



**TYPICAL CHARACTERISTICS
ON
SDLVA-0R61R1-65-CD-SFF-1**



September 7th, 2013
Tested by: Edd Benson
Designed by: Paul Kuhn



**TYPICAL CHARACTERISTICS
ON
SDLVA-0R61R1-65-CD-SFF-1**

Summary Test Data @ +25°C

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS
1	Frequency Range:	600MHz to 1.1GHz	See Plot #1
2	RF Output: (Limiting Level)	0 to +5dBm W/J1 Input @ -45Bm	<u>2.41</u> dBm See Plot #1
3	RF Limit Level Flatness	± 1.50dB Max W/J1 Input @ -45dBm	<u>± .1</u> dB See Plot #1
4	TSS:	-68dBm Max	<u>-74.5</u> dBm See Plot #2
5	VSWR:	2.0:1 (J1 VSWR)	(J1) <u>1.216</u> :1 See Plot #3
6	Power Input:	+13dBm CW Max (J1)	Pass
7	Log Range:	-65 to 0 dBm	-70 to +3dBm
8	Output Offset:	100mv(J3) (Typ @ +25°C)	80 mV
9	Log Slope: (100Ω Load)	30mV/dB ±1.5mv/dB (J3) (@+25°C)	<u>29</u> mV/dB See Plot #4A
10	Log Linearity:	±1.2dB (J3) (@+25°C)	See Plots #4A
11	Log Linearity:	±2.0dB (J3) (-20°C & +70°C)	See Plots #4B & 4C
12	Pulse Range:	30ns to CW	Pass
13	Rise Time:	30ns (Max)	<u>12.45</u> ns
14	Fall Time:	40ns (Max)	<u>37.4</u> ns
15	Recovery Time:	80ns (Max)	<u>72.2</u> ns
16	DC Supply:	+12VDC @ 300 mA -12VDC @ 200 mA	<u>180</u> mA <u>110</u> mA



TYPICAL CHARACTERISTICS ON SDLVA-0R61R1-65-CD-SFF-1

Logging Accuracy, Linearity, Slope and Flatness @ +25°C

LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-0R61R1-65-CD-SFF-1
 TESTED BY: EBenson
 TEST DATE: 09/07/2013
 SERIAL NO: PL13930
 TEST TEMP: +25C

Saturday, September 07, 2013
 2:35 PM

Plot #5A



PLANAR MONOLITHICS INDUSTRIES
 7311-F GROVE ROAD, FREDERICK, MD 21704
 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 URL: WWW.PMI-RF.COM

Frequency

0.6 GHz	INTERCEPT (mV)	2146
	SLOPE (mV/dB)	29.18

0.9 GHz	INTERCEPT (mV)	2154
	SLOPE (mV/dB)	28.87

1.1 GHz	INTERCEPT (mV)	2136
	SLOPE (mV/dB)	28.47

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
241	386	548	690	830	981	1121	1274	1419	1573	1715	1852	1999	2130	
-8	-9	8	4	-2	3	-3	4	3	11	7	-2	-1	-16	
-0.26	-0.29	0.26	0.12	-0.08	0.10	-0.11	0.14	0.10	0.38	0.25	-0.06	-0.02	-0.53	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
281	416	576	707	854	991	1139	1293	1436	1584	1727	1861	2014	2147	
3	-6	9	-4	-1	-9	-5	5	3	7	6	-5	4	-7	
0.11	-0.22	0.33	-0.14	-0.04	-0.30	-0.17	0.16	0.12	0.24	0.19	-0.16	0.14	-0.26	

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
289	420	580	710	854	984	1137	1288	1429	1573	1715	1842	1998	2130	
4	-8	10	-2	-1	-13	-2	6	5	7	6	-9	4	-6	
0.13	-0.27	0.35	-0.09	-0.03	-0.46	-0.09	0.22	0.17	0.23	0.22	-0.32	0.16	-0.21	

