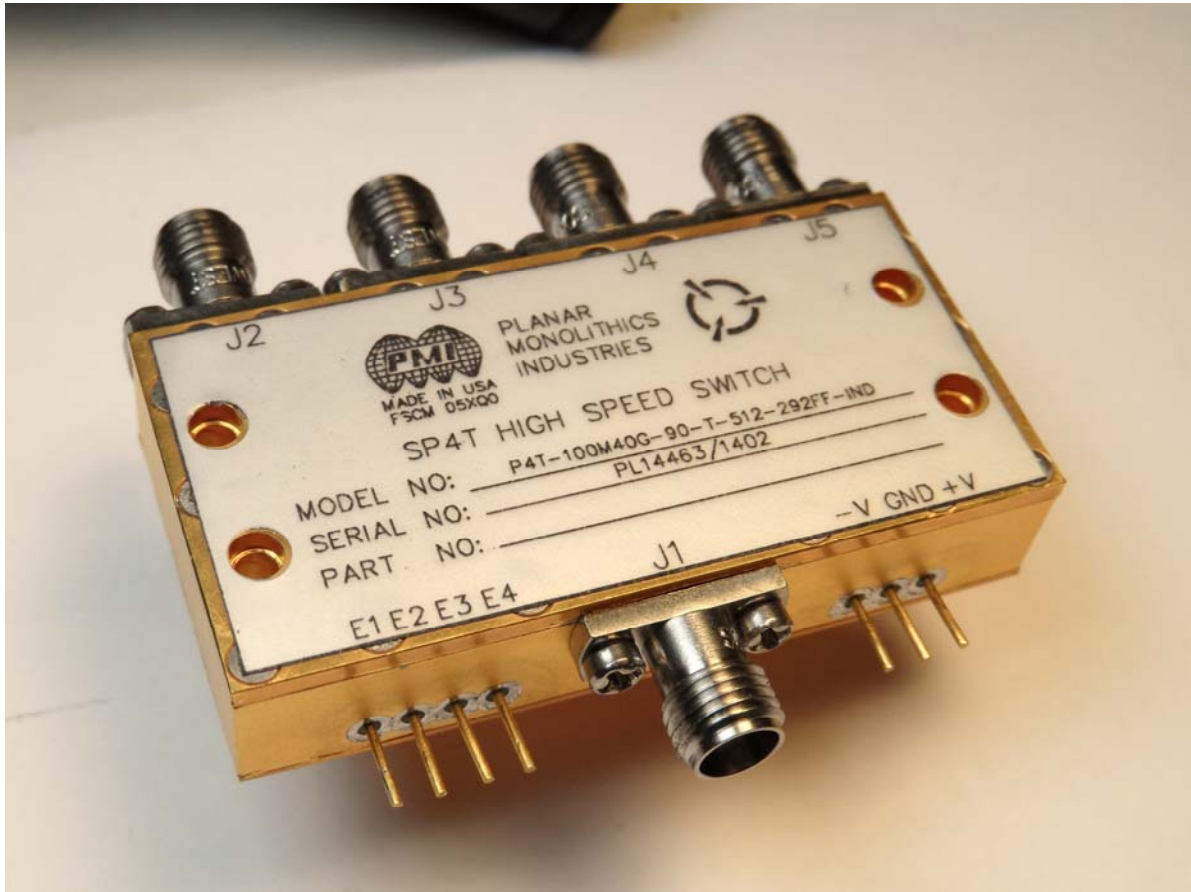




**TYPICAL CHARACTERISTICS
ON
P4T-100M40G-90-T-512-292FF-IND**

PMI MODEL P4T-100M40G-90-T-512-292FF-IND IS AN ABSORPTIVE, SINGLE POLE, FOUR THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.1 GHz TO 40 GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.



January 8, 2014

Designed By: PMI Engineering

Tested & Reported By: Randy Combs



TYPICAL CHARACTERISTICS ON P4T-100M40G-90-T-512-292FF-IND

DESCRIPTION

PMI MODEL P4T-100M40G-90-T-512-292FF-IND IS AN ABSORPTIVE, SINGLE POLE, FOUR THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.1 GHz TO 40 GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.

