



6.10 Frequency Stability

Test Requirement:	47 CFR Part 15 Section 15.407(g)
Test Method:	ANSI C63.10: 2013
Test Setup:	<pre> graph LR SA[Spectrum Analyzer] --- EUT[EUT] EUT --- ACDC[AC/DC Power supply] EUT --- TC[Temperature Chamber] </pre>
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of -20 degrees to 55 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. Turn the EUT on and couple its output to a spectrum analyzer. Turn the EUT off and set the chamber to the highest temperature specified. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates.
Final Test Mode:	Through Pre-scan, 6Mbps of rate is the worst case of 802.11a; 6.5Mbps of rate is the worst case of 802.11n(HT20); 6.5Mbps of rate is the worst case of 802.11ac 20; 13.5Mbps of rate is the worst case of 802.11n(HT40); 13.5Mbps of rate is the worst case of 802.11ac 40; 29.2Mbps of rate is the worst case of 802.11ac 80.

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Test plot as follows:

Test mode:	802.11a	Frequency(MHz):	5180
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5180.003	3	Pass
	2 mins later	5180.000	0	Pass
	5 mins later	5180.003	3	Pass
	10 mins later	5180.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5180.003	3	Pass
	102VAC	5180.000	0	Pass
	138VAC	5180.003	3	Pass

Test mode:	802.11a	Frequency(MHz):	5220
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5220.002	2	Pass
	2 mins later	5220.000	0	Pass
	5 mins later	5220.002	2	Pass
	10 mins later	5220.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5220.003	2	Pass
	102VAC	5220.000	0	Pass
	138VAC	5220.003	2	Pass

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Test mode:	802.11a	Frequency(MHz):	5240
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5240.002	2	Pass
	2 mins later	5240.000	0	Pass
	5 mins later	5240.002	2	Pass
	10 mins later	5240.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5240.003	2	Pass
	102VAC	5240.000	0	Pass
	138VAC	5240.003	2	Pass

Test mode:	802.11a	Frequency(MHz):	5260
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5260.009	9	Pass
	2 mins later	5260.000	0	Pass
	5 mins later	5260.009	9	Pass
	10 mins later	5260.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5260.009	9	Pass
	102VAC	5260.000	0	Pass
	138VAC	5260.009	9	Pass

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Test mode:	802.11a	Frequency(MHz):	5280
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5280.009	9	Pass
	2 mins later	5280.000	0	Pass
	5 mins later	5280.009	9	Pass
	10 mins later	5280.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5280.009	9	Pass
	102VAC	5280.000	0	Pass
	138VAC	5280.009	9	Pass

Test mode:	802.11a	Frequency(MHz):	5320
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5320.013	13	Pass
	2 mins later	5320.000	0	Pass
	5 mins later	5320.013	13	Pass
	10 mins later	5320.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5320.013	13	Pass
	102VAC	5320.000	0	Pass
	138VAC	5320.013	13	Pass

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Test mode:	802.11a	Frequency(MHz):	5500
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5500.009	9	Pass
	2 mins later	5500.000	0	Pass
	5 mins later	5500.009	9	Pass
	10 mins later	5500.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5500.009	9	Pass
	102VAC	5500.000	0	Pass
	138VAC	5500.009	9	Pass

Test mode:	802.11a	Frequency(MHz):	5580
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5580.013	13	Pass
	2 mins later	5580.000	0	Pass
	5 mins later	5580.013	13	Pass
	10 mins later	5580.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5580.013	13	Pass
	102VAC	5580.000	0	Pass
	138VAC	5580.013	13	Pass

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Test mode:	802.11a	Frequency(MHz):	5700
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5700.002	2	Pass
	2 mins later	5700.000	0	Pass
	5 mins later	5700.002	2	Pass
	10 mins later	5700.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5700.003	2	Pass
	102VAC	5700.000	0	Pass
	138VAC	5700.003	2	Pass

