



PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-G GROVE ROAD, FREDERICK, MARYLAND 21704
 TEL: 301-631-1579 FAX: 301-662-2029
 URL: WWW.PLANARMONOLITHICS.COM
 EMAIL: SALES@PLANARMONOLITHICS.COM
 ISO 9001:2000 CERTIFIED

SUMMARY TEST DATA
ON
SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER

CUSTOMER: _____
MODEL NO: SDLVA-0120-70
OPTION NO: 500M105, 10DBM, MH
SERIAL NO: PM510334

JOB NO: P507029
TESTED BY: H. HAHN
TEMPERATURE: ROOM
DATE: 2/13/06

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	0.5 TO 1.5 GHz	0.5 TO 1.5 GHz	
2	INPUT VSWR	1.8:1 MAXIMUM; (1.5:1 TYPICAL)	1.39:1	
3	TYPICAL OUTPUT VOLTAGE @ -60 TO +5 dBm	2.7 V MAXIMUM	SEE PLOTS	
4	TSS (0.5 -1.5 GHz)	-65 dBm (-70 dBm TYPICAL)	-66 dBm	
5	LOG SLOPE	25 mV/dB NOMINAL	23.25 mV/dB to 27.46 mV/dB	
6	LOG LINEARITY @ -60 TO 0 dBm	± 1.2 dB MAXIMUM	±0.81 dB	
7	LOG LINEARITY @ -65 TO +5 dBm	± 1.5 dB MAXIMUM	±0.85 dB	
8	LIMITED IF OUTPUT (±10%)	+10 dBm	10.1 dBm to 10.64 dBm	
9	VIDEO LOAD	100Ω ± 10%	100Ω	
10	RISE TIME	25 nSec MAXIMUM	13 nS	
11	FALL TIME	30 nSec MAXIMUM	16 nS	
12	SETTLING TIME	40 nSec MAXIMUM	30 nS	
13	DC POWER +V (NO LOAD)	12 to 15V @ 150mA Maximum	139 mA	
14	DC POWER -V (NO LOAD)	-12 to -15V @ 150mA Maximum	150 mA	

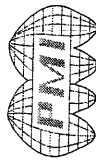
TESTED ON: HP8350B/83592A, GIGATRONIC 8541, TEKTRONIX TDS3014B

QA / QC APPROVAL: _____

QA DATED: _____

2/15/06

TABULATED TEST DATA @ 500 MHz, 1000 MHz AND 1500 MHz @ +25 DEGREES C



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TECHNICIAN: **H. HAHN** MODEL NUMBER: **SDLVAC-0120-70** OPTION: **500M105,10DBM,MH**
 DATE: **02/13/06** SERIAL NUMBER: **PM510334**

RF POWER IN (dBm)	500 MHz		1000 MHz		1500 MHz	
	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)
5	1.867	10.52	1.676	10.05	1.473	10.16
0	1.751	10.52	1.563	10.06	1.364	10.18
-5	1.62	10.52	1.444	10.08	1.261	10.19
-10	1.471	10.51	1.305	10.09	1.142	10.2
-15	1.338	10.52	1.182	10.1	1.028	10.21
-20	1.182	10.52	1.044	10.1	0.91	10.21
-25	1.077	10.53	0.94	10.11	0.807	10.21
-30	0.898	10.55	0.783	10.12	0.669	10.21
-35	0.79	10.59	0.683	10.16	0.577	10.2
-40	0.641	10.64	0.544	10.19	0.443	10.2
-45	0.51	10.62	0.422	10.22	0.337	10.26
-50	0.363	10.59	0.278	10.26	0.209	10.33
-55	0.242	10.59	0.162	10.35	0.083	10.35
-60	0.082	10.45	0.023	10.33	-0.028	10.28
-65	-0.027	10.29	-0.067	10.17	-0.112	10.21
DC POWER @ + 5 VOLTS	+139 mA					
DC POWER @ - 5 VOLTS	-150 mA					
LOG SLOPE						
BEST FIT STRAIGHT LINE	27.4621	mV/dB	25.3543	mV/dB	23.0757	mV/dB
LOG ERROR IN dB @ -65 - +5 dB	0.70		0.85		0.79	
LOG ERROR IN dB @ -60 - 0 dB	-0.81		-0.62		-0.76	
FREQUENCY FLATNESS						
LOG VIDEO FROM THE VALUE @ 1 GHz IN dB						

