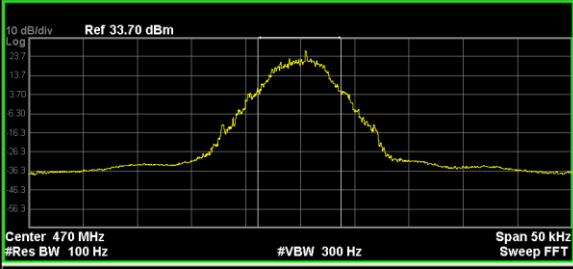


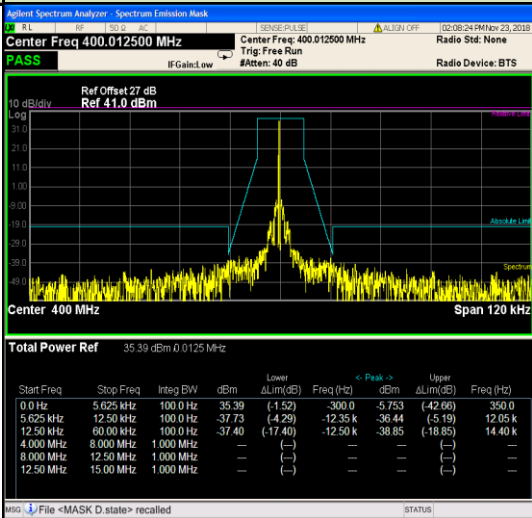


Appendix B:Occupied Bandwidth

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-DNL	4FSK	CH _H	Agilent Spectrum Analyzer - Occupied BW Center Freq 469.987500 MHz 10 dB/div Ref 33.70 dBm  Center 470 MHz #Res BW 100 Hz #VBW 300 Hz Span 50 kHz Sweep FFT Occupied Bandwidth 7.627 kHz Total Power 37.3 dBm Transmit Freq Error -73 Hz OBW Power 99.00 % x dB Bandwidth 9.614 kHz x dB -26.00 dB Frequency Center Freq 469.987500 MHz CF Step 5.000 kHz Freq Offset 0 Hz STATUS DC Coupled

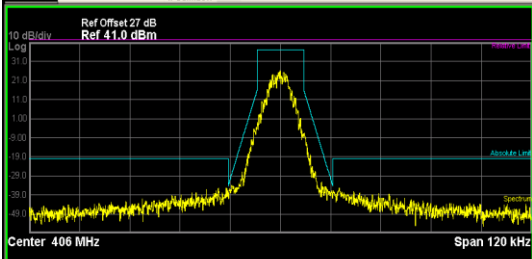
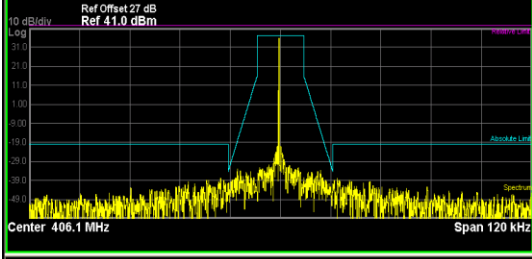
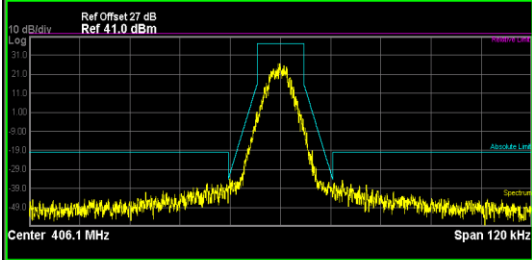


Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																																
TX-DNH	4FSK	CH _L	 Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 400.012500 MHz Ref Offset 27 dB Ref 41.0 dBm Center 400 MHz Span 120 kHz Total Power Ref 35.39 dBm 0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>35.39</td><td>(-1.52)</td><td>-300.0</td><td>-5.753</td><td>(-42.66)</td><td>350.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-37.73</td><td>(-4.29)</td><td>-12.35 k</td><td>-36.44</td><td>(-5.19)</td><td>12.05 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-37.40</td><td>(-17.40)</td><td>-12.50 k</td><td>-38.85</td><td>(-18.85)</td><td>14.40 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table>	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	35.39	(-1.52)	-300.0	-5.753	(-42.66)	350.0	5.625 kHz	12.50 kHz	100.0 Hz	-37.73	(-4.29)	-12.35 k	-36.44	(-5.19)	12.05 k	12.50 kHz	60.00 kHz	100.0 Hz	-37.40	(-17.40)	-12.50 k	-38.85	(-18.85)	14.40 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—	Frequency Center Freq 400.012500 MHz CF Step 12.000 kHz Man Freq Offset 0 Hz
		Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																									
		0.0 Hz	5.625 kHz	100.0 Hz	35.39	(-1.52)	-300.0	-5.753	(-42.66)	350.0																																																									
5.625 kHz	12.50 kHz	100.0 Hz	-37.73	(-4.29)	-12.35 k	-36.44	(-5.19)	12.05 k																																																											
12.50 kHz	60.00 kHz	100.0 Hz	-37.40	(-17.40)	-12.50 k	-38.85	(-18.85)	14.40 k																																																											
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																											
0.0 Hz	5.625 kHz	100.0 Hz	26.14	(-10.77)	-550.0	26.53	(-10.37)	400.0																																																											
5.625 kHz	12.50 kHz	100.0 Hz	-36.26	(-1.73)	-12.50 k	-39.23	(-4.70)	12.50 k																																																											
12.50 kHz	60.00 kHz	100.0 Hz	-34.20	(-14.20)	-14.85 k	-34.20	(-14.20)	14.90 k																																																											
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																											
0.0 Hz	5.625 kHz	100.0 Hz	35.62	(-1.51)	-250.0	-4.931	(-42.06)	450.0																																																											
5.625 kHz	12.50 kHz	100.0 Hz	-37.41	(-7.10)	-11.95 k	-41.34	(-7.40)	12.45 k																																																											
12.50 kHz	60.00 kHz	100.0 Hz	-35.00	(-15.00)	-12.75 k	-38.82	(-18.82)	16.15 k																																																											
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																											



Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																															
TX-DNH	4FSK	CH _{M1}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 405.987500 MHz PASS Ref Offset 27 dB Ref 41.0 dBm  Center 406 MHz Span 120 kHz Total Power Ref 39.12 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>26.35</td><td>(-10.78)</td><td>-50.00</td><td>25.70</td><td>(-11.43)</td><td>0.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-35.87</td><td>(-4.48)</td><td>-12.10 k</td><td>-37.18</td><td>(-2.87)</td><td>12.50 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-35.53</td><td>(-15.53)</td><td>-14.75 k</td><td>-35.42</td><td>(-15.42)</td><td>12.55 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 405.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	26.35	(-10.78)	-50.00	25.70	(-11.43)	0.0	5.625 kHz	12.50 kHz	100.0 Hz	-35.87	(-4.48)	-12.10 k	-37.18	(-2.87)	12.50 k	12.50 kHz	60.00 kHz	100.0 Hz	-35.53	(-15.53)	-14.75 k	-35.42	(-15.42)	12.55 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	26.35	(-10.78)	-50.00	25.70	(-11.43)	0.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-35.87	(-4.48)	-12.10 k	-37.18	(-2.87)	12.50 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-35.53	(-15.53)	-14.75 k	-35.42	(-15.42)	12.55 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNH	4FSK	CH _{M2}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 406.112500 MHz PASS Ref Offset 27 dB Ref 41.0 dBm  Center 406.1 MHz Span 120 kHz Total Power Ref 35.77 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>35.64</td><td>(-1.44)</td><td>-250.0</td><td>-21.04</td><td>(-58.12)</td><td>50.00</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-41.67</td><td>(7.31)</td><td>-12.50 k</td><td>-44.88</td><td>(-10.52)</td><td>12.50 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-38.00</td><td>(-18.00)</td><td>-14.20 k</td><td>-38.03</td><td>(-18.03)</td><td>13.65 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 406.112500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	35.64	(-1.44)	-250.0	-21.04	(-58.12)	50.00	5.625 kHz	12.50 kHz	100.0 Hz	-41.67	(7.31)	-12.50 k	-44.88	(-10.52)	12.50 k	12.50 kHz	60.00 kHz	100.0 Hz	-38.00	(-18.00)	-14.20 k	-38.03	(-18.03)	13.65 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	35.64	(-1.44)	-250.0	-21.04	(-58.12)	50.00																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-41.67	(7.31)	-12.50 k	-44.88	(-10.52)	12.50 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-38.00	(-18.00)	-14.20 k	-38.03	(-18.03)	13.65 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNH	4FSK	CH _{M2}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 406.112500 MHz PASS Ref Offset 27 dB Ref 41.0 dBm  Center 406.1 MHz Span 120 kHz Total Power Ref 39.18 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>26.74</td><td>(-10.34)</td><td>-100.0</td><td>25.65</td><td>(-11.43)</td><td>950.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-34.13</td><td>(-2.68)</td><td>-12.10 k</td><td>-38.85</td><td>(-5.59)</td><td>12.35 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-36.49</td><td>(-16.49)</td><td>-14.10 k</td><td>-34.66</td><td>(-14.66)</td><td>14.85 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 406.112500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	26.74	(-10.34)	-100.0	25.65	(-11.43)	950.0	5.625 kHz	12.50 kHz	100.0 Hz	-34.13	(-2.68)	-12.10 k	-38.85	(-5.59)	12.35 k	12.50 kHz	60.00 kHz	100.0 Hz	-36.49	(-16.49)	-14.10 k	-34.66	(-14.66)	14.85 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	26.74	(-10.34)	-100.0	25.65	(-11.43)	950.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-34.13	(-2.68)	-12.10 k	-38.85	(-5.59)	12.35 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-36.49	(-16.49)	-14.10 k	-34.66	(-14.66)	14.85 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										



Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																															
TX-DNH	4FSK	CH _{M3}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 438.012500 MHz Trig: Free Run #Atten: 40 dB Radio Std: None Radio Device: BTS Ref Offset 28 dB Ref 41.0 dBm Center 438 MHz Span 120 kHz Total Power Ref 36.10 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>35.81</td><td>(-0.95)</td><td>-300.0</td><td>-4.832</td><td>(-41.60)</td><td>100.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-37.70</td><td>(-3.76)</td><td>-12.40 k</td><td>-38.49</td><td>(-4.55)</td><td>12.40 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-35.03</td><td>(-15.03)</td><td>-14.45 k</td><td>-35.29</td><td>(-15.29)</td><td>13.80 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 438.012500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	35.81	(-0.95)	-300.0	-4.832	(-41.60)	100.0	5.625 kHz	12.50 kHz	100.0 Hz	-37.70	(-3.76)	-12.40 k	-38.49	(-4.55)	12.40 k	12.50 kHz	60.00 kHz	100.0 Hz	-35.03	(-15.03)	-14.45 k	-35.29	(-15.29)	13.80 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	35.81	(-0.95)	-300.0	-4.832	(-41.60)	100.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-37.70	(-3.76)	-12.40 k	-38.49	(-4.55)	12.40 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-35.03	(-15.03)	-14.45 k	-35.29	(-15.29)	13.80 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNH	4FSK	CH _{M3}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 438.012500 MHz Trig: Free Run Avg: 100.00% of 10 Radio Std: None Radio Device: BTS Ref Offset 28 dB Ref 41.0 dBm Center 438 MHz Span 120 kHz Total Power Ref 39.00 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>27.06</td><td>(-9.71)</td><td>-550.0</td><td>26.30</td><td>(-10.47)</td><td>150.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-39.17</td><td>(-5.23)</td><td>-12.40 k</td><td>-37.86</td><td>(-3.91)</td><td>12.40 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-35.41</td><td>(-15.41)</td><td>-15.45 k</td><td>-35.11</td><td>(-15.11)</td><td>12.55 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 438.012500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	27.06	(-9.71)	-550.0	26.30	(-10.47)	150.0	5.625 kHz	12.50 kHz	100.0 Hz	-39.17	(-5.23)	-12.40 k	-37.86	(-3.91)	12.40 k	12.50 kHz	60.00 kHz	100.0 Hz	-35.41	(-15.41)	-15.45 k	-35.11	(-15.11)	12.55 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	27.06	(-9.71)	-550.0	26.30	(-10.47)	150.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-39.17	(-5.23)	-12.40 k	-37.86	(-3.91)	12.40 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-35.41	(-15.41)	-15.45 k	-35.11	(-15.11)	12.55 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNH	4FSK	CH _H	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 469.987500 MHz Trig: Free Run #Atten: 40 dB Radio Std: None Radio Device: BTS Ref Offset 27 dB Ref 41.0 dBm Center 470 MHz Span 120 kHz Total Power Ref 35.32 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>35.30</td><td>(-1.64)</td><td>-300.0</td><td>-5.584</td><td>(-42.53)</td><td>150.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-36.35</td><td>(-1.86)</td><td>-12.50 k</td><td>-38.74</td><td>(-6.07)</td><td>12.25 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-37.70</td><td>(-17.70)</td><td>-13.90 k</td><td>-37.78</td><td>(-17.78)</td><td>13.30 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 469.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	35.30	(-1.64)	-300.0	-5.584	(-42.53)	150.0	5.625 kHz	12.50 kHz	100.0 Hz	-36.35	(-1.86)	-12.50 k	-38.74	(-6.07)	12.25 k	12.50 kHz	60.00 kHz	100.0 Hz	-37.70	(-17.70)	-13.90 k	-37.78	(-17.78)	13.30 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	35.30	(-1.64)	-300.0	-5.584	(-42.53)	150.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-36.35	(-1.86)	-12.50 k	-38.74	(-6.07)	12.25 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-37.70	(-17.70)	-13.90 k	-37.78	(-17.78)	13.30 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										



Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																															
TX-DNH	4FSK	CH _H	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 469.987500 MHz PASS Ref Offset 27 dB Ref 41.0 dBm Center 470 MHz Span 120 kHz Total Power Ref 38.29 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>27.62</td><td>(-9.32)</td><td>-50.00</td><td>26.26</td><td>(-10.68)</td><td>1.200 k</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-36.37</td><td>(-2.24)</td><td>-12.45 k</td><td>-39.56</td><td>(-5.43)</td><td>12.45 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-36.02</td><td>(-16.02)</td><td>-13.30 k</td><td>-33.46</td><td>(-13.46)</td><td>13.25 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 469.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	27.62	(-9.32)	-50.00	26.26	(-10.68)	1.200 k	5.625 kHz	12.50 kHz	100.0 Hz	-36.37	(-2.24)	-12.45 k	-39.56	(-5.43)	12.45 k	12.50 kHz	60.00 kHz	100.0 Hz	-36.02	(-16.02)	-13.30 k	-33.46	(-13.46)	13.25 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	27.62	(-9.32)	-50.00	26.26	(-10.68)	1.200 k																																																										
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12.50 kHz	60.00 kHz	100.0 Hz	-36.02	(-16.02)	-13.30 k	-33.46	(-13.46)	13.25 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _L	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 400.012500 MHz PASS Ref Offset 27 dB Ref 35.0 dBm Center 400 MHz Span 120 kHz Total Power Ref 29.80 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>29.82</td><td>(-1.56)</td><td>-300.0</td><td>8.343</td><td>(-39.72)</td><td>350.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-43.43</td><td>(6.26)</td><td>-12.10 k</td><td>-43.71</td><td>(-5.83)</td><td>12.20 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-42.78</td><td>(-22.78)</td><td>-16.90 k</td><td>-43.26</td><td>(-23.26)</td><td>13.60 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 400.012500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	29.82	(-1.56)	-300.0	8.343	(-39.72)	350.0	5.625 kHz	12.50 kHz	100.0 Hz	-43.43	(6.26)	-12.10 k	-43.71	(-5.83)	12.20 k	12.50 kHz	60.00 kHz	100.0 Hz	-42.78	(-22.78)	-16.90 k	-43.26	(-23.26)	13.60 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
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12.50 kHz	60.00 kHz	100.0 Hz	-42.78	(-22.78)	-16.90 k	-43.26	(-23.26)	13.60 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _L	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 400.012500 MHz PASS Ref Offset 27 dB Ref 35.0 dBm Center 400 MHz Span 120 kHz Total Power Ref 34.03 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>21.35</td><td>(-10.03)</td><td>-550.0</td><td>21.07</td><td>(-10.31)</td><td>500.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-44.59</td><td>(-4.54)</td><td>-12.50 k</td><td>-41.93</td><td>(-5.87)</td><td>11.95 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-40.71</td><td>(-20.71)</td><td>-15.50 k</td><td>-42.62</td><td>(-22.62)</td><td>12.60 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 400.012500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	21.35	(-10.03)	-550.0	21.07	(-10.31)	500.0	5.625 kHz	12.50 kHz	100.0 Hz	-44.59	(-4.54)	-12.50 k	-41.93	(-5.87)	11.95 k	12.50 kHz	60.00 kHz	100.0 Hz	-40.71	(-20.71)	-15.50 k	-42.62	(-22.62)	12.60 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
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4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										



Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																															
TX-DNL	4FSK	CH _{M1}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 405.987500 MHz Ref Offset 27 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 406 MHz Span 120 kHz Total Power Ref 30.21 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>30.11</td><td>(-1.29)</td><td>-250.0</td><td>-9.602</td><td>(-41.00)</td><td>100.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-41.12</td><td>(-1.81)</td><td>-12.40 k</td><td>-40.25</td><td>(-4.94)</td><td>11.85 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-42.26</td><td>(-22.26)</td><td>-21.05 k</td><td>-42.65</td><td>(-22.65)</td><td>20.45 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 405.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz File <MASK.D.state> recalled STATUS	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	30.11	(-1.29)	-250.0	-9.602	(-41.00)	100.0	5.625 kHz	12.50 kHz	100.0 Hz	-41.12	(-1.81)	-12.40 k	-40.25	(-4.94)	11.85 k	12.50 kHz	60.00 kHz	100.0 Hz	-42.26	(-22.26)	-21.05 k	-42.65	(-22.65)	20.45 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
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4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _{M1}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 405.987500 MHz Ref Offset 27 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 406 MHz Span 120 kHz Total Power Ref 33.52 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>21.25</td><td>(-10.15)</td><td>-250.0</td><td>21.58</td><td>(-9.82)</td><td>150.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-42.62</td><td>(-2.58)</td><td>-12.50 k</td><td>-41.44</td><td>(-1.40)</td><td>12.50 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-42.58</td><td>(-22.58)</td><td>-14.60 k</td><td>-41.33</td><td>(-21.33)</td><td>14.25 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 405.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz File <Temp.png> saved STATUS	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	21.25	(-10.15)	-250.0	21.58	(-9.82)	150.0	5.625 kHz	12.50 kHz	100.0 Hz	-42.62	(-2.58)	-12.50 k	-41.44	(-1.40)	12.50 k	12.50 kHz	60.00 kHz	100.0 Hz	-42.58	(-22.58)	-14.60 k	-41.33	(-21.33)	14.25 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
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12.50 kHz	60.00 kHz	100.0 Hz	-42.58	(-22.58)	-14.60 k	-41.33	(-21.33)	14.25 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _{M2}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 406.112500 MHz Ref Offset 27 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 406.1 MHz Span 120 kHz Total Power Ref 30.04 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>30.01</td><td>(-1.33)</td><td>-300.0</td><td>-26.73</td><td>(-58.07)</td><td>550.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-47.25</td><td>(-7.15)</td><td>-12.50 k</td><td>-45.05</td><td>(-4.96)</td><td>12.50 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-43.29</td><td>(-23.29)</td><td>-14.05 k</td><td>-42.40</td><td>(-22.40)</td><td>13.50 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 406.112500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz File <MASK.D.state> recalled STATUS	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	30.01	(-1.33)	-300.0	-26.73	(-58.07)	550.0	5.625 kHz	12.50 kHz	100.0 Hz	-47.25	(-7.15)	-12.50 k	-45.05	(-4.96)	12.50 k	12.50 kHz	60.00 kHz	100.0 Hz	-43.29	(-23.29)	-14.05 k	-42.40	(-22.40)	13.50 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
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12.50 kHz	60.00 kHz	100.0 Hz	-43.29	(-23.29)	-14.05 k	-42.40	(-22.40)	13.50 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										



Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																															
TX-DNL	4FSK	CH _{M2}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 406.112500 MHz Ref Offset 27 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 406.1 MHz Span 120 kHz Total Power Ref 32.84 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>20.89</td><td>(-10.45)</td><td>-350.0</td><td>20.96</td><td>(-10.38)</td><td>750.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-42.69</td><td>(-4.41)</td><td>-12.25 k</td><td>-43.66</td><td>(-4.29)</td><td>12.40 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-43.10</td><td>(-23.10)</td><td>-12.55 k</td><td>-41.48</td><td>(-21.48)</td><td>12.95 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 406.112500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	20.89	(-10.45)	-350.0	20.96	(-10.38)	750.0	5.625 kHz	12.50 kHz	100.0 Hz	-42.69	(-4.41)	-12.25 k	-43.66	(-4.29)	12.40 k	12.50 kHz	60.00 kHz	100.0 Hz	-43.10	(-23.10)	-12.55 k	-41.48	(-21.48)	12.95 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	20.89	(-10.45)	-350.0	20.96	(-10.38)	750.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-42.69	(-4.41)	-12.25 k	-43.66	(-4.29)	12.40 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-43.10	(-23.10)	-12.55 k	-41.48	(-21.48)	12.95 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _{M3}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 438.012500 MHz Ref Offset 28 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 438 MHz Span 120 kHz Total Power Ref 30.99 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>30.73</td><td>(-0.67)</td><td>-300.0</td><td>-8.257</td><td>(-39.66)</td><td>300.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-44.00</td><td>(-6.87)</td><td>-12.10 k</td><td>-45.12</td><td>(-6.89)</td><td>12.25 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-43.44</td><td>(-23.44)</td><td>-16.70 k</td><td>-43.54</td><td>(-23.54)</td><td>15.10 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 438.012500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	30.73	(-0.67)	-300.0	-8.257	(-39.66)	300.0	5.625 kHz	12.50 kHz	100.0 Hz	-44.00	(-6.87)	-12.10 k	-45.12	(-6.89)	12.25 k	12.50 kHz	60.00 kHz	100.0 Hz	-43.44	(-23.44)	-16.70 k	-43.54	(-23.54)	15.10 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	30.73	(-0.67)	-300.0	-8.257	(-39.66)	300.0																																																										
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4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _{M3}	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 438.012500 MHz Ref Offset 28 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 438 MHz Span 120 kHz Total Power Ref 33.73 dBm/0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>19.74</td><td>(-11.66)</td><td>-500.0</td><td>22.10</td><td>(-9.30)</td><td>650.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-39.07</td><td>(-1.21)</td><td>-12.20 k</td><td>-43.53</td><td>(-3.49)</td><td>12.50 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-39.89</td><td>(-19.89)</td><td>-15.90 k</td><td>-40.56</td><td>(-20.56)</td><td>12.90 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 438.012500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	19.74	(-11.66)	-500.0	22.10	(-9.30)	650.0	5.625 kHz	12.50 kHz	100.0 Hz	-39.07	(-1.21)	-12.20 k	-43.53	(-3.49)	12.50 k	12.50 kHz	60.00 kHz	100.0 Hz	-39.89	(-19.89)	-15.90 k	-40.56	(-20.56)	12.90 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	19.74	(-11.66)	-500.0	22.10	(-9.30)	650.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-39.07	(-1.21)	-12.20 k	-43.53	(-3.49)	12.50 k																																																										
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4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										



Appendix C:Emission Mask

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																																															
TX-DNL	4FSK	CH _H	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 469.987500 MHz Ref Offset 27 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 470 MHz Span 120 kHz Total Power Ref 29.91 dBm 0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>29.67</td><td>(-1.54)</td><td>-300.0</td><td>-5.288</td><td>(-36.51)</td><td>100.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-41.03</td><td>(-1.17)</td><td>-12.45 k</td><td>-41.33</td><td>(-6.20)</td><td>11.80 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-44.42</td><td>(-24.42)</td><td>-12.80 k</td><td>-44.42</td><td>(-24.42)</td><td>15.95 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 469.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz File <MASK.D.state> recalled STATUS	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	29.67	(-1.54)	-300.0	-5.288	(-36.51)	100.0	5.625 kHz	12.50 kHz	100.0 Hz	-41.03	(-1.17)	-12.45 k	-41.33	(-6.20)	11.80 k	12.50 kHz	60.00 kHz	100.0 Hz	-44.42	(-24.42)	-12.80 k	-44.42	(-24.42)	15.95 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
		Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																								
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4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
TX-DNL	4FSK	CH _H	Agilent Spectrum Analyzer - Spectrum Emission Mask Center Freq 469.987500 MHz Ref Offset 27 dB Ref 35.0 dBm 10 dB/div Log 25.0 15.0 5.00 5.00 15.0 25.0 35.0 45.0 55.0 Center 470 MHz Span 120 kHz Total Power Ref 32.64 dBm 0.0125 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th>< Peak > dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>0.0 Hz</td><td>5.625 kHz</td><td>100.0 Hz</td><td>21.85</td><td>(-9.37)</td><td>-1.050 k</td><td>20.18</td><td>(-11.04)</td><td>450.0</td></tr><tr><td>5.625 kHz</td><td>12.50 kHz</td><td>100.0 Hz</td><td>-42.72</td><td>(3.59)</td><td>-12.35 k</td><td>-40.94</td><td>(3.63)</td><td>12.10 k</td></tr><tr><td>12.50 kHz</td><td>60.00 kHz</td><td>100.0 Hz</td><td>-42.55</td><td>(22.55)</td><td>-13.25 k</td><td>-43.12</td><td>(23.12)</td><td>15.15 k</td></tr><tr><td>4.000 MHz</td><td>8.000 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>8.000 MHz</td><td>12.50 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr><tr><td>12.50 MHz</td><td>15.00 MHz</td><td>1.000 MHz</td><td>—</td><td>(—)</td><td>—</td><td>—</td><td>(—)</td><td>—</td></tr></table> Frequency Center Freq 469.987500 MHz CF Step 12.000 kHz Auto Man Freq Offset 0 Hz File <Temp.png> saved STATUS	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)	0.0 Hz	5.625 kHz	100.0 Hz	21.85	(-9.37)	-1.050 k	20.18	(-11.04)	450.0	5.625 kHz	12.50 kHz	100.0 Hz	-42.72	(3.59)	-12.35 k	-40.94	(3.63)	12.10 k	12.50 kHz	60.00 kHz	100.0 Hz	-42.55	(22.55)	-13.25 k	-43.12	(23.12)	15.15 k	4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—	8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—	12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	< Peak > dBm	Upper ΔLim(dB)	Freq (Hz)																																																										
0.0 Hz	5.625 kHz	100.0 Hz	21.85	(-9.37)	-1.050 k	20.18	(-11.04)	450.0																																																										
5.625 kHz	12.50 kHz	100.0 Hz	-42.72	(3.59)	-12.35 k	-40.94	(3.63)	12.10 k																																																										
12.50 kHz	60.00 kHz	100.0 Hz	-42.55	(22.55)	-13.25 k	-43.12	(23.12)	15.15 k																																																										
4.000 MHz	8.000 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
8.000 MHz	12.50 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										
12.50 MHz	15.00 MHz	1.000 MHz	—	(—)	—	—	(—)	—																																																										

