

**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: PL44459/2406

Tested By: H. Gonzales
 Temperature: -25°C, +25°C, +75°C
 Date: 2/9/2024
 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
2	Gain @ -25°C:			QA1
	Max. Gain Position	+42dB ± 2.0dB Max	42.89 dB Max, 40.19 dB Min	
3	Min. Gain Position	+27dB ± 2.0dB Max	26.68 dB Max, 25.17 dB Min	PMI QA1
	Gain @ +25°C:			
4	Max. Gain Position	+40dB ± 2.0dB Max	41.36 dB Max, 39.11 dB Min	> 39 dB
	Min. Gain Position	+25dB ± 2.0dB Max	25.83 dB Max, 24.7 dB Min	
5	Gain @ +75°C:			> 24 dB
	Max. Gain Position	+37dB ± 2.0dB Max	39.65 dB Max, 37.16 dB Min	
6	Min. Gain Position	+22dB ± 2.0dB Max	24.89 dB Max, 23.14 dB Min	PMI QA1
	Pout @ 1dB Compression @ -25°C:			
7	Max. Gain Position	+21dBm Min.	21.9 dBm Min	PMI QA1
	Min. Gain Position	+20dBm Min.	21.8 dBm Min	
8	Pout @ 1dB Compression @ +25°C:			PMI QA1
	Max. Gain Position	+21dBm Min.	21.7 dBm Min	
9	Min. Gain Position	+20dBm Min.	21.6 dBm Min	PMI QA1
	Pout @ 1dB Compression @ +75°C:			
10	Max. Gain Position	+20dBm Min.	21.4 dBm Min	PMI QA1
	Min. Gain Position	+20dBm Min.	21.2 dBm Min	
11	Saturated Output Power (Both Gains) Over Operating Temperature Range:	+26dBm. Max.	+28.41dBm.	> 26 dB
12	Noise @ -25°C:			PMI QA1
	Max. Gain Position	+3.8 dB Max.	3.6 dB Max.	
13	Min. Gain Position	+6.0 dB Max.	4.4 dB Max.	PMI QA1
	Noise @ +25°C:			
14	Max. Gain Position	+4.5 dB Max.	4.0 dB Max.	PMI QA1
	Min. Gain Position	+7.0 dB Max.	4.9 dB Max.	
15	Noise @ +75°C:			PMI QA1
	Max. Gain Position	+5.0 dB Max.	4.6 dB Max.	
16	Min. Gain Position	+8.0 dB Max.	5.7 dB Max.	PMI QA1
	VSWR In/Out:	2.0:1 Max.	Input 1.76:1dB Output 1.91:1dB -25C Input 1.76:1dB Output 1.84:1dB +25C Input 1.73:1dB Output 1.84:1dB +75C	
17	Input/Output Impedance:	50Ω Nominal	50Ω Nominal	
18	Input Power Without Damage	+20dBm CW Max	+20dBm CW Max	
19	In-Band Harmonics @ or below the 1dB Compression Point	-10dBc Min.	-10dBc	
20	Pulse Rise Time with Input Signals up to -20dBm	<5ns	<5ns By Design	
21	Pulse Overshoot with Input Signals up to -20dBm	<0.5dB	<0.5dB By Design	PMI QA1

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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 QA1	
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.	462mA Max Gain	PMI QA1	
			462mA Min Gain		-25C
			467mA Max Gain		+25C
			467mA Min Gain		
			457mA Max Gain	+75C	
			457mA Min Gain		

QA/QC  PMI QA1

DATE: 2/12/24

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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: +43dB ±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 IMPEDANCE: 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 250μs IN DURATION INPUT SIGNAL UP TO -20dBm: <2.0dB
- PULSE RECOVERY TIME WITH THE FOLLOWING PULSES UP TO 250μs 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)



REV	DESCRIPTION	DATE	APPROVED
A1	ORIGINAL RELEASE	4/20/09	
A2	ECN # 22-0155	4/20/09	
J1	ECN # 22-0155	4/20/09	

ENVIRONMENTAL RATINGS:

