



Spot Check Evaluation

FCC ID : UZ7EM45B1
EQUIPMENT : Enterprise Mobile
BRAND NAME : Zebra
MODEL NAME : EM45B1
APPLICANT : Zebra Technologies Corporation
3 Overlook Point, Lincolnshire, IL 60069 USA
MANUFACTURER : Zebra Technologies Corporation
3 Overlook Point, Lincolnshire, IL 60069 USA
STANDARD : 47 CFR Part 22(H), 24(E), 27(L), 27(H), 27(F), 27(M),
27(N), 27(O), 27(Q), 90(S)
47 CFR Part 15 Subpart C §15.247
47 CFR Part 15 Subpart C §15.225
47 CFR Part 15 Subpart E §15.407

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR460508-02F	Rev. 01	Initial issue of report	Feb. 13, 2025



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Enterprise Mobile
Brand Name	Zebra
Model Name	EM45B1
FCC ID	UZ7EM45B1
IMEI Code	Conducted: 350332150060484 Conduction: 350332150060096/350332150064049 Radiation: 350332150060260/350332150063959 CBP/DFS: 350332150060575
HW Version	DV
SW Version	14-24-09.00-UG-U00-PRD-ATH-04
MFD	09DEC24
EUT Stage	Identical Prototype

Specification of Accessory				
Battery	Brand Name	Zebra	Model	BT-000501
			Part Number	BT-000501-2000

Supported Unit used in test configuration and system				
AC Adapter 1 (Type C Wall Charger 1)	Brand Name	Zebra	Model	SAWA-102-22520A
			Part Number	PWR-WUA5V45W1US
AC Adapter 2 (Type A Wall Charger 2)	Brand Name	Zebra	Model	SAWA-65-20005A
			Part Number	PWR-WUA5V12W0US
Earphone 1 (Wired headset USB-C)	Brand Name	Zebra	Part Number	HDST-USBC-PTT1-01
Earphone 2 (Rugged Bluetooth Headset)	Brand Name	Zebra	Part Number	HS3100-OTH
Earphone 3 (3.5mm PTT Headset)	Brand Name	Zebra	Part Number	HDST-35MM-PTT1-02
Earphone 4 (Rugged Headset)	Brand Name	Zebra	Part Number	HS2100-OTH
3.5mm to 3.5mm audio connector	Brand Name	Zebra	Part Number	CBL-HS2100-3MS1-01
Type C-Audio Cable (Type C to 3.5mm)	Brand Name	Zebra	Part Number	ADP-USBC-35MM1-01
USB Cable 1 (USB-C to C Cable)	Brand Name	Zebra	Part Number	CBL-EC5X-USBC3A-01
USB Cable 2 (USB-A to C Cable)	Brand Name	Zebra	Part Number	CBL-TC5X-USBC2A-01
EM45 Protective Case	Brand Name	Zebra	Part Number	SG-EM45EXO2-01



1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Site

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-KS CO01-KS DFS01-KS 03CH02-KS 03CH04-KS 03CH06-KS	CN1257	314309

1.4 Test Software

Item	Site	Manufacturer	Name	Version
1.	TH01-KS	Tonscend	JS1120-3 test system China_210602	3.3.10
2.	03CH02-KS	AUDIX	E3	6.2009-8-24a1
3.	03CH04-KS	AUDIX	E3	210616
4.	03CH06-KS	AUDIX	E3	210616
5.	DFS01-KS	Sporton	Test Tools	1.0
6.	CO01-KS	AUDIX	E3	6.2009-8-24

1.5 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC KDB 484596 D01 Referencing Test Data v02r03
- ♦ 47 CFR Part 22(H), 24(E), 27(L), 27(H), 27(F), 27(M), 27(N), 27(O), 27(Q), 90(S)
- ♦ ANSI C63.10-2013
- ♦ ANSI C63.26-2015
- ♦ 47 CFR Part 15 Subpart C §15.225
- ♦ 47 CFR Part 15 Subpart C §15.247
- ♦ 47 CFR Part 15 Subpart E §15.407



2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: EM45B1, FCC ID: UZ7EM45B1) is electrically identical to the reference device (Model: EM45B2, FCC ID: UZ7EM45B2) for the portions of the circuitry corresponding to the data being re-used, following the FCC KDB 484596 D01 Referencing Test Data v02r03.

ECR Data Referencing Inquiry has been approved by FCC, and the data referencing and spot check test plan includes RF/EMC, the details are presented in section 2.3 of this report, and for SAR Reference detail, please refer to FCC SAR report FA460508-02.

The criteria set in section 3 of KDB 484596 D01 v02r03 is followed to determine whether the data referencing is justified. For SAR, the higher between the referenced value and the spot check value is used to determine compliance in both standalone and simultaneous transmission conditions.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: UZ7EM45B1.

2.2 Model Difference Information

The **main** difference between FCC ID: UZ7EM45B2 and FCC ID: UZ7EM45B1 is as below:

- Removed RFID function.
- Antenna 1 removed WWAN TX function, keep supported Low bands and Middle bands RX function.

Other differences and all the details of similarity and difference can be found in the confidential documents (UZ7EM45B1 Operational Description of Product Equality Declaration).



2.3 Reference detail Section:

Rule Part	Equipment Class	Frequency Band (MHz)	Reference FCC ID (Parent)	Reference on test	Reference Title	FCC ID Filling (Variant)	Test on the variant	Data Referencing (Y/N)
15C	DSS (BR/EDR)	2400~2483.5	UZ7EM45B2	Full test	FR460508A	UZ7EM45B1	Spot check	Y, All test items
	DTS (BLE)	2400~2483.5	UZ7EM45B2	Full test	FR460508B	UZ7EM45B1	Spot check	Y, All test items
	DTS (WLAN)	2400~2483.5	UZ7EM45B2	Full test	FR460508C	UZ7EM45B1	Spot check	Y, All test items
	DXX (NFC)	13.56	UZ7EM45B2	Full test	FR460508D	UZ7EM45B1	Spot check	Y, All test items
15E	U-NII	5180~5240	UZ7EM45B2	Full test	FR460508E	UZ7EM45B1	Spot check	Y, All test items
		5260~5320	UZ7EM45B2	Full test	FR460508E	UZ7EM45B1	Spot check	Y, All test items
		5500~5720	UZ7EM45B2	Full test	FR460508E	UZ7EM45B1	Spot check	Y, All test items
		5745~5825	UZ7EM45B2	Full test	FR460508E	UZ7EM45B1	Spot check	Y, All test items
		5260~5320 5500~5720	UZ7EM45B2	Full test	FZ460508	UZ7EM45B1	Spot check	Y, All test items
	6CD	5925~7125	UZ7EM45B2	Full test	FR460508G FR460508H	UZ7EM45B1	Spot check	Y, All test items
22, 24, 27, 90	PCE (GSM)	GSM 850/1900	UZ7EM45B2	Full test	FG460508A	UZ7EM45B1	Spot check	Y, All test items
	PCE (WCDMA)	Band II, IV, V	UZ7EM45B2	Full test	FG460508A	UZ7EM45B1	Spot check	Y, All test items
	PCE (LTE)	B2/4/5/7/13/17/26/38/ 41/42/66/71 ULCA 5B/7C/38C 41C/66B/66C	UZ7EM45B2	Full test	FG460508B FG460508C FG460508D FG460508F	UZ7EM45B1	Spot check	Y, All test items
	PCE (LTE)	B26 (90S)	UZ7EM45B2	Full test	FG460508E	UZ7EM45B1	Spot check	Y, All test items
	PCE (NR)	n2/n5/n7/n26/ n38/n41/n66/ n71/n77/n78	UZ7EM45B2	Full test	FG460508G FG460508H FG460508J FG460508K	UZ7EM45B1	Spot check	Y, All test items
	PCE (NR)	n26 (90S)	UZ7EM45B2	Full test	FG460508I	UZ7EM45B1	Spot check	Y, All test items

Y: Pointer to spot-check exhibit; N: Pointer to full test exhibit

2.4 Spot Check Verification Data Section

All test items test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

All test procedures follow the related section of parent report.

Spot-check measurements, while being always compliant with the applicable rule part(s) for the test under consideration, show a deviation d_{dB} from the reference data no larger than 3 dB:

$$d_{dB} = |V_{dB} - R_{dB}| \leq 3 \text{ dB} \quad (1)$$

V_{dB} , the variant spot-check level

R_{dB} , the corresponding measurement level for the reference model

An alternative to the limit of eq. (1) is available, and is based on considering how far the reference data R_{dB} is from the compliance threshold C_{dB} (also expressed in dB), for the particular test under consideration. In this case, if $M_{dB} = |C_{dB} - R_{dB}|$ is the margin in dB from the compliance limit, a spot check may be considered acceptable when the deviation d_{dB} from the reference data satisfies the following condition:

$$d_{dB} = |V_{dB} - R_{dB}| \leq (3 + M_{dB} / 20) \text{ dB}, \text{ for } 0 \leq M_{dB} \leq 60 \text{ dB} \quad (2)$$

$$d_{dB} = |V_{dB} - R_{dB}| = 6 \text{ dB}, \text{ for } M_{dB} > 60 \text{ dB}$$

where “| |” is the absolute value of the measured quantity.

When using the option in eq. (2), d_{dB} increases linearly from 3 dB to 6 dB.



Summary for spot check for each rule entry and technology is listed as below:

Mode	Test Item	UZ7EM45B2 Parent Worst mode Test Result	UZ7EM45B1 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
BT 1Mbps (CH00)	Number of Channels	79	79	0	3
	Hopping Channel Separation	1.135	0.996	0.139	3
	Dwell Time of Each Channel	0.31	0.31	0	3
	20dB Bandwidth	0.94	0.95	0.01	3
	99% Bandwidth	0.851	0.89	0.039	3
	Conducted Band Edges	-41.78	-43.72	1.94	3
	Conducted Spurious Emission	-44.27	-46.4	2.13	3
BT 1Mbps (CH00)	Radiated Band Edges and Radiated Spurious Emission	56.93	55.71	1.22	3
BT	AC Conducted Emission	14.81	13.96	0.85	3
BLE 1Mbps (CH39)	6dB Bandwidth	0.68	0.69	0.01	3
	99% Bandwidth	1.027	1.035	0.008	3
	Power Spectral Density	-5.44	-6.6	1.16	3
	Conducted Band Edges	-57.54	-58.86	1.32	3
	Conducted Spurious Emission	-44.23	-45.77	1.54	3
BLE 2Mbps (CH39)	Radiated Band Edges and Spurious Emission	46.49	48.90	2.41	3
BLE	AC Conducted Emission	14.81	13.96	0.85	3
WIFI 2.4G (802.11b CH11)	6dB Bandwidth	8.56	8.56	0	3
	99% Bandwidth	13.187	13.307	0.12	3
	Power Spectral Density	-1.37	-1.5	0.13	3
	Conducted Band Edges	-47.92	-48.21	0.29	3
	Conducted Spurious Emission	-43.71	-46.01	2.3	3
WIFI 2.4G (802.11g CH01)	Radiated Band Edges and Spurious Emission	51.90	52.85	1.95	3
WIFI 2.4G	AC Conducted Emission	14.81	13.96	0.85	3
WIFI 5G (802.11a CH149)	26dB Bandwidth	19.15	19.29	0.14	3
	99% Bandwidth	16.705	16.705	0	3
	Power Spectral Density	6.94	6.92	0.02	3
	Unwanted Emissions	16.31	16.33	0.02	3
WIFI 5G (11ax HE160 Ch50)	Radiated Band Edges and Spurious Emission	50.75	52.88	2.13	3
WIFI 5G	AC Conducted Emission	11.52	14.22	2.70	3
WIFI 5G (802.11a CH116)	DFS	0.862829	0.935231	0.073	3
WIFI 6G UNII-5 (802.11ax HE160 CH15 6025MHz)-6CD Indoor Client	26dB Emission Bandwidth	165.79	166.17	0.38	3
	99% Occupied Bandwidth	156.8	156.495	0.305	3
	Fundamental Maximum EIRP	17.64	17.39	0.25	3
	Fundamental Power Spectral Density	-2.95	-3.42	0.47	3
	In-Band Emissions	-12.59	-11.73	0.86	3
WIFI 6G UNII-5 (802.11ax HE20 CH1 5955MHz)-6CD Standard Client	26dB Emission Bandwidth	21.15	21.25	0.1	3
	99% Occupied Bandwidth	19.048	19.086	0.038	3
	Fundamental Maximum EIRP	17.68	17.58	0.10	3
	Fundamental Power Spectral Density	5.13	4.38	0.75	3
	In-Band Emissions	-19.18	-18.83	0.35	3
WIFI 6G UNII-5 (802.11ax HE160 CH47 6185MHz)	Contention Based Protocol	-64.77	-66.92	2.15	3



WIFI 6G (802.11ax HE20 Ch233)	Radiated Band Edges and Spurious Emission	66.90	67.00	0.1	3
WIFI 6G	AC Conducted Emission	14.72	16.18	1.46	3
NFC	20dB Spectrum Bandwidth	2.48	2.49	0.01	3
	99% OBW Spectrum Bandwidth	2.11	2.11	0	3
	Frequency Stability	-21.3496	-22.382	1.0324	3
	Field Strength of Fundamental Emissions	60.61	60.41	0.2	3
	Radiated Spurious Emissions	36.17	36.86	0.69	3
	AC Conducted Emission	14.22	16.01	1.79	3

Mode	Test Item	UZ7EM45B2 Parent Worst mode Test Result	UZ7EM45B1 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
Part 27F LTE Band 13	Radiated Spurious Emission	-62.22	-61.76	0.46	3
Part27O_N77	Equivalent Isotropic Radiated Power	26.23	25.90	0.33	3
	Peak-to-Average Ratio	5.24	5.04	0.2	3
	Occupied Bandwidth	57.948	57.853	0.095	3
	Conducted Band Edge	-14.04	-15.20	1.16	3
	Conducted Spurious Emission	-33.15	-33.32	0.17	3
	Frequency Stability	0.0039	0.0027	0.0012	3

Conducted power for Unlicensed bands

Test Item	Mode	UZ7EM45B2 Parent Worst mode Test Result	UZ7EM45B1 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
Conducted Power(dBm) BT & BLE	BT BR/EDR	9.57	9.11	0.46	3
	BLE 1Mbps	9.57	9.10	0.47	3
	BLE 2Mbps	9.58	9.24	0.34	3
Conducted Power(dBm) WIFI 2.4G	11b, 2.4GHz	25.04	24.97	0.07	3
	11g, 2.4GHz	28.45	28.36	0.09	3
	11n HT20, 2.4GHz	28.38	28.34	0.04	3
	11ac VHT20, 2.4GHz	28.30	28.25	0.05	3
	11ax HE20, 2.4GHz	28.56	28.51	0.05	3
Conducted Power(dBm) WIFI 5G	11a, 5.2GHz	22.53	22.38	0.15	3
	11a, 5.3GHz	22.62	22.15	0.47	3
	11a, 5.5GHz	22.19	21.74	0.45	3
	11a, 5.8GHz	21.69	21.47	0.22	3
	11n HT20, 5.2GHz	21.34	21.26	0.08	3
	11n HT20, 5.3GHz	20.98	20.62	0.36	3
	11n HT20, 5.5GHz	21.32	21.26	0.06	3
	11n HT20, 5.8GHz	21.37	21.33	0.04	3
	11ac VHT20, 5.2GHz	21.41	21.29	0.12	3
	11ac VHT20, 5.3GHz	21.04	20.69	0.35	3
	11ac VHT20, 5.5GHz	21.36	21.33	0.03	3
	11ac VHT20, 5.8GHz	21.41	21.36	0.05	3
	11ax HE20, 5.2GHz	21.47	21.34	0.13	3
	11ax HE20, 5.3GHz	21.09	20.72	0.37	3
	11ax HE20, 5.5GHz	21.39	21.37	0.02	3
	11ax HE20, 5.8GHz	21.45	21.39	0.06	3
	11n HT40, 5.2GHz	20.76	20.71	0.05	3
	11n HT40, 5.3GHz	20.71	20.53	0.18	3
	11n HT40, 5.5GHz	20.62	20.58	0.04	3



	11n HT40, 5.8GHz	20.36	20.28	0.08	3
	11ac VHT40, 5.2GHz	20.82	20.76	0.06	3
	11ac VHT40, 5.3GHz	20.77	20.56	0.21	3
	11ac VHT40, 5.5GHz	20.67	20.62	0.05	3
	11ac VHT40, 5.8GHz	20.42	20.32	0.10	3
	11ax HE40, 5.2GHz	20.86	20.81	0.05	3
	11ax HE40, 5.3GHz	20.83	20.61	0.22	3
	11ax HE40, 5.5GHz	20.73	20.68	0.05	3
	11ax HE40, 5.8GHz	20.48	20.36	0.12	3
	11ac VHT80, 5.2GHz	20.07	19.99	0.08	3
	11ac VHT80, 5.3GHz	20.14	19.91	0.23	3
	11ac VHT80, 5.5GHz	20.32	20.08	0.24	3
	11ac VHT80, 5.8GHz	20.17	20.10	0.07	3
	11ax HE80, 5.2GHz	20.12	20.05	0.07	3
	11ax HE80, 5.3GHz	20.22	19.96	0.26	3
	11ax HE80, 5.5GHz	20.38	20.12	0.26	3
	11ax HE80, 5.8GHz	20.24	20.15	0.09	3
	11ac VHT160, 5.3GHz	19.81	19.66	0.15	3
	11ac VHT160, 5.5GHz	19.79	19.63	0.16	3
	11ax HE160, 5.3GHz	19.92	19.70	0.22	3
	11ax HE160, 5.5GHz	19.88	19.69	0.19	3
Conducted Power(dBm) WIFI 6G Indoor Client	6CD 11a, U-NII-5	7.05	6.75	0.30	3
	6CD 11a, U-NII-6	7.97	7.86	0.11	3
	6CD 11a, U-NII-7	6.64	6.58	0.06	3
	6CD 11a, U-NII-8	5.82	5.78	0.04	3
	6CD 11ax HE20, U-NII-5	10.85	10.84	0.01	3
	6CD 11ax HE20, U-NII-6	11.28	11.21	0.07	3
	6CD 11ax HE20, U-NII-7	10.12	10.07	0.05	3
	6CD 11ax HE20, U-NII-8	9.61	9.57	0.04	3
	6CD 11ax HE40, U-NII-5	13.76	13.74	0.02	3
	6CD 11ax HE40, U-NII-6	13.74	13.59	0.15	3
	6CD 11ax HE40, U-NII-7	13.04	12.79	0.25	3
	6CD 11ax HE40, U-NII-8	12.65	12.60	0.05	3
	6CD 11ax HE80, U-NII-5	16.97	16.93	0.04	3
	6CD 11ax HE80, U-NII-6	16.82	16.77	0.05	3
	6CD 11ax HE80, U-NII-7	16.36	16.30	0.06	3
	6CD 11ax HE80, U-NII-8	15.76	15.71	0.05	3
	6CD 11ax HE160, U-NII-5	17.29	17.04	0.25	3
	6CD 11ax HE160, U-NII-6	17.01	16.95	0.06	3
Conducted Power(dBm) WIFI 6G Standard Client	6CD 11ax HE160, U-NII-7	17.06	17.01	0.05	3
	6CD 11ax HE160, U-NII-8	16.89	16.83	0.06	3
	6CD 11a, U-NII-5	17.29	17.21	0.08	3
	6CD 11a, U-NII-7	17.11	17.07	0.04	3
	6CD 11ax HE20, U-NII-5	17.33	17.23	0.10	3
	6CD 11ax HE20, U-NII-7	17.08	17.04	0.04	3
	6CD 11ax HE40, U-NII-5	17.23	17.16	0.07	3
	6CD 11ax HE40, U-NII-7	16.97	16.93	0.04	3
	6CD 11ax HE80, U-NII-5	17.26	17.14	0.12	3
	6CD 11ax HE80, U-NII-7	16.96	16.92	0.04	3
	6CD 11ax HE160, U-NII-5	17.34	17.10	0.24	3
	6CD 11ax HE160, U-NII-7	17.12	17.07	0.05	3



Conducted power for Licensed bands

Test Item	Mode	UZ7EM45B2 Parent Worst mode Test Result	UZ7EM45B1 Variant Check Test Result	Deviation (dB)	Deviation Limit (dB)
Conducted Power (dBm)	GSM 850	32.32	32.3	0.02	3
	GSM 1900	29.07	28.82	0.25	3
	WCDMA 850	23.02	22.87	0.15	3
	WCDMA1900	22.91	22.64	0.27	3
	WCDMA1700	22.79	22.75	0.04	3
	LTE B2	22.84	22.78	0.06	3
	LTE B4	22.89	22.45	0.44	3
	LTE B5	22.84	22.71	0.13	3
	LTE B5B	22.84	22.77	0.07	3
	LTE B13	22.78	22.63	0.15	3
	LTE B17	22.75	22.56	0.19	3
	LTE B26H	23.04	22.72	0.32	3
	LTE B26L	22.80	22.75	0.05	3
	LTE B66	22.89	22.74	0.15	3
	LTE B71	22.98	22.51	0.47	3
	LTE B7	23.83	23.48	0.35	3
	LTE B7C	23.70	23.59	0.11	3
	LTE B38	22.84	22.7	0.14	3
	LTE B41	22.89	22.66	0.23	3
	LTE B38C	22.84	22.71	0.13	3
	LTE B41C	22.88	22.78	0.1	3
	LTE B42	22.64	22.6	0.04	3
	LTE B66B	22.73	22.54	0.19	3
	LTE B66C	22.72	22.55	0.17	3
	N2	23.69	23.19	0.5	3
	N5	23.19	22.85	0.34	3
	N26H	23.22	22.93	0.29	3
	N26L	22.91	22.73	0.18	3
	N7	24.85	24.37	0.48	3
	N38	23.31	22.85	0.46	3
	N41	23.01	22.67	0.34	3
	N66	23.28	23.12	0.16	3
	N71	23.60	23.22	0.38	3
	N77 27O	26.28	25.95	0.33	3
	N78 27O	26.24	26.02	0.22	3
	N77 27Q	26.29	25.97	0.32	3
	N78 27Q	26.25	25.93	0.32	3
	N77 27O MIMO	24.32	23.89	0.43	3
	N78 27O MIMO	23.94	23.87	0.07	3
	N77 27Q MIMO	24.38	23.92	0.46	3
	N78 27Q MIMO	24.31	23.95	0.36	3



6CD- < indoor client>

<SISO mode>

U-NII-5 SISO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
11a	6Mbps	1	093	6415	0.03	0.04	4.16	3.22	0.35	-0.85	4.51	2.37	24.00	Pass	6	6

U-NII-5 SISO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
HE20	MCS0	1	093	6415	Full	0.00	0.00	8.03	7.42	0.35	-0.85	8.38	6.57	24.00	Pass	8	8
HE40	MCS0	1	091	6405	Full	0.00	0.00	10.87	10.38	0.35	-0.85	11.22	9.53	24.00	Pass	11	11
HE80	MCS0	1	087	6385	Full	0.00	0.00	14.22	13.48	0.35	-0.85	14.57	12.63	24.00	Pass	14	14
HE160	MCS0	1	015	6025	Full	0.00	0.00	13.83	14.15	0.35	-0.85	14.18	13.30	24.00	Pass	14	14

U-NII-6 SISO															
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
				Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
11a	6Mbps	1	6475	0.03	0.04	5.45	4.09	0.75	-2.44	6.20	1.65	24.00	Pass	5	5

U-NII-6 SISO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
HE20	MCS0	1	105	6475	Full	0.00	0.00	8.42	7.86	0.75	-2.44	9.17	5.42	24.00	Pass	8.5	8.5
HE40	MCS0	1	107	6485	Full	0.00	0.00	11.05	9.97	0.75	-2.44	11.80	7.53	24.00	Pass	11	11
HE80	MCS0	1	103	6465	Full	0.00	0.00	14.09	13.15	0.75	-2.44	14.84	10.71	24.00	Pass	14	14
HE160	MCS0	1	111	6505	Full	0.00	0.00	14.21	13.31	0.75	-2.44	14.96	10.87	24.00	Pass	14	14



U-NII-7 SISO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
11a	6Mbps	1	117	6535	0.03	0.04	4.25	2.69	1.02	0.16	5.27	2.85	24.00	Pass	3.5	3.5

U-NII-7 SISO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
HE20	MCS0	1	181	6855	Full	0.00	0.00	7.03	6.95	1.02	0.16	8.05	7.11	24.00	Pass	7.5	7.5
HE40	MCS0	1	147	6685	Full	0.00	0.00	10.01	9.45	1.02	0.16	11.03	9.61	24.00	Pass	10	10
HE80	MCS0	1	135	6625	Full	0.00	0.00	13.55	12.93	1.02	0.16	14.57	13.09	24.00	Pass	13.5	13.5
HE160	MCS0	1	143	6665	Full	0.00	0.00	14.25	13.54	1.02	0.16	15.27	13.70	24.00	Pass	14	14

U-NII-8 SISO															
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
				Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
11a	6Mbps	1	6895	0.03	0.04	3.27	2.12	0.70	1.66	3.97	3.78	24.00	Pass	3	3

U-NII-8 SISO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
HE20	MCS0	2	185	6875	Full	0.00	0.00	6.68	6.29	0.70	1.66	7.38	7.95	24.00	Pass	7	7
HE40	MCS0	2	195	6925	Full	0.00	0.00	9.78	9.32	0.70	1.66	10.48	10.98	24.00	Pass	10	10
HE80	MCS0	2	199	6945	Full	0.00	0.00	12.75	12.58	0.70	1.66	13.45	14.24	24.00	Pass	13	13
HE160	MCS0	2	207	6985	Full	0.00	0.00	13.97	13.60	0.70	1.66	14.67	15.26	24.00	Pass	14	14



<CDD mode>

U-NII-5 MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
11a	6Mbps	2	093	6415	0.03	0.04	4.18	3.25	6.75	0.35		7.10	24.00	Pass	6	

U-NII-6 MIMO															
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
				Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
11a	6Mbps	2	6475	0.03	0.04	5.49	4.11	7.86	0.75		8.61	24.00	Pass	5	

U-NII-7 MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
11a	6Mbps	2	117	6535	0.03	0.04	4.29	2.71	6.58	1.02		7.60	24.00	Pass	3.5	

U-NII-8 MIMO															
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
				Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
11a	6Mbps	2	6895	0.03	0.04	3.30	2.17	5.78	1.66		7.44	24.00	Pass	3	

<SDM mode>

U-NII-5 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	093	6415	Full	0.00	0.00	8.18	7.45	10.84	0.35		11.19	24.00	Pass	8	
HE40	MCS0	2	091	6405	Full	0.00	0.00	11.01	10.43	13.74	0.35		14.09	24.00	Pass	11	
HE80	MCS0	2	087	6385	Full	0.00	0.00	14.29	13.52	16.93	0.35		17.28	24.00	Pass	14	
HE160	MCS0	2	015	6025	Full	0.00	0.00	13.88	14.18	17.04	0.35		17.39	24.00	Pass	14	



U-NII-6 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
HE20	MCS0	2	105	6475	Full	0.00	0.00	8.47	7.91	11.21	0.75		11.96	24.00	Pass	8.5	
HE40	MCS0	2	107	6485	Full	0.00	0.00	11.09	10.01	13.59	0.75		14.34	24.00	Pass	11	
HE80	MCS0	2	103	6465	Full	0.00	0.00	14.24	13.22	16.77	0.75		17.52	24.00	Pass	14	
HE160	MCS0	2	111	6505	Full	0.00	0.00	14.42	13.39	16.95	0.75		17.70	24.00	Pass	14	

U-NII-7 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
HE20	MCS0	2	181	6855	Full	0.00	0.00	7.09	7.02	10.07	1.02		11.09	24.00	Pass	7.5	
HE40	MCS0	2	147	6685	Full	0.00	0.00	10.06	9.48	12.79	1.02		13.81	24.00	Pass	10	
HE80	MCS0	2	135	6625	Full	0.00	0.00	13.59	12.97	16.30	1.02		17.32	24.00	Pass	13.5	
HE160	MCS0	2	143	6665	Full	0.00	0.00	14.35	13.61	17.01	1.02		18.03	24.00	Pass	14	

U-NII-8 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
HE20	MCS0	2	185	6875	Full	0.00	0.00	6.77	6.34	9.57	1.66	11.23	24.00	Pass	7		
HE40	MCS0	2	195	6925	Full	0.00	0.00	9.81	9.35	12.60	1.66	14.26	24.00	Pass	10		
HE80	MCS0	2	199	6945	Full	0.00	0.00	12.78	12.62	15.71	1.66	17.37	24.00	Pass	13		
HE160	MCS0	2	207	6985	Full	0.00	0.00	14.01	13.63	16.83	1.66	18.49	24.00	Pass	14		



<standard client >

<SISO mode>

U-NII-5 SISO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
11a	6Mbps	1	001	5955	0.03	0.04	14.19	14.13	0.35	-0.85	14.54	13.28	30.00	Pass	14	

U-NII-5 SISO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
HE20	MCS0	1	001	5955	Full	0.00	0.00	14.21	14.22	0.35	-0.85	14.56	13.37	30.00	Pass	14	14
HE40	MCS0	1	003	5965	Full	0.00	0.00	14.17	14.05	0.35	-0.85	14.52	13.20	30.00	Pass	14	14
HE80	MCS0	1	007	5985	Full	0.00	0.00	14.16	14.06	0.35	-0.85	14.51	13.21	30.00	Pass	14	14
HE160	MCS0	1	015	6025	Full	0.00	0.00	13.83	14.15	0.35	-0.85	14.18	13.30	30.00	Pass	14	14

U-NII-7 SISO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
11a	6Mbps	1	149	6695	0.03	0.04	14.27	13.78	1.02	0.16	15.29	13.94	30.00	Pass	14	14

U-NII-7 SISO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10	Ant 8	Ant 10			Ant 8	Ant 10
HE20	MCS0	1	149	6695	Full	0.00	0.00	14.22	13.78	1.02	0.16	15.24	13.94	30.00	Pass	14	14
HE40	MCS0	1	147	6685	Full	0.00	0.00	14.29	13.43	1.02	0.16	15.31	13.59	30.00	Pass	14	14
HE80	MCS0	1	135	6625	Full	0.00	0.00	14.27	13.47	1.02	0.16	15.29	13.63	30.00	Pass	14	14
HE160	MCS0	1	143	6665	Full	0.00	0.00	14.25	13.54	1.02	0.16	15.27	13.70	30.00	Pass	14	14



<CDD mode>

U-NII-5 MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
11a	6Mbps	2	001	5955	0.03	0.04	14.22	14.17	17.21	0.35		17.56	30.00	Pass	14	

U-NII-5 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	001	5955	Full	0.00	0.00	14.24	14.19	17.23	0.35		17.58	30.00	Pass	14	
HE40	MCS0	2	003	5965	Full	0.00	0.00	14.22	14.07	17.16	0.35		17.51	30.00	Pass	14	
HE80	MCS0	2	007	5985	Full	0.00	0.00	14.17	14.09	17.14	0.35		17.49	30.00	Pass	14	
HE160	MCS0	2	015	6025	Full	0.00	0.00	13.95	14.23	17.10	0.35		17.45	30.00	Pass	14	

U-NII-7 MIMO																
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
					Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
11a	6Mbps	2	149	6695	0.03	0.04	14.31	13.80	17.07	1.02		18.09	30.00	Pass	14	

U-NII-7 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
HE20	MCS0	2	149	6695	Full	0.00	0.00	14.24	13.81	17.04	1.02		18.06	30.00	Pass	14	
HE40	MCS0	2	147	6685	Full	0.00	0.00	14.32	13.48	16.93	1.02		17.95	30.00	Pass	14	
HE80	MCS0	2	135	6625	Full	0.00	0.00	14.29	13.49	16.92	1.02		17.94	30.00	Pass	14	
HE160	MCS0	2	143	6665	Full	0.00	0.00	14.39	13.71	17.07	1.02		18.09	30.00	Pass	14	



Conclusion:

All test items test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result, the test data from the original model is representative for the variant model. All spot check test data are shown within expected level compliant to limit line.

We are using power and ERP/EIRP measurements from the original parent model reports to list on the grant.

The same detection mechanism/software/antenna gain is used in the variant of DFS. Hence, all test cases refer to parent report.

We confirm that the test data referencing policy of FCC KDB 484596 D01 Referencing Test Data v02r03 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.



3 List of Measuring Equipment

For BT/WIFI:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY56400023	3Hz~8.5GHz;Max 30dBm	Jan. 02, 2024	Nov. 06, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471084	10Hz~44GHz	Jul. 04, 2024	Nov. 06, 2024	Jul. 03, 2025	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Nov. 06, 2024	Sep. 07, 2025	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	59913	30MHz~1GHz	Sep. 03, 2024	Nov. 06, 2024	Sep. 02, 2025	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 11, 2024	Nov. 06, 2024	Apr. 10, 2025	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101093	18GHz~40GHz	Jan. 06, 2024	Nov. 06, 2024	Jan. 05, 2025	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	372171	9KHz ~1GHZ	Jan. 02, 2024	Nov. 06, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
Amplifier	EM	EM18G40GA	060728	18~40GHz	Jan. 02, 2024	Nov. 06, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2082395	1Ghz-18Ghz	Jan. 02, 2024	Nov. 06, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY57280119	500MHz~26.5GHz	Oct. 09, 2024	Nov. 06, 2024	Oct. 08, 2025	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 06, 2024	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 06, 2024	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 06, 2024	NCR	Radiation (03CH06-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 18, 2024	Oct. 27, 2024	Apr. 17, 2025	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Aug. 20, 2024	Oct. 27, 2024	Aug. 19, 2025	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Apr. 18, 2024	Oct. 27, 2024	Apr. 17, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP00000811	AC 0V~300V, 45Hz~1000Hz	Oct. 09, 2024	Oct. 27, 2024	Oct. 08, 2025	Conduction (CO01-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 07, 2024~Feb. 11, 2025	Oct. 09, 2025	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2024	Nov. 07, 2024~Feb. 11, 2025	Jan. 01, 2025	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2025	Nov. 07, 2024~Feb. 11, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2024	Nov. 07, 2024~Feb. 11, 2025	Jan. 01, 2025	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2025	Nov. 07, 2024~Feb. 11, 2025	Jan. 01, 2026	Conducted (TH01-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 05, 2024	Oct. 09, 2025	CBP (DFS01-KS)
MXG-B RF Vector Signal Generator	Keysight	5182B /5182BX07	MY56200417/MY59360210	9kHz~7.2GHz	Apr. 17, 2024	Nov. 05, 2024	Apr. 16, 2025	CBP (DFS01-KS)
Vector Signal Generator	R&S	SMBV100A	258305	9kHz~6GHz	Jan. 02, 2024	Nov. 05, 2024	Jan. 01, 2025	CBP (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Nov. 05, 2024	NCR	CBP (DFS01-KS)
Signal Analyzer	R&S	FSV7	101632	10Hz~7GHz	Jan. 02, 2024	Nov. 05, 2024	Jan. 01, 2025	DFS (DFS01-KS)
Vector Signal Generator	R&S	SMJ100A	101908	100kHz~6GHz	Jan. 02, 2024	Nov. 05, 2024	Jan. 01, 2025	DFS (DFS01-KS)
MXG-B RF Vector Signal Generator	Keysight	5182B /5182BX07	MY56200417/MY59360210	9kHz~7.2GHz	Apr. 17, 2024	Nov. 05, 2024	Apr. 16, 2025	DFS (DFS01-KS)



Combiner	MTJ Cooperation	MTJ7114-M	N/A	0.5GHz~18GHz	NCR	Nov. 05, 2024	NCR	DFS (DFS01-KS)
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NCR: No Calibration Required

For NFC:

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Ma x 30dBm	Oct. 11, 2024	Oct. 24, 2024	Oct. 10, 2025	Radiation (03CH02-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 08, 2024	Oct. 24, 2024	Sep. 07, 2025	Radiation (03CH02-KS)
Bilog Antenna	TeseQ	CBL6111D	59915	30MHz-1GHz	Aug. 18, 2024	Oct. 24, 2024	Aug. 17, 2025	Radiation (03CH02-KS)
AC Power Source	Chroma	61601	616010002473	N/A	NCR	Oct. 24, 2024	NCR	Radiation (03CH02-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Oct. 24, 2024	NCR	Radiation (03CH02-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Oct. 24, 2024	NCR	Radiation (03CH02-KS)
Amplifier	SONOMA	310N	413740	9KHz-1GHz	Jan. 03, 2024	Oct. 24, 2024	Jan. 02, 2025	Radiation (03CH02-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 18, 2024	Oct. 26, 2024	Apr. 17, 2025	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Aug. 20, 2024	Oct. 26, 2024	Aug. 19, 2025	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Apr. 18, 2024	Oct. 26, 2024	Apr. 17, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 09, 2024	Oct. 26, 2024	Oct. 08, 2025	Conduction (CO01-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 07, 2024	Oct. 09, 2025	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2024	Nov. 07, 2024	Jan. 01, 2025	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2024	Nov. 07, 2024	Jan. 01, 2025	Conducted (TH01-KS)

NCR: No Calibration Required

**For WWAN Bands:**

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 10, 2024	Nov. 04, 2024	Oct. 09, 2025	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	NCR	Nov. 04, 2024	NCR	Conducted (TH01-KS)
Temperature & humidity chamber	Hongzhan	LP-150U	H2014011440	-40~+150°C 20%~95%RH	Jul. 05, 2023	Nov. 04, 2024	Jul. 04, 2024	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55370528	10Hz~44G, MAX 30dB	Oct. 11, 2024	Oct. 20, 2024	Oct. 10, 2025	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	44483	30MHz~1GHz	Dec. 06, 2023	Oct. 20, 2024	Dec. 05, 2024	Radiation (03CH04-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00227860	1GHz~18GHz	Aug. 16, 2024	Oct. 20, 2024	Aug. 15, 2025	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 27, 2024	Oct. 20, 2024	Jan. 26, 2025	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	413740	9KHz~1GHz	Jan. 03, 2024	Oct. 20, 2024	Jan. 02, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM18G40G A	060728	18~40GHz	Jan. 02, 2024	Oct. 20, 2024	Jan. 01, 2025	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18G A	060840	1Ghz~18Ghz	Oct. 09, 2024	Oct. 20, 2024	Oct. 08, 2025	Radiation (03CH04-KS)
Amplifier	EM	EM01G18G A	060892	1Ghz~18Ghz	Oct. 09, 2024	Oct. 20, 2024	Oct. 08, 2025	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Oct. 20, 2024	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Oct. 20, 2024	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Oct. 20, 2024	NCR	Radiation (03CH04-KS)
Signal Analyzer	R&S	FSV7	101472	10Hz~7GHz	Jan. 05, 2024	Nov. 12, 2024	Jan. 04, 2025	Conducted (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Nov. 12, 2024	NCR	Conducted (DFS01-KS)

NCR: No Calibration Required

4 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement (BT/WIFI2.4G/5G)

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Conducted Power Spectral Density	±0.90 dB
Frequency	±0.04 ppm

Uncertainty of Conducted Measurement(WIFI 6G)

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Conducted Power Spectral Density	±0.90 dB
Frequency	0.04ppm
Conducted Generated signal Levels	±0.56 dB
Conducted Time	0.54%

Uncertainty of Conducted Measurement(NFC)

Test Item	Uncertainty
Occupied Channel Bandwidth	±0.1%
Frequency	0.04ppm

Uncertainty of Conducted Measurement (DFS)

Test Item	Uncertainty
Conducted Generated signal Levels	±0.56 dB
Conducted Time	0.38%

Uncertainty of Conducted Measurement (WWAN)

Test Item	Uncertainty
Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Peak to Average Ratio	±0.46 dB
Frequency Stability	±0.04 ppm

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.84 dB
---	---------

03CH06-KS(BT/WIF):

Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.30dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.08dB
---	--------

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.18dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.22dB
---	--------

03CH02-KS(NFC):

Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.30dB
---	--------

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.04dB
---	--------



03CH04-KS(WWAN):

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.83 dB
---	---------

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.82 dB
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----- THE END -----



Appendix B. Reference Report



FCC RF Test Report

FCC ID : UZ7EM45B2
EQUIPMENT : Enterprise Mobile
BRAND NAME : Zebra
MODEL NAME : EM45B2
APPLICANT : Zebra Technologies Corporation
3 Overlook Point, Lincolnshire, IL 60069 USA
MANUFACTURER : Zebra Technologies Corporation
3 Overlook Point, Lincolnshire, IL 60069 USA
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : 15E 6 GHz Low Power Dual Client (6CD)
TEST DATE(S) : Jul. 17, 2024 ~ Aug. 25, 2024

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

**No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China**



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History of this test report

Report No.	Version	Description	Issued Date
FR460508H	01	Initial issue of report	Sep. 10, 2024



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403(i) 15.407(a)(10)	26dB Emission Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Reporting only	-
3.2	15.407(a)(7)	Maximum Conducted Output Power	Reporting only	-
3.2	15.407(a)(7)	Fundamental Maximum EIRP	Pass	-
3.3	15.407(a)(7)	Fundamental Power Spectral Density	Pass	-
3.4	15.407(b)(6)	In-Band Emissions (Channel Mask)	Pass	-
3.5	15.407(d)(6)	Contention Based Protocol	Pass	-
3.6	15.407(b)	Unwanted Emissions	Pass	Under limit 1.14 dB at 7125.00 MHz
3.7	15.207	AC Conducted Emission	Pass	Under limit 14.72 dB at 0.181 MHz
3.8	15.203 15.407(a)	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Enterprise Mobile
Brand Name	Zebra
Model Name	EM45B2
FCC ID	UZ7EM45B2
SN/IMEI Code	Conducted: 24128000613410 Conduction: 350854420026896/350854420028314 Radiation: 350854420036044 CBP: 350854420029205/350854420029346
HW Version	EV2.5
SW Version	13-32-02.00-TG-U06-STD-ATH-04
MFD	02AUG24
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Specification of Accessory			
Battery	Brand Name	Zebra	Model
			BT-000501
			Part Number
			BT-000501-2000

Supported Unit used in test configuration and system				
AC Adapter 1 (Type C Wall Charger 1)	Brand Name	Zebra	Model	SAWA-102-22520A
			Part Number	PWR-WUA5V45W1US
AC Adapter 2 (Type A Wall Charger 2)	Brand Name	Zebra	Model	SAWA-65-20005A
			Part Number	PWR-WUA5V12W0US
Earphone 1 (Wired headset USB-C)	Brand Name	Zebra	Part Number	HDST-USBC-PTT1-01
Earphone 2 (Rugged Bluetooth Headset)	Brand Name	Zebra	Part Number	HS3100-OTH
Earphone 3 (3.5mm PTT Headset)	Brand Name	Zebra	Part Number	HDST-35MM-PTT1-02
Earphone 4 (Rugged Headset)	Brand Name	Zebra	Part Number	HS2100-OTH
3.5mm to 3.5mm audio connector	Brand Name	Zebra	Part Number	CBL-HS2100-3MS1-01
Type C-Audio Cable (Type C to 3.5mm)	Brand Name	Zebra	Part Number	ADP-USBC-35MM1-01
USB Cable 1 (USB-C to C Cable)	Brand Name	Zebra	Part Number	CBL-EC5X-USBC3A-01
USB Cable 2 (USB-A to C Cable)	Brand Name	Zebra	Part Number	CBL-TC5X-USBC2A-01
EM45 Protective Case	Brand Name	Zebra	Part Number	SG-EM45EXO1-01

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification			
Tx/Rx Frequency Range	U-NII-5: 5925 MHz ~ 6425 MHz U-NII-6: 6425 MHz ~ 6525 MHz U-NII-7: 6525 MHz ~ 6875 MHz U-NII-8: 6875 MHz ~ 7125 MHz		
Maximum EIRP	<MIMO Ant.8+10> <5925 MHz ~ 7125 MHz > 802.11a : 8.72 dBm / 0.0074 W 802.11ax HE20 : 12.03 dBm / 0.0160 W 802.11ax HE40 : 14.49 dBm / 0.0281 W 802.11ax HE80 : 17.57 dBm / 0.0571 W 802.11ax HE160 : 18.55 dBm / 0.0716 W		
99% Occupied Bandwidth	802.11a : 16.762 MHz 802.11ax HE20 : 19.067 MHz 802.11ax HE40 : 38.019 MHz 802.11ax HE80 : 77.562 MHz 802.11ax HE160 : 157.410 MHz		
Antenna Type / Gain	<5925 MHz ~ 6425 MHz > <Ant. 8>: Monopole Antenna with gain 0.35 dBi <Ant. 10>: Monopole Antenna with gain -0.85 dBi <6425 MHz ~ 6525 MHz > <Ant. 8>: Monopole Antenna with gain 0.75 dBi <Ant. 10>: Monopole Antenna with gain -2.44 dBi <6525 MHz ~ 6875 MHz > <Ant. 8>: Monopole Antenna with gain 1.02 dBi <Ant. 10>: Monopole Antenna with gain 0.16 dBi <6875 MHz ~ 7125 MHz > <Ant. 8>: Monopole Antenna with gain 0.70 dBi <Ant. 10>: Monopole Antenna with gain 1.66 dBi		
Type of Modulation	802.11a : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ax : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM / 1024QAM)		
Antenna Function Description		Ant. 8	Ant. 10
	802.11 a/ax SISO	V	V
	802.11 a/ax CDD	V	
	802.11 ax SDM	V	

Remark:

- 802.11ax support full RU tone and partial RU tone(26/52/242/484/996-tone), both full RU and partial RU-left (for low CH) and partial RU-right (for high CH) are tested for conducted power/PSD/Channel Mask in appendix A, all the other test case were performed with full RU with its maximum power/PSD.
- The EUT does not support channel puncturing mode.
- The device does not support UNII-5 CH 2.
- WIFI MIMO support CDD mode for 802.11a, and support CDD & SDM mode for 802.11ax.
- For WLAN SISO & MIMO(CDD) mode of 802.11a, the whole testing has assessed CDD mode by referring to the higher normal conducted power.



