

**TYPICAL CHARACTERISTICS  
ON  
P3T-500M18G-60-T-SFF-LV-SP**

**PMI MODEL NUMBER P3T-500M18G-60-T-SFF-LV-SP IS A SINGLE POLE, THREE THROW NON-REFLECTIVE SWITCH DESIGNED TO OPERATE OVER THE 0.5 GHz TO 18.0 GHz FREQUENCY RANGE. THIS MODEL IS DESIGNED TO MAINTAIN LOW INSERTION LOSS, HIGH ISOLATION, AND FAST SWITCHING SPEED. THIS MODEL OFFERS LOW VIDEO TRANSIENT PERFORMANCE OF 100 mV MAXIMUM.**



**Tested By:  
K Wagaman**

**Reported By:  
J Escano**

**Date:  
11/5/2025**

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ON  
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**PRODUCT FEATURE**

**DESCRIPTION:**

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**SPECIFICATIONS:**

- FREQUENCY: 0.5 GHz TO 18.0 GHz
- INSERTION LOSS: 4.4dB MAXIMUM
- ISOLATION: 60dB MINIMUM
- VSWR: 2.0:1 MAXIMUM
- SPEED: ON/OFF - 50ns MAXIMUM
- POWER INPUT (OPERATING): 200mW CW MAXIMUM
- VIDEO LEAKAGE: 100mV @ 350MHZ BW MAXIMUM (1) (2)
- CONTROL: TTL LOGIC - '0' = 'LOW LOSS'  
TTL LOGIC - '1' = 'ISOLATION'  
PINS E1, E2, and E3 ARE PULLED LOW '0'  
PINS E1, E2, and E3 ARE PULLED LOW '0'  
**\*SURGE PROTECTION INCLUDED ON TTL LINES**
- POWER SUPPLY: +5V @ 110 mA NOMINAL  
-12V @ 90 mA NOMINAL
- RF CONNECTORS: SMA FEMALE CONNECTORS
- DC CONNECTORS: SOLDER PINS
- SEALING: UNLESS OTHERWISE SPECIFIED, PMI WILL SUPPLY EPOXY SEAL
- 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.

(1) After 50 nsec no video transient will be present  
(2) - Video filter is required on input and output ports.

**ENVIRONMENTAL RATINGS:**

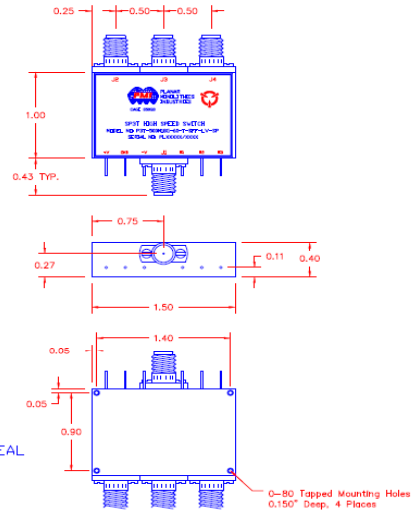
- TEMPERATURE: -54°C TO +85°C (OPERATING)  
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. C
- VIBRATION: MIL-STD-202F, METHOD 204D COND. G
- SALT FOG: MIL-STD-202F, METHOD 101D+EST COND. B
- FUNGUS: MIL-STD-810F, METHOD 508.5

Note: Environmental testing and ESS will be met, but actual testing is not done by PMI  
Actual screening is available for an additional charge.

**NOTE: CHANGES TO DRAWING OR SPECIFICATIONS MUST BE APPROVED BY THE END USER**

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
XXX ±0.020  
XXXX ±0.010

| REVISIONS |      |                  |          |          |
|-----------|------|------------------|----------|----------|
| ZONE      | REV. | DESCRIPTION      | DATE     | APPROVED |
|           | A1   | ORIGINAL RELEASE | 11/08/18 |          |
|           | A3   | ECN # 20-0125    | 7/6/20   |          |
|           | C1   | ECN # 25-0284    | 10/14/25 |          |



