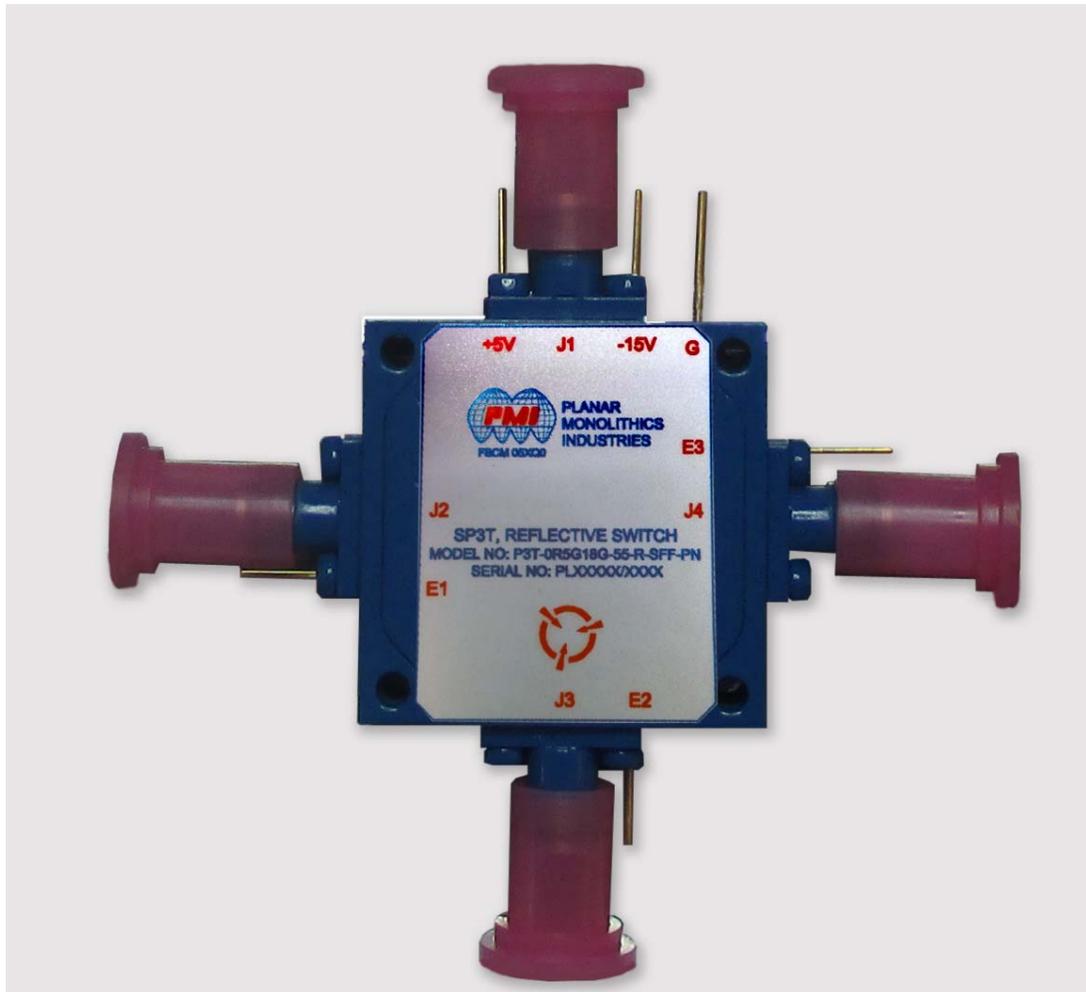




Typical Characteristics For P3T-0R5G18G-55-T-SFF-PN-OPT218

PMI MODEL NUMBER P3T-0R5G18G-55-R-SFF-PN IS A SINGLE POLE, THREE THROW ABSORBTIVE SWITCH DESIGNED TO OPERATE OVER THE 2.0 GHz TO 18.0 GHz FREQUENCY RANGE. THIS MODEL IS DESIGNED TO MAINTAIN LOW INSERTION LOSS, HIGH ISOLATION, AND FAST SWITCHING SPEED.



