

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

Customer: _____
SO No: _____
Model No: PEC-40/25-218-21-12-SFF-TTLVG Rev B
Serial No: PL40591/2319

Tested By: H. Gonzales
Temperature: -25°C, +25°C, +75°C
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	+42dB ± 2.0dB Max	43.96 dB Max, 40.31 dB Min	< 40 dB
	Min. Gain Position	+27dB ± 2.0dB Max	26.93 dB Max, 25.22 dB Min	< 25 dB
	Gain @ +25°C:			
3	Max. Gain Position	+40dB ± 2.0dB Max	42.04 dB Max, 39.19 dB Min	
	Min. Gain Position	+25dB ± 2.0dB Max	26.1 dB Max, 24.62 dB Min	
4	Gain @ +75°C:			
	Max. Gain Position	+37dB ± 2.0dB Max	39.88 dB Max, 37.4 dB Min	> 39 dB
	Min. Gain Position	+22dB ± 2.0dB Max	24.97 dB Max, 23.22 dB Min	> 24 dB
	Pout @ 1dB Compression @ -25°C:			
5	Max. Gain Position	+21dBm Min.	22.5 dBm Min	
	Min. Gain Position	+20dBm Min.	22.1 dBm Min	
6	Pout @ 1dB Compression @ +25°C:			
	Max. Gain Position	+21dBm Min.	22.2 dBm Min	
	Min. Gain Position	+20dBm Min.	21.6 dBm Min	
	Pout @ 1dB Compression @ +75°C:			
7	Max. Gain Position	+20dBm Min.	21.8 dBm Min	
	Min. Gain Position	+20dBm Min.	21.0 dBm Min	
8	Saturated Output Power (Both Gains) Over Operating Temperature Range:	+26dBm. Max.	+27.3dBm.	> 26 dB
9	Noise @ -25°C:			
	Max. Gain Position	+3.8 dB Max.	3.1 dB Max.	
	Min. Gain Position	+6.0 dB Max.	3.6 dB Max.	
	Noise @ +25°C:			
10	Max. Gain Position	+4.5 dB Max.	3.6 dB Max.	
	Min. Gain Position	+7.0 dB Max.	4.1 dB Max.	
11	Noise @ +75°C:			
	Max. Gain Position	+5.0 dB Max.	4.2 dB Max.	
	Min. Gain Position	+8.0 dB Max.	4.6 dB Max.	
	12	VSWR In/Out:	2.0:1 Max.	Input 1.85:1dB Output 1.74:1dB
Input 1.84:1dB Output 1.58:1dB				+25C
Input 1.85:1dB Output 1.5:1dB				+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 410mA Max Gain 410mA Min Gain +25C 420mA Max Gain 420mA Min Gain +75C	PMI QA2

QA/QC 

PMI
QA2

DATE: 10/30/2023

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PL40591/2319

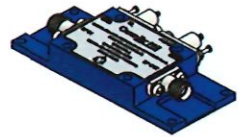
Technical Sheet

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:..... +20dBm 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:..... -80dBc 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)



CHK	REV	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	8/27/2014	
	A5	ECN # 22-0155	8/19/16	
	J1	ECN # 22-0155	12/18/22	

ENVIRONMENTAL RATINGS:

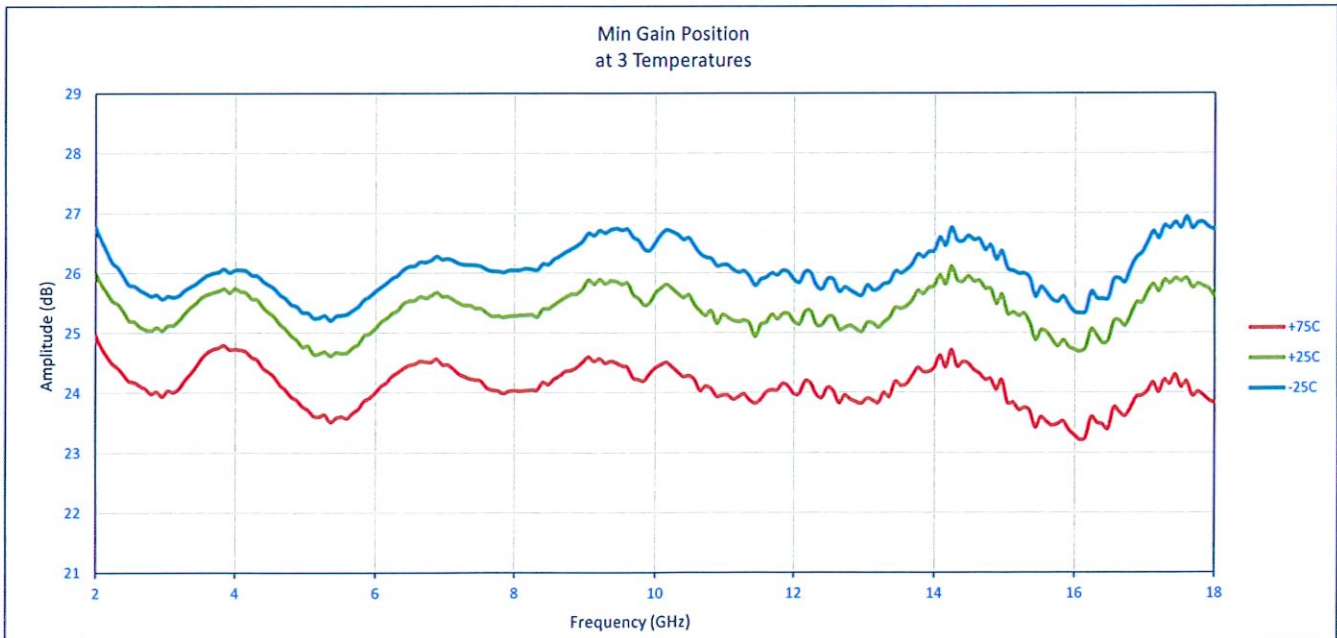
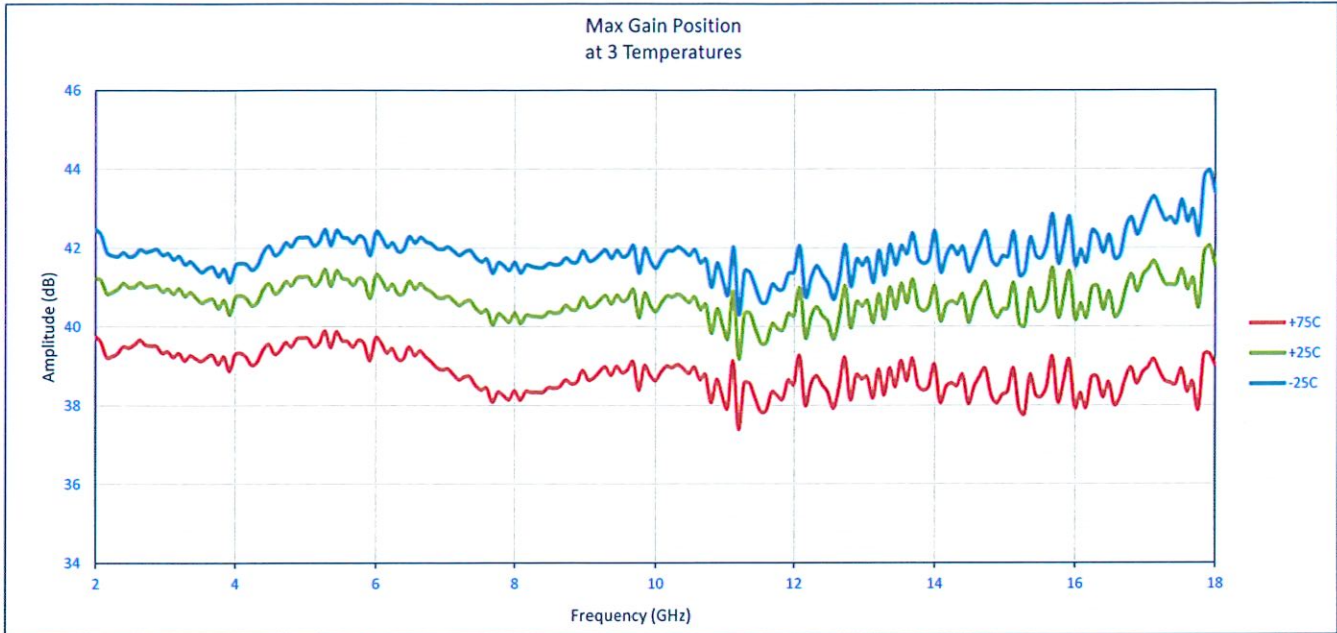
- TEMPERATURE:..... -55°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY:..... MIL-STD-202F, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202F, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202F, METHOD 107D COND. A

