



**Summary Data  
For  
ERDLVA-218-CW-75MV**

Customer: \_\_\_\_\_

Tested By: JOHNM

SO No: \_\_\_\_\_

Temperature: -28C, 25C, 85C

Model No: ERDLVA-218-CW-75MV

Date 4/5/2022

Serial No: PL35869

Drawing No: 27642440

Rev: A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	2 to 18 GHz	2 to 18 GHz	PMI QA
2	VSWR:	2.5:1 MAX @ -20 dBm	1.35:1 MAX	
3	Input Power:	23 dBm Max.	Pass	
4	VIDEO OUT TSS:	-42 dBm MAX	-42.5dBm	
5	VIDEO OUT Dynamic Range:	-40 to +20 dBm	-40 to +20 dBm	
6	VIDEO OUT Log Slope Fixed:	75 ± 10mV/dB	75.5-78.8mV/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	102mV	
9	VIDEO OUT Rise Time (10% to 90%):	25 ns MAX	19ns	
10	VIDEO OUT Settling Time:	±0.5dB within 25ns from 90%	<0.5dB	
11	VIDEO OUT Recovery Time:	500ns MAX	250ns	
12	VIDEO OUT Video Frequency Flatness:	3.0 dB p-p MAX @ -20dBm	3.0dB p-p MAX @ -20dBm	

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**Summary Data  
For  
ERDLVA-218-CW-75MV**

13	VIDEO OUT CW Immunity:	CW Immune Power -50 to -10 dBm	Pass	PMI QA3
		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	52mV	
22	VIDEO OUT Propagation Delay:	35 ns MAX from RF 10% to 10% video (excluding cable)	30ns	
23	Power Supply	+12 V @ 250 mA MAX -12 V @ 250 mA MAX	+12 V @ 150 mA -12 V @ 60 mA	

QA/QC Approval: *H. Winters* *M. Gan* Date: 4-7-22

LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV  
 TESTED BY: J.Merriner  
 DATE: 3-30-22  
 SERIAL NO: PL 35869  
 Test Temp: +25C

VOS=102MV



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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)	3417
	SLOPE (mV/dB)	75.0

354	788	1199	1583	1957	2323	2653	3016	3374	3791	4202	4545	4897
-65	-6	30	39	39	30	-15	-27	-43	-1	35	3	-19
-0.87	-0.08	0.40	0.53	0.52	0.40	-0.20	-0.35	-0.58	-0.01	0.47	0.04	-0.26

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

4.67 GHz	INTERCEPT (mV)	3466
	SLOPE (mV/dB)	79.0

286	678	1114	1510	1876	2280	2687	3095	3474	3882	4286	4640	4991
-22	-25	16	18	-11	-2	10	23	8	21	30	-11	-55
-0.28	-0.31	0.21	0.22	-0.14	-0.03	0.13	0.30	0.10	0.26	0.38	-0.14	-0.69

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

7.33 GHz	INTERCEPT (mV)	3509
	SLOPE (mV/dB)	78.9

323	734	1152	1550	1921	2328	2741	3140	3514	3910	4317	4681	5044
-30	-13	10	14	-10	3	21	26	5	7	19	-11	-43
-0.38	-0.17	0.13	0.18	-0.12	0.04	0.27	0.33	0.07	0.09	0.25	-0.14	-0.54

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

10 GHz	INTERCEPT (mV)	3638
	SLOPE (mV/dB)	78.4

448	922	1307	1681	2068	2467	2860	3242	3646	4046	4433	4800	5186
-54	28	21	3	-2	5	6	-4	8	16	11	-14	-20
-0.69	0.35	0.27	0.04	-0.03	0.06	0.07	-0.06	0.10	0.20	0.14	-0.18	-0.26

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

12.67 GHz	INTERCEPT (mV)	3608
	SLOPE (mV/dB)	78.1

429	902	1286	1666	2049	2444	2829	3212	3608	3995	4394	4771	5166
-55	28	21	11	3	8	2	-6	0	-4	5	-9	-4
-0.70	0.35	0.27	0.13	0.04	0.10	0.03	-0.07	0.00	-0.05	0.06	-0.11	-0.05

