

**TYPICAL CHARACTERISTICS
ON
PEC-30-500M40G-20-12-292FF-OPT250M**

PMI MODEL NUMBER PEC-30-500M40G-20-12-292FF-OPT250M IS A 250 MHz TO 40 GHz LOW NOISE AMPLIFIER. THIS AMPLIFIER HAS A GAIN OF 25 dB WITH ± 2.0 dB FLATNESS.



June 19, 2025

Designed By:

Engineering PMI

Tested and Reported By:

Alfredo Lopez

TYPICAL CHARACTERISTICS ON PEC-30-500M40G-20-12-292FF-OPT250M

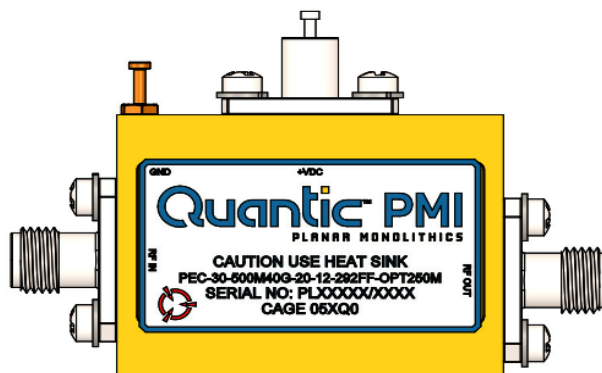
Outline Drawing

DESCRIPTION:

PMI MODEL NUMBER PEC-30-500M40G-20-12-292FF-OPT250M IS A 250 MHz TO 40 GHz LOW NOISE AMPLIFIER. THIS AMPLIFIER HAS A GAIN OF 25 dB WITH ± 2.0 dB FLATNESS.

SPECIFICATIONS:

- FREQUENCY RANGE:..... 250 MHz TO 40 GHz
- GAIN:..... 25 dB NOM
- GAIN FLATNESS:..... ± 2.0 dB MAX (+25°C TO +85°C)
..... ± 3.0 dB MAX (-55°C TO +25°C)
- NOISE FIGURE:..... 5.5 dB TYP (250 MHz TO 26.5 GHz)
..... 7.0 dB MAX (26.5 GHz TO 40 GHz)
- OP1dB:..... +18 dBm MIN (250 MHz TO 10 GHz)
..... +17 dBm MIN (10 GHz TO 18 GHz)
..... +15 dBm MIN (18 GHz TO 40 GHz)
- PSAT:..... +25 dBm MAX (250 MHz TO 18 GHz)
..... +22 dBm MAX (18 GHz TO 40 GHz)
- RF INPUT (ABSOLUTE MAX):..... +23 dBm (250 MHz TO 26 GHz)
..... +20 dBm (26 GHz TO 40 GHz)
- VSWR (INPUT/OUTPUT):..... 2.0:1 / 2.5:1 MAX
- DC VOLTAGE SUPPLY:..... +12 TO +15 VDC
- DC CURRENT DRAW:..... 400 mA MAX (Iq)
- CONNECTORS (INPUT/OUTPUT):..... 2.92mm (F)
- FINISH:..... GOLD PLATED



ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -55°C TO +85°C (OPERATING)
..... -65°C TO +117°C (STORAGE)
- HUMIDITY:..... MIL-STD-202, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202, METHOD 213B COND. B
- VIBRATION:..... MIL-STD-202, METHOD 204D COND. B
- ALTITUDE:..... MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE:..... MIL-STD-202, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ZONE	REV	DESCRIPTION	DATE	APPROVED
A1		ORIGINAL RELEASE	1/30/2005	
A2		ECN # 25-0191	8/19/05	

