



Calibration Laboratory Cert: 5518.01

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

Customer Address: Rental Unit

Certificate #: A24080101DR

Product: Solid State Amplifier

Manufacturer: Amplifier Research
Model: 100W1000B
Serial #: 0327906

Notes: Amplifier Range 1MHz to 1GHz
Power: 100 Watts
CSV Files available upon request

Date of Report: 8/1/2024
Date of Calibration: 8/1/2024
Next Calibration:

The above instrument was tested and found to be within the Manufacturer's specifications at the tested parameters. 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 are only applicable to the Model/Serial number shown above.

Ambient Conditions of Laboratory

Temperature (°C): **21**
Relative Humidity (%): **38**

Technician: **Dan Raines**

Technician Signature: _____



Calibration Equipment				
Model	Description	Serial Number	Certificate #	Due Date
ZNB 8	Rohde&Schwarz Vect. Netw. Ana.	102017	S220805-021	9/9/2024
ZV-Z21	Calibration Kit (50Ω)	100800	0001A300706445	7/27/2025

Calibration method used: IEC 61000-4-6

VSWR measurements made are not accredited

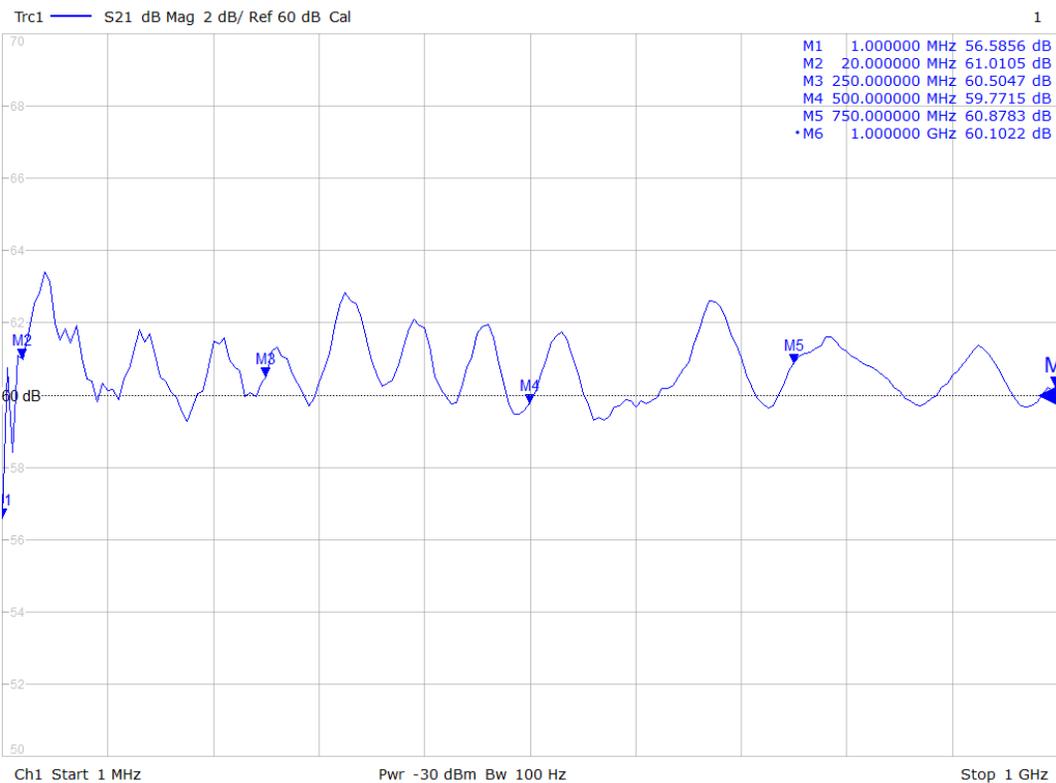
Condition as found:	IN tolerance
Condition as left:	IN tolerance

Measuring Uncertainties	
Insertion Loss	± 0.2 dB
RF Power Level	± 0.3 dB
Power Amplifier Gain Linearity	± 0.44 dB

