FCC Test Report

Report No.: AGC07716190301FE06

FCC ID	:	2AFENXJ03W
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	LED Projector
BRAND NAME	:	XGIMI
MODEL NAME	:	XJ03W, XJ04W, XJ05W, XJ06W, XJ07W, XJ08W, XJ09W, XJ10W, XJ11W, XJ12W, XJ13W, XJ14W, XJ15W, XJ16W, XJ17W, XJ18W, XJ19W, XJ20W, XJ21W, XJ22W, XJ23W, XJ24W, XJ25W, XJ26W, XJ27W, XJ28W, XJ29W, XJ30W, XJ31W, XJ32W
APPLICANT	:	Chengdu XGimi Technology Co., Ltd.
DATE OF ISSUE	:	Jun. 24, 2019
STANDARD(S) TEST PROCEDURE(S)	:	FCC Part 15.407 KDB 789033 D02 v02r01
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jun. 24, 2019	Valid	Initial Release

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1. VERIFICATION OF CONFORMITY

Chengdu XGimi Technology Co., Ltd.			
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Chengdu XGimi Technology Co., Ltd.			
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TCL KING ELECTRICAL APPLIANCE(CHENG DU)CO., LTD.			
No.18 Kexin Road, Hi-Tech Development Zone (West Park), Chengdu, Sichuan			
Yibin XGIMI Optoelectronics Co., Ltd.			
 (1) A3, Intelligent Terminal Industrial Park, Cuiping Disrict, Yibin. (2) Room 328, Enterprise Service Center, No.17, Section 3, West Section of Changjiang North Road, Lingang Economic and Technological Development Zone, Yibin 			
LED Projector			
XGIMI			
WEOLX			
XJ04W, XJ05W, XJ06W, XJ07W, XJ08W, XJ09W, XJ10W, XJ11W, XJ12W, XJ13W, XJ14W, XJ15W, XJ16W, XJ17W, XJ18W, XJ19W, XJ20W, XJ21W, XJ22W, XJ23W, XJ24W, XJ25W, XJ26W, XJ27W, XJ28W, XJ29W, XJ30W, XJ31W, XJ32W			
All the same except for the model name and different appearance color			
May 22, 2019 to Jun. 24, 2019			
None			
Normal			
Pass			
AGCRT-US-BGN/RF			

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Tested By	Draven.li		
	Draven Li(Li Ming Liang)	Jun. 24, 2019	
Reviewed By	Max Zha	ing	
	Max Zhang(Zhang Yi)	Jun. 24, 2019	
Approved By	Forvest L	ei	
	Forrest Lei(Lei Yonggang) Authorized Officer	Jun. 24, 2019	

2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

The EUT is designed as "LED Projector". It is designed by way of utilizing the OFDM technology to achieve the system operation.

A major technical description of		
Operation Frequency	5150 MHz \sim 5250MHz;5725 MHz \sim 5850MHz	
Output Power	IEEE 802.11a20:18.01dBm; IEEE 802.11n(20):17.97dBm	
	IEEE802.11n(40):16.97dBm	
Modulation	BPSK, QPSK, 16QAM, 64QAM, 128QAM, 256QAM,OFDM	
Number of channels	13	
Hardware Version	V04	
Software Version	V1.0.62	
Antenna Designation	FPC Antenna	
Number of transmit chain	2(802.11a/n20/n40 all used two antennas,but 802.11a support SISO and	
	802.11n20/n40 support MIMO)	
Directional gain	All transmit signals are completely uncorrelated with each other	
Antenna Gain	6.99dBi	
Power Supply	DC 14V by battery or DC 19V by adapter	

A major technical description of EUT is described as following

2.2. TABLE OF CARRIER FREQUENCYS

Frequency Band	Channel Number	Frequency	Frequency Band	Channel Number	Frequency
	36	5180 MHz		149	5745 MHz
	38	5190 MHz	5725 GHz~ 5850GHz	151	5755 MHz
5150 GHz∼ 5250GHz	40	5200 MHz		153	5765 MHz
	44	5220 MHz		157	5785 MHz
	46	5230 MHz		159	5795 MHz
	48	5240 MHz		161	5805 MHz
				165	5825MHz

Note: For 20MHZ bandwidth system use Channel 36,40,44,48,149,153,157,161,165; For 40MHZ bandwidth system use Channel 38,46,151,159.

2.3. RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2AFENXJ03W** filing to comply with the FCC Part 15 requirements.

2.4. TEST METHODOLOGY

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10 (2013). Radiated testing was performed at an antenna to EUT distance 3 meters.

Others testing (listed at item 5.3) was performed according to the procedures in FCC Part 15.407 rules KDB 789033 D02

2.5. SPECIAL ACCESSORIES

Refer to section 5.2.

2.6. EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in measurement" (GUM) published by CISPR and ANSI.

- Uncertainty of Conducted Emission, $Uc = \pm 3.2 \text{ dB}$
- Uncertainty of Radiated Emission below 1GHz, Uc = ±3.9 dB
- Uncertainty of Radiated Emission above 1GHz, Uc = ±4.8 dB

4. DESCRIPTION OF TEST MODES

Mode	Available channel	Tested channel	Modulation	Date rate(Mbps)
802.11a/n20	36,40,44,48,149,153,157,161,165	36,38,48,149,	OFDM	6/6.5
		157,165		
802.11n40	38,46,151,159	38,46, 151,159	OFDM	13.5

Note:

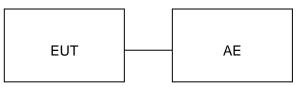
- 1. The EUT has been set to operate continuously on tested channel individually, and the EUT is operating at its maximum duty cycle>or equal 98%
- 2. All modes under which configure applicable have been tested and the worst mode test data recording in the test report, if no other mode data.

3. The test software is the SecureCRTSecure_V7.0.0.326 which can set the EUT into the individual test modes.

5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Configure 1:



5.2. EQUIPMENT USED IN EUT SYSTEM

ltem	Equipment	Model No.	ID or Specification	Remark
1	LED Projector	XJ03W	2AFENXJ03W	EUT
3	Adapter	HKA06519034-6J	Input: AC 100-240V, 50/60Hz, 1.5A Output: DC 19V, 3.42A	Market with EUT
4	Loudspeaker			AE
5	PC	Xiaomi	Air 13.3	AE

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.407	6dB Bandwidth	Compliant
§15.407	Emission Bandwidth	Compliant
§15.407	Maximum conducted output power	Compliant
§15.407	Conducted Spurious Emission	Compliant
§15.407	Maximum Conducted Output Power Density	Compliant
§15.209	Radiated Emission	Compliant
§15.407	Band Edges	Compliant
§15.207	Line Conduction Emission Compliant	

6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd	
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community Fuhai Street, Bao'an District, Shenzhen, Guangdong, China	
Designation Number	CN1259	
FCC Test Firm Registration Number	975832	
A2LA Cert. No.	5054.02	
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA	

TEST EQUIPMENT OF CONDUCTED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESPI	101206	Jun. 10, 2019	Jun. 09, 2020
LISN	R&S	ESH2-Z5	100086	Aug. 28, 2018	Aug. 27, 2019

TEST EQUIPMENT OF RADIATED EMISSION TEST

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Due
TEST RECEIVER	R&S	ESCI	10096	Jun. 10, 2019	Jun. 09, 2020
EXA Signal Analyzer	Aglient	N9010A	MY53470504	Dec. 20, 2018	Dec. 19, 2019
Power sensor	Aglient	U2021XA	MY54110007	Dec. 20, 2018	Dec. 19, 2019
Horn antenna	SCHWARZBECK	BBHA 9170	#768	Sep. 21, 2017	Sep. 20, 2020
preamplifier	ChengYi	EMC184045SE	980508	Sep. 21, 2017	Sep. 20, 2020
Active loop antenna (9K-30MHz)	A.H.	SAS-562B	CC&C	May. 26, 2018	May. 25, 2020
Double-Ridged Waveguide Horn	ETS LINDGREN	3117	00034609	May. 26, 2018	May. 25, 2020
Broadband Preamplifier	SCHWARZBECK	BBV 9718	9718-205	Sep. 28, 2017	Sep. 27, 2019
ANTENNA	SCHWARZBECK	VULB9168	D69250	Sep. 28, 2017	Sep. 27, 2019

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1. MEASUREMENT PROCEDURE

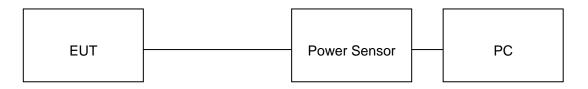
For average power test:

- 1. Connect EUT RF output port to power sensor through an RF attenuator.
- 2. Connect the power sensor to the PC.
- 3. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 4. Record the maximum power from the software.

Note : The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

7.2. TEST SET-UP

AVERAGE POWER SETUP



LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION							
Frequency (MHz)	Average Power Chain 1(dBm)	Average Power Chain 2(dBm)	Average Power Total(dBm)	Applicable Limits (dBm)	Pass or Fail		
5180	18.01	17.86	N/A	22.99	Pass		
5200	17.95	17.81	N/A	22.99	Pass		
5240	17.86	17.79	N/A	22.99	Pass		
5745	17.74	17.58	N/A	29.01	Pass		
5785	17.68	17.69	N/A	29.01	Pass		
5825	17.61	17.74	N/A	29.01	Pass		

7.3. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT FOR 802.11N20 MODULATION							
Frequency (MHz)	Average Power Chain 1(dBm)	Average Power Chain 2(dBm)	Average Power Total(dBm)	Applicable Limits (dBm)	Pass or Fail		
5180	15.03	14.88	17.97	22.99	Pass		
5200	14.95	14.76	17.87	22.99	Pass		
5240	14.81	14.63	17.73	22.99	Pass		
5745	14.75	14.71	17.74	29.01	Pass		
5785	14.83	14.59	17.72	29.01	Pass		
5825	14.62	14.68	17.66	29.01	Pass		

LIMITS AND MEASUREMENT RESULT FOR 802.11N40 MODULATION								
Frequency (MHz)	Average Power Chain 1(dBm)Average Power Chain 2(dBm)Average Power Total(dBm)Applicable Limits 			Pass or Fail				
5190	14.03	13.88	16.97	22.99	Pass			
5230	13.98	13.80	16.90	22.99	Pass			
5755	13.86	13.85	16.87	29.01	Pass			
5795	13.81	13.78	16.81	29.01	Pass			

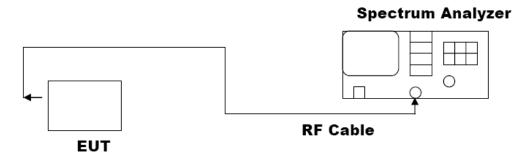
8. 6dB BANDWIDTH

8.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on operation frequency individually.
- 3. Set RBW = 100kHz.
- 4. Set the VBW \geq 3*RBW. Detector = Peak. Trace mode = max hold.
- 5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

8.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



8.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION						
Annlinghla Limita	Applicable Limits					
Applicable Limits	Test Da	Criteria				
>500KHZ	5745MHz	15.13	PASS			
	5785MHz	15.09	PASS			
	5825MHz	15.12	PASS			

LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION						
Annlinghle Limite		Applicable Limits				
Applicable Limits	Test Da	Criteria				
	5745MHz	15.07	PASS			
	5785MHz	15.11	PASS			
>500KHZ	5825MHz	15.06	PASS			
	5755MHz	35.43	PASS			
	5795MHz	35.02	PASS			

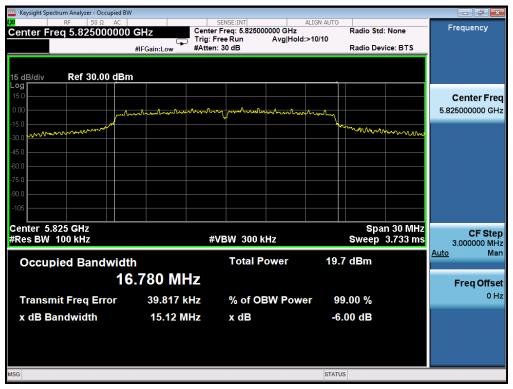
Keysight Spectrum Analyzer - Occupied BW GHZ Center Freq: 5.74500000 GHz Trig: Free Run Avg|Hold:>10/10 #Atten: 30 dB Radio Std: None Frequency Center Freq 5.745000000 GHz Radio Device: BTS 15 dB/div Ref 30.00 dBm Log **Center Freq** ٨ 5.745000000 GHz Center 5.745 GHz #Res BW 100 kHz Span 30 MHz Sweep 3.733 ms CF Step 3.000000 MHz #VBW 300 kHz Auto Man **Occupied Bandwidth** Total Power 19.3 dBm 16.507 MHz **Freq Offset** 0 Hz -59.593 kHz 99.00 % Transmit Freq Error % of OBW Power x dB Bandwidth 15.13 MHz x dB -6.00 dB MSG STATUS

802.11a20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5745MHz

TEST PLOT OF BANDWIDTH FOR 5785MHz

Keysight Spectrum Analyzer - Occupied B	W					
RF 50 Ω AC Center Freq 5.785000000	Trig	sense:INT ter Freq: 5.785000000 GI : Free Run Avg l en: 20 dB	ALIGN AUTO Hz Hold:>10/10	Radio Std: Radio Devi		Frequency
10 dB/div Ref 20.00 dBr	n					
0.00	monton tongent ton ton ton ton	han promber and brown hours	human			Center Freq 5.785000000 GHz
-10.0 -20.0 -30.0			\	www.	Mr.M. May	
-40.0						
-70.0 Center 5.785 GHz				Spa	n 30 MHz	CE Step
#Res BW 100 kHz Occupied Bandwid		#VBW 300 kHz Total Power	19.1		3.733 ms	CF Step 3.000000 MHz <u>Auto</u> Man
10	6.382 MHz					Freq Offset 0 Hz
Transmit Freq Error x dB Bandwidth	-52.535 kHz 15.09 MHz	% of OBW P x dB		0.00 % 00 dB		0 Hz
MSG			STATUS			