PMI CONFIDENTIAL AND PROPRIETARY

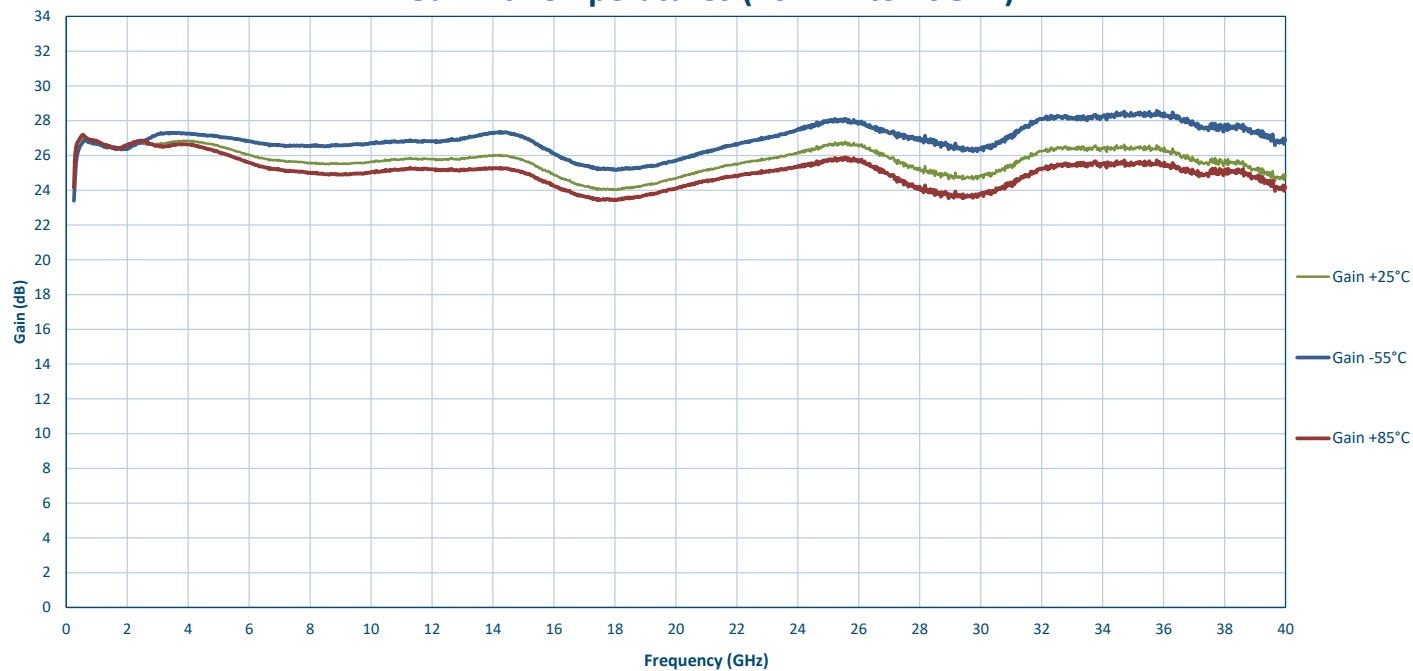
Quantic PMI PLANAR MONOLITHICS 7309-A GROVE ROAD, FREDERICK, MD 21704 USA TEL: (301) 662-5019 FAX: (301) 662-1731 WEB: WWW.QUANTICPMI.COM EMAIL: SALES@QUANTICPMI.COM ISO 9001 CERTIFIED		APPROVALS DATE 1/30/2005 DESIGN: J ESCANO REVISION:		TITLE OUTLINE PEC-30-500M40G-20-12-292FF-OPT250M	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 3 .00 0.005 0		ISSUED BY: B DATE: 8/19/05		SIZE B FIG NO. 05XQ0 DWG NO. 27050600 SCALE 3:1	
				REV. A2 SHEET 1 OF 2	

