# Documant for FCC

| | | |
|---|---|---|
| Model Name | : | HH7700 |
| FCC ID | : | B3THH7700 |
| Type | : | FM TRANSCEIVEI |
| Serial Number | : | Sample 1 |

# EQUIPMENT SPECIFICATION DECLARED BY THE APPLICANT

| | | | | |
|---|---|---|---|---|
| Model Name | | : | HH7700 | |
| FCC ID | | : | B3THH7700 | |
| Specification is Referenced | | : | TIA-603-C | |
| Emission Type | | : | 16K0F3E/11K0F3E | |
| Channnel Spacing | | : | 25/12.5 | [kHz] |
| Description | | : | Portable | |
| Mode | | : | FM | |
| Frequency Range | TX | : | 30.000-87.9875 | [MHz] |
| | RX | : | 30.000-87.9875 | [MHz] |
| Rated RF Power | | : | 5 | [W] |
| Maximum Power Rating | | : | 0.5 | [W] |
| Power Supply Voltage | DC | : | 7.2 | [V] |

# TECHNICAL REPORT FOR TYPE ACCEPTANCE

# OF DATRON WORLD COMMUNICATIONS,INC.

**MODEL : HH7700**

**FCC ID : B3THH7700**

**EMI TEST REPORT**

**Date of test : Sep 24, 2008**
**Date of Issue : Sep 29, 2008**

**UL Japan, Inc.**
**YAMAKITA EMC LAB.**

**907 Kawanishi, Yamakita-machi, Ashigarakami-gum,**
**Kanagawa-ken, 258-0124 JAPAN**

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**5. Modulation Limiting (narrow/wide)**

a. Measured using test set-up, see Figure 13.

b. Primary Input Voltage of 7.2 VDC at battery input connector.

c. Data (Positive peak) is presented in Figure 5.1 / 5.5.

d. Data (Negative peak) is presented in Figure 5.2 / 5.6.

e. Data (Positive peak) with CTCSS (250.3Hz) is presented in Figure 5.3 / 5.7.

f. Data (Negative peak) with CTCSS (250.3Hz) is presented in Figure 5.4 / 5.8.

**6. Transmitter Audio Frequency Response (narrow/wide)**

a. Measured using test set-up, see Figure 13.

b. Primary Input Voltage of 7.2 VDC at battery input connector.

Ref = 1 kHz tone response at 20%of the rated system deviation.

Set the test receiver to measure rms deviation and record the deviation reading.

c. Data is presented in Figure 6.1 / 6.2.

**7. Audio Low-Pass Filter Response (narrow/wide)**

a. Measured using test set-up, see Figure 13.

b. Primary Input Voltage of 7.2 VDC at battery input connector.

Input 1 kHz tone at a level 20dB greater than that required for 3 kHz deviation

The response at 1 kHz tone = 0dB. Curve was taken maintaining constant input at modulation sensitivity. Output of low-pass filter was monitored using Audio Analyzer

c. Data is presented in Figure 7.1 / 7.2.

**8. CONDUCTED SPURIOUS EMISSION**

Conducted spurious data was measured at 25 degrees Celsius, 7.2 VDC applied at battery input connector external power input and using external antenna jack. See Figure 13 for test set-up.

1. Data for 30.575MHz @ 5W is presented in Figure 8.1
2. Data for 39.975MHz @ 5W is presented in Figure 8.2.
3. Data for 49.575MHz @ 5W is presented in Figure 8.3.
4. Data for 72.125MHz @ 5W is presented in Figure 8.4.
5. Data for 75.975MHz @ 5W is presented in Figure 8.5.

**9. CONDUCTED SPURIOUS EMISSION（Receiver）**

Data for 30.575MHz to 75.975MHz @ Receiver is presented in Table.9.

**10. TRANSIENT BEHAVIOR**

a. Measured using test set-up, see Figure 13.

b. Primary Input Voltage of 7.2 VDC at battery input connector.

c. Data is presented in Figure.10.1 to 10.4.

**11. RADIATED SPURIOUS EMISSION**

Radiated spurious data was measured at 20degrees Celsius, 7.2 VDC applied at battery input and using external antenna jack into a 50 ohm non-radiating load. The substitution method found in TIA/EIA 603 C procedure.

1. Data for 30.575MHz @ 5W is presented in Figure11.1.
2. Data for 39.975MHz @ 5W is presented in Figure11.2.
3. Data for 49.575MHz @ 5W is presented in Figure11.3.
4. Data for 72.125MHz @ 5W is presented in Figure11.4.
5. Data for 75.975MHz @ 5W is presented in Figure11.5.

**12. LIST OF TEST EQUIPMENT**

See Table.12.

**13. TEST SET-UP**

See Figure.13.

**14. RADIATED SPURIOUS EMISSION (Receive)**

Data for 30.575MHz to 75.975MHz @ Receiver is presented in Sheet 1.

（See EMI TEST REPORT ）

# TEST DATA

| | | | | | |
|---|---|---|---|---|---|
| **Model Name** | | : | **HH7700** | | |
| **Sample Number** | | : | **Sample 1** | | |
| **Specification is Referenced** | | : | **EIA/TIA-603C** | | |
| **Emission Type** | | : | **11K0F3E/16K0F3E** | | |
| **Channel Spacing** | | : | **12.5(narrow)/25.0(wide)** | | **(kHz)** |
| **Description** | | : | **Handheld** | | |
| **Mode** | | : | **FM** | | |
| **Frequency Range** | **TX** | : | **30.0-50.0, 72.0-76.0** | | **(MHz)** |
| | **RX** | : | **30.0-50.0, 72.0-76.0** | | **(MHz)** |
| | **Normal** | : | **7.2** | | **(V)** |
| | **Extreme** | : | **6.12** | **(7.2-15%)** | **(V)** |
| | | : | **8.28** | **(7.2+15%)** | **(V)** |
| **Temperature** | **Normal** | : | **25** | | **(°C)** |
| | **Extreme** | : | **-30 - +60** | | **(°C)** |
| **Test Frequency** | **TX/RX** | : | **30.5750** | **(narrow)** | **(MHz)** |
| | **TX/RX** | : | **39.9750** | **(narrow)** | **(MHz)** |
| | **TX/RX** | : | **49.5750** | **(narrow)** | **(MHz)** |
| | **TX/RX** | : | **72.1250** | **(narrow)** | **(MHz)** |
| | **TX/RX** | : | **75.9750** | **(narrow)** | **(MHz)** |
| | **TX/RX** | : | **49.6000** | **(wide)** | **(MHz)** |

| | | | | |
|---|---|---|---|---|
| **1st IF** | **RX** | : | **130.5** | **(MHz)** |
| **2nd IF** | **RX** | : | **450** | **(kHz)** |
| **Microphone Impedance** | | : | **2000** | **(Ω)** |
| **Speaker Impedance** | | : | **8** | **(Ω)** |
| **Rated RF Power** | | : | **5** | **(W)** |
| **Test Operator** | | : | **K.Atsuta** | |
| **Test Date** | **Start** | : | **2009/9/18** | |
| | **Finish** | : | **2009/9/26** | |

Model Name HH7700
FCC ID B3THH7700
Serial Number SAMPLE1
Emission Type 11K0F3E
Channel Spacing 12.5[kHz]

**1. RF Power Output @5W ( Table.1 )**

| Carrier Frequency [MHz] | RF Power Output [W] | Final D.C. Input Current [A] | D.C. Input Voltage [V] | D.C. Input Power [W] |
|---|---|---|---|---|
| 30.5750 | 4.82 | 1.86 | 7.20 | 13.39 |
| 39.9750 | 4.86 | 2.07 | 7.20 | 14.90 |
| 49.5750 | 4.90 | 2.05 | 7.20 | 14.76 |
| 72.1250 | 4.95 | 2.07 | 7.20 | 14.90 |
| 75.9750 | 5.00 | 2.12 | 7.20 | 15.26 |

**2. Frequency Stability vs. Voltage ( Table.2 )**

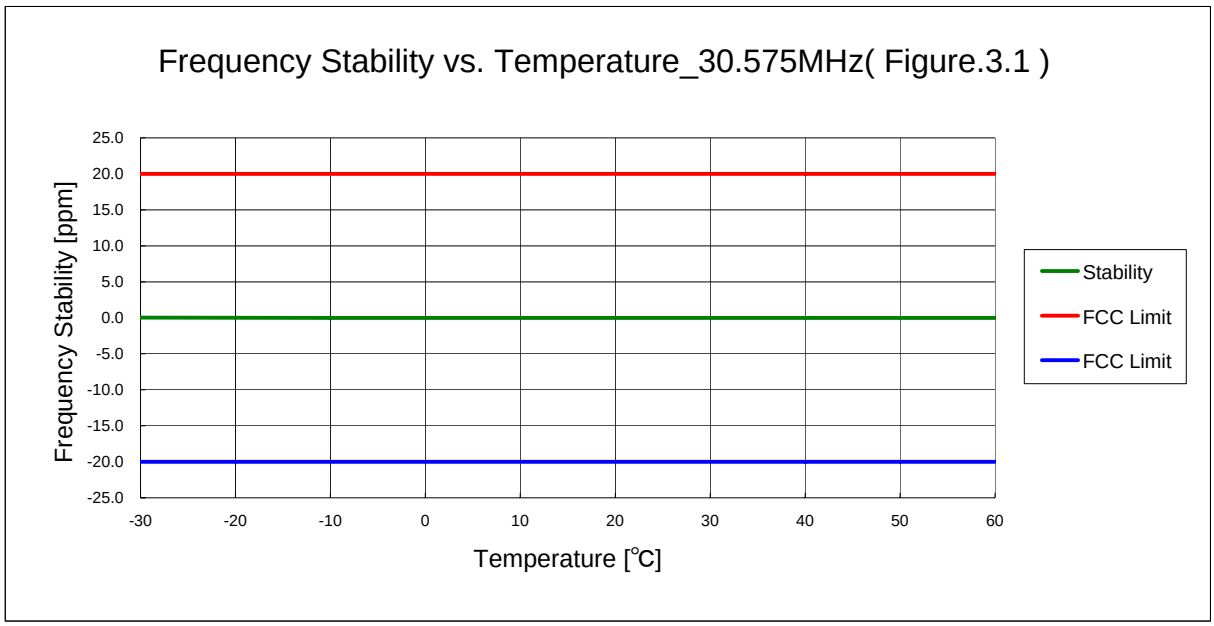
| Carrier Frequency [MHz] | STV [%] | Voltage [V] | Change in Frequency | | |
|---|---|---|---|---|---|
| | | | [MHz] | [Hz] | [ppm] |
| 30.5750 | 100 | 7.20 | 30.57499 | -10 | -0.33 |
| | 85 | 6.12 | 30.57499 | -10 | -0.33 |
| | 115 | 8.28 | 30.57499 | -10 | -0.33 |
| 39.9750 | 100 | 7.20 | 39.97499 | -10 | -0.25 |
| | 85 | 6.12 | 39.97499 | -10 | -0.25 |
| | 115 | 8.28 | 39.97499 | -10 | -0.25 |
| 49.5750 | 100 | 7.20 | 49.57499 | -10 | -0.20 |
| | 85 | 6.12 | 49.57499 | -10 | -0.20 |
| | 115 | 8.28 | 49.57499 | -10 | -0.20 |
| 72.1250 | 100 | 7.20 | 72.12499 | -10 | -0.14 |
| | 85 | 6.12 | 72.12499 | -10 | -0.14 |
| | 115 | 8.28 | 72.12499 | -10 | -0.14 |
| 75.9750 | 100 | 7.20 | 75.97500 | 0 | 0.00 |
| | 85 | 6.12 | 75.97500 | 0 | 0.00 |
| | 115 | 8.28 | 75.97500 | 0 | 0.00 |

**3.Frequency Stability vs. Temperature**

**3. 1.Frequency Stability vs. Temperature 30.575MHz (Table.3.1)**

**Carrier Freq. 30.575 MHz**

| Temperature[℃] | Measured | Frequency error[Hz] | [ppm] | FCC Limit [ppm] | FCC Limit [ppm] |
|---|---|---|---|---|---|
| -30 | 30.57502 | 20 | 0.04 | 20.00 | -20.00 |
| -20 | 30.57501 | 10 | 0.02 | 20.00 | -20.00 |
| -10 | 30.57500 | 0 | 0.00 | 20.00 | -20.00 |
| 0 | 30.57500 | 0 | 0.00 | 20.00 | -20.00 |
| 10 | 30.57499 | -10 | -0.02 | 20.00 | -20.00 |
| 25 | 30.57499 | -10 | -0.02 | 20.00 | -20.00 |
| 40 | 30.57500 | 0 | 0.00 | 20.00 | -20.00 |
| 50 | 30.57500 | 0 | 0.00 | 20.00 | -20.00 |
| 60 | 30.57500 | 0 | 0.00 | 20.00 | -20.00 |

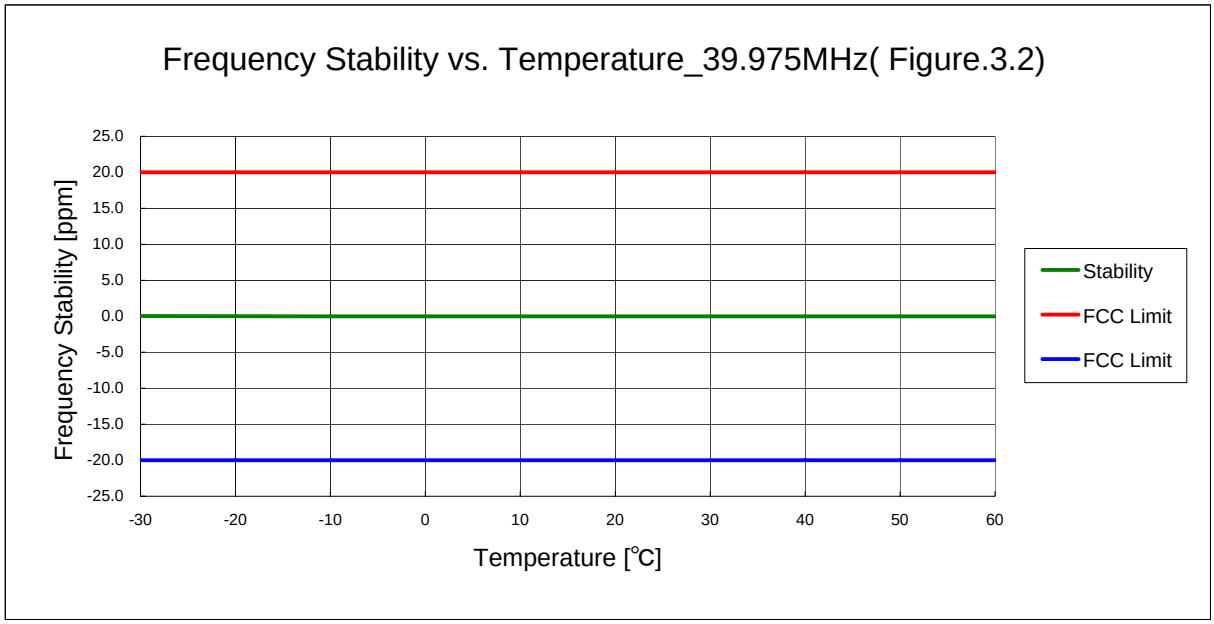


**3.Frequency Stability vs. Temperature**

**3.2 Frequency Stability vs. Temperature 39.975MHz (Table.3.2)**

**Carrier Freq. 39.975 MHz**

| Temperature[℃] | Measured | Frequency error[Hz] | [ppm] | FCC Limit [ppm] | FCC Limit [ppm] |
|---|---|---|---|---|---|
| -30 | 39.97502 | 20 | 0.04 | 20.00 | -20.00 |
| -20 | 39.97501 | 10 | 0.02 | 20.00 | -20.00 |
| -10 | 39.97500 | 0 | 0.00 | 20.00 | -20.00 |
| 0 | 39.97500 | 0 | 0.00 | 20.00 | -20.00 |
| 10 | 39.97499 | -10 | -0.02 | 20.00 | -20.00 |
| 25 | 39.97499 | -10 | -0.02 | 20.00 | -20.00 |
| 40 | 39.97499 | -10 | -0.02 | 20.00 | -20.00 |
| 50 | 39.97499 | -10 | -0.02 | 20.00 | -20.00 |
| 60 | 39.97500 | 0 | 0.00 | 20.00 | -20.00 |

