



Appendix Report
FCC PART 95E Test Form

QRE317 V 3.2 (2019-11)

Project No.	SHT2008103307EW	Test sample No.	RB26
Start test date	2020/10/12	Finish date	2020/10/15
Temperature	22.5°C	Humidity	55%
Test Engineer	Zijian Li	Auditor	Xiaodong Zhu

Appendix clause	Test Item	Test date (M/D)	Test Result (PASS/FAIL)
A	Transmitting Power	10/14	PASS
B	99% Occupied Bandwidth & 26dB Bandwidth	10/12	PASS
C	Emission Mask	10/12	PASS
D	Modulation Limit	10/14	PASS
E	Audio Frequency Response	10/14	PASS
F	Audio Low Pass Filter Response	10/13	PASS
G	Frequency Stability Test & Temperature	10/13	PASS
H	Frequency Stability Test & Voltage	10/13	PASS



Appendix A: Transmitting Power

Test Mode	Modulation Type	Test Channel	Measured power (dBm)	Measured power (W)	Limit(W)	Result
TX-GMRS	FM	CH _{M1}	32.54	1.79	≤50	PASS
TX-GMRS	FM	CH _{M2}	32.39	1.73	≤50	PASS
TX-GMRS	FM	CH _{M3}	32.48	1.77	≤5	PASS
TX-GMRS	FM	CH _{M4}	26.88	0.49	≤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-GMRS	FM	CH _{M1}	9.79	10.402	≤20	PASS
TX-GMRS	FM	CH _{M2}	9.79	10.359	≤20	PASS
TX-GMRS	FM	CH _{M3}	9.79	10.414	≤20	PASS
TX-GMRS	FM	CH _{M4}	9.94	10.194	≤12.5	PASS



Appendix B:Occupied Bandwidth

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																												
TX-GMRS	FM	CH _{M4}	<div style="border: 1px solid black; padding: 5px;"> <p>MultiView Spectrum</p> <p>Ref Level 29.00 dBm Offset 0.50 dB RBW 300 Hz Att 38 dB SWI 1.4 ms (-23 ms) VBW 1 kHz Mode Auto FFT</p> <p>1 Occupied Bandwidth</p> <p>CF 467.6375 MHz 1001 pts 5.0 kHz/ Span 50.0 kHz</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-Value</th> <th>Y-Value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>467.63745 MHz</td> <td>24.15 dBm</td> <td></td> <td></td> </tr> <tr> <td>T1</td> <td>1</td> <td></td> <td>467.6325549 MHz</td> <td>2.87 dBm</td> <td>Occ Bw</td> <td>9.79020979 kHz</td> </tr> <tr> <td>T2</td> <td>1</td> <td></td> <td>467.6423452 MHz</td> <td>2.15 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 14.OCT.2020 17:08:47</p> </div>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1	1		467.63745 MHz	24.15 dBm			T1	1		467.6325549 MHz	2.87 dBm	Occ Bw	9.79020979 kHz	T2	1		467.6423452 MHz	2.15 dBm		
Type	Ref	Trc	X-Value	Y-Value	Function	Function Result																									
M1	1		467.63745 MHz	24.15 dBm																											
T1	1		467.6325549 MHz	2.87 dBm	Occ Bw	9.79020979 kHz																									
T2	1		467.6423452 MHz	2.15 dBm																											



Appendix C:Emission Mask

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-GMRS	FM	CH _{M1}	<p> MultView Spectrum Ref Level 36.00 dBm Offset 20.50 dB RBW 300 Hz Att 25 dB SWT 14 ms (~23 ms) VBW 1 kHz Mode Auto FFT 1PK View 2PK View M1[1] 33.38 dBm 462.650000 MHz 1 Frequency Sweep 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm CF 462.65 MHz 1001 pts 12.0 kHz/ Span 120.0 kHz Measuring... 12.10.2020 18:00:48 Date: 12.OCT.2020 18:00:48 </p>
TX-GMRS	FM	CH _{M2}	<p> MultView Spectrum Ref Level 36.00 dBm Offset 20.50 dB RBW 300 Hz Att 25 dB SWT 14 ms (~23 ms) VBW 1 kHz Mode Auto FFT 1PK View 2PK View M1[1] 33.32 dBm 467.650000 MHz 1 Frequency Sweep 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm CF 467.65 MHz 1001 pts 12.0 kHz/ Span 120.0 kHz Measuring... 12.10.2020 18:05:36 Date: 12.OCT.2020 18:05:36 </p>
TX-GMRS	FM	CH _{M3}	<p> MultView Spectrum Ref Level 36.00 dBm Offset 20.50 dB RBW 300 Hz Att 25 dB SWT 14 ms (~23 ms) VBW 1 kHz Mode Auto FFT 1PK View 2PK View M1[1] 33.37 dBm 462.637500 MHz 1 Frequency Sweep 30 dBm 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm CF 462.6375 MHz 1001 pts 12.0 kHz/ Span 120.0 kHz Measuring... 12.10.2020 18:08:29 Date: 12.OCT.2020 18:08:29 </p>