Flatness +/-dB

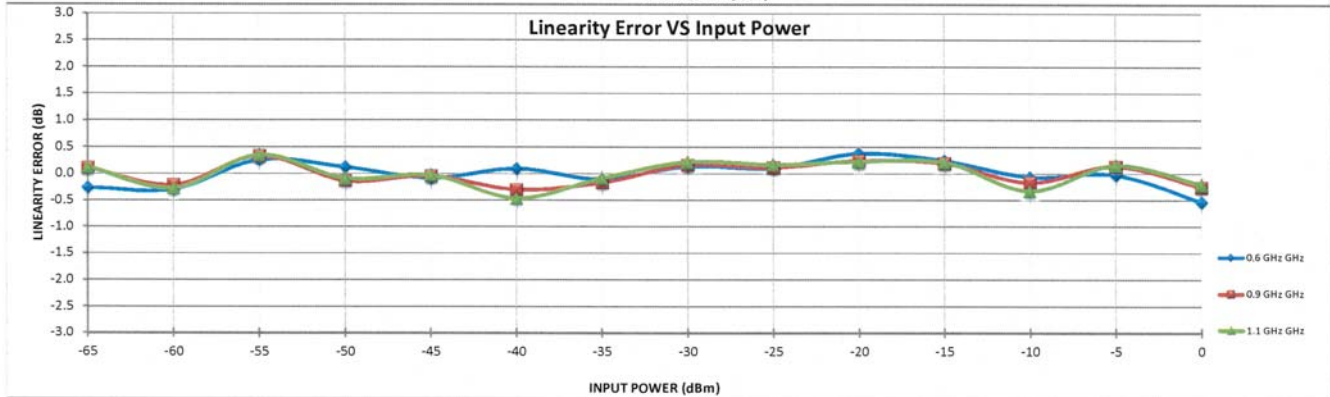
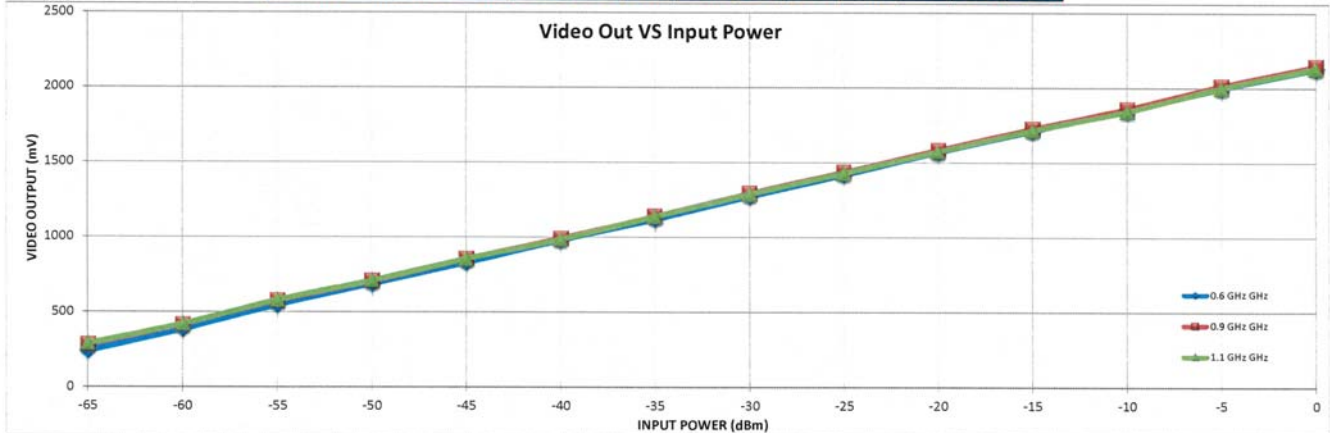
0.8	0.6	0.6	0.3	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3
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RF Input Power (dBm)

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

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

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





TYPICAL CHARACTERISTICS ON SDLVA-0R61R1-65-CD-SFF-1

Logging Accuracy, Linearity, Slope and Flatness @ -20°C

LOG TRANSFER WITH FREQUENCY
 MODEL: SDLVA-0R61R1-65-CD-SFF-1
 TESTED BY: EBenson
 TEST DATE: 09/07/2013
 SERIAL NO: PL13930
 TEST TEMP: -20C

