

11N20MIMO\_Ant1\_5825



11N20MIMO\_Ant2\_5825



11N40MIMO\_Ant1\_5190



Date: 30 JUN 2023 10:24:40

11N40MIMO\_Ant2\_5190



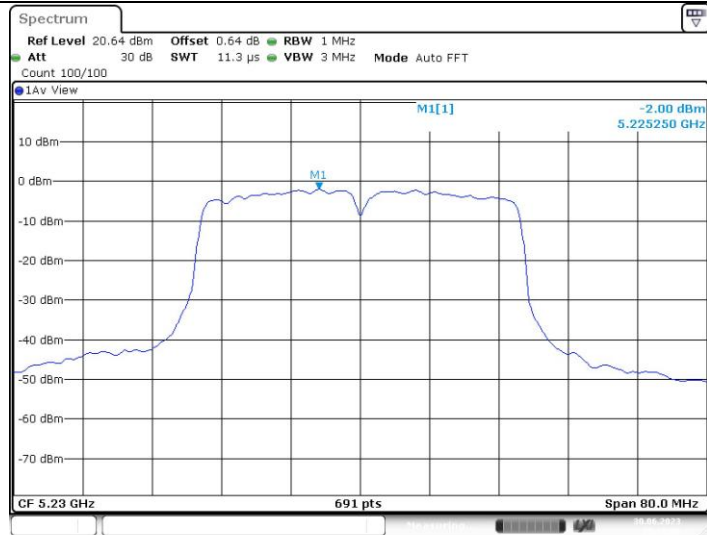
Date: 30 JUN 2023 10:26:14

11N40MIMO\_Ant1\_5230



Date: 30 JUN 2023 10:27:53

11N40MIMO\_Ant2\_5230



Date: 30 JUN 2023 10:29:10

11N40MIMO\_Ant1\_5270



Date: 30 JUN 2023 10:30:35

11N40MIMO\_Ant2\_5270



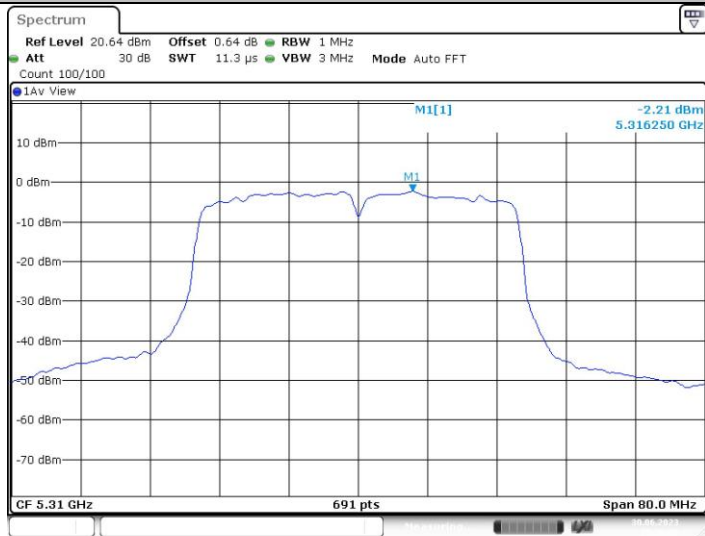
Date: 30 JUN 2023 10:33:04

11N40MIMO\_Ant1\_5310

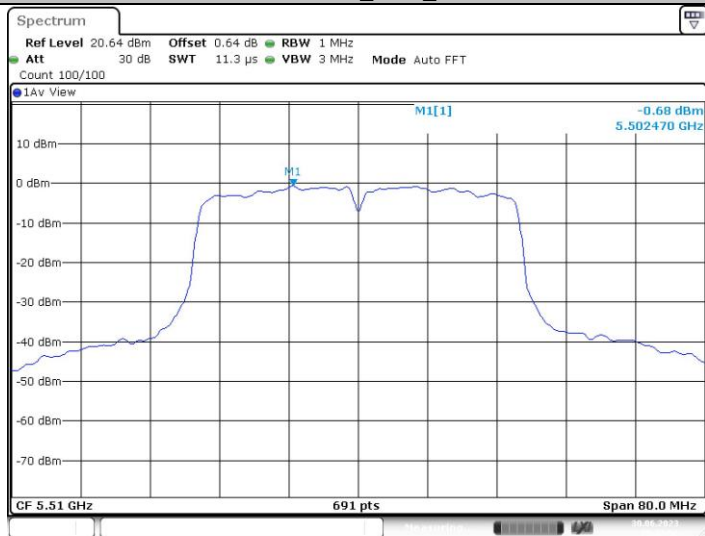




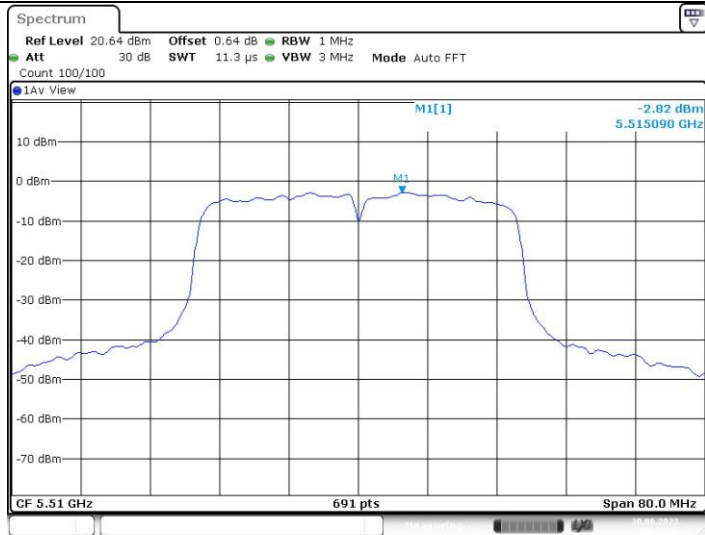
11N40MIMO\_Ant2\_5310



11N40MIMO\_Ant1\_5510

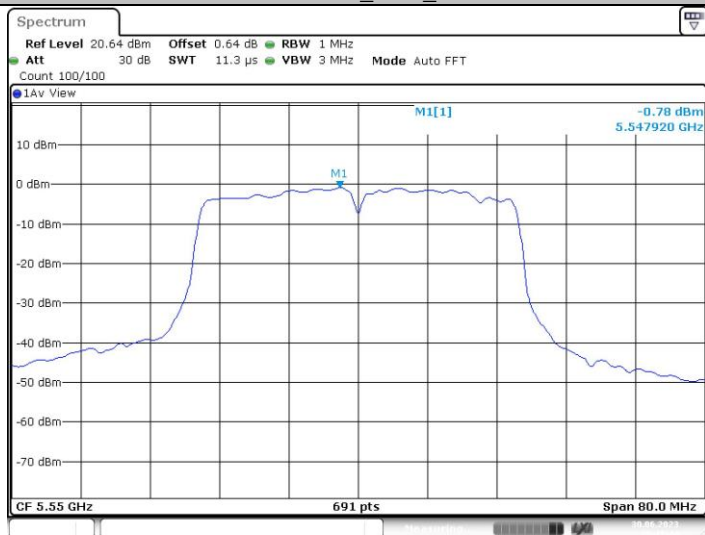


11N40MIMO\_Ant2\_5510



Date: 30 JUN 2023 10:39:58

11N40MIMO\_Ant1\_5550



Date: 30 JUN 2023 10:41:44

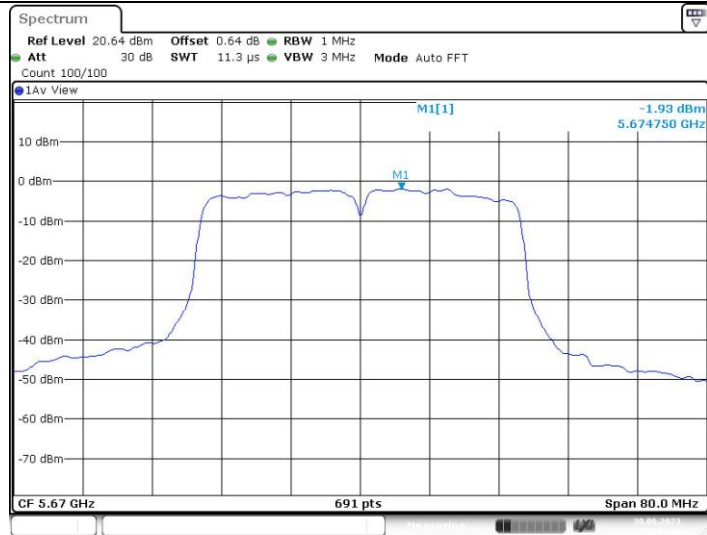
