



**SUMMARY TEST DATA  
ON  
SDLVA-2020-70 Opt 0518 A03  
A07-50OHM**

**PL44933/2413**

Customer: \_\_\_\_\_ Tested By: EA Valdez  
SO No: \_\_\_\_\_ Temperature: +25°C  
Model No: SDLVA-2020-70 Opt 0518 A03 A07-50OHM Date: 3/21/24  
Serial No: PL44933/2413 Drawing No: 27610088 Rev: A1

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	0.5 GHz to 18.0 GHz	0.5 to 18.0 GHz See Plot	<b>QA QC</b>
2	Frequency Flatness:	±2.0 dB Typ (0.5 to 18.0GHz)	±2.3 dB See Plot	
3	Logging Linearity:	±1.75 dB Max (-65 to +5 dBm)	±1.49 dB See Plot	
4	TSS:	-65 dBm Max (8.0 to 18.0 GHz)	-68.0 dBm See Plot	
5	VSWR:	3.0:1 (0.5 to 18.0 GHz @ -20 dBm)	2.9:1 See Plot	
6	Logging Range	-65 dBm to +5 dBm	-65 to +5 dBm See Plot	
7	Log Slope	20 mV/dB (±10% Tolerance)	20.8 mV/dB See Plot	
8	Log Temperature Stability:	±1.75 dB (0°C to 60°C)	±1.49 dB See Plot	
9	Rise Time (10% to 90%):	20 ns Max	17.8 ns See Plot	
10	Recover Time:	200 ns Max (-65 dBm to +5 dBm)	176 ns See Plot	
11	Output Power:	+10 dBm ±2.5 dB Typ.	+12.7 dBm See Plot	
12	Output Video Load:	50Ω ±10% or as desired	Pass	
13	Power Supply:	+15 V @ 600 mA Max -15 V @ 200 mA Max	450 mA 90 mA	

QA/QC Approval: \_\_\_\_\_

*K. Hunter*

Date: \_\_\_\_\_

*3-26-24*



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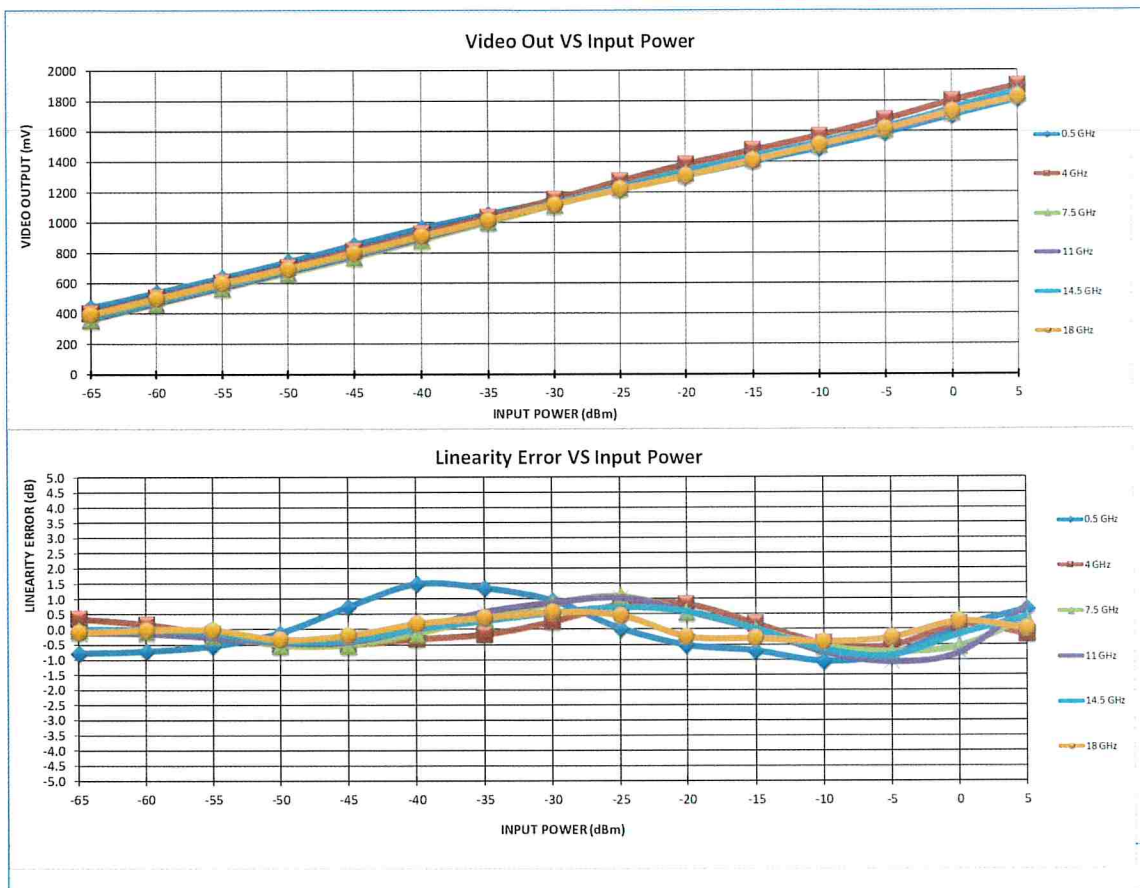
**TRANSFER RESPONSE @+25°C**

