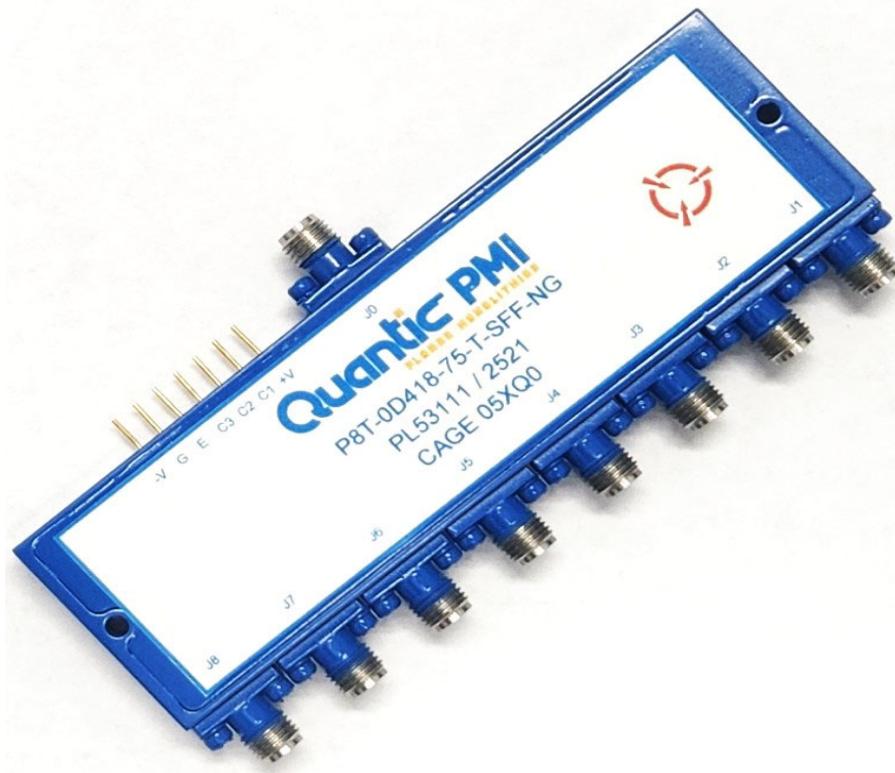


**TYPICAL CHARACTERISTICS  
ON  
P8T-0D418-75-T-SFF-NG**

**PMI MODEL P8T-0D418-75-T-SFF-NG IS A SINGLE POLE EIGHT THROW ABSORPTIVE SWITCH THAT OPERATES OVER THE FREQUENCY RANGE OF 0.4 TO 18 GHz. IT HAS A MINIMUM ISOLATION OF 75 dB AND A MINIMUM RETURN LOSS OF 10 dB. THIS MODEL HAS THE FOLLOWING SPECIFICATIONS.**



**Reported By** Shane O'Neill  
**Author** Noor Azhar  
**Date** May 9 2025

**TYPICAL CHARACTERISTICS  
ON  
P8T-0D418-75-T-SFF-NG**

**PRODUCT FEATURE**

**DESCRIPTION:**

PMI MODEL P8T-0D418-75-T-SFF-NG IS A SINGLE POLE EIGHT THROW ABSORPTIVE SWITCH THAT OPERATES OVER THE FREQUENCY RANGE OF 0.4 TO 18 GHz. IT HAS A MINIMUM ISOLATION OF 75 dB AND A MINIMUM RETURN LOSS OF 10 dB. THIS MODEL HAS THE FOLLOWING SPECIFICATIONS.

**SPECIFICATIONS:**

- FREQUENCY RANGE: 0.4 TO 18.0 GHz
- ISOLATION: 75 dB MIN
- INSERTION LOSS: 3.4 dB MAX @ 0.4 TO 10.0 GHz  
4.5 dB MAX @ 10.0 TO 18.0 GHz
- RETURN LOSS (ALL PORTS ON OR OFF STATE): 10 dB MIN
- RISE/FALL TIME: 50 ns MAX
- ON/OFF TIME: 100 ns MAX
- INPUT POWER: +25 dBm CW MAX  
(+20 dBm HOT SWITCHING)
- POWER SUPPLY: +5 V ± 0.25 V @ 250 mA MAX  
-12 V ± 0.25 V @ 100 mA MAX
- CONTROL LOGIC: TTL (ENCODED 3-BIT)  
ALL OFF CONDITION USE ENABLE PIN
- IMPEDANCE: 50 Ω
- CONNECTORS: SMA FEMALE
- FINISH: PAINTED BLUE

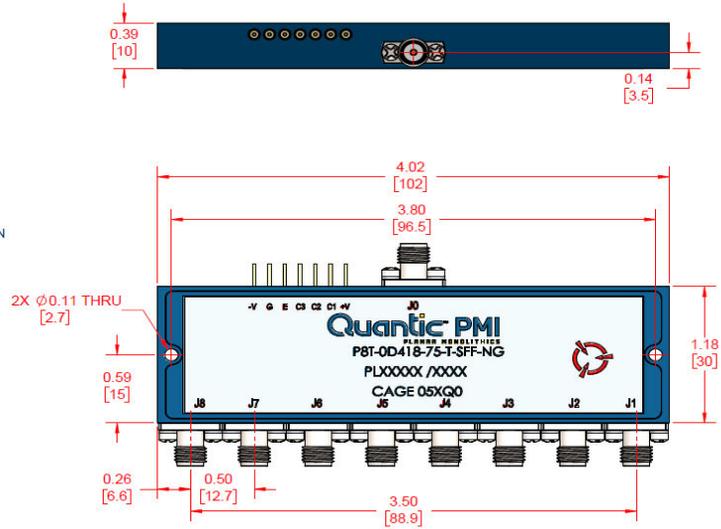
C1	C2	C3	E	ON	OFF
DC	DC	DC	1	-	J0-J1, J2, J3, J4, J5, J6, J7, J8
0	0	0	0	J0-J1	J0-J2, J3, J4, J5, J6, J7, J8
0	0	1	0	J0-J2	J0-J1, J3, J4, J5, J6, J7, J8
0	1	0	0	J0-J3	J0-J1, J2, J4, J5, J6, J7, J8
0	1	1	0	J0-J4	J0-J1, J2, J3, J5, J6, J7, J8
1	0	0	0	J0-J5	J0-J1, J2, J3, J4, J6, J7, J8
1	0	1	0	J0-J6	J0-J1, J2, J3, J4, J5, J7, J8
1	1	0	0	J0-J7	J0-J1, J2, J3, J4, J5, J6, J8
1	1	1	0	J0-J8	J0-J1, J2, J3, J4, J5, J6, J7