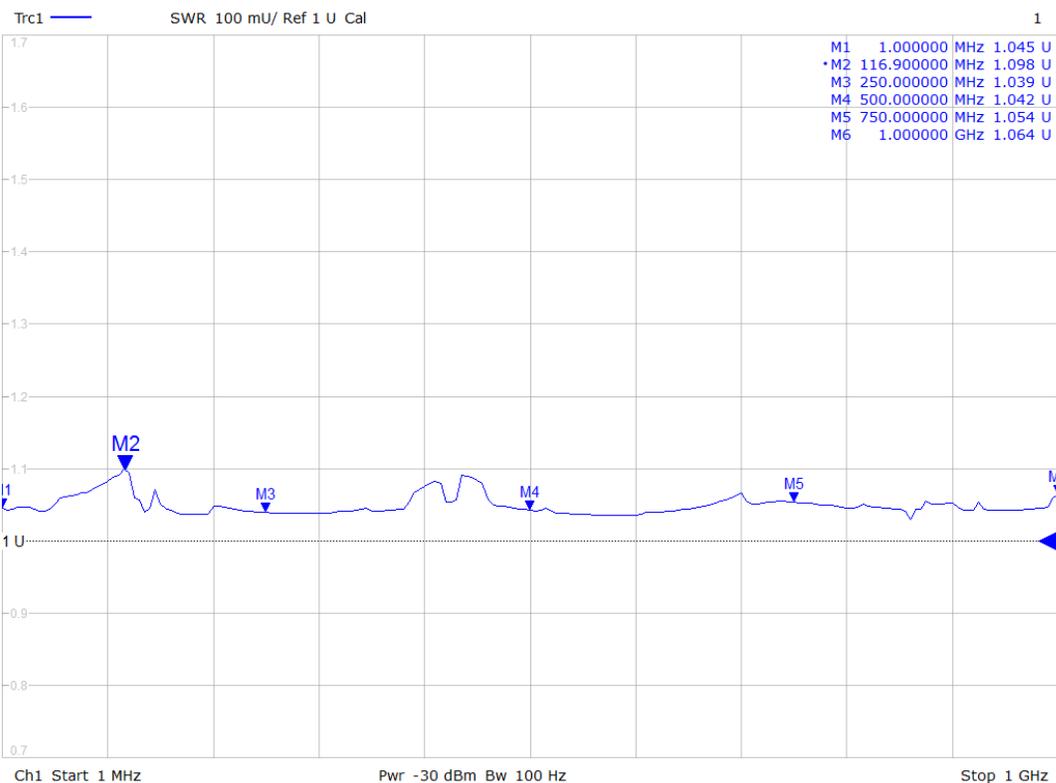
The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95%



