



**TYPICAL CHARACTERISTICS
ON
P2T-2G18G-65-T-SFF**

PMI MODEL: P2T-2G18G-65-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE, TWO THROW, SWITCH DESIGNED TO OPERATE OVER THE 2.0 GHz TO 18.0 GHz FREQUENCY RANGE. THIS MODEL IS INCORPORATES A TTL COMPATIBLE DRIVER FOR EASY SYSTEM INTEGRATION.



NOVEMBER 01, 2018

DESIGNED BY: PMI ENGINEERING

TESTED BY: K. MANSFIELD AND A. LOPEZ

REPORTED BY: G. RADTKE

DATA SHEET REVIEWED BY: A. LOPEZ



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OUTLINE DRAWING

DESCRIPTION

PMI MODEL P2T-2G18G-65-T-SFF IS AN ABSORPTIVE, HIGH SPEED, SINGLE POLE TWO THROW SWITCH CAPABLE OF SWITCHING WITHIN 100 ns MAXIMUM. THE FREQUENCY RANGE IS 2.0 GHz TO 18.0 GHz. THIS SWITCH HAS 65 dB ISOLATION.

SPECIFICATIONS

- FREQUENCY RANGE: _____ 2.0 GHz TO 18.0 GHz
- IMPEDANCE: _____ 50 Ω
- INPUT POWER: _____ +30dBm MAX (SURVIVAL)
+20dBm MAX (OPERATING)
- INPUT VSWR: _____ 2.0:1 MAX
- INSERTION LOSS: _____ 3.0dB MAX
- ISOLATION: _____ 65dB TYP.
- SWITCHING SPEED: _____ 100ns MAX
- DC VOLTAGE: _____ +5VDC, 100mA TYP.
-15VDC, 100mA TYP.
- CONTROL: _____ SOLDER PIN
TTL COMPATIBLE - SEE LOGIC TABLE
- CONNECTORS IN/OUT: _____ SMA (F)
- SIZE: _____ (L) 1.0" X (W) 1.0" X (H) 0.4"
- FINISH: _____ PAINTED BLUE

LOGIC TABLE

CTL	J1 - J2	J1 - J3
0	ON	OFF
1	OFF	ON

ENVIRONMENTAL RATINGS

- TEMPERATURE: _____ -55 °C TO +85 °C (OPERATING)
-65 °C TO +125 °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

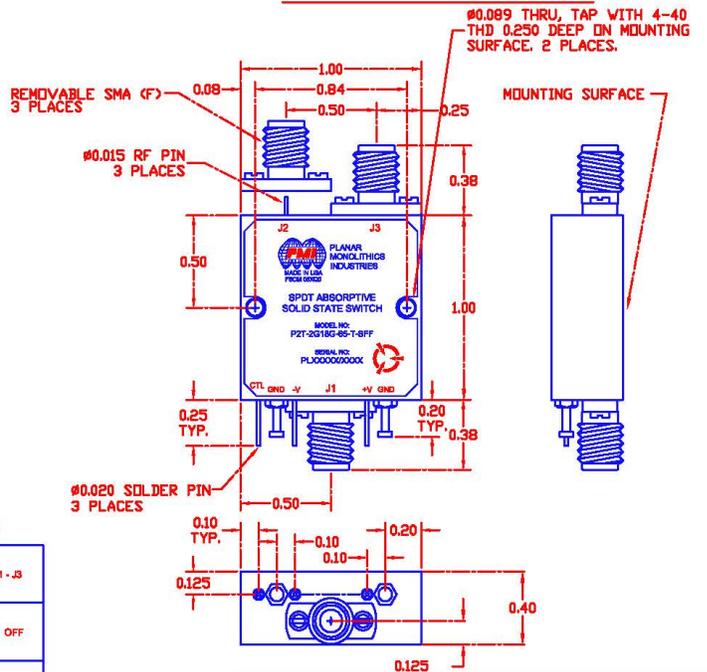
NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PMI CONFIDENTIAL AND PROPRIETARY