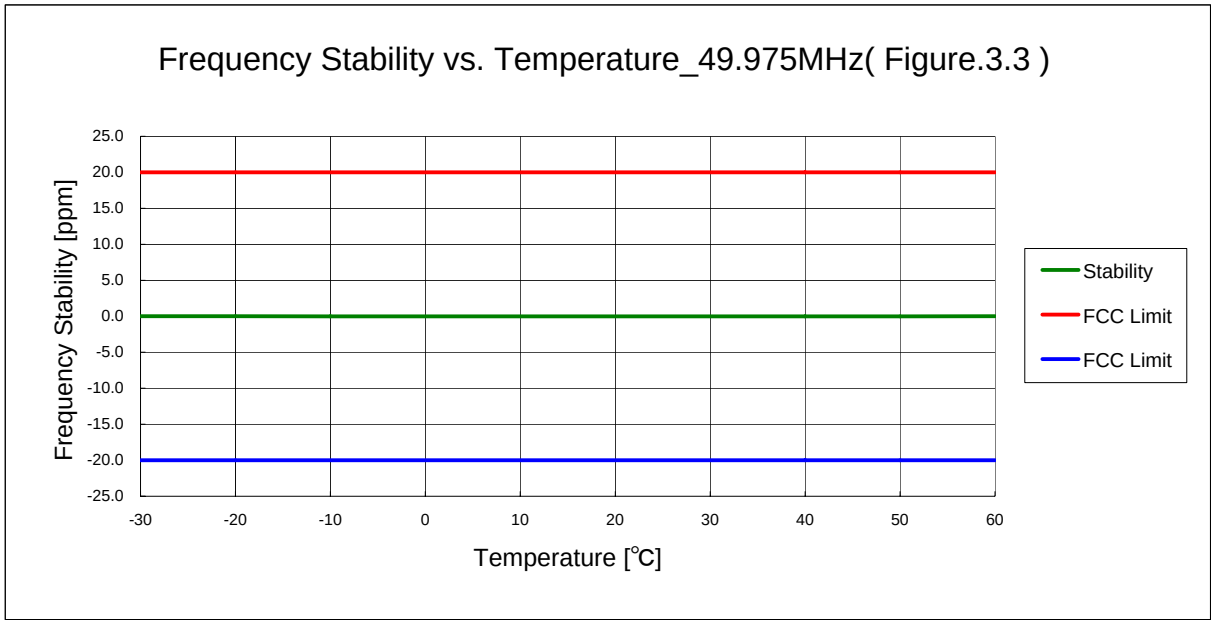


**3.Frequency Stability vs. Temperature**

**3.3 Frequency Stability vs. Temperature 49.575MHz (Table.3.3)**

**Carrier Freq. 49.575 MHz**

| Temperature[℃] | Measured | Frequency error[Hz] | [ppm] | FCC Limit [ppm] | FCC Limit [ppm] |
|---|---|---|---|---|---|
| -30 | 49.57501 | 10 | 0.02 | 20.00 | -20.00 |
| -20 | 49.57501 | 10 | 0.02 | 20.00 | -20.00 |
| -10 | 49.57500 | 0 | 0.00 | 20.00 | -20.00 |
| 0 | 49.57500 | 0 | 0.00 | 20.00 | -20.00 |
| 10 | 49.57499 | -10 | -0.02 | 20.00 | -20.00 |
| 25 | 49.57499 | -10 | -0.02 | 20.00 | -20.00 |
| 40 | 49.57499 | -10 | -0.02 | 20.00 | -20.00 |
| 50 | 49.57499 | -10 | -0.02 | 20.00 | -20.00 |
| 60 | 49.57501 | 10 | 0.02 | 20.00 | -20.00 |

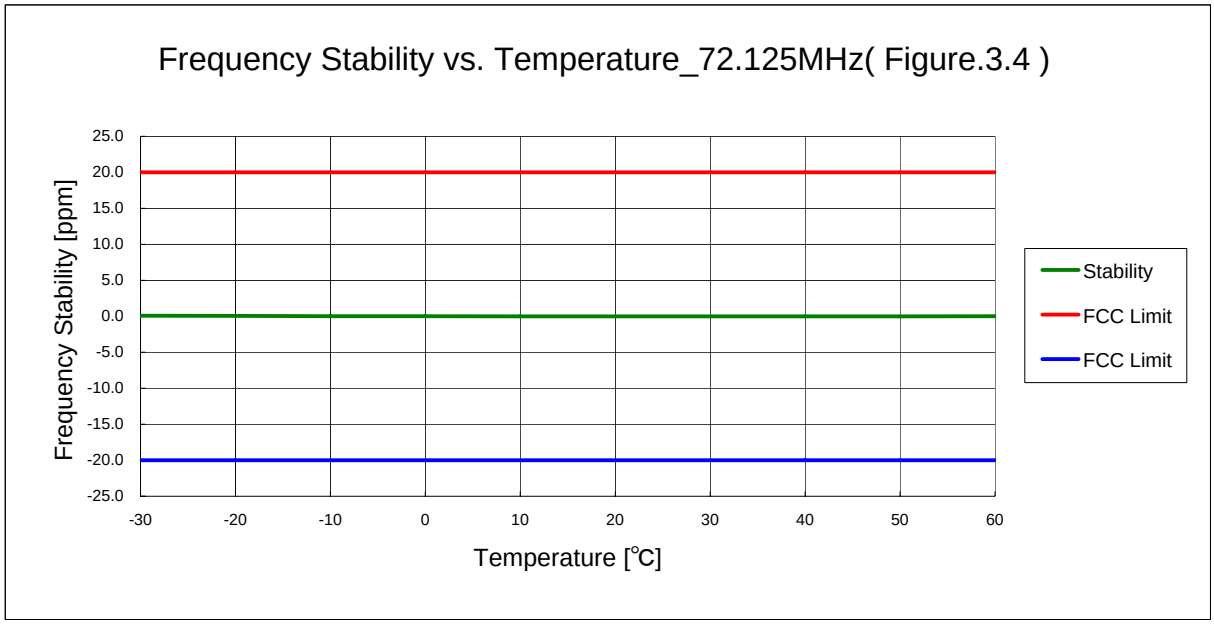


**3.Frequency Stability vs. Temperature**

**3.4. Frequency Stability vs. Temperature 72.125MHz (Table.3.4)**

**Carrier Freq. 72.125 MHz**

| Temperature[℃] | Measured | Frequency error[Hz] | [ppm] | FCC Limit [ppm] | FCC Limit [ppm] |
|---|---|---|---|---|---|
| -30 | 72.12504 | 40 | 0.09 | 20.00 | -20.00 |
| -20 | 72.12503 | 30 | 0.06 | 20.00 | -20.00 |
| -10 | 72.12501 | 10 | 0.02 | 20.00 | -20.00 |
| 0 | 72.12501 | 10 | 0.02 | 20.00 | -20.00 |
| 10 | 72.12500 | 0 | 0.00 | 20.00 | -20.00 |
| 25 | 72.12499 | -10 | -0.02 | 20.00 | -20.00 |
| 40 | 72.12499 | -10 | -0.02 | 20.00 | -20.00 |
| 50 | 72.12500 | 0 | 0.00 | 20.00 | -20.00 |
| 60 | 72.12501 | 10 | 0.02 | 20.00 | -20.00 |

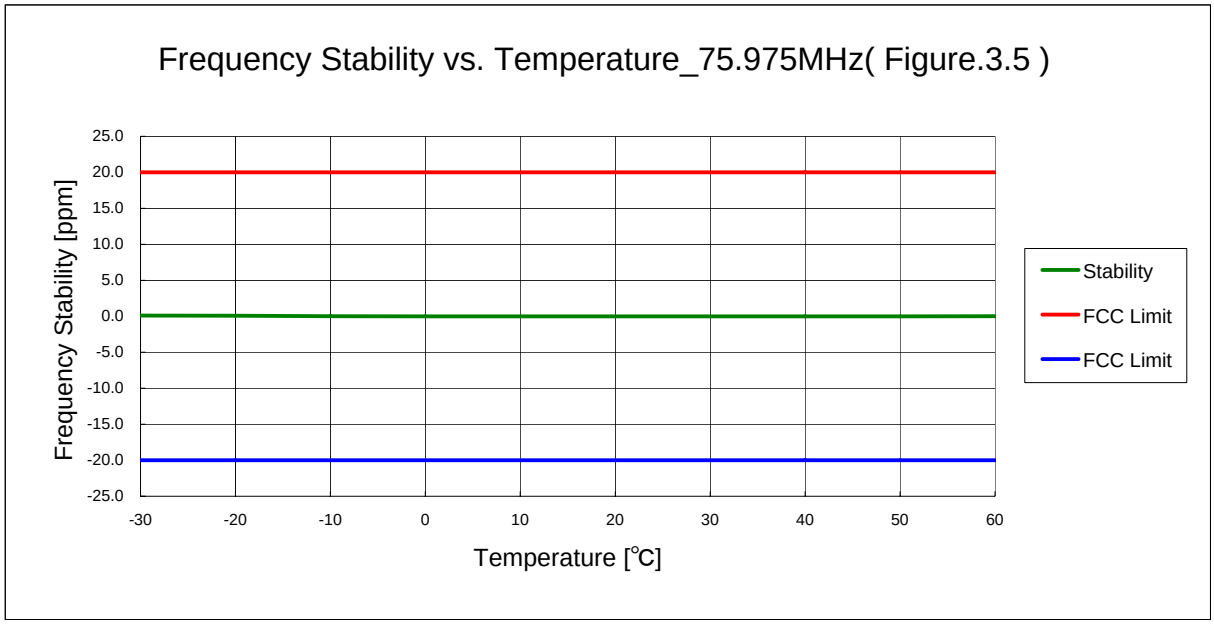


**3.Frequency Stability vs. Temperature**

**3.5.Frequency Stability vs. Temperature 75.975MHz (Table.3.5)**

**Carrier Freq. 75.975 MHz**

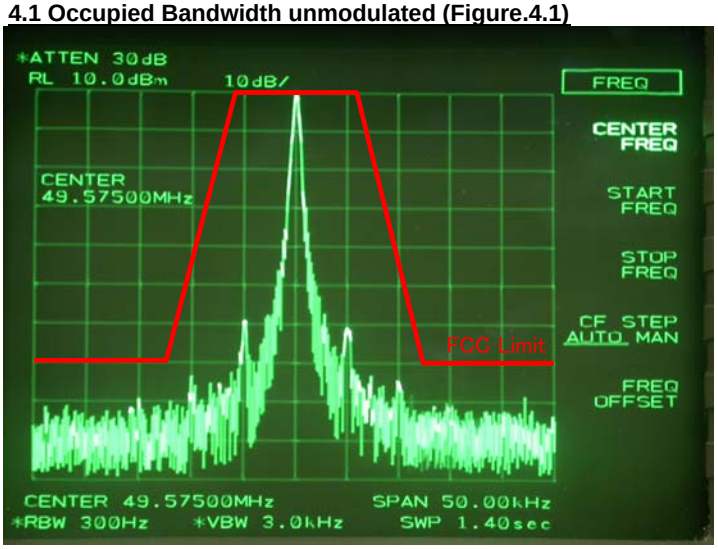
| Temperature[℃] | Measured | Frequency error[Hz] | [ppm] | FCC Limit [ppm] | FCC Limit [ppm] |
|---|---|---|---|---|---|
| -30 | 75.97505 | 50 | 0.11 | 20.00 | -20.00 |
| -20 | 75.97504 | 40 | 0.09 | 20.00 | -20.00 |
| -10 | 75.97501 | 10 | 0.02 | 20.00 | -20.00 |
| 0 | 75.97500 | 0 | 0.00 | 20.00 | -20.00 |
| 10 | 75.97500 | 0 | 0.00 | 20.00 | -20.00 |
| 25 | 75.97500 | 0 | 0.00 | 20.00 | -20.00 |
| 40 | 75.97499 | -10 | -0.02 | 20.00 | -20.00 |
| 50 | 75.97500 | 0 | 0.00 | 20.00 | -20.00 |
| 60 | 75.97501 | 10 | 0.02 | 20.00 | -20.00 |



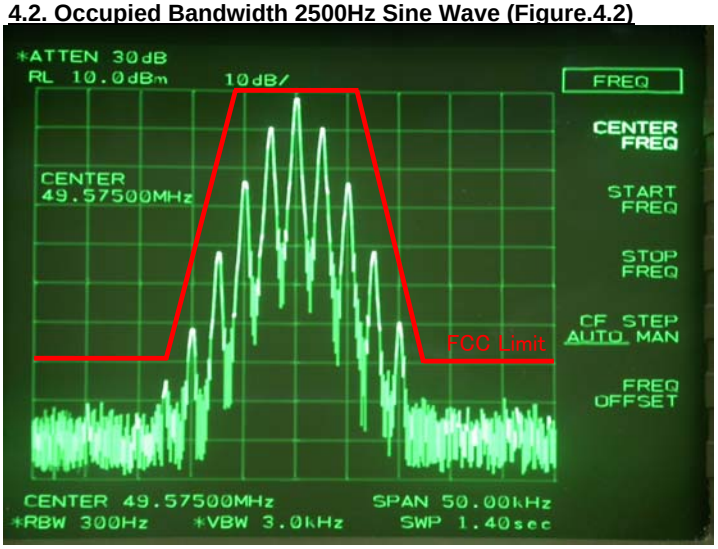
| | |
|---|---|
| Model Name | HH7700 |
| FCC ID | B3THH7700 |
| Serial Number | SAMPLE1 |
| Emission Type | 11K0F3E |
| Channel Spacing | 12.5[kHz] |
| Frequency | 49.575[MHz] |

## 4. Occupied Bandwidth

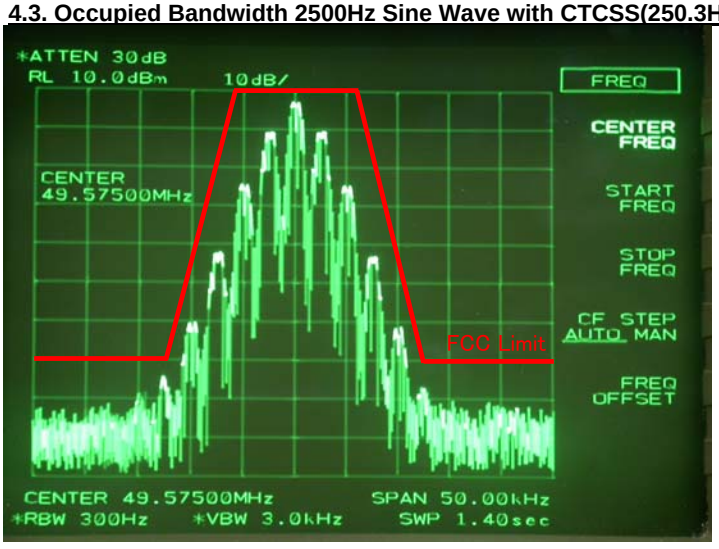
### 4.1 Occupied Bandwidth unmodulated (Figure.4.1)




