

TEST REPORT

Test Items: Radiation above 18GHz

Applicant: PCD, LLC.

Address of applicant: 1500 Tradeport Drive, Suite A. Orlando, FL.

Product Description: Monkey II LTE

Tested Model: PL5003

Tested Date: September 15, 2017

Tested By: Lifan He / Engineer

Approved & Authorized By: Jimmy Li / Manager



Prepared By:

Centre Testing International Group Co., Ltd.

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen,
China



Centre Testing International Group Co., Ltd Laboratory has been recognized by FCC as the Designation Number is CN1164 and Test Firm Registration Number is 260439 which compliance with ANSI C63.10-2013 and ANSI/TIA-603-D:2010.

Test Equipment List

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
1	Pre-amplifier	Compliance Direction Systems Inc.	PAP-1840-60	N/A	2017-07-09	2018-07-08
2	Spectrum Analyzer	R&S	ESIB 40	10116	2017-07-09	2018-07-08
3	DRG Horn Antenna	DRG Horn Antenna	SAS-574	374	2017-07-09	2018-07-08

Centre Testing International Group Co., Ltd

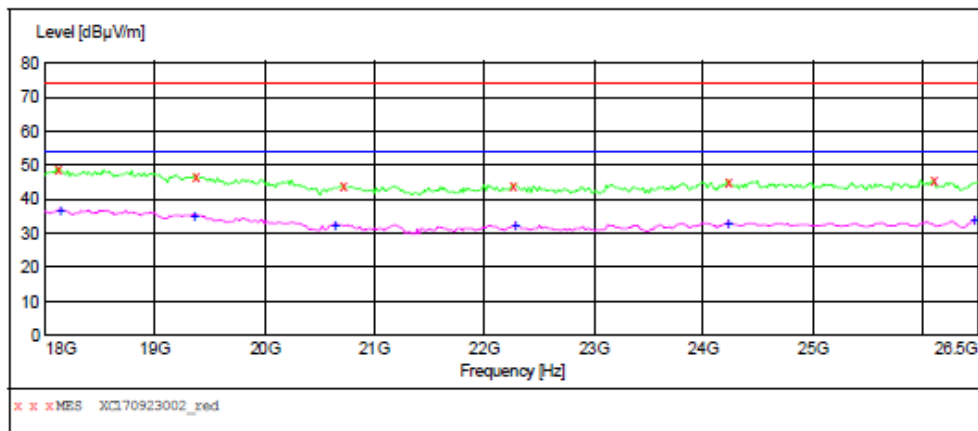
Spurious Emissions Above 18GHz

FCC Part 15.205, 15.209 and 15.247 standards

Operating Condition: Worst case BT DHS low channel (2402MHz)
 Test Site: 3M CHAMBER
 Operator: HLF
 Test Specification: DC3.8V
 Comment: PL5003
 Start of Test: 9/23/2017 / 8:18:05PM

SWEEP TABLE: "test (18G-40G) P"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	40.0 GHz	MaxPeak	Coupled	1 MHz	SAS-574
Average					



MEASUREMENT RESULT: "XC170923002_red"

9/23/2017 8:22PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18102.204409	49.10	-19.6	74.0	24.9	---	200.0	196.00	VERTICAL
19362.725451	47.10	-24.7	74.0	26.9	---	100.0	61.00	VERTICAL
20708.416834	44.00	-26.7	74.0	30.0	---	100.0	334.00	VERTICAL
22258.517034	44.20	-25.3	74.0	29.8	---	100.0	279.00	VERTICAL
24217.434870	45.50	-22.8	74.0	28.5	---	100.0	290.00	VERTICAL
26091.182365	45.80	-22.2	74.0	28.2	---	200.0	350.00	VERTICAL

MEASUREMENT RESULT: "XC170923002_red2"

9/23/2017 8:22PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18136.272545	37.00	-19.8	54.0	17.0	---	200.0	102.00	VERTICAL
19345.691383	35.50	-24.6	54.0	18.5	---	200.0	139.00	VERTICAL
20640.280561	32.80	-26.7	54.0	21.2	---	100.0	0.00	VERTICAL
22275.551102	32.50	-25.3	54.0	21.5	---	200.0	333.00	VERTICAL
24217.434870	33.20	-22.8	54.0	20.8	---	100.0	158.00	VERTICAL
26465.931864	34.10	-21.7	54.0	19.9	---	100.0	34.00	VERTICAL

