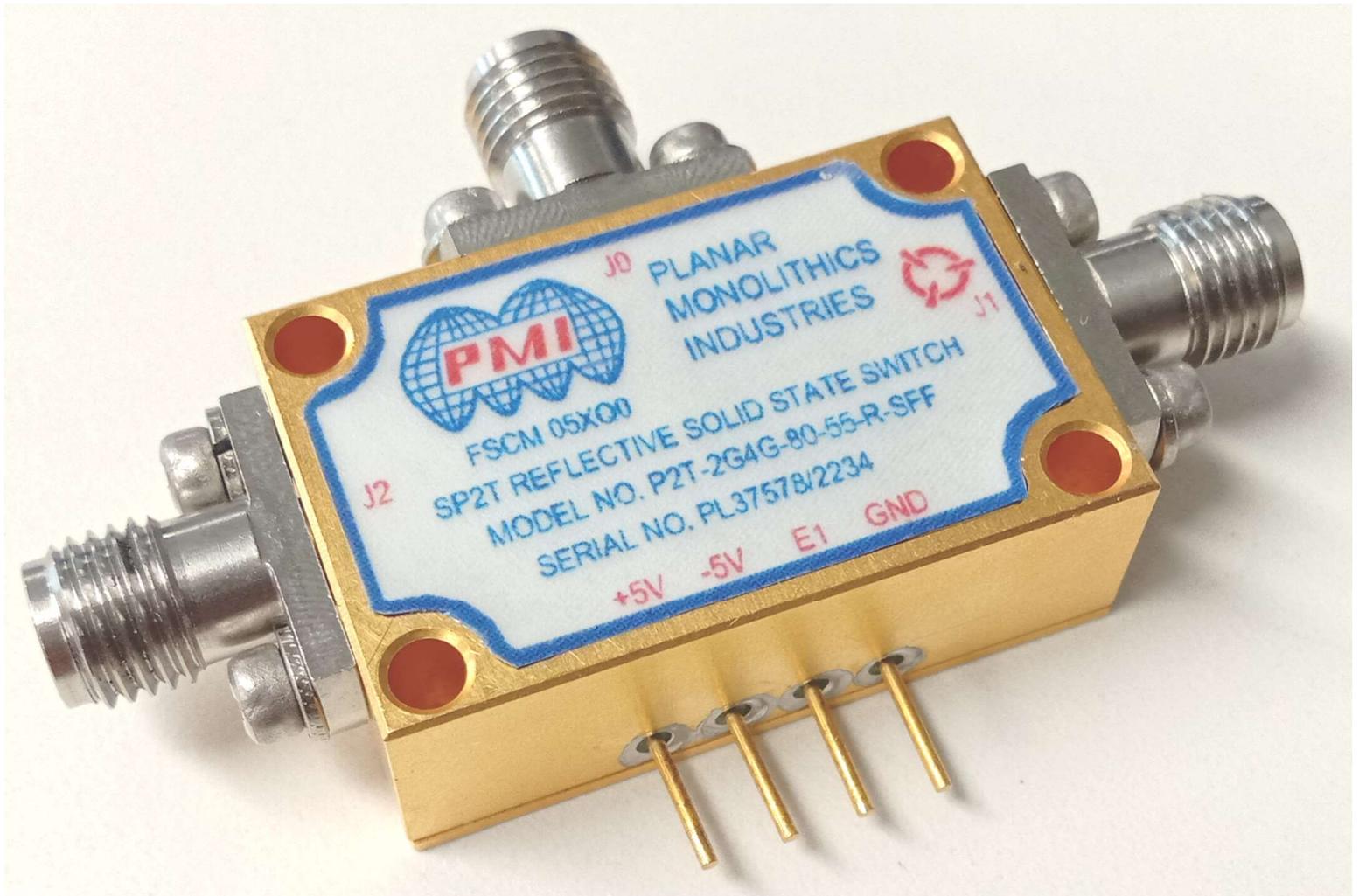


PLANAR MONOLITHICS INDUSTRIES MODEL: P2T-2G4G-80-55-R-SFF IS A SINGLE POLE, TWO THROW REFLECTIVE SWITCH OPERATING OVER THE FREQUENCY RANGE OF 2.0 TO 4.0 GHZ. THIS MODEL IS DESIGNED TO MAINTAIN LOW INSERTION LOSS, HIGH ISOLATION, AND FAST SWITCHING SPEED.



