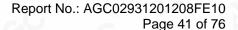
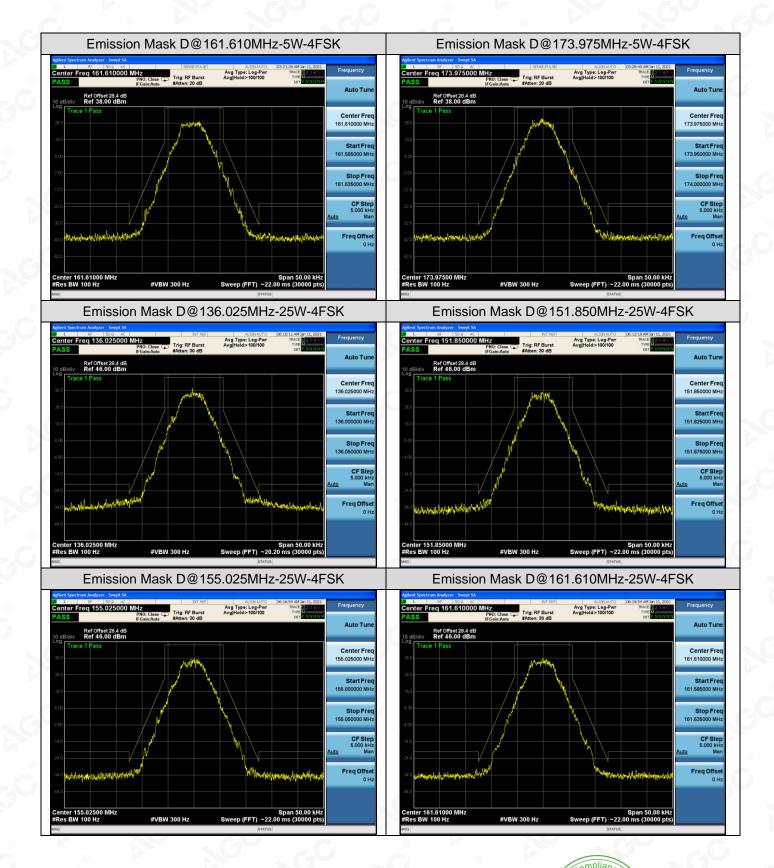


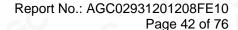
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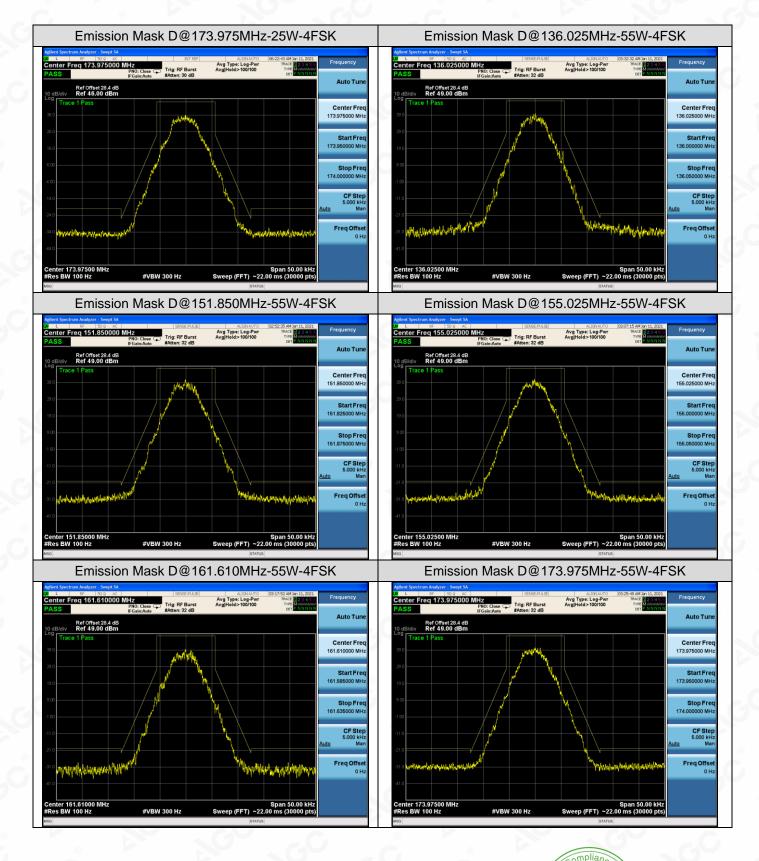




