FCC PART 22, 74 and 90

TEST REPORT

For

Hytera Communications Corporation Limited

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

FCC ID: YAMDS-6250U1

Report Type:	Product Type:
Original Report	DMR Trunking Base Station

Report Number:	RDG170727012-00B
Report Date:	2017-09-22
Reviewed By:	Rocky Kang 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: *DS-6250 U1 (FCC ID: YAMDS-6250U1)* in this report is a *DMR Trunking Base Station* which was measured approximately: 435 mm (L) x 340 mm (W) x 157 mm (H), rated input voltage: DC -48V.

** All measurement and test data in this report was gathered from production sample serial number: 170727012 (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2017-07-27.*

Objective

This test report is prepared on behalf of *Hytera Communications Corporation Limited* in accordance with Part 2, and Part 22,74,90 of the Federal Communication Commissions rules.

Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s).

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 individual parts:

Part 22 – Public Mobile Service
Part 74 – Experimental Radio, Auxiliary, Special Broadcast and other Program Distributonal Service
Part 90 – Private Land Mobile Radio Service

Applicable Standards: TIA 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
All emissions, radiated	±4.88dB
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.

Bay Area Compliance Laboratories Corp. (Shenzhen) has been accredited to ISO/IEC 17025 by CNAS(Lab code: L2408). And accredited to ISO/IEC 17025 by NVLAP(Lab code: 200707-0), the FCC Designation No. CN5001 under the KDB 974614 D01.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Bay Area Compliance Laboratories Corp. (Shenzhen) was registered with ISED Canada under ISED Canada Registration Number 3062B.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a test mode which has been done in the factory.

EUT Exercise Software

No exercise software was used.

Special Accessories

No special accessory was used.

Equipment Modifications

No modification was made to the EUT tested.

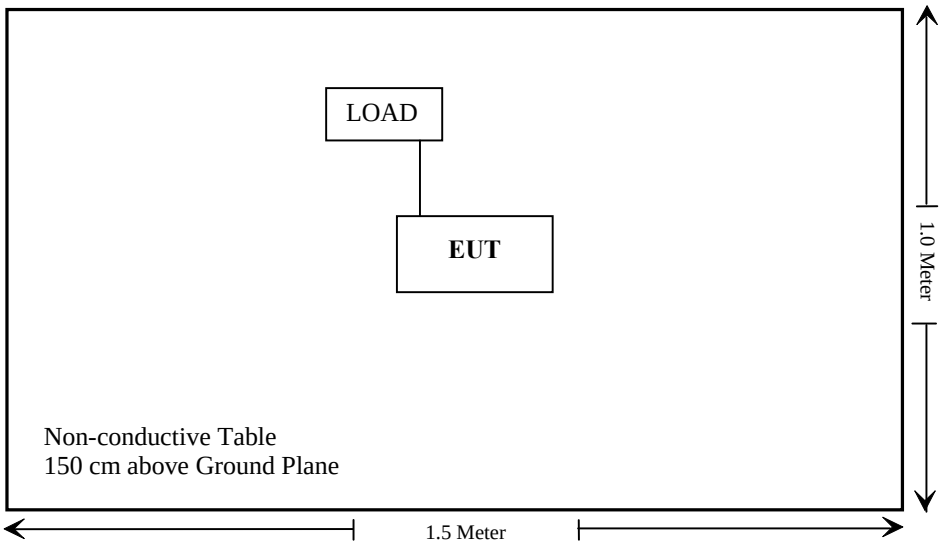
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
N/A	Load	N/A	N/A

External I/O Cable

Cable Description	Length (m)	From Port	To
Shileding Detachable RF Cable	0.5	EUT	Load

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§1.1307(b), §2.1091	Maximum Permissible exposure (MPE)	Compliance
§2.1046; § 22.727; §74.461; §90.205	RF Output Power	Compliance
§2.1047; §74.463;§90.207	Modulation Characteristic	Not Applicable
§2.1049;§22.357;§ 22.731; §74.462;§90.209; §90.210	Occupied Bandwidth & Emission Mask	Compliance
§2.1051; §22.861; §74.462;§90.210	Spurious Emission at Antenna Terminal	Compliance
§2.1053; §22.861; §74.462;§90.210	Spurious Radiated Emissions	Compliance
§2.1055; § 22.355; §74.464;§90.213	Frequency Stability	Compliance
§90.214	Transient Frequency Behavior	Compliance

Note: there are two antenna which can not support MIMO and prescan all of the the two antenna port, chosed the Max output power antenna port for the test

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test					
Sunol Sciences	Horn Antenna	DRH-118	A052604	2014-12-29	2017-12-28
Rohde & Schwarz	Signal Generator	FSIQ26	8386001028	2017-04-24	2018-04-24
Sunol Sciences	Bi-log Antenna	JB1	A040904-2	2014-12-17	2017-12-16
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2017-02-14	2018-02-14
HP	Amplifier	HP8447E	1937A01046	2017-05-21	2017-11-19
Anritsu	Signal Generator	68369B	004114	2016-12-05	2017-12-05
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2016-12-07	2017-12-07
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	2017-05-21	2017-11-19
Ducommun technologies	RF Cable	104PEA	218124002	2017-05-21	2017-11-19
Ducommun technologies	RF Cable	RG-214	1	2017-05-21	2017-11-19
Ducommun technologies	RF Cable	RG-214	2	2017-05-22	2017-11-22

*** 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).

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted Test					
Rohde & Schwarz	Signal Analyzer	FSW13	103533	2017-06-15	2018-06-14
ESPEC	Temperature & Humidity Chamber	EL-10KA	09107726	2016-11-22	2017-11-22
Long Wei	DC Power Supply	TPR-6420D	398363	NCR	NCR
Rohde & Schwarz	Vector Signal Generator	SMW200A	102522	2017-06-15	2018-06-14
BEW	Coaxial Attenuator	TS300-6-40	N/A	2017-06-15	2018-06-14
MICABLE	RF Cable	D02	N/A	2017-06-15	2018-06-14

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/cm2)
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)

Frequency (MHz)	**Antenna Gain**		**Max average output power**	**Evaluation Distance (cm)**	**Power Density (mW/cm^2)**	**MPE Limit (mW/cm^2)**
	(dBi)	**(numeric)**	**(mW)**			
410-470	9	7.94	28117	140	0.91	1.37

Note: Max tune-up output power is 47.5dBm (56234 mW), and PMR radio 4FSK mode,the duty cycle is 50%. So the average power is 28117 mW

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 140cm from nearby persons.

Result: Compliance

FCC §2.1046 & § 22.727 & §74.461 & §90.205 - RF OUTPUT POWER

Applicable Standard

FCC §2.1046, § 22.727, §74.461 and §90.205

Test Procedure

Conducted RF Output Power:

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

Spectrum Analyzer Setting:

R B/W	Video B/W
100 kHz	300 kHz

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Vincent Zeng on 2017-09-10.

Test Mode: Transmitting(antenna 2)

Test Result: Compliance. Please refer to following table.

Modulation	Channel Separation (kHz)	Frequency (MHz)	Conducted Output Power (dBm)	Conducted Output Power (W)	Note
Digital	12.5	410.0125	45.52	35.65	For FCC Part 90
	12.5	450.0125	45.85	38.46	For FCC Part 74/90
	12.5	459.9875	45.63	36.56	For FCC Part 22/90
	12.5	469.9875	45.95	39.36	For FCC Part 90

Note: The high rated power is 40W, limit is 32W-48W.

FCC §2.1047 & §74.463 & §90.207 - MODULATION CHARACTERISTIC

Applicable Standard

According to FCC § 2.1047(d), Part 22, 74, 90 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

FCC §2.1049 & §22.357 & § 22.731 & §74.462 & §90.209 & §90.210 – OCCUPIED BANDWIDTH & EMISSION MASK

Applicable Standard

FCC §2.1049, §22.357, § 22.731, §74.462, §90.209 and §90.210

Emission Mask D - 12.5 kHz channel bandwidth equipment. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

1) For any frequency removed from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0, 0dB.

2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.626 kHz but no more than 12.5 kHz, at least 7.27 (f_d –2.88 kHz) dB.

3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz at least: At least 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation.

Test Procedure

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

The resolution bandwidth of the spectrum analyzer was set at 100 Hz and the spectrum was recorded in the frequency band ±50 kHz from the carrier frequency.

Test Data

Environmental Conditions

Temperature:	24~27 ℃
Relative Humidity:	50~57 %
ATM Pressure:	100.0~101.0 kPa

The testing was performed by Vincent Zeng from 2017-08-29 to 2017-09-20.

