E1-10 Audio Frequency Response

Specification Requirement per TIA 603:

Audio Frequency Response, 25 kHz Channels: The audio frequency response from 300 Hz to 3000 Hz shall not vary more than +1 dB or -3 dB from a true 6 dB per octave pre-emphasis characteristic as referenced to the 1000 Hz level, with an additional 6 dB per octave attenuation allowed from 500 Hz to 3000 Hz, and an additional 6 dB per octave attenuation is allowed from 2500 Hz to 3000 Hz in equipment operating in the 25 MHz to 869 MHz range.

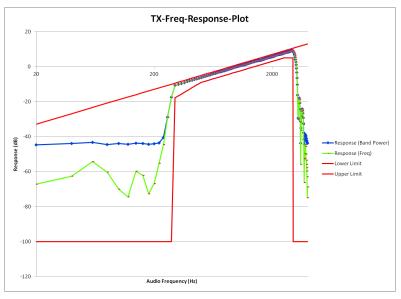
Audio Frequency Response, 12.5 kHz Channels: The audio frequency response from 300 Hz to 3000 Hz shall not vary more than +1 dB or -3 dB from a true 6 dB per octave pre-emphasis characteristic as referenced to the 1000 Hz level, with an additional 6 dB per octave attenuation allowed from 500 Hz to 300 Hz. An additional 6 dB per octave rolloff is allowed from 2300 Hz to 2700 Hz, and an additional 12 dB per octave is allowed from 2700 Hz to 3000 Hz in equipment operating in the 896 MHz to 940 MHz range or for 12.5 kHz channel operation.

Modulation:Audio Test ToneCarrier Frequency:Performance was measured at carrier frequencies at the low end, middle,and high end of the operating band..Specification:The specification limit is shown on the response plots

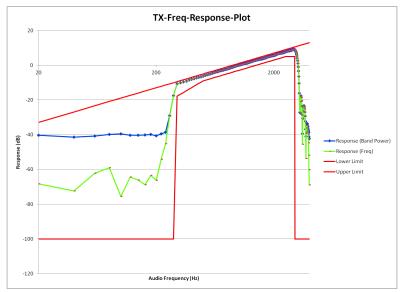
| EXHIBIT | DESCRIPTION |
|---------|---|
| E1-10.1 | Audio Frequency Response – Modulation Characteristics, 25 kHz |
| | Channels – 406.1125 MHz |
| E1-10.2 | Audio Frequency Response – Modulation Characteristics, 25 kHz |
| | Channels – 420.0125 MHz |
| E1-10.3 | Audio Frequency Response – Modulation Characteristics, 25 kHz |
| | Channels – 429.9875 MHz |
| E1-10.4 | Audio Frequency Response – Modulation Characteristics, 25 kHz |
| | Channels – 450.0125 MHz |
| E1-10.5 | Audio Frequency Response – Modulation Characteristics, 25 kHz |
| | Channels – 460.0125 MHz |
| E1-10.6 | Audio Frequency Response – Modulation Characteristics, 25 kHz |
| | Channels – 469.9875 MHz |

| E1-10.7 | Audio Frequency Response – Modulation Characteristics, 12.5 kHz |
|----------|---|
| | Channels – 406.1125 MHz |
| E1-10.8 | Audio Frequency Response – Modulation Characteristics, 12.5 kHz |
| | Channels – 420.0125 MHz |
| E1-10.9 | Audio Frequency Response – Modulation Characteristics, 12.5 kHz |
| | Channels – 429.9875 MHz |
| E1-10.10 | Audio Frequency Response – Modulation Characteristics, 12.5 kHz |
| | Channels – 450.0125 MHz |
| E1-10.11 | Audio Frequency Response – Modulation Characteristics, 12.5 kHz |
| | Channels – 460.0125 MHz |
| E1-10.12 | Audio Frequency Response – Modulation Characteristics, 12.5 kHz |
| | Channels – 469.9875 MHz |

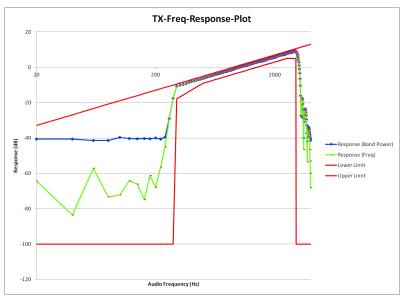
E1-10.1 Audio Frequency Response – Modulation Characteristics, 25 kHz Channels – 406.1125 MHz



