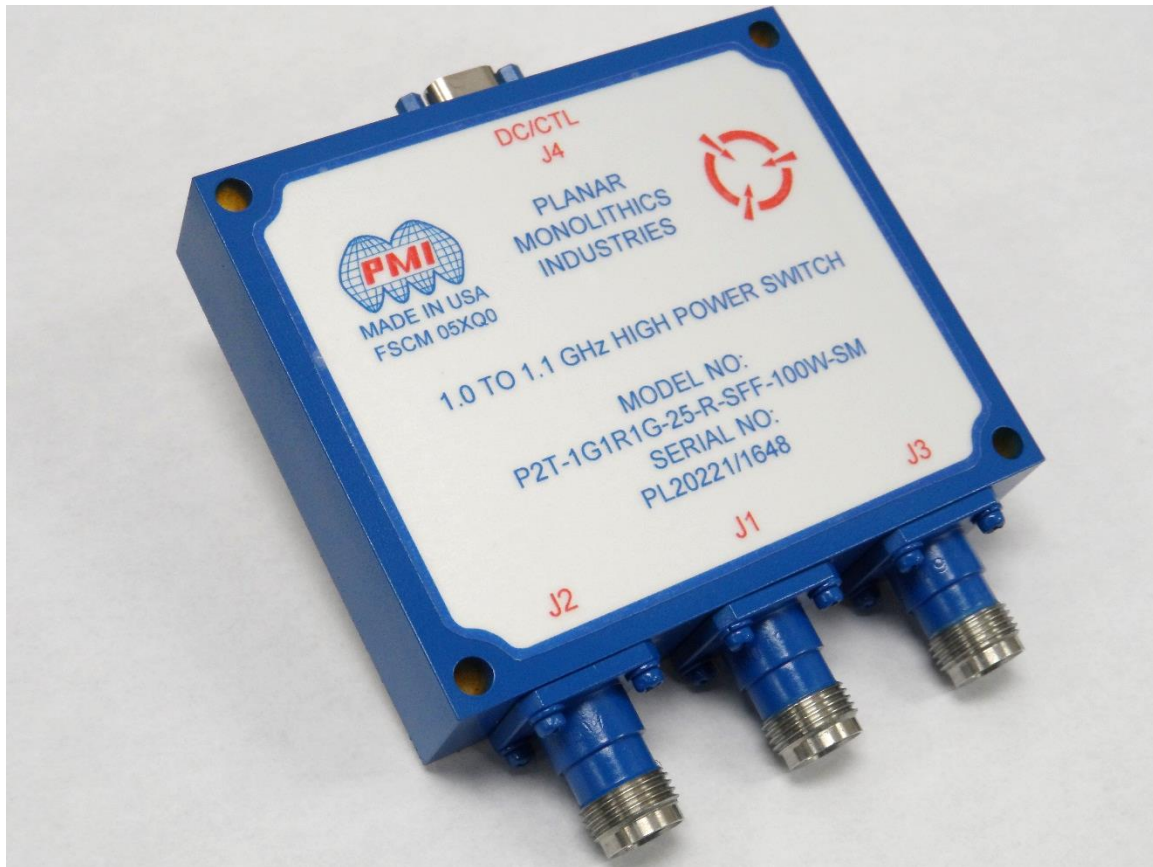




Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

PL20221/1648

PMI MODEL NUMBER P2T-1G1R1G-25-R-SFF-100W-SM IS A SINGLE POLE, TWO THROW HERMETICALLY SEALED REFLECTIVE SWITCH DESIGNED TO OPERATE OVER THE 1.0 GHz TO 1.1 GHz FREQUENCY RANGE. THIS MODEL IS DESIGNED TO HANDLE 100 WATTS AVERAGE INPUT POWER AND 5 kW PEAK HAVING A 17 μ s PULSE WIDTH AND 2% DUTY CYCLE.