Technical Specifications

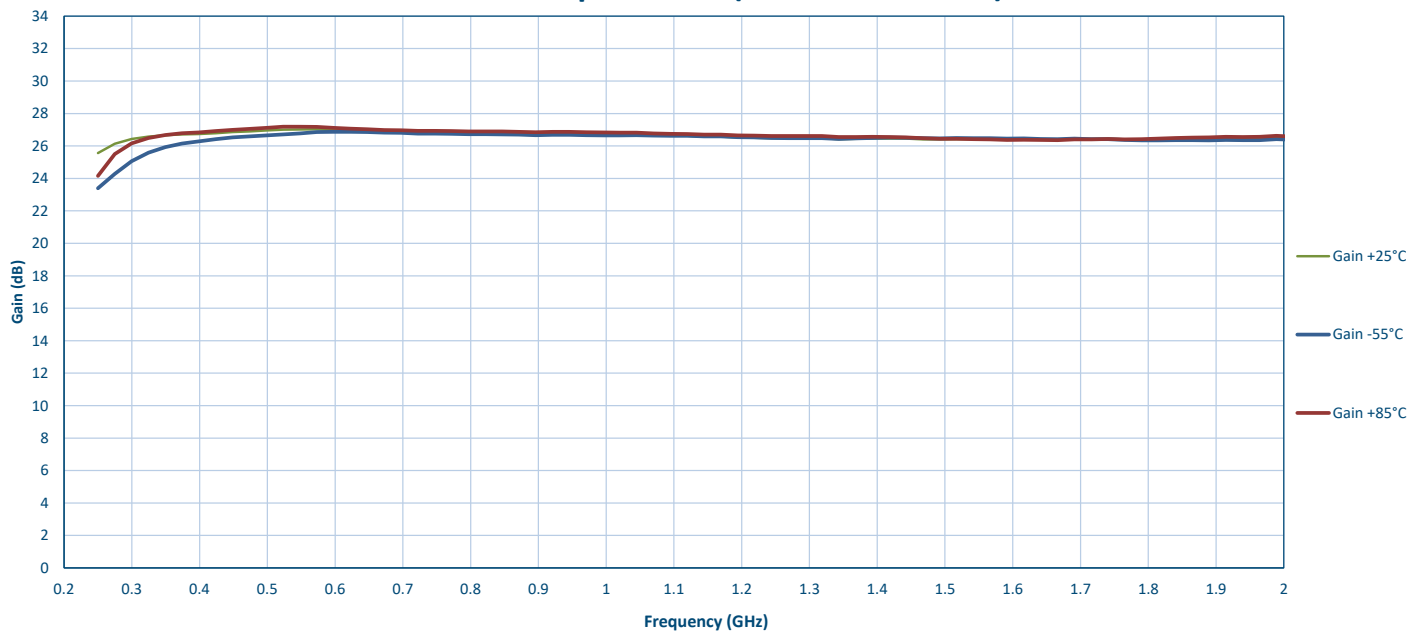
TEST ITEM NO	PARAMETERS	SPECIFIED VALUE	Test Results		
			+25°C	-55°C	+85°C
1	Frequency Range:	250 MHz - 40 GHz	250 MHz - 40 GHz	250 MHz - 40 GHz	250 MHz - 40 GHz
2	Gain:	+25 dB Nom	+ 27.03 dB Max. + 24.01 dB Min. See Graph	+ 28.57 dB Max. + 23.39 dB Min. See Graph	+ 27.19 dB Max. + 23.42 dB Min. See Graph
3	Gain Flatness:	±2.0 dB Max (+25°C to +85°C) (±3.0 Max. @ -55°C)	±1.51 dB See Graph	±2.59 dB See Graph	±1.88 dB See Graph
4	Noise Figure:	5.5 dB Typ (0.25-26.5 GHz) 7.0 dB Max (26.5 to 40 GHz)	4.74 dB	4.45 dB	5.17 dB
			(0.25 to 26.5 GHz)	(0.25 to 26.5 GHz)	(0.25 to 26.5 GHz)
			6.56 dB	6.03 dB	6.86 dB
			(26.5 to 40 GHz)	(26.5 to 40 GHz)	(26.5 to 40 GHz)
5	OP1dB:	+18 dBm Min (0.25-10 GHz) +17 dBm Min (10-18 GHz) +15 dBm Min (18-40 GHz)	See Graph	See Graph	See Graph
			+ 18.6 dBm	+ 18.81 dBm	+ 18.16 dBm
			+ 18.94 dBm	+ 18.81 dBm	+ 18.16 dBm
			+ 15.71 dBm	+ 15.58 dBm	+ 15.55 dBm
6	Psat:	+25 dBm Max (0.25-18 GHz) +22 dBm Max (18-40 GHz)	See Graph	See Graph	See Graph
			+ 21.75 dBm	+ 22.16 dBm	+ 21.36 dBm
			+ 19.37 dBm	+ 20.01 dBm	+ 18.74 dBm
7	Input Power Handling:	+23 dBm Max (0.25 - 26 GHz) +20 dBm Max (26 - 40 GHz)	See Graph	See Graph	See Graph
			Pass +23 dBm See Graph	Pass +23 dBm See Graph	Pass +23 dBm See Graph
8	VSWR: (Input/Output)	2.0:1 Max. (Input) 2.5:1 Max. (Output)	Pass +20 dBm See Graph	Pass +20 dBm See Graph	Pass +20 dBm See Graph
			1.91 :1 (In)	1.96 :1 (In)	1.9 :1 (In)
			1.87 :1 (Out)	2.05 :1 (Out)	1.73 :1 (Out)
9	DC Supply:	+12 to +15 VDC @ 400 mA Max (Iq)	See Graph	See Graph	See Graph
			+12 to +15 VDC @ 306 mA	+12 to +15 VDC @ 305 mA	+12 to +15 VDC @ 304 mA

