

Page 1 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

Document Title

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

Revision History

Rev. History
0.0 Initial issue

Issue Date Sep.16 2020 Remark

Contents

- 1. Summery of Standards and Results
- 2. General Information
- 3. Spurious Emission
- 4. Band Edge Compliance Test
- 5. Photograph of Test Site
- 6. Photograph of DUT



Page 2 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

1. SUMMARY OF STANDARDS AND RESULTS

Standard: FCC15.247 (5800MHz Band)

Item	Description	Frequency (MHz)	Limit	Test Data	Result	Remark
1	Max. Peak conducted	Low Channel	1 W, Peak	14.3 dBm	Pass	
1	Output Power	High Channel	1 W, Peak	14.69 dBm	Pass	
		33~88	40dBuV/m, QP	Page 4~9	Pass	
		88~216	43.5dBuV/m, QP	Page 4~9	Pass	
	TX	216~960	46dBuV/m, QP	Page 4~9	Pass	
2	Radiated Emission	960~1000	54dBuV/m, QP	Page 4~9	Pass	
	Test	1000~25000	<74dBuV/m, Peak	Page 4~9	Pass	71dBuV/m (MAX.)
		1000~25000	<54dBuV/m, Averag	Page 4~9	Pass	@duty cycle < 10% Annotation 1
		Low band edge	<74dBuV/m, Peak	Page 10~11	Pass	71.016dBuV/m (MAX.)
3	TX Band	Low band edge	<54dBuV/m, Averag	Page 10~11	Pass	@duty cycle < 9.98% Annotation 2
	edge Test	High band edge	<74dBuV/m, Peak	Page 10~11	Pass	
		High band edge	<54dBuV/m, Averag	Page 10~11	Pass	

Annotation:

- 1. The limit is 74 dBuV/m (peak) and 54 dBuV/m (average) in restriction bands. Please refer to FCC15.247 for detail.
- 2. If customers want to use higher duty, they should set the channels a little far away the ISM band edge to pass the FCC limit.



Page 3 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

2. GENERAL INFORMATION

Item	Description	Remark
1	DUT Name	A5133-CEFCC-05-1
2	DUT Operation Frequency	5725~5850MHz
3	DUT Operation Condition	See Below Table
4	Modulation Technology	FSK
5	Firmware Version	20200915_with Trim_CEFCCTX687-CH145
6	Manufacturer	AMICCOM (笙科電子)
7	Test Site	BUREAU (香港商立德國際商品試驗有限公司)
8	Chamber	966 Chamber

TO WITH	^		~ .	
DUT	()nera	tion (ond	ition
	ODULA			

DUIU	ociation Containe	11
Test	Frequency	Test Mode
Item	(MHz)	
1	30~1000	TX Burst Mode @ 5730 MHz, Data Rate = 4Mbps, Fdev = 1MHz
2	30~1000	TX Burst Mode @ 5845 MHz, Data Rate = 4Mbps, Fdev = 1MHz
3	1000~25000	TX Burst Mode @ 5730 MHz, Data Rate = 4Mbps, Fdev = 1MHz
4	1000~25000	TX Burst Mode @ 5845 MHz, Data Rate = 4Mbps, Fdev = 1MHz

Annotation:

When test Bandedge, DUT is set at 5730 MHz and 5845 MHz.



Page 4 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

3. SPURIOUS EMISSION

3.1 30 MHz ~ 1000 MHz Spurious (Vertical) when Tx is 5730 MHz



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Brand / Model: A5133-CEFCC-05_1 Remark: 5730, setting: 559

Operate Software:

Sample No. Tested By : Eric Peng

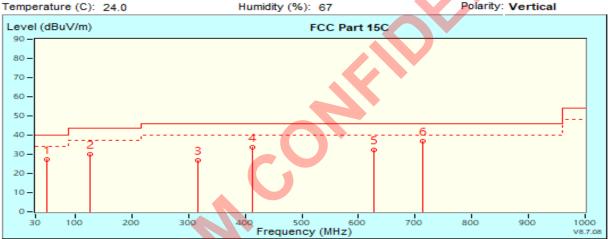
Location: 966 Chamber. 3

Date: 2020/09/15

Time: 17:02:52

Approved by:

Polarity: Vertical



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved sign If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.co It cannot be used for EMC approvals unless it contains the approved signature.

