

Project No.	SHT2206065003EW		
Test sample No.	YPHT22060650003	Model No.	Q-538
Start test date	2022/6/28	Finish date	2022/6/30
Temperature	23.5℃	Humidity	45%
Test Engineer	<i>Casper Chen</i>	Auditor	<i>Xiaodong Zhao</i>

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}	24.80	0.30	≤2	PASS

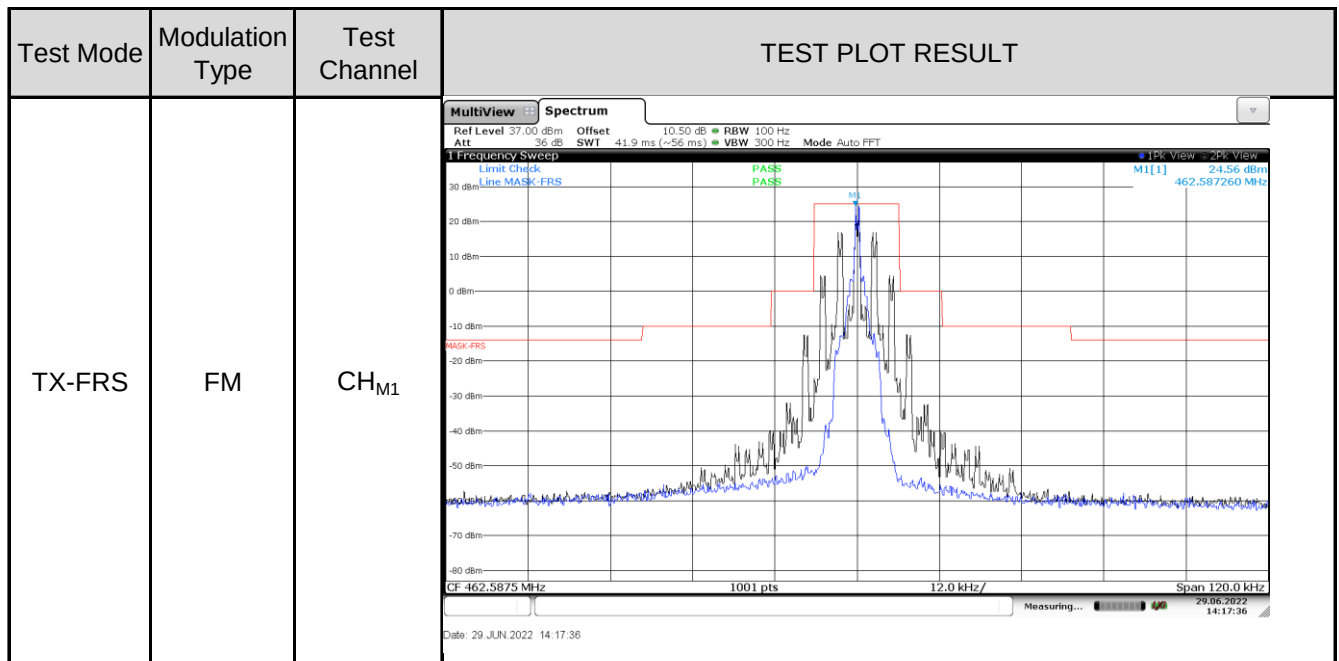
Appendix B: 99% Occupied Bandwidth & 26dB Bandwidth

Test Mode	Modulation Type	Test Channel	Occupied Bandwidth		99% Limit(kHz)	Result
			99%(kHz)	26dB(kHz)		
TX-FRS	FM	CH _{M1}	10.00	10.74	≤12.5	PASS

Appendix B: 99% Occupied Bandwidth & 26dB Bandwidth

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-FRS	FM	CH _{M1}	Agilent Spectrum Analyzer - Occupied BW Center Freq 462.587500 MHz Center Freq: 462.587500 MHz Trig: Free Run Avg/Hold: > 10/10 #IF Gain: Low #Atten: 38 dB Radio Std: None Radio Device: BTS Frequency Center Freq 462.587500 MHz CF Step 5.000 kHz Auto Man Freq Offset 0 Hz Ref 29.18 dBm Center 462.6 MHz #Res BW 100 Hz #VBW 300 Hz Span 50 kHz Sweep FFT Occupied Bandwidth 10.000 kHz Total Power 30.4 dBm Transmit Freq Error 47 Hz OBW Power 99.00 % x dB Bandwidth 10.74 kHz x dB -26.00 dB

