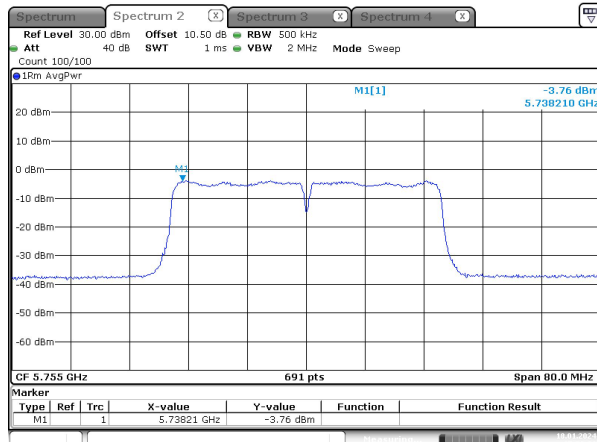
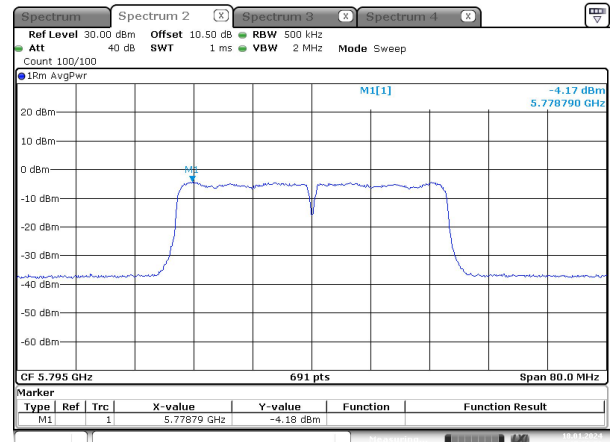


n40\_5755MHz\_Chain 0



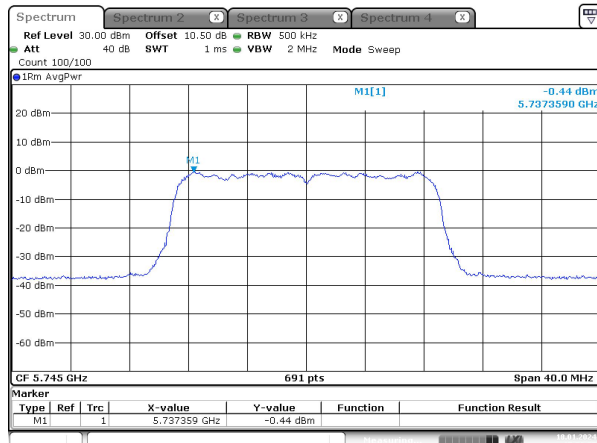
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 17:58:01

n40\_5795MHz\_Chain 0



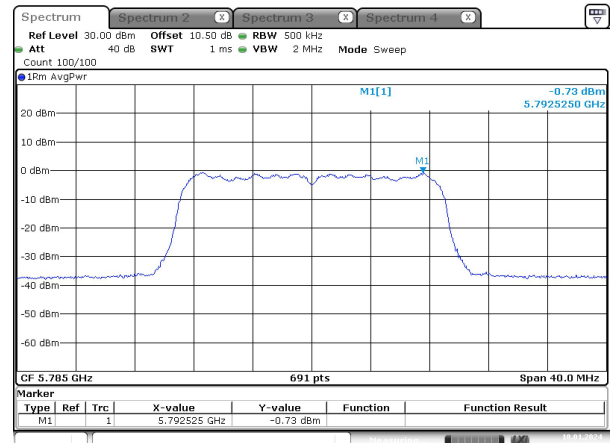
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 17:58:59