June 27, 2018

Designed by: PMI Engineering

Tested by: E. Kretz

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**Typical Characteristics
For
P3T-0R5G18G-55-T-SFF-PN-OPT218**

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Typical Characteristics For P3T-0R5G18G-55-T-SFF-PN-OPT218

Product Feature & Mechanical Drawing:

DESCRIPTION

PMI MODEL: P3T-0R5G18G-55-T-SFF-PN-OPT218 IS AN ABSORPTIVE SINGLE POLE, THREE THROW SWITCH THAT OPERATES OVER THE 2.0 TO 18.0 GHz FREQUENCY RANGE. THIS MODEL OFFERS A MINIMUM OF 55 dB ISOLATION AND A MAXIMUM INSERTION LOSS OF 3.8 dB. THE COMPACT 1.20" x 1.20" x 0.50" HOUSING IS OUTFITTED WITH FIELD REPLACEABLE SMA FEMALE CONNECTORS.

| REVISIONS | | | | |
|-----------|------|------------------|----------|----------|
| ZONE | REV. | DESCRIPTION | DATE | APPROVED |
| | A1 | ORIGINAL RELEASE | 02/02/18 | |
| | | | | |
| | | | | |

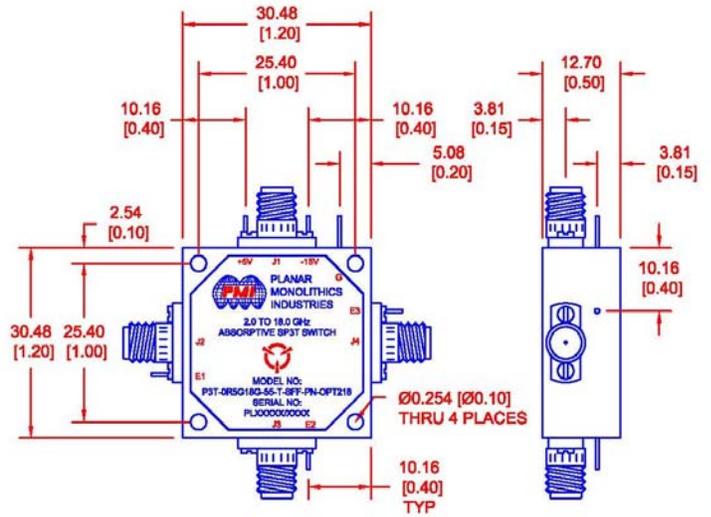
SPECIFICATIONS @ +25°C

- FREQUENCY RANGE: 2.0 TO 18.0 GHz
- INSERTION LOSS: 3.8 dB MAXIMUM
- ISOLATION: 55 dB MINIMUM
- VSWR: 2.0:1 MAXIMUM
- OPERATIONAL POWER HANDLING: +20 dBm CW MAXIMUM
- CONTROL: TTL LOGIC - SEE LOGIC TABLE
- POWER SUPPLY: +5V @ 120 mA NOMINAL
-15V @ 50 mA NOMINAL
- CONNECTORS: RF: SMA FEMALE (4 PLACES)
LOGIC/POWER: SOLDER PIN (6 PLACES)
- SIZE: 30.48 mm x 30.48 mm x 12.70 mm
[1.20" x 1.20" x 0.50"]
EXCLUDING CONNECTORS
- FINISH: PAINTED BLUE

LOGIC TABLE

| 3-BIT TTL | | | |
|-----------|----|----|------------------|
| 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" |

MECHANICAL OUTLINE



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 mm [INCH]
TOLERANCES:
XJXX ± 0.508 [0.020]
XJXXX ± 0.254 [0.010]

