



## Typical Characteristics For P2T-4G8G-70-T-SFF

PMI MODEL P2T-4G8G-70-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE TWO THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 4.0 GHz TO 8.0 GHz. THIS SWITCH HAS > 70 dB ISOLATION.



February 4, 2016

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# Typical Characteristics For P2T-4G8G-70-T-SFF

## Product Feature & Mechanical Drawing:

### DESCRIPTION

PMI MODEL P2T-4G8G-70-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE TWO THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 4.0 GHz TO 8.0 GHz. THIS SWITCH HAS > 70 dB ISOLATION.

### SPECIFICATIONS

- FREQUENCY RANGE: 4.0 GHz TO 8.0 GHz
- IMPEDANCE: 50 Ω
- INPUT POWER: +30dBm MAX (SURVIVAL)  
+20dBm MAX (OPERATING)
- INPUT VSWR: 1.6:1 TYP.
- INSERTION LOSS: 1.9dB MAX
- ISOLATION: 70dB MIN
- SWITCHING SPEED: 100ns MAX
- DC VOLTAGE: +5VDC, 100mA TYP.  
-15VDC, 100mA TYP.
- CONTROL: SOLDER PIN  
TTL COMPATIBLE - SEE LOGIC TABLE
- CONNECTORS IN/OUT: SMA (F)
- SIZE: (L) 1.0" X (W) 1.0" X (H) 0.4"
- 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.

### LOGIC TABLE

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

### ENVIRONMENTAL RATINGS

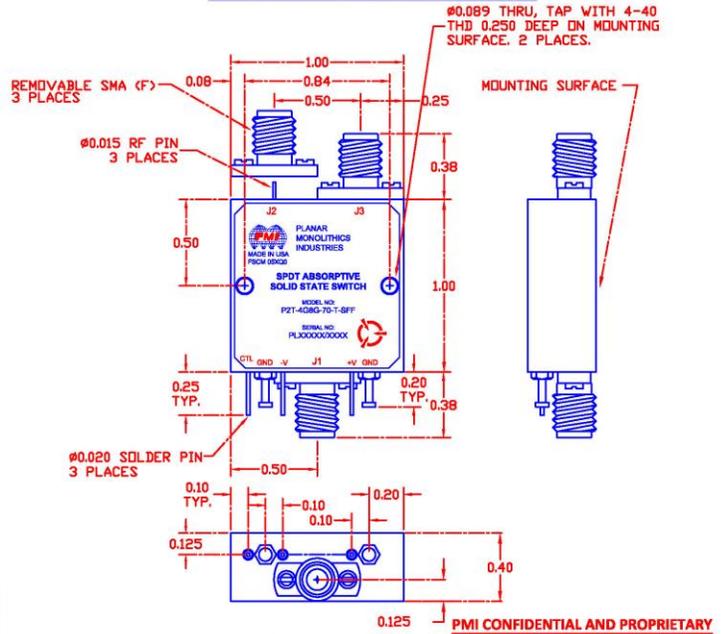
- TEMPERATURE: -55°C TO + 85°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
XXX ±0.020  
XXX ±0.010

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	10/19/15	

### MECHANICAL OUTLINE



### PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD  
FREDERICK, MARYLAND 21704 USA  
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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE	
DRAWN	<i>GdB</i>	10/19/15	PRODUCT FEATURE P2T-4G8G-70-T-SFF	
CHECKED			SIZE	FSM NO.
ISSUED			A	05XQ0
			DWG NO.	27026441
			SCALE	N: S
			SHEET	1 OF 1

