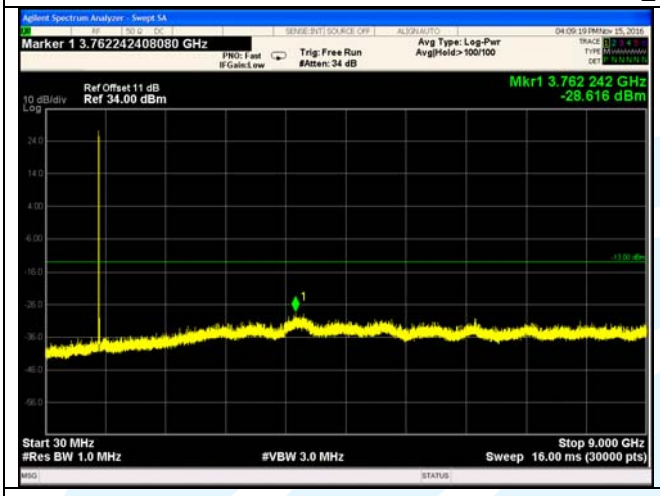
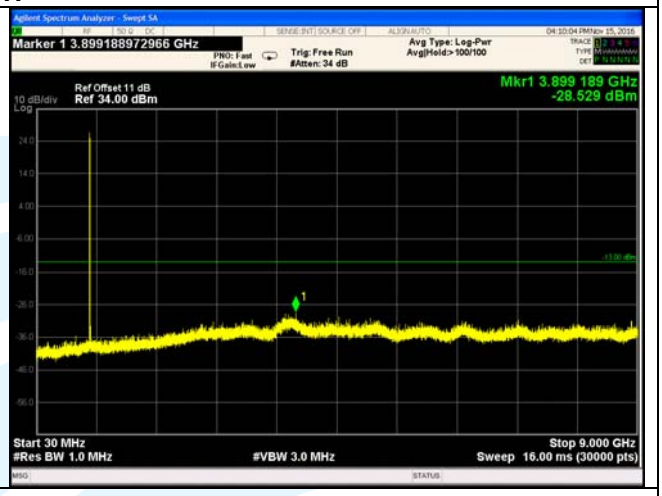
LTE_ Band 5_ Channel Bandwidth: 5 MHz_1RB#0	
QPSK	**16QAM**
LCH	
	
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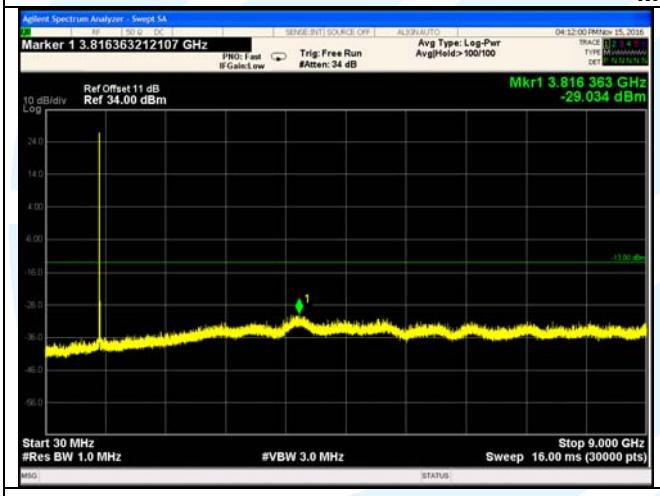
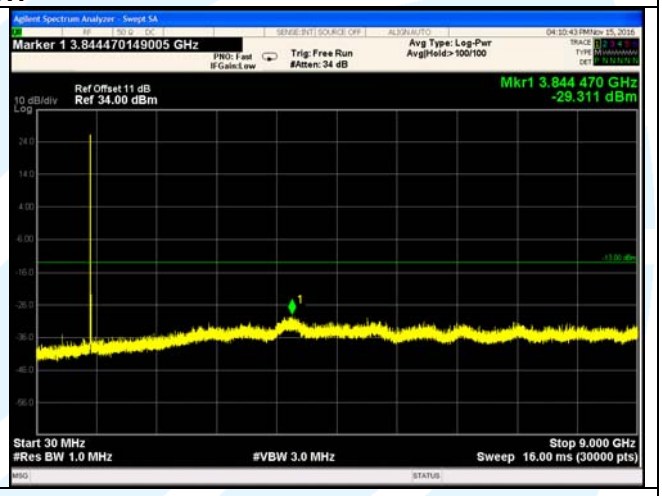
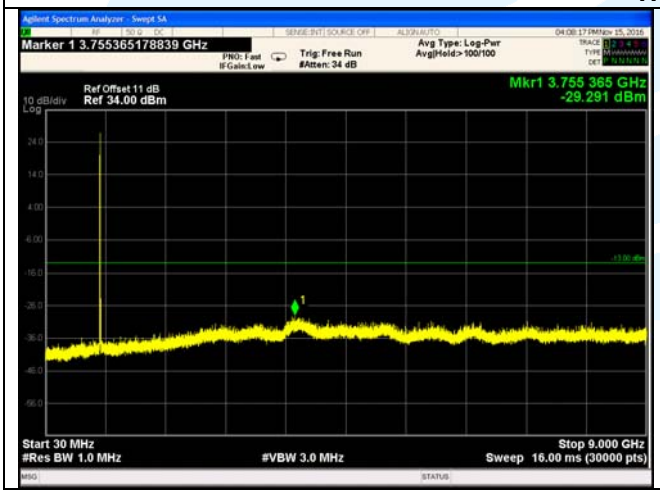
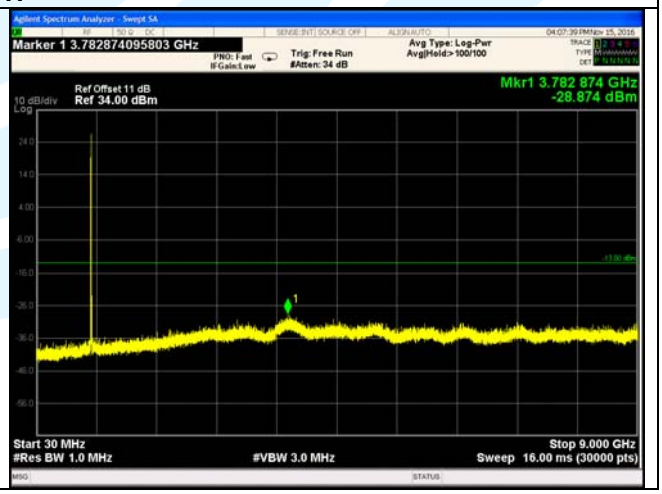
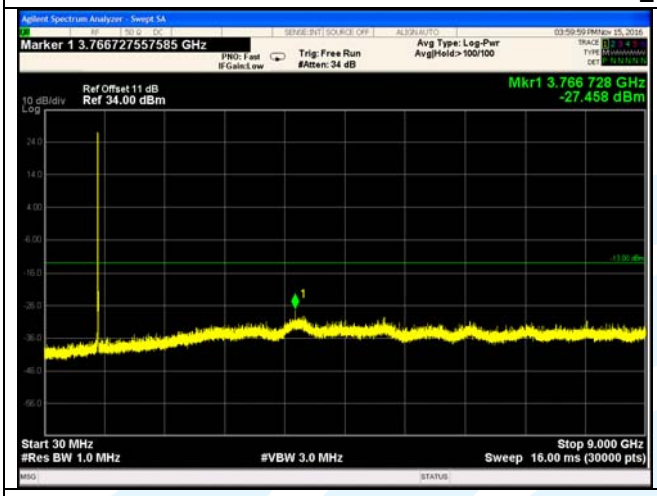
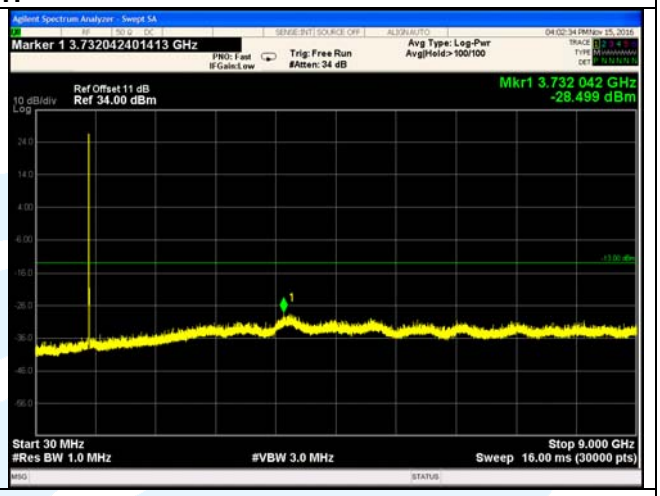
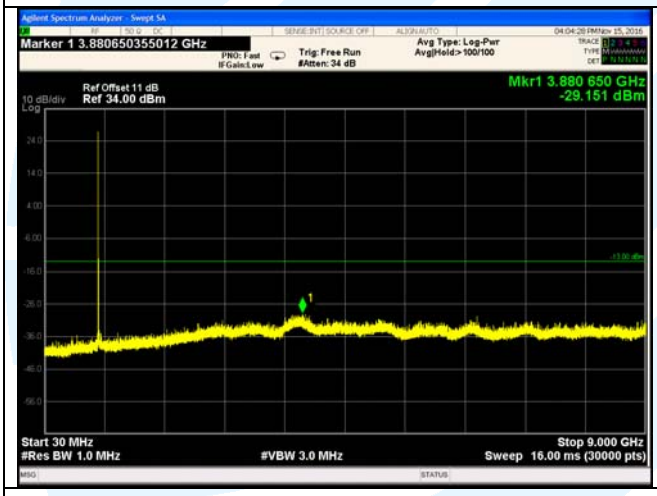
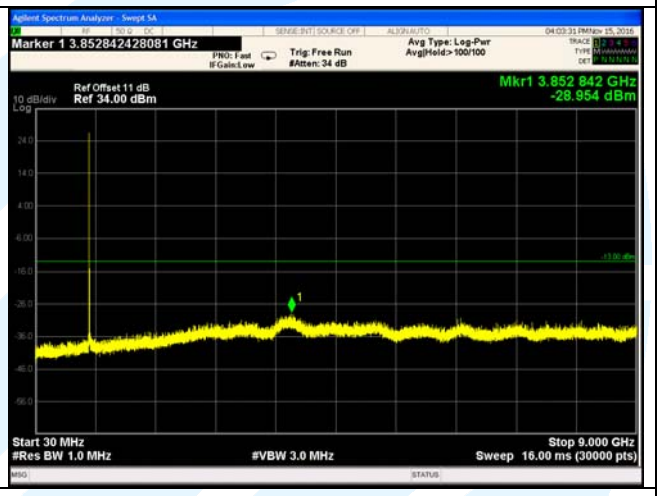
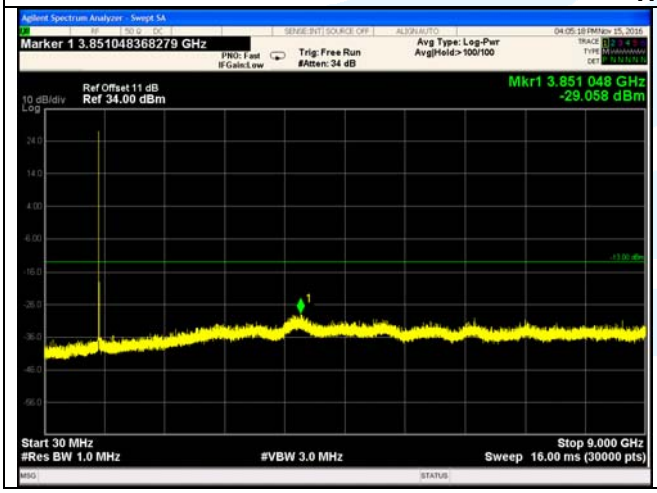
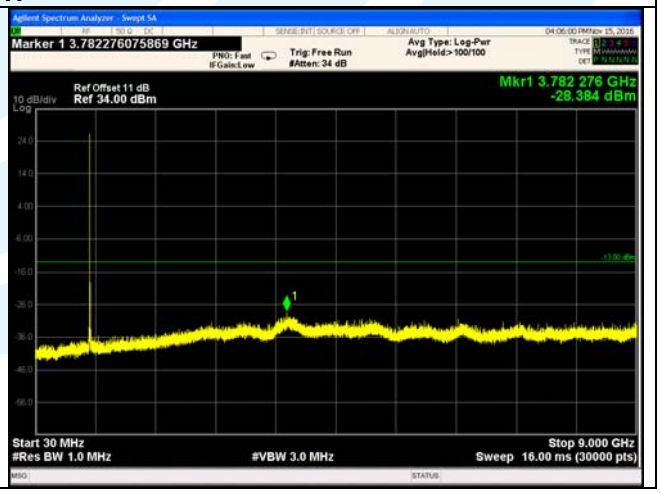
	