1	No. Frequency		Factor	Reading	Emission	Limit	Margin	Tower	Table
		MHz	dB/m	dBu∨	dBuV/m	dBuV/m	dB	cm	deg
Г	1	49.93 (PK)	-7.5	34.6	27.1	40.0	-12.9	150	303
Г	2	127.00 (PK)	-8.5	38.7	30.2	43.5	-13.3	150	360
Г	3	315.98 (PK)	-5.1	31.8	26.7	46.0	-19.3	200	0
	4	411.99 (PK)	-2.7	36.5	33.8	46.0	-12.2	250	167
	5	626.60 (PK)	2.8	29.3	32.1	46.0	-13.9	250	360
*	6	713.53 (PK)	4.1	32.7	36.8	46.0	-9.2	150	307
			·						

966-3ANT(E1-011702)_30M-1GHz_191_20201110.af '+' 966-3CAB(GG-203701+GG-200702+GG-200703)_30M-1GHz_201.af '+' 966-3ATT(ZZ-011127)_30M-1GHz_191.af '-' 966-3 AMP(ZZ-010609)_30M-1GHz_201_20210427.AMP

Page 1 of 1

D:\3m Chamber 3\ADT_Radiated_V8.7 below 1GHz\Logs\202009\



Page 5 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

3.2 30 MHz ~ 1000 MHz Spurious (Horizontal) when Tx is 5730 MHz



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

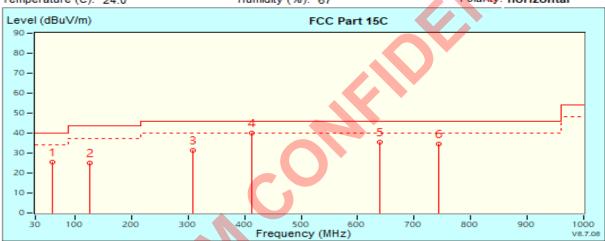
Brand / Model: A5133-CEFCC-05_1 Remark: 5730, setting: 559

Operate Software :

Sample No. :

Tested By : Eric Peng

Location: 966 Chamber. 3 Date: 2020/09/15 Time: 17:07:50 Approved by: Temperature (C): 24.0 Humidity (%): 67 Polarity: Horizontal



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature. If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.com

ı	lo.	Frequency	Factor	Reading	Emission	Limit	Margin	Tower	Table
L		MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	cm	deg
Г	1	60.43 (PK)	-8.3	33.9	25.6	40.0	-14.4	100	8
Г	2	126.95 (PK)	-8.5	33.7	25.2	43.5	-18.3	200	61
Г	3	308.00 (PK)	-5.5	36.9	31.4	46.0	-14.6	100	96
*	4	412.01 (PK)	-2.7	42.8	40.1	46.0	-5.9	250	259
Г	5	640.01 (PK)	3.0	32.3	35.3	46.0	-10.7	150	133
Г	6	744.02 (PK)	5.3	29.4	34.7	46.0	-11.3	100	140
						·			

968-3ANT(E1-011702)_30M-1GHz_191_20201110.af '+' 968-3CAB(GG-203701+GG-200702+GG-200703)_30M-1GHz_201.cf '+' 968-3ATT(ZZ 011127)_30M-1GHz_191.cf '-' 968-3 AMP(ZZ-010609)_30M-1GHz_201_20210427.AMP

