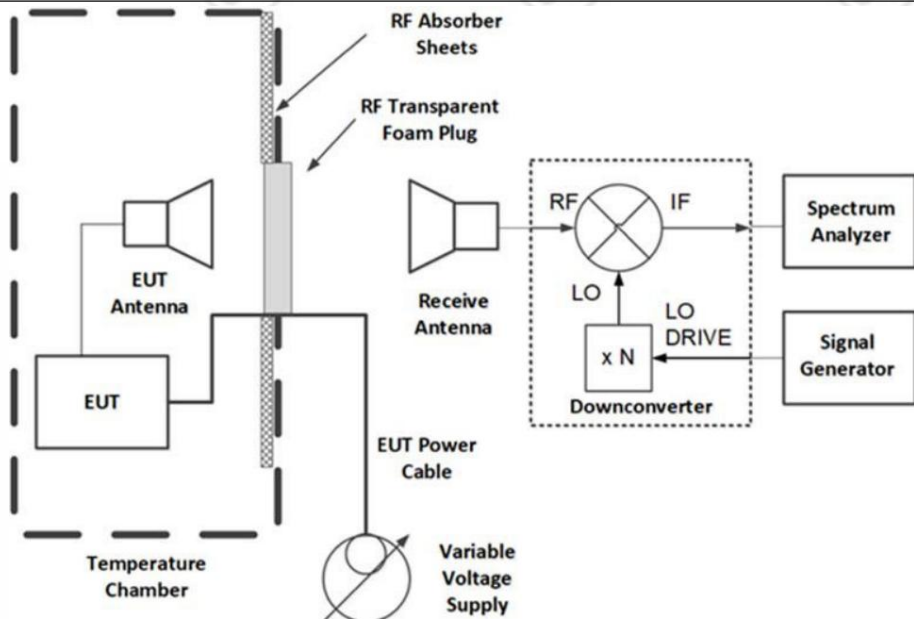


6.5 Frequency stability

Test Requirement:	47 CFR Part 95, Subpart M Section 95.3379 (b), KDB 653005 D01 76-81 GHz Radars v01r01 Section 4 d)
Test Method:	ANSI C63.10:2020 Section 9.5
Limit:	Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation.
Test Setup:	 <p>Figure 23—Example of a frequency stability setup configuration</p>
Test Procedure:	<p>The carrier frequency of the transmitter is measured at room temperature. (20°C to provide a reference)</p> <p>At 10°C intervals of temperatures between -30°C and +50°C at the manufacturer's rated supply voltage, and At +20°C temperature and ±15% supply voltage variations. If a product is specified to operate over a range of input voltage then the -15% variation is applied to the lowermost voltage and the +15% is applied to the uppermost voltage.</p> <p>Measurement data showing variation in transmitter output frequency from a cold start and the elapsed time necessary for the frequency to stabilize within the applicable tolerance.</p> <p>Tests shall be made after temperature stabilization at each of the ambient temperature levels; the lower temperature limit, 0°C and + 30°C with no primary power applied.</p> <p>Beginning at each temperature level , the frequency shall be measured within one minute after application of primary power to the transmitter and at intervals of no more than one minute thereafter until ten minutes have elapsed or until sufficient measurements are obtained to indicate clearly that the frequency has stabilized within the applicable tolerance, whichever time period is greater.</p> <p>During each test, the ambient temperature shall not be allowed to rise more than 10°C above the respective beginning ambient temperature level.</p>
Test Mode:	TX mode_Make EUT continuously emit radar signals.

Test data:

Voltage (%)	Power (V/DC)	Temperature (°C)	Frequency Left (GHz)	Frequency Right (GHz)	Limit (GHz)	Result
100	24.0	-40	76.00589	76.70142	76 to 81	Pass
		-30	76.00455	76.70593	76 to 81	Pass
		-20	76.00985	76.70508	76 to 81	Pass
		-10	76.00444	76.70677	76 to 81	Pass
		0	76.00677	76.70473	76 to 81	Pass
		+10	76.00692	76.70569	76 to 81	Pass
		+20	76.00352	76.70808	76 to 81	Pass
		+30	76.00464	76.70320	76 to 81	Pass
		+40	76.00426	76.70837	76 to 81	Pass
		+50	76.00611	76.70609	76 to 81	Pass
		+60	76.00216	76.70828	76 to 81	Pass
		+70	76.00216	76.70900	76 to 81	Pass
		+80	76.00831	76.70026	76 to 81	Pass
		+85	76.00641	76.70425	76 to 81	Pass
115	32.0	+20	76.00289	76.70947	76 to 81	Pass
85	9.0	+20	76.00508	76.70643	76 to 81	Pass

Note:The extreme voltage and extreme temperature is specified by the manufacturer.

Statement

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
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