



Typical Characteristics For P3T-12G18G-70-T-SFF

PMI MODEL P3T-12G18G-70-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE THREE THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 12.0 GHz TO 18.0 GHz. THIS SWITCH HAS > 70 dB ISOLATION.



January 24, 2017

Designed by: PMI Engineering

Tested and Reported by: Simon Kuhn

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TABLE OF CONTENTS

1. Product Feature & Mechanical Drawing:	Page 3
2. Summary Test Data:	Page 4
3. J1 – J2 Insertion Loss and Return Loss / Isolation and Return Loss:	Page 5
4. J1 – J3 Insertion Loss and Return Loss / Isolation and Return Loss:	Page 6
5. J1 – J4 Insertion Loss and Return Loss / Isolation and Return Loss:	Page 7
6. Switching Speed:	Page 8



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Product Feature & Mechanical Drawing:

DESCRIPTION

PMI MODEL P3T-12G18G-70-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE THREE THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 12.0 GHz TO 18.0 GHz. THIS SWITCH HAS > 70 dB ISOLATION.

SPECIFICATIONS

- FREQUENCY RANGE: 12.0 GHz TO 18.0 GHz
- IMPEDANCE: 50 Ω
- INPUT POWER: +30dBm MAX (SURVIVAL)
+20dBm MAX (OPERATING)
- VSWR: 2.0:1 MAX
- INSERTION LOSS: 3.75dB MAX
- ISOLATION: 70dB MIN.
- SWITCHING SPEED: 100ns MAX
- DC VOLTAGE: +5VDC, 150mA TYP.
-15VDC, 100mA TYP.
- CONTROL: SOLDER PIN
TTL COMPATIBLE - SEE LOGIC TABLE
- CONNECTORS IN/OUT: SMA (F)
- SIZE: (L) 1.5" X (W) 1.5" X (H) 0.4"
- 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.

LOGIC TABLE			
E1	E2	E3	FUNCTION
0	1	1	J1-J2 "LOW LOSS"
1	0	1	J1-J3 "LOW LOSS"
1	1	0	J1-J4 "LOW LOSS"

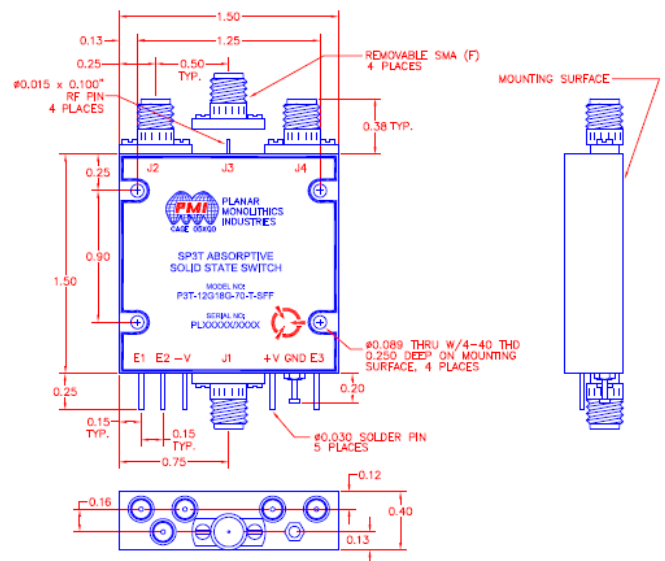
ENVIRONMENTAL RATINGS

- 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 OR REVISION

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

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	11/18/15	
	A1	ECN # 16-0101	8/18/16	
	A2	ECN # 17-0002	1/18/17	

MECHANICAL OUTLINE



PMI CONFIDENTIAL AND PROPRIETARY

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ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN: <i>SAB</i>		11/18/15	PRODUCT FEATURE P3T-12G18G-70-T-SFF		
CHECKED:			SIZE: A	FSOM NO. 05XQ0	DWG NO. 27026621
ISSUED:			SCALE: N:S		REV. A2
					SHEET 1 OF 1

