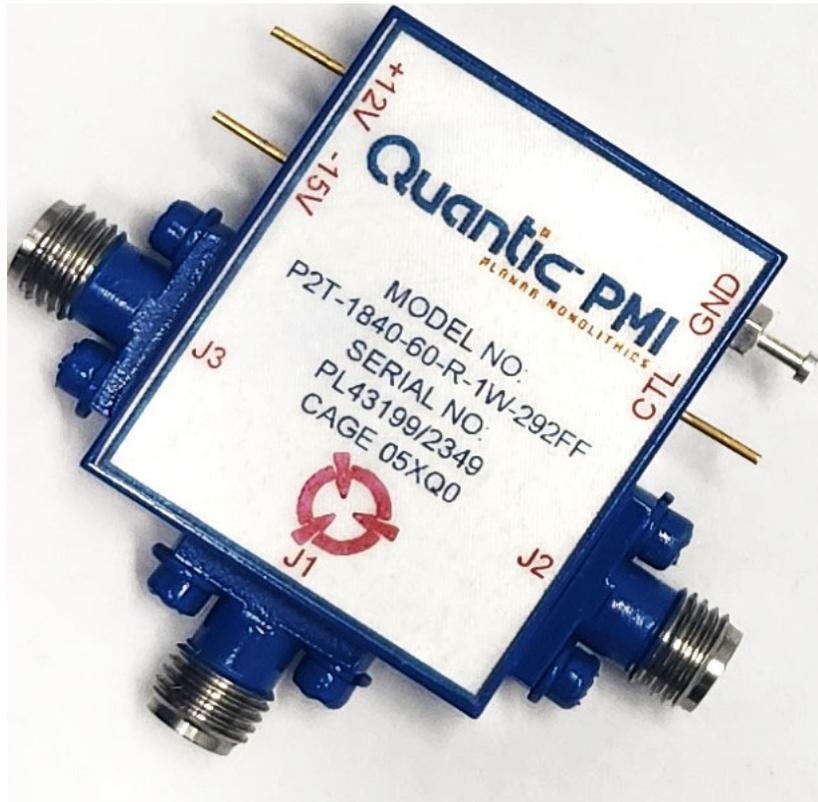


Typical Characteristics  
ON  
P2T-1840-60-R-1W-292FF

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER P2T-1840-60-R-1W-292FF IS A REFLECTIVE SINGLE POLE, TWO THROW SWITCH THAT OPERATES FROM 18 GHz TO 40 GHz WHICH HANDLES 1WATT CW POWER. THE PORT TO PORT ISOLATION IS 60DB MINIMUM. THIS MODEL HAS LOW INSERTION LOSS WHILE STILL OFFERING FAST SWITCHING SPEED.



December 18, 2023

Designed By:

PMI Engineering

Tested By:

Shane O'Neil

Reported By:

Robert Sirk

**Product Feature**

**DESCRIPTION:**

PMI MODEL: P2T-1840-60-R-1W-292FF IS A REFLECTIVE SINGLE POLE, TWO THROW SWITCH THAT OPERATES FROM 18 GHz TO 40 GHz WHICH HANDLES 1 WATT CW POWER. THE PORT TO PORT ISOLATION IS 60 dB MINIMUM. THIS MODEL HAS LOW INSERTION LOSS WHILE STILL OFFERING FAST SWITCHING SPEED.