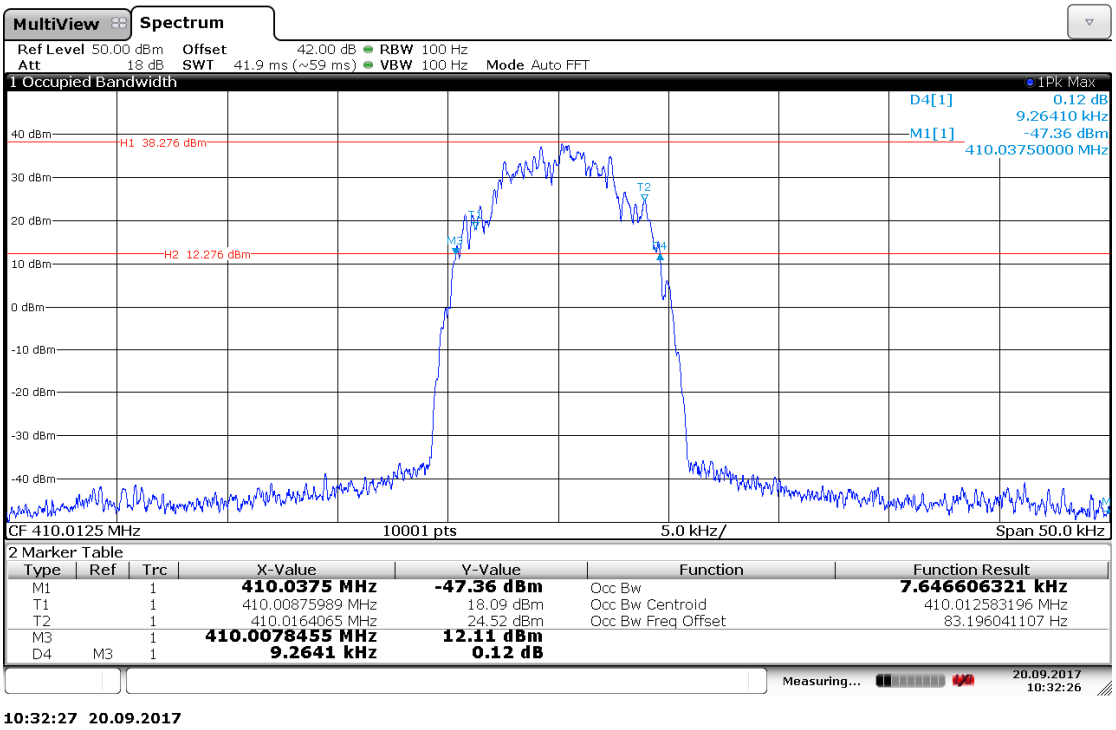
Test mode: transimitting(antenna 2)

Modulation	Frequency(MHz)	Channel Separation(kHz)	99% Occupied Bandwidth(kHz)	26dB Emission Bandwidth(kHz)
Digital	410.0125	12.5	7.65	9.26
Digital	450.0125	12.5	7.57	9.25
Digital	459.9875	12.5	7.64	9.30
Digital	469.9875	12.5	7.67	9.31

For Digital Mode (Channel Spacing: 12.5 kHz)
Emission Designator 7K60F1D and 7K60F1E
The 99% energy rule (title 47CFR 2.1049) was used for digital mode. It basically states that 99% of the modulation energy falls within X kHz, in this case, 7.67 kHz. The emission mask was obtained from 47CFR 90.210(d).
F1D and F1E portion of the designator indicates digital information.
Therefore, the entire designator for 12.5 kHz channel spacing digital mode is 7K60F1D and 7K60F1E.

Digital Modulation:

Frequency 410.0125 MHz: 99% Occupied & 26 dB Bandwidth



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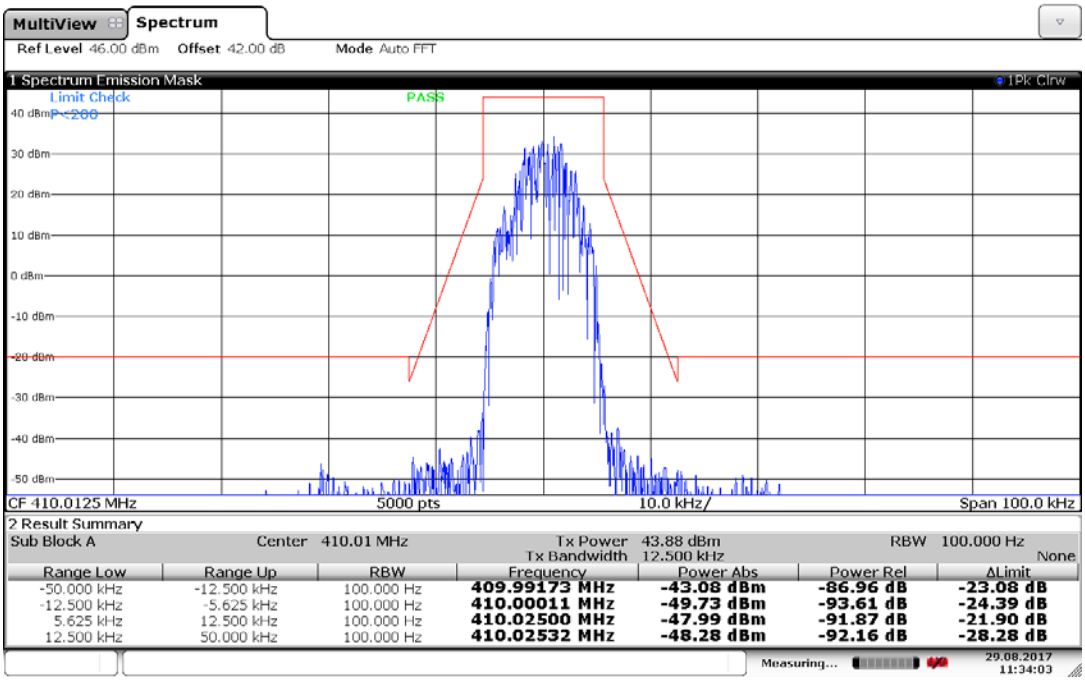
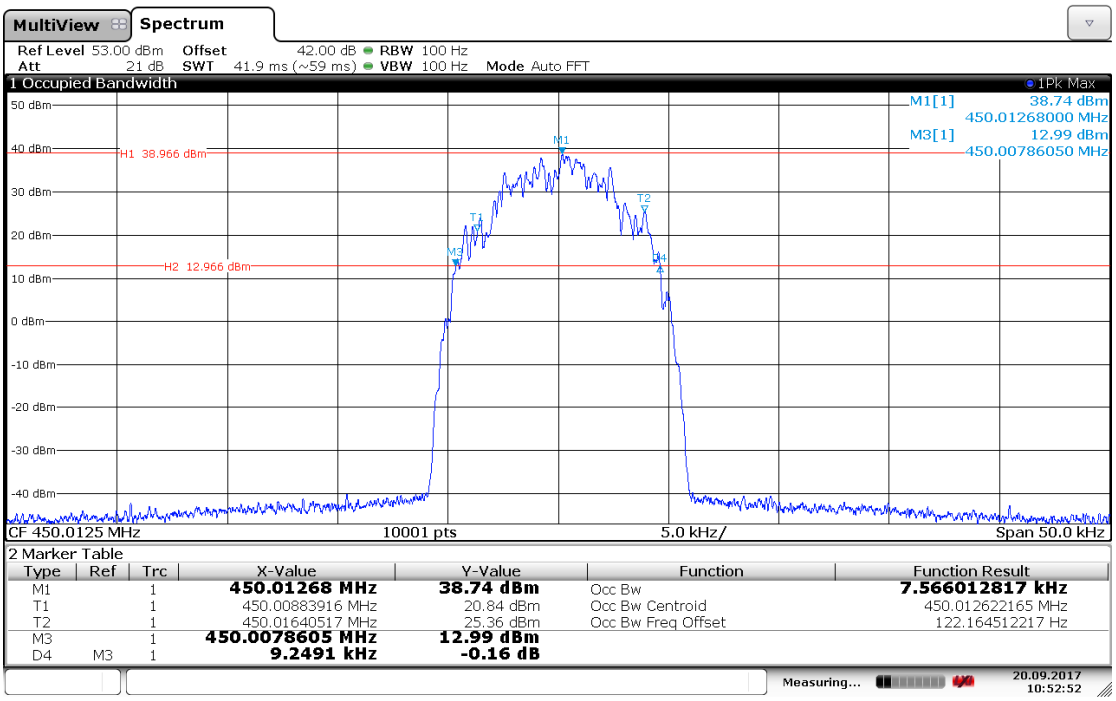
Frequency 410.0125 MHz: Emission Mask D



