



**SUMMARY TEST DATA
ON
024142SA**

Customer: _____	Tested By: <u>E.Benson</u>
SO No: _____	Temperature: <u>+25°C</u>
Model No: <u>024142SA</u>	Date: <u>02/18/2014</u>
Serial No: <u>PL14706/1407 (DEMO)</u>	Drawing No: <u>ETD000046</u>

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS
1	Frequency Range:	18.0 to 40.0GHz	18.0GHz to 40.0GHz
2	TSS (See Graph #2)	-65 dBm Max.	-66dBm
3	Power Handling	+10dBm Max.	Pass
4	Dynamic Range:	-63dBm to +2dBm	-63dBm to +2dBm
5	Log Linearity: @+25C (See Graph #1)	± 2.0 dB Max.	+1.56dB -1.77dB
6	Log Slope: (See Graph #1)	25 mV/dB Nom.	25.47 mV/dB
7	Log Slope Variation: (See Graph #1)	±2.0 mV/dB Max.	±0.30 mV/dB
8	Frequency Flatness: @+25C (See Graph #1)	±2.5dB Max.	±2.20dB
9	Pulse Width Range:	30ns to CW	Pass
10	Rise Time: (See Graph #3)	11ns Max. (8 ns Typ.)	5.71ns
11	Recovery Time: (See Graph #4)	60ns Max. (40 ns Typ.)	31.4ns
12	Delay Time: (See Graph #5)	15ns Max.	8.736ns
13	Input VSWR: (See Graph #6)	2.5:1 Max.	2.342:1
14	Power Supply	+12V @ 400mA -12V @ 200mA	+443mA -189mA



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Model: 024142SA Serial Number: PL14706

Graph #1 Log Transfer vs Frequency @+25C

LOG TRANSFER WITH FREQUENCY @ +25 °C
MODEL: 024142SA
SERIAL NO: PL14706
TESTED BY: E.Benson

Wednesday, February 19, 2014



PLANAR MONOLITHICS INDUSTRIES
4921 Robert J. Mathews Parkway Suit 1
El Dorado Hills, CA 95762
TEL: 916-542-1401 FAX: 916-265-2597
EMAIL: SALES@PMI-RF.COM

