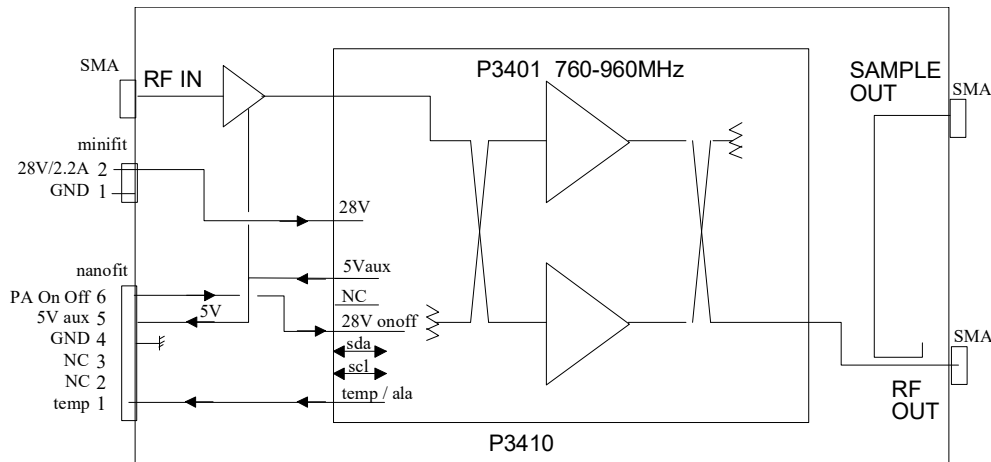


LPA Concepts

LINEAR POWER AMPLIFIER	LPA-AH0-020AA-0760M-0960M-28-01
P3410	
FEATURES	AH0 PACKAGE
◆ OIP3 = +55dBm; 760-960MHz ◆ Gain = 36dB; 50ohms input/output ◆ +28V / 2.1A supply, Class A ◆ Protection against reverse voltage, over current and over temperature ◆ Alarm/Temp line, ON/OFF / Reset line ◆ Unconditionally stable ◆ RoHS compliant	
	APPLICATIONS
	◆ Instrumentation ◆ Communications

BLOCK DIAGRAM



Specifications and information are subject to change without notice

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Electrical characteristics: 50 ohms; +28V; -25°C to +85°C (1)

Ref	parameter	conditions	note	min	typ	max	units
1	Bandwidth			760		960	MHz
3	Gain small signal	860 MHz; 50°C			36		dB
4	Gain variation vs frequency	760 MHz - 960 MHz				2	dBpp
5	Gain variation vs temperature	-25°C to +85°C	2		2		dB
6	Input return loss	50 ohms				-15	dB
7	Output return loss	50 ohms				-15	dB
8	Sample output signal	Level relative to output			-31		dBc
9	Peak envelope power	IMD3 = -30dBc	5		40		W
10	Instantaneous bandwidth	Fctr=860MHz	3		50		MHz
11	output intercept point 3 rd order	2 CW IMD at -60dBc 860MHz			+54		dBm
12	OIP3 flatness over frequency	760-960MHz			2		dBm
13	Multi tones intermodulation	10 tones 1MHz spacing, 4Wave	4		-28	-26	dBc
14	Current consumption	28V, idle			2.1		A
15	Current consumption	28V, 20W CW			3.1		A
16	Shut down current	On overdrive			3.6		A

1. Unless otherwise specified
2. Module Temperature
3. 2 tones 810MHz 860MHz 5W each IMD<-30dBc
4. peaked phases
5. 2 tones 10W each 10MHz spacing

Maximum ratings

Ref	parameter	conditions	note	min	Nom	max	units
1	Operating temperature	Flange temperature		-40°C		+90	°C
2	Supply voltage			26	28	32	V
3	Current available on 5V aux					200	mA
4	Input power	CW				+3	dBm

Protections

Ref	parameter	description	remarks
1	Overcurrent	Shut down if current > 3.6A	
2	Temperature	Shut down if temp > 80°C	PA On/Off to recover