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE: -40°C TO +85°C (OPERATING)  
-55°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 TEMPERATURE  
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/01/2024	



PMI CONFIDENTIAL AND PROPRIETARY

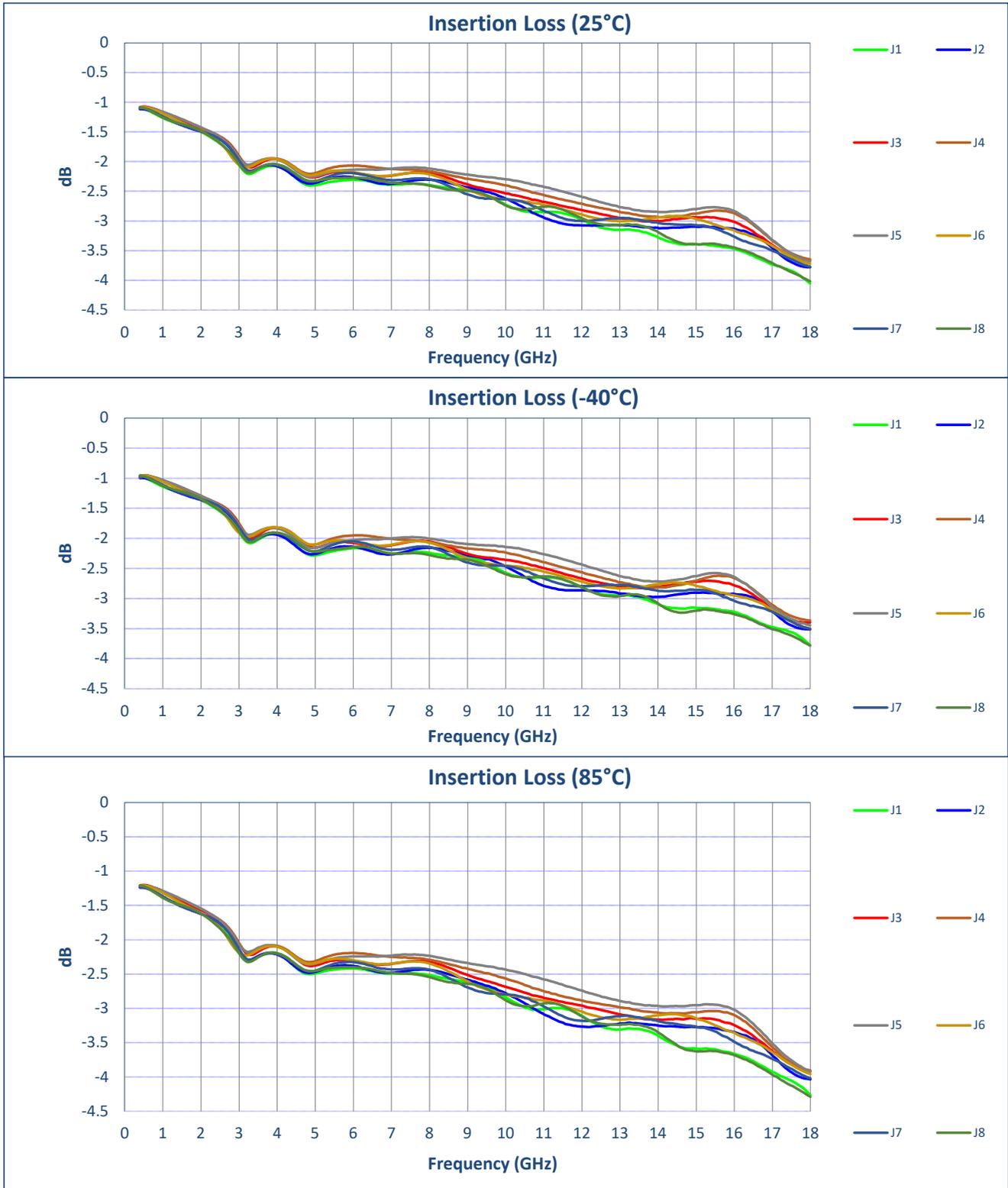
APPROVALS		DATE	TITLE	
DESIGN:	S AZHAR	11/29/24	OUTLINE	
REVISION:			P8T-0D418-75-T-SFF-NG	
ISSUED:			REV:	A1
BY:			FORM NO:	27050320
SCALE:	5:1		SHEET 1 OF 1	

