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 / IC TEST REPORT(4 of 4)
Report Revision : Rev. B

Date/s Tested	:	17-JUL-2017 - 21-SEP-2017
Report Issue Date	:	30-NOV-2017
Manufacturer/Location	:	Motorola Solutions Malaysia Sdn Bhd
Requestor	:	ROLANDO HERNANDEZ
Product Type	:	Portable
Model Number	:	H91TGD9PW7AN
Frequency Band	:	VHF,UHF,7/800
Low / Max RF Output Power	:	1 Watts / 3.6 Watts
Applicant Name	:	Motorola Solutions Malaysia Sdn Bhd
Applicant Address	:	Innoplex Plot 2A, Medan Bayan Lepas, Mukim 12 S.W.D, 11900 Bayan Lepas, Penang, Malaysia
FCC Registrations	:	772092
IC Registrations	:	109AK
FCC Test Firm Registration	:	461337

The equipment was tested accordance to the requirement listed below:

(LMR) **FCC 47 CFR Part 90** **IC RSS- Gen / 119**	**PASS**

Prepared By:

Song Zhi Wei
Test Personnel

Approved By:

Vincent Foong
Responsible Engineer

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Report Revision History

Revision History	Description	Date	Originator
Rev. A	Initial Report	03-OCT-2017	Song Zhi Wei
Rev. B	Removed Not Applicable Parts.	30-NOV-2017	Song Zhi Wei

1.0 General Information

EUT Description:

Technologies	Land Mobile Radio (LMR)
Modulation Type	Analog, C4FM, Phase II

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/TIA/-603-D
ANSI C63.4.2014
TIA-102 CCAA-A
TIA-102 CAAB-D
TIA-102 CAAA-D
ANSI C63.26-2015

2.0 Summary of Test Results

FCC General Rules Part (47CFR)	IC General Rules Part	Test Item	Result
90.210	RSS-Gen, RSS-119	RF Power Output	Pass
-	-	Frequency Stability	NA
-	-	Audio Frequency Response	NA
-	-	Audio Low Pass Filter Response	NA
-	-	Modulation limiting	NA
90.210,90.691	RSS-Gen, RSS-119	Occupied Bandwidth	Pass
-	-	Band Edge Conducted Spurious Emission	NA
-	-	Transient Frequency Behavior	NA
-	-	Adjacent Channel Power	NA
90.210	RSS-Gen, RSS-119	Conducted Spurious Emissions	Pass
90.210	RSS-Gen, RSS-119	Radiated Spurious Emission	Pass
-	-	GNSS (EIRP for 1559 – 1610MHz)	NA
-	-	Effective Radiated Power (ERP)	NA
-	-	AC Power Line Conducted Spurious Emission	NA

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 Transient ATE #1: (SW Version: FCC Transient ATE_R 1.1.1)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
POWER SUPPLY	6032A	2818A03549	11-May-17	11-May-18
POWER SENSOR	E4412A	MY41498918	9-May-17	9-May-18
POWER METER	E4416A	MY45101016	11-Jan-17	11-Jan-18
ATTENUATORS/SWITCH DRIVER	11713A	2508A10141	CNR	CNR
STEP ATTENUATOR/11dB	8494G	MY52300223	9-May-17	9-May-18
STEP ATTENUATOR/110dB	8496G	MY52300176	9-May-17	9-May-18
OSCILLOSCOPE	MSO8064A	MY48240107	25-May-17	25-May-18
AUDIO ANALYZER	8903B	3729A17409	2-May-17	2-May-18
AUDIO ANALYZER	8903B	3011A08952	2-May-17	2-May-18
MODULATION ANALYZER	8901B	3019A02766	4-Mar-17	4-Mar-18
SIGNAL GENERATOR	8657A	3323A05725	2-May-17	2-May-18
SPECTRUM ANAYLYZER	E4440A	MY46185415	24-May-17	24-May-19
SWITCH CONTROL UNIT	-	-	CNR	CNR

Conducted Spurious Emission ATE # 1: (SW Version: Conducted Spur ATE_rev 1.23.0)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
SWITCH CONTROL UNIT	3488A	2719A32735	CNR	CNR
SPECTRUM ANALYZER	E4440A	US45303111	16-Feb-17	16-Feb-18
POWER SUPPLY	6032A	MY41002067	5-May-17	5-May-18
HIGH PASS FILTER SWITCH BOX	-	CS001	7-Apr-17	7-Apr-18
MICROWAVE GENERATOR	SMP 02	830682/015	19-Oct-16	19-Oct-17
MODULATION ANALYZER	8901B	3438A05278	3-Mar-17	3-Mar-18

Radiated Emission Station: (SW Version: EMC_FCC_IC_BT_RE_V 1.5.1)

Description	Model	Serial Number	Calibration Date	Calibration Due Date
DRG HORN FREQ.	SAS-571	566	04-Sep-16	04-Sep-17
DRG HORN FREQ.	SAS-571	720	02-Mar-17	02-Mar-19
POWER SUPPLY	6674A	3126A00133	12-Nov-15	12-Nov-17
MICROWAVE SIGNAL GENERATOR	SMP04	100127	19-Jul-17	18-Jul-18
EMI TEST RECEIVER	ESIB26	100336	13-Jul-17	12-Jul-18
SIGNAL ANALYZER	FSV40	101103	18-Jul-17	17-Jul-18
5m Semi-anechoic Chamber	S800-HX	J2308	CNR	CNR
BILOG ANTENNA	CBL6112B	2950	23-Feb-16	23-Feb-18
BILOG ANTENNA	CBL6112B	2964	03-Feb-17	03-Feb-18
BROAD-BAND HORN ANTENNA	BBHA9170	BBHA9170255	14-Oct-16	14-Oct-17
DATA LOGGER	SDL500	A.016776	18-Mar-17	18-Mar-18
LOOP ANTENNA	6502	208416	27-Jul-17	27-Jul-18
SYSTEM CONTROLLER	SC104V	050806-1	CNR	CNR
TURNTABLE FLUSH MOUNT 2M	FM2011	NA	CNR	CNR
ANTENNA POSITIONING TOWER	TLT2	NA	CNR	CNR
18 - 40GHz PREAMPLIFIER	BBV9721	9721-007	CNR	CNR
PREAMPLIFIER	PAM-0118P	361	CNR	CNR

CNR → Calibration Not Required

5.0 Test Condition

5.1. Transmitter Test Conditions

Test Item, (Channel Spacing)	Temperature (°C)	Voltage Supply (V)	Power (W)	Modulation	Test Frequency (MHz)
RF Output Power	25°C	Nominal	Low / Max	Analog	806.0125,814.9875, 823.9875, 851.0125,860.0125, 868.8875
Frequency Stability	-30°C ~ 60°C	80% ~ 120% of Nominal Volt	Max	NA	NA
Audio Frequency Response (12.5kHz / 25kHz)	25°C	Nominal	Max	NA	NA
Audio Low Pass Filter Response (12.5kHz / 25kHz)	25°C	Nominal	Max	NA	NA
Modulation limiting (12.5kHz / 25kHz)	25°C	Nominal	Max	NA	NA
Occupied Bandwidth (12.5kHz / 20kHz / 25kHz)	25°C	Nominal	Max	Analog, Digital	806.0125,814.9875,823.9875, 851.0125,853.9875,860.0125, 868.8875
Band Edge Conducted Spurious Emission (12.5kHz / 20kHz / 25kHz)	25°C	Nominal	Max	Analog, Digital	NA
Transient Frequency Behavior *(UHF & VHF Band)* (12.5kHz / 25kHz)	25°C	Nominal	Max	NA	NA
Adjacent Channel Power *(700MHz Band)* (12.5kHz / 25kHz)	25°C	Nominal	Max	Analog, Digital	NA
Conducted Spurious Emissions (12.5kHz / 20kHz / 25kHz)	25°C	Nominal	Low / Max	Analog, Digital	806.0125,814.9875,823.9875, 851.0125,860.0125,868.8875
Radiated Spurious Emission (12.5kHz / 25kHz)	25°C	Nominal	Low / Max	Analog, Digital	806.0125,814.9875,823.9875, 851.0125, 860.0125,868.8875
GNSS *(700MHz Band)* (EIRP for 1559-1610MHz) (12.5kHz / 25kHz)	25°C	Nominal	Max	Analog	NA
Effective Radiated Power (ERP) *(700MHz & 900MHz Band)* (12.5kHz / 25kHz)	25°C	Nominal	Max	Analog	NA
AC Power Line Conducted Spurious Emissions* (12.5kHz)	25°C	Nominal	Max	NA	NA

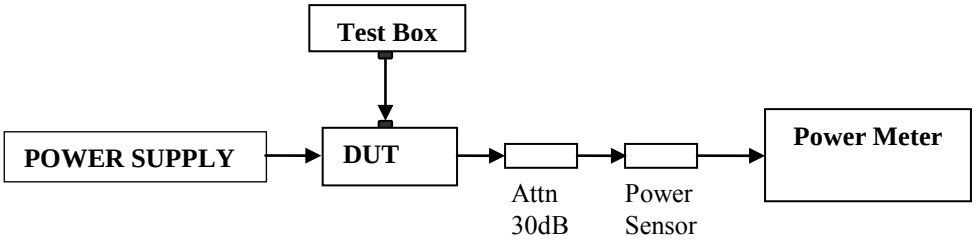
*** – ONLY tested if portables can be operated during charging OR mobiles can be used in desktop operation connected to a power supply**

NA → Not Applicable

6.0 Transmitter Test Parameters

6.1. RF Output Power

6.1.1. Test Setup



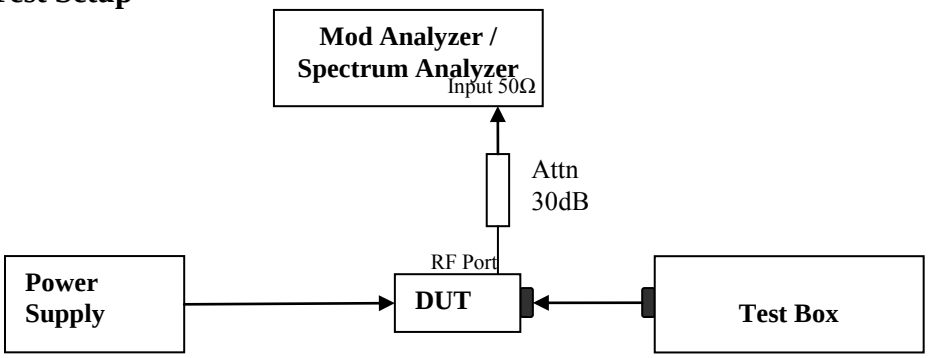
1) The DUT transmitter connected to Power Meter using the 30 dB attenuator and power sensor with above setup.
2) Path loss for the measurement included.
3) All the measurement was done at low, mid, high frequency for each band.
4) Record the power into the test report.

6.1.2. Test Result

Temperature	25˚C				
Voltage (V)	7.5V				
Frequency (MHz)	Low Power (W)	Current (A)	Max Power (W)	Current (A)	Remarks
806.0125	1.02	1.22	3.57	1.74	
814.9875	1.01	1.19	3.54	1.90	
823.9875	1.02	1.16	3.58	1.88	
851.0125	1.03	1.19	3.56	1.85	
860.0125	1.04	1.07	3.58	1.77	
868.8875	1.02	1.03	3.59	1.75	

6.2. Frequency Stability

6.2.1. Test Setup



1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Path loss for the measurement included.
3) Transmit the DUT and record the freq in MCF_{MHz}.
4) Test in 2 conditions: Different Temperature & Supply Voltage input.
   - Temperature: Vary voltage per test condition in Clause 5.1
   - Supply Voltage: Vary temperature per test condition in Clause 5.1
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

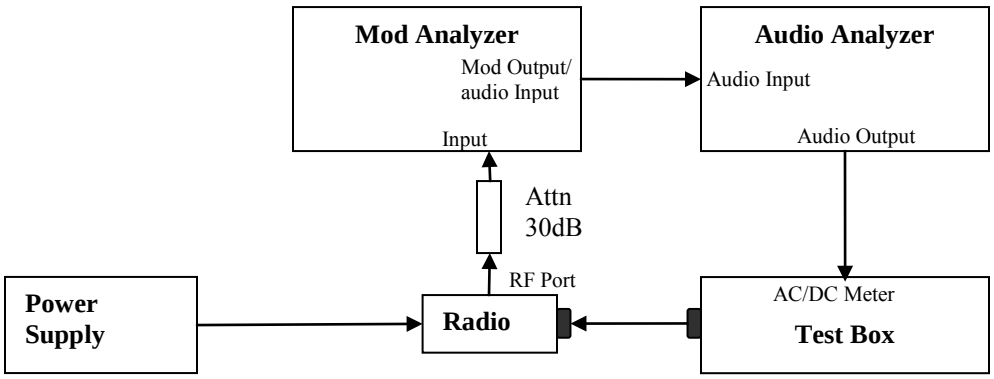
Not Applicable

6.2.3. Test Limit

As per manufacturer declared spec +/- 1ppm

6.3. Audio Frequency Response

6.3.1. Test Setup

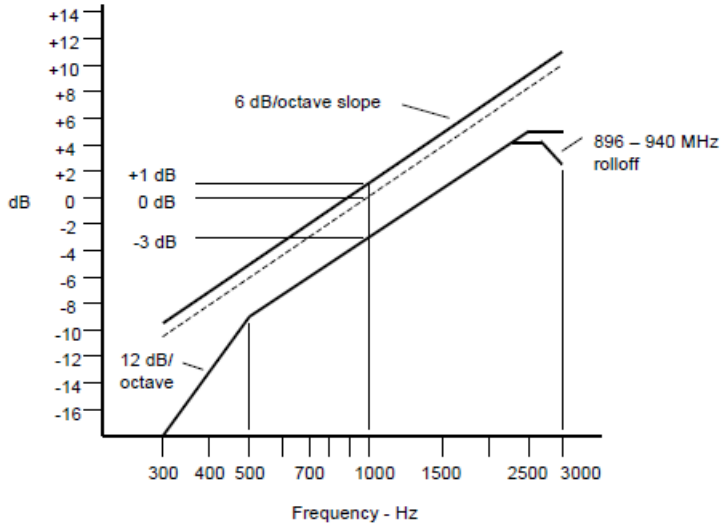


1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Path loss for the measurement included.
3) Set the audio bandwidth filter to 15 kHz and 50 kHz.
4) Transmit the radio and set the audio analyzer to 1 kHz audio frequency and 20% of the maximum deviation.
5) On audio analyzer, 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

Not Applicable

6.3.3. Test Limit

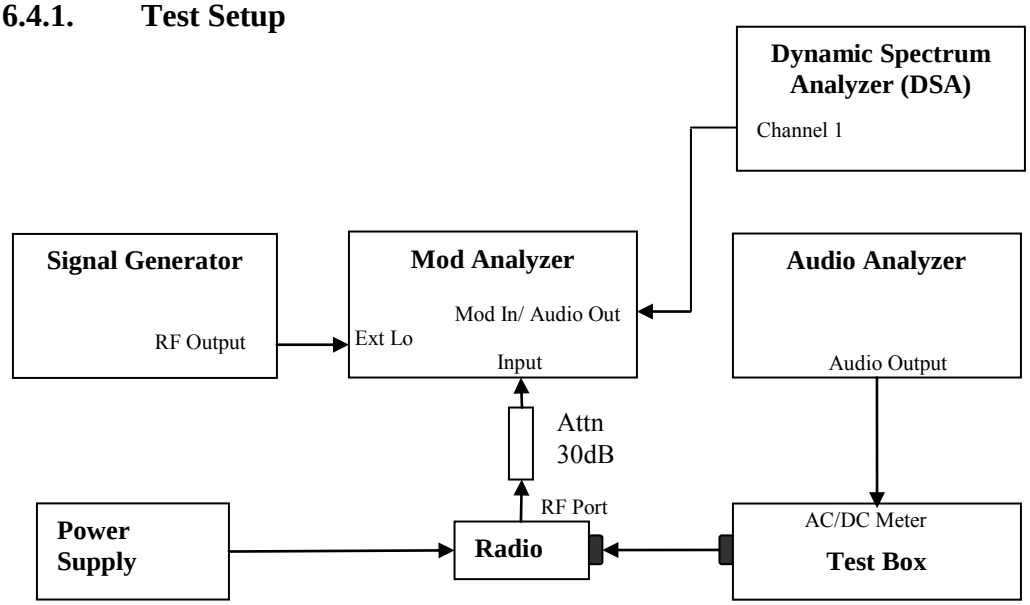


Note:

- *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

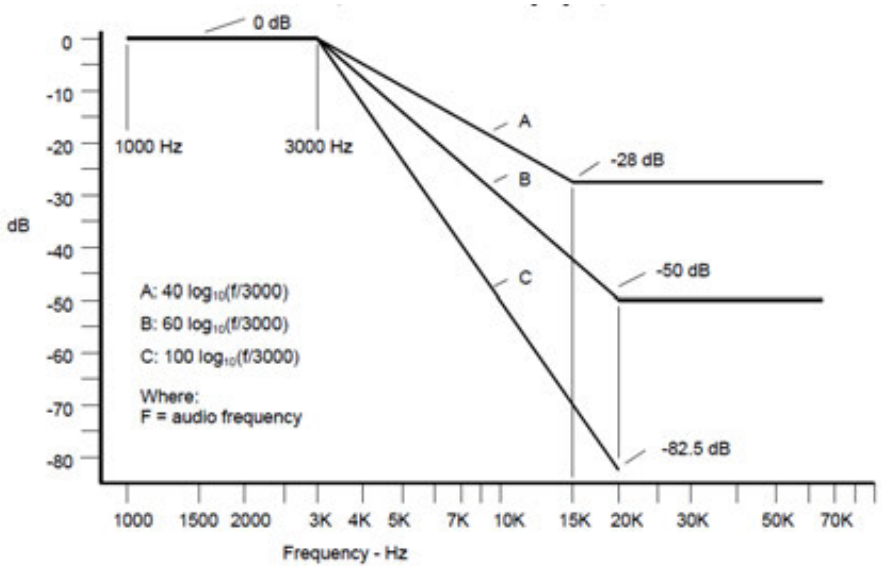


1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Path loss for the measurement included.
3) Press 23.1SPCL on modulation analyzer to enable the external LO from Sigen.
4) Set the Sigen frequency to Fc + 1.5 MHz, RF output level to 0dBm without modulation.
5) Transmit the radio and set the audio analyzer to 1 kHz audio frequency and 60% of the maximum 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

Not Applicable

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.

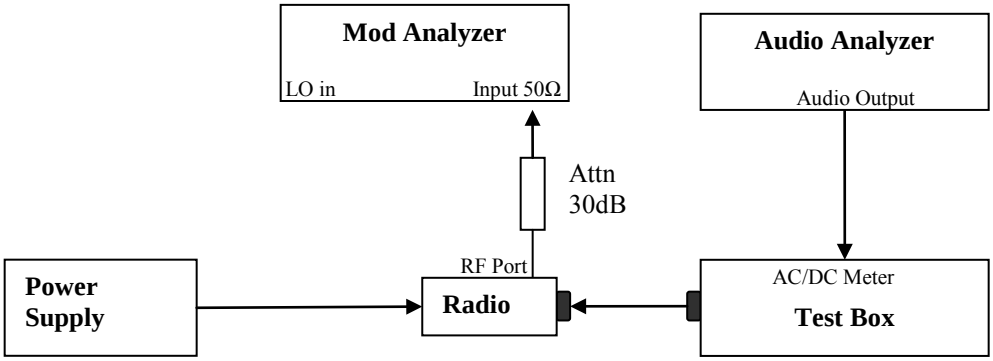
c) For equipment operating on channels between 896 MHz through 901 MHz, between 935 MHz through 940 MHz, and 12.5 or 15 kHz spaced channels in the frequency range 138-174 MHz and 406-512 MHz.

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 maximum 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

Not Applicable

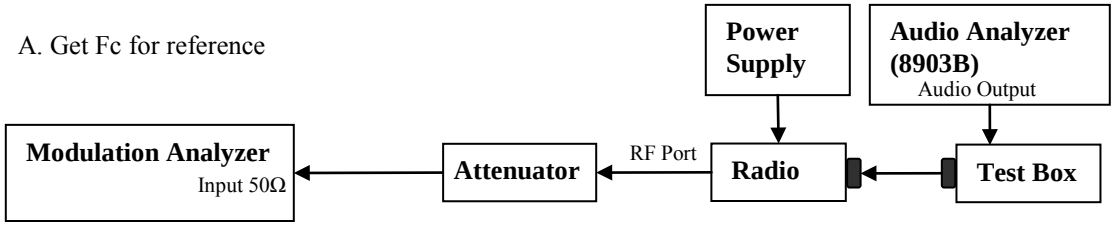
6.5.3. Test Limit

Modulation shall not exceed 100 percent if amplitude modulation is employed.

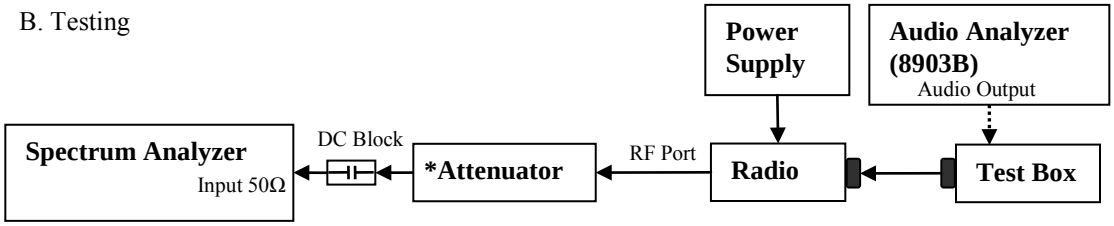
6.6. Occupied Bandwidth

6.6.1. Test Setup (Analog)

A. Get Fc for reference



B. Testing

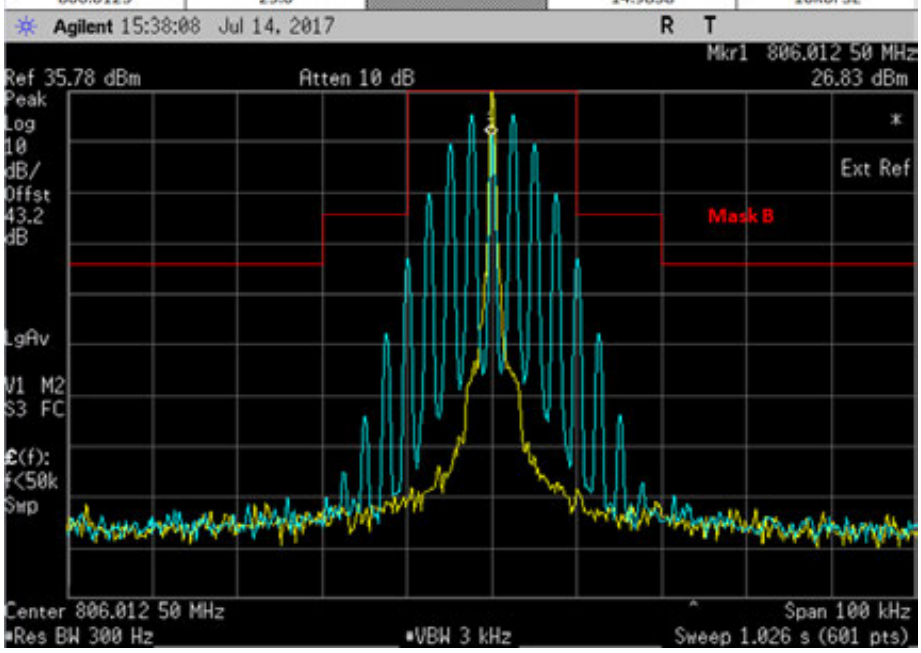


1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Set the audio bandwidth filter to 15 kHz low pass filter and 50 kHz high pass filter.
3) Transmit the radio and set the audio analyzer to 2.5 kHz audio frequency and 50% of the rated deviation. Up the amplitude by 16 dB. Dekey the DUT.
4) Path loss for the measurement included.
5) Select the Occupied Bandwidth measurement for 99% 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 to 100 KHz 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.

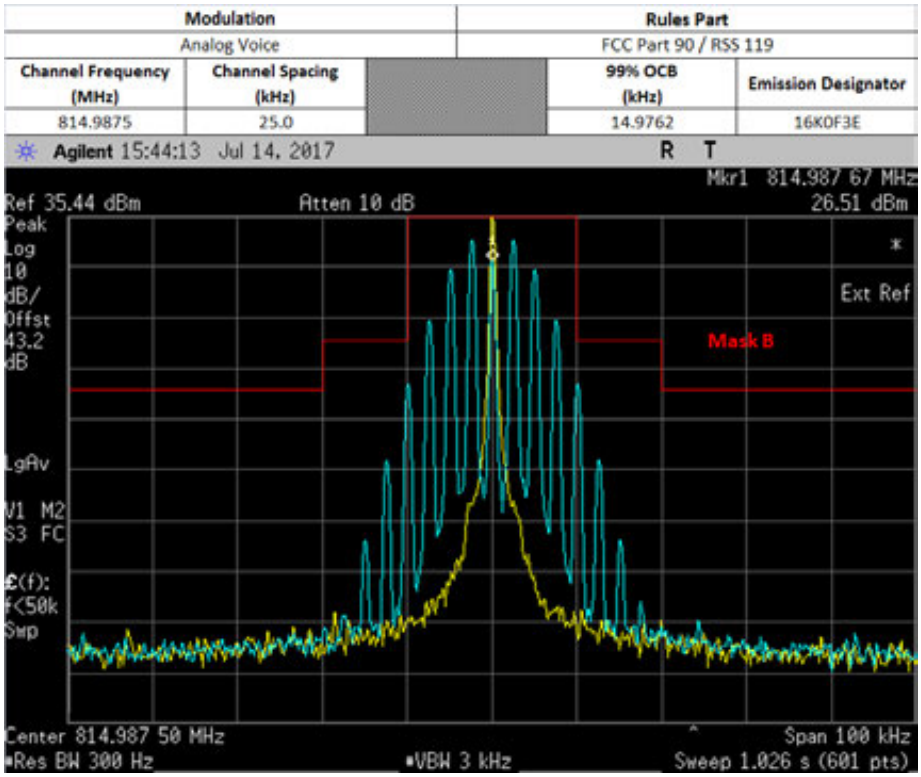
* Only HPF added for Mask 80.211 measurement with attenuator.

6.6.2. Test Result (Analog)

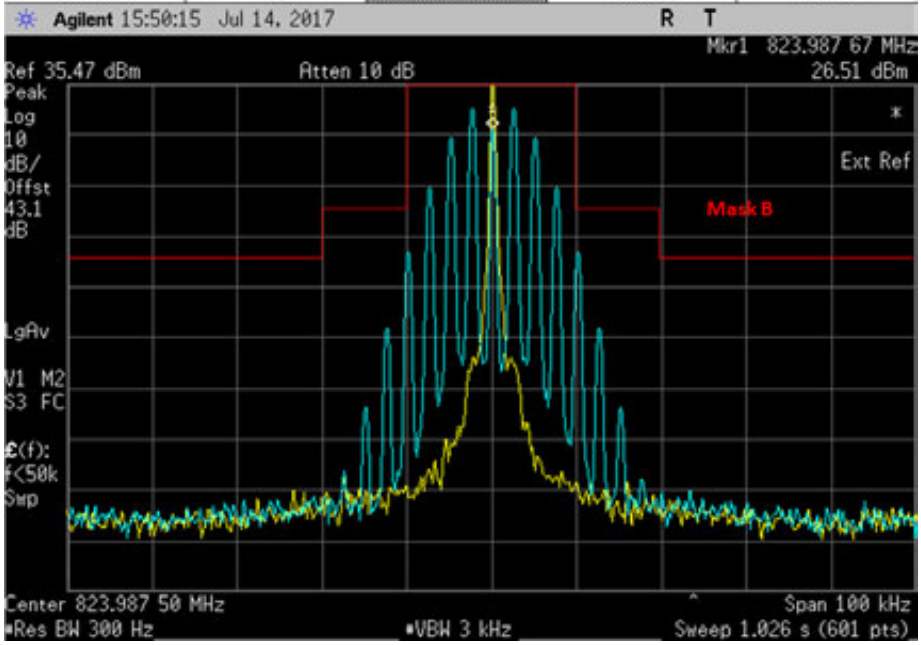
Modulation	Rules Part			
Analog Voice	RSS 119			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
806.0125	25.0		14.9838	16K0F3E



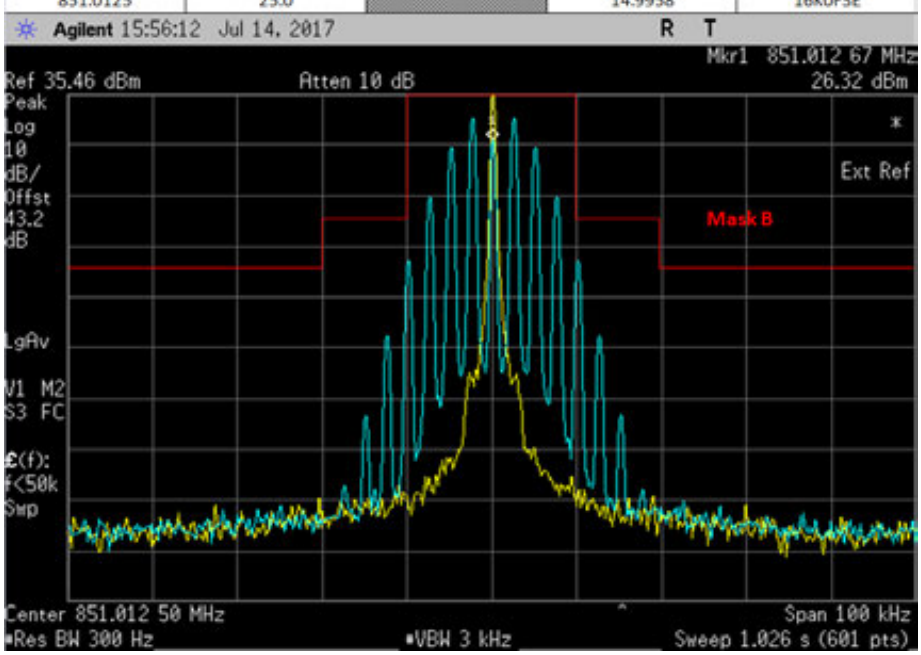
Modulation	Rules Part			
Analog Voice	FCC Part 90 / RSS 119			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	25.0		14.9762	16K0F3E



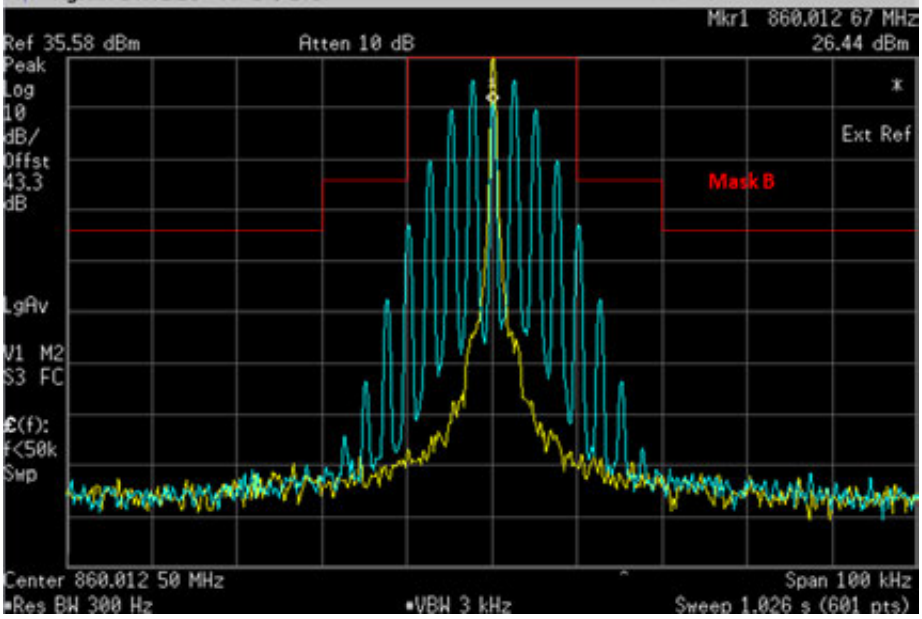
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
823.9875	25.0		14.9805	16K0F3E



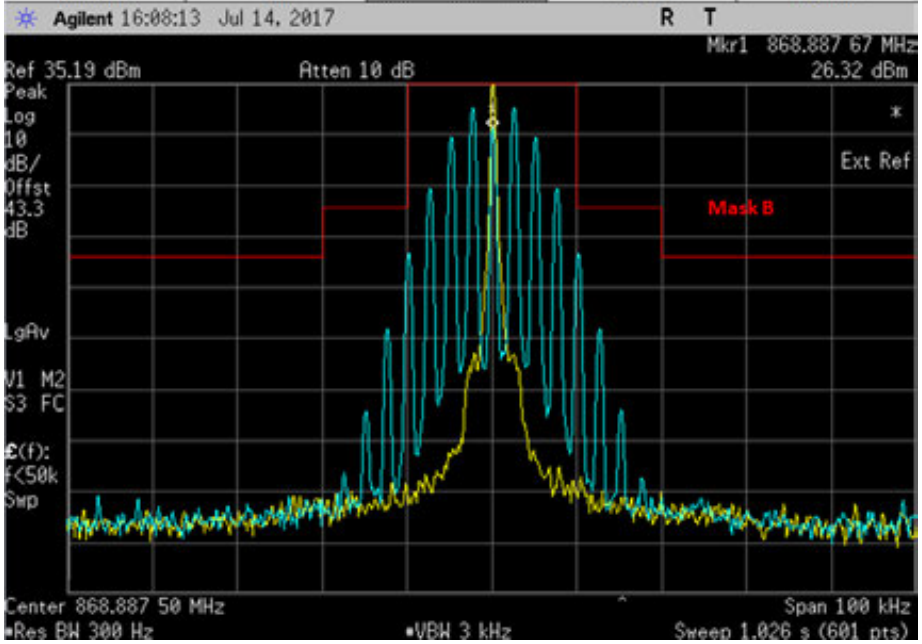
Modulation			Rules Part	
Analog Voice			RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
851.0125	25.0		14.9958	16K0F3E



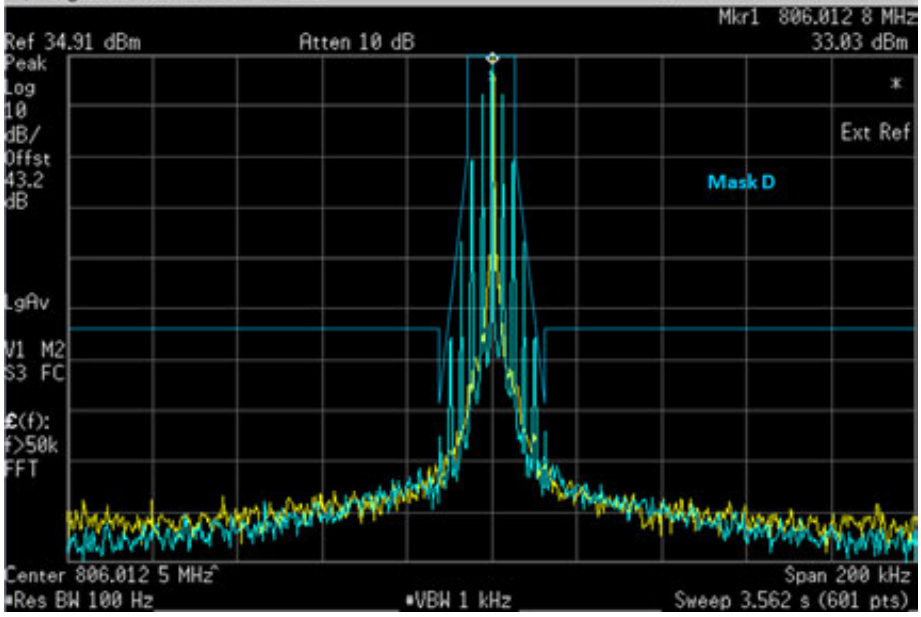
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
860.0125	25.0	14.9949	16K0F3E



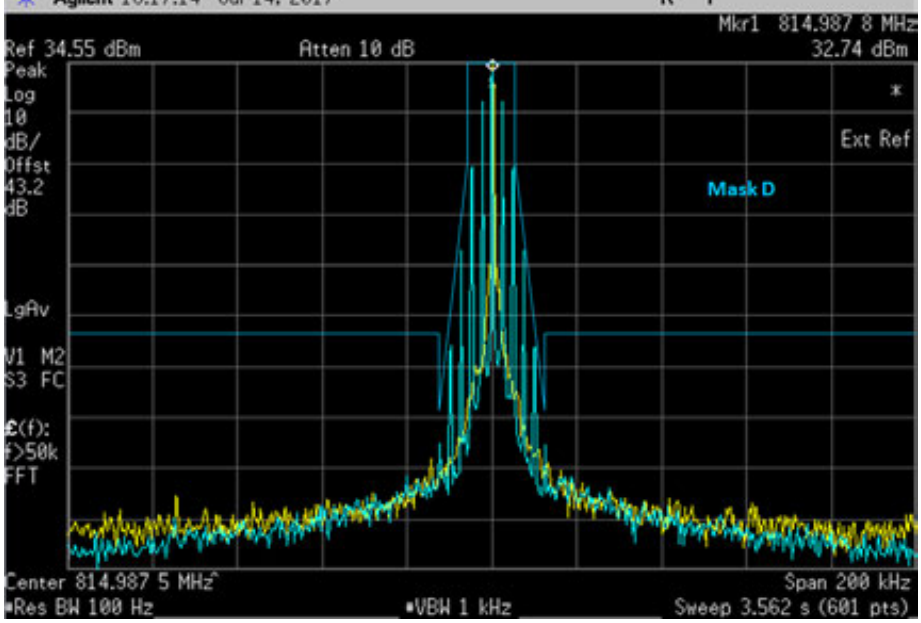
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
868.8875	25.0	14.9711	16K0F3E



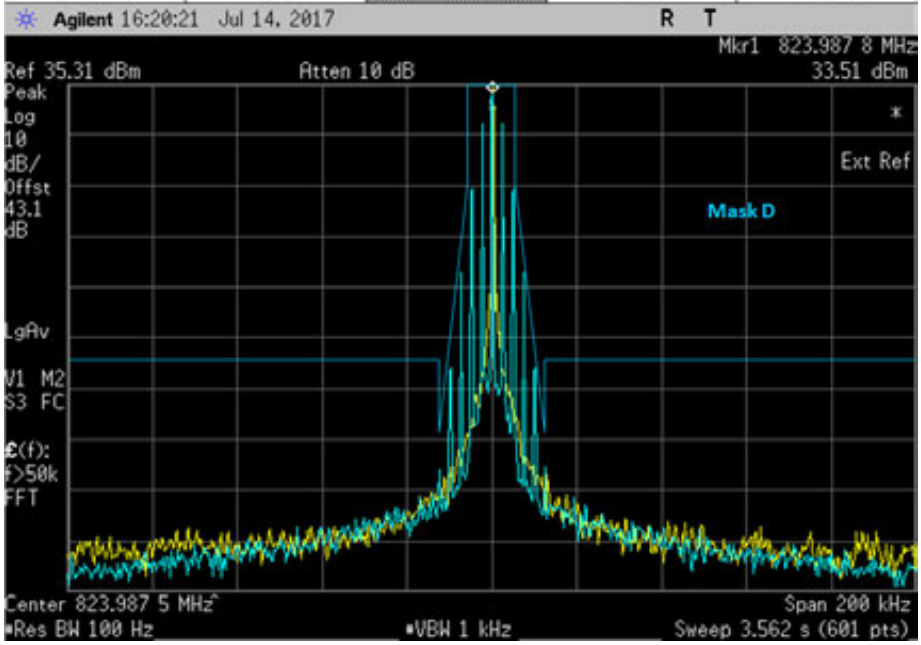
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5	9.9617	11K0F3E



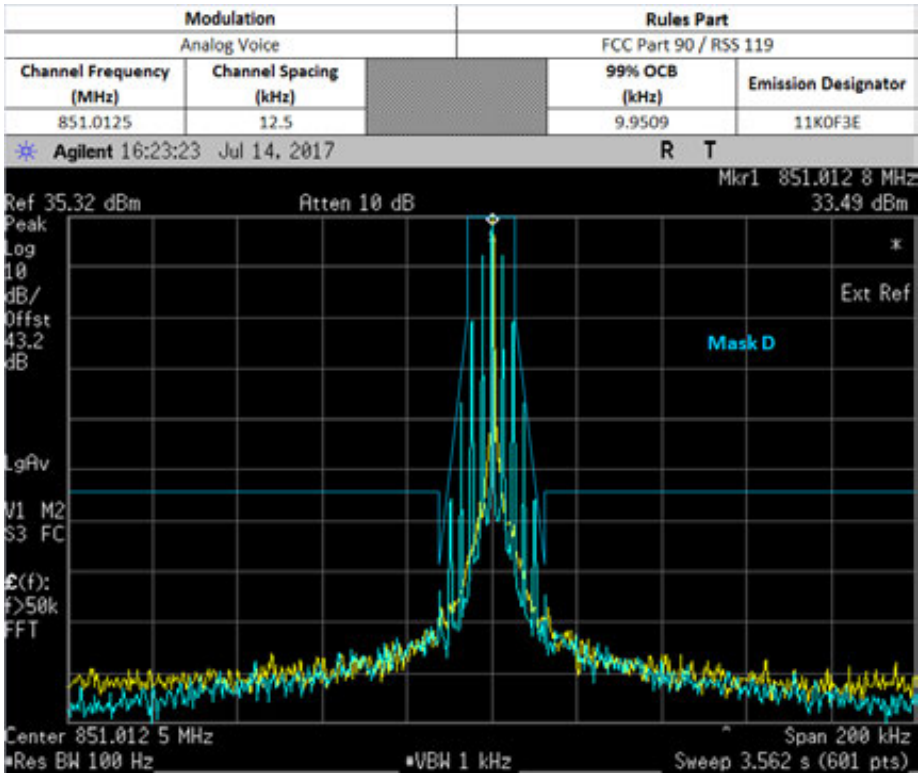
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5	9.9364	11K0F3E



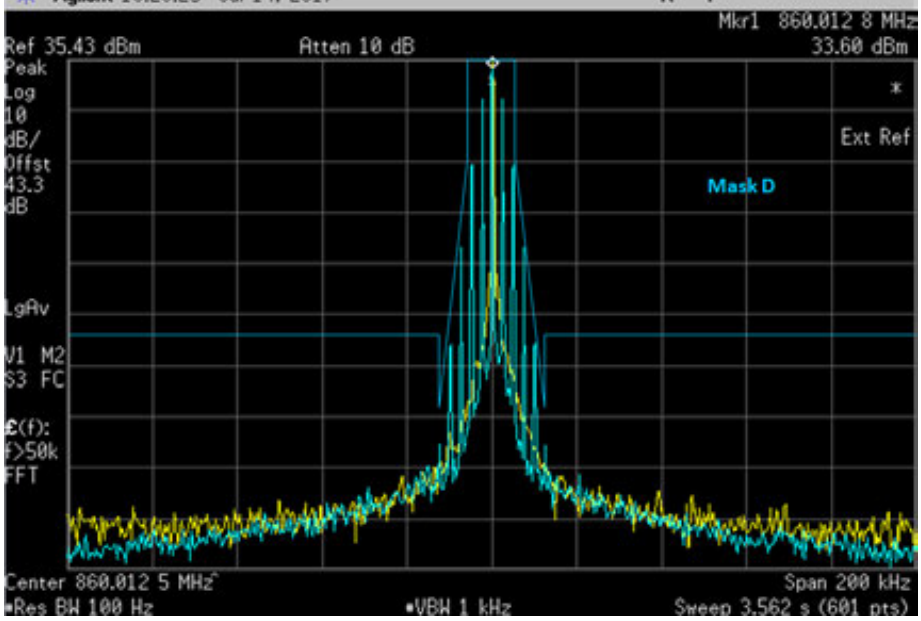
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
823.9875	12.5		9.945	11K0F3E