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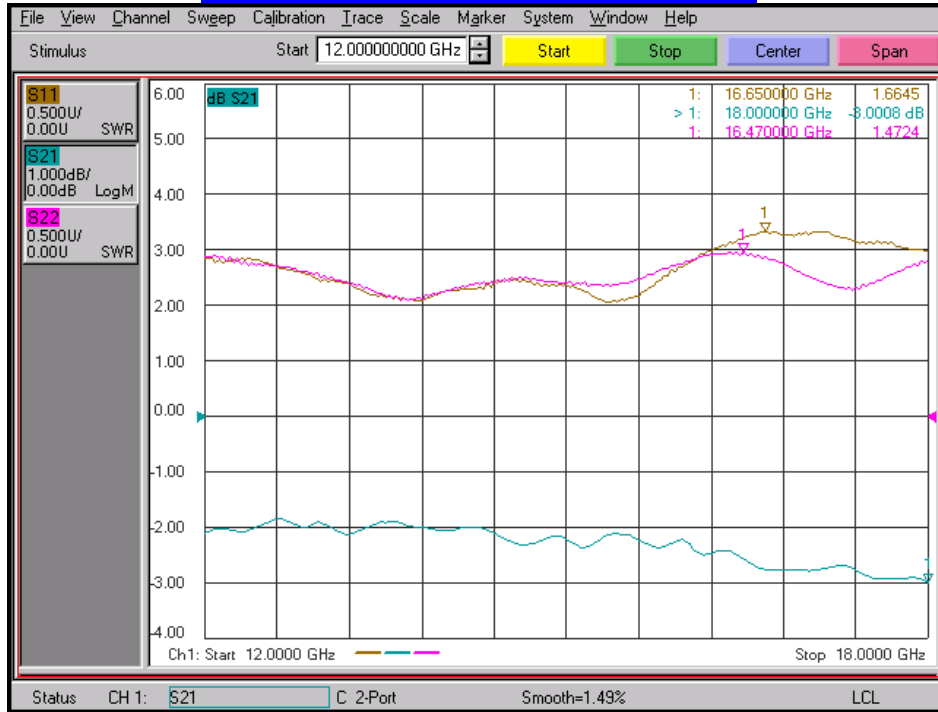
Typical Characteristics
For
P3T-12G18G-70-T-SFF
Summary Test Data

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	12.0 TO 18.0 GHz	12.0 TO 18.0 GHz	
2	Insertion Loss	3.75 dB Max	3.00 dB (See Plot)	
3	VSWR	2.0:1 Max	1.93 :1 (See Plot)	
4	Isolation	70 dB Min	73.22 dB (See Plot)	
5	Switching Speed	100 ns Max	49.6 ns	
6	Input Power	+30dBm Max (Survival) +20dBm Max (Operating)	Pass	
7	DC Supply	+5VDC @ 150 mA Typ -15VDC @ 75 mA Typ	77 mA 54 mA	
8	Control Signal	LOGIC TABLE E1 E2 E3 FUNCTION 0 1 1 J1-J2 "LOW LOSS" 1 0 1 J1-J3 "LOW LOSS" 1 1 0 J1-J4 "LOW LOSS"	Pass	

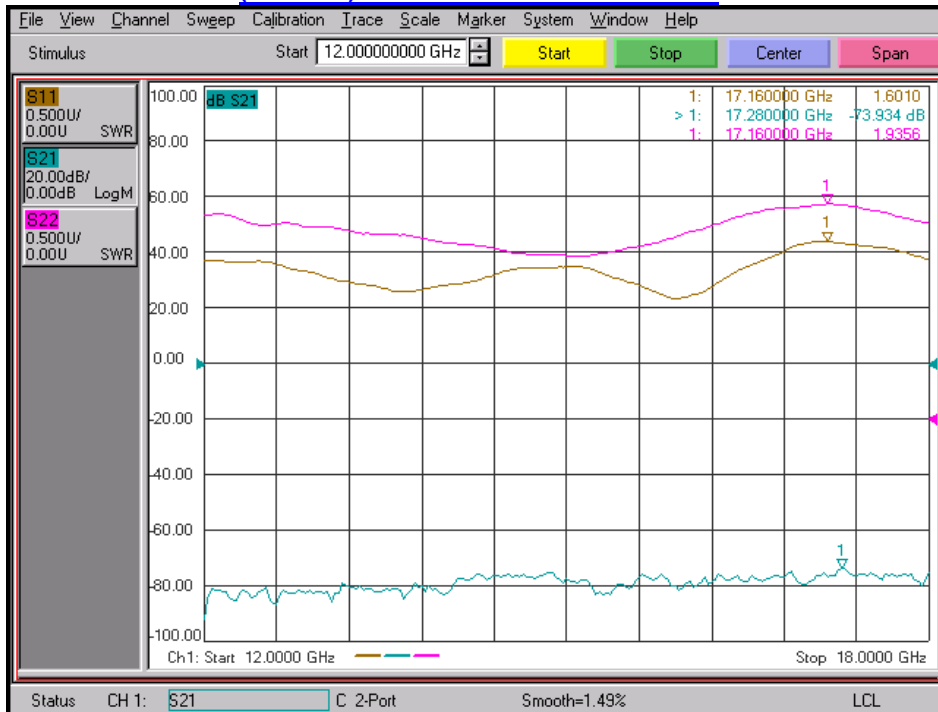
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Typical Characteristics For P3T-12G18G-70-T-SFF (J1 – J2) Insertion Loss and Return Loss



