



**TYPICAL CHARACTERISTICS  
ON  
P1T-6G18G-60-T-SFF-1W**

**THE MODEL P1T-6G18G-60-T-SFF-1W IS A HIGH SPEED SINGLE POLE,  
SINGLE THROW, ABSORPTIVE SWITCH CAPABLE OF SWITCHING WITHIN  
25ns WITH INPUT RF POWER LEVELS UP TO 1 WATT CW.. THE  
FREQUENCY RANGE IS 6.0 TO 18.0 GHz AND THIS SWITCH HAS OVER  
60dB OF ISOLATION.**



**March, 02, 2016**

**DESIGNED BY: PMI ENGINEERING**

**TESTED & REPORTED BY: CHRISTOPHER BENJAMINS**



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ON  
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**OUTLINE DRAWING**

REVISIONS		DATE	APPROVED
ZONE	REV.	DESCRIPTION	
	1	ORIGINAL RELEASE	12/7/13

**DESCRIPTION**

THE MODEL P1T-6G18G-60-T-SFF-1W IS A HIGH SPEED, SINGLE POLE, SINGLE THROW, ABSORPTIVE SWITCH CAPABLE OF SWITCHING WITHIN 25ns WITH INPUT RF POWER LEVELS UP TO 1 WATT CW. THE FREQUENCY RANGE IS 6.0 TO 18.0 GHz AND THIS SWITCH HAS OVER 60DB OF ISOLATION.

**SPECIFICATIONS:**

- FREQUENCY RANGE: 6.0 TO 18.0 GHz
- INSERTION LOSS: 2.75dB MAXIMUM
- ISOLATION: 65dB MINIMUM
- VSWR (ON/OFF): 2.0:1 MAXIMUM, 1.5:1 GOAL
- SWITCHING SPEED: 25 ns TYPICAL (50% TTL TO 10/90% RF)
- OPERATING POWER: +30dbm MAXIMUM
- CONTROL: TTL LOGIC "0" = INSERTION LOSS  
TTL LOGIC "1" = ISOLATION
- POWER SUPPLY: +5V @ 50 mA MAXIMUM  
-15V @ 75 mA MAXIMUM
- CONNECTORS: SMA FEMALE  
RF: SMA FEMALE  
CONTROL: SOLDER PIN
- SIZE: (L) 1.0" X (W) 1.0" X (H) 0.5"
- 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.
- SEALING: EPOXY SEALED

**OPTIONS:**

- HERM \_\_\_\_\_ HERMETIC SEALING

**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 BY REVISION

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES: .0000  
XXX .0000  
XXX .0010

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ISO 9001 CERTIFIED

**PMI CONFIDENTIAL AND PROPRIETARY**

APPROVALS	DATE	TITLE	SIZE FROM NO.	SHEET NO.	SHEET	REV.
DESIGNED BY: <i>J. Stenmark</i>	12/7/13	PRODUCT FEATURE	P1T-6G18G-60-T-SFF-1W	A	05X00	27028521
CHECKED						
ISSUED						
SCALE: N/S						1 OF 1



