

4.5-9.0GHz 1W Power Amplifier

Features

- Frequency Range: 4.5 – 9.0GHz
- Gain: 27dB
- P_{1dB}: +30dBm
- IP3: +39dBm
- Noise Figure: 4.5dB
- DC Voltage: +9V @ 850mA
- RF Connector: SMA-F

Photo



Description

HD33864 is a 1W high performance RF Power Amplifier, with standard frequency range of 4.5 to 9.0GHz.

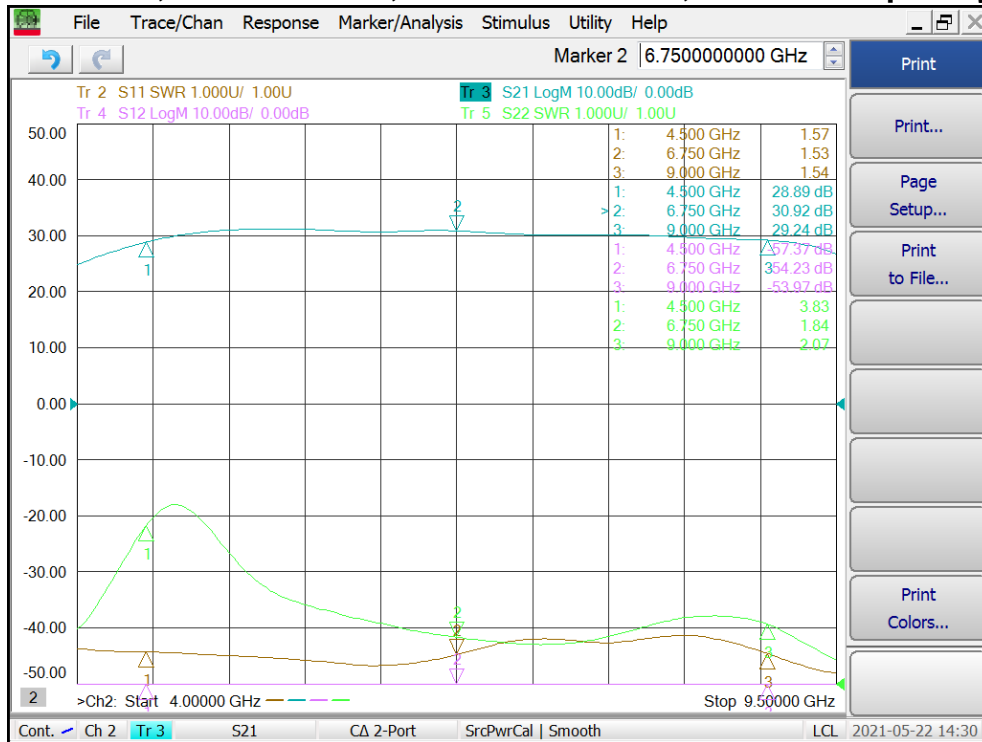
Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +9VDC

| Parameter | Unit | Minimum | Typical | Maximum |
|----------------------------------|---------|---|---------|---------|
| Frequency Range | GHz | 4.5 | | 9.0 |
| Gain (S21) | dB | 27 | 29 | |
| Gain Flatness | dB | | ±1.0 | ±1.5 |
| Output Power P _{1dB} | dBm | +29 | +30 | |
| Output Third Order Intercept IP3 | dBm | +38 | +39 | |
| Noise Figure | dB | | 4.5 | 5.5 |
| Isolation S12 | dB | -45 | -55 | |
| VSWR-Input (S11) | | | 1.5:1 | 2.0:1 |
| DC Power Supply - voltage | V | +8.5 | +9.0 | +9.5 |
| DC Power Supply - current | mA | | 850 | 950 |
| Operating Temperature | °C | -40 | | +85 |
| Size (RF/DC feedthru's excluded) | Inch/mm | 1.79x1.10x0.45/45.47x27.94x11.43(LxWxH) | | |
| Weight | Oz | 2.0 (56.7 grams) | | |