**TYPICAL CHARACTERISTICS
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Gain Vs Temperatures (10MHz to 40GHz)

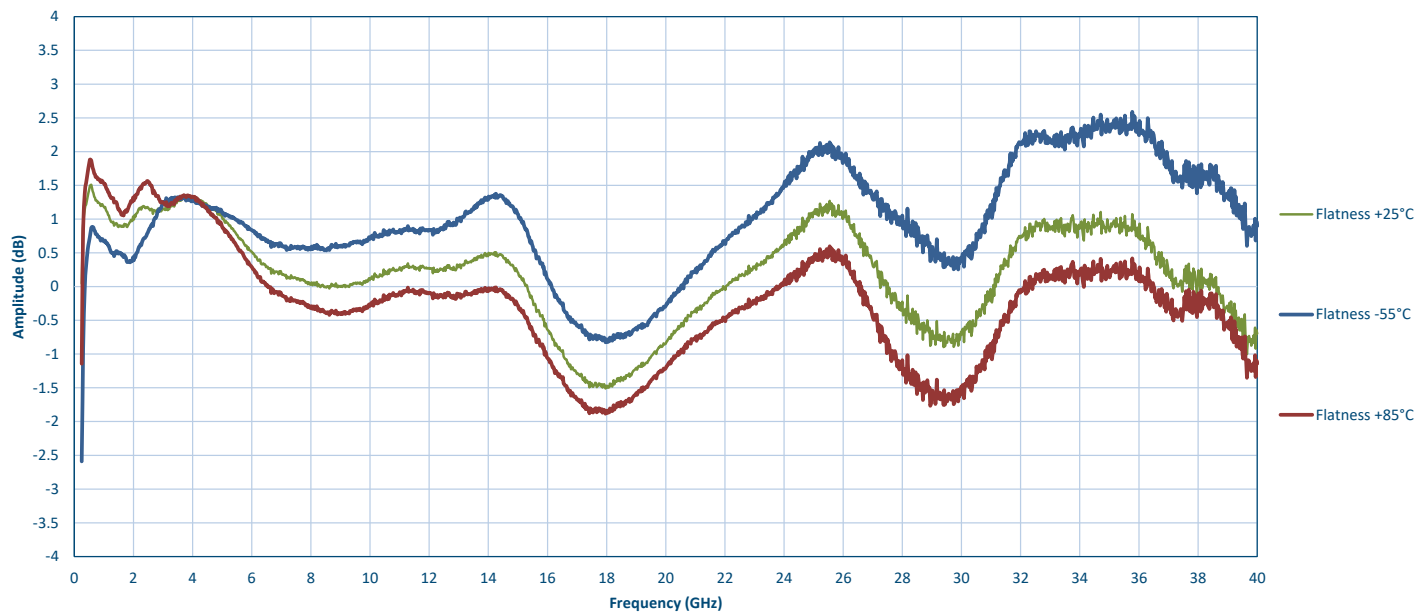


Gain Vs Temperatures (0.2 GHz to 2 GHz)