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## Summary Test Data

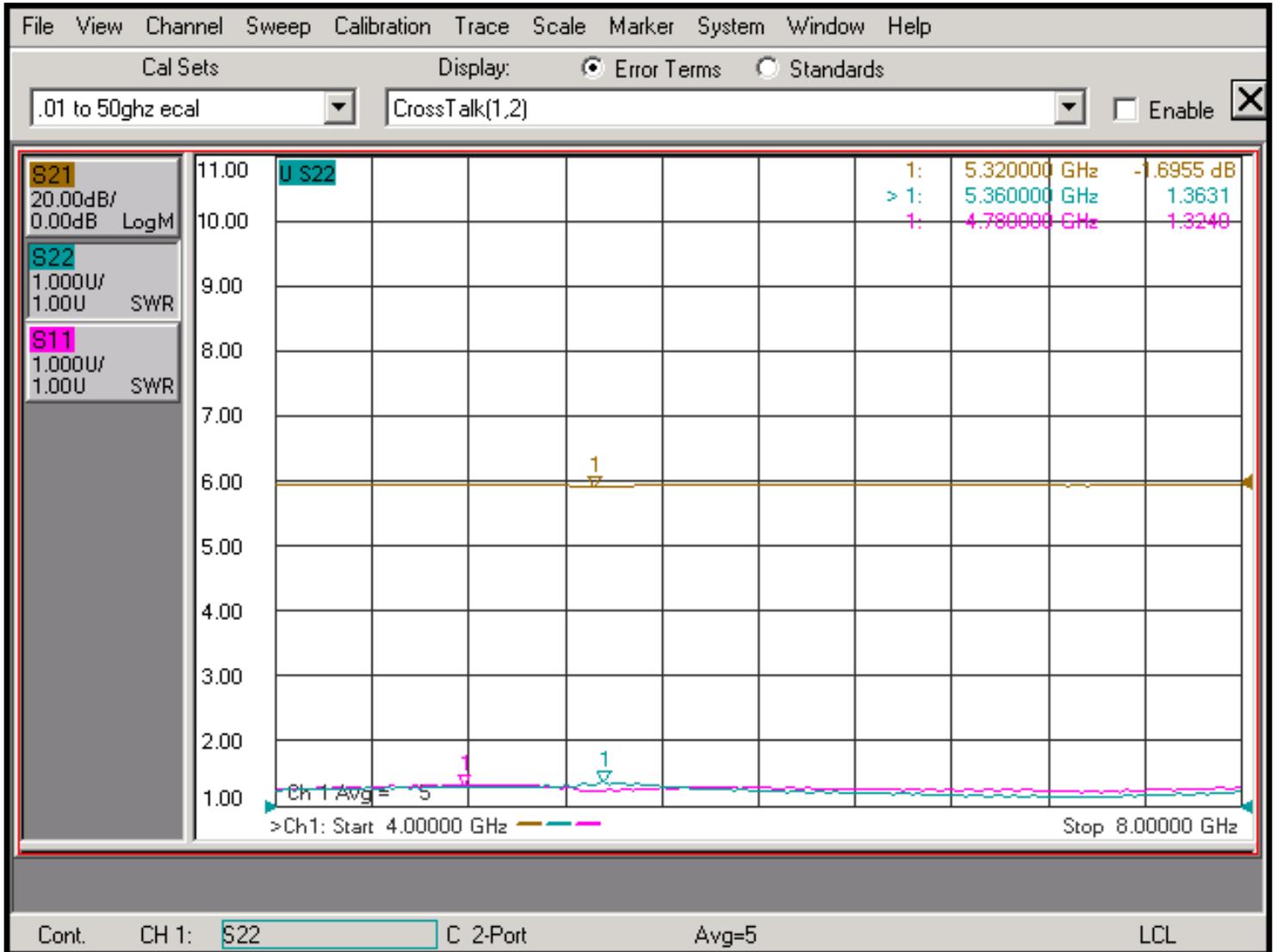
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	4.0 TO 8.0 GHz	<b>4.0 TO 8.0 GHz</b>	
2	Insertion Loss	1.9 dB Max	<b>1.78 dB (See Plot)</b>	
3	VSWR	1.6:1 Typ	<b>1.52:1 (See Plot)</b>	
4	Isolation	70 dB Min	<b>119 dB (See Plot)</b>	
5	Switching Speed	100 ns Max	<b>49.6 ns</b>	
6	Input Power	+30dBm Max (Survival) +20dBm Max (Operating)	<b>Pass</b>	
7	DC Supply	+5VDC @ 100 mA Typ -15VDC @ 100 mA Typ	<b>24 mA 58 mA</b>	
8	Control Signal	LOGIC TABLE FUNCTION CTL 0 J1-J2 "LOW LOSS" 1 J1-J3 "LOW LOSS"	<b>Pass</b>	

