



**Summary Data
For
ERDLVA-8G18G-65-70MV**

Customer:

Tested By: J. Emperador

SO No:

Temperature: +25°C (Unless Otherwise Specified)

Model No: ERDLVA-8G18G-65-70MV

Date 1/15/2019

Serial No: PL23460

Drawing No: 27633290

Rev: A1

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	8 to 18 GHz	8 to 18 GHz	PMI QA1
2	VSWR:	2.3:1 Max @ 50 Ω	1.81:1 @ 50 Ω (RF In) 1.92:1 @ 50 Ω (Bit In)	
3	Input Power Max:	(1) 1 W CW (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%	(1) 1 W CW (2) 100 W Peak @ PW = 1 us & Duty Cycle = 1%	
4	Switch Isolation:	60 dB Min (All Ports)	65 dB	
5	Switching Speed:	100 ns Max	34 ns	
6	Video Frequency Flatness:	±1.75 dB Max @ 25°C	±1.10 dB	
7	TSS:	-71 dBm	-71.4 dBm	PMI QA1

Planar Monolithics Industries

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Page 1 of 3



**Summary Data
For
ERDLVA-8G18G-65-70MV**

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
8	Dynamic Range:	-65 to 0 dBm	-65 to 0 dBm	PMI QA 1
9	Log Slope: @+25°C, -10°C, +85°C	70 mV/dB ±3 mV/dB	68.58 mV/dB	
10	Log Linearity: @+25°C	±1.0 dB Max	+0.40 / -0.50 dB	
11	Log Accuracy @ 25°C:	±1.75 dB Max	+1.14 / -1.12 dB	
12	Absolute Log Accuracy: @+25°C, -10°C, +85°C	±2.0 dB Max	+1.14 / -1.71 dB	
13	DC Offset:	0 - 100mV	+53 mV	
14	Rise Time:	28 ns Max (10% to 90% @ -40 & -10 dBm)	23.4 ns	
15	Fall Time:	300 ns Max (90% to 10% @ -40 & -10 dBm)	130.4 ns	
16	Settling Time:	50 ns Max (From 10% to within 35 mV of final value @ -40 & -10 dBm)	47 ns	
17	Recovery Time:	500 ns Max (From 90% of a -5 dBm, 100us Pulse to within ±1 dB of baseline) without Amplitude loss of a following -65 dBm, 100ns Pulse	185 ns	
18	Pulse Width Process Range:	100ns to 100us	100 ns to 100 us	
19	Video Output Load Impedance:	95 ±1 Ω	95 Ω	PMI QA 1



**Summary Data
For
ERDLVA-8G18G-65-70MV**

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
20	Video Output @ -65 dBm:	320 ± 123 mV Over Frequency	+259 - 333 mV	PMI QA1
21	Video Output Drive Capability:	Driving 100 Ft RG180 into 95 Ω Load	Pass	
22	Pulse Density Capability:	No Pulse Amplitude Loss 20% Duty @ 100ns PW 70% Duty @ 100us PW	20% Duty @ ns PW 70% Duty @ us PW	
23	Noise Level:	30 mV RMS Max	14.22 mV	
24	Pulse Droop @ -65 dBm:	70 mV Max	0 mV	
25	Propagation Delay:	80ns Max (50% RF to 10% Video)	23 ns	
26	CW Immune Power:	TSS to -40 dBm	TSS to -40 dBm	
27	Baseline Shift:	200 mV Max @ -40 dBm CW	174 mV	
28	Pulse Amplitude Loss with Pulse @ -30 dBm:	CW @ -50 dBm = No Loss CW @ -40 dBm = 2 dB Max	-50 dBm = 0 dB -40 dBm = 1.83 dB	
29	CW Immune Time @ CW = -40 dBm	4ms Max	3.9 ms	
30	CW Recovery Time @ CW = -40 dBm	120us Max	55 us	
31	DC Power:	+15V (±5%) @ 500 mA Max -15V (±5%) @ 200 mA Max	+463 mA -138 mA	PMI QA1