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

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	7/18/2018	

MECHANICAL OUTLINE



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ISO 9001 CERTIFIED

APPROVALS		DATE	TITLE			REV.
DRAWN <i>B. Thomas</i>		10/14/16	PRODUCT FEATURE P2T-2G18G-65-T-SFF			
REDRAWN <i>SPU</i>		7/18/18	SIZE A	FORM NO. 05XQ0	DWG NO. 27035340	A1
ISSUED			SCALE N:S			SHEET 1 OF 1



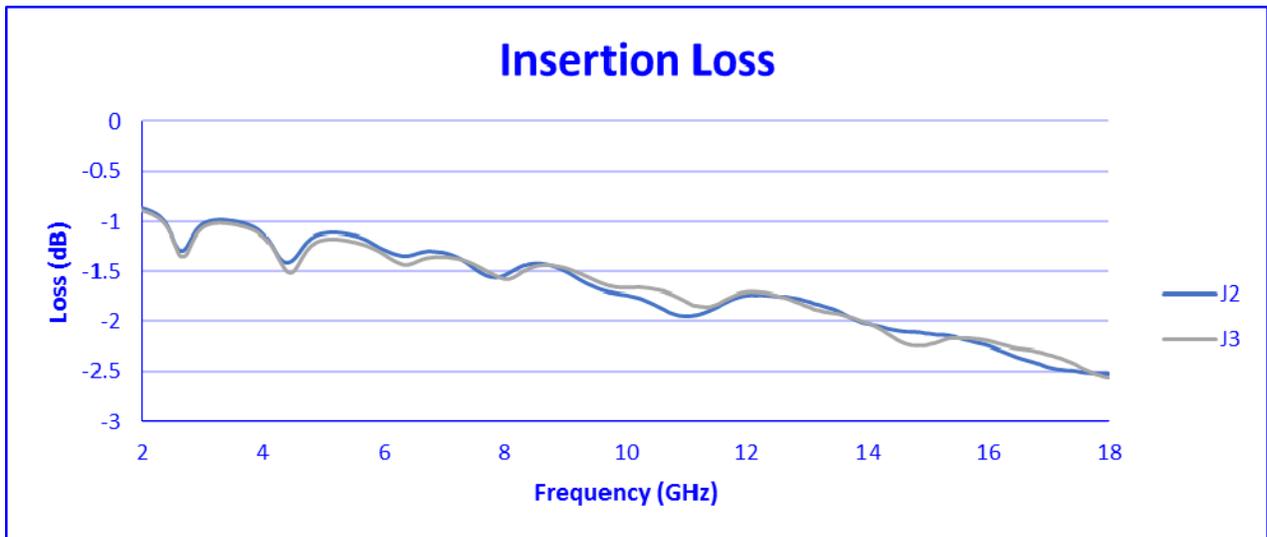
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TEST DATA SUMMARY

TEST ITEM	PARAMETER	SPECIFIED VALUE	TEST MEASUREMENT	QA QC
1	Frequency Range	2.0 GHz to 18.0 GHz	2.0 GHz to 18.0 GHz (See Plots)	
2	Insertion Loss:	3.0 dB Max.	2.59 dB (See Plots)	
3	Isolation:	65 dB Typ.	75.8 dB (See Plots)	
4	Input VSWR:	2.0:1 Max.	1.51:1 (See Plots)	
5	Switching Speed:	100 ns Max.	49.5 ns (See Plots)	
6	Impedance:	50 Ω	Pass	
7	Input Power:	+30 dBm Max. (Survival) +20 dBm (Operating)	Pass (See Graph)	
8	DC Supply:	+5 VDC @ 100 mA Typ. -15 VDC @ 100 mA Typ.	+5 VDC @ 24 mA -15 VDC @ 57 mA	
9	Control:	TTL "0" → (J1-J2) TTL "1" → (J1-J3)	Pass	



