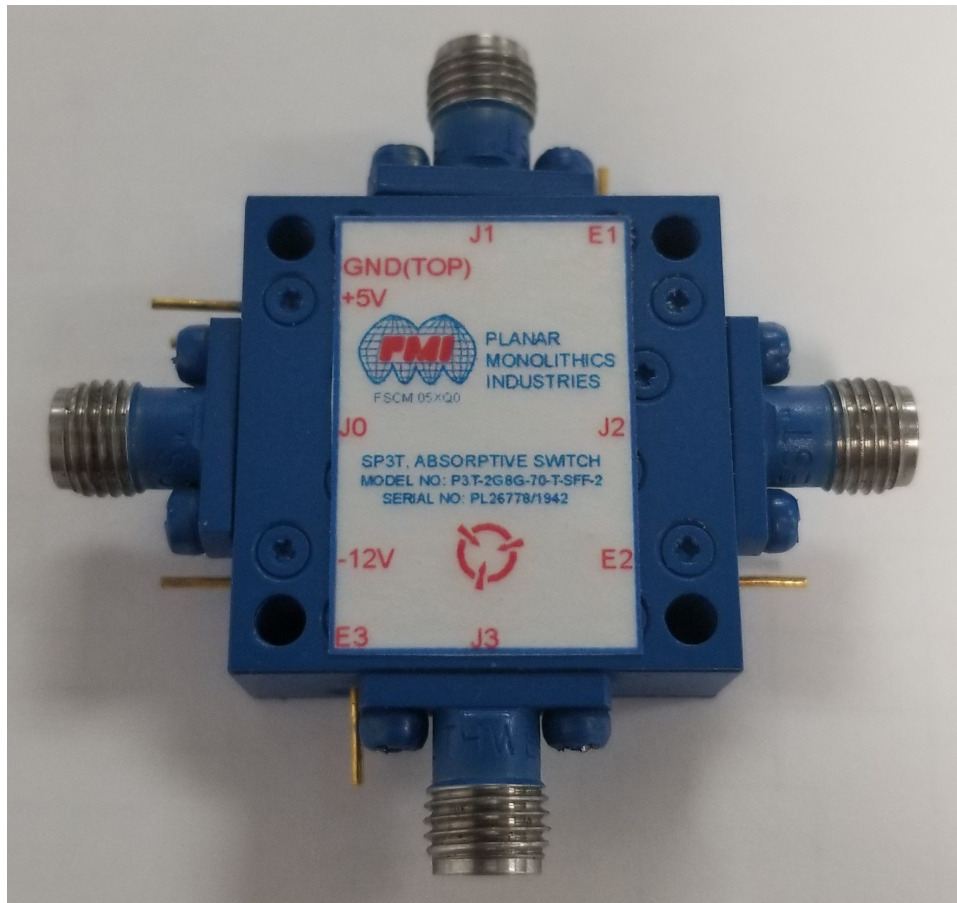




**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**

**PMI MODEL: P3T-2G8G-70-T-SFF-2 IS A SINGLE POLE, THREE THROW, ABSORPTIVE SWITCH THAT OPERATES OVER THE FREQUENCY RANGE 2.0 TO 8.0 GHz. IT HAS AN INSERTION LOSS OF 2.1 dB MAXIMUM AND AN ISOLATION OF 70 dB MINIMUM. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.**



**October 17, 2019**

**DESIGNED BY: PMI ENGINEERS**

**TESTED & REPORTED BY: Brad Willard**



**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**

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# TYPICAL CHARACTERISTICS ON P3T-2G8G-70-T-SFF-2

## OUTLINE DRAWING

### DESCRIPTION

PMI MODEL NO. P3T-2G8G-70-T-SFF-2 IS A SINGLE POLE, THREE THROW, ABSORPTIVE SWITCH THAT OPERATES OVER THE FREQUENCY RANGE 2.0 TO 8.0 GHz. IT HAS AN INSERTION LOSS OF 2.1 dB MAXIMUM AND AN ISOLATION OF 70 dB MINIMUM. THIS MODEL IS OUTFITTED WITH SMA FEMALE CONNECTORS.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	INITIAL RELEASE	8/16/2018	