QA/QC Approval:

PMI
QA1

Date:

1/17/19

LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-8G18G-65-70MV
TESTED BY: J. Emperador
DATE: 1/15/2019
SERIAL NO: PL23460

Test Temp: +25C



PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731
EMAIL: SALES@PMI-RF.COM
ISO 9001:2000 CERTIFIED

DC Offset= 0.053

Frequency

8000 MHz	INTERCEPT (mV)	4864.4
	SLOPE (mV/dB)	69.24

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
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333	712	1059	1412	1774	2107	2457	2786	3116	3449	3831	4176	4509	4875
-31	2	3	10	26	12	16	-1	-17	-31	5	4	-9	11
-0.44	0.03	0.04	0.14	0.37	0.18	0.23	-0.02	-0.25	-0.44	0.08	0.06	-0.13	0.15
0.53	0.95	0.91	0.96	1.14	0.90	0.91	0.62	0.34	0.10	0.57	0.50	0.26	0.50

9000 MHz	INTERCEPT (mV)	4881.8
	SLOPE (mV/dB)	70.28

294	668	1015	1370	1734	2073	2434	2782	3124	3454	3836	4186	4520	4879
-20	3	-2	2	15	2	12	9	-1	-22	8	7	-10	-3
-0.28	0.04	-0.02	0.03	0.21	0.03	0.17	0.12	-0.01	-0.32	0.12	0.10	-0.15	-0.04

10000 MHz	INTERCEPT (mV)	4910.7
	SLOPE (mV/dB)	70.38

312	691	1036	1393	1759	2104	2463	2811	3148	3483	3859	4205	4547	4914
-24	1	-4	2	16	8	18	12	-3	-20	4	-2	-12	3
-0.34	0.05	-0.05	0.02	0.22	0.12	0.22	0.17	-0.04	-0.28	0.06	-0.03	-0.17	0.05

11000 MHz	INTERCEPT (mV)	4903
	SLOPE (mV/dB)	70.57

301	675	1021	1379	1743	2081	2439	2788	3132	3466	3845	4200	4545	4916
-15	6	0	5	16	1	6	2	-7	-26	1	3	-5	13
-0.21	0.09	-0.01	0.07	0.22	0.01	0.09	0.03	-0.09	-0.36	0.01	0.04	-0.07	0.18

12000 MHz	INTERCEPT (mV)	4868
	SLOPE (mV/dB)	70.14

294	665	1010	1363	1724	2064	2418	2768	3116	3439	3819	4172	4511	4874
-15	6	0	2	12	2	5	4	2	-26	3	5	-6	6
-0.21	0.08	0.00	0.03	0.18	0.02	0.07	0.06	0.02	-0.37	0.04	0.08	-0.09	0.09

13000 MHz	INTERCEPT (mV)	4799.2
	SLOPE (mV/dB)	69.70

259	615	964	1319	1677	2016	2363	2711	3062	3371	3761	4115	4445	4799
-10	-2	-2	5	14	5	3	3	5	-34	7	13	-6	0
-0.14	-0.03	-0.03	0.07	0.20	0.07	0.05	0.04	0.07	-0.49	0.10	0.18	-0.08	0.00

14000 MHz	INTERCEPT (mV)	4842.3
	SLOPE (mV/dB)	69.08

323	701	1047	1389	1747	2078	2424	2777	3132	3455	3831	4162	4478	4817
-29	3	4	1	13	-1	-1	7	17	-6	25	11	-19	-25
-0.42	0.05	0.06	0.01	0.19	-0.02	-0.01	0.10	0.24	-0.08	0.36	0.15	-0.27	-0.37

15000 MHz	INTERCEPT (mV)	4877.9
	SLOPE (mV/dB)	70.33

293	662	1006	1352	1710	2055	2416	2790	3147	3475	3848	4184	4505	4846
-13	4	-4	-9	-3	-10	0	12	27	28	-14	12	8	-17
-0.19	0.06	-0.05	-0.13	-0.04	-0.14	0.01	0.17	0.39	0.40	-0.20	0.17	0.11	-0.24