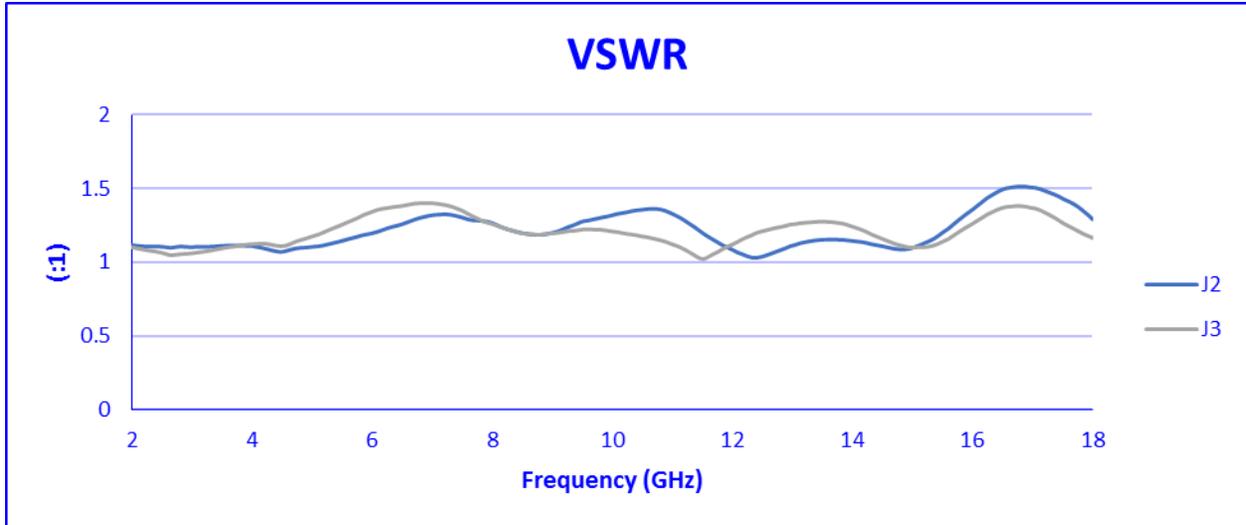
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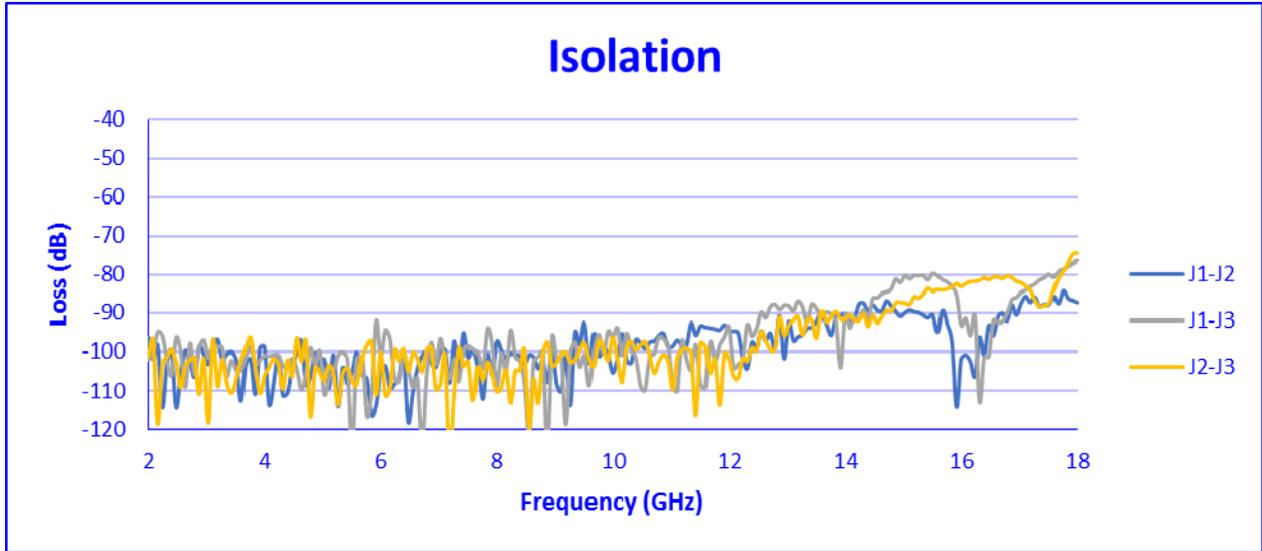
VSWR @ +25°C





