TESTING LABORATORY
CERTIFICATE # 4821.01

FCC PART 22H, PART 24E

MEASUREMENT AND TEST REPORT

For

Hytera Communications Corporation Limited

Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, 518057 China

FCC ID: YAMEPOLE100F4

Report Type:	**Product Type:**
Original Report	Digital WANET Repeater

Report Number:	RDG171229011-00C
Report Date:	2018-03-17
Reviewed By:	Candy Li RF Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *Hytera Communications Corporation Limited's* product, model number: *E-pole100 F4 (FCC ID: YAMEPOLE100F4)* in this report is a *Digital WANET Repeater*, which was measured approximately: 316 mm (L) x 223 mm (W) x 133 mm(H), rated input voltage: AC 100~240V or DC 13.5V-16.5V.

** All measurement and test data in this report was gathered from production sample serial number: 171229011 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2017-12-29.*

Objective

This type approval report is prepared on behalf of *Hytera Communications Corporation Limited* in accordance with Part 2, Part 22-Subpart H, Part 24-Subpart E of the Federal Communication Commission's rules.

The objective is to determine the compliance of EUT with FCC rules for output power, modulation characteristic, occupied bandwidth, and spurious emission at antenna terminal, spurious radiated emission, frequency stability, and band edge.

Related Submittal(s)/Grant(s)

Part 22, 74, 90 TNB submissions with FCC ID: YAMEPOLE100F4.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-Part J as well as the following parts:

Part 22 Subpart H - Public Mobile Services
Part 24 Subpart E - Personal Communication Services

Applicable Standards: TIA/EIA 603-D.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		±1.5dB
Unwanted Emission, conducted		±1.5dB
Emissions, radiated	Below 1GHz	±4.70dB
	Above 1GHz	±4.80dB
Temperature		±1℃
Supply voltages		±0.4%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 382179,the FCC Designation No. : CN5001.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to TIA/EIA-603-D.

The final qualification test was performed with the EUT operating at normal mode.

Equipment Modifications

No modifications were made to the EUT.

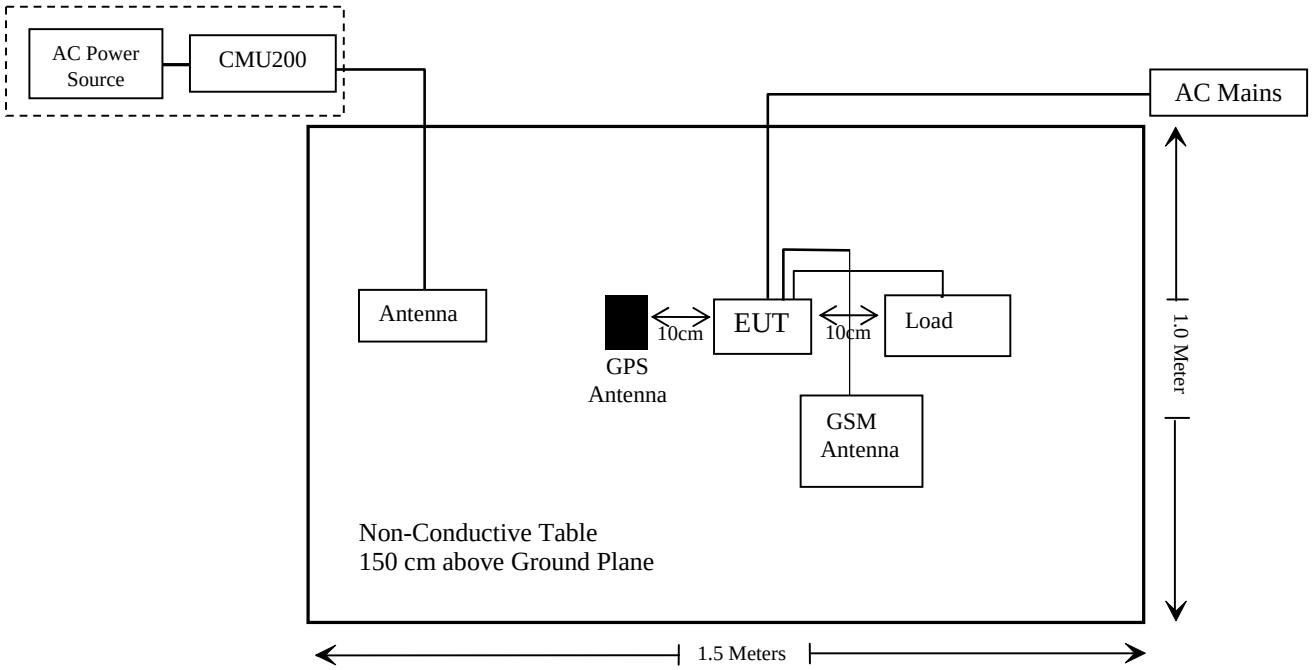
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891
N/A	GPS Antenna	N/A	N/A
N/A	GSM Antenna	N/A	N/A
N/A	Load	N/A	N/A