### 4.2. Occupied Bandwidth 2500Hz Sine Wave (Figure.4.2)

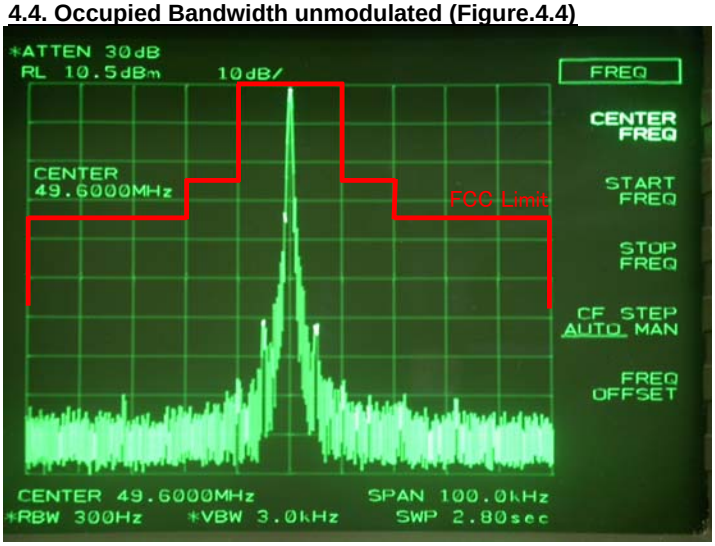



### 4.3. Occupied Bandwidth 2500Hz Sine Wave with CTCSS(250.3Hz) (Figure.4.3)

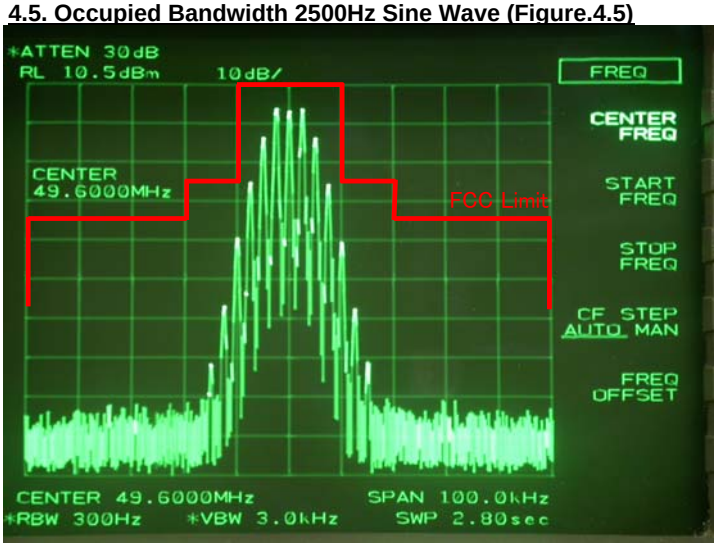


## 4. Occupied Bandwidth

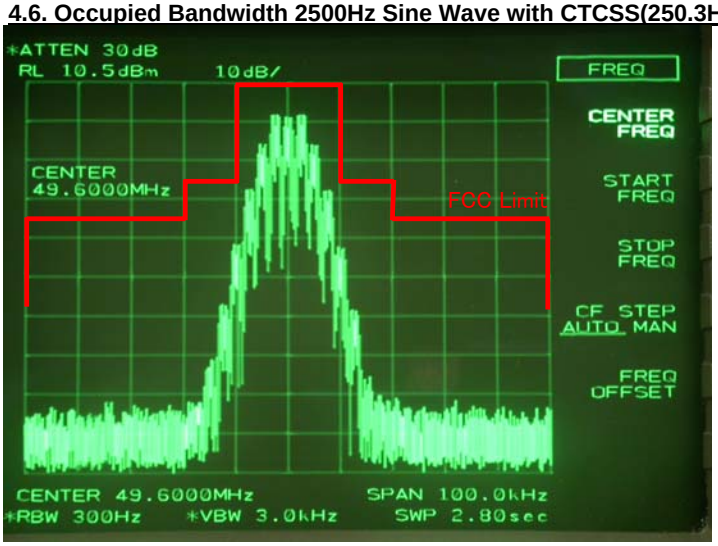
### 4.4. Occupied Bandwidth unmodulated (Figure.4.4)




### 4.5. Occupied Bandwidth 2500Hz Sine Wave (Figure.4.5)




### 4.6. Occupied Bandwidth 2500Hz Sine Wave with CTCSS(250.3Hz) (Figure.4.6)



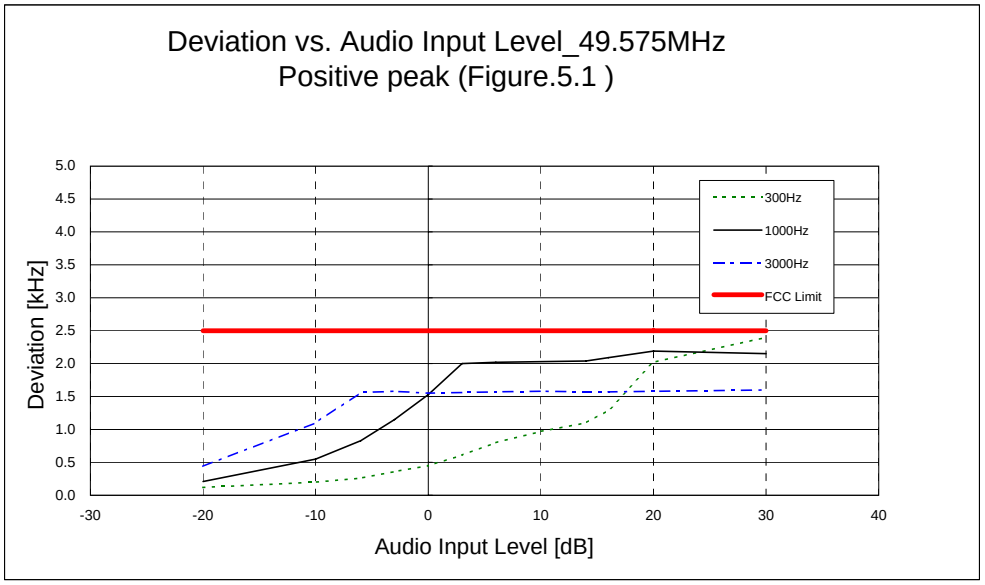
| | |
|---|---|
| Model Name | HH7700 |
| FCC ID | B3THH7700 |
| Serial Number | SAMPLE1 |
| Emission Type | 11K0F3E |
| Channel Spacing | 12.5[kHz] |
| Frequency | 49.575[MHz] |

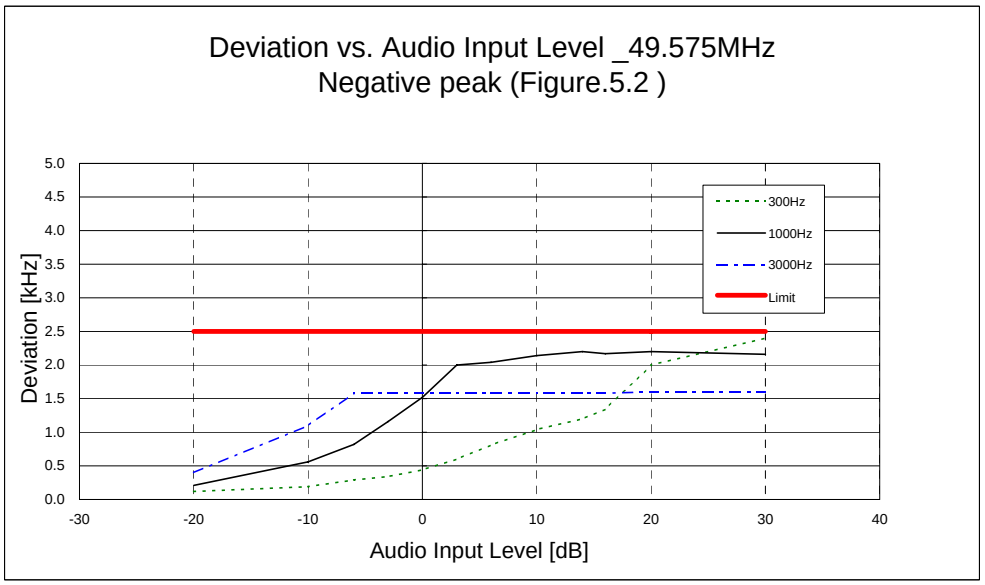
0dB =10.0[mV]

**5.Modulation Limiting**

**5.1.Deviation vs. Audio Input Level 49.575MHz (Table 5.1)**

| INPUT | | f=300Hz | | f=1000Hz | | f=3000Hz | | FCC Limit |
|---|---|---|---|---|---|---|---|---|
| V[mV] | [dB] | Positive peak | Negative peak | Positive peak | Negative peak | Positive peak | Negative peak | |
| 1.0 | -20 | 0.12 | 0.12 | 0.21 | 0.21 | 0.44 | 0.40 | 2.5 |
| 3.2 | -10 | 0.20 | 0.19 | 0.55 | 0.56 | 1.10 | 1.10 | 2.5 |
| 5.0 | -6 | 0.26 | 0.29 | 0.83 | 0.82 | 1.56 | 1.58 | 2.5 |
| 7.1 | -3 | 0.36 | 0.34 | 1.15 | 1.16 | 1.58 | 1.58 | 2.5 |
| 10.0 | 0 | 0.45 | 0.44 | 1.53 | 1.52 | 1.55 | 1.58 | 2.5 |
| 14.1 | 3 | 0.61 | 0.60 | 2.00 | 2.00 | 1.56 | 1.58 | 2.5 |
| 20.0 | 6 | 0.80 | 0.81 | 2.02 | 2.04 | 1.57 | 1.58 | 2.5 |
| 31.6 | 10 | 0.97 | 1.04 | 2.03 | 2.14 | 1.58 | 1.58 | 2.5 |
| 50.1 | 14 | 1.10 | 1.20 | 2.04 | 2.20 | 1.57 | 1.58 | 2.5 |
| 63.1 | 16 | 1.29 | 1.34 | 2.09 | 2.17 | 1.57 | 1.58 | 2.5 |
| 100.0 | 20 | 2.02 | 2.00 | 2.19 | 2.20 | 1.58 | 1.60 | 2.5 |
| 316.2 | 30 | 2.40 | 2.40 | 2.15 | 2.16 | 1.60 | 1.60 | 2.5 |



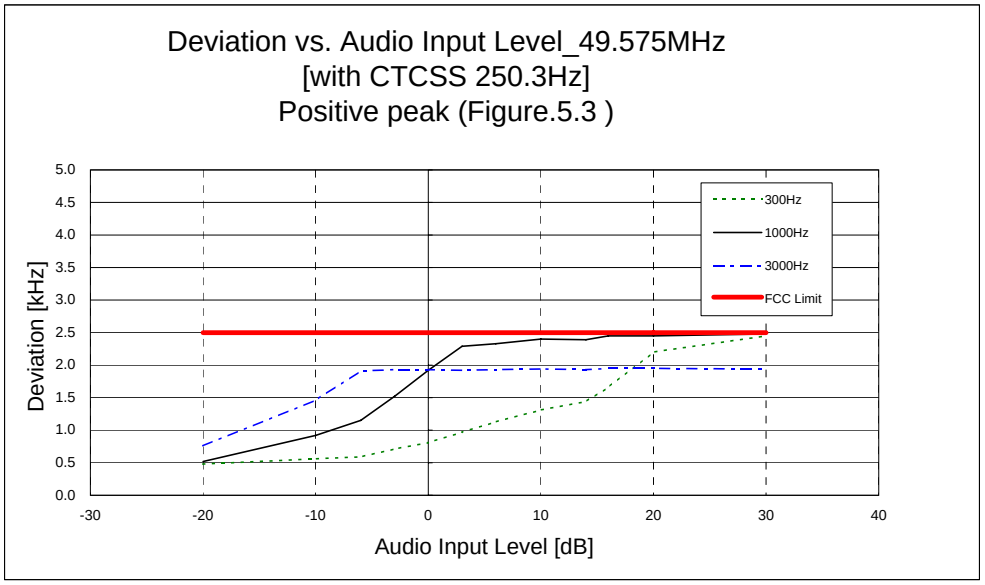
| | |
|---|---|
| Model Name | HH7700 |
| FCC ID | B3THH7700 |
| Serial Number | SAMPLE1 |
| Emission Type | 11K0F3E |
| Channel Spacing | 12.5[kHz] |
| Frequency | 49.575[MHz] |

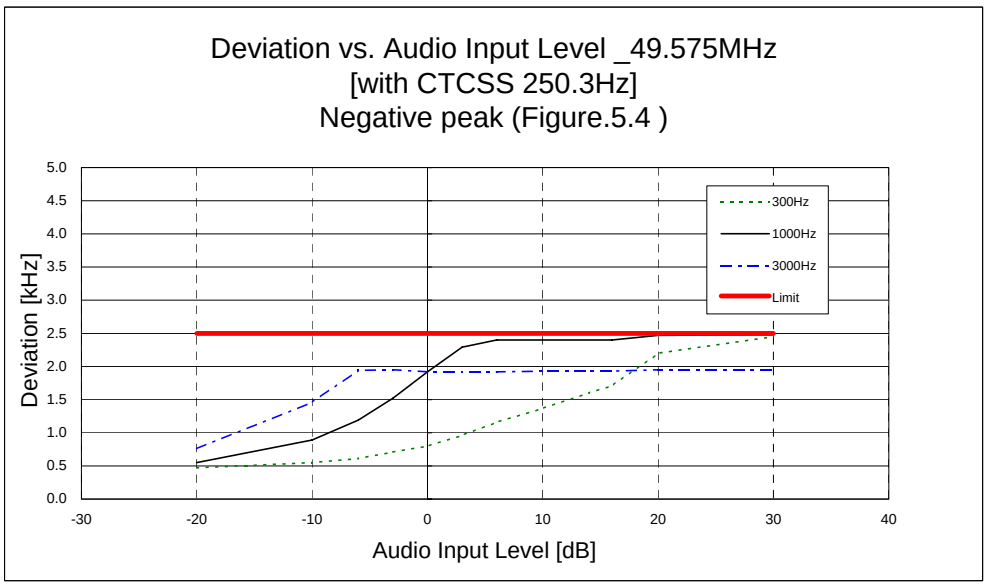
0dB =10.0[mV]

**5.Modulation Limiting**

**5.2.Deviation vs. Audio Input Level 49.575MHz with CTCSS (Table 5.2)**

| INPUT | | f=300Hz | | f=1000Hz | | f=3000Hz | | FCC Limit |
|---|---|---|---|---|---|---|---|---|
| V[mV] | [dB] | Positive peak | Negative peak | Positive peak | Negative peak | Positive peak | Negative peak | |
| 1.0 | -20 | 0.48 | 0.47 | 0.52 | 0.55 | 0.76 | 0.76 | 2.5 |
| 3.2 | -10 | 0.56 | 0.55 | 0.92 | 0.89 | 1.46 | 1.46 | 2.5 |
| 5.0 | -6 | 0.59 | 0.61 | 1.15 | 1.19 | 1.91 | 1.94 | 2.5 |
| 7.1 | -3 | 0.71 | 0.71 | 1.52 | 1.52 | 1.93 | 1.95 | 2.5 |
| 10.0 | 0 | 0.81 | 0.80 | 1.92 | 1.92 | 1.93 | 1.92 | 2.5 |
| 14.1 | 3 | 0.97 | 0.96 | 2.29 | 2.29 | 1.92 | 1.92 | 2.5 |
| 20.0 | 6 | 1.13 | 1.16 | 2.33 | 2.40 | 1.93 | 1.92 | 2.5 |
| 31.6 | 10 | 1.31 | 1.37 | 2.40 | 2.40 | 1.94 | 1.93 | 2.5 |
| 50.1 | 14 | 1.44 | 1.60 | 2.39 | 2.40 | 1.93 | 1.93 | 2.5 |
| 63.1 | 16 | 1.66 | 1.71 | 2.45 | 2.40 | 1.95 | 1.93 | 2.5 |
| 100.0 | 20 | 2.20 | 2.20 | 2.45 | 2.47 | 1.95 | 1.95 | 2.5 |
| 316.2 | 30 | 2.45 | 2.45 | 2.48 | 2.48 | 1.94 | 1.95 | 2.5 |