ac20\_5745MHz\_Chain 0



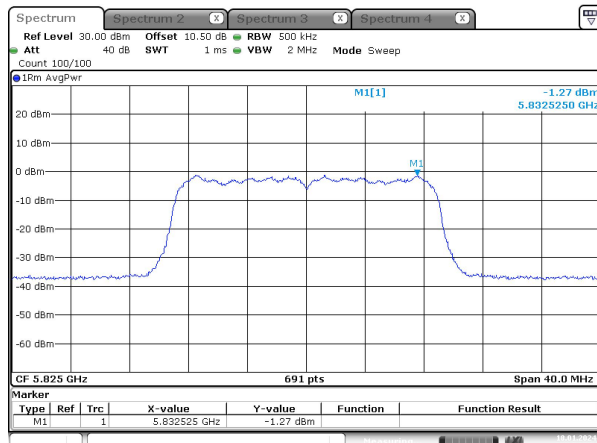
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 17:59:55

ac20\_5785MHz\_Chain 0



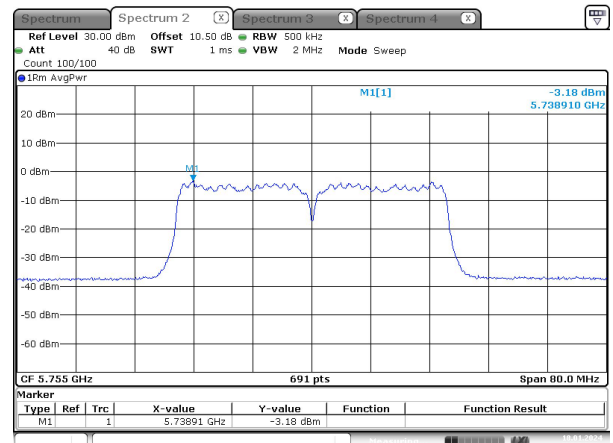
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 18:00:31

ac20\_5825MHz\_Chain 0



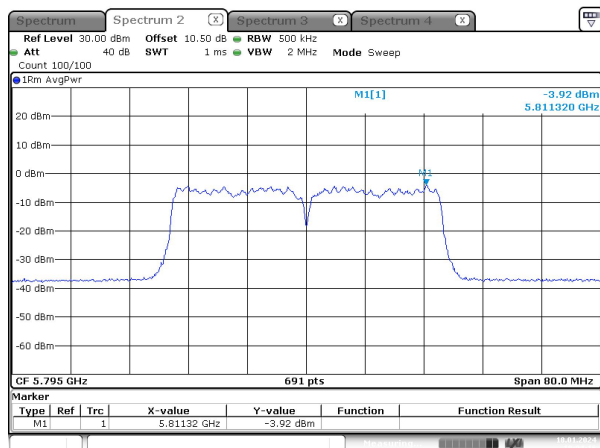
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Date: 18.JAN.2024 18:00:58

ac40\_5755MHz\_Chain 0



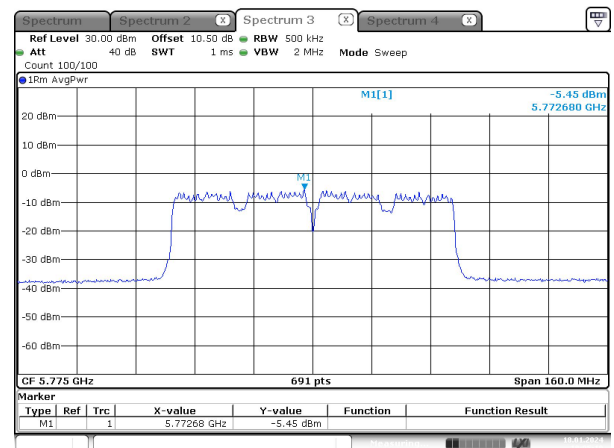
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 18:03:17