### SPECIFICATIONS

- FREQUENCY RANGE: 2.0 TO 8.0 GHz
- INSERTION LOSS: 2.1 dB MAX
- ISOLATION: 70 dB MIN
- VSWR: 1.7:1 MAX
- ON/OFF TIME: 180 ns MAX
- POWER SUPPLY: +5 V @ 85 mA MAX  
-12 V @ 85 mA MAX
- CONNECTORS: SMA FEMALE
- LOGIC: "1" RF ON  
"0" RF OFF
- FINISH: PAINTED BLUE
- INPUT POWER: +20 dBm MAX

### SP3T - CONTROL LOGIC

CONTROL INPUT			
E1	E2	E3	SIGNAL
HIGH	LOW	LOW	J0-J1
LOW	HIGH	LOW	J0-J2
LOW	LOW	HIGH	J0-J3

### ENVIRONMENTAL RATINGS

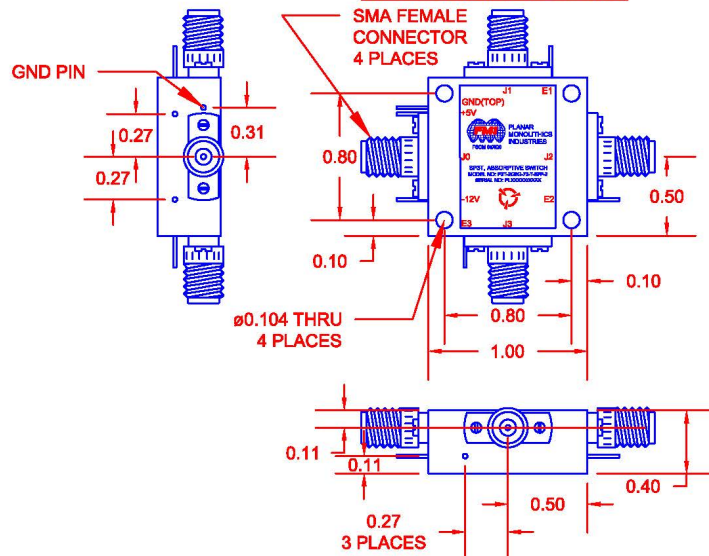
- TEMPERATURE: 0 °C TO +70 °C (OPERATING)  
-30 °C TO +85 °C (STORAGE)
- HUMIDITY: MIL-STD-202, METHOD 103B COND. B
- SHOCK: MIL-STD-202, METHOD 213B COND. B
- VIBRATION: MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202, METHOD 107D COND. A

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

PMI CONFIDENTIAL AND PROPRIETARY

ALL DIMENSIONS  
ARE IN INCHES (mm)  
TOLERANCES:  
XXX ±0.005  
XXXX ±0.010

### MECHANICAL OUTLINE



### PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD  
FREDERICK, MARYLAND 21704 USA  
TEL: (301)-662-5019, FAX: (301)-662-1731  
WEB: www.pmi-rf.com, EMAIL: sales@pmi-rf.com  
ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE			REV.
DRAWN	SW	8/16/18	PRODUCT FEATURE			
REDRAWN	SPR	08/16/18	P3T-2G8G-70-T-SFF-2			
ISSUED			SIZE	FSCM NO.	DWG NO.	
			A	05XQ0	27036360	A1
			SCALE	N:S	SHEET	1 OF 1



