



FCC Test Report

Report No.: FVC-ESH-P20112379B-13

FCC ID: T2C-A20

Product: Video Conferencing Endpoint

Model: MeetingBar A20

Received Date: Dec.30, 2020

Test Date: Jan.02 to Jan.22, 2021

Issued Date: Jan.23, 2021

Applicant: YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD.

Address: 309, 3rd Floor, No.16, Yun Ding North Road, Huli District, Xiamen City, Fujian, P.R. China

Manufacturer: YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD.

Address: 309, 3rd Floor, No.16, Yun Ding North Road, Huli District, Xiamen City, Fujian, P.R. China

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

Lab Address: No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)



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Release Control Record

Issue No.	Description	Date Issued
FVC-ESH-P20112379B-13	Original release	Jan.23, 2021



1 Certificate of Conformity

Product: Video Conferencing Endpoint

Brand: Yealink

Model: MeetingBar A20

Applicant: YEALINK(XIAMEN) NETWORK TECHNOLOGY CO.,LTD.

Test Date: Jan.02 to Jan.22, 2021

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10:2013

The above equipment has been tested by **BUREAU VERITAS ADT (Shanghai) Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :



Yuan ZHANG
Project Engineer

, Date:

Jan.23, 2021

Approved by :



Daniel Sun
EMC Lab Manager

, Date:

Jan.23, 2021



2 Summary of Test Results

The EUT has been tested according to the following specifications:

47 CFR FCC Part 15, Subpart C (SECTION 15.247)			
FCC Clause	Test Item	Result	Remarks
15.203	Antenna Requirement	PASS	No antenna connector is used.
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	Minimum 6dB Bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted Output Power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.247(d)	Conducted Band Edges Measurement	PASS	Meet the requirement of limit.
15.247(d)	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
15.247(d)	Emissions in restricted frequency bands	PASS	Meet the requirement of limit.
15.205 / 15.209 / 15.247(d)	Radiated Emissions Measurement	PASS	Meet the requirement of limit.

2.1 Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Hybrid Antenna(25MHz-1.5GHz)	Schwarzbeck	VULB9168	E1A1012	Jul.29, 20	Jul.28, 22
Horn Antenna(1GHz -18GHz)	Schwarzbeck	BBHA9120D	E1A1017	Aug.25, 20	Aug.24, 22
Double Ridge Horn Antenna(18G-40G)	COM-POWER	AH-840	E1A1040	Jul.15, 20	Jul.14, 22
Pre-Amplifier(100kHz-1.3GHz)	Agilent	8447D	E1A2001	Apr.20, 20	Apr.19, 21
Pre-Amplifier(0.5GHz-18GHz)	EMCI	EMC184045SE	E1A2009	Jul.06, 20	Jul.05, 21
Pre-Amplifier(18GHz-40GHz)	EMCI	EMC051845SE	E1A2008	Jul.06, 20	Jul.05, 21
EMI test receiver	R&S	ESR7	E1R1005	Apr.20, 20	Apr.19, 21
Spectrum Analyzer	Keysight	N9030B	E1S1003	Jul.23, 20	Jul.22, 21
Spectrum Analyzer	Keysight	N9020A	E1S1004	Mar.03, 20	Mar.02, 21
EMI test receiver	R&S	ESCS30	E1R1001	May.12, 20	May.11, 21
LISN	R&S	ENV216	E1L1011	May.12, 20	May.11, 21
Humidity&Temp Tester	Baolima	WS508	E1H1011	Apr. 03, 20	Apr. 02, 21
RF Control Unit	Toscend	JS0806-2	E1C5003	N/A	N/A
Test Software	ADT	ADT_COND_V7 .3.1	N/A	N/A	N/A
Test Software	Toscend	JS32-RE	N/A	N/A	N/A
Test Software	Toscend	JS1120	N/A	N/A	N/A
Test Software	Toscend	JS1120-3	N/A	N/A	N/A

