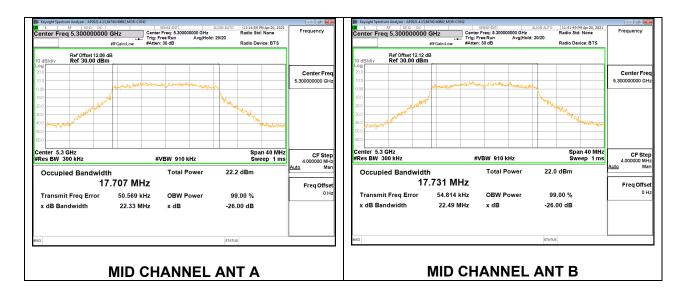
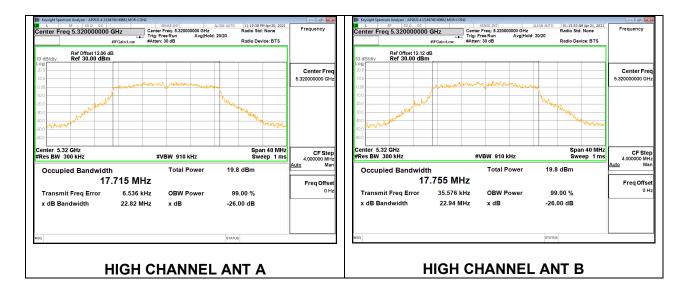
## **MID CHANNEL**



## **HIGH CHANNEL**



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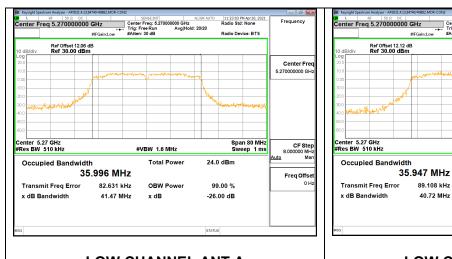
IC: 3048A-1964

## 9.3.8. 802.11n HT40 MODE IN THE 5.3 GHz BAND

## 2TX Antenna A + Antenna B SDM MODE

Channel	Frequency	99% Bandwidth	99% Bandwidth
		Antenna A	Antenna B
	(MHz)	(MHz)	(MHz)
Low	5270	35.9960	35.9470
High	5310	35.9840	36.0760

#### **LOW CHANNEL**

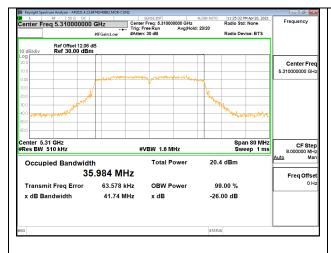


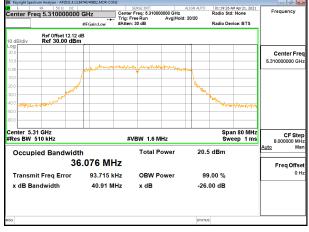


## **LOW CHANNEL ANT A**

## **LOW CHANNEL ANT B**

## **HIGH CHANNEL**





**HIGH CHANNEL ANT A** 

**HIGH CHANNEL ANT B** 

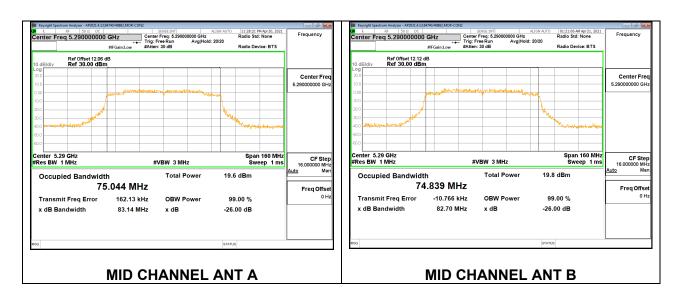
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# 9.3.9. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND

## 2TX Antenna A + Antenna B SDM MODE

Channel	Frequency	99% Bandwidth	99% Bandwidth
		Antenna A	Antenna B
	(MHz)	(MHz)	(MHz)
Mid	5290	75.0440	74.8390

## **MID CHANNEL**



## 9.4. OUTPUT POWER AND PSD

# **LIMITS**

# FCC §15.407

#### Band 5.15-5.25 GHz

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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#### Bands 5.25-5.35 GHz

The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### **RSS-247**

#### Band 5.15-5.25 GHz

The maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log10B, dBm, whichever power is less. B is the 99% emission bandwidth in megahertz. The e.i.r.p. spectral density shall not exceed 10 dBm in any 1.0 MHz band.

## Band 5.25-5.35 GHz

The maximum conducted output power shall not exceed 250 mW or 11 + 10 log10B, dBm, whichever is less. The power spectral density shall not exceed 11 dBm in any 1.0 MHz band.

The maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log10B, dBm, whichever is less. B is the 99% emission bandwidth in megahertz. Note that devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

## **TEST PROCEDURE**

The measurement method used for output power is KDB 789033 D02 v02r01, Section E.3.b (Method PM-G).

The measurement method used for power spectral density is KDB 789033 D02 v02r01, Section F.

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## **DIRECTIONAL ANTENNA GAIN**

## For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

## For 2 TX:

Tx antennas are uncorrelated for power. Tx antennas are correlated for 11a PSD.

Tx antennas are uncorrelated for 11n/ac PSD.

The directional gains are as follows:

	ANT A	ANT B	<b>Uncorrelated Chains</b>	Correlated Chains
	Antenna	Antenna	Directional	Directional
Band	Gain	Gain	Gain	Gain
(GHz)	(dBi)	(dBi)	(dBi)	(dBi)
5.2	4.50	3.40	3.98	6.98
5.3	4.60	4.60	4.60	7.61
5.6	6.40	6.90	6.66	9.66
5.8	7.80	7.70	7.75	10.76

TEL: (919) 549-1400

## **RESULTS**

# 9.4.1.802.11a MODE IN THE 5.2 GHz BAND

# 1TX Antenna A MODE (FCC) MOBILE

Test Engineer:	84445/40882
Test Date:	2021-08-13

#### **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Low	5180	4.50	24.00	11.00
Mid	5200	4.50	24.00	11.00
Mid	5220	4.50	24.00	11.00
High	5240	4.50	24.00	11.00

Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd PSD
-------------------------	--

### **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	17.47	17.47	24.00	-6.53
Mid	5200	18.71	18.71	24.00	-5.29
Mid	5220	18.62	18.62	24.00	-5.38
High	5240	18.62	18.62	24.00	-5.38

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
				1MHz)	
Low	5180	6.259	6.349	11.00	-4.65
Mid	5200	7.350	7.440	11.00	-3.56
Mid	5220	7.100	7.190	11.00	-3.81
High	5240	6.800	6.890	11.00	-4.11

# 1TX Antenna B MODE (FCC) MOBILE

Test Engineer:	84445/40882	
Test Date:	2021-08-13	

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD	
		Gain	Limit	Limit	
	(MHz)	(dBi)	(dBm)	(dBm/	
				1MHz)	
Low	5180	3.40	24.00	11.00	
Mid	5200	3.40	24.00	11.00	
Mid	5220	3.40	24.00	11.00	
High	5240	3.40	24.00	11.00	

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD
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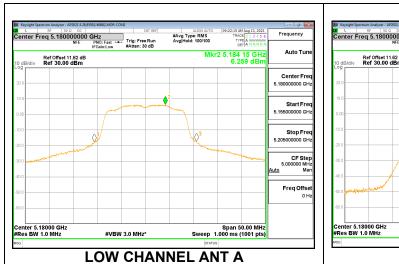
#### **Output Power Results**

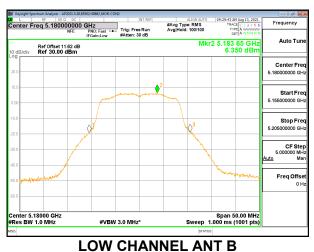
Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	17.41	17.41	24.00	-6.59
Mid	5200	18.10	18.10	24.00	-5.90
Mid	5220	18.16	18.16	24.00	-5.84
High	5240	18.22	18.22	24.00	-5.78