6. For WLAN SISO & MIMO(CDD) & MIMO(SDM) mode of 802.11ax, SDM mode conducted power is set to 3dB higher than CDD mode, since the array gain for CDD mode is 3dB for two antennas system, the whole testing has assessed SDM mode by referring to the higher output power.
7. CBP test with antenna path of minimum gain (Antenna 10, Minimum gain= -2.44 dBi).
8. The device supports 1S2T (CDD) and 2S2T (SDM) mode; 1S2T: Nss=1, MIMO 2Tx; 2S2T: Nss=2, MIMO 2Tx.

1.3 Modification of EUT

No modifications are made to the EUT during all test items.

1.4 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	CO01-KS 03CH06-KS TH01-KS DFS01-KS	CN1257	314309

1.5 Test Software

Item	Site	Manufacture	Name	Version
1.	TH01-KS	Tonscend	JS1120-3 test system China_210602	3.3.10
2.	03CH06-KS	AUDIX	E3	210616
3.	CO01-KS	AUDIX	E3	6.2009-8-24



1.6 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

<U-NII-5, 6, 7, 8>

BW 20M	Channel	1	5	9	13	17	21	25	29
	Freq. (MHz)	5955	5975	5995	6015	6035	6055	6075	6095
BW 40M	Channel	3		11		19		27	
	Freq. (MHz)	5965		6005		6045		6085	
BW 80M	Channel	7				23			
	Freq. (MHz)	5985				6065			
BW 160M	Channel	15							
	Freq. (MHz)	6025							

BW 20M	Channel	33	37	41	45	49	53	57	61
	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255
BW 40M	Channel	35		43		51		59	
	Freq. (MHz)	6125		6165		6205		6245	
BW 80M	Channel	39				55			
	Freq. (MHz)	6145				6225			
BW 160M	Channel	47							
	Freq. (MHz)	6185							



BW 20M	Channel	65	69	73	77	81	85	89	93
	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415
BW 40M	Channel	67		75		83		91	
	Freq. (MHz)	6285		6325		6365		6405	
BW 80M	Channel	71				87			
	Freq. (MHz)	6305				6385			
BW 160M	Channel	79							
	Freq. (MHz)	6345							

BW 20M	Channel	97	101	105	109	113	117	121	125
	Freq. (MHz)	6435	6455	6475	6495	6515	6535	6555	6575
BW 40M	Channel	99		107		115		123	
	Freq. (MHz)	6445		6485		6525		6565	
BW 80M	Channel	103				119			
	Freq. (MHz)	6465				6545			
BW 160M	Channel	111							
	Freq. (MHz)	6505							

BW 20M	Channel	129	133	137	141	145	149	153	157
	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735
BW 40M	Channel	131		139		147		155	
	Freq. (MHz)	6605		6645		6685		6725	
BW 80M	Channel	135				151			
	Freq. (MHz)	6625				6705			
BW 160M	Channel	143							
	Freq. (MHz)	6665							



BW 20M	Channel	161	165	169	173	177	181	185	189
	Freq. (MHz)	6755	6775	6795	6815	6835	6855	6875	6895
BW 40M	Channel	163		171		179		187	
	Freq. (MHz)	6765		6805		6845		6885	
BW 80M	Channel	167				183			
	Freq. (MHz)	6785				6865			
BW 160M	Channel	175							
	Freq. (MHz)	6825							
BW 320M	Channel	159							
	Freq. (MHz)	6745							

BW 20M	Channel	193	197	201	205	209	213	217	221
	Freq. (MHz)	6915	6935	6955	6975	6995	7015	7035	7055
BW 40M	Channel	195		203		211		219	
	Freq. (MHz)	6925		6965		7005		7045	
BW 80M	Channel	199				215			
	Freq. (MHz)	6945				7025			
BW 160M	Channel	207							
	Freq. (MHz)	6985							
BW 320M	Channel	191							
	Freq. (MHz)	6905							

BW 20M	Channel	225	229	233
	Freq. (MHz)	7075	7095	7115
BW 40M	Channel	227		
	Freq. (MHz)	7085		

2.2 Test Mode

Radiated Spurious Emission Test Modes

1. For Radiated Test Cases, The tests were performed with Adapter. All radiated test mode refer to Appendix C of this report.
2. For simultaneous transmission test mode, the combination testing was assessed from the worst RSE link mode of WWAN and the worst RSE mode of BT / WLAN (2.4G/6G).
3. For UNII-5/7, since the device is dual client, the UNII-5/-7 are tested under standard client power level, thus the 6CD_ standard power client could re-use the RSE test results.
4. The device support DBS (Dual Band Simultaneous) function, when the device WLAN 2.4GHz and WLAN 6GHz transmit at the same time the module will limit different output power for simultaneous transmission compliance.

Test Cases	
AC Conducted Emission	Mode 1 : WLAN 6G Link + BT Link + USB Cable1(Charging from AC Adapter 1) + Battery

Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11a/ax HE20	802.11a/ax HE20	802.11a/ax HE20	802.11a/ax HE20
L	Low	001	097	117	189
M	Middle	049	105	149	209
H	High	093	113	181	229/233
Straddle		-	-	185	-

Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE40	802.11ax HE40	802.11ax HE40	802.11ax HE40
L	Low	003	099	123	195
M	Middle	051	-	147	211
H	High	091	107	179	227
Straddle		-	115	187	-



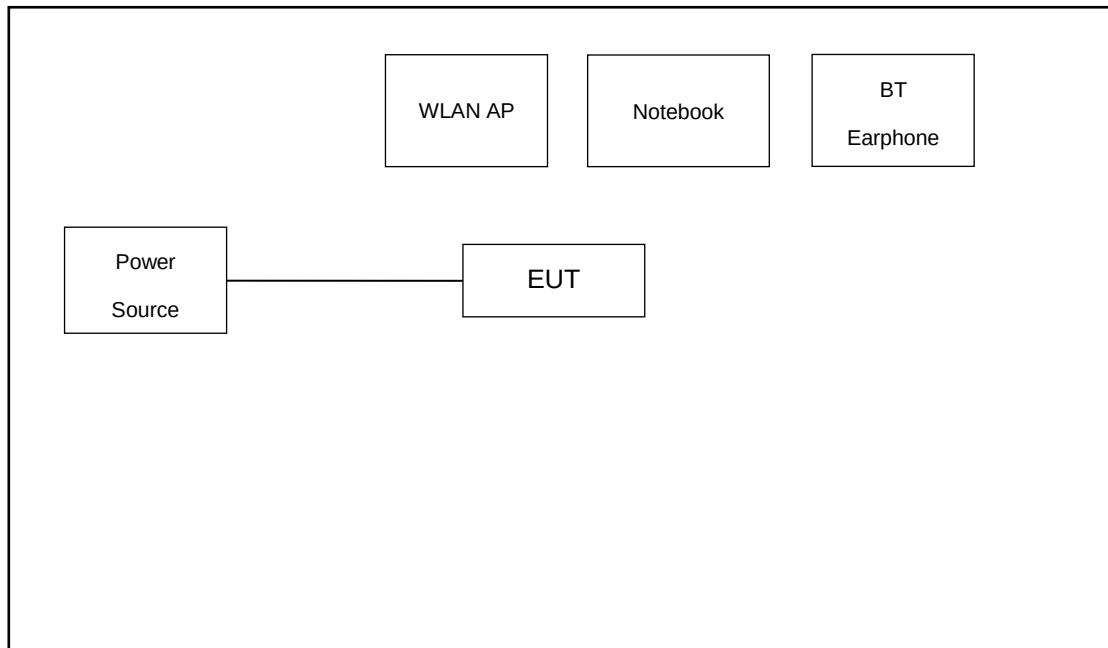
Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE80	802.11ax HE80	802.11ax HE80	802.11ax HE80
L	Low	007	103	135	199
M	Middle	055		151	-
H	High	087		167	215
Straddle		-	119	183	-

Ch. #		5925-6425 MHz UNII-5	6425-6525 MHz UNII-6	6525-6875 MHz UNII-7	6875-7125 MHz UNII-8
		802.11ax HE160	802.11ax HE160	802.11ax HE160	802.11ax HE160
L	Low	015	-	143	207
M	Middle	047			
H	High	079			
Straddle		-	111	175	-

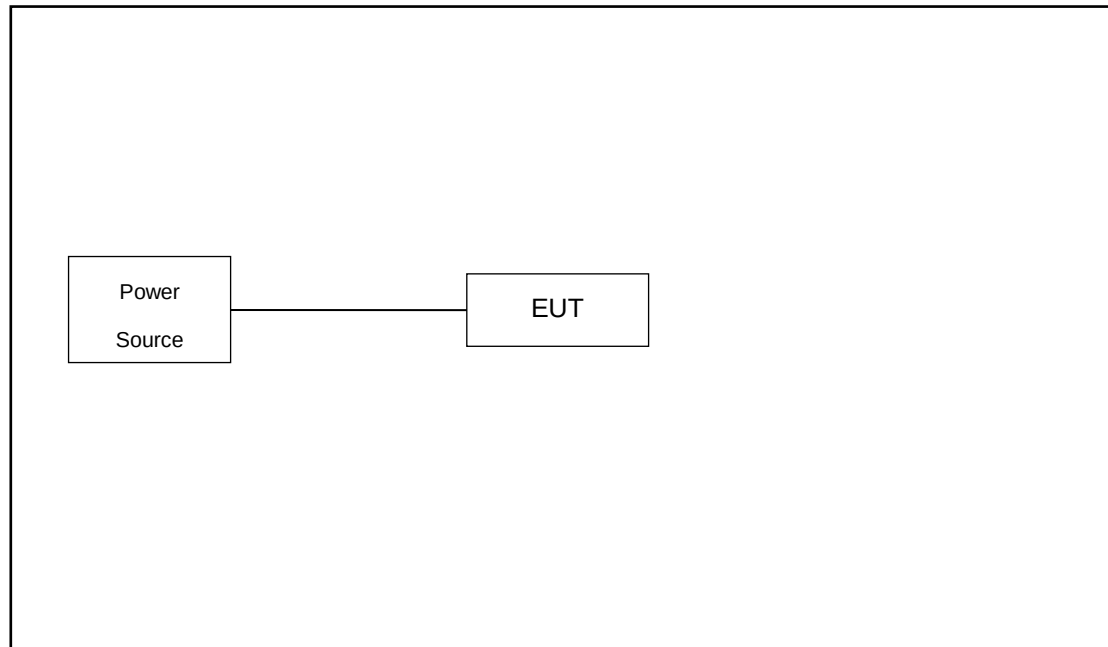
Remark: For radiation spurious emission, the final modulation and the worst data rate was reference the max RF conducted power.

2.3 Connection Diagram of Test System

For Conducted Emission:



For Radiated Emission:



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	WLAN AP	D-link	DIR-655	KA21R655B1	N/A	Unshielded, 1.8m
2.	SD Card	Kingston	8GB	N/A	N/A	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit.

For AC power line conducted emissions, the EUT was set to connect with the WLAN AP under large package sizes transmission.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.07 dB and 20dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 5.07 + 20 = 25.07(\text{dB})\end{aligned}$$

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Limit of 26dB & 99% Occupied Bandwidth

<FCC 14-30 CFR 15.407>

(a)(10) The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

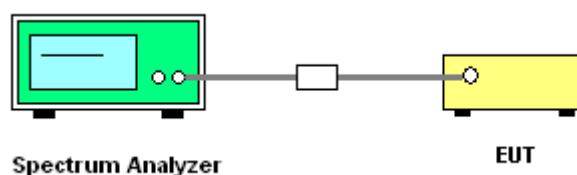
3.1.2 Measuring Instruments

See list of measuring equipment of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak 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%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1-5% of the emission bandwidth and set the Video bandwidth (VBW) $\geq 3 * RBW$.
8. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

3.2 Maximum conducted Output Power and Fundamental Maximum EIRP Measurement

3.2.1 Limit of Fundamental Maximum EIRP

<FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

3.2.2 Measuring Instruments

See list of measuring equipment of this test report.

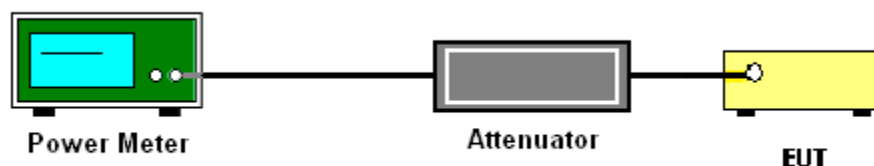
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, $10 \log(1/x)$, where x is the duty cycle.
4. For MIMO mode, the measure-and-sum technique should be used for measuring the in-band transmit power of a device.

3.2.4 Test Setup



3.2.5 Test Result of Fundamental Maximum EIRP

Please refer to Appendix A.



3.3 Fundamental Power Spectral Density Measurement

3.3.1 Limit of Fundamental Power Spectral Density

<FCC 14-30 CFR 15.407>

(a)(8) For client devices operating under the control of an indoor access point in the 5.925-7.125 GHz bands, the maximum power spectral density must not exceed -1 dBm e.i.r.p. in any 1-megahertz band.

3.3.2 Measuring Instruments

See list of measuring equipment of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Section F) Maximum power spectral density.

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

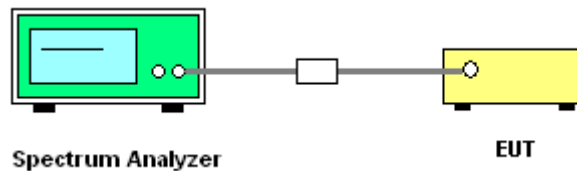
- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW $\geq$ 3 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, attenuator loss and duty factor. Measure the PPSD and record it.
3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (b): Measure and sum spectral maxima across the outputs.

The measurement on each individual output were performed with the same span and number on each individual output. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 In-Band Emissions (Channel Mask)

3.4.1 Limit of Unwanted Emissions

<FCC 14-30 CFR 15.407>

(b)(6) For transmitters operating within the 5.925-7.125 GHz bands: Power spectral density must be suppressed by 20 dB at 1 MHz outside of channel edge, by 28 dB at one channel bandwidth from the channel center, and by 40 dB at one- and one-half times the channel bandwidth away from channel center. At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression. Emissions removed from the channel center by more than one- and one-half times the channel bandwidth must be suppressed by at least 40 dB.

3.4.2 Measuring Instruments

See list of measuring equipment of this test report.

3.4.3 Test Procedures

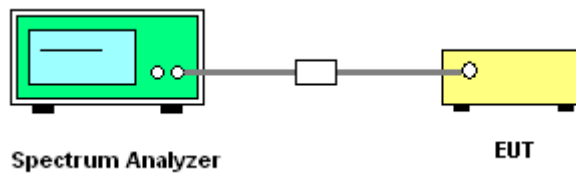
The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v01r01.

Section J) In-Band Emissions.

1. Take nominal bandwidth as reference channel bandwidth provided that 26 dB emission bandwidth is always larger than nominal bandwidth
2. Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
 - a) Set the span to encompass the entire 26 dB EBW of the signal.
 - b) Set RBW = same RBW used for 26 dB EBW measurement.
 - c) Set VBW $\geq 3 \times$ RBW
 - d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - e) Sweep time = auto.
 - f) Detector = RMS (i.e., power averaging)
 - g) Trace average at least 100 traces in power averaging (rms) mode.
 - h) Use the peak search function on the instrument to find the peak of the spectrum.
3. Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - a. Suppressed by 20 dB at 1 MHz outside of the channel edge.
 - b. Suppressed by 28 dB at one channel bandwidth from the channel center.

- c. Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
4. Adjust the span to encompass the entire mask as necessary.
5. Clear trace.
6. Trace average at least 100 traces in power averaging (rms) mode.
7. Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

3.4.4 Test Setup



3.4.5 Test Result

Please refer to Appendix A.

3.5 Contention Based Protocol

3.5.1 Limit of Contention Based Protocol

<FCC 14-30 CFR 15.407>

(d)(6) Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel and stay off the channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain. To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

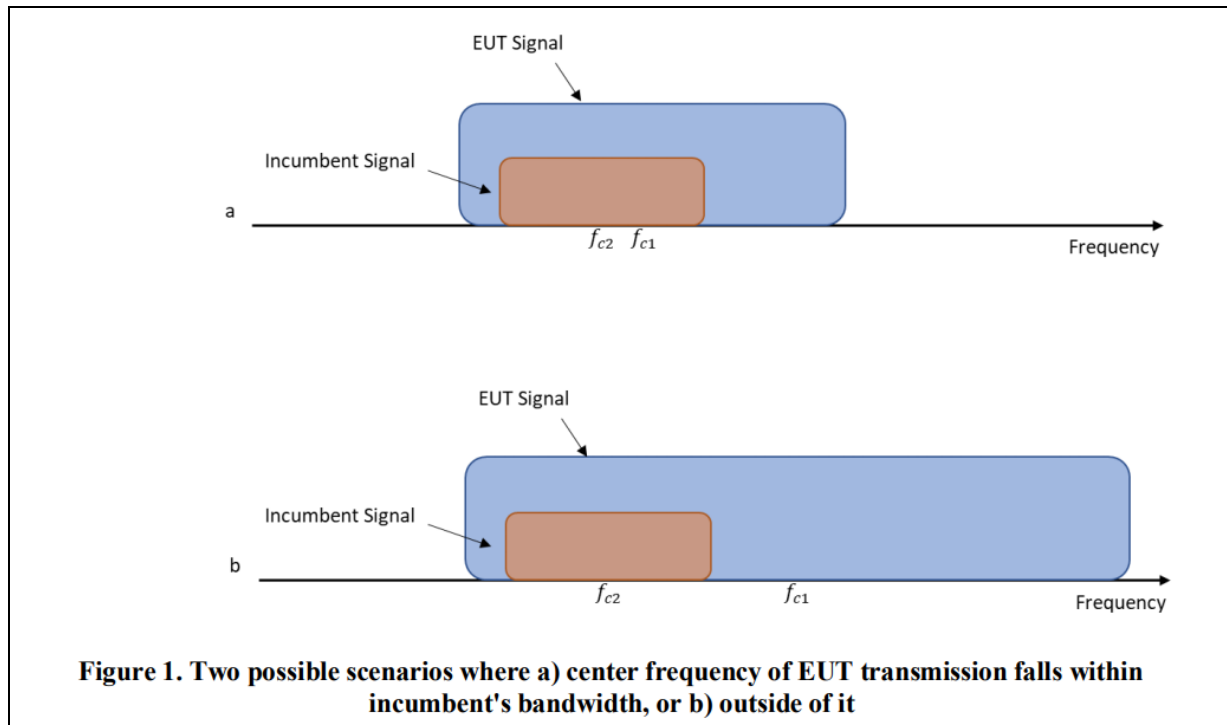
where:

BW_{EUT} : Transmission bandwidth of EUT signal

BW_{Inc} : Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)

f_{c1} : Center frequency of EUT transmission

f_{c2} : Center frequency of simulated incumbent signal



3.5.2 Measuring Instruments

See list of measuring equipment of this test report.

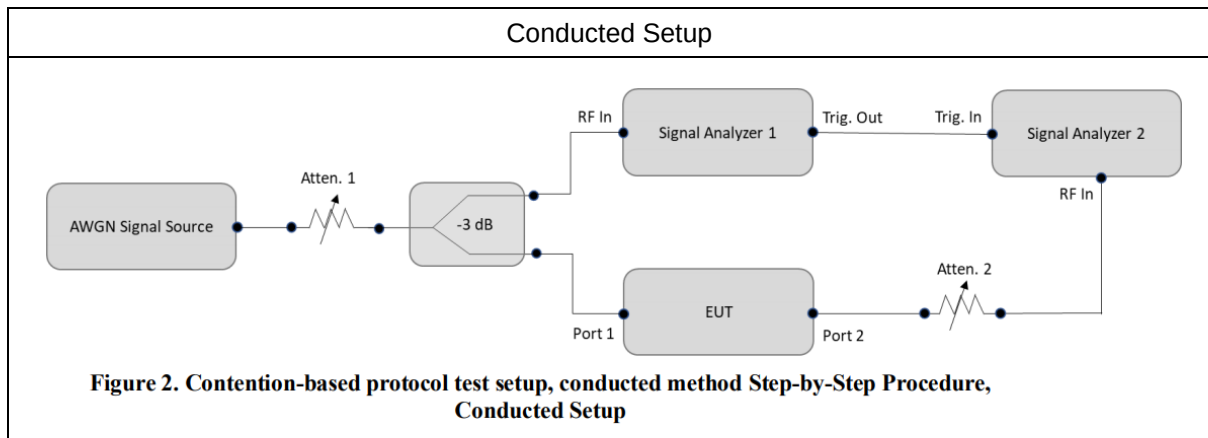
3.5.3 Test Procedures

1. To ensure EUT reliably detects an incumbent signal in both scenarios shown in Figure 1, the detection threshold test may be repeated more than once with the incumbent signal (having center frequency f_{c2}) tuned to different center frequencies within the UT transmission bandwidth. The criteria specified in Table 1 determines how many times the detection threshold test must be performed
2. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
3. Monitor the signal analyzer to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
4. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
5. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 2, choose a different center

frequency for the AWGN signal and repeat the process.

6. EUT was driven in MIMO mode, the interferer signal was injected to both chains to monitor the performance, while the interferer level is determined according to the lowest antenna gain among both antennas.

3.5.4 Test Setup



3.5.5 Support Unit used in test configuration and system

Instrument	Brand Name	Model No.	Characteristics
WLAN AP	ASUS	GT-AXE11000	Dual Band AP
Notebook	Acer	N15C1	LAN



3.5.6 Test Summary of Contention Based Protocol Test

Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 5	6135	20	6135	-67.33	100	-62	-64.89	2.89
				Result: Stop Transmission				
				-68.33	< 90	-62	-65.89	3.89
				Result: Minimal Operation				
				-72.41	0	-62	-69.97	7.97
				Result: Normal Operation				
	6185	160	6110	-67.50	100	-62	-65.06	3.06
				Result: Stop Transmission				
				-68.50	< 90	-62	-66.06	4.06
				Result: Minimal Operation				
				-70.64	0	-62	-68.2	6.2
				Result: Normal Operation				
			6185	-64.77 (worst)	100	-62	-62.33	0.33
				Result: Stop Transmission				
				-65.77	< 90	-62	-63.33	1.33
				Result: Minimal Operation				
				-67.11	0	-62	-64.67	2.67
				Result: Normal Operation				
			6260	-69.40	100	-62	-66.96	4.96
				Result: Stop Transmission				
				-70.40	< 90	-62	-67.96	5.96
				Result: Minimal Operation				
				-70.80	0	-62	-68.36	6.36
				Result: Normal Operation				

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (Antenna 10, gain=-2.44dBi)

Note 2: Path Loss between antenna and RF connector is negligible. (0 dB)

Note 3: Margin = Regulated Threshold level - Adjusted Power



Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 6	6455	20	6455	-69.15	100	-62	-66.71	4.71
					Result: Stop Transmission			
				-70.15	< 90	-62	-67.71	5.71
					Result: Minimal Operation			
				-72.61	0	-62	-70.17	8.17
					Result: Normal Operation			
	6505	160	6430	-66.02	100	-62	-63.58	1.58
					Result: Stop Transmission			
				-67.02	< 90	-62	-64.58	2.58
					Result: Minimal Operation			
				-68.93	0	-62	-66.49	4.49
					Result: Normal Operation			
			6505	-65.10	100	-62	-62.66	0.66
					Result: Stop Transmission			
				-66.10	< 90	-62	-63.66	1.66
					Result: Minimal Operation			
				-66.42	0	-62	-63.98	1.98
					Result: Normal Operation			
			6580	-68.04	100	-62	-65.6	3.6
					Result: Stop Transmission			
				-69.04	< 90	-62	-66.6	4.6
					Result: Minimal Operation			
				-69.88	0	-62	-67.44	5.44
					Result: Normal Operation			

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain Antenna 10, gain=-2.44dBi);

Note 2: Path Loss between antenna and RF connector is negligible. (0 dB)

Note 3: Margin = Regulated Threshold level - Adjusted Power



Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 7	6695	20	6695	-69.97	100	-62	-67.53	5.53
				Result: Stop Transmission				
				-70.97	< 90	-62	-68.53	6.53
				Result: Minimal Operation				
				-72.32	0	-62	-69.88	7.88
				Result: Normal Operation				
	6665	160	6590	-69.84	100	-62	-67.4	5.4
				Result: Stop Transmission				
				-70.84	< 90	-62	-68.4	6.4
				Result: Minimal Operation				
				-71.13	0	-62	-68.69	6.69
				Result: Normal Operation				
			6665	-64.83	100	-62	-62.39	0.39
				Result: Stop Transmission				
				-65.83	< 90	-62	-63.39	1.39
				Result: Minimal Operation				
				-66.19	0	-62	-63.75	1.75
				Result: Normal Operation				
			6740	-67.07	100	-62	-64.63	2.63
				Result: Stop Transmission				
				-68.07	< 90	-62	-65.63	3.63
				Result: Minimal Operation				
				-69.06	0	-62	-66.62	4.62
				Result: Normal Operation				

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain Antenna 10, gain=-2.44dBi)

Note 2: Path Loss between antenna and RF connector is negligible. (0 dB)

Note 3: Margin = Regulated Threshold level - Adjusted Power



Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 8	7015	20	7015	-68.24	100	-62	-65.8	3.8
					Result: Stop Transmission			
				-69.24	< 90	-62	-66.8	4.8
					Result: Minimal Operation			
				-72.92	0	-62	-70.48	8.48
					Result: Normal Operation			
	6985	160	6910	-68.65	100	-62	-66.21	4.21
					Result: Stop Transmission			
				-69.65	< 90	-62	-67.21	5.21
					Result: Minimal Operation			
				-71.06	0	-62	-68.62	6.62
					Result: Normal Operation			
			6985	-65.05	100	-62	-62.61	0.61
					Result: Stop Transmission			
				-66.05	< 90	-62	-63.61	1.61
					Result: Minimal Operation			
				-66.68	0	-62	-64.24	2.24
					Result: Normal Operation			
			7060	-66.72	100	-62	-64.28	2.28
					Result: Stop Transmission			
				-67.72	< 90	-62	-65.28	3.28
					Result: Minimal Operation			
				-68.73	0	-62	-66.29	4.29
					Result: Normal Operation			

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain Antenna 10, gain=-2.44dBi);

Note 2: Path Loss between antenna and RF connector is negligible. (0 dB)

Note 3: Margin = Regulated Threshold level - Adjusted Power



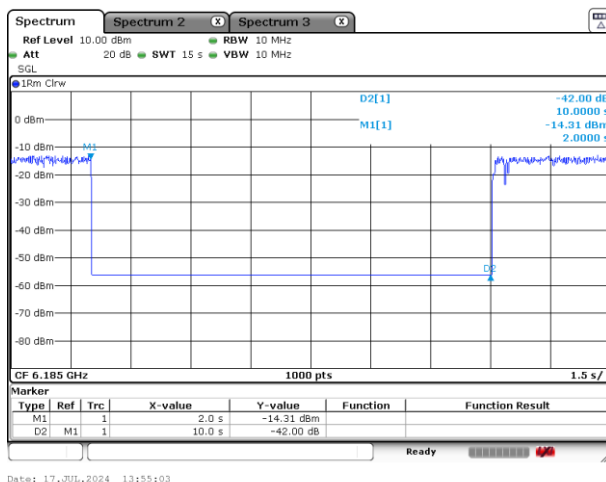
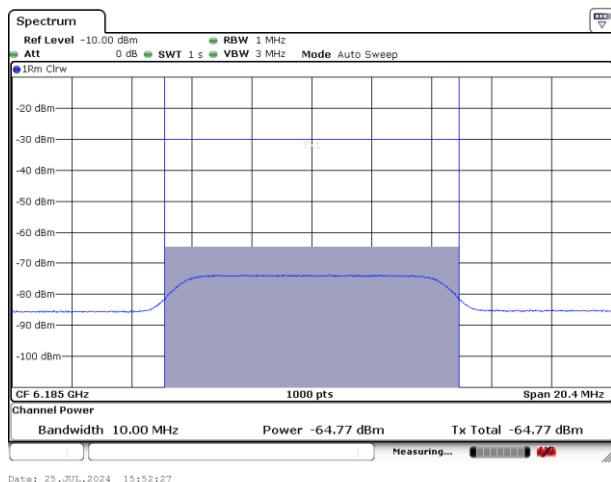
3.5.7 Worst Case Plots of Contention Based Protocol

Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

802.11ax (HE160) / 6185MHz (Middle)
Threshold Level (TL) = -64.77 dBm

802.11ax (HE160) / 6185MHz (Middle)

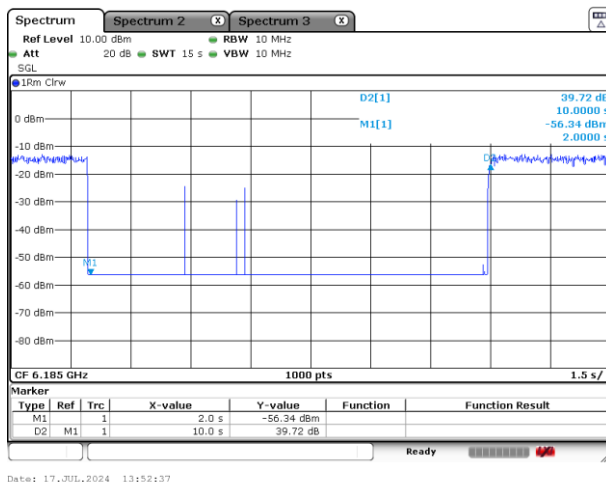
Test result is pass due to no transmission occur.



802.11ax (HE160) / 6185MHz (Middle)
Threshold Level (TL) = -65.77 dBm

802.11ax (HE160) / 6185MHz (Middle)

Transmit when the interferer is 1dB lower.



Remark: M1: Injection of AWGN signal, D2: Removal of AWGN signal

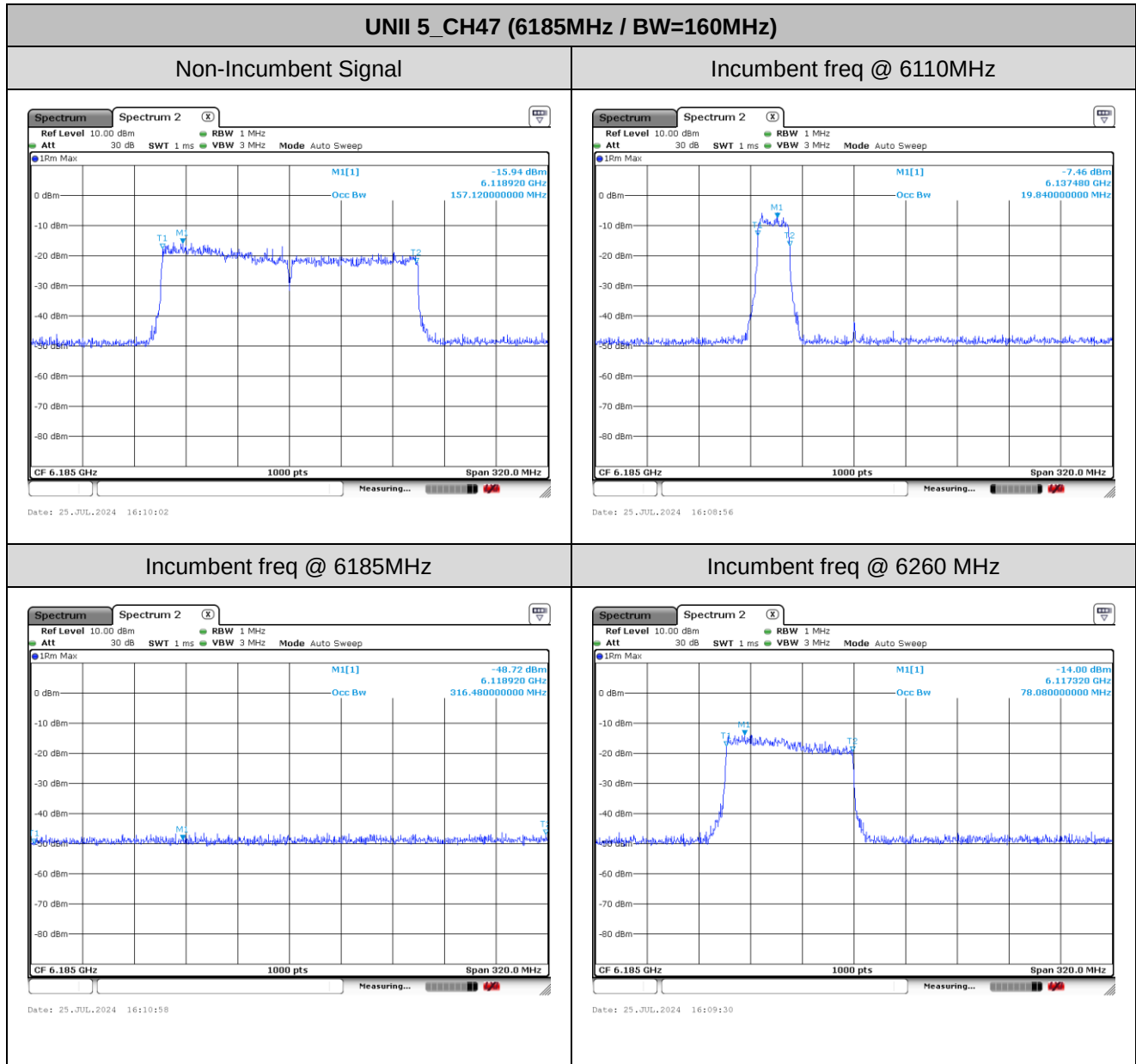


3.5.8 Verify Contention Based Protocol Transmission Bandwidth

Verify transmission absence when Incumbent signal at different frequency (frequency domain plots).

This device does not support channel puncturing mode for incumbent avoidance but bandwidth reduction mechanism is supported.

1. When Incumbent Signal inject at lowest frequency, the transmission bandwidth reduced to 20MHz;
2. When Incumbent Signal inject at middle frequency, the whole 160MHz bandwidth stop transmission;
3. When Incumbent Signal inject at highest frequency, the transmission bandwidth reduced to 80MHz;



3.6 Unwanted Emissions Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.6.1 Limit of Unwanted Emissions

- (1) For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27 (RMS)	68.3
- 7 (Peak)	88.3

According 987594 D02 U-NII 6GHz EMC Measurement v01r01 section G:

Unwanted emissions outside of restricted bands are measured with a RMS detector.

