



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: PL28837/2018

Tested By: H. Gonzales
 Temperature: -25°C, +25°C, +75°C
 Date: 1/10/2022
 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 > 44 dB										
	Max. Gain Position	+42dB ± 2.0dB Max	44.04 dB Max, 40.1 dB Min											
3	Min. Gain Position	+27dB ± 2.0dB Max	27.36 dB Max, 25.14 dB Min	> 42 dB										
	Gain @ +25°C:													
4	Max. Gain Position	+40dB ± 2.0dB Max	42.46 dB Max, 38.32 dB Min	> 39 dB										
	Min. Gain Position	+25dB ± 2.0dB Max	26.42 dB Max, 23.76 dB Min											
5	Gain @ +75°C:			PMI QA1										
	Max. Gain Position	+37dB ± 2.0dB Max	40.85 dB Max, 36.45 dB Min											
6	Min. Gain Position	+22dB ± 2.0dB Max	25.43 dB Max, 22.32 dB Min	> 24 dB										
	Pout @ 1dB Compression @ -25°C:													
7	Max. Gain Position	+21dBm Min.	22.4 dBm Min	PMI QA1										
	Min. Gain Position	+20dBm Min.	21 dBm Min											
8	Pout @ 1dB Compression @ +25°C:			< +20 dBm										
	Max. Gain Position	+21dBm Min.	21.9 dBm Min											
9	Min. Gain Position	+20dBm Min.	19.42 dBm Min	< +20 dBm										
	Pout @ 1dB Compression @ +75°C:													
10	Max. Gain Position	+20dBm Min.	19.4 dBm Min	< +20 dBm										
	Min. Gain Position	+20dBm Min.	19 dBm Min											
11	Saturated Output Power (Both Gains) Over Operating Temperature Range:	+26dBm. Max.	+26.2dBm	> +26 dBm										
	Noise @ -25°C:			PMI QA1										
Max. Gain Position	+3.8 dB Max.	3.7 dBm Max												
12	Min. Gain Position	+6.0 dB Max.	3.3 dBm Max											
	Noise @ +25°C:													
13	Max. Gain Position	+4.5 dB Max.	4.2 dBm Max											
	Min. Gain Position	+7.0 dB Max.	3.9 dBm Max											
14	Noise @ +75°C:													
	Max. Gain Position	+5.0 dB Max.	4.6 dBm Max											
15	Min. Gain Position	+8.0 dB Max.	4.6 dBm Max											
	VSWR In/Out:	2.0:1 Max.	<table border="1" style="width: 100%;"> <tr> <td>Input 1.6:1dB</td> <td>-25C</td> </tr> <tr> <td>Output 1.5:1dB</td> <td></td> </tr> <tr> <td>Input 1.6:1dB</td> <td>+25C</td> </tr> <tr> <td>Output 1.5:1dB</td> <td></td> </tr> <tr> <td>Input 1.6:1dB</td> <td>+75C</td> </tr> <tr> <td>Output 1.5:1dB</td> <td></td> </tr> </table>		Input 1.6:1dB	-25C	Output 1.5:1dB		Input 1.6:1dB	+25C	Output 1.5:1dB		Input 1.6:1dB	+75C
Input 1.6:1dB	-25C													
Output 1.5:1dB														
Input 1.6:1dB	+25C													
Output 1.5:1dB														
Input 1.6:1dB	+75C													
Output 1.5:1dB														
16	Input/Output Impedance:	50Ω Nominal	50Ω Nominal											
17	Input Power Without Damage	+20dBm CW Max	+20dBm CW Max											
18	In-Band Harmonics @ or below the 1dB Compression Point	-10dBc Min.	-10dBc											
19	Pulse Rise Time with Input Signals up to -20dBm	<5ns	<5ns By Design											
20	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.	497mA Max Gain		-25C
			497mA Min Gain		
			500mA Max Gain		+25C
			500mA Min Gain		
496mA Max Gain	+75C				
496mA Min Gain					

QA/QC Approval:  PMI
QA1

Date: 1/14/22



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Technical Sheet

DESCRIPTION

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

SPECIFICATIONS

- FREQUENCY RANGE:..... 2 - 18GHz
- 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 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:..... -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 SWITCH CONTROL:..... TTL HIGH "1" - Max GAIN
TTL LOW "0" - Min GAIN
- DC SUPPLY:..... 780mA Max@ +12V ±5% Max GAIN POSITION
610mA Max@ +12V ±5% Min GAIN POSITION
- FINISH..... PAINTED GRAY (MOUNTING SURFACE FREE OF PAINT, GOLD)

