P/N:LBW-AM06-PAM-6G18G-46B

Сверхширокополосный усилитель мощности
6 ГГц - 18 ГГц

Характеристики:

- Твердотельный усилитель мощности
- Коэффициент усиления: 70 дБ (тип.)
- Выходная мощность: 48 дБм (тип.)
- Напряжение питания: +28 В

Области применения:

- Беспроводные сети
- 5G сети
- Оборудование для тестирования и измерений
- Микроэлектроника и спутниковая связь
- Оптоволоконные сети

Parameter		Min.	Typ.	Max.	Units
Frequency Range		6		18	GHz
Gain			70		dB
Gain Flatness			±6.0		dB
Gain Variation Over Temperature (-40℃~+70℃)			±6.0		dB
Input Return Loss			10		dB
Saturated Output Power (Psat)		45	48		dBm
RF ON/OFF Speed (IDQ on)			50		ns
Isolation S12			-50		dB
Supply Current (Vcc=+28V)			5.2		A
Power-Added Efficiency			10		%
TDD-Time-Division Duplexing PA Blanking	ON		400		us
	OFF		300		

Weight	Net	/ Max ounces	Impedance	50ohms
	Including Heat sink	/ Max ounces		
Input / Output Connectors		SMA-Female/N-Female	Material	Copper
Finish		Nickel Plated	Package Sealing	Epoxy Sealed (Standard)
				Hermetically Sealed (Optional)

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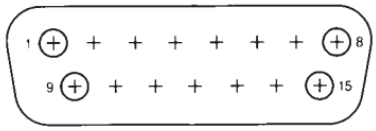
HIGH/LOW voltages are standard TTL signals:
0.0V-0.8V = LOW
2V-5V = HIGH

Interface Connector

Male D-Sub is on the housing
The mating female part number: 172-E15-203R001



PIN #	NAME	FUNCTION	Initial State	Description	Applied
1	Reset	Control	HIGH	Resets PA when logic LOW is applied and released	Yes
2	Switch Disable	Control	HIGH	Applying logic LOW disconnects RF signal of amplifiers	NO
3	Drain Disable	Control	HIGH	Applying logic LOW disables drains of amplifiers	Yes
4	Gate Disable	Control	HIGH	Applying logic LOW disables gates of amplifiers	Yes
5	RF Input Over Drive	Indicator	LOW	Pin will be latched to logic HIGH when input signal is over limit	Yes
6	Over Current	Indicator	LOW	Pin will be latched to logic HIGH when drain current limit is reached	Yes
7	Over Temp	Indicator	LOW	Pin will be latched to logic HIGH when amplifier is driven over temperature	Yes
8	VSWR	Indicator	LOW	Pin will be latched to logic HIGH when output reflection is over limit	Yes
9	ACDC Alarm	Indicator	LOW	Pin will be latched to logic HIGH when ACDC limit is reached	NO
10	Fan Alarm	Indicator	LOW	Pin will be latched to logic HIGH when Fan limit is reached	NO
11	PA-OFF	Indicator	LOW	Amplifier working state, high level is off	NO
12	PA output FW power	Indicator	VOLTAGE	PA output forward detection is represented by voltage	Yes
13	PA output RE power	Indicator	VOLTAGE	PA output reverse detection is represented by voltage	Yes
14	+5V-User	Power	+5V	+5V DC is supplied for reference(700mA)	Yes
15	GND	Ground	GND	Ground	Yes

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Absolute Maximum Ratings

Operating Voltage	+30V
RF Input Power	Psat – Large Signal Gain

Note: Maximum RF input power is set to assure safety of amplifier. Input power may be increased at own risk to achieve full power of amplifier. Please reference gain and power curves.

Biasing Up Procedure

Step 1	Connect Ground Pin
Step 2	Connect input and output with 50 Ohm source/load. (in band VSWR10dB return loss)
Step 3	Connect +28V

Power OFF Procedure

Step 1	Turn off +28V biasing
Step 2	Remove RF connection
Step 3	Remove Ground

Environmental Specifications

Operational Temperature	-40ºC~+70ºC
Storage Temperature	-50ºC~+105ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35ºc, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

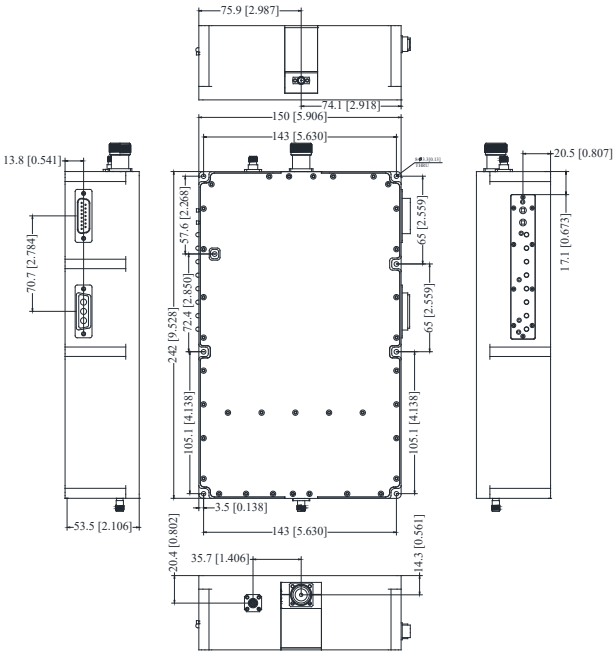
Note: The operating temperature for the unit is specified at the package base. It is the user's responsibility to ensure the part is in an environment capable of maintaining the temperature within the specified limits

Outline Drawing:

All Dimensions in mm (inches)

Housing Tolerances ±0.2(0.008)

Heat Sink required during operation(Sold Separately)



Notes:

DB15 cable is configured for power connection port by default.