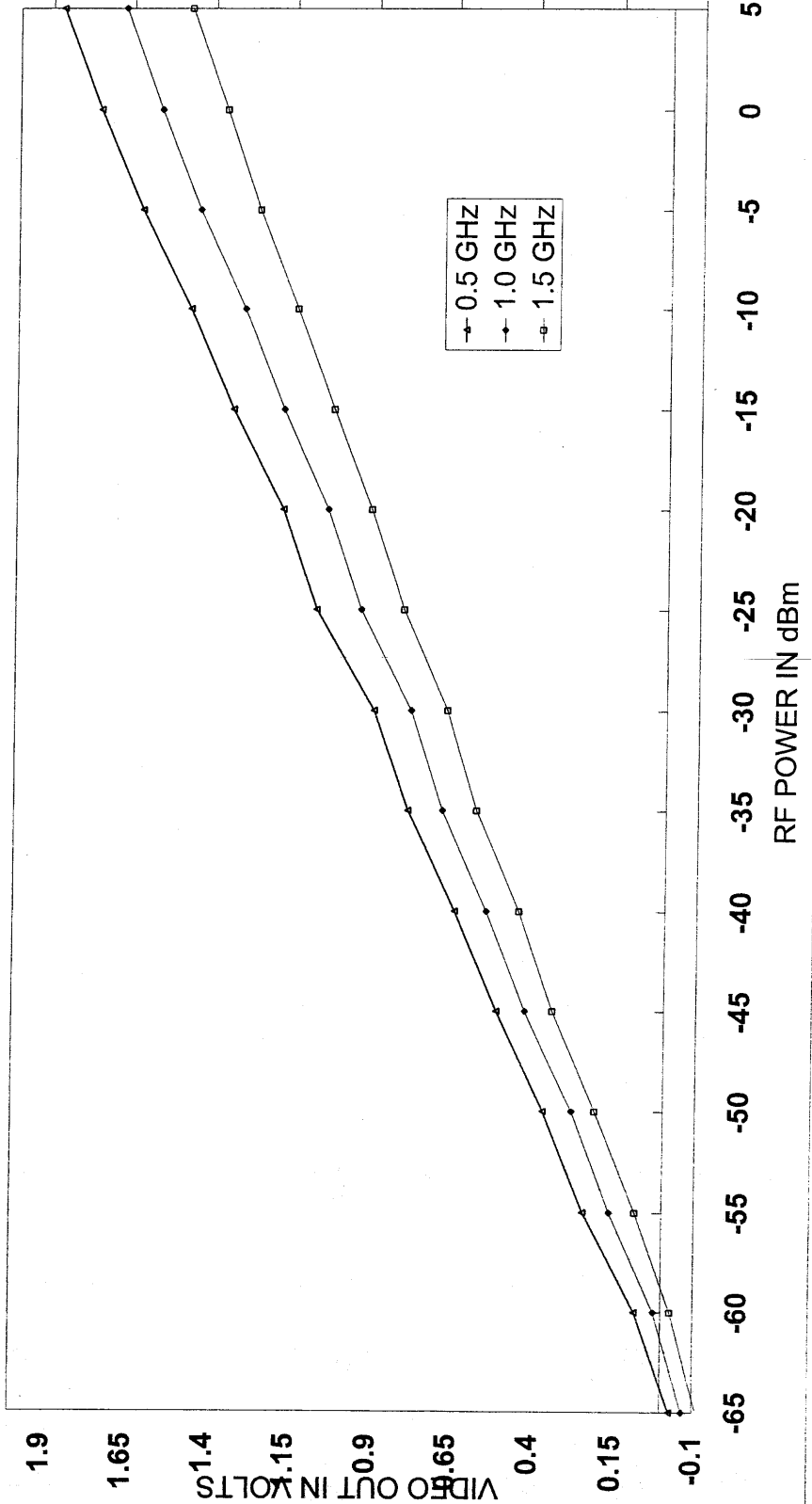


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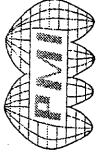
TABULATED TEST DATA @ 500 MHz, 1000 MHz AND 1500 MHz @ +25 DEGREES C

TECHNICIAN: H. HAHN MODEL NUMBER: SDLVAC-0120-70 OPTION: 500M105,10DBM,MH
DATE: 02/13/06 SERIAL NUMBER: PM510334

PLOT OF LOG SLOPE OVER FREQUENCY



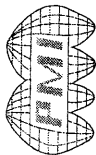
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 DATE: **02/13/06** SERIAL NUMBER: **PM510335**

