Quantic PMI
PLANAR MONOLITHICS

SUMMARY TEST DATA
ON
PEC-40/25-218-21-12-SFF-TTLVG Rev B

Customer: [redacted]
SO No: [redacted]
Model No: PEC-40/25-218-21-12-SFF-TTLVG Rev B
Serial No: PL40592/2319

Tested By: H. Gonzales
Temperature: -25°C, +25C, +75C
Date: 10/24/2023
Drawing No: 27605737 REV: B1

Test Item No.	PARAMETERS	SPECIFIED VALUE	MEASURED VALUE		QA/QC
1	Frequency Range:	2 – 18 GHz	2 – 18 GHz		PMI QA2
2	Gain @ -25°C: Max. Gain Position Min. Gain Position	 +42dB ± 2.0dB Max +27dB ± 2.0dB Max	 41.8 dB Max, 40.43 dB Min 26.6 dB Max, 24.77 dB Min		 < 40 dB < 25 dB
3	Gain @ +25°C: Max. Gain Position Min. Gain Position	 +40dB ± 2.0dB Max +25dB ± 2.0dB Max	 40.88 dB Max, 39.46 dB Min 25.92 dB Max, 24.51 dB Min		
4	Gain @ +75°C: Max. Gain Position Min. Gain Position	 +37dB ± 2.0dB Max +22dB ± 2.0dB Max	 39.44 dB Max, 37.06 dB Min 24.75 dB Max, 23.54 dB Min		 > 39 dB > 24 dB
5	Pout @ 1dB Compression @ -25°C: Max. Gain Position Min. Gain Position	 +21dBm Min. +20dBm Min.	 22.0 dBm Min 21.9 dBm Min		
6	Pout @ 1dB Compression @ +25°C: Max. Gain Position Min. Gain Position	 +21dBm Min. +20dBm Min.	 21.7 dBm Min 21.5 dBm Min		
7	Pout @ 1dB Compression @ +75°C: Max. Gain Position Min. Gain Position	 +20dBm Min. +20dBm Min.	 21.3 dBm Min 21.0 dBm Min		
8	Saturated Output Power (Both Gains) Over Operating Temperature Range:	+26dBm. Max.	+27.7dBm.		> 26 dB
9	Noise @ -25°C: Max. Gain Position Min. Gain Position	 +3.8 dB Max. +6.0 dB Max.	 3.6 dB Max. 3.9 dB Max.		
10	Noise @ +25°C: Max. Gain Position Min. Gain Position	 +4.5 dB Max. +7.0 dB Max.	 4.1 dB Max. 4.4 dB Max.		
11	Noise @ +75°C: Max. Gain Position Min. Gain Position	 +5.0 dB Max. +8.0 dB Max.	 4.8 dB Max. 5.33 dB Max.		
12	VSWR In/Out:	2.0:1 Max.	Input 1.86:1dB Output 1.56:1dB	-25C	
			Input 1.88:1dB Output 1.49:1dB	+25C	
			Input 1.90:1dB Output 1.52:1dB	+75C	
13	Input/Output Impedance:	50Ω Nominal	50Ω Nominal		
14	Input Power Without Damage	+20dBm CW Max	+20dBm CW Max		
15	In-Band Harmonics @ or below the 1dB Compression Point	-10dBc Min.	-10dBc		
16	Pulse Rise Time with Input Signals up to -20dBm	<5ns	<5ns By Design		
17	Pulse Overshoot with Input Signals up to -20dBm	<0.5dB	<0.5dB By Design		PMI QA2

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18	Pulse Droop with pulses up to 250u in Duration and Input Signals up to -20dBm	<2.0dB	<2.0dB By Design		PMI QA2
19	Pulse Recovery Time with pulses up to 250u in Duration and Input Signals up to -20dBm	15ns	15ns By Design		
20	Gain Switching Time	<500ns	226ns		
21	Gain Switch Control:	TTL High "1" - Max. Gain TTL Low "0" - Min. Gain	TTL High "1" - Max. Gain TTL Low "0" - Min. Gain		
22	DC Supply:	780mA Max@ +12V ±5% Max Gain Position. 610mA Max@ +12V ± 5% Min Gain Position.	410mA Max Gain 410mA Min Gain	-25C	PMI QA2
			410mA Max Gain 410mA Min Gain	+25C	
			420mA Max Gain 420mA Min Gain	+75C	

QA/QC _____ PMI QA2

DATE: 10/30/2023

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Technical Sheet

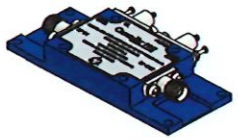
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	6/27/2012	
	A5	ECN # 22-0156	8/09/18	
	J1	ECN # 22-0155	12/13/2022	

DESCRIPTION

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER PEC-40/25-218-21-12-SFF-TTLVG IS A DUAL GAIN AMPLIFIER THAT OPERATES BETWEEN THE FREQUENCY RANGE 2 TO 18GHz.