External I/O Cable

Cable Description	Length (m)	From/Port	To
Shielding Detachable RF Cable	1.0	EUT	GPS Antenna
Shielding Detachable RF Cable	0.5	EUT	Load
Shielding Detachable RF Cable	1.5	EUT	GSM Antenna

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307 (b) (1) & §2.1091	Maximum Permissible exposure (MPE)	Compliance
§2.1046; § 22.913 (a); § 24.232 (c)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905; § 22.917; § 24.238	Occupied Bandwidth	Compliance
§ 2.1051; § 22.917 (a); § 24.238 (a)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053; § 22.917 (a); § 24.238 (a)	Spurious Radiated Emissions	Compliance
§ 22.917 (a); § 24.238 (a)	Band Edge	Compliance
§ 2.1055; § 22.355; § 24.235	Frequency stability	Compliance

Note: This device can support two types of power supply, pre-test with AC and DC mode which will not affect the test result, and the worst case was performed for AC power supply except for frequency stability test item.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Sunol Sciences	Horn Antenna	DRH-118	A052604	2017-12-29	2020-12-28
Rohde & Schwarz	Signal Analyzer	FSIQ26	8386001028	2017-04-24	2018-04-24
Sunol Sciences	Bi-log Antenna	JB1	A040904-2	2017-12-17	2020-12-16
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2017-05-21	2018-05-21
HP	Amplifier	HP8447E	1937A01046	2017-11-19	2018-05-17
Anritsu	Signal Generator	68369B	004114	2017-12-05	2018-12-05
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2017-12-07	2018-12-07
COM POWER	Dipole Antenna	AD-100	041000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2015-08-18	2018-08-17
Ducommun technologies	RF Cable	UFA210A-1-4724-30050U	MFR64369 223410-001	2017-11-19	2018-05-17
Ducommun technologies	RF Cable	104PEA	218124002	2017-11-19	2018-05-17
Ducommun technologies	RF Cable	RG-214	1	2017-11-19	2018-05-17
Ducommun technologies	RF Cable	RG-214	2	2017-11-22	2018-05-22
Ducommun Technologies	Horn Antenna	ARH-4223-02	1007726-04	2017-12-29	2020-12-28
Ducommun technologies	Horn Antenna	ARH-2823-02	1007726-03	2017-12-29	2020-12-28
Ducommun technologies	Pre-amplifier	ALN-22093530-01	991373-01	2017-08-03	2018-08-03
RF Conducted Test					
Rohde & Schwarz	SPECTRUM ANALYZER	FSU26	200120	2017-12-05	2018-12-05
ESPEC	Temperature & Humidity Chamber	EL-10KA	09107726	2017-11-22	2018-11-22
Fluke	Digital Multimeter	287	19000011	2017-04-09	2018-04-09
TDK-Lambda	DC Power Supply	Z60-14-L-C	N/A	NCR	NCR
Changjiang	Contact Voltage Regulator	TDGC2-	N/A	NCR	NCR
Rohde & Schwarz	Wideband Radio Communication Tester	CMU200	106891	2017-10-18	2018-10-18
Ducommun technologies	RF Cable	RG-214	3	2017-11-22	2018-05-22
WEINSCHEL	3dB Attenuator	N/A	N/A	2017-11-23	2018-05-22
N/A	Power Splitter	N/A	N/A	2017-05-21	2018-05-21

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §1.1307 (b) (1) & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for Occupational/Controlled Exposure

Limits for occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (V/m)**	**Magnetic Field Strength (A/m)**	**Power Density (mW/cm^2)**	**Averaging Time (Minutes)**
0.3-1.34	614	1.63	*(100)	6
1.34-30	1842/f	4.89/f	*($900/f^2$)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5.0	6

f = frequency in MHz
* = Plane-wave equivalent power density

Result

Calculated Formulary:

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW).
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \le 1$$

Worst case as below:

Frequency (MHz)	Antenna Gain		Tune up Conducted Power		Tune up Average power	Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
	(dBi)	(numeric)	(dBm)	(mW)	(mW)			
824-849	1.0	1.26	32.5	1778.28	222.29	65	0.005	2.74
1850-1910	3.5	2.24	29.0	794.33	99.29	65	0.004	6.16
410-470	7.8	6.03	43.0	19952.62	9976.31	65	1.133	1.36

Note:
For GSM mode, the Time-base average power was consideration, Average power as below:
GSM850: 1778.28*(1/8)mW=222.29mW.
PCS1900: 794.33*(1/8)mW=99.29mW.