RF POWER IN (dBm)	500 MHz		1000 MHz		1500 MHz	
	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)
5	1.858	10.7	1.67	10.24	1.478	10.3
0	1.744	10.71	1.559	10.26	1.369	10.31
-5	1.612	10.71	1.442	10.28	1.267	10.32
-10	1.464	10.7	1.304	10.28	1.15	10.33
-15	1.332	10.7	1.182	10.29	1.037	10.33
-20	1.176	10.71	1.046	10.29	0.92	10.34
-25	1.069	10.71	0.943	10.3	0.818	10.34
-30	0.891	10.73	0.787	10.32	0.68	10.34
-35	0.782	10.76	0.688	10.35	0.588	10.33
-40	0.629	10.78	0.548	10.37	0.456	10.33
-45	0.499	10.75	0.43	10.39	0.351	10.38
-50	0.353	10.76	0.289	10.4	0.23	10.44
-55	0.23	10.75	0.173	10.49	0.114	10.48
-60	0.079	10.62	0.034	10.52	0.019	10.49
-65	-0.022	10.48	-0.061	10.33	-0.095	10.41
DC POWER @ + 5 VOLTS	+140 mA					
DC POWER @ - 5 VOLTS	-150 mA					
LOG SLOPE						
BEST FIT STRAIGHT LINE	27.4171		25.1279		22.6943	
LOG ERROR IN dB @ -65 - +5 dB	0.89		0.65		0.55	
LOG ERROR IN dB @ -60 - 0 dB	-0.80		-0.61		-0.53	
FREQUENCY FLATNESS						
LOG VIDEO FROM THE VALUE @ 1 GHz IN dB						
	mV/dB		mV/dB		mV/dB	

