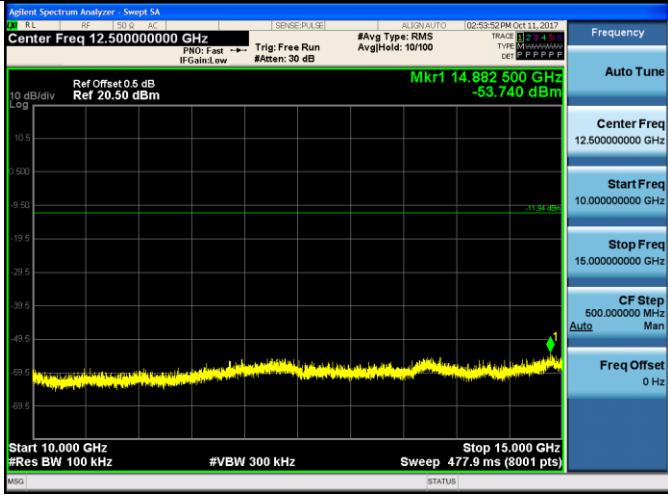
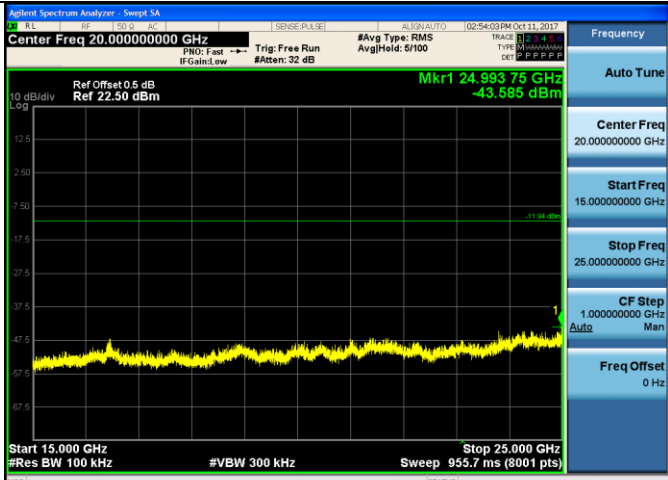
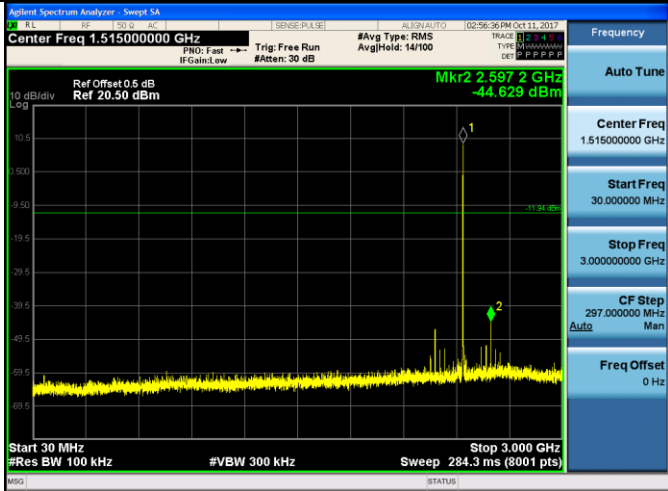
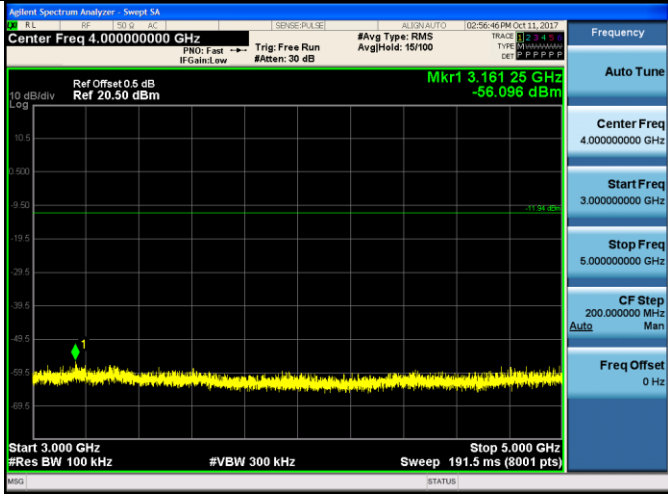
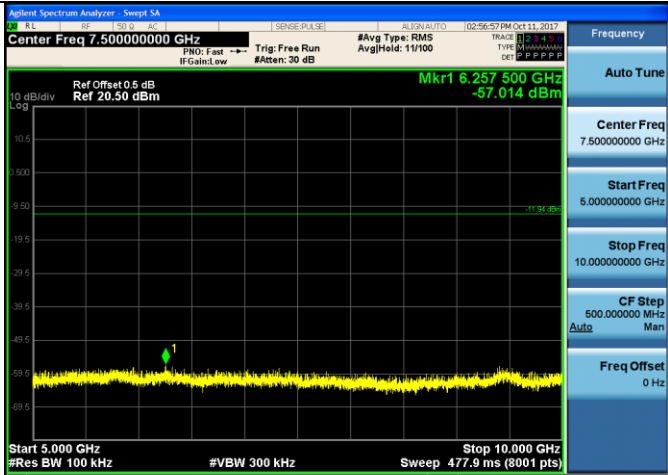
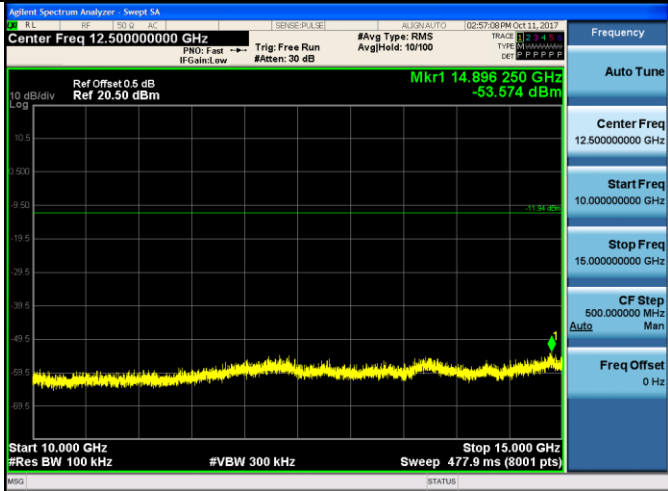

