




PLANAR MONOLITHICS INDUSTRIES  
 7311-G GROVE ROAD, FREDERICK, MD 21704  
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 ISO 9001:2000 CERTIFIED

**SUMMARY TEST DATA  
 ON  
 SUCCESSIVE DETECTION LOG VIDEO AMPLIFIED--SDLVA**

CUSTOMER:	_____	NORTHROP PART NO:	_____
MODEL NO:	<u>SDLVAC-0120-70M</u>	JOB NO:	<u>P702006</u>
OPTION NO:	<u>0308</u>	TESTED BY:	<u>R.AFABLE</u>
SERIAL NO:	<u>PM703797</u>	TEMPERATURE:	<u>25 °C</u>
		DATE:	_____

NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	300 TO 800 MHz	300 TO 800 MHz	✓
2	INPUT VSWR	1.8:1 (MAX)	1.19:1	✓
3	LOGGING RANGE	-60 dB TO +5 dB (MIN) PLOTS ATTACHED	-60 dB TO +5 dB SEE PLOTS	✓
4	TSS	-65 dBm (MIN)	-65 dBm	✓
5	LOG LINEARITY: @ -60 TO 0 dBm @-65 TO +5dBm	±1.2 dB (MAX) ±1.5 dB(MAX)	±0.70 dB ±1.07 dB	✓
6	RISE TIME (10% TO 90% POINTS)	25 nSec (MAX)	11 nS	✓
7	FALL TIME (90% TO 10% POINTS)	30 nSec (MAX)	13 nS	✓
8	SETTLING TIME	40 nSEC (MAX)	36 nS	✓
9	LIMITED IF OUTPUT	-16 dBm (TYPICAL)	-15.89 dBm to -16.58 dBm	✓
10	DC POWER @ +5 VDC (NO LOAD)	30 mA (MAX)	26 mA	✓
11	VIDEO LOAD	100 OHMS MINIMUM	100 OHMS	✓
12	DC POWER @ -5 VDC (NO LOAD)	170 mA (MAX)	114 mA	✓

QA / QC APPROVAL: \_\_\_\_\_  DATED: 4/6/07

LOG TRANSFER WITH FREQUENCY @ 25 °C  
 MODEL: SDLVAC-0120-70M OPTION : 0308 SERIAL No. :PM703797  
 TESTED BY: R. AFABLE  
 DATE: 06/Apr/2007

