



AC 110V/220V Powered Low Noise Amplifier 50-69GHz NF: 3.8dB



- Short Haul / High Capacity Links
- Wireless LANs
- Military & Space
- Noise Figure: 4 dB
- P1dB: +16 dBm
- Gain: 40 dB
- Supply Voltage: +5V AND -5V
- 50 Ohm Matched Input/Output



Electrical Specifications [1], TA = +25 ° C
Vd = +5V, Vg = -5V, Id = 227mA

| Parameter | Min. | Typ. | Max. | Min. | Typ. | Max. | Units |
|--|---|------|------|------|------|------|-------|
| Frequency Range | 50 | | 60 | 61 | | 69 | GHz |
| Gain | 37 | 40 | 41 | 31 | 36 | 38 | dB |
| Gain Flatness | | ±0.5 | | | ±0.5 | | dB |
| Gain Variation Over Temperature(-45 ~ +85) | | ±0.5 | | | ±0.5 | | dB |
| Noise Figure | | 4 | | | 4 | | dB |
| Input Return Loss | | 10 | | | 10 | | dB |
| Output Return Loss | | 7 | | | 7 | | dB |
| Output Power for 1 dB Compression (P1dB) | | 16 | | | 16 | | dBm |
| Output Third Order Intercept (IP3) | | 25 | | | 25 | | dBm |
| Supply Current (Idd) (Vd=+5V) | | 220 | 227 | | 227 | 227 | mA |
| Isolation S12 | 60 | 60 | 60 | 66 | 67 | 70 | dB |
| Input Max Power(no damage) | | | -10 | | | -10 | dBm |
| Weight | 20 | | | | | | g |
| Impedance | 50 | | | | | | Ohms |
| Input /Output Connector | 1.85mm-Female | | | | | | |
| Finishing | Standard: Gold 40 micron; Nickel 220 micron thickness | | | | | | |
| | Option: Gold 80 micron; Nickel 180 micron thickness | | | | | | |
| Material | Aluminum/copper | | | | | | |
| Package Sealing | Epoxy Sealing (Standard) | | | | | | |
| | Hermetically Seal (Option with extra charge) | | | | | | |

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Absolute Maximum Ratings

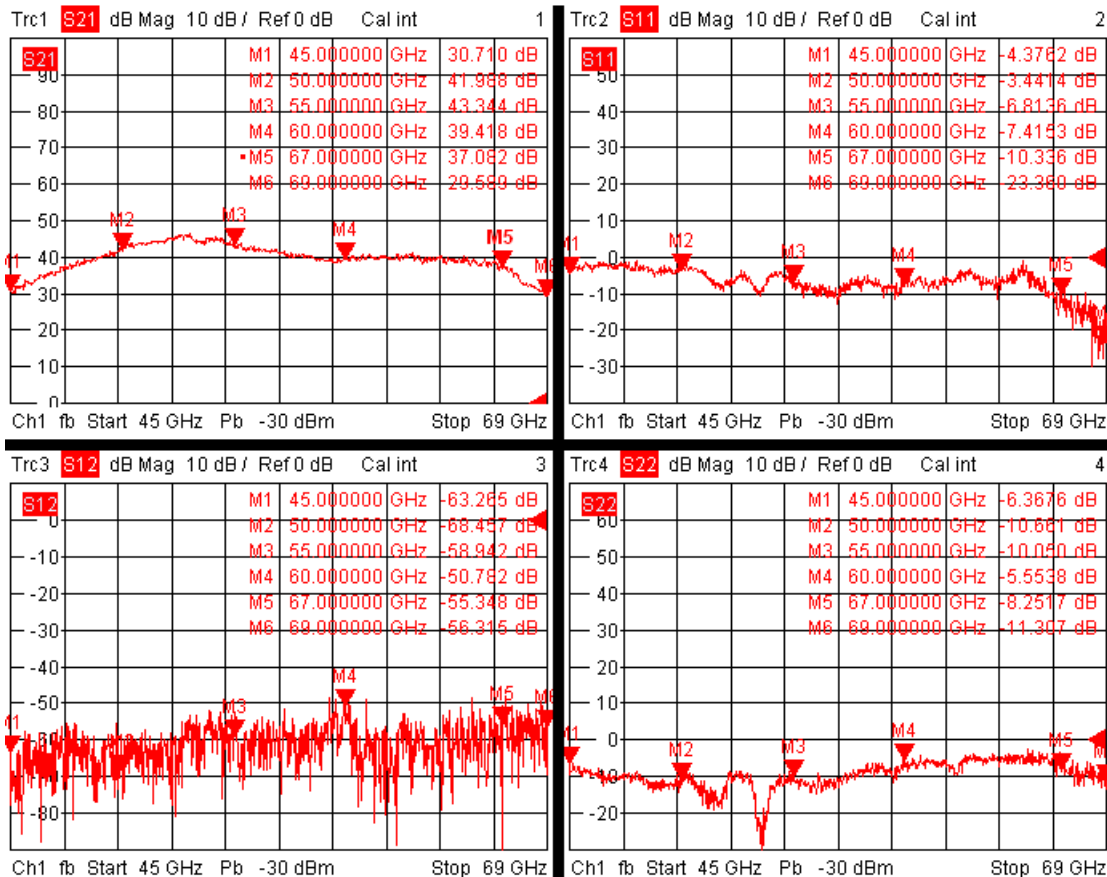
| | |
|-------------------------|----------------|
| Drain Biasing | +5~+5.2Vdc |
| Gate Biasing | -5V to -5.2Vdc |
| RF Input Power (RFIN) | -10dB m |
| Storage Temperature(C°) | -65 to +150 |