**SPECIFICATIONS:**

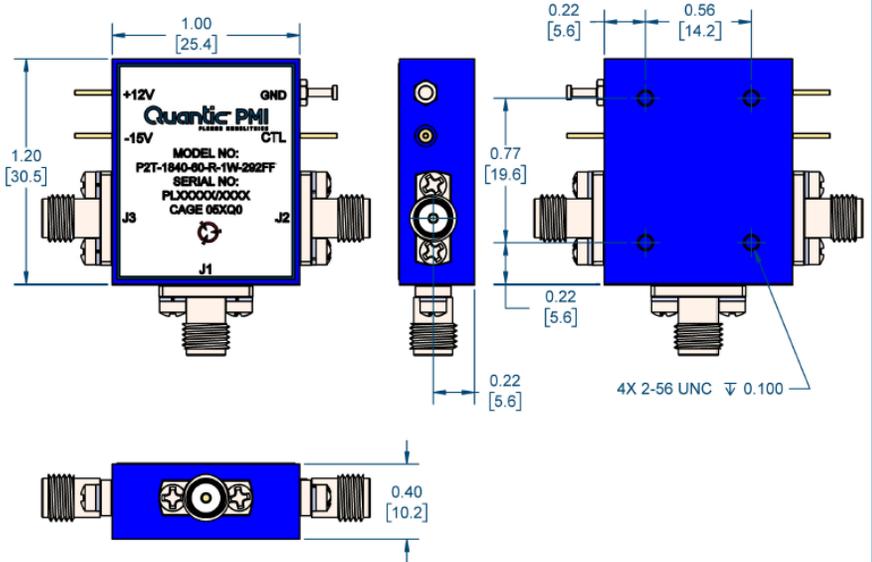
- FREQUENCY RANGE:..... 18 TO 40 GHz
- INSERTION LOSS (@+25°C) :..... 3.25 dB TYP, 3.5 dB MAX
- OPERATING INPUT POWER:..... 1W CW MAX
- VSWR:..... 2.0:1 TYP, 2.5:1 MAX
- ISOLATION:..... 60 dB MIN
- SWITCHING SPEED:..... 100 ns TYP, 500 ns MAX
- CONTROL:..... TTL LOGIC "0" = J1 TO J3 ON, J1 TO J2 OFF  
TTL LOGIC "1" = J1 TO J2 ON, J1 TO J3 OFF
- DC VOLTAGE:..... +12V @ 100 mA MAX  
-15V @ 50 mA MAX
- CONNECTORS:..... 2.92mm FEMALE
- POWER AND CONTROL:..... SOLDER PINS
- SIZE:..... (L) 1.0" X (W) 1.2" X (H) 0.4"
- WEIGHT:..... 1.5 oz MAX
- FINISH:..... PAINTED BLUE

**ENVIRONMENTAL RATINGS:**

- TEMPERATURE:..... -55°C TO +95°C (OPERATING)  
-65°C TO +150°C (STORAGE)
- HUMIDITY:..... MIL-STD-202F, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202F, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202F, 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	8/23/2023	
	A2	ECN # 23-0239	12/19/2023	