#### **PSD Results**

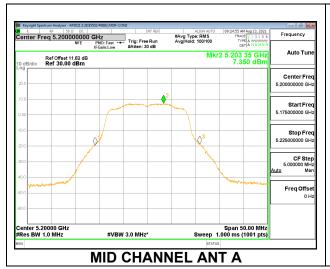
r ob Nesulis						
Channel	Frequency		Total	PSD	PSD	
		Meas	Corr'd	Limit	Margin	
		PSD	PSD			
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)	
				1MHz)		
Low	5180	6.350	6.440	11.00	-4.56	
Mid	5200	7.426	7.516	11.00	-3.48	
Mid	5220	7.128	7.218	11.00	-3.78	
High	5240	7.158	7.248	11.00	-3.75	

## **LOW CHANNEL**



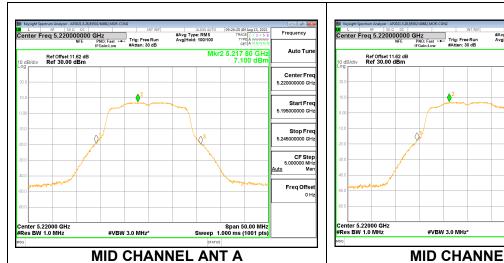


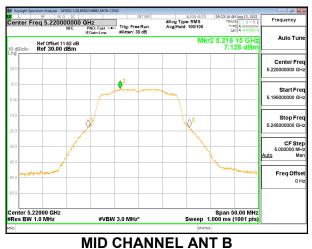
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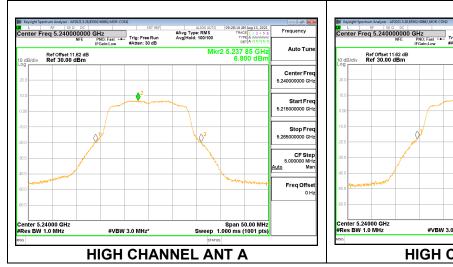


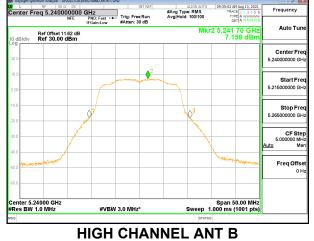
# **MID CHANNEL**





## **HIGH CHANNEL**





# 1TX Antenna A MODE (IC)

Test Engineer:	85502/40882, 84740/40882
Test Date:	2021-08-10

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Low	5180	16.5810	4.50	22.20	17.70	10.00	5.50
Mid	5200	16.6480	4.50	22.21	17.71	10.00	5.50
Mid	5220	16.6880	4.50	22.22	17.72	10.00	5.50
High	5240	16.6030	4.50	22.20	17.70	10.00	5.50

Duty Cycle CF (dB) 0.09	Included in Calculations of Corr'd PSD
-------------------------	--

#### **Output Power Results**

Output Fower Results						
Frequency		Total	Power	Power		
	Meas	Corr'd	Limit	Margin		
	Power	Power				
(MHz)	(dBm)	(dBm)	(dBm)	(dB)		
5180	12.73	12.73	17.70	-4.97		
5200	12.57	12.57	17.71	-5.14		
5220	12.61	12.61	17.72	-5.11		
5240	12.64	12.64	17.70	-5.06		
	(MHz) 5180 5200 5220	Meas   Power   (MHz)   (dBm)	Frequency         Total Corr'd Power (dBm)           (MHz)         (dBm)         (dBm)           5180         12.73         12.73           5200         12.57         12.57           5220         12.61         12.61	Frequency         Meas Power (dBm)         Total Corr'd Power (dBm)         Power (dBm)           5180         12.73         12.73         17.70           5200         12.57         12.57         17.71           5220         12.61         12.61         17.72		

#### **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
	(MHz)	PSD (dBm/1MHz)	PSD (dBm/1MHz)	(dBm/	(dB)
	(IVIFIZ)	(dBIII/ HVIFIZ)	(ubili/ livinz)	1MHz)	(ub)
Low	5180	1.661	1.751	5.50	-3.75
Mid	5200	1.424	1.514	5.50	-3.99
Mid	5220	1.496	1.586	5.50	-3.91
High	5240	1.374	1.464	5.50	-4.04

TEL: (919) 549-1400

# 1TX Antenna B MODE (IC)

Test Engineer:	85502/40882, 84740/40882
Test Date:	2021-08-10

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Low	5180	16.6570	3.40	22.22	18.82	10.00	6.60
Mid	5200	16.5230	3.40	22.18	18.78	10.00	6.60
Mid	5220	16.6210	3.40	22.21	18.81	10.00	6.60
High	5240	16.7080	3.40	22.23	18.83	10.00	6.60

Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD
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### **Output Power Results**

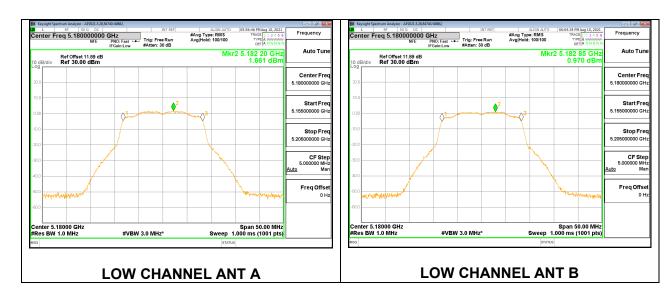
	ower Results				
Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	13.15	13.15	18.82	-5.67
Mid	5200	13.09	13.09	18.78	-5.69
Mid	5220	13.14	13.14	18.81	-5.67
High	5240	13.10	13.10	18.83	-5.73

## **PSD Results**

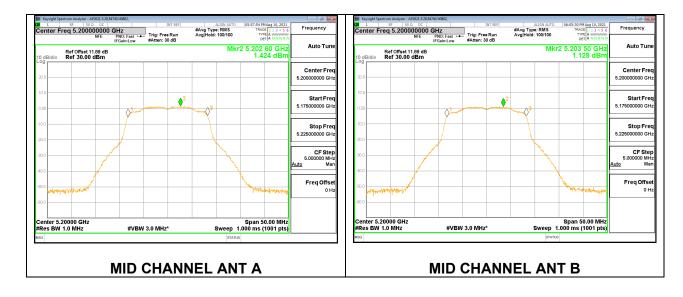
Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
				1MHz)	
Low	5180	0.970	1.060	6.60	-5.54
Mid	5200	1.128	1.218	6.60	-5.38
Mid	5220	1.172	1.262	6.60	-5.34
High	5240	1.156	1.246	6.60	-5.35