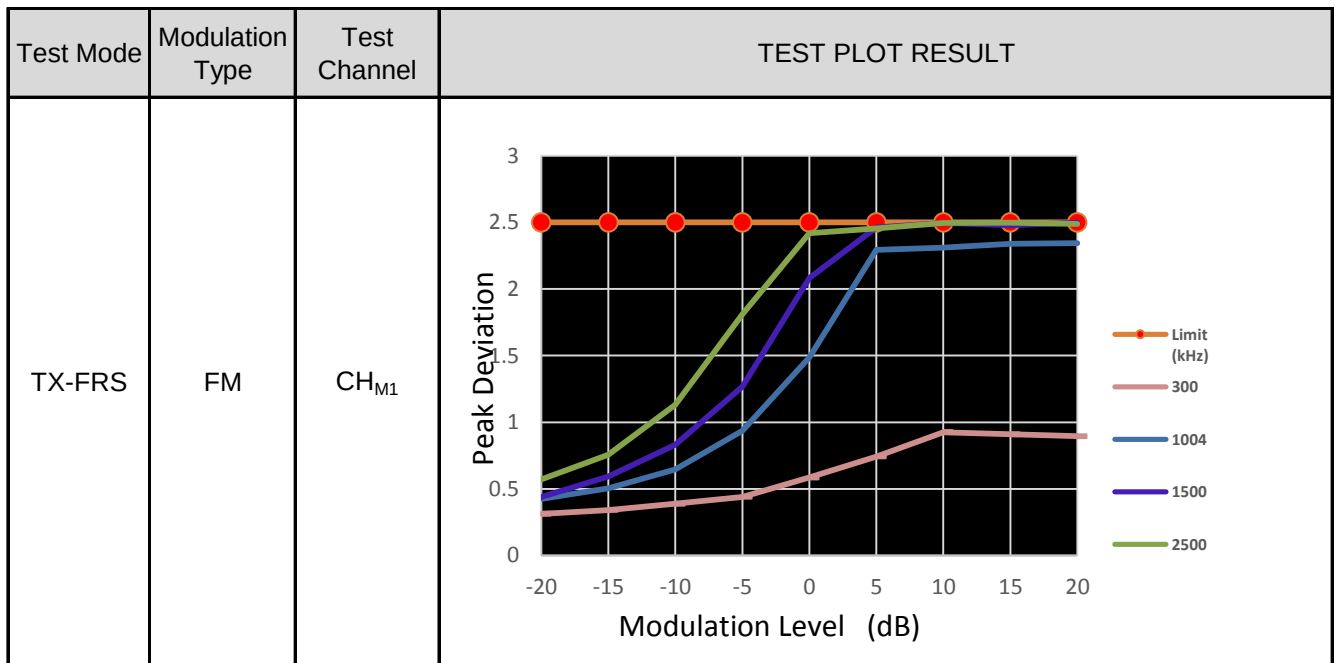
Appendix C:Emission Mask



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	0.313	0.426	0.439	0.572	2.5	PASS
TX-FRS	FM	CH _{M1}	-15	0.341	0.505	0.593	0.757	2.5	PASS
TX-FRS	FM	CH _{M1}	-10	0.388	0.647	0.830	1.130	2.5	PASS
TX-FRS	FM	CH _{M1}	-5	0.440	0.936	1.269	1.811	2.5	PASS
TX-FRS	FM	CH _{M1}	0	0.585	1.487	2.082	2.419	2.5	PASS
TX-FRS	FM	CH _{M1}	5	0.742	2.293	2.462	2.454	2.5	PASS
TX-FRS	FM	CH _{M1}	10	0.925	2.311	2.496	2.496	2.5	PASS
TX-FRS	FM	CH _{M1}	15	0.910	2.339	2.478	2.498	2.5	PASS
TX-FRS	FM	CH _{M1}	20	0.895	2.344	2.499	2.488	2.5	PASS