Saturday, September 07, 2013
 2:34 PM

Plot #5B



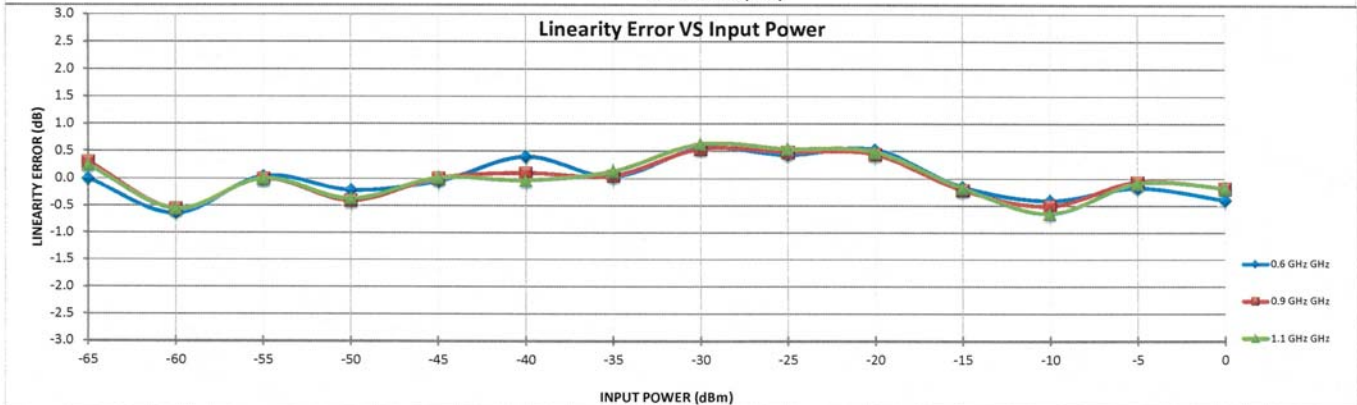
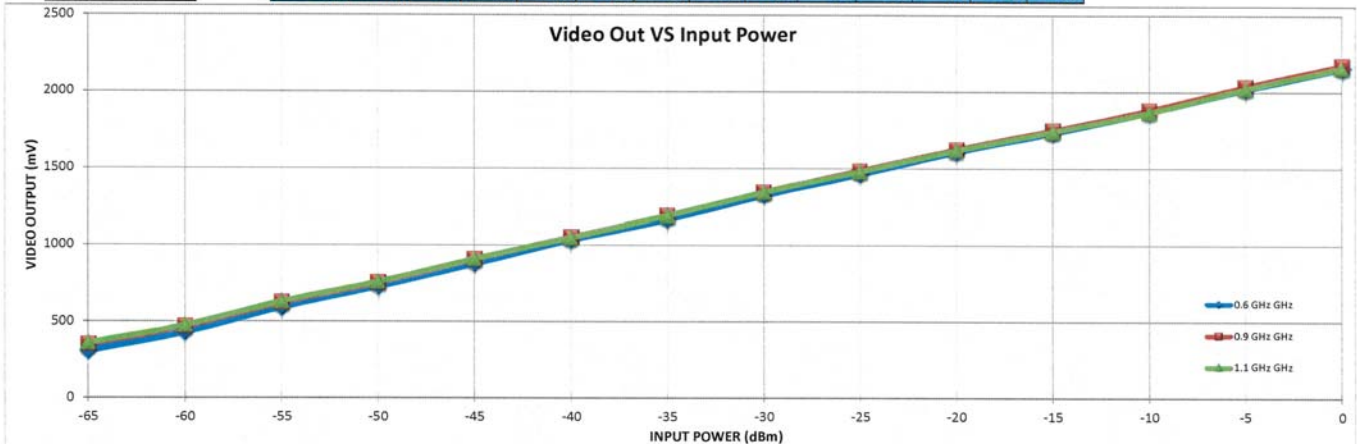
PLANAR MONOLITHICS INDUSTRIES
 7311-F GROVE ROAD, FREDERICK, MD 21704
 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 URL: WWW.PMI-RF.COM

Frequency

		-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0.6 GHz	INTERCEPT (mV)	306	431	594	730	878	1034	1167	1325	1465	1611	1735	1871	2021	2158
	SLOPE (mV/dB)	0.00	-0.64	0.05	-0.21	-0.04	0.40	0.04	0.55	0.43	0.53	-0.15	-0.40	-0.17	-0.39
0.9 GHz	INTERCEPT (mV)	349	466	623	753	906	1050	1190	1345	1485	1625	1748	1881	2035	2173
	SLOPE (mV/dB)	0.30	-0.56	-0.01	-0.41	0.01	0.10	0.05	0.53	0.49	0.44	-0.21	-0.51	-0.06	-0.18
1.1 GHz	INTERCEPT (mV)	358	475	630	759	909	1047	1191	1344	1481	1619	1740	1866	2021	2158
	SLOPE (mV/dB)	0.24	-0.56	0.00	-0.37	0.01	-0.04	0.13	0.62	0.54	0.49	-0.17	-0.65	-0.09	-0.17

RF Input Power (dBm)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

Flatness +/-dB													
0.9	0.8	0.6	0.5	0.5	0.3	0.4	0.4	0.4	0.2	0.2	0.3	0.2	0.3





TYPICAL CHARACTERISTICS ON SDLVA-0R61R1-65-CD-SFF-1

Logging Accuracy, Linearity, Slope and Flatness @ +70°C

LOG TRANSFER WITH FREQUENCY
MODEL: SDLVA-0R61R1-65-CD-SFF-1
TESTED BY: EBenson
TEST DATE: 09/07/2013
SERIAL NO: PL13930
TEST TEMP: +70C