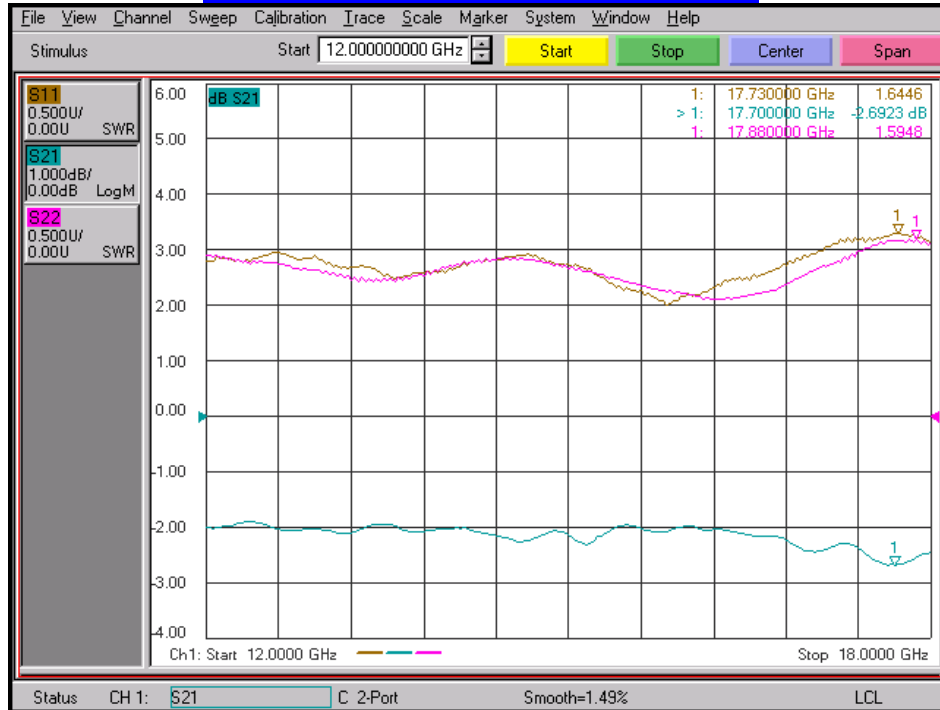
(J1 – J2) Isolation and Return Loss



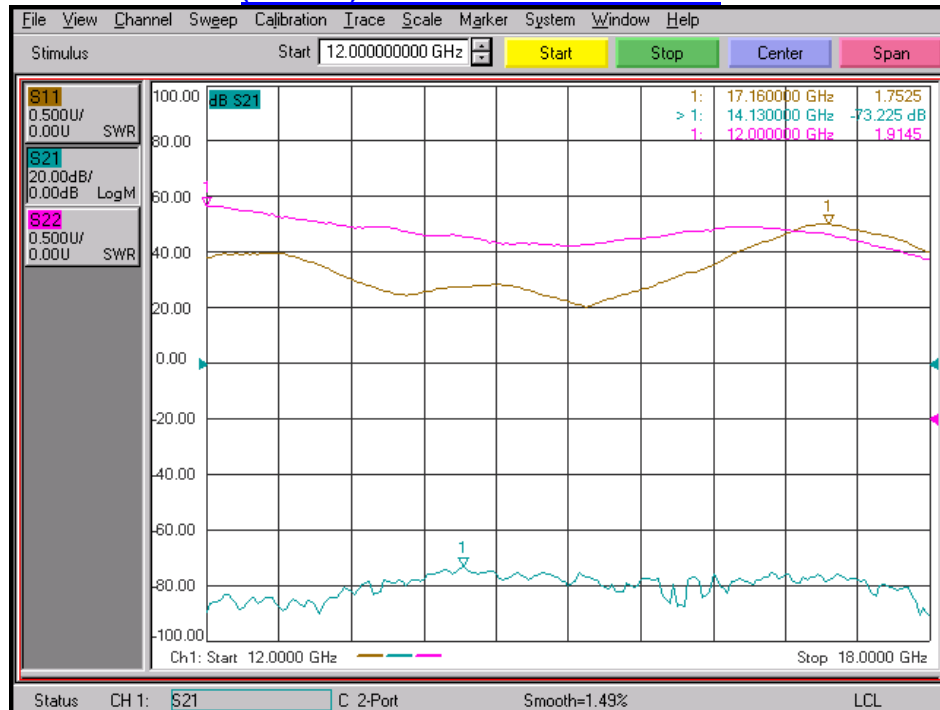
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Typical Characteristics For P3T-12G18G-70-T-SFF (J1 – J3) Insertion Loss and Return Loss