LOG TRANSFER VS FREQUENCY		Thursday, March 21, 2024																RF Input Power (dBm)	
MODEL: SDLVA-2020-70 OPT. 0518, A03, A07-50OHM																		Test Temp: +25C	
TESTED BY: EA Valdez																		PLANAR MONOLITHICS INDUSTRIES	
DATE: 03/19/24																		7311-F GROVE ROAD, FREDERICK, MD 21704 USA	
SERIAL NO: PL44933																		TEL: 301-662-5019 FAX: 301-662-1731	
																		URL: WWW.PMI-RF.COM	
																		EMAIL: SALES@PMI-RF.COM	
Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	Measured Value (mV)		
0.5 GHz	INTERCEPT (mV)	442	539	638	742	854	964	1057	1145	1223	1308	1400	1489	1589	1702	1809	Measured Value (mV)		
	SLOPE (mV/dB)	-15	-14	-10	-2	14	29	26	18	1	-10	-14	-20	-16	1	13	Error (mV)		
		-0.79	-0.72	-0.55	-0.11	0.74	1.49	1.35	0.95	0.03	-0.52	-0.72	-1.06	-0.84	0.07	0.66	LINEARITY ERROR (dB)		
4 GHz	INTERCEPT (mV)	401	505	606	706	814	926	1037	1154	1274	1382	1476	1570	1676	1799	1900	Measured Value (mV)		
	SLOPE (mV/dB)	8	4	-3	-11	-11	-7	-4	6	18	18	4	-10	-12	4	-3	Error (mV)		
		0.35	0.17	-0.15	-0.51	-0.50	-0.31	-0.16	0.26	0.82	0.83	0.19	-0.45	-0.54	0.16	-0.16	LINEARITY ERROR (dB)		
7.5 GHz	INTERCEPT (mV)	359	464	567	666	772	886	1003	1119	1230	1325	1419	1513	1615	1725	1850	Measured Value (mV)		
	SLOPE (mV/dB)	0	-1	-4	-11	-11	-3	9	18	23	12	0	-12	-16	-12	7	Error (mV)		
		0.00	-0.04	-0.18	-0.51	-0.51	-0.14	0.38	0.86	1.09	0.57	0.01	-0.56	-0.75	-0.56	0.34	LINEARITY ERROR (dB)		
11 GHz	INTERCEPT (mV)	363	468	571	673	779	894	1011	1123	1232	1328	1421	1511	1610	1722	1860	Measured Value (mV)		
	SLOPE (mV/dB)	-2	-3	-5	-9	-9	1	12	19	22	12	0	-16	-22	-16	16	Error (mV)		
		-0.11	-0.14	-0.26	-0.43	-0.41	0.04	0.58	0.88	1.04	0.59	-0.01	-0.75	-1.06	-0.75	0.78	LINEARITY ERROR (dB)		
14.5 GHz	INTERCEPT (mV)	372	478	582	682	789	903	1015	1127	1237	1340	1434	1526	1628	1749	1867	Measured Value (mV)		
	SLOPE (mV/dB)	0	0	-2	-9	-8	0	6	12	16	12	0	-14	-18	-3	9	Error (mV)		
		0.00	-0.01	-0.11	-0.40	-0.37	0.00	0.28	0.55	0.73	0.58	0.01	-0.66	-0.85	-0.16	0.40	LINEARITY ERROR (dB)		
18 GHz	INTERCEPT (mV)	391	495	597	693	798	908	1014	1120	1220	1308	1409	1509	1614	1727	1824	Measured Value (mV)		
	SLOPE (mV/dB)	-2	0	-1	-7	-4	4	8	12	9	-5	-6	-8	-5	5	0	Error (mV)		
		-0.11	-0.02	-0.03	-0.33	-0.19	0.19	0.38	0.56	0.46	-0.24	-0.29	-0.40	-0.26	0.27	0.01	LINEARITY ERROR (dB)		
Flatness		2	1.8	1.7	1.8	1.9	1.8	1.3	0.8	1.3	1.8	1.8	1.9	2.1	2.3	2.2			
Linearity Max.(dB)=	1.49																		
Linearity Min.(dB)=	-1.06																		
Average Slope (mV/dB)	20.8																		



