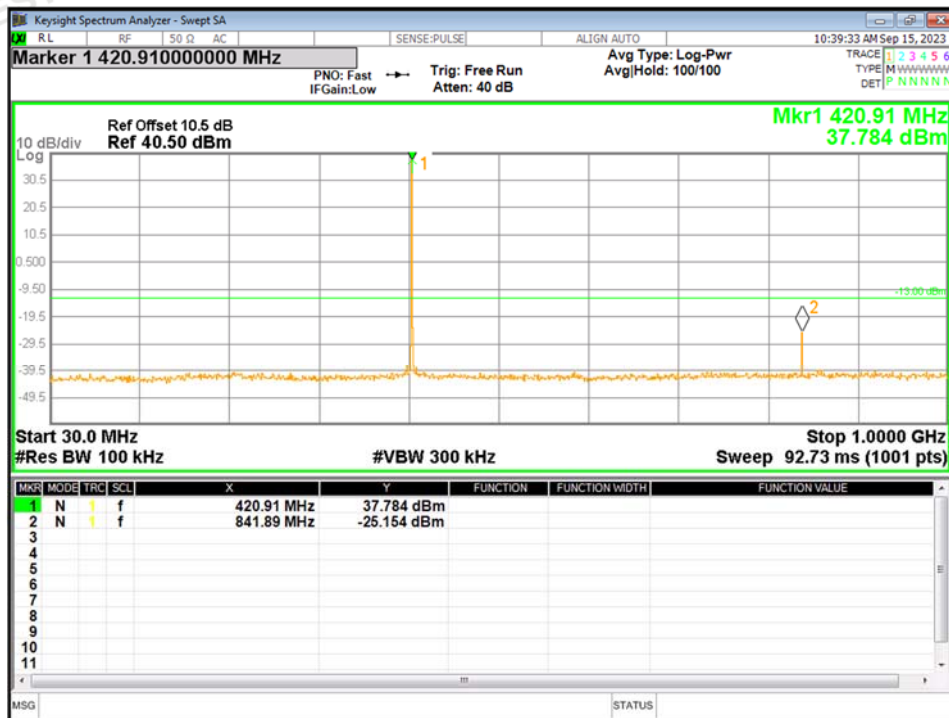
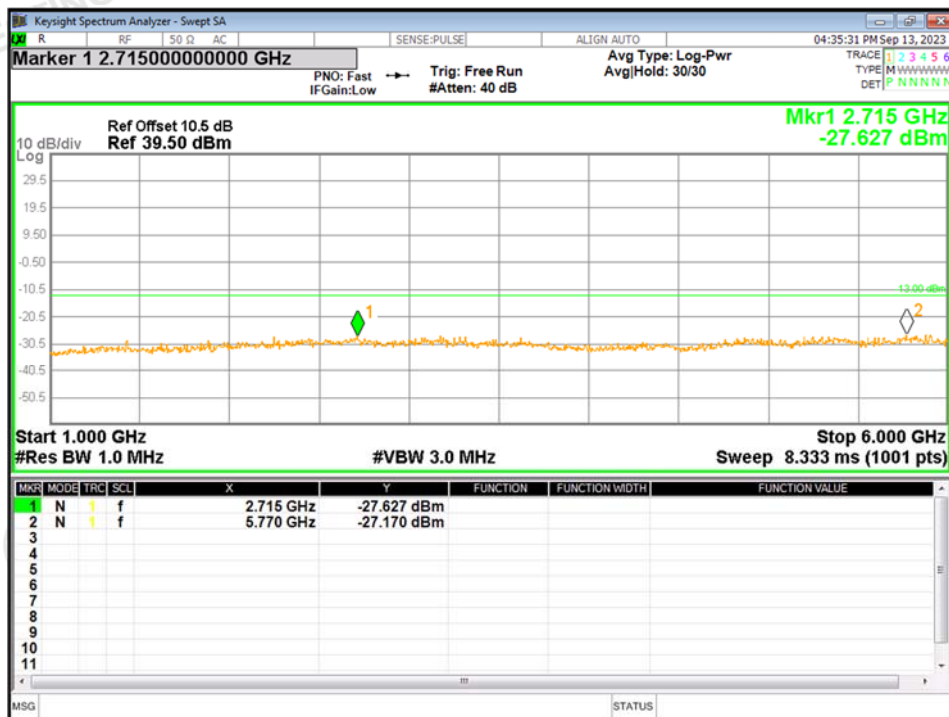


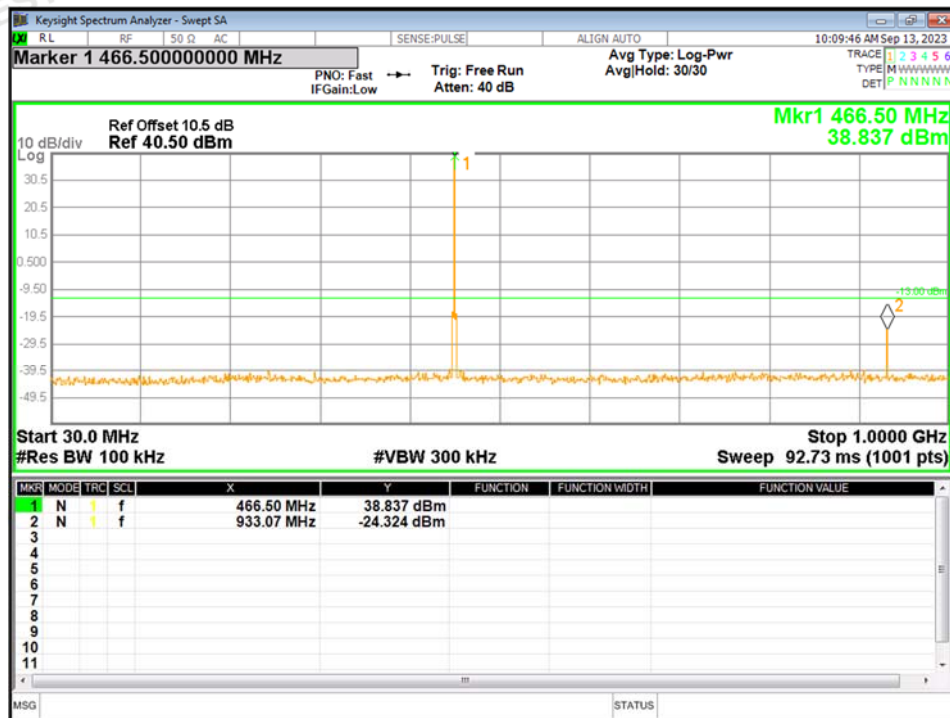
## Mode12-421.025MHz 30MHz-1GHz



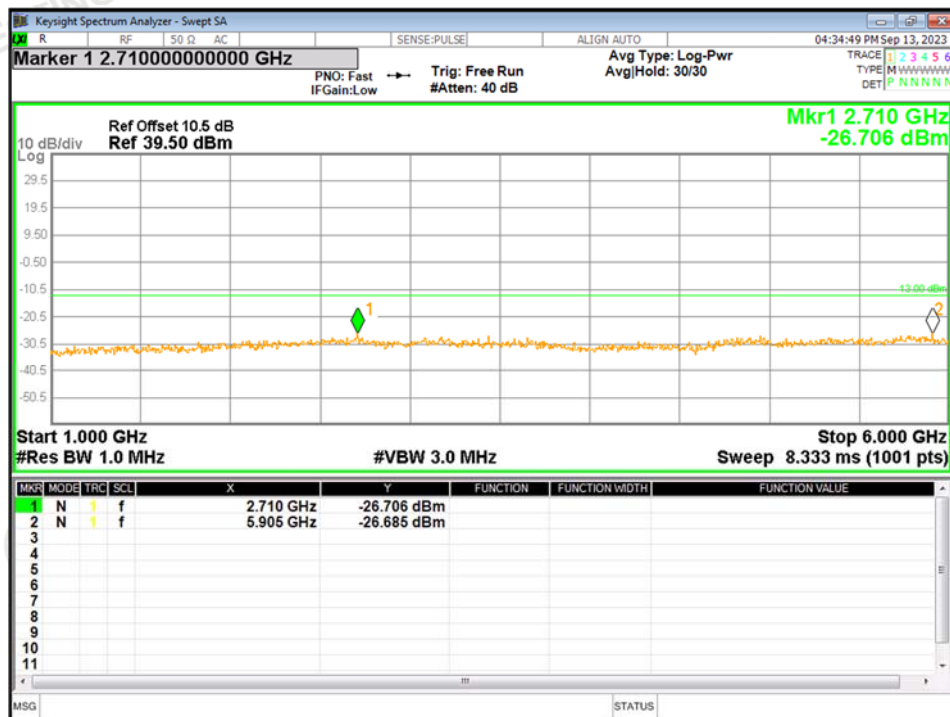
## Mode12-421.025MHz 1GHz-6GHz



## Mode12-466.5MHz 30MHz-1GHz



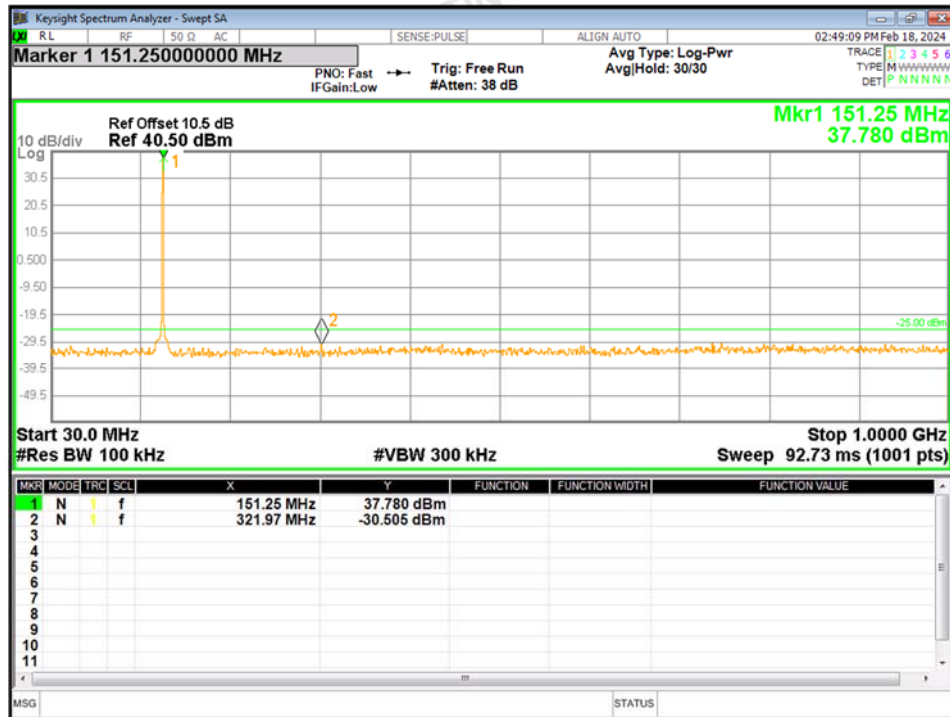
## Mode12-466.5MHz 1GHz-6GHz





6.25 kHz:

Mode14-150.80625MHz 30MHz-1GHz

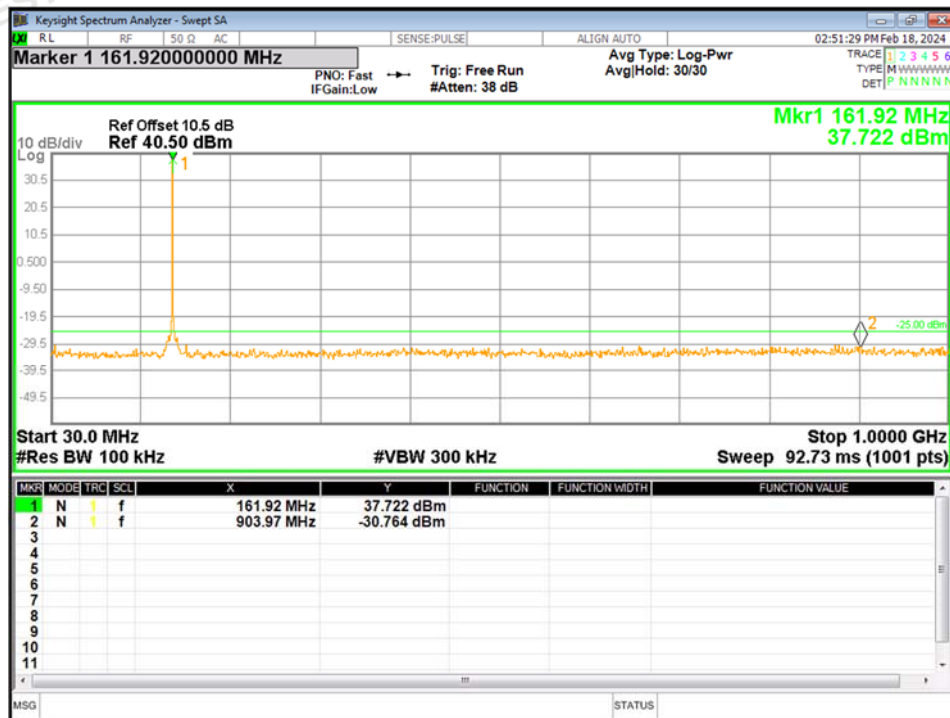


Mode14-150.80625MHz 1GHz-2GHz

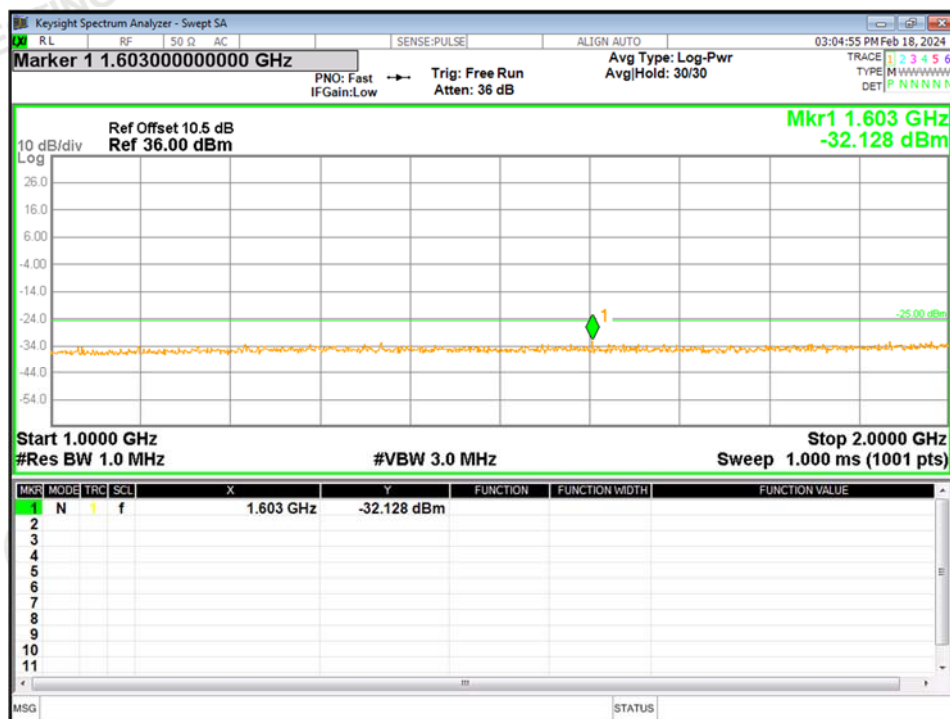




## Mode14-162.00625MHz 30MHz-1GHz



## Mode14-162.00625MHz 1GHz-2GHz











## 8. FREQUENCY STABILITY

### 8.1 PROVISIONS APPLICABLE

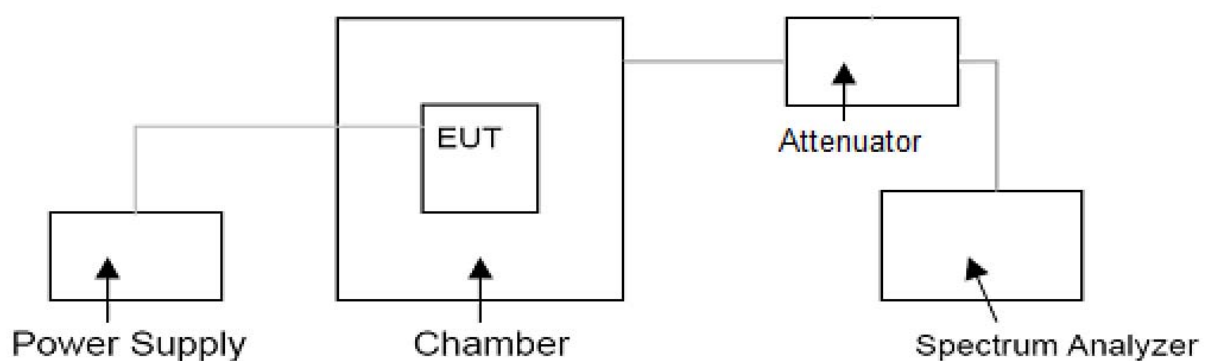
- 1) According to FCC Part 2 Section 2.1055 (a)(1), the frequency stability shall be measured with variation of ambient temperature from -30°C to +50°C centigrade.
- 2) According to FCC Part 2 Section 2.1055 (a) (2), for battery powered equipment, the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point, which is specified by the manufacture.
- 3) Vary primary supply voltage from 85 to 115 percent of the nominal value.
- 4)

| Frequency range (MHz)    | Fixed and base stations | Mobile stations           |                              |
|--------------------------|-------------------------|---------------------------|------------------------------|
|                          |                         | Over 2 watts output power | 2 watts or less output power |
| Below 25                 | <sup>1 2 3</sup> 100    | 100                       | 200                          |
| 25-50                    | 20                      | 20                        | 50                           |
| 72-76                    | 5                       |                           | 50                           |
| 150-174                  | <sup>5 11</sup> 5       | <sup>6</sup> 5            | <sup>4 6</sup> 50            |
| 216-220                  | 1.0                     |                           | 1.0                          |
| 220-222 <sup>12</sup>    | 0.1                     | 1.5                       | 1.5                          |
| 421-512                  | <sup>7 11 14</sup> 2.5  | <sup>8</sup> 5            | <sup>8</sup> 5               |
| 806-809                  | <sup>14</sup> 1.0       | 1.5                       | 1.5                          |
| 809-824                  | <sup>14</sup> 1.5       | 2.5                       | 2.5                          |
| 851-854                  | 1.0                     | 1.5                       | 1.5                          |
| 854-869                  | 1.5                     | 2.5                       | 2.5                          |
| 896-901                  | <sup>14</sup> 0.1       | 1.5                       | 1.5                          |
| 902-928                  | 2.5                     | 2.5                       | 2.5                          |
| 902-928 <sup>13</sup>    | 2.5                     | 2.5                       | 2.5                          |
| 929-930                  | 1.5                     |                           |                              |
| 935-940                  | 0.1                     | 1.5                       | 1.5                          |
| 1427-1435                | <sup>9</sup> 300        | 300                       | 300                          |
| Above 2450 <sup>10</sup> |                         |                           |                              |

