
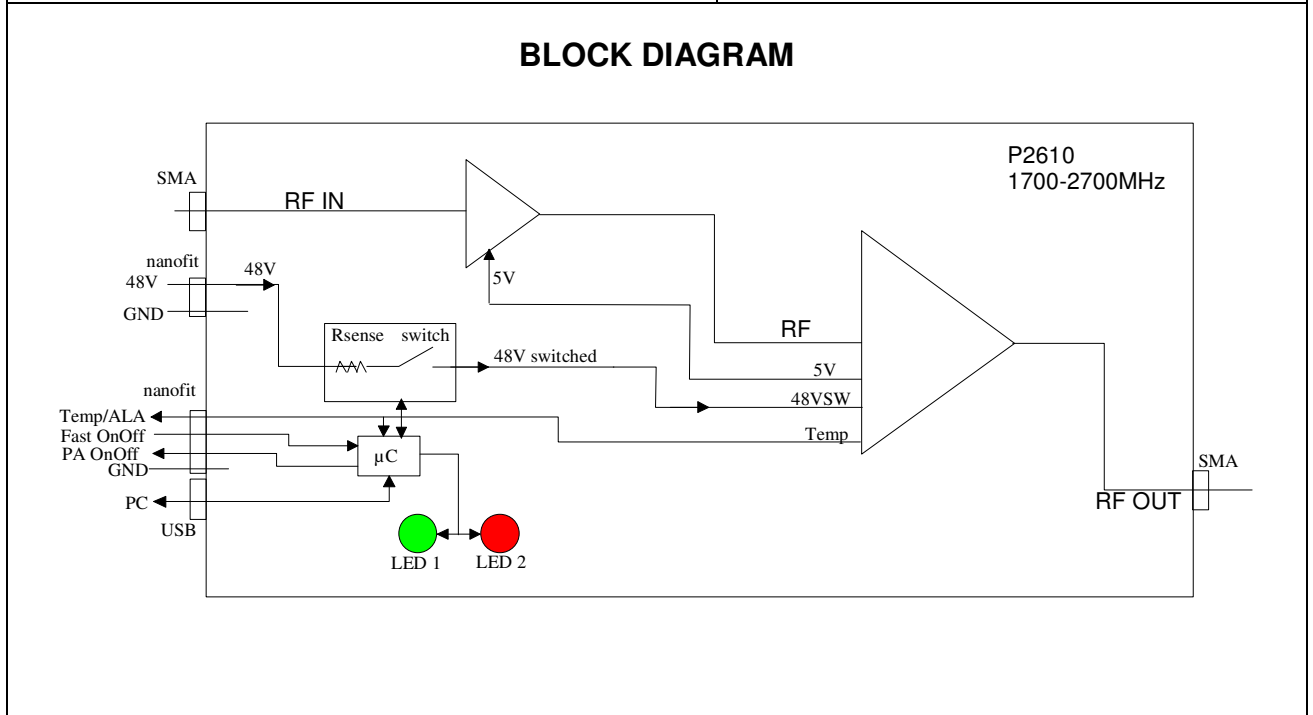


<b>LINEAR POWER AMPLIFIER</b>	<b>LPA-AH1-050AB-1700M-2700M-48-00</b>
<b>P2610</b>	
<b>FEATURES</b> <ul style="list-style-type: none"> <li>◆ 1700-2700MHz</li> <li>◆ Gain : 43 dB Class AB</li> <li>◆ Peak power &gt; 50W</li> <li>◆ Instantaneous bandwidth 100MHz</li> <li>◆ 48V / 1.5 A @ 25W CW</li> <li>◆ Temperature compensated gain</li> <li>◆ monitoring voltages, current, temperature</li> <li>◆ Shut down on over voltage, over current and over temperature</li> <li>◆ USB communications</li> <li>◆ RoHS compliant</li> </ul>	<b>AH1 PACKAGE</b>   <b>APPLICATIONS</b> <ul style="list-style-type: none"> <li>◆ Instrumentation</li> <li>◆ Communications</li> <li>◆ Heating</li> </ul>



Specifications and information are subject to change without notice

## Electrical characteristics: 50 ohms; +48V; -25°C to +85°C (1)

Ref	parameter	conditions	note	min	typ	max	units
1	Bandwidth			1700		2700	MHz
2	Instantaneous bandwidth			100			MHz
3	Gain small signal	2200 MHz; 50°C			43		dB
4	Gain variation vs frequency	1700 MHz - 2700 MHz				2	dBpp
5	Gain variation vs temperature	-25°C to +85°C	2		1		dB
6	Input return loss	50 ohms				-18	dB
7	Output return loss	50 ohms				-18	dB
8	Peak envelope power 10 tones	IMD3 < -30 dBc	3		50		W
9	Peak envelope power 2 tones	IMD3 < -30 dBc			50		W
10	Instantaneous bandwidth	IMD3 < -27 dBc		100			MHz
11	Current consumption	48V, idle			0.3		A
12	Current Consumption	48V, 25W CW 2200MHz			1.5		A