11N40MIMO\_Ant2\_5550



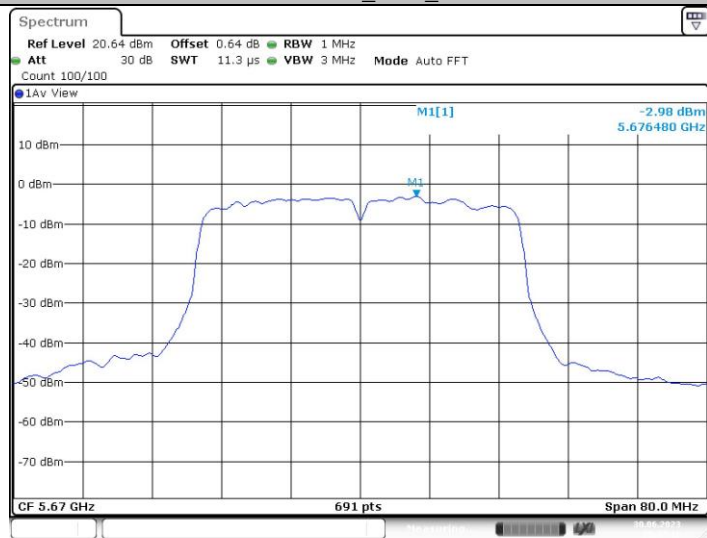
Date: 30 JUN 2023 10:43:17

11N40MIMO\_Ant1\_5670





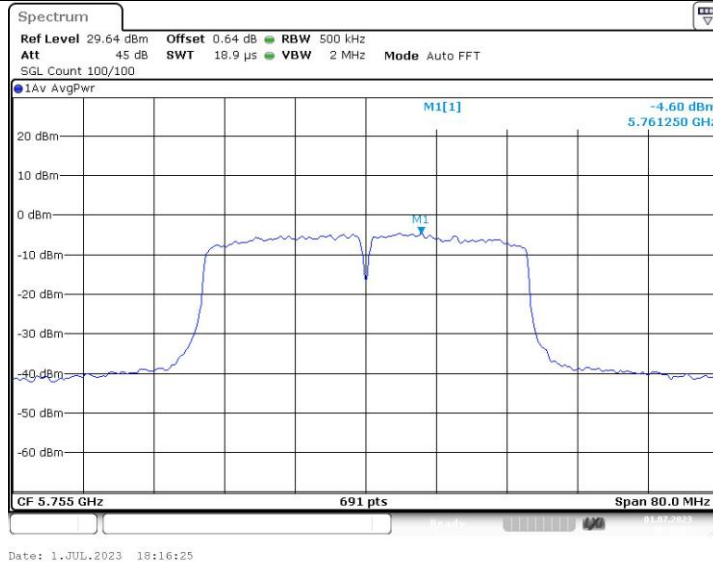
11N40MIMO\_Ant2\_5670



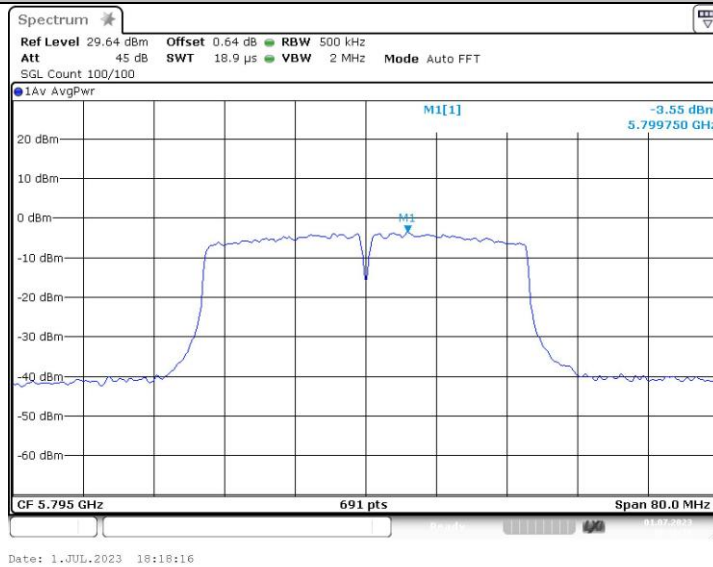
11N40MIMO\_Ant1\_5755



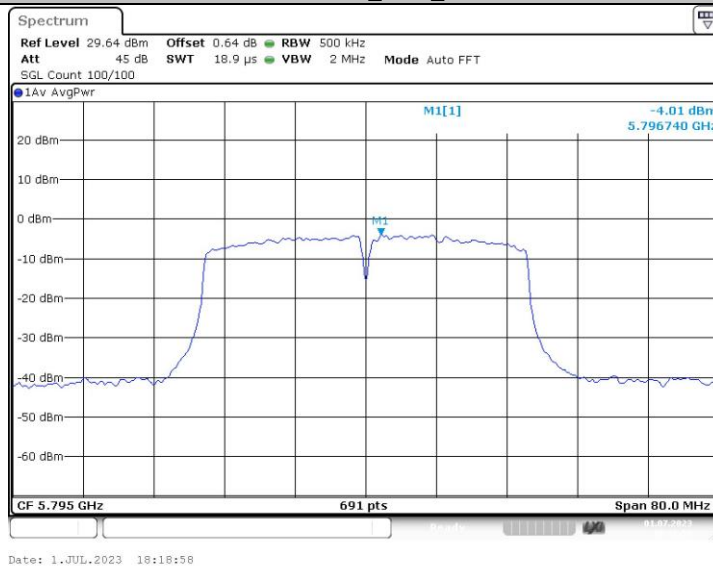
11N40MIMO\_Ant2\_5755



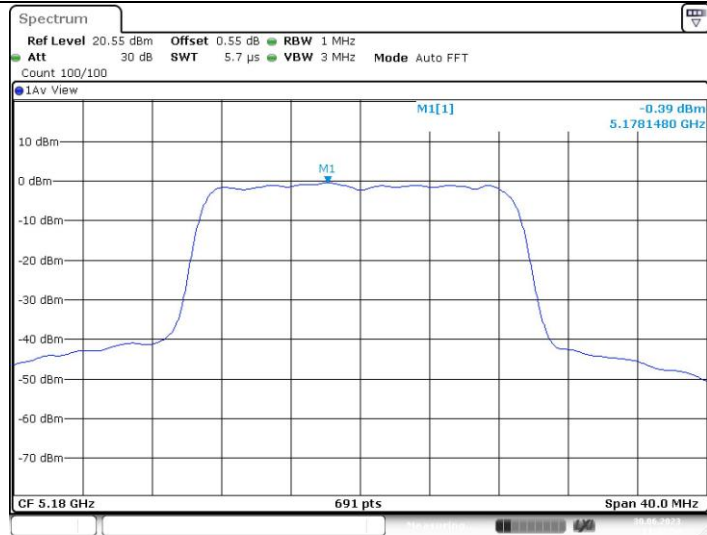
11N40MIMO\_Ant1\_5795



11N40MIMO\_Ant2\_5795



11AC20MIMO\_Ant1\_5180



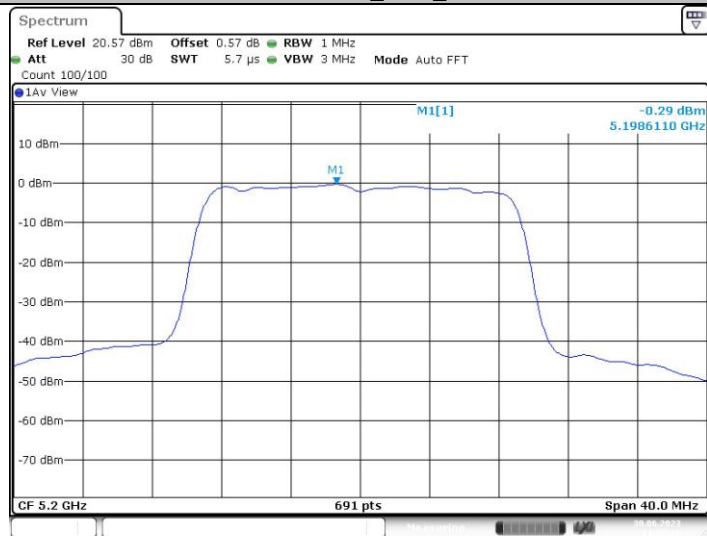
Date: 30 JUN 2023 11:22:54

11AC20MIMO\_Ant2\_5180



Date: 30 JUN 2023 11:24:55

11AC20MIMO\_Ant1\_5200

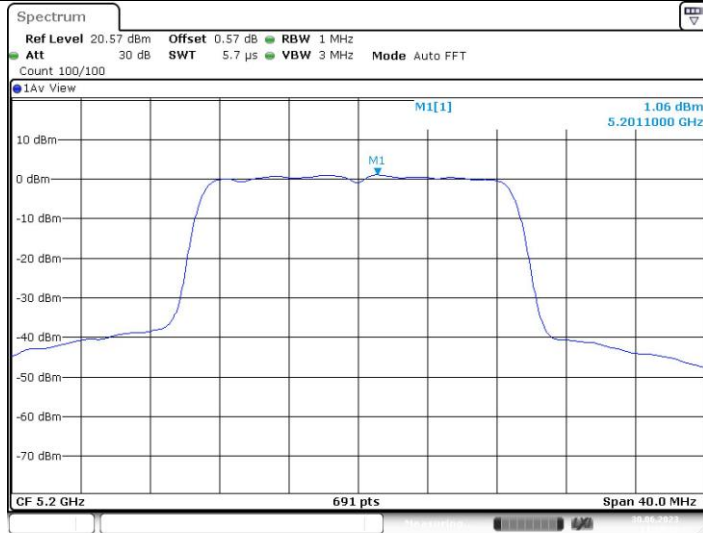


Date: 30 JUN 2023 11:27:09

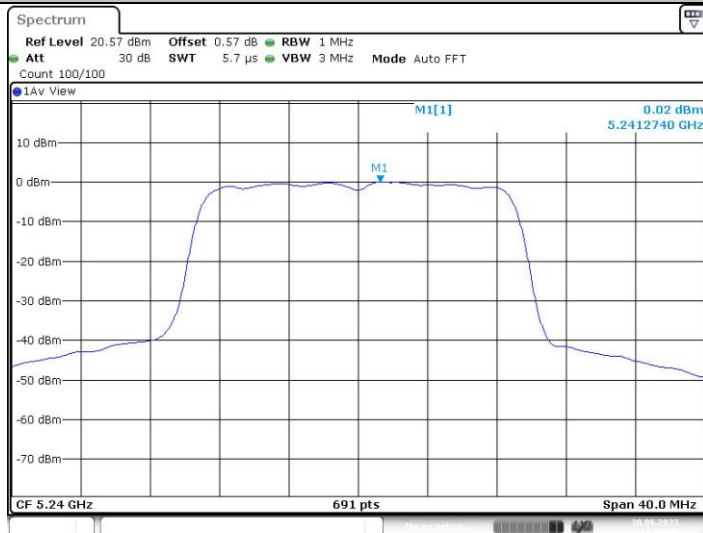
11AC20MIMO\_Ant2\_5200



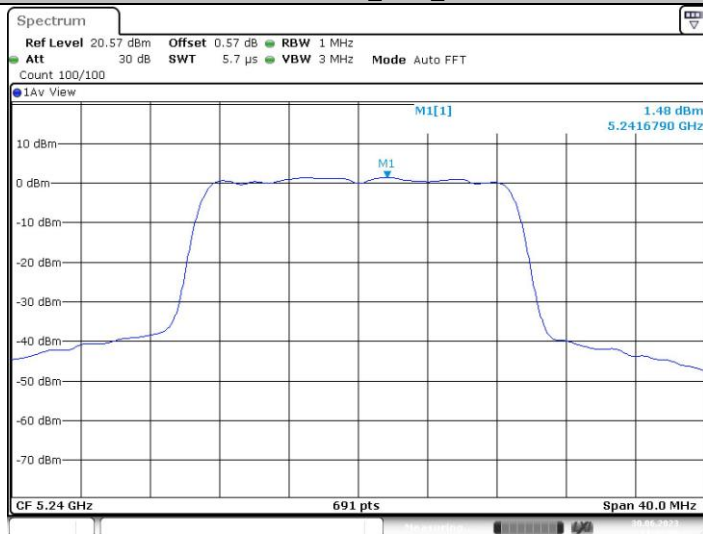




11AC20MIMO\_Ant1\_5240

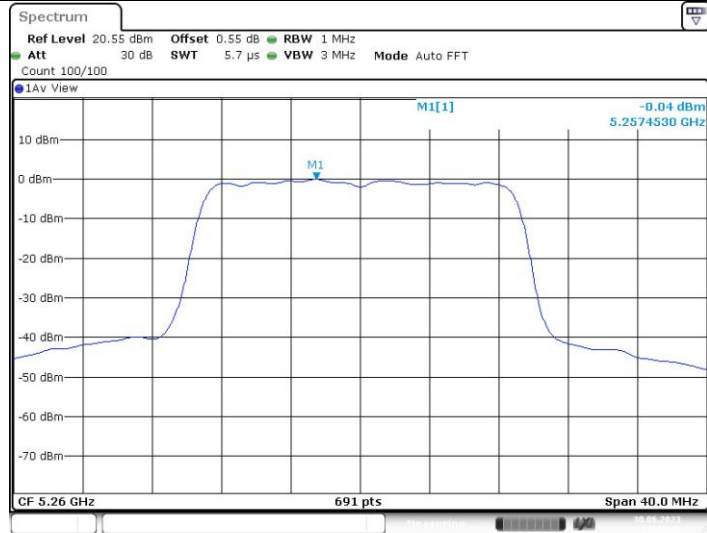