In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table:

Frequency (MHz)	Field Strength (microvolts/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: The following formula is used to convert the EIRP to field strength.

$$E = \frac{1000000\sqrt{30P}}{3} \mu\text{V/m, where P is the eirp (Watts)}$$

3.6.2 Measuring Instruments

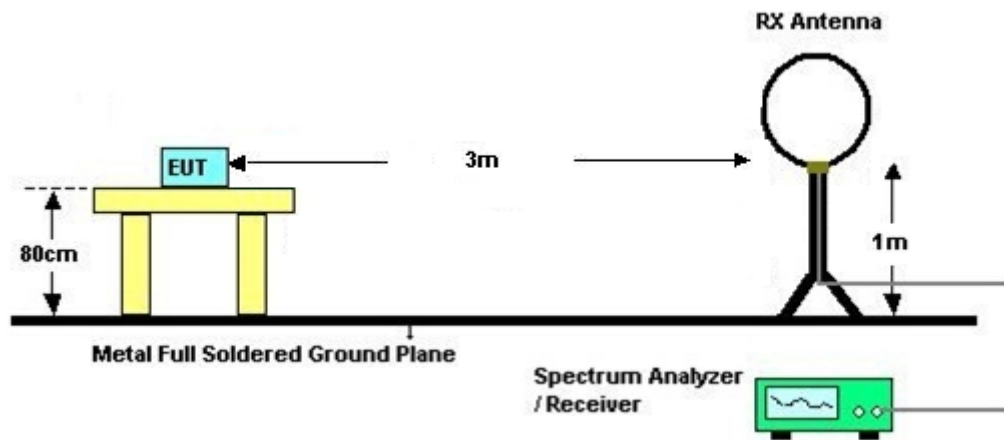
See list of measuring equipment of this test report.

3.6.3 Test Procedures

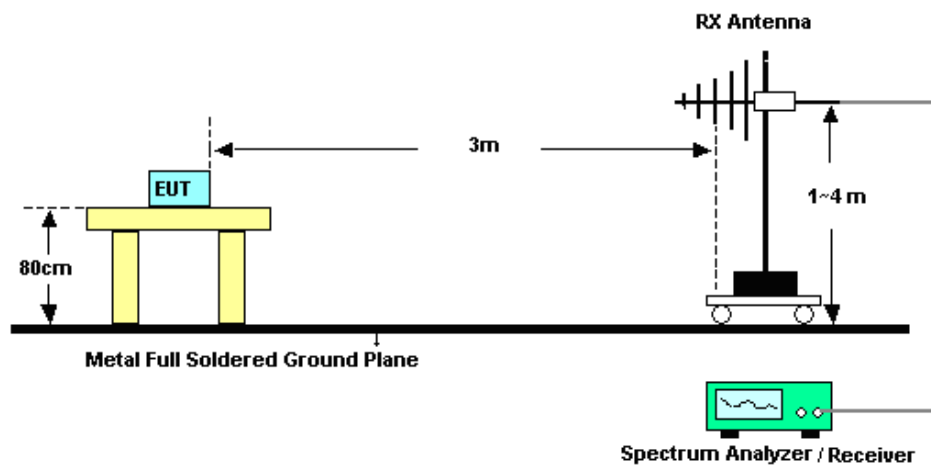
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.6.4 Test Setup

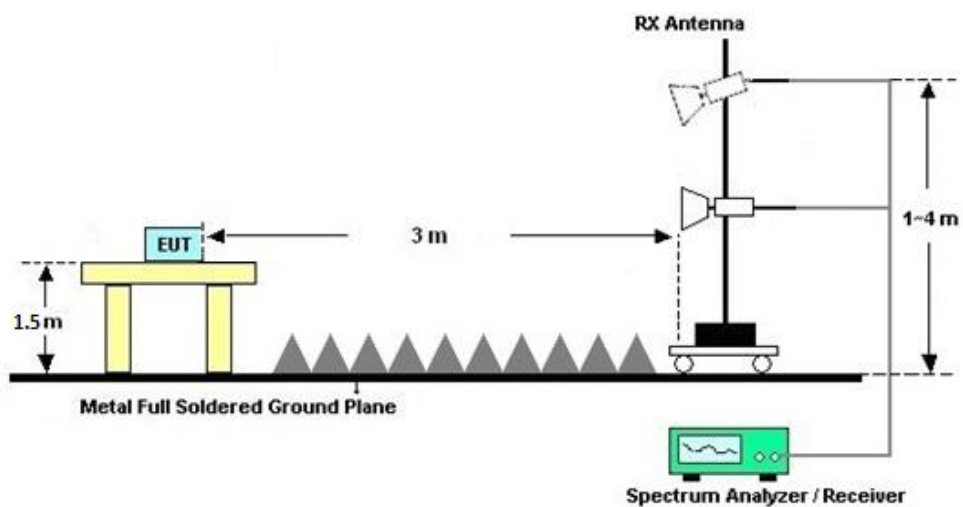
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





3.6.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.6.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C

3.6.7 Duty Cycle

Please refer to Appendix D.

3.6.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix C.

The emission level above 18GHz is checked that the emission level is noise floor only, so it is not reflected in the report.

3.7 AC Conducted Emission Measurement

3.7.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

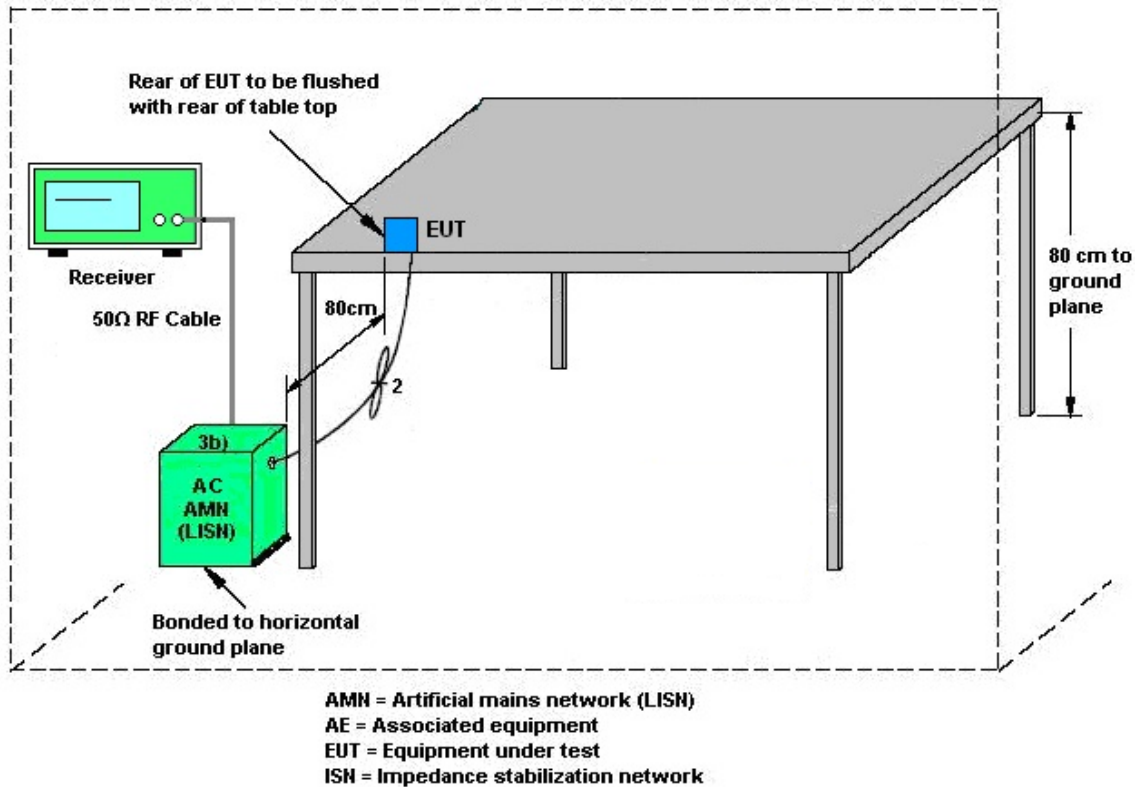
3.7.2 Measuring Instruments

See list of measuring equipment of this test report.

3.7.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.7.4 Test Setup



3.7.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.8 Antenna Requirements

3.8.1 Standard Applicable

§15.203: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used. The EUT complies with the requirement of 15.203.

3.8.3 Antenna Gain

<CDD Modes >

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For 802.11a/ax mode, directional gain is calculated as

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e.,

Directional gain = $G_{ANT\ MAX}(Ant.1\ Gain, Ant.2\ Gain, \dots) + \text{Array Gain}$, as following table for Power,

where Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

For PSD, the directional gain calculation is following,

Directional gain = $10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_n/20})^2 / N_{ANT}]$ dBi, as following table for PSD.

N_{ANT} = number of transmit antennas

N_{SS} = number of spatial streams. (The worst case directional gain will occur when $N_{SS} = 1$)

<CDD Modes>				
			DG for Power (dBi)	DG for PSD (dBi)
	Ant. 8 (dBi)	Ant. 10 (dBi)		
UNII-5	0.35	-0.85	0.35	2.78
UNII-6	0.75	-2.44	0.75	2.31
UNII-7	1.02	0.16	1.02	3.61
UNII-8	0.70	1.66	1.66	4.20

<SDM Modes>

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For 802.11ax mode, directional gain is calculated as

For power, the directional gain G_{ANT} is set equal to the antenna having the highest gain, i.e.,

Directional gain = $G_{ANT\ MAX}(Ant.1\ Gain, Ant.2\ Gain, \dots) + \text{Array Gain}$, as following table for Power, where Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

For PSD, the directional gain calculation is following,

Directional gain = $10 \log[(10^{G_1/10} + 10^{G_2/10} + \dots + 10^{G_n/10})/N_{ANT}]$ dBi, as following table for PSD.

N_{ANT} = number of transmit antennas

			DG for Power (dBi)	DG for PSD (dBi)
	Ant. 8 (dBi)	Ant. 10 (dBi)		
U-NII-5	0.35	-0.85	0.35	-0.21
U-NII-6	0.75	-2.44	0.75	-0.56
U-NII-7	1.02	0.16	1.02	0.61
U-NII-8	0.70	1.66	1.66	1.21



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 11, 2023	Aug. 11, 2024~ Aug. 25, 2024	Oct. 10, 2024	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 02, 2024	Aug. 11, 2024~ Aug. 25, 2024	Jan. 01, 2025	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 02, 2024	Aug. 11, 2024~ Aug. 25, 2024	Jan. 01, 2025	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400023	3Hz~8.5GHz; Max 30dBm	Jan. 02, 2024	Aug. 17, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY60242126	10Hz~44GHz	Oct. 11, 2023	Aug. 17, 2024	Oct. 10, 2024	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2E	101125	9kHz~30MHz	Sep. 11, 2023	Aug. 17, 2024	Sep. 10, 2024	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	59915	30MHz~1GHz	Aug. 19, 2023	Aug. 17, 2024	Aug. 18, 2024	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 11, 2024	Aug. 17, 2024	Apr. 10, 2025	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101093	18GHz~40GHz	Jan. 06, 2024	Aug. 17, 2024	Jan. 05, 2025	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	372171	9KHz ~1GHZ	Jan. 02, 2024	Aug. 17, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
Amplifier	EM	EM18G40GA	060728	18~40GHz	Jan. 02, 2024	Aug. 17, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2082395	1Ghz-18Ghz	Jan. 02, 2024	Aug. 17, 2024	Jan. 01, 2025	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270319	500MHz~26.5GHz	Oct. 11, 2023	Aug. 17, 2024	Oct. 10, 2024	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Aug. 17, 2024	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Aug. 17, 2024	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Aug. 17, 2024	NCR	Radiation (03CH06-KS)
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz;	Apr. 18, 2024	Jul. 21, 2024	Apr. 17, 2025	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060103	9kHz~30MHz	Oct. 11, 2023	Jul. 21, 2024	Oct. 10, 2024	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060105	9kHz~30MHz	Apr. 18, 2024	Jul. 21, 2024	Apr. 17, 2025	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 11, 2023	Jul. 21, 2024	Oct. 10, 2024	Conduction (CO01-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 11, 2023	Jul. 17, 2024~ Jul. 25, 2024	Oct. 10, 2024	CBP (DFS01-KS)
MXG-B RF Vector Signal Generator	Keysight	5182B /5182BX07	MY56200417 /MY59360210	9kHz~7.2GHz	Apr. 17, 2024	Jul. 17, 2024~ Jul. 25, 2024	Apr. 16, 2025	CBP (DFS01-KS)
Vector Signal Generator	R&S	SMBV100A	258305	9kHz~6GHz	Jan. 02, 2024	Jul. 17, 2024~ Jul. 25, 2024	Jan. 01, 2025	CBP (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Jul. 17, 2024~ Jul. 25, 2024	NCR	CBP (DFS01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

Uncertainty of Conducted Measurement

Conducted Spurious Emission & Bandedge	±2.22 dB
Occupied Channel Bandwidth	±0.1%
Conducted Power	±0.50 dB
Conducted Power Spectral Density	±0.90 dB
Frequency	0.04ppm
Conducted Generated signal Levels	±0.56 dB
Conducted Time	0.54%

Uncertainty of AC Conducted Emission Measurement (0.15 MHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.84 dB
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Uncertainty of Radiated Emission Measurement (9 KHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.30 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	6.06 dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.18 dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.38 dB
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----- THE END -----



Appendix A. Conducted Test Results

A1. Conducted Test Results

Test Engineer:	Jiang Jun	Temperature:	21~25	°C
Test Date:	2024.08.11~2024.08.25	Relative Humidity:	51~54	%

TEST RESULTS DATA
EIRP Power Table

CDD Mode

UNII-5 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10			
11a	6Mbps	2	001	5955	0.03	0.04	4.04	3.98	7.02	0.35		7.37	24.00	Pass
11a	6Mbps	2	049	6195	0.03	0.04	4.06	3.56	6.83	0.35		7.18	24.00	Pass
11a	6Mbps	2	093	6415	0.03	0.04	4.20	3.86	7.05	0.35		7.40	24.00	Pass

Power Setting	
Ant 8	Ant 10
3.5	
4	
6	

TEST RESULTS DATA
EIRP Power Table

UNII-6 MIMO													
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
				Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM		
11a	6Mbps	2	6435	0.03	0.04	4.99	4.41	7.72	0.75		8.47	24.00	Pass
11a	6Mbps	2	6475	0.03	0.04	5.17	4.73	7.97	0.75		8.72	24.00	Pass
11a	6Mbps	2	6515	0.03	0.04	4.97	4.76	7.88	0.75		8.63	24.00	Pass

Power Setting	
Ant 8	Ant 10
4.5	
5	
5	

TEST RESULTS DATA
EIRP Power Table

UNII-7 MIMO														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM		
11a	6Mbps	2	117	6535	0.03	0.04	4.04	3.18	6.64	1.02		7.66	24.00	Pass
11a	6Mbps	2	149	6695	0.03	0.04	3.52	3.55	6.55	1.02		7.57	24.00	Pass
11a	6Mbps	2	181	6855	0.03	0.04	3.16	3.15	6.17	1.02		7.19	24.00	Pass
11a	6Mbps	2	185	6875	0.03	0.04	2.71	2.44	5.59	1.02		6.61	24.00	Pass

Power Setting	
Ant 8	Ant 10
	3.5
	4
	3.5
	3

TEST RESULTS DATA
EIRP Power Table

UNII-8 MIMO													
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
				Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM		
11a	6Mbps	2	6895	0.03	0.04	2.74	2.87	5.82	1.66		7.48	24.00	Pass
11a	6Mbps	2	6995	0.03	0.04	3.09	2.39	5.77	1.66		7.43	24.00	Pass
11a	6Mbps	2	7095	0.03	0.04	2.91	2.60	5.77	1.66		7.43	24.00	Pass
11a	6Mbps	2	7115	0.03	0.04	2.43	1.93	5.20	1.66		6.86	24.00	Pass

Power Setting	
Ant 8	Ant 10
3	
3	
3	
2.5	

TEST RESULTS DATA
EIRP Power Table

SDM Mode

UNII-5 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10				SUM	Ant 8
HE20	MCS0	2	001	5955	Full	0.00	0.00	7.10	7.42	10.27	0.35		10.62	24.00	Pass	7	
HE20	MCS0	2	001	5955	26/0	0.00	0.00	-2.19	-1.95	0.94	0.35		1.29	24.00	Pass	-1.5	
HE20	MCS0	2	001	5955	52/37	0.00	0.00	-0.80	-0.05	2.60	0.35		2.95	24.00	Pass	0.5	
HE20	MCS0	2	001	5955	106/53	0.00	0.00	4.63	3.97	7.32	0.35		7.67	24.00	Pass	3.5	
HE20	MCS0	2	049	6195	Full	0.00	0.00	7.81	7.46	10.65	0.35		11.00	24.00	Pass	7.5	
HE20	MCS0	2	049	6195	26/0	0.00	0.00	-2.58	-2.54	0.45	0.35		0.80	24.00	Pass	-2	
HE20	MCS0	2	049	6195	52/37	0.00	0.00	-0.32	-0.18	2.76	0.35		3.11	24.00	Pass	0.5	
HE20	MCS0	2	049	6195	106/53	0.00	0.00	3.94	3.36	6.67	0.35		7.02	24.00	Pass	3.5	
HE20	MCS0	2	093	6415	Full	0.00	0.00	8.05	7.61	10.85	0.35		11.20	24.00	Pass	8	
HE20	MCS0	2	093	6415	26/8	0.00	0.00	-2.07	-1.83	1.06	0.35		1.41	24.00	Pass	0	
HE20	MCS0	2	093	6415	52/40	0.00	0.00	1.31	0.82	4.08	0.35		4.43	24.00	Pass	3	
HE20	MCS0	2	093	6415	106/54	0.00	0.00	4.39	4.14	7.28	0.35		7.63	24.00	Pass	6	
HE40	MCS0	2	003	5965	Full	0.00	0.00	10.05	10.47	13.28	0.35		13.63	24.00	Pass	10	
HE40	MCS0	2	003	5965	242/61	0.00	0.00	8.06	8.18	11.13	0.35		11.48	24.00	Pass	7.5	
HE40	MCS0	2	051	6205	Full	0.00	0.00	10.82	10.16	13.51	0.35		13.86	24.00	Pass	10.5	
HE40	MCS0	2	051	6205	242/61	0.00	0.00	8.00	7.54	10.79	0.35		11.14	24.00	Pass	7.5	
HE40	MCS0	2	091	6405	Full	0.00	0.00	11.03	10.45	13.76	0.35		14.11	24.00	Pass	11	
HE40	MCS0	2	091	6405	242/62	0.00	0.00	8.28	7.84	11.08	0.35		11.43	24.00	Pass	8	
HE80	MCS0	2	007	5985	Full	0.00	0.00	13.52	13.90	16.72	0.35		17.07	24.00	Pass	13.5	
HE80	MCS0	2	007	5985	484/65	0.07	0.04	11.07	11.12	14.11	0.35		14.46	24.00	Pass	10.5	
HE80	MCS0	2	055	6225	Full	0.00	0.00	13.76	13.34	16.57	0.35		16.92	24.00	Pass	13.5	
HE80	MCS0	2	055	6225	484/65	0.07	0.04	10.82	10.45	13.65	0.35		14.00	24.00	Pass	10	
HE80	MCS0	2	087	6385	Full	0.00	0.00	14.32	13.57	16.97	0.35		17.32	24.00	Pass	14	
HE80	MCS0	2	087	6385	484/66	0.07	0.04	11.24	11.07	14.17	0.35		14.52	24.00	Pass	11	
HE160	MCS0	2	015	6025	Full	0.00	0.00	14.23	14.33	17.29	0.35		17.64	24.00	Pass	14	
HE160	MCS0	2	015	6025	996/67	0.05	0.05	11.61	11.80	14.71	0.35		15.06	24.00	Pass	11	
HE160	MCS0	2	047	6185	Full	0.00	0.00	14.61	13.58	17.14	0.35		17.49	24.00	Pass	14	
HE160	MCS0	2	047	6185	996/67	0.05	0.05	11.87	11.12	14.52	0.35		14.87	24.00	Pass	10.5	
HE160	MCS0	2	079	6345	Full	0.00	0.00	14.29	13.62	16.98	0.35		17.33	24.00	Pass	14	
HE160	MCS0	2	079	6345	996/68	0.05	0.05	10.96	11.07	14.02	0.35		14.37	24.00	Pass	11	

TEST RESULTS DATA
EIRP Power Table

UNII-6 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	097	6435	Full	0.00	0.00	8.24	7.58	10.93	0.75		11.68	24.00	Pass	8	
HE20	MCS0	2	097	6435	26/0	0.00	0.00	-1.77	-1.73	1.26	0.75		2.01	24.00	Pass	-2	
HE20	MCS0	2	097	6435	52/37	0.00	0.00	1.66	0.99	4.35	0.75		5.10	24.00	Pass	1	
HE20	MCS0	2	097	6435	106/53	0.00	0.00	4.66	4.02	7.36	0.75		8.11	24.00	Pass	4	
HE20	MCS0	2	105	6475	Full	0.00	0.00	8.50	8.02	11.28	0.75		12.03	24.00	Pass	8.5	
HE20	MCS0	2	105	6475	26/0	0.00	0.00	-0.62	-0.86	2.27	0.75		3.02	24.00	Pass	-1	
HE20	MCS0	2	105	6475	52/37	0.00	0.00	2.15	1.33	4.77	0.75		5.52	24.00	Pass	1.5	
HE20	MCS0	2	105	6475	106/53	0.00	0.00	5.49	4.90	8.22	0.75		8.97	24.00	Pass	5	
HE20	MCS0	2	113	6515	Full	0.00	0.00	8.29	7.58	10.96	0.75		11.71	24.00	Pass	8	
HE20	MCS0	2	113	6515	26/8	0.00	0.00	-1.48	-1.82	1.36	0.75		2.11	24.00	Pass	-2	
HE20	MCS0	2	113	6515	52/40	0.00	0.00	1.25	1.03	4.15	0.75		4.90	24.00	Pass	1	
HE20	MCS0	2	113	6515	106/54	0.00	0.00	4.87	4.56	7.73	0.75		8.48	24.00	Pass	4.5	
HE40	MCS0	2	099	6445	Full	0.00	0.00	10.51	9.82	13.19	0.75		13.94	24.00	Pass	10.5	
HE40	MCS0	2	099	6445	242/61	0.00	0.00	7.91	6.94	10.46	0.75		11.21	24.00	Pass	7.5	
HE40	MCS0	2	107	6485	Full	0.00	0.00	11.20	10.20	13.74	0.75		14.49	24.00	Pass	11	
HE40	MCS0	2	107	6485	242/61	0.00	0.00	8.47	7.63	11.08	0.75		11.83	24.00	Pass	8	
HE80	MCS0	2	103	6465	Full	0.00	0.00	14.29	13.26	16.82	0.75		17.57	24.00	Pass	14	
HE80	MCS0	2	103	6465	484/65	0.07	0.04	10.84	10.47	13.67	0.75		14.42	24.00	Pass	10.5	

TEST RESULTS DATA
EIRP Power Table

UNII-7 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	117	6535	Full	0.00	0.00	7.12	7.08	10.11	1.02		11.13	24.00	Pass	7	
HE20	MCs0	2	117	6535	26/0	0.00	0.00	-1.92	-2.21	0.95	1.02		1.97	24.00	Pass	-2.5	
HE20	MCS0	2	117	6535	52/37	0.00	0.00	0.50	0.12	3.32	1.02		4.34	24.00	Pass	0	
HE20	MCS0	2	117	6535	106/53	0.00	0.00	4.35	3.40	6.91	1.02		7.93	24.00	Pass	3.5	
HE20	MCs0	2	149	6695	Full	0.00	0.00	6.91	6.69	9.81	1.02		10.83	24.00	Pass	7	
HE20	MCS0	2	149	6695	26/0	0.00	0.00	-2.96	-2.02	0.55	1.02		1.57	24.00	Pass	-2.5	
HE20	MCS0	2	149	6695	52/37	0.00	0.00	-0.36	0.32	3.00	1.02		4.02	24.00	Pass	0	
HE20	MCS0	2	149	6695	106/53	0.00	0.00	3.16	3.20	6.19	1.02		7.21	24.00	Pass	3.5	
HE20	MCS0	2	181	6855	Full	0.00	0.00	6.75	7.45	10.12	1.02		11.14	24.00	Pass	7.5	
HE20	MCS0	2	181	6855	26/8	0.00	0.00	-2.06	-2.47	0.75	1.02		1.77	24.00	Pass	-2	
HE20	MCS0	2	181	6855	52/40	0.00	0.00	0.87	0.92	3.91	1.02		4.93	24.00	Pass	1	
HE20	MCs0	2	181	6855	106/54	0.00	0.00	3.92	3.83	6.89	1.02		7.91	24.00	Pass	4	
HE40	MCS0	2	115	6525	Full	0.00	0.00	10.04	9.34	12.71	1.02		13.73	24.00	Pass	10	
HE40	MCS0	2	115	6525	242/62	0.00	0.00	7.16	7.09	10.14	1.02		11.16	24.00	Pass	7	
HE40	MCS0	2	123	6565	Full	0.00	0.00	10.10	9.43	12.79	1.02		13.81	24.00	Pass	10	
HE40	MCs0	2	123	6565	242/61	0.00	0.00	6.92	7.10	10.02	1.02		11.04	24.00	Pass	7	
HE40	MCS0	2	147	6685	Full	0.00	0.00	10.02	9.59	12.82	1.02		13.84	24.00	Pass	10	
HE40	MCS0	2	147	6685	242/61	0.00	0.00	7.02	7.32	10.18	1.02		11.20	24.00	Pass	7.5	
HE40	MCs0	2	179	6845	Full	0.00	0.00	10.37	9.66	13.04	1.02		14.06	24.00	Pass	10.5	
HE40	MCS0	2	179	6845	242/62	0.00	0.00	7.46	7.76	10.62	1.02		11.64	24.00	Pass	8	
HE80	MCS0	2	119	6545	Full	0.00	0.00	13.34	12.37	15.89	1.02		16.91	24.00	Pass	13	
HE80	MCS0	2	119	6545	484/66	0.07	0.04	10.33	9.94	13.15	1.02		14.17	24.00	Pass	10	
HE80	MCs0	2	135	6625	Full	0.00	0.00	13.63	13.04	16.36	1.02		17.38	24.00	Pass	13.5	
HE80	MCS0	2	135	6625	484/65	0.07	0.04	11.01	10.60	13.82	1.02		14.84	24.00	Pass	10.5	
HE80	MCS0	2	151	6705	Full	0.00	0.00	13.34	12.93	16.15	1.02		17.17	24.00	Pass	13.5	
HE80	MCs0	2	151	6705	484/65	0.07	0.04	10.59	10.28	13.45	1.02		14.47	24.00	Pass	10.5	
HE80	MCS0	2	167	6785	Full	0.00	0.00	13.59	12.88	16.26	1.02		17.28	24.00	Pass	13.5	
HE80	MCS0	2	167	6785	484/66	0.07	0.04	10.76	9.99	13.40	1.02		14.42	24.00	Pass	10.5	
HE160	MCS0	2	111	6505	Full	0.00	0.00	14.49	13.44	17.01	1.02		18.03	24.00	Pass	14	
HE160	MCs0	2	111	6505	996/67	0.05	0.05	11.62	10.76	14.22	1.02		15.24	24.00	Pass	11	
HE160	MCS0	2	143	6665	Full	0.00	0.00	14.38	13.69	17.06	1.02		18.08	24.00	Pass	14	
HE160	MCS0	2	143	6665	996/68	0.05	0.05	11.50	11.08	14.30	1.02		15.32	24.00	Pass	11	

TEST RESULTS DATA
EIRP Power Table

UNII-8 MIMO															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM		
HE20	MCS0	2	185	6875	Full	0.00	0.00	6.25	6.92	9.61	1.66	11.27	24.00	Pass	
HE20	MCS0	2	185	6875	26/8	0.00	0.00	-2.58	-3.02	0.22	1.66	1.88	24.00	Pass	
HE20	MCS0	2	185	6875	52/40	0.00	0.00	0.38	-0.21	3.11	1.66	4.77	24.00	Pass	
HE20	MCS0	2	185	6875	106/54	0.00	0.00	3.47	3.33	6.41	1.66	8.07	24.00	Pass	
HE20	MCS0	2	189	6895	Full	0.00	0.00	6.29	6.62	9.47	1.66	11.13	24.00	Pass	
HE20	MCS0	2	189	6895	26/0	0.00	0.00	-2.91	-3.01	0.05	1.66	1.71	24.00	Pass	
HE20	MCS0	2	189	6895	52/37	0.00	0.00	0.02	-0.08	2.98	1.66	4.64	24.00	Pass	
HE20	MCS0	2	189	6895	106/53	0.00	0.00	3.88	2.78	6.38	1.66	8.04	24.00	Pass	
HE20	MCS0	2	209	6995	Full	0.00	0.00	6.47	6.12	9.31	1.66	10.97	24.00	Pass	
HE20	MCS0	2	209	6995	26/0	0.00	0.00	-2.46	-2.59	0.49	1.66	2.15	24.00	Pass	
HE20	MCS0	2	209	6995	52/37	0.00	0.00	0.35	-0.11	3.14	1.66	4.80	24.00	Pass	
HE20	MCS0	2	209	6995	106/53	0.00	0.00	3.79	3.21	6.52	1.66	8.18	24.00	Pass	
HE20	MCS0	2	229	7095	Full	0.00	0.00	6.42	6.11	9.28	1.66	10.94	24.00	Pass	
HE20	MCS0	2	229	7095	26/8	0.00	0.00	-4.04	-3.96	-0.99	1.66	0.67	24.00	Pass	
HE20	MCS0	2	229	7095	52/40	0.00	0.00	-0.73	-1.26	2.02	1.66	3.68	24.00	Pass	
HE20	MCS0	2	229	7095	106/54	0.00	0.00	2.64	2.24	5.45	1.66	7.11	24.00	Pass	
HE20	MCS0	2	233	7115	Full	0.00	0.00	-4.49	-5.55	-1.98	1.66	-0.32	24.00	Pass	
HE20	MCS0	2	233	7115	26/8	0.00	0.00	-14.18	-14.85	-11.49	1.66	-9.83	24.00	Pass	
HE20	MCS0	2	233	7115	52/40	0.00	0.00	-11.63	-12.41	-8.99	1.66	-7.33	24.00	Pass	
HE20	MCS0	2	233	7115	106/54	0.00	0.00	-8.64	-9.62	-6.09	1.66	-4.43	24.00	Pass	
HE40	MCS0	2	187	6885	Full	0.00	0.00	9.84	9.36	12.62	1.66	14.28	24.00	Pass	
HE40	MCS0	2	187	6885	484/65	0.00	0.00	6.79	7.40	10.12	1.66	11.78	24.00	Pass	
HE40	MCS0	2	195	6925	Full	0.00	0.00	9.84	9.44	12.65	1.66	14.31	24.00	Pass	
HE40	MCS0	2	195	6925	242/61	0.00	0.00	7.31	7.38	10.36	1.66	12.02	24.00	Pass	
HE40	MCS0	2	211	7005	Full	0.00	0.00	8.73	8.45	11.60	1.66	13.26	24.00	Pass	
HE40	MCS0	2	211	7005	242/62	0.00	0.00	6.31	6.34	9.34	1.66	11.00	24.00	Pass	
HE40	MCS0	2	227	7085	Full	0.00	0.00	9.14	9.08	12.12	1.66	13.78	24.00	Pass	
HE40	MCS0	2	227	7085	242/62	0.00	0.00	6.70	6.61	9.67	1.66	11.33	24.00	Pass	
HE80	MCS0	2	183	6865	Full	0.00	0.00	12.36	12.01	15.20	1.66	16.86	24.00	Pass	
HE80	MCS0	2	183	6865	484/66	0.07	0.04	10.24	9.66	12.97	1.66	14.63	24.00	Pass	
HE80	MCS0	2	199	6945	Full	0.00	0.00	12.83	12.66	15.76	1.66	17.42	24.00	Pass	
HE80	MCS0	2	199	6945	484/65	0.07	0.04	10.08	10.01	13.06	1.66	14.72	24.00	Pass	
HE80	MCS0	2	215	7025	Full	0.00	0.00	11.36	11.24	14.31	1.66	15.97	24.00	Pass	
HE80	MCS0	2	215	7025	484/66	0.07	0.04	9.51	9.03	12.29	1.66	13.95	24.00	Pass	
HE160	MCS0	2	175	6825	Full	0.00	0.00	14.09	13.27	16.71	1.66	18.37	24.00	Pass	
HE160	MCS0	2	175	6825	996/67	0.05	0.05	11.08	10.76	13.93	1.66	15.59	24.00	Pass	
HE160	MCS0	2	207	6985	Full	0.00	0.00	14.07	13.68	16.89	1.66	18.55	24.00	Pass	
HE160	MCS0	2	207	6985	996/68	0.05	0.05	11.37	10.42	13.93	1.66	15.59	24.00	Pass	

Power Setting	
Ant 8	Ant 10
7	
-2.5	
0.5	
3.5	
6.5	
-3	
0	
3	
6.5	
-2.5	
0	
3.5	
6	
-4	
-1	
2.5	
-5	
-15	
-12	
-9	
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7.5	
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6.5	
9.5	
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12.5	
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13	
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11.5	
9	
14	
11	
14	
11	

TEST RESULTS DATA
EIRP Power Table

CDD Mode

UNII-5 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	001	5955	Full	0.00	0.00	4.04	4.37	7.22	0.35		7.57	24.00	Pass	4	
HE20	MCS0	2	001	5955	26/0	0.00	0.00	-5.22	-5.01	-2.10	0.35		-1.75	24.00	Pass	-4.5	
HE20	MCS0	2	001	5955	52/37	0.00	0.00	-3.85	-3.12	-0.46	0.35		-0.11	24.00	Pass	-2.5	
HE20	MCS0	2	001	5955	106/53	0.00	0.00	1.60	0.93	4.29	0.35		4.64	24.00	Pass	0.5	
HE20	MCS0	2	049	6195	Full	0.00	0.00	4.75	4.40	7.59	0.35		7.94	24.00	Pass	4.5	
HE20	MCS0	2	049	6195	26/0	0.00	0.00	-5.65	-5.57	-2.60	0.35		-2.25	24.00	Pass	-5	
HE20	MCS0	2	049	6195	52/37	0.00	0.00	-3.36	-3.27	-0.30	0.35		0.05	24.00	Pass	-2.5	
HE20	MCS0	2	049	6195	106/53	0.00	0.00	0.88	0.29	3.61	0.35		3.96	24.00	Pass	0.5	
HE20	MCS0	2	093	6415	Full	0.00	0.00	4.96	4.54	7.77	0.35		8.12	24.00	Pass	5	
HE20	MCS0	2	093	6415	26/8	0.00	0.00	-5.15	-4.90	-2.01	0.35		-1.66	24.00	Pass	-3	
HE20	MCS0	2	093	6415	52/40	0.00	0.00	-1.78	-2.25	1.00	0.35		1.35	24.00	Pass	0	
HE20	MCS0	2	093	6415	106/54	0.00	0.00	1.36	1.07	4.23	0.35		4.58	24.00	Pass	3	
HE40	MCS0	2	003	5965	Full	0.00	0.00	7.00	7.38	10.20	0.35		10.55	24.00	Pass	7	
HE40	MCS0	2	003	5965	242/61	0.00	0.00	5.01	5.09	8.06	0.35		8.41	24.00	Pass	4.5	
HE40	MCS0	2	051	6205	Full	0.00	0.00	7.75	7.08	10.44	0.35		10.79	24.00	Pass	7.5	
HE40	MCS0	2	051	6205	242/61	0.00	0.00	4.93	4.49	7.73	0.35		8.08	24.00	Pass	4.5	
HE40	MCS0	2	091	6405	Full	0.00	0.00	7.94	7.40	10.69	0.35		11.04	24.00	Pass	8	
HE40	MCS0	2	091	6405	242/62	0.00	0.00	5.20	4.76	8.00	0.35		8.35	24.00	Pass	5	
HE80	MCS0	2	007	5985	Full	0.00	0.00	10.46	10.83	13.66	0.35		14.01	24.00	Pass	10.5	
HE80	MCS0	2	007	5985	484/65	0.07	0.04	8.04	8.08	11.07	0.35		11.42	24.00	Pass	7.5	
HE80	MCS0	2	055	6225	Full	0.00	0.00	10.71	10.31	13.52	0.35		13.87	24.00	Pass	10.5	
HE80	MCS0	2	055	6225	484/65	0.07	0.04	7.75	7.39	10.58	0.35		10.93	24.00	Pass	7	
HE80	MCS0	2	087	6385	Full	0.00	0.00	11.25	10.49	13.90	0.35		14.25	24.00	Pass	11	
HE80	MCS0	2	087	6385	484/66	0.07	0.04	8.19	8.03	11.12	0.35		11.47	24.00	Pass	8	
HE160	MCS0	2	015	6025	Full	0.00	0.00	11.15	11.27	14.22	0.35		14.57	24.00	Pass	11	
HE160	MCS0	2	015	6025	996/67	0.05	0.05	8.52	8.73	11.63	0.35		11.98	24.00	Pass	8	
HE160	MCS0	2	047	6185	Full	0.00	0.00	11.54	10.52	14.07	0.35		14.42	24.00	Pass	11	
HE160	MCS0	2	047	6185	996/67	0.05	0.05	8.84	8.03	11.46	0.35		11.81	24.00	Pass	7.5	
HE160	MCS0	2	079	6345	Full	0.00	0.00	11.25	10.58	13.94	0.35		14.29	24.00	Pass	11	
HE160	MCS0	2	079	6345	996/68	0.05	0.05	7.91	8.02	10.97	0.35		11.32	24.00	Pass	8	

TEST RESULTS DATA
EIRP Power Table

UNII-6 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	097	6435	Full	0.00	0.00	5.17	4.49	7.85	0.75		8.60	24.00	Pass	5	
HE20	MCS0	2	097	6435	26/0	0.00	0.00	-4.85	-4.81	-1.82	0.75		-1.07	24.00	Pass	-5	
HE20	MCS0	2	097	6435	52/37	0.00	0.00	-1.41	-2.08	1.28	0.75		2.03	24.00	Pass	-2	
HE20	MCS0	2	097	6435	106/53	0.00	0.00	1.60	0.96	4.30	0.75		5.05	24.00	Pass	1	
HE20	MCS0	2	105	6475	Full	0.00	0.00	5.43	4.95	8.21	0.75		8.96	24.00	Pass	5.5	
HE20	MCS0	2	105	6475	26/0	0.00	0.00	-3.66	-3.93	-0.78	0.75		-0.03	24.00	Pass	-4	
HE20	MCS0	2	105	6475	52/37	0.00	0.00	-0.89	-1.74	1.72	0.75		2.47	24.00	Pass	-1.5	
HE20	MCS0	2	105	6475	106/53	0.00	0.00	2.43	1.81	5.14	0.75		5.89	24.00	Pass	2	
HE20	MCS0	2	113	6515	Full	0.00	0.00	5.25	4.55	7.92	0.75		8.67	24.00	Pass	5	
HE20	MCS0	2	113	6515	26/8	0.00	0.00	-4.56	-4.85	-1.69	0.75		-0.94	24.00	Pass	-5	
HE20	MCS0	2	113	6515	52/40	0.00	0.00	-1.80	-2.04	1.09	0.75		1.84	24.00	Pass	-2	
HE20	MCS0	2	113	6515	106/54	0.00	0.00	1.79	1.50	4.66	0.75		5.41	24.00	Pass	1.5	
HE40	MCS0	2	099	6445	Full	0.00	0.00	7.46	6.76	10.13	0.75		10.88	24.00	Pass	7.5	
HE40	MCS0	2	099	6445	242/61	0.00	0.00	4.86	3.86	7.40	0.75		8.15	24.00	Pass	4.5	
HE40	MCS0	2	107	6485	Full	0.00	0.00	8.13	7.14	10.67	0.75		11.42	24.00	Pass	8	
HE40	MCS0	2	107	6485	242/61	0.00	0.00	5.39	4.60	8.02	0.75		8.77	24.00	Pass	5	
HE80	MCS0	2	103	6465	Full	0.00	0.00	11.24	10.21	13.77	0.75		14.52	24.00	Pass	11	
HE80	MCS0	2	103	6465	484/65	0.07	0.04	7.79	7.39	10.61	0.75		11.36	24.00	Pass	7.5	