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# Typical Characteristics For P2T-4G8G-70-T-SFF

## J1 – J2 Insertion Loss and Return Loss:

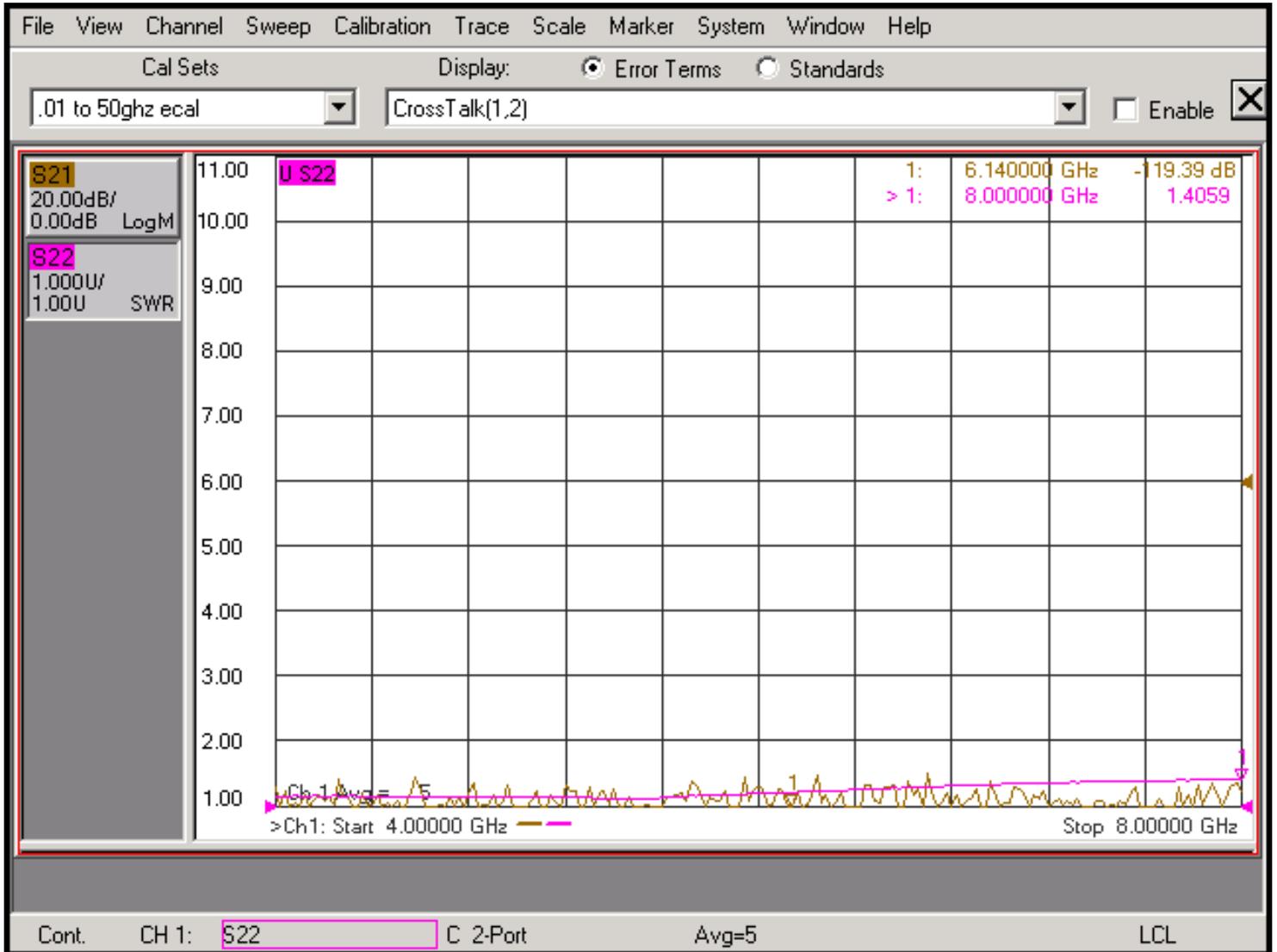


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## J1 – J2 Isolation and Terminated Return Loss:

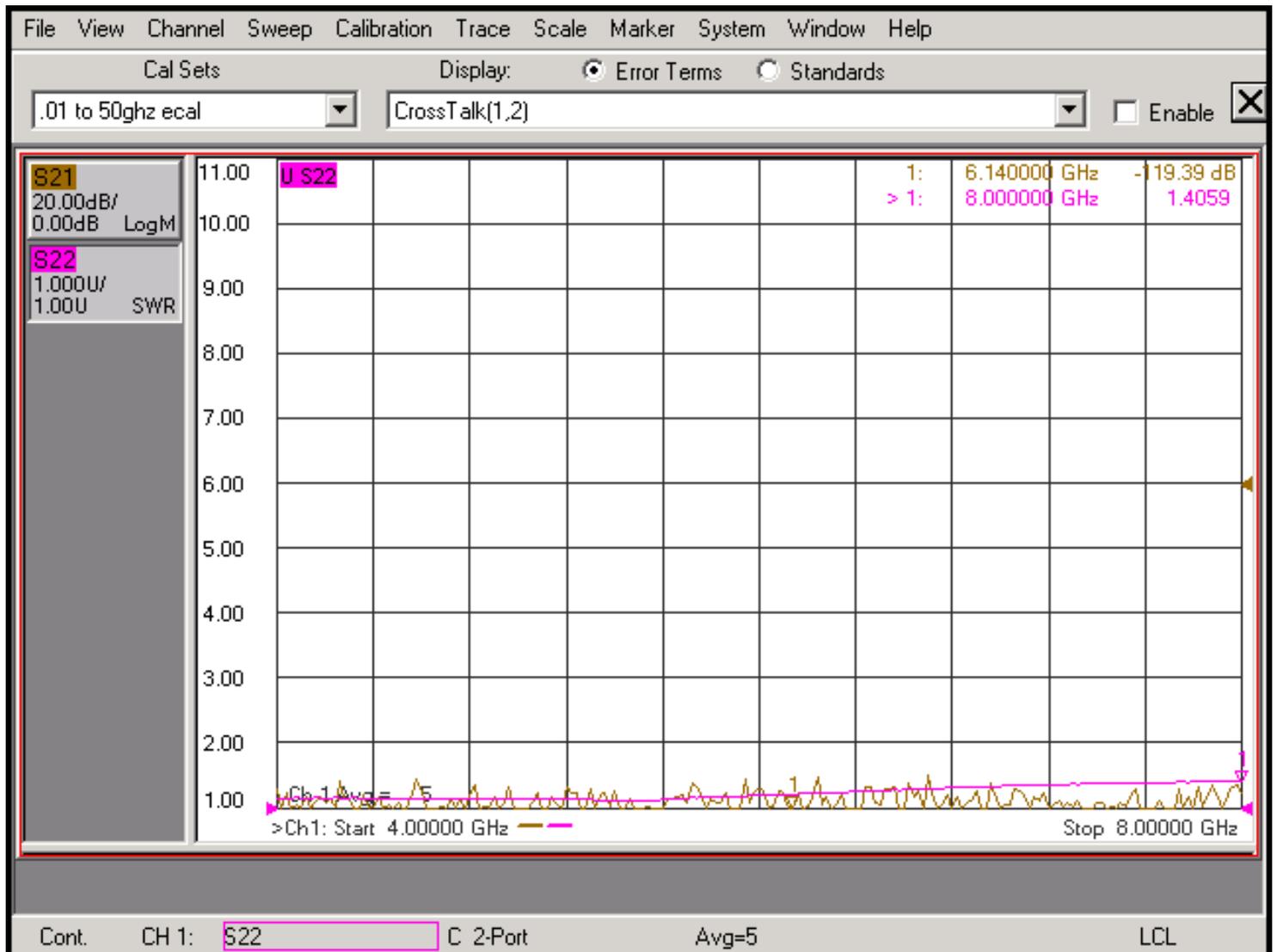


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# Typical Characteristics For P2T-4G8G-70-T-SFF