TEL: (919) 549-1400

## **LOW CHANNEL**

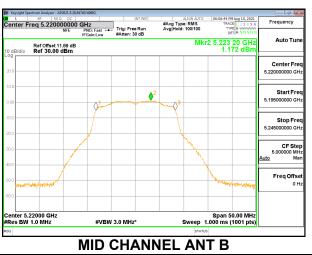


## **MID CHANNEL**

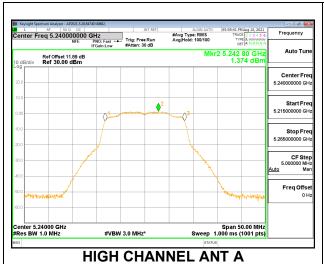


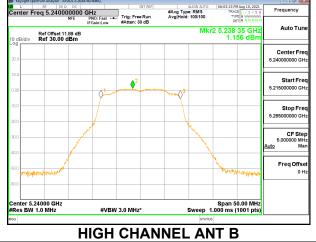
## **MID CHANNEL**



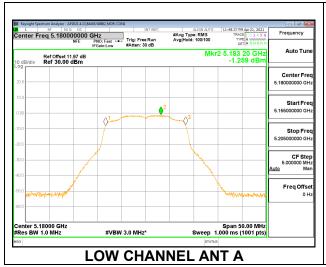


## **HIGH CHANNEL**





## **LOW CHANNEL**

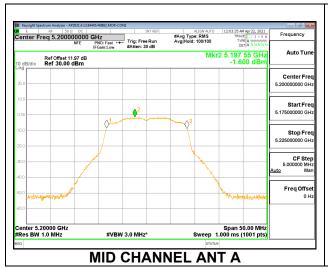


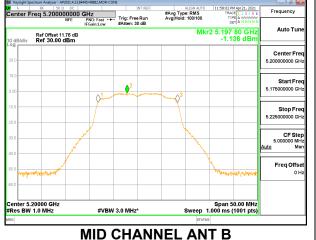


DATE: 2021-08-13

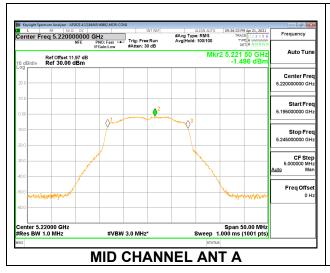
IC: 3048A-1964

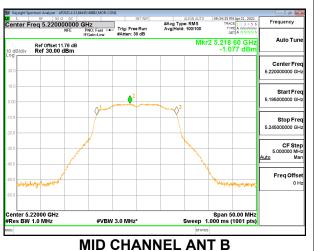
## **MID CHANNEL**





## **MID CHANNEL**

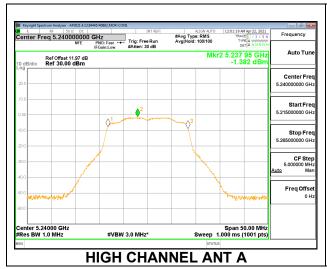




DATE: 2021-08-13

IC: 3048A-1964

## **HIGH CHANNEL**





# 9.4.2. 802.11n HT20 MODE IN THE 5.2 GHz BAND

## 1TX Antenna A MODE (FCC) MOBILE

Test Engineer:	84445/40882
Test Date:	2021-04-19 – 2021-04-22

# **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Low	5180	4.50	24.00	11.00
Mid	5200	4.50	24.00	11.00
Mid	5220	4.50	24.00	11.00
High	5240	4.50	24.00	11.00

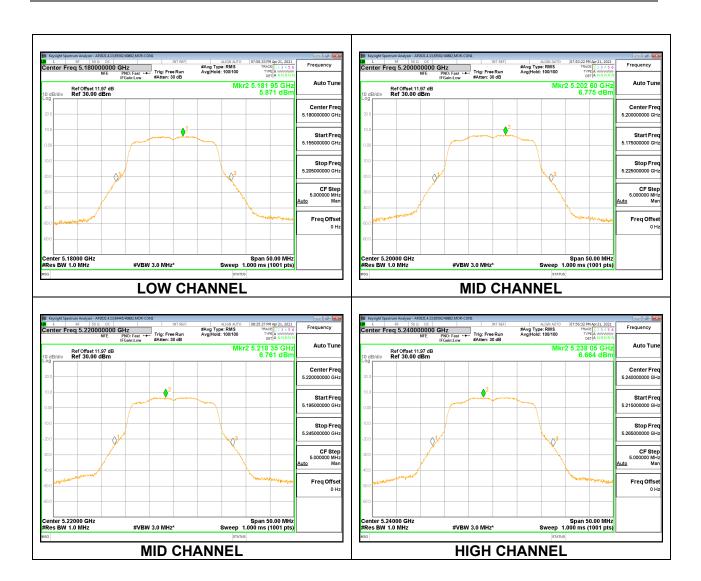
Duty Cycle CF (dB) 0.00	Included in Calculations of Corr'd PSD
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#### **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	18.03	18.03	24.00	-5.97
Mid	5200	18.89	18.89	24.00	-5.11
Mid	5220	18.45	18.45	24.00	-5.55
High	5240	18.81	18.81	24.00	-5.19

#### **PSD Results**

Channel	Frequency (MHz)	Meas PSD (dBm/1MHz)	Total Corr'd PSD (dBm/1MHz)	PSD Limit (dBm/ 1MHz)	PSD Margin (dB)
Low	5180	5.871	5.871	11.00	-5.13
Mid	5200	6.775	6.775	11.00	-4.23
Mid	5220	6.761	6.761	11.00	-4.24
High	5240	6.664	6.664	11.00	-4.34



DATE: 2021-08-13

IC: 3048A-1964

# 1TX Antenna A MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

#### Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Low	5180	17.7670	4.50	22.50	18.00	10.00	5.50
Mid	5200	17.7430	4.50	22.49	17.99	10.00	5.50
Mid	5220	17.6950	4.50	22.48	17.98	10.00	5.50
High	5240	17.7480	4.50	22.49	17.99	10.00	5.50

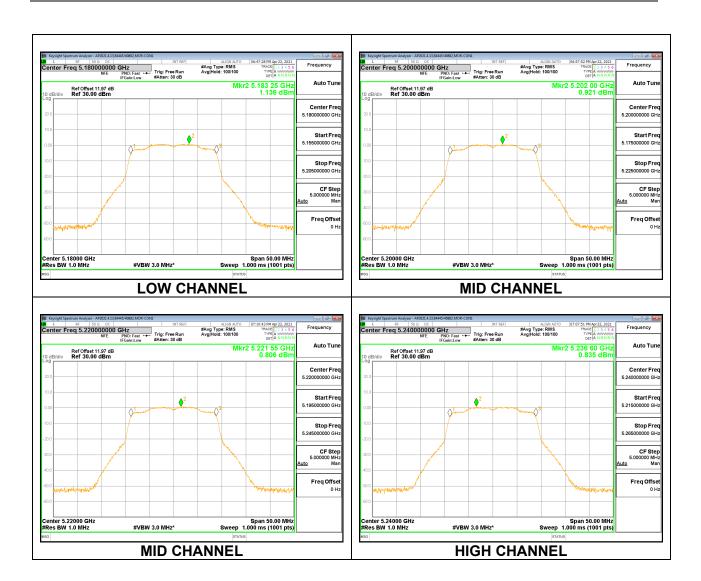
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD

## **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	12.490	12.49	18.00	-5.51
Mid	5200	12.390	12.39	17.99	-5.60
Mid	5220	12.330	12.33	17.98	-5.65
High	5240	12.410	12.41	17.99	-5.58

## **PSD Results**

r 3D Results						
Channel	Frequency		Total	PSD	PSD	
		Meas	Corr'd	Limit	Margin	
		PSD	PSD			
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)	
				1MHz)		
Low	5180	1.136	1.136	5.50	-4.36	
Mid	5200	0.921	0.921	5.50	-4.58	
Mid	5220	0.806	0.806	5.50	-4.69	
High	5240	0.835	0.835	5.50	-4.67	



DATE: 2021-08-13

IC: 3048A-1964

# 1TX Antenna B MODE (FCC) MOBILE

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Low	5180	3.40	24.00	11.00
Mid	5200	3.40	24.00	11.00
Mid	5220	3.40	24.00	11.00
High	5240	3.40	24.00	11.00

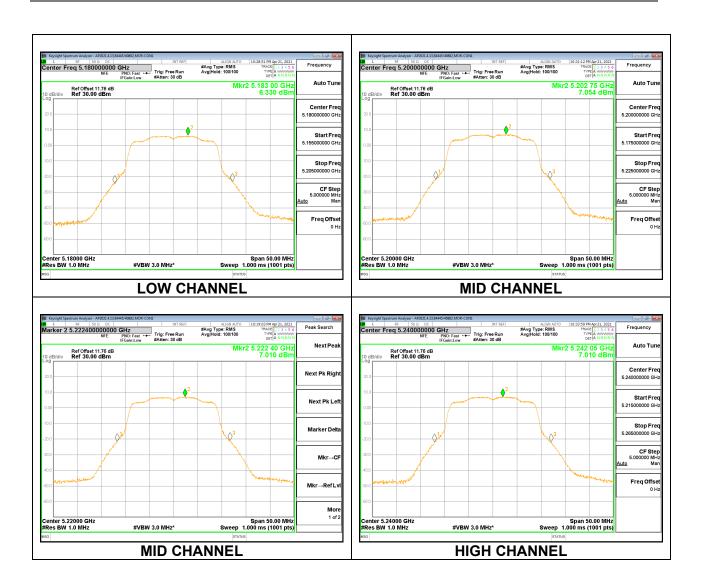
Duty Cycle CF (dB) 0.	.00 Included in C	Calculations of Corr'd PSD
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#### **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	17.90	17.90	24.00	-6.10
Mid	5200	18.86	18.86	24.00	-5.14
Mid	5220	18.34	18.34	24.00	-5.66
High	5240	18.94	18.94	24.00	-5.06