SPECIFICATIONS

- FREQUENCY RANGE: 0.1 TO 40 GHz
- ISOLATION: 100dB Typ., 95dB Min. (0.1 to 18 GHz)
95dB Typ., 80dB Min. (18 to 28.5 GHz)
77dB Typ., 70dB Min. (28.5 to 40 GHz)
- INSERTION LOSS: 5.25dB Typ., 6dB Max. (0.1 to 18 GHz)
6.25dB Typ., 8dB Max. (18 to 28.5 GHz)
7.25dB Typ., 10dB Max. (28.5 to 40 GHz)
- VSWR: 2.0:1 Typ., 2.75:1 Max
- OPERATING INPUT POWER: +20 dBm CW MAX
- RF SWITCHING SPEED: 100ns Max
- DC VOLTAGE: +5V @ 200 mA MAX
-12V @ 100 mA MAX
- CONTROL SIGNAL: 4 LINE TTL "0" = INSERTION LOSS & "1" = ISOLATION
- CONNECTORS I N/O/U: 2.92mm FEMALE CONNECTORS
- CONTROL: SOLDER PINS
- SIZE: (L)2.0" x (W)1.0" x (H)0.4"
- FINISH: GOLD PLATED

ENVIRONMENTAL RATINGS

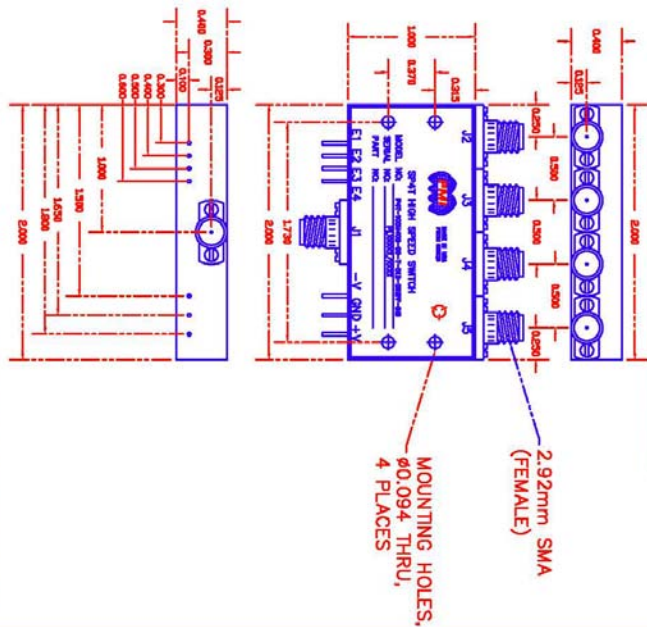
- TEMPERATURE: -40°C TO +85°C (OPERATING)
-55°C TO +125°C (STORAGE)
 - HUMIDITY: MIL-STD-202F, METHOD 1038 COND. B
 - SHOCK: MIL-STD-202F, METHOD 2138 COND. B
 - VIBRATION: MIL-STD-202F, METHOD 2049 COND. B
 - ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
 - SALT POG: MIL-STD-202F, METHOD 107D COND. A
 - FUNGUS: MIL-STD-810C, METHOD 508.2
 - TEMPERATURE CYCLES: MIL-STD-202F, METHOD 107
- NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE.
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION.

ALL DIMENSIONS ARE IN INCHES

TOLERANCES:
XXX .010
XXXX .005

ZONE	REV	DESCRIPTION	DATE	APPROVED
1		OUTLINE	10/28/18	

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
 E-MAIL: sales@pmi-rf.com
 ISO 9001 CERTIFIED



APPROVALS	DATE	TITLE	REV	FORM NO.	REV NO.	SCALE	SHEET
DESIGN	10/28/18	PRODUCT FEATURE	A	05X00	27021061		1 OF 1
ORDERED							
ISSUED							



**TYPICAL CHARACTERISTICS
ON
P4T-100M40G-90-T-512-292FF-IND**

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	100MHz to 40GHz	100MHz to 40GHz (See Plots)	
2	Insertion Loss:	5.25dB Typ., 6dB Max (0.1 to 18 GHz) 6.25dB Typ., 8dB Max (18 to 26.5 GHz) 7.25dB Typ., 10dB Max (26.5 to 40 GHz)	3.45 dB (See Plots) 4.08 dB (See Plots) 7.4 dB (See Plots)	
3	Isolation:	100dB Typ., 95dB Min (0.1 to 18 GHz) 95 dB Typ., 80dB Min (18 to 26.5 GHz) 77dB Typ., 70dB Min (26.5 to 40 GHz)	103 dB (See Plots) 80.5 dB (See Plots) 84.6 dB (See Plots)	
4	VSWR:	2.0:1 Typ. 2.75:1 Max	2.19:1 (See Plots)	
5	Switching Speed:	100ns Max	20ns (See Plots)	
6	Video Transients:	Not Specified	1V Peak to Peak Typ. (See Plots)	
7	Input Power:	+20dBm CW	Pass	
8	Control TTL	4 Line Independent Logic "0" = Insertion Loss Logic "1" = Isolation	Pass	
9	Power Supply:	+5VDC @ 200mA * -12VDC @ 100mA *	93 mA 98 mA	