HCH	
	

LTE_ Band 5_ Channel Bandwidth: 10 MHz_1RB#0	
QPSK	**16QAM**
LCH	
	
MCH	
	
HCH	
	

5.6 Field strength of spurious radiation

Test Requirement: FCC 47 CFR Part 2.1053 & FCC 47 CFR Part 22.917(a)(b)

Test Method: ANSI/TIA/EIA-603-D 2010 & KDB 971168 D01v02r02

Limit: The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13 dBm.

Test Procedure:

1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.

Test procedure as below:

1) The EUT was powered ON and placed on a 1.5m high table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. Modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7) were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:

ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)
EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
EIRP=ERP+2.15dB

where:
Pg is the generator output power into the substitution antenna.

10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode, and found the Z axis positioning which it is worse case.
12) Repeat above procedures until all frequencies measured was complete.

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-30MHz	Peak	10kHz	30kHz	Peak
30MHz-1GHz	Peak	100kHz	300kHz	Peak
Above 1GHz	Peak	1MHz	3MHz	Peak

Test Setup: Refer to section 4.1.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

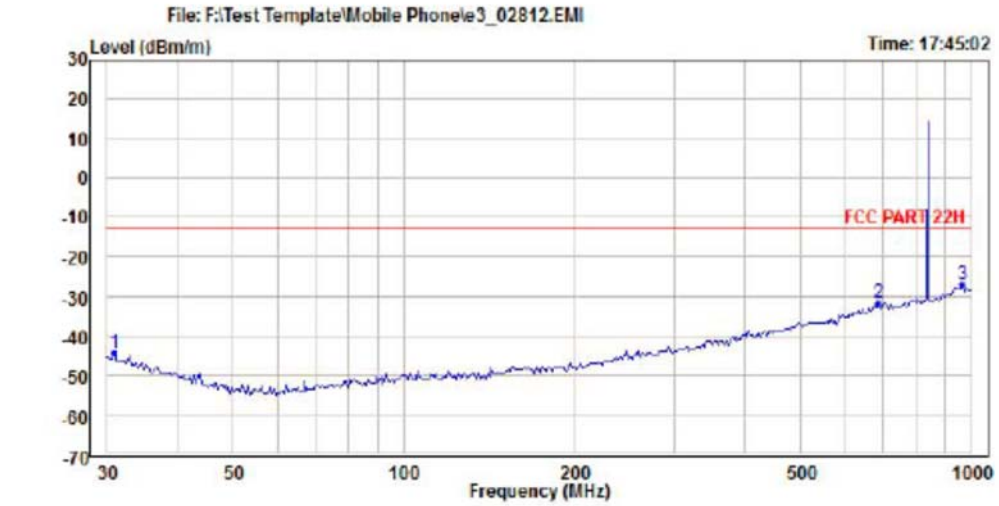
Test Data:

5.6.1 Spurious Emission Test Data (9 KHz ~ 30 MHz)

The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

5.6.2 Spurious Emission Test Data (30 MHz ~ 1 GHz)

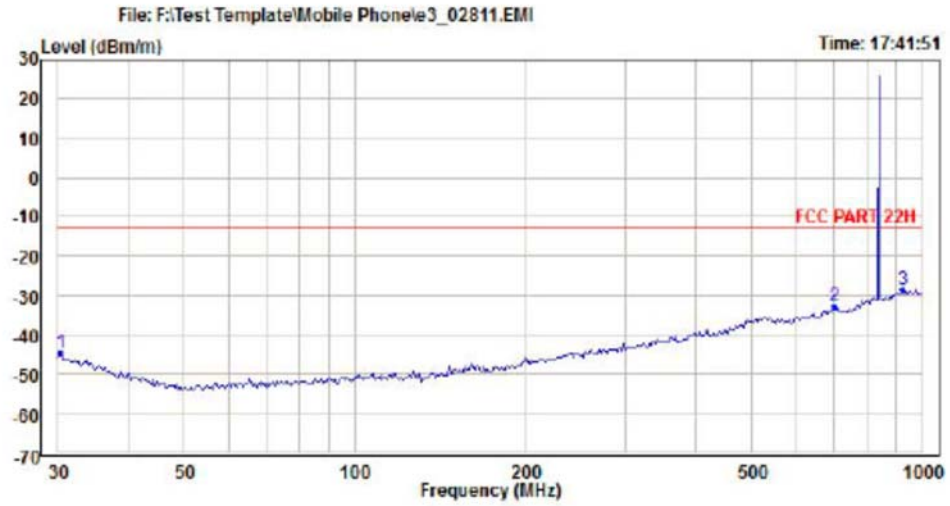
GSM 1Tx-slot_190 channel/836.6MHz_Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : GSM850_Mid

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.855220	-70.59	16.13	10.39	-44.07	-13.00	-31.07	Peak	Horizontal
2	689.05100	-67.47	22.59	13.37	-31.51	-13.00	-18.51	Peak	Horizontal
3	PP965.47420	-65.90	24.67	14.11	-27.12	-13.00	-14.12	Peak	Horizontal

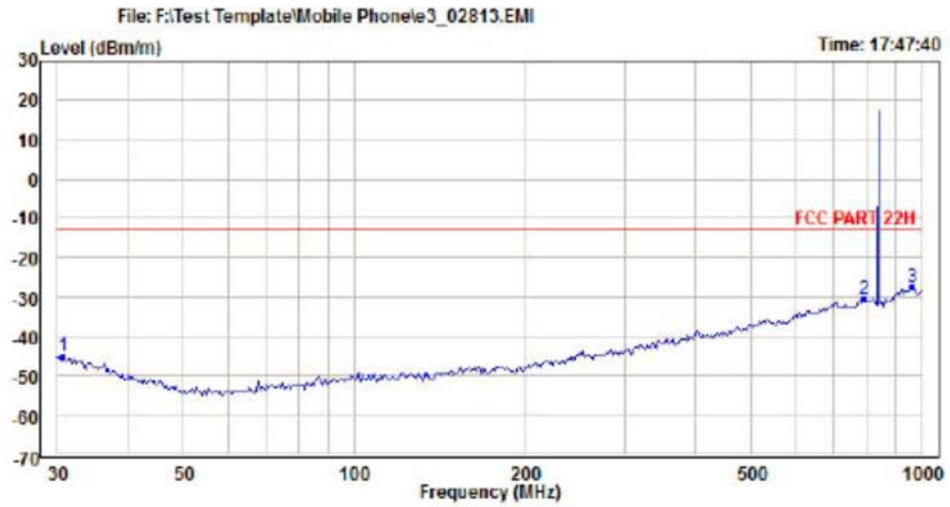
GSM 1Tx-slot_190 channel/836.6MHz_Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : GSM850_Mid