## J1 – J3 Insertion Loss and Return Loss:

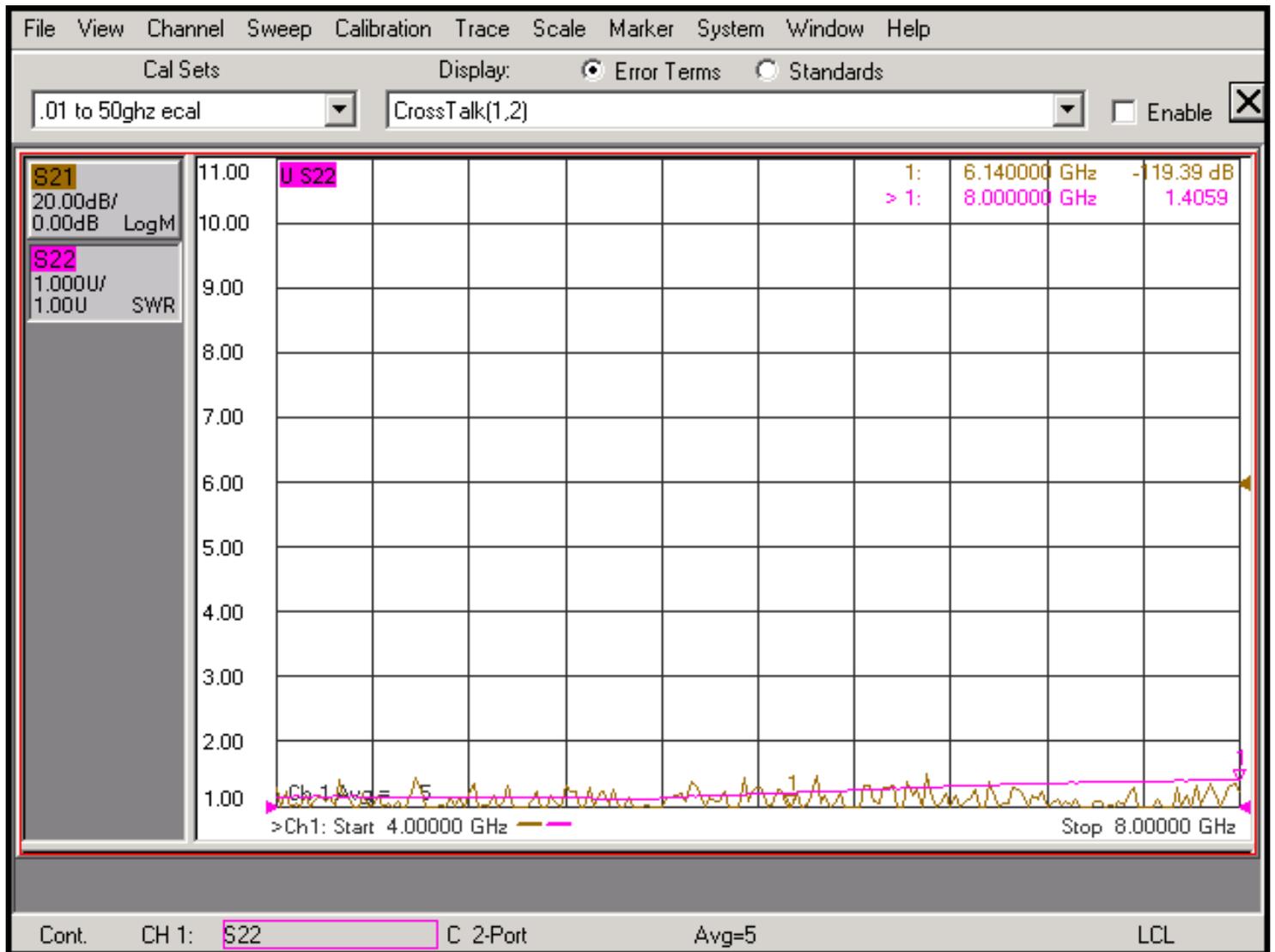


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# Typical Characteristics For P2T-4G8G-70-T-SFF