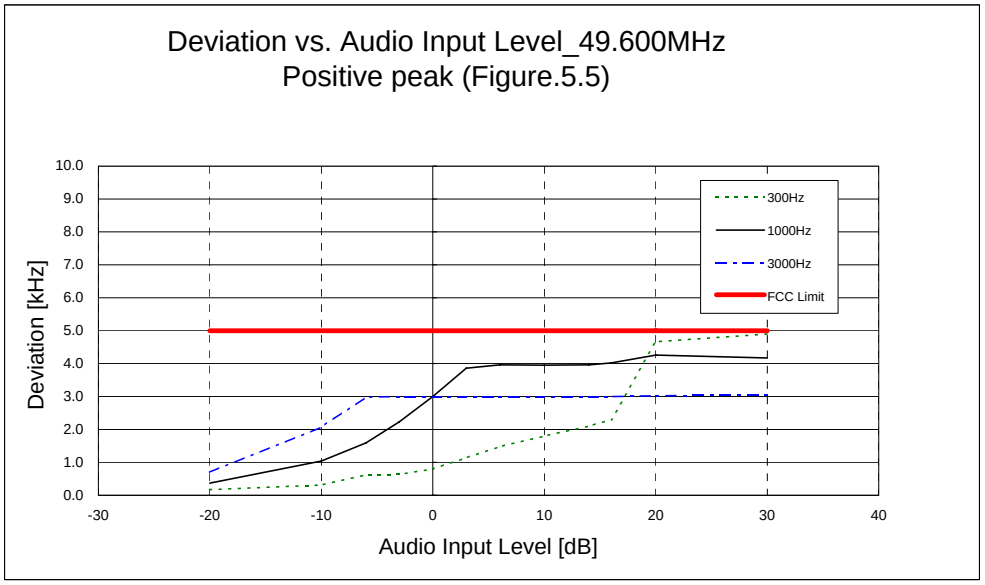



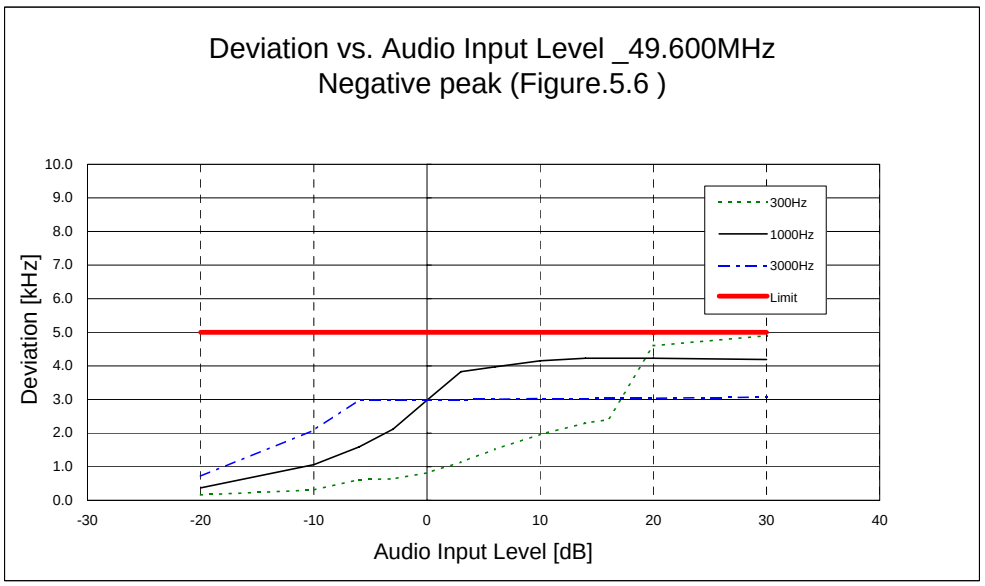
Model Name HH7700
FCC ID B3THH7700
Serial Number SAMPLE1
Emission Type 16K0F3E
Channel Spacing 25.0[kHz]
Frequency 49.600[MHz]

0dB =10.0[mV]

**5.Modulation Limiting**
**5.3.Deviation vs. Audio Input Level 49.600MHz (Table 5.3)**

| INPUT | | f=300Hz | | f=1000Hz | | f=3000Hz | | FCC Limit |
|---|---|---|---|---|---|---|---|---|
| V[mV] | [dB] | Positive peak | Negative peak | Positive peak | Negative peak | Positive peak | Negative peak | |
| 1.0 | -20 | 0.17 | 0.16 | 0.37 | 0.37 | 0.70 | 0.72 | 5.0 |
| 3.2 | -10 | 0.31 | 0.31 | 1.04 | 1.06 | 2.07 | 2.09 | 5.0 |
| 5.0 | -6 | 0.62 | 0.62 | 1.59 | 1.59 | 2.98 | 2.99 | 5.0 |
| 7.1 | -3 | 0.63 | 0.64 | 2.23 | 2.12 | 3.00 | 3.00 | 5.0 |
| 10.0 | 0 | 0.80 | 0.82 | 3.00 | 2.98 | 3.00 | 3.00 | 5.0 |
| 14.1 | 3 | 1.14 | 1.14 | 3.86 | 3.83 | 3.00 | 3.00 | 5.0 |
| 20.0 | 6 | 1.48 | 1.52 | 3.96 | 3.97 | 3.00 | 3.01 | 5.0 |
| 31.6 | 10 | 1.80 | 1.96 | 3.95 | 4.15 | 3.00 | 3.03 | 5.0 |
| 50.1 | 14 | 2.10 | 2.30 | 3.96 | 4.23 | 3.00 | 3.03 | 5.0 |
| 63.1 | 16 | 2.30 | 2.40 | 4.02 | 4.23 | 3.00 | 3.04 | 5.0 |
| 100.0 | 20 | 4.66 | 4.60 | 4.26 | 4.23 | 3.02 | 3.04 | 5.0 |
| 316.2 | 30 | 4.90 | 4.90 | 4.17 | 4.19 | 3.06 | 3.07 | 5.0 |



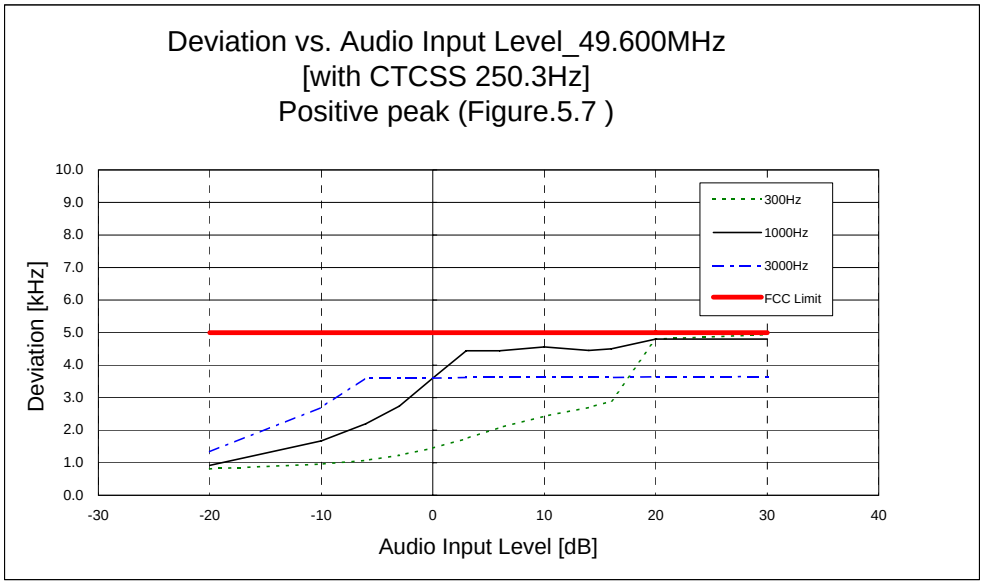
| | |
|---|---|
| Model Name | HH7700 |
| FCC ID | B3THH7700 |
| Serial Number | SAMPLE1 |
| Emission Type | 16K0F3E |
| Channel Spacing | 25.0[kHz] |
| Frequency | 49.600[MHz] |

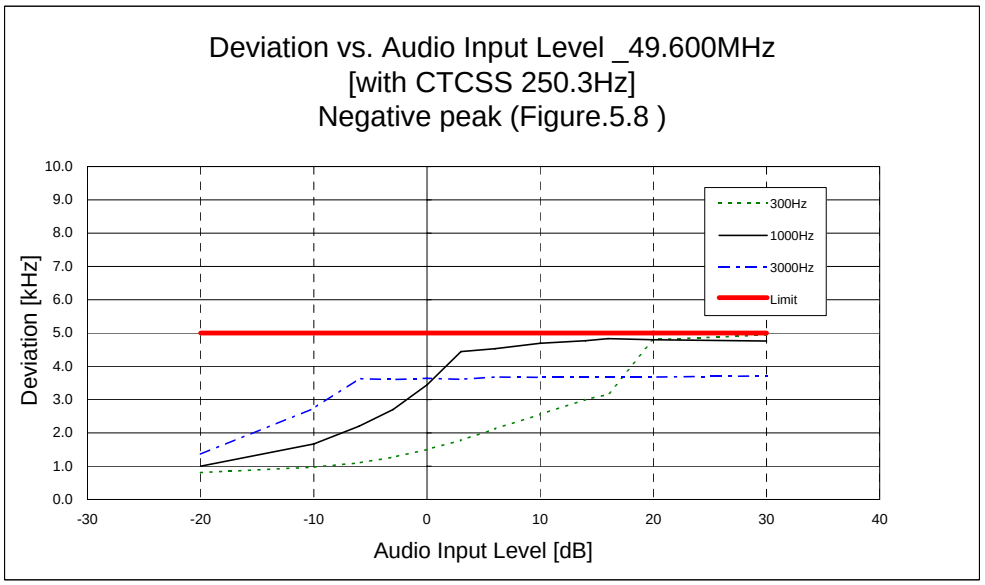
0dB =10.0[mV]

**5.Modulation Limiting**

**5.4.Deviation vs. Audio Input Level 49.600MHz with CTCSS (Table5.4)**

| INPUT | | f=300Hz | | f=1000Hz | | f=3000Hz | | FCC Limit |
|---|---|---|---|---|---|---|---|---|
| V[mV] | [dB] | Positive peak | Negative peak | Positive peak | Negative peak | Positive peak | Negative peak | |
| 1.0 | -20 | 0.81 | 0.81 | 0.92 | 1.00 | 1.34 | 1.36 | 5.0 |
| 3.2 | -10 | 0.96 | 0.97 | 1.67 | 1.67 | 2.70 | 2.74 | 5.0 |
| 5.0 | -6 | 1.07 | 1.10 | 2.20 | 2.20 | 3.61 | 3.63 | 5.0 |
| 7.1 | -3 | 1.23 | 1.27 | 2.74 | 2.70 | 3.60 | 3.60 | 5.0 |
| 10.0 | 0 | 1.45 | 1.50 | 3.60 | 3.44 | 3.60 | 3.64 | 5.0 |
| 14.1 | 3 | 1.74 | 1.78 | 4.44 | 4.44 | 3.62 | 3.61 | 5.0 |
| 20.0 | 6 | 2.08 | 2.12 | 4.44 | 4.53 | 3.62 | 3.68 | 5.0 |
| 31.6 | 10 | 2.43 | 2.56 | 4.56 | 4.69 | 3.62 | 3.67 | 5.0 |
| 50.1 | 14 | 2.70 | 3.00 | 4.45 | 4.77 | 3.62 | 3.68 | 5.0 |
| 63.1 | 16 | 2.89 | 3.16 | 4.50 | 4.83 | 3.62 | 3.68 | 5.0 |
| 100.0 | 20 | 4.80 | 4.80 | 4.80 | 4.80 | 3.64 | 3.68 | 5.0 |
| 316.2 | 30 | 4.94 | 4.94 | 4.80 | 4.76 | 3.65 | 3.71 | 5.0 |



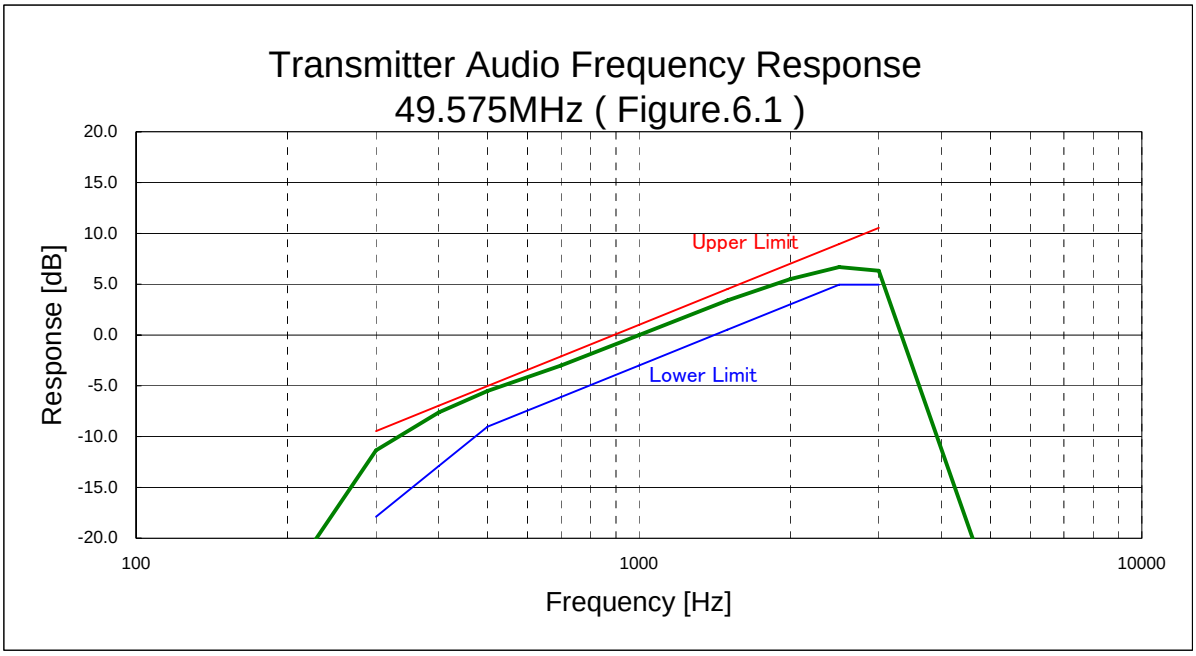



Model Name HH7700
FCC ID B3THH7700
Serial Number SAMPLE1
Emission Type 11K0F3E
Channel Spacing 12.5[kHz]
Frequency 49.575[MHz]

## 6.Audio Frequency Response

### 6.1.Transmitter Audio Frequency Response (Table.6.1)

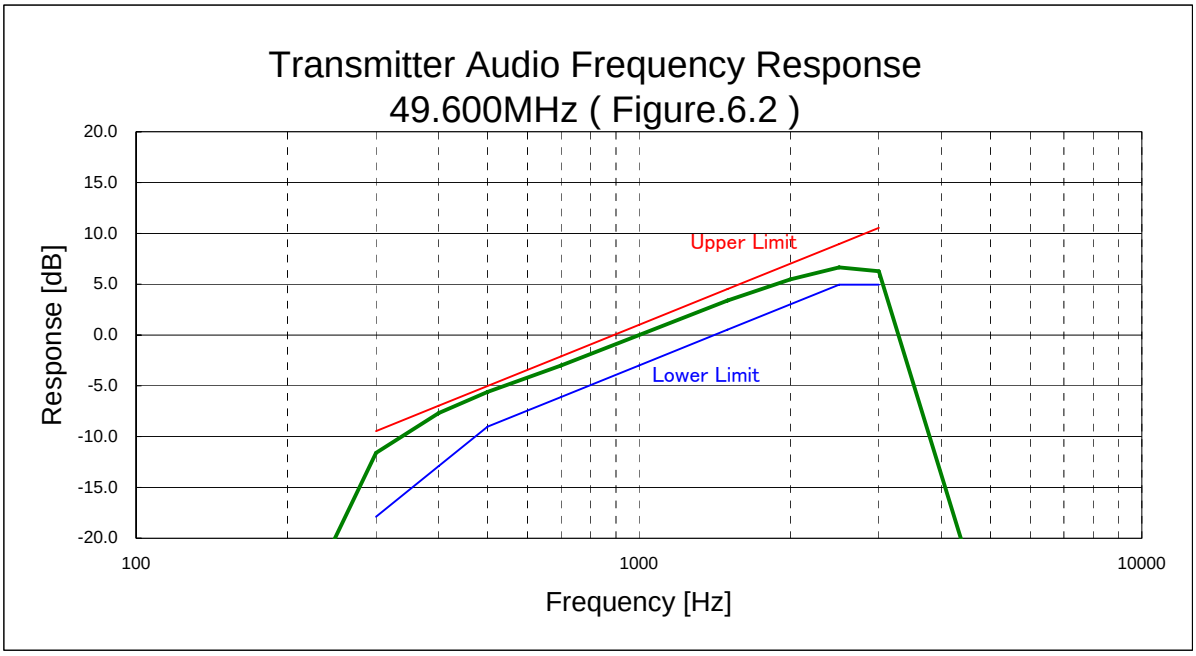
| Frequency[Hz] | Measured SAMPLE1 | FCC Limit | FCC Limit |
|---|---|---|---|
| 100 | | | |
| 200 | -24.20 | | |
| 300 | -11.35 | -9.46 | -17.89 |
| 400 | -7.62 | -6.96 | -12.90 |
| 500 | -5.50 | -5.02 | -9.02 |
| 700 | -3.00 | -2.10 | -6.10 |
| 1000 | 0.00 | 1.00 | -3.00 |
| 1500 | 3.41 | 4.52 | 0.52 |
| 2000 | 5.50 | 7.02 | 3.02 |
| 2500 | 6.68 | 8.96 | 4.96 |
| 3000 | 6.33 | 10.54 | 4.96 |
| 5000 | -25.00 | | |