September 6, 2022

Designed By: PMI Engineering

Tested and Reported By: Yuyi Li

Outline Drawing

DESCRIPTION:

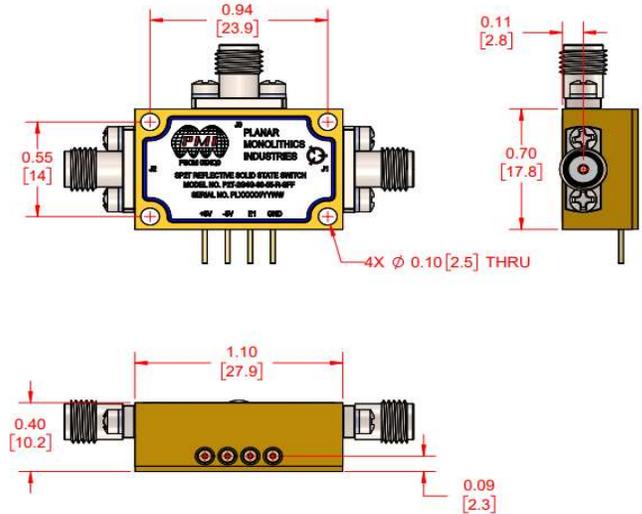
PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER P2T-2G4G-80-55-R-SFF IS A SINGLE POLE, TWO THROW, REFLECTIVE SWITCH OPERATING OVER THE FREQUENCY RANGE OF 2.0 TO 4.0 GHz. THIS MODEL IS DESIGNED TO MAINTAIN LOW INSERTION LOSS, HIGH ISOLATION, AND FAST SWITCHING SPEED.

SPECIFICATIONS:

- FREQUENCY RANGE:..... 2.0 TO 4.0 GHz
- IMPEDANCE:..... 50 Ω
- RF INPUT POWER:..... +30 dBm MAX (OPERATING)
- VSWR:..... 1.5:1 MAX
- INSERTION LOSS:..... 1.3 dB MAX
- ISOLATION:..... 80 dB MIN
- SWITCHING SPEED:..... 50 ns MAX
- DC VOLTAGES :..... +5 VDC 100 mA MAX, -5 VDC 50 mA MAX
- CONTROL:..... TTL COMPATABLE (SEE TRUTH TABLE)
- CONNECTORS:..... SMA FEMALE (FIELD REPLACEABLE)
- SIZE:..... (L) 1.1" X (W) 0.7" X (H) 0.4"
- FINISH:..... GOLD PLATED

TRUTH TABLE	
E1	OUTPUT
"0"	J0-J1 "LOW LOSS"
"1"	J0-J2 "LOW LOSS"

ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	6/14/2022	
	B1	ECN # 22-0110	8/26/2022	



ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -40°C TO +85°C (OPERATING)
-55°C TO +125°C (STORAGE)
- VIBRATION:..... 25g RMS (15 DEGREES 2 KHz)
- HUMIDITY:..... 100% RH AT 35°C, 95% RH AT 40°C
- SHOCK:..... 20G FOR 11 ms

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION
SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

