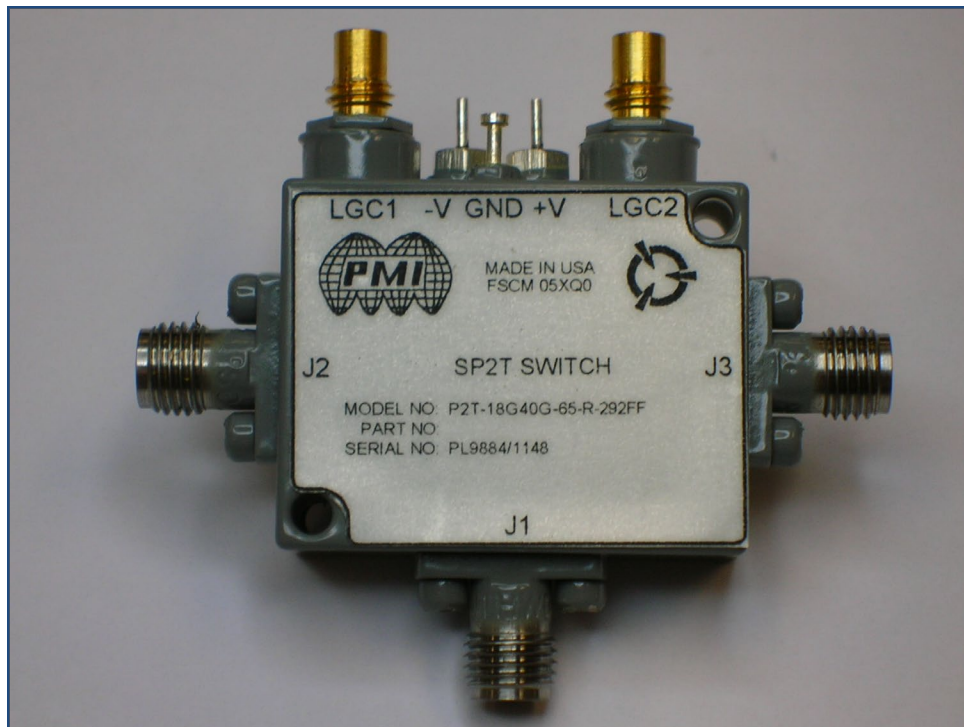




**TYPICAL CHARACTERISTICS
ON
P2T-18G40G-65-R-292FF**

**PMI MODEL P2T-18G40G-65-R-292FF IS A SINGLE POLE, TWO
THROW PIN DIODE SWITCH THAT OPERATES OVER THE
18GHz TO 40GHz FREQUENCY RANGE. THIS MODEL
INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY
SYSTEM INTEGRATION.**