**TYPICAL CHARACTERISTICS  
ON  
P8T-0D418-75-T-SFF-NG**

**TEST DATA**

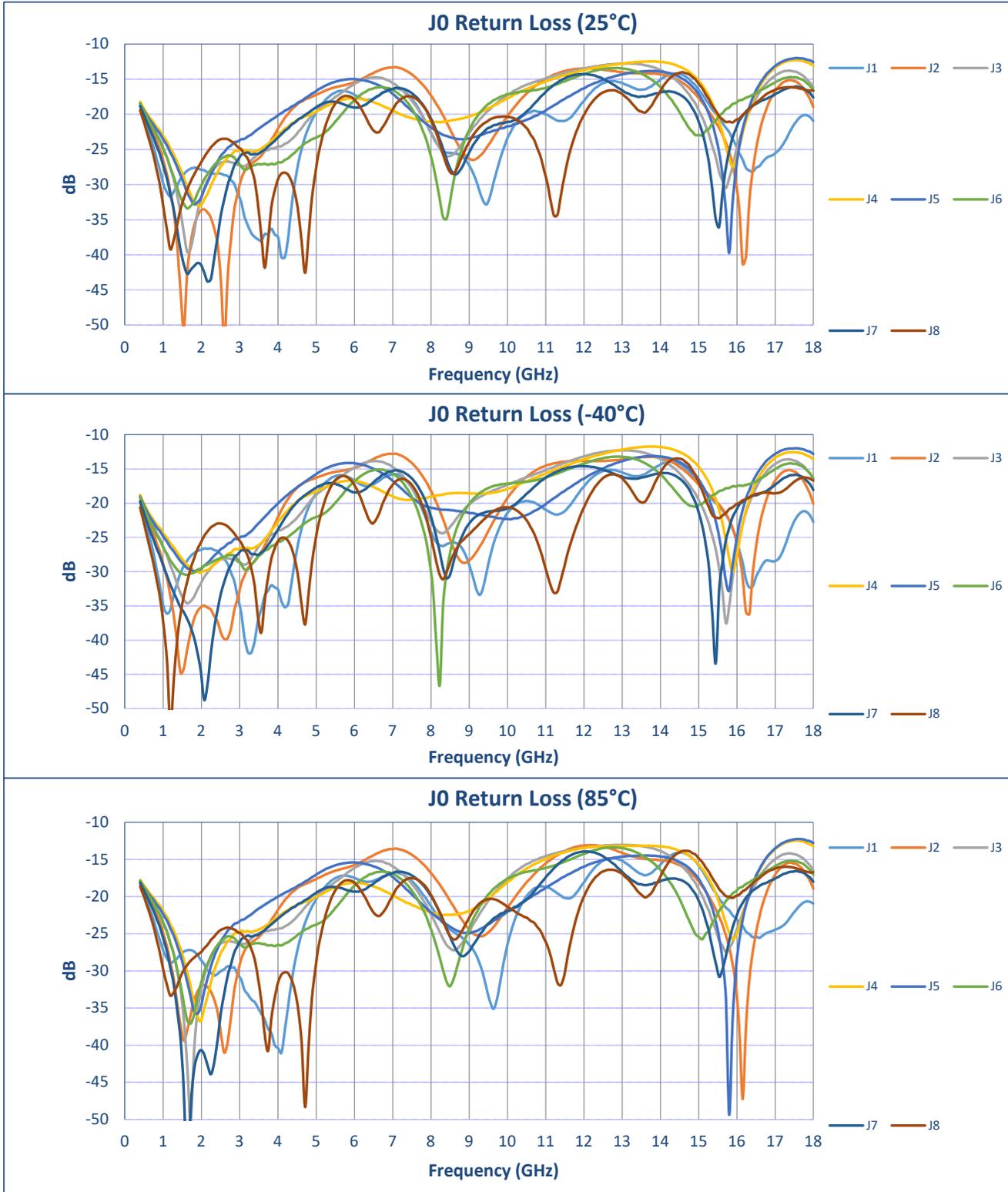
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			25°C	-40°C	85°C
1	Frequency Range	0.4 GHz to 18 GHz	0.4 GHz to 18 GHz		
2	Isolation	75 dB Min.	85.2 dB	86.3 dB	87.3 dB
3	Insertion Loss	3.4 dB Max., 0.4-10 GHz 4.5 dB Max., 10-18 GHz	2.76 dB 4.05 dB	2.61 dB 3.78 dB	2.91 dB 4.29 dB
4	Return Loss	-10 dB Min.	-12 dB J0 -11.52 dB J1-J8 -11.82 dB J1-J8 Off	-11.73 dB J0 -11.21 dB J1-J8 -11.44 dB J1-J8 Off	-12.25 dB J0 -11.53 dB J1-J8 -11.74 dB J1-J8 Off
5	Rise/Fall Time	50 ns Max. Rise 50 ns Max. Fall	45.0 ns Rise 16.8 ns Fall	40.0 ns Rise 18.6 ns Fall	45.0 ns Rise 19.4 ns Fall
6	Switching Speed	100 ns Max.	78.0 ns On 50.2 ns Off	68.0 ns On 46.4 ns Off	78.0 ns On 56.4 ns Off
7	Operating Power	25 dBm CW Max (+20 dBm HOT SWITCHING)	25 dBm CW Max (+20 dBm HOT SWITCHING)	25 dBm CW Max (+20 dBm HOT SWITCHING)	25 dBm CW Max (+20 dBm HOT SWITCHING)
8	Power Supply	5 V @ 250 mA Max. -12 V @ 100 mA Max.	5 V @ 168 mA -12 V @ 76 mA	5 V @ 168 mA -12 V @ 76 mA	5 V @ 166 mA -12 V @ 75 mA

