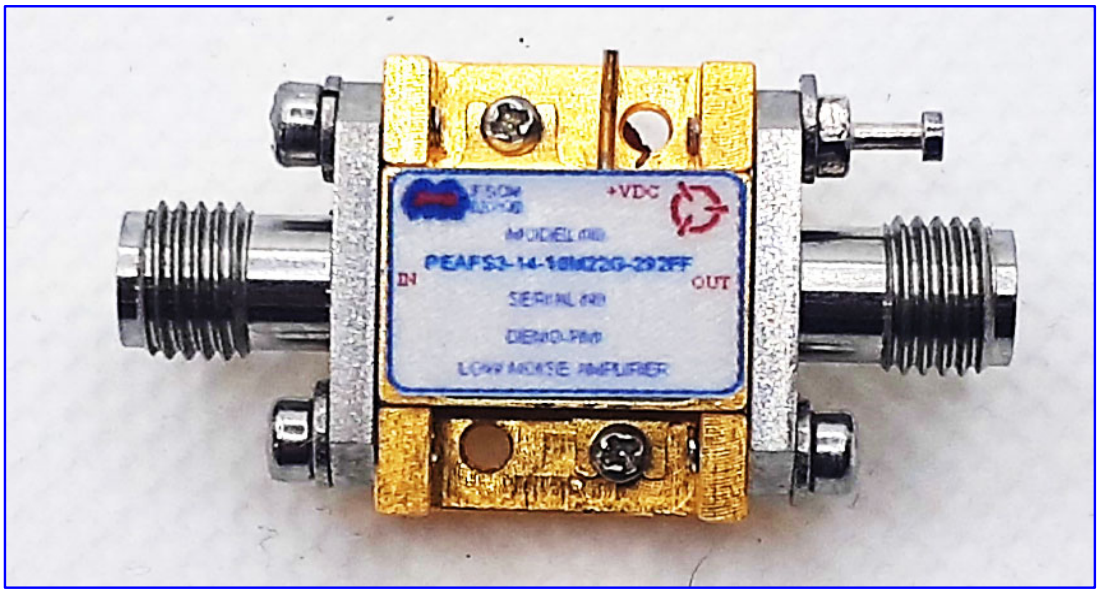
Typical Characteristics
ON
PEAFS3-14-10M22G-292FF

PMI MODEL NUMBER: PEAFS3-14-10M22G-292FF IS A VERY LOW NOISE AMPLIFIER WITH WORKING FREQUENCY RANGE OF 10MHZ TO 22GHZ. THIS AMPLIFIER IS SUPPLIED IN A HOUSING THAT CAN BE USED AS A 2.92MM SURFACE MOUNT OR CONNECTORIZED COMPONENT.



February 3, 2021

Designed By:

Dr. Ashok Gorwara & Sebastian Palacio

Tested and Reported By:

Alfredo Lopez

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Email: sales@pmi-rf.com

Typical Characteristics ON PEAFS3-14-10M22G-292FF

Outline Drawing

DESCRIPTION:

PMI MODEL NUMBER: PEAFS3-14-10M22G-292FF IS A VERY LOW NOISE AMPLIFIER WITH WORKING FREQUENCY RANGE OF 10MHZ TO 22GHZ. THIS AMPLIFIER IS SUPPLIED IN A HOUSING THAT CAN BE USED AS A 2.92MM SURFACE MOUNT OR CONNECTORIZED COMPONENT.

SPECIFICATIONS:

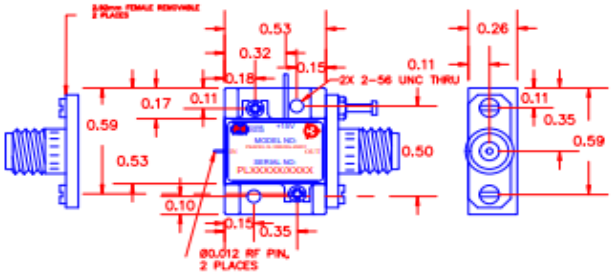
Frequency Range:	10 MHz to 22 GHz
Gain:	+14 dB Typ
Gain Flatness:	±0.8 dB Max
Noise Figure: (See Note)	3.0 dB Typ. (20MHz to 0.5 GHz) 2.5 dB Typ. (0.5 to 18 GHz) 3.4 dB Typ. (18 to 22 GHz)
OP1dB:	+14 dBm Typ. (10MHz to 18 GHz) +13 dBm Typ. (18 to 22 GHz)
PSat:	+16 dBm Typ. (10 MHz to 18 GHz) +15 dBm Typ. (18 to 22 GHz)
OIP3:	+25 dBm Typ. (10MHz to 20 GHz) +20 dBm Typ. (20 to 22 GHz)
VSWR Input/Output:	2.0:1 Max.
Reverse Isolation:	19 dB Typ. (10 MHz to 18 GHz) 20 dB Typ. (18 to 22 GHz)
DC Supply:	+3.3VDC @ 50mA Max.
Connectors In/Out:	2.92mm Female
Finish:	Gold Plated

Note: Noise figure only valid above 20 MHz

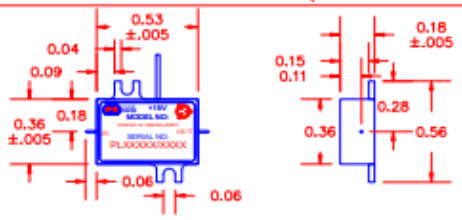
REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	02/03/21	
	B1	ECN # 22-0003	1/20/22	
	C1	ECN # 25-0015	1/22/25	

HOUSING WITH CARRIER



HOUSING WITHOUT CARRIER (SURFACE MOUNT)



ENVIRONMENTAL RATINGS:

Temperature:	-40°C to + 85°C (Operating) -40°C to +100°C (Storage)
Humidity:	MIL-STD-202F, METHOD 103B COND B.
Shock:	MIL-STD-202F, METHOD 213B COND B.
Altitude:	MIL-STD-202F, METHOD 105C COND B.
Temperature Cycle:	MIL-STD-202F, METHOD 107D COND A

Note: The above specifications are subject to change or revision. Specifications will vary over operating temperature.

FEATURES:
Internal Voltage Regulation
Unconditional Stability

AVAILABLE OPTIONS:
Various Package types
Various Connector types
Temperature Compensation
Gain and Phase Matching
MIL-STD-883 Screening Available

PMI CONFIDENTIAL AND PROPRIETARY

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E-MAIL: sales@pmi-rf.com
ISO 9001 CERTIFIED

