

TRANSMITTER MODULATION LIMITING

SPECIFICATION: FCC 47 CFR 2.1047 (b)

GUIDE: ANSI C63.26 5.3.2

MEASUREMENT PROCEDURE:

1. Refer Annex A for Equipment set up.
2. An audio input tone of 1000 Hz was applied with the level set to obtain 60% of maximum deviation. This was used as the 0 dB reference point.
3. The modulation response was measured at four audio frequencies while increasing the input level in 5dB steps.
4. Additionally the level used to measure sideband spectrum (occupied bandwidth) was included in the level sweep.
5. Measurements were made for both Positive and Negative Deviation.

MEASUREMENT RESULTS:

See the plots on the following pages for 12.5 kHz channel spacing.

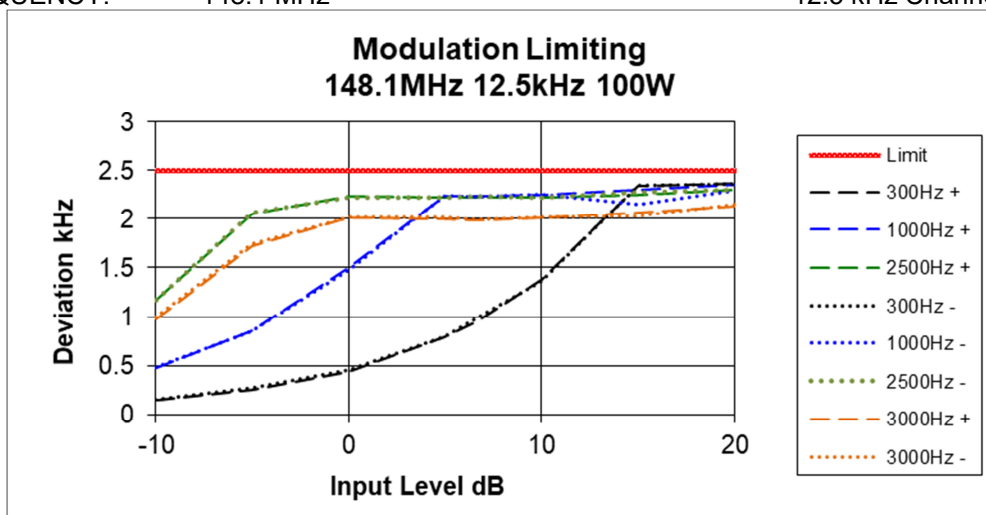
LIMIT CLAUSE: TIA/EIA-603E 1.3.4.4

MEASUREMENT UNCERTAINTY: $\pm 1.5 \%$

SPECIFICATION: FCC CFR 2.1047 (b)

