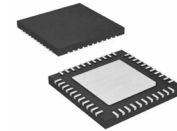
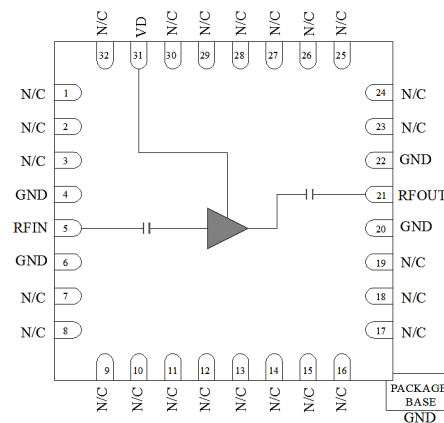


Features

- Single Biasing Voltage (Self Biased)
- Frequency: 2-20GHz
- Small Signal Gain: 13dB Typical
- Gain Flatness: ± 1.0 dB Typical
- Noise Figure: 4.5dB Typical
- P1dB: 24dBm Typical
- Power Supply: +8V/185mA
- Input/Output: 50 Ω
- Package Size : 5 x 5 x 0.65mm


Functional Block Diagram

Typical Applications

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

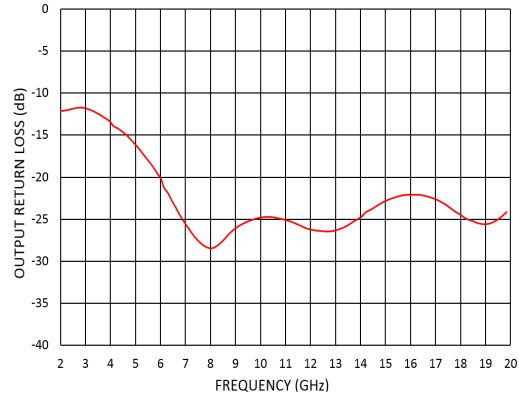
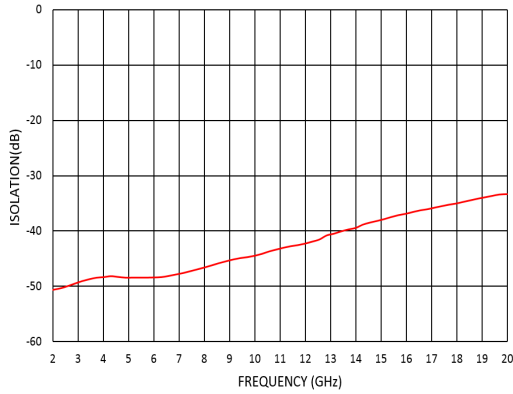
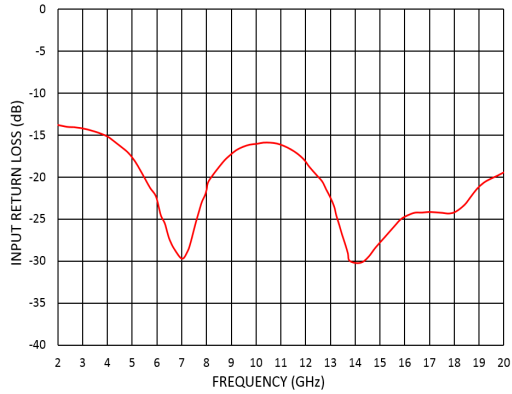
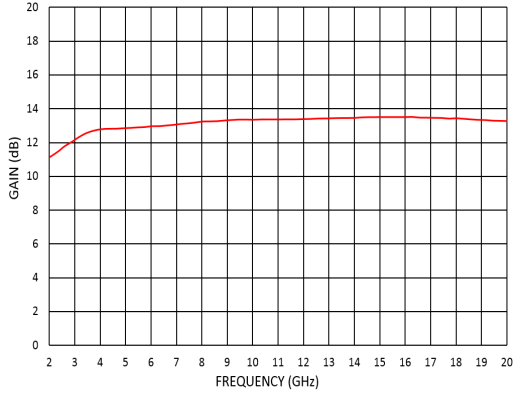
Electrical Specifications

TA = +25°C, VD = +8V, IDD = 185mA Typical

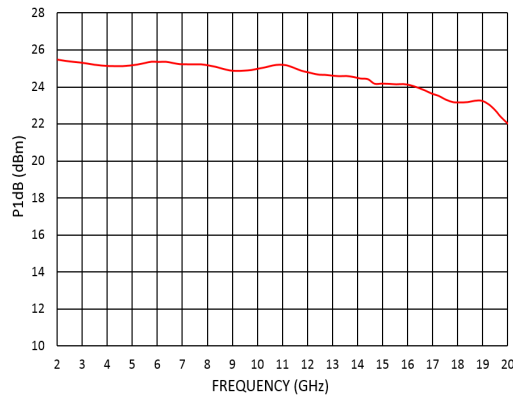
Parameters	Min.	Typ.	Max.	Units
Frequency	2		20	GHz
Small Signal Gain	10.5	13		dB
Gain Flatness		± 1.0		dB
Noise Figure		4.5		dB
P1dB - Output 1dB Compression	21.5	24		dBm
Psat - Saturated Output Power		25		dBm
OIP3 - Output 3rd Order Intercept		32		dBm
Input Return Loss		-16		dB
Output Return Loss		-20		dB



Measurement Plots: S-parameters



Measurement Plots: P1dB



Absolute Maximum Ratings

Drain Bias Voltage (VD)	+10V
RF Input Power (RFIN)(VD=+8V)	+20dBm
Channel Temperature	175°C
Continuous Pdiss (T = 85 °C) (derate 22.2mW/°C above 85 °C)	2W
Thermal Resistance (channel to die bottom)	50°C/W
Operating Temperature	-55°C to +85 °C
Storage Temperature	-65°C to +150 °C