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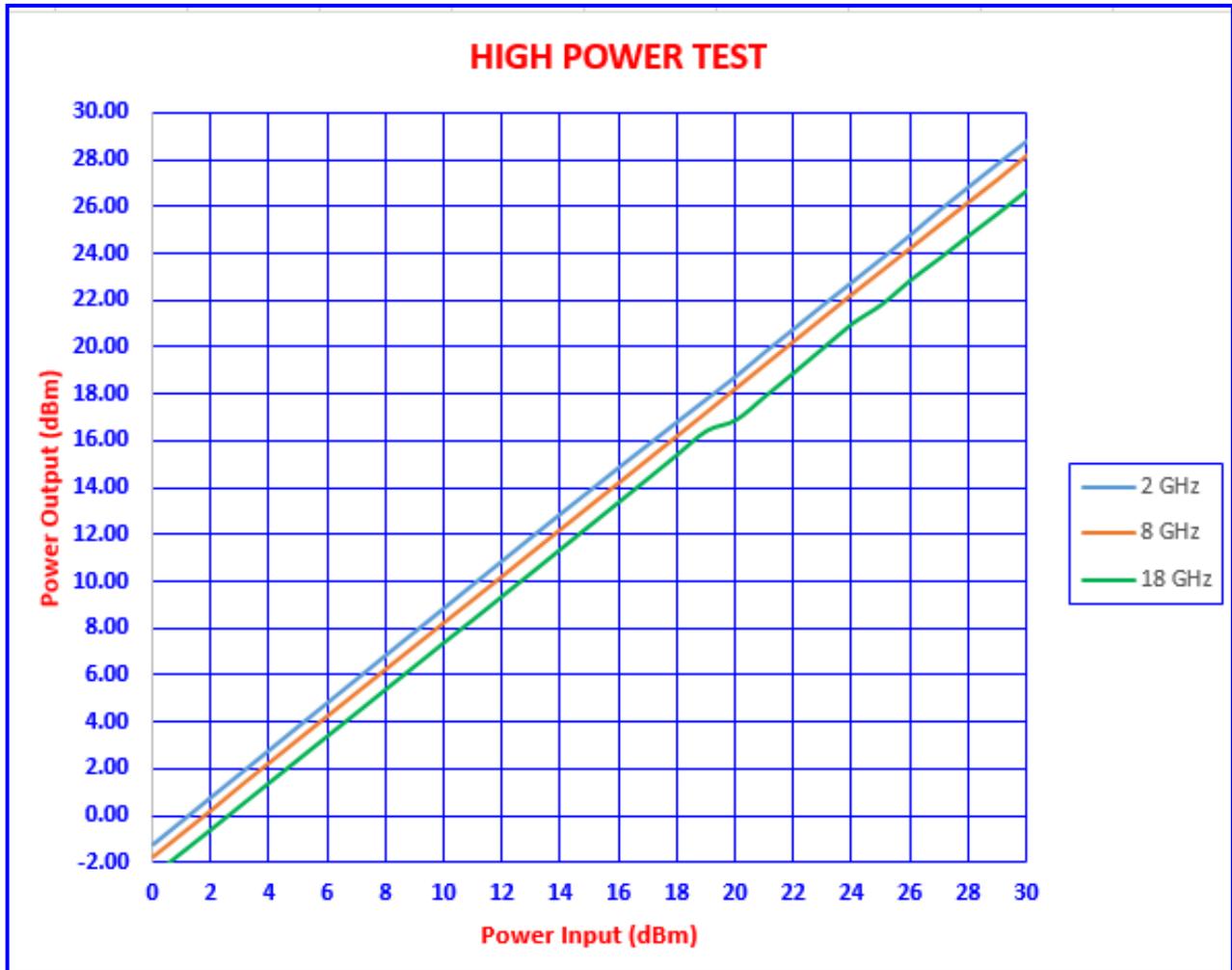
J1-J2, J1-J3, J2-J3 ISOLATION