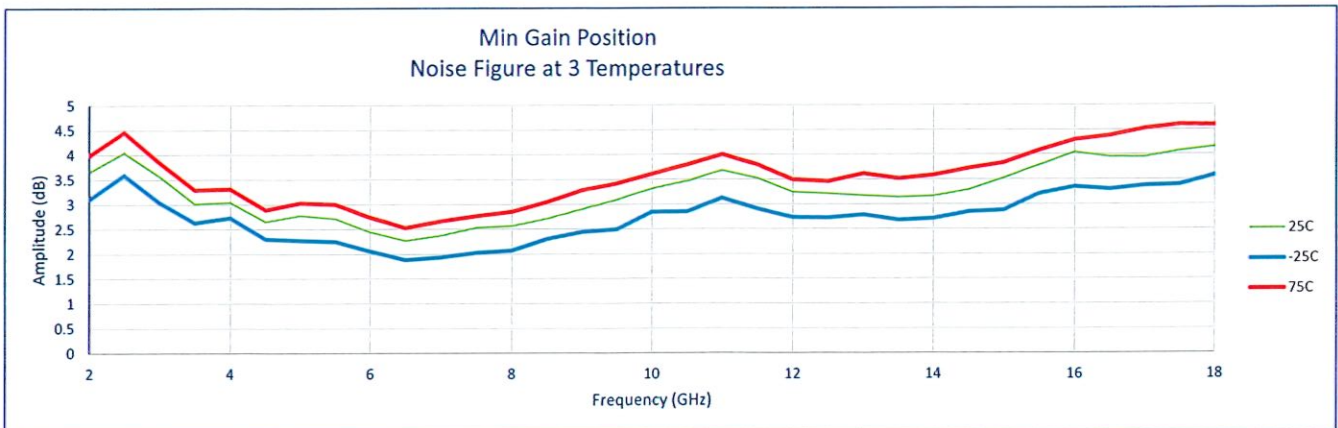
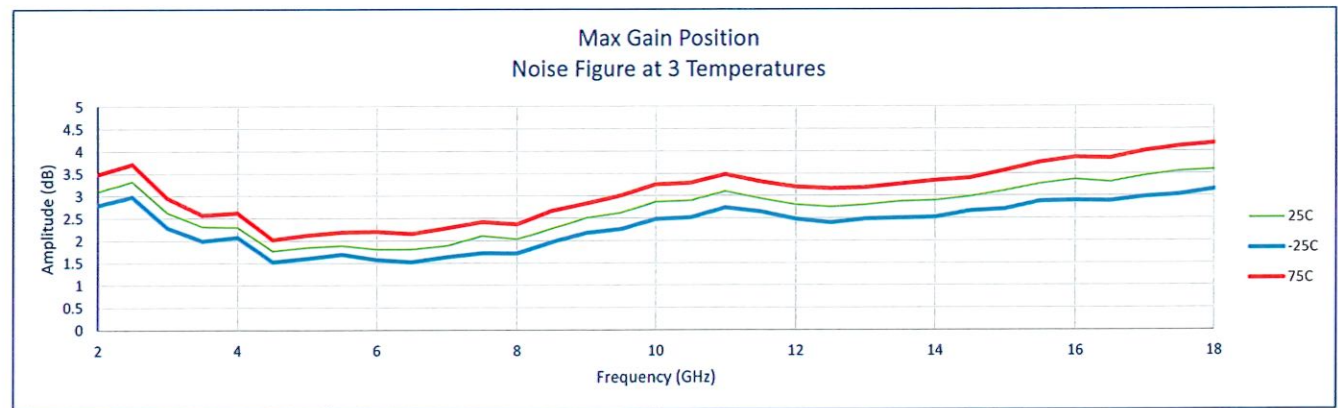
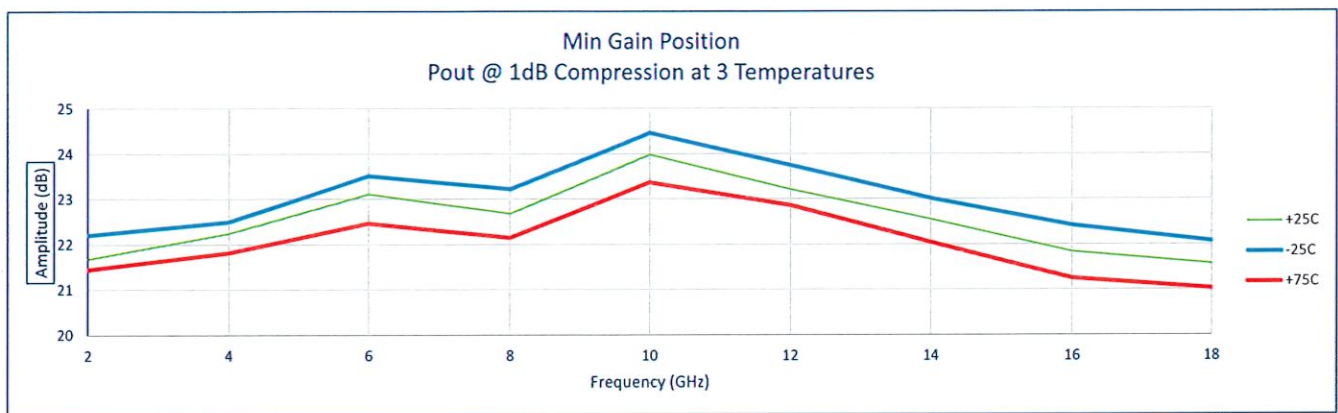