16000 MHz	INTERCEPT (mV)	4857.3
	SLOPE (mV/dB)	70.49

271	628	975	1316	1675	2038	2402	2770	3123	3433	3812	4160	4488	4837
-4	0	-5	-17	-10	0	12	27	28	-14	12	8	-17	-20
-0.06	0.00	-0.07	-0.24	-0.14	0.01	0.17	0.39	0.40	-0.20	0.17	0.11	-0.24	-0.29

17000 MHz	INTERCEPT (mV)	4845.3
	SLOPE (mV/dB)	70.02

281	646	992	1328	1690	2055	2415	2767	3114	3419	3801	4153	4482	4832
-13	2	-2	-16	4	10	20	22	19	-26	6	8	-13	-13
-0.19	0.03	-0.03	-0.23	-0.06	0.15	0.29	0.32	0.27	-0.37	0.09	0.11	-0.19	-0.19

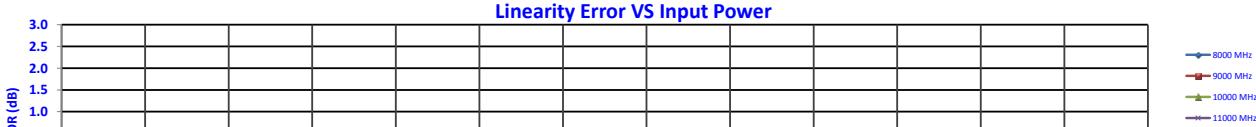
18000 MHz	INTERCEPT (mV)	4773.7
	SLOPE (mV/dB)	68.77

284	646	992	1329	1685	2041	2385	2721	3065	3364	3751	4096	4422	4762
-20	-2	0	-6	6	18	18	10	10	-34	9	10	-8	-12
-0.29	-0.02	0.01	-0.09	0.08	0.26	0.26	0.15	0.15	-0.50	0.13	0.15	-0.11	-0.17

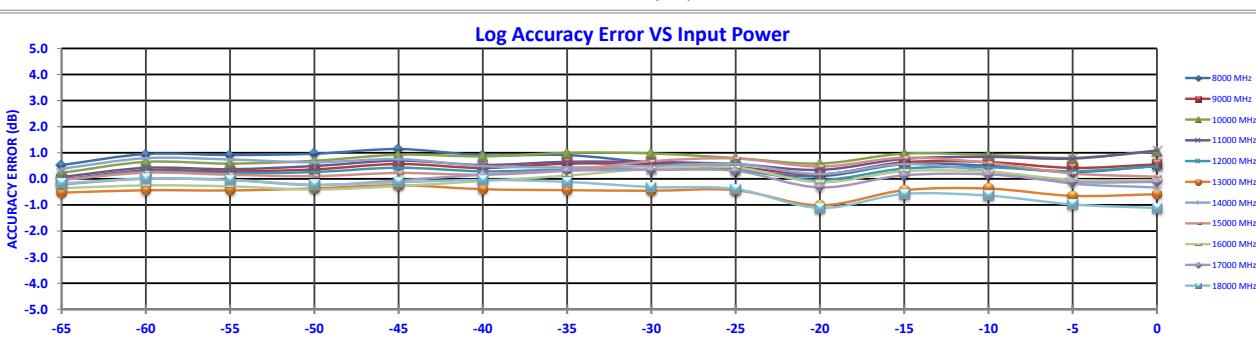
Flatness +/- dB

333 Max
259 Min

Linearity Error VS Input Power



Log Accuracy Error VS Input Power



LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-8G18G-65-70MV
TESTED BY: J. Emperador
DATE: 1/15/2019
SERIAL NO: PL23460

Test Temp: -10C



PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731
EMAIL: SALES@PMI-RF.COM
ISO 9001:2000 CERTIFIED

