MILLER MMIC

MMP127

V1.0.0

GaAs MMIC
Power Amplifier
6-18GHz

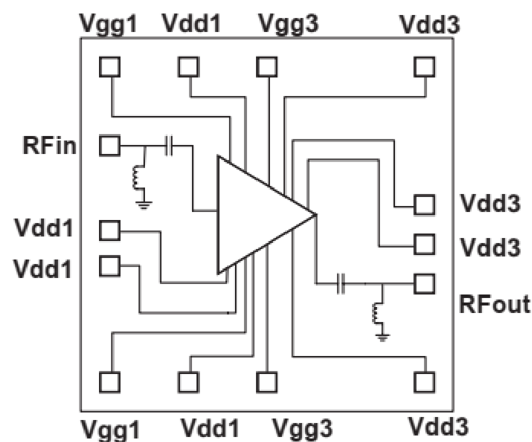
MMP127

Power Amplifier- MMIC 6-18GHz

Features

- Frequency: 6-18GHz
- Small Signal Gain: 21dB
- P1dB: 36dBm
- Psat: 37dBm
- Static Operating Current: 2.3A@+8V
- Die Size : 5.8 x 5.475 mm

Functional Block Diagram



Typical Applications

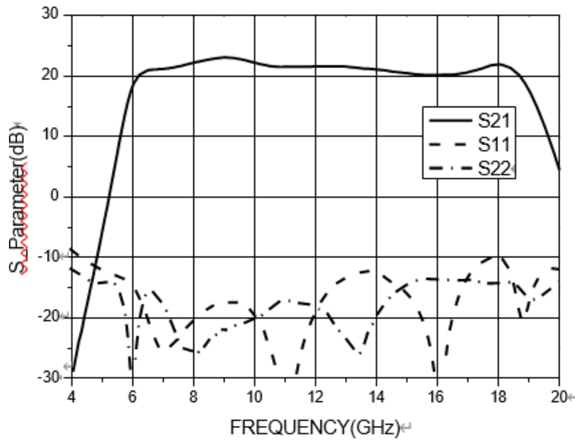
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

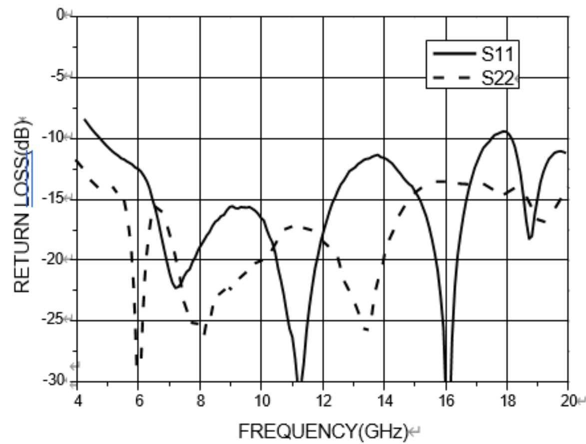
TA = +25°C, Vdd = +8V, Vgg = -0.86V (On-wafer Measurement Results)

Parameters	Min.	Typ.	Max.	Units
Frequency	6-18			GHz
Gain		21		dB
P1dB		36		dBm
Psat		37		dBm
Input Return Loss		19		dB
Output Return Loss		19		dB
Quiescent Current		2.3		A