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INPUT POWER





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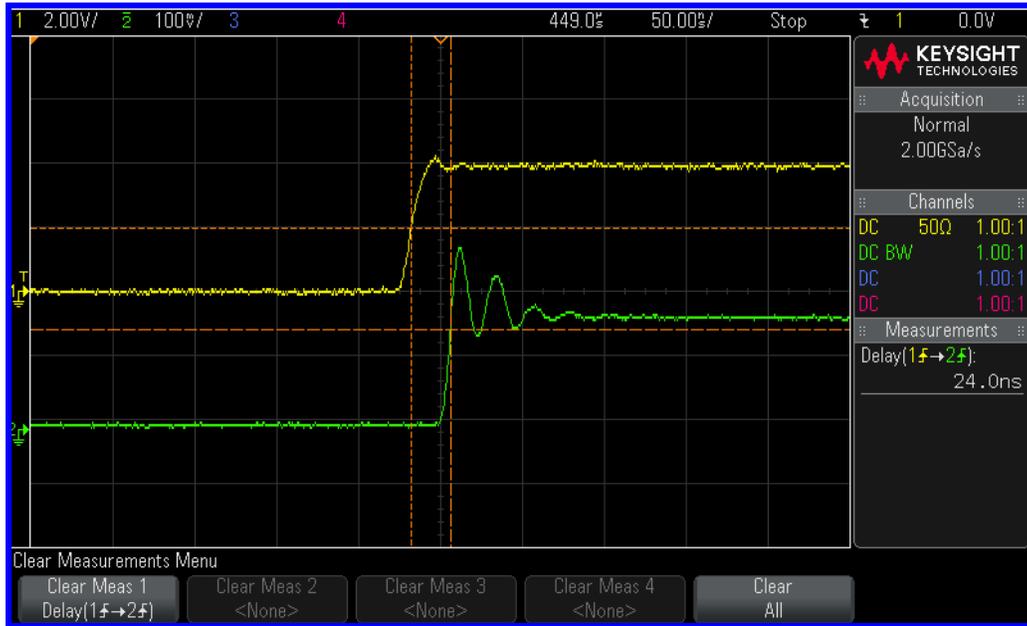
DATA HIGH POWER TEST.