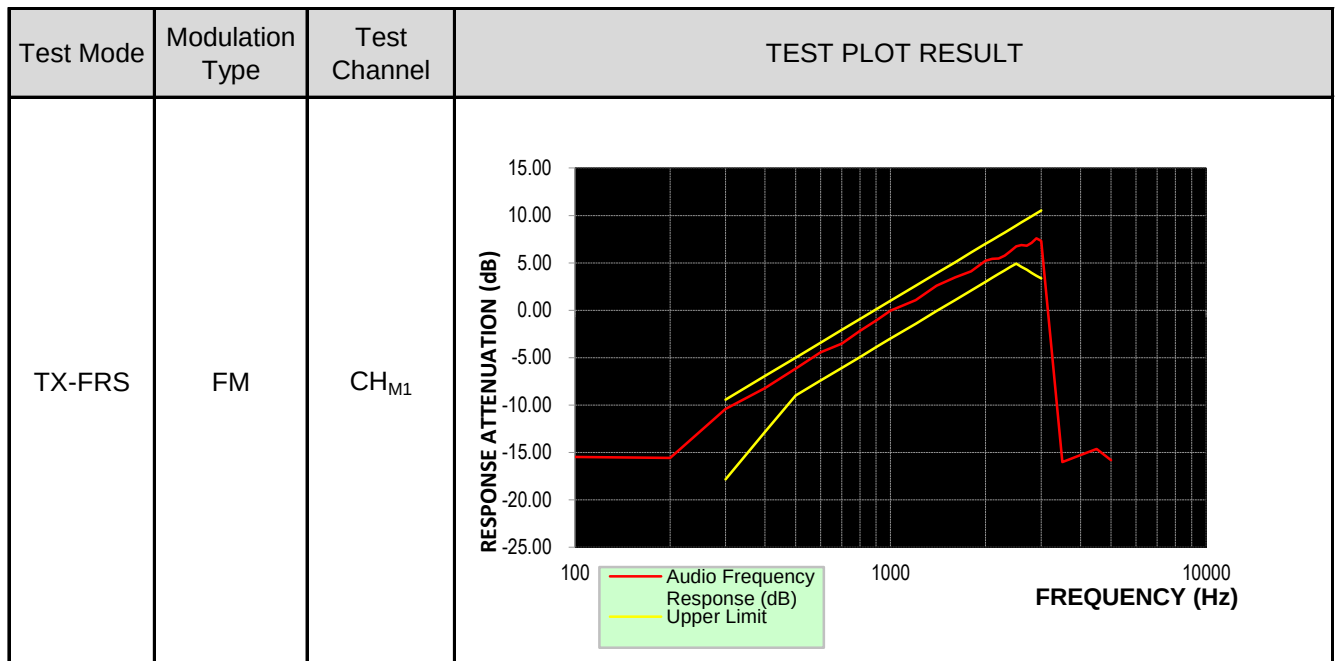
Appendix D:Modulation Limit



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	-15.49			PASS
TX-FRS	FM	CH _{M1}	200	-15.57			PASS
TX-FRS	FM	CH _{M1}	300	-10.40	-17.84	-9.42	PASS
TX-FRS	FM	CH _{M1}	400	-8.21	-12.86	-6.93	PASS
TX-FRS	FM	CH _{M1}	500	-6.15	-9.00	-5.00	PASS
TX-FRS	FM	CH _{M1}	600	-4.43	-7.42	-3.42	PASS
TX-FRS	FM	CH _{M1}	700	-3.51	-6.09	-2.09	PASS
TX-FRS	FM	CH _{M1}	800	-2.19	-4.93	-0.93	PASS
TX-FRS	FM	CH _{M1}	900	-1.08	-3.91	0.09	PASS
TX-FRS	FM	CH _{M1}	1000	-0.04	-3.00	1.00	PASS
TX-FRS	FM	CH _{M1}	1200	1.06	-1.42	2.58	PASS
TX-FRS	FM	CH _{M1}	1400	2.59	-0.09	3.91	PASS
TX-FRS	FM	CH _{M1}	1600	3.48	1.07	5.07	PASS
TX-FRS	FM	CH _{M1}	1800	4.11	2.09	6.09	PASS
TX-FRS	FM	CH _{M1}	2000	5.23	3.00	7.00	PASS
TX-FRS	FM	CH _{M1}	2100	5.41	3.42	7.42	PASS
TX-FRS	FM	CH _{M1}	2200	5.46	3.83	7.83	PASS
TX-FRS	FM	CH _{M1}	2300	5.76	4.21	8.21	PASS
TX-FRS	FM	CH _{M1}	2400	6.24	4.58	8.58	PASS
TX-FRS	FM	CH _{M1}	2500	6.74	4.93	8.93	PASS
TX-FRS	FM	CH _{M1}	2600	6.89	4.59	9.27	PASS
TX-FRS	FM	CH _{M1}	2700	6.81	4.27	9.60	PASS
TX-FRS	FM	CH _{M1}	2800	7.12	3.95	9.91	PASS
TX-FRS	FM	CH _{M1}	2900	7.58	3.65	10.22	PASS
TX-FRS	FM	CH _{M1}	3000	7.33	3.35	10.51	PASS
TX-FRS	FM	CH _{M1}	3500	-16.04			PASS
TX-FRS	FM	CH _{M1}	4000	-15.27			PASS
TX-FRS	FM	CH _{M1}	4500	-14.63			PASS
TX-FRS	FM	CH _{M1}	5000	-15.82			PASS