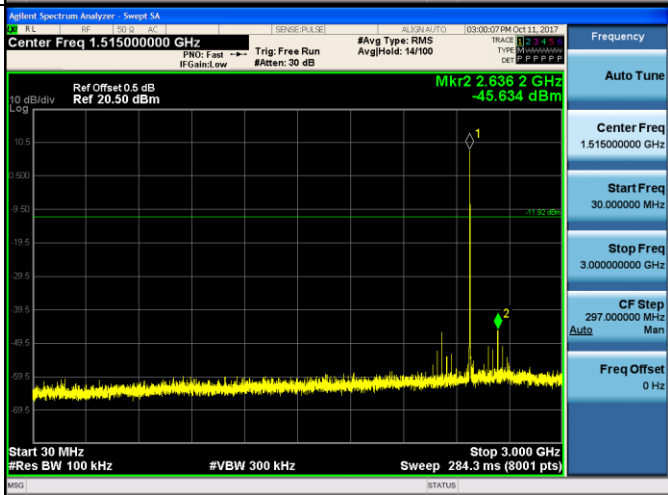
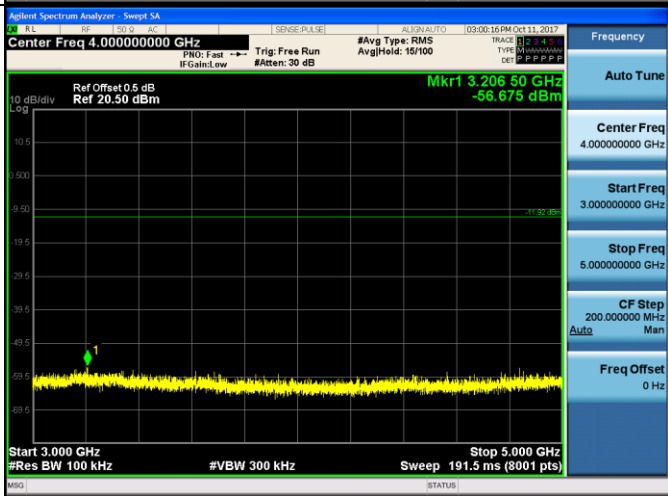
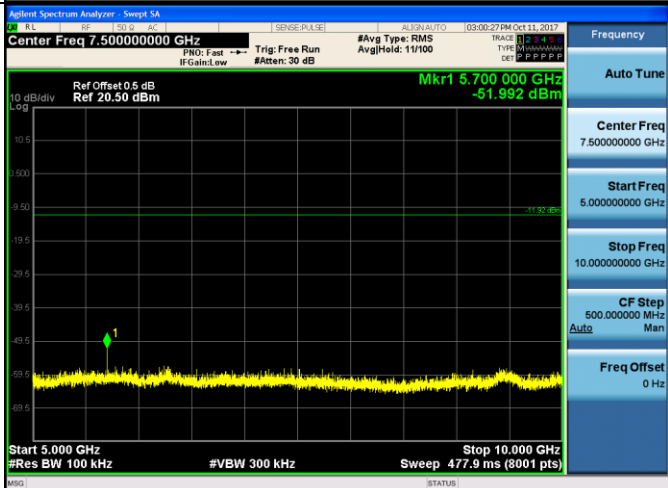
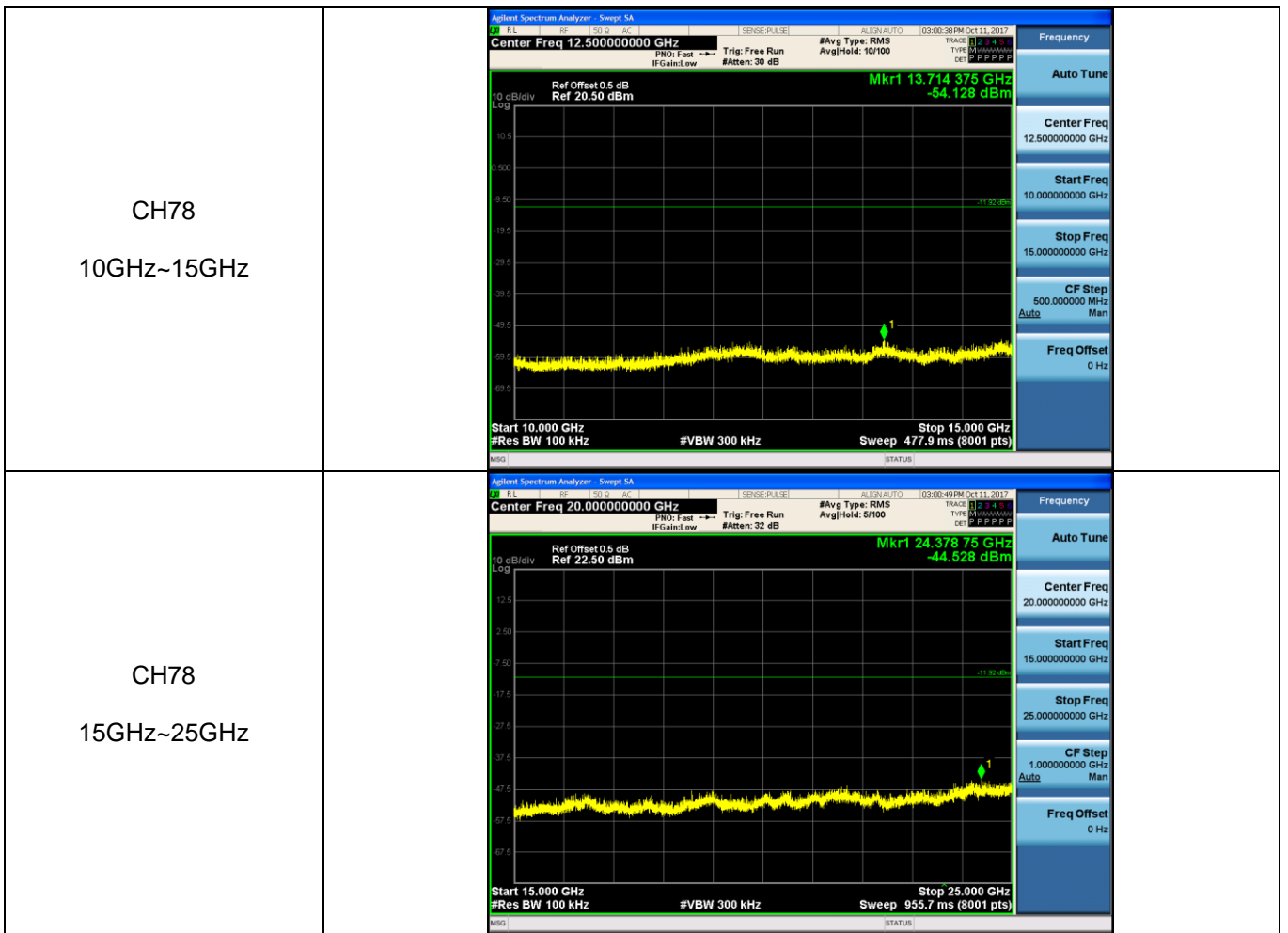
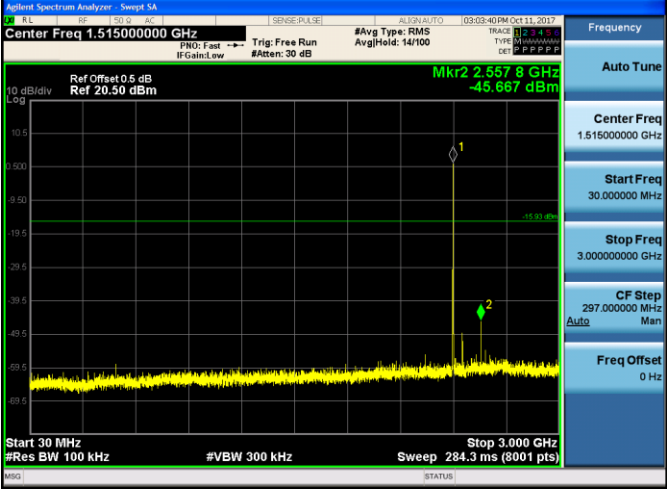
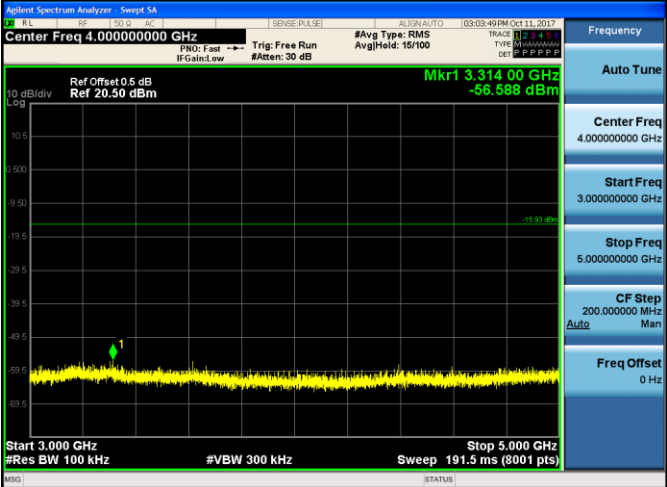
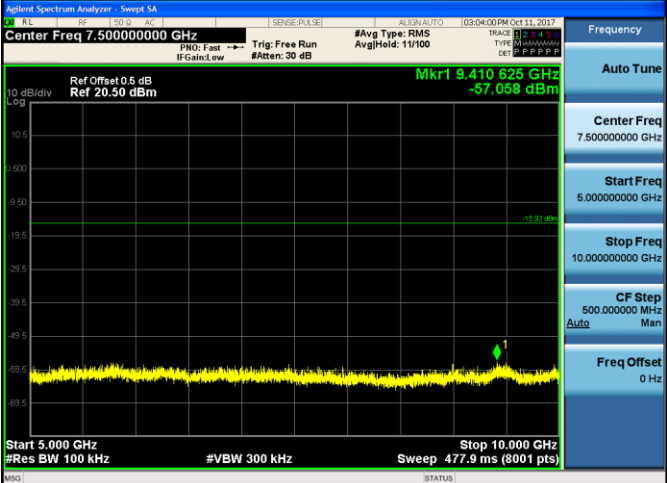