**TYPICAL CHARACTERISTICS  
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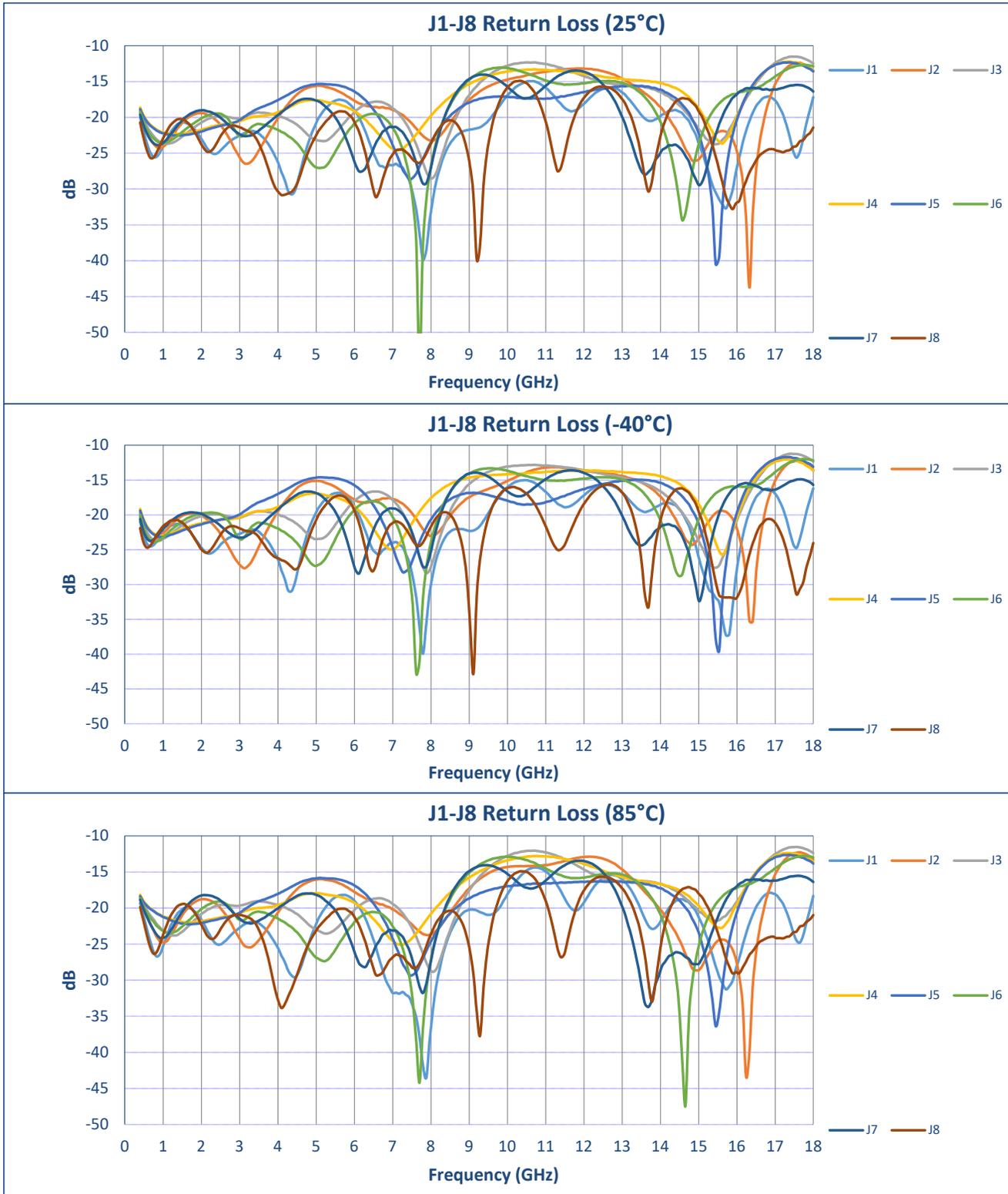
7309-A Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731  
Email: sales@quanticpmi.com

