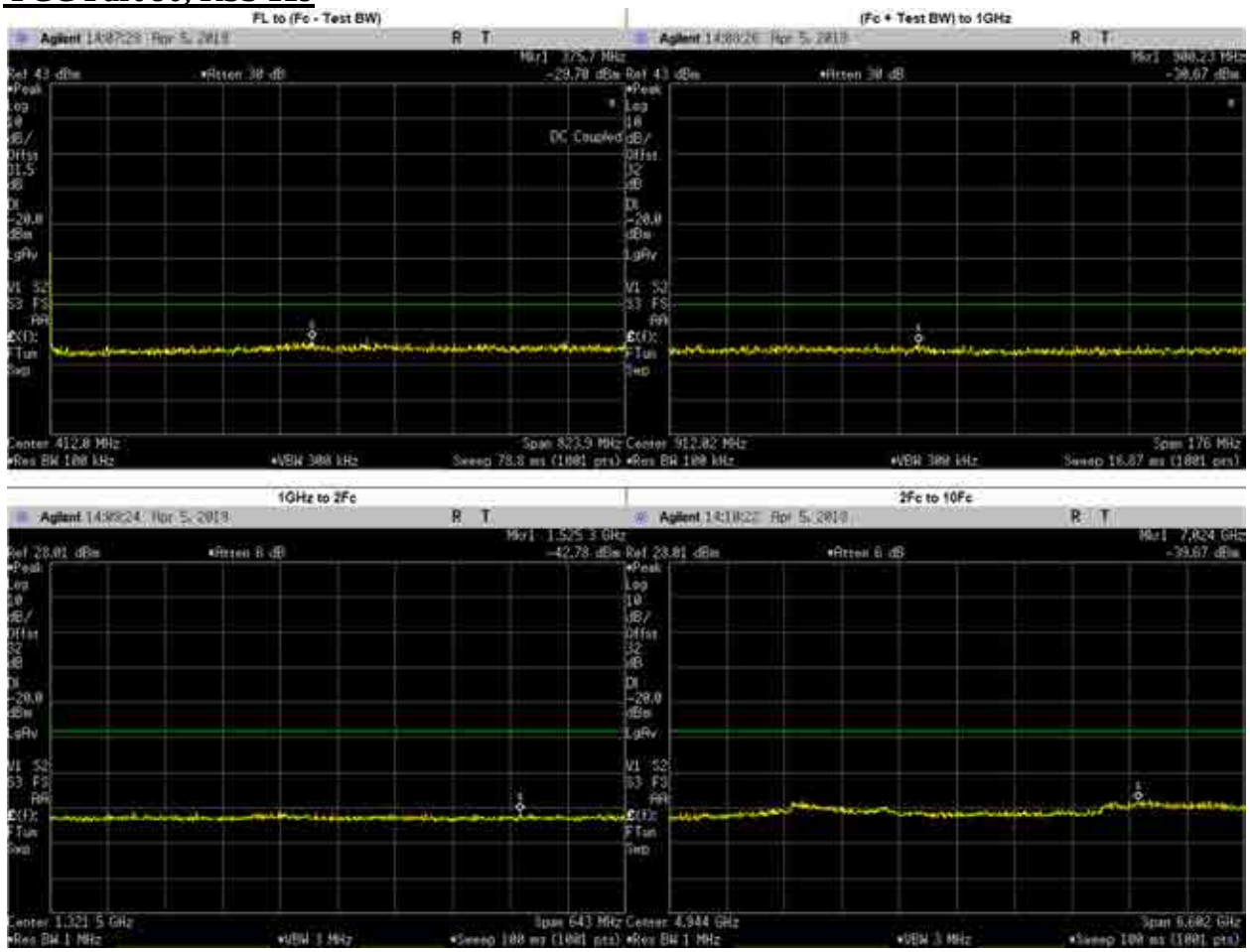
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	728.5910	-29.8219	-20	PASS
(Fc + Test BW) to 1GHz	872.5831	-31.0800	-20	PASS
1GHz to 2Fc	1250.7010	-42.3200	-20	PASS
2Fc to 10Fc	1612.0250	-44.6987	-20	PASS
	2418.0370	-44.2126	-20	PASS
	3224.0500	-41.3170	-20	PASS
	4030.0620	-42.2648	-20	PASS
	4836.0750	-43.6570	-20	PASS
	5642.0870	-44.4495	-20	PASS
	6448.1000	-43.9231	-20	PASS
	7254.1130	-41.2540	-20	PASS
	8060.1250	-42.0791	-20	PASS
	7070.5780	-39.4700	-20	PASS

<u>Digital</u>: 814.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



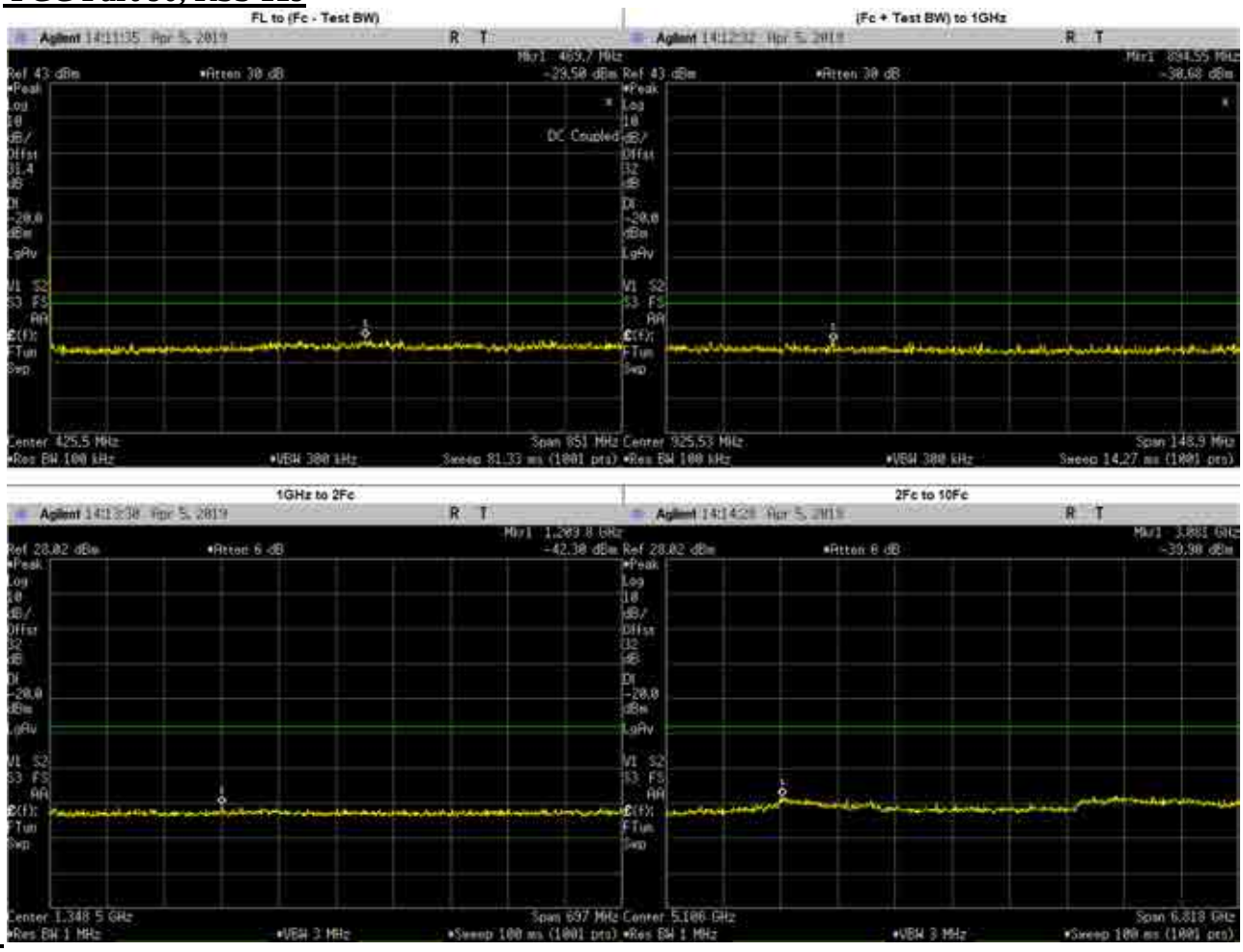
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	620.9845	-29.9050	-20	PASS
(Fc + Test BW) to 1GHz	882.7338	-30.8400	-20	PASS
1GHz to 2Fc	1243.7400	-42.5900	-20	PASS
1GHz to 2Fc	7247.2190	-40.0000	-20	PASS
	1629.9750	-45.7864	-20	PASS
	2444.9630	-43.9394	-20	PASS
	3259.9500	-41.1900	-20	PASS
	4074.9370	-42.2348	-20	PASS
	4889.9250	-44.6740	-20	PASS
	5704.9130	-43.5499	-20	PASS
	6519.9000	-43.5158	-20	PASS
	7334.8870	-41.3290	-20	PASS
	8149.8750	-42.2415	-20	PASS
	7136.2110	-39.5100	-20	PASS

<u>Digital</u>: 823.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



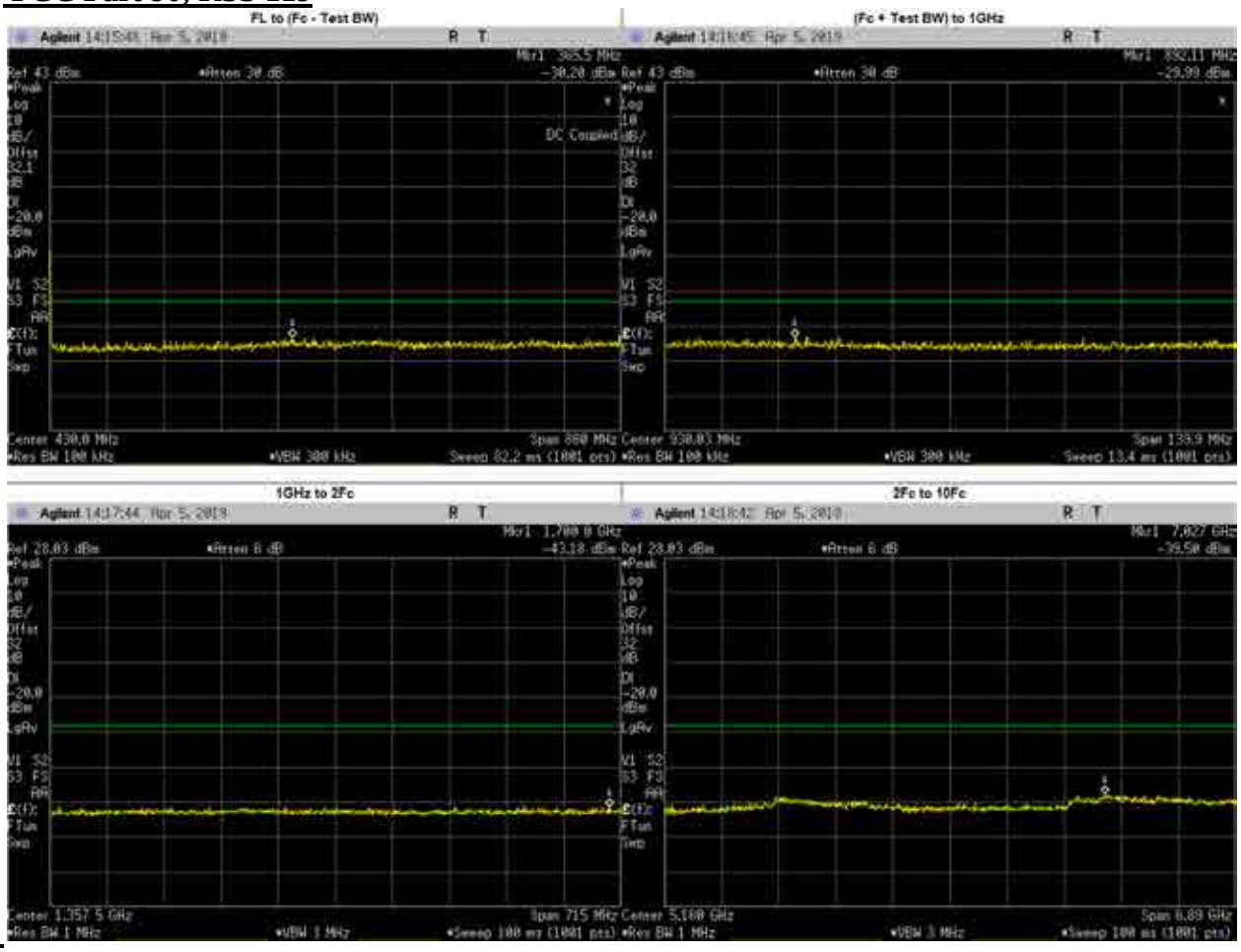
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	453.9936	-30.1790	-20	PASS
(Fc + Test BW) to 1GHz	900.2293	-30.6700	-20	PASS
1GHz to 2Fc	1525.3110	-42.7800	-20	PASS
2Fc to 10Fc	1647.9750	-45.5361	-20	PASS
	2471.9630	-43.4849	-20	PASS
	3295.9500	-41.2267	-20	PASS
	4119.9370	-41.9243	-20	PASS
	4943.9250	-43.7530	-20	PASS
	5767.9130	-43.6571	-20	PASS
	6591.9000	-43.2879	-20	PASS
	7415.8870	-41.5271	-20	PASS
	8239.8750	-42.1710	-20	PASS
	7023.5240	-39.6700	-20	PASS

<u>Digital</u>: 851.0125 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



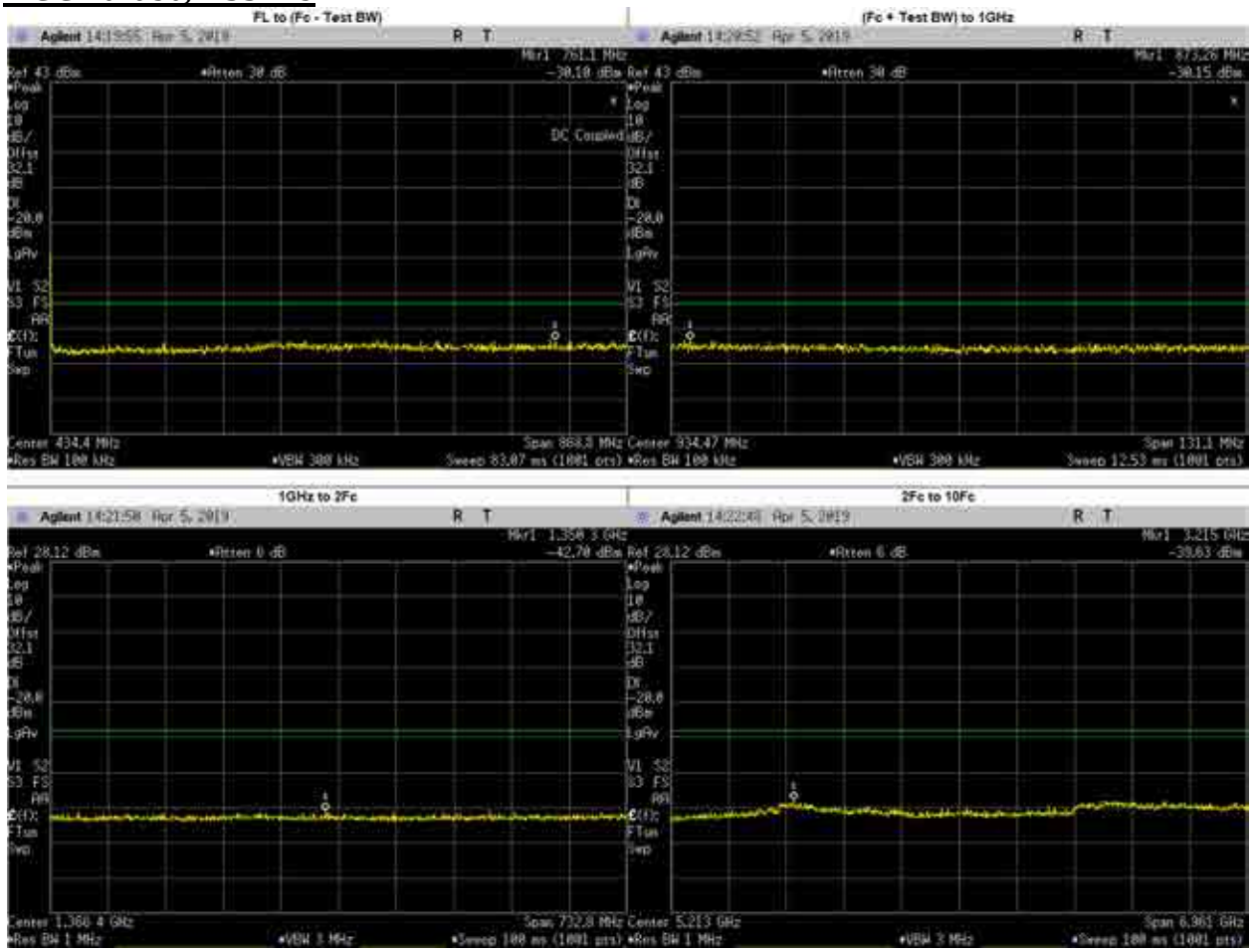
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	469.7353	-29.7193	-20	PASS
(Fc + Test BW) to 1GHz	894.5522	-30.6800	-20	PASS
1GHz to 2Fc	1209.8040	-42.3000	-20	PASS
2Fc to 10Fc	1702.0250	-45.4875	-20	PASS
	2553.0370	-44.0645	-20	PASS
	3404.0500	-41.3043	-20	PASS
	4255.0620	-43.7587	-20	PASS
	5106.0750	-43.5160	-20	PASS
	5957.0870	-43.2467	-20	PASS
	6808.1000	-40.9826	-20	PASS
	7659.1130	-41.6436	-20	PASS
	8510.1250	-41.3203	-20	PASS
	3081.0990	-39.9000	-20	PASS