For DMR mode, the duty cycle of 50% was consideration, Average power as below:
19952.62*50%mW=9976.31mW.

Simultaneous transmitting consideration: GSM850 and DMR, or PCS1900 and DMR

The ratio=MPE/$limit_{824MHz}$+MPE/$limit_{410MHz}$=0.005/2.74+1.133/1.36=0.83＜1.0.

The ratio=MPE/$limit_{1850MHz}$+MPE/$limit_{410MHz}$=0.004/6.16+1.133/1.36=0.83＜1.0.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 65cm from nearby persons.

Result: Compliance

FCC §2.1047 - MODULATION CHARACTERISTIC

According to FCC § 2.1047(d) , Part 22H & 24E there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC § 2.1046, § 22.913 (a) & § 24.232 (c) - RF OUTPUT POWER

Applicable Standards

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

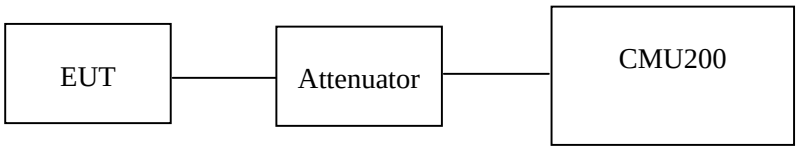
According to FCC §2.1046 and §24.232 (c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB.

Test Procedure

Conducted method:

The RF output of the transmitter was connected to the CMU200 through sufficient attenuation.



Radiated method:

TIA603-D section 2.2.17

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Rocky Kang on 2018-01-22.

Conducted Power

Cellular Band (Part 22H)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
GSM	128	824.2	32.08	38.45
	190	836.6	31.71	38.45
	251	848.8	31.89	38.45

PCS Band (Part 24E)

Mode	Channel	Frequency (MHz)	Average Output Power (dBm)	Limit (dBm)
GSM	512	1850.2	28.75	33
	661	1880.0	28.63	33
	810	1909.8	28.28	33

Peak-to-average ratio (PAR)

Cellular Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	1.28	13
	Middle	1.54	13
	High	1.26	13

PCS Band

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	1.11	13
	Middle	1.28	13
	High	1.35	13

Radiated Power

GSM Mode:

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)	Level (dBm)	Cable loss (dB)	Antenna Gain (dB)			
ERP, Cellular Band (Part 22H), Middle Channel										
836.6	88.08	23	1.7	H	25.7	0.7	0.0	25.00	38.45	13.45
836.6	89.10	38	1.3	V	28.7	0.7	0.0	28.00	38.45	10.45
EIRP, PCS Band (Part 24E), Middle Channel										
1880	85.52	218	1.9	H	15.5	1.30	8.50	22.70	33	10.30
1880	89.27	203	1.1	V	19.0	1.30	8.50	26.20	33	6.80

Note:
All above data were tested with no amplifier.
Absolute Level = Substituted Level - Cable loss + Antenna Gain
Margin = Limit- Absolute Level

FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH

Applicable Standard

FCC 47 §2.1049, §22.917, §22.905, §24.238.

Test Procedure

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The resolution bandwidth of the spectrum analyzer was set at 1% to 5% of the anticipated emission bandwidth and the 26 dB & 99% bandwidth was recorded.
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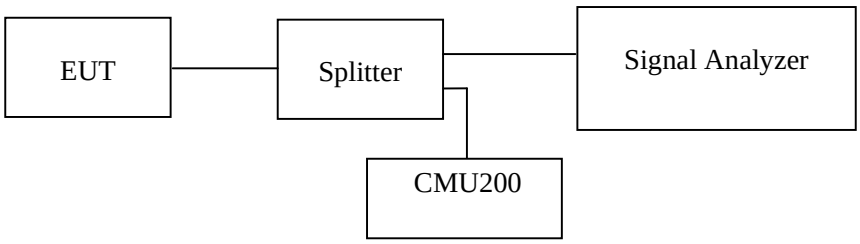


Test Data

Environmental Conditions

Temperature:	24 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Rocky Kang on 2018-01-17.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables and plots.

Cellular Band (Part 22H)