ac40\_5795MHz\_Chain 0



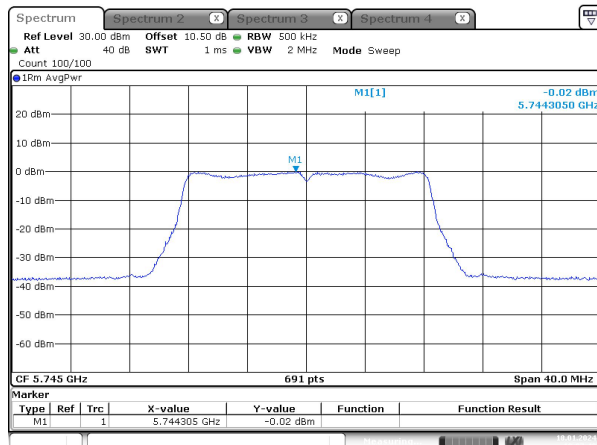
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 18:04:16

ac80\_5775MHz\_Chain 0



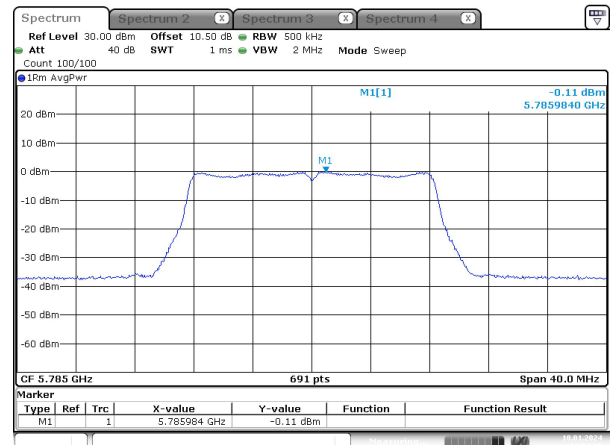
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 18:05:10

a\_5745 MHz\_Chain 1



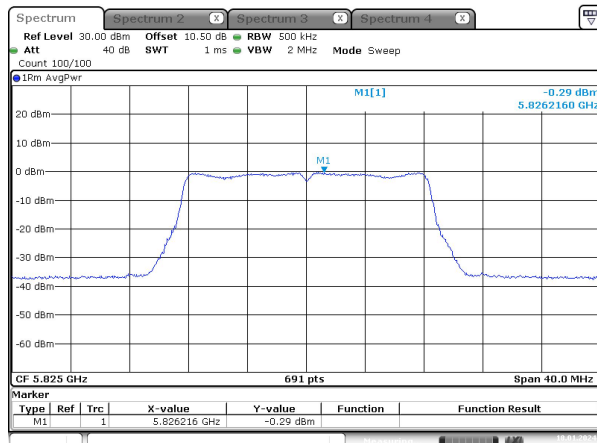
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Date: 18.JAN.2024 19:07:49

a\_5785MHz\_Chain 1



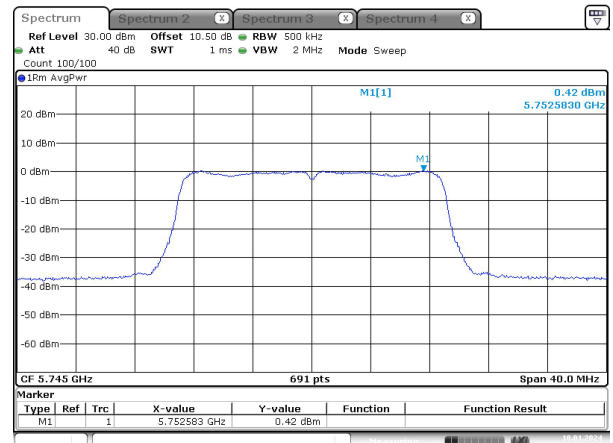
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Date: 18.JAN.2024 19:08:50

a\_5825MHz\_Chain 1



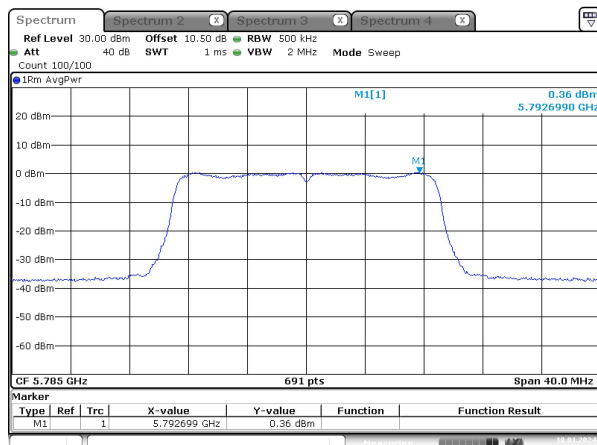
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:09:31

