

JOB NO: P401004

**SUMMARY TEST DATA
ON**

SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA)

CUSTOMER: _____
 JOB NO: _____
 MODEL NO: SDLVA-07103-70
 SERIAL NO: PM 404289

TESTED BY: Loc Chau
 TEMPERATURE: ROOM
 DATE: 6/30/2004
 OPTION NO: LA3

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	750-1250 MHz	750-1250 MHz	
2	DYNAMIC RANGE	-70 dB (Minimum)	-70 dB	
3	LOG LINEARITY (@1 GHz) ± 1.5 dB max (input -65 dBm to -60 dBm) ± 1.2 dB max (input -60 dBm to 0 dBm) ± 2.5 dB max (input 0 dBm to +5 dBm)	± 1.5 dB (Maximum) ± 1.2 dB (Maximum) ± 2.5 dB (Maximum)	± 0.61 dB ± 0.81 dB ± 1.56 dB	
4	MINIMUM LOGGING RANGE	-70 dBm Input	-70 dBm	
5	MAXIMUM LOGGING RANGE	+3 dBm Input (+5 dBm typical)	+5 dBm	
6	VSWR INPUT AND OUTPUT	2.0:1 (Maximum) 1.5:1 (Typical)	Input: 1.66:1 Output: 1.51:1	
7	MINIMUM TANGENTIAL SENSITIVITY	-76 dBm (Maximum)	-76 dBm	
8	LIMITED IF OUTPUT 13.0 dBm to 16.0 dBm (Input -70 dBm to +3 dBm)	13.0 dBm to 16.0 dBm	14.52 dBm TO 14.92 dBm	
9	INSERTION PHASE VARIATION: INPUT: -60 dBm to 0 dBm INPUT: -65 dBm to -60 dBm (For any 50 MHz Segment)	± 2.5° (Maximum) ± 5.0° (Maximum)	<2.5° <5.0°	
10	OUTPUT VOLTAGE @ 1 GHz (-67 dBm Input Power) (+3 dBm Input Power) (For nominal power supply voltages of +5V and -5.2V) (For DC voltage level tolerance per paragraph 3.1.12 the output video levels can be ±30 mV of the value measured for the nominal DC voltage)	300 mV DC ± 5% 2400 mV DC ± 2.5%	292 mV DC 2350 mV DC	

Note: Further Test Data Appears on Reverse

SUMMARY TEST DATA
ON
SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA)

CUSTOMER: 1
JOB NO: P
MODEL NO: SDLVA-07103-70
SERIAL NO: PM404289

TESTED BY: Loc Chau
TEMPERATURE: ROOM
DATE: 6/30/2004
OPTION NO: LA3

11	AM / PM: input -65 dBm to -55 dBm input -55 dBm to 0 dBm input 0 dBm to +5 dBm	1.2° dB MAX 0.75° dB MAX 2.0° dB MAX	0.13° dB 0.08° dB 1.44° dB	
12	RISE TIME	25 nS (Maximum)	12 nS	
13	FALL TIME	35 nS (Maximum)	12 nS	
14	SETTLING TIME 40 nS Maximum (10% Pulse input to within 0.5 dB of final video output level)	40 nS (Maximum)	35 nS	
15	RECOVERY TIME (Maximum Pulse In) (90% Pulse input to within 0.5 dB of final video output level)	50 nS (Maximum)	40 nS	
16	SLOPE 30 mV/dB $\pm 5\%$ at 1 GHz 30 mV/dB $\pm 7\%$ at 750 MHz and 1.25 GHz	30 mV/dB $\pm 5\%$ at 1 GHz 30 mV/dB $\pm 7\%$ at 750 MHz and 1.25 GHz	29.5 mV/dB 31.3 mV/dB 27.9 mV/dB	
17	LOG SLOPE VARIATION WITH FREQUENCY	± 0.5 mV/dB (at 1 GHz ± 50 MHz)	0.36 mV/dB	
18	PROPAGATION DELAY	10 nS (Maximum) 7 nS (Typical)	9.15 nS	
19	VIDEO LOAD	100 OHMS (Minimum)	100 OHMS	
20	D.C. POWER @ +5 V (no load)	250 mA (maximum)	230 mA	
21	D.C. POWER @ -5.2 V (no load)	150 mA (maximum)	130 mA	

