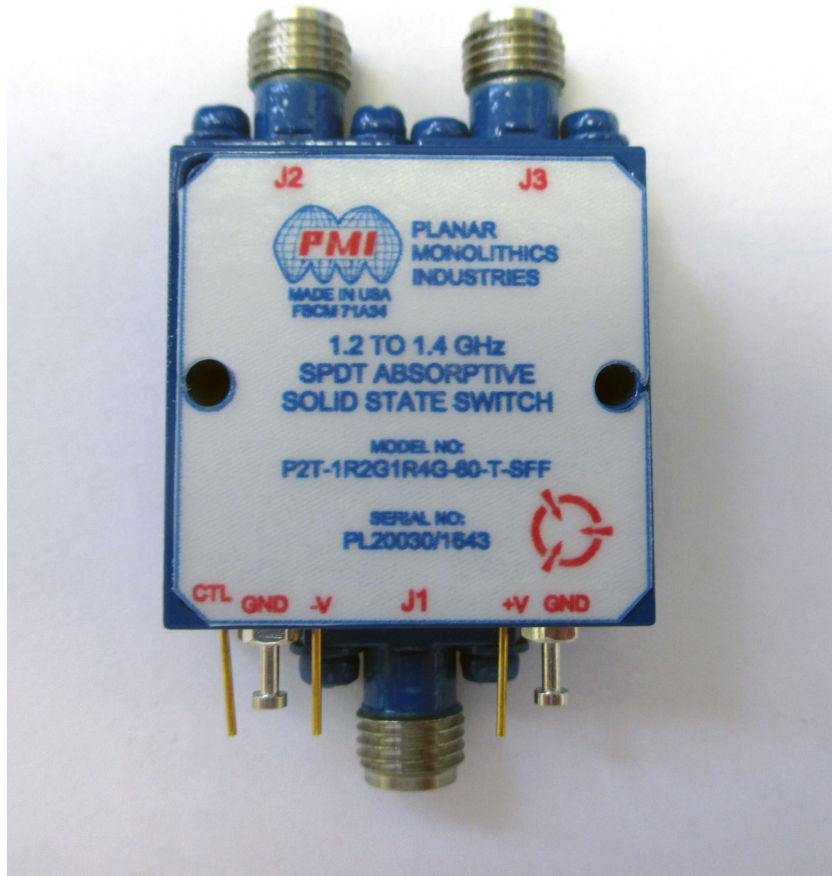




**Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF**

PMI MODEL P2T-1R2G1R4G-60-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE TWO THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 1.2 GHz TO 1.4 GHz. THIS SWITCH HAS 60 dB ISOLATION.



Designed by: PMI Engineering

October 20, 2016

Tested & Reported by: Simon Kuhn

Page 1 of 9



**Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF**

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# Typical Characteristics On P2T-1R2G1R4G-60-T-SFF

## Product Feature & Mechanical Drawing

### DESCRIPTION

PMI MODEL P2T-1R2G1R4G-60-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE TWO THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 1.2 GHz TO 1.4 GHz. THIS SWITCH HAS 60 dB ISOLATION.

### SPECIFICATIONS

- FREQUENCY RANGE: 1.2 GHz TO 1.4 GHz
- IMPEDANCE: 50 Ω
- INPUT POWER: +30 dBm MAX (SURVIVAL)  
+20 dBm MAX (OPERATING)
- INPUT VSWR: 1.5:1 MAX
- INSERTION LOSS: 1 dB MAX
- ISOLATION: 60 dB MIN
- SWITCHING SPEED: 100 ns MAX
- DC VOLTAGE: +5 VDC, 100 mA TYP  
-15 VDC, 100 mA TYP
- CONTROL: SOLDER PIN  
TTL COMPATIBLE - SEE LOGIC TABLE
- CONNECTORS IN/OUT: SMA (F)
- SIZE: 25.40 mm x 25.40 mm x 10.16 mm [1.00" x 1.00" x 0.40"]
- WEIGHT: 34.02 g [1.2 oz] MAX
- STATIC SENSITIVITY: ESD CLASS 1A, HBM - PROPER ESD TECHNIQUES SHOULD BE USED DURING HANDLING
- FINISH: BLUE EPOXY POLIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