September 24, 2013

Designed By:
PMI Engineering

Tested and Reported By:
Hugo Gonzales, Lee McGraw & Sebastian Palacio



TYPICAL CHARACTERISTICS ON P2T-18G40G-65-R-292FF

<p>DESCRIPTION</p> <p>PMI MODEL P2T-18G40G-65-R-292FF IS A SINGLE POLE, TWO THROW PIN DIODE SWITCH THAT OPERATES OVER THE 18GHz TO 40GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.</p> <p>SPECIFICATIONS</p> <ul style="list-style-type: none"> • FREQUENCY RANGE: 18GHz TO 40GHz • ISOLATION: 65dB Min (18-26.5GHz) 55dB Min (26.5-40GHz) • INSERTION LOSS: 3.5dB Max (18-26.5GHz) 4.5dB Max (26.5-40GHz) • VSWR (ON POSITION): 2.3:1 Max (18-26.5GHz) 2.5:1 Max (26.5-40GHz) • SWITCHING SPEED: 100ns MAX. • RF POWER CAPABILITY: +20dBm Max (+30dBm Damage Level) • DC SUPPLY: + 5VDC @ 75mA T_{yp} -12VDC @ 50mA T_{yp} • CONTROL SIGNAL: LOW "0" - ON HIGH "1" - OFF J1-J2 - ON (L6C1 "0", L6C2 "1") J1-J3 - ON (L6C1 "1", L6C2 "0") • CONNECTORS IN/OUT: 2.92mm FEMALE CONNECTORS • CONTROL CONNECTORS: SMC MALE • SIZE: (L) 1.2" X (W) 0.95" X (H) 0.46" • FINISH: GRAY EPOXY POLIMIDE COATING IAW MIL-C-22750, TYPE I OVER EPOXY POLIMIDE PRIMER IAW MIL-P-23377, TYPE I, CLASS 1 OR 3. <p>ENVIRONMENTAL RATINGS</p> <ul style="list-style-type: none"> • TEMPERATURE: -65°C TO +110°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 <p><small>NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION.</small></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">ZONE</td> <td style="width: 10%;">REV.</td> <td style="width: 40%;">DESCRIPTION</td> <td style="width: 10%;">DATE</td> <td style="width: 10%;">APPROVED</td> </tr> <tr> <td>A1</td> <td></td> <td>ORIGINAL RELEASE</td> <td>05/11/11</td> <td></td> </tr> <tr> <td>A2</td> <td></td> <td>ECN # 13-0036</td> <td>05/08/13</td> <td></td> </tr> </table> <p style="text-align: center;">MECHANICAL OUTLINE</p> <p style="text-align: center;">PMI CONFIDENTIAL AND PROPRIETARY</p> <p style="text-align: center;">PLANAR MONOLITHICS INDUSTRIES, INC.</p> <p style="text-align: center;">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</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">APPROVALS</td> <td style="width: 20%;">DATE</td> <td colspan="2" style="text-align: center;">TITLE</td> </tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: center;">PRODUCT FEATURE</td> </tr> <tr> <td></td> <td></td> <td colspan="2" style="text-align: center;">P2T-18G40G-65-R-292FF</td> </tr> <tr> <td>DRAWN</td> <td>DATE</td> <td>REV</td> <td>FEED NO.</td> </tr> <tr> <td></td> <td>05/11/11</td> <td>A</td> <td>05XQ0</td> </tr> <tr> <td>DATE</td> <td></td> <td>DWG NO.</td> <td></td> </tr> <tr> <td></td> <td></td> <td>27014761</td> <td></td> </tr> <tr> <td>FILED</td> <td></td> <td>SCALE</td> <td>SHEET</td> </tr> <tr> <td></td> <td></td> <td>N: S</td> <td>1 OF 1</td> </tr> </table> <p style="text-align: center;"><small>ALL DIMENSIONS ARE IN INCHES TOLERANCES: XXX .0000 XXXX .0010</small></p>	ZONE	REV.	DESCRIPTION	DATE	APPROVED	A1		ORIGINAL RELEASE	05/11/11		A2		ECN # 13-0036	05/08/13		APPROVALS	DATE	TITLE				PRODUCT FEATURE				P2T-18G40G-65-R-292FF		DRAWN	DATE	REV	FEED NO.		05/11/11	A	05XQ0	DATE		DWG NO.				27014761		FILED		SCALE	SHEET			N: S	1 OF 1
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TEST ITEM NO	PARAMETERS	SPECIFIED VALUE		TEST RESULTS		QA QC
1	Frequency Range:	18 GHz – 40 GHz		18 GHz – 40 GHz See Plots		
2	Isolation:	65 dB Min	(18 – 26.5 GHz)	77dB	(18 – 26.5 GHz)	
		55 dB Min	(26.5 – 40 GHz)	82dB	(26.5 – 40 GHz)	
3	Insertion Loss:	3.5 dB Max	(18 – 26.5 GHz)	2.0dB	(18 – 26.5 GHz)	
		4.5 dB Max	(26.5 – 40 GHz)	3.6dB	(26.5 – 40 GHz)	
				See Plots		
4	VSWR: (On Position)	2.3:1 Max	(18 – 26.5 GHz)	1.97:1	(18 – 26.5 GHz)	
		2.5:1 Max	(26.5 – 40 GHz)	2.0:1	(26.5 – 40 GHz)	
				See Plots		