### 8.2 MEASUREMENT PROCEDURE

- a. The EUT was connected to the spectrum analyzer through sufficient attenuation.
- b. The EUT was set in the climate chamber and connected to an external DC power supply
- c. After temperature stabilization (approx. 20 min for each stage), the frequency for the lower, the middle and the highest frequency range was recorded.
- d. For Frequency stability Vs. Voltage the EUT was connected to a DC power supply and the voltage was adjusted in the required ranges. The result was recorded.

### 8.3 TEST SETUP BLOCK DIAGRAM



## 8.4 TEST RESULT

12.5 KHz:

Low Power

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 1         | 30               | Normal Voltage  | 150.8125                | 150.81251                | 0.066                     | 2.5ppm | PASS   |
|                | -20              |                 | 150.8125                | 150.81251                | 0.066                     |        |        |
|                | -10              |                 | 150.8125                | 150.81258                | 0.530                     |        |        |
|                | 0                |                 | 150.8125                | 150.81252                | 0.133                     |        |        |
|                | 10               |                 | 150.8125                | 150.81257                | 0.464                     |        |        |
|                | 20               |                 | 150.8125                | 150.81250                | 0.000                     |        |        |
|                | 30               |                 | 150.8125                | 150.81247                | -0.199                    |        |        |
|                | 40               |                 | 150.8125                | 150.81253                | 0.199                     |        |        |
|                | 50               |                 | 150.8125                | 150.81247                | -0.199                    |        |        |
|                | 20               | Maximum Voltage | 150.8125                | 150.81248                | -0.133                    |        |        |
|                | 20               | BEP             | 150.8125                | 150.81254                | 0.265                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 1         | 30               | Normal Voltage  | 156.4000                | 156.40002                | 0.128                     | 2.5ppm | PASS   |
|                | -20              |                 | 156.4000                | 156.40001                | 0.064                     |        |        |
|                | -10              |                 | 156.4000                | 156.40001                | 0.064                     |        |        |
|                | 0                |                 | 156.4000                | 156.40003                | 0.192                     |        |        |
|                | 10               |                 | 156.4000                | 156.39993                | -0.448                    |        |        |
|                | 20               |                 | 156.4000                | 156.39996                | -0.256                    |        |        |
|                | 30               |                 | 156.4000                | 156.39996                | -0.256                    |        |        |
|                | 40               |                 | 156.4000                | 156.39997                | -0.192                    |        |        |
|                | 50               |                 | 156.4000                | 156.39999                | -0.064                    |        |        |
|                | 20               | Maximum Voltage | 156.4000                | 156.39998                | -0.128                    |        |        |
|                | 20               | BEP             | 156.4000                | 156.39992                | -0.512                    |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 1         | 30               | Normal Voltage  | 162.0000                | 162.00002                | 0.123                     | 2.5ppm | PASS   |
|                | -20              |                 | 162.0000                | 162.00003                | 0.185                     |        |        |
|                | -10              |                 | 162.0000                | 162.00000                | 0.000                     |        |        |
|                | 0                |                 | 162.0000                | 162.00004                | 0.247                     |        |        |
|                | 10               |                 | 162.0000                | 161.99999                | -0.062                    |        |        |
|                | 20               |                 | 162.0000                | 162.00000                | 0.000                     |        |        |
|                | 30               |                 | 162.0000                | 162.00001                | 0.062                     |        |        |
|                | 40               |                 | 162.0000                | 162.00001                | 0.062                     |        |        |
|                | 50               |                 | 162.0000                | 162.00004                | 0.247                     |        |        |
|                | 20               | Maximum Voltage | 162.0000                | 161.99998                | -0.123                    |        |        |
|                | 20               | BEP             | 162.0000                | 162.00003                | 0.185                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 3         | 30               | Normal Voltage  | 173.3000                | 173.30003                | 0.173                     | 2.5ppm | PASS   |
|                | -20              |                 | 173.3000                | 173.30002                | 0.115                     |        |        |
|                | -10              |                 | 173.3000                | 173.29997                | -0.173                    |        |        |
|                | 0                |                 | 173.3000                | 173.30001                | 0.058                     |        |        |
|                | 10               |                 | 173.3000                | 173.29993                | -0.404                    |        |        |
|                | 20               |                 | 173.3000                | 173.30000                | 0.000                     |        |        |
|                | 30               |                 | 173.3000                | 173.30000                | 0.000                     |        |        |
|                | 40               |                 | 173.3000                | 173.30001                | 0.058                     |        |        |
|                | 50               |                 | 173.3000                | 173.29998                | -0.115                    |        |        |
|                | 20               | Maximum Voltage | 173.3000                | 173.29996                | -0.231                    |        |        |
|                | 20               | BEP             | 173.3000                | 173.30001                | 0.058                     |        |        |

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 5         | 30               | Normal Voltage  | 421.0125                | 421.01258                | 0.190                     | 2.5ppm | PASS   |
|                | -20              |                 | 421.0125                | 421.01263                | 0.309                     |        |        |
|                | -10              |                 | 421.0125                | 421.01283                | 0.784                     |        |        |
|                | 0                |                 | 421.0125                | 421.01215                | -0.831                    |        |        |
|                | 10               |                 | 421.0125                | 421.01219                | -0.736                    |        |        |
|                | 20               |                 | 421.0125                | 421.01275                | 0.594                     |        |        |
|                | 30               |                 | 421.0125                | 421.01246                | -0.095                    |        |        |
|                | 40               |                 | 421.0125                | 421.01267                | 0.404                     |        |        |
|                | 50               |                 | 421.0125                | 421.01230                | -0.475                    |        |        |
|                | 20               | Maximum Voltage | 421.0125                | 421.01219                | -0.736                    |        |        |
|                | 20               | BEP             | 421.0125                | 421.01261                | 0.261                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 5         | 30               | Normal Voltage  | 466.5000                | 466.49999                | -0.021                    | 2.5ppm | PASS   |
|                | -20              |                 | 466.5000                | 466.49983                | -0.364                    |        |        |
|                | -10              |                 | 466.5000                | 466.50025                | 0.536                     |        |        |
|                | 0                |                 | 466.5000                | 466.50001                | 0.021                     |        |        |
|                | 10               |                 | 466.5000                | 466.49957                | -0.922                    |        |        |
|                | 20               |                 | 466.5000                | 466.50026                | 0.557                     |        |        |
|                | 30               |                 | 466.5000                | 466.50004                | 0.086                     |        |        |
|                | 40               |                 | 466.5000                | 466.50024                | 0.514                     |        |        |
|                | 50               |                 | 466.5000                | 466.50005                | 0.107                     |        |        |
|                | 20               | Maximum Voltage | 466.5000                | 466.49967                | -0.707                    |        |        |
|                | 20               | BEP             | 466.5000                | 466.50002                | 0.043                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 5         | 30               | Normal Voltage  | 511.9875                | 511.98758                | 0.156                     | 2.5ppm | PASS   |
|                | -20              |                 | 511.9875                | 511.98758                | 0.156                     |        |        |
|                | -10              |                 | 511.9875                | 511.98779                | 0.566                     |        |        |
|                | 0                |                 | 511.9875                | 511.98793                | 0.840                     |        |        |
|                | 10               |                 | 511.9875                | 511.98746                | -0.078                    |        |        |
|                | 20               |                 | 511.9875                | 511.98782                | 0.625                     |        |        |
|                | 30               |                 | 511.9875                | 511.98754                | 0.078                     |        |        |
|                | 40               |                 | 511.9875                | 511.98774                | 0.469                     |        |        |
|                | 50               |                 | 511.9875                | 511.98762                | 0.234                     |        |        |
|                | 20               | Maximum Voltage | 511.9875                | 511.98726                | -0.469                    |        |        |
|                | 20               | BEP             | 511.9875                | 511.98763                | 0.254                     |        |        |

## High Power

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 2         | 30               | Normal Voltage  | 150.8125                | 150.81251                | 0.066                     | 2.5ppm | PASS   |
|                | -20              |                 | 150.8125                | 150.81247                | -0.199                    |        |        |
|                | -10              |                 | 150.8125                | 150.81249                | -0.066                    |        |        |
|                | 0                |                 | 150.8125                | 150.81249                | -0.066                    |        |        |
|                | 10               |                 | 150.8125                | 150.81251                | 0.066                     |        |        |
|                | 20               |                 | 150.8125                | 150.81251                | 0.066                     |        |        |
|                | 30               |                 | 150.8125                | 150.81256                | 0.398                     |        |        |
|                | 40               |                 | 150.8125                | 150.81243                | -0.464                    |        |        |
|                | 50               |                 | 150.8125                | 150.81248                | -0.133                    |        |        |
|                | 20               | Maximum Voltage | 150.8125                | 150.81245                | -0.332                    |        |        |
|                | 20               | BEP             | 150.8125                | 150.81242                | -0.530                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 2         | 30               | Normal Voltage  | 156.4000                | 156.40003                | 0.192                     | 2.5ppm | PASS   |
|                | -20              |                 | 156.4000                | 156.40001                | 0.064                     |        |        |
|                | -10              |                 | 156.4000                | 156.39993                | -0.448                    |        |        |
|                | 0                |                 | 156.4000                | 156.40000                | 0.000                     |        |        |
|                | 10               |                 | 156.4000                | 156.40004                | 0.256                     |        |        |
|                | 20               |                 | 156.4000                | 156.40004                | 0.256                     |        |        |
|                | 30               |                 | 156.4000                | 156.39995                | -0.320                    |        |        |
|                | 40               |                 | 156.4000                | 156.39992                | -0.512                    |        |        |
|                | 50               |                 | 156.4000                | 156.40005                | 0.320                     |        |        |
|                | 20               | Maximum Voltage | 156.4000                | 156.39994                | -0.384                    |        |        |
|                | 20               | BEP             | 156.4000                | 156.40000                | 0.000                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 2         | 30               | Normal Voltage  | 162.0000                | 161.99998                | -0.123                    | 2.5ppm | PASS   |
|                | -20              |                 | 162.0000                | 162.00001                | 0.062                     |        |        |
|                | -10              |                 | 162.0000                | 162.00006                | 0.370                     |        |        |
|                | 0                |                 | 162.0000                | 162.00008                | 0.494                     |        |        |
|                | 10               |                 | 162.0000                | 162.00003                | 0.185                     |        |        |
|                | 20               |                 | 162.0000                | 161.99995                | -0.309                    |        |        |
|                | 30               |                 | 162.0000                | 162.00003                | 0.185                     |        |        |
|                | 40               |                 | 162.0000                | 162.00006                | 0.370                     |        |        |
|                | 50               |                 | 162.0000                | 162.00004                | 0.247                     |        |        |
|                | 20               | Maximum Voltage | 162.0000                | 161.99998                | -0.123                    |        |        |
|                | 20               | BEP             | 162.0000                | 162.00004                | 0.247                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 4         | 30               | Normal Voltage  | 173.3000                | 173.30006                | 0.346                     | 2.5ppm | PASS   |
|                | -20              |                 | 173.3000                | 173.30000                | 0.000                     |        |        |
|                | -10              |                 | 173.3000                | 173.30000                | 0.000                     |        |        |
|                | 0                |                 | 173.3000                | 173.29996                | -0.231                    |        |        |
|                | 10               |                 | 173.3000                | 173.30008                | 0.462                     |        |        |
|                | 20               |                 | 173.3000                | 173.30002                | 0.115                     |        |        |
|                | 30               |                 | 173.3000                | 173.29999                | -0.058                    |        |        |
|                | 40               |                 | 173.3000                | 173.30001                | 0.058                     |        |        |
|                | 50               |                 | 173.3000                | 173.30002                | 0.115                     |        |        |
|                | 20               | Maximum Voltage | 173.3000                | 173.30001                | 0.058                     |        |        |
|                | 20               | BEP             | 173.3000                | 173.29997                | -0.173                    |        |        |

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 6         | 30               | Normal Voltage  | 421.0125                | 421.01246                | -0.095                    | 2.5ppm | PASS   |
|                | -20              |                 | 421.0125                | 421.01266                | 0.380                     |        |        |
|                | -10              |                 | 421.0125                | 421.01236                | -0.333                    |        |        |
|                | 0                |                 | 421.0125                | 421.01263                | 0.309                     |        |        |
|                | 10               |                 | 421.0125                | 421.01219                | -0.736                    |        |        |
|                | 20               |                 | 421.0125                | 421.01261                | 0.261                     |        |        |
|                | 30               |                 | 421.0125                | 421.01254                | 0.095                     |        |        |
|                | 40               |                 | 421.0125                | 421.01281                | 0.736                     |        |        |
|                | 50               |                 | 421.0125                | 421.01255                | 0.119                     |        |        |
|                | 20               | Maximum Voltage | 421.0125                | 421.01229                | -0.499                    |        |        |
|                | 20               | BEP             | 421.0125                | 421.01214                | -0.855                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 6         | 30               | Normal Voltage  | 466.5000                | 466.49972                | -0.600                    | 2.5ppm | PASS   |
|                | -20              |                 | 466.5000                | 466.49989                | -0.236                    |        |        |
|                | -10              |                 | 466.5000                | 466.49974                | -0.557                    |        |        |
|                | 0                |                 | 466.5000                | 466.49959                | -0.879                    |        |        |
|                | 10               |                 | 466.5000                | 466.49974                | -0.557                    |        |        |
|                | 20               |                 | 466.5000                | 466.50039                | 0.836                     |        |        |
|                | 30               |                 | 466.5000                | 466.50020                | 0.429                     |        |        |
|                | 40               |                 | 466.5000                | 466.49998                | -0.043                    |        |        |
|                | 50               |                 | 466.5000                | 466.49986                | -0.300                    |        |        |
|                | 20               | Maximum Voltage | 466.5000                | 466.49985                | -0.322                    |        |        |
|                | 20               | BEP             | 466.5000                | 466.49969                | -0.665                    |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 6         | 30               | Normal Voltage  | 511.9875                | 511.98723                | -0.527                    | 2.5ppm | PASS   |
|                | -20              |                 | 511.9875                | 511.98788                | 0.742                     |        |        |
|                | -10              |                 | 511.9875                | 511.98790                | 0.781                     |        |        |
|                | 0                |                 | 511.9875                | 511.98740                | -0.195                    |        |        |
|                | 10               |                 | 511.9875                | 511.98734                | -0.313                    |        |        |
|                | 20               |                 | 511.9875                | 511.98739                | -0.215                    |        |        |
|                | 30               |                 | 511.9875                | 511.98723                | -0.527                    |        |        |
|                | 40               |                 | 511.9875                | 511.98742                | -0.156                    |        |        |
|                | 50               |                 | 511.9875                | 511.98718                | -0.625                    |        |        |
|                | 20               | Maximum Voltage | 511.9875                | 511.98753                | 0.059                     |        |        |
|                | 20               | BEP             | 511.9875                | 511.98749                | -0.020                    |        |        |

