

Project No.	SHT2104043004EW		
Test sample No.	YPHT21040430038	Model No.	RB29
Start test date	2021/5/19	Finish date	2021/5/20
Temperature	23.6°C	Humidity	53%
Test Engineer	<i>Casper Chen</i>	Auditor	<i>Xiaodong Zhuo</i>

Appendix clause	Test Item	Test date (M/D)	Test Result (PASS/FAIL)
A	Transmit Power (ERP)	5/19	PASS
B	Occupied Bandwidth	5/19	PASS
C	Emission Mask	5/19	PASS
D	Modulation Limit	5/20	PASS
E	Audio Frequency Response	5/20	PASS
F	Audio Low Pass Filter Response	5/20	PASS
G	Frequency Stability Test & Temperature	5/20	PASS
H	Frequency Stability Test & Voltage	5/20	PASS

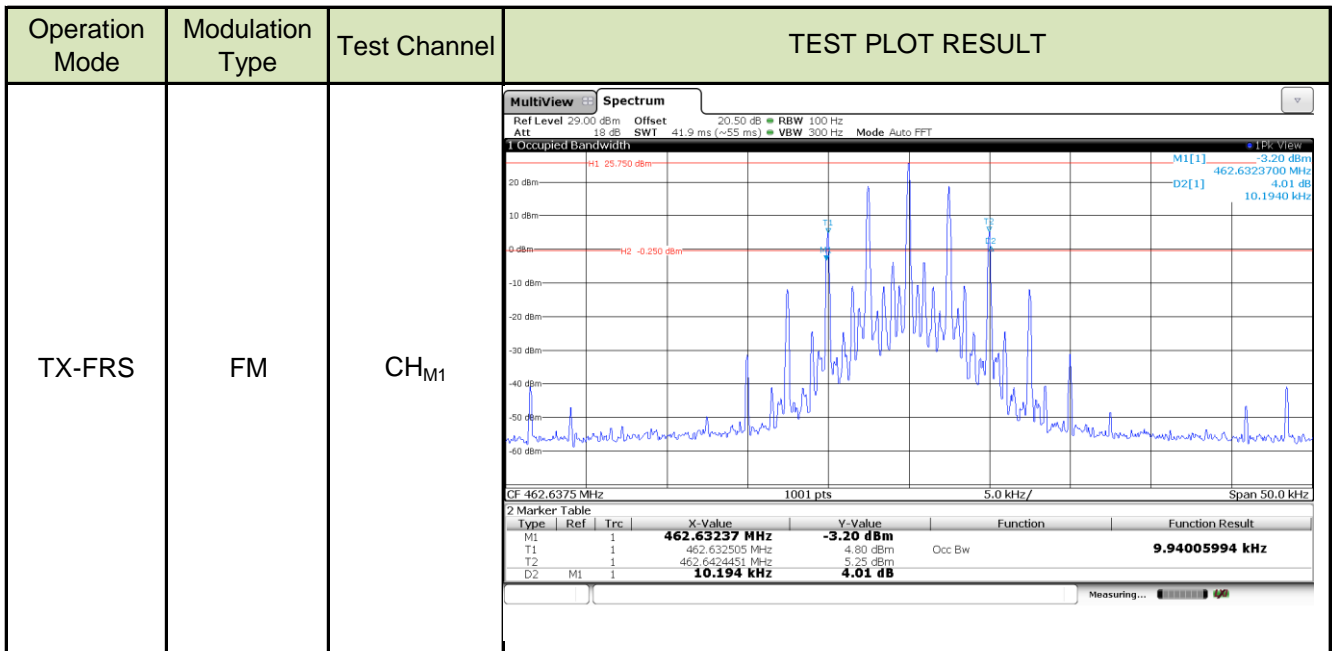
Appendix A: Transmit Power (ERP)

Test Mode	Modulation Type	Test Channel	Measured power (dBm)	Measured power (W)	Limit(W)	Result
TX-FRS	FM	CH _{M1}	27.88	0.61	≤2	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}	9.94	10.194	≤12.5	PASS