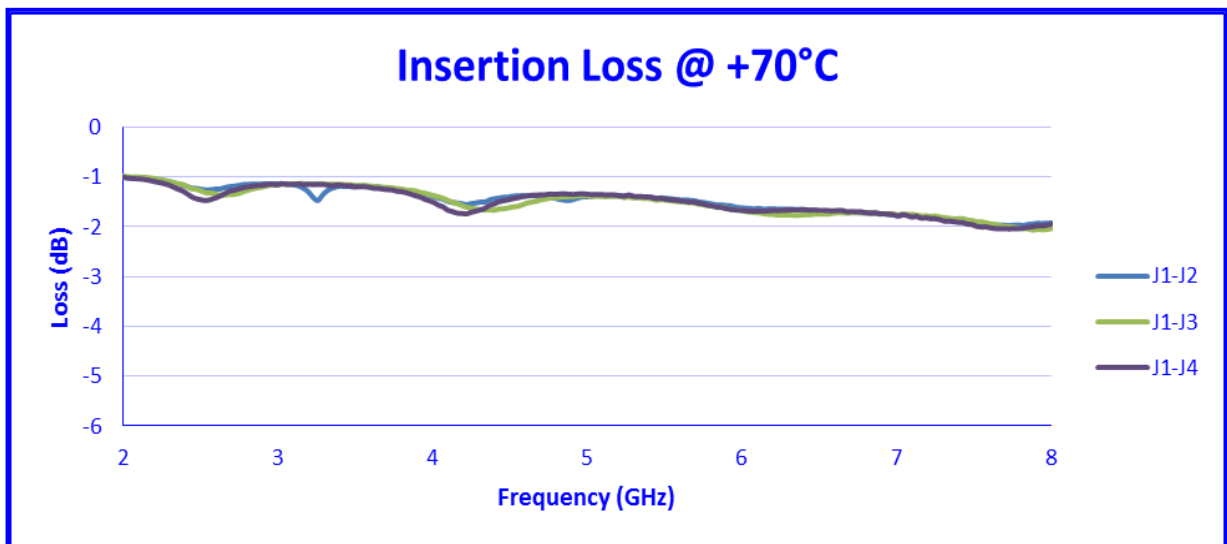
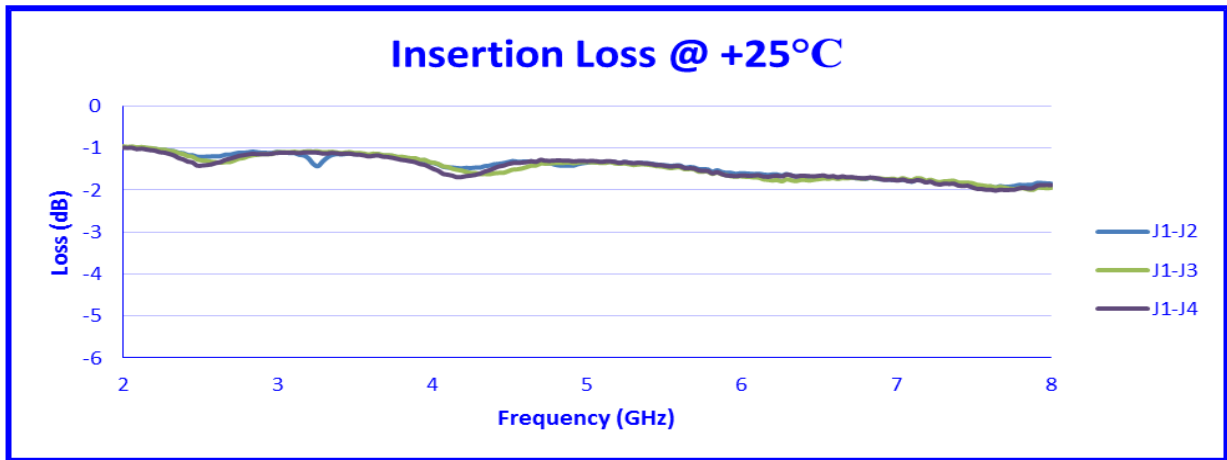
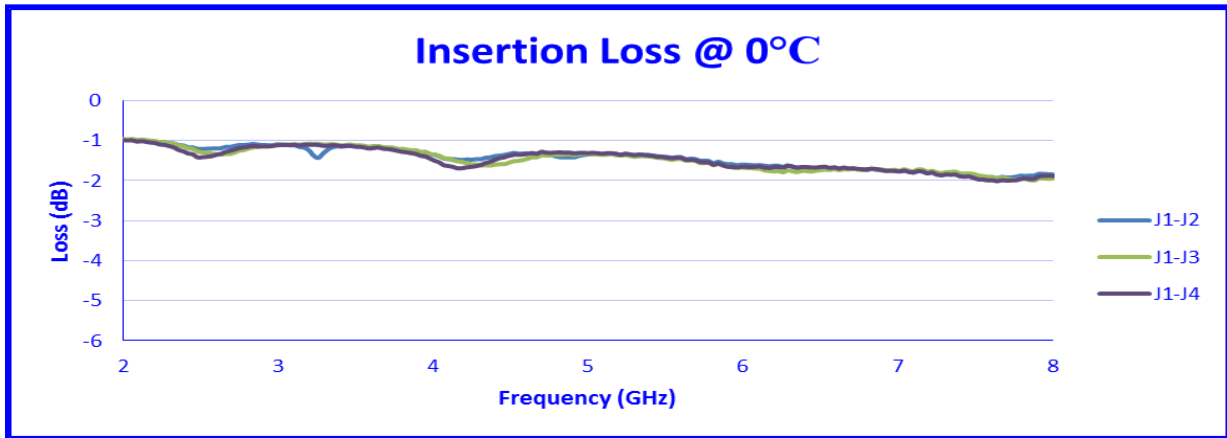
**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**