Model Name HH7700
FCC ID B3THH7700
Serial Number SAMPLE1
Emission Type 16K0F3E
Channel Spacing 25.0kHz]
Frequency 49.600[MHz]

**6. Audio Frequency Response**
**6.2.Transmitter Audio Frequency Response (Table.6.2)**

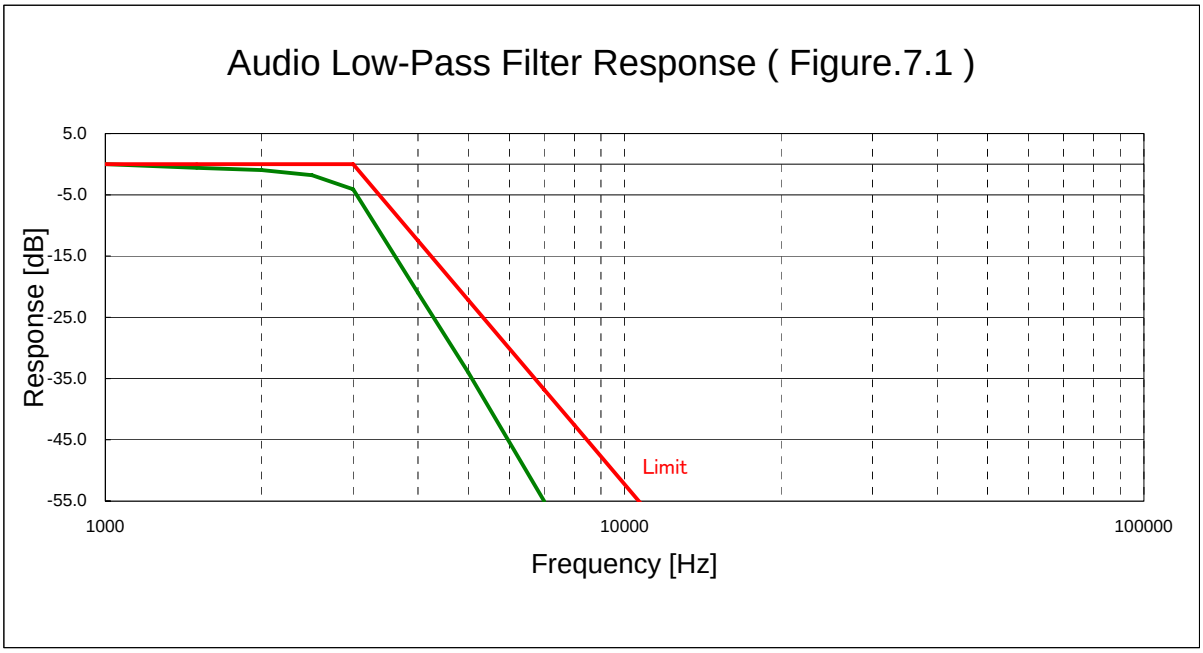
| Frequency[Hz] | Measured SAMPLE1 | FCC Limit | FCC Limit |
|---|---|---|---|
| 100 | | | |
| 200 | -29.70 | | |
| 300 | -11.60 | -9.46 | -17.89 |
| 400 | -7.68 | -6.96 | -12.90 |
| 500 | -5.60 | -5.02 | -9.02 |
| 700 | -3.00 | -2.10 | -6.10 |
| 1000 | 0.00 | 1.00 | -3.00 |
| 1500 | 3.40 | 4.52 | 0.52 |
| 2000 | 5.48 | 7.02 | 3.02 |
| 2500 | 6.65 | 8.96 | 4.96 |
| 3000 | 6.28 | 10.54 | 4.96 |
| 5000 | -29.50 | | |



**7. Audio LPF Response**

**7.1.Audio Low-Pass Filter Response (Table.7.1)**

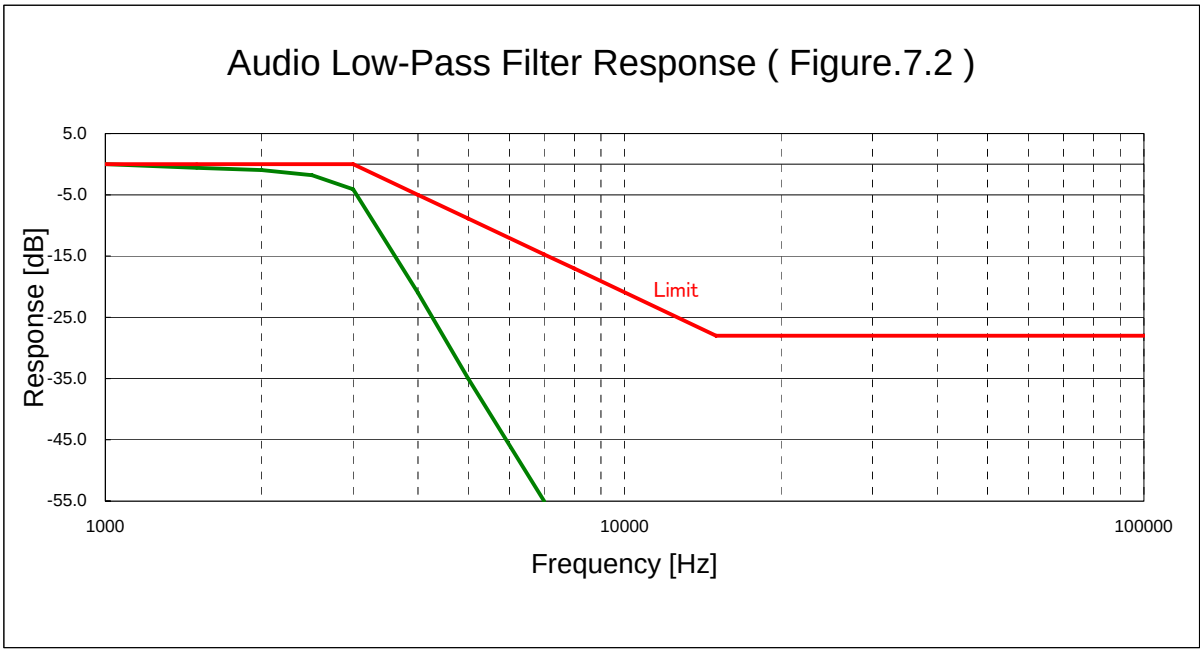
| AF[kHz] | Measured SAMPLE1 | FCC Limit |
|---|---|---|
| 1000 | 0.00 | **0.00** |
| 1500 | -0.60 | **0.00** |
| 2000 | -0.96 | **0.00** |
| 2500 | -1.80 | **0.00** |
| 3000 | -4.10 | **0.00** |
| 4000 | -21.00 | **-12.49** |
| 5000 | -34.00 | **-22.18** |
| 7000 | -55.00 | **-36.80** |
| 8000 | | **-42.60** |
| 15000 | | **-69.90** |
| 20000 | | **-82.39** |
| 100000 | | **-152.29** |



**7.Audio LPF Response**

**7.2Audio Low-Pass Filter Response (Table.7.2)**

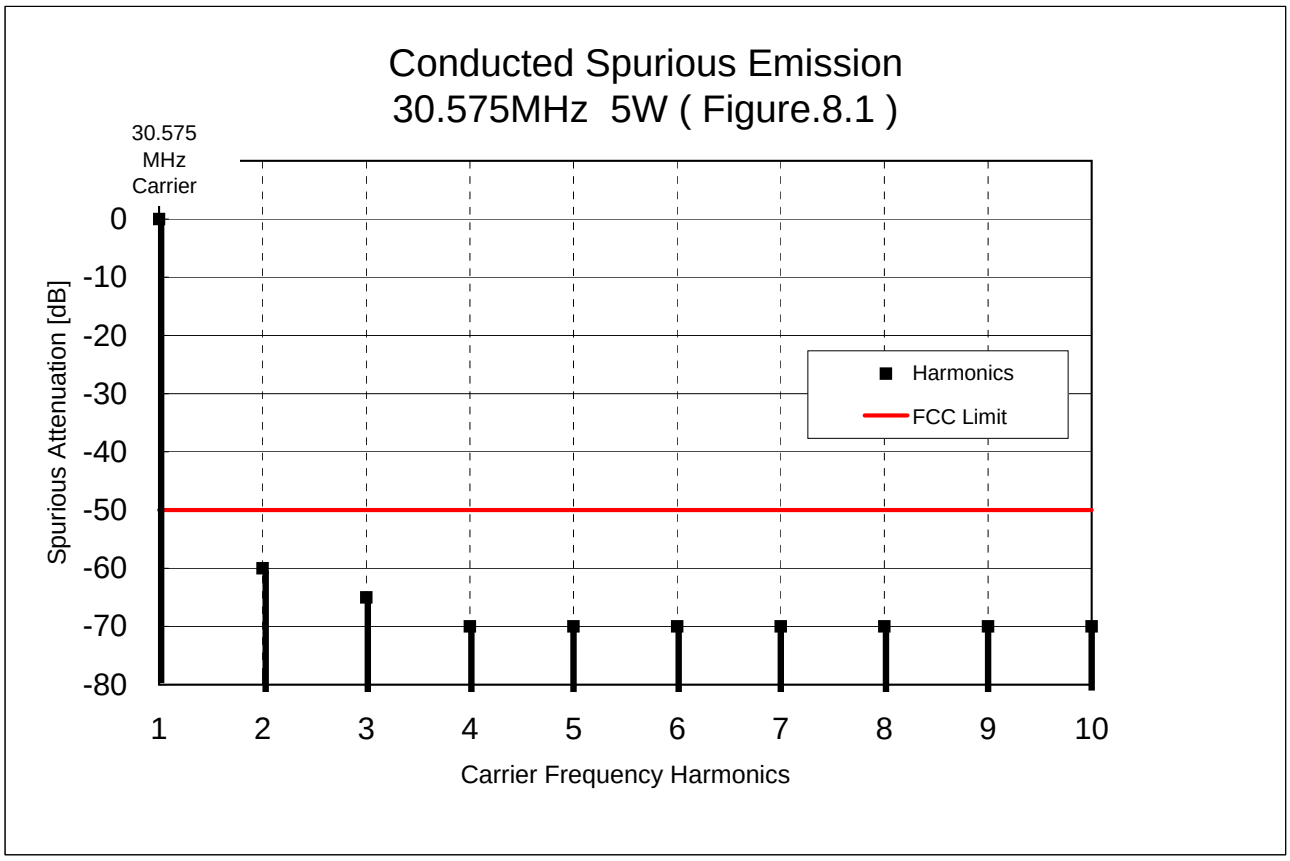
| AF[kHz] | Measured **SAMPLE1** | **FCC Limit** |
|---|---|---|
| 1000 | 0.00 | **0.00** |
| 1500 | -0.60 | **0.00** |
| 2000 | -0.96 | **0.00** |
| 2500 | -1.80 | **0.00** |
| 3000 | -4.10 | **0.00** |
| 4000 | -21.00 | **-5.00** |
| 5000 | -35.00 | **-8.87** |
| 7000 | -55.00 | **-14.72** |
| 8000 | | **-17.04** |
| 15000 | | **-28.00** |
| 20000 | | **-28.00** |
| 100000 | | **-28.00** |



**8.Conducted Spurious Emission**

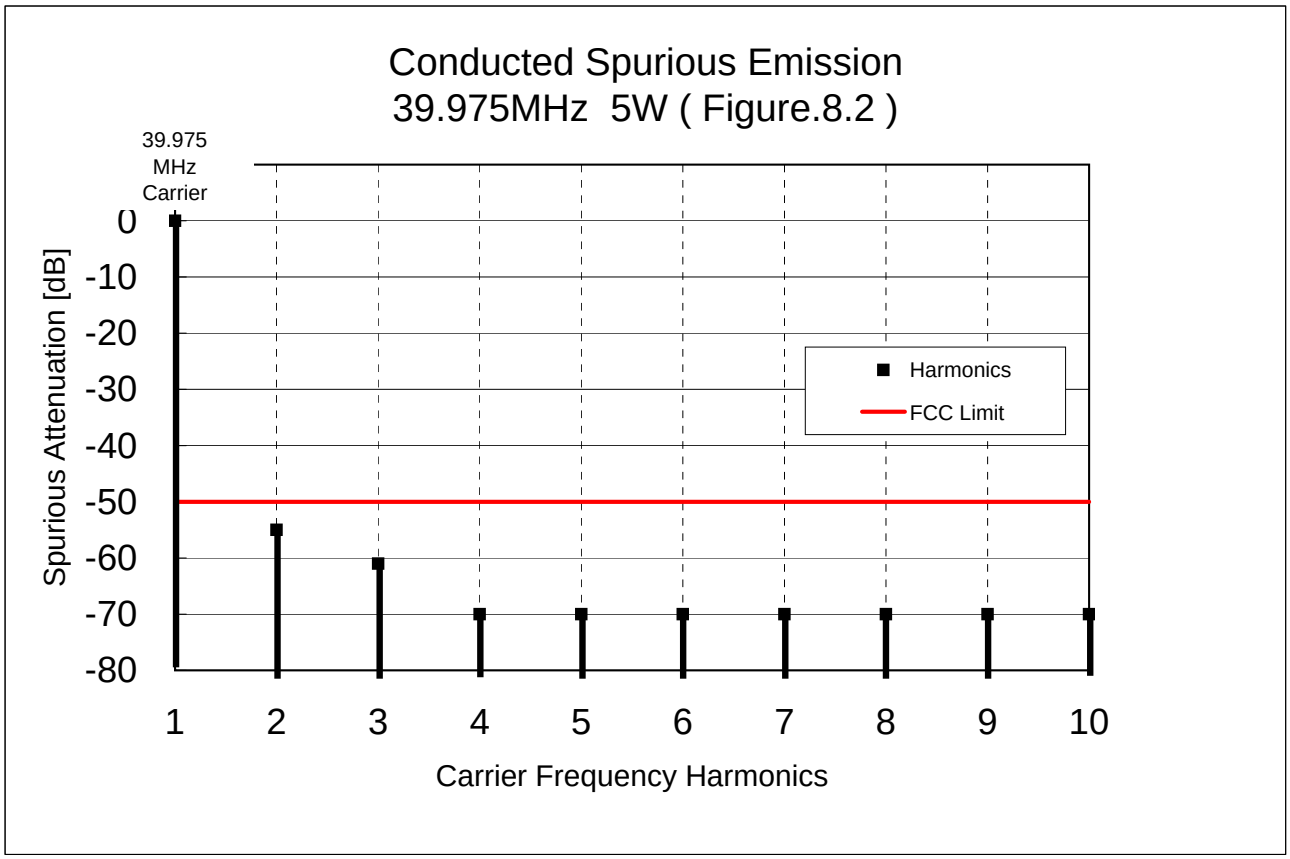
**8.1.Conducted Spurious Emission, 30.575MHz@5W (Table.8.1)**

| Harmonics | Emission Frequency [MHz] | Spurious Attenuation [dB] | FCC Limit [dB] |
|---|---|---|---|
| 1 | 30.575 | Carrier | -50.0 |
| 2 | 61.150 | -60.0 | -50.0 |
| 3 | 91.725 | -65.0 | -50.0 |
| 4 | 122.300 | -70.0 | -50.0 |
| 5 | 152.875 | -70.0 | -50.0 |
| 6 | 183.450 | -70.0 | -50.0 |
| 7 | 214.025 | -70.0 | -50.0 |
| 8 | 244.600 | -70.0 | -50.0 |
| 9 | 275.175 | -70.0 | -50.0 |
| 10 | 305.750 | -70.0 | -50.0 |



