



**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>12/30/2013</u>
Serial No: <u>PL14434/1351 (production)</u>	Drawing No: <u>ETD000046</u>

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	18.0 to 40.0GHz	18.0GHz to 40.0GHz	
2	TSS (See Graph #2)	-65 dBm Max.	-67dBm	
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.	+1.53dB -1.37dB	
6	Log Slope: (See Graph #1)	25 mV/dB Nom.	24.72 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.)	5.85ns	
11	Recovery Time: (See Graph #4)	60ns Max. (40 ns Typ.)	34.0ns	
12	Delay Time: (See Graph #5)	15ns Max.	8.736ns	
13	Input VSWR: (See Graph #6)	2.5:1 Max.	2.282:1	
14	Power Supply	+12V @ 400mA -12V @ 200mA	+373mA -180mA	

QA/QC Approval: _____ Date: _____



**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

Graph #1
Log Transfer vs Frequency @+25C

LOG TRANSFER WITH FREQUENCY @ +25 °C
MODEL: 024142SA
SERIAL NO: PL14434
TESTED BY: E.Benson

Monday, December 30, 2013



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		
18 GHz	INTERCEPT (mV)	1696
	SLOPE (mV/dB)	24.5

23.5 GHz	INTERCEPT (mV)	1736
	SLOPE (mV/dB)	24.7

29 GHz	INTERCEPT (mV)	1753
	SLOPE (mV/dB)	25.1

34.5 GHz	INTERCEPT (mV)	1765
	SLOPE (mV/dB)	24.6

40 GHz	INTERCEPT (mV)	1744
	SLOPE (mV/dB)	24.7

Flatness +/- dB	
Max Video Output Volts	
Min Video Output Volts	

	-63	-58	-53	-48	-43	-38	-33	-28	-23	-18	-13	-8	-3	2
146	242	364	508	680	788	909	1034	1158	1283	1375	1475	1598	1723	
-7	-33	-34	-12	37	23	21	24	25	28	-3	-25	-25	-22	
-0.27	-1.35	-1.37	-0.49	1.53	0.94	0.88	0.98	1.04	1.14	-0.10	-1.02	-1.00	-0.90	
-1.06	-2.22	-2.34	-1.58	0.30	-0.38	-0.54	-0.54	-0.58	-0.58	-1.90	-2.90	-2.98	-2.98	
189	301	425	563	683	785	905	1030	1154	1305	1419	1539	1666	1792	
9	-2	-2	13	9	-12	-16	-14	-14	14	4	0	4	6	
0.38	-0.08	-0.07	0.52	0.38	-0.50	-0.64	-0.58	-0.56	0.55	0.16	0.02	0.16	0.26	
0.66	0.14	0.10	0.62	0.42	-0.50	-0.70	-0.70	-0.74	0.30	-0.14	-0.34	-0.26	-0.22	
193	305	423	545	679	790	911	1030	1152	1306	1432	1560	1688	1816	
21	7	0	-4	5	-10	-14	-21	-24	4	5	7	10	13	
0.83	0.29	-0.01	-0.15	0.19	-0.38	-0.56	-0.82	-0.96	0.18	0.20	0.30	0.40	0.50	
0.82	0.30	0.02	-0.10	0.26	-0.30	-0.46	-0.70	-0.82	0.34	0.38	0.50	0.62	0.74	
222	338	465	600	706	815	934	1052	1178	1324	1450	1570	1699	1830	
10	3	6	18	1	-13	-17	-23	-20	3	6	2	8	16	
0.40	0.11	0.26	0.74	0.04	-0.54	-0.71	-0.92	-0.81	0.12	0.23	0.10	0.33	0.65	
1.98	1.62	1.70	2.10	1.34	0.70	0.46	0.18	0.22	1.06	1.10	0.90	1.06	1.30	
182	292	413	557	700	832	954	1071	1185	1303	1415	1535	1663	1777	
-8	-21	-23	-3	17	26	24	18	9	3	-8	-11	-7	-16	
-0.32	-0.86	-0.95	-0.11	0.69	1.04	0.99	0.73	0.35	0.14	-0.32	-0.46	-0.27	-0.65	
0.38	-0.22	-0.38	0.38	1.10	1.38	1.26	0.94	0.50	0.22	-0.30	-0.50	-0.38	-0.82	
1.50	1.90	2.00	1.90	0.50	1.00	1.00	0.80	0.70	0.80	1.50	1.90	2.00	2.20	
0.22	0.34	0.47	0.60	0.71	0.83	0.95	1.07	1.19	1.32	1.45	1.57	1.70	1.83	
0.15	0.24	0.36	0.51	0.68	0.79	0.91	1.03	1.15	1.28	1.38	1.48	1.60	1.72	