<u>Digital</u>: 860.0125 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	725.8098	-30.8089	-20	PASS
(Fc + Test BW) to 1GHz	892.1082	-29.9900	-20	PASS
1GHz to 2Fc	1700.0090	-43.1800	-20	PASS
2Fc to 10Fc	1720.0250	-44.4913	-20	PASS
	2580.0370	-44.1336	-20	PASS
	3440.0500	-41.4525	-20	PASS
	4300.0620	-43.3549	-20	PASS
	5160.0750	-43.4090	-20	PASS
	6020.0870	-43.9420	-20	PASS
	6880.1000	-42.0300	-20	PASS
	7740.1130	-41.2612	-20	PASS
	8600.1250	-42.4563	-20	PASS
	7027.2920	-39.5000	-20	PASS

<u>Digital</u>: 868.8875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>

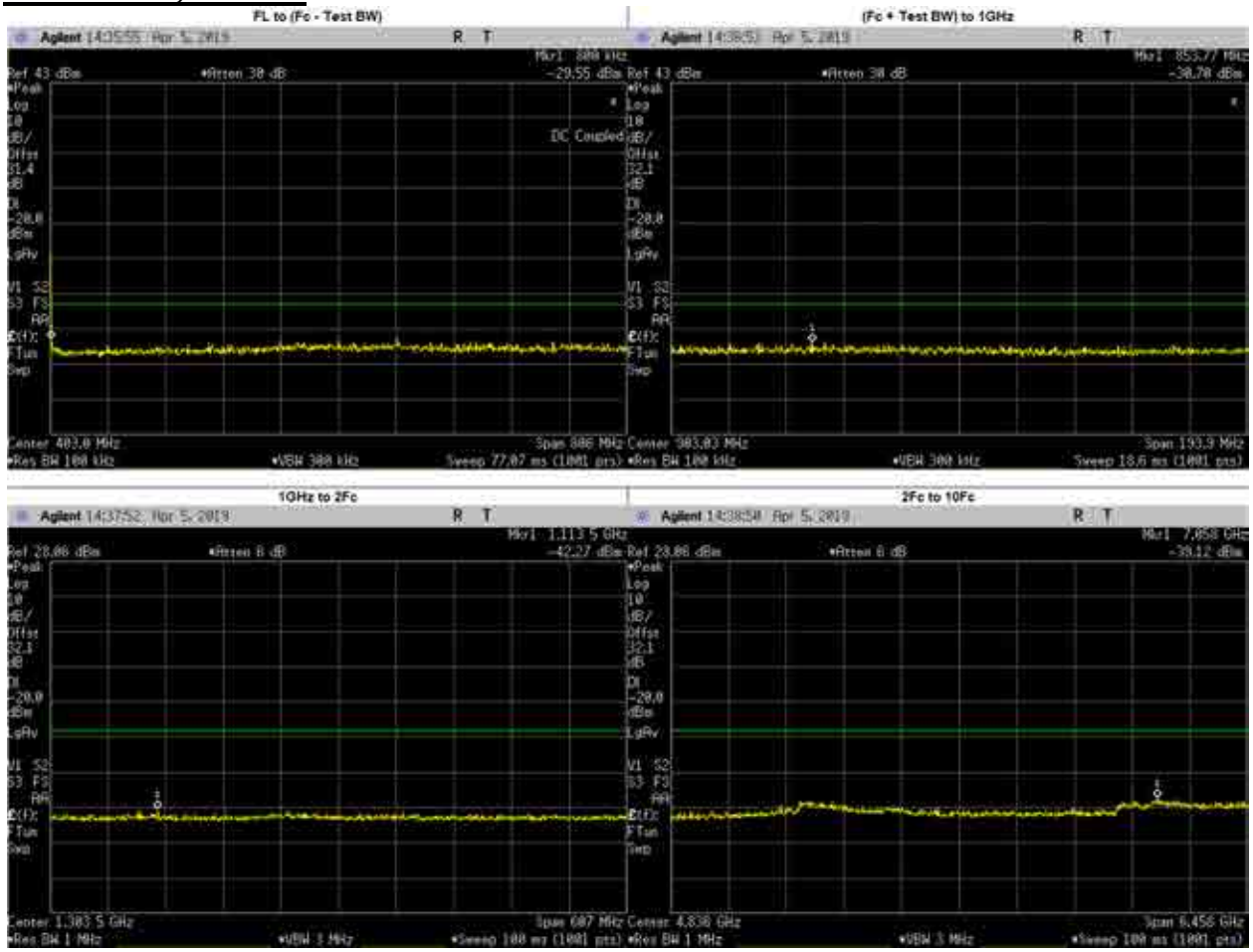


Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	761.1028	-30.3479	-20	PASS
(Fc + Test BW) to 1GHz	873.2626	-30.1500	-20	PASS
1GHz to 2Fc	1350.2660	-42.7000	-20	PASS
2Fc to 10Fc	1737.7750	-44.7056	-20	PASS
	2606.6620	-43.6182	-20	PASS
	3475.5500	-41.8319	-20	PASS
	4344.4370	-44.0318	-20	PASS
	5213.3250	-43.6660	-20	PASS
	6082.2120	-43.6097	-20	PASS
	6951.1000	-41.1885	-20	PASS
	7819.9880	-41.4214	-20	PASS
	8688.8750	-41.8362	-20	PASS
	3215.4890	-39.6300	-20	PASS

6.10.3. Test Result (PHASE 2)

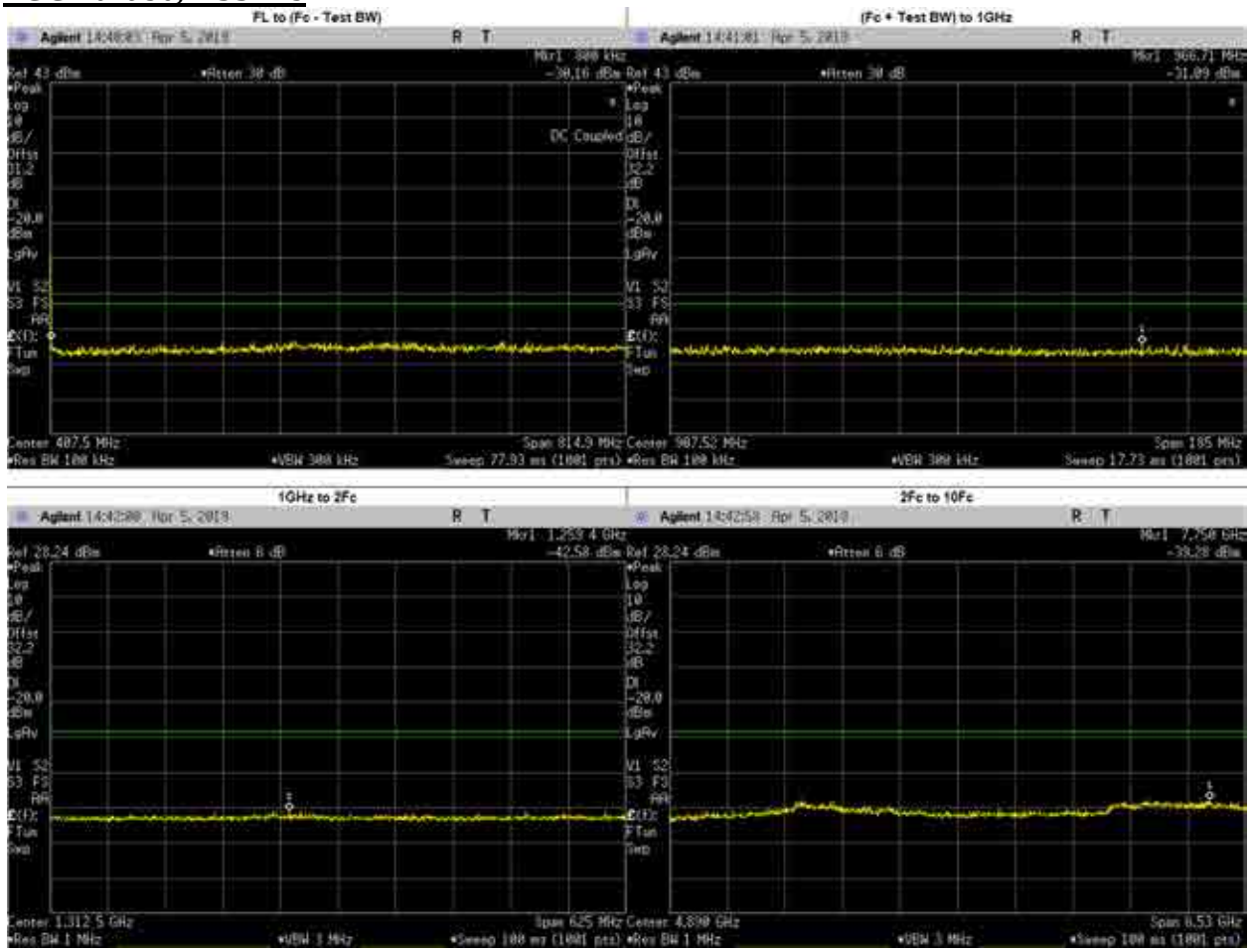
<u>Phase 2:</u> 806.0125 MHz, 12.5kHz Channel Spacing, Max Power

<u>FCC Part 90, RSS 119</u>



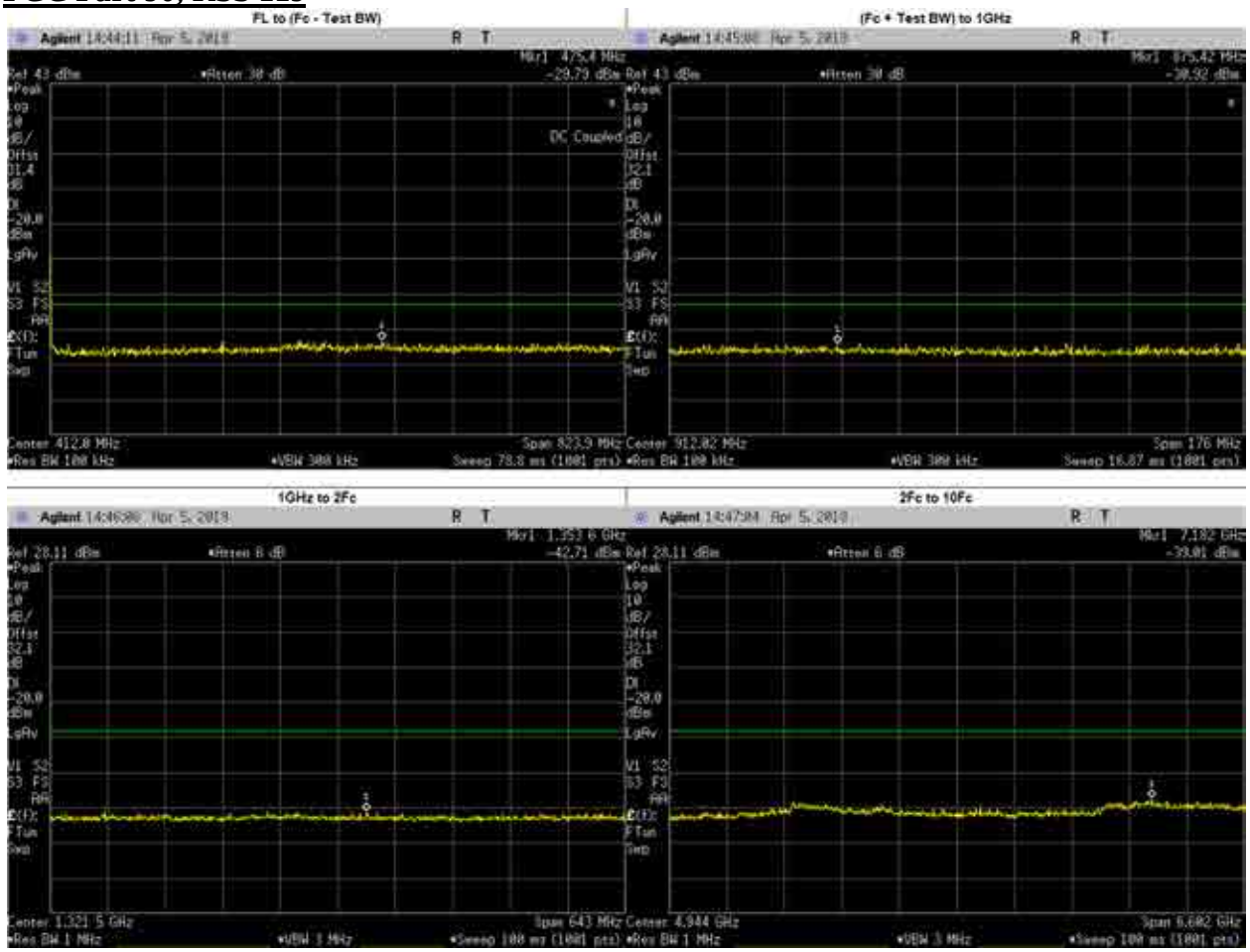
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	485.1930	-30.2000	-20	PASS
(Fc + Test BW) to 1GHz	853.7711	-30.7000	-20	PASS
1GHz to 2Fc	1113.5140	-42.2700	-20	PASS
2Fc to 10Fc	1612.0250	-45.4265	-20	PASS
	2418.0370	-44.0620	-20	PASS
	3224.0500	-41.3373	-20	PASS
	4030.0620	-42.2211	-20	PASS
	4836.0750	-43.7910	-20	PASS
	5642.0870	-43.7517	-20	PASS
	6448.1000	-43.3778	-20	PASS
	7254.1130	-40.7496	-20	PASS
	8060.1250	-41.1104	-20	PASS
	7057.6610	-39.1200	-20	PASS

<u>Phase 2:</u> 814.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



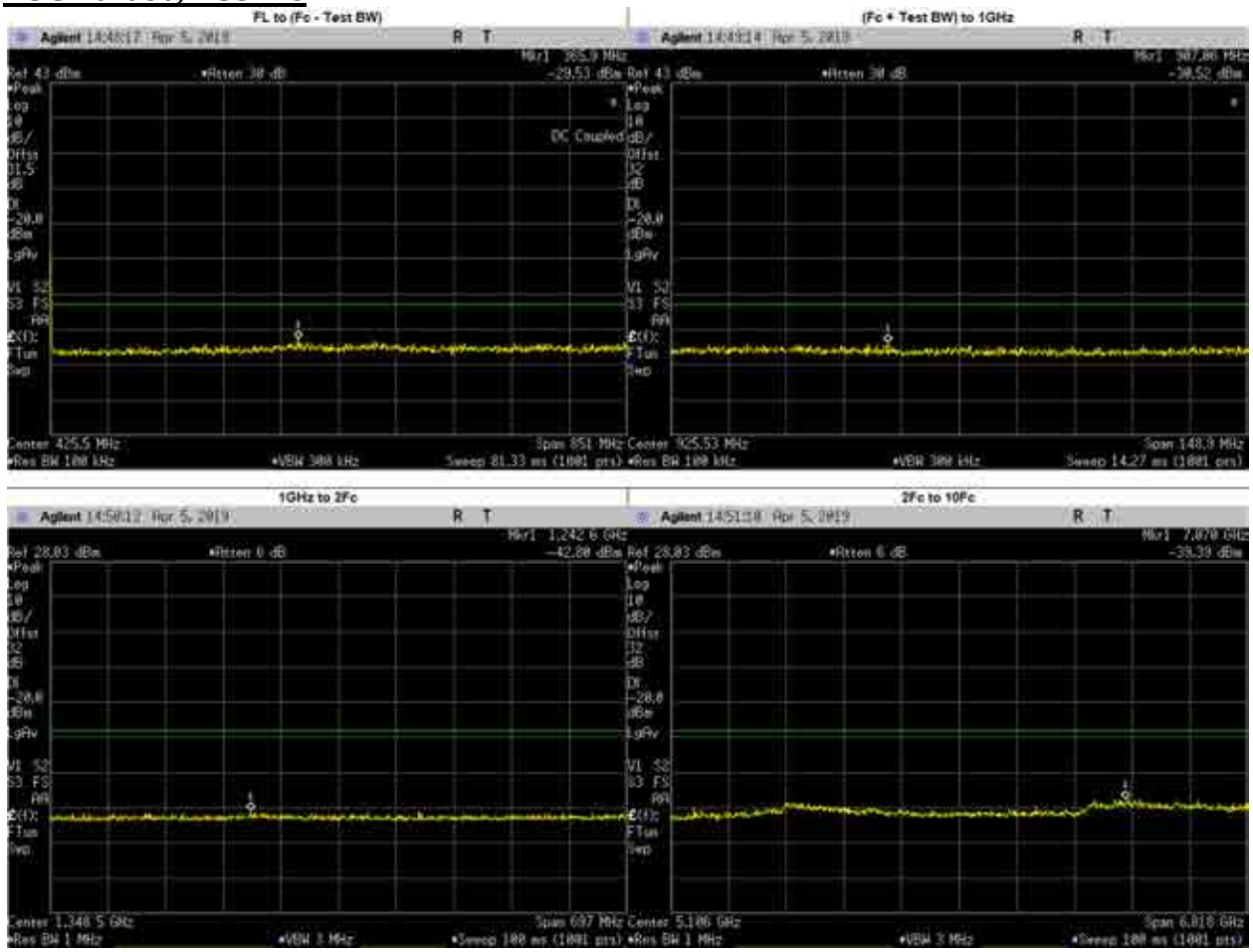
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	485.7064	-30.5610	-20	PASS
(Fc + Test BW) to 1GHz	966.7068	-31.0900	-20	PASS
1GHz to 2Fc	1259.3650	-42.5800	-20	PASS
2Fc to 10Fc	1629.9750	-44.3368	-20	PASS
	2444.9630	-44.1187	-20	PASS
	3259.9500	-41.9813	-20	PASS
	4074.9370	-42.7211	-20	PASS
	4889.9250	-43.4550	-20	PASS
	5704.9130	-43.7497	-20	PASS
	6519.9000	-43.3095	-20	PASS
	7334.8870	-40.8014	-20	PASS
	8149.8750	-41.9203	-20	PASS
	7750.0210	-39.2800	-20	PASS