Saturday, September 07, 2013
2:33 PM

Plot #5C



PLANAR MONOLITHICS INDUSTRIES
7311-F GROVE ROAD, FREDERICK, MD 21704
USA
TEL: 301-662-5019 FAX: 301-662-1731
URL: WWW.PMI-RF.COM

Frequency

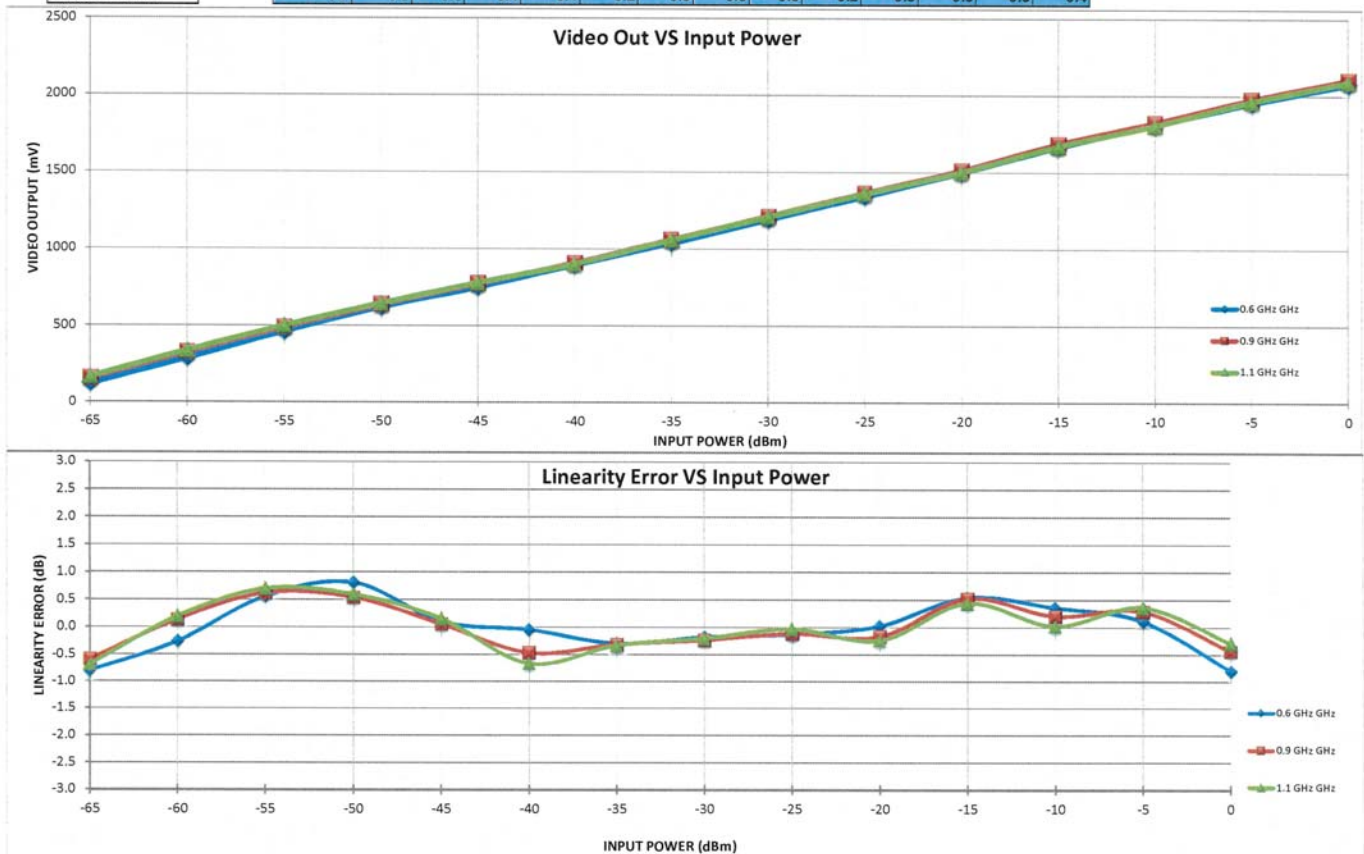
0.6 GHz INTERCEPT (mV) 2103
SLOPE (mV/dB) 30.09

