



**SUMMARY TEST DATA  
ON  
PTRAN-100M18G-SFB-3UVPX-MAH**

Customer: _____	Tested By: <b>D. DURBIN</b>
SO No: _____	Temperature: <b>+25°C</b>
Model No: <b>PTRAN-100M18G-SFB-3UVPX-MAH</b>	Date: <b>08/26/14</b>
Serial No: <b>PL15715/1433</b>	Drawing No: <b>27622144</b> Rev: <b>A1</b>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
<b>J1 – Receive Input</b>				
1	Frequency	100MHz-18GHz	<b>100MHz-18GHz</b>	
2	Input Power Level	-80 dBm to -10 dBm	<b>-80 dBm to -10 dBm</b>	
<b>J5 – IF Input</b>				
3	Frequency	100MHz-4GHz	<b>100MHz-4GHz</b>	
4	Input Power Level	0 dBm Typical	<b>0 dBm</b>	
<b>J7 LO1 Input</b>				
5	Frequency	4GHz-20GHz	<b>4GHz-20GHz</b>	
6	Input Power Level	+15 dBm Typ.	<b>+15 dBm</b>	
<b>J8 LO2 Input</b>				
7	Input Frequency	4GHz-20GHz	<b>4GHz-20GHz</b>	
8	Input Power Level	+15 dBm Typ.	<b>+15 dBm</b>	
<b>J4 IF Output</b>				
9	Output Frequency	100MHz - 4GHz	<b>100MHz - 4GHz</b>	
10	Output Power Level	0dBm Typical for Limited SDLVA channels	<b>0dBm to +10dBm</b>	

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



**SUMMARY TEST DATA  
ON  
PTRAN-100M18G-SFB-3UVPX-MAH**

<b>J10 TX Output</b>				
11	Output Frequency	100MHz-18GHz	<b>100MHz-18GHz</b>	
12	Output Power Level	0 dBm to +10 dBm Typical with use of variable attenuator	<b>0dBm to +10dBm with use of variable attenuator</b>	
<b>SDLVA 1 (PL15157, See Data Attached)</b>				
<b>SDLVA 2 (PL15003, See Data Attached)</b>				
<b>Control Logic – LVDS</b>				
13	LVDS 1	Receive 0 - Baseband Channel 1 - High Frequency Channel	<b>0 - Baseband Channel 1 - High Frequency Channel</b>	
14	LVDS 2	SDLVA2 0 – Limited Output 1 – Linear Output	<b>0 – Limited Output 1 – Linear Output</b>	
15	LVDS 3	SDLVA1 0 – Limited Output 1 – Linear Output	<b>0 – Limited Output 1 – Linear Output</b>	
16	LVDS 4	00000 – 0 dB Atten. 11111 – 31 dB Atten.	<b>00000 – 0 dB Atten. 11111 – 31 dB Atten.</b>	
17	LVDS 5	0 – Output to TX Filter Bank, RX- Backplane/Input (J1) 1 - Output to RX Filter Bank, RX- Transceiver Input	<b>0 – Output to TX Filter Bank, RX- Backplane/Input (J1) 1 - Output to RX Filter Bank, RX- Transceiver Input</b>	
18	LVDS 6	Receive Channel 000 – Thru Channel 001 – Channel 1 010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined	<b>000 – Thru Channel 001 – Channel 1 010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined</b>	
19	LVDS 7	Transmit 0 – Baseband Chan. 1 – High Freq. Chan.	<b>0 – Baseband Chan. 1 – High Freq. Chan.</b>	
20	LVDS 8	Transmit Channel 000 – Thru Channel 001 – Channel 1	<b>000 – Thru Channel 001 – Channel 1</b>	



**SUMMARY TEST DATA  
ON  
PTRAN-100M18G-SFB-3UVPX-MAH**

		010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined	<b>010 – Channel 2 011 – Channel 3 100 – Channel 4 101 – Channel 5 110 Not Defined 111 – Not Defined</b>	
21	LVDS X	00 M1–LO1 M2–LO1 01 M1–LO1 M2–LO2 10 M1–LO2 M2–LO1 11 M1–LO2 M2–LO2	<b>00 M1–LO1 M2–LO1 01 M1–LO1 M2–LO2 10 M1–LO2 M2–LO1 11 M1–LO2 M2–LO2</b>	
22	Power Supply	+12V -12V +5V +3.3V	<b>+12V @ 1.3 A -12V @ 759 mA +5V @ 684 mA +3.3V @ 395 mA</b>	
<b>Transmit Filter Bank (PL15672, See Data Attached)</b>				
<b>Receive Filter Bank (PL15447, See Data Attached)</b>				
<b>Transceiver Module (PL15496, See Data Attached)</b>				

QA/QC Approval: \_\_\_\_\_ Date: \_\_\_\_\_



**SUMMARY TEST DATA  
ON  
SDLVA-100M3G-70-MAH**

Customer: _____	Tested By: <u>S.Baughman</u>
SO No: _____	Temperature: <u>+25°C (unless otherwise specified)</u>
Model No: <u>SDLVA-100M3G-70-MAH</u>	Date: <u>05/28/2014</u>
Serial No: <u>PL15157/1420</u>	Drawing No: <u>27617549</u> Rev: <u>A2</u>

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	0.1GHz-3GHz	0.1 to 3.0 GHz	HLH 5/28
2	Frequency Flatness	±2.0 dB Max.	1.0dB	
3	TSS	-68 dBm Min., -70 dBm Typ.	-68 dBm	
4	Limited Output Power	+6.5 dBm ± 3.0 dB Max.	+9.1 dBm	
5	Linear Output Gain	38dB ± 3.0 dB Max.	40.5 dB	
6	Linear Output Psat	6 dBm ± 3.0 dB Max.	3.4 dBm	
7	VSWR	2.0:1 Max.	1.79 :1	
8	V0 (Video Comparator Signal Amplitude)	3.3V Typ.	3.6 V	
9	Video Comparator Delay	50 ns Typ.	34.5 ns	
10	Video Comparator Threshold Level	-64 dBm ± 3.0 dB Max.	-63.5 dBm	
11	V1 (Log Video Signal Amplitude)	1 Volt Max.	.793 V	
12	Log Slope	10mV/dB into a 50Ω load (±1mV) Max.	9.56 mV/dB	
13	Log Range	-65 to +5 dBm Min.	-65 to +5 dBm	
14	Log Linearity	±1.50dB (-40°C to +85°C) Max.	+1.28dB -1.16dB	↓

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



**SUMMARY TEST DATA  
ON  
SDLVA-100M3G-70-MAH**

15	Pulse Range	100ns to CW	100ns to CW	HCH
16	Rise Time	35ns Typ..	31.2 ns	
17	Settling time to $\pm 1$ dB	50ns Typ.	46.7ns	
18	Recovery Time	200ns Max. (150ns Typ.)	198ns	
19	SPST Isolation	70dB Typ.	72dB	
20	SPST Switch Speed	20ns Typ.	20ns	
21	Power Supply	$\pm 12$ VDC to $\pm 15$ VDC	4.4 W	

QA/QC Approval: *[Signature]* Date: 3/28/14

LOG TRANSFER WITH FREQUENCY  
 MODEL: SDLVA-100M3G-70-MAH  
 TESTED BY: SBAUGHMAN  
 TEST DATE: 05/28/14  
 SERIAL NO: PL15157  
 TEST TEMP: +25C



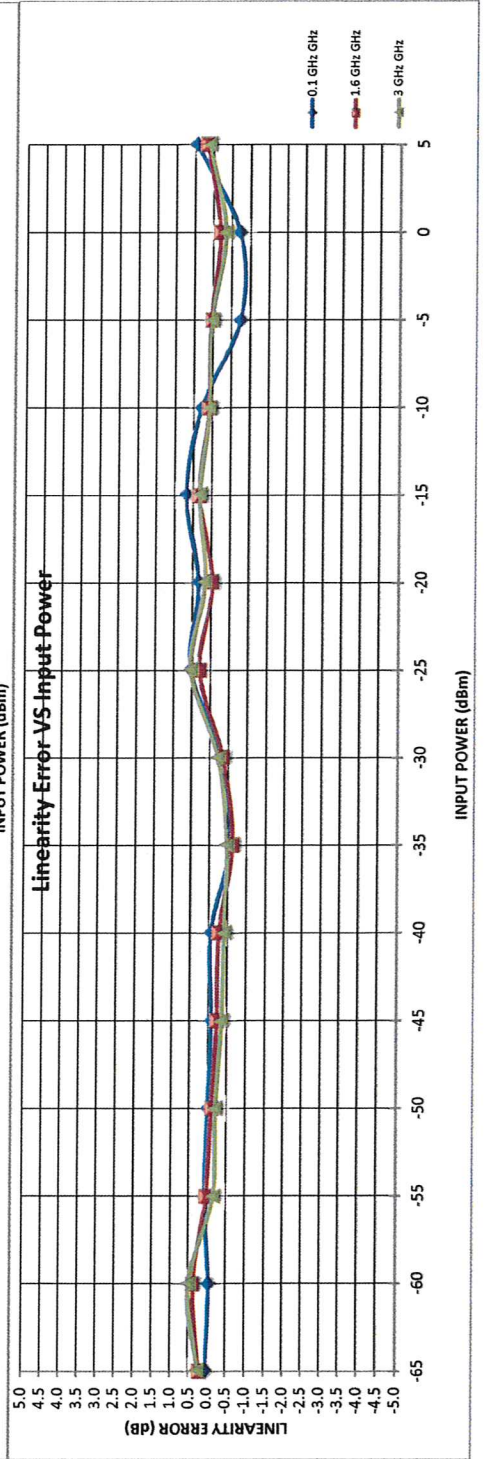
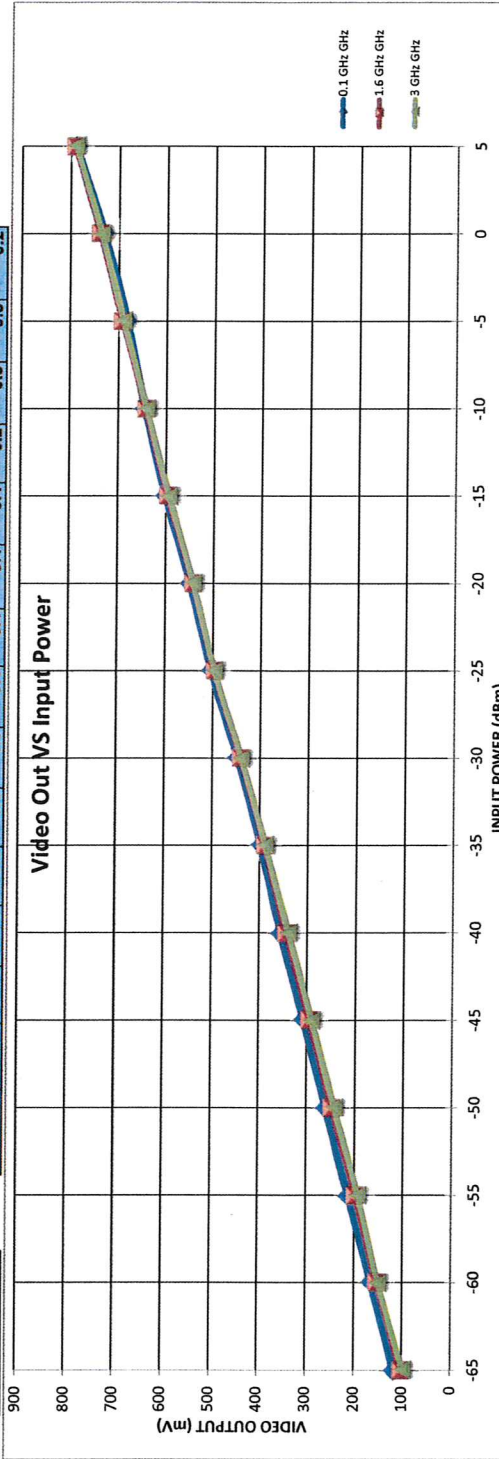
PLANAR MONOLITHICS INDUSTRIES  
 4921 Robert J. Mathews Pkwy Ste 1  
 El Dorado Hills, CA 95762  
 Phone: (916)542-1401 Fax: (301)662-1731  
 EMAIL: SALES@PMI-RF.COM



## SUMMARY TEST DATA ON SDLVA-100M3G-70-MAH

Frequency	Intercept (mV)	Slope (mV/dB)	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
0.1 GHz	738	9.56	117	164	213	260	307	355	398	448	504	550	601	645	683	731	790
			0	0	1	0	-1	0	-5	-3	5	3	7	3	-7	-7	4
			0.05	-0.03	0.09	0.01	-0.07	-0.05	-0.55	-0.32	0.54	0.35	0.69	0.29	-0.73	-0.71	0.46
1.6 GHz	742	9.88	102	153	199	247	295	344	390	442	498	544	597	644	683	740	793
			2	4	1	-1	-2	-3	-6	-3	0	3	1	1	1	-2	2
			0.24	0.40	0.06	-0.08	-0.22	-0.26	-0.61	-0.34	0.32	-0.02	0.35	0.10	0.06	-0.18	0.18
3 GHz	739	9.91	98	150	193	242	290	339	388	440	497	543	594	641	680	736	790
			3	5	-1	-2	-3	-4	-5	-2	5	2	3	1	0	-3	1
			0.27	0.52	-0.14	-0.19	-0.35	-0.40	-0.46	-0.21	0.54	0.19	0.34	0.08	0.03	-0.33	0.12

