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| <p><b>MOTOROLA PENANG ADV. COMM. LABORATORY</b><br/>                 Motorola Solutions Malaysia SDN BHD,<br/>                 Plot 2A, Medan Bayan Lepas,<br/>                 Mukim 12 S.W.D, 11900 Bayan Lepas,<br/>                 Penang, Malaysia.</p>  | <p><b>FCC/ISED TEST REPORT</b><br/>                 Report Revision : Rev.A</p>  |
| <p><b>Date/s Tested</b> : 20-JAN-2025 - 25-JAN-2025<br/> <b>Report Issue Date</b> : 12-APR-2025<br/> <b>Manufacturer</b> : Motorola Solutions Malaysia SDN BHD<br/> <b>Manufacturer Address</b> : Plot 2A, Medan Bayan Lepas, Mukim 12 SWD,<br/>                 11900 Bayan Lepas, Penang, Malaysia<br/> <b>Requestor</b> : FAUZIAH ABDUL RAHNI<br/> <b>Product Type</b> : Portable<br/> <b>Product Marketing Version (PMN)</b> : MXP600<br/> <b>Hardware Version Identification Number (HVIN)</b> : AZH77PCN6TZ5AN<br/> <b>Frequency Band</b> : 350-470 MHz<br/> <b>Max RF Output Power</b> : 3.0 Watts<br/> <b>Applicant Name</b> : Motorola Solutions Inc<br/> <b>Applicant Address</b> : Plot 2A, Medan Bayan Lepas, Mukim 12 SWD,<br/>                 11900 Bayan Lepas, Penang, Malaysia<br/> <b>ISED Registrations</b> : MY0001<br/> <b>FCC Registrations</b> : 461337<br/> <b>Firmware Version Identification Number (FVIN)</b> : R55.000.9735</p> <p>The equipment was tested accordance to the requirement listed below:</p> <p>(LMR)<br/>                 FCC 47 CFR Part 90<br/>                 ISED RSS-119 Issue 12</p> <p style="text-align: right;"><b>PASS</b></p> |  |
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| <p>Prepared By:</p>  <p>_____<br/>                 Farah Nur Arina<br/>                 Test Personnel</p>  | <p>Approved Signatory:</p> <p>_____<br/>                 Maheshvaran A/L Rajagopal<br/>                 Responsible Engineer</p>   |

# Table of Contents

|   |    |
|---|----|
| Report Revision History .....             | 3  |
| 1.0 General Information .....             | 4  |
| 2.0 Summary of Test Results .....         | 5  |
| 3.0 Measurement Uncertainty .....         | 6  |
| 4.0 Equipment List.....                   | 7  |
| 5.0 Test Condition .....                  | 10 |
| 5.1. Transmitter Test Conditions.....     | 10 |
| 6.0 Transmitter Test Parameters .....     | 11 |
| 6.1. RF Output Power.....                 | 11 |
| 6.1.1. Test Setup .....                   | 11 |
| 6.1.2. Test Result.....                   | 11 |
| 6.2. Frequency Stability .....            | 12 |
| 6.2.1. Test Setup .....                   | 12 |
| 6.2.2. Test Result.....                   | 13 |
| 6.2.3. Test Limit.....                    | 20 |
| 6.3. Occupied Bandwidth .....             | 21 |
| 6.3.1. Test Setup (Digital) .....         | 21 |
| 6.3.2. Test Result (Digital) .....        | 22 |
| 6.3.3. Test Limit.....                    | 25 |
| 6.4. Transient Frequency Behavior .....   | 26 |
| 6.4.1. Test Setup .....                   | 26 |
| 6.4.2. Test Result.....                   | 27 |
| 6.4.3. Test Limit.....                    | 29 |
| 6.5. Adjacent Channel Power.....          | 30 |
| 6.5.1. Test Setup (Digital) .....         | 30 |
| 6.5.2. Test Result.....                   | 31 |
| 6.5.3. Test Limit.....                    | 32 |
| 6.6. Conducted Spurious Emission .....    | 34 |
| 6.6.1. Test Setup .....                   | 34 |
| 6.6.2. Test Result (Digital) .....        | 35 |
| 6.6.3. Test Limit.....                    | 47 |
| 6.7. Radiated Spurious Emission.....      | 48 |
| 6.7.1. Test Setup .....                   | 48 |
| 6.7.2. Test Result (Digital) .....        | 49 |
| 6.7.3. Test Limit.....                    | 55 |
| 6.8. Effective Radiated Power (ERP) ..... | 56 |
| 6.8.1. Test Setup .....                   | 56 |
| 6.8.2. Test Result.....                   | 56 |
| 6.8.3. Test Limit.....                    | 56 |

### Report Revision History

| Revision History | Description    | Date        | Originator |
|------------------|----------------|-------------|------------|
| Rev. A           | Initial Report | 28-Jan-2025 | Farah      |

## 1.0 General Information

### EUT Description:

|                        |                         |
|------------------------|-------------------------|
| <b>Technologies</b>    | Land Mobile Radio (LMR) |
| <b>Modulation Type</b> | $\pi$ / 4DQPSK          |

The EUT contains following accessory devices and data cable:

| <b>Item</b>                   | <b>Brand</b> | <b>Model or P/N</b> |
|-------------------------------|--------------|---------------------|
| BATT LION IMPRES 2 IP68 3400T | MOTOROLA     | PMNN4802A           |

### General Description of Applied Standards

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

#### ANSI C63.26-2015

No modifications were done to the UUT to facilitate the tests in this report.

#### Deviation from standard

Not applicable as no deviation from standard test method

#### Antenna gain disclaimer

Antenna gain information is provided by customer. The validity of the results is dependent upon this information. The lab will not be held accountable in the event the supplied information affects compliance.

#### Test configuration of EUT

All relevant configurations involving radio models and accessories (including chargers, batteries, and antennas) were assessed. Only worst case configurations will be included in this report.

## 2.0 Summary of Test Results

| FCC General Rules Part (47CFR) | ISED General Rules Part | Test Item                      | Result | Remarks  | Serial number tested |
|--------------------------------|-------------------------|--------------------------------|--------|--|----------------------|
| Part 90                        | RSS-119                 | RF Power Output                | Pass   |  | 767TAV3882           |
| Part 90                        | RSS-119                 | Frequency Stability            | Pass   |  | 767TAV3882           |
| -                              | RSS-119                 | Occupied Bandwidth             | Pass   | 22K0D1W – 20.8646kHz                                       | 767TAV3882           |
| Part 90                        | RSS-119                 | Transient Frequency Behavior   | Pass   |  | 767TAV3883           |
| Part 90                        | -                       | Adjacent Channel Power         | PASS   |  |                      |
| Part 90                        | RSS-119                 | Conducted Spurious Emissions   | Pass   | Worst case: -38.59 dBm                                     | 767TAV3882           |
| Part 90                        | RSS-119                 | Radiated Spurious Emission     | Pass   | Worst case: spur level: -45.8400 dBm<br>margin: 32.8400 dB | 767TAV3882           |
| -                              | -                       | Effective Radiated Power (ERP) | NA     |  |                      |

**NA → Not Applicable**

**\*Note:** A reference voltage controlled temperature compensated crystal oscillator (VCTCXO) operating at 19.2MHz acts as the master reference for both synthesizers and the radio control system. Inherent frequency stability of the VCTCXO is better than 1 part per million (ppm). During trunked network operation this reference is frequency locked to the received base station frequency.

In addition to this, the ETSI conformance standard EN 300 394-1 states that the product, when in trunked mode and therefore locked onto the base station carrier signal, shall be within +/-100Hz of this signal under normal test conditions.

The manufacturer confirms that during their conformance testing of this product type against the conformance standard the frequency error was within +/-100Hz of the base station carrier frequency, therefore well within specification limits

### 3.0 Measurement Uncertainty

| Measurement   | Frequency       | Expanded Uncertainty (k=1.96) (±) |
|---|-----------------|-----------------------------------|
| AC Power Line Conducted Spurious Emission                   | 150KHz ~ 30MHz  | 3.48 dB                           |
| Radiated Emissions up to 1 GHz dB $\mu$ V/m(Field Strength) | 30MHz ~ 1000MHz | 5.88 dB                           |
| Radiated Emissions above 1 GHz dB $\mu$ V/m(Field Strength) | 1GHz ~ 18GHz    | 5.84 dB                           |
|   | 18GHz ~ 40GHz   | 6.02 dB                           |
| Radiated Emissions dBm (ERP/EiRP)                           | 30MHz ~ 18GHz   | 4.03 dB                           |
| Conducted Spurious Emissions                                | 9kHz ~ 12.75GHz | 2.82 dB                           |
| Frequency Stability   | 9kHz ~ 12.75GHz | 0.0085 ppm                        |
| Occupied Bandwidth  | 9kHz ~ 12.75GHz | 2.82 dB                           |
| Transient Frequency Behavior                                | 9kHz ~ 12.75GHz | 5.4 ms                            |
| Adjacent Channel Power                                      | 9kHz ~ 12.75GHz | 2.82 dB                           |

#### 4.0 Equipment List

##### FCC Analog ATE#1: (SW version: FCC\_Analog\_v2.5.0)

| Description              | Model         | Serial Number | Calibration Date | Calibration Due Date |
|--------------------------|---------------|---------------|------------------|----------------------|
| CHAMBER                  | SH-641        | 92009188      | 04-Mar-24        | 04-Mar-25            |
| POWER SUPPLY             | 6031A         | 2729A00711    | 08-Jun-24        | 08-Jun-25            |
| POWER SENSOR             | E4412A        | MY50000141    | 16-Aug-24        | 16-Aug-25            |
| POWER METER              | E4416A        | MY45101448    | 23-Aug-24        | 23-Aug-25            |
| CXA SIGNAL ANALYZER      | N9000B        | MY60250581    | 08-Jun-24        | 08-Jun-25            |
| AUDIO ANALYZER           | U8903B        | MY61070007    | 17-Aug-24        | 17-Aug-25            |
| CHAMBER                  | SH-641        | 92009188      | 04-Mar-24        | 04-Mar-25            |
| N to N RF Cable # 1      | M17/128-RG400 | NA            | NA               | NA                   |
| BNC to N RF Cable # 1    | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 1  | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 2  | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 3  | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 4  | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 5  | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 6  | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 7  | RG 58         | NA            | NA               | NA                   |
| N to SMA RF Cable # 1    | RG 58         | NA            | NA               | NA                   |
| N to SMA RF Cable # 2    | RG 58         | NA            | NA               | NA                   |
| N to SMA RF Cable # 3    | RG 58         | NA            | NA               | NA                   |
| Aeroflex Attenuator 30dB | 49-30-34-LIM  | NA            | NA               | NA                   |

**FCC TRANSIENT ATE #1: (SW version: FCC Transient ATE\_R1.2.1)**

| Description                | Model         | Serial Number | Calibration Date | Calibration Due Date |
|----------------------------|---------------|---------------|------------------|----------------------|
| SWITCH CONTROL UNIT        | 3488A         | 2719A36210    | CNR              | CNR                  |
| ATTENUATOR / SWITCH DRIVER | 11713A        | 3748A09090    | CNR              | CNR                  |
| POWER METER                | E4416A        | GB41293866    | 31-Dec-24        | 31-Dec-25            |
| AUDIO ANALYZER             | 8903B         | 3729A17612    | 14-Feb-24        | 14-Feb-25            |
| CXA SIGNAL ANALYZER        | N9000B        | MY60250716    | 3-Dec-24         | 3-Dec-25             |
| AUDIO ANALYZER             | 8903B         | 2836A05866    | 09-Feb-24        | 09-Feb-25            |
| POWER SENSOR               | E9301B        | MY50180003    | 19-Jul-24        | 19-Jul-25            |
| POWER SUPPLY               | 6623A         | 3305A02648    | 31-Jul-24        | 31-Jul-25            |
| SPECTRUM ANALYZER          | E4445A        | MY46181513    | 04-Jul-24        | 04-Jul-25            |
| ATTENUATOR/11DB            | 8494G         | MY52300223    | 15-Aug-24        | 15-Aug-25            |
| ATTENUATOR/110DB           | 8496G         | MY52300088    | 15-Aug-24        | 15-Aug-25            |
| MODULATION ANALYZER        | 8901B         | 3403A04772    | 18-Sep-24        | 18-Sep-25            |
| SIGNAL GENERATOR           | 8657A         | 3250A05137    | 16-Aug-24        | 16-Aug-25            |
| N to N RF Cable # 1        | SF126/11N/11N | NA            | NA               | NA                   |
| N to N RF Cable # 1        | SF126/11N/11N | NA            | NA               | NA                   |
| N to N RF Cable # 2        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 3        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 4        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 5        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 6        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 7        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 8        | M17/128-RG400 | NA            | NA               | NA                   |
| N to N RF Cable # 9        | M17/128-RG400 | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 1    | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 2    | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 3    | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 4    | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 5    | RG 58         | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 6    | RG 58         | NA            | NA               | NA                   |
| BNC to N RF Cable # 1      | RG 58         | NA            | NA               | NA                   |
| Aeroflex Attenuator 10dB   | 49-10-43-LIM  | NA            | NA               | NA                   |
| Aeroflex Attenuator 10dB   | 33-10-34-LIM  | NA            | NA               | NA                   |

**FCC CONDUCTED SPUR EMISSION ATE # 1 (SW version: Conducted Spur ATE\_rev 1.23.06)**

| Description              | Model         | Serial Number | Calibration Date | Calibration Due Date |
|--------------------------|---------------|---------------|------------------|----------------------|
| SWITCH CONTROL UNIT      | 3488A         | 2719A32735    | Not Required     | Not Required         |
| INTERFACE BOX - FILTER   | NA            | CS001         | Not Required     | Not Required         |
| POWER SUPPLY             | 6032A         | 2723A02219    | 21-Aug-24        | 21-Aug-25            |
| SPECTRUM ANALYZER        | E4440A        | MY48250919    | 06-Jun-24        | 06-Jun-25            |
| N to N RF Cable # 1      | SF126/11N/11N | NA            | NA               | NA                   |
| N to N RF Cable # 2      | SF126/11N/11N | NA            | NA               | NA                   |
| BNC to BNC RF Cable # 1  | RG 58         | NA            | NA               | NA                   |
| Aeroflex Attenuator 30dB | 49-30-43-LIM  | NA            | NA               | NA                   |
| Aeroflex Attenuator 10dB | 33-10-34-LIM  | NA            | NA               | NA                   |

**RADIATED EMISSION (CHAMBER 1)**

| DESCRIPTION              | MODEL                        | SERIAL NUMBER   | CALIBRATION DATE | CALIBRATION DUE DATE |
|--------------------------|------------------------------|-----------------|------------------|----------------------|
| EMI TEST RECEIVER        | ESIB40                       | 100307          | 23-Oct-24        | 23-Oct-25            |
| 3m Semi-anechoic Chamber | NA                           | 888032          | Not Required     | Not Required         |
| TURNTABLE FLUSH MOUNT 2M | T-200-S                      | N/A             | Not Required     | Not Required         |
| PROGRAMMING CONTROLLER   | MF-7802BS                    | N/A             | Not Required     | Not Required         |
| POWER SUPPLY             | 6674A                        | 3126A00133      | 13-Mar-24        | 13-Mar-25            |
| SIGNAL ANALYZER          | FSV40                        | 101432          | 09-Aug-24        | 08-Aug-25            |
| DATA LOGGER              | SDL500                       | A.016800        | 26-Jun-24        | 26-Jun-25            |
| BILOG ANTENNA            | CBL6112D                     | 55546           | 05-Jun-24        | 05-Jun-25            |
| BILOG ANTENNA            | CBL 6112B                    | 2964            | 08-Oct-24        | 08-Oct-25            |
| DRG HORN FREQ.           | SAS-571                      | 1027            | 01-Jul-24        | 01-Jul-25            |
| DRG HORN FREQ.           | SAS-571                      | 720             | 18-Apr-23        | 18-Apr-25            |
| PREAMPLIFIER             | PAM-0118                     | 427             | 15-Nov-24        | 15-Nov-25            |
| SIGNAL GENERATOR         | SMB100A                      | 181117          | 06-Dec-21        | 06-Feb-25            |
| LOOP ANTENNA             | 6502                         | 00203479        | 06-Mac-24        | 06-Mac-25            |
| BROAD-BAND HORN ANTENNA  | BBHA9170                     | BBHA91702<br>55 | 13-Mar-24        | 13-Mar-25            |
| Test Software            | EMC_FCC_IC_Bluetooth_RE_Test |                 |                  |                      |
| Version                  | EMC_FCC_RE_v1.6.5            |                 |                  |                      |

## 5.0 Test Condition

### 5.1. Transmitter Test Conditions

| Test Item,<br>(Channel Spacing)                                       | Power<br>(W)   | Modulation     | Test Frequency<br>(MHz)                                      | Tested By | Environmental<br>conditions                                     |
|---|----------------|----------------|--|-----------|---|
| RF Output Power   | Max<br>Mode1&2 | $\pi$ / 4DQPSK | 406.125, 418.0125,<br>429.975, 450.025,<br>460.025, 469.9875 | Farah     | 23.4°C,<br>50%RH  |
| Frequency Stability   | Max<br>Mode2   | $\pi$ / 4DQPSK | 418.0125, 460.025  | Farah     | 25.1°C,<br>54.3%RH,<br>60.3°C,<br>50%RH,<br>-30.1°C,<br>51.2%RH |
| Occupied Bandwidth<br>(12.5kHz / 20kHz / 25kHz)                       | Max<br>Mode2   | $\pi$ / 4DQPSK | 406.125, 418.0125,<br>429.975, 450.025,<br>460.025, 469.9875 | Farah     | 23.4°C,<br>50%RH  |
| Transient Frequency Behavior<br>(UHF & VHF Band)<br>(12.5kHz / 25kHz) | Max<br>Mode2   | $\pi$ / 4DQPSK | 418.0125, 460.025  | Farah     | 23.4°C,<br>50%RH  |
| Adjacent Channel Power<br>(700MHz Band)<br>(12.5kHz / 25kHz)          | Max<br>Mode1   | $\pi$ / 4DQPSK | 450.025, 460.025,<br>469.9875                                | Farah     | 23.4°C,<br>50%RH  |
| Conducted Spurious Emissions-<br>(12.5kHz / 25kHz)                    | Max<br>Mode1&2 | $\pi$ / 4DQPSK | 406.125, 418.0125,<br>429.975, 450.025,<br>460.025, 469.9875 | Farah     | 23.4°C,<br>50%RH  |
| Radiated Spurious Emission<br>(12.5kHz / 25kHz)                       | Max<br>Mode2   | $\pi$ / 4DQPSK | 406.125, 418.0125,<br>429.975, 450.025,<br>460.025, 469.9875 | Aiman     | 23.4°C,<br>50%RH  |
| Effective Radiated Power (ERP)<br>(12.5kHz / 25kHz)                   | Max            | NA             | NA   |           | NA  |

#### NA → Not Applicable

Mode1: TXNDC test mode is transmit at max power (3W), duty cycle 100% which is the worst case mode.

Mode2: MSPD test mode is transmit at max power 2.51W, duty cycle 62.5%.

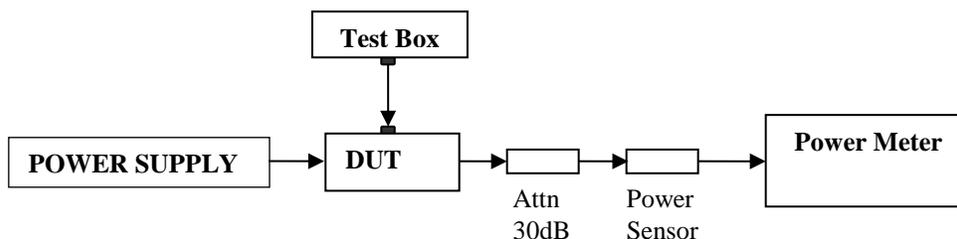
Mode3: SSPD test mode is transmit at max power 3W, duty cycle 22%.

\*SSPD test mode is not cover in the testing as the testing is conducted in the worst case condition.