PMI CONFIDENTIAL AND PROPRIETARY

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ISO 9001 CERTIFIED



| APPROVALS | | DATE | TITLE | | | REV. |
|-----------|-----------------|----------|---|----------|----------|--------------|
| DRAWN | <i>M. Berry</i> | 02/02/18 | PRODUCT FEATURE | | | |
| CHECKED | | | P3T-0R5G18G-55-T-SFF-PN-OPT218 | | | |
| ISSUED | | | 2.0 to 18.0 GHz Single Pole Three Throw Absorptive Switch | | | |
| | | | SIZE | FROM NO. | DWG NO. | |
| | | | A | 05XQ0 | 27034120 | A1 |
| | | | SCALE | N:S | | SHEET 1 OF 1 |

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Typical Characteristics
For
P3T-0R5G18G-55-T-SFF-PN-OPT218
Summary Test Data

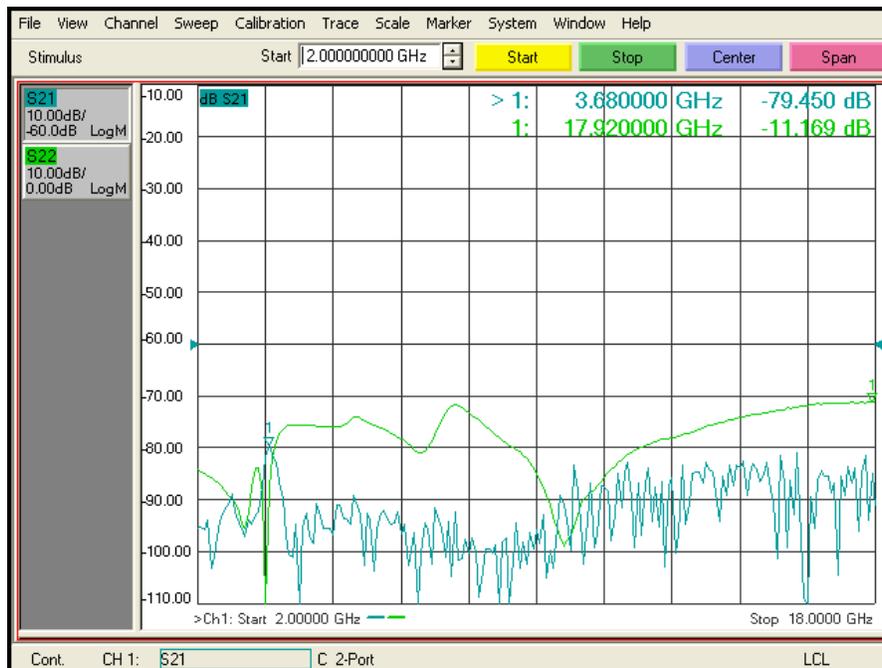
| TEST ITEM | PARAMETERS | SPECIFIED VALUE | | | | TEST RESULTS | QA QC |
|-----------|-----------------|--|----|----|----------|-----------------------------|-------|
| 1 | Frequency Range | 2.0 to 18.0 GHz | | | | 2.0 to 18.0 GHz | PASS |
| 2 | Insertion Loss | 3.8 dB Max | | | | 2.63 dB (See Plot) | PASS |
| 3 | VSWR | 2.0:1 Max | | | | 1.91:1 (See Plot) | PASS |
| 4 | Isolation | 55 dB Min | | | | 77 dB (See Plot) | PASS |
| 5 | Switching Speed | 100 ns Max | | | | 23 ns (See Plot) | PASS |
| 6 | Input Power | +20 dBm CW Max | | | | Pass | PASS |
| 7 | DC Supply | +5 VDC @ 120 mA Nominal -15 VDC @ 50 mA Nominal | | | | +5 V @ 60mA -15 V @ 32mA | PASS |
| 8 | Control Signal | E1 | E2 | E3 | FUNCTION | Pass | PASS |
| | | 0 | 1 | 1 | J1-J2 | | |
| | | 1 | 0 | 1 | J1-J3 | | |
| | | 1 | 1 | 0 | J1-J4 | | |



Typical Characteristics For P3T-0R5G18G-55-T-SFF-PN-OPT218 J1 J2 Insertion Loss And Return Loss