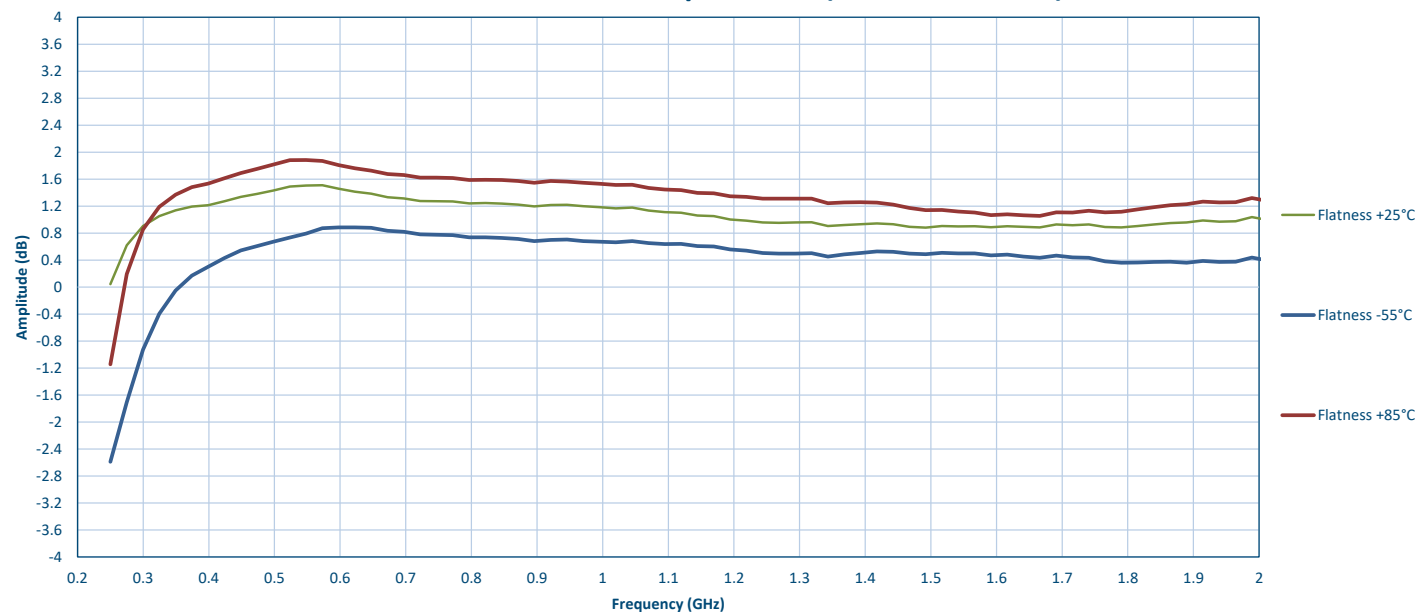


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Gain Flatness Vs Temperatures (10 MHz to 40 GHz)

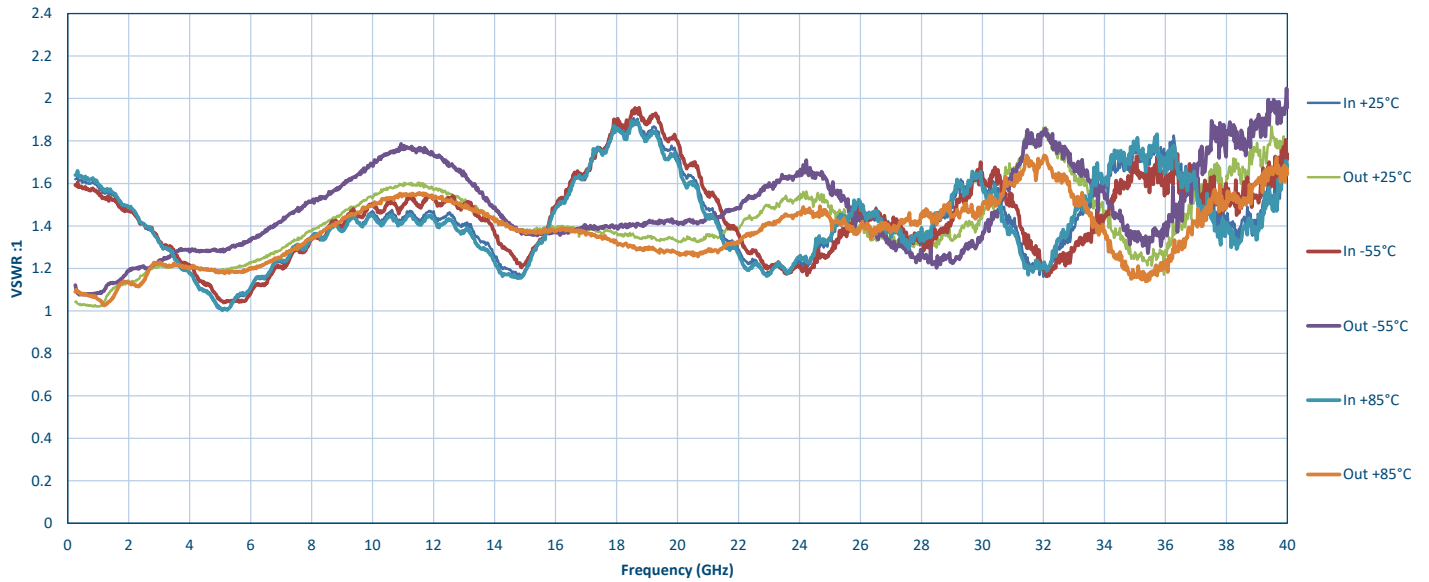


Gain Flatness Vs Temperatures (0.2 GHz to 2GHz)

