TYPICAL CHARACTERISTICS
ON
P2T-500M40G-60-R-55-292SFF

PMI MODEL P2T-500M40G-60-R-55-292FF IS A REFLECTIVE, SINGLE POLE, TWO THROWS PIN DIODE SWITCHTHAT OPERATES OVER THE 0.5 GHz TO 40 GHz FREQUENCY RANGE .THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.

December 28, 2016

DESIGNED BY: PMI ENGINEERING

TESTED & REPORTED BY: Jerry N

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OUTLINE DRAWING

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	10/05/15	
	A1	ECN # 16-0150	10/24/16	

DESCRIPTION

PMI MODEL P2T-500M40G-60-R-55-292FF IS A REFLECTIVE, SINGLE POLE, TWO THROW PIN DIODE SWITCH THAT OPERATES OVER THE 0.5 GHz TO 40 GHz FREQUENCY RANGE. THIS MODEL INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.

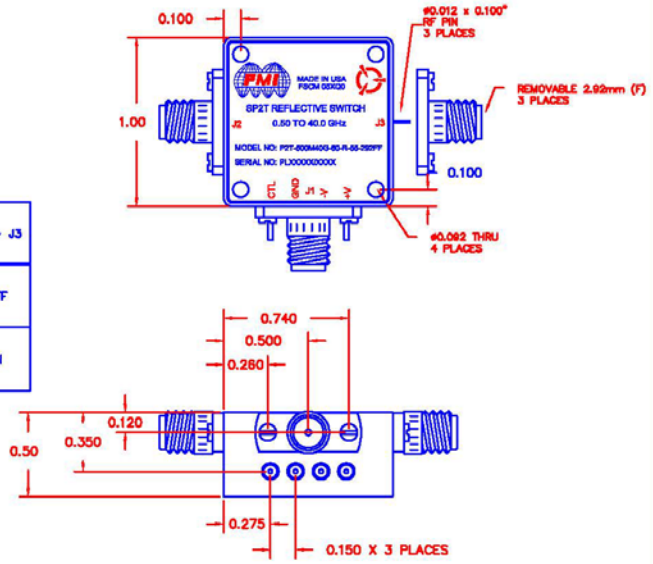
SPECIFICATIONS

- FREQUENCY RANGE: ..... 0.5 TO 40 GHz
- ISOLATION: ..... 55 dB MIN
- INSERTION LOSS: ..... 5.5 dB TYP
- VSWR IN / OUT: ..... 2.5:1 TYP
- INPUT POWER: ..... +20 dBm CW MAX
- SURVIVAL POWER: ..... 1W PEAK 1 us
- RF SWITCHING SPEED: ..... RISE: 15 ns MAX
  FALL: 15 ns MAX
  DELAY ON: 50 ns MAX
  DELAY OFF: 50 ns MAX
- DC VOLTAGE: ..... +5 V @ 200 mA MAX
  −5 V @ 100 mA MAX
- CONTROL SIGNAL: ..... TTL LOGIC
  SEE LOGIC TABLE
- CONNECTORS IN/OUT: ..... 2.92 mm FEMALE CONNECTORS
- CONTROL CONNECTORS: ..... SOLDER PINS
- 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.

LOGIC TABLE

CTL	J1 – J2	J1 – J3
0	ON	OFF
1	OFF	ON

MECHANICAL OUTLINE



PMI CONFIDENTIAL AND PROPRIETARY

ENVIRONMENTAL RATINGS

- **TEMPERATURE:** ..... −40°C TO +85°C (OPERATING)
  −55°C TO +125°C (STORAGE)

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 ±0.010
X.XXX ±0.005

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E-MAIL: sales@pmi-rf.com
ISO 9001:2008 CERTIFIED

APPROVALS	DATE
DRAWN CW	10/05/15
CHECKED	
ISSUED	

TITLE: OUTLINE DRAWING
P2T-500M40G-60-R-55-292FF

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27027641	A1

SCALE N: S SHEET 1 OF 1

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TEST DATA SUMMARY

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range	0.5 GHz - 40.0 GHz	**0.5 GHz - 40.0 GHz**	
2	Insertion Loss	5.5 dB Typ.	**4.22 dB (See Plot)**	
3	Isolation	55 dB Min	**55.43 dB (See Plot)**	
4	VSWR : In/Out	2.5:1 Typ	**2.33 :1 (See Plot)**	
5	Switching Speed	Rise/Fall : 15 ns Max. Delay ON/OFF : 50 ns Max.	**Rise/Fall : 3 ns** **Delay ON/OFF : 25 ns** **(See Plots)**	
6	Input Power:	+20dBm CW Max.	**Pass**	
7	Survival Power:	1W Peak 1us	**Pass**	
8	DC Supply:	+5VDC @ 200 mA Max. -5VDC @ 100 mA Max.	**50 mA** **18 mA**	
9	Control Signal:	TTL LOGIC SEE LOGIC TABLE	**Pass**	