Appendix B: 99% Occupied Bandwidth & 26dB Bandwidth



Appendix C:Emission Mask

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH _{M1}	<p> MultiView Spectrum Ref Level 33.00 dBm Offset 20.00 dB RBW 100 Hz Att 23 dB SWI 41.9 ms (~56 ms) VBW 300 Hz Mode Auto FFT 1 Frequency Sweep 1PK View 2PK View 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 462.6375 MHz 1001 pts 12.0 kHz/ Span 120.0 kHz M1[1] 29.83 dBm 462.617300 MHz Measuring... 19 MAY 2021 17:14:48 Date: 19 MAY 2021 17:14:48 </p>

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	0.042	0.173	0.291	0.462	2.5	PASS
TX-FRS	FM	CH _{M1}	-15	0.052	0.267	0.512	0.816	2.5	PASS
TX-FRS	FM	CH _{M1}	-10	0.070	0.490	0.836	1.594	2.5	PASS
TX-FRS	FM	CH _{M1}	-5	0.082	0.837	1.474	1.928	2.5	PASS
TX-FRS	FM	CH _{M1}	0	0.151	1.492	2.042	2.068	2.5	PASS
TX-FRS	FM	CH _{M1}	5	0.269	1.634	2.093	2.107	2.5	PASS
TX-FRS	FM	CH _{M1}	10	0.438	1.727	2.113	2.127	2.5	PASS
TX-FRS	FM	CH _{M1}	15	0.571	1.764	2.156	2.196	2.5	PASS
TX-FRS	FM	CH _{M1}	20	0.586	1.809	2.181	2.234	2.5	PASS

Appendix D:Modulation Limit

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																		
TX-FRS	FM	CH _{M1}	<p>The graph plots Peak Deviation (kHz) on the y-axis (0 to 3) against Modulation Level (dB) on the x-axis (-20 to 20). A horizontal orange line at 2.5 kHz indicates the modulation limit. Four curves represent different modulation rates: 300 Hz (pink), 1004 Hz (blue), 1500 Hz (purple), and 2500 Hz (green). All curves show an upward trend as the modulation level increases, with the 2500 Hz curve reaching the highest peak deviation of approximately 2.2 kHz at 20 dB. The 300 Hz curve remains the lowest, reaching about 0.6 kHz at 20 dB.</p> <table border="1"> <caption>Approximate Peak Deviation (kHz) vs Modulation Level (dB)</caption> <thead> <tr> <th>Modulation Level (dB)</th> <th>300 Hz (kHz)</th> <th>1004 Hz (kHz)</th> <th>1500 Hz (kHz)</th> <th>2500 Hz (kHz)</th> </tr> </thead> <tbody> <tr> <td>-20</td> <td>0.05</td> <td>0.25</td> <td>0.35</td> <td>0.45</td> </tr> <tr> <td>-15</td> <td>0.05</td> <td>0.35</td> <td>0.55</td> <td>0.85</td> </tr> <tr> <td>-10</td> <td>0.05</td> <td>0.55</td> <td>0.85</td> <td>1.55</td> </tr> <tr> <td>-5</td> <td>0.05</td> <td>0.85</td> <td>1.45</td> <td>1.95</td> </tr> <tr> <td>0</td> <td>0.15</td> <td>1.55</td> <td>2.05</td> <td>2.15</td> </tr> <tr> <td>5</td> <td>0.35</td> <td>1.75</td> <td>2.15</td> <td>2.25</td> </tr> <tr> <td>10</td> <td>0.55</td> <td>1.85</td> <td>2.25</td> <td>2.35</td> </tr> <tr> <td>15</td> <td>0.65</td> <td>1.95</td> <td>2.35</td> <td>2.45</td> </tr> <tr> <td>20</td> <td>0.65</td> <td>1.95</td> <td>2.35</td> <td>2.45</td> </tr> </tbody> </table>	Modulation Level (dB)	300 Hz (kHz)	1004 Hz (kHz)	1500 Hz (kHz)	2500 Hz (kHz)	-20	0.05	0.25	0.35	0.45	-15	0.05	0.35	0.55	0.85	-10	0.05	0.55	0.85	1.55	-5	0.05	0.85	1.45	1.95	0	0.15	1.55	2.05	2.15	5	0.35	1.75	2.15	2.25	10	0.55	1.85	2.25	2.35	15	0.65	1.95	2.35	2.45	20	0.65	1.95	2.35	2.45
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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	-20.96			PASS
TX-FRS	FM	CH _{M1}	200	-19.78			PASS
TX-FRS	FM	CH _{M1}	300	-17.37	-17.84	-9.42	PASS
TX-FRS	FM	CH _{M1}	400	-11.92	-12.86	-6.93	PASS
TX-FRS	FM	CH _{M1}	500	-8.34	-9.00	-5.00	PASS
TX-FRS	FM	CH _{M1}	600	-6.97	-7.42	-3.42	PASS
TX-FRS	FM	CH _{M1}	700	-5.76	-6.09	-2.09	PASS
TX-FRS	FM	CH _{M1}	800	-4.32	-4.93	-0.93	PASS
TX-FRS	FM	CH _{M1}	900	-3.19	-3.91	0.09	PASS
TX-FRS	FM	CH _{M1}	1000	-2.53	-3.00	1.00	PASS
TX-FRS	FM	CH _{M1}	1200	-0.97	-1.42	2.58	PASS
TX-FRS	FM	CH _{M1}	1400	1.34	-0.09	3.91	PASS
TX-FRS	FM	CH _{M1}	1600	1.96	1.07	5.07	PASS
TX-FRS	FM	CH _{M1}	1800	3.09	2.09	6.09	PASS
TX-FRS	FM	CH _{M1}	2000	5.27	3.00	7.00	PASS
TX-FRS	FM	CH _{M1}	2100	5.93	3.42	7.42	PASS
TX-FRS	FM	CH _{M1}	2200	6.71	3.83	7.83	PASS
TX-FRS	FM	CH _{M1}	2300	6.87	4.21	8.21	PASS
TX-FRS	FM	CH _{M1}	2400	7.24	4.58	8.58	PASS
TX-FRS	FM	CH _{M1}	2500	7.79	4.93	8.93	PASS
TX-FRS	FM	CH _{M1}	2600	8.01	4.59	9.27	PASS
TX-FRS	FM	CH _{M1}	2700	8.86	4.27	9.60	PASS
TX-FRS	FM	CH _{M1}	2800	9.58	3.95	9.91	PASS
TX-FRS	FM	CH _{M1}	2900	9.79	3.65	10.22	PASS
TX-FRS	FM	CH _{M1}	3000	9.84	3.35	10.51	PASS
TX-FRS	FM	CH _{M1}	3500	-20.72			PASS
TX-FRS	FM	CH _{M1}	4000	-21.07			PASS
TX-FRS	FM	CH _{M1}	4500	-21.37			PASS
TX-FRS	FM	CH _{M1}	5000	-20.93			PASS

