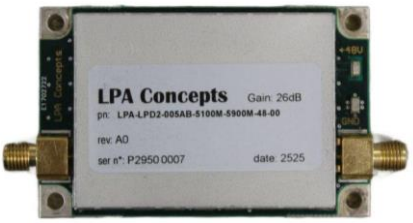
LPA Concepts

LINEAR POWER DRIVER AMPLIFIER	LPA-LPD2-005AA-1000M-2000M-28-00
P3460	

FEATURES

- ♦ 1000-2000MHz
- ♦ Gain: 37 dB / P_{1dB} = 5W
- ♦ OIP3 = +47dBm
- ♦ 50Ω input / output
- ♦ 28V / 650mA
- ♦ Aluminum flange

PACKAGE

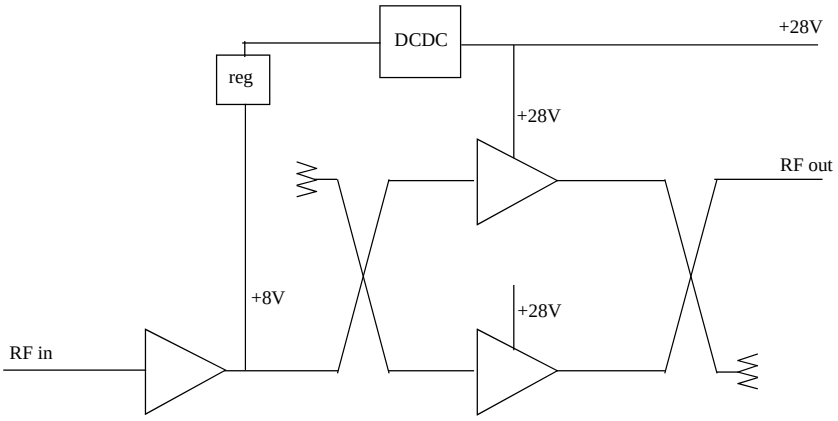


LPD2 package

APPLICATIONS

- ♦ Instrumentation
- ♦ General purpose

BLOCK DIAGRAM



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

Ref	Parameter	Conditions	Note	Min	Typ	Max	Units
1	Bandwidth			1000		2000	MHz
2	Gain small signal	1500 MHz; 50°C			37		dB
3	Gain variation vs frequency	1000 MHz - 2000 MHz			1	2	dBpp
4	Gain variation vs temperature	-25°C to +80°C	2		3		dB
5	Input return loss	50 ohms				-16	dB
6	Output return loss	50 ohms				-16	dB
7	P-1dB	1-2GHz		4	5		W
8	Peak envelope power	IMD3 = -30 dBc, f=1500 MHz	3	5	5		W
9	Output 3rd order intercept point	2 tones +21dBm each			+47		dBm
10	Current consumption	Pout < 1W			0.65		A
11	Max current	Shut down current			1		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 4W output			10:1		