Test mode:	802.11a	Frequency(MHz):	5745
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5745.013	13	Pass
	2 mins later	5745.000	0	Pass
	5 mins later	5745.013	13	Pass
	10 mins later	5745.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5745.013	13	Pass
	102VAC	5745.000	0	Pass
	138VAC	5745.013	13	Pass

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Test mode:	802.11a	Frequency(MHz):	5785
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5785.014	14	Pass
	2 mins later	5785.000	0	Pass
	5 mins later	5785.014	14	Pass
	10 mins later	5785.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5785.014	14	Pass
	102VAC	5785.000	0	Pass
	138VAC	5785.014	14	Pass

Test mode:	802.11a	Frequency(MHz):	5825
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5825.013	13	Pass
	2 mins later	5825.000	0	Pass
	5 mins later	5825.013	13	Pass
	10 mins later	5825.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5825.013	13	Pass
	102VAC	5825.000	0	Pass
	138VAC	5825.013	13	Pass

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Test mode:	802.11n(HT20)	Frequency(MHz):	5180
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5180.007	7	Pass
	2 mins later	5180.000	0	Pass
	5 mins later	5180.007	7	Pass
	10 mins later	5180.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5180.013	13	Pass
	102VAC	5180.000	0	Pass
	138VAC	5180.013	13	Pass

Test mode:	802.11n(HT20)	Frequency(MHz):	5220
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5220.013	13	Pass
	2 mins later	5220.000	0	Pass
	5 mins later	5220.013	13	Pass
	10 mins later	5220.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5220.013	13	Pass
	102VAC	5220.000	0	Pass
	138VAC	5220.013	13	Pass



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Test mode:	802.11n(HT20)	Frequency(MHz):	5240
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5240.011	11	Pass
	2 mins later	5240.000	0	Pass
	5 mins later	5240.011	11	Pass
	10 mins later	5240.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5240.013	13	Pass
	102VAC	5240.000	0	Pass
	138VAC	5240.013	13	Pass

Test mode:	802.11n(HT20)	Frequency(MHz):	5260
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5260.016	16	Pass
	2 mins later	5260.000	0	Pass
	5 mins later	5260.016	16	Pass
	10 mins later	5260.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5260.016	16	Pass
	102VAC	5260.000	0	Pass
	138VAC	5260.016	16	Pass

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Test mode:	802.11n(HT20)	Frequency(MHz):	5280
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5280.011	11	Pass
	2 mins later	5280.000	0	Pass
	5 mins later	5280.011	11	Pass
	10 mins later	5280.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5280.011	11	Pass
	102VAC	5280.000	0	Pass
	138VAC	5280.011	11	Pass

Test mode:	802.11n(HT20)	Frequency(MHz):	5320
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5320.016	16	Pass
	2 mins later	5320.000	0	Pass
	5 mins later	5320.016	16	Pass
	10 mins later	5320.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5320.016	16	Pass
	102VAC	5320.000	0	Pass
	138VAC	5320.016	16	Pass

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Test mode:	802.11n(HT20)	Frequency(MHz):	5500
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5500.010	10	Pass
	2 mins later	5500.000	0	Pass
	5 mins later	5500.010	10	Pass
	10 mins later	5500.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5500.010	10	Pass
	102VAC	5500.000	0	Pass
	138VAC	5500.010	10	Pass

Test mode:	802.11n(HT20)	Frequency(MHz):	5580
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5580.011	11	Pass
	2 mins later	5580.000	0	Pass
	5 mins later	5580.011	11	Pass
	10 mins later	5580.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5580.011	11	Pass
	102VAC	5580.000	0	Pass
	138VAC	5580.011	11	Pass

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Test mode:	802.11n(HT20)	Frequency(MHz):	5700
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5700.011	11	Pass
	2 mins later	5700.000	0	Pass
	5 mins later	5700.011	11	Pass
	10 mins later	5700.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5700.011	11	Pass
	102VAC	5700.000	0	Pass
	138VAC	5700.011	11	Pass