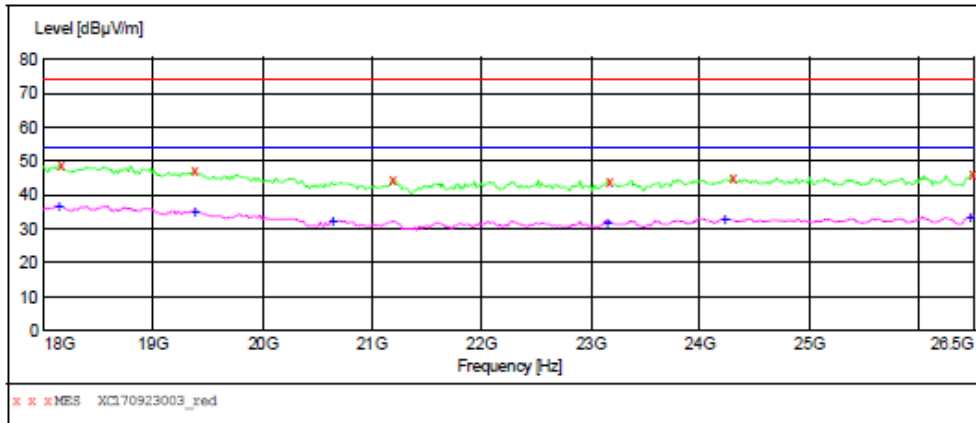


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Operating Condition: Worst case BT DHS low channel (2402MHz)
 Test Site: 3M CHAMBER
 Operator: HLF
 Test Specification: DC3.8V
 Comment: PL5003
 Start of Test: 9/23/2017 / 8:24:39PM

SWEEP TABLE: "test (18G-40G) P"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	40.0 GHz	MaxPeak Average	Coupled	1 MHz	SAS-574



MEASUREMENT RESULT: "XC170923003_red"

9/23/2017 8:29PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18153.306613	48.80	-19.9	74.0	25.2	---	100.0	312.00	HORIZONTAL
19379.759519	47.20	-24.7	74.0	26.8	---	100.0	85.00	HORIZONTAL
21185.370741	44.70	-26.7	74.0	29.3	---	200.0	162.00	HORIZONTAL
23161.322645	44.40	-24.2	74.0	29.6	---	200.0	179.00	HORIZONTAL
24285.571142	45.40	-22.8	74.0	28.6	---	100.0	136.00	HORIZONTAL
26482.965932	46.40	-21.7	74.0	27.6	---	100.0	336.00	HORIZONTAL

MEASUREMENT RESULT: "XC170923003_red2"

9/23/2017 8:29PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18136.272545	37.00	-19.8	54.0	17.0	---	100.0	98.00	HORIZONTAL
19362.725451	35.30	-24.7	54.0	18.7	---	100.0	248.00	HORIZONTAL
20640.280561	32.80	-26.7	54.0	21.2	---	100.0	0.00	HORIZONTAL
23144.288577	32.40	-24.2	54.0	21.6	---	100.0	163.00	HORIZONTAL
24217.434870	33.10	-22.8	54.0	20.9	---	100.0	136.00	HORIZONTAL
26465.931864	33.80	-21.7	54.0	20.2	---	100.0	14.00	HORIZONTAL