25 KHz:

Low Power

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 7         | 30               | Normal Voltage  | 150.8250                | 150.82506                | 0.398                     | 2.5ppm | PASS   |
|                | -20              |                 | 150.8250                | 150.82500                | 0.000                     |        |        |
|                | -10              |                 | 150.8250                | 150.82504                | 0.265                     |        |        |
|                | 0                |                 | 150.8250                | 150.82505                | 0.332                     |        |        |
|                | 10               |                 | 150.8250                | 150.82502                | 0.133                     |        |        |
|                | 20               |                 | 150.8250                | 150.82503                | 0.199                     |        |        |
|                | 30               |                 | 150.8250                | 150.82502                | 0.133                     |        |        |
|                | 40               |                 | 150.8250                | 150.82492                | -0.530                    |        |        |
|                | 50               |                 | 150.8250                | 150.82496                | -0.265                    |        |        |
|                | 20               | Maximum Voltage | 150.8250                | 150.82499                | -0.066                    |        |        |
|                | 20               | BEP             | 150.8250                | 150.82506                | 0.398                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 7         | 30               | Normal Voltage  | 156.4000                | 156.39999                | -0.064                    | 2.5ppm | PASS   |
|                | -20              |                 | 156.4000                | 156.40000                | 0.000                     |        |        |
|                | -10              |                 | 156.4000                | 156.40000                | 0.000                     |        |        |
|                | 0                |                 | 156.4000                | 156.40001                | 0.064                     |        |        |
|                | 10               |                 | 156.4000                | 156.40004                | 0.256                     |        |        |
|                | 20               |                 | 156.4000                | 156.39996                | -0.256                    |        |        |
|                | 30               |                 | 156.4000                | 156.39999                | -0.064                    |        |        |
|                | 40               |                 | 156.4000                | 156.39991                | -0.575                    |        |        |
|                | 50               |                 | 156.4000                | 156.39999                | -0.064                    |        |        |
|                | 20               | Maximum Voltage | 156.4000                | 156.40003                | 0.192                     |        |        |
|                | 20               | BEP             | 156.4000                | 156.39999                | -0.064                    |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 7         | 30               | Normal Voltage  | 161.9750                | 161.97498                | -0.123                    | 2.5ppm | PASS   |
|                | -20              |                 | 161.9750                | 161.97498                | -0.123                    |        |        |
|                | -10              |                 | 161.9750                | 161.97501                | 0.062                     |        |        |
|                | 0                |                 | 161.9750                | 161.97502                | 0.123                     |        |        |
|                | 10               |                 | 161.9750                | 161.97505                | 0.309                     |        |        |
|                | 20               |                 | 161.9750                | 161.97501                | 0.062                     |        |        |
|                | 30               |                 | 161.9750                | 161.97501                | 0.062                     |        |        |
|                | 40               |                 | 161.9750                | 161.97498                | -0.123                    |        |        |
|                | 50               |                 | 161.9750                | 161.97493                | -0.432                    |        |        |
|                | 20               | Maximum Voltage | 161.9750                | 161.97500                | 0.000                     |        |        |
|                | 20               | BEP             | 161.9750                | 161.97498                | -0.123                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 9         | 30               | Normal Voltage  | 173.3000                | 173.29995                | -0.289                    | 2.5ppm | PASS   |
|                | -20              |                 | 173.3000                | 173.29998                | -0.115                    |        |        |
|                | -10              |                 | 173.3000                | 173.29993                | -0.404                    |        |        |
|                | 0                |                 | 173.3000                | 173.29996                | -0.231                    |        |        |
|                | 10               |                 | 173.3000                | 173.29999                | -0.058                    |        |        |
|                | 20               |                 | 173.3000                | 173.30007                | 0.404                     |        |        |
|                | 30               |                 | 173.3000                | 173.29994                | -0.346                    |        |        |
|                | 40               |                 | 173.3000                | 173.29999                | -0.058                    |        |        |
|                | 50               |                 | 173.3000                | 173.29997                | -0.173                    |        |        |
|                | 20               | Maximum Voltage | 173.3000                | 173.29997                | -0.173                    |        |        |
|                | 20               | BEP             | 173.3000                | 173.29992                | -0.462                    |        |        |

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 11        | 30               | Normal Voltage  | 421.0250                | 421.02493                | -0.166                    | 2.5ppm | PASS   |
|                | -20              |                 | 421.0250                | 421.02471                | -0.689                    |        |        |
|                | -10              |                 | 421.0250                | 421.02460                | -0.950                    |        |        |
|                | 0                |                 | 421.0250                | 421.02475                | -0.594                    |        |        |
|                | 10               |                 | 421.0250                | 421.02498                | -0.048                    |        |        |
|                | 20               |                 | 421.0250                | 421.02487                | -0.309                    |        |        |
|                | 30               |                 | 421.0250                | 421.02518                | 0.428                     |        |        |
|                | 40               |                 | 421.0250                | 421.02539                | 0.926                     |        |        |
|                | 50               |                 | 421.0250                | 421.02483                | -0.404                    |        |        |
|                | 20               | Maximum Voltage | 421.0250                | 421.02474                | -0.618                    |        |        |
|                | 20               | BEP             | 421.0250                | 421.02468                | -0.760                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 11        | 30               | Normal Voltage  | 466.5000                | 466.50007                | 0.150                     | 2.5ppm | PASS   |
|                | -20              |                 | 466.5000                | 466.49979                | -0.450                    |        |        |
|                | -10              |                 | 466.5000                | 466.50038                | 0.815                     |        |        |
|                | 0                |                 | 466.5000                | 466.50003                | 0.064                     |        |        |
|                | 10               |                 | 466.5000                | 466.49989                | -0.236                    |        |        |
|                | 20               |                 | 466.5000                | 466.49985                | -0.322                    |        |        |
|                | 30               |                 | 466.5000                | 466.50022                | 0.472                     |        |        |
|                | 40               |                 | 466.5000                | 466.49971                | -0.622                    |        |        |
|                | 50               |                 | 466.5000                | 466.50009                | 0.193                     |        |        |
|                | 20               | Maximum Voltage | 466.5000                | 466.50000                | 0.000                     |        |        |
|                | 20               | BEP             | 466.5000                | 466.50020                | 0.429                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 11        | 30               | Normal Voltage  | 511.9750                | 511.97466                | -0.664                    | 2.5ppm | PASS   |
|                | -20              |                 | 511.9750                | 511.97499                | -0.020                    |        |        |
|                | -10              |                 | 511.9750                | 511.97503                | 0.059                     |        |        |
|                | 0                |                 | 511.9750                | 511.97510                | 0.195                     |        |        |
|                | 10               |                 | 511.9750                | 511.97531                | 0.605                     |        |        |
|                | 20               |                 | 511.9750                | 511.97501                | 0.020                     |        |        |
|                | 30               |                 | 511.9750                | 511.97508                | 0.156                     |        |        |
|                | 40               |                 | 511.9750                | 511.97497                | -0.059                    |        |        |
|                | 50               |                 | 511.9750                | 511.97479                | -0.410                    |        |        |
|                | 20               | Maximum Voltage | 511.9750                | 511.97528                | 0.547                     |        |        |
|                | 20               | BEP             | 469.9875                | 469.98747                | -0.064                    |        |        |

## High Power

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 8         | 30               | Normal Voltage  | 150.8250                | 150.82500                | 0.000                     | 2.5ppm | PASS   |
|                | -20              |                 | 150.8250                | 150.82496                | -0.265                    |        |        |
|                | -10              |                 | 150.8250                | 150.82506                | 0.398                     |        |        |
|                | 0                |                 | 150.8250                | 150.82496                | -0.265                    |        |        |
|                | 10               |                 | 150.8250                | 150.82496                | -0.265                    |        |        |
|                | 20               |                 | 150.8250                | 150.82494                | -0.398                    |        |        |
|                | 30               |                 | 150.8250                | 150.82502                | 0.133                     |        |        |
|                | 40               |                 | 150.8250                | 150.82502                | 0.133                     |        |        |
|                | 50               |                 | 150.8250                | 150.82498                | -0.133                    |        |        |
|                | 20               | Maximum Voltage | 150.8250                | 150.82499                | -0.066                    |        |        |
|                | 20               | BEP             | 150.8250                | 150.82504                | 0.265                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 8         | 30               | Normal Voltage  | 156.4000                | 156.40000                | 0.000                     | 2.5ppm | PASS   |
|                | -20              |                 | 156.4000                | 156.40002                | 0.128                     |        |        |
|                | -10              |                 | 156.4000                | 156.39993                | -0.448                    |        |        |
|                | 0                |                 | 156.4000                | 156.40002                | 0.128                     |        |        |
|                | 10               |                 | 156.4000                | 156.39993                | -0.448                    |        |        |
|                | 20               |                 | 156.4000                | 156.40001                | 0.064                     |        |        |
|                | 30               |                 | 156.4000                | 156.39999                | -0.064                    |        |        |
|                | 40               |                 | 156.4000                | 156.40004                | 0.256                     |        |        |
|                | 50               |                 | 156.4000                | 156.40000                | 0.000                     |        |        |
|                | 20               | Maximum Voltage | 156.4000                | 156.39996                | -0.256                    |        |        |
|                | 20               | BEP             | 156.4000                | 156.40001                | 0.064                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 8         | 30               | Normal Voltage  | 161.9750                | 161.97502                | 0.123                     | 2.5ppm | PASS   |
|                | -20              |                 | 161.9750                | 161.97496                | -0.247                    |        |        |
|                | -10              |                 | 161.9750                | 161.97492                | -0.494                    |        |        |
|                | 0                |                 | 161.9750                | 161.97496                | -0.247                    |        |        |
|                | 10               |                 | 161.9750                | 161.97499                | -0.062                    |        |        |
|                | 20               |                 | 161.9750                | 161.97500                | 0.000                     |        |        |
|                | 30               |                 | 161.9750                | 161.97501                | 0.062                     |        |        |
|                | 40               |                 | 161.9750                | 161.97501                | 0.062                     |        |        |
|                | 50               |                 | 161.9750                | 161.97496                | -0.247                    |        |        |
|                | 20               | Maximum Voltage | 161.9750                | 161.97500                | 0.000                     |        |        |
|                | 20               | BEP             | 161.9750                | 161.97499                | -0.062                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 10        | 30               | Normal Voltage  | 173.3000                | 173.30005                | 0.289                     | 2.5ppm | PASS   |
|                | -20              |                 | 173.3000                | 173.30002                | 0.115                     |        |        |
|                | -10              |                 | 173.3000                | 173.30004                | 0.231                     |        |        |
|                | 0                |                 | 173.3000                | 173.30001                | 0.058                     |        |        |
|                | 10               |                 | 173.3000                | 173.29995                | -0.289                    |        |        |
|                | 20               |                 | 173.3000                | 173.30008                | 0.462                     |        |        |
|                | 30               |                 | 173.3000                | 173.29999                | -0.058                    |        |        |
|                | 40               |                 | 173.3000                | 173.30003                | 0.173                     |        |        |
|                | 50               |                 | 173.3000                | 173.30002                | 0.115                     |        |        |
|                | 20               | Maximum Voltage | 173.3000                | 173.30005                | 0.289                     |        |        |
|                | 20               | BEP             | 173.3000                | 173.30003                | 0.173                     |        |        |

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 12        | 30               | Normal Voltage  | 421.0250                | 421.02487                | -0.309                    | 2.5ppm | PASS   |
|                | -20              |                 | 421.0250                | 421.02531                | 0.736                     |        |        |
|                | -10              |                 | 421.0250                | 421.02528                | 0.665                     |        |        |
|                | 0                |                 | 421.0250                | 421.02475                | -0.594                    |        |        |
|                | 10               |                 | 421.0250                | 421.02482                | -0.428                    |        |        |
|                | 20               |                 | 421.0250                | 421.02513                | 0.309                     |        |        |
|                | 30               |                 | 421.0250                | 421.02500                | 0.000                     |        |        |
|                | 40               |                 | 421.0250                | 421.02501                | 0.024                     |        |        |
|                | 50               |                 | 421.0250                | 421.02475                | -0.594                    |        |        |
|                | 20               | Maximum Voltage | 421.0250                | 421.02461                | -0.926                    |        |        |
|                | 20               | BEP             | 421.0250                | 421.02498                | -0.048                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 12        | 30               | Normal Voltage  | 466.5000                | 466.49974                | -0.557                    | 2.5ppm | PASS   |
|                | -20              |                 | 466.5000                | 466.49974                | -0.557                    |        |        |
|                | -10              |                 | 466.5000                | 466.49995                | -0.107                    |        |        |
|                | 0                |                 | 466.5000                | 466.49976                | -0.514                    |        |        |
|                | 10               |                 | 466.5000                | 466.50000                | 0.000                     |        |        |
|                | 20               |                 | 466.5000                | 466.50041                | 0.879                     |        |        |
|                | 30               |                 | 466.5000                | 466.50007                | 0.150                     |        |        |
|                | 40               |                 | 466.5000                | 466.49962                | -0.815                    |        |        |
|                | 50               |                 | 466.5000                | 466.49996                | -0.086                    |        |        |
|                | 20               | Maximum Voltage | 466.5000                | 466.50009                | 0.193                     |        |        |
|                | 20               | BEP             | 466.5000                | 466.50018                | 0.386                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 12        | 30               | Normal Voltage  | 511.9750                | 511.97502                | 0.039                     | 2.5ppm | PASS   |
|                | -20              |                 | 511.9750                | 511.97514                | 0.273                     |        |        |
|                | -10              |                 | 511.9750                | 511.97487                | -0.254                    |        |        |
|                | 0                |                 | 511.9750                | 511.97469                | -0.605                    |        |        |
|                | 10               |                 | 511.9750                | 511.97507                | 0.137                     |        |        |
|                | 20               |                 | 511.9750                | 511.97474                | -0.508                    |        |        |
|                | 30               |                 | 511.9750                | 511.97505                | 0.098                     |        |        |
|                | 40               |                 | 511.9750                | 511.97518                | 0.352                     |        |        |
|                | 50               |                 | 511.9750                | 511.97501                | 0.020                     |        |        |
|                | 20               | Maximum Voltage | 511.9750                | 511.97509                | 0.176                     |        |        |
|                | 20               | BEP             | 469.9875                | 469.98749                | -0.021                    |        |        |

6.25KHz

Low Power

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 13        | 30               | Normal Voltage  | 150.80625               | 150.80623                | -0.133                    | 2ppm   | PASS   |
|                | -20              |                 | 150.80625               | 150.80624                | -0.066                    |        |        |
|                | -10              |                 | 150.80625               | 150.80629                | 0.265                     |        |        |
|                | 0                |                 | 150.80625               | 150.80630                | 0.332                     |        |        |
|                | 10               |                 | 150.80625               | 150.80626                | 0.066                     |        |        |
|                | 20               |                 | 150.80625               | 150.80622                | -0.199                    |        |        |
|                | 30               |                 | 150.80625               | 150.80623                | -0.133                    |        |        |
|                | 40               |                 | 150.80625               | 150.80629                | 0.265                     |        |        |
|                | 50               |                 | 150.80625               | 150.80628                | 0.199                     |        |        |
|                | 20               | Maximum Voltage | 150.80625               | 150.80627                | 0.133                     |        |        |
|                | 20               | BEP             | 150.80625               | 150.80624                | -0.066                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 13        | 30               | Normal Voltage  | 156.40000               | 156.40004                | 0.256                     | 2ppm   | PASS   |
|                | -20              |                 | 156.40000               | 156.40003                | 0.192                     |        |        |
|                | -10              |                 | 156.40000               | 156.40001                | 0.064                     |        |        |
|                | 0                |                 | 156.40000               | 156.40000                | 0.000                     |        |        |
|                | 10               |                 | 156.40000               | 156.39989                | -0.703                    |        |        |
|                | 20               |                 | 156.40000               | 156.40002                | 0.128                     |        |        |
|                | 30               |                 | 156.40000               | 156.39993                | -0.448                    |        |        |
|                | 40               |                 | 156.40000               | 156.40001                | 0.064                     |        |        |
|                | 50               |                 | 156.40000               | 156.39999                | -0.064                    |        |        |
|                | 20               | Maximum Voltage | 156.40000               | 156.40001                | 0.064                     |        |        |
|                | 20               | BEP             | 156.40000               | 156.39991                | -0.575                    |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 13        | 30               | Normal Voltage  | 162.00625               | 162.00623                | -0.123                    | 2ppm   | PASS   |
|                | -20              |                 | 162.00625               | 162.00627                | 0.123                     |        |        |
|                | -10              |                 | 162.00625               | 162.00622                | -0.185                    |        |        |
|                | 0                |                 | 162.00625               | 162.00635                | 0.617                     |        |        |
|                | 10               |                 | 162.00625               | 162.00626                | 0.062                     |        |        |
|                | 20               |                 | 162.00625               | 162.00633                | 0.494                     |        |        |
|                | 30               |                 | 162.00625               | 162.00623                | -0.123                    |        |        |
|                | 40               |                 | 162.00625               | 162.00634                | 0.556                     |        |        |
|                | 50               |                 | 162.00625               | 162.00628                | 0.185                     |        |        |
|                | 20               | Maximum Voltage | 162.00625               | 162.00621                | -0.247                    |        |        |
|                | 20               | BEP             | 162.00625               | 162.00627                | 0.123                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 15        | 30               | Normal Voltage  | 173.30000               | 173.30002                | 0.115                     | 2ppm   | PASS   |
|                | -20              |                 | 173.30000               | 173.30005                | 0.289                     |        |        |
|                | -10              |                 | 173.30000               | 173.29993                | -0.404                    |        |        |
|                | 0                |                 | 173.30000               | 173.29998                | -0.115                    |        |        |
|                | 10               |                 | 173.30000               | 173.29987                | -0.750                    |        |        |
|                | 20               |                 | 173.30000               | 173.29991                | -0.519                    |        |        |
|                | 30               |                 | 173.30000               | 173.29997                | -0.173                    |        |        |
|                | 40               |                 | 173.30000               | 173.30007                | 0.404                     |        |        |
|                | 50               |                 | 173.30000               | 173.29991                | -0.519                    |        |        |
|                | 20               | Maximum Voltage | 173.30000               | 173.30001                | 0.058                     |        |        |
|                | 20               | BEP             | 173.30000               | 173.30003                | 0.173                     |        |        |