*Voltage Regulation & Reverse Bias Protection Included

7311-F Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@pmi-rf.com



TYPICAL CHARACTERISTICS ON P4T-100M40G-90-T-512-292FF-IND

(J1-J2) Insertion Loss and Return Loss



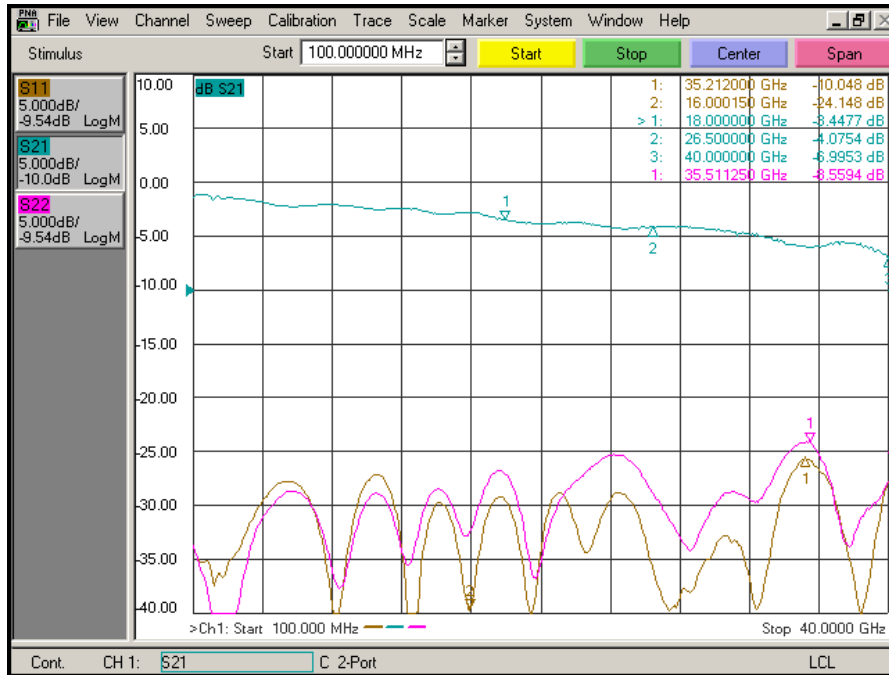
(J1-J3) Insertion Loss and Return Loss



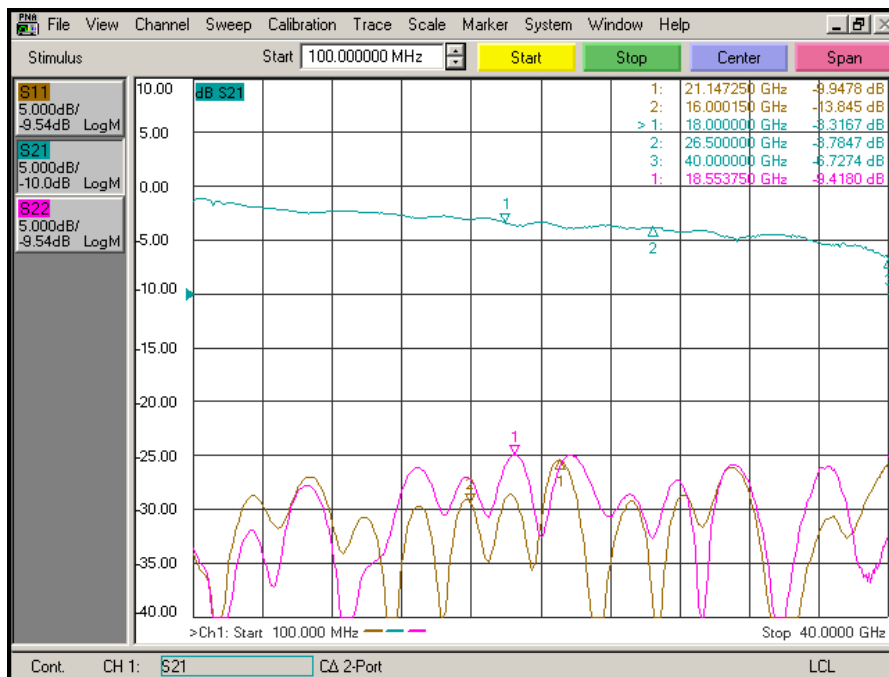