**TYPICAL CHARACTERISTICS  
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**TEST DATA SUMMARY**

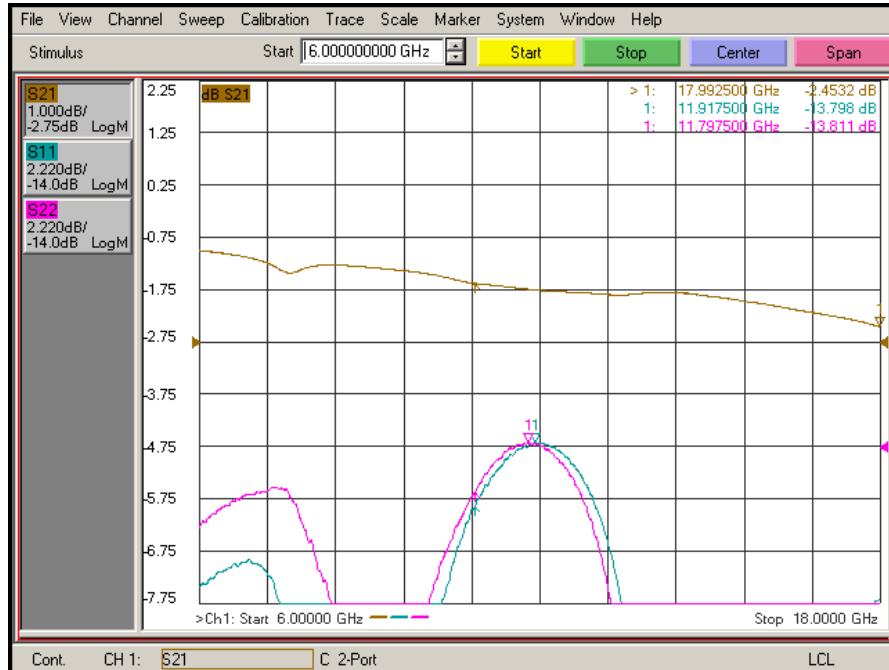
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	6.0 to 18.0 GHz	6.0 to 18.0 GHz	
2	Insertion Loss:	2.75dB Max	2.45dB (See Plot)	
3	Isolation:	65dB Min	96.9dB (See Plot)	
4	VSWR:	2.0:1 Max (1.5:1 Goal)	1.74:1	
5	Switching Speed:	25ns Typ	23.8ns (See Plot)	
6	Operating Power:	+30dBm Max	Pass	
7	Control	TTL Logic "0" = Insertion Loss "1" = Isolation	Pass	
8	Power Supply:	+5VDC @ 50mA Max -15VDC @ 75mA Max	41mA 70mA	