Gain Through Band 150kHz to 150MHz



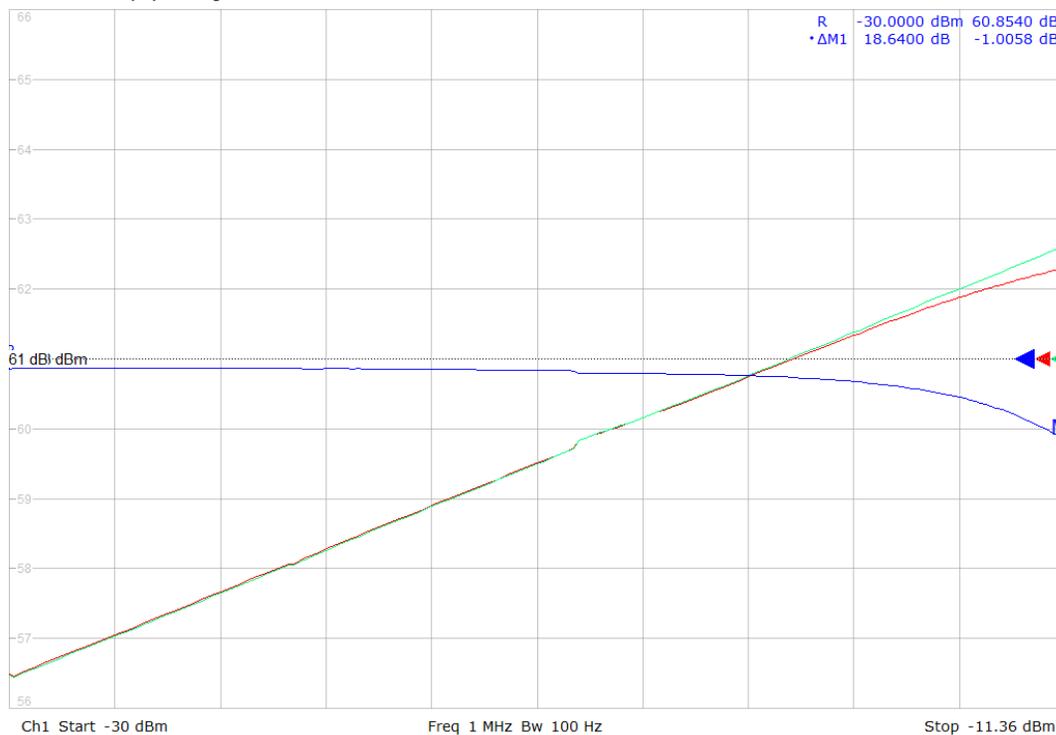
VSWR on Amplifier Input





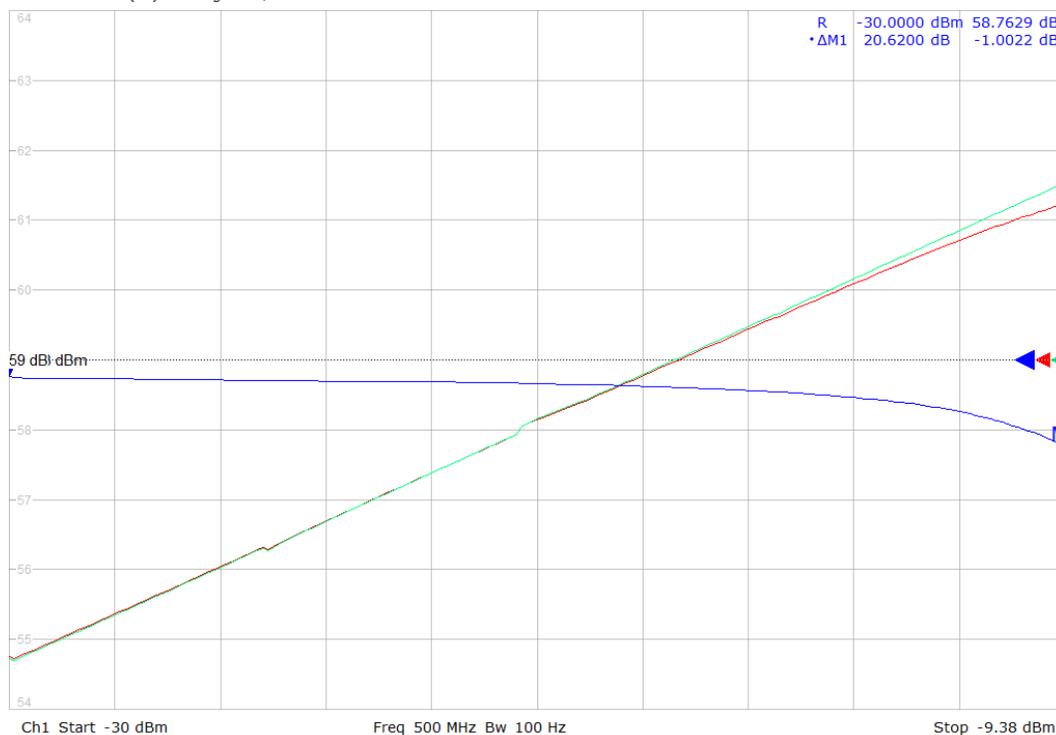
P1dB at 1MHz

Trc1 — S21 dB Mag 1 dB/ Ref 61 dB Offs Trc2 — b2(P1) dB Mag 3 dB/ Ref 4.38 dB Offs 1
 Trc3 — a1(P1) dB Mag 3 dB/ Ref -56.43 dB Offs