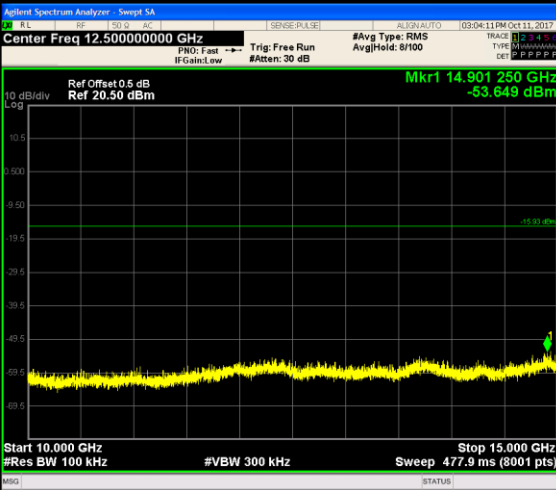
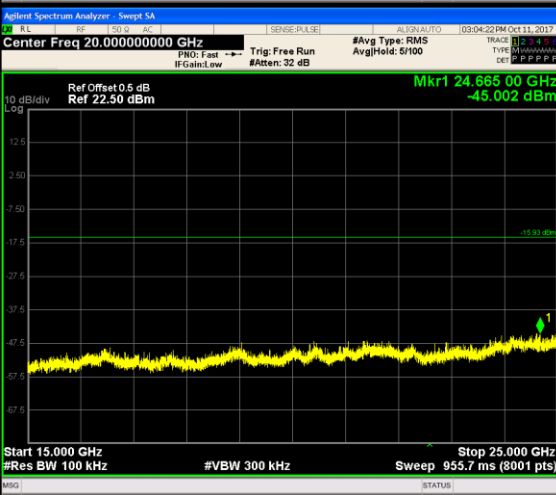
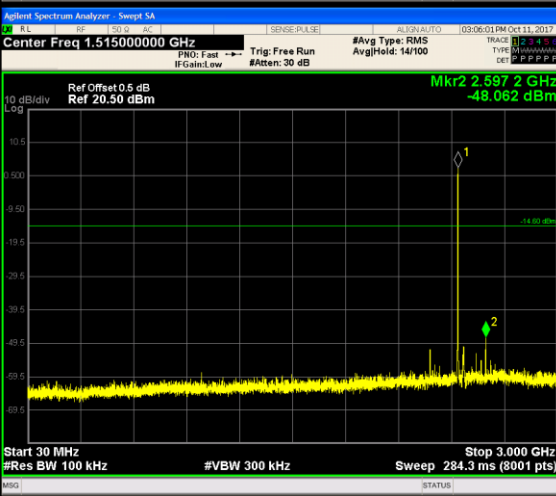
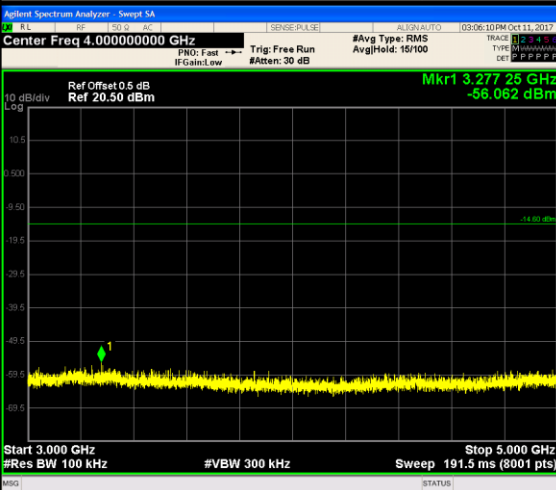
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<p>CH00 15GHz~25GHz</p>	
<p>CH39 30MHz~3GHz</p>	

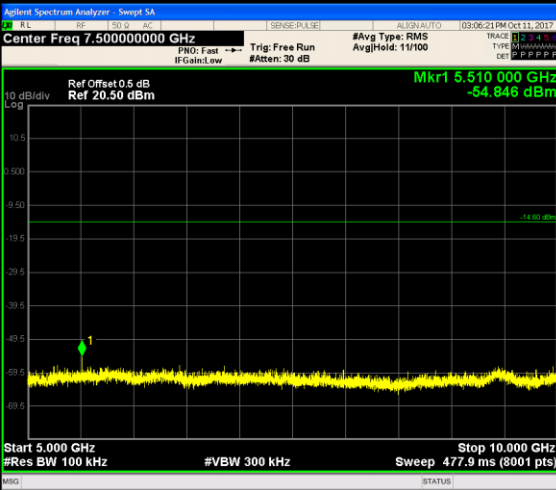
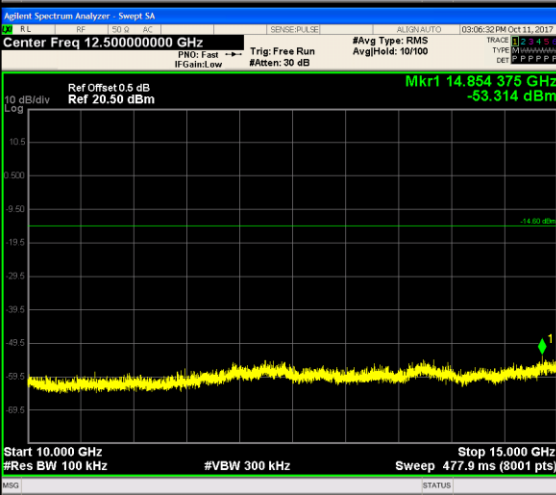
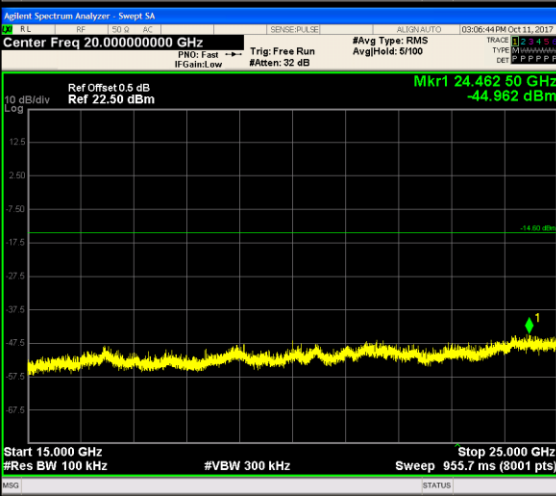
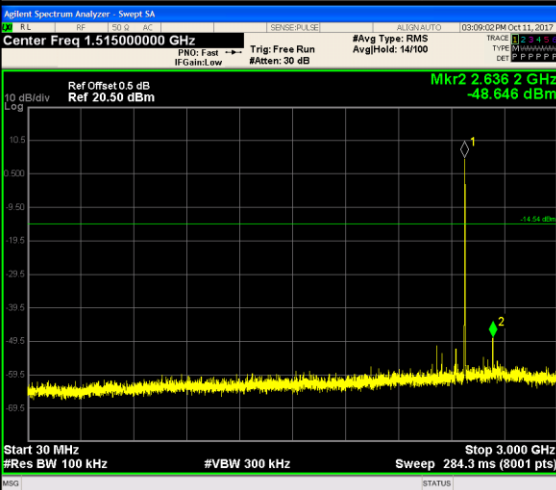
<p>CH39 3GHz~5GHz</p>	
<p>CH39 5GHz~10GHz</p>	
<p>CH39 10GHz~15GHz</p>	

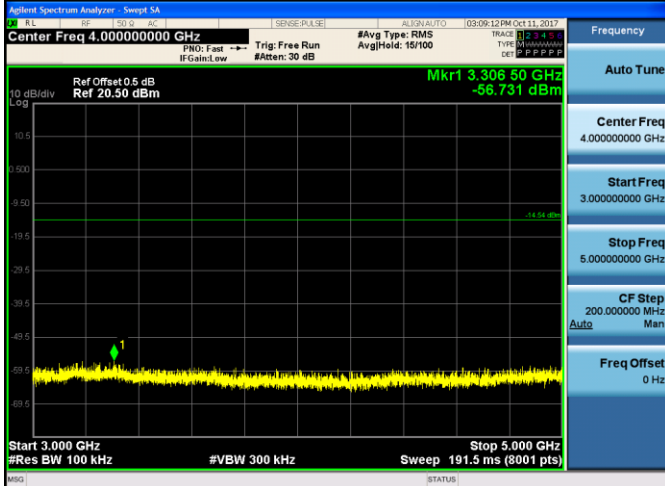
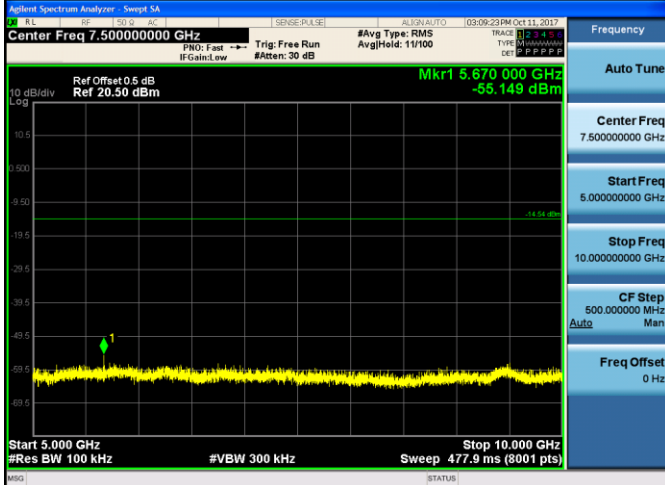
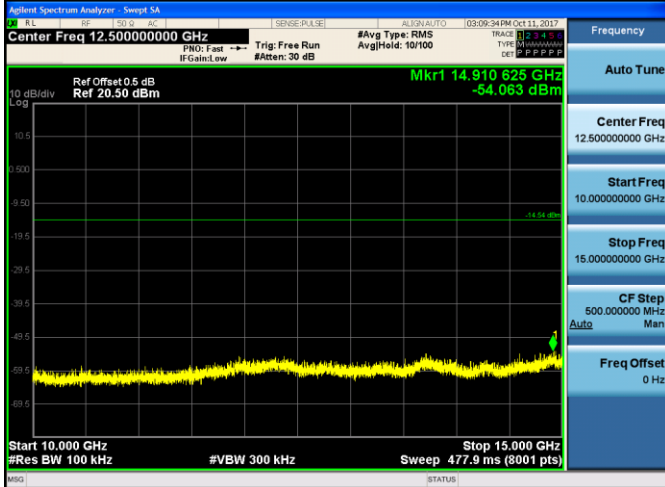
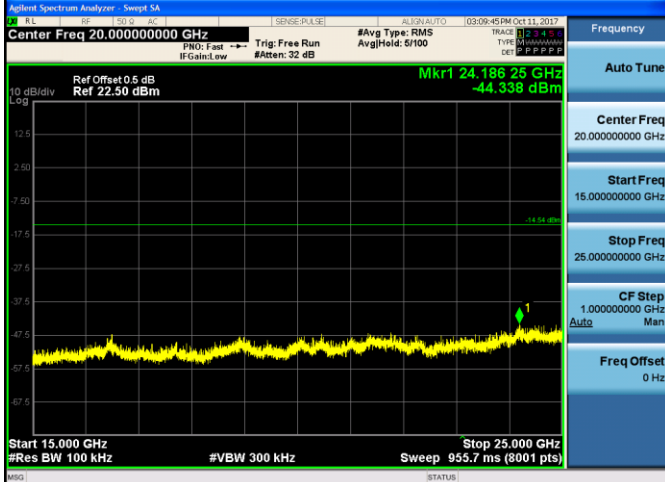
<p>CH39 15GHz~25GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.00000000 GHz</p> <p>Start Freq 15.00000000 GHz</p> <p>Stop Freq 25.00000000 GHz</p> <p>CF Step 1.00000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 30MHz~3GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 1.51500000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 3.00000000 GHz</p> <p>CF Step 297.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 3GHz~5GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 4.00000000 GHz</p> <p>Start Freq 3.00000000 GHz</p> <p>Stop Freq 5.00000000 GHz</p> <p>CF Step 200.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 5GHz~10GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 7.50000000 GHz</p> <p>Start Freq 5.00000000 GHz</p> <p>Stop Freq 10.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>