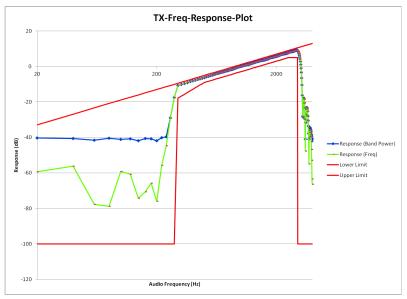
E1-10.2 Audio Frequency Response – Modulation Characteristics, 25 kHz Channels – 420.0125 MHz



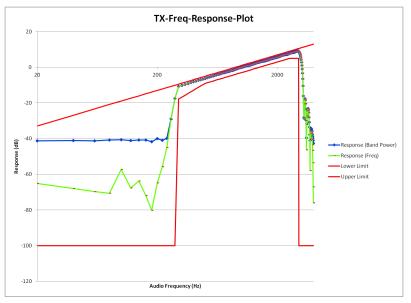
E1-10.3 Audio Frequency Response – Modulation Characteristics, 25 kHz Channels – 429.9875 MHz



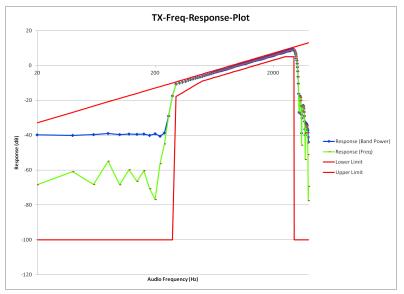
E1-10.4 Audio Frequency Response – Modulation Characteristics, 25 kHz Channels – 450.0125 MHz



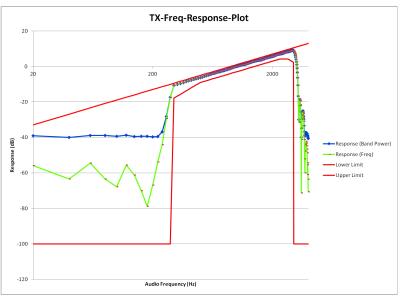
E1-10.5 Audio Frequency Response – Modulation Characteristics, 25 kHz Channels – 460.0125 MHz



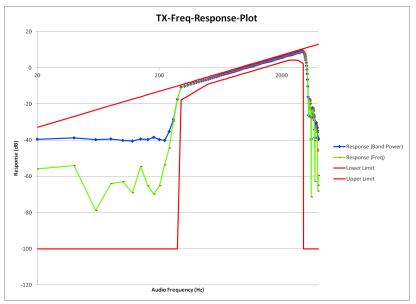
E1-10.6 Audio Frequency Response – Modulation Characteristics, 25 kHz Channels – 469.9875 MHz



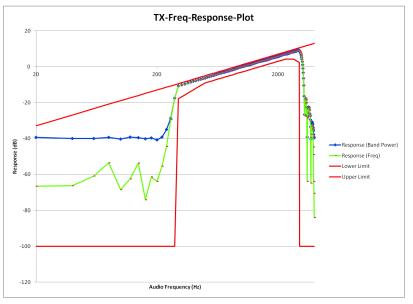
E1-10.7 Audio Frequency Response – Modulation Characteristics, 12.5 kHz Channels – 406.1125 MHz



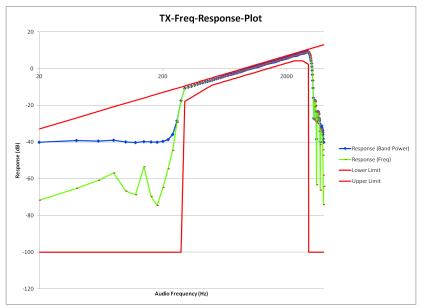
E1-10.8 Audio Frequency Response – Modulation Characteristics, 12.5 kHz Channels – 420.0125 MHz



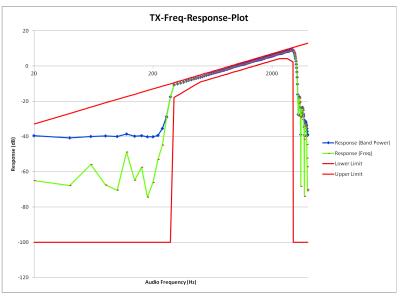
E1-10.9 Audio Frequency Response – Modulation Characteristics, 12.5 kHz Channels – 429.9875 MHz



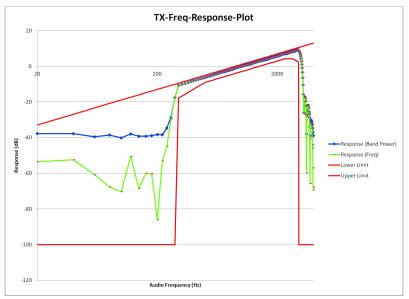
E1-10.10 Audio Frequency Response – Modulation Characteristics, 12.5 kHz Channels – 450.0125 MHz