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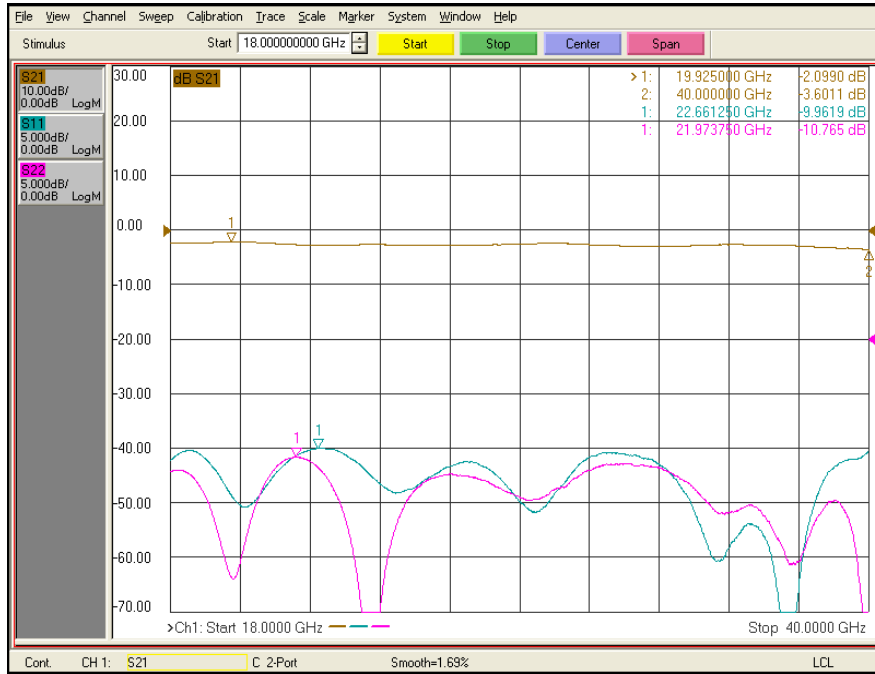
**TYPICAL CHARACTERISTICS
ON
P2T-18G40G-65-R-292FF**

5	Switching Speed:	100 ns Max	<30ns See Plots	
6	RF Power Capability	-20dBm Max (-30dBm Damage Level)	Pass	
7	DC Supply:	+5VDC @ 75 mA Typ -12VDC @ 50 mA Typ	57mA 17mA	
8	Video Transients:	Not Specified	2V Peak Typ. 4V Peak to Peak Typ. See Plots	
9	Control Signal	LOW (0) – ON HIGH (1) - OFF	PASS	