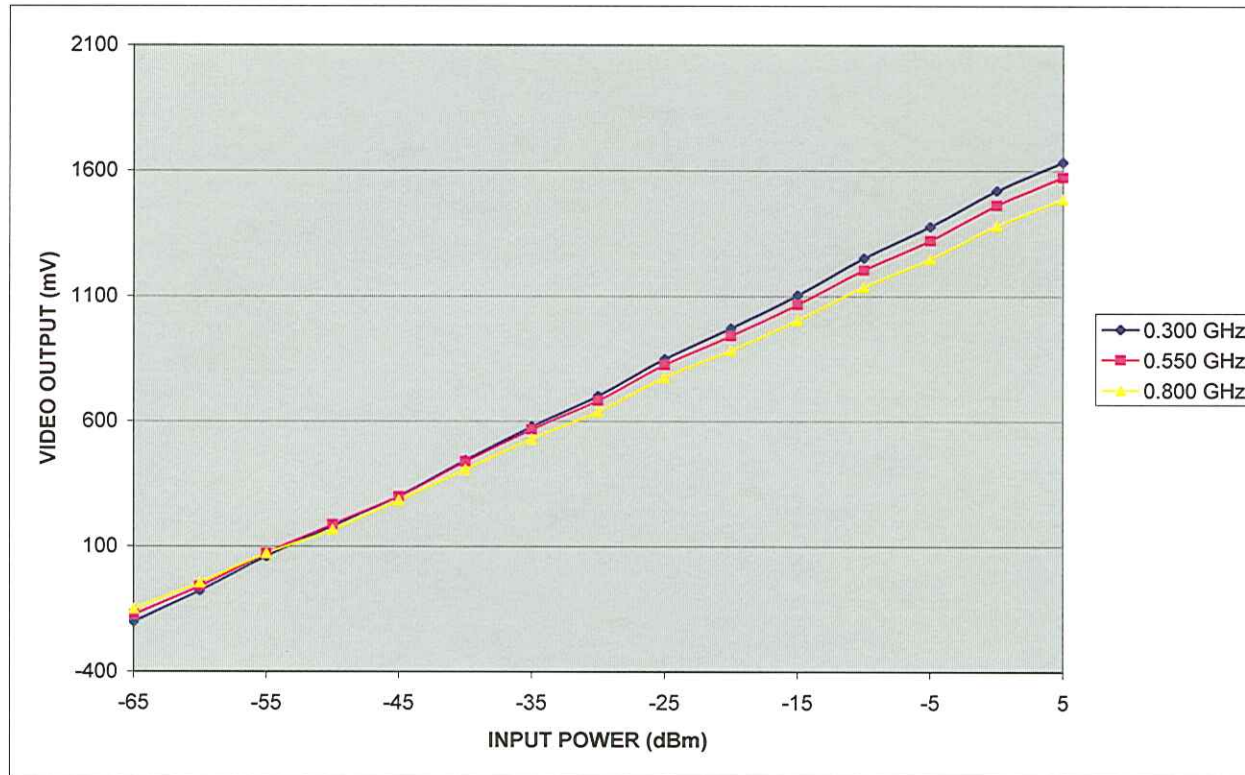


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Frequency

0.30 INTERCEPT (mV) 1505  
 SLOPE (mV/dB) 26.44  
 LIMITED IF OUTPUT (dBm)  
 0.55 INTERCEPT (mV) 1449  
 SLOPE (mV/dB) 25.18  
 LIMITED IF OUTPUT (dBm)  
 0.80 INTERCEPT (mV) 1364  
 SLOPE (mV/dB) 23.65  
 LIMITED IF OUTPUT (dBm)  
 LINEARITY(-60 TO 0dBm) ± 0.70  
 LINEARITY(-65 TO +5dBm) ± 1.07  
 FREQUENCY FLATNESS ± 2.94

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
0.30 Measured Value (mV)	-201	-77	60	180	300	443	578	699	847	970	1102	1251	1376	1520	1634	
0.30 Error (mV)	12	4	9	-3	-15	-5	-2	-13	3	-7	-7	10	3	15	-4	
0.30 Measured Value (mV)	-16.58	-16.28	-16.16	-16.11	-16.06	-16.04	-16.04	-16.03	-16.03	-16.03	-16.03	-16.03	-16.03	-16.03	-16.05	
0.55 Measured Value (mV)	-173	-60	71	187	298	438	566	682	824	940	1065	1204	1322	1463	1574	
0.55 Error (mV)	15	2	7	-3	-18	-4	-1	-11	5	-5	-6	7	-1	14	-1	
0.55 Measured Value (mV)	-16.45	-16.22	-16.08	-16.02	-16.03	-16.06	-16.05	-16.03	-16.02	-16.03	-16.03	-16.03	-16.03	-16.04	-16.08	
0.80 Measured Value (mV)	-148	-44	71	166	284	407	530	639	774	883	1003	1136	1248	1380	1487	
0.80 Error (mV)	25	11	8	-15	-16	-11	-6	-15	1	-8	-6	9	2	16	5	
0.80 Measured Value (mV)	-16.29	-16.09	-16.00	-15.93	-15.89	-15.92	-15.97	-15.97	-15.96	-15.96	-15.96	-15.95	-15.95	-15.96	-16.03	



LOG TRANSFER WITH FREQUENCY @ -54 °C  
 MODEL: SDLVAC-0120-70M OPTION : 0308 SERIAL No. :PM703797  
 TESTED BY: R. AFABLE  
 DATE: 06/Apr/2007