## 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

##### MSPD

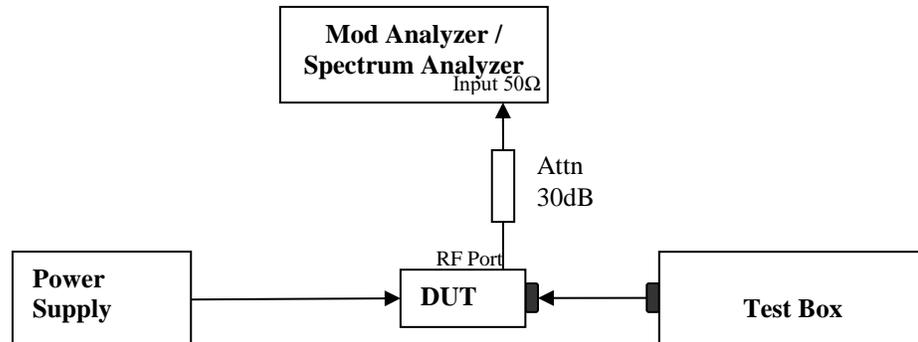
|                 |               |             |                    |
|-----------------|---------------|-------------|--------------------|
| Temperature     | 25°C          |             |                    |
| Voltage (V)     | 3.8V          |             |                    |
| Frequency (MHz) | Max Power (W) | Current (A) | Remark             |
| 406.12500       | 2.48          | 2.99        | Not for FCC review |
| 418.01250       | 2.45          | 2.36        | Not for FCC review |
| 429.97500       | 2.46          | 2.04        | Not for FCC review |
| 450.02500       | 2.46          | 2.57        |                    |
| 460.02500       | 2.48          | 2.11        |                    |
| 469.98750       | 2.48          | 2.09        |                    |

##### TXNDC

|                 |               |             |                    |
|-----------------|---------------|-------------|--------------------|
| Temperature     | 25°C          |             |                    |
| Voltage (V)     | 3.8V          |             |                    |
| Frequency (MHz) | Max Power (W) | Current (A) | Remark             |
| 406.12500       | 2.89          | 3.57        | Not for FCC review |
| 418.01250       | 2.89          | 3.48        | Not for FCC review |
| 429.97500       | 2.88          | 3.24        | Not for FCC review |
| 450.02500       | 2.87          | 3.27        |                    |
| 460.02500       | 2.88          | 3.29        |                    |
| 469.98750       | 2.91          | 3.20        |                    |

## 6.2. Frequency Stability

### 6.2.1. Test Setup



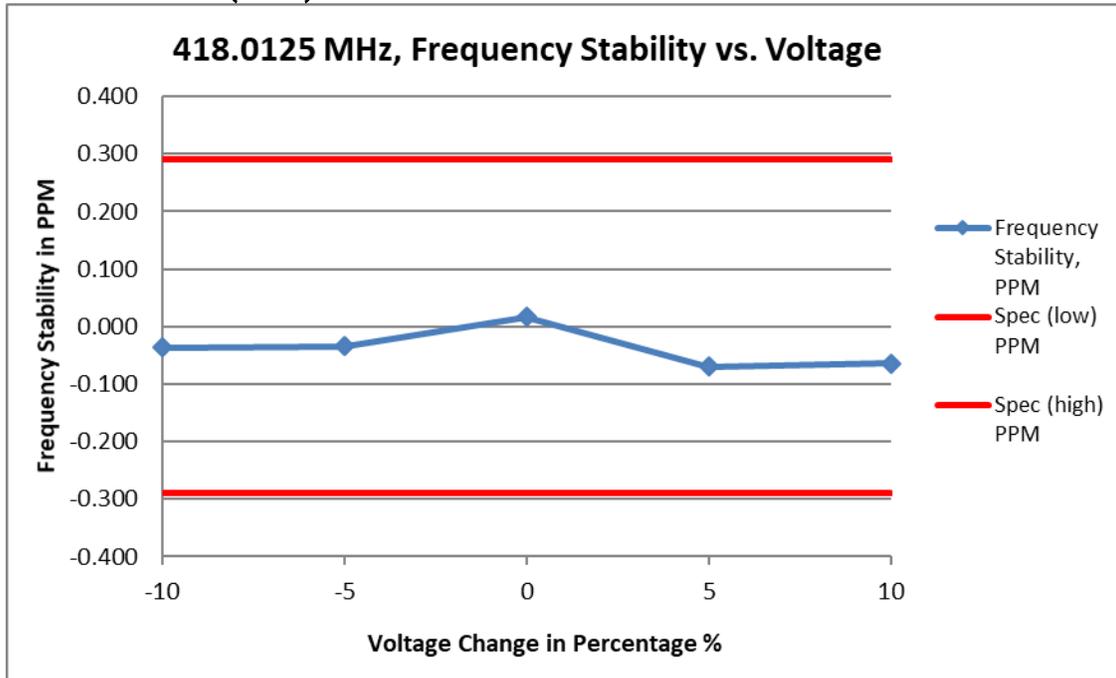
- 1) The DUT transmitter output port was connected to Modulation / Spectrum Analyzer.
- 2) Path loss for the measurement included.
- 3) Transmit the DUT and record the freq in  $MCF_{MHz}$ .
- 4) Test in 2 conditions:
  - Temperature: The frequency of the transmitter was measured from  $-30^{\circ}C$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

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

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

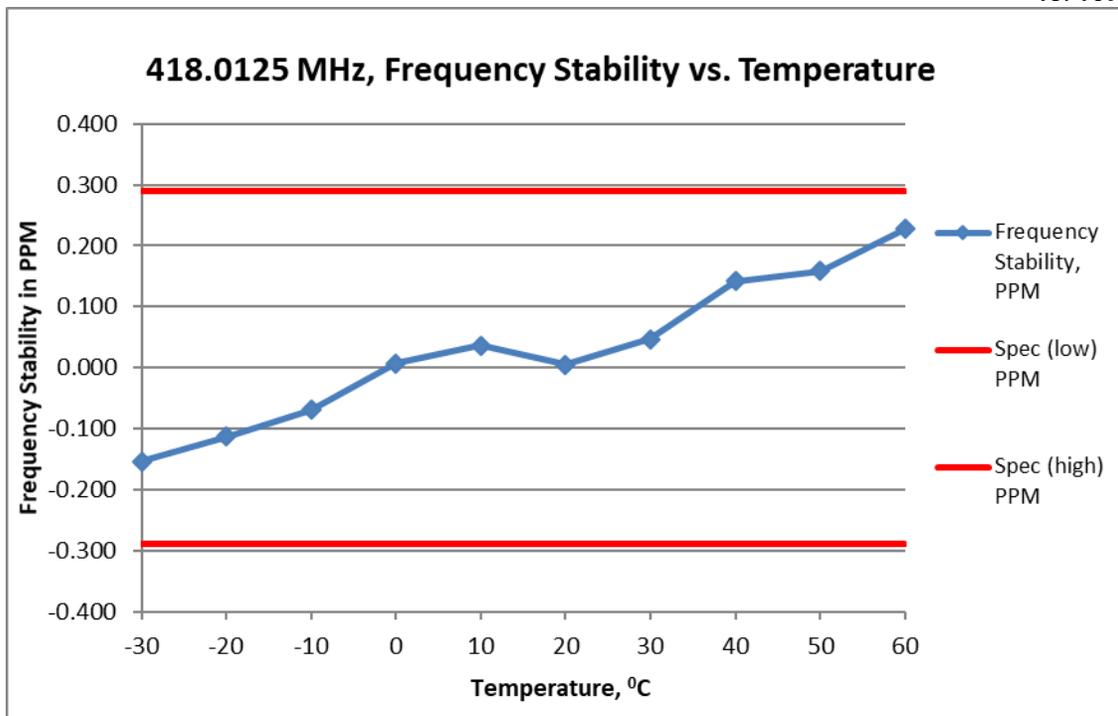
### 6.2.2. Test Result

#### Trunked Mode (TMO)



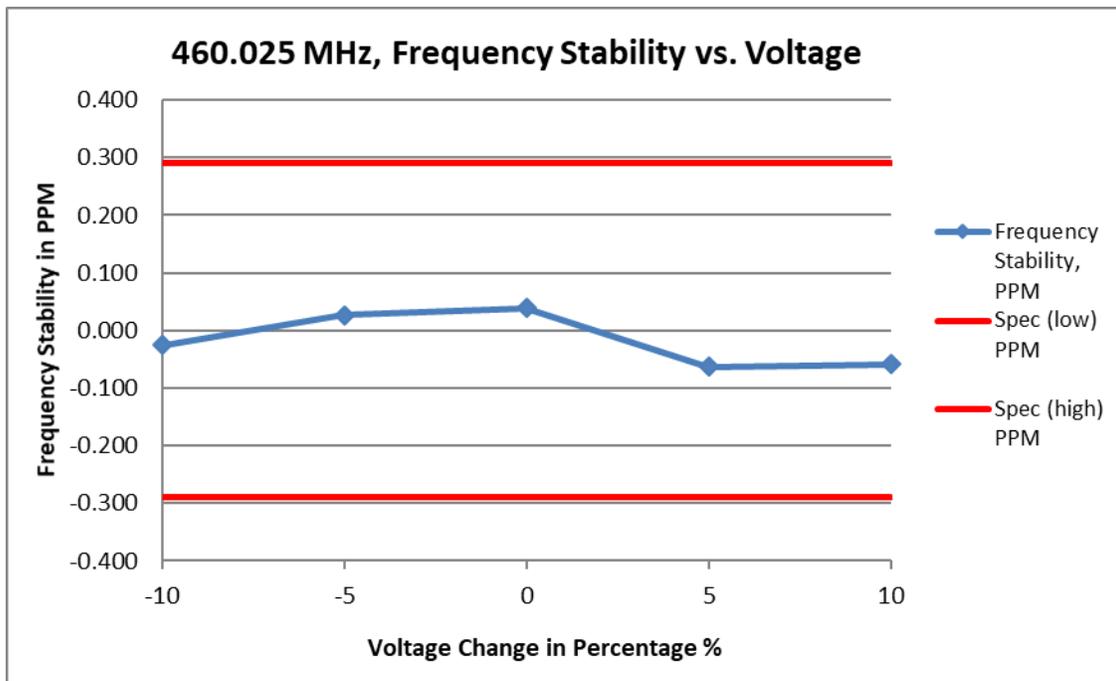
(i) Frequency Stability VS Voltage

| Frequency / Channel Spacing |            | 418.0125 MHz / 25 kHz |                          |                |                 |
|-----------------------------|------------|-----------------------|--------------------------|----------------|-----------------|
| Temperature, °C             |            | 25                    |                          |                |                 |
| Voltage %                   | Voltage, V | Frequency, MHz        | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -10                         | 3.420      | 418.012500            | 0.027                    | -0.290         | 0.290           |
| -5                          | 3.610      | 418.012500            | -0.005                   | -0.290         | 0.290           |
| 0                           | 3.800      | 418.012500            | -0.037                   | -0.290         | 0.290           |
| 5                           | 3.990      | 418.012500            | -0.034                   | -0.290         | 0.290           |
| 10                          | 4.180      | 418.012500            | 0.017                    | -0.290         | 0.290           |



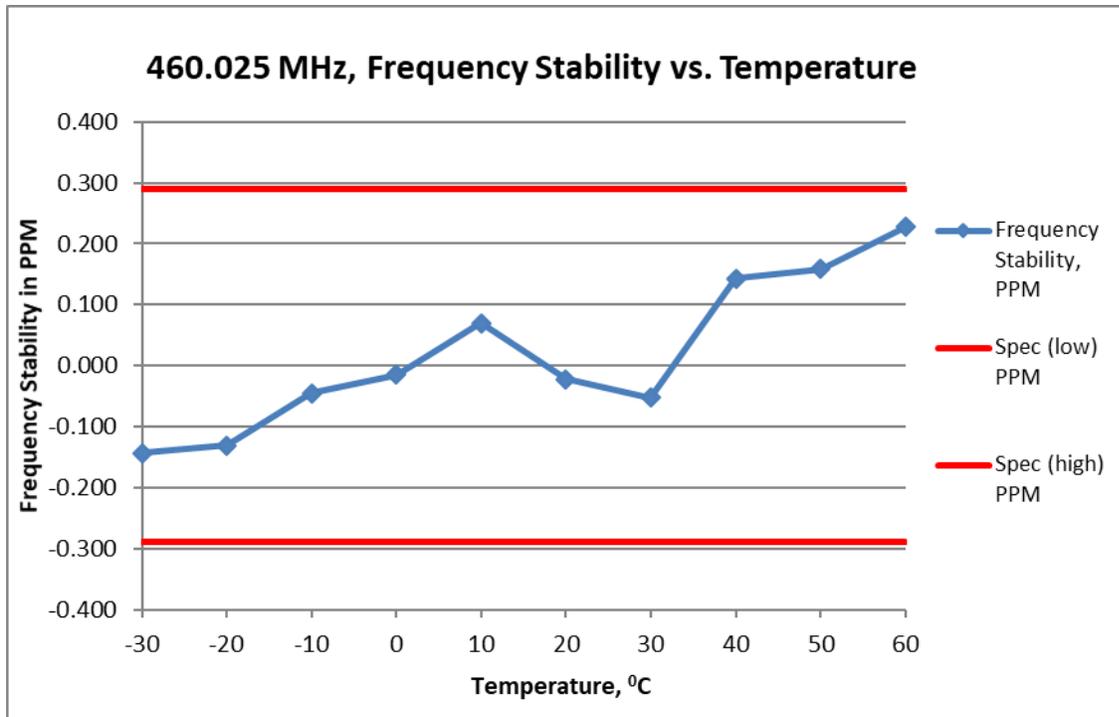
(ii) Frequency Stability VS temperature

| Frequency / Channel Spacing |                | 418.0125 MHz / 25 kHz    |                |                 |
|-----------------------------|----------------|--------------------------|----------------|-----------------|
| Voltage, V                  |                | 3.8                      |                |                 |
| Temperature, °C             | Frequency, MHz | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -30                         | 418.012515     | -0.154                   | -0.290         | 0.290           |
| -20                         | 418.012480     | -0.113                   | -0.290         | 0.290           |
| -10                         | 418.012475     | -0.069                   | -0.290         | 0.290           |
| 0                           | 418.012470     | 0.007                    | -0.290         | 0.290           |
| 10                          | 418.012466     | 0.036                    | -0.290         | 0.290           |
| 20                          | 418.012463     | 0.006                    | -0.290         | 0.290           |
| 30                          | 418.012479     | 0.047                    | -0.290         | 0.290           |
| 40                          | 418.012519     | 0.141                    | -0.290         | 0.290           |
| 50                          | 418.012518     | 0.159                    | -0.290         | 0.290           |
| 60                          | 418.012528     | 0.228                    | -0.290         | 0.290           |



(i) Frequency Stability VS Voltage

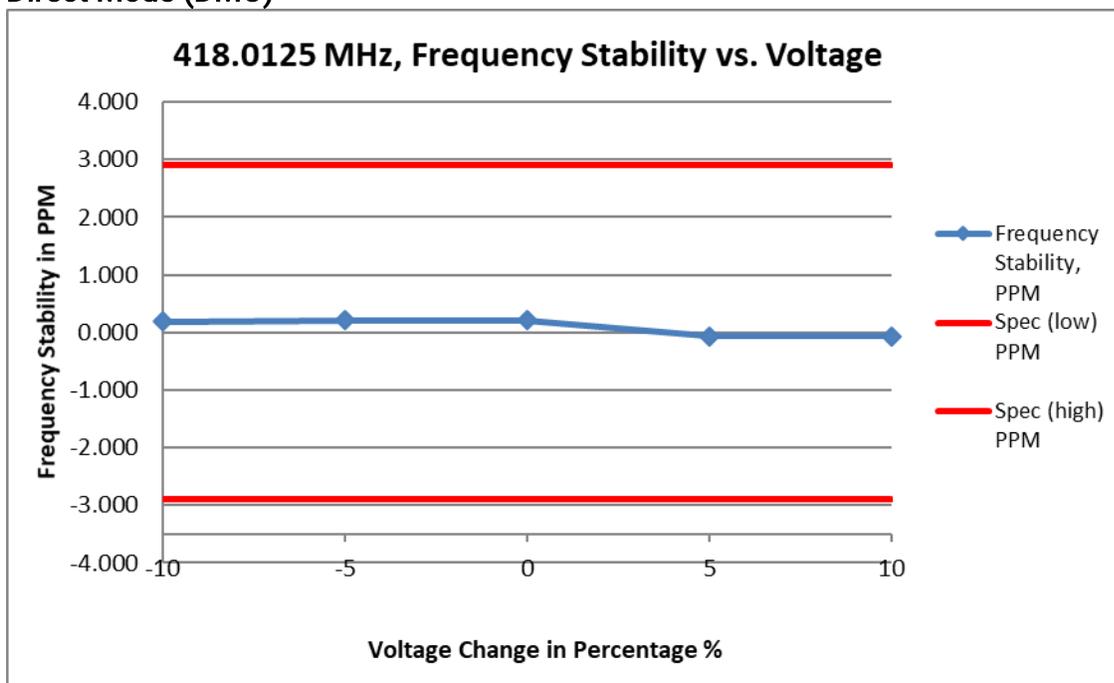
| Frequency / Channel Spacing |            | 460.025 MHz / 25 kHz |                          |                |                 |
|-----------------------------|------------|----------------------|--------------------------|----------------|-----------------|
| Temperature, °C             |            | 25                   |                          |                |                 |
| Voltage %                   | Voltage, V | Frequency, MHz       | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -10                         | 3.420      | 460.025000           | 0.022                    | -0.290         | 0.290           |
| -5                          | 3.610      | 460.025000           | 0.005                    | -0.290         | 0.290           |
| 0                           | 3.800      | 460.025000           | -0.025                   | -0.290         | 0.290           |
| 5                           | 3.990      | 460.025000           | 0.027                    | -0.290         | 0.290           |
| 10                          | 4.180      | 460.025000           | 0.038                    | -0.290         | 0.290           |



(ii) Frequency Stability VS temperature

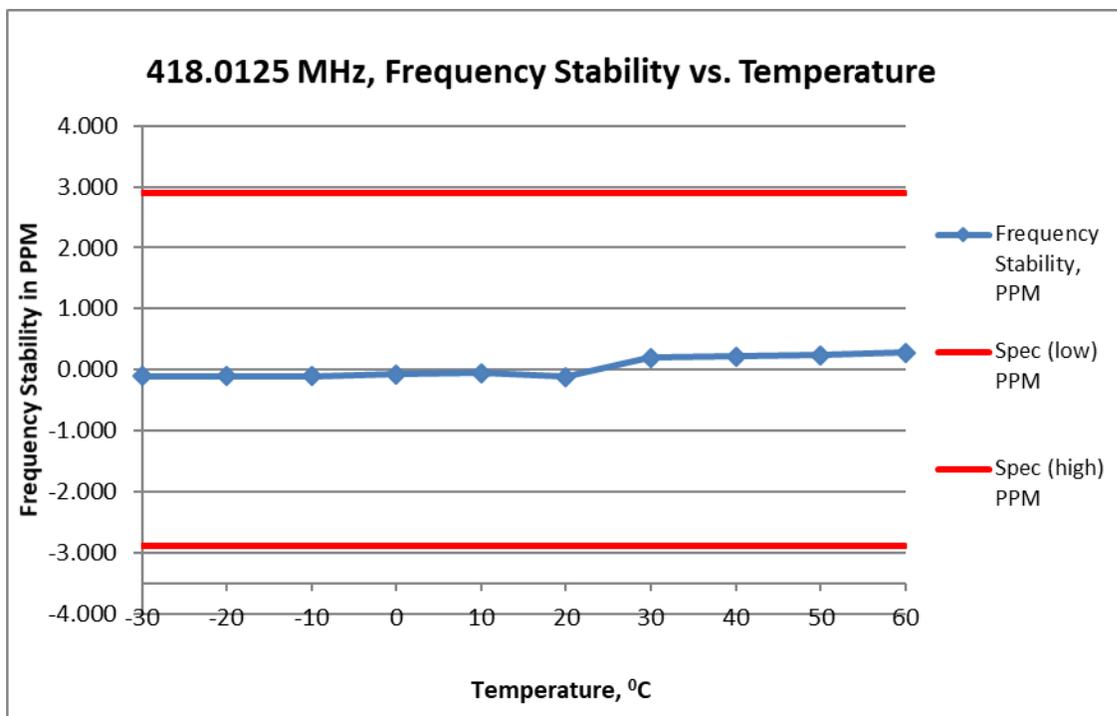
| Frequency / Channel Spacing | 460.025 MHz / 25 kHz |                          |                |                 |
|-----------------------------|----------------------|--------------------------|----------------|-----------------|
| Voltage, V                  | 3.8                  |                          |                |                 |
| Temperature, °C             | Frequency, MHz       | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -30                         | 460.025008           | -0.144                   | -0.290         | 0.290           |
| -20                         | 460.024979           | -0.131                   | -0.290         | 0.290           |
| -10                         | 460.024970           | -0.045                   | -0.290         | 0.290           |
| 0                           | 460.024962           | -0.015                   | -0.290         | 0.290           |
| 10                          | 460.024966           | 0.070                    | -0.290         | 0.290           |
| 20                          | 460.024968           | -0.023                   | -0.290         | 0.290           |
| 30                          | 460.024978           | -0.053                   | -0.290         | 0.290           |
| 40                          | 460.024986           | 0.143                    | -0.290         | 0.290           |
| 50                          | 460.025012           | 0.159                    | -0.290         | 0.290           |
| 60                          | 460.025049           | 0.228                    | -0.290         | 0.290           |

### Direct Mode (DMO)



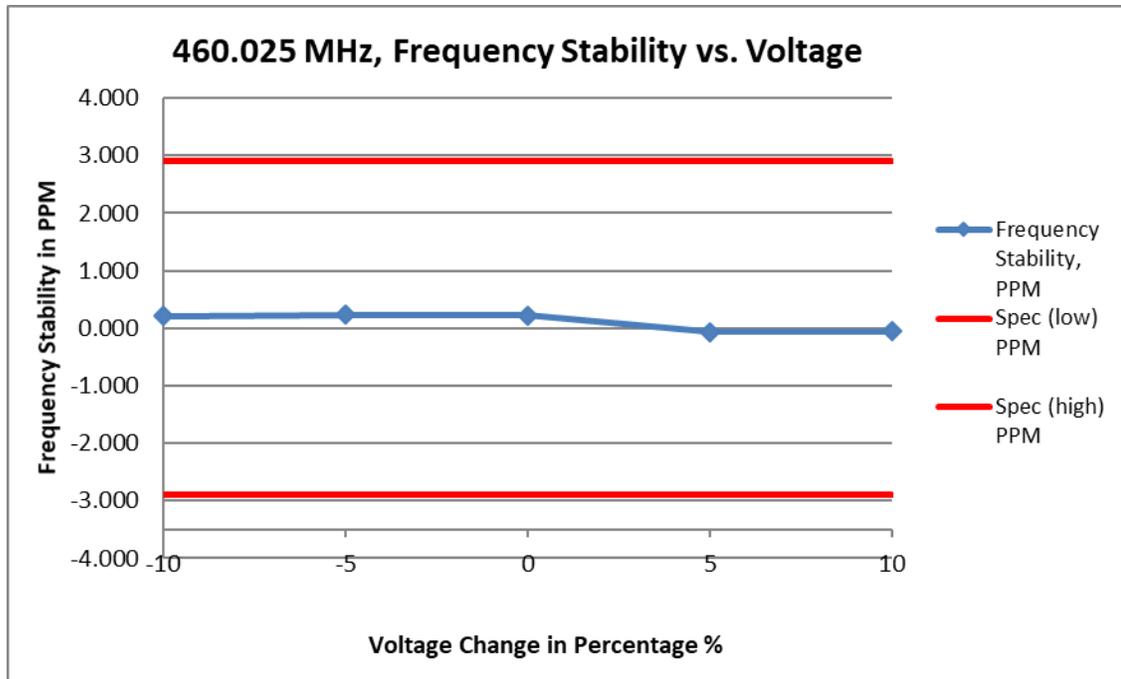
(i) Frequency Stability VS Voltage

| Frequency / Channel Spacing |            | 418.0125 MHz / 25 kHz |                          |                |                 |
|-----------------------------|------------|-----------------------|--------------------------|----------------|-----------------|
| Temperature, °C             |            | 25                    |                          |                |                 |
| Voltage %                   | Voltage, V | Frequency, MHz        | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -10                         | 3.420      | 418.012500            | 0.222                    | -2.900         | 2.900           |
| -5                          | 3.610      | 418.012500            | 0.224                    | -2.900         | 2.900           |
| 0                           | 3.800      | 418.012500            | 0.185                    | -2.900         | 2.900           |
| 5                           | 3.990      | 418.012500            | 0.208                    | -2.900         | 2.900           |
| 10                          | 4.180      | 418.012500            | 0.216                    | -2.900         | 2.900           |