Flatness +/-dB	1	0.7	1	0.9	0.9	0.8	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.2	0.5	0.5	0.2
----------------	---	-----	---	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



LOG TRANSFER WITH FREQUENCY  
 MODEL: SDLVA-100M3G-70-MAH  
 TESTED BY: SBaughman  
 TEST DATE: 05/28/14  
 SERIAL NO: PL15157  
 TEST TEMP: -40C

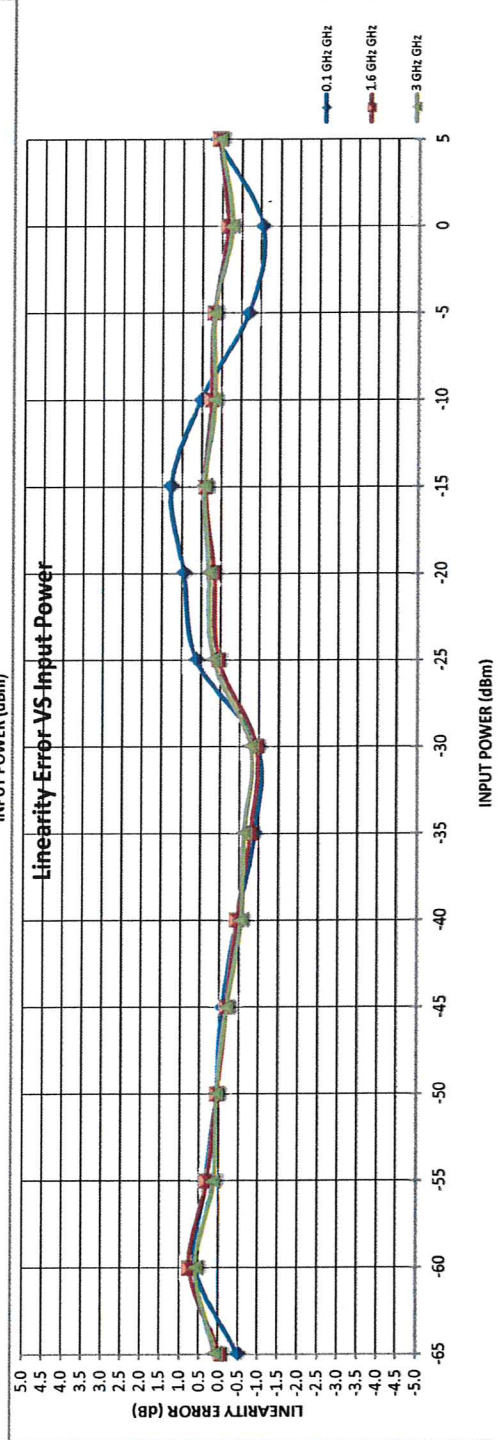
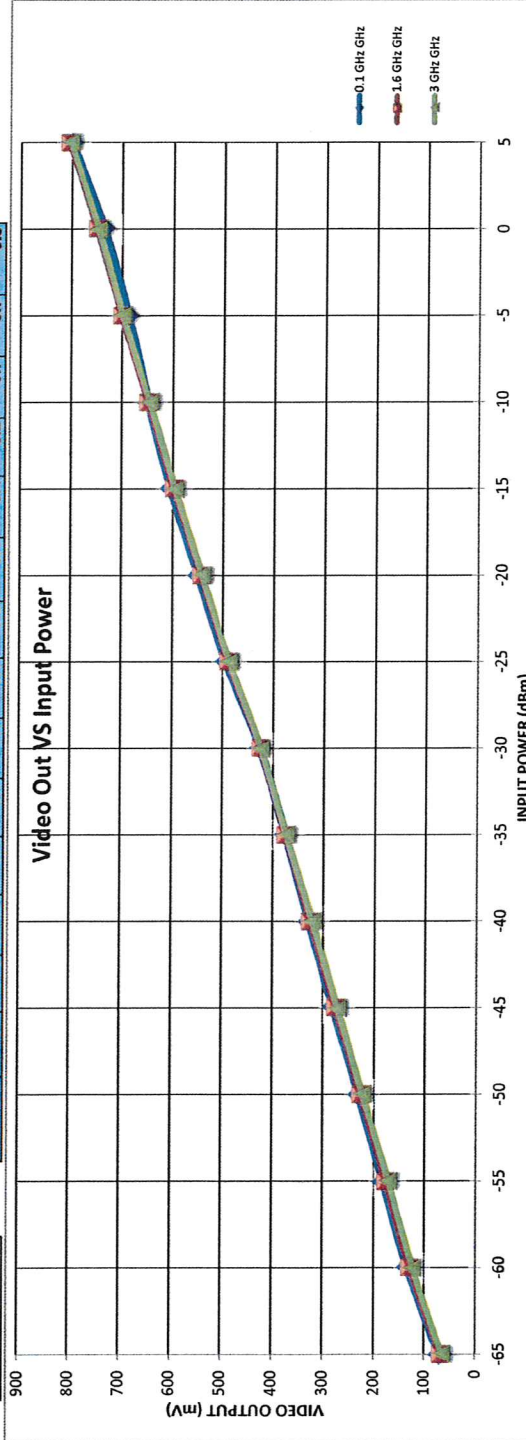


PLANAR MONOLITHICS INDUSTRIES  
 4921 Robert J. Mathews Pkwy Ste 1  
 El Dorado Hills, CA 95762  
 Phone: (916)542-1401 Fax: (301)662-1731  
 EMAIL: SALES@PMI-RF.COM



## SUMMARY TEST DATA ON SDLVA-100M3G-70-MAH

Frequency	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
0.1 GHz	70	133	182	231	281	329	376	427	495	550	605	649	688	736	800
	-5	6	3	1	-1	-4	-9	-10	7	10	13	6	-7	-11	2
	-0.51	0.59	0.34	0.08	-0.08	-0.43	-0.89	-0.95	0.63	0.96	1.28	0.54	-0.88	-1.04	0.16
1.6 GHz	68	129	177	227	277	327	376	427	490	544	599	650	702	751	806
	0	8	3	1	-2	-4	-8	-10	1	2	5	3	2	-1	1
	-0.04	0.76	0.32	0.07	-0.18	-0.42	-0.77	-0.92	0.07	0.20	0.43	0.28	0.22	-0.12	0.11
3 GHz	65	123	171	223	273	322	374	425	488	542	596	646	699	747	803
	1	6	2	1	-2	-6	-5	-8	2	3	5	2	2	-3	1
	0.09	0.59	0.14	0.08	-0.18	-0.54	-0.61	-0.77	0.20	0.32	0.44	0.18	0.21	-0.24	0.07
Flatness +/-dB	0.2	0.5	0.5	0.4	0.4	0.3	0.1	0.1	0.3	0.4	0.4	0.2	0.2	0.7	0.3



7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
 Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)

# SUMMARY TEST DATA ON SDLVA-100M3G-70-MAH

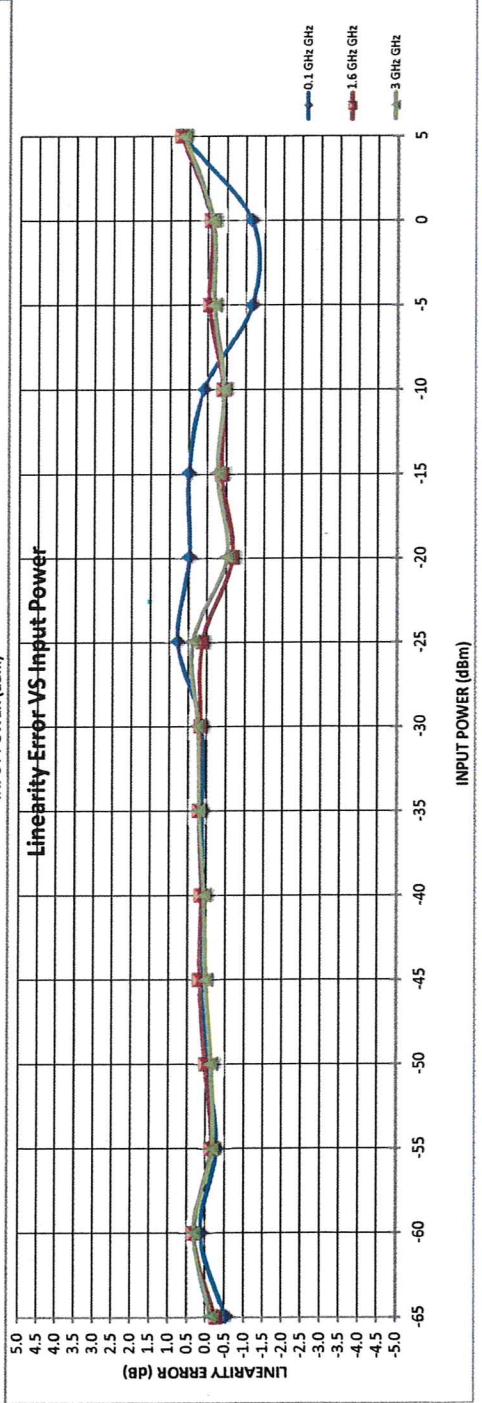
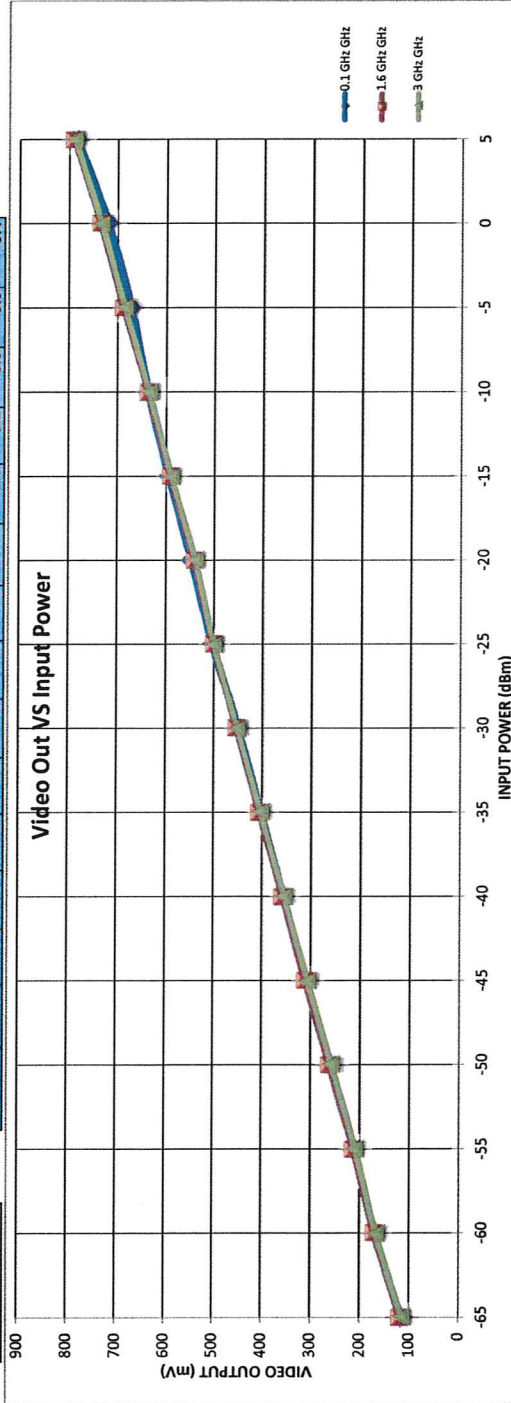


PLANAR MONOLITHICS INDUSTRIES  
4921 Robert J. Mathews Pkwy Ste 1  
El Dorado Hills, CA 95762  
Phone: (916)542-1401 Fax: (301)662-1731  
EMAIL: SALES@PMI-RF.COM

LOG TRANSFER WITH FREQUENCY  
MODEL: SDLVA-100M3G-70-MAH  
TESTED BY: Sbaughman  
TEST DATE: 05/28/14  
SERIAL NO: PL15157  
TEST TEMP: +85C

Frequency	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5
0.1 GHz	117	170	213	252	310	357	404	451	504	548	595	638	673	720	784
	-5	1	-3	0	1	1	1	1	7	5	5	1	-11	-11	7
	-0.53	0.13	-0.28	-0.05	0.08	0.10	0.12	0.14	0.80	0.49	0.51	0.10	-1.16	-1.14	0.70
1.6 GHz	119	172	215	254	313	360	408	455	502	542	592	639	690	737	792
	-3	3	-1	0	2	1	2	2	1	-6	-4	0	-1	-1	7
	-0.27	0.32	-0.14	0.03	0.20	0.15	0.22	0.18	0.13	-0.65	-0.37	-0.41	-0.03	-0.08	0.73
3 GHz	115	167	210	258	307	355	404	452	501	540	590	636	686	734	789
	-1	3	-2	-1	0	1	2	2	4	-5	-2	-4	-2	-1	6
	-0.15	0.32	-0.17	-0.13	0.02	0.06	0.21	0.25	0.40	-0.50	-0.25	-0.42	-0.17	-0.13	0.65

Flatness +/-dB	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.9	0.9	0.4
----------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)





