

## GPA Series

## 5 – 20GHz RF Amplifier

### Features

- Frequency Range: 5-20GHz
- Gain: 10dB
- $P_{1dB}$ : +17dBm
- IP3: +25dBm
- Noise Figure: 6.5dB (typ.)
- DC Power: 5V @ 130mA
- SMA-female connectorized

### Description

GPA-240F is a high performance RF Microwave Driver Amplifier, with standard frequency range of 5GHz to 20GHz.

### Photo



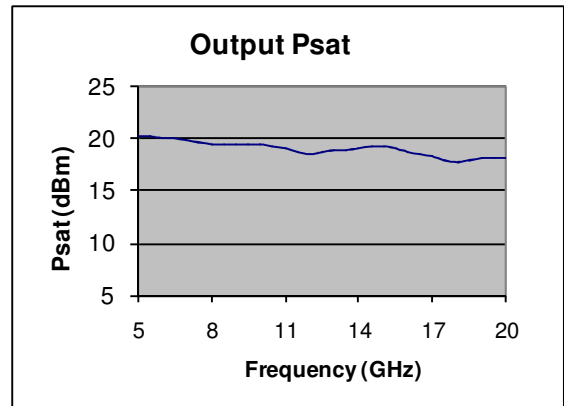
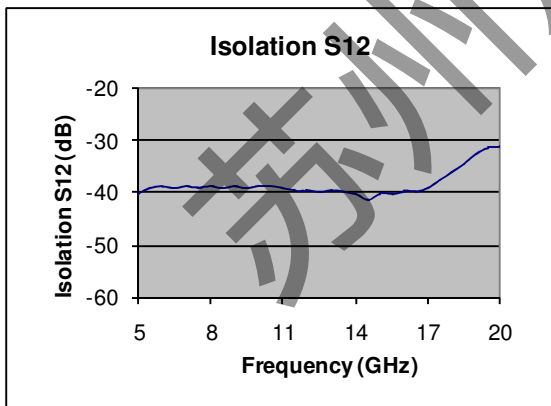
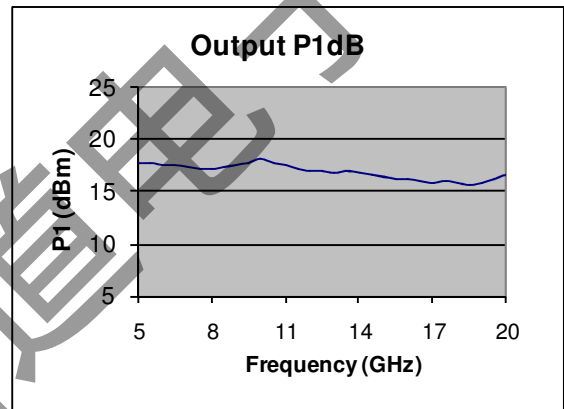
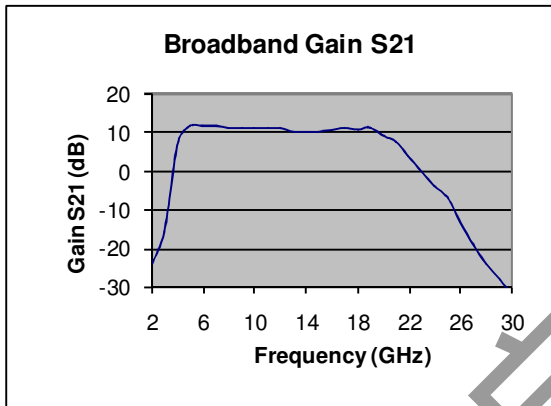
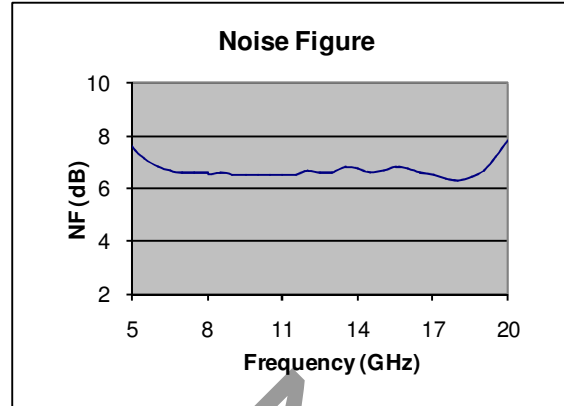
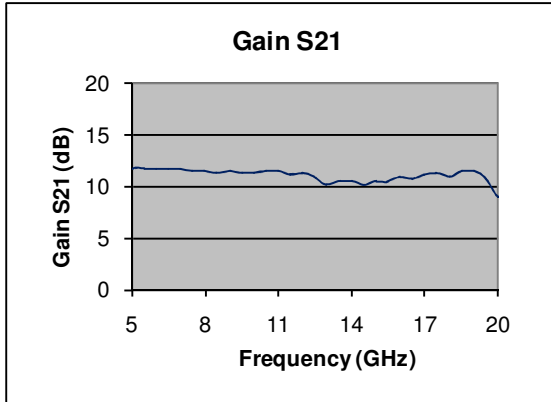
### Electrical Specifications @+25 °C, $Z_{in}=Z_{out}=50\ \Omega$ , $V_{supply} = +5VDC$