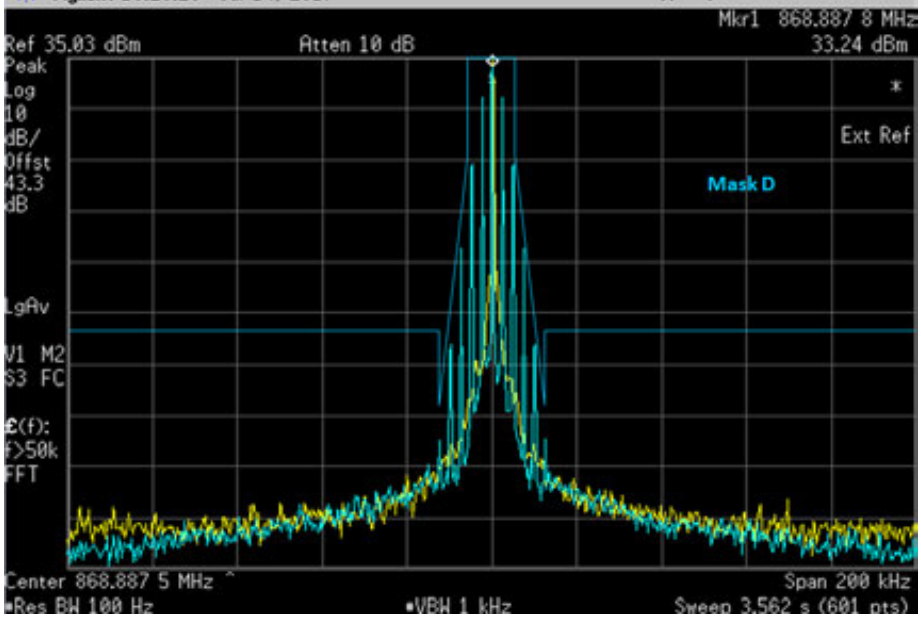
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
851.0125	12.5		9.9509	11K0F3E



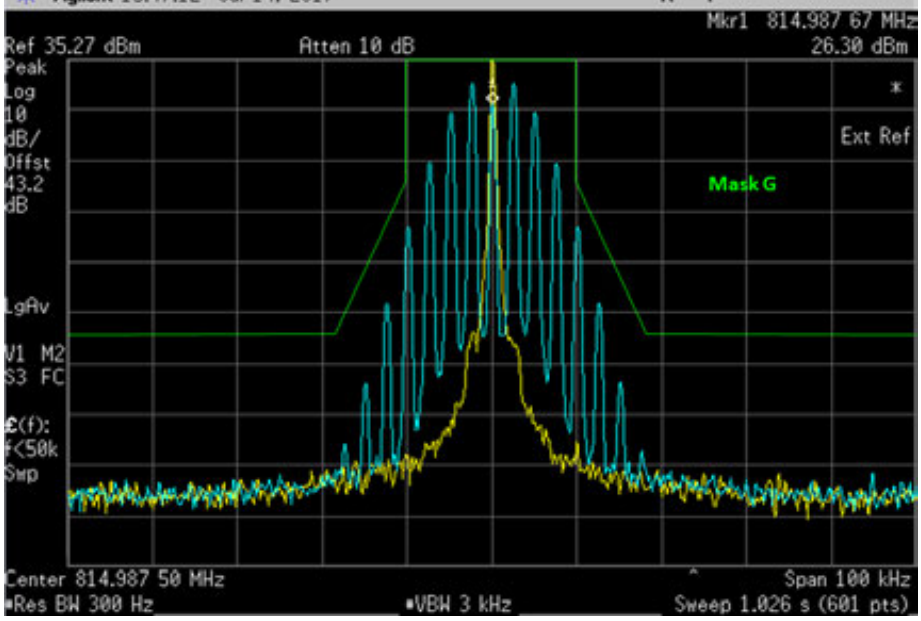
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5	9.9555	11K0F3E



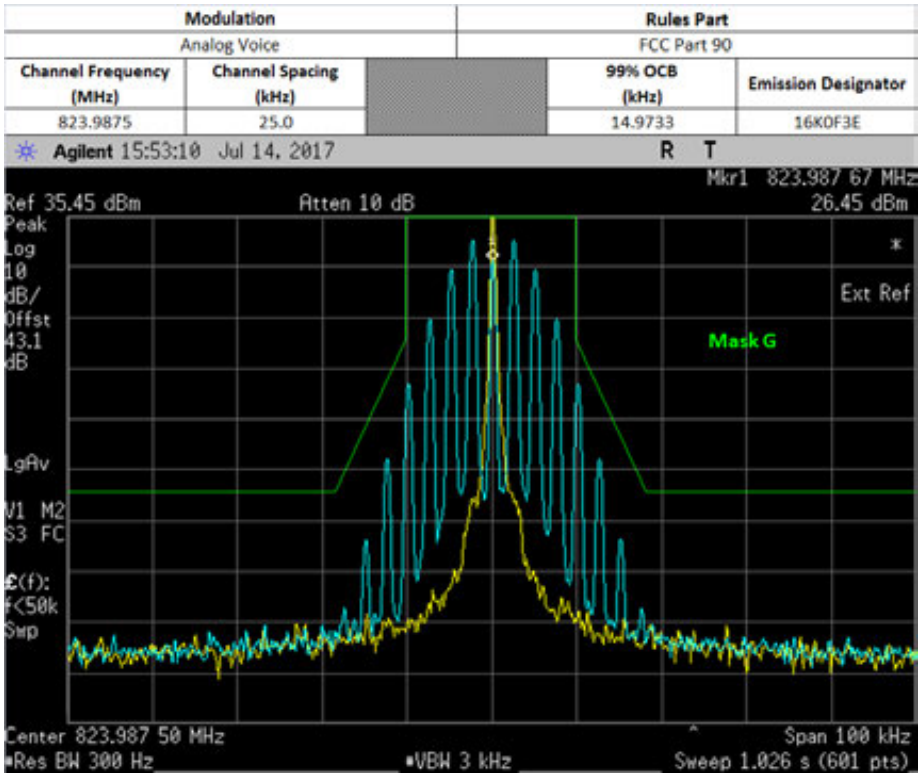
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
868.8875	12.5	9.9280	11K0F3E



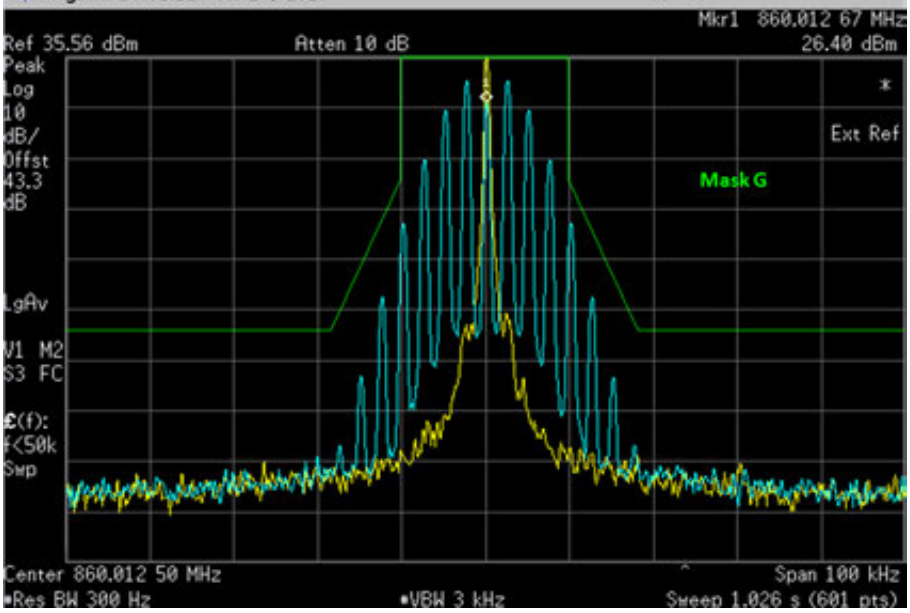
Modulation	Rules Part		
Analog Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
814.9875	25.0	14.9681	16K0F3E



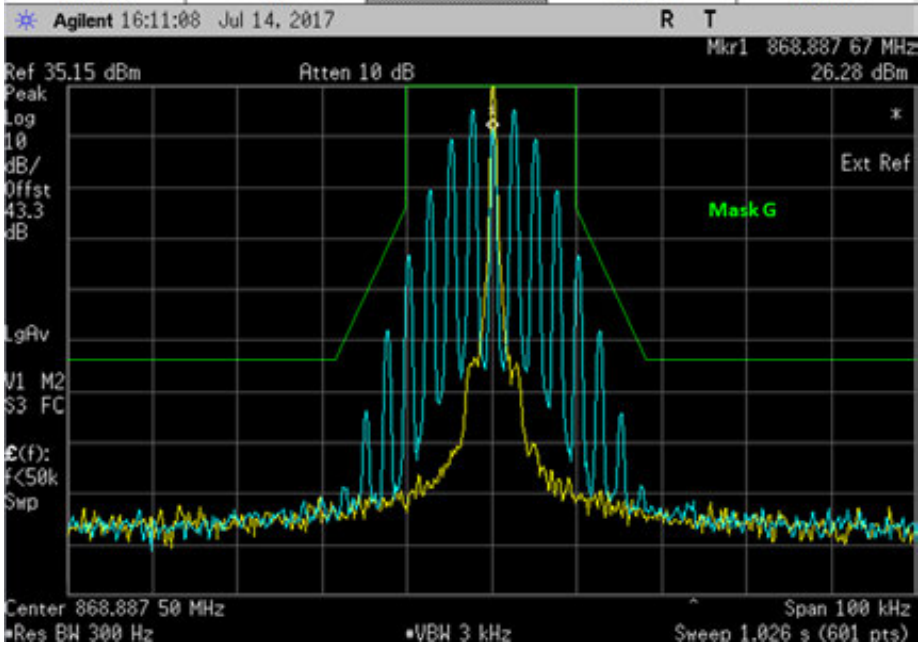
Modulation	Rules Part		
Analog Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
823.9875	25.0	14.9733	16K0F3E



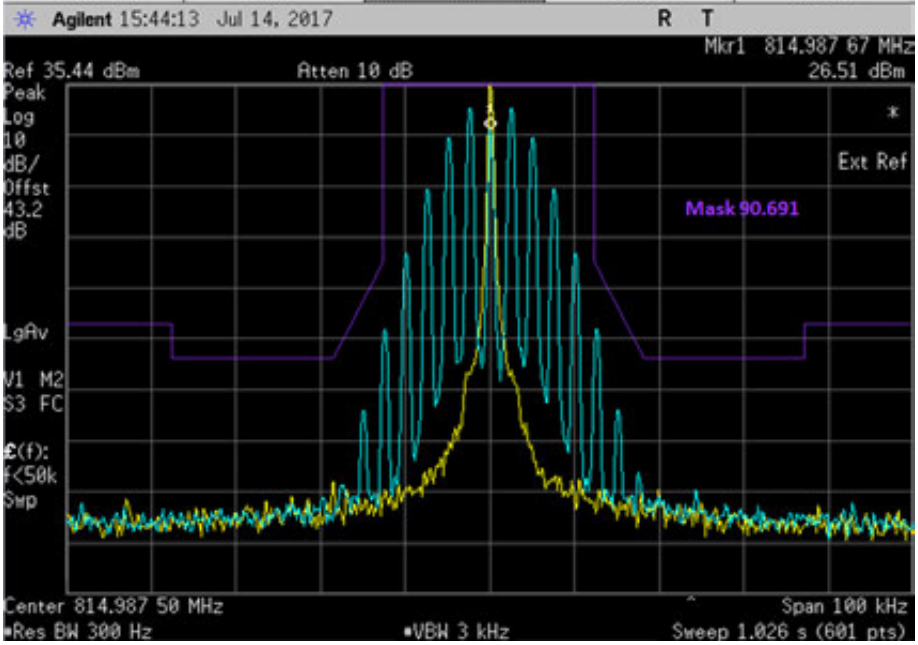
Modulation			Rules Part	
Analog Voice			FCC Part 90	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	25.0		14.9872	16K0F3E



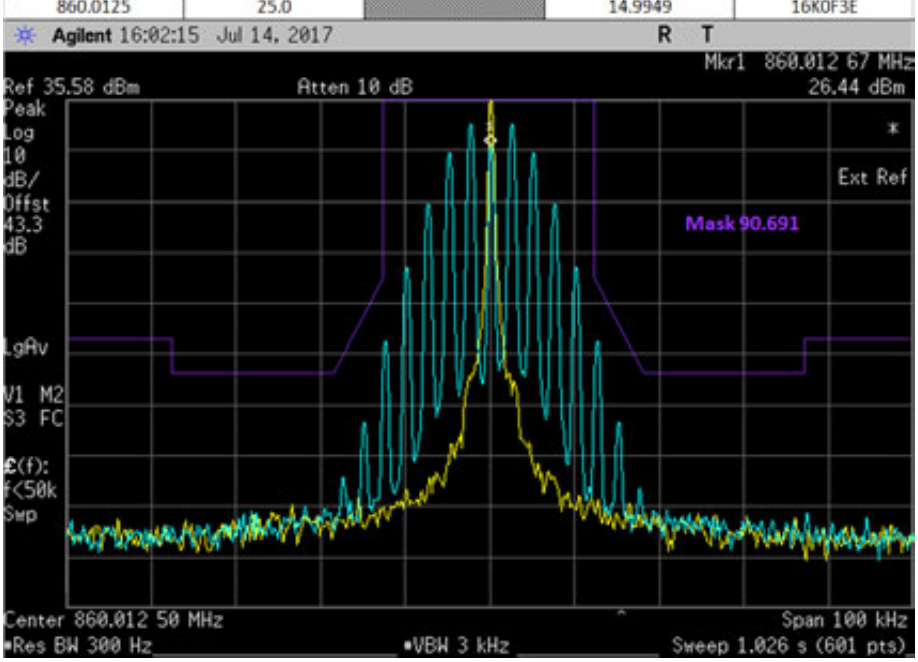
Modulation			Rules Part	
Analog Voice			FCC Part 90	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
868.8875	25.0		14.9624	16K0F3E



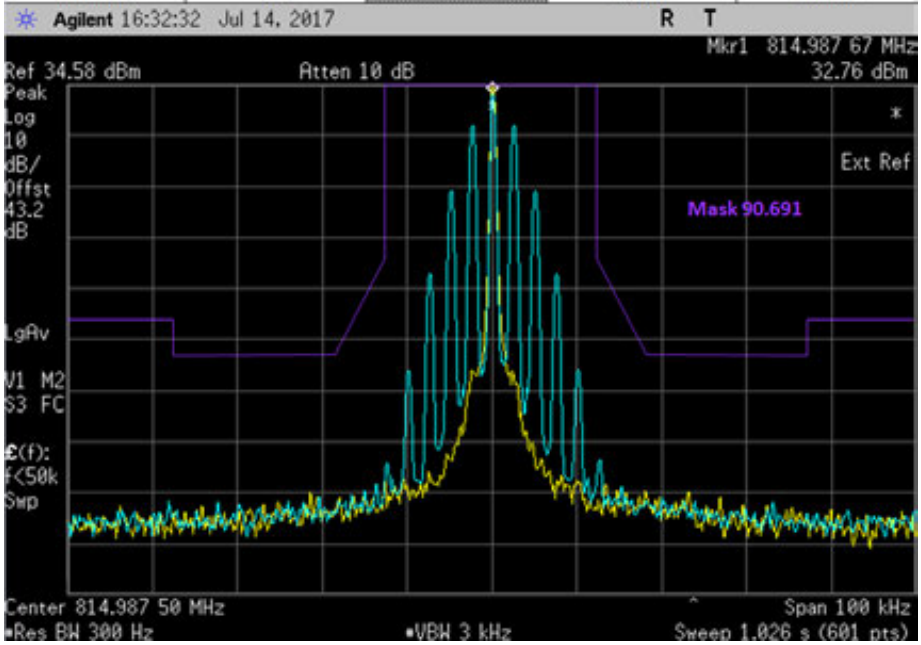
Modulation			Rules Part	
Analog Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	25.0		14.9762	16K0F3E



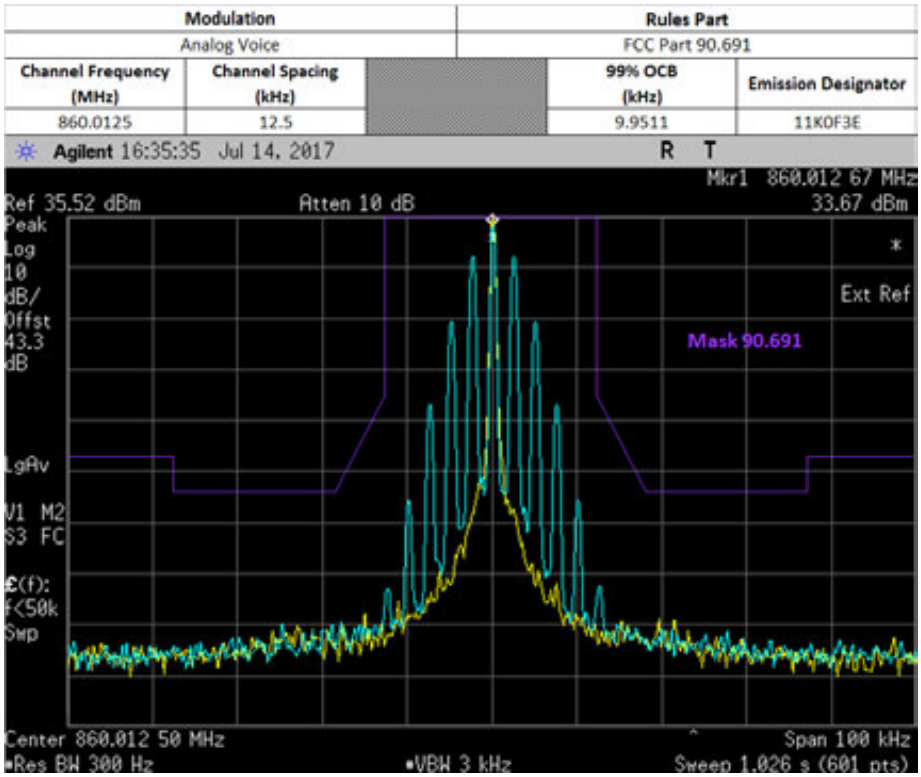
Modulation			Rules Part	
Analog Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	25.0		14.9949	16K0F3E



Modulation			Rules Part	
Analog Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5		9.9425	11K0F3E

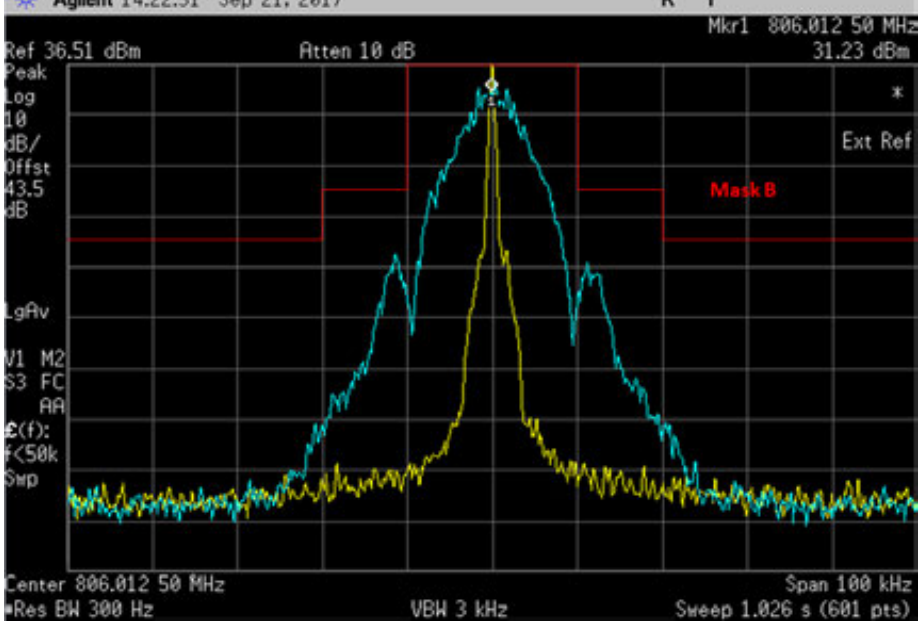


Modulation			Rules Part	
Analog Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5		9.9511	11K0F3E

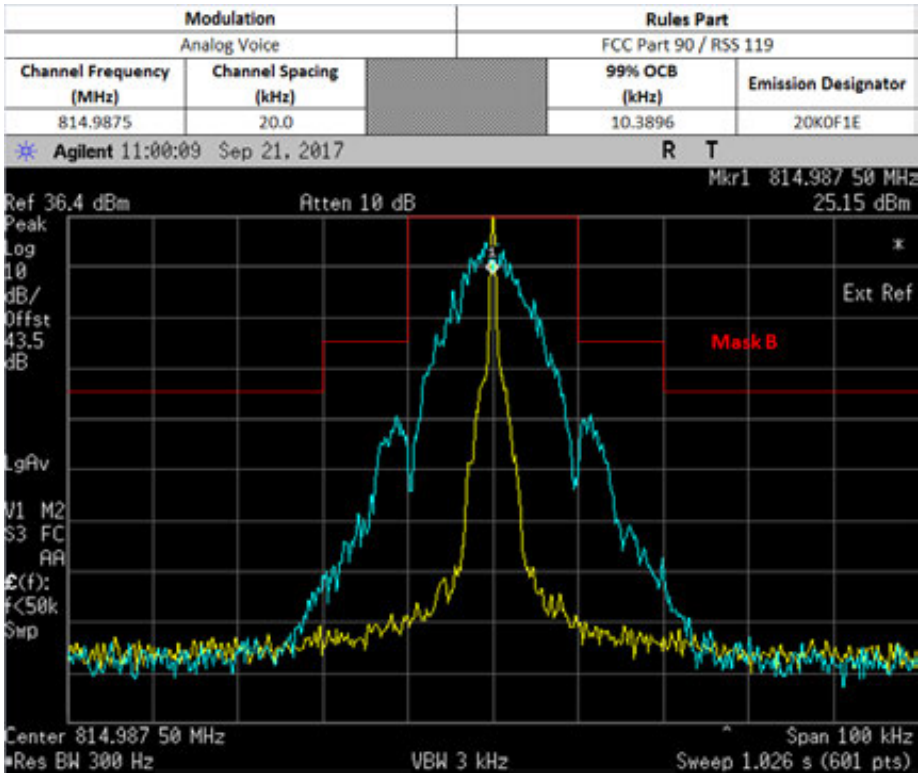


Encryption Mode

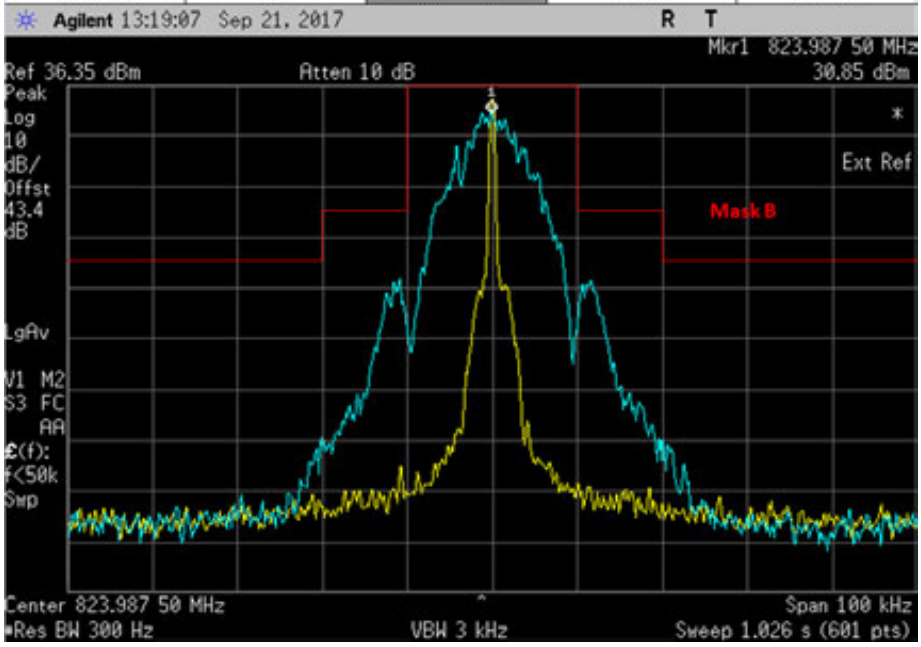
Modulation	Rules Part			
Analog Voice	RSS 119			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
806.0125	20.0		10.3928	20K0F1E



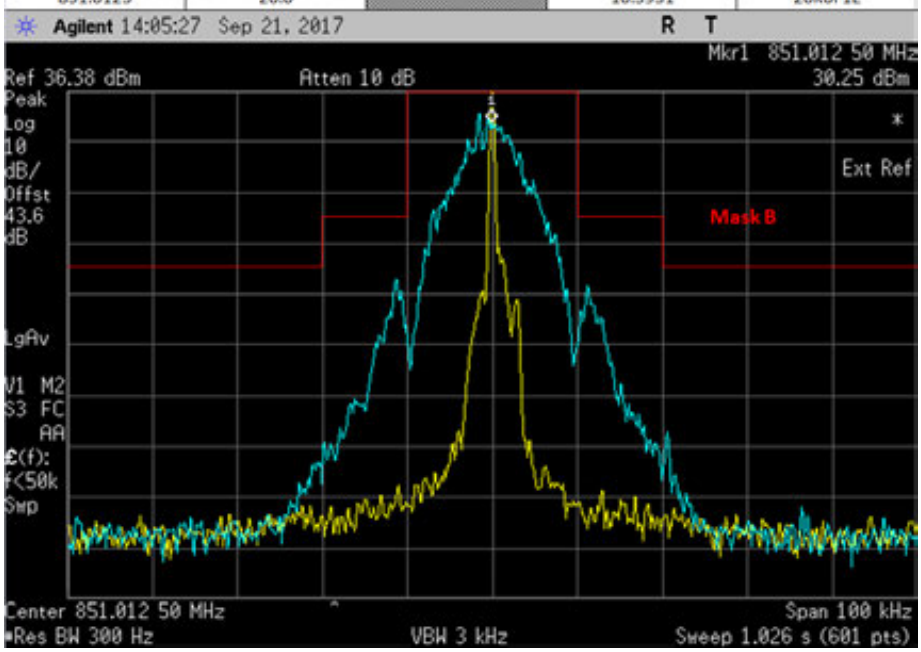
Modulation	Rules Part			
Analog Voice	FCC Part 90 / RSS 119			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	20.0		10.3896	20K0F1E



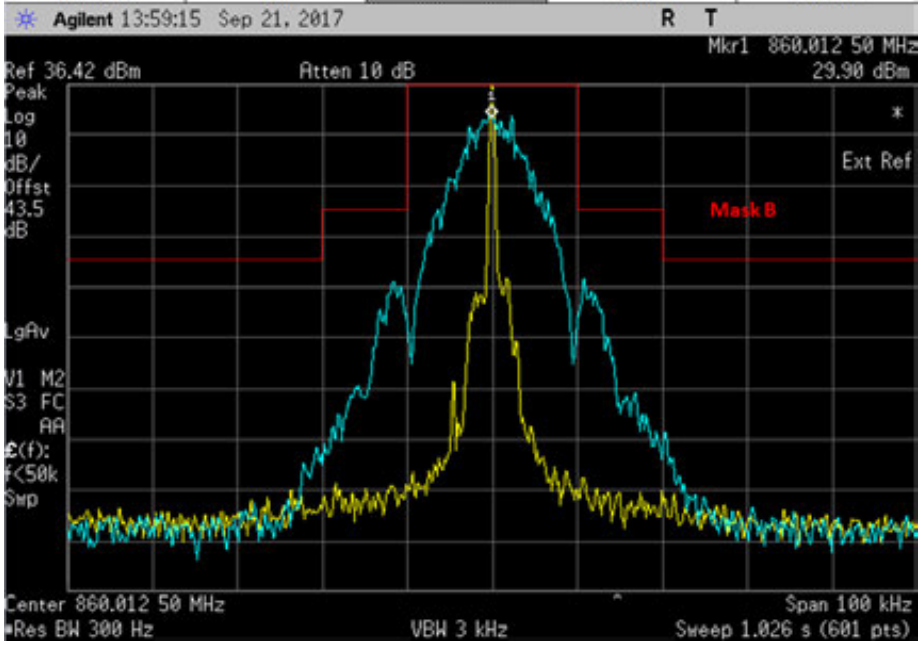
Modulation	Rules Part		
Analog Voice	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
823.9875	20.0	10.3894	20K0F1E



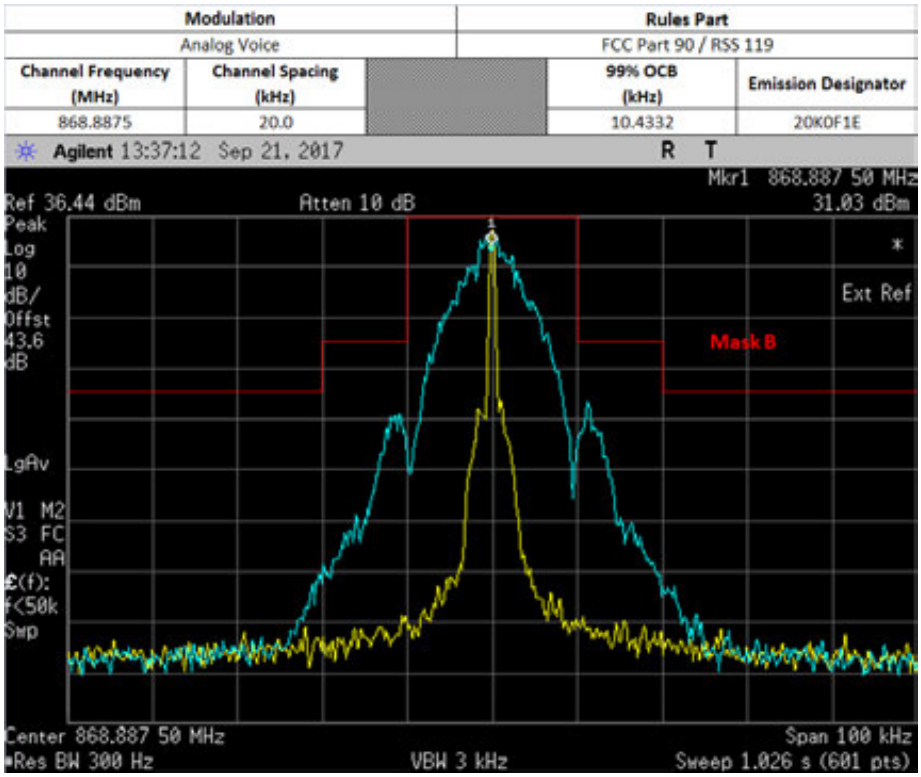
Modulation	Rules Part		
Analog Voice	RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
851.0125	20.0	10.3931	20K0F1E



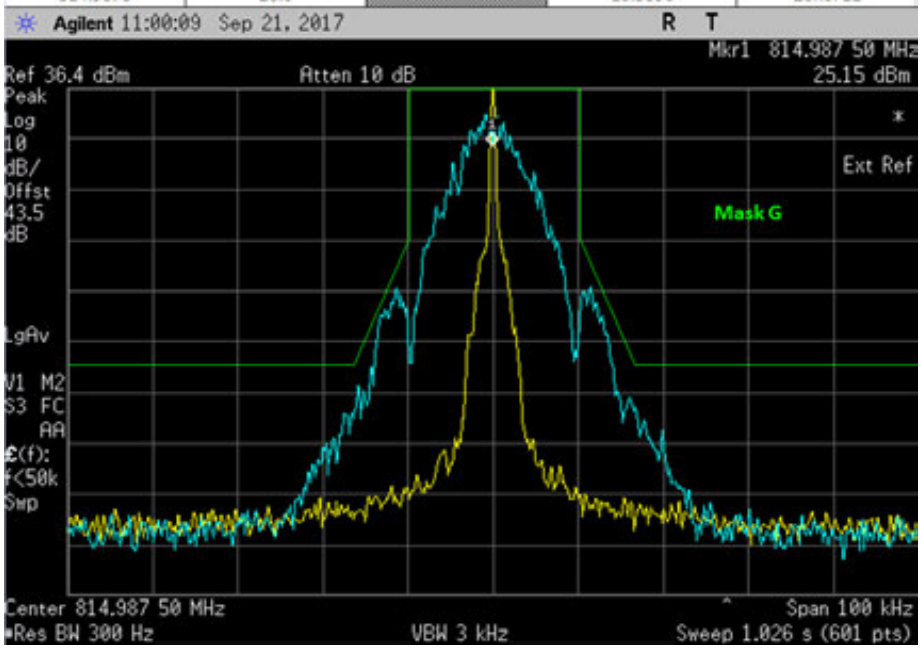
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	20.0		10.4334	20K0F1E



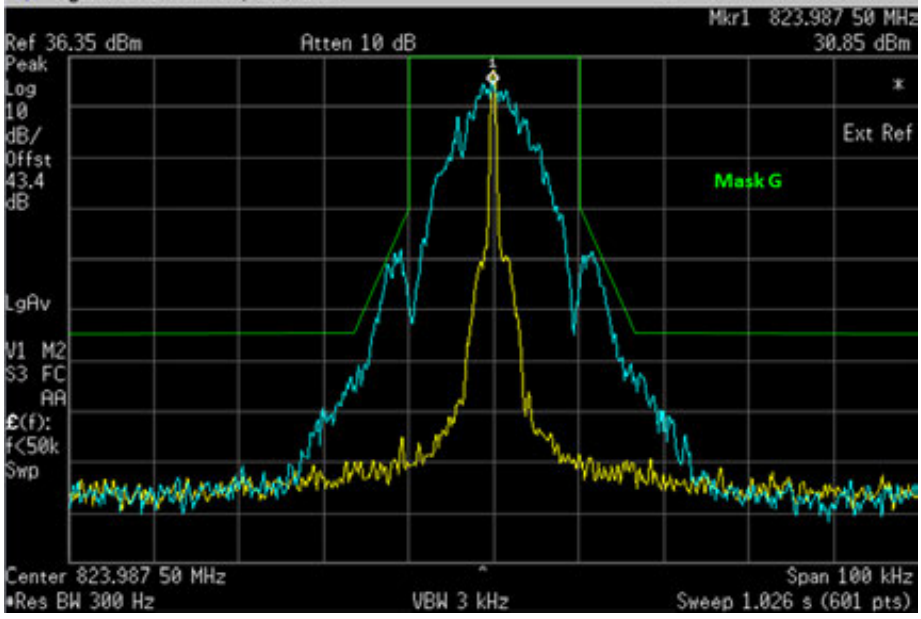
Modulation			Rules Part	
Analog Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
868.8875	20.0		10.4332	20K0F1E



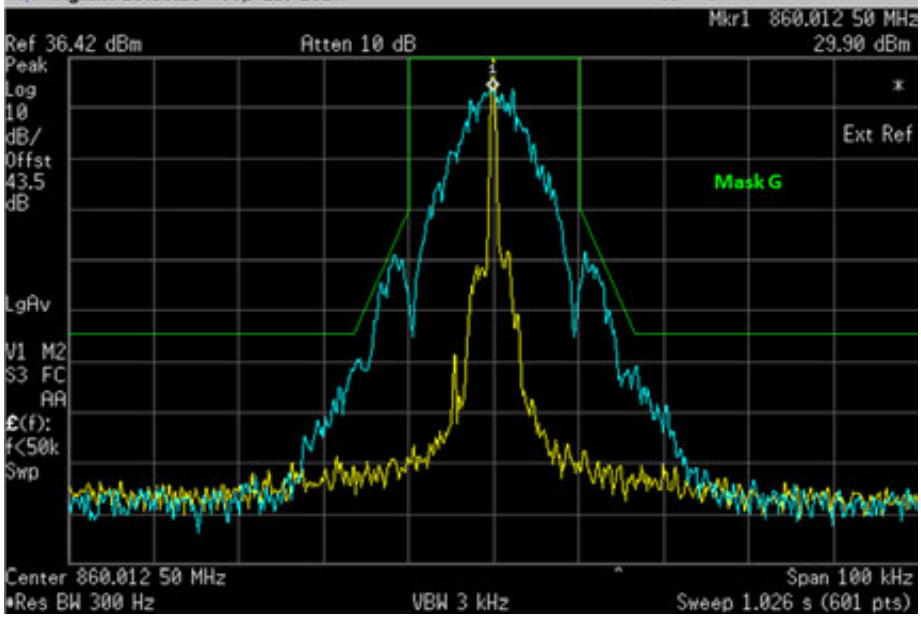
Modulation			Rules Part	
Analog Voice			FCC Part 90	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	20.0		10.3896	20K0F1E



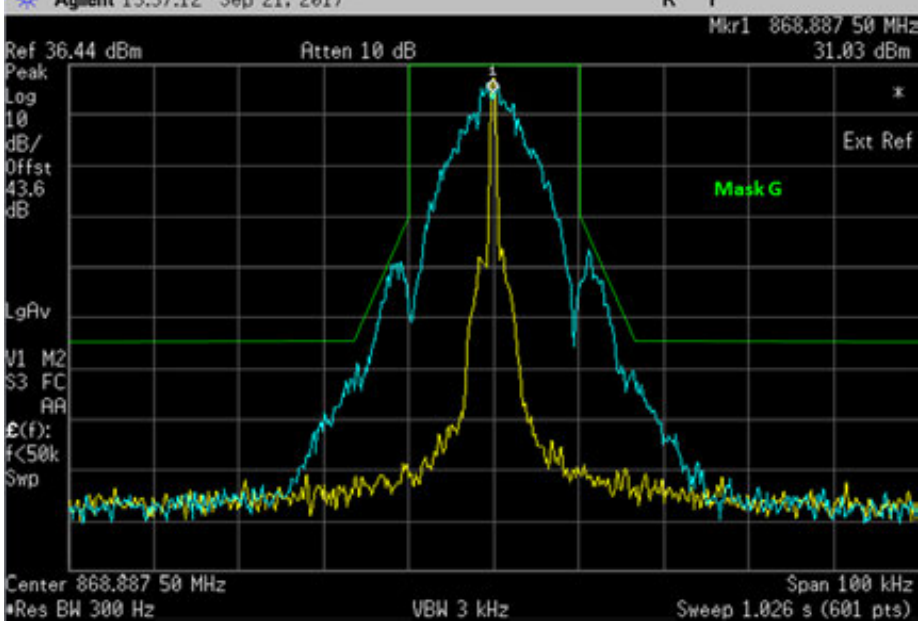
Modulation			Rules Part	
Analog Voice			FCC Part 90	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
823.9875	20.0		10.3894	20K0F1E



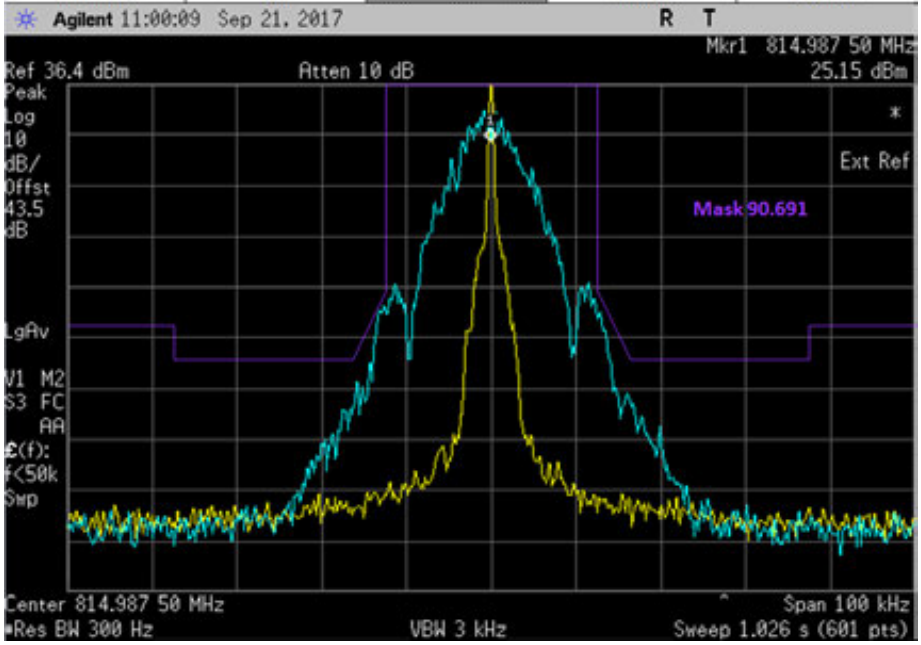
Modulation	Rules Part		
Analog Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
860.0125	20.0	10.4334	20K0F1E



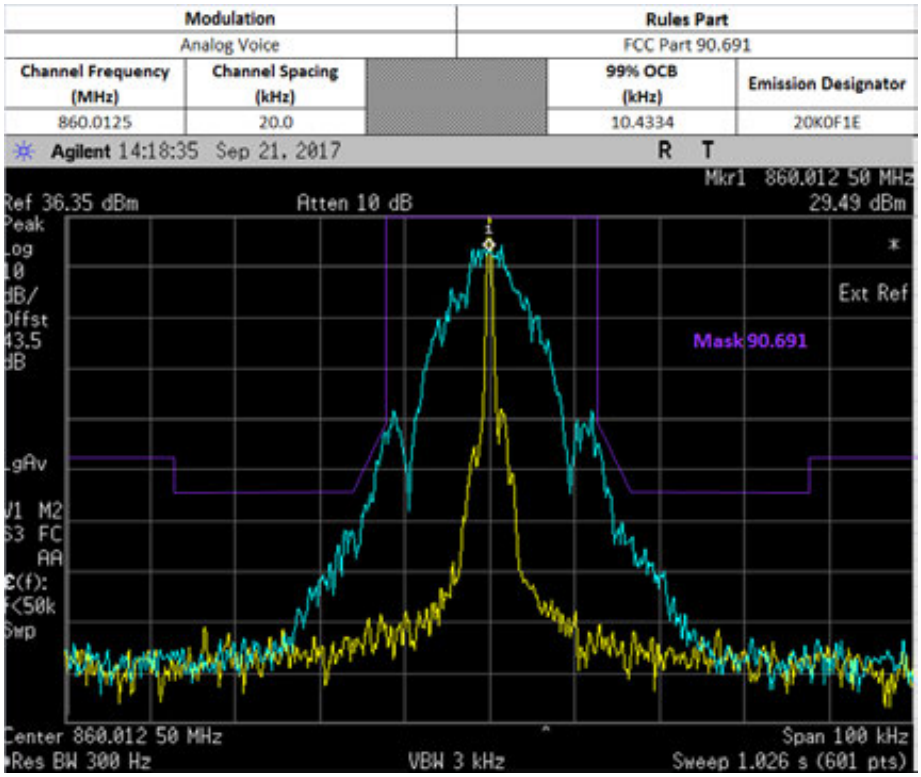
Modulation	Rules Part		
Analog Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
868.8875	20.0	10.4332	20K0F1E



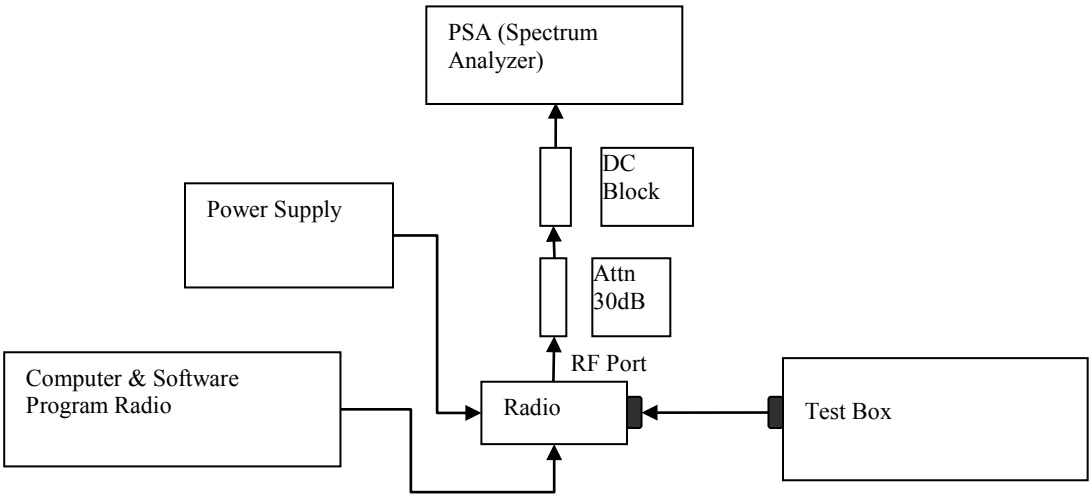
Modulation			Rules Part	
Analog Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	20.0		10.3896	20K0F1E



Modulation			Rules Part	
Analog Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	20.0		10.4334	20K0F1E



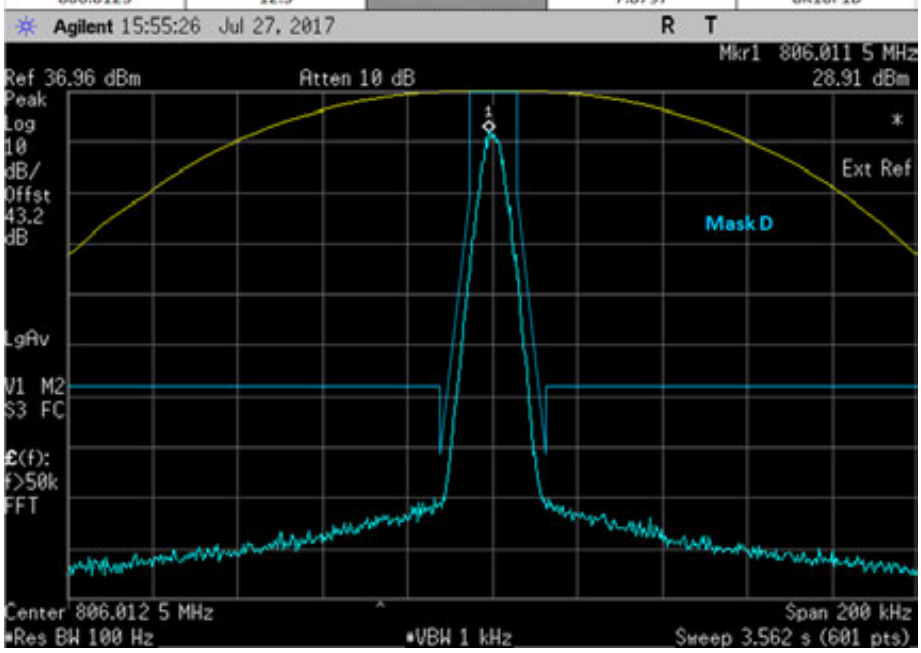
6.6.3. Test Setup (Digital)



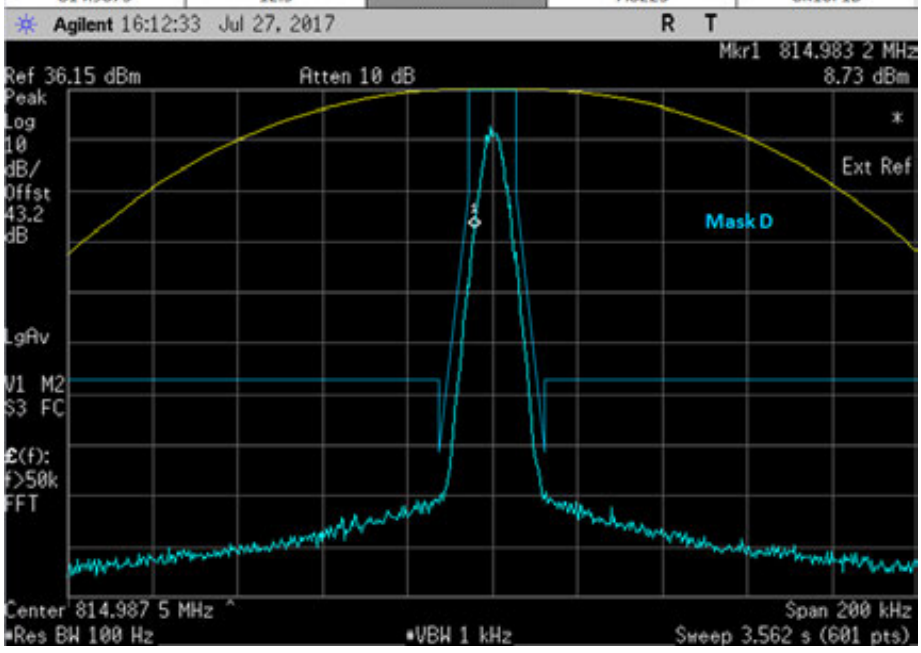
1) Program and set radio to operate in desire test frequency and digital mode with modulation. (4FSK, C4FM, CQPSK or other digital modulation form).
2) Path loss for the measurement included.
3) Select the Occupied Bandwidth measurement for 99% Bandwidth Measurement.
4) Key in the Fc and RBW (1 ~ 5 % 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 to 100 KHz and Resolution Bandwidth (according to FCC/ ISED standard).
8) Capture the screen shot as modulated signal.