Nominal Log Slope (mV/dB) :	24.72
Log Slope Variation (± mV/dB) :	0.30

RF Input Power (dBm)

Measured Value (mV)	Error(dB)	
Error (mV)	MAX	MIN
LINEARITY ERROR (dB)	1.53	-1.37
LOGGING ACCURACY (dB)	0.30	-2.98

Measured Value (mV)	Error(dB)	
Error (mV)	MAX	MIN
LINEARITY ERROR (dB)	0.55	-0.64
LOGGING ACCURACY (dB)	0.66	-0.74

Measured Value (mV)	Error(dB)	
Error (mV)	MAX	MIN
LINEARITY ERROR (dB)	0.83	-0.96
LOGGING ACCURACY (dB)	0.82	-0.82

Measured Value (mV)	Error(dB)	
Error (mV)	MAX	MIN
LINEARITY ERROR (dB)	0.74	-0.92
LOGGING ACCURACY (dB)	2.10	0.18

Measured Value (mV)	Error(dB)	
Error (mV)	MAX	MIN
LINEARITY ERROR (dB)	1.04	-0.95
LOGGING ACCURACY (dB)	1.38	-0.82

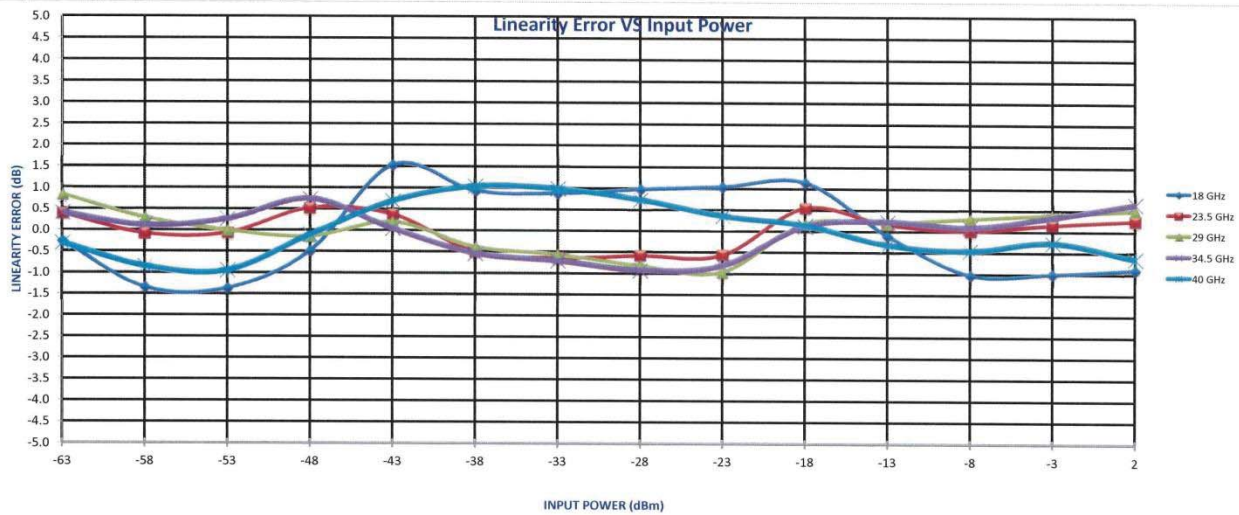