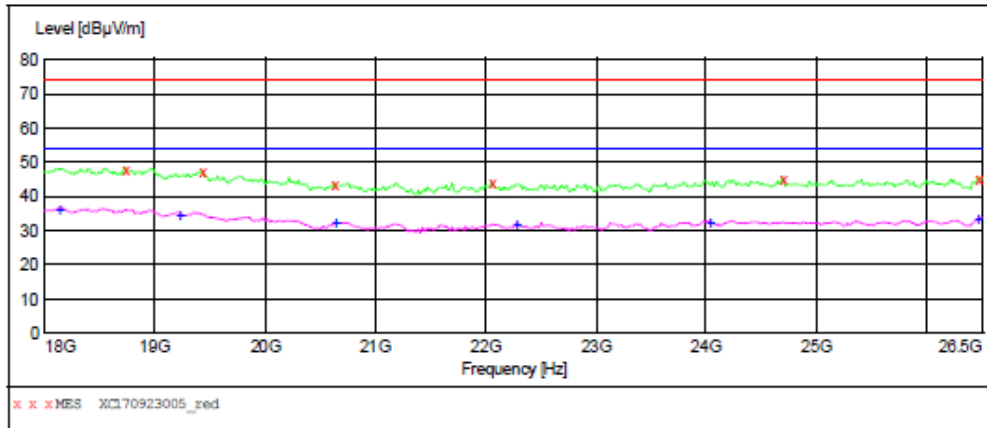


Centre Testing International Group Co., Ltd

Operating Condition: Worst case BT BLE low channel (2402MHz)
 Test Site: 3M CHAMBER
 Operator: HLF
 Test Specification: DC3.8V
 Comment: PL5003
 Start of Test: 9/23/2017 / 8:37:01PM

SWEEP TABLE: "test (18G-40G) P"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	40.0 GHz	MaxPeak Average	Coupled	1 MHz	SAS-574



MEASUREMENT RESULT: "XC170923005_red"

9/23/2017 8:41PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18732.464930	48.20	-22.6	74.0	25.8	---	200.0	0.00	VERTICAL
19430.861723	47.50	-24.9	74.0	26.5	---	100.0	226.00	VERTICAL
20623.246493	43.90	-26.7	74.0	30.1	---	200.0	162.00	VERTICAL
22054.108216	44.30	-25.6	74.0	29.7	---	100.0	12.00	VERTICAL
24694.388778	45.60	-22.8	74.0	28.4	---	200.0	280.00	VERTICAL
26465.931864	45.50	-21.7	74.0	28.5	---	100.0	100.00	VERTICAL

MEASUREMENT RESULT: "XC170923005_red2"

9/23/2017 8:41PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18136.272545	36.70	-19.8	54.0	17.3	---	200.0	323.00	VERTICAL
19226.452906	35.10	-24.4	54.0	18.9	---	100.0	0.00	VERTICAL
20640.280561	32.60	-26.7	54.0	21.4	---	100.0	0.00	VERTICAL
22275.551102	32.10	-25.3	54.0	21.9	---	200.0	299.00	VERTICAL
24030.060120	32.80	-22.8	54.0	21.2	---	200.0	192.00	VERTICAL
26465.931864	33.90	-21.7	54.0	20.1	---	100.0	0.00	VERTICAL

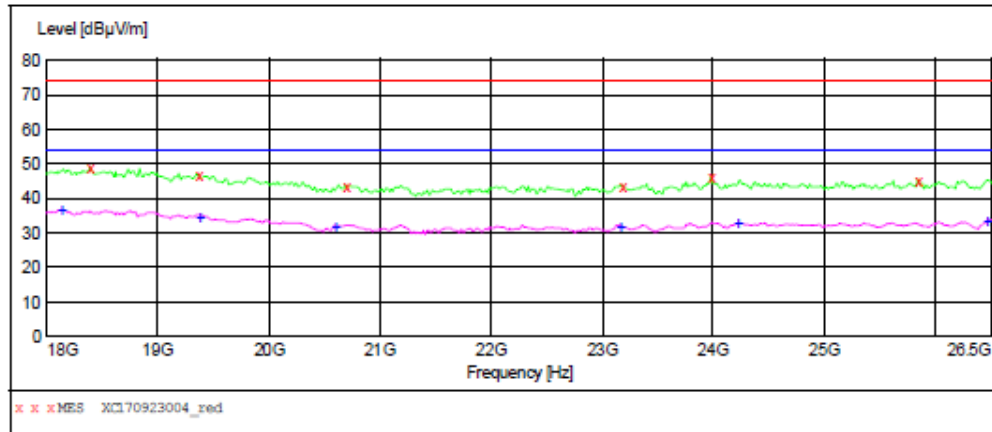


Centre Testing International Group Co., Ltd

Operating Condition: Worst case BT BLE low channel (2402MHz)
 Test Site: 3M CHAMBER
 Operator: HLF
 Test Specification: DC3.8V
 Comment: PL5003
 Start of Test: 9/23/2017 / 8:31:24PM

SWEEP TABLE: "test (18G-40G) P"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	40.0 GHz	MaxPeak Average	Coupled	1 MHz	SAS-574



MEASUREMENT RESULT: "XC170923004_red"