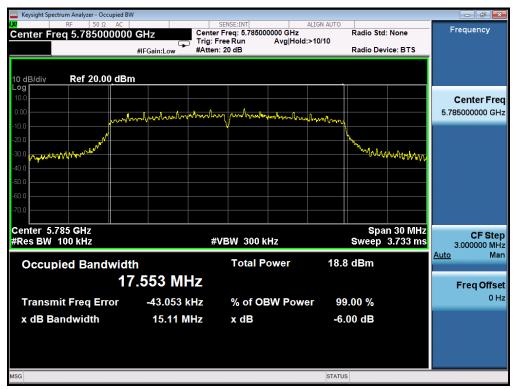


TEST PLOT OF BANDWIDTH FOR 5825MHz

802.11n20 TEST RESULT

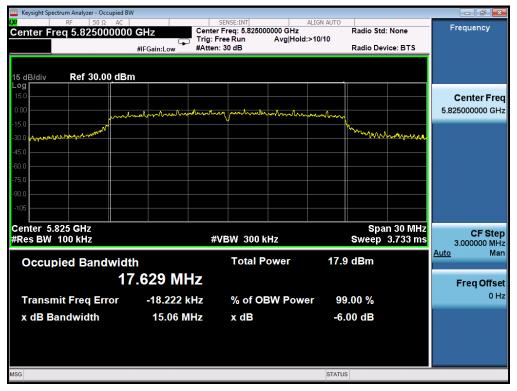
TEST PLOT OF BANDWIDTH FOR 5745MHz

Keysight Spectrum Analyzer - Occupied B	W					
Center Freq 5.74500000			ALIGN AUTO Hz Hold:>10/10	Radio Std: No		Frequency
	#IFGain:Low #At	tten: 30 dB		Radio Device:	BTS	
15 dB/div Ref 30.00 dB	<u>m</u>					
15.0						Center Freq
0.00	unel manhammen	strong por thront more man	houtingons			5.745000000 GHz
-15.0			- h	in the second		
-30.0 Malennet to and the second				where the worker	Warthan	
-45.0						
-60.0						
-75.0						
-105						
Center 5.745 GHz #Res BW 100 kHz		#VBW 300 kHz		Span 3 Sweep 3.7	BO MHZ	CF Step
						3.000000 MHz Nuto Man
Occupied Bandwid	th	Total Power	18.6	dBm		
1	7.625 MHz					Freq Offset
Transmit Freq Error	-53.669 kHz	% of OBW P	ower 99.	.00 %		0 Hz
x dB Bandwidth	15.07 MHz	x dB	-6.0	00 dB		
MSG			STATUS			



TEST PLOT OF BANDWIDTH FOR 5785MHz

TEST PLOT OF BANDWIDTH FOR 5825MHz



Keysight Spectrum Analyzer - Occupied BW SENSE:INT ALIGN AUTO Center Freq: 5.755000000 GHz Trig: Free Run Trig: Free Run Avg|Hold:>10/10 #IFGain:Low #Atten: 30 dB Span Radio Std: None Span 60.000 MHz Radio Device: BTS Span . 60.000 MHz 15 dB/div Ref 30.00 dBm Log 1.1 أسلمهما Full Span Center 5.755 GHz #Res BW 100 kHz Span 60 MHz Sweep 7.467 ms #VBW 300 kHz Last Span **Occupied Bandwidth** Total Power 18.3 dBm 36.279 MHz Transmit Freq Error -13.460 kHz 99.00 % % of OBW Power x dB Bandwidth 35.43 MHz x dB -6.00 dB MSG STATUS

802.11n40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5755MHz

TEST PLOT OF BANDWIDTH FOR 5795MHz

M RF 50 Ω AC SENSE:INT ALIGN AUTO Center Freq 5.795000000 GHz Center Freq: 5.795000000 GHz Radio Std: None #IFGain:Low #IFGain:Low Auten: 30 dB Radio Device: BTS	су
Trig: Free Run Avg Hold:>10/10	
15 dB/div Ref 30.00 dBm	
15.0 Cente	r Freq
0.00	00 GHz
30.0 Josephinkophi	
-45.0	
60.0	
-75.0	
90.0	
-105	
	Step
Auto	MHZ Man
Occupied Bandwidth Total Power 17.9 dBm	
36.259 MHz Freq	Offect
	0 Hz
Transmit Freq Error -16.992 kHz % of OBW Power 99.00 %	0112
x dB Bandwidth 35.02 MHz x dB -6.00 dB	
ASG STATUS	

9. EMISSION BANDWIDTH

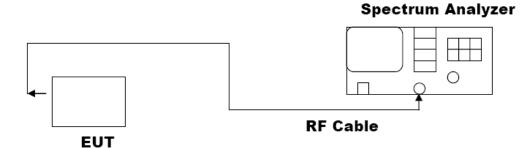
9.1. MEASUREMENT PROCEDURE

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.

e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

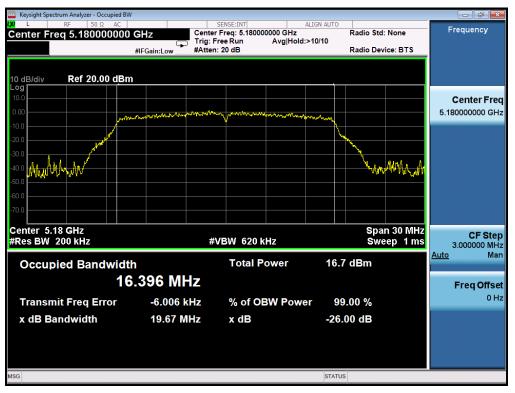
9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



9.3. LIMITS AND MEASUREMENT RESULTS

LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION						
Annlinghla Limita	Applicable Limits					
Applicable Limits	Test Da	Criteria				
Within the Band	5180MHz	19.67	PASS			
	5200MHz	19.70	PASS			
	5240MHz	19.60	PASS			

LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION						
Appliachte Limite		Applicable Limits				
Applicable Limits	Test Da	Criteria				
	5180MHz	19.75	PASS			
	5200MHz	20.00	PASS			
Within the Band	5240MHz	20.21	PASS			
	5190MHz	39.54	PASS			
	5230MHz	40.08	PASS			



802.11a20 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5180MHz

TEST PLOT OF BANDWIDTH FOR 5200MHz

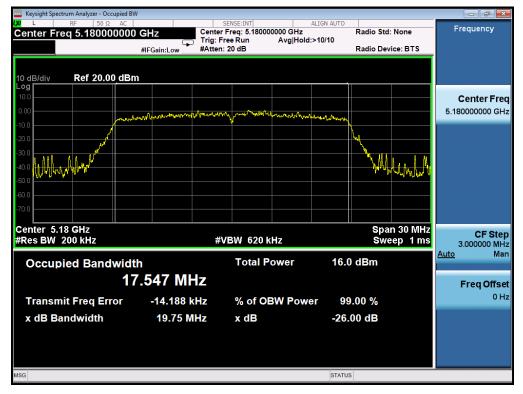


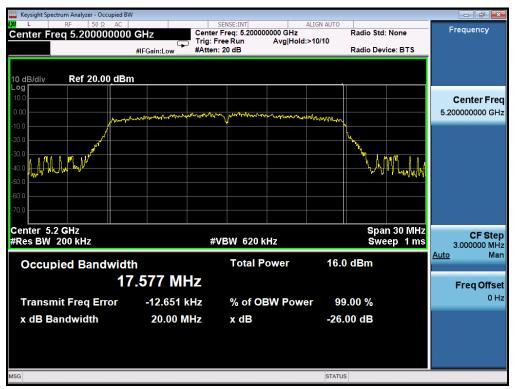


TEST PLOT OF BANDWIDTH FOR 5240MHz

802.11n20 TEST RESULT

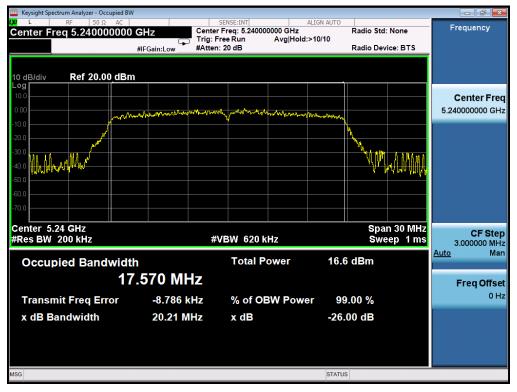
TEST PLOT OF BANDWIDTH FOR 5180MHz

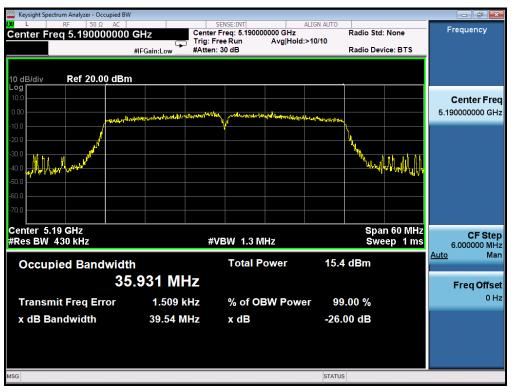




TEST PLOT OF BANDWIDTH FOR 5200MHz

TEST PLOT OF BANDWIDTH FOR 5240MHz





802.11n40 TEST RESULT

TEST PLOT OF BANDWIDTH FOR 5190MHz

TEST PLOT OF BANDWIDTH FOR 5230MHz



10. MAXIMUM CONDUCTED OUTPUT PEAK POWER SPECTRAL DENSITY

10.1 MEASUREMENT PROCEDURE

Refer to KDB 789033 section F

10.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

Refer To Section 8.2.

10.3 MEASUREMENT EQUIPMENT USED

Refer To Section 6.

10.4 LIMITS AND MEASUREMENT RESULT

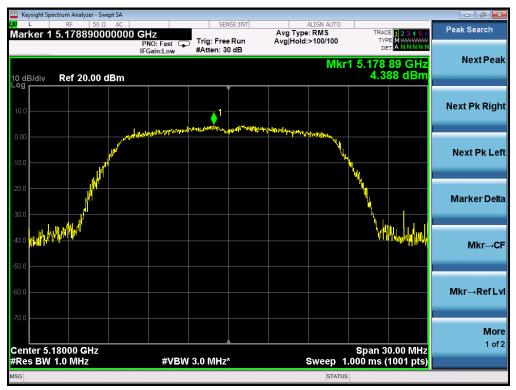
LIMITS AND MEASUREMENT RESULT FOR 802.11A20 MODULATION								
Frequency (MHz)	Power density Chain 1 (dBm/MHz)	Power density Chain 2 (dBm/MHz)	Power density Total (dBm/MHz)	Applicable Limits (dBm/MHz)	Pass or Fail			
5180	4.663	4.388	N/A	10.01	Pass			
5200	4.588	5.241	N/A	10.01	Pass			
5240	4.841	4.158	N/A	10.01	Pass			
Frequency (MHz)	Power density Chain 1 (dBm/500kHz)	Power density Chain 2 (dBm/500kHz)	Power density Total (dBm/500kHz)	Applicable Limits (dBm/500kHz)	Pass or Fail			
5745	1.077	1.060	N/A	16.01	Pass			
5785	1.809	1.524	N/A	16.01	Pass			
5825	1.123	1.105	N/A	16.01	Pass			

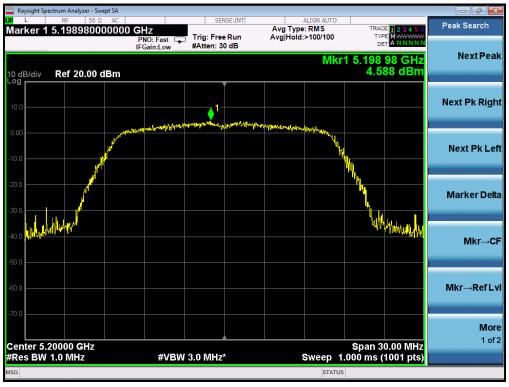
LIMITS AND MEASUREMENT RESULT FOR 802.11N20/40 MODULATION									
Frequency (MHz)	Power density Chain 1 (dBm/MHz)	Power density Chain 2 (dBm/MHz)	Power density Total (dBm/MHz)	Applicable Limits (dBm/MHz)	Pass or Fail				
5180	3.557	3.522	6.55	10.01	Pass				
5200	3.902	4.209	7.07	10.01	Pass				
5240	3.945	4.627	7.31	10.01	Pass				
5190	0.828	1.190	4.02	10.01	Pass				
5230	1.481	1.776	4.64	10.01	Pass				
Frequency (MHz)	Power density Chain 1 (dBm/500kHz)	Power density Chain 2 (dBm/500kHz)	Power density Total (dBm/500kHz)	Applicable Limits (dBm/500kHz)	Pass or Fail				
5745	0.204	0.091	3.16	16.01	Pass				
5785	0.211	0.993	3.63	16.01	Pass				
5825	0.142	-0.091	3.04	16.01	Pass				
5755	-2.553	-3.023	0.23	16.01	Pass				
5795	-3.158	-3.143	-0.14	16.01	Pass				



802.11a20 TEST RESULT TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz AT CHAIN 1