**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

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

LOG TRANSFER WITH FREQUENCY @ +25 °C
MODEL: 024142SA
TESTED BY: E.Benson
SERIAL NO: PL14434

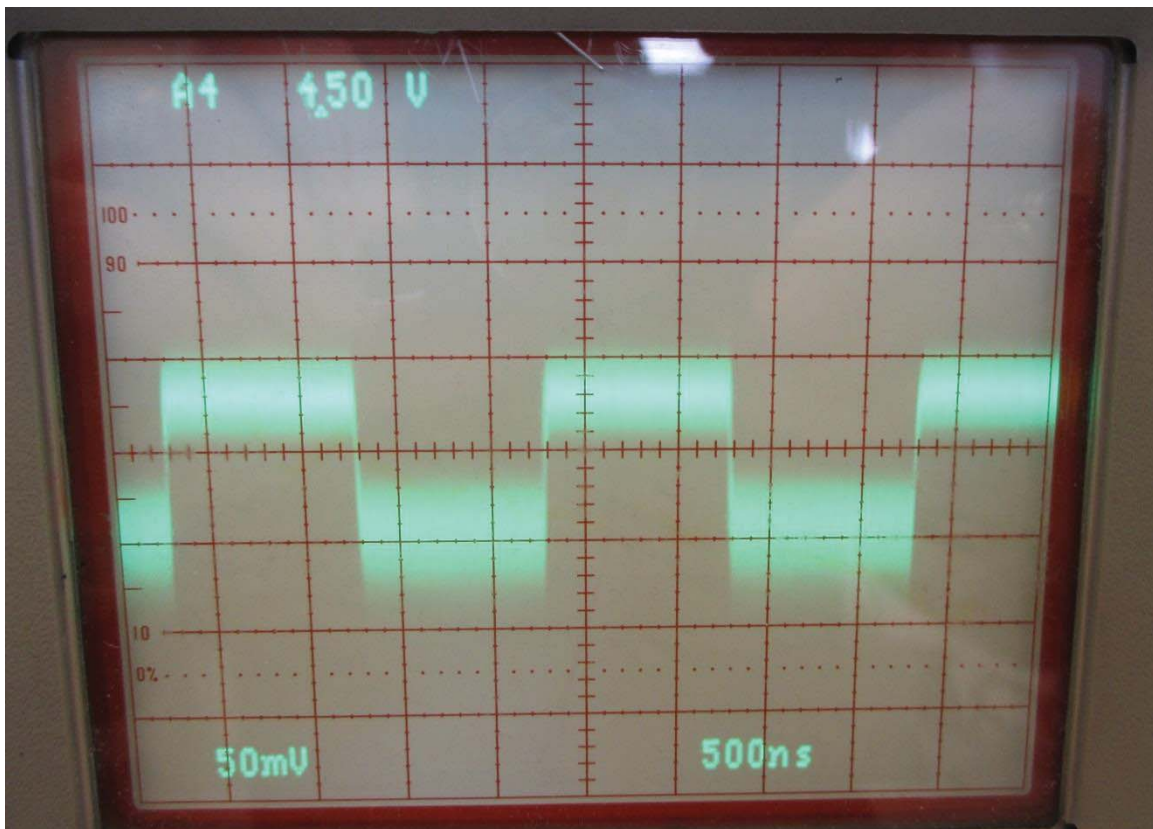




**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

Graph #2



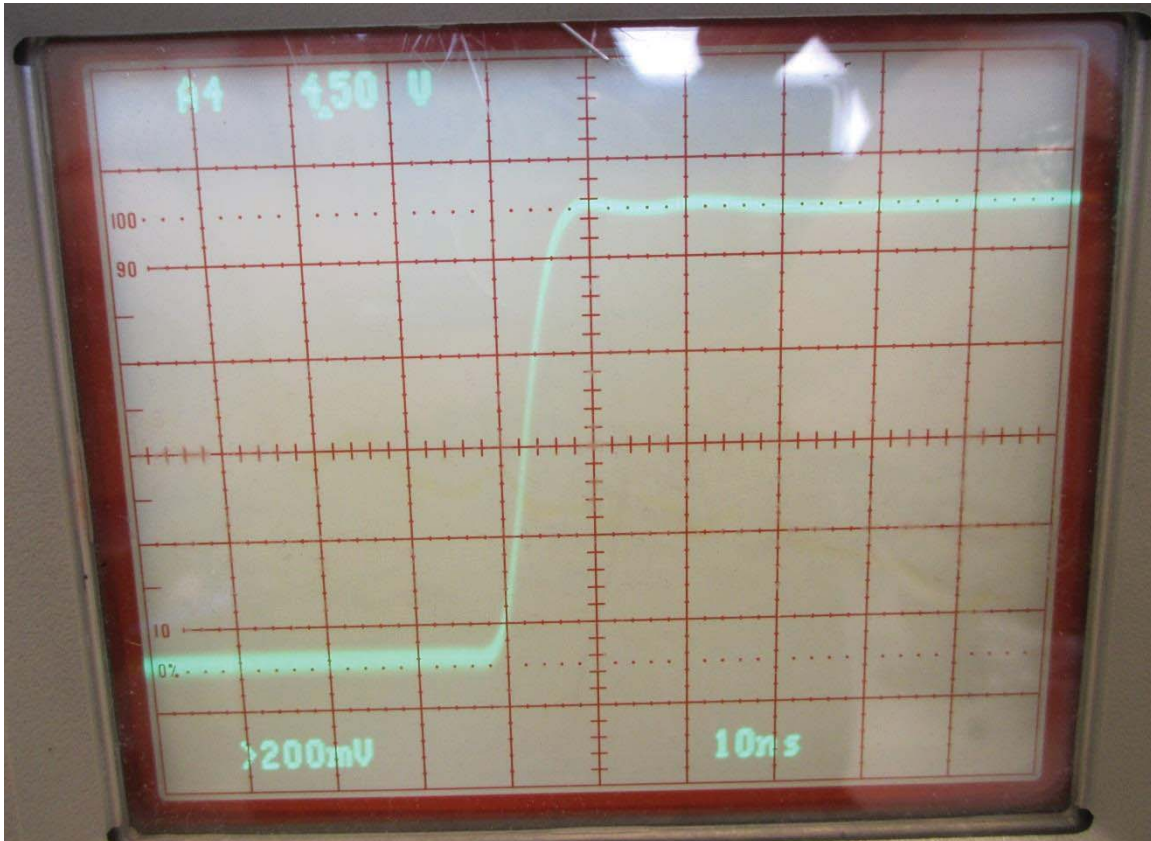
TSS-67dBm @+25C