Environment specifications

| | |
|------------------------------|---|
| Operational Temperature (C°) | -45 ~ +85(Case Temperature must be less than 85C all time) |
| Storage Temperature (C°) | -65 ~ +150 |
| Altitude | 30,000 ft. (Epoxy Seal Controlled environment) |
| | 60,000 ft 1.0psi min (Hermetically Seal Un-controlled environment) (Optional) |
| Vibration | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |
| Humidity | 100% RH at 35c, 95%RH at 40°c |
| Shock | 20G for 11msc half sin wave,3 axis both directions |

| Biasing Up Procedure | |
|----------------------|--------------------------|
| Step 1 | Connect input and output |
| Step 2 | Connect Ground Pin |
| Step 3 | Connect -5V biasing |
| Step 4 | Connect +5V biasing |
| Power OFF Procedure | |
| Step 1 | Turn off -5V biasing |
| Step 2 | Turn off +5V biasing |
| Step 3 | Remove RF connection |
| Step 4 | Remove Ground. |

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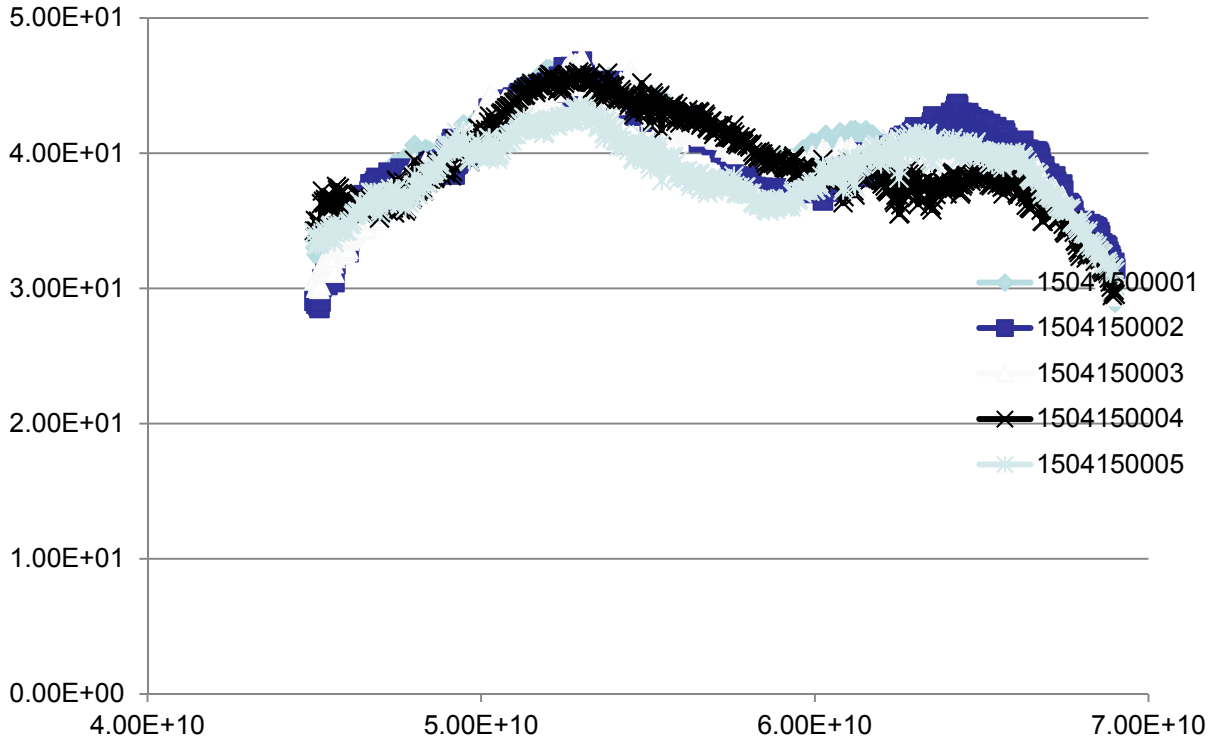