9/23/2017 8:35PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18391.783567	49.00	-21.0	74.0	25.0	---	100.0	281.00	HORIZONTAL
19362.725451	46.80	-24.7	74.0	27.2	---	100.0	318.00	HORIZONTAL
20691.382766	43.90	-26.7	74.0	30.1	---	100.0	220.00	HORIZONTAL
23178.356713	43.80	-24.2	74.0	30.2	---	200.0	259.00	HORIZONTAL
23978.957916	46.10	-22.8	74.0	27.9	---	200.0	293.00	HORIZONTAL
25835.671343	45.50	-22.4	74.0	28.5	---	100.0	135.00	HORIZONTAL

MEASUREMENT RESULT: "XC170923004_red2"

9/23/2017 8:35PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18136.272545	36.80	-19.8	54.0	17.2	---	100.0	54.00	HORIZONTAL
19379.759519	35.20	-24.7	54.0	18.8	---	100.0	0.00	HORIZONTAL
20589.178357	32.40	-26.7	54.0	21.6	---	100.0	0.00	HORIZONTAL
23161.322645	32.20	-24.2	54.0	21.8	---	100.0	0.00	HORIZONTAL
24217.434870	33.10	-22.8	54.0	20.9	---	200.0	279.00	HORIZONTAL
26465.931864	33.90	-21.7	54.0	20.1	---	100.0	294.00	HORIZONTAL

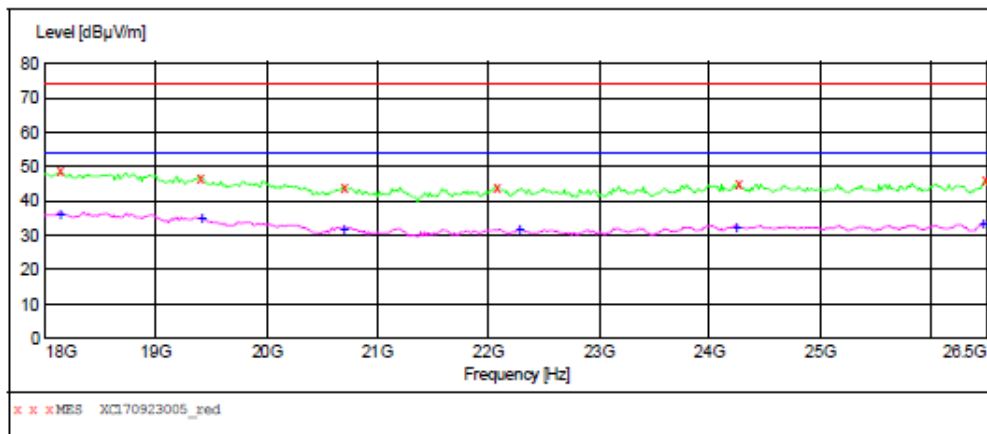


Centre Testing International Group Co., Ltd

Operating Condition: Worst case WIFI 802.11b low channel (2412MHz)
 Test Site: 3M CHAMBER
 Operator: HLF
 Test Specification: DC3.8V
 Comment: PL5003
 Start of Test: 9/23/2017 / 8:47:13PM

SWEEP TABLE: "test (18G-40G) P"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	40.0 GHz	MaxPeak Average	Coupled	1 MHz	SAS-574



MEASUREMENT RESULT: "XC170923005_red"

9/23/2017 8:51PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18136.272545	48.80	-19.8	74.0	25.2	---	200.0	4.00	VERTICAL
19396.793587	46.90	-24.8	74.0	27.1	---	200.0	110.00	VERTICAL
20691.382766	44.30	-26.7	74.0	29.7	---	100.0	112.00	VERTICAL
22071.142285	44.50	-25.6	74.0	29.5	---	100.0	292.00	VERTICAL
24251.503006	45.10	-22.8	74.0	28.9	---	100.0	228.00	VERTICAL
26482.965932	46.10	-21.7	74.0	27.9	---	200.0	120.00	VERTICAL

MEASUREMENT RESULT: "XC170923005_red2"