Tx FREQUENCY: 148.1 MHz

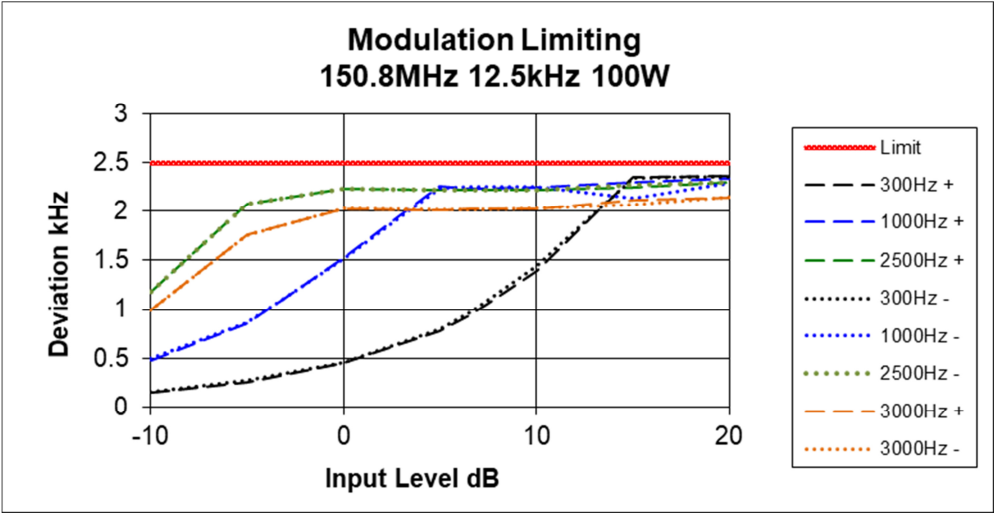
12.5 kHz Channel Spacing



Transmitter Modulation Limiting

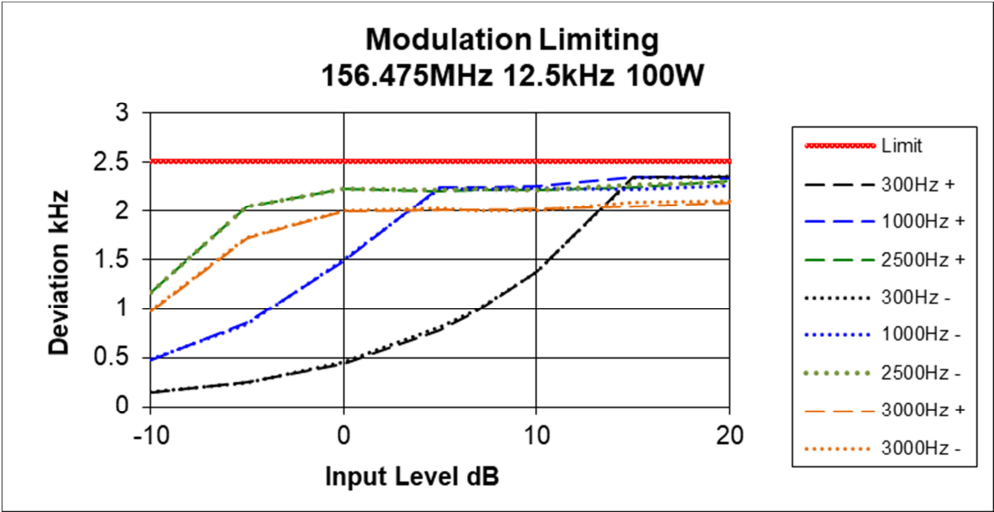
SPECIFICATION: FCC CFR 2.1047 (b)

Tx FREQUENCY: 150.8 MHz 12.5 kHz Channel Spacing



SPECIFICATION: FCC CFR 2.1047 (b)

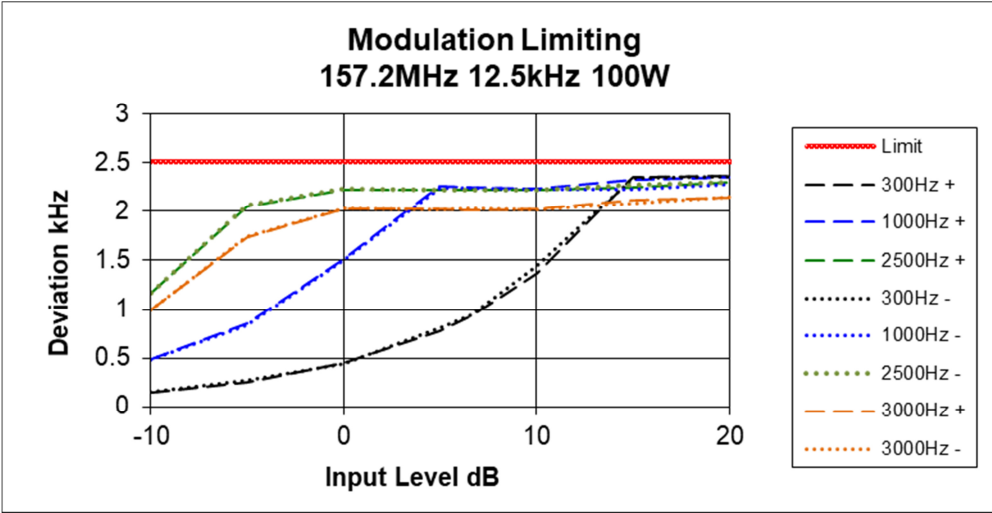
Tx FREQUENCY: 156.475 MHz 12.5 kHz Channel Spacing