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 17        | 30               | Normal Voltage  | 421.00625               | 421.00633                | 0.190                     | 1ppm   | PASS   |
|                | -20              |                 | 421.00625               | 421.00639                | 0.333                     |        |        |
|                | -10              |                 | 421.00625               | 421.00654                | 0.689                     |        |        |
|                | 0                |                 | 421.00625               | 421.00587                | -0.903                    |        |        |
|                | 10               |                 | 421.00625               | 421.00595                | -0.713                    |        |        |
|                | 20               |                 | 421.00625               | 421.00647                | 0.523                     |        |        |
|                | 30               |                 | 421.00625               | 421.00625                | 0.000                     |        |        |
|                | 40               |                 | 421.00625               | 421.00640                | 0.356                     |        |        |
|                | 50               |                 | 421.00625               | 421.00612                | -0.309                    |        |        |
|                | 20               | Maximum Voltage | 421.00625               | 421.00594                | -0.736                    |        |        |
|                | 20               | BEP             | 421.00625               | 421.00639                | 0.333                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 17        | 30               | Normal Voltage  | 466.50000               | 466.49996                | -0.086                    | 1ppm   | PASS   |
|                | -20              |                 | 466.50000               | 466.49976                | -0.514                    |        |        |
|                | -10              |                 | 466.50000               | 466.50023                | 0.493                     |        |        |
|                | 0                |                 | 466.50000               | 466.50002                | 0.043                     |        |        |
|                | 10               |                 | 466.50000               | 466.49963                | -0.793                    |        |        |
|                | 20               |                 | 466.50000               | 466.50024                | 0.514                     |        |        |
|                | 30               |                 | 466.50000               | 466.50011                | 0.236                     |        |        |
|                | 40               |                 | 466.50000               | 466.50023                | 0.493                     |        |        |
|                | 50               |                 | 466.50000               | 466.50005                | 0.107                     |        |        |
|                | 20               | Maximum Voltage | 466.50000               | 466.49966                | -0.729                    |        |        |
|                | 20               | BEP             | 466.50000               | 466.50000                | 0.000                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 17        | 30               | Normal Voltage  | 511.99375               | 511.99372                | -0.059                    | 1ppm   | PASS   |
|                | -20              |                 | 511.99375               | 511.99390                | 0.293                     |        |        |
|                | -10              |                 | 511.99375               | 511.99407                | 0.625                     |        |        |
|                | 0                |                 | 511.99375               | 511.99418                | 0.840                     |        |        |
|                | 10               |                 | 511.99375               | 511.99369                | -0.117                    |        |        |
|                | 20               |                 | 511.99375               | 511.99410                | 0.684                     |        |        |
|                | 30               |                 | 511.99375               | 511.99378                | 0.059                     |        |        |
|                | 40               |                 | 511.99375               | 511.99399                | 0.469                     |        |        |
|                | 50               |                 | 511.99375               | 511.99396                | 0.410                     |        |        |
|                | 20               | Maximum Voltage | 511.99375               | 511.99347                | -0.547                    |        |        |
|                | 20               | BEP             | 511.99375               | 511.99390                | 0.293                     |        |        |

## High Power

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 14        | 30               | Normal Voltage  | 150.80625               | 150.80626                | 0.066                     | 2ppm   | PASS   |
|                | -20              |                 | 150.80625               | 150.80631                | 0.398                     |        |        |
|                | -10              |                 | 150.80625               | 150.80629                | 0.265                     |        |        |
|                | 0                |                 | 150.80625               | 150.80624                | -0.066                    |        |        |
|                | 10               |                 | 150.80625               | 150.80632                | 0.464                     |        |        |
|                | 20               |                 | 150.80625               | 150.80627                | 0.133                     |        |        |
|                | 30               |                 | 150.80625               | 150.80626                | 0.066                     |        |        |
|                | 40               |                 | 150.80625               | 150.80620                | -0.332                    |        |        |
|                | 50               |                 | 150.80625               | 150.80624                | -0.066                    |        |        |
|                | 20               | Maximum Voltage | 150.80625               | 150.80614                | -0.729                    |        |        |
|                | 20               | BEP             | 150.80625               | 150.80616                | -0.597                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 14        | 30               | Normal Voltage  | 156.40000               | 156.40011                | 0.703                     | 2ppm   | PASS   |
|                | -20              |                 | 156.40000               | 156.40001                | 0.064                     |        |        |
|                | -10              |                 | 156.40000               | 156.39999                | -0.064                    |        |        |
|                | 0                |                 | 156.40000               | 156.40002                | 0.128                     |        |        |
|                | 10               |                 | 156.40000               | 156.40002                | 0.128                     |        |        |
|                | 20               |                 | 156.40000               | 156.40005                | 0.320                     |        |        |
|                | 30               |                 | 156.40000               | 156.39990                | -0.639                    |        |        |
|                | 40               |                 | 156.40000               | 156.39987                | -0.831                    |        |        |
|                | 50               |                 | 156.40000               | 156.40002                | 0.128                     |        |        |
|                | 20               | Maximum Voltage | 156.40000               | 156.39998                | -0.128                    |        |        |
|                | 20               | BEP             | 156.40000               | 156.40001                | 0.064                     |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 14        | 30               | Normal Voltage  | 162.00625               | 162.00622                | -0.185                    | 2ppm   | PASS   |
|                | -20              |                 | 162.00625               | 162.00627                | 0.123                     |        |        |
|                | -10              |                 | 162.00625               | 162.00638                | 0.802                     |        |        |
|                | 0                |                 | 162.00625               | 162.00636                | 0.679                     |        |        |
|                | 10               |                 | 162.00625               | 162.00636                | 0.679                     |        |        |
|                | 20               |                 | 162.00625               | 162.00617                | -0.494                    |        |        |
|                | 30               |                 | 162.00625               | 162.00630                | 0.309                     |        |        |
|                | 40               |                 | 162.00625               | 162.00631                | 0.370                     |        |        |
|                | 50               |                 | 162.00625               | 162.00620                | -0.309                    |        |        |
|                | 20               | Maximum Voltage | 162.00625               | 162.00626                | 0.062                     |        |        |
|                | 20               | BEP             | 162.00625               | 162.00631                | 0.370                     |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 16        | 30               | Normal Voltage  | 173.30000               | 173.30004                | 0.231                     | 2ppm   | PASS   |
|                | -20              |                 | 173.30000               | 173.30005                | 0.289                     |        |        |
|                | -10              |                 | 173.30000               | 173.30001                | 0.058                     |        |        |
|                | 0                |                 | 173.30000               | 173.30003                | 0.173                     |        |        |
|                | 10               |                 | 173.30000               | 173.30006                | 0.346                     |        |        |
|                | 20               |                 | 173.30000               | 173.30006                | 0.346                     |        |        |
|                | 30               |                 | 173.30000               | 173.29998                | -0.115                    |        |        |
|                | 40               |                 | 173.30000               | 173.29999                | -0.058                    |        |        |
|                | 50               |                 | 173.30000               | 173.30008                | 0.462                     |        |        |
|                | 20               | Maximum Voltage | 173.30000               | 173.30003                | 0.173                     |        |        |
|                | 20               | BEP             | 173.30000               | 173.29995                | -0.289                    |        |        |

| Low Channel    |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 18        | 30               | Normal Voltage  | 421.00625               | 421.00621                | -0.095                    | 1ppm   | PASS   |
|                | -20              |                 | 421.00625               | 421.00639                | 0.333                     |        |        |
|                | -10              |                 | 421.00625               | 421.00609                | -0.380                    |        |        |
|                | 0                |                 | 421.00625               | 421.00636                | 0.261                     |        |        |
|                | 10               |                 | 421.00625               | 421.00593                | -0.760                    |        |        |
|                | 20               |                 | 421.00625               | 421.00633                | 0.190                     |        |        |
|                | 30               |                 | 421.00625               | 421.00635                | 0.238                     |        |        |
|                | 40               |                 | 421.00625               | 421.00653                | 0.665                     |        |        |
|                | 50               |                 | 421.00625               | 421.00625                | 0.000                     |        |        |
|                | 20               | Maximum Voltage | 421.00625               | 421.00606                | -0.451                    |        |        |
|                | 20               | BEP             | 421.00625               | 421.00583                | -0.998                    |        |        |

| Middle Channel |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 18        | 30               | Normal Voltage  | 466.50000               | 466.49972                | -0.600                    | 1ppm   | PASS   |
|                | -20              |                 | 466.50000               | 466.49988                | -0.257                    |        |        |
|                | -10              |                 | 466.50000               | 466.49969                | -0.665                    |        |        |
|                | 0                |                 | 466.50000               | 466.49961                | -0.836                    |        |        |
|                | 10               |                 | 466.50000               | 466.49974                | -0.557                    |        |        |
|                | 20               |                 | 466.50000               | 466.50037                | 0.793                     |        |        |
|                | 30               |                 | 466.50000               | 466.50013                | 0.279                     |        |        |
|                | 40               |                 | 466.50000               | 466.49992                | -0.171                    |        |        |
|                | 50               |                 | 466.50000               | 466.49993                | -0.150                    |        |        |
|                | 20               | Maximum Voltage | 466.50000               | 466.49986                | -0.300                    |        |        |
|                | 20               | BEP             | 466.50000               | 466.49968                | -0.686                    |        |        |

| High Channel   |                  |                 |                         |                          |                           |        |        |
|----------------|------------------|-----------------|-------------------------|--------------------------|---------------------------|--------|--------|
| Operation Mode | Temperature (°C) | Voltage (V)     | Nominal Frequency (MHz) | Measured Frequency (MHz) | Frequency Deviation (ppm) | Limits | Result |
| Mode 18        | 30               | Normal Voltage  | 511.99375               | 511.99349                | -0.508                    | 1ppm   | PASS   |
|                | -20              |                 | 511.99375               | 511.99414                | 0.762                     |        |        |
|                | -10              |                 | 511.99375               | 511.99418                | 0.840                     |        |        |
|                | 0                |                 | 511.99375               | 511.99360                | -0.293                    |        |        |
|                | 10               |                 | 511.99375               | 511.99351                | -0.469                    |        |        |
|                | 20               |                 | 511.99375               | 511.99360                | -0.293                    |        |        |
|                | 30               |                 | 511.99375               | 511.99349                | -0.508                    |        |        |
|                | 40               |                 | 511.99375               | 511.99368                | -0.137                    |        |        |
|                | 50               |                 | 511.99375               | 511.99342                | -0.645                    |        |        |
|                | 20               | Maximum Voltage | 511.99375               | 511.99377                | 0.039                     |        |        |
|                | 20               | BEP             | 511.99375               | 511.99373                | -0.039                    |        |        |

## 9. TRANSIENT FREQUENCY BEHAVIOR

### 9.1 PROVISIONS APPLICABLE

Section 90.214

Transient frequencies must be 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 512MHz |
| Transient Frequency Behavior for Equipment Designed to Operate on 25 KHz Channels   |                                           |                |               |
| t <sub>1</sub> <sup>4</sup> .....                                                   | ± 25.0 KHz                                | 5.0 ms         | 10.0 ms       |
| t <sub>2</sub> .....                                                                | ± 12.5 KHz                                | 20.0 ms        | 25.0 ms       |
| t <sub>3</sub> <sup>4</sup> .....                                                   | ± 25.0 KHz                                | 5.0 ms         | 10.0 ms       |
| Transient Frequency Behavior for Equipment Designed to Operate on 12.5 KHz Channels |                                           |                |               |
| t <sub>1</sub> <sup>4</sup> .....                                                   | ± 12.5 KHz                                | 5.0 ms         | 10.0 ms       |
| t <sub>2</sub> .....                                                                | ± 6.25 KHz                                | 20.0 ms        | 25.0 ms       |
| t <sub>3</sub> <sup>4</sup> .....                                                   | ± 12.5 KHz                                | 5.0 ms         | 10.0 ms       |
| Transient Frequency Behavior for Equipment Designed to Operate on 6.25 KHz Channels |                                           |                |               |
| t <sub>1</sub> <sup>4</sup> .....                                                   | ±6.25 KHz                                 | 5.0 ms         | 10.0 ms       |
| t <sub>2</sub> .....                                                                | ±3.125 KHz                                | 20.0 ms        | 25.0 ms       |
| t <sub>3</sub> <sup>4</sup> .....                                                   | ±6.25 KHz                                 | 5.0 ms         | 10.0 ms       |

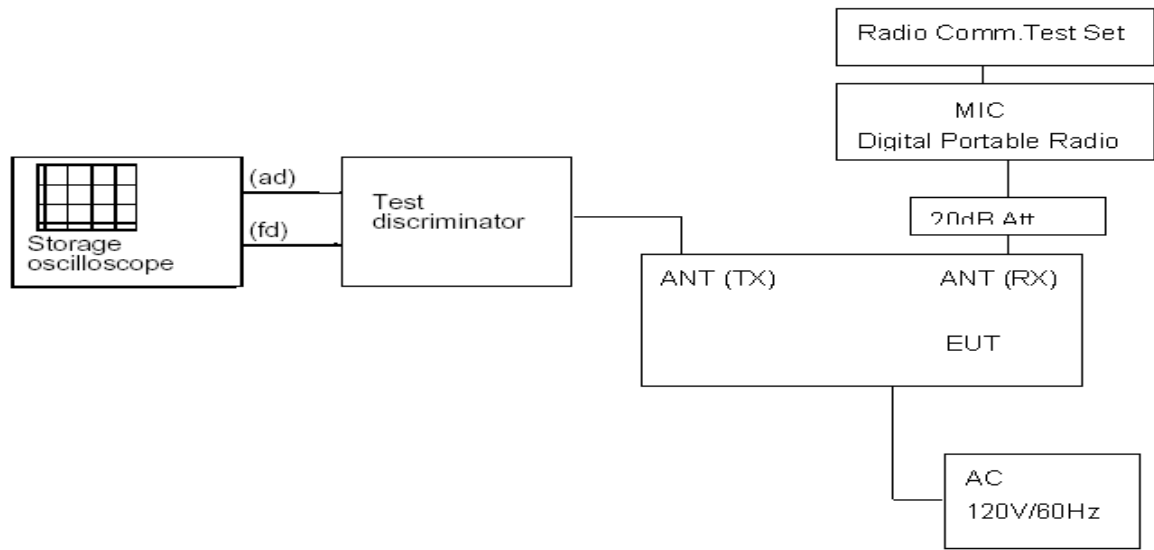
- $t_{on}$  is the instant when a 1 KHz test signal is completely suppressed, including any capture time due to phasing.  
 $t_1$  is the time period immediately following  $t_{on}$ .  
 $t_2$  is the time period immediately following  $t_1$ .  
 $t_3$  is the time period from the instant when the transmitter is turned off until  $t_{off}$ .  
 $t_{off}$  is the instant when the 1 KHz test signal starts to rise.
- 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.
- Difference between the actual transmitter frequency and the assigned transmitter frequency.
- 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.