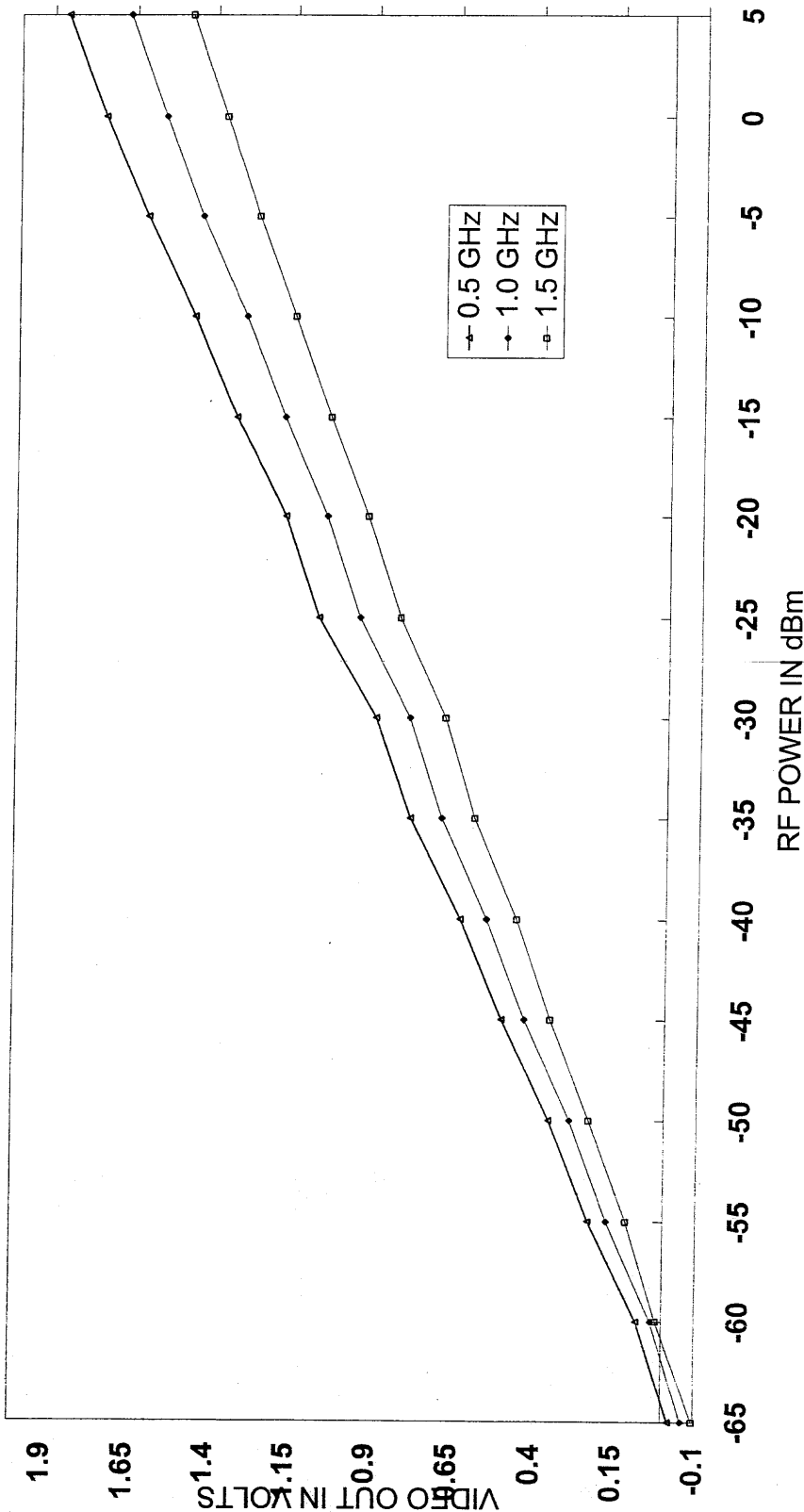


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DATE: 02/13/06 SERIAL NUMBER: PM510335

LOT OF LOG SLOPE OVER FREQUENCY





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SERIAL NO: PM510336

JOB NO: P507029
TESTED BY: H. HAHN
TEMPERATURE: ROOM
DATE: 2/13/06

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	0.5 TO 1.5 GHz	0.5 TO 1.5 GHz	✓
2	INPUT VSWR	1.8:1 MAXIMUM; (1.5:1 TYPICAL)	1.41:1	✓
3	TYPICAL OUTPUT VOLTAGE @ -60 TO +5 dBm	2.7 V MAXIMUM	SEE PLOTS	✓
4	TSS (0.5 -1.5 GHz)	-65 dBm (-70 dBm TYPICAL)	-65 dBm	✓
5	LOG SLOPE	25 mV/dB NOMINAL	22.57mV/dB to 27.42 mV/dB	✓
6	LOG LINEARITY @ -60 TO 0 dBm	± 1.2 dB MAXIMUM	±0.90 dB	✓
7	LOG LINEARITY @ -65 TO +5 dBm	± 1.5 dB MAXIMUM	±1.23 dB	✓
8	LIMITED IF OUTPUT (±10%)	+10 dBm	10.19 dBm to 10.67 dBm	✓
9	VIDEO LOAD	100Ω ± 10%	100Ω	✓
10	RISE TIME	25 nSec MAXIMUM	13 nS	✓
11	FALL TIME	30 nSec MAXIMUM	15 nS	✓
12	SETTLING TIME	40 nSec MAXIMUM	28 nS	✓
13	DC POWER +V (NO LOAD)	12 to 15V @ 150mA Maximum	140 mA	✓
14	DC POWER -V (NO LOAD)	-12 to -15V @ 150mA Maximum	149 mA	✓

TESTED ON: HP8350B/83592A, GIGATRONIC 8541, TEKTRONIX TDS3014B

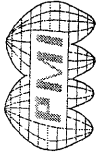
QA / QC APPROVAL: _____

Q4

DATED: _____

5/15/06

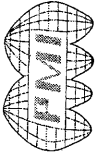
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 DATE: **02/13/06** SERIAL NUMBER: **PM510336**