6.6.4. Test Result (Digital)

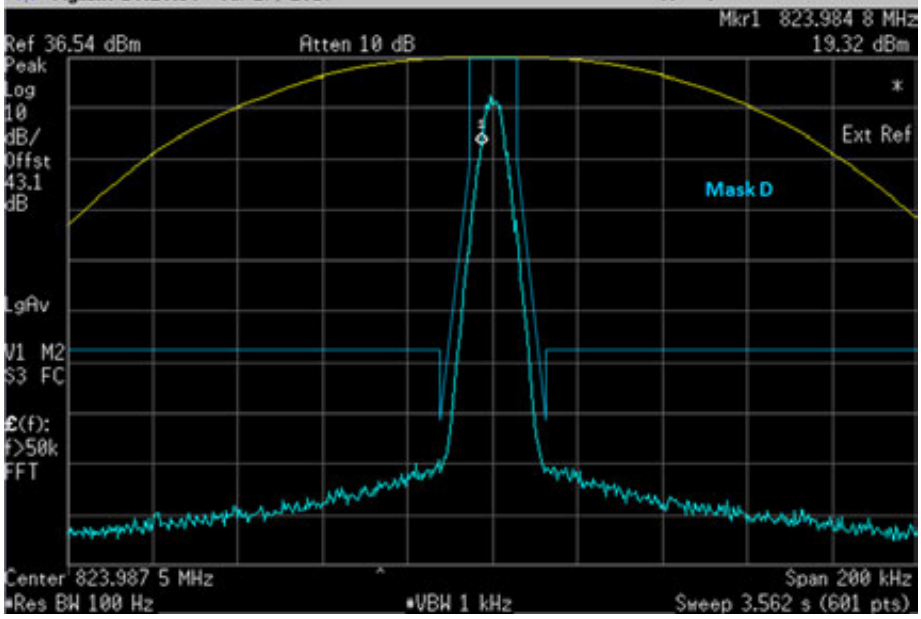
Modulation		Rules Part	
Digital Data		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5	7.8797	8K10F1D



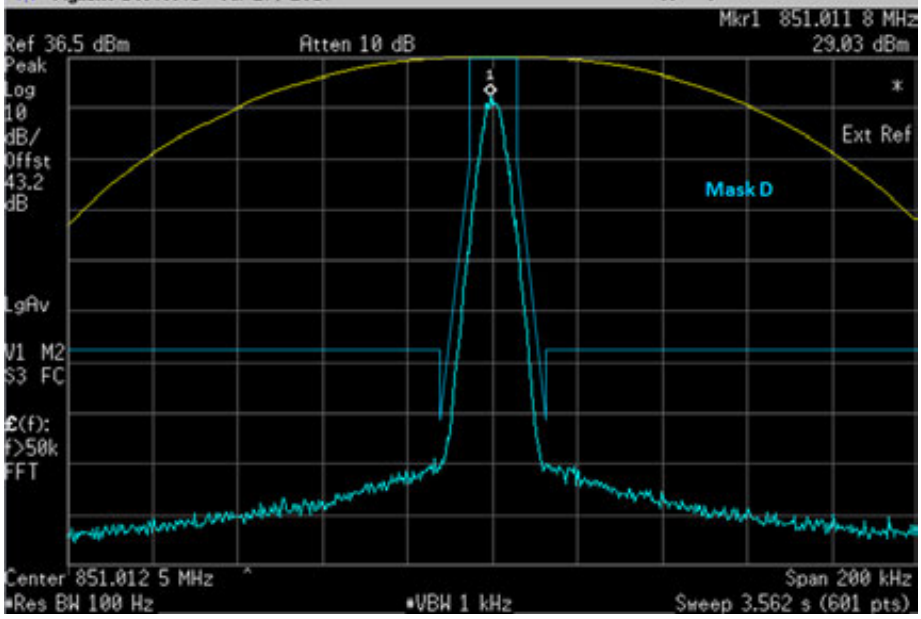
Modulation		Rules Part	
Digital Data		FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5	7.8225	8K10F1D



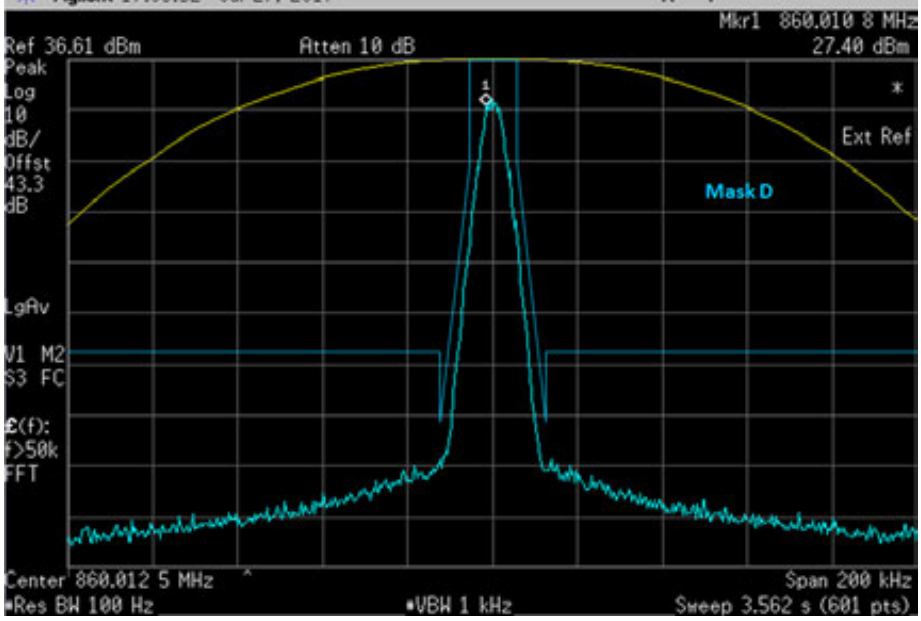
Modulation	Rules Part		
Digital Data	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
823.9875	12.5	7.9744	8K10F1D



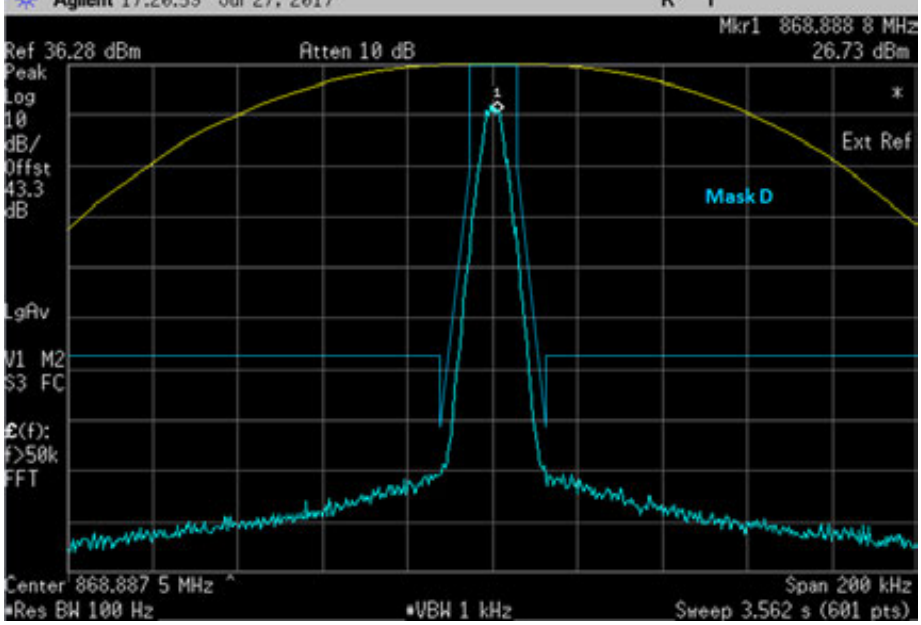
Modulation	Rules Part		
Digital Data	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
851.0125	12.5	7.8356	8K10F1D



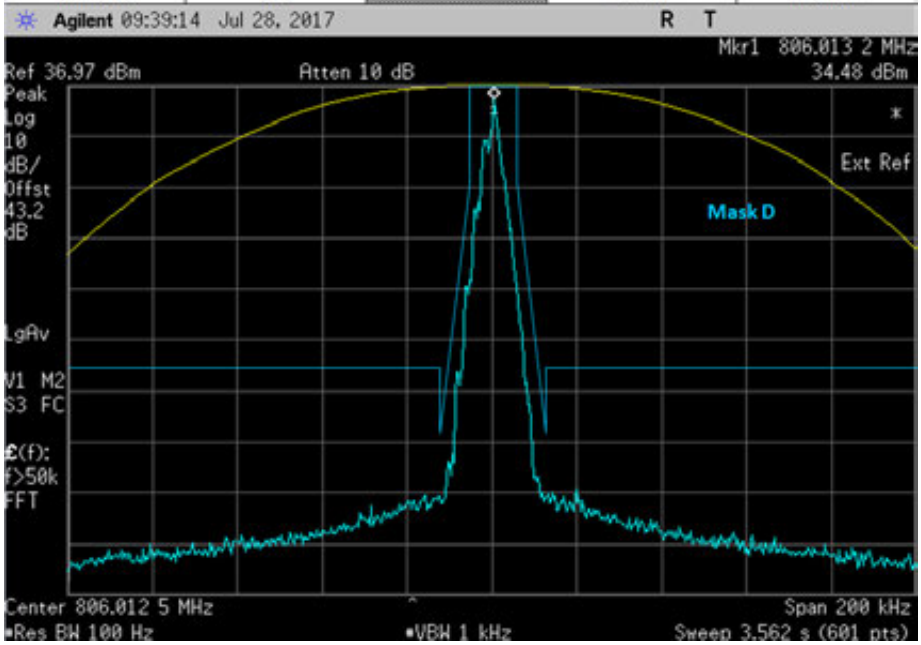
Modulation	Rules Part		
Digital Data	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5	8.0118	8K10F1D



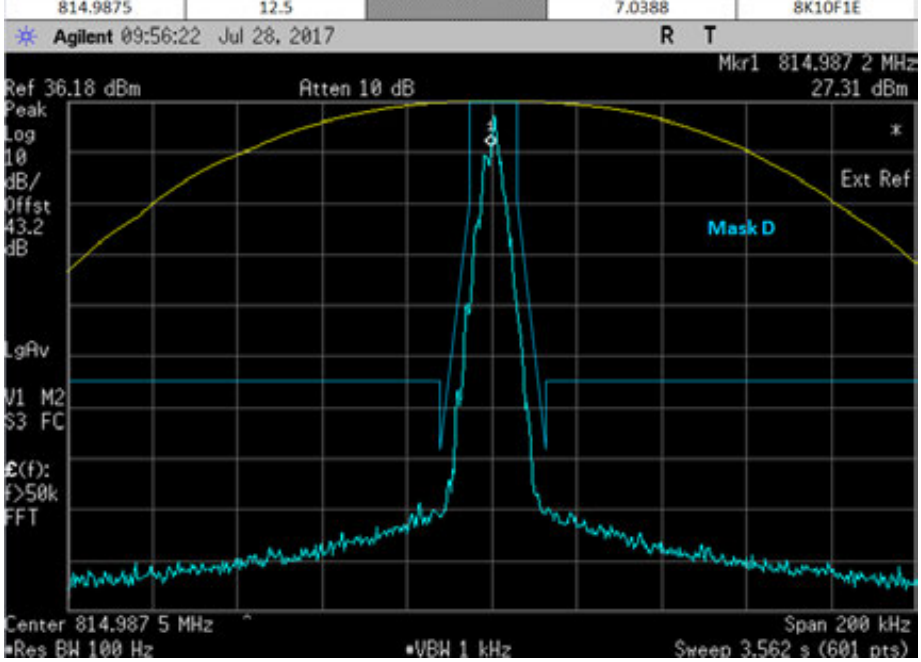
Modulation	Rules Part		
Digital Data	FCC Part 90 / RSS 119		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
868.8875	12.5	7.8300	8K10F1D



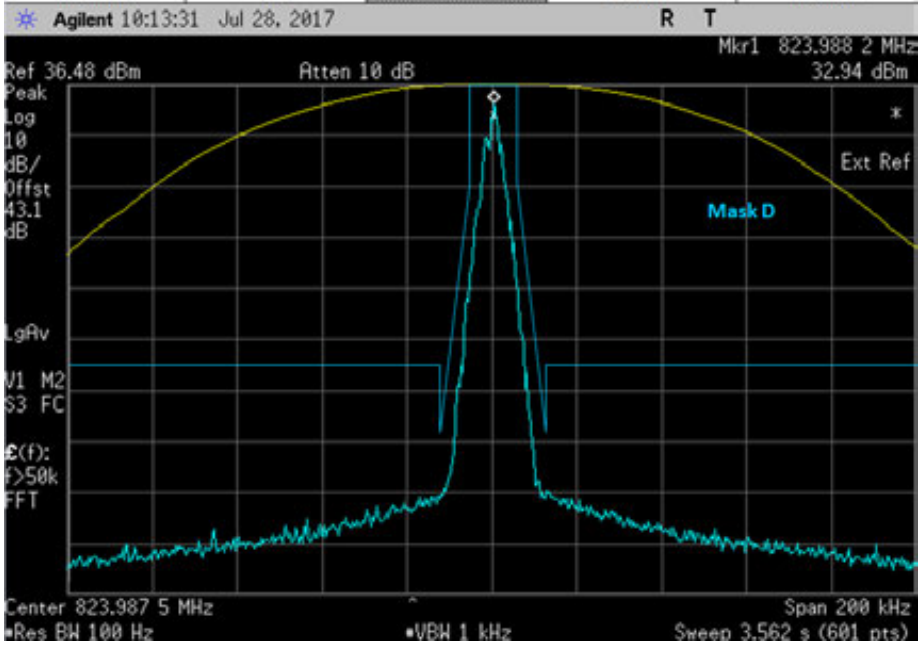
Modulation	Rules Part			
Digital Voice	FCC Part 90 / RSS 119			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5		7.3940	8K10F1E



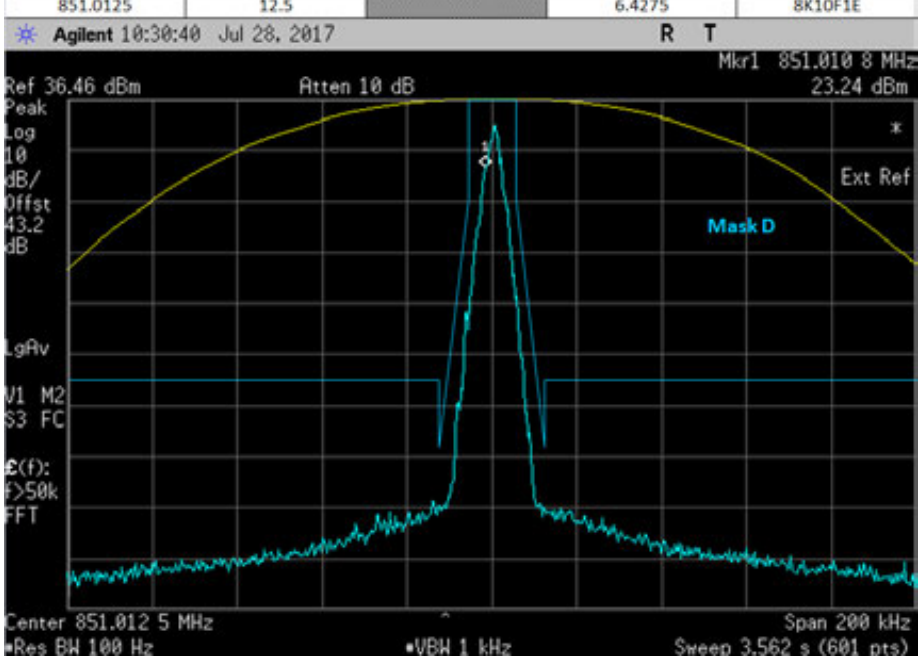
Modulation	Rules Part			
Digital Voice	FCC Part 90 / RSS 119			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5		7.0388	8K10F1E



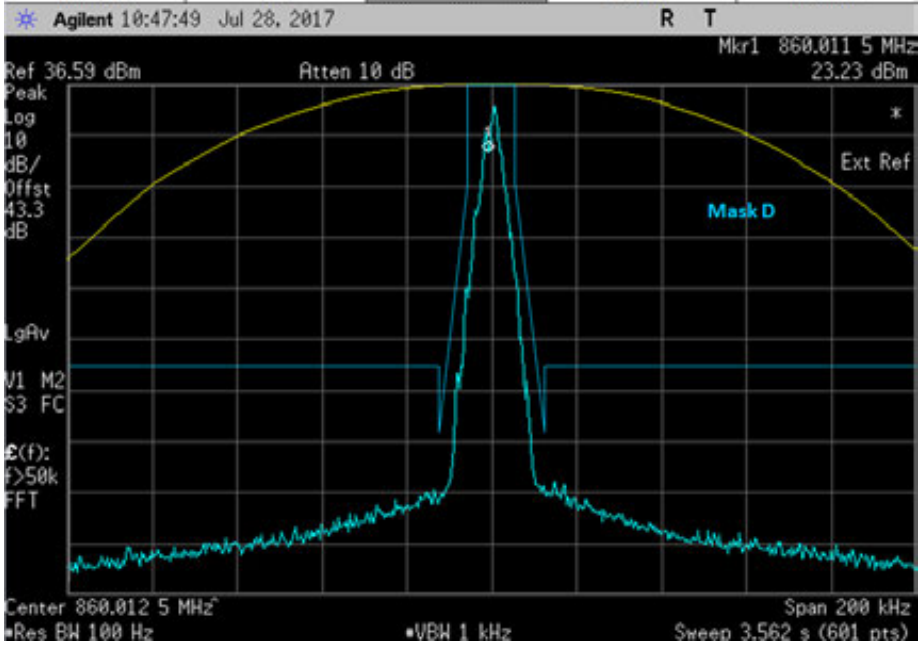
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
823.9875	12.5		6.5617	8K10F1E



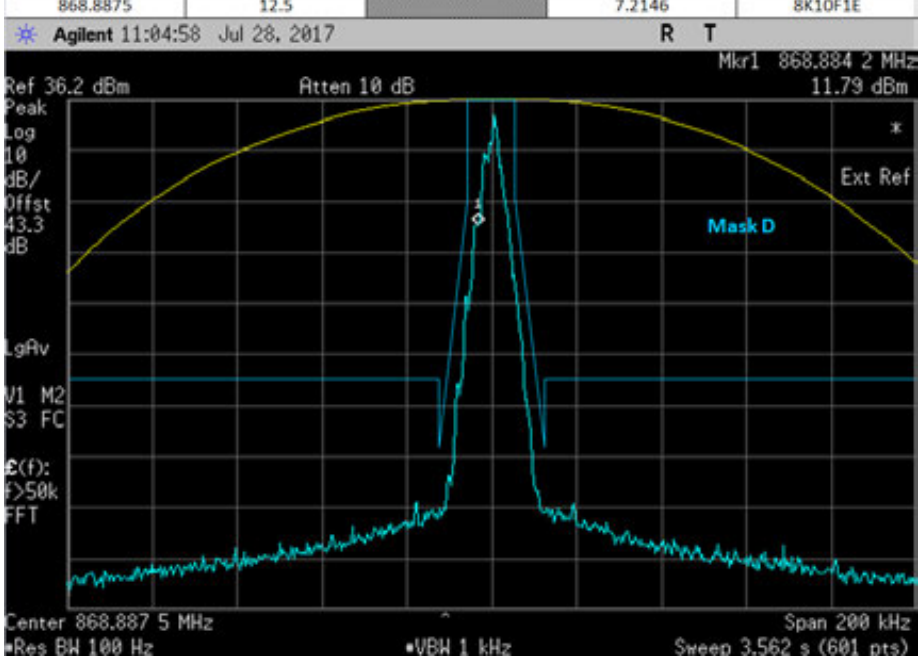
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
851.0125	12.5		6.4275	8K10F1E



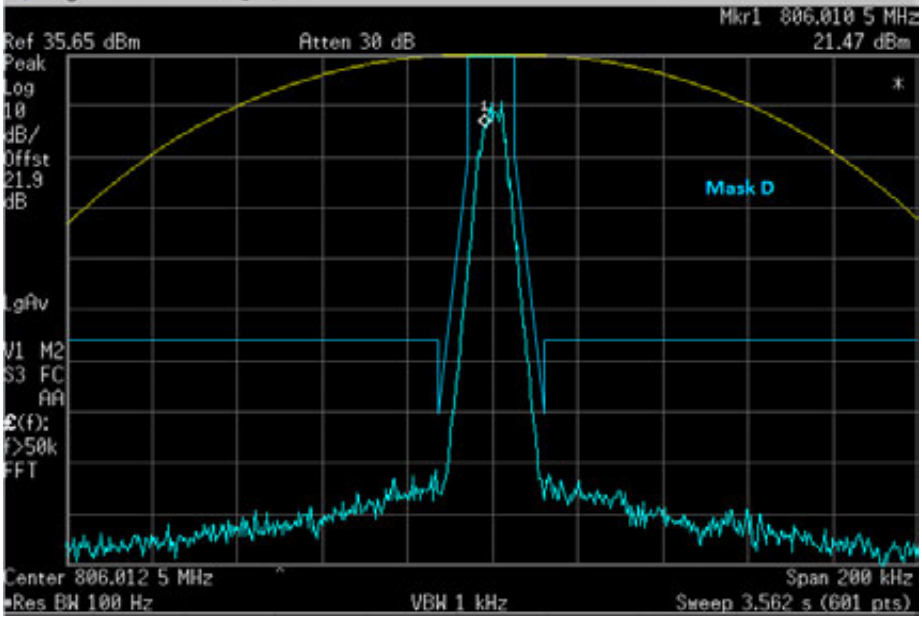
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5		6.5208	8K10F1E



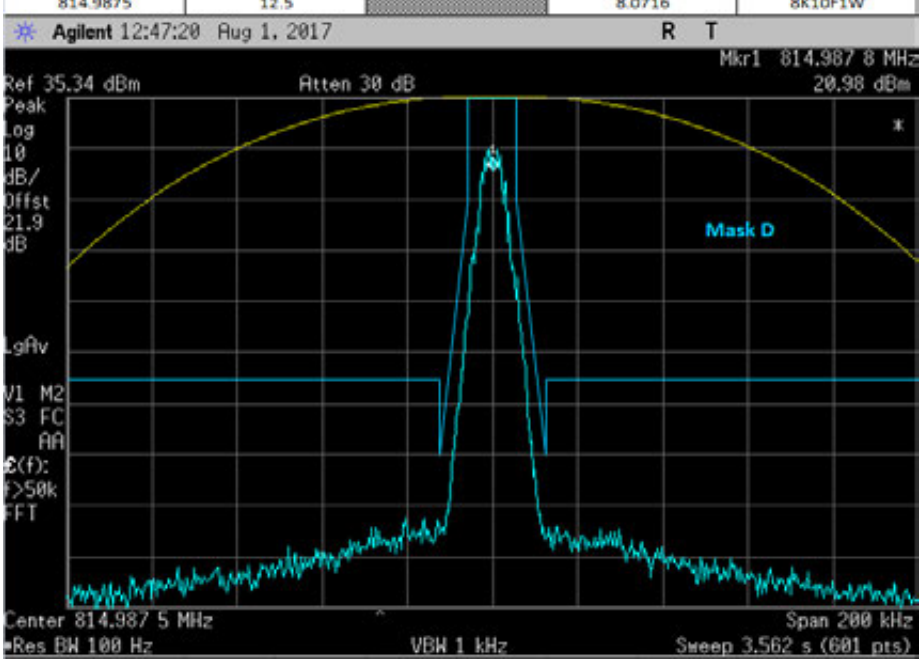
Modulation			Rules Part	
Digital Voice			FCC Part 90 / RSS 119	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
868.8875	12.5		7.2146	8K10F1E



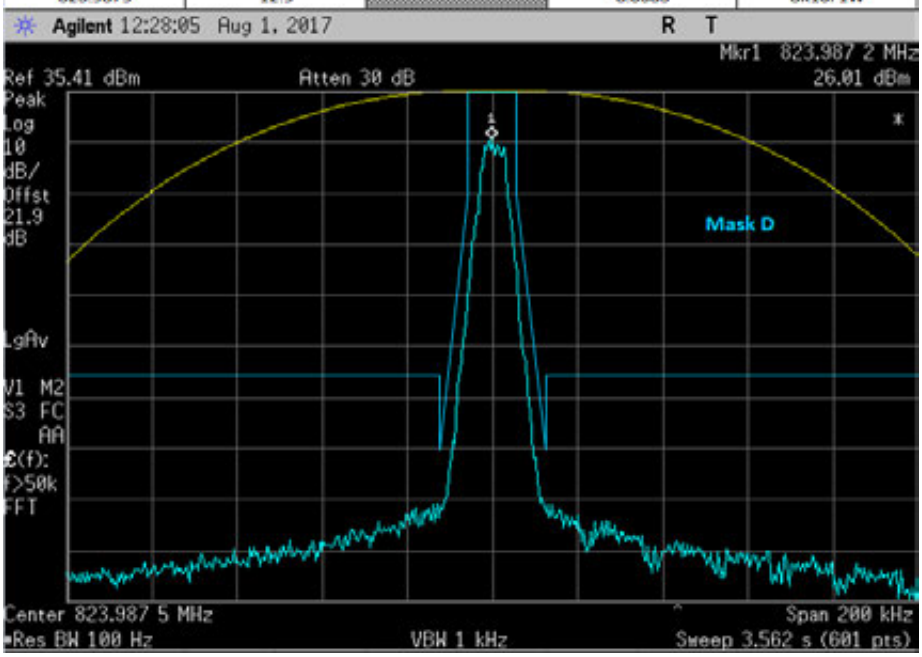
Modulation		Rules Part	
Phase II		FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
806.0125	12.5	7.2723	8K10F1W



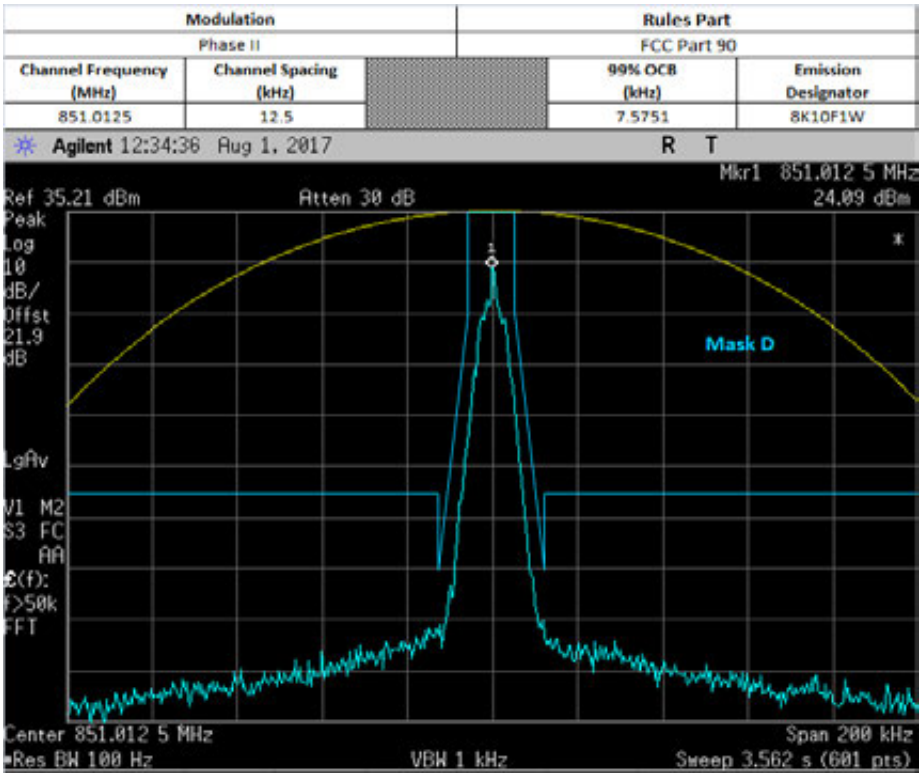
Modulation		Rules Part	
Phase II		FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
814.9875	12.5	8.0716	8K10F1W



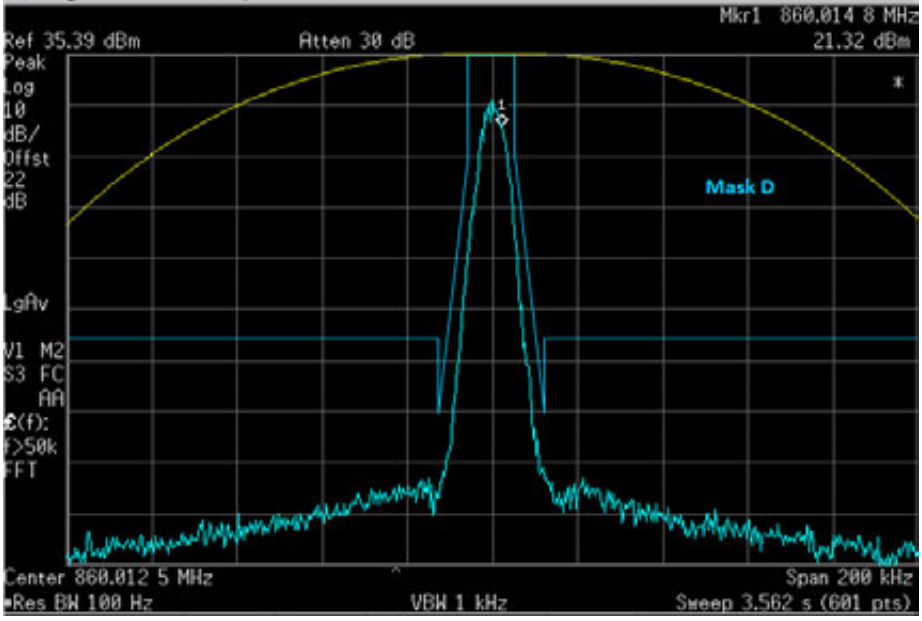
Modulation		Rules Part	
Phase II		FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
823.9875	12.5	8.0683	8K10F1W



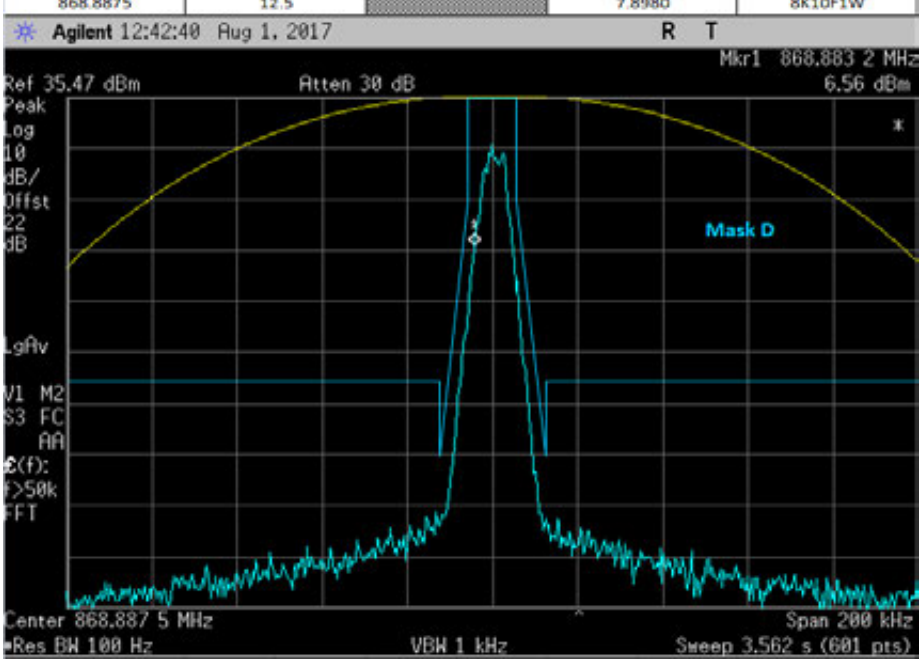
Modulation		Rules Part	
Phase II		FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
851.0125	12.5	7.5751	8K10F1W



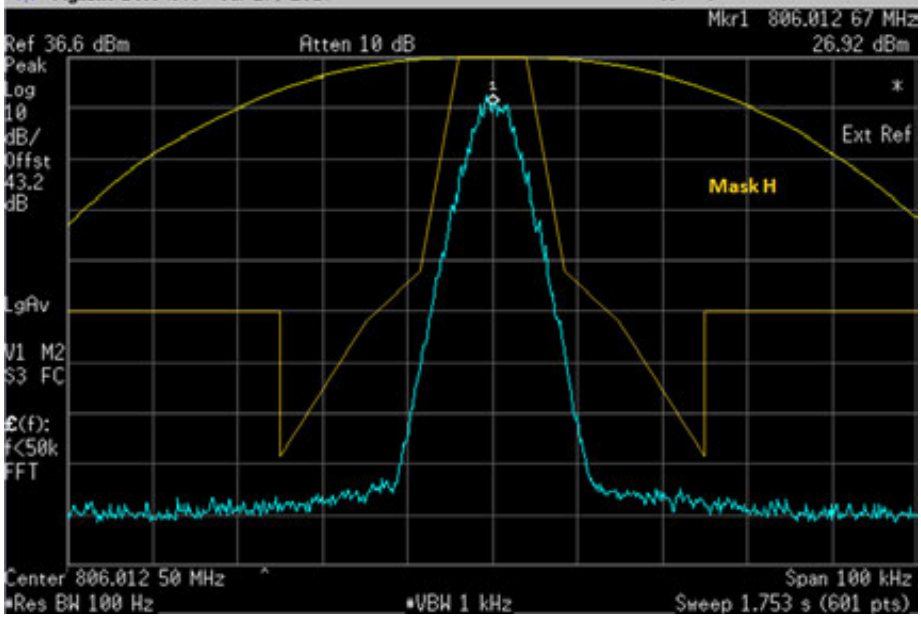
Modulation		Rules Part	
Phase II		FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
860.0125	12.5	7.9188	8K10F1W



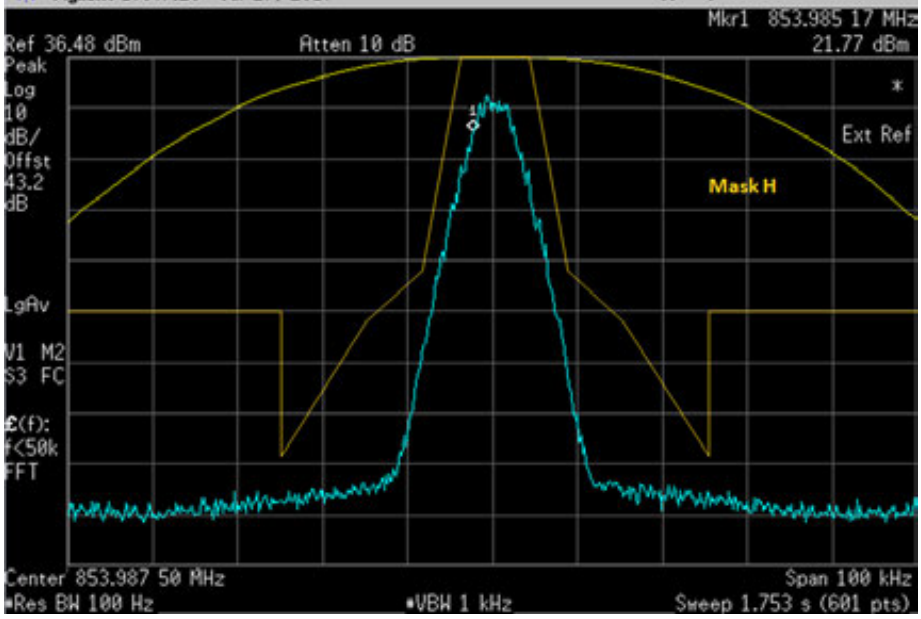
Modulation		Rules Part	
Phase II		FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
868.8875	12.5	7.8980	8K10F1W



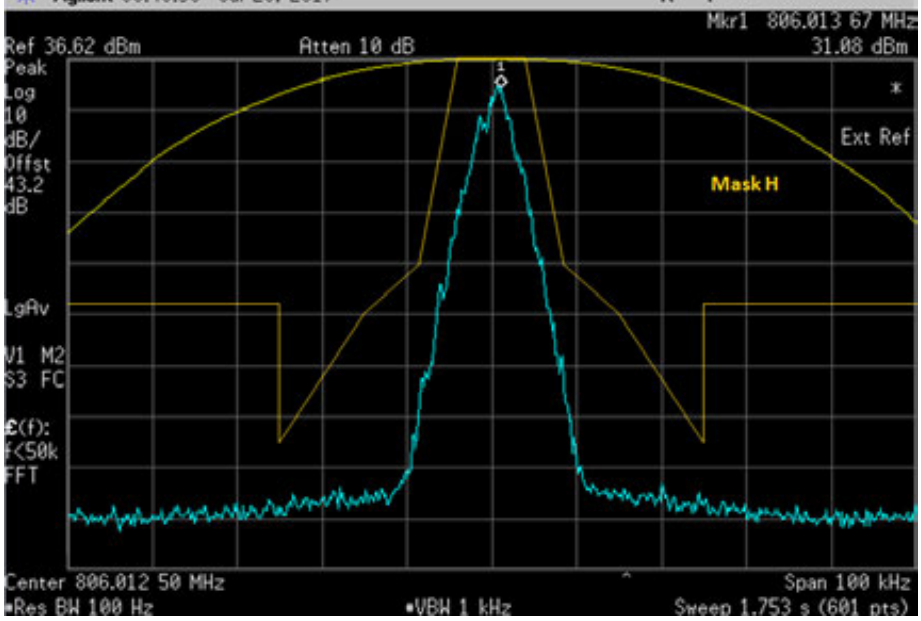
Modulation		Rules Part	
Digital Data		FCC Part 90	
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5	8.0044	8K10F1D