Frequency 450.0125 MHz: 99% Occupied & 26 dB Bandwidth



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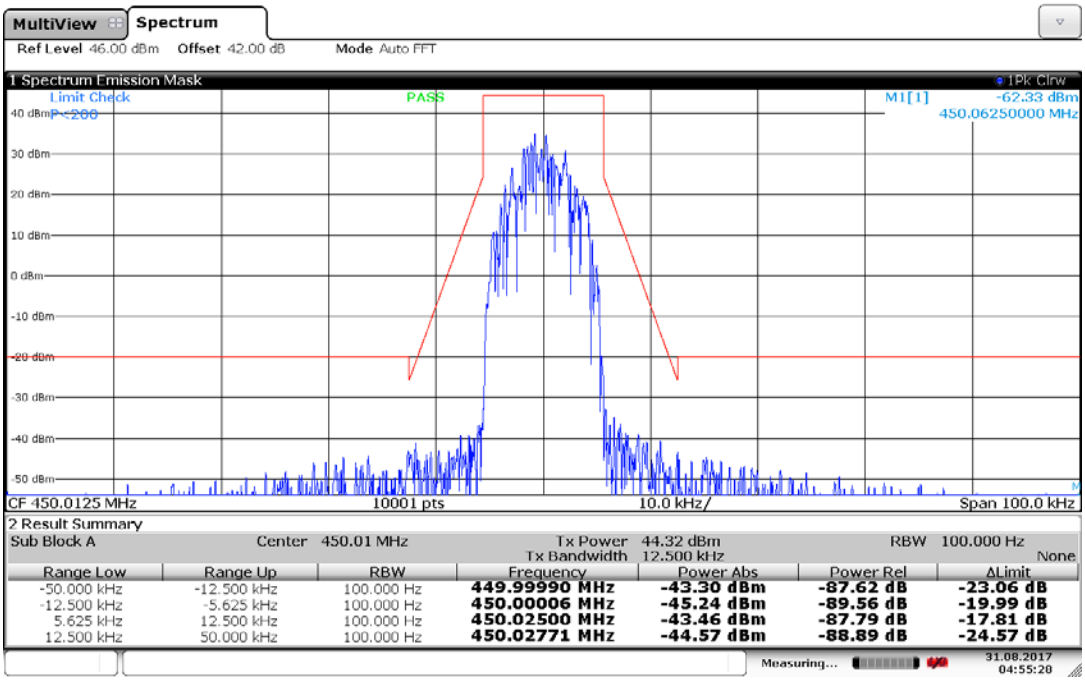
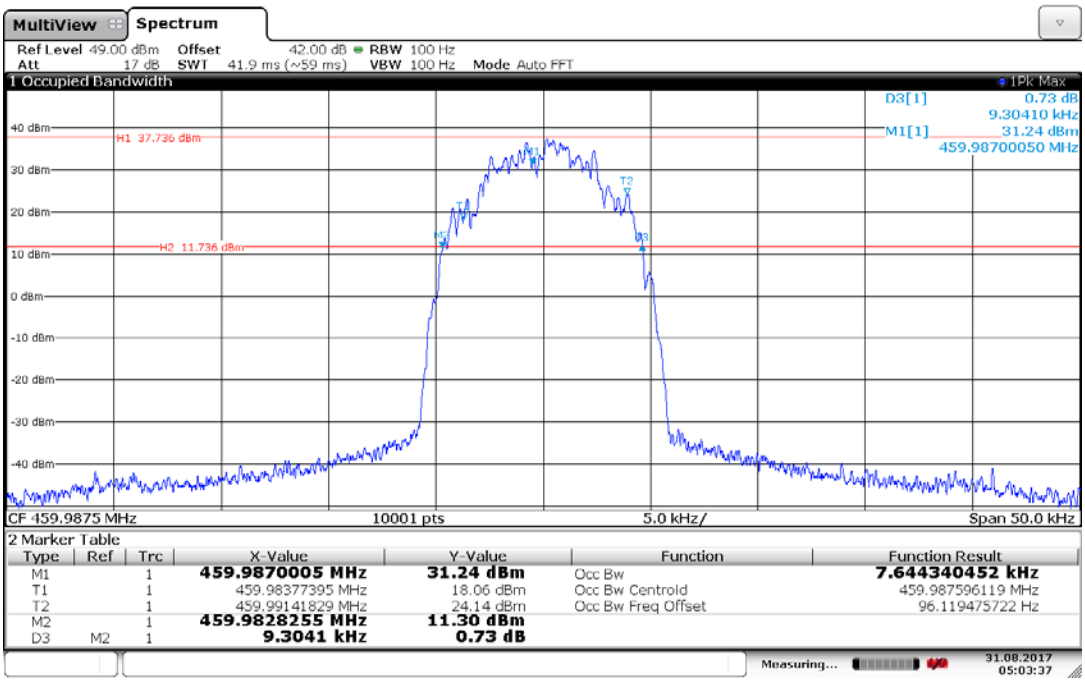
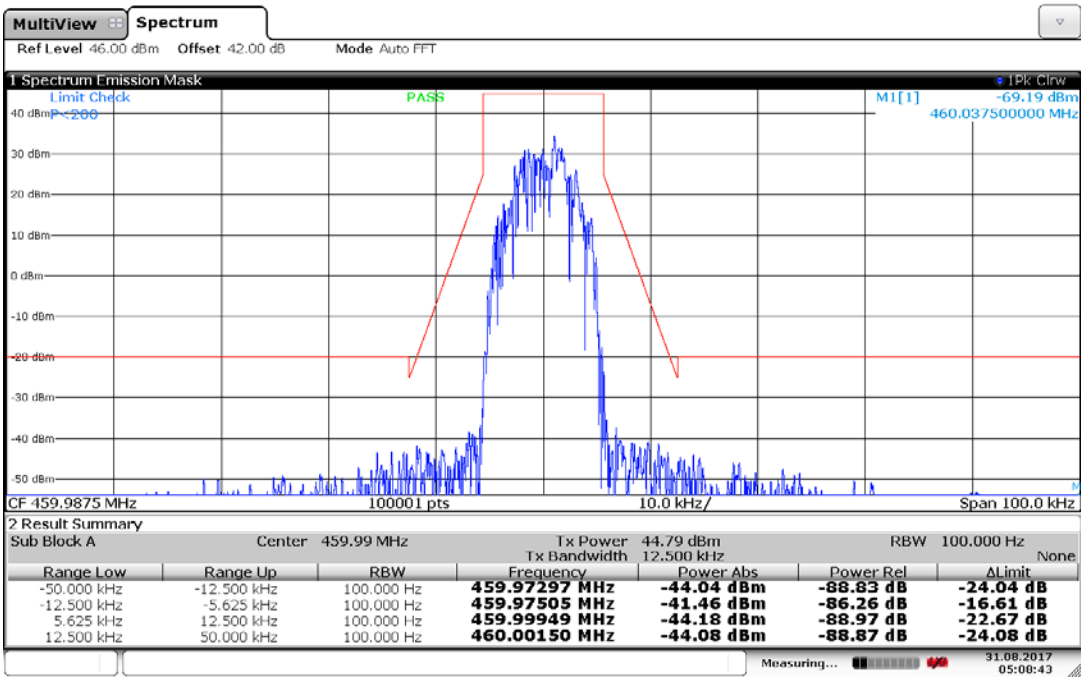
Frequency 450.0125 MHz: Emission Mask D



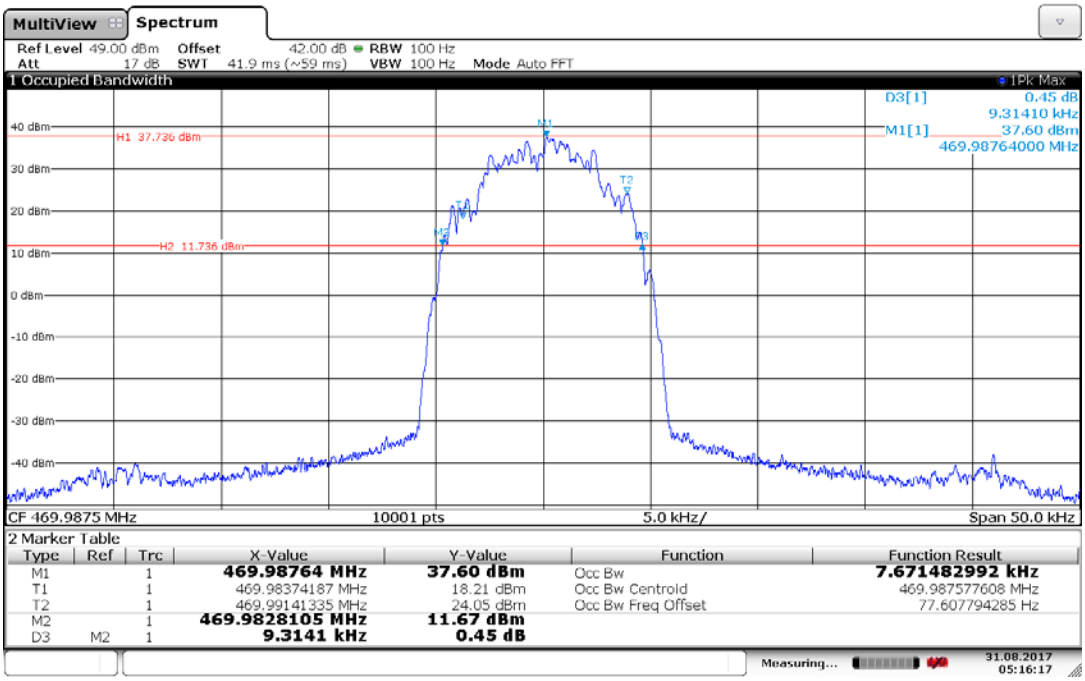
Frequency 459.9875 MHz: 99% Occupied & 26 dB Bandwidth