APPROVALS	DATE
DRAWN	01/3/2021
REDRAWN	
ISSUED	

TITLE: PRODUCT FEATURE
PEAFS3-14-10M22G-292FF

SIZE A | FSCM NO. | DWG NO 27041220 | REV. C1
SCALE N:S | SHEET 1 OF 1

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

Typical Characteristics ON PEAFS3-14-10M22G-292FF

Technical Specifications

TEST ITEM NO.	PARAMETERS	SPECIFIED VALUE	Test Results			QA QC
			+25°C	-40°C	+85°C	
1	Frequency Range:	10MHz to 22GHz	**10MHz to 22GHz**	**10MHz to 22GHz**	**10MHz to 22GHz**	
2	Gain:	+14 dB Typ. (10 MHz to 22 GHz)	**14.48 dB Max.**	**14.57 dB Max.**	**14.33 dB Max.**	
			13.13 dB Min.	**13.21 dB Min.**	**12.96 dB Min.**	
			See Graphs	**See Graphs**	**See Graphs**	
3	Gain Flatness:	±0.8 dB Max. (10MHz to 22 GHz)	**0.67 dB (±)**	**0.68 dB (±)**	**0.79 dB (±)**	
			See Graphs	**See Graphs**	**See Graphs**	
4	Noise Figure:	3 dB Typ. (20MHz - 0.5GHz)	**3.86 dB Max / 2 dB Min**	**3.86 dB Max / 2 dB Min**	**3.86 dB Max / 2 dB Min**	
		2.5 dB Typ. (0.5 to 18GHz)	**2.54 dB Max / 1.85 dB Min**	**2.54 dB Max / 1.85 dB Min**	**2.54 dB Max / 1.85 dB Min**	
		3.4 dB Typ. (18 to 22 GHz)	**3.39 dB Max / 2.59 dB Min**	**3.39 dB Max / 2.59 dB Min**	**3.39 dB Max / 2.59 dB Min**	
		See Note	**See Graphs**	**See Graphs**	**See Graphs**	
5	OP1dB:	+14 dBm Typ.(10 MHz to 18 GHz)	**14.35 dBm**	**13.86 dBm**	**13.54 dBm**	
		+13 dB Typ. (18 to 22 GHz)	**12.46 dBm**	**12.13 dBm**	**11.86 dBm**	
			See Graphs	**See Graphs**	**See Graphs**	
6	Psat:	+16 dBm Typ. (10 MHz to 18 Ghz)	**15.39 dBm**	**15.89 dBm**	**14.82 dBm**	
		+15 dBm Typ. (18 to 22 GHz)	**14.37 dBm**	**14.92 dBm**	**13.77 dBm**	
			See Graphs	**See Graphs**	**See Graphs**	
7	OIP3	+25 dBm Typ. (10MHz to 20 GHz)	**29.18 dBm Max**	**29.18 dBm Max**	**29.18 dBm Max**	
			21.65 Min. dBm	**21.65 Min. dBm**	**21.65 Min. dBm**	
		+20 dBm Typ. (20 to 22 GHz)	**21.65 dBm Max.**	**21.65 dBm Max.**	**21.65 dBm Max.**	
			18.63 dBm Min.	**18.63 dBm Min.**	**18.63 dBm Min.**	
			See Plots	**See Plots**	**See Plots**	
8	VSWR Input/Output:	2.0:1 Max.	**1.97 :1**	**2 :1**	**1.98 :1**	
			See Graphs	**See Graphs**	**See Graphs**	
9	Reverse Isolation:	19 dB Typ. (10 MHz to 18 Ghz)	**19.12 dB**	**19.11 dB**	**19.05 dB**	
		20 dB Typ. (18 to 22 GHz)	**20.52 dB**	**20.46 dB**	**20.71 dB**	
			See Graphs	**See Graphs**	**See Graphs**	
10	DC Supply:	+3.3 VDC @ 50 mA Max.	**+3.3 VDC @ 47 mA**	**+3.3 VDC @ 46 mA**	**+3.3 VDC @ 48 mA**	

Note: Noise figure only valid above 20 MHz

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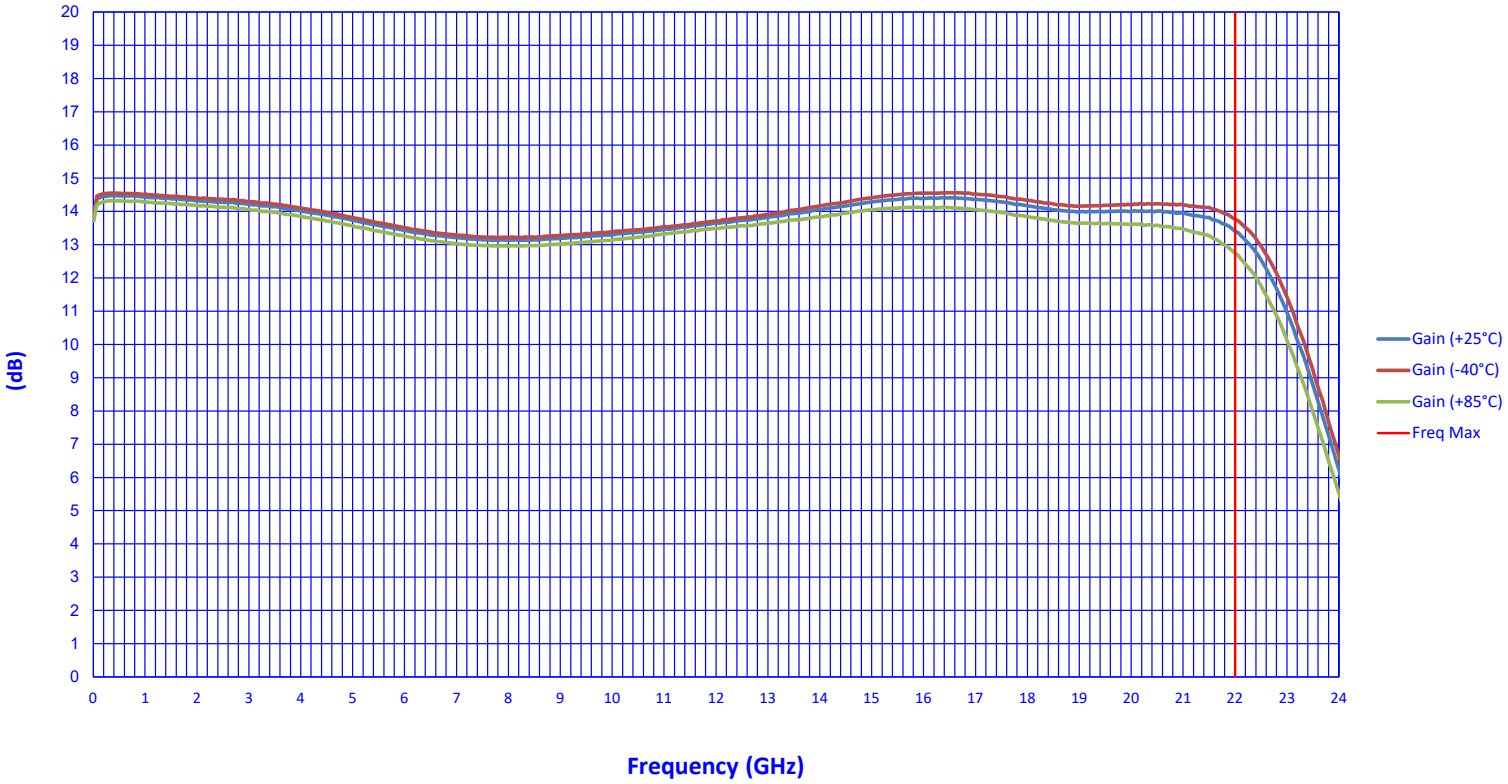
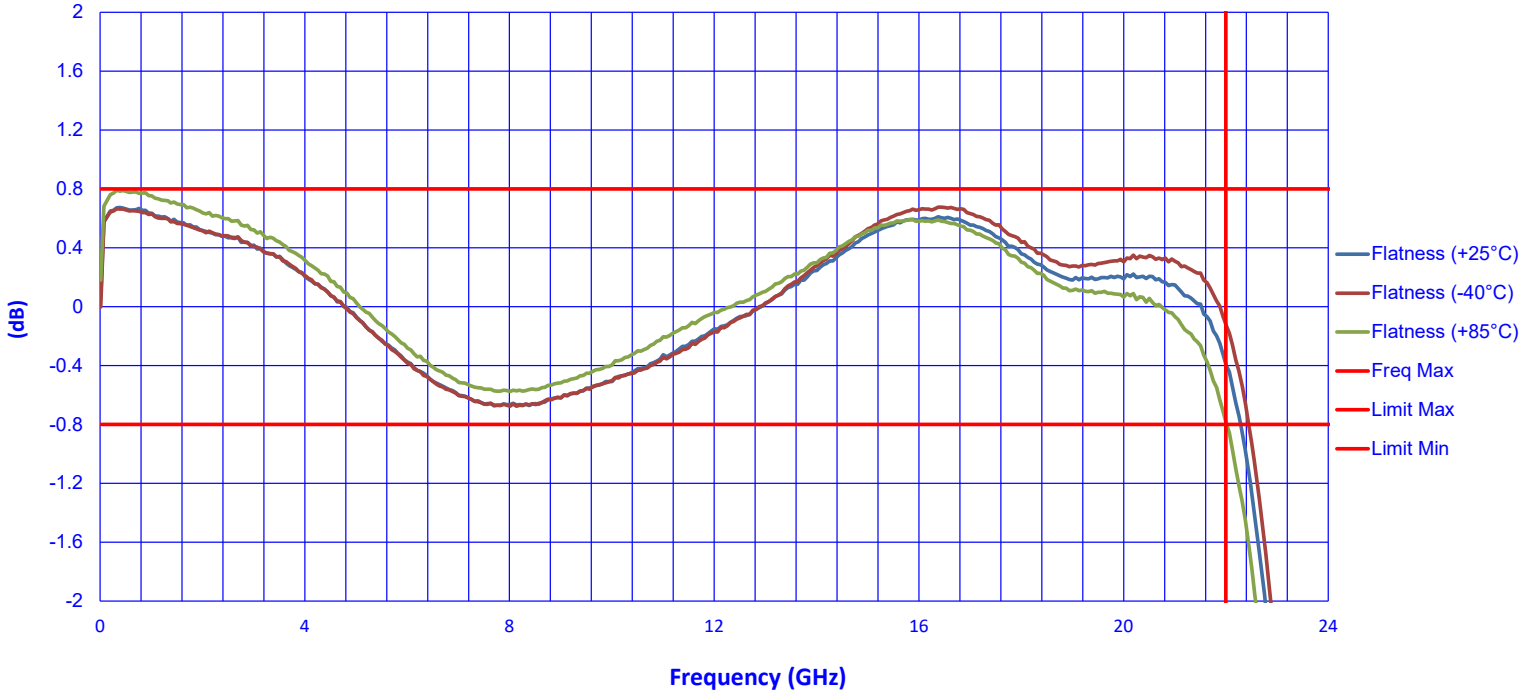
Gain Vs Temperature