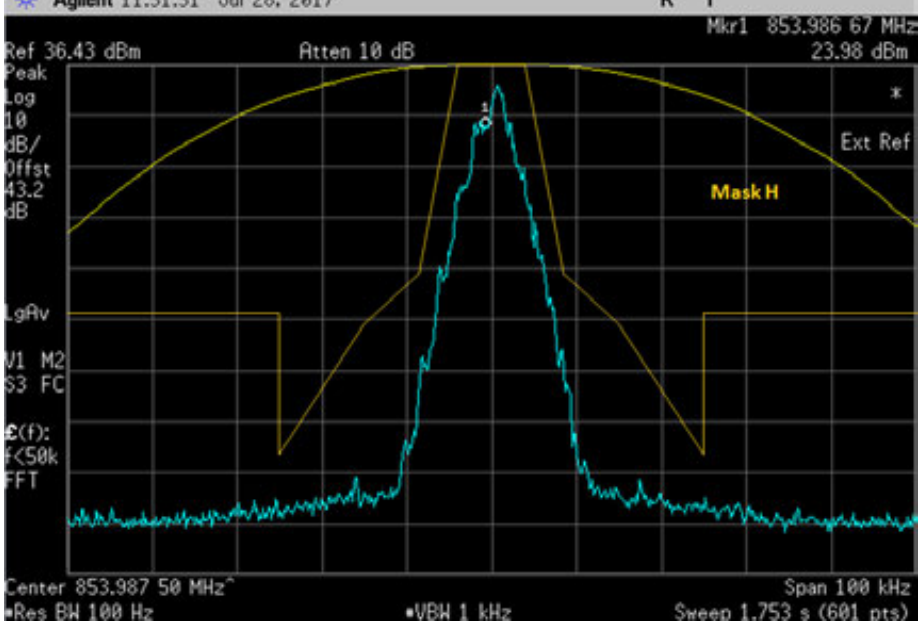
Modulation		Rules Part	
Digital Data		FCC Part 90	
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
853.9875	12.5	7.7745	8K10F1D



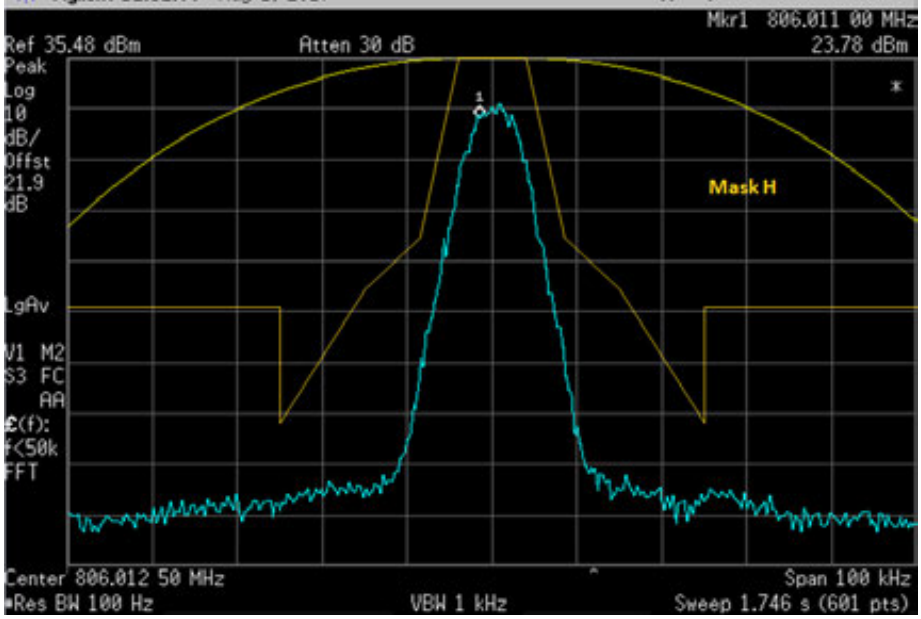
Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5	6.7142	8K10F1E



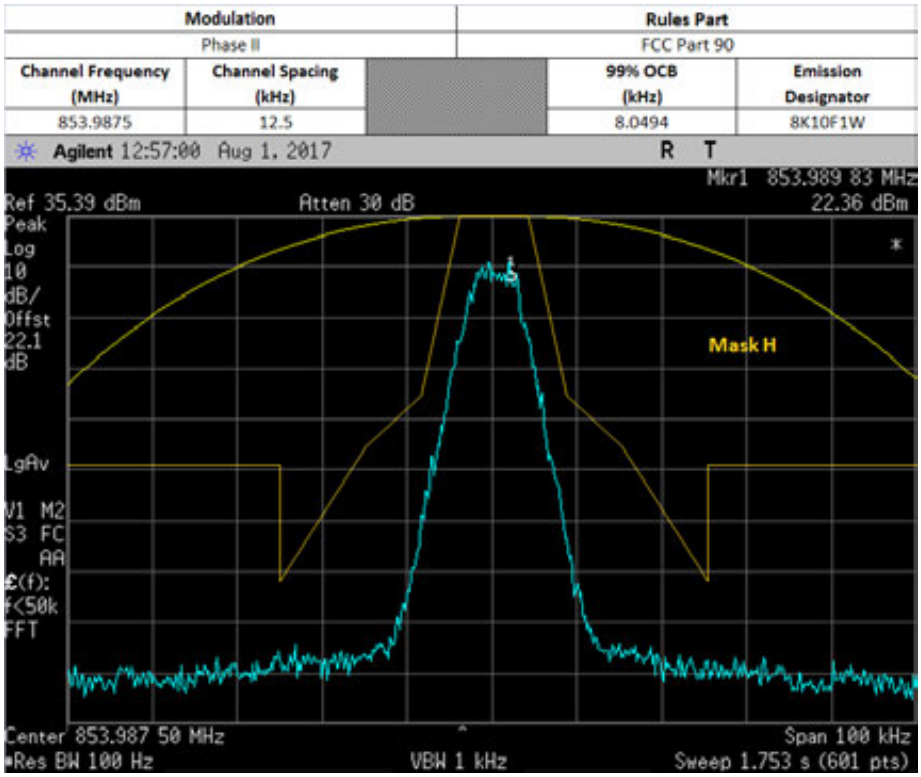
Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
853.9875	12.5	6.9522	8K10F1E



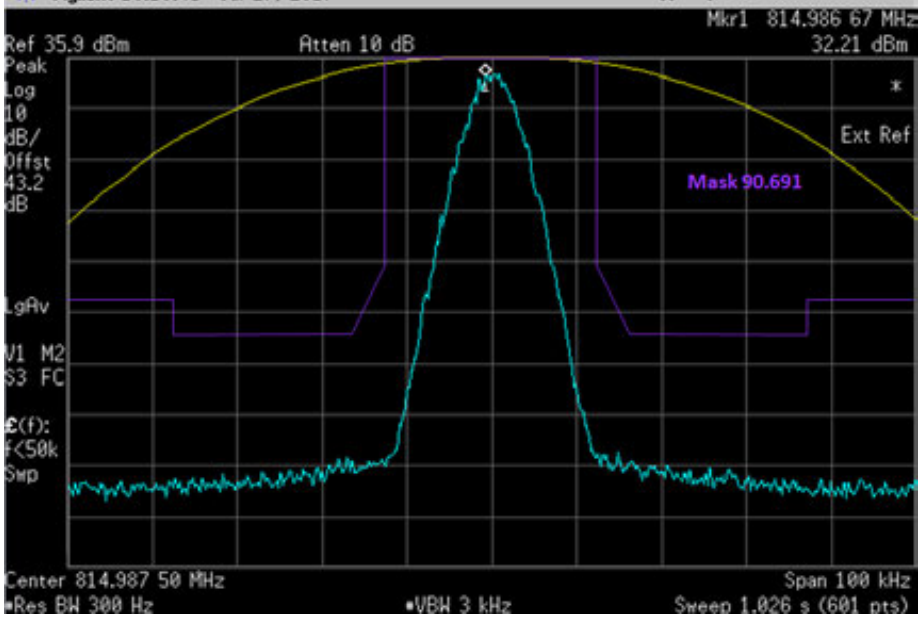
Modulation			Rules Part	
Phase II			FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
806.0125	12.5		8.0204	8K10F1W



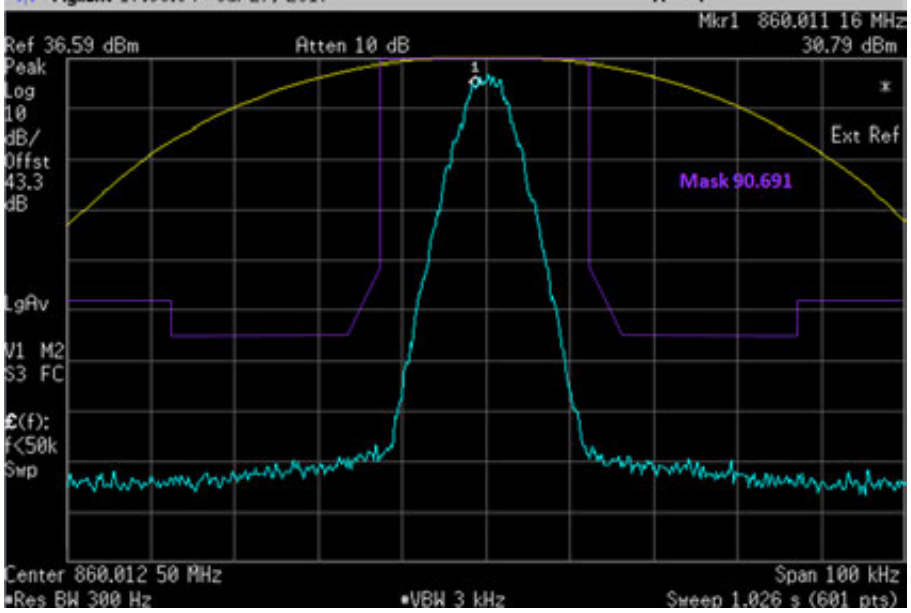
Modulation			Rules Part	
Phase II			FCC Part 90	
Channel Frequency (MHz)	Channel Spacing (kHz)		99% OCB (kHz)	Emission Designator
853.9875	12.5		8.0494	8K10F1W



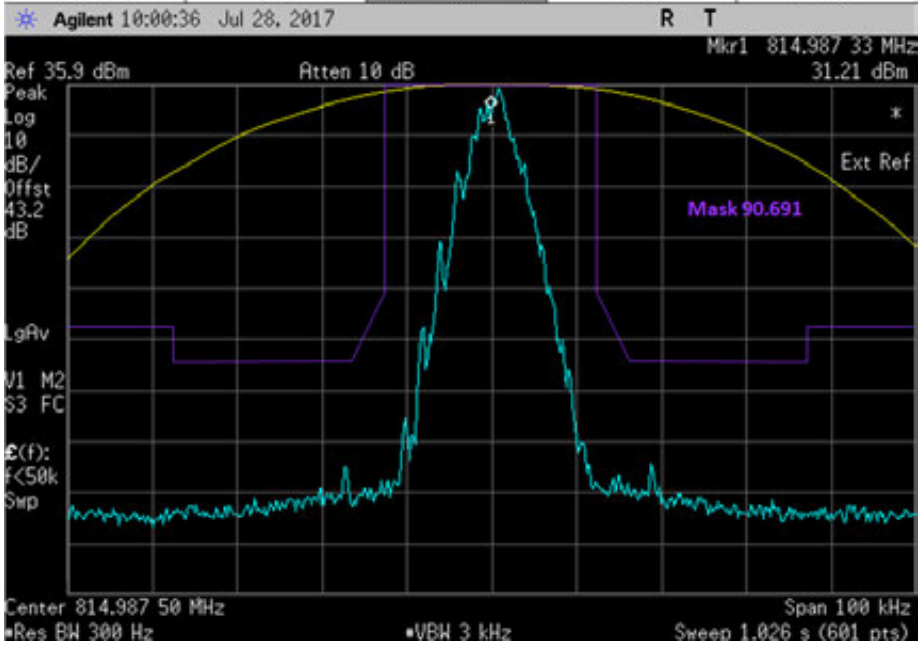
Modulation	Rules Part		
Digital Data	FCC part 90.691		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5	7.9871	8K10F1D



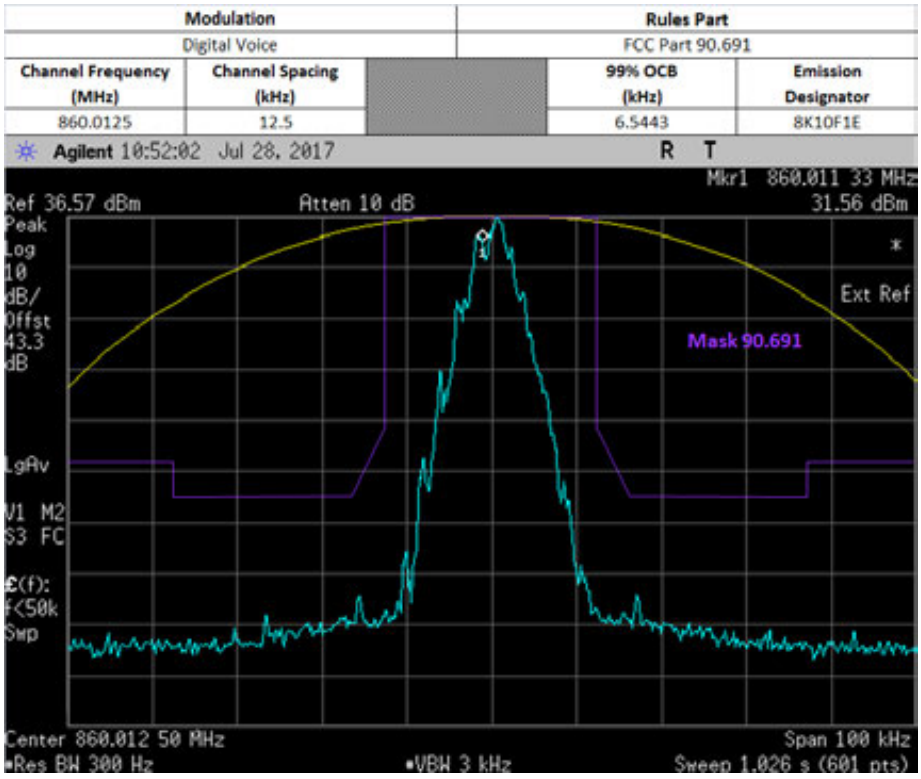
Modulation	Rules Part		
Digital Data	FCC part 90.691		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5	7.9846	8K10F1D



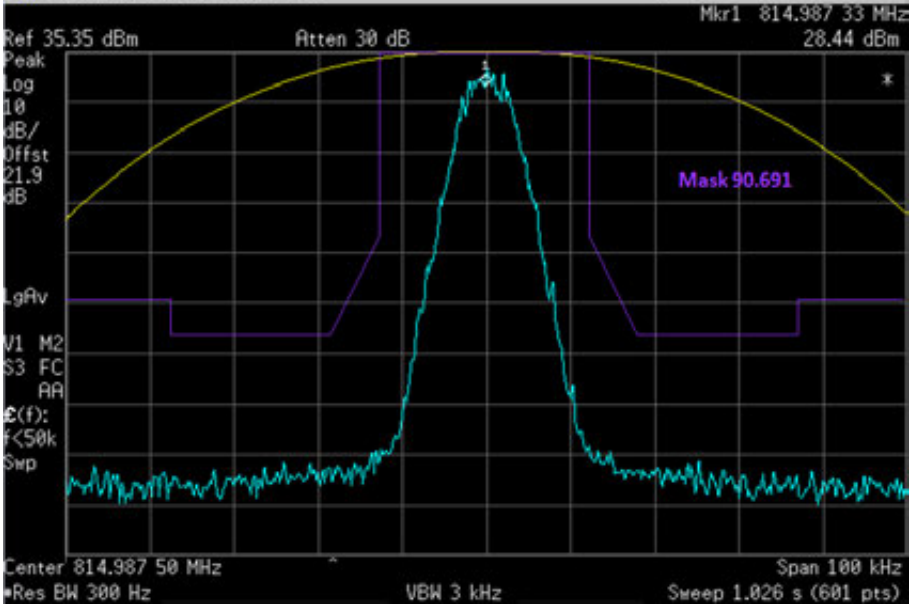
Modulation			Rules Part	
Digital Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5		7.0488	8K10F1E



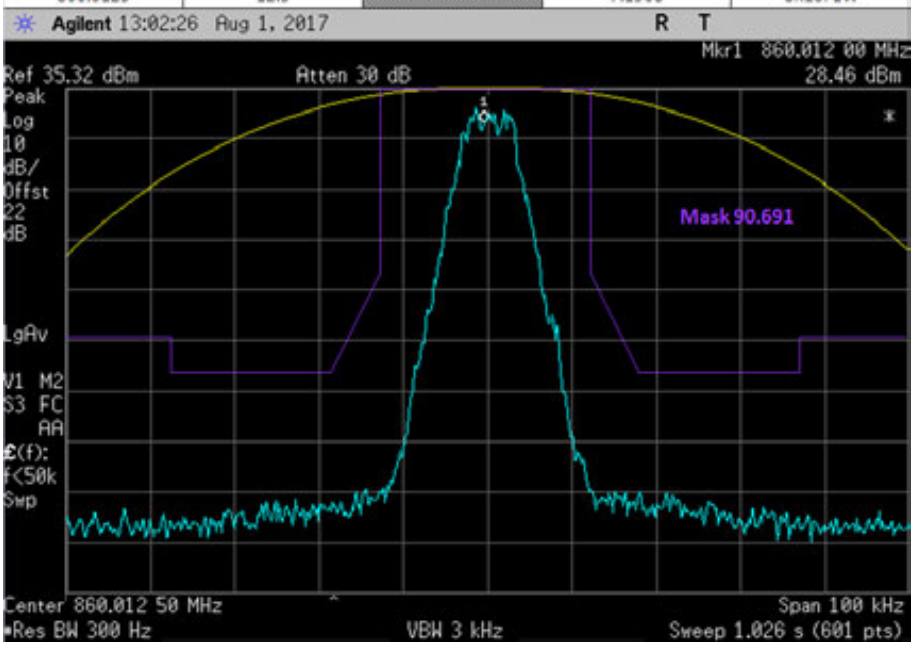
Modulation			Rules Part	
Digital Voice			FCC Part 90.691	
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5		6.5443	8K10F1E



Modulation	Rules Part			
Phase II	FCC Part 90.691			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5		7.9507	8K10F1W

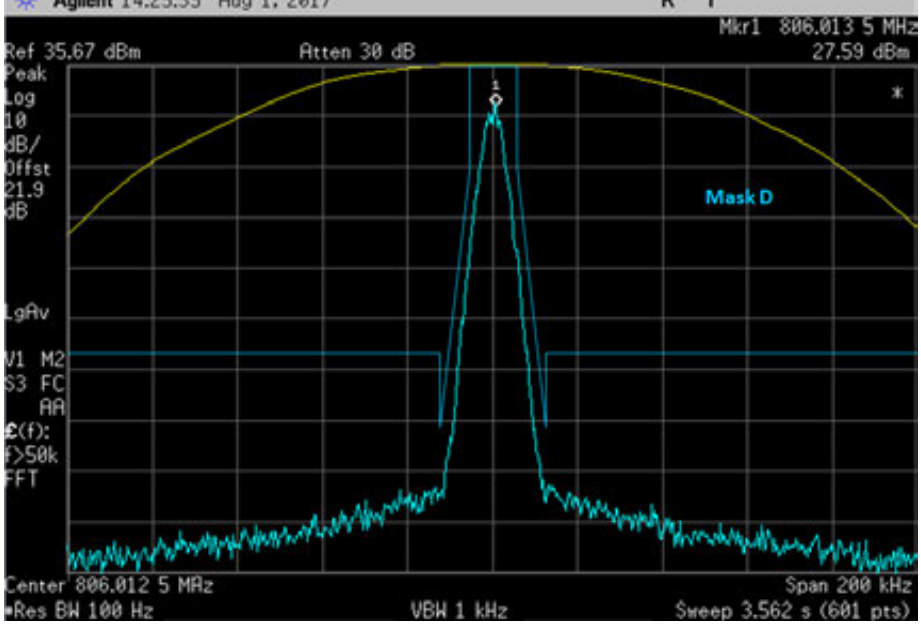


Modulation	Rules Part			
860.0125	FCC Part 90.691			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5		7.1968	8K10F1W

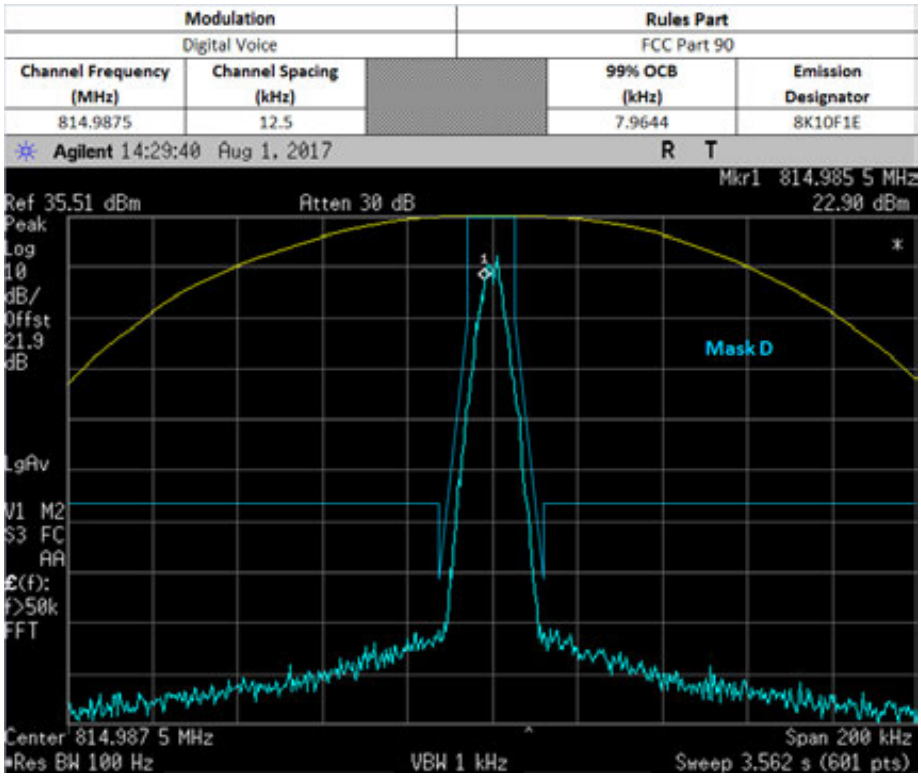


Encryption Mode

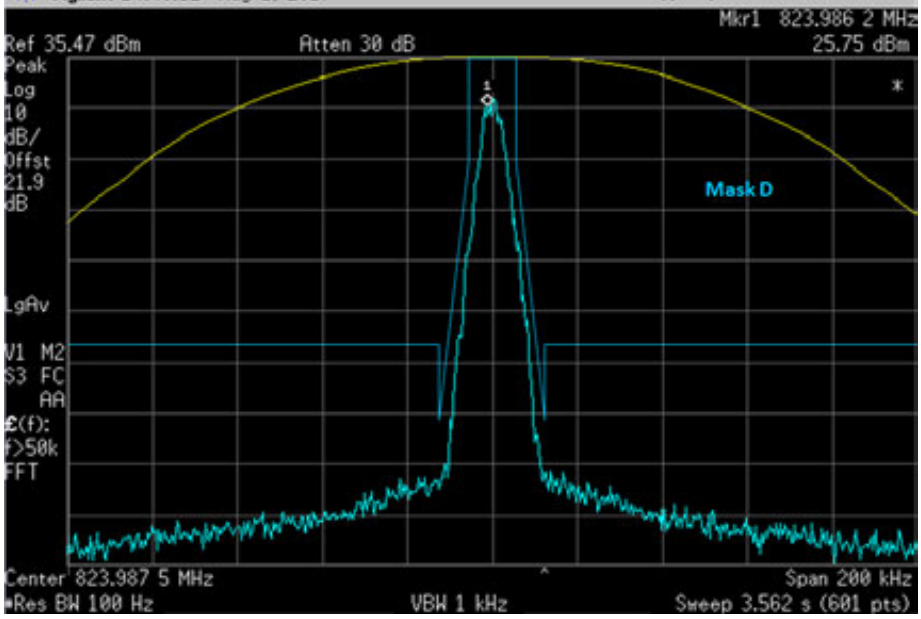
Modulation	Rules Part			
Digital Voice	FCC Part 90			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5		7.9642	8K10F1E



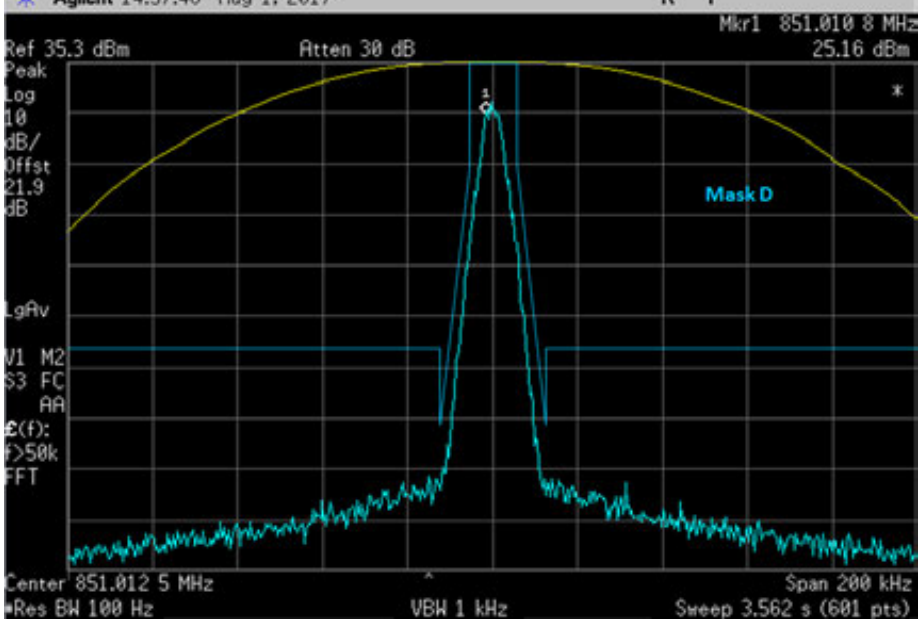
Modulation	Rules Part			
Digital Voice	FCC Part 90			
Channel Frequency (MHz)	**Channel Spacing (kHz)**		**99% OCB (kHz)**	**Emission Designator**
814.9875	12.5		7.9644	8K10F1E



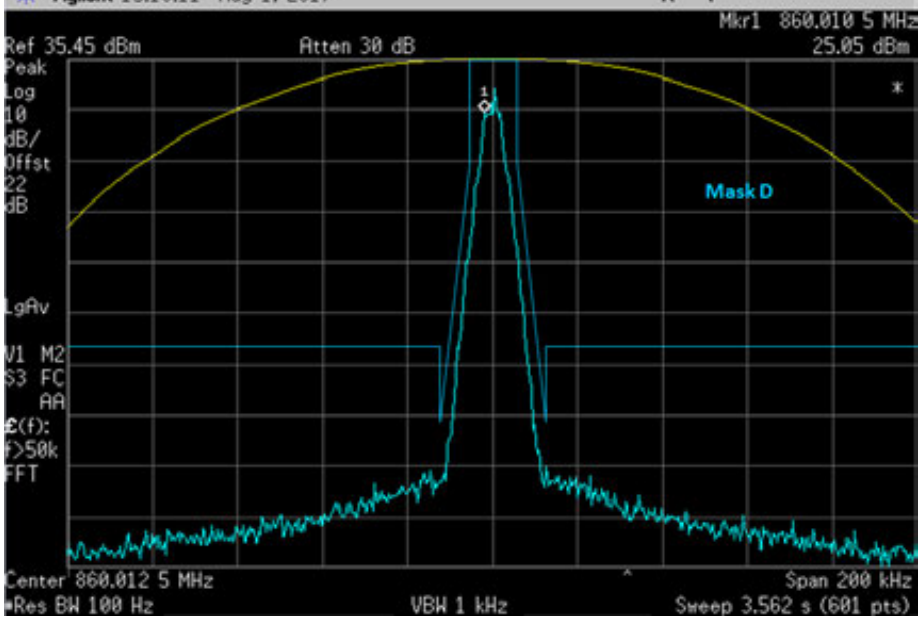
Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
823.9875	12.5	7.6817	8K10F1E



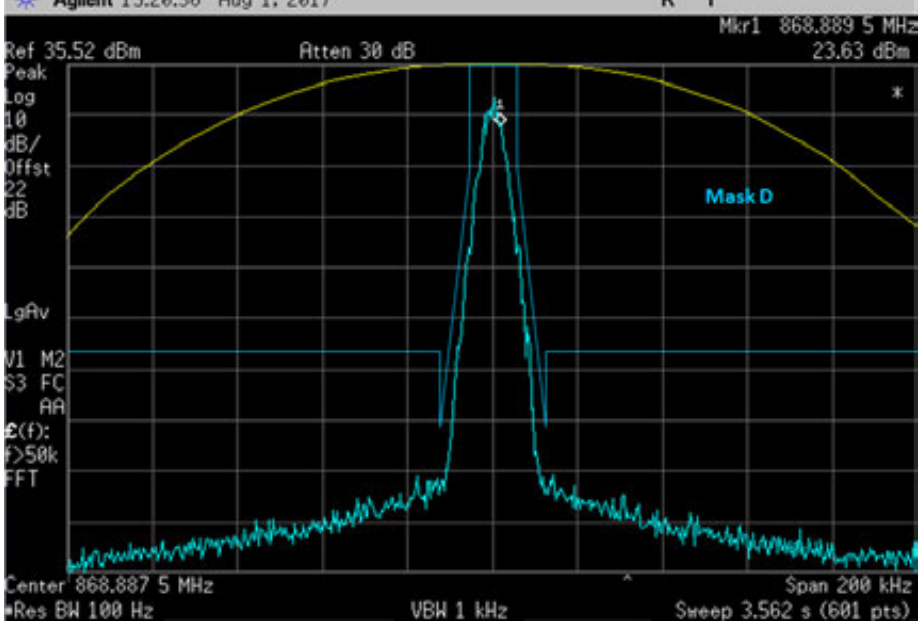
Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
851.0125	12.5	7.8912	8K10F1E



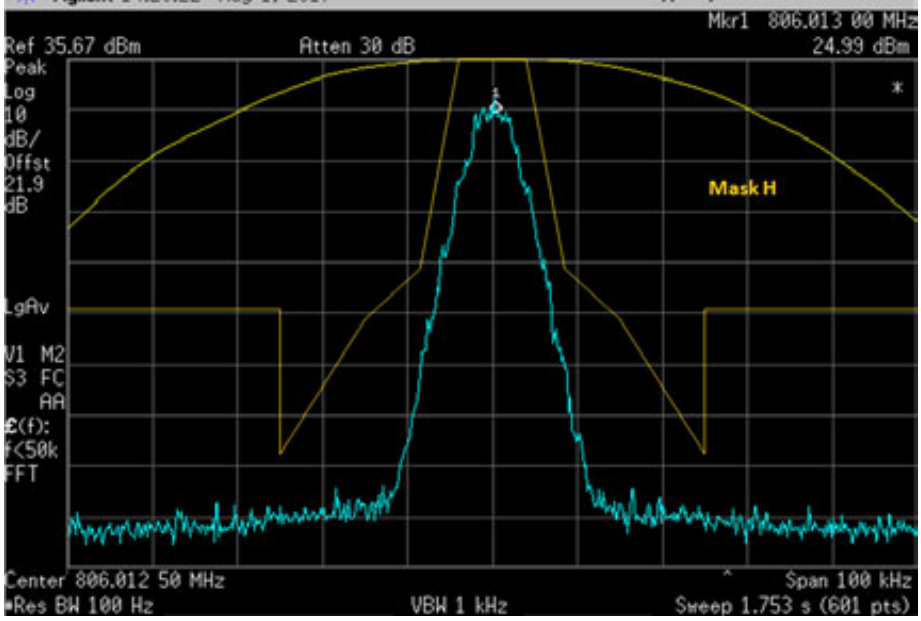
Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
860.0125	12.5	7.5296	8K10F1E



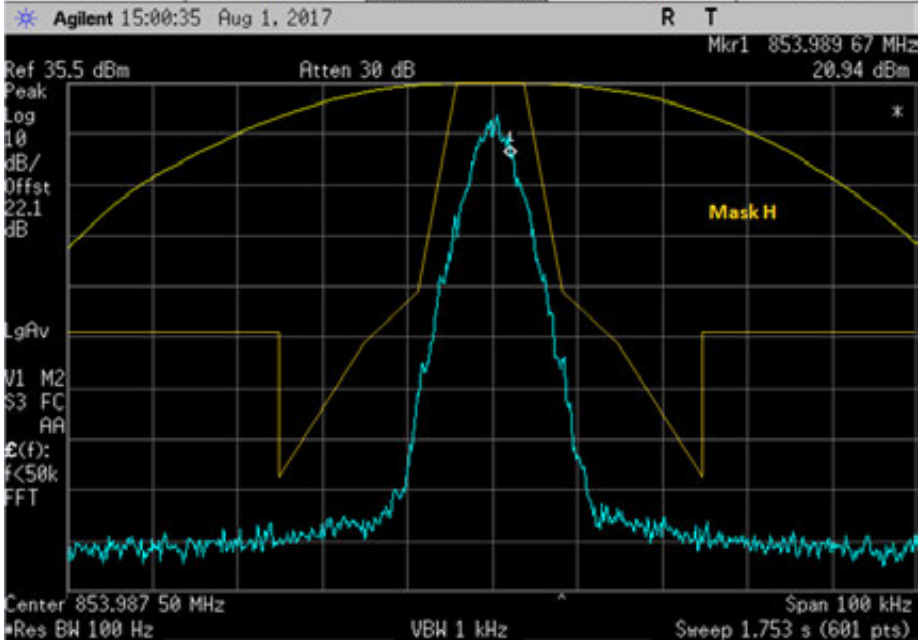
Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
868.8875	12.5	7.8627	8K10F1E



Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
806.0125	12.5	7.6824	8K10F1E

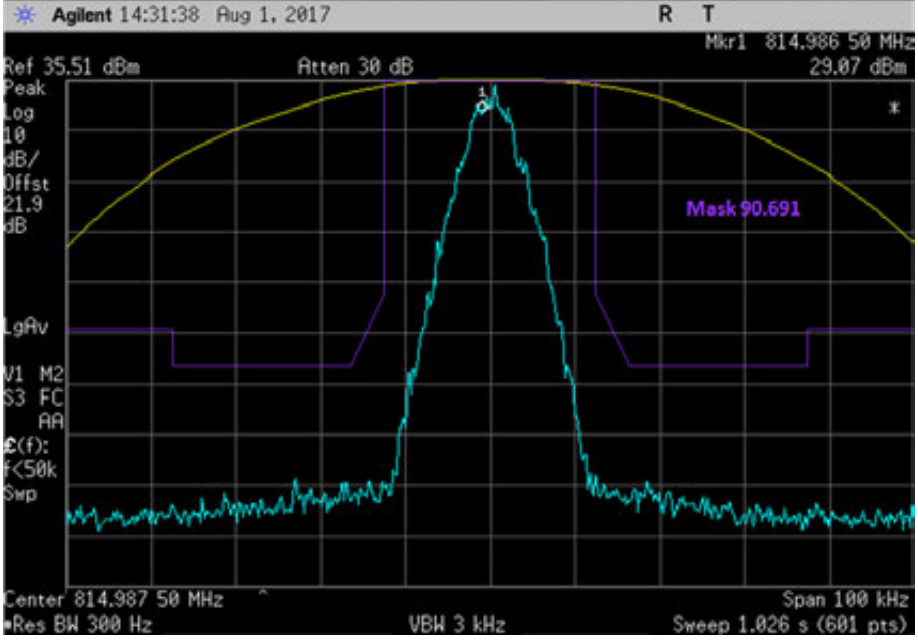


Modulation	Rules Part		
Digital Voice	FCC Part 90		
Channel Frequency (MHz)	**Channel Spacing (kHz)**	**99% OCB (kHz)**	**Emission Designator**
853.9875	12.5	7.9486	8K10F1E



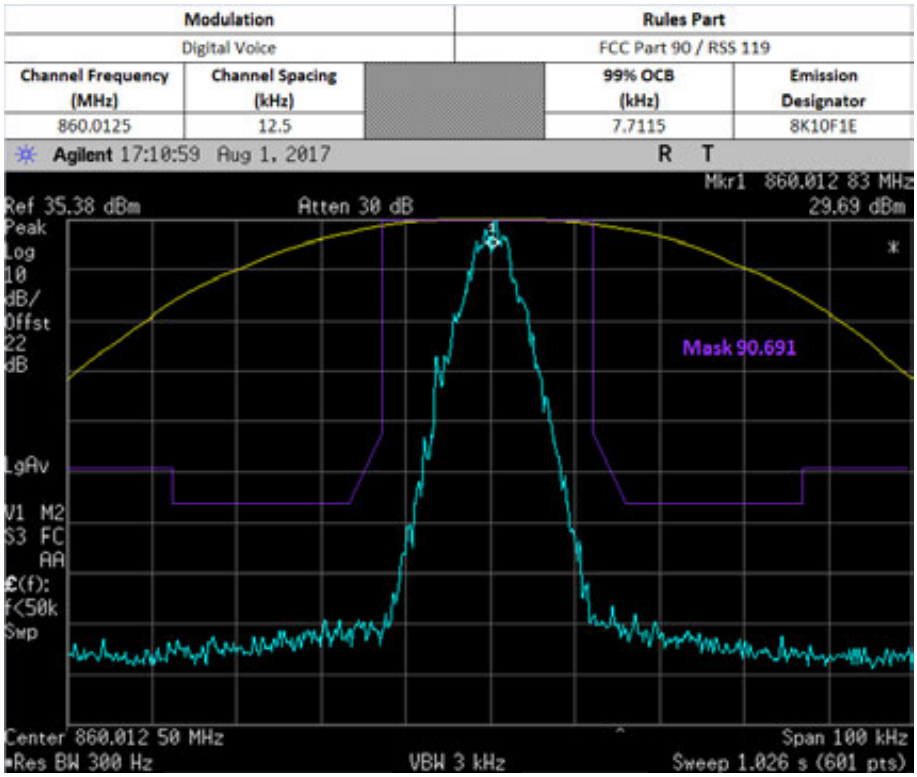
Modulation	Rules Part
Digital Voice	FCC Part 90.691

Channel Frequency (MHz)	Channel Spacing (kHz)	99% OCB (kHz)	Emission Designator
814.9875	12.5	7.5534	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	7.7115	8K10F1E

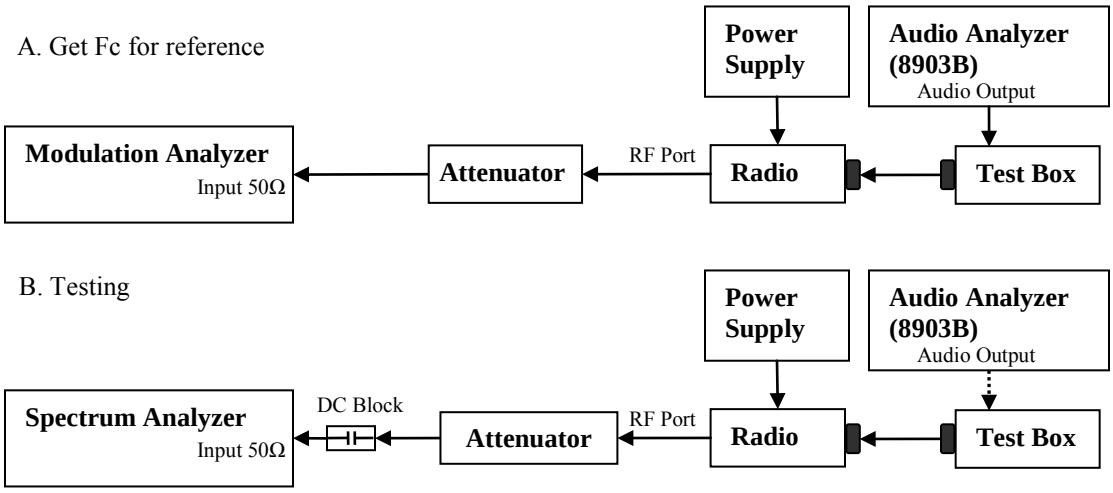


6.6.5. Test Limit

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.

Band Edge Conducted Spurious Emission (Part 22)

6.6.6. Test Setup (Analog)

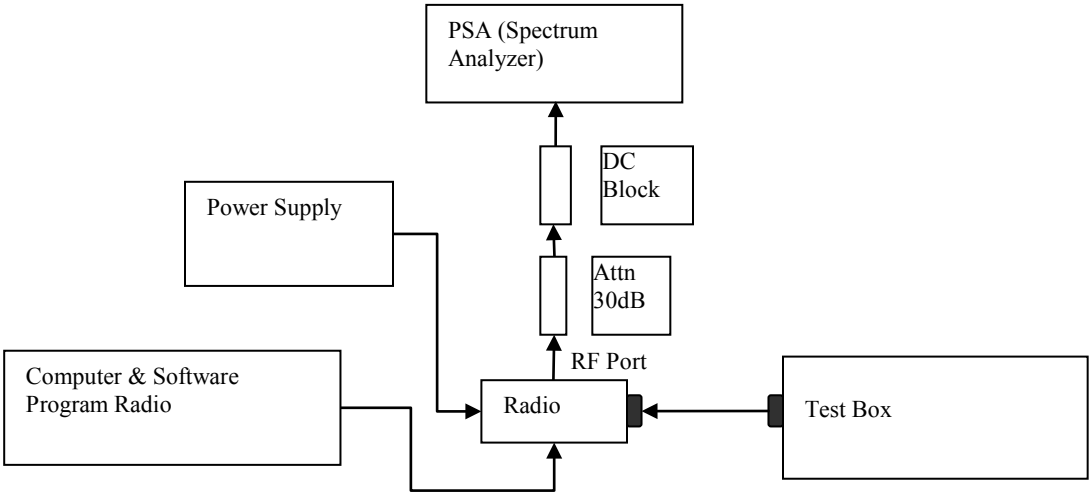


1) The DUT transmitter output port was connected to Modulation Analyzer.
2) Set the audio bandwidth filter to 15 kHz low pass filter and 50 kHz high pass filter.
3) Path loss for the measurement included.
4) Select the Occupied Bandwidth measurement for 99% and 26dB Emissions Bandwidth Measurement.
5) Key in the Fc and RBW= 100Hz.
6) Transmit the DUT and record the occupied Bandwidth frequencies.
7) Preset the spectrum analyzer for band edge measurement.
8) The band edges of lowest and highest channels were measured.
9) The center frequency of spectrum is the band edge frequency, span is 60 kHz and RBW is at least 1% of Emission Bandwidth.
10) Save the screen shot as modulated signal.
11) Remove the audio tone from audio analyzer to capture unmodulated signal.

6.6.7. Test Result (Analog)

Not Applicable

6.6.8. 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 RBW= 100Hz.
5) Transmit radio record the occupied Bandwidth frequencies.
6) Preset the spectrum analyzer for band edge measurement.
7) The band edges of lowest and highest channels were measured.
8) The center frequency of spectrum is the band edge frequency, span is 60 kHz and RBW is at least 1% of Emission Bandwidth.
9) Save the screen shot.

**Note:
- For Digital Modulation for 12.5 kHz Voice (F1E) and 12.5 kHz Data (F1D) would be the same. Therefore only measurements with F1E modulation shown below.