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas PSD	Corr'd PSD	Limit	Margin
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/ 1MHz)	(dB)
Low	5180	6.330	6.330	11.00	-4.67
Mid	5200	7.054	7.054	11.00	-3.95
Mid	5220	7.010	7.010	11.00	-3.99
High	5240	7.010	7.010	11.00	-3.99



DATE: 2021-08-13

IC: 3048A-1964

# 1TX Antenna B MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Low	5180	17.7300	3.40	22.49	19.09	10.00	6.60
Mid	5200	17.6770	3.40	22.47	19.07	10.00	6.60
Mid	5220	17.7370	3.40	22.49	19.09	10.00	6.60
High	5240	17.8060	3.40	22.51	19.11	10.00	6.60

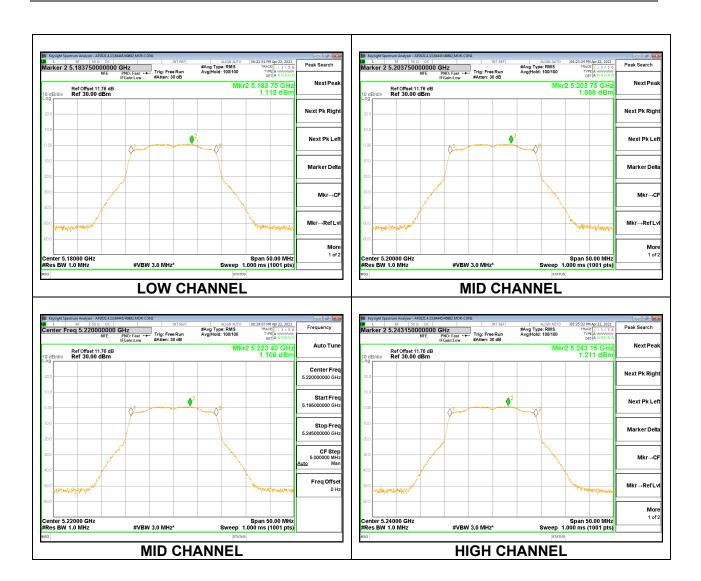
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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# **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	12.320	12.32	19.09	-6.77
Mid	5200	12.250	12.25	19.07	-6.82
Mid	5220	12.250	12.25	19.09	-6.84
High	5240	12.280	12.28	19.11	-6.83

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
	(MHz)	PSD (dBm/1MHz)	PSD (dBm/1MHz)	(dBm/	(dB)
	(IVITIZ)	(ubili/ livinz)	(ubili/ livinz)	1MHz)	(ub)
Low	5180	1.112	1.112	6.60	-5.49
Mid	5200	1.068	1.068	6.60	-5.53
Mid	5220	1.100	1.100	6.60	-5.50
High	5240	1.211	1.211	6.60	-5.39



DATE: 2021-08-13

IC: 3048A-1964

# 2TX Antenna A + Antenna B SDM MODE (FCC) MOBILE

Test Engineer:	84445/40882
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Directional	Power	PSD
		Gain	Gain	Limit	Limit
		for Power	for PSD		
	(MHz)	(dBi)	(dBi)	(dBm)	(dBm/
					1MHz)
Low	5180	3.98	3.98	24.00	11.00
Mid	5200	3.98	3.98	24.00	11.00
Mid	5220	3.98	3.98	24.00	11.00
High	5240	3.98	3.98	24.00	11.00

Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD	Included in Calculations of Corr'd PSD
--	--

#### **Output Power Results**

Channel	Frequency	Antenna A	Antenna B	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	16.08	16.02	19.06	24.00	-4.94
Mid	5200	17.00	17.04	20.03	24.00	-3.97
Mid	5220	17.43	17.32	20.39	24.00	-3.61
High	5240	17.93	18.06	21.01	24.00	-2.99

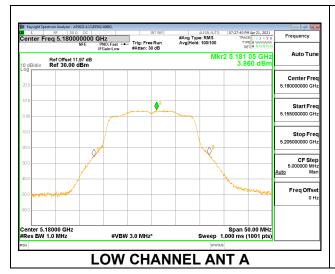
#### **PSD Results**

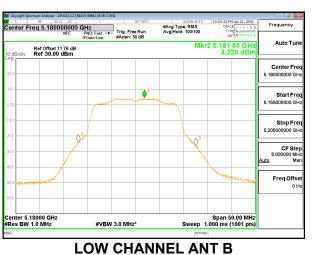
Channel	Frequency	Antenna A	Antenna B	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
					1MHz)	
Low	5180	3.860	4.220	7.05	11.00	-3.95
Mid	5200	4.762	5.352	8.08	11.00	-2.92
Mid	5220	5.776	6.032	8.92	11.00	-2.08
High	5240	5.886	6.368	9.14	11.00	-1.86

Note: Average power taken as a gated measurement.

TEL: (919) 549-1400

# **LOW CHANNEL**

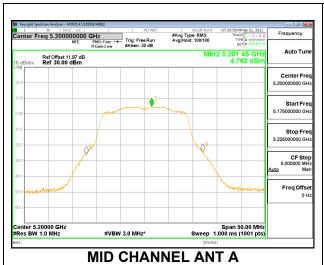


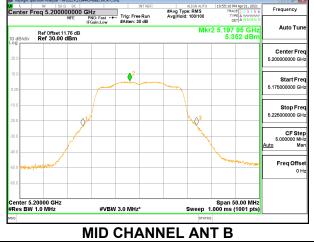


DATE: 2021-08-13

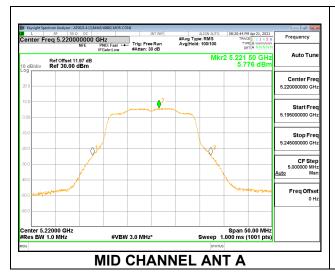
IC: 3048A-1964

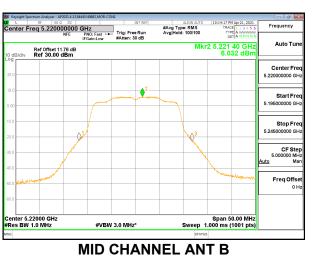
## **MID CHANNEL**





# **MID CHANNEL**



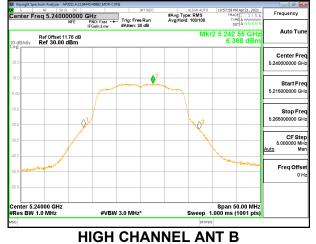


DATE: 2021-08-13

IC: 3048A-1964

## **HIGH CHANNEL**





# 2TX Antenna A + Antenna B SDM MODE (IC)

Test Engineer:	84445/40882
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Gain	Power	Limit	PSD	Limit
		BW	for Power	for PSD	Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
							1MHz)	1MHz)
Low	5180	17.7300	3.98	3.98	22.49	18.51	10.00	6.02
Mid	5200	17.6770	3.98	3.98	22.47	18.49	10.00	6.02
Mid	5220	17.6950	3.98	3.98	22.48	18.50	10.00	6.02
High	5240	17.7480	3.98	3.98	22.49	18.51	10.00	6.02

Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD	Outy Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD	
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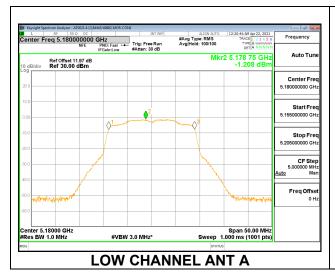
## **Output Power Results**

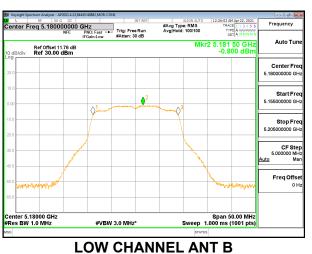
Channel	Frequency	Antenna A	Antenna B	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5180	10.31	10.17	13.25	18.51	-5.26
Mid	5200	10.22	10.06	13.15	18.49	-5.34
Mid	5220	10.17	10.15	13.17	18.50	-5.33
High	5240	10.30	10.26	13.29	18.51	-5.22