<u>Phase 2:</u> 823.9875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



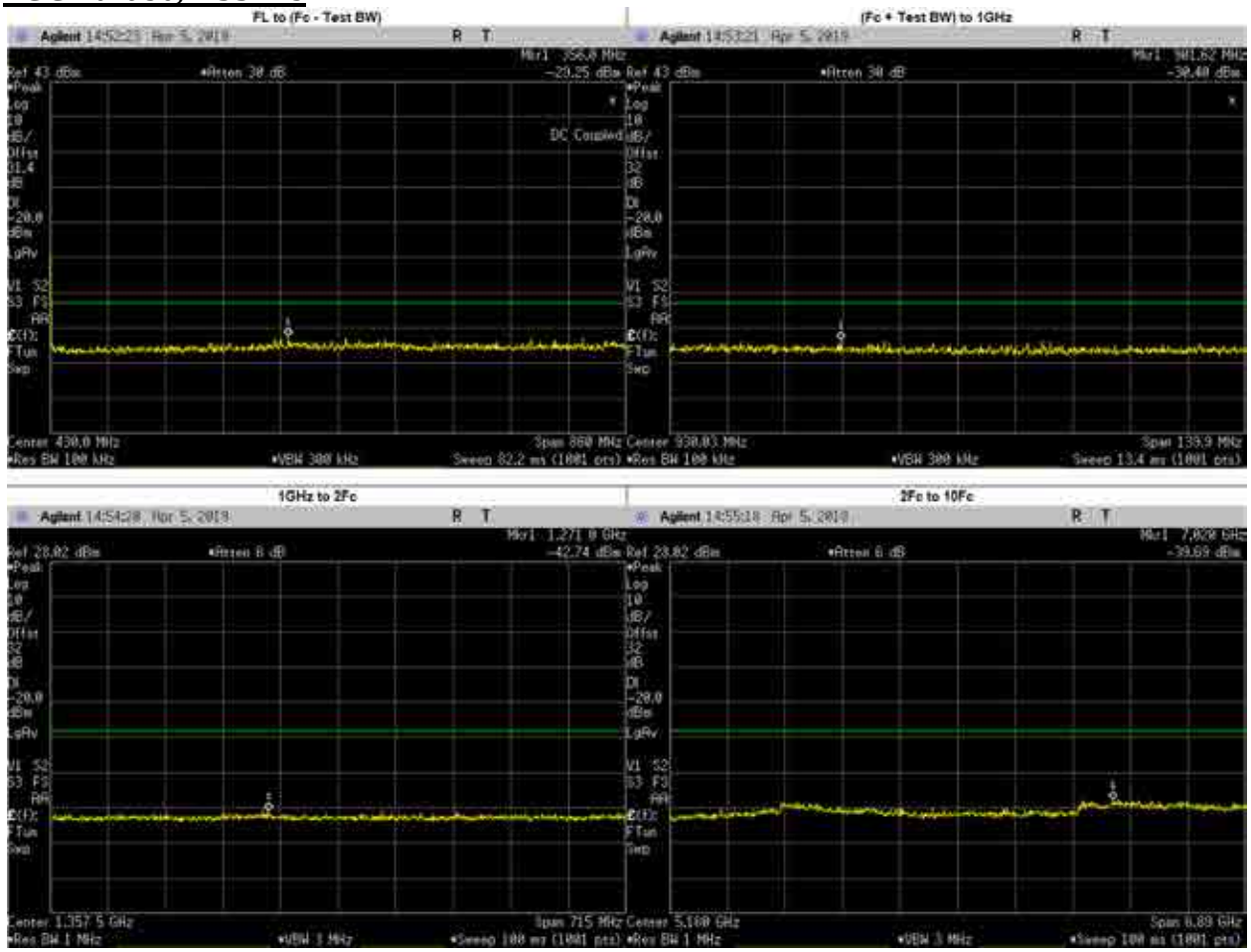
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	393.0229	-30.3453	-20	PASS
(Fc + Test BW) to 1GHz	875.4185	-30.9200	-20	PASS
1GHz to 2Fc	1353.6360	-42.7100	-20	PASS
2Fc to 10Fc	1647.9750	-44.3918	-20	PASS
	2471.9630	-43.3439	-20	PASS
	3295.9500	-41.4737	-20	PASS
	4119.9370	-42.5606	-20	PASS
	4943.9250	-43.1760	-20	PASS
	5767.9130	-43.5789	-20	PASS
	6591.9000	-43.5424	-20	PASS
	7415.8870	-41.9268	-20	PASS
	8239.8750	-42.2791	-20	PASS
	7181.9690	-39.0100	-20	PASS

<u>Phase 2:</u> 851.0125 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



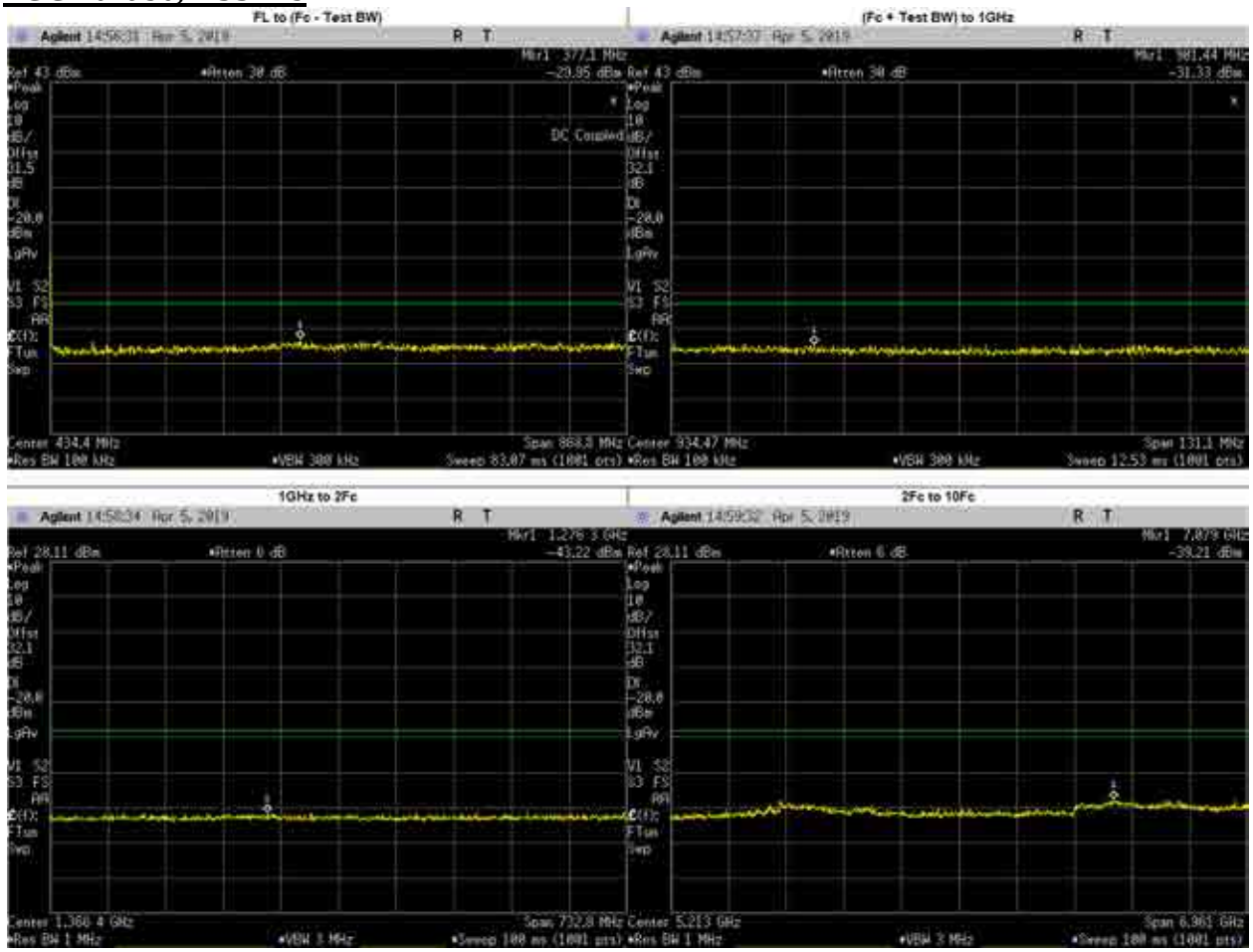
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	846.7077	-30.2781	-20	PASS
(Fc + Test BW) to 1GHz	907.0630	-30.5200	-20	PASS
1GHz to 2Fc	1242.5650	-42.8000	-20	PASS
2Fc to 10Fc	1702.0250	-45.4474	-20	PASS
	2553.0370	-44.2108	-20	PASS
	3404.0500	-41.8002	-20	PASS
	4255.0620	-43.9747	-20	PASS
	5106.0750	-44.0800	-20	PASS
	5957.0870	-44.3165	-20	PASS
	6808.1000	-41.7247	-20	PASS
	7659.1130	-40.6494	-20	PASS
	8510.1250	-41.1299	-20	PASS
	7069.6880	-39.3900	-20	PASS

<u>Phase 2:</u> 860.0125 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	718.0702	-29.4410	-20	PASS
(Fc + Test BW) to 1GHz	901.6239	-30.4000	-20	PASS
1GHz to 2Fc	1270.9950	-42.7400	-20	PASS
2Fc to 10Fc	1720.0250	-44.9719	-20	PASS
	2580.0370	-43.9315	-20	PASS
	3440.0500	-41.8729	-20	PASS
	4300.0620	-44.1312	-20	PASS
	5160.0750	-44.2510	-20	PASS
	6020.0870	-42.8687	-20	PASS
	6880.1000	-41.6803	-20	PASS
	7740.1130	-41.4272	-20	PASS
	8600.1250	-41.6810	-20	PASS
	7020.4020	-39.6900	-20	PASS

<u>Phase 2:</u> 868.8875 MHz, 12.5kHz Channel Spacing, Max Power
<u>FCC Part 90, RSS 119</u>



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL to (Fc - Test BW)	846.2480	-30.1938	-20	PASS
(Fc + Test BW) to 1GHz	901.4410	-31.7137	-20	PASS
1GHz to 2Fc	1276.2560	-43.2200	-20	PASS
2Fc to 10Fc	1737.7750	-44.5425	-20	PASS
	2606.6620	-44.1232	-20	PASS
	3475.5500	-41.7470	-20	PASS
	4344.4370	-43.6205	-20	PASS
	5213.3250	-44.0300	-20	PASS
	6082.2120	-43.5428	-20	PASS
	6951.1000	-41.2226	-20	PASS
	7819.9880	-41.6108	-20	PASS
	8688.8750	-41.4657	-20	PASS
	7078.9000	-39.2100	-20	PASS

6.10.4. Test Limit

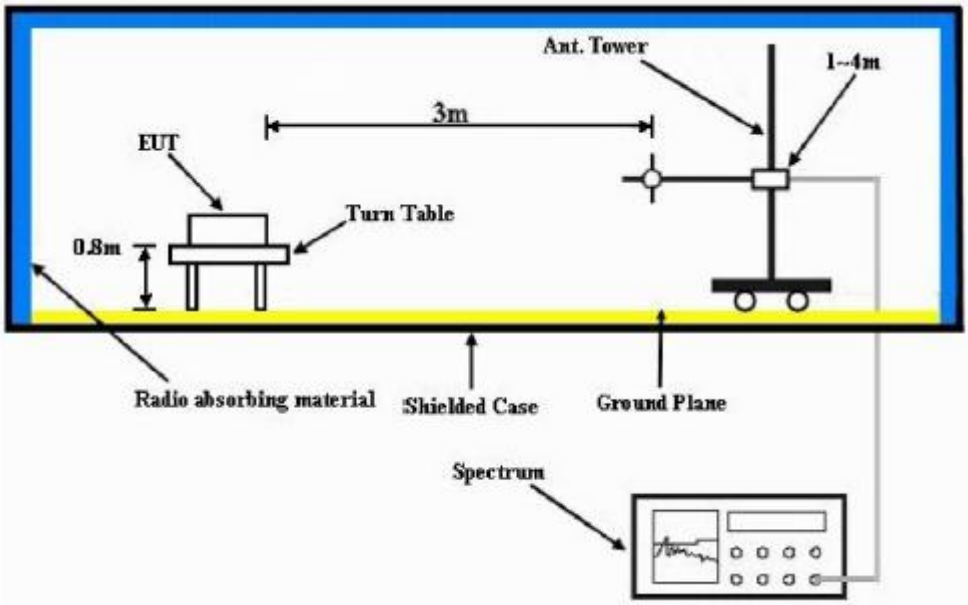
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz		Not Applicable		43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz	Not Applicable	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

6.11. Radiated Spurious Emission

6.11.1. Test Setup



1) The Resolution Bandwidth for scanning Radiated Emission below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector mode is positive peak.
2) In the semi- anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height (for frequencies < 1GHz) or 1.5m (for frequencies > 1GHz) of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
3) The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.
4) Final Radiated Spurious Emission = "Read Value" + Measured substitution value.