Appendix E:Audio Frequency Response

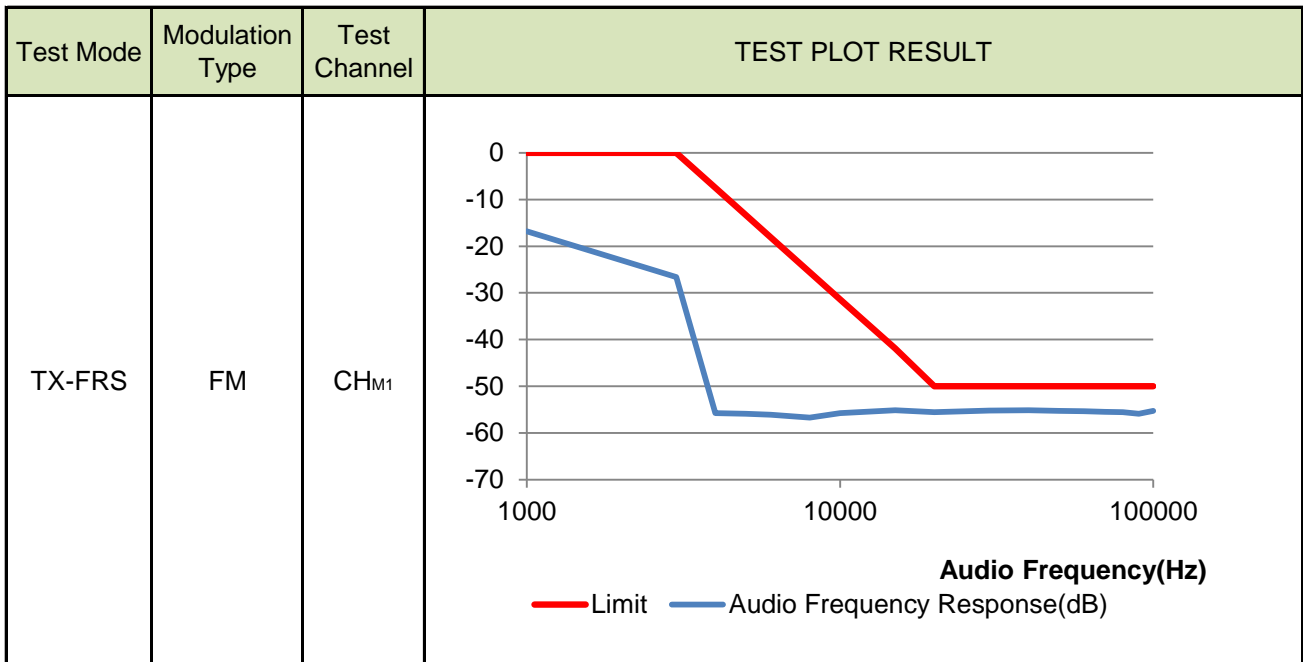
Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH _{M1}	<p>The graph displays the audio frequency response in dB against frequency in Hz. The x-axis is logarithmic, ranging from 100 Hz to 10,000 Hz. The y-axis is linear, ranging from -25.00 dB to 15.00 dB. Three data series are shown: a red line for 'Audio Frequency Response (dB)', a yellow line for 'Upper Limit', and a green line for 'Lower Limit'. The red line starts at approximately -20 dB at 100 Hz, rises to about -10 dB at 1 kHz, and reaches a peak of approximately 10 dB at 3.125 kHz. After this peak, the response drops sharply to about -20 dB at 10 kHz. The yellow line (Upper Limit) follows a similar upward trend but peaks at approximately 5 dB at 3.125 kHz before dropping. The green line (Lower Limit) remains relatively flat around -10 dB until 1 kHz, then rises to meet the red line at 3.125 kHz.</p>