### 9.2 MEASUREMENT PROCEDURE

Use Digital portable radio which manufactured by VictelGlobal Communications Corporation

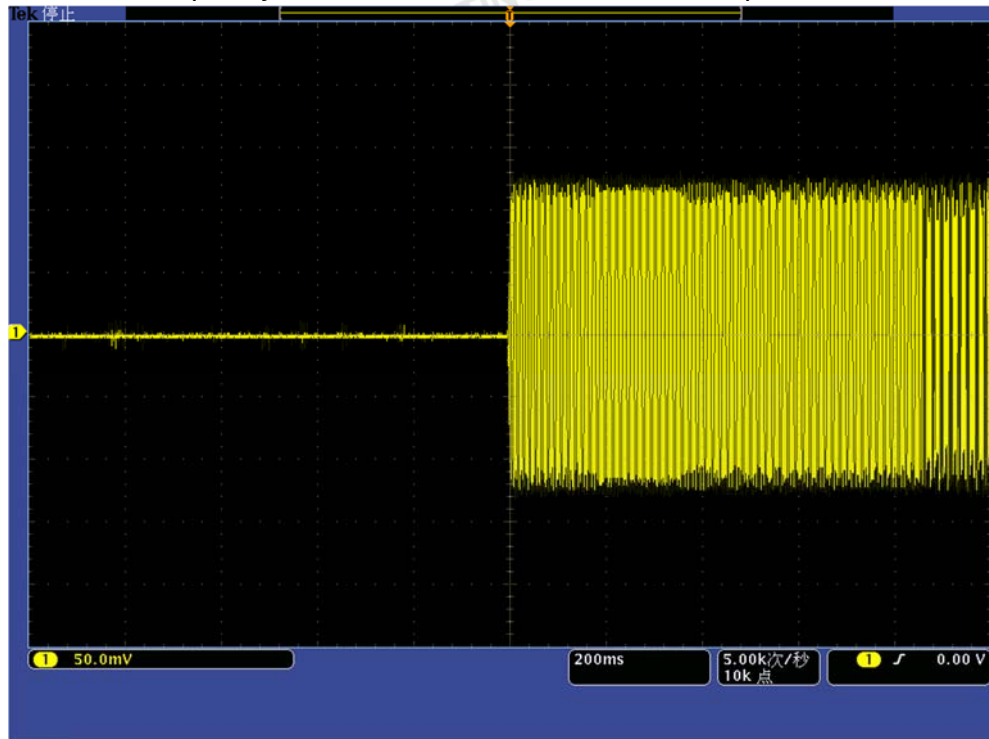
- Limited which uses same protocol as the DUT connect to RX antenna by 20Att in order to avoid damaging DUT;
- Connect DUT into Test discriminator and Storage Oscilloscope and keep DUT stats ON;
- Inut 1KHz signal into digital portable radio;
- Set the modulation domain analyzer to trigger on the rising edge of the waveform in order to capture a single-shot turn-on of the transmitter signals;
- Keep the digital protable radio in OFF state and Key the PTT of digital portable radio;  
Observe the stored oscilloscope of modulation domain analyzer.The signal trace shall be
- maintained within the allowable limits during the periods  $t_1$  and  $t_2$ ,and shall also remain within limits following  $t_2$ ;
- Adjust the modulation domain anzlyzer to trigger on the falling edge of the transmitter waveform in order to capture a single-shot turn-off transmitter of the transmitter signal.
- Keep the digital portable radio in ON state and Unkey the PTT of digital portable radio;
- Observe the stored oscilloscope of modulation domain analyzer.The signal trace shall be maintained within the allowable limits during the period  $t_3$

## 9.3 TEST SETUP BLOCK DIAGRAM

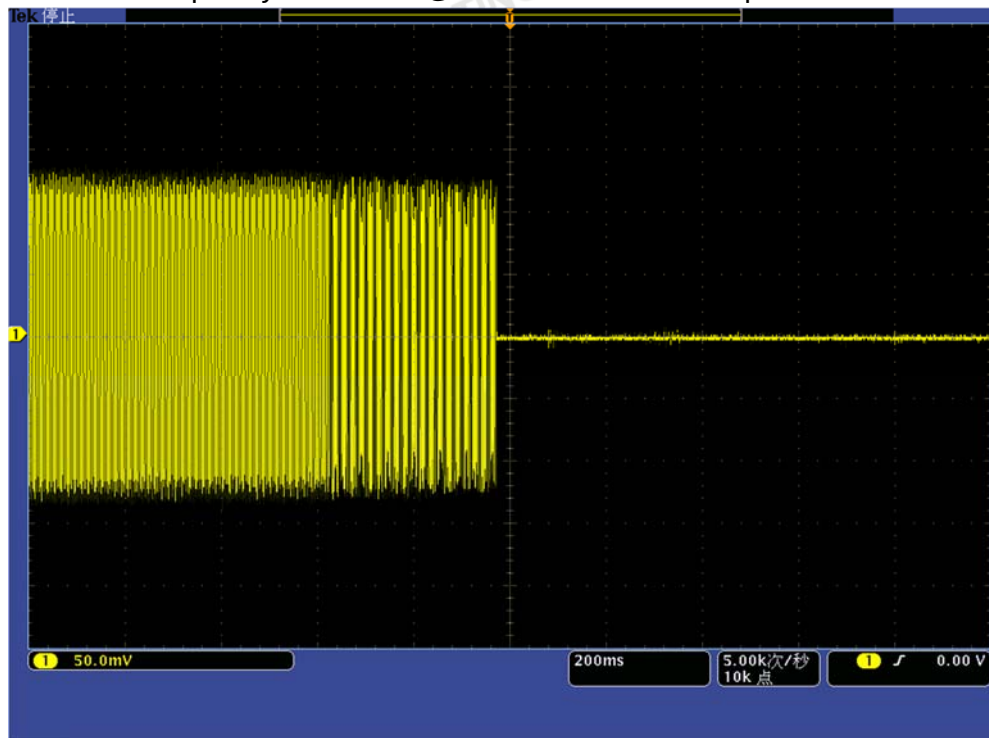


## 9.4 TEST RESULT

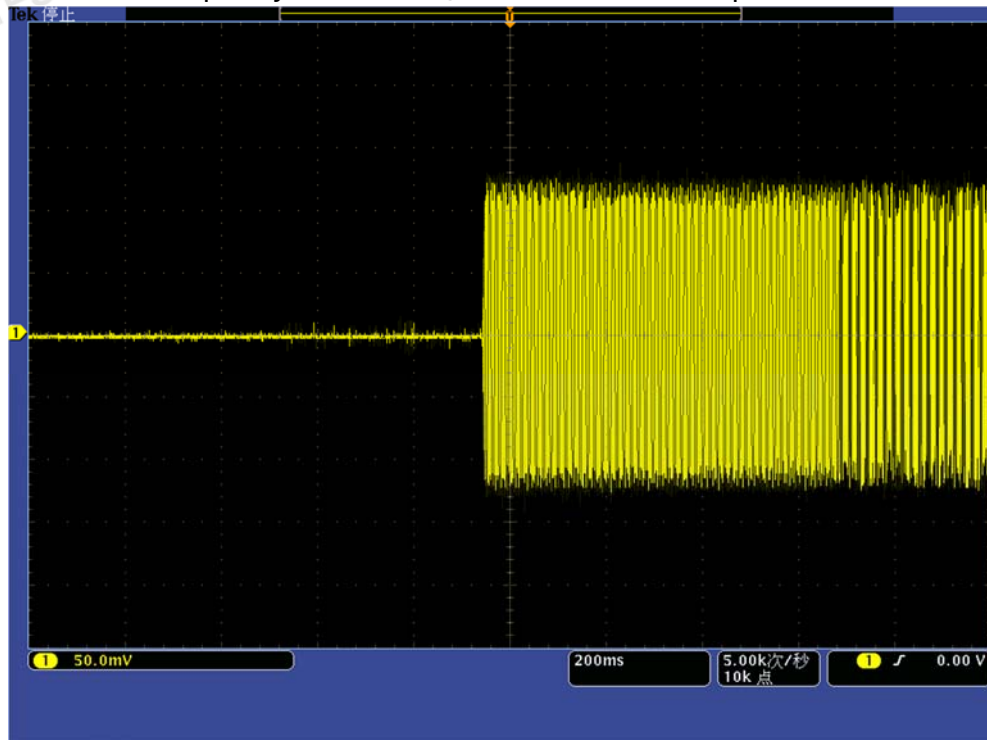
Transmitter Frequency Behaviour @ 12.5 KHz Channel Separation-----Off – On



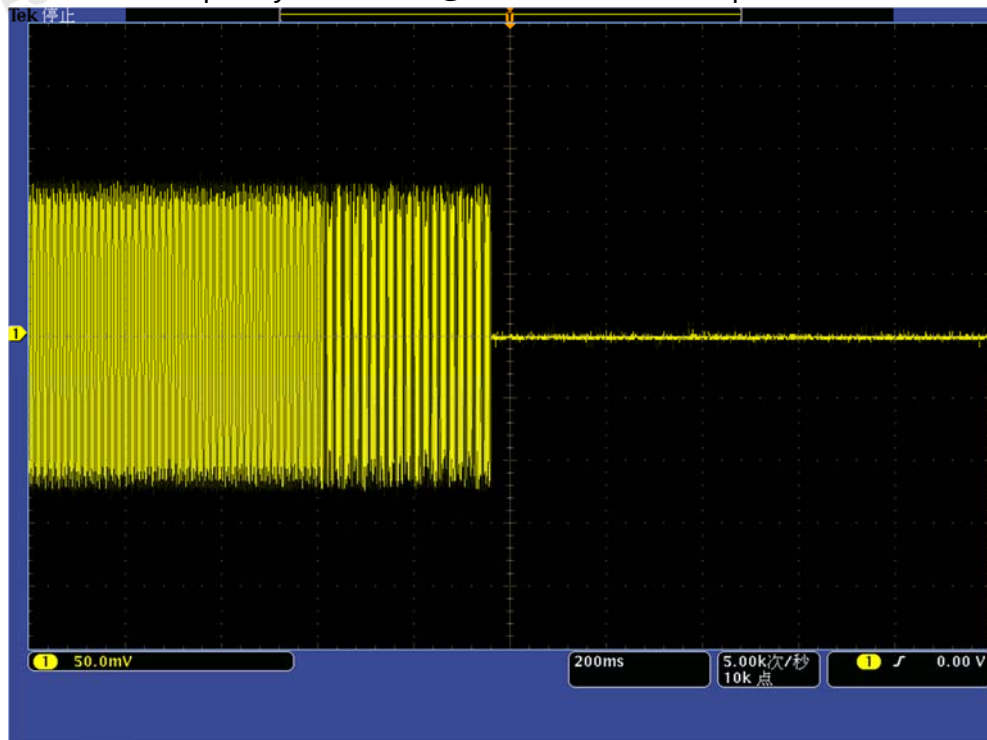
Transmitter Frequency Behaviour @ 12.5 KHz Channel Separation-----On – Off



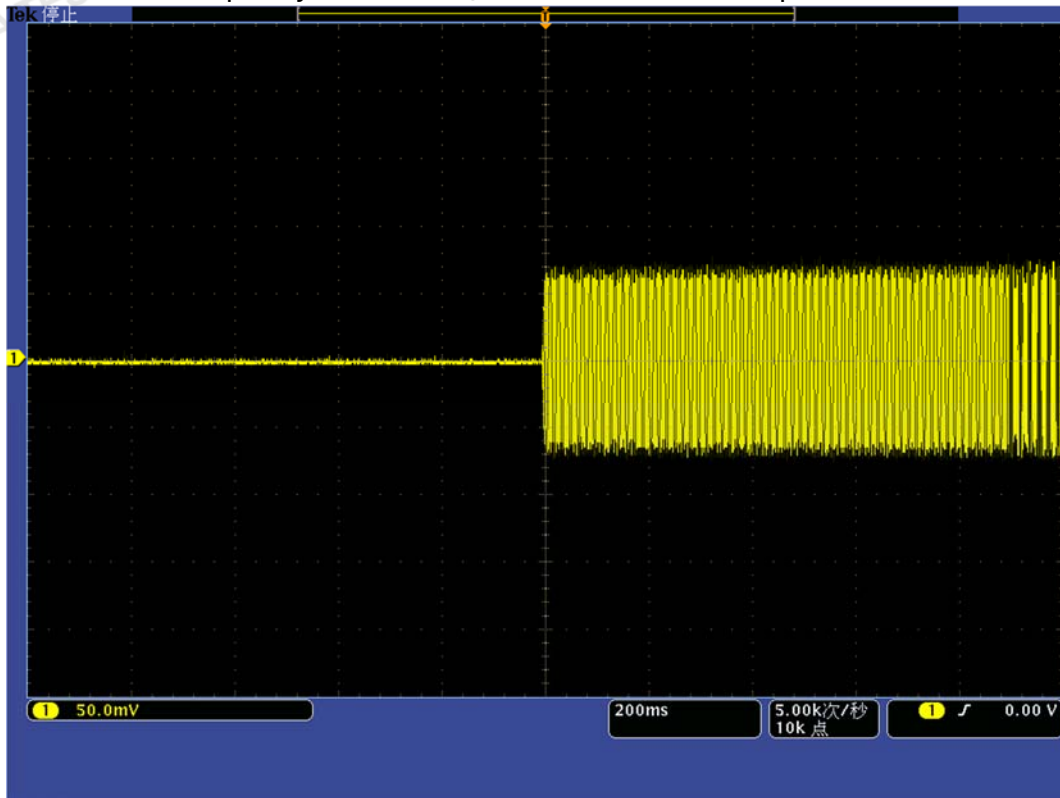
Transmitter Frequency Behaviour @ 25 KHz Channel Separation-----Off – On



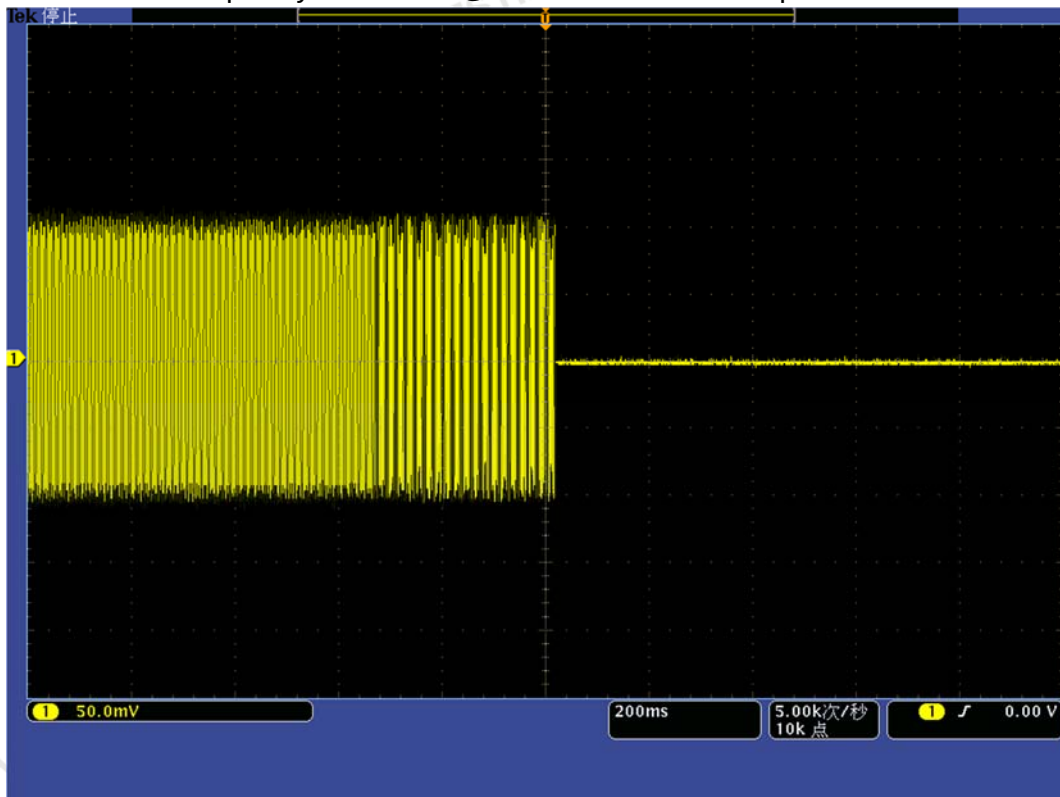
Transmitter Frequency Behaviour @ 25 KHz Channel Separation-----On – Off



Transmitter Frequency Behaviour @ 6.25 KHz Channel Separation-----Off – On



Transmitter Frequency Behaviour @ 6.25 KHz Channel Separation-----On – Off



## 10. MODULATION CHARACTERISTIC

### 10.1 LIMIT

FCC Part 2.1047

- (a) Equipment which utilizes voice modulated communication show the frequency response of the audio modulating circuit over a range of 100 to 5000 Hz shall be submitted. For equipment required to have an audio low-pass filter, a curve showing the frequency response of the filter, or of all circuitry installed between the modulation limiter and the modulated stage shall be submitted.
- (b) Equipment which employs modulation limiting, a curve showing the percentage of modulation versus the modulation input voltage shall be supplied.