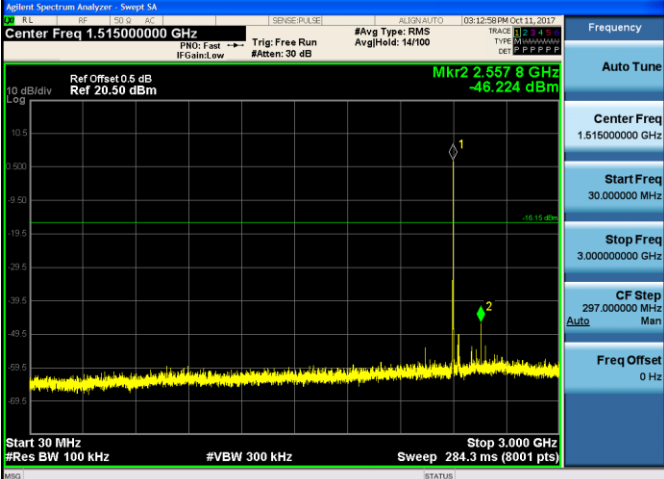
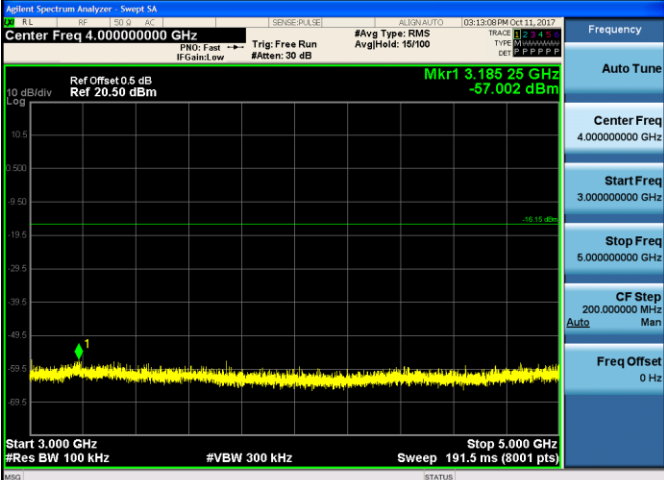
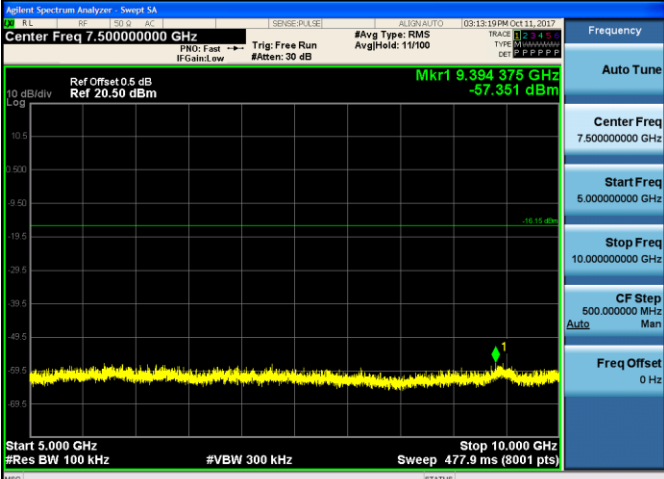
Test Item:	SE	Modulation type:	$\pi/4$ DQPSK
<p>CH00 30MHz~3GHz</p>			
<p>CH00 3GHz~5GHz</p>			
<p>CH00 5GHz~10GHz</p>			

<p>CH00 10GHz~15GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 12.50000000 GHz Mkr1 14.901 250 GHz -53.649 dBm Start 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 477.9 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.50000000 GHz</p> <p>Start Freq 10.00000000 GHz</p> <p>Stop Freq 15.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH00 15GHz~25GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 20.00000000 GHz Mkr1 24.665 00 GHz -45.002 dBm Start 15.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 955.7 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.00000000 GHz</p> <p>Start Freq 15.00000000 GHz</p> <p>Stop Freq 25.00000000 GHz</p> <p>CF Step 1.000000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 30MHz~3GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 1.515000000 GHz Mkr2 2.697 2 GHz -48.062 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 284.3 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 1.515000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 3.000000000 GHz</p> <p>CF Step 297.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 3GHz~5GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 4.000000000 GHz Mkr1 3.277 25 GHz -56.062 dBm Start 3.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 191.5 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 4.000000000 GHz</p> <p>Start Freq 3.000000000 GHz</p> <p>Stop Freq 5.000000000 GHz</p> <p>CF Step 200.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