GRAPH #1

Frequency	INTERCEPT (mV)	SLOPE (mV/dB)	1786	1792	1766	1733	1781	RF Input Power (dBm)	Measured Value (mV)	Error(dB)									
18 GHz	1786	25.7	180	289	426	574	714	789	894	1034	1177	1315	1448	1582	1722	1868	Measured Value (mV)	MAX	MIN
			15	-4	4	23	35	-19	-43	-31	-17	-7	-3	2	14	31	Error (mV)		
			0.60	-0.17	0.16	0.91	1.35	-0.73	-1.65	-1.21	-0.65	-0.29	-0.12	0.09	0.53	1.20	LINEARITY ERROR (dB)	1.35	-1.65
			0.30	-0.34	0.14	1.06	1.66	-0.34	-1.14	-0.54	0.18	0.70	1.02	1.38	1.98	2.82	LOGGING ACCURACY (dB)	2.82	-1.14
23.5 GHz	1792	26.3	164	267	403	553	699	777	879	1017	1160	1300	1438	1595	1737	1886	Measured Value (mV)	MAX	MIN
			27	-2	3	22	36	-17	-46	-40	-28	-19	-13	13	23	41	Error (mV)		
			1.02	-0.06	0.12	0.83	1.38	-0.65	-1.77	-1.51	-1.07	-0.74	-0.49	0.49	0.89	1.56	LINEARITY ERROR (dB)	1.56	-1.77
			-0.34	-1.22	-0.78	0.22	1.06	-0.82	-1.74	-1.22	-0.50	0.10	0.62	1.90	2.58	3.54	LOGGING ACCURACY (dB)	3.54	-1.74
29 GHz	1766	25.5	179	289	417	548	665	780	897	1037	1178	1319	1435	1563	1689	1835	Measured Value (mV)	MAX	MIN
			20	3	3	7	-4	-17	-27	-15	-1	12	0	1	-1	18	Error (mV)		
			0.80	0.11	0.13	0.26	-0.15	-0.65	-1.06	-0.58	-0.05	0.47	0.02	0.04	-0.03	0.69	LINEARITY ERROR (dB)	0.80	-1.06
			0.26	-0.34	-0.22	0.02	-0.30	-0.70	-1.02	-0.42	0.22	0.86	0.50	0.62	0.66	1.50	LOGGING ACCURACY (dB)	1.50	-1.02
34.5 GHz	1733	25	155	253	386	525	670	816	935	1065	1190	1304	1406	1508	1627	1768	Measured Value (mV)	MAX	MIN
			-6	-33	-25	-10	10	31	25	31	31	20	-3	-25	-31	-15	Error (mV)		
			-0.24	-1.31	-0.98	-0.41	0.40	1.25	1.02	1.23	1.24	0.80	-0.11	-1.02	-1.25	-0.60	LINEARITY ERROR (dB)	1.25	-1.31
			-0.70	-1.78	-1.46	-0.90	-0.10	0.74	0.50	0.70	0.70	0.26	-0.66	-1.58	-1.82	-1.18	LOGGING ACCURACY (dB)	0.74	-1.82
40 GHz	1781	24.9	211	336	467	591	706	822	951	1090	1221	1342	1452	1574	1696	1839	Measured Value (mV)	MAX	MIN
			-1	-1	6	5	-4	-13	-8	6	13	10	-5	-7	-10	9	Error (mV)		
			-0.05	-0.03	0.23	0.21	-0.17	-0.51	-0.32	0.26	0.52	0.38	-0.20	-0.30	-0.39	0.35	LINEARITY ERROR (dB)	0.52	-0.51
			1.54	1.54	1.78	1.74	1.34	0.98	1.14	1.70	1.94	1.78	1.18	1.06	0.94	1.66	LOGGING ACCURACY (dB)	1.94	0.94
Flatness +/- dB			1.10	1.60	1.60	1.30	1.00	0.90	1.40	1.40	1.20	0.80	0.90	1.70	2.20	2.30			
Max Video Output Volts			0.21	0.34	0.47	0.59	0.71	0.82	0.95	1.09	1.22	1.34	1.45	1.60	1.74	1.89			
Min Video Output Volts			0.16	0.25	0.39	0.53	0.67	0.78	0.88	1.02	1.16	1.30	1.41	1.51	1.63	1.77			