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz AT CHAIN 2





TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz AT CHAIN 2







TEST PLOT OF SPECTRAL DENSITY FOR 5240MHz AT CHAIN 2



TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz AT CHAIN 2







TEST PLOT OF SPECTRAL DENSITY FOR 5785MHz AT CHAIN 2







TEST PLOT OF SPECTRAL DENSITY FOR 5825MHz AT CHAIN 2



802.11n20 TEST RESULT

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz AT CHAIN 1

TEST PLOT OF SPECTRAL DENSITY FOR 5180MHz AT CHAIN 2





TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5200MHz AT CHAIN 2



TEST PLOT OF SPECTRAL DENSITY FOR 5240MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5240MHz AT CHAIN 2



TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5745MHz AT CHAIN 2



TEST PLOT OF SPECTRAL DENSITY FOR 5785MHz AT CHAIN 1

Keysight Spectrum Analyzer - Swept SA L RF 50 Ω AC arker 1 5.7875500000000	PNO: Fast Tric	SENSE:INT	ALIGN AUTO Avg Type: Log-Pw Avg Hold:>100/100		Peak Search
dB/div Ref 20.00 dBm	I Gam.Low		MI	kr1 5.787 55 GHz 0.993 dBm	Next Pea
		1			Next Pk Righ
00	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		mar and		Next Pk Le
					Marker Delt
					Mkr→C
					Mkr→RefL
enter 5.78500 GHz				Span 30.00 MHz 1.000 ms (1001 pts)	Mor 1 of

TEST PLOT OF SPECTRAL DENSITY FOR 5785MHz AT CHAIN 2



TEST PLOT OF SPECTRAL DENSITY FOR 5825MHz AT CHAIN 1



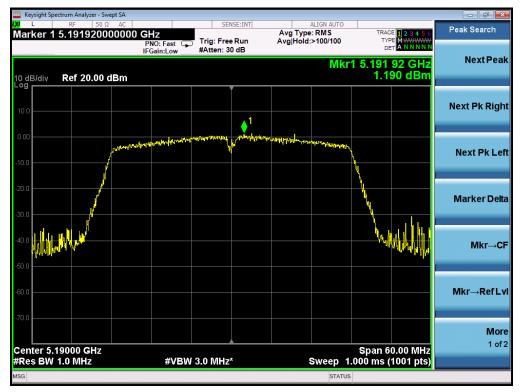
TEST PLOT OF SPECTRAL DENSITY FOR 5825MHz AT CHAIN 2



802.11n40 TEST RESULT

TEST PLOT OF SPECTRAL DENSITY FOR 5190MHz AT CHAIN 1

TEST PLOT OF SPECTRAL DENSITY FOR 5190MHz AT CHAIN 2

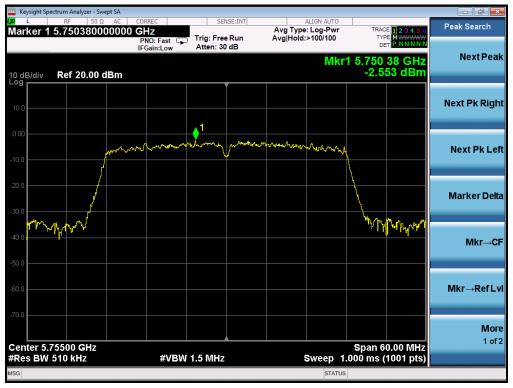




TEST PLOT OF SPECTRAL DENSITY FOR 5230MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5230MHz AT CHAIN 2



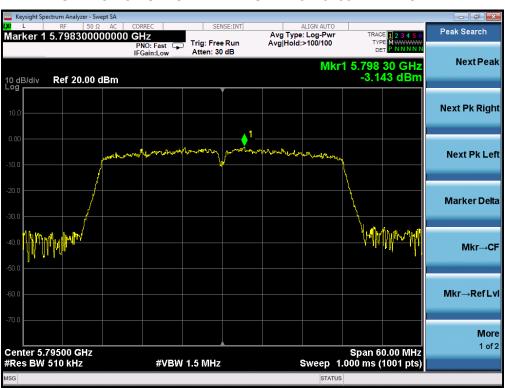
TEST PLOT OF SPECTRAL DENSITY FOR 5755MHz AT CHAIN 1



TEST PLOT OF SPECTRAL DENSITY FOR 5755MHz AT CHAIN 2







TEST PLOT OF SPECTRAL DENSITY FOR 5795MHz AT CHAIN 2

11. CONDUCTED SPURIOUS EMISSION

11.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2, Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- 3. Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

11.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)

The same as described in section 8.2.

11.3. MEASUREMENT EQUIPMENT USED

The same as described in section 6.

11.4. LIMITS AND MEASUREMENT RESULT

LIMITS AND MEASUREMENT RESULT		
Applieghte Limite	Measurement R	esult
Applicable Limits	Test channel	Criteria
-27dBm/MHz	5150MHz-5250MHz	PASS
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edgeincreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge, and from 5 MHz above or below the band edge.	5725MHz-5850MHz	PASS

Keysight Spectrum Analyzer - Swept SA SENSE:INT GN A Avg Type: Log-Pwr Avg|Hold:>100/100 TRACE 1 2 3 4 5 6 TYPE MWWW DET P NNNN Peak Search Marker 1 815.549888747 MHz PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB Next Peak Mkr1 815.550 MHz -58.634 dBm 10 dB/div Ref 20.00 dBm Next Pk Right Next Pk Left Marker Delta Mkr→CF 1 Mkr→RefLvl a advertised to be a bit of a data bit More 1 of 2 Start 0.0300 GHz #Res BW 100 kHz Stop 1.0000 GHz Sweep 93.33 ms (40000 pts) #VBW 300 kHz MSG STATUS Keysight Spectrum Analyzer - Swept SA Peak Search Marker 1 5.144501112528 GHz PNO: Fast C IFGain:Low #Atten: 30 dB Avg Type: Log-Pwr Avg|Hold:>100/100 TYPE MWWWW DET P NNNNN Next Peak Mkr1 5.144 50 GHz -45.077 dBm 10 dB/div Ref 20.00 dBm Next Pk Right Next Pk Left Marker Delta Mkr→CF Mkr→RefLvl More 1 of 2 Start 1.000 GHz #Res BW 1.0 MHz Stop 5.150 GHz Sweep 8.000 ms (40000 pts) #VBW 3.0 MHz STATUS

FOR 802.11A20 MODULATION

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5180MHz

Report No.: AGC07716190301FE06 Page 46 of 84

Keysight Spectrum Analyzer - KI RF 50	Swept SA D Ω AC	S	ENSE:INT	ALIGN	AUTO		
Start Freq 5.15000	PN	0: Fast Trig: Fro		Avg Type: Log Avg Hold:>100		TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N	Frequency
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-og 10.0			Ĭ				Conton Fra
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70.0							
Start 5.1500 GHz Res BW 1.0 MHz		#VBW 3.0 MH	7	Swoo		p 5.3500 GHz ns (40000 pts)	CF Ste 20.000000 MH
IKR MODE TRC SCL	X	**B** 3.0 1411				FUNCTION VALUE	Auto Mi
1 N 1 f	5.169 755	GHz -27.671 c	IBm		WDTH	UNCTION VALUE	
2 N 1 f	5.190 431	GHz -26.813 c	IBM				Freq Offs
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10							Log <u>L</u>
11							
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Keysight Spectrum Analyzer -						, *	
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SG Keysight Spectrum Analyzer -	Ω AC 8750000 G PN		ee Run		I AUTO	TRACE 1 2 3 4 5 6 TYPE M DET P N N N N	Peak Search
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Keysight Spectrum Analyzer Keysight Spectrum Analyzer RF 50 Aarker 1 38.70668 0 dB/div Ref 20.00	0 Ω AC 3750000 G PN IFG	Hz 0: Fast 🖵 Trig: Fr	ee Run	Avg Type: Log	g-Pwr D/100 Mkr1 38		Peak Search
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sg sg d RF st Narker 1 38.70668 0 dB/div Ref 20.00	0 Ω AC 3750000 G PN IFG	Hz 0: Fast 🖵 Trig: Fr	ee Run	Avg Type: Log	g-Pwr D/100 Mkr1 38	B.706 7 GHz	Peak Search Next Pea Next Pk Rig
Keysight Spectrum Analyzer - G RF Aarker 1 38.70668 0 BF	0 Ω AC 3750000 G PN IFG	Hz 0: Fast 🖵 Trig: Fr	ee Run	Avg Type: Log	g-Pwr D/100 Mkr1 38	B.706 7 GHz	Peak Search Next Pea Next Pk Rig
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Keysight Spectrum Analyzer - RF SG Reysight Spectrum Analyzer - RF SG Aarker 1 38.70668 Ref 20.00 SG 0 dB/div Ref 20.00 Ref 20.00 0 0	0 Ω AC 3750000 G PN IFG	Hz 0: Fast 🖵 Trig: Fr	ee Run	Avg Type: Log	g-Pwr D/100 Mkr1 38	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le
Keysight Spectrum Analyzer RF SI RF SI Aarker 1 38.70666 0 dB/div Ref 20.00 0	0 Ω AC 3750000 G PN IFG	Hz 0: Fast 🖵 Trig: Fr	ee Run	Avg Type: Log	g-Pwr D/100 Mkr1 38	B.706 7 GHz	Peak Search Next Pea Next Pk Rig Next Pk Le
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G Reysight Spectrum Analyzer Keysight Spectrum Analyzer SI 0 RF SI Aarker 1 38.70668 0 dlasta	0 Ω AC 3750000 G PN IFG	Hz 0: Fast 🖵 Trig: Fr	ee Run	Avg Type: Log Avg Hold:>100	AUTO 	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
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Keysight Spectrum Analyzer - Reysight Spectrum Analyzer - RF 51 Aarker 1 38.70668 O dB/div Ref 20.00 O d	0 Ω AC 18750000 G PN PN IFG 0 dBm	HZ O: Fast Atten: 4 Atten: 4		Avg Type: Lo Avg/Hold:>100	I AUTO 	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
G Reysight Spectrum Analyzer G RF SI Aarker 1 38.70668 Ref 20.00 O dB/div Ref 20.00	0 Ω AC 18750000 G PN PN IFG 0 dBm	HZ O: Fast Atten: 4 Atten: 4		Avg Type: Lo Avg/Hold:>100	I AUTO 	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
G Reysight Spectrum Analyzer - 0 Q RF SI Aarker 1 38.70668 Aarker 20.00 0 Ref 20.00 0	0 Ω AC 18750000 G PN PN IFG 0 dBm	HZ O: Fast Atten: 4 Atten: 4		Avg Type: Lo Avg/Hold:>100	I AUTO 	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
Keysight Spectrum Analyzer - 3 RF SI Image: Second Stress of St	0 Ω AC 18750000 G PN PN IFG 0 dBm	HZ O: Fast Atten: 4 Atten: 4		Avg Type: Lo Avg/Hold:>100	I AUTO 	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→Ref L
G Reysight Spectrum Analyzer RF SI Iarker 1 38.70668 0 dB/div Ref 20.00 9	0 Ω AC 18750000 G PN PN IFG 0 dBm	HZ O: Fast Atten: 4 Atten: 4		Avg Type: Lo Avg/Hold:>100	Mkr1 38	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→Ref L Mo
Keysight Spectrum Analyzer - RF SI Iarker 1 38.70668 O dB/div Ref 20.00 9	0 Ω AC 18750000 G PN PN IFG 0 dBm	HZ O: Fast Atten: 4 Atten: 4	ee Run 300 dB	Avg Type: Lo Avg Hold:>100	AUTO Pwr /100 Mkr1 38 4 4 4 4 4 4 4 	3.706 7 GHz 40.066 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→Ref L Moi 1 of

Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO		
arker 1 853.696092402 I	MHZ PNO: Fast 🖵	Trig: Free Run	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Peak Search
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ic.	** D**	OUD MILE		33 ms (40000 pts)	
Dig	<i>774 D 44</i>		STATUS	35 ms (40000 praj	
Keysight Spectrum Analyzer - Swept SA	# C D C		STATUS		
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	GHz	SENSE:INT	STATUS ALIGN AUTO Avg Type: Log-Pwr	TRACE 12.3456	reak Search
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE M	
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.139002225056	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE M DET P NNNNN 1 5.139 00 GHz	
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 15.139002225056 0 dEJ/div Ref 20.00 dBm	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE M	Peak Search
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.139002225056 0 dB/div Ref 20.00 dBm	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE M DET P NNNNN 1 5.139 00 GHz	Peak Search Next Pea
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Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.139002225056 0 dE/div Ref 20.00 dBm 0 0	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456 TYPE MWWWW DET PNNNNN 15.139 00 GHZ -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Jarker 1 5.139002225056 0 dB/div Ref 20.00 dBm 0 0	i GHz PNO: Fast ⊂ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC AC <td>i GHz PNO: Fast ⊂ IFGain:Low</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*</td> <td>TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del</td>	i GHz PNO: Fast ⊂ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC A arker 1 5.139002225056 A </td <td>i GHz PNO: Fast ⊂ IFGain:Low</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr</td> <td>TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C</td>	i GHz PNO: Fast ⊂ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC A arker 1 5.139002225056 A </td <td>i GHz PNO: Fast ⊂ IFGain:Low</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*</td> <td>TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C</td>	i GHz PNO: Fast ⊂ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.139002225056 0 dB/div Ref 20.00 dBm 0	i GHz PNO: Fast ⊂ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.139002225056 0 B B <td>i GHz PNO: Fast ⊂ IFGain:Low</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*</td> <td>TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C Mkr→Ref L</td>	i GHz PNO: Fast ⊂ IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr*	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C Mkr→Ref L
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.139002225056 0 B B <td>Sector Sector S</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>ALIGN AUTO Avg Hold:>100/100 Mkr Mkr</td> <td>TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le</td>	Sector S	SENSE:INT Trig: Free Run #Atten: 30 dB	ALIGN AUTO Avg Hold:>100/100 Mkr Mkr	TRACE 1 2 3 4 5 6 TYPE MINIMU DET PINIMUM 1 5.139 00 GHz -46.780 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5240MHz