**TYPICAL CHARACTERISTICS
ON
P4T-100M40G-90-T-512-292FF-IND**

(J1-J4) Insertion Loss and Return Loss



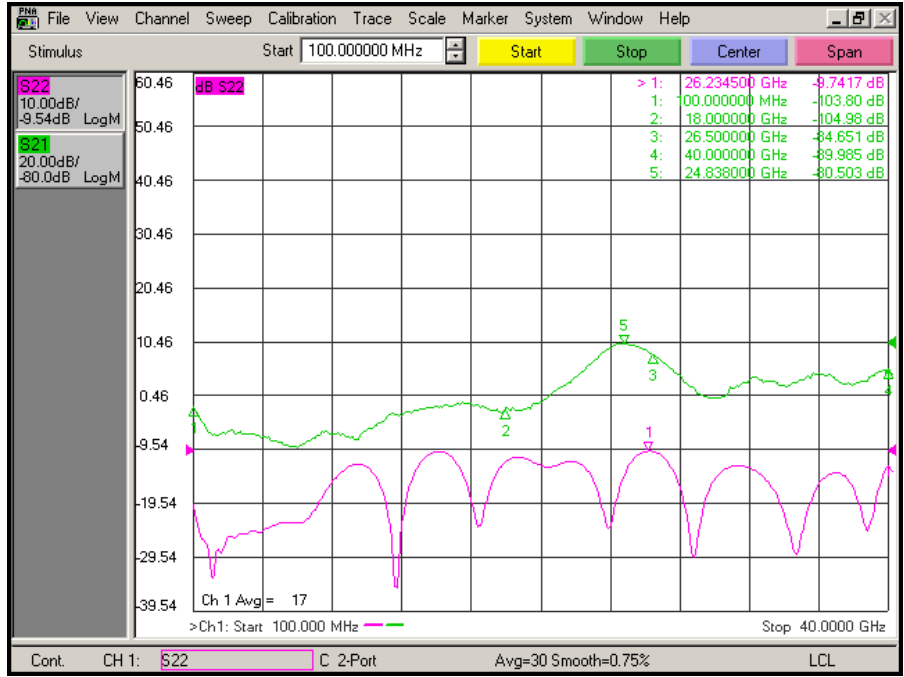
(J1-J5) Insertion Loss and Return Loss





**TYPICAL CHARACTERISTICS
ON
P4T-100M40G-90-T-512-292FF-IND**

(J1 – J2) Isolation and Termination Return Loss



(J1 – J3) Isolation and Termination Return Loss