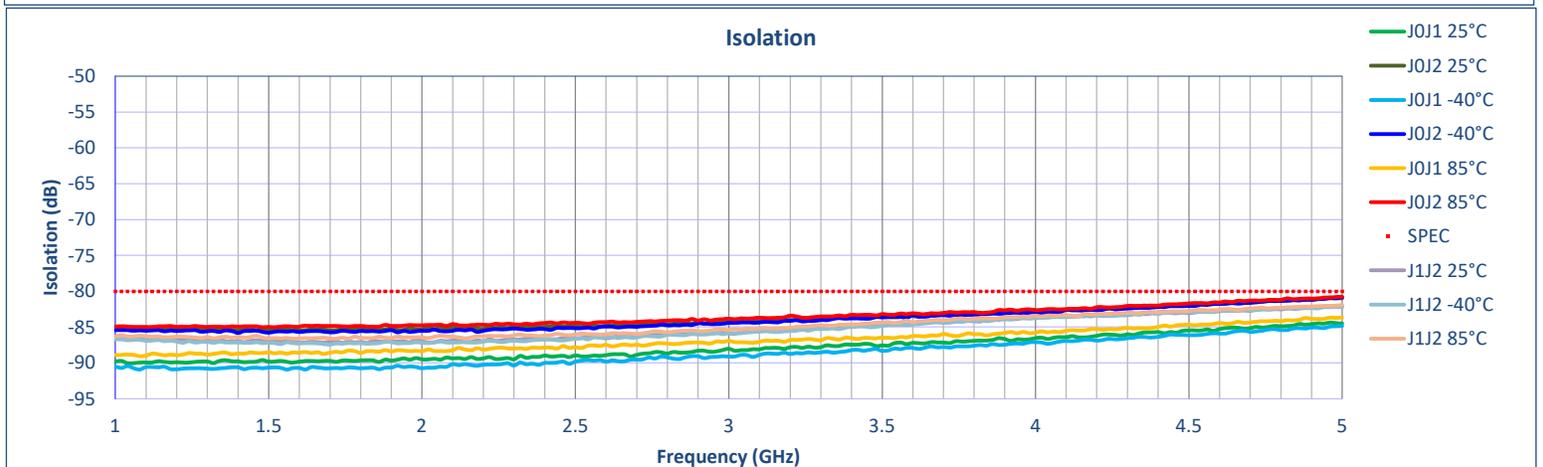
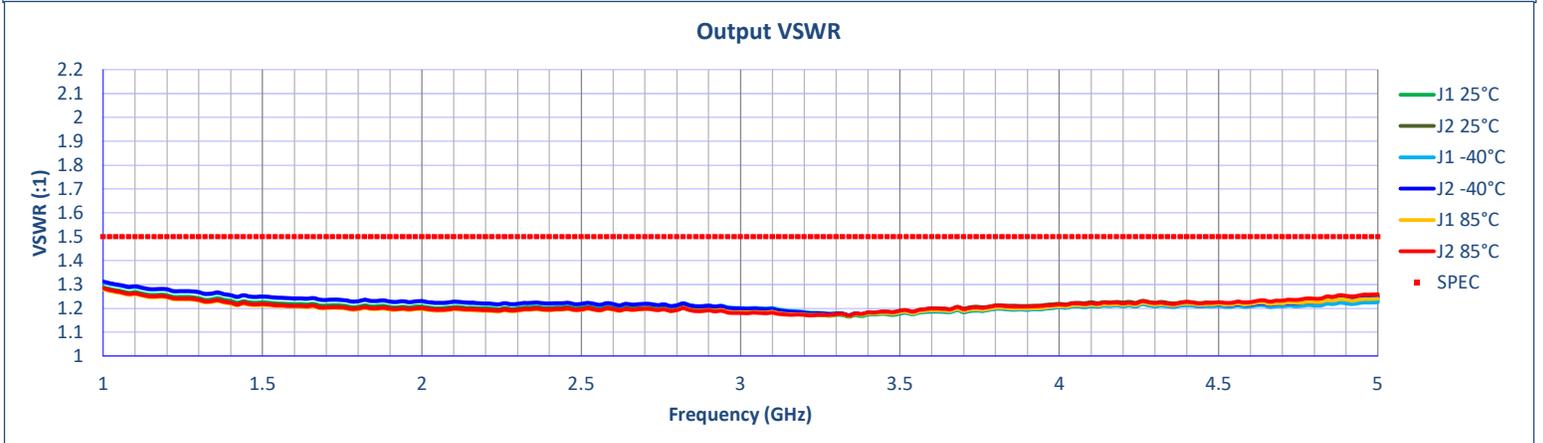