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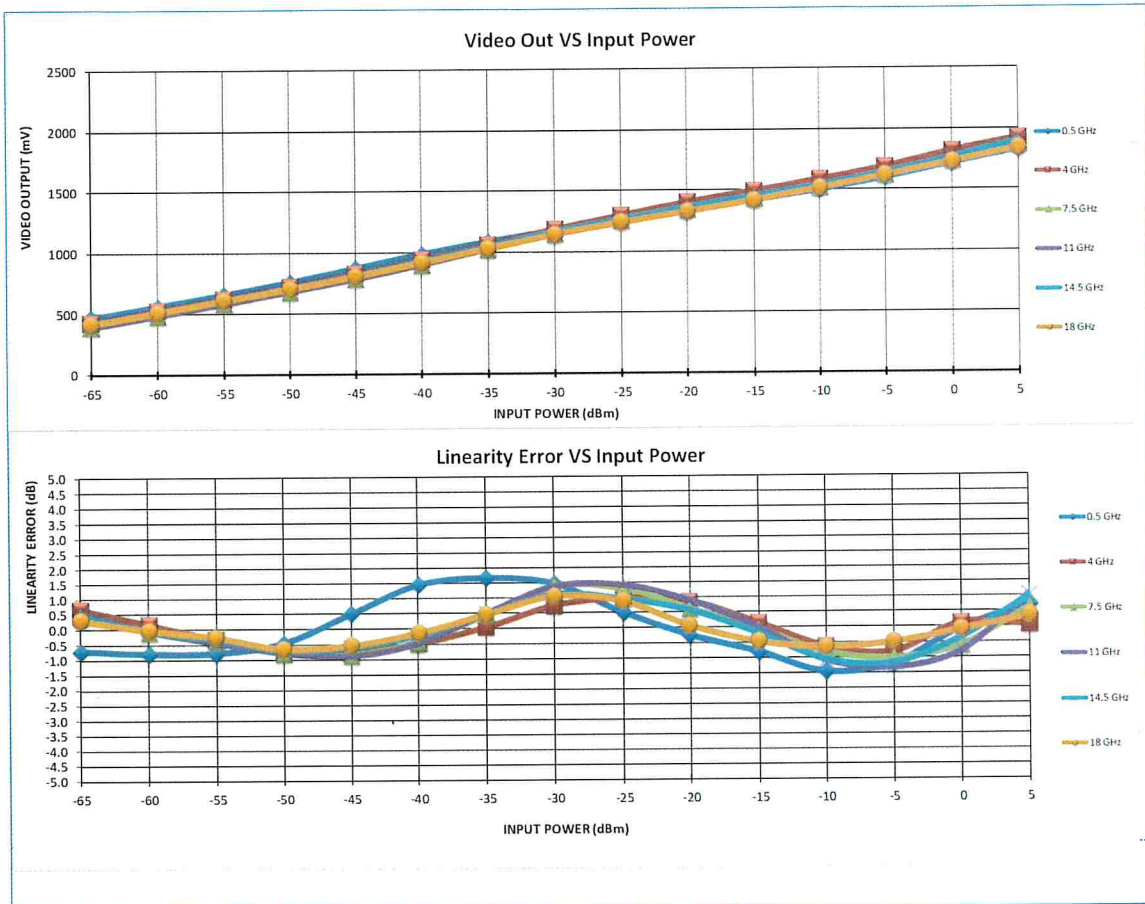
**TRANSFER RESPONSE @ 0°C**