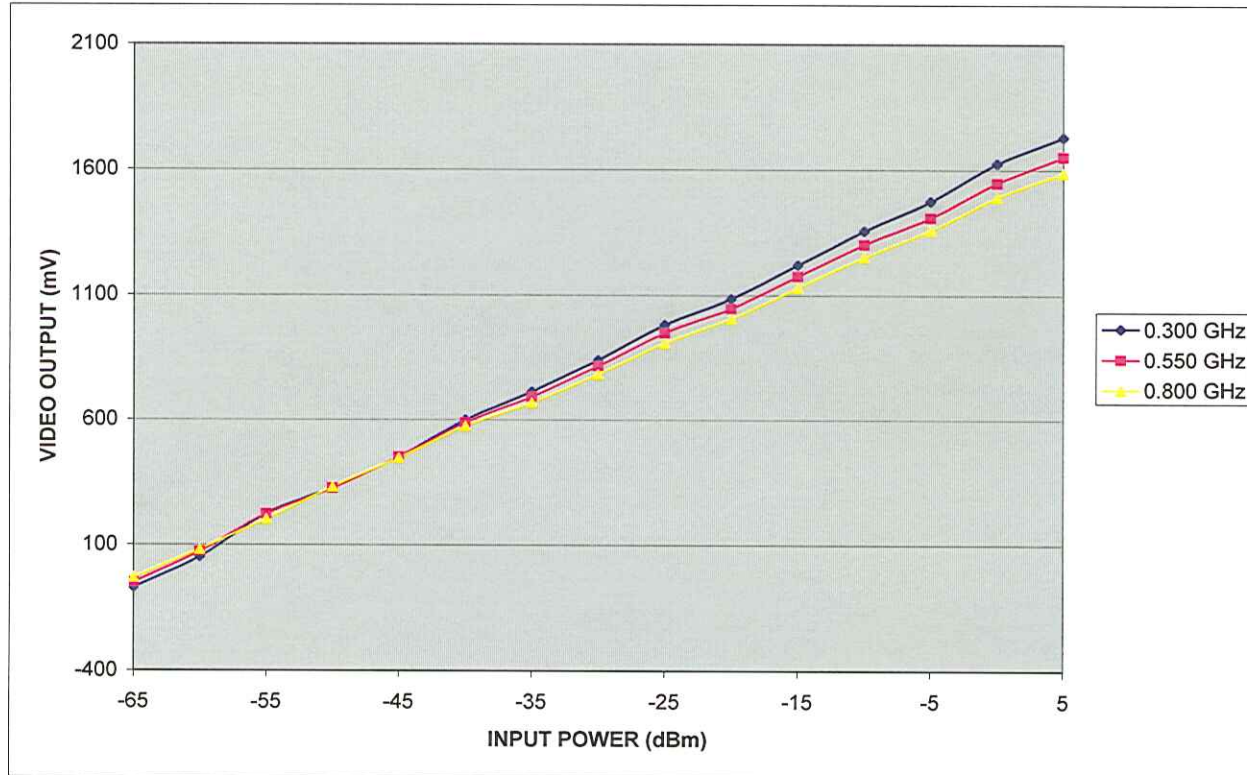


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Frequency

0.30 INTERCEPT (mV) 1611  
 SLOPE (mV/dB) 25.66  
 LIMITED IF OUTPUT (dBm)  
 0.55 INTERCEPT (mV) 1541  
 SLOPE (mV/dB) 24.23  
 LIMITED IF OUTPUT (dBm)  
 0.80 INTERCEPT (mV) 1480  
 SLOPE (mV/dB) 23.11  
 LIMITED IF OUTPUT (dBm)  
 LINEARITY(-60 TO 0dBm) ± 1.00  
 LINEARITY(-65 TO +5dBm) ± 1.00  
 FREQUENCY FLATNESS ± 2.84

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
0.30 Measured Value (mV)	-70	52	225	329	453	600	713	841	981	1086	1220	1356	1474	1625	1729	Measured Value (mV)
0.30 Error (mV)	-13	-19	26	1	-3	16	0	0	12	-12	-6	2	-8	14	-10	Error (mV)
0.30 Measured Value (mV)	-16.85	-16.64	-16.57	-16.57	-16.57	-16.57	-16.57	-16.58	-16.58	-16.59	-16.59	-16.59	-16.60	-16.60	-16.62	Measured Value (mV)
0.55 Measured Value (mV)	-50	74	224	328	453	590	694	817	950	1048	1176	1303	1409	1548	1652	Measured Value (mV)
0.55 Error (mV)	-16	-13	15	-2	2	18	1	3	14	-9	-2	4	-11	7	-11	Error (mV)
0.55 Measured Value (mV)	-16.88	-16.71	-16.57	-16.66	-16.68	-16.59	-16.61	-16.62	-16.64	-16.66	-16.67	-16.68	-16.68	-16.69	-16.73	Measured Value (mV)
0.80 Measured Value (mV)	-29	83	203	333	450	577	670	783	909	1006	1130	1252	1358	1491	1587	Measured Value (mV)
0.80 Error (mV)	-7	-11	-6	8	10	21	-1	-4	7	-12	-3	3	-7	11	-9	Error (mV)
0.80 Measured Value (mV)	-16.93	-16.78	-16.73	-16.86	-16.86	-16.85	-16.80	-16.73	-16.72	-16.72	-16.71	-16.71	-16.72	-16.75	-16.85	Measured Value (mV)