6.11.1. Test Result (Analog)

SAC Transmitter Radiated Emission:

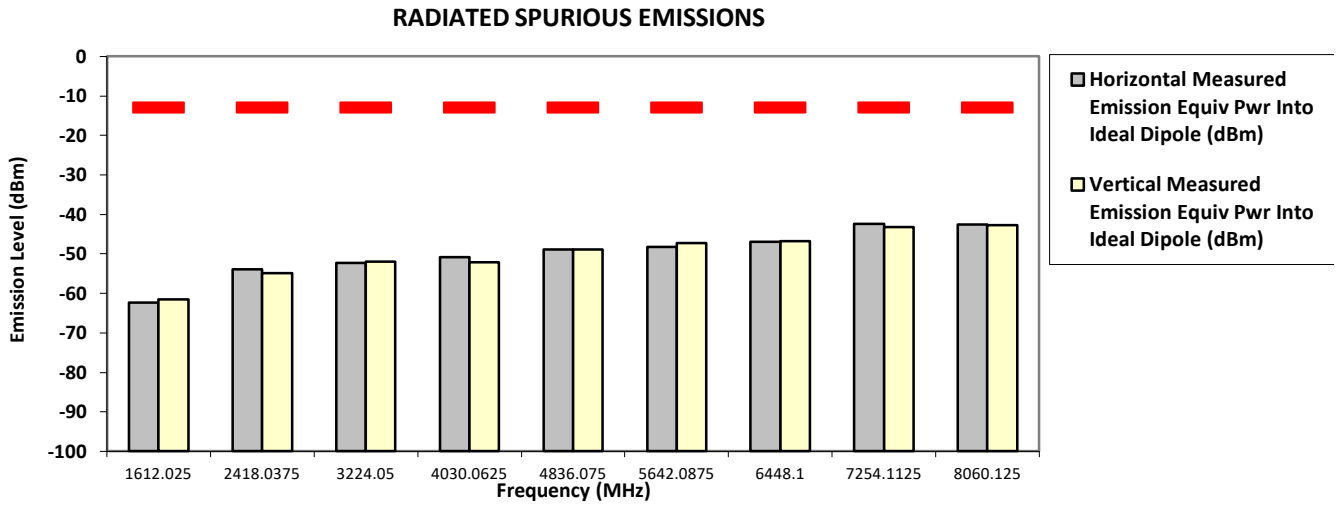
Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX Analog

806.012500 MHz **25 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1612.0250	-13.0000	-62.3687 **	-61.4755 **
2418.0375	-13.0000	-53.9289 **	-54.8064 **
3224.0500	-13.0000	-52.2356 **	-51.8751 **
4030.0625	-13.0000	-50.7596 **	-52.1065 **
4836.0750	-13.0000	-48.9555 **	-48.8106 **
5642.0875	-13.0000	-48.2571 **	-47.3042 **
6448.1000	-13.0000	-46.9338 **	-46.7419 **
7254.1125	-13.0000	-42.3256 **	-43.1548 **
8060.1250	-13.0000	-42.5072 **	-42.7361 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

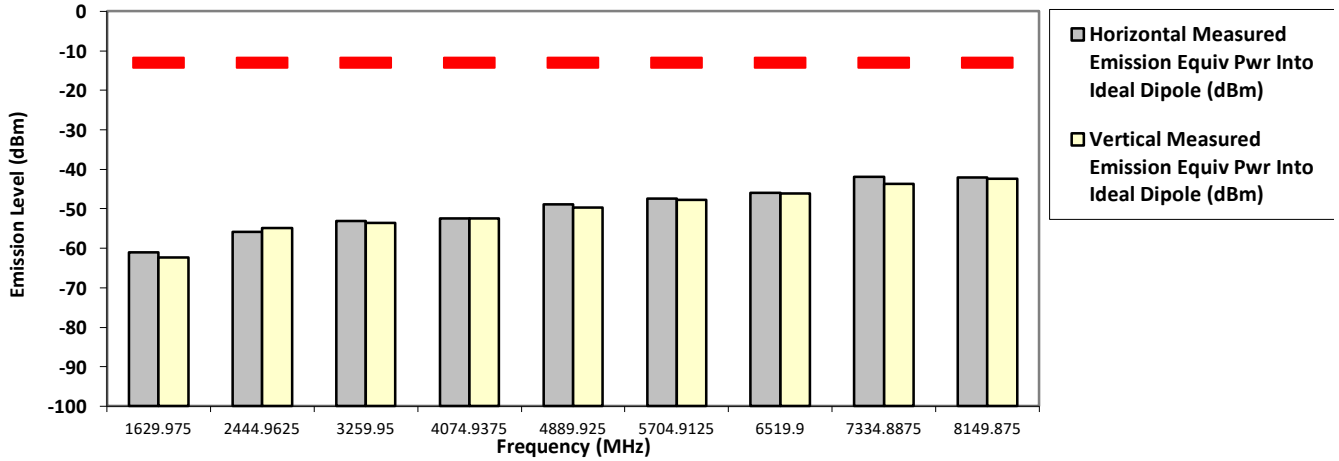
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX Analog

814.987500 MHz **25 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1629.9750	-13.0000	-60.9800 **	-62.3060 **
2444.9625	-13.0000	-55.8724 **	-54.9085 **
3259.9500	-13.0000	-53.0989 **	-53.5026 **
4074.9375	-13.0000	-52.4241 **	-52.3831 **
4889.9250	-13.0000	-48.8370 **	-49.7071 **
5704.9125	-13.0000	-47.4450 **	-47.7658 **
6519.9000	-13.0000	-45.9967 **	-46.1637 **
7334.8875	-13.0000	-41.9747 **	-43.6303 **
8149.8750	-13.0000	-42.0361 **	-42.4424 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

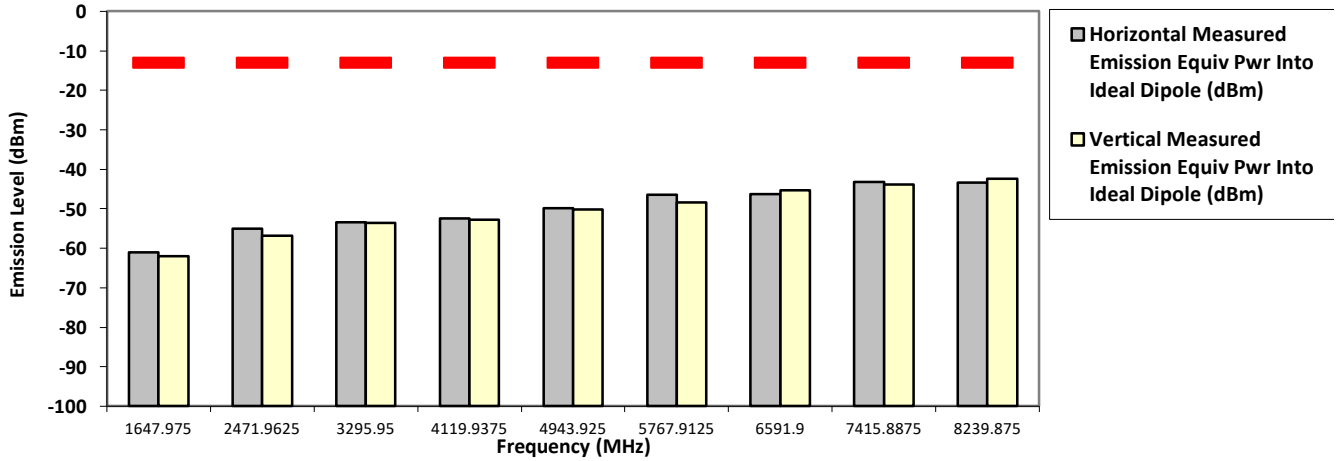
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX Analog

823.987500 MHz **25 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1647.9750	-13.0000	-61.0515 **	-61.9411 **
2471.9625	-13.0000	-55.0037 **	-56.8368 **
3295.9500	-13.0000	-53.4766 **	-53.5326 **
4119.9375	-13.0000	-52.5061 **	-52.8294 **
4943.9250	-13.0000	-49.8675 **	-50.1725 **
5767.9125	-13.0000	-46.5242 **	-48.3909 **
6591.9000	-13.0000	-46.2724 **	-45.2805 **
7415.8875	-13.0000	-43.2724 **	-43.8218 **
8239.8750	-13.0000	-43.2904 **	-42.4107 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

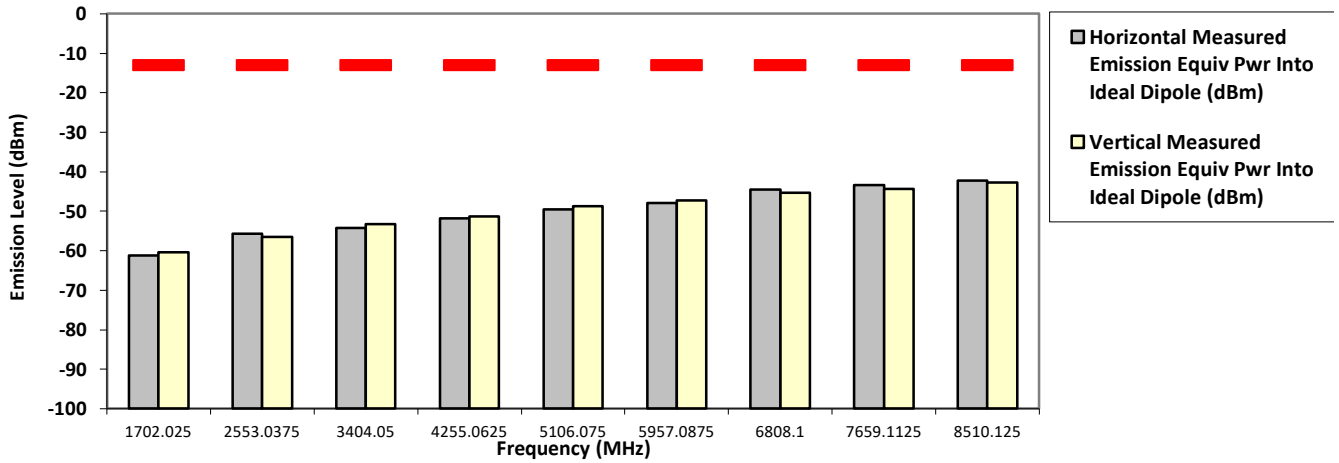
Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**
Battery Part No: PMNN4487A **Accy Part No: NA**
Test Mode: TX Analog
851.012500 MHz **25 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1702.0250	-13.0000	-61.1909 **	-60.3164 **
2553.0375	-13.0000	-55.7469 **	-56.5310 **
3404.0500	-13.0000	-54.1947 **	-53.2075 **
4255.0625	-13.0000	-51.7441 **	-51.3241 **
5106.0750	-13.0000	-49.4545 **	-48.6904 **
5957.0875	-13.0000	-47.9739 **	-47.2818 **
6808.1000	-13.0000	-44.5023 **	-45.3155 **
7659.1125	-13.0000	-43.3434 **	-44.3989 **
8510.1250	-13.0000	-42.2277 **	-42.6636 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:	Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

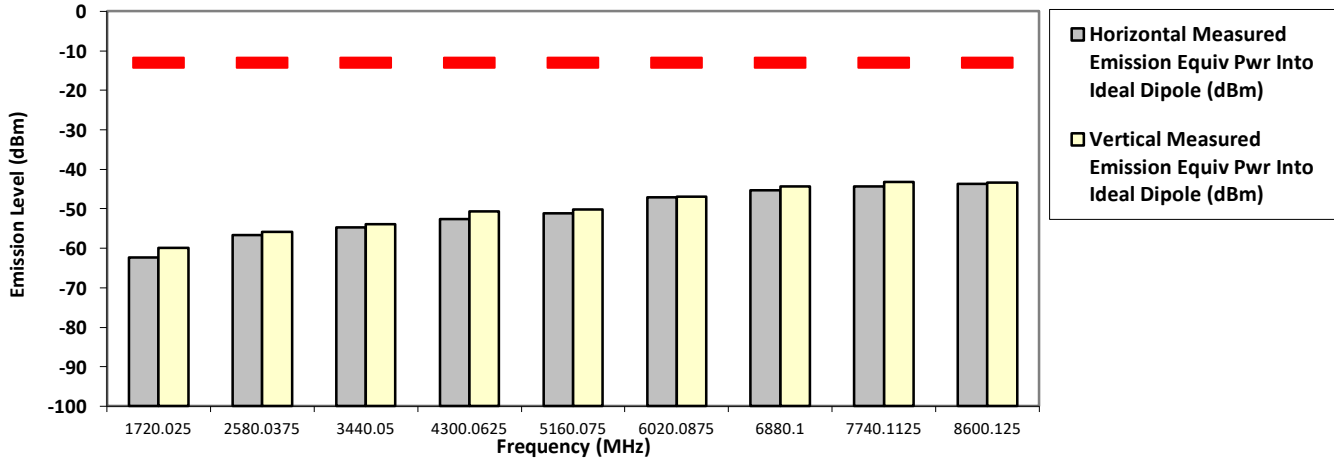
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX Analog

860.012500 MHz **25 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1720.0250	-13.0000	-62.2673 **	-59.8555 **
2580.0375	-13.0000	-56.6390 **	-55.8418 **
3440.0500	-13.0000	-54.7808 **	-53.9139 **
4300.0625	-13.0000	-52.5506 **	-50.6893 **
5160.0750	-13.0000	-51.1287 **	-50.1513 **
6020.0875	-13.0000	-47.1181 **	-46.8790 **
6880.1000	-13.0000	-45.3282 **	-44.3491 **
7740.1125	-13.0000	-44.2743 **	-43.2845 **
8600.1250	-13.0000	-43.7004 **	-43.3295 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

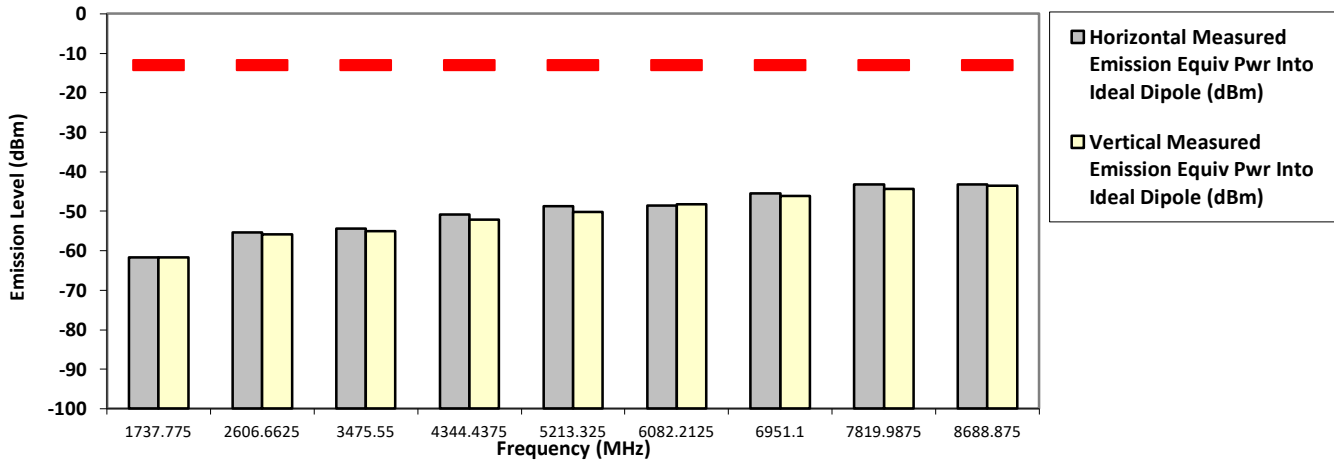
Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**
Battery Part No: PMNN4487A **Accy Part No: NA**
Test Mode: TX Analog
868.887500 MHz **25 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1737.7750	-13.0000	-61.7059 **	-61.6897 **
2606.6625	-13.0000	-55.2934 **	-55.8278 **
3475.5500	-13.0000	-54.4181 **	-55.0369 **
4344.4375	-13.0000	-50.7888 **	-52.1334 **
5213.3250	-13.0000	-48.7378 **	-50.1578 **
6082.2125	-13.0000	-48.5400 **	-48.2593 **
6951.1000	-13.0000	-45.5234 **	-46.1940 **
7819.9875	-13.0000	-43.2641 **	-44.3983 **
8688.8750	-13.0000	-43.1398 **	-43.5576 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.
Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**
Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

6.11.2. Test Result (Digital)

SAC Transmitter Radiated Emission:

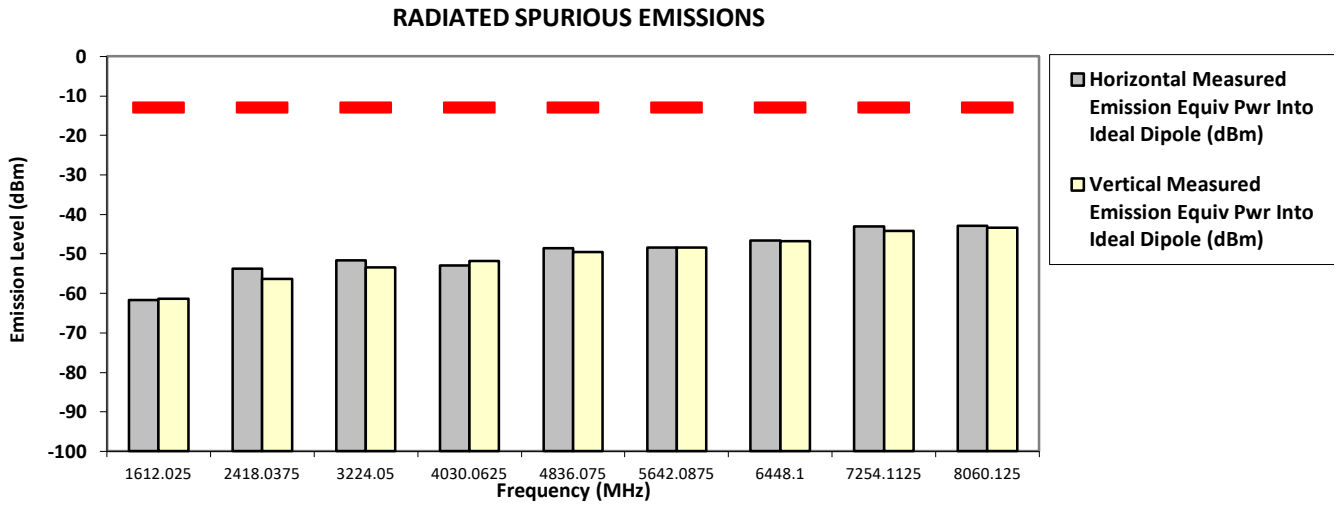
Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