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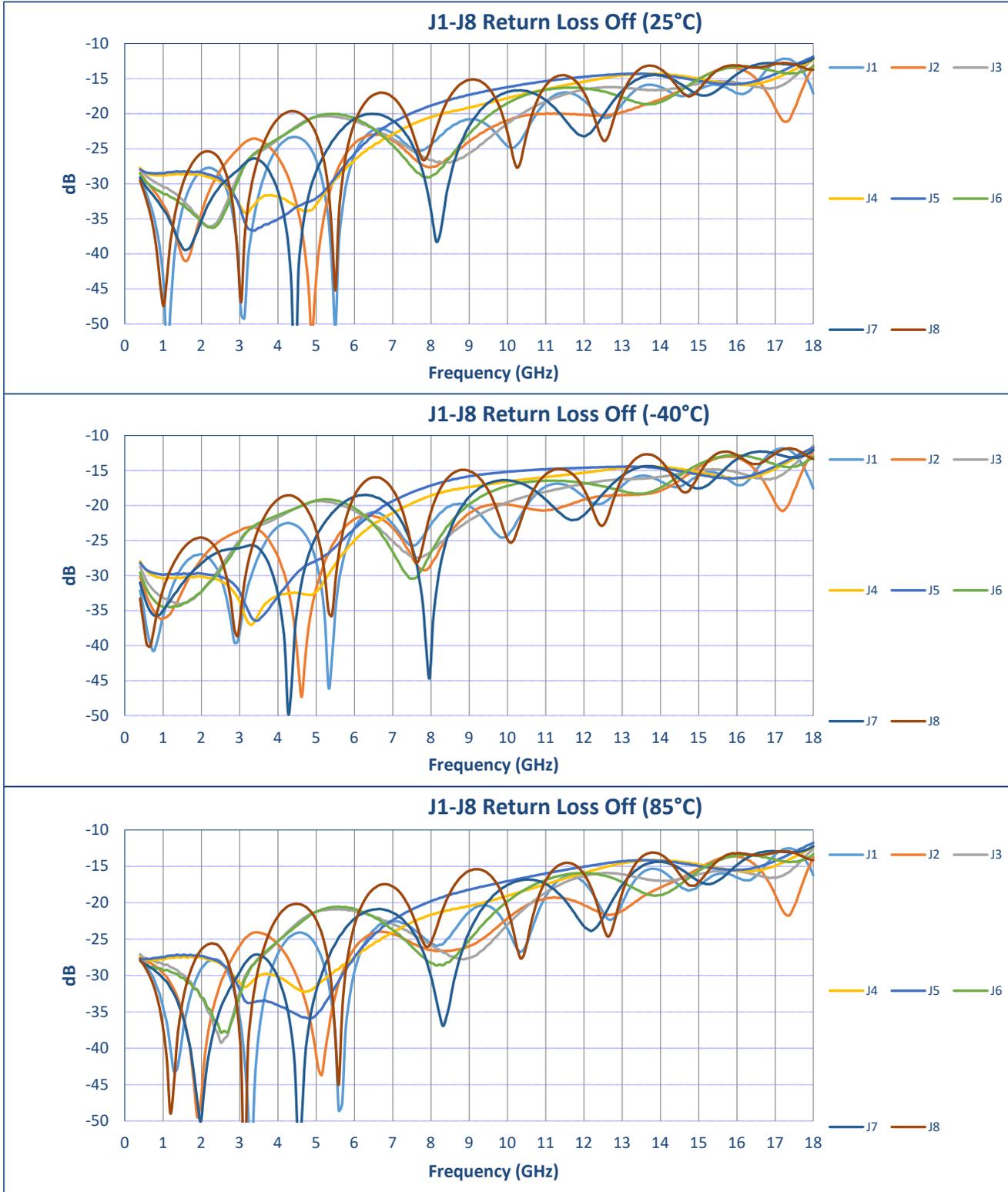
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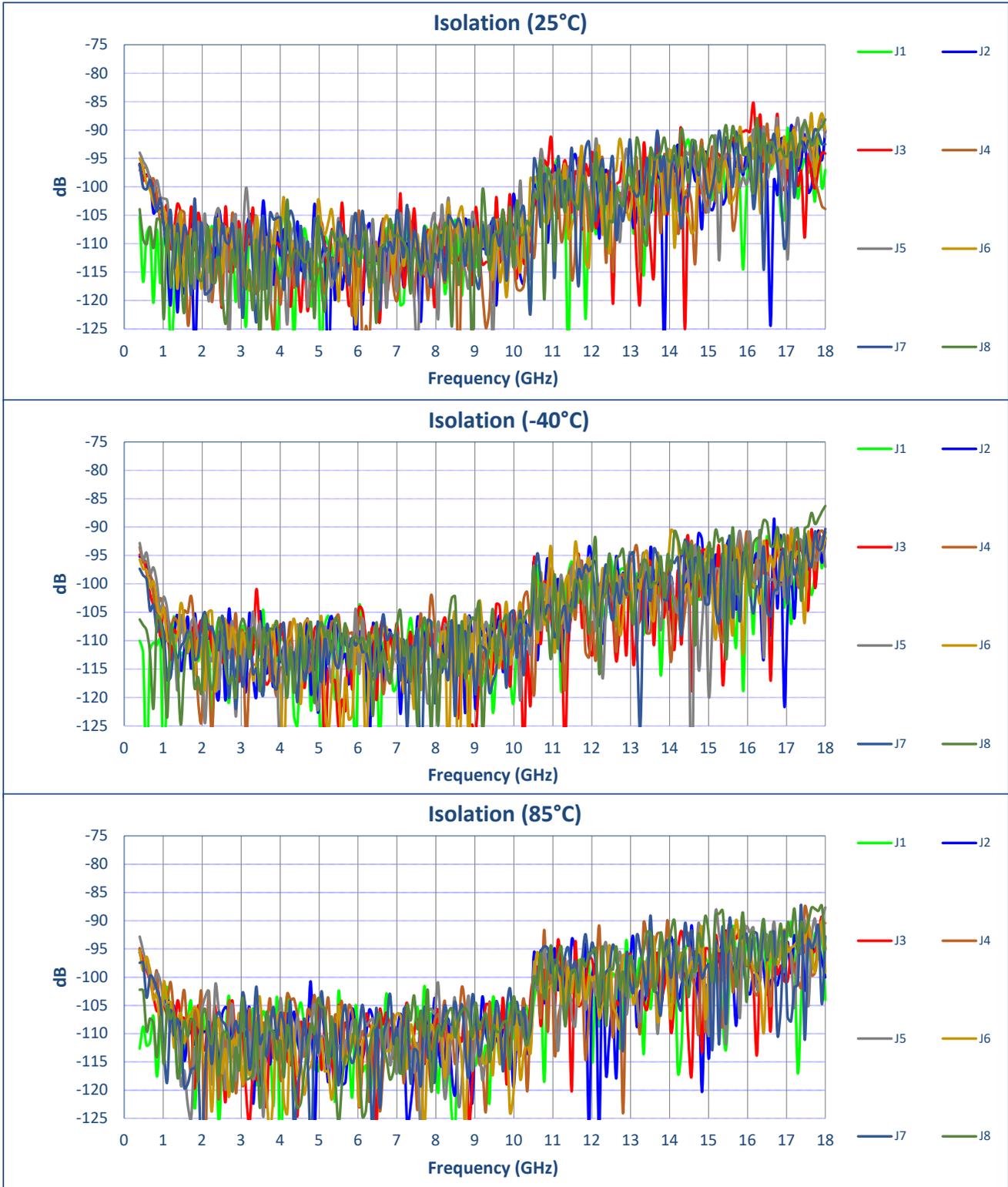
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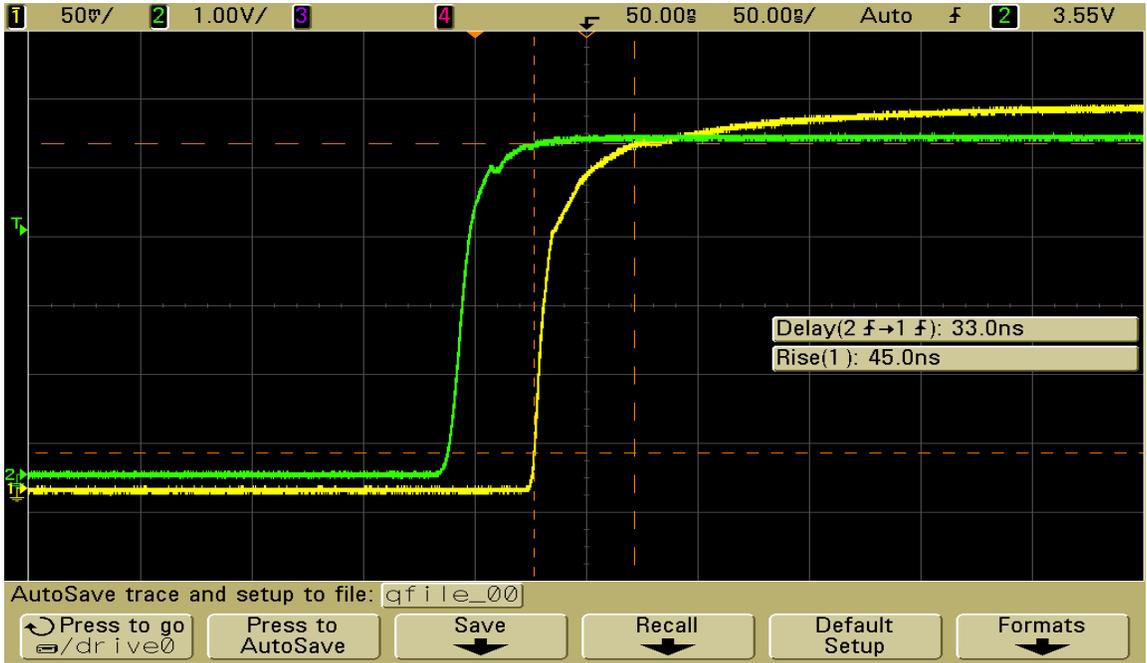
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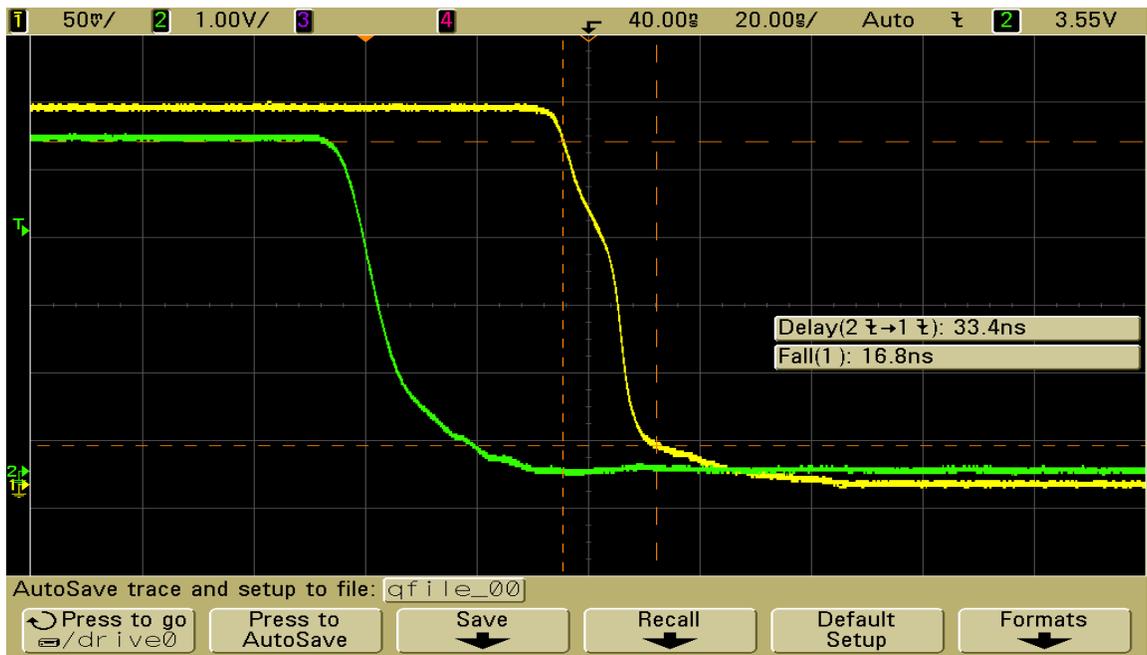
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TYPICAL CHARACTERISTICS  
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P8T-0D418-75-T-SFF-NG