QA/QC APPROVAL: K. Vogler

DATED: 6/30/04

	-67	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	3	5
Rf Input power (dbm)																	

FREQUENCY	750 MHz	1.0 GHz	1.25 GHz
SLOPE	31.3	31.3	31.3
INTERCEPT	240.2	240.2	240.2

FREQUENCY	750 MHz	1.0 GHz	1.25 GHz
SLOPE	29.5	29.5	29.5
INTERCEPT	227.2	227.2	227.2

FREQUENCY	750 MHz	1.0 GHz	1.25 GHz
SLOPE	27.9	27.9	27.9
INTERCEPT	210.8	210.8	210.8

LIMITED IF OUT

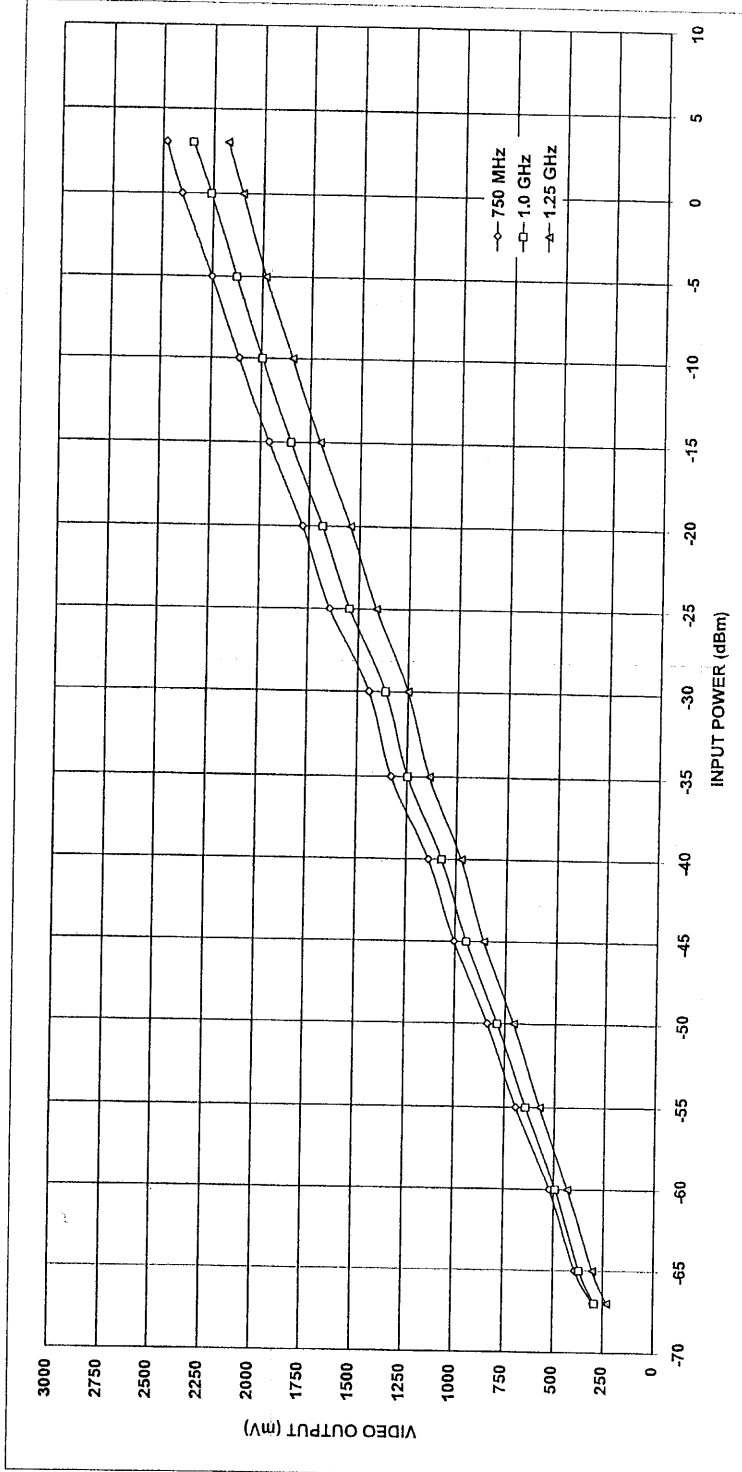
Measured Values (dBm)	-67	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	3	5
750 MHz	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278