**SUMMARY TEST DATA  
ON  
SDLVA-3G18G-CW-70-MAH**

Customer: _____	Tested By: <u>S. Baughman</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>SDLVA-3G18G-CW-70-MAH</u>	Date: <u>0425/2014</u>
Serial No: <u>PL15003/1417</u>	Drawing No: <u>27617568</u>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency Range	2GHz-18GHz	<b>2-18 GHz</b>	<i>EJG</i>
2	Frequency Flatness	±2.0 dB Max.	<b>+/-1.2 dB</b>	↓
3	TSS	-68 dBm Min., -70 dBm Typ.	<b>-68 dBm</b>	
4	Limited Output Power	+6.5 dBm ±3.0dBm Max.	<b>7dBm+/- 2.0dB</b>	
5	VSWR	2.0:1 Max.	<b>1.78:1</b>	
6	Linear Output Gain	43dB ±3.0dB Max.	<b>45dB +/-0.6dB</b>	
7	Linear Output Psat	3 dBm ±3.0dB Max.	<b>3dBm +/-1.5dB</b>	
8	V0 (Video Comparator Signal Amplitude)	3.3V Typ.	<b>3.3 V</b>	
9	Video Comparator Delay	50 ns Typ.	<b>43 ns</b>	
10	Video Comparator Threshold Level	-64 dBm ± 3.0 dB Max.	<b>-64dBm+/-2dB</b>	
11	V1 (Log Video Signal Amplitude)	1 Volt Max.	<b>0.82V</b>	
12	Log Slope	10mV/dB into a 50Ω load (±1mV) Max.	<b>10.4 V/dB</b>	
13	Log Range	-65 to +5 dBm Min.	<b>-65 to +5 dBm</b>	



**SUMMARY TEST DATA  
ON  
SDLVA-3G18G-CW-70-MAH**

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC	
14	Log Linearity	±1.75dB (-40°C to +85°C) Max.	+/- 1.26 dB	<i>EB</i>	
15	Pulse Range	100ns to 250µs	<b>100ns to 250µs</b>	↓	
16	Rise Time	35ns Max.	<b>25 ns</b>		
17	Settling time to ±1dB	50ns Typ.	<b>42 ns</b>		
18	Recovery Time	200ns Max. (150ns Typ.)	<b>200 ns</b>		
19	CW Immunity Range	TSS to -45 dBm (1dB degradation)	<b>0.8 dB</b>		
20	Pulse Considered CW	1ms Typ.	<b>.7 ms</b>		
21	Rejection Time	1ms Typ.	<b>0.3 ms</b>		
22	Droop	1dB Max.	<b>0 dB</b>		
23	SPST Isolation	70dB Typ.	<b>72 dB</b>		
24	SPST Switch Speed	20ns Typ.	<b>20 ns</b>		
25	Power Supply	±12VDC to ±15VDC	+/-12VDC to +/-15VDC		↓

QA/QC APPROVAL *Edwin A. Benn* DATE *4-25-2014*



# SUMMARY TEST DATA ON SDLVA-3G18G-CW-70-MAH

LOG TRANSFER WITH FREQUENCY @  
 MODEL: SDLVA-3G18G-70-MAH  
 TESTED BY: S.Baughman  
 TEST DATE: 04/24/14  
 SERIAL NO: PL15003  
 TEST TEMP: +25C



PLANAR MONOLITHICS INDUSTRIES  
 4921 ROBERT J. MATHEWS PARKWAY  
 ELDORADO HILLS, CA 95762  
 PH: 916-542-1401 FAX: 916-265-2597  
 EMAIL: SALES@PMI-RF.COM

Frequency

2 GHz	INTERCEPT (mV)	773.7
	SLOPE (mV/dB)	10.1

10 GHz	INTERCEPT (mV)	769.9
	SLOPE (mV/dB)	9.977

18 GHz	INTERCEPT (mV)	775.2
	SLOPE (mV/dB)	10.41

-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	----	---	---	----------------------

113	167	218	270	324	376	424	469	513	569	619	671	726	777	824
-4	-1	0	1	5	6	4	-2	-8	-3	-3	-2	3	3	0
-0.41	-0.06	-0.01	0.13	0.48	0.63	0.38	-0.17	-0.81	-0.26	-0.31	-0.17	0.28	0.33	-0.02

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

118	171	222	271	325	378	424	469	512	567	617	668	723	773	821
-3	0	1	0	4	7	3	-2	-8	-3	-3	-2	3	3	1
-0.34	-0.03	0.08	-0.01	0.41	0.72	0.33	-0.16	-0.85	-0.34	-0.33	-0.21	0.30	0.31	0.12

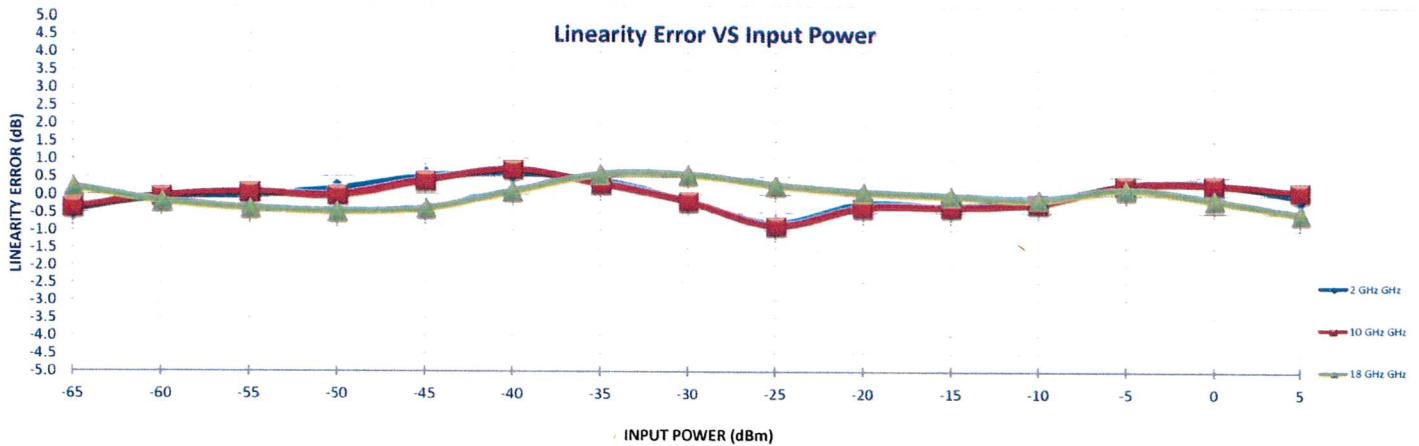
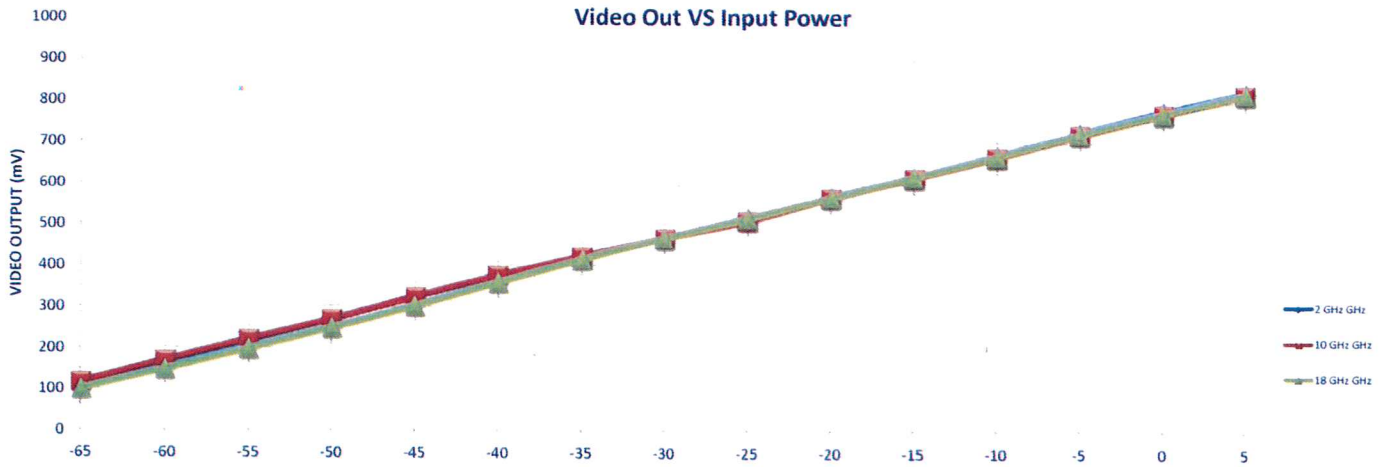
Measured Value (mV)
Error (mV)
LINEARITY ERROR (dB)

101	149	199	250	303	360	417	469	518	568	619	670	725	774	822
2	-2	-4	-5	-4	1	6	6	3	1	0	-1	2	-1	-5
0.23	-0.16	-0.36	-0.46	-0.37	0.11	0.59	0.58	0.29	0.09	-0.01	-0.11	0.18	-0.11	-0.50

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

Flatness dB

0.9	1.1	1.2	1.1	1.1	0.9	0.4	0	0.3	0.1	0.1	0.2	0.2	0.2	0.2
-----	-----	-----	-----	-----	-----	-----	---	-----	-----	-----	-----	-----	-----	-----



7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
 Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



# SUMMARY TEST DATA ON SDLVA-3G18G-CW-70-MAH

LOG TRANSFER WITH FREQUENCY @  
 MODEL: SDLVA-3G18G-70-MAH  
 TESTED BY: S.Baughman  
 TEST DATE: 04/24/14  
 SERIAL NO: PL15003  
 TEST TEMP: -40C

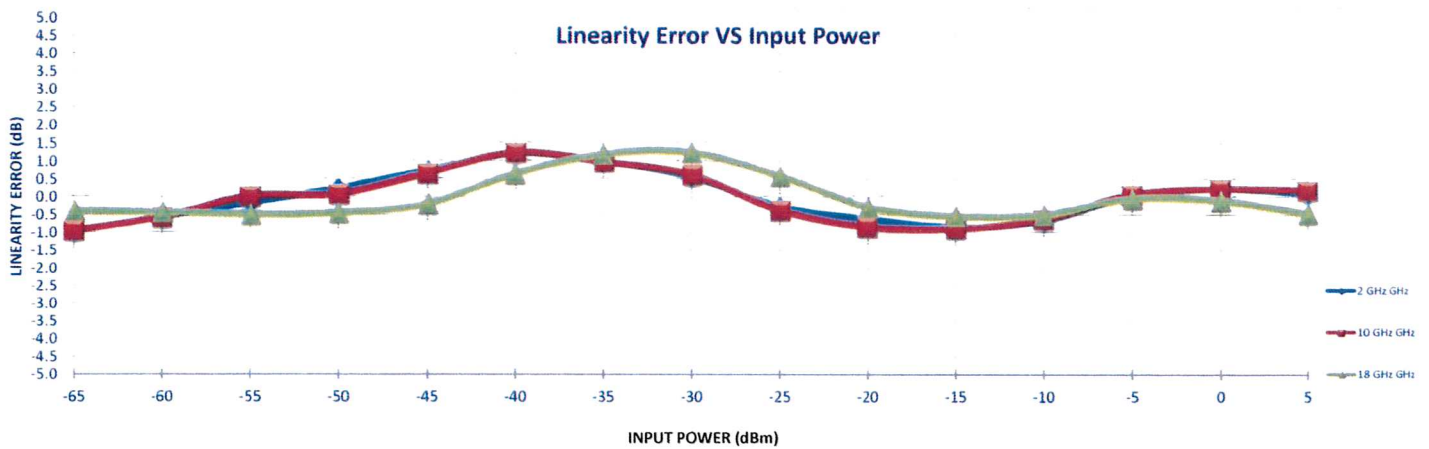
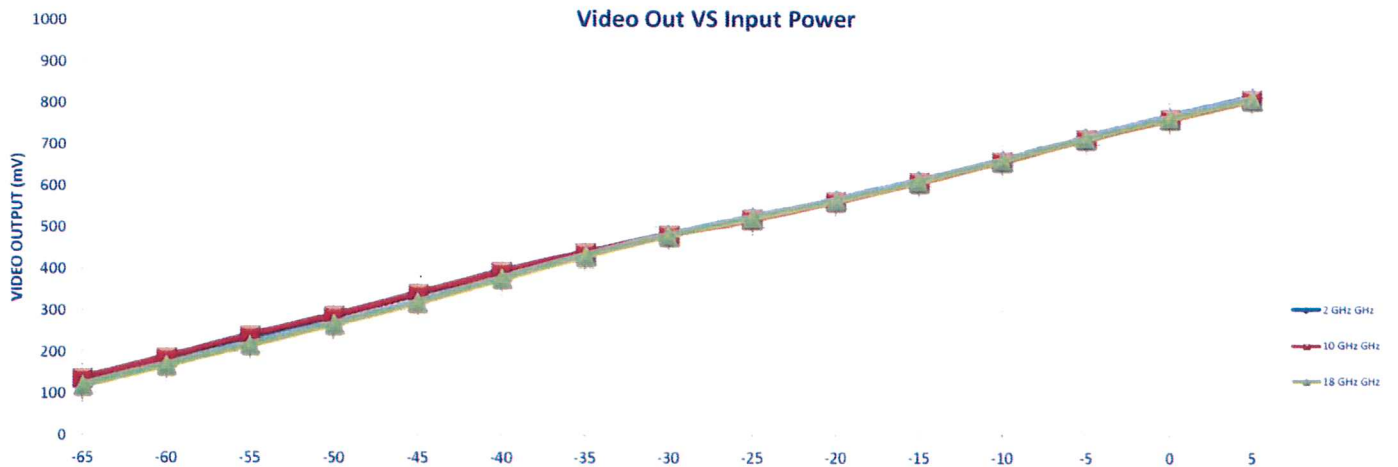


