



**SUMMARY TEST DATA
ON
ERDLVA-218-CW-75MV-93**

PL41374/2330

Customer: _____	Tested By: <u>Jim Hopson</u>
SO No: _____	Temperature: <u>-25°C +25C +85C</u>
Model No: <u>ERDLVA-218-CW-75MV-93</u>	Date: <u>7/25/2023</u>
Serial No: <u>PL41374/2330</u>	Drawing No: <u>27 @240</u> Rev: <u>A1</u>

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	2 to 18 GHz	PMI QA3
2	VSWR:	2.5:1 MAX @ -20 dBm	1.38:1 MAX	
3	Input Power:	23 dBm Max.	Pass	
4	VIDEO OUT TSS:	-42 dBm MAX	-43dBm	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	-40 to +20 dBm	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	74.3-77.4mV/dB	
7	VIDEO OUT Log Linearity:	±1.0 dB MAX @25C ±1.5 dB MAX @ Over Temperature	See attached Graphs	
8	VIDEO OUT DC Offset:	0 to 125 mV @25C	25mV	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	16.3ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<0.5dB	

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11	VIDEO OUT Recovery	500ns MAX	<500ns	PMI QAS
12	Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	1.20dB p-p MAX @ -20dBm	
13	VIDEO OUT CW Immunity:	CW Immune Power -50 to -10 dBm	Pass	
		CW Attack Time 1500us	<1500us	
		CW Release Time 250us	30us	
17	Pulse droop	1dB Max for 250us pulses	<1dB	
18	VIDEO OUT Pulse Response, input Signal:	100 ns to 300 us	100 ns to 300 us	
19	VIDEO LOAD Impedance:	93 ±1 Ω	93Ω	
21	VIDEO OUT Noise Level (RMS):	102 mV max	21mV	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	<25ns	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	+12 V @ 160 mA -12 V @ 70 mA	



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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 TESTED BY: Jim Hopson
 DATE: 07-24-23
 SERIAL NO: PL41374
 Test Temp: -25C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3476
	SLOPE (mV/dB)	74.5

490	866	1249	1635	1989	2339	2719	3088	3483	3869	4233	4573	4969
-6	-3	8	21	3	-19	-12	-15	7	21	12	-20	3
-0.08	-0.04	0.11	0.29	0.04	-0.26	-0.16	-0.21	0.10	0.28	0.17	-0.27	0.05

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

4.67 GHz	INTERCEPT (mV)	3459
	SLOPE (mV/dB)	77.4

368	759	1123	1512	1905	2270	2695	3084	3485	3871	4246	4601	4981
5	9	-14	-12	-6	-28	10	12	26	25	13	-19	-26
0.07	0.12	-0.18	-0.15	-0.07	-0.36	0.13	0.16	0.34	0.33	0.17	-0.24	-0.33

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

7.33 GHz	INTERCEPT (mV)	3489
	SLOPE (mV/dB)	75.5

469	852	1232	1618	1978	2331	2716	3096	3498	3882	4257	4618	4996
-1	5	8	16	-1	-26	-18	-15	9	16	13	-3	-3
-0.01	0.07	0.10	0.21	-0.02	-0.34	-0.24	-0.21	0.12	0.21	0.18	-0.04	-0.03

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

10 GHz	INTERCEPT (mV)	3516
	SLOPE (mV/dB)	77.0

432	821	1194	1583	1962	2338	2770	3149	3555	3940	4296	4647	5013
-3	0	-12	-8	-14	-23	24	18	39	38	9	-25	-44
-0.04	0.01	-0.15	-0.10	-0.18	-0.30	0.31	0.23	0.50	0.50	0.12	-0.32	-0.57

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

12.67 GHz	INTERCEPT (mV)	3495
	SLOPE (mV/dB)	76.3

440	823	1196	1596	1965	2325	2736	3117	3522	3907	4271	4624	4990
-2	-1	-9	9	-4	-25	4	4	27	31	13	-15	-31
-0.03	-0.01	-0.12	0.12	-0.05	-0.33	0.06	0.05	0.36	0.40	0.17	-0.20	-0.41