# **PSD Results**

L 2D IVE 3	uito					
Channel	Frequency	Antenna A	Antenna B	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
					1MHz)	
Low	5180	-1.208	-0.800	2.01	6.02	-4.01
Mid	5200	-1.273	-0.894	1.93	6.02	-4.09
Mid	5220	-1.261	-0.836	1.97	6.02	-4.05
High	5240	-1.220	-0.761	2.03	6.02	-3.99

## **LOW CHANNEL**

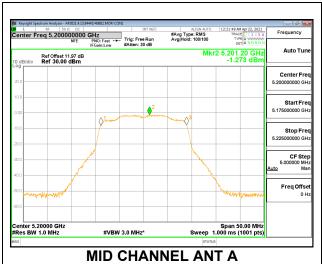


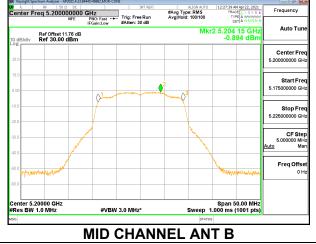


DATE: 2021-08-13

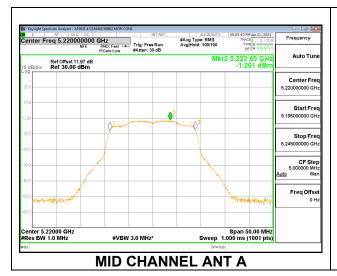
IC: 3048A-1964

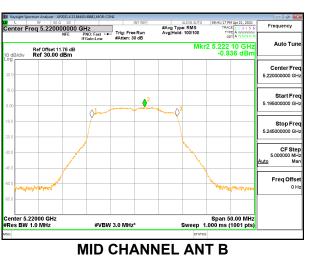
## **MID CHANNEL**





## **MID CHANNEL**

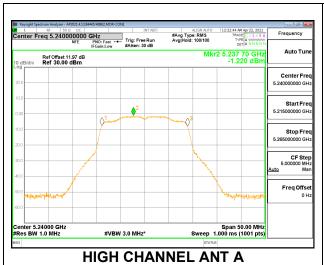




DATE: 2021-08-13

IC: 3048A-1964

## **HIGH CHANNEL**





# 9.4.3. 802.11n HT40 MODE IN THE 5.2 GHz BAND

# 1TX Antenna A MODE (FCC) MOBILE

Test Engineer:	84445/40882
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
		for Power		
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Low	5190	4.50	24.00	11.00
High	5230	4.50	24.00	11.00

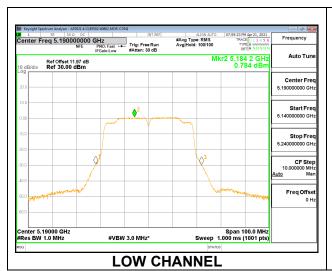
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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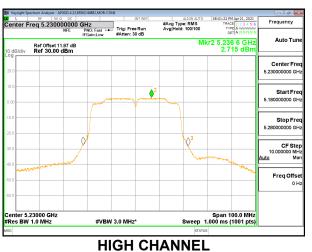
### **Output Power Results**

Channel	Frequency		Total	Power	Power				
		Meas	Corr'd	Limit	Margin				
		Power	Power						
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)				
			, ,	•	` '				
Low	5190	16.07	16.07	24.00	-7.93				

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
				1MHz)	
Low	5190	0.784	0.784	11.00	-10.22
High	5230	2.715	2.715	11.00	-8.29





# 1TX Antenna A MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Low	5190	36.0620	4.50	23.00	18.50	10.00	5.50
High	5230	35.9680	4.50	23.00	18.50	10.00	5.50

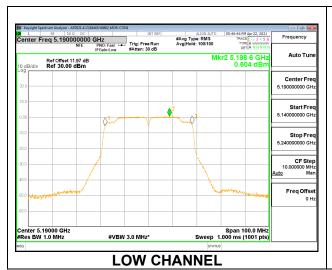
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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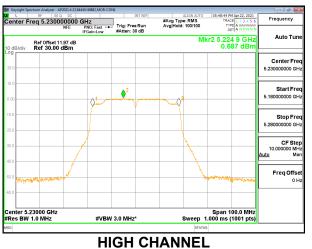
## **Output Power Results**

Cutput i	Output I ower results							
Channel	Frequency		Total	Power	Power			
		Meas	Corr'd	Limit	Margin			
		Power	Power					
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)			
Low	5190	16.070	16.07	18.50	-2.43			
High	5230	15.620	15.62	18.50	-2.88			

### **PSD Results**

. 05 1100	4110				
Channel	Frequency	requency		PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
				1MHz)	
Low	5190	0.604	0.604	5.50	-4.90





# 1TX Antenna B MODE (FCC) MOBILE

Test Engineer:			
Test Date:	2021-04-19 - 2021-04-22		

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
		for Power		
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Low	5190	3.40	24.00	11.00
High	5230	3.40	24.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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## **Output Power Results**

	output: ono: itoouito						
Channel	Frequency		Total	Power	Power		
		Meas	Corr'd	Limit	Margin		
		Power	Power				
	<i></i>			/ I= \	\		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)		
Low	( <b>MHz</b> ) 5190	(dBm) 16.07	(dBm) 16.07	(dBm) 24.00	-7.93		

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
				1MHz)	
Low	5190	1.258	1.258	11.00	-9.74
				11.00	-7.88





# 1TX Antenna B MODE (IC)

Test Engineer:			
Test Date:	2021-04-19 - 2021-04-22		

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Low	5190	36.1830	3.40	23.00	19.60	10.00	6.60
High	5230	36.0900	3.40	23.00	19.60	10.00	6.60

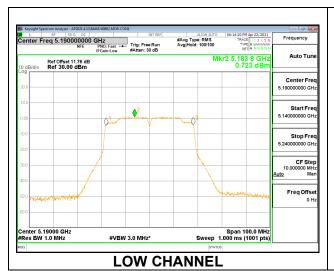
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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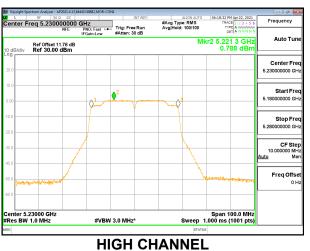
### **Output Power Results**

Channel	Frequency	Meas Power	Total Corr'd Power	Power Limit	Power Margin
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	16.070	16.07	19.60	-3.53
High	5230	15.480	15.48	19.60	-4.12

### **PSD Results**

1 OD Trocato					
Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/	(dB)
				1MHz)	
1	F400	0.700	0.700	0.00	T 00
Low	5190	0.723	0.723	6.60	-5.88





# 2TX Antenna A + Antenna B SDM MODE (FCC) MOBILE

Test Engineer:	84445/40882
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Directional	Power	PSD
		Gain	Gain	Limit	Limit
		for Power	for PSD		
	(MHz)	(dBi)	(dBi)	(dBm)	(dBm/
					1MHz)
Low	5190	3.98	3.98	24.00	11.00
High	5230	3.98	3.98	24.00	11.00

Duty Cycle CF (dB) 0.0	0	Included in Calculations of Corr'd PSD
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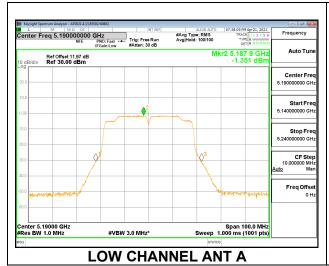
#### **Output Power Results**

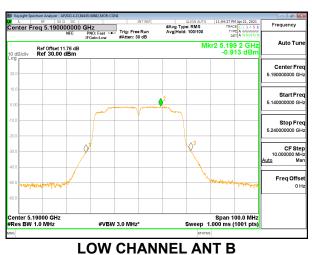
Channel	Frequency	Antenna A	Antenna B	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
		, ,	` '	· · /	` ,	` '
Low	5190	14.07	14.05	17.07	24.00	-6.93