**TEST DATA SUMMARY**

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS			QC
			SPECIFICATIONS @ 0°C	SPECIFICATIONS @ +25°C	SPECIFICATIONS @ +70°C	
1	Frequency Range:	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz	
2	Insertion Loss:	2.1 dB Max.	2.01 dB (See Plot)	2.06 dB (See Plot)	2.06 dB (See Plot)	
3	Isolation:	70 dB Min.	78 dB (See Plot)	87 dB (See Plot)	87 dB (See Plot)	
4	VSWR: In/Out	1.7:1 Max.	In 1.78:1 Out 1.72:1 (See Plot)	In 1.70:1 Out 1.69:1 (See Plot)	In 1.70:1 Out 1.69:1 (See Plot)	
5	Switching Speed:	180 ns Max.	ON : 30ns OFF: 21.9ns (See Plot)	ON : 30ns OFF: 21.9ns (See Plot)	ON : 30ns OFF: 21.9ns (See Plot)	
6	DC Voltage:	+5 VDC @ 85 mA Typ. -12 VDC @ 85 mA Typ.	+5 VDC @ 75 mA -12 VDC @ 43 mA	+5 VDC @ 79 mA -12 VDC @ 45 mA	+5 VDC @ 81 mA -12 VDC @ 48 mA	
7	Control Signal:	TTL "0" → (ISOLATION) TTL "1" → (LOW LOSS)	Pass	Pass	Pass	
8	Input Power	+20dBm Max	Pass	Pass	Pass	