2.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Measurement	Frequency	Expanded Uncertainty ($k=2$) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.36 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.47 dB
	6GHz ~ 18GHz	3.75 dB
	18GHz ~ 40GHz	3.30 dB

2.3 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Video Conferencing Endpoint
Brand	Yealink
Test Model	MeetingBar A20
Power Rating	I/P: 48V ===, 0.7A for Video Conferencing Endpoint; I/P: 100-240Vac, 50/60Hz, 1.0A; O/P: 48V ===, 0.7A for AC Adapter.
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Operating Frequency	See clause 3.2
Number of Channel	See clause 3.2
Output Power	16.24dBm
Antenna Type	PCB Antenna
Antenna Connector	--
Antenna Gain	Ant1:3dBi Ant2:3dBi MIMO Gain:6.01dBi

Note: For more details, please refer to the User's manual of the EUT.

Special comments: None.

Modulation Mode	TX /RX Function
802.11b	2TX / 2RX
802.11g	2TX / 2RX
802.11n (HT20)	2TX / 2RX
802.11n (HT40)	2TX / 2RX

3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20) and 7 channels are provided for 802.11n (HT40).

Channel	Frequency	Channel	Frequency
1	2412MHz	7	2442MHz
2	2417MHz	8	2447MHz
3	2422MHz	9	2452MHz
4	2427MHz	10	2457MHz
5	2432MHz	11	2462MHz
6	2437MHz	-	-

3.2.1 Test Mode Applicability:

EUT Configure Mode	Applicable to				Description
	RE ≥ 1G	RE < 1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G**: Radiated Emission above 1GHz **RE≤1G**: Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM**: Antenna Port Conducted Measurement

Radiated Emission Test (Above 1 GHz):

- ☒ ☐ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Radiated Emission Test (Below 1 GHz):

- ☒ ☐ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Power Line Conducted Emission Test:

- ☒ ☐ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1	DSSS	DBPSK	1.0

Antenna Port Conducted Measurement

- ☐ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1.0
-	802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
-	802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
-	802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

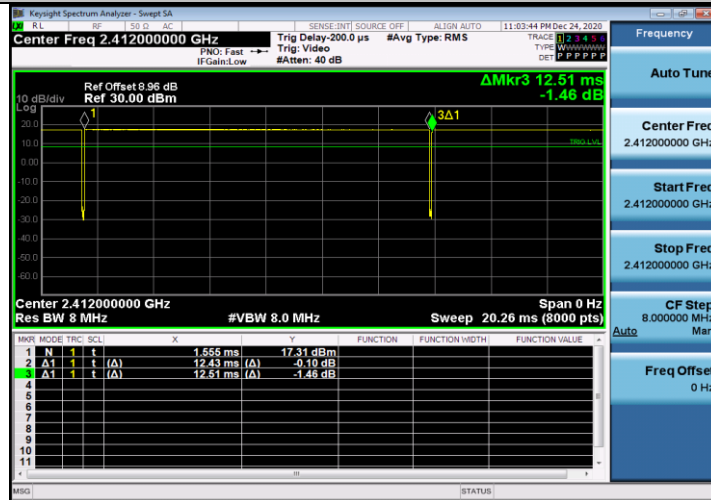
3.2.2 Test Condition:

Applicable to	Normal Environmental Conditions	Normal Input Power
RE ≥ 1G	25deg. C, 60%RH	120Vac, 60Hz
RE < 1G	25deg. C, 60%RH	120Vac, 60Hz
PLC	25deg. C, 60%RH	120Vac, 60Hz
APCM	25deg. C, 60%RH	120Vac, 60Hz

