Typical Characteristics
For
P4T-8G12G-70-T-SFF

PMI MODEL P4T-8G12G-70-T-SFF IS AN ABSORPBTIVE, HIGH SPEED, SINGLE POLE FOUR THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 8.0 GHz TO 12.0 GHz. THIS SWITCH HAS > 70 dB ISOLATION.

March 31, 2016

Designed by: PMI Engineering

Tested and Reported by: Simon Kuhn

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Typical Characteristics For P4T-8G12G-70-T-SFF

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Typical Characteristics
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Product Feature & Mechanical Drawing:

DESCRIPTION

PMI MODEL P4T-8G12G-70-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE FOUR THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 8.0 GHz TO 12.0 GHz. THIS SWITCH HAS > 70 dB ISOLATION.

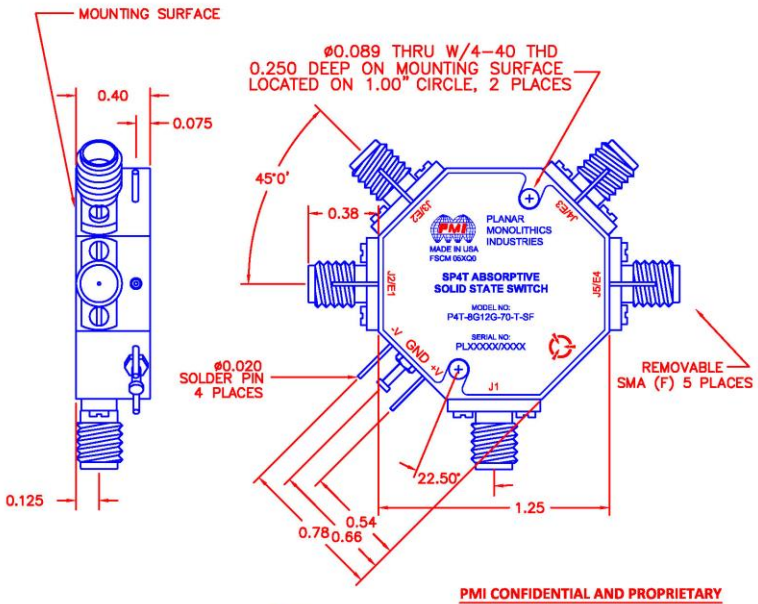
REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	11/11/15	

MECHANICAL OUTLINE

SPECIFICATIONS

- FREQUENCY RANGE: 8.0 GHz TO 12.0 GHz
- IMPEDANCE: 50 Ω
- INPUT POWER: +30dBm MAX (SURVIVAL)
  +20dBm MAX (OPERATING)
- VSWR: 1.8:1 TYP
- INSERTION LOSS: 2.6dB MAX
- ISOLATION: 70dB MIN
- SWITCHING SPEED: 100ns MAX
- DC VOLTAGE: +5VDC, 200mA TYP
  −15VDC, 100mA TYP
- CONTROL: SOLDER PIN
  TTL Logic "0" = Low Loss
  TTL Logic "1" = Isolation
  E1 Controls J1 − J2
  E2 Controls J1 − J3
  E3 Controls J1 − J4
  E4 Controls J1 − J5
- CONNECTORS IN/OUT: SMA (F)
- SIZE: (L) 1.25" X (W) 1.25" 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.



PMI CONFIDENTIAL AND PROPRIETARY

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:
X.XX ±0.020
X.XXX ±0.010

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ISO 9001 CERTIFIED

APPROVALS	DATE
DRAWN B. Thomas	11/11/15
CHECKED	
ISSUED	

TITLE: PRODUCT FEATURE
P4T−8G12G−70−T−SFF

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27026741	1

SCALE N:S SHEET 1 OF 1

Typical Characteristics For P4T-8G12G-70-T-SFF

Summary Test Data

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	8.0 TO 12.0 GHz	**8.0 TO 12.0 GHz**	
2	Insertion Loss	2.6 dB Max	**2.42 dB (See Plot)**	
3	VSWR	1.8:1 Typ	**1.72:1 (See Plot)**	
4	Isolation	70 dB Min	**75.55 dB (See Plot)**	
5	Switching Speed	100 ns Max	**49.6 ns**	
6	Input Power	+30dBm Max (Survival) +20dBm Max (Operating)	**Pass**	
7	DC Supply	+5VDC @ 150 mA Typ -15VDC @ 75 mA Typ	**114 mA** **53 mA**	
8	Control Signal	TTL LOGIC “0” = LOW LOSS TTL LOGIC “1” = ISOLATION E1 CONTROLS J1–J2 E2 CONTROLS J1–J3 E3 CONTROLS J1–J4 E4 CONTROLS J1–J5	**Pass**	