LIMITED IF OUT

Measured Values (dBm)	-67	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	3	5
1.0 GHz	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271

LIMITED IF OUT

Measured Values (dBm)	-67	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	3	5
1.25 GHz	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261





JOB NO: P401004

SUMMARY TEST DATA
ON

SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA)

CUSTOMER: I _____
 JOB NO: F _____
 MODEL NO: SDLVA-07103-70
 SERIAL NO: PM 404289

TESTED BY: Loc Chau
 TEMPERATURE: -40°C
 DATE: 6/30/2004
 OPTION NO: LA3

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	750-1250 MHz	750-1250 MHz	
2	DYNAMIC RANGE	-70 dB (Minimum)	-70 dB	
3	LOG LINEARITY (@1 GHz) ± 1.5 dB max (input -65 dBm to -60 dBm) ± 1.2 dB max (input -60 dBm to 0 dBm) ± 2.5 dB max (input 0 dBm to +5 dBm)	± 1.5 dB (Maximum) ± 1.2 dB (Maximum) ± 2.5 dB (Maximum)	±0.49 dB ±1.01 dB ±1.18 dB	
4	MINIMUM LOGGING RANGE	-70 dBm Input	-70 dBm	
5	MAXIMUM LOGGING RANGE	+3 dBm Input (+5 dBm typical)	+5 dBm	
6	VSWR INPUT AND OUTPUT	2.0:1 (Maximum) 1.5:1 (Typical)	Input: 1.58:1 Output: 1.35:1	
7	MINIMUM TANGENTIAL SENSITIVITY	-76 dBm (Maximum)	-76 dBm	
8	LIMITED IF OUTPUT 13.0 dBm to 16.0 dBm (Input -70 dBm to +3 dBm)	13.0 dBm to 16.0 dBm	13.30 dBm TO 14.98 dBm	
9	INSERTION PHASE VARIATION: INPUT: -60 dBm to 0 dBm INPUT: -65 dBm to -60 dBm (For any 50 MHz Segment)	± 2.5° (Maximum) ± 5.0° (Maximum)	<2.5° <5.0°	
10	OUTPUT VOLTAGE @ 1 GHz (-67 dBm Input Power) (+3 dBm Input Power) (For nominal power supply voltages of +5V and -5.2V) (For DC voltage level tolerance per paragraph 3.1.12 the output video levels can be ±30 mV of the value measured for the nominal DC voltage)	300 mV DC ± 5% 2400 mV DC ± 2.5%	285 mV DC 2442 mV DC	

Note: Further Test Data Appears on Reverse

**SUMMARY TEST DATA
ON
SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA)**

CUSTOMER: _____
JOB NO: 1-1144444
MODEL NO: SDLVA-07103-70
SERIAL NO: PM404289

TESTED BY: Loc Chau
TEMPERATURE: -40°C
DATE: 6/30/2004
OPTION NO: LA3

11	AM / PM: input -65 dBm to -55 dBm input -55 dBm to 0 dBm input 0 dBm to +5 dBm	1.2° dB MAX 0.75° dB MAX 2.0° dB MAX	0.19° dB 0.10° dB 1.45° dB	
12	RISE TIME	25 nS (Maximum)	12 nS	
13	FALL TIME	35 nS (Maximum)	12 nS	
14	SETTLING TIME 40 nS Maximum (10% Pulse input to within 0.5 dB of final video output level)	40 nS (Maximum)	35 nS	
15	RECOVERY TIME (Maximum Pulse In) (90% Pulse input to within 0.5 dB of final video output level)	50 nS (Maximum)	40 nS	
16	SLOPE 30 mV/dB $\pm 5\%$ at 1 GHz 30 mV/dB $\pm 7\%$ at 750 MHz and 1.25 GHz	30 mV/dB $\pm 5\%$ at 1 GHz 30 mV/dB $\pm 7\%$ at 750 MHz and 1.25 GHz	30.6 mV/dB 32.6 mV/dB 29.9 mV/dB	
17	LOG SLOPE VARIATION WITH FREQUENCY	± 0.5 mV/dB (at 1 GHz ± 50 MHz)	0.39 mV/dB	
18	PROPAGATION DELAY	10 nS (Maximum) 7 nS (Typical)	9.0 nS	
19	VIDEO LOAD	100 OHMS (Minimum)	100 OHMS	
20	D.C. POWER @ +5 V (no load)	250 mA (maximum)	230 mA	
21	D.C. POWER @ -5.2 V (no load)	150 mA (maximum)	130 mA	