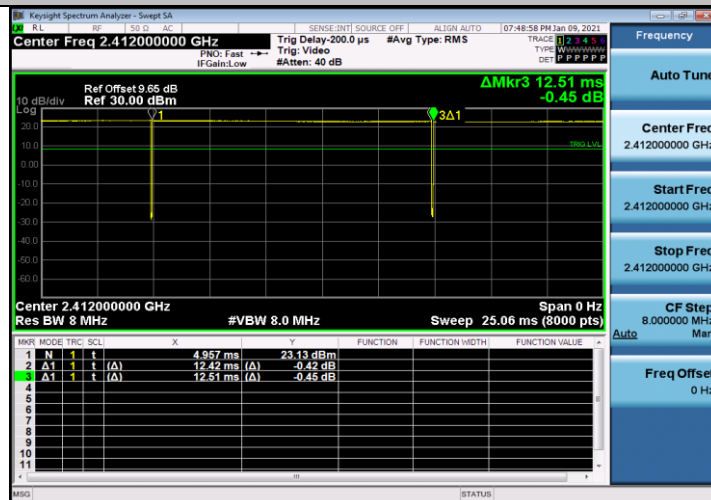
3.3 Duty Cycle of Test Signal

Test Mode	Antenna	Channel [MHz]	Duty Cycle [%]	10log(1/x) Factor[dB]
11B	Ant1	2412	99.36	0.03
	Ant2	2412	99.28	0.03
	Ant1	2437	99.36	0.03
	Ant2	2437	99.36	0.03
	Ant1	2462	99.36	0.03
	Ant2	2462	99.36	0.03
11G	Ant1	2412	98.10	0.08
	Ant2	2412	98.10	0.08
	Ant1	2437	98.10	0.08
	Ant2	2437	98.10	0.08
	Ant1	2462	98.10	0.08
	Ant2	2462	98.10	0.08
11N20MIMO	Ant1	2412	97.96	0.09
	Ant2	2412	97.96	0.09
	Ant1	2437	97.96	0.09
	Ant2	2437	97.96	0.09
	Ant1	2462	97.96	0.09
	Ant2	2462	97.96	0.09
11N40MIMO	Ant1	2422	95.00	0.22
	Ant2	2422	95.00	0.22
	Ant1	2437	95.00	0.22
	Ant2	2437	95.00	0.22
	Ant1	2452	95.00	0.22
	Ant2	2452	95.00	0.22