PLANAR MONOLITHICS INDUSTRIES  
 4921 ROBERT J. MATHEWS PARKWAY  
 ELDORADO HILLS, CA 95762  
 PH: 916-542-1401 FAX: 916-265-2597  
 EMAIL: SALES@PMI-RF.COM

Frequency

2 GHz	INTERCEPT (mV)	767.8
	SLOPE (mV/dB)	9.639
10 GHz	INTERCEPT (mV)	763.7
	SLOPE (mV/dB)	9.49
18 GHz	INTERCEPT (mV)	768.9
	SLOPE (mV/dB)	9.911

	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0	5	RF Input Power (dBm)
2 GHz	132	184	236	288	341	394	440	484	524	569	615	665	720	770	817	Measured Value (mV)
	-9	-5	-2	2	7	12	10	5	-3	-6	-8	-6	0	2	1	Error (mV)
	-0.96	-0.56	-0.17	0.23	0.73	1.22	1.00	0.56	-0.29	-0.62	-0.85	-0.66	0.04	0.23	0.11	LINEARITY ERROR (dB)
10 GHz	138	189	242	290	343	396	441	485	523	566	613	663	717	766	813	Measured Value (mV)
	-9	-5	0	1	6	12	9	6	-3	-8	-8	-6	1	2	2	Error (mV)
	-0.93	-0.56	0.03	0.08	0.67	1.25	1.00	0.63	-0.36	-0.83	-0.88	-0.61	0.08	0.24	0.19	LINEARITY ERROR (dB)
18 GHz	121	170	219	269	321	379	434	484	527	568	615	665	719	768	814	Measured Value (mV)
	-4	-4	-5	-4	-2	7	12	12	6	-3	-5	-5	0	-1	-4	Error (mV)
	-0.37	-0.42	-0.48	-0.43	-0.19	0.66	1.21	1.26	0.60	-0.27	-0.53	-0.48	-0.03	-0.09	-0.45	LINEARITY ERROR (dB)
Flatness dB	0.9	1	1.2	1.1	1.2	0.9	0.4	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	



7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
 Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



# SUMMARY TEST DATA ON SDLVA-3G18G-CW-70-MAH

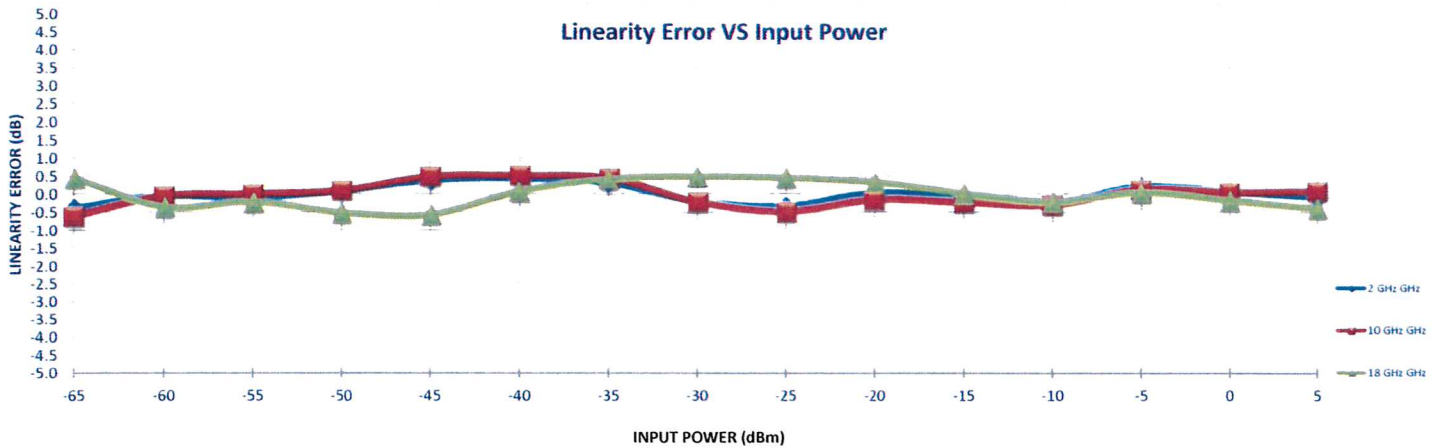
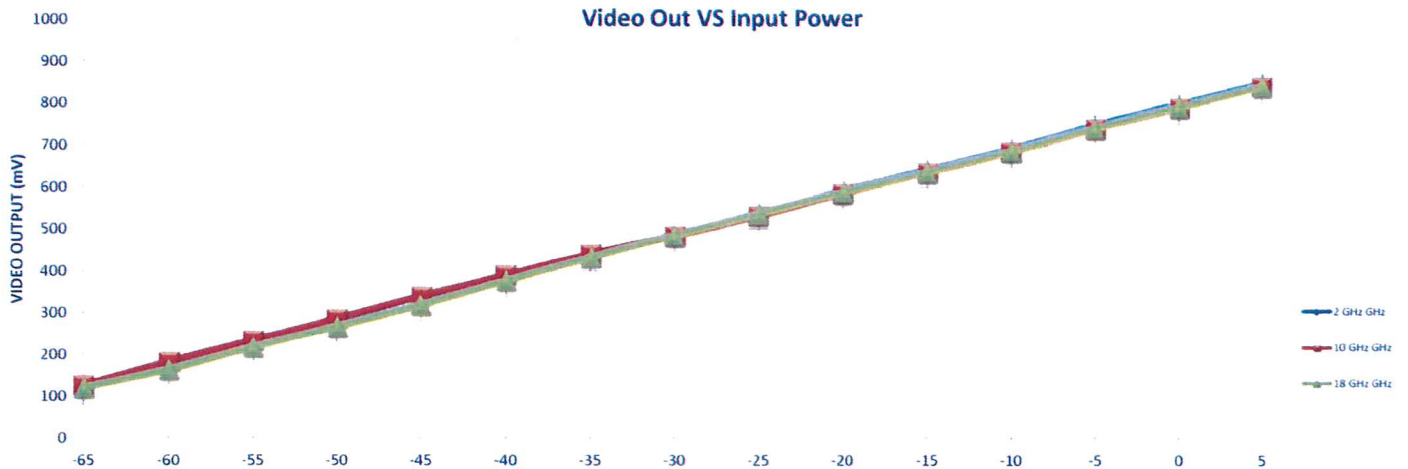
LOG TRANSFER WITH FREQUENCY @  
 MODEL: SDLVA-3G18G-70-MAH  
 TESTED BY: S.Baughman  
 TEST DATE: 04/24/14  
 SERIAL NO: PL15003  
 TEST TEMP: +85C



PLANAR MONOLITHICS INDUSTRIES  
 4921 ROBERT J. MATHEWS PARKWAY  
 ELDORADO HILLS, CA 95762  
 PH: 916-542-1401 FAX: 916-265-2597  
 EMAIL: SALES@PMI-RF.COM

Frequency

Frequency	Intercept (mV)	Slope (mV/dB)	RF Input Power (dBm)													Measured Value (mV)	Error (mV)	Linearity Error (dB)		
2 GHz	797.3	10.27	125	180	231	285	339	391	441	487	537	592	642	692	748	798	848	125	-4	-0.40
			-4	-1	-1	1	4	5	3	-2	-3	0	-1	-3	2	1	-1			
			-0.40	-0.06	-0.08	0.09	0.39	0.45	0.32	-0.21	-0.34	0.01	-0.12	-0.25	0.20	0.06	-0.07			
10 GHz	792.3	10.14	127	183	235	286	341	392	442	486	534	588	638	688	743	793	844	127	-6	-0.60
			-6	0	0	1	5	5	5	-2	-5	-1	-2	-3	1	1	1			
			-0.60	-0.04	0.02	0.12	0.51	0.54	0.46	-0.20	-0.47	-0.14	-0.21	-0.28	0.14	0.07	0.09			
18 GHz	795.7	10.47	120	164	218	267	319	378	434	487	539	590	639	689	744	794	844	120	5	0.45
			5	-4	-2	-5	-6	1	5	5	5	4	0	-2	1	-2	-4			
			0.45	-0.34	-0.20	-0.50	-0.55	0.08	0.44	0.50	0.47	0.34	0.02	-0.20	0.06	-0.17	-0.39			
Flatness dB			0.3 0.9 0.8 0.9 1.1 0.7 0.4 0 0.2 0.2 0.2 0.2 0.2 0.2 0.2																	



7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
 Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH-TX**

Customer: _____	Tested By: <u>S. PALACIO / D. DURBIN</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>6SFB-100M18G-1MP-MAH-TX</u>	Date: <u>8/20/2014</u>
Serial No: <u>PL15672/1432</u>	Drawing No: <u>27619654</u> Rev: <u>A1</u>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency	100 MHz-18.0 GHz	100 MHz-18.0 GHz	PMI QA1
2	Switching Speed	100 ns Typ.	85ns See Plots	
3	J2 Input Frequency (Input from Transceiver)	100 MHz-18.0 GHz	100 MHz-18.0 GHz	
4	J2 Input Power Level	-58 dBm to -28dBm	-58 dBm to -28dBm	
5	J3 Output Frequency (Output to Backplane)	100 MHz-18.0 GHz	100 MHz-18.0 GHz	
6	J3 Output Power Level	0 dBm to +10dBm Typ. when input is -28 dBm	-0.08 to +10.43dBm	
7	Thru Channel Passband Frequency	100 MHz-18 GHz	100 MHz - 18 GHz	
8	Channel 1 Center Frequency	3400 MHz	3400MHz	
9	Channel 1 (3 dB Bandwidth)	2000 MHz	2000MHz	
10	Channel 1 Rejection	-40 dBc TYP, -30 dBc MIN 100 MHz-2 GHz, 4.8 GHz-18 GHz	-42.90dBc  -41.57dBc	
11	Channel 2 Center Frequency	5400 MHz	5400MHz	
12	Channel 2 (3 dB Bandwidth)	2000 MHz	2000MHz	



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH-TX**

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
13	Channel 2 Rejection	-40 dBc TYP, -30 dBc MIN 100 MHz-4 GHz, 6.8 GHz-18 GHz	-35.93dBc -33.15dBc	PMI QA 1
14	Channel 3 Center Frequency	7400 MHz	7400MHz	
15	Channel 3 (3 dB Bandwidth)	2000 MHz	2000MHz	
16	Channel 3 Rejection	-40 dBc TYP, -30 dBc MIN 100 MHz-6 GHz, 8.8 GHz-18 GHz	-45.28dBc -31.89dBc	
17	Channel 4 Center Frequency	9400 MHz	9400MHz	
18	Channel 4 (3 dB Bandwidth)	2000 MHz	2000MHz	
19	Channel 4 Rejection	-40 dBc TYP, -30 dBc MIN 100 MHz-8 GHz, 10.8 GHz-18 GHz	-30.69dBc -30.54dBc	
20	Channel 5 Center Frequency	11400 MHz	11400MHz	
21	Channel 5 (3 dB Bandwidth)	2000 MHz	2000MHz	
22	Channel 5 Rejection	-40 dBc TYP, -30 dBc MIN 100 MHz-10 GHz, 12.8 GHz-18 GHz	-57.84dBc -38.4dBc	
23	Control Logic	3.3 V TTL	Pass	
24	Power Supply	+12 V, -12 V, +5 V, +3.3V	125mA@ +5V 255mA@ +12V 107mA@ -12V 0mA@ +3.3V	