0.9 GHz INTERCEPT (mV) 2117
SLOPE (mV/dB) 29.9

1.1 GHz INTERCEPT (mV) 2097
SLOPE (mV/dB) 29.42

RF Input Power (dBm)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0.6 GHz Measured Value (mV)	123	290	465	623	752	898	1041	1195	1347	1502	1668	1813	1956	2079
0.6 GHz Error (mV)	-24	-8	17	24	3	-1	-9	-5	-4	1	16	11	3	-24
0.6 GHz LINEARITY ERROR (dB)	-0.81	-0.26	0.56	0.81	0.10	-0.05	-0.30	-0.18	-0.13	0.02	0.54	0.36	0.11	-0.80
0.9 GHz Measured Value (mV)	156	327	491	638	773	907	1061	1213	1366	1514	1684	1824	1976	2104
0.9 GHz Error (mV)	-18	4	18	16	1	-14	-10	-7	-4	-5	16	6	9	-13
0.9 GHz LINEARITY ERROR (dB)	-0.59	0.13	0.62	0.53	0.05	-0.47	-0.32	-0.24	-0.12	-0.17	0.52	0.20	0.29	-0.43
1.1 GHz Measured Value (mV)	165	338	500	644	778	901	1058	1209	1361	1502	1669	1804	1961	2089
1.1 GHz Error (mV)	-20	6	21	17	4	-20	-10	-6	-1	-7	13	1	11	-8
1.1 GHz LINEARITY ERROR (dB)	-0.69	0.19	0.70	0.59	0.15	-0.67	-0.33	-0.20	-0.03	-0.24	0.44	0.02	0.36	-0.29
Flatness +/-dB	0.7	0.8	0.6	0.4	0.4	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4

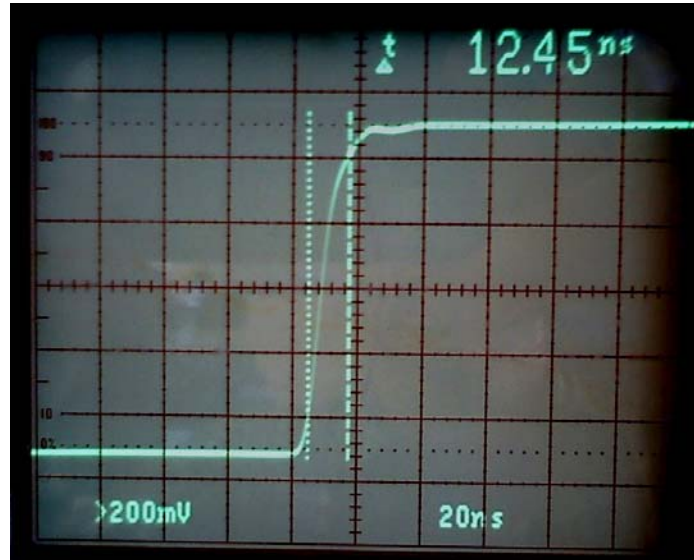
RF Input Power (dBm)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)