Log Slope Variation: ± mV/dB 25.47

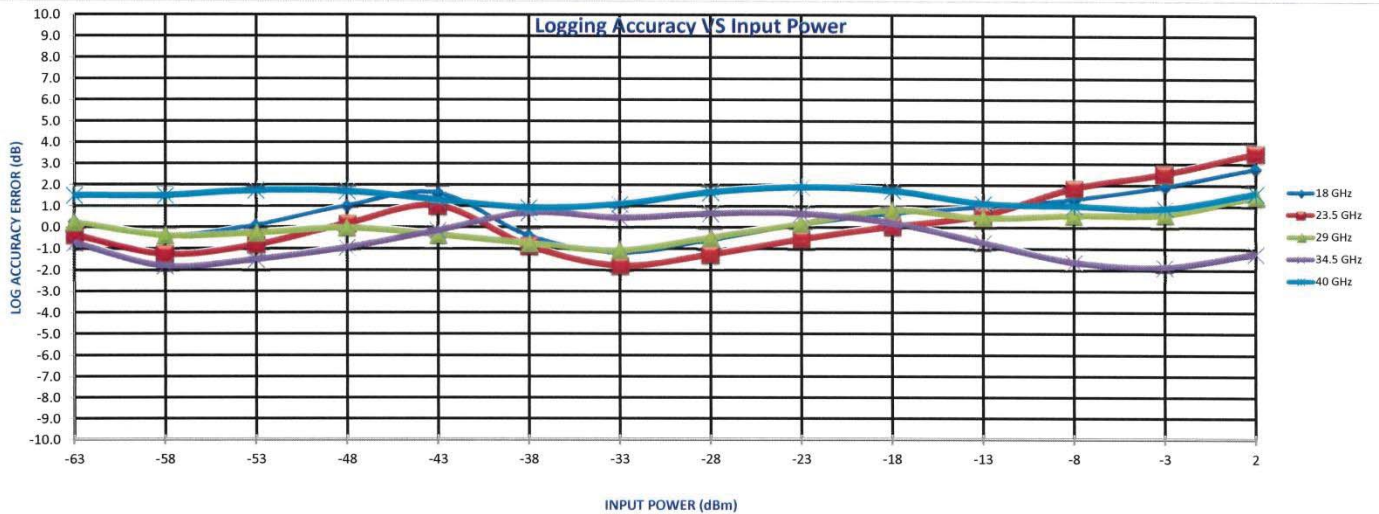
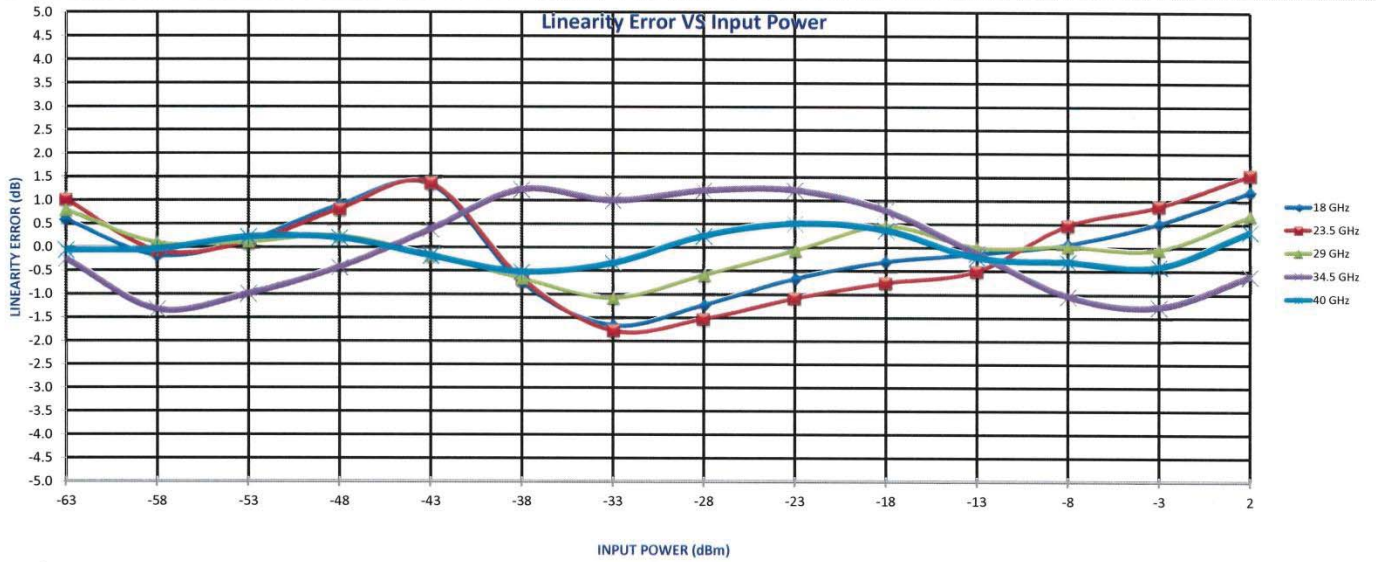


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**Graph #1 (cont.)
Log Transfer vs Frequency @+25C**