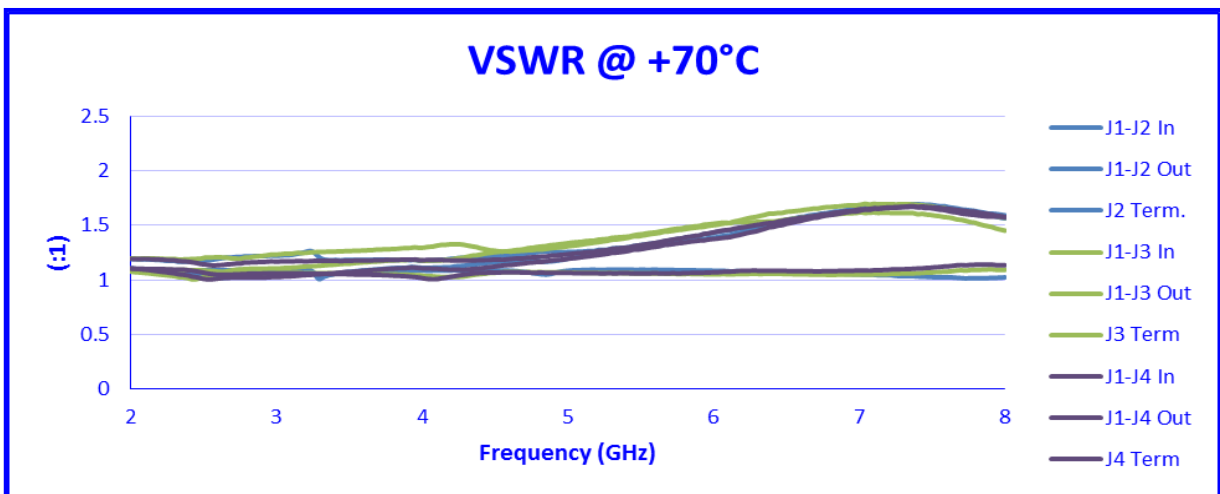
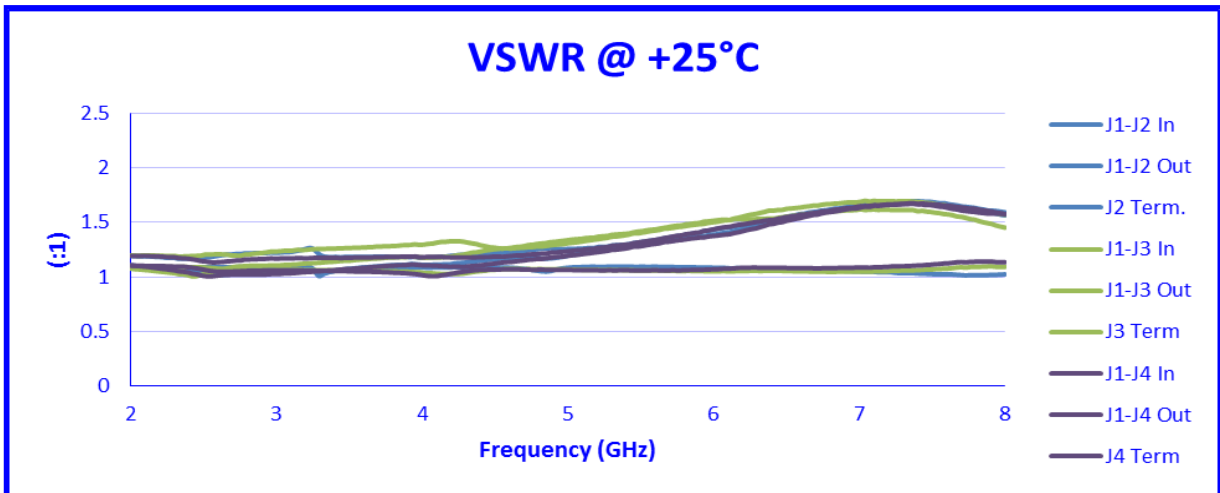
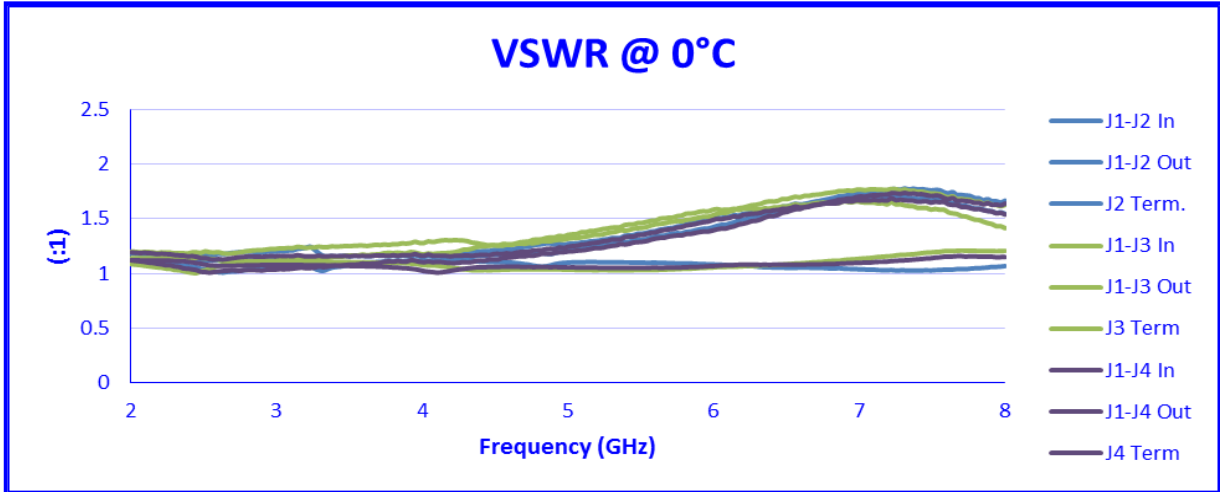