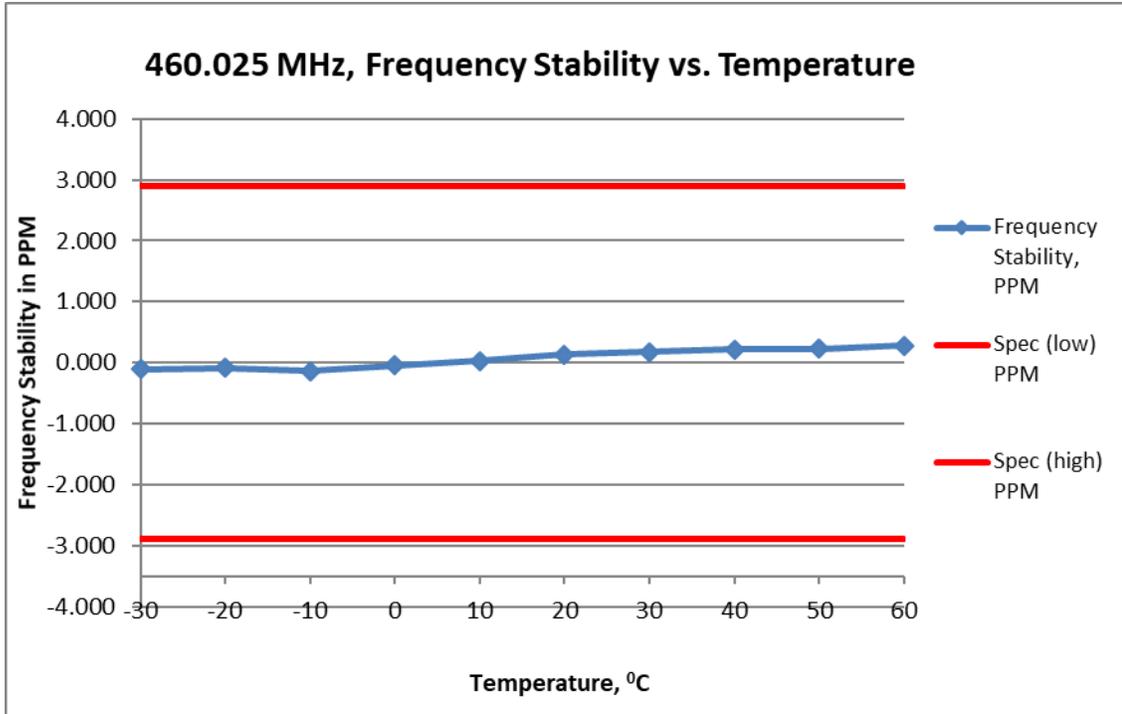
(ii) Frequency Stability VS temperature

| Frequency / Channel Spacing | 418.0125 MHz / 25 kHz |                          |                |                 |
|-----------------------------|-----------------------|--------------------------|----------------|-----------------|
| Voltage, V                  | 3.8                   |                          |                |                 |
| Temperature, °C             | Frequency, MHz        | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -30                         | 418.012515            | -0.104                   | -2.900         | 2.900           |
| -20                         | 418.012480            | -0.111                   | -2.900         | 2.900           |
| -10                         | 418.012475            | -0.110                   | -2.900         | 2.900           |
| 0                           | 418.012470            | -0.081                   | -2.900         | 2.900           |
| 10                          | 418.012466            | -0.050                   | -2.900         | 2.900           |
| 20                          | 418.012463            | -0.116                   | -2.900         | 2.900           |
| 30                          | 418.012479            | 0.200                    | -2.900         | 2.900           |
| 40                          | 418.012519            | 0.213                    | -2.900         | 2.900           |
| 50                          | 418.012518            | 0.239                    | -2.900         | 2.900           |
| 60                          | 418.012528            | 0.276                    | -2.900         | 2.900           |



(i) Frequency Stability VS Voltage

| Frequency / Channel Spacing | 460.025 MHz / 25 kHz |                |                          |                |                 |
|-----------------------------|----------------------|----------------|--------------------------|----------------|-----------------|
| Temperature, °C             | 25                   |                |                          |                |                 |
| Voltage %                   | Voltage, V           | Frequency, MHz | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -10                         | 3.420                | 460.025000     | 0.183                    | -2.900         | 2.900           |
| -5                          | 3.610                | 460.025000     | 0.203                    | -2.900         | 2.900           |
| 0                           | 3.800                | 460.025000     | 0.211                    | -2.900         | 2.900           |
| 5                           | 3.990                | 460.025000     | 0.228                    | -2.900         | 2.900           |
| 10                          | 4.180                | 460.025000     | 0.225                    | -2.900         | 2.900           |



(ii) Frequency Stability VS temperature

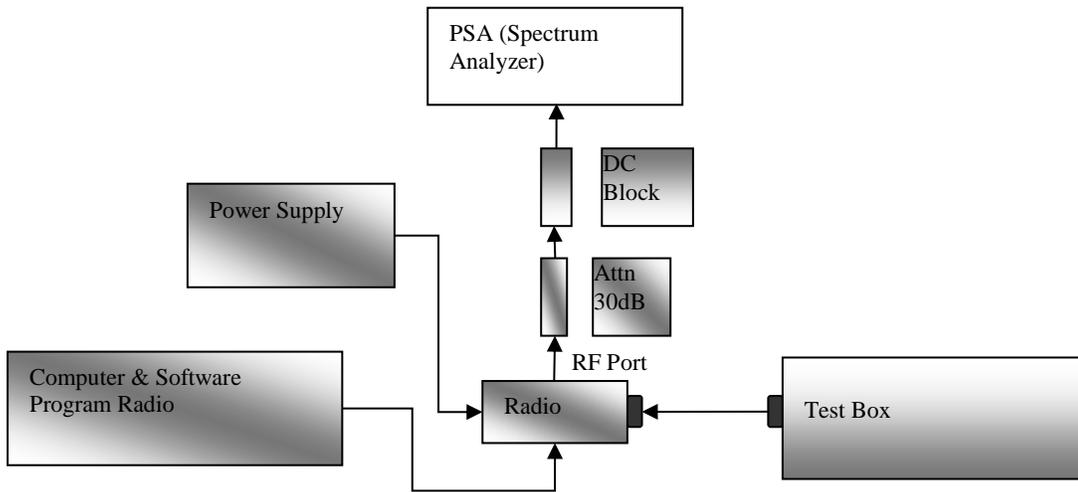
| Frequency / Channel Spacing |                | 460.025 MHz / 25 kHz     |                |                 |
|-----------------------------|----------------|--------------------------|----------------|-----------------|
| Voltage, V                  |                | 3.8                      |                |                 |
| Temperature, °C             | Frequency, MHz | Frequency Stability, PPM | Spec (low) PPM | Spec (high) PPM |
| -30                         | 460.025008     | -0.103                   | -2.900         | 2.900           |
| -20                         | 460.024979     | -0.090                   | -2.900         | 2.900           |
| -10                         | 460.024970     | -0.134                   | -2.900         | 2.900           |
| 0                           | 460.024962     | -0.048                   | -2.900         | 2.900           |
| 10                          | 460.024966     | 0.029                    | -2.900         | 2.900           |
| 20                          | 460.024968     | 0.136                    | -2.900         | 2.900           |
| 30                          | 460.024978     | 0.175                    | -2.900         | 2.900           |
| 40                          | 460.024986     | 0.213                    | -2.900         | 2.900           |
| 50                          | 460.025012     | 0.227                    | -2.900         | 2.900           |
| 60                          | 460.025049     | 0.276                    | -2.900         | 2.900           |

### 6.2.3. Test Limit

The frequency stability limit is established as the most stringent value derived from the applicable regulatory requirements or the product-declared specifications.

### 6.3. Occupied Bandwidth

#### 6.3.1. Test Setup (Digital)



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

\* 99% Bandwidth measurement is computed by the spectrum analyzer and is consistent with the C63.26 5.4.4 method.

\*Note1 (For C4FM, FSK):

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

\*Note2 (For  $\pi/4$  QPSK, QAM):

- For Digital Modulation, 25 kHz Data D1D, D1E & D1W would be the same. Therefore only measurements with D1W modulation shown below.

### 6.3.2. Test Result (Digital)

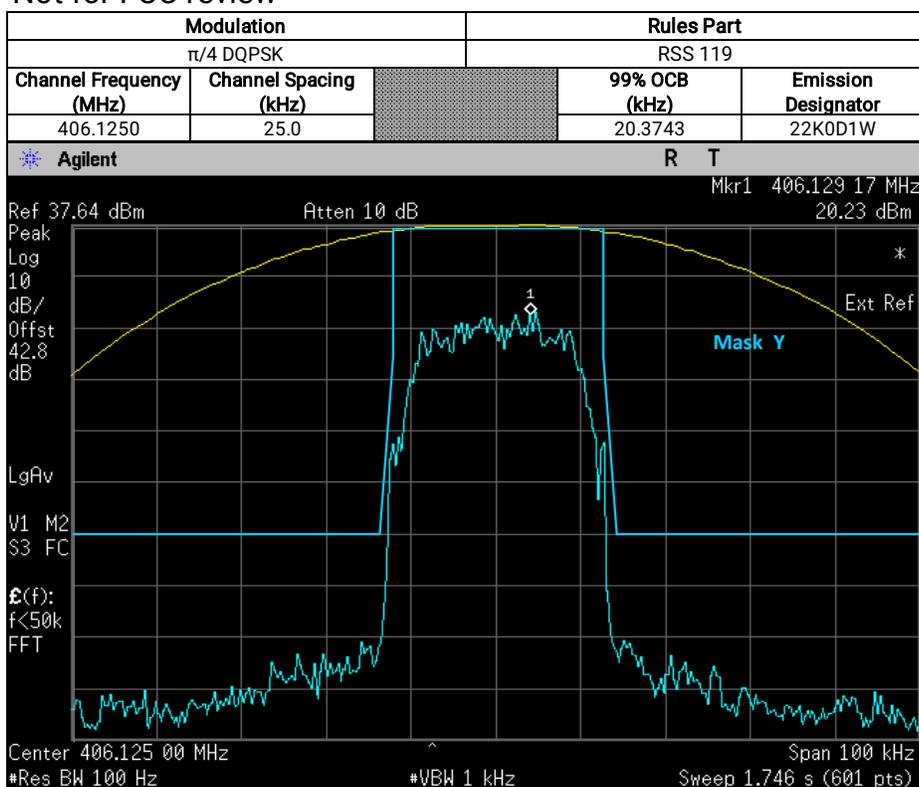
Digital (12.5 kHz Channelization, Digital Voice):  
 Emission Designator 22K0D1D/E/W

The 99% energy rule (title 47CFR 2.989) was used for digital mode and is more accurate than Carson's rule. It basically states that 99% of the modulation energy falls within X kHz, in this case, 22kHz.

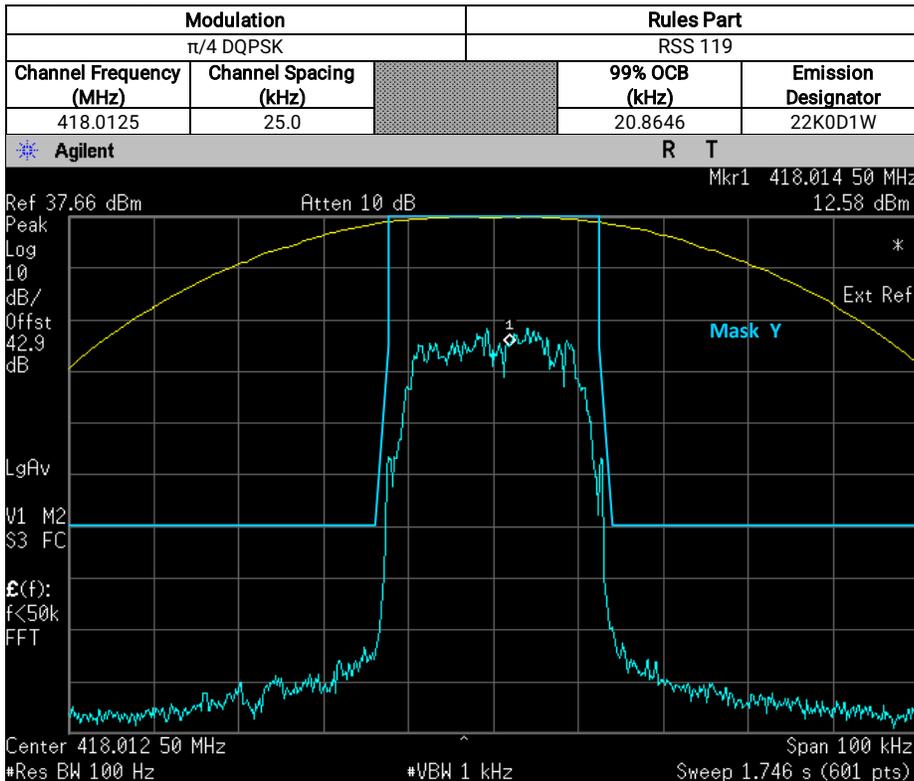
D1D/E/W portion of the designator indicates digital voice/data/voice+data.

Therefore, the entire designator for 25 kHz channelization digital voice is 22K0D1D/E/W.