SPECIFICATIONS:

- FREQUENCY RANGE: ..... 2.0 TO 18.0 GHz
- GAIN @ -25°C
  - MAX GAIN POSITION: ..... +42dB ±2dB MAX
  - MIN GAIN POSITION: ..... +27dB ±2dB MAX
- GAIN @ +25°C
  - MAX GAIN POSITION: ..... +40dB ±2dB MAX
  - MIN GAIN POSITION: ..... +25dB ±2dB MAX
- GAIN @ +75°C
  - MAX GAIN POSITION: ..... +37dB ±2dB MAX
  - MIN GAIN POSITION: ..... +22dB ±2dB MAX
- Pout @ 1dB COMPRESSION @ -25°C
  - MAX GAIN POSITION: ..... +21dB MIN
  - MIN GAIN POSITION: ..... +20dB MIN
- Pout @ 1dB COMPRESSION @ +25°C
  - MAX GAIN POSITION: ..... +21dB MIN
  - MIN GAIN POSITION: ..... +20dB MIN
- Pout @ 1dB COMPRESSION @ +75°C
  - MAX GAIN POSITION: ..... +20dB MIN
  - MIN GAIN POSITION: ..... +20dB MIN
- SATURATED OUTPUT POWER (BOTH GAINS) OVER OPERATING TEMP RANGE: ..... +26dBm MAX
- NOISE @ -25°C
  - MAX GAIN POSITION: ..... +3.8dB MAX
  - MIN GAIN POSITION: ..... +6.0dB MAX
- NOISE @ +25°C
  - MAX GAIN POSITION: ..... +4.5dB MAX
  - MIN GAIN POSITION: ..... +7.0dB MAX
- NOISE @ +75°C
  - MAX GAIN POSITION: ..... +5.0dB MAX
  - MIN GAIN POSITION: ..... +8.0dB MAX
- VSWR IN/OUT: ..... 2.0:1 MAX
- INPUT/OUTPUT IMPEADANCE: ..... 50Ω NOMINAL
- INPUT POWER (WITHOUT DAMAGE) ..... +20dBm CW MAX
- IN-BAND HARMONICS @ OR BELOW THE 1dB COMPRESSION POINT: ..... -10dBc MIN
- SPURIOUS OUTPUT SIGNAL @ ANY SIGNAL LEVEL UP TO THE MAX INPUT LEVEL: ..... -60dBc MAX
- PULSE RISE TIME WITH INPUT SIGNALS UP TO 20dBm: ..... <5ns
- PULSE OVERSHOOT WITH INPUT SIGNALS UP TO 20dBm: ..... <0.5dB
- PULSE DROOP WITH THE FOLLOWING PULSES UP TO 250u IN DURATION INPUT SIGNAL UP TO -20dBM: ..... <2.0dB
- PULSE RECOVERY TIME WITH THE FOLLOWING PULSES UP TO 250u IN DURATION INPUT SIGNAL UP TO -20dBM: 15ns
- GAIN SWITCHING TIME: ..... <500ns
- GAIN SWITCHING CONTROL: ..... TTL HIGH "1" - MAX GAIN; TTL HIGH "0" - MIN GAIN
- DC SUPPLY: ..... 780mA MAX @ +12V ±5% MAX GAIN POSITION; 610mA MAX @ +12V ±5% MIN GAIN POSITION
- FINISH: ..... PAINTED BLUE (MOUNTING SURFACE FREE OF PAINT, GOLD)



ENVIRONMENTAL RATINGS:

- TEMPERATURE: ..... -55°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. 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

PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS	DATE
M. HANKEN	6/27/2012

Quantic PMI

TITLE: OUTLINE
PEC-40/25-218-21-12-SFF-TTLVG RevB
SIZE: B | FSCM NO: 05XQ0 | DWG NO: 27005731 | REV: J1
SCALE 1.1 | SHEET 1 OF 2