**PMI CONFIDENTIAL AND PROPRIETARY**

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ISO 9001 CERTIFIED

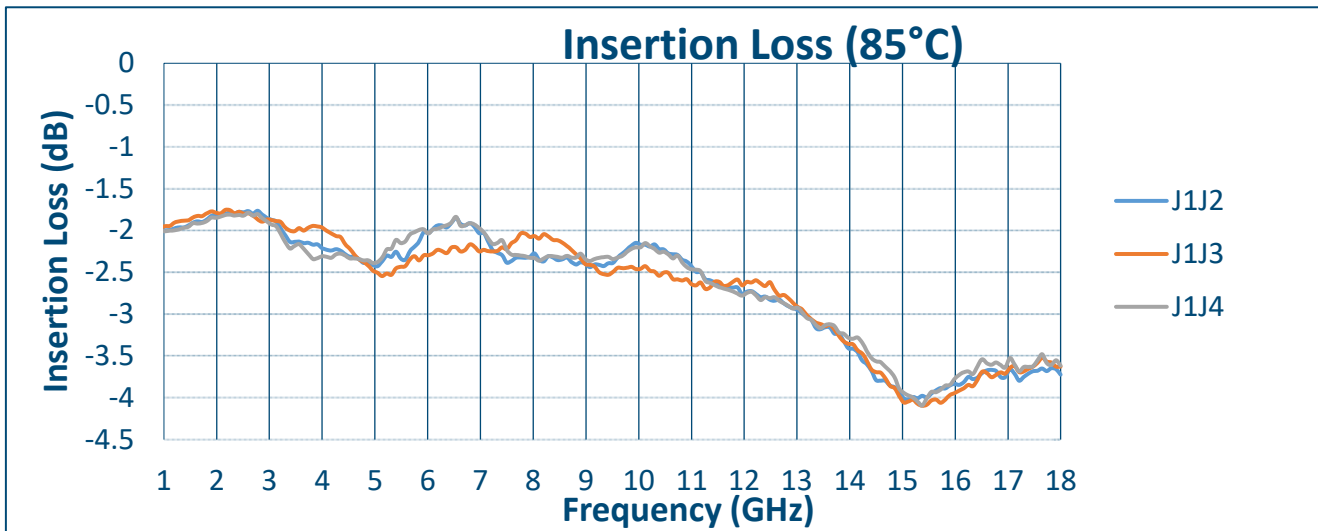
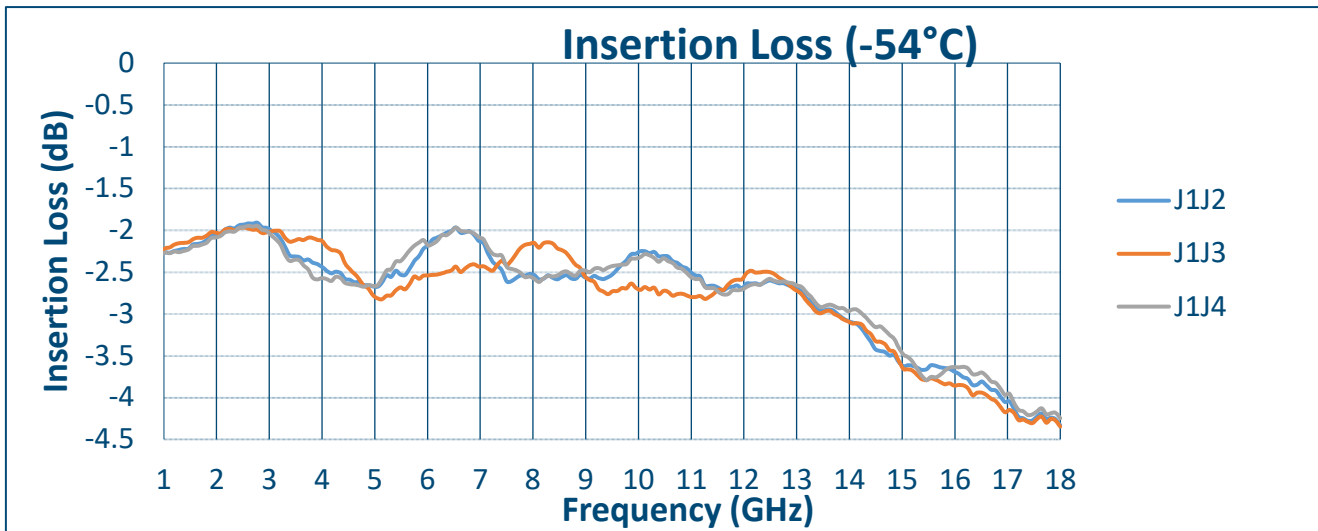
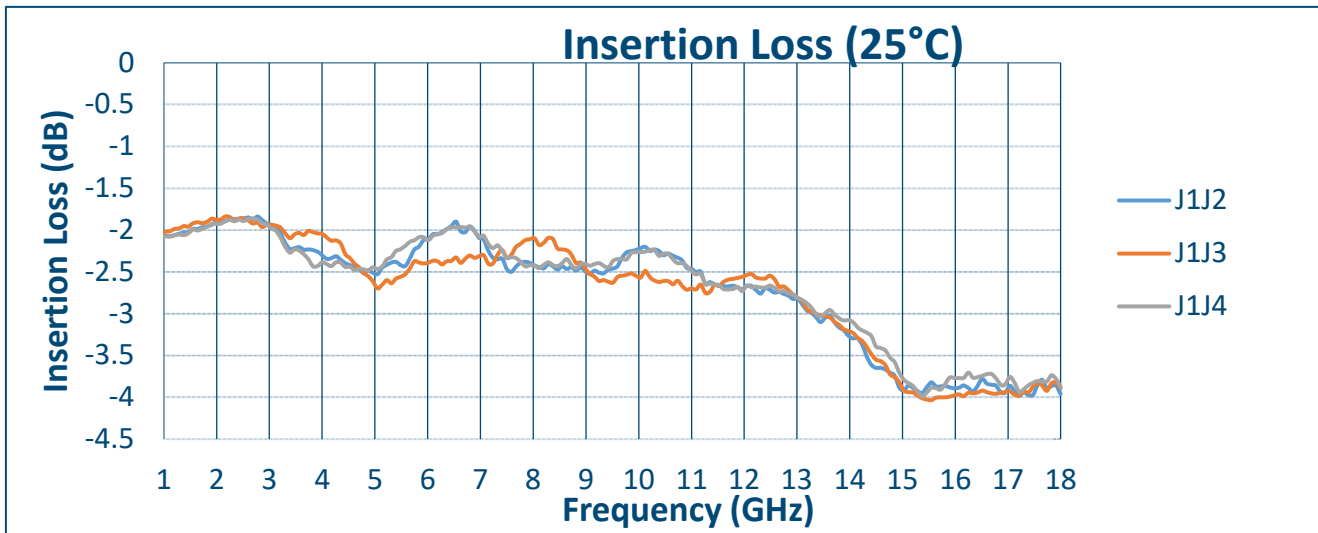