**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**



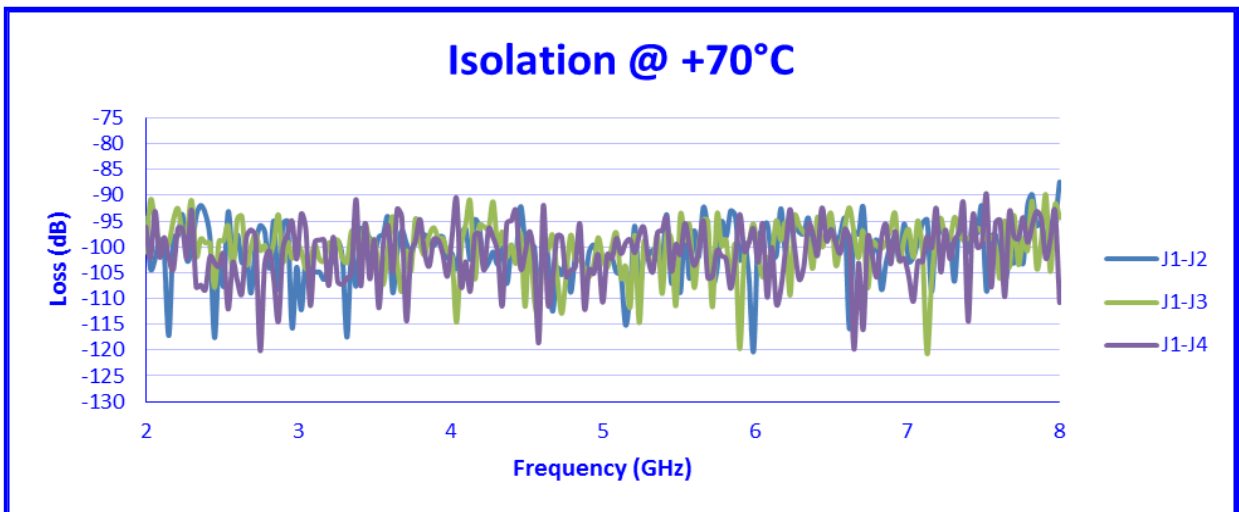
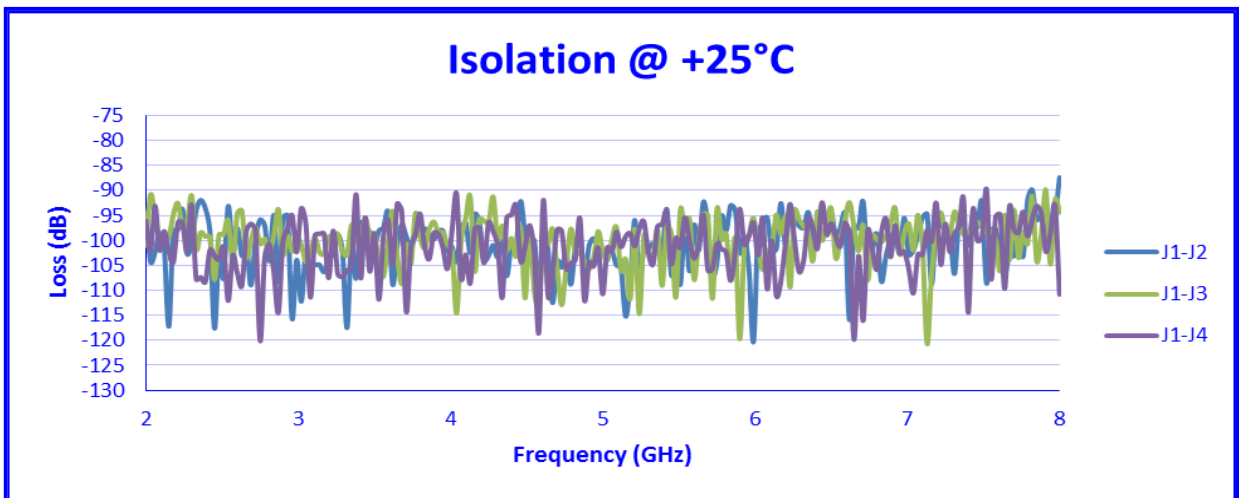
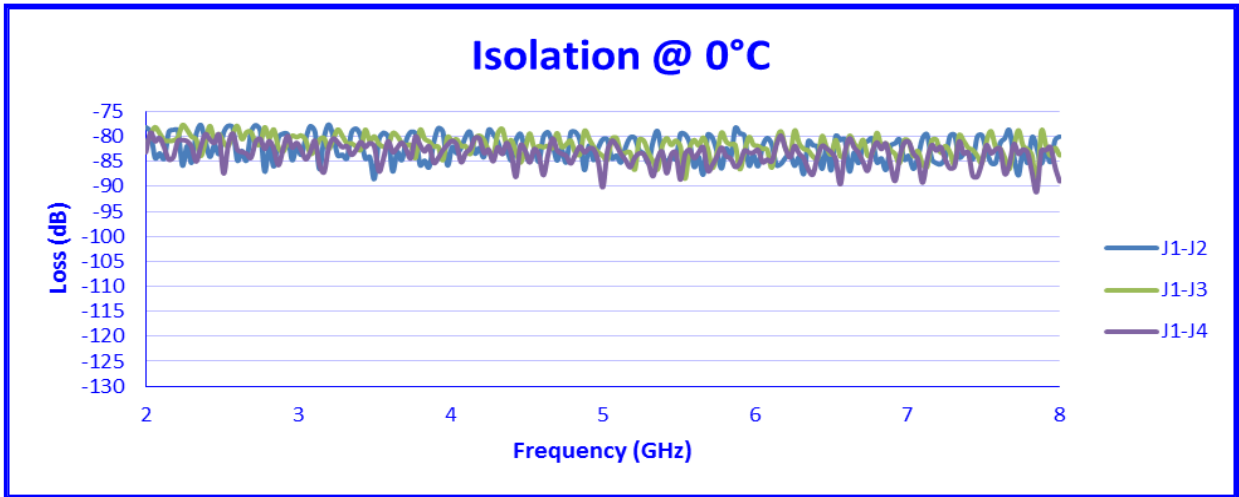