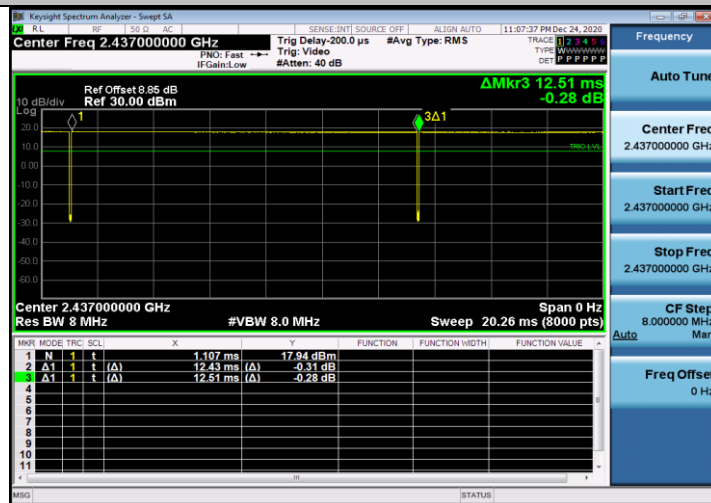
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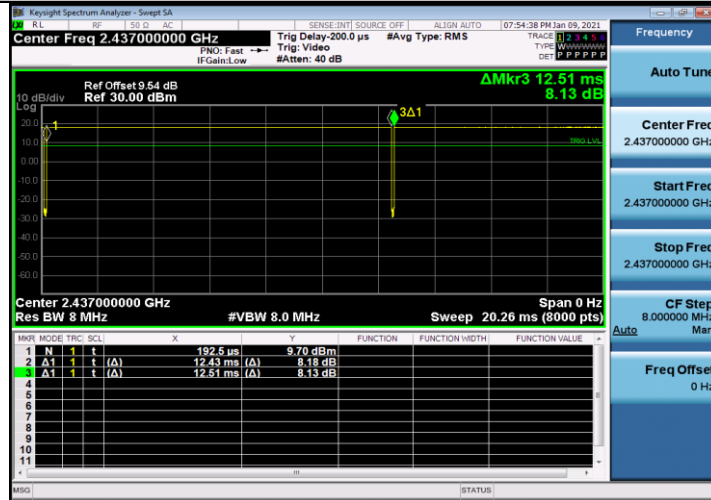
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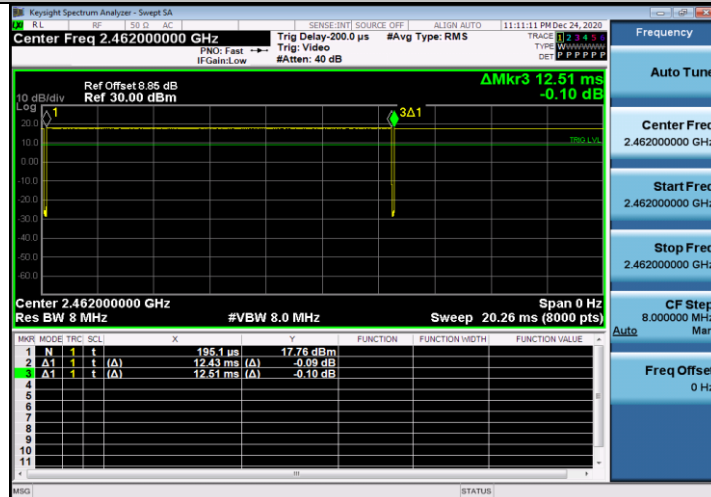
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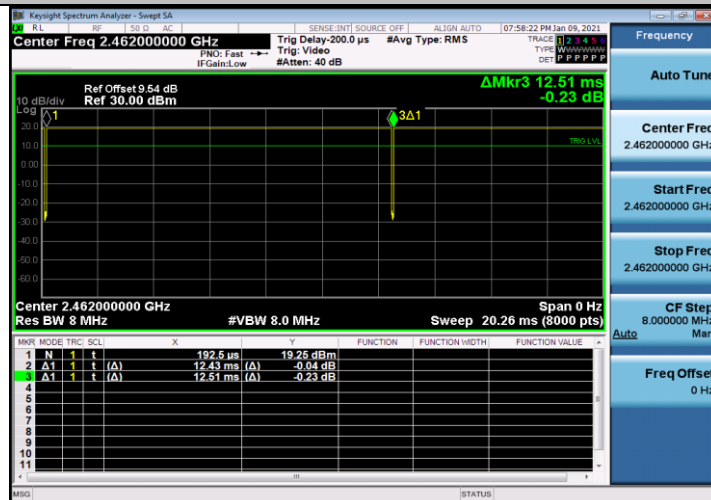