QA/QC APPROVAL: K Vooglen

DATED: 6/30/04

RF input power (dbm)

-67	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	3	5
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FREQUENCY	283	377	496	639	857	1033	1189	1363	1483	1705	1837	2016	2182	2324	2462	2560	2603
SLOPE	14	10	34	6	0	13	5	17	-26	33	2	18	21	0	-25	-25	-47
INTERCEPT																	

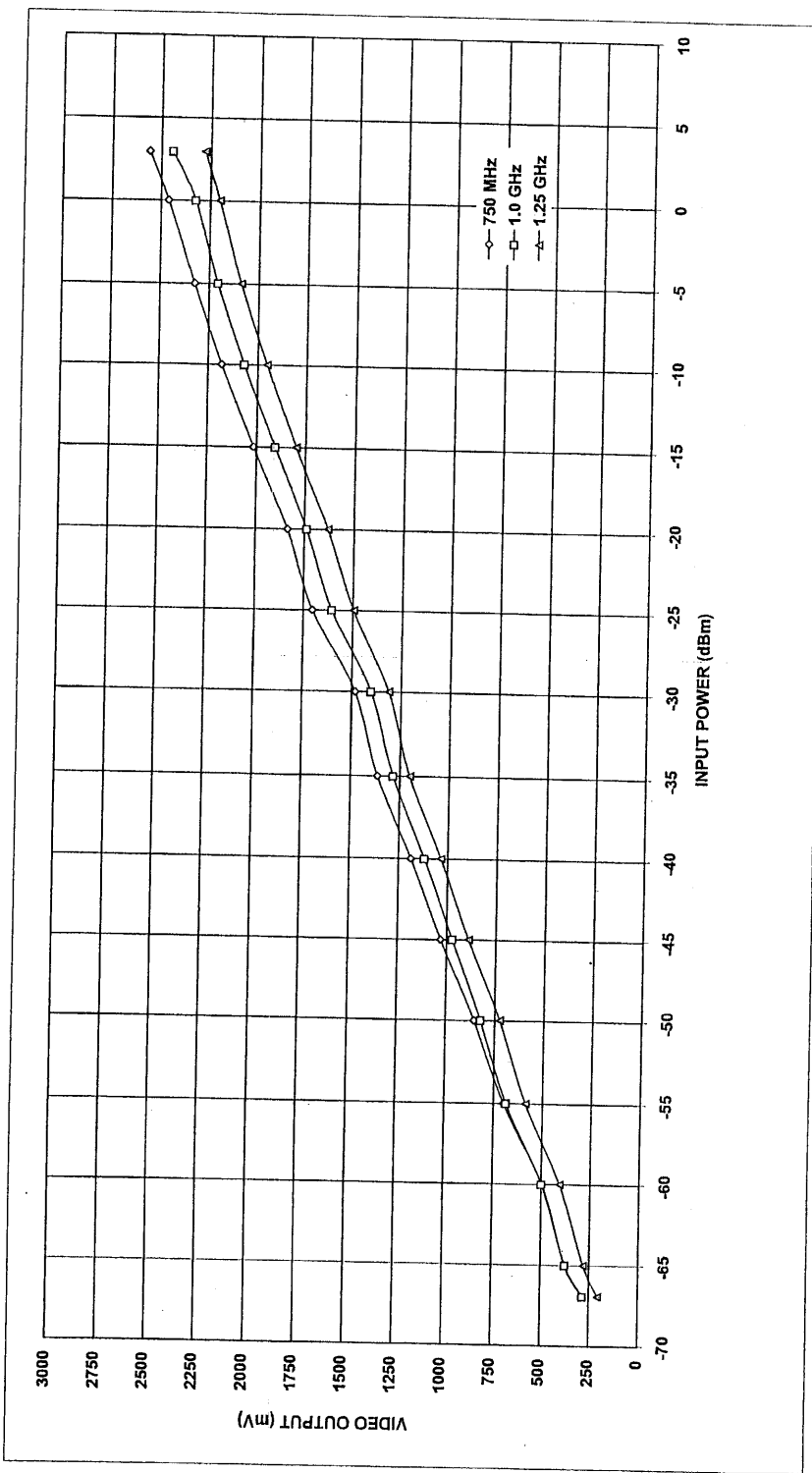
FREQUENCY	285	376	500	636	823	972	1120	1284	1402	1607	1739	1906	2068	2207	2324	2442	2470
SLOPE	15	15	-14	18	2	2	-7	4	-31	20	-1	13	22	8	-29	-3	-36
INTERCEPT																	