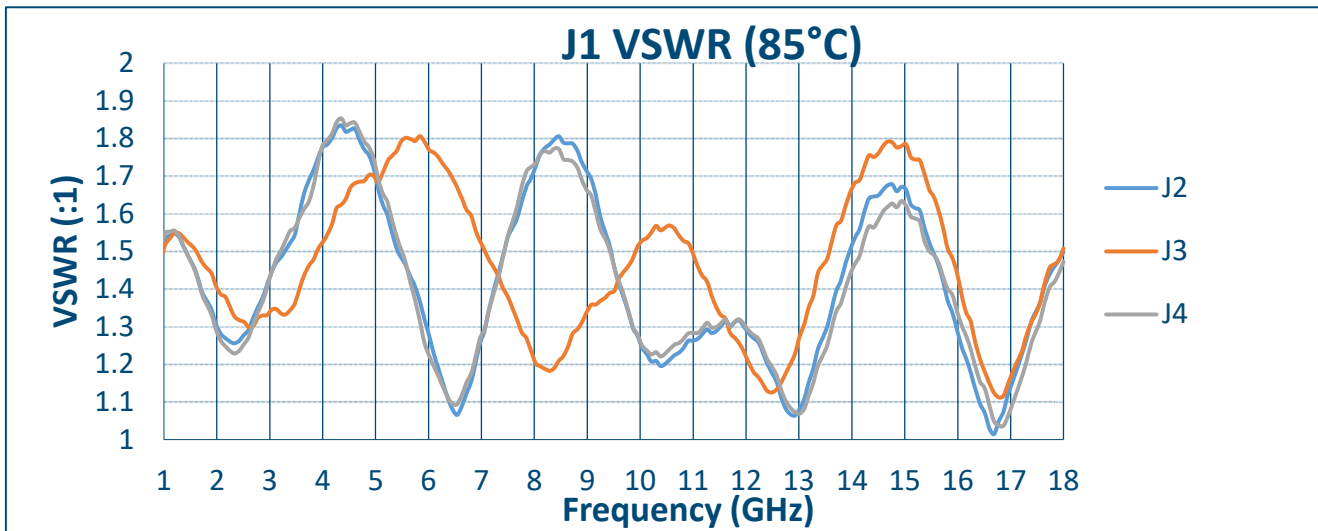
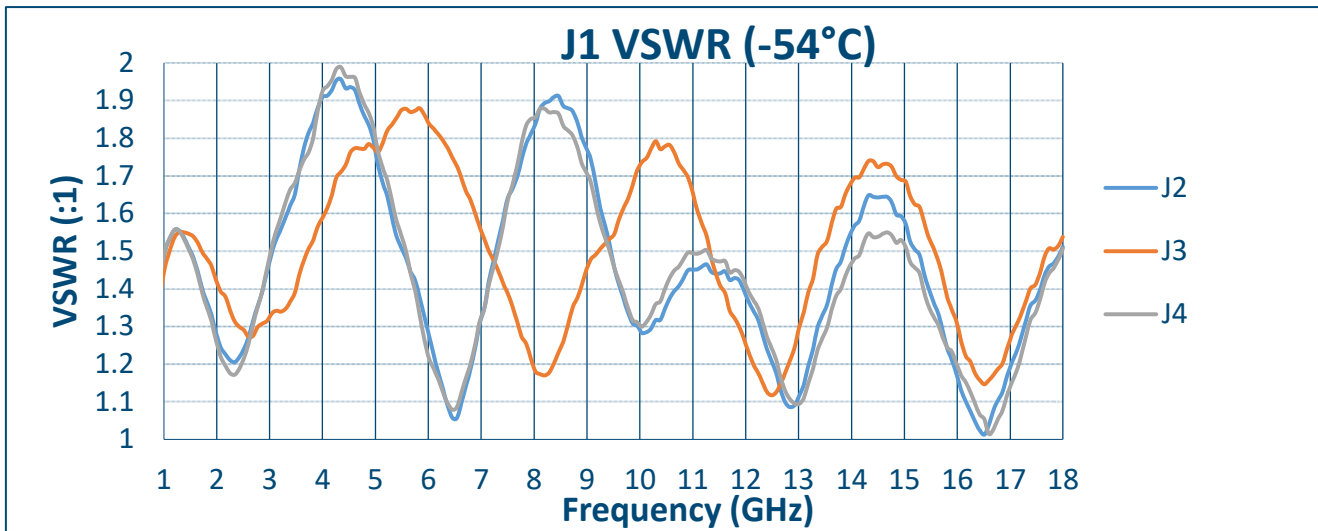
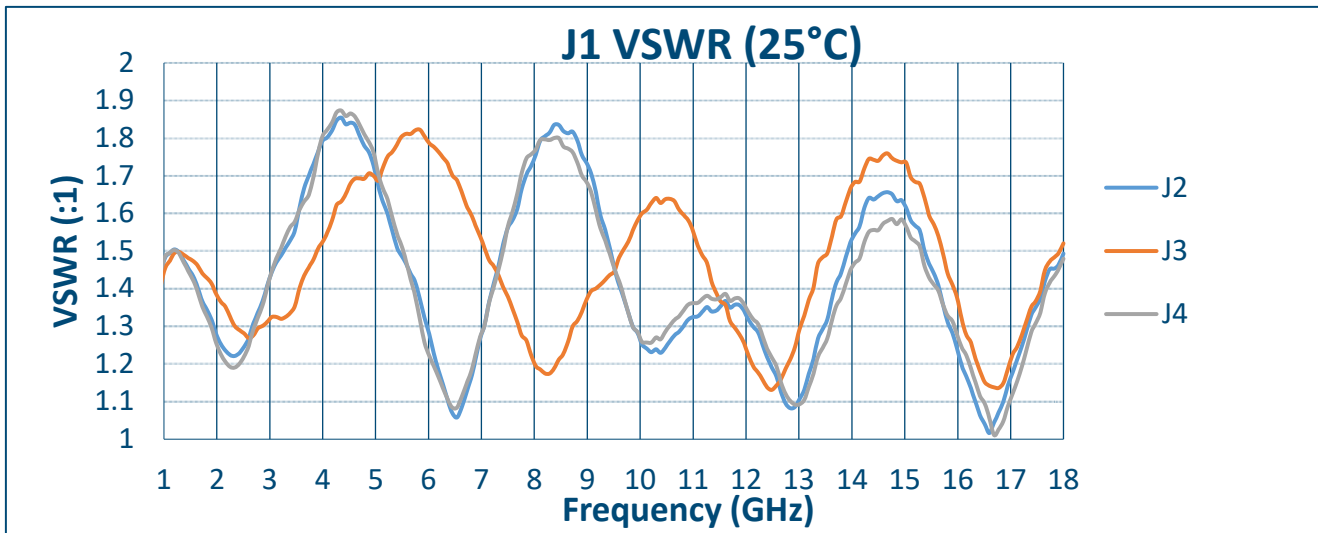
| APPROVALS |              | DATE    | TITLE                      |          |              |
|-----------|--------------|---------|----------------------------|----------|--------------|
| DRAWN     | <i>JNS</i>   | 7/29/18 | PRODUCT FEATURE            |          |              |
| CHECKED   | <i>B.M.F</i> | 8/19/17 | P3T-500M18G-60-T-SFF-LV-SP |          |              |
| ISSUED    |              |         | SIZE                       | FORM NO. | DWG. NO.     |
|           |              |         | A                          | 05XQ0    | 27032821     |
|           |              |         | SCALE                      | N:S      | SHEET 1 OF 1 |