6.6.9. Test Result (Digital)

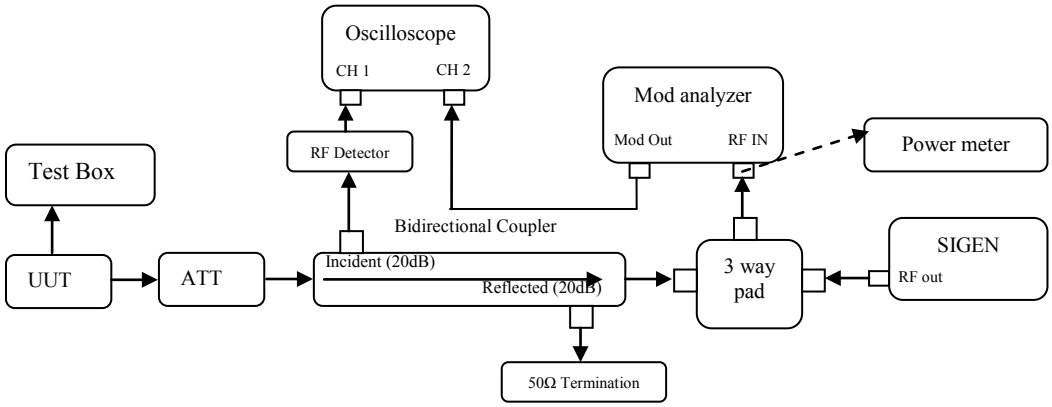
Not Applicable

6.6.10. 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.

6.7. Transient Frequency Behavior

6.7.1. 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 UUT is keying up.
6) Note the power level on power meter and dekey the UUT.
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) Set the horizontal sweep rate on the storage oscilloscope to 10 milliseconds per division and adjust the display to continuously view the 1000 Hz. Adjust the vertical amplitude control of the oscilloscope to display the 1000 Hz at □4 divisions vertically centered on the display.
10) Reduce 30dB attenuation and transmit the radio to get the trigger line.
11) Capture the screen shot for key-up (rising edge) and de-key (falling edge) mode.

6.7.2. Test Result

Not Applicable

6.7.3. 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.

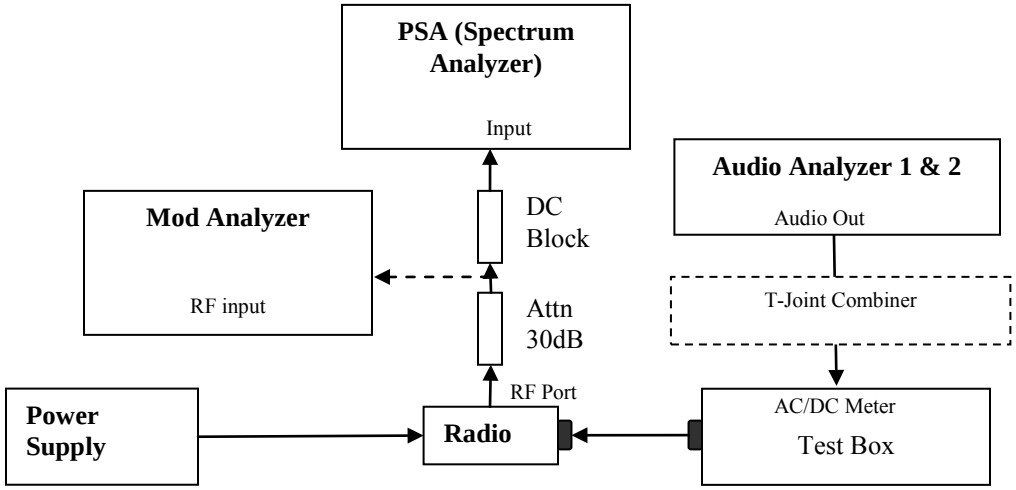
[2] During the time from the end of t_2 to the beginning of t_3, the frequency difference must not exceed the limits specified in §90.213.

[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.

6.8. Adjacent Channel Power

6.8.1. Test Setup (Analog)

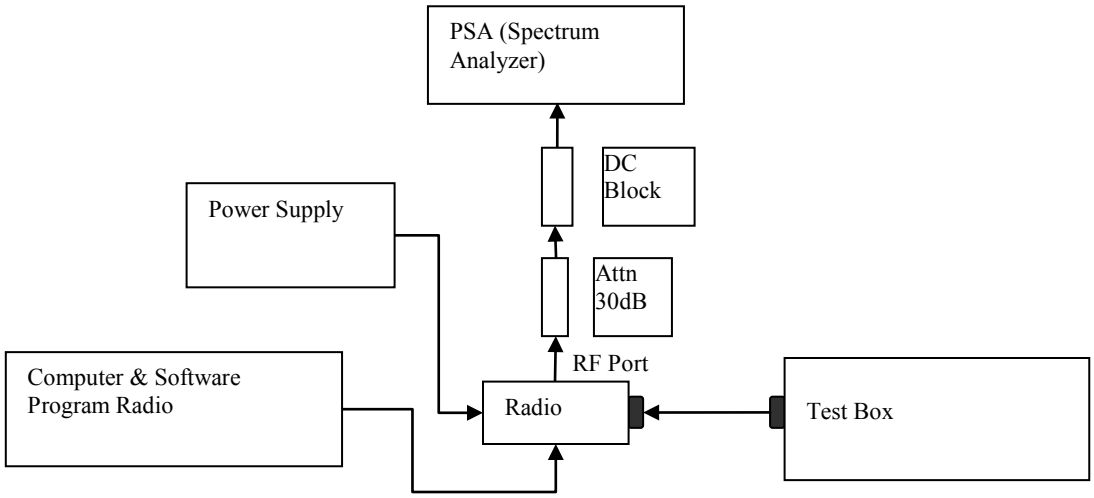


1) The DUT transmitter output port was connected to modulation analyzer.
2) Path loss for the measurement included.
3) Transmit the radio and turn on 1st audio analyzer with audio frequency 650Hz, 50% rated deviation, and record the amplitude value as AmpT1.
4) Turn off Audio analyzer 1 and turn on audio analyzer 2, set the audio frequency to 2.2 kHz and 50% deviation. Record the amplitude as AmpT2.
5) Turn both audio analyzers ON and up 10dB amplitude level.
6) Connect the output to PSA and set to assigned center frequency.
7) Set Span, RBW and VBW as shown in FCC rules part 90.543.
8) Transmit the radio and record the ACP value in dBc.

6.8.2. Test Result

Not Applicable

6.8.3. Test Setup (Digital)



1) Program and set radio to operate in desire test frequency and digital mode with modulation. (4FSK, C4FM, CQPSK or other digital modulation form).
2) Path loss for the measurement included.
3) Prepare setup as per picture.
4) Turn on the ACP Measurement – Press Measure, ACP.
5) Set Span, RBW and VBW as shown in FCC rules part 90.543.
6) Transmit the radio and record the ACP value in dBc.

6.8.4. Test Result

Not Applicable

6.8.5. 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

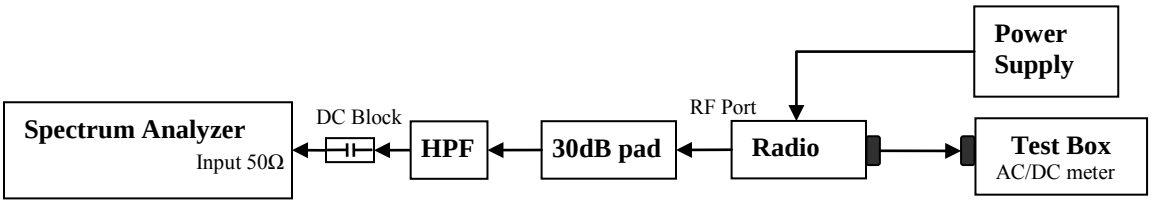
Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
9.375	6.25	−40
15.625	6.25	−60
21.875	6.25	−60
37.5	25	−60
62.5	25	−65
87.5	25	−65
150	100	−65
250	100	−65
350.00	100	−65
>400 kHz to 12 MHz	30 (s)	−80
12 MHz to paired receive band	30 (s)	−80
In the paired receive band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

6.9. Conducted Spurious Emission

6.9.1. Test Setup

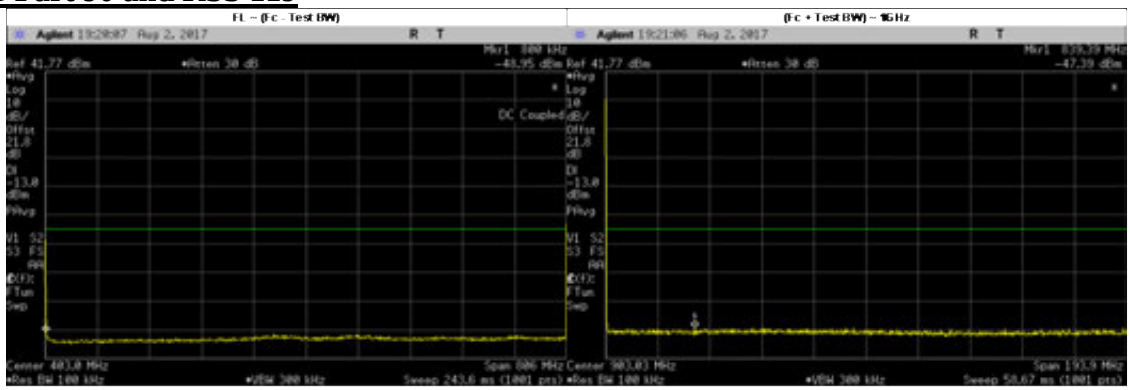


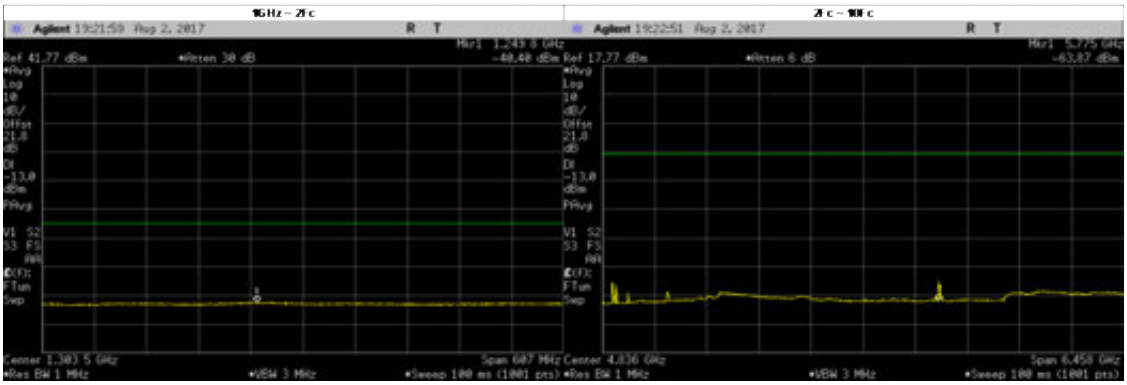
1) The DUT transmitter output port was connected to Spectrum Analyzer with above setup.
2) Program and set radio to operate in desire test frequency and mode. (Analog / digital modulation form).
3) Adjust the PSA RBW = 100kHz for spur emission below 1GHz, and 1MHz for spur emission above 1GHz.
4) Set the Ref offset from the pathloss offset calibration file.
5) Adjust the center frequency of the spectrum analyzer for incremental coverage of the range from:
   (a) The lowest radio frequency to Fc – Test BW
   (b) Fc + Test BW to Freq < 2Fc.
6) Record the levels of spurious emissions and dekey the UUT.
7) Turn On HPF path and Key up the UUT.
8) Adjust the PSA Freq for incremental coverage of range from 2Fc to 10Fc.
9) The levels recorded are the absolute levels of conducted spurious emissions in dBm.

6.9.2. Test Result (Analog)

Analog: 806.0125 MHz, 25.0 kHz Channel Spacing, Max Power

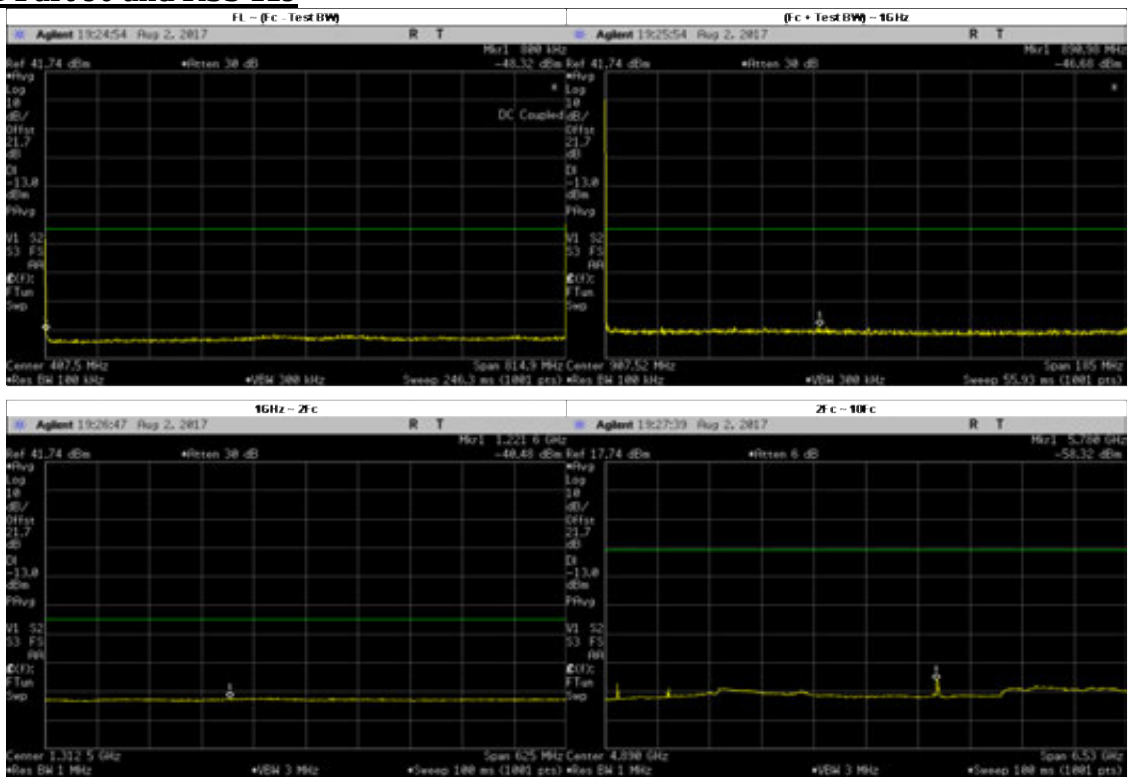
FCC Part 90 and RSS 119





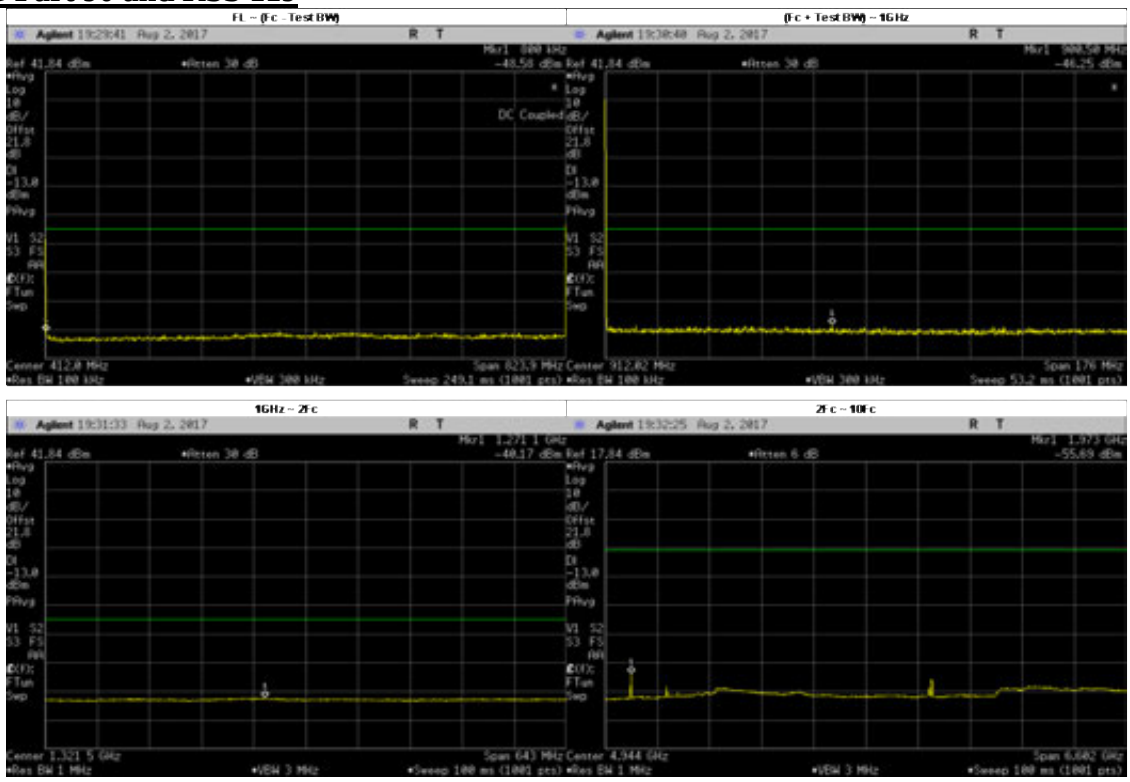
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	353.4691	-49.6700	-13	PASS
(Fc + Test BW) ~ 1GHz	839.3864	-47.3900	-13	PASS
1GHz ~ 2Fc	1249.8440	-40.4000	-13	PASS
2Fc ~ 10Fc	5774.7900	-57.2700	-13	PASS
	1781.2190	-58.7900	-13	PASS
	1768.3160	-60.0100	-13	PASS
	1768.3160	-60.0100	-13	PASS
	1612.0250	-64.2969	-13	PASS
	2418.0370	-61.4726	-13	PASS
	3224.0500	-61.7755	-13	PASS
	4030.0620	-62.6882	-13	PASS
	4836.0750	-64.1245	-13	PASS
	5642.0870	-63.9605	-13	PASS
	6448.1000	-63.9588	-13	PASS
	7254.1130	-61.1167	-13	PASS
	8060.1250	-62.5400	-13	PASS

Analog: 814.9875 MHz, 25.0 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



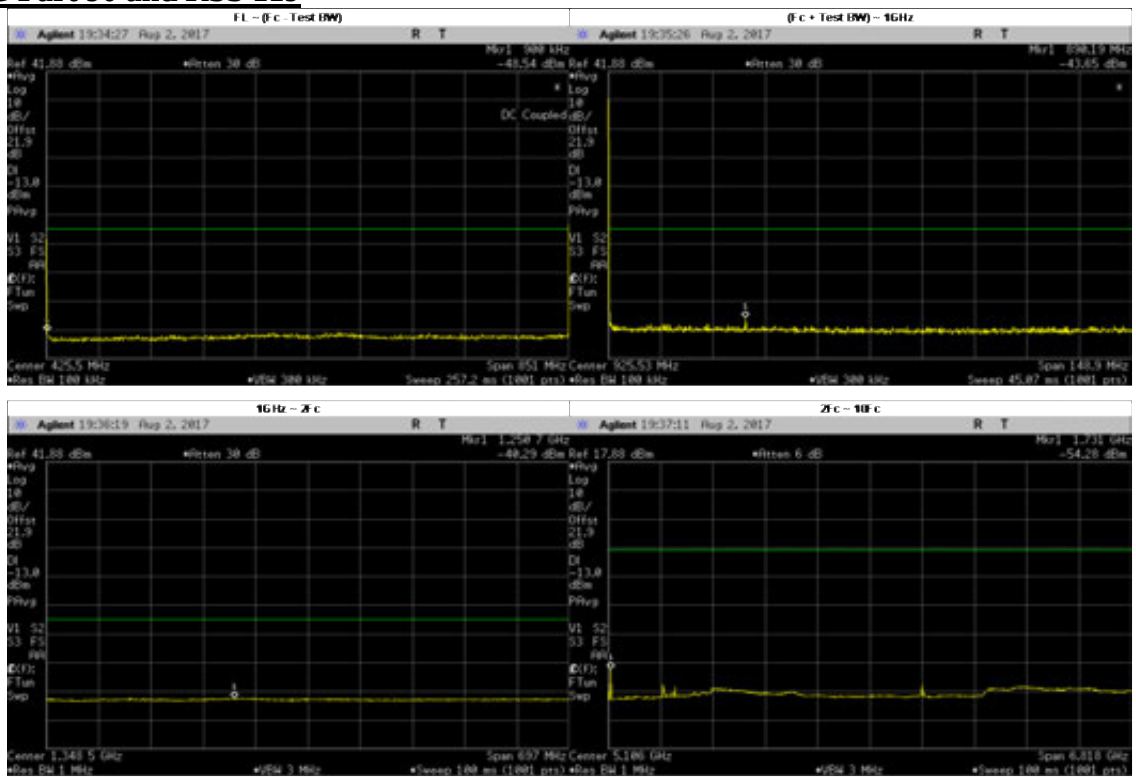
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	464.0542	-49.7300	-13	PASS
(Fc + Test BW) ~ 1GHz	890.9811	-46.6800	-13	PASS
1GHz ~ 2Fc	1221.6450	-40.4800	-13	PASS
2Fc ~ 10Fc	5780.3660	-57.8400	-13	PASS
	1629.9750	-64.7664	-13	PASS
	2444.9630	-63.9778	-13	PASS
	3259.9500	-61.9275	-13	PASS
	4074.9370	-62.3216	-13	PASS
	4889.9250	-64.1265	-13	PASS
	5704.9130	-63.6769	-13	PASS
	6519.9000	-63.8027	-13	PASS
	7334.8870	-61.3651	-13	PASS
	8149.8750	-62.4800	-13	PASS

Analog: 823.9875 MHz, 25.0 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



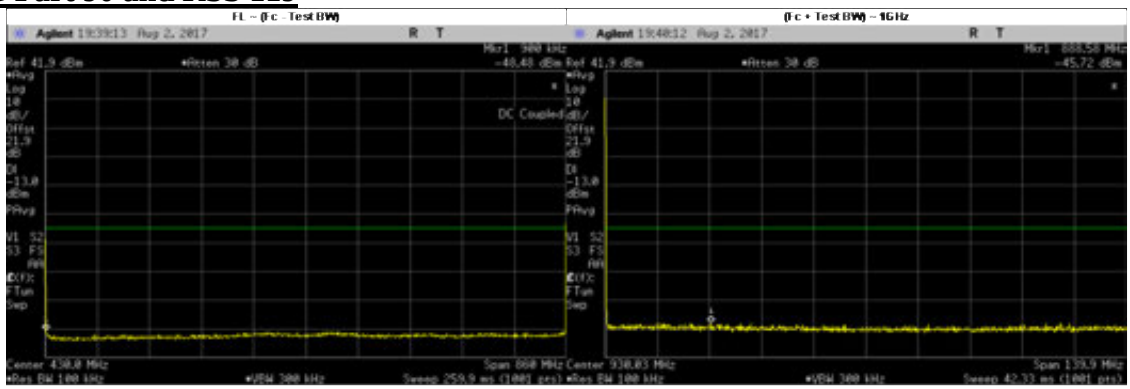
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	483.9950	-48.8100	-13	PASS
(Fc + Test BW) ~ 1GHz	900.5047	-46.2500	-13	PASS
1GHz ~ 2Fc	1271.0640	-40.1600	-13	PASS
2Fc ~ 10Fc	1972.7400	-55.6900	-13	PASS
	5778.2310	-58.2200	-13	PASS
	1647.9750	-64.7514	-13	PASS
	2471.9630	-63.5745	-13	PASS
	3295.9500	-61.6443	-13	PASS
	4119.9370	-62.5547	-13	PASS
	4943.9250	-63.9265	-13	PASS
	5767.9130	-61.2451	-13	PASS
	6591.9000	-63.0664	-13	PASS
	7415.8870	-61.7407	-13	PASS
	8239.8750	-61.1700	-13	PASS

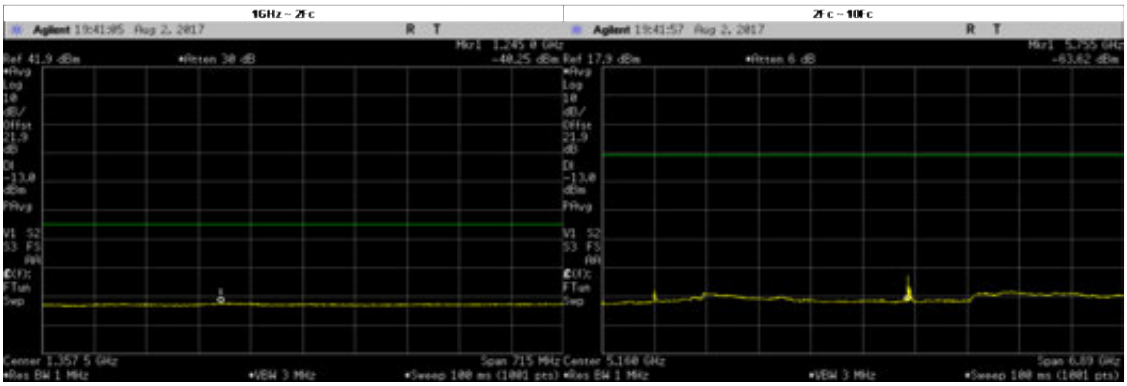
Analog: 851.0125 MHz, 25.0 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	453.9642	-48.9400	-13	PASS
(Fc + Test BW) ~ 1GHz	890.1939	-43.6500	-13	PASS
1GHz ~ 2Fc	1250.6780	-40.2900	-13	PASS
2Fc ~ 10Fc	1731.0810	-54.2800	-13	PASS
	2412.2100	-59.6200	-13	PASS
	5783.7980	-59.7800	-13	PASS
	1702.0250	-63.8757	-13	PASS
	2553.0370	-63.8047	-13	PASS
	3404.0500	-61.8004	-13	PASS
	4255.0620	-63.4079	-13	PASS
	5106.0750	-63.7465	-13	PASS
	5957.0870	-63.8411	-13	PASS
	6808.1000	-61.3947	-13	PASS
	7659.1130	-61.2541	-13	PASS
	8510.1250	-61.5500	-13	PASS

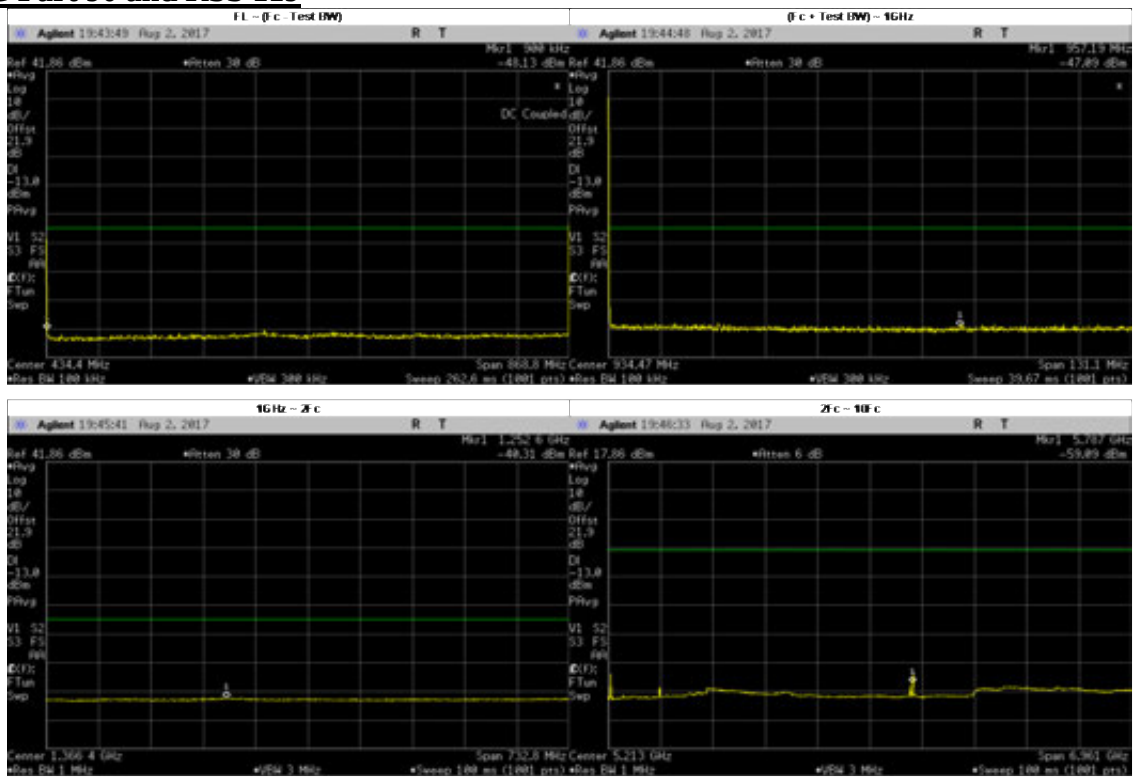
<u>Analog:</u> 860.0125 MHz, 25.0 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119





Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	464.7791	-48.8900	-13	PASS
(Fc + Test BW) ~ 1GHz	888.5812	-45.7200	-13	PASS
1GHz ~ 2Fc	1245.0090	-40.2500	-13	PASS
2Fc ~ 10Fc	5755.4730	-54.8700	-13	PASS
	2410.2300	-59.8500	-13	PASS
	1720.0250	-63.9329	-13	PASS
	2580.0370	-63.3330	-13	PASS
	3440.0500	-61.7694	-13	PASS
	4300.0620	-63.5310	-13	PASS
	5160.0750	-63.7240	-13	PASS
	6020.0870	-63.6383	-13	PASS
	6880.1000	-61.6514	-13	PASS
	7740.1130	-61.1436	-13	PASS
	8600.1250	-62.0300	-13	PASS

Analog: 868.8875 MHz, 25.0 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119

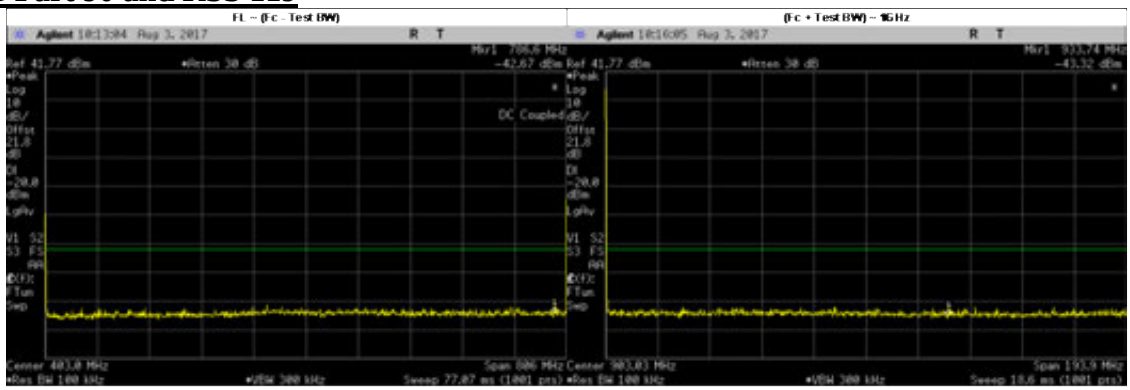


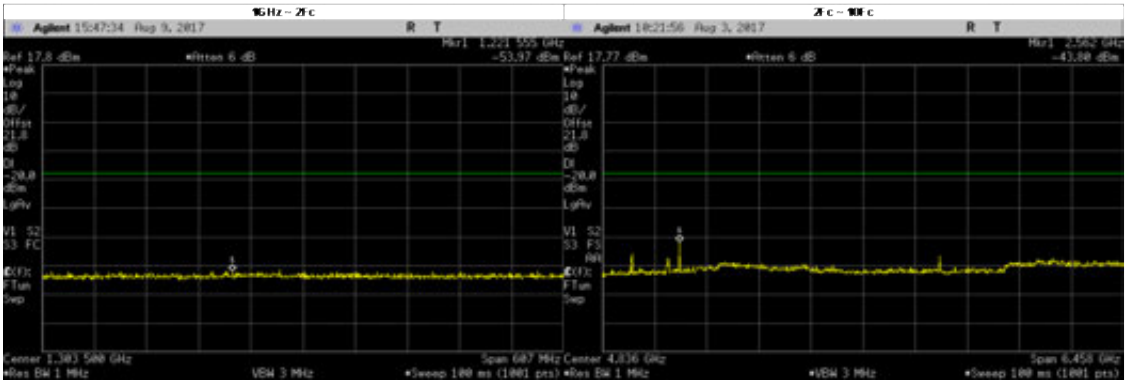
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	361.9485	-48.5400	-13	PASS
(Fc + Test BW) ~ 1GHz	957.1854	-46.0200	-13	PASS
1GHz ~ 2Fc	1252.5550	-40.3100	-13	PASS
2Fc ~ 10Fc	5787.0420	-55.9700	-13	PASS
	1737.7750	-63.9704	-13	PASS
	2606.6620	-63.6524	-13	PASS
	3475.5500	-61.9120	-13	PASS
	4344.4370	-63.6617	-13	PASS
	5213.3250	-63.6250	-13	PASS
	6082.2120	-63.7859	-13	PASS
	6951.1000	-61.2608	-13	PASS
	7819.9880	-61.3124	-13	PASS
	8688.8750	-63.1300	-13	PASS

6.9.3. Test Result (Digital)

C4FM: 806.0125 MHz, 12.5 kHz Channel Spacing, Max Power

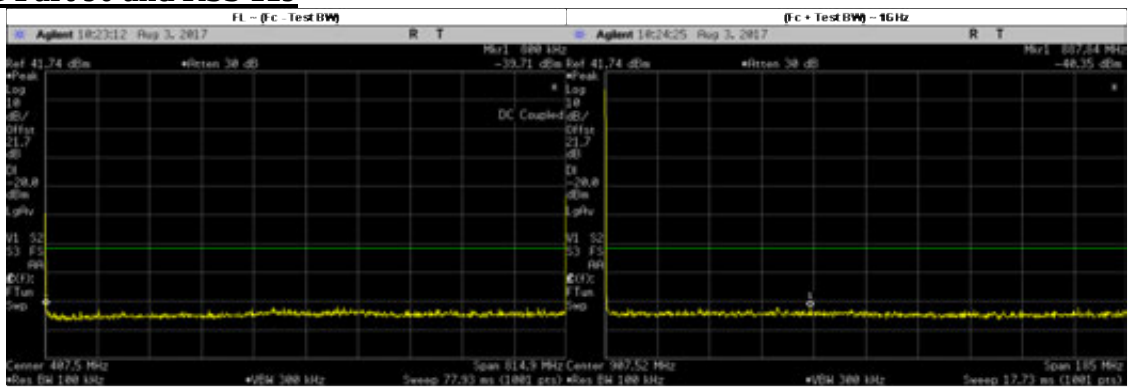
FCC Part 90 and RSS 119

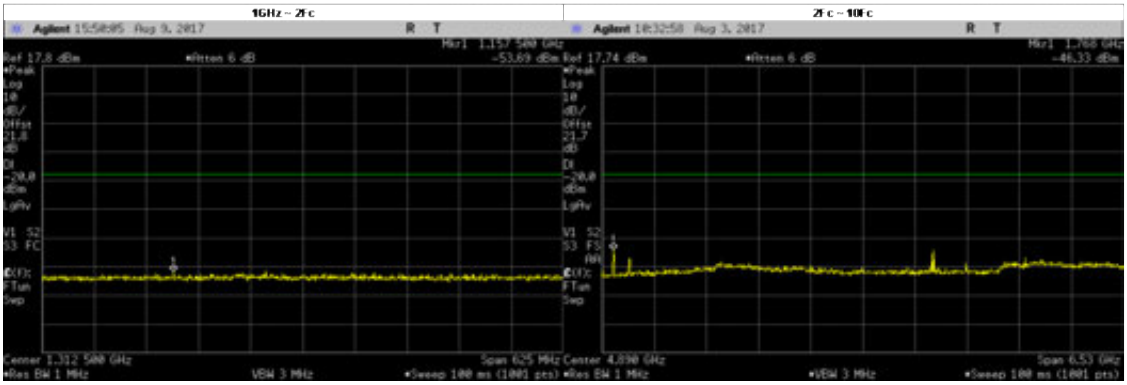




Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	719.0065	-40.1500	-20	PASS
(Fc + Test BW) ~ 1GHz	933.7396	-39.8905	-20	PASS
1GHz ~ 2Fc	1221.5550	-53.9700	-20	PASS
2Fc ~ 10Fc	2561.8690	-43.8000	-20	PASS
	1974.7690	-48.1200	-20	PASS
	1612.0250	-54.6780	-20	PASS
	2418.0370	-52.0595	-20	PASS
	3224.0500	-51.2173	-20	PASS
	4030.0620	-52.8364	-20	PASS
	4836.0750	-54.4985	-20	PASS
	5642.0870	-54.2158	-20	PASS
	6448.1000	-54.2247	-20	PASS
	7254.1130	-51.4900	-20	PASS
	8060.1250	-53.9000	-20	PASS

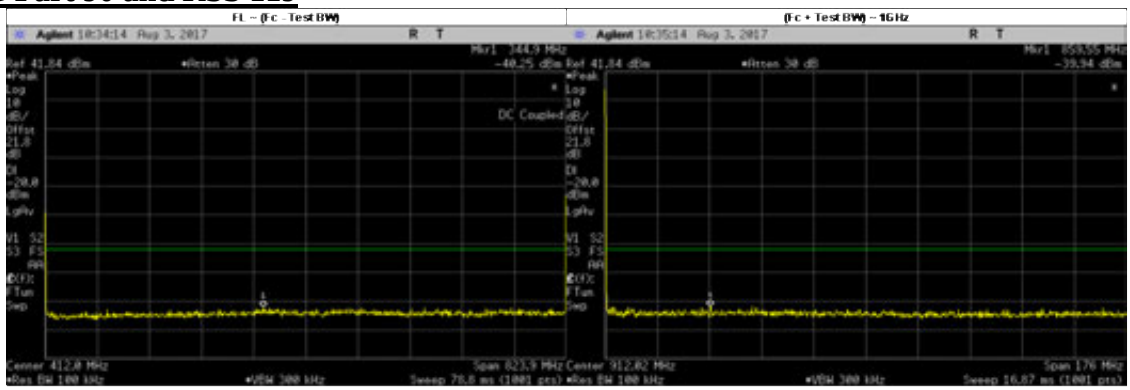
C4FM: 814.9875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119

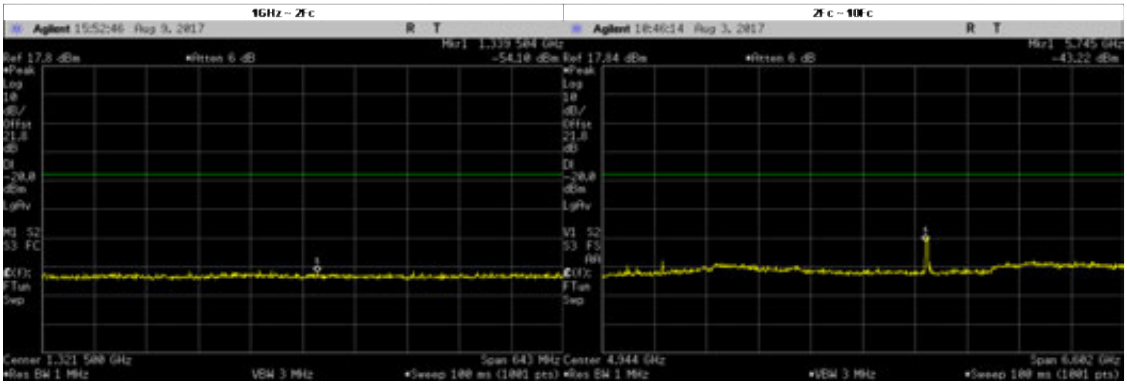




Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	457.5413	-40.0800	-20	PASS
(Fc + Test BW) ~ 1GHz	887.8399	-40.3500	-20	PASS
1GHz ~ 2Fc	1157.5000	-53.6900	-20	PASS
2Fc ~ 10Fc	1768.4890	-46.3300	-20	PASS
	1964.1910	-49.4600	-20	PASS
	1629.9750	-54.1143	-20	PASS
	2444.9630	-54.2707	-20	PASS
	3259.9500	-52.6114	-20	PASS
	4074.9370	-52.7671	-20	PASS
	4889.9250	-54.5310	-20	PASS
	5704.9130	-53.8522	-20	PASS
	6519.9000	-54.1661	-20	PASS
	7334.8870	-50.7947	-20	PASS
	8149.8750	-53.7200	-20	PASS

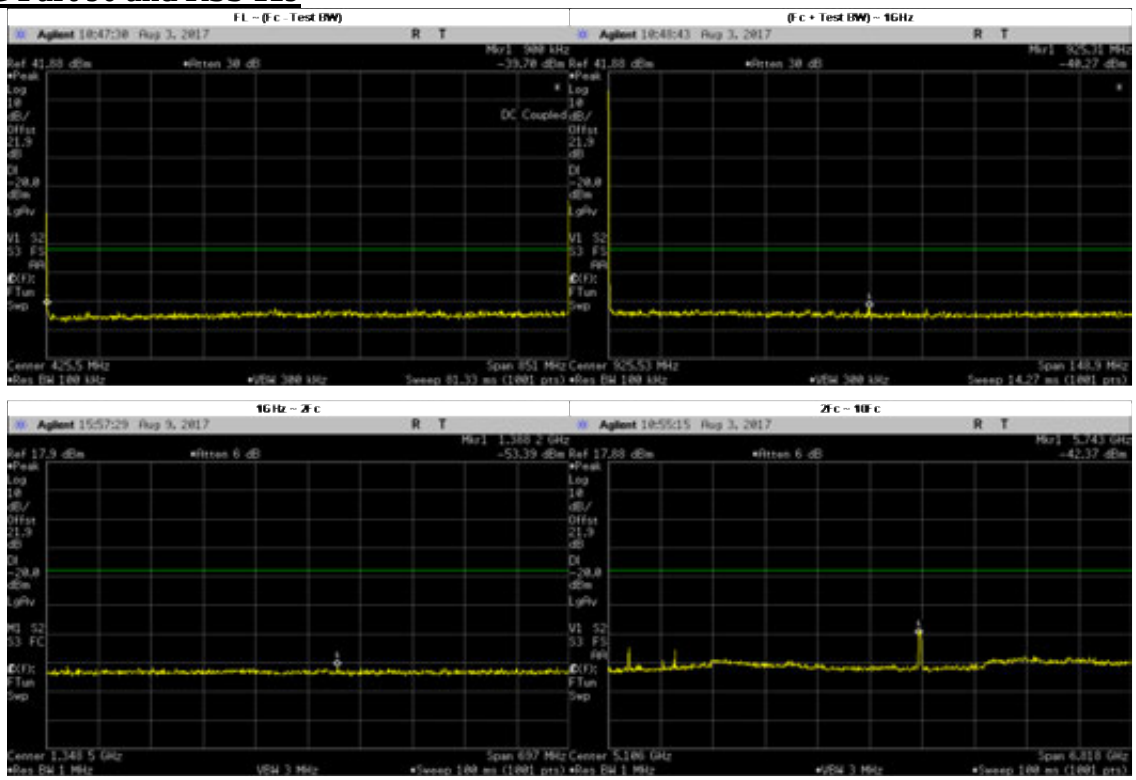
C4FM: 823.9875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119