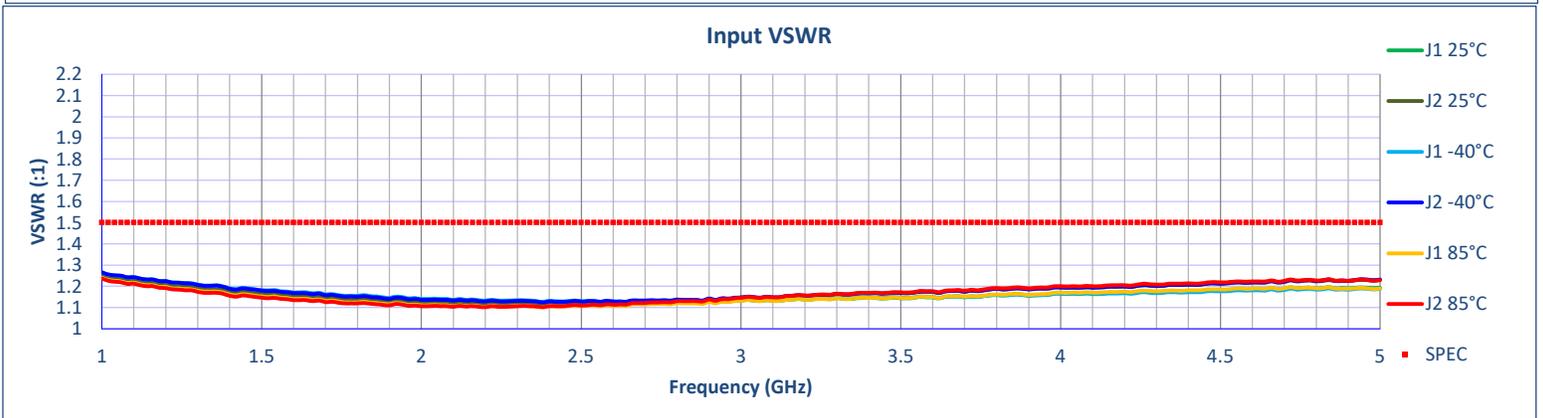
PMI CONFIDENTIAL AND PROPRIETARY