1. Unless otherwise specified
2. Hot Spot Temperature
3. 10 CW tones, 2200MHz center frequency

## Maximum ratings

Ref	parameter	conditions	note	min	Nom	max	units
1	Operating temperature	Flange temperature		-25°C		+85	°C
2	Supply voltage			30	48	50	V
3	Input power	CW frequency				1	dBm

## Protections

Ref	Parameter	Description	Remarks
1	Overvoltage	Shut down if supply > 50V	
2	Under voltage	Shut down if supply < 30 V	
3	Overcurrent	Shut down if current > 2.7 A	55mV on Rsense=20 ohms
4	Temperature	Shut down if temp > 85°C	Recovery on 48VONOFF (temp<75°C)
5	Temperature warning	Alarm, no shut down	Warning on for temp>60°C Warning off for temp<55°C

## Analog monitoring & controls

Ref	Characteristic	Description	Remarks
1	Temperature	Analog output	-40°C to +100°C (TMP20)
2	Alarm	Open drain (0V on alarm)	Multiplexed with analog temp
3	Fast On/Off	Amplifier Muted if FOO > 3V	48V remains applied to transistors
4	PA On/Off	<Amplifier Off when PAOO > 3V	48V switches off

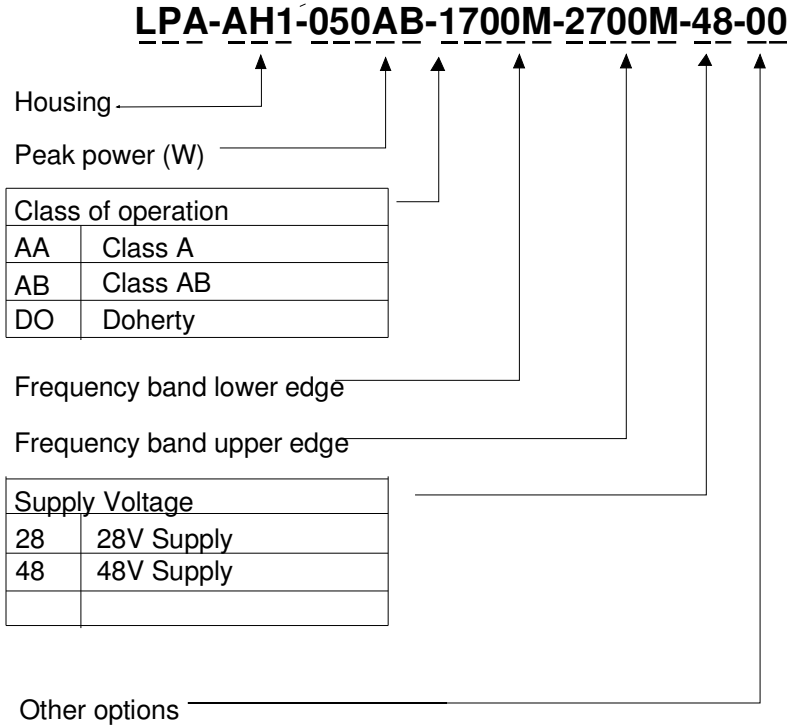
## USB Monitoring & controls (4, 5)

Ref	Characteristic	Description	Remarks
1	Temperature	Temperature of amplifier module	Digital sensor
2	Supply voltage	Voltage applied by user	
3	Current	Through sense resistor	Rsense=20 mohms
4	ON/OFF	Shut down amplifier	
5	Alarm	Provide state of amplifier	

1. For more details see programmer's guide
2. Driver needed for communication

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Part numbering:

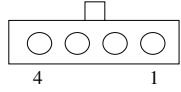


Support material:


Ref	Document type	Document number	Title	Date
1	USB Cable		USB to mini USB B	

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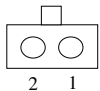
## Communication DC Connector Molex NanoFit 105313-1104

Pin description			PINOUT
Pin 1 : GND		Mate with 105313-1104	
Pin 2 : PA ONOff			
Pin 3 : Fast OnOff			
Pin 4 : Temperature /ALA	Open drain		

