

**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: PL42865/2346


Tested By: H. Gonzales
 Temperature: -25°C, +25C, +75C
 Date: 11/17/2023
 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 QA1	
2	Gain @ -25°C:				
	Max. Gain Position	+42dB ± 2.0dB Max	42.61 dB Max, 40.71 dB Min		
3	Min. Gain Position	+27dB ± 2.0dB Max	27.24 dB Max, 25.29 dB Min	PMI QA1	
	Gain @ +25°C:				
4	Max. Gain Position	+40dB ± 2.0dB Max	41.37 dB Max, 39.67 dB Min	> 39 dB > 24 dB	
	Min. Gain Position	+25dB ± 2.0dB Max	26.23 dB Max, 24.67 dB Min		
5	Gain @ +75°C:			PMI QA1	
	Max. Gain Position	+37dB ± 2.0dB Max	39.68 dB Max, 37.21 dB Min		
6	Min. Gain Position	+22dB ± 2.0dB Max	25.02 dB Max, 23.59 dB Min		
	Pout @ 1dB Compression @ -25°C:				
7	Max. Gain Position	+21dBm Min.	21.3 dBm Min	PMI QA1	
	Min. Gain Position	+20dBm Min.	21.3 dBm Min		
8	Pout @ 1dB Compression @ +25°C:				
	Max. Gain Position	+21dBm Min.	21.0 dBm Min		
9	Min. Gain Position	+20dBm Min.	21.1 dBm Min	PMI QA1	
	Pout @ 1dB Compression @ +75°C:				
10	Max. Gain Position	+20dBm Min.	20.3 dBm Min	PMI QA1	
	Min. Gain Position	+20dBm Min.	20.4 dBm Min		
11	Saturated Output Power (Both Gains) Over Operating Temperature Range:	+26dBm. Max.	+27.4dBm.	> 26 dB	
	Noise @ -25°C:				
12	Max. Gain Position	+3.8 dB Max.	3.4 dB Max.	PMI QA1	
	Min. Gain Position	+6.0 dB Max.	3.9 dB Max.		
13	Noise @ +25°C:				
	Max. Gain Position	+4.5 dB Max.	3.7 dB Max.		
14	Min. Gain Position	+7.0 dB Max.	4.4 dB Max.		
	Noise @ +75°C:				
15	Max. Gain Position	+5.0 dB Max.	4.4 dB Max.		
	Min. Gain Position	+8.0 dB Max.	5.0 dB Max.		
16	VSWR In/Out:	2.0:1 Max.	Input 1.68:1dB		
			Output 1.54:1dB		-25C
			Input 1.97:1dB		+25C
17	Input/Output Impedance:	50Ω Nominal	Output 1.63:1dB		
			Input 1.89:1dB		+75C
18	Input Power Without Damage	+20dBm CW Max	Output 1.54:1dB		
			50Ω Nominal		
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	PMI QA1	
22	DC Supply:	780mA Max@ +12V ±5% Max Gain Position. 610mA Max@ +12V ± 5% Min Gain Position.	420mA Max Gain 420mA Min Gain		-25C
			420mA Max Gain 420mA Min Gain		+25C
			430mA Max Gain 430mA Min Gain		+75C
			430mA Max Gain 430mA Min Gain	+75C	

QA/QC



PMI
QA1

DATE:

11/24/23

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PL42865/2346

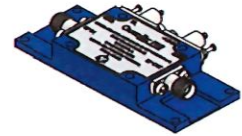
Technical Sheet

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.