LOG TRANSFER WITH FREQUENCY @ +85 °C  
 MODEL: SDLVAC-0120-70M OPTION : 0306 SERIAL No. :PM703797  
 TESTED BY: R. AFABLE  
 DATE: 06/Apr/2007



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Frequency

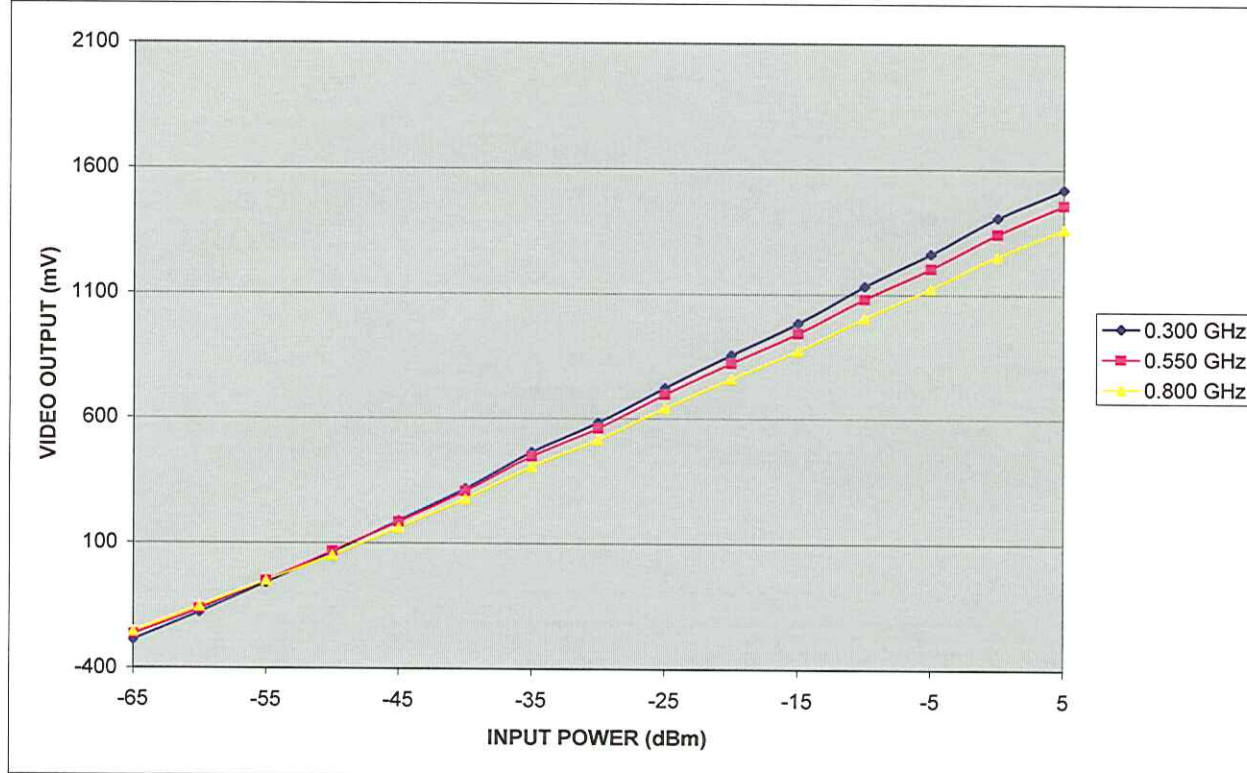
0.30 INTERCEPT (mV) 1386  
 SLOPE (mV/dB) 26.24  
 LIMITED IF OUTPUT (dBm)