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

15.33 GHz	INTERCEPT (mV)	3485
	SLOPE (mV/dB)	76.3

432	819	1193	1589	1958	2319	2720	3102	3506	3890	4261	4615	4991
-3	3	-5	10	-2	-22	-3	-2	21	24	13	-14	-19
-0.04	0.03	-0.06	0.13	-0.03	-0.29	-0.04	-0.03	0.27	0.31	0.17	-0.18	-0.25

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

18 GHz	INTERCEPT (mV)	3470
	SLOPE (mV/dB)	76.3

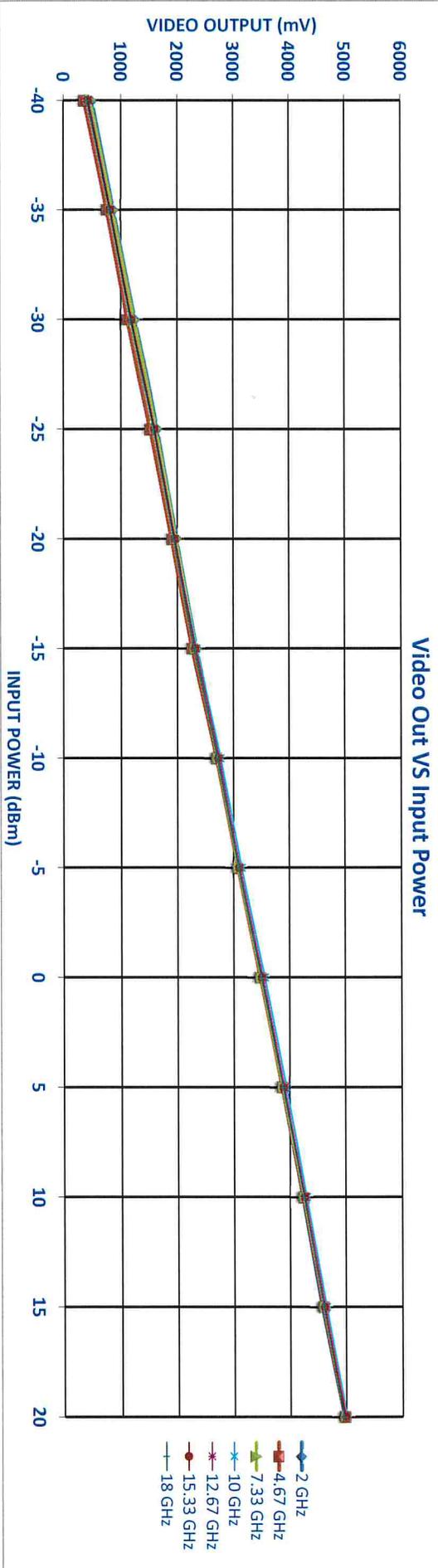
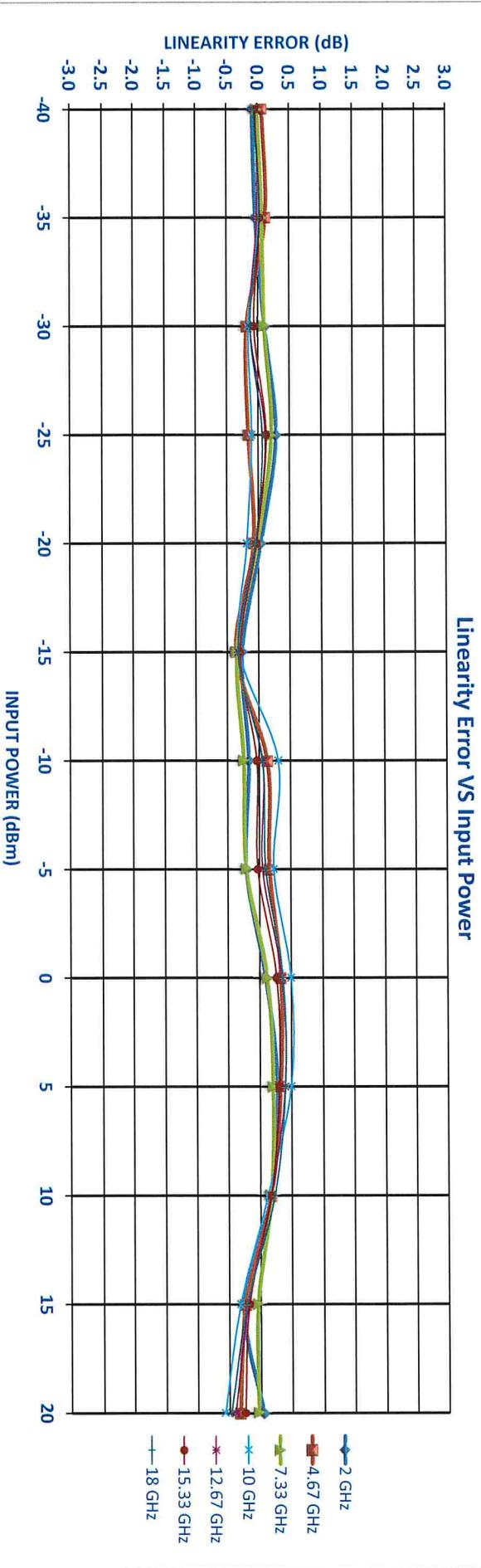
414	802	1172	1568	1941	2301	2711	3096	3498	3882	4250	4597	4959
-5	2	-10	5	-3	-25	4	8	28	31	18	-17	-36
-0.06	0.02	-0.13	0.07	-0.04	-0.32	0.05	0.10	0.37	0.41	0.23	-0.22	-0.47