December 1, 2016
Designed by: PMI Engineering
Test and Reported by: H. Gonzales / S. Palacio

Page # 1

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**Typical Characteristics
on
P2T-1G1R1G-25-R-SFF-100W-SM**

PL20221/1648

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Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

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DESCRIPTION

PMI MODEL NUMBER P2T-1G1R1G-25-R-SFF-100W-SM IS A SINGLE POLE, TWO THROW HERMETICALLY SEALED REFLECTIVE SWITCH DESIGNED TO OPERATE OVER THE 1.0 GHz TO 1.1 GHz FREQUENCY RANGE. THIS MODEL IS DESIGNED TO HANDLE 100 WATTS AVERAGE INPUT POWER AND 5 KW PEAK HAVING A 17 μ s PULSE WIDTH AND 2% DUTY CYCLE.

SPECIFICATIONS

- FREQUENCY: 1.0 GHz TO 1.1 GHz
- POWER: 5 kW PEAK
- AVERAGE POWER: 100 WATTS
- INSERTION LOSS: 0.8 dB MAX
- ISOLATION: 25 dB MIN
- VSWR: 1.5:1
- RISE TIME: 275 ns TYP (FROM 10% TO 90% RF)
- DUTY CYCLE: 1%
- PULSE WIDTH: 32 μ s
- PRF: 600 Hz
- SWITCHING SPEED: 250 ns TYP (50% TTL TO 10%/90% RF)
- SWITCHING RATE: 2 kHz
- COLD SWITCHING: YES
- POWER SUPPLY: +50V @ 50 mA, +5V @ 200 mA
- CONTROL: TTL (SEE LOGIC TABLE)
- FINISH: NO PAINT ON MOUNTING SURFACE
BLUE EPOXY POLIMIDE COATING IAW
MIL-C-22750, TYPE 1 OVER EPOXY POLIMIDE
PRIMER IAW MIL-P-23377,
TYPE I, CLASS 1 OR 3.
- CONNECTORS: TNC FEMALE (J1, J2, J3) 9-PIN MICRO D (DC/CONTROL)
- J4 CONNECTIONS:

LOGIC TABLE	
TTL	STATE
0	J1 - J3
1	J1 - J2

J4 PIN	CONNECT TO
1	U1 +50V
2	NO CONNECTION
3	NO CONNECTION
4	U1 +5V
5	U1 IN1, (CTL)
6	U1 GROUND
7	U1 GROUND
8	U1 GROUND
9	U1 GROUND

ENVIRONMENTAL RATINGS

- TEMPERATURE: -45°C TO +85°C (OPERATING - BASE PLATE)
-54°C TO +125°C (NON-OPERATING)
- ENVIRONMENTAL: MIL-STD-810E
- EM/EMC: MIL-STD-461

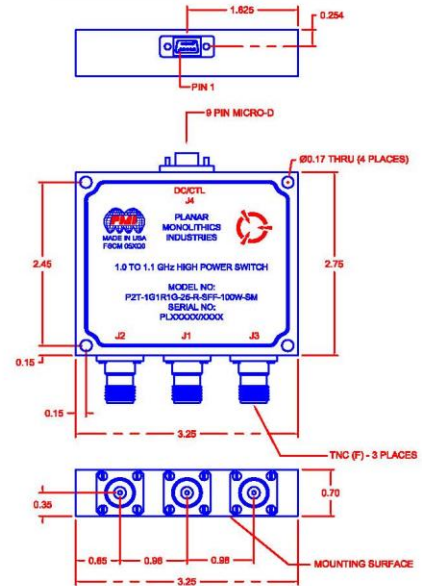
ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
X.XX ±0.020
X.XXX ±0.010

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

PMI CONFIDENTIAL AND PROPRIETARY

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	PRELIMINARY	10/20/16	SP

MECHANICAL OUTLINE



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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE	
DRAWN <i>M. Barry</i>		07/14/16	PRODUCT FEATURE P2T-1G1R1G-25-R-SFF-100W-SM 1.0 to 1.1 GHz High Power Switch	
CHECKED			SIZE: FROM NO. A 05XQ0	DWG NO. 27030201
ISSUED			SCALE: N:S	REV. 1
			SHEET 1 OF 1	



Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

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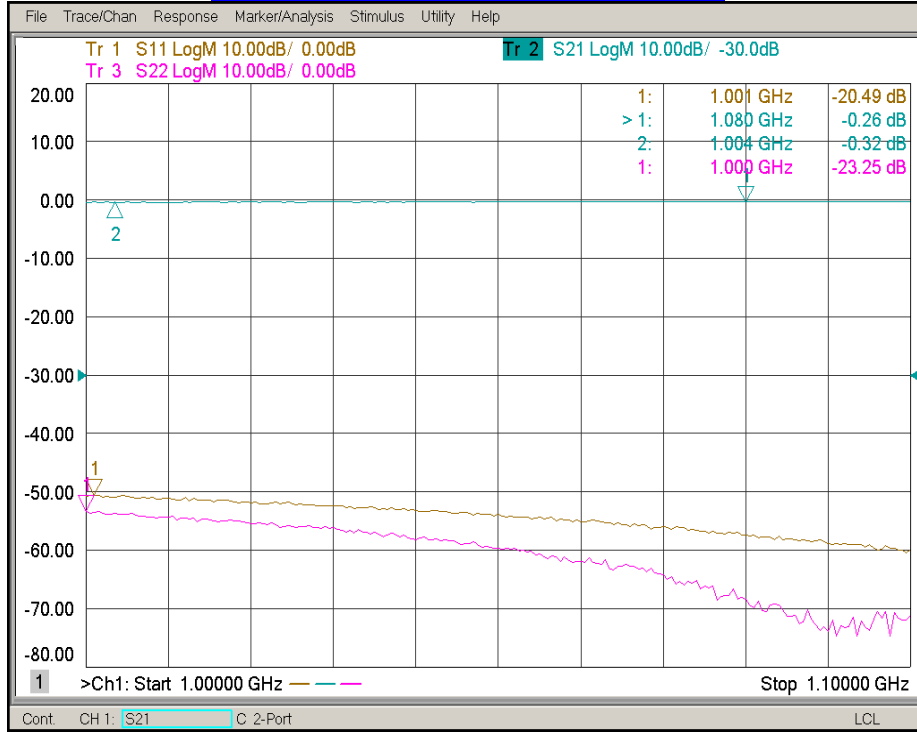
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	1.0 to 1.1 GHz	1.0 to 1.1 GHz See Plots	
2	Power:	5 kW Peak	5 kW	
3	Average Power:	100 W	100 W See Graph	
4	Insertion Loss:	0.8 dB Max	0.32dB See Plots	
5	Isolation:	25 dB Min	40.26dB See Plots	
6	VSWR:	1.5:1	1.2:1 See Plots	
7	Rise Time:	275 ns Typ From 10% to 90% RF	190ns See Plot	
8	Duty Cycle:	1%	1%	
9	Pulse Width:	32 μ s	32 μs	
10	PRF:	600 Hz	600 Hz	
11	Switching Speed:	250 ns Typ (50% TTL to 10%/90% RF)	310ns See Plot	
12	Switching Rate:	2 kHz	2 kHz	
13	Power Supply:	+50V @ 50 mA +5V @ 200 mA	+50V @ 10mA +5V @ 128mA	
14	Control Table:	Logic Table		Pass
		TTL	State	
		"0"	J1 – J3	
		"1"	J1 – J2	



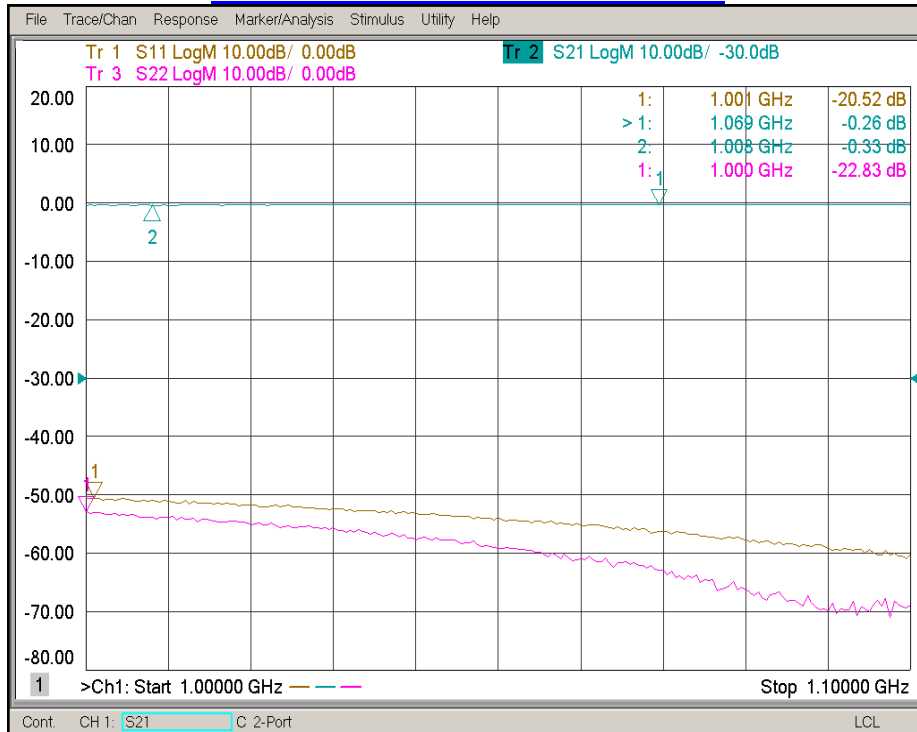
Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