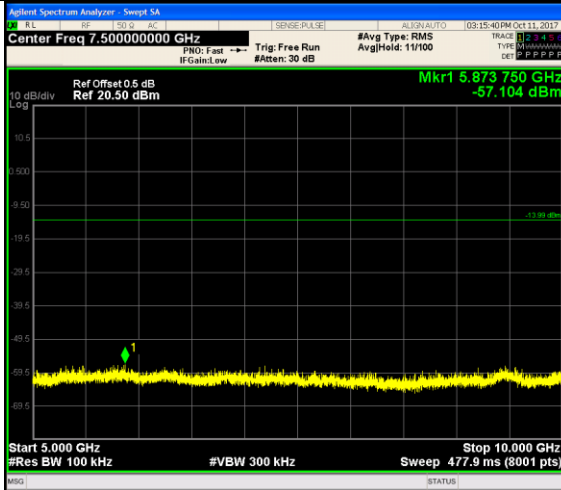
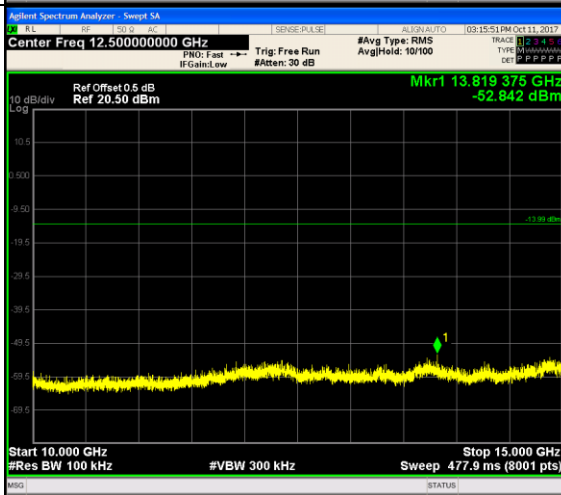
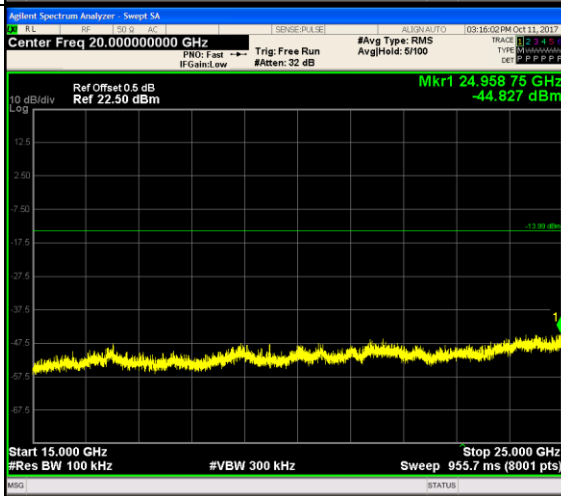
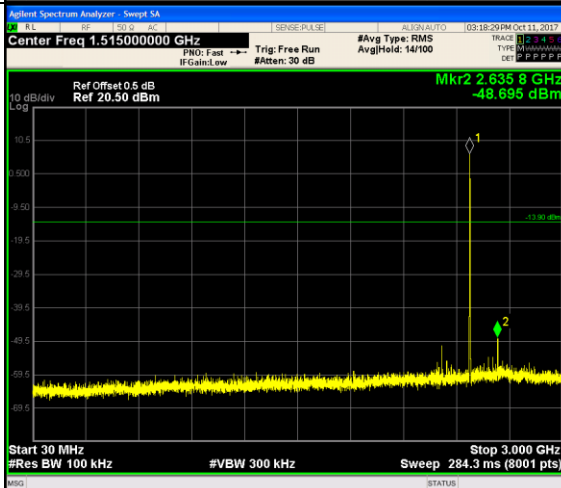
<p>CH39 5GHz~10GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 7.500000000 GHz Ref Offset 0.5 dB Ref 20.50 dBm Mkr1 5.510 000 GHz -54.846 dBm Start 5.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 477.9 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 7.500000000 GHz</p> <p>Start Freq 5.000000000 GHz</p> <p>Stop Freq 10.000000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 10GHz~15GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 12.500000000 GHz Ref Offset 0.5 dB Ref 20.50 dBm Mkr1 14.854 375 GHz -53.314 dBm Start 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 477.9 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.500000000 GHz</p> <p>Start Freq 10.000000000 GHz</p> <p>Stop Freq 15.000000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 15GHz~25GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 20.000000000 GHz Ref Offset 0.5 dB Ref 22.50 dBm Mkr1 24.462 50 GHz -44.962 dBm Start 15.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 955.7 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.000000000 GHz</p> <p>Start Freq 15.000000000 GHz</p> <p>Stop Freq 25.000000000 GHz</p> <p>CF Step 1.000000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 30MHz~3GHz</p>	 <p>Agilent Spectrum Analyzer - Sweep SA Center Freq 1.515000000 GHz Ref Offset 0.5 dB Ref 20.50 dBm Mkr2 2.636 2 GHz -48.646 dBm Mkr1 30 MHz -14.94 dBm Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 284.3 ms (8001 pts)</p>	<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 1.515000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 3.000000000 GHz</p> <p>CF Step 297.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

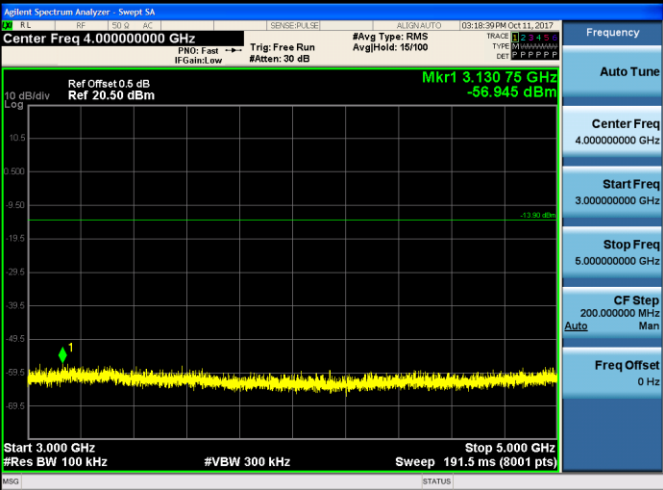
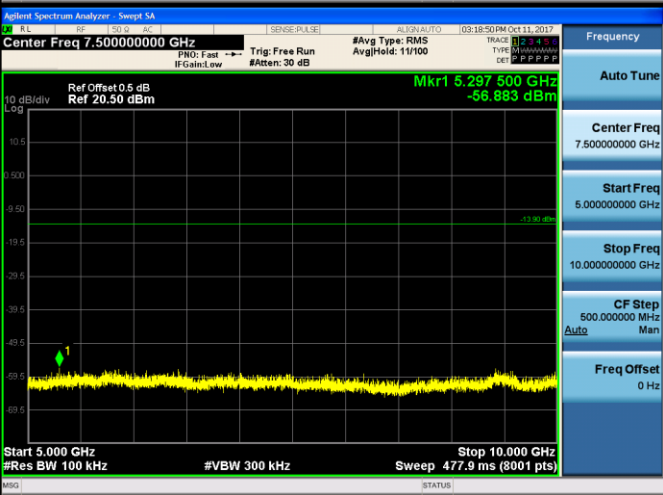
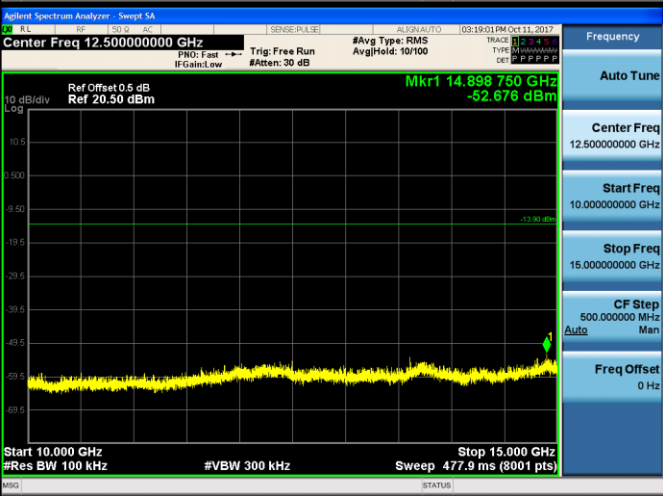
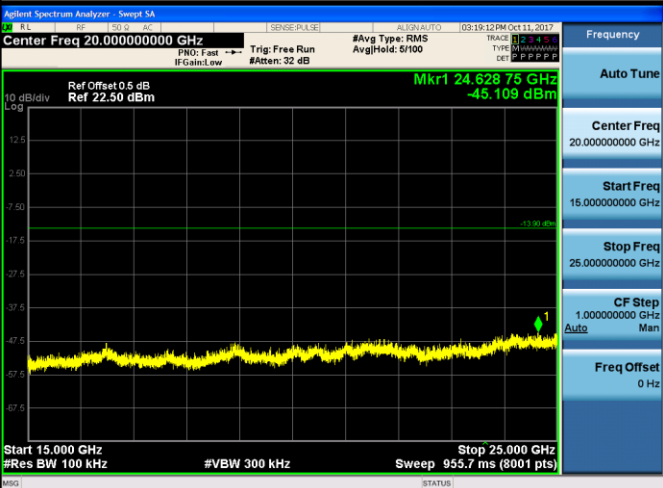
<p>CH78 3GHz~5GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 4.00000000 GHz</p> <p>Start Freq 3.00000000 GHz</p> <p>Stop Freq 5.00000000 GHz</p> <p>CF Step 200.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 5GHz~10GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 7.50000000 GHz</p> <p>Start Freq 5.00000000 GHz</p> <p>Stop Freq 10.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 10GHz~15GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.50000000 GHz</p> <p>Start Freq 10.00000000 GHz</p> <p>Stop Freq 15.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 15GHz~25GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.00000000 GHz</p> <p>Start Freq 15.00000000 GHz</p> <p>Stop Freq 25.00000000 GHz</p> <p>CF Step 1.00000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>



Test Item:	SE	Modulation type:	8DPSK
<p>CH00 30MHz~3GHz</p>			
<p>CH00 3GHz~5GHz</p>			
<p>CH00 5GHz~10GHz</p>			

<p>CH00 10GHz~15GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.50000000 GHz</p> <p>Start Freq 10.00000000 GHz</p> <p>Stop Freq 15.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH00 15GHz~25GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.00000000 GHz</p> <p>Start Freq 15.00000000 GHz</p> <p>Stop Freq 25.00000000 GHz</p> <p>CF Step 1.000000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 30MHz~3GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 1.515000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 3.000000000 GHz</p> <p>CF Step 297.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 3GHz~5GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 4.000000000 GHz</p> <p>Start Freq 3.000000000 GHz</p> <p>Stop Freq 5.000000000 GHz</p> <p>CF Step 200.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