SWITCHING SPEED ON @ 20 dBm (25°C)

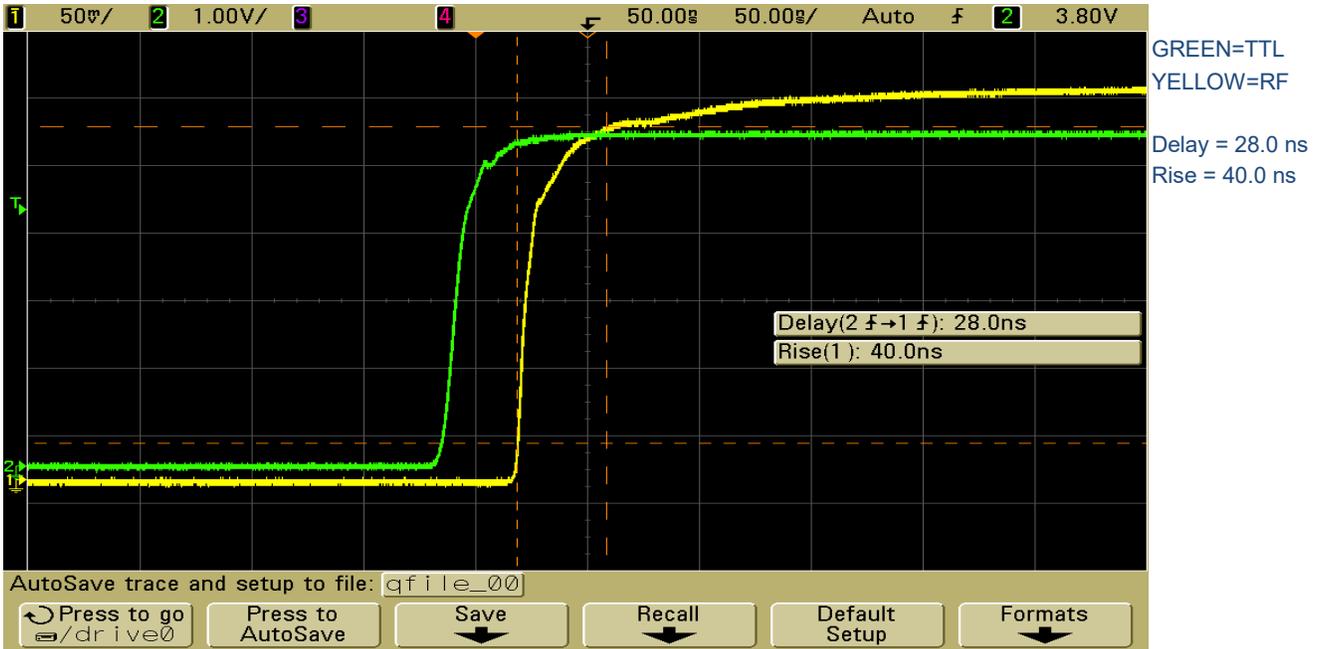


SWITCHING SPEED OFF @ 20 dBm (25°C)