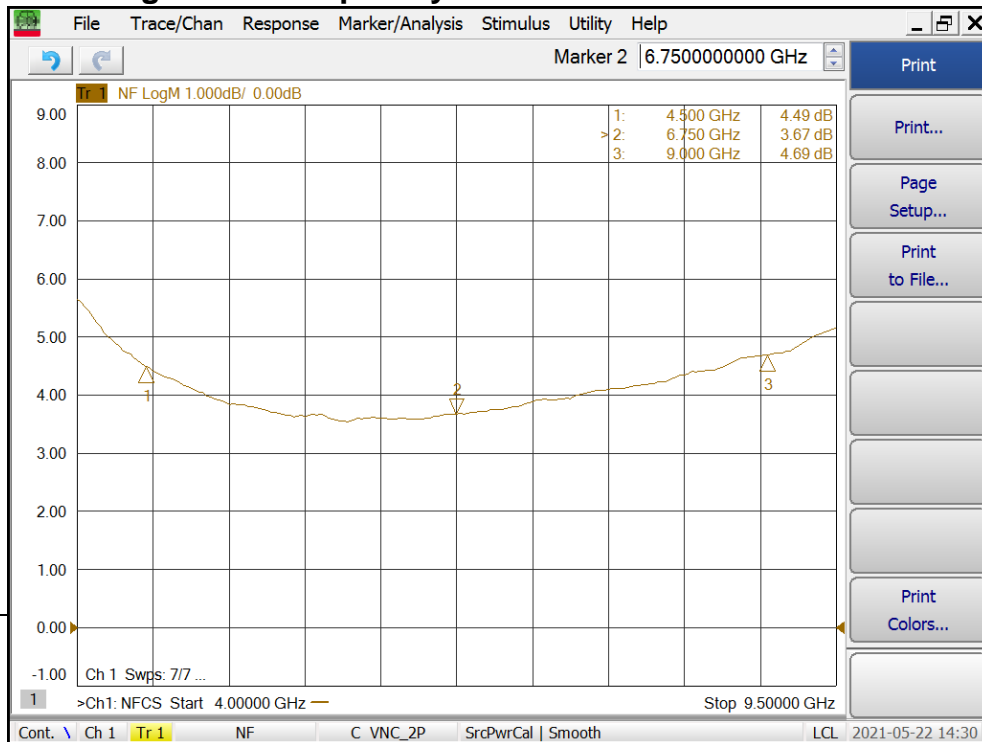
WARNING: MUST USE HEAT SINK

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Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency

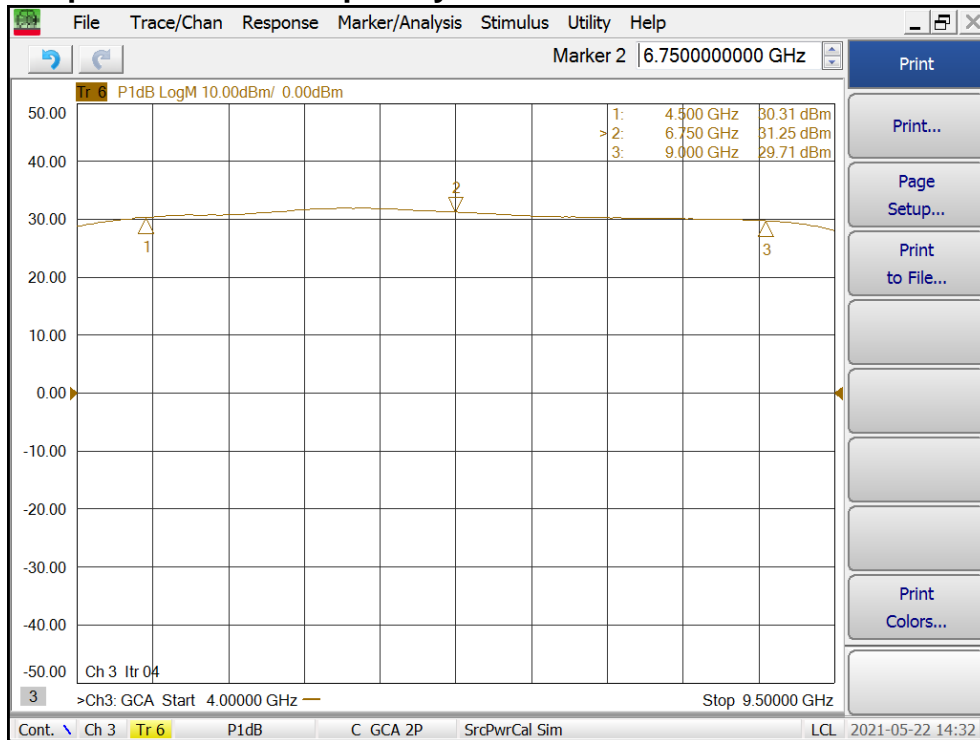


Noise Figure vs Frequency

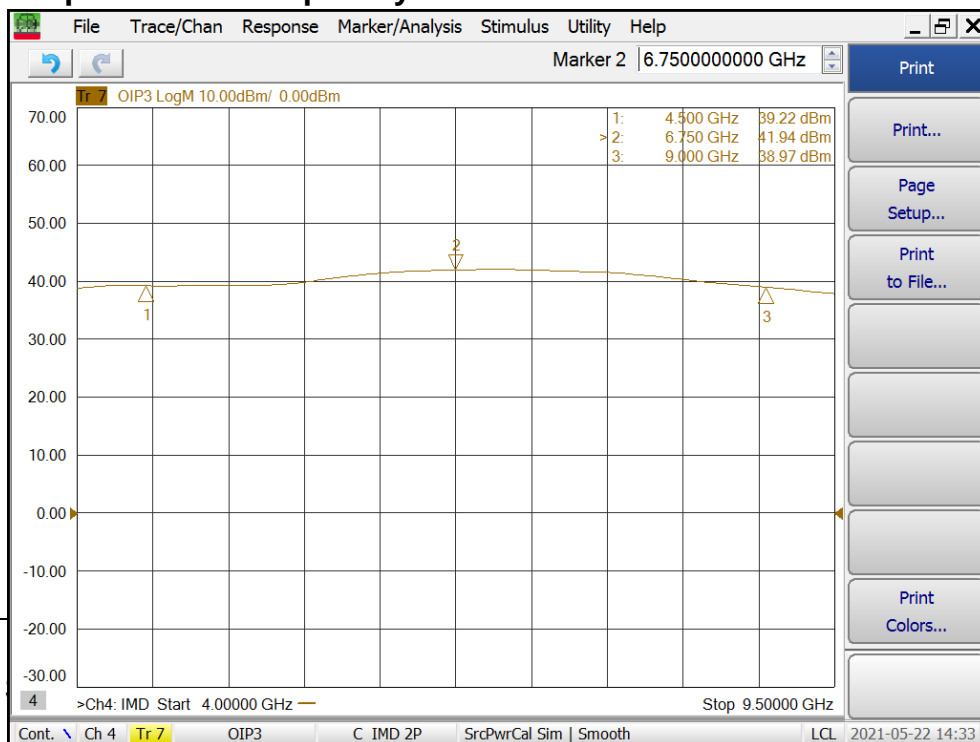


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Output P1dB vs Frequency



Output IP3 vs Frequency



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Absolute Maximum Ratings

| Parameter | Absolute Maximum |
|-----------------------|-------------------|
| RF Input Power | +27dBm |
| DC Supply Voltage | +12V |
| Operating Temperature | -40 °C to +85 °C |
| Storage Temperature | -55 °C to +125 °C |

ESD Sensitive Material



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Outline