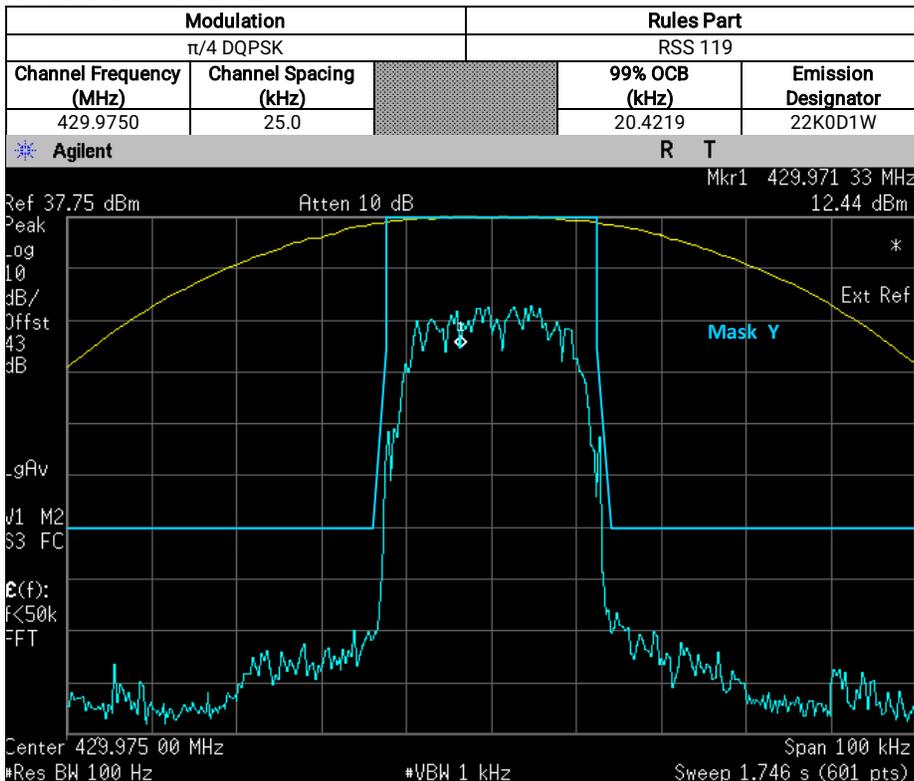
Not for FCC review



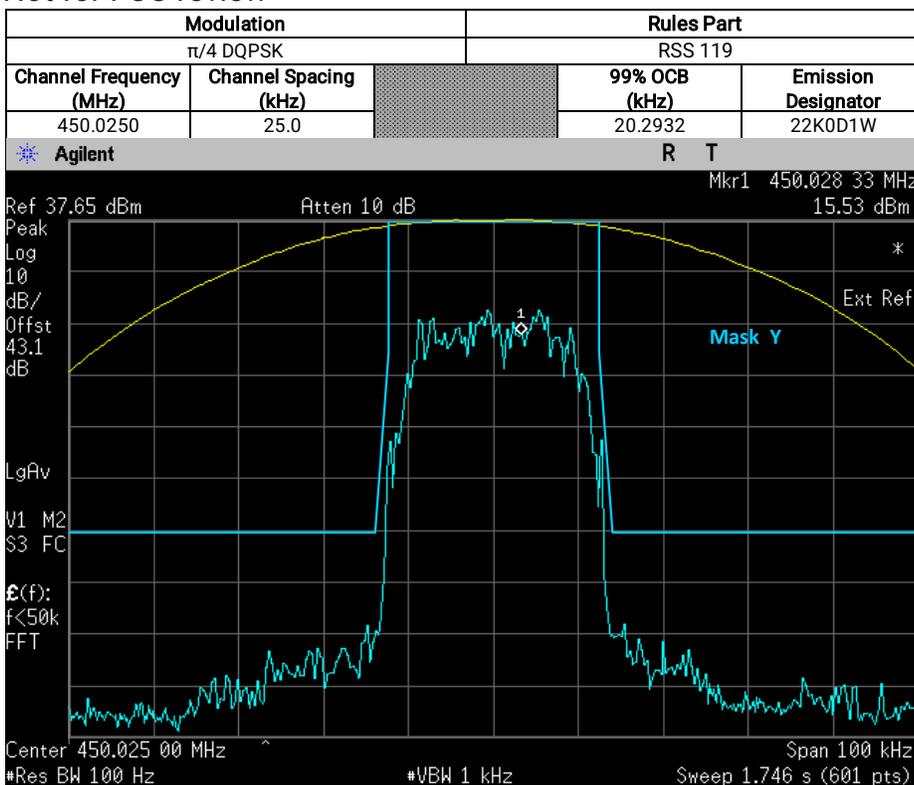
Not for FCC review



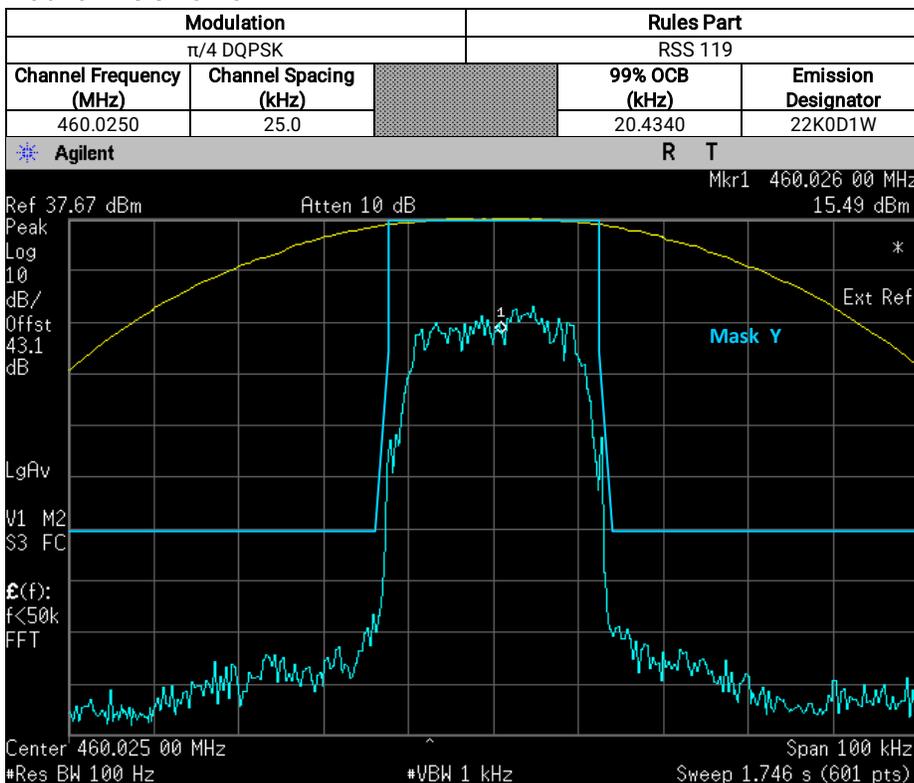
Not for FCC review



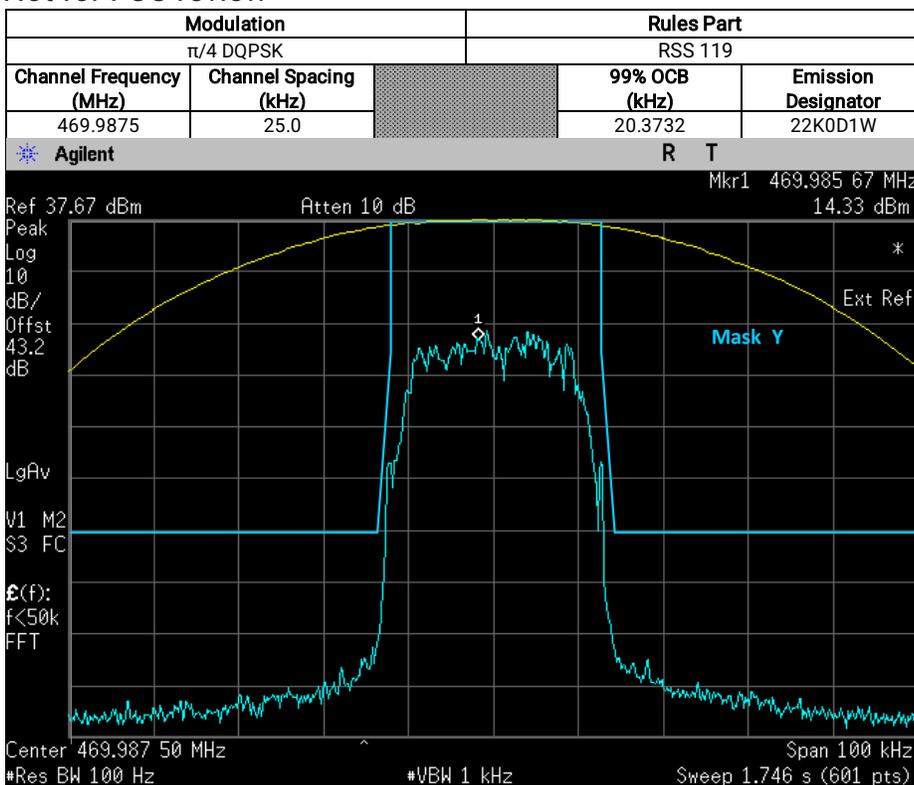
Not for FCC review



Not for FCC review



Not for FCC review

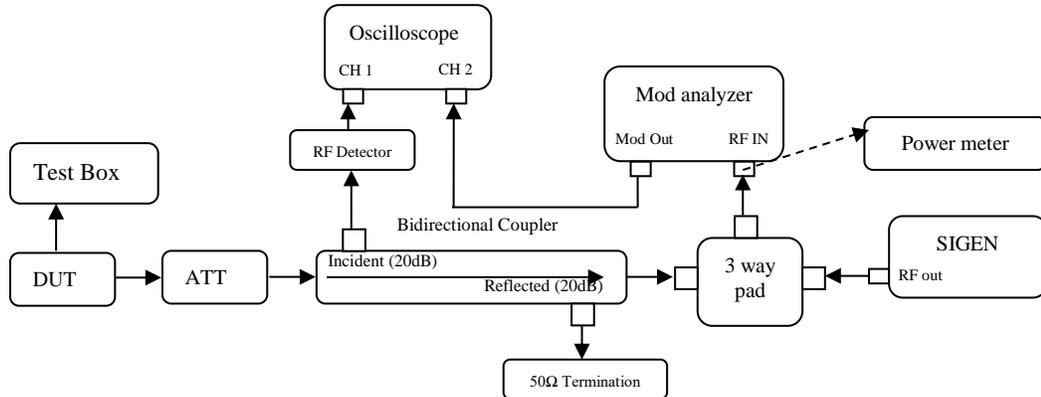


### 6.3.3. Test Limit

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

## 6.4. Transient Frequency Behavior

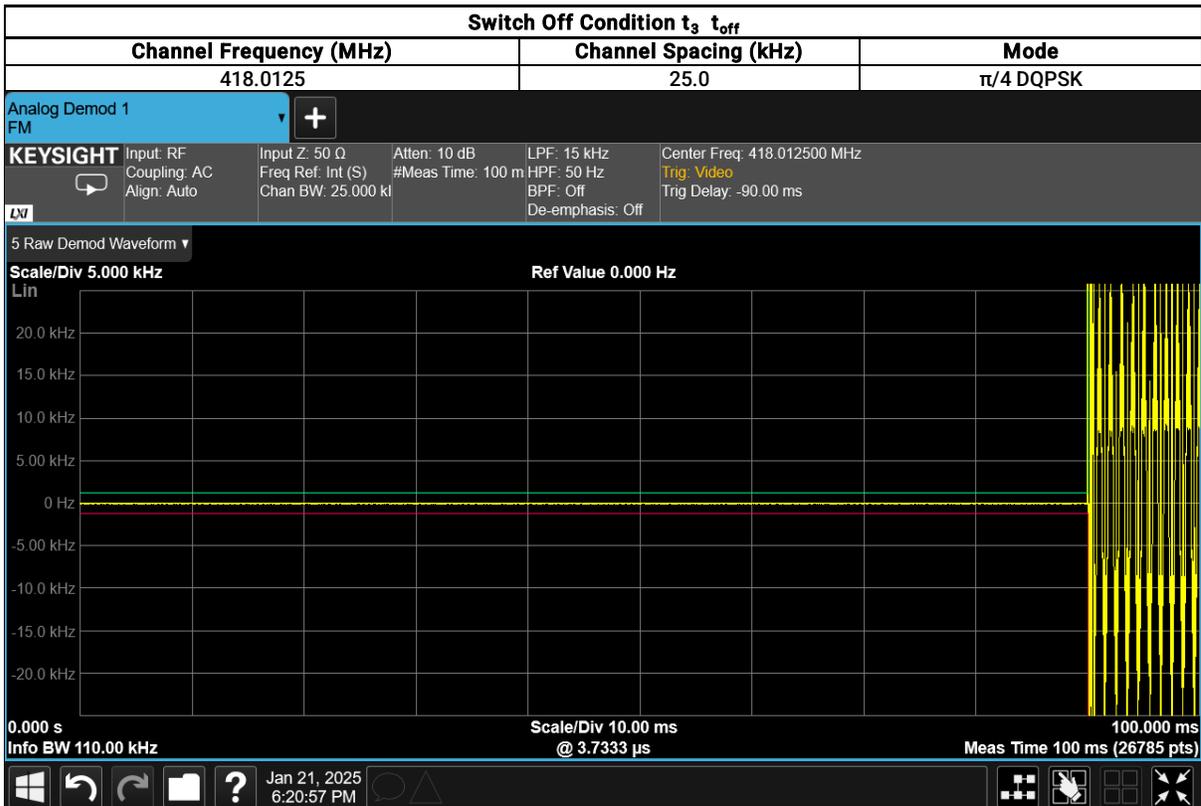
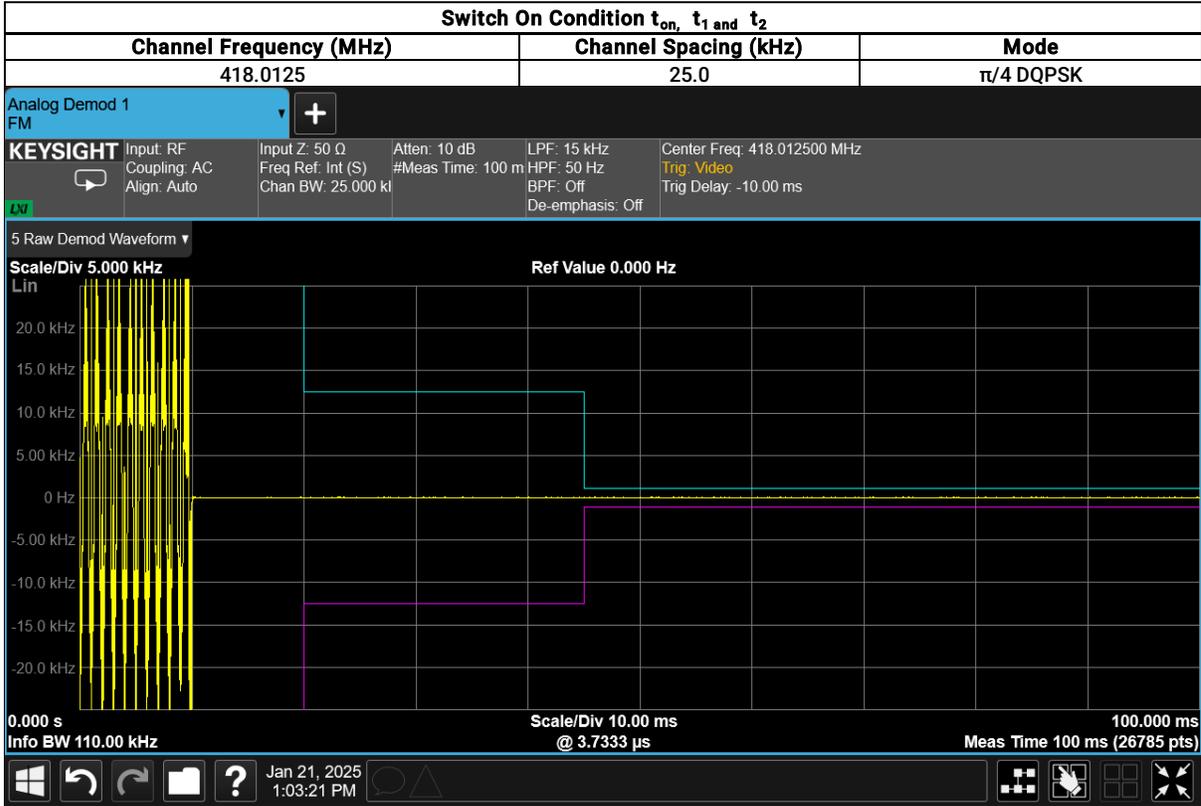
### 6.4.1. Test Setup

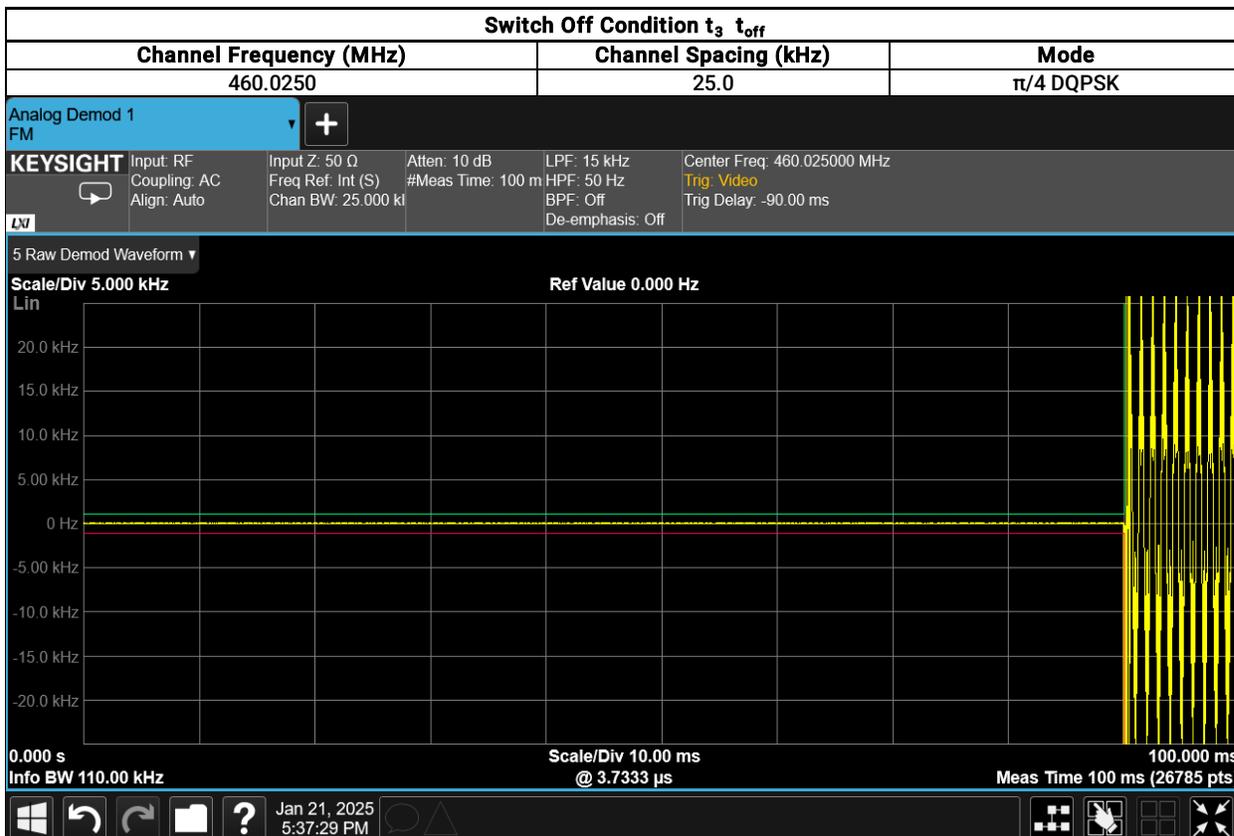
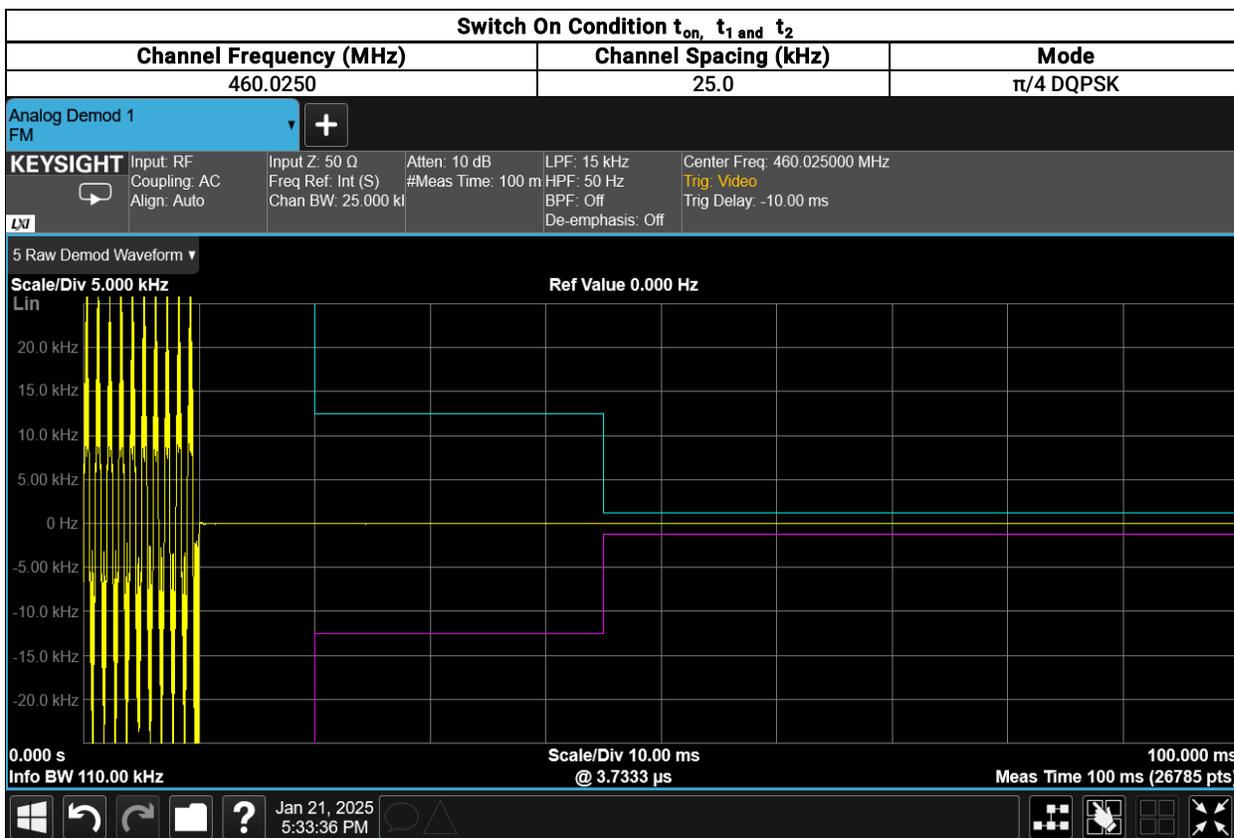


- 1) Connect the setup as figure above.
- 2) Path loss for the measurement included.
- 3) Set on Sigen with the assigned center frequency, internal 1 kHz FM tone.  
FM Deviation: Analog 25kHz Channel Spacing = 25 kHz  
Analog 12.5 kHz Channel Spacing = 12.5 kHz  
C4FM = 12.5 kHz
- 4) Turn on 50 kHz high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

### 6.4.2. Test Result

Not for FCC review





### 6.4.3. 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 <sup>1 2</sup>   | Maximum frequency difference <sup>3</sup> | 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        |

<sup>1</sup>  $t_{on}$  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.

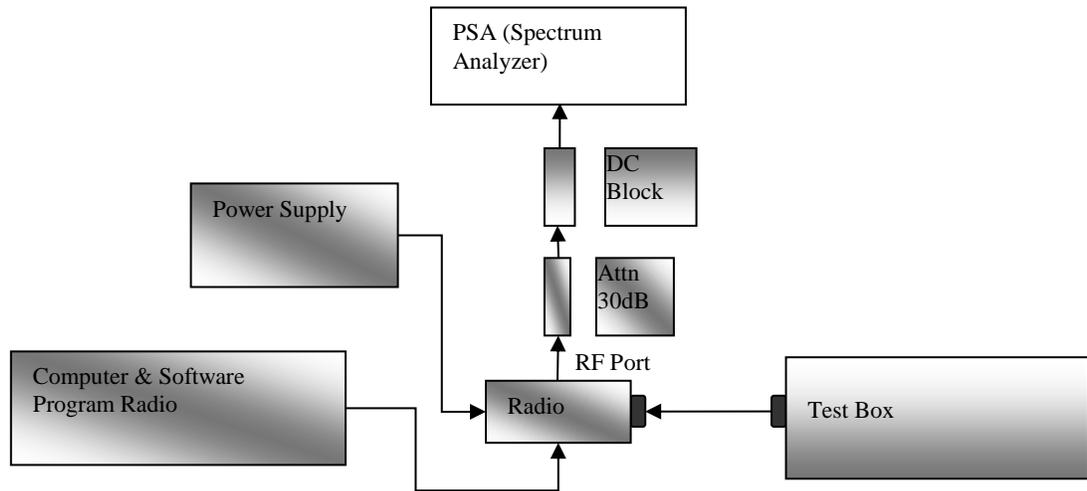
<sup>2</sup> During the time from the end of  $t_2$  to the beginning of  $t_3$ , the frequency difference must not exceed the limits specified in §90.213.

<sup>3</sup> Difference between the actual transmitter frequency and the assigned transmitter frequency.

<sup>4</sup> 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.