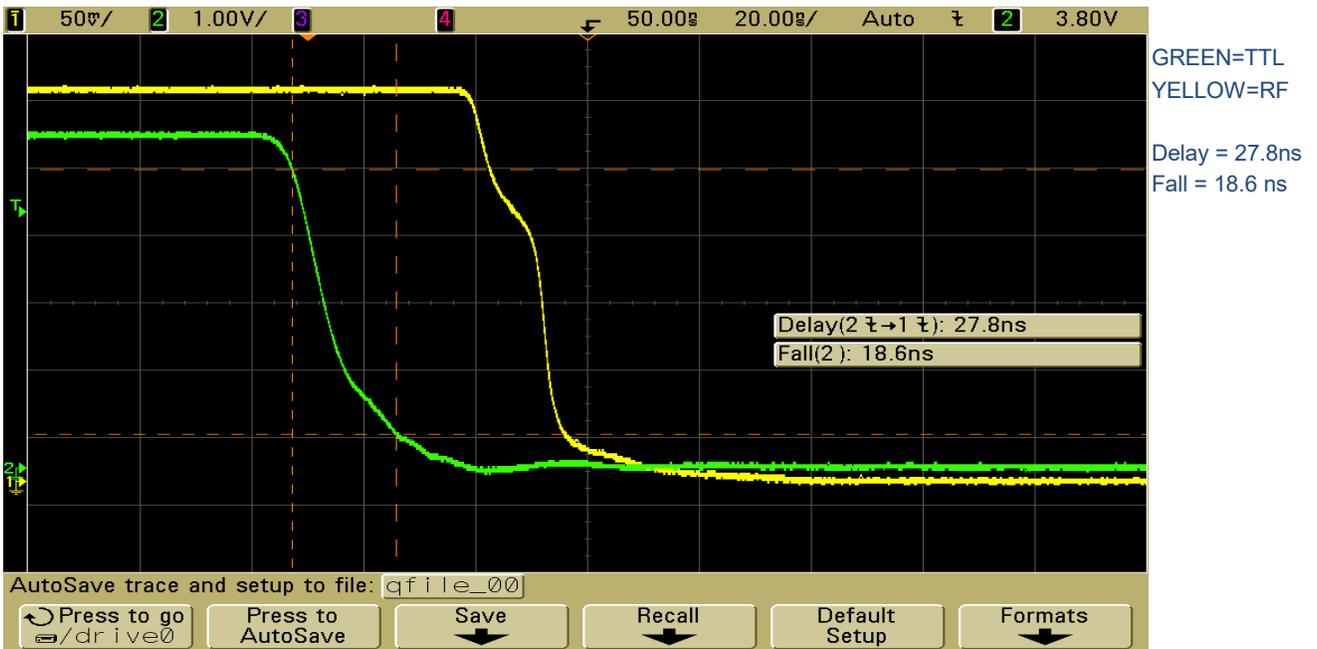


**TYPICAL CHARACTERISTICS  
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SWITCHING SPEED ON @ 20 dBm (-40°C)

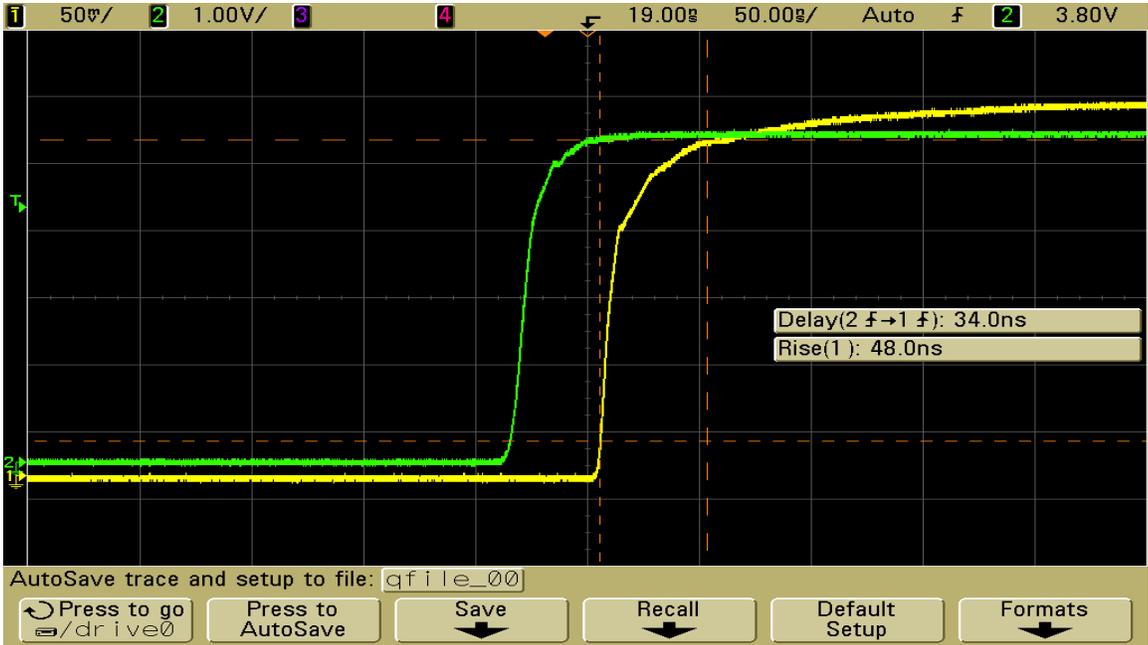


SWITCHING SPEED OFF @ 20 dBm (-40°C)



