

Compliance with 15.407(g) frequency stability

The following table shows the specifications of the determining oscillators and the *total frequency stability of the equipment at both bands over the full operating temperature range*. The data show on the table covers the worst frequency shift situation within the full operating temperature range of –30 to +65C specified for the equipment under application. The oscillators are crystal types.

	5.775 GHz Transmitter	5.3 GHz Transmitter
Fundamental Oscillator (PN: 1900012-414000-000)	140MHz±10ppm or ±1.4 kHz	140MHz±10ppm or ±1.4 kHz
Secondary Oscillator (PN: 1900017-610900-000)	(109MHz±30ppm)x5 or ±16.4kHz	(109MHz±30ppm) x5 or ±16.4kHz
RF reference Oscillator (PN: 1900017-610900-000)	(106.041666MHz±10ppm)x48 or ±50.89kHz	(124.687500MHz±10ppm)x48 or 59.85kHz
Total Frequency Stability	±11.89ppm or ±68.69kHz	±14.65ppm or ±77.65kHz

Justification for the claim of compliance with 15.407(g) is as follows:

- The lowest channel center frequency is 5300 MHz, with a 26dBc width of 86.3 MHz. The margin above and below the 26dBc points to the band edges is 6.85 MHz, both above and below the center frequency.
- The highest channel center frequency is 5775 MHz with a 26dBc width of 80.4 MHz. The margin above and below the 26dBc points to the band edges is 9.8 MHz, both above and below the center frequency.
- Therefore, the frequency stability of the frequency-determining element must be no worse than 0.129% (6.85 MHz/5300 MHz) over the normal operating range to maintain the emissions within the allowed band. From the above table, it can be seen that the frequency-determining components offer much superior stability to ensure the compliance to 15.407(g).