## 6.5. Adjacent Channel Power

### 6.5.1. Test Setup (Digital)



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

**6.5.2. Test Result**

Not for IC review

|                             |                      |         |         |                  |
|-----------------------------|----------------------|---------|---------|------------------|
| <b>Mode</b>                 | $\pi/4$ DQPSK        |         |         |                  |
| <b>Frequency, MHz</b>       | 450.025              |         |         |                  |
| <b>Channel Spacing, kHz</b> | 25                   |         |         |                  |
| <b>Offset (kHz)</b>         | <b>Meas BW (kHz)</b> | Lower   | Upper   | <b>Spec (dB)</b> |
| 25.000                      | 18                   | -68.750 | -67.820 | -40              |
| 50.000                      | 18                   | -73.700 | -73.250 | -60              |
| 75.000                      | 18                   | -75.510 | -75.050 | -60              |

Not for IC review

|                             |                      |         |         |                  |
|-----------------------------|----------------------|---------|---------|------------------|
| <b>Mode</b>                 | $\pi/4$ DQPSK        |         |         |                  |
| <b>Frequency, MHz</b>       | 460.025              |         |         |                  |
| <b>Channel Spacing, kHz</b> | 25                   |         |         |                  |
| <b>Offset (kHz)</b>         | <b>Meas BW (kHz)</b> | Lower   | Upper   | <b>Spec (dB)</b> |
| 25.000                      | 18                   | -68.770 | -68.140 | -40              |
| 50.000                      | 18                   | -74.410 | -73.040 | -60              |
| 75.000                      | 18                   | -77.200 | -76.930 | -60              |

Not for IC review

|                             |                      |         |         |                  |
|-----------------------------|----------------------|---------|---------|------------------|
| <b>Mode</b>                 | $\pi/4$ DQPSK        |         |         |                  |
| <b>Frequency, MHz</b>       | 469.9875             |         |         |                  |
| <b>Channel Spacing, kHz</b> | 25                   |         |         |                  |
| <b>Offset (kHz)</b>         | <b>Meas BW (kHz)</b> | Lower   | Upper   | <b>Spec (dB)</b> |
| 25.000                      | 18                   | -68.400 | -68.730 | -40              |
| 50.000                      | 18                   | -74.180 | -73.480 | -60              |
| 75.000                      | 18                   | -77.200 | -77.020 | -60              |

### 6.5.3. 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**

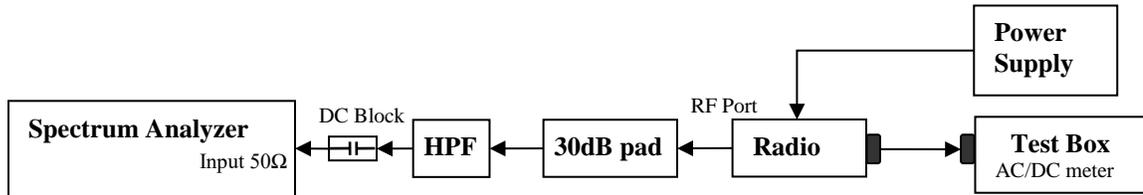
| Offset from center frequency (kHz) | Measurement bandwidth (kHz) | Maximum ACP (dBc) |
|------------------------------------|-----------------------------|-------------------|
| 9.375                              | 6.25                        | -40               |
| 15.625                             | 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)                      | -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)                      | -85               |

## 6.6. Conducted Spurious Emission

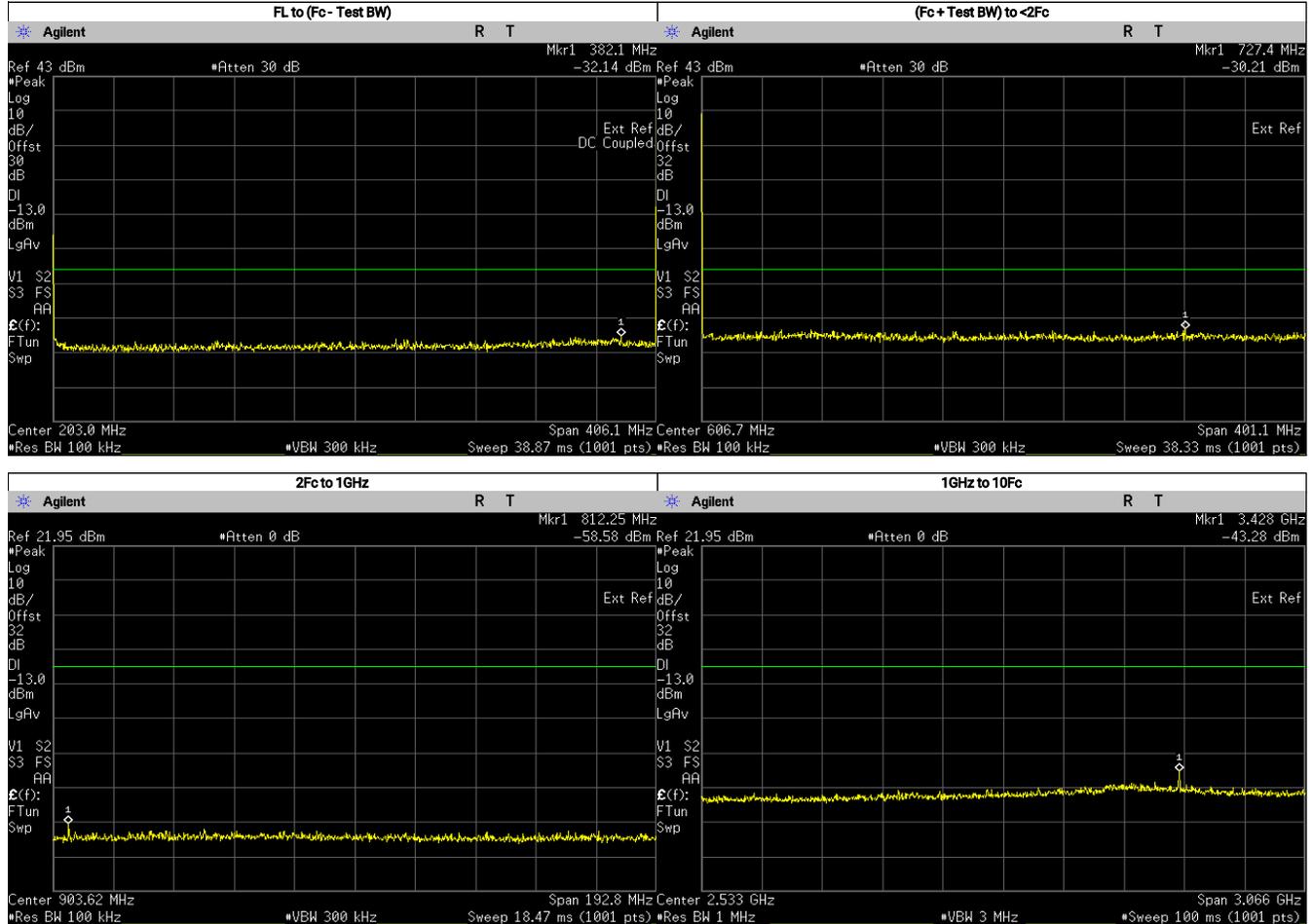
### 6.6.1. Test Setup



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

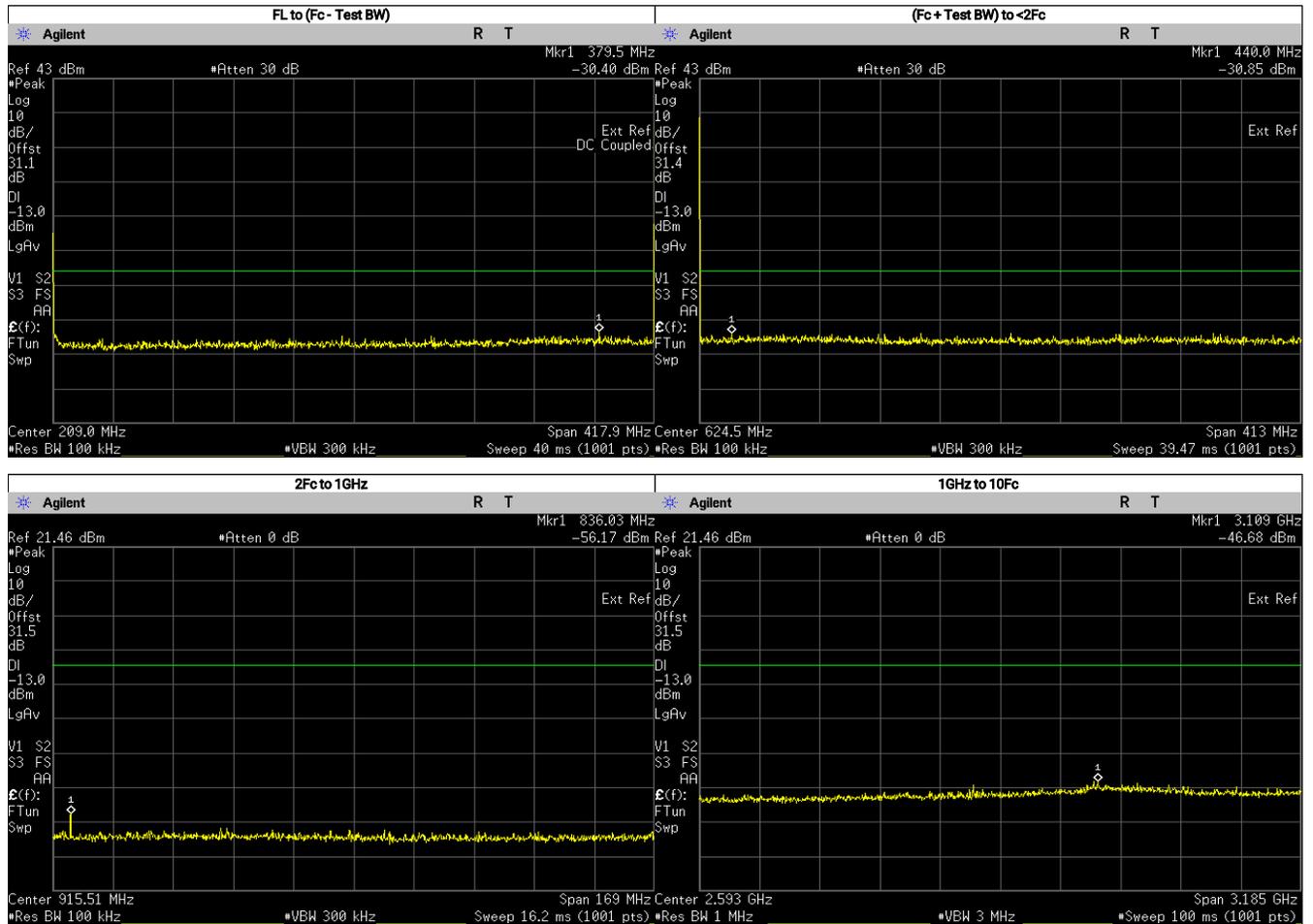
6.6.2. Test Result (Digital)

PI/4DQPSK (MSPD) : 406.125. MHz, 25 kHz Channel Spacing, Max. Power  
 Not for FCC review



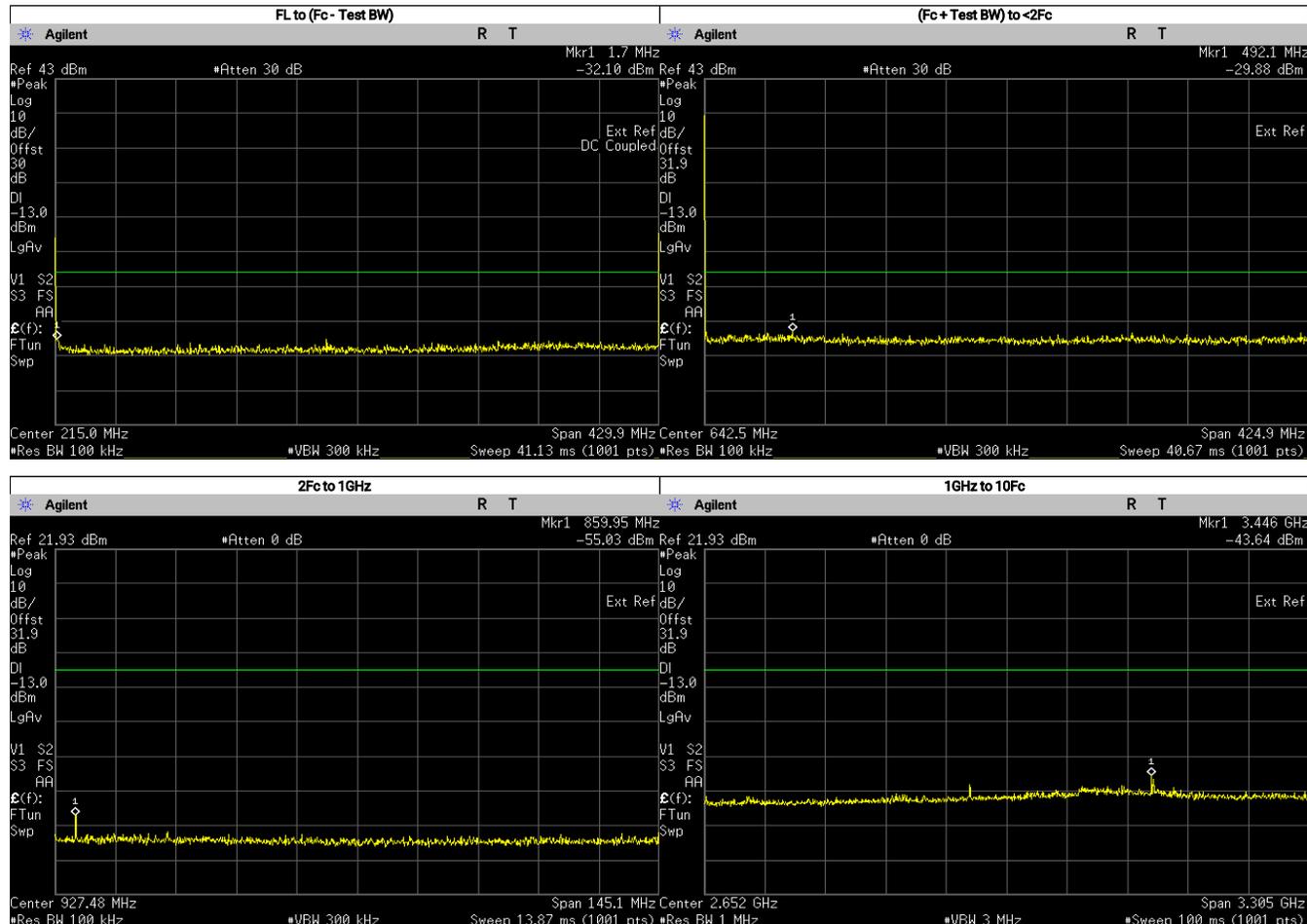
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 382.1000                     | -32.1410             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 727.4372                     | -30.2100             | -13                 | PASS    |
| 2Fc to 1GHz            | 812.2500                     | -58.5800             | -13                 | PASS    |
| 1GHz to 10Fc           | 3428.4700                    | -43.2800             | -13                 | PASS    |
|                        | 1218.3750                    | -51.7331             | -13                 | PASS    |
|                        | 1624.5000                    | -51.1211             | -13                 | PASS    |
|                        | 2030.6250                    | -50.6348             | -13                 | PASS    |
|                        | 2436.7500                    | -50.1140             | -13                 | PASS    |
|                        | 2842.8750                    | -49.1264             | -13                 | PASS    |
|                        | 3249.0000                    | -48.4382             | -13                 | PASS    |
|                        | 3655.1250                    | -49.2926             | -13                 | PASS    |
| 4061.2500              | -50.1032                     | -13                  | PASS                |         |

**PI/4DQPSK (MSPD) : 418.0125. MHz, 25 kHz Channel Spacing, Max. Power**  
 Not for FCC review



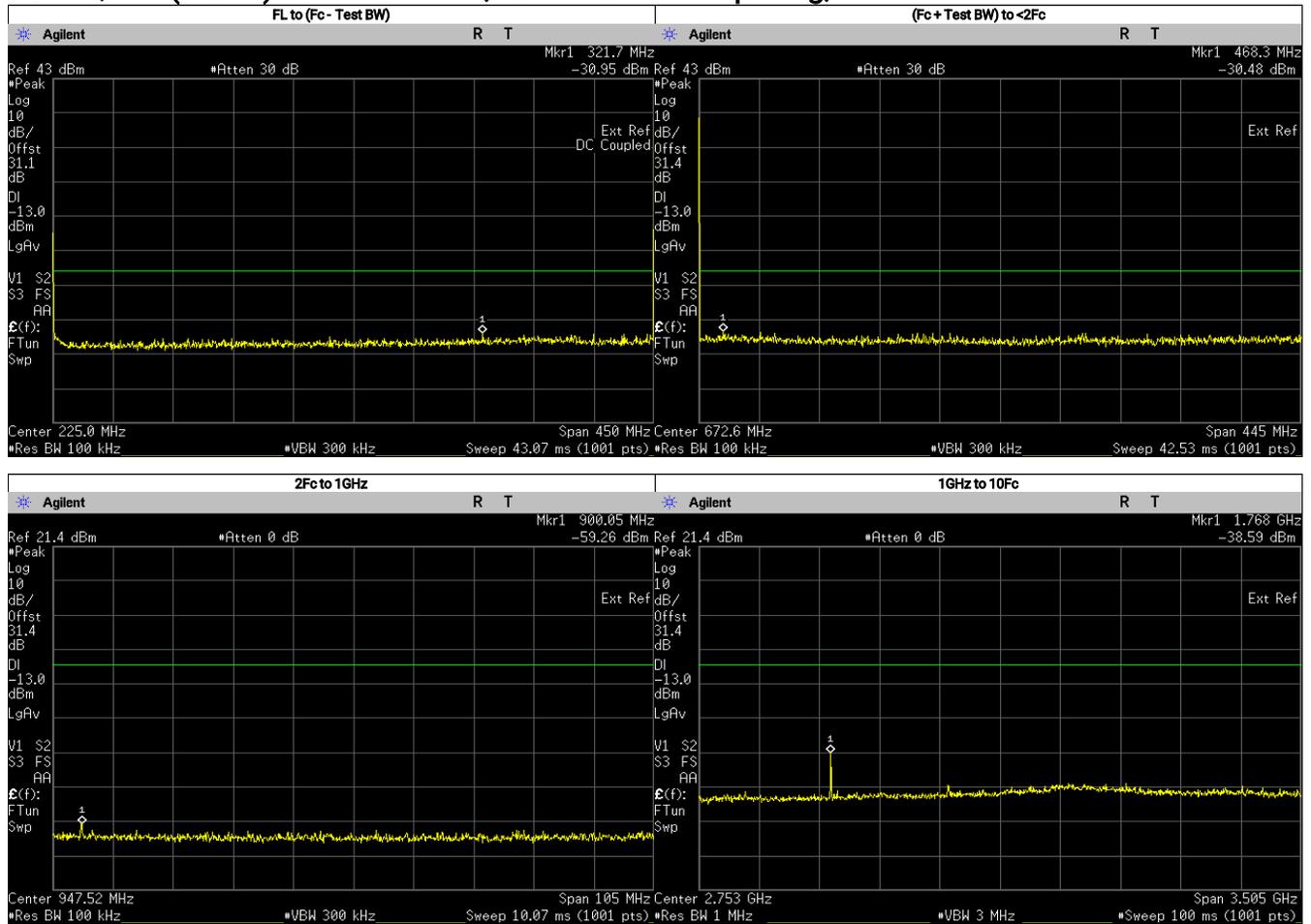
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 379.5000                     | -30.3960             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 439.9548                     | -30.8500             | -13                 | PASS    |
| 2Fc to 1GHz            | 836.0250                     | -56.1700             | -13                 | PASS    |
| 1GHz to 10Fc           | 3108.5530                    | -46.6800             | -13                 | PASS    |
|                        | 1254.0370                    | -51.0843             | -13                 | PASS    |
|                        | 1672.0500                    | -51.8587             | -13                 | PASS    |
|                        | 2090.0620                    | -50.8004             | -13                 | PASS    |
|                        | 2508.0750                    | -50.4563             | -13                 | PASS    |
|                        | 2926.0880                    | -49.4597             | -13                 | PASS    |
|                        | 3344.1000                    | -49.1507             | -13                 | PASS    |
|                        | 3762.1130                    | -50.1022             | -13                 | PASS    |
|                        | 4180.1250                    | -49.7475             | -13                 | PASS    |

**PI/4DQPSK (MSPD) : 429.975. MHz, 25 kHz Channel Spacing, Max. Power**  
 Not for FCC review



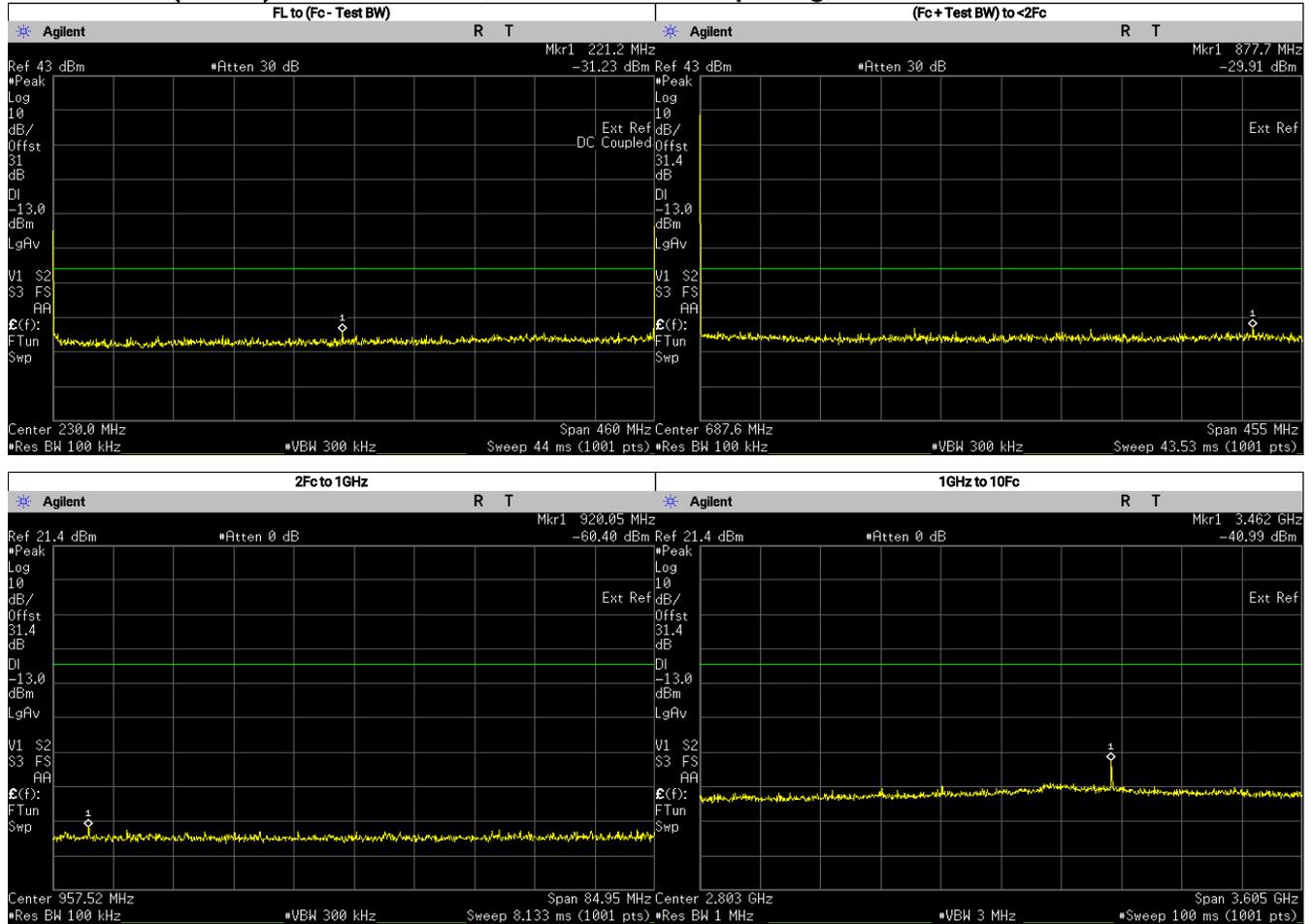
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 1.7000                       | -32.1050             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 492.0689                     | -29.8800             | -13                 | PASS    |
| 2Fc to 1GHz            | 859.9500                     | -55.0300             | -13                 | PASS    |
| 1GHz to 10Fc           | 3445.5150                    | -43.6400             | -13                 | PASS    |
|                        | 1289.9250                    | -51.2034             | -13                 | PASS    |
|                        | 1719.9000                    | -51.3433             | -13                 | PASS    |
|                        | 2149.8750                    | -51.0060             | -13                 | PASS    |
|                        | 2579.8500                    | -49.8867             | -13                 | PASS    |
|                        | 3009.8250                    | -48.9454             | -13                 | PASS    |
|                        | 3439.8000                    | -48.9956             | -13                 | PASS    |
|                        | 3869.7750                    | -49.8112             | -13                 | PASS    |
|                        | 4299.7500                    | -50.0267             | -13                 | PASS    |