Appendix C:Emission Mask

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-GMRS	FM	CH _{M4}	<p>The spectrum plot shows a signal centered at 467.6375 MHz. The y-axis represents power in dBm, ranging from -60 to 20. The x-axis represents frequency in MHz, with a span of 120.0 kHz. A red line indicates the emission mask, and a blue line shows the measured signal. A peak is measured at 25.63 dBm. The plot also shows a noise floor around -50 dBm. The date and time of the measurement are 14.OCT.2020 17:18:25.</p>



**Appendix Report
FCC PART 95E Test Form**

QRE317 V 3.2 (2019-11)

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-GMRS	FM	CH _{M1}	-20	0.203	2.208	1.809	1.31	5	PASS
TX-GMRS	FM	CH _{M1}	-15	0.212	2.125	1.786	1.263	5	PASS
TX-GMRS	FM	CH _{M1}	-10	0.198	2.254	1.812	1.327	5	PASS
TX-GMRS	FM	CH _{M1}	-5	0.202	2.131	1.803	1.268	5	PASS
TX-GMRS	FM	CH _{M1}	0	0.246	2.391	1.817	1.356	5	PASS
TX-GMRS	FM	CH _{M1}	5	0.903	2.373	1.824	1.402	5	PASS
TX-GMRS	FM	CH _{M1}	10	1.872	2.286	1.825	1.41	5	PASS
TX-GMRS	FM	CH _{M1}	15	1.868	2.291	1.83	1.415	5	PASS
TX-GMRS	FM	CH _{M1}	20	1.875	2.288	1.826	1.417	5	PASS
TX-GMRS	FM	CH _{M2}	-20	1.105	0.844	0.869	1.043	5	PASS
TX-GMRS	FM	CH _{M2}	-15	0.768	0.97	1.101	1.347	5	PASS
TX-GMRS	FM	CH _{M2}	-10	0.84	1.207	1.428	1.832	5	PASS
TX-GMRS	FM	CH _{M2}	-5	0.922	1.609	2.039	2.656	5	PASS
TX-GMRS	FM	CH _{M2}	0	1.083	2.372	2.691	2.931	5	PASS
TX-GMRS	FM	CH _{M2}	5	1.332	2.593	2.833	3.081	5	PASS
TX-GMRS	FM	CH _{M2}	10	1.3	2.595	2.864	3.065	5	PASS
TX-GMRS	FM	CH _{M2}	15	1.332	2.554	2.857	3.064	5	PASS
TX-GMRS	FM	CH _{M2}	20	1.32	2.544	2.858	3.073	5	PASS
TX-GMRS	FM	CH _{M3}	-20	1.146	0.882	0.885	1.054	5	PASS
TX-GMRS	FM	CH _{M3}	-15	0.784	0.989	1.104	1.33	5	PASS
TX-GMRS	FM	CH _{M3}	-10	0.843	1.189	1.412	1.836	5	PASS
TX-GMRS	FM	CH _{M3}	-5	0.919	1.596	2.022	2.622	5	PASS
TX-GMRS	FM	CH _{M3}	0	1.067	2.349	2.712	2.934	5	PASS
TX-GMRS	FM	CH _{M3}	5	1.349	2.672	2.822	3.036	5	PASS
TX-GMRS	FM	CH _{M3}	10	1.308	2.586	2.873	3.069	5	PASS
TX-GMRS	FM	CH _{M3}	15	1.309	2.554	2.876	3.048	5	PASS
TX-GMRS	FM	CH _{M3}	20	1.302	2.586	2.874	3.067	5	PASS
TX-GMRS	FM	CH _{M4}	-20	0.363	0.185	0.25	0.33	2.5	PASS
TX-GMRS	FM	CH _{M4}	-15	0.098	0.293	0.405	0.563	2.5	PASS
TX-GMRS	FM	CH _{M4}	-10	0.143	0.499	0.695	0.986	2.5	PASS
TX-GMRS	FM	CH _{M4}	-5	0.232	0.856	1.207	1.722	2.5	PASS
TX-GMRS	FM	CH _{M4}	0	0.399	1.518	1.945	2.069	2.5	PASS
TX-GMRS	FM	CH _{M4}	5	0.674	1.995	2.148	2.253	2.5	PASS
TX-GMRS	FM	CH _{M4}	10	0.647	1.905	2.157	2.306	2.5	PASS
TX-GMRS	FM	CH _{M4}	15	0.682	1.988	2.155	2.308	2.5	PASS
TX-GMRS	FM	CH _{M4}	20	0.647	1.914	2.157	2.311	2.5	PASS