RF POWER IN (dBm)	500 MHz		1000 MHz		1500 MHz	
	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)
5	1.889	10.61	1.7	10.28	1.492	10.28
0	1.773	10.61	1.588	10.29	1.385	10.28
-5	1.641	10.62	1.47	10.31	1.283	10.29
-10	1.491	10.61	1.329	10.32	1.162	10.29
-15	1.357	10.61	1.206	10.32	1.049	10.29
-20	1.203	10.61	1.07	10.32	0.933	10.3
-25	1.093	10.61	0.964	10.33	0.829	10.3
-30	0.916	10.63	0.808	10.34	0.696	10.29
-35	0.81	10.66	0.709	10.37	0.604	10.28
-40	0.655	10.67	0.565	10.4	0.472	10.29
-45	0.528	10.63	0.443	10.4	0.372	10.34
-50	0.384	10.62	0.296	10.39	0.251	10.38
-55	0.258	10.63	0.178	10.44	0.141	10.38
-60	0.106	10.54	0.045	10.37	0.017	10.31
-65	0.006	10.36	-0.035	10.19	-0.061	10.24
DC POWER @ + 5 VOLTS	+140 mA					
DC POWER @ - 5 VOLTS	-149 mA					
LOG SLOPE						
BEST FIT STRAIGHT LINE	27.4229	mV/dB	25.3921	mV/dB	22.5793	mV/dB
LOG ERROR IN dB @ -65 + 5 dB	0.92		1.23		0.93	
LOG ERROR IN dB @ -60 - 0 dB	-0.90		-0.73		-0.62	
FREQUENCY FLATNESS						
LOG VIDEO FROM THE VALUE @ 1 GHz IN dB						

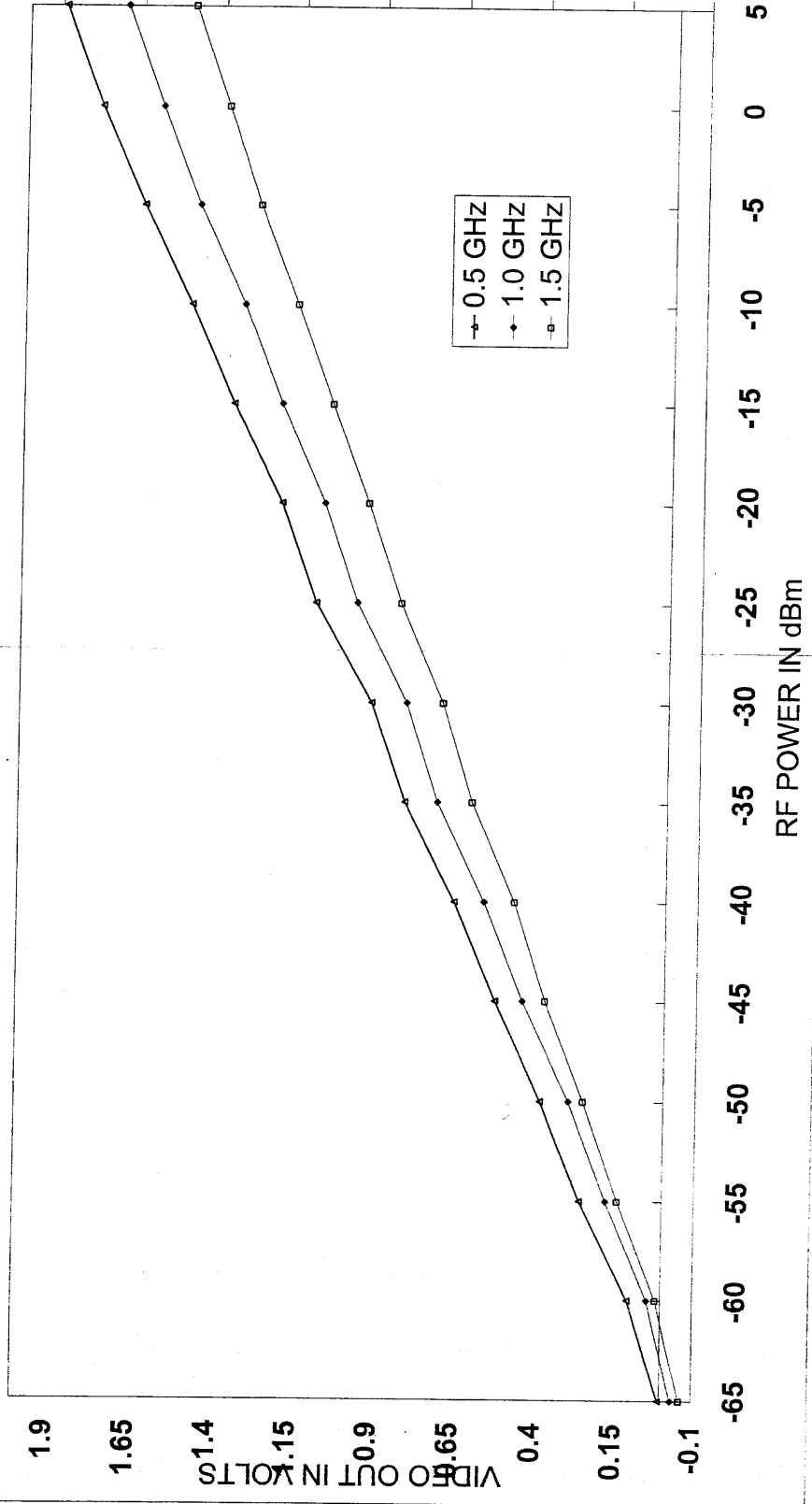


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DATE: 02/13/06 SERIAL NUMBER: PM510336

