

Features

- Single Biasing Voltage (Self Biased)
- Frequency: 6- 18GHz
- Small Signal Gain Typical : 25dB@6GHz,21dB@18GHz Typical
- Gain Flatness: ± 2.0 dB Typical
- Noise Figure: 1.7dB Typical
- P1dB: 16dBm Typical
- Power Supply: +5V/80mA
- Input/Output: 50 Ω
- Package Size : 4 x 4x 0. 8mm

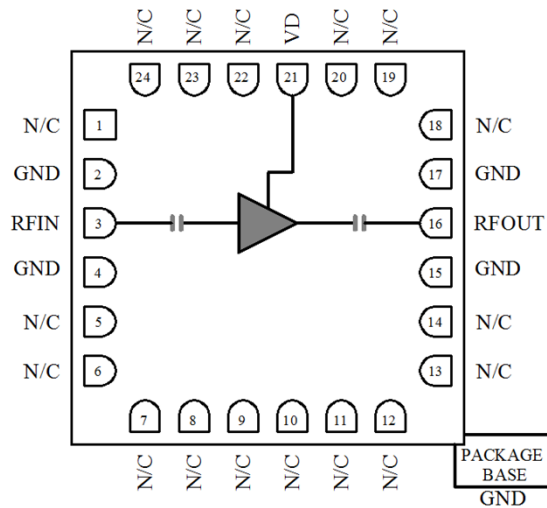
Typical Applications

- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

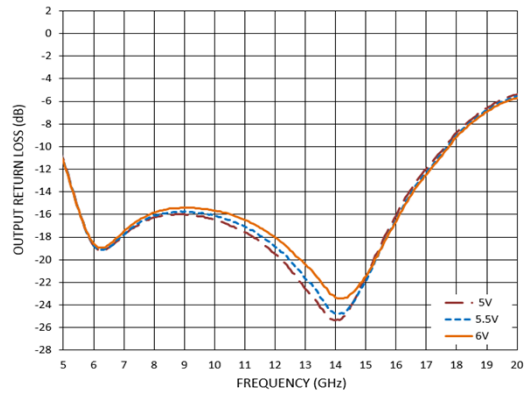
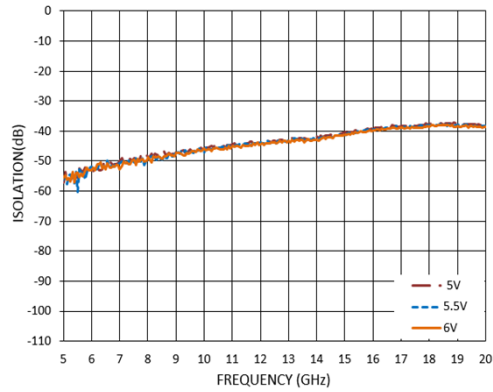
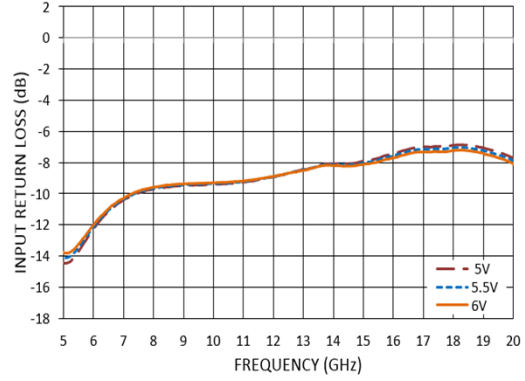
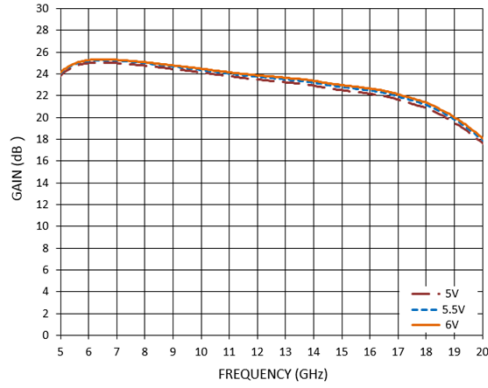
TA = +25°C, VD = +5V, IDD = 80mA Typical

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	6-12			12-18			GHz
Small Signal Gain	22	24		20	22		dB
Gain Flatness		± 1.0			± 1.5		dB
Noise Figure		1.7			2.0		dB
P1dB-Output 1dB Compression	14	16		13	15		dBm
Psat - Saturated Output Power		18			17		dBm
OIP3- Output Third Order Intercept		30			30		dBm
Input Return Loss		9			8		dB
Output Return Loss		14			12		dB