### 10.2 TEST PROCEDURE

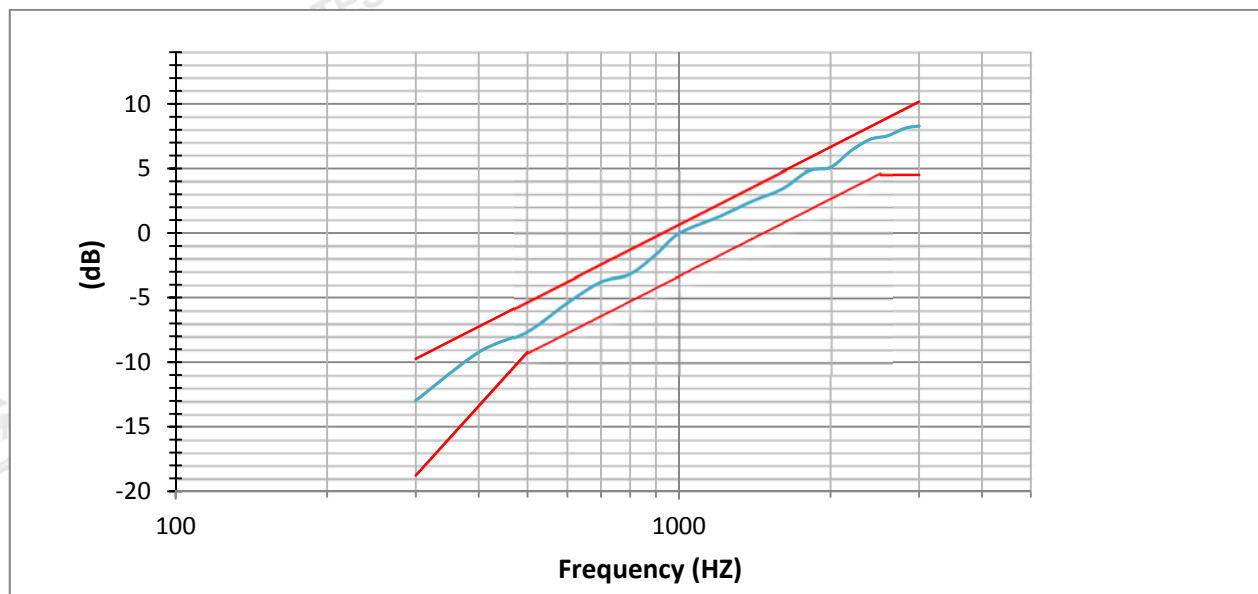
The test procedure please reference ANSI C63.26-2015.

### 10.3 TEST RESULT

#### 10.3.1 Audio Frequency Response

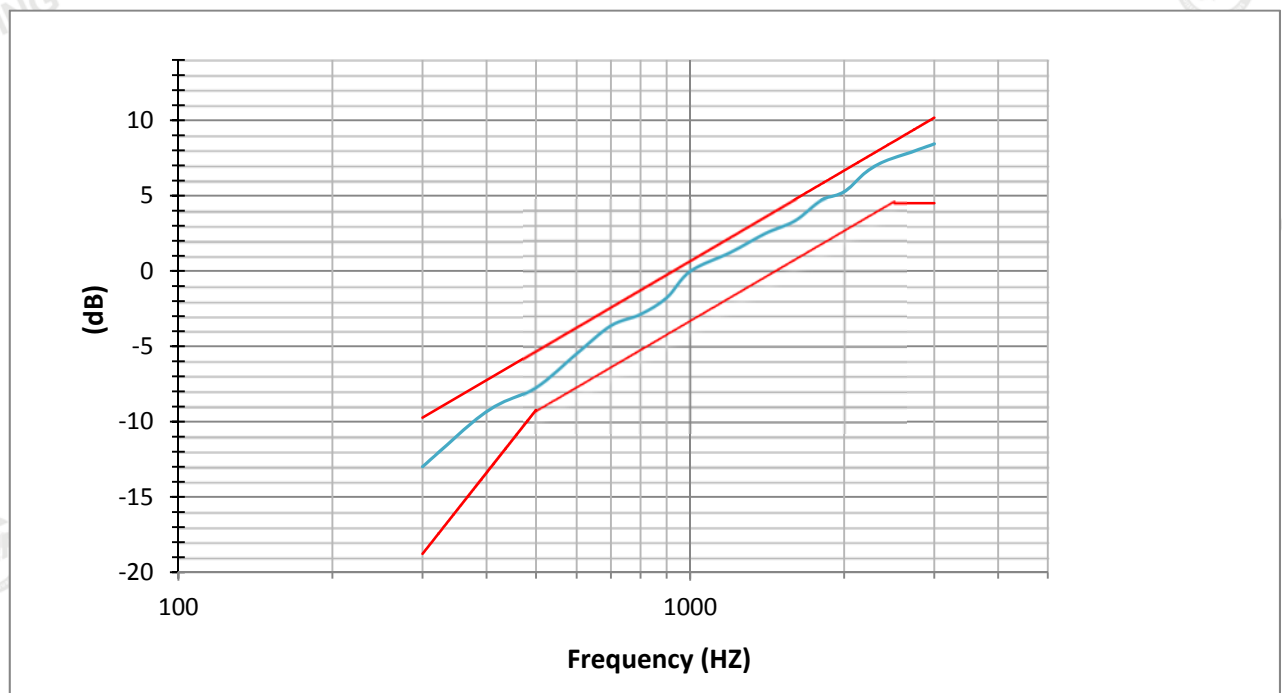
(Modulation Type:GFSK,Channel Separation:12.5kHz)- Low Power

| Audio Frequency(Hz) | Audio Frequency Response(dB) | Result |
|---------------------|------------------------------|--------|
| 300                 | -12.97                       | PASS   |
| 400                 | -9.24                        |        |
| 500                 | -7.60                        |        |
| 600                 | -5.36                        |        |
| 700                 | -3.73                        |        |
| 800                 | -3.14                        |        |
| 900                 | -1.61                        |        |
| 1000                | 0.00                         |        |
| 1200                | 1.30                         |        |
| 1400                | 2.52                         |        |
| 1600                | 3.44                         |        |
| 1800                | 4.81                         |        |
| 2000                | 5.09                         |        |
| 2200                | 6.39                         |        |
| 2400                | 7.26                         |        |
| 2600                | 7.53                         |        |
| 2800                | 8.09                         |        |
| 3000                | 8.29                         |        |



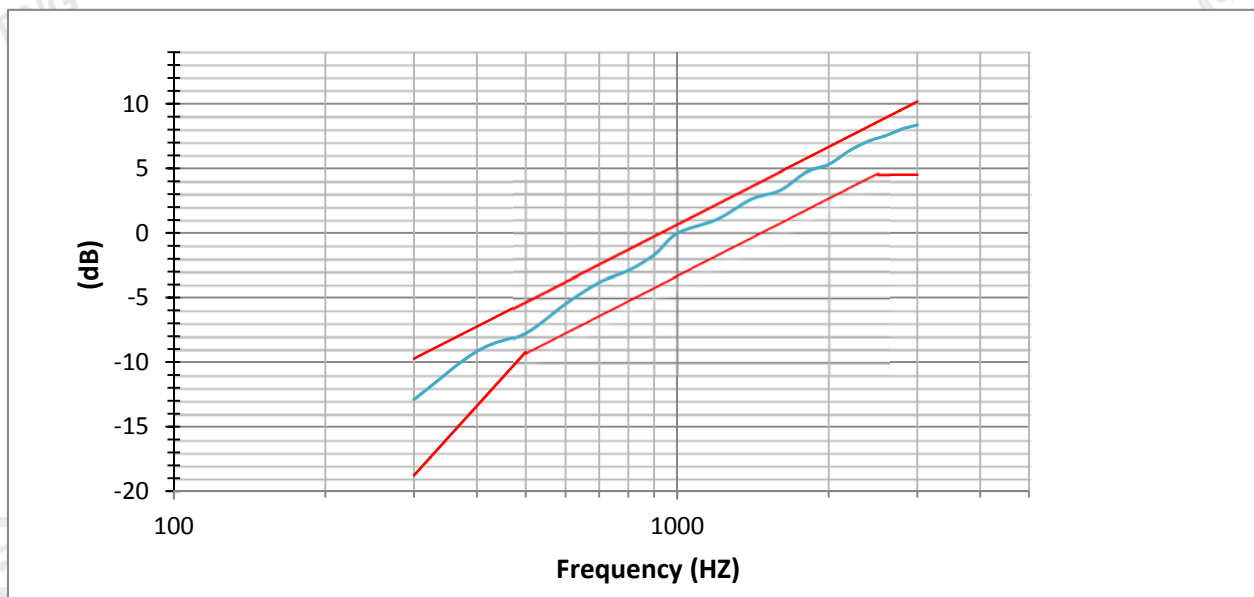
(Modulation Type:GFSK,Channel Separation:12.5kHz)- High Power

| Audio Frequency | Audio Frequency Response | Result |
|-----------------|--------------------------|--------|
| (Hz)            | (dB)                     |        |
| 300             | -12.99                   | PASS   |
| 400             | -9.34                    |        |
| 500             | -7.72                    |        |
| 600             | -5.47                    |        |
| 700             | -3.61                    |        |
| 800             | -2.85                    |        |
| 900             | -1.75                    |        |
| 1000            | 0.00                     |        |
| 1200            | 1.26                     |        |
| 1400            | 2.50                     |        |
| 1600            | 3.34                     |        |
| 1800            | 4.69                     |        |
| 2000            | 5.25                     |        |
| 2200            | 6.52                     |        |
| 2400            | 7.29                     |        |
| 2600            | 7.68                     |        |
| 2800            | 8.07                     |        |
| 3000            | 8.43                     |        |



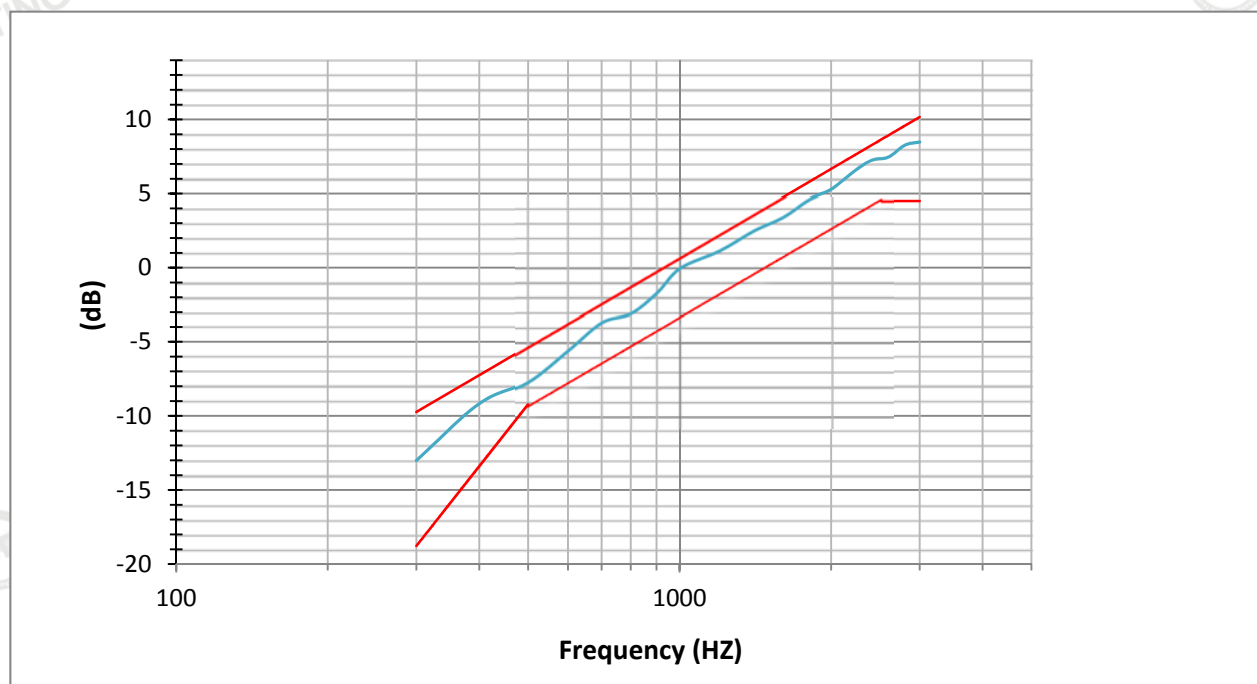
(Modulation Type:GFSK,Channel Separation:25kHz)- Low Power

| Audio Frequency(Hz) | Audio Frequency Response(dB) | Result |
|---------------------|------------------------------|--------|
| 300                 | -12.90                       | PASS   |
| 400                 | -9.17                        |        |
| 500                 | -7.70                        |        |
| 600                 | -5.42                        |        |
| 700                 | -3.77                        |        |
| 800                 | -2.87                        |        |
| 900                 | -1.66                        |        |
| 1000                | 0.00                         |        |
| 1200                | 1.08                         |        |
| 1400                | 2.62                         |        |
| 1600                | 3.32                         |        |
| 1800                | 4.71                         |        |
| 2000                | 5.31                         |        |
| 2200                | 6.37                         |        |
| 2400                | 7.11                         |        |
| 2600                | 7.54                         |        |
| 2800                | 8.05                         |        |
| 3000                | 8.36                         |        |



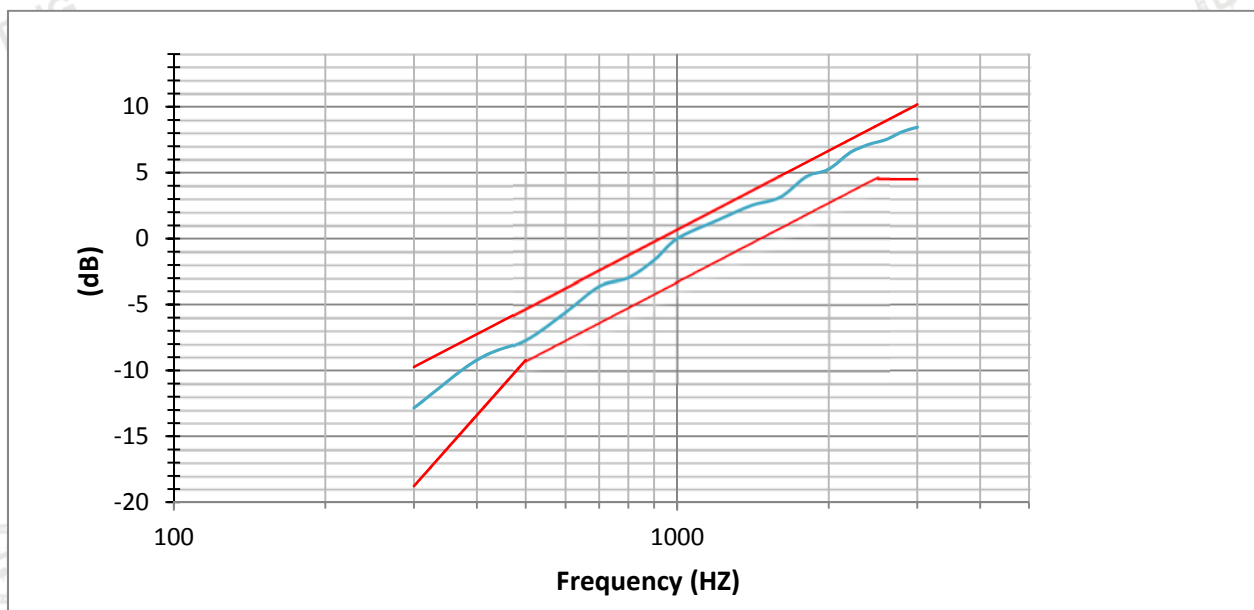
(Modulation Type:GFSK,Channel Separation:25kHz)- High Power

| Audio Frequency | Audio Frequency Response | Result |
|-----------------|--------------------------|--------|
| (Hz)            | (dB)                     | PASS   |
| 300             | -13.01                   |        |
| 400             | -9.17                    |        |
| 500             | -7.67                    |        |
| 600             | -5.54                    |        |
| 700             | -3.64                    |        |
| 800             | -3.04                    |        |
| 900             | -1.66                    |        |
| 1000            | 0.00                     |        |
| 1200            | 1.19                     |        |
| 1400            | 2.52                     |        |
| 1600            | 3.43                     |        |
| 1800            | 4.61                     |        |
| 2000            | 5.29                     |        |
| 2200            | 6.39                     |        |
| 2400            | 7.23                     |        |
| 2600            | 7.46                     |        |
| 2800            | 8.26                     |        |
| 3000            | 8.48                     |        |