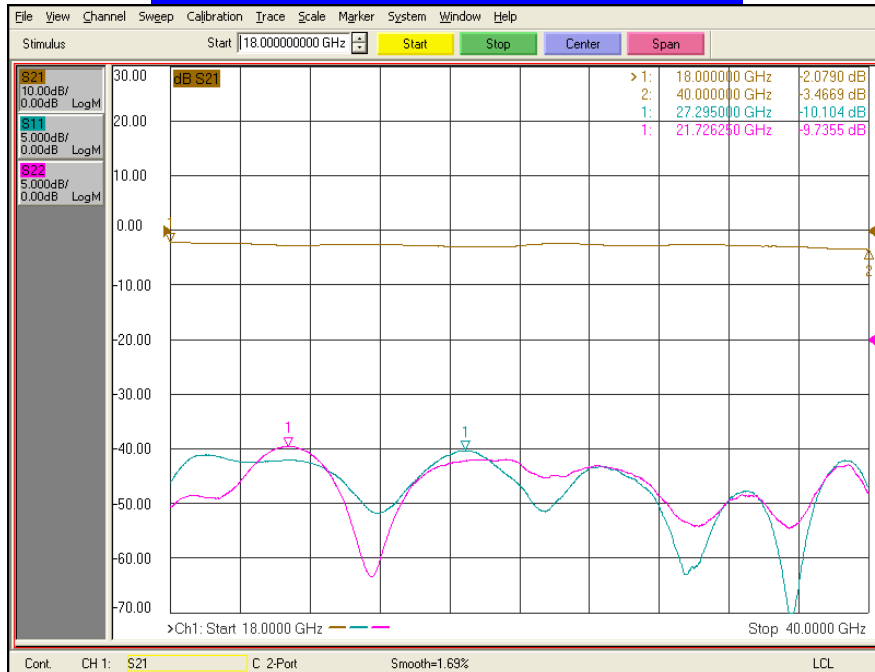
(J1-J2) Insertion Loss and Return Loss



TYPICAL CHARACTERISTICS ON P2T-18G40G-65-R-292FF



(J1-J3) Insertion Loss and Return Loss

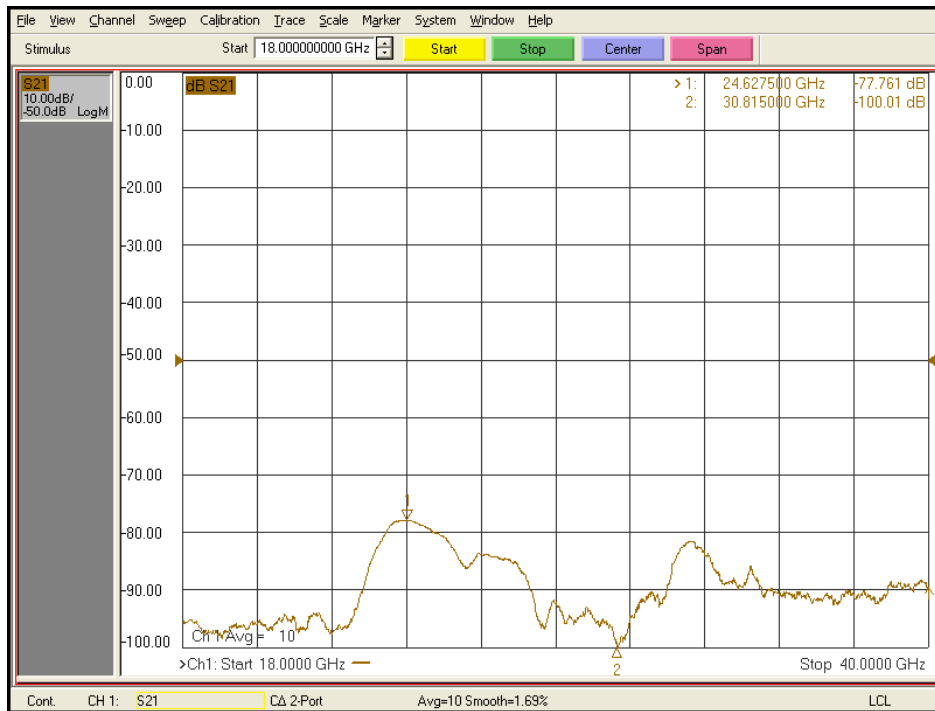


(J1 - J2) Isolation

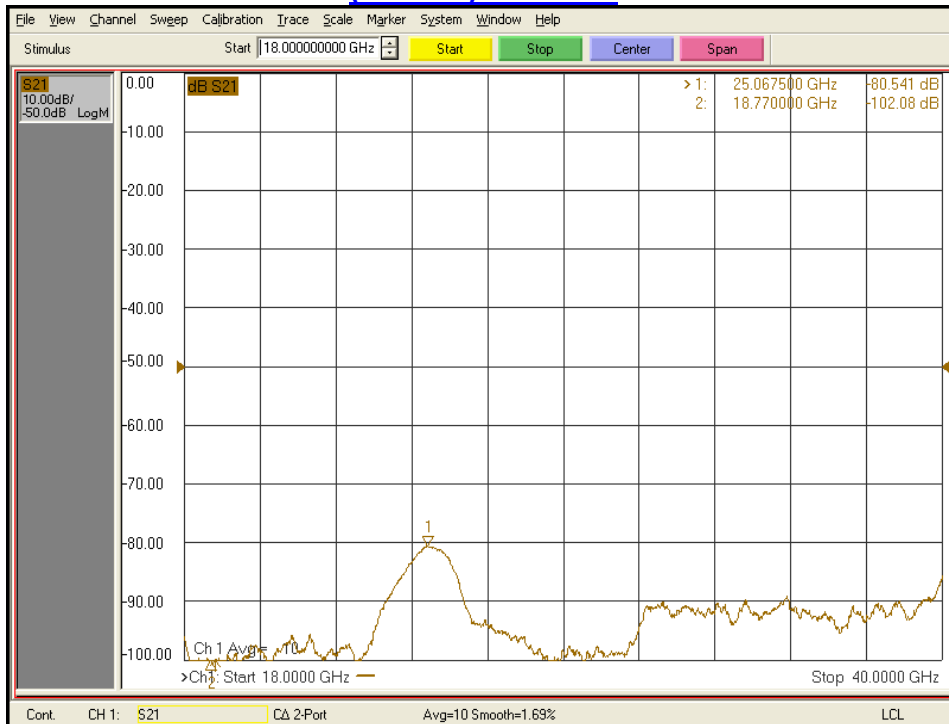
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TYPICAL CHARACTERISTICS ON P2T-18G40G-65-R-292FF



