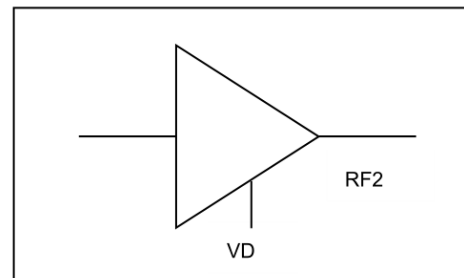
Features

- Frequency: 8-12GHz
- Gain: 28dB
- Noise Figure: 1.2 dB max.
- P1dB: >13dBm
- Power supply: +4V/59mA
- Input/Output: 50Ω
- Die Size: 2 .0 x 1.1mm

Functional Block Diagram



Typical Applications

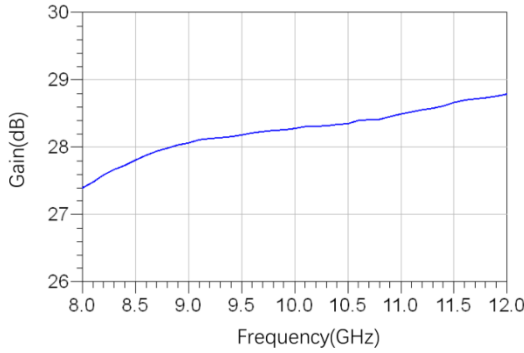
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

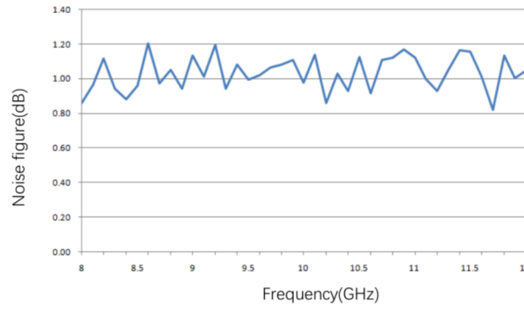
TA = +25ºC, Vd = +4V, 50Ω system.

Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Drain Voltage		+4		V
Drain Current	53	56	59	mA
Gain	27.5	28.5	28.8	dB
Noise Figure	0.8	1.1	1.2	dB
Output 1dB Compression (P1dB)	13	13.5	14	dBm
Input VSWR		1.4		dB
Output VSWR		1.3		dB

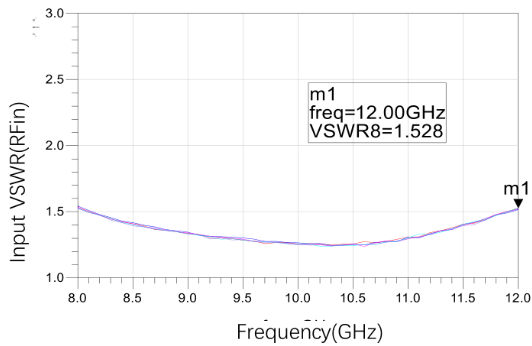
Gain vs. Frequency



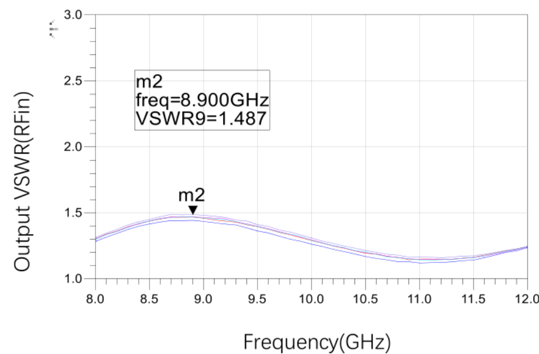
Noise Figure vs. Frequency



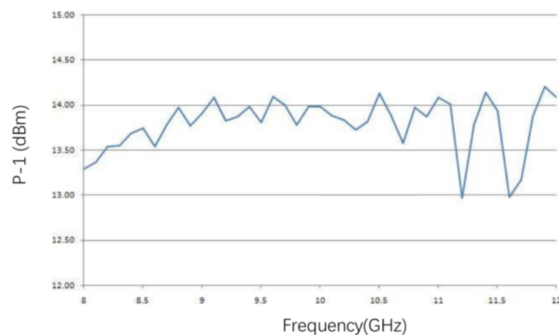
Input VSWR vs. Frequency



Output VSWR vs. Frequency

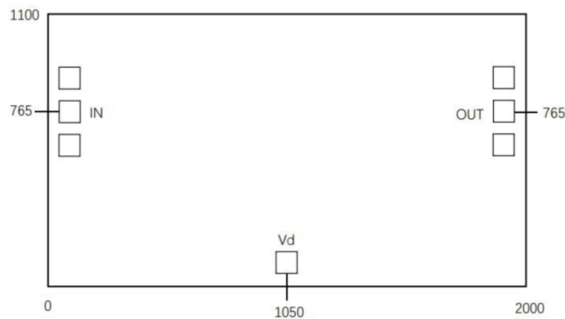


P1dB vs. Frequency

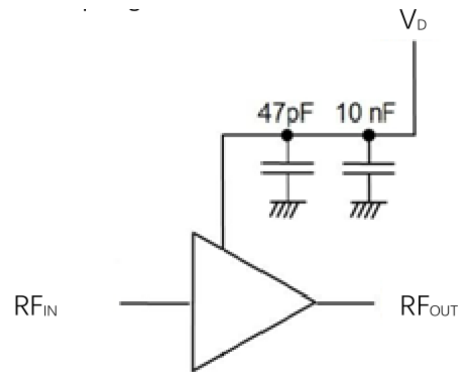


Outline Drawing:

All Dimensions in µm



Assembly Drawing



To prevent instability of the customer design it is highly recommended to place small chip capacitors as near as possible to the MML030, here 100pF recommended as placed in the demonstration board. Additionally, a 10nF capacitor can be added on a drain connection to insure low frequency decoupling.

Notes:
1. **Die thickness: 100um**
2. **Typical bond pad is 100*100 µm²**
3. **Bond pad metalization: Gold**
4. **Backside metalization: Gold**
5. **Backside of the die (GND)**
6. **No connection required for unlabeled bond pads**

Maximum Ratings:
1. **Maximum drain voltage: +5V**
2. **Maximum drain current: 60mA**
3. **Maximum input power: +10dBm**
4. **Operating temperature: -55℃ to +85℃**
5. **Storage temperature: -65℃ to +125℃**