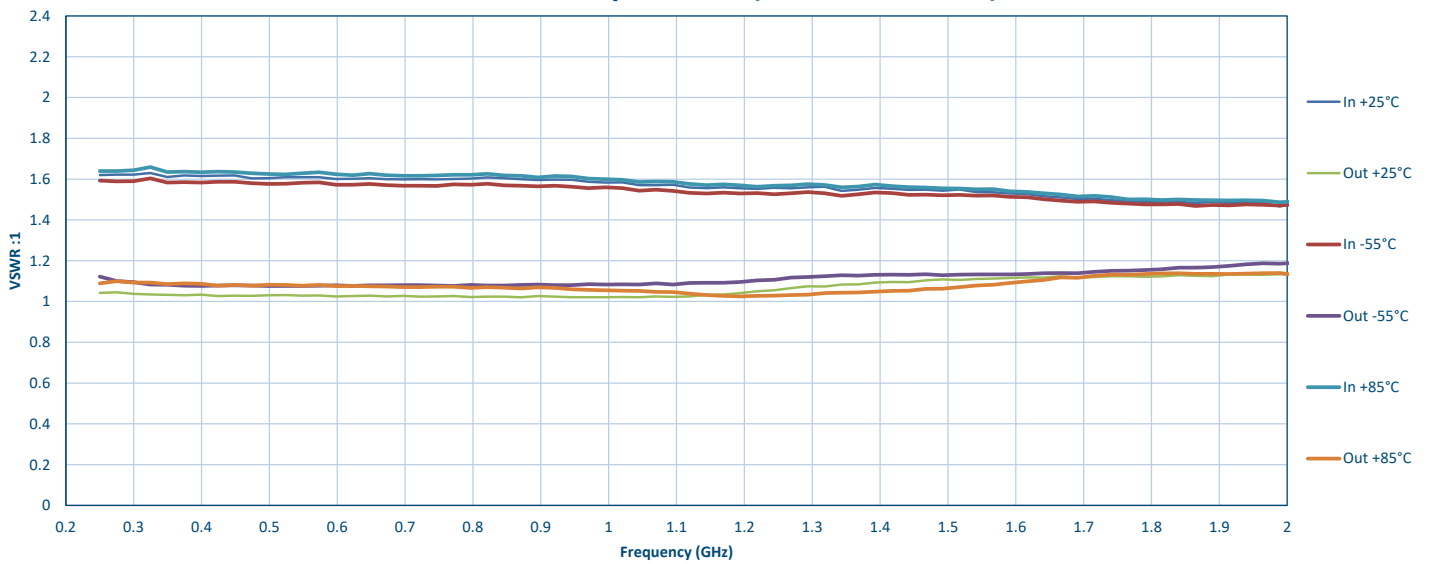


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VSWR Vs Temperatures (10 MHz to 40 GHz)