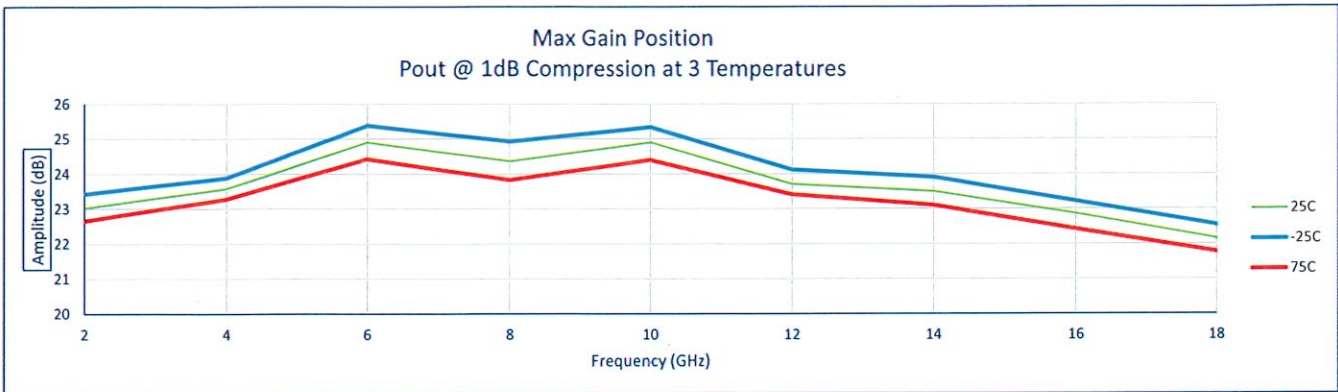
NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE

PMI CONFIDENTIAL AND PROPRIETARY

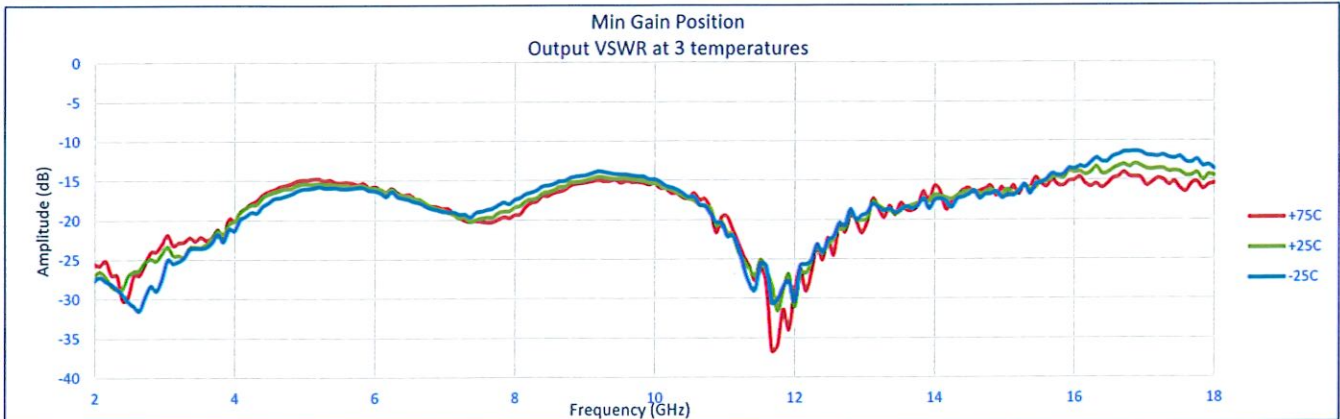
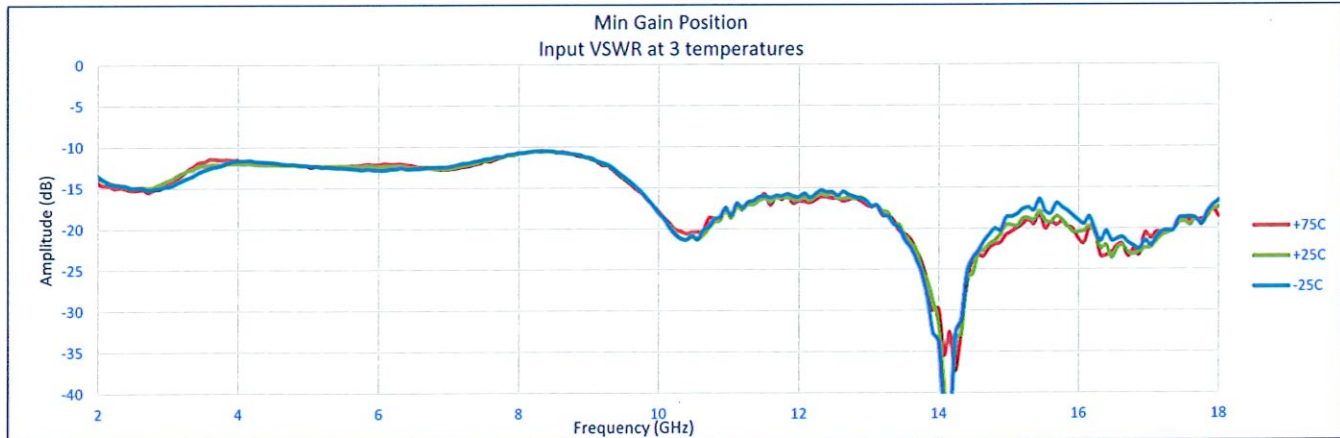
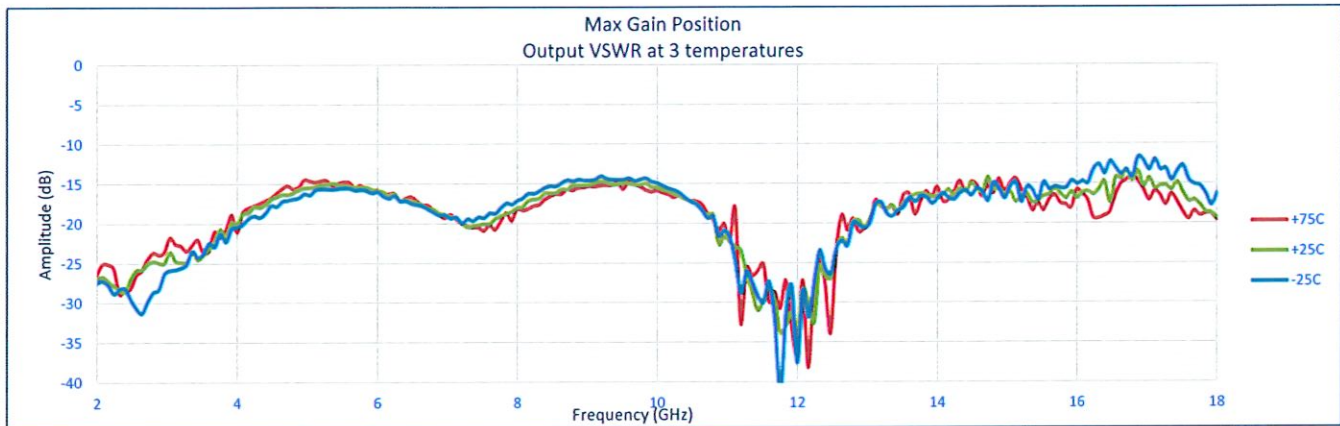
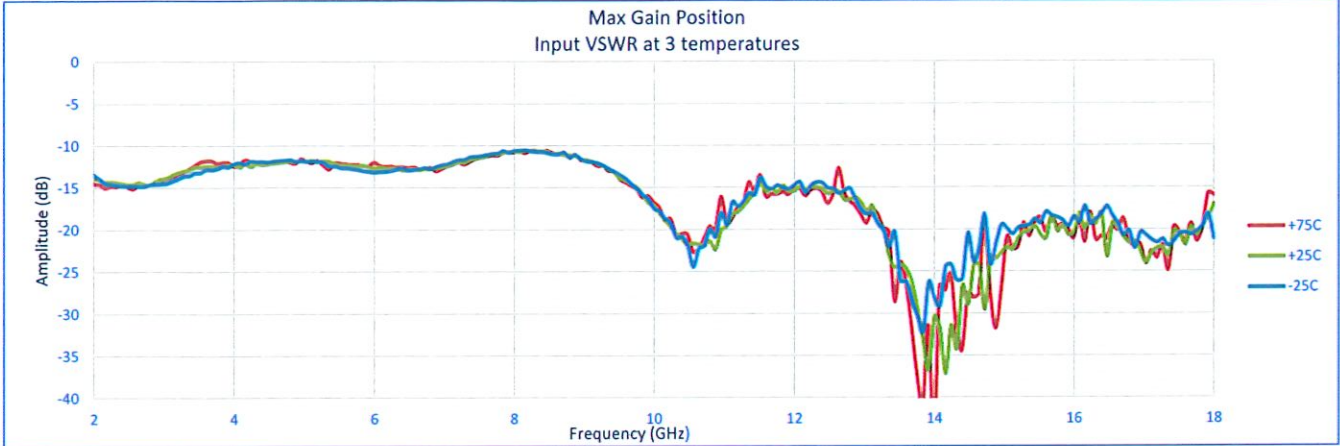
<small>7309-A GROVE ROAD, FREDERICK, MD 21704 USA TEL: (301) 662-5019 FAX: (301) 662-1731 WWW.QUANTICPMI.COM</small>	
APPROVALS	DATE
M. HANKEN	
DESIGNER	TITLE
	OUTLINE
REVISION	DESCRIPTION
B	PEC-40/25-218-21-12-SFF-TTLVG Rev B
SCALE	1:1
SHEET	1 OF 2

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