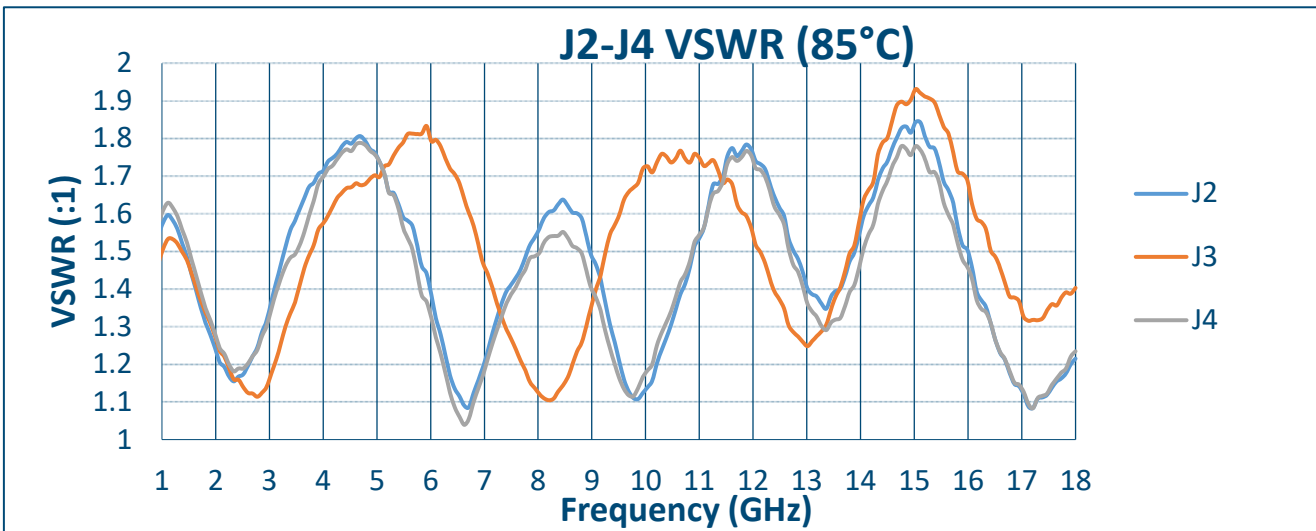
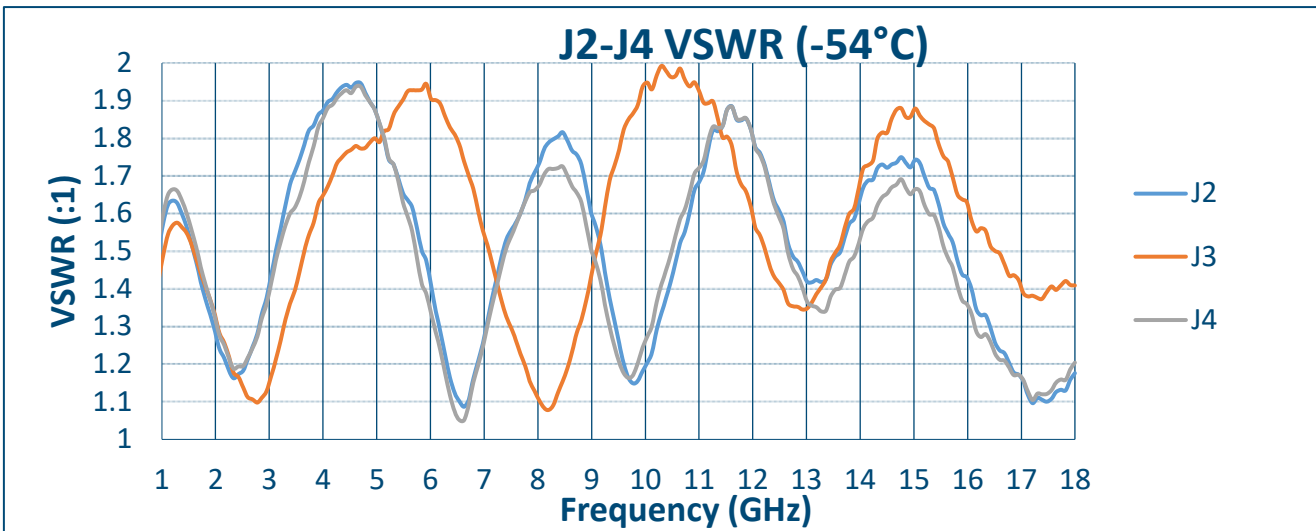
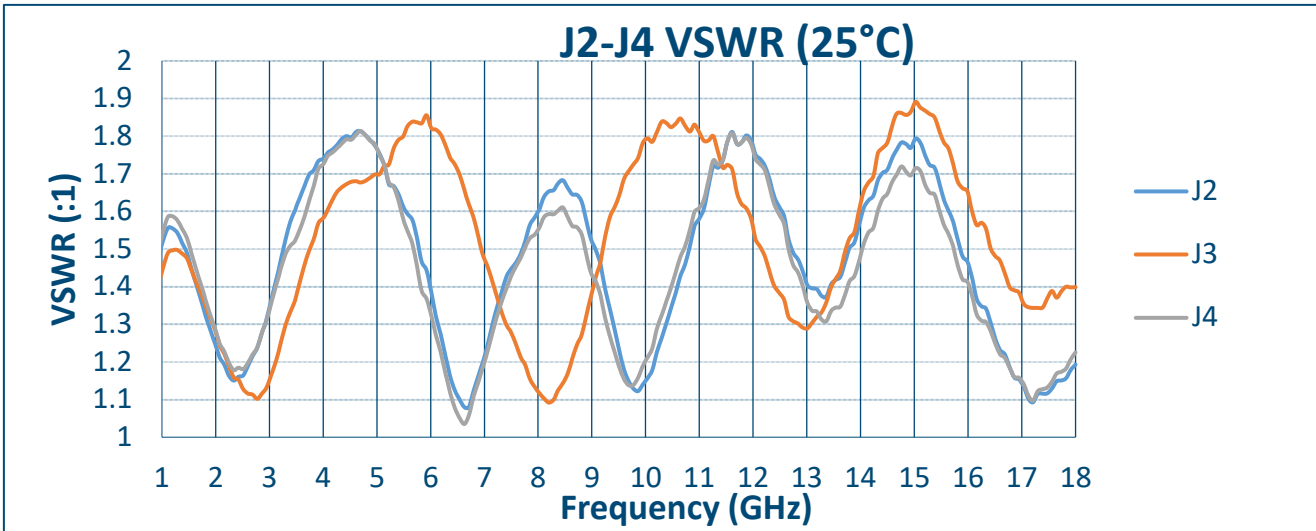
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