| Parameter                        | Unit       | Minimum                        | Typical    | Maximum    |
|----------------------------------|------------|--------------------------------|------------|------------|
| Frequency Range                  | GHz        | 5                              |            | 20         |
| Gain (S21) f = 5GHz              | dB         |                                | 11.5       |            |
| f = 12GHz                        | dB         | 10.0                           | 11.0       |            |
| f = 20GHz                        | dB         |                                | 9.0        |            |
| Gain Variation Over Temperature  | dB/°C      |                                | 0.02       | 0.03       |
| Output Power $P_{1dB}$           | dBm        |                                | +17        |            |
| Saturated Output Power $P_{Sat}$ | dBm        |                                | +19        |            |
| Output Third Order Intercept IP3 | dBm        |                                | +25        |            |
| Noise Figure @12GHz              | dB         |                                | 6.5        | 7.5        |
| Reverse Isolation (S12) @12GHz   | dB         |                                | -39        |            |
| VSWR-Input (S11)                 | ratio:1    | 1.6 @5GHz                      | 1.3 @12GHz | 2.2 @20GHz |
| VSWR-Output (S22)                | (unitless) | 1.1 @5GHz                      | 1.3 @12GHz | 1.8 @20GHz |
| DC Power Supply - voltage        | V          | 4.5                            | 5.0        | 5.5        |
| DC Power Supply - current        | mA         |                                | 130        | 150        |
| Operating Temperature            | °C         | -40                            |            | +85        |
| Size (RF/DC feedthru's excluded) | Inch       | 1.00 (L) x 0.75 (W) x 0.45 (H) |            |            |
| Weight                           | Oz         | 0.6 (17 grams)                 |            |            |

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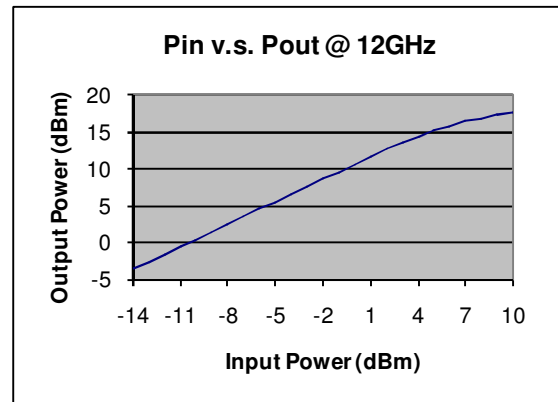
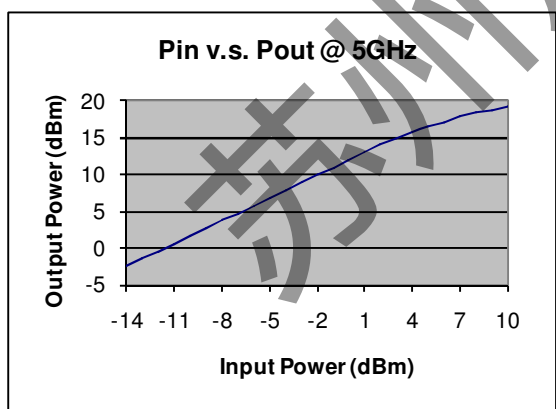
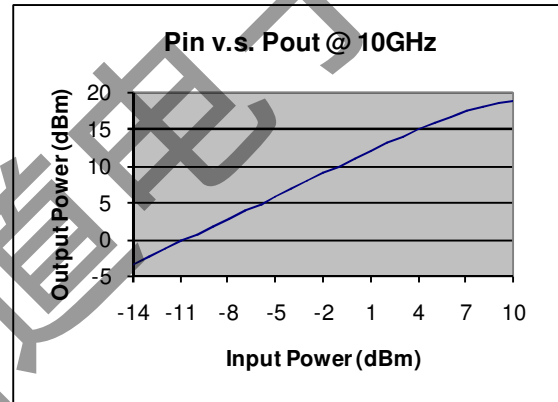
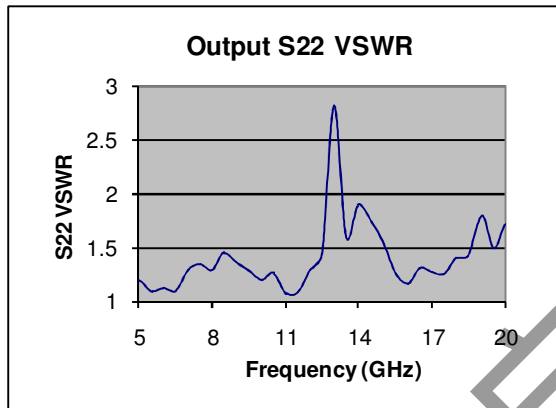
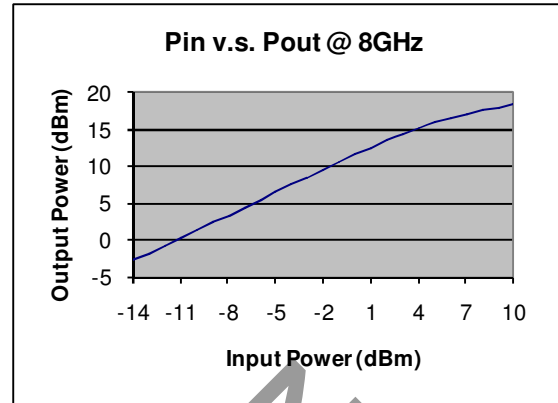
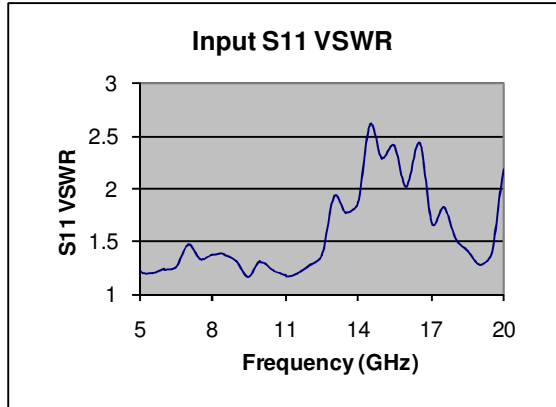
**Typical Performance @+25 °C**