## J1 – J3 Isolation and Terminated Return Loss:



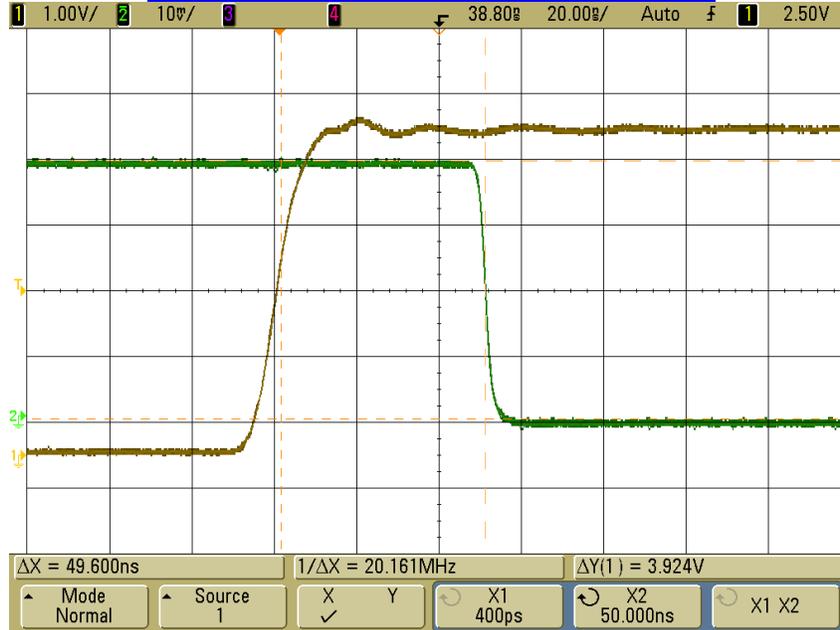
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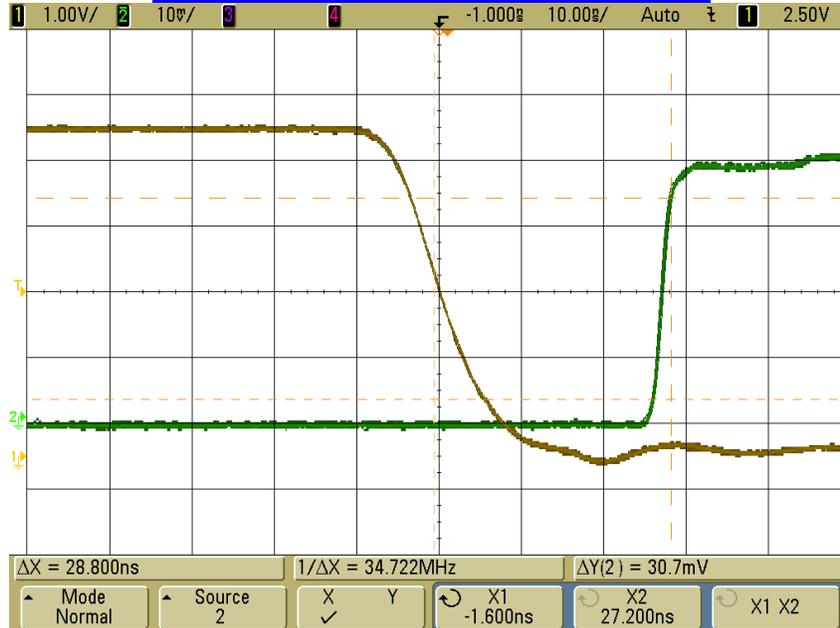
# Typical Characteristics For P2T-4G8G-70-T-SFF

## Switching Speed:

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



### ON Delay and Rise Time – 10 ns per Div.



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

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