11AC20MIMO\_Ant2\_5240

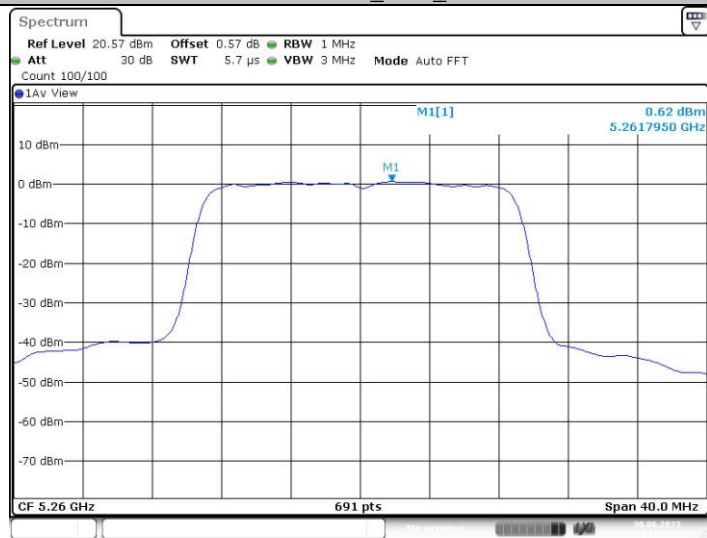


11AC20MIMO\_Ant1\_5260

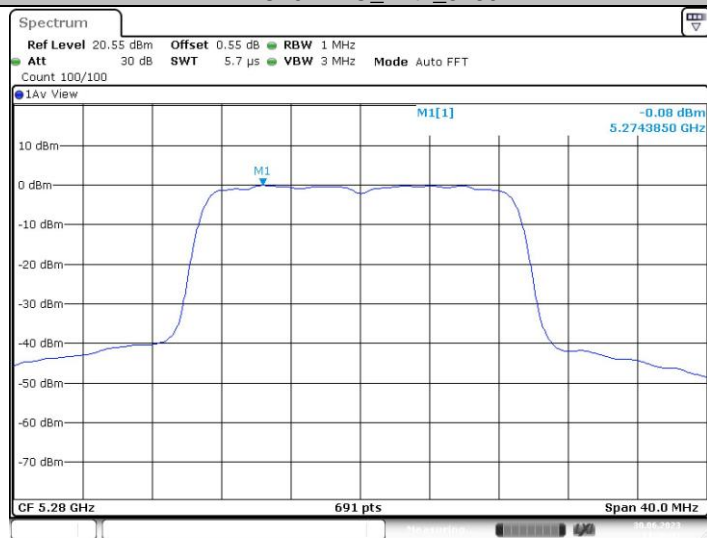




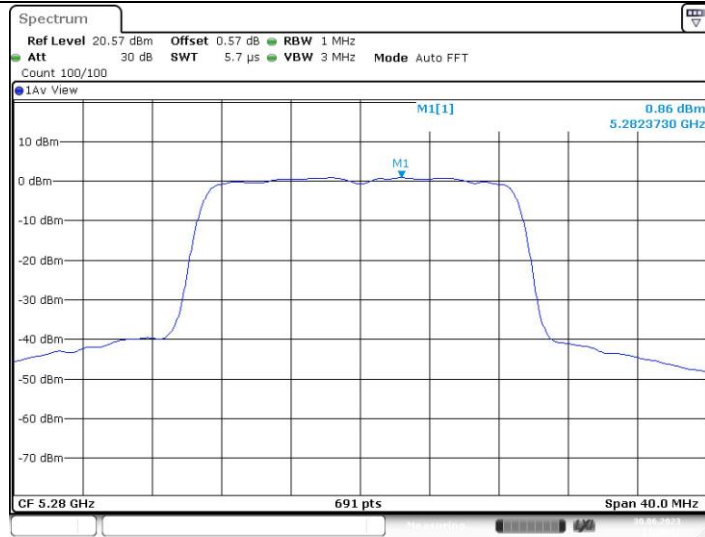
11AC20MIMO\_Ant2\_5260



11AC20MIMO\_Ant1\_5280



11AC20MIMO\_Ant2\_5280



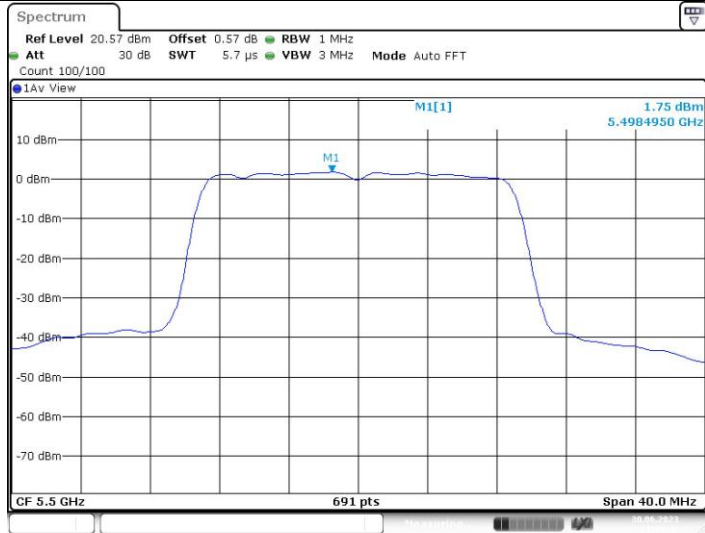
11AC20MIMO\_Ant1\_5320



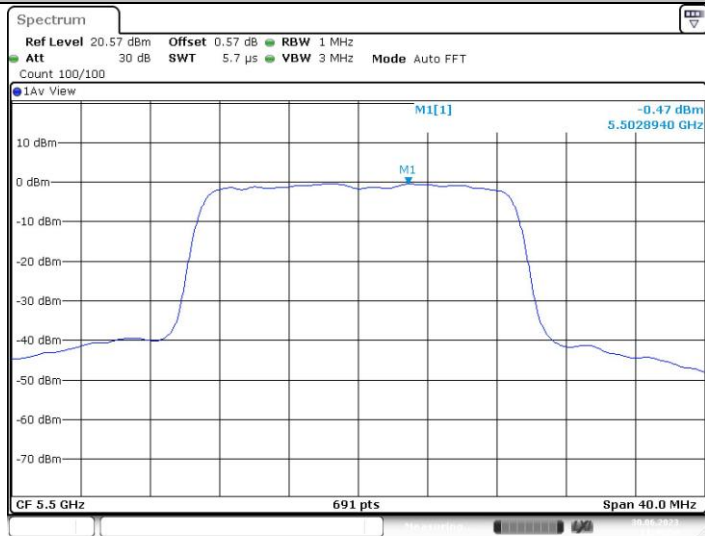
11AC20MIMO\_Ant2\_5320



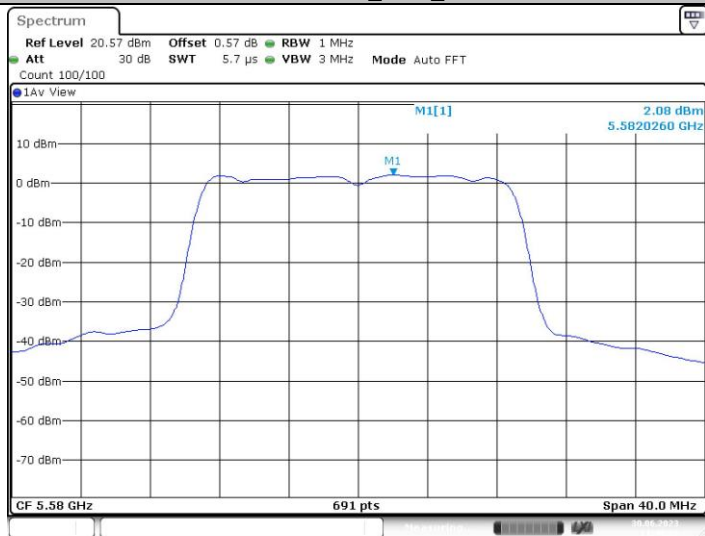
11AC20MIMO\_Ant1\_5500



11AC20MIMO\_Ant2\_5500



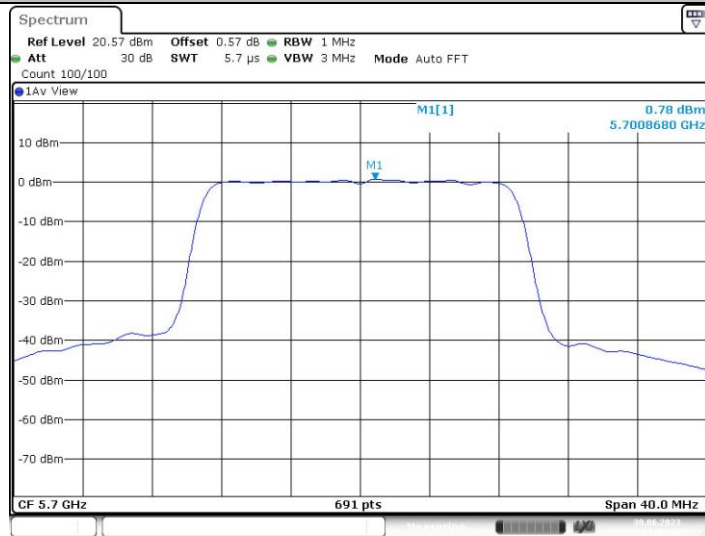
11AC20MIMO\_Ant1\_5580



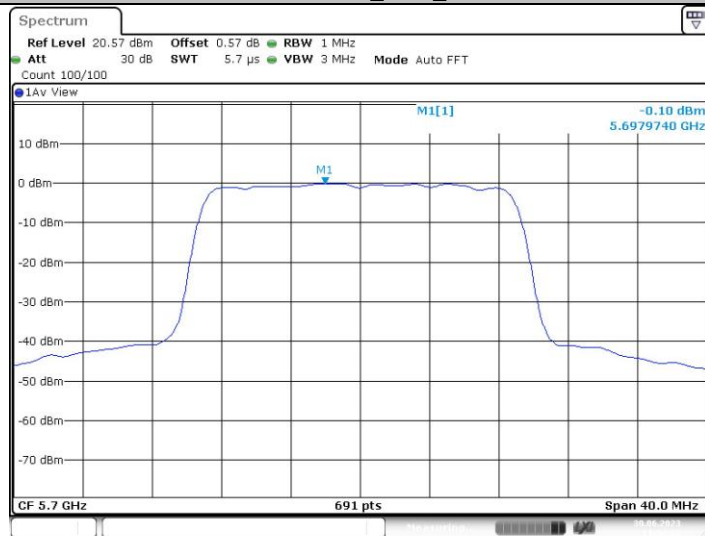
11AC20MIMO\_Ant2\_5580



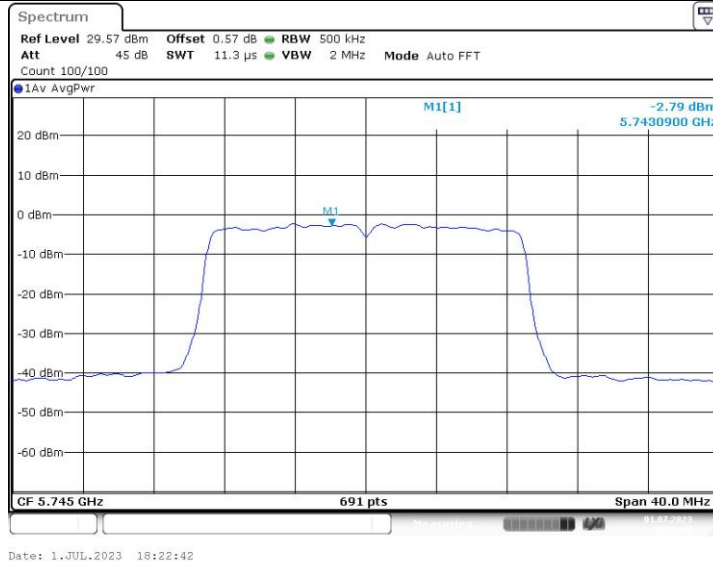
11AC20MIMO\_Ant1\_5700



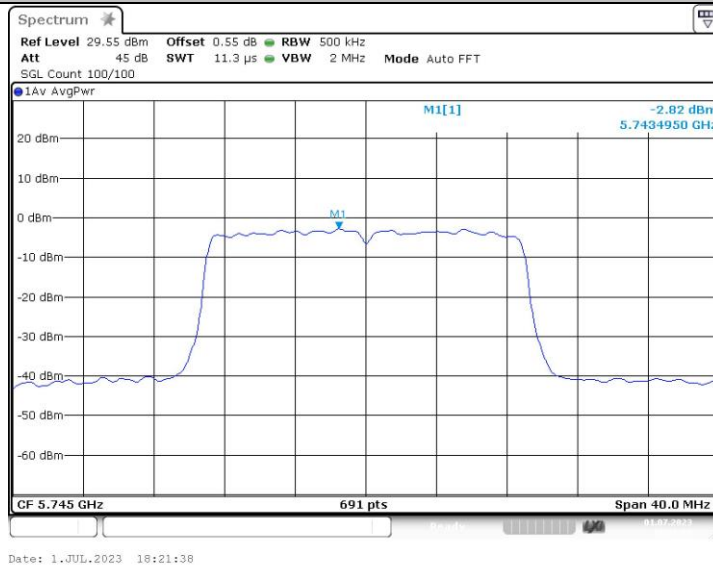
11AC20MIMO\_Ant2\_5700



11AC20MIMO\_Ant1\_5745