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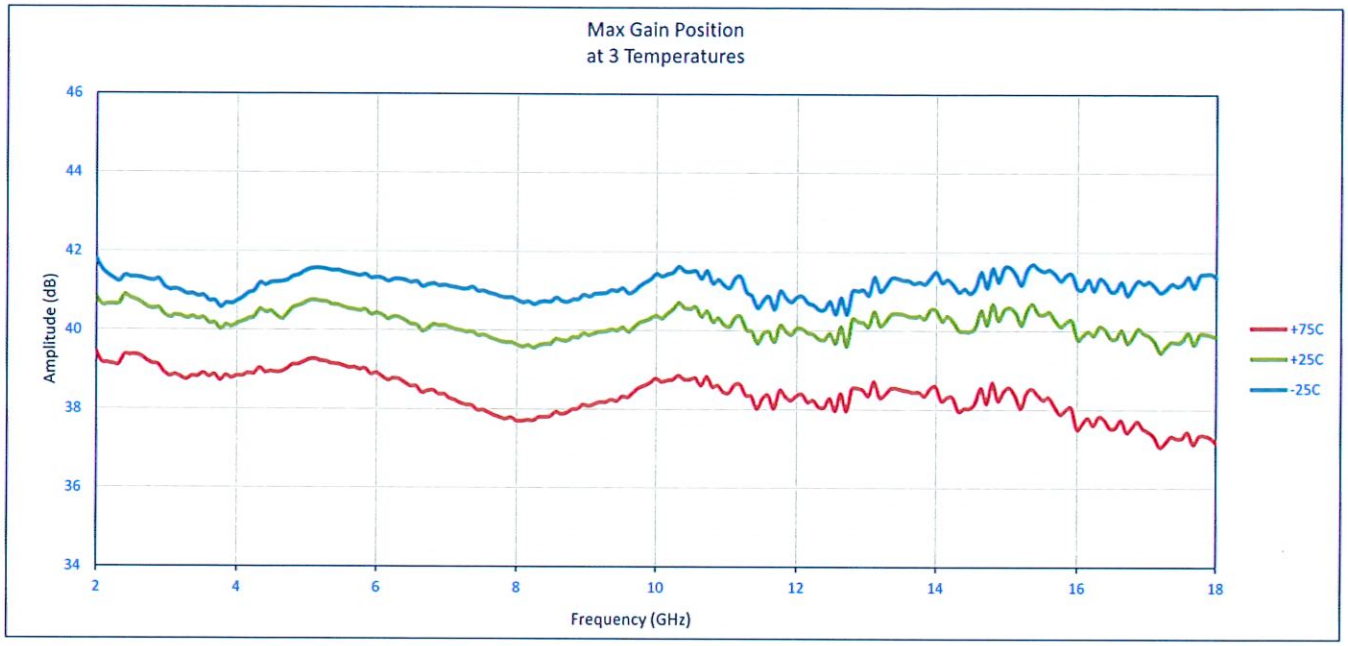

