

LPA Concepts

LINEAR POWER DRIVER AMPLIFIER	LPA-LPD2-002AA-2000M-6000M-28-00
P3270	
FEATURES ◆ 2000-6000MHz ◆ Gain: 32 dB / $P_{1dB} = 2W$ ◆ OIP3 = +44dBm ◆ 50Ω input / output ◆ 28V / 380mA ◆ Aluminum flange	PACKAGE LPD2 package APPLICATIONS ◆ General purpose
BLOCK DIAGRAM	

Specifications and information are subject to change without notice

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Electrical characteristics: 50 ohms; +28V; -25°C to +80°C (1, 2)

Ref	Parameter	Conditions	Note	Min	Typ	Max	Units
1	Bandwidth			2000		6000	MHz
2	Gain small signal	4000 MHz; 50°C			33		dB
3	Gain variation vs frequency	2000 MHz - 6000 MHz			2	4	dBpp
4	Gain variation vs temperature	-25°C to +80°C	2		3		dB
5	Input return loss	50 ohms				-12	dB
6	Output return loss	50 ohms				-12	dB
7	P-1dB	2-6GHz		1.5	2		W
8	Peak envelope power	IMD3 = -30 dBc, f=4000 MHz	3	1	1.5		W
9	Output 3 rd order intercept point	2 tones +16dBm each			+44		dBm
10	Current consumption	Pout < 1W			0.38		A
11	Max current	Shut down current			0.55		A

1. Unless otherwise specified
2. Housing temperature
3. 2 CW, tone spacing 5MHz

Maximum ratings

Ref	Parameter	Conditions	Note	Min	Nom	Max	Units
1	Operating temperature	flange temperature		-40°C		+80	°C
2	Supply voltage			24	28	32	V
3	Input peak power					+8	dBm
4	Input average power					+8	dBm
5	Max load VSWR	at 2W output			10:1		

Power Supply DC Connection

Pin description			
Terminal 2 : Supply +28V		SMD LOOP TERMINAL	3.3mm x 1.85mm x 2.0mm
Terminal 1 : Gnd			

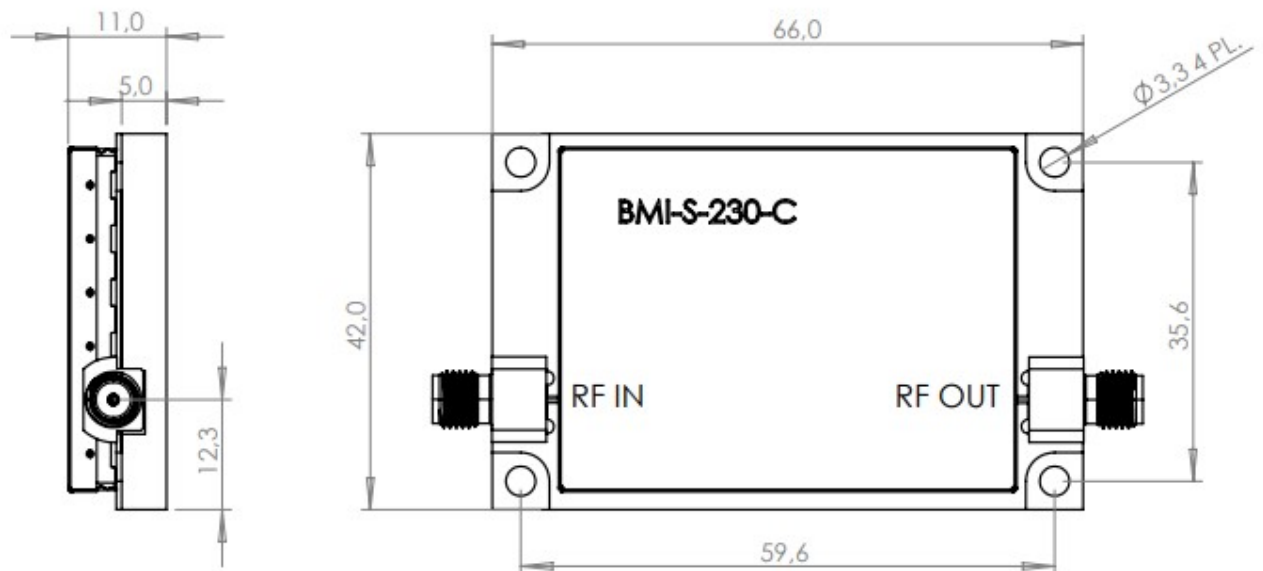
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Mechanical characteristics