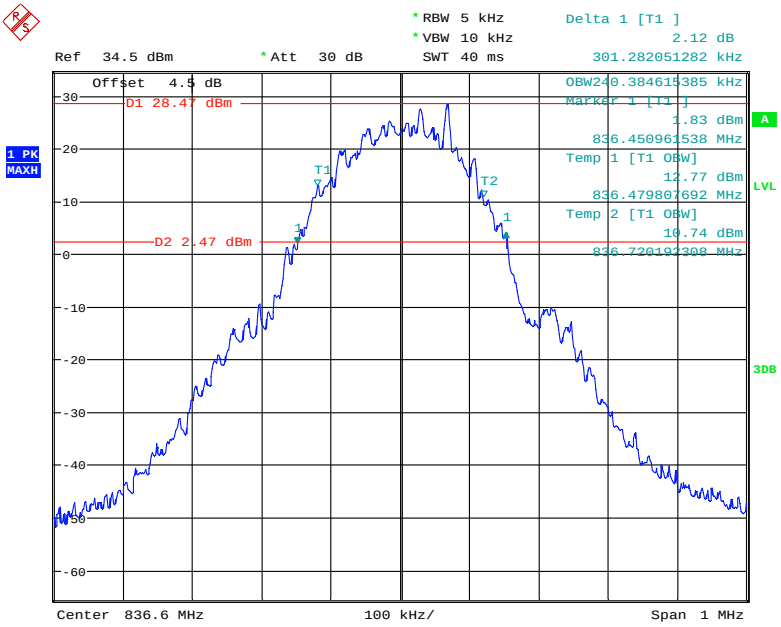
Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	836.6	240.38	301.28

PCS Band (Part 24E)

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	1880.0	243.59	317.31

Cellular Band (Part 22H)

26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode



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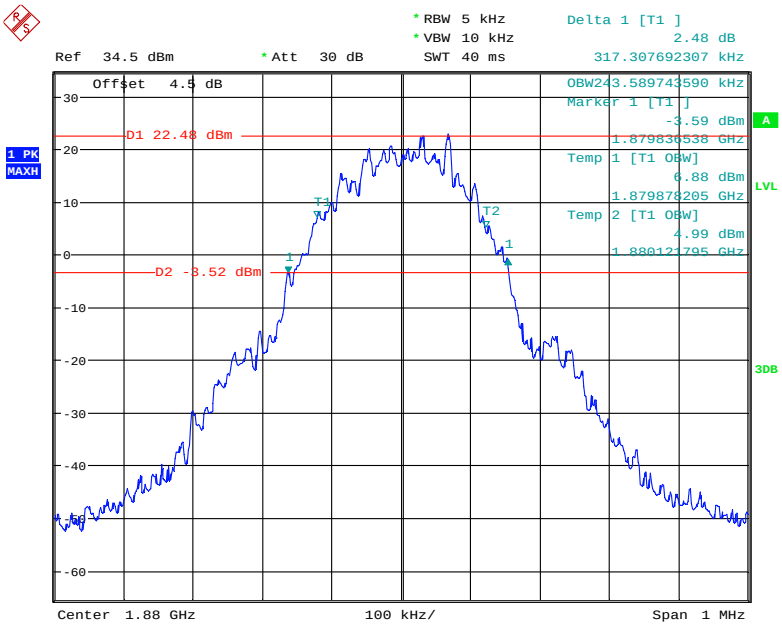
PCS Band (Part 24E)

26 dB Emissions & 99% Occupied Bandwidth for GSM (GMSK) Mode



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FCC §2.1051, §22.917(a) & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

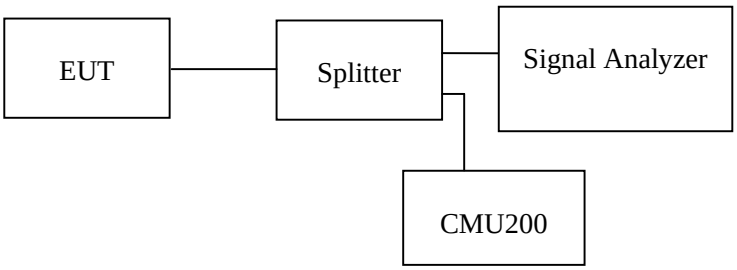
Applicable Standard

FCC §2.1051, §22.917(a) and §24.238(a).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

Test Procedure

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100kHz for below 1GHz and 1MHz for above 1GHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.



Test Data

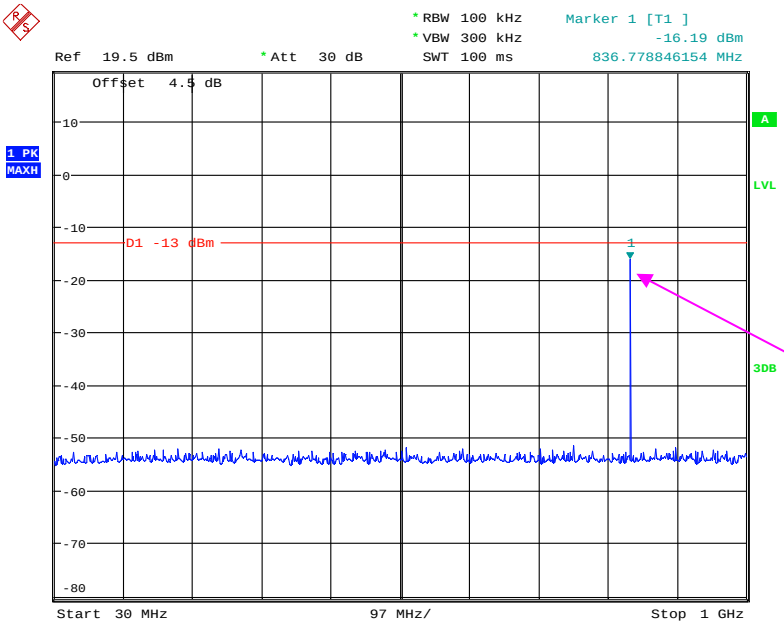
Environmental Conditions

Temperature:	24 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Rocky Kang on 2018-01-17.