9/23/2017 8:51PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18119.238477	36.60	-19.7	54.0	17.4	---	200.0	79.00	VERTICAL
19413.827655	35.30	-24.8	54.0	18.7	---	200.0	46.00	VERTICAL
20691.382766	32.30	-26.7	54.0	21.7	---	100.0	61.00	VERTICAL
22275.551102	32.20	-25.3	54.0	21.8	---	100.0	71.00	VERTICAL
24234.468938	32.80	-22.8	54.0	21.2	---	200.0	79.00	VERTICAL
26465.931864	33.80	-21.7	54.0	20.2	---	100.0	241.00	VERTICAL

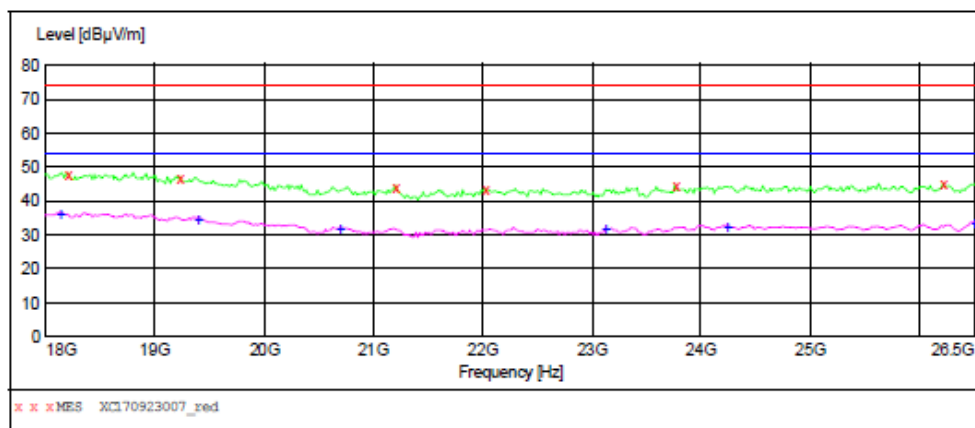


Centre Testing International Group Co., Ltd

Operating Condition: Worst case WIFI 802.11b low channel (2412MHz)
 Test Site: 3M CHAMBER
 Operator: HLF
 Test Specification: DC3.8V
 Comment: PL5003
 Start of Test: 9/23/2017 / 8:52:05PM

SWEEP TABLE: "test (18G-40G) P"

Start Frequency	Stop Frequency	Detector	Meas. Time	IF Bandw.	Transducer
18.0 GHz	40.0 GHz	MaxPeak Average	Coupled	1 MHz	SAS-574



MEASUREMENT RESULT: "XC170923007_red"

9/23/2017 8:56PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18204.408818	48.40	-20.1	74.0	25.6	---	200.0	6.00	HORIZONTAL
19226.452906	47.00	-24.4	74.0	27.0	---	200.0	191.00	HORIZONTAL
21202.404810	44.50	-26.7	74.0	29.5	---	200.0	215.00	HORIZONTAL
22020.040080	43.70	-25.6	74.0	30.3	---	100.0	157.00	HORIZONTAL
23757.515030	44.60	-23.2	74.0	29.4	---	200.0	86.00	HORIZONTAL
26210.420842	45.20	-22.0	74.0	28.8	---	200.0	198.00	HORIZONTAL

MEASUREMENT RESULT: "XC170923007_red2"

9/23/2017 8:56PM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
18136.272545	36.70	-19.8	54.0	17.3	---	100.0	235.00	HORIZONTAL
19396.793587	35.20	-24.8	54.0	18.8	---	100.0	235.00	HORIZONTAL
20691.382766	32.20	-26.7	54.0	21.8	---	200.0	235.00	HORIZONTAL
23127.254509	32.30	-24.3	54.0	21.7	---	100.0	279.00	HORIZONTAL
24234.468938	32.90	-22.8	54.0	21.1	---	200.0	6.00	HORIZONTAL
26500.000000	33.80	-21.7	54.0	20.2	---	100.0	96.00	HORIZONTAL

FCC Part 22.917 and 24.238 standards

Spurious Emission From 18GHz to 26.5GHz

For Cellular Band_ GSM850 Mode; Band_ GSM1900 Mode; 3G Band 2 Mode;

FDD_LTE Band 2 Mode; For FDD_LTE Band 4 Mode; For FDD_LTE Band 7 Mode

Testing is carried out with frequency rang 18GHz to 26.5GHz, which emissions attenuated more than 20dB below the FCC limit, so the data is not display.



Test Setup Photographs



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