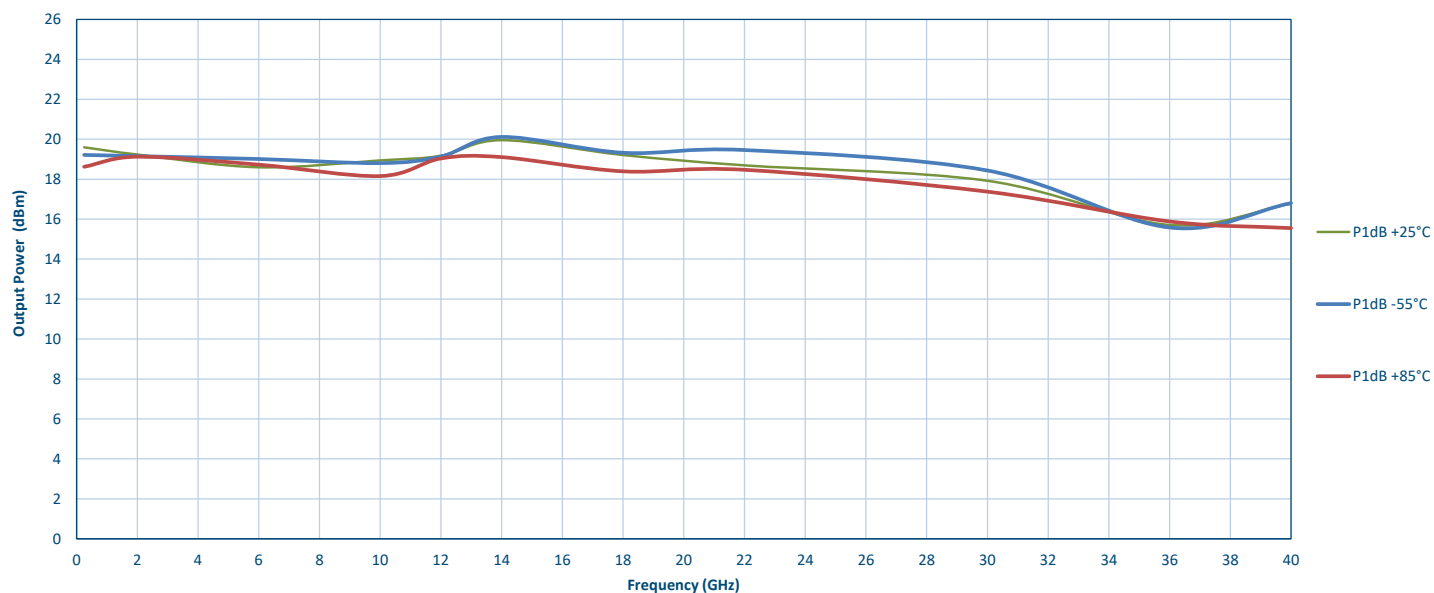


VSWR Vs Temperatures (0.2 GHz to 2 GHz)

