



## Certificate of Calibration

Customer Address: Rental Unit

Certificate: 24101701DR

Product: Signal Analyzer  
 Manufacturer: The EMC Shop  
 Model: ESA1G  
 Serial: SVA1XGDXA5R0277

Notes: 9kHz to 1.5GHz  
 10MHz out measures 2.1dBm @ 9,999,996.5Hz

Date of Calibration: 10/17/2024

Next Calibration:

***The next calibration date is defined by the equipment user/owner. We recommend calibration annually.***

### Calibration Equipment

Model	Description	Serial Number	Due Date
N9010A	Signal Analyzer	MY54510521	3/1/2025
SMA100B	Signal Generator	101590	3/15/2025
E4419B	Power Meter	GB39512253	5/14/2025
E9304A	Power Sensor	MY62480010	9/5/2025

The above instrument was tested and found to be within the Manufacturer's specification. The results of the tests performed are held on file at The EMC Shop. The calibration was carried out in accordance with the general requirements of IEC 61000-4-6:2014 using laboratory standards which are traceable to the SI International System of Quantities through the National Institute of Standards and Technology (NIST), and or other Accredited bodies except where none exist. Tests are carried out in environmental conditions controlled to the extent appropriate to the instrument's specification. This certificate shall not be reproduced except in full without the written approval of the laboratory.

#### Ambient Conditions of Laboratory

Temperature (°C): **20**  
 Relative Humidity (%): **44**

Technician: **Dan Raines**

Technician Signature: \_\_\_\_\_



#### 1dB step Accuracy tested at 9kHz

Nominal (dBm)	Actual (dBm)	Difference (dBm)	Tol. Error (dBm)	Verdict
0.00	-0.60	0.60	±1.00	PASS
-1.00	-1.60	-0.60	±1.00	PASS
-2.00	-2.60	-0.60	±1.00	PASS
-3.00	-3.60	-0.60	±1.00	PASS
-4.00	-4.60	-0.60	±1.00	PASS
-5.00	-5.60	-0.60	±1.00	PASS
-6.00	-6.60	-0.60	±1.00	PASS
-7.00	-7.60	-0.60	±1.00	PASS
-8.00	-8.60	-0.60	±1.00	PASS
-9.00	-9.70	-0.70	±1.00	PASS
-10.00	-10.70	-0.70	±1.00	PASS

#### 1dB step Accuracy tested at 1.495GHz

Nominal (dBm)	Actual (dBm)	Difference (dBm)	Tol. Error (dBm)	Verdict
0.00	-0.80	-0.80	±1.00	PASS
-1.00	-1.80	-0.80	±1.00	PASS
-2.00	-2.80	-0.80	±1.00	PASS
-3.00	-3.80	-0.80	±1.00	PASS
-4.00	-4.80	-0.80	±1.00	PASS
-5.00	-5.80	-0.80	±1.00	PASS
-6.00	-6.80	-0.80	±1.00	PASS
-7.00	-7.80	-0.80	±1.00	PASS
-8.00	-8.80	-0.80	±1.00	PASS
-9.00	-9.90	-0.90	±1.00	PASS
-10.00	-10.90	-0.90	±1.00	PASS



**Power Level Accuracy versus Frequency tested at 0dBm**

Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-0.6	±1.00	PASS
30 kHz	-0.6	±1.00	PASS
100 kHz	-0.6	±1.00	PASS
300 kHz	-0.6	±1.00	PASS
1 MHz	-0.5	±1.00	PASS
3 MHz	-0.2	±1.00	PASS
10 MHz	-0.5	±1.00	PASS
30 MHz	-0.4	±1.00	PASS
100 MHz	-0.6	±1.00	PASS
300 MHz	-0.5	±1.00	PASS
1 GHz	-0.6	±1.00	PASS
1.495 GHz	-0.8	±1.00	PASS

**Power Level Accuracy versus Frequency tested at -10dBm**

Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-10.6	±1.00	PASS
30 kHz	-10.5	±1.00	PASS
100 kHz	-10.6	±1.00	PASS
300 kHz	-10.6	±1.00	PASS
1 MHz	-10.5	±1.00	PASS
3 MHz	-10.2	±1.00	PASS
10 MHz	-10.4	±1.00	PASS
30 MHz	-10.6	±1.00	PASS
100 MHz	-10.5	±1.00	PASS
300 MHz	-10.6	±1.00	PASS
1 GHz	-10.6	±1.00	PASS
1.495 GHz	-10.9	±1.00	PASS