LOG TRANSFER WITH FREQUENCY @ +25 °C
MODEL: 024142SA
TESTED BY: E.Benson
SERIAL NO: PL14706



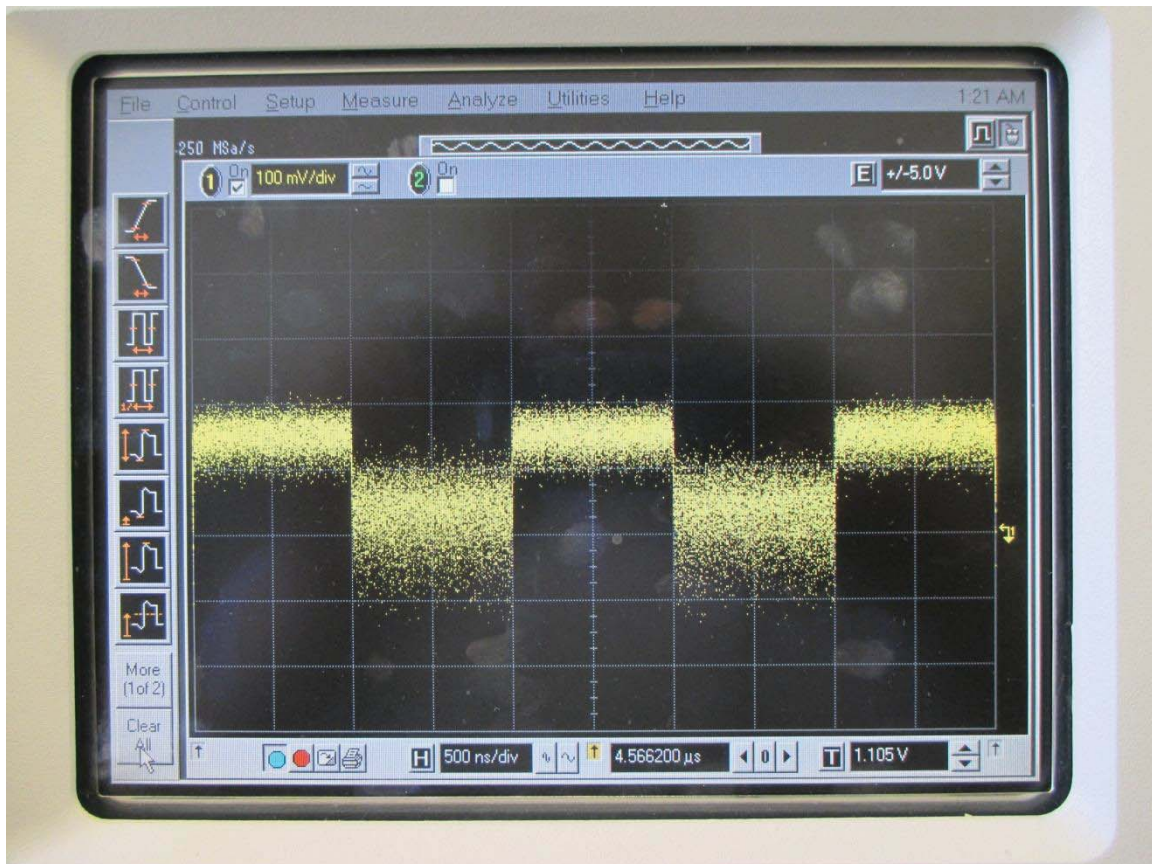
4921 Robert J. Mathews Pkwy Suite 1 Ph: (916)542-1401 Fax: (916)265-2597
Email: sales@pmi-rf.com



