

AC- Low Noise Amplifier

MPC1018.50
1GHz-18GHz

Features

- ✓ Broad band operation from 1 to 18 GHz
- ✓ Low VSWR, unconditional stable
- ✓ Convenient AC Power Input. (AC 110V/220V)
- ✓ SMA female connector I/O
- ✓ Gain: 50dB Typical
- ✓ Operating temperature -40~+85°C
- ✓ Storage temperature -50~+105°C



Specifications

Parameters	Minimum	Typical	Maximum	Minimum	Typical	Maximum
Frequency Range	1GHz		10GHz	10GHz		18GHz
Gain	48 dB	51 dB		47 dB	50 dB	
Gain Flatness		±1.5 dB			±2.0 dB	
Gain Variation Over Temperature (-40°C~+85°C)		±1.5 dB			±2.0 dB	
Noise Figure		2.0dB			2.0dB	
Input VSWR		1.8:1			1.8:1	
Output VSWR		1.8:1			2.0:1	
Output 1 dB Compression Point (P1dB)	20 dBm	23 dBm		18 dBm	20 dBm	
Saturated Output Power (Psat)		25 dBm			22 dBm	
Output Third Order Intercept (OIP3)		32 dBm			30 dBm	
Isolation S12		-60 dB			-60 dB	
Current (AC 110~220V)		55mA			55mA	
RF In/Out connectors	SMA female					
Size (mm)	163.5mmx148mmx58mm					

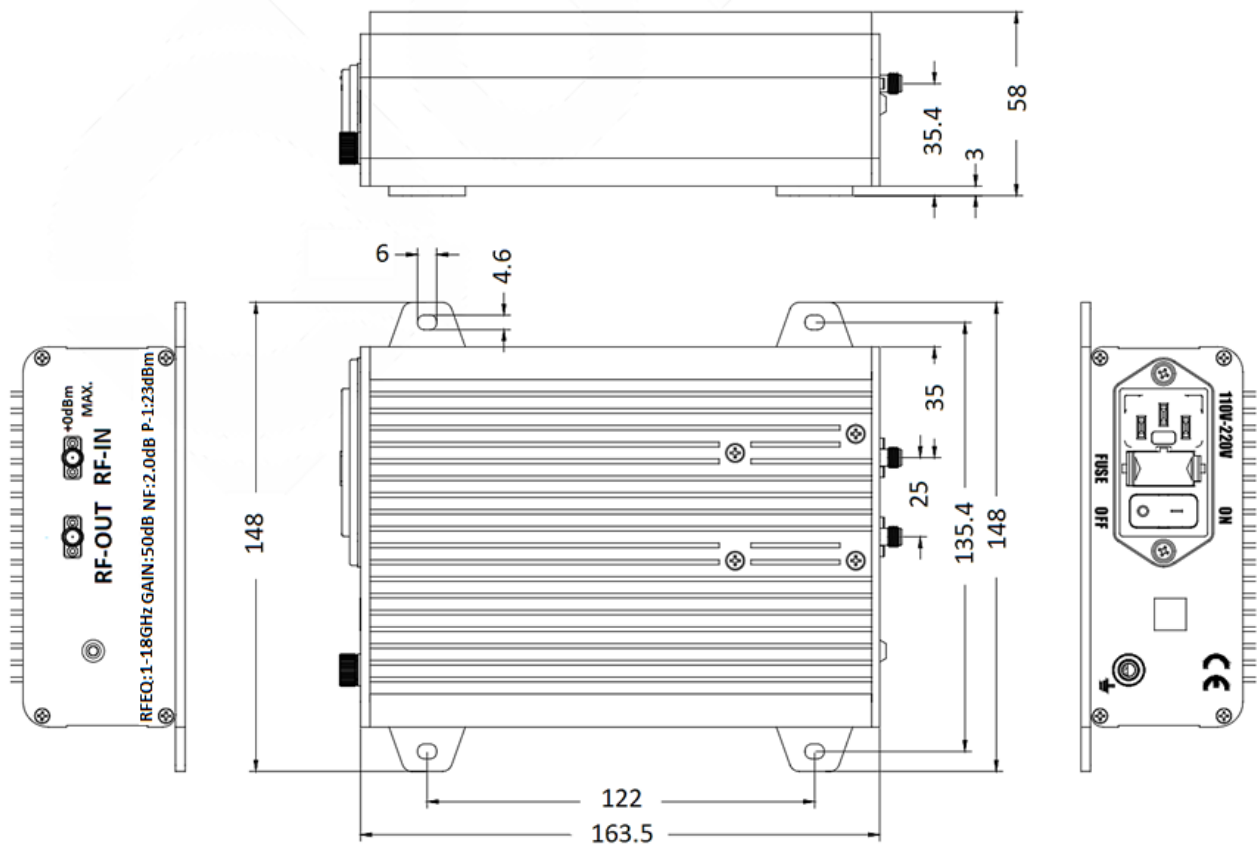
NOTES:

1. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME
2. CUSTOMER OUTLINE DRAWING FOR REFERENCE ONLY



Tolerance: X= ±0.5

Outline Drawing (Unit: mm)



Absolute Maximum Ratings	
Operating Voltage	AC110~220VAC
RF Input Power(RFIN)	-20dBm
Storage Temperature	-50~+105°C

Biasing Up Procedure	
Step 1	Connect input and output with 50 Ohm source and load with in band return loss better than 10dB
Step 2	Connect AC Plug
Step 3	Flip switch to "ON" position