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.211560	-70.42	15.49	10.38	-44.55	-13.00	-31.55	Peak	Vertical
2	698.80350	-67.57	21.26	13.41	-32.90	-13.00	-19.90	Peak	Vertical
3	PP925.61320	-66.42	23.90	14.04	-28.48	-13.00	-15.48	Peak	Vertical

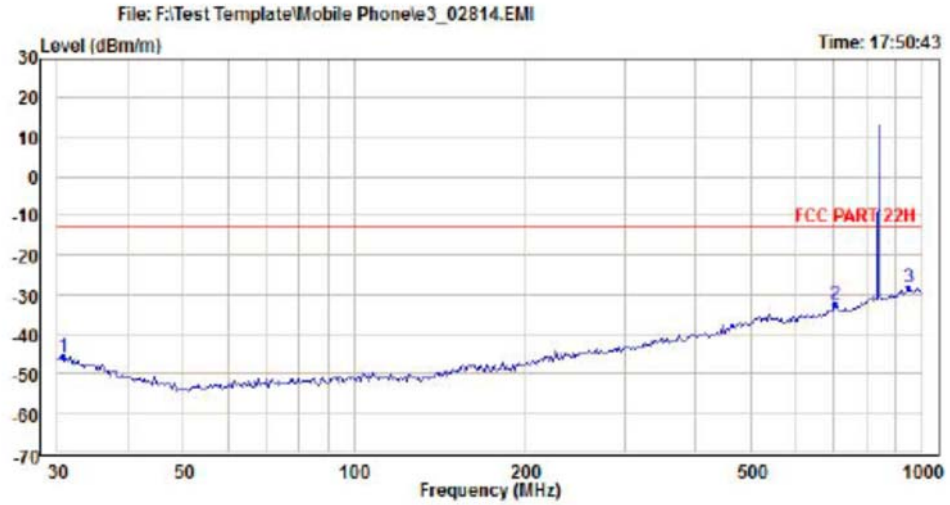
EDGE 1Tx-slot _190 channel/836.6MHz_Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : EDGE850_Mid

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.639160	-71.68	16.25	10.39	-45.04	-13.00	-32.04	Peak	Horizontal
2	793.02810	-67.24	23.13	13.60	-30.51	-13.00	-17.51	Peak	Horizontal
3	PP958.71350	-66.44	24.86	14.11	-27.47	-13.00	-14.47	Peak	Horizontal

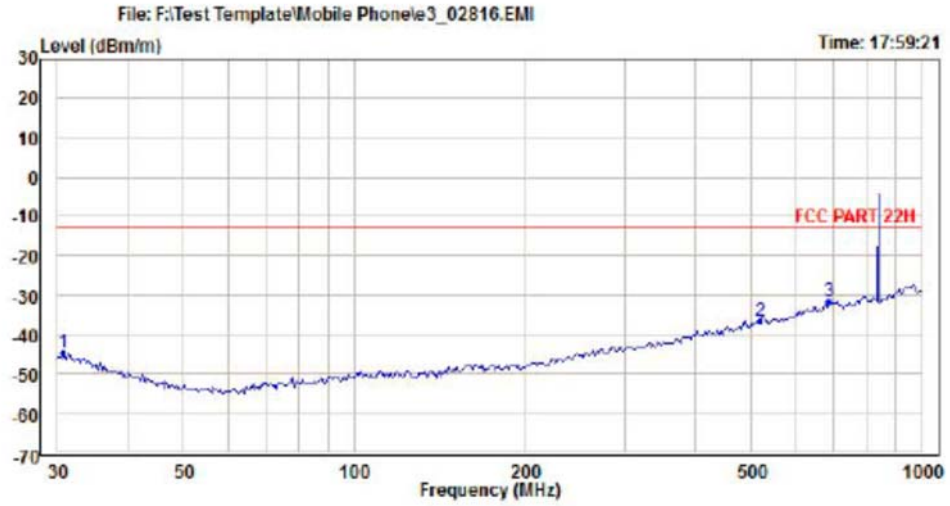
EDGE 1Tx-slot _190 channel/836.6MHz _Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : EDGE850_Mid

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.639160	-71.40	15.25	10.39	-45.76	-13.00	-32.76	Peak	Vertical
2	703.73140	-67.01	21.27	13.41	-32.33	-13.00	-19.33	Peak	Vertical
3	PP952.00010	-66.00	23.67	14.11	-28.22	-13.00	-15.22	Peak	Vertical

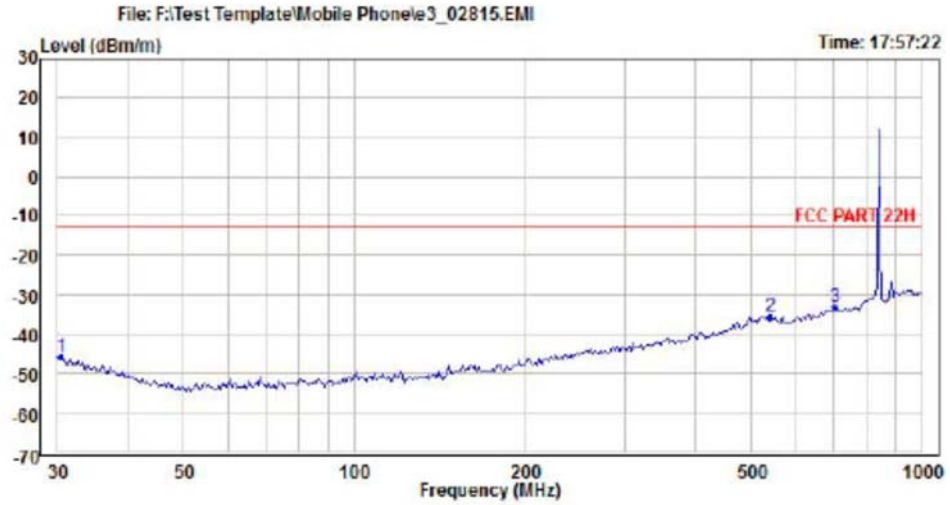
WCDMA RMC 12.2Kbps_4182 channel/836.4 MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : WCDMA_BandV_Mid

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.639160	-71.12	16.25	10.39	-44.48	-13.00	-31.48	Peak	Horizontal
2	520.20790	-68.84	19.53	12.82	-36.49	-13.00	-23.49	Peak	Horizontal
3	PP689.05100	-67.49	22.59	13.37	-31.53	-13.00	-18.53	Peak	Horizontal

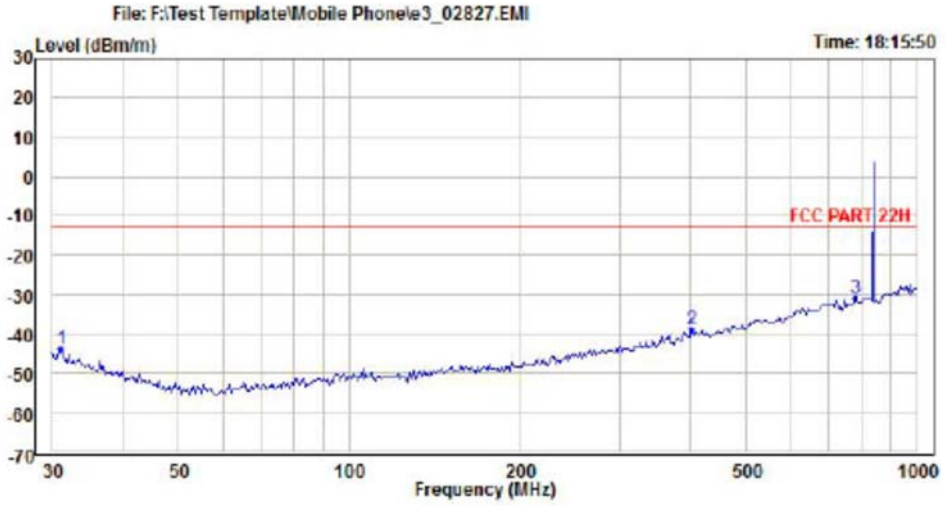
WCDMA RMC 12.2Kbps_4182 channel/836.4 MHz _Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : WCDMA_BandV_Mid

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.424610	-71.42	15.37	10.39	-45.66	-13.00	-32.66	Peak	Vertical
2	542.61040	-67.82	19.68	12.87	-35.27	-13.00	-22.27	Peak	Vertical
3	PP703.73140	-67.66	21.27	13.41	-32.98	-13.00	-19.98	Peak	Vertical

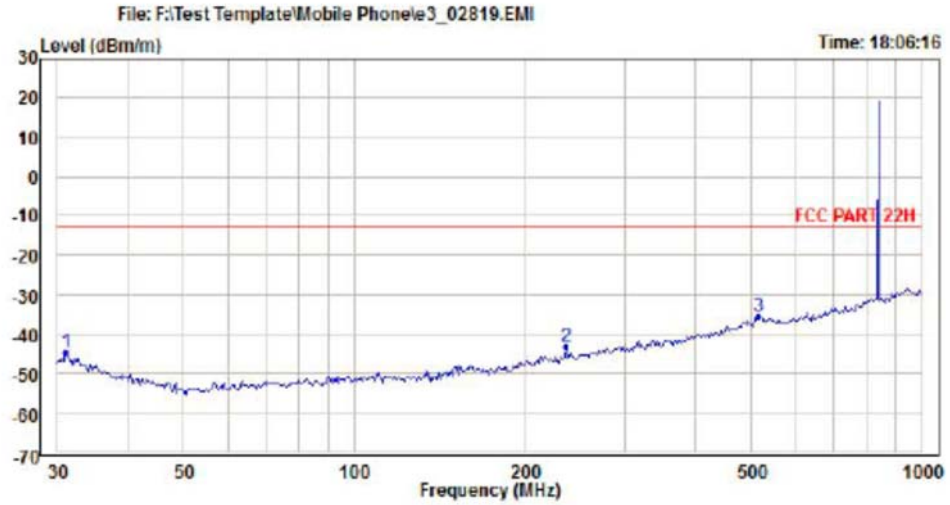
LTE Band 5; Bandwidth 1.4MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_1.4MBW_QPSK_Mid_1RB2