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	-16.83	0	PASS
TX-FRS	FM	CH _{M1}	3000	-26.58	0	PASS
TX-FRS	FM	CH _{M1}	4000	-55.76	-7.5	PASS
TX-FRS	FM	CH _{M1}	5000	-55.87	-13.3	PASS
TX-FRS	FM	CH _{M1}	6000	-56.09	-18.1	PASS
TX-FRS	FM	CH _{M1}	8000	-56.73	-25.6	PASS
TX-FRS	FM	CH _{M1}	10000	-55.78	-31.4	PASS
TX-FRS	FM	CH _{M1}	15000	-55.13	-41.9	PASS
TX-FRS	FM	CH _{M1}	20000	-55.58	-50	PASS
TX-FRS	FM	CH _{M1}	30000	-55.19	-50	PASS
TX-FRS	FM	CH _{M1}	40000	-55.17	-50	PASS
TX-FRS	FM	CH _{M1}	50000	-55.28	-50	PASS
TX-FRS	FM	CH _{M1}	60000	-55.31	-50	PASS
TX-FRS	FM	CH _{M1}	70000	-55.46	-50	PASS
TX-FRS	FM	CH _{M1}	80000	-55.55	-50	PASS
TX-FRS	FM	CH _{M1}	90000	-55.92	-50	PASS
TX-FRS	FM	CH _{M1}	100000	-55.27	-50	PASS

Appendix F:Audio Low Pass Filter Response



Appendix G:Frequency Stability Test & Temperature

Test Mode	Modulation Type	Test Conditions		Frequency error (ppm)	Limit (ppm)	Result
		Voltage	Temperature	CH _{M1}		
TX-FRS	FM	V _N	-30	0.134	±2.5	PASS
TX-FRS	FM	V _N	-20	0.131	±2.5	PASS
TX-FRS	FM	V _N	-10	0.129	±2.5	PASS
TX-FRS	FM	V _N	0	0.138	±2.5	PASS
TX-FRS	FM	V _N	10	0.128	±2.5	PASS
TX-FRS	FM	V _N	20	0.132	±2.5	PASS
TX-FRS	FM	V _N	30	0.136	±2.5	PASS
TX-FRS	FM	V _N	40	0.141	±2.5	PASS
TX-FRS	FM	V _N	50	0.134	±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}		
TX-FRS	FM	V _N	T _N	0.138	±2.5	PASS
TX-FRS	FM	V _L	T _N	0.132	±2.5	PASS
TX-FRS	FM	V _H	T _N	0.134	±2.5	PASS

----End of Report----