P1dB at 500MHz

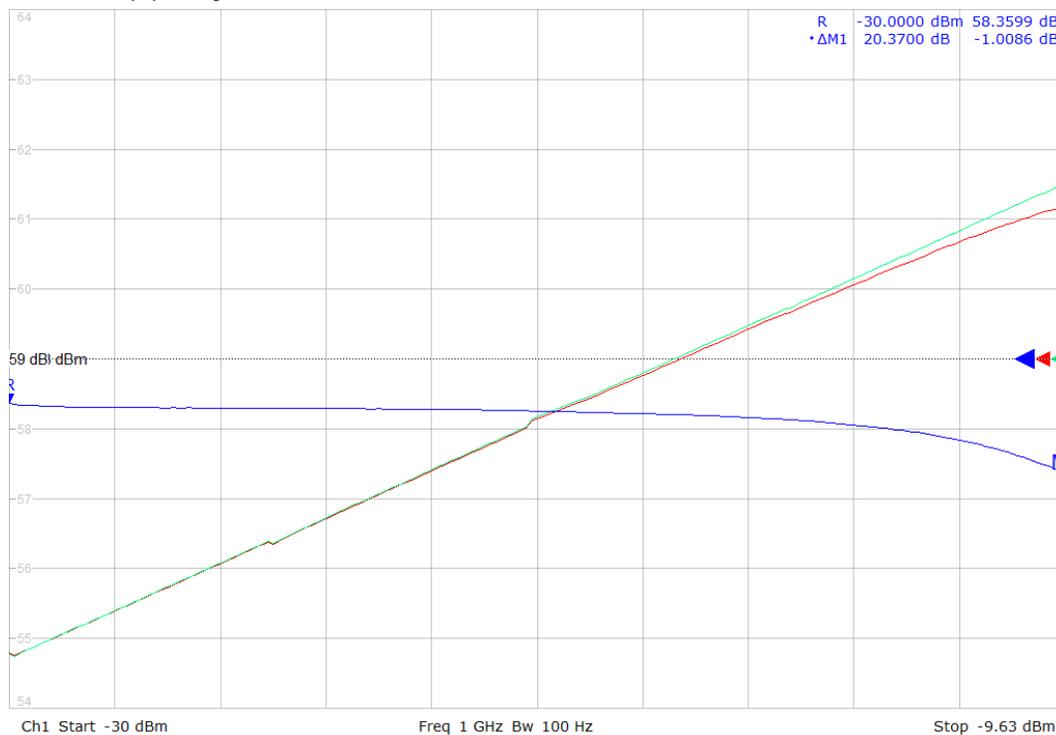
Trc1 — S21 dB Mag 1 dB/ Ref 59 dB Offs Trc2 — b2(P1) dB Mag 3 dB/ Ref 2.25 dB Offs 1
 Trc3 — a1(P1) dB Mag 3 dB/ Ref -56.43 dB Offs





P1dB at 1GHz

Trc1 — S21 dB Mag 1 dB/ Ref 59 dB Offs Trc2 — b2(P1) dB Mag 3 dB/ Ref 1.89 dBm Offs 1
 Trc3 — a1(P1) dB Mag 3 dB/ Ref -56.43 dBm Offs



Frequency (Hz)	GAIN (dBm)	VSWR (U)
1000000	56.59	1.05
5995000	60.77	1.04
10990000	58.42	1.04
15985000	61.08	1.05
20980000	60.99	1.05
25975000	61.82	1.05
30970000	62.52	1.04
35965000	62.85	1.04
40960000	63.41	1.04
45955000	63.17	1.04
50950000	61.99	1.05
55945000	61.53	1.06
60940000	61.84	1.06
65935000	61.44	1.06
70930000	61.94	1.06
75925000	61.03	1.07
80920000	60.45	1.07
85915000	60.37	1.07
90910000	59.82	1.07
95905000	60.32	1.08
100900000	60.14	1.08
105895000	60.17	1.09
110890000	59.87	1.09
115885000	60.48	1.10
120880000	60.72	1.09
125875000	61.30	1.06
130870000	61.82	1.06
135865000	61.46	1.04
140860000	61.71	1.05
145855000	61.12	1.07
150850000	60.51	1.05
155845000	60.37	1.04
160840000	60.06	1.04
165835000	59.93	1.04
170830000	59.52	1.04
175825000	59.28	1.04
180820000	59.66	1.04
185815000	60.05	1.04