LOT OF LOG SLOPE OVER FREQUENCY





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 TEMPERATURE: ROOM
 DATE: 2/13/06

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	0.5 TO 1.5 GHz	0.5 TO 1.5 GHz	✓
2	INPUT VSWR	1.8:1 MAXIMUM; (1.5:1 TYPICAL)	1.40:1	✓
3	TYPICAL OUTPUT VOLTAGE @ -60 TO +5 dBm	2.7 V MAXIMUM	SEE PLOTS	✓
4	TSS (0.5 -1.5 GHz)	-65 dBm (-70 dBm TYPICAL)	-65 dBm	✓
5	LOG SLOPE	25 mV/dB NOMINAL	23.17 mV/dB to 27.65 mV/dB	✓
6	LOG LINEARITY @ -60 TO 0 dBm	± 1.2 dB MAXIMUM	±1.17 dB	✓
7	LOG LINEARITY @ -65 TO +5 dBm	± 1.5 dB MAXIMUM	±1.28 dB	✓
8	LIMITED IF OUTPUT (±10%)	+10 dBm	10.20 dBm to 10.81 dBm	✓
9	VIDEO LOAD	100Ω ± 10%	100Ω	✓
10	RISE TIME	25 nSec MAXIMUM	14 nS	✓
11	FALL TIME	30 nSec MAXIMUM	17 nS	✓
12	SETTLING TIME	40 nSec MAXIMUM	28 nS	✓
13	DC POWER +V (NO LOAD)	12 to 15V @ 150mA Maximum	140 mA	✓
14	DC POWER -V (NO LOAD)	-12 to -15V @ 150mA Maximum	148 mA	✓

TESTED ON: HP8350B/83592A, GIGATRONIC 8541, TEKTRONIX TDS3014B

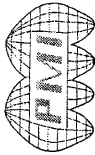
QA / QC APPROVAL: _____

04

DATED: _____

2/15/06

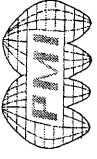
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 DATE: 02/13/06 SERIAL NUMBER: PM510337

RF POWER IN (dBm)	500 MHz		1000 MHz		1500 MHz	
	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)	VIDEO OUT (VOLTS)	LIMITED IF OUT (dBm)
5	1.924	10.75	1.742	10.21	1.549	10.26
0	1.809	10.75	1.631	10.22	1.441	10.27
-5	1.677	10.75	1.511	10.24	1.339	10.27
-10	1.525	10.76	1.37	10.25	1.219	10.27
-15	1.391	10.76	1.246	10.25	1.106	10.28
-20	1.236	10.77	1.109	10.26	0.988	10.28
-25	1.126	10.78	1.002	10.27	0.884	10.28
-30	0.948	10.8	0.845	10.28	0.748	10.28
-35	0.84	10.81	0.743	10.31	0.653	10.27
-40	0.682	10.81	0.599	10.34	0.518	10.28
-45	0.555	10.77	0.479	10.37	0.413	10.36
-50	0.405	10.76	0.329	10.34	0.286	10.42
-55	0.275	10.77	0.209	10.31	0.17	10.4
-60	0.128	10.65	0.083	10.32	0.031	10.31
-65	0.032	10.52	-0.001	10.23	-0.045	10.2
DC POWER @ + 5 VOLTS	+140 mA					
DC POWER @ - 5 VOLTS	-148 mA					
LOG SLOPE						
BEST FIT STRAIGHT LINE	27.6586	mV/dB	25.5307	mV/dB	23.1750	mV/dB
LOG ERROR IN dB @ -65 - +5 dB	1.08		1.28		0.67	
LOG ERROR IN dB @ -60 - 0 dB	-0.80		-0.79		-1.17	
FREQUENCY FLATNESS						
LOG VIDEO FROM THE VALUE @ 1 GHz IN dB						



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LOT OF LOG SLOPE OVER FREQUENCY