PMI CONFIDENTIAL AND PROPRIETARY

**Quantic PMI**  
PLANAR MONOLITHICS

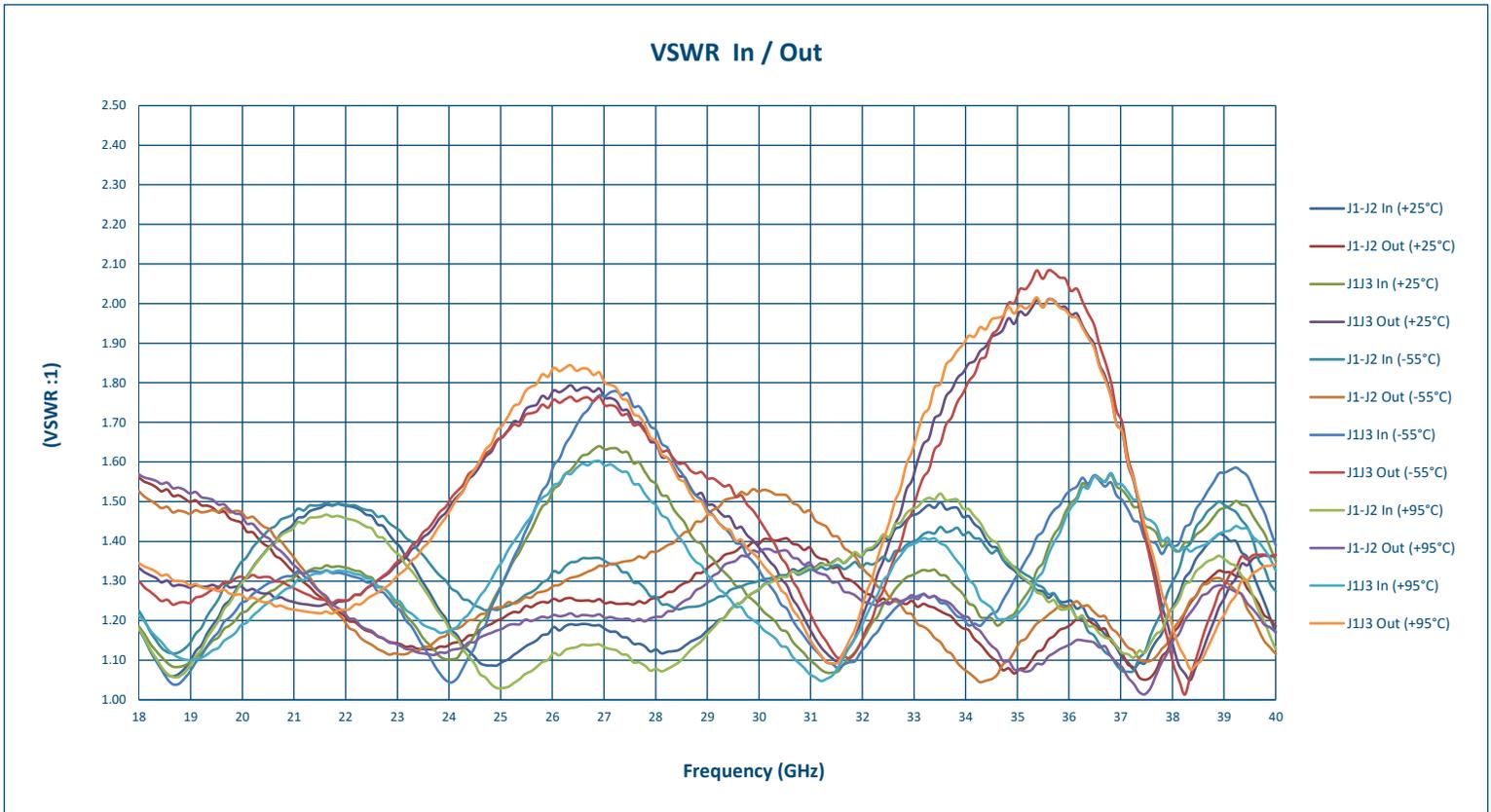
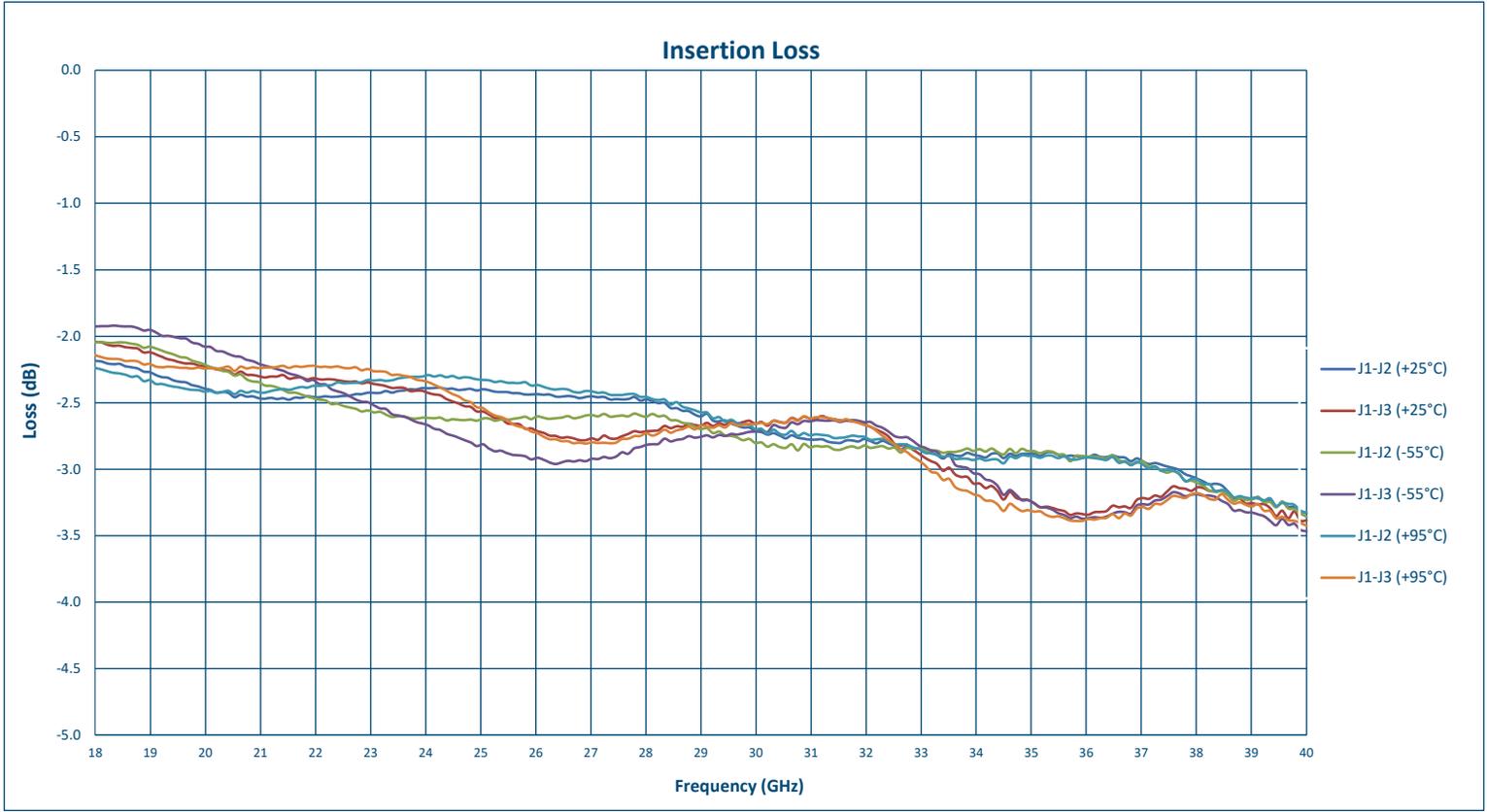
7309-A GROVE ROAD FREDERICK, MD 21704 USA  
TEL: (301) 662-5019 FAX: (301) 662-1731  
WEB: WWW.QUANTICPMI.COM EMAIL: SALES@QUANTICPMI.COM  
800-888-8888