PL20221/1648

J1-J2 Insertion Loss and Return Loss



J1-J3 Insertion Loss and Return Loss

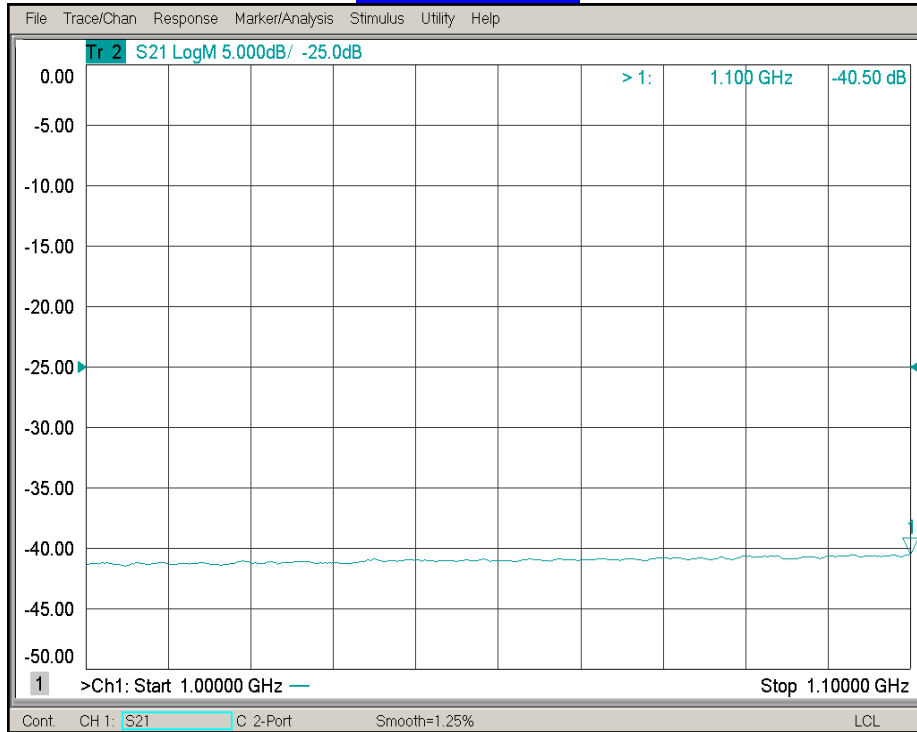




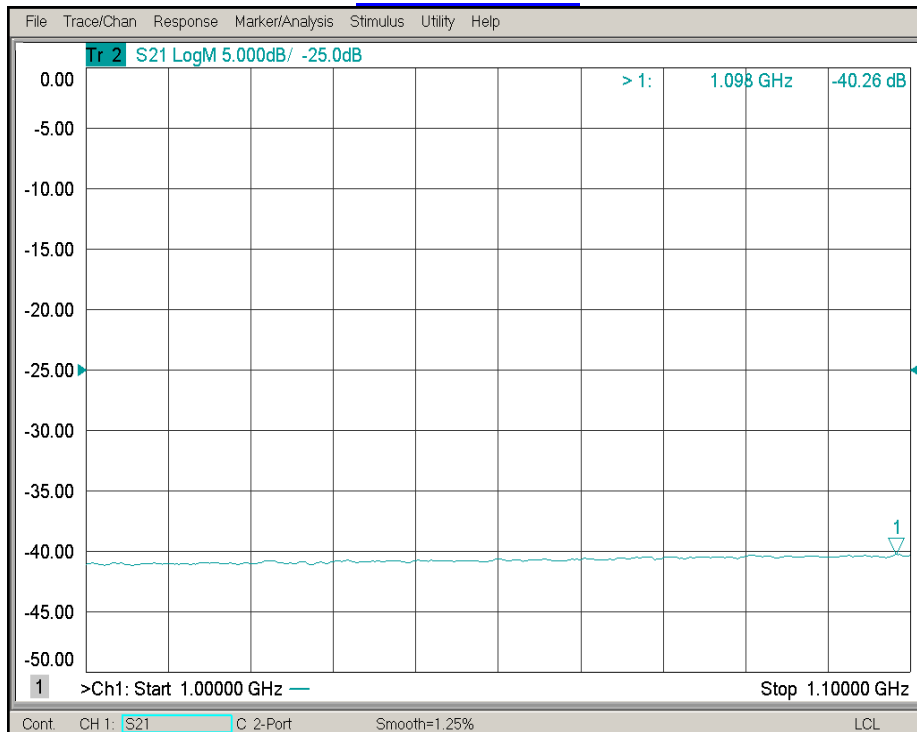
Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

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J1 – J2 Isolation