Keysight Spectrum Analyzer - 1 RF 50	Ω AC	SENSE	E:INT	ALIGN AUTO		
tart Freq 5.15000	0000 GHz PNO: F	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	e: Log-Pwr d:>100/100	TRACE 1 2 3 4 5 TYPE MWWWW DET P NNNN	Frequency
	IFGain:	Low Atten: 30 d	iD	Mkr1 5.	229 747 GHz	Auto Tur
0 dB/div Ref 20.00	0 dBm				-27.290 dBm	
10.0		Ĭ				Center Fre
0.00						5.250000000 GH
10.0			2			
20.0		^1^	2		DL1 -27.00 dBm	Start Fre
40.0			Arres .			5.15000000 GH
50.0 <mark>Here and all the second of the second s</mark>	an da mandari d <mark>i</mark> dan madil		A DEPARTMENT OF A DEPARTMENT	hall detail as a franch and bland		
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Start 5.1500 GHz		#\/B\// 2.0 MU-			top 5.3500 GHz	
KR MODE TRC SCL	X	#VBW 3.0 MHz			7 ms (40000 pts	20.000000 MH Auto Ma
1 N 1 f	5.229 747 G		n	INCTION WIDTH	FUNCTION VALUE	
2 N 1 f 3 4	5.250 273 GH	lz -26.132 dBn	n			Freq Offs
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		III		STATUS	4	
11 SG		m		STATUS	4	
SG Keysight Spectrum Analyzer - 3 RF 50	Ω AC	m SENSI		ALIGN AUTO		
SG Keysight Spectrum Analyzer - 3 RF 50	Ω AC 5000000 GHz PNO: F	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold		TRACE 12345 TYPE M	Peak Search
SG Keysight Spectrum Analyzer - 3 RF 50	Ω AC 5000000 GHz	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100		Peak Search
11 SG Keysight Spectrum Analyzer - 3 RF 50 Narker 1 36.71171	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100	TRACE 12 3 4 5 TYPE MWWWW DET P NNNN 36.711 7 GHz -38.599 dBm	Peak Search Next Pea
11 SG Keysight Spectrum Analyzer - 3 RF 50 Narker 1 36.71171	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100	36.711 7 GHz	Peak Search Next Pea
11 SG Keysight Spectrum Analyzer - RF 50 Narker 1 36.71171 0 dB/div Ref 20.00	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100	36.711 7 GHz	Peak Search Next Pea
11 SG Keysight Spectrum Analyzer - RF 50 Aarker 1 36.71171 0 dB/div Ref 20.00 9	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100	36.711 7 GHz	Peak Search Next Pea
11 SG Keysight Spectrum Analyzer - RF 50 Narker 1 36.71171 0 dB/div Ref 20.00 9	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100	36.711 7 GHz	Peak Search Next Pea Next Pk Rig
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11	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold	ALIGN AUTO e: Log-Pwr d:>100/100	-27 00 dBr	Peak Search Next Pea Next Pk Rigi
11 RF 50 RF 50 50 Iarker 1 36.71171 0 dB/div Ref 20.000 0 dB/div Ref 20.000 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0 10 0 0 0	Ω AC 5000000 GHz PNO: F IFGain:	ast 🕞 Trig: Free F	Avg Typ Run Avg Hold B	ALIGN AUTO	-27.00 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le
11 RF 50 Iarker 1 36.71171 0 dB/div Ref 20.00 9 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	2 AC 5000000 GHz PRO:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B B B B B B B B B B B B B B B B B B	ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1	1	Peak Search Next Pea Next Pk Rig Next Pk Le
11	2 AC 5000000 GHz PRO:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B	ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1	1	Peak Search Next Pea Next Pk Rig Next Pk Le
11	2 AC 5000000 GHz PRO:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B B B B B B B B B B B B B B B B B B	ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1	1	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
11	2 AC 5000000 GHz PRO:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B B B B B B B B B B B B B B B B B B	ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1	1	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
11	2 AC 5000000 GHz PRO:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B B B B B B B B B B B B B B B B B B	ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1	1	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
11 RF 50 Iarker 1 36.71171 0 dB/div Ref 20.00 9 10.0 10.0 10.0 10.0 10.0 <td>2 AC 5000000 GHz PRO:</td> <td>Trig: Free R Atten: 30 d</td> <td>Avg Typ Run Avg Hold B B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B Avg Hold B B B B B B B B B B B B B B B B B B B</td> <td>ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1</td> <td>1</td> <td>Peak Search Next Pea Next Pk Righ Next Pk Le Marker Del Mkr→C</td>	2 AC 5000000 GHz PRO:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B Avg Hold B B B B B B B B B B B B B B B B B B B	ALIGN AUTO ::- Log-Pwr ::- 100/100 Mkr1	1	Peak Search Next Pea Next Pk Righ Next Pk Le Marker Del Mkr→C
11 RF 50 Iarker 1 36.71171 0 dB/div Ref 20.00 0 RF 50 10.0	Ω AC 5000000 GHz PNO: E PRO: E PNO: E IFGain: IFGain: 0 dBm IfGain:	Trig: Free R Atten: 30 d	Avg Typ Run Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B Avg Hold B B Avg Hold B B B B B B B B B B B B B B B B B B B	ALIGN AUTO E: Log-Pwr I:>100/100 Mkr1 Uuluuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuuu	1	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C Mkr→Ref L

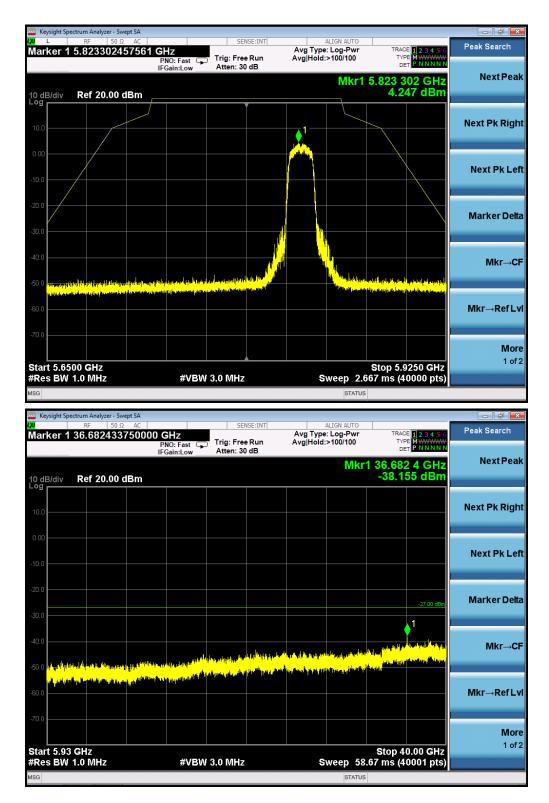
Keysight Sp	RF 50 Ω AC		SENSE:INT	ALIGN AUTO		Deels Ceerele
arker 1	808.177704443	MHz PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Peak Search
		IFGain:Low	Atten: 30 dB	•		NextPea
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dB/div ^g	Ref 20.00 dBm					
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tart 0.03					Stop 1.0000 GHz	1 0
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	100 KHZ	#VBV	7 JUU KHZ	aweep a	3.33 ms (40000 prs)	
G	100 KH2	#VBV	7 300 KHZ	Sweep 9		
ŝG		#VBW	7 300 KHZ			
G Keysight Sp	ectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	STATU ALIGN AUTO	IS	Peak Search
iG Keysight Sp	ectrum Analyzer - Swept SA	9 GHz PNO: Fast 🔾	SENSE:INT	STATU		Peak Search
iG Keysight Sp	ectrum Analyzer - Swept SA RF 50 Ω AC	9 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123450 TYPE MWWWWW DET P.NNNN	
Keysight Sp arker 1 0 dB/div	ectrum Analyzer - Swept SA RF 50 Ω AC	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456	Peak Search
Keysight Sp Iarker 1	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search
G Keysight Sp larker 1	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search Next Pea
ig keysight Sp. larker 1	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search Next Pea
ig keysight Sp. larker 1	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search Next Pea Next Pk Rig
is keysight Spin Spin Spin Spin Spin Spin Spin Spin	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search Next Pea Next Pk Rig
is keysight Spin Spin Spin Spin Spin Spin Spin Spin	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search Next Pea Next Pk Rig
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G dB/div	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNNN T1 5.645 93 GHz	Peak Search Next Pea Next Pk Rig Next Pk Le
G Keysight Sp	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	rt 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le
G Keysight Sp larker 1 0 dB/div 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHz PNO: Fast 🔾	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	rt 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De
G	ectrum Analyzer - Swept SA RF 50 Ω AC 5.6459311148273 Ref 20.00 dBm	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De
G	ectrum Analyzer - Swept SA RF 50.Q AC 5.645931148279	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
G G G G G G G G G G G G G G G G G G G	ectrum Analyzer - Swept SA RF 50 Ω AC 5.6459311148273 Ref 20.00 dBm	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Per Next Pk Rig Next Pk Le Marker De Mkr→C
G	ectrum Analyzer - Swept SA RF 50 Ω AC 5.6459311148273 Ref 20.00 dBm	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Per Next Pk Rig Next Pk Le Marker De Mkr→C
G Keysight Sp arker 1 0 dB/div 0 d 0 dB/div 0 d 0 d 0 d 0 d 0 d 0 d 0 d 0 d	ectrum Analyzer - Swept SA RF 50 Ω AC 5.6459311148273 Ref 20.00 dBm	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
G G G G G G G G G G G G G G G G G G G	ectrum Analyzer - Swept SA RF 50 Ω AC 5.6459311148273 Ref 20.00 dBm	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C Mkr→Ref L
Image: second	ectrum Analyzer - Swept SA RF 50 Ω AC 5.6459311148274 Ref 20.00 dBm	9 GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	ITRACE 2 3 4 5 6 TYPE MWWWW DET PNNNNN r1 5.645 93 GHz -44.716 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5745MHz

Keysight Spectrum Analyzer - Swept SA L RF 50 Ω AC	SENSE:INT			Back Secret
larker 1 5.740573514338	PNO: Fast IFGain:Low Atten: 30 dB	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Peak Search
		Mkr1 5	.740 574 GHz	NextPea
0 dB/div Ref 20.00 dBm			5.332 dBm	
10.0	1			Next Pk Rigi
				Next Pk Le
0.0				
20.0			\longrightarrow	Mankan Dal
80.0	/ <mark>/</mark>			Marker De
				Mkr→C
		yn af Maastan fan sy'n diffition i bûlder de greeger syntaan geleger yn yn ar yn geleger yn yn geleger yn yn g Mae'n geleger geleger a geleger geleger yn geleger geleger geleger geleger geleger geleger geleger geleger geleg	ha dha dhindin dan bahaya pudan a Tahaya pilana a manya manya manya a	
60.0				Mkr→RefL
70.0				
				Mo
tart 5.6500 GHz				1 of
	#VBW 3.0 MHz	Sweep 2.66	Stop 5.9250 GHz 7 ms (40000 pts)	
Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep 2.66	Stop 5.9250 GHz 7 ms (40000 pts)	
Res BW 1.0 MHz		Sweep 2.66	6top 5.9250 GHz 7 ms (40000 pts)	
Res BW 1.0 MHz	GHz	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr	7 ms (40000 pts)	Peak Search
Res BW 1.0 MHz sg Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	SENSE:INT	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 1 2 3 4 5 6 TYPE M	Peak Search
Res BW 1.0 MHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω larker 1 38.546914500000 0 dB/div Ref 20.00 dBm) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts)	Peak Search
Res BW 1.0 MHz sg Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 12 3 4 5 G TYPE MANNAN DET P NANNAN 38,546 9 GHz	Peak Search Next Pea
Res BW 1.0 MHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω larker 1 38.546914500000 0 dB/div Ref 20.00 dBm) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 12 3 4 5 G TYPE MANNAN DET P NANNAN 38,546 9 GHz	Peak Search Next Pea
Res BW 1.0 MHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 38.546914500000 0 dB/div Ref 20.00 dBm) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 12 3 4 5 G TYPE MANNAN DET P NANNAN 38,546 9 GHz	Peak Search
Res BW 1.0 MHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 38.546914500000 0 0 0 0 0 0 0 0) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 12 3 4 5 G TYPE MANNAN DET P NANNAN 38,546 9 GHz	Peak Search Next Pea
Res BW 1.0 MHz 3G) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 12 3 4 5 G TYPE MANNAN DET P NANNAN 38,546 9 GHz	Peak Search Next Pea Next Pk Rig
Res BW 1.0 MHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 38.546914500000 0 0 0 0 0 0 0 0) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 12 3 4 5 G TYPE MANNAN DET P NANNAN 38,546 9 GHz	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 1.0 MHz 3G) GHz PN0: Fast C Trig: Free Run	Sweep 2.66 STATUS ALIGN AUTO Avg Type: Log-Pwr Avg[Hold:>100/100	7 ms (40000 pts) TRACE 1 2 3 4 5 6 TYPE WWWW 38.546 9 GHz -38.385 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo
Res BW 1.0 MHz 3G 3G RF 50 Ω Action RF 50 Ω Action Barker 1 38.546914500000 0 dB/div Ref 20.00 dBm 9 0.00 0.00) GHz PN0: Fast C Trig: Free Run	Sweep 2.66	7 ms (40000 pts) TRACE 1 2 3 4 5 6 TYPE MANNAN 38.546 9 GHz -38.385 dBm -27 00 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De
Res BW 1.0 MHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 38.546914500000 0 dB/div Ref 20.00 dBm 0 0.00 0.00 0.00 0.00 0.00	CH2 PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB	Sweep 2.66	7 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
Res BW 1.0 MHz 3G Revight Spectrum Analyzer - Swept SA RF 50 0 AC Iarker 1 38.546914500000 0 dB/div Ref 20.00 dBm 0 0 A <td>SENSE :INT PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB</td> <td>Sweep 2.66</td> <td>7 ms (40000 pts)</td> <td>Peak Search Next Per Next Pk Rig Next Pk Lo Marker De Mkr→0</td>	SENSE :INT PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB	Sweep 2.66	7 ms (40000 pts)	Peak Search Next Per Next Pk Rig Next Pk Lo Marker De Mkr→0
Res BW 1.0 MHz 3G Keysight Spectrum Analyzer - Swept SA RF 50.0 AC Iarker 1 38.546914500000 0 dB/div Ref 20.00 dBm 0 0 dB/div Ref 20.00 dBm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	CH2 PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB	Sweep 2.66	7 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
Res BW 1.0 MHz 3G Revight Spectrum Analyzer - Swept SA RF 50 0 AC Iarker 1 38.546914500000 0 dB/div Ref 20.00 dBm 0 0 A <td>CH2 PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB</td> <td>Sweep 2.66</td> <td>7 ms (40000 pts)</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker De Mkr→C</td>	CH2 PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB	Sweep 2.66	7 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De Mkr→C
Res BW 1.0 MHz 3G Revisight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 38.546914500000 0 dB/div Ref 20.00 dBm 0 B 0.0 Image: Spectrum Analyzer - Swept SA 0.0 Image: Spect SA </td <td>CH2 PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB</td> <td>Sweep 2.66</td> <td>7 ms (40000 pts)</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C</td>	CH2 PNO: Fast IFGain:Low Trig: Free Run Atten: 30 dB	Sweep 2.66	7 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C

Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO	TRUCK	Peak Search
larker 1 944.975374384	PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	r our oouron
	IFGain:Low	Atten: 30 dB	MI	(r1 944.975 MHz	NextPea
dB/div Ref 20.00 dBm			IVIT	-58.910 dBm	
		l l			
10.0					Next Pk Rig
10.0					
0.00					
					Next Pk Le
0.0					
0.0					Marker De
0.0				DL1 -27.00 dBm	
0.0					Mkr→0
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					Mo
tart 0.0300 GHz				Stop 1.0000 GHz	1 0
Res BW 100 kHz	#VBN	/ 300 kHz	Sweep 9	3.33 ms (40000 pts)	
Res BW 100 kHz	#VBN	/ 300 kHz	Sweep 9		
G	#VBW	/ 300 kHz			
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	STATU ALIGN AUTO	IS	Peak Search
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	STATL	TRACE	Peak Search
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	4 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 0 TYPE M	Peak Search
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 0 TYPE M	Peak Search
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.8833653341334 0 dB/div Ref 20.00 dBm	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pea
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.8833653341334 0 dB/div Ref 20.00 dBm	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pe
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pea
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pea Next Pk Rig
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pea Next Pk Rig
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0 0.0 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pea Next Pk Rig
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0 0.0 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	IS TRACE 123456 TYPE MWWWWW DET PNNNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN r1 3.883 65 GHz	Peak Search Next Pe Next Pk Rig Next Pk Li
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dB/div Ref 20.00 dBm 9 0.0 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	IS TRACE 123456 TYPE MWWWWW DET PNNNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pe Next Pk Rig Next Pk Li
G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 3.883653341334 0 dE/div Ref 20.00 dBm 9 0.0 0.0 0.0 0.0 0.0 0.0 0.0	1 GHz PNO: Fast ⊂	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mtk	IS TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P.NNNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pe Next Pk Rig Next Pk Li Marker De
G RF 50 Ω AC AC <tha< td=""><td>1 GHz PNO: Fast ⊂</td><td>SENSE:INT</td><td>STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk</td><td>18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm</td><td>Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De</td></tha<>	1 GHz PNO: Fast ⊂	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
G RF 50 Ω AC A	1 GHz PN0: Fast IFGain:Low	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
G RF 50 Ω AC A	1 GHz PN0: Fast IFGain:Low	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mtk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→0
Image: sector management RF 50 Ω AC AC <t< td=""><td>1 GHz PN0: Fast IFGain:Low</td><td>SENSE:INT</td><td>STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk</td><td>18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm</td><td>Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→0</td></t<>	1 GHz PN0: Fast IFGain:Low	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→0
Image: sector in analyzer - Swept SA RF 50 Ω AC AC <td>1 GHz PN0: Fast IFGain:Low</td> <td>SENSE:INT</td> <td>STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk</td> <td>18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→0</td>	1 GHz PN0: Fast IFGain:Low	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→0
G RF 50 Ω AC AC <thac< th=""> AC AC <thac<< td=""><td>1 GHz PN0: Fast IFGain:Low</td><td>SENSE:INT</td><td>STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk</td><td>18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm</td><td>Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr-J Mkr-Ref L</td></thac<<></thac<>	1 GHz PN0: Fast IFGain:Low	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr-J Mkr-Ref L
G RF 50 Ω AC RF 50 Ω AC arker 1 3.883653341334 OdB/div Ref 20.00 dBm 0	1 GHz PN0: Fast IFGain:Low	SENSE:INT	STATL ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	IS TRACE 1 2 3 4 5 6 TYPE MANNANA r1 3.883 65 GHz -46.676 dBm DL1-27 00 dBm DL1-27 00 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→Ref L Mo
Image: sector in analyzer - Swept SA RF 50 Ω AC AC <td>t GHZ PNO: Fast IFGain:Low</td> <td>SENSE:INT</td> <td>STATU ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk</td> <td>18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm</td> <td></td>	t GHZ PNO: Fast IFGain:Low	SENSE:INT	STATU ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mk	18 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NINNN r1 3.883 65 GHz -46.676 dBm	

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5825MHz



FOR 802.11N40 MODULATION

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5190MHz

Keysight Spe K	RF 50 Ω AC		SENSE:INT	ALIGN AUTO		
larker 1	887.671191780	MHz PNO: Fast 😱	Tain Free Day	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Peak Search
		IFGain:Low	#Atten: 30 dB	-		NextPea
0 dB/div	Ref 20.00 dBm			Mkr1	887.671 MHz -58.842 dBm	Nextret
	Kei 20.00 uBili		Ť			
10.0						Next Pk Rigi
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tart 0.03					top 1.0000 GHz	1 of
Res BW		#VBW	300 kHz	Sweep 93.3	3 ms (40000 pts)	
		#VBW	300 kHz			
Res BW		#VBW	300 kHz	Sweep 93.3	3 ms (40000 pts)	
Res BW	100 kHz ectrum Analyzer - Swept SA	9 GHz	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr	3 ms (40000 pts)	Peak Search
Res BW	100 kHz ctrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 234 5 6 TYPE M	Peak Search
Res BW	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search
Res BW sq Keysight Spo larker 1 0 dB/div	100 kHz ctrum Analyzer - Swept SA RF 50 Ω AC	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 234 5 6 TYPE M	
Res BW Keysight Spo larker 1 0 dB/div	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea
Res BW G Arker 1 Arker 1	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea
Res BW G G Keysight Spo Aarker 1 O dB/div O G G G G G G G G G G G G G G G G G G	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea
Res BW scale keysight Spr larker 1	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea Next Pk Rig
Res BW scale keysight Spr larker 1	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea Next Pk Rig
Res BW science of the second	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW aa aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 2 3 4 5 6 TYPE MUNIMAN DET P NINN N 5.148 34 GHz	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW according to the second	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts) TRACE 23456 TYPE MUNITURE DET PINNINN 5.148 34 GHz -37.219 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast	SENSE:INT	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
Res BW ag keysight Spo arker 1 0 dB/div og 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	100 kHz setrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm	9 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr1	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De
Res BW 3G 3G Iterstand Iterstand 0 dB/div 0 dB/div </td <td>100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849</td> <td>9 GHz PNO: Fast IFGain:Low</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100</td> <td>3 ms (40000 pts)</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del</td>	100 kHz ectrum Analyzer - Swept SA RF 50 Ω AC 5.148339955849	9 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
Res BW 3G 3G Iterstand Iterstand 0 dB/div 0 dB/div </td <td>100 kHz setrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm</td> <td>9 GHz PNO: Fast IFGain:Low</td> <td>SENSE:INT Trig: Free Run #Atten: 30 dB</td> <td>Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr1</td> <td>3 ms (40000 pts)</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Le Marker De Mkr→C</td>	100 kHz setrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm	9 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr1	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De Mkr→C
Res BW 3G Service of the service	100 kHz setrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm	9 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr1	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De Mkr→C
Res BW 3G SG SG SG SG SG SG SG	100 kHz setrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm	9 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: STATUS ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr1	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C Mkr-Ref L
Res BW G Keysight Spel C C C C C C C C C	100 kHz setrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm	9 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: Status ALIGN AUTO AvgType: Log-Pwr AvgHold:>100/100 MIKr1	3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C Mkr→Ref L
Res BW 3G Service of the service	100 kHz etrum Analyzer - Swept SA RF 50 Ω AC 5.14833995849 Ref 20.00 dBm 	9 GHZ PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run #Atten: 30 dB	Sweep 93.3: Status ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKr1	3 ms (40000 pts)	Peak Search

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Keysight Spectrum Analyzer - Sv		SENSE:INT	ALIGN AUTO		
Start Freq 5.150000	PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456 TYPE MWWWW DET P N N N N N	Frequency
	IFGain:Low	Atten: 30 dB	Miced	5.168 950 GHz	Auto Tur
0 dB/div Ref 20.00	dBm			-27.649 dBm	
- og 10.0		Ť			Conton En
0.00					Center Fre 5.25000000 GH
10.0					0.2000000000
.20.01	2				Ctort Err
30.0				DL1 -27.00 dBm	Start Fre 5.15000000 Gi
40.0 40.0		Martin A. de un			
50.0 					Stop Fre
60.0					5.350000000 GI
70.0					
tart 5.1500 GHz Res BW 1.0 MHz	#\/R	W 3.0 MHz	Sween 26	Stop 5.3500 GHz 67 ms (40000 pts)	CF Ste 20.000000 Mi
IKR MODE TRC SCL			INCTION FUNCTION WIDTH	FUNCTION VALUE	Auto M
1 N 1 f	5.168 950 GHz	-27.649 dBm	NCTION FONCTION WIDTH		
2 N 1 f	5.211 017 GHz	-27.763 dBm			Freq Offs
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Keysight Spectrum Analyzer - Sv				• • • • • • • • • • • • • • • • • • •	də _
ا Keysight Spectrum Analyzer - Sv RF 50 ۵	Ω AC 6250000 GHz	m SENSE:INT	ALIGN AUTO	TRACE 123456	Peak Search
ا Keysight Spectrum Analyzer - Sv RF 50 ۵	ΩAC		ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100		Peak Search
Keysight Spectrum Analyzer - Sv RF 50 C larker 1 38.067396	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search
Keysight Spectrum Analyzer - Sv RF 50 1 Iarker 1 38.067396 0 dB/div Ref 20.00	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100		Peak Search
Keysight Spectrum Analyzer - Sv RF 50 £ Iarker 1 38.067396 0 dB/div Ref 20.00	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea
Keysight Spectrum Analyzer - Sv RF 50 £ Iarker 1 38.067396 0 dB/div Ref 20.00	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea
Keysight Spectrum Analyzer - Sv RF 50 0 Iarker 1 38.067396 0 dB/div Ref 20.00 0 0	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea
Keysight Spectrum Analyzer - Su RF 50 S Iarker 1 38.067396 O dB/div Ref 20.00 G G	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea Next Pk Rig
Keysight Spectrum Analyzer - Sv RF 50 g Iarker 1 38.067396 0 dB/div Ref 20.00 9 0 10 0 0	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea Next Pk Rig
Keysight Spectrum Analyzer - Sv RF 50 g Iarker 1 38.067396 0 dB/div Ref 20.00 9	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea Next Pk Rig
Keysight Spectrum Analyzer - Sv RF 50 g Iarker 1 38.067396 0 dB/div Ref 20.00 9	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	1 38.067 4 GHz	Peak Search Next Pea Next Pk Rig Next Pk Le
Keysight Spectrum Analyzer - Sv RF 50 g Iarker 1 38.067396 0 dB/div Ref 20.00 9	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALTGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	-27.00 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le
Keysight Spectrum Analyzer - Sv RF 50 c Iarker 1 38.067396 0 dB/div Ref 20.00 9	Ω AC 5250000 GHz PN0: Fast C IFGain:Low	Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr	-27.00 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le
Keysight Spectrum Analyzer - Sv RF 50 C Iarker 1 38.067396 0 dB/div Ref 20.00 9	α AC 5250000 GHz PN0: Fast C IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr		
Keysight Spectrum Analyzer - Sv RF 50 s Iarker 1 38.067396 0 dlB/div Ref 20.00 9 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	α AC S250000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr		Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del
Keysight Spectrum Analyzer - Sv RF S0 5 Aarker 1 38.067396 Ref 20.00 Ref 20.00	α AC S250000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr		Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
Keysight Spectrum Analyzer - Sv RF 50 (s) Aarker 1 38.067396 0 dB/div Ref 20.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	α AC 5250000 GHz PN0: Fast C IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr		Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
Keysight Spectrum Analyzer - Sv RF S0 5 Aarker 1 38.067396 Ref 20.00 Ref 20.00	α AC S250000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr		Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C
Keysight Spectrum Analyzer - Sv RF 50 S Iarker 1 38.067396 Ref 20.00 Ref 20.00	α AC S250000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr		Peak Search Next Pea Next Pk Rig Next Pk Le Marker De Mkr→C
Keysight Spectrum Analyzer - Su RF 50 S Iarker 1 38.067396 Ref 20.00 Ref 20.00	α AC S250000 GHz PNO: Fast IFGain:Low dBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr	1 38.067 4 GHz -40.108 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr→C Mkr→Ref L
Keysight Spectrum Analyzer - Sv RF 50 c Jarker 1 38.067396 0 dB/div Ref 20.00 9	AC GHZ PNO: Fast PNO: Fast GBm	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr	1 38.067 4 GHz -40.108 dBm	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del

