

LPA Concepts

LINEAR POWER DRIVER AMPLIFIER	
P3070	LPA-LPD2-010AB-3000M-4000M-48-00
FEATURES ◆ 3000-4000MHz ◆ Gain: 26 dB / $P_{pep} = 10W$ ◆ 50Ω input / output ◆ 48V / 80mA idle ◆ 48V / 0.6A @ 10W CW ◆ Aluminum flange ◆ Low cost	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; +48V; -25°C to +80°C (1, 2)

Ref	Parameter	Conditions	Note	Min	Typ	Max	Units
1	Bandwidth			3000		4000	MHz
2	Gain small signal	3500 MHz; 50°C			26		dB
3	Gain variation vs frequency	3000 MHz - 4000 MHz			2	3	dBpp
4	Gain variation vs temperature	-25°C to +80°C	2		3		dB
5	Input return loss	50 ohms				-15	dB
6	Output return loss	50 ohms				-15	dB
7	Peak envelope power	IMD3 = -30 dBc, f1=3497.5 MHz f2=3502.5MHz	3	10	15		W
8	Current consumption idle	On 48V			0.08		A
9	Current consumption 10W	CW frequency 3500MHz			0.6		A
10	Max supply current	Shut down current	4		0.85		A
11	Max temperature	Shut down temperature	5		80		°C

1. Unless otherwise specified
2. Housing temperature
3. 2 CW, tone spacing 5MHz
4. On/Off to reset
5. Auto restart at 70°C

Maximum ratings

Ref	Parameter	Conditions	Note	Min	Nom	Max	Units
1	Operating temperature	flange temperature		-40°C		+80	°C
2	Supply voltage			46	48	50	V
3	Input peak power					+17	dBm
4	Input average power					+14	dBm
5	Load VSWR	At 10W max			10:1		

Power Supply DC Connection

Pin description			
Terminal 2 : Supply +48V		SMD LOOP TERMINAL	3.3mm x 1.85mm x 2.0mm
Terminal 1 : Gnd			

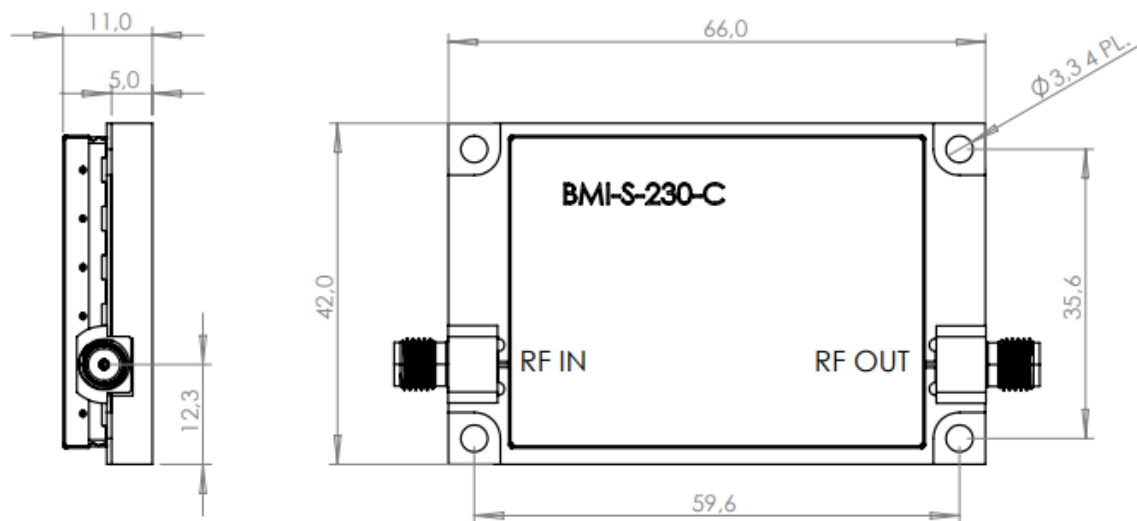
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Mechanical characteristics

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

Package outline:

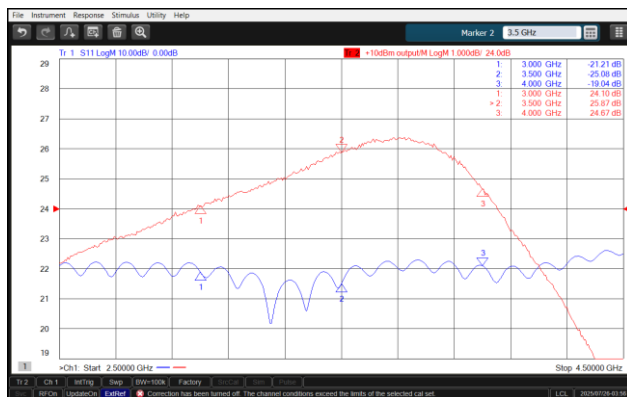


dimensions are in mm

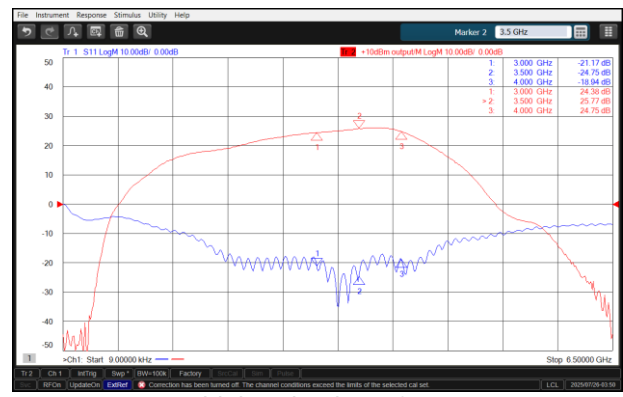
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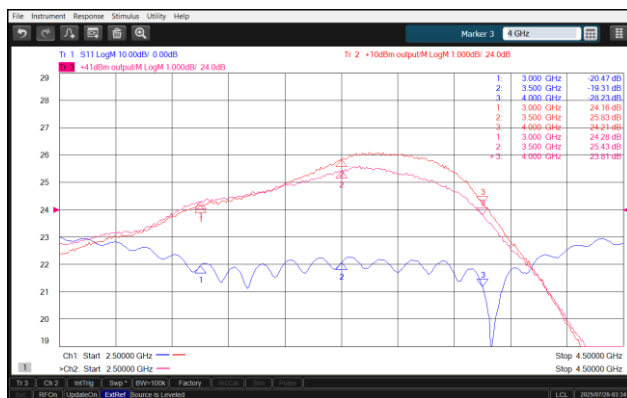
TYPICAL PERFORMANCE