Gain Flatness Vs Temperature



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Typical Characteristics
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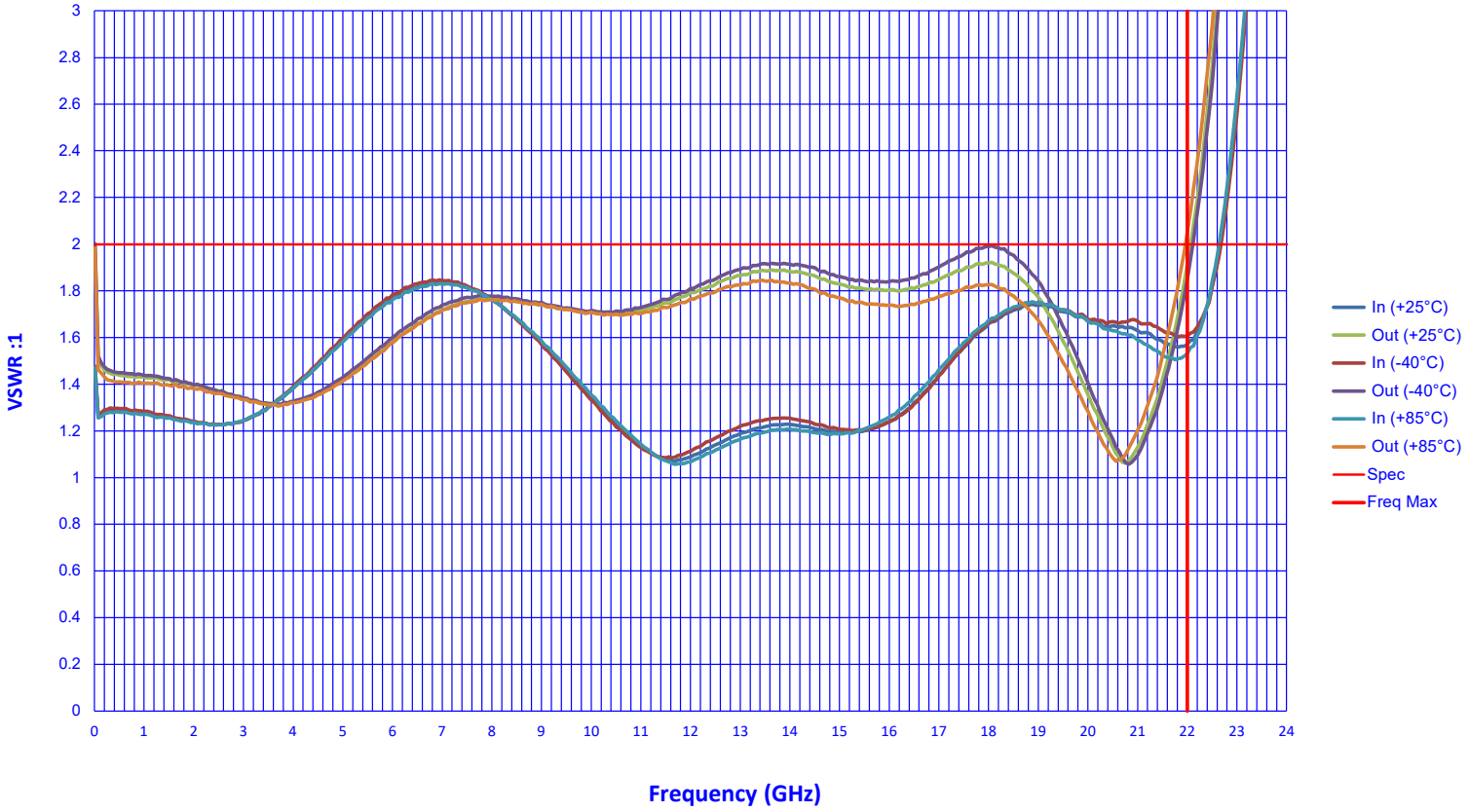
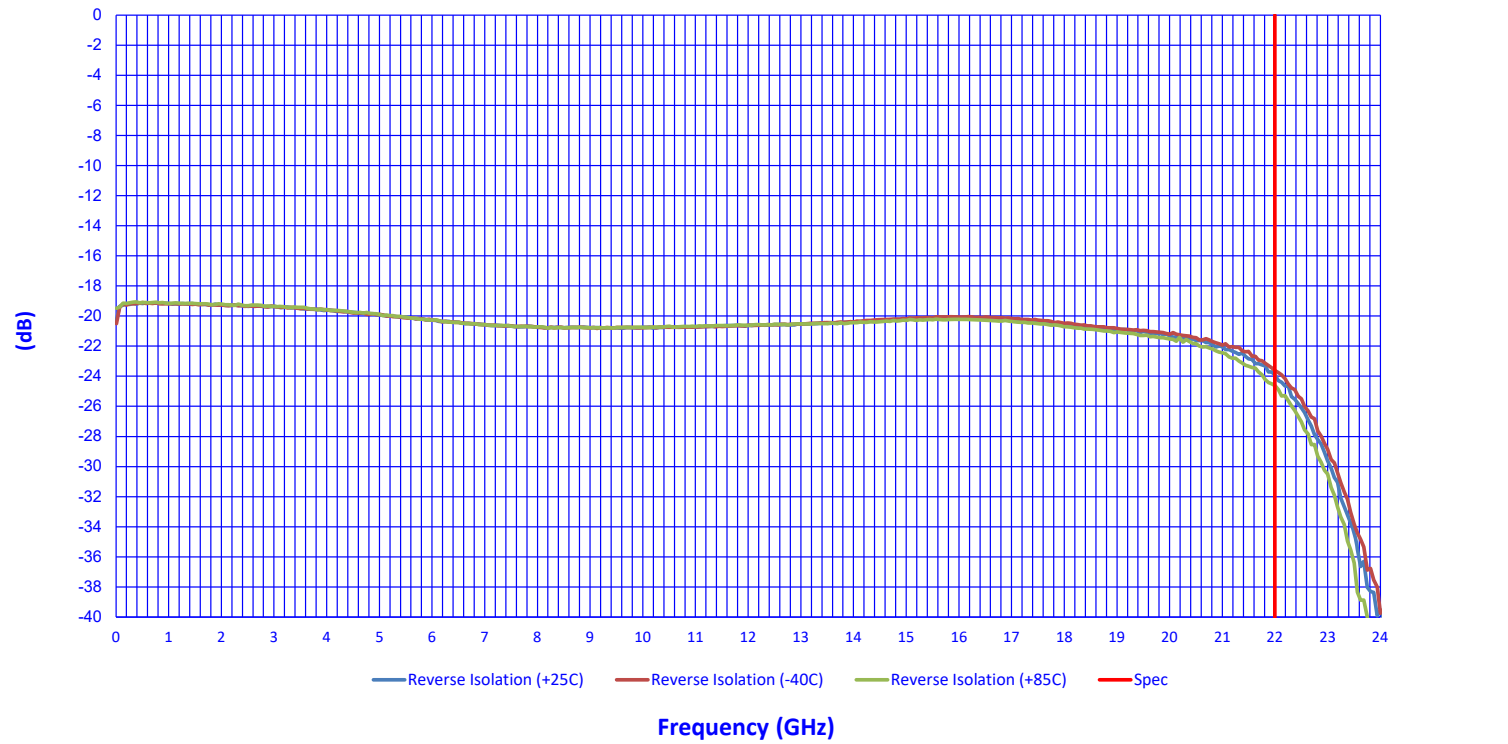
VSWR Vs Temperature