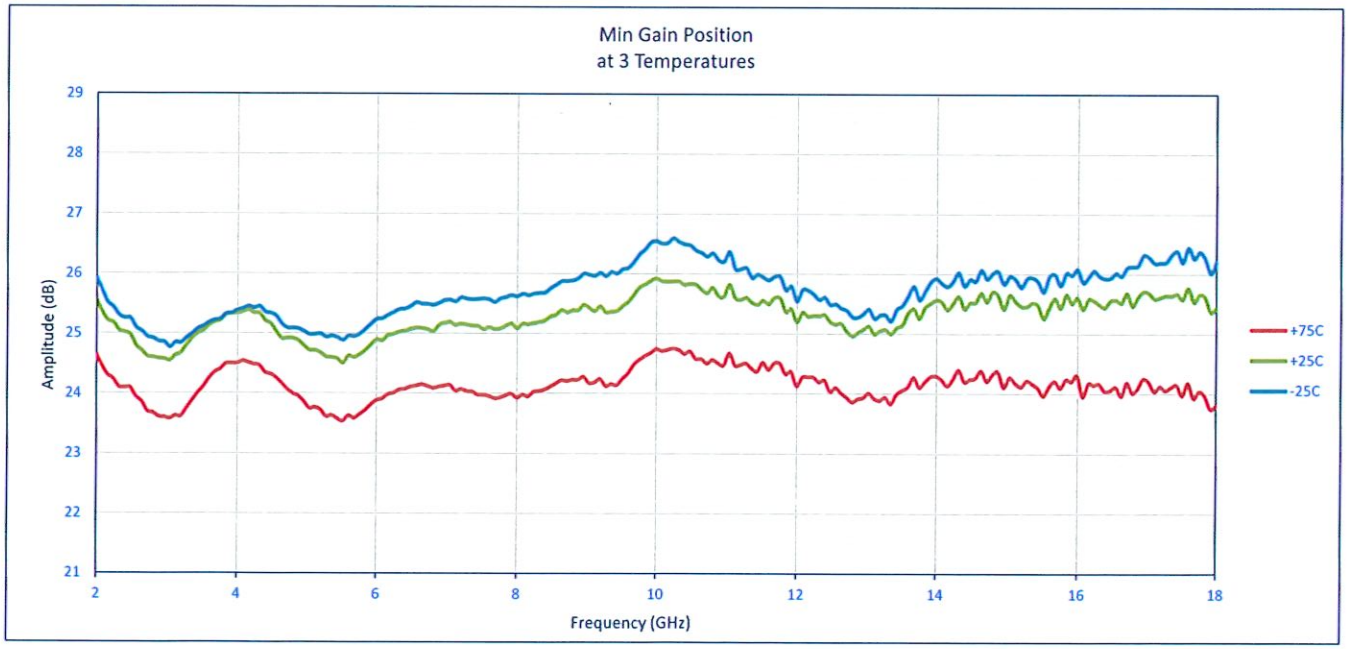

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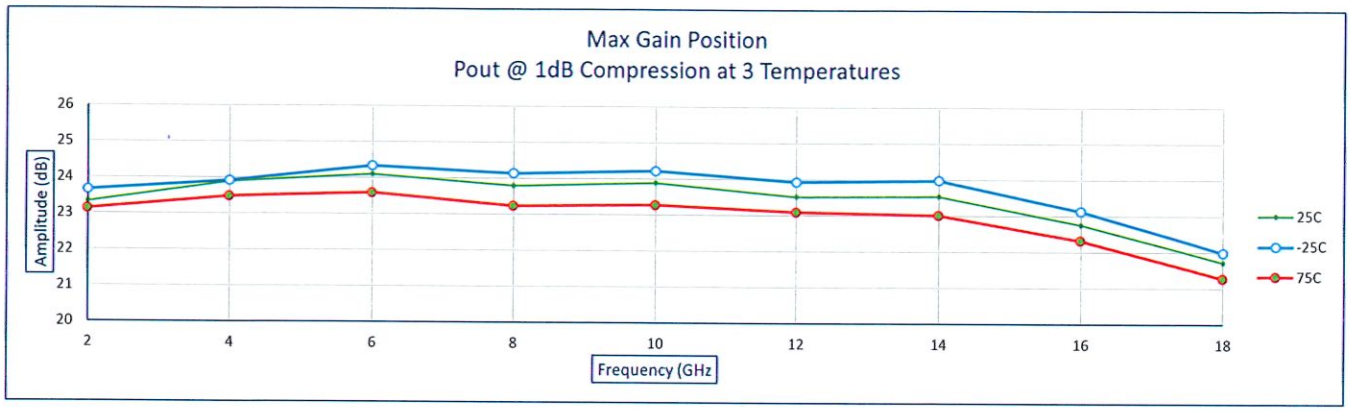

