



TEST REPORT

Report Reference No...... : **TRE1703009601** **R/C**.....: **35277**
FCC ID..... : **YAMPT560HF5**
Applicant's name..... : **Hytera Communications Corporation Limited**
Address.....: Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road,
Nanshan District, Shenzhen, People's Republic of China
Manufacturer.....: Hytera Communications Corporation Limited
Address.....: Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road,
Nanshan District, Shenzhen, People's Republic of China
Test item description : **TETRA TERMINAL**
Trade Mark: Hytera
Model/Type reference.....: PT560H F5
Listed Model(s): -
Standard : **FCC Part 90**
FCC Part 2
Date of receipt of test sample.....: Mar. 13, 2017
Date of testing.....: Mar. 14, 2017 - Apr. 08, 2017
Date of issue.....: Apr. 08, 2017
Result.....: **PASS**

Compiled by
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Approved by
(position+printed name+signature)..: RF Manager Hans Hu

Testing Laboratory Name : **Shenzhen Huatongwei International Inspection Co., Ltd.**
Address.....: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao,
Gongming, Shenzhen, China

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1. Test Standards and Report version

1.1. Test Standards

The tests were performed according to following standards:

[FCC Rules Part 90](#) Private land mobile radio services.

[TIA/EIA 603 D: June 2010](#) Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

[FCC Part 15 Subpart B](#) Unintentional Radiators

[FCC Part 2](#) Frequency allocations and radio treaty matters, general rules and regulations.

[KDB579009 D01 v03r01](#): Questions and Answers on Re-farming Part 90 frequencies

[KDB579009 D02 v01r02](#): Transition Summary Table

[KDB579009 D03 v01](#): Applications Part 90 Refarming Bands.

[KDB971168 D01 v02r02](#): MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

1.2. Report version

Version No.	Date of issue	Description
00	Apr. 08, 2017	Original

2. Test Description

Transmitter Requirement			
Test item	Standards requirement	Result	
		Pass	N/A
Maximum Transmitter Power	FCC Part 90.205	<input checked="" type="checkbox"/>	
Occupied Bandwidth	FCC Part 90.209	<input checked="" type="checkbox"/>	
Emission Mask	FCC Part 90.210	<input checked="" type="checkbox"/>	
Frequency Stability	FCC Part 90.213	<input checked="" type="checkbox"/>	
Adjacent Channel Power Limits	FCC Part 90.221	<input checked="" type="checkbox"/>	
Transmitter Radiated Spurious Emission	FCC Part 90.210	<input checked="" type="checkbox"/>	
Spurious Emission On Antenna Port	FCC Part 90.210	<input checked="" type="checkbox"/>	
Receiver Requirement			
Test item	Standards requirement	Result	
		Pass	N/A
Conducted Emission	FCC Part 15.107	<input checked="" type="checkbox"/>	
Radiated Emission	FCC Part 15.109	<input checked="" type="checkbox"/>	

3. SUMMARY

3.1. Client Information

Applicant:	Hytera Communications Corporation Limited
Address:	Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, People's Republic of China
Manufacturer:	Hytera Communications Corporation Limited
Address:	Hytera Tower, Hi-Tech Industrial Park North, 9108# Beihuan Road, Nanshan District, Shenzhen, People's Republic of China

3.2. Product Description

Name of EUT	TETRA TERMINAL
Trade Mark:	Hytera
Model/Type reference:	PT560H F5
Listed Model(s):	-
Power supply:	DC 7.4V
Charger information:	Model: CH20L06 Input: 12Vd.c., 2000mA Output: 2000mA
Adapter information:	Model: HKA02412020-1W Input: 100-240Va.c., 0.7A, 50/60Hz Output: 12.0Vd.c., 2.0A
RF Specification	
Operation Frequency Range:	809 MHz~824MHz,854 MHz~869 MHz
Rated Output Power:	3 Watts (34.77dBm)
Modulation Type:	$\pi/4$ DQPSK
Channel Separation:	25kHz
Antenna Type	External
Maximum Transmitter Power :	2.82W for TMO 2.75W for DMO

3.3. Test frequency list

Mode	Modulation	Operation Frequency Range	Test Frequency (MHz)
TMO	$\pi/4$ DQPSK	809MHz-824MHz	CH _{L1} 809.025
			CH _{M1} 816.000
			CH _{H1} 823.975
		854MHz~869MHz	CH _{L2} 854.025
			CH _{M2} 861.000
			CH _{H2} 868.975
DMO	$\pi/4$ DQPSK	809MHz-824MHz	CH _{L1} 809.025
			CH _{M1} 816.000
			CH _{H1} 823.975
		851MHz~869MHz	CH _{L2} 854.025
			CH _{M2} 861.000
			CH _{H2} 868.975

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the above listed frequency for testing.

3.4. EUT operation mode

Test mode	Transmitting	Receiving	TMO	DMO	GPS	AC Adapter
TX1	√		√			
TX2	√			√		
RX1		√			√	√

√: is operation mode.

3.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

<input type="radio"/>	Power Cable	Length (m) :	/
		Shield :	Unshielded
		Detachable :	Undetachable
<input type="radio"/>	Multimeter	Manufacturer :	/
		Model No. :	/

4. Test Environment

4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., LTD.

Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

Phone: 86-755-26748019 Fax: 86-755-26748089

4.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: February 28, 2015. Valid time is until February 27, 2018.

A2LA-Lab Cert. No. 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 317478

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 317478, Renewal date Jul. 18, 2014, valid time is until Jul. 18, 2017.

IC-Registration No.: 5377B

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377B on Dec.03, 2014, valid time is until Dec. 03, 2017.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3. Environmental conditions

Normal Conditon	
Relative humidity:	20 % to 75 %.
Air Pressure:	950~1050mba
Voltage:	DC 7.4V

4.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Frequency stability	25 Hz	(1)
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-40 GHz	1.60 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 9KHz-30MHz	2.20 dB	(1)
Radiated Emission 30~1000MHz	4.65 dB	(1)
Radiated Emission 1~18GHz	5.16 dB	(1)
Radiated Emission 18-40GHz	5.54 dB	(1)
Occupied Bandwidth	35 Hz	(1)
FM deviation	25 Hz	(1)
Audio level	0.62 dB	(1)
Low Pass Filter Response	0.76 dB	(1)
Modulation Limiting	0.42 %	(1)
Transient Frequency Behavior	6.8 %	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=1.96$.

4.5. Equipments Used during the Test

Conducted Emission				
Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.
Artificial Mains	Rohde&Schwarz	ESH2-Z5	100028	2016/11/13
EMI Test Receiver	Rohde&Schwarz	ESCS 30	100038	2016/11/13
Pulse Limiter	Rohde&Schwarz	ESHSZ2	100044	2016/11/13
EMI Test Software	Rohde&Schwarz	ES-K1 V1.71	N/A	N/A
RF COMMUNICATION TEST SET	HP	8920A	3813A10206	2016/11/13
Artificial Mains	Rohde&Schwarz	ESH3-Z6	100210	2016/11/13
Artificial Mains	Rohde&Schwarz	ESH3-Z6	100211	2016/11/13
Test cable	ENVIROFLEX	3651	1101902	2016/11/13

Adjacent Channel Power				
Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.
TETRA Signal Analyzer	IFR	2310	231001/168	2016/11/13
RF Cable	Chengdu E-Microwave	----	----	2016/11/13

Frequency Stability				
Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.
RF COMMUNICATION TEST SET	HP	8920A	3813A10206	2016/11/13
Signal Generator	Rohde&Schwarz	SMT03	100059	2016/11/13
Climate Chamber	ESPEC	EL-10KA	05107008	2016/11/13
RF Cable	Chengdu E-Microwave	----	----	2016/11/13