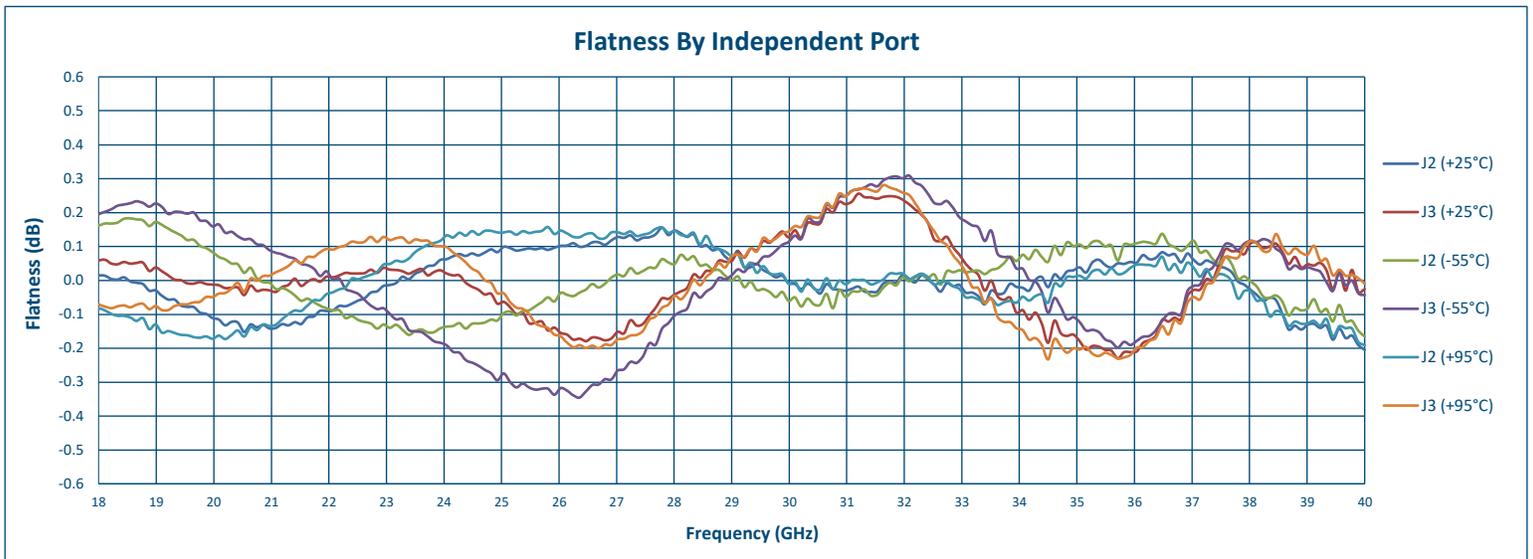
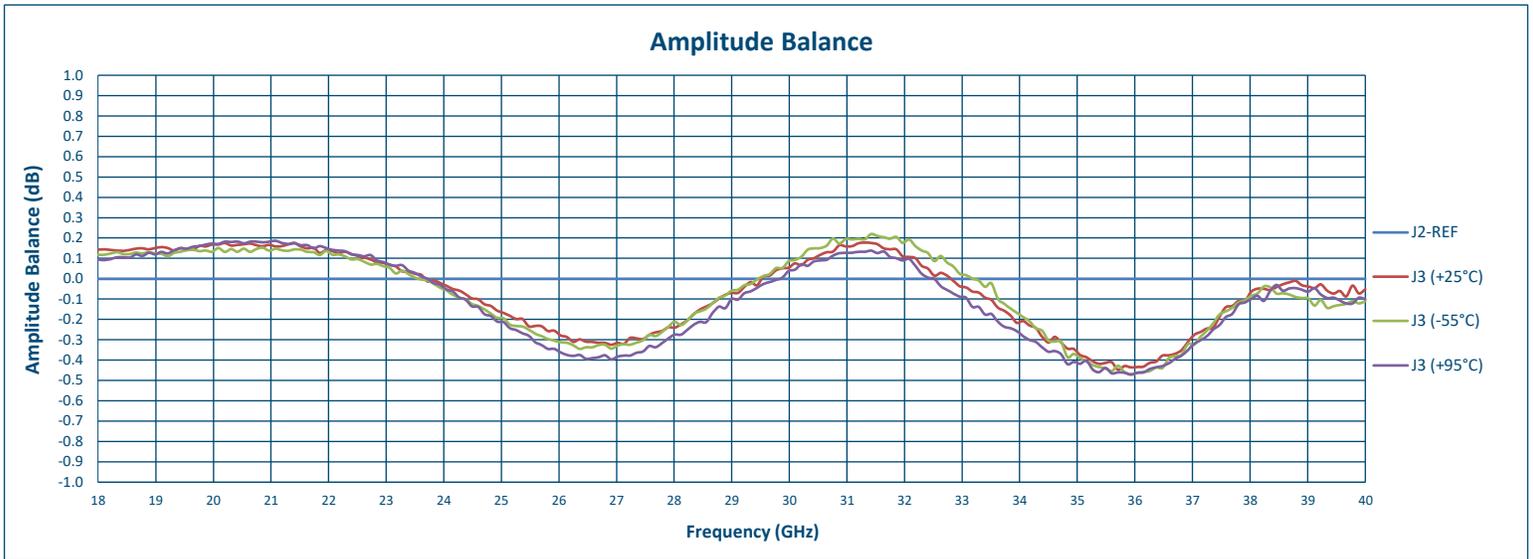
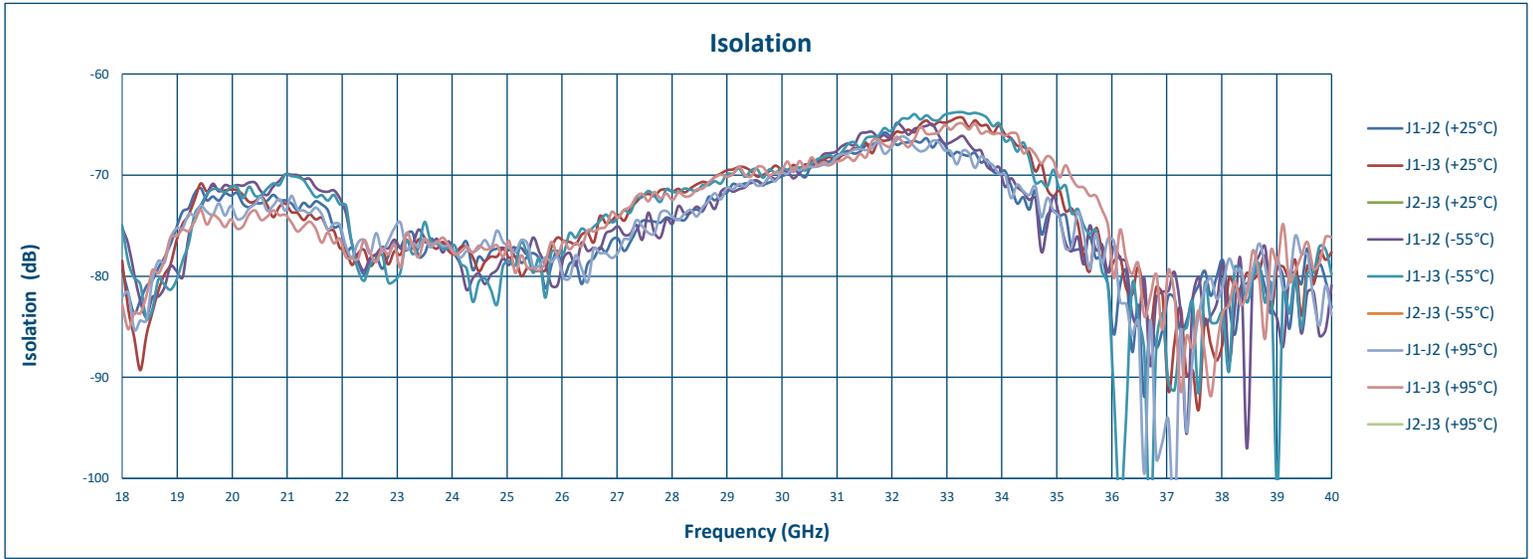
APPROVALS	DATE	TITLE
DESIGNED R. SIRK	8/23/2023	OUTLINE
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES X .XX ± 0.02 X X.X ± 0.01 X		P2T-1840-60-R-1W-292FF SIZE: PAPER NO. DWG NO. REV: B 05XQ00 27047060 A2 SCALE 2:1 SHEET 1 OF 1

