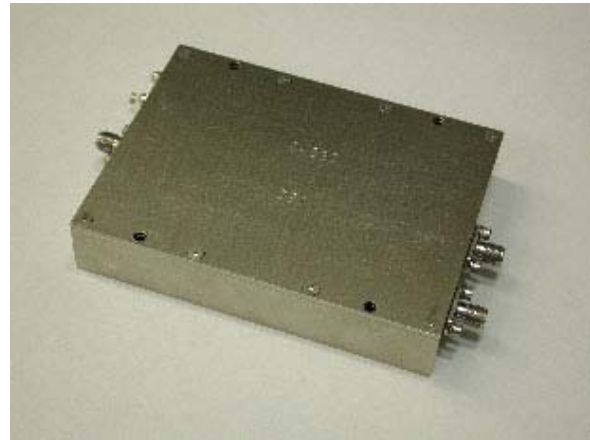


## DESCRIPTION

AMCOM's AM053231SF-3H is a Broadband Power Amplifier designed for high power microwave applications. It operates from 0.5 to 3.2GHz and delivers a minimum P1dB of +31dBm and a minimum small signal gain of 16 dB. The amplifier is in an aluminum housing with SMA connectors. The unit has an RF output monitoring port and is equipped with a built-in reverse-bias protection circuit and a zero-gate voltage/drain-shutoff switching circuit.



## FEATURES

- Broadband design from 0.5 to 3.2GHz
- High Gain (16dB min.) and High Saturated Power (31.5dBm min.) across entire operating frequency band.
- RF Output Monitoring Port (Nominal Coupling Factor: 25dB)
- +15V/1A, -5V/65mA bias with built-in reverse-bias protection and zero-gate voltage/drain shutoff circuit.
- Positive Voltage Regulation.
- Return Loss on Input port: > 13dB. Return Loss on Output port: > 8dB.

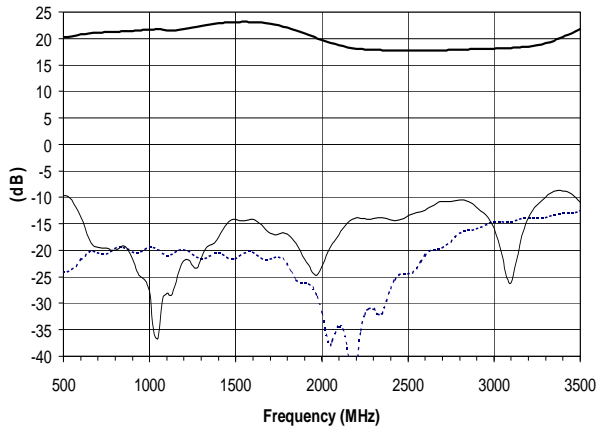
## ABSOLUTE MAXIMUM RATING

| Parameters       | Rating |
|------------------|--------|
| Positive Voltage | 20V    |
| Negative Voltage | -7V    |
| Input RF Power   | +17dBm |
| Case Temperature | 55°C   |

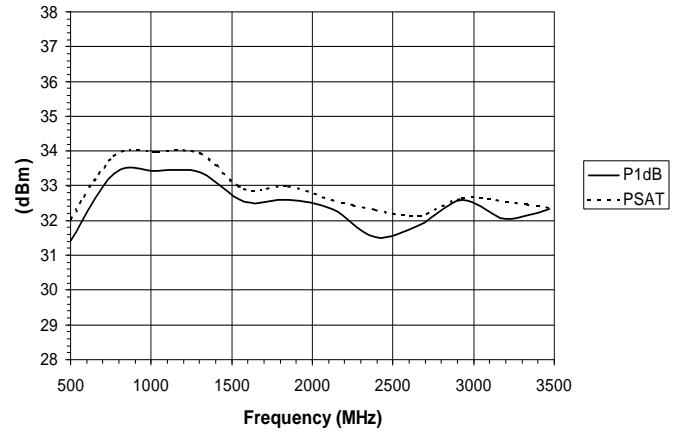
## PERFORMANCE FROM 0.5 - 3.2GHz (+15V / -5V, TA = 25°C)