806.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1612.0250	-13.0000	-61.6619 **	-61.3890 **
2418.0375	-13.0000	-53.6804 **	-56.3197 **
3224.0500	-13.0000	-51.6098 **	-53.4675 **
4030.0625	-13.0000	-52.8881 **	-51.7331 **
4836.0750	-13.0000	-48.5209 **	-49.4935 **
5642.0875	-13.0000	-48.3934 **	-48.3586 **
6448.1000	-13.0000	-46.5288 **	-46.8275 **
7254.1125	-13.0000	-42.9678 **	-44.1757 **
8060.1250	-13.0000	-42.9413 **	-43.3421 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

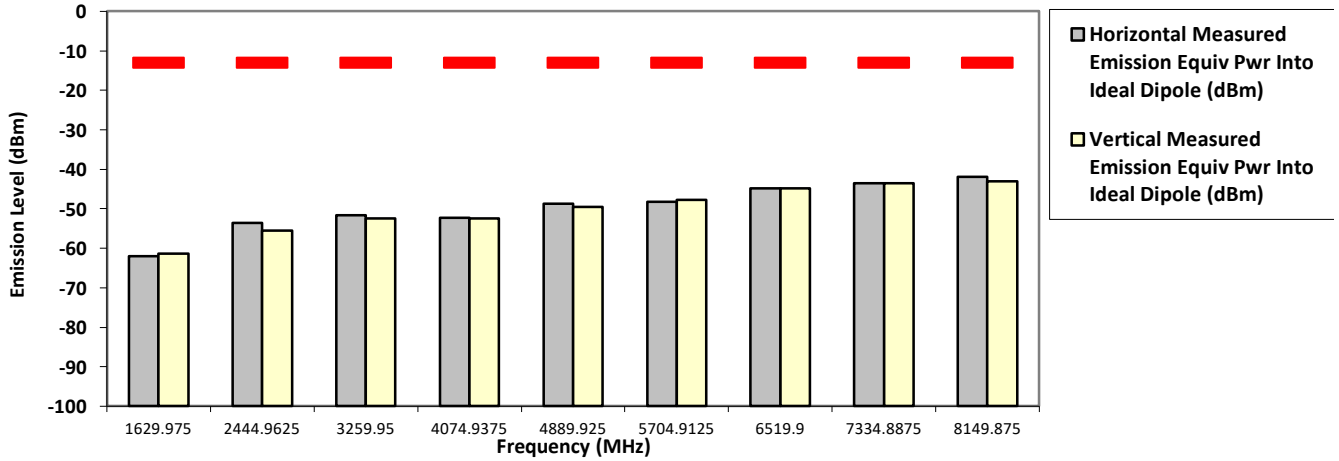
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

814.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1629.9750	-13.0000	-62.0745 **	-61.3791 **
2444.9625	-13.0000	-53.5559 **	-55.5424 **
3259.9500	-13.0000	-51.5556 **	-52.5072 **
4074.9375	-13.0000	-52.2506 **	-52.3718 **
4889.9250	-13.0000	-48.6630 **	-49.5044 **
5704.9125	-13.0000	-48.1701 **	-47.7627 **
6519.9000	-13.0000	-44.8556 **	-44.8515 **
7334.8875	-13.0000	-43.5305 **	-43.5180 **
8149.8750	-13.0000	-41.9099 **	-42.9898 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

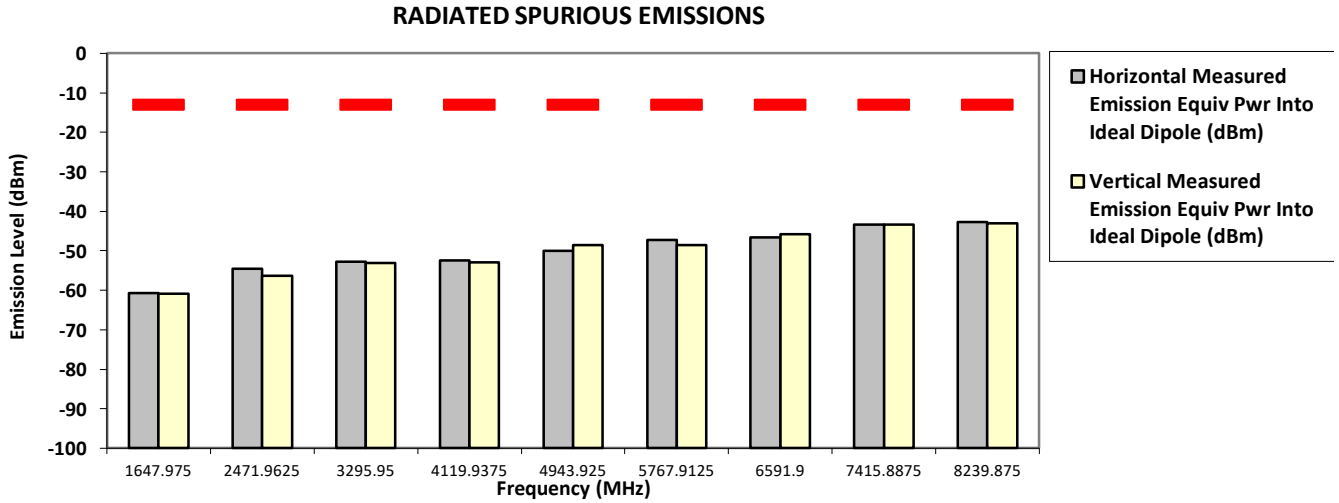
Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

823.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1647.9750	-13.0000	-60.7451 **	-60.8601 **
2471.9625	-13.0000	-54.5205 **	-56.3930 **
3295.9500	-13.0000	-52.7220 **	-53.0717 **
4119.9375	-13.0000	-52.4867 **	-52.9005 **
4943.9250	-13.0000	-49.9984 **	-48.5458 **
5767.9125	-13.0000	-47.2912 **	-48.4898 **
6591.9000	-13.0000	-46.5712 **	-45.8540 **
7415.8875	-13.0000	-43.3929 **	-43.4333 **
8239.8750	-13.0000	-42.6391 **	-43.1050 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

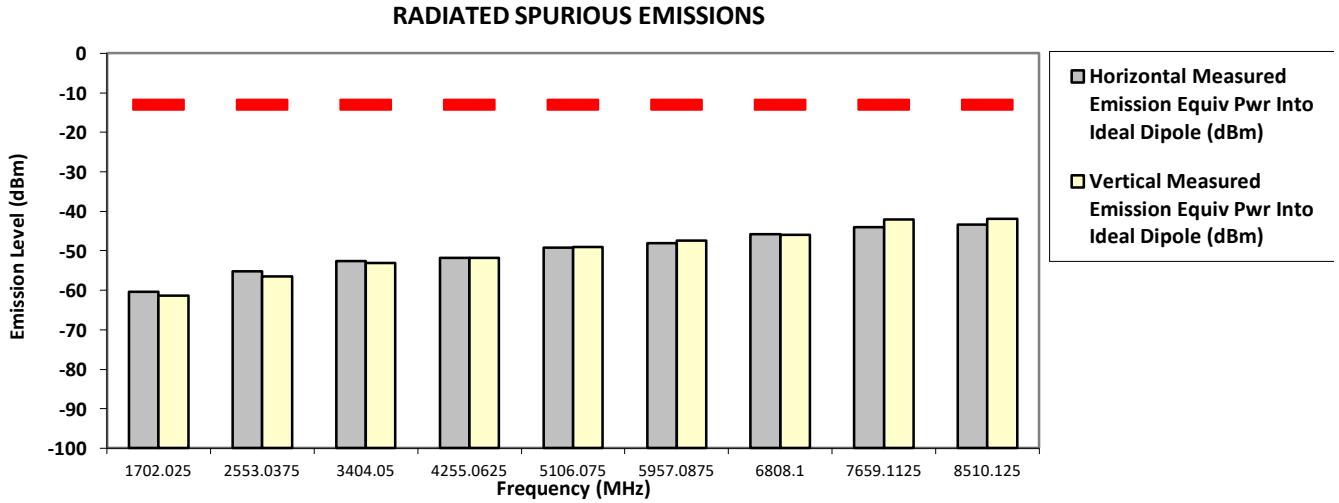
Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

851.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1702.0250	-13.0000	-60.3552 **	-61.4077 **
2553.0375	-13.0000	-55.1871 **	-56.5517 **
3404.0500	-13.0000	-52.5965 **	-53.0375 **
4255.0625	-13.0000	-51.8060 **	-51.7562 **
5106.0750	-13.0000	-49.1498 **	-48.9752 **
5957.0875	-13.0000	-48.0571 **	-47.4800 **
6808.1000	-13.0000	-45.7380 **	-45.9973 **
7659.1125	-13.0000	-44.0892 **	-42.0678 **
8510.1250	-13.0000	-43.3199 **	-41.8865 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

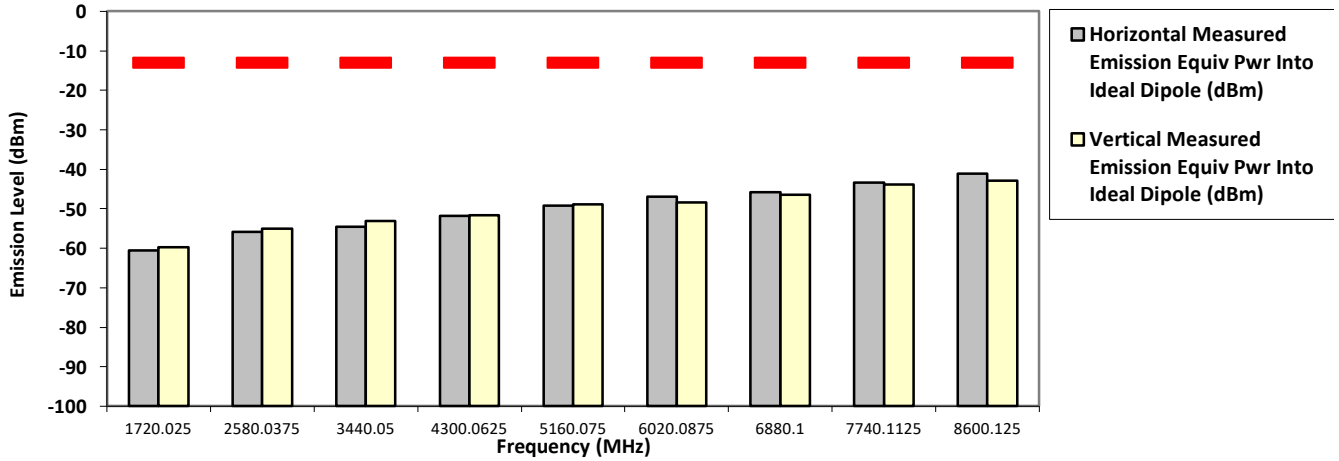
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

860.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1720.0250	-13.0000	-60.5940 **	-59.7218 **
2580.0375	-13.0000	-55.8618 **	-55.0629 **
3440.0500	-13.0000	-54.4781 **	-53.1072 **
4300.0625	-13.0000	-51.8132 **	-51.5914 **
5160.0750	-13.0000	-49.1430 **	-48.9511 **
6020.0875	-13.0000	-46.9038 **	-48.4157 **
6880.1000	-13.0000	-45.7410 **	-46.5071 **
7740.1125	-13.0000	-43.3407 **	-43.9276 **
8600.1250	-13.0000	-41.1221 **	-42.9231 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

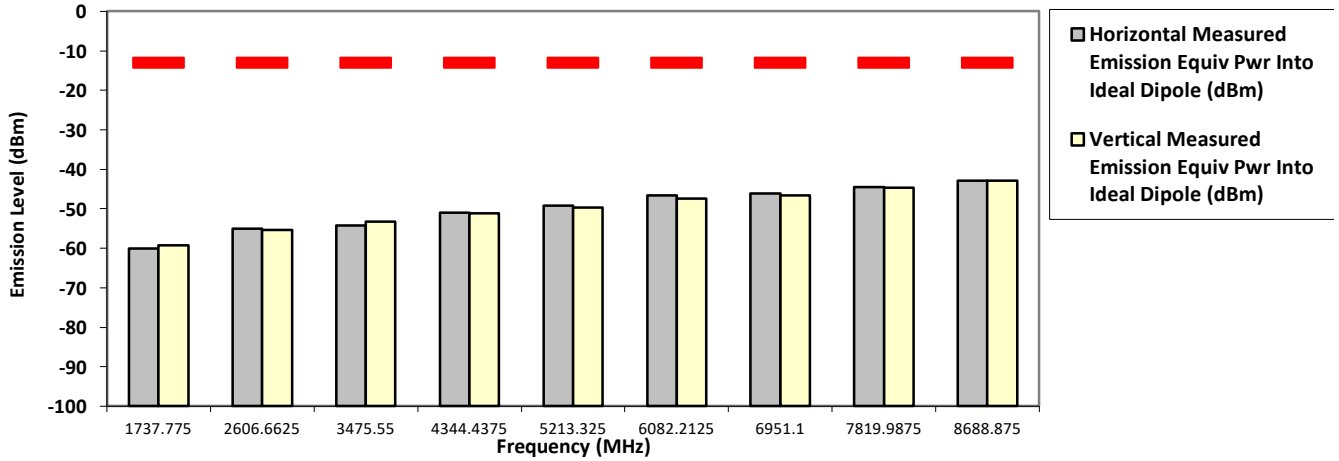
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

868.887500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1737.7750	-13.0000	-60.0178 **	-59.2029 **
2606.6625	-13.0000	-55.0417 **	-55.3173 **
3475.5500	-13.0000	-54.2776 **	-53.1999 **
4344.4375	-13.0000	-50.9368 **	-51.1151 **
5213.3250	-13.0000	-49.2705 **	-49.6438 **
6082.2125	-13.0000	-46.6845 **	-47.4111 **
6951.1000	-13.0000	-46.1536 **	-46.5956 **
7819.9875	-13.0000	-44.4826 **	-44.6008 **
8688.8750	-13.0000	-42.8547 **	-42.8165 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

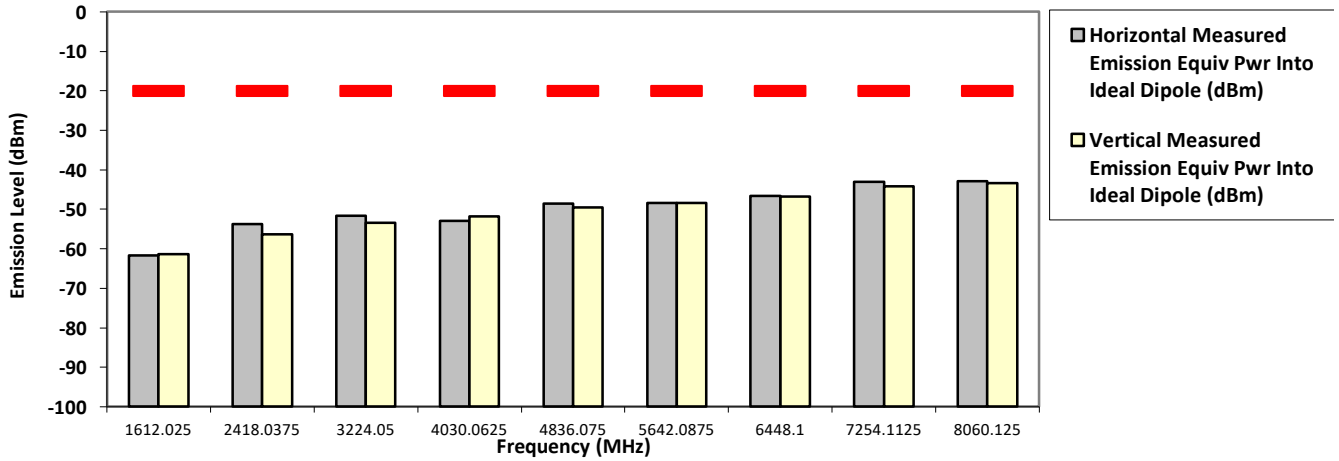
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

806.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1612.0250	-20.0000	-61.6619 **	-61.3890 **
2418.0375	-20.0000	-53.6804 **	-56.3197 **
3224.0500	-20.0000	-51.6098 **	-53.4675 **
4030.0625	-20.0000	-52.8881 **	-51.7331 **
4836.0750	-20.0000	-48.5209 **	-49.4935 **
5642.0875	-20.0000	-48.3934 **	-48.3586 **
6448.1000	-20.0000	-46.5288 **	-46.8275 **
7254.1125	-20.0000	-42.9678 **	-44.1757 **
8060.1250	-20.0000	-42.9413 **	-43.3421 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

