

## AC- POWER AMPLIFIER

**MPC1022.41**  
**1GHz-22GHz**

### Features

- ✓ Broad band operation from 1 to 22 GHz
- ✓ Low VSWR, unconditional stable
- ✓ Convenient AC Power Input. (AC 110V/220V)
- ✓ SMA female connector I/O
- ✓ Gain: 41dB Typical
- ✓ Operating temperature -45~+85°C
- ✓ Storage temperature -50~+125°C

### Specifications

Parameters	Minimum	Typical	Maximum	Minimum	Typical	Maximum
Frequency Range	1 GHz		10 GHz	11 GHz		22 GHz
Gain	37 dB	44 dB	48 dB	37 dB	45 dB	45 dB
Gain Flatness		±5.0 dB			±5.0 dB	
Gain Variation Over Temperature (-40°C~+85°C)		±3.0 dB			±3.0 dB	
Noise Figure		5 dB			5 dB	
Input Return Loss		15 dB			15 dB	
Output Return Loss		10 dB			12 dB	
Output 1 dB Compression Point (P1dB)	33 dBm	34 dBm	36 dBm	32 dBm	33 dBm	36 dBm
Output 3 dB Compression Point (P3dB)	36 dBm	37 dBm	38 dBm	34 dBm	36 dBm	38 dBm
Saturated Output Power (Psat)		39 dBm			38 dBm	
Output Third Order Intercept (IP3)		42 dBm			42 dBm	
Supply Current (I <sub>dd</sub> ) (V <sub>cc</sub> =+24V) Require 20% current head room for power supply		2500 mA	2800 mA		2500 mA	2800 mA
Power Supply Voltage	24 V	24V Recommended				28 V
RF In/Out connectors	SMA female					

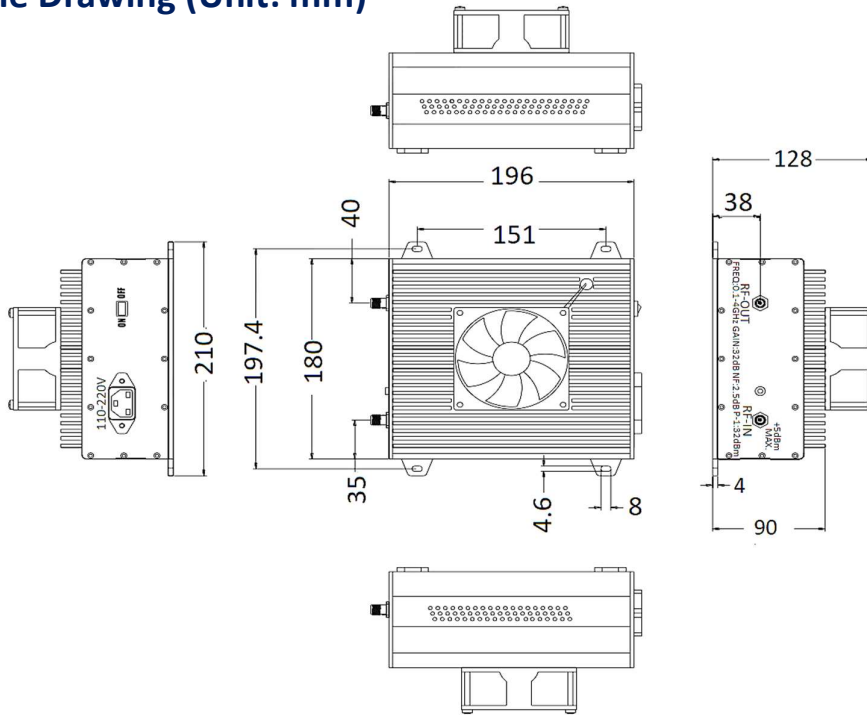
NOTES:

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	AC110~220V
RF Input Power(RFIN)	+2dBm
Storage Temperature	-50~+125°C

Biasing Up Procedure	
Step 1	Connect input and output with 50 Ohm source/load. ( in band VSWR<1.9:1 or >10dB return loss)
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 (°C)	-45~+85°C (Case Temperature below 85)
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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