TEST RESULTS DATA
EIRP Power Table

UNII-7 MIMO																	
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail	Power Setting	
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM			Ant 8	Ant 10
HE20	MCS0	2	117	6535	Full	0.00	0.00	4.08	4.00	7.05	1.02		8.07	24.00	Pass	4	
HE20	MCS0	2	117	6535	26/0	0.00	0.00	-4.96	-5.26	-2.10	1.02		-1.08	24.00	Pass	-5.5	
HE20	MCS0	2	117	6535	52/37	0.00	0.00	-2.55	-2.97	0.26	1.02		1.28	24.00	Pass	-3	
HE20	MCS0	2	117	6535	106/53	0.00	0.00	1.28	0.35	3.85	1.02		4.87	24.00	Pass	0.5	
HE20	MCS0	2	149	6695	Full	0.00	0.00	3.82	3.66	6.75	1.02		7.77	24.00	Pass	4	
HE20	MCS0	2	149	6695	26/0	0.00	0.00	-5.99	-5.10	-2.51	1.02		-1.49	24.00	Pass	-5.5	
HE20	MCS0	2	149	6695	52/37	0.00	0.00	-3.41	-2.76	-0.06	1.02		0.96	24.00	Pass	-3	
HE20	MCS0	2	149	6695	106/53	0.00	0.00	0.11	0.11	3.12	1.02		4.14	24.00	Pass	0.5	
HE20	MCS0	2	181	6855	Full	0.00	0.00	3.67	4.41	7.07	1.02		8.09	24.00	Pass	4.5	
HE20	MCS0	2	181	6855	26/8	0.00	0.00	-5.11	-5.51	-2.30	1.02		-1.28	24.00	Pass	-5	
HE20	MCS0	2	181	6855	52/40	0.00	0.00	-2.19	-2.16	0.84	1.02		1.86	24.00	Pass	-2	
HE20	MCS0	2	181	6855	106/54	0.00	0.00	0.88	0.79	3.85	1.02		4.87	24.00	Pass	1	
HE20	MCS0	2	185	6875	Full	0.00	0.00	3.18	3.85	6.54	1.02		7.56	24.00	Pass	4	
HE20	MCS0	2	185	6875	26/8	0.00	0.00	-5.65	-6.09	-2.85	1.02		-1.83	24.00	Pass	-5.5	
HE20	MCS0	2	185	6875	52/40	0.00	0.00	-2.68	-3.27	0.05	1.02		1.07	24.00	Pass	-2.5	
HE20	MCS0	2	185	6875	106/54	0.00	0.00	0.43	0.26	3.36	1.02		4.38	24.00	Pass	0.5	
HE40	MCS0	2	115	6525	Full	0.00	0.00	6.96	6.27	9.64	1.02		10.66	24.00	Pass	7	
HE40	MCS0	2	115	6525	242/62	0.00	0.00	4.12	4.00	7.07	1.02		8.09	24.00	Pass	4	
HE40	MCS0	2	123	6565	Full	0.00	0.00	7.05	6.36	9.73	1.02		10.75	24.00	Pass	7	
HE40	MCS0	2	123	6565	242/61	0.00	0.00	3.84	4.05	6.96	1.02		7.98	24.00	Pass	4	
HE40	MCS0	2	147	6685	Full	0.00	0.00	6.94	6.52	9.75	1.02		10.77	24.00	Pass	7	
HE40	MCS0	2	147	6685	242/61	0.00	0.00	3.95	4.25	7.11	1.02		8.13	24.00	Pass	4.5	
HE40	MCS0	2	179	6845	Full	0.00	0.00	7.30	6.62	9.98	1.02		11.00	24.00	Pass	7.5	
HE40	MCS0	2	179	6845	242/62	0.00	0.00	4.40	4.71	7.57	1.02		8.59	24.00	Pass	5	
HE40	MCS0	2	187	6885	Full	0.00	0.00	6.80	6.33	9.58	1.02		10.60	24.00	Pass	7	
HE40	MCS0	2	187	6885	484/65	0.00	0.00	3.73	4.34	7.06	1.02		8.08	24.00	Pass	4.5	
HE80	MCS0	2	119	6545	Full	0.00	0.00	10.27	9.28	12.81	1.02		13.83	24.00	Pass	10	
HE80	MCS0	2	119	6545	484/66	0.07	0.04	7.26	6.87	10.08	1.02		11.10	24.00	Pass	7	
HE80	MCS0	2	135	6625	Full	0.00	0.00	10.55	9.97	13.28	1.02		14.30	24.00	Pass	10.5	
HE80	MCS0	2	135	6625	484/65	0.07	0.04	7.92	7.54	10.74	1.02		11.76	24.00	Pass	7.5	
HE80	MCS0	2	151	6705	Full	0.00	0.00	10.27	9.85	13.08	1.02		14.10	24.00	Pass	10.5	
HE80	MCS0	2	151	6705	484/65	0.07	0.04	7.50	7.24	10.38	1.02		11.40	24.00	Pass	7.5	
HE80	MCS0	2	167	6785	Full	0.00	0.00	10.55	9.82	13.21	1.02		14.23	24.00	Pass	10.5	
HE80	MCS0	2	167	6785	484/66	0.07	0.04	7.72	6.96	10.37	1.02		11.39	24.00	Pass	7.5	
HE80	MCS0	2	183	6865	Full	0.00	0.00	9.28	8.93	12.12	1.02		13.14	24.00	Pass	9.5	
HE80	MCS0	2	183	6865	484/66	0.07	0.04	7.20	6.57	9.91	1.02		10.93	24.00	Pass	7	
HE160	MCS0	2	111	6505	Full	0.00	0.00	11.43	10.36	13.94	1.02		14.96	24.00	Pass	11	
HE160	MCS0	2	111	6505	996/67	0.05	0.05	8.58	7.72	11.18	1.02		12.20	24.00	Pass	8	
HE160	MCS0	2	143	6665	Full	0.00	0.00	11.29	10.63	13.98	1.02		15.00	24.00	Pass	11	
HE160	MCS0	2	143	6665	996/68	0.05	0.05	8.47	8.01	11.25	1.02		12.27	24.00	Pass	8	
HE160	MCS0	2	175	6825	Full	0.00	0.00	11.02	10.23	13.65	1.02		14.67	24.00	Pass	11	
HE160	MCS0	2	175	6825	996/67	0.05	0.05	8.01	7.67	10.85	1.02		11.87	24.00	Pass	8	

TEST RESULTS DATA
EIRP Power Table

UNII-8 MIMO															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
						Ant 8	Ant 10	Ant 8	Ant 10	SUM	Ant 8	Ant 10	SUM		
HE20	MCS0	2	185	6875	Full	0.00	0.00	3.18	3.85	6.54	1.66	8.20	24.00	Pass	
HE20	MCS0	2	185	6875	26/8	0.00	0.00	-5.65	-6.09	-2.85	1.66	-1.19	24.00	Pass	
HE20	MCS0	2	185	6875	52/40	0.00	0.00	-2.68	-3.27	0.05	1.66	1.71	24.00	Pass	
HE20	MCS0	2	185	6875	106/54	0.00	0.00	0.43	0.26	3.36	1.66	5.02	24.00	Pass	
HE20	MCS0	2	189	6895	Full	0.00	0.00	3.21	3.54	6.39	1.66	8.05	24.00	Pass	
HE20	MCS0	2	189	6895	26/0	0.00	0.00	-5.98	-6.09	-3.02	1.66	-1.36	24.00	Pass	
HE20	MCS0	2	189	6895	52/37	0.00	0.00	-3.05	-3.13	-0.08	1.66	1.58	24.00	Pass	
HE20	MCS0	2	189	6895	106/53	0.00	0.00	0.84	-0.26	3.34	1.66	5.00	24.00	Pass	
HE20	MCS0	2	209	6995	Full	0.00	0.00	3.42	3.08	6.26	1.66	7.92	24.00	Pass	
HE20	MCS0	2	209	6995	26/0	0.00	0.00	-5.49	-5.64	-2.55	1.66	-0.89	24.00	Pass	
HE20	MCS0	2	209	6995	52/37	0.00	0.00	-2.72	-3.14	0.09	1.66	1.75	24.00	Pass	
HE20	MCS0	2	209	6995	106/53	0.00	0.00	0.71	0.12	3.44	1.66	5.10	24.00	Pass	
HE20	MCS0	2	229	7095	Full	0.00	0.00	3.39	3.06	6.24	1.66	7.90	24.00	Pass	
HE20	MCS0	2	229	7095	26/8	0.00	0.00	-7.07	-7.01	-4.03	1.66	-2.37	24.00	Pass	
HE20	MCS0	2	229	7095	52/40	0.00	0.00	-3.78	-4.29	-1.02	1.66	0.64	24.00	Pass	
HE20	MCS0	2	229	7095	106/54	0.00	0.00	-0.40	-0.81	2.41	1.66	4.07	24.00	Pass	
HE20	MCS0	2	233	7115	Full	0.00	0.00	-7.54	-8.63	-5.04	1.66	-3.38	24.00	Pass	
HE20	MCS0	2	233	7115	26/8	0.00	0.00	-17.23	-17.88	-14.53	1.66	-12.87	24.00	Pass	
HE20	MCS0	2	233	7115	52/40	0.00	0.00	-14.69	-15.44	-12.04	1.66	-10.38	24.00	Pass	
HE20	MCS0	2	233	7115	106/54	0.00	0.00	-11.73	-12.67	-9.16	1.66	-7.50	24.00	Pass	
HE40	MCS0	2	187	6885	Full	0.00	0.00	6.80	6.33	9.58	1.66	11.24	24.00	Pass	
HE40	MCS0	2	187	6885	484/65	0.00	0.00	3.73	4.34	7.06	1.66	8.72	24.00	Pass	
HE40	MCS0	2	195	6925	Full	0.00	0.00	6.81	6.39	9.62	1.66	11.28	24.00	Pass	
HE40	MCS0	2	195	6925	242/61	0.00	0.00	4.28	4.32	7.31	1.66	8.97	24.00	Pass	
HE40	MCS0	2	211	7005	Full	0.00	0.00	5.65	5.42	8.55	1.66	10.21	24.00	Pass	
HE40	MCS0	2	211	7005	242/62	0.00	0.00	3.22	3.29	6.27	1.66	7.93	24.00	Pass	
HE40	MCS0	2	227	7085	Full	0.00	0.00	6.07	6.02	9.06	1.66	10.72	24.00	Pass	
HE40	MCS0	2	227	7085	242/62	0.00	0.00	3.63	3.57	6.61	1.66	8.27	24.00	Pass	
HE80	MCS0	2	183	6865	Full	0.00	0.00	9.28	8.93	12.12	1.66	13.78	24.00	Pass	
HE80	MCS0	2	183	6865	484/66	0.07	0.04	7.20	6.57	9.91	1.66	11.57	24.00	Pass	
HE80	MCS0	2	199	6945	Full	0.00	0.00	9.74	9.58	12.67	1.66	14.33	24.00	Pass	
HE80	MCS0	2	199	6945	484/65	0.07	0.04	7.00	6.97	10.00	1.66	11.66	24.00	Pass	
HE80	MCS0	2	215	7025	Full	0.00	0.00	8.29	8.16	11.24	1.66	12.90	24.00	Pass	
HE80	MCS0	2	215	7025	484/66	0.07	0.04	6.46	6.00	9.25	1.66	10.91	24.00	Pass	
HE160	MCS0	2	175	6825	Full	0.00	0.00	11.02	10.23	13.65	1.66	15.31	24.00	Pass	
HE160	MCS0	2	175	6825	996/67	0.05	0.05	8.01	7.67	10.85	1.66	12.51	24.00	Pass	
HE160	MCS0	2	207	6985	Full	0.00	0.00	10.99	10.60	13.81	1.66	15.47	24.00	Pass	
HE160	MCS0	2	207	6985	996/68	0.05	0.05	8.32	7.36	10.87	1.66	12.53	24.00	Pass	

Power Setting	
Ant 8	Ant 10
4	
-5.5	
-2.5	
0.5	
3.5	
-6	
-3	
0	
3.5	
-5.5	
-3	
0.5	
3	
-7	
-4	
-0.5	
-8	
-18	
-15	
-12	
7	
4.5	
7	
4.5	
6	
3.5	
6.5	
4	
9.5	
7	
10	
7	
8.5	
6	
11	
8	
11	
8	



Emission Bandwidth

Test Result

TestMode	Antenna	Freq(MHz)	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A-CDD	Ant8	5955	18.91	5945.40	5964.31	≤ 320	PASS
	Ant10	5955	19.15	5945.35	5964.50	≤ 320	PASS
	Ant8	6195	19.15	6185.26	6204.41	≤ 320	PASS
	Ant10	6195	19.20	6185.35	6204.55	≤ 320	PASS
	Ant8	6415	19.29	6405.16	6424.46	≤ 320	PASS
	Ant10	6415	19.25	6405.35	6424.60	≤ 320	PASS
	Ant8	6435	19.01	6425.30	6444.31	≤ 320	PASS
	Ant10	6435	19.20	6425.35	6444.55	≤ 320	PASS
	Ant8	6475	19.20	6465.26	6484.46	≤ 320	PASS
	Ant10	6475	19.39	6465.30	6484.70	≤ 320	PASS
	Ant8	6515	19.10	6505.30	6524.41	≤ 320	PASS
	Ant10	6515	19.25	6505.35	6524.60	≤ 320	PASS
	Ant8	6535	19.01	6525.30	6544.31	≤ 320	PASS
	Ant10	6535	19.34	6525.30	6544.65	≤ 320	PASS
	Ant8	6695	19.01	6685.30	6704.31	≤ 320	PASS
	Ant10	6695	19.06	6685.50	6704.55	≤ 320	PASS
	Ant8	6855	18.96	6845.35	6864.31	≤ 320	PASS
	Ant10	6855	19.29	6845.30	6864.60	≤ 320	PASS
	Ant8	6875	19.25	6865.26	6884.50	≤ 320	PASS
	Ant10	6875	19.06	6865.50	6884.55	≤ 320	PASS
	Ant8	6895	19.06	6885.35	6904.41	≤ 320	PASS
	Ant10	6895	19.10	6885.40	6904.50	≤ 320	PASS
	Ant8	6995	19.25	6985.30	7004.55	≤ 320	PASS
	Ant10	6995	18.87	6985.59	7004.46	≤ 320	PASS
	Ant8	7095	19.10	7085.30	7104.41	≤ 320	PASS
	Ant10	7095	19.20	7085.35	7104.55	≤ 320	PASS
	Ant8	7115	19.01	7105.30	7124.31	≤ 320	PASS
	Ant10	7115	18.96	7105.45	7124.41	≤ 320	PASS
11AX20MIMO-SDM	Ant8	5955	21.25	5944.21	5965.46	≤ 320	PASS
	Ant10	5955	20.91	5944.54	5965.46	≤ 320	PASS
	Ant8	6195	21.25	6184.26	6205.51	≤ 320	PASS
	Ant10	6195	21.06	6184.35	6205.41	≤ 320	PASS
	Ant8	6415	21.06	6404.45	6425.51	≤ 320	PASS
	Ant10	6415	20.96	6404.49	6425.46	≤ 320	PASS
	Ant8	6435	21.34	6424.30	6445.65	≤ 320	PASS
	Ant10	6435	21.01	6424.45	6445.46	≤ 320	PASS
	Ant8	6475	21.39	6464.35	6485.74	≤ 320	PASS
	Ant10	6475	21.06	6464.40	6485.46	≤ 320	PASS
	Ant8	6515	21.25	6504.21	6525.46	≤ 320	PASS
	Ant10	6515	20.82	6504.64	6525.46	≤ 320	PASS
	Ant8	6535	20.96	6524.54	6545.51	≤ 320	PASS
	Ant10	6535	20.72	6524.59	6545.31	≤ 320	PASS
	Ant8	6695	21.06	6684.45	6705.51	≤ 320	PASS



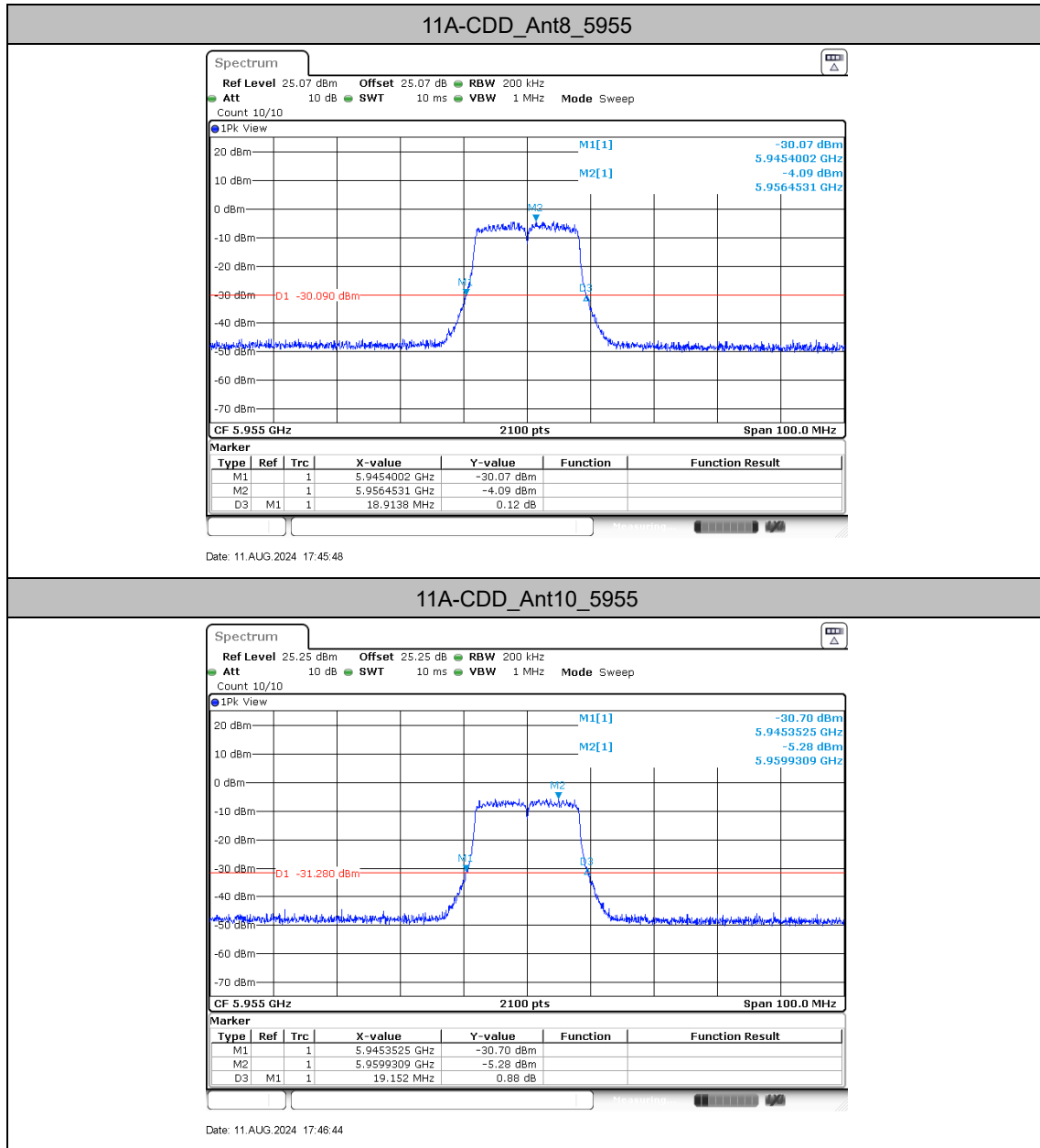
	Ant10	6695	20.82	6684.54	6705.36	≤ 320	PASS
	Ant8	6855	21.20	6844.45	6865.65	≤ 320	PASS
	Ant10	6855	20.87	6844.45	6865.31	≤ 320	PASS
	Ant8	6875	21.20	6864.40	6885.60	≤ 320	PASS
	Ant10	6875	21.01	6864.45	6885.46	≤ 320	PASS
	Ant8	6895	21.01	6884.45	6905.46	≤ 320	PASS
	Ant10	6895	20.96	6884.49	6905.46	≤ 320	PASS
	Ant8	6995	20.72	6984.73	7005.46	≤ 320	PASS
	Ant10	6995	20.82	6984.64	7005.46	≤ 320	PASS
	Ant8	7095	21.11	7084.40	7105.51	≤ 320	PASS
	Ant10	7095	20.87	7084.54	7105.41	≤ 320	PASS
	Ant8	7115	20.68	7104.69	7125.36	≤ 320	PASS
	Ant10	7115	20.87	7104.49	7125.36	≤ 320	PASS
11AX40MIMO -SDM	Ant8	5965	40.69	5944.56	5985.25	≤ 320	PASS
	Ant10	5965	40.59	5944.75	5985.34	≤ 320	PASS
	Ant8	6205	40.78	6184.56	6225.34	≤ 320	PASS
	Ant10	6205	40.59	6184.56	6225.15	≤ 320	PASS
	Ant8	6405	40.69	6384.56	6425.25	≤ 320	PASS
	Ant10	6405	40.40	6384.75	6425.15	≤ 320	PASS
	Ant8	6445	40.78	6424.66	6465.44	≤ 320	PASS
	Ant10	6445	40.50	6424.85	6465.34	≤ 320	PASS
	Ant8	6485	40.88	6464.66	6505.53	≤ 320	PASS
	Ant10	6485	40.40	6464.66	6505.06	≤ 320	PASS
	Ant8	6525	40.59	6504.56	6545.15	≤ 320	PASS
	Ant10	6525	40.50	6504.75	6545.25	≤ 320	PASS
	Ant8	6565	40.50	6544.85	6585.34	≤ 320	PASS
	Ant10	6565	40.59	6544.56	6585.15	≤ 320	PASS
	Ant8	6685	40.88	6664.56	6705.44	≤ 320	PASS
	Ant10	6685	40.40	6664.75	6705.15	≤ 320	PASS
	Ant8	6845	40.59	6824.66	6865.25	≤ 320	PASS
	Ant10	6845	40.50	6824.56	6865.06	≤ 320	PASS
	Ant8	6885	40.78	6864.56	6905.34	≤ 320	PASS
	Ant10	6885	40.50	6864.66	6905.15	≤ 320	PASS
	Ant8	6925	40.30	6904.75	6945.06	≤ 320	PASS
	Ant10	6925	40.50	6904.75	6945.25	≤ 320	PASS
	Ant8	7005	40.50	6984.66	7025.15	≤ 320	PASS
	Ant10	7005	40.50	6984.85	7025.34	≤ 320	PASS
	Ant8	7085	40.30	7064.75	7105.06	≤ 320	PASS
	Ant10	7085	40.30	7064.85	7105.15	≤ 320	PASS
11AX80MIMO -SDM	Ant8	5985	82.13	5943.93	6026.07	≤ 320	PASS
	Ant10	5985	82.13	5943.55	6025.69	≤ 320	PASS
	Ant8	6225	82.13	6183.93	6266.07	≤ 320	PASS
	Ant10	6225	82.52	6183.74	6266.26	≤ 320	PASS
	Ant8	6385	83.28	6343.36	6426.64	≤ 320	PASS
	Ant10	6385	82.32	6343.74	6426.07	≤ 320	PASS
	Ant8	6465	82.32	6423.74	6506.07	≤ 320	PASS
	Ant10	6465	81.94	6423.93	6505.88	≤ 320	PASS
	Ant8	6545	82.13	6503.93	6586.07	≤ 320	PASS
	Ant10	6545	82.32	6503.55	6585.88	≤ 320	PASS
	Ant8	6625	82.90	6583.55	6666.45	≤ 320	PASS

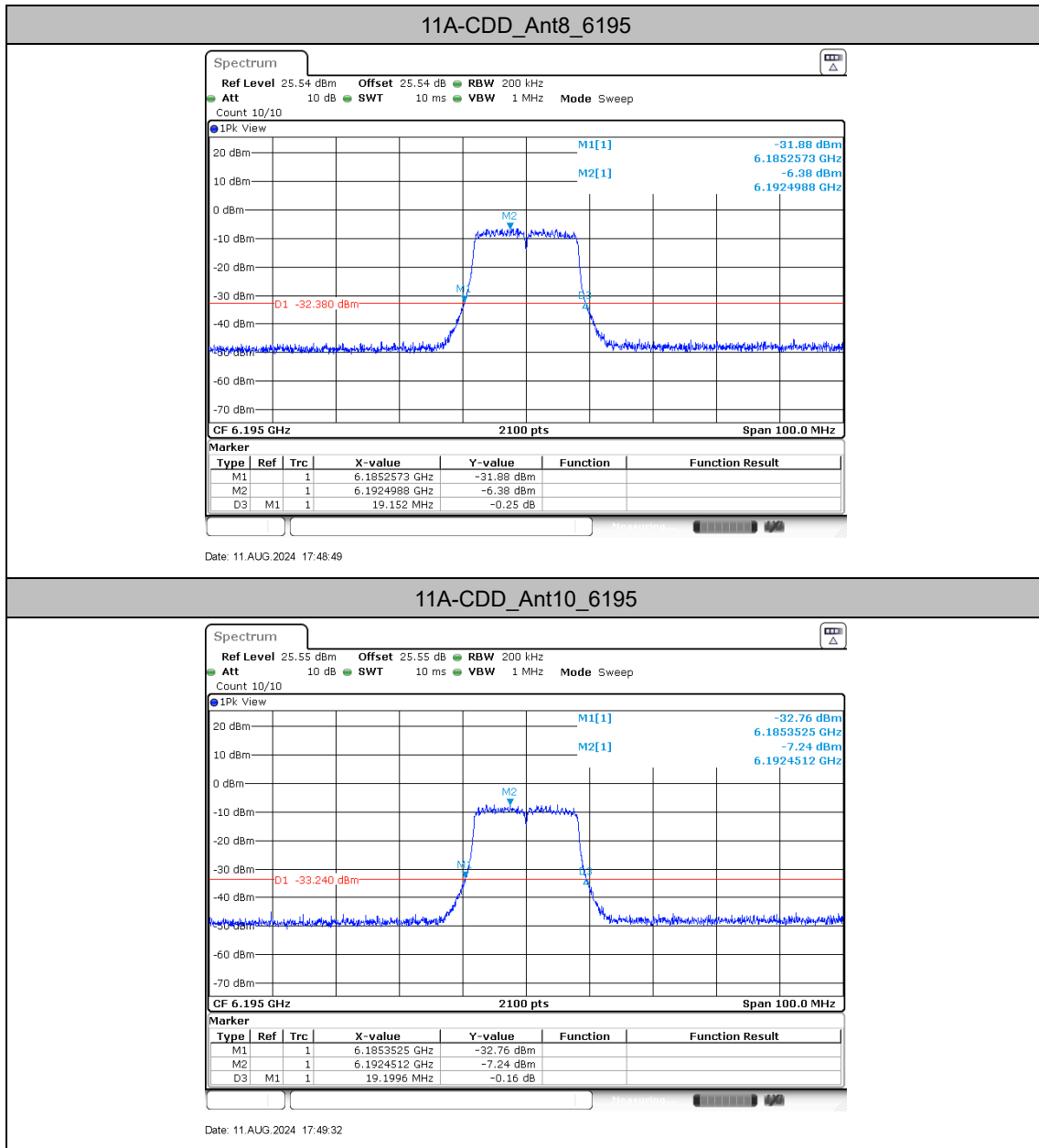


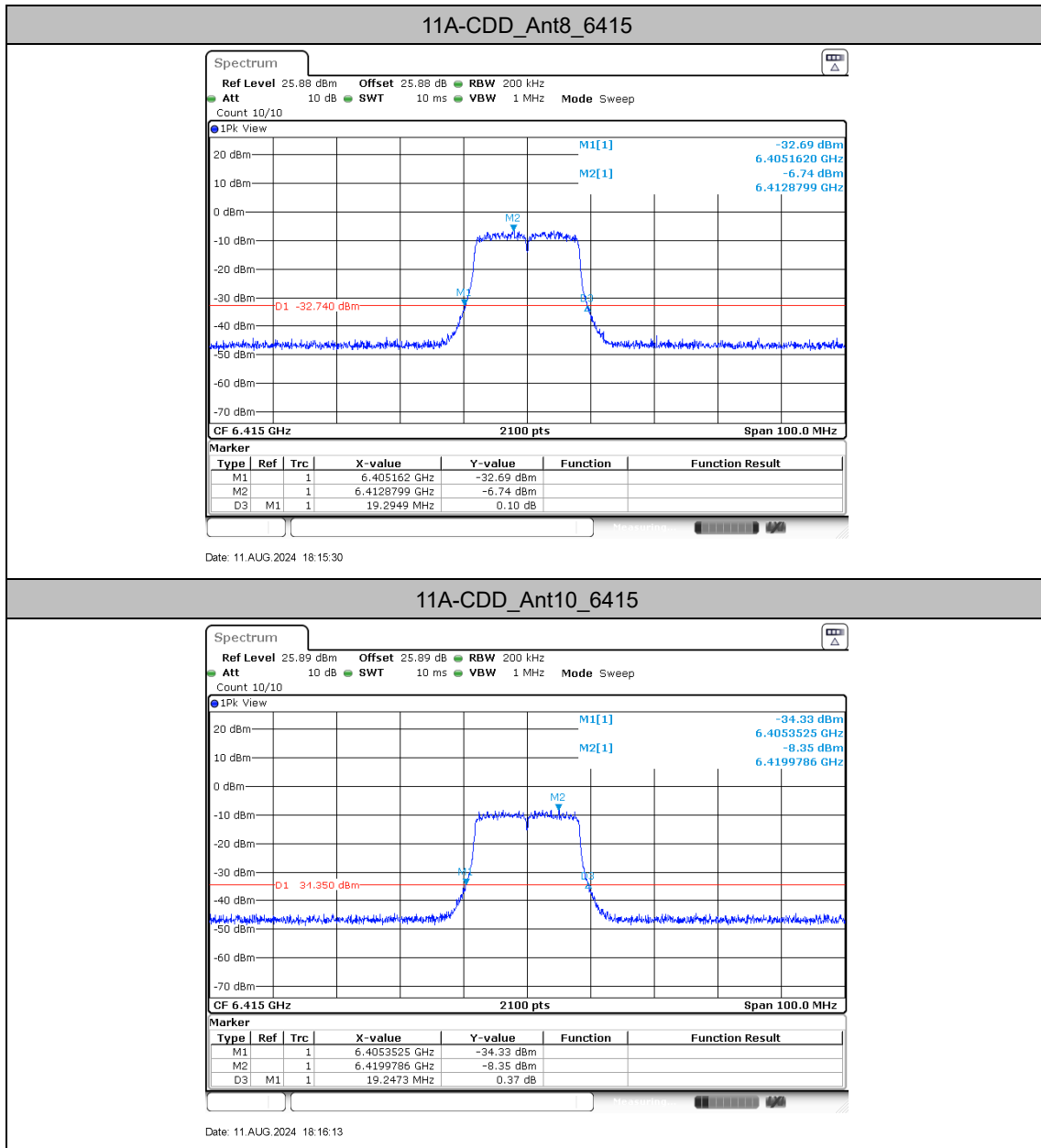
	Ant10	6625	82.32	6583.93	6666.26	≤ 320	PASS
	Ant8	6705	82.13	6664.12	6746.26	≤ 320	PASS
	Ant10	6705	82.32	6663.74	6746.07	≤ 320	PASS
	Ant8	6785	81.94	6743.93	6825.88	≤ 320	PASS
	Ant10	6785	82.13	6743.93	6826.07	≤ 320	PASS
	Ant8	6865	81.94	6824.12	6906.07	≤ 320	PASS
	Ant10	6865	81.37	6824.31	6905.69	≤ 320	PASS
	Ant8	6945	82.32	6903.74	6986.07	≤ 320	PASS
	Ant10	6945	81.37	6904.31	6985.69	≤ 320	PASS
	Ant8	7025	82.13	6983.74	7065.88	≤ 320	PASS
	Ant10	7025	82.90	6983.74	7066.64	≤ 320	PASS
11AX160MIMO -SDM	Ant8	6025	165.41	5942.10	6107.52	≤ 320	PASS
	Ant10	6025	165.79	5942.10	6107.90	≤ 320	PASS
	Ant8	6185	165.79	6101.72	6267.52	≤ 320	PASS
	Ant10	6185	165.79	6101.72	6267.52	≤ 320	PASS
	Ant8	6345	164.65	6262.87	6427.52	≤ 320	PASS
	Ant10	6345	164.65	6262.48	6427.13	≤ 320	PASS
	Ant8	6505	165.03	6422.10	6587.13	≤ 320	PASS
	Ant10	6505	164.65	6422.87	6587.52	≤ 320	PASS
	Ant8	6665	165.41	6582.48	6747.90	≤ 320	PASS
	Ant10	6665	165.41	6583.25	6748.66	≤ 320	PASS
	Ant8	6825	164.65	6742.48	6907.13	≤ 320	PASS
	Ant10	6825	163.89	6743.25	6907.13	≤ 320	PASS
	Ant8	6985	165.03	6902.48	7067.52	≤ 320	PASS
	Ant10	6985	165.41	6902.48	7067.90	≤ 320	PASS

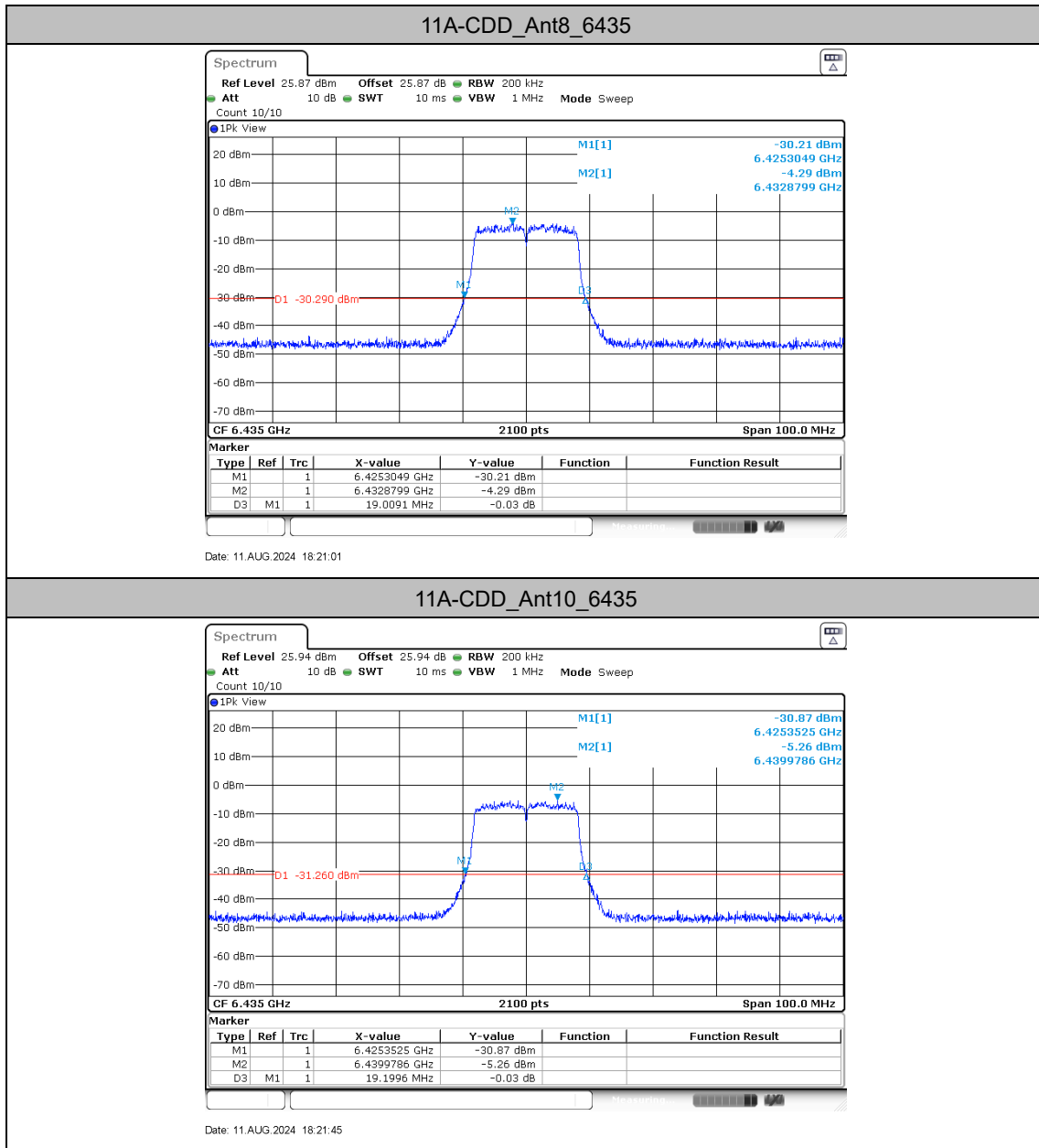


Test Graphs



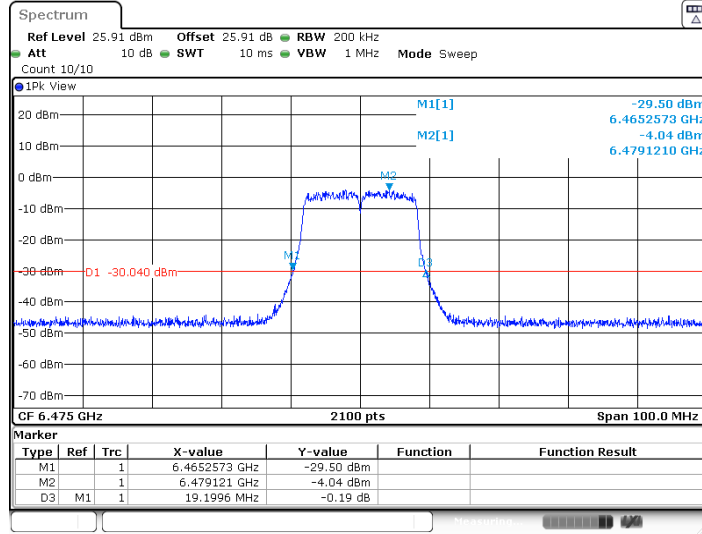






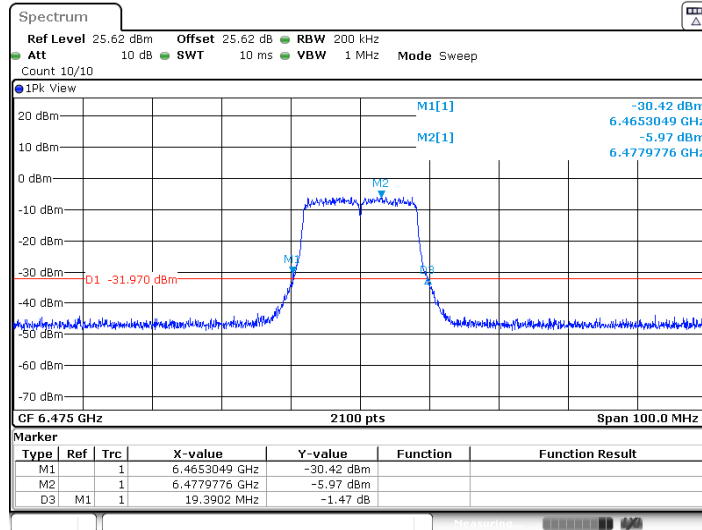


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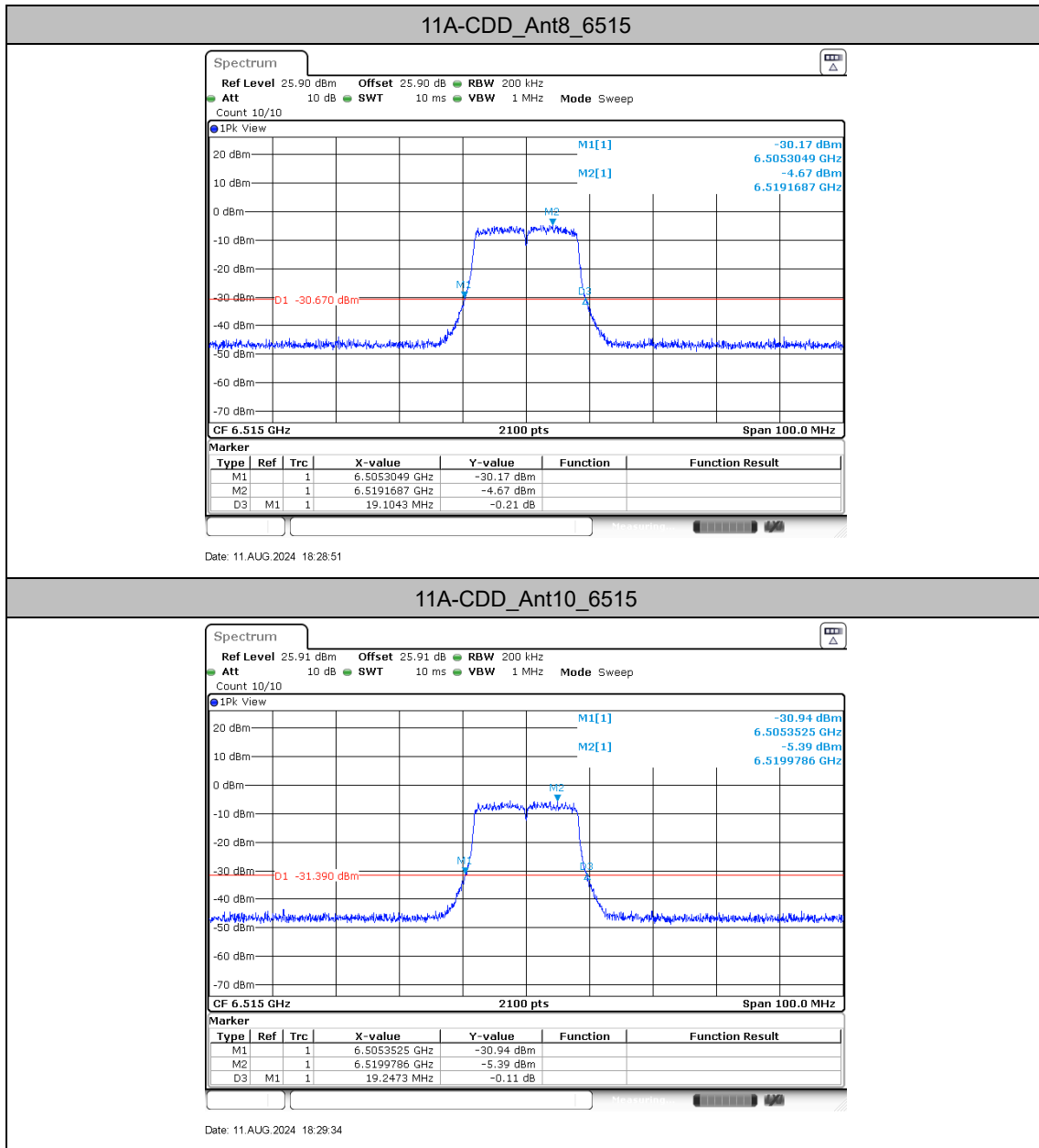