Typical Supply Current vs. VD

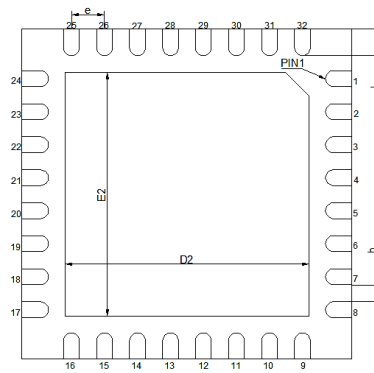
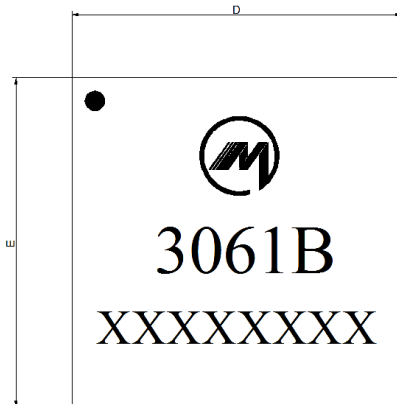
VD (V)	IDD (mA)
+8	185



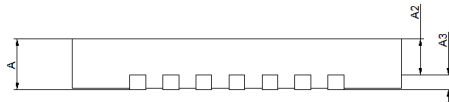
ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS



Outline Drawing:
All Dimensions in mm



Bottom perspective



UNITS=MM

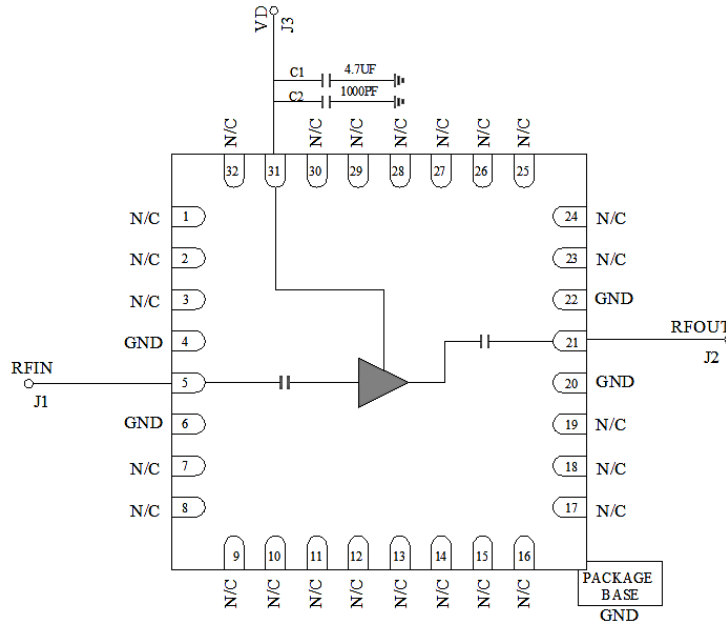
SYMBOL	MIN	NOM	MAX
A	0.55	0.65	0.75
A1	0	0.02	0.05
A2	0.36	0.45	0.54
A3	0.19	0.20	0.21
D	4.90	5.00	5.10
E	4.90	5.00	5.10
b	0.19	0.24	0.29
D2	3.60	3.70	3.80
E2	3.60	3.70	3.80
e		0.50	
K	0.20		
L	0.35	0.40	0.45
R	0.10		

Notes:

1. Package model : 32-Lead Lead Frame Chip Scale Package .
2. Dimensions are in millimeters.
3. Lead spacing tolerance is non-cumulative.

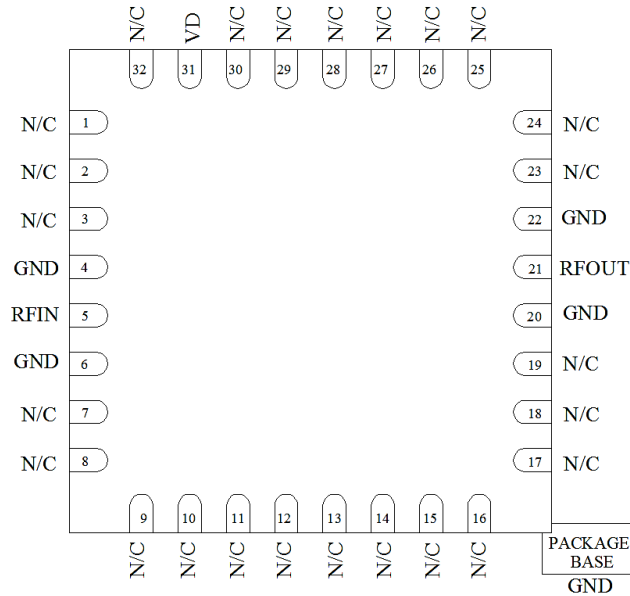


Assembly Drawing



Pin Descriptions

No	Function	Description
1,2,3,7,8,9,10,11,12,13,14,15,16,17,18,19,23,24,25,26,27,28,29,30,32	NC	No connection. These pins may be connected to RF ground. Performance will not be affected.
5	RF IN	RF Signal Input. This pad is dc-coupled and matched to 50 Ω.
21	RF OUT	RF Signal Output. This pad is dc-coupled and matched to 50 Ω.
31	VD	Connect to external 1000pf and 4.7uf bypass capacitors.
4,6,20,22	GND	These pins & exposed ground paddle must be connected to RF/DC ground
33	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 +8.0 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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