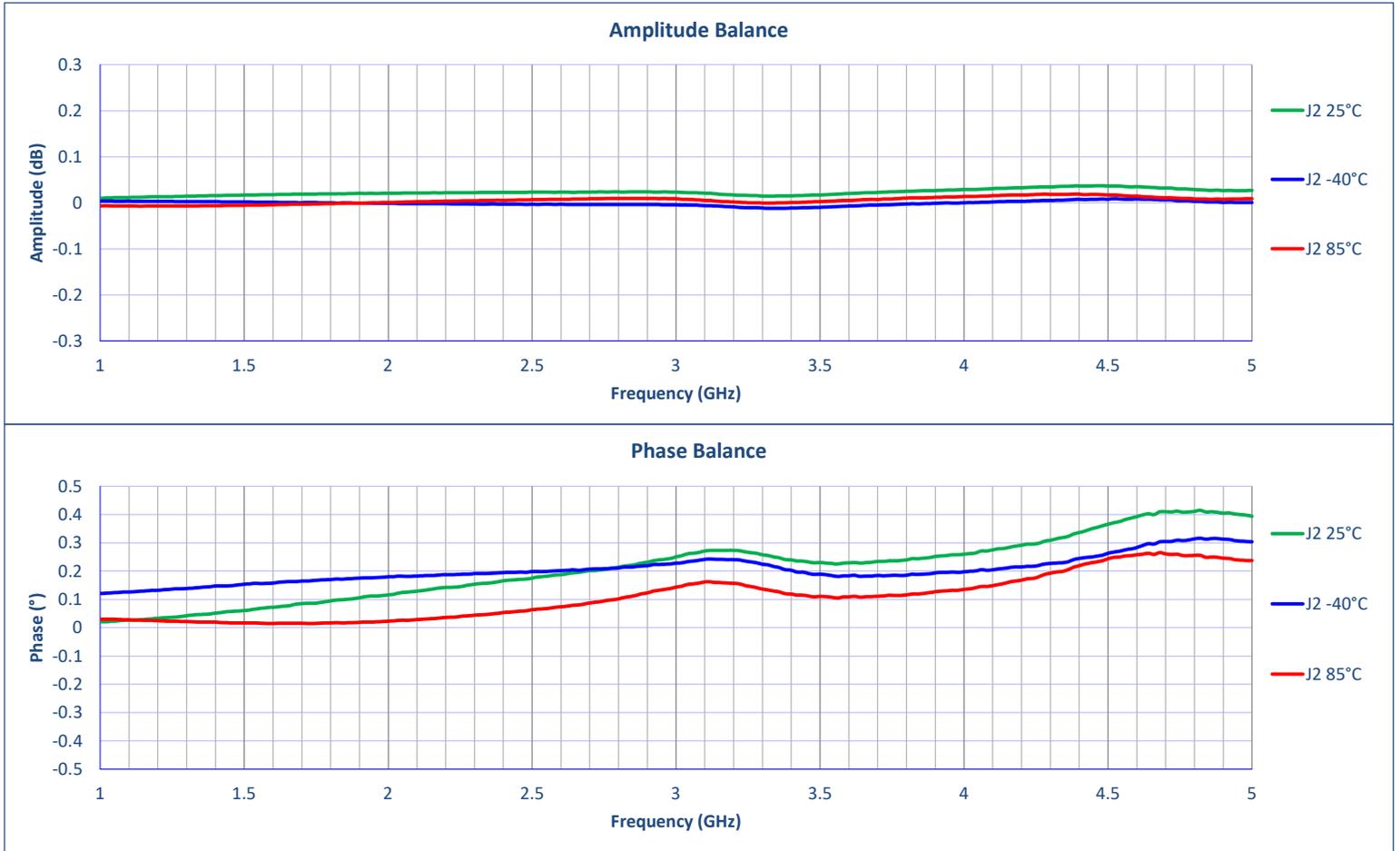
		<small>7111-F GROVE ROAD FREDERICK, MARYLAND 21704 USA TEL: (301) 662-5019 FAX: (301) 662-1731 WEB: www.pmi-rf.com ISO 9001:2015 ISO 9001 CERTIFIED</small>	
APPROVALS DRAWN: M. HANKEN CHECKED: _____ ISSUED: _____ SCALE: 2:1	DATE 6/14/2022	TITLE OUTLINE	REV B1
<small>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS AND DECIMALS ALL ANGLES UNLESS OTHERWISE SPECIFIED</small>		SIZE P2T-2G4G-80-55-R-SFF FORM NO. 27044400	SHEET 1 OF 1