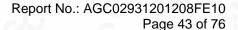
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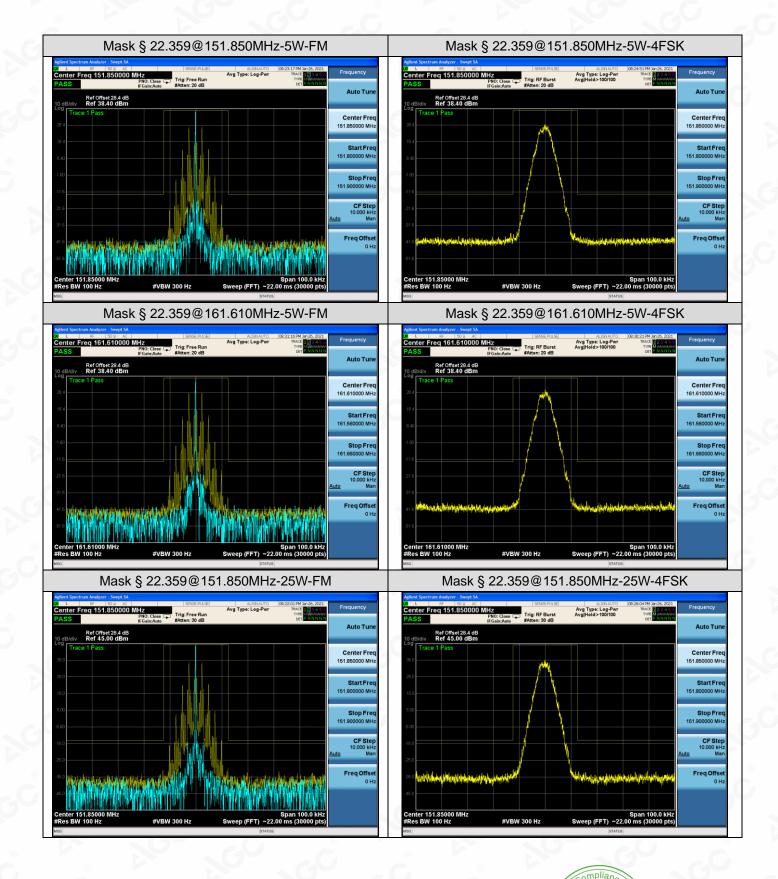




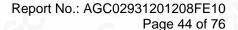
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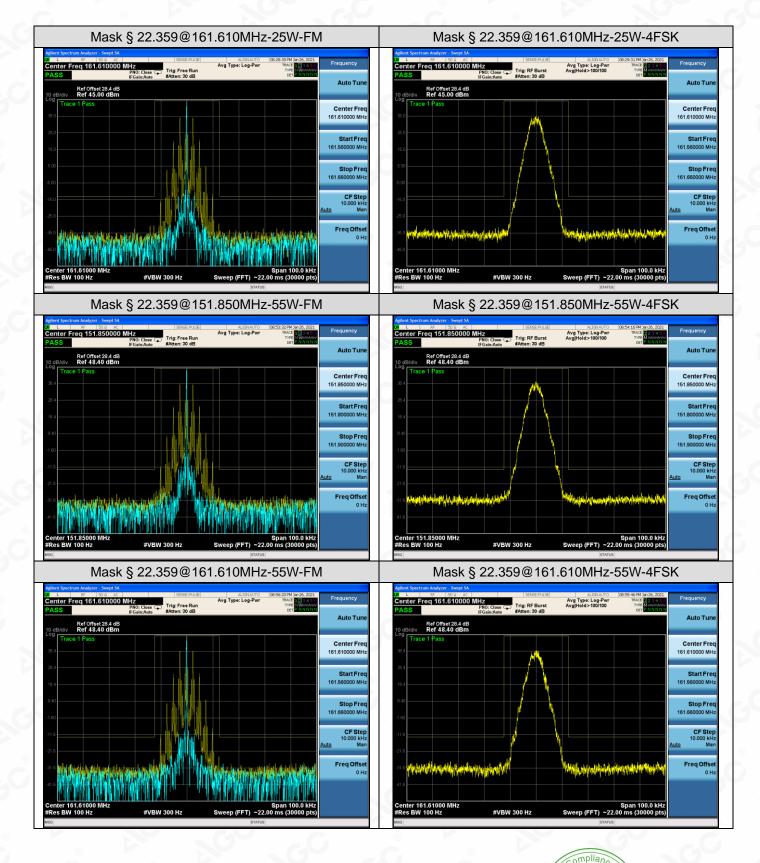