0.55 INTERCEPT (mV) 1326  
 SLOPE (mV/dB) 24.96  
 LIMITED IF OUTPUT (dBm)

0.80 INTERCEPT (mV) 1234  
 SLOPE (mV/dB) 23.4  
 LIMITED IF OUTPUT (dBm)

LINEARITY(-60 TO 0dBm) ± 0.86  
 LINEARITY(-65 TO +5dBm) ± 1.41  
 FREQUENCY FLATNESS ± 3.18

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
0.30 Measured Value (mV)	-287	-176	-57	63	190	319	465	584	724	857	984	1132	1262	1407	1520	Measured Value (mV)
0.30 Error (mV)	32	12	0	-11	-16	-18	-3	-15	-6	-5	-9	8	7	21	2	Error (mV)
0.30 Measured Value (mV)	-17.14	-16.67	-16.48	-16.39	-16.32	-16.28	-16.27	-16.26	-16.25	-16.25	-16.25	-16.24	-16.24	-16.23	-16.25	Measured Value (mV)
0.55 Measured Value (mV)	-264	-163	-50	69	187	310	449	563	698	824	944	1082	1204	1342	1457	Measured Value (mV)
0.55 Error (mV)	33	9	-3	-9	-15	-17	-3	-14	-4	-2	-7	6	3	16	7	Error (mV)
0.55 Measured Value (mV)	-16.85	-16.50	-16.31	-16.20	-16.13	-16.12	-16.13	-16.14	-16.13	-16.12	-16.12	-16.11	-16.11	-16.12	-16.14	Measured Value (mV)
0.80 Measured Value (mV)	-254	-152	-50	52	162	278	407	515	643	761	875	1006	1123	1253	1361	Measured Value (mV)
0.80 Error (mV)	33	18	3	-12	-19	-20	-8	-17	-6	-5	-8	6	6	19	10	Error (mV)
0.80 Measured Value (mV)	-16.56	-16.23	-16.09	-16.01	-15.96	-15.94	-15.95	-15.97	-15.98	-15.97	-15.97	-15.97	-15.97	-15.98	-16.04	Measured Value (mV)





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**SUMMARY TEST DATA  
 ON  
 SUCCESSIVE DETECTION LOG VIDEO AMPLIFIED--SDLVA**

CUSTOMER:	_____	NORTHROP PART NO:	_____
MODEL NO:	SDLVAC-0120-70M	JOB NO:	P702006
OPTION NO:	0308	TESTED BY:	R.AFABLE
SERIAL NO:	PM1703798	TEMPERATURE:	25 °C
		DATE:	_____

NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	FREQUENCY RANGE	300 TO 800 MHz	300 TO 800 MHz	✓
2	INPUT VSWR	1.8:1 (MAX)	1.21:1	✓
3	LOGGING RANGE	-60 dB TO +5 dB (MIN) PLOTS ATTACHED	-60 dB TO +5 dB SEE PLOTS	✓
4	TSS	-65 dBm (MIN)	-65 dBm	✓
5	LOG LINEARITY: @ -60 TO 0 dBm @-65 TO +5dBm	±1.2 dB (MAX) ±1.5 dB(MAX)	±0.88 dB ±1.16 dB	✓
6	RISE TIME (10% TO 90% POINTS)	25 nSec (MAX)	11 nS	✓
7	FALL TIME (90% TO 10% POINTS)	30 nSec (MAX)	13 nS	✓
8	SETTLING TIME	40 nSEC (MAX)	36 nS	✓
9	LIMITED IF OUTPUT	-16 dBm (TYPICAL)	-15.98 dBm to -16.66 dBm	✓
10	DC POWER @ +5 VDC (NO LOAD)	30 mA (MAX)	25 mA	✓
11	VIDEO LOAD	100 OHMS MINIMUM	100 OHMS	✓
12	DC POWER @ -5 VDC (NO LOAD)	170 mA (MAX)	114 mA	✓

QA / QC APPROVAL: \_\_\_\_\_ *[Signature]* DATED: 4/6/07

LOG TRANSFER WITH FREQUENCY @ 25 °C  
 MODEL: SDLVAC-0120-70M OPTION : 0308 SERIAL No. :PM703798  
 TESTED BY: R. AFABLE  
 DATE: 06/Apr/2007