Page 1 of 1

D:\3m Chamber 3\ADT_Radiated_V8.7 below 1GHz\Logs\202009\



Page 6 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

3.3 30 MHz ~ 1000 MHz Spurious (Vertical) when Tx is 5845 MHz



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

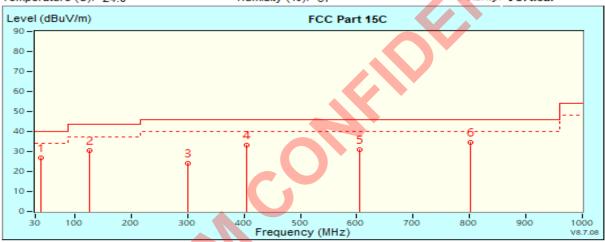
Brand / Model: A5133-CEFCC-05_1

Remark: 5845, setting: 559 Operate Software:

Sample No. :

Tested By : Eric Peng

Location: 966 Chamber. 3 Date: 2020/09/15 Time: 16:57:10 Approved by: Temperature (C): 24.0 Humidity (%): 67 Polarity: Vertical



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature. If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.com

1	lo.	Frequency	Factor	Reading	Emission	Limit	Margin	Tower	Table
L		MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	cm	deg
Г	1	40.82 (PK)	-7.9	34.6	26.7	40.0	-13.3	200	142
Г	2	126.98 (PK)	-8.5	39.0	30.5	43.5	-13.0	100	168
Г	3	300.00 (PK)	-5.8	29.8	24.0	46.0	-22.0	150	177
Г	4	404.03 (PK)	-2.9	36.0	33.1	46.0	-12.9	250	202
Г	5	604.94 (PK)	2.1	28.6	30.7	46.0	-15.3	250	356
*	6	801.97 (PK)	5.9	28.8	34.7	46.0	-11.3	250	285
Г									
Г									
Г									
Г									
Г									
Г									

968-3ANT(E1-011702)_30M-1GHz_191_20201110.sf '+' 968-3CAB(GG-203701+GG-200702+GG-200703)_30M-1GHz_201.cf '+' 968-3ATT(ZZ 011127)_30M-1GHz_191.cf '-' 968-3 AMP(ZZ-010609)_30M-1GHz_201_20210427.AMP

Page 1 of 1

D:\3m Chamber 3\ADT_Radiated_V8.7 below 1GHz\Logs\202009\



笙科電子股份有限公司

AMICCOM Electronics Corporation

Page 7 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

 $30 \text{ MHz} \sim 1000 \text{ MHz}$ Spurious (Horizontal) when Tx is 5845 MHz3.4



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Brand / Model: A5133-CEFCC-05_1

Remark: 5845, setting: 559 Operate Software:

Sample No.:

Tested By : Eric Peng

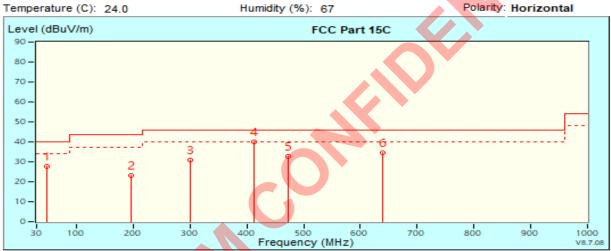
Location: 966 Chamber. 3

Date: 2020/09/15

Time: 16:50:29

Approved by:

Polarity: Horizontal



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature. If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.co

1	lo.	Frequency	Factor	Reading	Emission	Limit	Margin	Tower	Table
L		MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	cm	deg
Г	1	48.11 (PK)	-7.6	35.4	27.8	40.0	-12.2	150	120
Г	2	196.02 (PK)	-10.0	33.0	23.0	43.5	-20.5	200	132
Г	3	300.00 (PK)	-5.8	36.7	30.9	46.0	-15.1	100	252
*	4	412.01 (PK)	-2.7	42.8	40.1	46.0	-5.9	250	259
Г	5	472.00 (PK)	-1.0	33.8	32.8	46.0	-13.2	200	259
	6	640.01 (PK)	3.0	31.6	34.6	46.0	-11.4	150	305