REV	DESCRIPTION	DATE	APPROVED
A1	ORIGINAL RELEASE	03/2012	
A0	ECN # 22-0150	04/09	
J1	ECN # 22-0155	01/2012	

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.....-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 250μ IN DURATION INPUT SIGNAL UP TO -20dBm.....<2.0dB
- PULSE RECOVERY TIME WITH THE FOLLOWING PULSES UP TO 250μ 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)




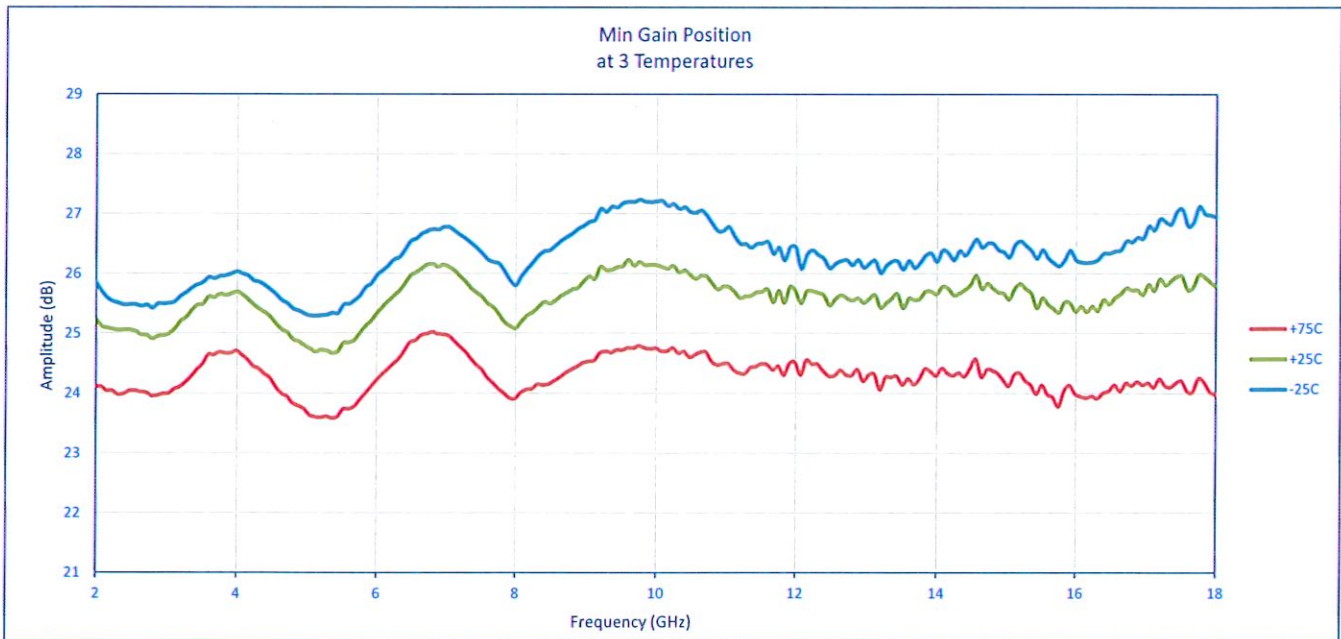
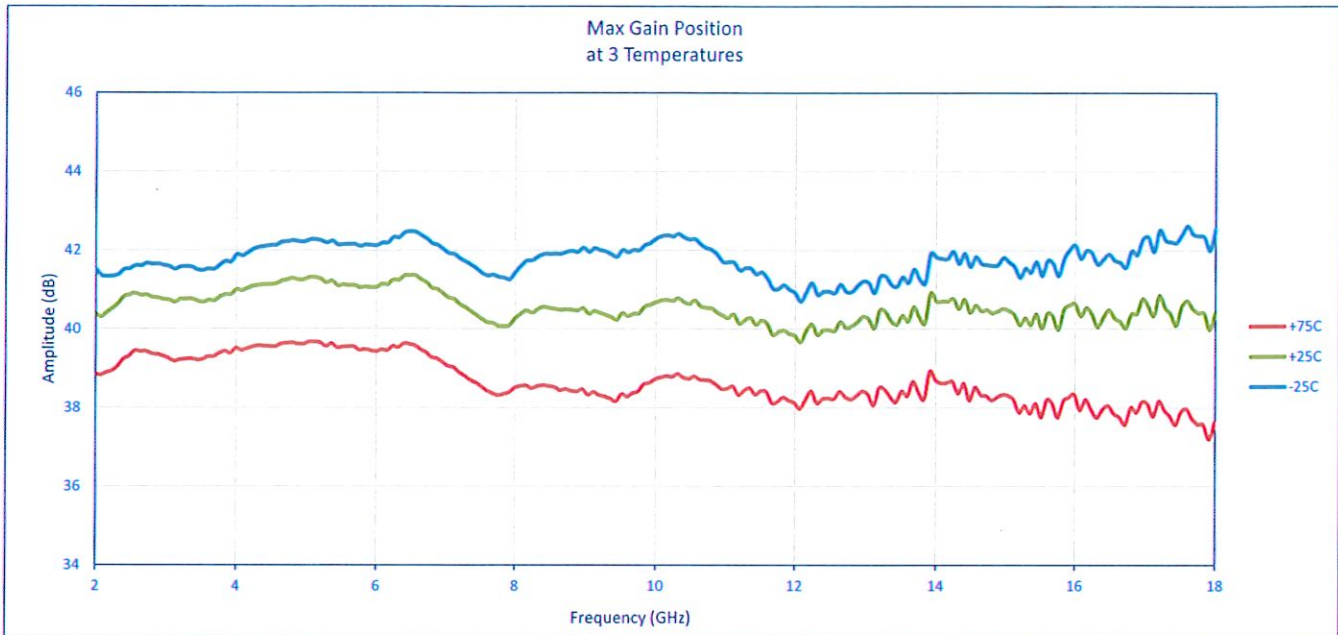
ENVIRONMENTAL RATINGS:

- 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

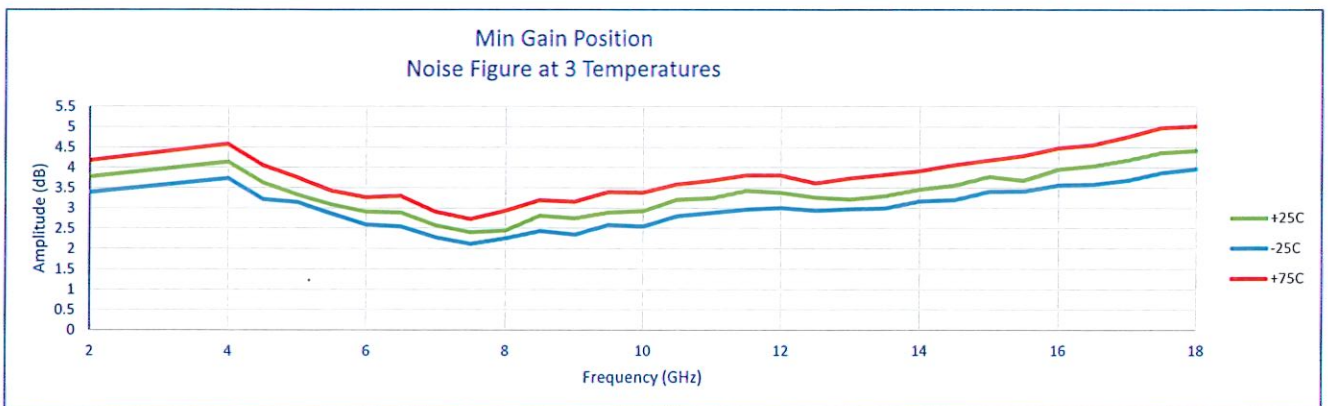
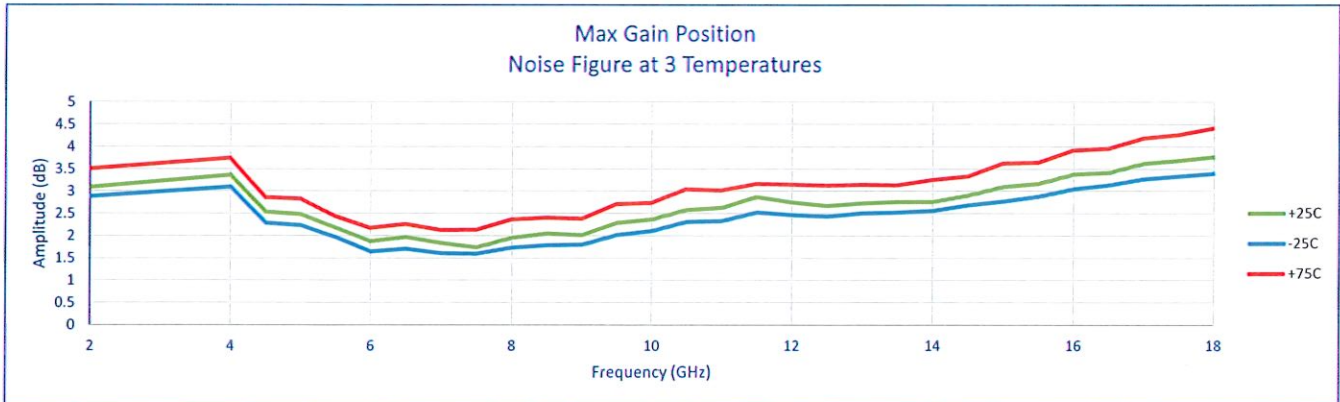