**Typical Characteristics  
ON  
P2T-1840-60-R-1W-292FF**

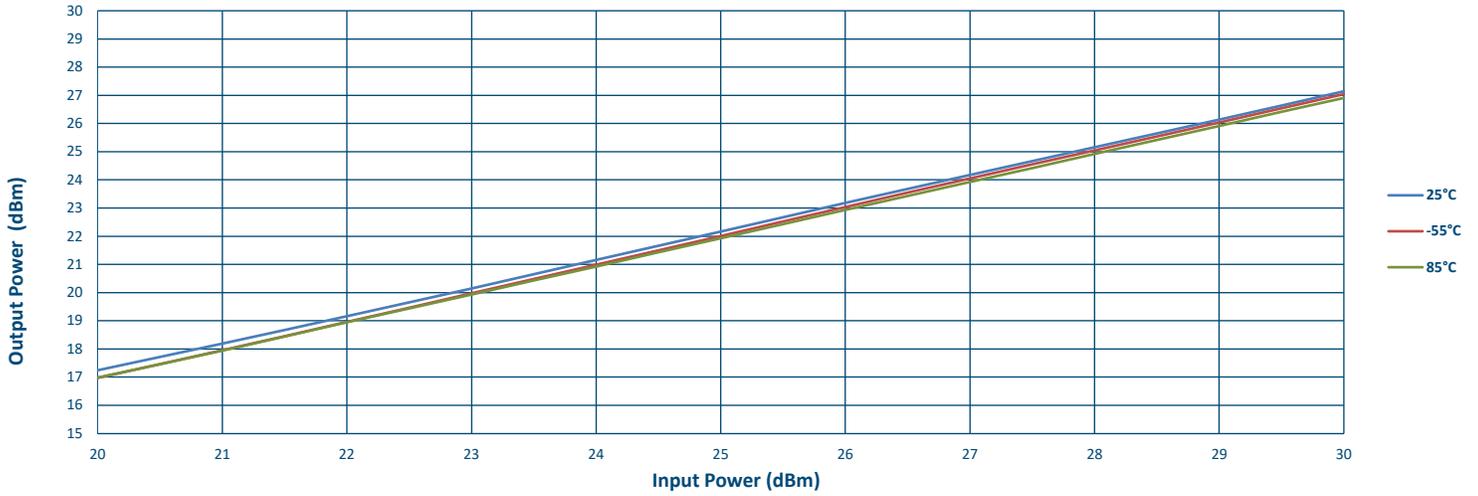
**Technical specifications**

TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			+25°C	-55°C	+95°C
1	Frequency Range:	18 GHz - 40 GHz	18 GHz - 40 GHz	18 GHz - 40 GHz	18 GHz - 40 GHz
2	Insertion Loss:	3.25 dB Typ. 3.5 dB Max.	3.39 dB (See Graph)	3.47 dB (See Graph)	3.43 dB (See Graph)
3	Isolation:	60 dB Min.	64.33 dB (See Graph)	63.77 dB (See Graph)	64.89 dB (See Graph)
4	VSWR: In/Out	2.0:1 Typ. 2.5:1 Max.	1.64 :1 In	1.78 :1 In	1.6 :1 In
			2.01 :1 Out	2.08 :1 Out	2.02 :1 Out
			(See Graph)	(See Graph)	(See Graph)
5	Switching Speed:	100 ns Typ. 500 ns Max.	Speed On - 26.7 ns		
			Speed Off - 21.5 ns		
			(See Graphs)		
6	Input Power:	1W CW Max.	Pass 1 Watt CW (See Graph)	Pass 1 Watt CW (See Graph)	Pass 1 Watt CW (See Graph)
7	DC Supply:	+12 VDC @ 100 mA Max. -15 VDC @ 50 mA Max.	+12 VDC @ 20 mA -15 VDC @ 20 mA	+12 VDC @ 20 mA -15 VDC @ 20 mA	+12 VDC @ 19 mA -15 VDC @ 20 mA
8	Control Signal:	TTL "0" → (J1-J3) TTL "1" → (J1-J2)	TTL "0" → (J1-J3) TTL "1" → (J1-J2)	TTL "0" → (J1-J3) TTL "1" → (J1-J2)	TTL "0" → (J1-J3) TTL "1" → (J1-J2)

