8. APPENDIX REPORT

Project No.	SHT2304090901EW		
Test sample No.	YPHT23040909001 01	Model No.	DJ02
Start test date	2023/5/18	Finish date	2023/6/13
Temperature	25.8℃	Humidity	54%
Test Engineer	ChunshuiGu	Auditor	Xiaodong Zhao

Appendix clause	Test Item	Test Result (PASS/FAIL)
A	Transmit Power (ERP)	PASS
B	Occupied Bandwidth	PASS
C	Emission Mask	PASS
D	Modulation Limit	PASS
E	Audio Frequency Response	PASS
F	Audio Low Pass Filter Response	PASS
G	Frequency Stability Test & Temperature	PASS
H	Frequency Stability Test & Voltage	PASS

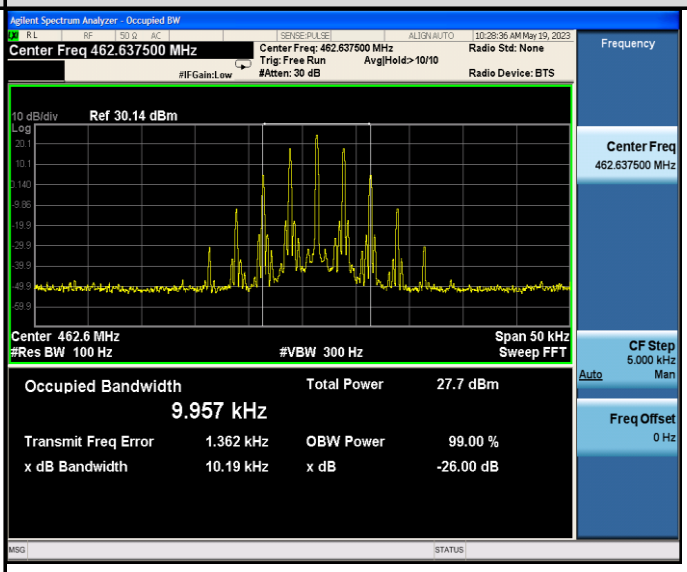
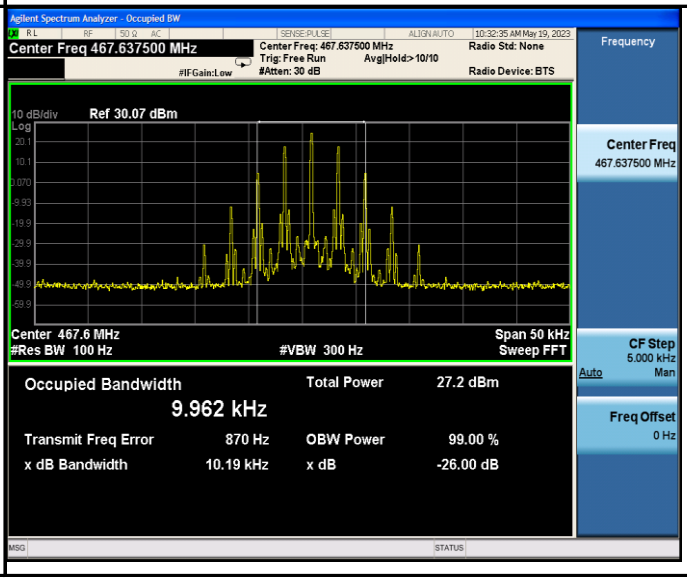
Appendix A: Transmit Power (ERP)

Test Mode	Modulation Type	Test Channel	Measured power (dBm)	Measured power (W)	Limit(W)	Result
TX-FRS	FM	CH_{M1}	26.59	0.46	≤2	PASS
TX-FRS	FM	CH_{M2}	26.51	0.45	≤0.5	PASS

