

# Frequency Stability

47 CFR 2.1055 (a)(1)

| Test Conditions |              | Frequency Stability (%) |                |              |
|-----------------|--------------|-------------------------|----------------|--------------|
|                 |              | Low Channel             | Middle Channel | High Channel |
| +50 degree C    | V min -42VDC | 0.00000604              | 0.00000599     | 0.00000581   |
|                 | V nom -48VDC | 0.00000604              | 0.00000588     | 0.00000518   |
|                 | V max -56VDC | 0.00000588              | 0.00000546     | 0.00000578   |
| +40 degree C    | V min -42VDC | 0.00000507              | 0.00000500     | 0.00000502   |
|                 | V nom -48VDC | 0.00000453              | 0.00000528     | 0.00000473   |
|                 | V max -56VDC | 0.00000514              | 0.00000538     | 0.00000523   |
| +30 degree C    | V min -42VDC | 0.00000564              | 0.00000538     | 0.00000569   |
|                 | V nom -48VDC | 0.00000540              | 0.00000634     | 0.00000635   |
|                 | V max -56VDC | 0.00000537              | 0.00000516     | 0.00000547   |
| +20 degree C    | V min -42VDC | 0.00000479              | 0.00000491     | 0.00000503   |
|                 | V nom -48VDC | 0.00000552              | 0.00000370     | 0.00000479   |
|                 | V max -56VDC | 0.00000449              | 0.00000385     | 0.00000515   |
| +10 degree C    | V min -42VDC | 0.00000670              | 0.00000621     | 0.00000673   |
|                 | V nom -48VDC | 0.00000559              | 0.00000602     | 0.00000635   |
|                 | V max -56VDC | 0.00000535              | 0.00000587     | 0.00000532   |
| 0 degree C      | V min -42VDC | 0.00000358              | 0.00000315     | 0.00000332   |
|                 | V nom -48VDC | 0.00000383              | 0.00000363     | 0.00000400   |
|                 | V max -56VDC | 0.00000333              | 0.00000300     | 0.00000284   |
| -10 degree C    | V min -42VDC | 0.00000376              | 0.00000311     | 0.00000290   |
|                 | V nom -48VDC | 0.00000363              | 0.00000309     | 0.00000389   |
|                 | V max -56VDC | 0.00000370              | 0.00000308     | 0.00000304   |
| -20 degree C    | V min -42VDC | 0.00000441              | 0.00000424     | 0.00000414   |
|                 | V nom -48VDC | 0.00000390              | 0.00000382     | 0.00000401   |
|                 | V max -56VDC | 0.00000467              | 0.00000377     | 0.00000363   |
| -30 degree C    | V min -42VDC | 0.00000506              | 0.00000487     | 0.00000499   |
|                 | V nom -48VDC | 0.00000448              | 0.00000497     | 0.00000462   |
|                 | V max -56VDC | 0.00000424              | 0.00000455     | 0.00000479   |

Limits: 47 CFR 101.107

|                              |       |
|------------------------------|-------|
| Frequency Tolerance, percent | 0.001 |
|------------------------------|-------|

$$\text{Frequency Stability (\%)} = [ |(F_c - F_{c \text{ measured}})| / F_c ] \times 100 \%$$

Where  $F_c$  = Center Frequency in Hz

$F_{c \text{ measured}}$  = Center Frequency in Hz measured with Spectrum Analyzer Frequency Counter with 1 Hz resolution