Reverse Isolation Vs Temperature



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Typical Characteristics
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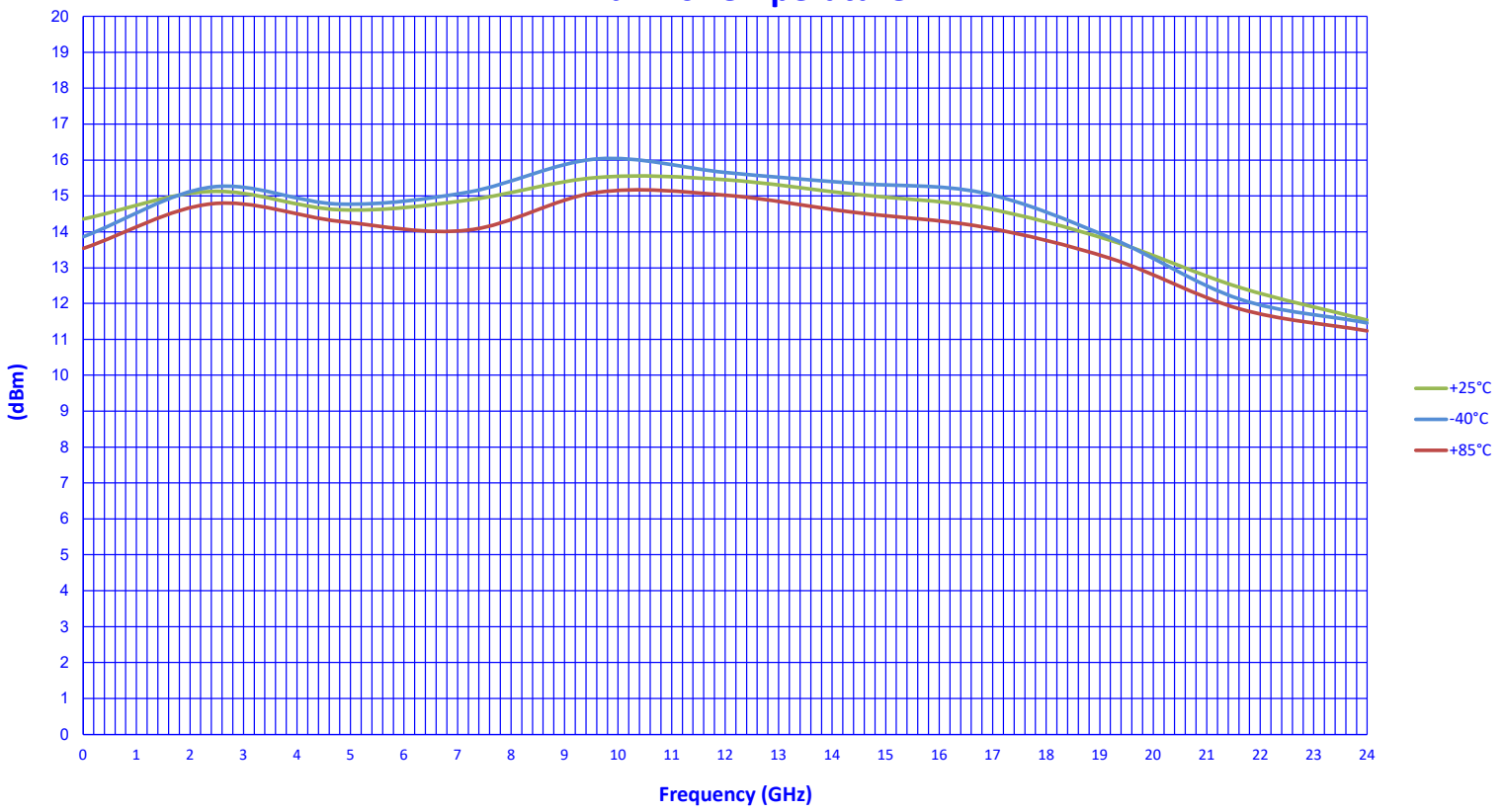
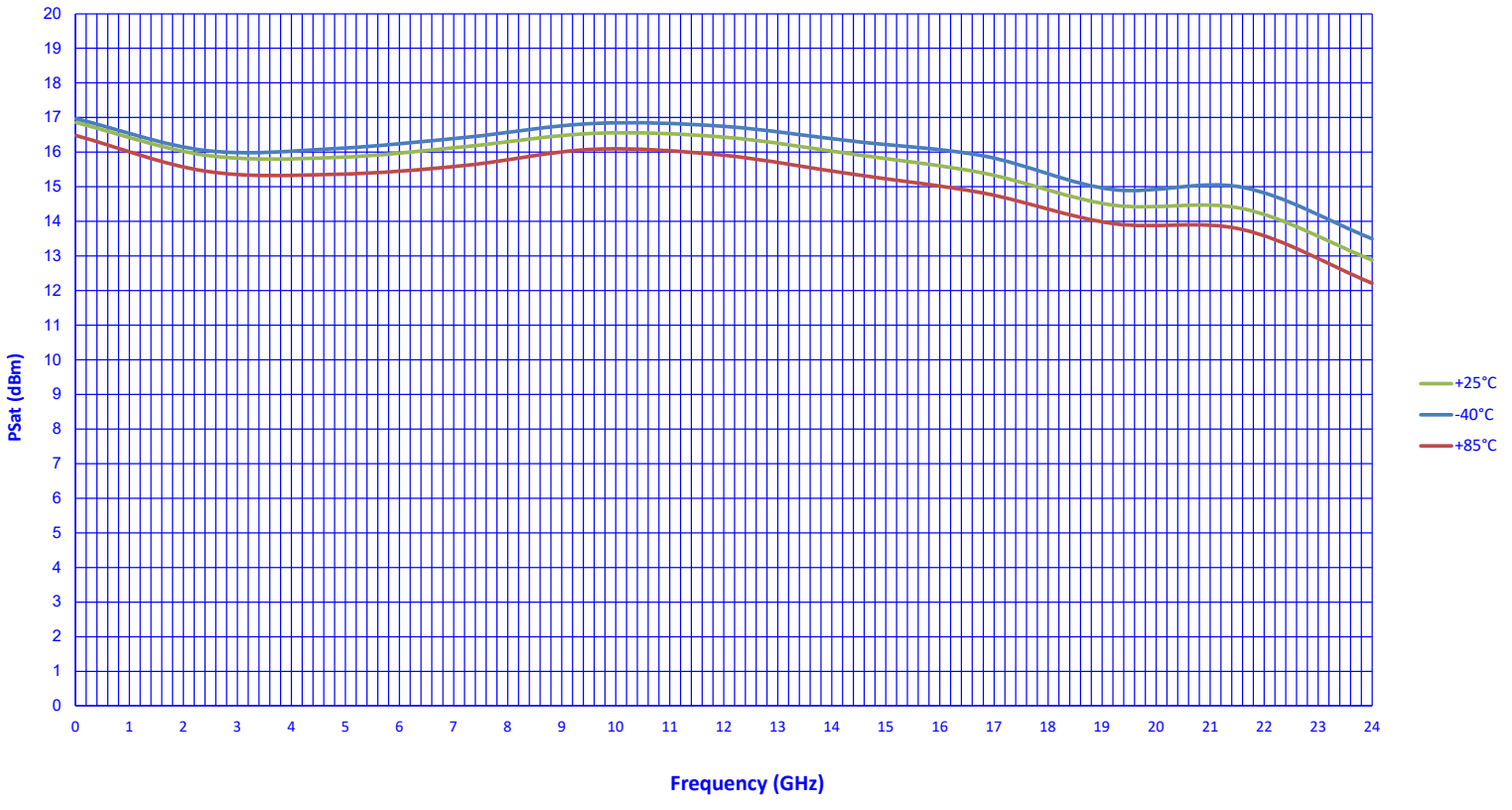
P1dB Vs Temperature