LOG TRANSFER VS FREQUENCY		Thursday, March 21, 2024																Test Temp: 0C
MODEL: SDLVA-2020-70 OPT. 0518, A03, A07-50OHM																		PLANAR MONOLITHICS INDUSTRIES 7311-F GROVE ROAD, FREDERICK, MD 21704 USA TEL: 301-662-5019 FAX: 301-662-1731 URL: WWW.PMI-RF.COM EMAIL: SALES@PMI-RF.COM
TESTED BY: EA Valdez																		
DATE: 03/20/24																		
SERIAL NO: PL44933																		
Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)	
0.5 GHz	INTERCEPT (mV)	465	559	655	757	871	985	1085	1177	1254	1335	1420	1503	1604	1722	1832	Measured Value (mV)	
	SLOPE (mV/dB)	-13	-15	-15	-9	10	28	32	29	10	-5	-15	-28	-23	0	14	Error (mV)	
		-0.70	-0.79	-0.78	-0.45	0.51	1.47	1.69	1.50	0.53	-0.24	-0.80	-1.46	-1.19	-0.02	0.73	LINEARITY ERROR (dB)	
4 GHz	INTERCEPT (mV)	428	525	622	721	828	942	1061	1184	1297	1402	1494	1585	1689	1817	1923	Measured Value (mV)	
	SLOPE (mV/dB)	14	3	-7	-16	-17	-10	1	-16	21	19	3	-14	-17	3	1	Error (mV)	
		0.66	0.16	-0.34	-0.74	-0.78	-0.48	0.04	0.75	0.99	0.87	0.14	-0.64	-0.81	0.13	0.05	LINEARITY ERROR (dB)	
7.5 GHz	INTERCEPT (mV)	394	488	587	683	787	901	1025	1150	1253	1344	1435	1524	1625	1739	1870	Measured Value (mV)	
	SLOPE (mV/dB)	10	-1	-7	-17	-18	-9	10	30	27	13	-1	-17	-21	-12	13	Error (mV)	
		0.47	-0.06	-0.35	-0.79	-0.85	-0.43	0.47	1.41	1.31	0.63	-0.04	-0.81	-1.01	-0.59	0.64	LINEARITY ERROR (dB)	
11 GHz	INTERCEPT (mV)	393	486	584	683	787	902	1029	1154	1261	1356	1443	1526	1627	1745	1891	Measured Value (mV)	
	SLOPE (mV/dB)	12	-1	-9	-17	-19	-10	11	30	30	19	0	-23	-28	-17	23	Error (mV)	
		0.56	-0.06	-0.45	-0.79	-0.89	-0.47	0.51	1.39	1.43	0.90	0.00	-1.09	-1.34	-0.78	1.09	LINEARITY ERROR (dB)	
14.5 GHz	INTERCEPT (mV)	412	507	606	704	811	925	1045	1164	1266	1363	1452	1539	1642	1765	1899	Measured Value (mV)	
	SLOPE (mV/dB)	9	-1	-7	-15	-13	-4	10	24	21	12	-4	-22	-25	-7	22	Error (mV)	
		0.45	-0.04	-0.34	-0.69	-0.62	-0.20	0.49	1.14	0.98	0.58	-0.19	-1.06	-1.17	-0.34	1.02	LINEARITY ERROR (dB)	
18 GHz	INTERCEPT (mV)	416	511	608	702	806	916	1030	1144	1242	1327	1418	1516	1621	1731	1842	Measured Value (mV)	
	SLOPE (mV/dB)	6	0	-5	-13	-11	-2	10	22	18	1	-9	-13	-10	-2	8	Error (mV)	
		0.31	-0.02	-0.26	-0.64	-0.53	-0.12	0.48	1.08	0.90	0.07	-0.46	-0.64	-0.48	-0.08	0.38	LINEARITY ERROR (dB)	
Flatness		1.7	1.7	1.7	1.7	2	2	1.4	0.9	1.3	1.8	1.8	1.9	2	2.2	2.1		
Linearity Max.(dB)=		1.69																
Linearity Min.(dB)=		-1.46																
Average Slope (mV/dB)		20.7																