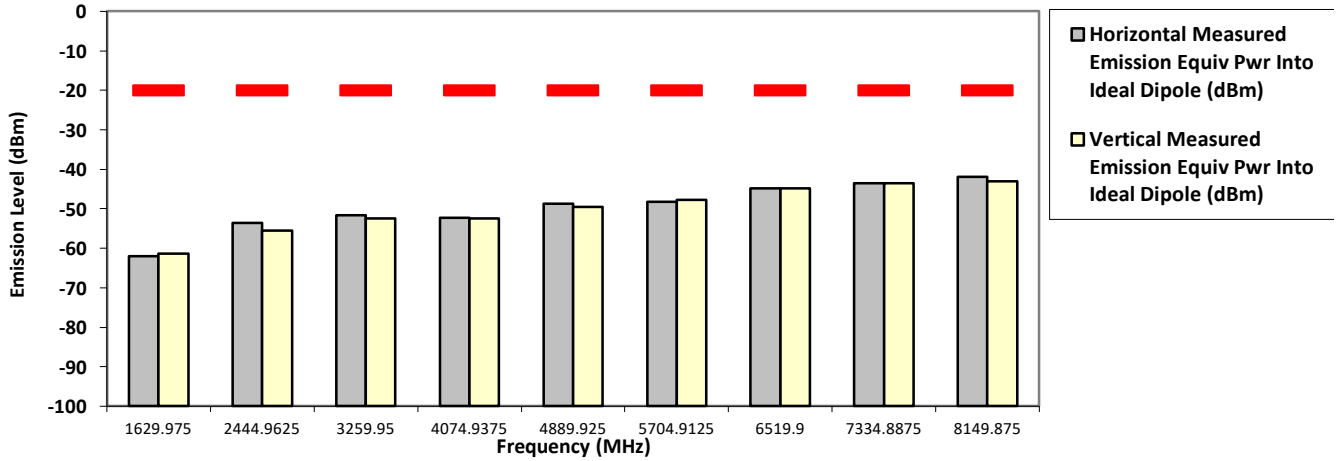
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

814.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1629.9750	-20.0000	-62.0745 **	-61.3791 **
2444.9625	-20.0000	-53.5559 **	-55.5424 **
3259.9500	-20.0000	-51.5556 **	-52.5072 **
4074.9375	-20.0000	-52.2506 **	-52.3718 **
4889.9250	-20.0000	-48.6630 **	-49.5044 **
5704.9125	-20.0000	-48.1701 **	-47.7627 **
6519.9000	-20.0000	-44.8556 **	-44.8515 **
7334.8875	-20.0000	-43.5305 **	-43.5180 **
8149.8750	-20.0000	-41.9099 **	-42.9898 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

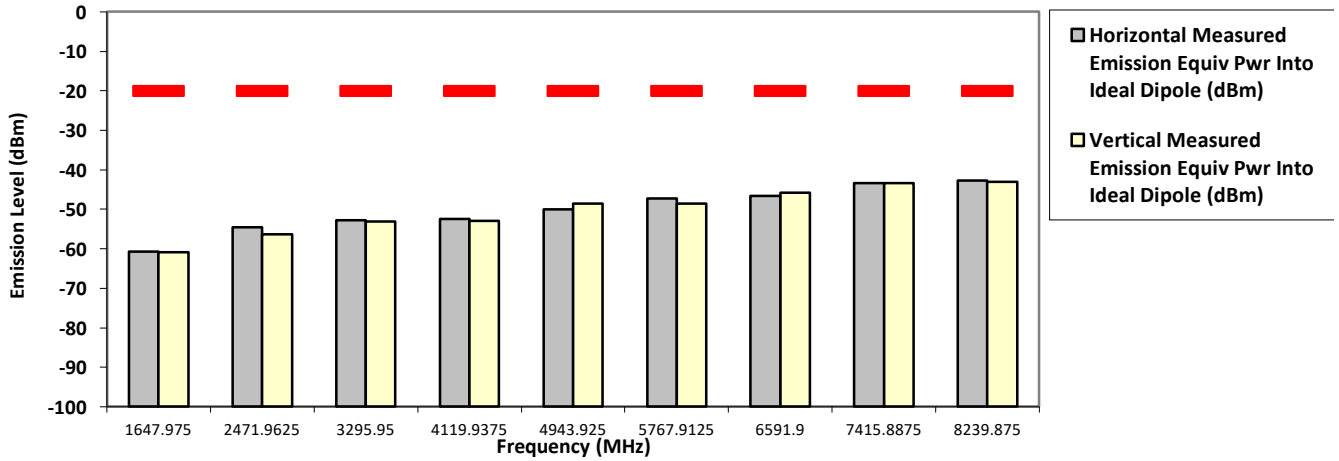
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

823.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1647.9750	-20.0000	-60.7451 **	-60.8601 **
2471.9625	-20.0000	-54.5205 **	-56.3930 **
3295.9500	-20.0000	-52.7220 **	-53.0717 **
4119.9375	-20.0000	-52.4867 **	-52.9005 **
4943.9250	-20.0000	-49.9984 **	-48.5458 **
5767.9125	-20.0000	-47.2912 **	-48.4898 **
6591.9000	-20.0000	-46.5712 **	-45.8540 **
7415.8875	-20.0000	-43.3929 **	-43.4333 **
8239.8750	-20.0000	-42.6391 **	-43.1050 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks: Passed Results | **Marginal Results** | **Failed Results**

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

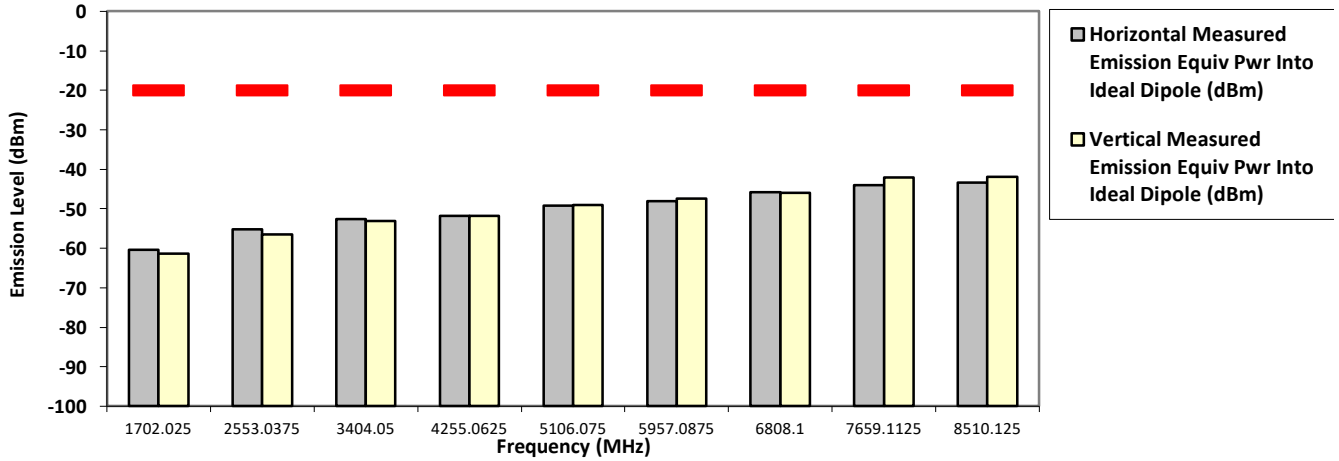
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

851.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1702.0250	-20.0000	-60.3552 **	-61.4077 **
2553.0375	-20.0000	-55.1871 **	-56.5517 **
3404.0500	-20.0000	-52.5965 **	-53.0375 **
4255.0625	-20.0000	-51.8060 **	-51.7562 **
5106.0750	-20.0000	-49.1498 **	-48.9752 **
5957.0875	-20.0000	-48.0571 **	-47.4800 **
6808.1000	-20.0000	-45.7380 **	-45.9973 **
7659.1125	-20.0000	-44.0892 **	-42.0678 **
8510.1250	-20.0000	-43.3199 **	-41.8865 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

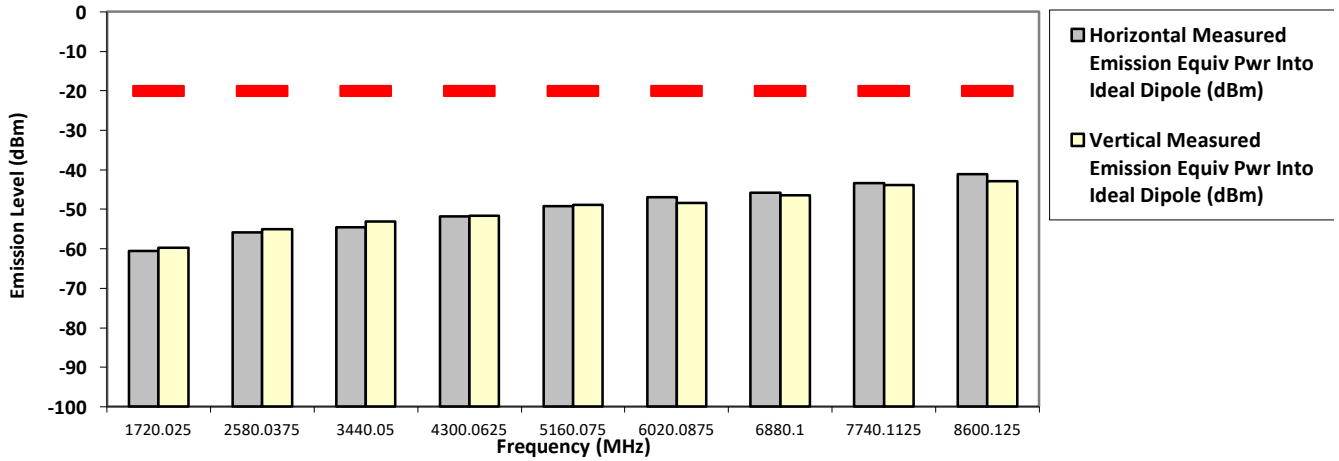
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

860.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1720.0250	-20.0000	-60.5940 **	-59.7218 **
2580.0375	-20.0000	-55.8618 **	-55.0629 **
3440.0500	-20.0000	-54.4781 **	-53.1072 **
4300.0625	-20.0000	-51.8132 **	-51.5914 **
5160.0750	-20.0000	-49.1430 **	-48.9511 **
6020.0875	-20.0000	-46.9038 **	-48.4157 **
6880.1000	-20.0000	-45.7410 **	-46.5071 **
7740.1125	-20.0000	-43.3407 **	-43.9276 **
8600.1250	-20.0000	-41.1221 **	-42.9231 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

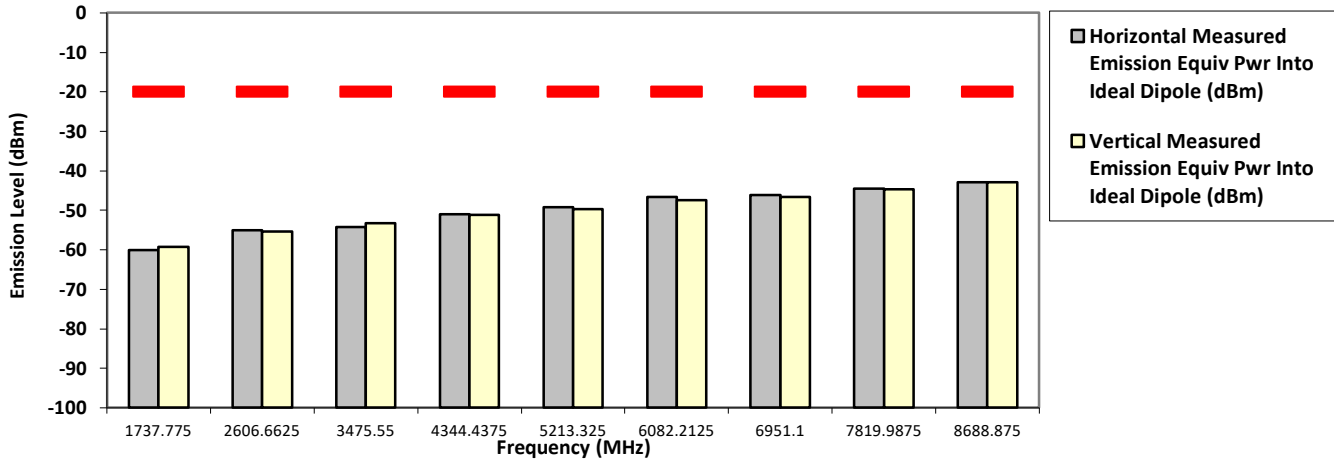
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital C4FM

868.887500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1737.7750	-20.0000	-60.0178 **	-59.2029 **
2606.6625	-20.0000	-55.0417 **	-55.3173 **
3475.5500	-20.0000	-54.2776 **	-53.1999 **
4344.4375	-20.0000	-50.9368 **	-51.1151 **
5213.3250	-20.0000	-49.2705 **	-49.6438 **
6082.2125	-20.0000	-46.6845 **	-47.4111 **
6951.1000	-20.0000	-46.1536 **	-46.5956 **
7819.9875	-20.0000	-44.4826 **	-44.6008 **
8688.8750	-20.0000	-42.8547 **	-42.8165 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

6.11.3. Test Result (Phase 2)

SAC Transmitter Radiated Emission:

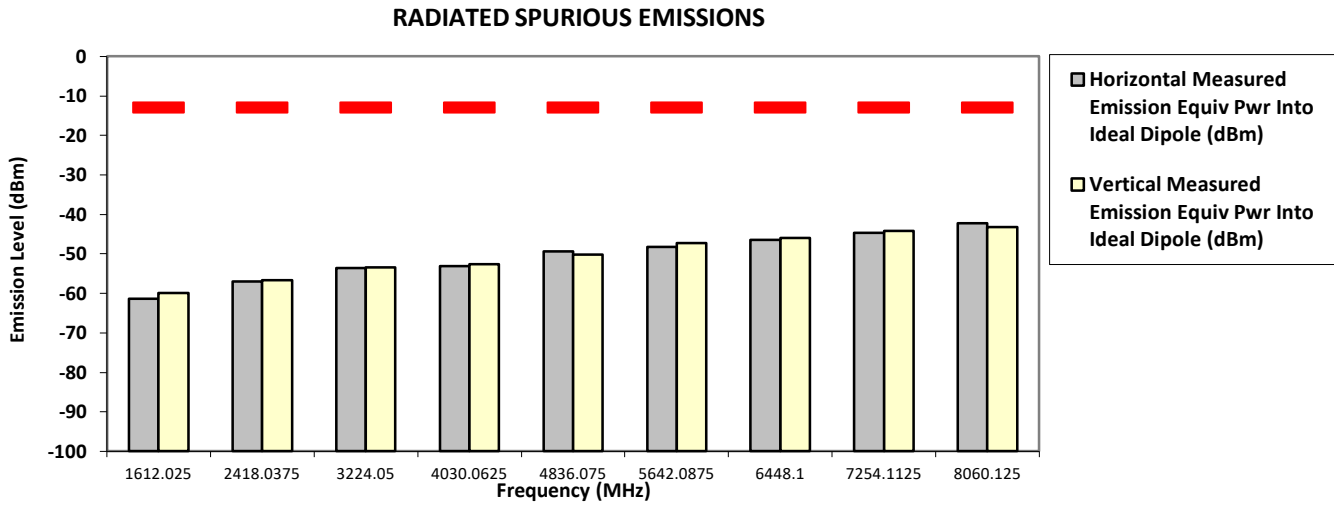
Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

806.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1612.0250	-13.0000	-61.2763 **	-59.8938 **
2418.0375	-13.0000	-56.9720 **	-56.6249 **
3224.0500	-13.0000	-53.5288 **	-53.3925 **
4030.0625	-13.0000	-53.1017 **	-52.5997 **
4836.0750	-13.0000	-49.3369 **	-50.1999 **
5642.0875	-13.0000	-48.1985 **	-47.1950 **
6448.1000	-13.0000	-46.4290 **	-45.9888 **
7254.1125	-13.0000	-44.6445 **	-44.1711 **
8060.1250	-13.0000	-42.2564 **	-43.2676 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	**Marginal Results**	**Failed Results**

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

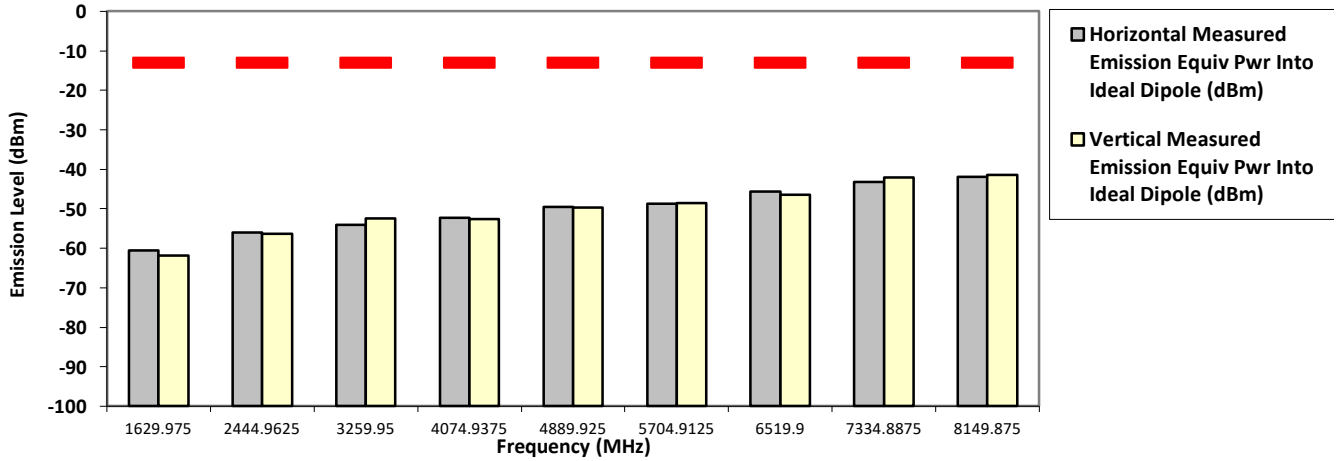
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