<p>CH39 5GHz~10GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 7.500000000 GHz</p> <p>Start Freq 5.000000000 GHz</p> <p>Stop Freq 10.000000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 10GHz~15GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.500000000 GHz</p> <p>Start Freq 10.000000000 GHz</p> <p>Stop Freq 15.000000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH39 15GHz~25GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.000000000 GHz</p> <p>Start Freq 15.000000000 GHz</p> <p>Stop Freq 25.000000000 GHz</p> <p>CF Step 1.000000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 30MHz~3GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 1.515000000 GHz</p> <p>Start Freq 30.000000 MHz</p> <p>Stop Freq 3.000000000 GHz</p> <p>CF Step 297.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>

<p>CH78 3GHz~5GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 4.00000000 GHz</p> <p>Start Freq 3.00000000 GHz</p> <p>Stop Freq 5.00000000 GHz</p> <p>CF Step 200.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 5GHz~10GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 7.50000000 GHz</p> <p>Start Freq 5.00000000 GHz</p> <p>Stop Freq 10.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 10GHz~15GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 12.50000000 GHz</p> <p>Start Freq 10.00000000 GHz</p> <p>Stop Freq 15.00000000 GHz</p> <p>CF Step 500.000000 MHz Auto Man</p> <p>Freq Offset 0 Hz</p>
<p>CH78 15GHz~25GHz</p>		<p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 20.00000000 GHz</p> <p>Start Freq 15.00000000 GHz</p> <p>Stop Freq 25.00000000 GHz</p> <p>CF Step 1.00000000 GHz Auto Man</p> <p>Freq Offset 0 Hz</p>

### 5.11. Spurious Emissions (radiated)

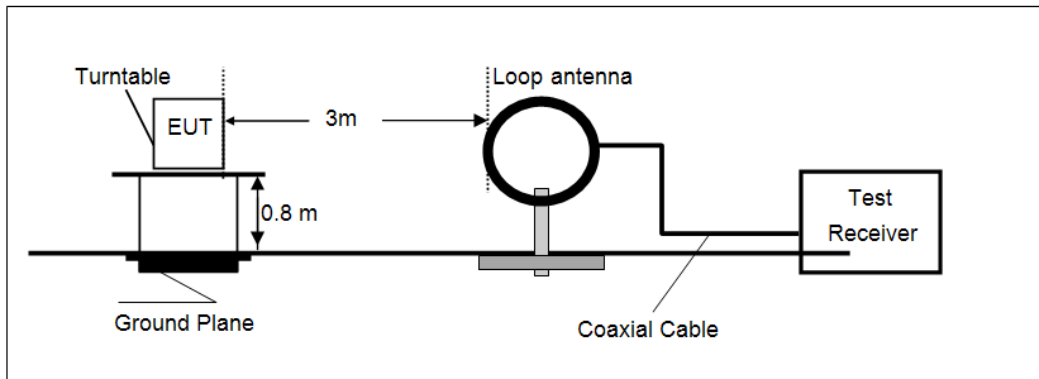
#### LIMIT

#### FCC CFR Title 47 Part 15 Subpart C Section 15.209

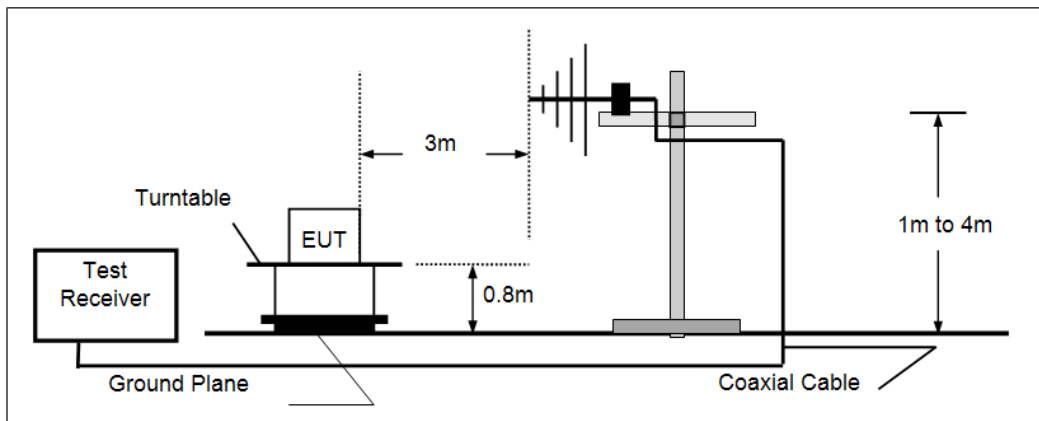
Frequency	Limit (dBuV/m @3m)	Value
30 MHz ~ 88 MHz	40.00	Quasi-peak
88 MHz ~ 216 MHz	43.50	Quasi-peak
216 MHz ~ 960 MHz	46.00	Quasi-peak
960 MHz ~ 1 GHz	54.00	Quasi-peak
Above 1 GHz	54.00	Average
	74.00	Peak

#### TEST CONFIGURATION

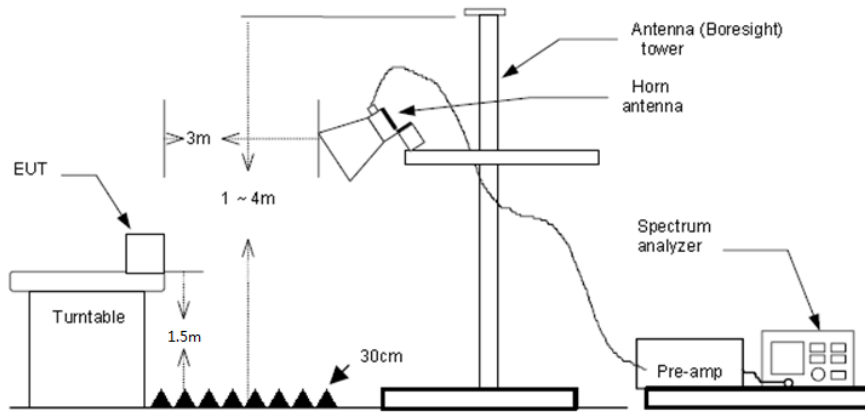
- Below 30 MHz



- 30 MHz ~1000 MHz



- Above 1 GHz



## TEST PROCEDURE

1. The EUT was tested according to ANSI C63.10:2013.
2. The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
4. The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna.
5. Use the following spectrum analyzer settings
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Below 1 GHz, RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold; If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
  - (3) Above 1 GHz, RBW=1 MHz, VBW=3 MHz Peak detector for Peak value  
RBW=1 MHz, VBW=10 Hz Peak detector for Average value.

## TEST MODE:

Please refer to the clause 3.3

## TEST RESULTS

Passed       Not Applicable

Note:

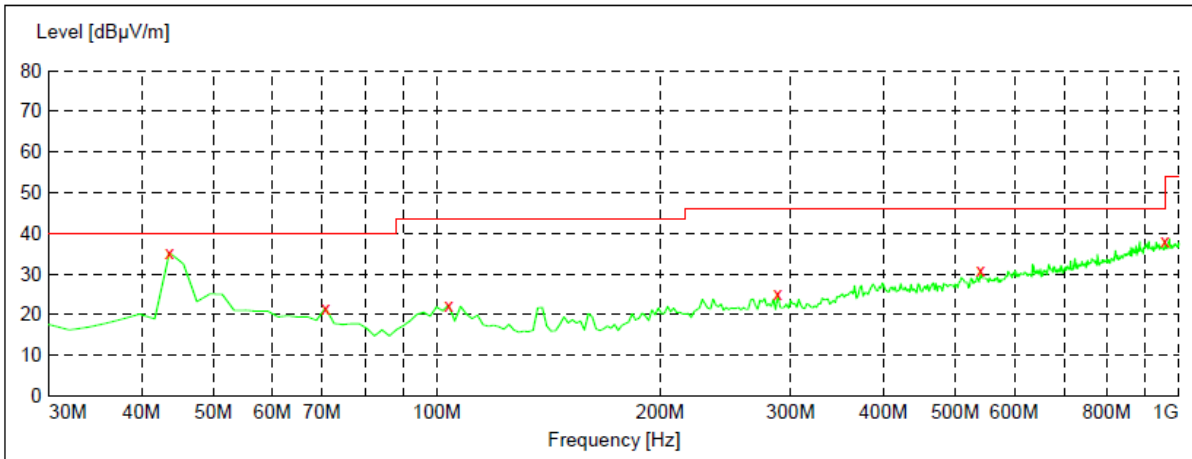
- 1) Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.
- 3) Below 1 GHz, Have pre-scan all modulation mode, found the GFSK modulation High channel which it was worst case, so only the worst case's data on the test report.
- 4) Above 1 GHz, Have pre-scan all modulation mode, found the GFSK modulation which it was worst case, so only the worst case's data on the test report
- 5) The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.