n20\_5745MHz\_Chain 1



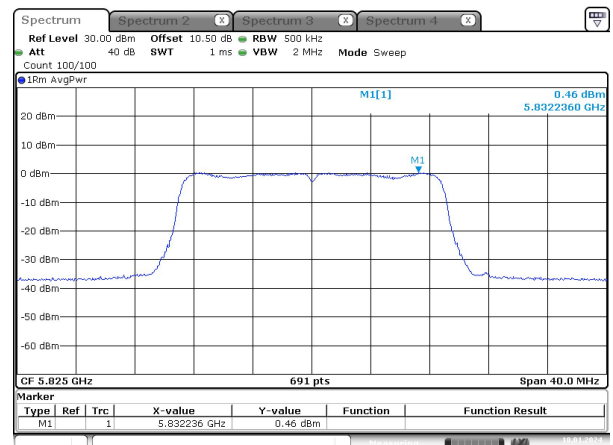
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Date: 18.JAN.2024 19:10:14

n20\_5785MHz\_Chain 1



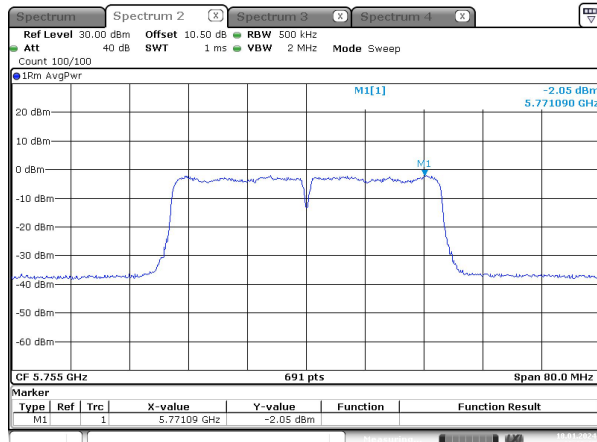
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Date: 18.JAN.2024 19:10:47

n20\_5825MHz\_Chain 1



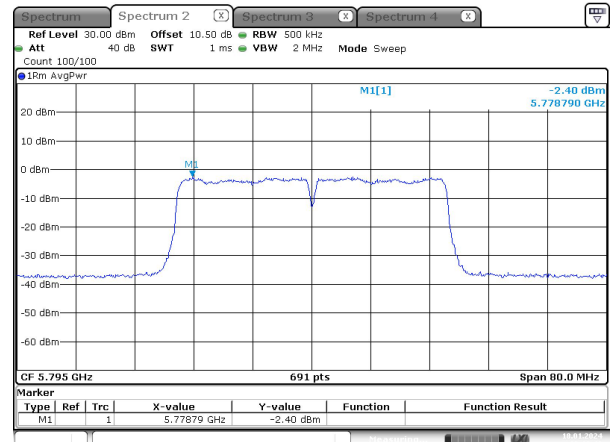
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:11:28

n40\_5755MHz\_Chain 1



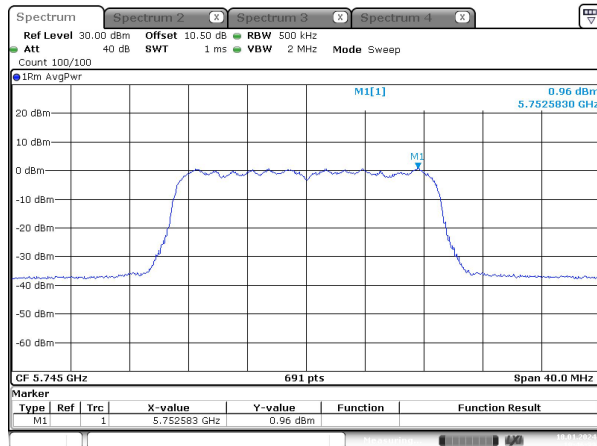
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:12:15