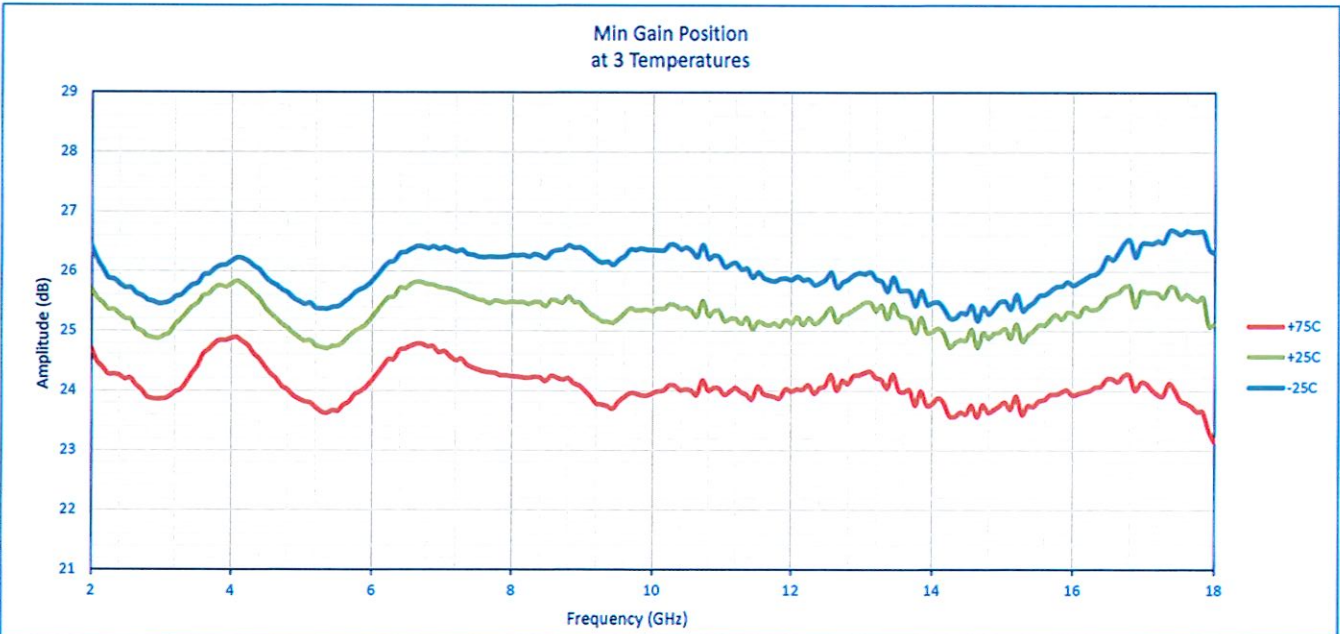
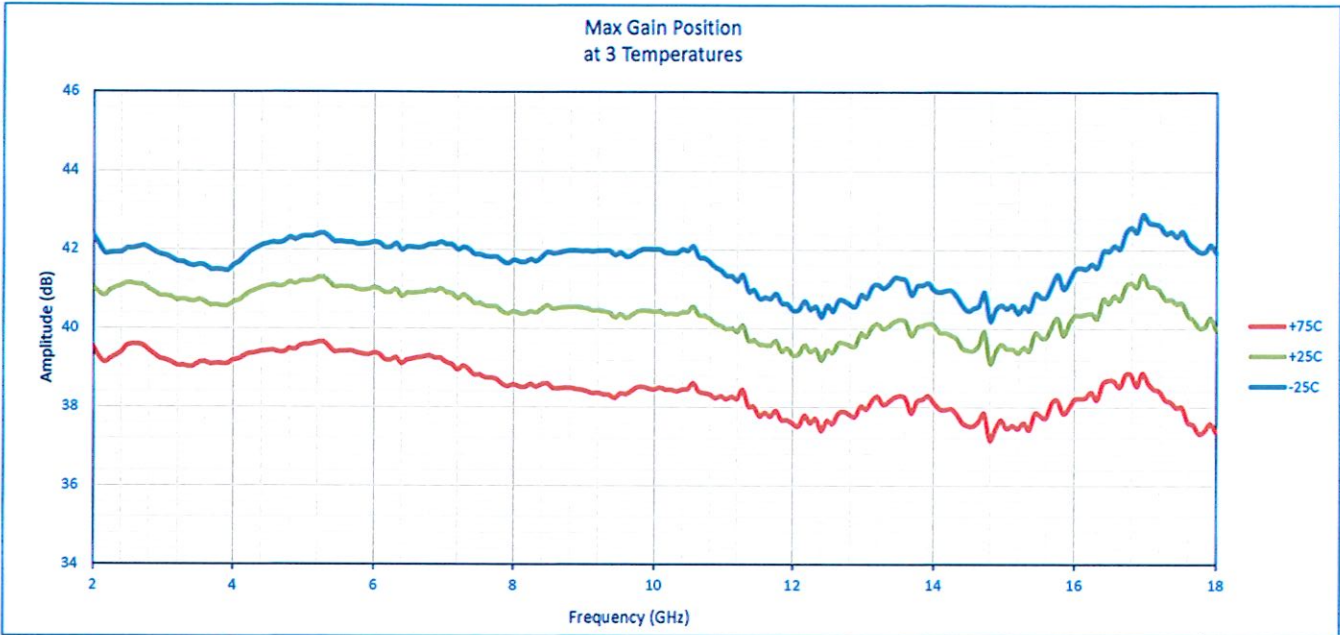
- TEMPERATURE: 55°C TO +85°C (OPERATING)
-65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND.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