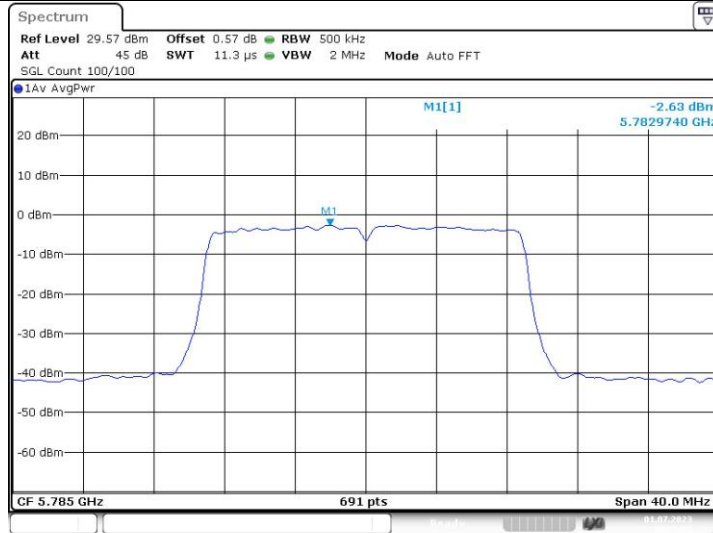
11AC20MIMO\_Ant2\_5745



11AC20MIMO\_Ant1\_5785

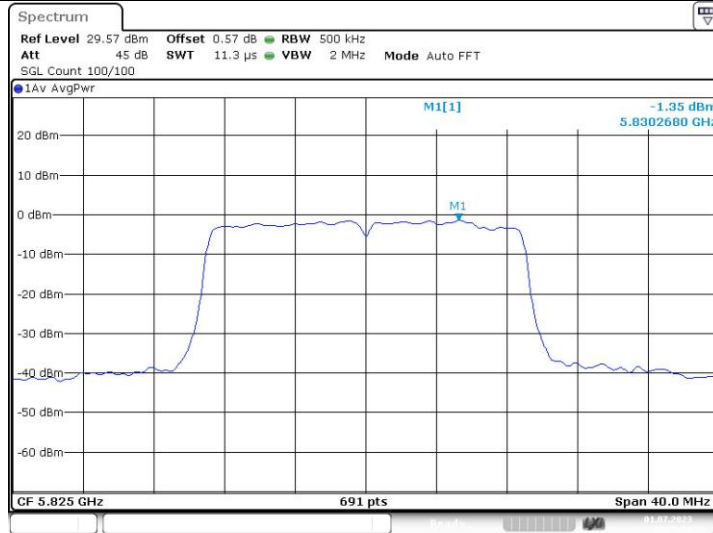


11AC20MIMO\_Ant2\_5785



Date: 1.JUL.2023 18:25:53

11AC20MIMO\_Ant1\_5825



Date: 1.JUL.2023 18:27:14

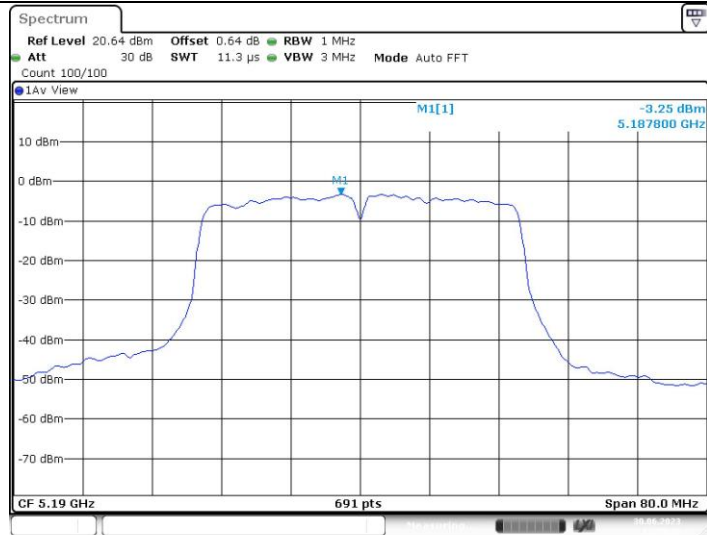
11AC20MIMO\_Ant2\_5825



Date: 1.JUL.2023 18:26:45

11AC40MIMO\_Ant1\_5190





11AC40MIMO\_Ant2\_5190

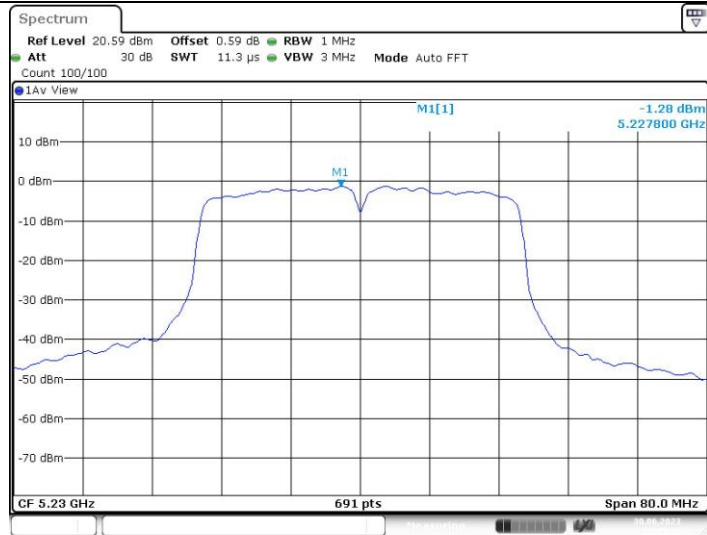


11AC40MIMO\_Ant1\_5230



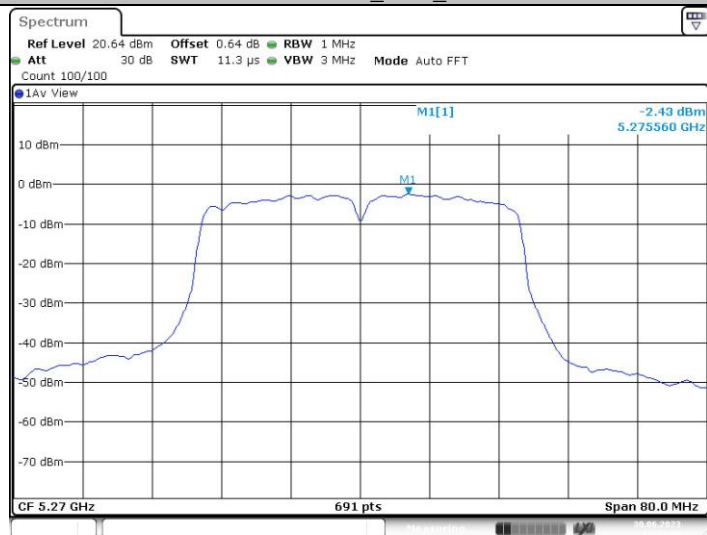
11AC40MIMO\_Ant2\_5230





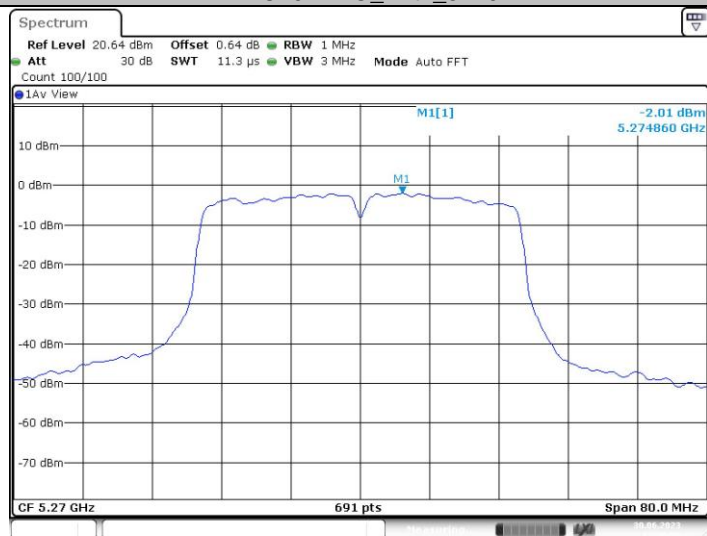
Date: 30 JUN 2023 12:35:31

11AC40MIMO\_Ant1\_5270



Date: 30 JUN 2023 12:37:05

11AC40MIMO\_Ant2\_5270



Date: 30 JUN 2023 12:38:59

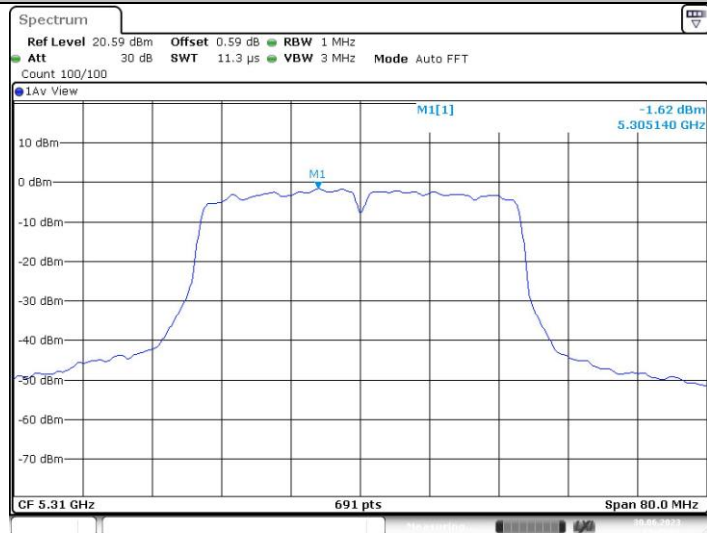
11AC40MIMO\_Ant1\_5310





Date: 30 JUN 2023 13:47:47

11AC40MIMO\_Ant2\_5310