814.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1629.9750	-13.0000	-60.5798 **	-61.8329 **
2444.9625	-13.0000	-55.9786 **	-56.4091 **
3259.9500	-13.0000	-53.9913 **	-52.3985 **
4074.9375	-13.0000	-52.2064 **	-52.5294 **
4889.9250	-13.0000	-49.4893 **	-49.6790 **
5704.9125	-13.0000	-48.7212 **	-48.6301 **
6519.9000	-13.0000	-45.6782 **	-46.4948 **
7334.8875	-13.0000	-43.2668 **	-42.0782 **
8149.8750	-13.0000	-41.9616 **	-41.4796 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

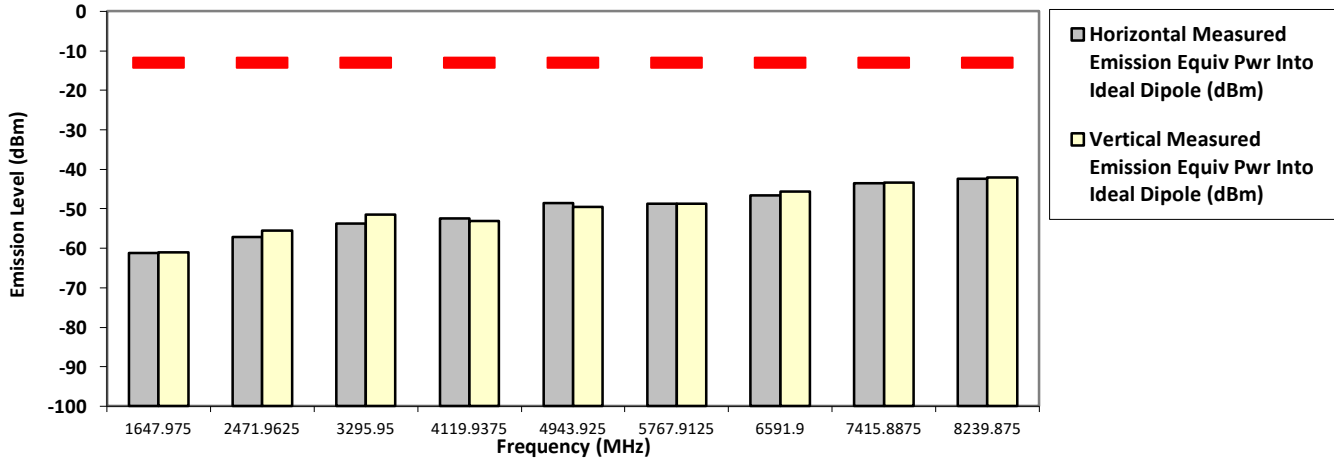
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

823.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1647.9750	-13.0000	-61.2063 **	-61.0684 **
2471.9625	-13.0000	-57.1375 **	-55.5562 **
3295.9500	-13.0000	-53.7032 **	-51.4410 **
4119.9375	-13.0000	-52.3761 **	-53.0538 **
4943.9250	-13.0000	-48.5739 **	-49.5561 **
5767.9125	-13.0000	-48.7496 **	-48.6712 **
6591.9000	-13.0000	-46.5407 **	-45.5932 **
7415.8875	-13.0000	-43.4893 **	-43.3497 **
8239.8750	-13.0000	-42.3388 **	-42.0656 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

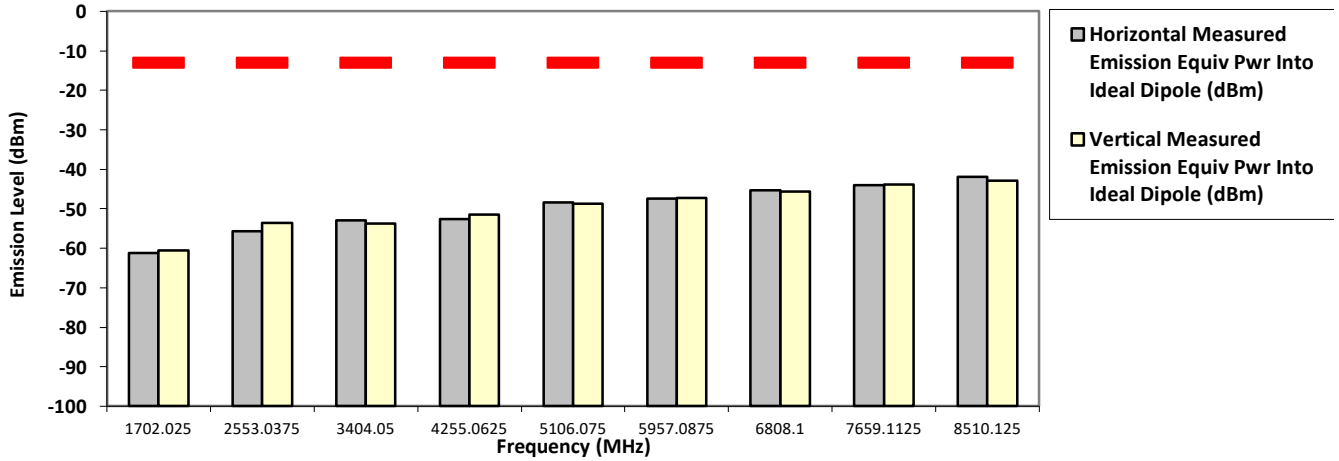
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

851.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1702.0250	-13.0000	-61.1816 **	-60.5105 **
2553.0375	-13.0000	-55.6735 **	-53.6166 **
3404.0500	-13.0000	-52.9223 **	-53.6923 **
4255.0625	-13.0000	-52.6595 **	-51.4961 **
5106.0750	-13.0000	-48.4230 **	-48.7342 **
5957.0875	-13.0000	-47.4955 **	-47.3311 **
6808.1000	-13.0000	-45.3664 **	-45.5648 **
7659.1125	-13.0000	-44.0317 **	-43.9004 **
8510.1250	-13.0000	-41.8776 **	-42.8409 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

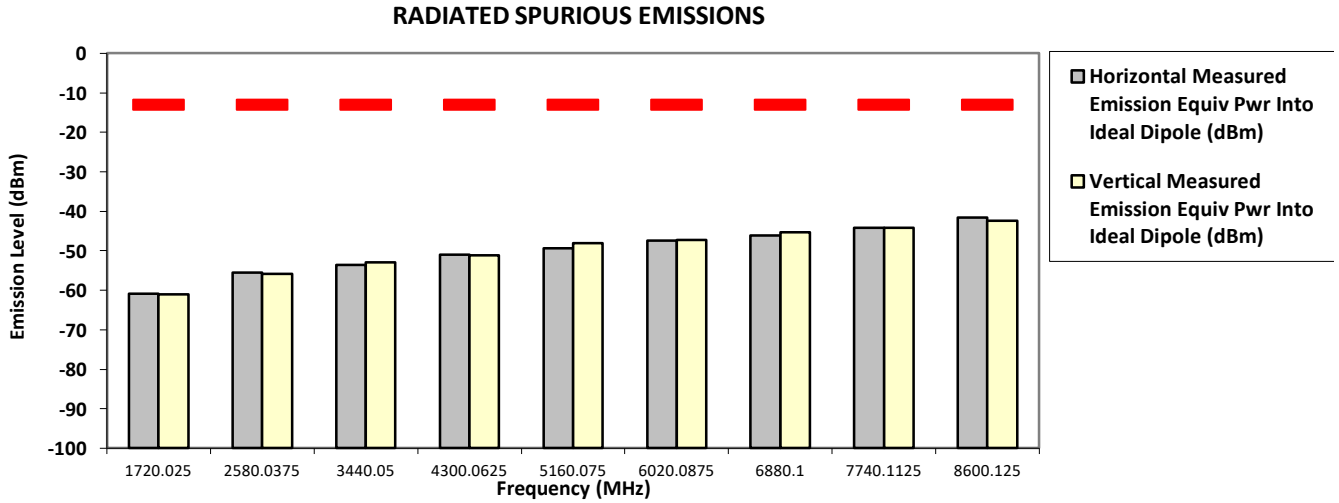
Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

860.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1720.0250	-13.0000	-60.7900 **	-60.9950 **
2580.0375	-13.0000	-55.5361 **	-55.7976 **
3440.0500	-13.0000	-53.5362 **	-52.8946 **
4300.0625	-13.0000	-50.9888 **	-51.1946 **
5160.0750	-13.0000	-49.4349 **	-48.0576 **
6020.0875	-13.0000	-47.4287 **	-47.2451 **
6880.1000	-13.0000	-46.1300 **	-45.3463 **
7740.1125	-13.0000	-44.2236 **	-44.2036 **
8600.1250	-13.0000	-41.5543 **	-42.4201 **



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

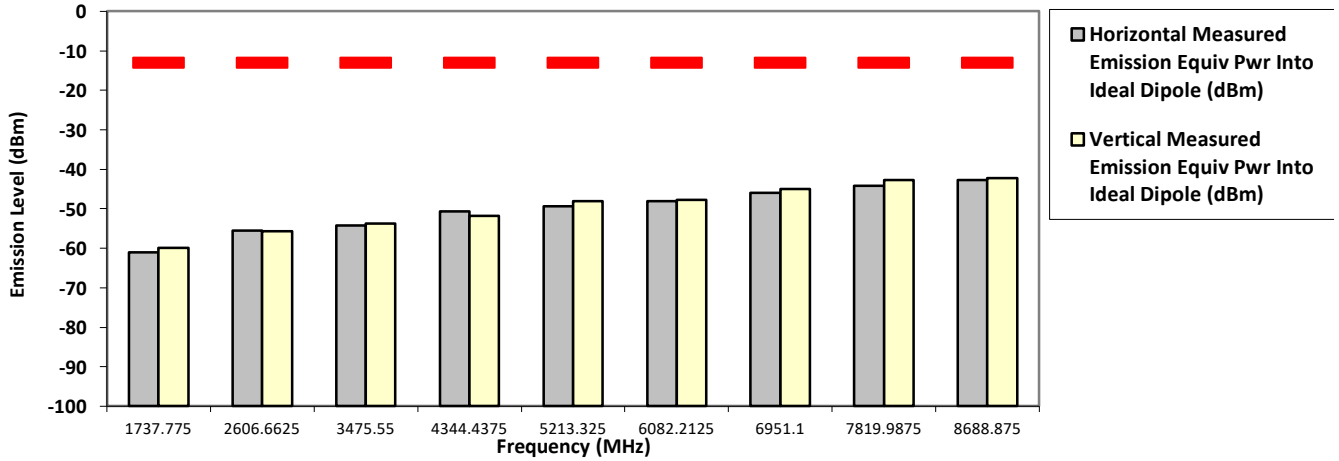
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

868.887500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1737.7750	-13.0000	-61.0490 **	-59.8619 **
2606.6625	-13.0000	-55.5115 **	-55.6025 **
3475.5500	-13.0000	-54.2560 **	-53.6885 **
4344.4375	-13.0000	-50.6540 **	-51.7862 **
5213.3250	-13.0000	-49.3044 **	-48.1302 **
6082.2125	-13.0000	-48.0694 **	-47.7243 **
6951.1000	-13.0000	-45.9143 **	-45.0470 **
7819.9875	-13.0000	-44.1167 **	-42.7251 **
8688.8750	-13.0000	-42.7533 **	-42.2329 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

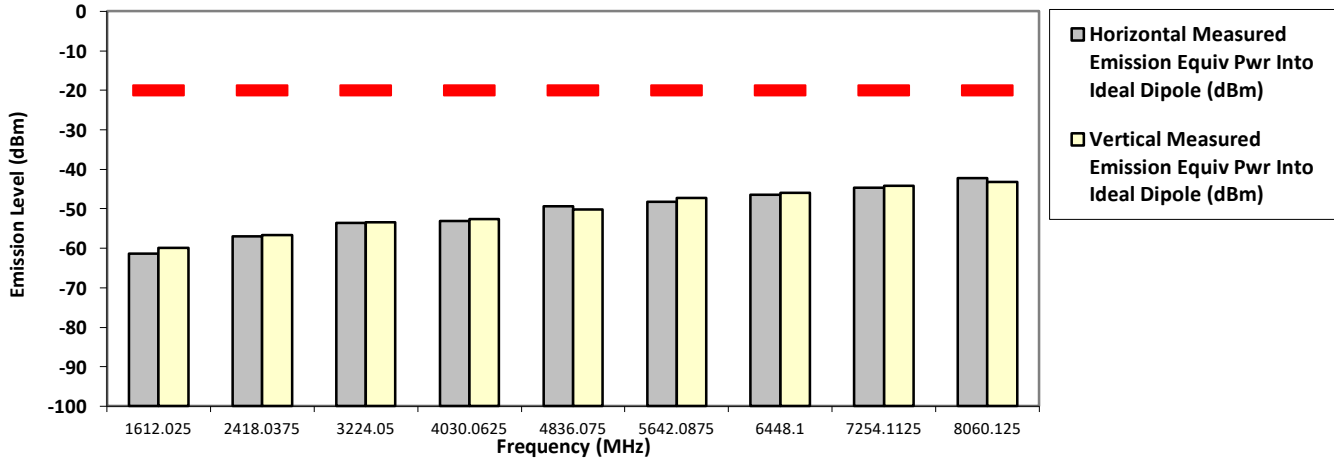
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

806.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1612.0250	-20.0000	-61.2763 **	-59.8938 **
2418.0375	-20.0000	-56.9720 **	-56.6249 **
3224.0500	-20.0000	-53.5288 **	-53.3925 **
4030.0625	-20.0000	-53.1017 **	-52.5997 **
4836.0750	-20.0000	-49.3369 **	-50.1999 **
5642.0875	-20.0000	-48.1985 **	-47.1950 **
6448.1000	-20.0000	-46.4290 **	-45.9888 **
7254.1125	-20.0000	-44.6445 **	-44.1711 **
8060.1250	-20.0000	-42.2564 **	-43.2676 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

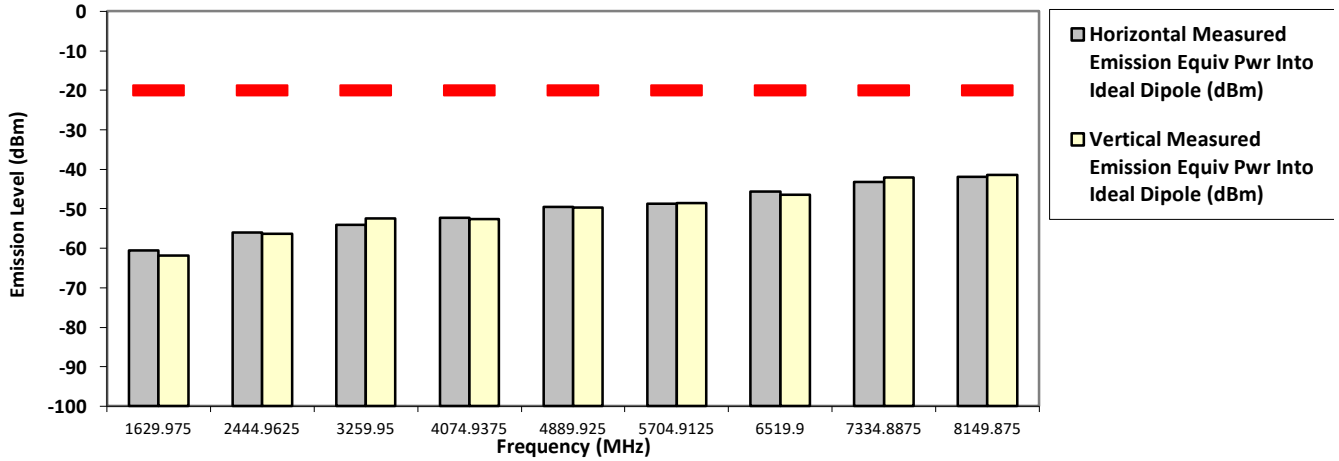
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