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

15.33 GHz	INTERCEPT (mV)	3602
	SLOPE (mV/dB)	78.2

417	890	1277	1656	2039	2435	2825	3211	3606	3991	4388	4764	5162
-56	26	22	10	1	6	5	0	4	-3	3	-12	-5
-0.71	0.33	0.28	0.12	0.02	0.08	0.06	0.00	0.04	-0.03	0.04	-0.15	-0.07

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

18 GHz	INTERCEPT (mV)	3503
	SLOPE (mV/dB)	76.8

368	834	1228	1614	1984	2365	2728	3118	3490	3868	4277	4653	5039
-65	17	27	29	16	13	-8	-2	-13	-19	6	-2	1
-0.85	0.22	0.35	0.38	0.20	0.17	-0.10	-0.02	-0.17	-0.25	0.08	-0.02	0.01

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

Flatness P-P

2.0	3.2	2.4	2.2	2.4	2.4	2.6	3.0	3.4	3.2	3.0	3.2	3.8
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Slope Avg(mv/dB) 77.8





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LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV  
 TESTED BY: J.Merriner  
 DATE: 3-30-22  
 SERIAL NO: PL 35869  
 Test Temp: -28C

VOS= 104MV

Frequency

2 GHz	INTERCEPT (mV)	3385
	SLOPE (mV/dB)	73.2

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
396	827	1210	1585	1967	2328	2632	2981	3333	3746	4160	4497	4826
-61	4	21	30	46	41	-21	-38	-52	-5	43	14	-22
-0.84	0.05	0.28	0.41	0.63	0.56	-0.29	-0.52	-0.71	-0.06	0.59	0.20	-0.31

RF Input Power (dBm)

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

4.67 GHz	INTERCEPT (mV)	3432
	SLOPE (mV/dB)	76.8

328	740	1127	1521	1897	2299	2673	3047	3429	3835	4236	4587	4912
-31	-3	0	10	2	19	9	-1	-3	18	35	2	-57
-0.40	-0.04	0.00	0.13	0.02	0.25	0.12	-0.01	-0.04	0.24	0.46	0.03	-0.75

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

7.33 GHz	INTERCEPT (mV)	3482
	SLOPE (mV/dB)	76.8

367	799	1180	1567	1950	2357	2732	3098	3481	3874	4275	4633	4970
-43	5	2	5	4	27	18	0	-1	8	25	-1	-48
-0.56	0.07	0.03	0.06	0.05	0.35	0.23	0.00	-0.01	0.10	0.32	-0.02	-0.63

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

10 GHz	INTERCEPT (mV)	3618
	SLOPE (mV/dB)	75.5

559	991	1376	1736	2125	2500	2846	3201	3611	4017	4392	4745	5116
-39	15	23	6	17	15	-17	-39	-7	22	20	-5	-11
-0.52	0.20	0.30	0.07	0.23	0.20	-0.22	-0.52	-0.09	0.29	0.26	-0.06	-0.15

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

12.67 GHz	INTERCEPT (mV)	3573
	SLOPE (mV/dB)	76.1

485	929	1308	1675	2066	2455	2809	3165	3566	3957	4344	4712	5086
-45	19	17	4	15	23	-3	-27	-7	4	11	-2	-8
-0.59	0.24	0.23	0.05	0.19	0.31	-0.04	-0.36	-0.09	0.05	0.14	-0.02	-0.11

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

15.33 GHz	INTERCEPT (mV)	3567
	SLOPE (mV/dB)	76.1

478	923	1298	1667	2057	2450	2803	3160	3563	3952	4338	4705	5080
-44	20	14	3	12	25	-3	-26	-4	5	10	-3	-9
-0.58	0.26	0.19	0.04	0.16	0.33	-0.04	-0.34	-0.05	0.06	0.13	-0.04	-0.12

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

18 GHz	INTERCEPT (mV)	3471
	SLOPE (mV/dB)	74.2

441	897	1270	1640	2020	2391	2709	3070	3448	3822	4227	4596	4956
-64	21	24	23	32	32	-21	-31	-23	-20	14	12	1
-0.86	0.29	0.32	0.31	0.43	0.43	-0.28	-0.41	-0.32	-0.27	0.19	0.16	0.02