Psat Vs Temperature



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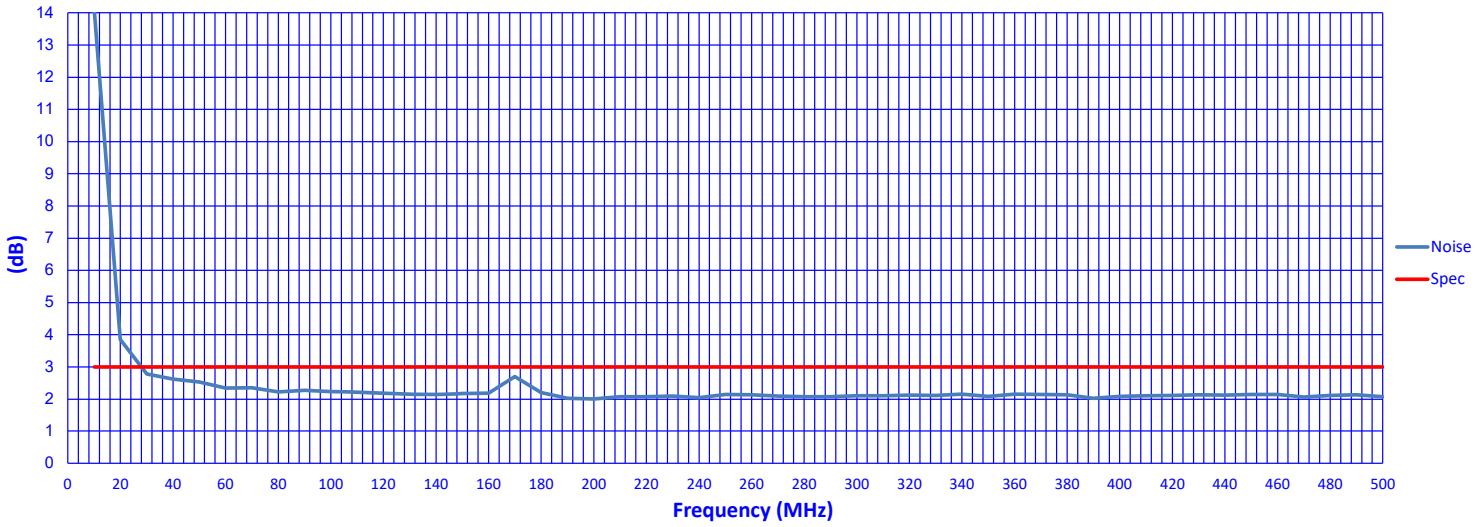
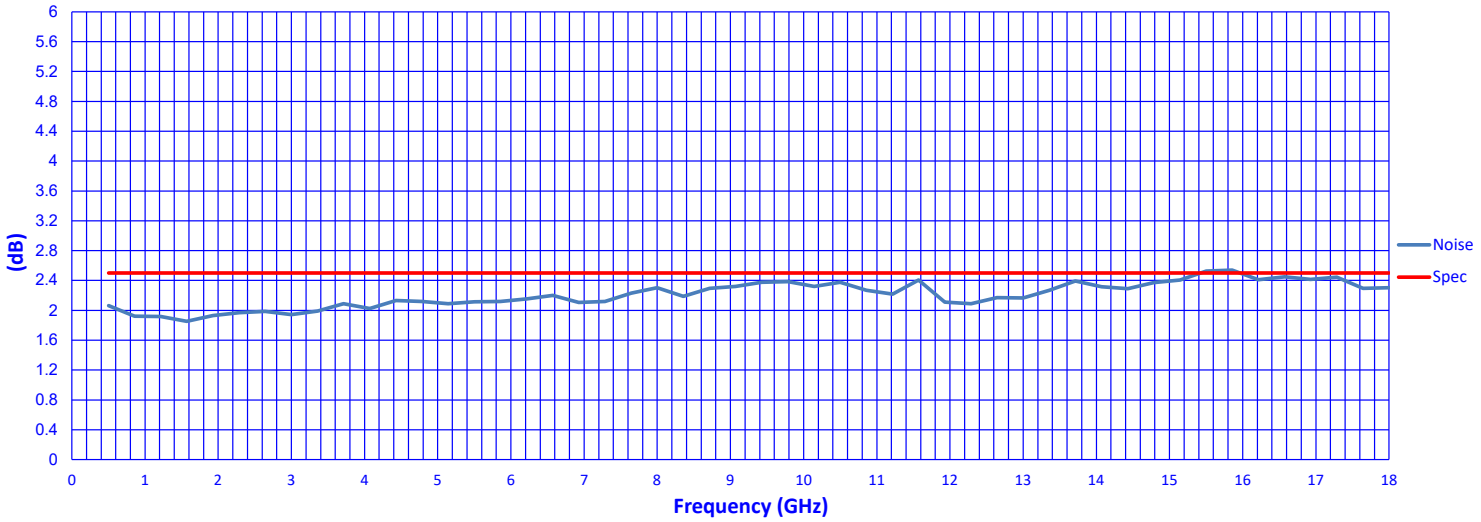
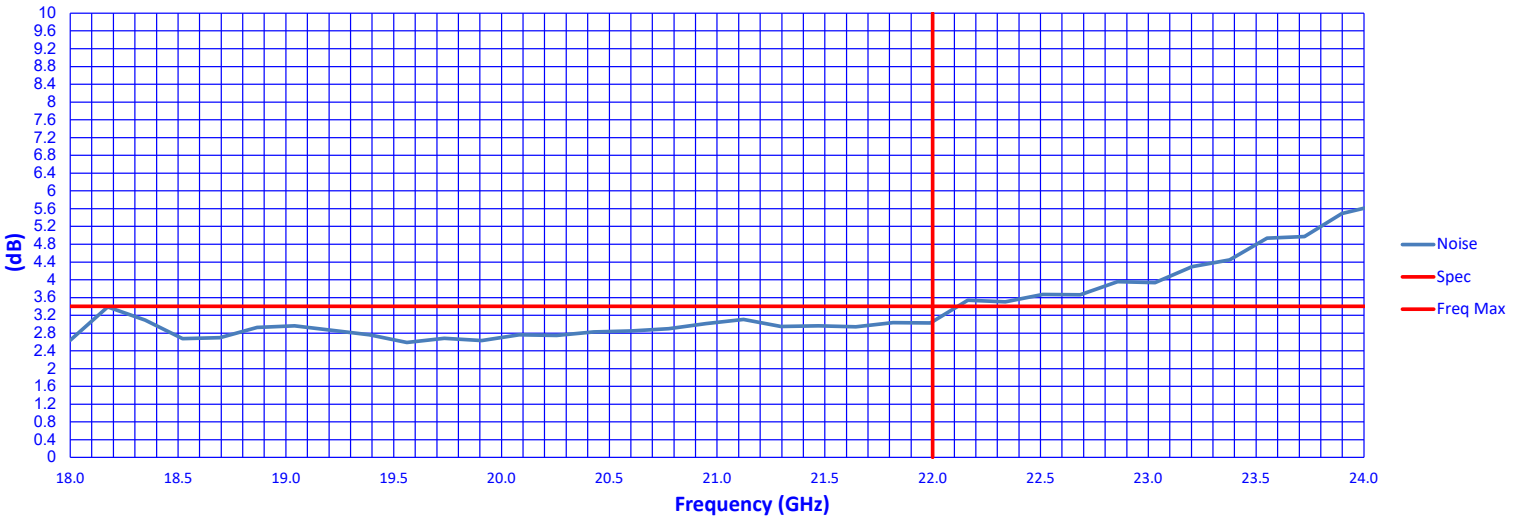
Noise Figure 10MHz to 0.5 GHz