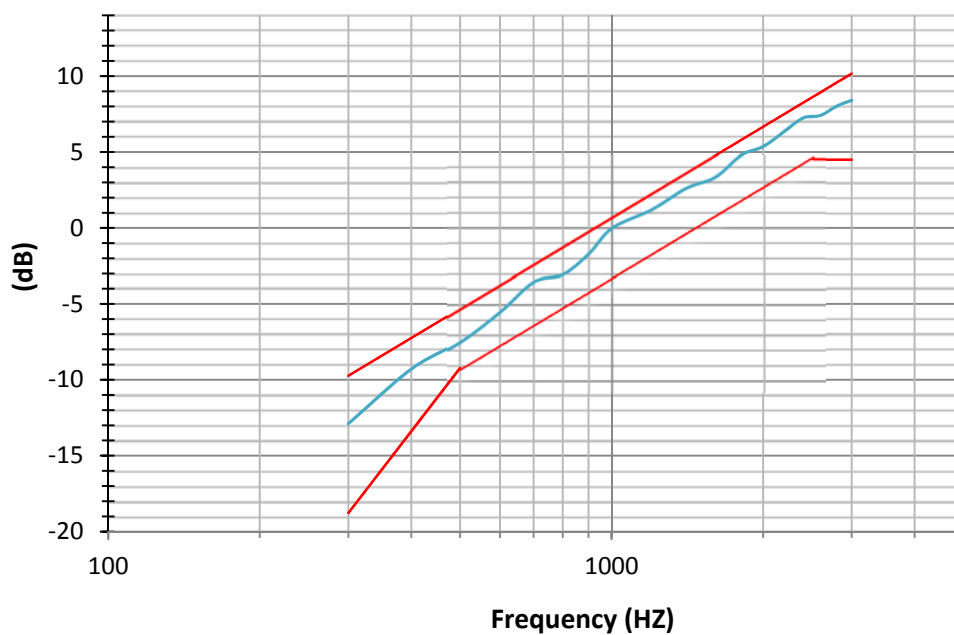
(Modulation Type:GFSK,Channel Separation:6.25kHz)- Low Power

| Audio Frequency(Hz) | Audio Frequency Response(dB) | Result |
|---------------------|------------------------------|--------|
| 300                 | -12.85                       | PASS   |
| 400                 | -9.21                        |        |
| 500                 | -7.68                        |        |
| 600                 | -5.55                        |        |
| 700                 | -3.59                        |        |
| 800                 | -2.96                        |        |
| 900                 | -1.62                        |        |
| 1000                | 0.00                         |        |
| 1200                | 1.38                         |        |
| 1400                | 2.49                         |        |
| 1600                | 3.13                         |        |
| 1800                | 4.67                         |        |
| 2000                | 5.26                         |        |
| 2200                | 6.49                         |        |
| 2400                | 7.13                         |        |
| 2600                | 7.51                         |        |
| 2800                | 8.1                          |        |
| 3000                | 8.45                         |        |



(Modulation Type:GFSK,Channel Separation:6.25kHz)- High Power

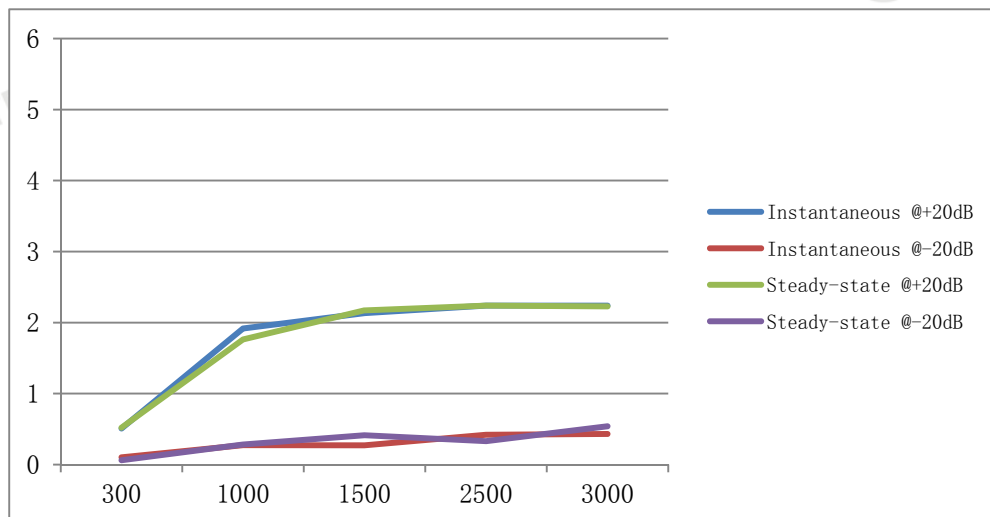
| Audio Frequency | Audio Frequency Response | Result |
|-----------------|--------------------------|--------|
| (Hz)            | (dB)                     | PASS   |
| 300             | -12.89                   |        |
| 400             | -9.30                    |        |
| 500             | -7.48                    |        |
| 600             | -5.49                    |        |
| 700             | -3.51                    |        |
| 800             | -3.03                    |        |
| 900             | -1.67                    |        |
| 1000            | 0.00                     |        |
| 1200            | 1.22                     |        |
| 1400            | 2.60                     |        |
| 1600            | 3.33                     |        |
| 1800            | 4.77                     |        |
| 2000            | 5.36                     |        |
| 2200            | 6.33                     |        |
| 2400            | 7.24                     |        |
| 2600            | 7.41                     |        |
| 2800            | 8.02                     |        |
| 3000            | 8.41                     |        |



## 10.3.2 Modulation Limiting

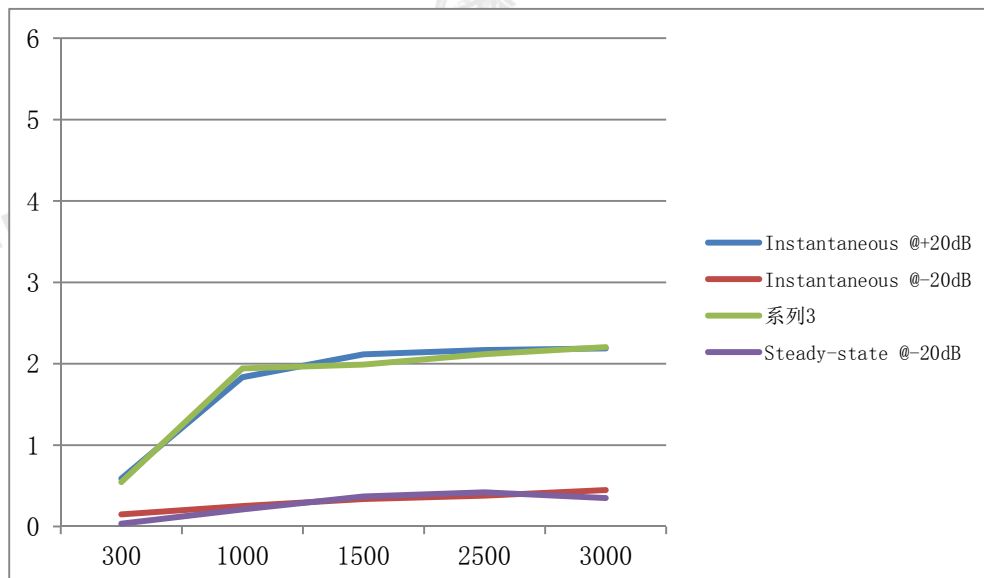
(Modulation Type:GFSK,Channel Separation:12.5kHz)- Low Power

| Channl 800           |                          |                          |                          |                          |             |        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------|
| Audio Frequency (Hz) | Instantaneous            |                          | Steady-state             |                          | Limit (kHz) | Result |
|                      | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) |             |        |
| 300                  | 0.509                    | 0.103                    | 0.519                    | 0.062                    | ±2.5        | Pass   |
| 1000                 | 1.916                    | 0.273                    | 1.762                    | 0.282                    |             |        |
| 1500                 | 2.133                    | 0.271                    | 2.172                    | 0.414                    |             |        |
| 2500                 | 2.238                    | 0.42                     | 2.238                    | 0.33                     |             |        |
| 3000                 | 2.24                     | 0.432                    | 2.227                    | 0.539                    |             |        |



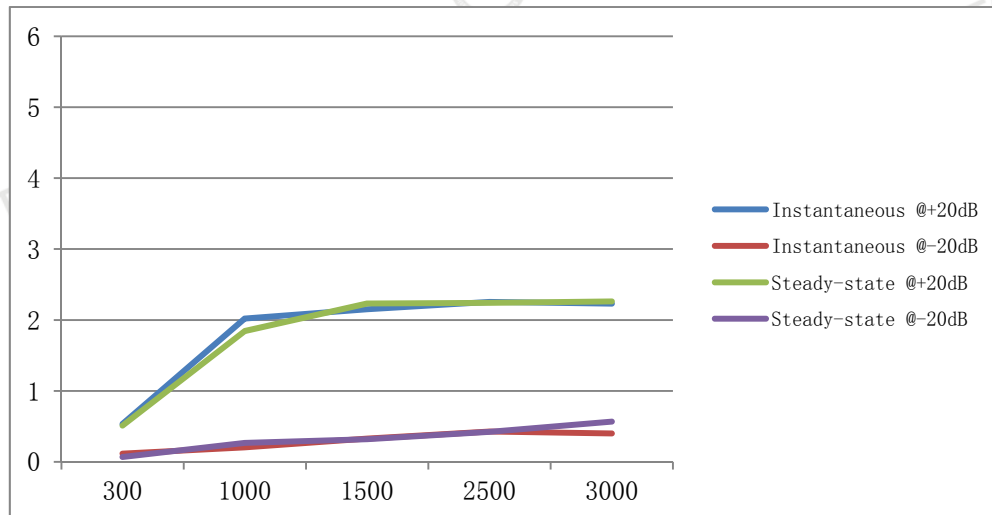
(Modulation Type:GFSK,Channel Separation:12.5kHz)- High Power

| Channl 800           |                          |                          |                          |                          |             |        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------|
| Audio Frequency (Hz) | Instantaneous            |                          | Steady-state             |                          | Limit (kHz) | Result |
|                      | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) |             |        |
| 300                  | 0.589                    | 0.148                    | 0.547                    | 0.034                    | ±2.5        | Pass   |
| 1000                 | 1.835                    | 0.251                    | 1.942                    | 0.209                    |             |        |
| 1500                 | 2.115                    | 0.338                    | 1.989                    | 0.369                    |             |        |
| 2500                 | 2.169                    | 0.38                     | 2.117                    | 0.42                     |             |        |
| 3000                 | 2.189                    | 0.447                    | 2.203                    | 0.35                     |             |        |



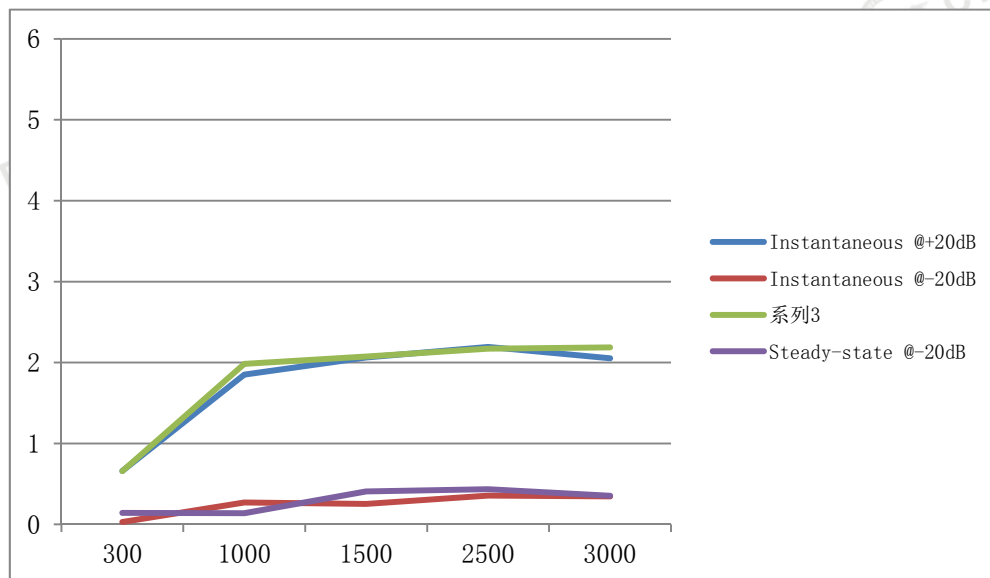
(Modulation Type:GFSK,Channel Separation:25kHz)- Low Power

| Channl 800           |                          |                          |                          |                          |             |        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------|
| Audio Frequency (Hz) | Instantaneous            |                          | Steady-state             |                          | Limit (kHz) | Result |
|                      | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) |             |        |
| 300                  | 0.533                    | 0.117                    | 0.512                    | 0.069                    | ±2.5        | Pass   |
| 1000                 | 2.021                    | 0.205                    | 1.844                    | 0.269                    |             |        |
| 1500                 | 2.152                    | 0.329                    | 2.234                    | 0.319                    |             |        |
| 2500                 | 2.256                    | 0.429                    | 2.241                    | 0.423                    |             |        |
| 3000                 | 2.231                    | 0.4                      | 2.262                    | 0.567                    |             |        |



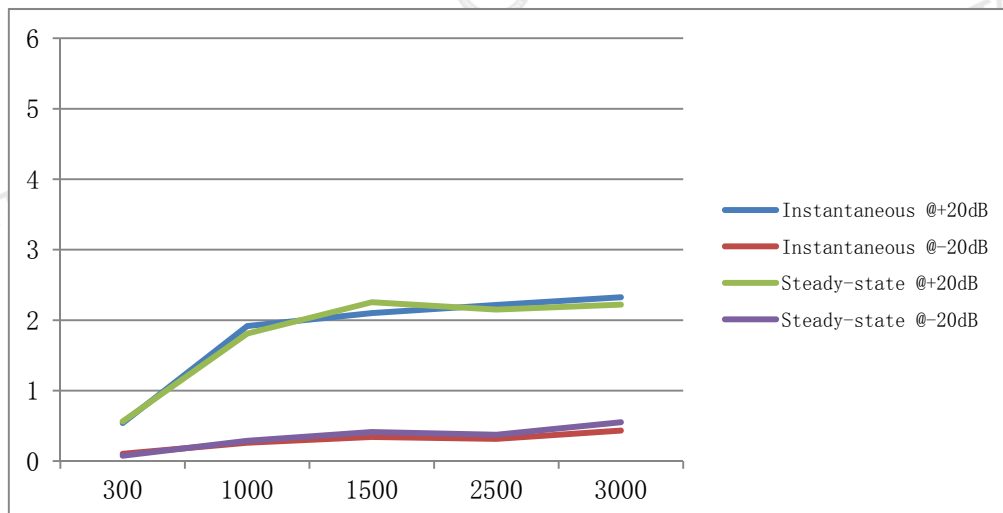
(Modulation Type:GFSK,Channel Separation:25kHz)- High Power

| Channl 800           |                          |                          |                          |                          |             |        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------|
| Audio Frequency (Hz) | Instantaneous            |                          | Steady-state             |                          | Limit (kHz) | Result |
|                      | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) |             |        |
| 300                  | 0.661                    | 0.03                     | 0.658                    | 0.143                    | ±2.5        | Pass   |
| 1000                 | 1.851                    | 0.27                     | 1.984                    | 0.138                    |             |        |
| 1500                 | 2.063                    | 0.253                    | 2.074                    | 0.407                    |             |        |
| 2500                 | 2.193                    | 0.356                    | 2.172                    | 0.435                    |             |        |
| 3000                 | 2.053                    | 0.345                    | 2.188                    | 0.354                    |             |        |



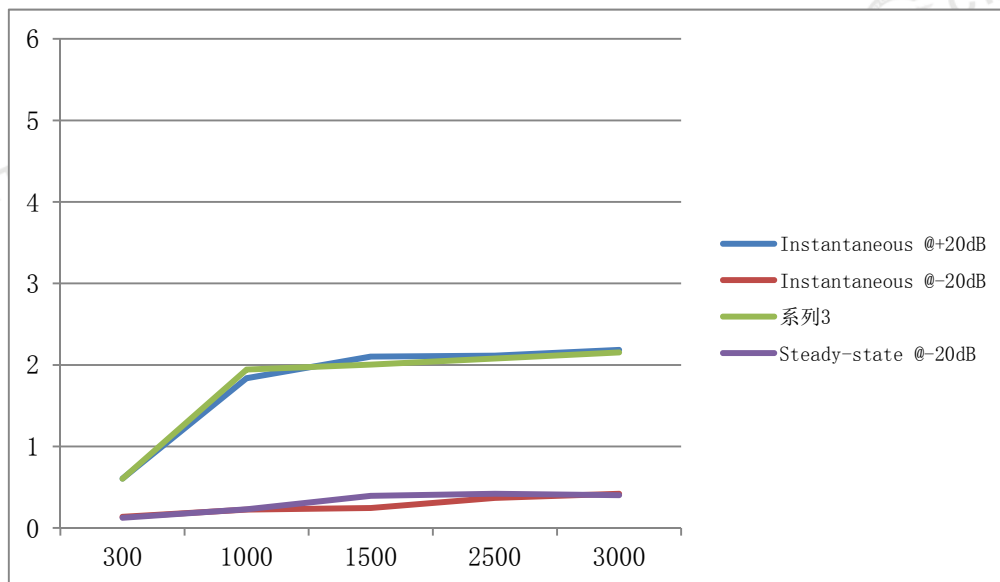
(Modulation Type:GFSK,Channel Separation:6.25kHz)- Low Power

| Channl 800           |                          |                          |                          |                          |             |        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------|
| Audio Frequency (Hz) | Instantaneous            |                          | Steady-state             |                          | Limit (kHz) | Result |
|                      | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) |             |        |
| 300                  | 0.539                    | 0.104                    | 0.563                    | 0.076                    | ±2.5        | Pass   |
| 1000                 | 1.917                    | 0.261                    | 1.81                     | 0.288                    |             |        |
| 1500                 | 2.101                    | 0.343                    | 2.254                    | 0.413                    |             |        |
| 2500                 | 2.215                    | 0.314                    | 2.15                     | 0.375                    |             |        |
| 3000                 | 2.324                    | 0.433                    | 2.221                    | 0.552                    |             |        |