968-3ANT(E1-011702)_30M-1GHz_191_20201110.af '+' 968-3CAB(GG-203701+GG-200702+GG-200703)_30M-1GHz_201.af '+' 968-3ATT(ZZ 011127)_30M-1GHz_191.af '-' 968-3 AMP(ZZ-010609)_30M-1GHz_201_20210427.AMP

Page 1 of 1

D:\3m Chamber 3\ADT_Radiated_V8.7 below 1GHz\Logs\202009\



Page 8 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

1GHz ~ 12.75 GHz Spurious (Vertical) when Tx is 5730 MHz 3.5



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Brand / Model: A5133-CEFCC-05_1

Remark: Tx, AV Emission test by 1MHz/5.1kHz, 5730, setting: 559

Operate Software: Sample No.:

Tested By : Eric.Peng

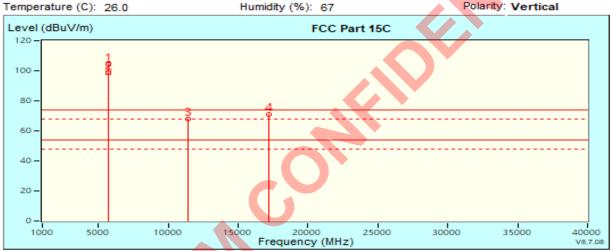
Location: 966 Chamber. 3

Date: 2020/09/15

Time: 17:41:30

Approved by:

Polarity: Vertical



This data is for evaluation purposes only, It cannot be used for EMC approvals unless it contains the approved signature If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.com

	No. Frequency		Factor	Reading	Emission	Limit	Margin	Tower	Table
L		MHz	dB/m	dBu∨	dBuV/m	dBuV/m	dB	cm	deg
i	1	5730.00 (PK)	4.4	99.6	104.0	74.0	30.0	105	269
*į	2	5730.00 (AV)	4.4	94.4	98.8	54.0	44.8	105	269
Г	3	11460.00 (PK)	13.9	53.7	67.6	74.0	-6.4	120	107
Г	4	17190.00 (PK)	18.1	52.9	71.0	74.0	-3.0	353	355
Г									
Г									
Г									
Г									
Г									
Г									
Г									
Г									

968-3ANT(E1-010928)_1G-18GHz_191_20201123.sf '+' 968-3CAB(ZZ-011295+ZZ-011296+ZZ-F10017)_1G-25G_202.CF '.' 968-3AMP(E1-010616)_

26.5GHz_201_20210114.AMP

Page 1 of 1 D:\3m Chamber 3\ADT_Radiated_V8.7 above 1GHz\Logs\202009\



Page 9 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

3.6 1GHz ~ 12.75 GHz Spurious (Horizontal) when Tx is 5730 MHz



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

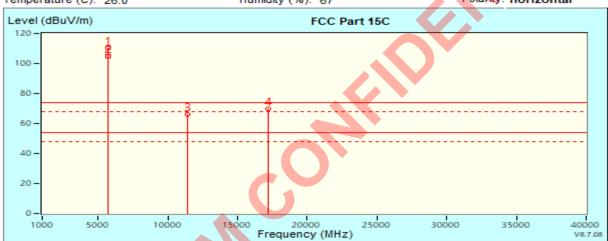
Brand / Model: A5133-CEFCC-05_1

Remark: Tx, AV Emission test by 1MHz/5.1kHz, 5730, setting: 559

Operate Software : Sample No. :

Tested By : Eric.Peng

Location: 966 Chamber. 3 Date: 2020/09/15 Time: 17:30:00 Approved by: Temperature (C): 26.0 Humidity (%): 67 Polarity: Horizontal



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature. If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.com

1	No. Frequency		Factor	Reading	Emission	Limit	Margin	Tower	Table
L		MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	cm	deg
i	1	5730.00 (PK)	4.4	105.7	110.1	74.0	36.1	100	271
*i	2	5730.00 (AV)	4.4	100.4	104.8	54.0	50.8	100	271
Г	3	11460.00 (PK)	13.9	52.1	66.0	74.0	-8.0	373	238
Г	4	17190.00 (PK)	18.1	51.3	69.4	74.0	-4.6	205	203
Г									
Г									
Г									
Г									
Г									
Г									
Г									
Г									
Г									