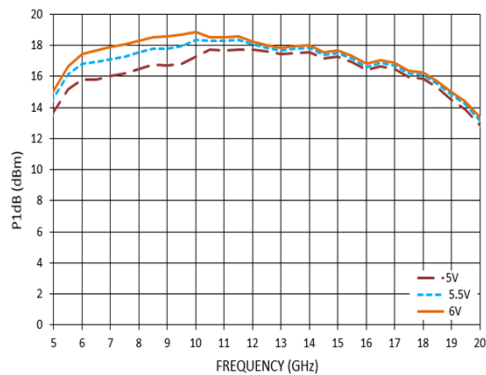
Functional Block Diagram




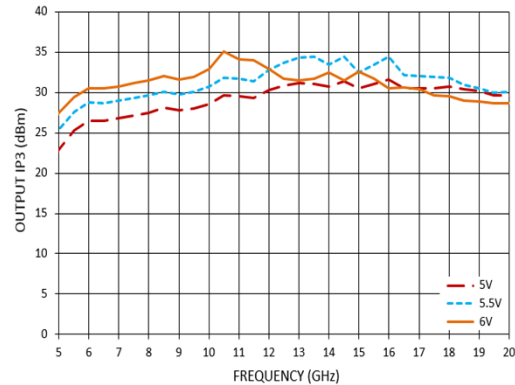
Measurement Plots: S-parameters

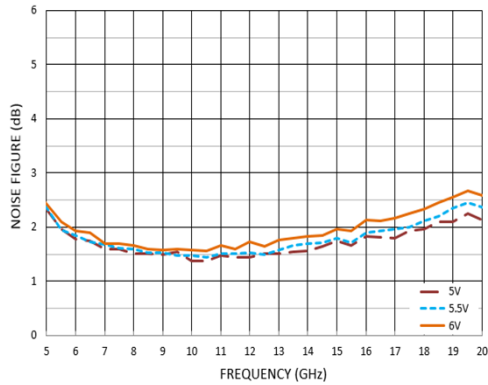


Measurement Plots: P1dB



Measurement Plots: OIP3



Measurement Plots: Noise Figure

Absolute Maximum Ratings

Drain Bias Voltage (VD)	+7V
RF Input Power (RFIN)(VD=+5V)	+20dBm
Channel Temperature	175 °C
Continuous Pdiss (T = 85 °C) (derate 9.4mW/°C above 85 °C)	0.85W
Thermal Resistance (channel to die bottom)	50°C/W
Operating Temperature	-55 to +85 °C
Storage Temperature	-65 to +150 °C