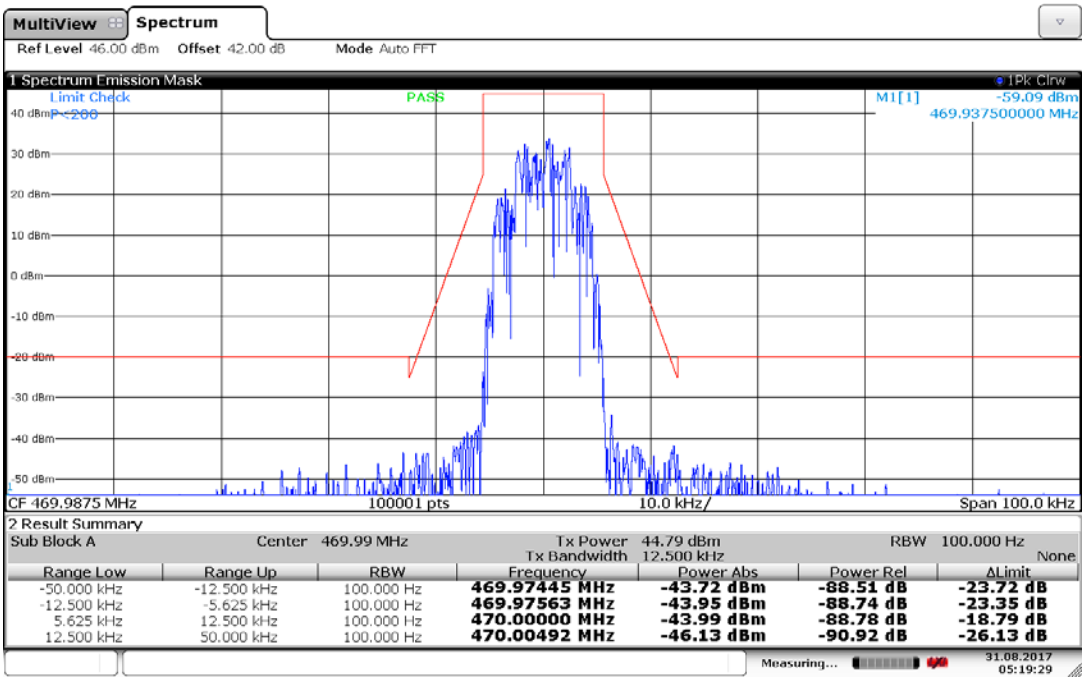
Frequency 459.9875 MHz: Emission Mask D



Frequency 469.9875 MHz: 99% Occupied & 26 dB Bandwidth



Frequency 469.9875 MHz: Emission Mask D



FCC §2.1051 & §22.861 & §74.462 & § 80.211 & §90.210 - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standard

Emission Mask D—12.5 kHz channel bandwidth equipment. For transmitters designed to operate with a 12.5 kHz channel bandwidth, any emission must be attenuated below the power (P) of the highest emission contained within the authorized bandwidth as follows:

1) For any frequency removed from the center of the authorized bandwidth f_0 to 5.625 kHz removed from f_0, 0 dB.

2) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.626 kHz but no more than 12.5 kHz, at least 7.27 (f_d –2.88 kHz) dB.

3) On any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 12.5 kHz: At least 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation.

Test Procedure

The RF output of the EUT was connected to a spectrum analyzer 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

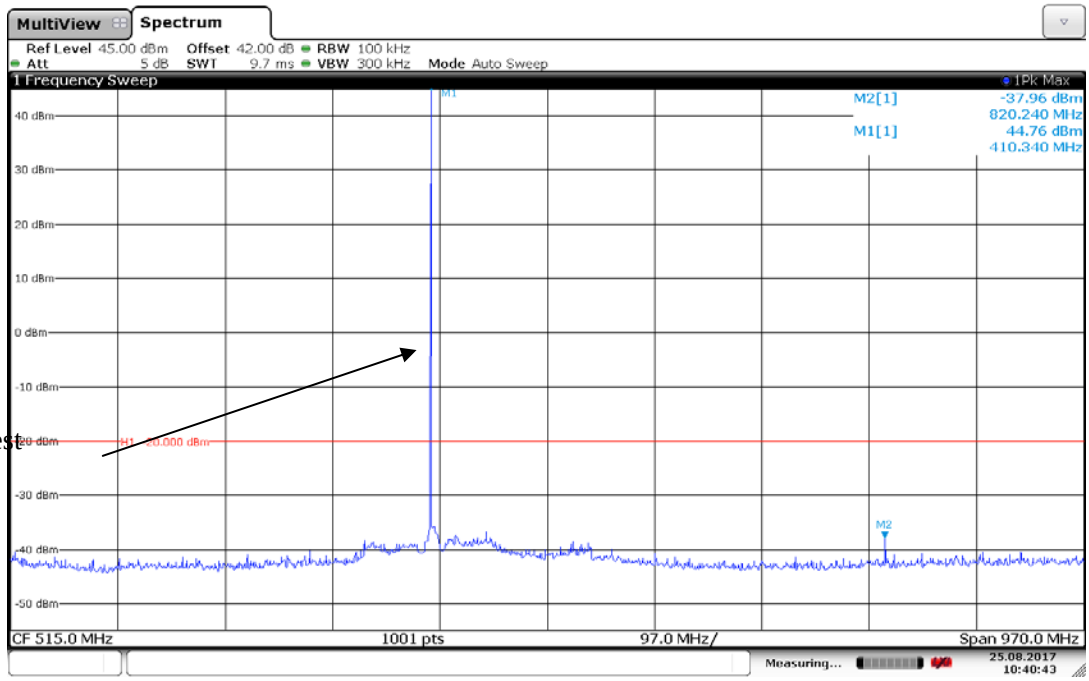
Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Vincent Zeng on 2017-08-25.

Test Mode: Transmitting(antenna 2), please refer to the following plots.

Digital Modulation:

30MHz – 1 GHz, Channel Spacing 12.5 kHz, 410.0125 MHz



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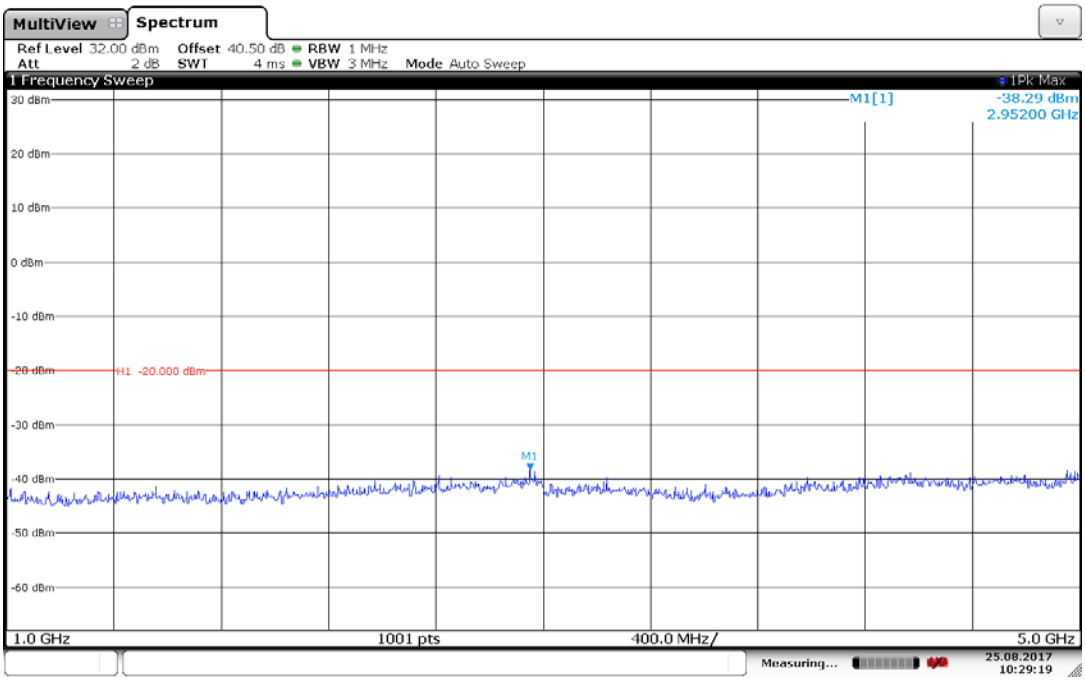
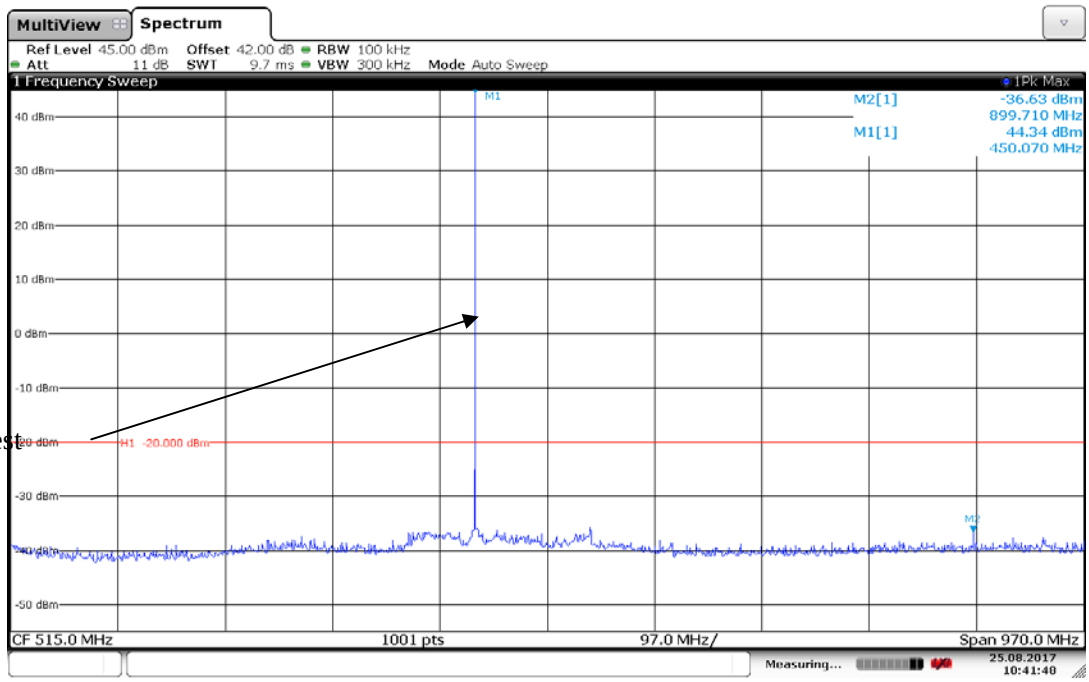
1 GHz – 5 GHz, Channel Spacing 12.5 kHz, 410.0125 MHz



30MHz – 1 GHz, Channel Spacing 12.5 kHz, 450.0125 MHz



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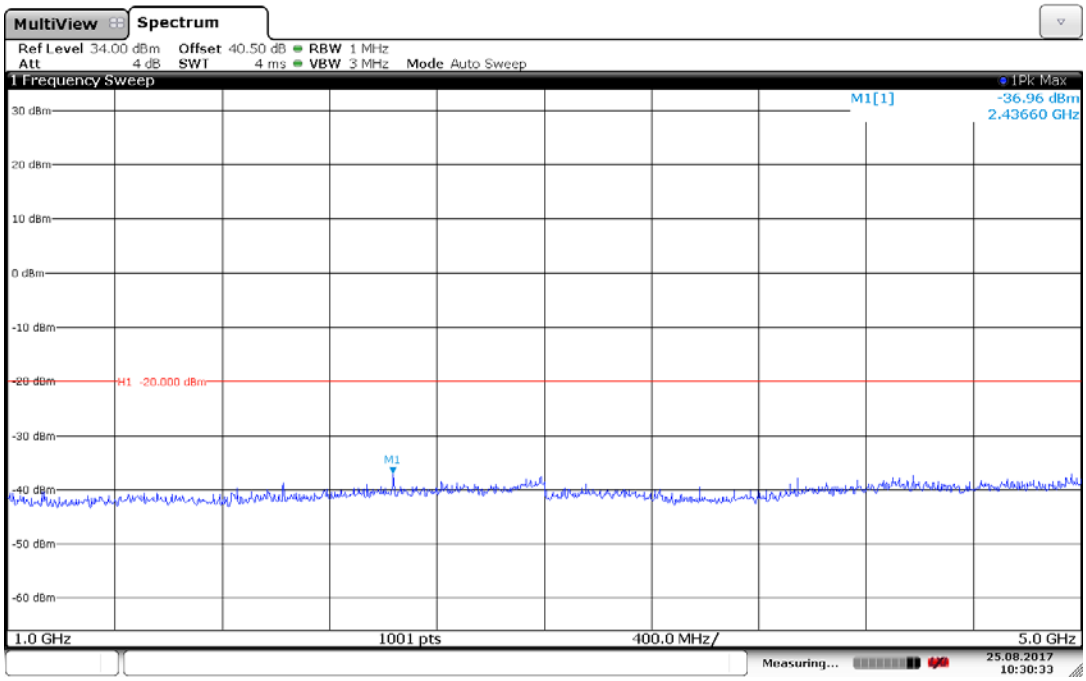
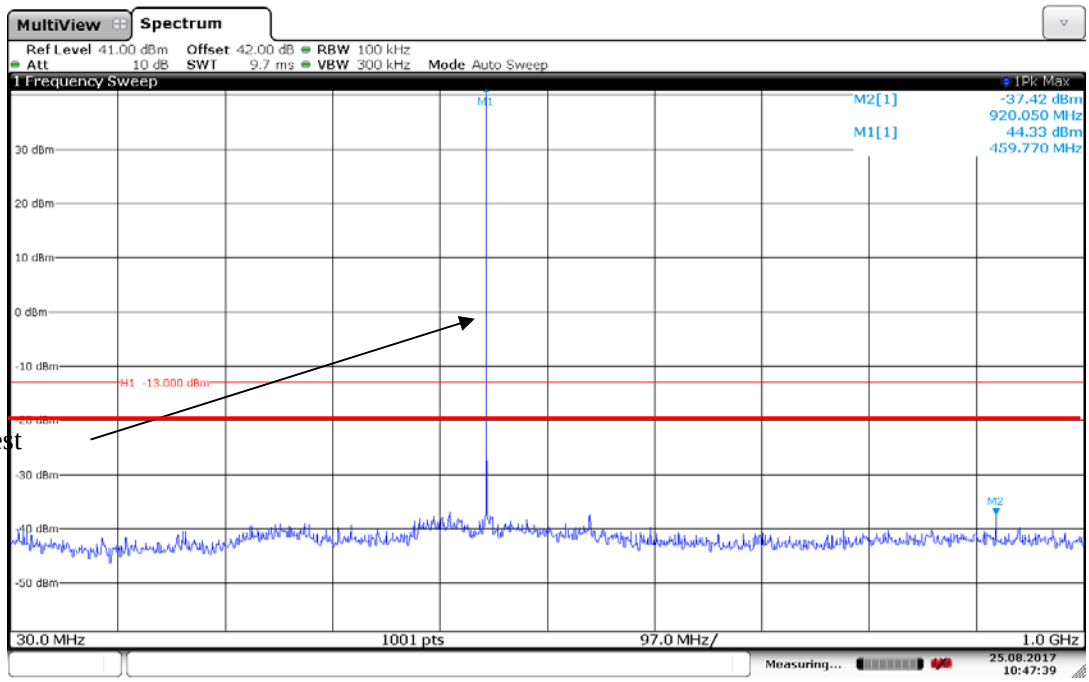
1 GHz – 5 GHz, Channel Spacing 12.5 kHz, 450.0125 MHz