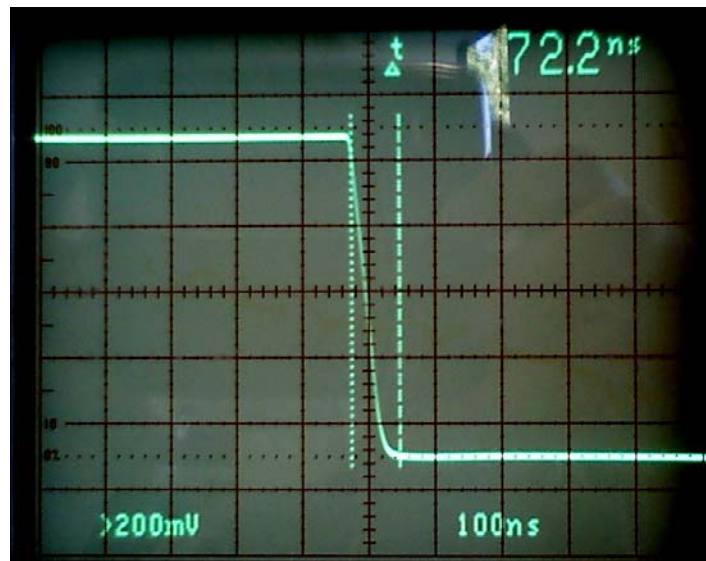


**TYPICAL CHARACTERISTICS
ON
SDLVA-0R61R1-65-CD-SFF-1**

Rise Time @ 0dBm & +25°C



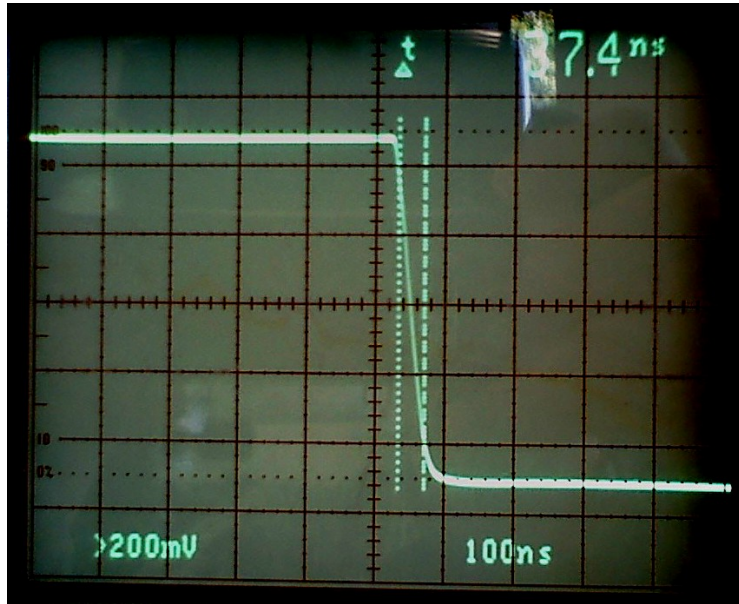
Recovery Time @ 0dBm & +25°C



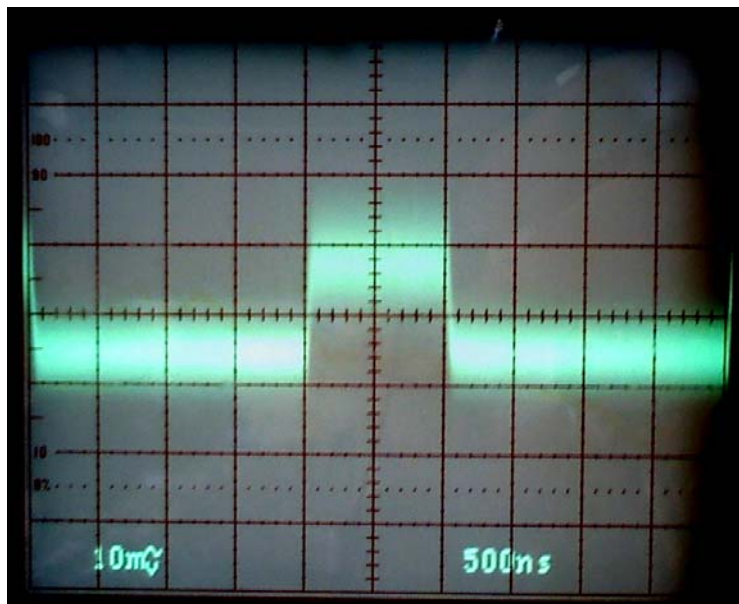


**TYPICAL CHARACTERISTICS
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Fall Time @ 0dBm & +25°C



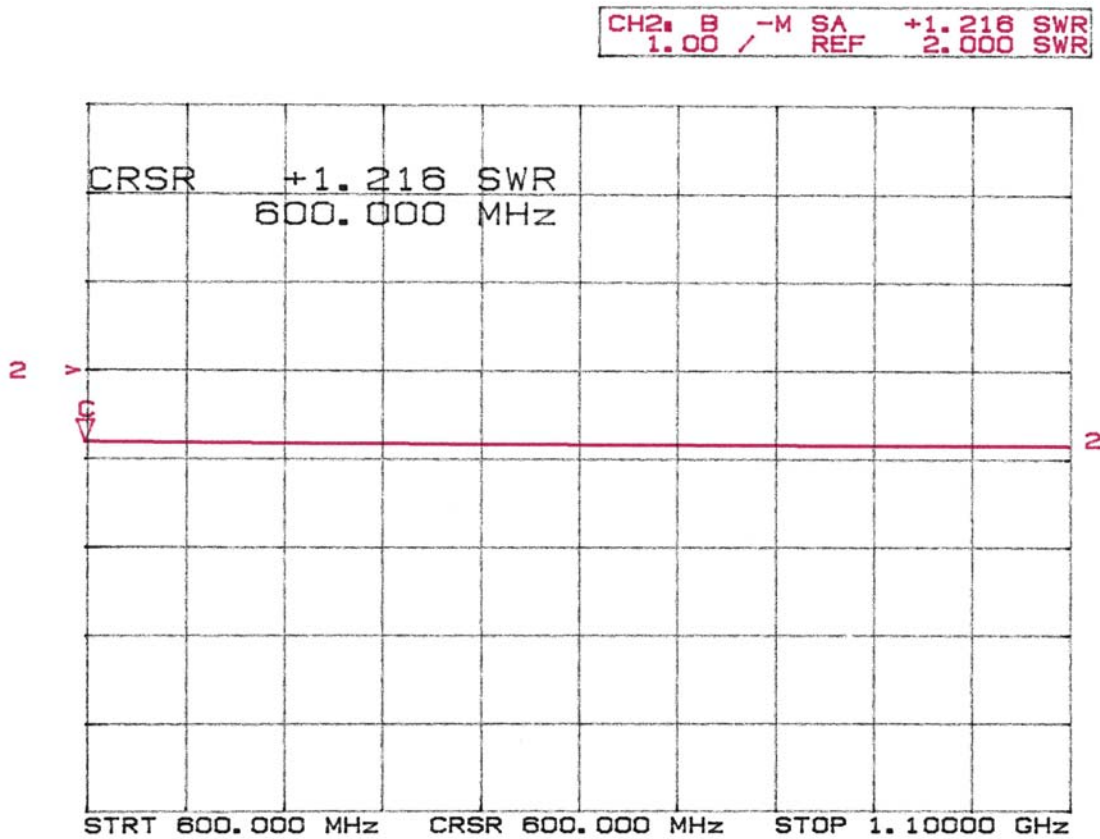
Tangential Signal Sensitivity (TSS) -74.5dBm @ +25°C