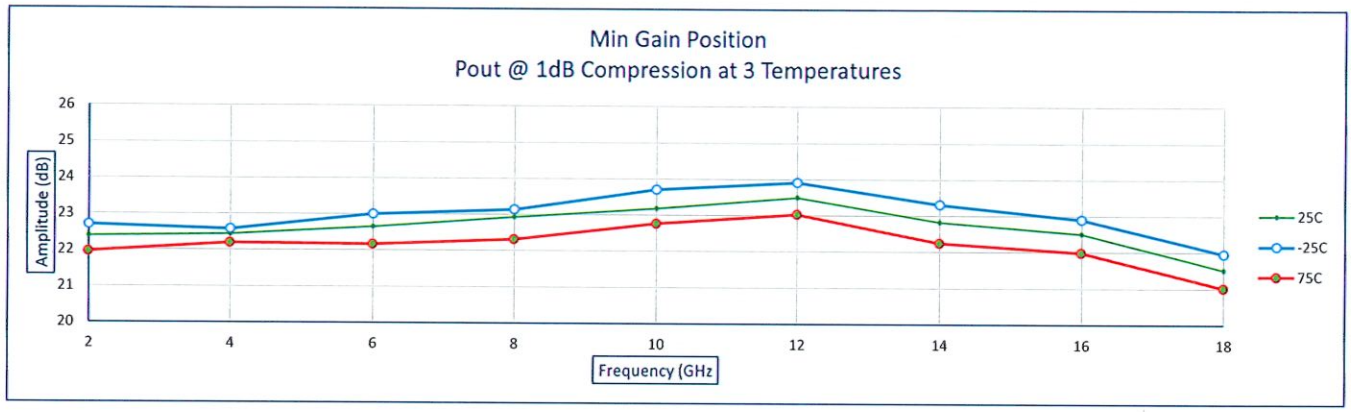

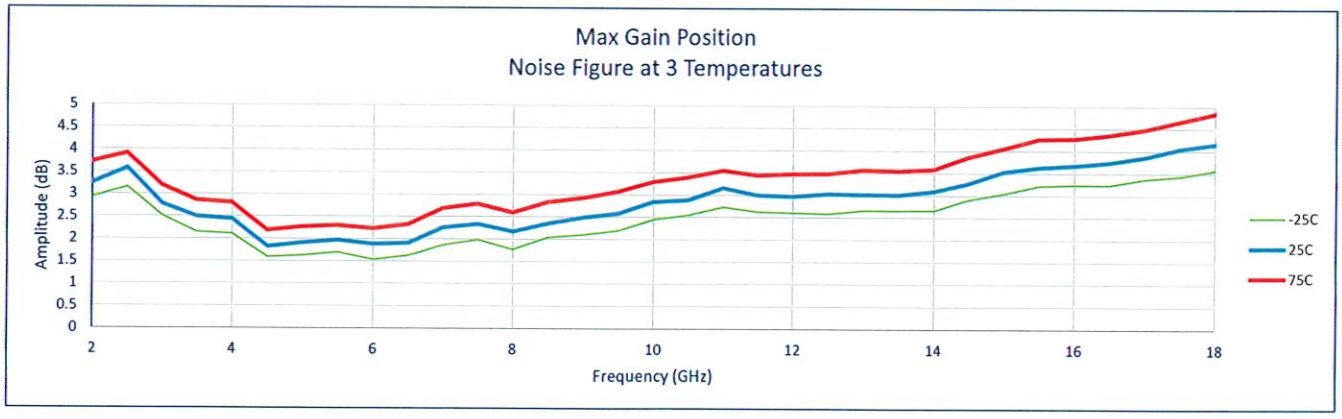

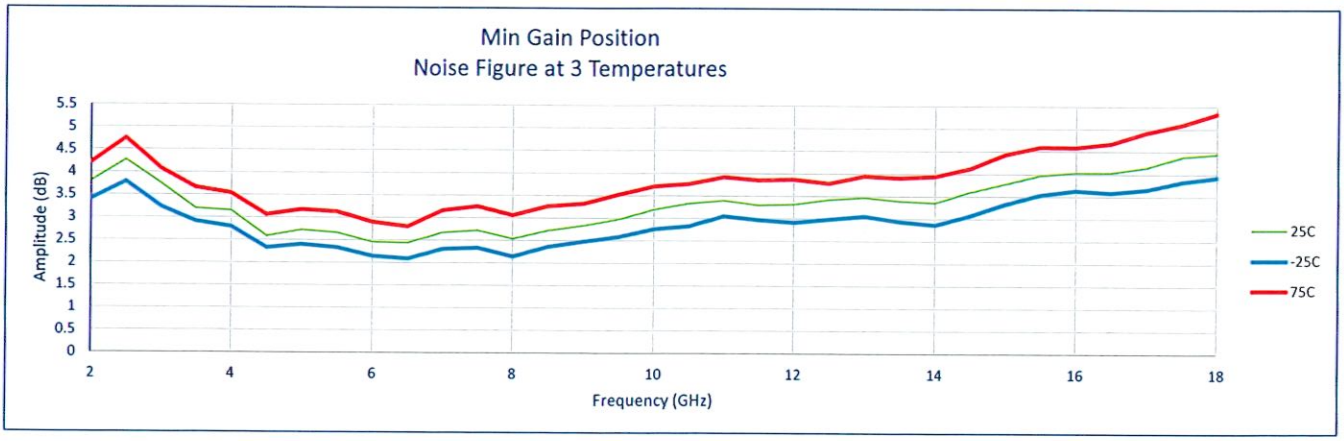