(J1 – J3) Isolation



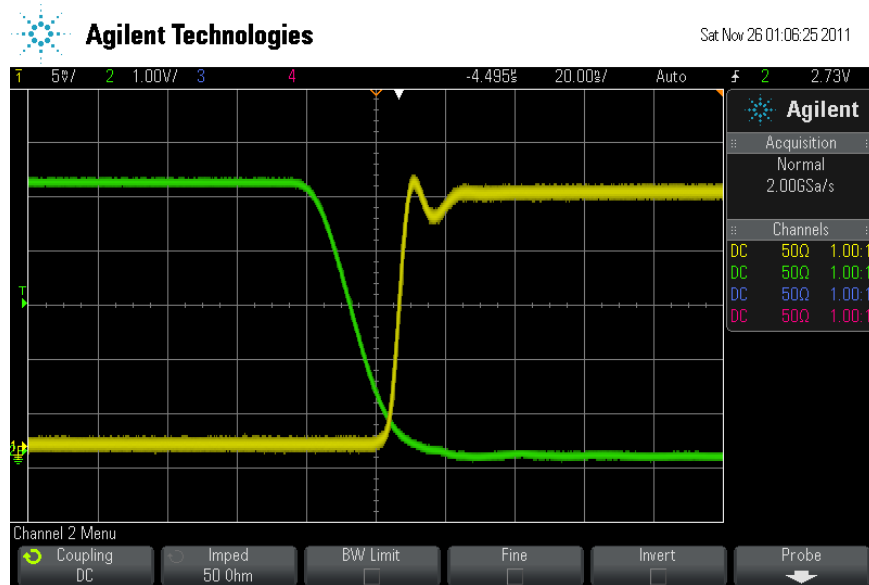
Switching Speed

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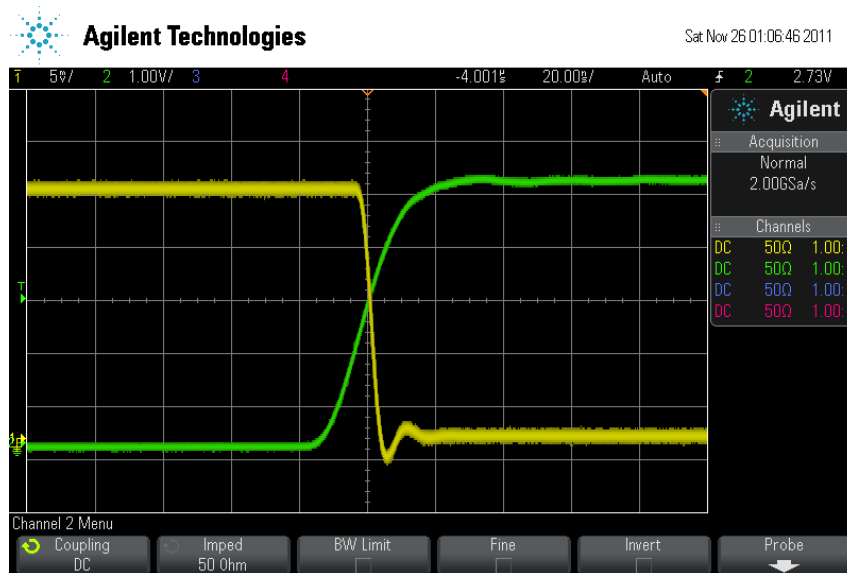