		REVISIONS		
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	06/07/18	
	A2	ECN # 13-0177	10/07/18	
	A3	ECN # 14-0198	10/09/18	
	A4	ECN # 18-0077	3/23/18	
	A5	ECN # 20-0096	8/09/20	
	A6	ECN # 20-0113	8/22/20	

ENVIRONMENTAL RATINGS
 * TEMPERATURE:.....-55°C TO + 85°C (OPERATING)
 -65°C TO +125°C (STORAGE)
 * HUMIDITY:.....ML-STD-202F, METHOD 1039 COND. B
 * SHOCK:.....ML-STD-202F, METHOD 2138 COND. B
 * VIBRATION:.....ML-STD-202F, METHOD 2040 COND. B
 * ALTITUDE:.....ML-STD-202F, METHOD 1050 COND. B
 * TEMPERATURE CYCLE:.....ML-STD-202F, METHOD 1070 COND. A
 NOTE: SPECIFICATIONS WILL VARY WITH SPECIFIC TEMPERATURES
 NOTE: SEE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XXX ±0.020
 .XXXX ±0.010

PMI CONFIDENTIAL AND PROPRIETARY

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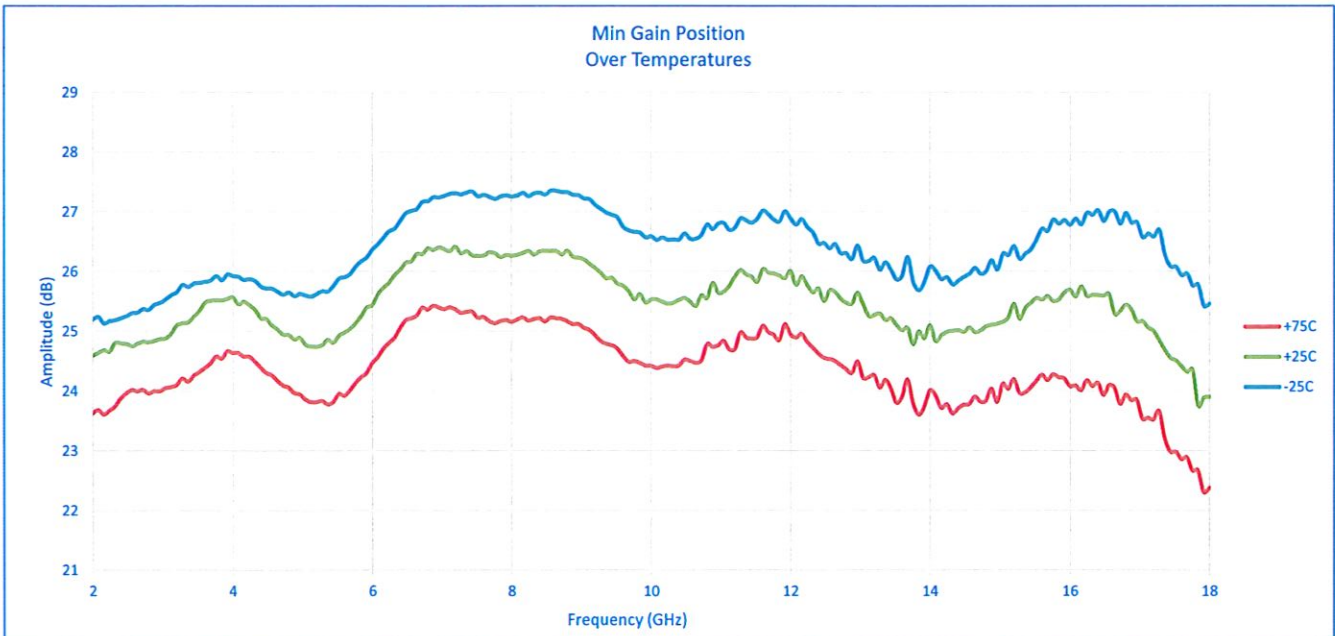
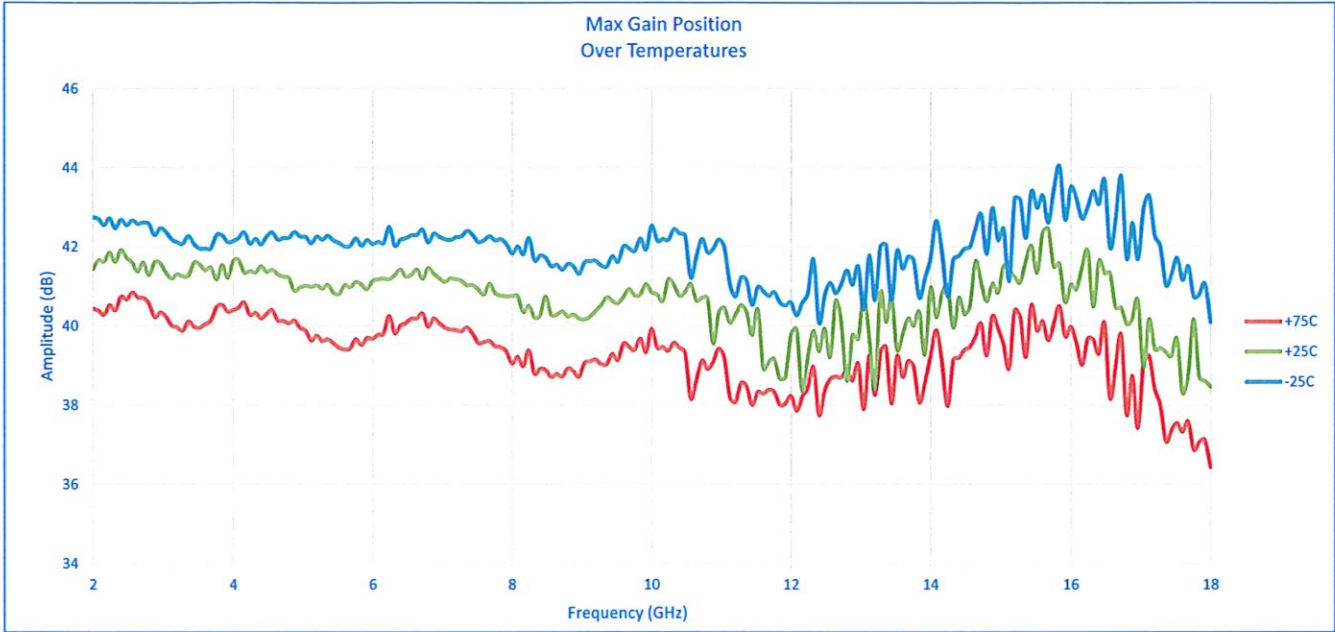


