



Calibration Laboratory Cert: 5518.01

ISO/IEC 17025:2017 and ANSI/NCSL Z540.1-1994

Accredited Calibration Certificate

Customer: [REDACTED]

Certificate: A2410111CC

Product: E Field Probe
 Manufacturer: NARDA
 Model: EP-604
 Serial: 811ZX20444

Notes: Correction Factors On 10kHz to 18GHz
 Correction Factors Off 18GHz to 26.5GHz
 Measurements above 18GHz are not accredited.

Date of Report: 10/11/2024
 Date of Calibration: 10/11/2024
 Next Calibration: [REDACTED]

The next calibration date is defined by the equipment user/owner.

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 ISO/IEC 17025-2017 and ANSI Z-540-1 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. The uncertainty results meet the requirements of the ISO/IEC 17025-2017 standard and ILAC Doc.P14. Statements of conformity (e.g. Pass or Fail) are made in accordance with Simple Acceptance decision rules as defined in ILAC G8 with a TUR of 4:1 or greater. The customer is responsible for considering whether the inclusion of the uncertainties shown on the certificate would prevent their use of the equipment based on their risk evaluations. Results are accredited unless annotated with an asterisk "*". The Results presented above are only applicable to the Model/Serial number shown. Template Rev1

Ambient Conditions of Laboratory

Temperature (°C): 22.7
 Relative Humidity (%): 33

Technician: Caleb Crites

Technician Signature: Caleb B Crites



Calibration Equipment				
Model	Description	Serial Number	Certificate Number	Due Date
FL7040	Field Probe	0352814	221213-130209-d54321	1/11/2025
FI7000	Field Probe Laser Interface	0349930	NA	NA
FM7004A	Field Probe Monitor	0346928	NA	NA
EP-602	Field Probe	711ZX00440	231213-133717-ea0d01	12/27/2024
3117	Horn Antenna	00212937	NA	NA
3160-09	Horn Antenna	2004081	NA	NA
E4419B	Power Meter	GB40202731	1-17660891762-1	5/24/2025
E9304A	Power Sensor	MY41497710	1-16749159368-1	2/14/2025
NRP33SN	Power Sensor	100892	A2410102CC	10/10/2025
N5173B	Signal Generator	MY53270199	WO-00544602	8/17/2025
N5183A	Signal Generator	MY50140101	WO-00753924	3/22/2025
DC1G-100	Directional Coupler	132228	A23042601DR	4/26/2025
DC18G-50	Directional Coupler	2220	A23042601DR	4/26/2025
DC40G-30	Directional Coupler	2105	A2410101CC	10/10/2025
50U1000	Amplifier, 10kHz to 1GHz	0357990	NA	NA
SS18G-10	Amplifier, 1GHz to 18GHz	2415066	NA	NA
40T18G26A	Amplifier, 18GHz to 26.5GHz	0341547	NA	NA
10x14x10 RF Chamber	RF Chamber	1000246	NA	NA
GTEM800	Transverse Electromagnetic Waveguide	513461	NA	NA

Calibration Method Used:	IEEE Std. 1309-2013; Substitution
Axis Alignment:	35.3° Angle, Z-Axis Aligned with E-Field
Parameters Calibrated:	Linearity
	Frequency Response

Condition as found:	IN tolerance
Condition as left:	IN tolerance

Measuring Uncertainties	
Linearity	± 1.8 dB
Frequency Response 1kHz to 1GHz	± 2.9 dB
Frequency Response 1GHz to 18GHz	± 2.32 dB