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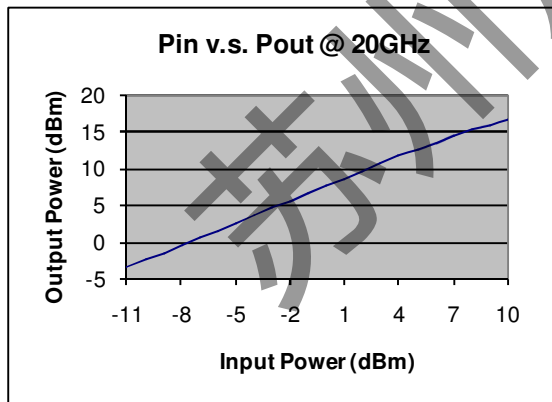
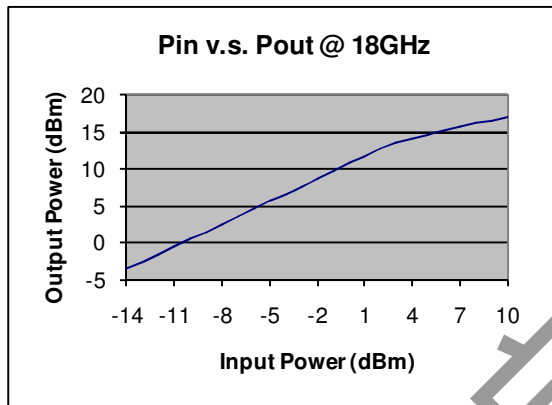
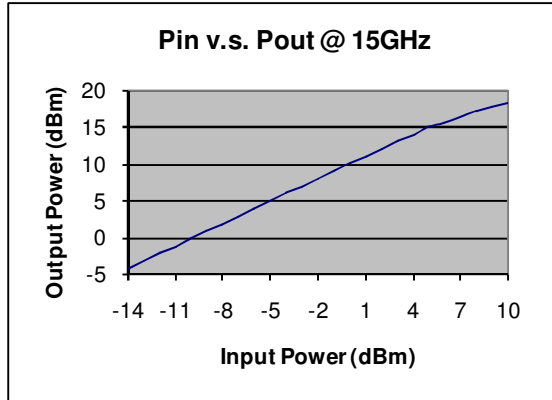
### Typical Performance @+25 °C



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### Typical Performance @+25 °C



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### Absolute Maximum Ratings

| Parameter                 | Absolute Maximum  |
|---------------------------|-------------------|
| RF Input Power            | +20dBm            |
| Supply Voltage (Survival) | +16V              |
| Operating Temperature     | -40 °C to +85 °C  |
| Storage Temperature       | -55 °C to +125 °C |

### Outline