Noise Figure 0.5 to 18 GHz



Noise Figure 18 to 22 GHz



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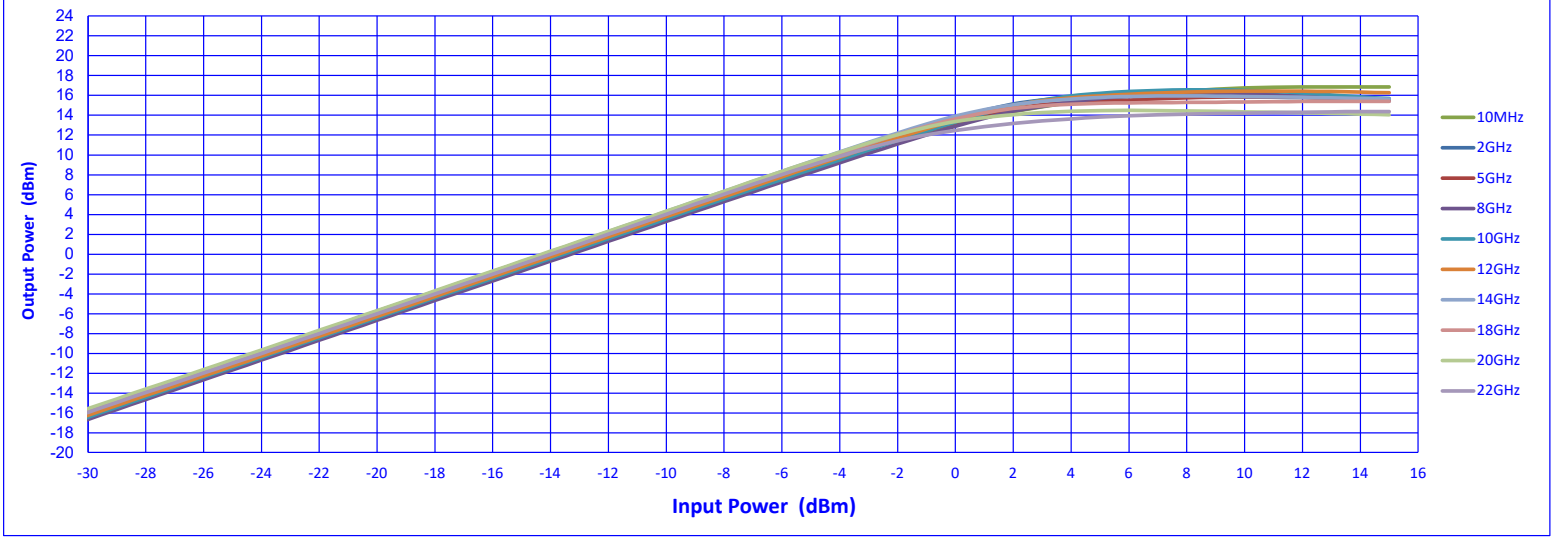
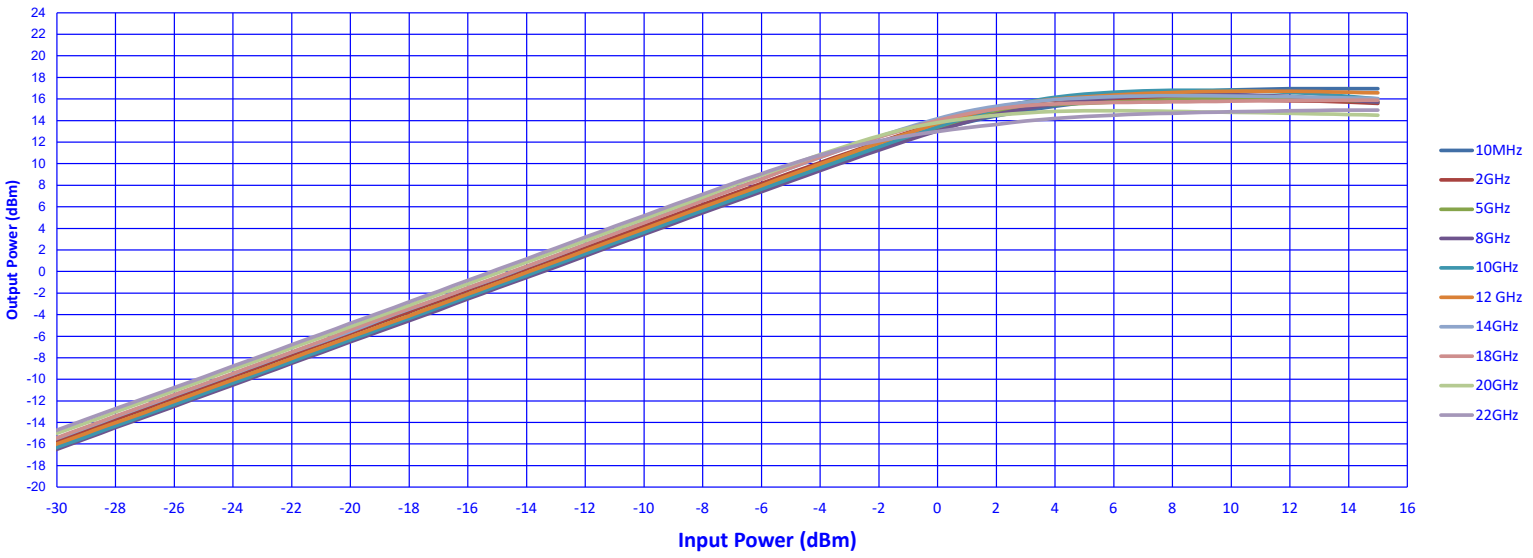
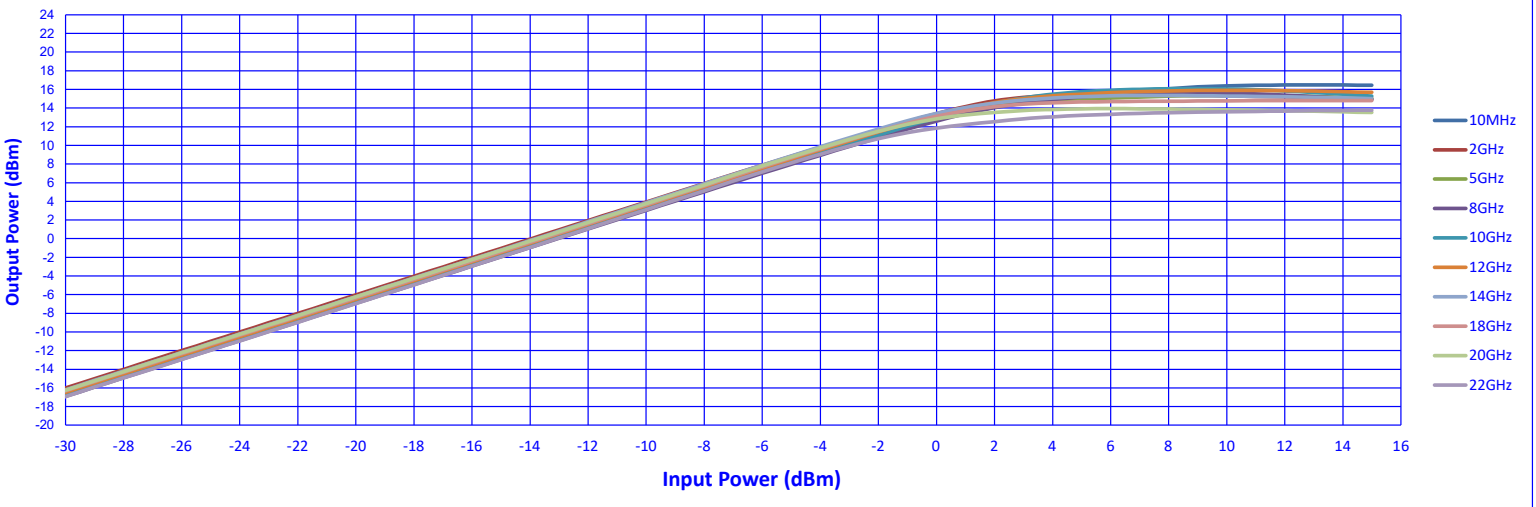
Input Power Vs Output Power (+25°C)