Appendix D: Modulation Limit

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-GMRS	FM	CH _{M1}	
TX-GMRS	FM	CH _{M2}	
TX-GMRS	FM	CH _{M3}	



Appendix D: Modulation Limit

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																												
TX-GMRS	FM	CH _{M4}	<p>Peak Deviation</p> <p>Modulation Level (dB)</p> <p>Legend:</p> <ul style="list-style-type: none">Limit (kHz)300100415002500 <table border="1"><caption>Approximate Peak Deviation (kHz) vs Modulation Level (dB)</caption><thead><tr><th>Modulation Level (dB)</th><th>Limit (kHz)</th><th>300 (kHz)</th><th>1004 (kHz)</th><th>1500 (kHz)</th><th>2500 (kHz)</th></tr></thead><tbody><tr><td>-20</td><td>2.5</td><td>0.1</td><td>0.2</td><td>0.3</td><td>0.4</td></tr><tr><td>-15</td><td>2.5</td><td>0.1</td><td>0.4</td><td>0.5</td><td>0.7</td></tr><tr><td>-10</td><td>2.5</td><td>0.2</td><td>0.6</td><td>0.8</td><td>1.1</td></tr><tr><td>-5</td><td>2.5</td><td>0.3</td><td>0.9</td><td>1.2</td><td>1.6</td></tr><tr><td>0</td><td>2.5</td><td>0.4</td><td>1.3</td><td>1.6</td><td>2.0</td></tr><tr><td>5</td><td>2.5</td><td>0.6</td><td>1.8</td><td>2.0</td><td>2.3</td></tr><tr><td>10</td><td>2.5</td><td>0.6</td><td>1.9</td><td>2.1</td><td>2.4</td></tr><tr><td>15</td><td>2.5</td><td>0.6</td><td>2.0</td><td>2.1</td><td>2.4</td></tr><tr><td>20</td><td>2.5</td><td>0.6</td><td>2.0</td><td>2.1</td><td>2.4</td></tr></tbody></table>	Modulation Level (dB)	Limit (kHz)	300 (kHz)	1004 (kHz)	1500 (kHz)	2500 (kHz)	-20	2.5	0.1	0.2	0.3	0.4	-15	2.5	0.1	0.4	0.5	0.7	-10	2.5	0.2	0.6	0.8	1.1	-5	2.5	0.3	0.9	1.2	1.6	0	2.5	0.4	1.3	1.6	2.0	5	2.5	0.6	1.8	2.0	2.3	10	2.5	0.6	1.9	2.1	2.4	15	2.5	0.6	2.0	2.1	2.4	20	2.5	0.6	2.0	2.1	2.4
Modulation Level (dB)	Limit (kHz)	300 (kHz)	1004 (kHz)	1500 (kHz)	2500 (kHz)																																																										
-20	2.5	0.1	0.2	0.3	0.4																																																										
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-5	2.5	0.3	0.9	1.2	1.6																																																										
0	2.5	0.4	1.3	1.6	2.0																																																										
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15	2.5	0.6	2.0	2.1	2.4																																																										
20	2.5	0.6	2.0	2.1	2.4																																																										



Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response (dB)	Lower Limit	Upper Limit	Result
TX-GMRS	FM	CH _{M1}	100	-37.71			PASS
TX-GMRS	FM	CH _{M1}	200	-37.67			PASS
TX-GMRS	FM	CH _{M1}	300	-12.04	-17.84	-9.42	PASS
TX-GMRS	FM	CH _{M1}	400	-8.80	-12.86	-6.93	PASS
TX-GMRS	FM	CH _{M1}	500	-6.53	-9.00	-5.00	PASS
TX-GMRS	FM	CH _{M1}	600	-4.72	-7.42	-3.42	PASS
TX-GMRS	FM	CH _{M1}	700	-3.51	-6.09	-2.09	PASS
TX-GMRS	FM	CH _{M1}	800	-2.30	-4.93	-0.93	PASS
TX-GMRS	FM	CH _{M1}	900	-1.04	-3.91	0.09	PASS
TX-GMRS	FM	CH _{M1}	1000	0.00	-3.00	1.00	PASS
TX-GMRS	FM	CH _{M1}	1200	1.08	-1.42	2.58	PASS
TX-GMRS	FM	CH _{M1}	1400	2.41	-0.09	3.91	PASS
TX-GMRS	FM	CH _{M1}	1600	3.40	1.07	5.07	PASS
TX-GMRS	FM	CH _{M1}	1800	3.61	2.09	6.09	PASS
TX-GMRS	FM	CH _{M1}	2000	4.63	3.00	7.00	PASS
TX-GMRS	FM	CH _{M1}	2100	4.63	3.42	7.42	PASS
TX-GMRS	FM	CH _{M1}	2200	4.53	3.83	7.83	PASS
TX-GMRS	FM	CH _{M1}	2300	4.57	4.21	8.21	PASS
TX-GMRS	FM	CH _{M1}	2400	4.77	4.58	8.58	PASS
TX-GMRS	FM	CH _{M1}	2500	5.02	4.93	8.93	PASS
TX-GMRS	FM	CH _{M1}	2600	4.87	4.59	9.27	PASS
TX-GMRS	FM	CH _{M1}	2700	4.74	4.27	9.60	PASS
TX-GMRS	FM	CH _{M1}	2800	4.81	3.95	9.91	PASS
TX-GMRS	FM	CH _{M1}	2900	4.98	3.65	10.22	PASS
TX-GMRS	FM	CH _{M1}	3000	4.65	3.35	10.51	PASS
TX-GMRS	FM	CH _{M1}	3500	-37.23			PASS
TX-GMRS	FM	CH _{M1}	4000	-37.66			PASS
TX-GMRS	FM	CH _{M1}	4500	-37.72			PASS
TX-GMRS	FM	CH _{M1}	5000	-37.44			PASS
TX-GMRS	FM	CH _{M2}	100	-37.47			PASS
TX-GMRS	FM	CH _{M2}	200	-37.44			PASS
TX-GMRS	FM	CH _{M2}	300	-12.09	-17.84	-9.42	PASS
TX-GMRS	FM	CH _{M2}	400	-8.80	-12.86	-6.93	PASS
TX-GMRS	FM	CH _{M2}	500	-6.55	-9.00	-5.00	PASS
TX-GMRS	FM	CH _{M2}	600	-4.74	-7.42	-3.42	PASS
TX-GMRS	FM	CH _{M2}	700	-3.51	-6.09	-2.09	PASS
TX-GMRS	FM	CH _{M2}	800	-2.32	-4.93	-0.93	PASS
TX-GMRS	FM	CH _{M2}	900	-1.08	-3.91	0.09	PASS
TX-GMRS	FM	CH _{M2}	1000	-0.01	-3.00	1.00	PASS
TX-GMRS	FM	CH _{M2}	1200	1.07	-1.42	2.58	PASS
TX-GMRS	FM	CH _{M2}	1400	2.40	-0.09	3.91	PASS
TX-GMRS	FM	CH _{M2}	1600	3.38	1.07	5.07	PASS
TX-GMRS	FM	CH _{M2}	1800	3.59	2.09	6.09	PASS
TX-GMRS	FM	CH _{M2}	2000	4.71	3.00	7.00	PASS
TX-GMRS	FM	CH _{M2}	2100	4.71	3.42	7.42	PASS



Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response (dB)	Lower Limit	Upper Limit	Result
TX-GMRS	FM	CH _{M2}	2200	4.60	3.83	7.83	PASS
TX-GMRS	FM	CH _{M2}	2300	4.64	4.21	8.21	PASS
TX-GMRS	FM	CH _{M2}	2400	4.84	4.58	8.58	PASS
TX-GMRS	FM	CH _{M2}	2500	5.00	4.93	8.93	PASS
TX-GMRS	FM	CH _{M2}	2600	4.94	4.59	9.27	PASS
TX-GMRS	FM	CH _{M2}	2700	4.82	4.27	9.60	PASS
TX-GMRS	FM	CH _{M2}	2800	4.88	3.95	9.91	PASS
TX-GMRS	FM	CH _{M2}	2900	5.05	3.65	10.22	PASS
TX-GMRS	FM	CH _{M2}	3000	4.72	3.35	10.51	PASS
TX-GMRS	FM	CH _{M2}	3500	-37.30			PASS
TX-GMRS	FM	CH _{M2}	4000	-37.62			PASS
TX-GMRS	FM	CH _{M2}	4500	-37.36			PASS
TX-GMRS	FM	CH _{M2}	5000	-37.52			PASS
TX-GMRS	FM	CH _{M3}	100	-37.60			PASS
TX-GMRS	FM	CH _{M3}	200	-37.63			PASS
TX-GMRS	FM	CH _{M3}	300	-12.14	-17.84	-9.42	PASS
TX-GMRS	FM	CH _{M3}	400	-8.79	-12.86	-6.93	PASS
TX-GMRS	FM	CH _{M3}	500	-6.52	-9.00	-5.00	PASS
TX-GMRS	FM	CH _{M3}	600	-4.75	-7.42	-3.42	PASS
TX-GMRS	FM	CH _{M3}	700	-3.52	-6.09	-2.09	PASS
TX-GMRS	FM	CH _{M3}	800	-2.30	-4.93	-0.93	PASS
TX-GMRS	FM	CH _{M3}	900	-1.06	-3.91	0.09	PASS
TX-GMRS	FM	CH _{M3}	1000	0.01	-3.00	1.00	PASS
TX-GMRS	FM	CH _{M3}	1200	1.08	-1.42	2.58	PASS
TX-GMRS	FM	CH _{M3}	1400	2.40	-0.09	3.91	PASS
TX-GMRS	FM	CH _{M3}	1600	3.39	1.07	5.07	PASS
TX-GMRS	FM	CH _{M3}	1800	3.59	2.09	6.09	PASS
TX-GMRS	FM	CH _{M3}	2000	4.81	3.00	7.00	PASS
TX-GMRS	FM	CH _{M3}	2100	4.81	3.42	7.42	PASS
TX-GMRS	FM	CH _{M3}	2200	4.71	3.83	7.83	PASS
TX-GMRS	FM	CH _{M3}	2300	4.75	4.21	8.21	PASS
TX-GMRS	FM	CH _{M3}	2400	4.95	4.58	8.58	PASS
TX-GMRS	FM	CH _{M3}	2500	5.10	4.93	8.93	PASS
TX-GMRS	FM	CH _{M3}	2600	5.04	4.59	9.27	PASS
TX-GMRS	FM	CH _{M3}	2700	4.92	4.27	9.60	PASS
TX-GMRS	FM	CH _{M3}	2800	4.99	3.95	9.91	PASS
TX-GMRS	FM	CH _{M3}	2900	5.15	3.65	10.22	PASS
TX-GMRS	FM	CH _{M3}	3000	4.83	3.35	10.51	PASS
TX-GMRS	FM	CH _{M3}	3500	-37.47			PASS
TX-GMRS	FM	CH _{M3}	4000	-37.51			PASS
TX-GMRS	FM	CH _{M3}	4500	-37.70			PASS
TX-GMRS	FM	CH _{M3}	5000	-37.56			PASS
TX-GMRS	FM	CH _{M4}	100	-33.52			PASS
TX-GMRS	FM	CH _{M4}	200	-33.87			PASS
TX-GMRS	FM	CH _{M4}	300	-12.06	-17.84	-9.42	PASS



Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	Frequency (Hz)	Audio Frequency Response (dB)	Lower Limit	Upper Limit	Result
TX-GMRS	FM	CH _{M4}	400	-8.86	-12.86	-6.93	PASS
TX-GMRS	FM	CH _{M4}	500	-6.57	-9.00	-5.00	PASS
TX-GMRS	FM	CH _{M4}	600	-4.73	-7.42	-3.42	PASS
TX-GMRS	FM	CH _{M4}	700	-3.53	-6.09	-2.09	PASS
TX-GMRS	FM	CH _{M4}	800	-2.31	-4.93	-0.93	PASS
TX-GMRS	FM	CH _{M4}	900	-1.09	-3.91	0.09	PASS
TX-GMRS	FM	CH _{M4}	1000	-0.03	-3.00	1.00	PASS
TX-GMRS	FM	CH _{M4}	1200	1.06	-1.42	2.58	PASS
TX-GMRS	FM	CH _{M4}	1400	2.39	-0.09	3.91	PASS
TX-GMRS	FM	CH _{M4}	1600	3.38	1.07	5.07	PASS
TX-GMRS	FM	CH _{M4}	1800	3.83	2.09	6.09	PASS
TX-GMRS	FM	CH _{M4}	2000	4.87	3.00	7.00	PASS
TX-GMRS	FM	CH _{M4}	2100	5.04	3.42	7.42	PASS
TX-GMRS	FM	CH _{M4}	2200	5.05	3.83	7.83	PASS
TX-GMRS	FM	CH _{M4}	2300	5.26	4.21	8.21	PASS
TX-GMRS	FM	CH _{M4}	2400	5.72	4.58	8.58	PASS
TX-GMRS	FM	CH _{M4}	2500	6.11	4.93	8.93	PASS
TX-GMRS	FM	CH _{M4}	2600	6.16	4.59	9.27	PASS
TX-GMRS	FM	CH _{M4}	2700	6.09	4.27	9.60	PASS
TX-GMRS	FM	CH _{M4}	2800	6.33	3.95	9.91	PASS
TX-GMRS	FM	CH _{M4}	2900	6.75	3.65	10.22	PASS
TX-GMRS	FM	CH _{M4}	3000	6.37	3.35	10.51	PASS
TX-GMRS	FM	CH _{M4}	3500	-33.47			PASS
TX-GMRS	FM	CH _{M4}	4000	-33.62			PASS
TX-GMRS	FM	CH _{M4}	4500	-33.51			PASS
TX-GMRS	FM	CH _{M4}	5000	-33.72			PASS



Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-GMRS	FM	CH _{M1}	<p>Graph showing Response Attenuation (dB) vs Frequency (Hz) for Test Channel CH_{M1}. The plot includes Audio Frequency Response (dB) (red line), Upper Limit (yellow line), and Lower Limit (green line). The response is within the limits across the frequency range.</p>
TX-GMRS	FM	CH _{M2}	<p>Graph showing Response Attenuation (dB) vs Frequency (Hz) for Test Channel CH_{M2}. The plot includes Audio Frequency Response (dB) (red line), Upper Limit (yellow line), and Lower Limit (green line). The response is within the limits across the frequency range.</p>
TX-GMRS	FM	CH _{M3}	<p>Graph showing Response Attenuation (dB) vs Frequency (Hz) for Test Channel CH_{M3}. The plot includes Audio Frequency Response (dB) (red line), Upper Limit (yellow line), and Lower Limit (green line). The response is within the limits across the frequency range.</p>



Appendix E:Audio Frequency Response

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-GMRS	FM	CH _{M4}	<p>The plot displays the audio frequency response for the TX-GMRS FM test mode on channel CH_{M4}. The y-axis represents Response Attenuation in dB, ranging from -25.00 to 15.00. The x-axis represents Frequency in Hz on a logarithmic scale from 100 to 10000. A red line indicates the measured audio frequency response, which starts at approximately -25 dB at 100 Hz, rises to about -12 dB at 200 Hz, then continues to rise to a peak of approximately 6 dB at 5000 Hz before dropping sharply to -25 dB at 10000 Hz. A yellow line represents the reference response, which starts at -10 dB at 200 Hz and rises linearly to 10 dB at 5000 Hz. A legend in the bottom left of the plot area identifies the red line as 'Audio Frequency Response (dB)'.</p>



Appendix F:Audio Low Pass Filter Response

Test Mode	Modulation Type	Test Channel	Audio Frequency(Hz)	Audio Frequency Response(dB)	Limit	Result
TX-GMRS	FM	CH _{M1}	1000	-16.92	0	PASS
TX-GMRS	FM	CH _{M1}	3000	-17.86	0	PASS
TX-GMRS	FM	CH _{M1}	4000	-22.52	-7.5	PASS
TX-GMRS	FM	CH _{M1}	5000	-50.21	-13.3	PASS
TX-GMRS	FM	CH _{M1}	6000	-50.14	-18.1	PASS
TX-GMRS	FM	CH _{M1}	8000	-50.65	-25.6	PASS
TX-GMRS	FM	CH _{M1}	10000	-50.47	-31.4	PASS
TX-GMRS	FM	CH _{M1}	15000	-50.68	-41.9	PASS
TX-GMRS	FM	CH _{M1}	20000	-50.77	-50	PASS
TX-GMRS	FM	CH _{M1}	30000	-51.16	-50	PASS
TX-GMRS	FM	CH _{M1}	40000	-51.21	-50	PASS
TX-GMRS	FM	CH _{M1}	50000	-51.17	-50	PASS
TX-GMRS	FM	CH _{M1}	60000	-51.37	-50	PASS
TX-GMRS	FM	CH _{M1}	70000	-51.68	-50	PASS
TX-GMRS	FM	CH _{M1}	80000	-51.49	-50	PASS
TX-GMRS	FM	CH _{M1}	90000	-51.76	-50	PASS
TX-GMRS	FM	CH _{M1}	100000	-51.88	-50	PASS
TX-GMRS	FM	CH _{M2}	1000	-16.88	0	PASS
TX-GMRS	FM	CH _{M2}	3000	-17.87	0	PASS
TX-GMRS	FM	CH _{M2}	4000	-22.51	-7.5	PASS
TX-GMRS	FM	CH _{M2}	5000	-51.19	-13.3	PASS
TX-GMRS	FM	CH _{M2}	6000	-51.22	-18.1	PASS
TX-GMRS	FM	CH _{M2}	8000	-51.07	-25.6	PASS
TX-GMRS	FM	CH _{M2}	10000	-51.38	-31.4	PASS
TX-GMRS	FM	CH _{M2}	15000	-51.17	-41.9	PASS
TX-GMRS	FM	CH _{M2}	20000	-51.24	-50	PASS
TX-GMRS	FM	CH _{M2}	30000	-51.34	-50	PASS
TX-GMRS	FM	CH _{M2}	40000	-51.66	-50	PASS
TX-GMRS	FM	CH _{M2}	50000	-51.59	-50	PASS
TX-GMRS	FM	CH _{M2}	60000	-51.67	-50	PASS
TX-GMRS	FM	CH _{M2}	70000	-51.81	-50	PASS
TX-GMRS	FM	CH _{M2}	80000	-51.79	-50	PASS
TX-GMRS	FM	CH _{M2}	90000	-51.30	-50	PASS
TX-GMRS	FM	CH _{M2}	100000	-51.85	-50	PASS
TX-GMRS	FM	CH _{M3}	1000	-16.79	0	PASS
TX-GMRS	FM	CH _{M3}	3000	-17.78	0	PASS
TX-GMRS	FM	CH _{M3}	4000	-22.55	-7.5	PASS
TX-GMRS	FM	CH _{M3}	5000	-51.2	-13.3	PASS
TX-GMRS	FM	CH _{M3}	6000	-51.24	-18.1	PASS
TX-GMRS	FM	CH _{M3}	8000	-51.33	-25.6	PASS
TX-GMRS	FM	CH _{M3}	10000	-51.44	-31.4	PASS
TX-GMRS	FM	CH _{M3}	15000	-51.4	-41.9	PASS
TX-GMRS	FM	CH _{M3}	20000	-51.61	-50	PASS
TX-GMRS	FM	CH _{M3}	30000	-51.55	-50	PASS
TX-GMRS	FM	CH _{M3}	40000	-51.28	-50	PASS
TX-GMRS	FM	CH _{M3}	50000	-51.64	-50	PASS
TX-GMRS	FM	CH _{M3}	60000	-51.70	-50	PASS
TX-GMRS	FM	CH _{M3}	70000	-51.83	-50	PASS