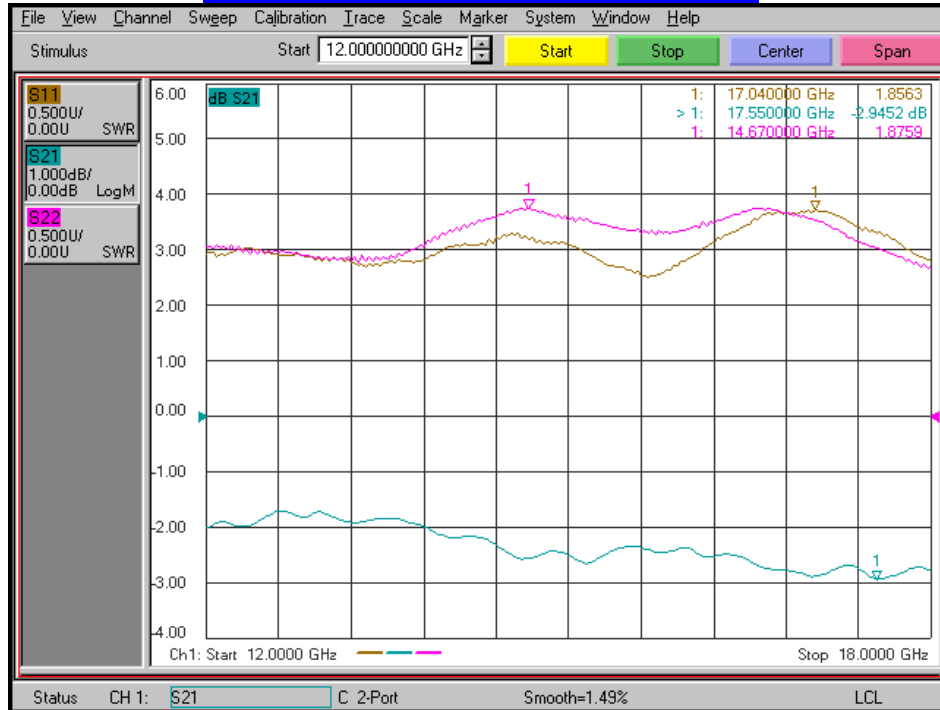
(J1 – J3) Isolation and Return Loss



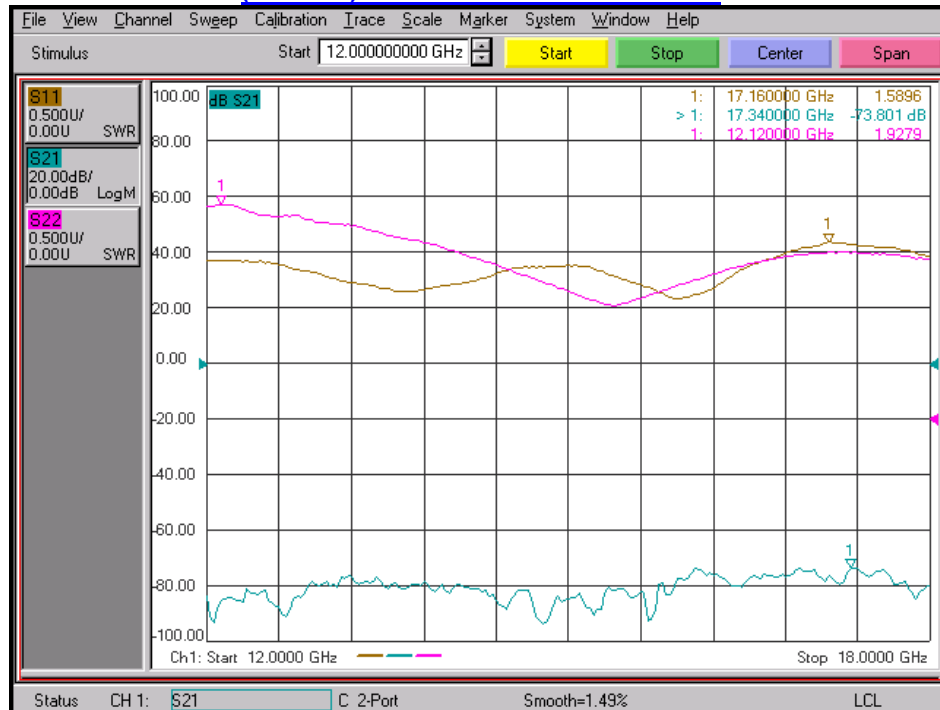
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Typical Characteristics For P3T-12G18G-70-T-SFF (J1 – J4) Insertion Loss and Return Loss