n40\_5795MHz\_Chain 1



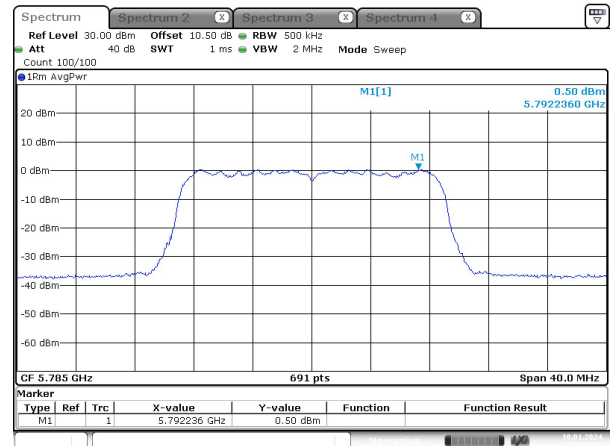
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:12:48

ac20\_5745MHz\_Chain 1



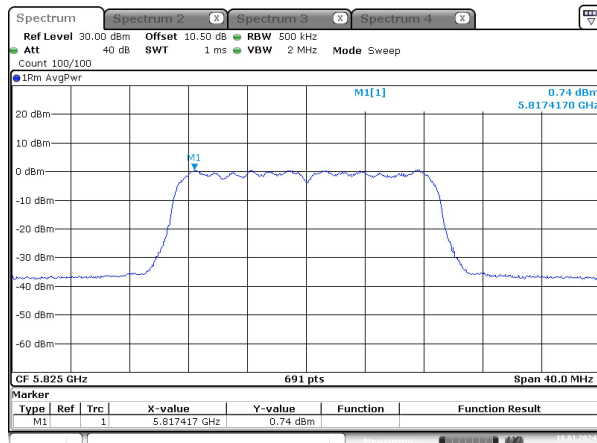
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:46:33

ac20\_5785MHz\_Chain 1



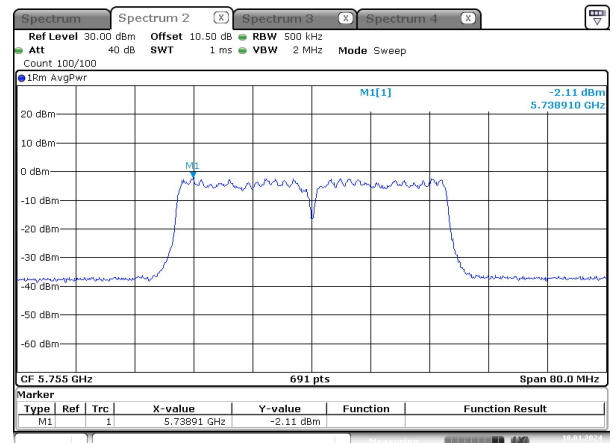
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:19:56

ac20\_5825MHz\_Chain 1



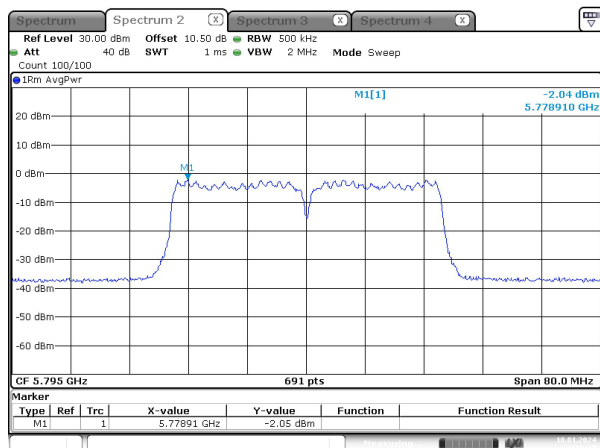
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Date: 18.JAN.2024 19:20:48