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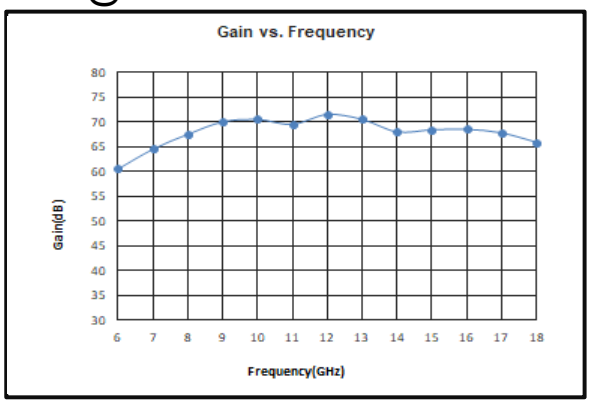
Gain @ +25℃

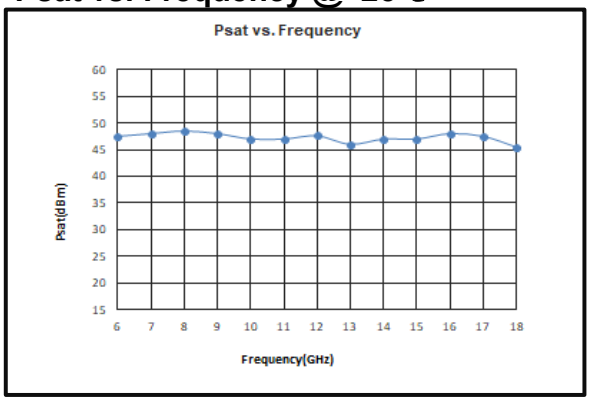


Input Return Loss @+25℃

Isolation @ +25℃

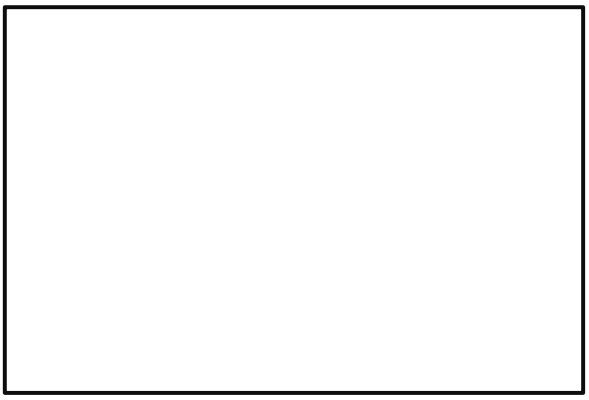
Gain vs. Output Power

Psat vs. Frequency @+25℃



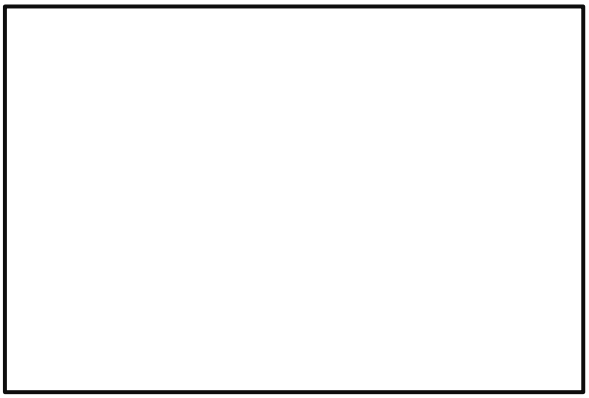
Isolation @ -40℃

P1dB – P7dB vs. Frequency @+70℃

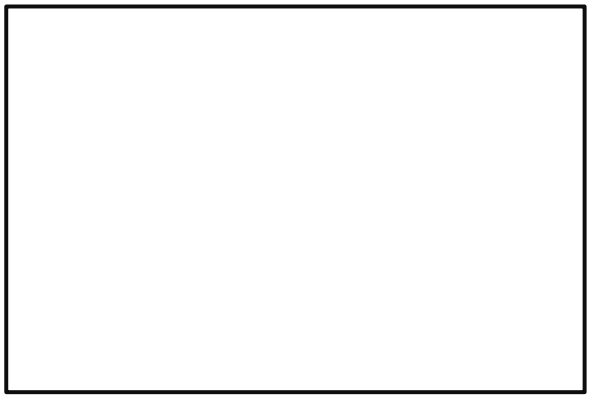


2nd Harmonic Wave Output Power

Switch Rise Time is 40 ns @+25℃



Switch Fall Time is 40 ns @+25℃



Switch control port: D-sub 15 PIN #12(RF_Switch_Off).
The yellow curve is Switch control signal, the blue curve is RF output envelope.

TDD Speed Time is 300us @+25℃

TDD control port：D-sub 15 PIN #14 (GATE_OFF).
The yellow curve is TDD control signal, the blue curve is RF output envelope.