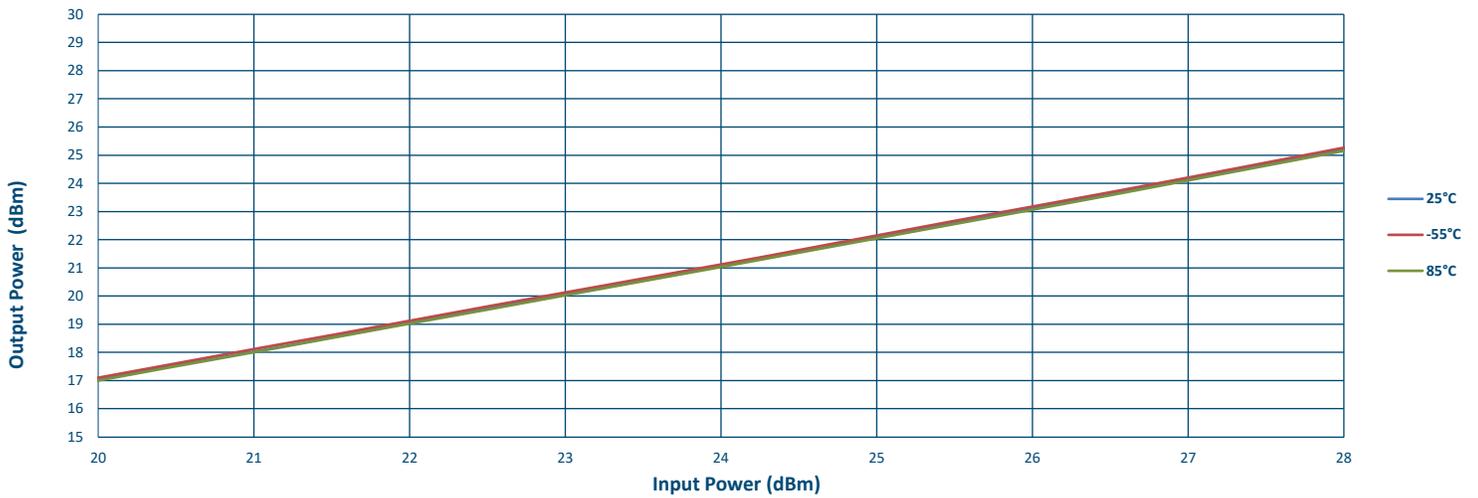




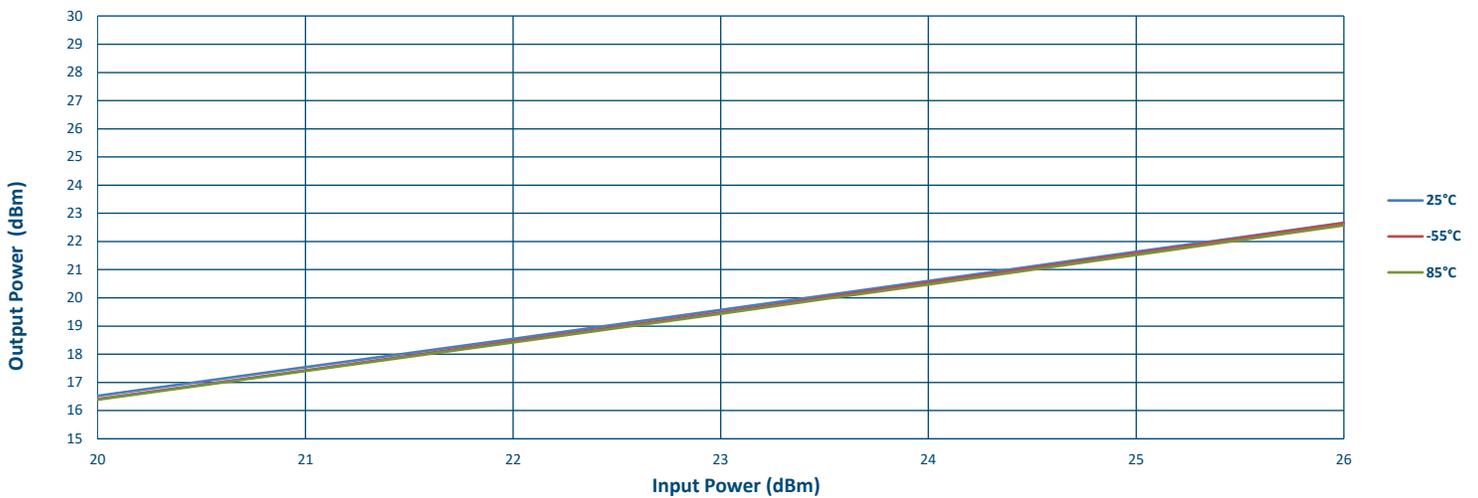
High Power Test Graph CW (18GHz)



High Power Test Graph CW (30GHz)

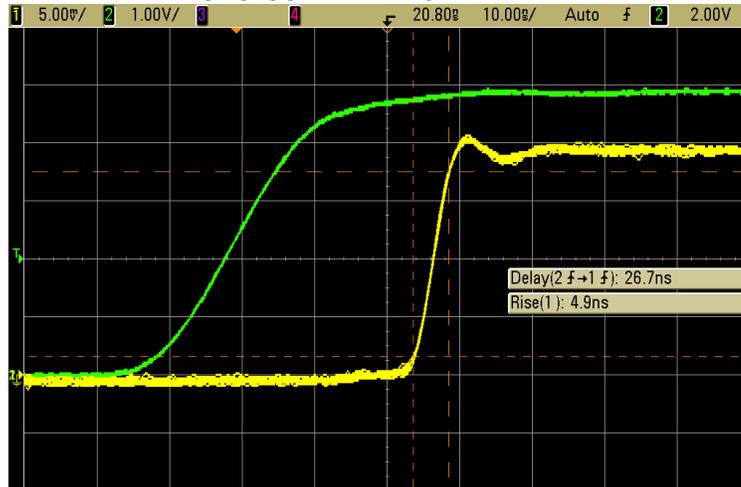


High Power Test Graph CW (40GHz)



**Typical Characteristics  
 ON  
 P2T-1840-60-R-1W-292FF**

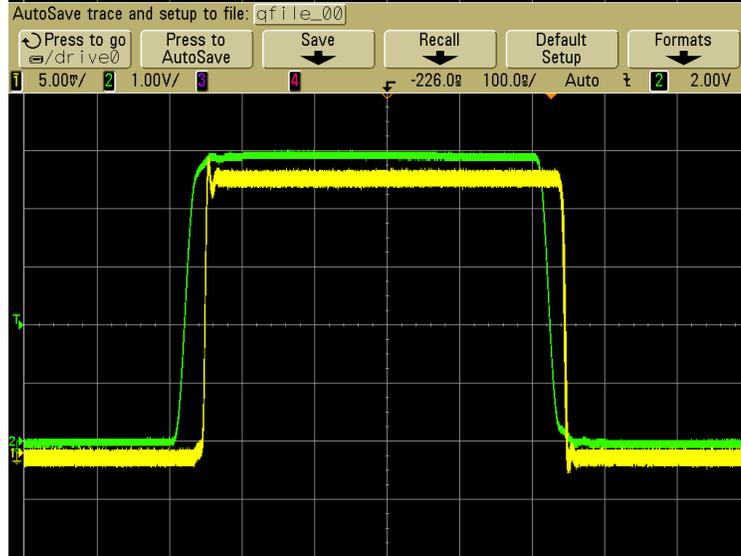
**Speed On -  
 26.7 ns**



**Speed Off -  
 21.5 ns**



**Full Pulse**



**Green Trace - TTL Signal**

**Yellow Trace - RF Signal**