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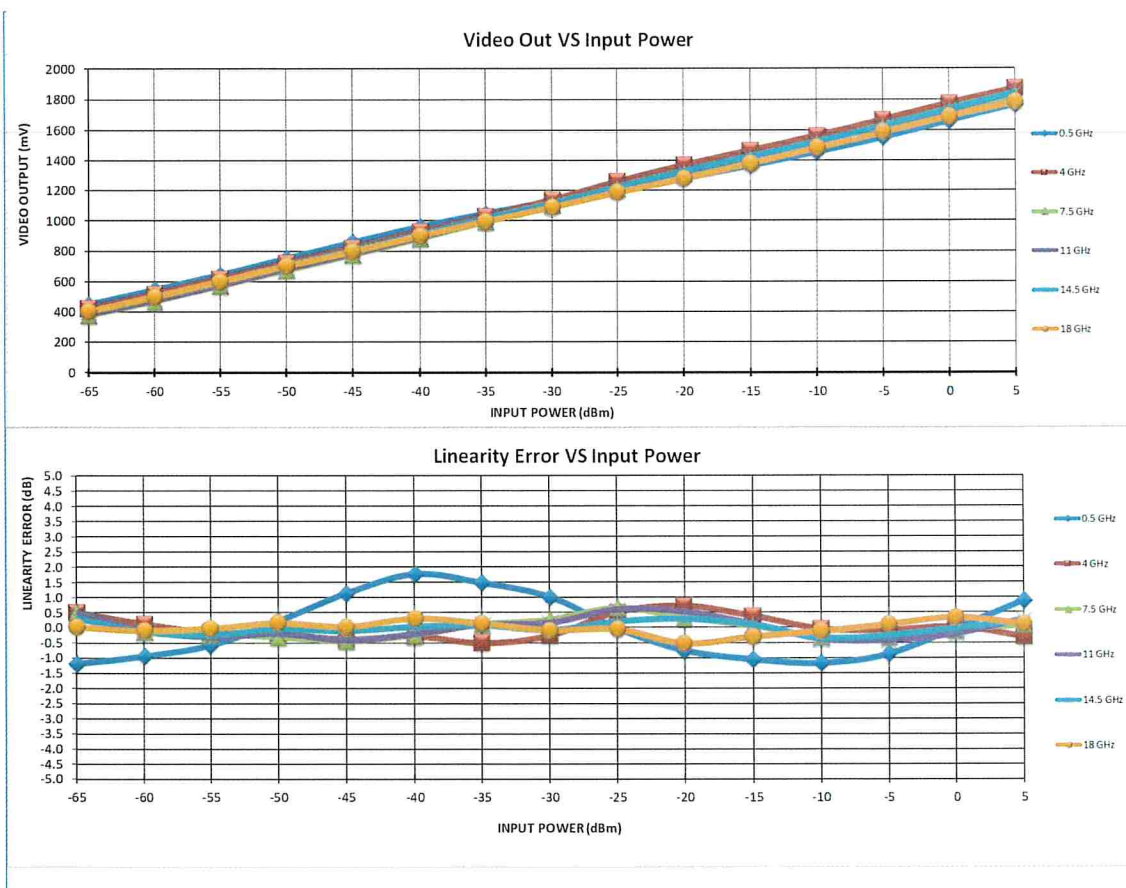
**TRANSFER RESPONSE @ +60°C**