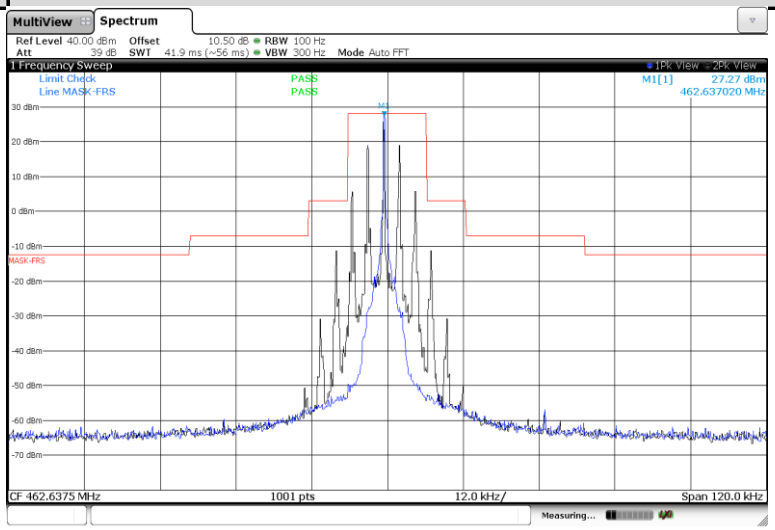
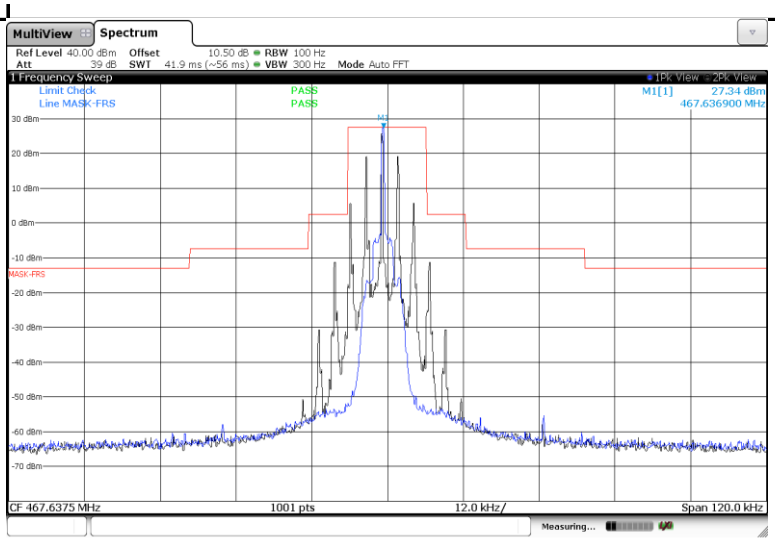
Appendix B: 99% Occupied Bandwidth & 26dB Bandwidth

Test Mode	Modulation Type	Test Channel	Occupied Bandwidth		99% Limit(kHz)	Result
			99%(kHz)	26dB(kHz)		
TX-FRS	FM	CH_{M1}	9.957	10.19	≤12.5	PASS
TX-FRS	FM	CH_{M2}	9.962	10.19	≤12.5	PASS