**SUMMARY TEST DATA
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Model: 024142SA Serial Number: PL14434

Graph #2



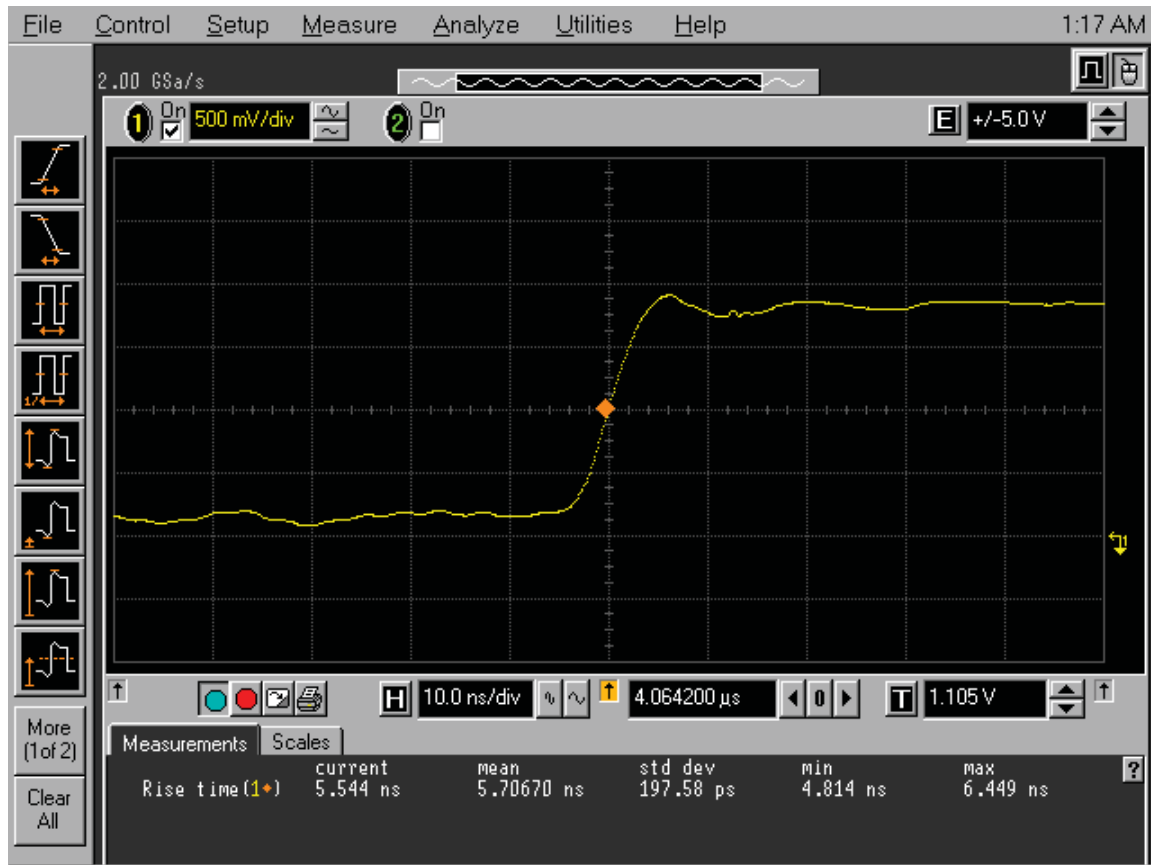
TSS-66dBm @+25C



**SUMMARY TEST DATA
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Graph#3