APPROVALS		DATE	TITLE	
DRAWN	4/6	06/07/18	PRODUCT FEATURE	
CHECKED			PEC-40/25-218-21-12-SFF-TTLVG	
ISSUED			SIZE	REV
			A 05XQ0	A6
			DWG NO	
			27005731	
			SCALE	SHEET
			N: S	1 OF 3



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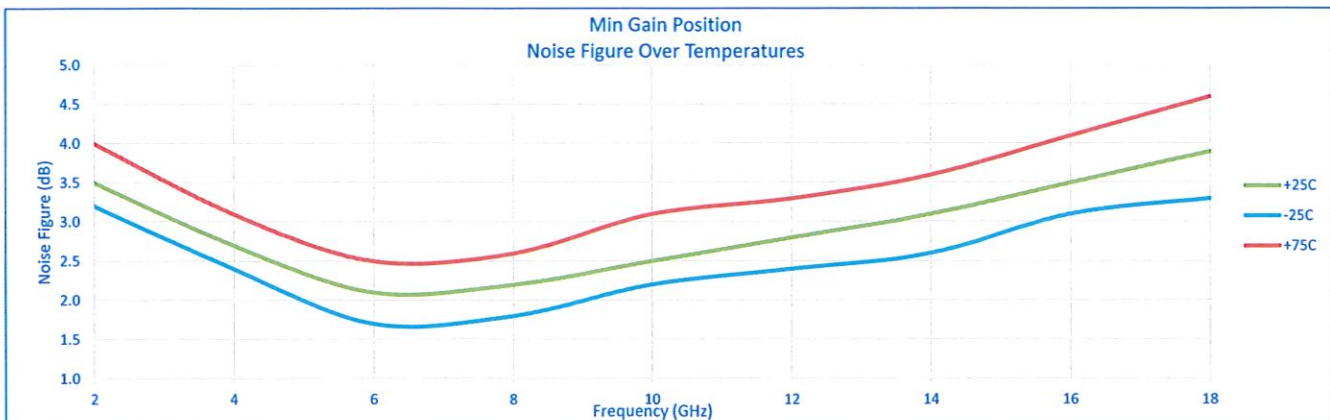
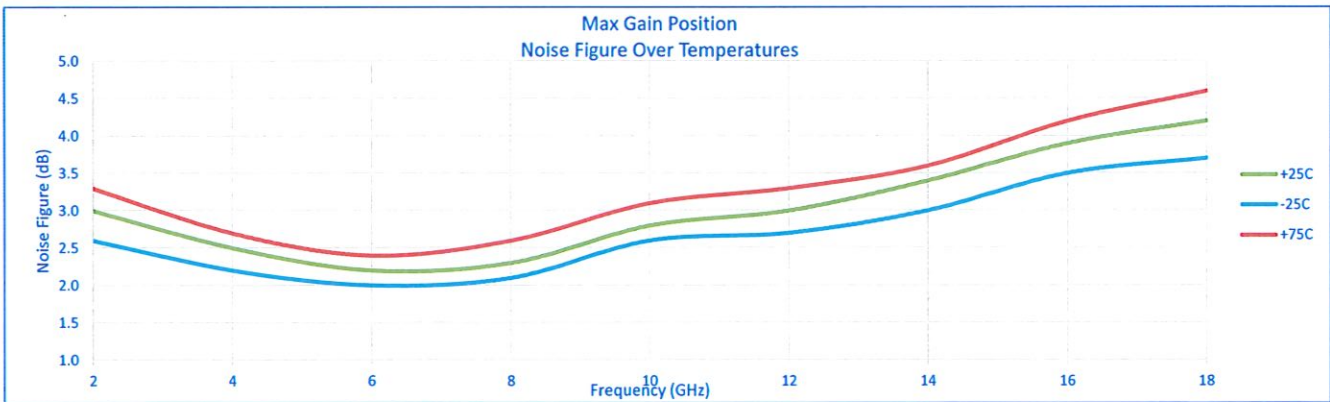
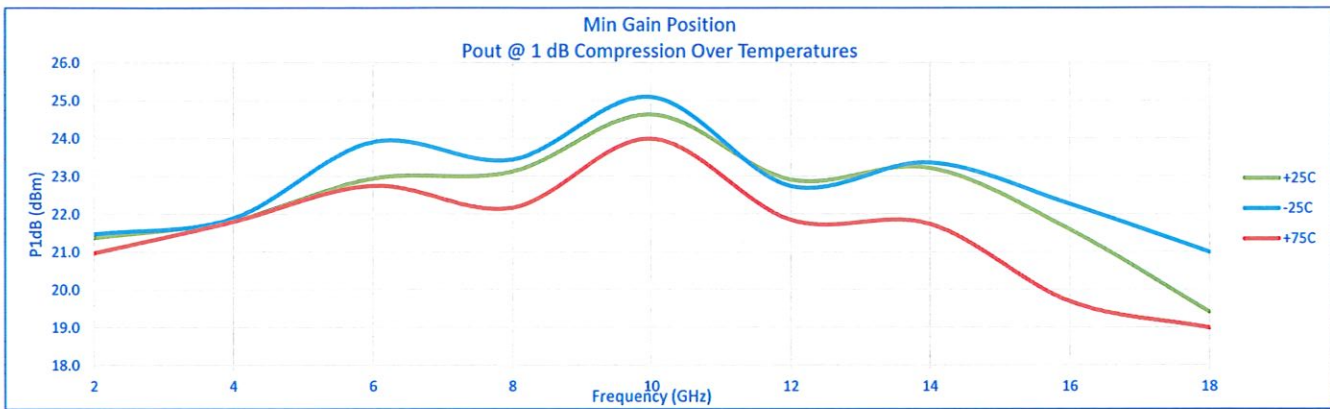
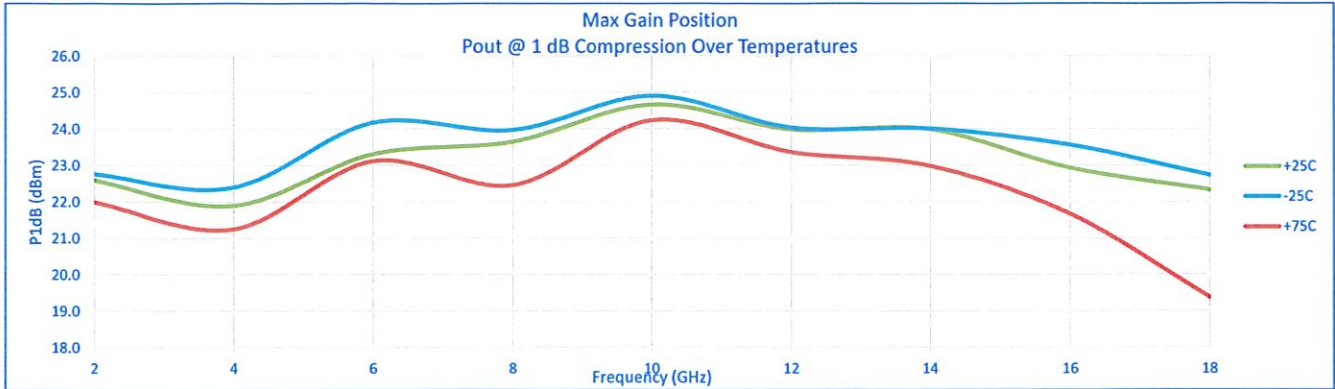
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