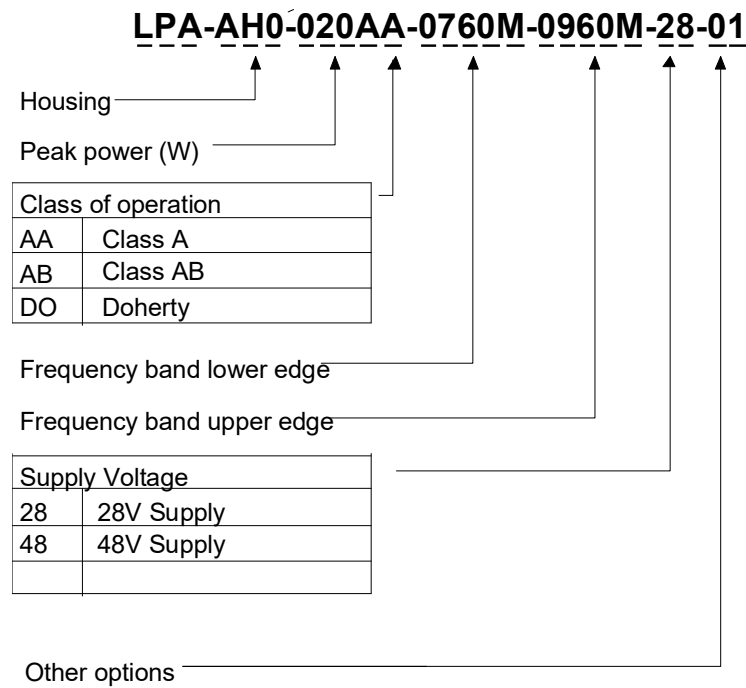
Monitoring & control

Ref	characteristic	description	remarks
1	PA On/Off	28V switching	Used for reset
2	Temperature	Analog output	-40°C to +100°C (TMP20)
3	Alarm	Temp line pulled low on alarm	

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Part numbering:



Support material

Ref	Characteristic	Description	Remarks
1	T280	Analog control board	Supplied by 5V aux from amplifier
2			
3			

Related products

Ref	Characteristic	Description	Remarks
1			
2			
3			

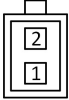
Communication DC Connector Molex NanoFit 105405-1206

Pin description			PINOUT
Pin 1 : Analog temp / Ala	Pin 4 : Gnd	Mate with 105308-1206	
Pin 2 : NC	Pin 5 : 5V aux		
Pin 3 : NC	Pin 6 : Power On/Off		

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LPA Concepts

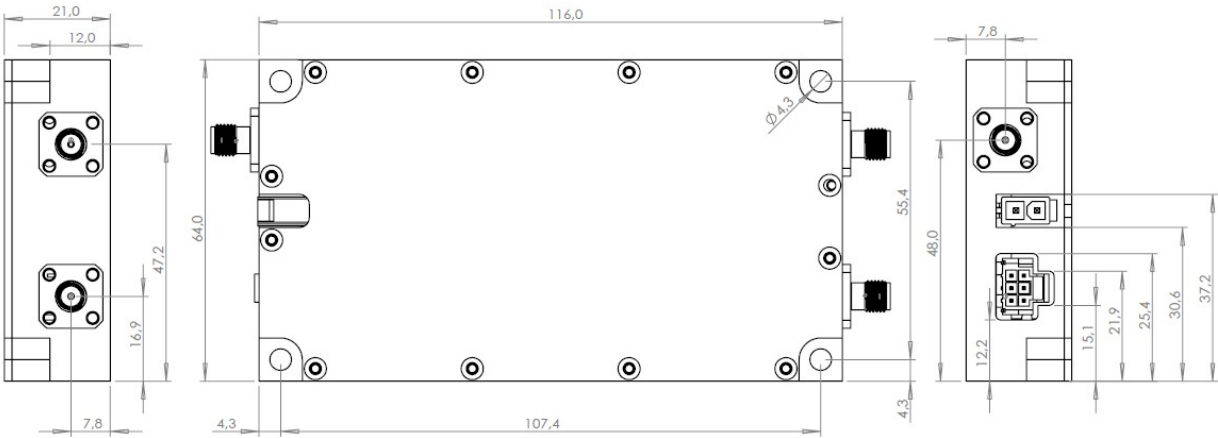
Power Supply DC Connector Molex MiniFit Jr 39-30-1022