968-3ANT(E1-010928)_1G-18GHz_191_20201123.af '+' 968-3CAB(ZZ-011295+ZZ-011296+ZZ-F10017)_1G-25G_202.CF '-' 968-3AMP(E1-010616)_1

26.5GHz_201_20210114.AMP

Page 1 of 1 D:\3m Chamber 3\ADT_Radiated_V8.7 above 1GHz\Logs\202009\



Page 10 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

1GHz ~ 12.75 GHz Spurious (Vertical) when Tx is 5845MHz 3.7



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Brand / Model: A5133-CEFCC-05_1

Remark: Tx, AV Emission test by 1MHz/5.1kHz, 5845, setting: 559

Operate Software: Sample No. :

Tested By : Eric.Peng

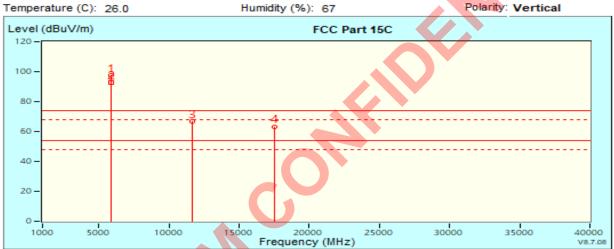
Location: 966 Chamber. 3

Date: 2020/09/15

Time: 17:39:56

Approved by:

Polarity: Vertical



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.com

ı	lo.	Frequency	Factor	Reading	Emission	Limit	Margin	Tower	Table
		MHz	dB/m	dBu∨	dBuV/m	dBuV/m	dB	cm	deg
i	1	5845.00 (PK)	4.9	92.7	97.6	74.0	23.6	100	250
*i	2	5845.00 (AV)	4.9	87.9	92.8	54.0	38.8	100	250
	3	11690.00 (PK)	14.0	52.4	66.4	74.0	-7.6	125	133
	4	17535.00 (PK)	19.0	44.3	63.3	74.0	-10.7	198	123

968-3ANT(E1-010928)_1G-18GHz_191_20201123.af '+' 968-3CAB(ZZ-011295+ZZ-011296+ZZ-F10017)_1G-25G_202.CF '-' 968-3AMP(E1-010616)_1-26.5GHz_201_20210114.AMP

Page 1 of 1

D:\3m Chamber 3\ADT_Radiated_V8.7 above 1GHz\Logs\202009\



Page 11 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

3.8 1GHz ~ 12.75 GHz Spurious (Horizontal) when Tx is 5845MHz



香港商立德國際商品試驗有限公司桃園分公司

Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

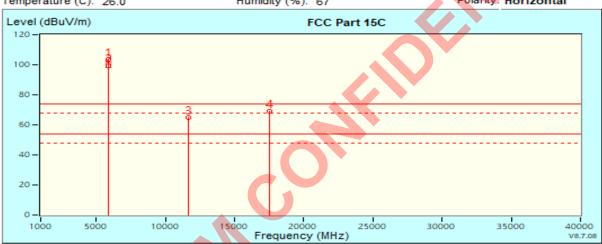
Brand / Model: A5133-CEFCC-05_1

Remark: Tx, AV Emission test by 1MHz/5.1kHz, 5845, setting: 559

Operate Software : Sample No. :

Tested By : Eric.Peng

Location: 966 Chamber. 3 Date: 2020/09/15 Time: 17:37:33 Approved by: Temperature (C): 26.0 Humidity (%): 67 Polarity: Horizontal



This data is for evaluation purposes only. It cannot be used for EMC approvals unless it contains the approved signature. If you have any questions regarding the test data, you can write your comments to service.adt@tw.bureauveritas.com