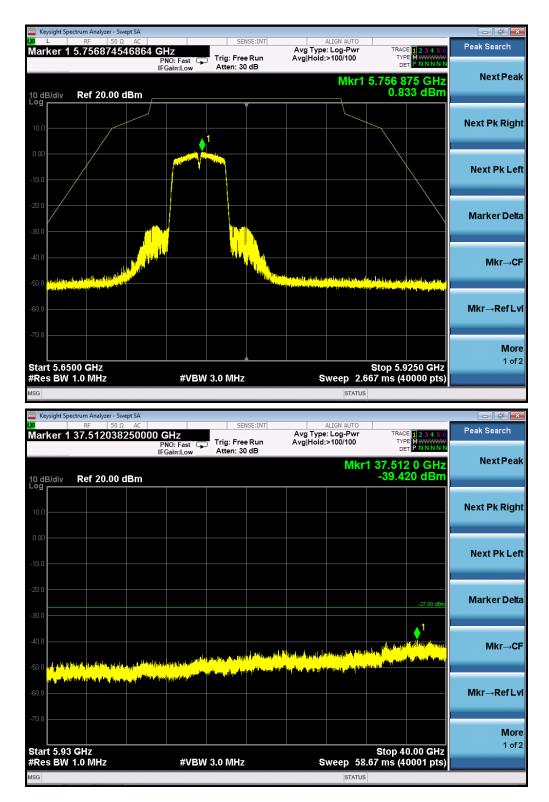
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Res BW 100 kHz G Resight Spectrum Analyzer - Sw arker 1 2.4737018 RF 50.0 G Ref 20.00 f G Solution G Solution	2 AC H 42546 GH PN IFG	IZ IO: Fast Sain:Low	SEN: Trig: Free	Run dB	Avg Type Avg Hold	ALIGN AUTO :: Log-Pwr :>100/100 Mkr	33 ms (4	0000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→C Mkr→Ref L
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TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5230MHz

Keysight Spectrum Analyzer - Swept		SENSE:INT	ALIGN AUTO		
tart Freq 5.1500000			Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE M	Frequency
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tart 5.1500 GHz Res BW 1.0 MHz	#VBI	N 3.0 MHz	Sweep 2.	Stop 5.3500 GHz 667 ms (40000 pts)	CF Ste 20.000000 M
KR MODE TRC SCL	Х		INCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> M
2 N 1 f	5.208 691 GHz 5.251 608 GHz	-27.049 dBm -27.251 dBm			Freq Offs
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G			STATU	s	
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		m SENSE:INT	ALIGN AUTO		
G Keysight Spectrum Analyzer - Swept RF 50 Ω	AC 0000 GHz	SENSE:INT		TRACE 123456	Peak Search
G Keysight Spectrum Analyzer - Swept RF 50 Ω	AC	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12345 TYPE MWWWW DET P NNNN	Peak Search
G Keysight Spectrum Analyzer - Swept RF 50 Ω arker 1 38.65471375	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456	Peak Search
RF 50 Ω Iarker 1 38.65471375	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12345 TYPE MWWWW DET PNNNN 138.6547 GHz	Peak Search
Keysight Spectrum Analyzer - Swept RF 50.0 Jarker 1 38.65471375 0 dB/div Ref 20.00 dB	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12345 TYPE MWWWW DET PNNNN 138.6547 GHz	Peak Search Next Pe
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Keysight Spectrum Analyzer - Swept RF 50.0 Jarker 1 38.65471375 0 dB/div Ref 20.00 dB 00 0	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12345 TYPE MWWWW DET PNNNN 138.6547 GHz	Peak Search Next Pea Next Pk Rig
G Keysight Spectrum Analyzer - Swept RF 50 Ω arker 1 38.65471375 0 dB/div Ref 20.00 dB 00 00 00 00 00 00 00 00 00 0	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12345 TYPE MWWWW DET PNNNN 138.6547 GHz	Peak Search Next Pea Next Pk Rig
G Keysight Spectrum Analyzer - Swept RF 50 Ω Jarker 1 38.65471375 0 dB/div Ref 20.00 dB 0 0 0 0.0 0	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12345 TYPE MWWWW DET PNNNN 138.6547 GHz	Peak Search Next Pea Next Pk Rig
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Keysight Spectrum Analyzer - Swept RF 50 Ω Jarker 1 38.65471375 0 dB/div Ref 20.00 dB 0.0 0.0 0.0 0.0 0.0 0.0	AC 00000 GHz PNO: Fast C IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MYNWW DET PINNIN 1 38.654 7 GHz -39.256 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
G G G G C C C C C C C C C C C C C	AC GHZ PNO: Fast C IFGain:Low _	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkt	TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
G Keysight Spectrum Analyzer - Swept RF 50 Ω Jarker 1 38.65471375 OdB/div Ref 20.00 dB 00 0.0 0.0 0.0 0.0 0.0 0.0 0.0	AC GHZ PNO: Fast C IFGain:Low _	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De
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G RF 50 Ω Iarker 1 38.65471375 0 dB/div Ref 20.00 dB 90 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90 0.00 90	AC GHZ PNO: Fast C IFGain:Low _	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkt	TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr0
G Reysight Spectrum Analyzer - Swept RF 50 Ω Jarker 1 38.65471375 OdB/div Ref 20.00 dB 00 000 000 000 <td>AC GHZ PNO: Fast C IFGain:Low _</td> <td>Trig: Free Run Atten: 30 dB</td> <td>ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkt</td> <td>TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm</td> <td>Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr0</td>	AC GHZ PNO: Fast C IFGain:Low _	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkt	TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lo Marker De Mkr0
G RF 50 Ω RF 50 Ω 100 Ω Iarker 1 38.65471375 0.0 0 0.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 <	AC GHZ PNO: Fast C IFGain:Low _	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkt	TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm	Peak Search Next Pea Next Pk Rig Next Pk Lu Marker De Mkr→Ref L Mo
G RF 50 Ω RF 50 Ω 100 Ω Iarker 1 38.65471375 0.0 0 0.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 <	AC DOUD GHZ	Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkt	TRACE 12 3 4 5 6 TYPE MWNWW DET MWNWW r1 38.654 7 GHz -39.256 dBm	Next Per Next Pk Rig Next Pk Le Marker De Mkr→Ref L Mo 1 o

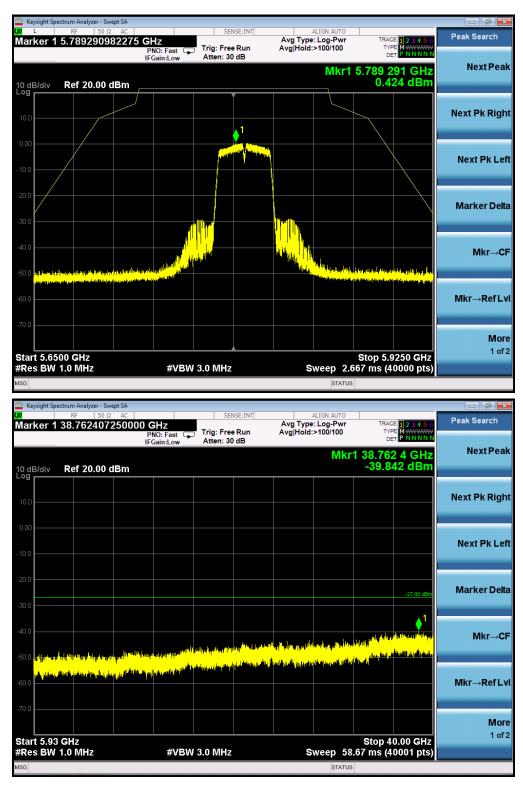
Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO		
arker 1 40.015500388 M	Hz PNO: Fast		Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Peak Search
	IFGain:Low	Atten: 30 dB	•.		NextPea
			Mk	r1 40.016 MHz -58.692 dBm	NEXTFEE
) dB/div Ref 20.00 dBm		Y		-38.092 uBm	
					Next Pk Rigi
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tart 0.0300 GHz Res BW 100 kHz	#VBW	30 kHz		Stop 1.0000 GHz 9.3 ms (40000 pts)	
	#VBW	30 kHz	Sweep 269 Status		
Res BW 100 KHz sg Keysight Spectrum Analyzer - Swept SA	#VBW		STATUS		- # -
Res BW 100 kHz G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	I GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	D.3 ms (40000 pts)	
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Res BW 100 kHz IG Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search
Res BW 100 kHz (keysight Spectrum Analyzer - Swept SA RF 50 Ω AC arker 1 5.629771994300 0 dEJ/div Ref 20.00 dBm	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	D.3 ms (40000 pts)	Peak Search
Res BW 100 kHz G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 5.629771994300 O dB/div Ref 20.00 dBm	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea
Res BW 100 kHz ig keysight Spectrum Analyzer - Swept SA RF 50 Ω Ac IarKer 1 5.629771994300 0 dB/div Ref 20.00 dBm	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 5.629771994300 0 dB/div Ref 20.00 dBm 0 Image: Comparison of the second	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω AC larker 1 5.629771994300	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig
Res BW 100 kHz G G G G G G G G G G G G G G G G G G	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig
Res BW 100 kHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 5.6297719943000 0 0B/div Ref 20.00 dBm 0 0.00	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω AC larker 1 5.629771994300	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	0.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 100 kHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 0 0 0	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 100 kHz Image: Sectrum Analyzer - Swept SA RF 50 Ω Iarker 1 5.629771994300 0 dB/div Ref 20.00 dBm 0 0 0 0.00 0 0.00 0	GHz PNO: Fast	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 100 kHz Image: Section Analyzer - Swept SA RF 50 Q. AC Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 9	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	Aug Type: Log-Pwr Avg Type: Log-Pwr Avg Hold:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 100 kHz xg xg Ref S0 Q AC larker 1 5.629771994300 0 dB/div Ref 20.00 dBm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg[Hoid:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le
Res BW 100 kHz 3G Reysight Spectrum Analyzer - Swept SA Ref 50 Q AC Iarker 1 5.6297719943000 Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 90	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	Aug Type: Log-Pwr Avg Type: Log-Pwr Avg Hold:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C
Res BW 100 kHz 3G Reysight Spectrum Analyzer - Swept SA Ref 50 Q AC Iarker 1 5.6297719943000 Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 90	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	Aug Type: Log-Pwr Avg Type: Log-Pwr Avg Hold:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker De
Res BW 100 kHz 3G Reyight Spectrum Analyzer - Swept SA RF 50 Q. Ac Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 90	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	Aug Type: Log-Pwr Avg Type: Log-Pwr Avg Hold:>100/100	2.3 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C
Res BW 100 kHz 3G Reyight Spectrum Analyzer - Swept SA RF 50 Q. Ac Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 90	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	Aug Type: Log-Pwr Avg Type: Log-Pwr Avg Hold:>100/100	2.3 ms (40000 pts)	Peak Search Next Peak Next Pk Rig Next Pk Le Marker Del MkrC
Res BW 100 kHz 3G Reysight Spectrum Analyzer - Swept SA RF 50 Q AC Iarker 1 5.6297719943000 0 dB/div Ref 20.00 dBm 0 db/	I GHZ PNO: Fast G IFGain:Low	SENSE:INT	Aug Type: Log-Pwr Avg Type: Log-Pwr Avg Hold:>100/100	D.3 ms (40000 pts)	Peak Search Next Peak Next Pk Rig Next Pk Le Marker Del Mkr→C
Res BW 100 kHz sq keysight Spectrum Analyzer - Swept SA RF 50 Q larker 1 5.6297719943000 0 dB/div Ref 20.00 dBm	PNO: Fast C	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 Mkr1	2.3 ms (40000 pts)	