LOG TRANSFER VS FREQUENCY		Thursday, March 21, 2024																RF Input Power (dBm)	
MODEL: SDLVA-2020-70 OPT. 0518, A03, A07-50OHM																		Test Temp: +60C	
TESTED BY: EA Valdez																		PLANAR MONOLITHICS INDUSTRIES	
DATE: 03/20/24																		7311-F GROVE ROAD, FREDERICK, MD 21704 USA	
SERIAL NO: PL44933																		TEL: 301-662-5019 FAX: 301-662-1731	
																		URL: WWW.PMI-RF.COM	
																		EMAIL: SALES@PMI-RF.COM	
Frequency		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5			
0.5 GHz	INTERCEPT (mV)	1661	1661	1661	1661	1661	1661	1661	1661	1661	1661	1661	1661	1661	1661	1661	Measured Value (mV)		
	SLOPE (mV/dB)	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	Error (mV)		
																		LINEARITY ERROR (dB)	
4 GHz	INTERCEPT (mV)	1772	1772	1772	1772	1772	1772	1772	1772	1772	1772	1772	1772	1772	1772	1772	Measured Value (mV)		
	SLOPE (mV/dB)	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	Error (mV)		
																		LINEARITY ERROR (dB)	
7.5 GHz	INTERCEPT (mV)	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	1719	Measured Value (mV)		
	SLOPE (mV/dB)	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	20.8	Error (mV)		
																		LINEARITY ERROR (dB)	
11 GHz	INTERCEPT (mV)	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732	1732	Measured Value (mV)		
	SLOPE (mV/dB)	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	20.9	Error (mV)		
																		LINEARITY ERROR (dB)	
14.5 GHz	INTERCEPT (mV)	1734	1734	1734	1734	1734	1734	1734	1734	1734	1734	1734	1734	1734	1734	1734	Measured Value (mV)		
	SLOPE (mV/dB)	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	Error (mV)		
																		LINEARITY ERROR (dB)	
18 GHz	INTERCEPT (mV)	1691	1691	1691	1691	1691	1691	1691	1691	1691	1691	1691	1691	1691	1691	1691	Measured Value (mV)		
	SLOPE (mV/dB)	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	Error (mV)		
																		LINEARITY ERROR (dB)	
Flatness		1.7	1.8	1.7	1.8	2	1.9	1.3	1.1	1.7	2.2	2.3	2.5	2.7	2.7	2.4			
Linearity Max.(dB)		1.78																	
Linearity Min.(dB)		-1.19																	
Average Slope (mV/dB)		20.2																	



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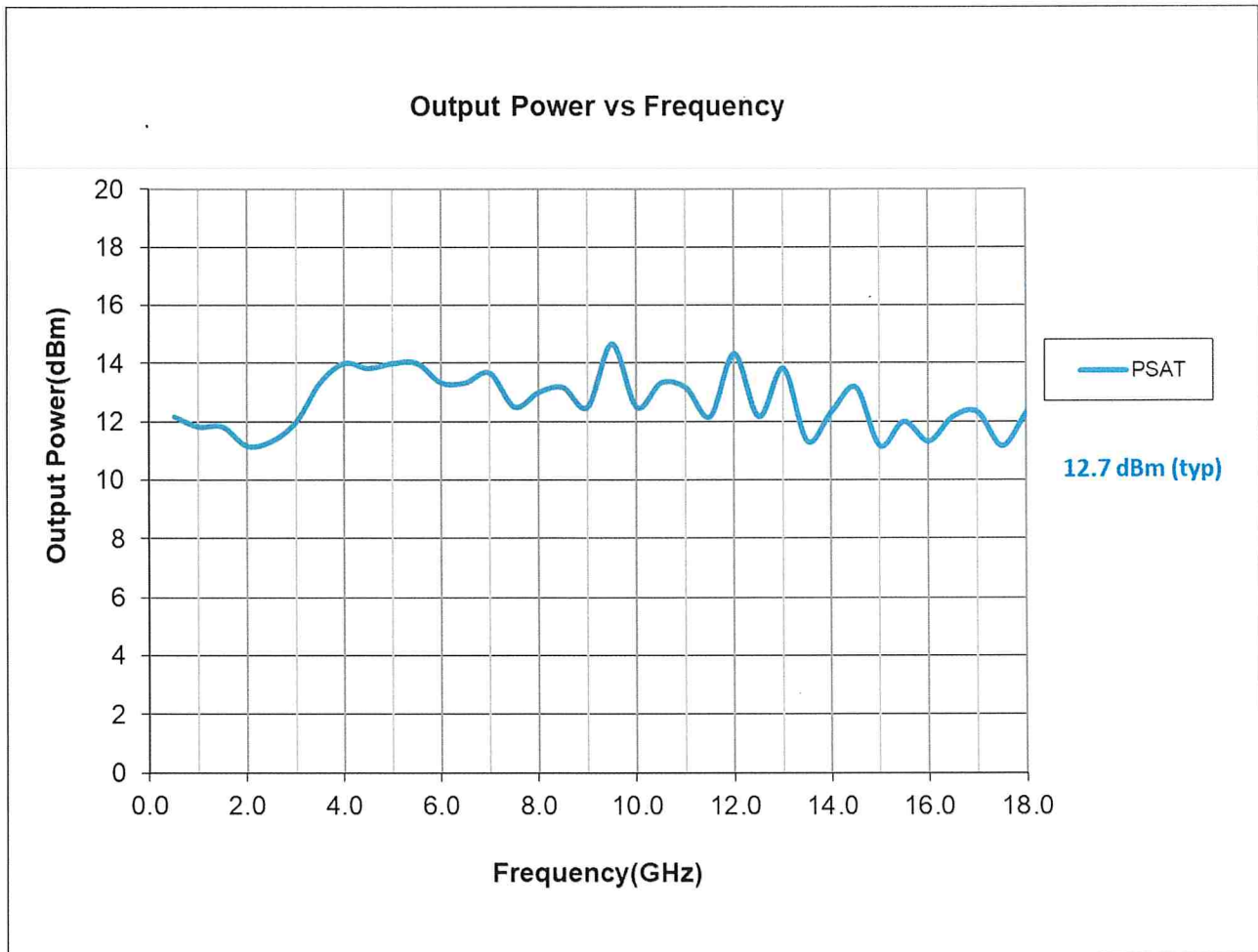