Power OFF Procedure	
Step 1	Flip switch to "OFF" position
Step 2	Remove AC Plug
Step 3	Remove RF Connection

Environmental Specifications	
Operational Temperature	-40~+85°C
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 35c, 95%RH at 40°C
Shock	20G for 11msec half sine wave, 3 axis both directions

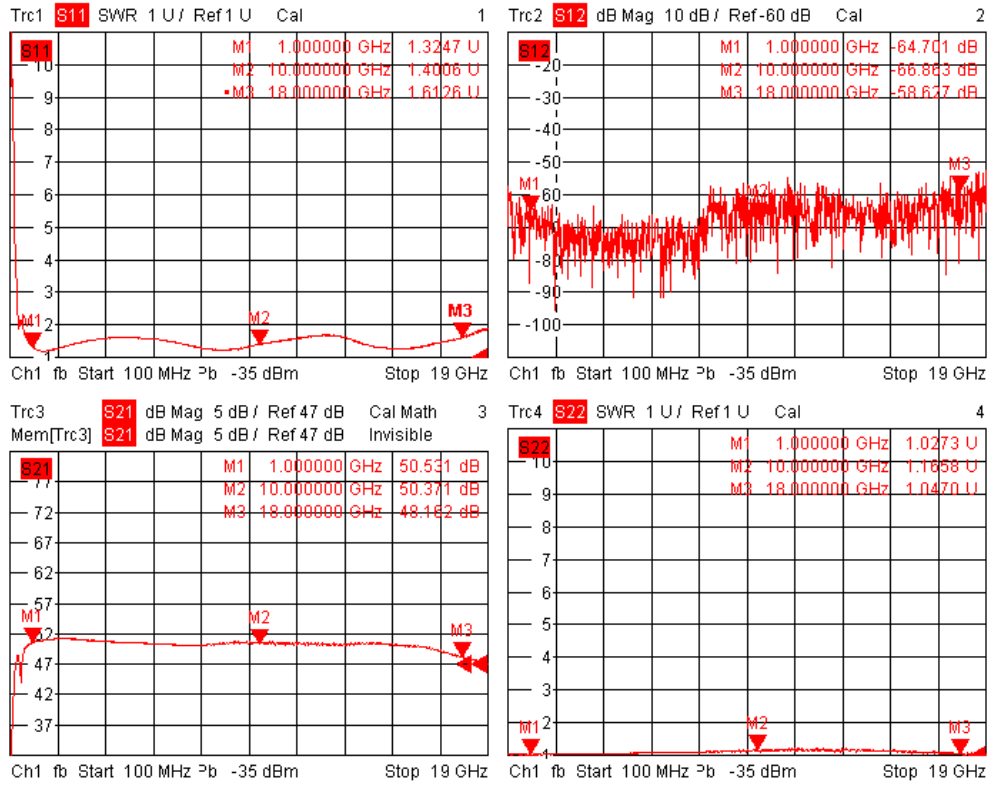
****Note:** Maximum RF input power is set to assure safety of amplifier. Input power may be increased at own risk to achieve full power of amplifier. Please reference gain and power curves.

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Typical Test Result

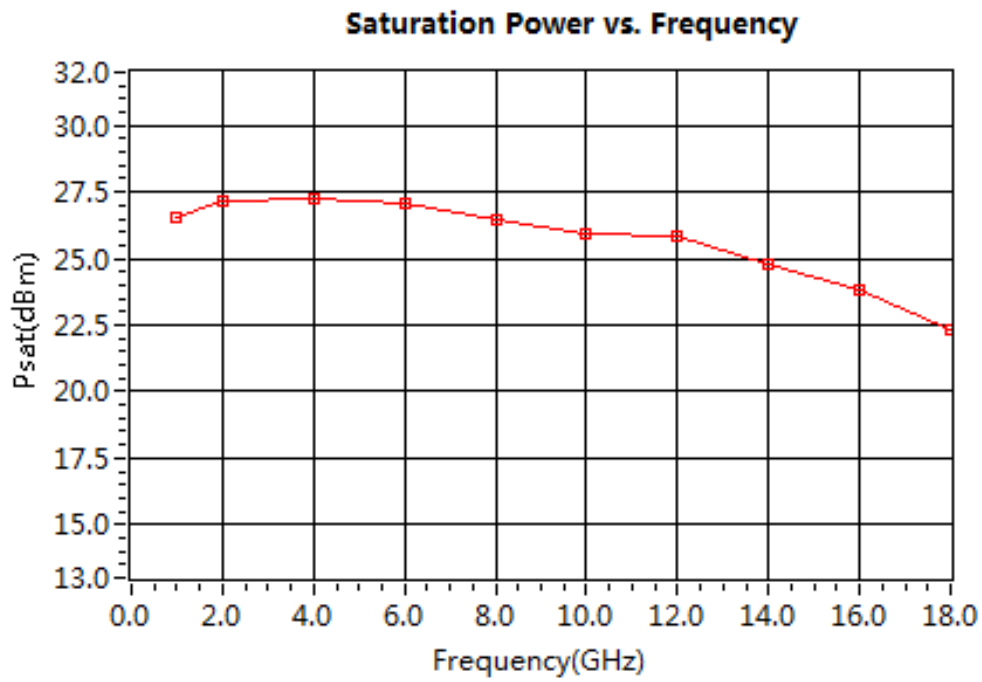
Gain



Noise Figure



Psat



P1dB