814.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1629.9750	-20.0000	-60.5798 **	-61.8329 **
2444.9625	-20.0000	-55.9786 **	-56.4091 **
3259.9500	-20.0000	-53.9913 **	-52.3985 **
4074.9375	-20.0000	-52.2064 **	-52.5294 **
4889.9250	-20.0000	-49.4893 **	-49.6790 **
5704.9125	-20.0000	-48.7212 **	-48.6301 **
6519.9000	-20.0000	-45.6782 **	-46.4948 **
7334.8875	-20.0000	-43.2668 **	-42.0782 **
8149.8750	-20.0000	-41.9616 **	-41.4796 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

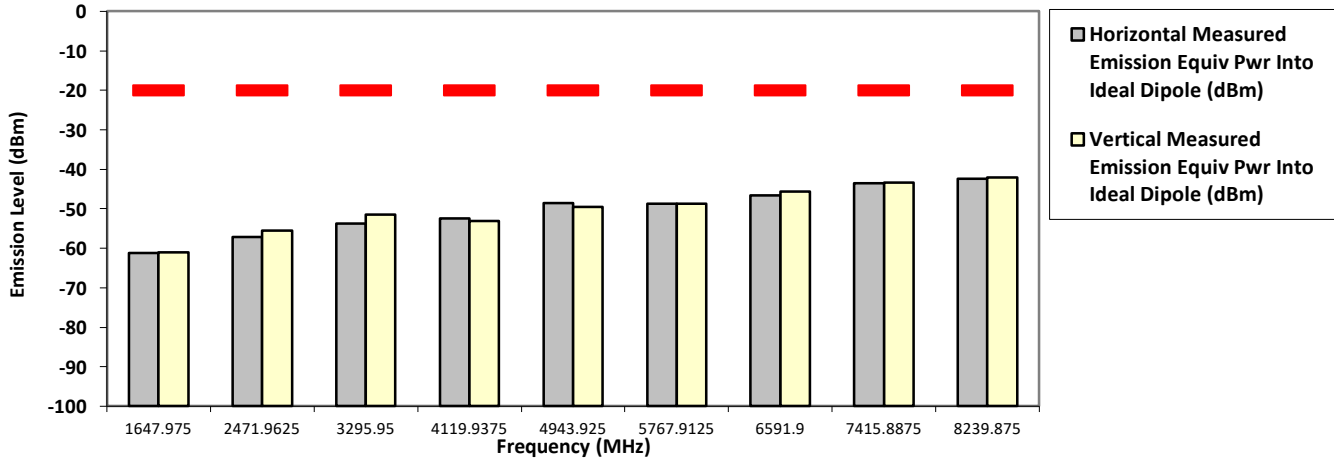
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

823.987500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1647.9750	-20.0000	-61.2063 **	-61.0684 **
2471.9625	-20.0000	-57.1375 **	-55.5562 **
3295.9500	-20.0000	-53.7032 **	-51.4410 **
4119.9375	-20.0000	-52.3761 **	-53.0538 **
4943.9250	-20.0000	-48.5739 **	-49.5561 **
5767.9125	-20.0000	-48.7496 **	-48.6712 **
6591.9000	-20.0000	-46.5407 **	-45.5932 **
7415.8875	-20.0000	-43.4893 **	-43.3497 **
8239.8750	-20.0000	-42.3388 **	-42.0656 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.
***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

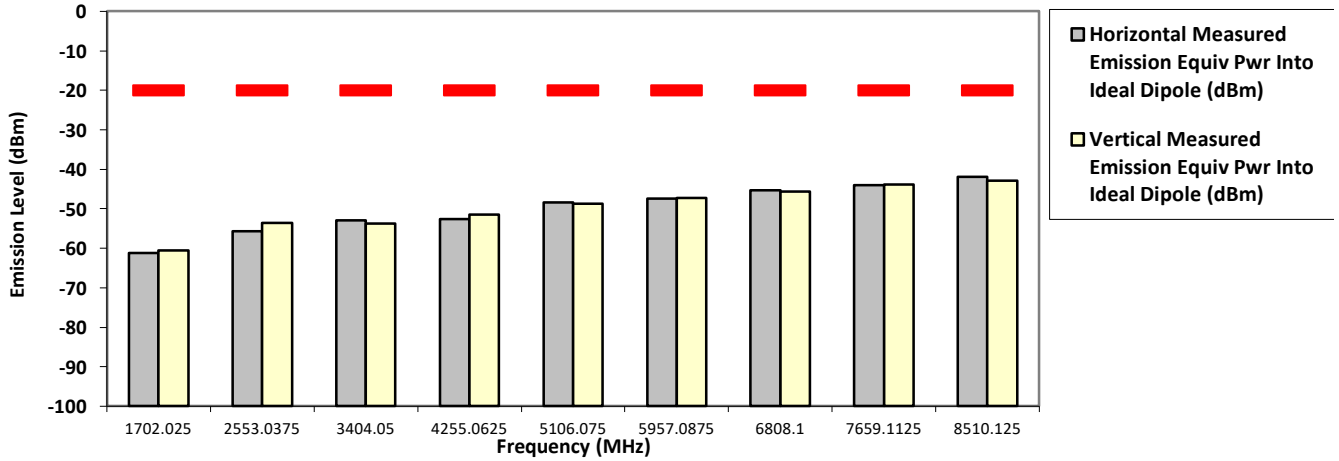
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

851.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1702.0250	-20.0000	-61.1816 **	-60.5105 **
2553.0375	-20.0000	-55.6735 **	-53.6166 **
3404.0500	-20.0000	-52.9223 **	-53.6923 **
4255.0625	-20.0000	-52.6595 **	-51.4961 **
5106.0750	-20.0000	-48.4230 **	-48.7342 **
5957.0875	-20.0000	-47.4955 **	-47.3311 **
6808.1000	-20.0000	-45.3664 **	-45.5648 **
7659.1125	-20.0000	-44.0317 **	-43.9004 **
8510.1250	-20.0000	-41.8776 **	-42.8409 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

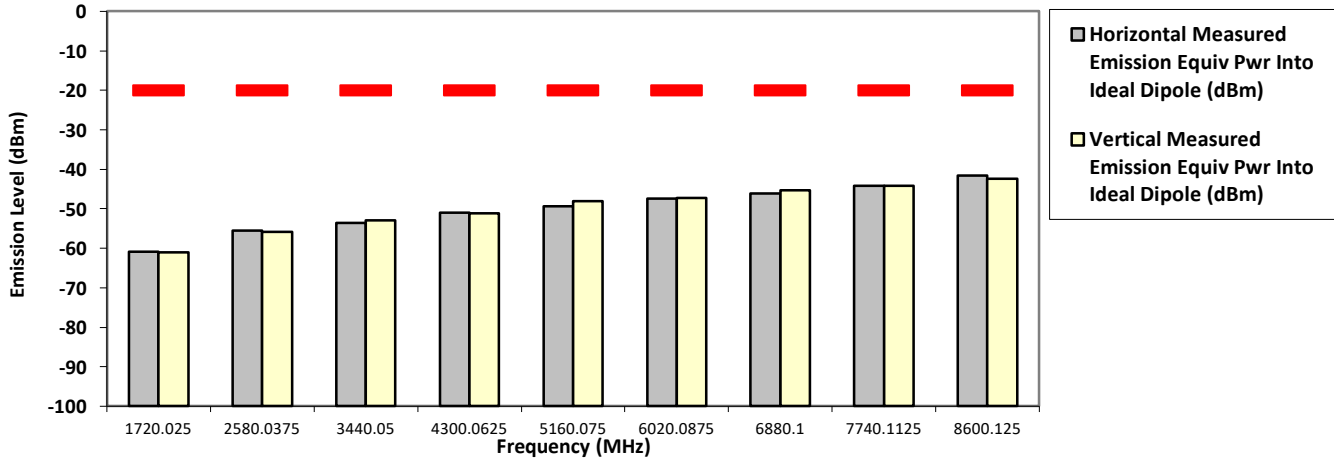
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

860.012500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1720.0250	-20.0000	-60.7900 **	-60.9950 **
2580.0375	-20.0000	-55.5361 **	-55.7976 **
3440.0500	-20.0000	-53.5362 **	-52.8946 **
4300.0625	-20.0000	-50.9888 **	-51.1946 **
5160.0750	-20.0000	-49.4349 **	-48.0576 **
6020.0875	-20.0000	-47.4287 **	-47.2451 **
6880.1000	-20.0000	-46.1300 **	-45.3463 **
7740.1125	-20.0000	-44.2236 **	-44.2036 **
8600.1250	-20.0000	-41.5543 **	-42.4201 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission:

Model Number: H98UCH9PW7BN **S/N: 756TVH3176** **SR:05882-EMC-00063**

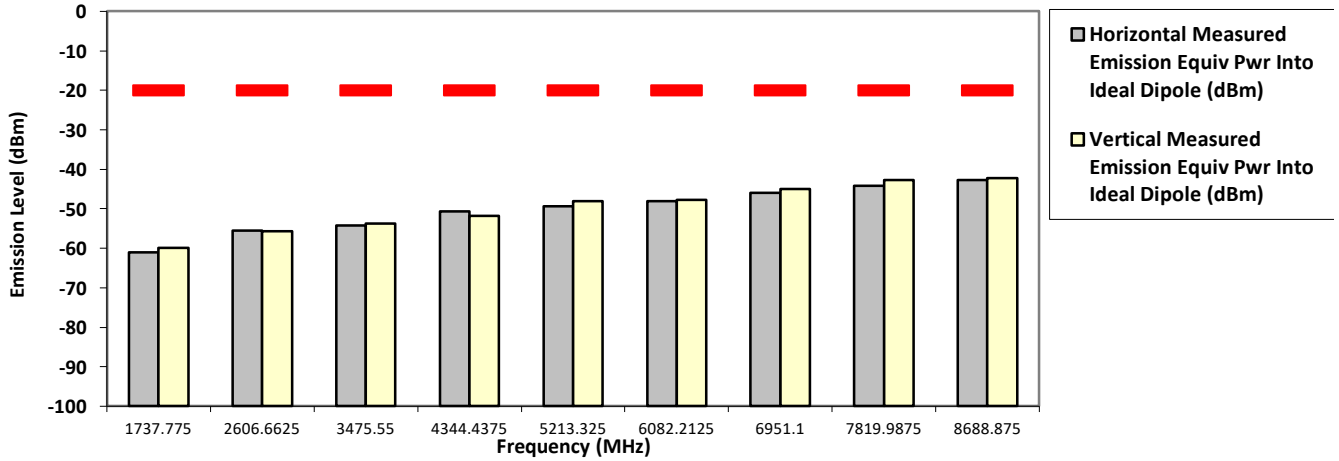
Battery Part No: PMNN4487A **Accy Part No: NA**

Test Mode: TX APCO Digital Phase II

868.887500 MHz **12.5 kHz** **3.600 Watt(s) /Max Power**

Frequency (MHz)	Limit	Horizontal Measured Emission Equiv Pwr Into Ideal Dipole (dBm)	Vertical Measured Emission Equiv Pwr Into ideal Dipole (dBm)
1737.7750	-20.0000	-61.0490 **	-59.8619 **
2606.6625	-20.0000	-55.5115 **	-55.6025 **
3475.5500	-20.0000	-54.2560 **	-53.6885 **
4344.4375	-20.0000	-50.6540 **	-51.7862 **
5213.3250	-20.0000	-49.3044 **	-48.1302 **
6082.2125	-20.0000	-48.0694 **	-47.7243 **
6951.1000	-20.0000	-45.9143 **	-45.0470 **
7819.9875	-20.0000	-44.1167 **	-42.7251 **
8688.8750	-20.0000	-42.7533 **	-42.2329 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.

Nazrin&Qawiman **Sat, Jun 22, 2019**

Remarks: ** Indicates the spurious emission could not be detected due to noise limitations or ambient.

***Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported**

Temp(Deg): 22.3 Hum(%RH): 70.6

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

6.11.4. Test Limit

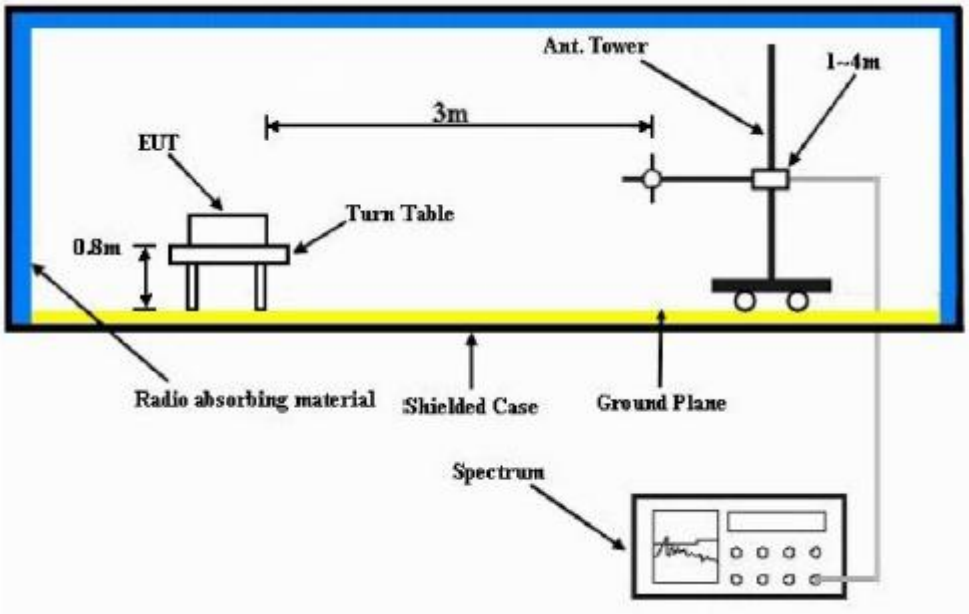
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

Channel Spacing	Part 22	Part 24D	Part 74	Part 80	Part 90 (UHF, VHF, 800, 900)	Part 90 (700)
12.5kHz	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz		Not Applicable		43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

Channel Spacing	RSS 134	RSS 182	RSS 119 (UHF, VHF, 800, 900)	RSS 119 (700)
12.5kHz	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)	43 + log10(P) (-13 dBm)
25kHz	Not Applicable	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

6.12. Effective Radiated Power (ERP)

6.12.1. Test Setup



1) The Resolution Bandwidth for Equivalent Radiated Power (ERP) below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for EIRP above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector Mode is RMS.
2) In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The "Read Value" is the spectrum reading of maximum power value.
3) The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.

6.12.2. Test Result

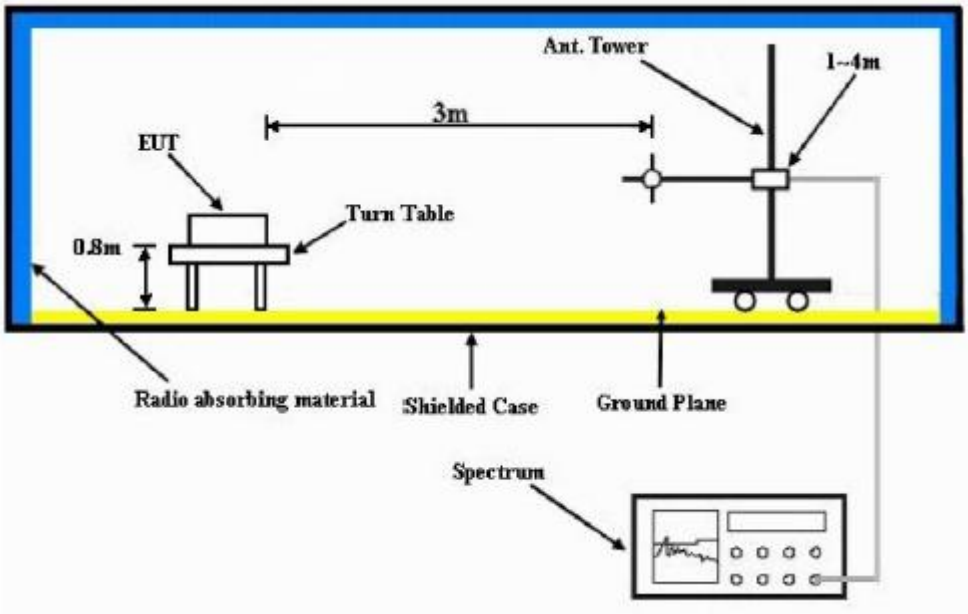
NA → Not Applicable

6.12.3. Test Limit

The maximum output power of the transmitter for mobile stations is 100 watts (20 dB). Power is given in terms of effective radiated power (ERP).

6.13. GNSS (EIRP for 1559 - 1610MHz)

6.13.1. Test Setup



4) The Resolution Bandwidth for Equivalent Isotropically Radiated Power (EIRP) below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for EIRP above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector Mode is RMS.
5) In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The "Read Value" is the spectrum reading of maximum power value.
6) The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.
7) EIRP = "Read Value" + Measured substitution value + 2.15.

6.13.1. Test Result

NA → Not Applicable

6.13.2. Test Limit

For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

~ End of Report ~