**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**





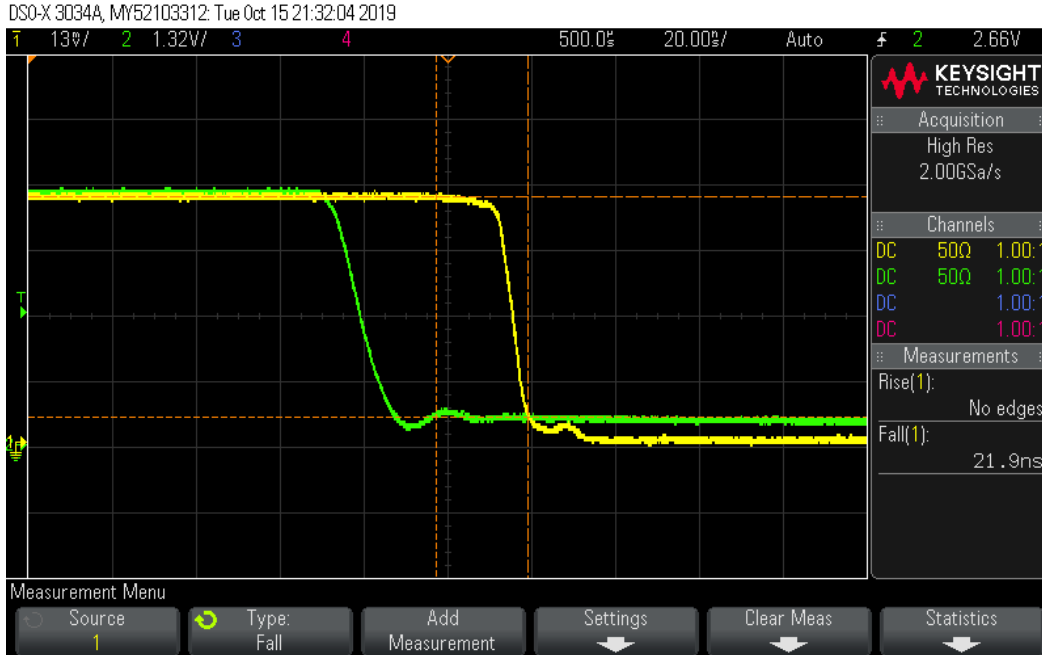
**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**