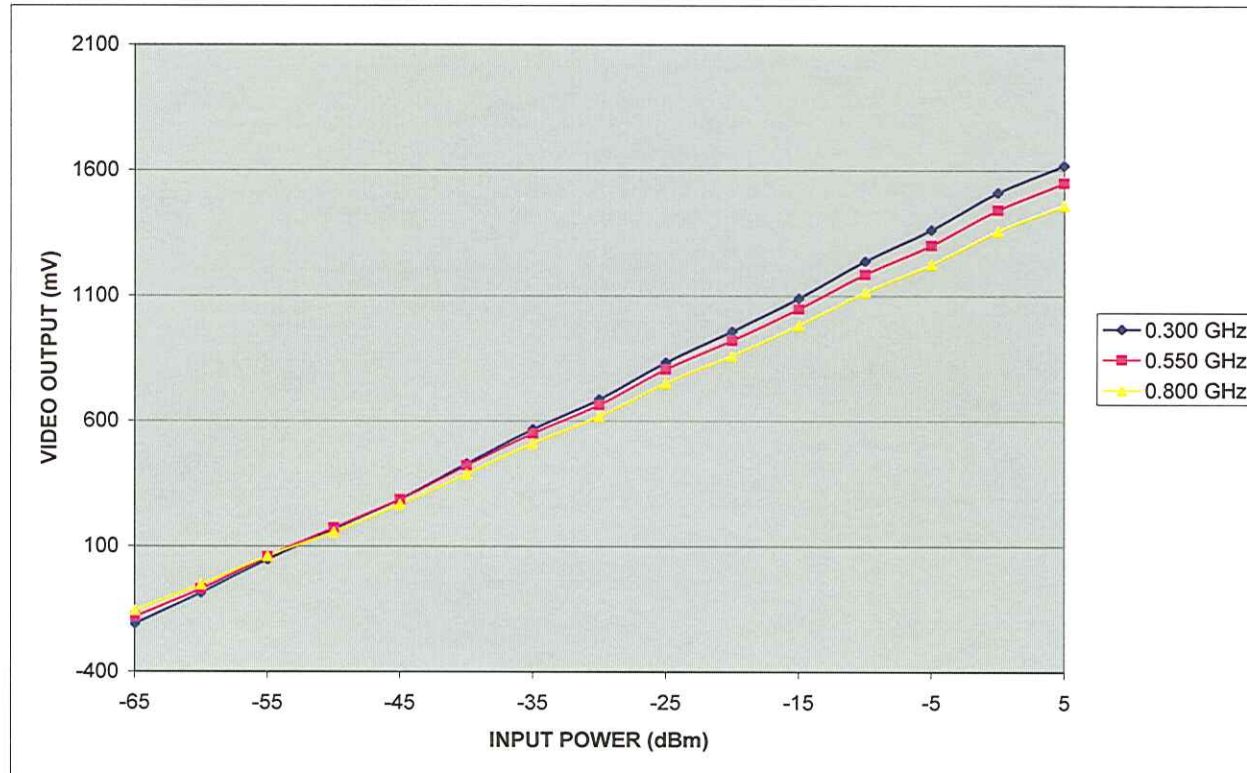


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Frequency

0.30 INTERCEPT (mV) 1493  
 SLOPE (mV/dB) 26.43  
 LIMITED IF OUTPUT (dBm)  
 0.55 INTERCEPT (mV) 1428  
 SLOPE (mV/dB) 25.03  
 LIMITED IF OUTPUT (dBm)  
 0.80 INTERCEPT (mV) 1338  
 SLOPE (mV/dB) 23.41  
 LIMITED IF OUTPUT (dBm)  
 LINEARITY(-60 TO 0dBm) ± 0.88  
 LINEARITY(-65 TO +5dBm) ± 1.16  
 FREQUENCY FLATNESS ± 3.18

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)	
0.30 Measured Value (mV)	-210	-87	47	168	287	429	566	685	833	957	1089	1238	1364	1512	1620	Measured Value (mV)	
0.30 Error (mV)	15	6	8	-3	-16	-7	-2	-15	1	-7	-7	10	3	19	-5	Error (mV)	
0.30 Measured Value (mV)	-16.66	-16.33	-16.22	-16.17	-16.13	-16.10	-16.09	-16.09	-16.08	-16.07	-16.07	-16.07	-16.07	-16.08	-16.10	Measured Value (mV)	
0.55 Measured Value (mV)	-182	-71	57	173	285	421	550	664	806	922	1047	1186	1303	1443	1552	Measured Value (mV)	
0.55 Error (mV)	17	3	6	-3	-17	-6	-2	-13	4	-5	-6	8	0	15	-1	Error (mV)	
0.55 Measured Value (mV)	-16.52	-16.27	-16.14	-16.06	-16.05	-16.08	-16.08	-16.07	-16.05	-16.05	-16.05	-16.05	-16.05	-16.06	-16.08	-16.12	Measured Value (mV)
0.80 Measured Value (mV)	-156	-53	60	156	267	388	510	618	752	861	981	1113	1225	1359	1461	Measured Value (mV)	
0.80 Error (mV)	27	13	9	-12	-18	-14	-9	-18	-1	-9	-6	9	4	21	6	Error (mV)	
0.80 Measured Value (mV)	-16.37	-16.17	-16.09	-16.03	-15.98	-15.99	-16.03	-16.04	-16.03	-16.03	-16.03	-16.03	-16.03	-16.04	-16.05	-16.11	Measured Value (mV)