Cellular Band (Part 22H)

30 MHz – 1 GHz (GSM Mode)



Fundamental test
With filter

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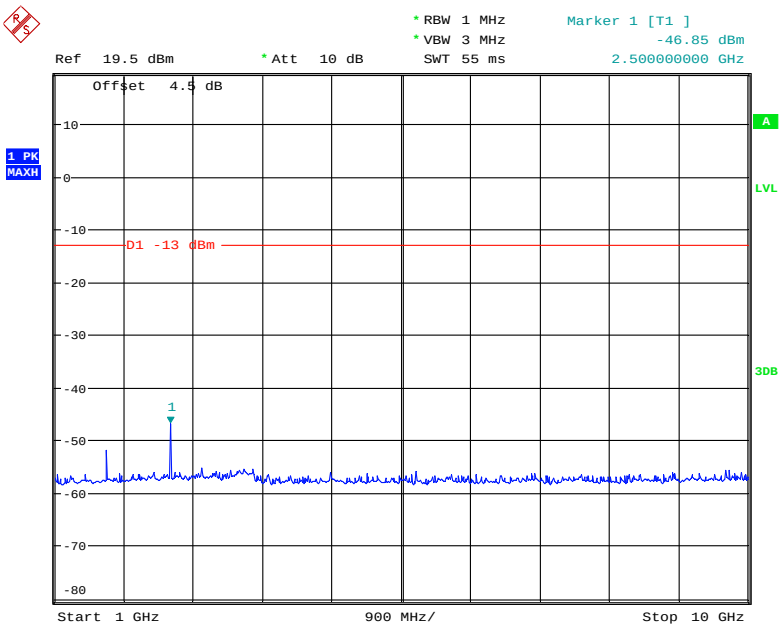
1 GHz – 10 GHz (GSM Mode)



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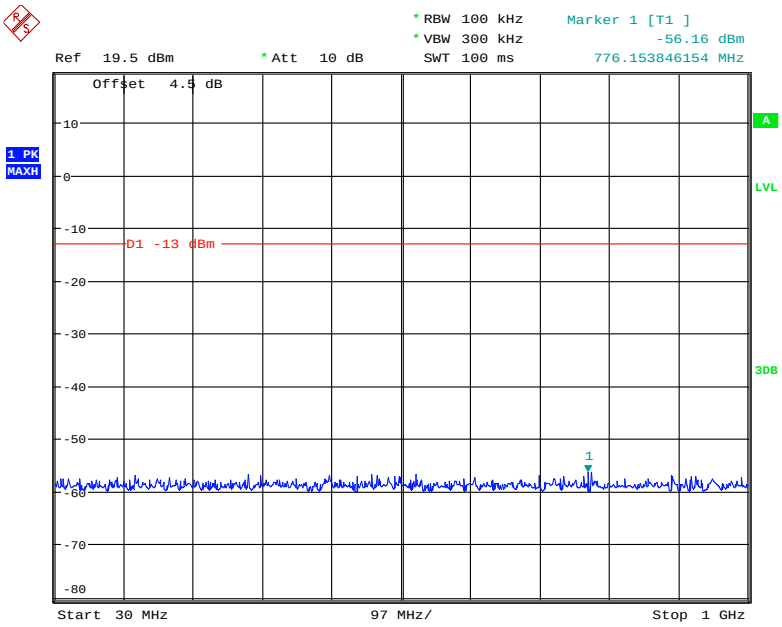
PCS Band (Part 24E)