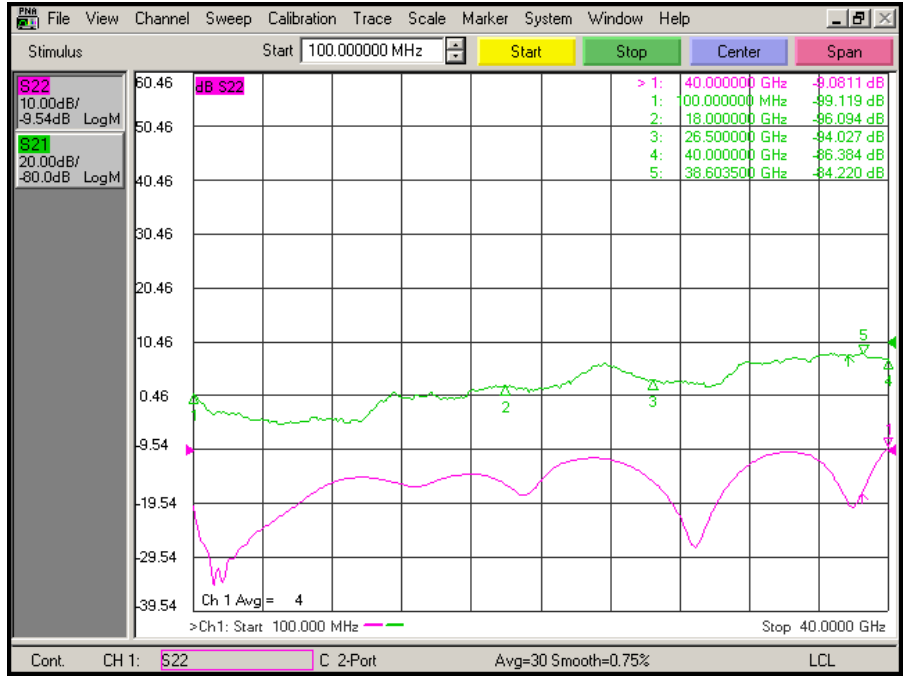


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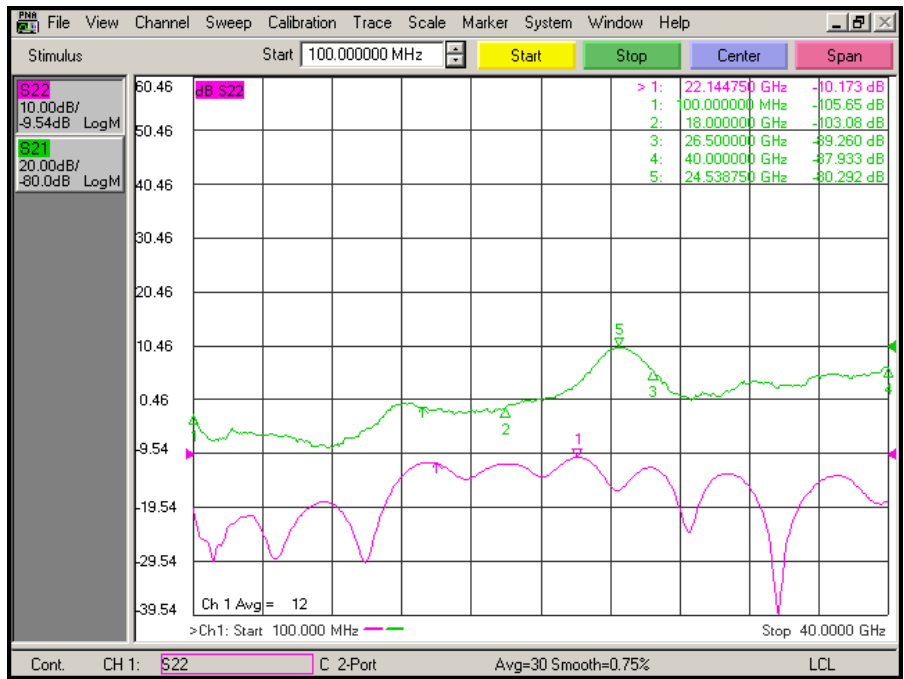


**TYPICAL CHARACTERISTICS
ON
P4T-100M40G-90-T-512-292FF-IND**

(J1 – J4) Isolation and Termination Return Loss



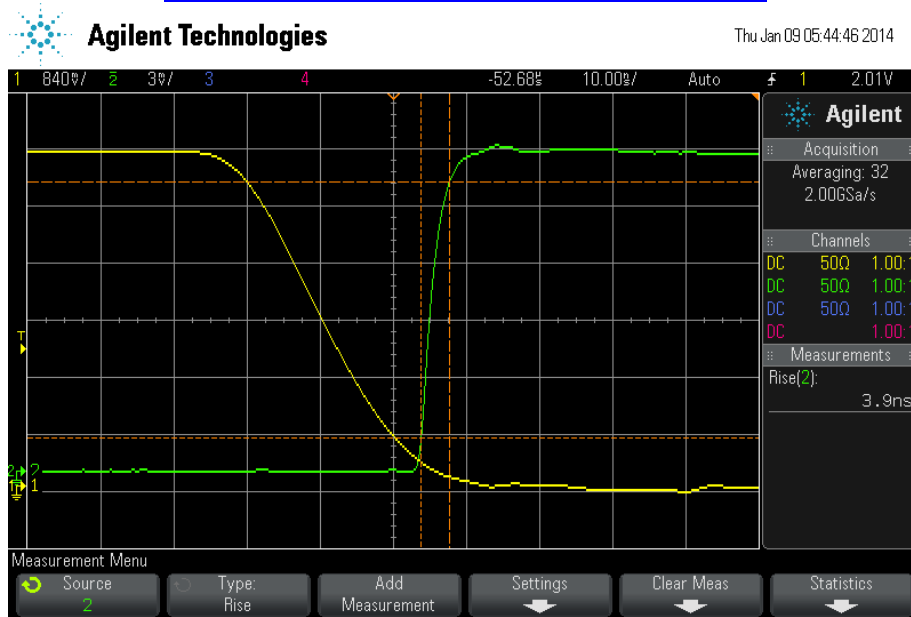
(J1 – J5) Isolation and Termination Return Loss