Typical Characteristics
ON
P2T-2G4G-80-55-R-SFF

Summary Test Data

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			25°C	-40°C	85°C
1	Frequency Range	2 GHz to 4 GHz	2 GHz to 4 GHz		
2	Input Power	30 dBm CW Max.	30 dBm CW		
3	Isolation	80 dB Min.	82.8 dB	82.9 dB	82.5 dB
4	Insertion Loss	1.3 dB Max.	1.19 dB	1.19 dB	1.19 dB
5	VSWR: In/Out	1.5:1 Max.	1.19:1 In	1.19:1 In	1.2:1 In
			1.22:1 Out	1.23:1 Out	1.22:1 Out
6	Switching Speed	50 ns Max.	41 ns OFF 23 ns ON		
7	DC Supply	+5VDC @ 100 mA Max. -5VDC @ 50 mA Max.	+5VDC @ 28 mA -5VDC @ 11 mA		
8	Amplitude Balance	Not Specified	±0.03 dB	±0.01 dB	±0.02 dB
9	Phase Balance	Not Specified	±0.27°	±0.32°	±0.27°

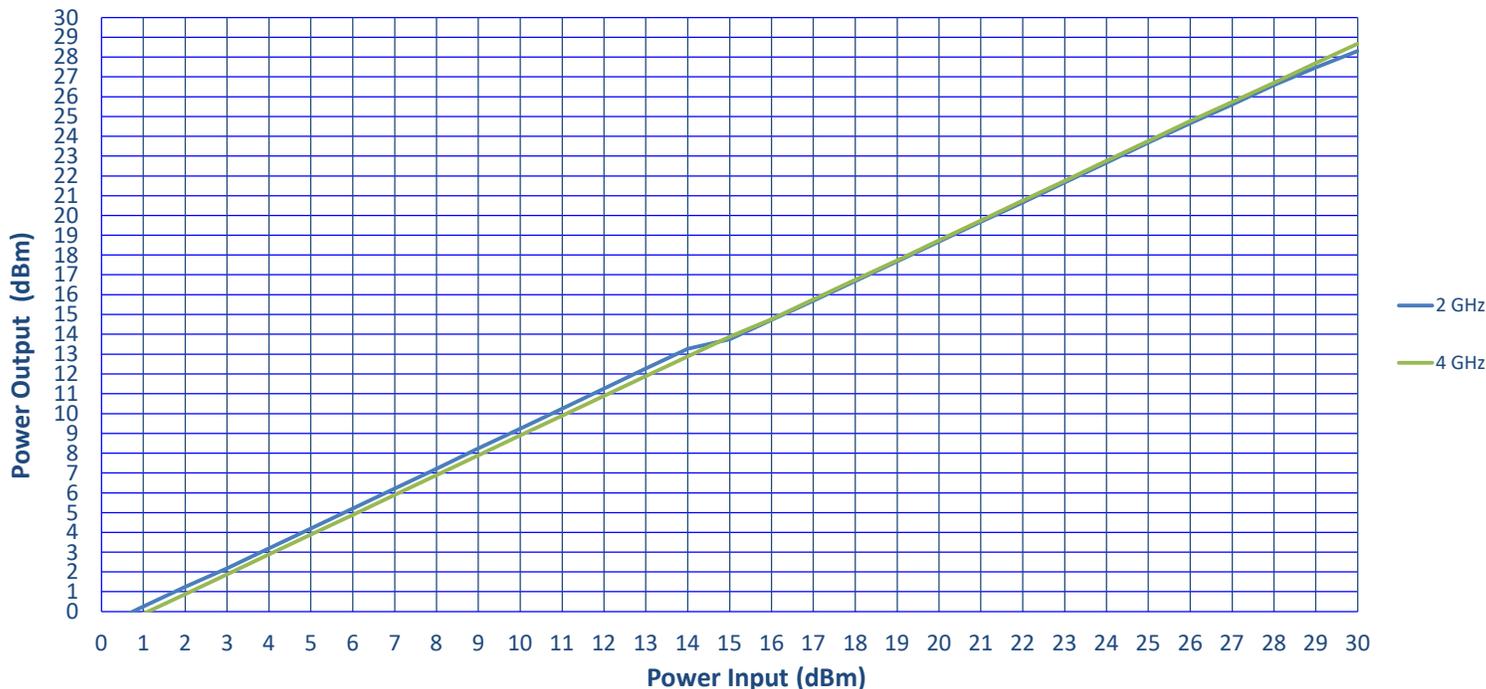




***WITH RESPECT TO J1 ARM AT SAME TEMPERATURE**

High Power

High Power Test Graph



High Power Test Data							
2 GHz				4 GHz			
Power In (dBm)	Power Out (dBm)	Loss	Compression (dBm)	Power In (dBm)	Power Out (dBm)	Loss	Compression (dBm)
0	-0.757	0.757	0.000	0	-1.113	1.113	0.000
1	0.253	0.747	-0.010	1	-0.112	1.112	-0.001
2	1.263	0.737	-0.020	2	0.887	1.113	0.000
3	2.185	0.815	0.058	3	1.887	1.113	0.000
4	3.189	0.811	0.054	4	2.888	1.112	-0.001