30 MHz – 1 GHz (GSM Mode)



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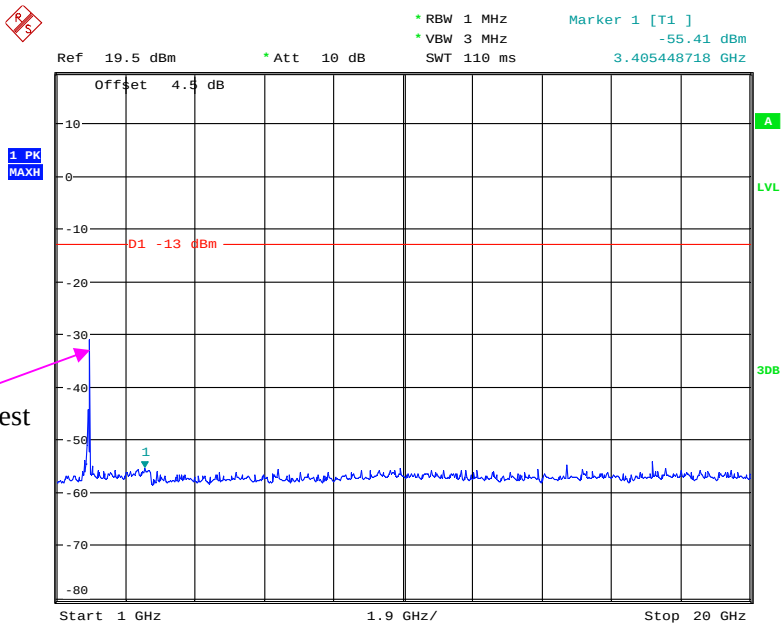
1 GHz – 20 GHz (GSM Mode)



Fundamental test
With filter

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FCC § 2.1053; § 22.917 (a);§ 24.238 (a) SPURIOUS RADIATED EMISSIONS

Applicable Standard

FCC § 2.1053, §22.917(a) and § 24.238(a).

Test Procedure

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Test Data

Environmental Conditions

Temperature:	26 ℃
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Rocky Kang on 2018-01-22.

Test mode: Transmitting

Test mode: Transmitting (Pre-scan with Low, Middle, High channel, and the worse case data as below)

30 MHz ~ 10 GHz:

Cellular Band (Part 22H)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)			
GSM 850 Mode										
552.63	31.55	224	1.6	H	-65.4	0.54	0	-65.94	-13	52.94
552.63	30.89	263	1.9	V	-66.1	0.54	0	-66.64	-13	53.64
1673.20	46.23	180	2.1	H	-60.8	1.30	9.10	-53.00	-13	40.00
1673.20	52.98	47	2.1	V	-53.5	1.30	9.10	-45.70	-13	32.70
2509.80	45.99	161	2.3	H	-57.5	2.60	9.30	-50.80	-13	37.80
2509.80	49.67	172	2.2	V	-53.2	2.60	9.30	-46.50	-13	33.50

30 MHz ~ 20 GHz:

PCS Band (Part 24E)

Frequency (MHz)	Receiver Reading (dBμV)	Turntable Angle Degree	Rx Antenna		Substituted			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			Height (m)	Polar (H/V)	Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)			
PCS 1900 Mode										
552.63	32.05	113	1.3	H	-64.9	0.54	0	-65.44	-13	52.44
552.63	31.52	273	1.4	V	-65.5	0.54	0	-66.04	-13	53.04
3760.00	43.51	187	1.4	H	-57.7	1.50	9.70	-49.50	-13	36.50
3760.00	43.47	46	2.0	V	-57.3	1.50	9.70	-49.10	-13	36.10
5640.00	42.93	22	2.0	H	-54.7	1.70	11.20	-45.20	-13	32.20
5640.00	42.05	271	2.4	V	-55.2	1.70	11.20	-45.70	-13	32.70

Note:
1) Absolute Level = Substituted Level - Cable loss + Antenna Gain
2) Margin = Limit- Absolute Level

FCC § 22.917 (a); § 24.238 (a) - BAND EDGES

Applicable Standard

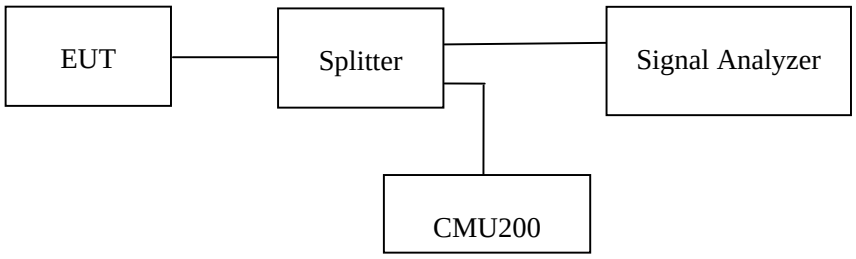
According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions 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.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency



Test Data

Environmental Conditions

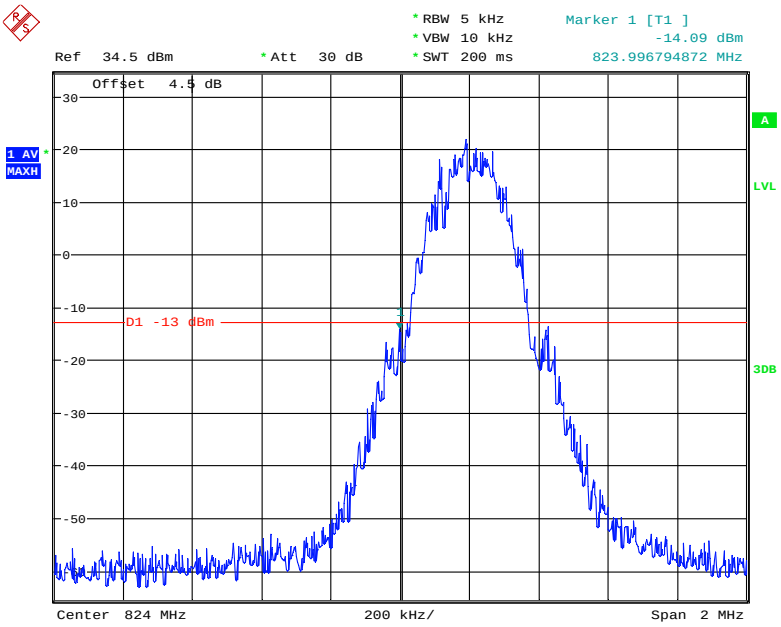
Temperature:	24 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Rocky Kang on 2018-01-17.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following plots.

Cellular Band, Left Band Edge for GSM (GMSK) Mode



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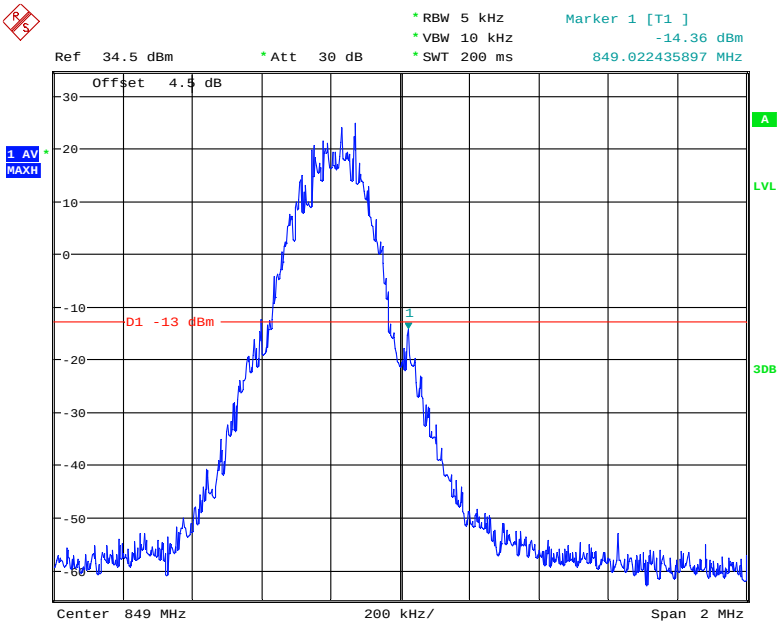
Cellular Band, Right Band Edge for GSM (GMSK) Mode



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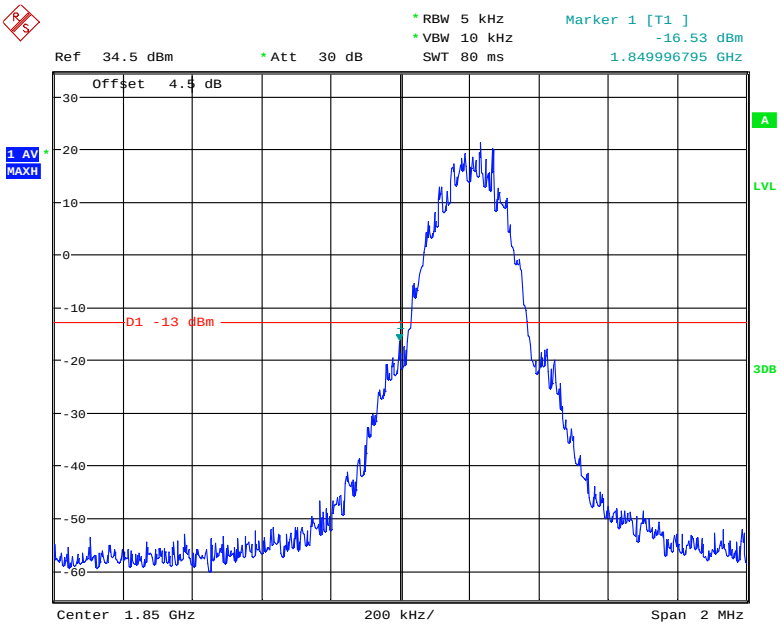
PCS Band, Left Band Edge for GSM (GMSK) Mode