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5755MHz



Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO		Back Secret
larker 1 39.991249781 I	MHz PNO: Fast 😱	Trig: Free Run	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Peak Search
	IFGain:Low	Atten: 30 dB	Mk	r1 39.991 MHz	Next Pea
dB/div Ref 20.00 dBm				-57.530 dBm	
og					
10.0					Next Pk Rigi
0.00					
					Next Pk Le
10.0					
20.0					
				DL1 -27.00 dBm	Marker Del
80.0					
40.0					Mkr→C
50.0					
60.0 A					
60.0	The ship to be put the second second state	and present and a second second	han a start and the start of th	i provi na sa la providina di K ^{ala} nda na fiji ng mala.	Mkr→RefL
(interfluence of the state of t	an state of the second seco	in and a spin of the state of the			
					Мо
					1 of
				Stop 1.0000 GHz	
Start 0.0300 GHz Res BW 100 kHz	#VBW	300 kHz		Stop 1.0000 GHz 33 ms (40000 pts)	
	#VBW	300 kHz	Sweep 93.	Stop 1.0000 GHz 33 ms (40000 pts)	
Res BW 100 kHz	#VBW	300 kHz		33 ms (40000 pts)	
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω AC	00 GHz	SENSE:INT	STATUS	33 ms (40000 pts)	Peak Search
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RF 50 Ω AC		SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search
Res BW 100 kHz 3G Keysight Spectrum Analyzer - Swept SA Re 50 Ω AC larker 1 5.55420760519 0 dB/cliv Ref 20.00 dBm	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search
Res BW 100 kHz sg keysight Spectrum Analyzer - Swept SA RE 50 Ω AC larker 1 5.55420760519 0 dB/div Ref 20.00 dBm	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea
Res BW 100 kHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω Action 1 Barker 1 5.55420760519 0 dB/div Ref 20.00 dBm	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea
Res BW 100 kHz s a keysight Spectrum Analyzer - Swept SA RF 50 Ω AC larker 1 5.55420760519 0 dB/div Ref 20.00 dBm	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea
Res BW 100 kHz s a keysight Spectrum Analyzer - Swept SA RF 50 Ω AC larker 1 5.55420760519 0 dB/div Ref 20.00 dBm	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi
Res BW 100 kHz 3G Keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 5.55420760519 0 dB/div Ref 20.00 dBm 0 0.00	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA RF 50 Ω Acr Iarker 1 5.55420760519 0 dB/div Ref 20.00 dBm 0	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi
Res BW 100 kHz SG SG Keysight Spectrum Analyzer - Swept SA RF 50 Q Marker 1 5.55420760519 0 dB/div Ref 20.00 dBm 0 0 0 10.0 0 10.0 0 10.0 0	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi
Res BW 100 kHz SG SG Keysight Spectrum Analyzer - Swept SA RF 50 Q Marker 1 5.55420760519 0 dB/div Ref 20.00 dBm 0 0 0 10.0 0 10.0 0 10.0 0	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA RF 50 Ω Jarker 1 5.55420760519 0 dB/div Ref 20.00 dBm 9	00 GHz PNO: Fast 😱	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi Next Pk Le Marker Def
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 5.55420760519 0 B/div RF 20.00 dBm 0 B/div Ref 20.00 dBm 0 B/div 0	00 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi Next Pk Le Marker Def
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 5.55420760519 0 dB/div Ref 20.00 dBm 9 0 10.0 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0 0.00 0	00 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi Next Pk Le Marker Def
Res BW 100 kHz SG SG Keysight Spectrum Analyzer - Swept SA RF 50 Ω AC Iarker 1 5.55420760519 0 dB/div Ref 20.00 dBm	00 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rig Next Pk Le Marker Del Mkr-C
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA Re 50 Ω Aarker 1 5.55420760519 0 Ref 20.00 dBm 0 0 0 <	00 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Pea Next Pk Righ Next Pk Le Marker Del Mkr→C
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA RF 50 Ω Aarker 1 5.55420760519 0 dB/div Ref 20.00 dBm	00 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Pea Next Pk Righ Next Pk Le Marker Del Mkr→C
Res BW 100 kHz SG Keysight Spectrum Analyzer - Swept SA RE 50 Q Ac Iarker 1 5.55420760519 0 dB/div Ref 20.00 dBm 0 dB/div Ref 20.00 dBm <td>00 GHz PNO: Fast IFGain:Low</td> <td>SENSE:INT Trig: Free Run Atten: 30 dB</td> <td>ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1</td> <td>33 ms (40000 pts)</td> <td>Peak Search Next Pea Next Pk Rigi Next Pk Le Marker Del Mkr→C Mkr→Ref L</td>	00 GHz PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Pea Next Pk Rigi Next Pk Le Marker Del Mkr→C Mkr→Ref L
Res BW 100 kHz sa keysight Spectrum Analyzer - Swept SA Re 50 Ω Aarker 1 5.55420760519 0 Ref 20.00 dBm 0 0 0 <	DO GHZ PNO: Fast IFGain:Low	SENSE:INT Trig: Free Run Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100 MKT1	33 ms (40000 pts)	Peak Search Next Peak Next Pk Righ Next Pk Le Marker Del Mkr→C Mkr→Ref Li

TEST PLOT OF OUT OF BAND EMISSIONS FOR MODULATION IN 5795M



Note: All the 20MHz bandwidth modulation had been tested, the 802.11a20 was the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 was the worst case and record in his test report.

Two transmit chains had been tested, the chain 1 was the worst case and record in the test report.

The spurious emission at chain 1 is more than 3dB below the limits, so the MIMO results for the spurious emissions are comply with the requirement.

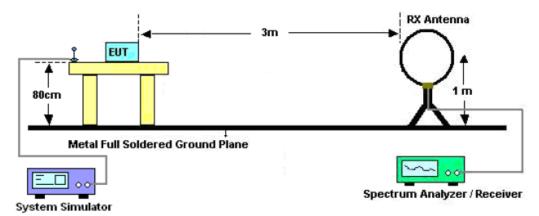
12. RADIATED EMISSION

12.1. MEASUREMENT PROCEDURE

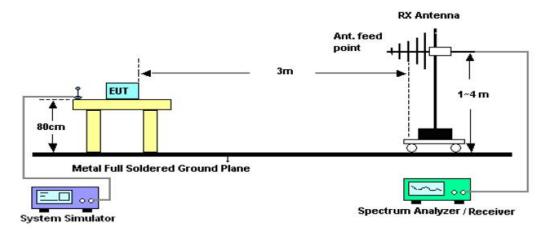
- 1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
- 2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
- 3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
- 4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
- 5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
- 6. For emissions above 1GHz, use 1MHz RBW and 3M VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- 7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
- 8.If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
- 9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
- 10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High Low scan is not required in this case.

12.2. TEST SETUP

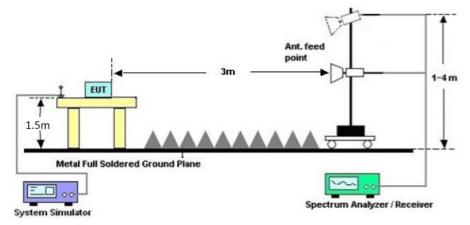
Radiated Emission Test-Setup Frequency Below 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



12.3. LIMITS AND MEASUREMENT RESULT

15.209(a) Limit in the below table has to be followed

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested For restricted band radiated emission,

the test records reported below are the worst result compared to other modes.

12.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.

EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Horizontal

RADIATED EMISSION BELOW 1GHZ

	Limit: — Margin: —
mon and a start a start and a start a	nonalination
a 30.000 127.00 224.00 321.00 418.00 515.00 612.00	709.00 806.00 1000.00

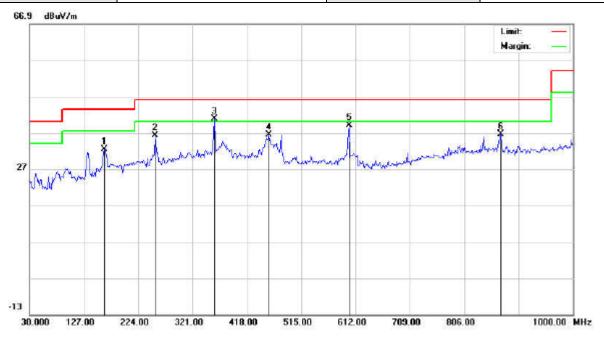
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB		cm	degree	
1		133.4667	13.29	18.82	32.11	43.50	-11.39	peak			
2		254.7167	16.39	18.40	34.79	46.00	-11.21	peak			
3	*	359.8000	19.75	21.57	41.32	46.00	-4.68	peak			
4		479.4333	10.78	24.58	35.36	46.00	-10.64	peak			
5	Ţ.	600.6833	13.05	26.96	40.01	46.00	-5.99	peak			
6		839.9500	6.44	30.93	37.37	46.00	-8.63	peak			

RESULT: PASS

66.9 dBuV/m

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EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Vertical



No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
	•	MHz	dBuV	dBuV/m	dBuV/m	dBuV/m	dB		cm	degree	
1		164.1833	13.62	18.76	32.38	43.50	-11.12	peak			
2		254.7167	17.78	18.40	36.18	46.00	-9.82	peak			
3	*	359.8000	19.29	21.57	40.86	46.00	-5.14	peak			
4		456.8000	12.33	24.12	36.45	46.00	-9.55	peak			
5		600.6833	12.01	26.96	38.97	46.00	-7.03	peak			
6		870.6667	5.20	31.32	36.52	46.00	-9.48	peak			

RESULT: PASS

Note: All test channels had been tested. The 802.11a20 at 5180MHz is the worst case and recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

The "Factor" value can be calculated automatically by software of measurement system.

RADIATED EMISSION ABOVE 1GHZ

EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin				
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type			
10360.120	40.74	9.14	49.88	74	-24.12	peak			
10360.120	34.69	9.14	43.83	54	-10.17	AVG			
15540.180	38.14	10.22	48.36	74	-25.64	peak			
15540.180	32.06	10.22	42.28	54	-11.72	AVG			
Remark:	temark:								
Factor = Anter	na Factor + Cabl	e Loss – Pre-	amplifier.						

RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin			
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type		
10360.120	39.47	9.14	48.61	74	-25.39	peak		
10360.120	33.26	9.14	42.4	54	-11.6	AVG		
15540.180	37.11	10.22	47.33	74	-26.67	peak		
15540.180	31.74	10.22	41.96	54	-12.04	AVG		
Remark:								
Factor = Anter	nna Factor + Cabl	e Loss – Pre-a	amplifier.					

actor = Antenna Factor + Cable Loss – Pre-ampliller.

Report No.: AGC07716190301FE06 Page 67 of 84

EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5240MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ-Horizontal

Descent Both Facing Control (exc) Lines Model Unity of the second sec

RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
10480.120	40.03	9.27	49.3	74	-24.7	peak
10480.120	35.98	9.27	45.25	54	-8.75	AVG
15720.180	38.12	10.38	48.5	74	-25.5	peak
15720.180	33.54	10.38	43.92	54	-10.08	AVG
Remark:						
Factor = Anter	na Factor + Cab	le Loss – Pre-a	mplifier.			

Report No.: AGC07716190301FE06 Page 68 of 84

EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5745MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	requency Meter Reading		Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
11490.120	39.47	9.42	48.89	74	-25.11	peak
11490.120	33.01	9.42	42.43	54	-11.57	AVG
17235.180	36.69	10.51	47.2	74	-26.8	peak
17235.180	31.47	10.51	41.98	54	-12.02	AVG
Remark:						
Factor = Anter	nna Factor + Cable	e Loss – Pre-	amplifier.			

RADIATED EMISSION ABOVE 1GHZ–Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	- Value Type
11490.120	39.68	9.42	49.1	74	-24.9	peak
11490.120	34.12	9.42	43.54	54	-10.46	AVG
17235.180	35.85	10.51	46.36	74	-27.64	peak
17235.180	31.21	10.51	41.72	54	-12.28	AVG
Remark:						
Factor = Anter	nna Factor + Cabl	e Loss – Pre-a	amplifier.			

actor Antenna Factor Pre-ampliller.

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EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5825MHz	Antenna	Horizontal/Vertical

RADIATED EMISSION ABOVE 1GHZ-Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type
11650.120	40.14	9.62	49.76	74	-24.24	peak
11650.120	34.69	9.62	44.31	54	-9.69	AVG
17475.180	36.89	10.75	47.64	74	-26.36	peak
17475.180	32.27	10.75	43.02	54	-10.98	AVG
Remark:						
-	no Footor I Cob	alaca Dra a	molifier			

Factor = Antenna Factor + Cable Loss – Pre-amplifier.

RADIATED EMISSION ABOVE 1GHZ-Vertical

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin		
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Value Type	
11650.120	11650.120 39.36 9.62 48.98 74 -2					peak	
11650.120	34.98	9.62	44.6	54	-9.4	AVG	
17475.180	37.74	10.75	48.49	74	-25.51	peak	
17475.180 32.15 10.75 42.9 54 -11.1 AVG							
Remark:							
Factor = Anter	na Factor + Cab	le Loss – Pre-a	mplifier				

Note: All the case had been tested. The 802.11a modulation is the worst case and recorded in the test report. Other frequencies radiation emission from 1GHz to 40GHz at least have 20dB margin and not recorded in the test report.

Factor = Antenna Factor + Cable loss - Amplifier gain, Margin= Limit-Level.

The "Factor" value can be calculated automatically by software of measurement system.

13. BAND EDGE EMISSION

13.1. MEASUREMENT PROCEDURE

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: (a) PEAK: RBW=1MHz, VBW=3MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz ; VBW=1/on time(1KHz) / Sweep=AUTO

3. Other procedures refer to clause 11.2.

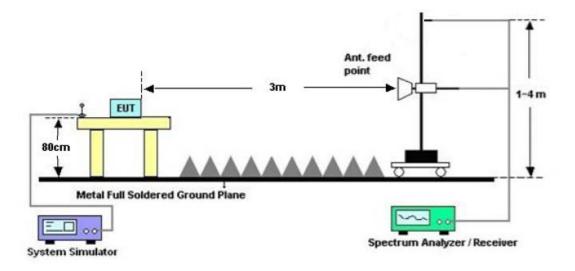
Note:

1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level

2. The factor had been edited in the "Input Correction" of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μ V) to represent the Amplitude. Use the F dB(μ V/m) to represent the Field Strength. So A=F.

3. Only the data of band edge emission at the restricted band 4.5GHz-5.15GHz record in the report. Other restricted band 5.35GHz-5.46GHz and 7.25GHz-7.77GHz were considered as ambient noise. No recording in the test report.