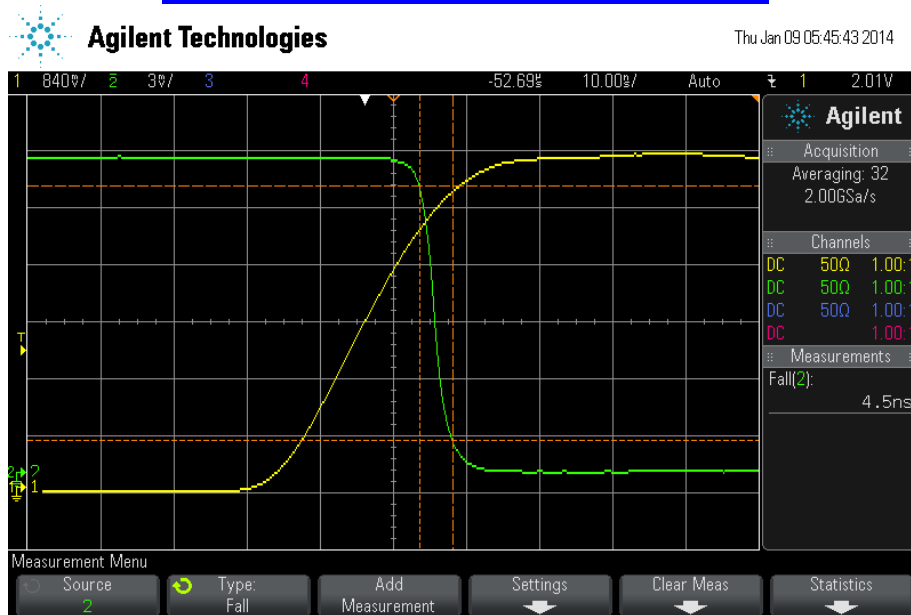


**TYPICAL CHARACTERISTICS
ON
P4T-100M40G-90-T-512-292FF-IND**

**Switching Speed
ON Delay and Rise Time – 10ns per Div.**



**Switching Speed
OFF Delay and Fall Time – 10ns per Div.**



Green Trace: RF Signal
Yellow Trace: TTL Signal

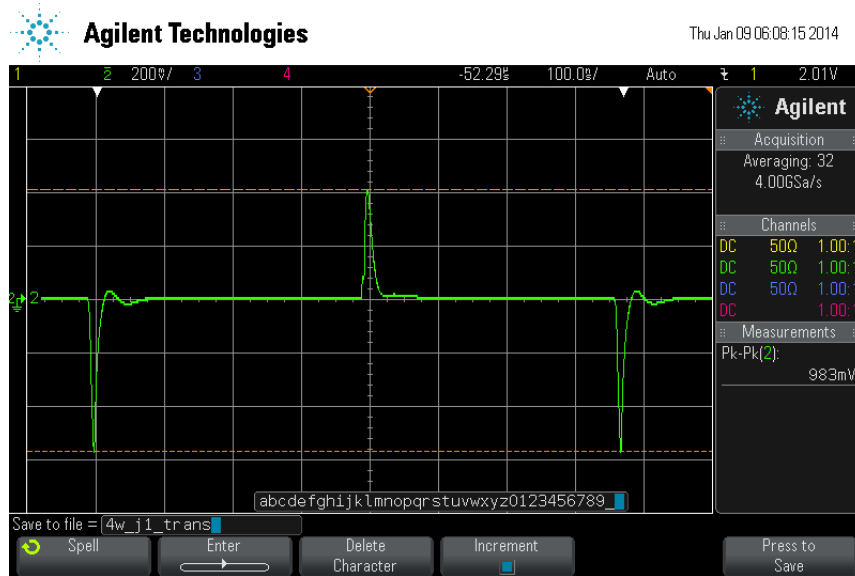
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TYPICAL CHARACTERISTICS ON P4T-100M40G-90-T-512-292FF-IND

Video Transients

Input



Output