FREQUENCY	208	283	407	587	725	890	1036	1200	1312	1497	1631	1796	1952	2089	2202	2278	2318
SLOPE	-14	2	-24	6	-5	10	6	21	-17	18	3	20	25	12	-25	-38	-58
INTERCEPT																	

LIMITED IF OUT	750 MHz	14.23	14.52	14.66	14.82	14.94	14.94	14.97	14.98	14.98	14.98	14.97	14.98	14.98	14.93	14.94	14.91
Measured Values (dBm)																	

LIMITED IF OUT	1.0 GHz	14.10	14.37	14.53	14.61	14.56	14.61	14.62	14.60	14.60	14.58	14.59	14.57	14.55	14.55	14.52	14.64
Measured Values (dBm)																	

LIMITED IF OUT	1.25 GHz	13.30	13.81	14.19	14.56	14.62	14.57	14.71	14.71	14.70	14.71	14.71	14.69	14.68	14.66	14.62	14.57
Measured Values (dBm)																	



JOB NO: P401004

SUMMARY TEST DATA
ON
SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA)

CUSTOMER: ITESTED BY: Loc ChauJOB NO: ITEMPERATURE: +75°CMODEL NO: SDLVA-07103-70DATE: 6/30/2004SERIAL NO: PM 404289OPTION NO: LA3

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	750-1250 MHz	750-1250 MHz	
2	DYNAMIC RANGE	-70 dB (Minimum)	-70 dB	
3	LOG LINEARITY (@1 GHz) ± 1.5 dB max (input -65 dBm to -60 dBm) ± 1.2 dB max (input -60 dBm to 0 dBm) ± 2.5 dB max (input 0 dBm to +5 dBm)	± 1.5 dB (Maximum) ± 1.2 dB (Maximum) ± 2.5 dB (Maximum)	± 0.41 dB ± 0.68 dB ± 2.13 dB	
4	MINIMUM LOGGING RANGE	-70 dBm Input	-70 dBm	
5	MAXIMUM LOGGING RANGE	+3 dBm Input (+5 dBm typical)	+5 dBm	
6	VSWR INPUT AND OUTPUT	2.0:1 (Maximum) 1.5:1 (Typical)	Input: 1.69:1 Output: 1.45:1	
7	MINIMUM TANGENTIAL SENSITIVITY	-76 dBm (Maximum)	-76 dBm	
8	LIMITED IF OUTPUT 13.0 dBm to 16.0 dBm (Input -70 dBm to +3 dBm)	13.0 dBm to 16.0 dBm	14.08 dBm TO 14.95 dBm	
9	INSERTION PHASE VARIATION: INPUT: -60 dBm to 0 dBm INPUT: -65 dBm to -60 dBm (For any 50 MHz Segment)	± 2.5° (Maximum) ± 5.0° (Maximum)	< 2.5° < 5.0°	
10	OUTPUT VOLTAGE @ 1 GHz (-67 dBm Input Power) (+3 dBm Input Power) (For nominal power supply voltages of +5V and -5.2V) (For DC voltage level tolerance per paragraph 3.1.12 the output video levels can be ±30 mV of the value measured for the nominal DC voltage)	300 mV DC ± 5% 2400 mV DC ± 2.5%	315 mV DC 2330 mV DC	