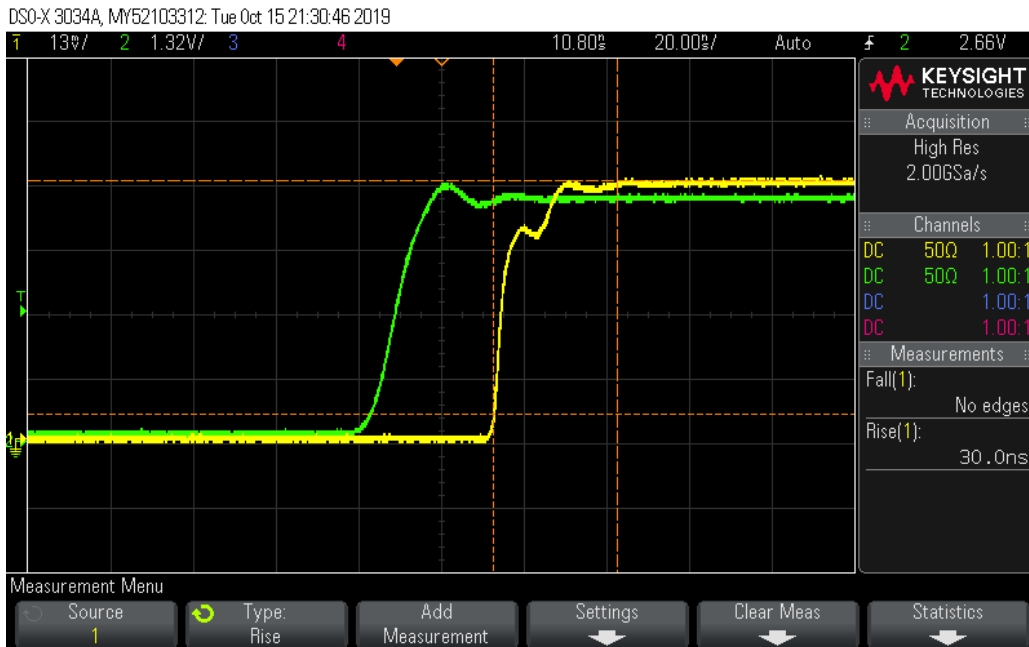


# TYPICAL CHARACTERISTICS ON P3T-2G8G-70-T-SFF-2

## Switching Speed OFF (21.9ns) 20ns Per Div.



## Switching Speed ON (30ns) 20ns Per Div.



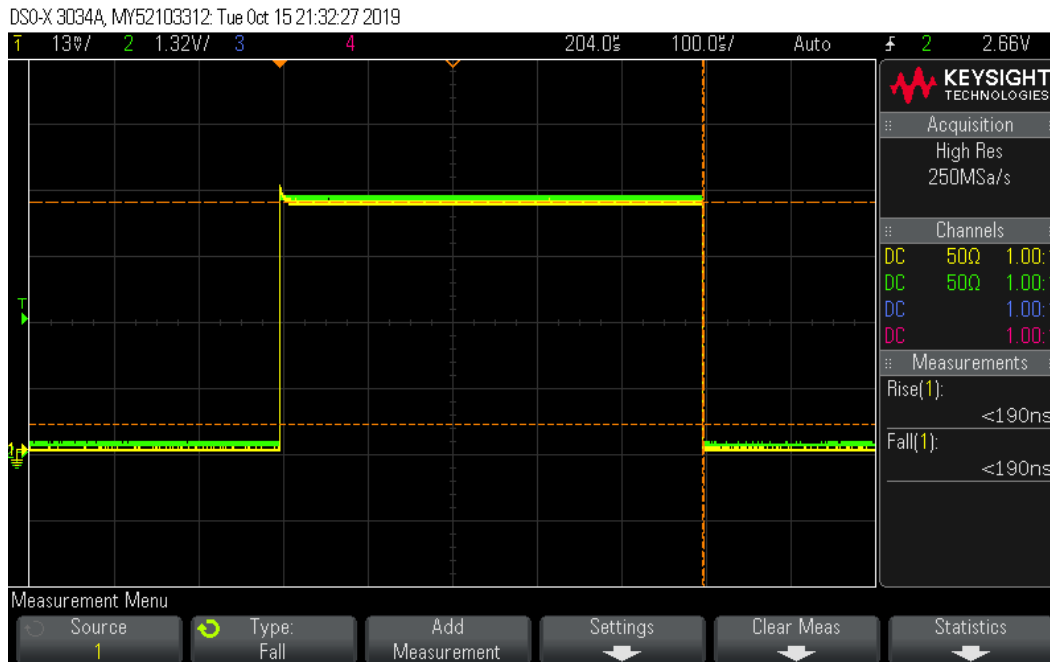
**Green trace: TTL Signal**  
**Yellow trace: RF Signal**





**TYPICAL CHARACTERISTICS  
ON  
P3T-2G8G-70-T-SFF-2**

**Full pulse  
100ns Per Div.**



**Green trace: TTL Signal**  
**Yellow trace: RF Signal**