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

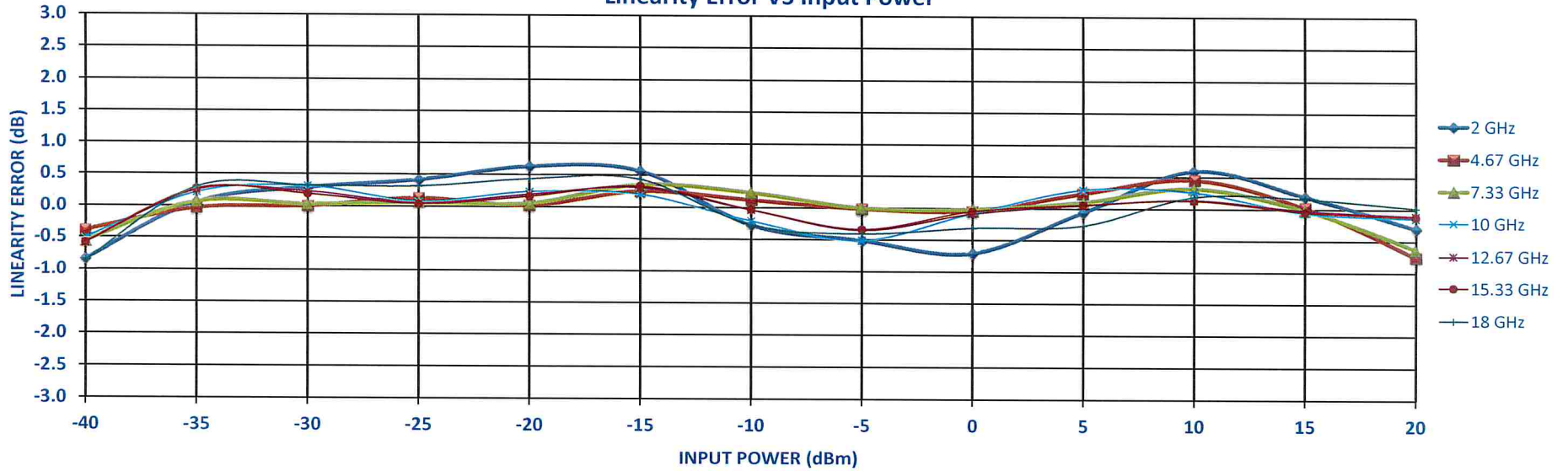
Flatness P-P

3.0	3.4	3.2	2.8	3.0	2.6	2.8	3.0	3.6	3.6	3.0	3.2	3.8
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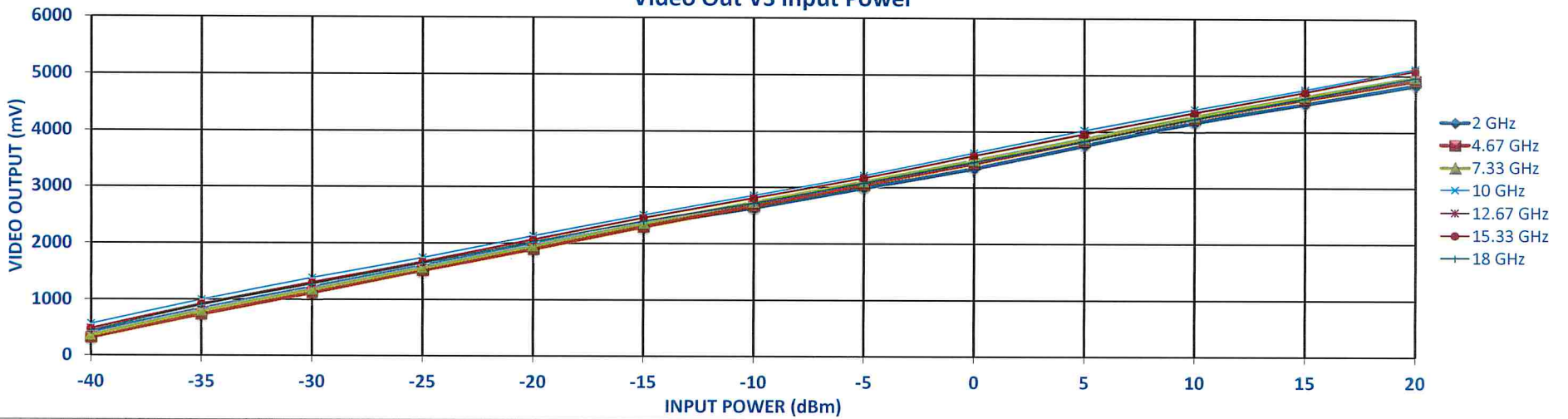
Slope Avg(mv/dB)	75.5
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LOG TRANSFER WITH FREQUENCY  
MODEL: ERDLVA-218-CW-75MV  
SERIAL NO: PL 35869  
Test Temp: -28C

