


SUMMARY TEST DATA

ON

SDLVA-1G20G-55-12-SFF-100OHM-ROHS

CUSTOMER: _____
 SO: _____
 MODEL NO: SDLVA-1G20G-55-12-SFF-100OHM-ROHS
 SERIAL NO: PL51766/2512

TESTED BY: FCC
 TEMPERATURE: +25°C
 DATE: 3/18/2025
 DRAWING NO: 27648680 REV: A1

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	1 to 20 GHz	1 to 20 GHz	
2	Frequency Flatness	±2.0 dB TYP	±1.20dB	
3	Log Linearity	±1.5 dB (Pin = -50 to 0 dBm) @ +25°C TYP	±2.62 dB	
4	Log Linearity Over Temp	±2.0 dB (Pin = -50 to 0 dBm) @ -55°C to +85°C TYP	±2.92dB	
5	Logging Range	-55 to +5 dBm	-55 to +5 dBm	
6	Input VSWR	2.8:1 TYP	3.42:1	
7	Log Video Output Voltage	0.1 to 2.5 V TYP	0.135V to 4.537 V	
8	Log Video Output Slope	50 mV / dB TYP	89.20 mV/ dB	
9	Log Video Output Rise Time	5 ns (Pin = -20 dBm @ 10% to 90%)	12.5 ns	
10	Log Video Output Fall Time	20 ns (Pin = -20 dBm @ 90% to 10%)	21.8 ns	
11	Log Video Recovery Time	28 ns (Pin = -50 to 0 dBm)	34.720 ns	
12	Log Video Propagation Delay	15 ns TYP	15 ns	
13	Tangential Signal Sensitivity	-58 dBm TSS TYP	- 58 dBm	
14	Power Supply	+8 to +15 VDC @ 130 mA TYP	120 mA	

QA/QC Approval: *K. Klumpp*

Date: 3-17-25

Tabulated Transfer Data @ 25C

LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-1G20G-55-12-SFF-100MV
 TESTED BY: FCC
 DATE: 3-17-25
 SERIAL NO: PL51768
 Test Temp: +25C

Output Offset(V)= 0.135



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Frequency

1 GHz	INTERCEPT (mV)	4819
	SLOPE (mV/dB)	92.8

	-55	-50	-45	-40	-35	-30	-26	-20	-15	-10	-5	0	5
178	274	532	988	1503	2022	2544	3047	3523	3965	4356	4591	4657	
449	79	-123	-129	-77	-21	38	78	92	72	0	-228	-624	
4.85	0.86	-1.33	-1.40	-0.83	-0.22	0.42	0.85	1.00	0.77	0.00	-2.46	-6.75	

	RF Input Power (dBm)	
	Measured Value (mV)	
	Error (mV)	
-2.46	1.00	LINEARITY ERROR (dB)

4.17 GHz	INTERCEPT (mV)	4824
	SLOPE (mV/dB)	92.3

182	273	528	997	1549	2065	2589	3078	3539	3977	4345	4582	4647	
432	62	-144	-137	-46	9	71	99	99	76	-18	-242	-638	
4.69	0.67	-1.56	-1.48	-0.50	0.10	0.77	1.07	1.07	0.82	-0.19	-2.62	-6.92	

	Measured Value (mV)	
	Error (mV)	
-2.62	1.07	LINEARITY ERROR (dB)

7.33 GHz	INTERCEPT (mV)	4791
	SLOPE (mV/dB)	91

190	286	541	1012	1658	2058	2564	3051	3500	3936	4302	4559	4613	
405	46	-154	-138	-47	-4	48	80	74	56	-34	-232	-633	
4.46	0.51	-1.69	-1.52	-0.52	-0.05	0.53	0.88	0.82	0.61	-0.37	-2.55	-6.95	

	Measured Value (mV)	
	Error (mV)	
-2.55	0.88	LINEARITY ERROR (dB)