DC Offset= 0.087

Frequency

8000 MHz	INTERCEPT (mV)	4903.1
	SLOPE (mV/dB)	69.30

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
374	741	1086	1439	1807	2148	2502	2834	3153	3492	3872	4215	4547	4900

-24	-4	-5	1	23	17	25	10	-17	-25	8	5	-10	-3
-0.35	-0.06	-0.08	0.02	0.33	0.25	0.35	0.14	-0.25	-0.36	0.12	0.07	-0.14	-0.04
0.48	0.73	0.66	0.71	0.98	0.86	0.92	0.67	0.23	0.08	0.52	0.43	0.17	0.22

9000 MHz	INTERCEPT (mV)	4921.2
	SLOPE (mV/dB)	70.39

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
332	697	1039	1393	1764	2112	2479	2830	3160	3497	3879	4226	4558	4903

-14	-1	-11	-9	10	6	21	21	-1	-16	14	9	-11	-18
-0.20	-0.01	-0.15	-0.12	0.15	0.09	0.31	0.29	-0.02	-0.23	0.19	0.12	-0.16	-0.26
-0.12	0.10	-0.01	0.06	0.36	0.34	0.59	0.61	0.33	0.15	0.62	0.58	0.33	0.27

10000 MHz	INTERCEPT (mV)	4954.4
	SLOPE (mV/dB)	70.61

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
350	716	1058	1415	1788	2141	2508	2858	3185	3530	3905	4250	4589	4941

-15	-2	-11	-8	11	11	25	23	-4	-12	19	2	-12	-11
-0.21	-0.03	-0.18	-0.13	0.16	0.16	0.35	0.31	-0.06	-0.17	0.14	0.02	-0.17	-0.19
0.14	0.37	0.26	0.37	0.71	0.76	1.01	1.01	0.69	0.63	0.99	0.93	0.78	0.81

11000 MHz	INTERCEPT (mV)	4952.4
	SLOPE (mV/dB)	70.82

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
342	705	1046	1405	1776	2123	2489	2842	3177	3520	3896	4249	4591	4948

-7	2	-11	-6	11	4	15	14	-5	-16	6	5	-7	-4
-0.10	0.03	-0.16	-0.09	0.15	0.05	0.22	0.20	-0.07	-0.22	0.08	0.07	-0.10	-0.06
0.02	0.21	0.09	0.23	0.54	0.50	0.73	0.78	0.58	0.48	0.86	0.91	0.80	0.91

12000 MHz	INTERCEPT (mV)	4912.7
	SLOPE (mV/dB)	70.23

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
339	700	1041	1394	1761	2110	2469	2821	3159	3490	3868	4219	4555	4900

-9	1	-9	-7	8	6	14	15	2	-18	9	9	-7	-13
-0.13	0.01	-0.13	-0.11	0.12	0.09	0.20	0.21	0.03	-0.26	0.12	0.12	-0.09	-0.18
-0.02	0.14	0.02	0.07	0.32	0.31	0.45	0.48	0.32	0.05	0.46	0.48	0.29	0.22

13000 MHz	INTERCEPT (mV)	4820.9
	SLOPE (mV/dB)	69.30

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
305	658	999	1353	1717	2062	2413	2754	3093	3400	3789	4145	4470	4805

-12	-5	-11	-3	14	13	17	12	4	-35	8	17	-4	-16
-0.17	-0.07	-0.15	-0.04	0.21	0.19	0.25	0.17	0.06	-0.50	0.11	0.25	-0.06	-0.23
-0.51	-0.46	-0.58	-0.52	-0.31	-0.37	-0.35	-0.47	-0.62	-1.23	-0.67	-0.58	-0.93	-1.13

14000 MHz	INTERCEPT (mV)	4863.3
	SLOPE (mV/dB)	68.58

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
376	745	1090	1430	1794	2131	2476	2819	3158	3482	3858	4192	4505	4828