Input Power Vs Output Power (-40°C)



Input Power Vs Output Power



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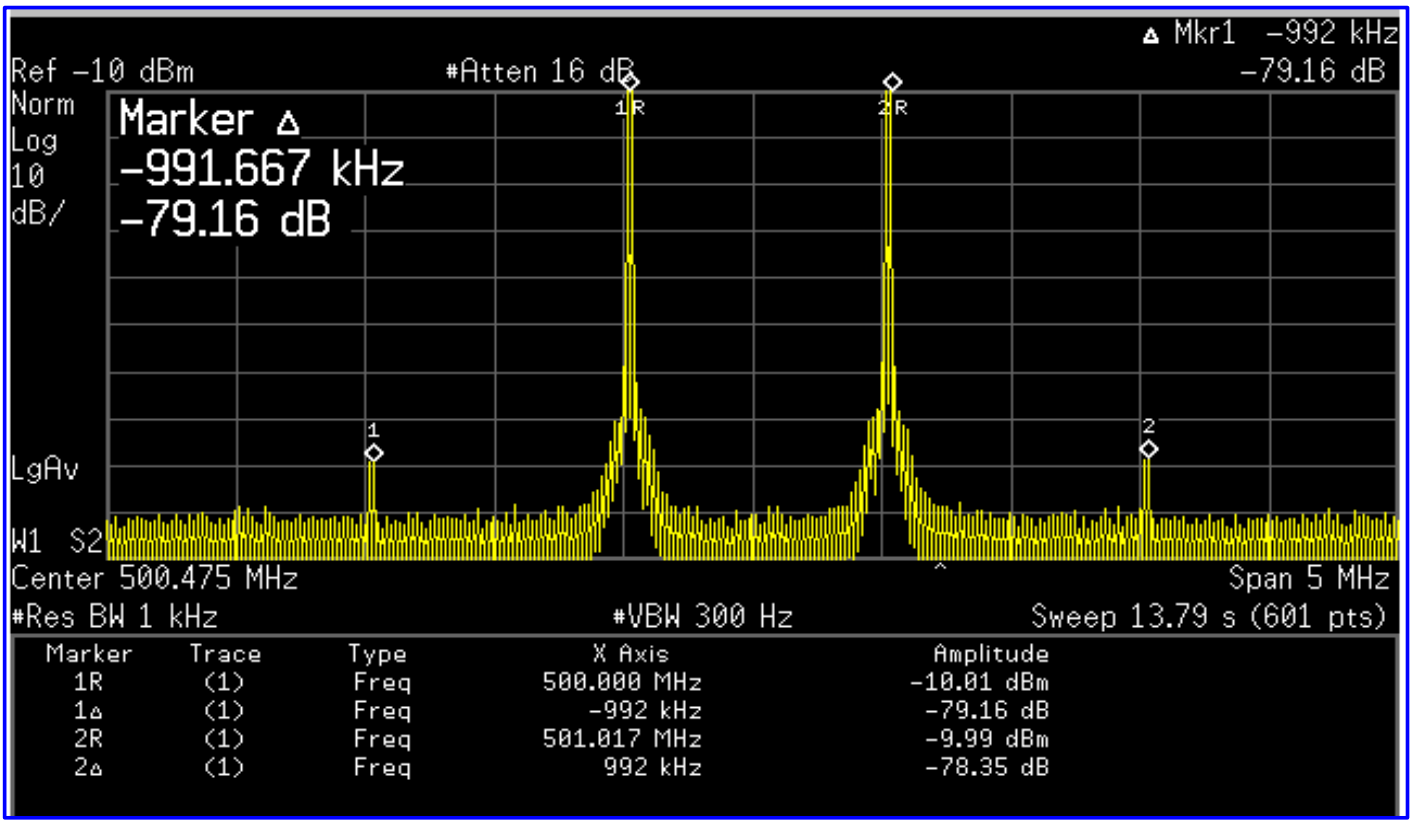
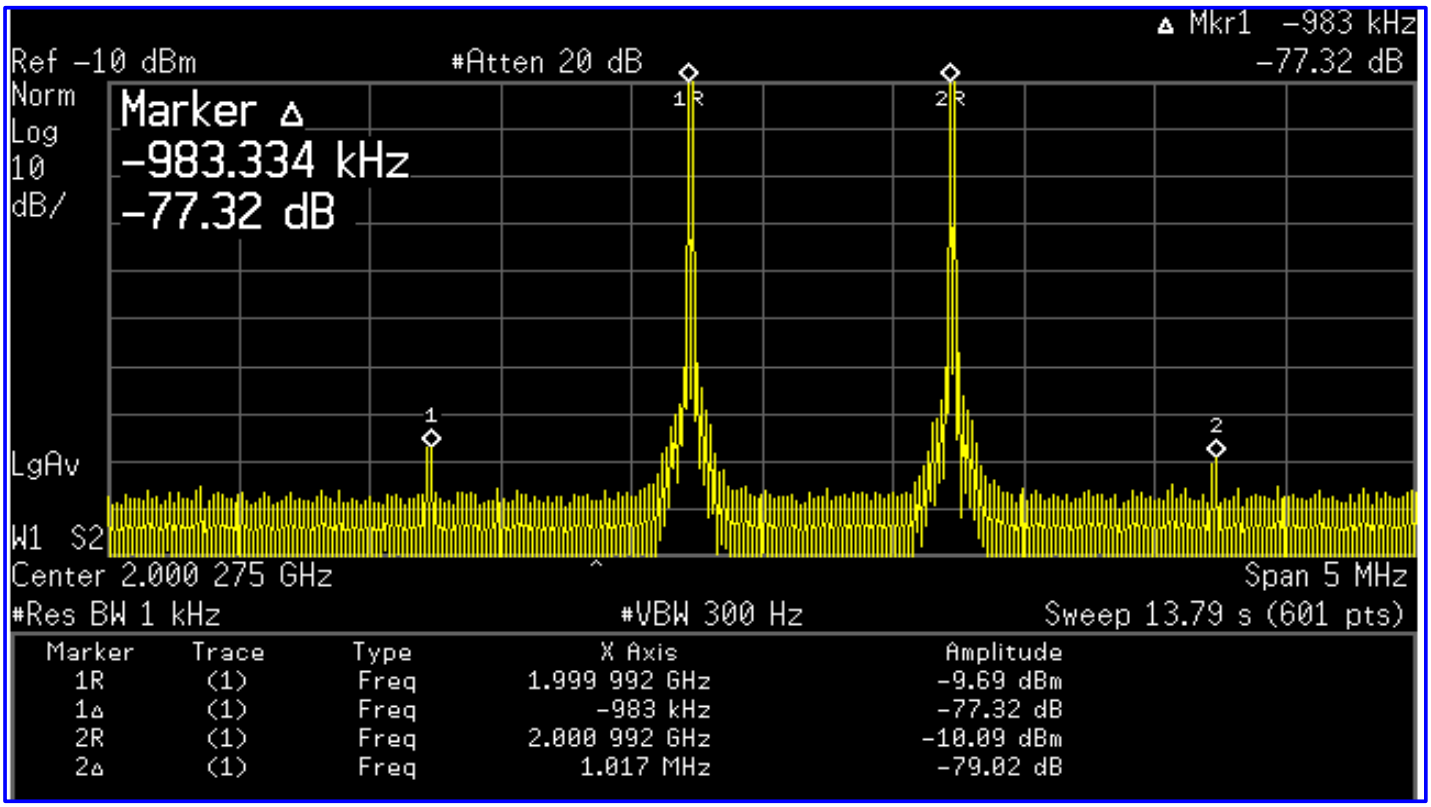
Output IP3 @ 0.5GHz