13.2. TEST SET-UP



13.3. TEST RESULT

EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Horizontal



PK Value

L RF	yzer - Swept SA 50 Ω AC CORREC 800000000 GHz	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456 TYPE A WWWWW	Peak Search
	PNO: Fas IFGain:Lo		-	r1 5.181 8 GHz	NextPea
0 dB/div Ref 1	06.00 dBµV			90.333 dBµV	
36.0					Next Pk Rig
6.0					
6.0					Next Pk Lo
6.0			2 ²	me ha	
6.0 6.0	- we want the second	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			Marker De
6.0					
tart 5.0000 GH Res BW 1.0 MH		/BW 3.0 MHz*	Sweep 1.	Stop 5.2000 GHz 000 ms (1001 pts)	Mkr→C
R MODE TRC SCL	× 5.181 8 GHz		NCTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 F 3 4 5 6	5.150 0 GHz	36.330 dBµV		E	Mkr→RefL
8					Ma
9					1 0
9 0 1					

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EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11a20 5180MHz	Antenna	Vertical



PK Value

AV Value

Keysight Spectrum Analyz L RF	50 Ω AC CORREC	SENSE:INT	ALIGN AUTO		Peak Search
larker 1 5.1812	DUUUUUUUU GHZ PNO: Fast IFGain:Low	Trig: Free Run Atten: 10 dB	Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	
0 dB/div Ref 10	6.00 dBµV		Mk	r1 5.181 2 GHz 88.658 dBµV	NextPea
og 96.0 86.0					Next Pk Righ
56.0 56.0					Next Pk Le
26.0	and a star a		<u>^2</u>		Marker Del
tart 5.0000 GHz Res BW 1.0 MHz		BW 3.0 MHz*		Stop 5.2000 GHz .000 ms (1001 pts)	Mkr→C
N 1 f 2 N 1 f 3 - - - 4 - - - 5 - - - 6 - - - -	× 5.181 2 GHz 5.150 0 GHz	Υ FU 88.658 dBμV 34.526 dBμV	NCTION FUNCTION WIDTH	FUNCTION VALUE	Mkr→RefL
7 8 9 0 1					Mo 1 of
G			STATUS	•	

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EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz	Antenna	Horizontal



PK Value

AV Value



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EUT	LED Projector	Model Name	XJ03W
Temperature	25°C	Relative Humidity	55.4%
Pressure	960hPa	Test Voltage	Normal Voltage
Test Mode	802.11n40 5190MHz	Antenna	Vertical



PK Value

AV Value



RESULT: PASS

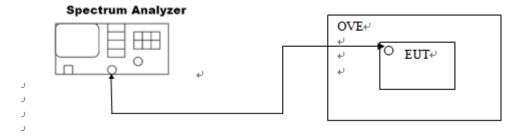
Note: All the 20MHz bandwidth modulation had been tested, the 802.11a20 was the worst case and record in his test report. All the 40MHz bandwidth modulation had been tested, the 802.11N40 was the worst case and record in his test report.

14. FREQUENCY STABILITY

14.1. MEASUREMENT PROCEDURE

- 1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- 2. Set the EUT Work on the operation frequency.
- 3. Set SPA Centre Frequency = Operation Frequency. SPAN=enough to measure the emission is maintained within the band
- 4. Set SPA Trace 1 Max hold, then View.
- 5. Extreme temperature rule is -10°C~60°C.

14.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



14.3. MEASUREMENT RESULTS

Test Mode	Temperature	Measurement Frequency (MHz)	Result	Conclusior
	- 10 ℃	5180	within the band	PASS
	0 °C	5180	within the band	PASS
	10 ℃	5180	within the band	PASS
	20 °C	5180	within the band	PASS
	30 °C	5180	within the band	PASS
	40 °C	5180	within the band	PASS
	50 ℃	5180	within the band	PASS
	60 °C	5180	within the band	PASS
	- 10 ℃	5240	within the band	PASS
	0 °C	5240	within the band	PASS
	10 ℃	5240	within the band	PASS
	20 °C	5240	within the band	PASS
	30 °C	5240	within the band	PASS
	40 °C	5240	within the band	PASS
802.11a	50 ℃	5240	within the band	PASS
	60 °C	5240	within the band	PASS
602.11a	- 10 ℃	5745	within the band	PASS
	0 °C	5745	within the band	PASS
	10 ℃	5745	within the band	PASS
	20 °C	5745	within the band	PASS
	30 °C	5745	within the band	PASS
	40 °C	5745	within the band	PASS
	50 ℃	5745	within the band	PASS
	60 °C	5240	within the band	PASS
	- 10 ℃	5825	within the band	PASS
-	0 °C	5825	within the band	PASS
	10 ℃	5825	within the band	PASS
	20 °C	5825	within the band	PASS
	30 °C	5825	within the band	PASS
	40 °C	5825	within the band	PASS
	50 °C	5825	within the band	PASS
	60 ℃	5825	within the band	PASS

Test Mode	Temperature	Measurement Frequency (MHz)	Result	Conclusion
	- 10℃	5180	within the band	PASS
	0 °C	5180	within the band	PASS
	10 ℃	5180	within the band	PASS
	20 °C	5180	within the band	PASS
	30 °C	5180	within the band	PASS
	40 °C	5180	within the band	PASS
	50 ℃	5180	within the band	PASS
	60 °C	5180	within the band	PASS
	- 10℃	5240	within the band	PASS
	0 °C	5240	within the band	PASS
	10 ℃	5240	within the band	PASS
	20 °C	5240	within the band	PASS
	30 ℃	5240	within the band	PASS
	40 °C	5240	within the band	PASS
	50 ℃	5240	within the band	PASS
802.11n20	60 °C	5240	within the band	PASS
802.11120	- 10℃	5745	within the band	PASS
	0 °C	5745	within the band	PASS
	10 ℃	5745	within the band	PASS
	20 °C	5745	within the band	PASS
	30 °C	5745	within the band	PASS
	40 °C	5745	within the band	PASS
	50 ℃	5745	within the band	PASS
	60 °C	5240	within the band	PASS
	- 10℃	5825	within the band	PASS
	0 °C	5825	within the band	PASS
	10 ℃	5825	within the band	PASS
	20 ℃	5825	within the band	PASS
	30 ℃	5825	within the band	PASS
	40 °C	5825	within the band	PASS
	50 ℃	5825	within the band	PASS
	60 °C	5825	within the band	PASS

Test Mode	Temperature	Measurement Frequency (MHz)	Result	Conclusion
	- 10℃	5190	within the band	PASS
	0 °C	5190	within the band	PASS
	10 ℃	5190	within the band	PASS
-	20 °C	5190	within the band	PASS
	30 ℃	5190	within the band	PASS
-	40 °C	5190	within the band	PASS
-	50 ℃	5190	within the band	PASS
_	60 °C	5190	within the band	PASS
	- 10℃	5230	within the band	PASS
-	0 °C	5230	within the band	PASS
-	10 ℃	5230	within the band	PASS
-	20 °C	5230	within the band	PASS
-	30 ℃	5230	within the band	PASS
-	40 °C	5230	within the band	PASS
-	50 ℃	5230	within the band	PASS
802.11n40	60 °C	5230	within the band	PASS
802.11140	- 10℃	5755	within the band	PASS
	0 °C	5755	within the band	PASS
	10 ℃	5755	within the band	PASS
	20 ℃	5755	within the band	PASS
-	30 ℃	5755	within the band	PASS
	40 °C	5755	within the band	PASS
	50 ℃	5755	within the band	PASS
	60 ℃	5755	within the band	PASS
	- 10℃	5795	within the band	PASS
	0 °C	5795	within the band	PASS
	10 ℃	5795	within the band	PASS
	20 °C	5795	within the band	PASS
	30 ℃	5795	within the band	PASS
	40 °C	5795	within the band	PASS
	50 ℃	5795	within the band	PASS
	60 ℃	5795	within the band	PASS

15. FCC LINE CONDUCTED EMISSION TEST

15.1. LIMITS OF LINE CONDUCTED EMISSION TEST

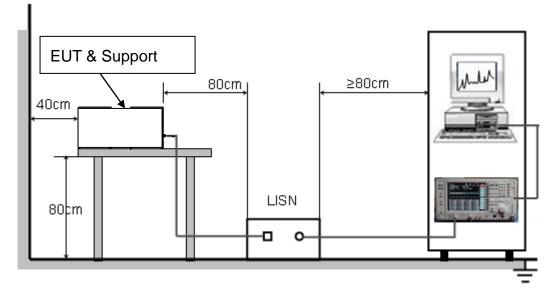
Frequency	Maximum RF	Line Voltage			
Frequency	Q.P.(dBuV)	Average(dBuV)			
150kHz~500kHz	66-56	56-46			
500kHz~5MHz	56	46			
5MHz~30MHz	60	50			

Note:

1. The lower limit shall apply at the transition frequency.

2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50MHz.

15.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



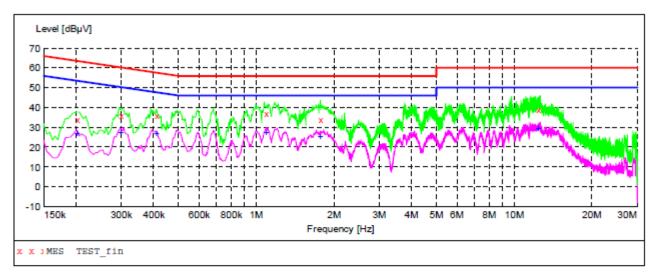
15.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

- The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2. Support equipment, if needed, was placed as per ANSI C63.10.
- 3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
- 4. All support equipments received AC120V/60Hz power from a LISN, if any.
- 5. The EUT received charging voltage by adapter which received 120V/60Hzpower by a LISN.
- 6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8. During the above scans, the emissions were maximized by cable manipulation.
- 9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

15.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

- 1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 3. The test data of the worst case condition(s) was reported on the Summary Data page.



15.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

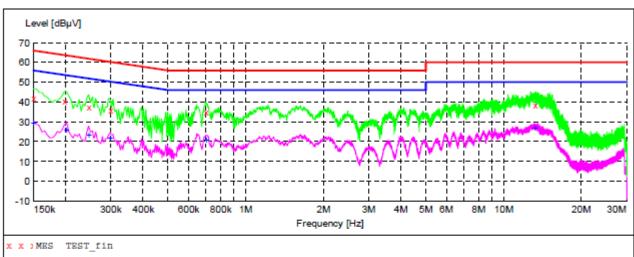


MEASUREMENT RESULT: "TEST_fin"

6/11/2019 7:09PM							
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBuV	dB	dBuV	dB			
0.202000	34.20	10.9	64	29.3	OP	L1	FLO
0.298000	35.90	10.9	60	24.4	QP	L1	FLO
0.410000	36.10	10.4	58	21.5	OP	L1	FLO
1.094000	37.00	11.5	56	19.0	ÕP	L1	FLO
1.770000	33.90	11.5	56	22.1	ÕP	L1	FLO
12.394000	39.30	12.0	60	20.7	ÕP	L1	FLO
					~		

MEASUREMENT RESULT: "TEST_fin2"

6/11/2019 7:09 Frequency MHz	PPM Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.202000	27.00	10.9	54	26.5	AV	L1	FLO
0.298000	27.30	10.9	50	23.0	AV	L1	FLO
0.410000	26.80	10.4	48	20.8	AV	L1	FLO
1.094000	27.30	11.5	46	18.7	AV	L1	FLO
1.770000	25.60	11.5	46	20.4	AV	L1	FLO
12.358000	29.20	12.0	50	20.8	AV	L1	FLO



LINE CONDUCTED EMISSION TEST-N

MEASUREMENT RESULT: "TEST_fin"

6/12/2019 4:30PM							
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dBµV	dB			
0.150000	42.30	10.8	66	23.7	QP	N	FLO
0.198000	40.70	10.9	64	23.0	QP	N	FLO
0.246000	37.80	10.9	62	24.1	OP	N	FLO
0.298000	36.20	10.9	60	24.1	ÕP	N	FLO
0.698000	34.90	10.3	56	21.1	0P	N	FLO
13.230000	38.60	12.1	60	21.4	0P	N	FLO
					~		

MEASUREMENT RESULT: "TEST_fin2"

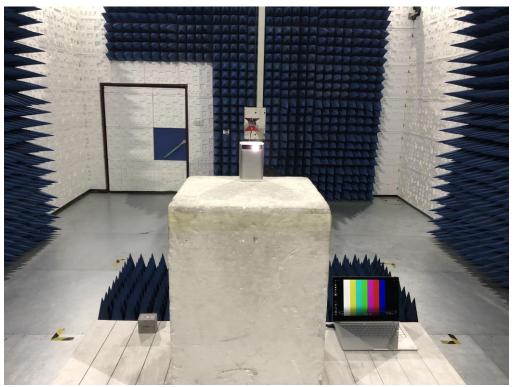
				_				
6	/12/2019 4:30 Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dBµV	dB	dBµV	dB			
	0.150000	29.40	10.8	56	26.6	AV	N	FLO
	0.202000	26.00	10.9	54	27.5	AV	N	FLO
	0.246000	23.30	10.9	52	28.6	AV	N	FLO
	0.298000	21.90	10.9	50	28.4	AV	N	FLO
	0.702000	21.00	10.3	46	25.0	AV	N	FLO
	13.230000	26.80	12.1	50	23.2	AV	N	FLO

RESULT: PASS

<image>

APPENDIX A: PHOTOGRAPHS OF TEST SETUP FCC LINE CONDUCTED EMISSION TEST SETUP

FCC RADIATED EMISSION TEST SETUP BELOW 1GHZ





FCC RADIATED EMISSION TEST SETUP ABOVE 1GHZ

----END OF REPORT----