**Appendix F:Frequency Stability Test & Temperature**

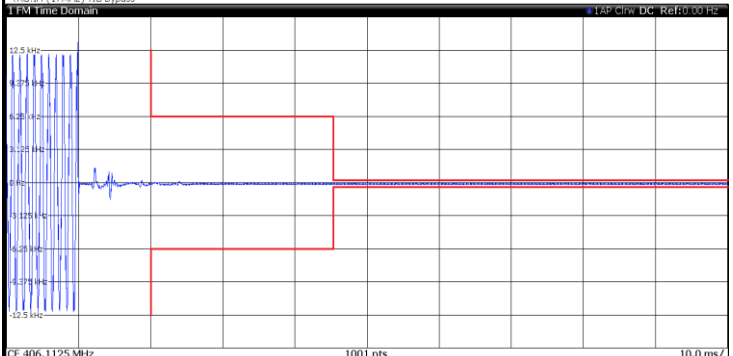
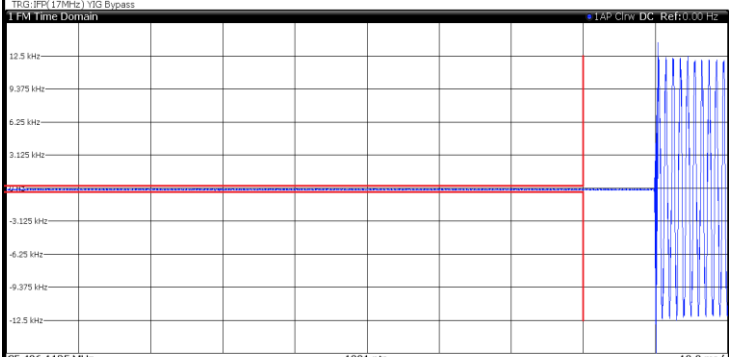
Operation Mode	Modulation Type	Test Conditions		Frequency error (ppm)					Limit (ppm)	Result
		Voltage	Temperature	CH _L	CH _{M1}	CH _{M2}	CH _{M3}	CH _H		
TX-DNH	4FSK	V _N	-30	-0.191	-0.192	-0.163	-0.214	-0.226	±5.0	PASS
TX-DNH	4FSK	V _N	-20	-0.185	-0.183	-0.157	-0.205	-0.216	±5.0	PASS
TX-DNH	4FSK	V _N	-10	-0.175	-0.181	-0.149	-0.200	-0.211	±5.0	PASS
TX-DNH	4FSK	V _N	0	-0.173	-0.170	-0.147	-0.190	-0.201	±5.0	PASS
TX-DNH	4FSK	V _N	10	-0.166	-0.162	-0.141	-0.184	-0.191	±5.0	PASS
TX-DNH	4FSK	V _N	20	-0.155	-0.154	<u>-0.132</u>	-0.173	-0.182	±5.0	PASS
TX-DNH	4FSK	V _N	30	-0.169	-0.156	-0.138	-0.185	-0.198	±5.0	PASS
TX-DNH	4FSK	V _N	40	-0.183	-0.182	-0.156	-0.204	-0.215	±5.0	PASS
TX-DNH	4FSK	V _N	55	-0.191	-0.190	-0.164	-0.214	-0.224	±5.0	PASS
TX-DNL	4FSK	V _N	-30	-0.196	-0.200	-0.200	-0.215	-0.235	±5.0	PASS
TX-DNL	4FSK	V _N	-20	-0.188	-0.193	-0.191	-0.204	-0.227	±5.0	PASS
TX-DNL	4FSK	V _N	-10	-0.184	-0.187	-0.187	-0.200	-0.220	±5.0	PASS
TX-DNL	4FSK	V _N	0	-0.178	-0.179	-0.176	-0.193	-0.211	±5.0	PASS
TX-DNL	4FSK	V _N	10	-0.170	-0.159	-0.168	-0.183	-0.186	±5.0	PASS
TX-DNL	4FSK	V _N	20	-0.155	-0.157	-0.157	-0.169	-0.184	±5.0	PASS
TX-DNL	4FSK	V _N	30	-0.164	-0.157	-0.168	-0.175	-0.198	±5.0	PASS
TX-DNL	4FSK	V _N	40	-0.182	-0.185	-0.188	-0.201	-0.220	±5.0	PASS
TX-DNL	4FSK	V _N	55	-0.191	-0.195	-0.193	-0.209	-0.227	±5.0	PASS

**Appendix G:Frequency Stability Test & Voltage**

Operation Mode	Modulation Type	Test Conditions		Frequency error (ppm)					Limit (ppm)	Result
		Voltage	Temperature	CH _L	CH _{M1}	CH _{M2}	CH _{M3}	CH _H		
TX-DNH	4FSK	V _N	T _N	-0.155	-0.154	<u>-0.132</u>	-0.173	-0.182	±5.0	PASS
TX-DNH	4FSK	V _L	T _N	-0.166	-0.165	-0.140	-0.187	-0.196	±5.0	PASS
TX-DNH	4FSK	V _H	T _N	-0.169	-0.163	-0.135	-0.179	-0.187	±5.0	PASS
TX-DNL	4FSK	V _N	T _N	<u>-0.155</u>	-0.157	-0.157	-0.169	-0.184	±5.0	PASS
TX-DNL	4FSK	V _L	T _N	-0.173	-0.175	-0.173	-0.186	-0.206	±5.0	PASS
TX-DNL	4FSK	V _H	T _N	-0.158	-0.162	-0.162	-0.177	-0.188	±5.0	PASS