**Power Level Accuracy versus Frequency tested at -20dBm**

Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-20.0	±1.00	PASS
30 kHz	-20.4	±1.00	PASS
100 kHz	-20.5	±1.00	PASS
300 kHz	-20.6	±1.00	PASS
1 MHz	-20.5	±1.00	PASS
3 MHz	-20.2	±1.00	PASS
10 MHz	-20.5	±1.00	PASS
30 MHz	-20.4	±1.00	PASS
100 MHz	-20.6	±1.00	PASS
300 MHz	-20.5	±1.00	PASS
1 GHz	-20.6	±1.00	PASS
1.495 GHz	-20.9	±1.00	PASS

**Power Level Accuracy versus Frequency tested at -30dBm**

Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-29.9	±1.00	PASS
30 kHz	-30.4	±1.00	PASS
100 kHz	-30.5	±1.00	PASS
300 kHz	-30.5	±1.00	PASS
1 MHz	-30.5	±1.00	PASS
3 MHz	-30.2	±1.00	PASS
10 MHz	-30.5	±1.00	PASS
30 MHz	-30.4	±1.00	PASS
100 MHz	-30.6	±1.00	PASS
300 MHz	-30.5	±1.00	PASS
1 GHz	-30.6	±1.00	PASS
1.495 GHz	-30.9	±1.00	PASS



**Power Level Accuracy versus Frequency tested at -40dBm**

Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-39.9	±1.00	PASS
30 kHz	-40.4	±1.00	PASS
100 kHz	-40.5	±1.00	PASS
300 kHz	-40.5	±1.00	PASS
1 MHz	-40.4	±1.00	PASS
3 MHz	-40.2	±1.00	PASS
10 MHz	-40.5	±1.00	PASS
30 MHz	-40.4	±1.00	PASS
100 MHz	-40.6	±1.00	PASS
300 MHz	-40.5	±1.00	PASS
1 GHz	-40.6	±1.00	PASS
1.495 GHz	-40.8	±1.00	PASS

**Power Level Accuracy versus Frequency tested at -50dBm**

Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-50.0	±1.00	PASS
30 kHz	-50.4	±1.00	PASS
100 kHz	-50.4	±1.00	PASS
300 kHz	-50.5	±1.00	PASS
1 MHz	-50.4	±1.00	PASS
3 MHz	-50.2	±1.00	PASS
10 MHz	-50.4	±1.00	PASS
30 MHz	-50.4	±1.00	PASS
100 MHz	-50.5	±1.00	PASS
300 MHz	-50.5	±1.00	PASS
1 GHz	-50.6	±1.00	PASS
1.495 GHz	-50.8	±1.00	PASS