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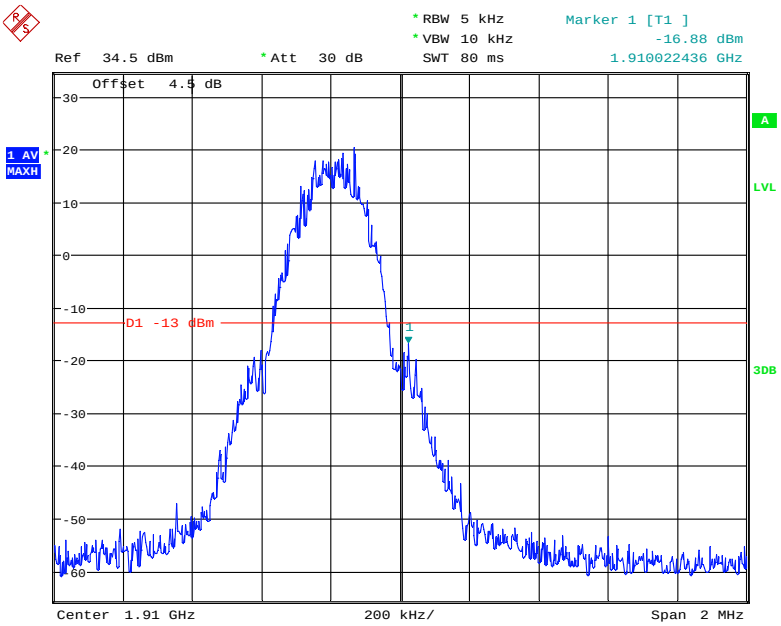
PCS Band, Right Band Edge for GSM (GMSK) Mode



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FCC § 2.1055; § 22.355; § 24.235 - FREQUENCY STABILITY

Applicable Standard

FCC § 2.1055, §22.355, §24.235.

According to FCC §2.1055, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile > 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

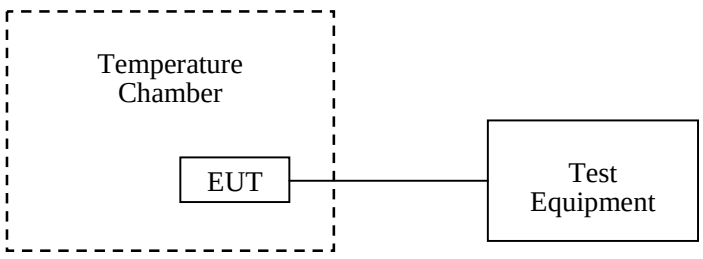
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external AC/DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The power cable and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



Test Data

Environmental Conditions

Temperature:	24 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Rocky Kang on 2018-01-17.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables.

Note: The device is intended for fixed using.

For AC power supply:

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6 MHz				
Temperature (℃)	**Voltage Supplied (V_{AC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	120	5	0.0060	1.5
-20		-1	-0.0012	1.5
-10		-2	-0.0024	1.5
0		4	0.0048	1.5
10		8	0.0096	1.5
20		-16	-0.0191	1.5
30		3	0.0036	1.5
40		5	0.0060	1.5
50		-3	-0.0036	1.5
25	V min.= 102	3	0.0036	1.5
	V max.= 138	-4	-0.0048	1.5

PCS Band (Part 24E)

GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{AC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	120	2	0.0011	Pass
-20		-1	-0.0005	Pass
-10		8	0.0043	Pass
0		-3	-0.0016	Pass
10		6	0.0032	Pass
20		11	0.0059	Pass
30		-4	-0.0021	Pass
40		2	0.0011	Pass
50		-8	-0.0043	Pass
25	V min.= 102	5	0.0027	Pass
	V max.= 138	5	0.0027	Pass

For DC power supply:

Cellular Band (Part 22H)

GSM Mode

Middle Channel, f_o =836.6 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
-30	13.5	4	0.0048	1.5
-20		-3	-0.0036	1.5
-10		-1	-0.0012	1.5
0		6	0.0072	1.5
10		5	0.0060	1.5
20		-3	-0.0036	1.5
30		2	0.0024	1.5
40		4	0.0048	1.5
50		-5	-0.0060	1.5
25	V min.= 11.4	2	0.0024	1.5
	V max.= 16.5	-5	-0.0060	1.5

PCS Band (Part 24E)

GSM Mode

Middle Channel, f_o =1880.0 MHz				
Temperature (℃)	**Voltage Supplied (V_{DC})**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Result**
-30	13.5	12	0.0064	Pass
-20		-7	-0.0037	Pass
-10		3	0.0016	Pass
0		5	0.0027	Pass
10		9	0.0048	Pass
20		8	0.0043	Pass
30		-6	-0.0032	Pass
40		4	0.0021	Pass
50		-3	-0.0016	Pass
25	V min.= 11.4	-4	-0.0021	Pass
	V max.= 16.5	-2	-0.0011	Pass

******* END OF REPORT *******