T N	lo.	Frequency	Factor	Reading	Emission	Limit	Margin	Tower	Table
L		MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	cm	deg
i	1	5845.00 (PK)	4.9	98.6	103.5	74.0	29.5	100	298
*i	2	5845.00 (AV)	4.9	94.4	99.3	54.0	45.3	100	298
Г	3	11690.00 (PK)	14.0	50.9	64.9	74.0	-9.1	367	352
Г	4	17535.00 (PK)	19.0	50.2	69.2	74.0	-4.8	198	357
Г									
Г									
Г									
	V								

986-3ANT(E1-010928)_1G-18GHz_191_20201123.af '+' 986-3CAB(ZZ-011295+ZZ-011296+ZZ-F10017)_1G-25G_202.CF '-' 986-3AMP(E1-010816)_1 28.5GHz_201_20210114.AMP

Page 1 of 1

D:\3m Chamber 3\ADT_Radiated_V8.7 above 1GHz\Logs\202009\



Page 12 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

4. BAND EDGE COMPLIANCE TEST

4.1 Low Band Edge (5725MHz) (Horizontal Peak)

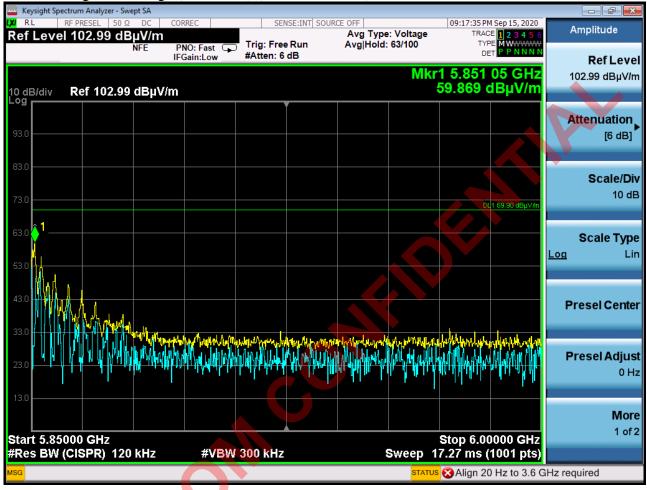




Page 13 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

4.2 High Band Edge (5850MHz) (Horizontal Peak)

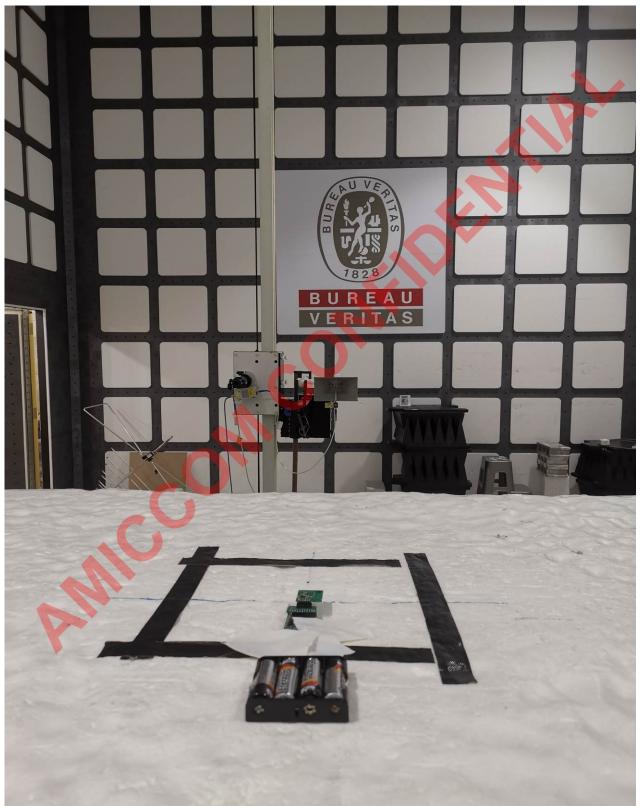




Page 14 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

5. Photograph of Test Site





Page 15 of 15

A5133 (A5133-CEFCC-05-1) FCC (15.247) Pre-Test Report

6. Photograph of DUT