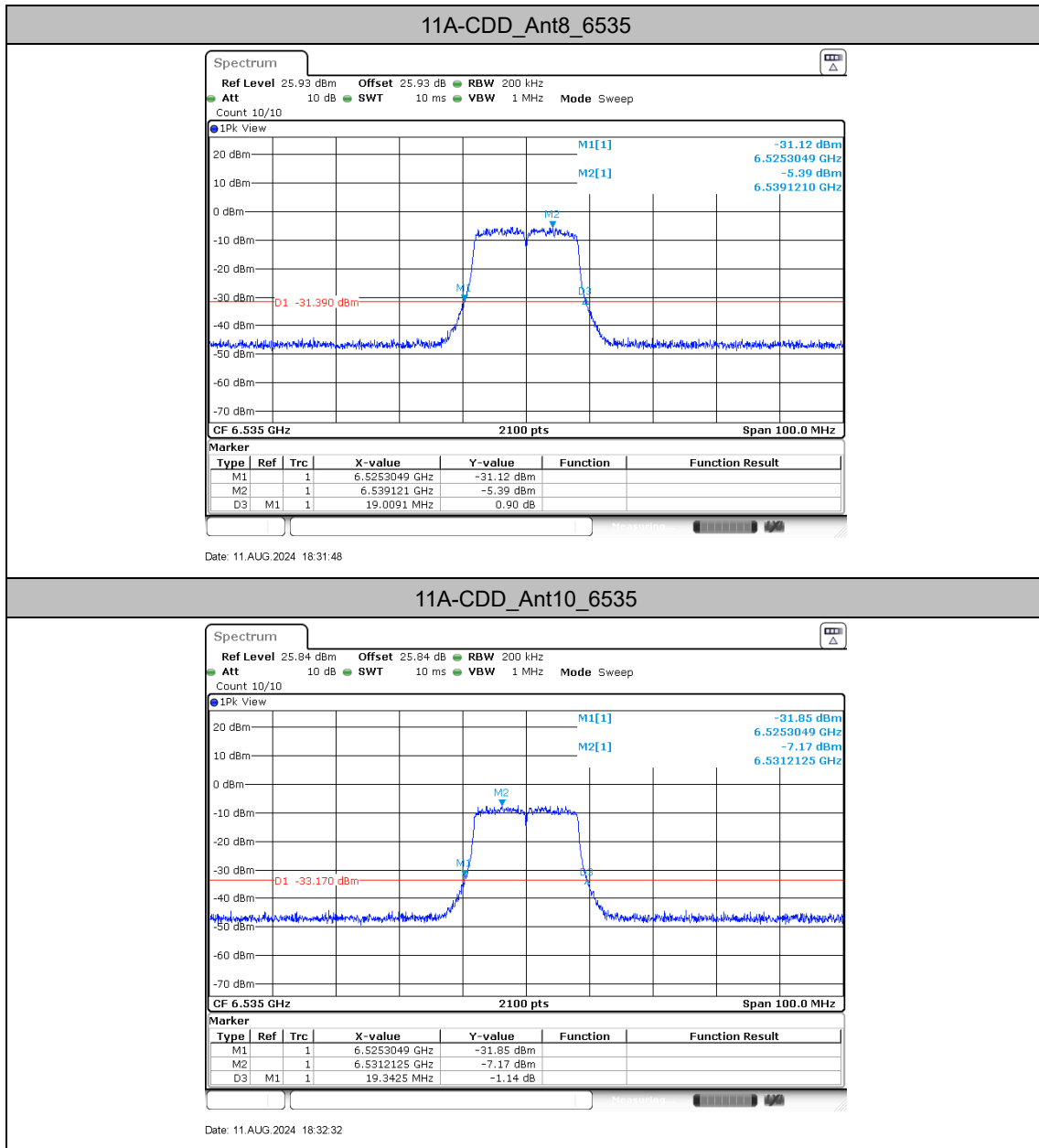
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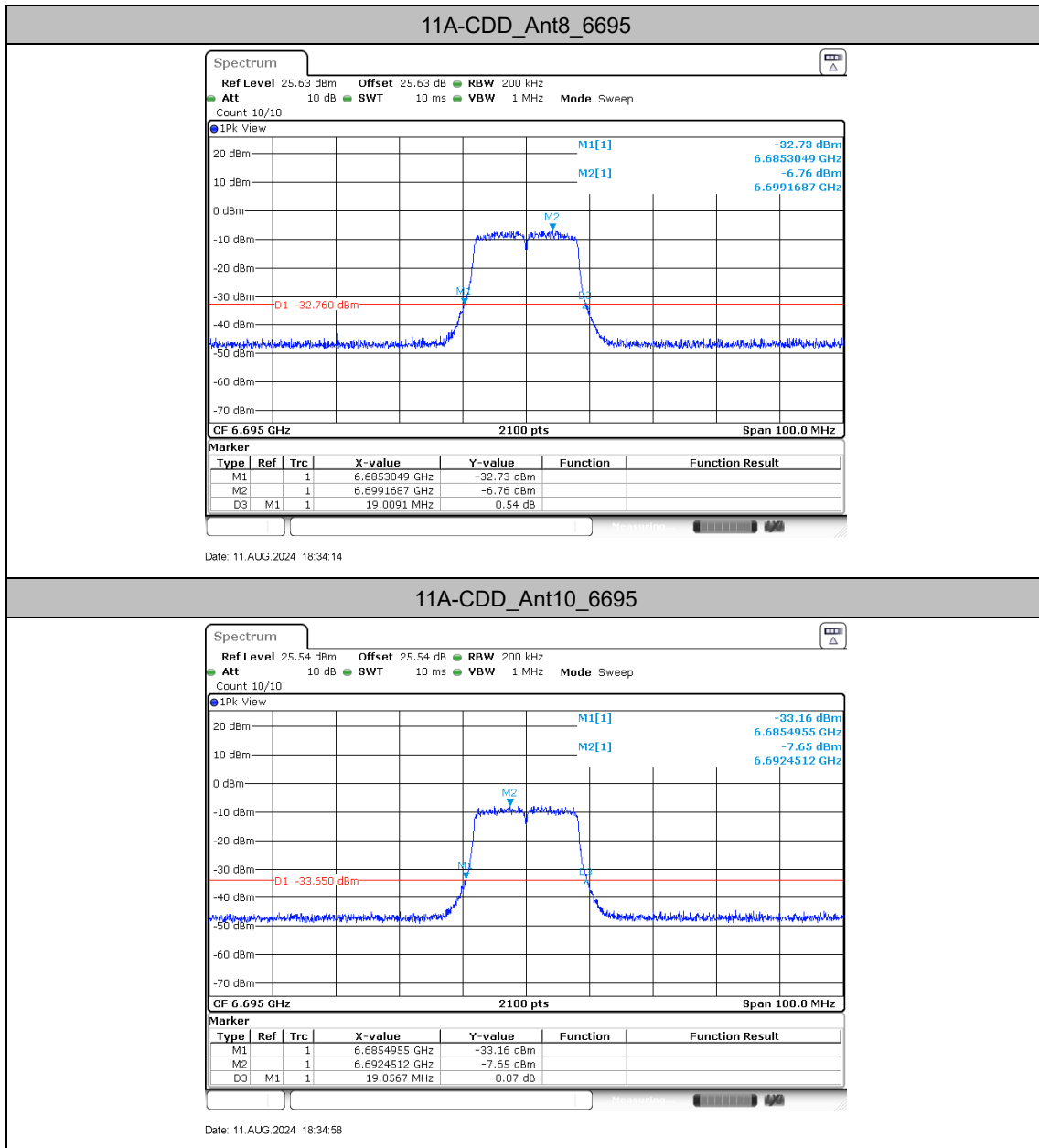
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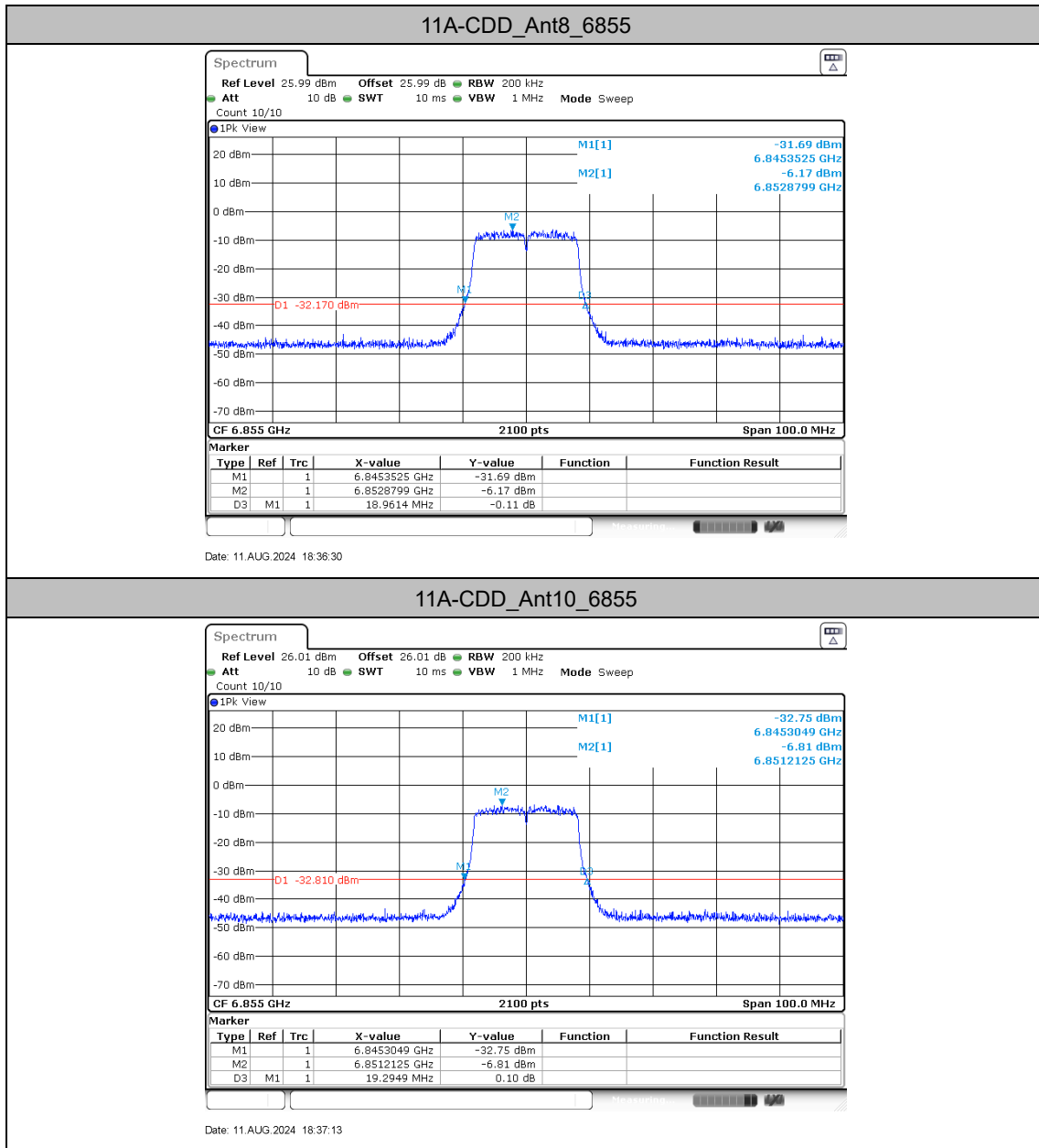


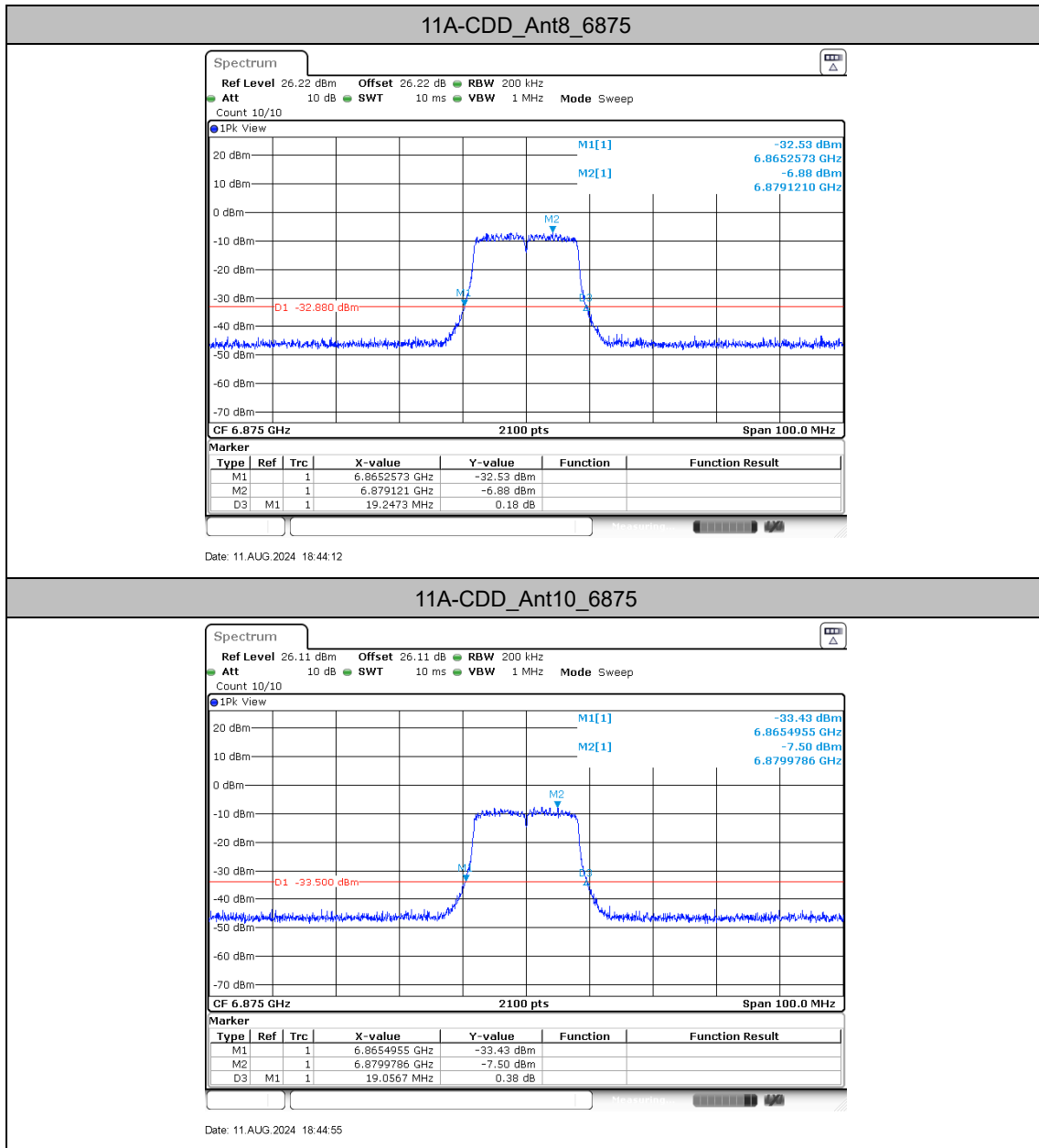
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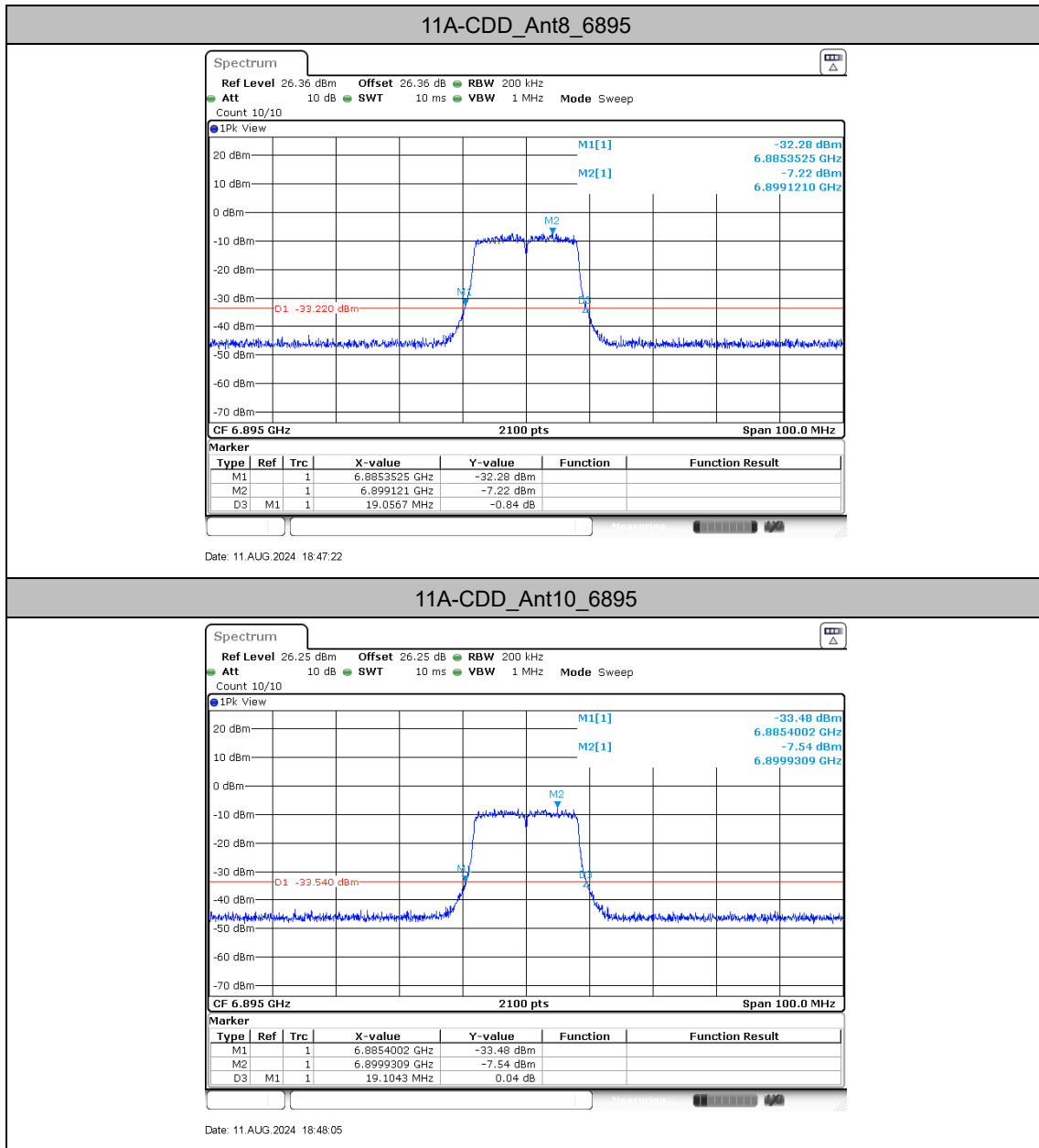