Transmitter Radiated Spurious Emission				
Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.
Ultra-Broadband Antenna	Rohde&Schwarz	HL562	100015	2016/11/13
EMI Test Receiver	Rohde&Schwarz	ESI 26	100009	2016/11/13
RF Test Panel	Rohde&Schwarz	TS / RSP	335015/ 0017	N/A
HORN ANTENNA	Rohde&Schwarz	HF906	100039	2016/11/13
Turntable	ETS	2088	2149	N/A
Antenna Mast	ETS	2075	2346	N/A
EMI Test Software	Rohde&Schwarz	ES-K1 V1.71	N/A	N/A
RF COMMUNICATION TEST SET	HP	8920A	3813A10206	2016/11/13
Ultra-Broadband Antenna	ShwarzBeck	VULB9163	538	2016/11/13
Ultra-Broadband Antenna	ShwarzBeck	VULB9163	539	2016/11/13
HORN ANTENNA	ShwarzBeck	9120D	1012	2016/11/13
HORN ANTENNA	ShwarzBeck	9120D	1011	2016/11/13
TURNTABLE	MATURO	TT2.0	----	N/A
ANTENNA MAST	MATURO	TAM-4.0-P	----	N/A
Test cable	Siva Cables Italy	RG 58A/U	W14.02	2016/11/13

Maximum Transmitter Power & Spurious Emission On Antenna Port & Occupied Bandwidth & Emission Mask				
Name of Equipment	Manufacturer	Model	Serial Number	Last Cal.
Receiver	Rohde&Schwarz	ESI 26	100009	11/13/2016
Attenuator	R&S	ESH3-22	100449	11/13/2016
RF COMMUNICATION TEST SET	HP	8920A	3813A10206	11/13/2016
High-Pass Filter	Anritsu	MP526B	6220875256	11/13/2016
High-Pass Filter	Anritsu	MP526D	6220878392	11/13/2016
Spectrum Analyzer	Aglient	E4407B	MY44210775	11/13/2016
Spectrum Analyzer	Rohde&Schwarz	FSP40	1164.4391.40	11/13/2016
SPECTRUM ANALYZER	Agilent	E4407B	MY44210775	11/13/2016
Digital Radio Tester	IFR	3920	299001967	11/13/2016
TETRA Signal Analyzer	IFR	2310	231001/168	11/13/2016
Attenuator	Chengdu E-Microwave	EMCAXX-10RNZ-3	----	2016/11/13
RF Cable	Chengdu E-Microwave	----	----	2016/11/13
Combiner	Chengdu E-Microwave	EMPD-T-2-180-10-600	----	2016/11/13

The calibration interval was one year.

5. Test conditions and results

5.1. RF output Power

The conducted carrier power output rating for a transmitter is the power available at the output terminals of the transmitter when the output terminals are connected to the standard transmitter load.

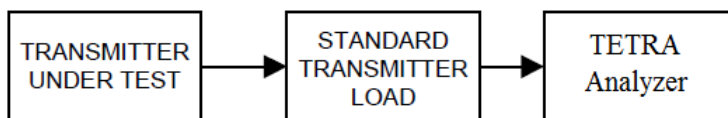
LIMIT

FCC Part 2.1046 and Part 90.205

Maximum ERP is dependent upon the station's antenna HAAT and required service area.

The output power shall not exceed by more than 20 percent either the output power shown in the Radio Equipment List for transmitters included in this list or when not so listed, the manufacturer's rated output power for the particular transmitter specifically listed on the authorization.

TEST CONFIGURATION



TEST PROCEDURE

TIA/EIA 603 D, Section 2.2.1.2

- 1) Connect the equipment as illustrated
- 2) Correct for all losses in the RF path
- 3) Measure the transmitter output power

TEST MODE:

Please reference to the section 2.4

TEST RESULTS

Passed **Not Applicable**

Please refer to the below test data:

Operation Mode	Test Channel	Measured power (dBm)	Measured power (W)	Limit (W)	Result
TX1	CH _{L1}	34.50	2.82	2.4 ~ 3.6	Pass
	CH _{M1}	34.50	2.82		
	CH _{H1}	34.50	2.82		
	CH _{L2}	34.50	2.82		
	CH _{M2}	34.40	2.75		
	CH _{H2}	34.40	2.75		
TX2	CH _{L1}	34.30	2.69	2.4 ~ 3.6	Pass
	CH _{M1}	34.40	2.75		
	CH _{H1}	34.40	2.75		
	CH _{L2}	34.00	2.51		
	CH _{M2}	34.40	2.75		
	CH _{H2}	34.30	2.69		

5.2. Occupied Bandwidth

LIMIT

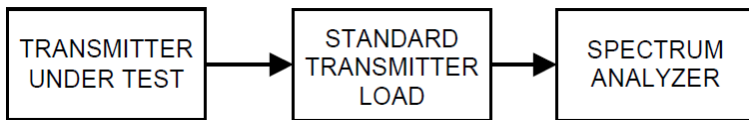
FCC part 90.209

Frequency band (MHz)	Channel spacing (kHz)	Authorized bandwidth (kHz)
Below 252		
25-50	20	20
72-76	20	20
150-174	17.5	1 320/11.25/6
216-2205	6.25	20/11.25/6
220-222	5	4
406-5122	16.25	1 320/11.25/6
806-809/851-854	12.5	20
809-824/854-869	25	20
896-901/935-940	12.5	13.6
902-9284		
929-930	25	20
1427-14325	12.5	12.5
32450-2483.52		
Above 25002		

Note:

Operations using equipment designed to operate with a 25 kHz channel bandwidth may be authorized up to a 22 kHz bandwidth if the equipment meets the Adjacent Channel Power limits of § 90.221.

TEST CONFIGURATION



TEST PROCEDURE

1. The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.
2. The resolution bandwidth of the spectrum analyzer was set at 300 Hz and the spectrum was recorded in the frequency band ± 50 kHz from the carrier frequency.

TEST MODE:

Please reference to the section 2.4

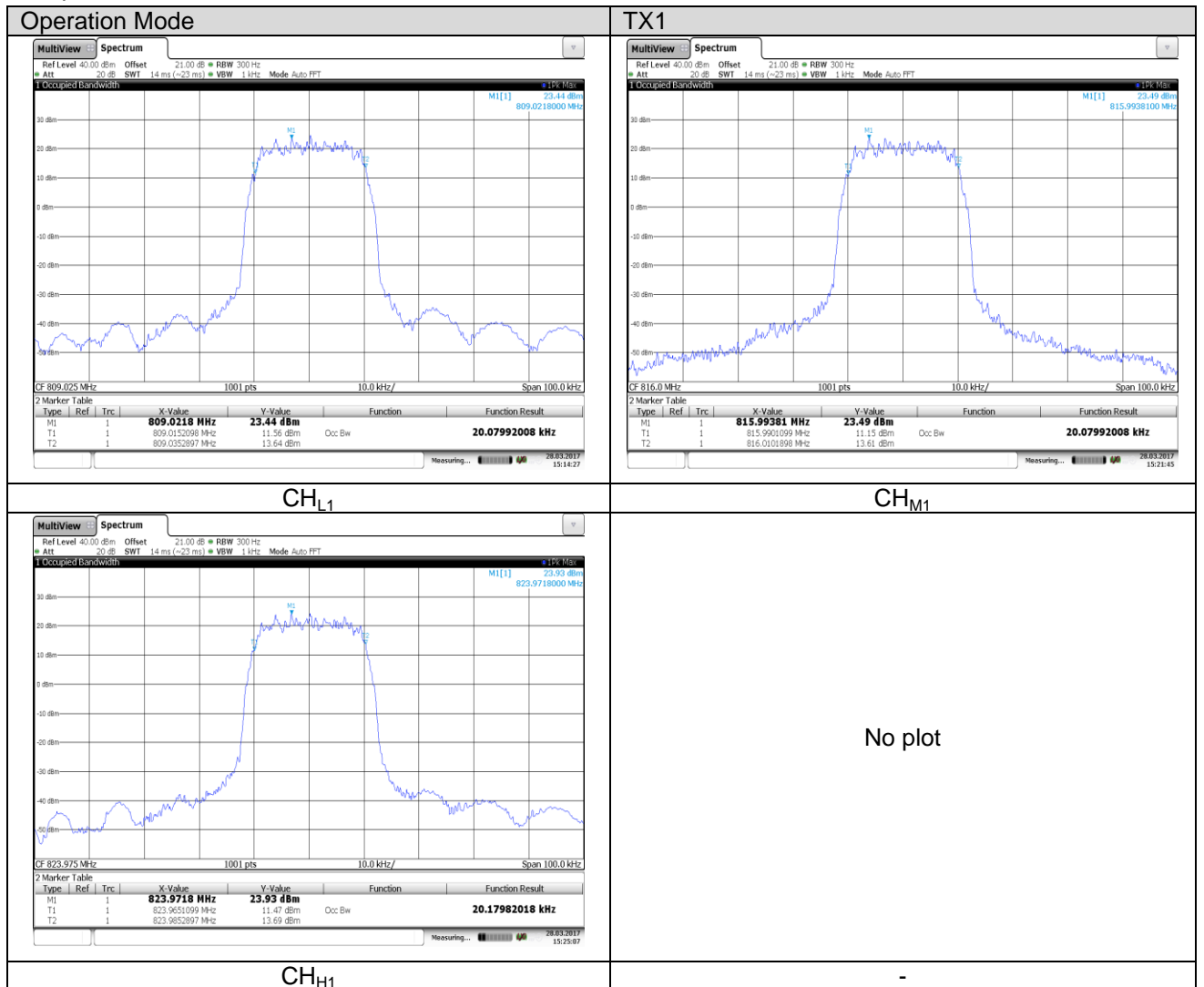
TEST RESULTS

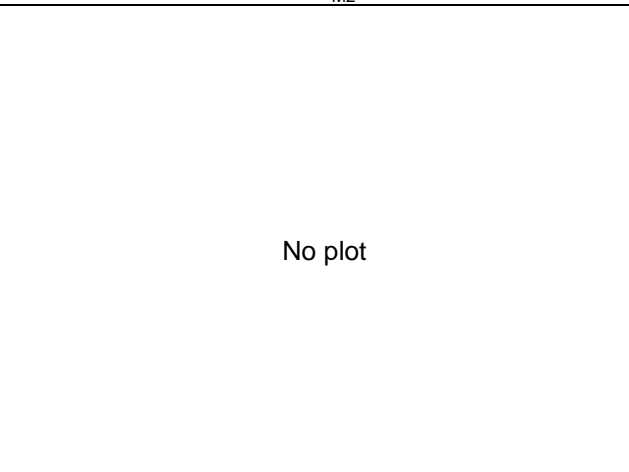
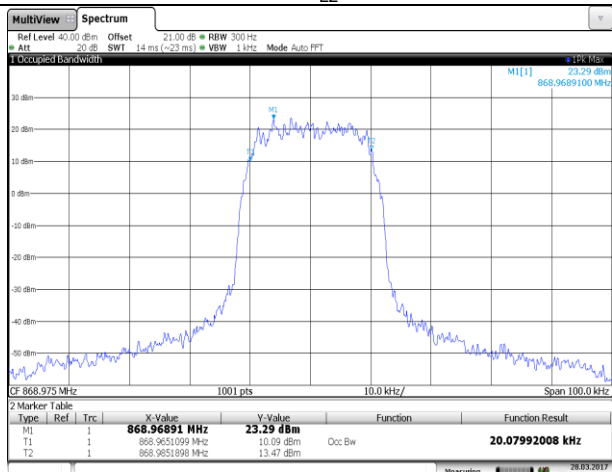
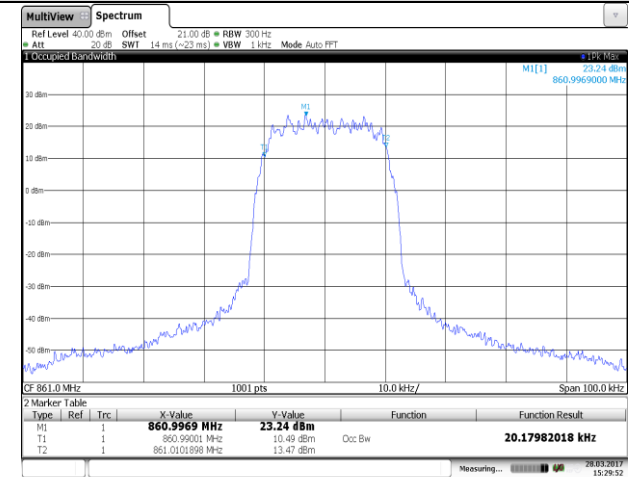
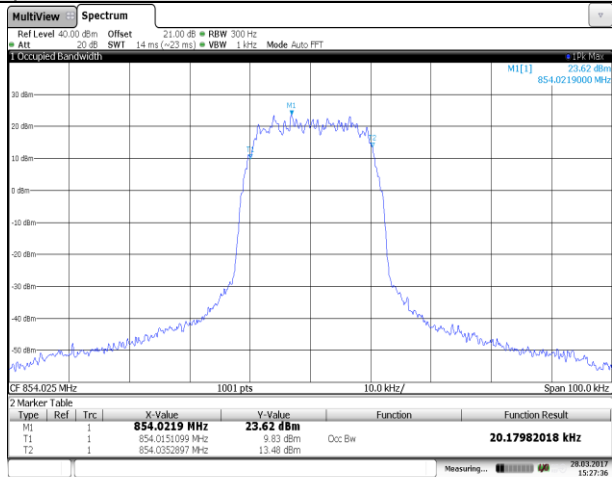
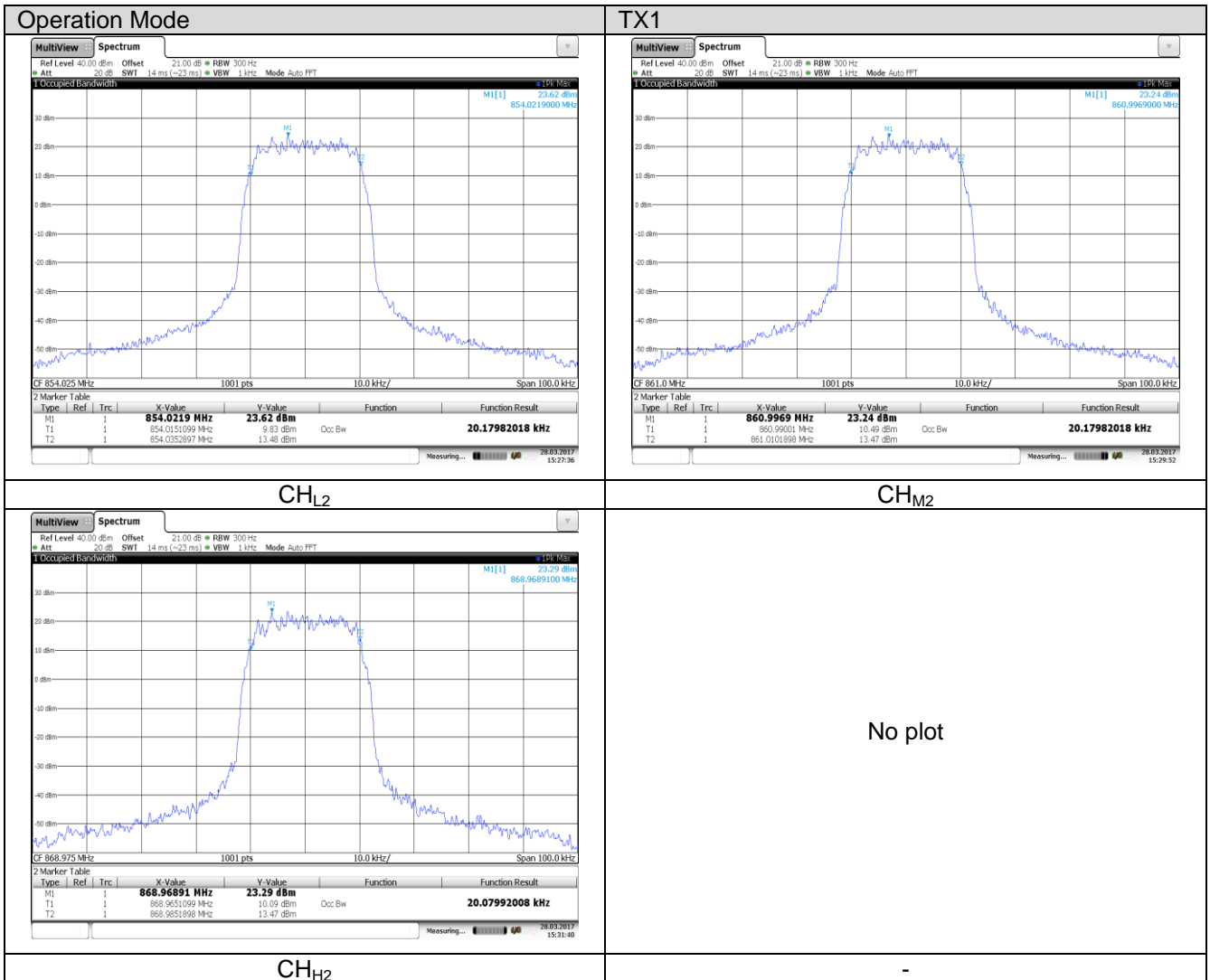
Passed **Not Applicable**