10.5 GHz	INTERCEPT (mV)	4712
	SLOPE (mV/dB)	88.7

203	315	598	1072	1597	2074	2548	3023	3445	3881	4279	4511	4602	
368	37	-123	-93	-11	22	54	85	83	56	10	-201	-564	
4.15	0.42	-1.39	-1.05	-0.13	0.25	0.61	0.95	0.71	0.63	0.12	-2.27	-6.24	

	Measured Value (mV)	
	Error (mV)	
-2.27	0.95	LINEARITY ERROR (dB)

13.66 GHz	INTERCEPT (mV)	4700
	SLOPE (mV/dB)	86.6

221	365	710	1182	1670	2122	2697	3084	3498	3923	4258	4494	4616	
287	-3	-94	-62	3	21	63	94	98	89	-9	-206	-517	
3.31	-0.03	-1.05	-0.60	0.03	0.25	0.73	1.08	1.13	1.03	-0.10	-2.38	-5.97	

	Measured Value (mV)	
	Error (mV)	
-2.38	1.13	LINEARITY ERROR (dB)

16.83 GHz	INTERCEPT (mV)	4703
	SLOPE (mV/dB)	86.8

229	376	719	1178	1663	2101	2586	3045	3472	3908	4258	4537	4561	
298	11	-80	-55	-3	1	52	77	71	73	-11	-166	-575	
3.43	0.13	-0.92	-0.63	-0.04	0.01	0.60	0.89	0.81	0.84	-0.13	-1.91	-6.63	

	Measured Value (mV)	
	Error (mV)	
-1.91	0.89	LINEARITY ERROR (dB)

20 GHz	INTERCEPT (mV)	4604
	SLOPE (mV/dB)	86.4

221	340	635	1066	1538	1985	2472	2938	3340	3791	4150	4484	4555	
368	55	-82	-83	-43	-28	27	61	32	51	-22	-120	-451	
4.26	0.64	-0.96	-0.96	-0.49	-0.32	0.32	0.71	0.37	0.69	-0.26	-1.39	-5.22	

	Measured Value (mV)	
	Error (mV)	
-1.39	0.71	LINEARITY ERROR (dB)