**Power Level Accuracy versus Frequency tested at -60dBm**

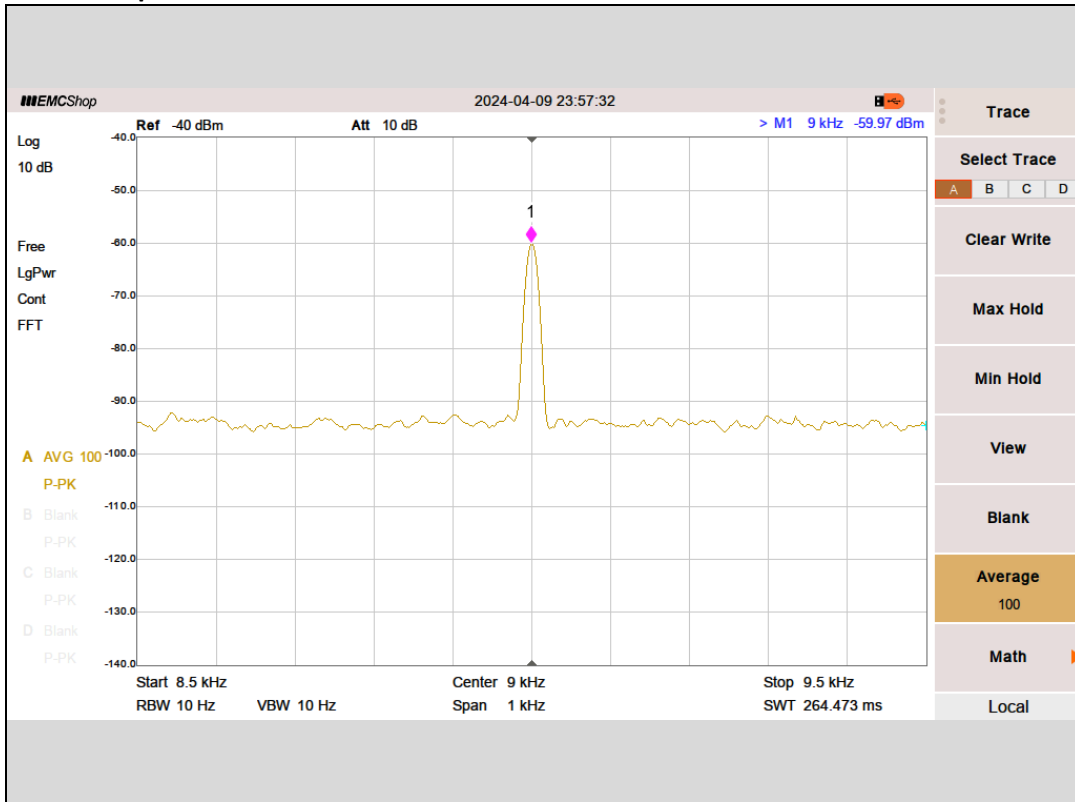
Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-60.1	±1.00	PASS
30 kHz	-60.3	±1.00	PASS
100 kHz	-60.3	±1.00	PASS
300 kHz	-60.5	±1.00	PASS
1 MHz	-60.4	±1.00	PASS
3 MHz	-60.2	±1.00	PASS
10 MHz	-60.4	±1.00	PASS
30 MHz	-60.4	±1.00	PASS
100 MHz	-60.5	±1.00	PASS
300 MHz	-60.4	±1.00	PASS
1 GHz	-60.6	±1.00	PASS
1.495 GHz	-60.8	±1.00	PASS

**Power Level Accuracy versus Frequency tested at -70dBm**

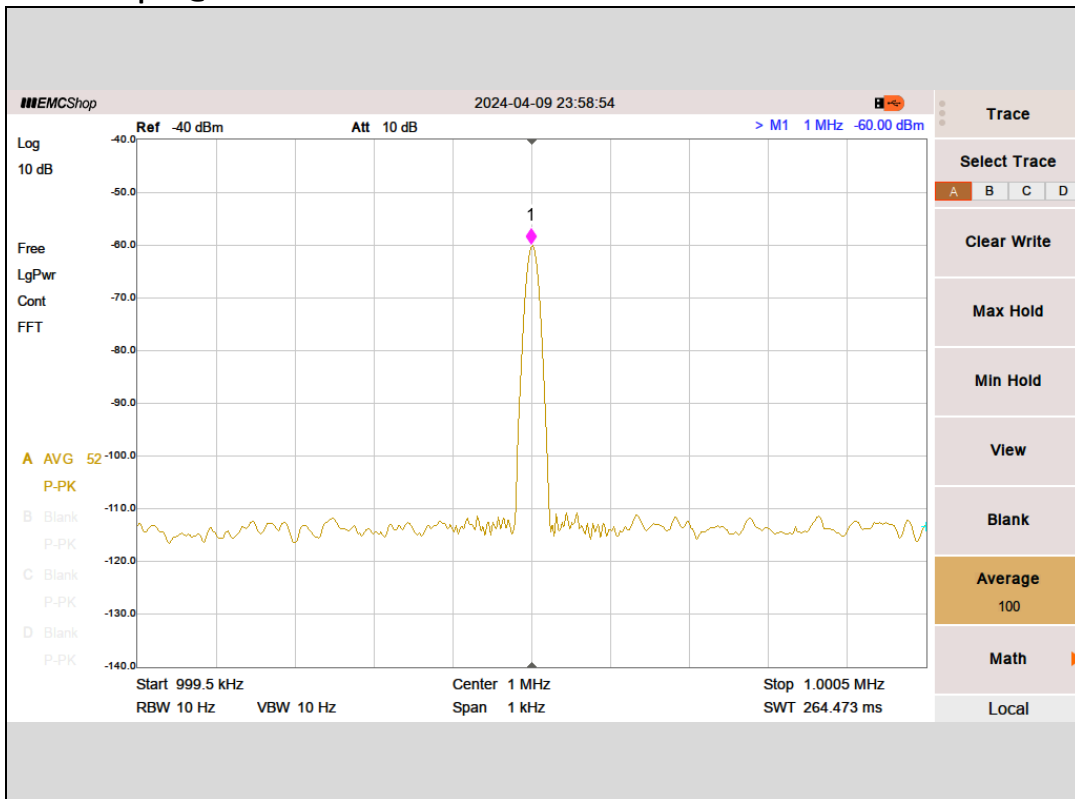
Frequency	Actual (dBm)	Tol. Error (dBm)	Verdict
9 kHz	-70.0	±1.00	PASS
30 kHz	-70.3	±1.00	PASS
100 kHz	-70.3	±1.00	PASS
300 kHz	-70.4	±1.00	PASS
1 MHz	-70.4	±1.00	PASS
3 MHz	-70.2	±1.00	PASS
10 MHz	-70.4	±1.00	PASS
30 MHz	-70.4	±1.00	PASS
100 MHz	-70.5	±1.00	PASS
300 MHz	-70.4	±1.00	PASS
1 GHz	-70.5	±1.00	PASS
1.495 GHz	-70.8	±1.00	PASS