30MHz – 1 GHz, Channel Spacing 12.5 kHz, 459.9875 MHz



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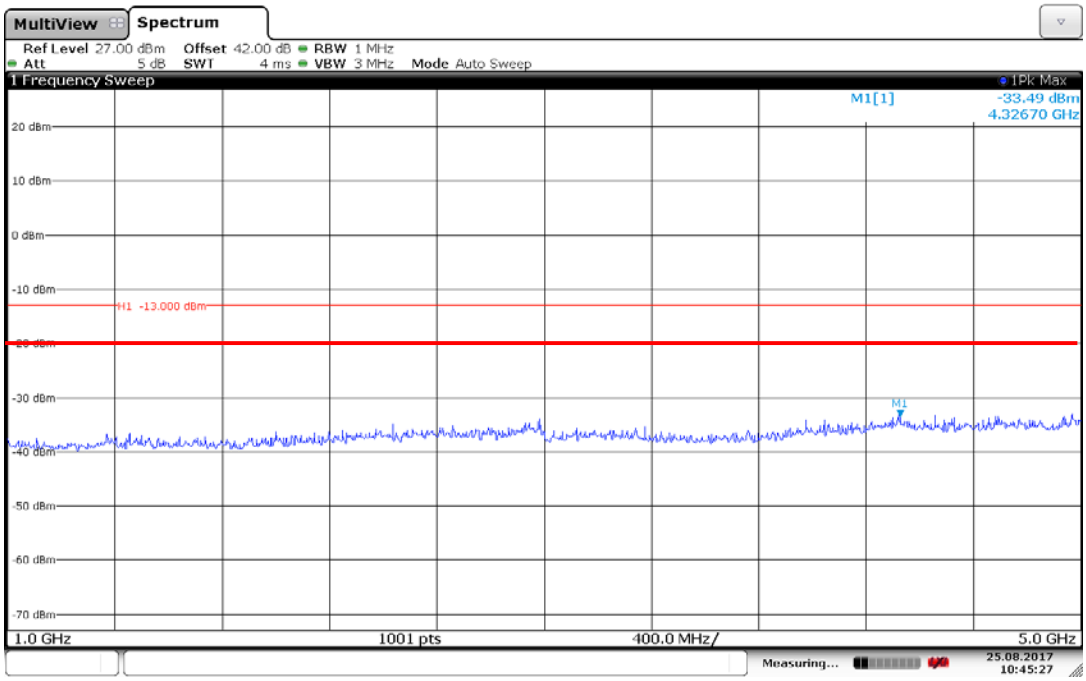
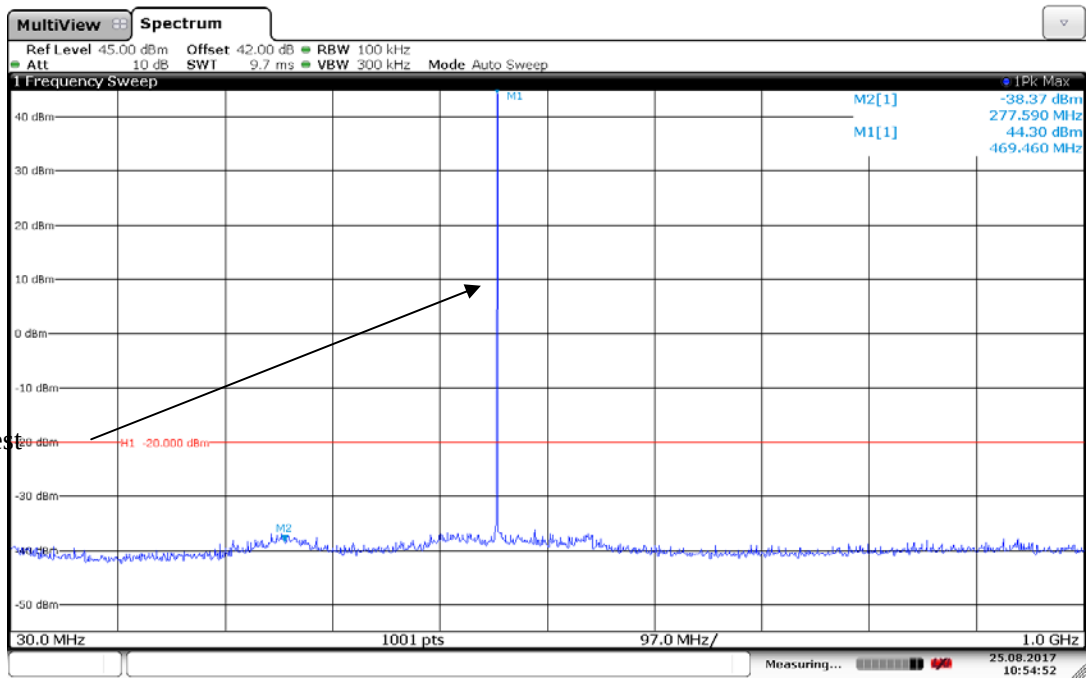
1 GHz – 5 GHz, Channel Spacing 12.5 kHz, 459.9875 MHz



30MHz – 1 GHz, Channel Spacing 12.5 kHz, 469.9875 MHz



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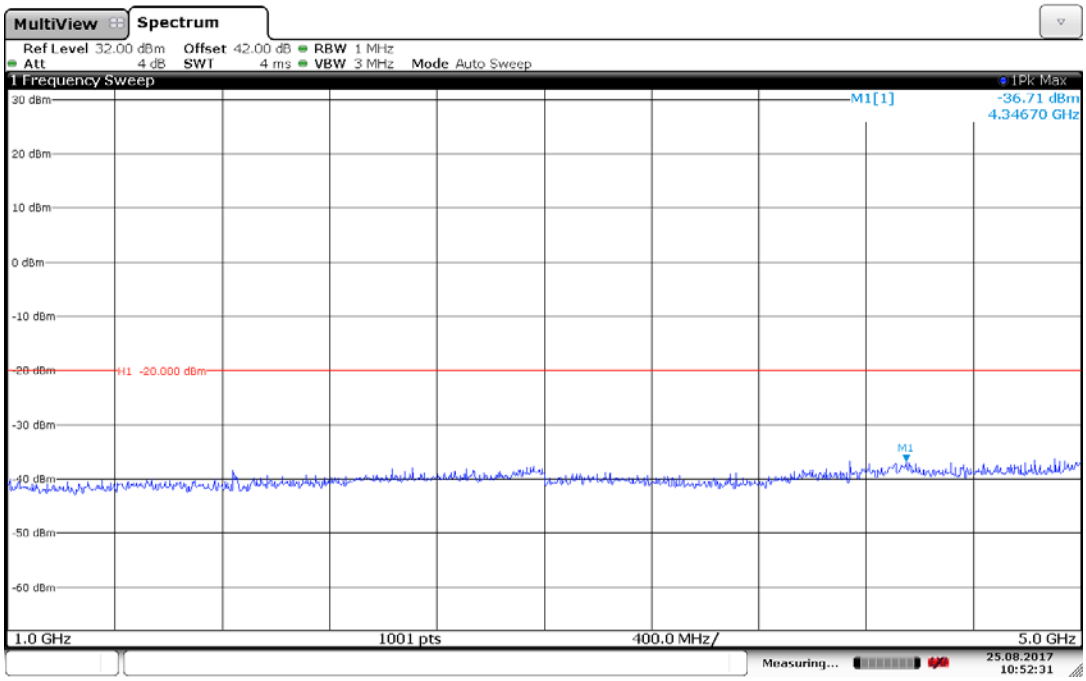
1 GHz – 5 GHz, Channel Spacing 12.5 kHz, 469.9875 MHz



FCC §2.1053 & §22.861 & §74.462 & §90.210 - RADIATED SPURIOUS EMISSIONS

Applicable Standard

FCC §2.1053, §22.861, §74.462 and §90.210

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 teeth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB =10 1g (TXpwr in Watts/0.001)-the absolute level

Spurious attenuation limit in dB =50+10 Log_{10} (power out in Watts) for EUT with a 12.5 kHz channel bandwidth.

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Vincent Zeng on 2017-07-13.

Test Mode: Transmitting

30MHz - 5GHz:

Frequency (MHz)	Receiver Reading (dBμV)	Turn Table 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)			
Antenna 2 410.0125MHz-12.5 kHz										
820.03	48.79	287	1.9	H	-46.21	0.6	0	-46.81	-20	26.81
820.03	46.29	72	2.1	V	-48.71	0.6	0	-49.31	-20	29.31
1230.04	50.96	79	1.5	H	-57.0	1.50	7.20	-51.30	-20	31.30
1230.04	48.63	107	1.2	V	-59.0	1.50	7.20	-53.30	-20	33.30
1640.05	47.89	94	2.2	H	-60.4	1.40	8.90	-52.90	-20	32.90
1640.05	48.64	316	2.0	V	-59.5	1.40	8.90	-52.00	-20	32.00
Antenna 2 450.0125MHz-12.5 kHz										
900.025	47.11	287	1.9	H	-47.9	0.6	0.0	-48.51	-20	28.51
900.025	47.86	72	2.1	V	-47.1	0.6	0.0	-47.76	-20	27.76
1350.04	48.04	68	1.5	H	-59.8	1.60	8.30	-53.10	-20	33.10
1350.04	47.28	282	2.5	V	-60.8	1.60	8.30	-54.10	-20	34.10
1800.05	47.91	112	2.3	H	-58.2	1.30	8.50	-51.00	-20	31.00
1800.05	45.88	216	2.5	V	-59.8	1.30	8.50	-52.60	-20	32.60
Antenna 2 459.9875MHz-12.5 kHz										
919.98	46.29	287	1.9	H	-48.71	0.6	0	-49.31	-20	29.31
919.98	48.53	72	2.1	V	-46.47	0.6	0	-47.07	-20	27.07
1379.96	49.76	186	1.5	H	-58.1	1.60	8.30	-51.40	-20	31.40
1379.96	48.24	192	2.2	V	-59.9	1.60	8.30	-53.20	-20	33.20
1839.95	47.96	65	2.1	H	-58.1	1.30	8.50	-50.90	-20	30.90
1839.95	48.66	140	2.0	V	-57.0	1.30	8.50	-49.80	-20	29.80
Antenna 2 469.9875MHz-12.5 kHz										
939.98	49.68	287	1.9	H	-45.32	0.6	0	-45.92	-20	25.92
939.98	48.76	72	2.1	V	-46.24	0.6	0	-46.84	-20	26.84
1409.96	46.88	231	1.5	H	-61.0	1.60	8.30	-54.30	-20	34.30
1409.96	47.59	220	1.4	V	-60.5	1.60	8.30	-53.80	-20	33.80
1879.95	49.32	70	2.5	H	-55.0	1.30	8.50	-47.80	-20	27.80
1879.95	48.91	26	2.2	V	-55.6	1.30	8.50	-48.40	-20	28.40

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

FCC §2.1055 & § 22.355 & §74.464 & §90.213 - FREQUENCY STABILITY

Applicable Standard

FCC §2.1055, § 22.355, §74.464 and §90.213

Test Procedure

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to a frequency counter via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads 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 counter.

Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

The testing was performed by Vincent Zeng on 2017-09-10.

Test Mode: Transmitting(antenna 2)

Digital Modulation, Reference Frequency: 410.0125 MHz, Limit: ±1.5 ppm			
Test Environment		Frequency Measure with Time Elapsed	
Temperature (℃)	Voltage Supplied (V_{DC})	Measured Frequency (MHz)	Frequency Error (ppm)
Frequency Stability versus Input Temperature			
50	-48.0	410.012492	-0.02
40	-48.0	410.012494	-0.01
30	-48.0	410.012494	-0.01
20	-48.0	410.012502	0.01
10	-48.0	410.012504	0.01
0	-48.0	410.012506	0.01
-10	-48.0	410.012508	0.02
-20	-48.0	410.012508	0.02
-30	-48.0	410.012508	0.02
Frequency Stability versus Input Voltage			
20	-37.0	410.012504	0.01
20	-60.0	410.012504	0.01

Digital Modulation, Reference Frequency: 450.0125 MHz, Limit: ±1.5 ppm			
Test Environment		Frequency Measure with Time Elapsed	
Temperature (℃)	Voltage Supplied (V_{DC})	Measured Frequency (MHz)	Frequency Error (ppm)
Frequency Stability versus Input Temperature			
50	-48.0	450.012489	-0.02
40	-48.0	450.012492	-0.02
30	-48.0	450.012492	-0.02
20	-48.0	450.012494	-0.01
10	-48.0	450.012485	-0.03
0	-48.0	450.012485	-0.03
-10	-48.0	450.012484	-0.04
-20	-48.0	450.012485	-0.03
-30	-48.0	450.012484	-0.04
Frequency Stability versus Input Voltage			
20	-37.0	450.012494	-0.01
20	-60.0	450.012492	-0.02

Digital Modulation, Reference Frequency: 459.9875 MHz, Limit: ±1.5 ppm			
Test Environment		Frequency Measure with Time Elapsed	
Temperature (℃)	Voltage Supplied (V_{DC})	Measured Frequency (MHz)	Frequency Error (ppm)
Frequency Stability versus Input Temperature			
50	-48.0	459.987504	0.01
40	-48.0	459.987504	0.01
30	-48.0	459.987508	0.02
20	-48.0	459.987512	0.03
10	-48.0	459.98751	0.02
0	-48.0	459.987516	0.04
-10	-48.0	459.987508	0.02
-20	-48.0	459.98751	0.02
-30	-48.0	459.987512	0.03
Frequency Stability versus Input Voltage			
20	-37.0	459.987512	0.03
20	-60.0	459.987508	0.02

Digital Modulation, Reference Frequency: 469.9875 MHz, Limit: ±1.5 ppm			
Test Environment		Frequency Measure with Time Elapsed	
Temperature (℃)	Voltage Supplied (V_{DC})	Measured Frequency (MHz)	Frequency Error (ppm)
Frequency Stability versus Input Temperature			
50	-48.0	469.987522	0.05
40	-48.0	469.987522	0.05
30	-48.0	469.987520	0.04
20	-48.0	469.987508	0.02
10	-48.0	469.987512	0.03
0	-48.0	469.987514	0.03
-10	-48.0	469.987516	0.03
-20	-48.0	469.987514	0.03
-30	-48.0	498.987512	0.03
Frequency Stability versus Input Voltage			
20	-37.0	469.987508	0.02
20	-60.0	469.987512	0.03

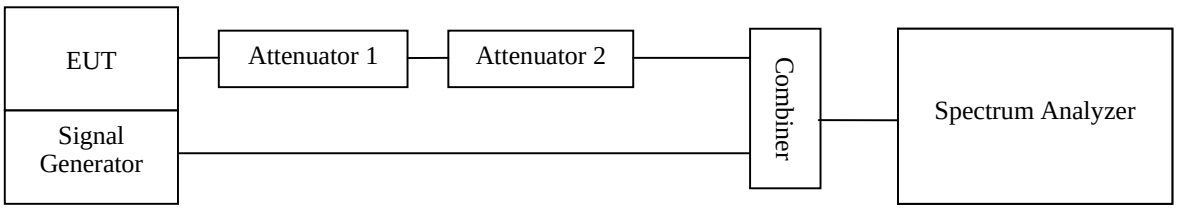
FCC §90.214 - TRANSIENT FREQUENCY BEHAVIOR

Applicable Standard

Regulations: FCC §90.214
Test method: ANSI/TIA-603-D 2010, section 2.2.19.3

Test Procedure

a) Connect the EUT and test equipment as shown on the following block diagram.
b) Set the Spectrum Analyzer to measure FM deviation, and tune the RF frequency to the transmitter assigned frequency.
c) Set the signal generator to the assigned transmitter frequency and modulate it with a 1 kHz tone at ±12.5 kHz deviation and set its output level to -100dBm.
d) Turn on the transmitter.
e) Supply sufficient attenuation via the RF attenuator to provide an input level to the Spectrum Analyzer that is 40 dB below the maximum allowed input power when the transmitter is operating at its rated power level. Note this power level on the Spectrum Analyzer as P_0.
f) Turn off the transmitter.
g) Adjust the RF level of the signal generator to provide RF power equal to P_0. This signal generator RF level shall be maintained throughout the rest of the measurement.
h) Remove the attenuation 1, so the input power to the Spectrum Analyzer is increased by 30 dB when the transmitter is turned on.
i) Adjust the vertical amplitude control of the spectrum analyzer to display the 1000 Hz at ±4 divisions vertically centered on the display. Set trigger mode of the Spectrum Analyzer to "Video", and tune the "trigger level" on suitable level. Then set the "tiger offset" to -10ms for turn on and -15ms for turn off.
j) Turn on the transmitter and the transient wave will be captured on the screen of Spectrum Analyzer. Observe the stored display. The instant when the 1 kHz test signal is completely suppressed is considered to be t_{on}. The trace should be maintained within the allowed divisions during the period t_1 and t_2.
k) Then turn off the transmitter, and another transient wave will be captured on the screen of Spectrum Analyzer. The trace should be maintained within the allowed divisions during the period t_3.



Test Data

Environmental Conditions

Temperature:	25 ℃
Relative Humidity:	56 %
ATM Pressure:	101.0 kPa

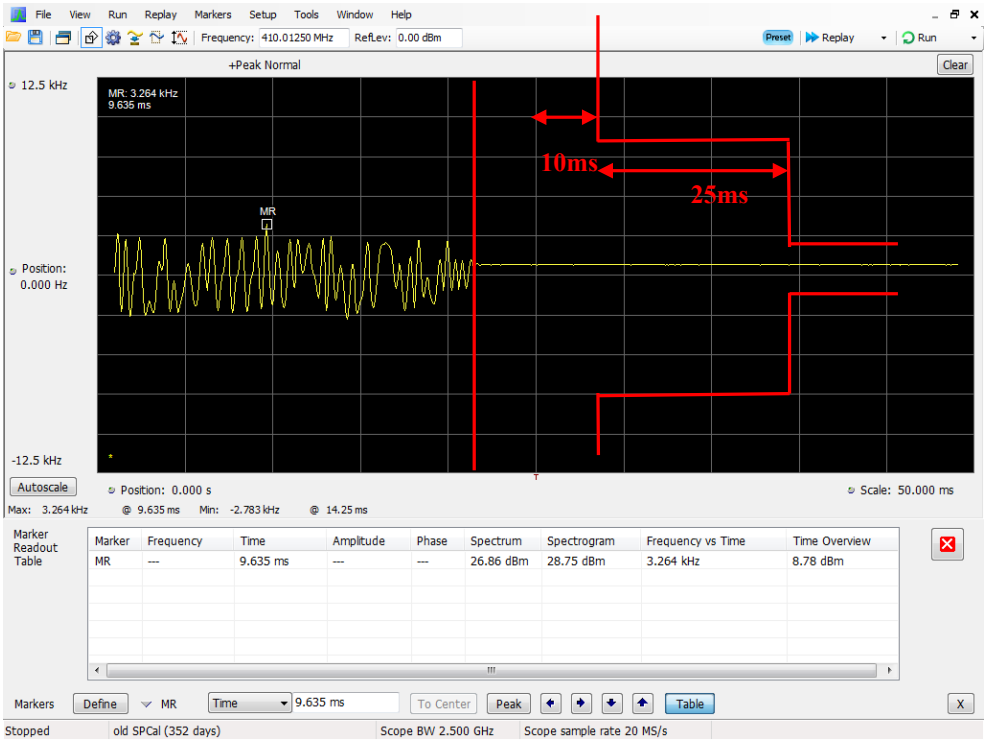
The testing was performed by Vincent Zeng on 2017-09-10.