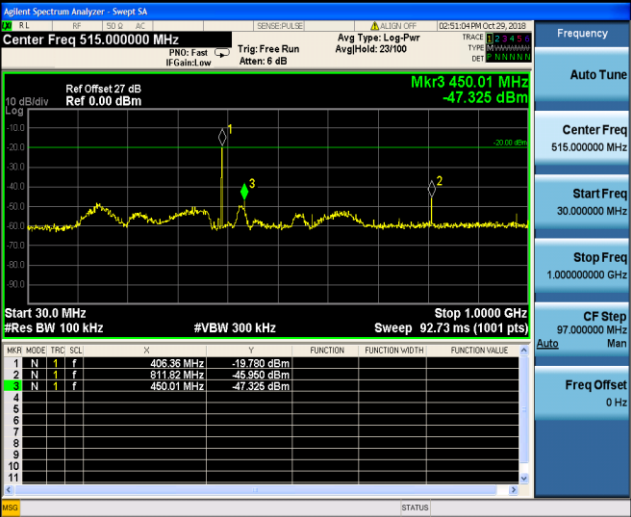


Appendix H:Transmitter Frequency Behavior

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																
TX-DNH	4FSK	CH _{M2}	MultiViewSpectrumAnalog Demod Ref Level 38.00 dBm Offset 20.50 dB Att 27 dB AQT 100 ms DBW 25 kHz Freq 406.1125 MHz TRG:IFPK(17MHz) YIG Bypass 1 FM Time Domain  CF 406.1125 MHz1001 pts10.0 ms/ 4 Result Summary <table><tr><td></td><td>Carrier Power</td><td>24.68 dBm</td><td>Carrier Offset</td><td>-150.90 Hz</td><td>Mod. Freq.</td><td>SINAD</td><td>THD</td></tr><tr><td>FM</td><td>13.233 kHz</td><td>-12.179 kHz</td><td>12.706 kHz</td><td>8.7548 kHz</td><td>1.0175 kHz</td><td>---</td><td>---</td></tr></table> Carrier Power 24.68 dBm Carrier Offset -150.90 Hz Mod. Freq. 13.233 kHz SINAD 1.0175 kHz THD --- Analog Demod: Waiting for Trigger...Measuring...29.10.2018 15:45:51 Date: 29.OCT.2018 15:45:51 OFF-ON		Carrier Power	24.68 dBm	Carrier Offset	-150.90 Hz	Mod. Freq.	SINAD	THD	FM	13.233 kHz	-12.179 kHz	12.706 kHz	8.7548 kHz	1.0175 kHz	---	---
	Carrier Power	24.68 dBm	Carrier Offset	-150.90 Hz	Mod. Freq.	SINAD	THD												
FM	13.233 kHz	-12.179 kHz	12.706 kHz	8.7548 kHz	1.0175 kHz	---	---												
TX-DNH	4FSK	CH _{M2}	MultiViewSpectrumAnalog Demod Ref Level 38.00 dBm Offset 20.50 dB Att 27 dB AQT 100 ms DBW 25 kHz Freq 406.1125 MHz TRG:IFPK(17MHz) YIG Bypass 1 FM Time Domain  CF 406.1125 MHz1001 pts10.0 ms/ 4 Result Summary <table><tr><td></td><td>Carrier Power</td><td>24.66 dBm</td><td>Carrier Offset</td><td>-152.75 Hz</td><td>Mod. Freq.</td><td>SINAD</td><td>THD</td></tr><tr><td>FM</td><td>13.727 kHz</td><td>-23.437 kHz</td><td>18.582 kHz</td><td>2.8251 kHz</td><td>---</td><td>---</td><td>---</td></tr></table> Carrier Power 24.66 dBm Carrier Offset -152.75 Hz Mod. Freq. 13.727 kHz SINAD 2.8251 kHz THD --- Analog Demod: Waiting for Trigger...Measuring...29.10.2018 15:45:08 Date: 29.OCT.2018 15:45:08 ON-OFF		Carrier Power	24.66 dBm	Carrier Offset	-152.75 Hz	Mod. Freq.	SINAD	THD	FM	13.727 kHz	-23.437 kHz	18.582 kHz	2.8251 kHz	---	---	---
	Carrier Power	24.66 dBm	Carrier Offset	-152.75 Hz	Mod. Freq.	SINAD	THD												
FM	13.727 kHz	-23.437 kHz	18.582 kHz	2.8251 kHz	---	---	---												



Appendix I:Spurious Emission On Antenna Port

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-DNH	4FSK	CH _L	 30MHz~1GHz
TX-DNH	4FSK	CH _L	 1GHz~10th Harmonic
TX-DNH	4FSK	CH _{M1}	 30MHz~1GHz