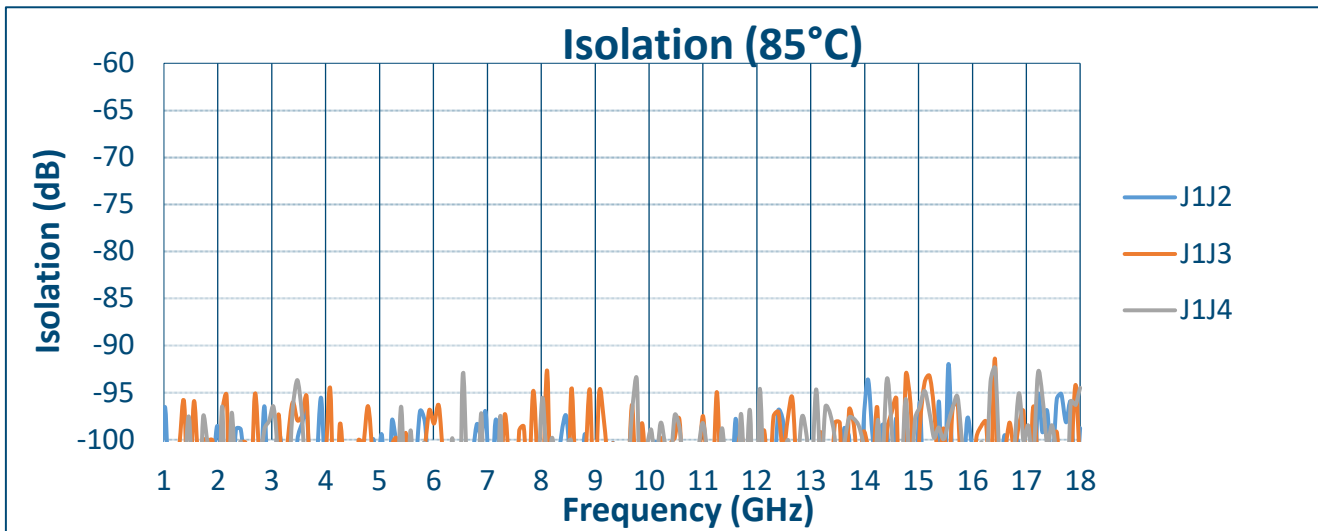
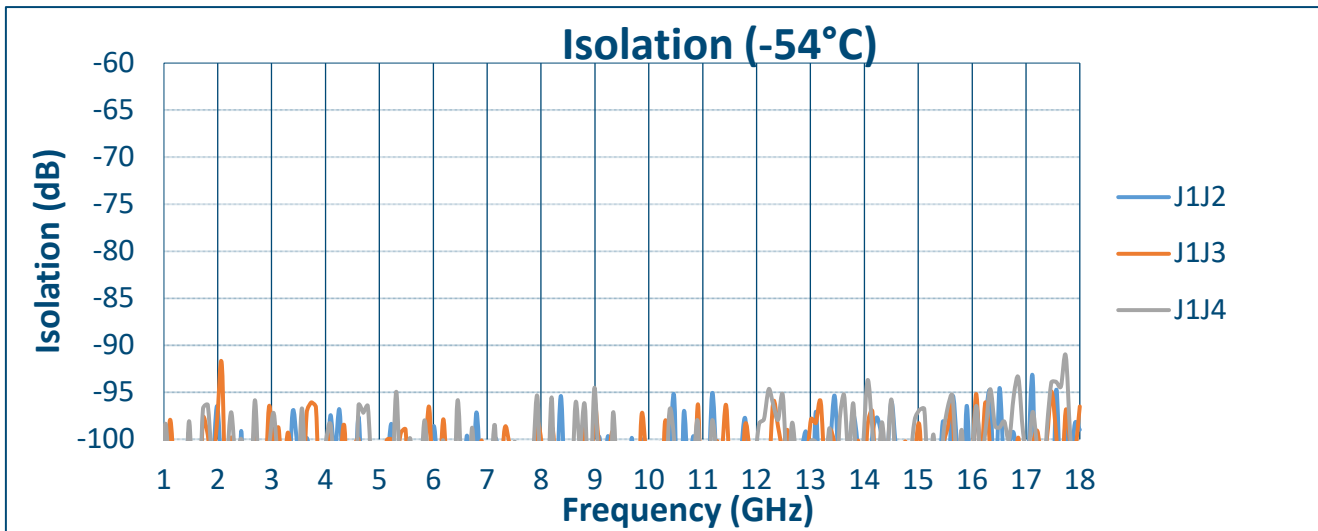
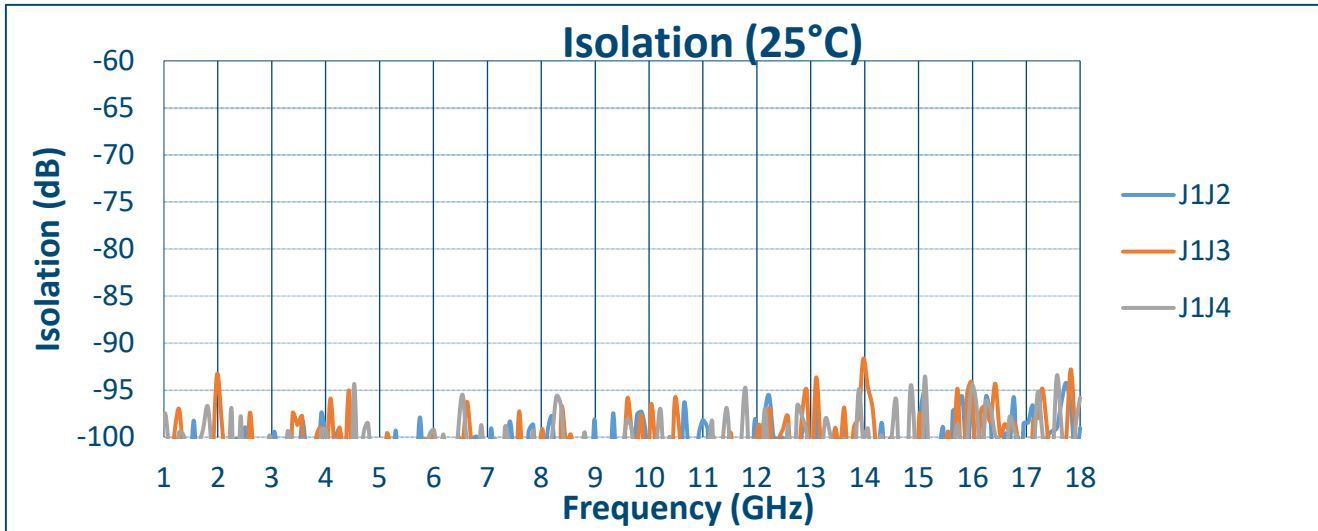
**TEST DATA**