-30	-4	-2	-4	17	11	13	13	9	-10	23	14	-15	-35
-0.43	-0.05	-0.02	-0.07	0.24	0.16	0.19	0.19	0.13	-0.14	0.34	0.21	-0.23	-0.52
0.51	0.79	0.72	0.59	0.79	0.61	0.55	0.46	0.30	-0.06	0.32	0.10	-0.43	-0.81

15000 MHz	INTERCEPT (mV)	4923.1
	SLOPE (mV/dB)	70.13

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
350	716	1057	1400	1764	2115	2481	2851	3193	3529	3899	4233	4552	4876

-15	-1	-11	-17	-3	-3	12	32	23	8	28	11	-21	-47
-0.21	0.01	-0.13	-0.24	-0.05	-0.04	0.18	0.45	0.33	0.12	0.40	0.21	-0.13	-0.23
0.14	0.37	0.25	0.16	0.38	0.21	0.06	0.35	0.57	0.41	-0.05	0.35	0.30	-0.04

16000 MHz	INTERCEPT (mV)	4900.1
	SLOPE (mV/dB)	70.35

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15
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LOG TRANSFER WITH FREQUENCY
MODEL: ERDLVA-8G18G-65-70MV
TESTED BY: J. Emperador
DATE: 1/15/2019
SERIAL NO: PL23460

Test Temp: +85C



PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway STE 1
TEL: 916-542-1401 FAX: 301-662-1731
EMAIL: SALES@PMI-RF.COM
ISO 9001:2000 CERTIFIED

DC Offset= 0.094

Frequency

8000 MHz	INTERCEPT (mV)	4806.7
	SLOPE (mV/dB)	69.39

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
272	636	999	1357	1706	2037	2378	2724	3072	3390	3766	4115	4448	4822	
-24	-7	9	20	22	6	0	0	0	-29	0	2	-12	15	
-0.35	-0.11	0.13	0.28	0.31	0.08	0.00	-0.02	0.00	-0.42	0.00	0.03	-0.17	0.22	
0.47	0.63	0.79	0.87	0.82	0.52	0.36	0.27	0.21	-0.28	0.06	0.01	-0.26	0.05	

9000 MHz	INTERCEPT (mV)	4825.4
	SLOPE (mV/dB)	70.26

	250	597	969	1323	1676	2013	2361	2722	3085	3398	3774	4127	4461	4832
-9	-13	8	11	12	-2	-5	4	16	-22	2	4	-13	7	
-0.12	-0.18	0.11	0.15	0.17	-0.03	-0.08	0.06	0.23	-0.32	0.04	0.06	-0.19	0.09	
0.16	0.08	0.36	0.38	0.39	0.18	0.12	0.24	0.39	-0.17	0.17	0.18	-0.08	0.19	

10000 MHz	INTERCEPT (mV)	4849.1
	SLOPE (mV/dB)	70.75

	247	589	964	1323	1675	2017	2367	2733	3098	3414	3788	4140	4481	4862
-4	-15	6	11	9	-2	-6	6	18	-20	1	-2	-14	13	
-0.05	-0.22	0.08	0.16	0.13	-0.03	-0.08	0.09	0.25	-0.29	0.00	-0.02	-0.20	0.18	
0.11	-0.03	0.29	0.38	0.38	0.23	0.20	0.40	0.58	0.06	0.37	0.37	0.21	0.61	

11000 MHz	INTERCEPT (mV)	4827.5
	SLOPE (mV/dB)	70.65

	240	572	950	1309	1659	1998	2340	2706	3076	3391	3765	4124	4464	4847
5	-17	8	14	11	-4	-15	-2	15	-24	3	3	-10	19	
0.06	-0.24	0.11	0.20	0.15	-0.05	-0.21	-0.03	0.21	-0.33	-0.04	0.04	-0.15	0.28	
0.01	-0.27	0.09	0.19	0.15	-0.03	-0.18	0.01	0.26	-0.26	0.04	0.14	-0.04	0.40	