Pin description			PINOUT
Pin 2 : Supply +28V		Mate with 39-01-2020 and inserts 39-00-0038	
Pin 1 : Gnd			

Mechanical characteristics

Ref	characteristic	description	remarks
1	Housing dimensions	116mm x 64mm x 21mm	
2	Housing finish	Electroless nickel	
3	Mounting	4 M4 screws	
4	Input/output RF connectors	SMA	female
5	DC supply connector	Molex 39-30-1022	Male type
6	DC controls connector	Molex 105405-1206	Male type
7	Weight	400 grams	

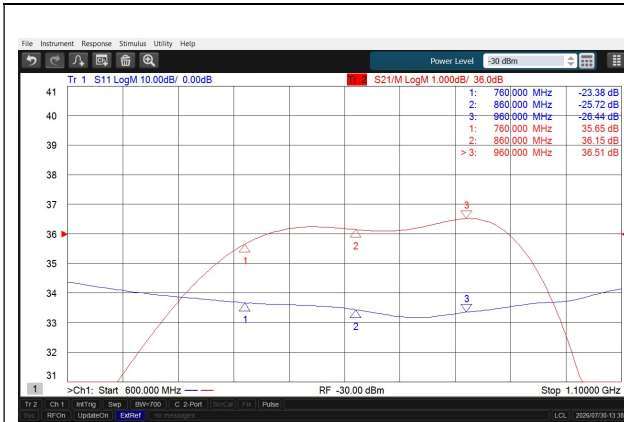
Package outline:



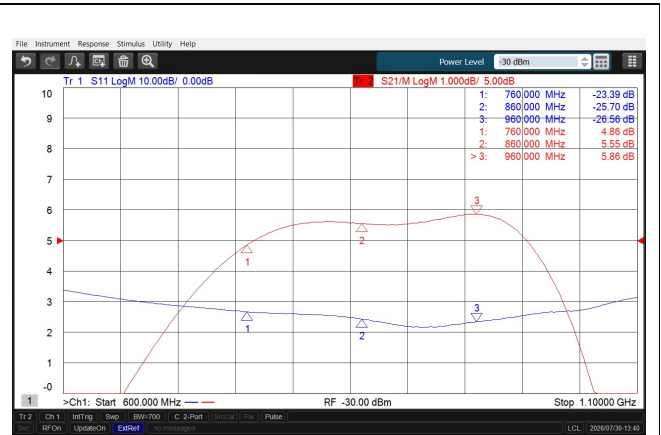
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LPA Concepts