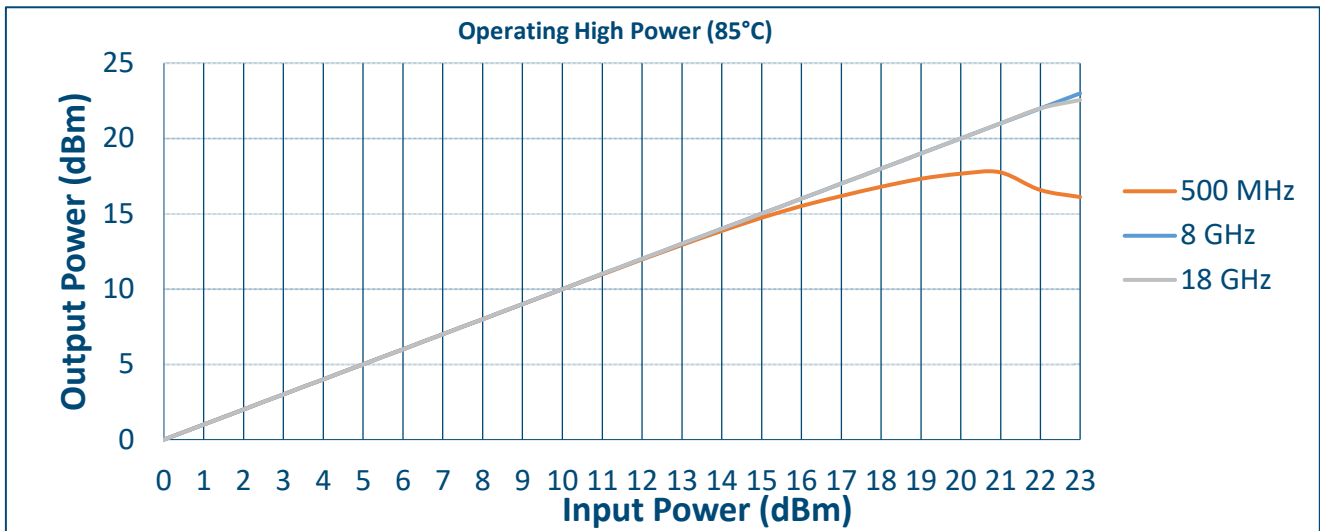
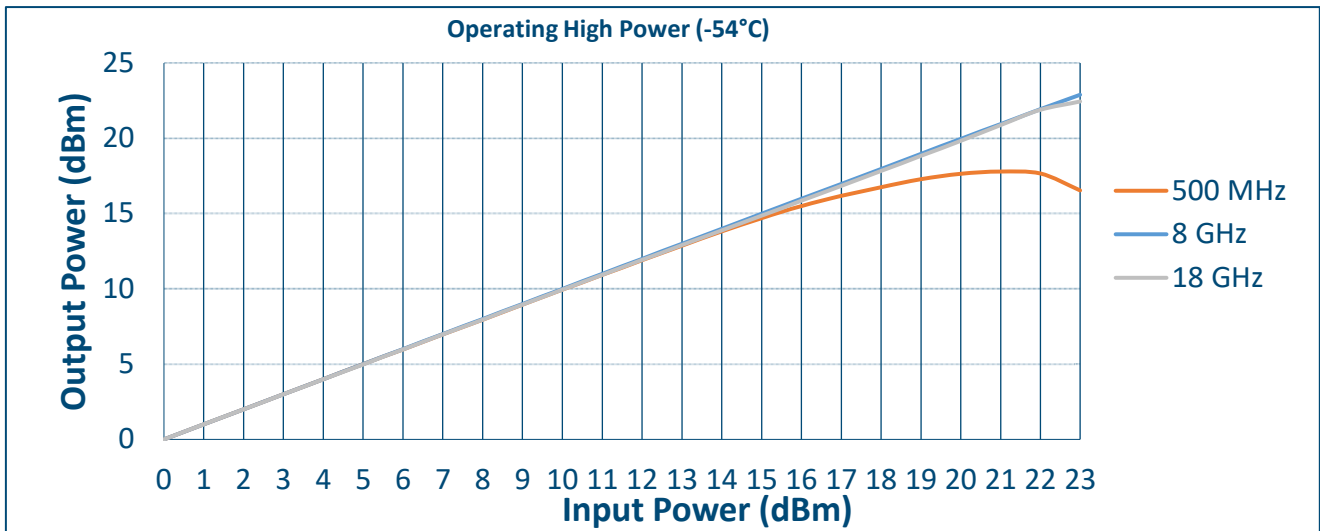
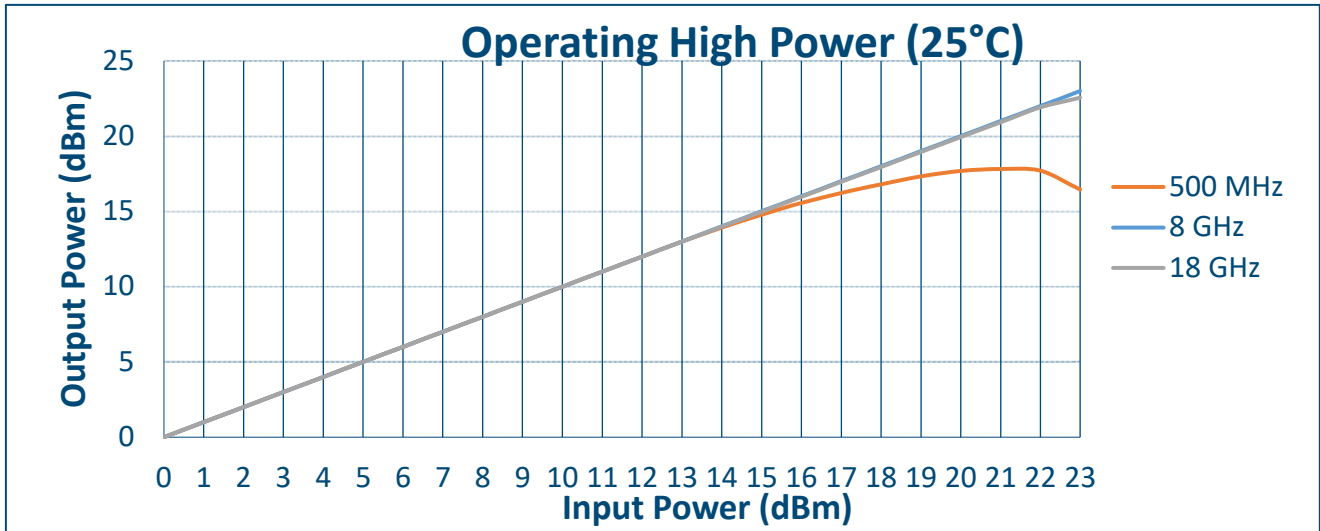
| TEST ITEM | PARAMETERS      | SPECIFIED VALUE                       | TEST RESULTS                          |                                       |                                       |
|-----------|-----------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|           |                 |                                       | 25°C                                  | -54°C                                 | 85°C                                  |
| 1         | Frequency Range | 0.5 GHz to 18 GHz                     | <b>0.5 GHz to 18 GHz</b>              |                                       |                                       |
| 2         | Isolation       | 60 dB Min                             | <b>91.7 dB</b>                        | <b>91.1 dB</b>                        | <b>92 dB</b>                          |
| 3         | Insertion Loss  | 4.4 dB Max                            | <b>4 dB</b>                           | <b>4.3 dB</b>                         | <b>4.1 dB</b>                         |
| 4         | VSWR In/Out     | 2.0:1 Max                             | <b>1.9:1</b>                          | <b>2:1</b>                            | <b>1.9:1</b>                          |
| 5         | Input Power     | +23 dBm CW Typ                        | <b>+23 dBm CW</b>                     |                                       |                                       |
| 6         | Switching Speed | 50 ns Max                             | <b>50 ns</b>                          |                                       |                                       |
| 7         | Video Leakage   | 100 mV @ 350 MHz<br>BW Max            | <b>92 mV</b>                          |                                       |                                       |
| 8         | DC Voltage      | +5V @ 150 mA Typ<br>-12V @ 100 mA Typ | <b>+5 V @ 37 mA<br/>-15 V @ 39 mA</b> | <b>+5 V @ 36 mA<br/>-15 V @ 40 mA</b> | <b>+5 V @ 38 mA<br/>-15 V @ 38 mA</b> |