Typical Supply Current vs. VD

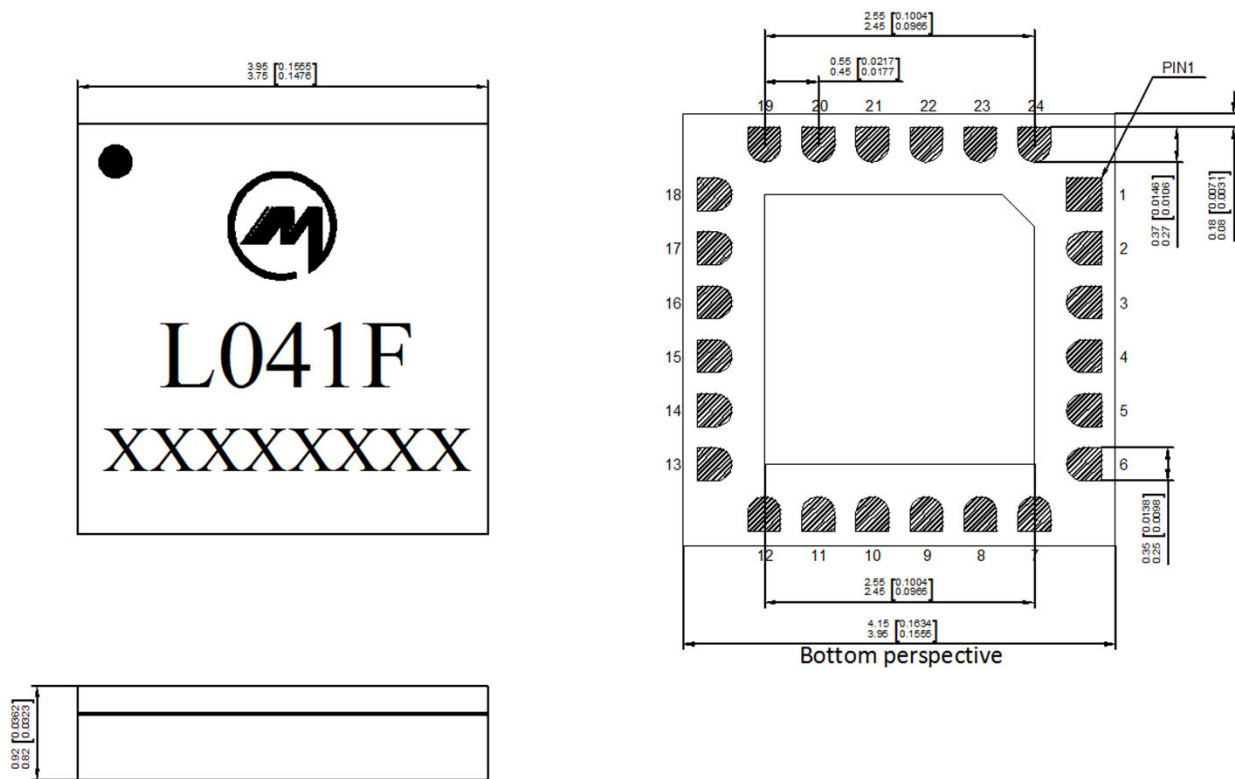
VD (V)	IDD (mA)
+5	80
+5.5	97
+6	120



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS



Outline Drawing: All Dimensions in mm[inches]

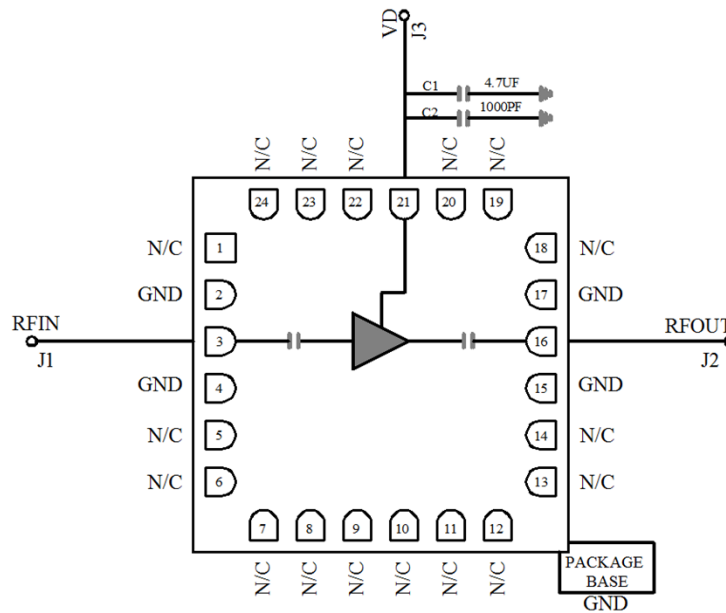


Notes:

1. Package body material : Alumina.
2. Lead and ground paddle plating: Gold flash over nickel.
3. Dimensions are in millimeters(inches).
4. Lead spacing tolerance is non-cumulative.

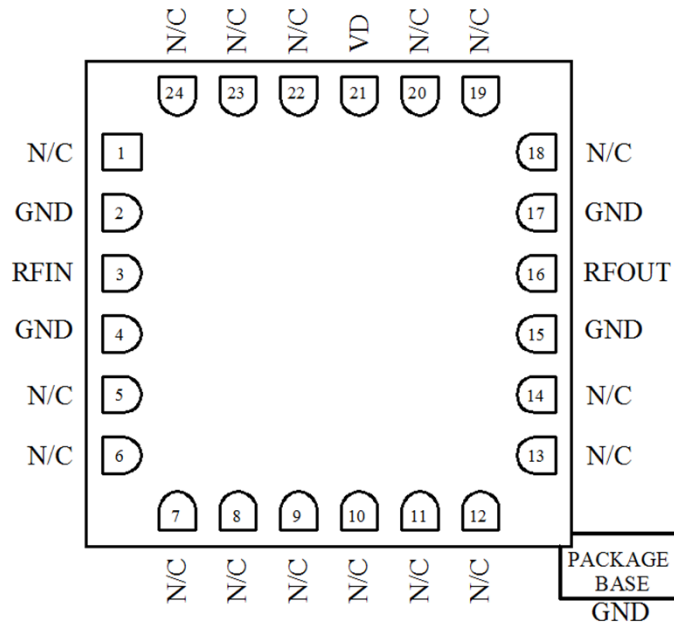


Assembly Drawing



Pin Descriptions

No	Function	Description
1,5,6,7,8,9,10,11,12,13,14,18,19,20,22,23,24	NC	No connection. These pins may be connected to RF ground. Performance will not be affected.
3	RF IN	RF Signal Input. This pad is ac-coupled and matched to 50 Ω.
16	RF OUT	RF Signal Output. This pad is ac-coupled and matched to 50 Ω.
21	VD	Connect to external 1000pf and 4.7uf bypass capacitors.
2,4,15,17	GND	These pins & exposed ground paddle must be connected to RF/DC ground
	GND	Package bottom must be connected to RF/DC ground



Biasing and Operation

Turn ON procedure:

1. Connect GND to RF and dc ground.
2. Apply positive drain voltage VD and set to +5 V .
3. Apply RF signal.

Turn OFF procedure:

1. Turn off the RF signal.
2. Turn off the positive drain voltage VD.

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