Appendix F:Audio Low Pass Filter Response

Test Mode	Modulation Type	Test Channel	Audio Frequency(Hz)	Audio Frequency Response(dB)	Limit	Result
TX-GMRS	FM	CH _{M3}	80000	-51.87	-50	PASS
TX-GMRS	FM	CH _{M3}	90000	-51.75	-50	PASS
TX-GMRS	FM	CH _{M3}	100000	-51.69	-50	PASS
TX-GMRS	FM	CH _{M4}	1000	-17.05	0	PASS
TX-GMRS	FM	CH _{M4}	3000	-18.03	0	PASS
TX-GMRS	FM	CH _{M4}	4000	-22.67	-7.5	PASS
TX-GMRS	FM	CH _{M4}	5000	-50.06	-13.3	PASS
TX-GMRS	FM	CH _{M4}	6000	-50.12	-18.1	PASS
TX-GMRS	FM	CH _{M4}	8000	-50.22	-25.6	PASS
TX-GMRS	FM	CH _{M4}	10000	-50.31	-31.4	PASS
TX-GMRS	FM	CH _{M4}	15000	-50.26	-41.9	PASS
TX-GMRS	FM	CH _{M4}	20000	-50.21	-50	PASS
TX-GMRS	FM	CH _{M4}	30000	-50.27	-50	PASS
TX-GMRS	FM	CH _{M4}	40000	-50.44	-50	PASS
TX-GMRS	FM	CH _{M4}	50000	-50.52	-50	PASS
TX-GMRS	FM	CH _{M4}	60000	-50.35	-50	PASS
TX-GMRS	FM	CH _{M4}	70000	-50.64	-50	PASS
TX-GMRS	FM	CH _{M4}	80000	-50.77	-50	PASS
TX-GMRS	FM	CH _{M4}	90000	-50.71	-50	PASS
TX-GMRS	FM	CH _{M4}	100000	-50.88	-50	PASS



Appendix F:Audio Low Pass Filter Response

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-GMRS	FM	CH _{M1}	<p>0 -10 -20 -30 -40 -50 -60 -70</p> <p>1000 10000 100000</p> <p>Audio Frequency(Hz)</p> <p>— Limit — Audio Frequency Response(dB)</p>
TX-GMRS	FM	CH _{M2}	<p>0 -10 -20 -30 -40 -50 -60 -70</p> <p>1000 10000 100000</p> <p>Audio Frequency(Hz)</p> <p>— Limit — Audio Frequency Response(dB)</p>
TX-GMRS	FM	CH _{M3}	<p>0 -10 -20 -30 -40 -50 -60 -70</p> <p>1000 10000 100000</p> <p>Audio Frequency(Hz)</p> <p>— Limit — Audio Frequency Response(dB)</p>