LOG TRANSFER WITH FREQUENCY @ +85 °C  
 MODEL: SDLVAC-0120-70M OPTION : 0308 SERIAL No. :PM703798  
 TESTED BY: R. AFABLE  
 DATE: 06/Apr/2007



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Frequency

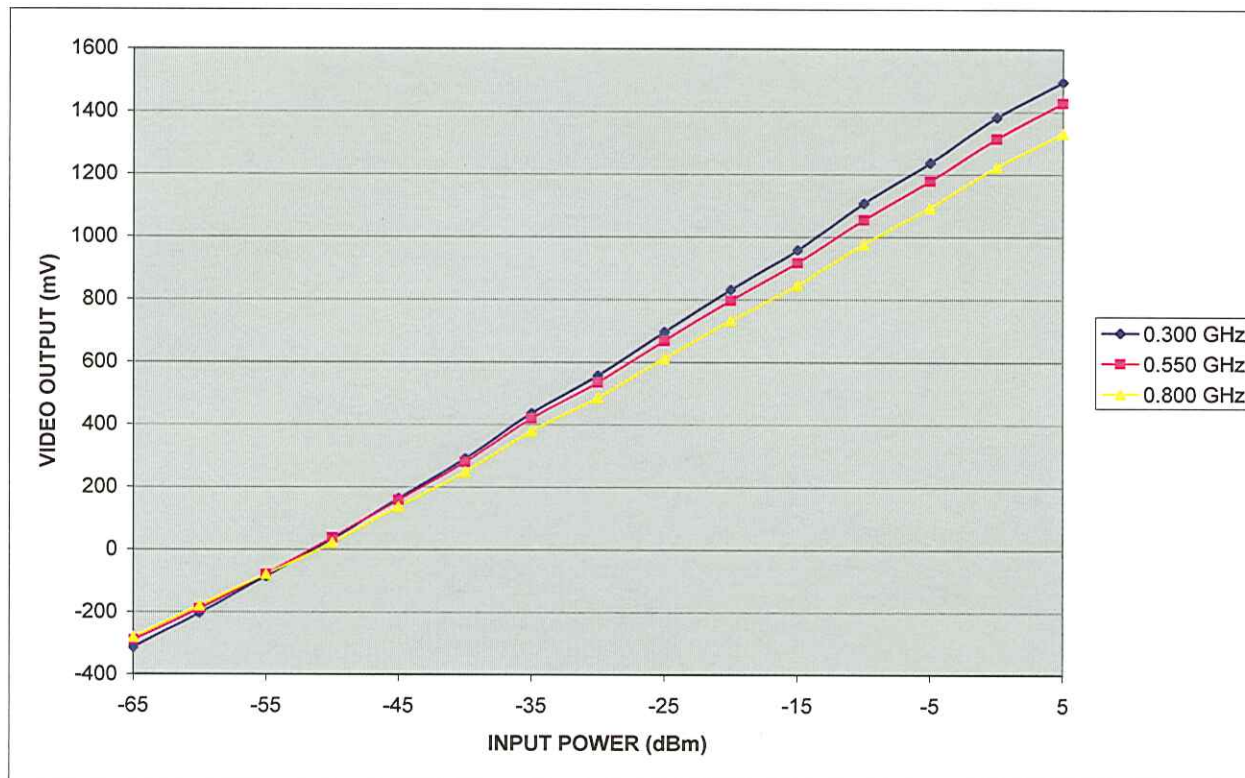
0.30 INTERCEPT (mV) 1360  
 SLOPE (mV/dB) 26.27  
 LIMITED IF OUTPUT (dBm)