### ➤ 9 kHz ~ 30 MHz

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

➤ 30 MHz ~ 1 GHz

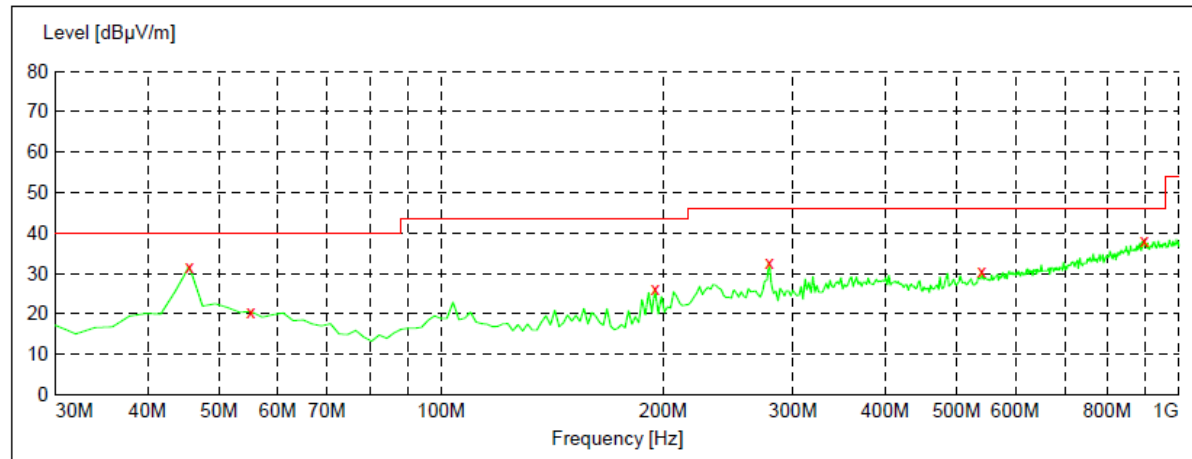
Polarization: Vertical



x x x MES GM1710096095\_red

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
43.580000	35.20	-9.1	40.0	4.8	QP	100.0	285.00	VERTICAL
70.740000	21.70	-13.3	40.0	18.3	QP	100.0	113.00	VERTICAL
103.720000	22.40	-10.5	43.5	21.1	QP	100.0	86.00	VERTICAL
288.020000	25.10	-7.5	46.0	20.9	QP	100.0	113.00	VERTICAL
540.220000	31.00	-1.0	46.0	15.0	QP	100.0	273.00	VERTICAL
957.320000	38.10	7.3	46.0	7.9	QP	100.0	349.00	VERTICAL

Polarization: Horizontal



x x x MES GM1710096096\_red

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
45.520000	31.80	-8.8	40.0	8.2	QP	300.0	171.00	HORIZONTAL
55.220000	20.60	-9.2	40.0	19.4	QP	300.0	119.00	HORIZONTAL
194.900000	26.20	-10.1	43.5	17.3	QP	300.0	0.00	HORIZONTAL
278.320000	32.70	-7.8	46.0	13.3	QP	100.0	90.00	HORIZONTAL
540.220000	30.60	-1.0	46.0	15.4	QP	100.0	226.00	HORIZONTAL
897.180000	38.30	6.7	46.0	7.7	QP	300.0	360.00	HORIZONTAL

## ➤ 1 GHz ~ 25 GHz

CH00									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1195.05	40.53	26.26	4.65	36.57	34.87	74.00	-39.13	Vertical	Peak
3644.18	34.41	29.30	8.32	38.26	33.77	74.00	-40.23	Vertical	Peak
4834.05	44.21	31.53	9.56	36.86	48.44	74.00	-25.56	Vertical	Peak
6730.19	32.21	34.14	11.52	35.12	42.75	74.00	-31.25	Vertical	Peak
1195.05	41.81	26.26	4.65	36.57	36.15	74.00	-37.85	Horizontal	Peak
2972.75	42.45	28.57	7.47	38.25	40.24	74.00	-33.76	Horizontal	Peak
4809.50	44.62	31.58	9.55	36.93	48.82	74.00	-25.18	Horizontal	Peak
6713.08	31.79	34.17	11.50	35.15	42.31	74.00	-31.69	Horizontal	Peak

CH39									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2081.55	47.24	26.63	6.34	37.32	42.89	74.00	-31.11	Vertical	Peak
2980.33	40.90	28.58	7.47	38.24	38.71	74.00	-35.29	Vertical	Peak
4883.52	45.26	31.43	9.59	36.73	49.55	74.00	-24.45	Vertical	Peak
7432.62	36.03	36.23	12.18	34.85	49.59	74.00	-24.41	Vertical	Peak
1782.18	41.60	25.37	5.93	37.10	35.80	74.00	-38.20	Horizontal	Peak
3463.29	35.95	28.71	8.06	38.46	34.26	74.00	-39.74	Horizontal	Peak
4883.52	43.94	31.43	9.59	36.73	48.23	74.00	-25.77	Horizontal	Peak
7941.19	32.06	36.87	12.58	34.69	46.82	74.00	-27.18	Horizontal	Peak

CH78									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1192.01	41.37	26.24	4.64	36.57	35.68	74.00	-38.32	Vertical	Peak
2081.55	47.31	26.63	6.34	37.32	42.96	74.00	-31.04	Vertical	Peak
2987.92	43.98	28.59	7.47	38.24	41.80	74.00	-32.20	Vertical	Peak
4958.68	42.82	31.46	9.64	36.52	47.40	74.00	-26.60	Vertical	Peak
1495.10	38.73	25.80	5.27	36.58	33.22	74.00	-40.78	Horizontal	Peak
2980.33	43.03	28.58	7.47	38.24	40.84	74.00	-33.16	Horizontal	Peak
4958.68	45.00	31.46	9.64	36.52	49.58	74.00	-24.42	Horizontal	Peak
7209.02	32.48	36.21	11.87	35.07	45.49	74.00	-28.51	Horizontal	Peak

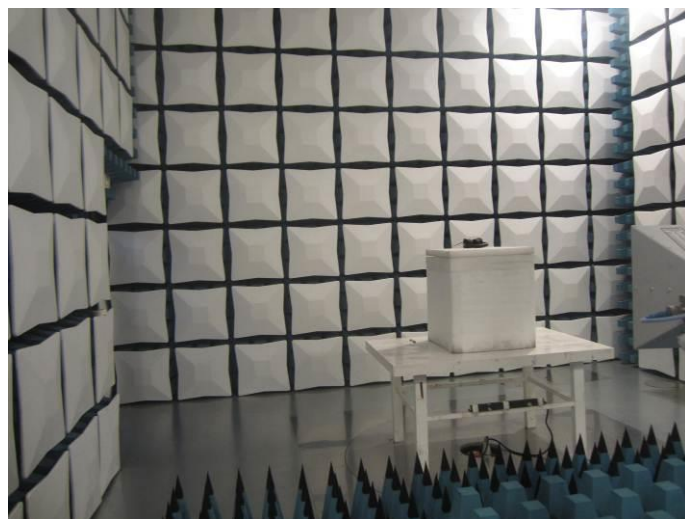
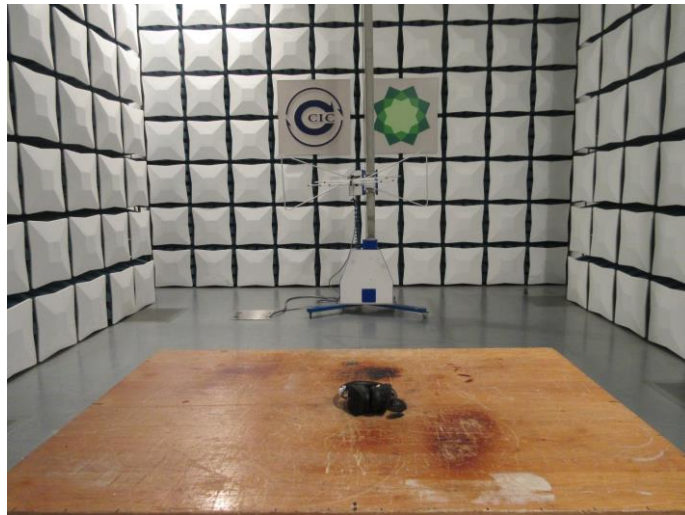
## Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.