J1 J2 Isolation And Return Loss



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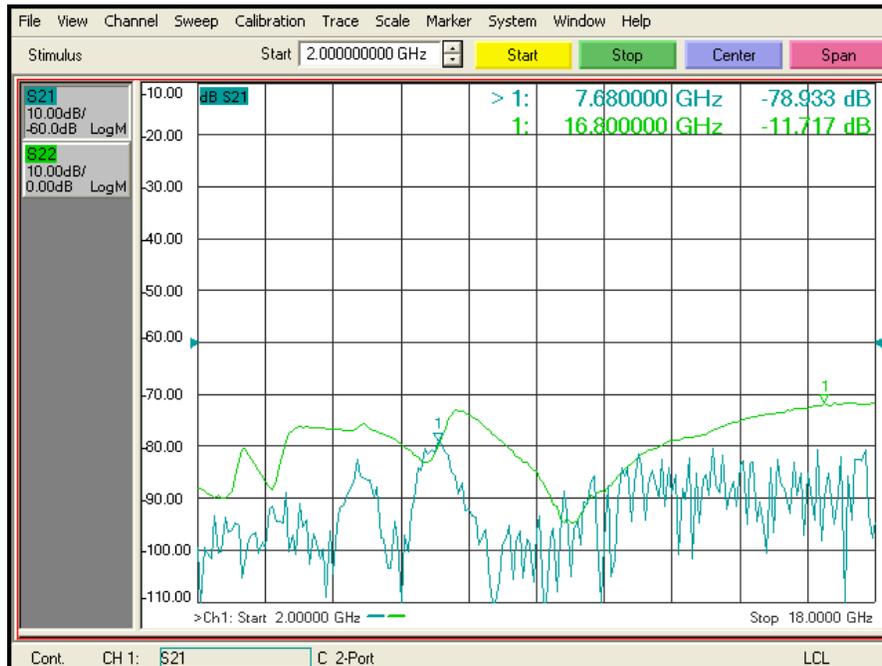


Typical Characteristics For P3T-0R5G18G-55-T-SFF-PN-OPT218

J1 J3 Insertion Loss And Return Loss



J1 J3 Isolation And Return Loss



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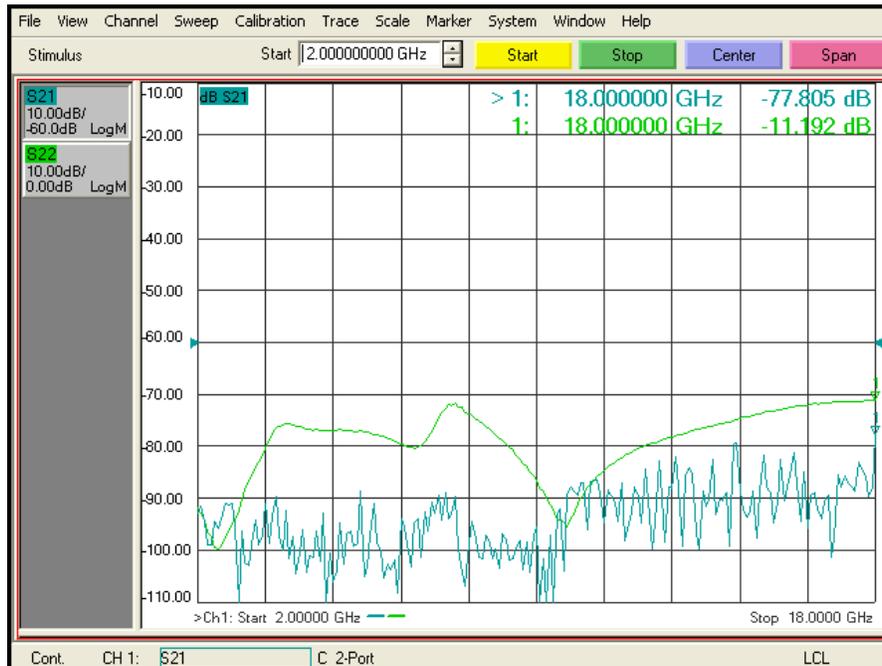