**TYPICAL CHARACTERISTICS
ON
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On Delay



Off Delay



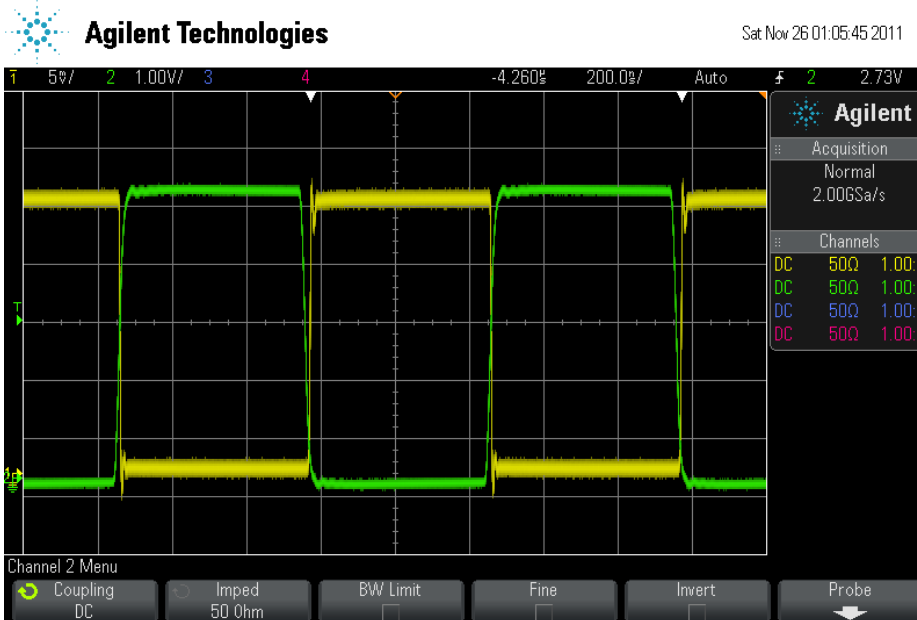
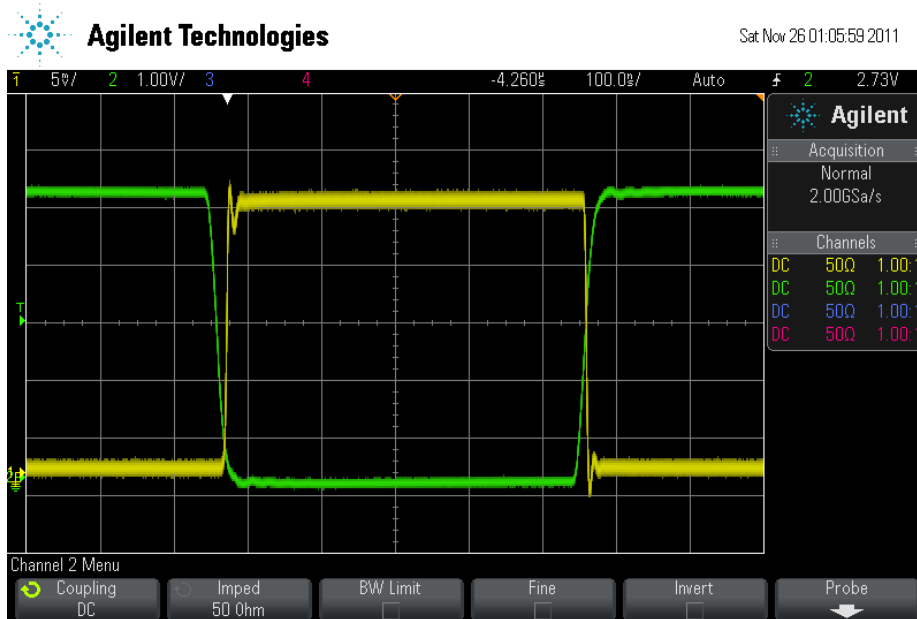
**Yellow Trace: RF Signal
Green Trace: TTL Signal**