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

Flatness P-P

Slope Avg(mv/dB) 76.2

LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 SERIAL NO.: PL41374
 Test Temp: -25C





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LOG TRANSFER WITH FREQUENCY
 MODEL: ERDLVA-218-CW-75MV-93
 TESTED BY: Jim Hopson
 DATE: 07-24-23
 SERIAL NO: PL41374
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-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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0.07	0.12	-0.18	-0.15	-0.07	-0.36	0.13	0.16	0.34	0.33	0.17	-0.24	-0.33

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

7.33 GHz	INTERCEPT (mV)	3489
	SLOPE (mV/dB)	75.5

469	852	1232	1618	1978	2331	2716	3096	3498	3882	4257	4618	4996
-1	5	8	16	-1	-26	-18	-15	9	16	13	-3	-3
-0.01	0.07	0.10	0.21	-0.02	-0.34	-0.24	-0.21	0.12	0.21	0.18	-0.04	-0.03

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

10 GHz	INTERCEPT (mV)	3516
	SLOPE (mV/dB)	77.0

432	821	1194	1583	1962	2338	2770	3149	3555	3940	4296	4647	5013
-3	0	-12	-8	-14	-23	24	18	39	38	9	-25	-44
-0.04	0.01	-0.15	-0.10	-0.18	-0.30	0.31	0.23	0.50	0.50	0.12	-0.32	-0.57

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

12.67 GHz	INTERCEPT (mV)	3495
	SLOPE (mV/dB)	76.3

440	823	1196	1596	1965	2325	2736	3117	3522	3907	4271	4624	4990
-2	-1	-9	9	-4	-25	4	4	27	31	13	-15	-31
-0.03	-0.01	-0.12	0.12	-0.05	-0.33	0.06	0.05	0.36	0.40	0.17	-0.20	-0.41

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432	819	1193	1589	1958	2319	2720	3102	3506	3890	4261	4615	4991
-3	3	-5	10	-2	-22	-3	-2	21	24	13	-14	-19
-0.04	0.03	-0.06	0.13	-0.03	-0.29	-0.04	-0.03	0.27	0.31	0.17	-0.18	-0.25