POWER IN (dBm)	2GHz		8GHz		18GHz	
	POWER OUT (dBm)	LOSS	POWER OUT (dBm)	LOSS	POWER OUT (dBm)	LOSS
0	-1.18	1.18	-1.73	1.73	-2.56	2.56
1	-0.18	1.18	-0.73	1.73	-1.58	2.58
2	0.84	1.16	0.26	1.74	-0.59	2.59
3	1.84	1.16	1.30	1.70	0.41	2.59
4	2.85	1.15	2.30	1.70	1.41	2.59
5	3.86	1.14	3.30	1.70	2.40	2.60
6	4.87	1.13	4.30	1.70	3.40	2.60
7	5.88	1.12	5.29	1.71	4.40	2.60
8	6.89	1.11	6.29	1.71	5.39	2.61
9	7.90	1.10	7.29	1.71	6.39	2.61
10	8.90	1.10	8.28	1.72	7.39	2.61
11	9.91	1.09	9.27	1.73	8.37	2.63
12	10.92	1.08	10.27	1.73	9.37	2.63
13	11.92	1.08	11.27	1.73	10.37	2.63
14	12.92	1.08	12.26	1.74	11.38	2.62
15	13.90	1.10	13.26	1.74	12.38	2.62
16	14.89	1.11	14.26	1.74	13.39	2.62
17	15.87	1.13	15.25	1.75	14.39	2.61
18	16.84	1.17	16.25	1.75	15.41	2.59
19	17.80	1.20	17.26	1.74	16.42	2.58
20	18.76	1.24	18.27	1.73	16.87	3.13
21	19.80	1.20	19.28	1.72	17.88	3.12
22	20.80	1.20	20.29	1.71	18.90	3.10
23	21.81	1.19	21.29	1.71	19.95	3.05
24	22.79	1.21	22.30	1.70	20.99	3.01
25	23.78	1.22	23.28	1.72	21.80	3.20
26	24.80	1.20	24.26	1.74	22.85	3.15
27	25.85	1.15	25.25	1.75	23.78	3.22
28	26.84	1.16	26.23	1.77	24.75	3.25
29	27.84	1.17	27.20	1.80	25.70	3.30
30	28.80	1.20	28.22	1.78	26.68	3.32

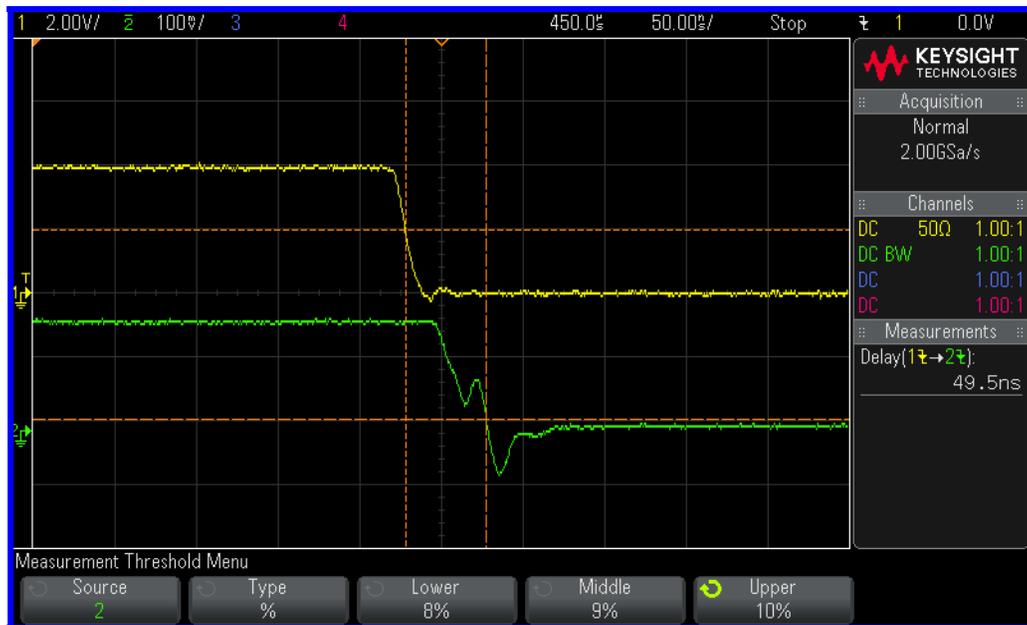


TYPICAL CHARACTERISTICS ON P2T-2G18G-65-T-SFF

ON SWITCHING SPEED (50ns Per Div)



OFF SWITCHING SPEED (50ns Per Div)



GREEN TRACE = TTL. YELLOW TRACE = RF.