12000 MHz	INTERCEPT (mV)	4784.3
	SLOPE (mV/dB)	70.37

	227	537	923	1272	1621	1969	2304	2671	3046	3357	3729	4084	4422	4799
17	-25	9	6	3	0	-17	-2	21	-20	0	3	-10	15	
0.24	-0.35	0.13	0.09	0.05	-0.01	-0.25	-0.03	0.30	-0.28	0.00	0.05	-0.15	0.21	
-0.17	-0.77	-0.29	-0.34	-0.39	-0.45	-0.69	-0.48	-0.16	-0.75	-0.47	-0.43	-0.63	-0.28	

13000 MHz	INTERCEPT (mV)	4749.9
	SLOPE (mV/dB)	70.44

	206	489	885	1228	1580	1931	2258	2631	3011	3323	3703	4056	4388	4758
35	-34	9	0	0	-1	-26	-6	22	-18	10	11	-19	8	
0.50	-0.49	0.13	0.00	0.00	-0.02	-0.37	-0.08	0.31	-0.26	0.14	0.15	-0.14	0.12	
-0.47	-1.45	-0.83	-0.96	-0.97	-0.99	-1.34	-1.05	-0.66	-1.23	-0.84	-0.83	-1.11	-0.86	

14000 MHz	INTERCEPT (mV)	4813
	SLOPE (mV/dB)	70.31

	244	578	955	1301	1646	1987	2322	2711	3103	3419	3785	4119	4435	4787
1	-17	9	3	-3	-14	-30	7	48	12	27	9	-26	-26	
0.01	-0.23	0.13	0.05	-0.04	-0.19	-0.43	0.10	0.68	0.17	0.38	0.13	-0.38	-0.37	
0.07	-0.19	0.16	0.07	-0.03	-0.19	-0.44	0.08	0.65	0.13	0.33	0.07	-0.45	-0.45	

15000 MHz	INTERCEPT (mV)	4817.7
	SLOPE (mV/dB)	71.40

	212	506	897	1236	1586	1943	2285	2685	3088	3402	3772	4116	4437	4794
36	-27	7	-11	-19	-19	-34	9	55	12	25	12	-24	-24	
0.50	-0.38	0.09	-0.16	-0.26	-0.26	-0.30	0.23	0.73	-0.05	0.18	0.13	-0.26	-0.16	
-0.38	-1.21	-0.66	-0.85	-0.82	-0.96	-1.10	-0.50	0.07	-0.66	-0.37	-0.36	-0.69	-0.52	

16000 MHz	INTERCEPT (mV)	4793.2
	SLOPE (mV/dB)	71.33

	206	479	876	1202	1558	1933	2275	2670	3062	3363	3736	4089	4418	4782
49	-34	6	-25	-25	-7	-22	17	52	-4	13	9	-19	-11	
0.69	-0.48	0.08	-0.35	-0.30	-0.10	-0.30	0.23	0.73	-0.05	0.18	0.10	-0.22	-0.05	
-0.47	-1.59	-0.96	-1.33	-1.28	-0.96	-1.10	-0.50	0.07	-0.66	-0.37	-0.36	-0.69	-0.52	

17000 MHz	INTERCEPT (mV)	4782.5
	SLOPE (mV/dB)	70.72

	218	510	902	1226	1581	1955	2298	2676	3056	3353	3727	4082	4413	4779
32	-29	9	-20	-19	1	-9	15	42	-15	5	7	-16	-3	
0.46	-0.41	0.13	-0.29	-0.27	0.02	-0.13	0.21	0.59	-0.21	0.08	0.10	-0.22	-0.05	
-0.30	-1.15	-0.59	-0.99	-0.95	-0.65	-0.78	-0.41	-0.02	-0.80	-0.50	-0.46	-0.76	-0.56	

18000 MHz	INTERCEPT (mV)	4703.6
	SLOPE (mV/dB)	69.42

	213	504	8