Appendix F:Audio Low Pass Filter Response

Test Mode	Modulation Type	Test Channel	TEST PLOT RESULT																					
TX-GMRS	FM	CH _{M4}	<p>The graph displays the audio low pass filter response. The x-axis represents Audio Frequency in Hz on a logarithmic scale from 1000 to 100,000. The y-axis represents the response in dB on a linear scale from 0 to -70. Two data series are shown: a red line for the Limit and a blue line for the Audio Frequency Response. The blue line starts at approximately -18 dB at 1000 Hz, remains flat until about 3000 Hz, then drops sharply to -50 dB at 4000 Hz and stays constant until 100,000 Hz. The red line starts at 0 dB at 1000 Hz, remains flat until about 3000 Hz, then drops linearly to -50 dB at 15,000 Hz and stays constant until 100,000 Hz.</p> <table border="1"><caption>Approximate data points from the graph</caption><thead><tr><th>Audio Frequency (Hz)</th><th>Limit (dB)</th><th>Audio Frequency Response (dB)</th></tr></thead><tbody><tr><td>1000</td><td>0</td><td>-18</td></tr><tr><td>3000</td><td>0</td><td>-18</td></tr><tr><td>4000</td><td>-10</td><td>-50</td></tr><tr><td>10000</td><td>-30</td><td>-50</td></tr><tr><td>15000</td><td>-50</td><td>-50</td></tr><tr><td>100000</td><td>-50</td><td>-50</td></tr></tbody></table>	Audio Frequency (Hz)	Limit (dB)	Audio Frequency Response (dB)	1000	0	-18	3000	0	-18	4000	-10	-50	10000	-30	-50	15000	-50	-50	100000	-50	-50
Audio Frequency (Hz)	Limit (dB)	Audio Frequency Response (dB)																						
1000	0	-18																						
3000	0	-18																						
4000	-10	-50																						
10000	-30	-50																						
15000	-50	-50																						
100000	-50	-50																						



Appendix G: Frequency Stability Test & Temperature

Test Mode	Modulation Type	Test Conditions		Frequency error (ppm)				Limit (ppm)	Result
		Voltage	Temperature	CH _{M1}	CH _{M2}	CH _{M3}	CH _{M4}		
TX-GMRS	FM	V _N	-30	-	-	-	0.049	±2.5	PASS
TX-GMRS	FM	V _N	-20	-	-	-	0.048	±2.5	PASS
TX-GMRS	FM	V _N	-10	-	-	-	0.051	±2.5	PASS
TX-GMRS	FM	V _N	0	-	-	-	0.047	±2.5	PASS
TX-GMRS	FM	V _N	10	-	-	-	0.049	±2.5	PASS
TX-GMRS	FM	V _N	20	-	-	-	0.047	±2.5	PASS
TX-GMRS	FM	V _N	30	-	-	-	0.050	±2.5	PASS
TX-GMRS	FM	V _N	40	-	-	-	0.049	±2.5	PASS
TX-GMRS	FM	V _N	50	-	-	-	0.049	±2.5	PASS
TX-GMRS	FM	V _N	-30	0.058	0.083	0.049	-	±5	PASS
TX-GMRS	FM	V _N	-20	0.058	0.082	0.045	-	±5	PASS
TX-GMRS	FM	V _N	-10	0.056	0.082	0.048	-	±5	PASS
TX-GMRS	FM	V _N	0	0.058	0.083	0.049	-	±5	PASS
TX-GMRS	FM	V _N	10	0.057	0.084	0.045	-	±5	PASS
TX-GMRS	FM	V _N	20	0.054	0.079	0.045	-	±5	PASS
TX-GMRS	FM	V _N	30	0.055	0.083	0.048	-	±5	PASS
TX-GMRS	FM	V _N	40	0.057	0.084	0.049	-	±5	PASS
TX-GMRS	FM	V _N	50	0.056	0.082	0.048	-	±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}	CH _{M3}	CH _{M4}		
TX-GMRS	FM	V _N	T _N	-	-	-	0.047	±2.5	PASS
TX-GMRS	FM	V _L	T _N	-	-	-	0.042	±2.5	PASS
TX-GMRS	FM	V _H	T _N	-	-	-	0.052	±2.5	PASS
TX-GMRS	FM	V _N	T _N	0.054	0.079	0.045	-	±5	PASS
TX-GMRS	FM	V _L	T _N	0.049	0.075	0.042	-	±5	PASS
TX-GMRS	FM	V _H	T _N	0.061	0.083	0.051	-	±5	PASS

----End of Report----