



**SUMMARY TEST DATA
ON
SDLVA-18G40G-65-50MV-100**

PL39475

Customer: _____	Tested By: <u>Dan Almond</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>SDLVA-18G40G-65-50MV-100</u>	Date: <u>02/08/2023</u>
Serial No: <u>PL39475/2306</u>	Drawing No: <u>27641480</u>

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	18.0 to 40.0GHz	18.0 to 40.0GHz	PMI QA3
2	TSS (See Graph #2)	-65 dBm Max.	-67.5 dBm	
3	Power Handling	+10dBm Max.	+10dBm Max.	
4	Dynamic Range:	-60dBm to +5dBm	-60dBm to +5dBm	
5	Log Linearity: @+25C (See Graph #1)	± 2.0 dB Max.	-1.07dB	
6	Log Slope: (See Graph #1)	50mV/dB Nom.	49.84mV/dB	
7	Log Slope Variation: (See Graph #1)	±2.0 mV/dB Max.	1.81dB	
8	DC Offset	200mV ± 200mV	124mV	
9	Frequency Flatness: @+25C (See Graph #1)	±2.5dB Max.	±1.4dB	
10	Pulse Width Range:	40ns to CW	30ns to CW	
11	Rise Time: (See Graph #3)	35ns Max.	18nS	
12	Recovery Time: (See Graph #4)	500ns Max.	70nS	
13	Settling Time (See Graph #5)	45ns to within 1dB of final value	Pass	
14	Input VSWR: (See Graph #6)	2.0:1 Max.	1.94:1	
15	Power Supply	+12V @ 400mA -12V @ 200mA	+12V @ 380mA -12V @ 158mA	

QA/QC Approval: *K. Hunter* Date: 2-14-23



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Log Transfer vs Frequency @+25C

Graph #1

Frequency			-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)			
18 GHz	INTERCEPT (mV)	3550	565	806	1041	1283	1544	1783	2030	2276	2511	2759	3059	3323	3581	3810	Measured Value (mV)			
	SLOPE (mV/dB)	50.2	27	17	1	-8	2	-10	-14	-19	-35	-38	11	24	31	9	Error (dB)			
			0.54	0.34	0.02	-0.16	0.04	-0.20	-0.28	-0.38	-0.69	-0.75	0.23	0.48	0.63	0.19	Error (mV)		MAX	MIN
																LINEARITY ERROR (dB)		0.63	-0.75	
23.5 GHz	INTERCEPT (mV)	3576	500	750	1002	1253	1518	1784	2028	2274	2507	2753	3081	3349	3605	3829	Measured Value (mV)			
	SLOPE (mV/dB)	51.5	15	7	2	-5	2	11	-3	-14	-39	-50	20	30	29	-5	Error (dB)			
			0.28	0.14	0.03	-0.10	0.05	0.21	-0.05	-0.28	-0.75	-0.98	0.39	0.59	0.56	-0.09	Error (mV)		MAX	MIN
																LINEARITY ERROR (dB)		0.59	-0.98	
29 GHz	INTERCEPT (mV)	3469	489	748	1001	1239	1481	1726	1965	2215	2451	2670	2971	3235	3495	3741	Measured Value (mV)			
	SLOPE (mV/dB)	49.7	2	13	-18	7	0	-3	-13	-11	-24	-53	-1	13	26	33	Error (dB)			
			0.05	0.26	0.35	0.14	0.01	-0.06	-0.25	-0.23	-0.48	-1.07	-0.02	0.29	0.52	0.47	Error (mV)		MAX	MIN
																LINEARITY ERROR (dB)		0.52	-1.07	
34.5 GHz	INTERCEPT (mV)	3454	486	735	988	1204	1418	1679	1932	2200	2456	2677	2954	3212	3474	3731	Measured Value (mV)			
	SLOPE (mV/dB)	49.9	25	25	28	-5	-40	-29	-25	-7	0	-28	-1	8	20	28	Error (dB)			
			0.51	0.50	0.57	-0.10	-0.81	-0.58	-0.50	-0.13	0.00	-0.57	-0.01	0.16	0.41	0.56	Error (mV)		MAX	MIN
																LINEARITY ERROR (dB)		0.57	-0.81	
40 GHz	INTERCEPT (mV)	3485	605	850	1091	1305	1551	1821	2071	2326	2565	2779	2973	3221	3475	3727	Measured Value (mV)			
	SLOPE (mV/dB)	47.9	-7	-2	0	-26	-19	12	22	38	37	12	-34	-25	-10	2	Error (dB)			
			-0.15	-0.04	0.00	-0.54	-0.40	0.24	0.46	0.79	0.78	0.25	-0.70	-0.52	-0.22	0.05	Error (mV)		MAX	MIN
																LINEARITY ERROR (dB)		0.79	-0.70	
Flatness +/- dB			1.20	1.20	1.00	1.00	1.30	1.40	1.40	1.30	1.10	1.10	1.30	1.40	1.30	1.00				
Max. Video Output (V)			0.61	0.85	1.09	1.31	1.55	1.82	2.07	2.33	2.57	2.78	3.08	3.35	3.61	3.83				
Min. Video Output (V)			0.49	0.74	0.99	1.20	1.42	1.68	1.93	2.20	2.45	2.67	2.95	3.21	3.47	3.73				
Nominal Log Slope mV/dB			49.84		Video Output @ -60dBm						Video Output @ +5dBm									
Log Slope Variation: ± mV/dB			1.81		Min(V)= 486.0						Min(V)= 3727.0									
					Max(V)= 605.0						Max(V)= 3829.0									