Frequency(MHz)	Channel Separation(KHz)	Transient Period(ms)	Transient Frequency
410.0125	12.5	10(t1)	＜±12.5KHz
		25(t2)	＜±6.25KHz
		10(t3)	＜±12.5KHz
469.9875	12.5	10(t1)	＜±12.5KHz
		25(t2)	＜±6.25KHz
		10(t3)	＜±12.5KHz

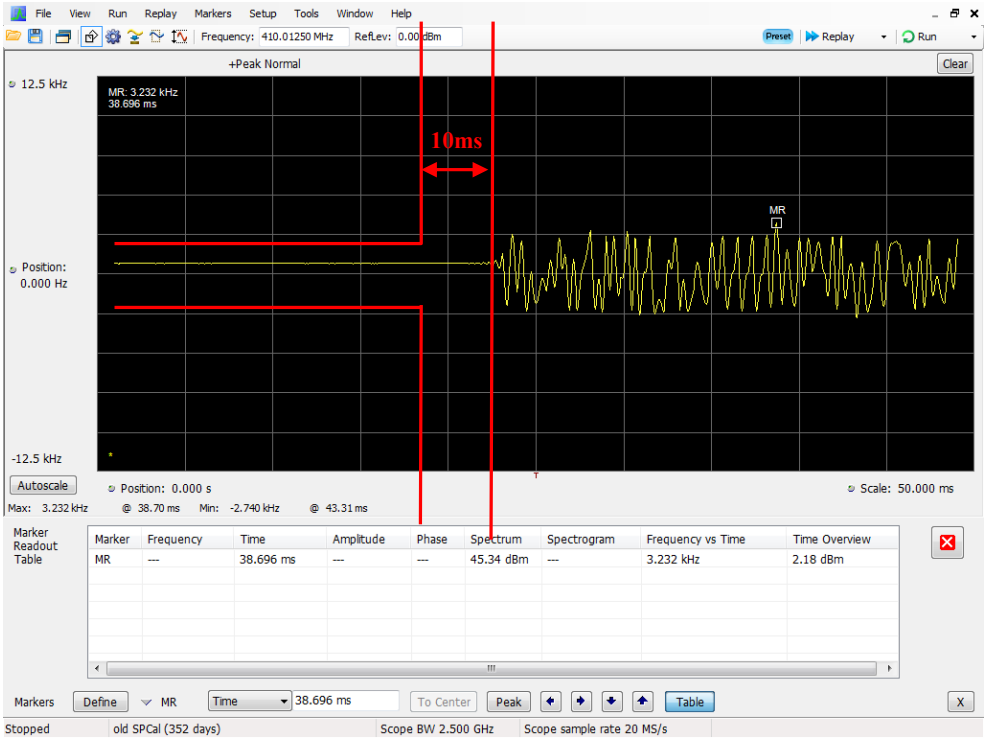
Please refer to the following plots.

Channel: 410.0125 MHz

Turn on

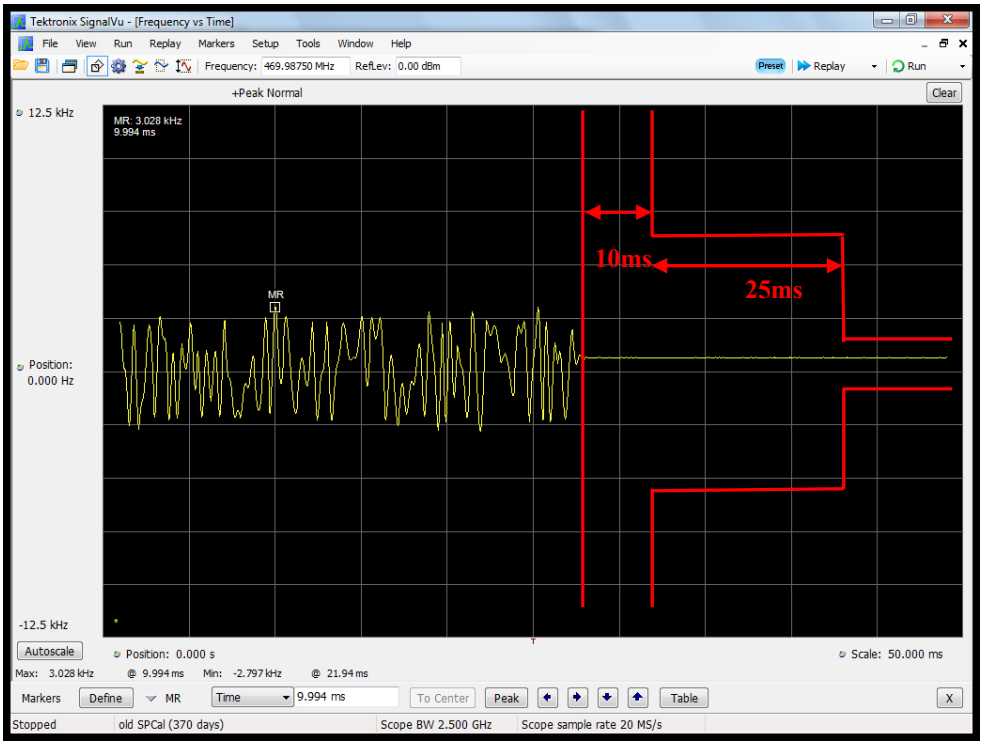


Turn off

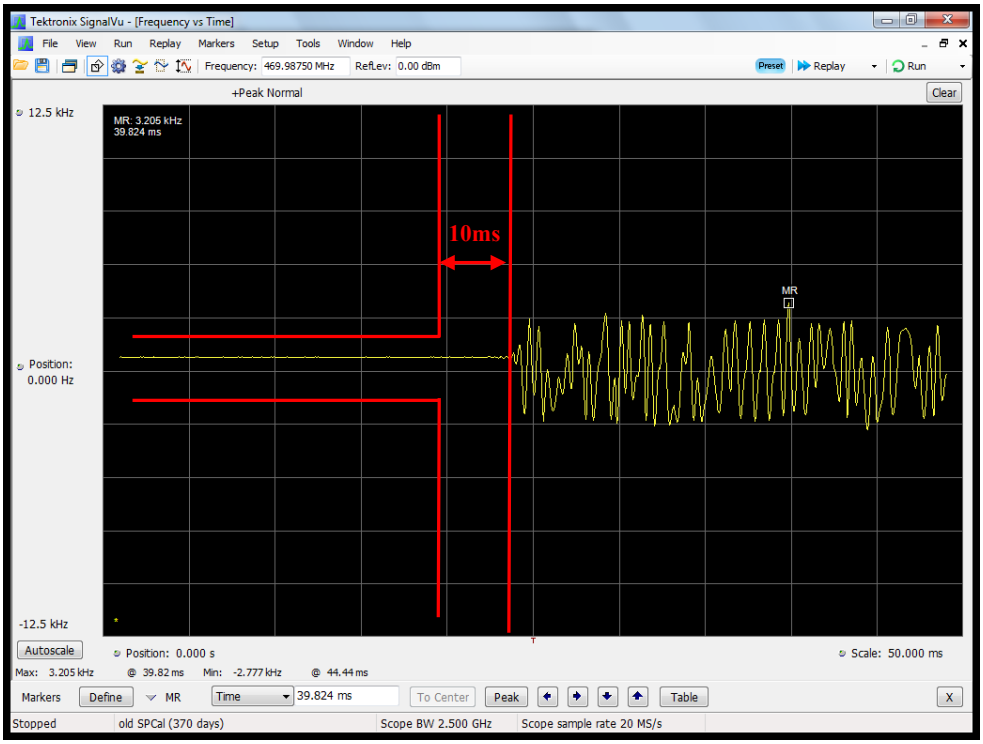


Channel: 469.9875 MHz

Turn on



Turn off



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