Test mode:	802.11n(HT20)	Frequency(MHz):	5745
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5745.016	16	Pass
	2 mins later	5745.000	0	Pass
	5 mins later	5745.016	16	Pass
	10 mins later	5745.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5745.016	16	Pass
	102VAC	5745.000	0	Pass
	138VAC	5745.016	16	Pass

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Test mode:	802.11n(HT20)	Frequency(MHz):	5785
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5785.014	14	Pass
	2 mins later	5785.000	0	Pass
	5 mins later	5785.014	14	Pass
	10 mins later	5785.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5785.014	14	Pass
	102VAC	5785.000	0	Pass
	138VAC	5785.014	14	Pass

Test mode:	802.11n(HT20)	Frequency(MHz):	5825
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5825.012	12	Pass
	2 mins later	5825.000	0	Pass
	5 mins later	5825.016	16	Pass
	10 mins later	5825.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5825.012	12	Pass
	102VAC	5825.000	0	Pass
	138VAC	5825.016	16	Pass

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Test mode:	802.11n(HT40)	Frequency(MHz):	5190
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5190.009	9	Pass
	2 mins later	5190.000	0	Pass
	5 mins later	5190.009	9	Pass
	10 mins later	5190.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5190.009	9	Pass
	102VAC	5190.000	0	Pass
	138VAC	5190.009	9	Pass

Test mode:	802.11n(HT40)	Frequency(MHz):	5230
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5230.012	12	Pass
	2 mins later	5230.000	0	Pass
	5 mins later	5230.016	16	Pass
	10 mins later	5230.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5230.012	12	Pass
	102VAC	5230.000	0	Pass
	138VAC	5230.016	16	Pass

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Test mode:	802.11n(HT40)	Frequency(MHz):	5270
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5270.007	7	Pass
	2 mins later	5270.000	0	Pass
	5 mins later	5270.007	7	Pass
	10 mins later	5270.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5270.007	7	Pass
	102VAC	5270.000	0	Pass
	138VAC	5270.007	7	Pass

Test mode:	802.11n(HT40)	Frequency(MHz):	5310
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5310.010	10	Pass
	2 mins later	5310.000	0	Pass
	5 mins later	5310.010	10	Pass
	10 mins later	5310.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5310.010	10	Pass
	102VAC	5310.000	0	Pass
	138VAC	5310.010	10	Pass

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Test mode:	802.11n(HT40)	Frequency(MHz):	5510
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5510.016	16	Pass
	2 mins later	5510.000	0	Pass
	5 mins later	5510.016	16	Pass
	10 mins later	5510.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5510.016	16	Pass
	102VAC	5510.000	0	Pass
	138VAC	5510.016	16	Pass

Test mode:	802.11n(HT40)	Frequency(MHz):	5550
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5550.010	10	Pass
	2 mins later	5550.000	0	Pass
	5 mins later	5550.010	10	Pass
	10 mins later	5550.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5550.010	10	Pass
	102VAC	5550.000	0	Pass
	138VAC	5550.010	10	Pass

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Test mode:	802.11n(HT40)	Frequency(MHz):	5670
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5670.012	12	Pass
	2 mins later	5670.000	0	Pass
	5 mins later	5670.012	12	Pass
	10 mins later	5670.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5670.012	12	Pass
	102VAC	5670.000	0	Pass
	138VAC	5670.012	12	Pass

Test mode:	802.11n(HT40)	Frequency(MHz):	5755
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5755.016	16	Pass
	2 mins later	5755.000	0	Pass
	5 mins later	5755.016	16	Pass
	10 mins later	5755.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5755.016	16	Pass
	102VAC	5755.000	0	Pass
	138VAC	5755.016	16	Pass

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Test mode:	802.11n(HT40)	Frequency(MHz):	5795
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5795.010	10	Pass
	2 mins later	5795.000	0	Pass
	5 mins later	5795.010	10	Pass
	10 mins later	5795.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5795.010	10	Pass
	102VAC	5795.000	0	Pass
	138VAC	5795.010	10	Pass