Linearity Error VS Input Power



Video Out VS Input Power



LOG TRANSFER WITH FREQUENCY  
 MODEL: ERDLVA-218-CW-75MV  
 TESTED BY: J.Merriner  
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 SERIAL NO: PL 35869  
 Test Temp: +85C

VOS= 103MV



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Frequency

2 GHz	INTERCEPT (mV)	3272
	SLOPE (mV/dB)	75.5

-40	-35	-30	-25	-20	-15	-10	-5	0	5	10	15	20
241	599	1043	1416	1782	2148	2489	2860	3270	3642	4053	4410	4777
-13	-32	35	30	19	8	-29	-35	-2	-8	26	6	-5
-0.17	-0.42	0.46	0.40	0.25	0.10	-0.38	-0.46	-0.03	-0.10	0.34	0.07	-0.06

RF Input Power (dBm)

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

4.67 GHz	INTERCEPT (mV)	3320
	SLOPE (mV/dB)	79.5

203	480	946	1324	1685	2092	2513	2959	3350	3740	4146	4504	4872
65	-56	13	-7	-44	-34	-11	37	30	23	31	-9	-38
0.82	-0.70	0.16	-0.09	-0.55	-0.43	-0.14	0.47	0.38	0.29	0.39	-0.11	-0.48

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

7.33 GHz	INTERCEPT (mV)	3351
	SLOPE (mV/dB)	79.7

216	517	975	1351	1717	2123	2560	3000	3366	3759	4170	4536	4919
51	-46	14	-9	-41	-33	5	47	15	10	22	-10	-25
0.64	-0.58	0.17	-0.11	-0.51	-0.42	0.07	0.59	0.19	0.12	0.28	-0.13	-0.32

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

10 GHz	INTERCEPT (mV)	3459
	SLOPE (mV/dB)	80.0

255	652	1073	1451	1823	2236	2678	3102	3482	3878	4278	4646	5010
-4	-7	14	-8	-36	-23	19	43	23	19	20	-12	-48
-0.05	-0.09	0.17	-0.10	-0.45	-0.29	0.24	0.54	0.29	0.24	0.24	-0.15	-0.60

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

12.67 GHz	INTERCEPT (mV)	3454
	SLOPE (mV/dB)	79.2

276	686	1099	1476	1848	2248	2668	3086	3461	3849	4257	4636	5020
-12	3	20	1	-23	-19	6	28	7	-1	12	-5	-17
-0.15	0.03	0.25	0.01	-0.29	-0.23	0.07	0.35	0.09	-0.01	0.15	-0.06	-0.21

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

15.33 GHz	INTERCEPT (mV)	3440
	SLOPE (mV/dB)	79.5

255	648	1073	1451	1821	2224	2659	3082	3457	3841	4248	4628	5000
-4	-9	18	-1	-29	-24	14	39	17	3	12	-5	-31
-0.05	-0.11	0.23	-0.02	-0.36	-0.30	0.17	0.49	0.21	0.04	0.15	-0.07	-0.39

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

18 GHz	INTERCEPT (mV)	3319
	SLOPE (mV/dB)	78.4

211	528	986	1363	1722	2116	2532	2971	3339	3717	4128	4509	4835
29	-46	19	4	-29	-27	-3	44	20	5	24	13	-53
0.37	-0.59	0.25	0.05	-0.37	-0.34	-0.04	0.56	0.25	0.07	0.31	0.17	-0.68