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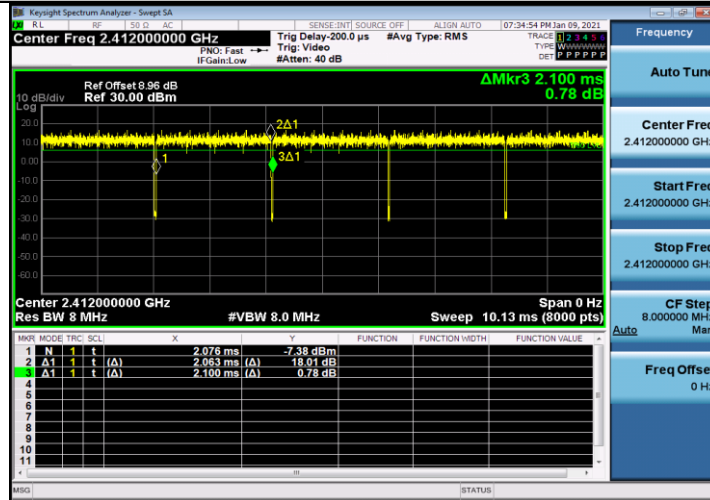
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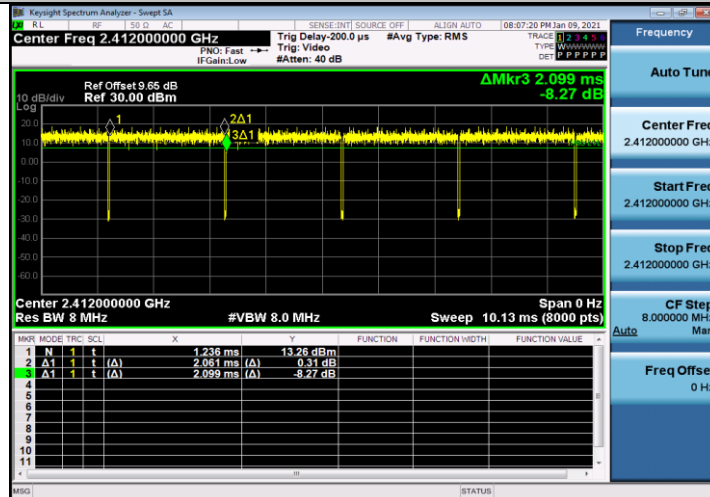
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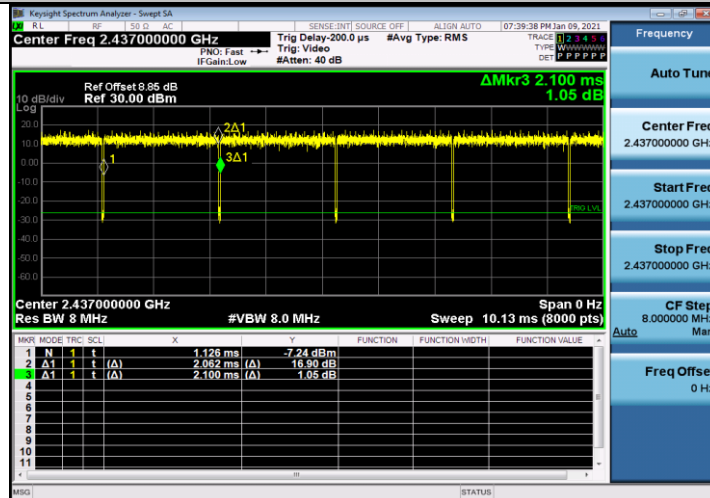
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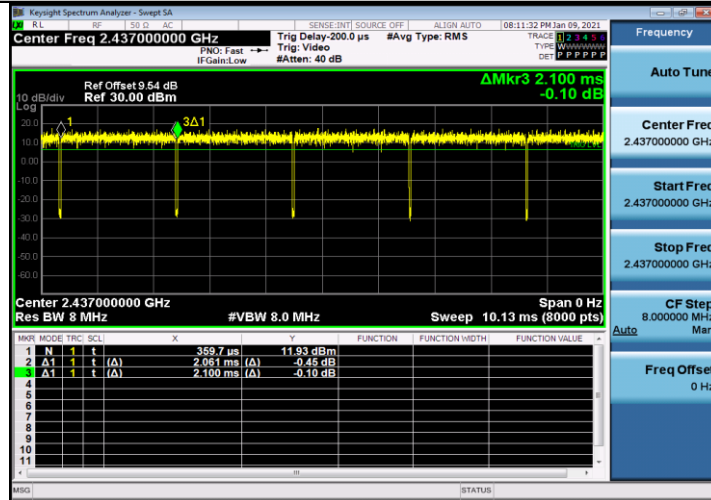