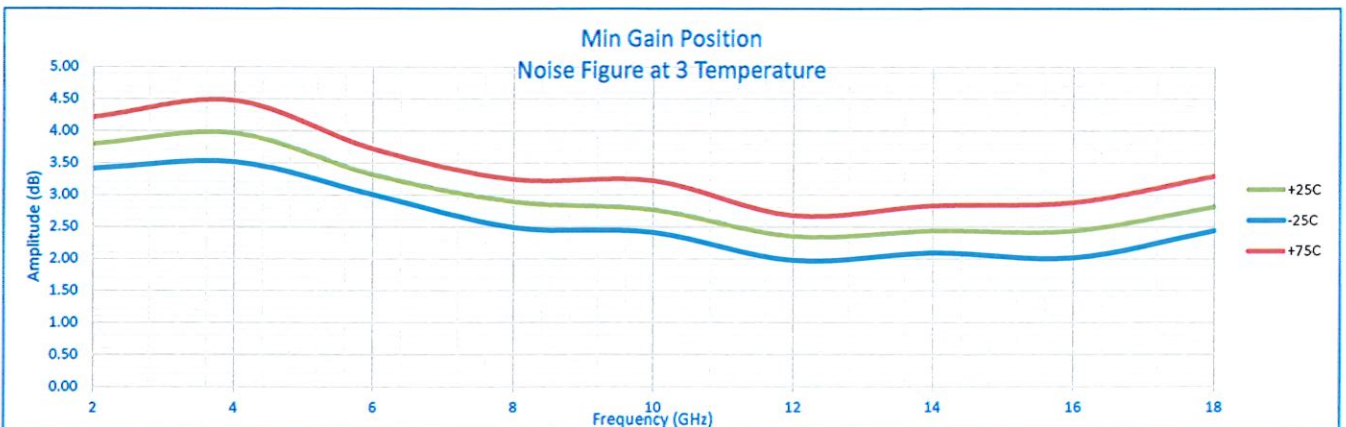
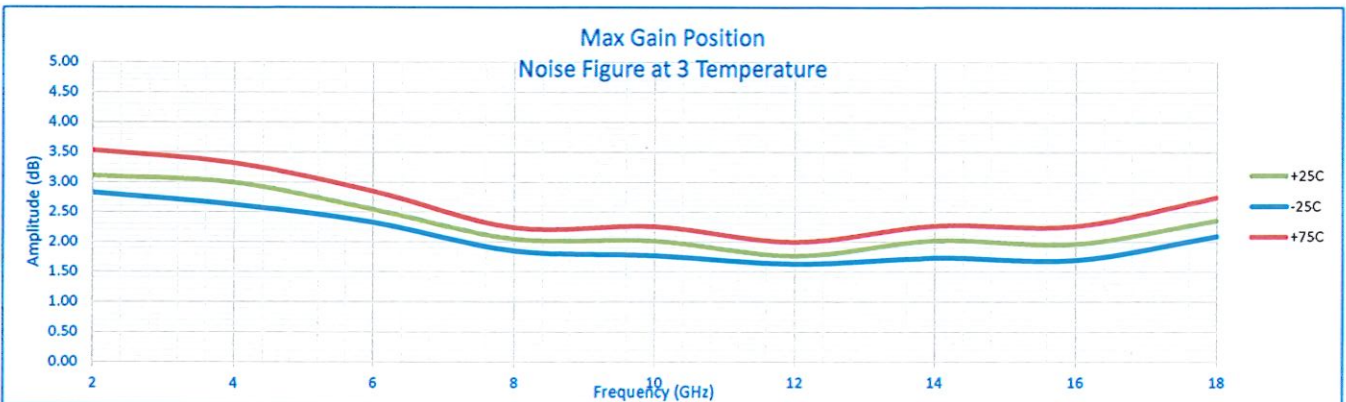
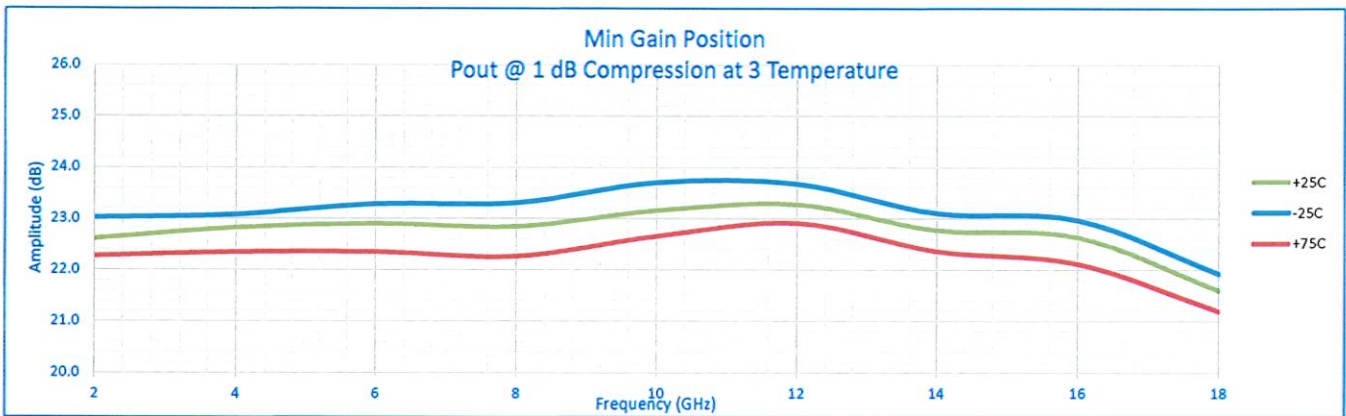