## 6. TEST SETUP PHOTOS

Radiated Emissions



## 7. EXTERANAL AND INTERNAL PHOTOS

### EXTERANAL PHOTOS

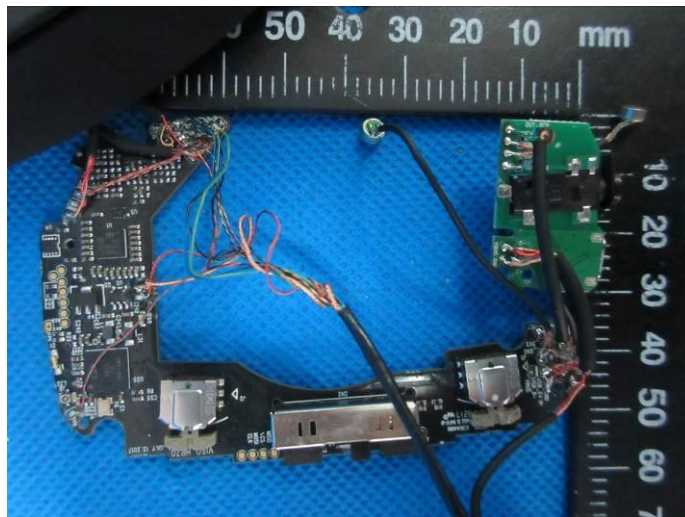
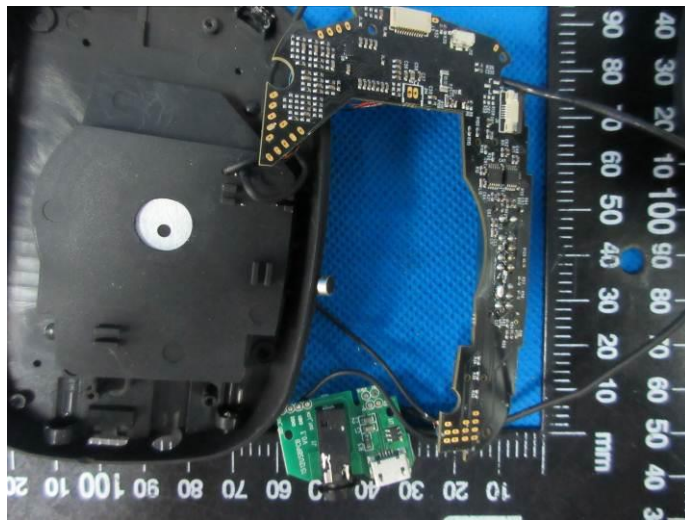
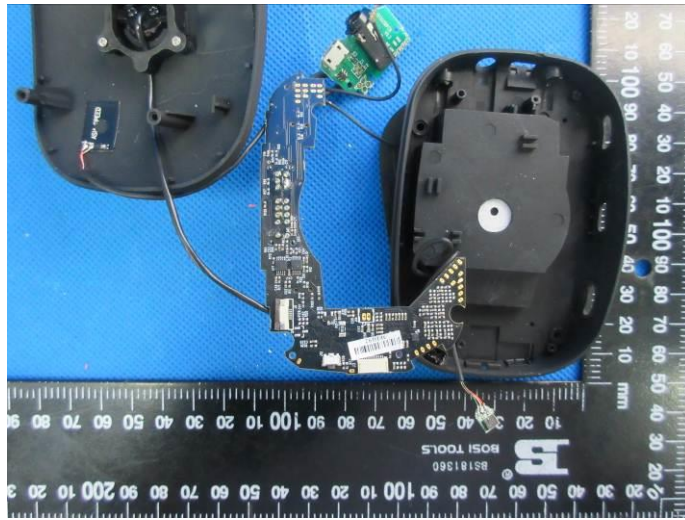


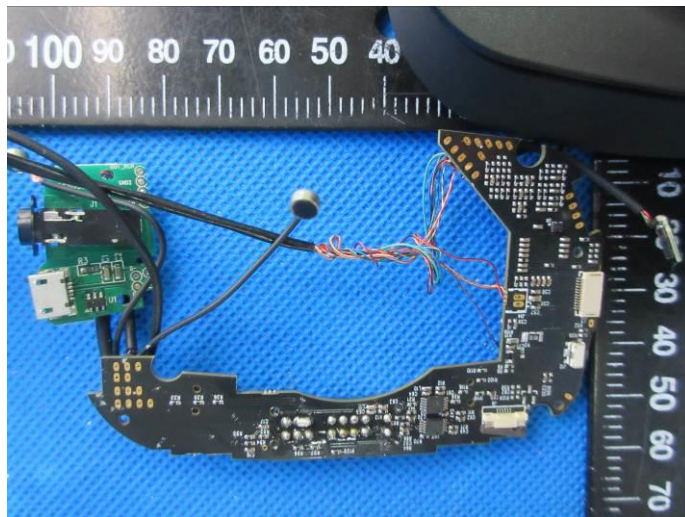
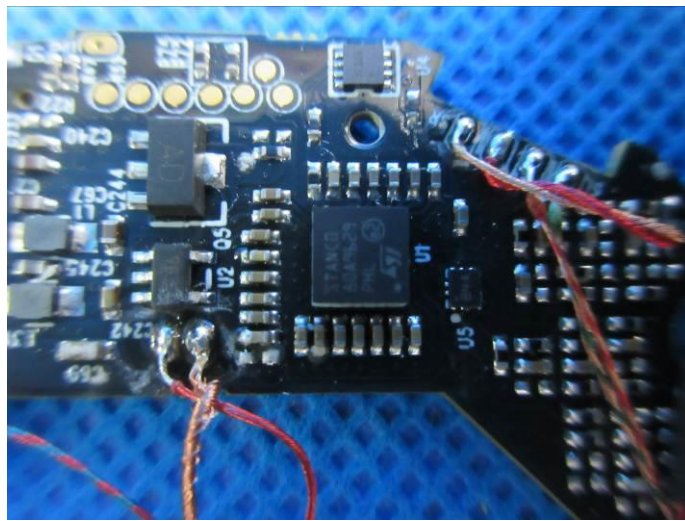
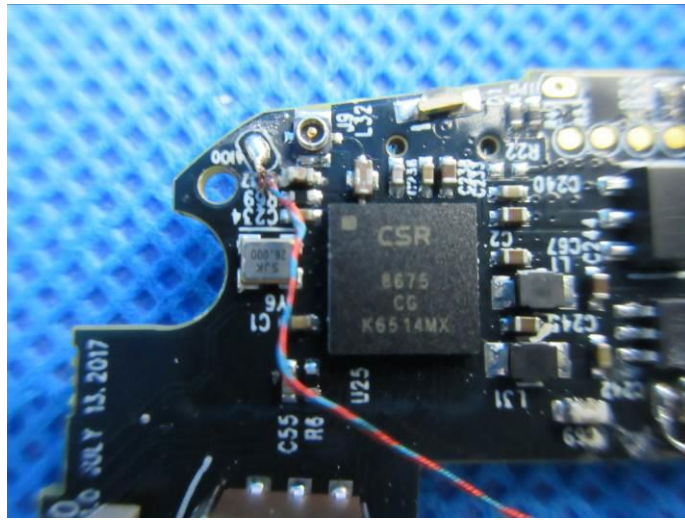


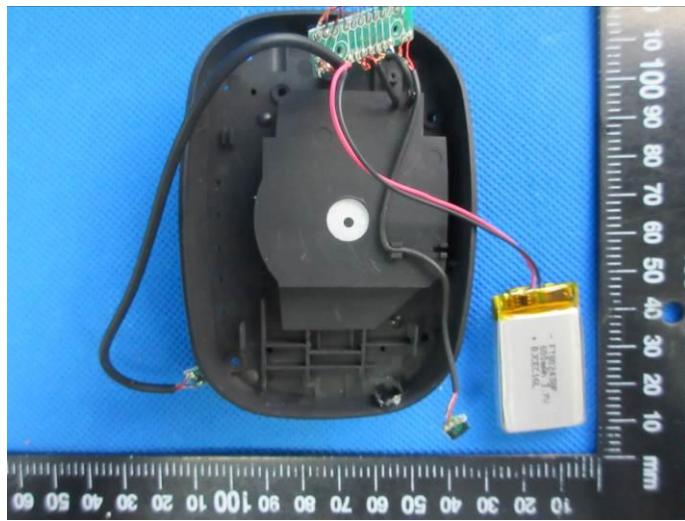
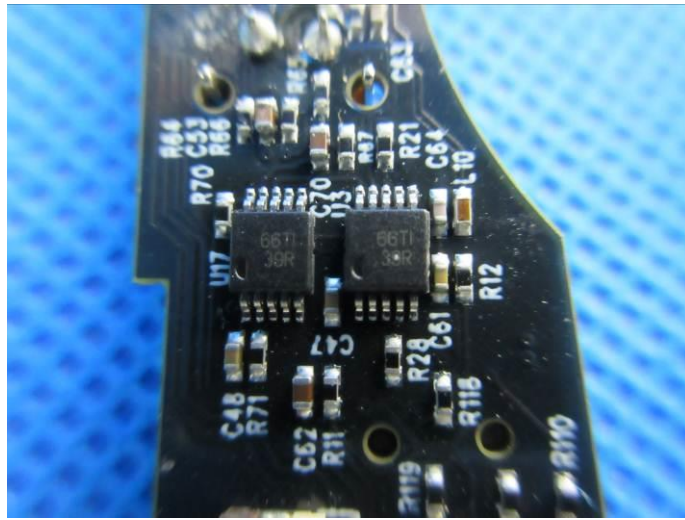


### INTERNAL PHOTOS













.....End of Report.....