QA/QC Approval: \_\_\_\_\_

PMI  
QA 1

*[Handwritten Signature]*

Date: \_\_\_\_\_

*8/20/14*



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH-TX**

Picture of Finish Product

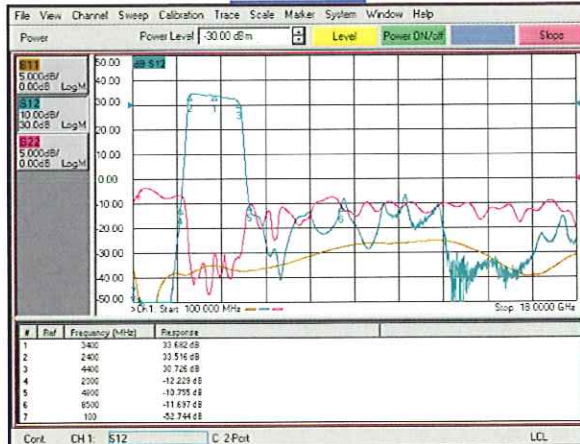




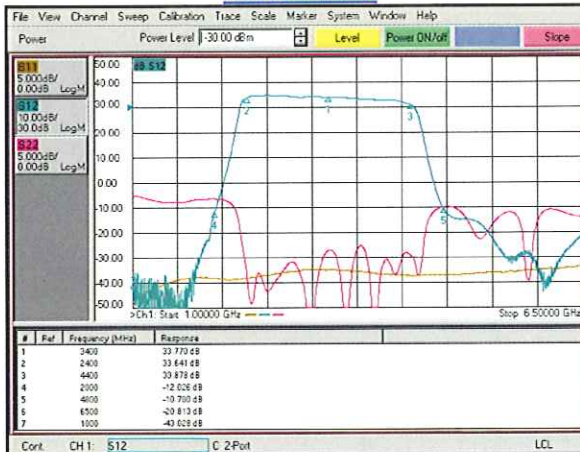


## SUMMARY TEST DATA ON 6SFB-100M18G-1MP-MAH-TX

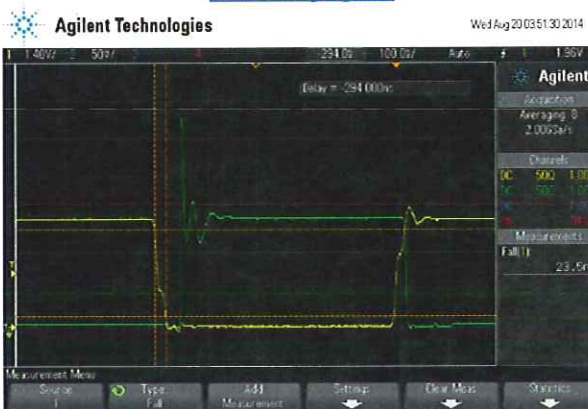
### Channel 1 Broad Band



### Narrow Band



### Switching Speed

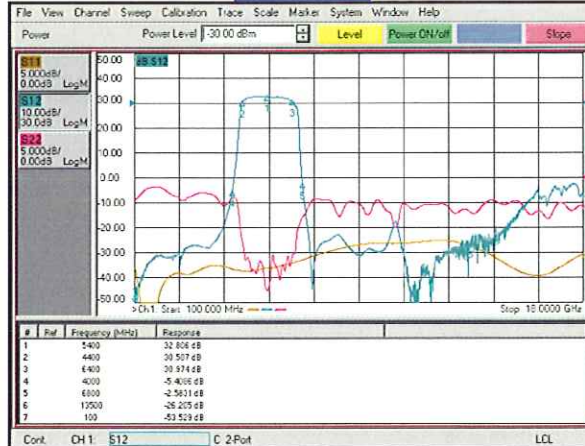


Yellow Trace: TTL Signal / Green Trace: RF Signal



## SUMMARY TEST DATA ON 6SFB-100M18G-1MP-MAH-TX

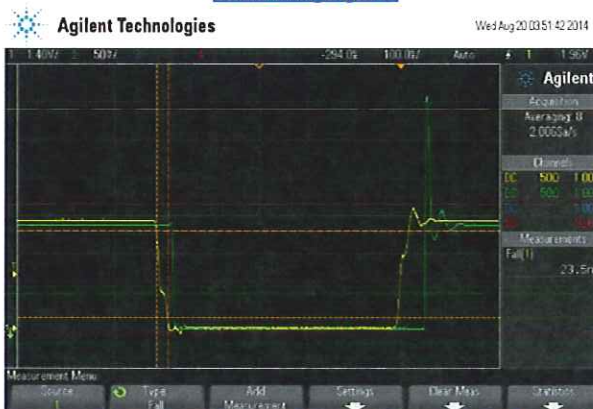
### Channel 2 Broad Band



### Narrow Band



### Switching Speed



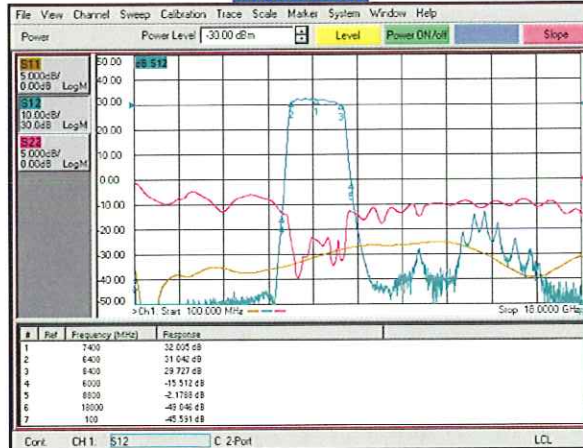
Yellow Trace: TTL Signal / Green Trace: RF Signal

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)

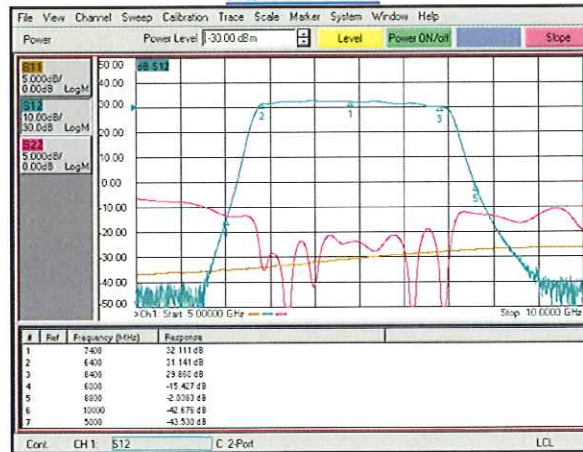


## SUMMARY TEST DATA ON 6SFB-100M18G-1MP-MAH-TX

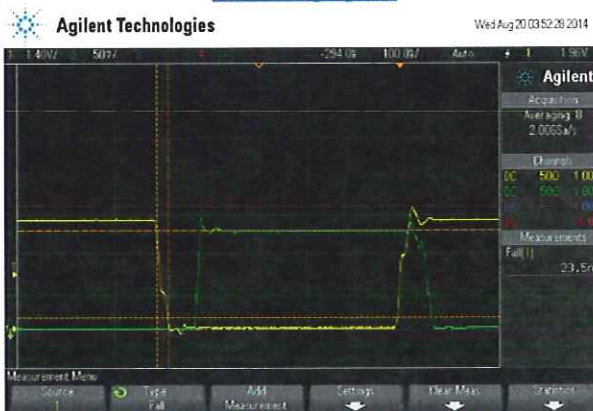
### Channel 3 Broad Band



### Narrow Band



### Switching Speed

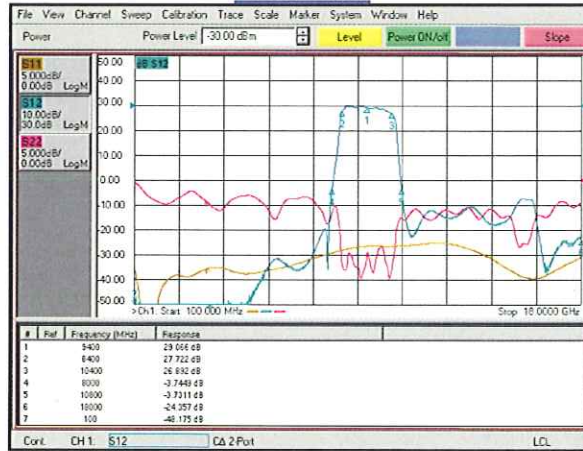


7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)

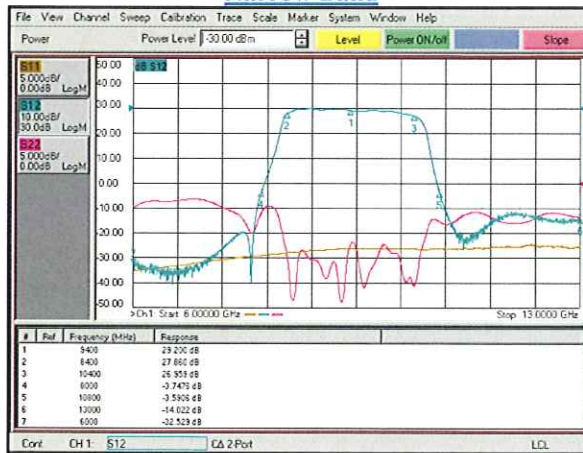


## SUMMARY TEST DATA ON 6SFB-100M18G-1MP-MAH-TX

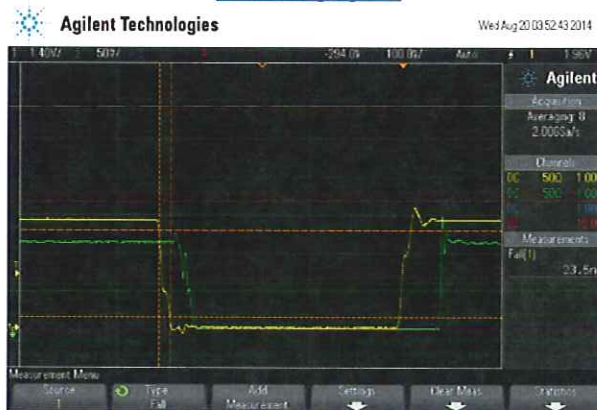
### Channel 4 Broad Band



### Narrow Band



### Switching Speed

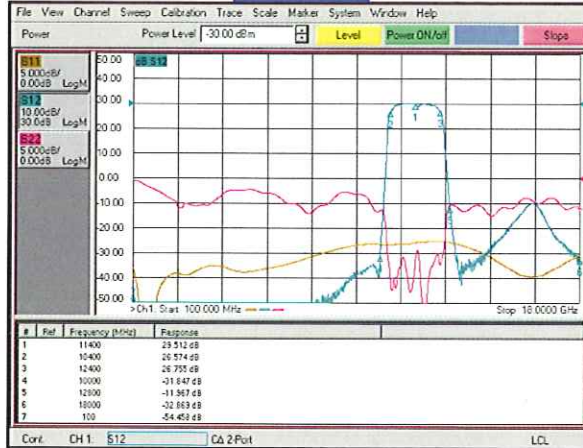


7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)

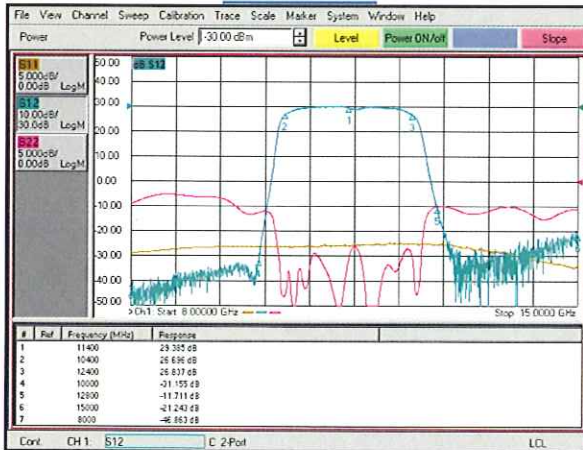


## SUMMARY TEST DATA ON 6SFB-100M18G-1MP-MAH-TX

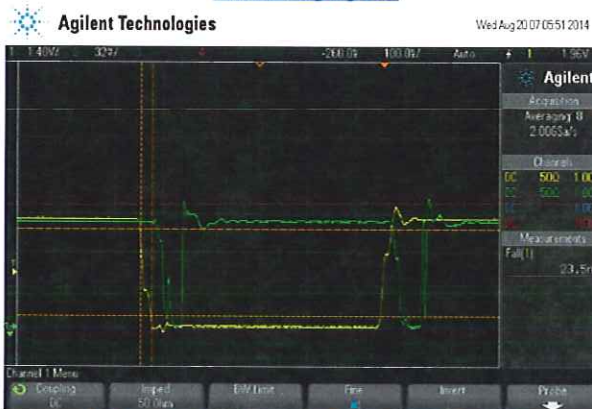
### Channel 5 Broad Band



### Narrow Band



### Switching Speed



Yellow Trace: TTL Signal / Green Trace: RF Signal



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH-TX**

Thru Path

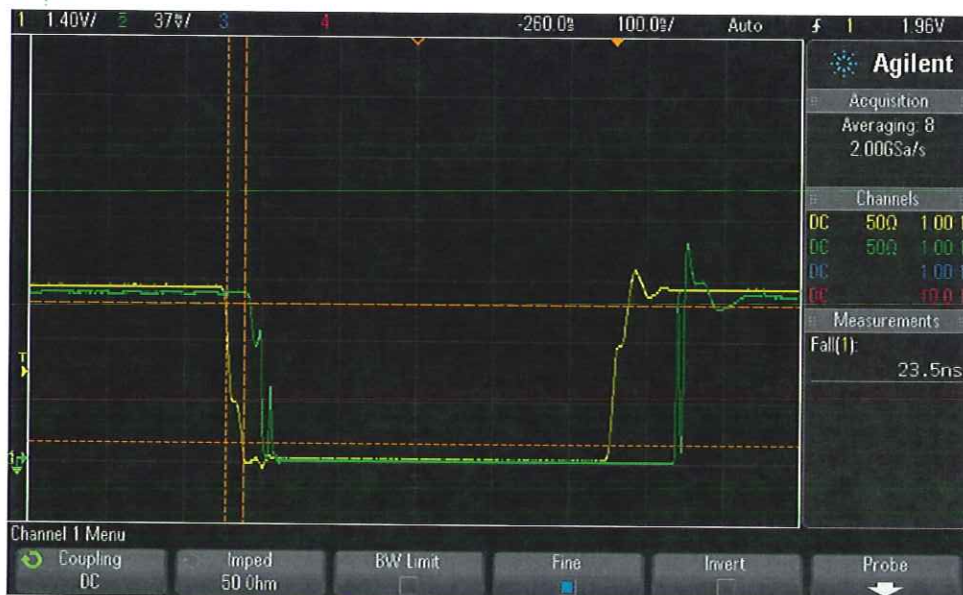


Switching Speed



**Agilent Technologies**

Wed Aug 20 06:49:38 2014



Yellow Trace: TTL Signal / Green Trace: RF Signal

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

Customer: _____	Tested By: <u>Daniel Almond</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>6SFB-100M18G-1MP-MAH</u>	Date: <u>07/17/14</u>
Serial No: <u>PL15447/1427</u>	Drawing No: <u>27619661</u> Rev: <u>B1</u>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	Frequency	100 MHz-18.0 GHz	100 MHz- 18.0 GHz	<b>PMI QA 2</b>
2	Gain	18 dB Typ.	18.8 to 25.6dB	
3	Isolation J1, J6	100 dB	100dB Typ	
4	Switching Speed	100 ns	100ns	
5	J1 Input Frequency (Input from Backplane)	100 MHz-18.0 GHz	100 MHz- 18.0 GHz	
6	J1 Input Power Level	-80 dBm to -10dBm	-80 to -10dBm	
7	J6 Input Frequency (Input from Transceiver)	100 MHz-18.0 GHz	100 MHz- 18.0 GHz	
8	J6 Input Power Level	-52 dBm to -22dBm	-52 to -22dBm	
9	J3 Output Frequency (LO2 from Backplane)	100 MHz-18.0 GHz	100 MHz- 18.0 GHz	
10	J3 Output Power Level	-62 dBm to +8 dBm Typ.	-66 to +4dBm Typ	
11	Thru Channel Passband Frequency	100 MHz-18 GHz	100 MHz – 18 GHz	
12	Channel 1 Center Frequency	3400 MHz	3400 MHz	
13	Channel 1 (3 dB Bandwidth)	2000 MHz	2000 MHz	
14	Channel 1 Rejection	-40 dBc Typ, -30 dBc Min 100 MHz-2 GHz, 4.8 GHz-8.5 GHz	59/35dBc Min	
15	Channel 2 Center Frequency	5400 MHz	5400 MHz	<b>PMI QA 2</b>