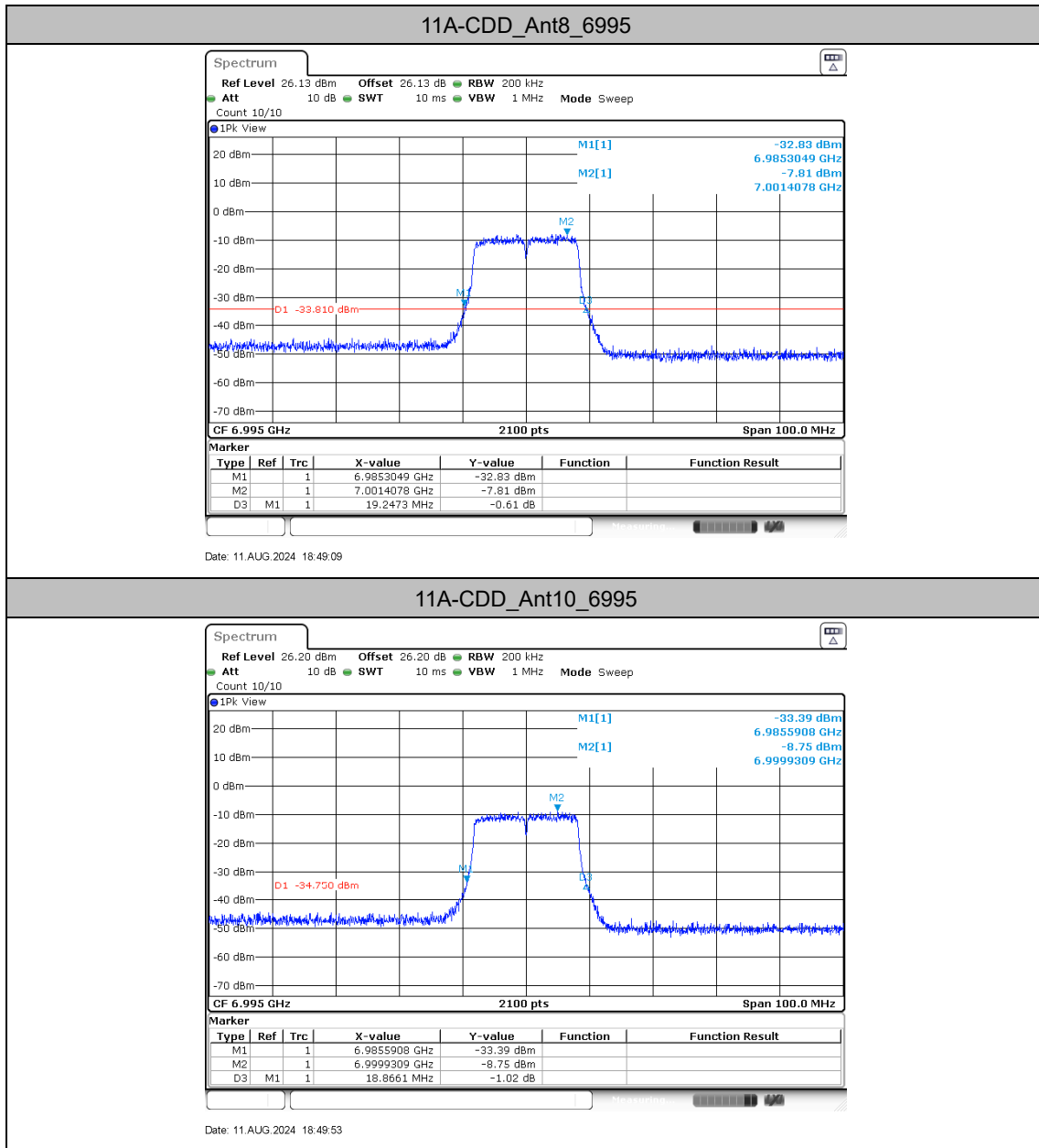


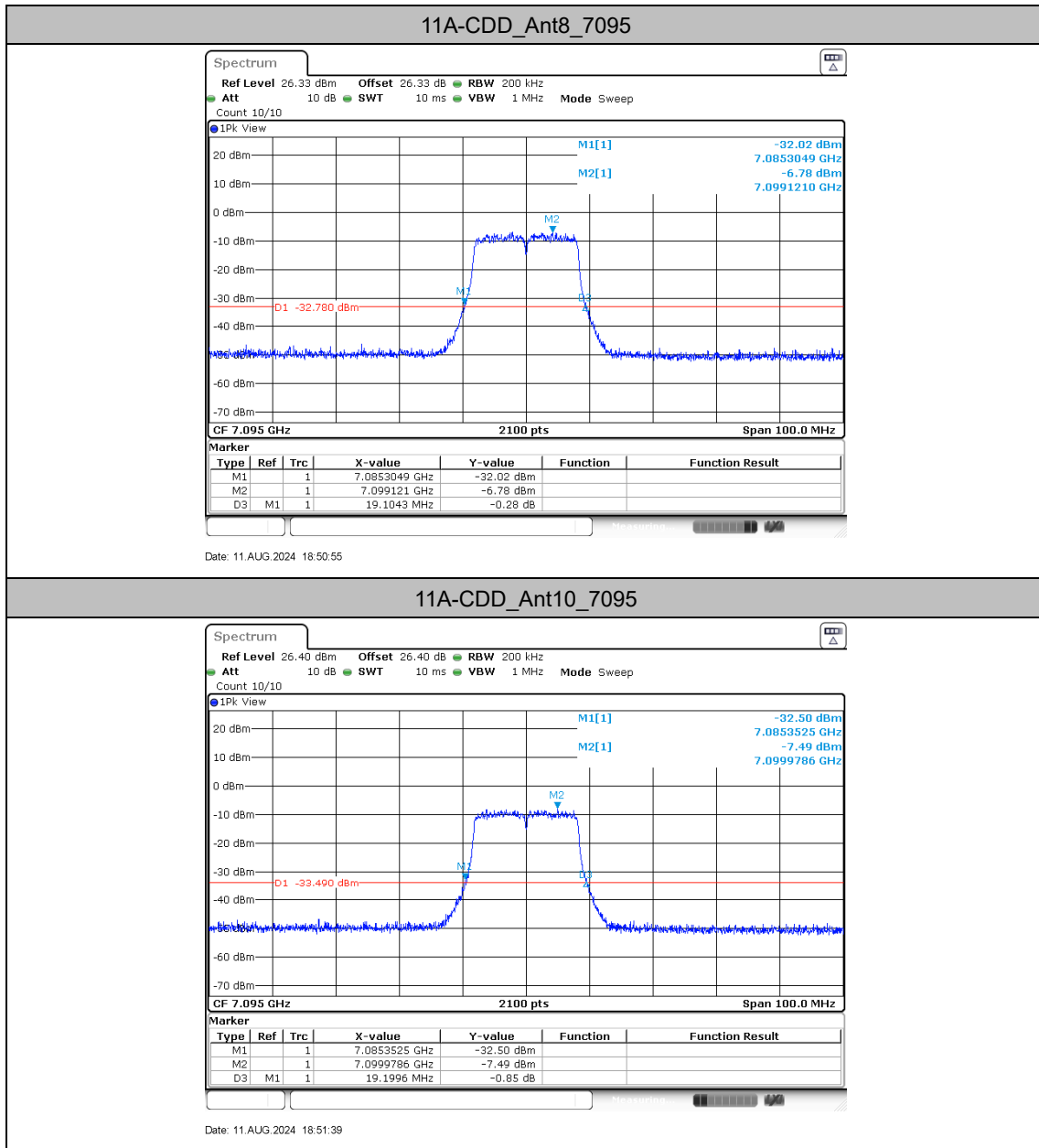


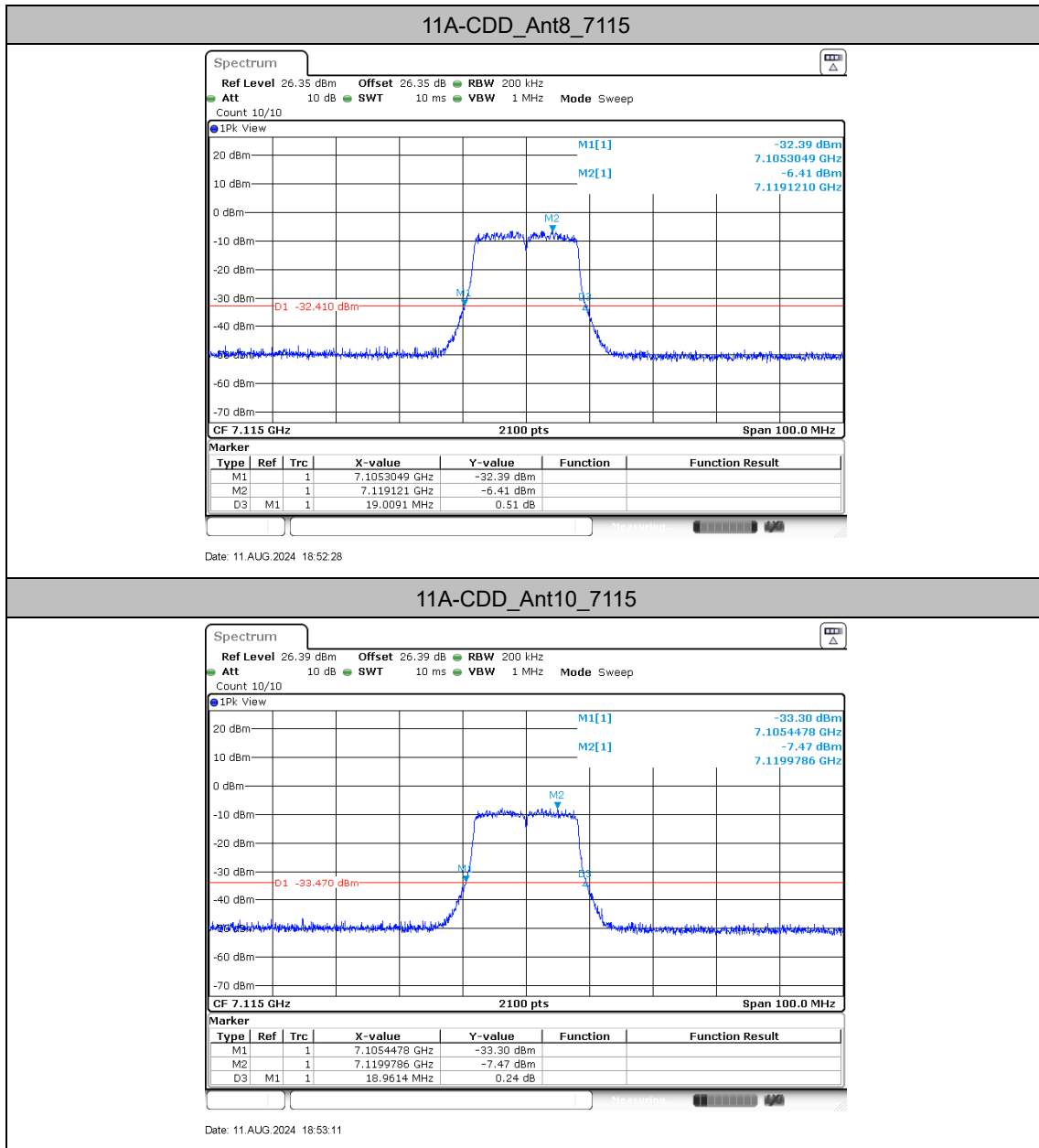


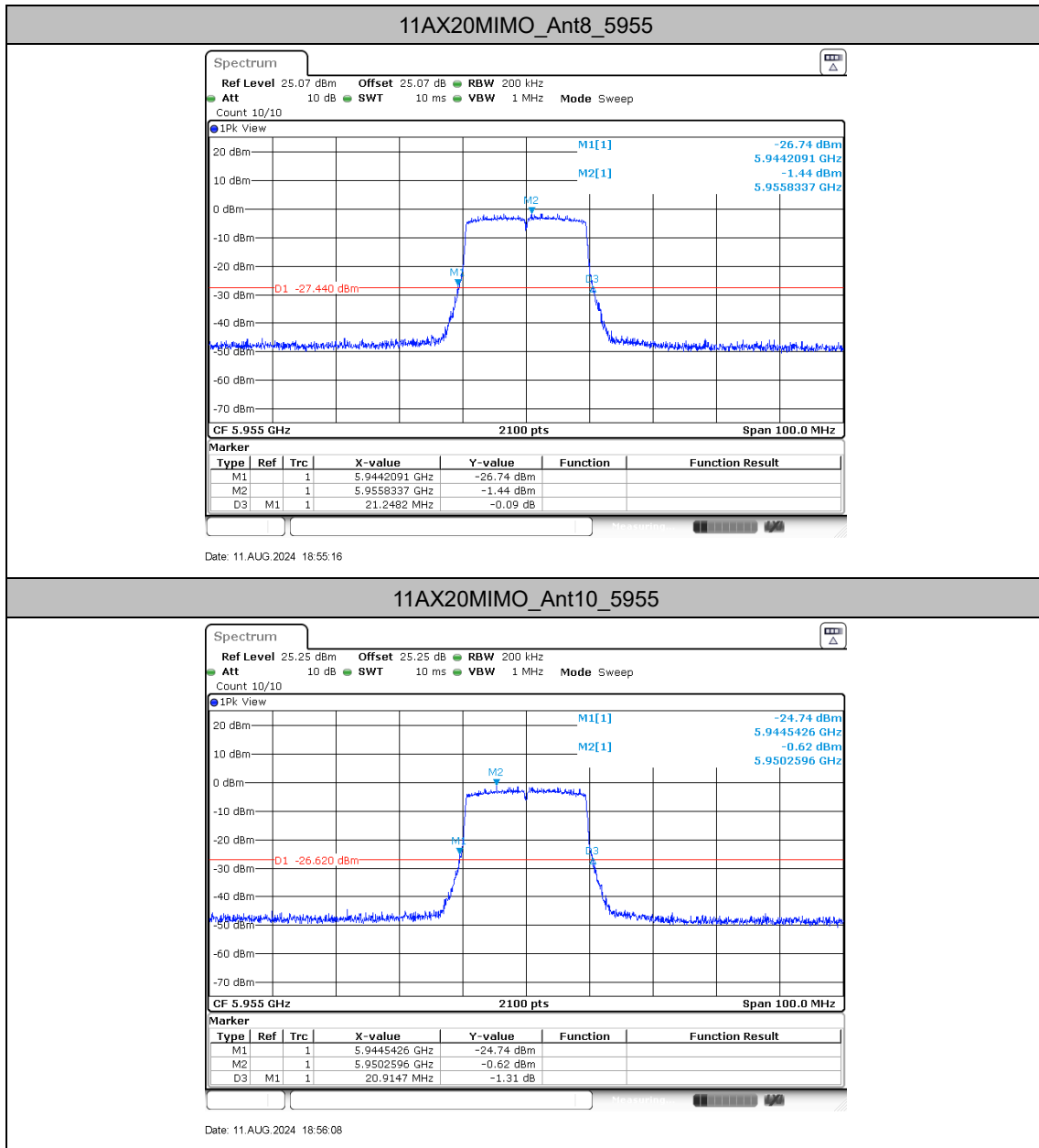


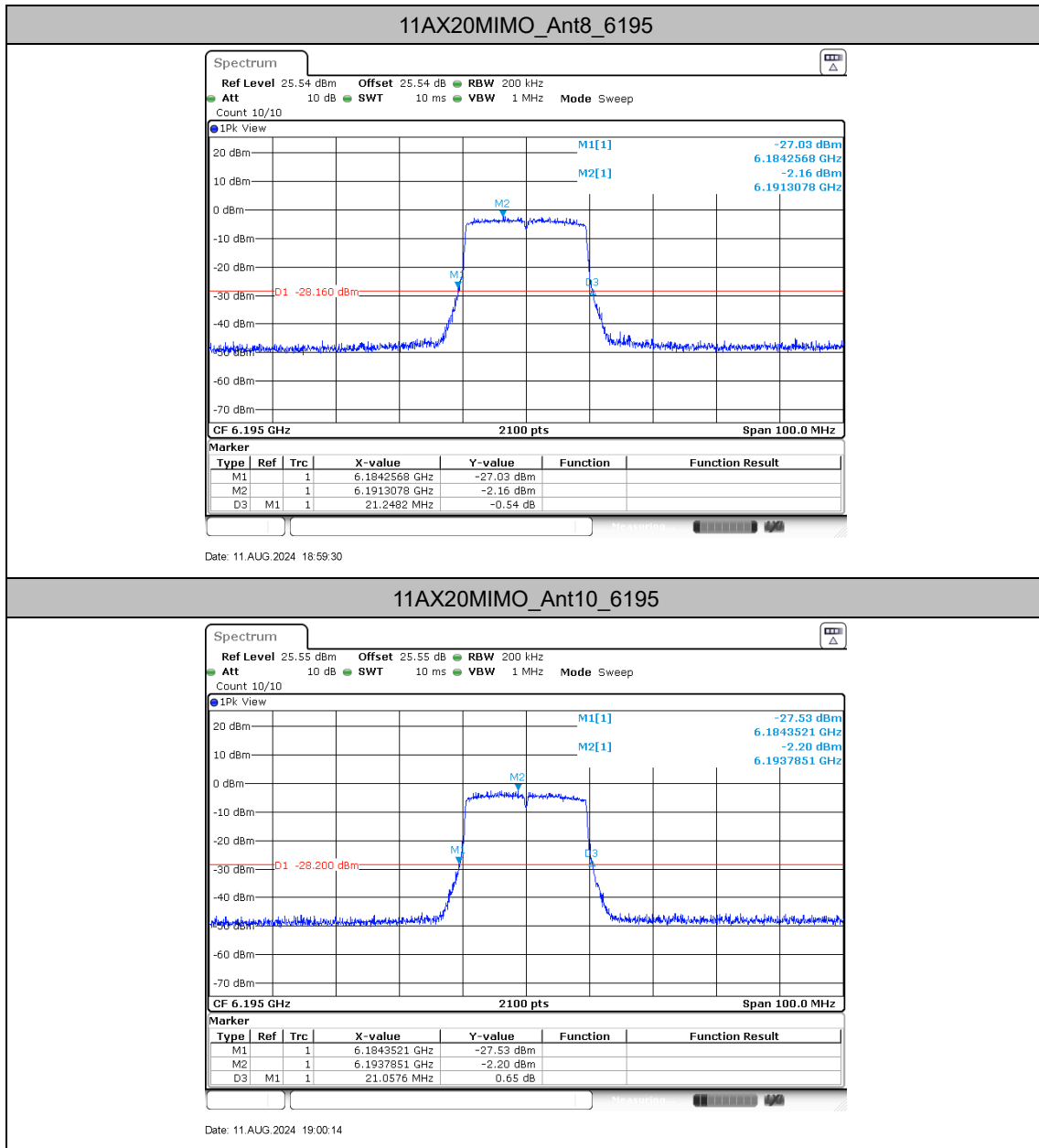


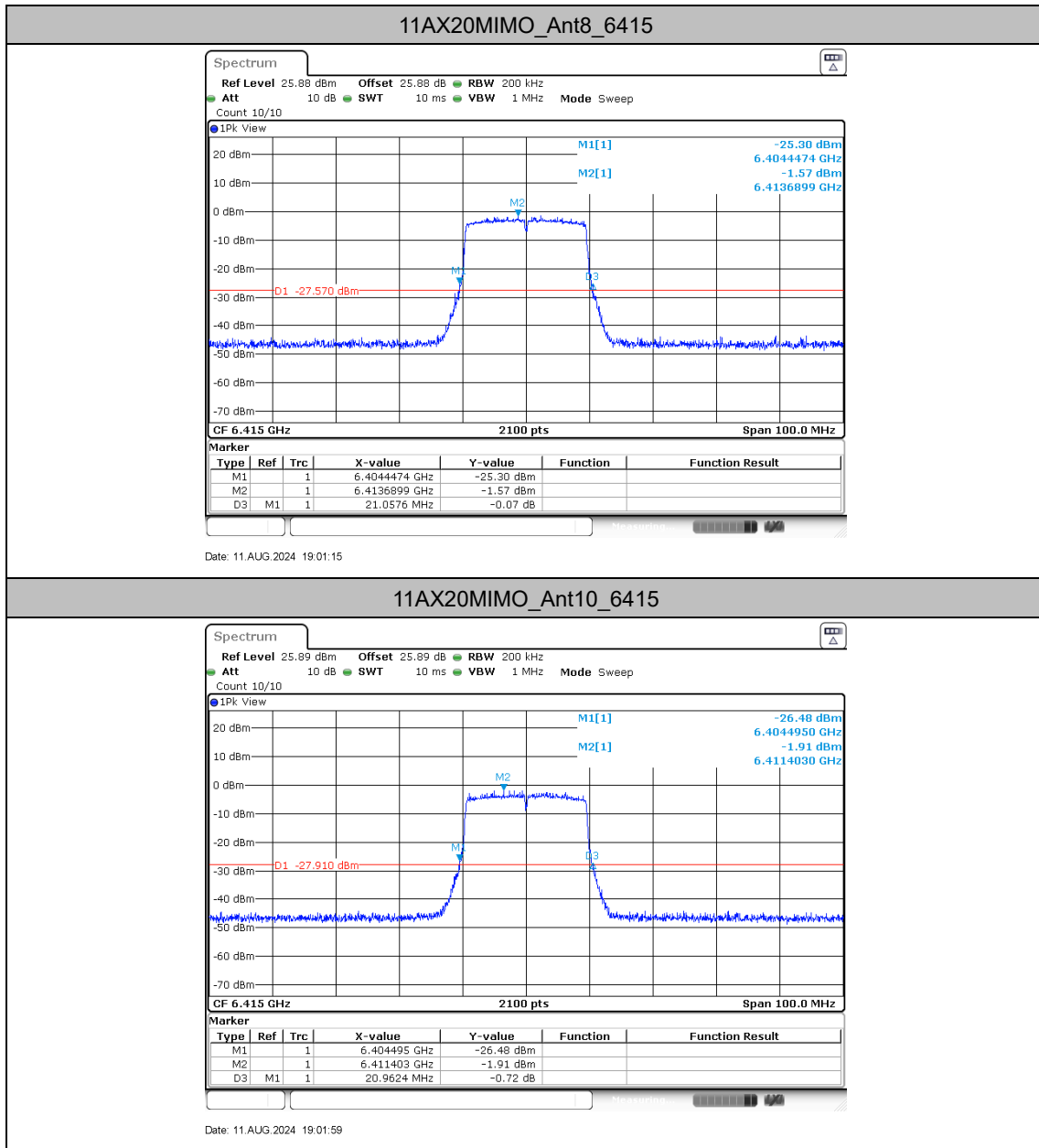


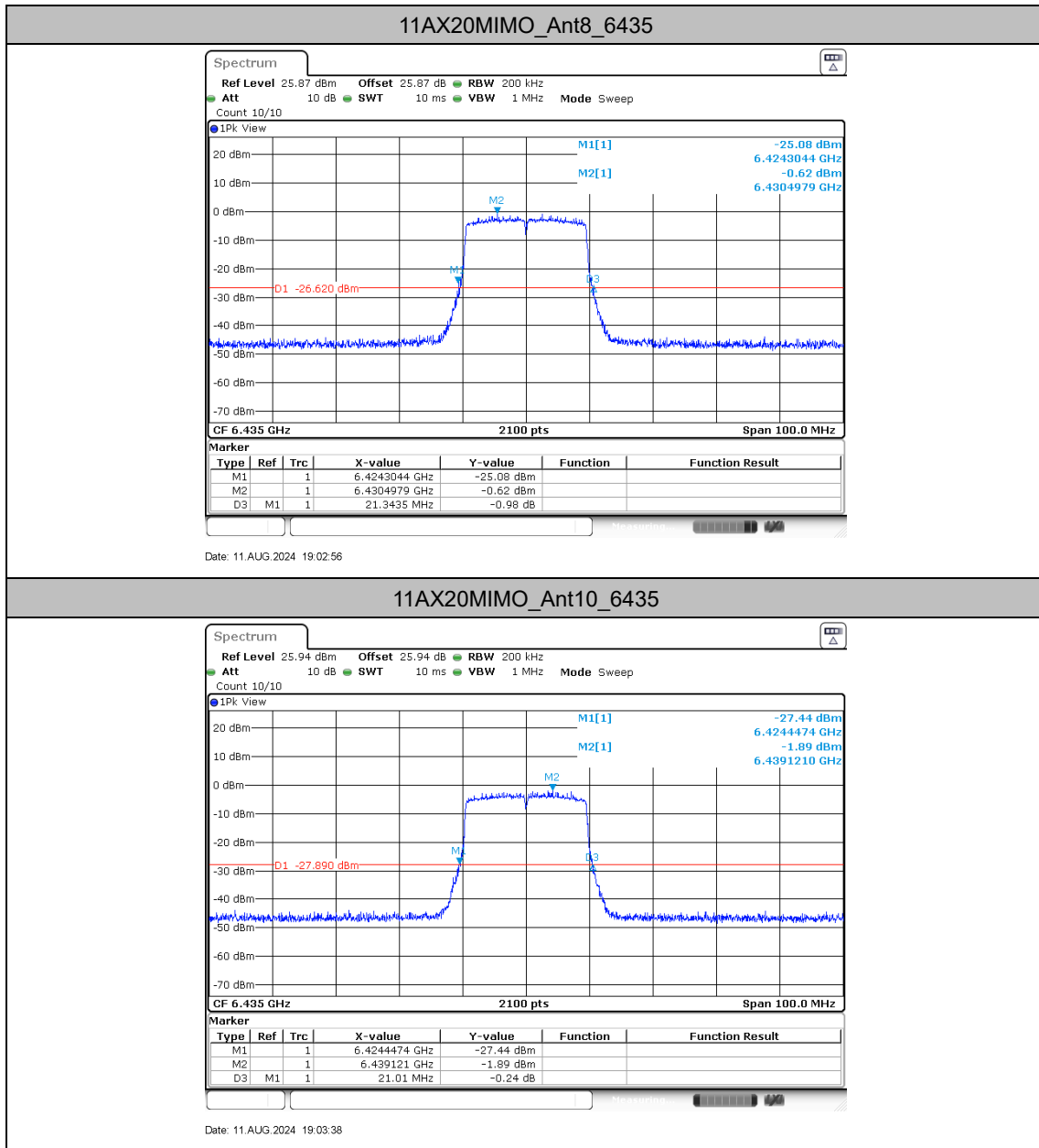


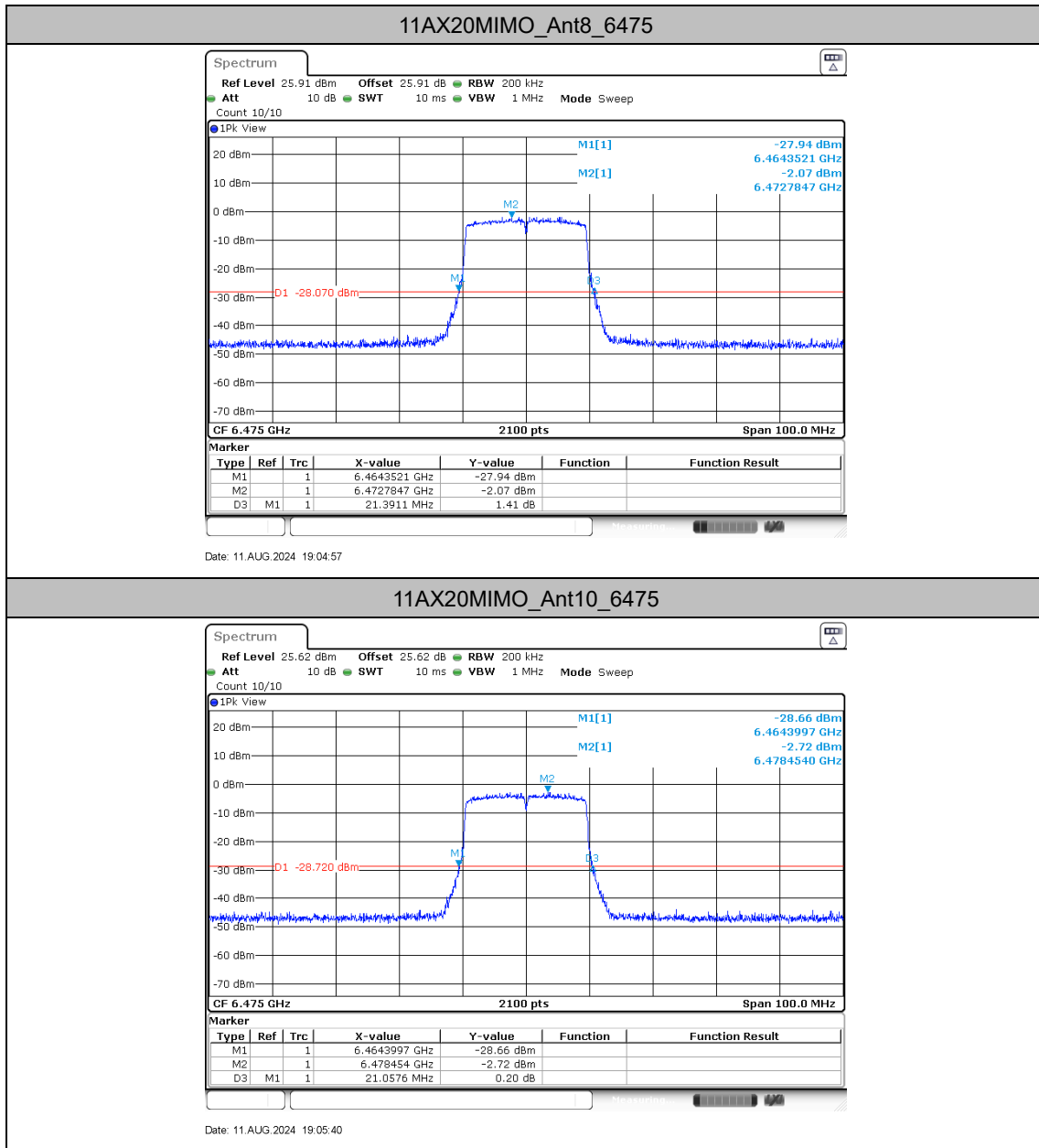


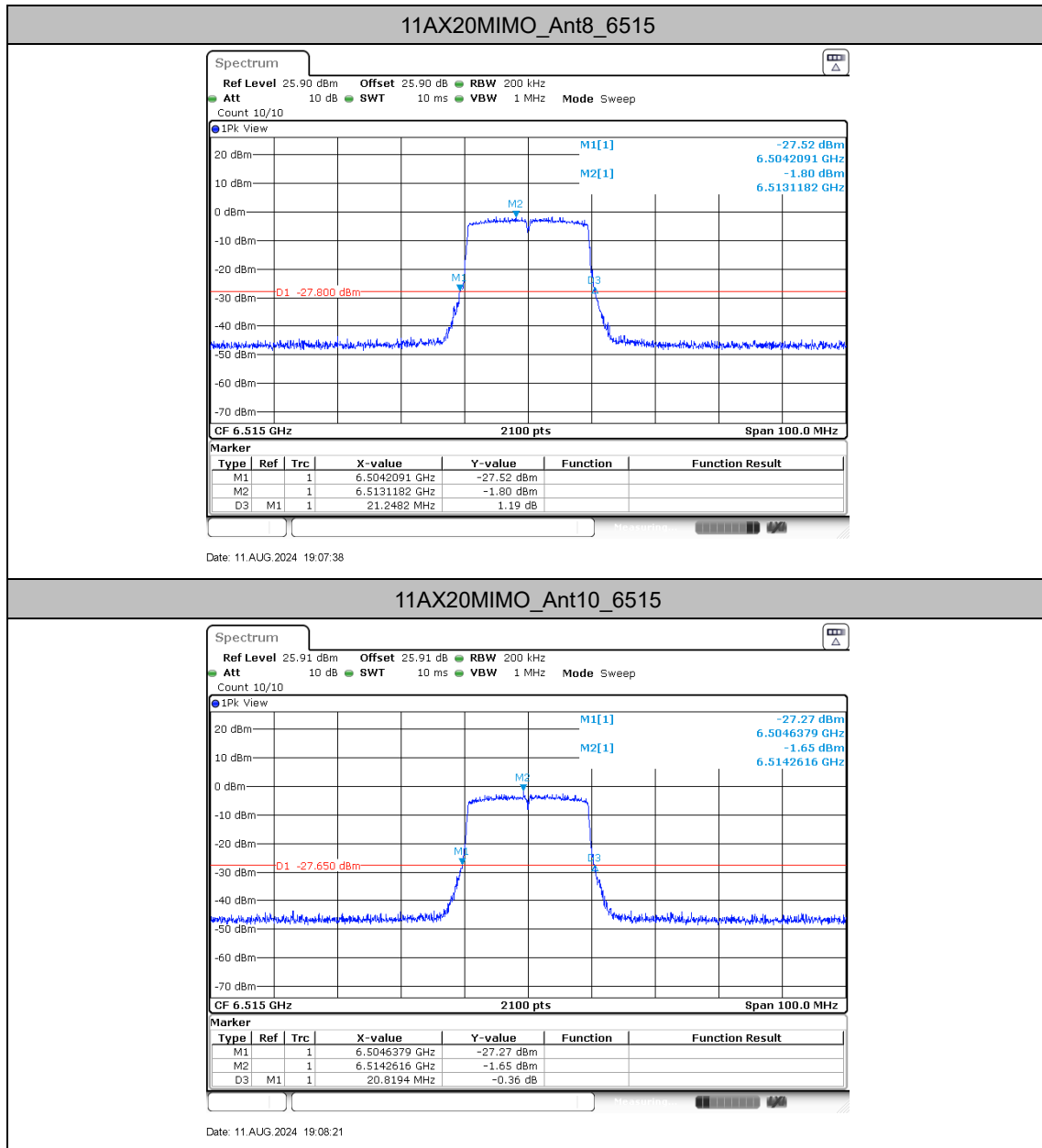


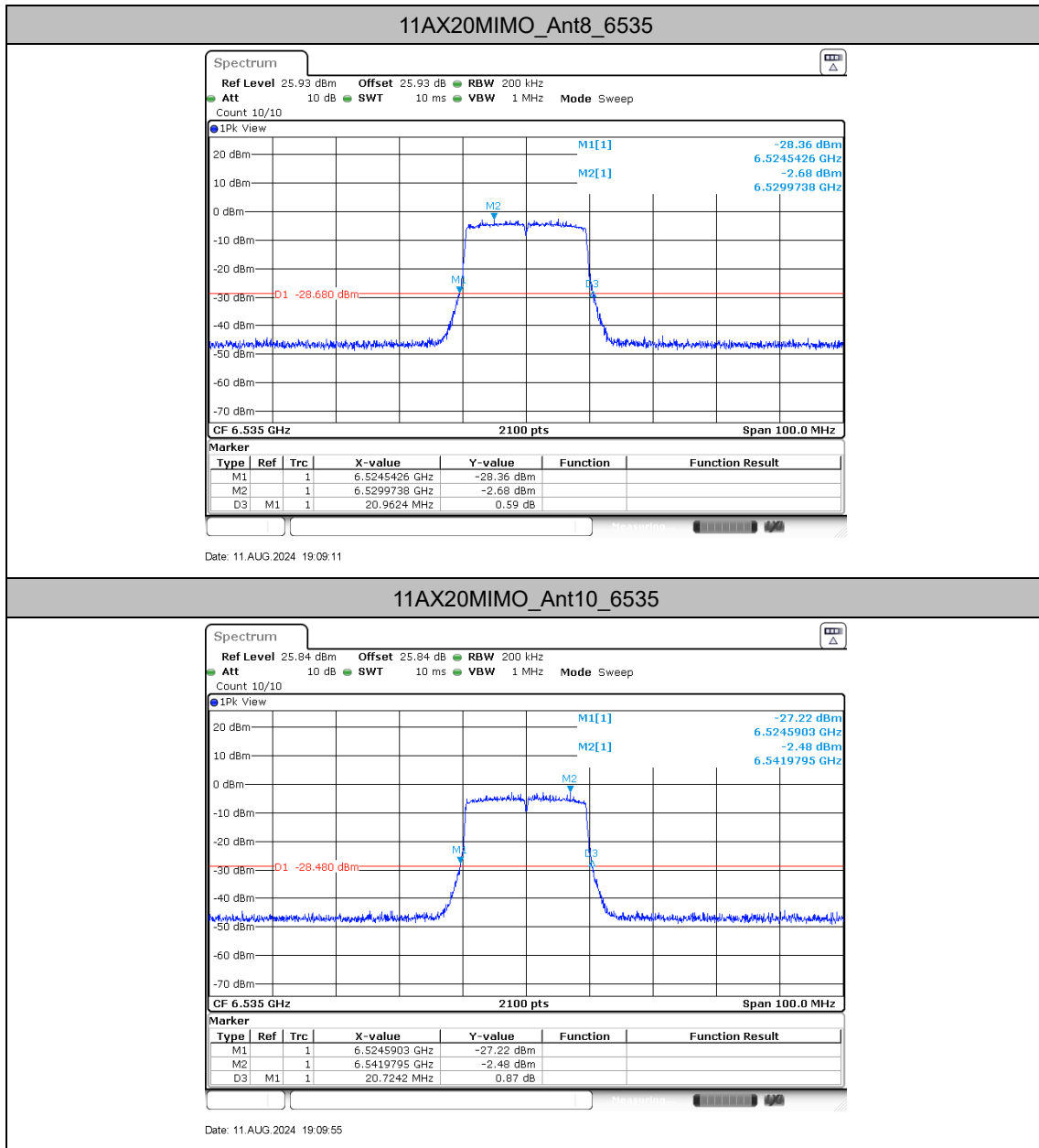


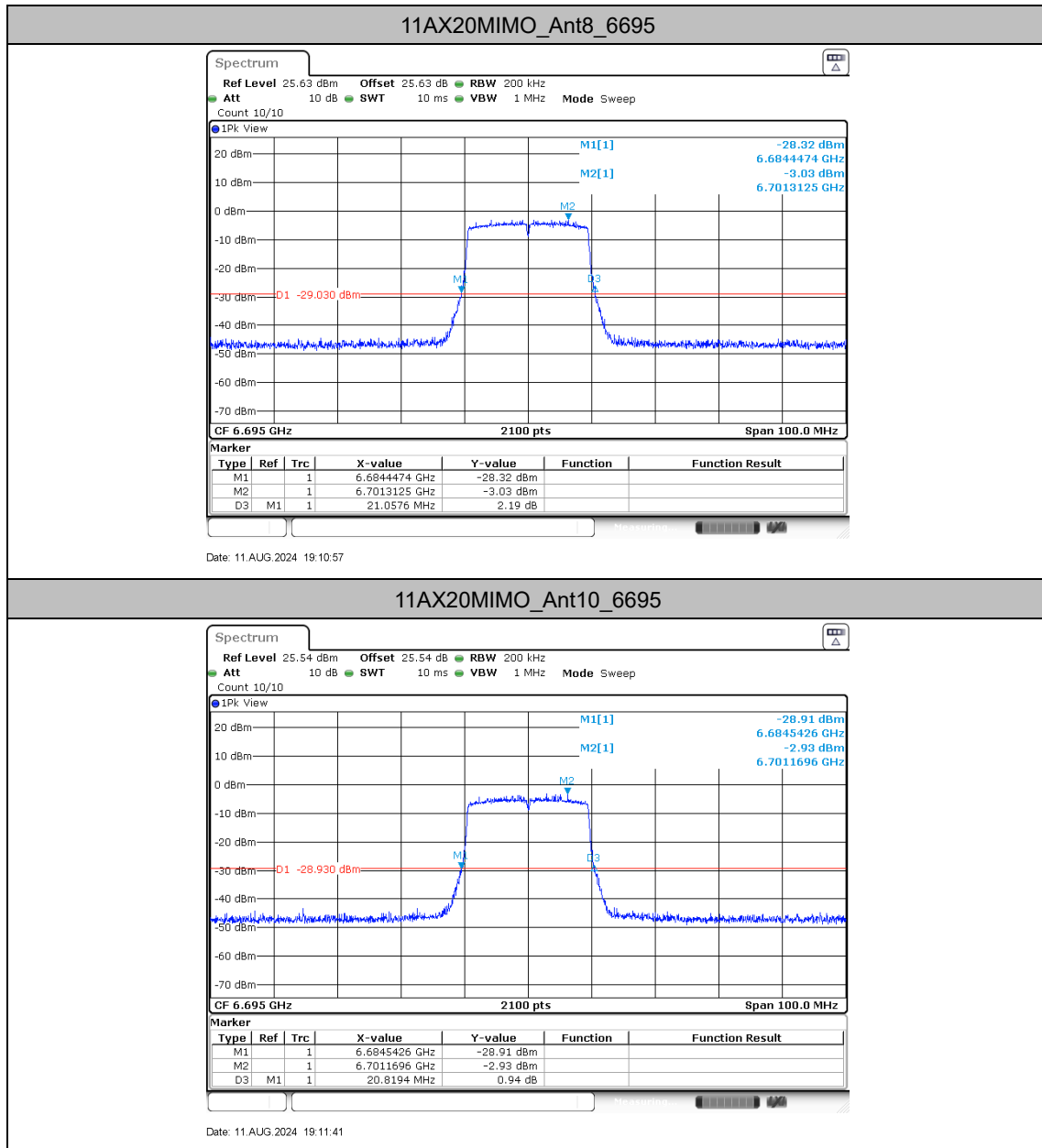


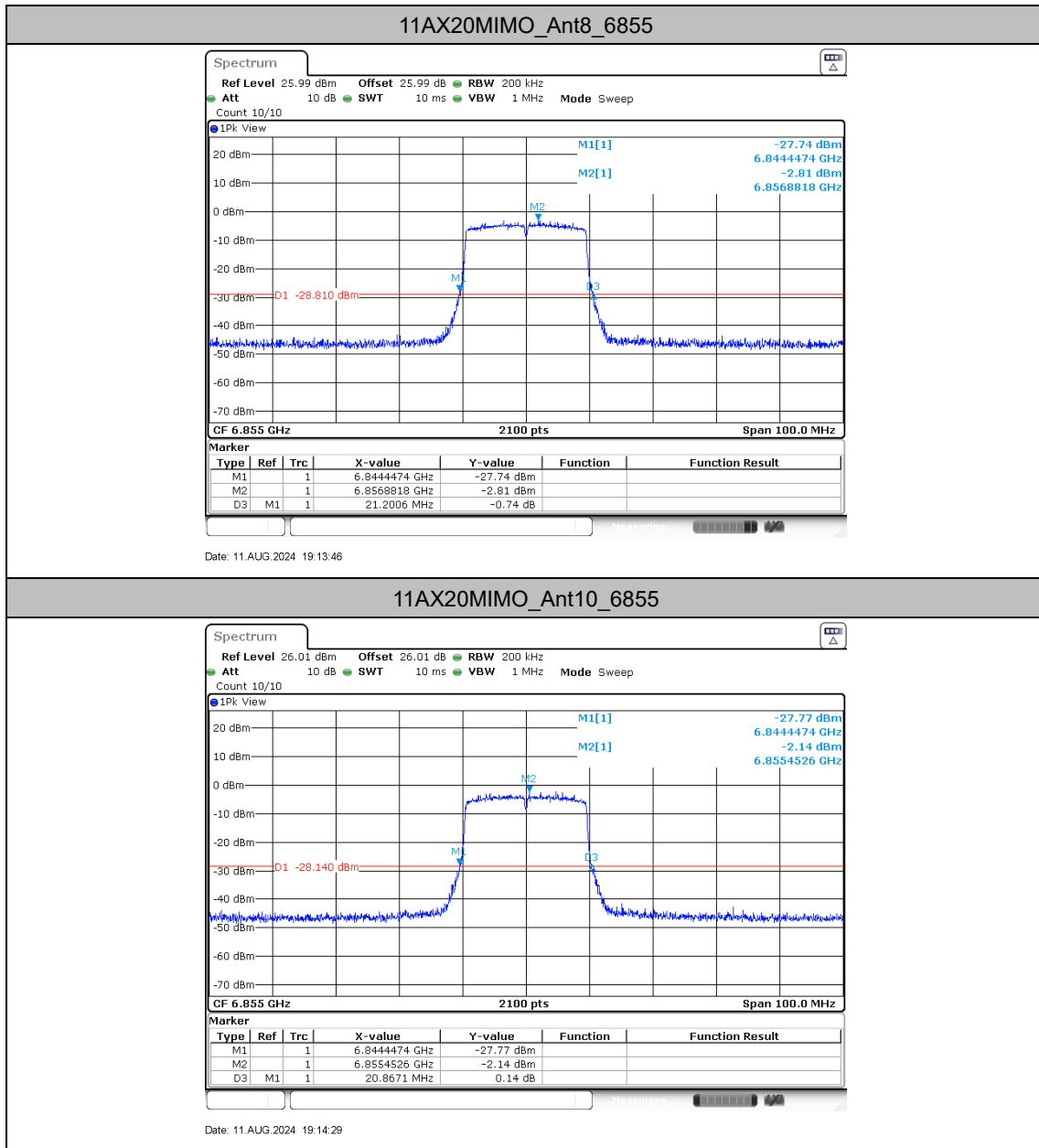


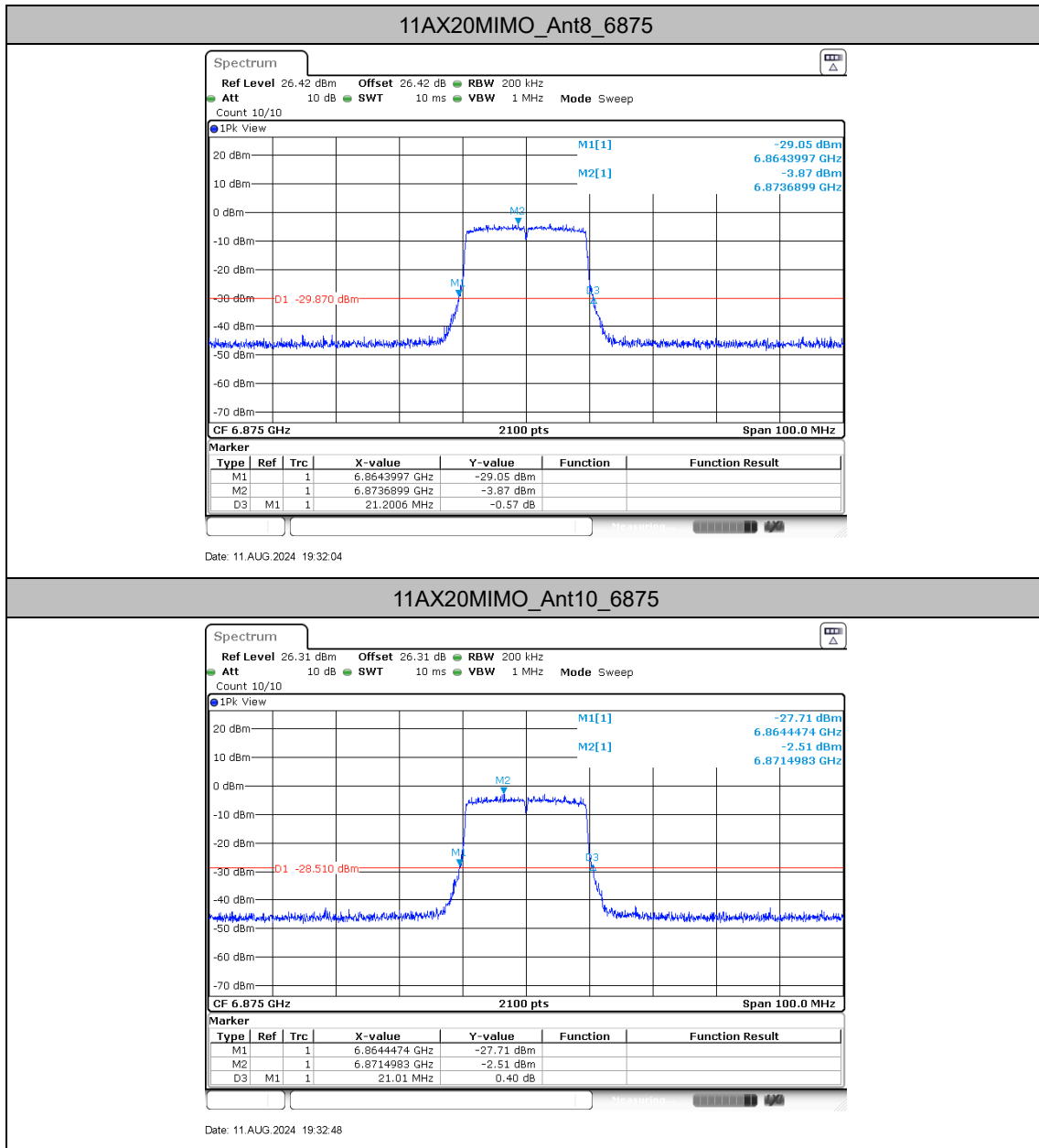


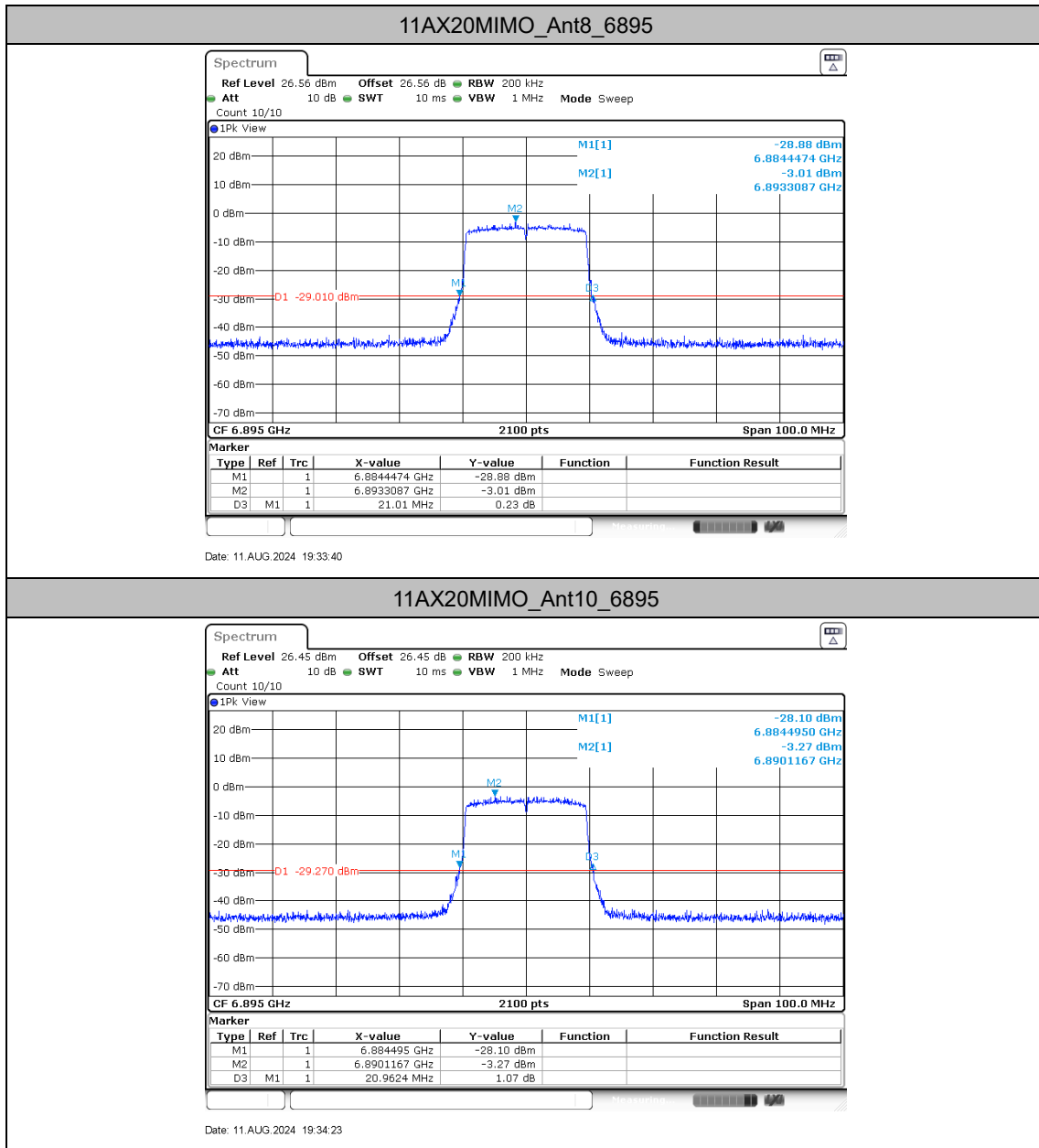


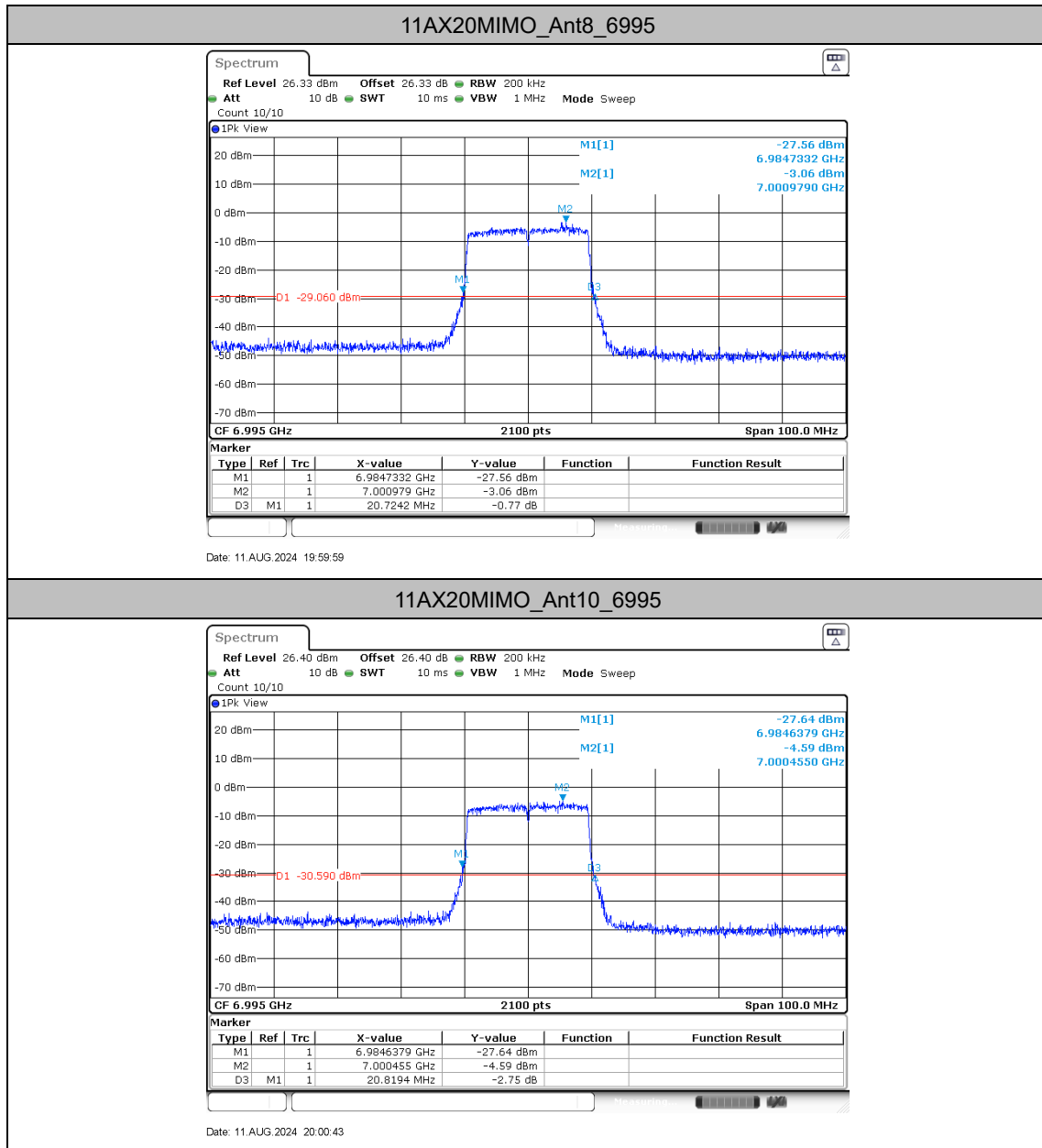


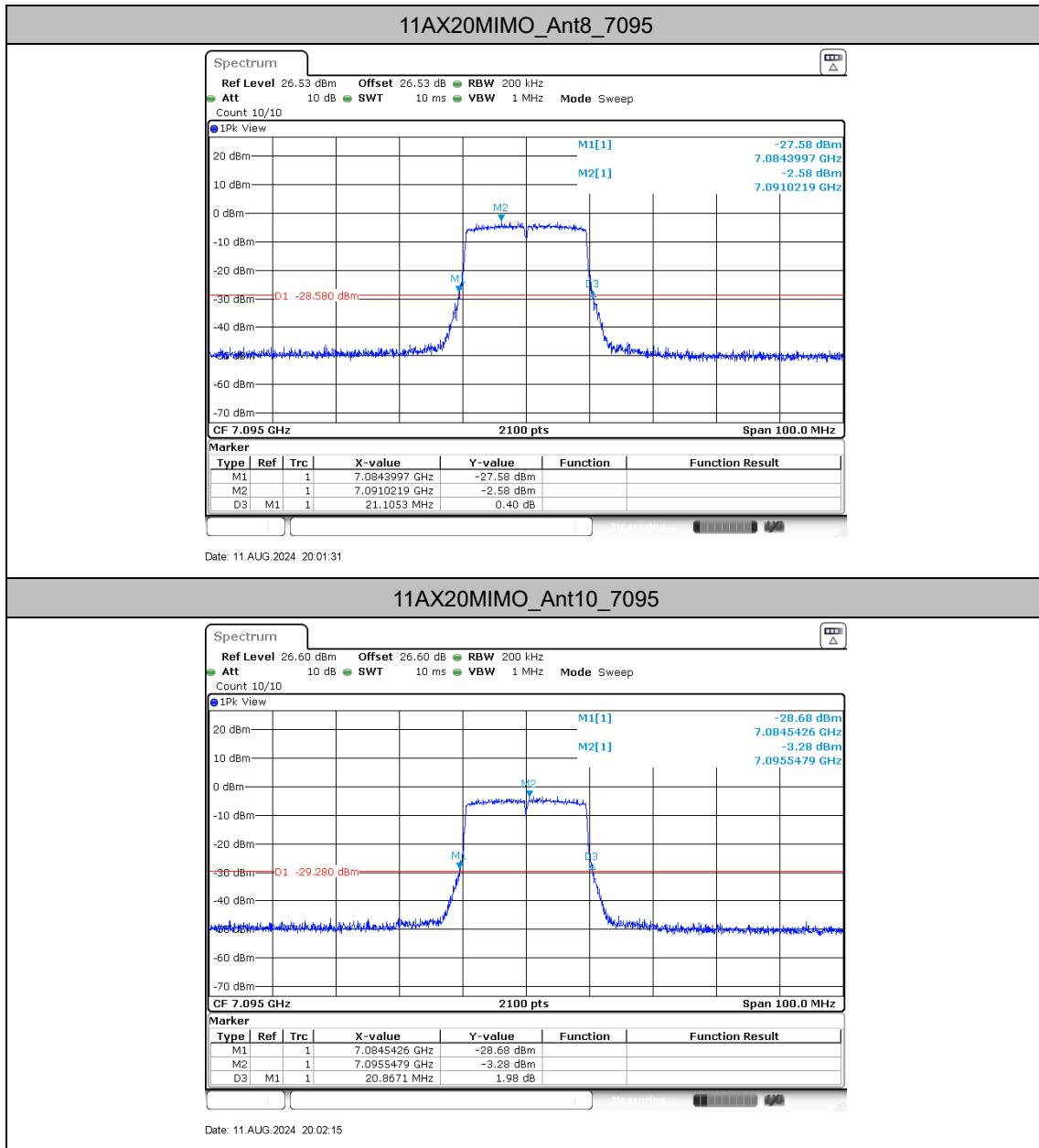