ac40\_5755MHz\_Chain 1



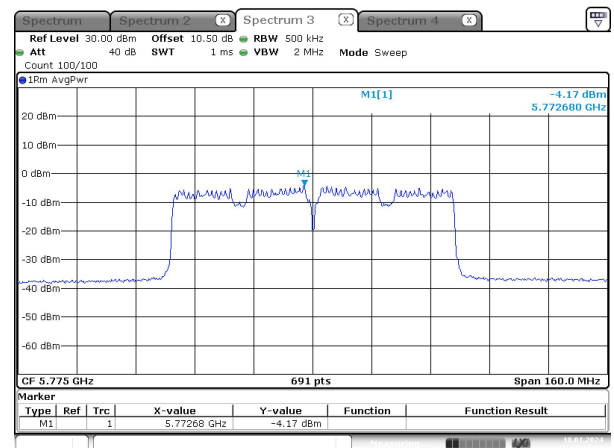
ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:21:30

ac40\_5795MHz\_Chain 1



ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:22:07

ac80\_5775MHz\_Chain 1



ProjectNo.:DG2231214-75420E-RF Tester:Jojo Zhou  
Date: 18.JAN.2024 19:22:54

## 5.7 Duty Cycle

|             |           |              |              |
|-------------|-----------|--------------|--------------|
| Serial No.: | 2F7N-2    | Test Date:   | 2024-01-18   |
| Test Site:  | RF        | Test Mode:   | Transmitting |
| Tester:     | Jojo Zhou | Test Result: | N/A          |

### Environmental Conditions:

|                      |      |                              |    |                           |       |
|----------------------|------|------------------------------|----|---------------------------|-------|
| Temperature:<br>(°C) | 25.7 | Relative<br>Humidity:<br>(%) | 43 | ATM<br>Pressure:<br>(kPa) | 101.8 |
|----------------------|------|------------------------------|----|---------------------------|-------|

### Test Equipment List and Details:

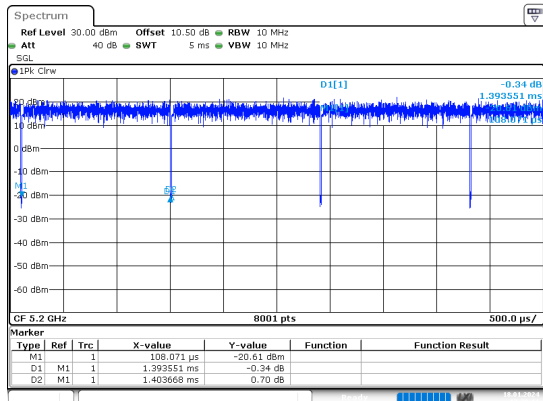
| Manufacturer | Description         | Model         | Serial Number | Calibration Date | Calibration Due Date |
|--------------|---------------------|---------------|---------------|------------------|----------------------|
| R&S          | Spectrum Analyzer   | FSV40         | 101947        | 2023-10-18       | 2024-10-17           |
| E-Microwave  | Blocking Control    | EMDCB-00036   | OE01201047    | 2023-05-06       | 2024-05-05           |
| yzjingcheng  | Coaxial Cable       | KTRFBU-141-50 | 41010012      | 2023-09-01       | 2024-08-31           |
| E-Microwave  | Coaxial Attenuators | EMCA10-5RN-6  | OE01203239    | 2023-09-01       | 2024-08-31           |

\* Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

### Test Data:

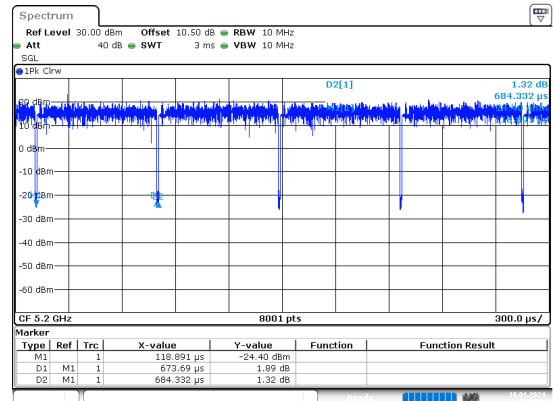
| Test Modes     | Ton (ms) | Ton+off (ms) | Duty cycle (%) | 1/T (Hz) | Duty cycle Factor (dB) | VBW Setting (kHz) |
|----------------|----------|--------------|----------------|----------|------------------------|-------------------|
| 802.11a        | 1.394    | 1.404        | 99.29          | /        | /                      | 0.01              |
| 802.11n ht20   | 0.674    | 0.684        | 98.54          | /        | /                      | 0.01              |
| 802.11n ht40   | 0.349    | 0.36         | 96.94          | 2865     | 0.13                   | 3.0               |
| 802.11ac vht20 | 0.101    | 0.111        | 90.99          | 9901     | 0.41                   | 10.0              |
| 802.11ac vht40 | 0.072    | 0.084        | 85.71          | 13889    | 0.67                   | 20.0              |
| 802.11ac vht80 | 0.057    | 0.066        | 86.36          | 17544    | 0.64                   | 20.0              |

a\_5200MHz\_Chain 0



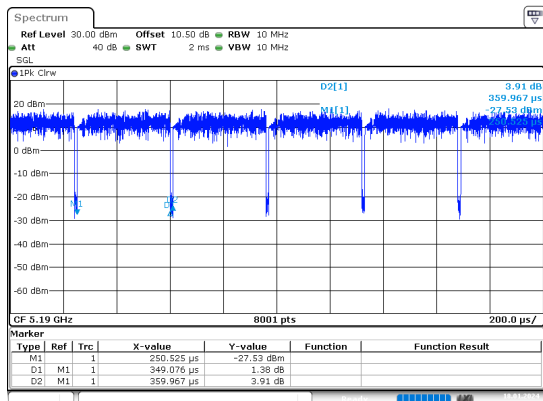
ProjectNo.:DG2231214-75420E-RF Testers:Jojo Zhou  
Date: 18.JAN.2024 17:20:11

n20\_5200MHz\_Chain 0



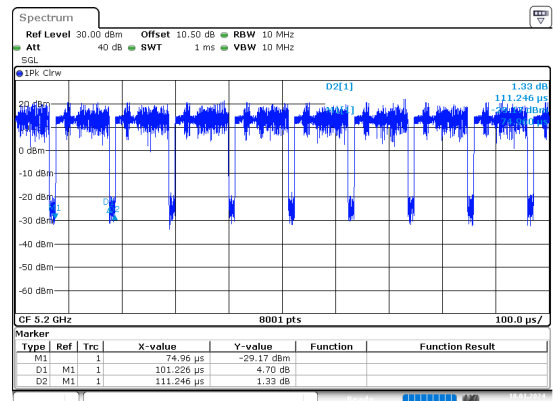
ProjectNo.:DG2231214-75420E-RF Testers:Jojo Zhou  
Date: 18.JAN.2024 17:22:18

n40\_5190MHz\_Chain 0



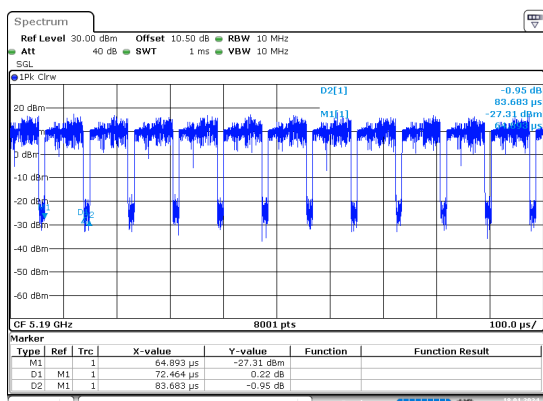
ProjectNo.:DG2231214-75420E-RF Testers:Jojo Zhou  
Date: 18.JAN.2024 17:23:59