J1 – J3 Isolation

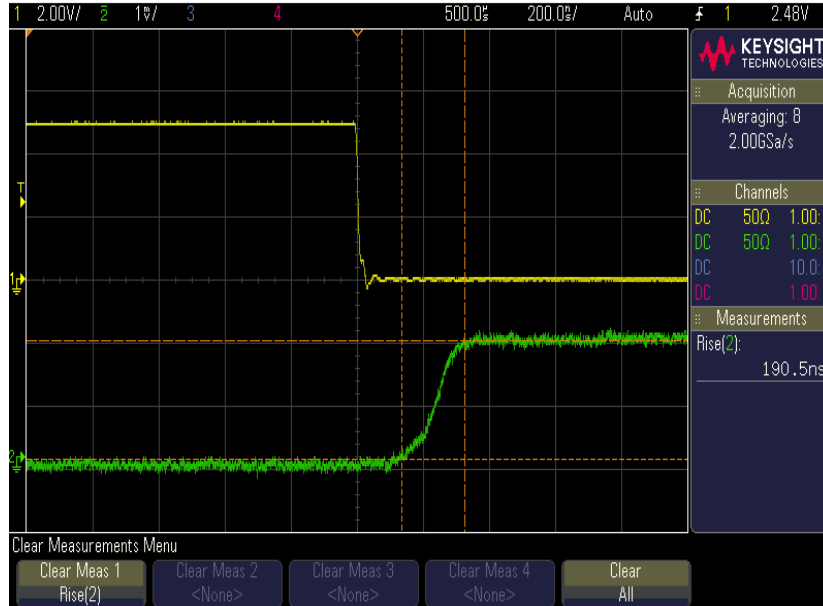




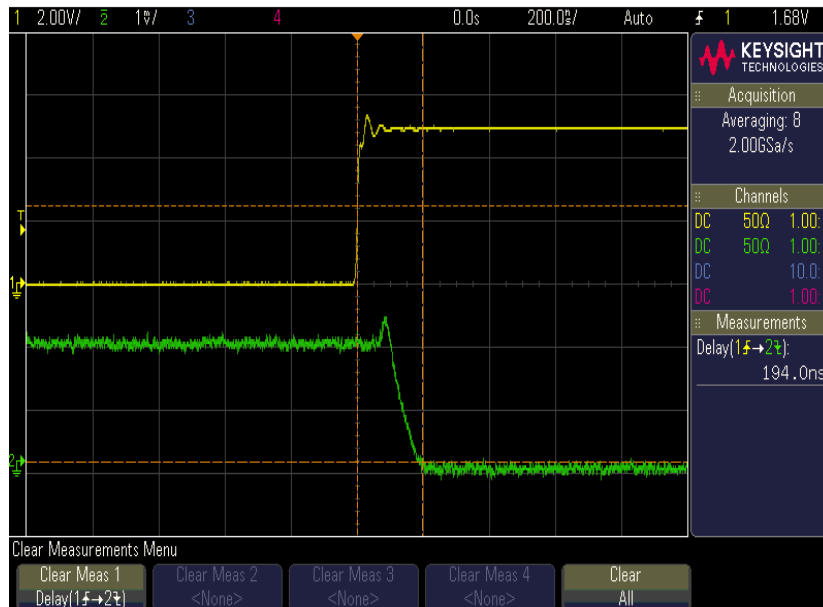
Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

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Switching Speed On Delay & Rise Time 200ns per Div.