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
16	Channel 2 (3 dB Bandwidth)	2000 MHz	2000 MHz	PMI QA 2
17	Channel 2 Rejection	-40 dBc Typ, -30 dBc Min 100 MHz-4 GHz, 6.8 GHz-13.5 GHz	44/61dBc	
18	Channel 3 Center Frequency	7400 MHz	7400 MHz	
19	Channel 3 dB Bandwidth	2000 MHz	2000 MHz	
20	Channel 3 Rejection	-40 dBc Typ, -30 dBc Min 100 MHz-6 GHz, 8.8 GHz-18 GHz	42/33dBc	
21	Channel 4 Center Frequency	9400 MHz	9400 MHz	
22	Channel 4 (3 dB Bandwidth)	2000 MHz	2000 MHz	
23	Channel 4 Rejection	-40 dBc Typ, -30 dBc Min 100 MHz-8 GHz, 10.8 GHz-18 GHz	35/37dBc	
24	Channel 5 Center Frequency	11400 MHz	11400 MHz	
25	Channel 5 (3 dB Bandwidth)	2000 MHz	2000 MHz	
26	Channel 5 Rejection	-40 dBc Typ, -30 dBc Min 100 MHz-10 GHz, 12.8 GHz-18 GHz	54/40dBc	
27	Control Logic	3.3 V TTL	3.3V	
28	Power Supply	+12 V, -12 V, +5 V, +3.3V	+12V@ 164mA +5V@ 190mA +3.3V@ 0mA -12V@ 112mA	PMI QA 2

QA/QC Approval:

*[Signature]*

PMI  
QA 2

Date:

*7/18/14*





**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

## **PL15447 Filter Plots**

**Tested By: Daniel Almond**

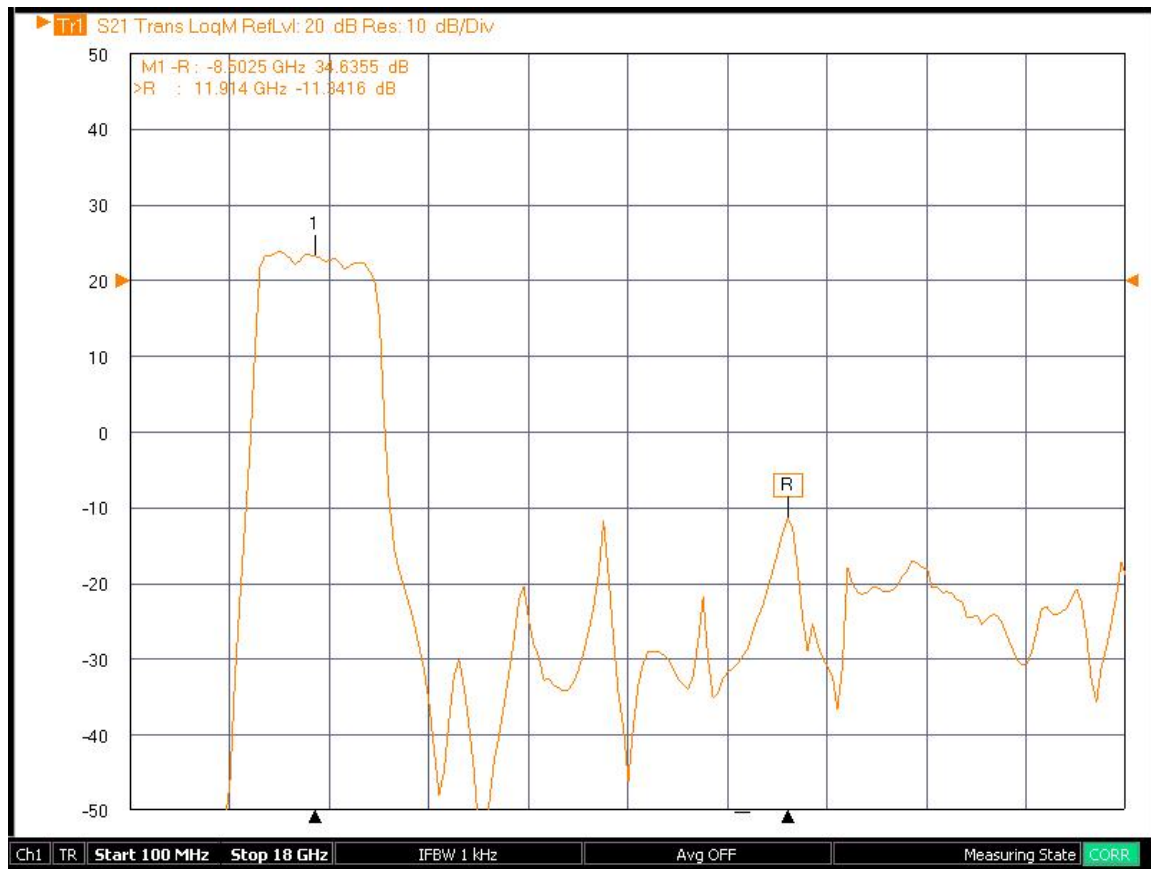
**July 17, 2014**



**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 1 S21Broadband**

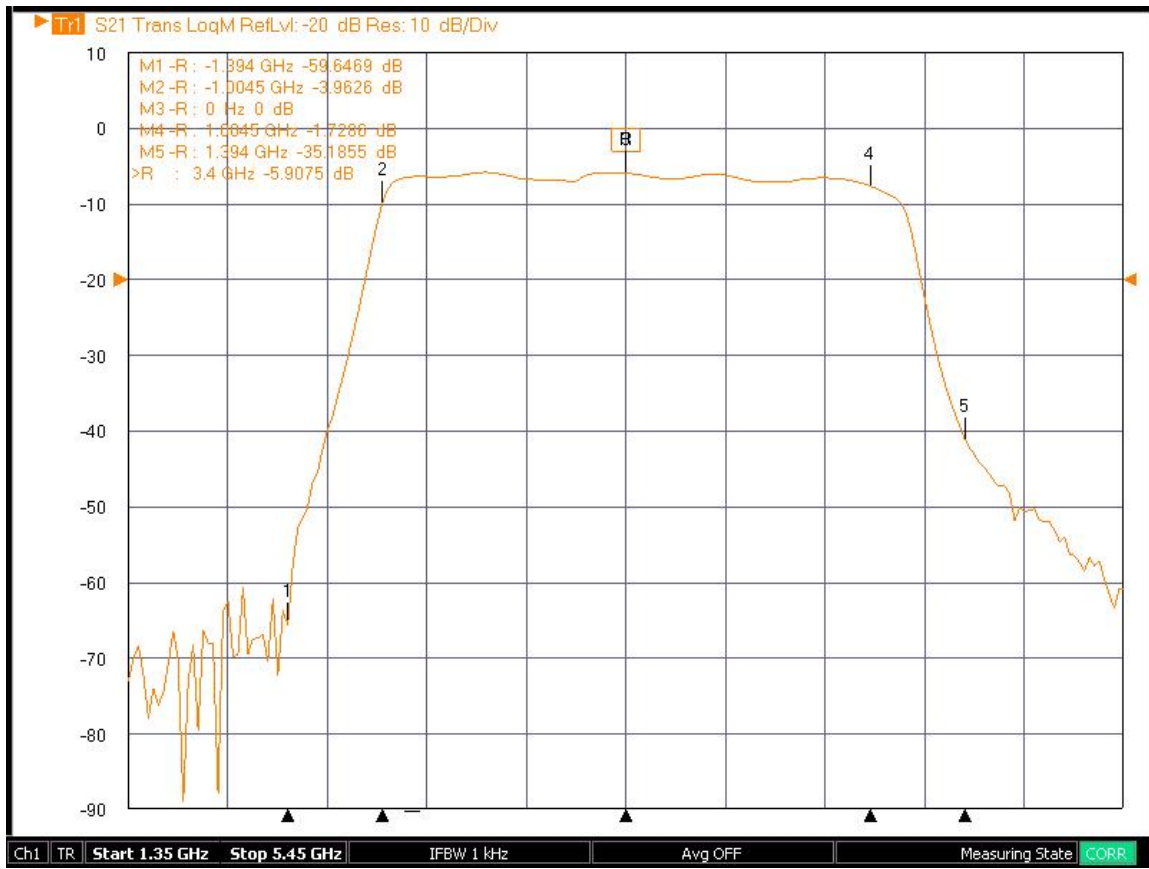




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 1 S21 Narrowband**

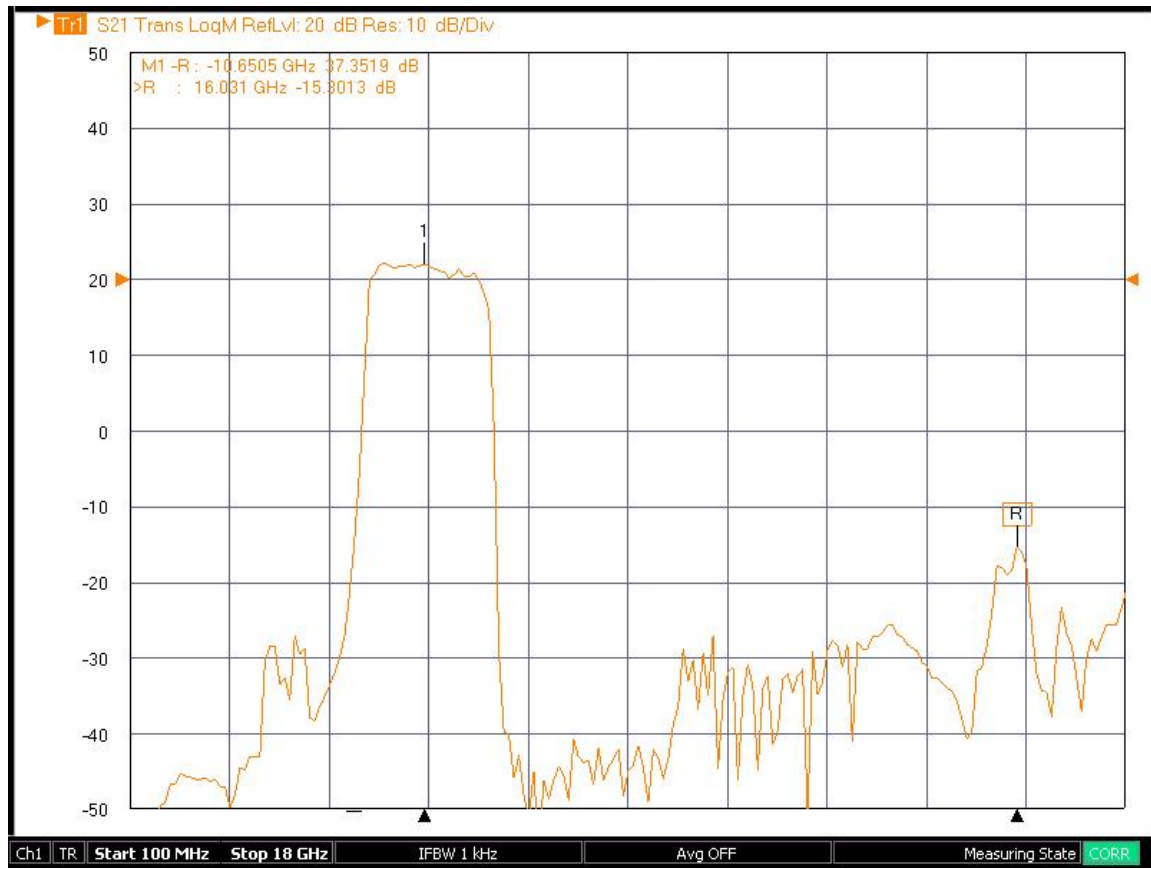




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 2 S21 Broadband**

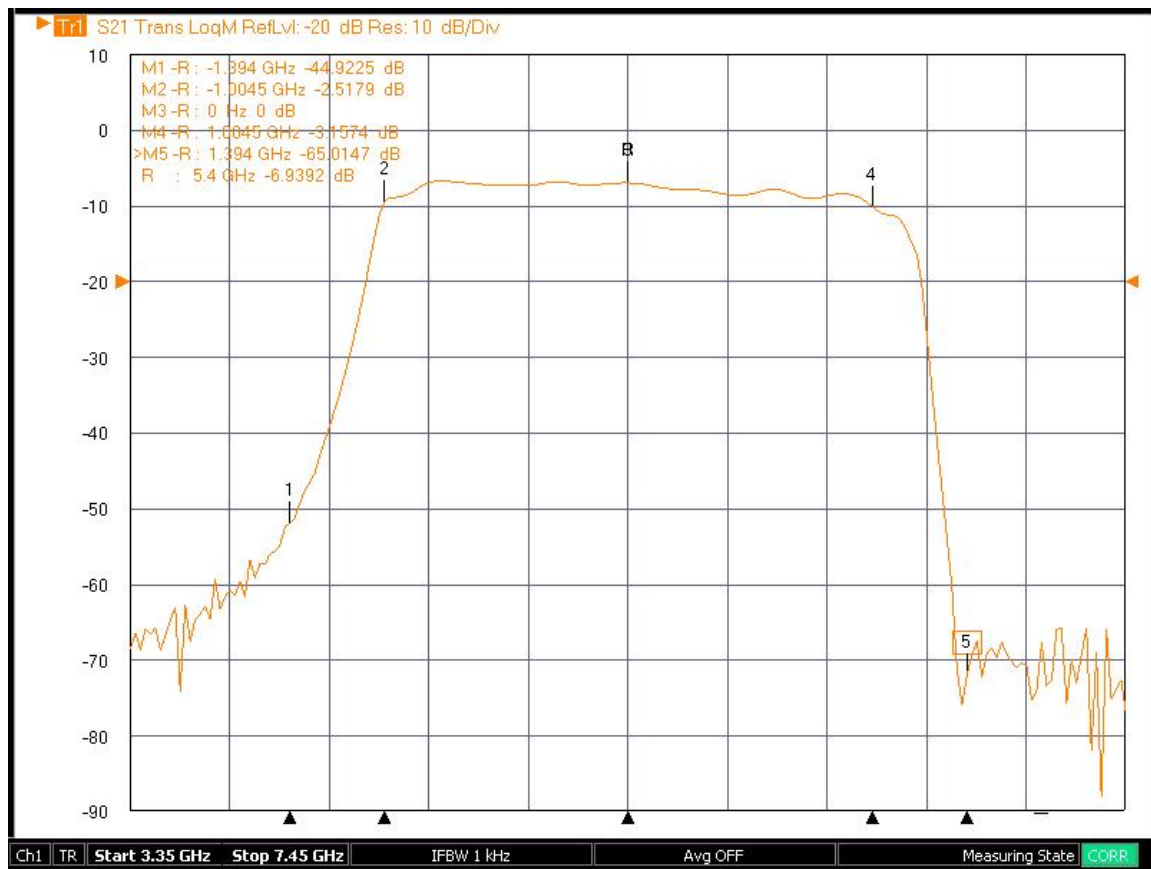




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 2 S21 Narrowband**

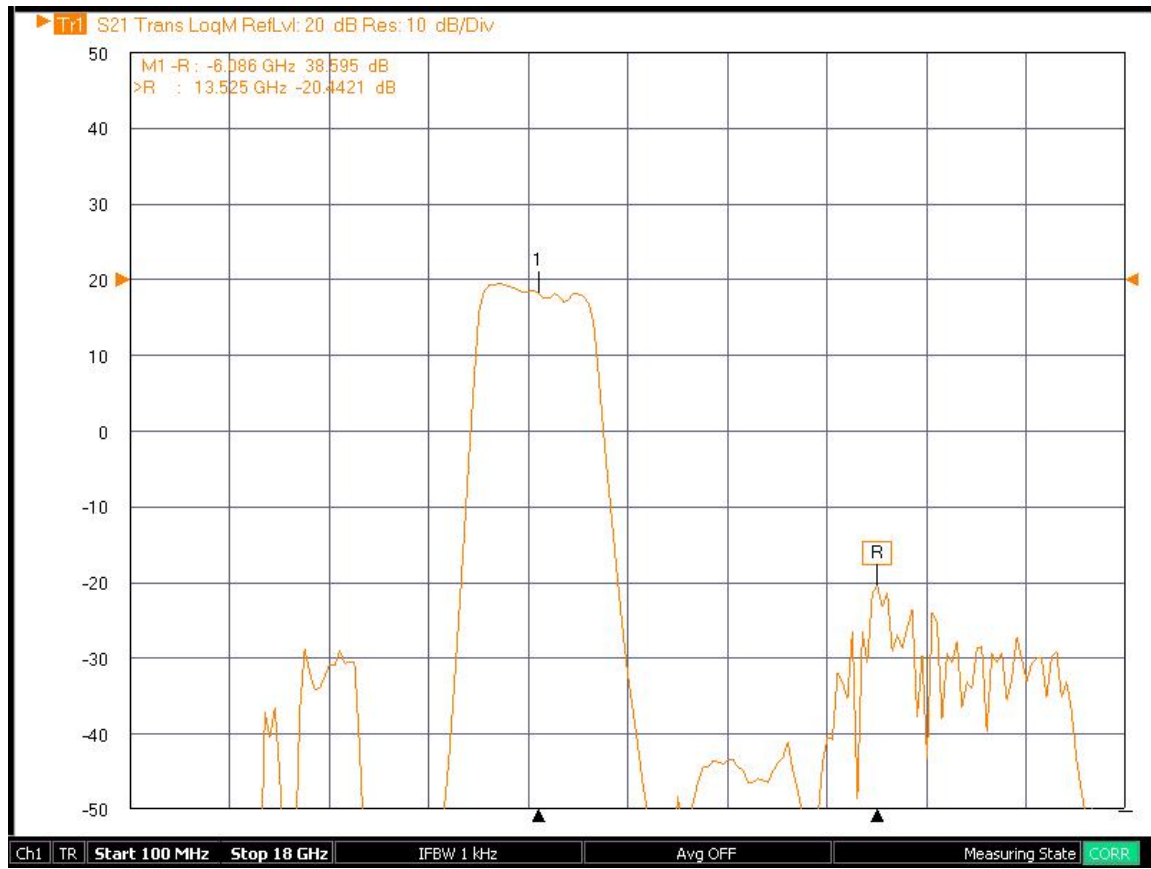




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 3 S21 Broadband**

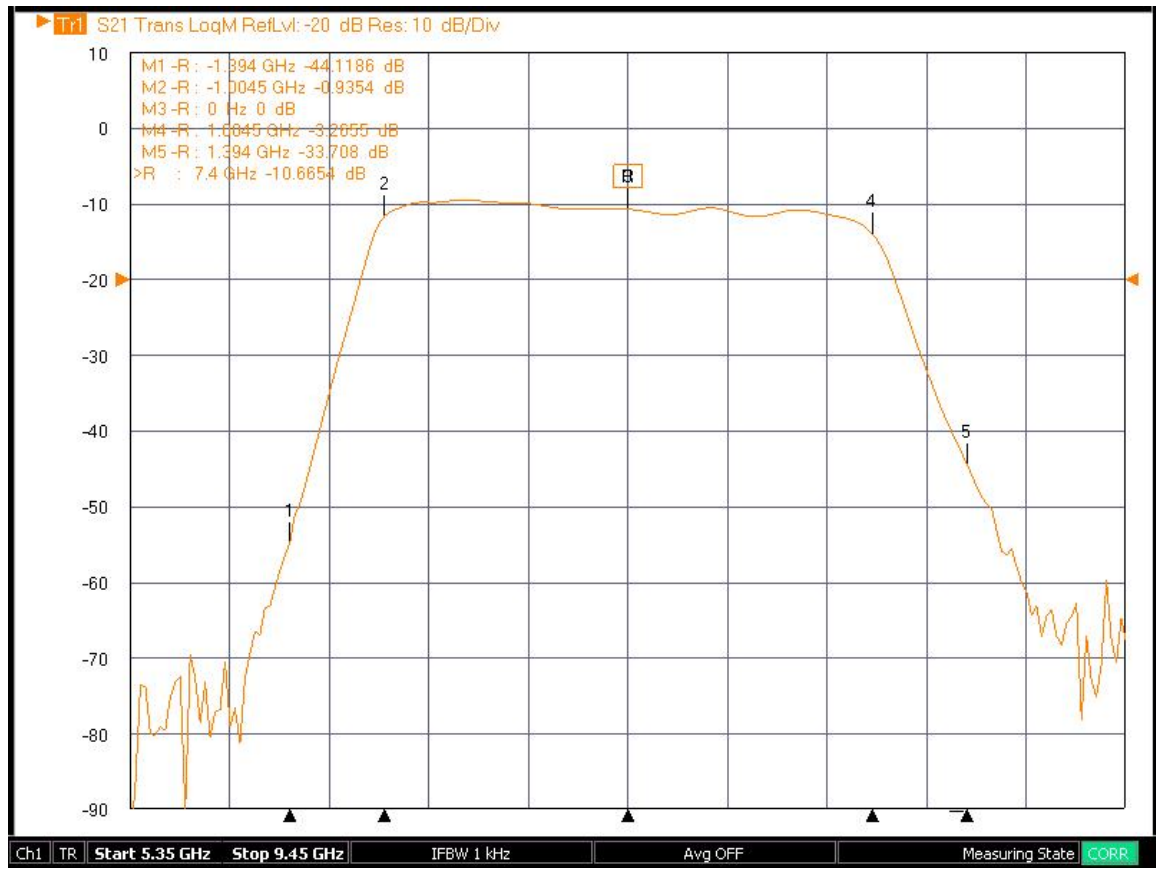




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 3 S21 Narrowband**

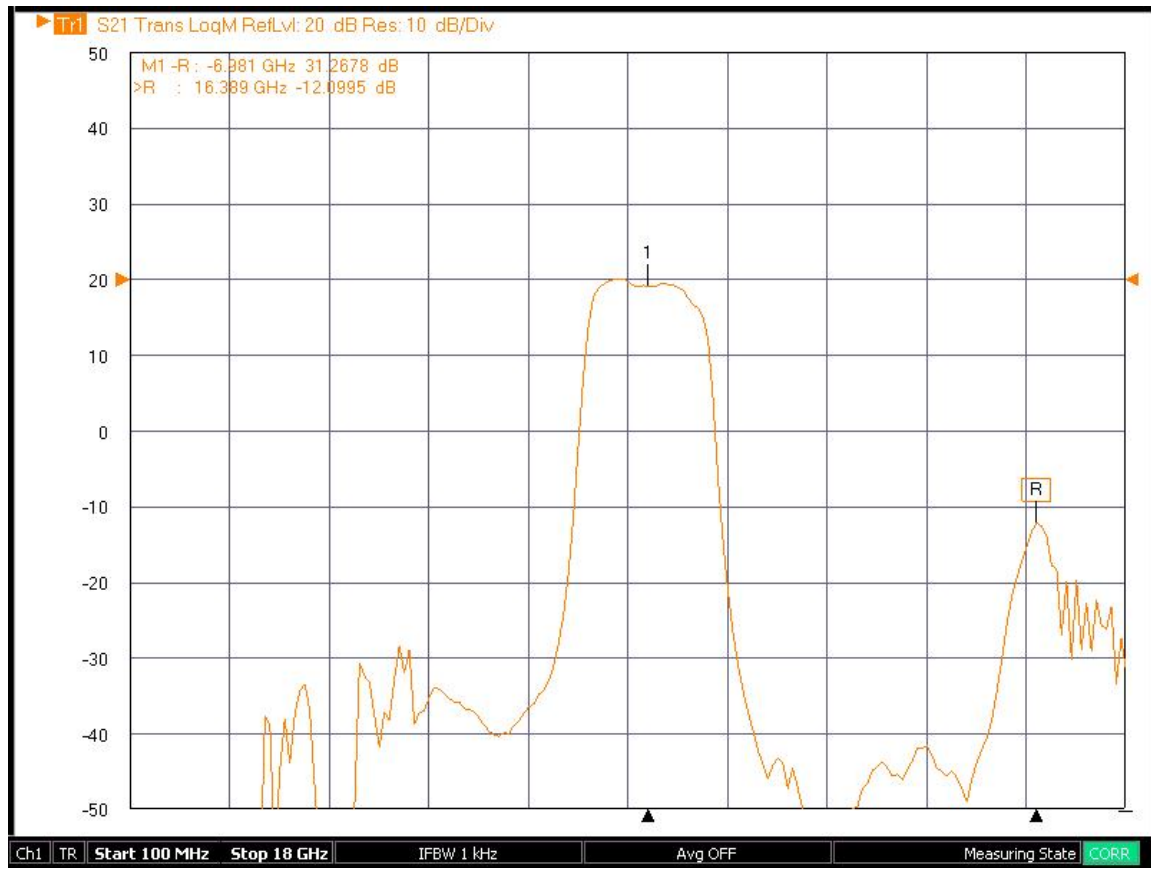




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 4 S21 Broadband**



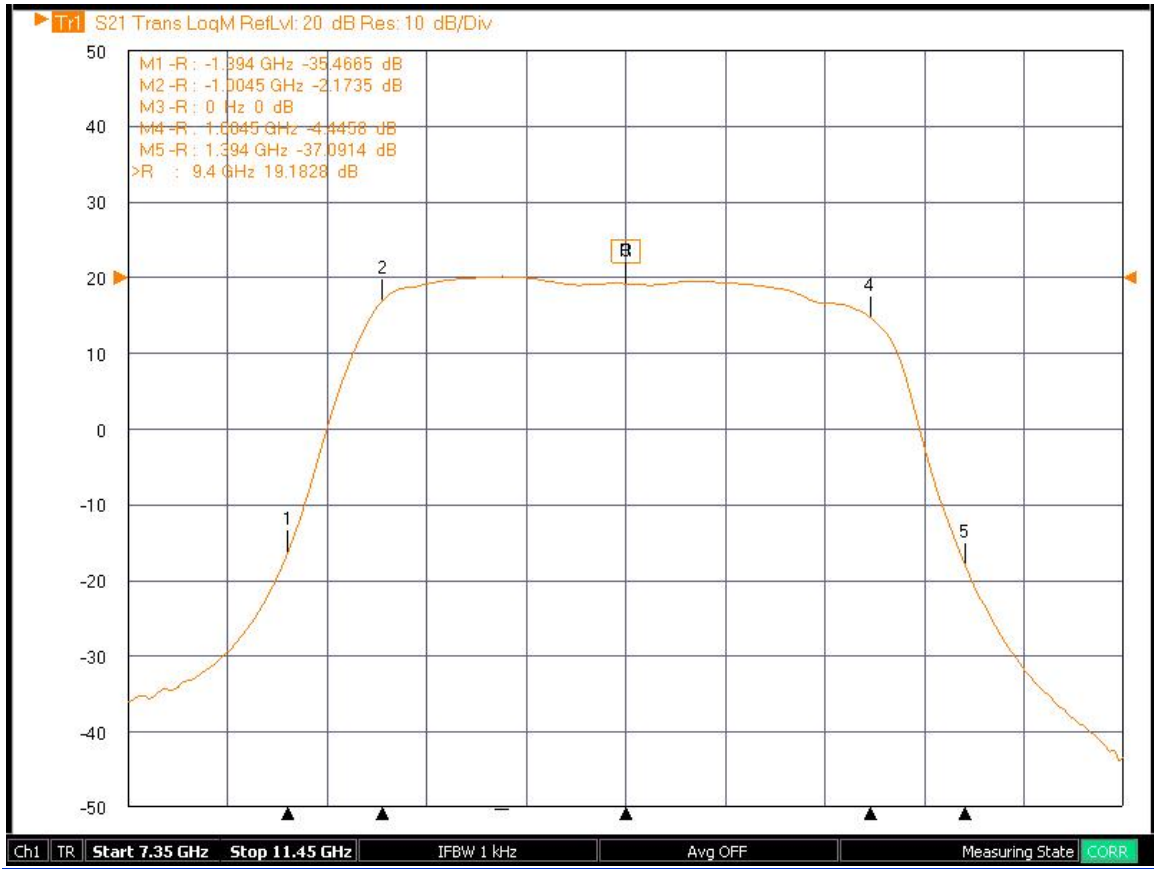




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 4 S21 Narrowband**

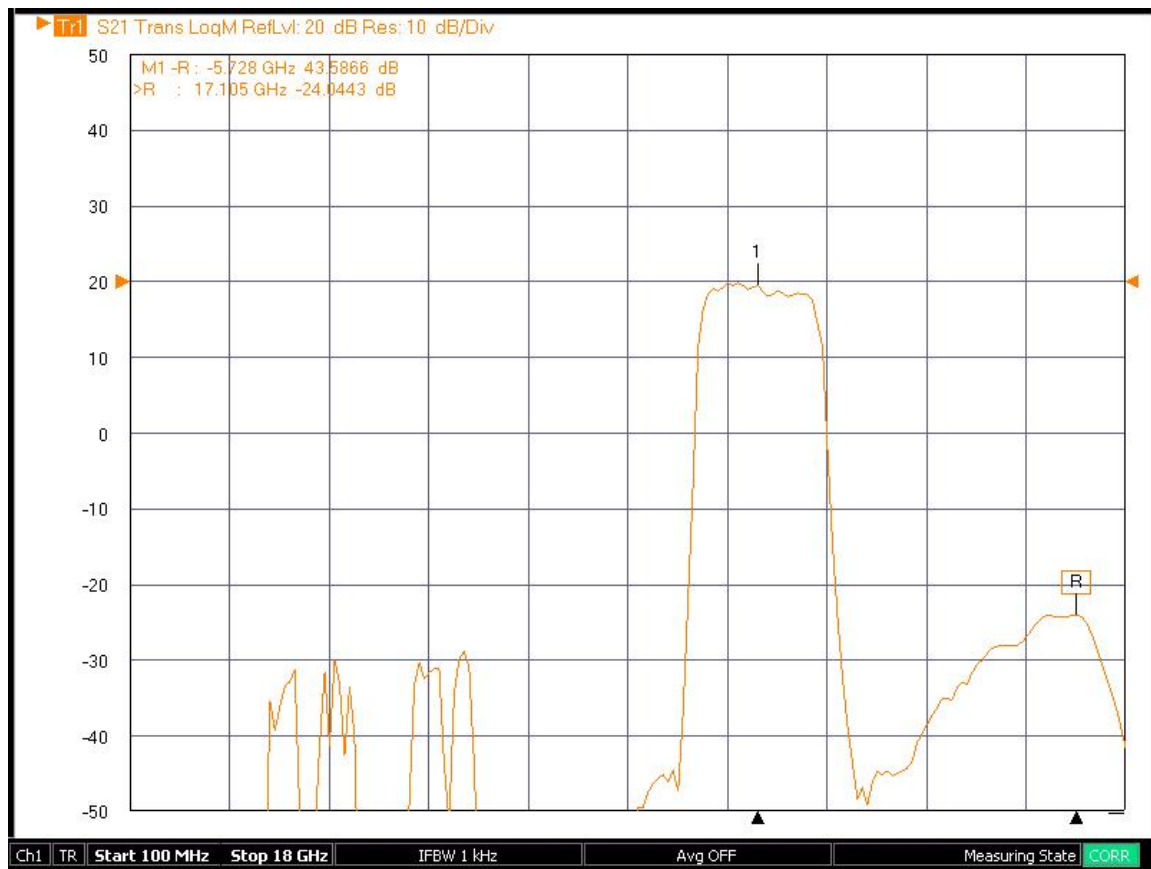




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 5 S21 Broadband**

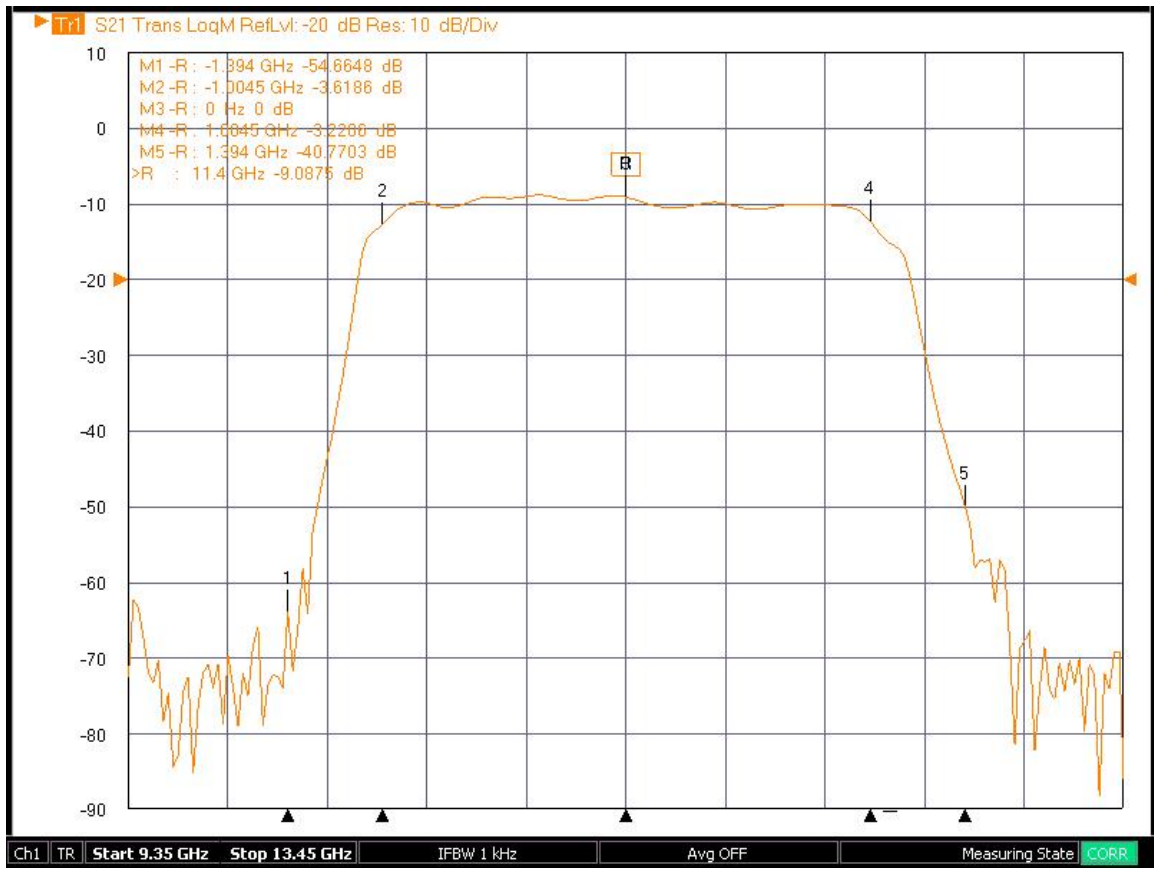




**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Channel 5 Narrowband**





**SUMMARY TEST DATA  
ON  
6SFB-100M18G-1MP-MAH**

PL15447/1427

**Table of current at each filter path**

Current Consumption		Serial Number: PL15447/1427			7/17/2014		
<b>5.0VDC</b>		<b>12VDC</b>		<b>-12VDC</b>		<b>3.3VDC</b>	<b>Condition</b>
140mA		163mA		105mA		0mA	Ch 1 BP
141mA		164mA		112		0mA	Ch 1
141mA		163mA		104		0mA	Ch 2 BP
142mA		164mA		111		0mA	Ch 2
141mA		163mA		105		0mA	Ch 3 BP
141mA		164mA		111		0mA	Ch 3