Date: 30 JUN 2023 13:49:01

11AC40MIMO\_Ant1\_5510



Date: 30 JUN 2023 13:50:23

11AC40MIMO\_Ant2\_5510



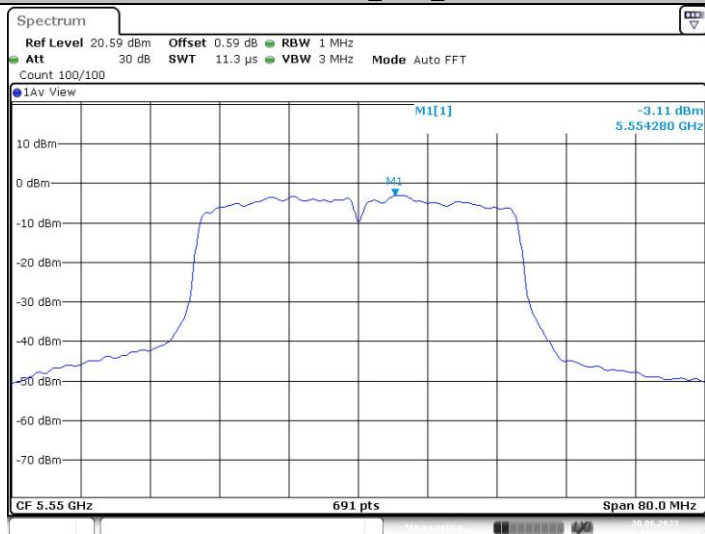
Date: 30 JUN 2023 13:51:41

11AC40MIMO\_Ant1\_5550



Date: 30 JUN 2023 13:54:55

11AC40MIMO\_Ant2\_5550



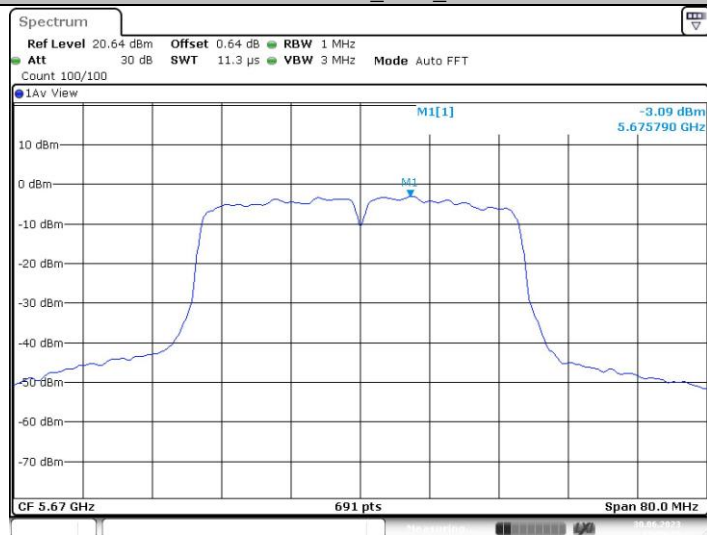
Date: 30 JUN 2023 13:56:36

11AC40MIMO\_Ant1\_5670



Date: 30 JUN 2023 13:58:03

11AC40MIMO\_Ant2\_5670



Date: 30 JUN 2023 13:59:15

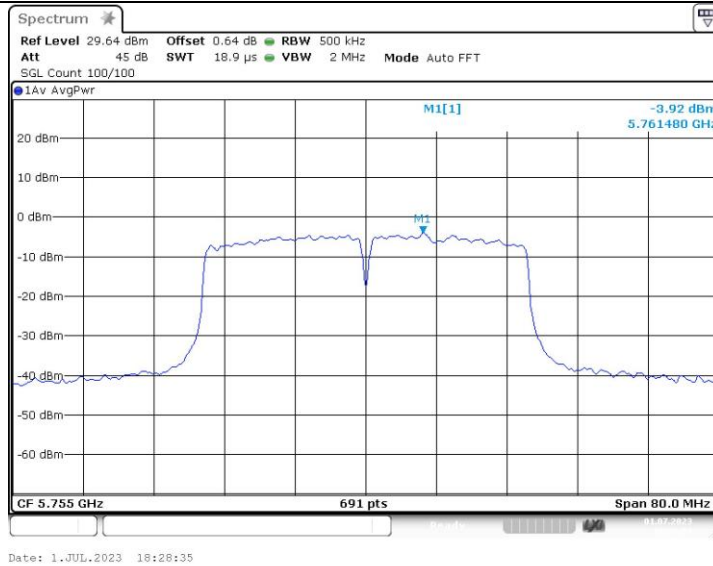
11AC40MIMO\_Ant1\_5755



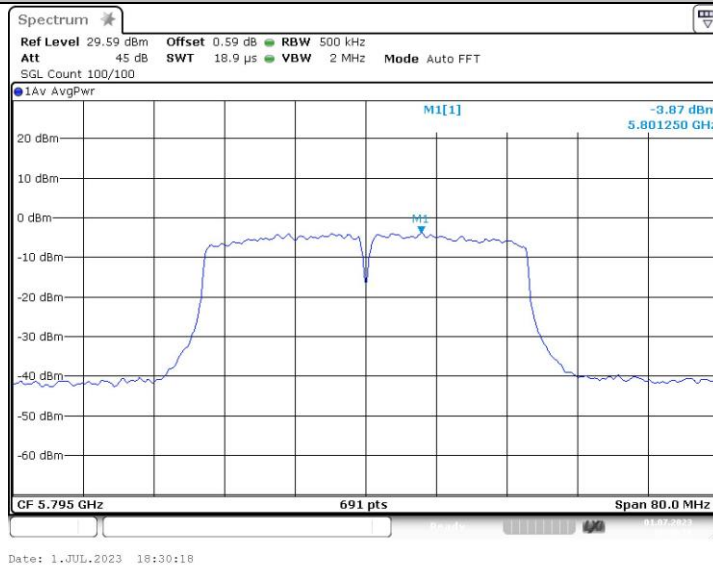
Date: 1 JUL 2023 18:29:18

11AC40MIMO\_Ant2\_5755

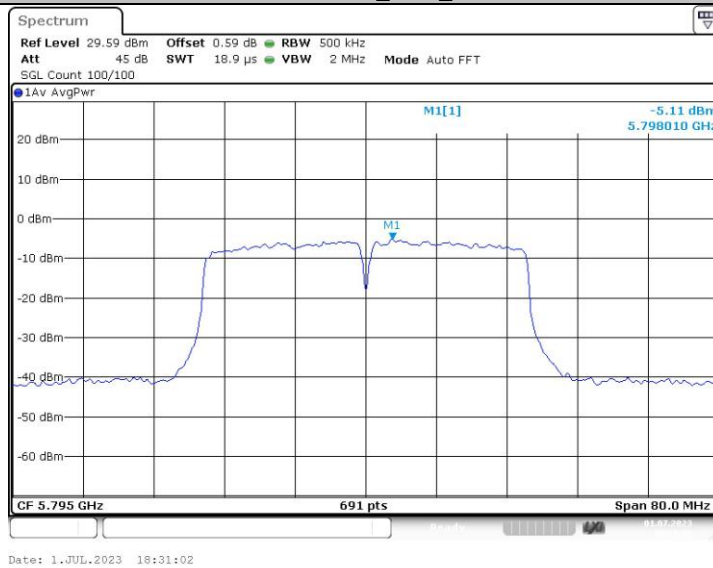




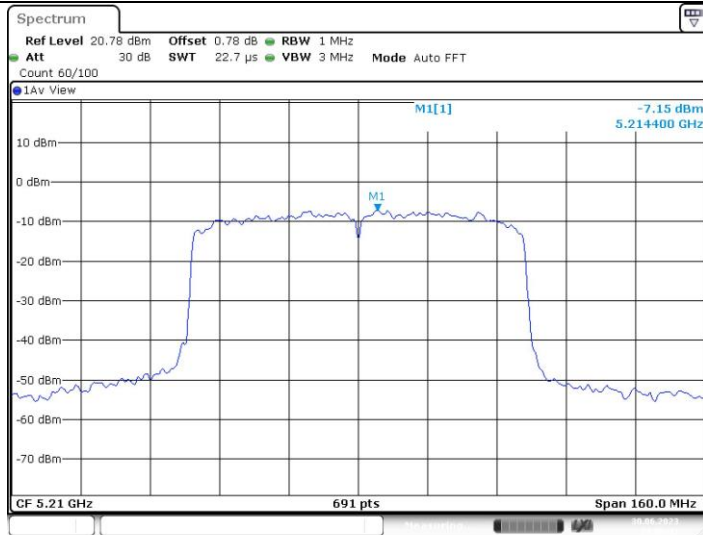
11AC40MIMO\_Ant1\_5795



11AC40MIMO\_Ant2\_5795

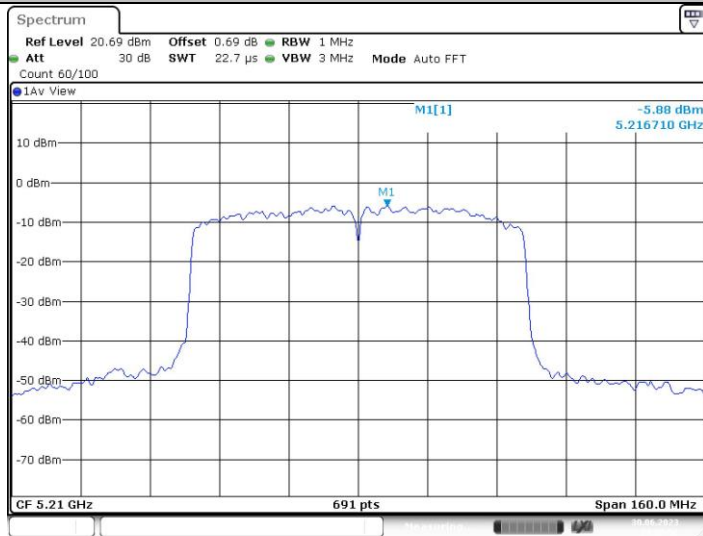


11AC80MIMO\_Ant1\_5210