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The power beyond expectations

RAMP50G69GA



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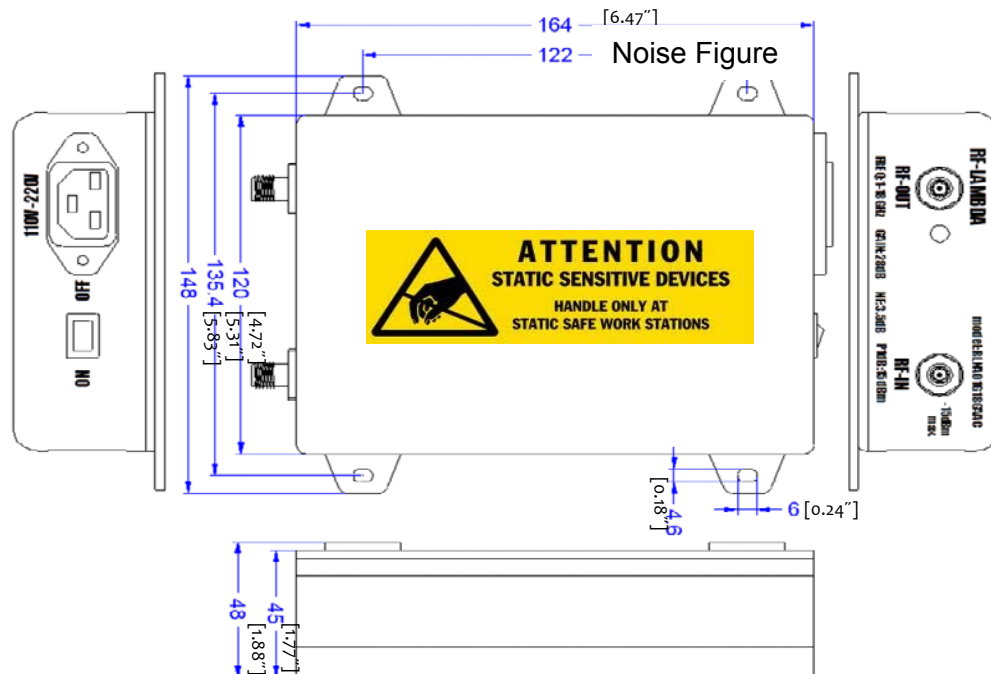
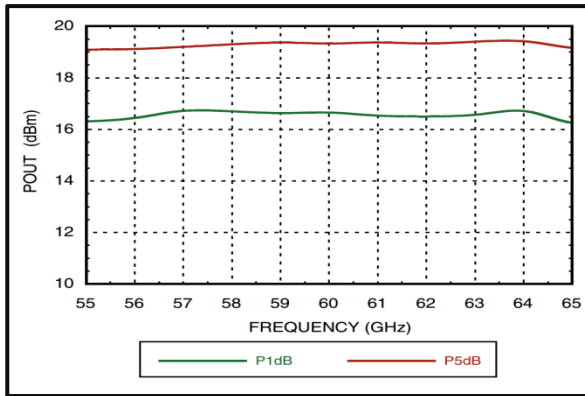


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P1dB vs. Frequency



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