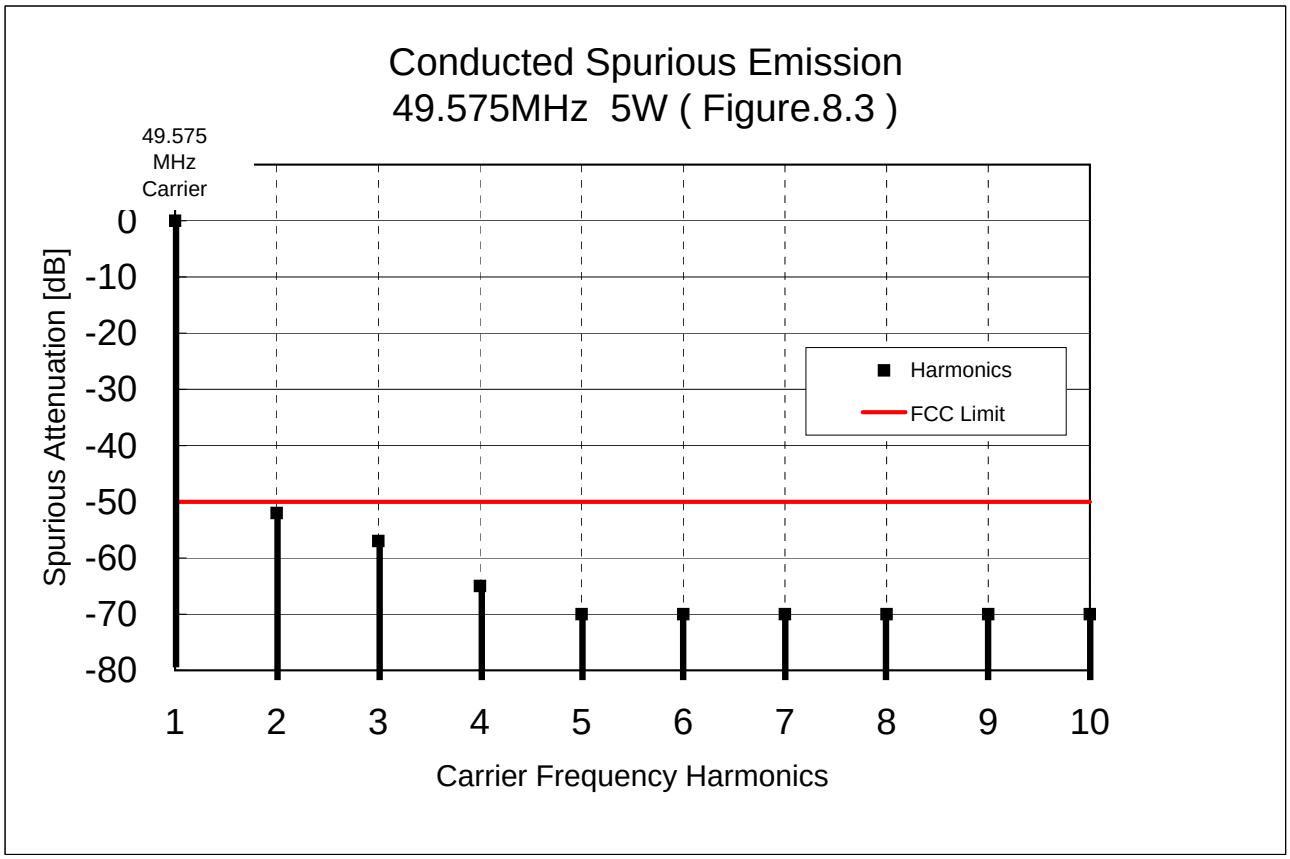
**8.Conducted Spurious Emission**
**8.2.Conducted Spurious Emission, 39.975MHz@5W (Table.8.2)**

| Harmonics | Emission Frequency [MHz] | Spurious Attenuation [dB] | FCC Limit [dB] |
|---|---|---|---|
| 1 | 39.975 | Carrier | -50.0 |
| 2 | 79.950 | -55.0 | -50.0 |
| 3 | 119.925 | -61.0 | -50.0 |
| 4 | 159.900 | -70.0 | -50.0 |
| 5 | 199.875 | -70.0 | -50.0 |
| 6 | 239.850 | -70.0 | -50.0 |
| 7 | 279.825 | -70.0 | -50.0 |
| 8 | 319.800 | -70.0 | -50.0 |
| 9 | 359.775 | -70.0 | -50.0 |
| 10 | 399.750 | -70.0 | -50.0 |



**8.Conducted Spurious Emission**
**8.3.Conducted Spurious Emission, 49.575MHz@5W (Table.8.3)**

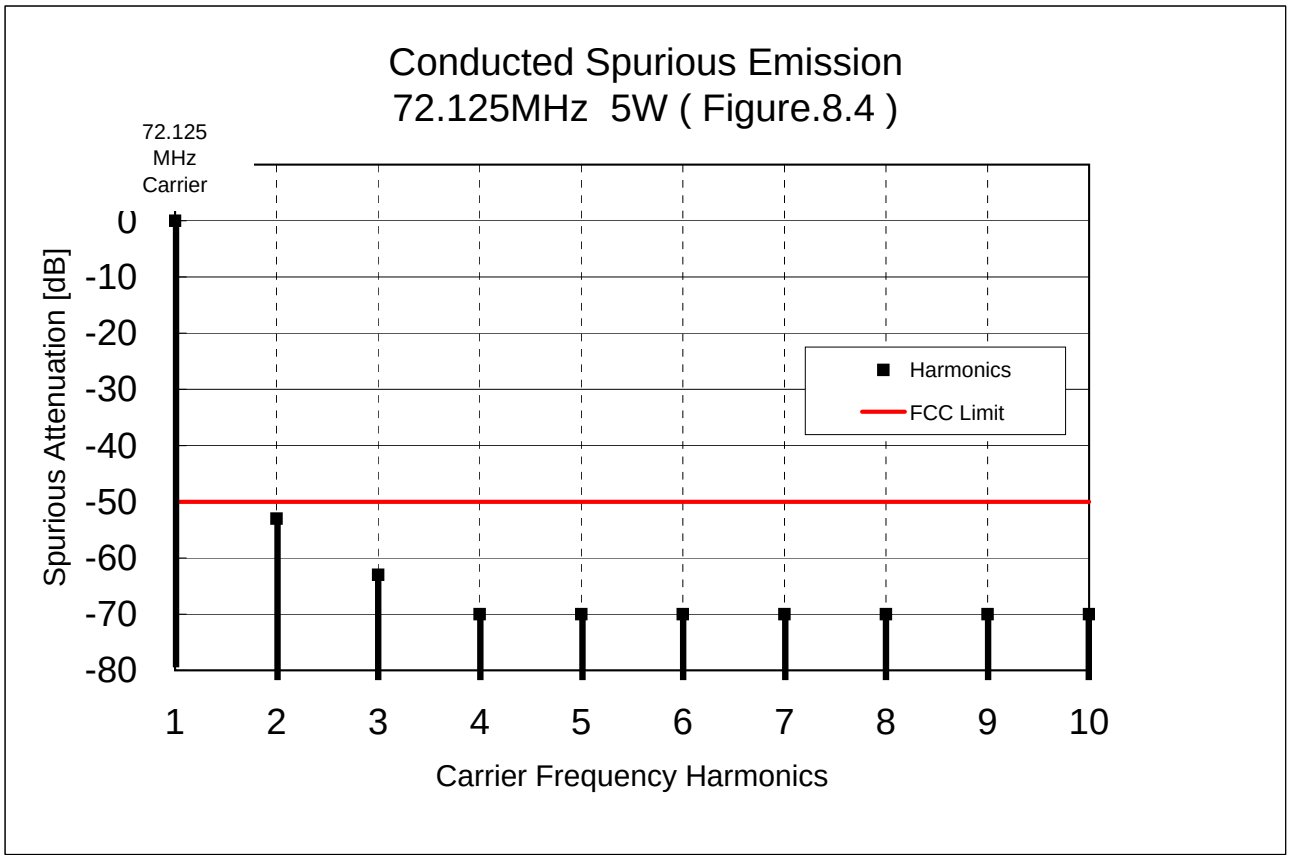
| Harmonics | Emission Frequency [MHz] | Spurious Attenuation [dB] | FCC Limit [dB] |
|---|---|---|---|
| 1 | 49.575 | Carrier | -50.0 |
| 2 | 99.150 | -52.0 | -50.0 |
| 3 | 148.725 | -57.0 | -50.0 |
| 4 | 198.300 | -65.0 | -50.0 |
| 5 | 247.875 | -70.0 | -50.0 |
| 6 | 297.450 | -70.0 | -50.0 |
| 7 | 347.025 | -70.0 | -50.0 |
| 8 | 396.600 | -70.0 | -50.0 |
| 9 | 446.175 | -70.0 | -50.0 |
| 10 | 495.750 | -70.0 | -50.0 |



**8.Conducted Spurious Emission**

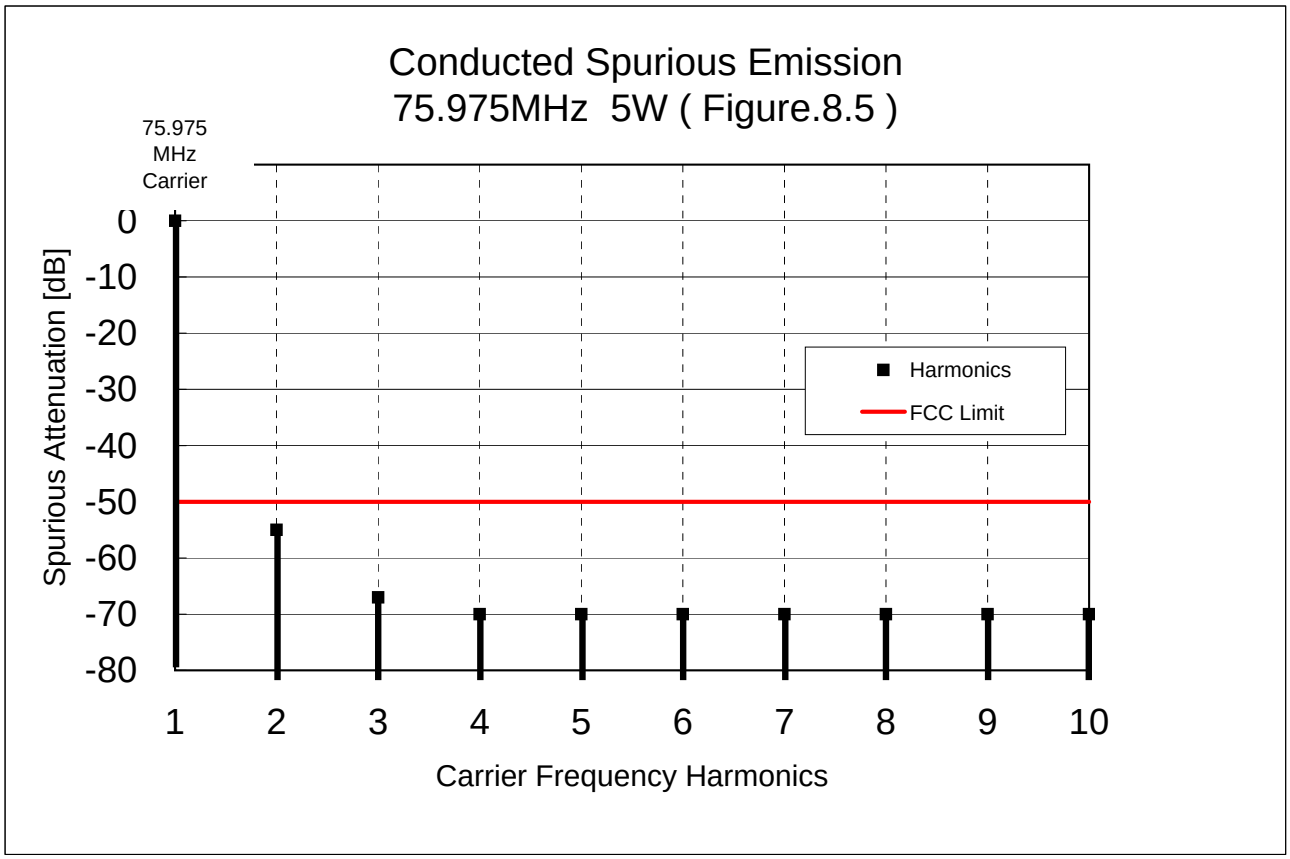
**8.4.Conducted Spurious Emission, 72.125MHz@5W (Table.8.4)**

| Harmonics | Emission Frequency [MHz] | Spurious Attenuation [dB] | FCC Limit [dB] |
|---|---|---|---|
| 1 | 72.125 | Carrier | -50.0 |
| 2 | 144.250 | -53.0 | -50.0 |
| 3 | 216.375 | -63.0 | -50.0 |
| 4 | 288.500 | -70.0 | -50.0 |
| 5 | 360.625 | -70.0 | -50.0 |
| 6 | 432.750 | -70.0 | -50.0 |
| 7 | 504.875 | -70.0 | -50.0 |
| 8 | 577.000 | -70.0 | -50.0 |
| 9 | 649.125 | -70.0 | -50.0 |
| 10 | 721.250 | -70.0 | -50.0 |



**8.Conducted Spurious Emission**
**8.5.Conducted Spurious Emission, 75.975MHz@5W (Table 8.5)**

| Harmonics | Emission Frequency [MHz] | Spurious Attenuation [dB] | FCC Limit [dB] |
|---|---|---|---|
| 1 | 75.975 | Carrier | -50.0 |
| 2 | 151.950 | -55.0 | -50.0 |
| 3 | 227.925 | -67.0 | -50.0 |
| 4 | 303.900 | -70.0 | -50.0 |
| 5 | 379.875 | -70.0 | -50.0 |
| 6 | 455.850 | -70.0 | -50.0 |
| 7 | 531.825 | -70.0 | -50.0 |
| 8 | 607.800 | -70.0 | -50.0 |
| 9 | 683.775 | -70.0 | -50.0 |
| 10 | 759.750 | -70.0 | -50.0 |



**9.Conducted Spurious Emission@Receiver (Table.9)**

| Frequency Tuned [MHz] | Frequency Emission [MHz] | Level [dBm] | Frequency Tuned [MHz] | Frequency Emission [MHz] | Level [dBm] | limit [dBm] |
|---|---|---|---|---|---|---|
| 30.5750 | 161.075 | -72.0 | 39.9750 | 170.475 | -72.0 | -57.0 |
| 30.5750 | 322.150 | --- | 39.9750 | 340.950 | --- | -57.0 |
| 30.5750 | 483.225 | --- | 39.9750 | 511.425 | --- | -57.0 |
| 30.5750 | 644.300 | --- | 39.9750 | 681.900 | --- | -57.0 |
| 30.5750 | 805.375 | --- | 39.9750 | 852.375 | --- | -57.0 |
| 30.5750 | 966.450 | --- | 39.9750 | 1022.850 | --- | -57.0 |
| 30.5750 | 1127.525 | --- | 39.9750 | 1193.325 | --- | -57.0 |
| 30.5750 | 1288.600 | --- | 39.9750 | 1363.800 | --- | -57.0 |
| 30.5750 | 1449.675 | --- | 39.9750 | 1534.275 | --- | -57.0 |
| 30.5750 | 1610.750 | --- | 39.9750 | 1704.750 | --- | -57.0 |