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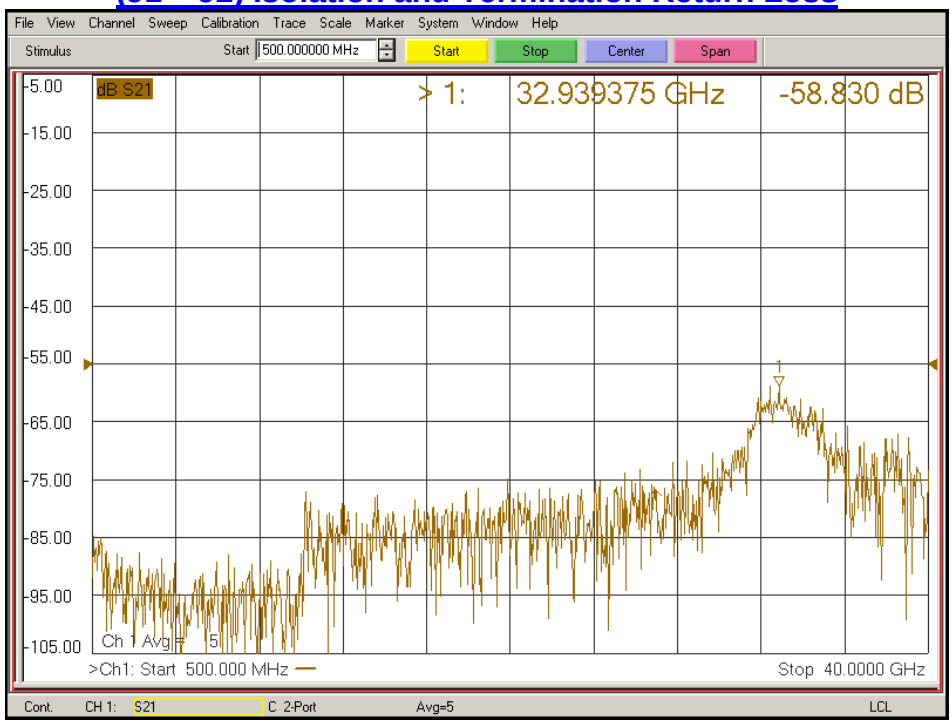
(J1 – J2) Insertion Loss and Return Loss

(J1 – J2) Isolation and Termination Return Loss



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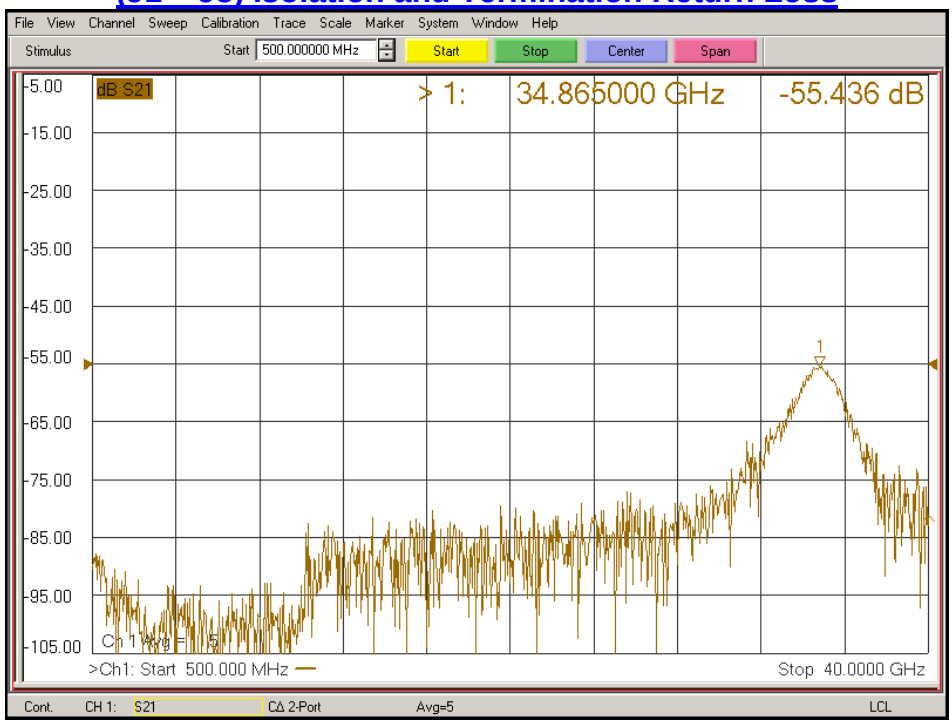