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	31.072810	-70.16	16.01	10.40	-43.75	-13.00	-30.75	Peak	Horizontal
2	401.10500	-68.67	17.39	12.43	-38.85	-13.00	-25.85	Peak	Horizontal
3	PP781.96060	-67.40	22.87	13.57	-30.96	-13.00	-17.96	Peak	Horizontal

LTE Band 5; Bandwidth 1.4MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical

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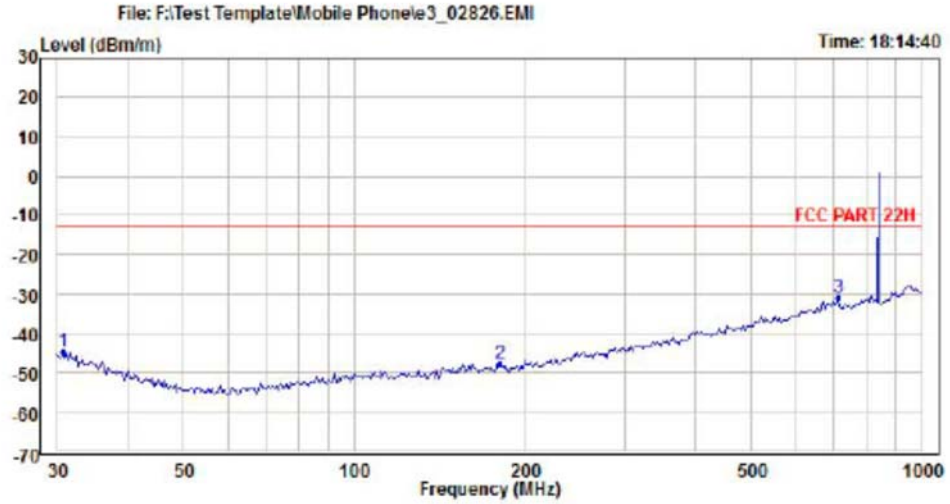
Condition       : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press           : 100.29kPa
Product         : Mobile Phone
Model No.       : 2016102
Power Rating    : 3.85V@Battery
Test Engineer   : Kevin Liang
Test Mode       : LTE_Band5_1.4MBW_QPSK_Mid_1RB2
```

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	31.072810	-69.99	15.02	10.40	-44.57	-13.00	-31.57	Peak	Vertical
2	236.79280	-66.86	12.27	11.73	-42.86	-13.00	-29.86	Peak	Vertical
3	PP516.56510	-68.03	19.76	12.81	-35.46	-13.00	-22.46	Peak	Vertical

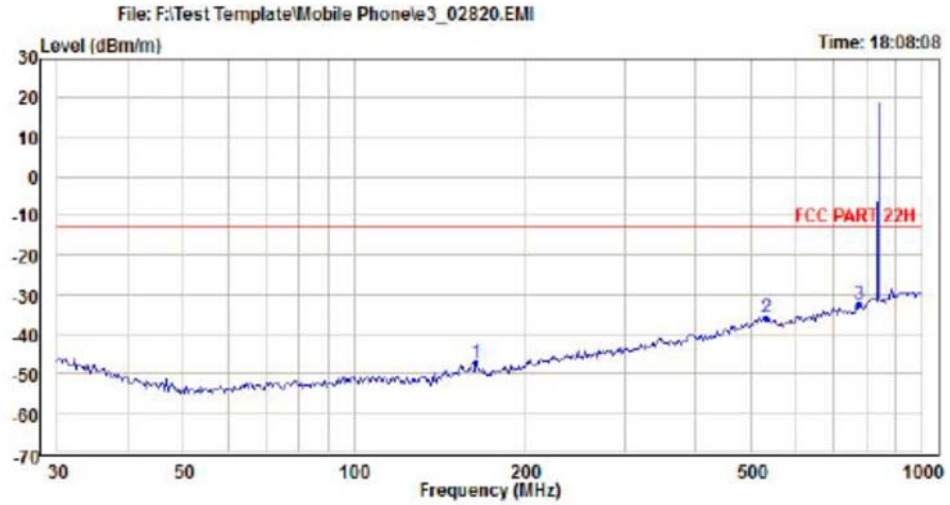
LTE Band 5; Bandwidth 3.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_3MBW_QPSK_Mid_1RB7

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.639160	-71.25	16.25	10.39	-44.61	-13.00	-31.61	Peak	Horizontal
2	181.30000	-69.16	10.26	11.46	-47.44	-13.00	-34.44	Peak	Horizontal
3	PP713.69170	-66.84	22.57	13.42	-30.85	-13.00	-17.85	Peak	Horizontal

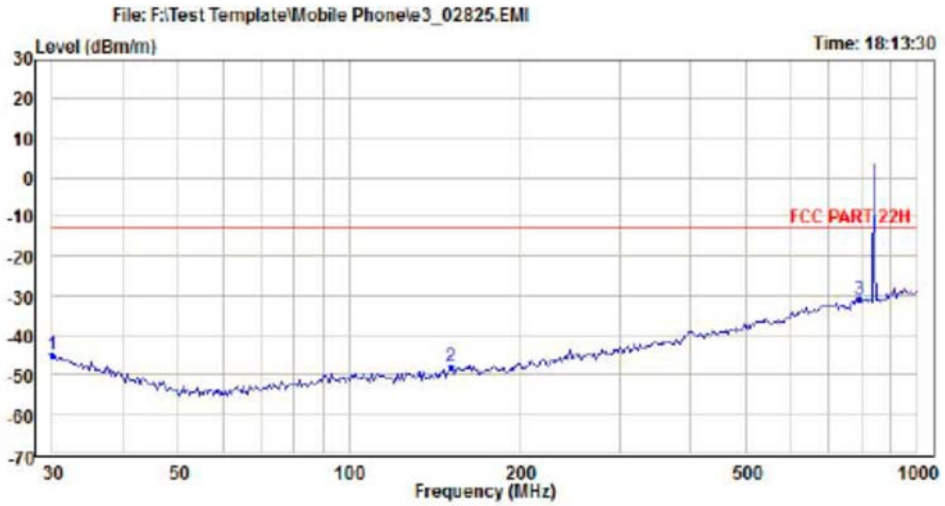
LTE Band 5; Bandwidth 3.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_3MBW_QPSK_Mid_1RB7

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	164.31290	-68.33	9.64	11.38	-47.31	-13.00	-34.31	Peak	Vertical
2	531.29100	-68.41	19.95	12.84	-35.62	-13.00	-22.62	Peak	Vertical
3	PP776.48490	-67.25	21.46	13.55	-32.24	-13.00	-19.24	Peak	Vertical

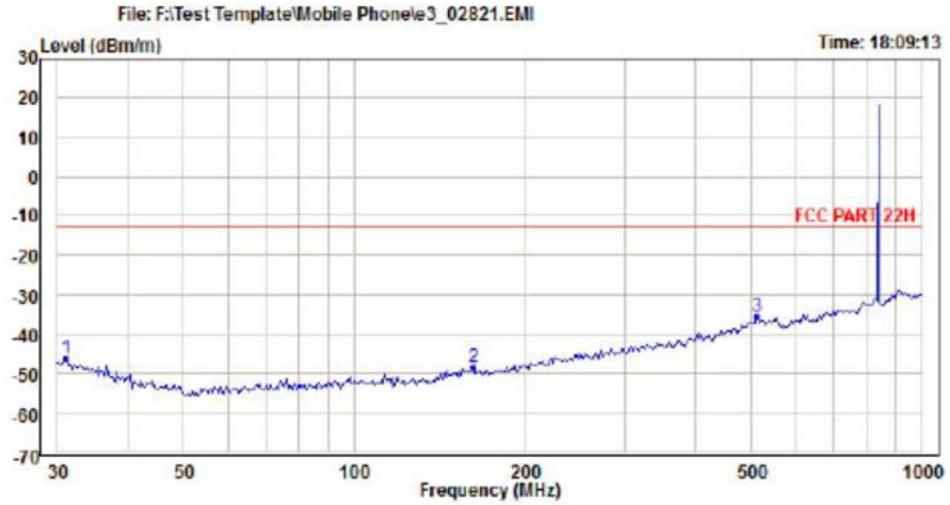
LTE Band 5; Bandwidth 5.0 MHz; Modulation: QPSK; RB:1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_5MBW_QPSK_Mid_1RB12

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.000000	-72.06	16.60	10.38	-45.08	-13.00	-32.08	Peak	Horizontal
2	151.02520	-68.90	9.68	11.31	-47.91	-13.00	-34.91	Peak	Horizontal
3	PP793.02810	-67.46	23.13	13.60	-30.73	-13.00	-17.73	Peak	Horizontal

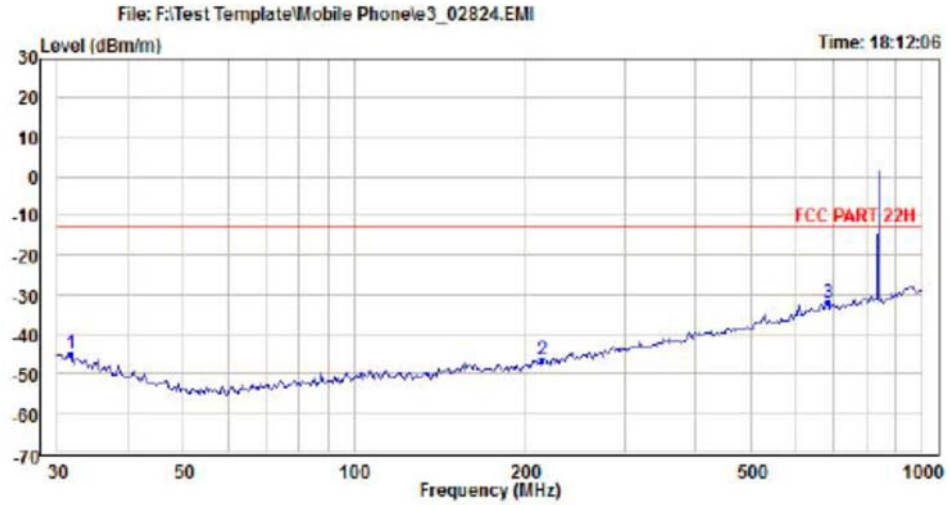
LTE Band 5; Bandwidth 5.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_5MBW_QPSK_Mid_1RB12

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	31.072810	-71.53	15.02	10.40	-46.11	-13.00	-33.11	Peak	Vertical
2	162.01970	-69.53	9.78	11.37	-48.38	-13.00	-35.38	Peak	Vertical
3	PP512.94780	-67.85	19.62	12.81	-35.42	-13.00	-22.42	Peak	Vertical

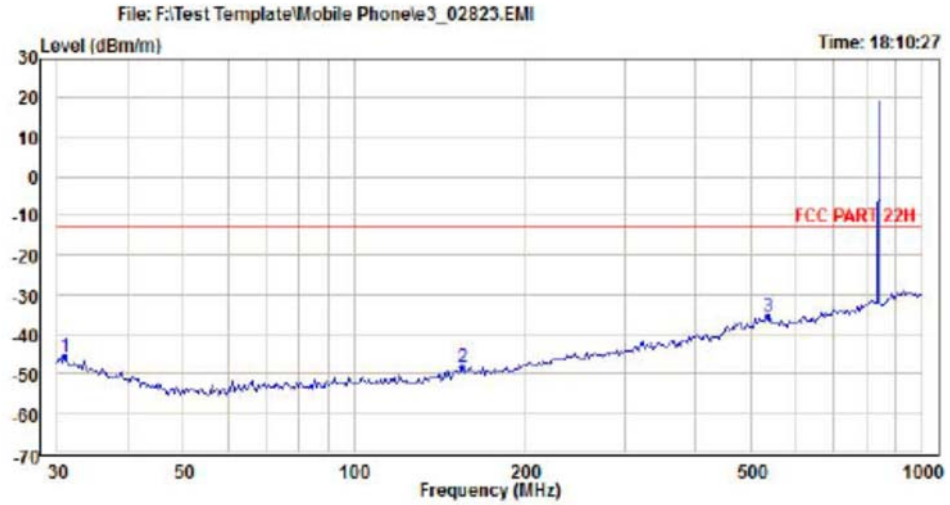
LTE Band 5; Bandwidth 10.0 MHz; Modulation :QPSK; RB:1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_10MBW_QPSK_Mid_1RB24

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	31.512600	-71.17	15.77	10.40	-45.00	-13.00	-32.00	Peak	Horizontal