5	4.193	0.807	0.050	5	3.888	1.112	-0.001
6	5.203	0.797	0.040	6	4.889	1.111	-0.002
7	6.211	0.789	0.032	7	5.888	1.112	-0.001
8	7.220	0.780	0.023	8	6.889	1.111	-0.002
9	8.231	0.769	0.012	9	7.890	1.110	-0.003
10	9.241	0.759	0.002	10	8.889	1.111	-0.002
11	10.254	0.746	-0.011	11	9.892	1.108	-0.005
12	11.263	0.737	-0.020	12	10.891	1.109	-0.004
13	12.268	0.732	-0.025	13	11.893	1.107	-0.006
14	13.270	0.730	-0.027	14	12.888	1.112	-0.001
15	13.743	1.257	0.500	15	13.885	1.115	0.002
16	14.719	1.281	0.524	16	14.761	1.239	0.126
17	15.703	1.297	0.540	17	15.768	1.232	0.119
18	16.701	1.299	0.542	18	16.751	1.249	0.136
19	17.696	1.304	0.547	19	17.738	1.262	0.149
20	18.681	1.319	0.562	20	18.751	1.249	0.136
21	19.680	1.320	0.563	21	19.753	1.247	0.134
22	20.662	1.338	0.581	22	20.758	1.242	0.129
23	21.665	1.335	0.578	23	21.742	1.258	0.145
24	22.664	1.336	0.579	24	22.757	1.243	0.130
25	23.671	1.329	0.572	25	23.755	1.245	0.132
26	24.660	1.340	0.583	26	24.765	1.235	0.122
27	25.612	1.388	0.631	27	25.734	1.266	0.153
28	26.577	1.423	0.666	28	26.703	1.297	0.184
29	27.469	1.531	0.774	29	27.695	1.305	0.192
30	28.312	1.688	0.931	30	28.673	1.327	0.214