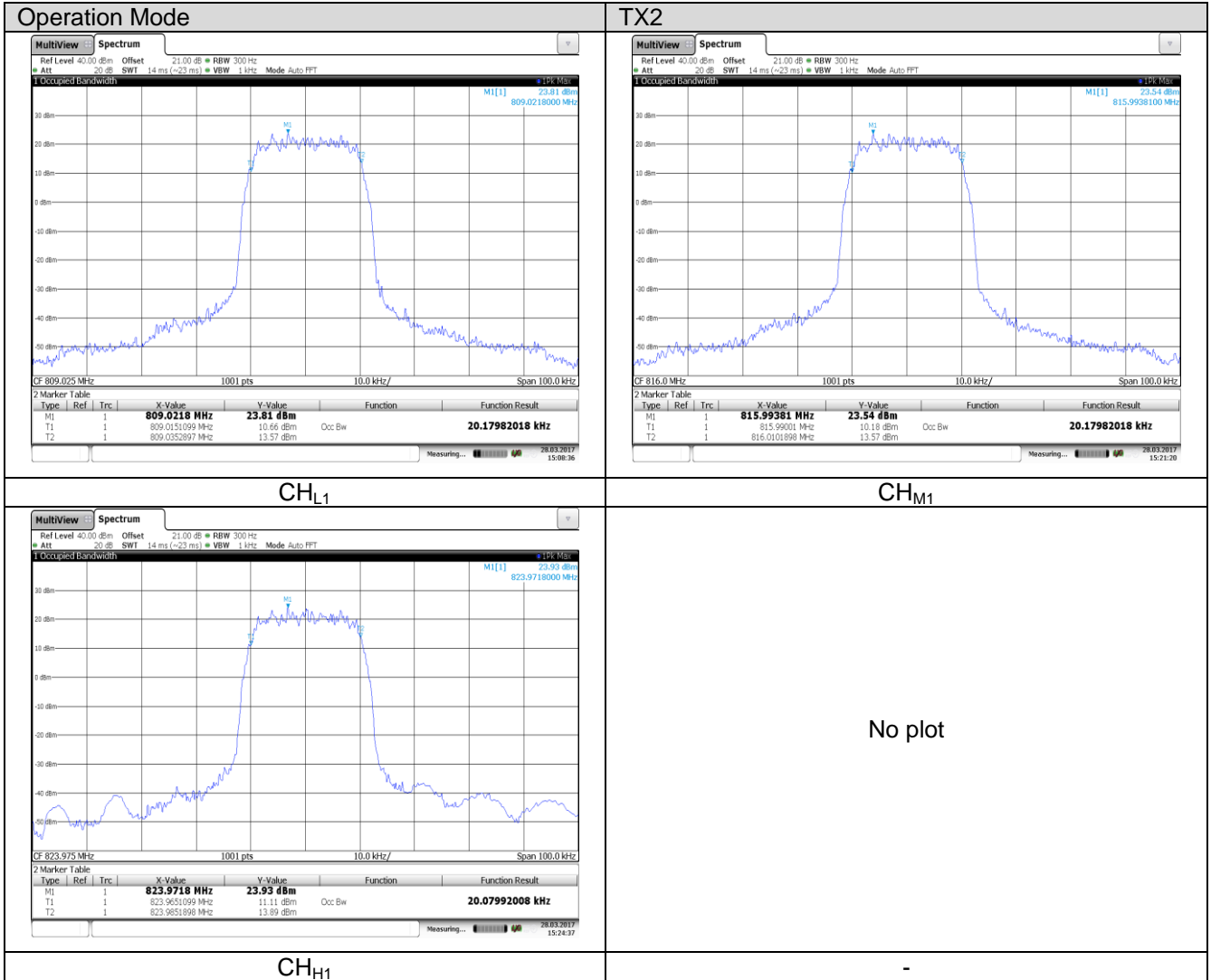
Please refer to the below test data:

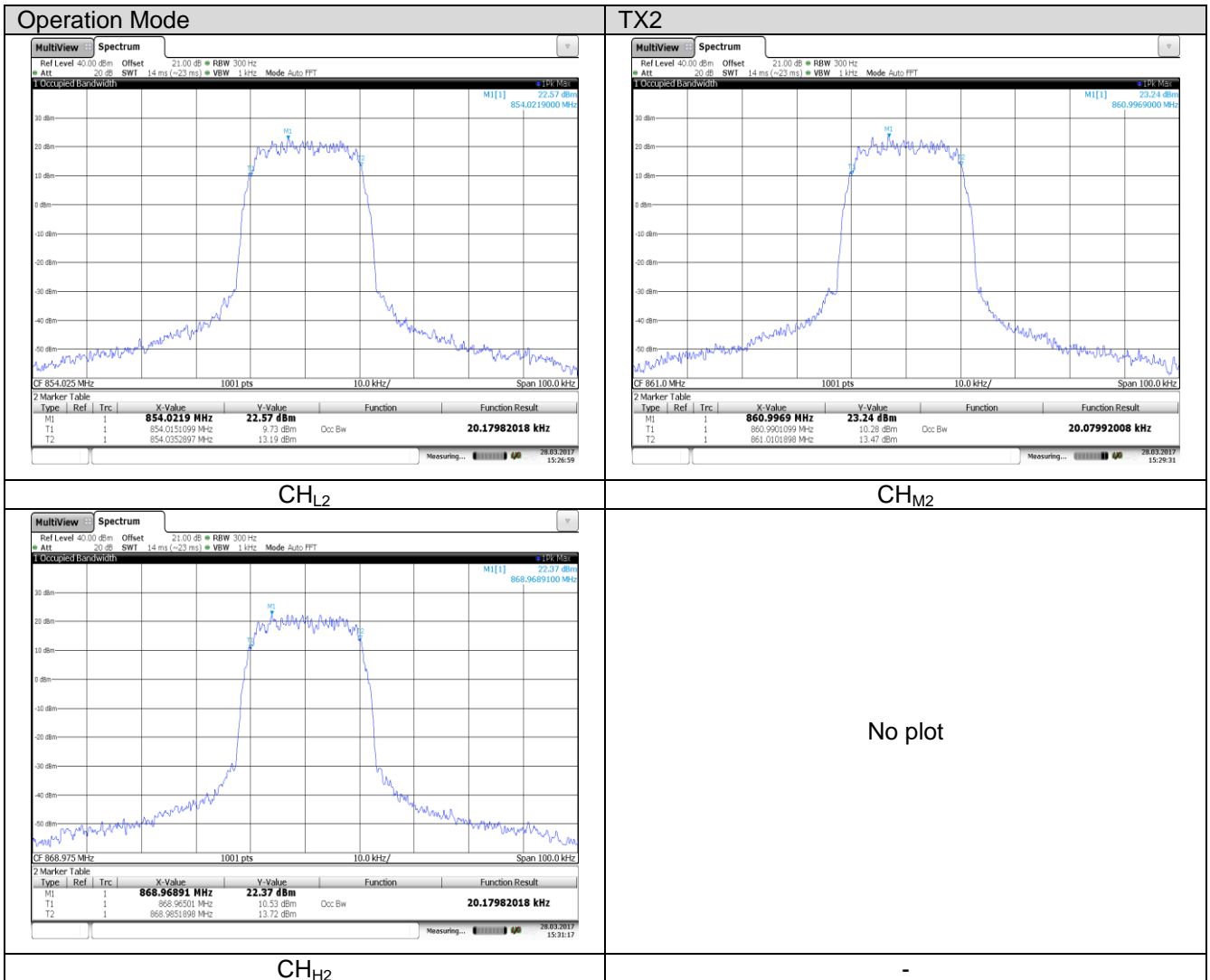
Operation Mode	Test Channel	Occupied Bandwidth (kHz)	Limit (kHz)	Result
		99%		
TX1	CH _{L1}	20.07	≤22	Pass
	CH _{M1}	20.08		
	CH _{H1}	20.18		
	CH _{L2}	20.17		
	CH _{M2}	20.18		
	CH _{H2}	20.08		
TX2	CH _{L1}	19.56	≤22	Pass
	CH _{M1}	19.56		
	CH _{H1}	19.38		
	CH _{L2}	19.47		
	CH _{M2}	19.38		
	CH _{H2}	19.56		

Test plot as follows:









5.3. Emission Mask

The transmitter sideband spectrum denotes the sideband power produced at a discrete frequency separation from the carrier up to the test bandwidth due to all sources of unwanted noise within the transmitter in a modulated condition.

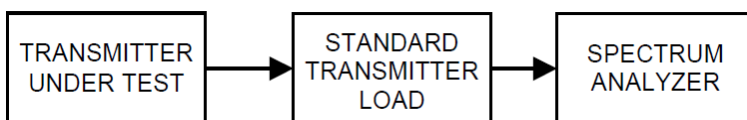
LIMIT

FCC part 90.210

Frequency band (MHz)	Mask for equipment with audio low pass filter	Mask for equipment without audio low pass filter
Below 251	A or B	A or C
25-50	B	C
72-76	B	C
150-1742	B, D, or E	C, D or E
150 paging only	B	C
220-222	F	F
421-5122 5	B, D, or E	C, D, or E
450 paging only	B	G
806-809/851-854	B	H
809-824/854-8693 5	B	G
896-901/935-940	I	J
902-928	K	K
929-930	B	G
4940-4990 MHz	L or M	L or M
5850-59254		
All other bands	B	C

- 1) Equipment using single sideband J3E emission must meet the requirements of Emission Mask A. Equipment using other emissions must meet the requirements of Emission Mask B or C, as applicable.
- 2) Equipment designed to operate with a 25 kHz channel bandwidth must meet the requirements of Emission Mask B or C, as applicable. Equipment designed to operate with a 12.5 kHz channel bandwidth must meet the requirements of Emission Mask D, and equipment designed to operate with a 6.25 kHz channel bandwidth must meet the requirements of Emission Mask E.
- 3) Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of §90.691 of this chapter.
- 4) DSRCS Roadside Units equipment in the 5850-5925 MHz band is governed under subpart M of this part.
- 5) Equipment may alternatively meet the Adjacent Channel Power limits of §90.221.

TEST CONFIGURATION



TEST PROCEDURE

TIA/EIA-603-D, Section 2.2.11.2

- 1) Connect the equipment as illustrated
- 2) Adjust the spectrum analyzer for the following settings
 - a) Resolution Bandwidth per the above table.
 - b) Video Bandwidth at least 10 times the resolution bandwidth.
 - c) Sweep Speed slow enough to maintain measurement calibration.
 - d) Detector Mode = Positive Peak.
 - e) Span that will allow proper viewing of the test bandwidth
- 3) Set the center frequency of the spectrum analyzer to the assigned transmitter frequency. Key the transmitter, and set the level of the unmodulated carrier to a full scale reference line. This is the 0 dB reference for the measurement
- 4) The device with digital modulation: modulated to its maximum extent using a pseudo-random data sequence.
- 5) Record the resulting spectrum analyzer presentation of the emission level with an on-line recording device or in a photograph. It is recommended that the emission limit be drawn on the plotted graph or photograph. The spectrum analyzer presentation is the sideband spectrum.

TEST MODE:

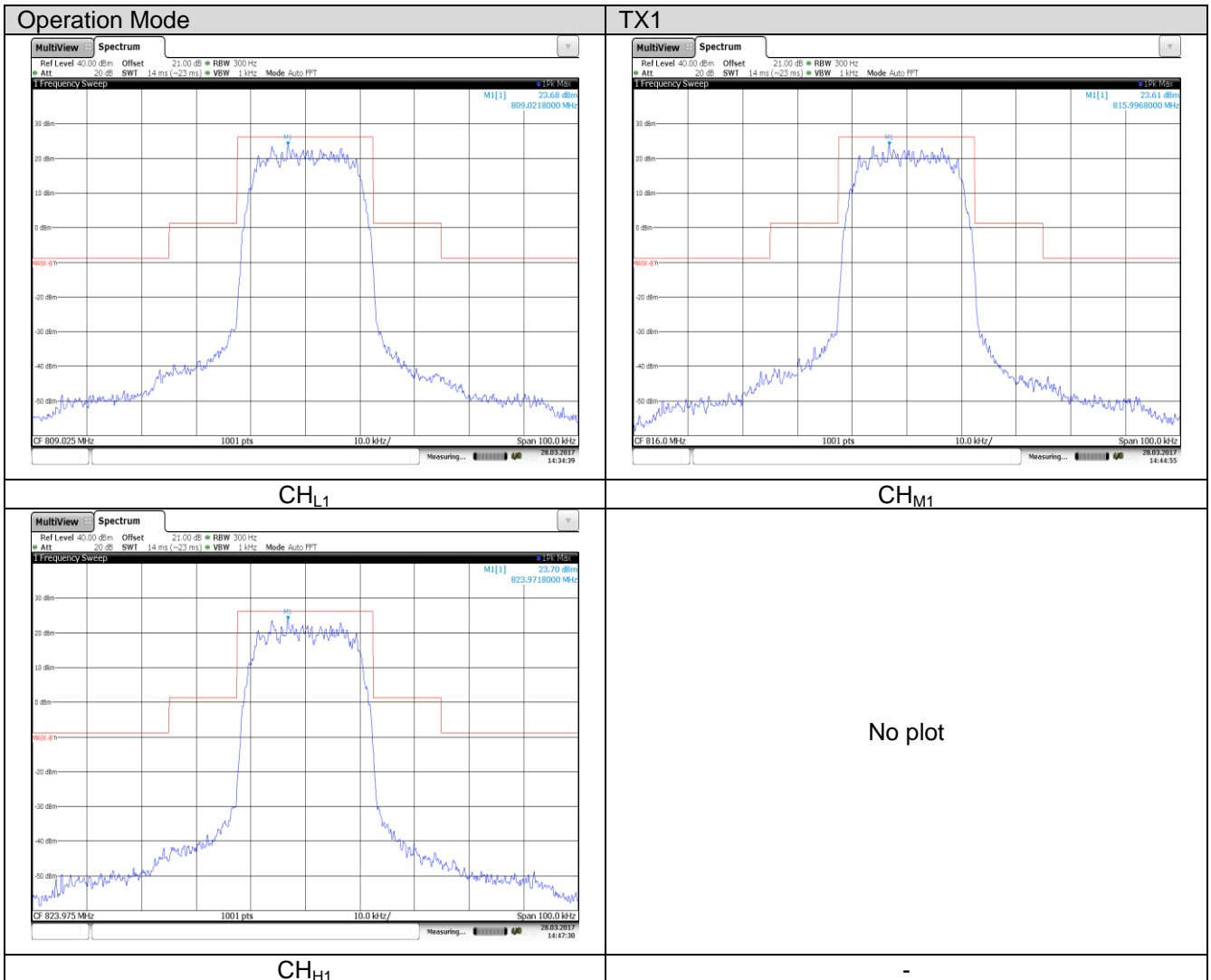
Please reference to the section 2.4

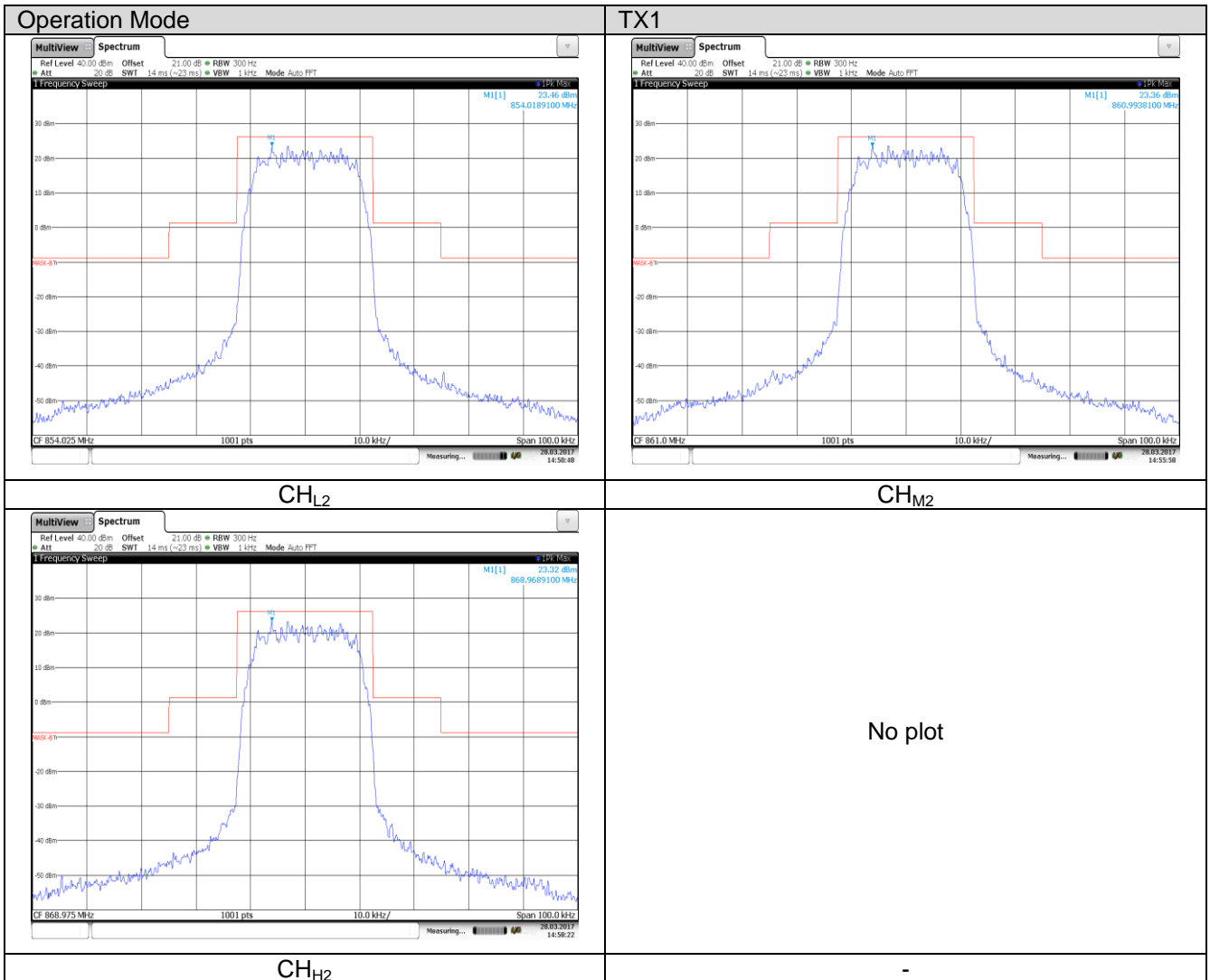
TEST RESULTS