TYPICAL PERFORMANCE



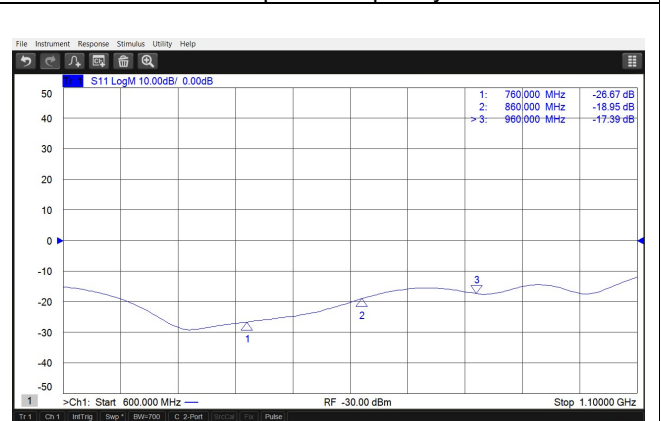
Gain vs Frequency



Sample vs frequency



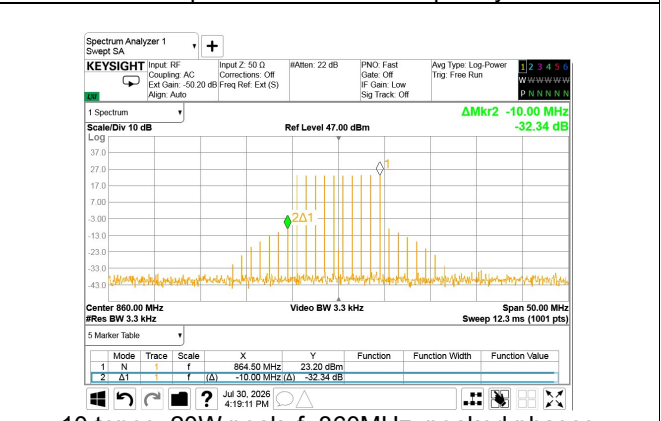
Wideband response



Output return loss vs Frequency



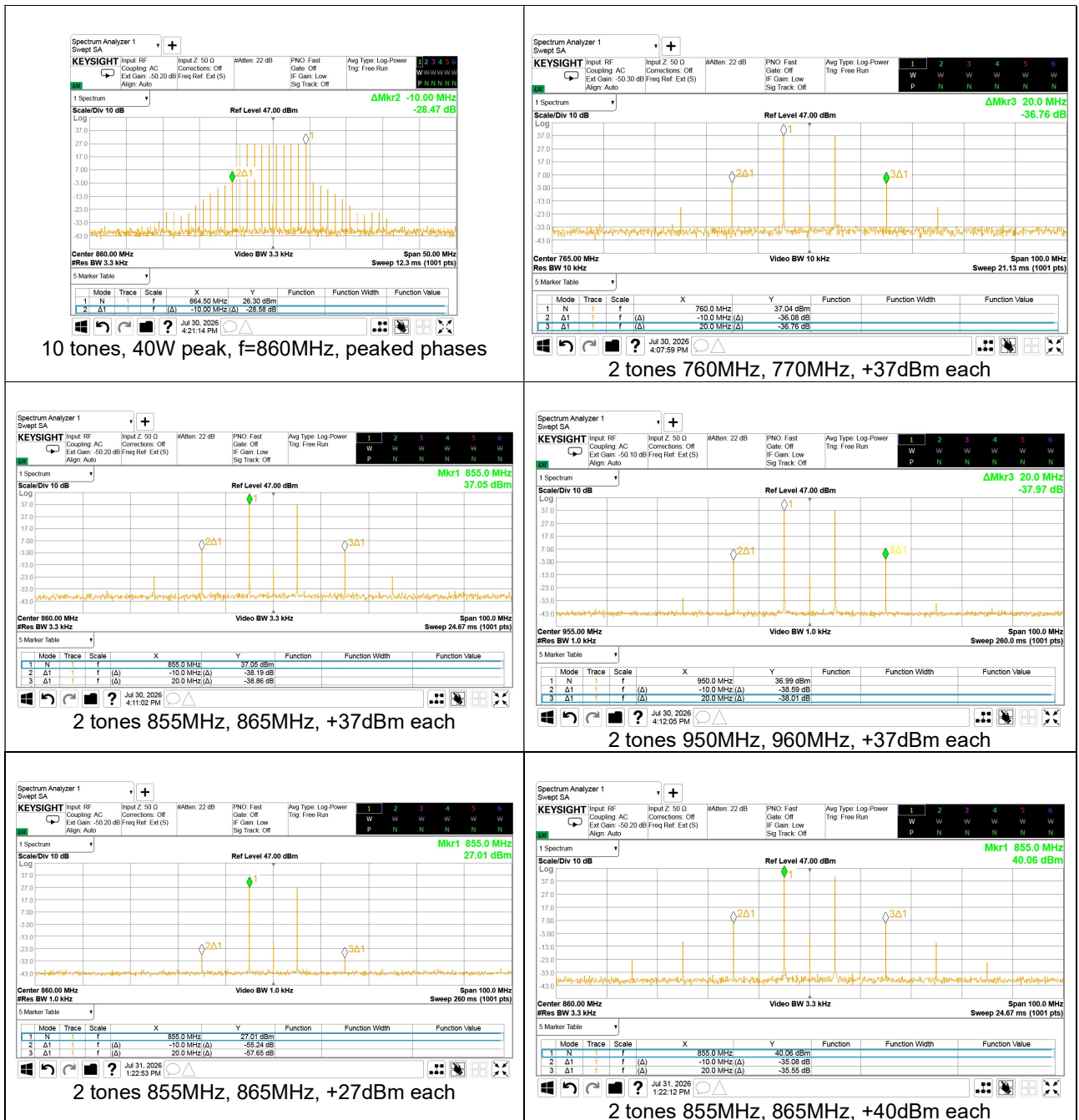
Gain compression at 20W output



10 tones, 20W peak, f=860MHz, peaked phases