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

18 GHz	INTERCEPT (mV)	3470
	SLOPE (mV/dB)	76.3

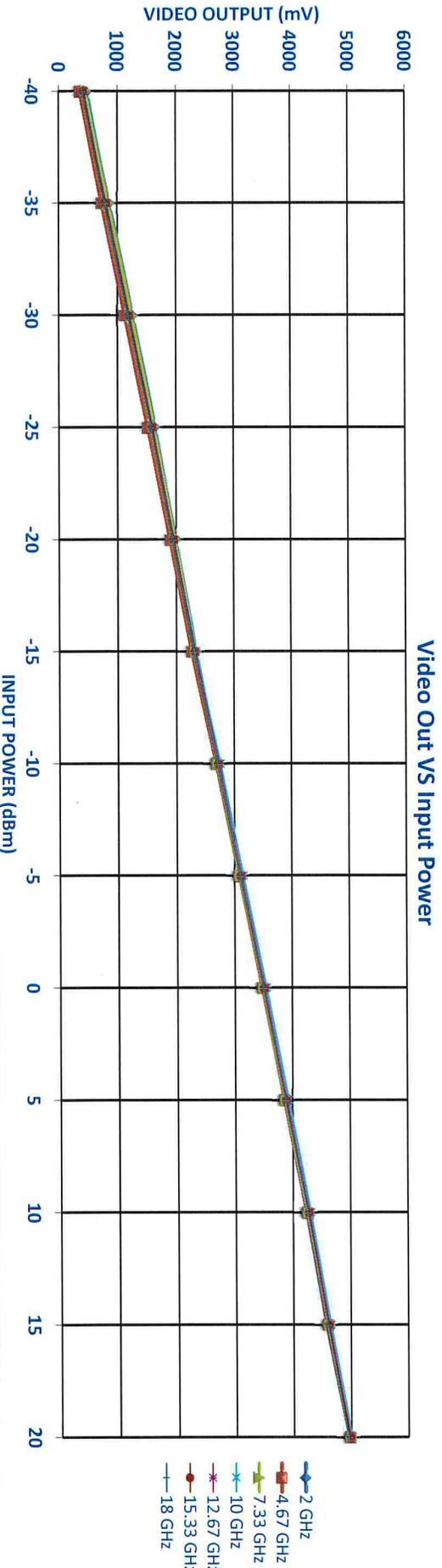
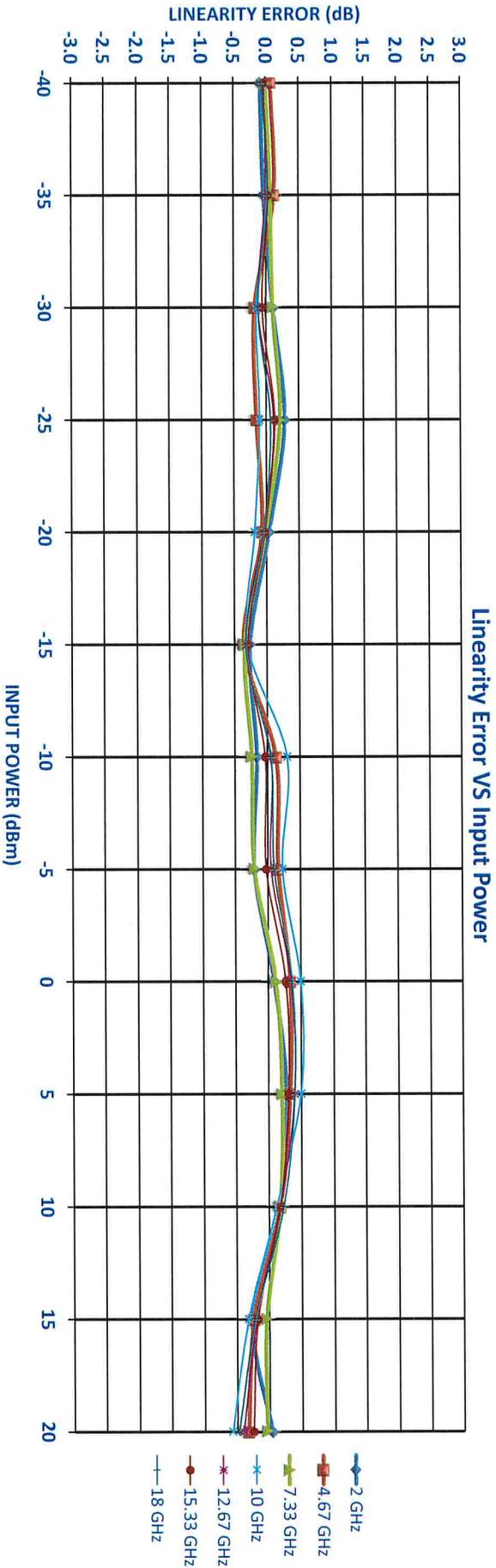
414	802	1172	1568	1941	2301	2711	3096	3498	3882	4250	4597	4959
-5	2	-10	5	-3	-25	4	8	28	31	18	-17	-36
-0.06	0.02	-0.13	0.07	-0.04	-0.32	0.05	0.10	0.37	0.41	0.23	-0.22	-0.47