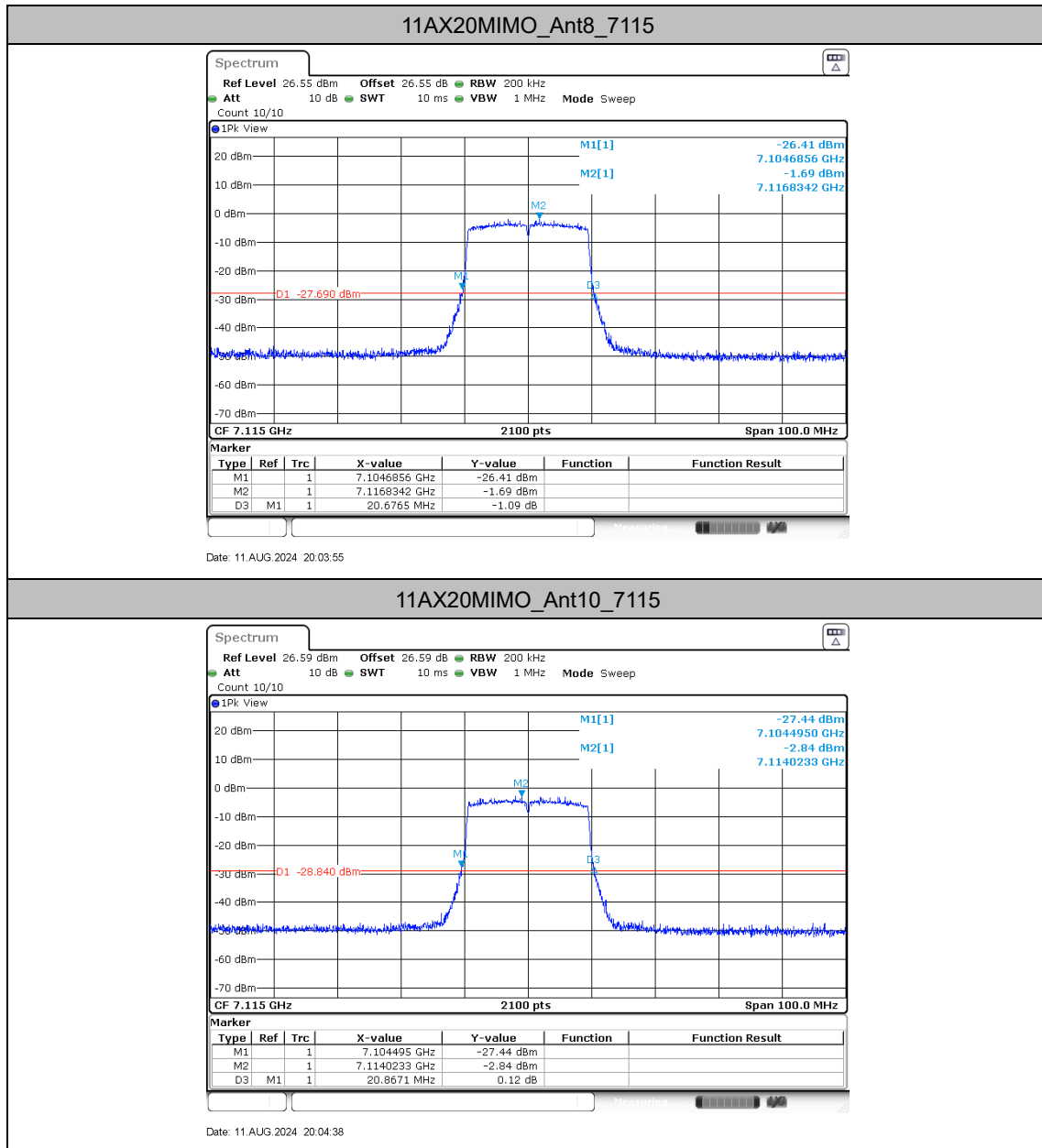


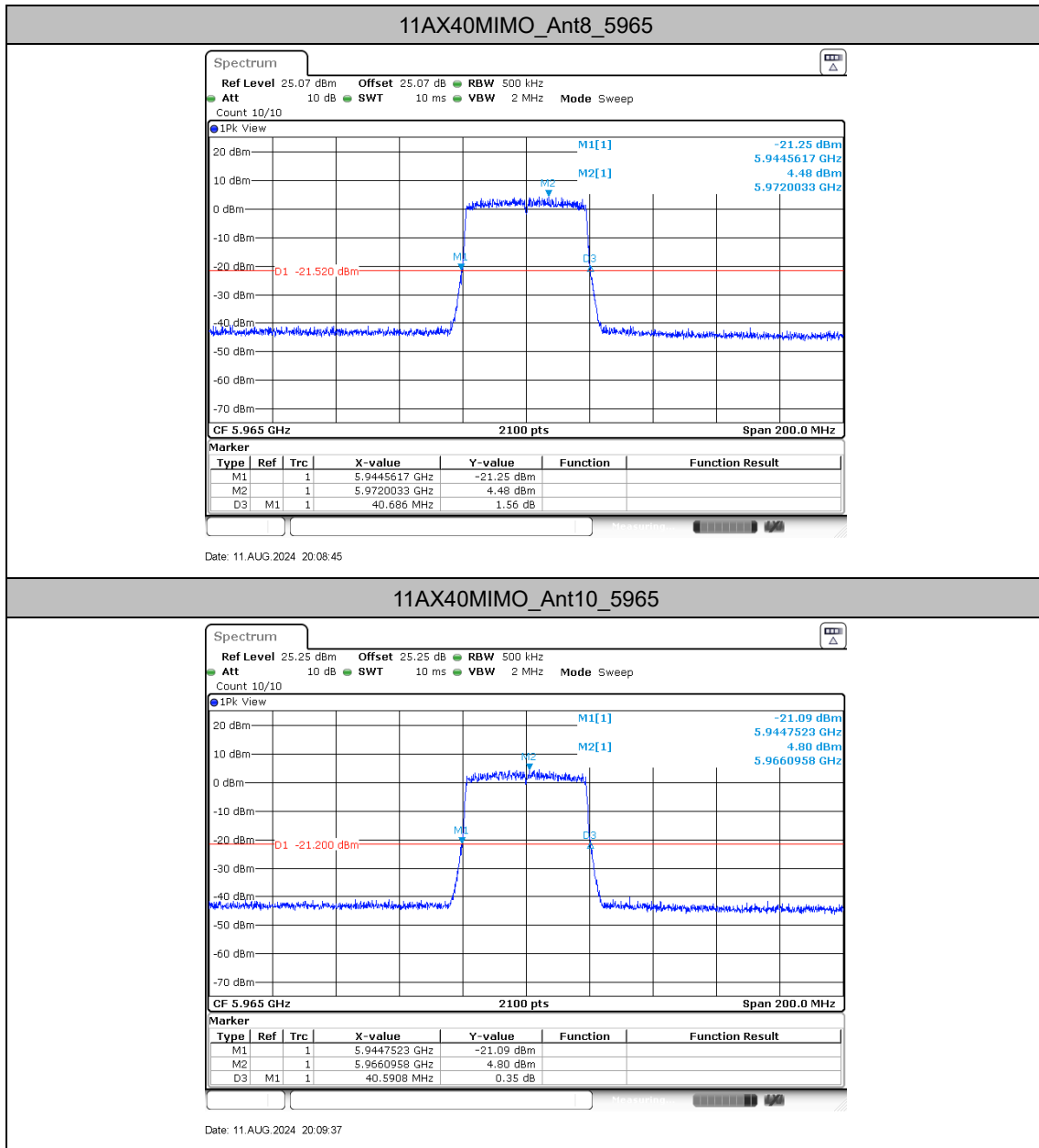


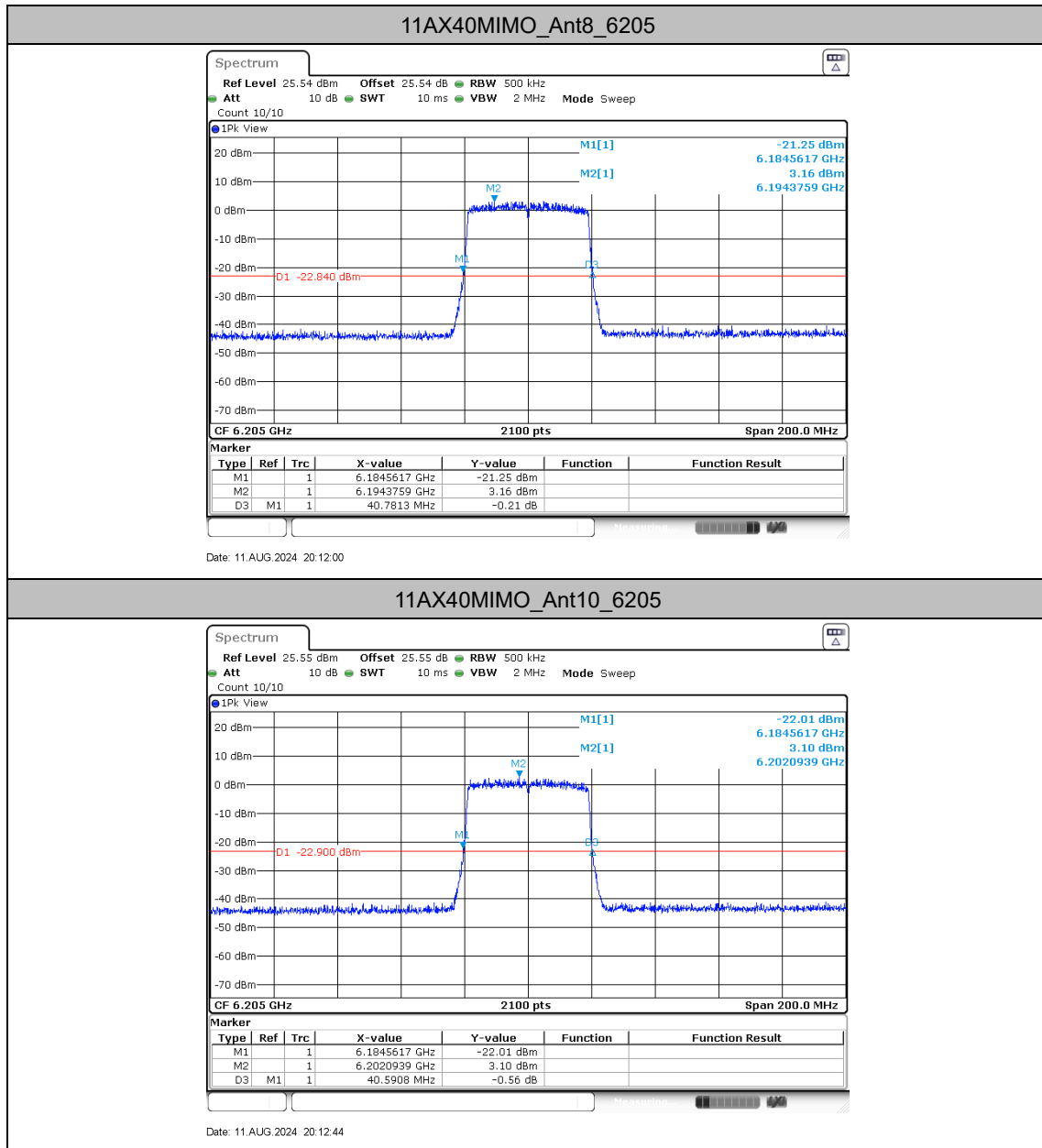


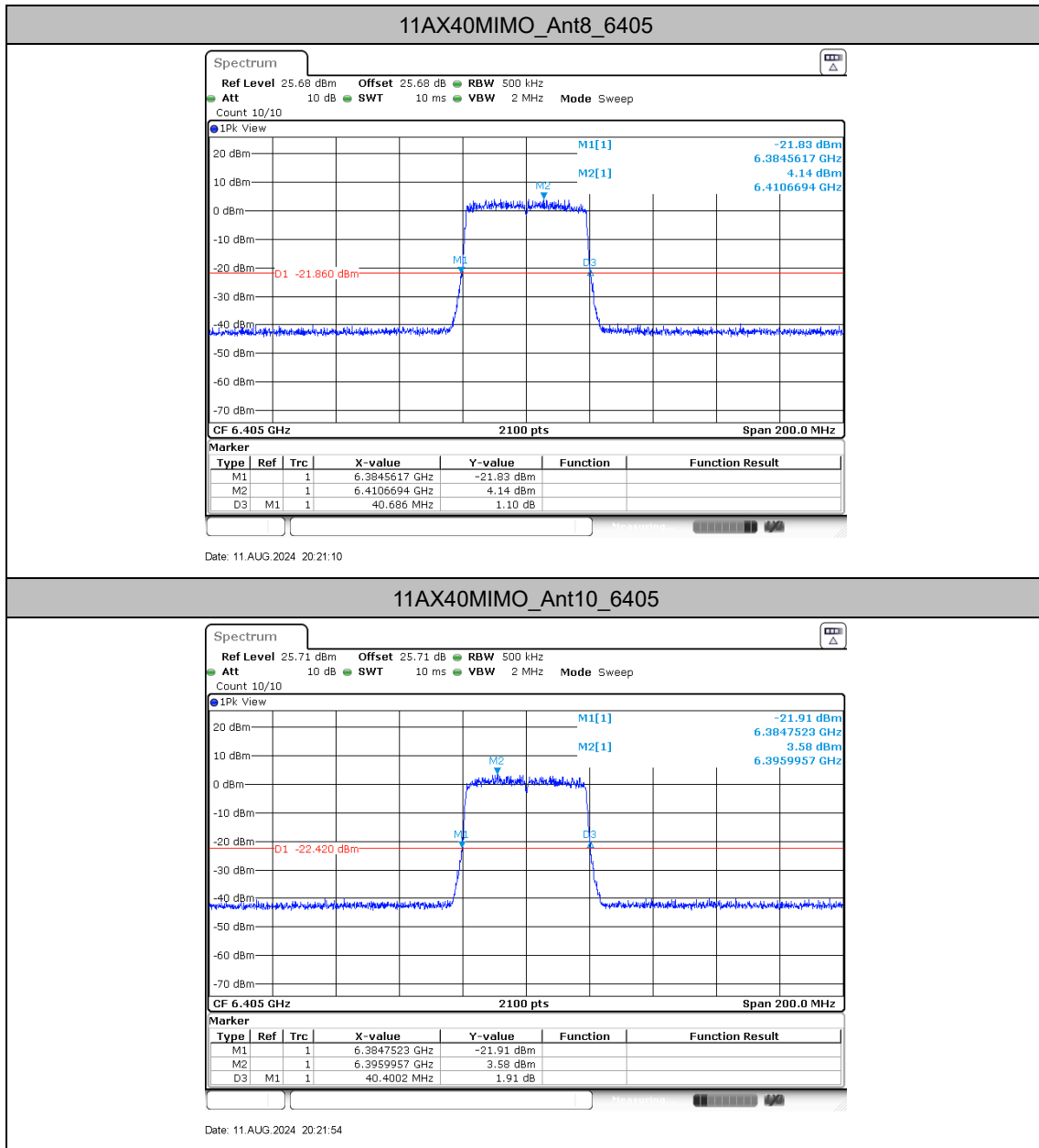






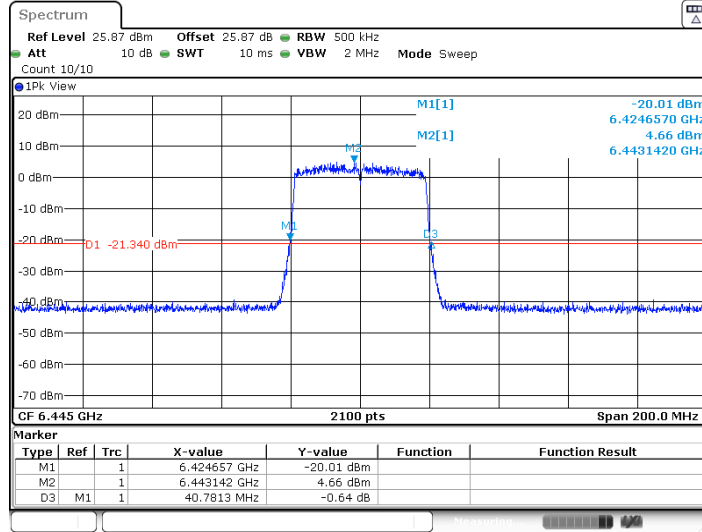






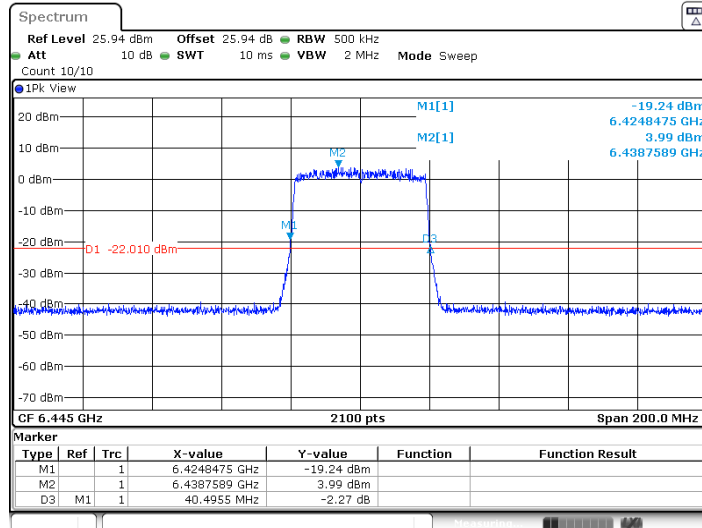


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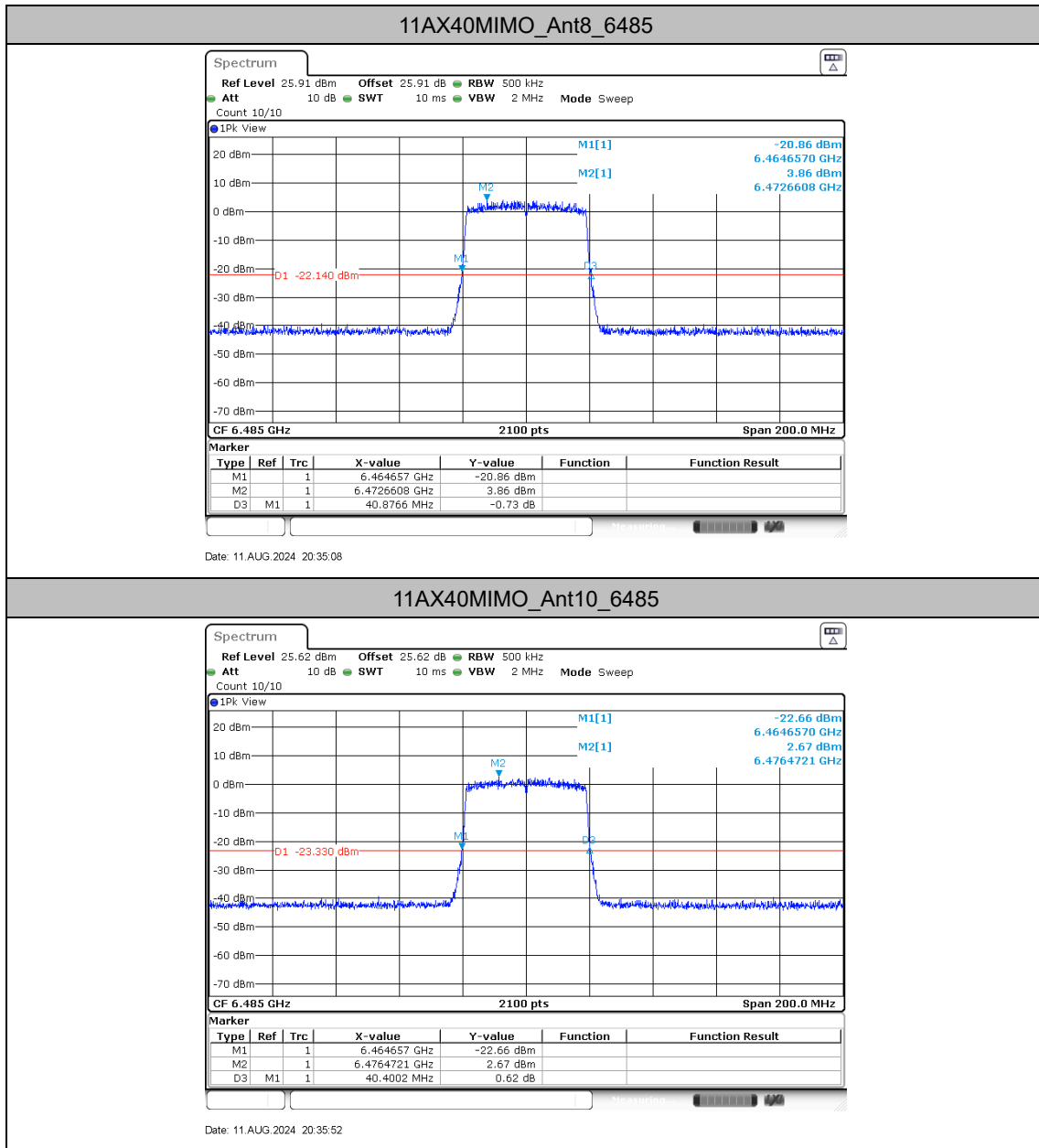


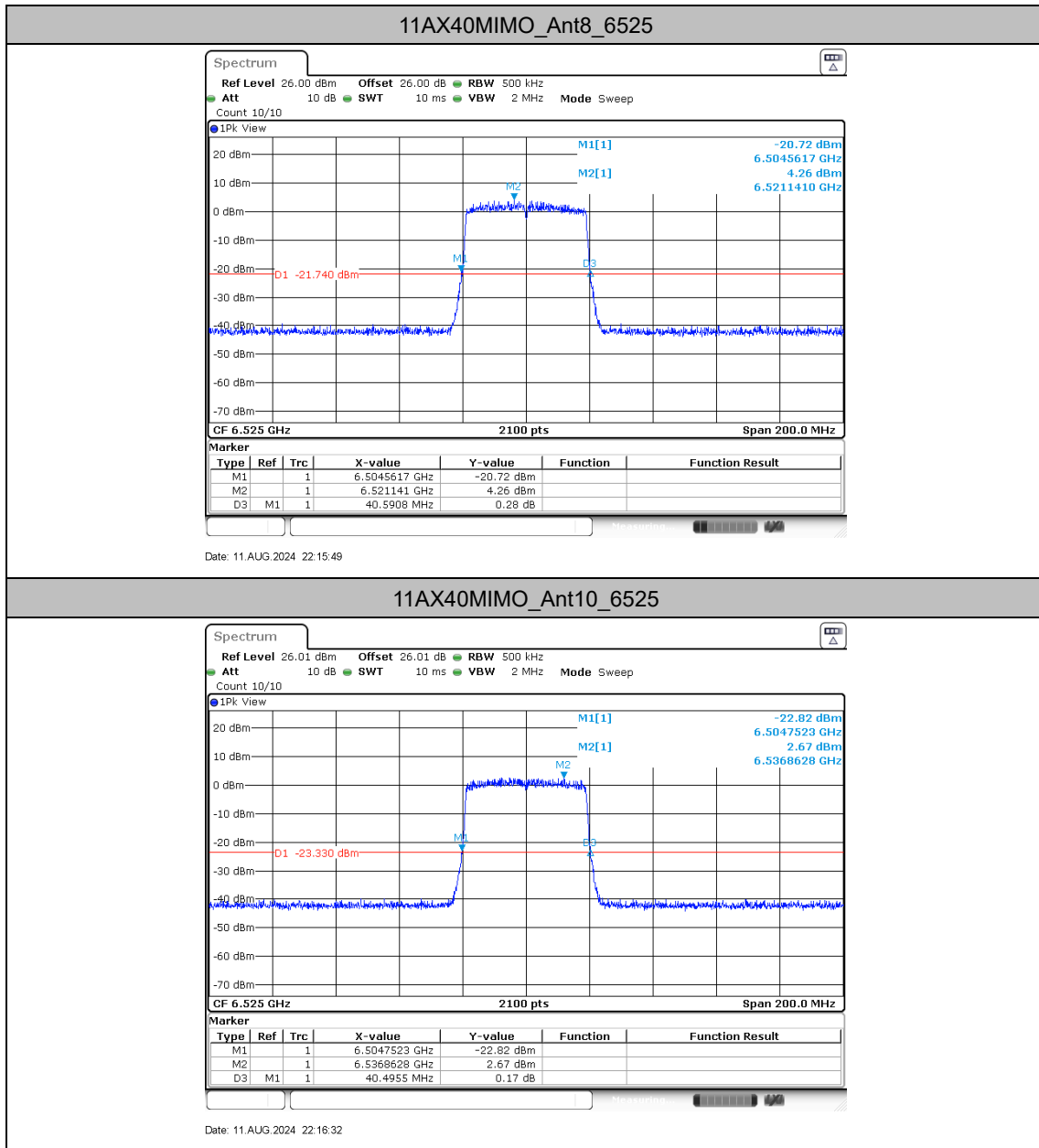
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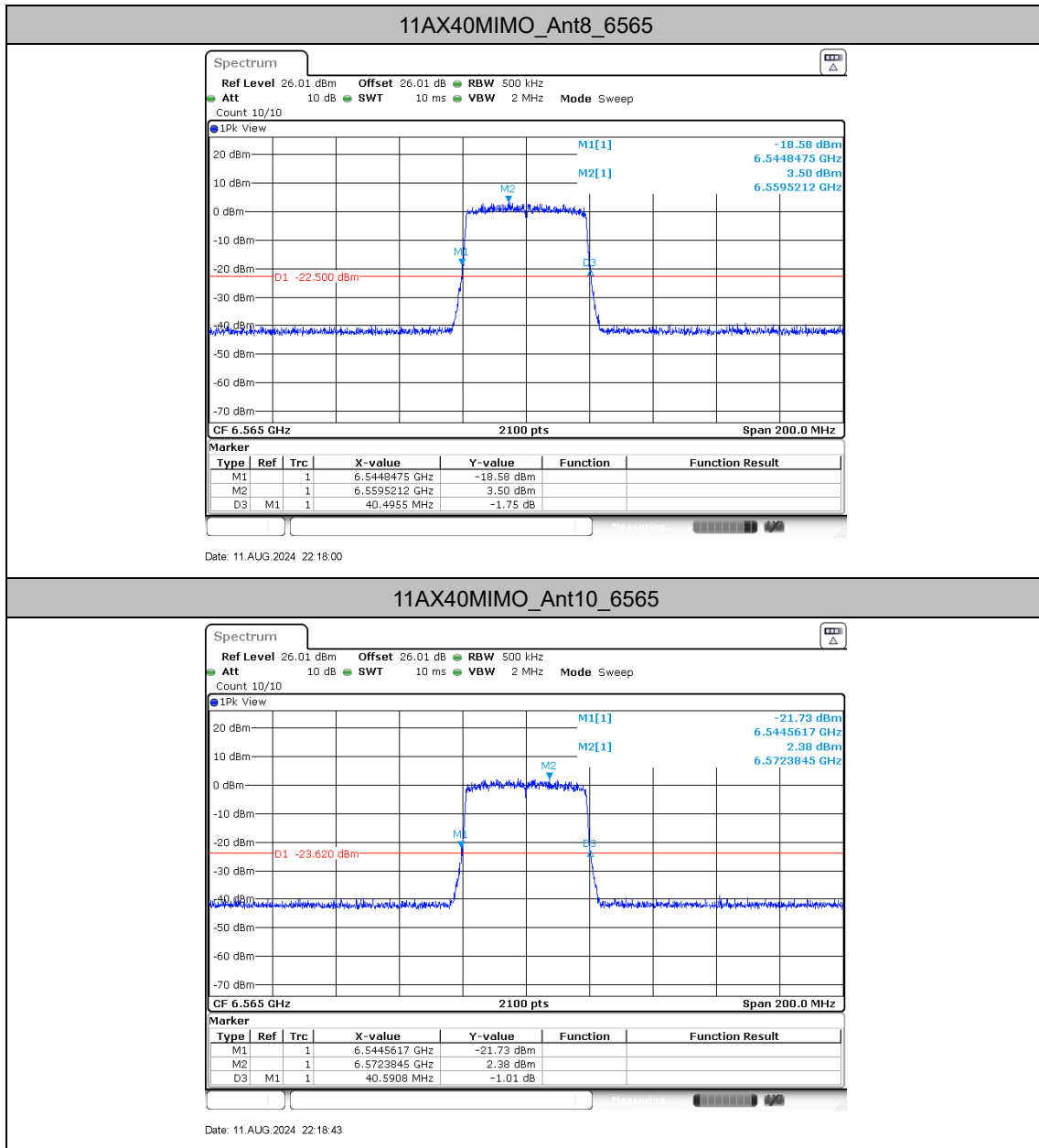
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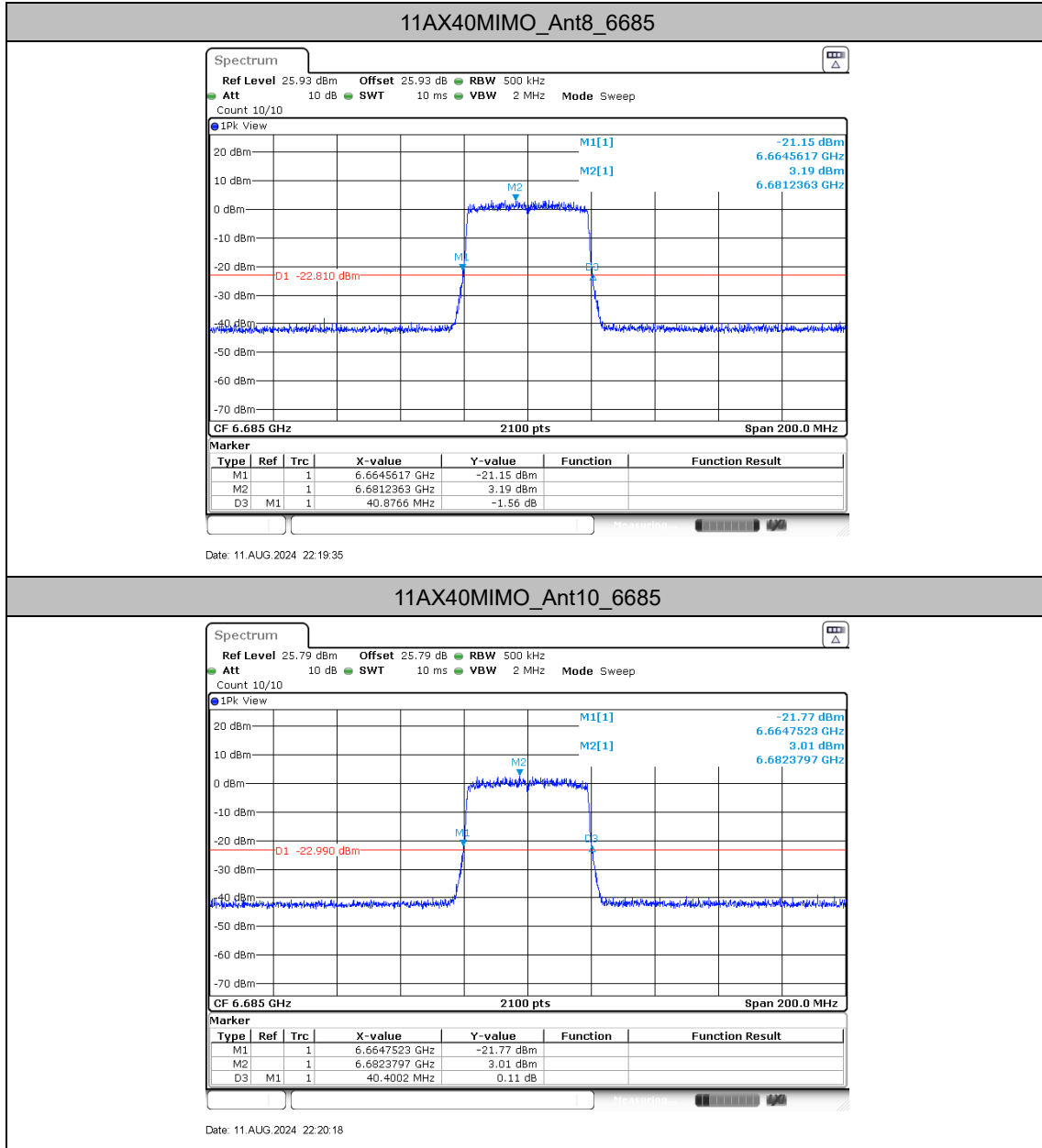


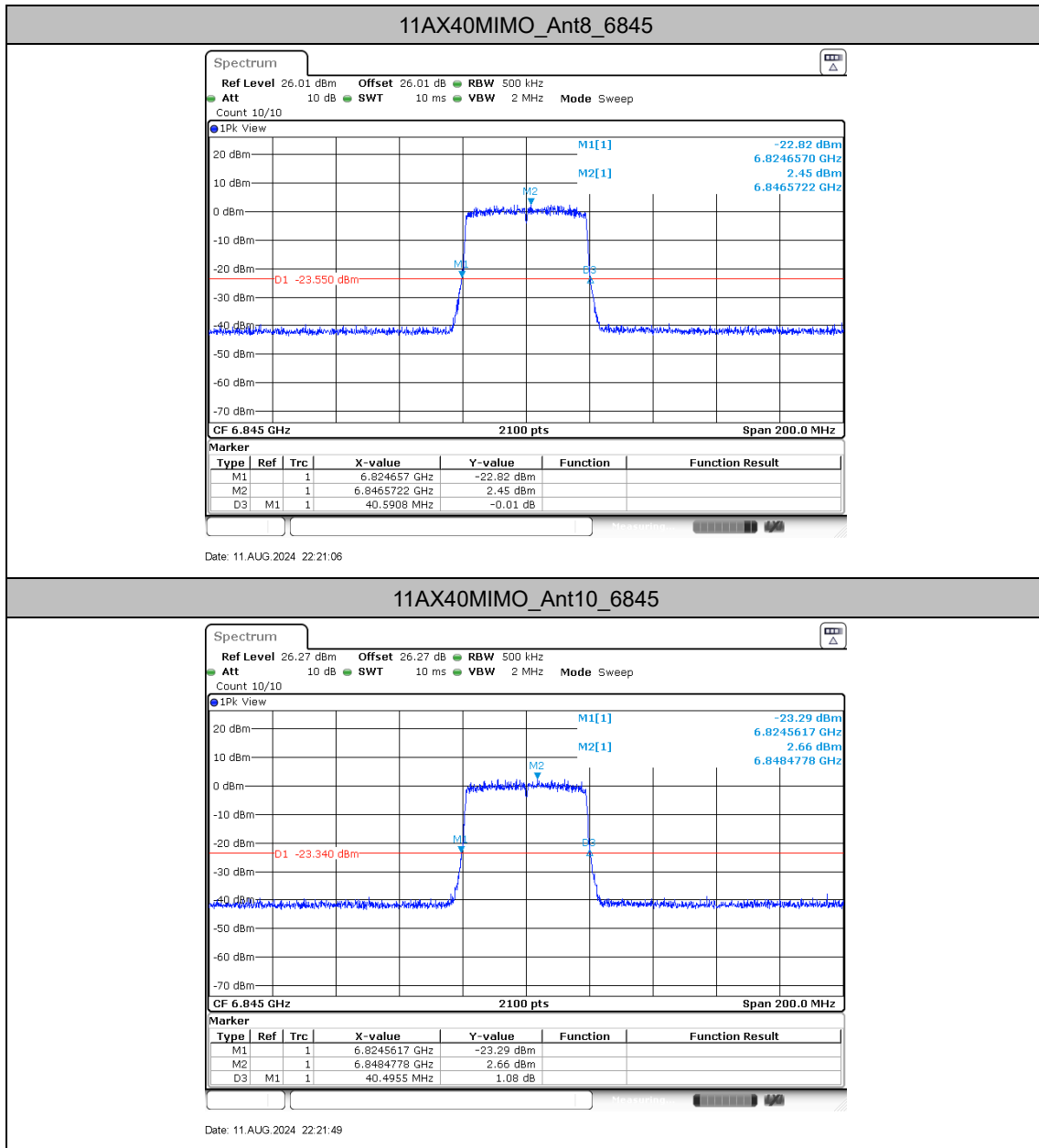
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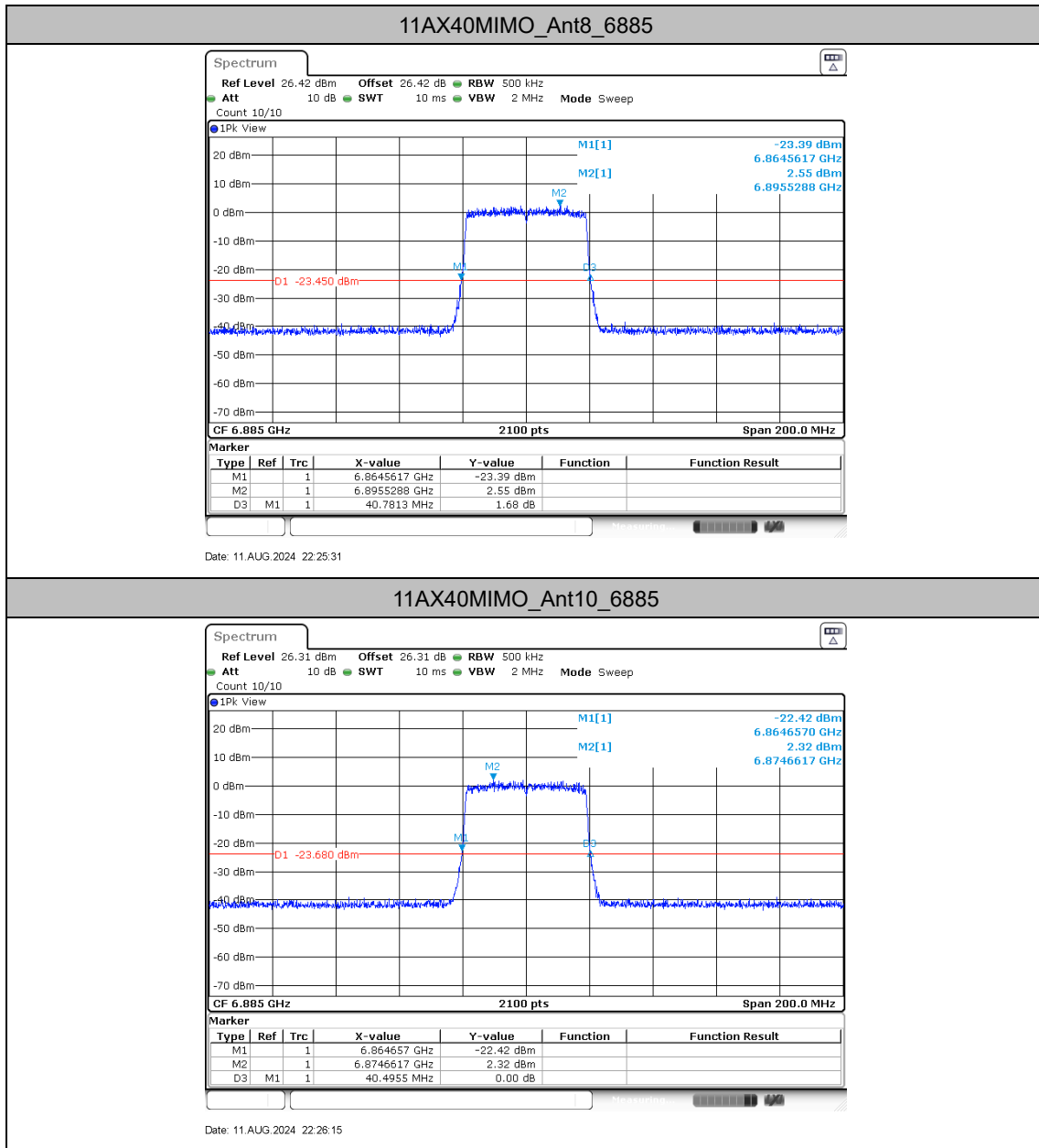