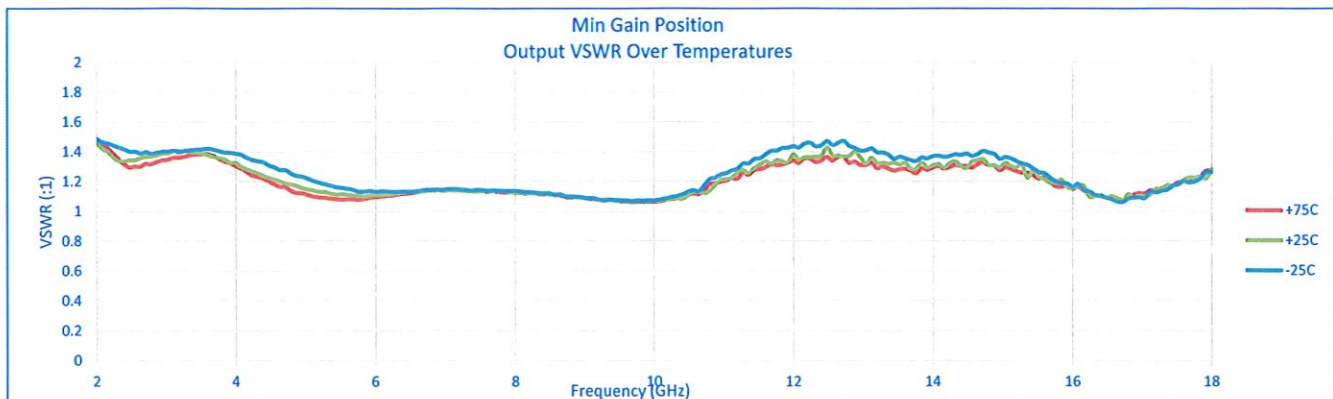
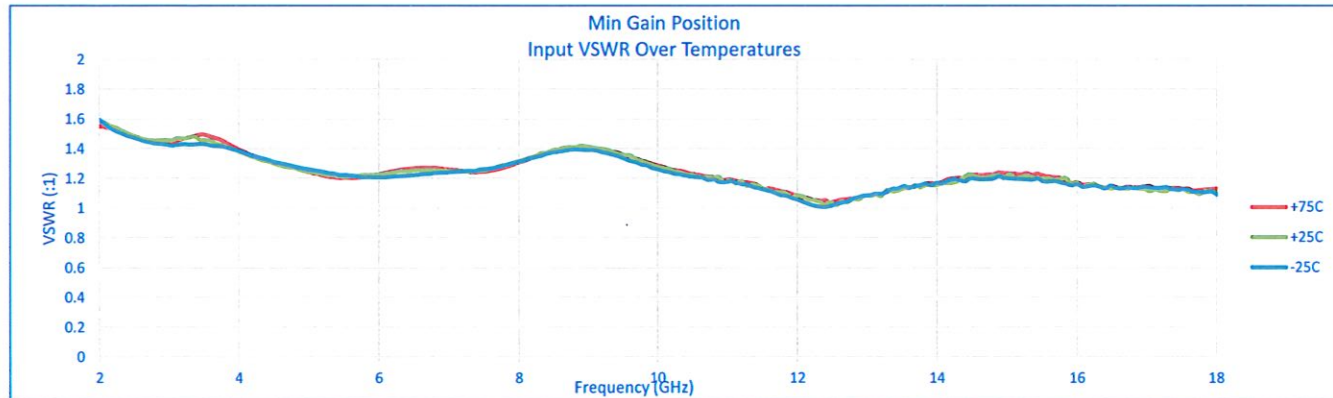
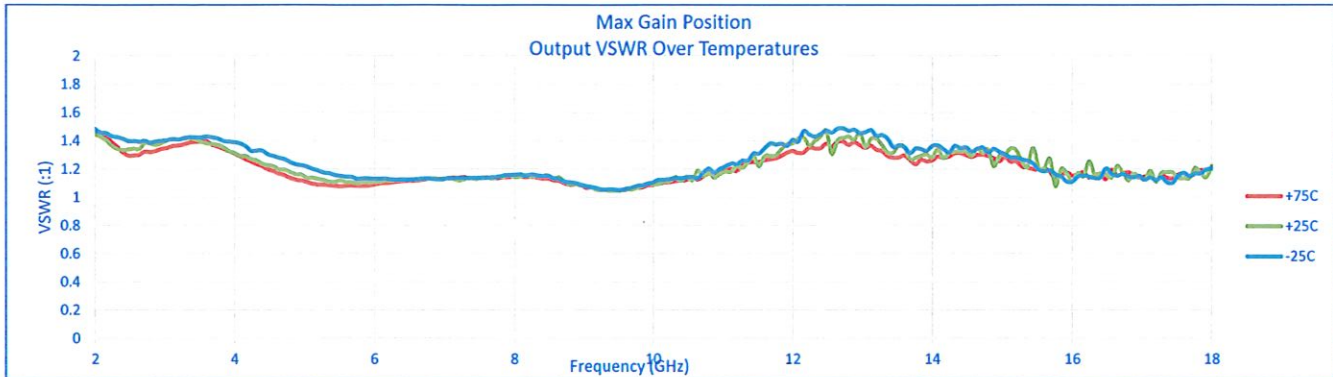
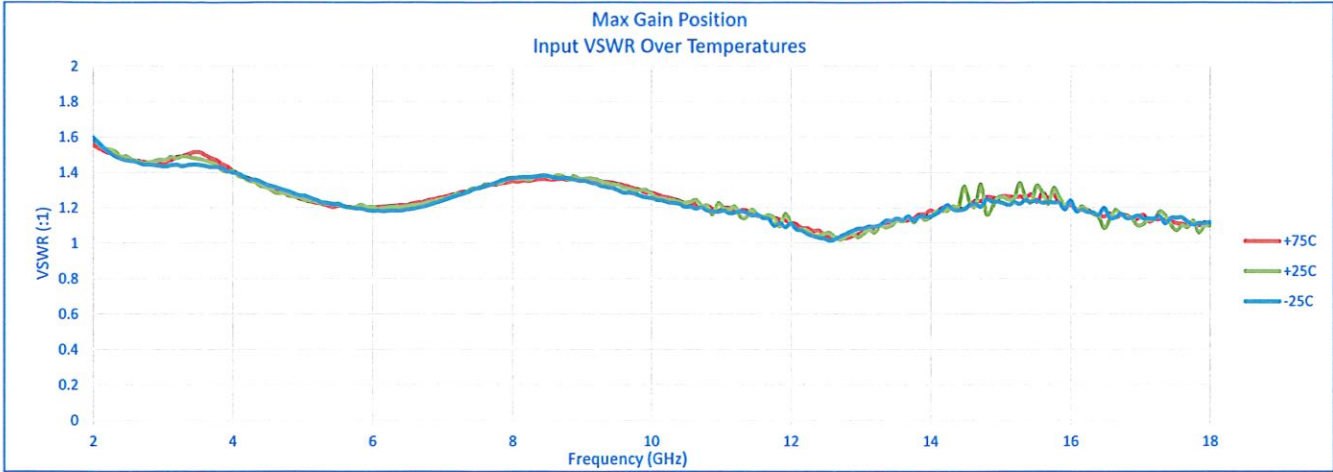
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