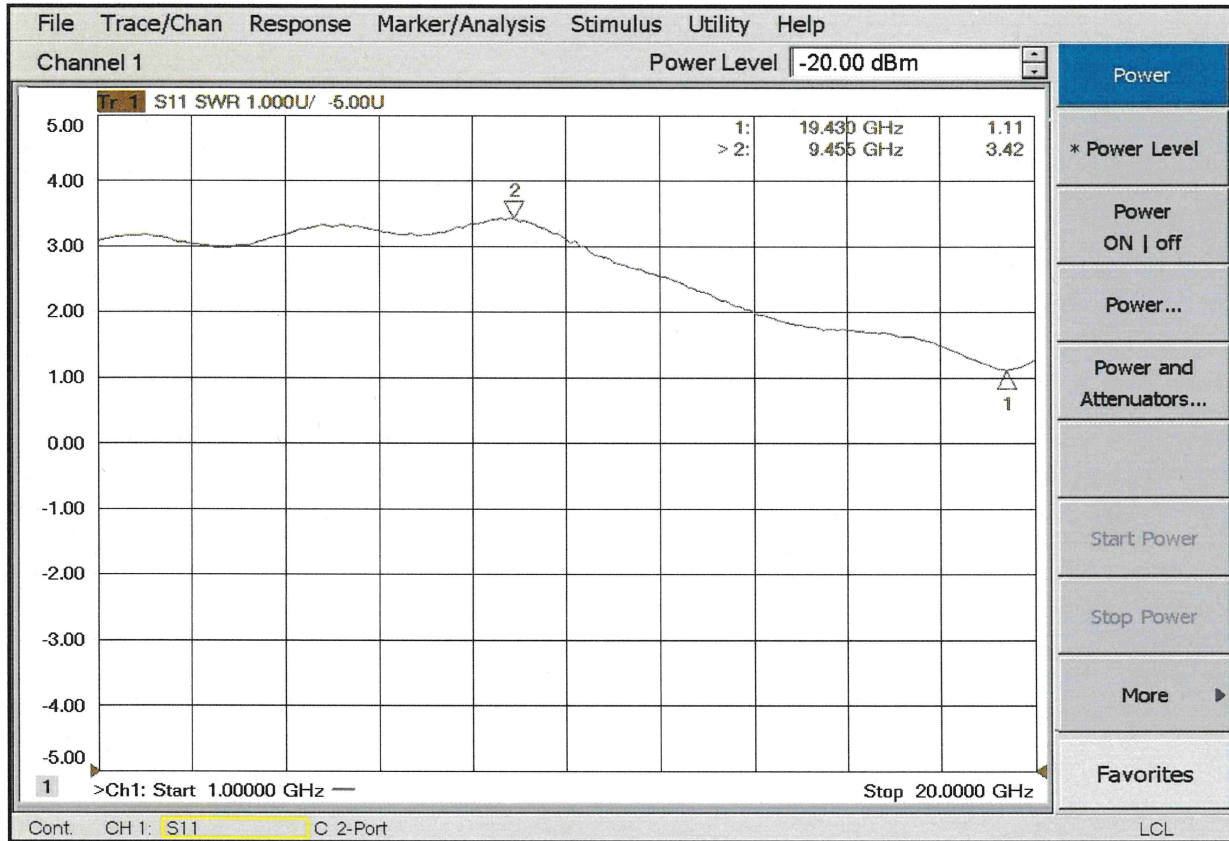
Flatness +/-dB

0.3	0.6	1.1	1.1	0.9	0.8	0.7	0.8	1.1	1.0	1.2	0.8	0.5
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+/- 1.20 FLATNESS ERROR (dB)