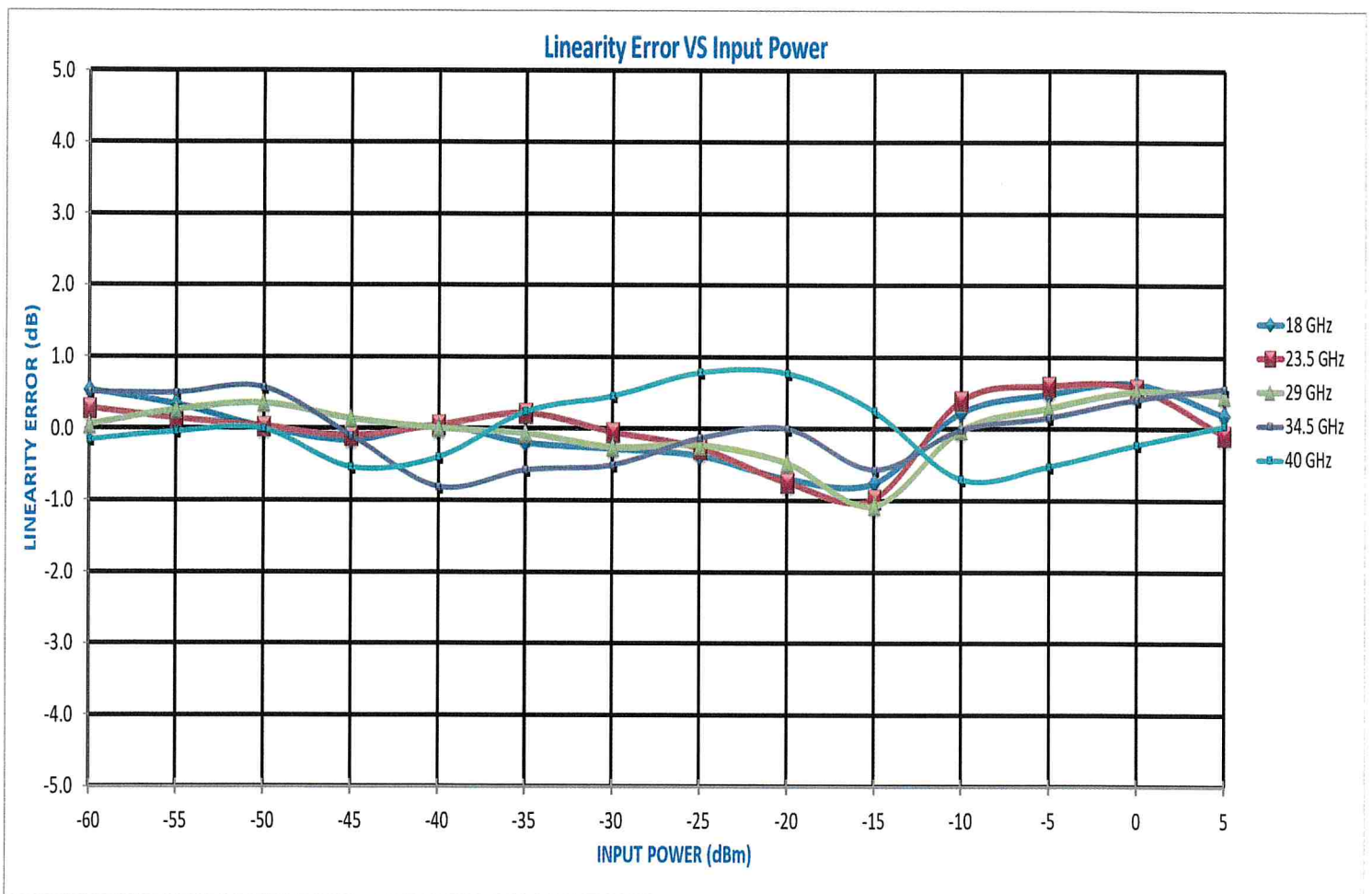


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Log Transfer vs Frequency @+25C

Graph #1 (cont.)