# **PSD Results**

I OD Kesi	arto					
Channel	Frequency	Antenna A	Antenna B	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/	(dBm/	(dBm/	(dBm/	(dB)
		1MHz)	1MHz)	1MHz)	1MHz)	
Low	5190	-1.351	-0.913	1.88	11.00	-9.12
High	5230	0.976	0.899	3.95	11.00	-7.05

# **LOW CHANNEL**

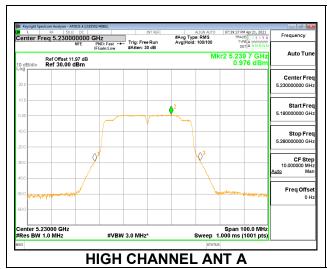


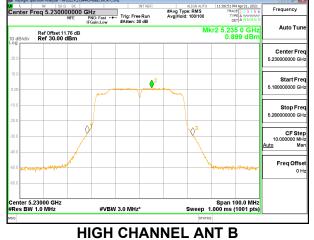


DATE: 2021-08-13

IC: 3048A-1964

## **HIGH CHANNEL**





# 2TX Antenna A + Antenna B SDM MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Gain	Power	Limit	PSD	Limit
		BW	for Power	for PSD	Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
							1MHz)	1MHz)
Low	5190	36.0620	3.98	3.98	23.00	19.02	10.00	6.02
High	5230	35.9680	3.98	3.98	23.00	19.02	10.00	6.02

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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# **Output Power Results**

Output i	ower itesuits	•				
Channel	Frequency	Antenna	Antenna B	Total	Power	Power
		Α				
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	12.45	12.31	15.39	19.02	-3.63
High	5230	12.54	12.24	15.40	19.02	-3.62

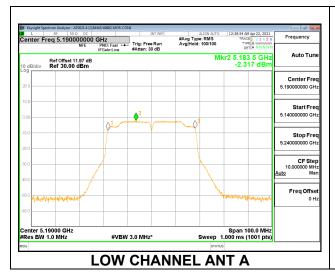
## **PSD Results**

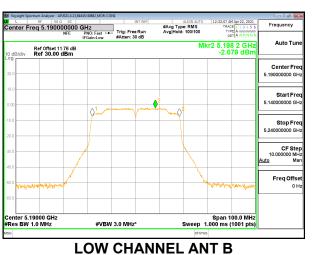
Channel	Frequency	Antenna	Antenna B	Total	PSD	PSD
		Α				
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/	(dBm/	(dBm/	(dBm/	(dB)
		1MHz)	1MHz)	1MHz)	1MHz)	
Low	5190	-2.317	-2.079	0.81	6.02	-5.21
High	5230	-2.210	-2.023	0.89	6.02	-5.13

Note: Average power taken as a gated measurement.

TEL: (919) 549-1400

## **LOW CHANNEL**

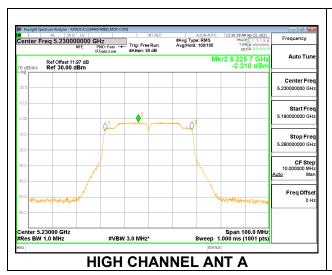


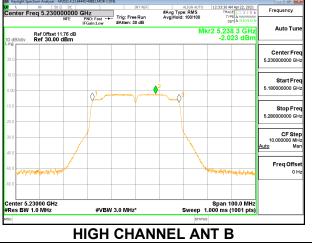


DATE: 2021-08-13

IC: 3048A-1964

## **HIGH CHANNEL**





# 9.4.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND

# 1TX Antenna A MODE (FCC) MOBILE

Test Engineer:	
Test Date:	2021-04-19 – 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(8411-)	(-ID:)	( ID )	
	l (IVIHZ)	(aBI)	(aBm)	(dBm/
	(MHz)	(dBi)	(dBm)	(dBm/ 1MHz)

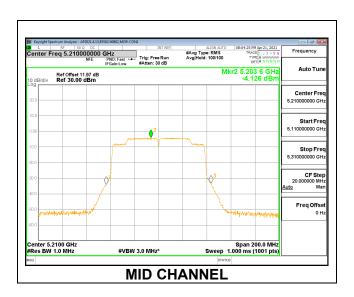
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
	0.00	

## **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5210	14.18	14.18	24.00	-9.82

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)
		1MHz)	1MHz)	1MHz)	
Mid	5210	-4.126	-4.126	11.00	-15.13



# 1TX Antenna A MODE (IC)

Test Engineer:	84445/40882
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

Banawia	Banawiath, Antenna Cam, and Emiles								
Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD		
		99%	Gain	Power	Limit	PSD	Limit		
		BW		Limit		Limit			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/		
						1MHz)	1MHz)		
Mid	5210	75.0890	4.50	23.00	18.50	10.00	5.50		

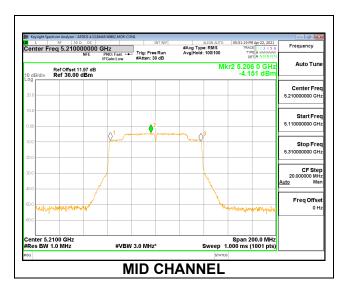
Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD	outy Cycle CF (dB)	<b>CF (dB)</b> 0.00	Included in Calculations of Corr'd PSD
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## **Output Power Results**

	Output Fower Results								
I	Channel	Frequency		Total	Power	Power			
ı			Meas	Corr'd	Limit	Margin			
ı			Power	Power					
ı		(MHz)	(dBm)	(dBm)	(dBm)	(dB)			
ĺ	Mid	5210	14.180	14.18	18.50	-4.32			

#### **PSD Results**

1 OD Results								
Channel	Frequency		Total	PSD	PSD			
		Meas	Corr'd	Limit	Margin			
		PSD	PSD					
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)			
		1MHz)	1MHz)	1MHz)				
Mid	5210	-4.151	-4.151	5.50	-9.65			



# 1TX Antenna B MODE (FCC) MOBILE

Test Engineer:			
Test Date:	2021-04-19 - 2021-04-22		

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Mid	5210	3.40	24.00	11.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
--------------------	------	--

## **Output Power Results**

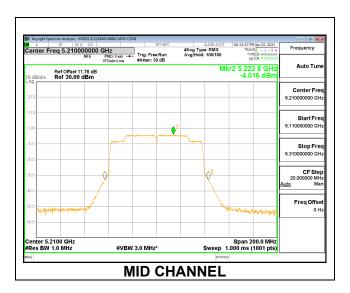
Channel	Frequency		Total	Power	Power			
		Meas	Corr'd	Limit	Margin			
		Power	Power					
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)			
Mid	5210	14.30	14.30	24.00	-9.70			

#### **PSD Results**

Channel	Frequency		Total	PSD	PSD		
		Meas	Corr'd	Limit	Margin		
		PSD	PSD				
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)		
		1MHz)	1MHz)	1MHz)			
Mid	5210	-4.016	-4.016	11.00	-15.02		

Note: Average power taken as a gated measurement.