* --- : Less than -80dBm

* --- : Less than -80dBm

| Frequency Tuned [MHz] | Frequency Emission [MHz] | Level [dBm] | Frequency Tuned [MHz] | Frequency Emission [MHz] | Level [dBm] | limit [dBm] |
|---|---|---|---|---|---|---|
| 49.5750 | 180.075 | -72.0 | 72.1250 | 202.625 | -77.0 | -57.0 |
| 49.5750 | 360.150 | --- | 72.1250 | 405.250 | --- | -57.0 |
| 49.5750 | 540.225 | --- | 72.1250 | 607.875 | --- | -57.0 |
| 49.5750 | 720.300 | --- | 72.1250 | 810.500 | --- | -57.0 |
| 49.5750 | 900.375 | -77.0 | 72.1250 | 1013.125 | --- | -57.0 |
| 49.5750 | 1080.450 | -77.0 | 72.1250 | 1215.750 | -78.0 | -57.0 |
| 49.5750 | 1260.525 | -73.0 | 72.1250 | 1418.375 | -73.0 | -57.0 |
| 49.5750 | 1440.600 | --- | 72.1250 | 1621.000 | --- | -57.0 |
| 49.5750 | 1620.675 | --- | 72.1250 | 1823.625 | --- | -57.0 |
| 49.5750 | 1800.750 | --- | 72.1250 | 2026.250 | --- | -57.0 |

* --- : Less than -80dBm

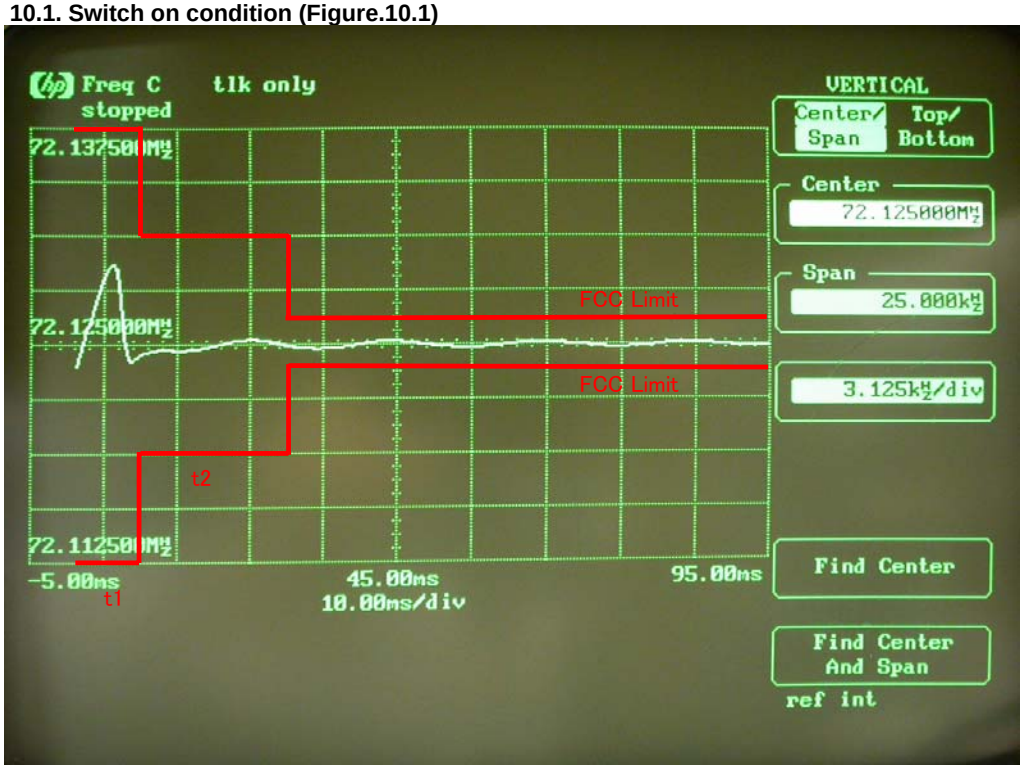
* --- : Less than -80dBm

| Frequency Tuned [MHz] | Frequency Emission [MHz] | Level [dBm] | limit [dBm] |
|---|---|---|---|
| 75.9750 | 206.475 | -72.0 | -57.0 |
| 75.9750 | 412.950 | --- | -57.0 |
| 75.9750 | 619.425 | --- | -57.0 |
| 75.9750 | 825.900 | --- | -57.0 |
| 75.9750 | 1032.375 | --- | -57.0 |
| 75.9750 | 1238.850 | --- | -57.0 |
| 75.9750 | 1445.325 | -74.0 | -57.0 |
| 75.9750 | 1651.800 | -76.0 | -57.0 |
| 75.9750 | 1858.275 | --- | -57.0 |
| 75.9750 | 2064.750 | --- | -57.0 |

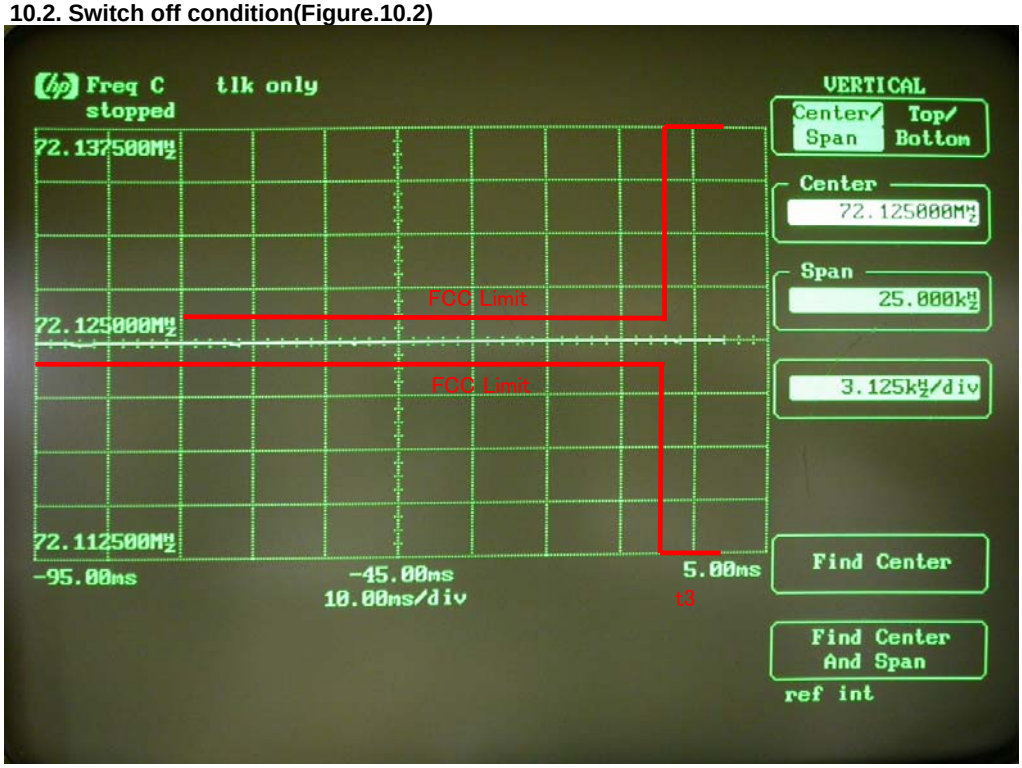
* --- : Less than -80dBm

**10.Transient Behavior**

**10.1. Switch on condition (Figure.10.1)**



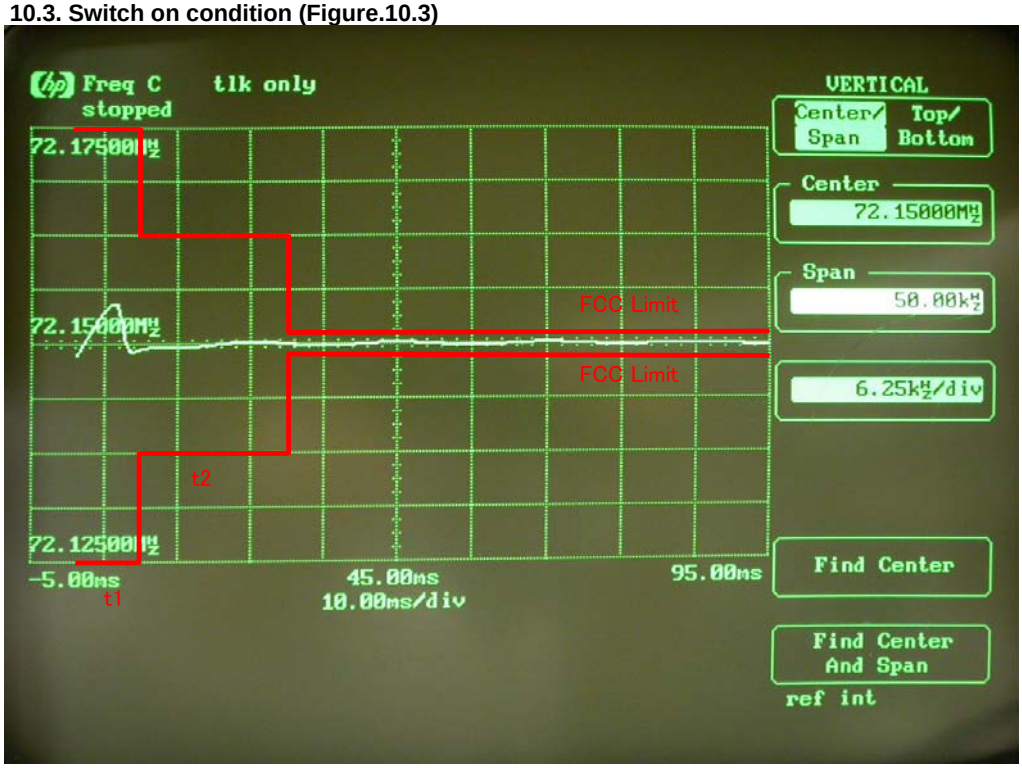

**10.2. Switch off condition(Figure.10.2)**



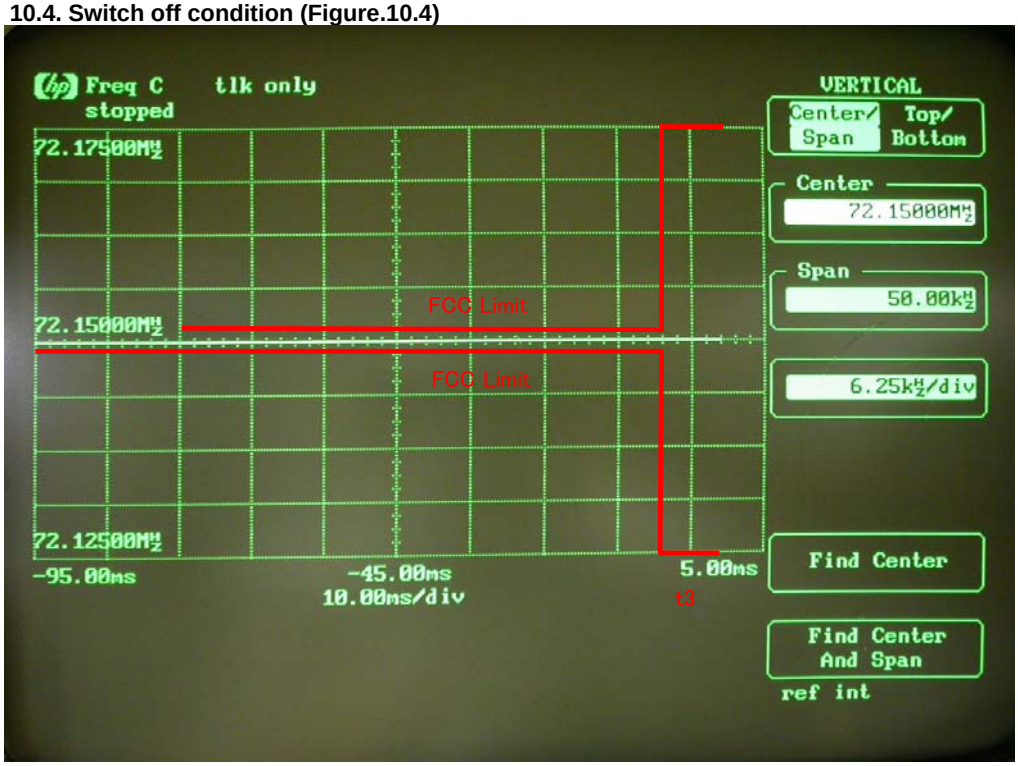
| | |
|---|---|
| Model Name | HH7700 |
| FCC ID | B3THH7700 |
| Serial Number | SAMPLE1 |
| Emission Type | 16K0F3E |
| Channel Spacing | 25.0[kHz] |
| Frequency | 72.150[MHz] |

**10.Transient Behavior**

**10.3. Switch on condition (Figure.10.3)**




**10.4. Switch off condition (Figure.10.4)**



## DATA OF SPURIOUS EMISSIONS TEST (RADIATED): 30MHz to 1000MHz

UL Japan, Inc.
YAMAKITA NO.1 Anechoic Chamber
Job No.: 29BE0120-YK

Applicant : DATRON WORLD COMMUNICATION, INC.
Kind of Equipment : VHF Handheld Transceiver
Model No. : HH7700
Serial No. : sample1
Power : DC7.2V
Mode : Transmitting (CH1: 30.575MHz)
Remarks :
Date : 2008/9/25
Test Distans : 3m
Temperature : 23 deg.C. Engineer : Tatsuya Arai
Humidity : 73 %
Regulation : FCC Part90

| No. | FREQ | READING | | CABLE | ANT | ATTEN | RESULT | | LIMITS | MARGIN | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | LOSS | GAIN | | HOR | VER | (ERP) | HOR | VER |
| | [MHz] | [dBm] | | [dB] | [dBi] | [dB] | [dBm] | | [dBm] | [dBm] | |
| 1 | 61.15 | -89.5 | -78.7 | 1.3 | -1.86 | 0.00 | -92.7 | -81.9 | -13.0 | 79.7 | 68.9 |
| 2 | 91.73 | -57.0 | -62.4 | 1.7 | 0.64 | 0.00 | -58.1 | -63.5 | -13.0 | 45.1 | 50.5 |
| 3 | 122.30 | -73.0 | -57.3 | 1.9 | 2.15 | 9.89 | -82.6 | -66.9 | -13.0 | 69.6 | 53.9 |
| 4 | 152.88 | -28.8 | -30.8 | 2.2 | 2.15 | 9.90 | -38.8 | -40.8 | -13.0 | 25.8 | 27.8 |
| 5 | 183.45 | -60.7 | -51.9 | 2.4 | 2.15 | 9.96 | -70.9 | -62.1 | -13.0 | 57.9 | 49.1 |
| 6 | 214.03 | -63.4 | -64.7 | 2.6 | 2.15 | 10.00 | -73.9 | -75.2 | -13.0 | 60.9 | 62.2 |
| 7 | 244.60 | -73.0 | -58.7 | 2.8 | 2.15 | 10.01 | -83.7 | -69.4 | -13.0 | 70.7 | 56.4 |
| 8 | 275.18 | -31.0 | -30.7 | 2.9 | 2.15 | 10.03 | -41.8 | -41.5 | -13.0 | 28.8 | 28.5 |
| 9 | 305.75 | -44.3 | -27.2 | 3.1 | 2.15 | 9.85 | -55.1 | -38.0 | -13.0 | 42.1 | 25.0 |

CALCULATION:READING(SG)-CABLE LOSS+ANT.GAIN-ATTEN
RxANTENNA:Biconical Antenna(30-300MHz), Logperriodic Antenna(No.300-1000MHz)
TxANTENNA:Biconical Antenna(30-100MHz), Dipole Antenna(100-1000MHz)