E1-10.11 Audio Frequency Response – Modulation Characteristics, 12.5 kHz Channels – 460.0125 MHz



E1-10.12 Audio Frequency Response – Modulation Characteristics, 12.5 kHz Channels – 469.9875 MHz



E1-11 Modulation Limiting

Specification Requirement per TIA 603:

Modulation Limiting, 25 kHz Channels: The maximum instantaneous peak and steady state deviations shall not exceed the rated system deviation of +/- 5 kHz at any audio frequency or change in level as specified in the method of measurement.

The minimum value of modulation limiting shall be at least 60% of the rated system deviation, or 3 kHz.

Modulation Limiting, 12.5 kHz Channels: The maximum instantaneous peak and steady state deviations shall not exceed the rated system deviation of +/- 2.5 kHz at any audio frequency or change in level as specified in the method of measurement.

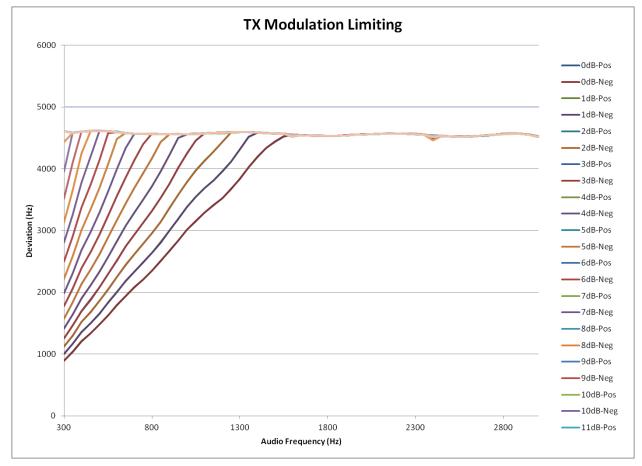
The minimum value of modulation limiting shall be at least 60% of the rated system deviation, or 1.5 kHz..

Modulation:Audio Test Tone, Varying Frequency between 300 Hz and 3000 HzCarrier Frequency:Performance was measured at carrier frequencies at the low end, middle,
and high end of the operating band.Performance was measured at carrier
frequencies at the low end, middle,

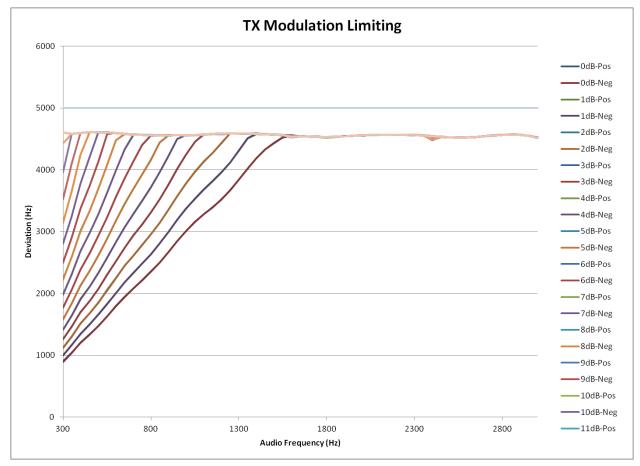
Modulation Limiting Response Plots:

| EXHIBIT | DESCRIPTION |
|---------|---|
| E1-11.1 | Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 406.1125 MHz |
| E1-11.2 | Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 420.0125 MHz |
| E1-11.3 | Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 429.9875 MHz |
| E1-11.4 | Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 450.0125 MHz |
| E1-11.5 | Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 460.0125 MHz |

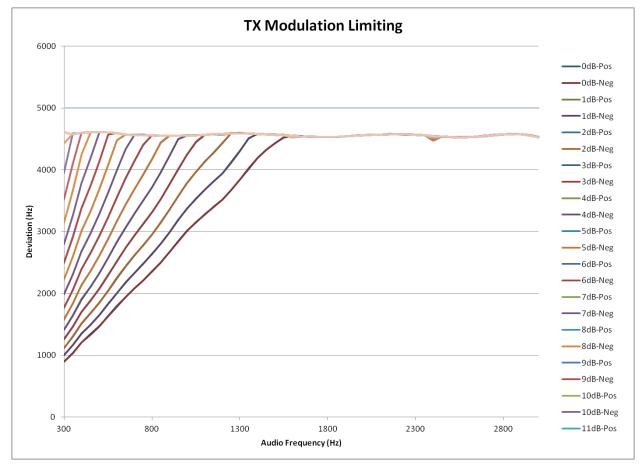
| E1-11.6 | Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 469.9875 MHz |
|----------|---|
| E1-11.7 | Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 406.1125 MHz |
| E1-11.8 | Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 420.0125 MHz |
| E1-11.9 | Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz |
| E1-11.10 | Channels – 429.9875 MHz Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz |
| E1-11.11 | Channels – 450.0125 MHz Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz |
| E1-11.12 | Channels – 460.0125 MHz Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz |
| | Channels – 469.9875 MHz |
| | |