TEL: (919) 549-1400



# 1TX Antenna B MODE (IC)

Test Engineer:			
Test Date:	2021-04-19 - 2021-04-22		

## Bandwidth, Antenna Gain, and Limits

Danama	Banawian, Antenna Sam, and Emms							
Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD	
		99%	Gain	Power	Limit	PSD	Limit	
		BW		Limit		Limit		
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/	
						1MHz)	1MHz)	
Mid	5210	75.1270	3.40	23.00	19.60	10.00	6.60	

Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD	
--	--

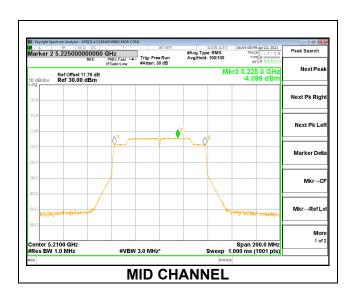
## **Output Power Results**

Output F	Output Fower Results					
Channel	Frequency		Total	Power	Power	
		Meas	Corr'd	Limit	Margin	
		Power	Power			
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)	
Mid	5210	14.300	14.30	19.60	-5.30	

#### **PSD Results**

	1 OD NOCANO					
	Channel	Frequency		Total	PSD	PSD
			Meas	Corr'd	Limit	Margin
			PSD	PSD		
		(MHz)	(dBm/	(dBm/	(dBm/	(dB)
ı			1MHz)	1MHz)	1MHz)	
	Mid	5210	-4.099	-4.099	6.60	-10.70

REPORT NO: R13541206-E5 FCC ID: C3K1964



DATE: 2021-08-13

# 2TX Antenna A + Antenna B SDM MODE (FCC) MOBILE

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Directional	Power	PSD
		Gain	Gain	Limit	Limit
		for Power	for PSD		
	(MHz)	(dBi)	(dBi)	(dBm)	(dBm/
					1MHz)
Mid	5210	3.98	3.98	24.00	11.00

Duty Cycle CF (dB) 0.00	Included in Calculations of Corr'd PSD
-------------------------	--

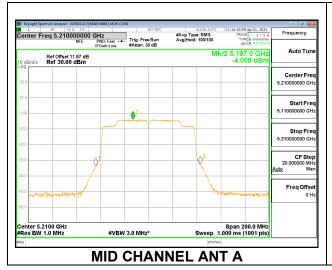
## **Output Power Results**

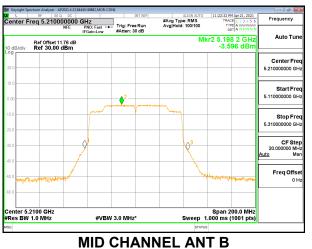
Channel	Frequency	Antenna A	Antenna B	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5210	13.16	13.15	16.17	24.00	-7.83

#### **PSD Results**

	~= ··········					
Channel	Frequency	Antenna A	Antenna B	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/	(dBm/	(dBm/	(dBm/	(dB)
		1MHz)	1MHz)	1MHz)	1MHz)	
Mid	5210	-4.008	-3.596	-0.79	11.00	-11.79

## **MID CHANNEL**





# 2TX Antenna A + Antenna B SDM MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Gain	Power	Limit	PSD	Limit
		BW	for Power	for PSD	Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
							1MHz)	1MHz)
Mid	5210	75.0890	3.98	3.98	23.00	19.02	10.00	6.02

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
--------------------	------	--

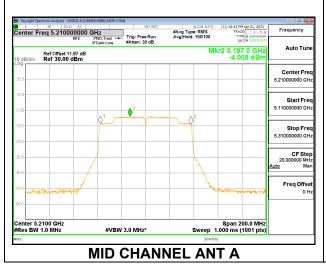
### **Output Power Results**

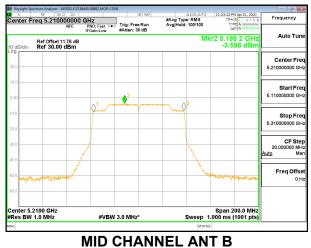
Channel	Frequency	Antenna	Antenna B	Total	Power	Power		
		_						
		A						
		Meas	Meas	Corr'd	Limit	Margin		
		Power	Power	Power				
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)		
	(IVITIZ)	(ubiii)	(ubili)	(ubili)	(ubili)	(ub)		
Mid	5210	13.16	13.15	16.17	19.02	-2.85		
	02.10	1 . 5. 10	1 .5.10		2			

#### **PSD Results**

r ob Nesulis						
Channel	Frequency	Antenna	Antenna B	Total	PSD	PSD
		Α				
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/	(dBm/	(dBm/	(dBm/	(dB)
		1MHz)	1MHz)	1MHz)	1MHz)	
Mid	5210	-4.008	-3.596	-0.79	6.02	-6.81

## **MID CHANNEL**





# 9.4.5. 802.11ac VHT160 MODE IN THE 5.2 GHz BAND

Note- Data for all 802.11ac VHT160 modes applied to the worst-case limit which is the 5.2 GHz band.

## 1TX Antenna A MODE (FCC) MOBILE

Test Engineer:	84445/40882		
Test Date:	2021-04-19 – 2021-04-22		

#### **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm/ 1MHz)
Mid	5250	4.50	24.00	11.00

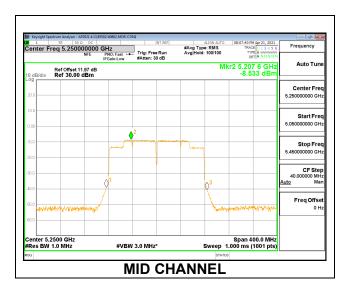
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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## **Output Power Results**

Channel	Frequency		Total	Power	Power			
		Meas	Corr'd	Limit	Margin			
		Power	Power					
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)			
Mid	5250	12.25	12.25	24.00	-11.75			

#### **PSD Results**

Channel	Frequency		Total	PSD	PSD		
		Meas	Corr'd	Limit	Margin		
		PSD	PSD				
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)		
		1MHz)	1MHz)	1MHz)			
Mid	5250	-8.533	-8.533	11.00	-19.53		



# 1TX Antenna A MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## Bandwidth, Antenna Gain, and Limits

	Zanawiani, / mtomia Gami, and Zimito						
Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD
		99%	Gain	Power	Limit	PSD	Limit
		BW		Limit		Limit	
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
						1MHz)	1MHz)
Mid	5250	153.7400	4.50	23.00	18.50	10.00	5.50

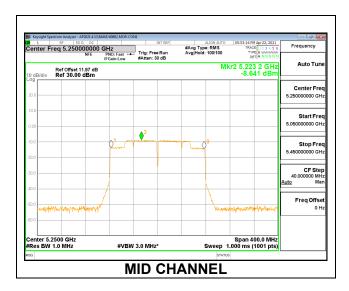
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
	0.00	morado m carcarationo or com a r co

## **Output Power Results**

- alpati - circi ito cario								
Channel	Frequency		Total	Power	Power			
		Meas	Corr'd	Limit	Margin			
		Power	Power					
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)			
Mid	5250	12.250	12.25	18.50	-6.25			

#### **PSD Results**

1 OB Nesures								
Channel	Frequency		Total	PSD	PSD			
		Meas	Corr'd	Limit	Margin			
		PSD	PSD					
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)			
		1MHz)	1MHz)	1MHz)				
Mid	5250	-8.641	-8.641	5.50	-14.14			



# 1TX Antenna B MODE (FCC) MOBILE

Test Engineer:	84445/40882
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Power	PSD
		Gain	Limit	Limit
	(MHz)	(dBi)	(dBm)	(dBm/
				1MHz)
Mid	5250	3.40	24.00	11.00

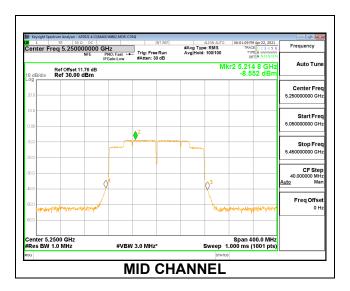
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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### **Output Power Results**

Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5250	12.69	12.69	24.00	-11.31

#### **PSD Results**

Channel	Frequency		Total	PSD	PSD		
		Meas	Corr'd	Limit	Margin		
		PSD	PSD				
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)		
		1MHz)	1MHz)	1MHz)			
Mid	5250	-8.552	-8.552	11.00	-19.55		



# 1TX Antenna B MODE (IC)

	84445/40882		
Test Date:	2021-04-19 - 2021-04-22		

## Bandwidth, Antenna Gain, and Limits

	Danamati, Antonia Gani, and Ennio									
Channel	Frequency	Min	Directional	EIRP	Power	EIRP	PSD			
		99%	Gain	Power	Limit	PSD	Limit			
		BW		Limit		Limit				
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/			
						1MHz)	1MHz)			
Mid	5250	153.8700	3.40	23.00	19.60	10.00	6.60			

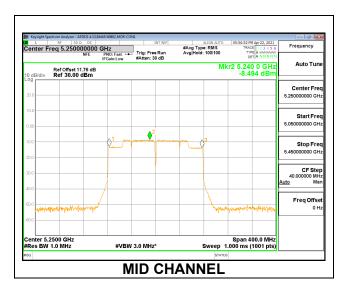
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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## **Output Power Results**