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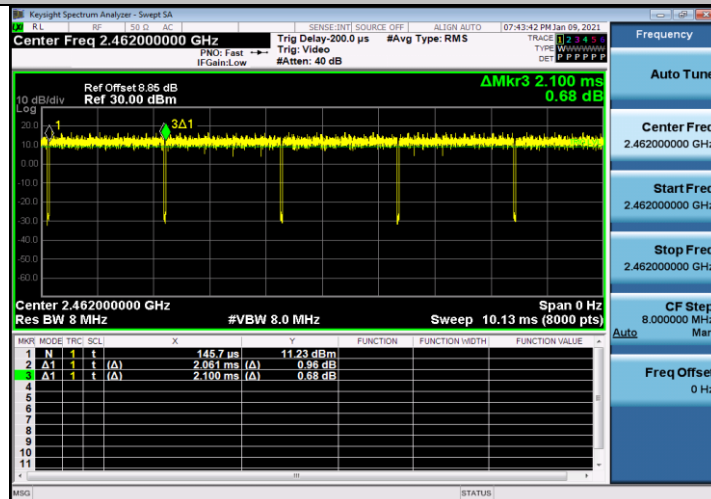
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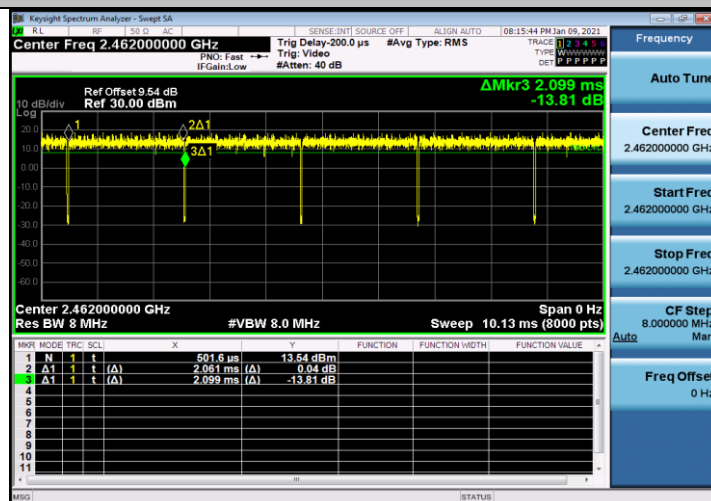
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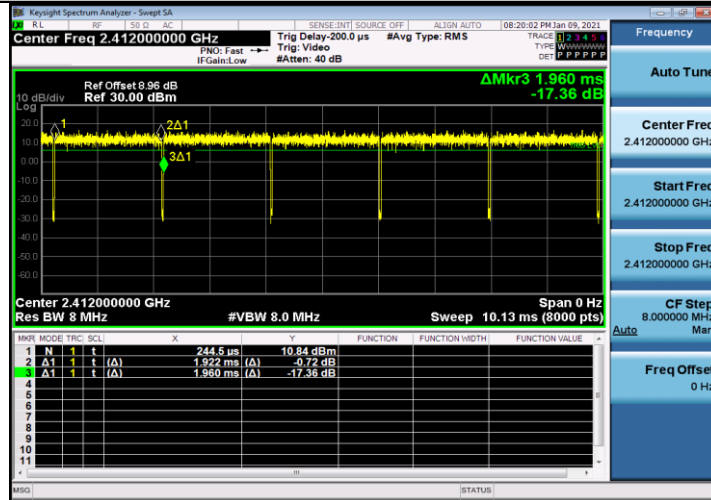
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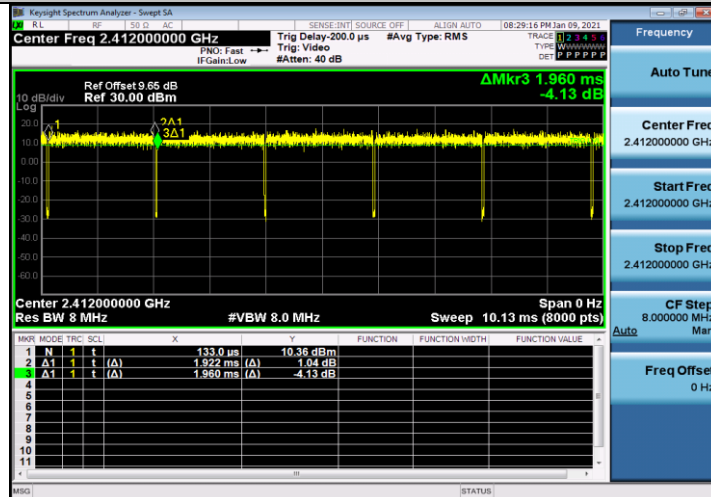