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#### 9.MODULATION CHARACTERISTICS

## 9.1 PROVISIONS APPLICABLE

According to FCC§2.1047 and §90.207, for Voice Modulation Communication Equipment, the frequency response of the audio modulation circuit over a range of 100 to 5000Hz shall be measured.

#### 9.2 MEASUREMENT METHOD

#### 9.2.1 Modulation Limit

- (1). Configure the EUT as shown in figure 1, adjust the audio input for 60% of rated system deviation at 1kHz using this level as a reference (0dB) and vary the input level from –20 to +20dB. Record the frequency deviation obtained as a function of the input level.
- (2). Repeat step 1 with input frequency changing to 300, 1000, 1500 and 3000Hz in sequence.

## 9.2.2 Audio Frequency Response

- (1). Configure the EUT as shown in figure 1.
- (2). Adjust the audio input for 20% of rated system deviation at 1 kHz using this level as a reference (0 dB).
- (3). Vary the Audio frequency from 100 Hz to 10 kHz and record the frequency deviation.
- (4). Audio Frequency Response = 20log10 (Deviation of test frequency/Deviation of 1 kHz reference).

## 9.3 MEASUREMENT SETUP



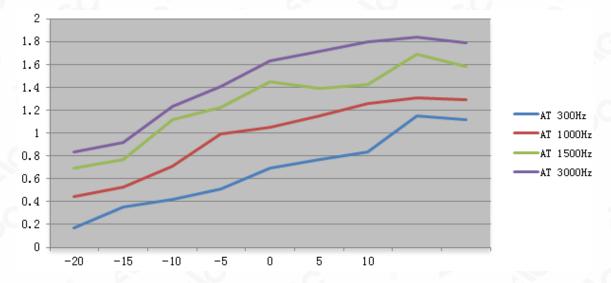
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# 9.4 MEASUREMENT RESULTS

# (A). MODULATION LIMIT:

12.5kHz, Analog modulation, Assigned Frequency:136.025MHz-55W				
Modulation Level (dB)	Peak Freq. Deviation At 300 Hz (kHz)	Peak Freq. Deviation At 1000 Hz (kHz)	Peak Freq. Deviation At 1500 Hz (kHz)	Peak Freq. Deviation At 3000 Hz (kHz)
-20	0.17	0.44	0.69	0.83
-15	0.35	0.53	0.77	0.92
-10	0.42	0.71	1.12	1.23
-5	0.51	0.99	1.22	1.41
0	0.69	1.05	1.45	1.63
+5	0.77	1.15	1.39	1.71
+10	0.83	1.26	1.42	1.8
+15	1.15	1.31	1.69	1.84
+20	1.12	1.29	1.58	1.79



Note: All the modes had been tested, but only the worst data recorded in the report.