Typical Characteristics For P3T-0R5G18G-55-T-SFF-PN-OPT218

J1 J4 Insertion Loss And Return Loss



J1 J4 Isolation And Return Loss

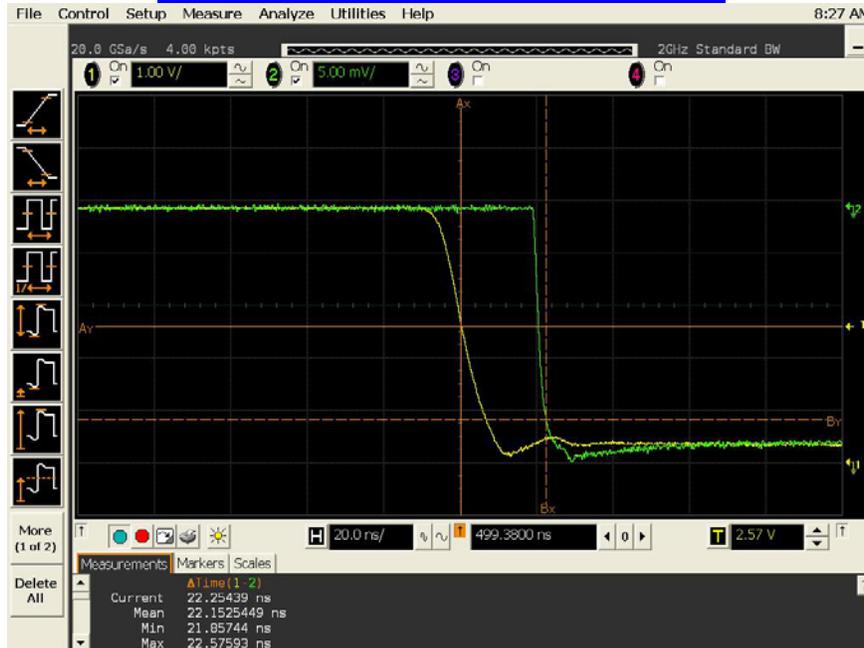


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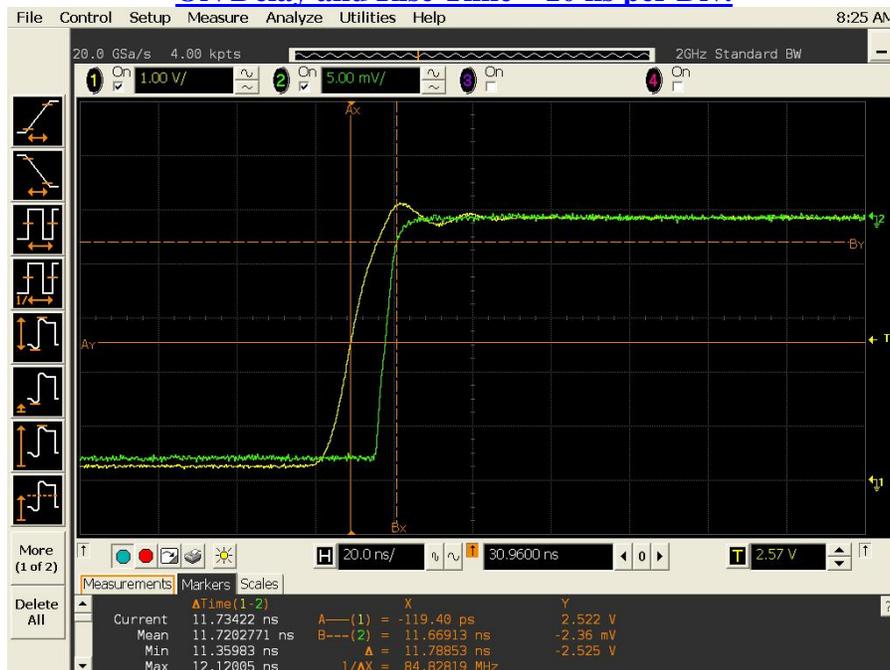


Typical Characteristics For P3T-0R5G18G-55-T-SFF-PN-OPT218

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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