**PI/4DQPSK (MSPD) : 450.025. MHz, 25 kHz Channel Spacing, Max. Power**



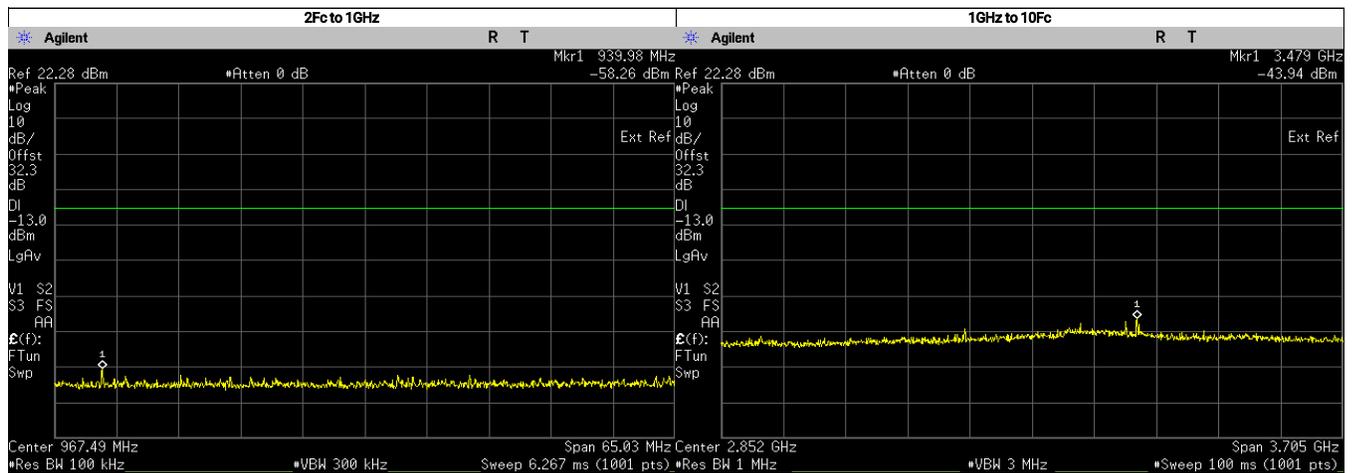
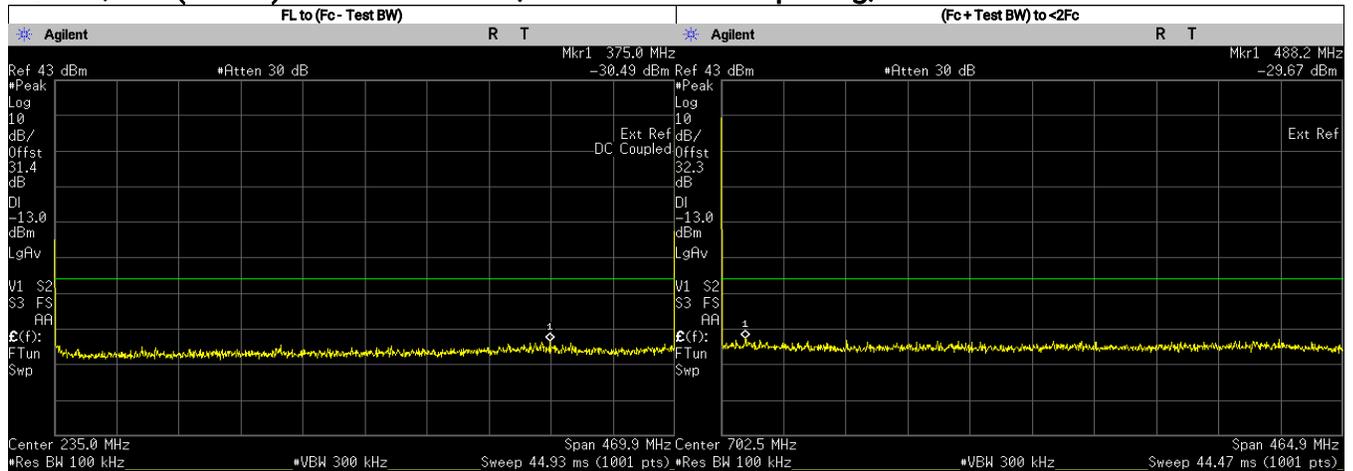
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 321.7000                     | -30.9460             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 468.3255                     | -30.4800             | -13                 | PASS    |
| 2Fc to 1GHz            | 900.0500                     | -59.2600             | -13                 | PASS    |
| 1GHz to 10Fc           | 1767.6500                    | -38.5900             | -13                 | PASS    |
|                        | 1350.0750                    | -51.7932             | -13                 | PASS    |
|                        | 1800.1000                    | -51.7860             | -13                 | PASS    |
|                        | 2250.1250                    | -51.3095             | -13                 | PASS    |
|                        | 2700.1500                    | -50.9010             | -13                 | PASS    |
|                        | 3150.1750                    | -48.2835             | -13                 | PASS    |
|                        | 3600.2000                    | -50.6134             | -13                 | PASS    |
|                        | 4050.2250                    | -49.4364             | -13                 | PASS    |
| 4500.2500              | -50.9741                     | -13                  | PASS                |         |

**PI/4DQPSK (MSPD) : 460.025. MHz, 25 kHz Channel Spacing, Max. Power**



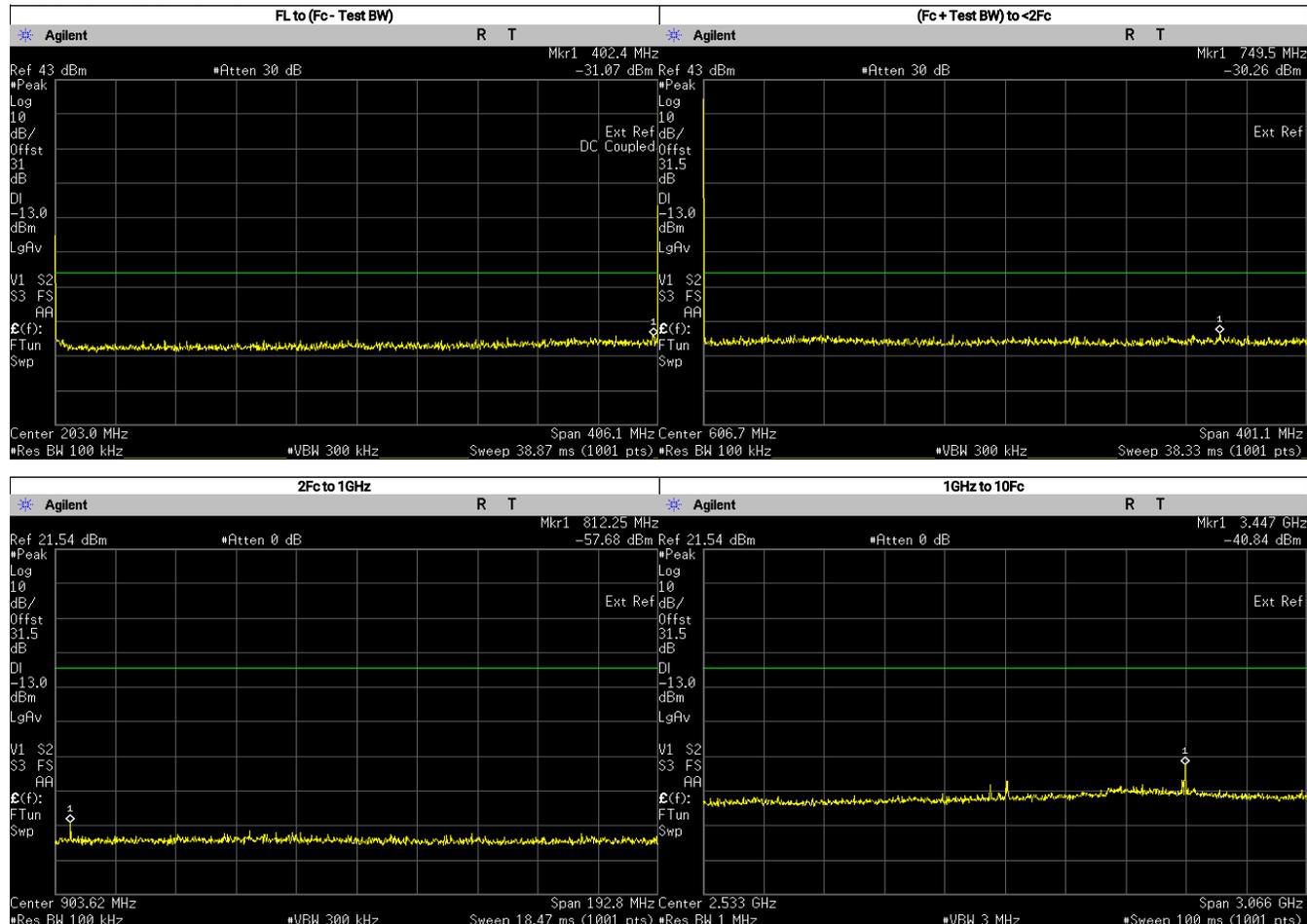
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 221.2000                     | -31.2260             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 877.7426                     | -29.9100             | -13                 | PASS    |
| 2Fc to 1GHz            | 920.0500                     | -60.4000             | -13                 | PASS    |
| 1GHz to 10Fc           | 3462.3860                    | -40.9900             | -13                 | PASS    |
|                        | 1380.0750                    | -52.4011             | -13                 | PASS    |
|                        | 1840.1000                    | -52.1772             | -13                 | PASS    |
|                        | 2300.1250                    | -51.3178             | -13                 | PASS    |
|                        | 2760.1500                    | -50.8087             | -13                 | PASS    |
|                        | 3220.1750                    | -48.7790             | -13                 | PASS    |
|                        | 3680.2000                    | -50.1533             | -13                 | PASS    |
|                        | 4140.2250                    | -50.3167             | -13                 | PASS    |
| 4600.2500              | -51.0887                     | -13                  | PASS                |         |

**PI/4DQPSK (MSPD) : 469.9875. MHz, 25 kHz Channel Spacing, Max. Power**



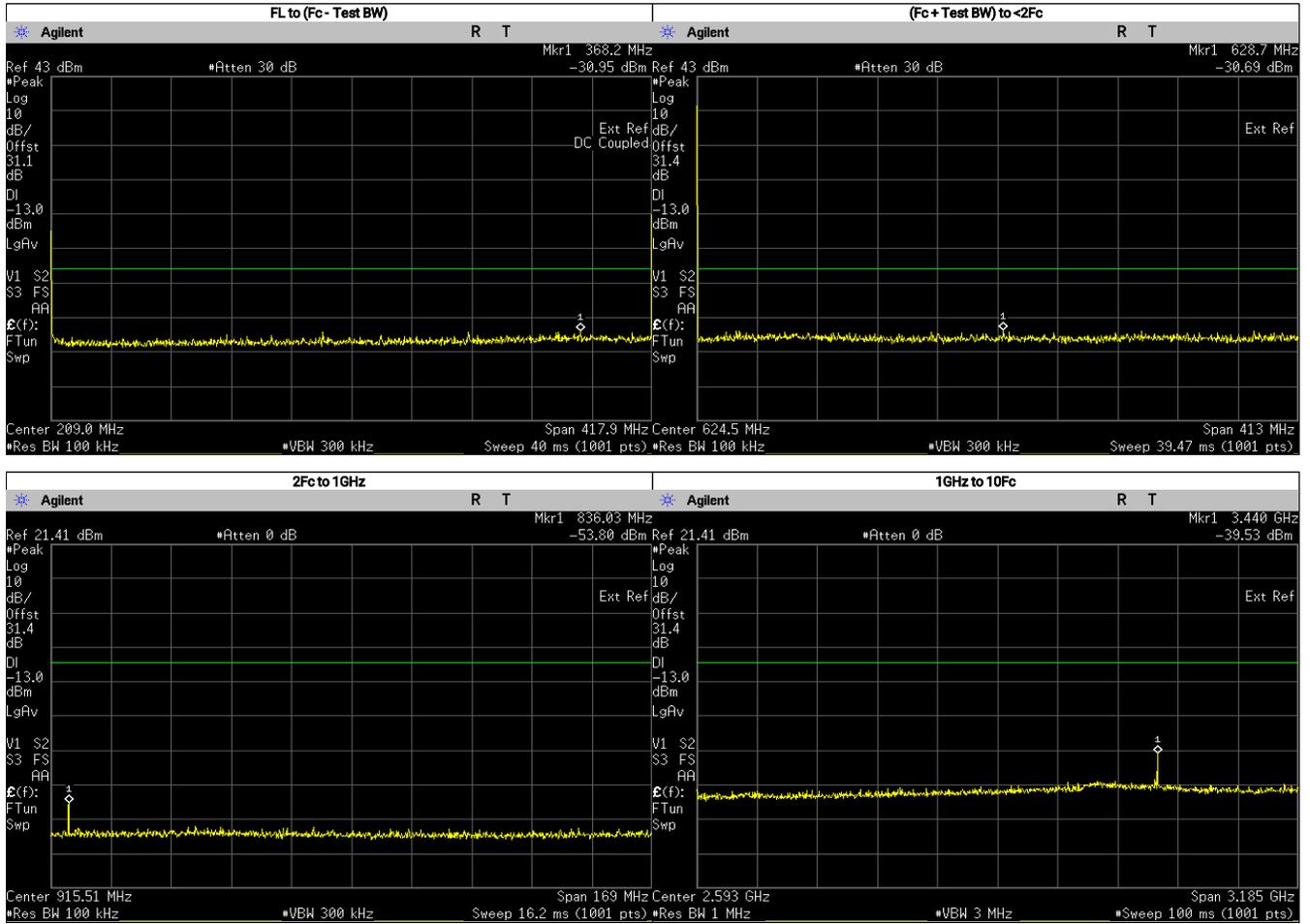
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 375.0000                     | -30.4860             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 488.1766                     | -29.6700             | -13                 | PASS    |
| 2Fc to 1GHz            | 939.9750                     | -58.2600             | -13                 | PASS    |
| 1GHz to 10Fc           | 3478.5610                    | -43.9400             | -13                 | PASS    |
|                        | 1409.9630                    | -50.6914             | -13                 | PASS    |
|                        | 1879.9500                    | -50.1467             | -13                 | PASS    |
|                        | 2349.9370                    | -49.2492             | -13                 | PASS    |
|                        | 2819.9250                    | -49.1335             | -13                 | PASS    |
|                        | 3289.9120                    | -47.1552             | -13                 | PASS    |
|                        | 3759.9000                    | -49.7247             | -13                 | PASS    |
|                        | 4229.8870                    | -49.3503             | -13                 | PASS    |
| 4699.8750              | -49.6232                     | -13                  | PASS                |         |

**PI/4DQPSK (TXNDC) : 406.125. MHz, 25 kHz Channel Spacing, Max. Power**  
 Not for FCC review



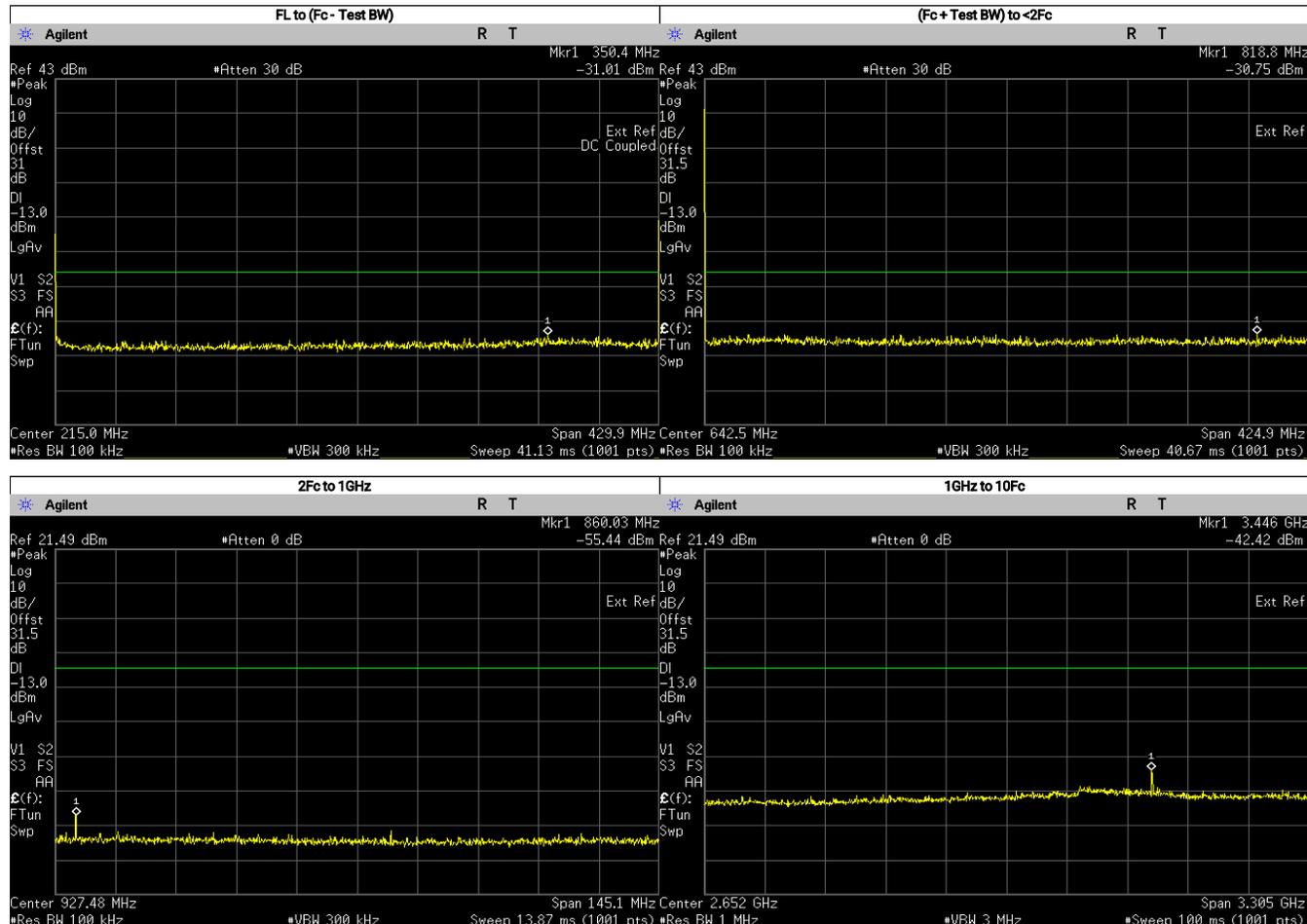
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 402.4000                     | -31.0720             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 749.4960                     | -30.2600             | -13                 | PASS    |
| 2Fc to 1GHz            | 812.2500                     | -57.6800             | -13                 | PASS    |
| 1GHz to 10Fc           | 3446.8670                    | -40.8400             | -13                 | PASS    |
|                        | 1218.3750                    | -51.3240             | -13                 | PASS    |
|                        | 1624.5000                    | -52.0817             | -13                 | PASS    |
|                        | 2030.6250                    | -51.3206             | -13                 | PASS    |
|                        | 2436.7500                    | -50.4707             | -13                 | PASS    |
|                        | 2842.8750                    | -49.8366             | -13                 | PASS    |
|                        | 3249.0000                    | -48.8804             | -13                 | PASS    |
|                        | 3655.1250                    | -49.4193             | -13                 | PASS    |
|                        | 4061.2500                    | -50.1339             | -13                 | PASS    |