Test mode:	802.11ac20	Frequency(MHz):	5180
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5180.008	8	Pass
	2 mins later	5180.000	0	Pass
	5 mins later	5180.008	8	Pass
	10 mins later	5180.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5180.011	11	Pass
	102VAC	5180.000	0	Pass
	138VAC	5180.011	11	Pass



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Test mode:	802.11ac20	Frequency(MHz):	5220
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5220.016	16	Pass
	2 mins later	5220.000	0	Pass
	5 mins later	5220.016	16	Pass
	10 mins later	5220.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5220.013	13	Pass
	102VAC	5220.000	0	Pass
	138VAC	5220.013	13	Pass

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Test mode:	802.11ac20	Frequency(MHz):	5240
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5240.010	10	Pass
	2 mins later	5240.000	0	Pass
	5 mins later	5240.011	11	Pass
	10 mins later	5240.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5240.010	10	Pass
	102VAC	5240.000	0	Pass
	138VAC	5240.013	13	Pass

Test mode:	802.11ac20	Frequency(MHz):	5260
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5260.011	11	Pass
	2 mins later	5260.000	0	Pass
	5 mins later	5260.013	13	Pass
	10 mins later	5260.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5260.012	12	Pass
	102VAC	5260.000	0	Pass
	138VAC	5260.012	12	Pass

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Test mode:	802.11ac20	Frequency(MHz):	5280
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5280.011	11	Pass
	2 mins later	5280.000	0	Pass
	5 mins later	5280.011	11	Pass
	10 mins later	5280.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5280.013	13	Pass
	102VAC	5280.000	0	Pass
	138VAC	5280.013	13	Pass

Test mode:	802.11ac20	Frequency(MHz):	5320
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5320.012	12	Pass
	2 mins later	5320.000	0	Pass
	5 mins later	5320.016	16	Pass
	10 mins later	5320.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5320.011	11	Pass
	102VAC	5320.000	0	Pass
	138VAC	5320.016	16	Pass

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Test mode:	802.11ac20	Frequency(MHz):	5500
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5500.013	13	Pass
	2 mins later	5500.000	0	Pass
	5 mins later	5500.013	13	Pass
	10 mins later	5500.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5500.013	13	Pass
	102VAC	5500.000	0	Pass
	138VAC	5500.013	13	Pass

Test mode:	802.11ac20	Frequency(MHz):	5580
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5580.014	14	Pass
	2 mins later	5580.000	0	Pass
	5 mins later	5580.014	14	Pass
	10 mins later	5580.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5580.014	14	Pass
	102VAC	5580.000	0	Pass
	138VAC	5580.014	14	Pass

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Test mode:	802.11ac20	Frequency(MHz):	5700
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5700.011	11	Pass
	2 mins later	5700.000	0	Pass
	5 mins later	5700.011	11	Pass
	10 mins later	5700.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5700.011	11	Pass
	102VAC	5700.000	0	Pass
	138VAC	5700.011	11	Pass

Test mode:	802.11ac20	Frequency(MHz):	5745
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5745.012	12	Pass
	2 mins later	5745.000	0	Pass
	5 mins later	5745.012	12	Pass
	10 mins later	5745.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5745.012	12	Pass
	102VAC	5745.000	0	Pass
	138VAC	5745.012	12	Pass

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Test mode:	802.11ac20	Frequency(MHz):	5785
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5785.012	12	Pass
	2 mins later	5785.000	0	Pass
	5 mins later	5785.012	12	Pass
	10 mins later	5785.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5785.012	12	Pass
	102VAC	5785.000	0	Pass
	138VAC	5785.012	12	Pass