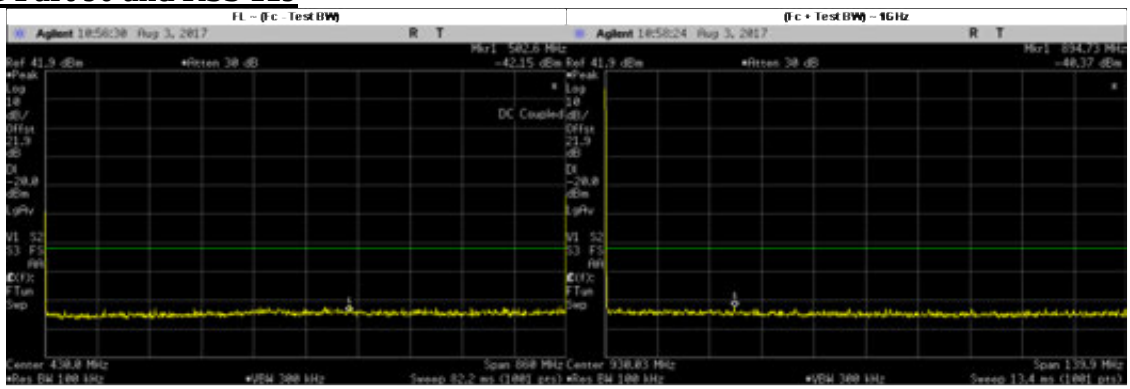
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	344.8902	-40.2500	-20	PASS
(Fc + Test BW) ~ 1GHz	859.5464	-40.0459	-20	PASS
1GHz ~ 2Fc	1339.5040	-54.1000	-20	PASS
2Fc ~ 10Fc	5745.2550	-42.0500	-20	PASS
	1647.9750	-55.4105	-20	PASS
	2471.9630	-53.7978	-20	PASS
	3295.9500	-52.0165	-20	PASS
	4119.9370	-52.5833	-20	PASS
	4943.9250	-54.5440	-20	PASS
	5767.9130	-45.6986	-20	PASS
	6591.9000	-52.5134	-20	PASS
	7415.8870	-52.4330	-20	PASS
	8239.8750	-54.2300	-20	PASS

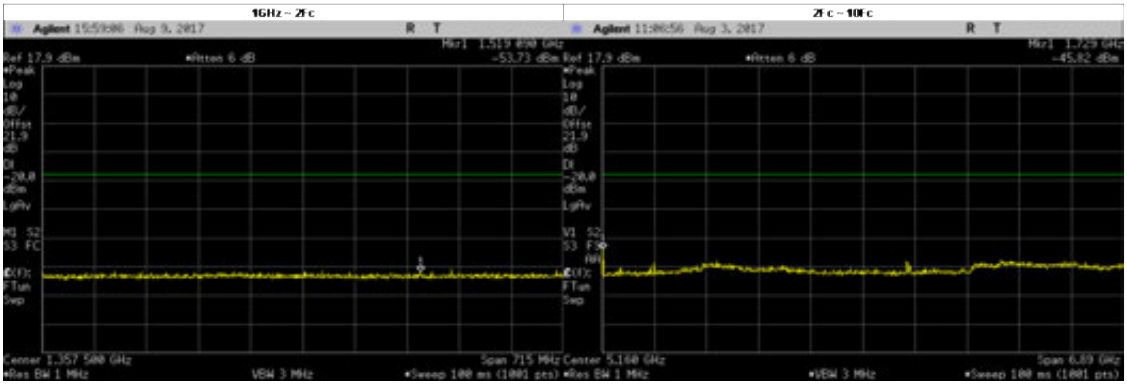
C4FM: 851.0125 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	371.5042	-40.6400	-20	PASS
(Fc + Test BW) ~ 1GHz	925.3081	-40.2700	-20	PASS
1GHz ~ 2Fc	1388.2000	-53.3900	-20	PASS
2Fc ~ 10Fc	5742.9310	-40.8300	-20	PASS
	1969.4760	-46.7700	-20	PASS
	1702.0250	-53.8078	-20	PASS
	2553.0370	-53.4445	-20	PASS
	3404.0500	-52.2603	-20	PASS
	4255.0620	-53.6360	-20	PASS
	5106.0750	-54.0260	-20	PASS
	5957.0870	-54.3377	-20	PASS
	6808.1000	-51.8922	-20	PASS
	7659.1130	-51.0468	-20	PASS
	8510.1250	-53.2300	-20	PASS

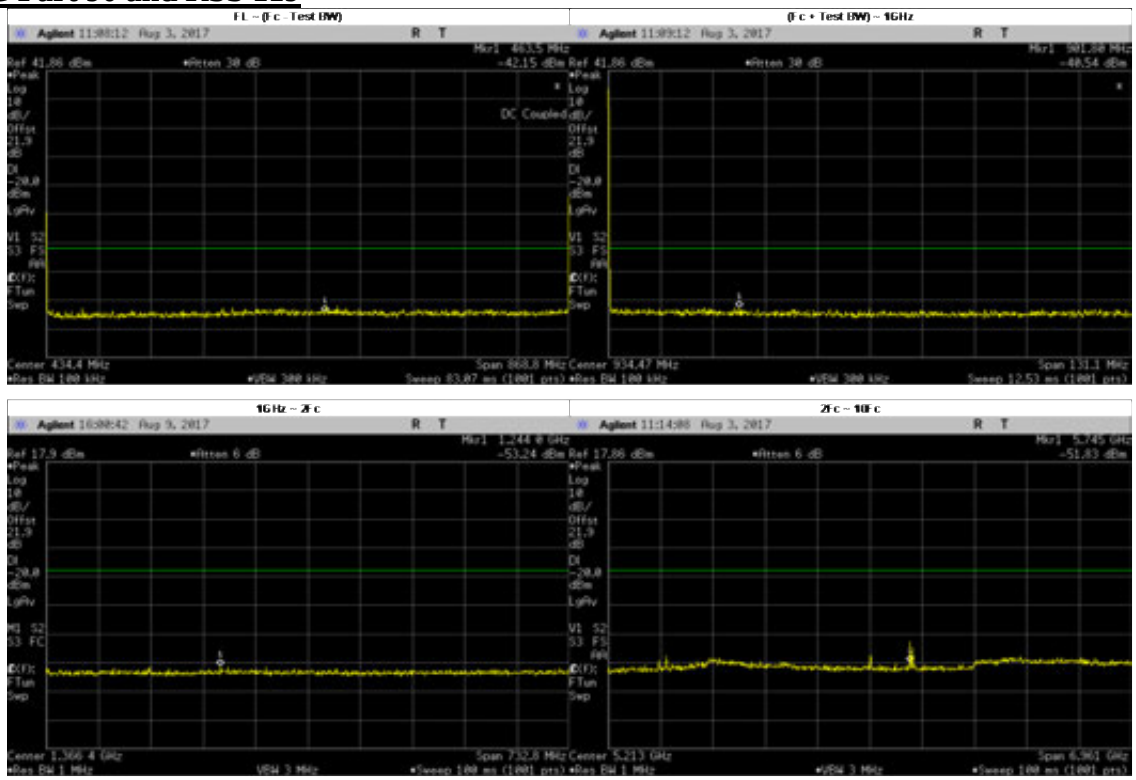
C4FM: 860.0125 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119





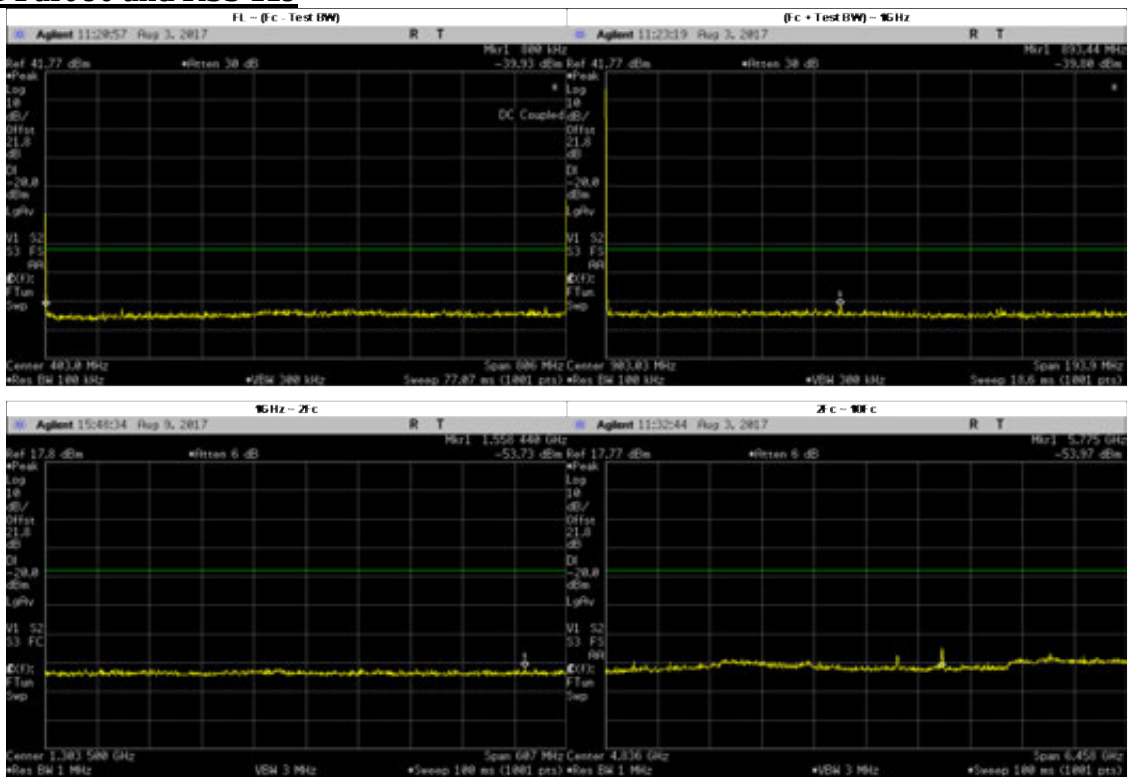
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	502.5792	-40.3798	-20	PASS
(Fc + Test BW) ~ 1GHz	894.7323	-40.3700	-20	PASS
1GHz ~ 2Fc	1519.0900	-53.7300	-20	PASS
2Fc ~ 10Fc	1728.7910	-45.8200	-20	PASS
	1720.0250	-48.5274	-20	PASS
	2580.0370	-53.9144	-20	PASS
	3440.0500	-51.9467	-20	PASS
	4300.0620	-53.9891	-20	PASS
	5160.0750	-53.8090	-20	PASS
	6020.0870	-54.1218	-20	PASS
	6880.1000	-51.7689	-20	PASS
	7740.1130	-51.6700	-20	PASS
	8600.1250	-53.3800	-20	PASS

C4FM: 868.8875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



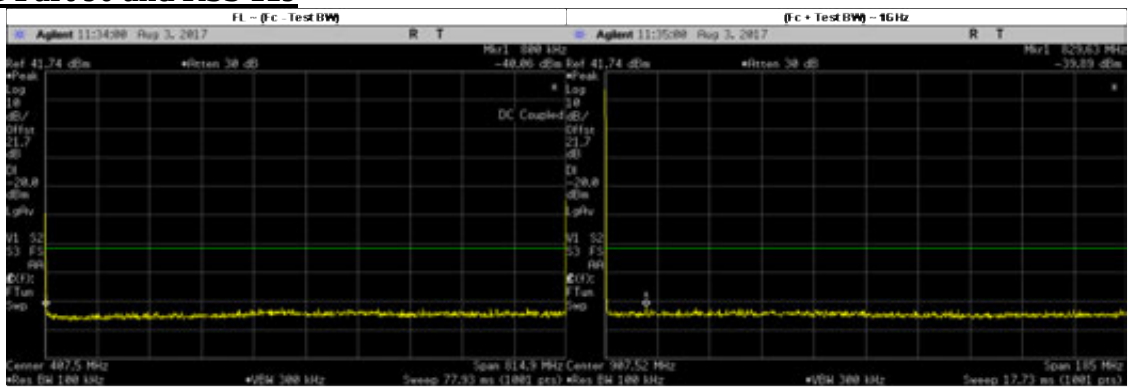
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	463.4999	-40.0000	-20	PASS
(Fc + Test BW) ~ 1GHz	901.8013	-40.5400	-20	PASS
1GHz ~ 2Fc	1244.0000	-53.2400	-20	PASS
2Fc ~ 10Fc	5745.3170	-44.6800	-20	PASS
	1737.7750	-54.0904	-20	PASS
	2606.6620	-53.5338	-20	PASS
	3475.5500	-52.0028	-20	PASS
	4344.4370	-53.6024	-20	PASS
	5213.3250	-51.6435	-20	PASS
	6082.2120	-54.2435	-20	PASS
	6951.1000	-51.8226	-20	PASS
	7819.9880	-51.6686	-20	PASS
	8688.8750	-51.9200	-20	PASS

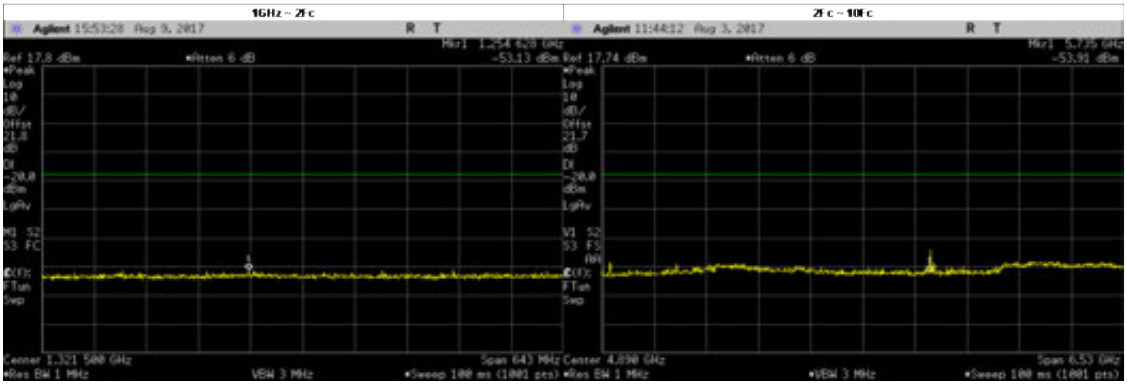
Phase II: 806.0125 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	772.1463	-40.1700	-20	PASS
(Fc + Test BW) ~ 1GHz	893.4409	-39.7575	-20	PASS
1GHz ~ 2Fc	1558.4400	-53.7300	-20	PASS
2Fc ~ 10Fc	5774.7900	-46.9100	-20	PASS
	1612.0250	-54.5176	-20	PASS
	2418.0370	-53.5873	-20	PASS
	3224.0500	-52.1629	-20	PASS
	4030.0620	-53.2001	-20	PASS
	4836.0750	-54.1185	-20	PASS
	5642.0870	-54.1599	-20	PASS
	6448.1000	-54.4037	-20	PASS
	7254.1130	-51.6211	-20	PASS
	8060.1250	-54.1800	-20	PASS

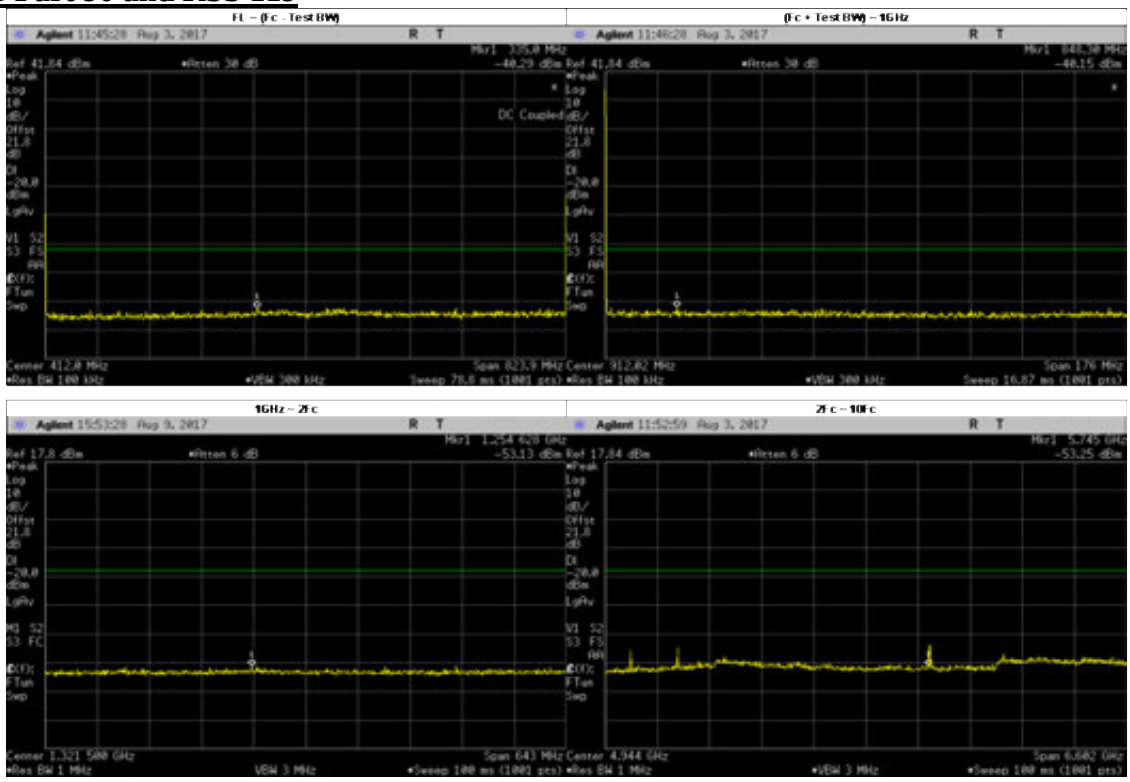
Phase II: 814.9875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119





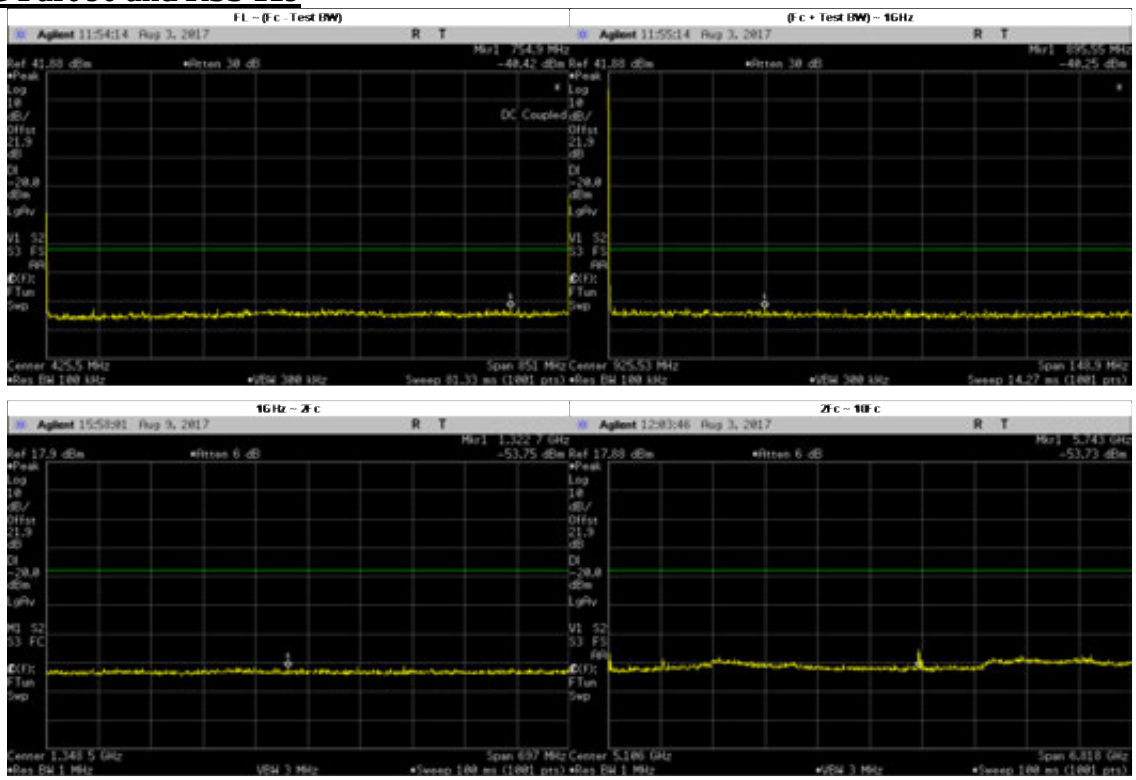
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	368.8028	-40.4800	-20	PASS
(Fc + Test BW) ~ 1GHz	829.6349	-39.8897	-20	PASS
1GHz ~ 2Fc	1254.6280	-53.1300	-20	PASS
2Fc ~ 10Fc	5734.7020	-46.2300	-20	PASS
	1629.9750	-53.6415	-20	PASS
	2444.9630	-54.0646	-20	PASS
	3259.9500	-52.1768	-20	PASS
	4074.9370	-52.8630	-20	PASS
	4889.9250	-54.4430	-20	PASS
	5704.9130	-53.8627	-20	PASS
	6519.9000	-53.4516	-20	PASS
	7334.8870	-51.1618	-20	PASS
	8149.8750	-54.1300	-20	PASS

Phase II: 823.9875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



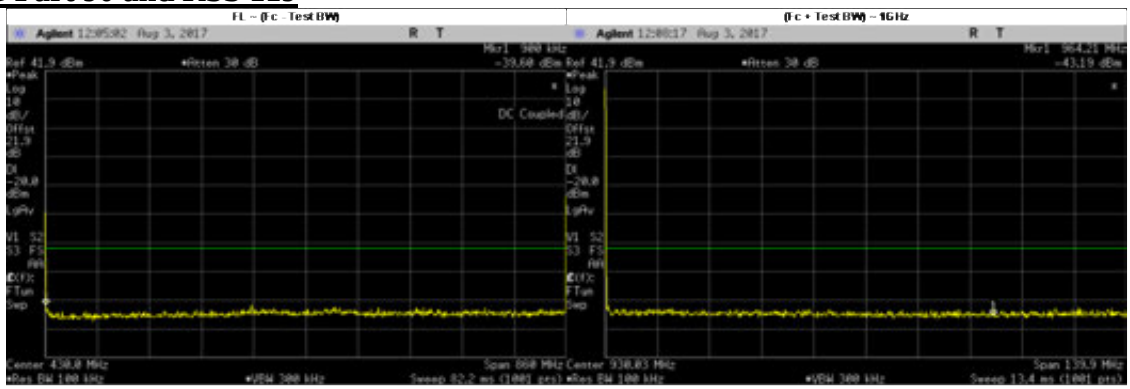
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	335.0129	-40.2900	-20	PASS
(Fc + Test BW) ~ 1GHz	848.2961	-40.1600	-20	PASS
1GHz ~ 2Fc	1254.6280	-53.1300	-20	PASS
2Fc ~ 10Fc	5745.2550	-45.8300	-20	PASS
	1966.1450	-47.9900	-20	PASS
	1647.9750	-55.5928	-20	PASS
	2471.9630	-54.2111	-20	PASS
	3295.9500	-51.8664	-20	PASS
	4119.9370	-52.9781	-20	PASS
	4943.9250	-54.0115	-20	PASS
	5767.9130	-51.6014	-20	PASS
	6591.9000	-53.1354	-20	PASS
	7415.8870	-51.7702	-20	PASS
	8239.8750	-53.7200	-20	PASS

Phase II: 851.0125 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



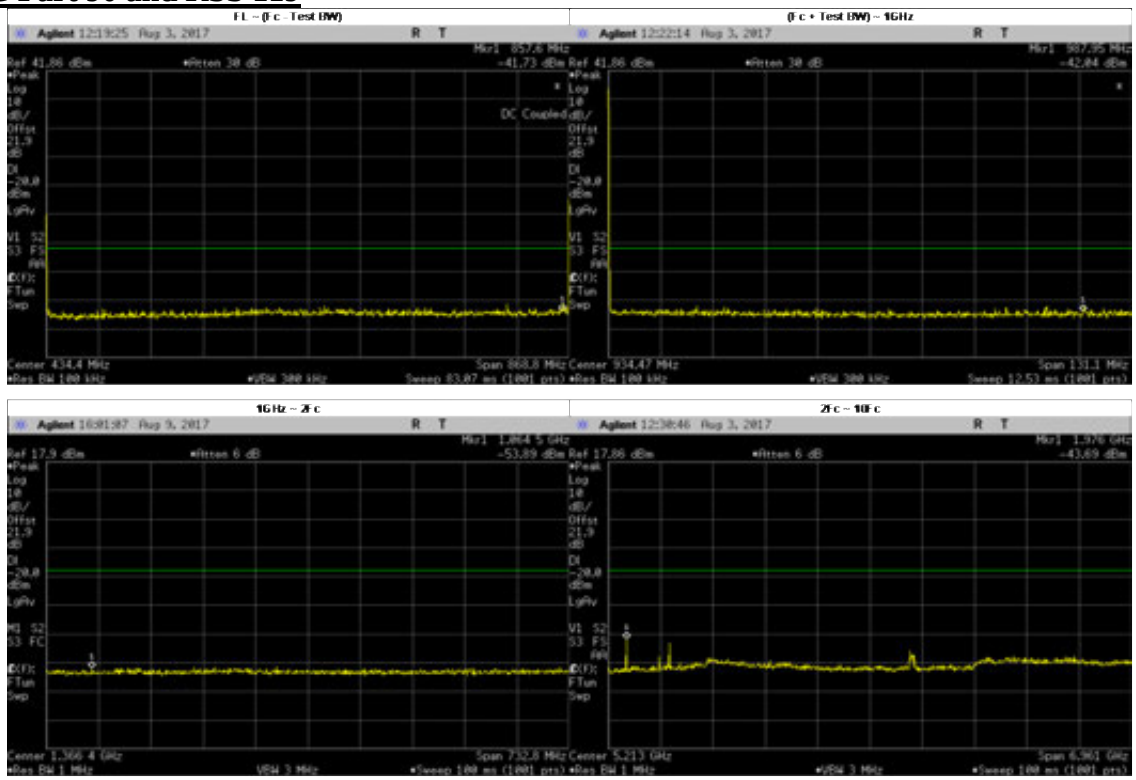
Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	754.9008	-40.4000	-20	PASS
(Fc + Test BW) ~ 1GHz	895.5503	-40.2500	-20	PASS
1GHz ~ 2Fc	1322.7000	-53.7500	-20	PASS
2Fc ~ 10Fc	5742.9310	-47.3900	-20	PASS
	1724.2700	-49.0400	-20	PASS
	1702.0250	-53.7359	-20	PASS
	2553.0370	-53.5972	-20	PASS
	3404.0500	-52.0502	-20	PASS
	4255.0620	-53.2681	-20	PASS
	5106.0750	-54.3080	-20	PASS
	5957.0870	-54.5424	-20	PASS
	6808.1000	-51.0071	-20	PASS
	7659.1130	-51.9199	-20	PASS
	8510.1250	-53.9200	-20	PASS

Phase II: 860.0125 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	477.6655	-40.2700	-20	PASS
(Fc + Test BW) ~ 1GHz	964.2118	-40.4300	-20	PASS
1GHz ~ 2Fc	1271.7000	-53.9200	-20	PASS
2Fc ~ 10Fc	5741.7070	-43.9363	-20	PASS
	5742.0000	-42.3800	-20	PASS
	1720.0250	-54.2056	-20	PASS
	2580.0370	-54.5320	-20	PASS
	3440.0500	-52.4258	-20	PASS
	4300.0620	-54.5248	-20	PASS
	5160.0750	-53.8435	-20	PASS
	6020.0870	-54.6967	-20	PASS
	6880.1000	-52.2456	-20	PASS
	7740.1130	-50.7139	-20	PASS
	8600.1250	-52.0400	-20	PASS

Phase II: 868.8875 MHz, 12.5 kHz Channel Spacing, Max Power
FCC Part 90 and RSS 119



Frequency Range	Highest Spur Frequency (MHz)	Spurious Level (MHz)	Failing Limit (dBm)	Results
FL ~ (Fc - Test BW)	857.5540	-39.3201	-20	PASS
(Fc + Test BW) ~ 1GHz	987.9543	-40.0200	-20	PASS
1GHz ~ 2Fc	1064.5000	-53.8900	-20	PASS
2Fc ~ 10Fc	1976.1700	-43.6900	-20	PASS
	1737.7750	-53.9487	-20	PASS
	2606.6620	-54.1879	-20	PASS
	3475.5500	-52.6959	-20	PASS
	4344.4370	-53.5468	-20	PASS
	5213.3250	-54.3320	-20	PASS
	6082.2120	-53.7541	-20	PASS
	6951.1000	-51.4441	-20	PASS
	7819.9880	-51.7090	-20	PASS
	8688.8750	-52.8800	-20	PASS

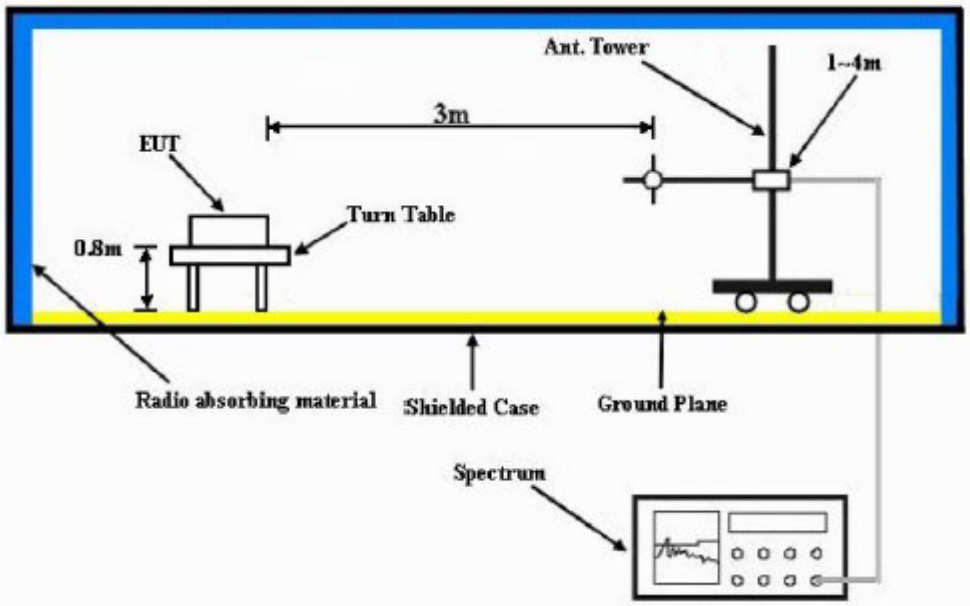
6.9.4. Test Limit

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
12.5kHz	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)
25kHz		Not Applicable		43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

6.10. Radiated Spurious Emission

6.10.1. Test Setup



1) The spectrum setting for scanning Radiated Emission below 1 GHz is RBW = 100 kHz, VBW = 300 kHz and above 1 GHz is RBW = 1 MHz, VBW = 3 MHz. Detector mode is positive peak.
2) In the semi-anechoic chamber, setup as illustrated above the EUT placed on the 0.8m height 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 EUT 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.

6.10.2. Test Result (Analog)

SAC Transmitter Radiated Emission

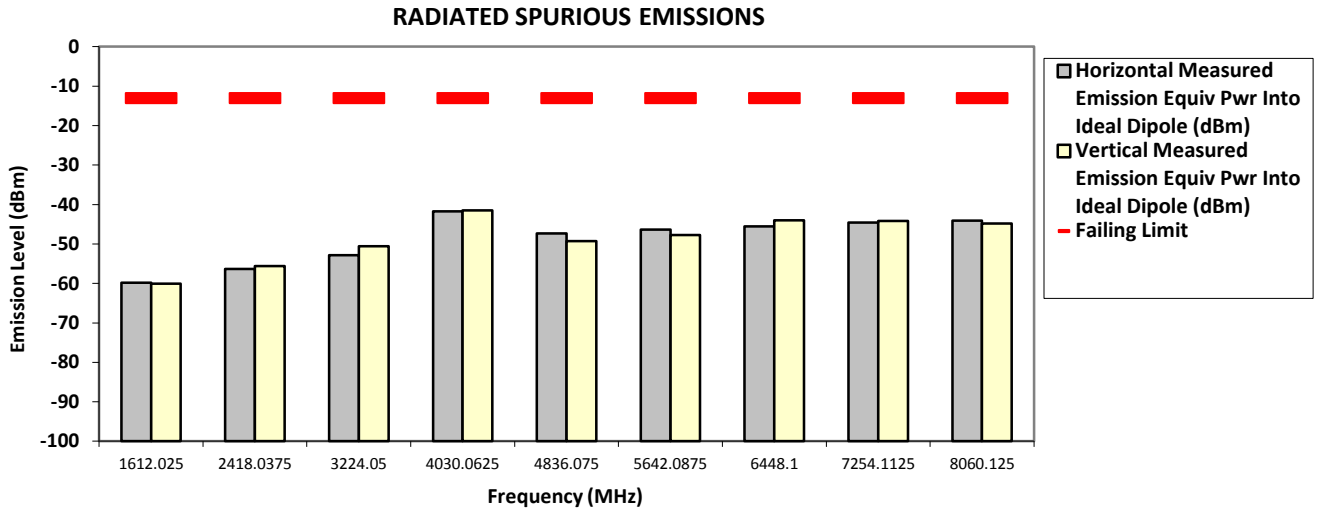
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-59.7931 **	-60.0609 **
2418.0375	-13.0000	-56.3518 **	-55.6289 **
3224.0500	-13.0000	-52.8150 **	-50.5893 **
4030.0625	-13.0000	-41.7600 *	-41.5100 *
4836.0750	-13.0000	-47.3627 **	-49.2993 **
5642.0875	-13.0000	-46.3180 **	-47.7493 **
6448.1000	-13.0000	-45.5442 **	-44.0089 **
7254.1125	-13.0000	-44.5880 **	-44.1530 **
8060.1250	-13.0000	-44.0756 **	-44.8141 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

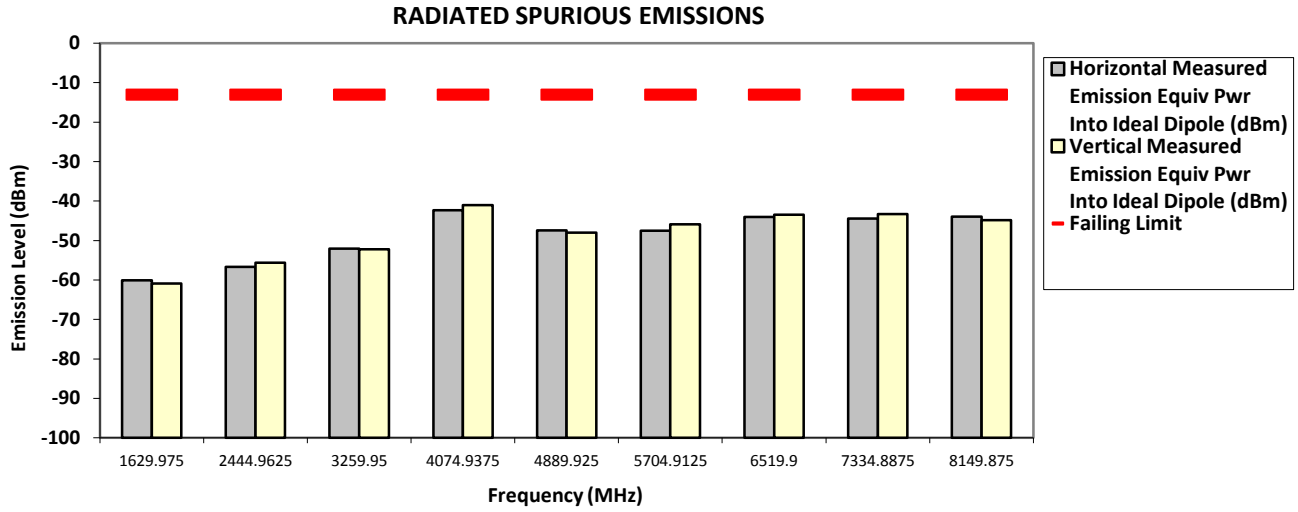
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.0806 **	-60.8862 **
2444.9625	-13.0000	-56.7033 **	-55.6490 **
3259.9500	-13.0000	-52.0389 **	-52.2325 **
4074.9375	-13.0000	-42.3500 *	-41.0600 *
4889.9250	-13.0000	-47.4141 **	-48.0410 **
5704.9125	-13.0000	-47.5286 **	-45.8659 **
6519.9000	-13.0000	-44.0019 **	-43.4627 **
7334.8875	-13.0000	-44.4309 **	-43.2710 **
8149.8750	-13.0000	-43.9319 **	-44.8255 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

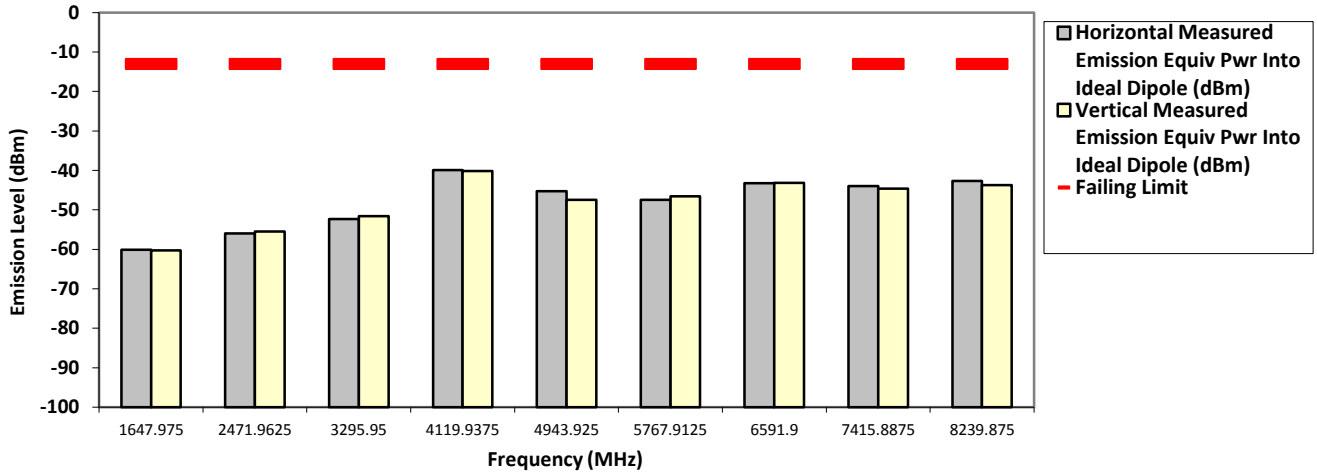
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.1259 **	-60.2643 **
2471.9625	-13.0000	-55.9564 **	-55.4652 **
3295.9500	-13.0000	-52.3622 **	-51.6098 **
4119.9375	-13.0000	-39.9300 *	-40.1500 *
4943.9250	-13.0000	-45.2854 **	-47.4602 **
5767.9125	-13.0000	-47.4640 **	-46.5974 **
6591.9000	-13.0000	-43.2273 **	-43.1752 **
7415.8875	-13.0000	-43.9343 **	-44.6506 **
8239.8750	-13.0000	-42.6451 **	-43.7433 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

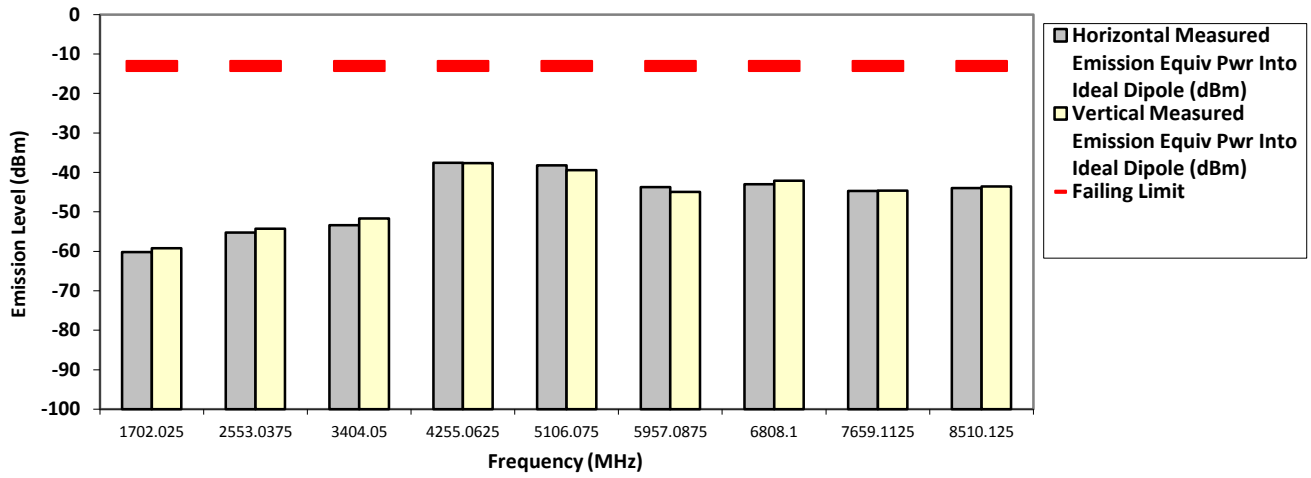
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.1942 **	-59.2041 **
2553.0375	-13.0000	-55.2225 **	-54.3004 **
3404.0500	-13.0000	-53.4159 **	-51.6712 **
4255.0625	-13.0000	-37.5900 *	-37.6500 *
5106.0750	-13.0000	-38.2200 *	-39.4200 *
5957.0875	-13.0000	-43.7582 **	-44.9657 **
6808.1000	-13.0000	-42.9906 **	-42.1281 **
7659.1125	-13.0000	-44.7379 **	-44.6315 **
8510.1250	-13.0000	-43.9571 **	-43.6057 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

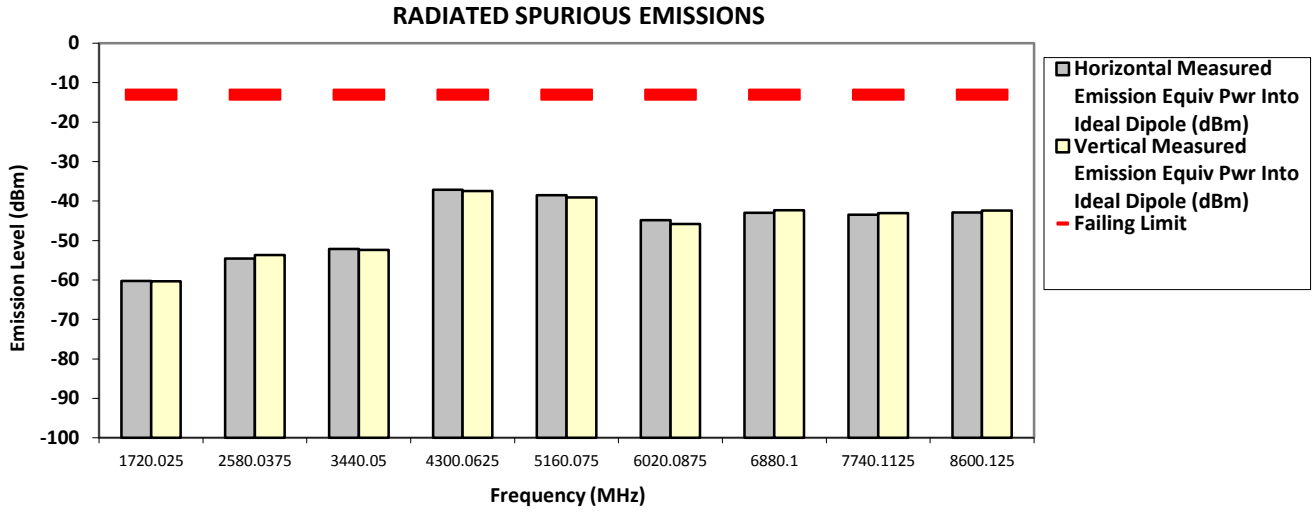
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.2852 **	-60.3658 **
2580.0375	-13.0000	-54.5344 **	-53.6802 **
3440.0500	-13.0000	-52.1467 **	-52.4066 **
4300.0625	-13.0000	-37.1200 *	-37.4700 *
5160.0750	-13.0000	-38.5200 *	-39.0600 *
6020.0875	-13.0000	-44.8099 **	-45.8041 **
6880.1000	-13.0000	-42.9928 **	-42.3646 **
7740.1125	-13.0000	-43.4440 **	-43.0686 **
8600.1250	-13.0000	-42.9171 **	-42.3697 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