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**Saturated Output Power**



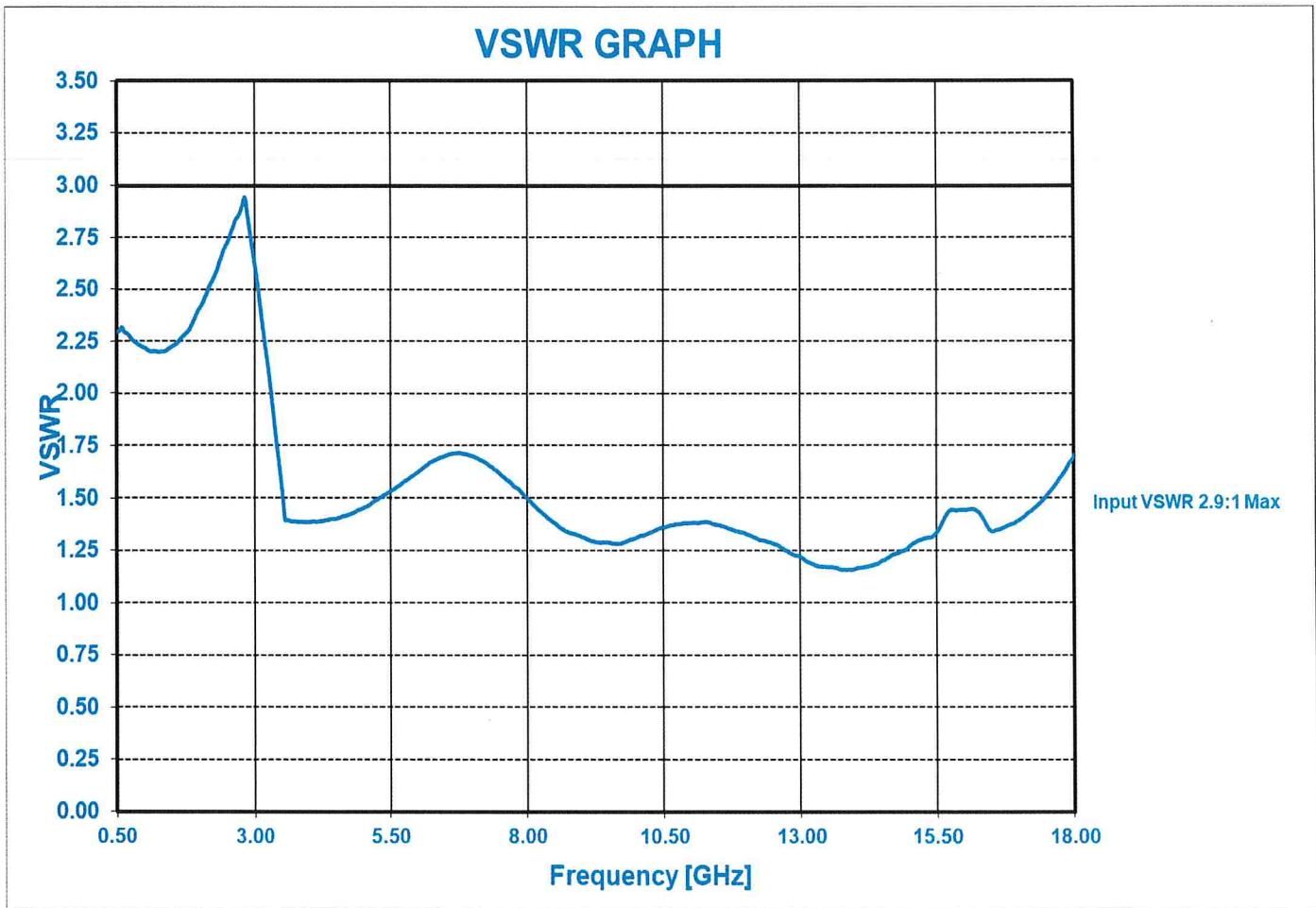




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**Input VSWR**





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**TSS Plot**