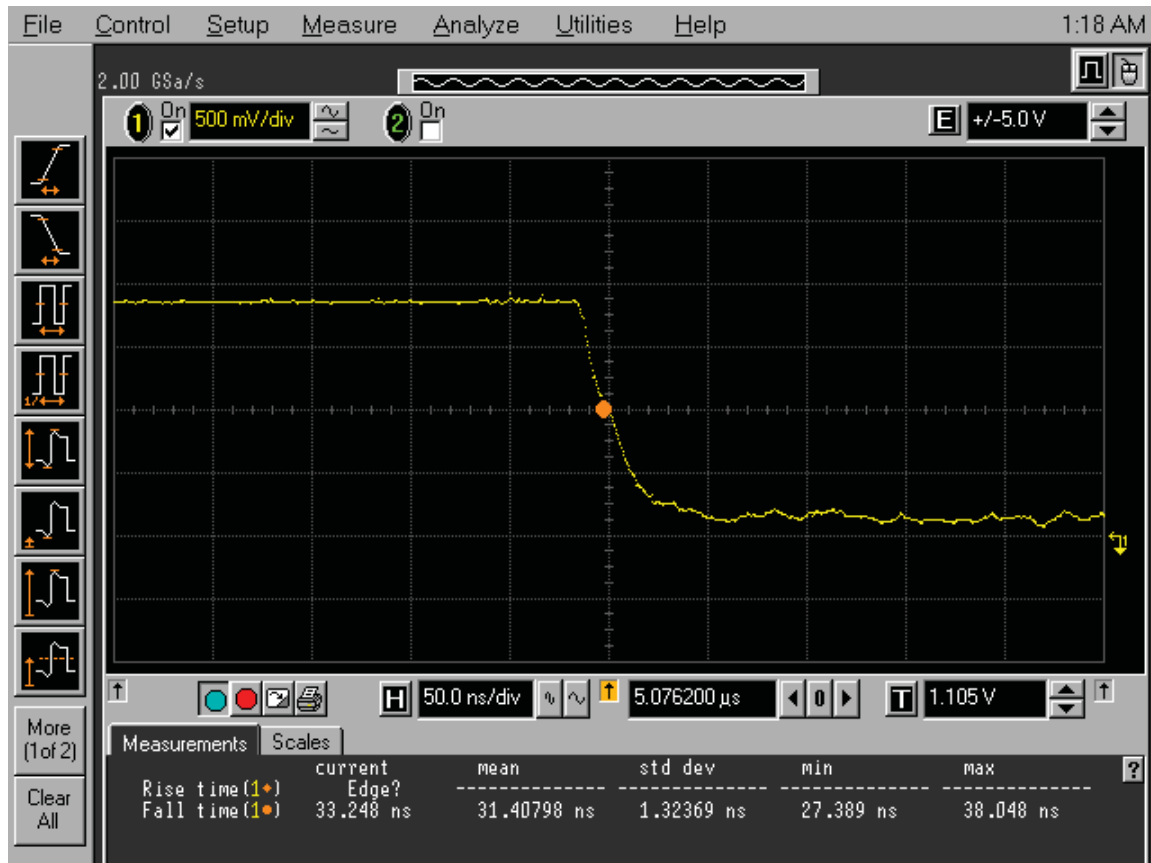
Rise Time 5.71ns @+25C & +2dBm



**SUMMARY TEST DATA
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Graph#4



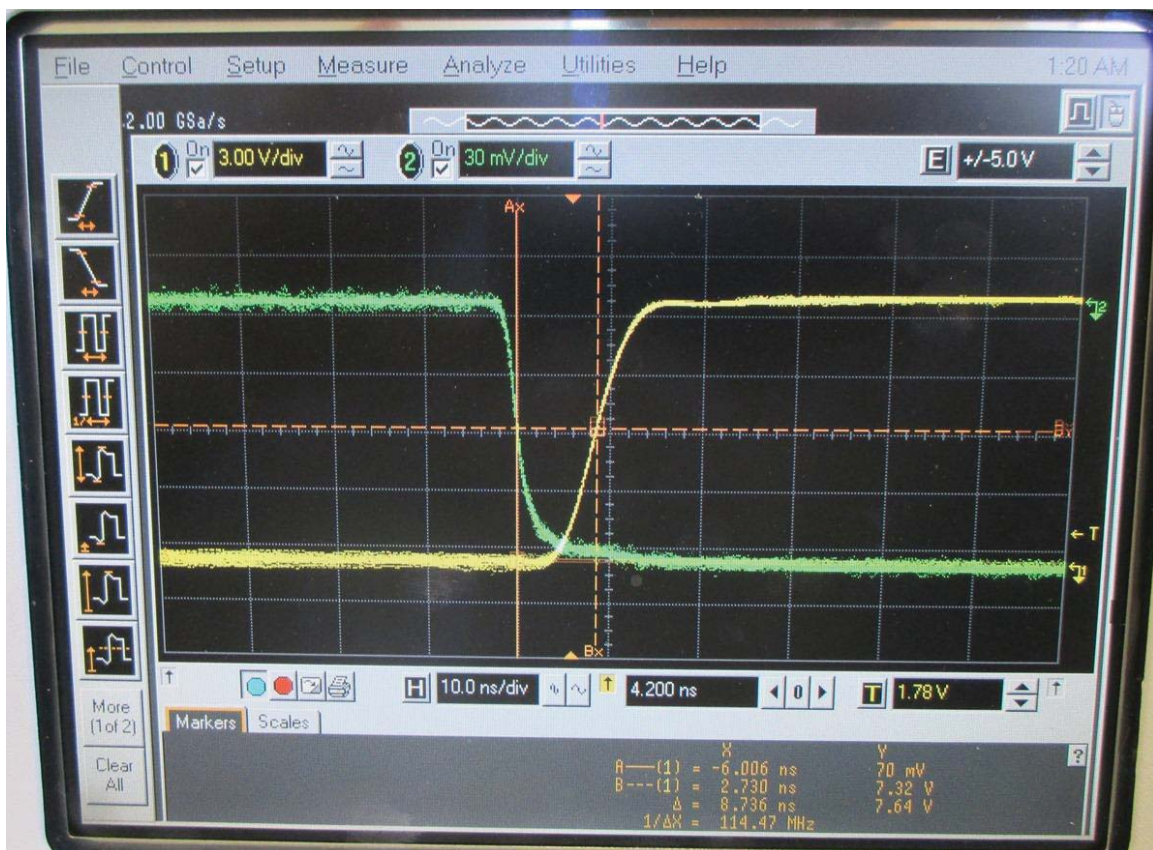
Recovery Time 31.4ns @+25C & +2dBm