Output	Output i Ower Results								
Channel	Frequency		Total	Power	Power				
		Meas	Corr'd	Limit	Margin				
		Power	Power						
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)				
Mid	5250	12.690	12.69	19.60	-6.91				

#### **PSD Results**

105100010								
Channel	Frequency		Total	PSD	PSD			
		Meas	Corr'd	Limit	Margin			
		PSD	PSD					
	(MHz)	(dBm/	(dBm/	(dBm/	(dB)			
		1MHz)	1MHz)	1MHz)				
Mid	5250	-8.494	-8.494	6.60	-15.09			



# 2TX Antenna A + Antenna B SDM MODE (FCC) MOBILE

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

## **Antenna Gain and Limits**

Channel	Frequency	Directional	Directional	Power	PSD
		Gain	Gain	Limit	Limit
		for Power	for PSD		
	(MHz)	(dBi)	(dBi)	(dBm)	(dBm/
					1MHz)
Mid	5250	3.98	3.98	24.00	11.00

Duty Cycle CF (dB) 0.00 Included in Calculations of Corr'd PSD	
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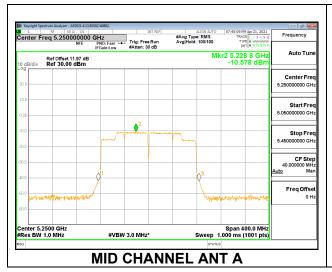
## **Output Power Results**

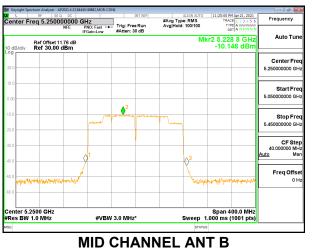
Channel	Frequency	Antenna A	Antenna B	Total	Power	Power
		Meas	Meas	Corr'd	Limit	Margin
		Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Mid	5250	10.55	10.40	13.49	24.00	-10.51

## **PSD Results**

Channel	Frequency	Antenna A	Antenna B	Total	PSD	PSD
		Meas	Meas	Corr'd	Limit	Margin
		PSD	PSD	PSD		
	(MHz)	(dBm/	(dBm/	(dBm/	(dBm/	(dB)
		1MHz)	1MHz)	1MHz)	1MHz)	
Mid	5250	-10.578	-10.148	-7.35	11.00	-18.35

## **MID CHANNEL**





# 2TX Antenna A + Antenna B SDM MODE (IC)

Test Engineer:	
Test Date:	2021-04-19 - 2021-04-22

# Bandwidth, Antenna Gain, and Limits

	Channel	Frequency	Min	Directional	Directional	EIRP	Power	EIRP	PSD
ı			99%	Gain	Gain	Power	Limit	PSD	Limit
1			BW	for Power	for PSD	Limit		Limit	
1		(MHz)	(MHz)	(dBi)	(dBi)	(dBm)	(dBm)	(dBm/	(dBm/
								1MHz)	1MHz)
	Mid	5250	153.7400	3.98	3.98	23.00	19.02	10.00	6.02

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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### **Output Power Results**

· ·									
Channel	Frequency	Antenna	Antenna B	Total	Power	Power			
		Α							
		Meas	Meas	Corr'd	Limit	Margin			
		Power	Power	Power					
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)			
Mid	5250	10.55	10.40	13.49	19.02	-5.53			

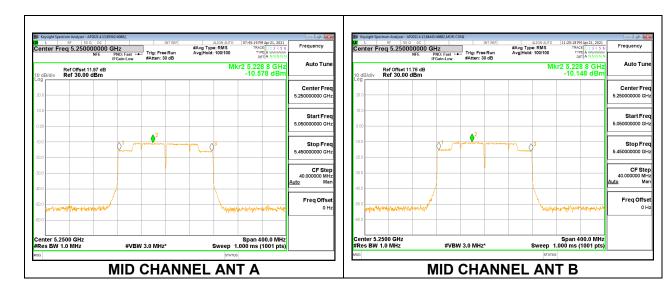
#### **PSD Results**

I OD INGS	r 3D Results									
Channel	Frequency	Antenna	Antenna B	Total	PSD	PSD				
		Α								
		Meas	Meas	Corr'd	Limit	Margin				
		PSD	PSD	PSD						
	(MHz)	(dBm/	(dBm/	(dBm/	(dBm/	(dB)				
		1MHz)	1MHz)	1MHz)	1MHz)					
Mid	5250	-10.578	-10.148	-7.35	6.02	-13.37				

Note: Average power taken as a gated measurement.

TEL: (919) 549-1400

## **MID CHANNEL**



# 9.4.6. 802.11a MODE IN THE 5.3 GHz BAND

# 1TX Antenna A MODE (FCC)

Test Engineer:	84740/40882
Test Date:	2021-08-10

### Bandwidth. Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Power	PSD
		26 dB	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm/1MHz)
Low	5260	21.70	4.60	24.00	11.00
Mid	5280	22.05	4.60	24.00	11.00
Mid	5300	21.80	4.60	24.00	11.00
High	5320	21.40	4.60	24.00	11.00

Duty Cycle CF (dB) 0.09 Included in Calculations of Corr'd PSD	Duty Cycle CF (dB)	0.09	Included in Calculations of Corr'd PSD
--	--------------------	------	--

### **Output Power Results**

Output Pt					
Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	19.28	19.28	24.00	-4.72
Mid	5280	18.31	18.31	24.00	-5.69
Mid	5300	17.35	17.35	24.00	-6.65
High	5320	15.20	15.20	24.00	-8.80

## **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
		PSD	PSD		
	(MHz)	(dBm/1MHz)	(dBm/1MHz)	(dBm/1MHz)	(dB)
Low	5260	7.024	7.114	11.00	-3.89
Mid	5280	5.813	5.903	11.00	-5.10
Mid	5300	4.878	4.968	11.00	-6.03
High	5320	2.659	2.749	11.00	-8.25

# 1TX Antenna B MODE (FCC)

Test Engineer:	84740/40882
Test Date:	2021-08-10

## Bandwidth, Antenna Gain, and Limits

Channel	Frequency	Min	Directional	Power	PSD
		26 dB	Gain	Limit	Limit
		BW			
	(MHz)	(MHz)	(dBi)	(dBm)	(dBm/1MHz)
Low	5260	21.40	4.60	24.00	11.00
Mid	5280	20.90	4.60	24.00	11.00
Mid	5300	21.65	4.60	24.00	11.00
High	5320	21.25	4.60	24.00	11.00

## **Output Power Results**

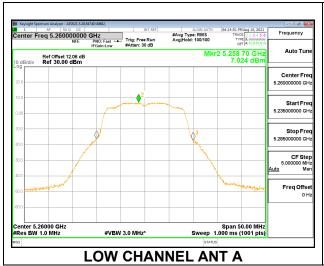
Channel	Frequency		Total	Power	Power
		Meas	Corr'd	Limit	Margin
		Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	19.47	19.47	24.00	-4.53
Mid	5280	18.43	18.43	24.00	-5.57
Mid	5300	17.43	17.43	24.00	-6.57
High	5320	15.31	15.31	24.00	-8.69

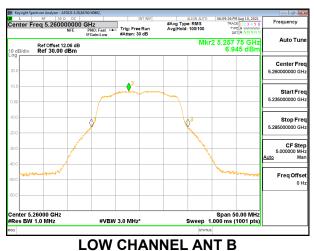
#### **PSD Results**

Channel	Frequency		Total	PSD	PSD
		Meas	Corr'd	Limit	Margin
	(MHz)	PSD (dBm/1MHz)	PSD (dBm/1MHz)	(dBm/1MHz)	(dB)
Low	5260	6.945	7.035	11.00	-3.97
Mid	5280	5.932	6.022	11.00	-4.98
Mid	5300	4.835	4.925	11.00	-6.08
High	5320	2.514	2.604	11.00	-8.40

Note: AV measurements taken as gated.

## **LOW CHANNEL**





DATE: 2021-08-13

IC: 3048A-1964

## **MID CHANNEL**