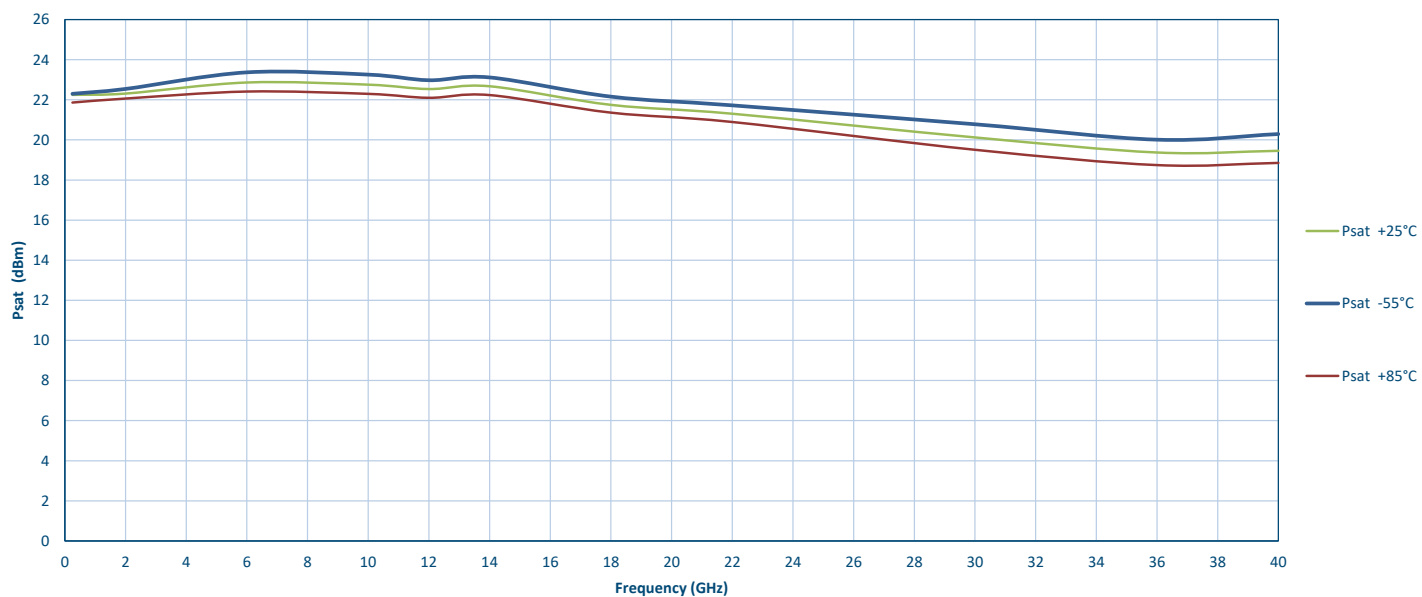


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OP1dB Vs Temperatures

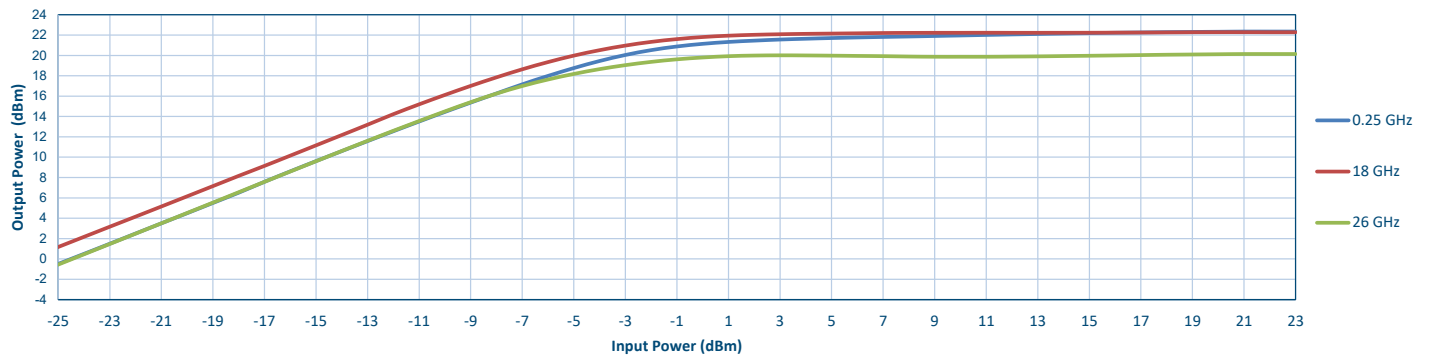


PSAT Vs Temperatures

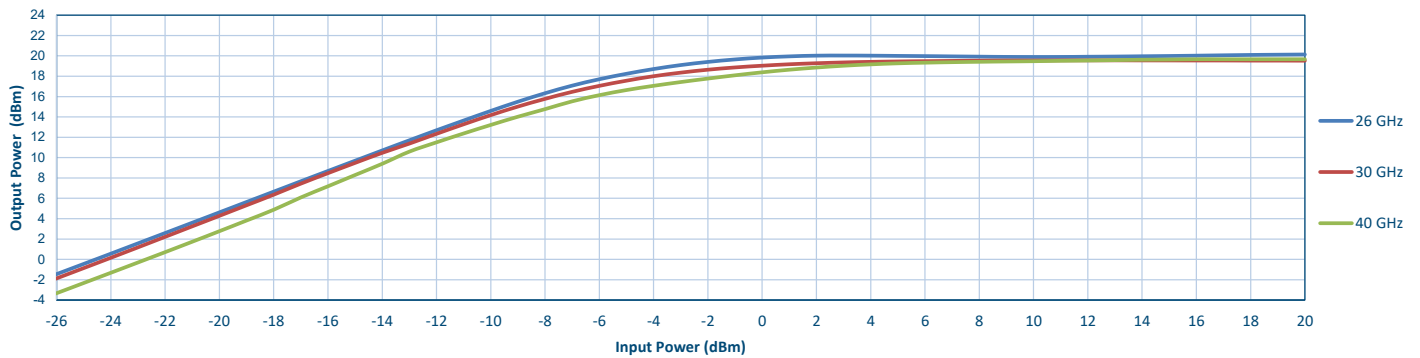


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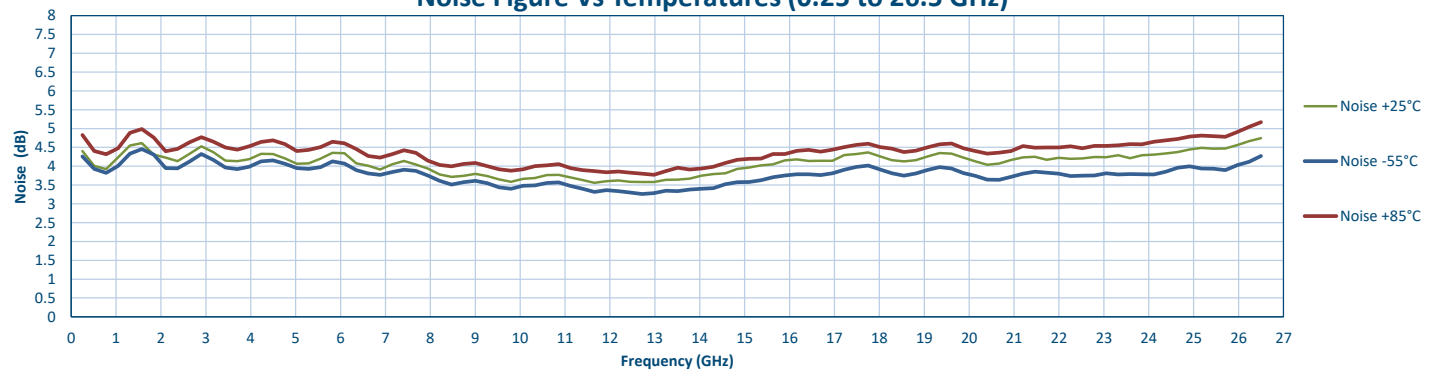
Power Test (0.25 GHz to 26 GHz)



Power Test (26 GHz to 40 GHz)



Noise Figure Vs Temperatures (0.25 to 26.5 GHz)



Noise Figure Vs Temperatures (26.5 to 40 GHz)