### ENVIRONMENTAL RATINGS

- TEMPERATURE: -55°C TO + 85°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B - 95% RH
- SHOCK: MIL-STD-202F, METHOD 213B COND. B - 10G
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B  
2-7Hz/IN Amplitude Max., 7-50Hz, 2.5G
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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

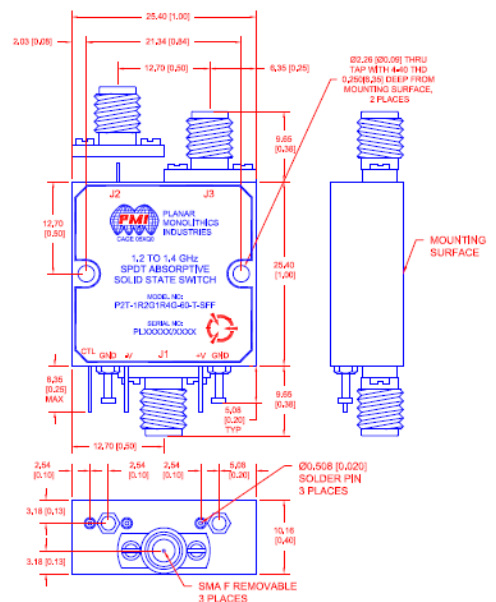
LOGIC TABLE

CTL	J1 + J2	J1 + J3
0	ON	OFF
1	OFF	ON

ALL DIMENSIONS ARE IN mm [INCH] TOLERANCES:  
XXX ± 0.508 [0.020]  
XXXX ± 0.254 [0.010]

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	8/31/2016	

### MECHANICAL OUTLINE



PMI CONFIDENTIAL AND PROPRIETARY

### PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD  
FREDERICK, MARYLAND 21704 USA  
TEL: 301-662-5019 FAX: 301-662-1731  
WEBSITE: [www.pmi-rf.com](http://www.pmi-rf.com)  
E-MAIL: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)  
ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN <i>JPU</i>		8/31/16	PRODUCT FEATURE 1.2 to 1.4 GHz 2-Way Absorptive Switch P2T-1R2G1R4G-60-T-SFF		
CHECKED			SIZE	FISCH NO.	DWG NO.
			A	05XQ0	27030501
ISSUED			SCALE	N:3	SHEET 1 OF 1



**Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF**

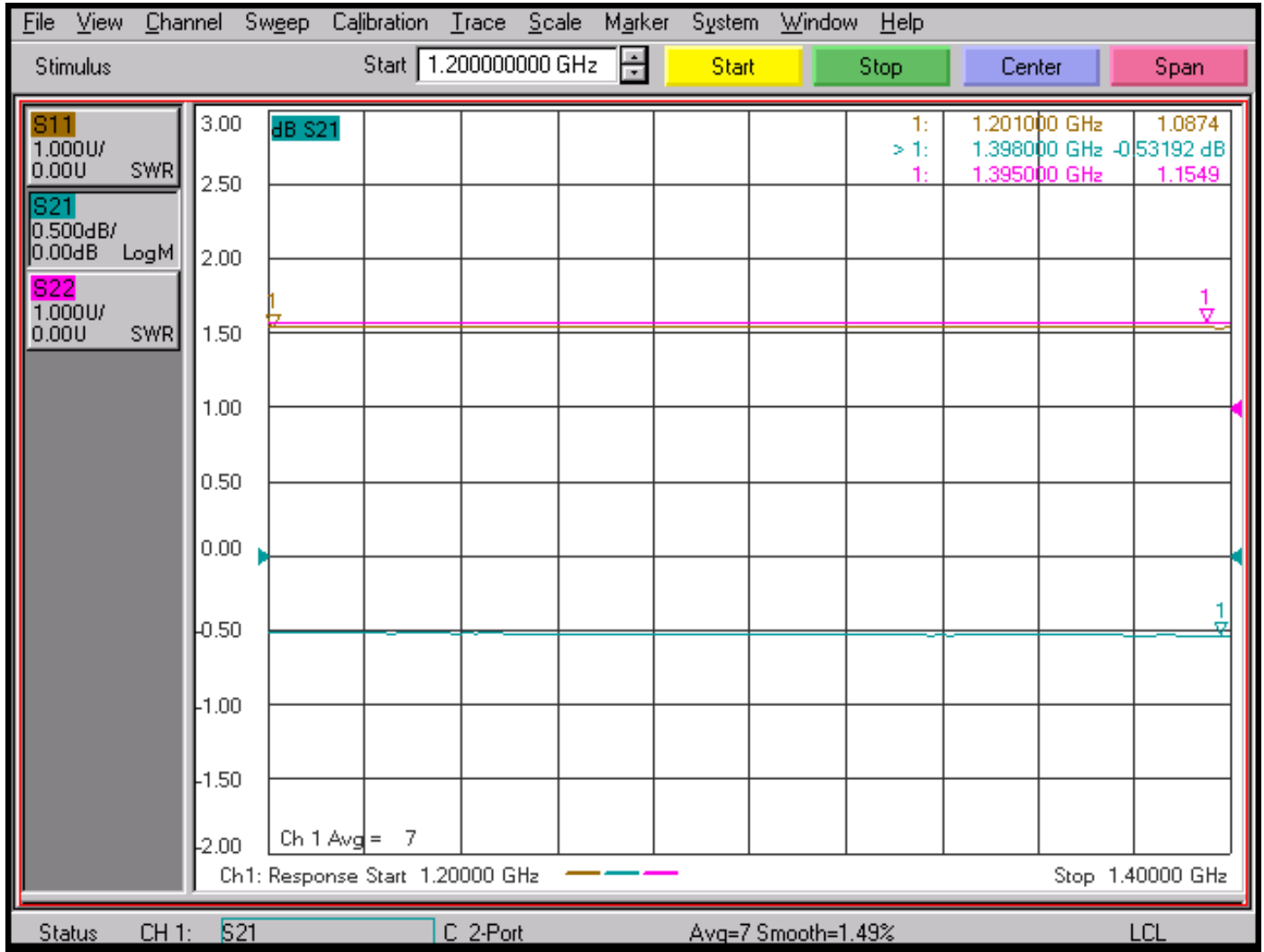
**Tabulated Data**

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	1.2 TO 1.4 GHz	1.2 TO 1.4 GHz	
2	Insertion Loss	1 dB Max	0.53 dB (See Plot)	
3	Input VSWR	1.5:1 Max	1.10:1 (See Plot)	
4	Isolation	60 dB MIN	93.47 dB (See Plot)	
5	Switching Speed	100 ns Max	49.8 ns	
6	Input Power	+30dBm Max (Survival) +20dBm Max (Operating)	Pass	
7	DC Supply	+5VDC @ 100 mA Typ -15VDC @ 100 mA Typ	23 mA 58 mA	
8	Control Signal	LOGIC TABLE CTL      FUNCTION 0      J1-J2 "LOW LOSS" 1      J1-J3 "LOW LOSS"	Pass	



Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF

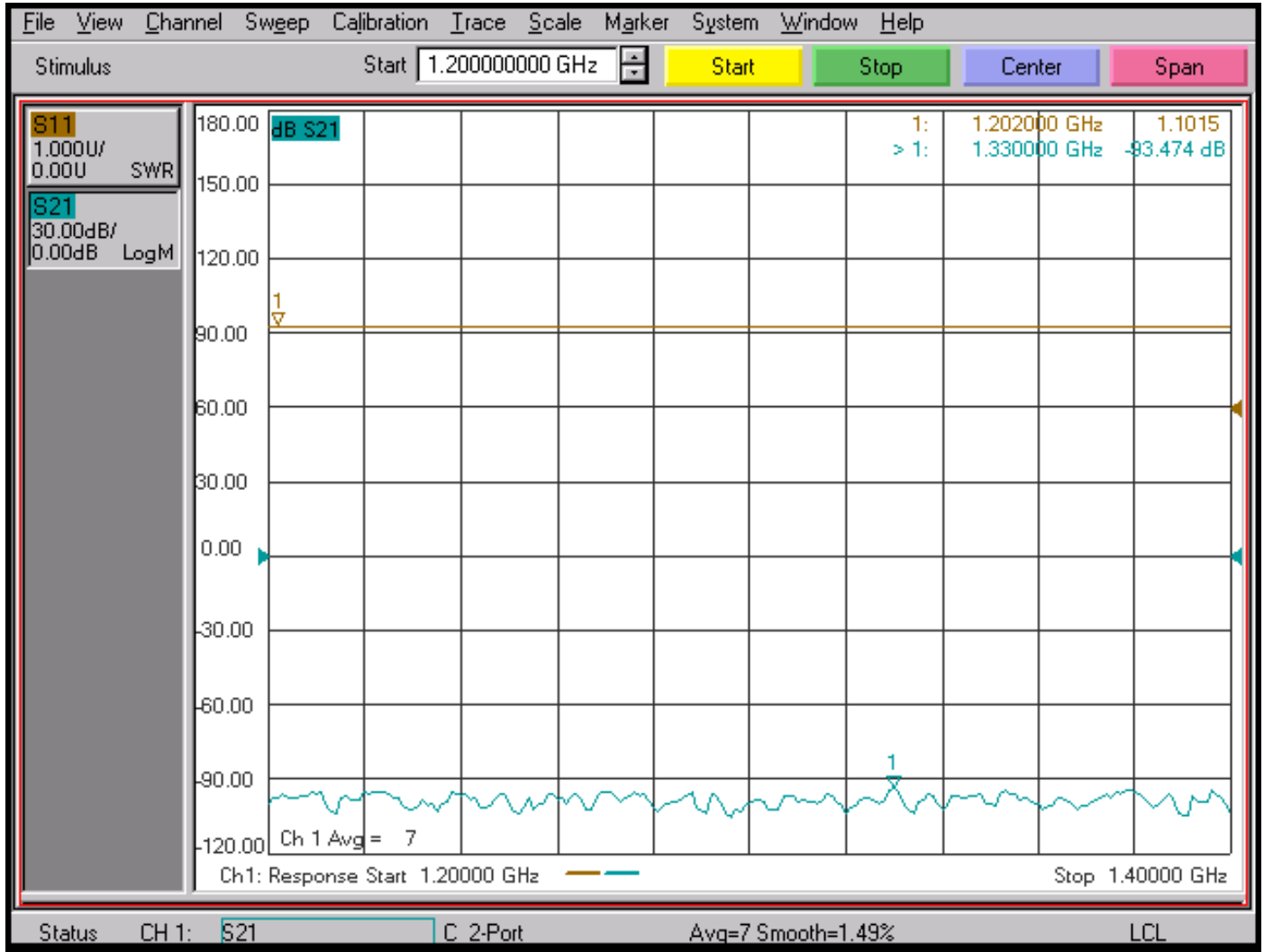
Insertion Loss and VSWR (J1 – J2)





Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF

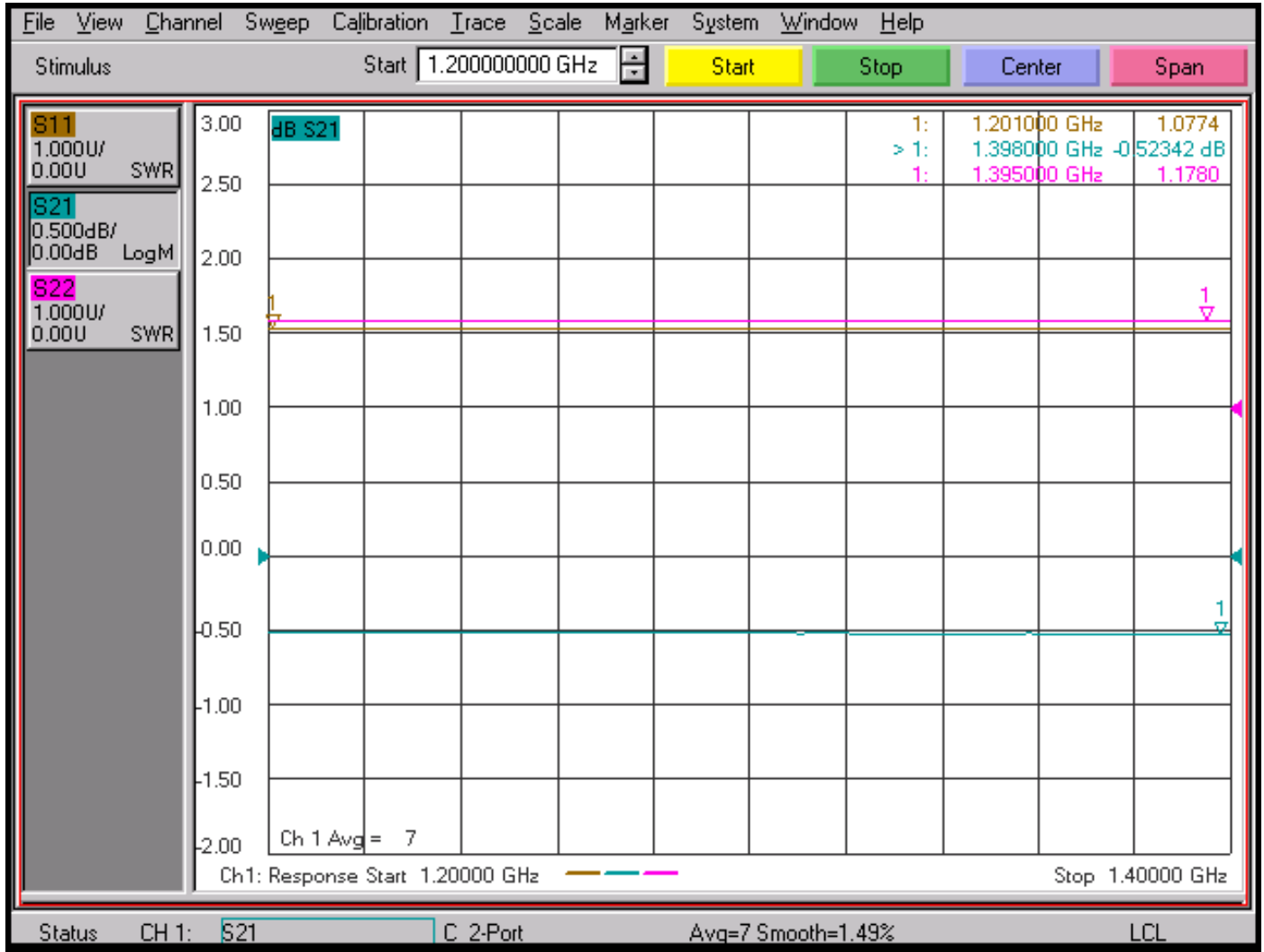
Isolation and Termination VSWR (J1 – J2)





Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF

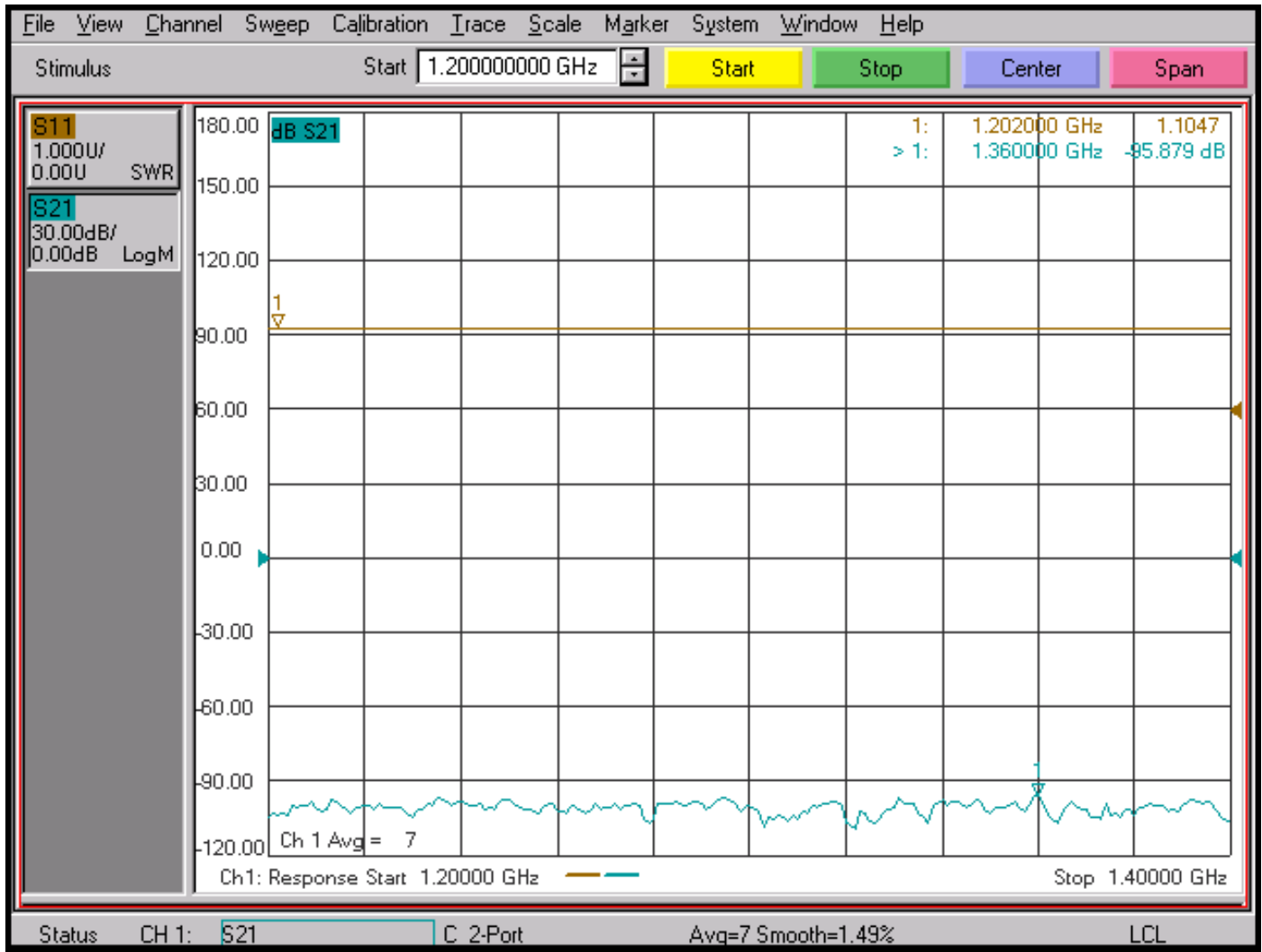
Insertion Loss and VSWR (J1 – J3)





Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF

Isolation and Termination VSWR (J1 – J3)