**TYPICAL CHARACTERISTICS
ON
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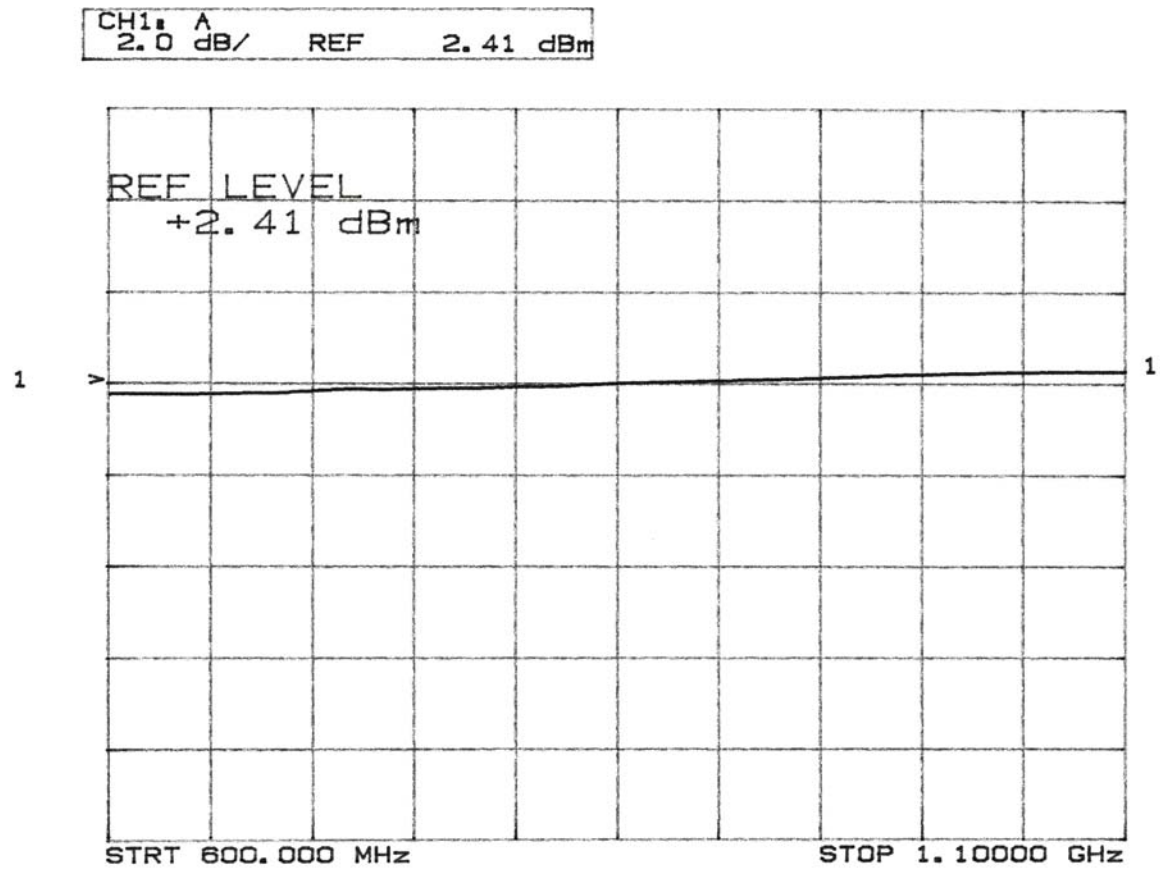
Return Loss @ +25°C