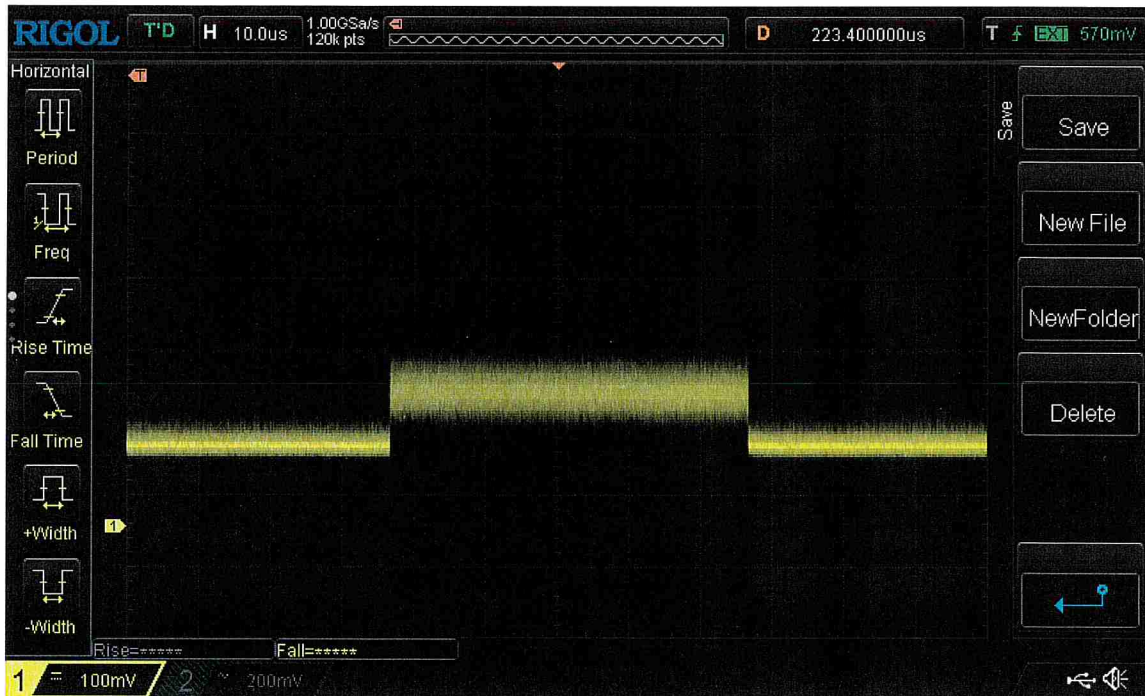


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Graph #2

TSS -67.5dBm @+25C





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Graph#3

Rise Time 18.00nS @+25C & -10dBm



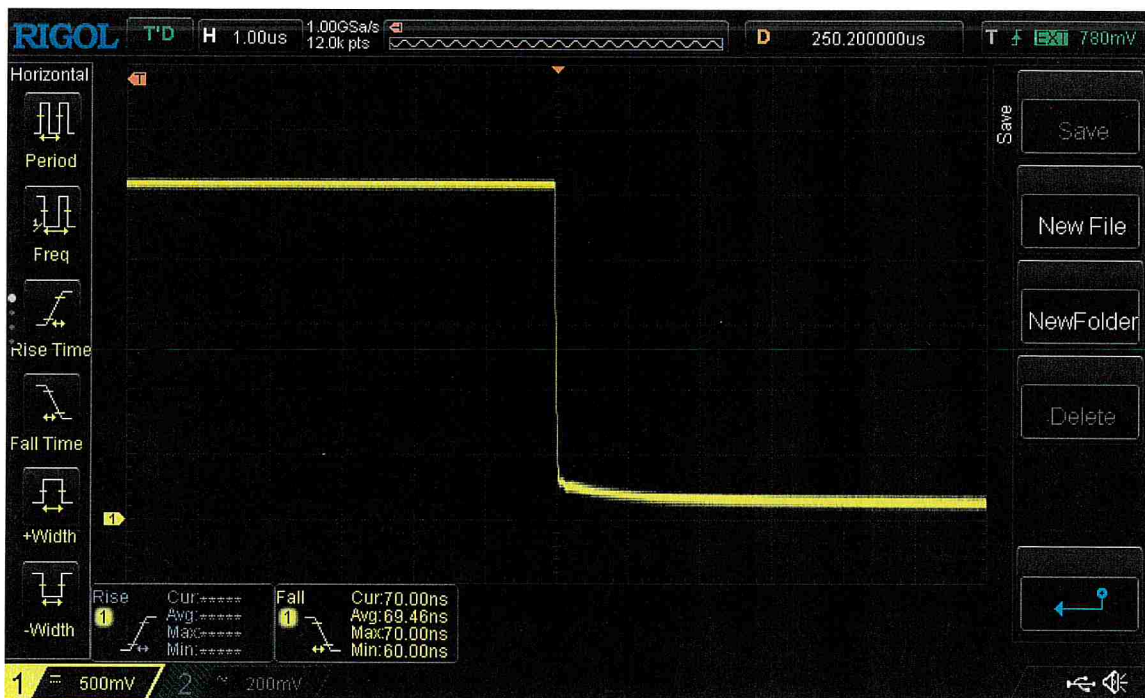


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Graph #4

Recovery Time 70nS @+25C & -10dBm





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Graph #5

VSWR 1.94:1 @+25C & -20dBm