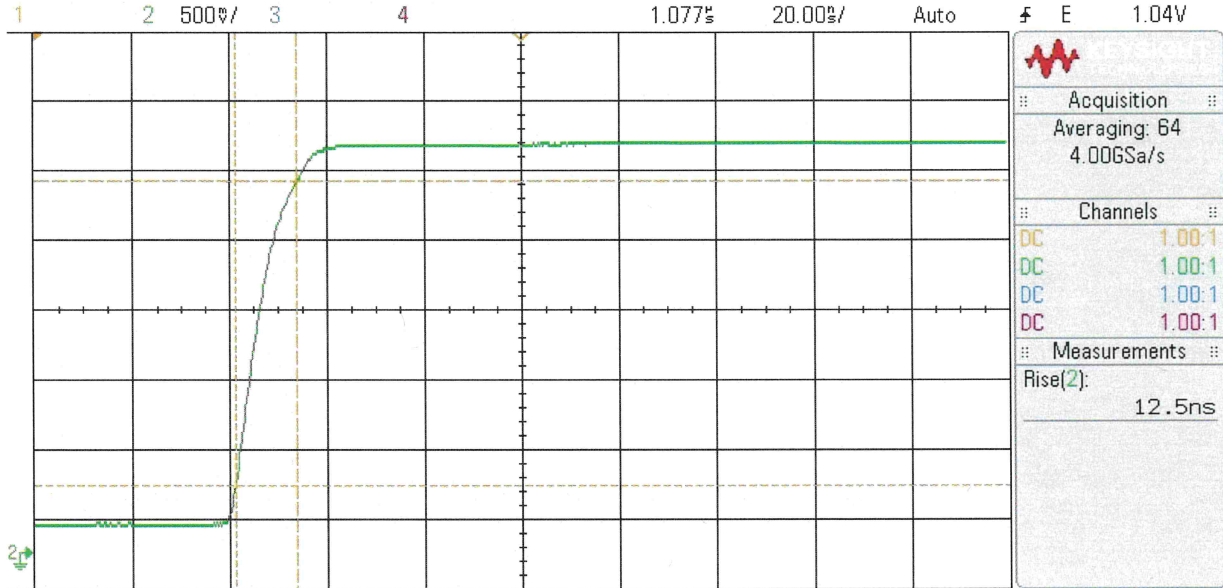
Slope Avg(mV/dB) 89.2

VSWR 3.42:1



Rise Time 12.5 ns

MSO-X 3054A, MY53400180: Mon Mar 17 11:37:54 2025



Trigger Menu

Trigger Type
Edge

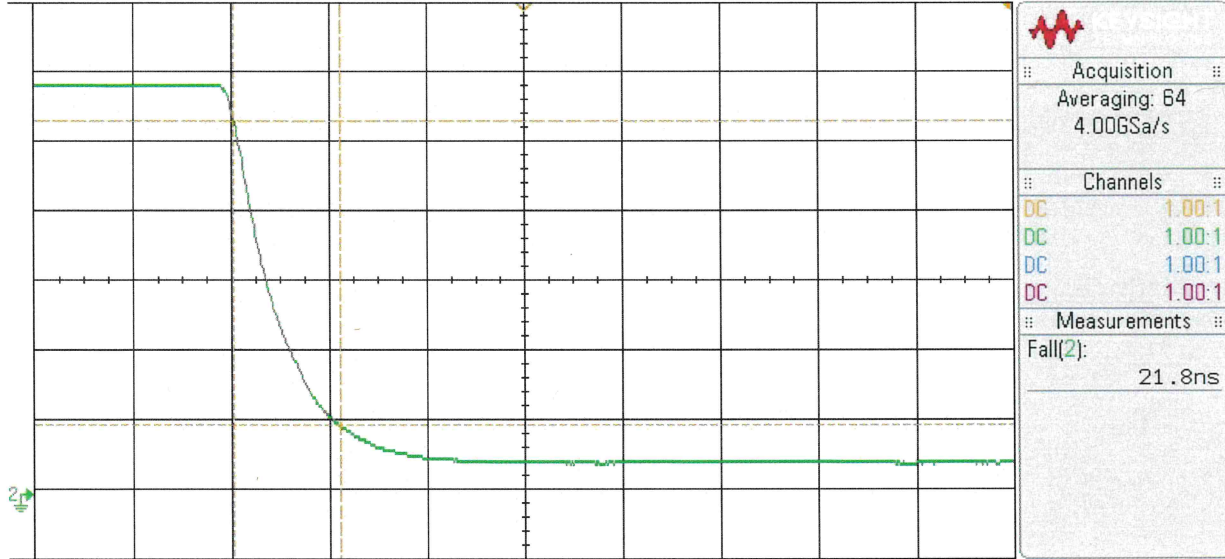
Source
Ext

Slope
f

Fall Time 21.8 ns

MSO-X 3054A, MY53400180: Mon Mar 17 11:42:21 2025

1 2 500% / 3 4 -48.92% 20.00% / Auto f E 290%



Acquisition	
Averaging:	64
	4.00GSa/s
Channels	
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1
Measurements	
Fall(2):	21.8ns

