



Appendix G

Frequency Stability

According to FCC Part 2.1055 & Part 24.235 & RSS-133



Frequency Error vs. Temperature:

Test Mode	RF Ch.	Volt.	Temp.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 1	M	VN	-30 °C	-14	-0.00745	---	±2.5	Pass
			-20 °C	-9	-0.00479	---	±2.5	Pass
			-10 °C	25	0.01330	---	±2.5	Pass
			0 °C	20	0.01064	---	±2.5	Pass
			10 °C	13	0.00691	---	±2.5	Pass
			20 °C	-21	-0.01117	---	±2.5	Pass
			30 °C	-8	-0.00426	---	±2.5	Pass
			40 °C	-20	-0.01064	---	±2.5	Pass
TM4(1.4 M)	M	VN	50 °C	27	0.01436	---	±2.5	Pass
			-30 °C	15	0.00798	---	±2.5	Pass
			-20 °C	10	0.00532	---	±2.5	Pass
			-10 °C	20	0.01064	---	±2.5	Pass
			0 °C	-12	-0.00638	---	±2.5	Pass
			10 °C	-23	-0.01223	---	±2.5	Pass
			20 °C	14	0.00745	---	±2.5	Pass
			30 °C	-8	-0.00426	---	±2.5	Pass
TM4(3M)	M	VN	40 °C	-8	-0.00426	---	±2.5	Pass
			50 °C	16	0.00851	---	±2.5	Pass
			-30 °C	-22	-0.01170	---	±2.5	Pass
			-20 °C	-19	-0.01011	---	±2.5	Pass
			-10 °C	10	0.00532	---	±2.5	Pass
			0 °C	8	0.00426	---	±2.5	Pass
			10 °C	28	0.01489	---	±2.5	Pass
			20 °C	-9	-0.00479	---	±2.5	Pass
TM4(5M)	M	VN	30 °C	-18	-0.00957	---	±2.5	Pass
			40 °C	-7	-0.00372	---	±2.5	Pass
			50 °C	-10	-0.00532	---	±2.5	Pass
			-30 °C	-20	-0.01064	---	±2.5	Pass
			-20 °C	-25	-0.01330	---	±2.5	Pass
			-10 °C	-13	-0.00691	---	±2.5	Pass
			0 °C	22	0.01170	---	±2.5	Pass
			10 °C	-8	-0.00426	---	±2.5	Pass
TM4(10)	M	VN	20 °C	9	0.00479	---	±2.5	Pass
			30 °C	-19	-0.01011	---	±2.5	Pass
			40 °C	-15	-0.00798	---	±2.5	Pass
			50 °C	-19	-0.01011	---	±2.5	Pass



M)			-20 °C	-13	-0.00691	---	±2.5	Pass
			-10 °C	10	0.00532	---	±2.5	Pass
			0 °C	-25	-0.01330	---	±2.5	Pass
			10 °C	-11	-0.00585	---	±2.5	Pass
			20 °C	-7	-0.00372	---	±2.5	Pass
			30 °C	11	0.00585	---	±2.5	Pass
			40 °C	-15	-0.00798	---	±2.5	Pass
			50 °C	27	0.01436	---	±2.5	Pass
TM4(15 M)	M	VN	-30 °C	14	0.00745	---	±2.5	Pass
			-20 °C	-15	-0.00798	---	±2.5	Pass
			-10 °C	-12	-0.00638	---	±2.5	Pass
			0 °C	-19	-0.01011	---	±2.5	Pass
			10 °C	18	0.00957	---	±2.5	Pass
			20 °C	20	0.01064	---	±2.5	Pass
			30 °C	-17	-0.00904	---	±2.5	Pass
			40 °C	18	0.00957	---	±2.5	Pass
TM4(20 M)	M	VN	50 °C	-21	-0.01117	---	±2.5	Pass
			-30 °C	15	0.00798	---	±2.5	Pass
			-20 °C	-9	-0.00479	---	±2.5	Pass
			-10 °C	-15	-0.00798	---	±2.5	Pass
			0 °C	-15	-0.00798	---	±2.5	Pass
			10 °C	9	0.00479	---	±2.5	Pass
			20 °C	-21	-0.01117	---	±2.5	Pass
			30 °C	28	0.01489	---	±2.5	Pass
			40 °C	-9	-0.00479	---	±2.5	Pass
			50 °C	20	0.01064	---	±2.5	Pass



Frequency Error vs. Voltage:

Test Mode	RF Ch.	Temp.	Volt.	Freq. Error [Hz]	Freq. vs. rated [ppm]	Freq. vs. 20 °C [ppm]	Limit [ppm]	Verdict
TM 1	M	20 °C	VL	-11	-0.00585	---	±2.5	Pass
			VN	12	0.00638	---	±2.5	Pass
			VH	21	0.01117	---	±2.5	Pass
TM4(1.4 M)	M	20 °C	VL	20	0.01064	---	±2.5	Pass
			VN	-10	-0.00532	---	±2.5	Pass
			VH	-16	-0.00851	---	±2.5	Pass
TM4(3M)	M	20 °C	VL	13	0.00691	---	±2.5	Pass
			VN	26	0.01383	---	±2.5	Pass
			VH	-22	-0.01170	---	±2.5	Pass
TM4(5M)	M	20 °C	VL	25	0.01330	---	±2.5	Pass
			VN	12	0.00638	---	±2.5	Pass
			VH	24	0.01277	---	±2.5	Pass
TM4(10 M)	M	20 °C	VL	-7	-0.00372	---	±2.5	Pass
			VN	-16	-0.00851	---	±2.5	Pass
			VH	14	0.00745	---	±2.5	Pass
TM4(15 M)	M	20 °C	VL	-11	-0.00585	---	±2.5	Pass
			VN	12	0.00638	---	±2.5	Pass
			VH	11	0.00585	---	±2.5	Pass
TM4(20 M)	M	20 °C	VL	19	0.01011	---	±2.5	Pass
			VN	19	0.01011	---	±2.5	Pass
			VH	-16	-0.00851	---	±2.5	Pass

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