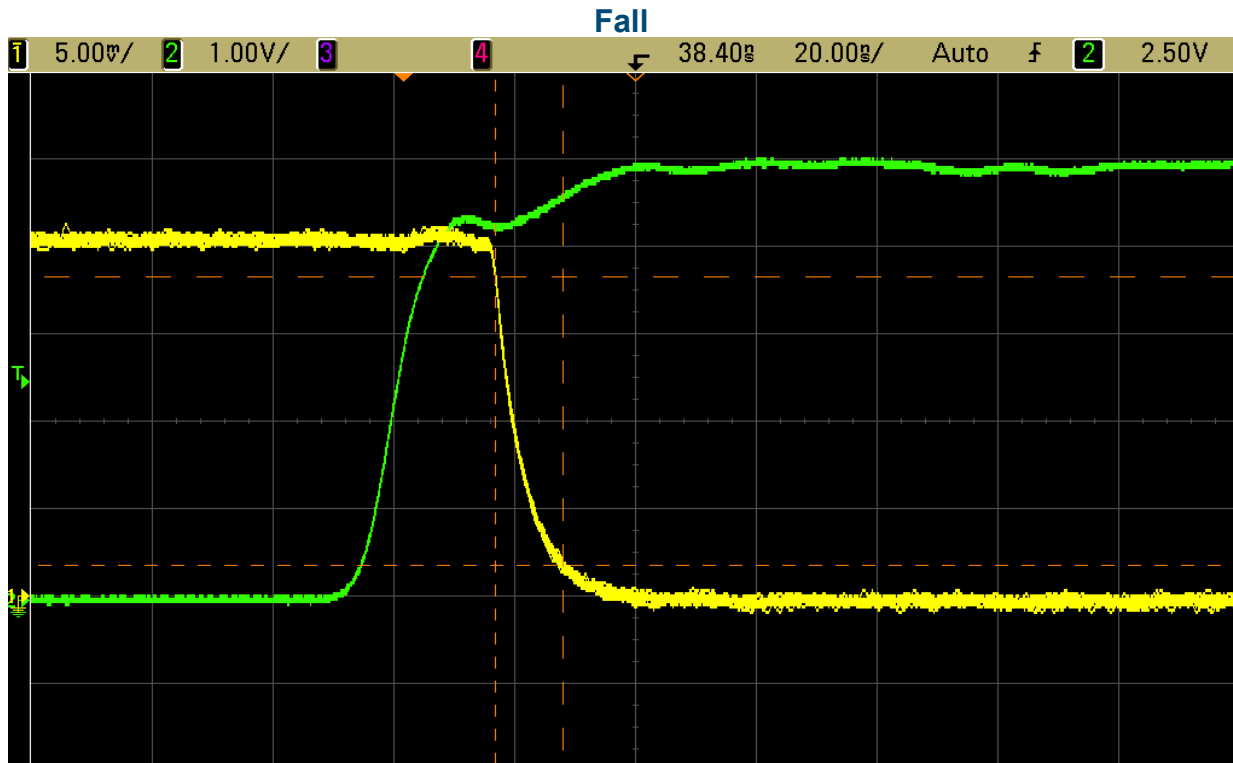








RF Signal = Yellow Trace, TTL Signal = Green Trace  
Switching Speed On = 50 ns



RF Signal = Yellow Trace, TTL Signal = Green Trace  
Switching Speed On = 30 ns

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