Measured Value (mV)
 Error (mV)
 LINEARITY ERROR (dB)

Flatness P-P

Slope Avg(mv/dB)	76.2
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 MODEL: ERDLVA-218-CW-75MV-93
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 Test Temp: -25C





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 TESTED BY: Jim Hopson
 DATE: 07-24-23
 SERIAL NO: PL41374
 Test Temp: +85C

Frequency

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
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RF Input Power (dBm)

2 GHz	INTERCEPT (mV)	3412
	SLOPE (mV/dB)	74.3

402	828	1202	1582	1950	2277	2640	3021	3404	3788	4164	4503	4928
-36	18	20	29	25	-20	-28	-19	-8	5	9	-24	29
-0.49	0.24	0.27	0.39	0.34	-0.26	-0.38	-0.26	-0.10	0.06	0.12	-0.32	0.40

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

4.67 GHz	INTERCEPT (mV)	3390
	SLOPE (mV/dB)	77.6

272	684	1056	1446	1844	2196	2621	3026	3409	3791	4175	4528	4932
-13	11	-5	-3	7	-30	7	24	19	13	8	-27	-11
-0.16	0.14	-0.07	-0.04	0.08	-0.38	0.09	0.31	0.24	0.16	0.11	-0.35	-0.14

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

7.33 GHz	INTERCEPT (mV)	3412
	SLOPE (mV/dB)	76.2

336	766	1133	1517	1901	2241	2641	3036	3417	3795	4182	4539	4942
-27	22	8	11	13	-28	-9	5	5	2	8	-16	6
-0.36	0.29	0.10	0.14	0.18	-0.36	-0.11	0.07	0.07	0.03	0.10	-0.21	0.08

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

10 GHz	INTERCEPT (mV)	3428
	SLOPE (mV/dB)	78.0

289	708	1078	1467	1865	2224	2674	3078	3467	3844	4214	4562	4951
-19	10	-10	-11	-3	-34	26	40	39	26	6	-36	-37
-0.24	0.13	-0.13	-0.14	-0.04	-0.43	0.34	0.52	0.50	0.34	0.08	-0.46	-0.47

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

12.67 GHz	INTERCEPT (mV)	3422
	SLOPE (mV/dB)	77.1

311	737	1105	1504	1890	2236	2660	3059	3446	3824	4201	4551	4942
-28	13	-5	9	9	-30	9	22	24	17	8	-27	-21
-0.36	0.16	-0.06	0.11	0.12	-0.39	0.11	0.29	0.31	0.22	0.11	-0.35	-0.28

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

15.33 GHz	INTERCEPT (mV)	3387
	SLOPE (mV/dB)	77.8

257	670	1041	1443	1839	2190	2621	3031	3412	3790	4175	4524	4924
-17	7	-11	2	8	-30	12	33	25	13	9	-31	-20
-0.22	0.09	-0.14	0.02	0.11	-0.38	0.15	0.42	0.32	0.17	0.12	-0.40	-0.26

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

18 GHz	INTERCEPT (mV)	3358
	SLOPE (mV/dB)	78.2

227	617	997	1399	1793	2151	2588	3013	3393	3772	4156	4498	4887
-3	-4	-15	-4	-1	-34	12	46	35	22	15	-34	-36
-0.03	-0.05	-0.19	-0.05	-0.01	-0.44	0.15	0.58	0.44	0.29	0.20	-0.43	-0.46

Measured Value (mV)	
Error (mV)	
LINEARITY ERROR (dB)	

Flatness P-P

Slope Avg(mV/dB) 77.0

2.2	2.8	2.6	2.4	2.0	1.6	1.2	0.8	1.0	1.0	0.8	0.8	0.8
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Model Number: ERDLVA-2G18G-CW-75MV
Serial Number: PL41374
Date: 7/25/2023

Temperature: +25C

VSWR GRAPH