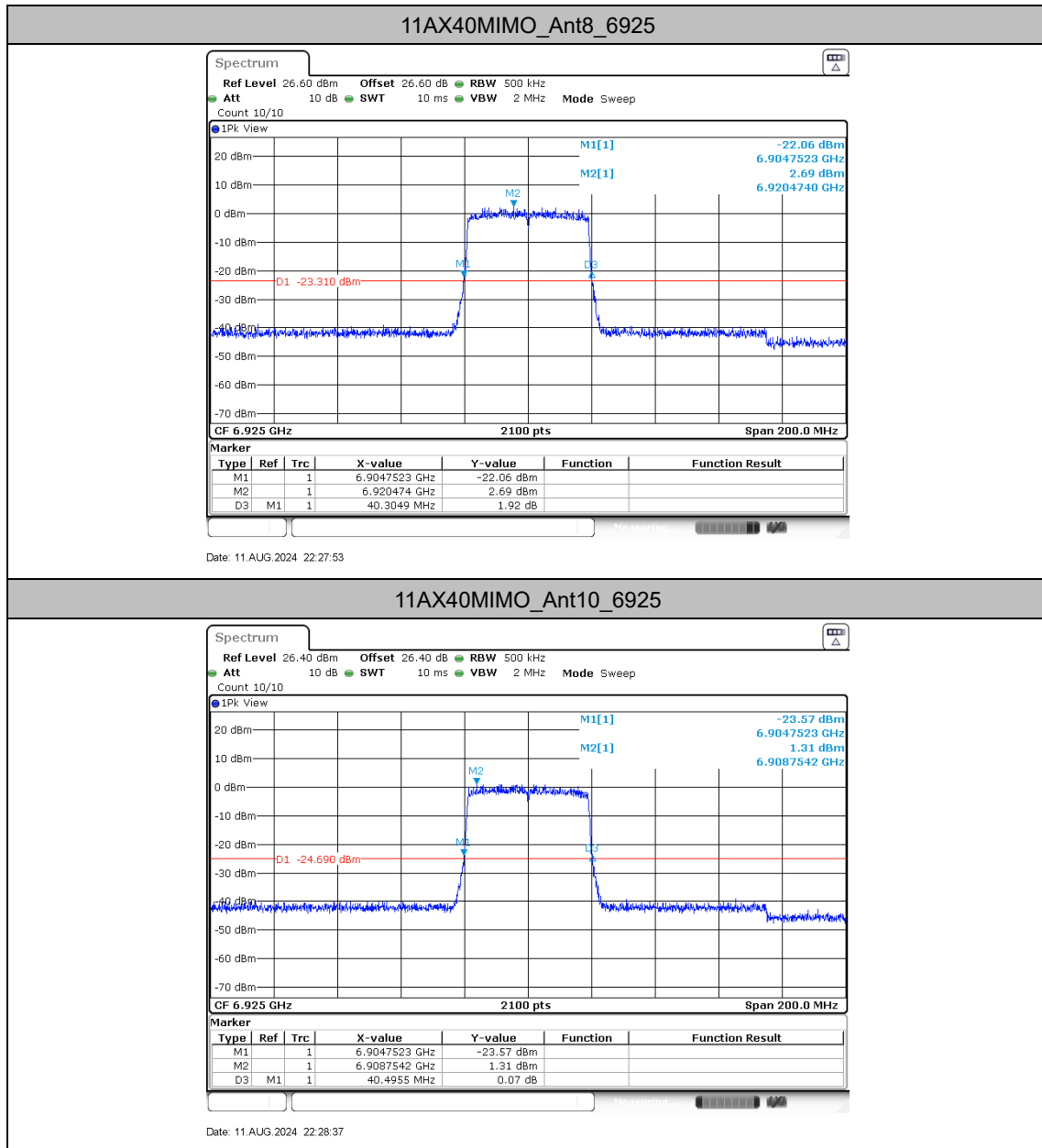


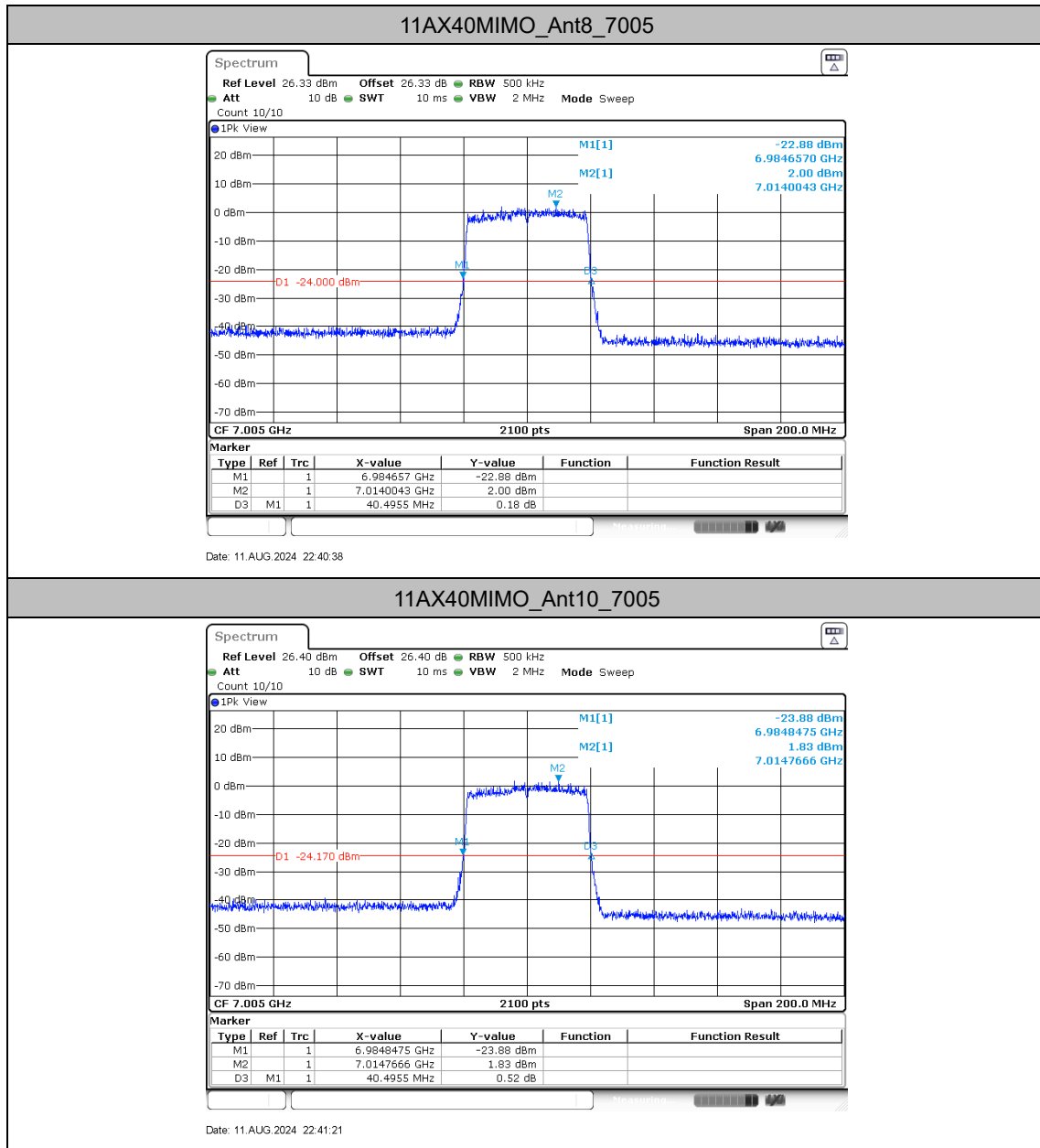


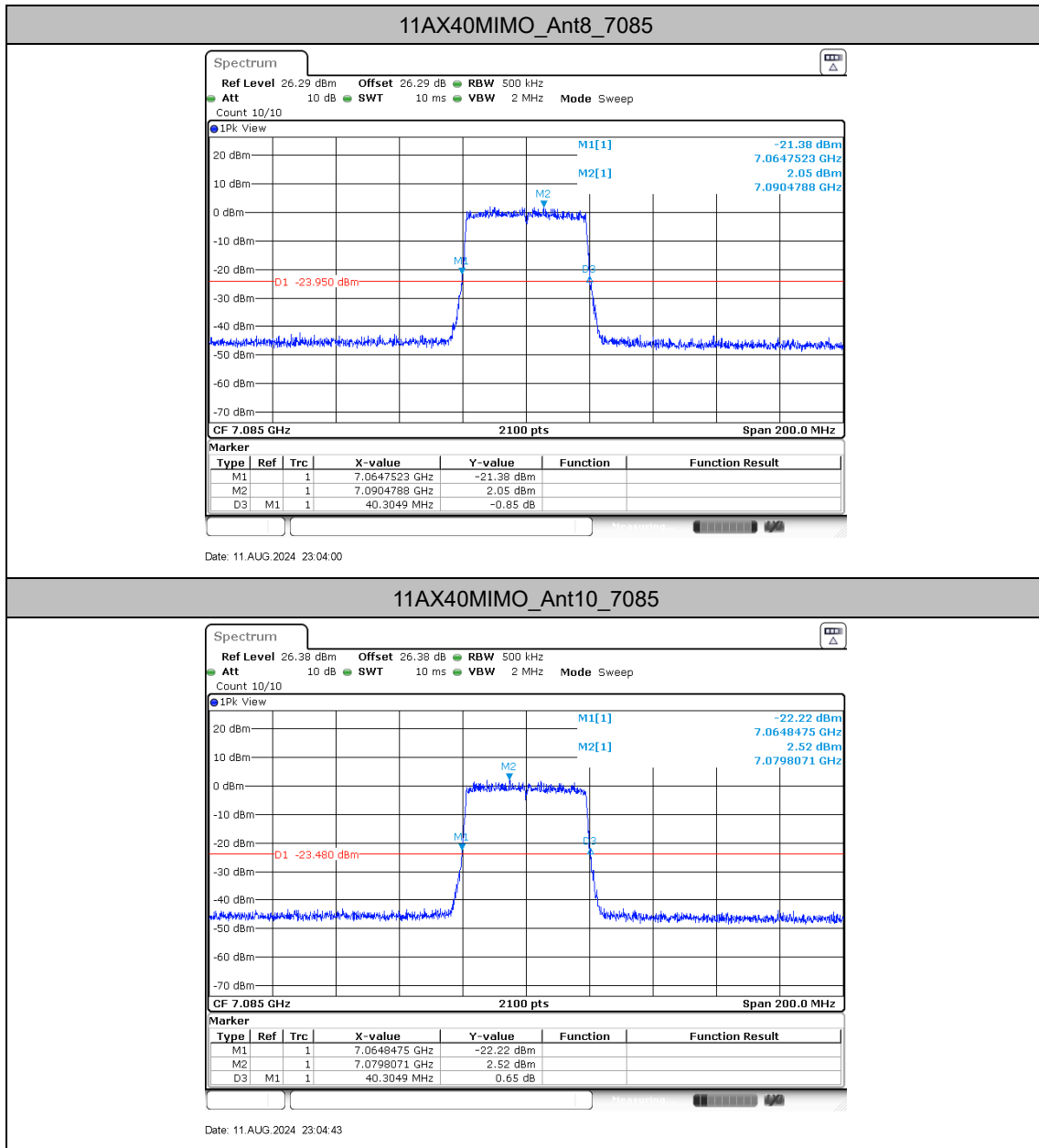


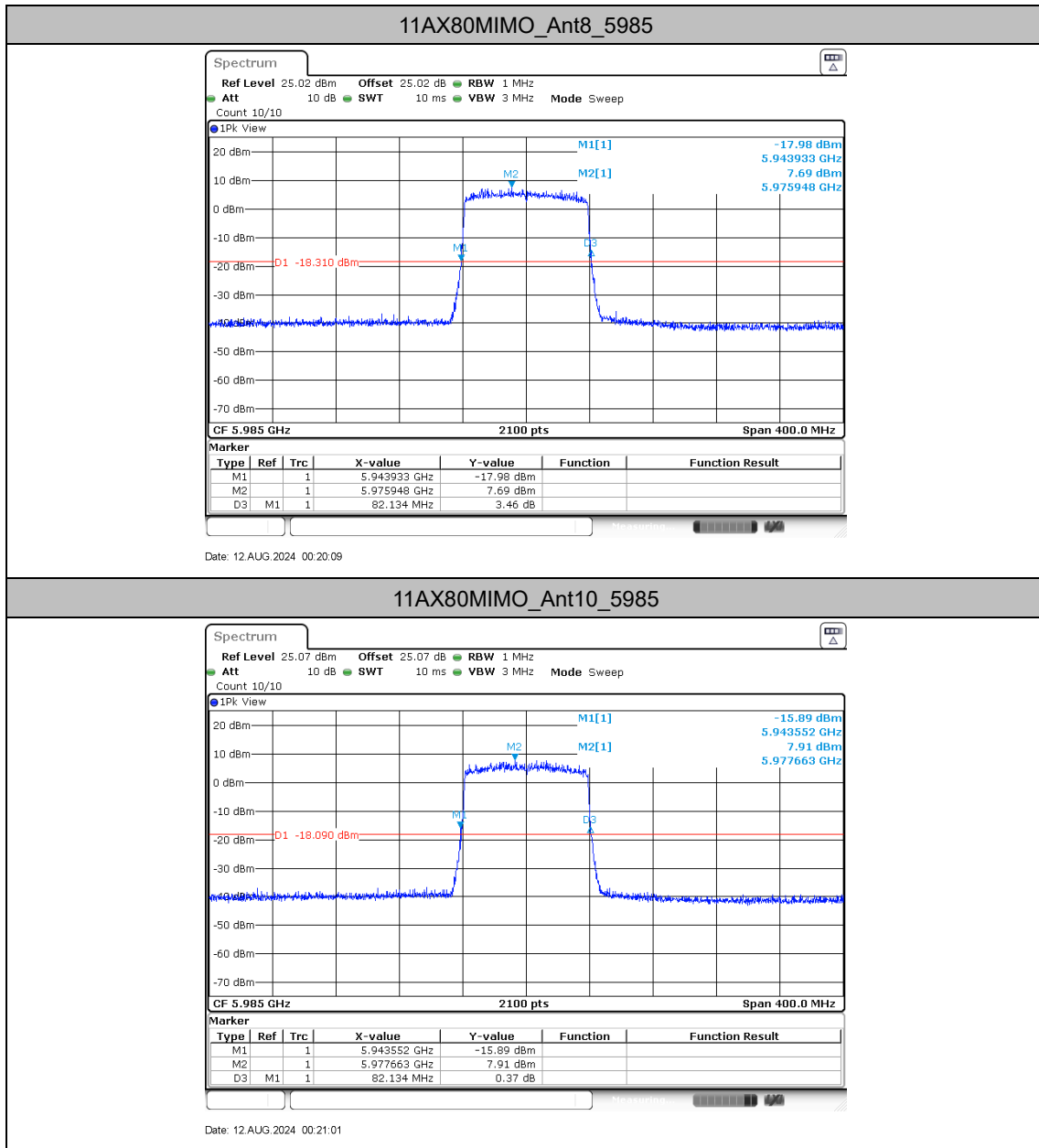


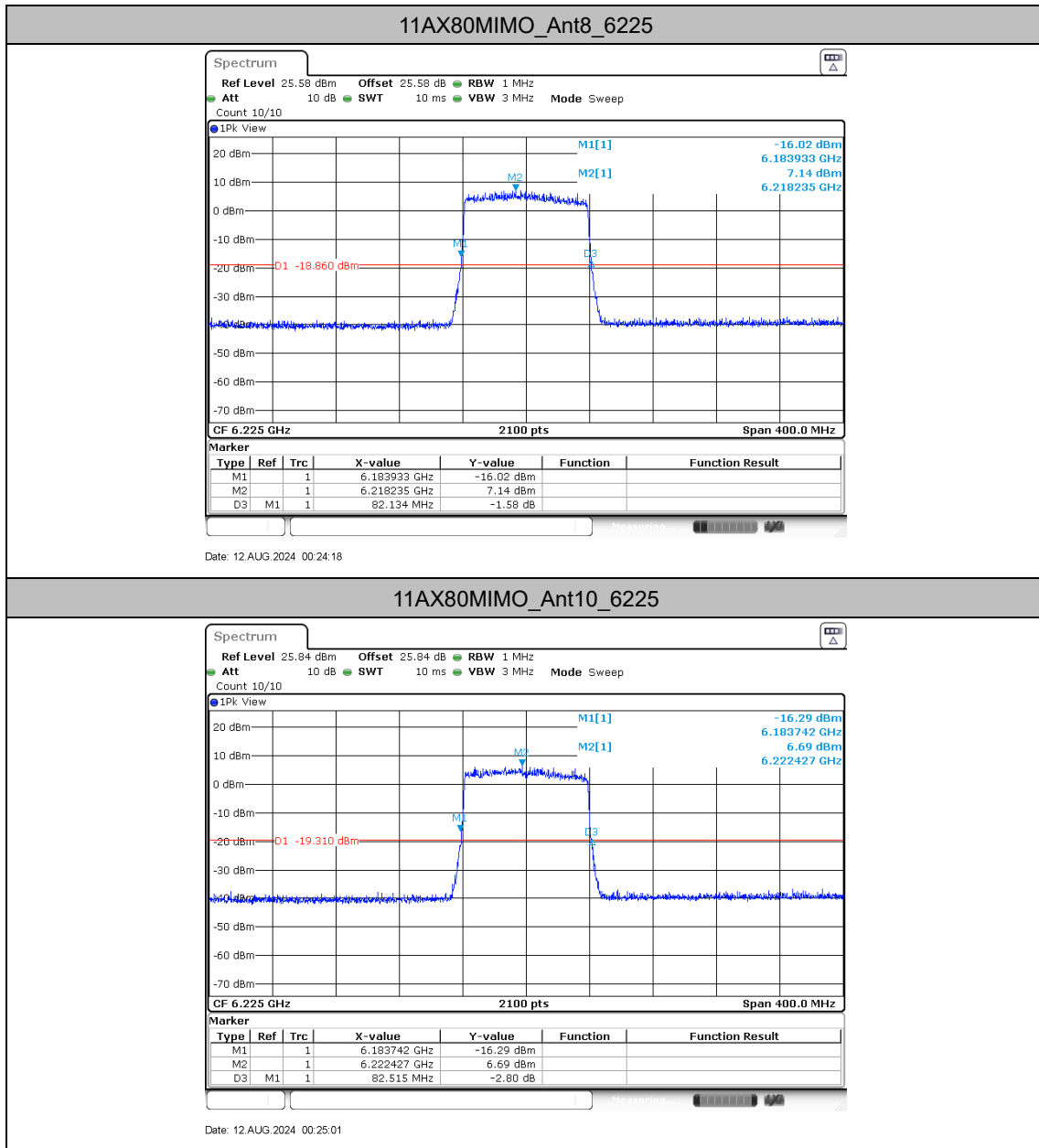


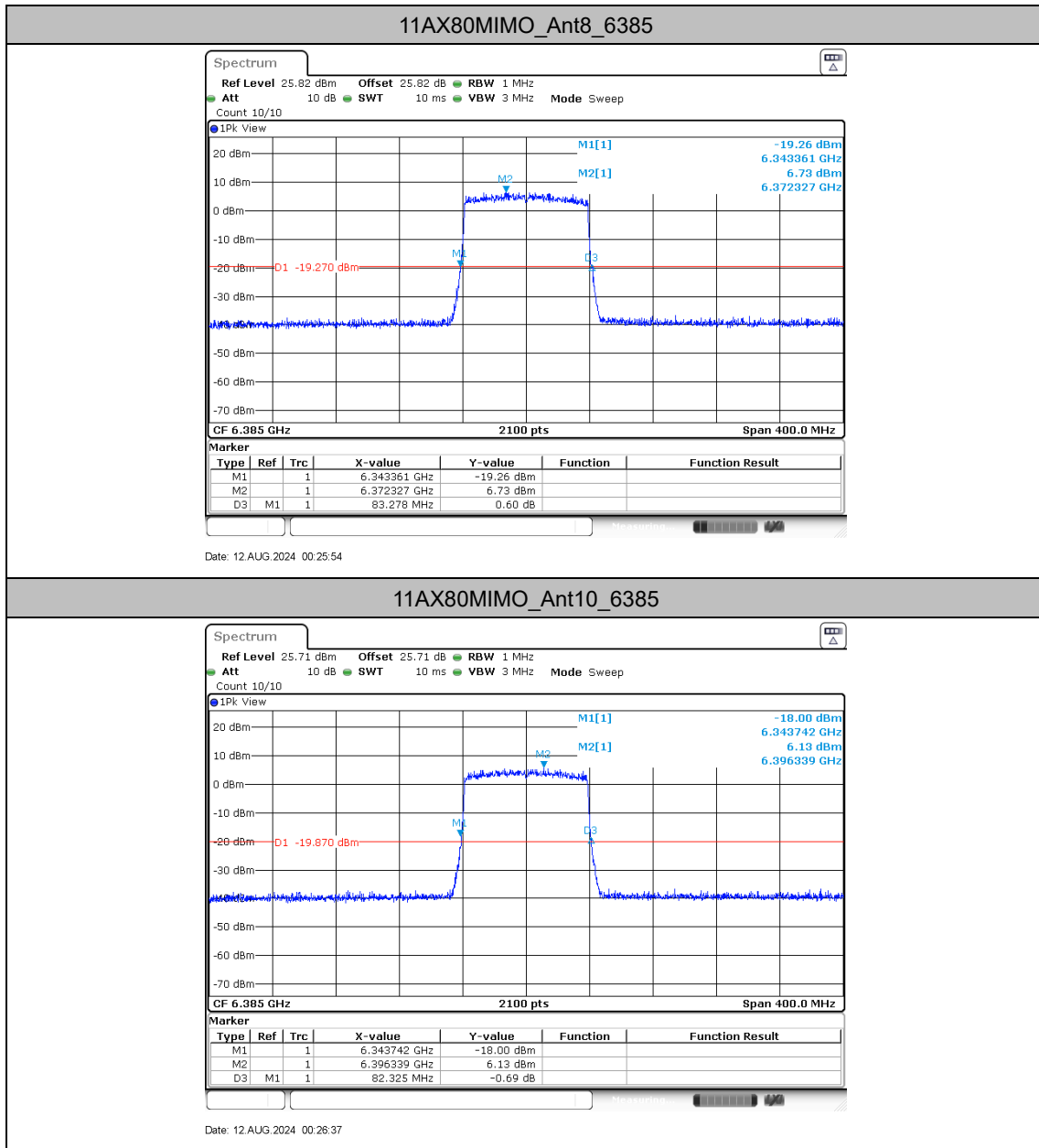


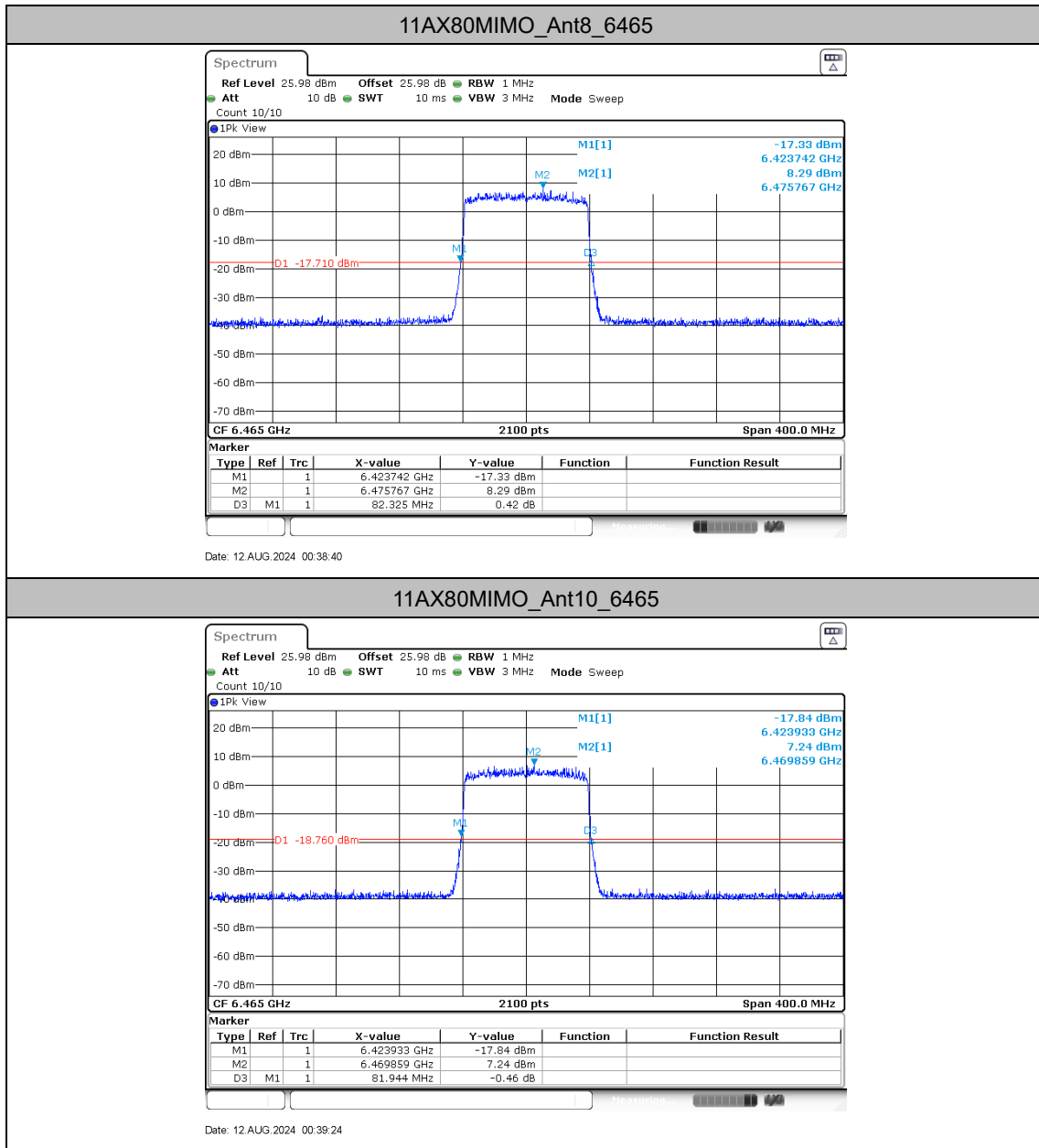


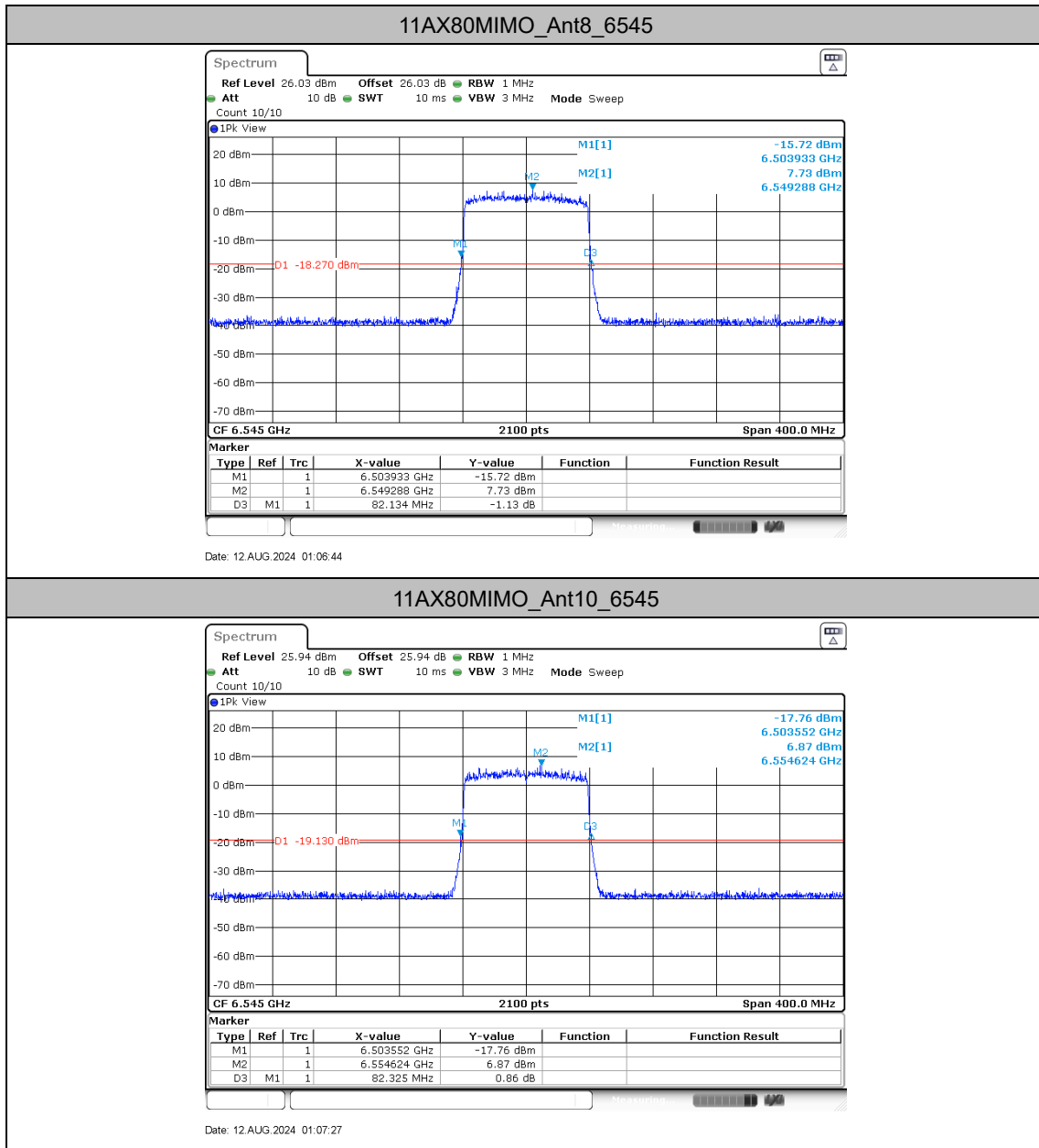


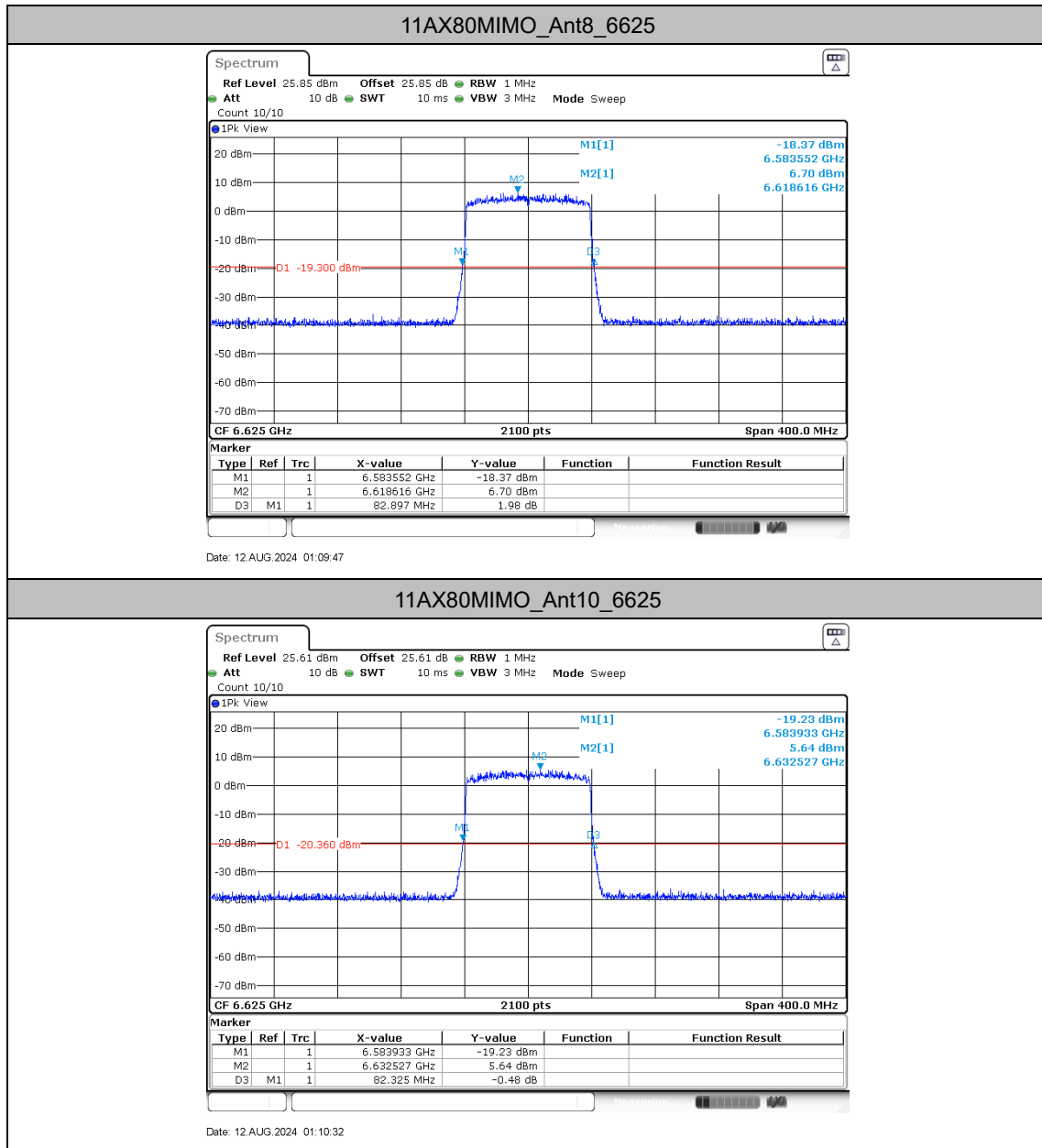






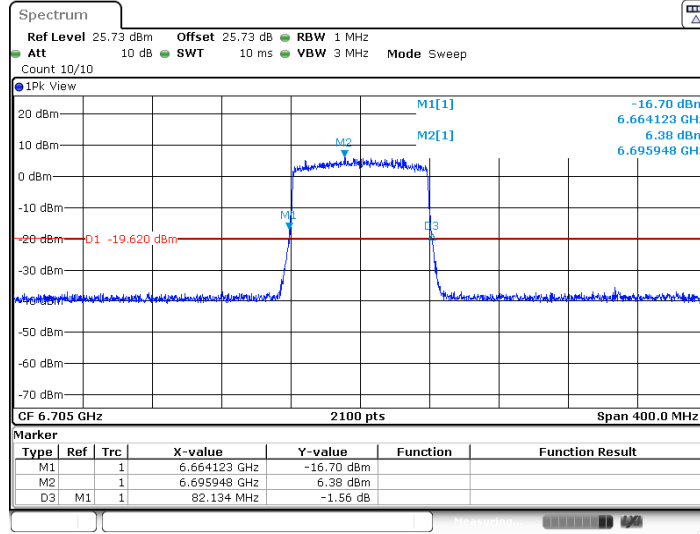






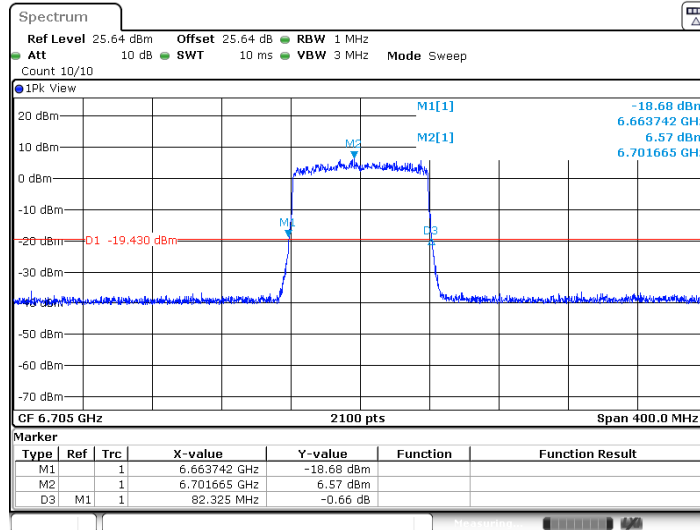


11AX80MIMO_Ant8_6705



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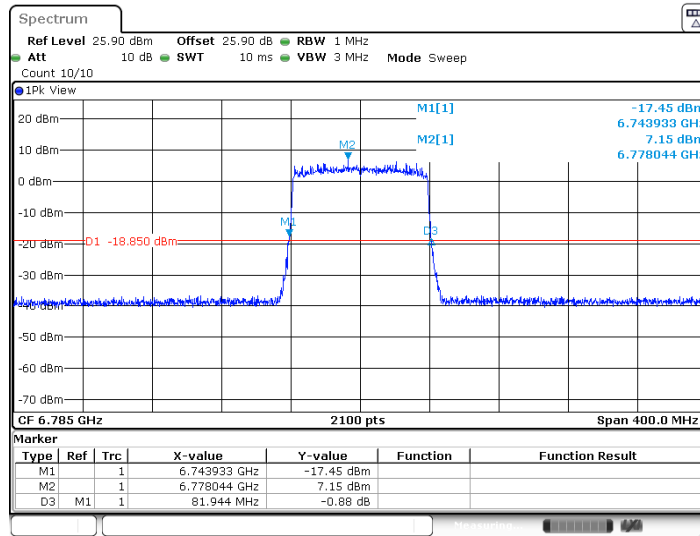
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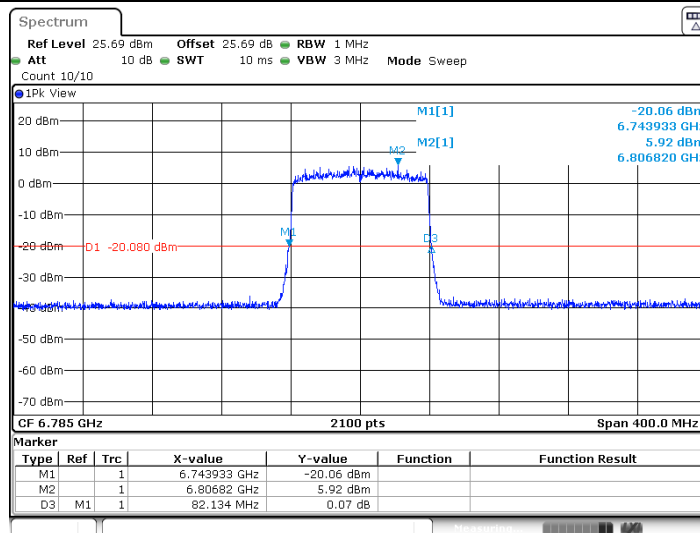


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11AX80MIMO_Ant10_6785



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