Ref	characteristic	description	remarks
1	Package dimensions	66mm x 42mm x 11mm	
2	Flange dimensions	66mm x 42mm x 5mm	4 x M3 screws for heatsink attach
3	Input/output RF connectors	SMA	
4	DC supply connection	SMD Loop terminal	For hook clip (Micrograbber or equivalent)
5	Weight	60 grams	

Package outline:

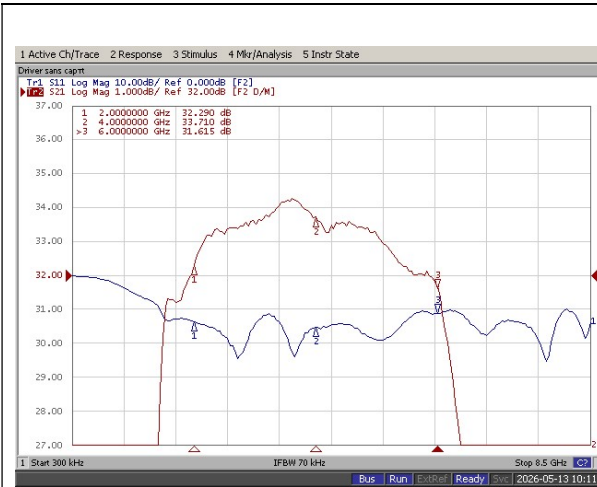


dimensions are in mm

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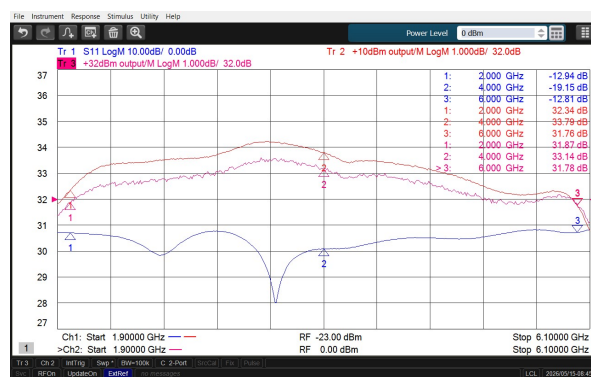
TYPICAL PERFORMANCE