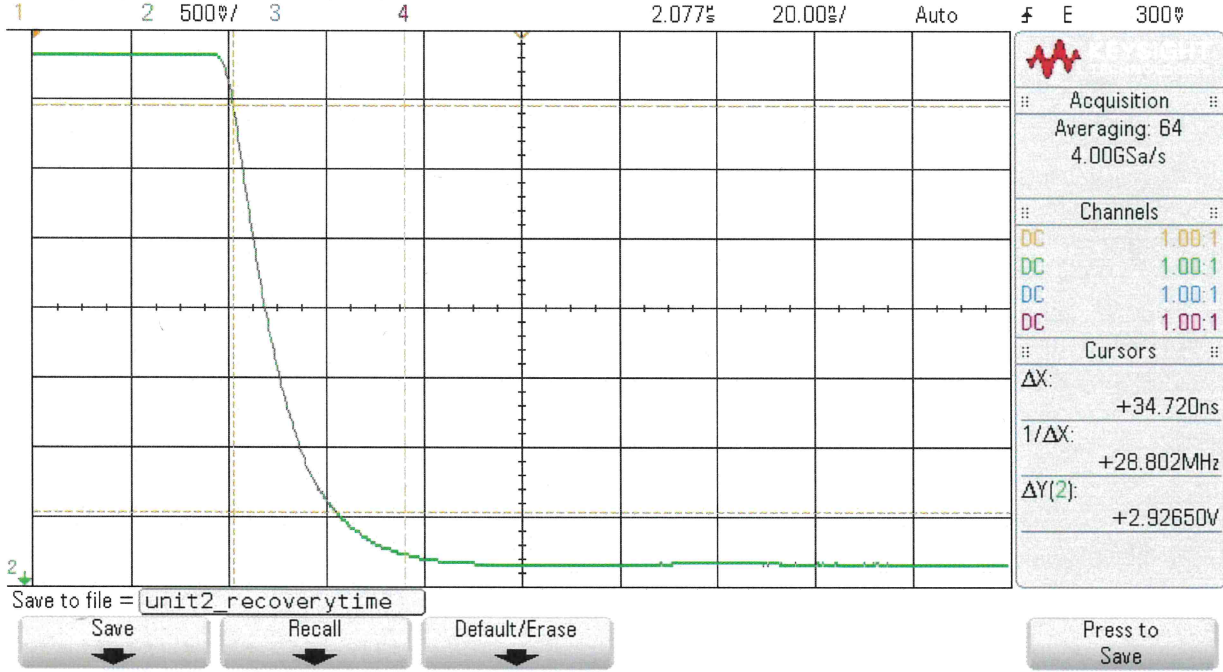
Acquire Menu

Acq Mode
Averaging

Avgs
64

Recovery Time 34.720 ns

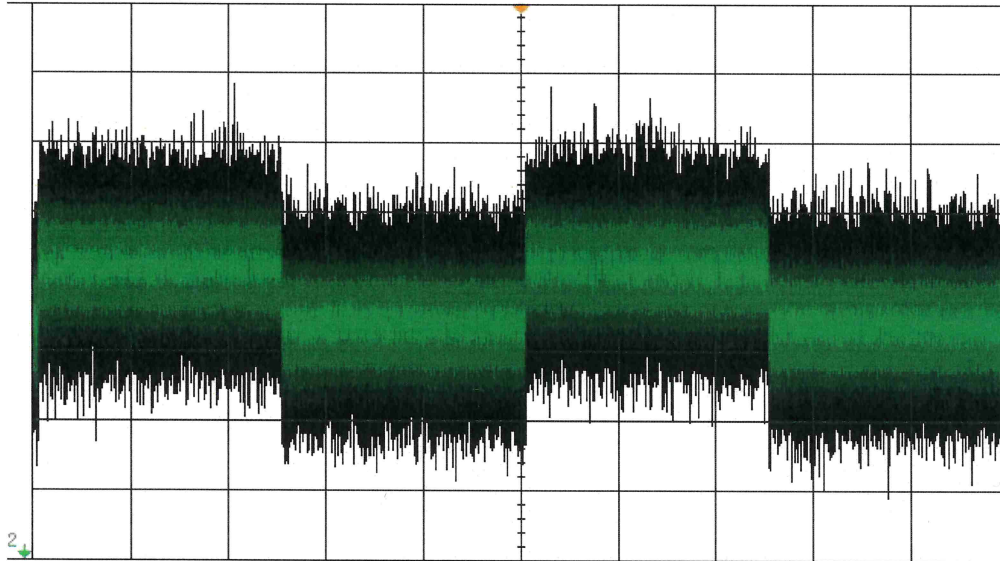
MSO-X 3054A, MY53400180: Mon Mar 17 11:55:00 2025



TSS @ -58.0 dBm

MSO-X 3054A, MY53400180: Mon Mar 17 12:01:30 2025

1 2 20% 3 4 0.0s 20.00%/ Auto f E 300%



Acquisition	
High Res	
4.00GSa/s	

Channels	
DC	1.00:1
DC	1.00:1
DC	1.00:1
DC	1.00:1

2 Help Menu

Getting Started

About Oscilloscope

Language English

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