**-60dBm Input @9kHz**

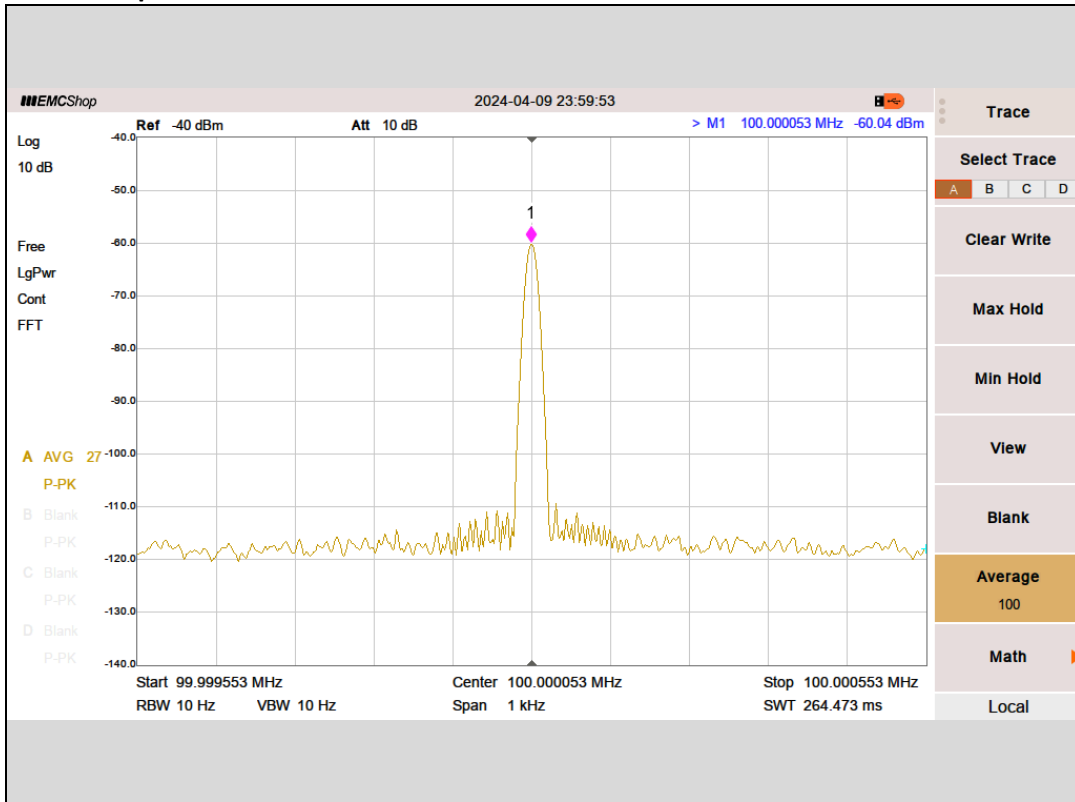


**-60dBm Input @1MHz**





**-60dBm Input @100MHz**



**-60dBm Input @1.495GHz**