**PI/4DQPSK (TXNDC) : 418.0125. MHz, 25 kHz Channel Spacing, Max. Power**  
 Not for FCC review



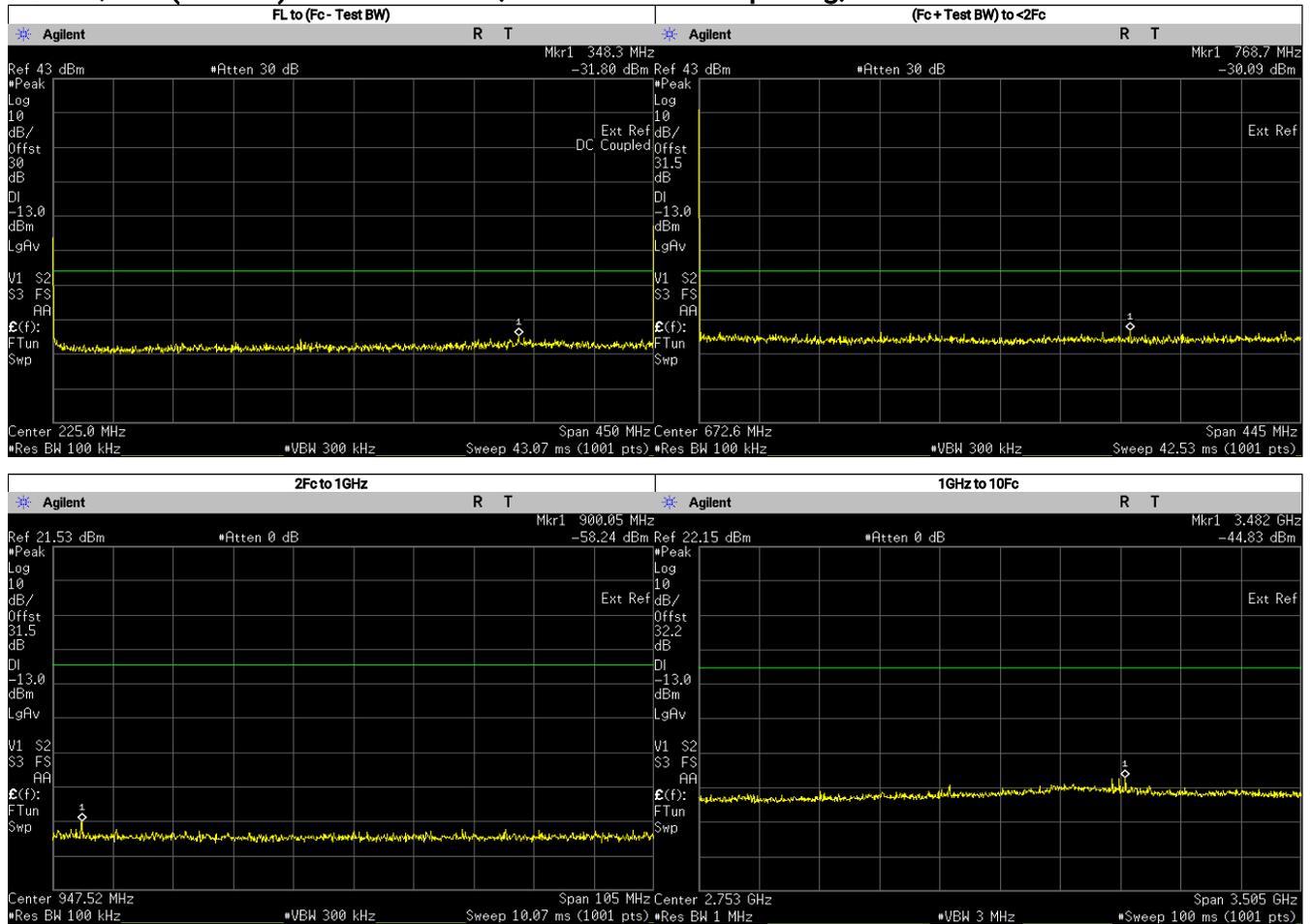
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 368.2000                     | -30.9470             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 628.6761                     | -30.6900             | -13                 | PASS    |
| 2Fc to 1GHz            | 836.0250                     | -53.8000             | -13                 | PASS    |
| 1GHz to 10Fc           | 3439.8060                    | -39.5300             | -13                 | PASS    |
|                        | 1254.0370                    | -51.1012             | -13                 | PASS    |
|                        | 1672.0500                    | -51.9714             | -13                 | PASS    |
|                        | 2090.0620                    | -51.1486             | -13                 | PASS    |
|                        | 2508.0750                    | -50.8498             | -13                 | PASS    |
|                        | 2926.0880                    | -49.8134             | -13                 | PASS    |
|                        | 3344.1000                    | -49.5094             | -13                 | PASS    |
|                        | 3762.1130                    | -50.3108             | -13                 | PASS    |
|                        | 4180.1250                    | -49.5742             | -13                 | PASS    |

**PI/4DQPSK (TXNDC) : 429.975. MHz, 25 kHz Channel Spacing, Max. Power**  
 Not for FCC review



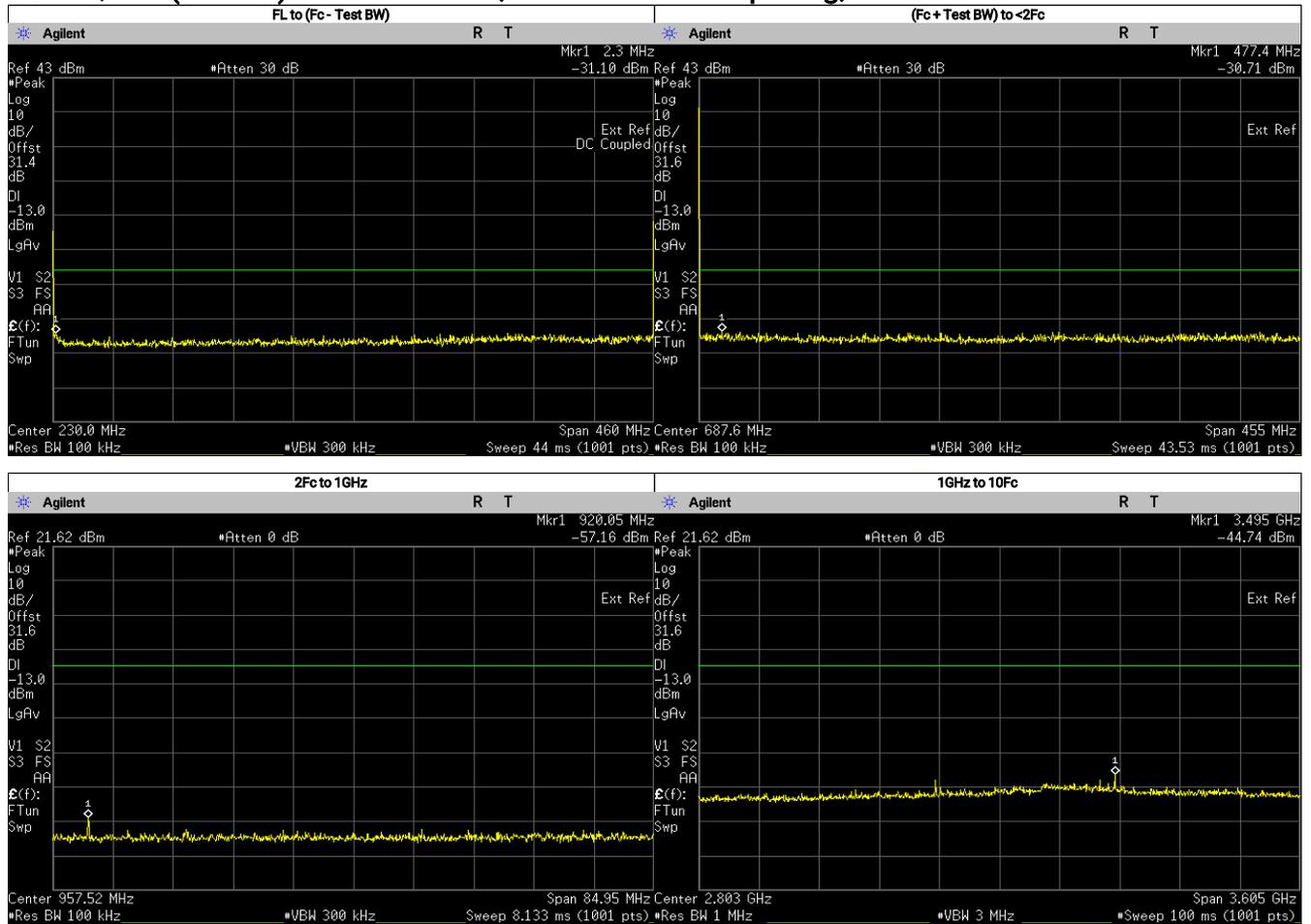
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 350.4000                     | -31.0080             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 818.8319                     | -30.7500             | -13                 | PASS    |
| 2Fc to 1GHz            | 860.0267                     | -55.4400             | -13                 | PASS    |
| 1GHz to 10Fc           | 3445.5150                    | -42.4200             | -13                 | PASS    |
|                        | 1289.9250                    | -51.4761             | -13                 | PASS    |
|                        | 1719.9000                    | -51.6455             | -13                 | PASS    |
|                        | 2149.8750                    | -50.8955             | -13                 | PASS    |
|                        | 2579.8500                    | -50.5623             | -13                 | PASS    |
|                        | 3009.8250                    | -49.3838             | -13                 | PASS    |
|                        | 3439.8000                    | -49.5144             | -13                 | PASS    |
|                        | 3869.7750                    | -50.3655             | -13                 | PASS    |
|                        | 4299.7500                    | -50.8631             | -13                 | PASS    |

**PI/4DQPSK (TXNDC) : 450.025. MHz, 25 kHz Channel Spacing, Max. Power**



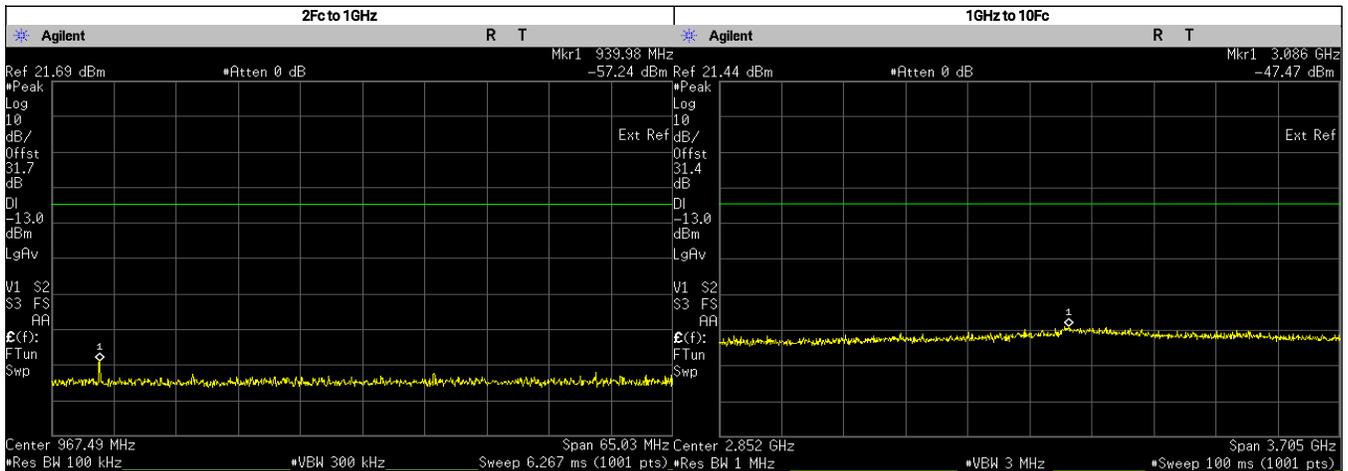
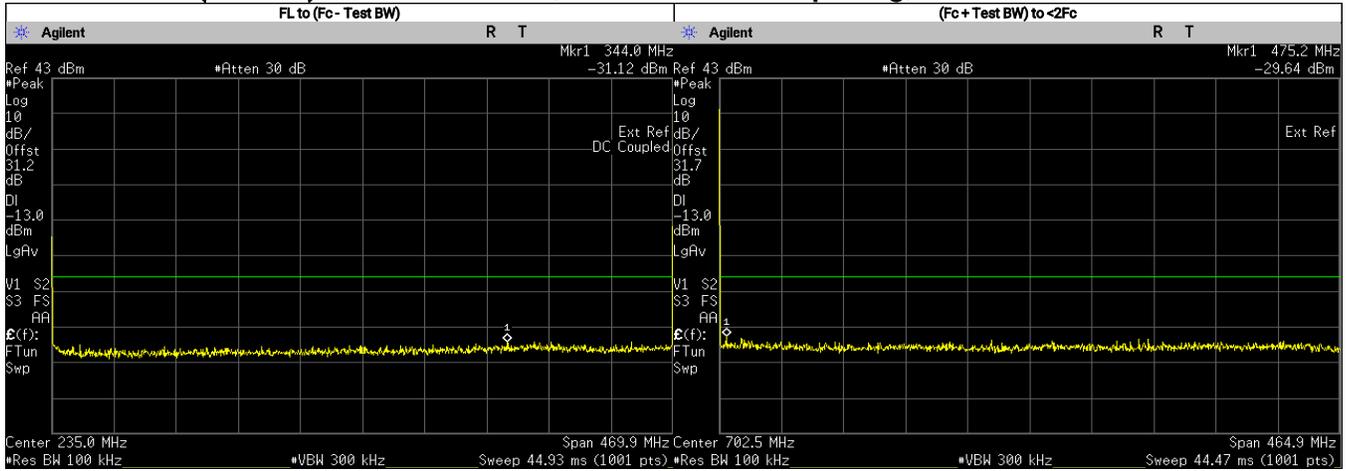
| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 348.3000                     | -31.8020             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 768.6790                     | -30.0900             | -13                 | PASS    |
| 2Fc to 1GHz            | 900.0500                     | -58.2400             | -13                 | PASS    |
| 1GHz to 10Fc           | 3481.7170                    | -44.8300             | -13                 | PASS    |
|                        | 1350.0750                    | -51.4563             | -13                 | PASS    |
|                        | 1800.1000                    | -51.0594             | -13                 | PASS    |
|                        | 2250.1250                    | -51.0340             | -13                 | PASS    |
|                        | 2700.1500                    | -49.4320             | -13                 | PASS    |
|                        | 3150.1750                    | -48.4012             | -13                 | PASS    |
|                        | 3600.2000                    | -49.2830             | -13                 | PASS    |
|                        | 4050.2250                    | -48.8680             | -13                 | PASS    |
| 4500.2500              | -49.5599                     | -13                  | PASS                |         |

**PI/4DQPSK (TXNDC) : 460.025. MHz, 25 kHz Channel Spacing, Max. Power**



| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 2.3000                       | -31.1010             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 477.3706                     | -30.7100             | -13                 | PASS    |
| 2Fc to 1GHz            | 920.0500                     | -57.1600             | -13                 | PASS    |
| 1GHz to 10Fc           | 3494.8330                    | -44.7400             | -13                 | PASS    |
|                        | 1380.0750                    | -51.5531             | -13                 | PASS    |
|                        | 1840.1000                    | -51.4627             | -13                 | PASS    |
|                        | 2300.1250                    | -50.7985             | -13                 | PASS    |
|                        | 2760.1500                    | -49.9203             | -13                 | PASS    |
|                        | 3220.1750                    | -48.5291             | -13                 | PASS    |
|                        | 3680.2000                    | -50.1487             | -13                 | PASS    |
|                        | 4140.2250                    | -50.2221             | -13                 | PASS    |
| 4600.2500              | -50.9178                     | -13                  | PASS                |         |

**PI/4DQPSK (TXNDC) : 469.9875. MHz, 25 kHz Channel Spacing, Max. Power**



| Frequency Range        | Highest Spur Frequency (MHz) | Spurious Level (MHz) | Failing Limit (dBm) | Results |
|------------------------|------------------------------|----------------------|---------------------|---------|
| FL to (Fc - Test BW)   | 344.0000                     | -31.1230             | -13                 | PASS    |
| (Fc + Test BW) to <2Fc | 475.1585                     | -29.6400             | -13                 | PASS    |
| 2Fc to 1GHz            | 939.9750                     | -57.2400             | -13                 | PASS    |
| 1GHz to 10Fc           | 3085.8450                    | -47.4700             | -13                 | PASS    |
|                        | 1409.9630                    | -51.4853             | -13                 | PASS    |
|                        | 1879.9500                    | -51.1875             | -13                 | PASS    |
|                        | 2349.9370                    | -51.2379             | -13                 | PASS    |
|                        | 2819.9250                    | -50.5489             | -13                 | PASS    |
|                        | 3289.9120                    | -48.9894             | -13                 | PASS    |
|                        | 3759.9000                    | -50.0609             | -13                 | PASS    |
|                        | 4229.8870                    | -49.4638             | -13                 | PASS    |
|                        | 4699.8750                    | -50.8938             | -13                 | PASS    |

### 6.6.3. Test Limit

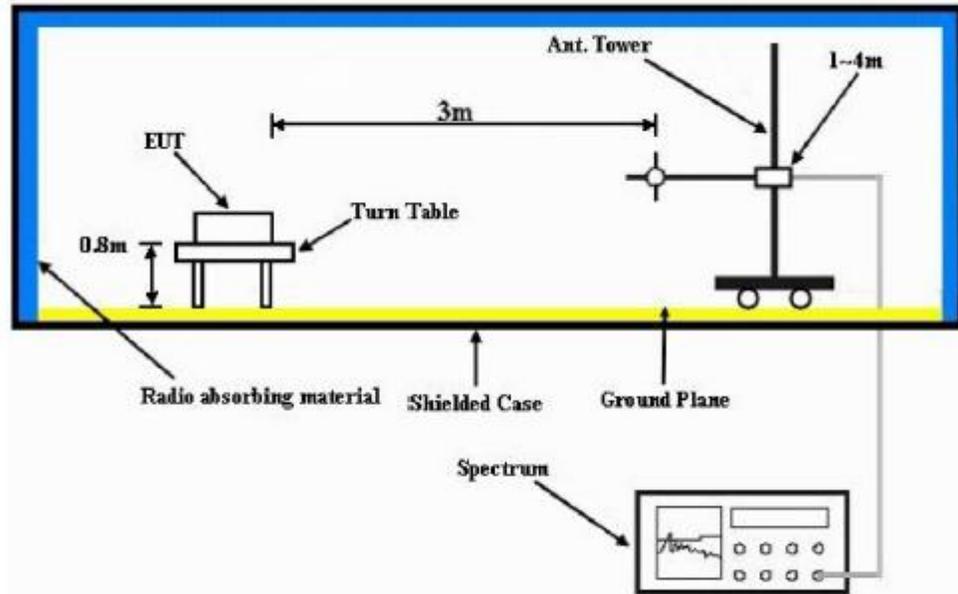
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

| Channel Spacing | Part 22                              | Part 24D                             | Part 74                              | Part 80                              | Part 90 (UHF, VHF, 800, 900)         | Part 90 (700)                        |
|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 12.5kHz         | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | Not Applicable                       | 50 + log <sub>10</sub> (P) (-20 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |
| 25kHz           |                                      | Not Applicable                       |                                      | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |

| Channel Spacing | RSS 134                              | RSS 182                              | RSS 119 (UHF, VHF, 800, 900)         | RSS 119 (700)                        |
|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 12.5kHz         | 43 + log <sub>10</sub> (P) (-13 dBm) | Not Applicable                       | 50 + log <sub>10</sub> (P) (-20 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |
| 25kHz           | Not Applicable                       | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |

## 6.7. Radiated Spurious Emission

### 6.7.1. Test Setup



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

### 6.7.2. Test Result (Digital)

Not for FCC review

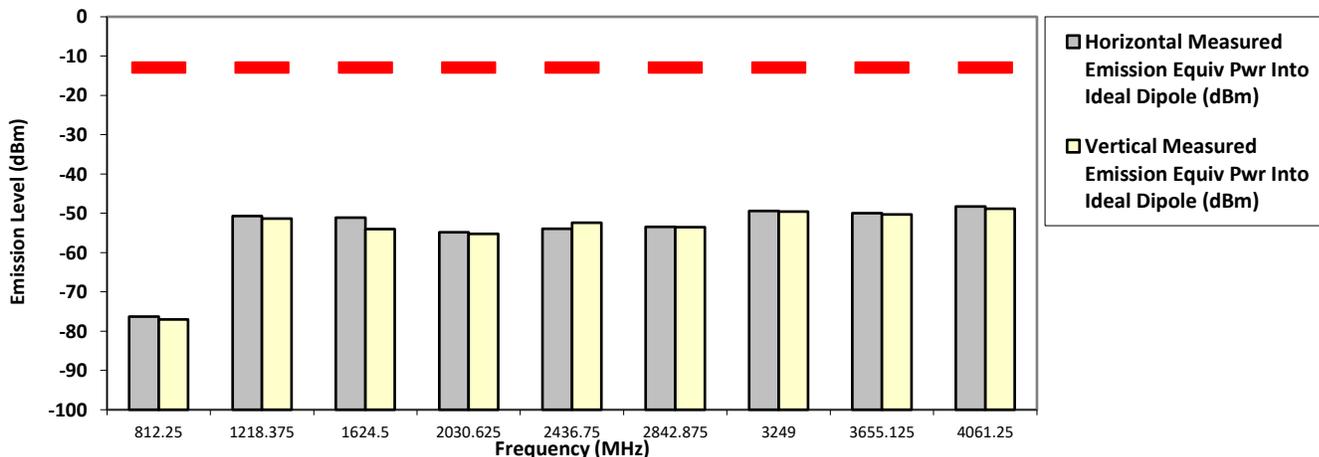
Test: SAC Transmitter Radiated Emission  
 Model Number: AZH77PCN6TZ5AN  
 Battery: PMNN4802A  
 Accessory: NA  
 Test Mode: TX Tetra  
 Channel Spacing: 25kHz

EMC SR ID#: 1177P00-EMC-00002  
 S/N: 767TAV3890

Test Frequency: 406.125000 MHz  
 Power : 3.0 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) |
|-----------------|----------|--|--|
| 812.2500        | -13.0000 | -76.2885 **  | -77.0571 **  |
| 1218.3750       | -13.0000 | -50.7400 *   | -51.3400 *   |
| 1624.5000       | -13.0000 | -51.1100 *   | -54.0300 *   |
| 2030.6250       | -13.0000 | -54.8129 **  | -55.2402 **  |
| 2436.7500       | -13.0000 | -53.9697 **  | -52.4052 **  |
| 2842.8750       | -13.0000 | -53.4678 **  | -53.5058 **  |
| 3249.0000       | -13.0000 | -49.4077 **  | -49.6050 **  |
| 3655.1250       | -13.0000 | -50.0202 **  | -50.2773 **  |
| 4061.2500       | -13.0000 | -48.3199 **  | -48.8138 **  |
|                 |          |  |  |