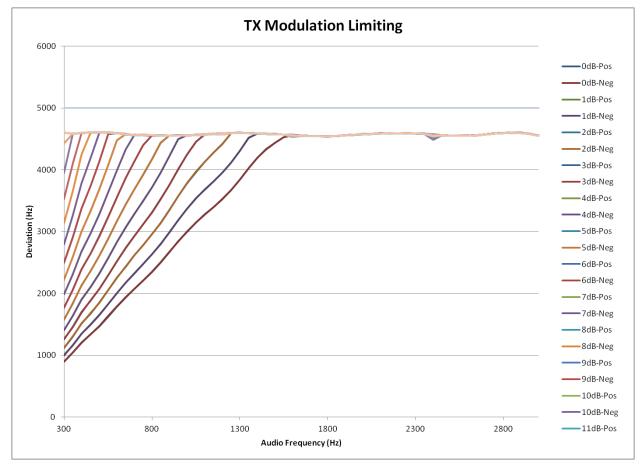
E1-11.1 Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 406.1125 MHz



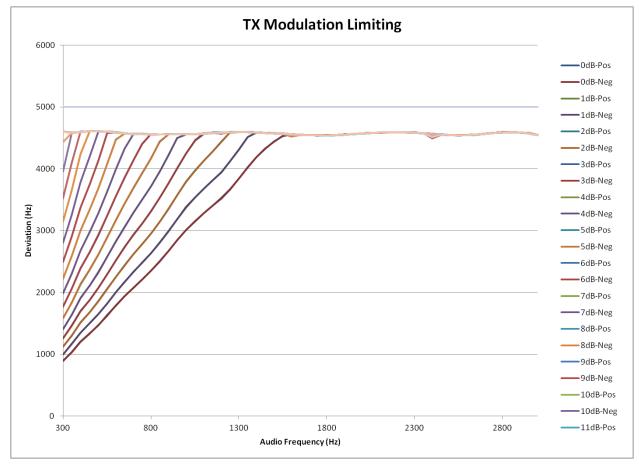
E1-11.2 Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 420.0125 MHz



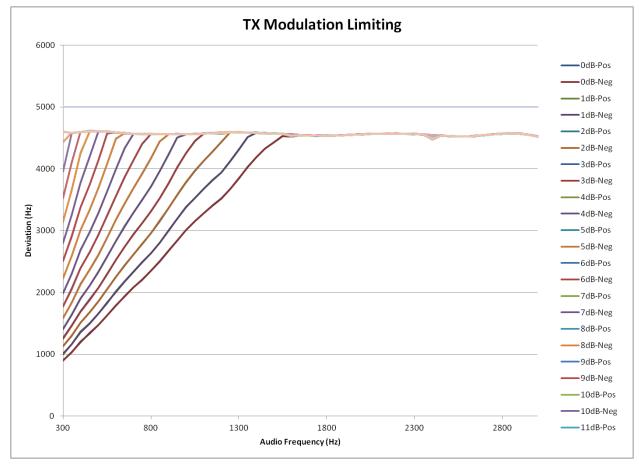
E1-11.3 Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 429.9875 MHz



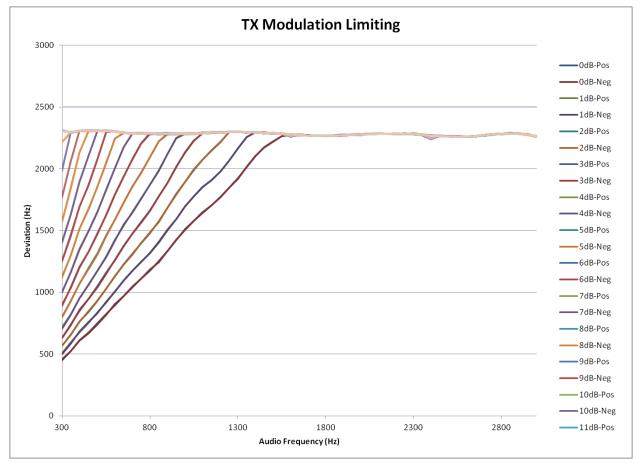
E1-11.4 Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 450.0125 MHz