Specifications and information are subject to change without notice

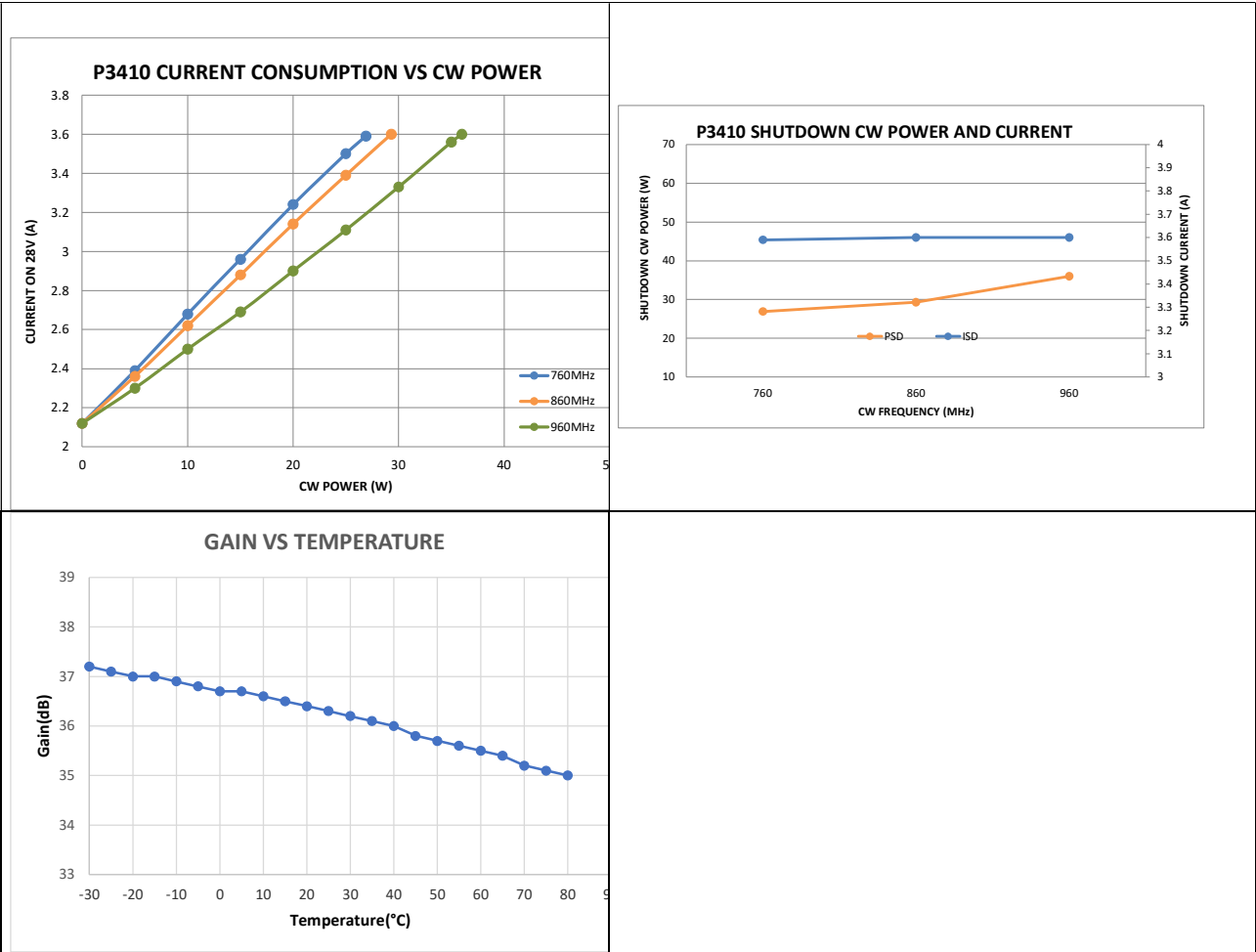
TYPICAL PERFORMANCE (continued)



Specifications and information are subject to change without notice

LPA Concepts

TYPICAL PERFORMANCE (continued)



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