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**TYPICAL CHARACTERISTICS
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Full Pulse



**Yellow Trace: RF Signal
Green Trace: TTL Signal**

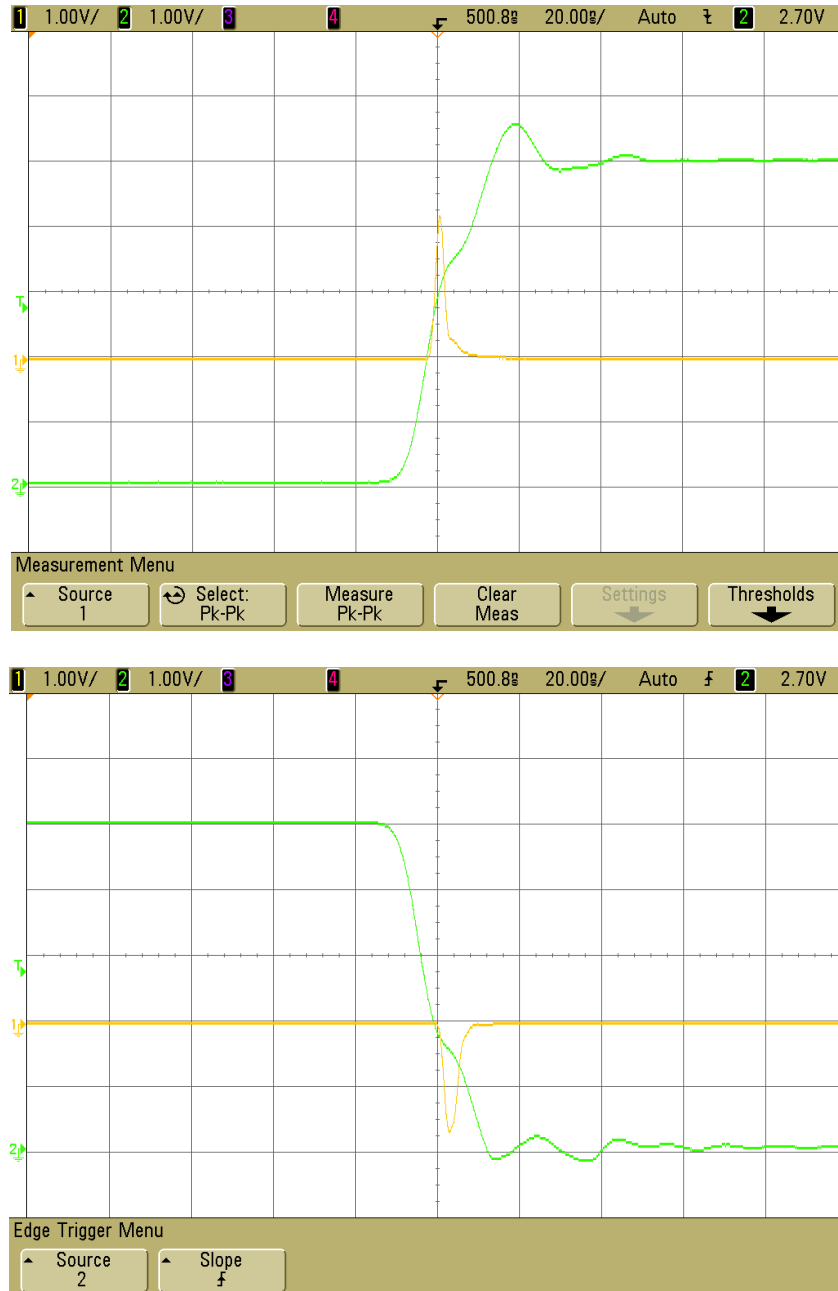
Video Transients

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**TYPICAL CHARACTERISTICS
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20ns per Div.



**Yellow Trace: Transients
Green Trace: TTL Signal**