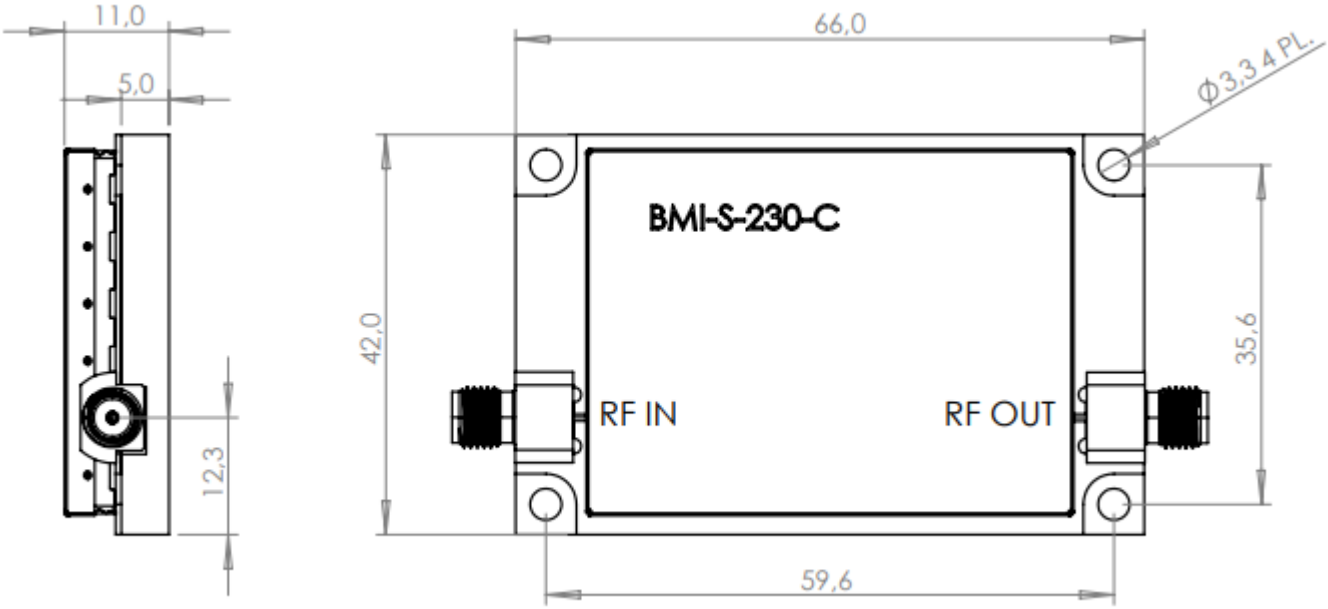
Power Supply DC Connection

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

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:

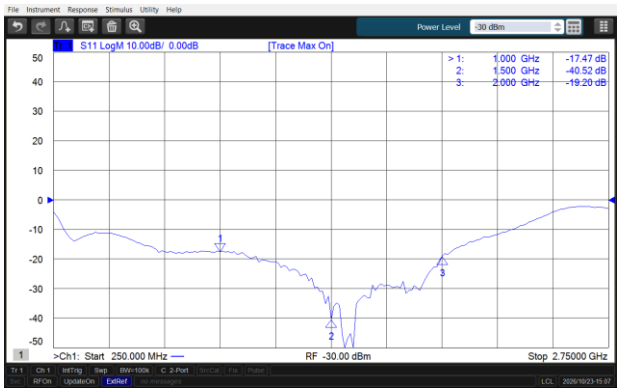


dimensions are in mm

TYPICAL PERFORMANCE



Gain vs Frequency



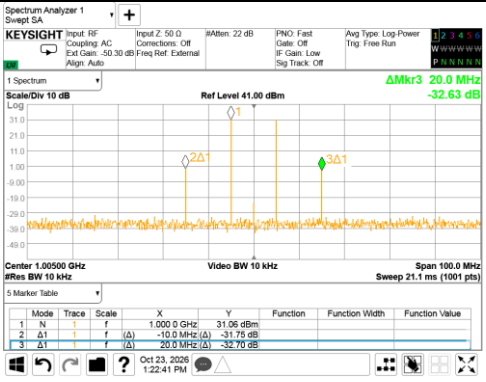
Output Return Loss vs Frequency



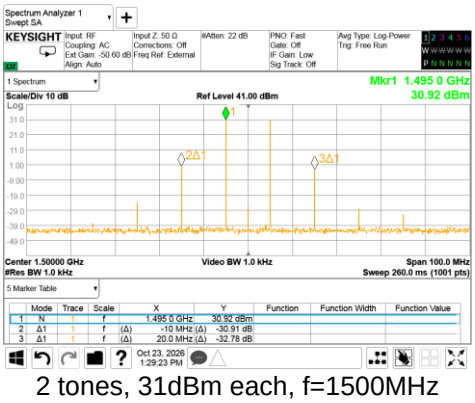
Wideband Gain vs Frequency



Gain compression at 5W Output

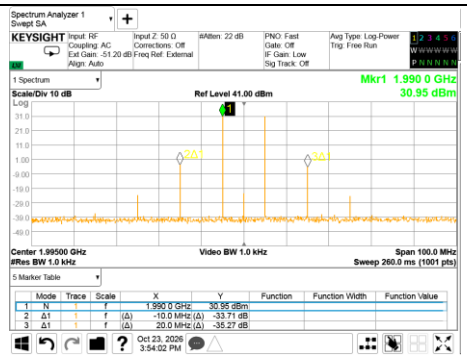


2 tones, 31dBm each, f=1000MHz

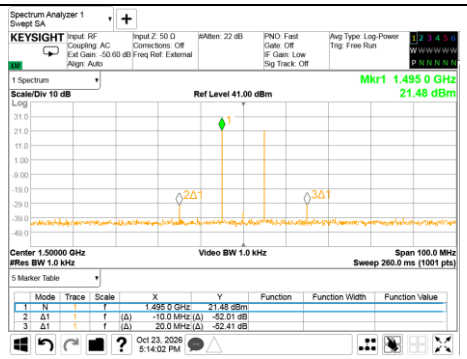


2 tones, 31dBm each, f=1500MHz

TYPICAL PERFORMANCE (continued)



2 tones, 31dBm each, f=2000MHz



2 tones, 21dBm each, f=1500MHz