## DATA OF SPURIOUS EMISSIONS TEST (RADIATED): 30MHz to 1000MHz

UL Japan, Inc.
YAMAKITA NO.1 Anechoic Chamber
Job No.: 29BE0120-YK

Applicant : DATRON WORLD COMMUNICATION, INC.
Kind of Equipment : VHF Handheld Transceiver
Model No. : HH7700
Serial No. : sample1
Power : DC7.2V
Mode : Transmitting (CH2: 39.975MHz)
Remarks :
Date : 2008/9/25
Test Distans : 3m
Temperature : 23 deg.C. Engineer : Tatsuya Arai
Humidity : 73 %
Regulation : FCC Part90

| No. | FREQ | READING | | CABLE | ANT | ATTEN | RESULT | | LIMITS | MARGIN | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | LOSS | GAIN | | HOR | VER | (ERP) | HOR | VER |
| | [MHz] | [dBm] | | [dB] | [dBi] | [dB] | [dBm] | | [dBm] | [dBm] | |
| 1 | 79.95 | -65.2 | -66.9 | 1.5 | 0.65 | 0.00 | -66.1 | -67.8 | -13.0 | 53.1 | 54.8 |
| 2 | 119.93 | -45.5 | -48.8 | 1.9 | 2.15 | 9.89 | -55.1 | -58.4 | -13.0 | 42.1 | 45.4 |
| 3 | 159.90 | -35.0 | -36.3 | 2.2 | 2.15 | 9.90 | -45.0 | -46.3 | -13.0 | 32.0 | 33.3 |
| 4 | 199.88 | -52.8 | -55.5 | 2.5 | 2.15 | 10.00 | -63.2 | -65.9 | -13.0 | 50.2 | 52.9 |
| 5 | 239.85 | -50.1 | -49.7 | 2.7 | 2.15 | 10.01 | -60.7 | -60.3 | -13.0 | 47.7 | 47.3 |
| 6 | 279.83 | -30.1 | -32.2 | 3.0 | 2.15 | 10.03 | -41.0 | -43.1 | -13.0 | 28.0 | 30.1 |
| 7 | 319.80 | -22.6 | -24.0 | 3.2 | 2.15 | 9.86 | -33.5 | -34.9 | -13.0 | 20.5 | 21.9 |
| 8 | 359.78 | -35.5 | -35.1 | 3.4 | 2.15 | 9.88 | -46.6 | -46.2 | -13.0 | 33.6 | 33.2 |
| 9 | 399.75 | -55.3 | -58.3 | 3.6 | 2.15 | 9.90 | -66.7 | -69.7 | -13.0 | 53.7 | 56.7 |

CALCULATION:READING(SG)-CABLE LOSS+ANT.GAIN-ATTEN
RxANTENNA:Biconical Antenna(30-300MHz), Logperriodic Antenna(No.300-1000MHz)
TxANTENNA:Biconical Antenna(30-100MHz), Dipole Antenna(100-1000MHz)

## DATA OF SPURIOUS EMISSIONS TEST (RADIATED): 30MHz to 1000MHz

UL Japan, Inc.
YAMAKITA NO.1 Anechoic Chamber
Job No.: 29BE0120-YK

Applicant : DATRON WORLD COMMUNICATION, INC.
Kind of Equipment : VHF Handheld Transceiver
Model No. : HH7700
Serial No. : sample1
Power : DC7.2V
Mode : Transmitting (CH3: 49.575MHz)
Remarks :
Date : 2008/9/25
Test Distans : 3m
Temperature : 23 deg.C. Engineer : Tatsuya Arai
Humidity : 73 %
Regulation : FCC Part90

| No. | FREQ | READING | | CABLE | ANT | ATTEN | RESULT | | LIMITS | MARGIN | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | LOSS | GAIN | | HOR | VER | (ERP) | HOR | VER |
| | [MHz] | [dBm] | | [dB] | [dBi] | [dB] | [dBm] | | [dBm] | [dBm] | |
| 1 | 99.15 | -61.6 | -62.6 | 1.8 | 0.02 | 0.00 | -63.4 | -64.4 | -13.0 | 50.4 | 51.4 |
| 2 | 148.73 | -31.1 | -33.1 | 2.1 | 2.15 | 9.89 | -40.9 | -42.9 | -13.0 | 27.9 | 29.9 |
| 3 | 198.30 | -57.7 | -60.2 | 2.5 | 2.15 | 10.00 | -68.1 | -70.6 | -13.0 | 55.1 | 57.6 |
| 4 | 247.88 | -48.1 | -48.5 | 2.8 | 2.15 | 10.01 | -58.8 | -59.2 | -13.0 | 45.8 | 46.2 |
| 5 | 297.45 | -20.1 | -22.4 | 3.1 | 2.15 | 10.05 | -31.1 | -33.4 | -13.0 | 18.1 | 20.4 |
| 6 | 347.03 | -32.7 | -32.9 | 3.4 | 2.15 | 9.87 | -43.8 | -44.0 | -13.0 | 30.8 | 31.0 |
| 7 | 396.60 | -47.8 | -46.3 | 3.6 | 2.15 | 9.90 | -59.2 | -57.7 | -13.0 | 46.2 | 44.7 |
| 8 | 446.18 | -57.5 | -56.3 | 3.9 | 2.15 | 9.91 | -69.2 | -68.0 | -13.0 | 56.2 | 55.0 |
| 9 | 495.75 | -52.9 | -52.4 | 4.1 | 2.15 | 9.92 | -64.8 | -64.3 | -13.0 | 51.8 | 51.3 |

CALCULATION:READING(SG)-CABLE LOSS+ANT.GAIN-ATTEN
RxANTENNA:Biconical Antenna(30-300MHz), Logperriodic Antenna(No.300-1000MHz)
TxANTENNA:Biconical Antenna(30-100MHz), Dipole Antenna(100-1000MHz)

## DATA OF SPURIOUS EMISSIONS TEST (RADIATED): 30MHz to 1000MHz

UL Japan, Inc.
YAMAKITA NO.1 Anechoic Chamber
Job No.: 29BE0120-YK

Applicant : DATRON WORLD COMMUNICATION, INC.
Kind of Equipment : VHF Handheld Transceiver
Model No. : HH7700
Serial No. : sample1
Power : DC7.2V
Mode : Transmitting (CH4: 72.125MHz)
Remarks :
Date : 2008/9/25
Test Distans : 3m
Temperature : 23 deg.C. Engineer : Tatsuya Arai
Humidity : 73 %
Regulation : FCC Part90

| No. | FREQ | READING | | CABLE | ANT | ATTEN | RESULT | | LIMITS | MARGIN | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | LOSS | GAIN | | HOR | VER | (ERP) | HOR | VER |
| | [MHz] | [dBm] | | [dB] | [dBi] | [dB] | [dBm] | | [dBm] | [dBm] | |
| 1 | 144.25 | -48.0 | -47.1 | 2.1 | 2.15 | 9.89 | -57.8 | -56.9 | -13.0 | 44.8 | 43.9 |
| 2 | 216.38 | -55.5 | -48.9 | 2.6 | 2.15 | 10.00 | -66.0 | -59.4 | -13.0 | 53.0 | 46.4 |
| 3 | 288.50 | -39.4 | -31.5 | 3.0 | 2.15 | 10.04 | -50.3 | -42.4 | -13.0 | 37.3 | 29.4 |
| 4 | 360.63 | -34.6 | -32.0 | 3.4 | 2.15 | 9.88 | -45.7 | -43.1 | -13.0 | 32.7 | 30.1 |
| 5 | 432.75 | -48.6 | -46.4 | 3.8 | 2.15 | 9.91 | -60.2 | -58.0 | -13.0 | 47.2 | 45.0 |
| 6 | 504.88 | -37.5 | -37.0 | 4.1 | 2.15 | 9.92 | -49.4 | -48.9 | -13.0 | 36.4 | 35.9 |
| 7 | 577.00 | -31.1 | -27.5 | 4.4 | 2.15 | 9.94 | -43.3 | -39.7 | -13.0 | 30.3 | 26.7 |
| 8 | 649.13 | -29.2 | -31.3 | 4.7 | 2.15 | 9.93 | -41.7 | -43.8 | -13.0 | 28.7 | 30.8 |
| 9 | 721.25 | -22.7 | -24.1 | 5.0 | 2.15 | 9.92 | -35.5 | -36.9 | -13.0 | 22.5 | 23.9 |

CALCULATION:READING(SG)-CABLE LOSS+ANT.GAIN-ATTEN
RxANTENNA:Biconical Antenna(30-300MHz), Logperriodic Antenna(No.300-1000MHz)
TxANTENNA:Biconical Antenna(30-100MHz), Dipole Antenna(100-1000MHz)

## DATA OF SPURIOUS EMISSIONS TEST (RADIATED): 30MHz to 1000MHz

UL Japan, Inc.
YAMAKITA NO.1 Anechoic Chamber
Job No.: 29BE0120-YK

Applicant : DATRON WORLD COMMUNICATION, INC.
Kind of Equipment : VHF Handheld Transceiver
Model No. : HH7700
Serial No. : sample1
Power : DC7.2V
Mode : Transmitting (CH5: 75.975MHz)
Remarks :
Date : 2008/9/25
Test Distans : 3m
Temperature : 23 deg.C. Engineer : Tatsuya Arai
Humidity : 73 %
Regulation : FCC Part90

| No. | FREQ | READING | | CABLE | ANT | ATTEN | RESULT | | LIMITS | MARGIN | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | LOSS | GAIN | | HOR | VER | (ERP) | HOR | VER |
| | [MHz] | [dBm] | | [dB] | [dBi] | [dB] | [dBm] | | [dBm] | [dBm] | |
| 1 | 151.95 | -41.1 | -42.2 | 2.2 | 2.15 | 9.90 | -51.1 | -52.2 | -13.0 | 38.1 | 39.2 |
| 2 | 227.93 | -47.0 | -50.5 | 2.7 | 2.15 | 10.00 | -57.6 | -61.1 | -13.0 | 44.6 | 48.1 |
| 3 | 303.90 | -46.9 | -46.2 | 3.1 | 2.15 | 9.85 | -57.7 | -57.0 | -13.0 | 44.7 | 44.0 |
| 4 | 379.88 | -41.7 | -42.0 | 3.5 | 2.15 | 9.89 | -52.9 | -53.2 | -13.0 | 39.9 | 40.2 |
| 5 | 455.85 | -47.7 | -53.5 | 3.9 | 2.15 | 9.91 | -59.4 | -65.2 | -13.0 | 46.4 | 52.2 |
| 6 | 531.83 | -37.5 | -35.6 | 4.2 | 2.15 | 9.93 | -49.5 | -47.6 | -13.0 | 36.5 | 34.6 |
| 7 | 607.80 | -37.2 | -31.3 | 4.6 | 2.15 | 9.95 | -49.6 | -43.7 | -13.0 | 36.6 | 30.7 |
| 8 | 683.78 | -23.6 | -26.1 | 4.9 | 2.15 | 9.91 | -36.3 | -38.8 | -13.0 | 23.3 | 25.8 |
| 9 | 759.75 | -25.3 | -34.4 | 5.1 | 2.15 | 9.96 | -38.2 | -47.3 | -13.0 | 25.2 | 34.3 |

CALCULATION:READING(SG)-CABLE LOSS+ANT.GAIN-ATTEN
RxANTENNA:Biconical Antenna(30-300MHz), Logperriodic Antenna(No.300-1000MHz)
TxANTENNA:Biconical Antenna(30-100MHz), Dipole Antenna(100-1000MHz)

**12.1.LIST OF TEST EQUIPMENT (Table.12)**

| Identified No. | Description | Manufacture | Type |
|---|---|---|---|
| 0199 | Regulated DC power supply | HP | 6032A |
| 0194 | Frequency Counter | ADVANTEST | TR5212 |
| 0197 | Modulation Analyzer | HP | 8901B |
| 0188 | Audio Analyzer | HP | HP8903A |
| 0003 | Spectrum Analyzer | ADVANTEST | MS612A |
| 0201 | Oscilloacpe | HITACHI | V-212 |
| 0193 | Digaital Multimeter | HP | 3478A |
| 0178 | Power Meter | HP | 436A |
| 10547 | Power Sensor | HP | 8482B |
| 0208 | Programmable ATT. | TAMAGAWA ELECTRONICS | TPA-316 |
| 0123 | **Modulation Domain Analyzer** | HP | 53310A |
| 0067 | Current Meter | YOKOGAWA | 2012 |

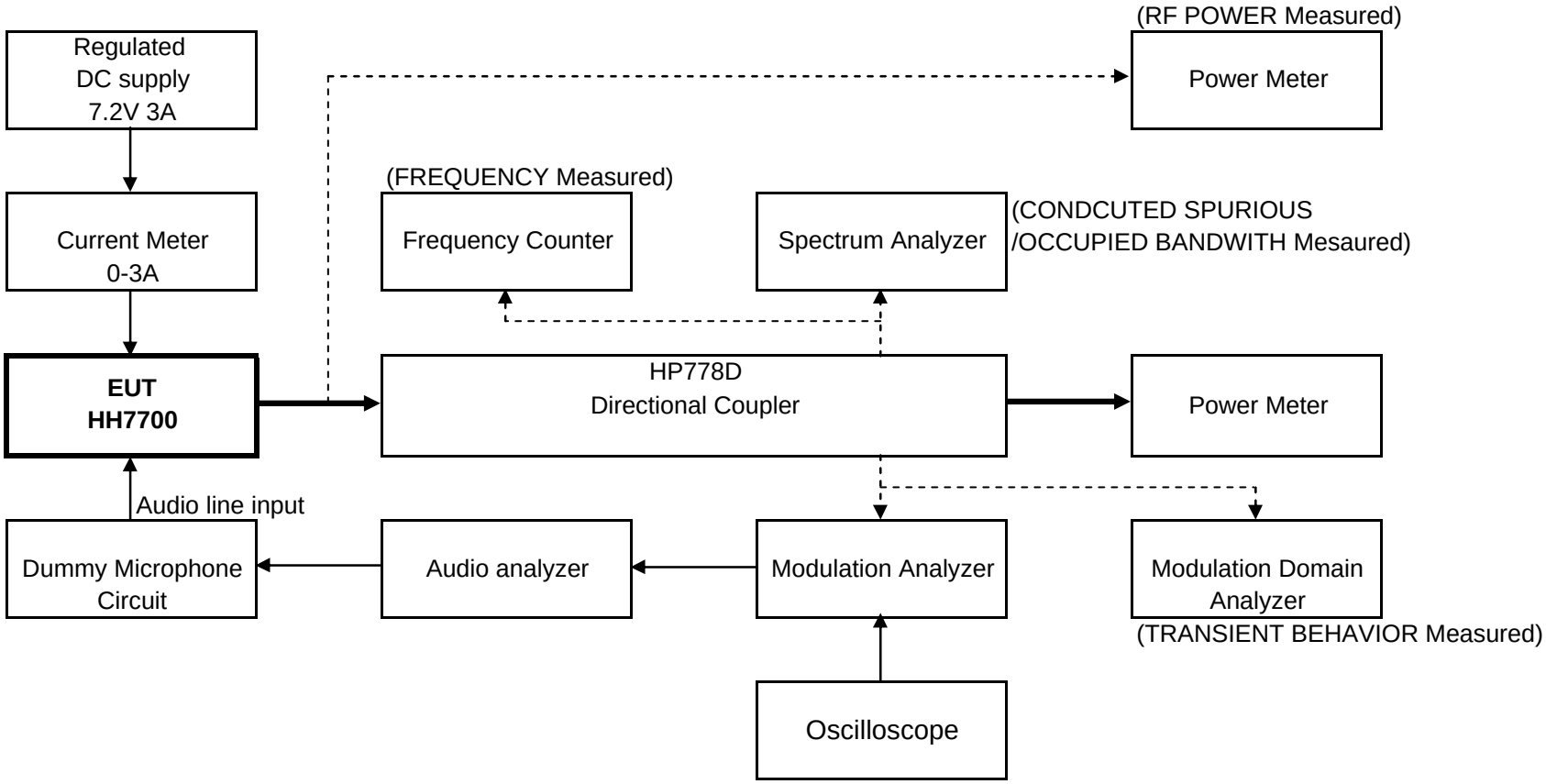



**Figure.13. Test Set-Up**