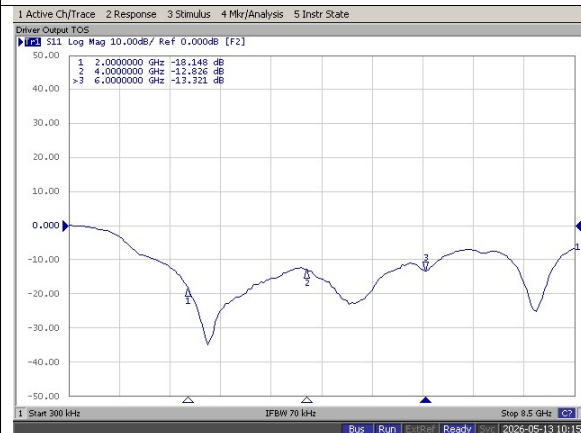
Gain vs Frequency 1dB/div



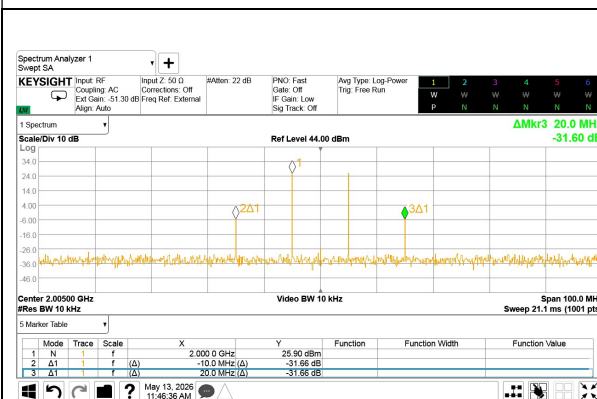
Gain vs Frequency 10dB/div



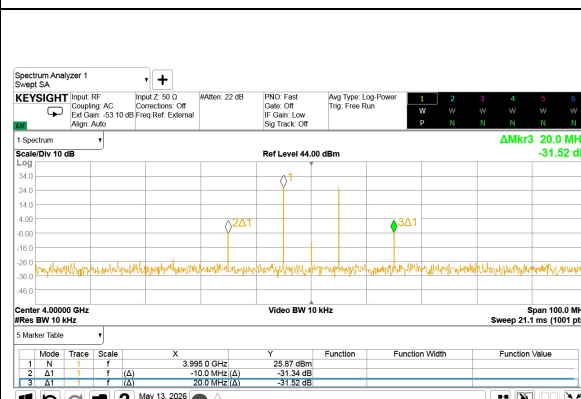
Gain compression at 1.5W out



Output Return Loss vs Frequency



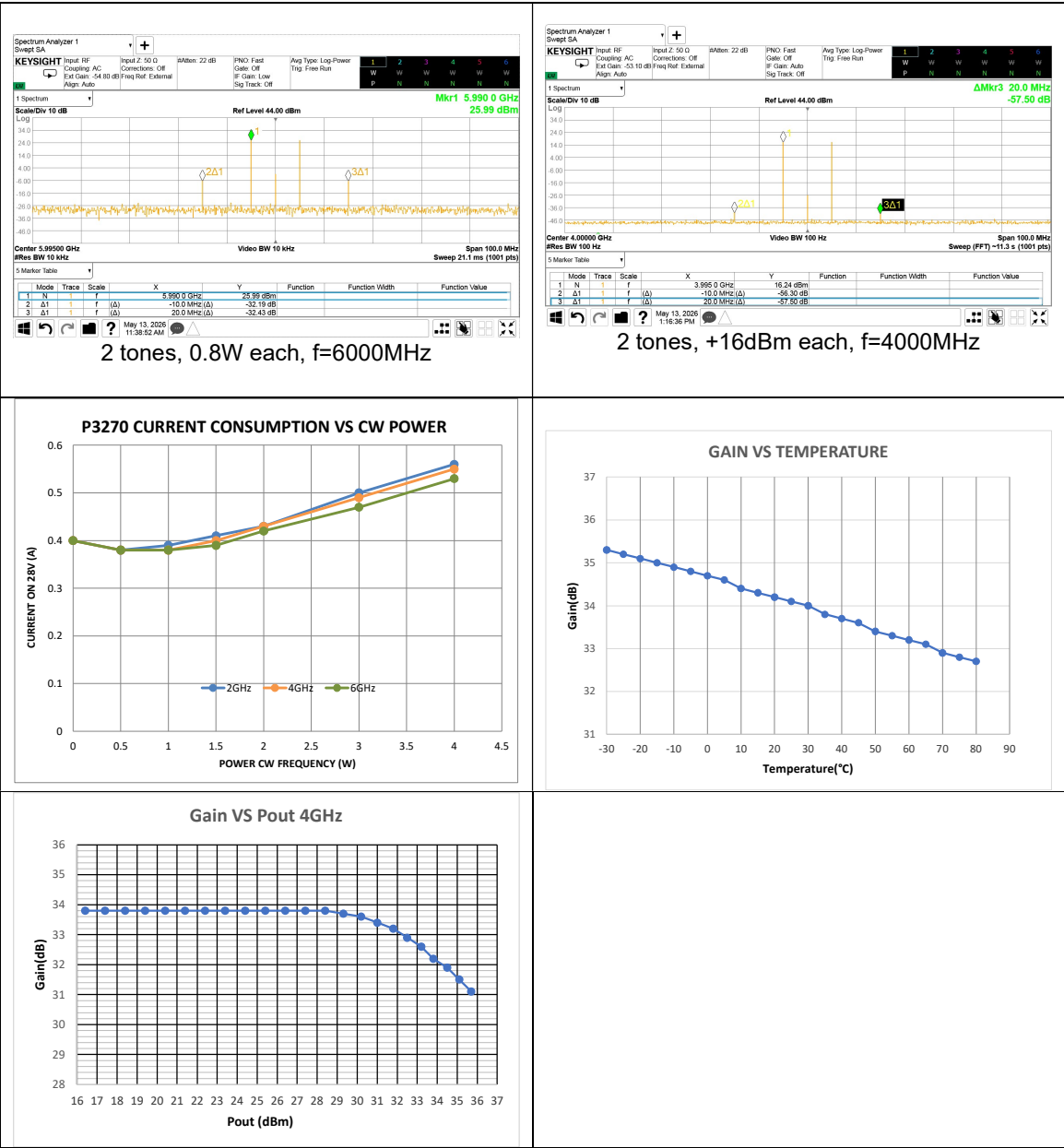
2 tones, 0.8W each, f=2000MHz



2 tones, 0.8W each, f=4000MHz

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TYPICAL PERFORMANCE (continued)



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