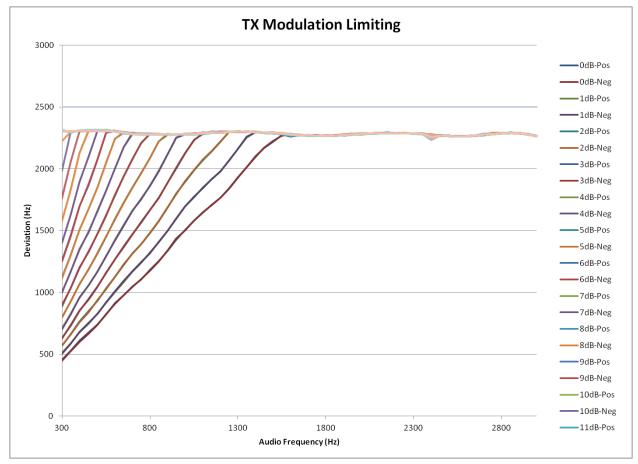
E1-11.5 Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 460.0125 MHz



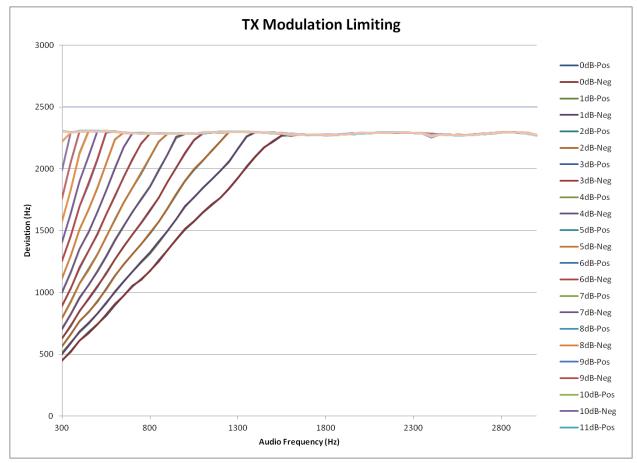
E1-11.6 Audio Modulation Limiting – Modulation Characteristics, 25 kHz Channels – 469.9875 MHz



E1-11.7 Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 406.1125 MHz

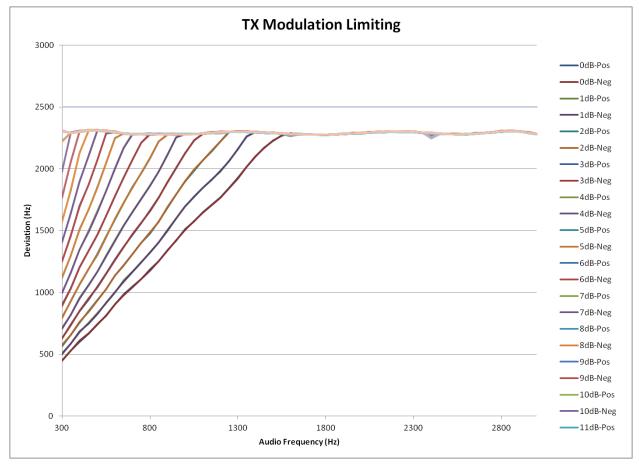


E1-11.8 Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 420.0125 MHz

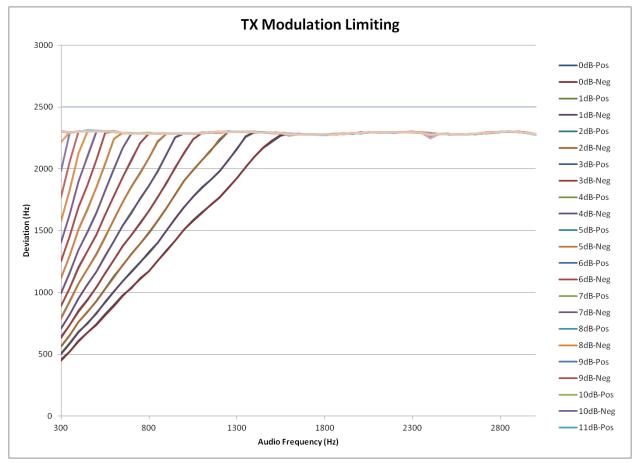


E1-11.9 Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 429.9875 MHz

E1-11.10 Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 450.0125 MHz



E1-11.11 Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 460.0125 MHz



E1-11.12 Audio Modulation Limiting – Modulation Characteristics, 12.5 kHz Channels – 469.9875 MHz