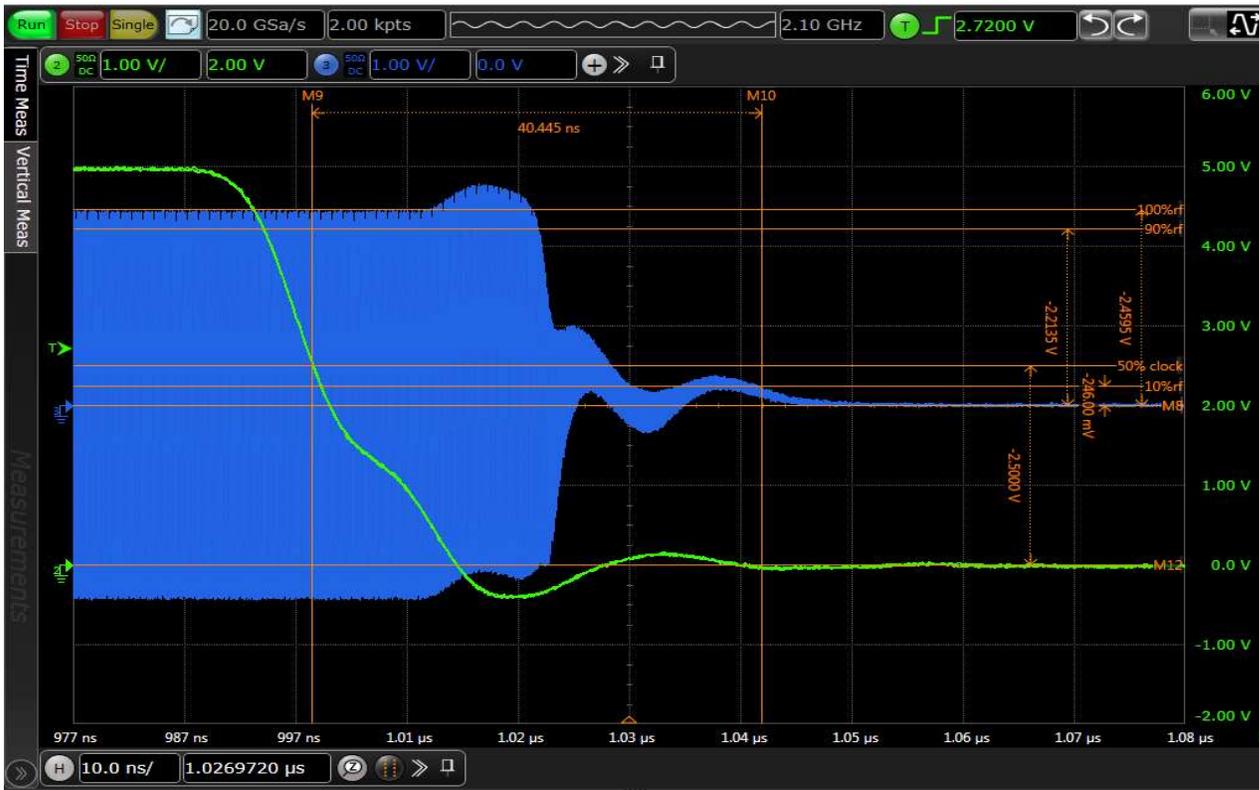
Fall Time



Rise Time



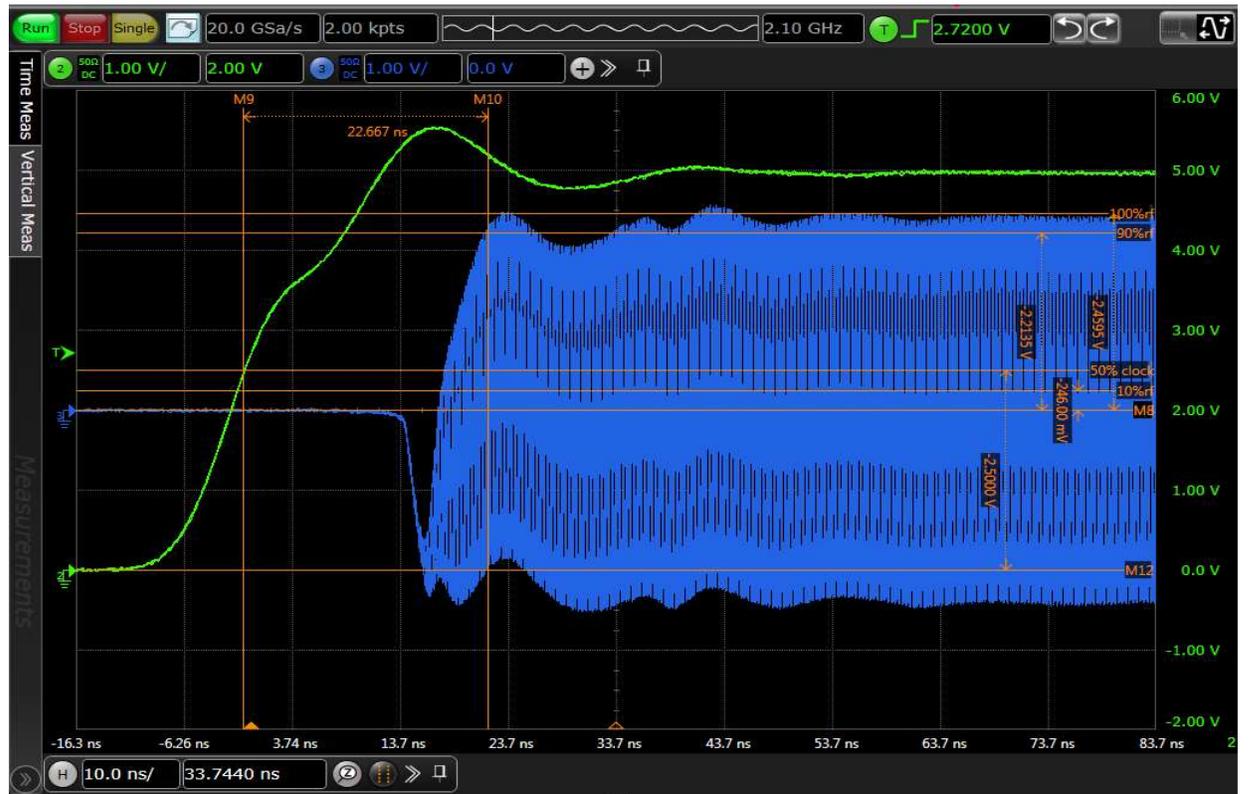
Switching Speed Off



Signal = Blue
 Pulse = Green

41 ns

Switching Speed On



23 ns

Full Pulse