Appendix I:Spurious Emission On Antenna Port

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-DNH	4FSK	CH _{M1}	Agilent Spectrum Analyzer - Swept SA Center Freq 2.529937500 GHz Ref Offset 27 dB Ref 0.00 dBm Mkr1 3.249 GHz -45.130 dBm Start 1.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 5.133 ms (1001 pts) File <Temp.png> saved (STATUS) Frequency Auto Tune Center Freq 2.529937500 GHz Start Freq 1.000000000 GHz Stop Freq 4.059875000 GHz CF Step 305.987500 MHz Auto Man Freq Offset 0 Hz 1GHz~10th Harmonic
TX-DNH	4FSK	CH _{M2}	Agilent Spectrum Analyzer - Swept SA Center Freq 515.000000 MHz Ref Offset 27 dB Ref 0.00 dBm Mkr3 450.01 MHz -47.456 dBm Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) File <Temp.png> saved (STATUS) Frequency Auto Tune Center Freq 515.000000 MHz Start Freq 30.000000 MHz Stop Freq 1.000000000 GHz CF Step 97.000000 MHz Auto Man Freq Offset 0 Hz 30MHz~1GHz
TX-DNH	4FSK	CH _{M2}	Agilent Spectrum Analyzer - Swept SA Center Freq 2.530562500 GHz Ref Offset 27 dB Ref 0.00 dBm Mkr1 3.250 GHz -44.869 dBm Start 1.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 5.133 ms (1001 pts) File <Temp.png> saved (STATUS) Frequency Auto Tune Center Freq 2.530562500 GHz Start Freq 1.000000000 GHz Stop Freq 4.061125000 GHz CF Step 306.112500 MHz Auto Man Freq Offset 0 Hz 1GHz~10th Harmonic



Appendix I:Spurious Emission On Antenna Port

Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT																																				
TX-DNH	4FSK	CH _{M3}	Agilent Spectrum Analyzer - Sweep SA Center Freq 515.000000 MHz Ref Offset 27 dB Ref 0.00 dBm 10 dB/div Log Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Stop 1.0000 GHz Sweep 92.73 ms (1001 pts) Mkr3 287.05 MHz -49.589 dBm <table><tr><th>Mkr</th><th>Mode</th><th>Trig</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>438.37 MHz</td><td>-39.705 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>450.01 MHz</td><td>-42.233 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>287.05 MHz</td><td>-49.589 dBm</td><td></td><td></td><td></td></tr></table> Frequency Auto Tune Center Freq 515.000000 MHz Start Freq 30.000000 MHz Stop Freq 1.000000000 GHz CF Step 97.000000 MHz Auto Man Freq Offset 0 Hz 30MHz~1GHz	Mkr	Mode	Trig	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	438.37 MHz	-39.705 dBm				2	N	1	f	450.01 MHz	-42.233 dBm				3	N	1	f	287.05 MHz	-49.589 dBm			
Mkr	Mode	Trig	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																															
1	N	1	f	438.37 MHz	-39.705 dBm																																		
2	N	1	f	450.01 MHz	-42.233 dBm																																		
3	N	1	f	287.05 MHz	-49.589 dBm																																		
TX-DNH	4FSK	CH _{M3}	Agilent Spectrum Analyzer - Sweep SA Center Freq 2.690062500 GHz Ref Offset 27 dB Ref 0.00 dBm 10 dB/div Log Start 1.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Stop 4.380 GHz Sweep 5.667 ms (1001 pts) Mkr1 3.197 GHz -44.972 dBm File <Temp.png> saved Frequency Auto Tune Center Freq 2.690062500 GHz Start Freq 1.000000000 GHz Stop Freq 4.380125000 GHz CF Step 338.012500 MHz Auto Man Freq Offset 0 Hz 1GHz~10th Harmonic																																				
TX-DNH	4FSK	CH _H	Agilent Spectrum Analyzer - Sweep SA Center Freq 515.000000 MHz Ref Offset 27 dB Ref 0.00 dBm 10 dB/div Log Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Stop 1.0000 GHz Sweep 92.73 ms (1001 pts) Mkr3 450.01 MHz -46.019 dBm <table><tr><th>Mkr</th><th>Mode</th><th>Trig</th><th>SCL</th><th>X</th><th>Y</th><th>FUNCTION</th><th>FUNCTION WIDTH</th><th>FUNCTION VALUE</th></tr><tr><td>1</td><td>N</td><td>1</td><td>f</td><td>470.38 MHz</td><td>-39.284 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>1</td><td>f</td><td>263.77 MHz</td><td>-45.435 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>1</td><td>f</td><td>450.01 MHz</td><td>-46.019 dBm</td><td></td><td></td><td></td></tr></table> Frequency Auto Tune Center Freq 515.000000 MHz Start Freq 30.000000 MHz Stop Freq 1.000000000 GHz CF Step 97.000000 MHz Auto Man Freq Offset 0 Hz 30MHz~1GHz	Mkr	Mode	Trig	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	1	N	1	f	470.38 MHz	-39.284 dBm				2	N	1	f	263.77 MHz	-45.435 dBm				3	N	1	f	450.01 MHz	-46.019 dBm			
Mkr	Mode	Trig	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE																															
1	N	1	f	470.38 MHz	-39.284 dBm																																		
2	N	1	f	263.77 MHz	-45.435 dBm																																		
3	N	1	f	450.01 MHz	-46.019 dBm																																		



Operation Mode	Modulation Type	Test Channel	TEST PLOT RESULT
TX-DNH	4FSK	CH _H	Agilent Spectrum Analyzer - Sweep 1A Center Freq 2.849937500 GHz Ref Offset 27 dB Ref 0.00 dBm Mkr1 3.135 GHz -45.390 dBm Start 1.000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 6.200 ms (1001 pts) Frequency Auto Tune Center Freq 2.849937500 GHz Start Freq 1.000000000 GHz Stop Freq 4.699875000 GHz CF Step 369.987500 MHz Auto Man Freq Offset 0 Hz File <Temp.png> saved STATUS

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