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Graph #5



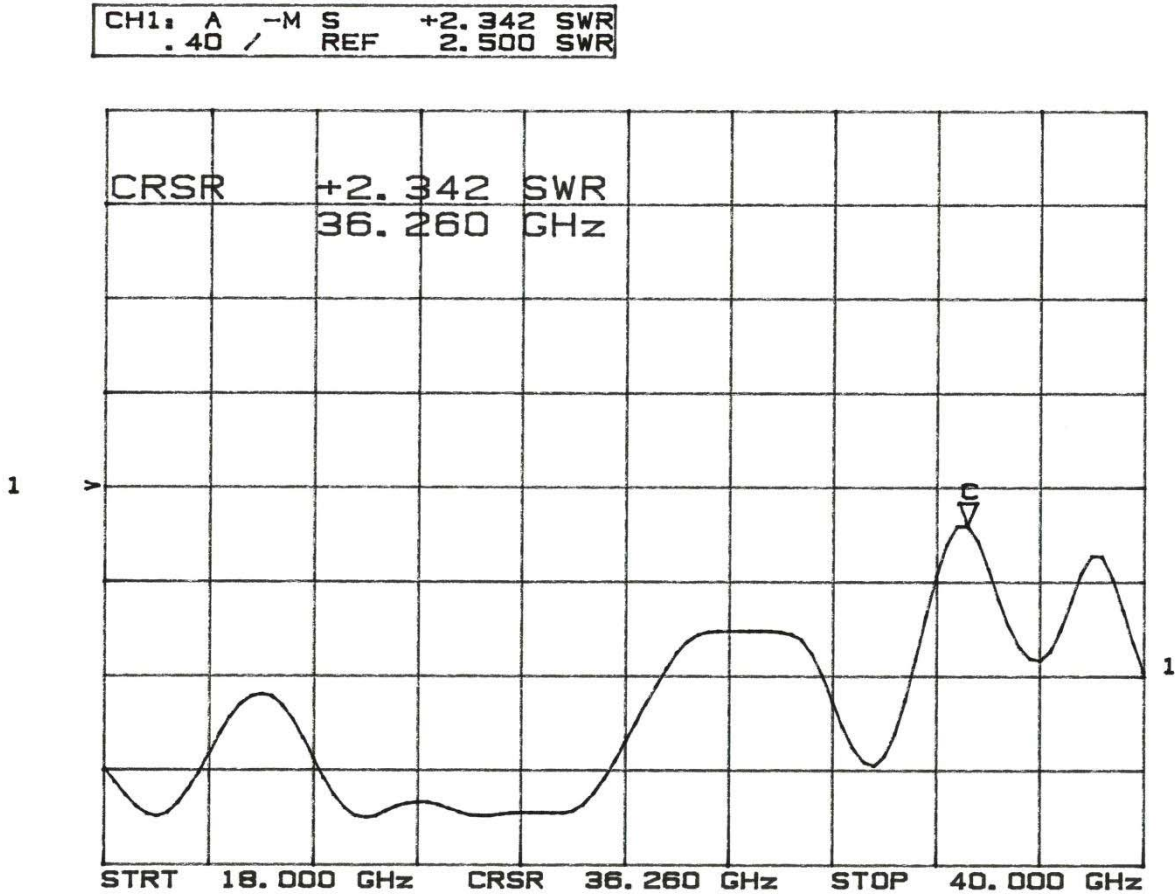
Delay Time 8.736ns @+25C & +2dBm



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Graph #6



VSWR 2.282:1 @+25C & -20dBm