**TYPICAL CHARACTERISTICS
ON
SDLVA-0R61R1-65-CD-SFF-1**

Limiting Output @ +25°C





TYPICAL CHARACTERISTICS ON SDLVA-0R61R1-65-CD-SFF-1

DESCRIPTION:

PMI MODEL NUMBER SDLVA-0R61R1-65-CD-SFF-1 IS A SDLVA (SUCCESSIVE DETECTION LOGARITHMIC VIDEO AMPLIFIER) DESIGNED TO OPERATE OVER THE 600MHz TO 1.1GHz FREQUENCY RANGE. THIS MODEL IS DESIGNED FOR ULTRA HIGH SPEED APPLICATIONS WHILE MAINTAINING FLATNESS AND ACCURACY.

SPECIFICATIONS:

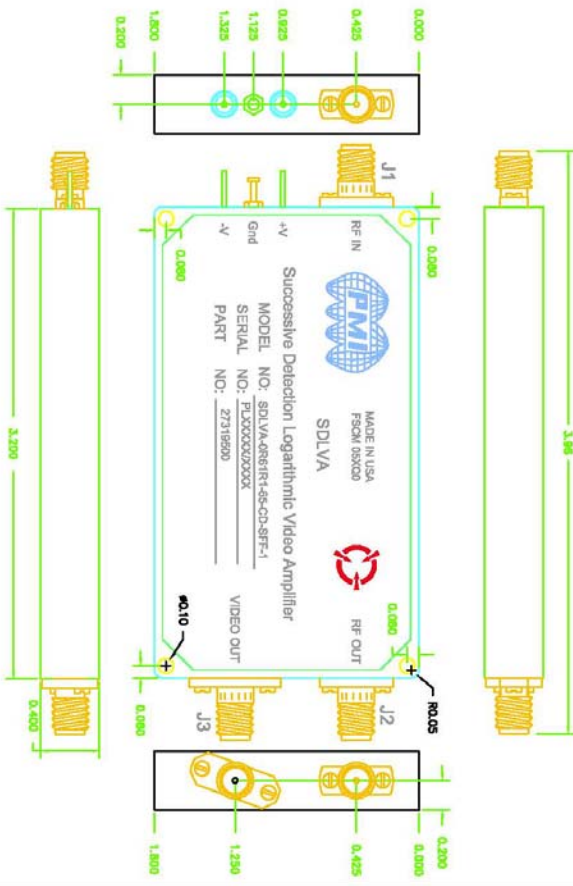
- FREQUENCY: 600MHz TO 1.1 GHz
- LIMITING OUTPUT LEVEL: 0 to +5dBm @-45dBm INPUT
- RF OUTPUT LIMITING-FLATNESS: ± 1.5dB MAX
- TSS: -68 dBm MAX
- VSWR(J1 & J2): 2.0:1
- POWER INPUT: +13 dbm CW MAX
- LOG SLOPE: 30 mV/dB Typ. 100 Ω LOAD
- LOG RANGE: -65 to 0 dbm
- LOG LINEARITY: ±2.0 dB (-20°C - +70°C)
- DC OFFSET: 100mv Typ
- PULSE RANGE: 30 ns to CW
- RISE TIME: 30 ns MAX
- RECOVERY TIME: 60 ns MAX
- FALL TIME: 40ns MAX
- POWER SUPPLY: +15V or +12V @ 300 mA MAX
-15V or -12V @ 200 mA MAX
- CONNECTORS: SMA FEMALE CONNECTORS
- FINISH: GOLD PLATED

ENVIRONMENTAL RATINGS:

- TEMPERATURE: -20°C TO +70°C (OPERATING)
-55°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 109B COND. B
- SHOCK: MIL-STD-202F, METHOD 2199 COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 108C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	5/23/13	



PMI CONFIDENTIAL & PROPRIETARY

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 WEBSITE: www.pmi-rf.com
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ISO 9001:2008 CERTIFIED



APPROVALS		DATE		FILE	
DESIGNED	CKM	4/14/18		REV.	FROM NO.
CHECKED	CS	6/19/18		DATE	27019513
ISSUED				SCALE	N:1S
				SHEET 1 OF 1	

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES UNLESS OTHERWISE SPECIFIED
 X.XXX ±0.010
 X.XXX ±0.005