2	214.60630	-68.87	10.98	11.62	-46.27	-13.00	-33.27	Peak	Horizontal
3	PP684.22590	-67.87	22.46	13.35	-32.06	-13.00	-19.06	Peak	Horizontal

LTE Band 5; Bandwidth 10.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical

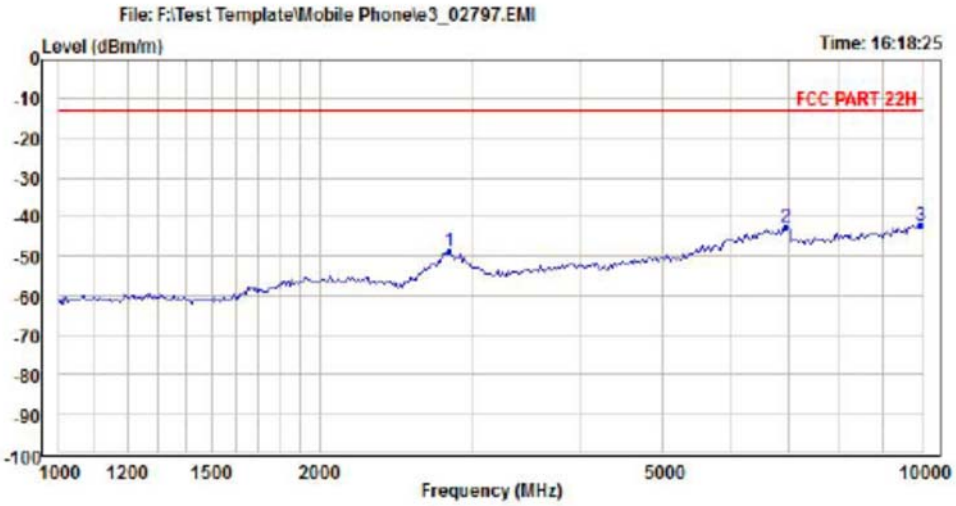


Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_10MBW_QPSK_Mid_1RB24

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	30.855220	-71.12	15.14	10.39	-45.59	-13.00	-32.59	Peak	Vertical
2	155.33050	-69.08	9.43	11.34	-48.31	-13.00	-35.31	Peak	Vertical
3	PP535.03770	-68.26	19.86	12.85	-35.55	-13.00	-22.55	Peak	Vertical

5.6.3 Spurious Emission Test Data (Above 1 GHz)

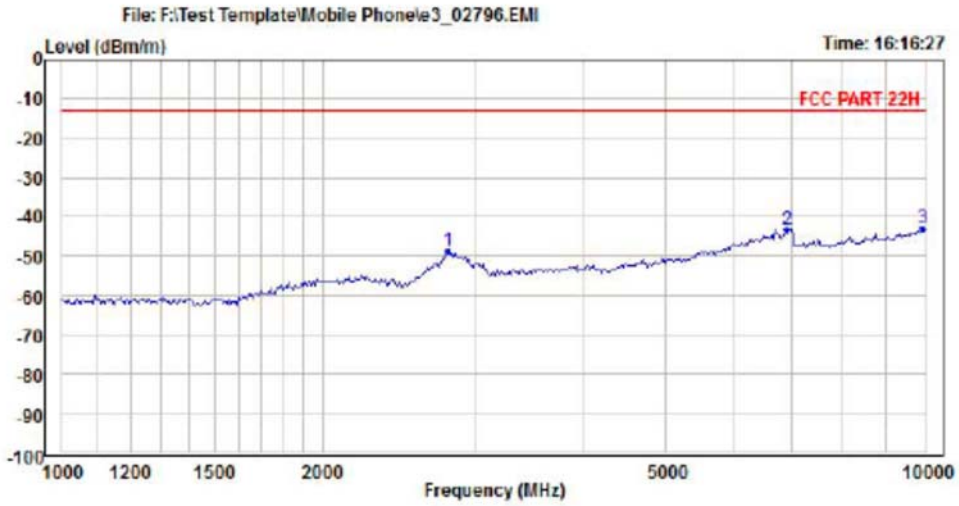
GSM 1Tx-slot_190 channel/836.6MHz_Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : GSM850_Mid
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2824.2410	-55.12	-13.71	20.32	-48.51	-13.00	-35.51	Peak	Horizontal
2	6945.1780	-52.63	-8.18	18.37	-42.44	-13.00	-29.44	Peak	Horizontal
3	PP9953.9620	-56.19	-6.08	20.16	-42.11	-13.00	-29.11	Peak	Horizontal

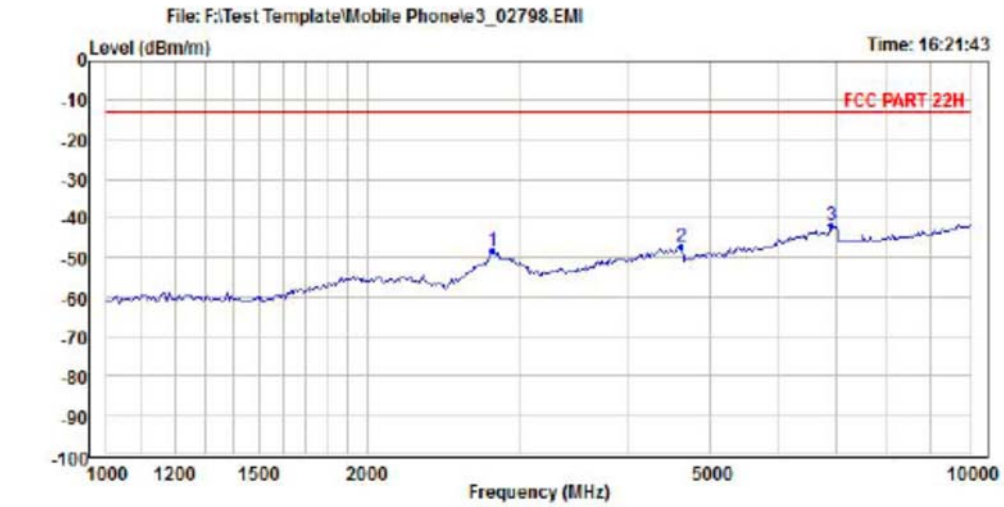
GSM 1Tx-slot_190 channel/836.6MHz_Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : GSM850_Mid
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2798.2970	-55.29	-14.10	20.63	-48.76	-13.00	-35.76	Peak	Vertical
2	6913.2040	-52.33	-9.30	18.34	-43.29	-13.00	-30.29	Peak	Vertical
3	PP9908.1370	-56.00	-7.23	20.10	-43.13	-13.00	-30.13	Peak	Vertical

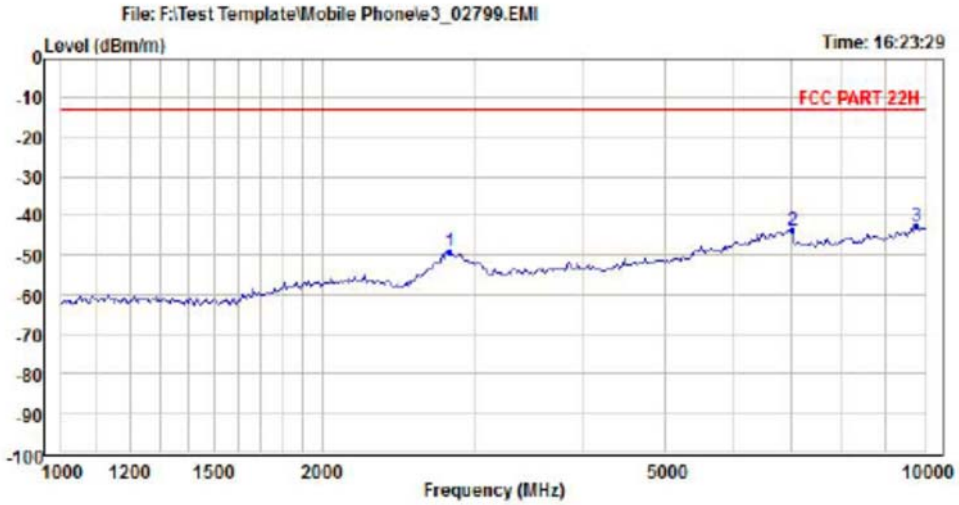
EDGE 1Tx-slot _190 channel/836.6MHz_Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : EDGE850_Mid
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2798.2970	-55.28	-13.74	20.63	-48.39	-13.00	-35.39	Peak	Horizontal
2	4627.3320	-52.60	-10.30	15.82	-47.08	-13.00	-34.08	Peak	Horizontal
3	PP6913.2040	-52.06	-8.17	18.34	-41.89	-13.00	-28.89	Peak	Horizontal

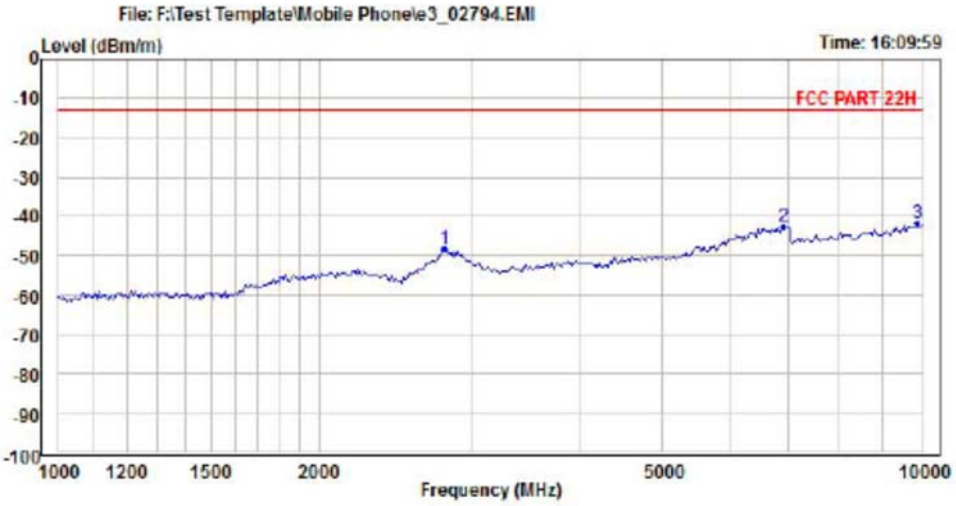
EDGE 1Tx-slot _190 channel/836.6MHz _Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : EDGE850_Mid
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2811.2390	-55.33	-14.08	20.51	-48.90	-13.00	-35.90	Peak	Vertical
2	7009.5700	-52.89	-9.31	18.42	-43.78	-13.00	-30.78	Peak	Vertical
3	PP9726.9340	-55.20	-7.14	19.86	-42.48	-13.00	-29.48	Peak	Vertical

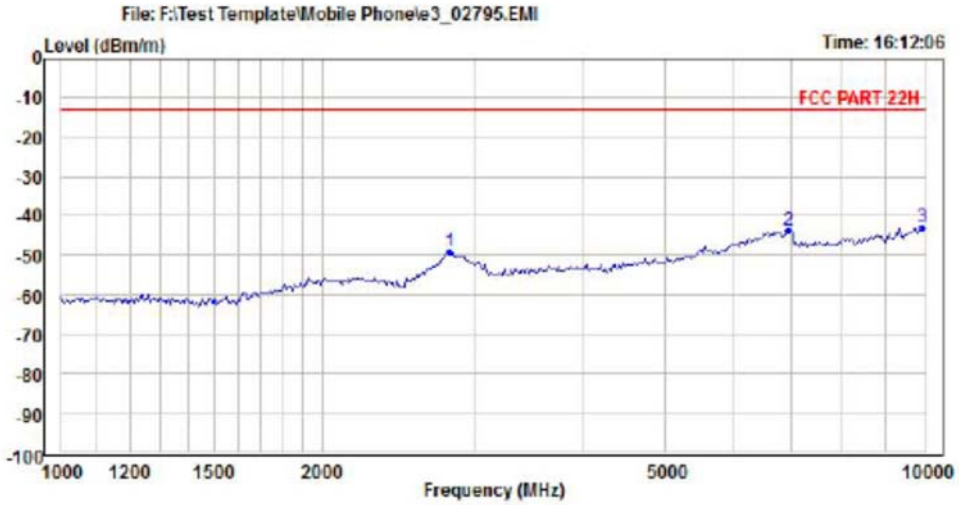
WCDMA RMC 12.2Kbps_4182 channel/836.4 MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : WCDMA_BandV_Mid
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2798.2970	-55.26	-13.74	20.63	-48.37	-13.00	-35.37	Peak	Horizontal
2	6913.2040	-52.89	-8.17	18.34	-42.72	-13.00	-29.72	Peak	Horizontal
3	PP9862.5210	-55.66	-6.05	20.04	-41.67	-13.00	-28.67	Peak	Horizontal

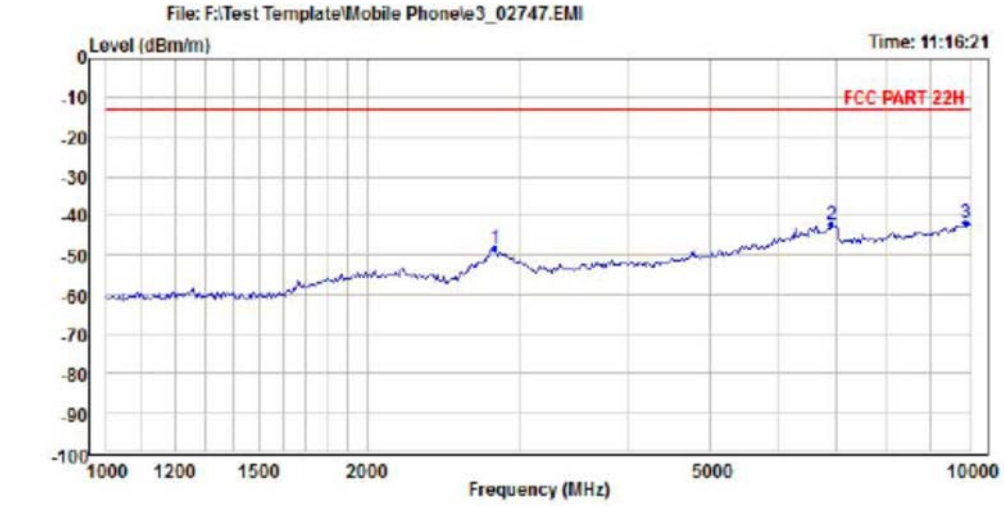
WCDMA RMC 12.2Kbps_4182 channel/836.4 MHz _Vertical