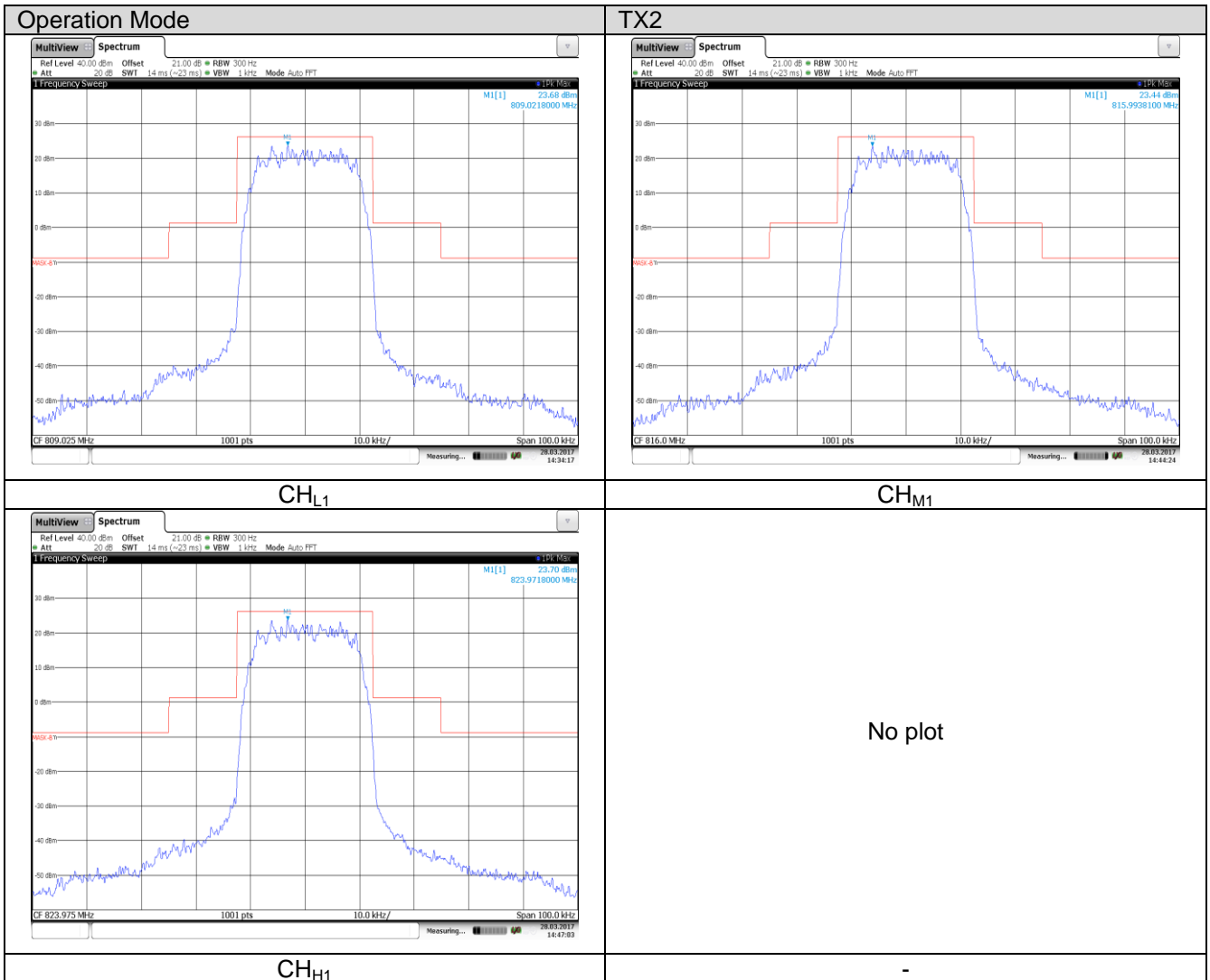
Passed **Not Applicable**

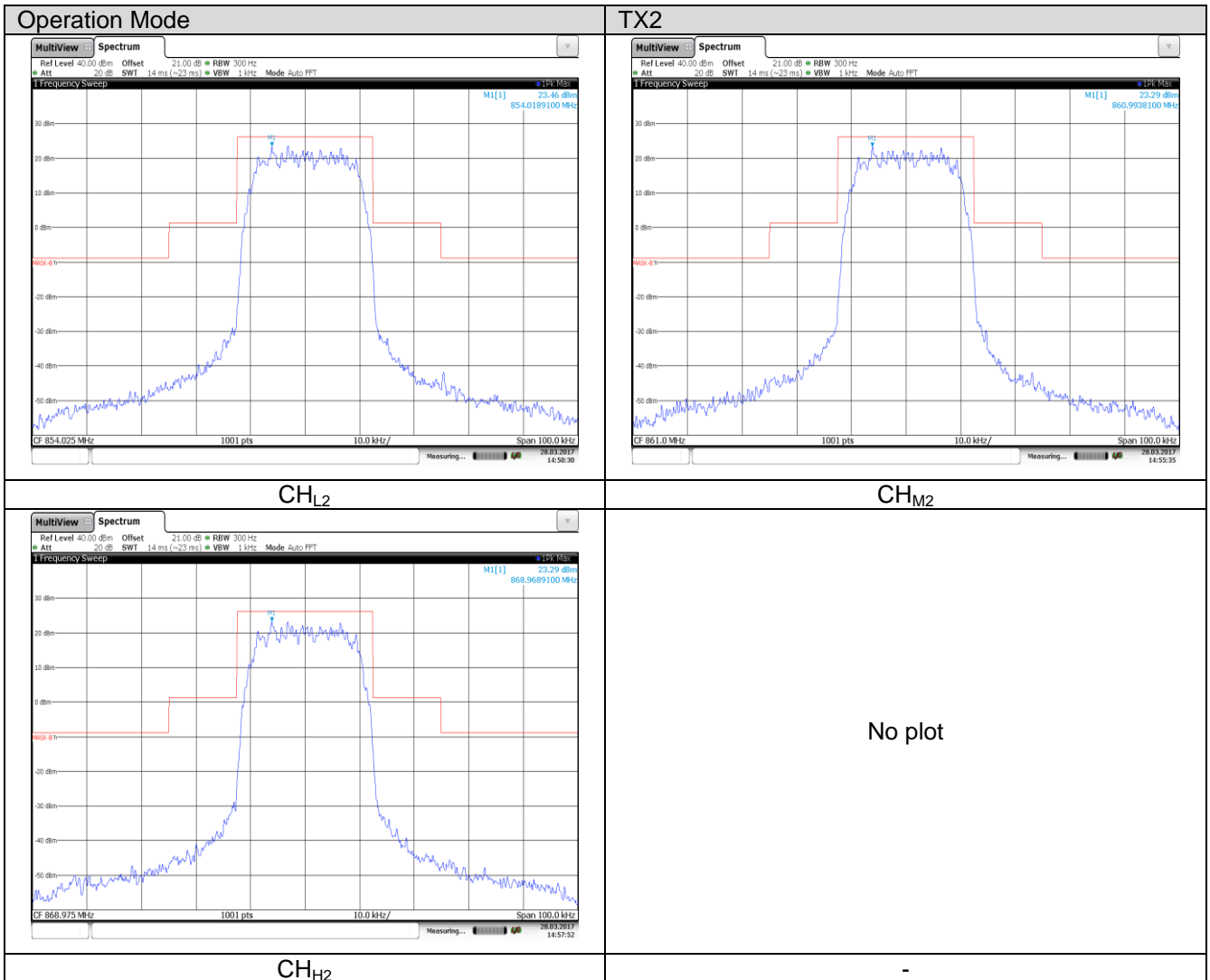
Note:
The equipment applicable to Emission Mask B.