#### RADIATED SPURIOUS EMISSIONS



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

Motorola Penang EMC Lab - Test Performed by: Aiman

Sat, 18 Jan, 2025

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

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

Temp(Deg): 22.5 Hum(%RH): 62.3

System MU: 4.03 dB

Remarks:

|                |                  |                |
|----------------|------------------|----------------|
| Passed Results | Marginal Results | Failed Results |
|----------------|------------------|----------------|

Not for FCC review

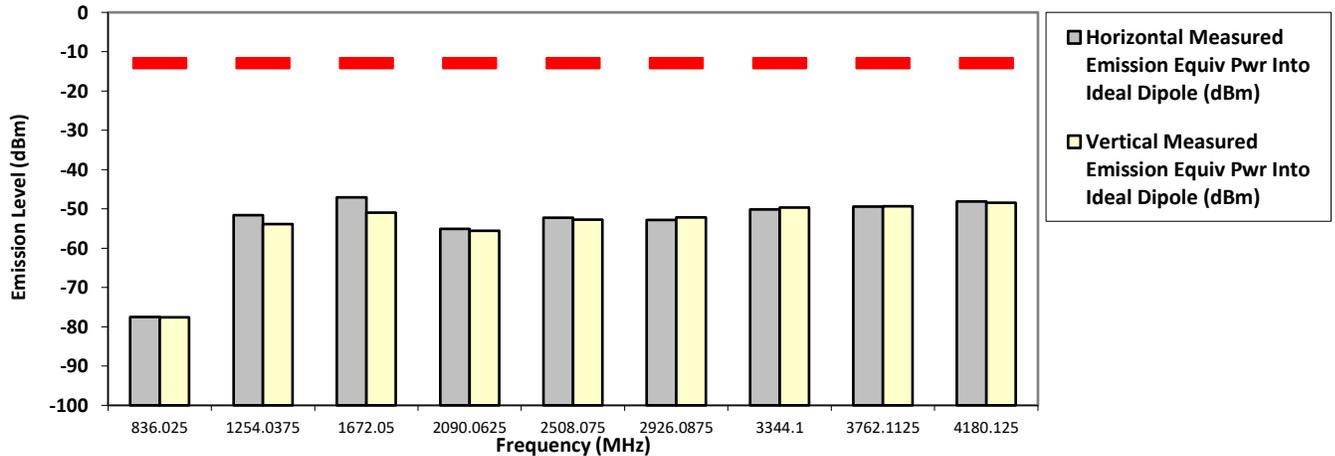
Test: SAC Transmitter Radiated Emission  
 Model Number: AZH77PCN6TZ5AN  
 Battery: PMNN4802A  
 Accessory: NA  
 Test Mode: TX Tetra  
 Channel Spacing: 25kHz

EMC SR ID#: 1177P00-EMC-00002  
 S/N: 767TAV3890

Test Frequency: 418.012500 MHz  
 Power : 3.0 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) |
|-----------------|----------|--|--|
| 836.0250        | -13.0000 | -77.4931 **  | -77.6354 **  |
| 1254.0375       | -13.0000 | -51.6400 *   | -53.8800 *   |
| 1672.0500       | -13.0000 | -47.0600 *   | -50.9600 *   |
| 2090.0625       | -13.0000 | -55.0897 **  | -55.5821 **  |
| 2508.0750       | -13.0000 | -52.2898 **  | -52.7127 **  |
| 2926.0875       | -13.0000 | -52.8332 **  | -52.1737 **  |
| 3344.1000       | -13.0000 | -50.1832 **  | -49.6805 **  |
| 3762.1125       | -13.0000 | -49.3967 **  | -49.3055 **  |
| 4180.1250       | -13.0000 | -48.0915 **  | -48.4340 **  |

**RADIATED SPURIOUS EMISSIONS**



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

Motorola Penang EMC Lab - Test Performed by: Aiman

Sat, 18 Jan, 2025

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

\*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported  
 Temp(Deg): 22.5 Hum(%RH): 62.3

System MU: 4.03 dB

Remarks:

|                |                  |                |
|----------------|------------------|----------------|
| Passed Results | Marginal Results | Failed Results |
|----------------|------------------|----------------|

Not for FCC review

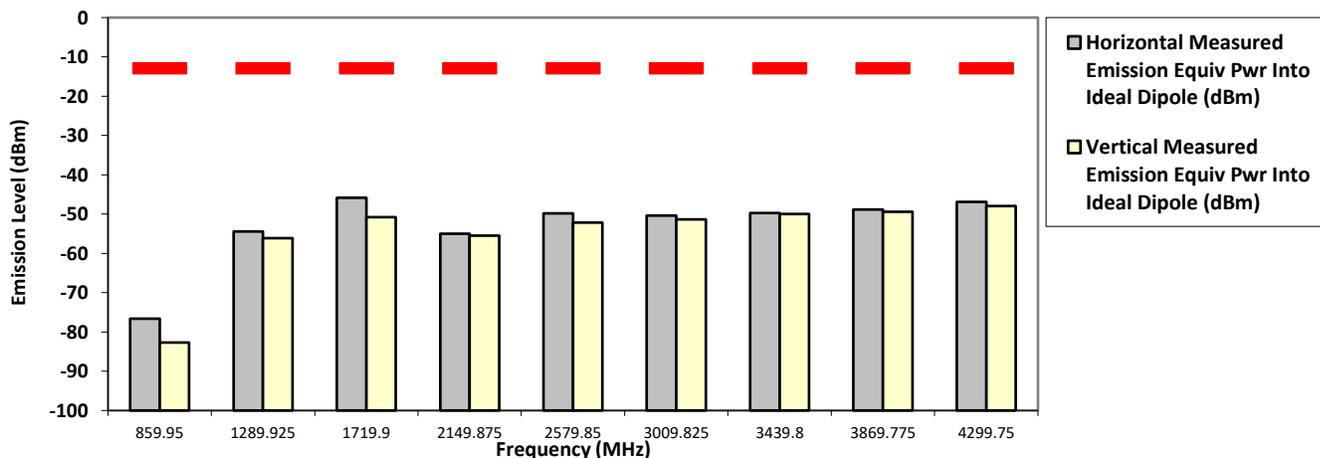
Test: SAC Transmitter Radiated Emission  
 Model Number: AZH77PCN6TZ5AN  
 Battery: PMNN4802A  
 Accessory: NA  
 Test Mode: TX Tetra  
 Channel Spacing: 25kHz

EMC SR ID#: 1177P00-EMC-00002  
 S/N: 767TAV3890

Test Frequency: 429.975000 MHz  
 Power : 3.0 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) |
|-----------------|----------|--|--|
| 859.9500        | -13.0000 | -76.6047 **  | -82.7013 **  |
| 1289.9250       | -13.0000 | -54.4200 *   | -56.1800 *   |
| 1719.9000       | -13.0000 | -45.8400 *   | -50.7900 *   |
| 2149.8750       | -13.0000 | -54.9816 **  | -55.4654 **  |
| 2579.8500       | -13.0000 | -49.8218 **  | -52.2031 **  |
| 3009.8250       | -13.0000 | -50.3569 **  | -51.3905 **  |
| 3439.8000       | -13.0000 | -49.7084 **  | -49.9791 **  |
| 3869.7750       | -13.0000 | -48.8798 **  | -49.4651 **  |
| 4299.7500       | -13.0000 | -46.9433 **  | -47.9797 **  |

**RADIATED SPURIOUS EMISSIONS**



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.  
 Motorola Penang EMC Lab - Test Performed by: Aiman Sat, 18 Jan, 2025

Remarks: \*\* Indicates the spurious emission could not be detected due to noise limitations or ambient.  
 \*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported  
 Temp(Deg): 22.5 Hum(%RH): 62.3

System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

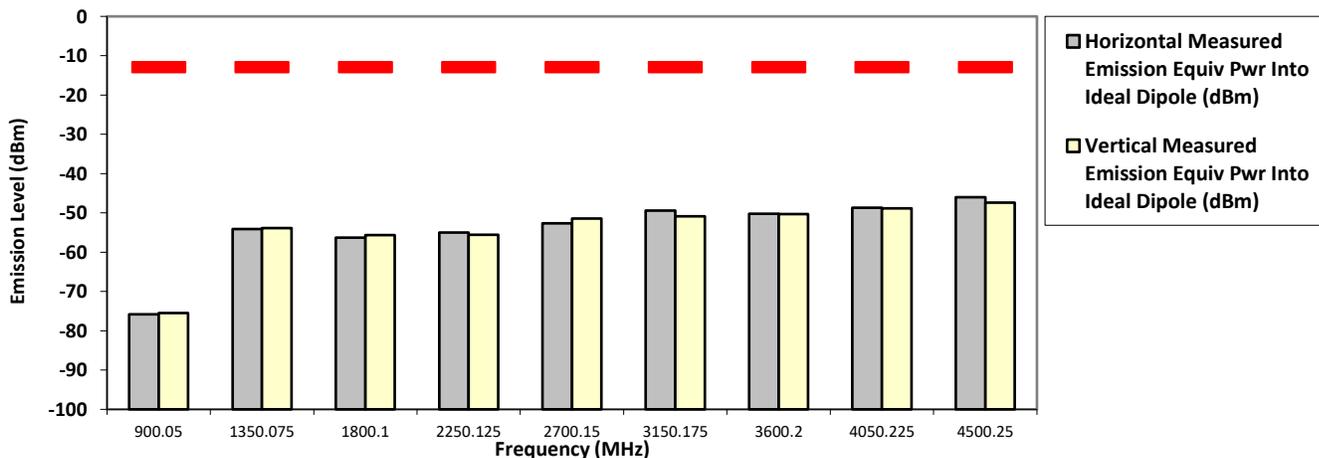
Test: SAC Transmitter Radiated Emission  
 Model Number: AZH77PCN6TZ5AN  
 Battery: PMNN4802A  
 Accessory: NA  
 Test Mode: TX Tetra  
 Channel Spacing: 25kHz

EMC SR ID#: 1177P00-EMC-00002  
 S/N: 767TAV3890

Test Frequency: 450.025000 MHz  
 Power : 3.0 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) |
|-----------------|----------|--|--|
| 900.0500        | -13.0000 | -75.7883 **  | -75.4769 **  |
| 1350.0750       | -13.0000 | -54.1100 *   | -53.8600 *   |
| 1800.1000       | -13.0000 | -56.3290 **  | -55.6298 **  |
| 2250.1250       | -13.0000 | -54.9752 **  | -55.5351 **  |
| 2700.1500       | -13.0000 | -52.6339 **  | -51.4798 **  |
| 3150.1750       | -13.0000 | -49.4513 **  | -50.8697 **  |
| 3600.2000       | -13.0000 | -50.2292 **  | -50.2906 **  |
| 4050.2250       | -13.0000 | -48.6569 **  | -48.8860 **  |
| 4500.2500       | -13.0000 | -46.0321 **  | -47.4119 **  |

**RADIATED SPURIOUS EMISSIONS**



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.  
 Motorola Penang EMC Lab - Test Performed by: Aiman Sat, 18 Jan, 2025

Remarks: \*\* Indicates the spurious emission could not be detected due to noise limitations or ambient.  
 \*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported  
 Temp(Deg): 22.5 Hum(%RH): 62.3

System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

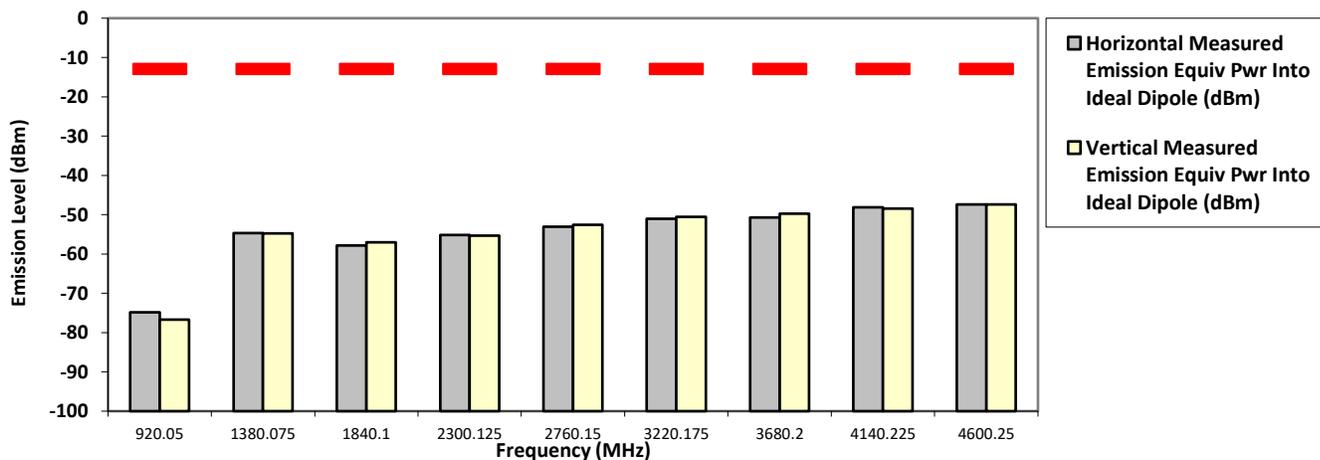
Test: SAC Transmitter Radiated Emission  
 Model Number: AZH77PCN6TZ5AN  
 Battery: PMNN4802A  
 Accessory: NA  
 Test Mode: TX Tetra  
 Channel Spacing: 25kHz

EMC SR ID#: 1177P00-EMC-00002  
 S/N: 767TAV3890

Test Frequency: 460.025000 MHz  
 Power : 3.0 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) |
|-----------------|----------|--|--|
| 920.0500        | -13.0000 | -74.8294 **  | -76.7124 **  |
| 1380.0750       | -13.0000 | -54.7100 *   | -54.7800 *   |
| 1840.1000       | -13.0000 | -57.8660 **  | -57.0090 **  |
| 2300.1250       | -13.0000 | -55.2084 **  | -55.3314 **  |
| 2760.1500       | -13.0000 | -53.0324 **  | -52.5834 **  |
| 3220.1750       | -13.0000 | -51.0653 **  | -50.5895 **  |
| 3680.2000       | -13.0000 | -50.7006 **  | -49.7793 **  |
| 4140.2250       | -13.0000 | -48.1491 **  | -48.4342 **  |
| 4600.2500       | -13.0000 | -47.3643 **  | -47.4039 **  |
|                 |          |  |  |

**RADIATED SPURIOUS EMISSIONS**



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.  
 Motorola Penang EMC Lab - Test Performed by: Airman Sat, 18 Jan, 2025

Remarks: \*\* Indicates the spurious emission could not be detected due to noise limitations or ambient.  
 \*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported  
 Temp(Deg): 22.5 Hum(%RH): 62.3

System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

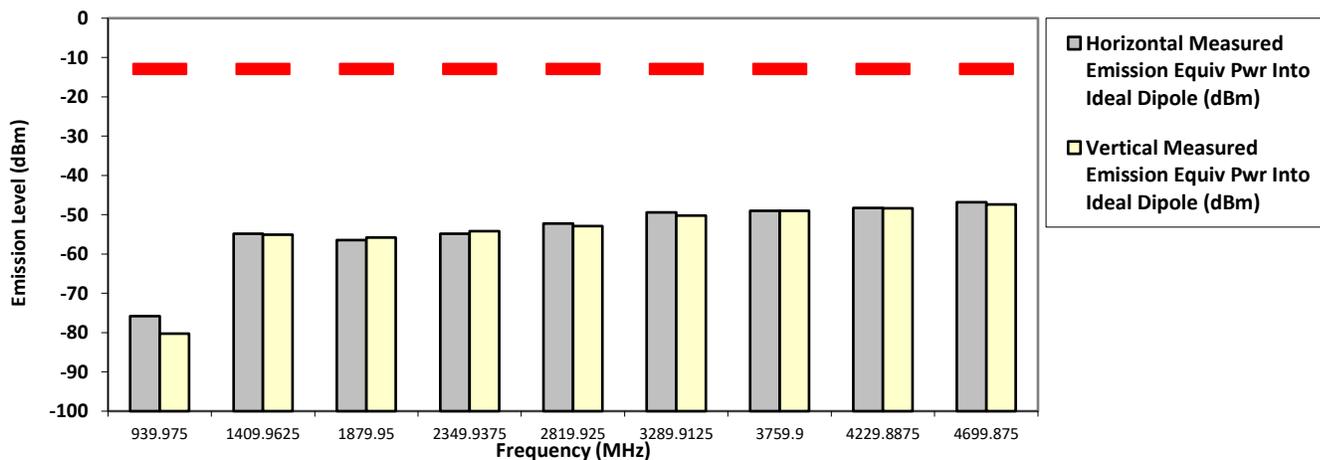
Test: SAC Transmitter Radiated Emission  
 Model Number: AZH77PCN6TZ5AN  
 Battery: PMNN4802A  
 Accessory: NA  
 Test Mode: TX Tetra  
 Channel Spacing: 25kHz

EMC SR ID#: 1177P00-EMC-00002  
 S/N: 767TAV3890

Test Frequency: 469.987500 MHz  
 Power : 3.0 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) |
|-----------------|----------|--|--|
| 939.9750        | -13.0000 | -75.8060 **  | -80.2945 **  |
| 1409.9625       | -13.0000 | -54.8100 *   | -55.0800 *   |
| 1879.9500       | -13.0000 | -56.4871 **  | -55.8226 **  |
| 2349.9375       | -13.0000 | -54.8631 **  | -54.1820 **  |
| 2819.9250       | -13.0000 | -52.2911 **  | -52.8984 **  |
| 3289.9125       | -13.0000 | -49.4307 **  | -50.2414 **  |
| 3759.9000       | -13.0000 | -49.0092 **  | -49.0385 **  |
| 4229.8875       | -13.0000 | -48.2802 **  | -48.3320 **  |
| 4699.8750       | -13.0000 | -46.7943 **  | -47.4020 **  |
|                 |          |  |  |

**RADIATED SPURIOUS EMISSIONS**



The data presented here was taken using the substitution method as found in the ANSI C63.26-2015 document.  
 Motorola Penang EMC Lab - Test Performed by: Airman Sat, 18 Jan, 2025

Remarks: \*\* Indicates the spurious emission could not be detected due to noise limitations or ambient.  
 \*Pursuant to CFR 47 Part 2.1057 (c), emissions attenuated more than 20 dB below the permissible limit are not reported  
 Temp(Deg): 22.5 Hum(%RH): 62.3

System MU: 4.03 dB

Remarks: Passed Results Marginal Results Failed Results

### 6.7.3. Test Limit

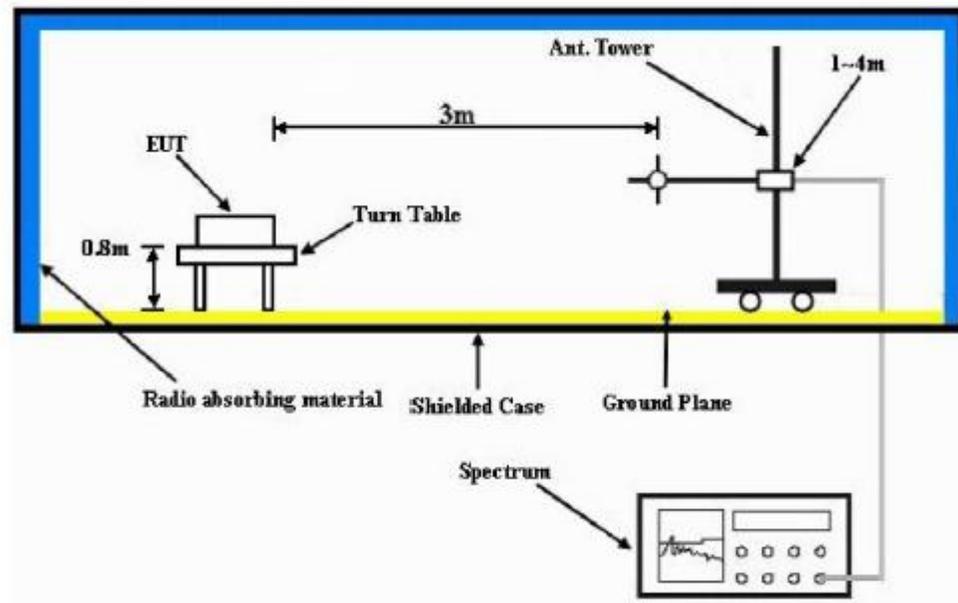
Table below summarized the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least

| Channel Spacing | Part 22                              | Part 24D                             | Part 74                              | Part 80                              | Part 90 (UHF, VHF, 800, 900)         | Part 90 (700)                        |
|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 12.5kHz         | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | Not Applicable                       | 50 + log <sub>10</sub> (P) (-20 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |
| 25kHz           |                                      | Not Applicable                       |                                      | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |

| Channel Spacing | RSS 134                              | RSS 182                              | RSS 119 (UHF, VHF, 800, 900)         | RSS 119 (700)                        |
|-----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| 12.5kHz         | 43 + log <sub>10</sub> (P) (-13 dBm) | Not Applicable                       | 50 + log <sub>10</sub> (P) (-20 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |
| 25kHz           | Not Applicable                       | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) | 43 + log <sub>10</sub> (P) (-13 dBm) |

## 6.8. Effective Radiated Power (ERP)

### 6.8.1. Test Setup



- 1) The Resolution Bandwidth for Equivalent Radiated Power (ERP) below 1 GHz is 100 kHz with Video Bandwidth = 300 kHz and Resolution Bandwidth for EIRP above 1 GHz is 1 MHz with Video Bandwidth = 3 MHz. Detector Mode is RMS.
- 2) In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height (for  $f_c < 1\text{GHz}$ ) or 1.5m (for  $f_c > 1\text{GHz}$ ) of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The "Read Value" is the spectrum reading of maximum power value.
- 3) The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum. So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain.

### 6.8.2. Test Result Not Applicable

### 6.8.3. Test Limit

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

~ End of Test Report ~