Appendix B: 99% Occupied Bandwidth & 26dB Bandwidth

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH_{M1}	
TX-FRS	FM	CH_{M2}	

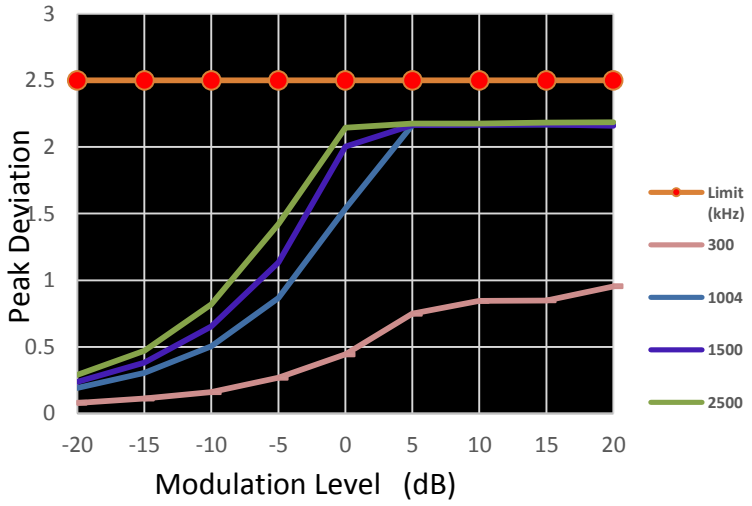
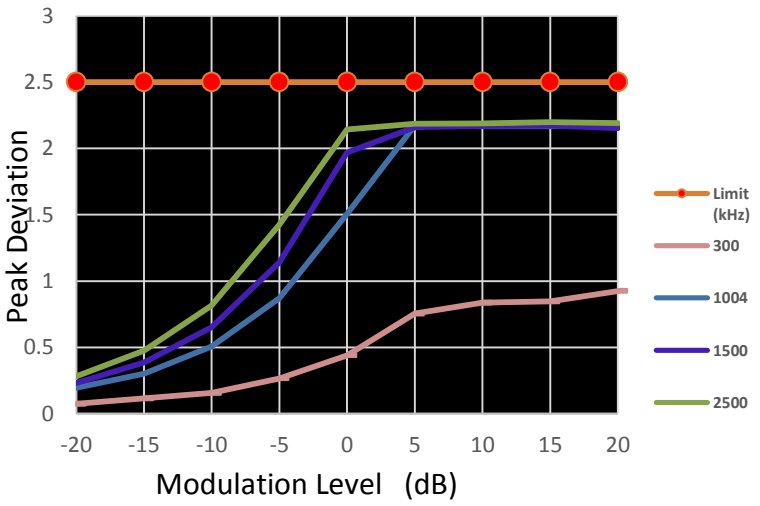
Appendix C:Emission Mask

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH_{M1}	
TX-FRS	FM	CH_{M2}	

Appendix D:Modulation Limit

Test Mode	Modulation Type	Test Channel	Modulation Level (dB)	Peak Frequency Deviation (Hz)				Limit (kHz)	Result
				300	1004	1500	2500		
TX-FRS	FM	CH_{M1}	-20	0.080	0.191	0.238	0.290	2.5	PASS
TX-FRS	FM	CH_{M1}	-15	0.112	0.304	0.382	0.471	2.5	PASS
TX-FRS	FM	CH_{M1}	-10	0.160	0.503	0.652	0.819	2.5	PASS
TX-FRS	FM	CH_{M1}	-5	0.268	0.866	1.134	1.421	2.5	PASS
TX-FRS	FM	CH_{M1}	0	0.443	1.537	2.004	2.145	2.5	PASS
TX-FRS	FM	CH_{M1}	5	0.748	2.165	2.163	2.176	2.5	PASS
TX-FRS	FM	CH_{M1}	10	0.845	2.170	2.167	2.176	2.5	PASS
TX-FRS	FM	CH_{M1}	15	0.848	2.168	2.168	2.183	2.5	PASS
TX-FRS	FM	CH_{M1}	20	0.954	2.168	2.159	2.186	2.5	PASS
TX-FRS	FM	CH_{M2}	-20	0.075	0.196	0.233	0.283	2.5	PASS
TX-FRS	FM	CH_{M2}	-15	0.115	0.301	0.387	0.475	2.5	PASS
TX-FRS	FM	CH_{M2}	-10	0.157	0.506	0.652	0.815	2.5	PASS
TX-FRS	FM	CH_{M2}	-5	0.266	0.870	1.142	1.427	2.5	PASS
TX-FRS	FM	CH_{M2}	0	0.440	1.506	1.968	2.143	2.5	PASS
TX-FRS	FM	CH_{M2}	5	0.755	2.175	2.160	2.187	2.5	PASS
TX-FRS	FM	CH_{M2}	10	0.837	2.166	2.170	2.188	2.5	PASS
TX-FRS	FM	CH_{M2}	15	0.846	2.167	2.171	2.199	2.5	PASS
TX-FRS	FM	CH_{M2}	20	0.925	2.184	2.152	2.191	2.5	PASS