190810000	60.11	1.04
195805000	60.68	1.04
200800000	61.49	1.05
205795000	61.40	1.05
210790000	61.59	1.05
215785000	61.00	1.05
220780000	60.78	1.04
225775000	60.66	1.04
230770000	59.96	1.04
235765000	60.07	1.04
240760000	59.96	1.04
245755000	60.33	1.04
250750000	60.54	1.04
255745000	61.20	1.04
260740000	61.32	1.04
265735000	61.08	1.04
270730000	61.01	1.04
275725000	60.60	1.04
280720000	60.33	1.04
285715000	60.02	1.04
290710000	59.71	1.04
295705000	59.89	1.04
300700000	60.35	1.04
305695000	60.72	1.04
310690000	61.16	1.04
315685000	61.89	1.04
320680000	62.49	1.04
325675000	62.83	1.04
330670000	62.62	1.04
335665000	62.53	1.04
340660000	62.14	1.04
345655000	61.51	1.05
350650000	60.96	1.04
355645000	60.55	1.04
360640000	60.23	1.04
365635000	60.33	1.04
370630000	60.40	1.04
375625000	60.85	1.04
380620000	61.37	1.04
385615000	61.83	1.05
390610000	62.10	1.07
395605000	61.93	1.07
400600000	61.86	1.08
405595000	61.36	1.08

410590000	60.53	1.08
415585000	60.16	1.08
420580000	59.97	1.05
425575000	59.76	1.05
430570000	59.79	1.06
435565000	60.22	1.09
440560000	60.76	1.09
445555000	61.06	1.09
450550000	61.71	1.08
455545000	61.91	1.08
460540000	61.95	1.06
465535000	61.58	1.05
470530000	60.88	1.05
475525000	60.33	1.05
480520000	59.77	1.05
485515000	59.47	1.05
490510000	59.48	1.04
495505000	59.57	1.04
500500000	59.79	1.04
505495000	60.11	1.04
510490000	60.57	1.04
515485000	60.99	1.05
520480000	61.48	1.04
525475000	61.65	1.04
530470000	61.75	1.04
535465000	61.55	1.04
540460000	61.11	1.04
545455000	60.58	1.04
550450000	60.04	1.04
555445000	59.74	1.04
560440000	59.30	1.04
565435000	59.39	1.04
570430000	59.29	1.04
575425000	59.42	1.04
580420000	59.67	1.04
585415000	59.69	1.04
590410000	59.86	1.04
595405000	59.84	1.04
600400000	59.68	1.04
605395000	59.83	1.04
610390000	59.76	1.04
615385000	59.83	1.04
620380000	59.92	1.04
625375000	60.20	1.04

630370000	60.18	1.04
635365000	60.26	1.04
640360000	60.49	1.04
645355000	60.74	1.04
650350000	60.90	1.04
655345000	61.40	1.05
660340000	61.78	1.05
665335000	62.23	1.05
670330000	62.60	1.05
675325000	62.57	1.05
680320000	62.44	1.05
685315000	62.13	1.06
690310000	61.70	1.06
695305000	61.40	1.06
700300000	61.05	1.07
705295000	60.55	1.06
710290000	60.23	1.05
715285000	59.93	1.05
720280000	59.75	1.05
725275000	59.65	1.05
730270000	59.69	1.05
735265000	60.02	1.05
740260000	60.28	1.05
745255000	60.68	1.05
750250000	60.89	1.05
755245000	61.07	1.05
760240000	61.15	1.05
765235000	61.19	1.05
770230000	61.30	1.05
775225000	61.36	1.05
780220000	61.62	1.05
785215000	61.60	1.05
790210000	61.47	1.05
795205000	61.29	1.05
800200000	61.21	1.05
805195000	61.07	1.05
810190000	60.98	1.05
815185000	60.86	1.05
820180000	60.80	1.05
825175000	60.77	1.05
830170000	60.63	1.05
835165000	60.52	1.05
840160000	60.40	1.04
845155000	60.21	1.04

850150000	60.11	1.04
855145000	59.90	1.04
860140000	59.85	1.03
865135000	59.73	1.04
870130000	59.71	1.04
875125000	59.80	1.05
880120000	59.91	1.05
885115000	59.99	1.05
890110000	60.21	1.05
895105000	60.34	1.05
900100000	60.55	1.05
905095000	60.68	1.05
910090000	60.86	1.04
915085000	61.05	1.04
920080000	61.24	1.04
925075000	61.39	1.05
930070000	61.27	1.04
935065000	61.14	1.04
940060000	60.86	1.04
945055000	60.65	1.04
950050000	60.36	1.04
955045000	60.09	1.04
960040000	59.87	1.04
965035000	59.70	1.04
970030000	59.67	1.04
975025000	59.71	1.04
980020000	59.81	1.05
985015000	60.03	1.05
990010000	60.21	1.05
995005000	60.14	1.06
1000000000	60.10	1.06