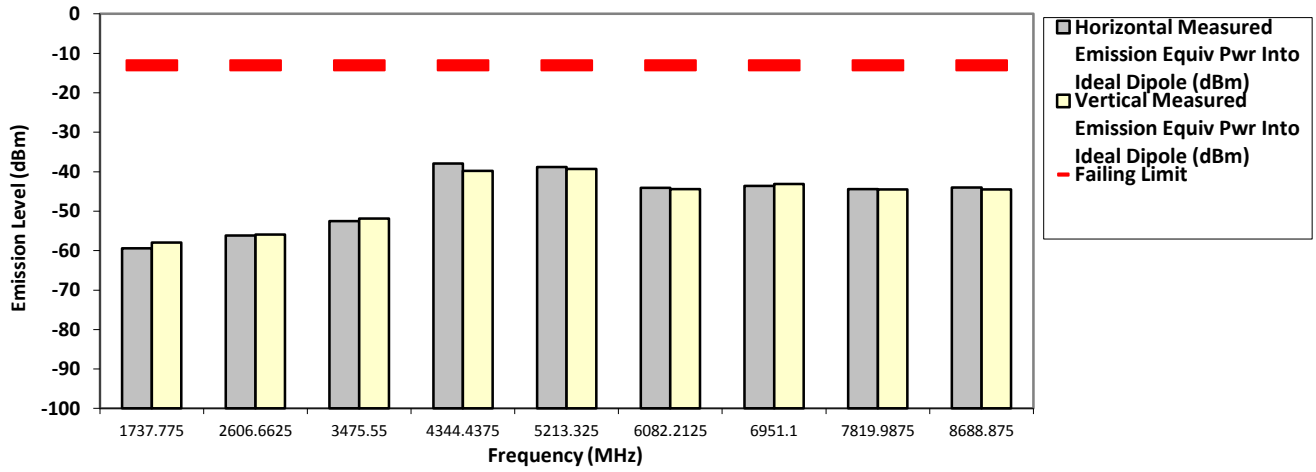
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-59.4485 **	-57.9228 **
2606.6625	-13.0000	-56.1802 **	-55.8966 **
3475.5500	-13.0000	-52.4875 **	-51.8484 **
4344.4375	-13.0000	-37.9500 *	-39.8000 *
5213.3250	-13.0000	-38.7800 *	-39.3300 *
6082.2125	-13.0000	-44.1174 **	-44.4275 **
6951.1000	-13.0000	-43.5594 **	-43.1025 **
7819.9875	-13.0000	-44.4083 **	-44.5279 **
8688.8750	-13.0000	-43.9905 **	-44.5033 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

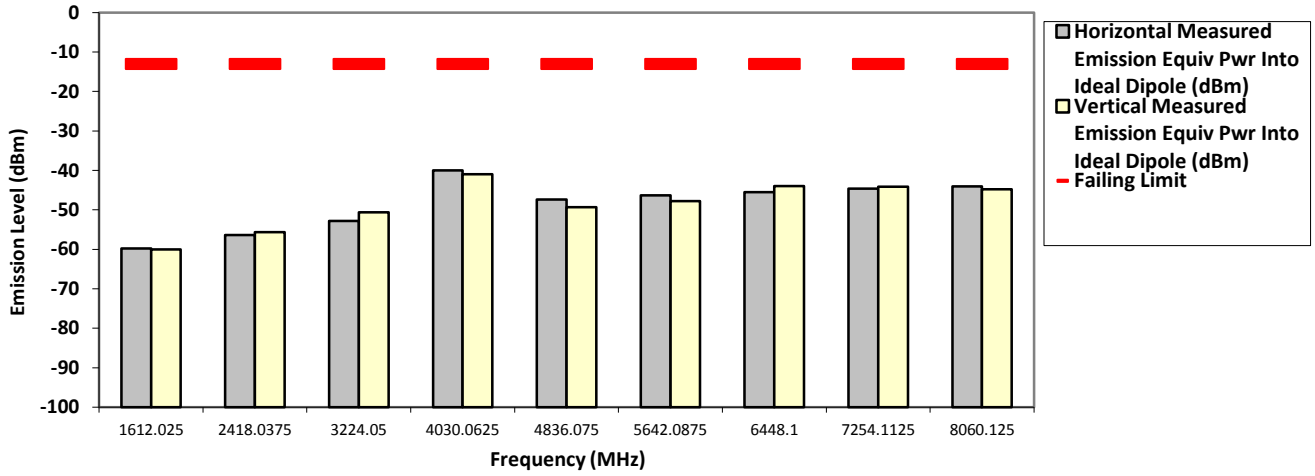
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-59.7931 **	-60.0609 **
2418.0375	-13.0000	-56.3518 **	-55.6289 **
3224.0500	-13.0000	-52.8150 **	-50.5893 **
4030.0625	-13.0000	-39.9700 *	-40.9400 *
4836.0750	-13.0000	-47.3627 **	-49.2993 **
5642.0875	-13.0000	-46.3180 **	-47.7493 **
6448.1000	-13.0000	-45.5442 **	-44.0089 **
7254.1125	-13.0000	-44.5880 **	-44.1530 **
8060.1250	-13.0000	-44.0756 **	-44.8141 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

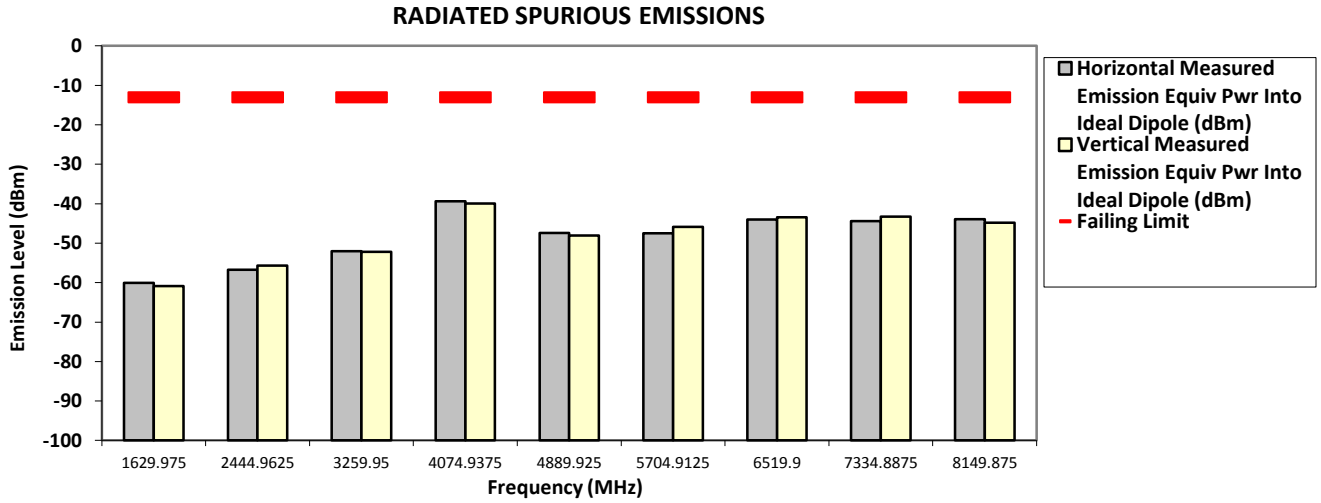
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.0806 **	-60.8862 **
2444.9625	-13.0000	-56.7033 **	-55.6490 **
3259.9500	-13.0000	-52.0389 **	-52.2325 **
4074.9375	-13.0000	-39.4100 *	-39.9500 *
4889.9250	-13.0000	-47.4141 **	-48.0410 **
5704.9125	-13.0000	-47.5286 **	-45.8659 **
6519.9000	-13.0000	-44.0019 **	-43.4627 **
7334.8875	-13.0000	-44.4309 **	-43.2710 **
8149.8750	-13.0000	-43.9319 **	-44.8255 **



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

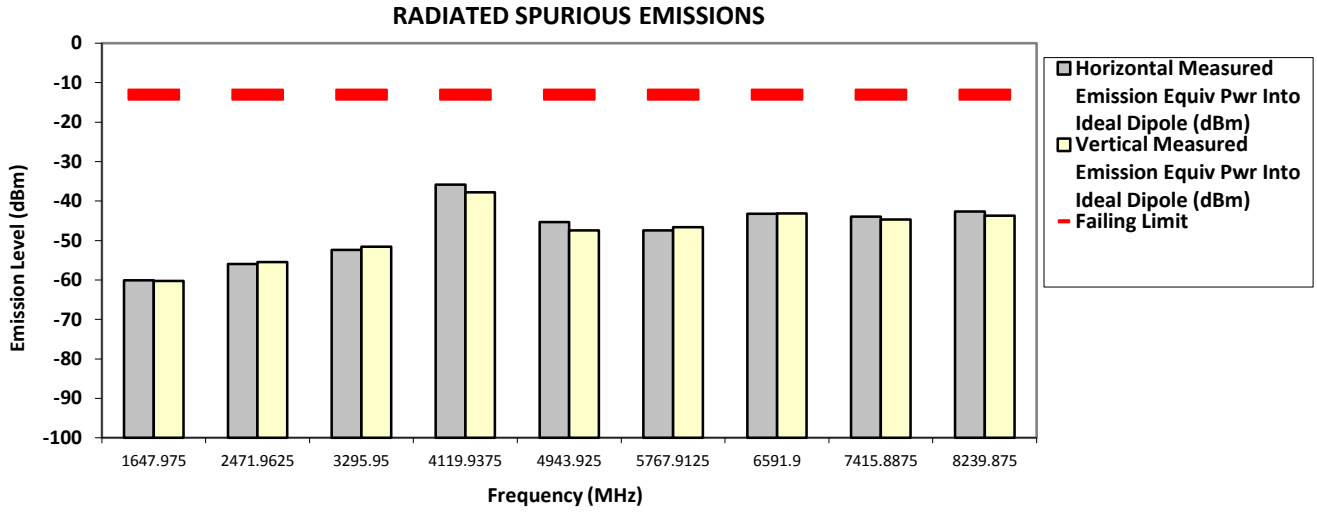
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.1259 **	-60.2643 **
2471.9625	-13.0000	-55.9564 **	-55.4652 **
3295.9500	-13.0000	-52.3622 **	-51.6098 **
4119.9375	-13.0000	-35.8400 *	-37.7900 *
4943.9250	-13.0000	-45.2854 **	-47.4602 **
5767.9125	-13.0000	-47.4640 **	-46.5974 **
6591.9000	-13.0000	-43.2273 **	-43.1752 **
7415.8875	-13.0000	-43.9343 **	-44.6506 **
8239.8750	-13.0000	-42.6451 **	-43.7433 **



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

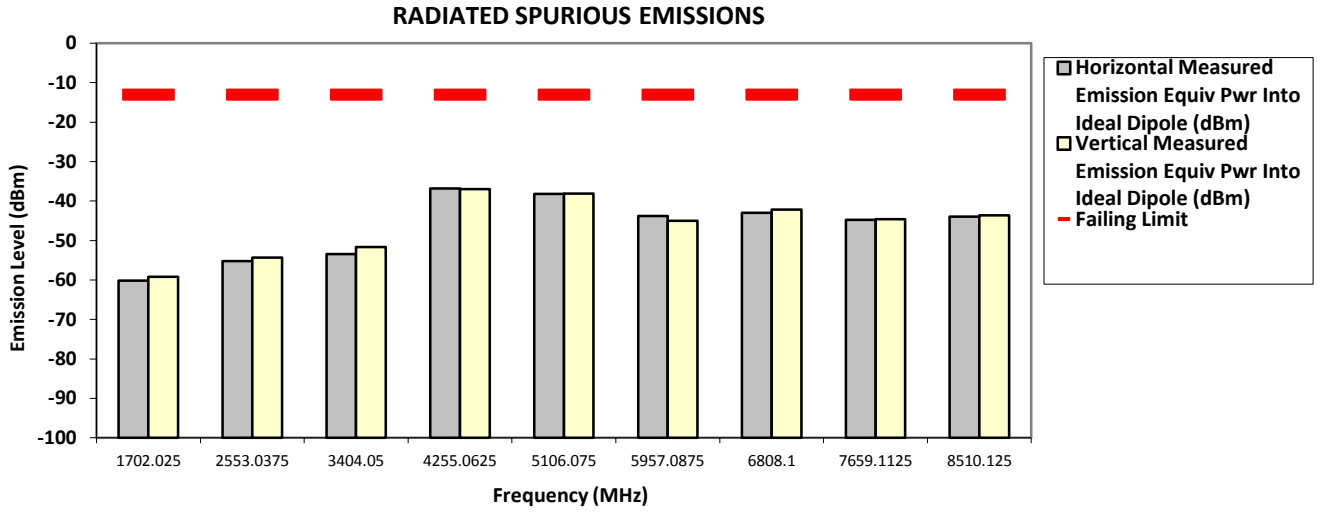
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.1942 **	-59.2041 **
2553.0375	-13.0000	-55.2225 **	-54.3004 **
3404.0500	-13.0000	-53.4159 **	-51.6712 **
4255.0625	-13.0000	-36.8000 *	-36.9400 *
5106.0750	-13.0000	-38.1500 *	-38.1000 *
5957.0875	-13.0000	-43.7582 **	-44.9657 **
6808.1000	-13.0000	-42.9906 **	-42.1281 **
7659.1125	-13.0000	-44.7379 **	-44.6315 **
8510.1250	-13.0000	-43.9571 **	-43.6057 **



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

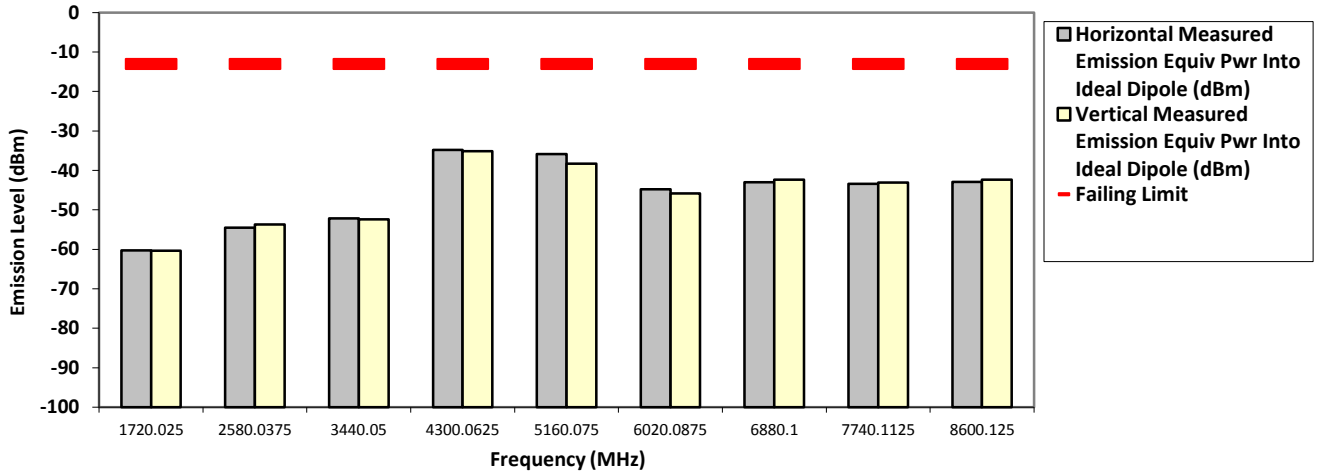
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.2852 **	-60.3658 **
2580.0375	-13.0000	-54.5344 **	-53.6802 **
3440.0500	-13.0000	-52.1467 **	-52.4066 **
4300.0625	-13.0000	-34.8400 *	-35.1300 *
5160.0750	-13.0000	-35.8600 *	-38.3000 *
6020.0875	-13.0000	-44.8099 **	-45.8041 **
6880.1000	-13.0000	-42.9928 **	-42.3646 **
7740.1125	-13.0000	-43.4440 **	-43.0686 **
8600.1250	-13.0000	-42.9171 **	-42.3697 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

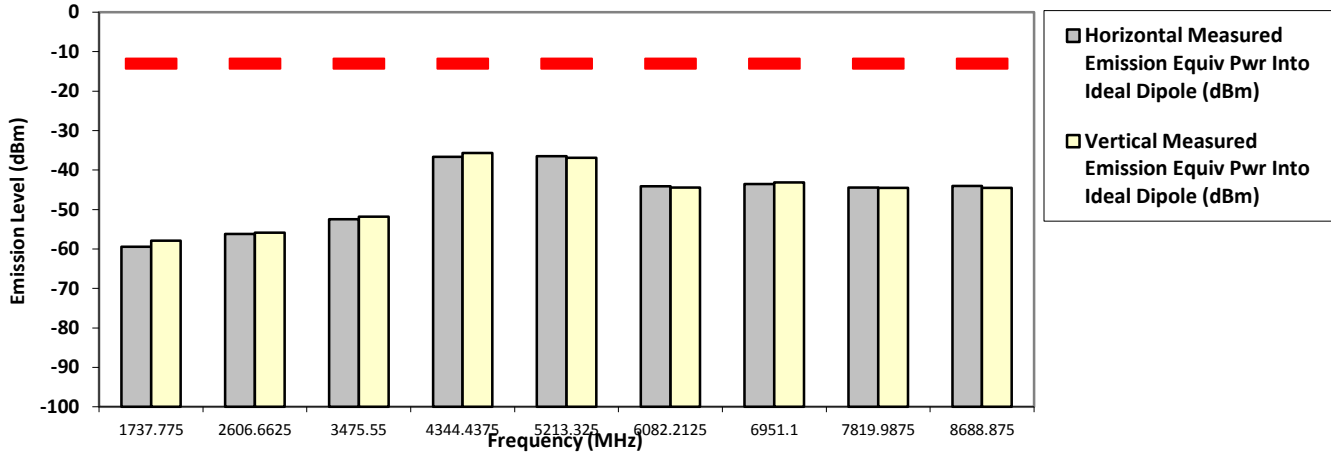
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-59.4485 **	-57.9228 **
2606.6625	-13.0000	-56.1802 **	-55.8966 **
3475.5500	-13.0000	-52.4875 **	-51.8484 **
4344.4375	-13.0000	-36.6800 *	-35.6600 *
5213.3250	-13.0000	-36.5100 *	-36.9300 *
6082.2125	-13.0000	-44.1174 **	-44.4275 **
6951.1000	-13.0000	-43.5594 **	-43.1025 **
7819.9875	-13.0000	-44.4083 **	-44.5279 **
8688.8750	-13.0000	-43.9905 **	-44.5033 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

6.10.3. Test Result (Digital)

SAC Transmitter Radiated Emission

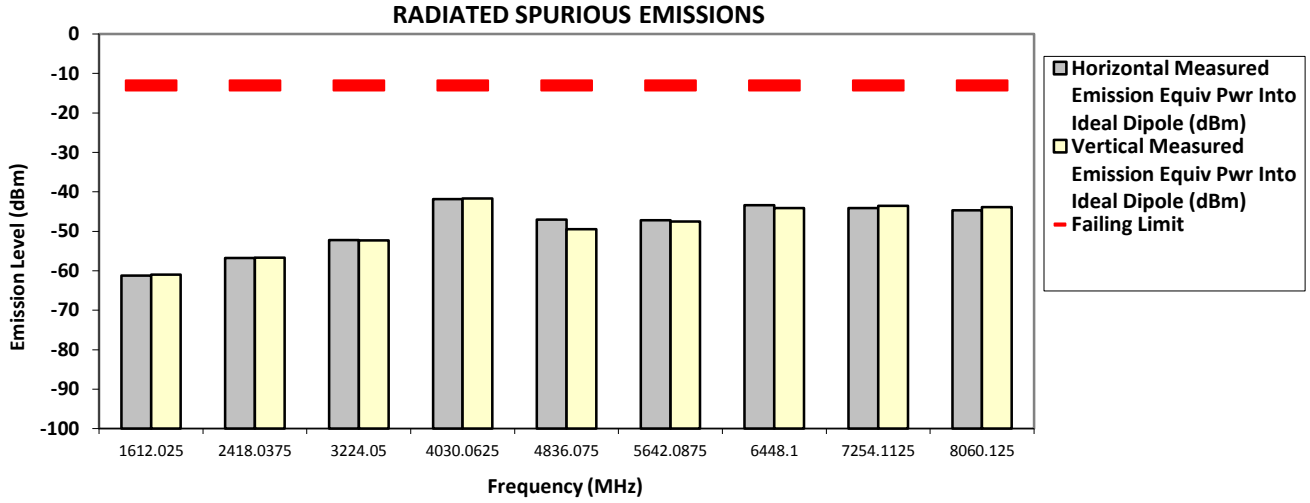
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-61.2354 **	-60.9489 **
2418.0375	-13.0000	-56.7541 **	-56.6452 **
3224.0500	-13.0000	-52.2316 **	-52.3359 **
4030.0625	-13.0000	-41.8200 *	-41.6500 *
4836.0750	-13.0000	-47.0398 **	-49.4640 **
5642.0875	-13.0000	-47.1518 **	-47.5448 **
6448.1000	-13.0000	-43.3453 **	-44.0796 **
7254.1125	-13.0000	-44.1373 **	-43.5528 **
8060.1250	-13.0000	-44.6565 **	-43.8454 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

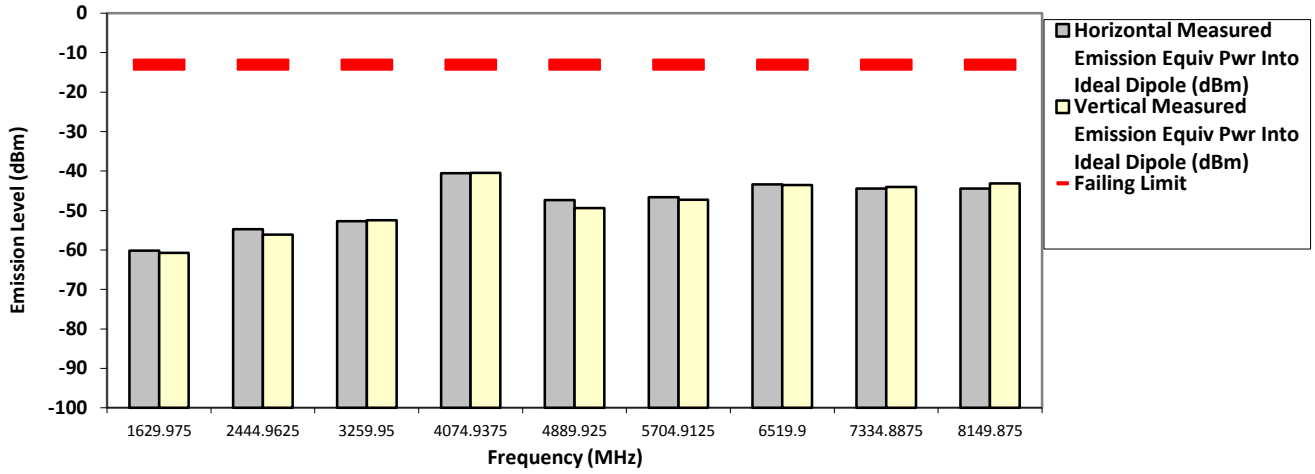
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.2011 **	-60.7010 **
2444.9625	-13.0000	-54.7237 **	-56.1232 **
3259.9500	-13.0000	-52.7411 **	-52.4755 **
4074.9375	-13.0000	-40.5200 *	-40.4200 *
4889.9250	-13.0000	-47.3242 **	-49.3583 **
5704.9125	-13.0000	-46.5886 **	-47.2445 **
6519.9000	-13.0000	-43.3941 **	-43.5576 **
7334.8875	-13.0000	-44.4692 **	-44.0451 **
8149.8750	-13.0000	-44.4121 **	-43.1450 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

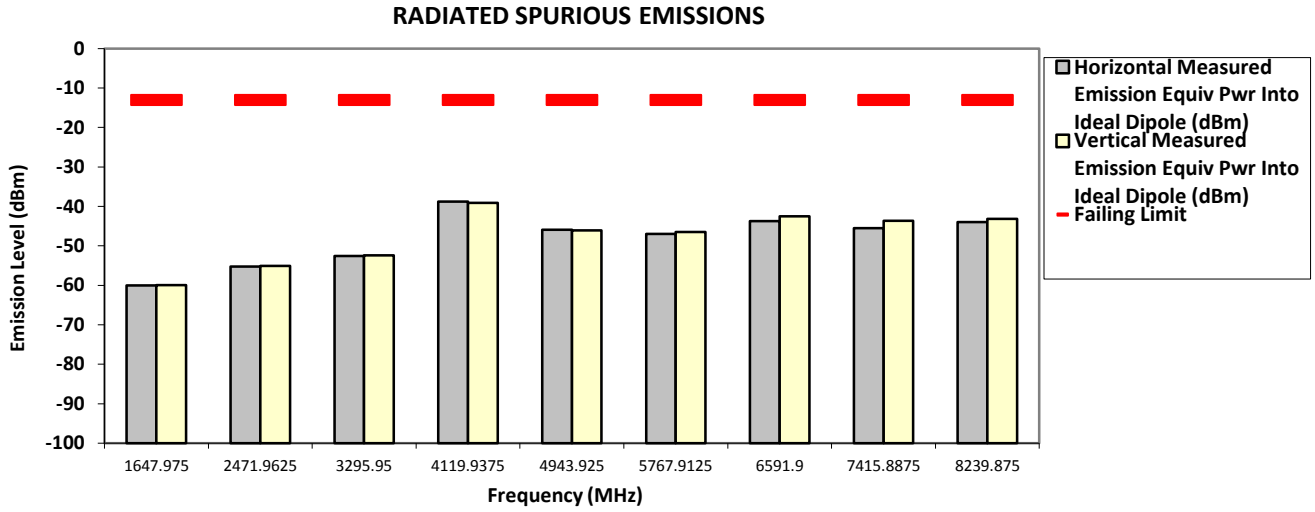
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.0486 **	-59.9843 **
2471.9625	-13.0000	-55.2273 **	-55.1015 **
3295.9500	-13.0000	-52.6021 **	-52.4379 **
4119.9375	-13.0000	-38.7700 *	-39.1100 *
4943.9250	-13.0000	-45.9151 **	-46.0985 **
5767.9125	-13.0000	-46.9652 **	-46.5263 **
6591.9000	-13.0000	-43.7428 **	-42.4998 **
7415.8875	-13.0000	-45.5289 **	-43.6169 **
8239.8750	-13.0000	-43.9840 **	-43.1756 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

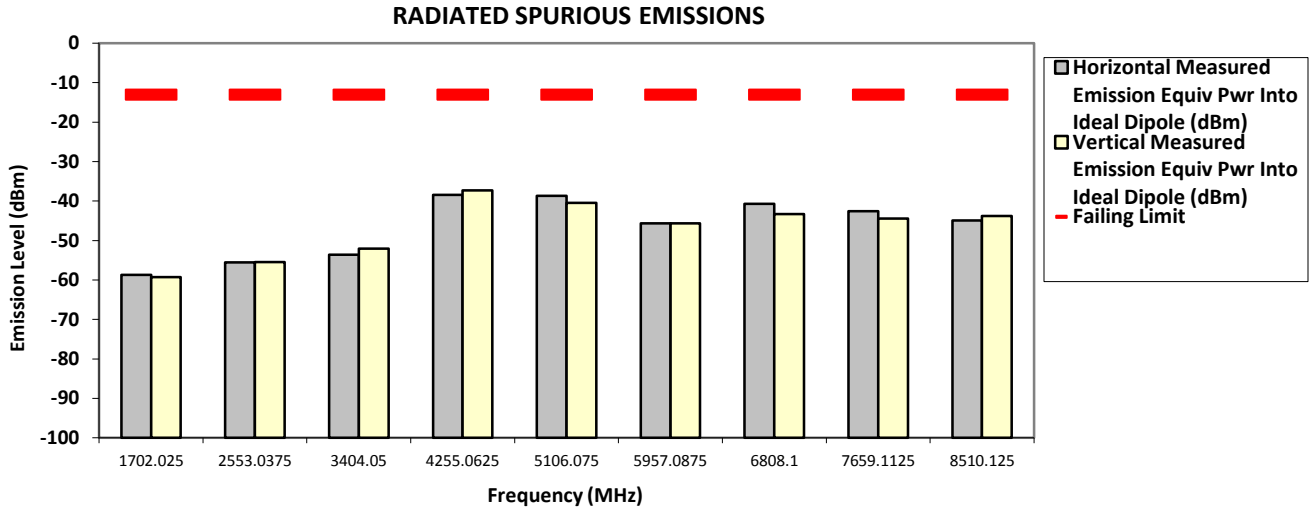
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-58.7043 **	-59.2668 **
2553.0375	-13.0000	-55.5297 **	-55.4912 **
3404.0500	-13.0000	-53.6092 **	-52.0697 **
4255.0625	-13.0000	-38.4300 *	-37.2700 *
5106.0750	-13.0000	-38.7100 *	-40.4600 *
5957.0875	-13.0000	-45.6463 **	-45.6433 **
6808.1000	-13.0000	-40.6649 **	-43.2704 **
7659.1125	-13.0000	-42.5659 **	-44.4659 **
8510.1250	-13.0000	-44.8881 **	-43.8251 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

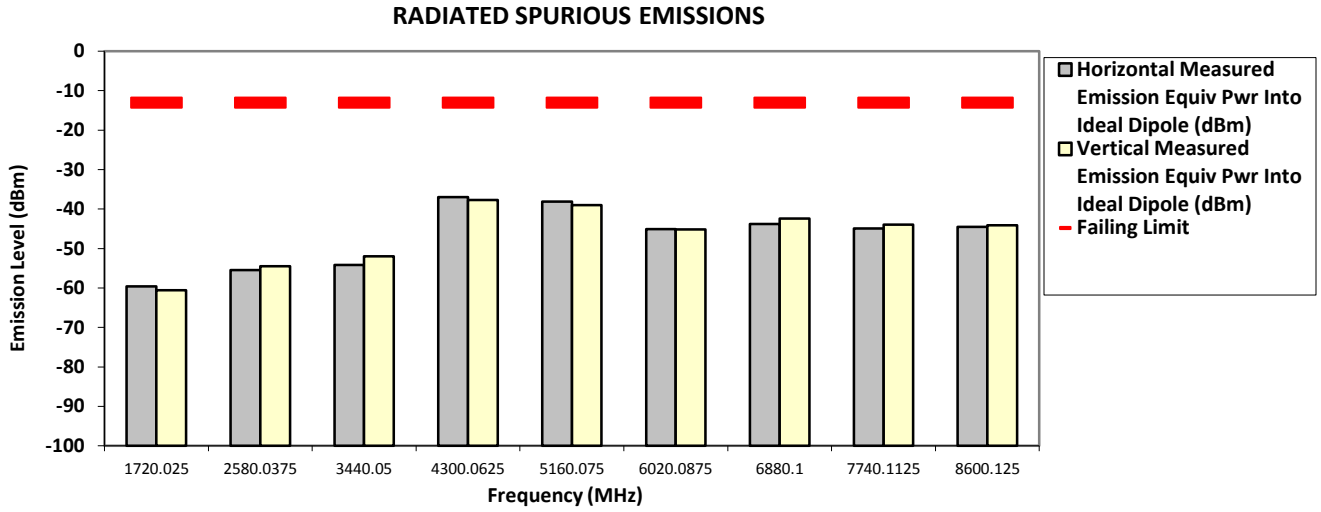
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-59.6246 **	-60.6073 **
2580.0375	-13.0000	-55.4557 **	-54.5044 **
3440.0500	-13.0000	-54.1275 **	-51.9740 **
4300.0625	-13.0000	-36.9900 *	-37.7000 *
5160.0750	-13.0000	-38.1000 *	-38.9600 *
6020.0875	-13.0000	-45.0725 **	-45.1755 **
6880.1000	-13.0000	-43.7827 **	-42.4374 **
7740.1125	-13.0000	-44.9288 **	-43.9854 **
8600.1250	-13.0000	-44.4851 **	-44.1047 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

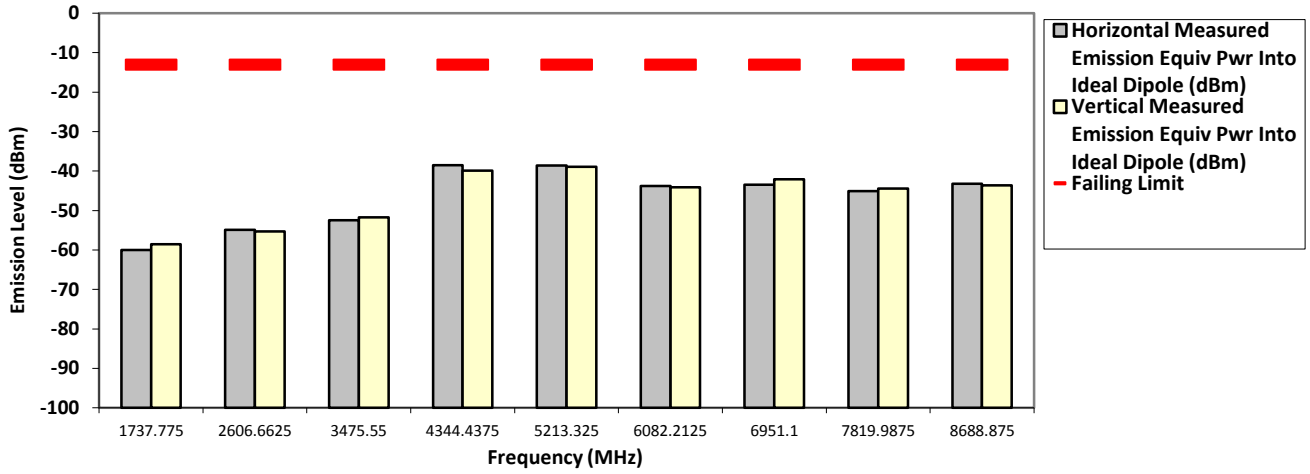
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.0440 **	-58.5404 **
2606.6625	-13.0000	-54.8646 **	-55.2672 **
3475.5500	-13.0000	-52.4443 **	-51.7335 **
4344.4375	-13.0000	-38.5100 *	-39.8900 *
5213.3250	-13.0000	-38.5600 *	-38.9500 *
6082.2125	-13.0000	-43.8229 **	-44.0771 **
6951.1000	-13.0000	-43.4671 **	-42.0473 **
7819.9875	-13.0000	-45.0758 **	-44.4523 **
8688.8750	-13.0000	-43.2552 **	-43.6530 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

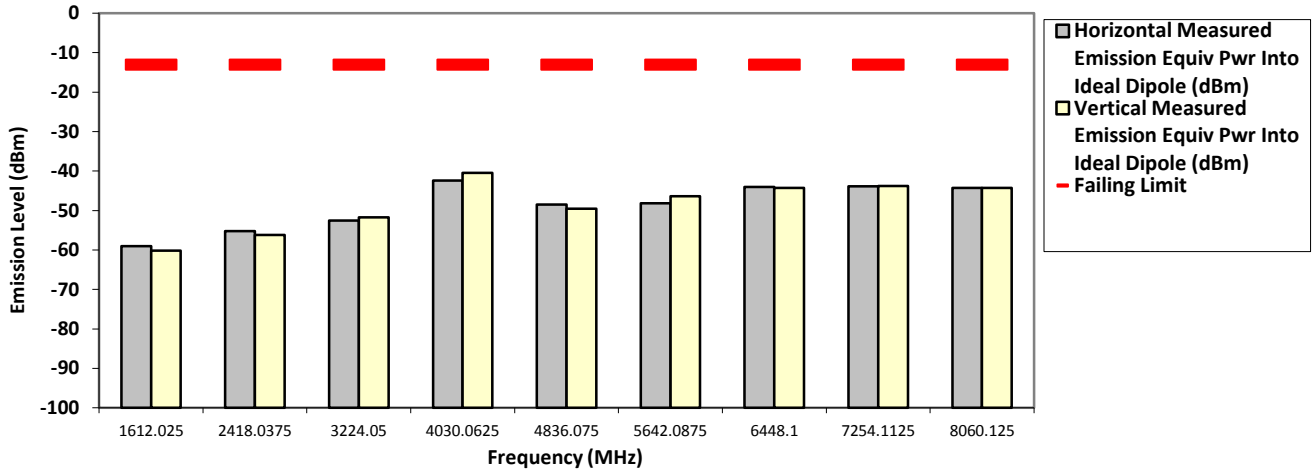
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-59.0059 **	-60.1331 **
2418.0375	-13.0000	-55.2440 **	-56.1834 **
3224.0500	-13.0000	-52.5543 **	-51.7270 **
4030.0625	-13.0000	-42.3800 *	-40.4900 *
4836.0750	-13.0000	-48.4482 **	-49.5113 **
5642.0875	-13.0000	-48.1295 **	-46.3855 **
6448.1000	-13.0000	-44.0439 **	-44.2699 **
7254.1125	-13.0000	-43.8822 **	-43.7534 **
8060.1250	-13.0000	-44.2940 **	-44.2784 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

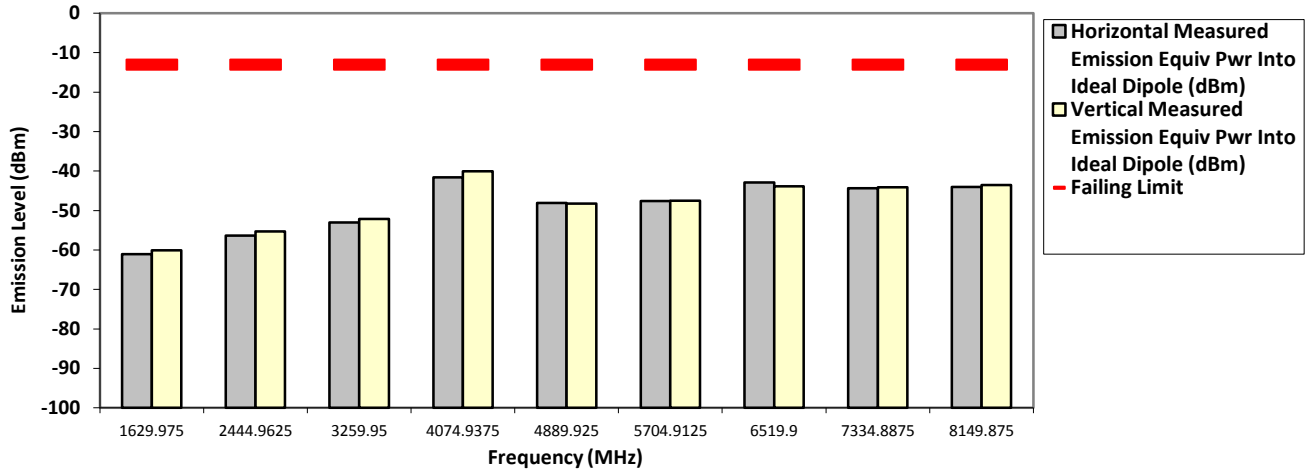
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-61.0449 **	-60.1125 **
2444.9625	-13.0000	-56.3445 **	-55.3243 **
3259.9500	-13.0000	-53.0078 **	-52.1255 **
4074.9375	-13.0000	-41.5600 *	-40.0500 *
4889.9250	-13.0000	-48.0688 **	-48.2531 **
5704.9125	-13.0000	-47.6006 **	-47.5323 **
6519.9000	-13.0000	-42.8948 **	-43.8705 **
7334.8875	-13.0000	-44.3327 **	-44.0884 **
8149.8750	-13.0000	-44.0398 **	-43.5776 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

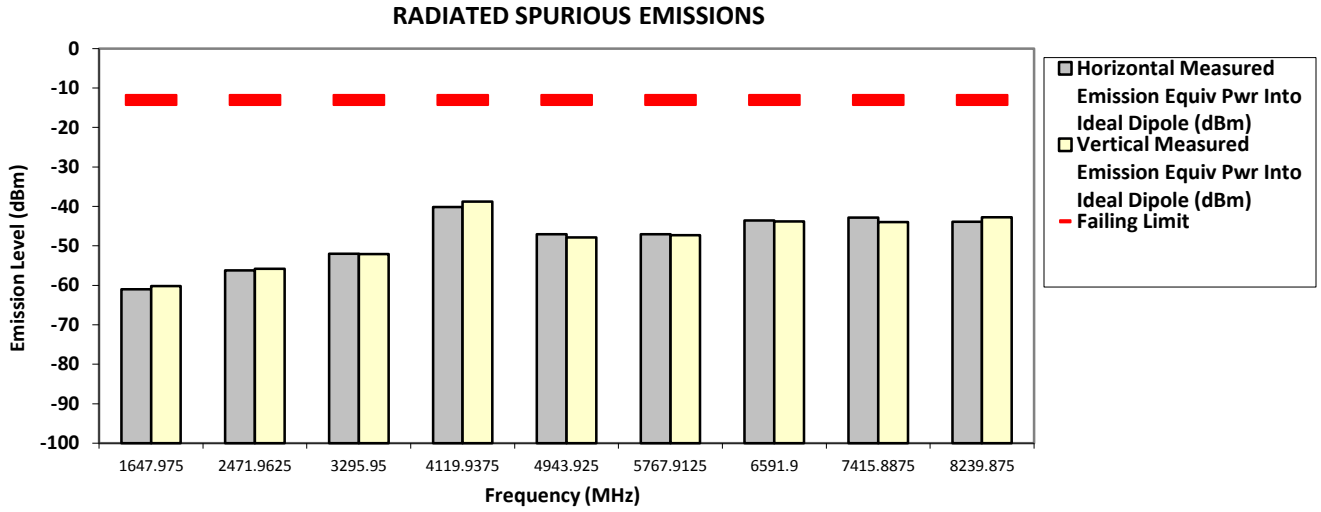
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.9805 **	-60.2263 **
2471.9625	-13.0000	-56.2393 **	-55.7772 **
3295.9500	-13.0000	-51.9723 **	-52.0518 **
4119.9375	-13.0000	-40.1800 *	-38.8000 *
4943.9250	-13.0000	-47.0691 **	-47.8373 **
5767.9125	-13.0000	-47.0441 **	-47.2737 **
6591.9000	-13.0000	-43.5363 **	-43.7875 **
7415.8875	-13.0000	-42.8743 **	-43.9841 **
8239.8750	-13.0000	-43.8562 **	-42.7515 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

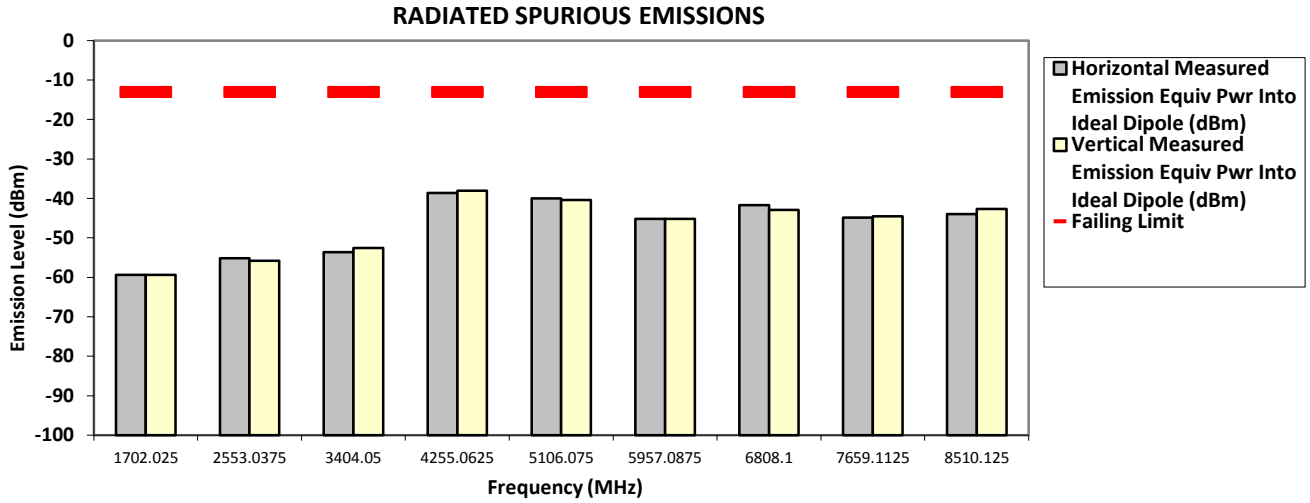
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-59.4178 **	-59.3842 **
2553.0375	-13.0000	-55.1791 **	-55.8419 **
3404.0500	-13.0000	-53.6431 **	-52.5466 **
4255.0625	-13.0000	-38.6200 *	-38.0200 *
5106.0750	-13.0000	-40.0200 *	-40.3700 *
5957.0875	-13.0000	-45.1908 **	-45.2167 **
6808.1000	-13.0000	-41.7246 **	-42.9193 **
7659.1125	-13.0000	-44.8899 **	-44.5414 **
8510.1250	-13.0000	-43.9954 **	-42.6908 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

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

SAC Transmitter Radiated Emission

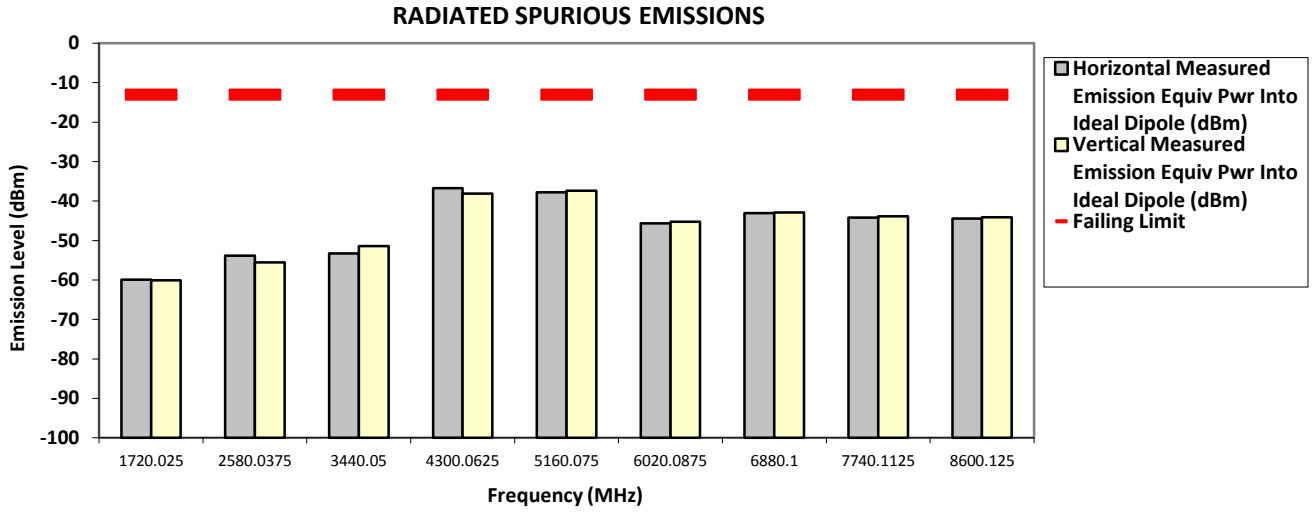
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-59.8846 **	-60.0900 **
2580.0375	-13.0000	-53.8249 **	-55.5659 **
3440.0500	-13.0000	-53.2710 **	-51.4180 **
4300.0625	-13.0000	-36.7200 *	-38.0700 *
5160.0750	-13.0000	-37.7800 *	-37.4100 *
6020.0875	-13.0000	-45.6452 **	-45.2657 **
6880.1000	-13.0000	-43.0418 **	-42.9267 **
7740.1125	-13.0000	-44.2070 **	-43.8841 **
8600.1250	-13.0000	-44.4687 **	-44.0810 **



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

Passed Results	Marginal Results	Failed Results

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

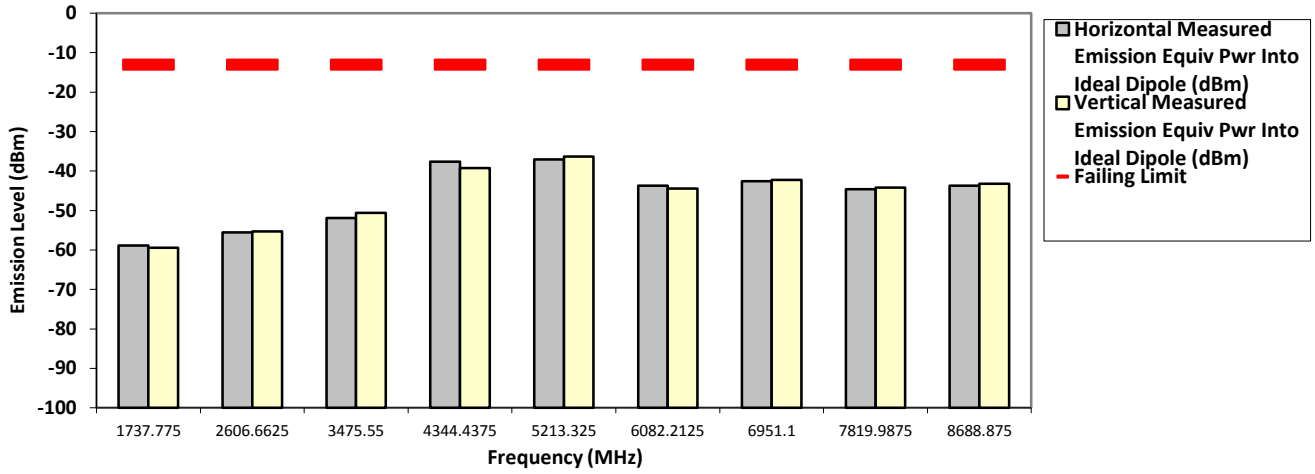
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-58.8938 **	-59.4497 **
2606.6625	-13.0000	-55.5578 **	-55.2686 **
3475.5500	-13.0000	-51.8933 **	-50.6216 **
4344.4375	-13.0000	-37.6500 *	-39.2800 *
5213.3250	-13.0000	-37.0300 *	-36.3200 *
6082.2125	-13.0000	-43.7197 **	-44.4234 **
6951.1000	-13.0000	-42.5970 **	-42.2541 **
7819.9875	-13.0000	-44.6105 **	-44.1725 **
8688.8750	-13.0000	-43.7177 **	-43.1974 **

RADIATED SPURIOUS EMISSIONS



The data presented here was taken using the substitution method as found in the TIA/EIA-603E document.