ac20\_5200MHz\_Chain 0



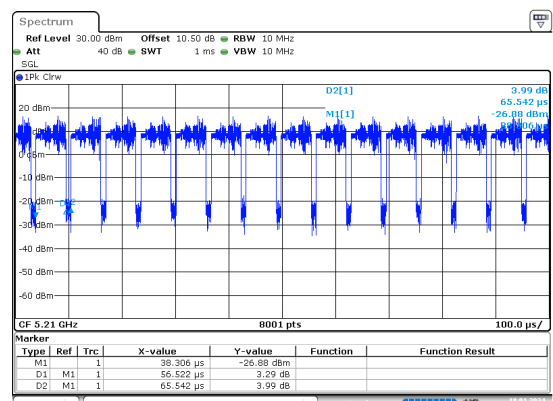
ProjectNo.:DG2231214-75420E-RF Testers:Jojo Zhou  
Date: 18.JAN.2024 17:27:59

ac40\_5190MHz\_Chain 0



ProjectNo.:DG2231214-75420E-RF Testers:Jojo Zhou  
Date: 18.JAN.2024 17:29:21

ac80\_5210MHz\_Chain 0



ProjectNo.:DG2231214-75420E-RF Testers:Jojo Zhou  
Date: 18.JAN.2024 17:25:50

## **APPENDIX A - EUT PHOTOGRAPHS**

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Please refer to the attachment DG2231214-75420E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and DG2231214-75420E-RF-INP EUT INTERNAL PHOTOGRAPHS.

## **APPENDIX B - TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment DG2231214-75420E-RF-00C-TSP TEST SETUP PHOTOGRAPHS.

## APPENDIX C - RF EXPOSURE EVALUATION

### Applicable Standard

According to subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

| (B) Limits for General Population/Uncontrolled Exposure |                               |                               |                                     |                          |
|---------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| Frequency Range (MHz)                                   | Electric Field Strength (V/m) | Magnetic Field Strength (A/m) | Power Density (mW/cm <sup>2</sup> ) | Averaging Time (minutes) |
| 0.3–1.34                                                | 614                           | 1.63                          | *(100)                              | 30                       |
| 1.34–30                                                 | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | 30                       |
| 30–300                                                  | 27.5                          | 0.073                         | 0.2                                 | 30                       |
| 300–1500                                                | /                             | /                             | f/1500                              | 30                       |
| 1500–100,000                                            | /                             | /                             | 1.0                                 | 30                       |

f = frequency in MHz; \* = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

### Calculation formula:

Prediction of power density at the distance of the applicable MPE limit

$S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

**Calculated Data:**

| Frequency<br>(MHz) | Antenna Gain |           | Conducted output<br>power including<br>Tune-up Tolerance |        | Evaluation<br>Distance<br>(cm) | Power<br>Density<br>(mW/cm <sup>2</sup> ) | MPE Limit<br>(mW/cm <sup>2</sup> ) |
|--------------------|--------------|-----------|----------------------------------------------------------|--------|--------------------------------|-------------------------------------------|------------------------------------|
|                    | (dBi)        | (numeric) | (dBm)                                                    | (mW)   |                                |                                           |                                    |
| 2412-2462          | 8.00         | 6.31      | 25.00                                                    | 316.23 | 20.00                          | 0.40                                      | 1.0                                |
| 5150-5250          | 8.00         | 6.31      | 17.00                                                    | 50.12  | 20.00                          | 0.06                                      | 1.0                                |
| 5725-5850          | 8.00         | 6.31      | 18.00                                                    | 63.10  | 20.00                          | 0.08                                      | 1.0                                |

The Conducted output power including Tune-up Tolerance provided by manufacturer

The WLAN 2.4G and 5G can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{Limit,i}}$$

$$=S_{2.4}/S_{limit-2.4} + S_5/S_{limit-5}$$

$$=0.40/1+0.08/1$$

$$=0.48$$

$$< 1.0$$

**Result:** The device meet FCC MPE at 20 cm distance

**===== END OF REPORT =====**