Linearity / Dynamic Range Levels

IEEE Std. 1309-2003 sec 7.1

Frequency (MHz)	Applied E-Field (V/m)	Measured E-Field (V/m)	Difference (V/m)	Difference Percent (%)	Difference (dB)
27	8.384	7.65	-0.74	8.80%	-0.800
27	9.603	9.47	-0.14	1.44%	-0.126
27	11.681	11.93	0.25	2.13%	0.183
27	14.281	15.14	0.86	6.01%	0.507
27	18.422	19.05	0.63	3.41%	0.292
27	22.656	24.03	1.38	6.08%	0.513
27	28.184	30.16	1.97	7.00%	0.588
27	35.167	37.78	2.61	7.42%	0.622
27	45.060	47.47	2.41	5.35%	0.453
27	56.386	59.33	2.95	5.22%	0.442
27	70.886	74.47	3.58	5.05%	0.428
27	87.848	91.06	3.21	3.65%	0.312
27	107.562	111.62	4.06	3.77%	0.321
27	131.206	134.57	3.37	2.57%	0.220
27	155.750	157.73	1.98	1.27%	0.110
27	176.866	178.77	1.90	1.07%	0.093



Frequency Response 9kHz to 18GHz

IEEE Std. 1309-2003 sec 7.2

Frequency (GHz)	Applied E-Field (V/m)	Measured E-Field (V/m)	Difference (V/m)	Difference Percent (%)	Difference (dB)
0.3	31.419	38.19	6.77	21.56%	1.696
0.5	31.183	61.09	29.91	95.91%	5.841
0.8	31.064	77.86	46.79	150.63%	7.981
1	30.994	81.68	50.69	163.53%	8.417
5	35.006	37.33	2.32	6.63%	0.557
8	38.217	41.18	2.96	7.75%	0.648
10	37.920	41.11	3.19	8.40%	0.701
50	27.466	30.26	2.79	10.17%	0.841
80	29.638	32.32	2.68	9.04%	0.751
100	25.562	27.90	2.34	9.16%	0.761
500	25.951	24.47	-1.48	5.71%	-0.510
800	41.658	40.97	-0.69	1.65%	-0.144
1,000	7.860	6.30	-1.56	19.80%	-1.916
2,000	10.980	11.70	0.72	6.58%	0.553
3,000	23.540	20.39	-3.15	13.37%	-1.247
4,000	25.880	25.19	-0.69	2.65%	-0.234
5,000	20.180	19.36	-0.82	4.05%	-0.359
6,000	26.110	20.35	-5.76	22.06%	-2.165
7,000	23.460	20.39	-3.07	13.08%	-1.218
8,000	21.700	19.32	-2.38	10.98%	-1.010
9,000	24.760	25.01	0.25	1.03%	0.089
10,000	21.230	19.42	-1.81	8.53%	-0.774
11,000	18.940	24.22	5.28	27.90%	2.137
12,000	17.230	18.60	1.37	7.97%	0.666
13,000	15.230	17.17	1.94	12.76%	1.043
14,000	27.770	19.21	-8.56	30.84%	-3.203
15,000	16.810	11.96	-4.85	28.87%	-2.959
16,000	20.700	12.81	-7.89	38.11%	-4.167
17,000	23.010	12.49	-10.53	45.74%	-5.311
18,000	19.430	9.90	-9.53	49.03%	-5.853



Frequency Response 18GHz to 26.5GHz (Not Accredited Measurements)

IEEE Std. 1309-2003 sec 7.2

Frequency (GHz)	Applied E-Field (V/m)	Measured E-Field (V/m)	Difference (V/m)	Difference Percent (%)	Difference (dB)
19,000	14.030	6.35	-7.68	54.73%	-6.884
20,000	17.320	7.58	-9.74	56.24%	-7.179
21,000	19.070	8.72	-10.35	54.26%	-6.795
22,000	18.620	10.56	-8.06	43.30%	-4.929
23,000	13.980	7.40	-6.58	47.04%	-5.521
24,000	12.230	4.84	-7.39	60.42%	-8.050
25,000	12.290	3.64	-8.65	70.41%	-10.576
26,000	13.290	2.87	-10.42	78.39%	-13.307
26,500	13.240	2.94	-10.30	77.81%	-13.077

End of Calibration Report: Field Probe Cert Rev. 1