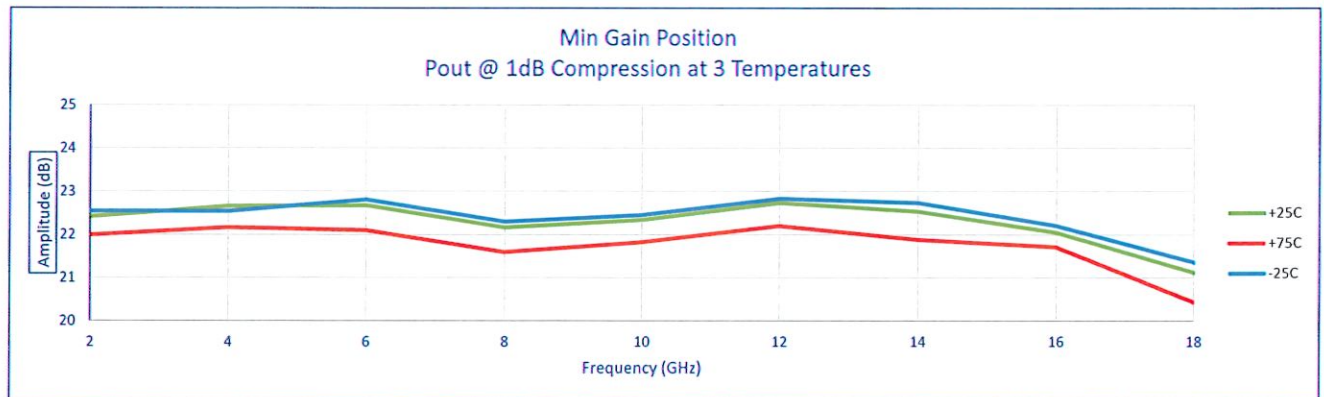
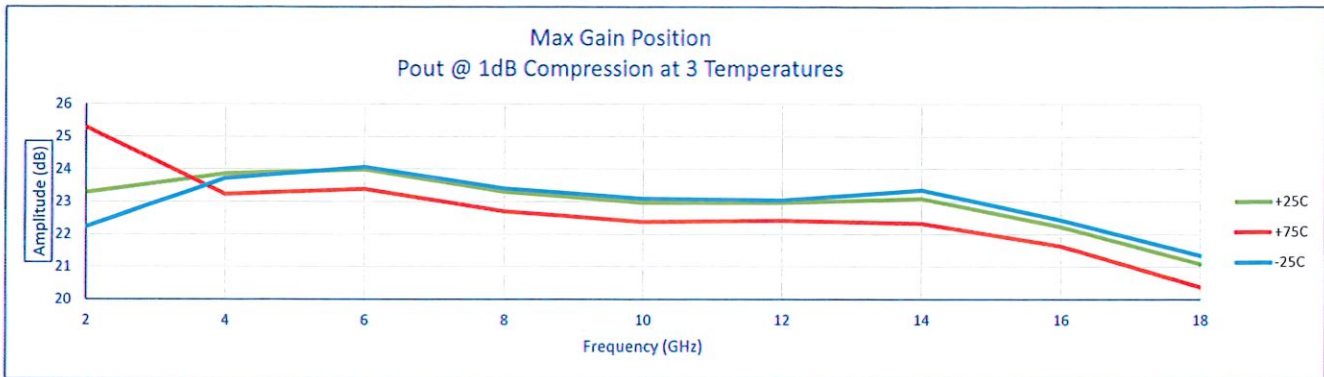
NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE

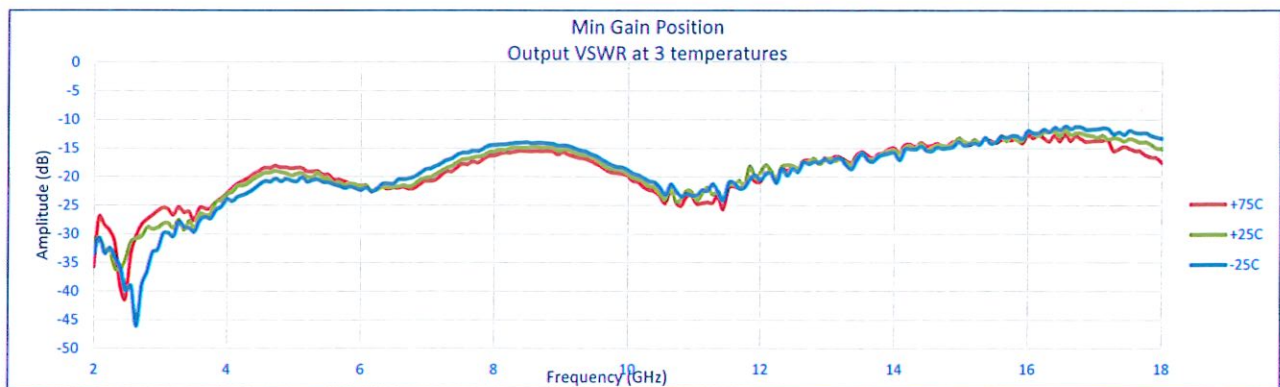
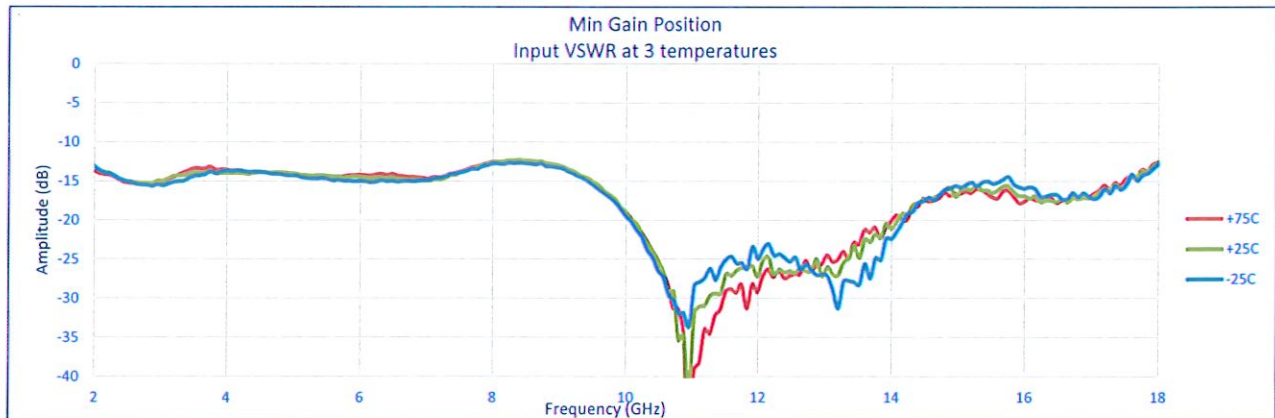
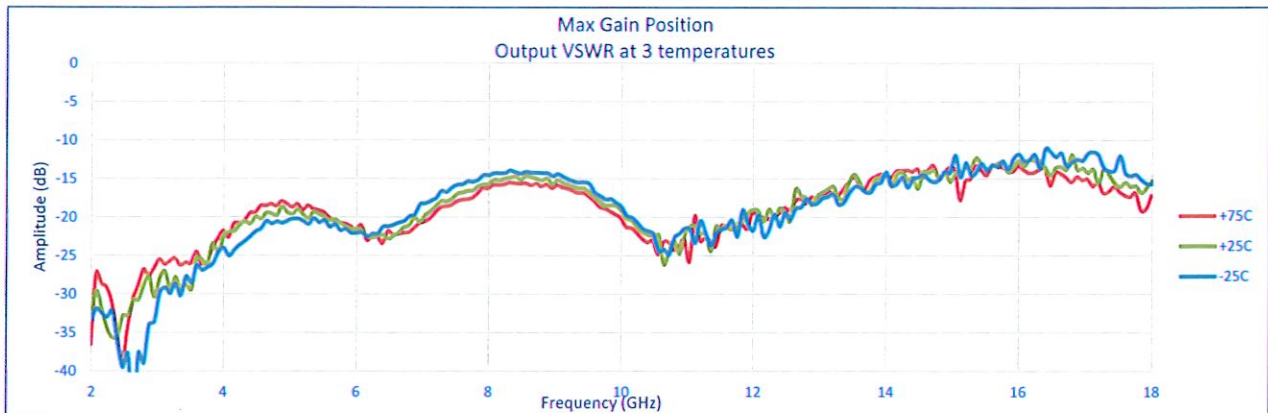
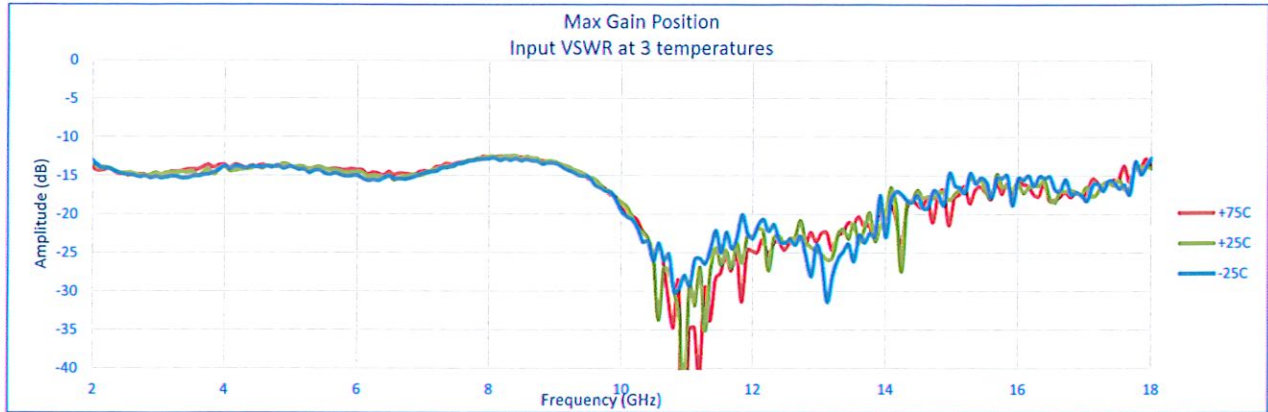
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APPROVALS		DATE	TITLE
	M. HANKEN	03/2012	OUTLINE
<small>QUALITY ENGINEERING APPROVED DESIGNATION AND ALL RIGHTS RESERVED REV. 0 REV. 0 REV. 0</small>		<small>ISSUE</small> B <small>DATE</small> 05X00 <small>REV. NO.</small> 27005731 <small>SCALE</small> 1:1 <small>SHEET</small> 1 OF 2	<small>FILE</small> PEC-40/25-218-21-12-SFF-TTLVG Rev B <small>REV</small> J1



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