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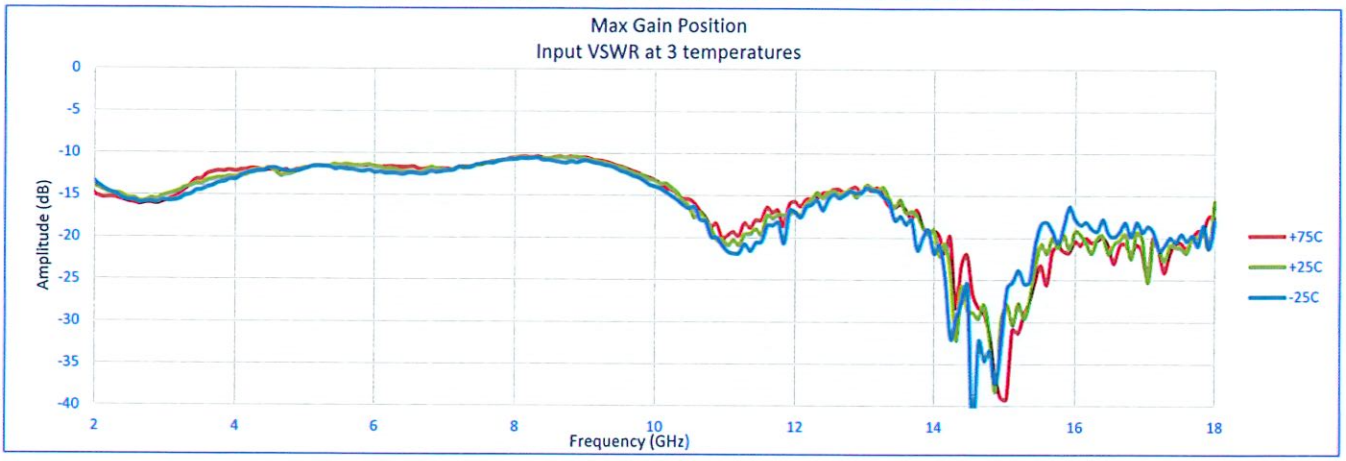