Test mode:	802.11ac20	Frequency(MHz):	5825
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5825.011	11	Pass
	2 mins later	5825.000	0	Pass
	5 mins later	5825.015	15	Pass
	10 mins later	5825.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5825.011	11	Pass
	102VAC	5825.000	0	Pass
	138VAC	5825.015	15	Pass

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Test mode:	802.11ac40	Frequency(MHz):	5190
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5190.009	9	Pass
	2 mins later	5190.000	0	Pass
	5 mins later	5190.009	9	Pass
	10 mins later	5190.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5190.009	9	Pass
	102VAC	5190.000	0	Pass
	138VAC	5190.009	9	Pass

Test mode:	802.11ac40	Frequency(MHz):	5230
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5230.011	11	Pass
	2 mins later	5230.000	0	Pass
	5 mins later	5230.013	13	Pass
	10 mins later	5230.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5230.011	11	Pass
	102VAC	5230.000	0	Pass
	138VAC	5230.013	13	Pass

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Test mode:	802.11ac40	Frequency(MHz):	5270
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5270.004	4	Pass
	2 mins later	5270.000	0	Pass
	5 mins later	5270.004	4	Pass
	10 mins later	5270.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5270.004	4	Pass
	102VAC	5270.000	0	Pass
	138VAC	5270.004	4	Pass

Test mode:	802.11ac40	Frequency(MHz):	5310
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5310.014	14	Pass
	2 mins later	5310.000	0	Pass
	5 mins later	5310.010	14	Pass
	10 mins later	5310.004	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5310.014	14	Pass
	102VAC	5310.000	0	Pass
	138VAC	5310.014	14	Pass

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Test mode:	802.11ac40	Frequency(MHz):	5510
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5510.012	12	Pass
	2 mins later	5510.000	0	Pass
	5 mins later	5510.012	12	Pass
	10 mins later	5510.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5510.012	12	Pass
	102VAC	5510.000	0	Pass
	138VAC	5510.012	12	Pass

Test mode:	802.11ac40	Frequency(MHz):	5550
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5550.010	10	Pass
	2 mins later	5550.000	0	Pass
	5 mins later	5550.010	10	Pass
	10 mins later	5550.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5550.010	10	Pass
	102VAC	5550.000	0	Pass
	138VAC	5550.010	10	Pass

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Test mode:	802.11ac40	Frequency(MHz):	5670
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5670.012	12	Pass
	2 mins later	5670.000	0	Pass
	5 mins later	5670.012	12	Pass
	10 mins later	5670.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5670.012	12	Pass
	102VAC	5670.000	0	Pass
	138VAC	5670.012	12	Pass

Test mode:	802.11ac40	Frequency(MHz):	5755
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5755.011	11	Pass
	2 mins later	5755.000	0	Pass
	5 mins later	5755.011	11	Pass
	10 mins later	5755.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5755.011	11	Pass
	102VAC	5755.000	0	Pass
	138VAC	5755.011	11	Pass



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Test mode:	802.11ac40	Frequency(MHz):	5795
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5795.013	13	Pass
	2 mins later	5795.000	0	Pass
	5 mins later	5795.013	13	Pass
	10 mins later	5795.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5795.013	13	Pass
	102VAC	5795.000	0	Pass
	138VAC	5795.013	13	Pass

Test mode:	802.11ac80	Frequency(MHz):	5210
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5310.012	12	Pass
	2 mins later	5310.000	0	Pass
	5 mins later	5310.012	12	Pass
	10 mins later	5310.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5310.010	10	Pass
	102VAC	5310.000	0	Pass
	138VAC	5310.010	10	Pass

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Test mode:	802.11ac80	Frequency(MHz):	5290
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5510.015	15	Pass
	2 mins later	5510.000	0	Pass
	5 mins later	5510.015	15	Pass
	10 mins later	5510.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5510.015	15	Pass
	102VAC	5510.000	0	Pass
	138VAC	5510.015	15	Pass