OIP3 = Pout +dBc/2 = 29.18 dBm

Output IP3 @ 2 GHz



OIP3 = Pout +dBc/2 = 28.66 dBm

Typical Characteristics
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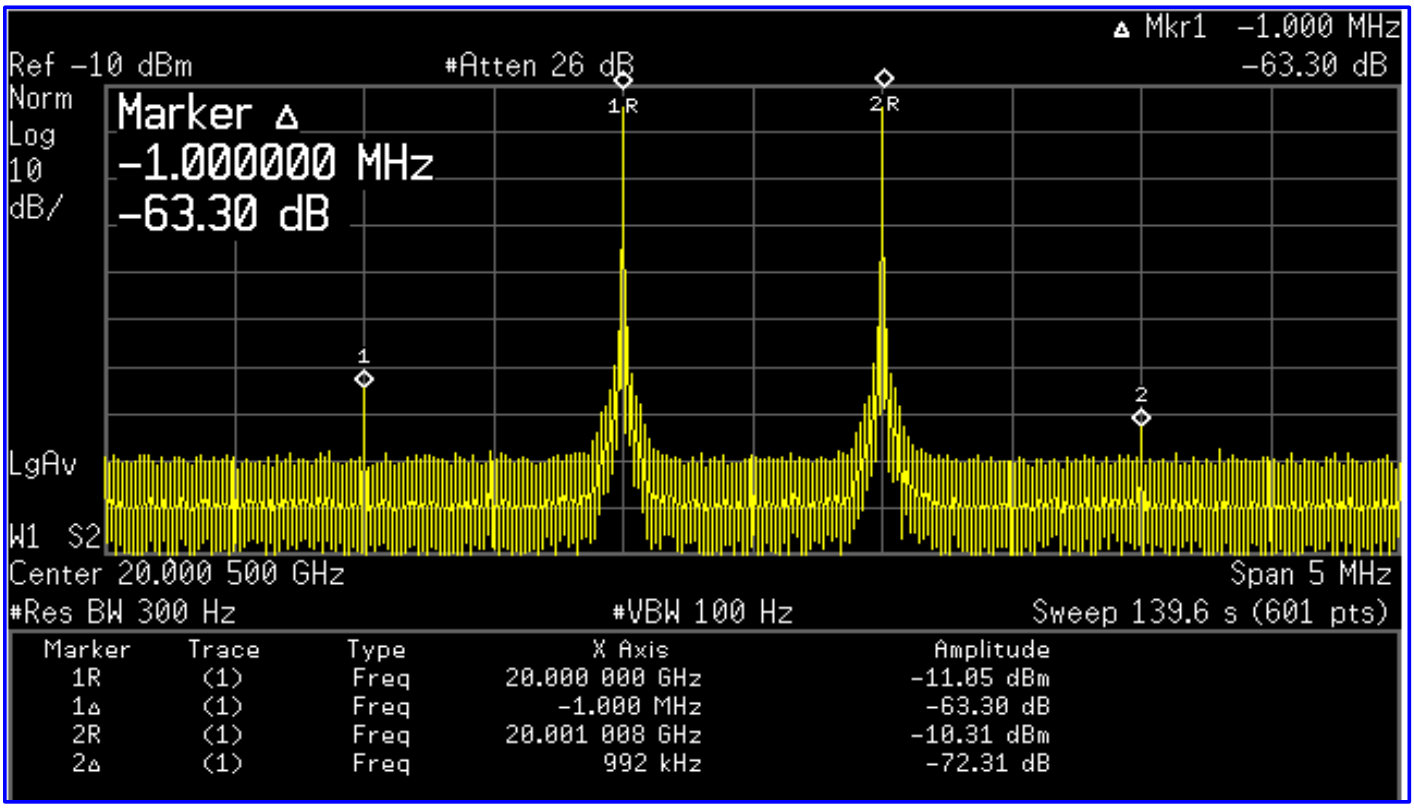
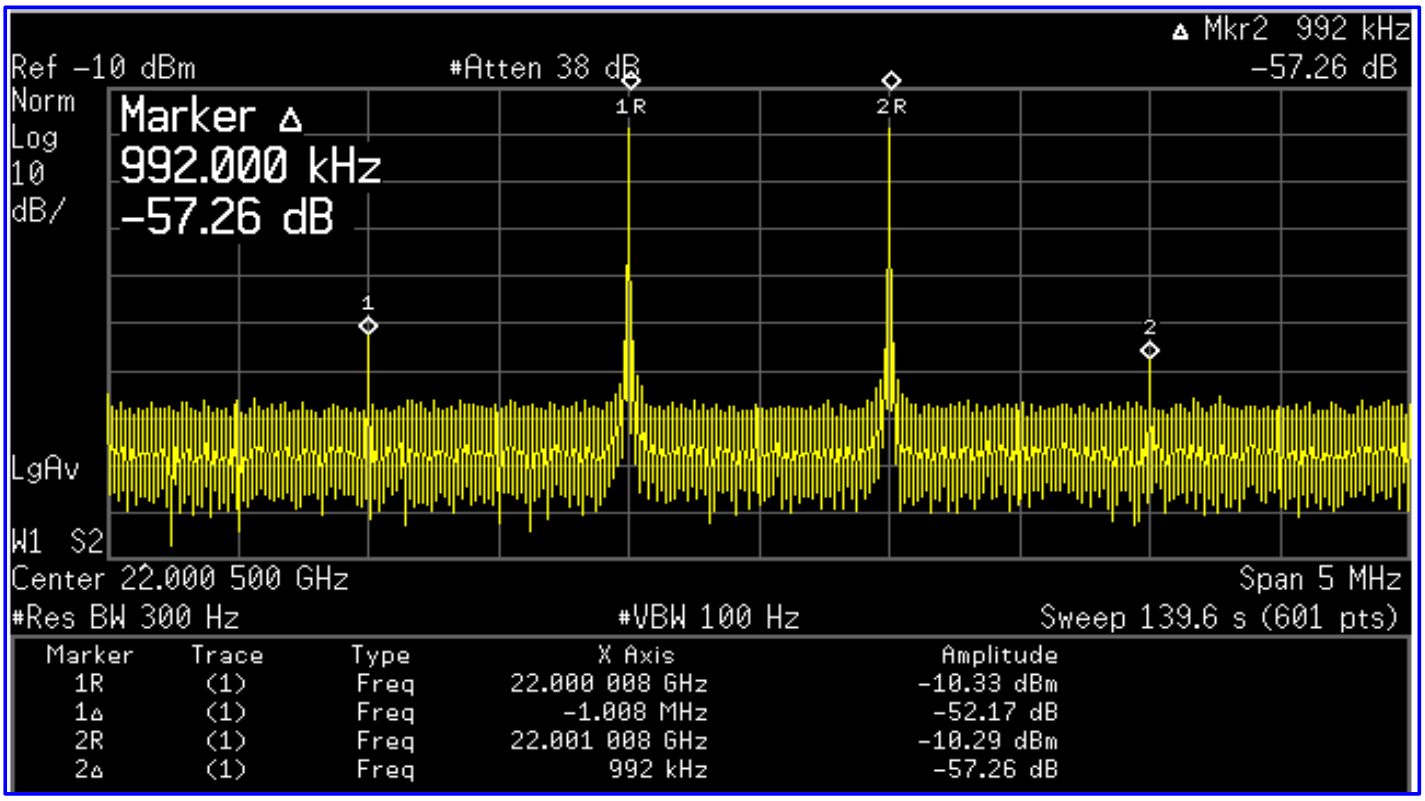
Output IP3 @ 20GHz



OIP3 = Pout +dBc/2 = 21.65 dBm

Output IP3 @ 22 GHz



OIP3 = Pout +dBc/2 = 18.63 dBm

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