DSO-X 3024A, MY54490369, Thu Mar 21 11:02:52 2024

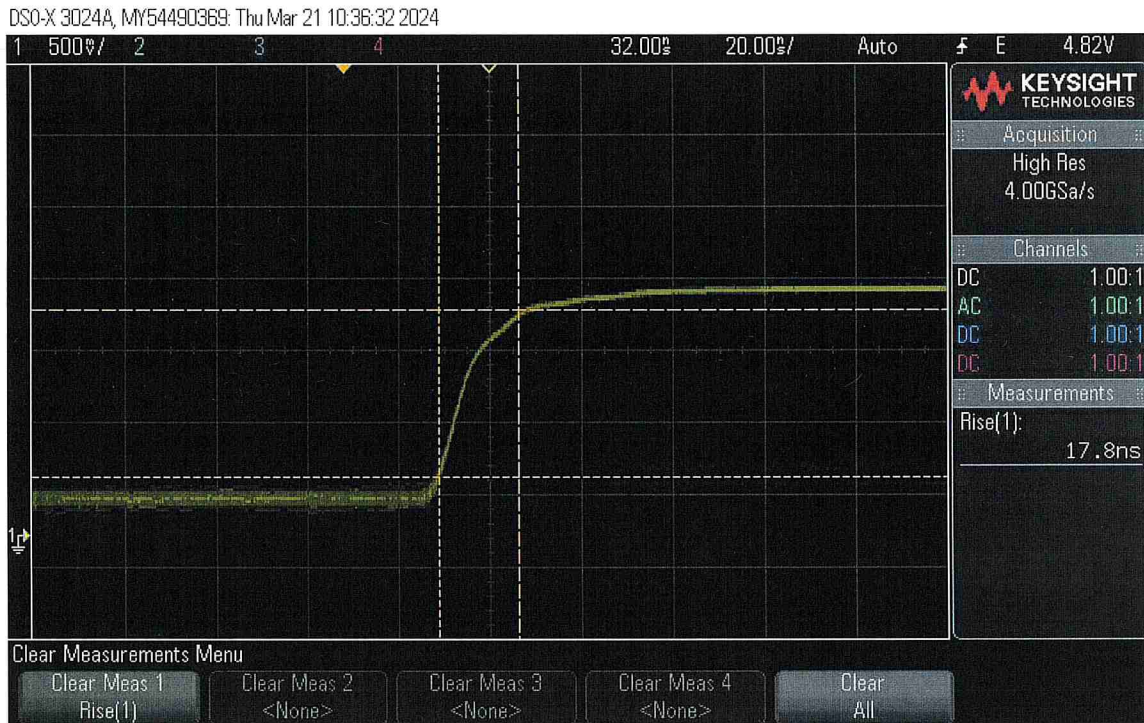




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Rise Time Plot







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Recovery Time Plot