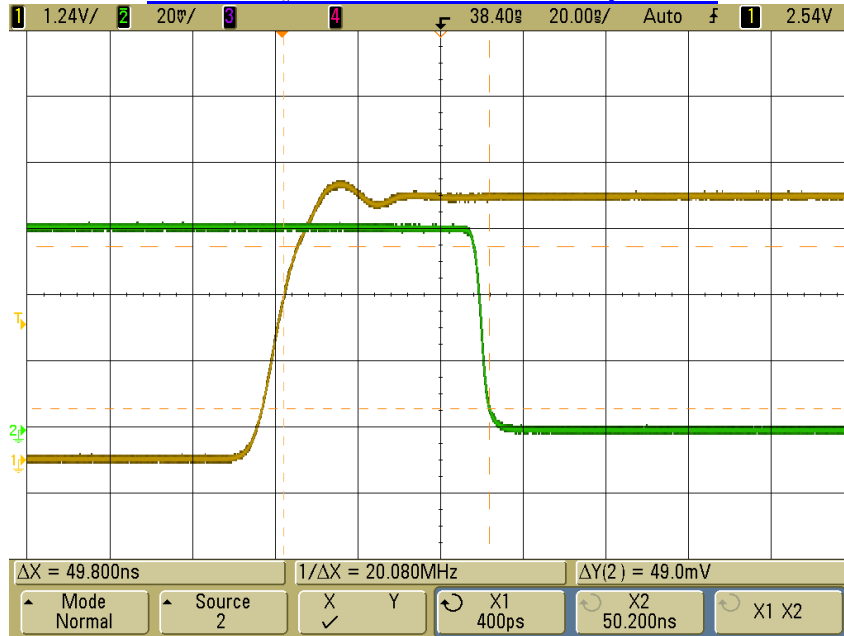




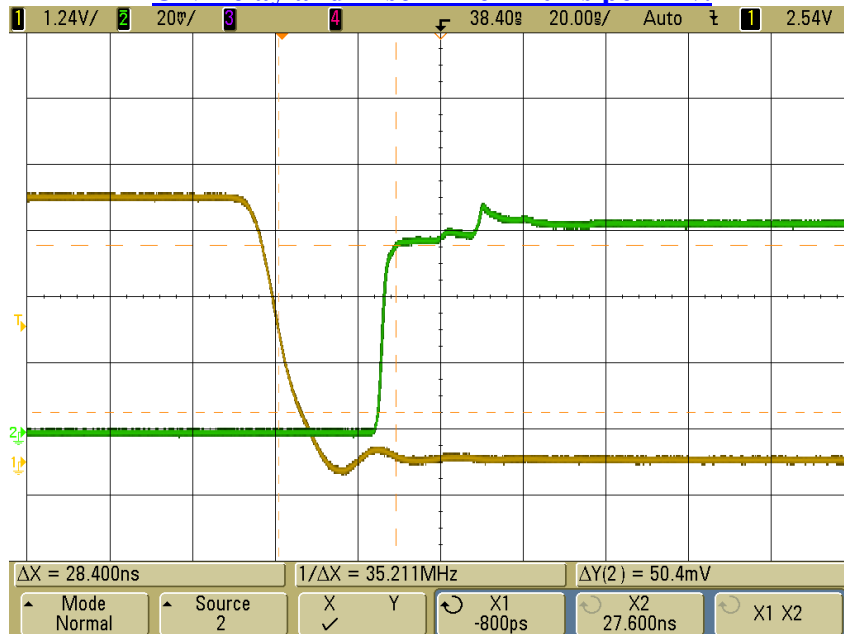
**Typical Characteristics  
On  
P2T-1R2G1R4G-60-T-SFF**

**Switching Speed TYP.**

**OFF Delay and Fall Time – 20 ns per Div.**



**ON Delay and Rise Time – 20 ns per Div.**



**GREEN TRACE : RF**  
**YELLOW TRACE: TTL**