Test mode:	802.11ac80	Frequency(MHz):	5530
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5550.012	12	Pass
	2 mins later	5550.000	0	Pass
	5 mins later	5550.012	12	Pass
	10 mins later	5550.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5550.012	12	Pass
	102VAC	5550.000	0	Pass
	138VAC	5550.012	12	Pass

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Test mode:	802.11ac80	Frequency(MHz):	5610
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5670.012	12	Pass
	2 mins later	5670.000	0	Pass
	5 mins later	5670.012	12	Pass
	10 mins later	5670.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5670.012	12	Pass
	102VAC	5670.000	0	Pass
	138VAC	5670.012	12	Pass

Test mode:	802.11ac80	Frequency(MHz):	5690
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5755.013	13	Pass
	2 mins later	5755.000	0	Pass
	5 mins later	5755.013	13	Pass
	10 mins later	5755.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5755.016	16	Pass
	102VAC	5755.000	0	Pass
	138VAC	5755.016	16	Pass

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Test mode:	802.11ac80	Frequency(MHz):	5775
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Test conditions	Record time	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
120VAC, 55°C	startup	5795.013	13	Pass
	2 mins later	5795.000	0	Pass
	5 mins later	5795.013	13	Pass
	10 mins later	5795.000	0	Pass

Test temperature	Test voltage	Measurement Frequency(MHz)	Delta Frequency(kHz)	Result
25°C	120VAC	5795.013	13	Pass
	102VAC	5795.000	0	Pass
	138VAC	5795.013	13	Pass

Remark: During the lower temperature, record four times change by 10° C , found the test result always keep in 16 kHz frequency error with respect to the centre frequency. It is not list in the form, but it deem to comply with the requirement.

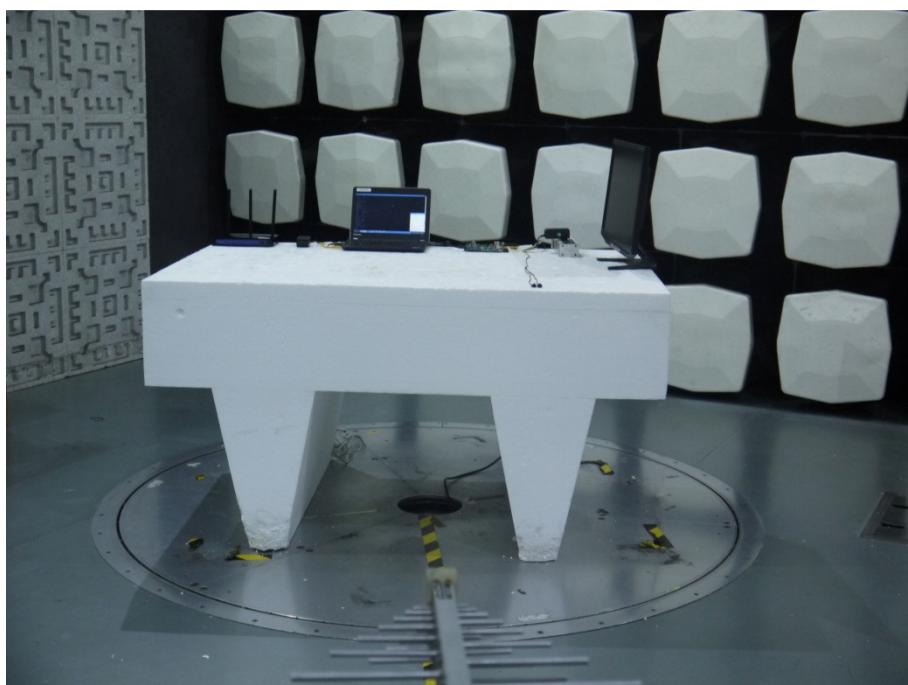
7 Photographs - EUT Test Setup

Test model No.: MCIMX7SABRE

7.10 Conducted Emission



7.11 Radiated Emission



7.12 Radiated Spurious Emission



8 Photographs - EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for SZEM1602000659CR.