189mA		163mA		35		0mA	Ch 4 BP
189mA		164mA		42		0mA	Ch 4
186mA		163mA		34		0mA	Ch 5 BP
189mA		164mA		42		0mA	Ch 5
187mA		163mA		35		0mA	Thru BP
190mA		164mA		42		0mA	Thru



**SUMMARY TEST DATA  
ON  
PTRAN-100M18G-70-MAH**

Customer: _____	Tested By: <u>R. COMBS</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>PTRAN-100M18G-70-MAH</u>	Date: <u>07/25/14</u>
Serial No: <u>PL15496/1428</u>	Drawing No: <u>27617593</u> Rev: <u>B1</u>

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
1	J3 Input Frequency (from RX filter bank)	100MHz-18.0GHz	100MHz-18.0GHz	<b>PMI QA2</b>
2	J3 Input Power Level	-62dBm to +8dBm Typical	-62dBm to +8dBm Typ.	
3	J5 Input Frequency (IF input from backplane)	100MHz-4GHz	100MHz-4GHz	
4	J5 Input Power Level	0dBm Typ.	0dBm	
5	J7 Input Frequency (LO1 from backplane)	4GHz-20GHz	4GHz-20GHz	
6	J7 Input Power Level	+15dBm Typ.	+15dBm	
7	J8 Input Frequency (LO2 from backplane)	4GHz-20GHz	4GHz-20GHz	
8	J8 Input Power Level	+15dBm Typ.	+15dBm	
9	J2 Output Frequency (output to TX filter bank)	100MHz-18GHz	100MHz-18GHz	
10	J2 Output Power Level	-20dBm Typical (Using Variable Attenuator)	-20dBm Typ.	
11	J4 Output Frequency (IF output to backplane)	100MHz-4GHz	100MHz-4GHz	
12	J4 Output Power Level	0dBm Typ. For Limited SDLVA channels	0dBm Typ.	
13	J6 Output Frequency (output to RX filter bank)	100MHz-18GHz	100MHz-18GHz	
14	J6 Output Power Level	-20dBm Typical (Using Variable Attenuator)	-20dBm Typ.	<b>PMI QA2</b>

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)



**SUMMARY TEST DATA  
ON  
PTRAN-100M18G-70-MAH**

TEST ITEM NO:	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE	REMARKS QA/QC
15	Power Supplies	+12V, -12V, +5V, +3.3V	802 mA@+12V 512 mA@-12V 528 mA@+5V 35 mA@+3.3V	PMI QA 2

QA/QC Approval:   Date: 7/28/14