0.55 INTERCEPT (mV) 1297  
 SLOPE (mV/dB) 24.95  
 LIMITED IF OUTPUT (dBm)

0.80 INTERCEPT (mV) 1204  
 SLOPE (mV/dB) 23.35  
 LIMITED IF OUTPUT (dBm)

LINEARITY(-60 TO 0dBm) ± 0.89  
 LINEARITY(-65 TO +5dBm) ± 1.45  
 FREQUENCY FLATNESS ± 3.26

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
0.30 Measured Value (mV)	-313	-203	-85	33	164	291	436	556	695	830	957	1106	1236	1382	1494	
0.30 Error (mV)	34	13	0	-14	-14	-18	-5	-16	-8	-5	-9	9	7	22	3	
0.30 Measured Value (mV)	-16.61	-16.11	-15.90	-15.81	-15.74	-15.70	-15.67	-15.66	-15.65	-15.64	-15.63	-15.64	-15.64	-15.64	-15.66	
0.55 Measured Value (mV)	-289	-189	-79	38	159	281	420	534	668	796	916	1054	1177	1314	1428	
0.55 Error (mV)	36	11	-4	-12	-15	-18	-4	-15	-5	-2	-7	6	5	17	6	
0.55 Measured Value (mV)	-16.36	-15.99	-15.79	-15.67	-15.58	-15.55	-15.56	-15.57	-15.57	-15.57	-15.57	-15.57	-15.57	-15.58	-15.61	
0.80 Measured Value (mV)	-280	-179	-79	23	137	249	379	486	612	732	845	977	1093	1223	1331	
0.80 Error (mV)	34	18	1	-13	-16	-21	-8	-17	-8	-5	-8	7	6	19	11	
0.80 Measured Value (mV)	-16.14	-15.78	-15.63	-15.55	-15.50	-15.48	-15.48	-15.50	-15.50	-15.51	-15.50	-15.51	-15.51	-15.53	-15.59	



LOG TRANSFER WITH FREQUENCY @ -54 °C  
 MODEL: SDLVAC-0120-70M OPTION : 0308 SERIAL No. :PM703798  
 TESTED BY: R. AFABLE  
 DATE: 06/Apr/2007



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Frequency

0.30 INTERCEPT (mV) 1749  
 SLOPE (mV/dB) 27.58  
 LIMITED IF OUTPUT (dBm)  
 0.55 INTERCEPT (mV) 1683  
 SLOPE (mV/dB) 26.25  
 LIMITED IF OUTPUT (dBm)  
 0.80 INTERCEPT (mV) 1600  
 SLOPE (mV/dB) 24.77  
 LIMITED IF OUTPUT (dBm)  
 LINEARITY(-60 TO 0dBm) ± 1.04  
 LINEARITY(-65 TO +5dBm) ± 1.04  
 FREQUENCY FLATNESS ± 3.12

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
0.30 Measured Value (mV)	-66	74	261	373	508	665	783	922	1073	1187	1333	1481	1605	1761	1867	
0.30 Error (mV)	-22	-20	29	3	0	19	-1	0	13	-11	-3	8	-6	12	-20	
0.30 Measured Value (mV)	-16.74	-16.52	-16.47	-16.48	-16.48	-16.48	-16.46	-16.45	-16.43	-16.43	-16.43	-16.44	-16.45	-16.46	-16.49	
0.55 Measured Value (mV)	-41	93	255	370	505	649	763	897	1042	1149	1289	1427	1541	1689	1799	
0.55 Error (mV)	-18	-15	16	0	4	16	-1	2	16	-9	0	7	-10	6	-15	
0.55 Measured Value (mV)	-16.69	-16.55	-16.40	-16.49	-16.52	-16.42	-16.43	-16.42	-16.43	-16.44	-16.45	-16.46	-16.47	-16.48	-16.51	
0.80 Measured Value (mV)	-19	110	237	356	496	632	732	855	989	1093	1227	1359	1471	1612	1711	
0.80 Error (mV)	-10	-4	-1	-6	10	22	-2	-2	8	-12	-2	6	-6	12	-13	
0.80 Measured Value (mV)	-16.68	-16.54	-16.46	-16.61	-16.61	-16.59	-16.55	-16.47	-16.44	-16.44	-16.43	-16.43	-16.44	-16.47	-16.57	