QA/QC Approval: \_\_\_\_\_ Date: \_\_\_\_\_

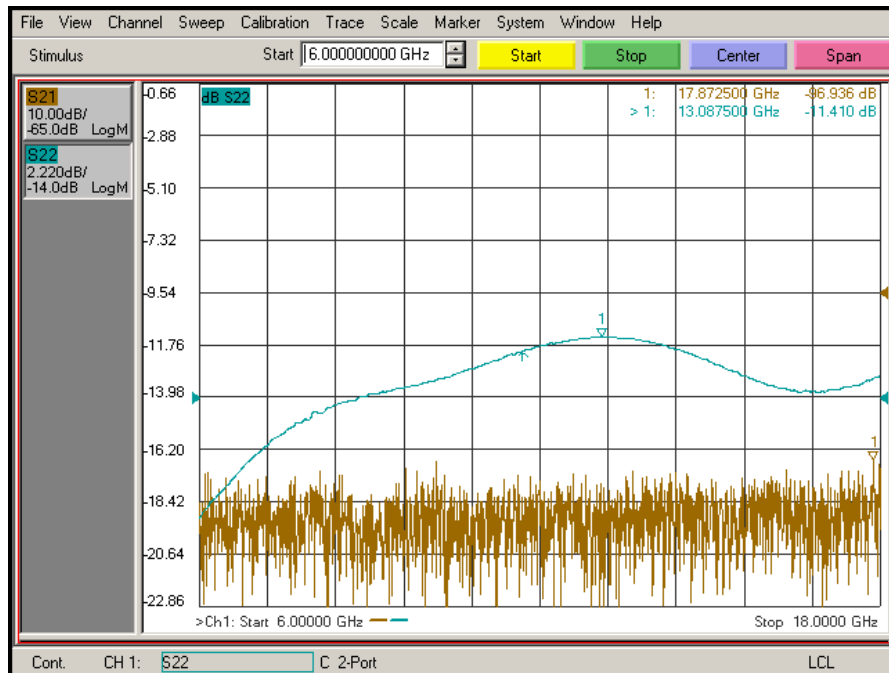


# TYPICAL CHARACTERISTICS ON P1T-6G18G-60-T-SFF-1W

## (J1-J2) Insertion Loss and Return Loss



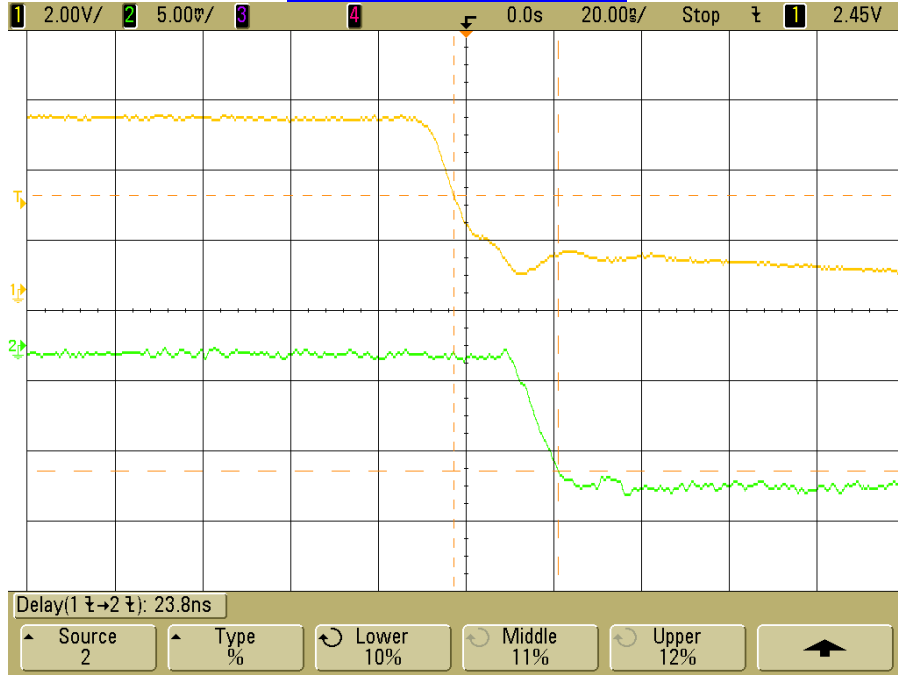
## (J1 - J2) Isolation and Termination Return Loss



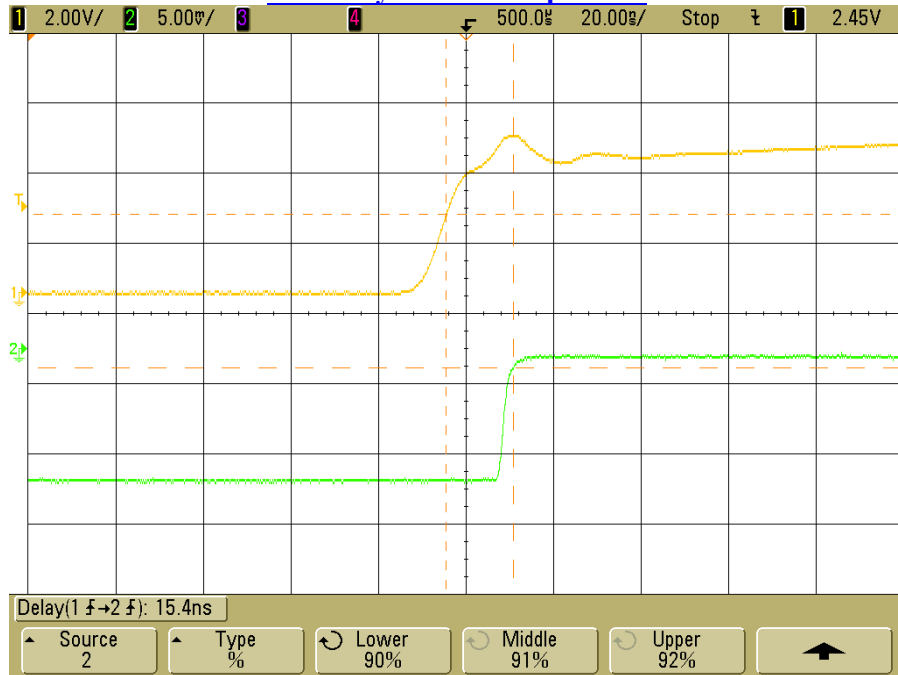


**TYPICAL CHARACTERISTICS  
ON  
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**Switching Speed TYP.  
OFF Delay – 20 ns per Div.**



**ON Delay and – 20 ns per Div.**



**GREEN TRACE: RF**  
**YELLOW TRACE: TTL**