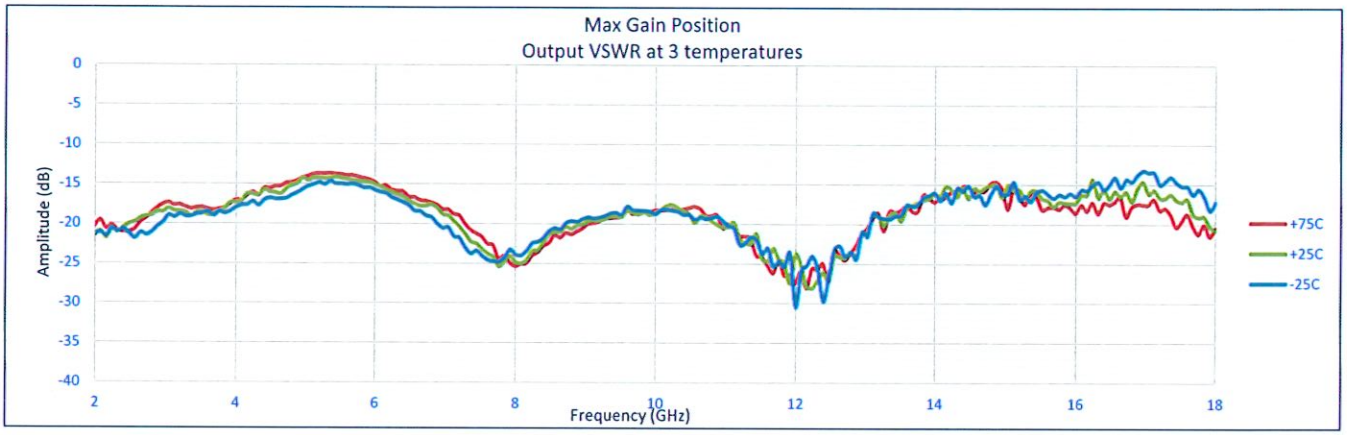

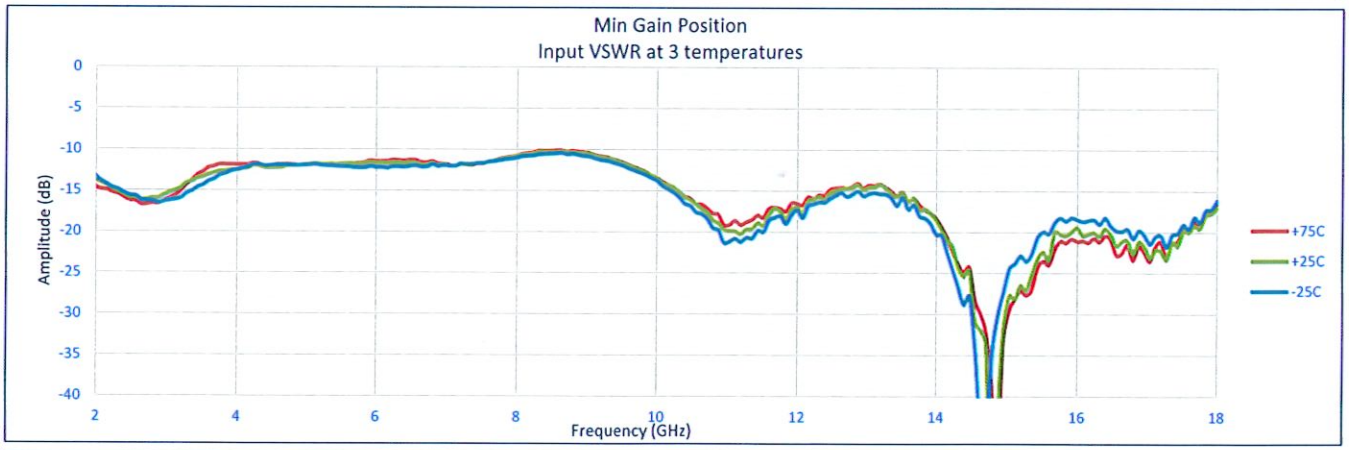

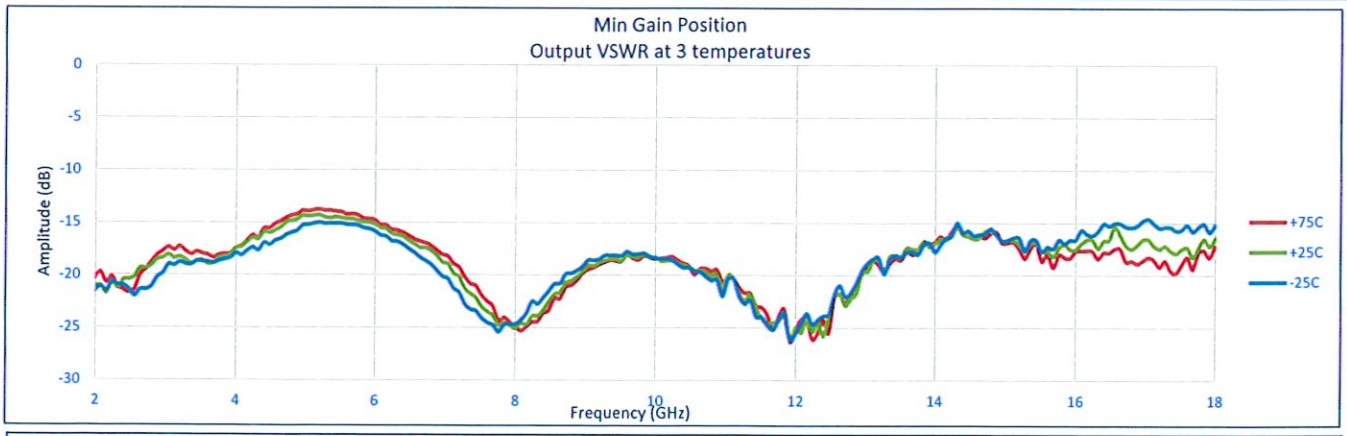

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