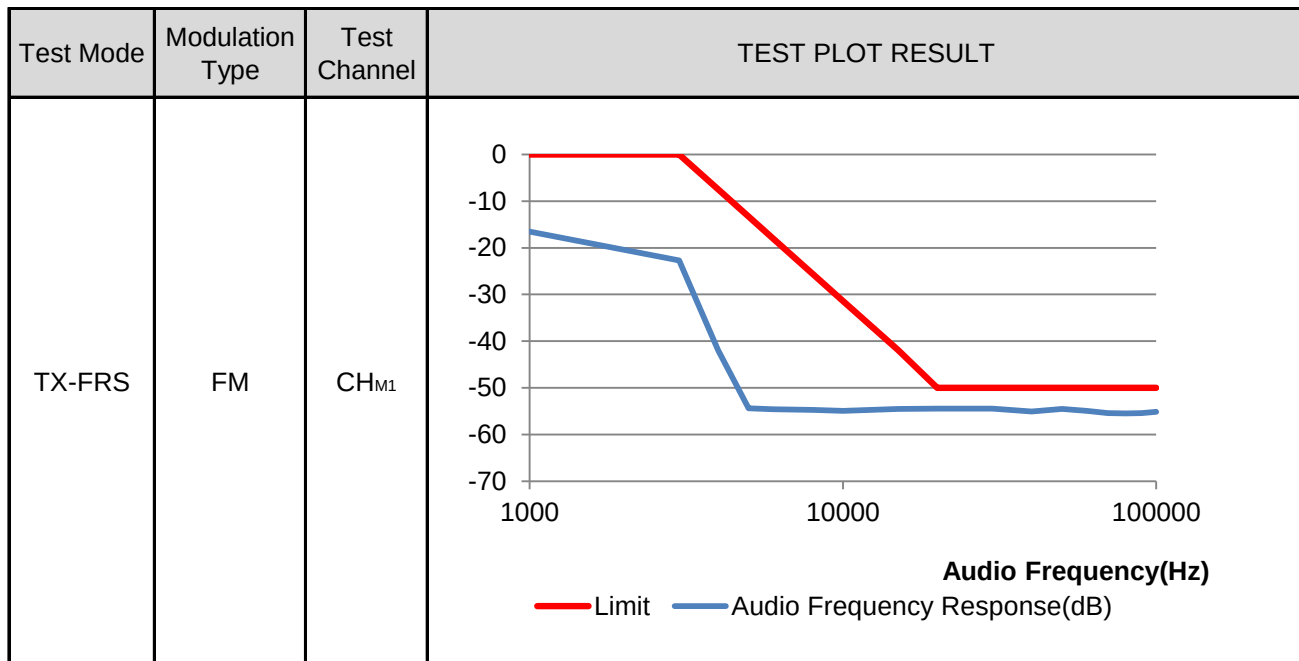
Appendix E:Audio Frequency Response



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	-16.56	0	PASS
TX-FRS	FM	CH _{M1}	3000	-22.73	0	PASS
TX-FRS	FM	CH _{M1}	4000	-41.98	-7.5	PASS
TX-FRS	FM	CH _{M1}	5000	-54.40	-13.3	PASS
TX-FRS	FM	CH _{M1}	6000	-54.61	-18.1	PASS
TX-FRS	FM	CH _{M1}	8000	-54.71	-25.6	PASS
TX-FRS	FM	CH _{M1}	10000	-54.90	-31.4	PASS
TX-FRS	FM	CH _{M1}	15000	-54.51	-41.9	PASS
TX-FRS	FM	CH _{M1}	20000	-54.43	-50	PASS
TX-FRS	FM	CH _{M1}	30000	-54.48	-50	PASS
TX-FRS	FM	CH _{M1}	40000	-55.07	-50	PASS
TX-FRS	FM	CH _{M1}	50000	-54.55	-50	PASS
TX-FRS	FM	CH _{M1}	60000	-54.95	-50	PASS
TX-FRS	FM	CH _{M1}	70000	-55.44	-50	PASS
TX-FRS	FM	CH _{M1}	80000	-55.46	-50	PASS
TX-FRS	FM	CH _{M1}	90000	-55.42	-50	PASS
TX-FRS	FM	CH _{M1}	100000	-55.16	-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	0.161	±2.5	PASS
TX-FRS	FM	V _N	-20	0.158	±2.5	PASS
TX-FRS	FM	V _N	-10	0.156	±2.5	PASS
TX-FRS	FM	V _N	0	0.152	±2.5	PASS
TX-FRS	FM	V _N	10	0.162	±2.5	PASS
TX-FRS	FM	V _N	20	0.147	±2.5	PASS
TX-FRS	FM	V _N	30	0.153	±2.5	PASS
TX-FRS	FM	V _N	40	0.155	±2.5	PASS
TX-FRS	FM	V _N	50	0.148	±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	0.147	±2.5	PASS
TX-FRS	FM	V _L	T _N	0.137	±2.5	PASS
TX-FRS	FM	V _H	T _N	0.149	±2.5	PASS

-----End of Report-----