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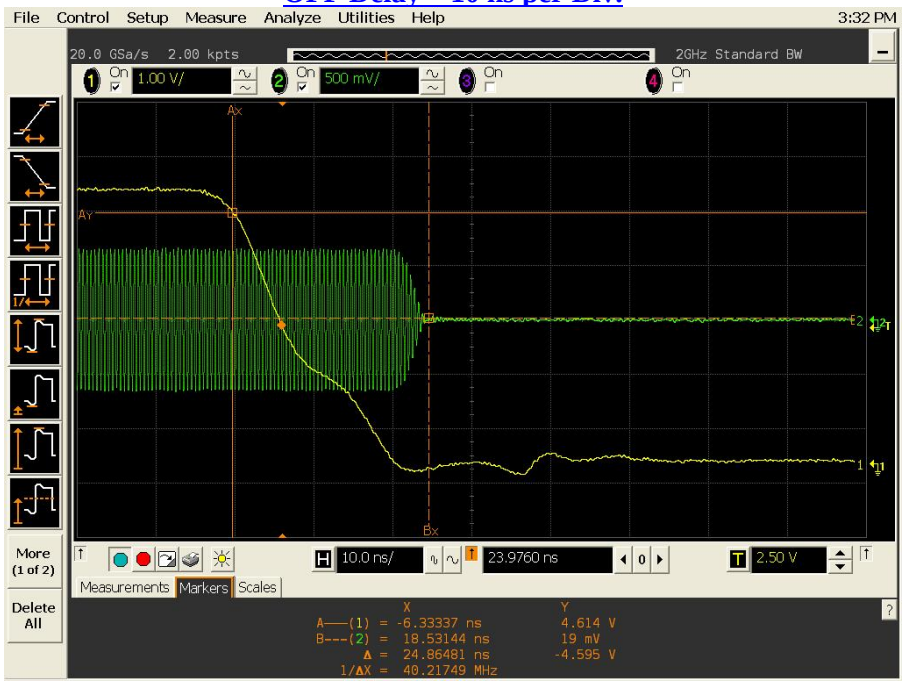
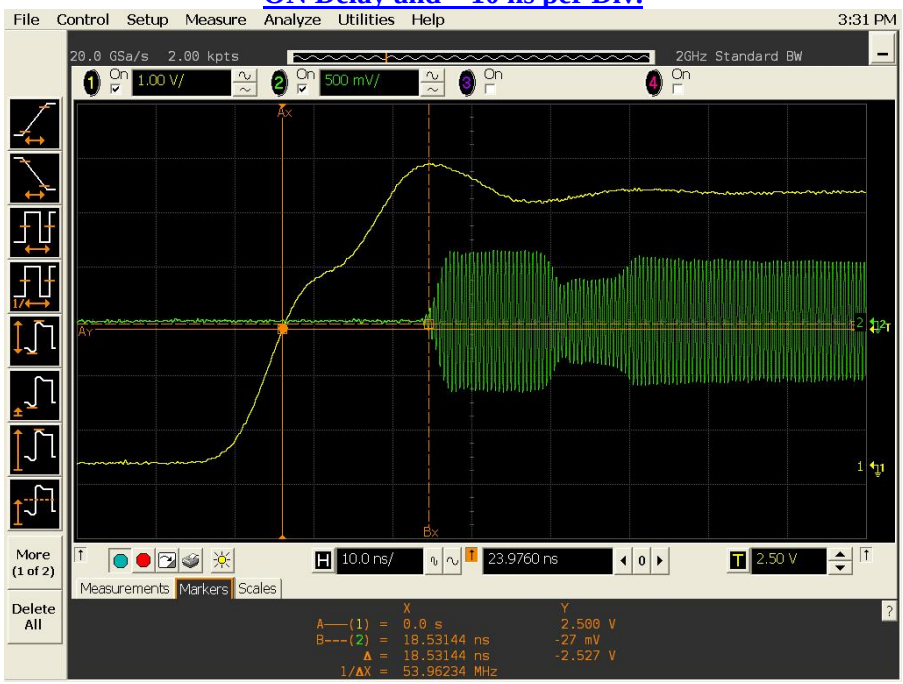
Switching Speed TYP.
OFF Delay – 10 ns per Div.



ON Delay and – 10 ns per Div.



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RISE TIME– 10 ns per Div.

FALL TIME– 10 ns per Div.

GREEN TRACE: RF

YELLOW TRACE: TTL

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