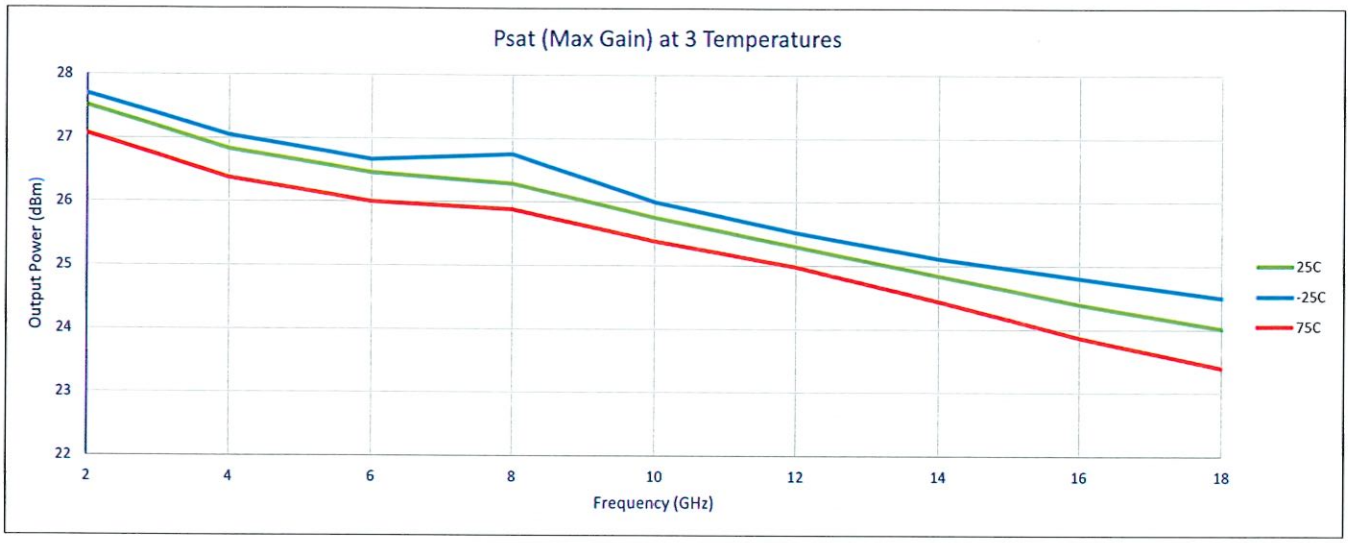

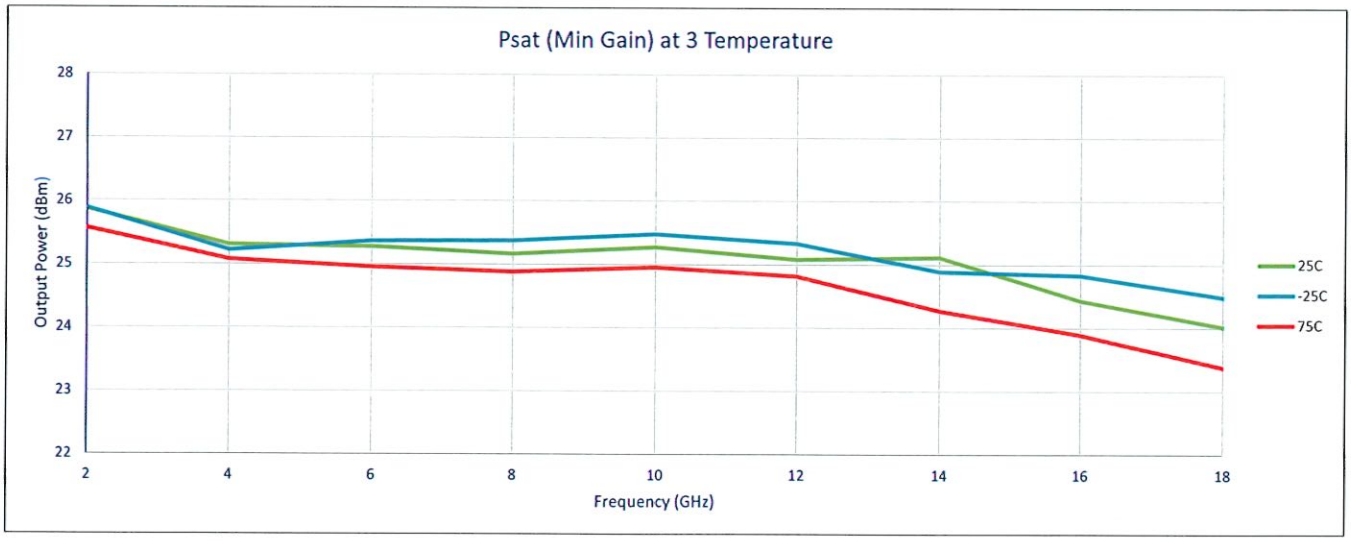

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