Transmitter Modulation Limiting

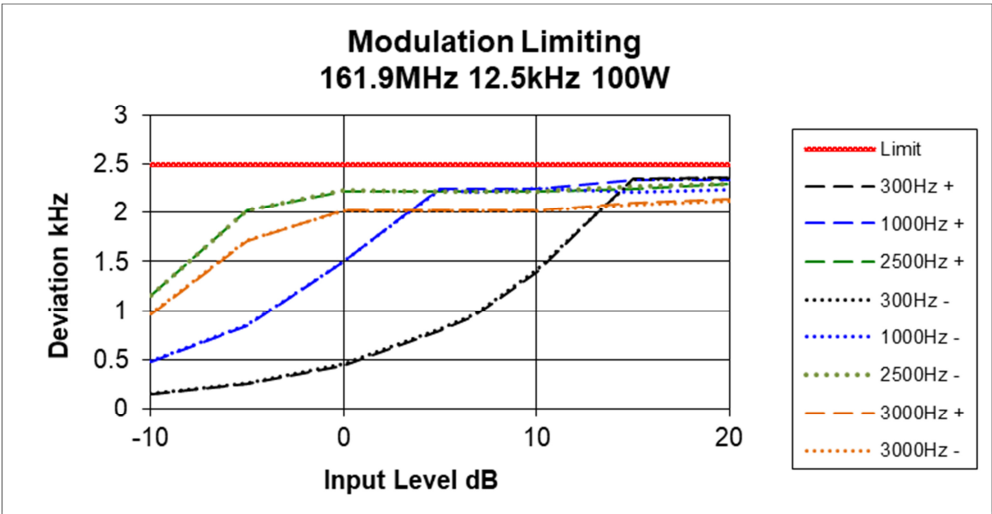
SPECIFICATION: FCC CFR 2.1047 (b)

Tx FREQUENCY: 157.2 MHz 12.5 kHz Channel Spacing



SPECIFICATION: FCC CFR 2.1047 (b)

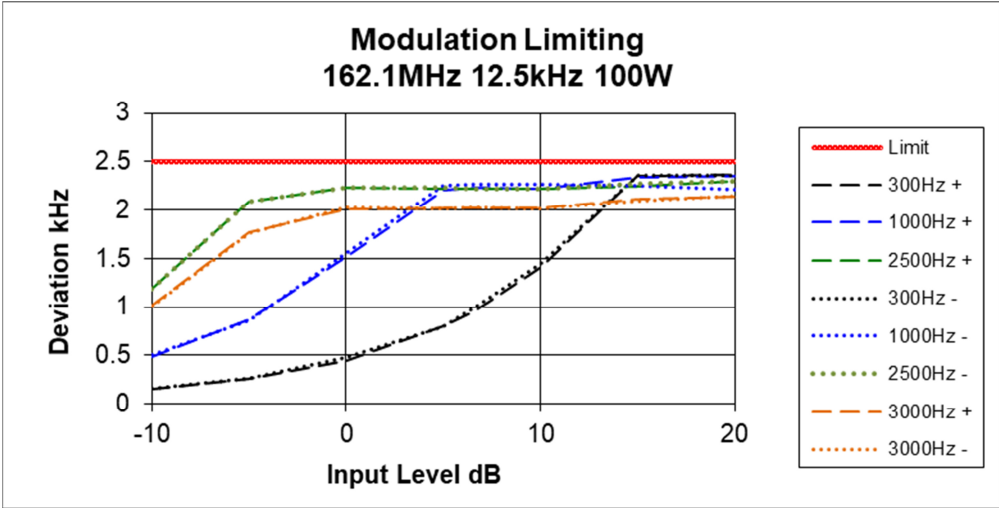
Tx FREQUENCY: 161.9 MHz 12.5 kHz Channel Spacing