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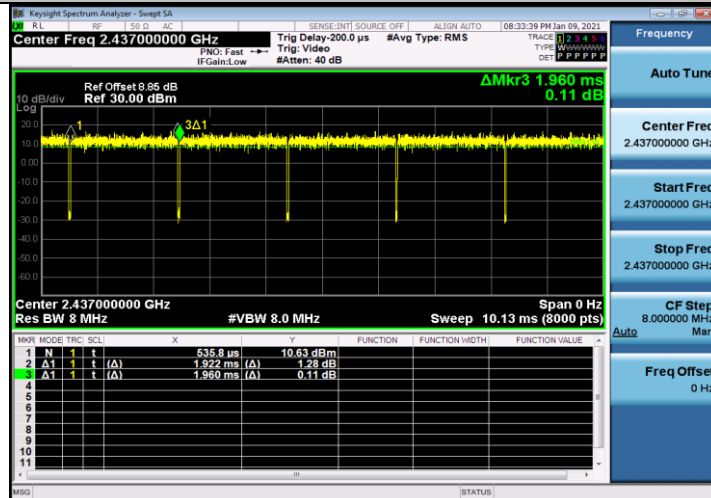
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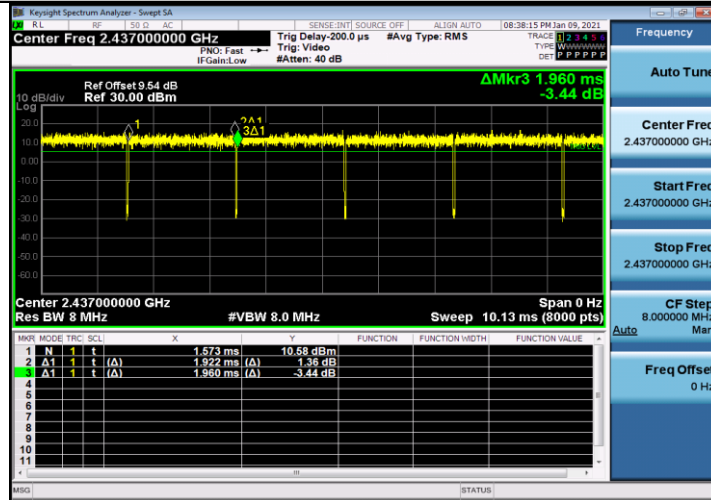
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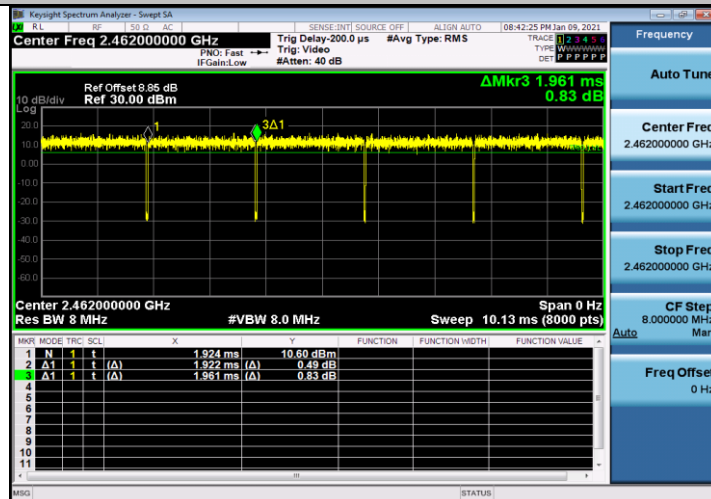
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11N20MIMO_Ant2_2437



11N20MIMO_Ant1_2462



11N20MIMO_Ant2_2462