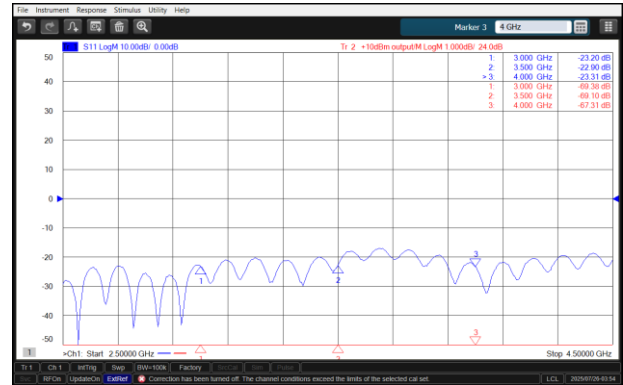
Gain vs Frequency



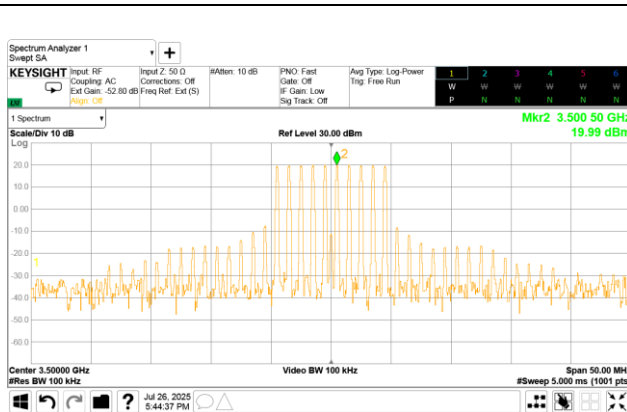
Wideband gain vs frequ



Gain at 10W output



Output Return Loss vs Frequency



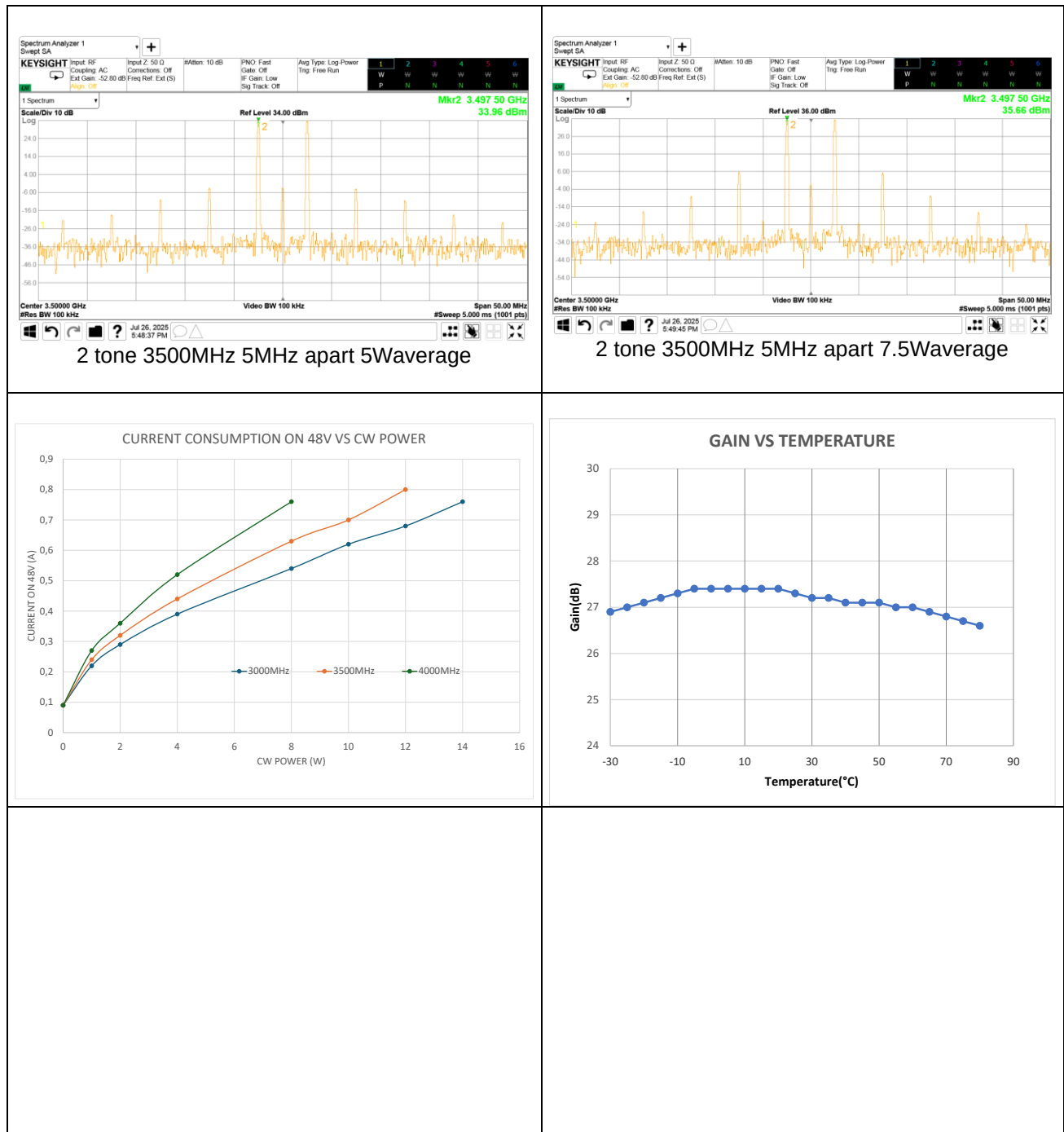
10 tones, 10 W peak, f=3500MHz, peaked phases



15 tones, 15 W peak, f=3500MHz, peaked phases

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TYPICAL PERFORMANCE (continued)



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