**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

Graph#3



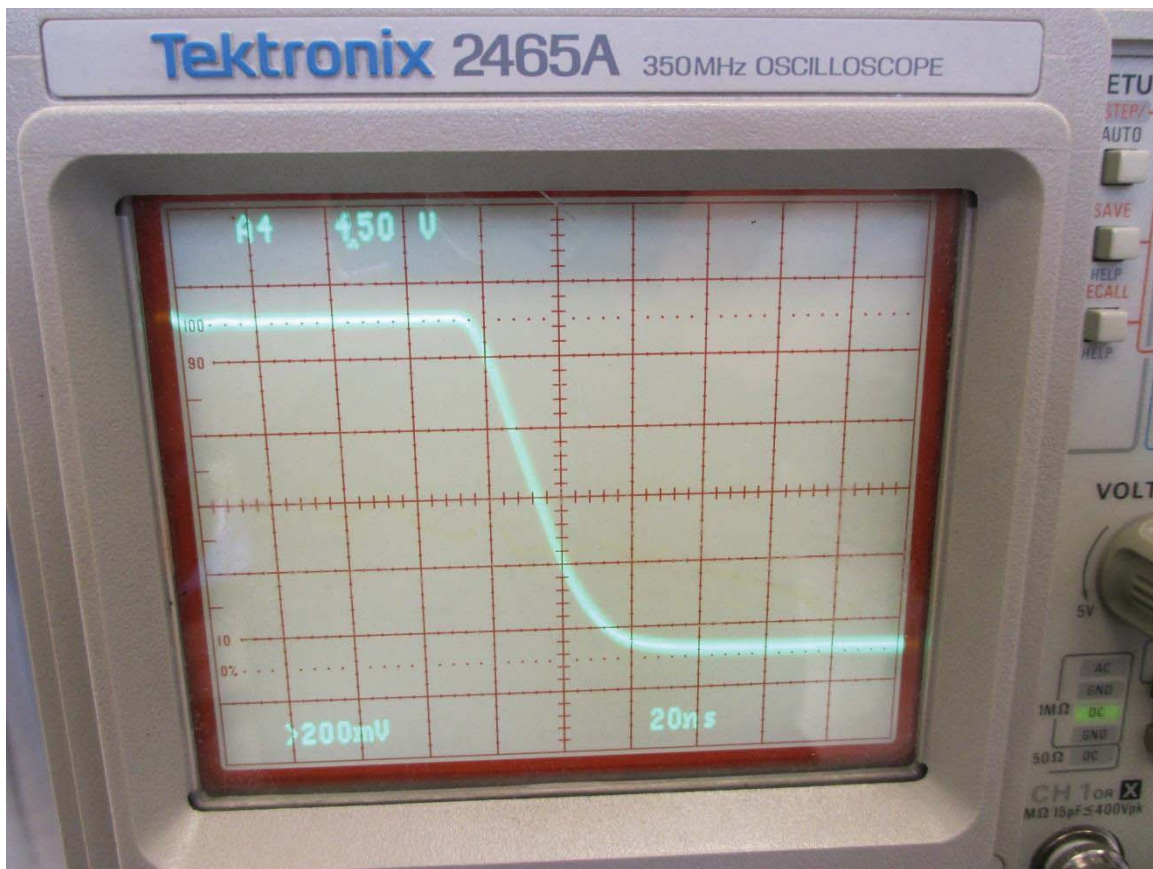
Rise Time 5.85ns @+25C & +2dBm



**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

Graph#4



Recovery Time 34.0ns @+25C & +2dBm

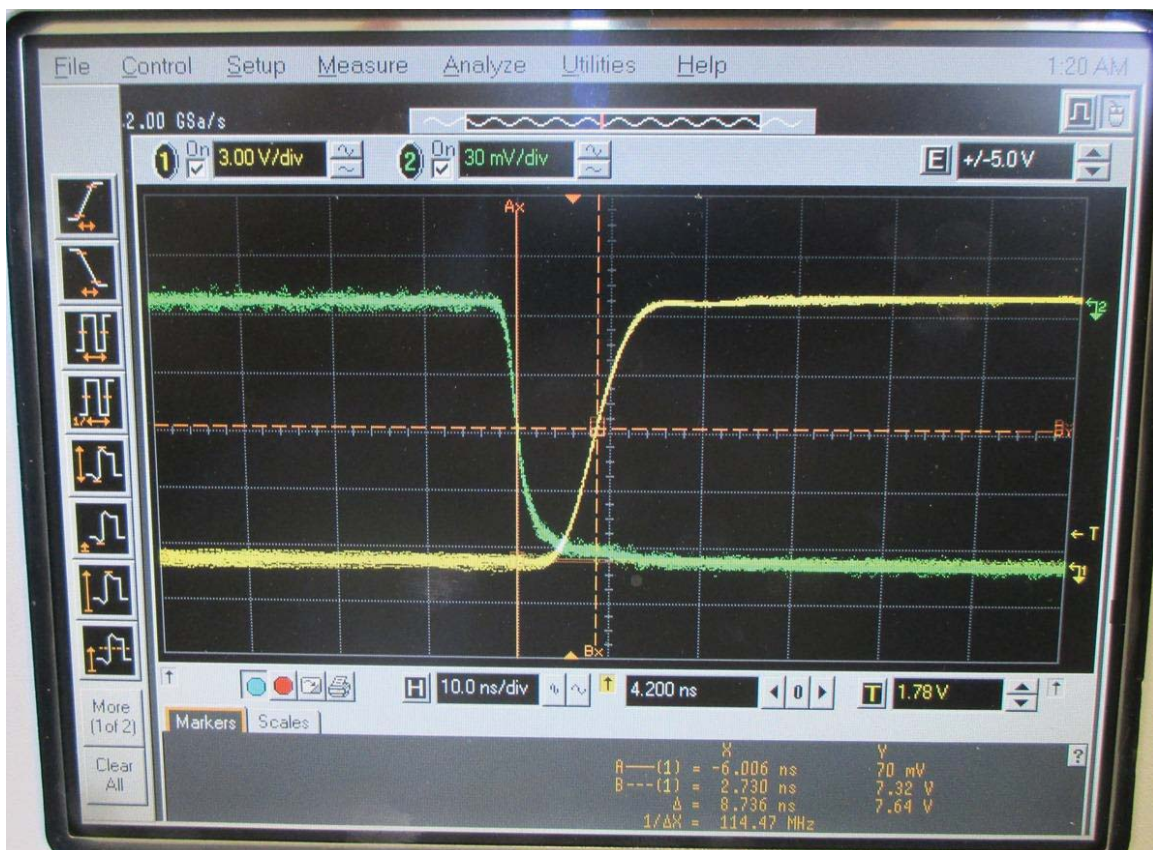
4921 Robert J. Mathews Pkwy Suite 1 Ph: (916)542-1401 Fax: (916)265-2597
Email: sales@pmi-rf.com