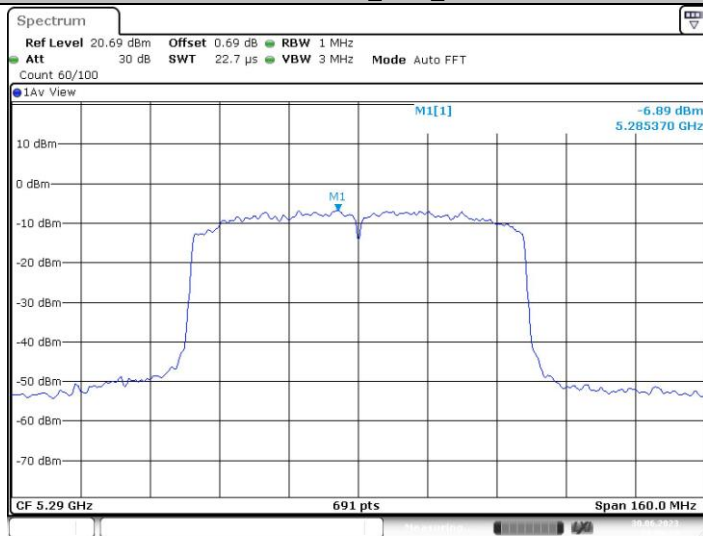
Date: 30 JUN 2023 14:06:41

11AC80MIMO\_Ant2\_5210



Date: 30 JUN 2023 14:07:52

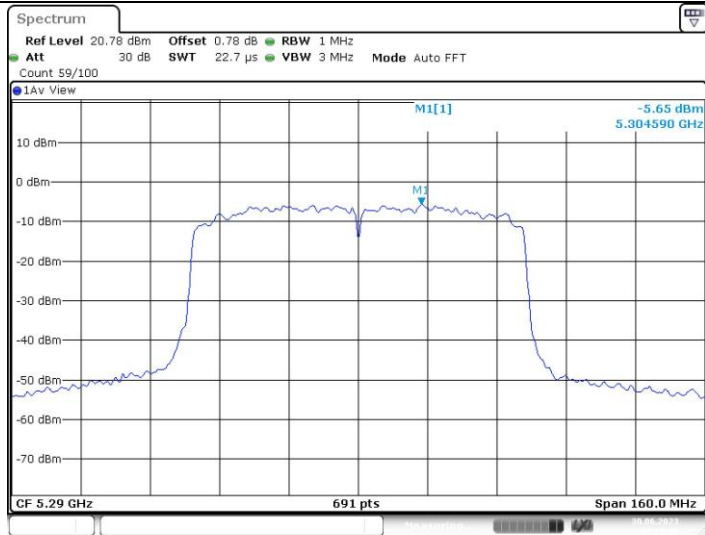
11AC80MIMO\_Ant1\_5290



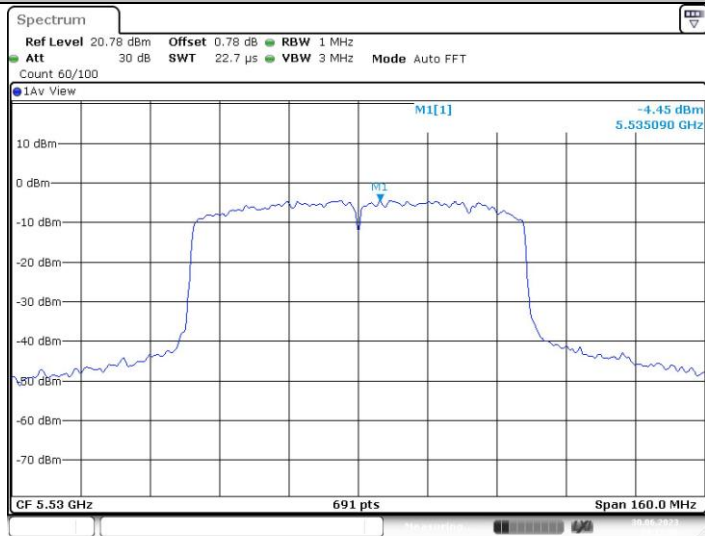
Date: 30 JUN 2023 14:09:14

11AC80MIMO\_Ant2\_5290

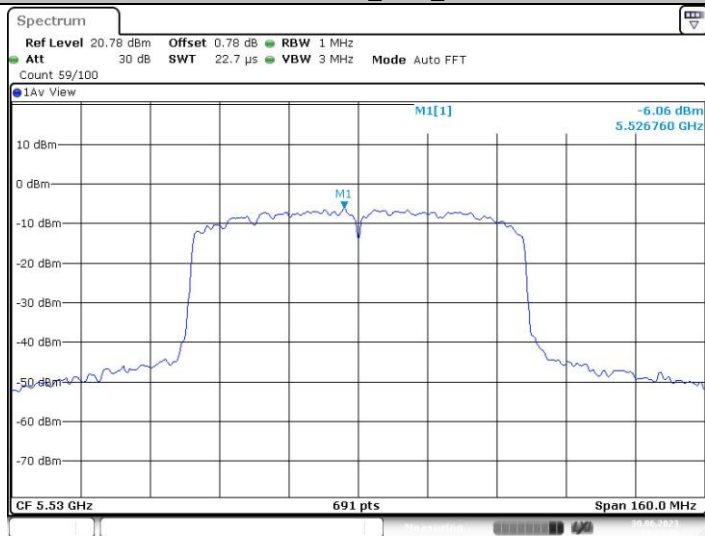




11AC80MIMO\_Ant1\_5530



11AC80MIMO\_Ant2\_5530

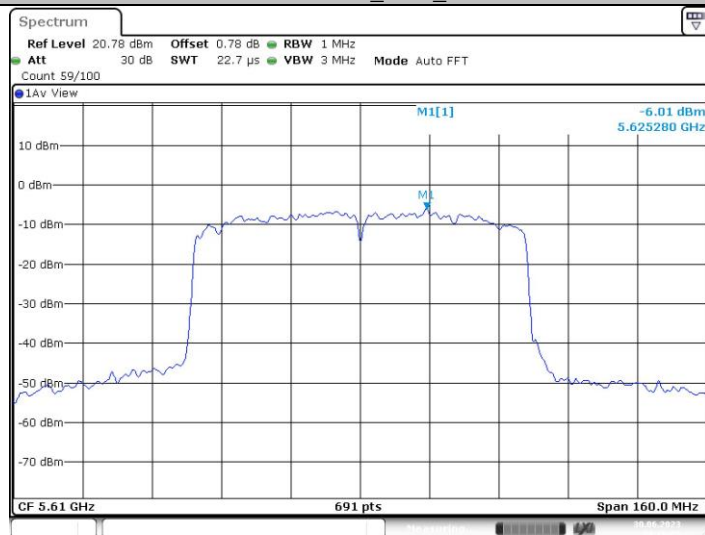


11AC80MIMO\_Ant1\_5610



Date: 30 JUN.2023 14:15:09

11AC80MIMO\_Ant2\_5610



Date: 30 JUN.2023 14:16:25

11AC80MIMO\_Ant1\_5775

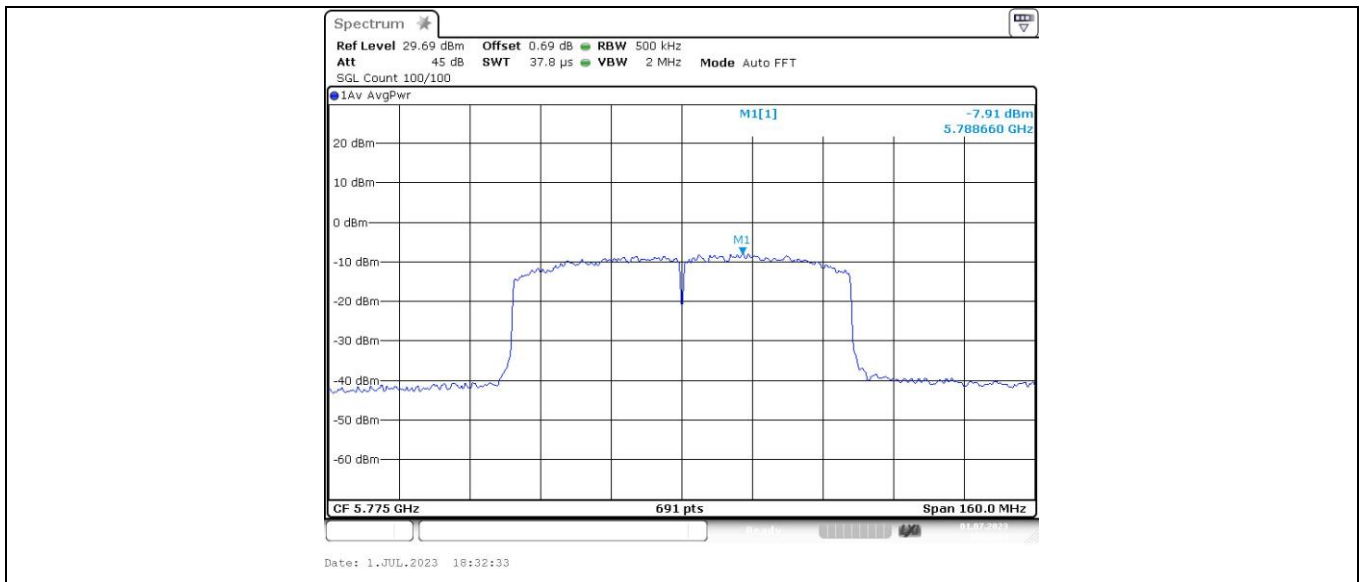


Date: 1 JUL.2023 18:33:16

11AC80MIMO\_Ant2\_5775







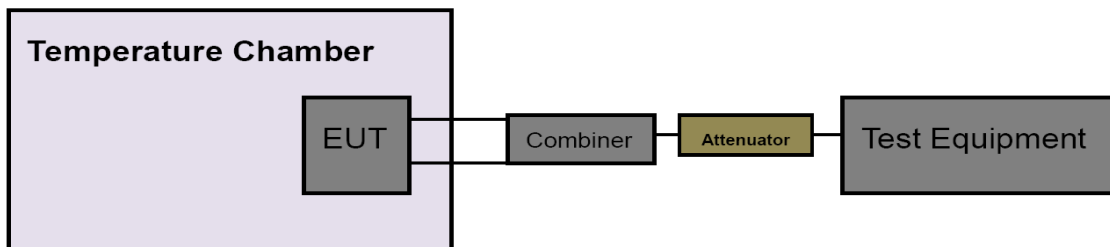
### 3.7. Frequency Stability

**Limit**

**FCC CFR Title 47 Part 15 Subpart E Section 15.407(g)**

Test Item	Limit	Frequency Range (MHz)
Frequency Stability	Specified in the user's manual, the transmitter center frequency tolerance shall be $\pm 20$ ppm maximum for the 5 GHz band (IEEE 802.11n specification)	5150~5250
		5250~5350
		5500~5700
		5725~5850

**Test Configuration**



**Test Procedure**

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyzer center frequency to transmitting frequency.
- (3) Set the span to encompass the entire emissions bandwidth (EBW) of the signal.
- (4) Set the RBW to: 8MHz, VBW=8MHz with peak detector and max hold settings.
- (5) The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
- (6) Extreme temperature is 0°C~45°C

NOTE: The EUT was set to continuously transmitting in continuously un-modulation transmitting mode.

**Test Mode**

Please refer to the clause 2.4.