| Parameters                   | MIN  | TYP     | MAX   |
|------------------------------|------|---------|-------|
| Small Signal Gain (dB)       | 16   | 20      |       |
| P1dB (dBm)                   | 30.5 | 31      |       |
| Gain Flatness (dB)           |      | +/- 2.5 | +/- 3 |
| Saturated Output Power (dBm) | 31.5 | 32      |       |
| RF Input Return Loss (dB)    |      |         | -13   |
| RF Output Return Loss (dB)   |      |         | -8    |
| Nominal Coupling Factor (dB) |      | 25      |       |
| Coupling Flatness (dB)       |      |         | +/- 3 |
| Positive Bias Current (mA)   |      | 975     |       |
| Negative Bias Current (mA)   |      | 65      |       |
| Operating Temperature (°C)   | -10  |         | +50   |

**PERFORMANCE FROM 0.5- 3.2GHz (+15V, - 5V, TA = 25°C) (CONTINUED)**



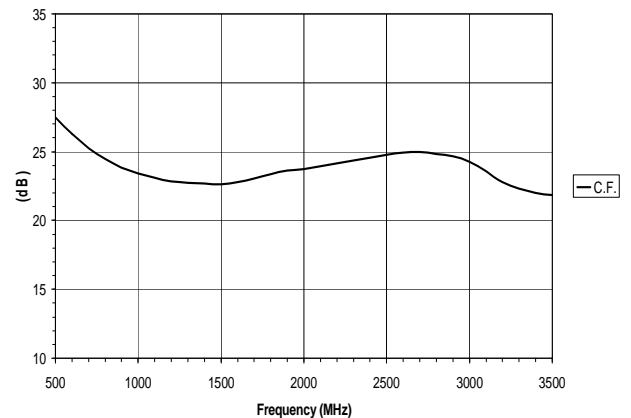
Small Signal Gain, Input/output Return Loss vs. Frequency



Output Power (P1dB), Saturated Power vs. Frequency

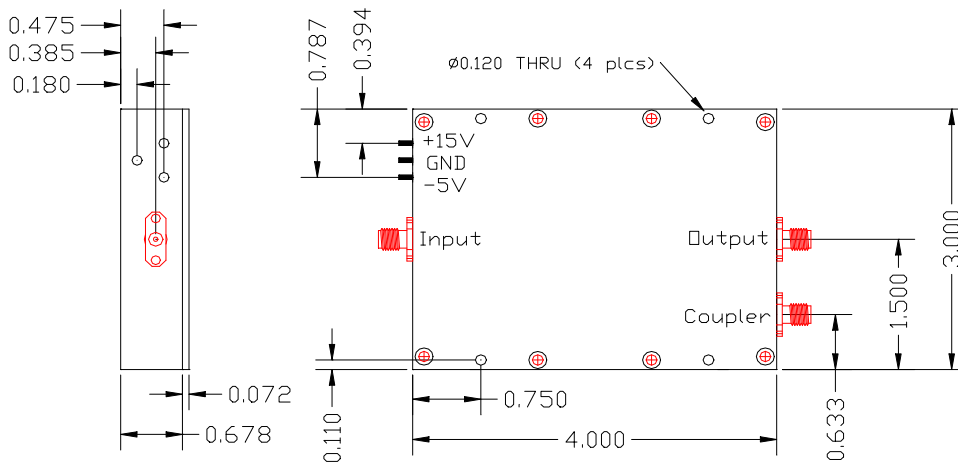
**GENERAL PRECAUTIONS**

The AM053231SF-3H Power Amplifier is housed in an aluminum housing with SMA female connectors on all RF Ports. The amplifier is designed to operate within specifications when biased with a +15V positive supply and -5V negative supply. Furthermore, the amplifier dissipates an average of 15 watts and therefore needs to be attached to a heatsink under operation to allow the case temperature to remain well below +55°C.



Monitoring Port Coupling Factor vs. Frequency

**PACKAGE OUTLINE**



All dimensions are in inches. Tolerance is +/- 0.005"