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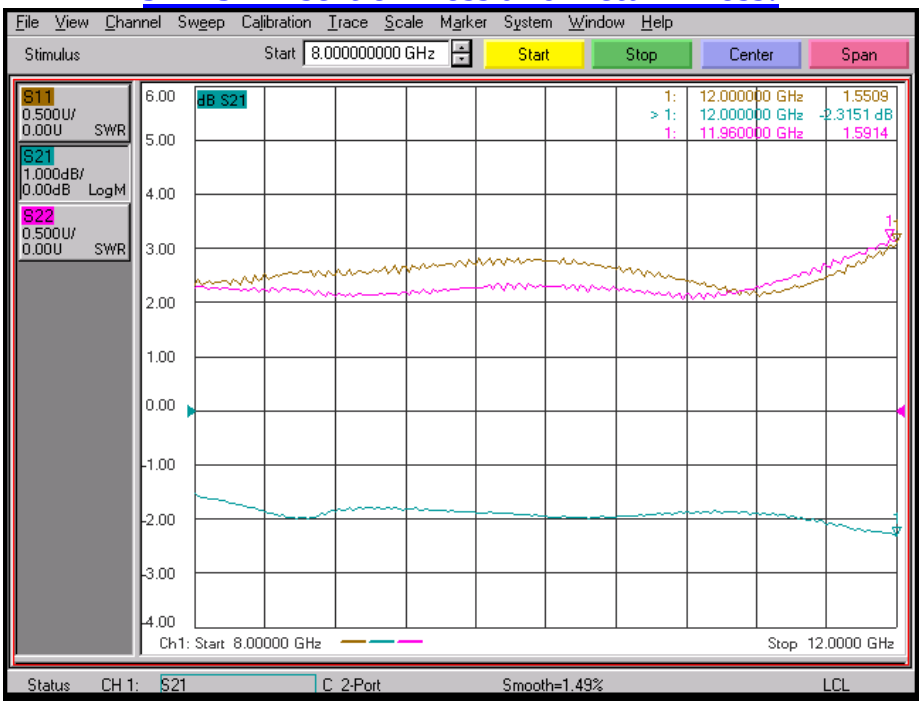
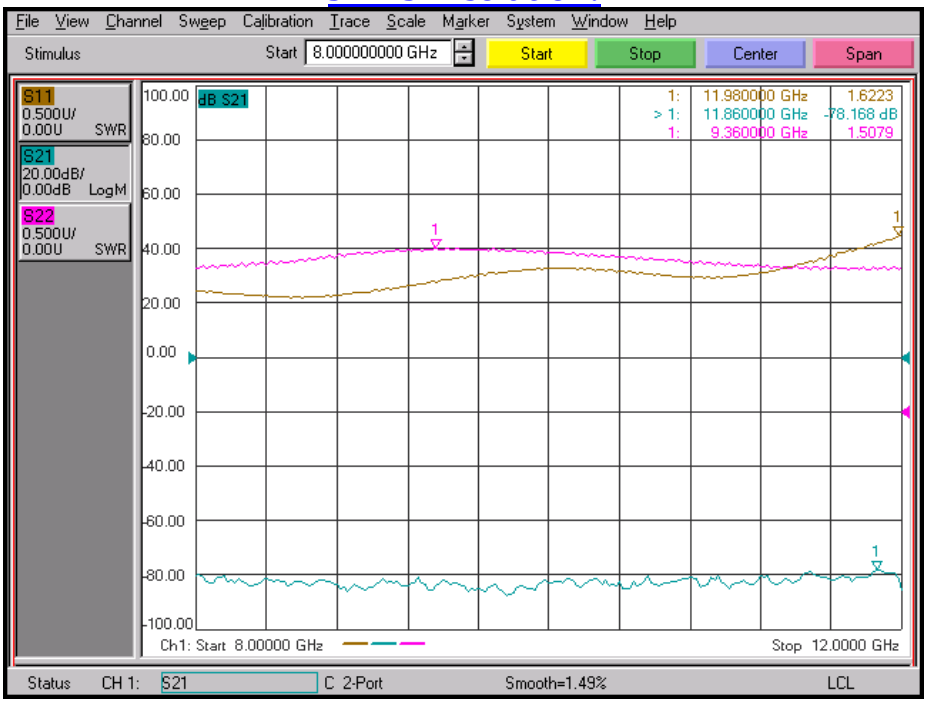
J1 – J2 Insertion Loss and Return Loss:



J1 – J2 Isolation:



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Typical Characteristics
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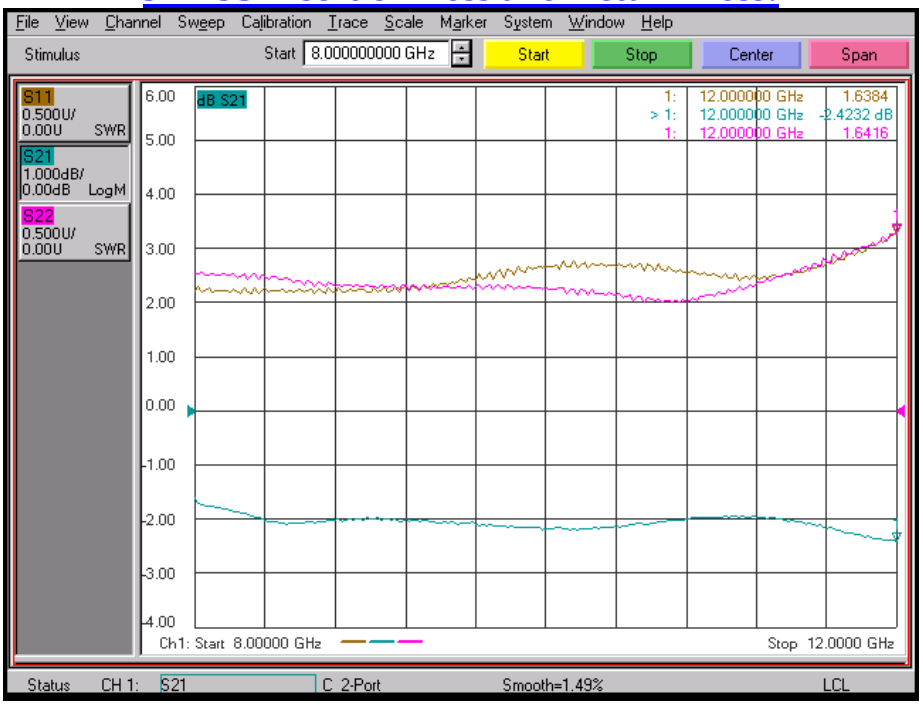
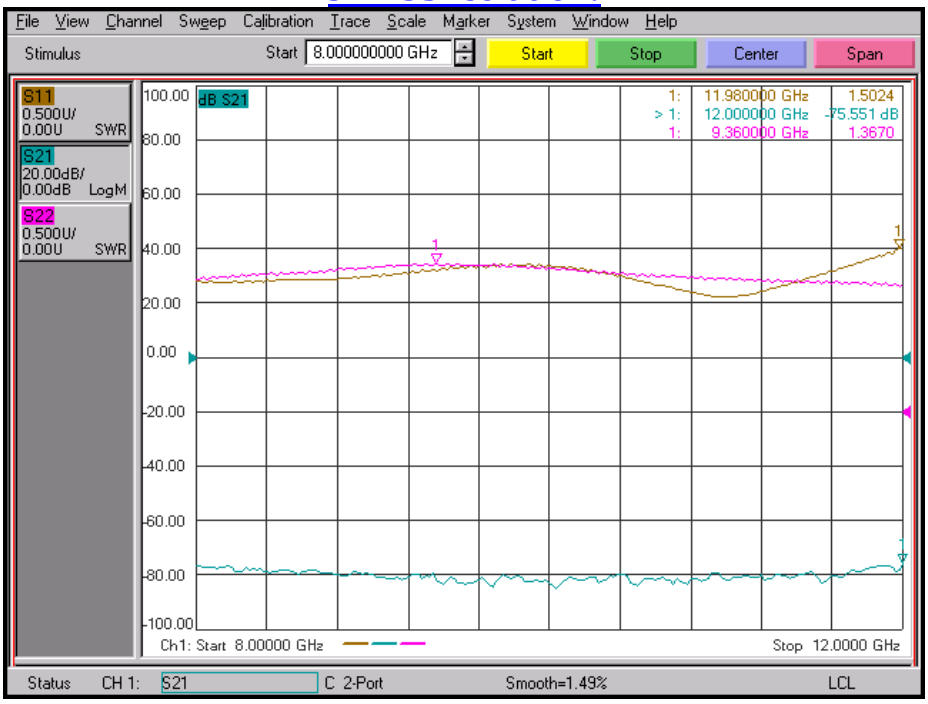
J1 – J3 Insertion Loss and Return Loss:



J1 – J3 Isolation:



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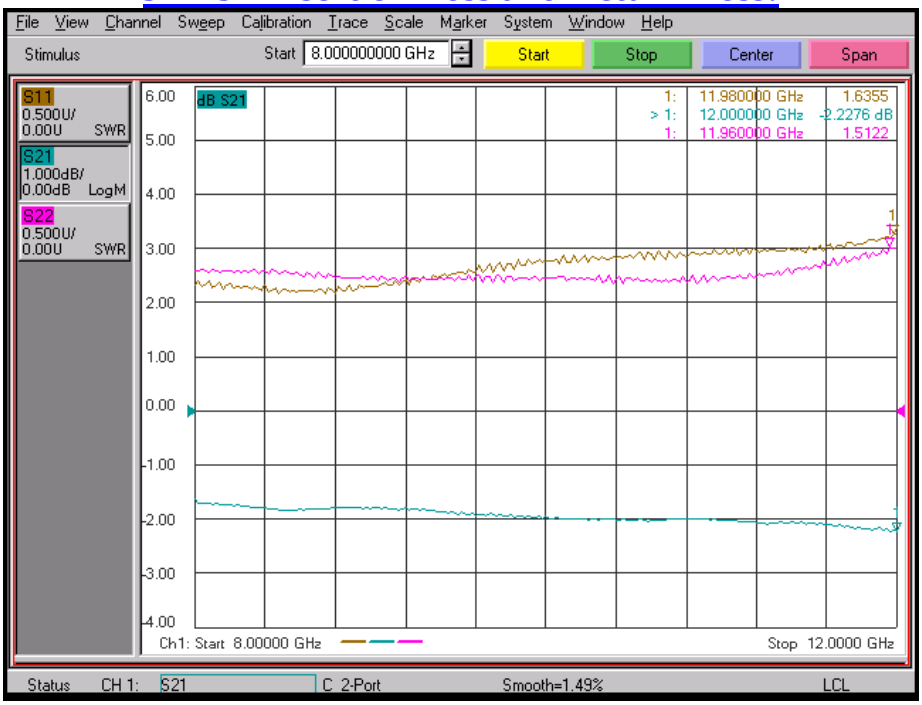
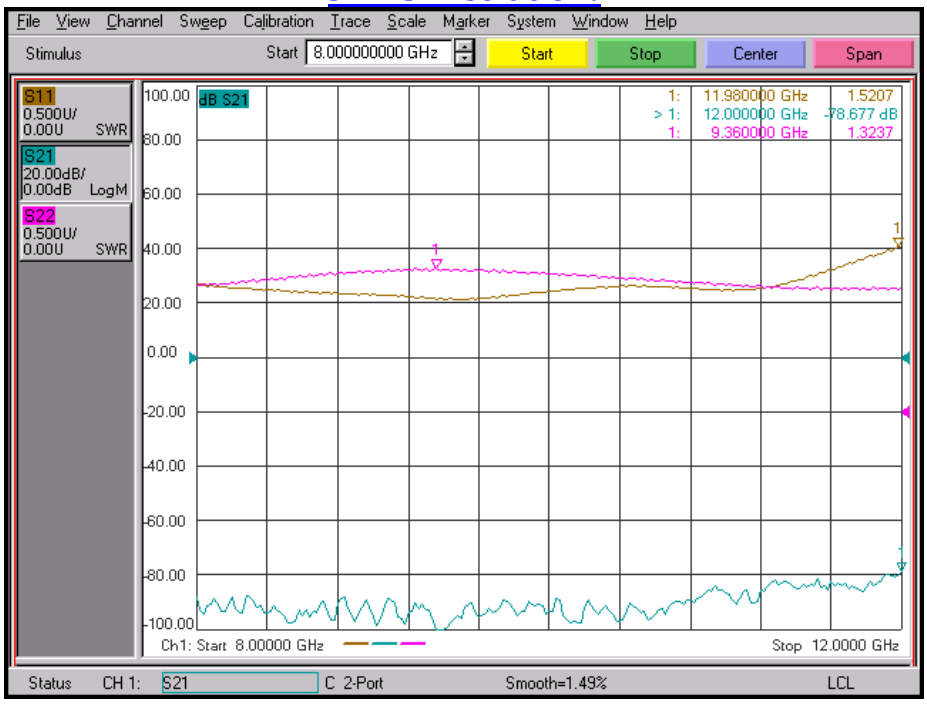
J1 – J4 Insertion Loss and Return Loss:



J1 – J4 Isolation:



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Typical Characteristics
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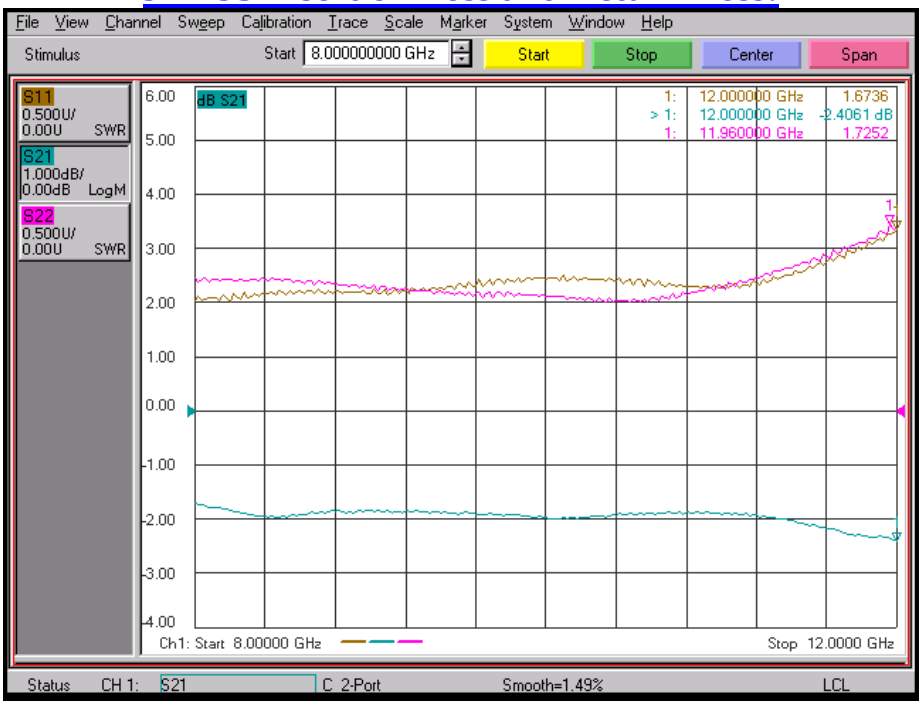
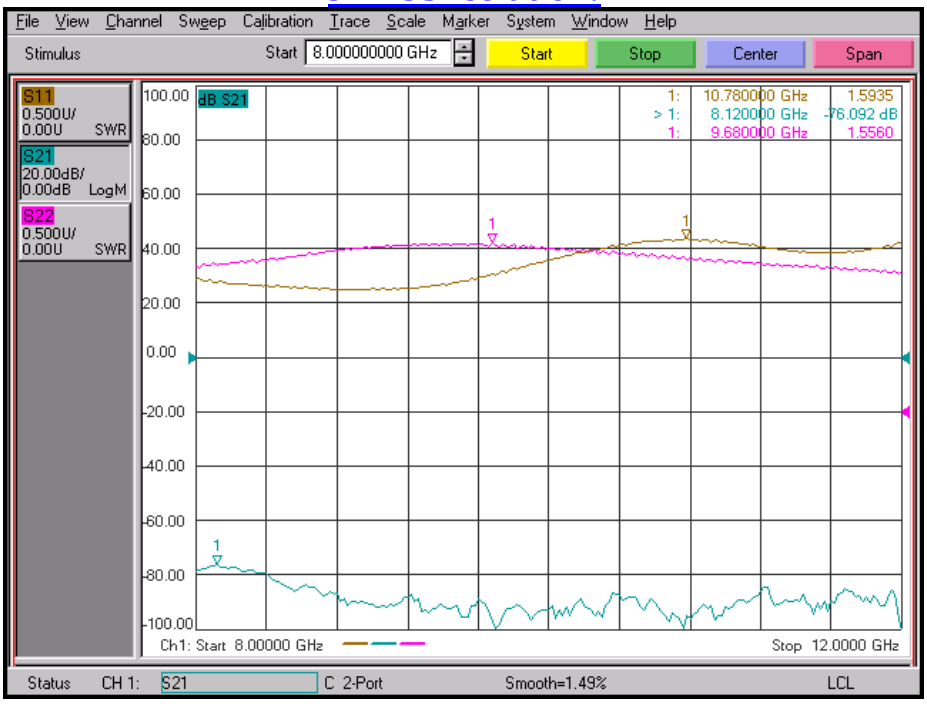
J1 – J5 Insertion Loss and Return Loss:



J1 – J5 Isolation:



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Typical Characteristics
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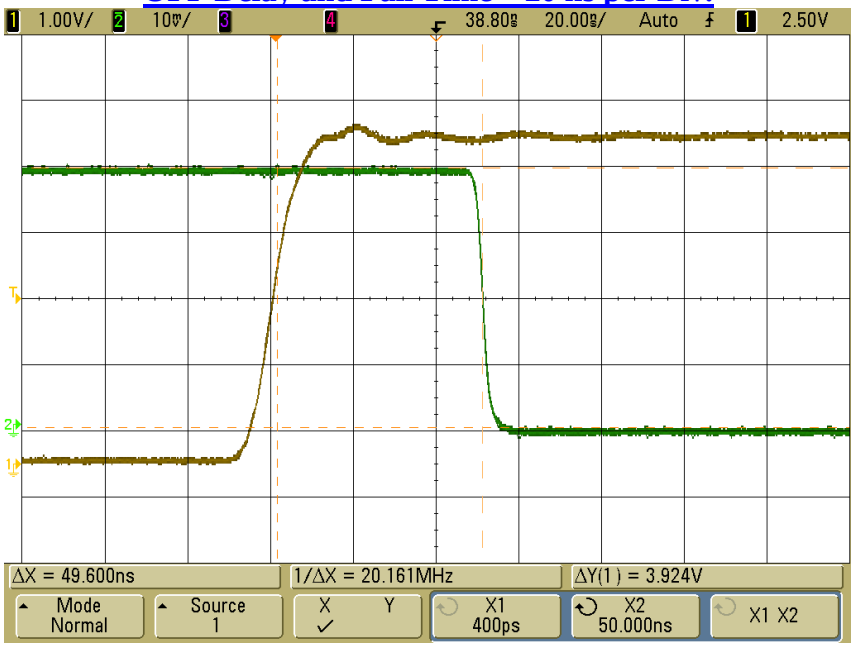
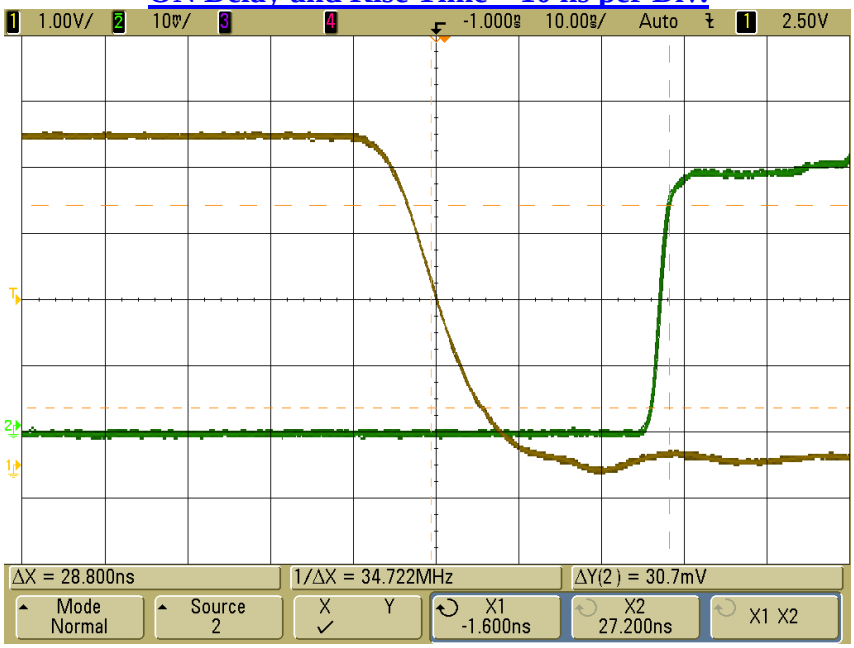
Switching Speed:

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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