## Communication USB

Pin description			PINOUT
Pin 1 : GND		Mini USB B	
Pin 2 : Data-			
Pin 3 : Data+			
Pin 4 : Vbus			

## Power Supply DC Connector Molex NanoFit 105313-1102

Pin description			PINOUT
Pin 2 : Supply +28V		Mate with 105307-1202 with 105300-2100 inserts and AWG20-22 wires	
Pin 1 : Gnd			

## LED significations

LED 1 (green)	LED 2 (red/orange)	Signification
OFF	OFF	Amplifier not supplied
ON	OFF	Amplifier ON
Blinking	OFF	Amplifier Muted by operator
ON	Orange	Temperature warning, amplifier ON
OFF	Red	Amplifier OFF (Under voltage, over voltage, over temp...)

## MTBF

Temperature (sensor)	MTBF	First year failure rate
65°C (10)	>300 000 hours	TBD%

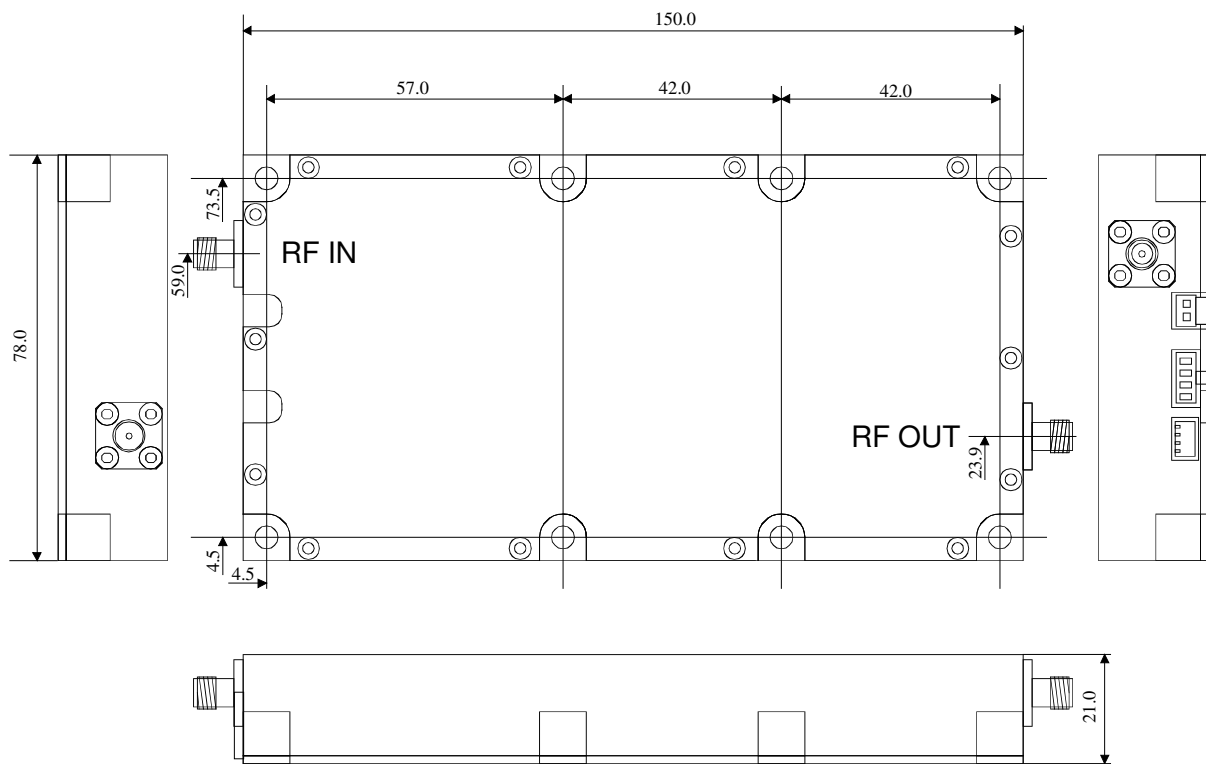
10. Although specified up to 85°C, this calculation assumes an average temperature of 65°C

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## Mechanical characteristics

Ref	characteristic	description	remarks
1	Housing dimensions	150mm x 78mm x 21mm	
2	Housing cover finish	Electroless nickel	
3	Mounting	8 M4 screws	
4	Input/output RF connectors	SMA	
5	DC supply connector	Molex 105313-1102	Male type
6	DC controls connector	Molex 105313-1104	Male type
7	USB connectors	Mini USB B	
8	Weight	460 grams	

## Package outline:



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**TYPICAL PERFORMANCE**