Appendix D:Modulation Limit

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH_{M1}	
TX-FRS	FM	CH_{M2}	

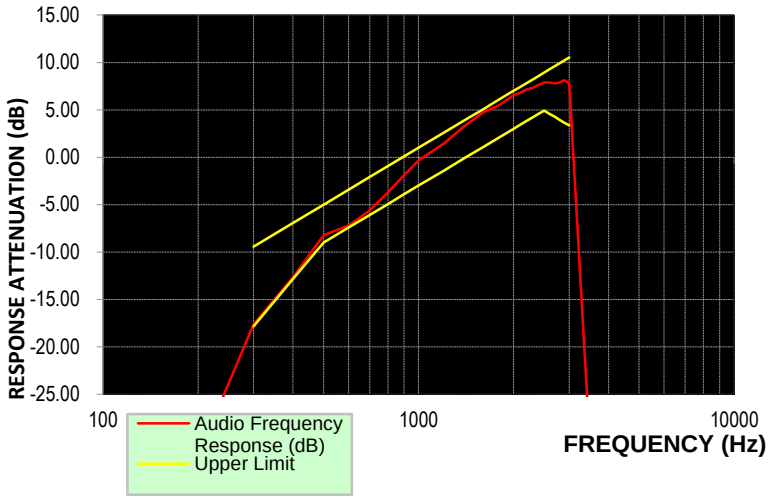
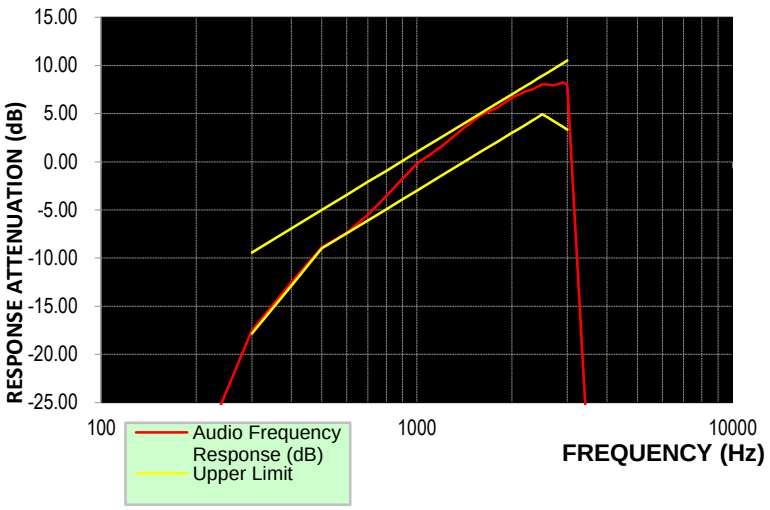
Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response (dB)	Lower Limit	Upper Limit	Result
TX-FRS	FM	CH_{M1}	100	-30.84			PASS
TX-FRS	FM	CH_{M1}	200	-31.49			PASS
TX-FRS	FM	CH_{M1}	300	-17.64	-17.84	-9.42	PASS
TX-FRS	FM	CH_{M1}	400	-12.67	-12.86	-6.93	PASS
TX-FRS	FM	CH_{M1}	500	-8.23	-9.00	-5.00	PASS
TX-FRS	FM	CH_{M1}	600	-7.19	-7.42	-3.42	PASS
TX-FRS	FM	CH_{M1}	700	-5.64	-6.09	-2.09	PASS
TX-FRS	FM	CH_{M1}	800	-3.69	-4.93	-0.93	PASS
TX-FRS	FM	CH_{M1}	900	-1.91	-3.91	0.09	PASS
TX-FRS	FM	CH_{M1}	1000	-0.35	-3.00	1.00	PASS
TX-FRS	FM	CH_{M1}	1200	1.45	-1.42	2.58	PASS
TX-FRS	FM	CH_{M1}	1400	3.29	-0.09	3.91	PASS
TX-FRS	FM	CH_{M1}	1600	4.71	1.07	5.07	PASS
TX-FRS	FM	CH_{M1}	1800	5.48	2.09	6.09	PASS
TX-FRS	FM	CH_{M1}	2000	6.52	3.00	7.00	PASS
TX-FRS	FM	CH_{M1}	2100	6.80	3.42	7.42	PASS
TX-FRS	FM	CH_{M1}	2200	7.13	3.83	7.83	PASS
TX-FRS	FM	CH_{M1}	2300	7.32	4.21	8.21	PASS
TX-FRS	FM	CH_{M1}	2400	7.63	4.58	8.58	PASS
TX-FRS	FM	CH_{M1}	2500	7.88	4.93	8.93	PASS
TX-FRS	FM	CH_{M1}	2600	7.87	4.59	9.27	PASS
TX-FRS	FM	CH_{M1}	2700	7.80	4.27	9.60	PASS
TX-FRS	FM	CH_{M1}	2800	7.91	3.95	9.91	PASS
TX-FRS	FM	CH_{M1}	2900	8.12	3.65	10.22	PASS
TX-FRS	FM	CH_{M1}	3000	7.80	3.35	10.51	PASS
TX-FRS	FM	CH_{M1}	3500	-31.24			PASS
TX-FRS	FM	CH_{M1}	4000	-31.26			PASS
TX-FRS	FM	CH_{M1}	4500	-31.19			PASS
TX-FRS	FM	CH_{M1}	5000	-31.26			PASS
TX-FRS	FM	CH_{M2}	100	-30.69			PASS
TX-FRS	FM	CH_{M2}	200	-31.34			PASS
TX-FRS	FM	CH_{M2}	300	-17.49	-17.84	-9.42	PASS
TX-FRS	FM	CH_{M2}	400	-12.52	-12.86	-6.93	PASS
TX-FRS	FM	CH_{M2}	500	-8.90	-9.00	-5.00	PASS
TX-FRS	FM	CH_{M2}	600	-7.39	-7.42	-3.42	PASS
TX-FRS	FM	CH_{M2}	700	-5.49	-6.09	-2.09	PASS
TX-FRS	FM	CH_{M2}	800	-3.54	-4.93	-0.93	PASS
TX-FRS	FM	CH_{M2}	900	-1.76	-3.91	0.09	PASS
TX-FRS	FM	CH_{M2}	1000	-0.20	-3.00	1.00	PASS
TX-FRS	FM	CH_{M2}	1200	1.60	-1.42	2.58	PASS
TX-FRS	FM	CH_{M2}	1400	3.44	-0.09	3.91	PASS
TX-FRS	FM	CH_{M2}	1600	4.86	1.07	5.07	PASS

Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response (dB)	Lower Limit	Upper Limit	Result
TX-FRS	FM	CH_{M2}	1800	5.63	2.09	6.09	PASS
TX-FRS	FM	CH_{M2}	2000	6.67	3.00	7.00	PASS
TX-FRS	FM	CH_{M2}	2100	6.95	3.42	7.42	PASS
TX-FRS	FM	CH_{M2}	2200	7.28	3.83	7.83	PASS
TX-FRS	FM	CH_{M2}	2300	7.47	4.21	8.21	PASS
TX-FRS	FM	CH_{M2}	2400	7.78	4.58	8.58	PASS
TX-FRS	FM	CH_{M2}	2500	8.03	4.93	8.93	PASS
TX-FRS	FM	CH_{M2}	2600	8.02	4.59	9.27	PASS
TX-FRS	FM	CH_{M2}	2700	7.95	4.27	9.60	PASS
TX-FRS	FM	CH_{M2}	2800	8.06	3.95	9.91	PASS
TX-FRS	FM	CH_{M2}	2900	8.27	3.65	10.22	PASS
TX-FRS	FM	CH_{M2}	3000	7.95	3.35	10.51	PASS
TX-FRS	FM	CH_{M2}	3500	-31.09			PASS
TX-FRS	FM	CH_{M2}	4000	-31.11			PASS
TX-FRS	FM	CH_{M2}	4500	-31.04			PASS
TX-FRS	FM	CH_{M2}	5000	-31.11			PASS