Transmitter Modulation Limiting

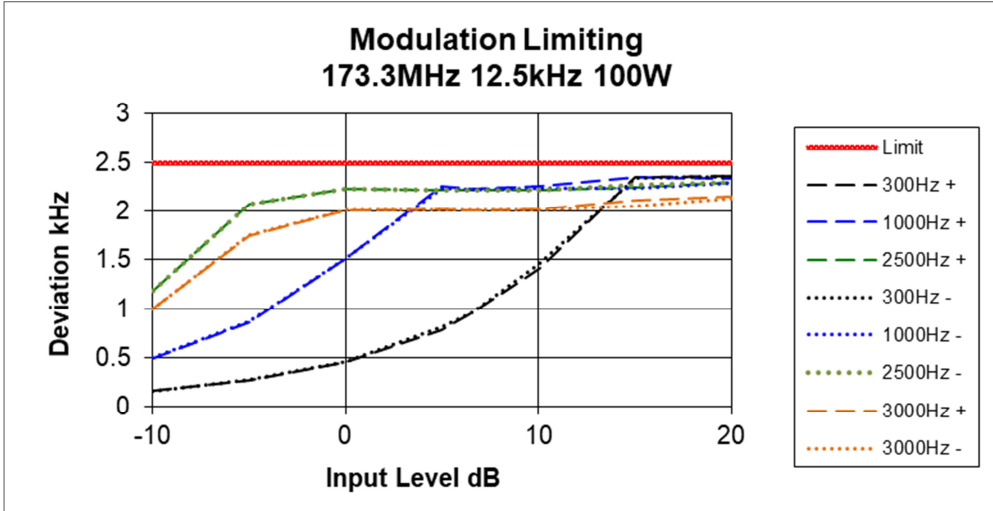
SPECIFICATION: FCC CFR 2.1047 (b)

Tx FREQUENCY: 162.1 MHz 12.5 kHz Channel Spacing



SPECIFICATION: FCC CFR 2.1047 (b)

Tx FREQUENCY: 173.3 MHz 12.5 kHz Channel Spacing



TRANSMITTER 99% EMISSION BANDWIDTH

SPECIFICATION: RSS-119 5.5

GUIDE: RSS-Gen 6.7

MEASUREMENT PROCEDURE:

1. Refer Annex A for Equipment Set up.
2. For analog measurements: The EUT was modulated by a 2500 Hz tone at an input level 16 dB above a level that produced 50% deviation. The input level was established at the frequency of maximum response of the audio modulating circuit.
For Data measurements: The EUT was modulated with an internally generated pseudo random bit sequence at the appropriate Baud rates.
3. The Occupied Bandwidth was measured on the Spectrum Analyser.

MEASUREMENT RESULTS:

Channel Spacing (MHz)	Channel Spacing (kHz)	Bandwidths (kHz)		
		Analog	FFSK 1200 bps	DMR
148.1	12.5	9.97	6.83	7.52
150.8	12.5	9.97	6.92	7.50
156.475	12.5	9.97	6.93	7.43
157.2	12.5	9.97	7.00	7.52
161.9	12.5	9.97	6.92	7.42
162.1	12.5	9.97	6.82	7.50
173.3	12.5	9.97	6.97	7.50
Limit Authorized Bandwidth 47 CFR 90.209 RSS 119 5.5		11.25	11.25	11.25
Necessary BW used in emission designator		11.0	7.6	7.6
Result		Pass	Pass	Pass