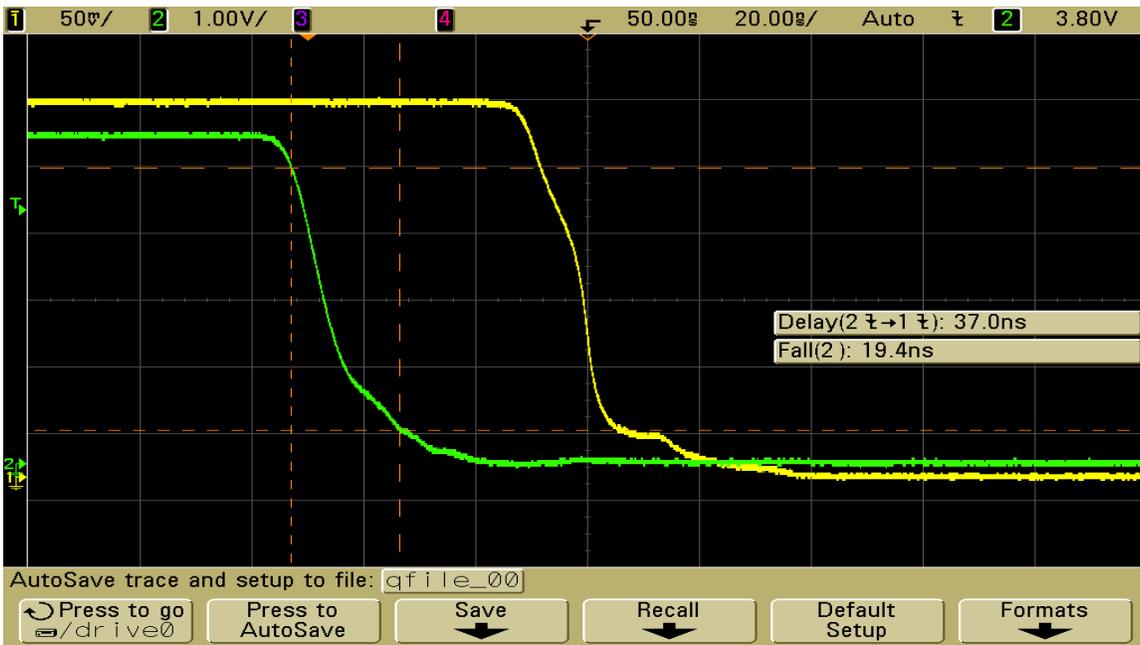
TYPICAL CHARACTERISTICS  
ON  
P8T-0D418-75-T-SFF-NG

SWITCHING SPEED ON @ 20 dBm (85°C)



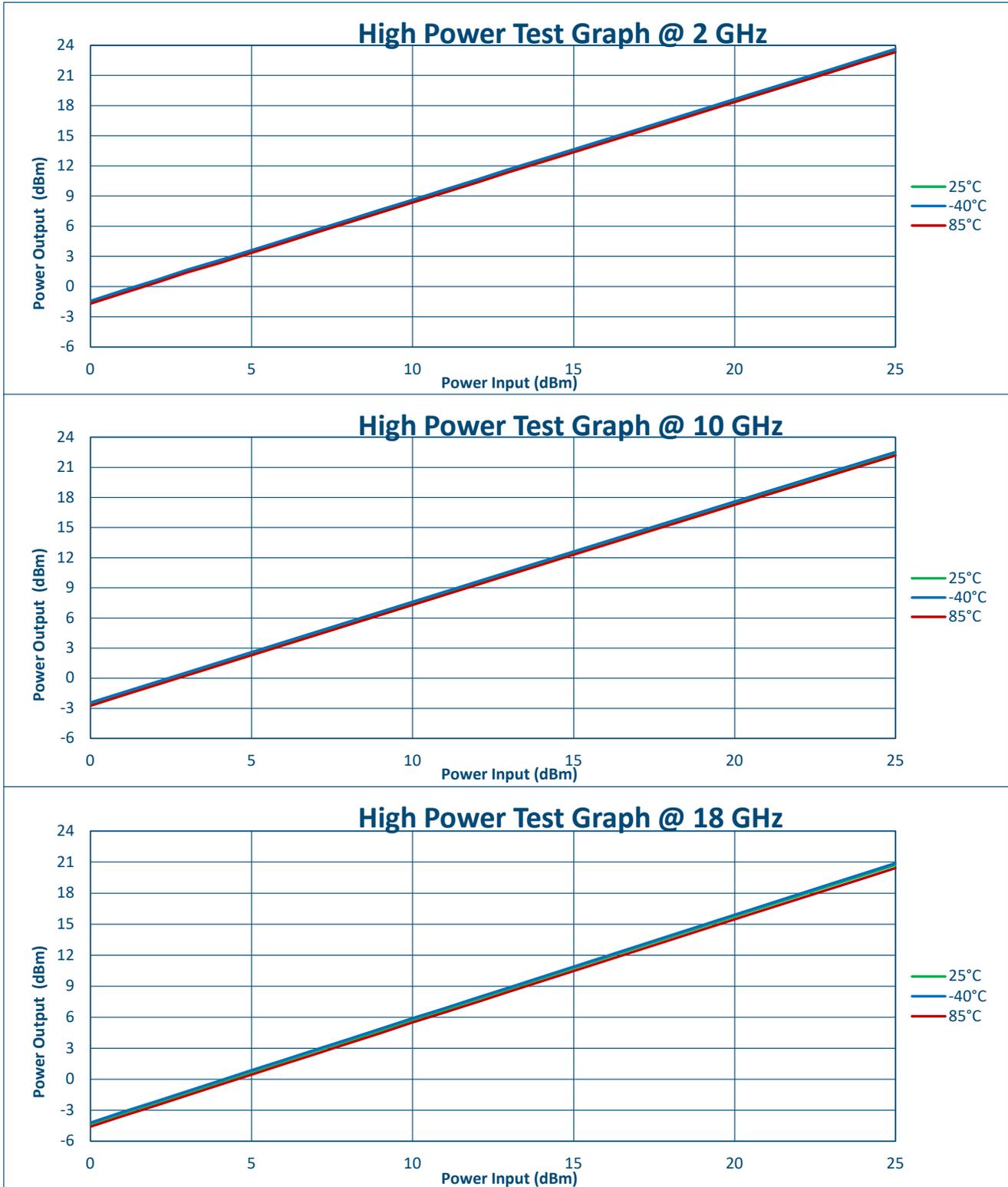
GREEN=TTL  
YELLOW=RF  
Delay = 33.0 ns  
Rise = 45.0 ns

SWITCHING SPEED OFF @ 20 dBm (85°C)



GREEN=TTL  
YELLOW=RF  
Delay = 37.0ns  
Fall = 19.4 ns

TYPICAL CHARACTERISTICS  
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