**Test Result**

TestMode	Antenna	Channel	Voltage				Limit (ppm)	Verdict
			Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)		
20M	Ant1	5180	NV	NT	-1000	-0.19305	20	PASS
			LV	NT	-1000	-0.19305	20	PASS
			HV	NT	-1000	-0.19305	20	PASS
	Ant2	5180	NV	NT	4000	0.772201	20	PASS
			LV	NT	4000	0.772201	20	PASS
			HV	NT	4000	0.772201	20	PASS
	Ant1	5200	NV	NT	4000	0.769231	20	PASS
			LV	NT	4000	0.769231	20	PASS
			HV	NT	5000	0.961538	20	PASS
	Ant2	5200	NV	NT	7000	1.346154	20	PASS
			LV	NT	8000	1.538462	20	PASS
			HV	NT	9000	1.730769	20	PASS
	Ant1	5240	NV	NT	3000	0.572519	20	PASS
			LV	NT	8000	1.526718	20	PASS
			HV	NT	10000	1.908397	20	PASS
	Ant2	5240	NV	NT	13000	2.480916	20	PASS
			LV	NT	12000	2.290076	20	PASS
			HV	NT	12000	2.290076	20	PASS
	Ant1	5260	NV	NT	2000	0.380228	20	PASS
			LV	NT	7000	1.330798	20	PASS
			HV	NT	10000	1.901141	20	PASS
	Ant2	5260	NV	NT	13000	2.471483	20	PASS
			LV	NT	13000	2.471483	20	PASS
			HV	NT	12000	2.281369	20	PASS
	Ant1	5280	NV	NT	11000	2.083333	20	PASS
			LV	NT	11000	2.083333	20	PASS
			HV	NT	12000	2.272727	20	PASS
	Ant2	5280	NV	NT	14000	2.651515	20	PASS
			LV	NT	14000	2.651515	20	PASS
			HV	NT	15000	2.840909	20	PASS
	Ant1	5320	NV	NT	11000	2.067669	20	PASS
			LV	NT	13000	2.443609	20	PASS
			HV	NT	14000	2.631579	20	PASS
	Ant2	5320	NV	NT	15000	2.819549	20	PASS
			LV	NT	15000	2.819549	20	PASS
			HV	NT	15000	2.819549	20	PASS
	Ant1	5500	NV	NT	6000	1.090909	20	PASS
			LV	NT	14000	2.545455	20	PASS
			HV	NT	15000	2.727273	20	PASS
	Ant2	5500	NV	NT	18000	3.272727	20	PASS
			LV	NT	17000	3.090909	20	PASS
			HV	NT	18000	3.272727	20	PASS
	Ant1	5580	NV	NT	8000	1.433692	20	PASS
			LV	NT	13000	2.329749	20	PASS
			HV	NT	15000	2.688172	20	PASS
	Ant2	5580	NV	NT	18000	3.225806	20	PASS
			LV	NT	18000	3.225806	20	PASS
			HV	NT	18000	3.225806	20	PASS
Ant1	5700	NV	NT	9000	1.578947	20	PASS	
		LV	NT	11000	1.929825	20	PASS	
		HV	NT	13000	2.280702	20	PASS	
Ant2	5700	NV	NT	15000	2.631579	20	PASS	
		LV	NT	16000	2.807018	20	PASS	
		HV	NT	15000	2.631579	20	PASS	
Ant1	5745	NV	NT	11000	1.914708	20	PASS	
		LV	NT	13000	2.262837	20	PASS	
		HV	NT	14000	2.436902	20	PASS	
Ant2	5745	NV	NT	17000	2.959095	20	PASS	
		LV	NT	16000	2.78503	20	PASS	
		LV	NT	16000	2.78503	20	PASS	

CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn



For anti-fake verification, please visit the official website of Certification and

Accreditation Administration of the People's Republic of China : <http://yz.cnca.cn>



	Ant1	5785	HV	NT	17000	2.959095	20	PASS	
			NV	NT	2000	0.345722	20	PASS	
			LV	NT	10000	1.728608	20	PASS	
	Ant2	5785	HV	NT	12000	2.07433	20	PASS	
			NV	NT	14000	2.420052	20	PASS	
			LV	NT	14000	2.420052	20	PASS	
	Ant1	5825	HV	NT	14000	2.420052	20	PASS	
			NV	NT	3000	0.515021	20	PASS	
			LV	NT	9000	1.545064	20	PASS	
	Ant2	5825	HV	NT	10000	1.716738	20	PASS	
			NV	NT	10000	1.716738	20	PASS	
			LV	NT	10000	1.716738	20	PASS	
	40M	Ant1	5190	HV	NT	11000	1.888412	20	PASS
				NV	NT	-1000	-0.192678	20	PASS
				LV	NT	4000	0.770713	20	PASS
		Ant2	5190	HV	NT	6000	1.156069	20	PASS
				NV	NT	10000	1.926782	20	PASS
				LV	NT	10000	1.926782	20	PASS
Ant1		5230	HV	NT	10000	1.926782	20	PASS	
			NV	NT	5000	0.956023	20	PASS	
			LV	NT	8000	1.529637	20	PASS	
Ant2		5230	HV	NT	10000	1.912046	20	PASS	
			NV	NT	11000	2.10325	20	PASS	
			LV	NT	11000	2.10325	20	PASS	
Ant1		5270	HV	NT	11000	2.10325	20	PASS	
			NV	NT	4000	0.759013	20	PASS	
			LV	NT	9000	1.70778	20	PASS	
Ant2		5270	HV	NT	10000	1.897533	20	PASS	
			NV	NT	11000	2.087287	20	PASS	
			LV	NT	11000	2.087287	20	PASS	
Ant1	5310	HV	NT	11000	2.087287	20	PASS		
		NV	NT	1000	0.188324	20	PASS		
		LV	NT	7000	1.318267	20	PASS		
Ant2	5310	HV	NT	8000	1.506591	20	PASS		
		NV	NT	10000	1.883239	20	PASS		
		LV	NT	10000	1.883239	20	PASS		
Ant1	5510	HV	NT	10000	1.883239	20	PASS		
		NV	NT	1000	0.181488	20	PASS		
		LV	NT	9000	1.633394	20	PASS		
Ant2	5510	HV	NT	11000	1.99637	20	PASS		
		NV	NT	15000	2.722323	20	PASS		
		LV	NT	15000	2.722323	20	PASS		
Ant1	5550	HV	NT	15000	2.722323	20	PASS		
		NV	NT	5000	0.900901	20	PASS		
		LV	NT	10000	1.801802	20	PASS		
Ant2	5550	HV	NT	11000	1.981982	20	PASS		
		NV	NT	13000	2.342342	20	PASS		
		LV	NT	13000	2.342342	20	PASS		
Ant1	5670	HV	NT	13000	2.342342	20	PASS		
		NV	NT	3000	0.529101	20	PASS		
		LV	NT	9000	1.587302	20	PASS		
Ant2	5670	HV	NT	10000	1.763668	20	PASS		
		NV	NT	13000	2.292769	20	PASS		
		LV	NT	13000	2.292769	20	PASS		
Ant1	5755	HV	NT	13000	2.292769	20	PASS		
		NV	NT	7000	1.216334	20	PASS		
		LV	NT	11000	1.911381	20	PASS		
Ant2	5755	HV	NT	15000	2.606429	20	PASS		
		NV	NT	18000	3.127715	20	PASS		
		LV	NT	18000	3.127715	20	PASS		
Ant1	5795	HV	NT	17000	2.953953	20	PASS		
		NV	NT	3000	0.517688	20	PASS		
		LV	NT	9000	1.553063	20	PASS		
Ant2	5795	HV	NT	11000	1.898188	20	PASS		
		NV	NT	12000	2.070751	20	PASS		
			LV	NT	12000	2.070751	20	PASS	

CTC Laboratories, Inc.

2/F., Building 1 and 1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Longhua District, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

中国国家认证认可监督管理委员会  
Certification and Accreditation Administration of the People's Republic of ChinaFor anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : <http://yz.cnca.cn>



80M	Ant1	5210	HV	NT	12000	2.070751	20	PASS
			NV	NT	2000	0.383877	20	PASS
			LV	NT	8000	1.535509	20	PASS
	Ant2	5210	HV	NT	9000	1.727447	20	PASS
			NV	NT	10000	1.919386	20	PASS
			LV	NT	10000	1.919386	20	PASS
	Ant1	5290	HV	NT	10000	1.919386	20	PASS
			NV	NT	7000	1.323251	20	PASS
			LV	NT	7000	1.323251	20	PASS
	Ant2	5290	HV	NT	8000	1.512287	20	PASS
			NV	NT	9000	1.701323	20	PASS
			LV	NT	9000	1.701323	20	PASS
	Ant1	5530	HV	NT	10000	1.890359	20	PASS
			NV	NT	4000	0.723327	20	PASS
			LV	NT	10000	1.808318	20	PASS
	Ant2	5530	HV	NT	12000	2.169982	20	PASS
			NV	NT	15000	2.712477	20	PASS
			LV	NT	15000	2.712477	20	PASS
	Ant1	5610	HV	NT	16000	2.893309	20	PASS
			NV	NT	1000	0.178253	20	PASS
			LV	NT	8000	1.426025	20	PASS
	Ant2	5610	HV	NT	11000	1.960784	20	PASS
			NV	NT	12000	2.139037	20	PASS
			LV	NT	13000	2.317291	20	PASS
Ant1	5775	HV	NT	13000	2.317291	20	PASS	
		NV	NT	-3000	-0.519481	20	PASS	
		LV	NT	-5000	-0.865801	20	PASS	
Ant2	5775	HV	NT	-7000	-1.212121	20	PASS	
		NV	NT	-12000	-2.077922	20	PASS	
		LV	NT	-12000	-2.077922	20	PASS	
			HV	NT	-12000	-2.077922	20	PASS