Off Delay & Fall Time 200ns per Div.



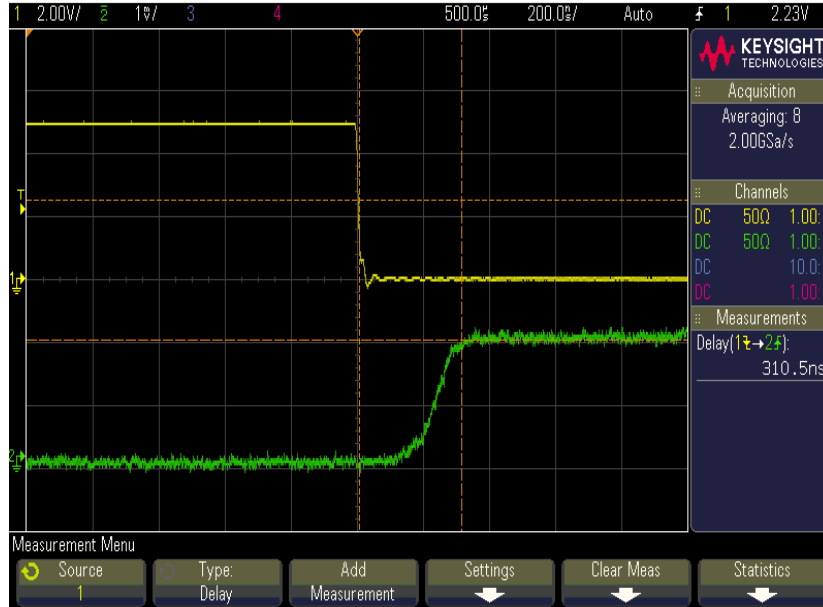
GREEN TRACE: RF Signal
YELLOW TRACE: TTL Signal



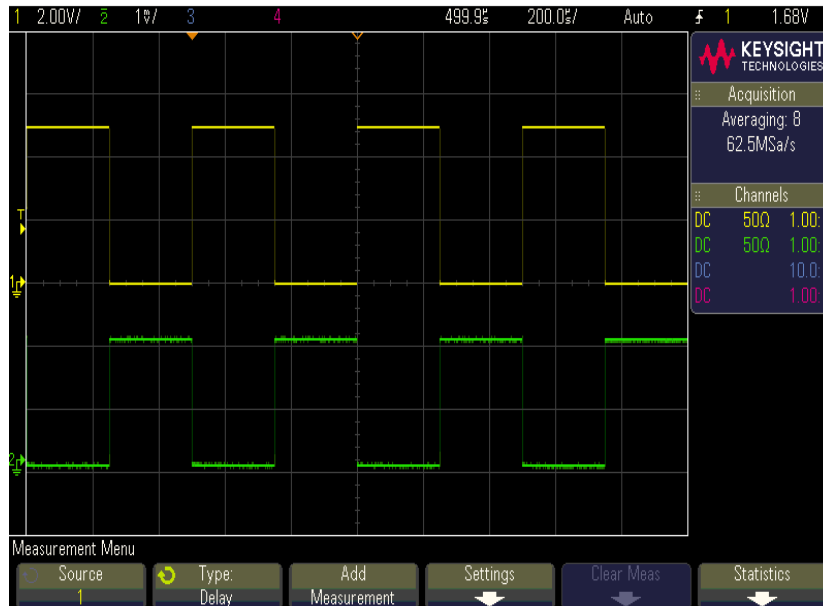
Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

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On Delay 200ns per Div.



Full Pulse 200 μs per Div.



GREEN TRACE: RF Signal
YELLOW TRACE: TTL Signal



Typical Characteristics on P2T-1G1R1G-25-R-SFF-100W-SM

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