Appendix E:Audio Frequency Response

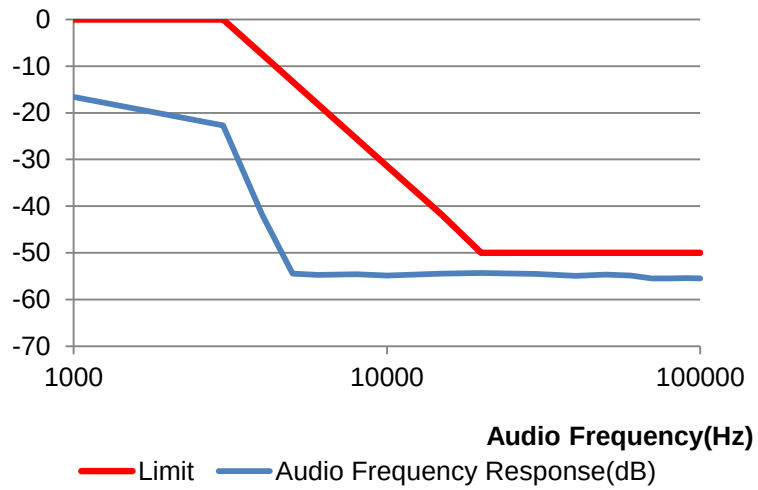
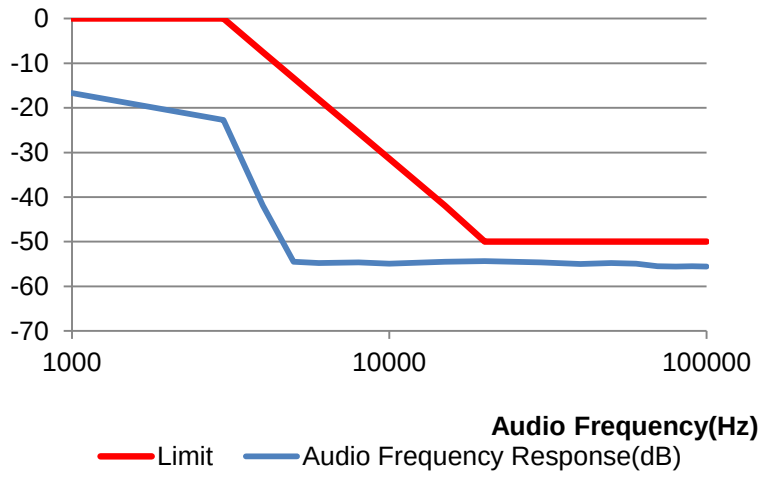
Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH_{M1}	
TX-FRS	FM	CH_{M2}	

Note: The highest audio frequency response at 3kHz<3.125kHz, so meet the requirement.