(Modulation Type:GFSK,Channel Separation:6.25kHz)- High Power

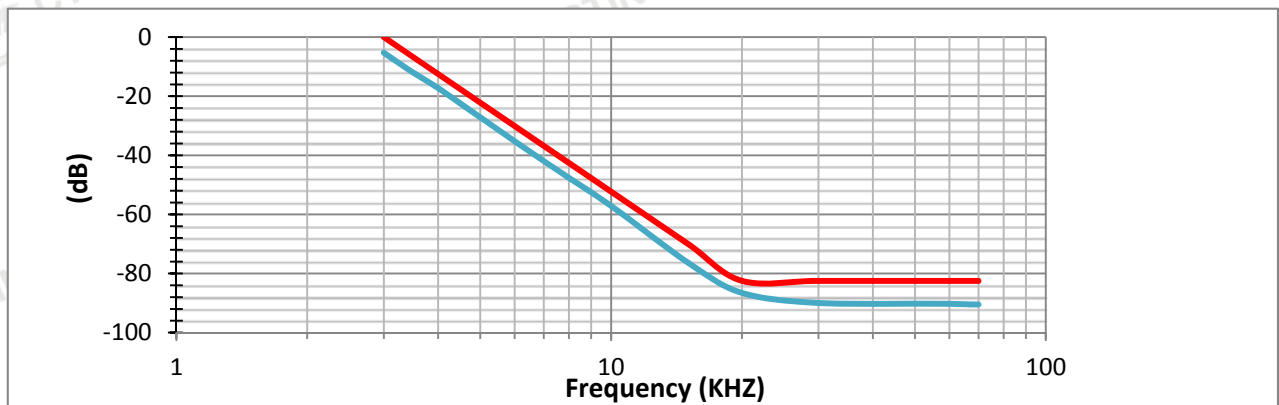
| Channl 800           |                          |                          |                          |                          |             |        |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------|--------|
| Audio Frequency (Hz) | Instantaneous            |                          | Steady-state             |                          | Limit (kHz) | Result |
|                      | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) | Deviation (@+20dB) (kHz) | Deviation (@-20dB) (kHz) |             |        |
| 300                  | 0.607                    | 0.137                    | 0.605                    | 0.125                    | ±2.5        | Pass   |
| 1000                 | 1.838                    | 0.226                    | 1.943                    | 0.229                    |             |        |
| 1500                 | 2.103                    | 0.245                    | 2.005                    | 0.394                    |             |        |
| 2500                 | 2.115                    | 0.368                    | 2.078                    | 0.42                     |             |        |
| 3000                 | 2.184                    | 0.419                    | 2.154                    | 0.403                    |             |        |



## 10.3.3 Audio Low Pass Filter Response

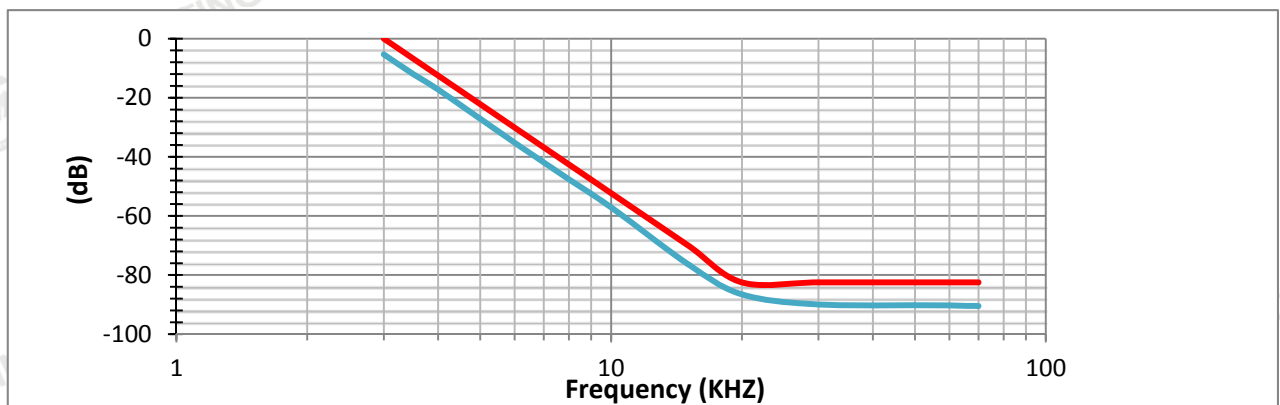
(Modulation Type:GFSK,Channel Separation:12.5kHz)- Low Power

| Audio Frequency(KHz) | Limit | Response Attenuation(dB) | Result |
|----------------------|-------|--------------------------|--------|
| 3                    | 0     | -5.30                    | Pass   |
| 3.5                  | -6.7  | -11.96                   |        |
| 4                    | -12.5 | -17.25                   |        |
| 5                    | -22.2 | -27.15                   |        |
| 7                    | -36.8 | -41.97                   |        |
| 10                   | -52.3 | -57.15                   |        |
| 15                   | -69.9 | -76.24                   |        |
| 20                   | -82.5 | -86.57                   |        |
| 30                   | -82.5 | -90.01                   |        |
| 50                   | -82.5 | -90.20                   |        |
| 70                   | -82.5 | -90.50                   |        |



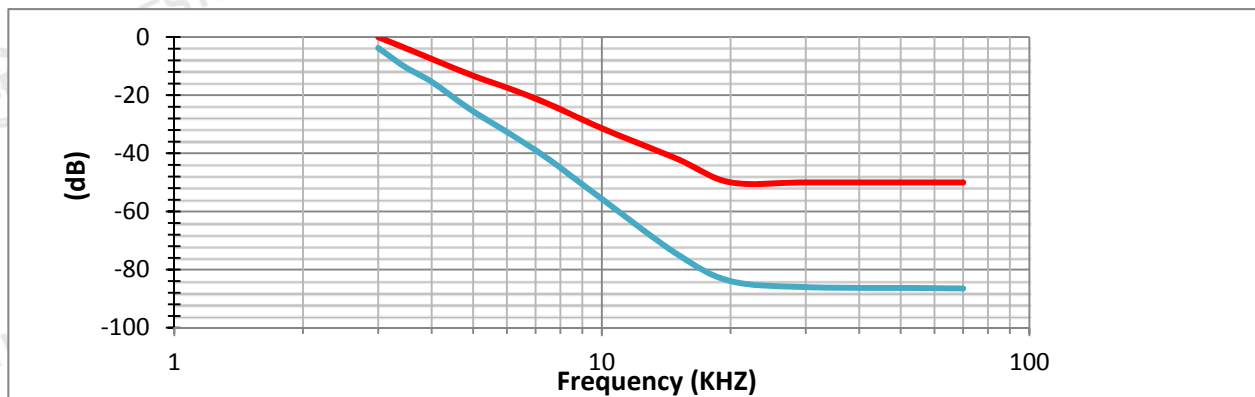
(Modulation Type:GFSK,Channel Separation:12.5kHz)- High Power

| Audio Frequency(KHz) | Limit | Response Attenuation(dB) | Result |
|----------------------|-------|--------------------------|--------|
| 3                    | 0     | -5.34                    | Pass   |
| 3.5                  | -6.7  | -11.91                   |        |
| 4                    | -12.5 | -17.24                   |        |
| 5                    | -22.2 | -27.14                   |        |
| 7                    | -36.8 | -41.96                   |        |
| 10                   | -52.3 | -57.13                   |        |
| 15                   | -69.9 | -76.26                   |        |
| 20                   | -82.5 | -86.56                   |        |
| 30                   | -82.5 | -90.00                   |        |
| 50                   | -82.5 | -90.22                   |        |
| 70                   | -82.5 | -90.49                   |        |



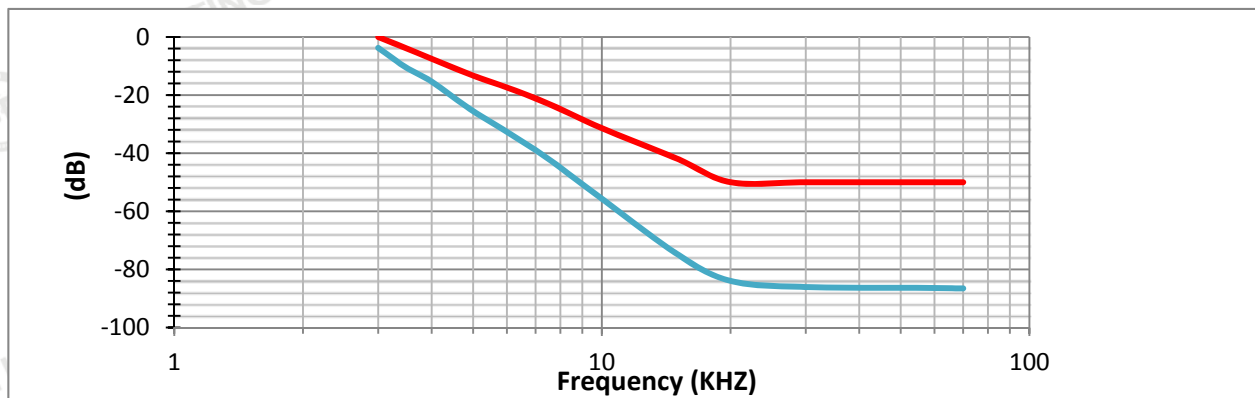
(Modulation Type:GFSK,Channel Separation:25kHz)- Low Power

| Audio Frequency(KHz) | Limit | Response Attenuation(dB) | Result |
|----------------------|-------|--------------------------|--------|
| 3                    | 0     | -3.75                    | Pass   |
| 3.5                  | -4    | -10.65                   |        |
| 4                    | -7.5  | -15.38                   |        |
| 5                    | -13.3 | -25.53                   |        |
| 7                    | -21.1 | -38.90                   |        |
| 10                   | -31.4 | -55.71                   |        |
| 15                   | -41.9 | -74.70                   |        |
| 20                   | -50   | -83.97                   |        |
| 30                   | -50   | -86.08                   |        |
| 50                   | -50   | -86.34                   |        |
| 70                   | -50   | -86.53                   |        |



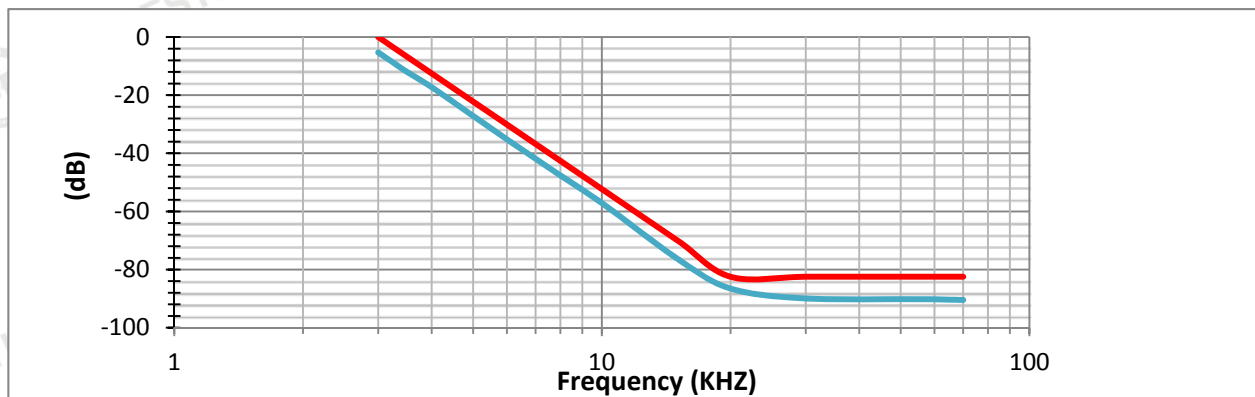
(Modulation Type:GFSK,Channel Separation:25kHz)- High Power

| Audio Frequency(KHz) | Limit | Response Attenuation(dB) | Result |
|----------------------|-------|--------------------------|--------|
| 3                    | 0     | -3.76                    | Pass   |
| 3.5                  | -4    | -10.66                   |        |
| 4                    | -7.5  | -15.37                   |        |
| 5                    | -13.3 | -25.51                   |        |
| 7                    | -21.1 | -38.91                   |        |
| 10                   | -31.4 | -55.70                   |        |
| 15                   | -41.9 | -74.71                   |        |
| 20                   | -50   | -83.98                   |        |
| 30                   | -50   | -86.08                   |        |
| 50                   | -50   | -86.33                   |        |
| 70                   | -50   | -86.54                   |        |



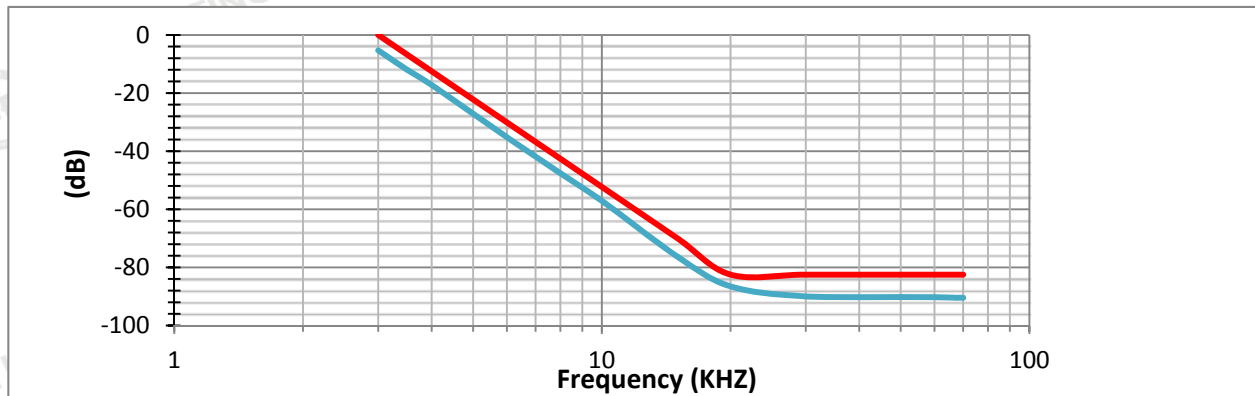
(Modulation Type:GFSK,Channel Separation:6.25kHz)- Low Power

| Audio Frequency(KHz) | Limit | Response Attenuation(dB) | Result |
|----------------------|-------|--------------------------|--------|
| 3                    | 0     | -5.28                    | Pass   |
| 3.5                  | -6.7  | -11.94                   |        |
| 4                    | -12.5 | -17.23                   |        |
| 5                    | -22.2 | -27.12                   |        |
| 7                    | -36.8 | -41.94                   |        |
| 10                   | -52.3 | -57.13                   |        |
| 15                   | -69.9 | -76.22                   |        |
| 20                   | -82.5 | -86.55                   |        |
| 30                   | -82.5 | -89.99                   |        |
| 50                   | -82.5 | -90.18                   |        |
| 70                   | -82.5 | -90.47                   |        |



(Modulation Type:GFSK,Channel Separation:6.25kHz)- High Power

| Audio Frequency(KHz) | Limit | Response Attenuation(dB) | Result |
|----------------------|-------|--------------------------|--------|
| 3                    | 0     | -5.32                    | Pass   |
| 3.5                  | -6.7  | -11.90                   |        |
| 4                    | -12.5 | -17.22                   |        |
| 5                    | -22.2 | -27.11                   |        |
| 7                    | -36.8 | -41.94                   |        |
| 10                   | -52.3 | -57.11                   |        |
| 15                   | -69.9 | -76.24                   |        |
| 20                   | -82.5 | -86.54                   |        |
| 30                   | -82.5 | -89.99                   |        |
| 50                   | -82.5 | -90.20                   |        |
| 70                   | -82.5 | -90.47                   |        |



## 11. PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

\*\*\*\*\*END OF THE REPORT\*\*\*\*\*