(J1 – J4) Isolation and Return Loss



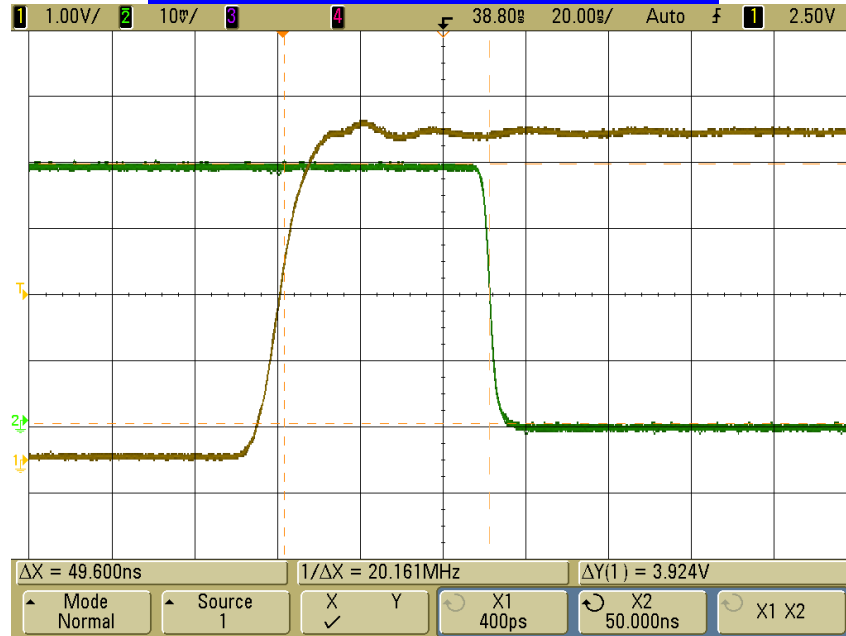
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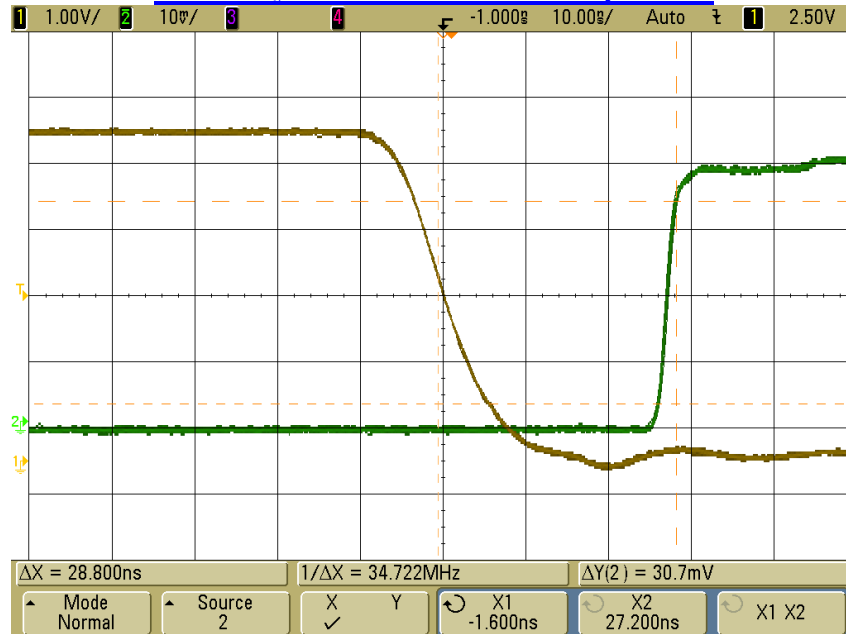
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Switching Speed:

OFF Delay and Fall Time – 20 ns per Div.



ON Delay and Rise Time – 10 ns per Div.



GREEN TRACE : RF
YELLOW TRACE : TTL

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