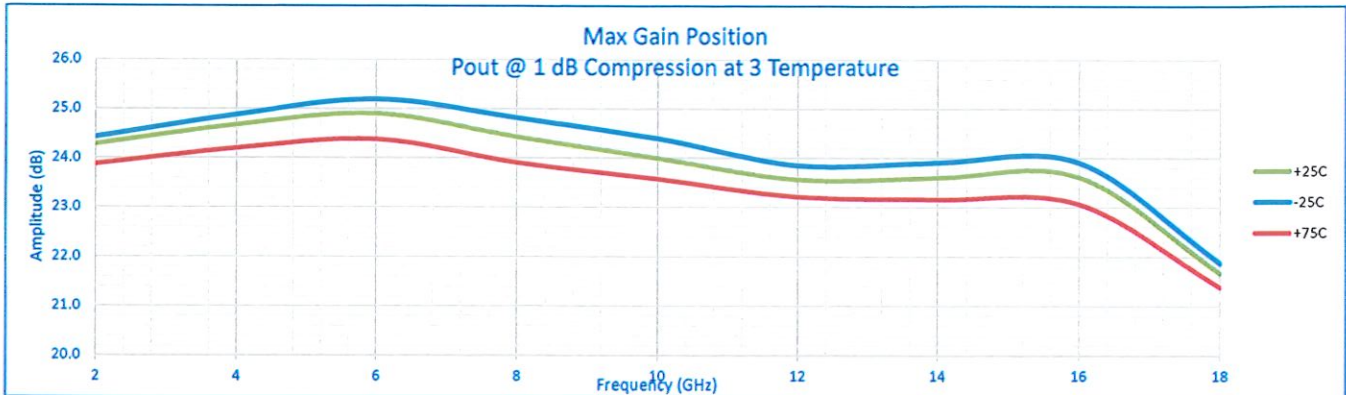
NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE

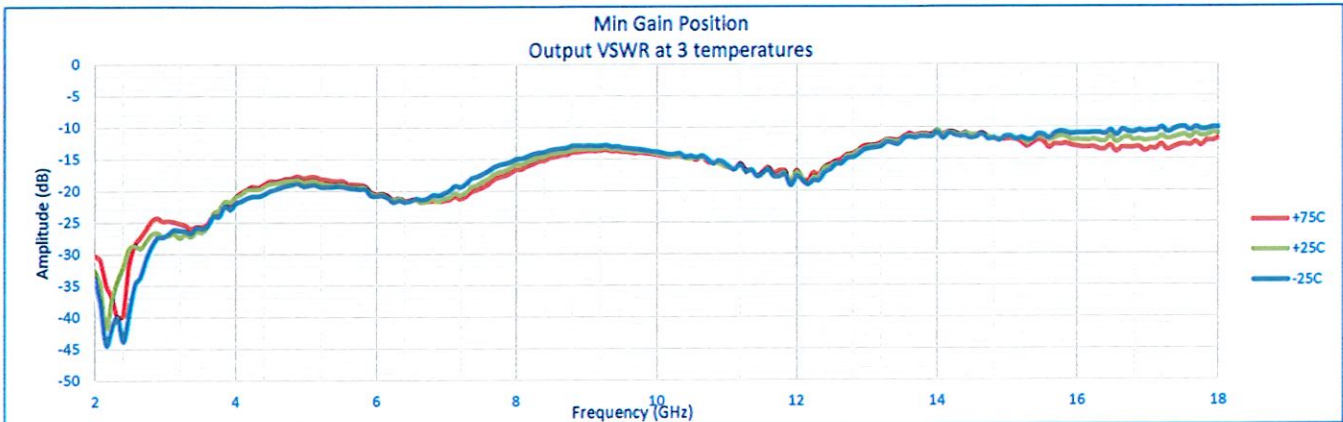
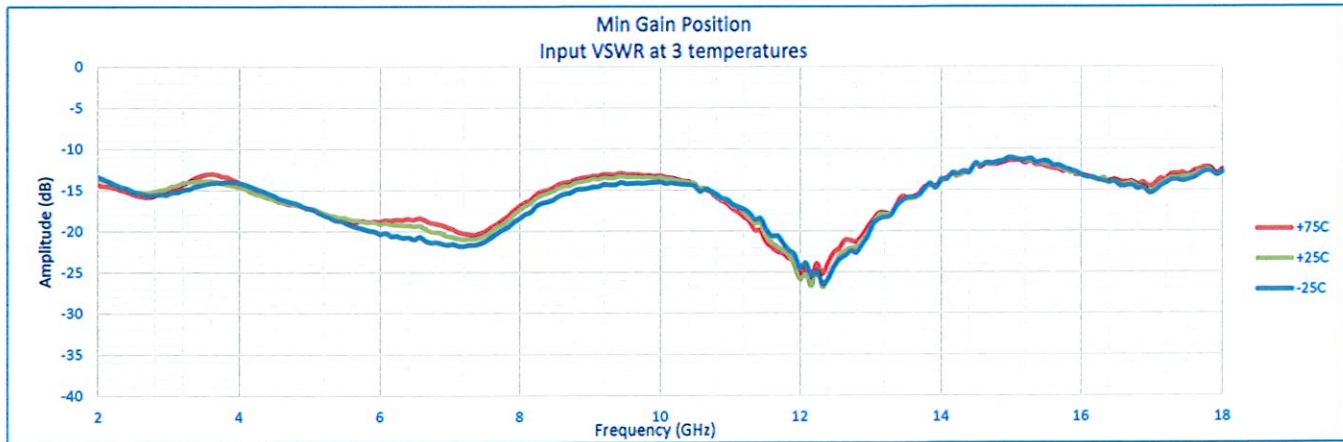
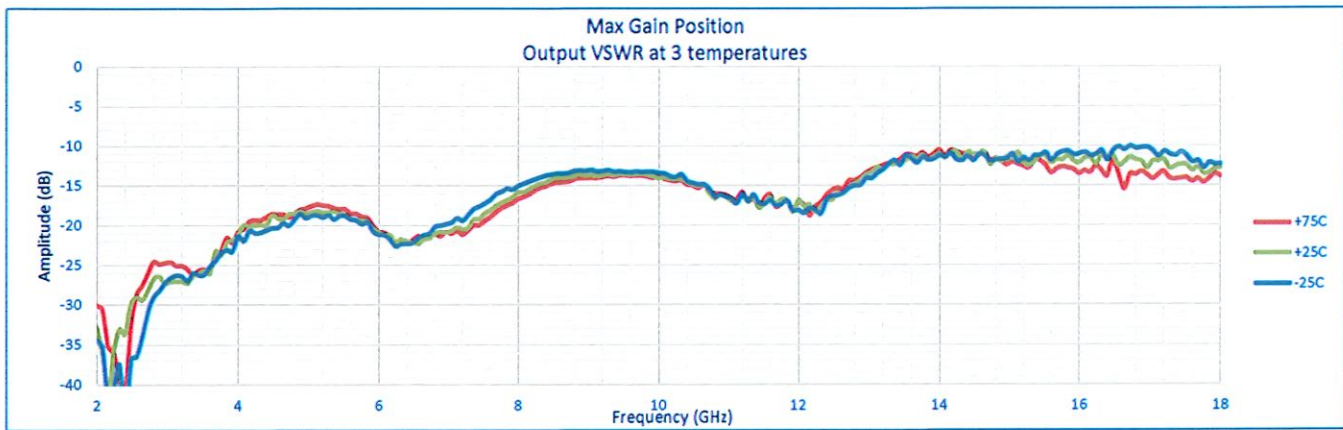
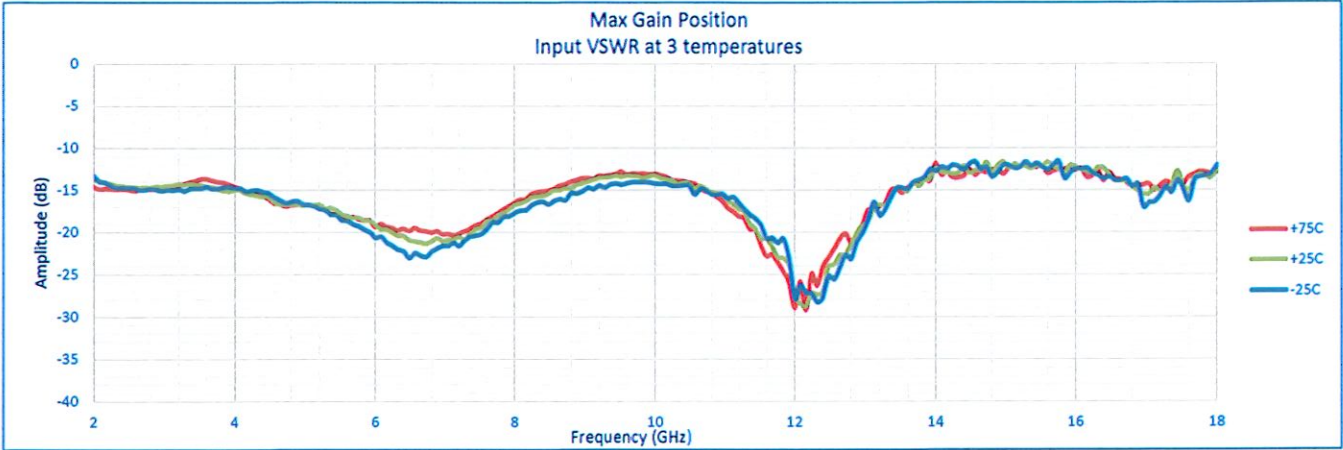
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Quantic PMI	
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APPROVALS: M. HANKEN	DATE: 4/20/09
DESIGN: B	REV: 05X00
TITLE: PEC-40/25-218-21-12-SFF-TTLVG RevB PART NO: 27005731	
SCALE: 1:1	SHEET: 1 OF 2

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