```
Condition       : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press           : 100.29kPa
Product         : Mobile Phone
Model No.       : 2016102
Power Rating    : 3.85V@Battery
Test Engineer   : Kevin Liang
Test Mode       : WCDMA_BandV_Mid
Remark          : Y
```

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2811.2390	-55.33	-14.08	20.51	-48.90	-13.00	-35.90	Peak	Vertical
2	6945.1780	-52.71	-9.30	18.37	-43.64	-13.00	-30.64	Peak	Vertical
3	PP9908.1370	-55.99	-7.23	20.10	-43.12	-13.00	-30.12	Peak	Vertical

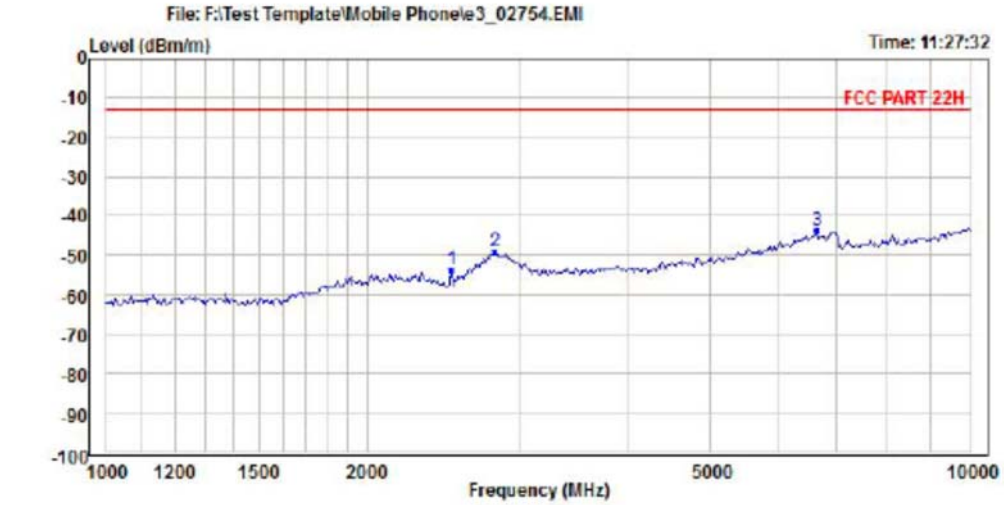
LTE Band 5; Bandwidth 1.4MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_1.4MBW_QPSK_Mid_1RB2
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2811.2390	-55.25	-13.73	20.51	-48.47	-13.00	-35.47	Peak	Horizontal
2	6913.2040	-52.46	-8.17	18.34	-42.29	-13.00	-29.29	Peak	Horizontal
3	PP9862.5210	-55.65	-6.05	20.04	-41.66	-13.00	-28.66	Peak	Horizontal

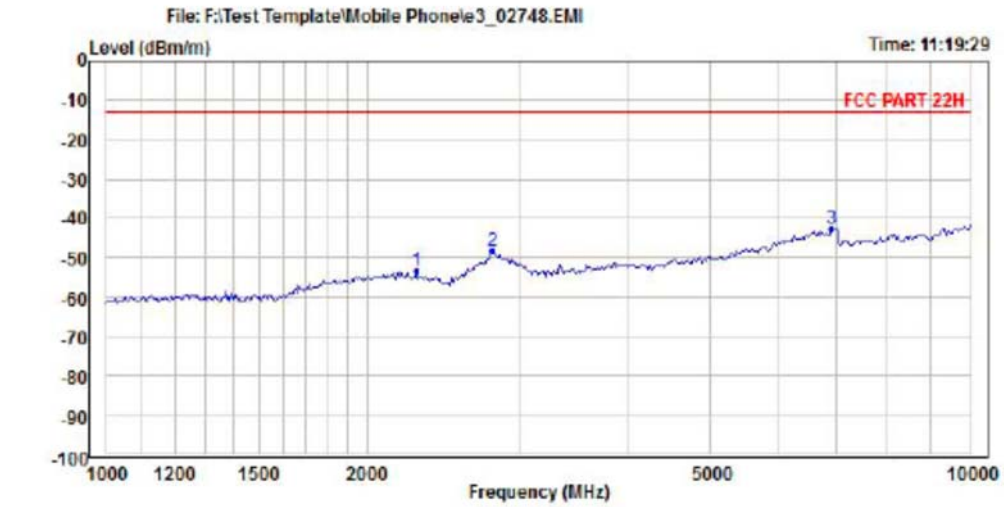
LTE Band 5; Bandwidth 1.4MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical



Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_1.4MBW_QPSK_Mid_1RB2
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2504.9420	-52.50	-14.89	13.68	-53.71	-13.00	-40.71	Peak	Vertical
2	2811.2390	-55.65	-14.08	20.51	-49.22	-13.00	-36.22	Peak	Vertical
3	PP6631.9810	-52.75	-9.21	18.06	-43.90	-13.00	-30.90	Peak	Vertical

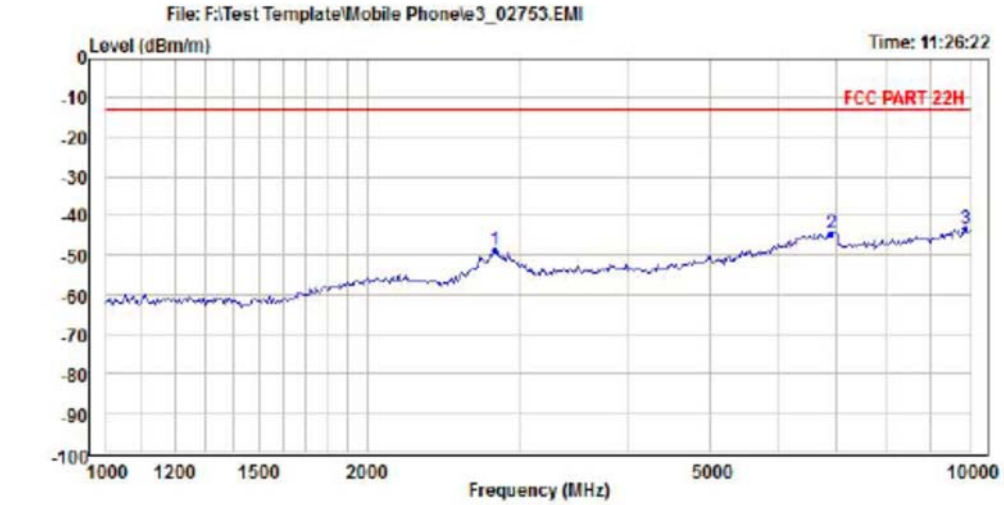
LTE Band 5; Bandwidth 3.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_3MBW_QPSK_Mid_1RB7
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2284.1120	-53.95	-14.20	14.89	-53.26	-13.00	-40.26	Peak	Horizontal
2	2798.2970	-55.22	-13.74	20.63	-48.33	-13.00	-35.33	Peak	Horizontal
3	PP6913.2040	-52.70	-8.17	18.34	-42.53	-13.00	-29.53	Peak	Horizontal

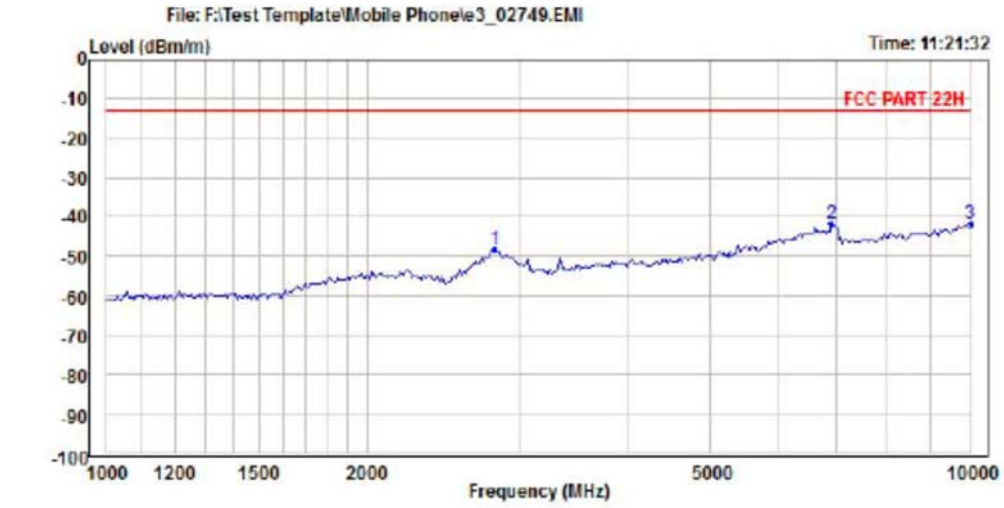
LTE Band 5; Bandwidth 3.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical




```
Condition       : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press           : 100.29kPa
Product         : Mobile Phone
Model No.       : 2016102
Power Rating    : 3.85V@Battery
Test Engineer   : Kevin Liang
Test Mode       : LTE_Band5_3MBW_QPSK_Mid_1RB7
Remark          : Y
```

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2811.2390	-55.06	-14.08	20.51	-48.63	-13.00	-35.63	Peak	Vertical
2	6913.2040	-53.60	-9.30	18.34	-44.56	-13.00	-31.56	Peak	Vertical
3	PP9862.5210	-56.22	-7.19	20.04	-43.37	-13.00	-30.37	Peak	Vertical

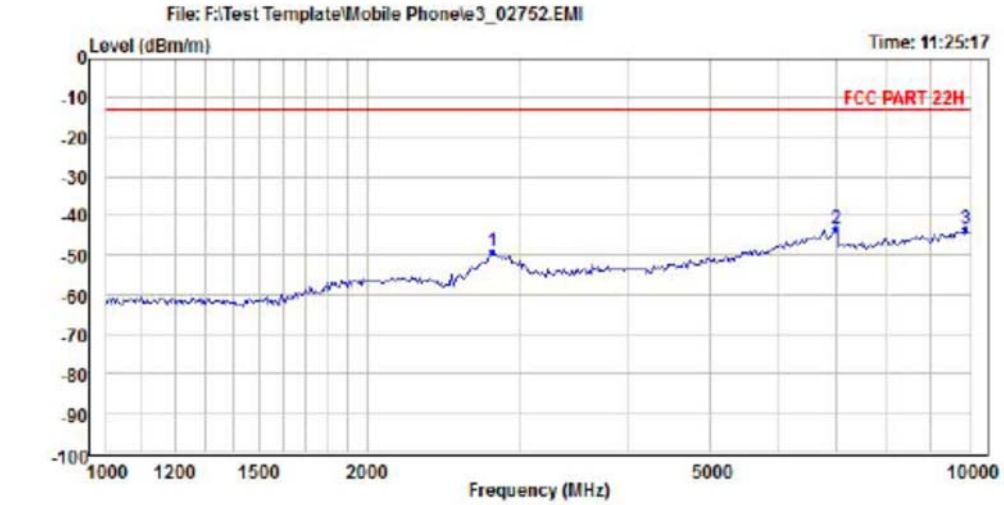
LTE Band 5; Bandwidth 5.0 MHz; Modulation: QPSK; RB:1; 20525/836.5MHz _Horizontal



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_5MBW_QPSK_Mid_1RB12
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2811.2390	-55.09	-13.73	20.51	-48.31	-13.00	-35.31	Peak	Horizontal
2	PP6913.2040	-51.85	-8.17	18.34	-41.68	-13.00	-28.68	Peak	Horizontal
3	10000.000	-55.92	-6.10	20.22	-41.80	-13.00	-28.80	Peak	Horizontal

LTE Band 5; Bandwidth 5.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical

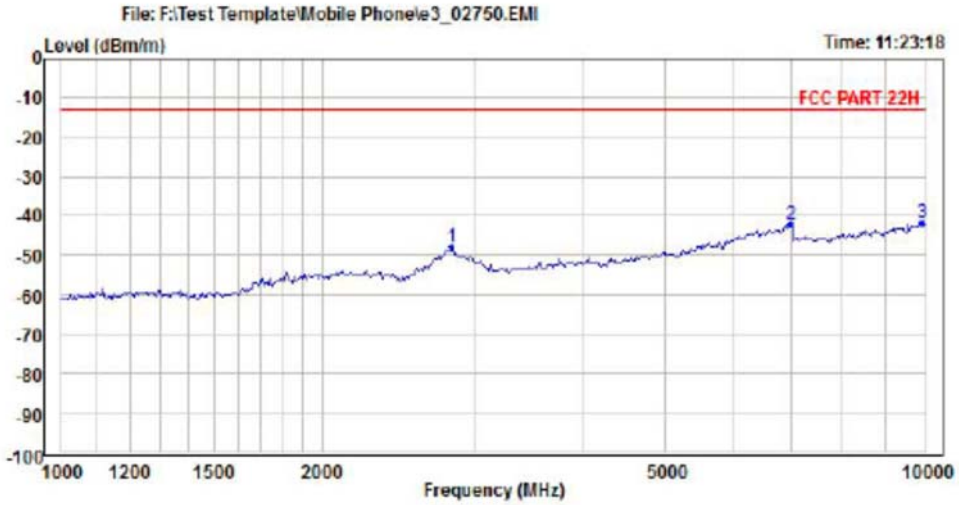


Condition : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_5MBW_QPSK_Mid_1RB12
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2798.2970	-55.69	-14.10	20.63	-49.16	-13.00	-36.16	Peak	Vertical
2	PP6977.3000	-52.40	-9.30	18.40	-43.30	-13.00	-30.30	Peak	Vertical
3	9862.5210	-56.24	-7.19	20.04	-43.39	-13.00	-30.39	Peak	Vertical

LTE Band 5; Bandwidth 10.0 MHz; Modulation :QPSK; RB:1; 20525/836.5MHz _Horizontal

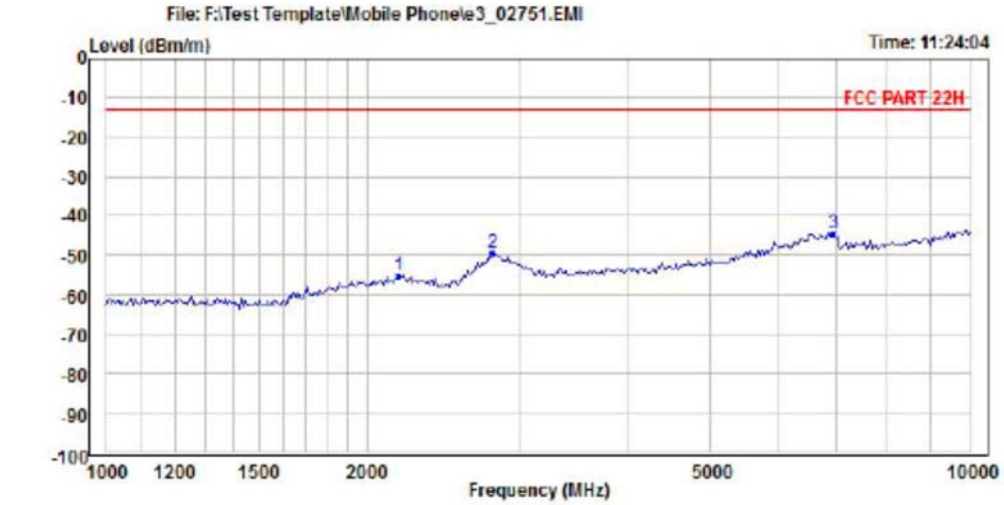
UnionTrust



Condition : limit\FCC\FCC PART 22H.csv 3m Horizontal
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press : 100.29kPa
Product : Mobile Phone
Model No. : 2016102
Power Rating : 3.85V@Battery
Test Engineer : Kevin Liang
Test Mode : LTE_Band5_10MBW_QPSK_Mid_1RB24
Remark : Y

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2824.2410	-54.41	-13.71	20.32	-47.80	-13.00	-34.80	Peak	Horizontal
2	6977.3000	-52.32	-8.19	18.40	-42.11	-13.00	-29.11	Peak	Horizontal
3	PP9908.1370	-55.82	-6.06	20.10	-41.78	-13.00	-28.78	Peak	Horizontal

LTE Band 5; Bandwidth 10.0 MHz; Modulation: QPSK; RB: 1; 20525/836.5MHz _Vertical