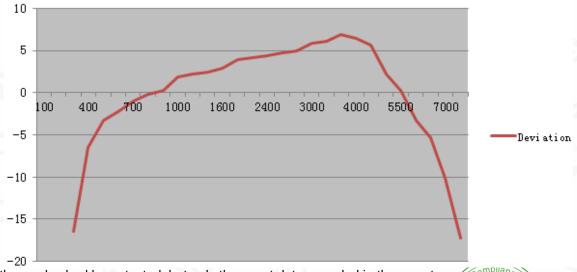
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(B). AUDIO FREQUENCY RESPONSE:

12.5kHz, Analog modulation, Assigned Frequency:136.025MHz-55W			
Frequency (Hz)	Deviation (kHz)	Audio Frequency Response(dB	
100			
200			
300	0.12	-16.48	
400	0.38	-6.47	
500	0.55	-3.25	
600	0.62	-2.21	
700	0.71	-1.04	
800	0.78	-0.22	
900	0.82	0.21	
1000	0.99	1.85	
1200	1.03	2.19	
1400	1.06	2.44	
1600	1.11	2.84	
1800	1.25	3.88	
2000	1.29	4.15	
2400	1.33	4.42	
2500	1.38	4.74	
2800	1.42	4.98	
3000	1.58	5.91	
3200	1.62	6.13	
3600	1.77	6.90	
4000	1.69	6.50	
4500	1.53	5.63	
5000	1.03	2.19	
5500	0.82	0.21	
6000	0.55	-3.25	
6500	0.43	-5.39	
7000	0.25	-10.10	
7500	0.11	-17.23	

# 12.5 KHz Channel Separations



Any Note: All the modes had been tested hour only albed worst adata recorded in the report by the Bedicated Pesting/Inspection
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#### 10. MAXIMUMN TRANSMITTER POWER

#### 10.1 PROVISIONS APPLICABLE

Per FCC §2.1046 § 22.565 and §90.205: Maximum ERP is dependent upon the station's antenna HAAT and required service area.

#### **10.2 MEASUREMENT METHOD**

The RF output of Two-way Radio was conducted to a spectrum analyzer through an appropriate attenuator. In the semi-anechoic chamber, setup as illustrated above the DUT placed on the 0.8m height of Turn Table, rotated the table 45 degree each interval to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power for each degree interval. The "Read Value" is the spectrum reading of maximum power value.

The substitution antenna is substituted for DUT at the same position and signals generator (S.G) export the CW signal to the substitution antenna via a TX cable. The receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum radiation power. Record the power level of maximum radiation power from spectrum.

So, the Measured substitution value = Ref level of S.G + TX cables loss – Substituted Antenna Gain. EIRP = "Read Value" + Measured substitution value + 2.15.

#### **10.3 MEASUREMENT METHOD**

## **CONDUCTED OUTPUT POWER:**

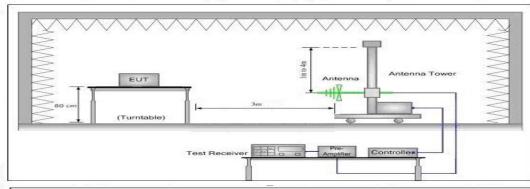


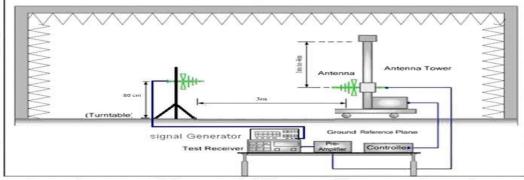
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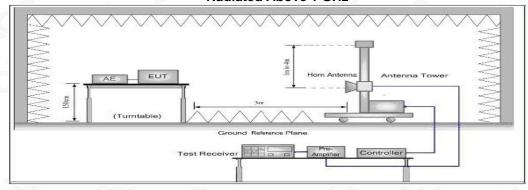
# **EFFECTIVE RADIATED POWER:**

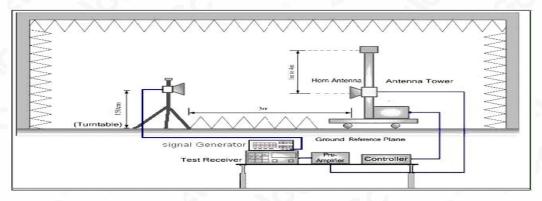
## Radiated Below1GHz





# **Radiated Above 1 GHz**





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