**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

Graph #5



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

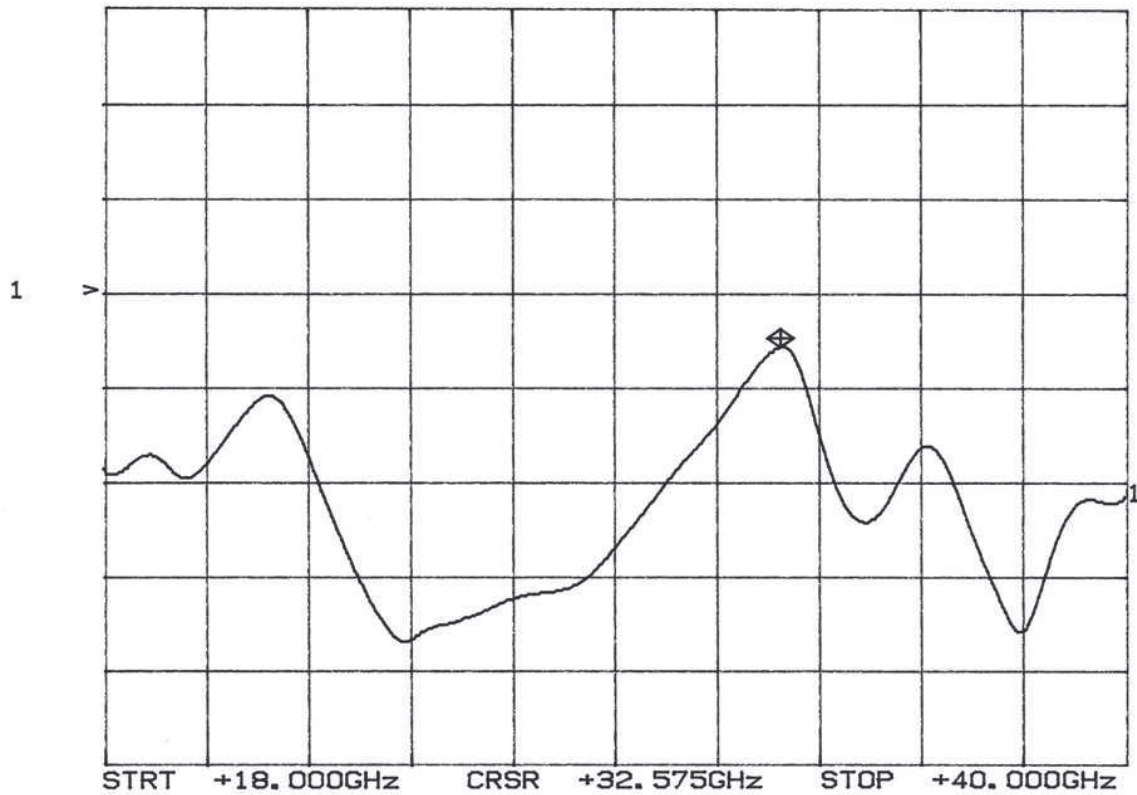


**SUMMARY TEST DATA
ON
024142SA**

Model: 024142SA Serial Number: PL14434

Graph #6

CH1: B -M S 2.282 SWR
.40 / REF 2.500 SWR



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