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 18, 2017**

Industry Canada: 109AK

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): 23.2 Hum(%RH): 70.3

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

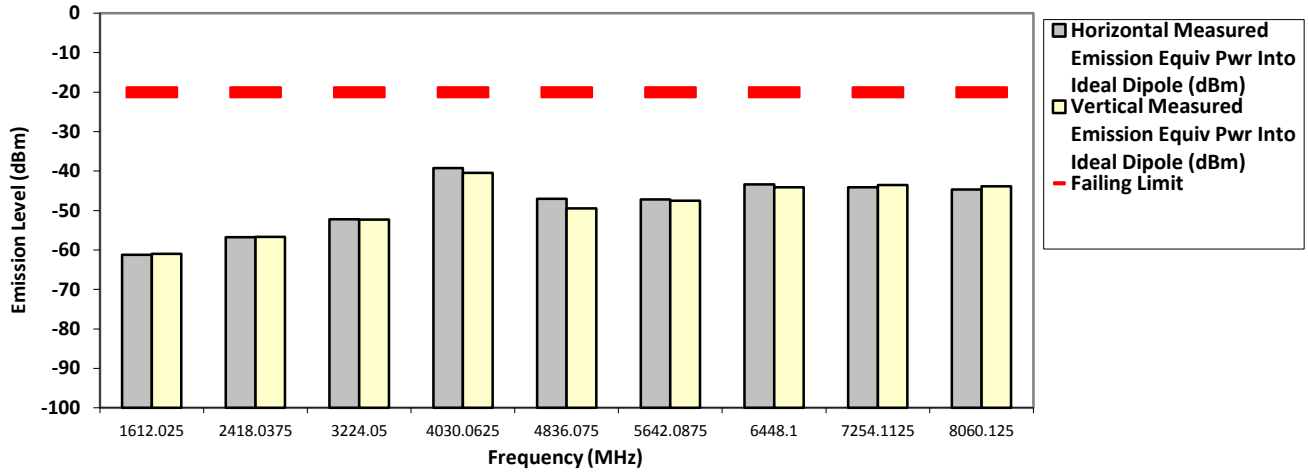
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-61.2354 **	-60.9489 **
2418.0375	-20.0000	-56.7541 **	-56.6452 **
3224.0500	-20.0000	-52.2316 **	-52.3359 **
4030.0625	-20.0000	-39.2300 *	-40.4800 *
4836.0750	-20.0000	-47.0398 **	-49.4640 **
5642.0875	-20.0000	-47.1518 **	-47.5448 **
6448.1000	-20.0000	-43.3453 **	-44.0796 **
7254.1125	-20.0000	-44.1373 **	-43.5528 **
8060.1250	-20.0000	-44.6565 **	-43.8454 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

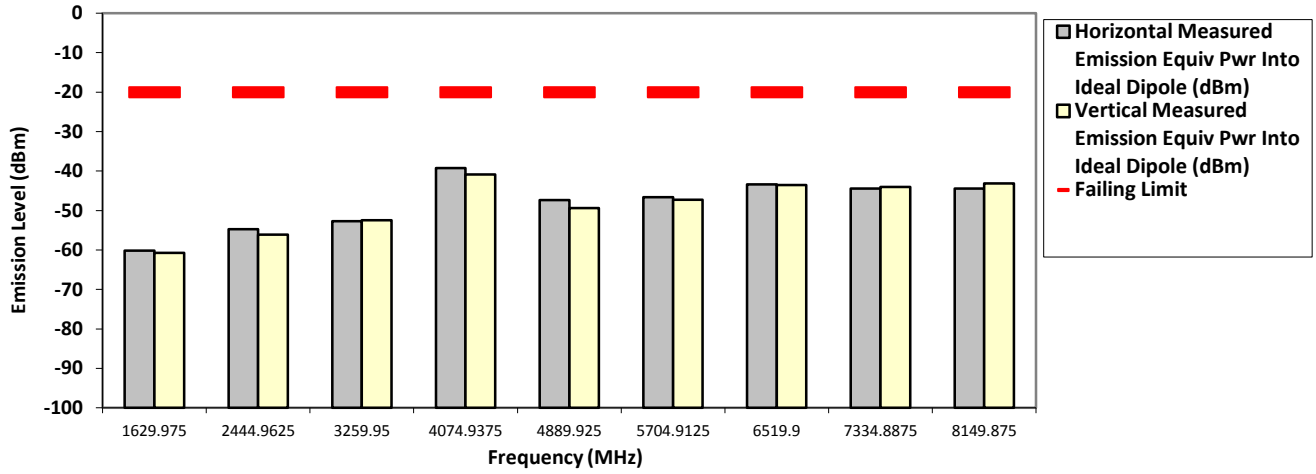
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.2011 **	-60.7010 **
2444.9625	-20.0000	-54.7237 **	-56.1232 **
3259.9500	-20.0000	-52.7411 **	-52.4755 **
4074.9375	-20.0000	-39.2300 *	-40.8800 *
4889.9250	-20.0000	-47.3242 **	-49.3583 **
5704.9125	-20.0000	-46.5886 **	-47.2445 **
6519.9000	-20.0000	-43.3941 **	-43.5576 **
7334.8875	-20.0000	-44.4692 **	-44.0451 **
8149.8750	-20.0000	-44.4121 **	-43.1450 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

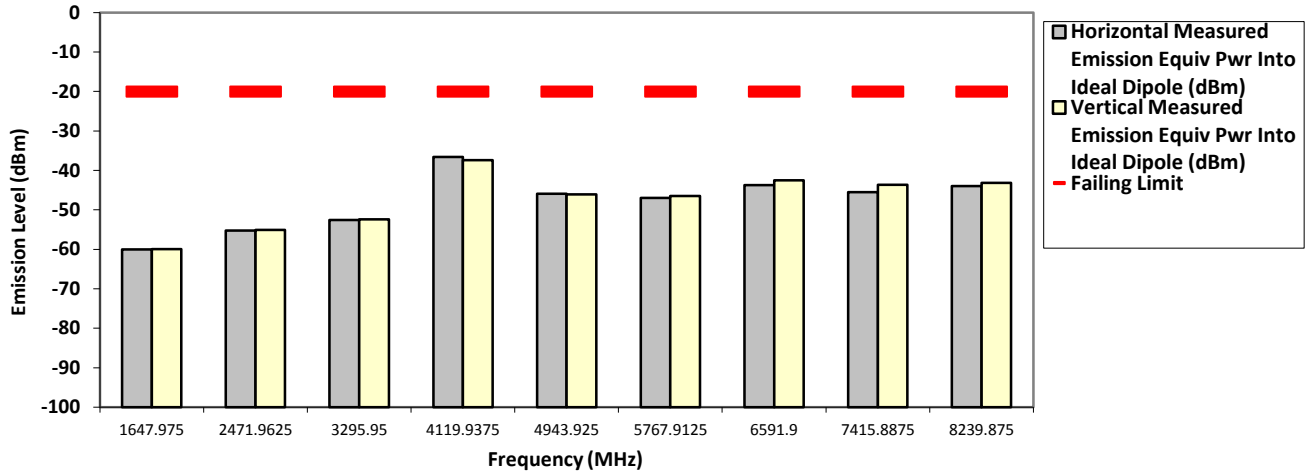
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.0486 **	-59.9843 **
2471.9625	-20.0000	-55.2273 **	-55.1015 **
3295.9500	-20.0000	-52.6021 **	-52.4379 **
4119.9375	-20.0000	-36.5800 *	-37.4300 *
4943.9250	-20.0000	-45.9151 **	-46.0985 **
5767.9125	-20.0000	-46.9652 **	-46.5263 **
6591.9000	-20.0000	-43.7428 **	-42.4998 **
7415.8875	-20.0000	-45.5289 **	-43.6169 **
8239.8750	-20.0000	-43.9840 **	-43.1756 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

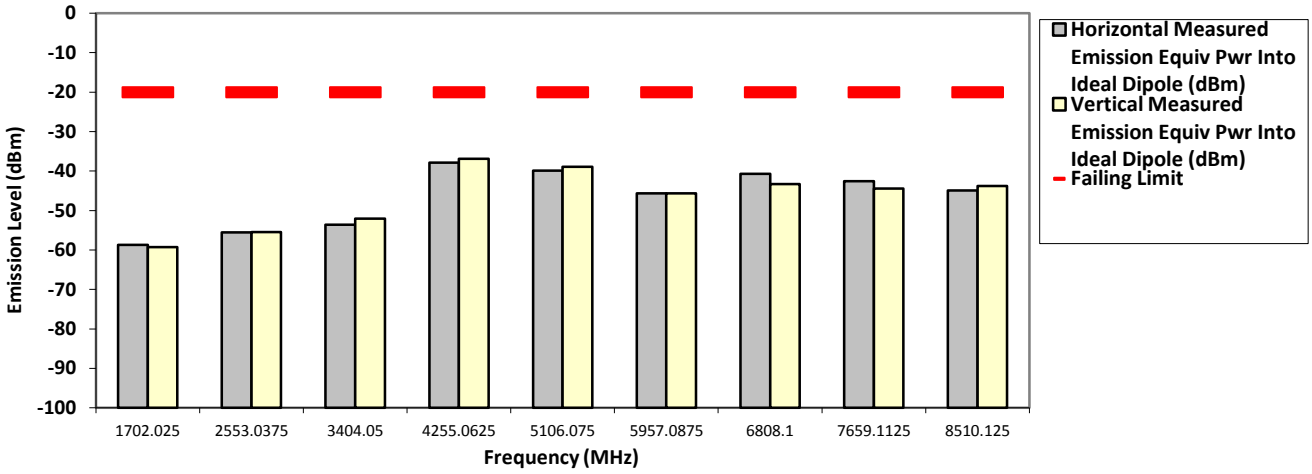
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-58.7043 **	-59.2668 **
2553.0375	-20.0000	-55.5297 **	-55.4912 **
3404.0500	-20.0000	-53.6092 **	-52.0697 **
4255.0625	-20.0000	-37.8300 *	-36.8900 *
5106.0750	-20.0000	-39.8800 *	-38.9400 *
5957.0875	-20.0000	-45.6463 **	-45.6433 **
6808.1000	-20.0000	-40.6649 **	-43.2704 **
7659.1125	-20.0000	-42.5659 **	-44.4659 **
8510.1250	-20.0000	-44.8881 **	-43.8251 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

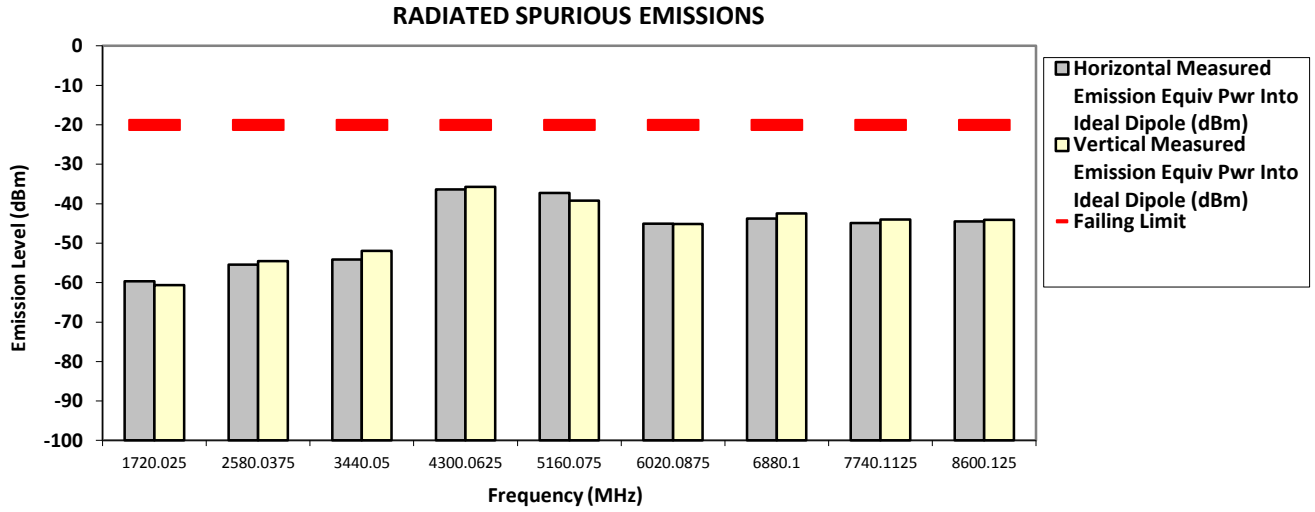
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-59.6246 **	-60.6073 **
2580.0375	-20.0000	-55.4557 **	-54.5044 **
3440.0500	-20.0000	-54.1275 **	-51.9740 **
4300.0625	-20.0000	-36.3400 *	-35.7200 *
5160.0750	-20.0000	-37.2700 *	-39.2100 *
6020.0875	-20.0000	-45.0725 **	-45.1755 **
6880.1000	-20.0000	-43.7827 **	-42.4374 **
7740.1125	-20.0000	-44.9288 **	-43.9854 **
8600.1250	-20.0000	-44.4851 **	-44.1047 **



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

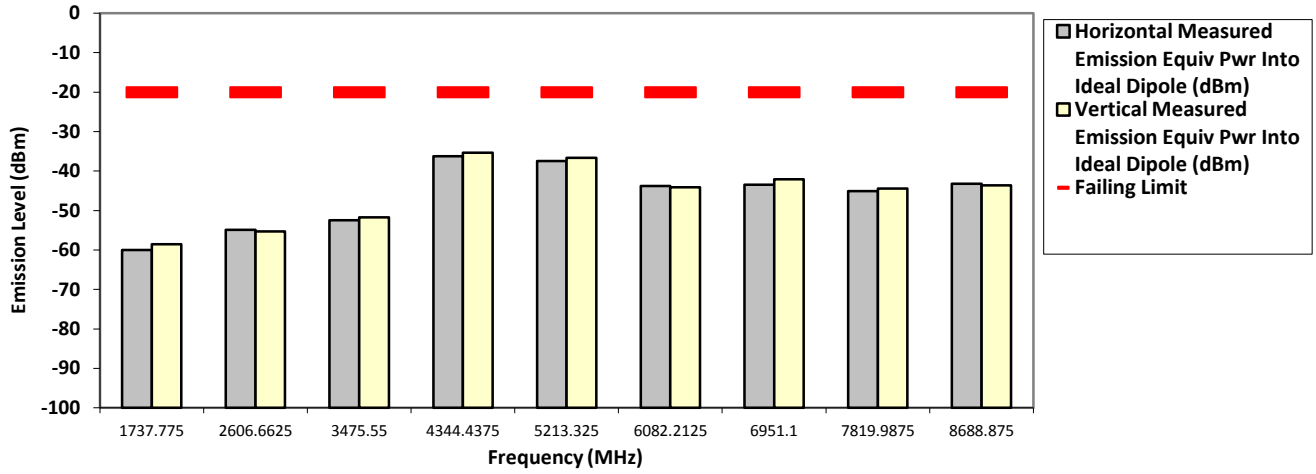
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-60.0440 **	-58.5404 **
2606.6625	-20.0000	-54.8646 **	-55.2672 **
3475.5500	-20.0000	-52.4443 **	-51.7335 **
4344.4375	-20.0000	-36.2200 *	-35.3500 *
5213.3250	-20.0000	-37.4600 *	-36.6600 *
6082.2125	-20.0000	-43.8229 **	-44.0771 **
6951.1000	-20.0000	-43.4671 **	-42.0473 **
7819.9875	-20.0000	-45.0758 **	-44.4523 **
8688.8750	-20.0000	-43.2552 **	-43.6530 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

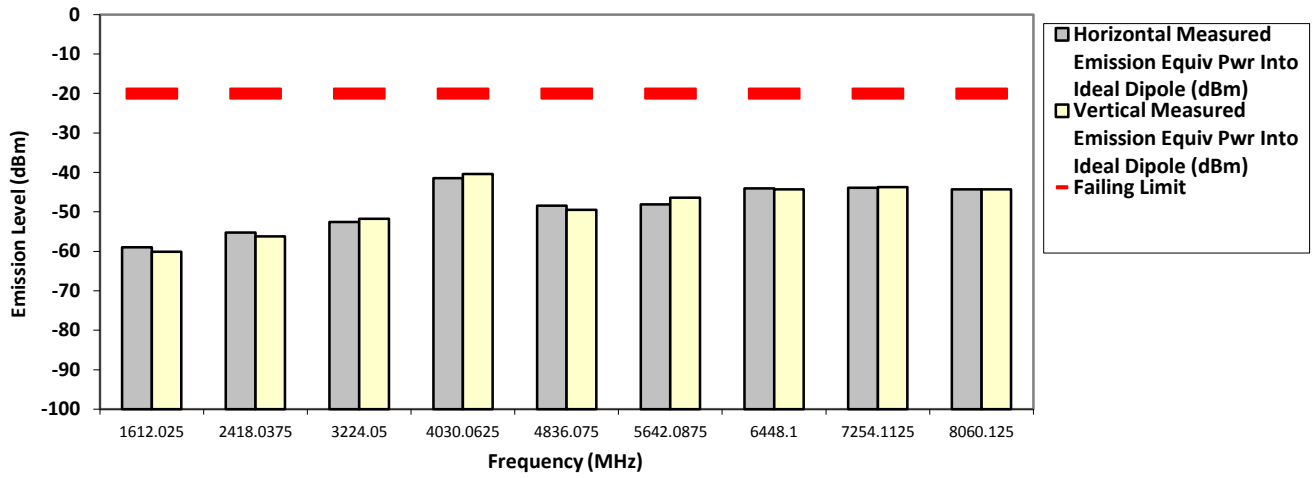
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-59.0059 **	-60.1331 **
2418.0375	-20.0000	-55.2440 **	-56.1834 **
3224.0500	-20.0000	-52.5543 **	-51.7270 **
4030.0625	-20.0000	-41.4300 *	-40.4100 *
4836.0750	-20.0000	-48.4482 **	-49.5113 **
5642.0875	-20.0000	-48.1295 **	-46.3855 **
6448.1000	-20.0000	-44.0439 **	-44.2699 **
7254.1125	-20.0000	-43.8822 **	-43.7534 **
8060.1250	-20.0000	-44.2940 **	-44.2784 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

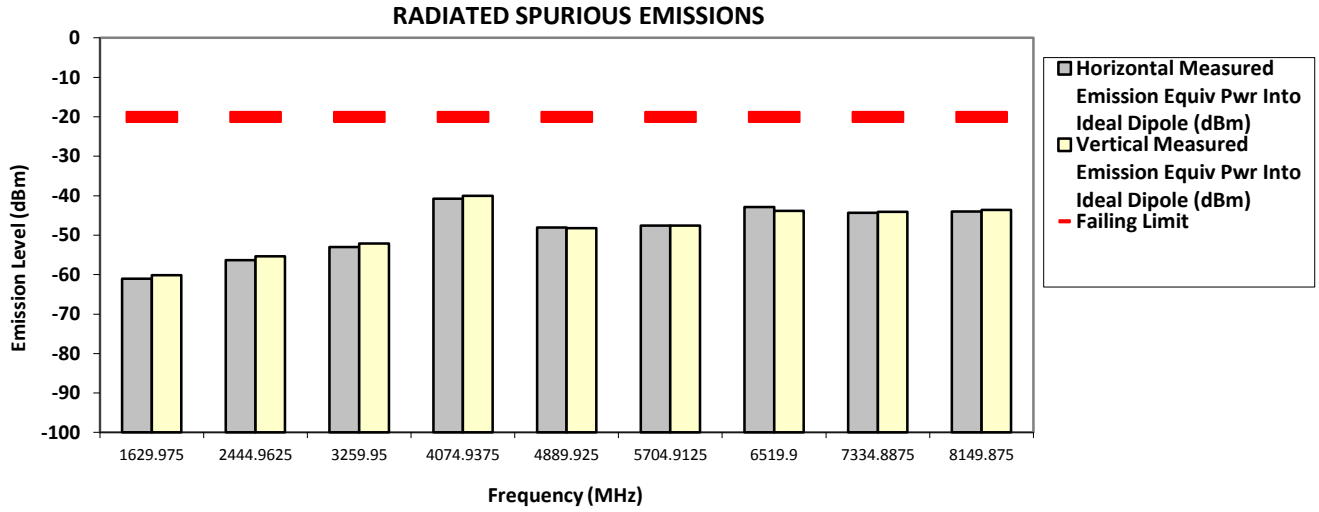
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-61.0449 **	-60.1125 **
2444.9625	-20.0000	-56.3445 **	-55.3243 **
3259.9500	-20.0000	-53.0078 **	-52.1255 **
4074.9375	-20.0000	-40.7500 *	-40.0400 *
4889.9250	-20.0000	-48.0688 **	-48.2531 **
5704.9125	-20.0000	-47.6006 **	-47.5323 **
6519.9000	-20.0000	-42.8948 **	-43.8705 **
7334.8875	-20.0000	-44.3327 **	-44.0884 **
8149.8750	-20.0000	-44.0398 **	-43.5776 **



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

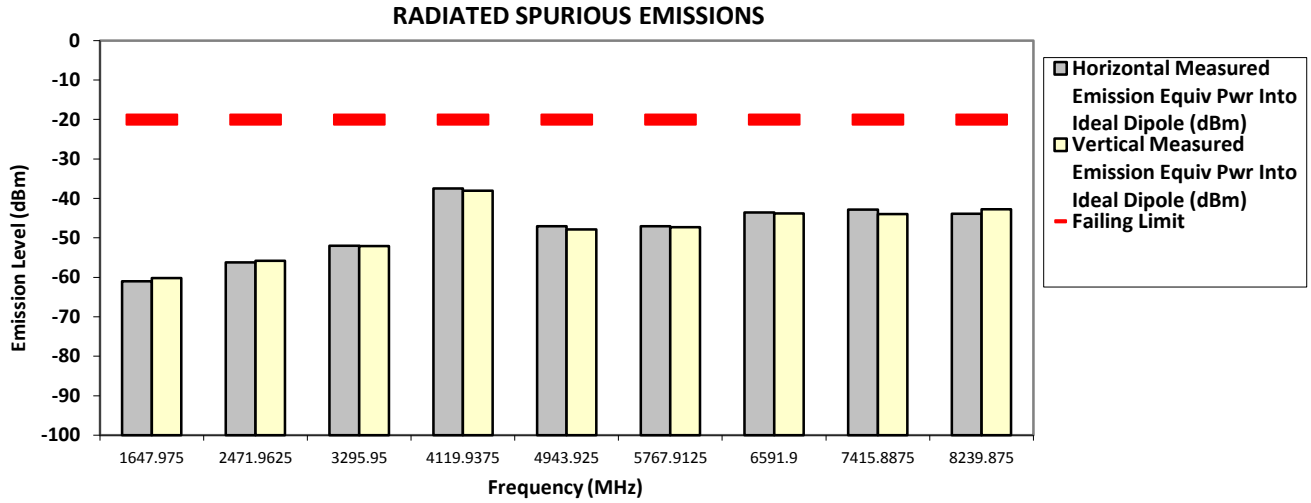
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-60.9805 **	-60.2263 **
2471.9625	-20.0000	-56.2393 **	-55.7772 **
3295.9500	-20.0000	-51.9723 **	-52.0518 **
4119.9375	-20.0000	-37.5100 *	-38.0500 *
4943.9250	-20.0000	-47.0691 **	-47.8373 **
5767.9125	-20.0000	-47.0441 **	-47.2737 **
6591.9000	-20.0000	-43.5363 **	-43.7875 **
7415.8875	-20.0000	-42.8743 **	-43.9841 **
8239.8750	-20.0000	-43.8562 **	-42.7515 **



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

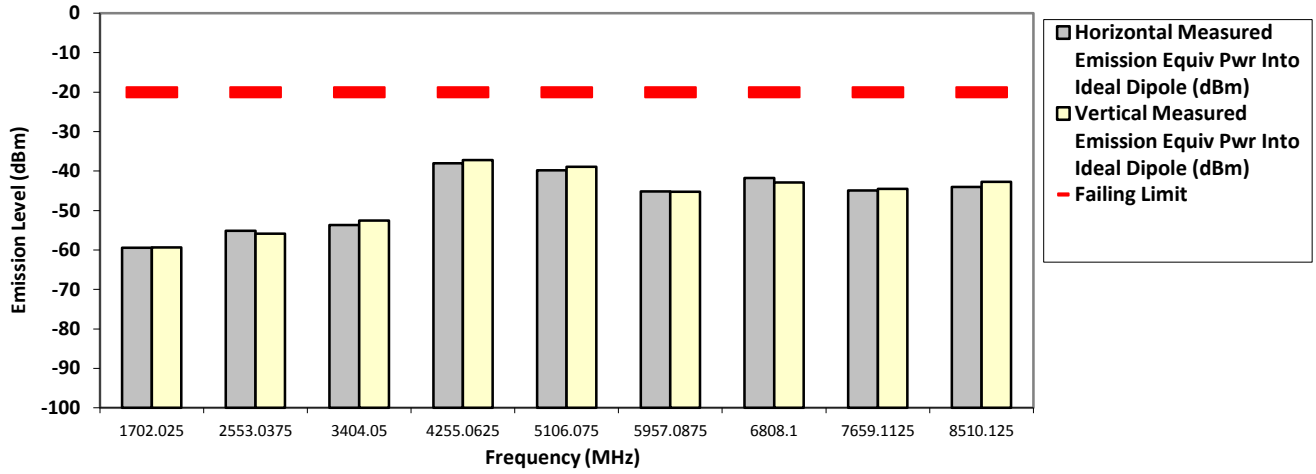
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-59.4178 **	-59.3842 **
2553.0375	-20.0000	-55.1791 **	-55.8419 **
3404.0500	-20.0000	-53.6431 **	-52.5466 **
4255.0625	-20.0000	-38.0300 *	-37.2100 *
5106.0750	-20.0000	-39.8000 *	-38.9500 *
5957.0875	-20.0000	-45.1908 **	-45.2167 **
6808.1000	-20.0000	-41.7246 **	-42.9193 **
7659.1125	-20.0000	-44.8899 **	-44.5414 **
8510.1250	-20.0000	-43.9954 **	-42.6908 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

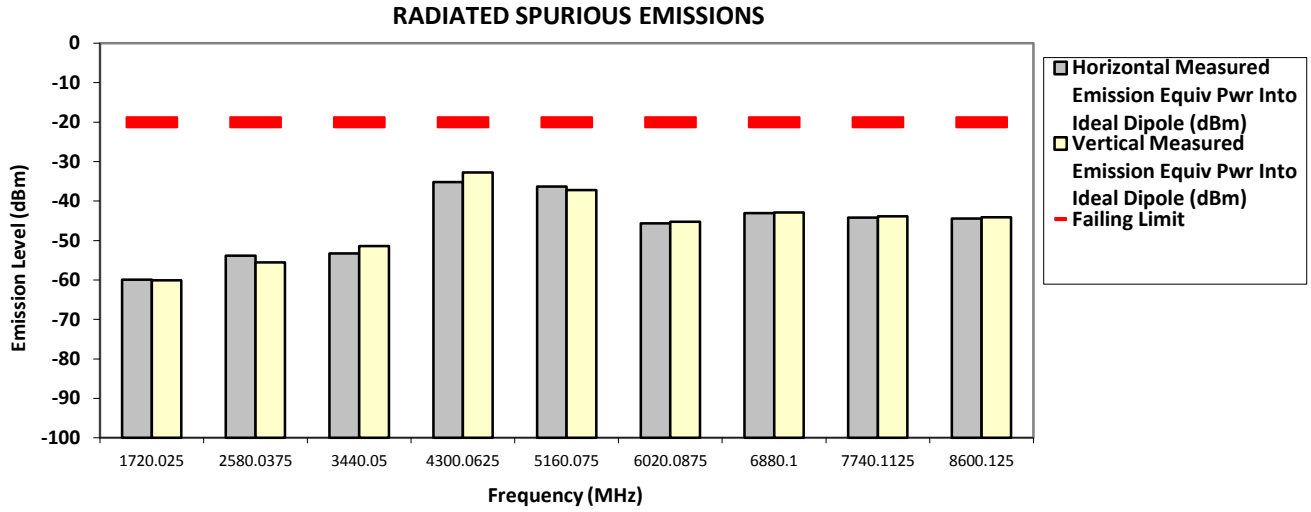
Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

Battery Part No: NNTN7034B **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	-59.8846 **	-60.0900 **
2580.0375	-20.0000	-53.8249 **	-55.5659 **
3440.0500	-20.0000	-53.2710 **	-51.4180 **
4300.0625	-20.0000	-35.1700 *	-32.7300
5160.0750	-20.0000	-36.3500 *	-37.2500 *
6020.0875	-20.0000	-45.6452 **	-45.2657 **
6880.1000	-20.0000	-43.0418 **	-42.9267 **
7740.1125	-20.0000	-44.2070 **	-43.8841 **
8600.1250	-20.0000	-44.4687 **	-44.0810 **



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Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

SAC Transmitter Radiated Emission

Model Number: H91TGD9PW7AN **S/N: 579TTME983** **SR:09095-EMC-00008**

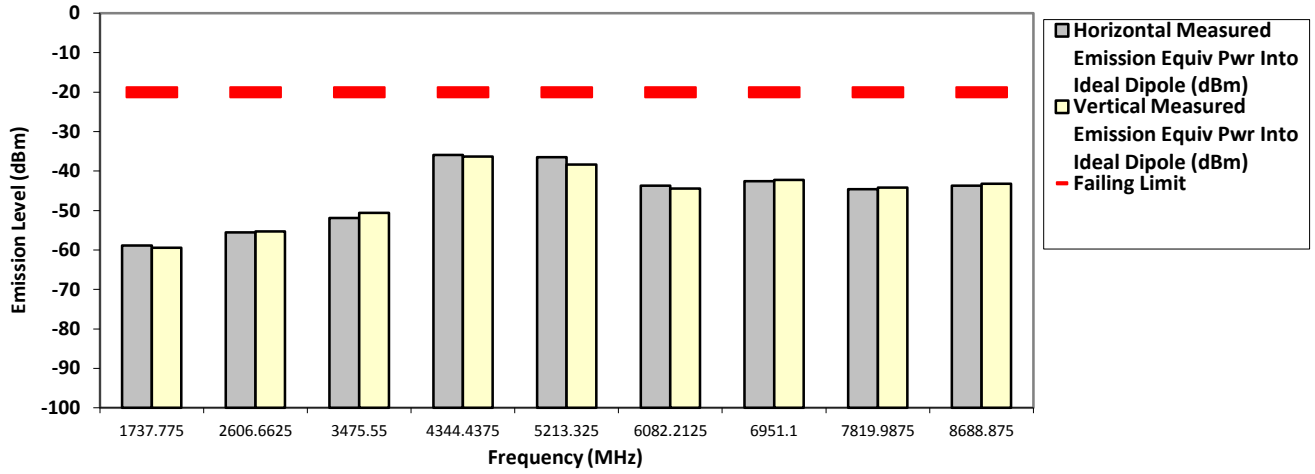
Battery Part No: NNTN7034B **Accy Part No: NA**

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	-58.8938 **	-59.4497 **
2606.6625	-20.0000	-55.5578 **	-55.2686 **
3475.5500	-20.0000	-51.8933 **	-50.6216 **
4344.4375	-20.0000	-35.9200 *	-36.3300 *
5213.3250	-20.0000	-36.4700 *	-38.3900 *
6082.2125	-20.0000	-43.7197 **	-44.4234 **
6951.1000	-20.0000	-42.5970 **	-42.2541 **
7819.9875	-20.0000	-44.6105 **	-44.1725 **
8688.8750	-20.0000	-43.7177 **	-43.1974 **

RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Nazrin,Qawiman&Azil **Fri, Aug 25, 2017**

Industry Canada: 109AK

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): 23.3 Hum(%RH): 71.4

System MU: 5.01 dB

Remarks:

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

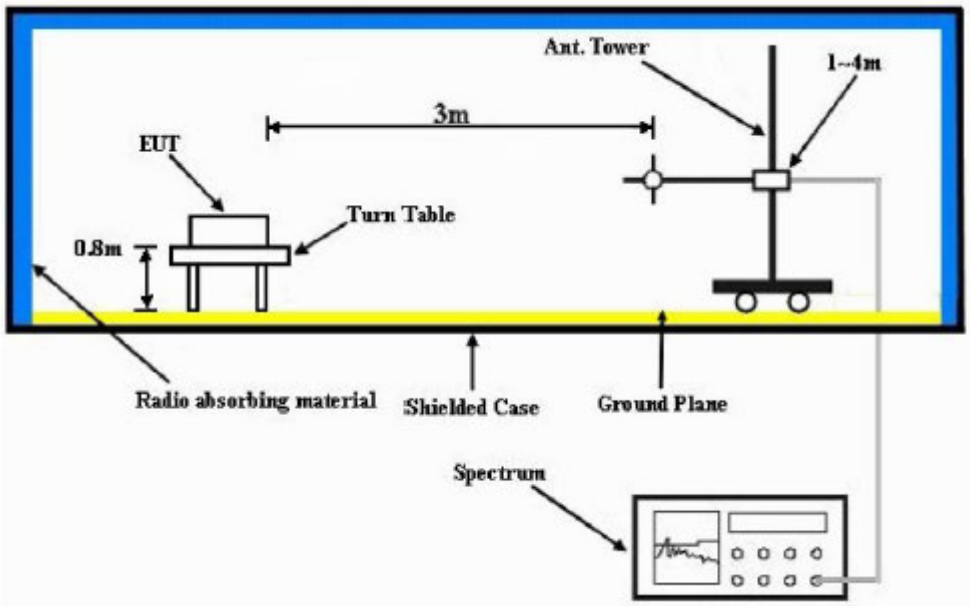
6.10.4. Test Limit

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
12.5kHz	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)	Not Applicable	50 + log10(P) (-20 dBm)
25kHz		Not Applicable		43 + log10(P) (-13 dBm)	43 + log10(P) (-13 dBm)

6.11. Effective Radiated Power (ERP) / GNSS (EIRP for 1559 - 1610MHz)

6.11.1. Test Setup



1) The spectrum setting for Equivalent Isotropically Radiated Power (EIRP) is RBW = 100 kHz, VBW = 300 kHz. Detector Mode is RMS.
2) In the semi-anechoic chamber, setup as illustrated above the EUT 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 EUT 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) EIRP = "Read Value" + Measured substitution value + 2.15.

6.11.2. Test Result

Not Applicable

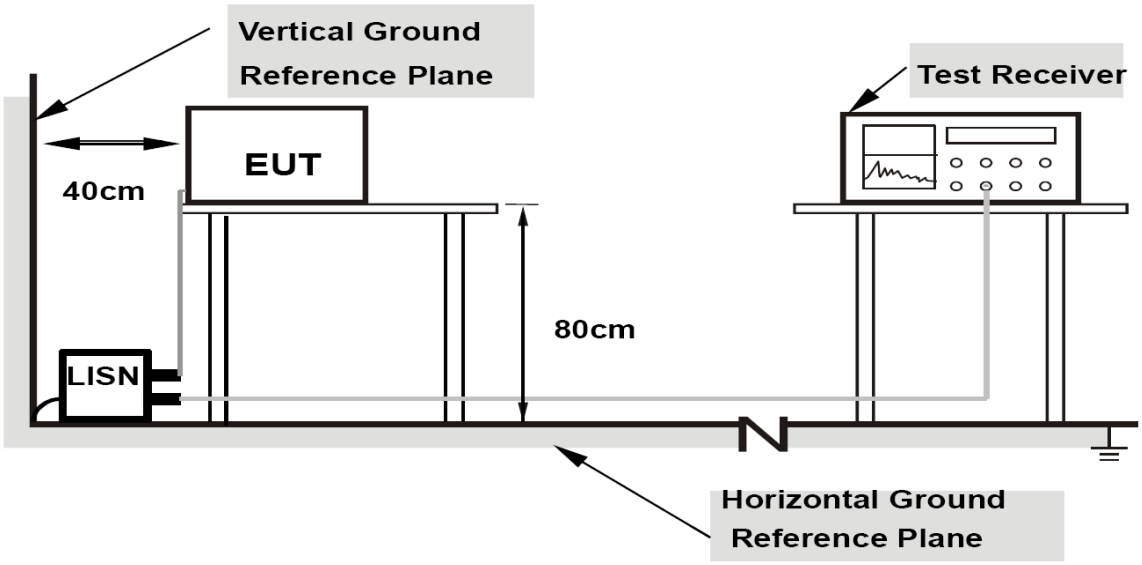
6.11.3. Test Limit

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

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.

6.12. AC Power Line Conducted Spur Emissions

6.12.1. Test Setup



1) Tests were conducted for both Receive and Transmit Mode of the EUT.
2) The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm / 50 µH of coupling impedance for the measuring instrument.
3) Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
4) The frequency range from 150 kHz to 30 MHz was measured.

6.12.2. Test Result

Not Applicable

6.12.3. Test Limit

For AC Power Line Conducted Test Limit can be Class A or B depends on product classification.

Limits for conducted disturbance at the mains ports of class A ITE

Frequency range MHz	Limits dB(µV)	
	Quasi-peak	Average
0,15 to 0,50	79	66
0,50 to 30	73	60
NOTE The lower limit shall apply at the transition frequency.		

Limits for conducted disturbance at the mains ports of class B ITE

Frequency range MHz	Limits dB(µV)	
	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50
NOTE 1 The lower limit shall apply at the transition frequencies. NOTE 2 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.		