```
Condition       : limit\FCC\FCC PART 22H.csv 3m Vertical
Temp.(C)/Hum.(%): 24.3(C) / 58%
Press           : 100.29kPa
Product         : Mobile Phone
Model No.       : 2016102
Power Rating    : 3.85V@Battery
Test Engineer   : Kevin Liang
Test Mode       : LTE_Band5_10MBW_QPSK_Mid_1RB24
Remark          : Y
```

	Freq	Read Level	Ant Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBm	dB/m	dB	dBm/m	dBm/m	dB		
1	2181.1090	-55.15	-15.18	15.37	-54.96	-13.00	-41.96	Peak	Vertical
2	2798.2970	-56.14	-14.10	20.63	-49.61	-13.00	-36.61	Peak	Vertical
3	PP6945.1780	-53.51	-9.30	18.37	-44.44	-13.00	-31.44	Peak	Vertical

5.7 Frequency stability

Test Requirement: FCC 47 CFR Part 2.1055 & FCC 47 CFR Part 22.355

Test Method: ANSI/TIA/EIA-603-D 2010 & KDB 971168 D01v02r02

Limit: The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

Test Procedure:

1) Use CMW 500 or CMU 200 with Frequency Error measurement capability.
   a) Temp. =−30° to +50°C
   b) Voltage =low voltage, 3.6Vdc, Normal, 3.85Vdc and High voltage, 4.4Vdc.
2) Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

3) Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

Test Setup: Refer to section 4.1.1(3) for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Test Data:

Modulation	Channel / Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
GSM 1Tx-slot							
GMSK	190/ 836.6	3.6	Normal	8	0.0096	± 2.5	PASS
		3.85		10	0.0120	± 2.5	PASS
		4.4		9	0.0108	± 2.5	PASS
		3.85	50	7	0.0084	± 2.5	PASS
			40	4	0.0048	± 2.5	PASS
			30	2	0.0024	± 2.5	PASS
			20	4	0.0048	± 2.5	PASS
			10	5	0.0060	± 2.5	PASS
			0	6	0.0072	± 2.5	PASS
			-10	7	0.0084	± 2.5	PASS
			-20	4	0.0048	± 2.5	PASS
			-30	5	0.0060	± 2.5	PASS

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
EDGE 1Tx-slot							
8PSK	190/ 836.6	3.6	Normal	37	0.0442	± 2.5	PASS
		3.85		22	0.0263	± 2.5	PASS
		4.4		26	0.0311	± 2.5	PASS
		3.85	50	21	0.0251	± 2.5	PASS
			40	25	0.0299	± 2.5	PASS
			30	23	0.0275	± 2.5	PASS

			20	27	0.0323	± 2.5	PASS
			10	25	0.0299	± 2.5	PASS
			0	20	0.0239	± 2.5	PASS
			-10	16	0.0191	± 2.5	PASS
			-20	30	0.0359	± 2.5	PASS
			-30	25	0.0299	± 2.5	PASS

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
WCDMA RMC 12.2Kbps							
BPSK	4182/ 836.4	3.6	Normal	-9	-0.0108	± 2.5	PASS
		3.85		-5	-0.0060	± 2.5	PASS
		4.4		-4	-0.0048	± 2.5	PASS
		3.85	50	-9	-0.0108	± 2.5	PASS
			40	-5	-0.0060	± 2.5	PASS
			30	-4	-0.0048	± 2.5	PASS
			20	-7	-0.0084	± 2.5	PASS
			10	-10	-0.0120	± 2.5	PASS
			0	-9	-0.0108	± 2.5	PASS
			-10	-4	-0.0048	± 2.5	PASS
			-20	-10	-0.0120	± 2.5	PASS
			-30	-12	-0.0143	± 2.5	PASS

Modulation	Channel/ Frequency (MHz)	Voltage (Vdc)	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Pass/ Fail
LTE Band 5; Channel Bandwidth: 10 MHz							
QPSK	20525/ 836.5	3.6	Normal	-8	-0.0096	± 2.5	PASS
		3.85		-9	-0.0108	± 2.5	PASS
		4.4		-5	-0.0060	± 2.5	PASS
		3.85	50	-12	-0.0143	± 2.5	PASS
			40	-11	-0.0132	± 2.5	PASS
			30	-12	-0.0143	± 2.5	PASS
			20	-8	-0.0096	± 2.5	PASS
			10	-10	-0.0120	± 2.5	PASS
			0	-6	-0.0072	± 2.5	PASS
			-10	-7	-0.0084	± 2.5	PASS
			-20	-5	-0.0060	± 2.5	PASS
			-30	-4	-0.0048	± 2.5	PASS

APPENDIX 1 PHOTOGRAPHS OF TEST SETUP

See test photographs attached in Appendix 1 for the actual connections between Product and support equipment.

APPENDIX 2 PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

Refer to Appendix 2 for EUT external and internal photographs.

*** End of Report ***