Appendix F:Audio Low Pass Filter Response

Test Mode	Modulation Type	Test Channel	Audio Frequency(Hz)	Audio Frequency Response(dB)	Limit	Result
TX-FRS	FM	CH_{M1}	1000	-16.62	0	PASS
TX-FRS	FM	CH_{M1}	3000	-22.67	0	PASS
TX-FRS	FM	CH_{M1}	4000	-41.81	-7.5	PASS
TX-FRS	FM	CH_{M1}	5000	-54.44	-13.3	PASS
TX-FRS	FM	CH_{M1}	6000	-54.7	-18.1	PASS
TX-FRS	FM	CH_{M1}	8000	-54.6	-25.6	PASS
TX-FRS	FM	CH_{M1}	10000	-54.85	-31.4	PASS
TX-FRS	FM	CH_{M1}	15000	-54.47	-41.9	PASS
TX-FRS	FM	CH_{M1}	20000	-54.29	-50	PASS
TX-FRS	FM	CH_{M1}	30000	-54.54	-50	PASS
TX-FRS	FM	CH_{M1}	40000	-54.95	-50	PASS
TX-FRS	FM	CH_{M1}	50000	-54.68	-50	PASS
TX-FRS	FM	CH_{M1}	60000	-54.88	-50	PASS
TX-FRS	FM	CH_{M1}	70000	-55.45	-50	PASS
TX-FRS	FM	CH_{M1}	80000	-55.47	-50	PASS
TX-FRS	FM	CH_{M1}	90000	-55.41	-50	PASS
TX-FRS	FM	CH_{M1}	100000	-55.49	-50	PASS
TX-FRS	FM	CH_{M2}	1000	-16.66	0	PASS
TX-FRS	FM	CH_{M2}	3000	-22.71	0	PASS
TX-FRS	FM	CH_{M2}	4000	-41.85	-7.5	PASS
TX-FRS	FM	CH_{M2}	5000	-54.48	-13.3	PASS
TX-FRS	FM	CH_{M2}	6000	-54.74	-18.1	PASS
TX-FRS	FM	CH_{M2}	8000	-54.64	-25.6	PASS
TX-FRS	FM	CH_{M2}	10000	-54.89	-31.4	PASS
TX-FRS	FM	CH_{M2}	15000	-54.51	-41.9	PASS
TX-FRS	FM	CH_{M2}	20000	-54.33	-50	PASS
TX-FRS	FM	CH_{M2}	30000	-54.6	-50	PASS
TX-FRS	FM	CH_{M2}	40000	-55.01	-50	PASS
TX-FRS	FM	CH_{M2}	50000	-54.74	-50	PASS
TX-FRS	FM	CH_{M2}	60000	-54.94	-50	PASS
TX-FRS	FM	CH_{M2}	70000	-55.51	-50	PASS
TX-FRS	FM	CH_{M2}	80000	-55.53	-50	PASS
TX-FRS	FM	CH_{M2}	90000	-55.47	-50	PASS
TX-FRS	FM	CH_{M2}	100000	-55.55	-50	PASS

Appendix F:Audio Low Pass Filter Response

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH_{M1}	
TX-FRS	FM	CH_{M2}	

Appendix G:Frequency Stability Test & Temperature

Test Mode	Modulation Type	Test Conditions		Frequency error (ppm)		Limit (ppm)	Result
		Voltage	Temperature	CH_{M1}	CH_{M2}		
TX-FRS	FM	V_N	-30	-0.507	-0.561	±2.5	PASS
TX-FRS	FM	V_N	-20	-0.496	-0.544	±2.5	PASS
TX-FRS	FM	V_N	-10	-0.514	-0.527	±2.5	PASS
TX-FRS	FM	V_N	0	-0.491	-0.526	±2.5	PASS
TX-FRS	FM	V_N	10	-0.516	-0.572	±2.5	PASS
TX-FRS	FM	V_N	20	-0.477	-0.523	±2.5	PASS
TX-FRS	FM	V_N	30	-0.491	-0.547	±2.5	PASS
TX-FRS	FM	V_N	40	-0.498	-0.562	±2.5	PASS
TX-FRS	FM	V_N	50	-0.512	-0.573	±2.5	PASS

Appendix H:Frequency Stability Test & Voltage

Test Mode	Modulation Type	Test Conditions		Frequency error (ppm)		Limit (ppm)	Result
		Voltage	Temperature	CH_{M1}	CH_{M2}		
TX-FRS	FM	V_N	T_N	-0.477	-0.523	±2.5	PASS
TX-FRS	FM	V_L	T_N	-0.467	-0.513	±2.5	PASS
TX-FRS	FM	V_H	T_N	-0.512	-0.525	±2.5	PASS

----End of Report----