Please refer to the below test data:









5.4. Frequency Stability Test

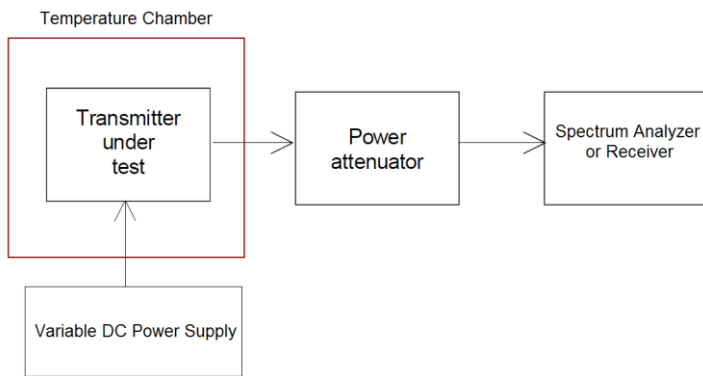
The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

LIMIT

FCC part 90.213

Frequency range (MHz)	Fixed and base stations	Mobile stations	
		Over 2 watts output power	2 watts or less output power
Below 25	1 2 3 100	100	200
25-50	20	20	50
72-76	5		50
150-174	5 115	65	4 650
216-220	1.0		1.0
220-222.12	0.1	1.5	1.5
421-512	7 11 142.5	85	85
806-809	141.0	1.5	1.5
809-824	141.5	2.5	2.5
851-854	1.0	1.5	1.5
854-869	1.5	2.5	2.5
896-901	140.1	1.5	1.5
902-928	2.5	2.5	2.5
902-928.13	2.5	2.5	2.5
929-930	1.5		
935-940	0.1	1.5	1.5
1427-1435	9300	300	300
Above 2450.10			

TEST CONFIGURATION



TEST PROCEDURE

1. According to FCC Part 2 Section 2.1055 (a)(1), the frequency stability shall be measured with variation of ambient temperature from -30°C to +50°C centigrade.
2. According to FCC Part 2 Section 2.1055 (d) (2), for battery powered equipment, the frequency stability shall be measured with reducing primary supply voltage to the battery operating end point, which is specified by the manufacture.
3. Vary primary supply voltage from 85 to 115 percent of the nominal value.
4. The EUT was set in the climate chamber and connected to an external DC power supply. The RF output was directly connected to Spectrum Analyzer. The coupling loss of the additional cables was recorded and taken in account for all the measurements. After temperature stabilization (approx. 20 min for each stage), the frequency for the lower, the middle and the highest frequency range was recorded. For Frequency stability Vs. Voltage the EUT was connected to a DC power supply and the voltage was adjusted in the required ranges. The result was recorded.

TEST MODE:

Please reference to the section 2.4

TEST RESULTS

Passed **Not Applicable**

Please refer to the below test data:

Frequency Stability VS Temperature

TX1									
Test conditions		Frequency error (ppm)						Limit (ppm)	Result
Voltage(V)	Temp(°C)	CH _{L1}	CH _{M1}	CH _{H1}	CH _{L2}	CH _{M2}	CH _{H2}		
7.4	-30	0.20	0.13	0.15	0.18	0.12	0.14	2.5	Pass
	-20	0.19	0.13	0.15	0.18	0.12	0.14		
	-10	0.19	0.13	0.15	0.19	0.12	0.14		
	0	0.18	0.13	0.14	0.19	0.12	0.14		
	10	0.18	0.13	0.14	0.18	0.13	0.13		
	20	0.20	0.14	0.15	0.19	0.13	0.14		
	30	0.21	0.14	0.16	0.21	0.13	0.16		
	40	0.21	0.15	0.17	0.22	0.14	0.17		
	50	0.22	0.15	0.18	0.24	0.14	0.19		
6.29	20	0.19	0.13	0.14	0.17	0.12	0.13		
8.51	20	0.20	0.15	0.16	0.19	0.13	0.15		

TX2									
Test conditions		Frequency error (ppm)						Limit (ppm)	Result
Voltage(V)	Temp(°C)	CH _{L1}	CH _{M1}	CH _{H1}	CH _{L2}	CH _{M2}	CH _{H2}		
7.4	-30	0.18	0.13	0.14	0.19	0.12	0.13	2.5	Pass
	-20	0.19	0.12	0.15	0.19	0.12	0.14		
	-10	0.19	0.12	0.14	0.18	0.12	0.13		
	0	0.18	0.13	0.14	0.18	0.12	0.13		
	10	0.19	0.13	0.15	0.19	0.12	0.14		
	20	0.20	0.13	0.15	0.19	0.12	0.14		
	30	0.21	0.15	0.15	0.20	0.12	0.14		
	40	0.21	0.16	0.16	0.21	0.14	0.16		
	50	0.22	0.17	0.17	0.22	0.14	0.16		
6.29	20	0.19	0.13	0.14	0.19	0.12	0.14		
8.51	20	0.21	0.15	0.16	0.19	0.12	0.15		

5.5. Adjacent Channel Power

The adjacent channel power ratio is the ratio of the total output power of a transmitter under defined conditions and modulation, to that part of the output power that falls within a specified passband centered on the nominal frequency of either of the adjacent channels or channels further offset above or below the assigned carrier frequency.

LIMIT

FCC part 90.221

(a) For the frequency bands indicated below, operations using equipment designed to operate with a 25 kHz channel bandwidth may be authorized up to a 22 kHz bandwidth if the equipment meets the adjacent channel power (ACP) limits below.

The table specifies a value for the ACP as a function of the displacement from the channel center frequency and a measurement bandwidth of 18 kHz.

(b)(1) Maximum adjacent power levels for frequencies in the 450-470 MHz band:

Frequency offset	Maximum ACP (dBc) for devices 1 watt and less	Maximum ACP (dBc) for devices above 1 watt
25 kHz	-55 dBc	-60 dBc
50 kHz	-70 dBc	-70 dBc
75 kHz	-70 dBc	-70 dBc

(2) In any case, no requirement in excess of -36 dBm shall apply.

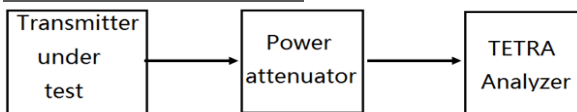
(c)(1) Maximum adjacent power levels for frequencies in the 809-824/854-869 MHz band:

Frequency offset	Maximum ACP (dBc) for devices less than 15 watts	Maximum ACP (dBc) for devices 15 watts and above
25 kHz	-55 dBc	-55 dBc
50 kHz	-65 dBc	-65 dBc
75 kHz	-65 dBc	-70 dBc

(2) In any case, no requirement in excess of -36 dBm shall apply.

(d) On any frequency removed from the assigned frequency by more than 75 kHz, the attenuation of any emission must be at least $43 + 10 \log (P_{\text{watts}})$ dB.

TEST CONFIGURATION



TEST PROCEDURE

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

TEST MODE

Please reference to the section 2.4

TEST RESULTS

Passed Not Applicable

Please refer to the below test data:

Operation Mode	Test Channel	Frequency Offset (kHz)	Measurement Power (dBc)	Limit (dB)	Result
TX1	CH _{L1}	-75	-77.52	≤-65	Pass
		-50	-76.51		
		-25	-63.42	≤-55	
		25	-63.59		
		50	-76.54	≤-65	
	75	-76.64			
	CH _{M1}	-75	-78.74	≤-65	
		-50	-76.06		
		-25	-64.39	≤-55	
		25	-64.54		
		50	-75.37	≤-65	
	75	-76.54			
	CH _{H1}	-75	-78.67	≤-65	
		-50	-76.64		
		-25	-64.52	≤-55	
25		-63.26			
50		-75.55	≤-65		
75	-76.32				
TX1	CH _{L2}	-75	-78.51	≤-65	Pass
		-50	-75.36		
		-25	-63.24	≤-55	
		25	-63.35		
		50	-75.54	≤-65	
	75	-76.24			
	CH _{M2}	-75	-76.74	≤-65	
		-50	-75.85		
		-25	-64.46	≤-55	
		25	-63.38		
		50	-75.46	≤-65	
	75	-76.42			
	CH _{H2}	-75	-78.37	≤-65	
		-50	-75.24		
		-25	-64.27	≤-55	
25		-63.66			
50		-75.57	≤-65		
75	-77.06				