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

Flatness P-P

1.0	2.6	2.0	2.0	2.0	2.0	2.4	3.0	2.6	3.0	2.8	3.0	3.0
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Slope Avg(mv/dB)	78.8
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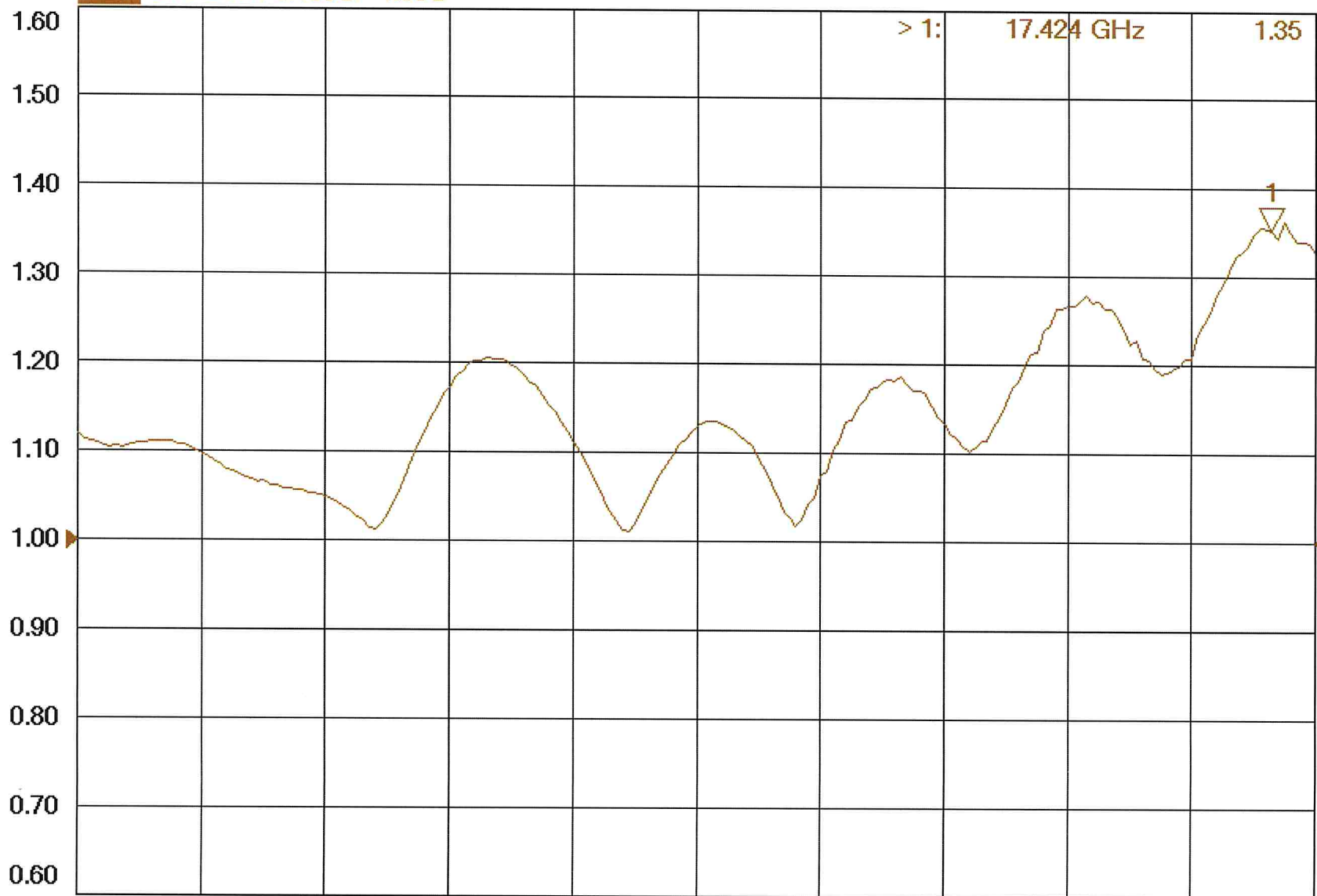
PL 35869

Trace 1

Marker 1 17.424000000 GHz

Marker

Tr 1 S11 SWR 0.100U/ 1.00U



- Marker 1
- Marker 2
- Marker 3
- Reference
- More Markers ▶
- Turn Off Markers ▶
- Properties ▶
- Marker Functions ▶
- Favorites

1 >Ch1: Start 2.00000 GHz — Stop 18.00000 GHz