Note: Further Test Data Appears on Reverse

SUMMARY TEST DATA
ON
SUCCESSIVE DETECTION LOG VIDEO AMPLIFIER (SDLVA)

CUSTOMER: P
 JOB NO: P
 MODEL NO: SDLVA-07103-70
 SERIAL NO: PM404289

TESTED BY: Loc Chau
 TEMPERATURE: +75°C
 DATE: 6/30/2004
 OPTION NO: LA3

11	AM / PM: input -65 dBm to -55 dBm input -55 dBm to 0 dBm input 0 dBm to +5 dBm	1.2° dB MAX 0.75° dB MAX 2.0° dB MAX	0.13° dB 0.08° dB 1.44° dB	
12	RISE TIME	25 nS (Maximum)	12 nS	
13	FALL TIME	35 nS (Maximum)	12 nS	
14	SETTLING TIME 40 nS Maximum (10% Pulse input to within 0.5 dB of final video output level)	40 nS (Maximum)	35 nS	
15	RECOVERY TIME (Maximum Pulse In) (90% Pulse input to within 0.5 dB of final video output level)	50 nS (Maximum)	40 nS	
16	SLOPE 30 mV/dB $\pm 5\%$ at 1 GHz 30 mV/dB $\pm 7\%$ at 750 MHz and 1.25 GHz	30 mV/dB $\pm 5\%$ at 1 GHz 30 mV/dB $\pm 7\%$ at 750 MHz and 1.25 GHz	29.0 mV/dB 30.8 mV/dB 27.3 mV/dB	
17	LOG SLOPE VARIATION WITH FREQUENCY	± 0.5 mV/dB (at 1 GHz ± 50 MHz)	0.40 mV/dB	
18	PROPAGATION DELAY	10 nS (Maximum) 7 nS (Typical)	9.0 nS	
19	VIDEO LOAD	100 OHMS (Minimum)	100 OHMS	
20	D.C. POWER @ +5 V (no load)	250 mA (maximum)	230 mA	
21	D.C. POWER @ -5.2 V (no load)	150 mA (maximum)	130 mA	

QA/QC APPROVAL: K Vogler

DATED: 6/30/04



	-67	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	3	5
Rf Input power (dbm)																	

FREQUENCY	50 MHz	53	715	553	715	851	1032	1152	1339	1459	1645	1785	1963	2112	2254	2405	2476	2499	
SLOPE	30.0	13	4	4	14	13	24	12	22	10	-2	18	15	3	0	-21	-80		
INTERCEPT	2205																		

FREQUENCY	1 GHz	315	386	518	666	796	965	1082	1252	1374	1542	1682	1845	1989	2125	2258	2330	2346	
SLOPE	23.0	12	-1	1	-14	10	-18	6	-20	6	-1	-18	17	8	4	-20	-62		
INTERCEPT	2262																		

FREQUENCY	2.5 GHz	289	335	461	603	723	885	993	1148	1263	1418	1550	1702	1836	1977	2098	2159	2173	
SLOPE	27.0	9	-2	4	-12	14	-15	4	-17	2	-3	13	11	15	0	-21	-61		
INTERCEPT	2295																		

LIMITED IF OUT
750 MHz 14.56 14.74 14.88 14.94 14.95 14.95 14.95 14.95 14.95 14.95 14.95 14.95 14.95 14.95 14.95 14.94 14.93 14.91

LIMITED IF OUT
1.0 GHz 14.35 14.56 14.72 14.77 14.78 14.79 14.79 14.79 14.79 14.79 14.79 14.78 14.78 14.78 14.79 14.77 14.76

LIMITED IF OUT
1.25 GHz 14.08 14.31 14.51 14.59 14.61 14.60 14.61 14.62 14.62 14.62 14.64 14.64 14.66 14.66 14.63 14.58 14.59 14.60