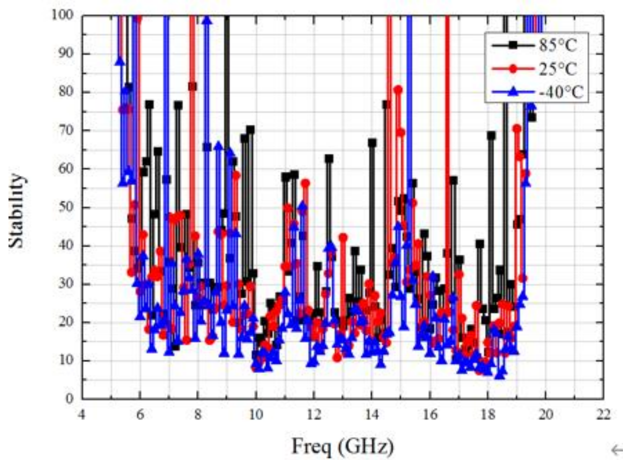
S-Parameter vs. Frequency



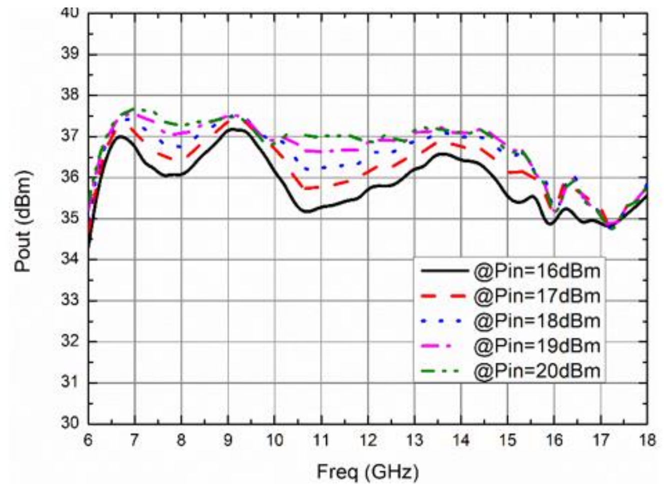
I/O Return Loss vs. Frequency



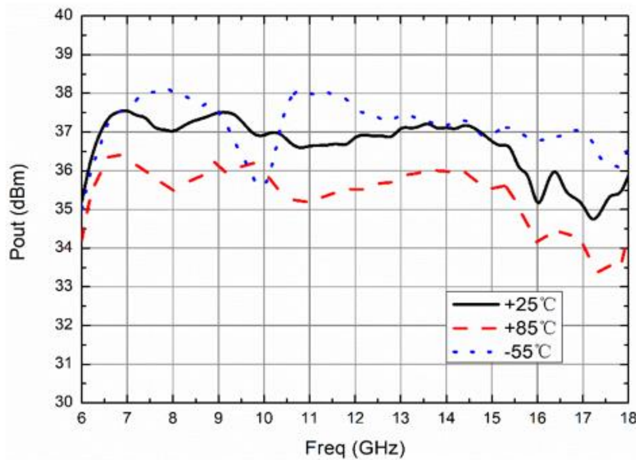
Stability vs. Temperature



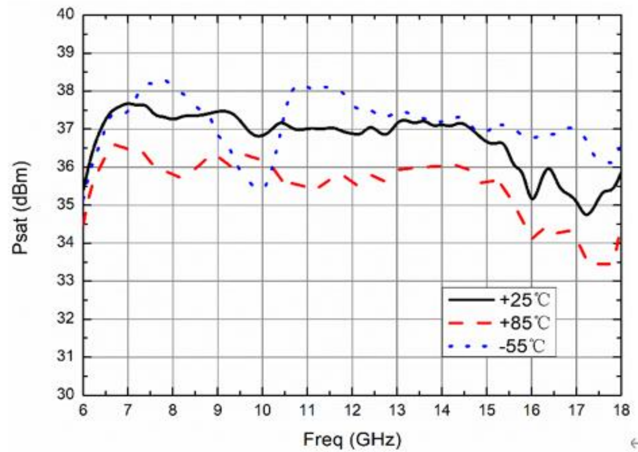
Output power at different input powers



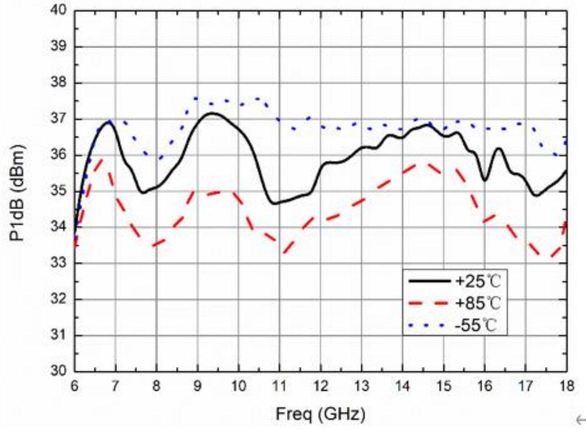
Pout@Pin = 19dBm vs. Frequency



Psat vs. Frequency

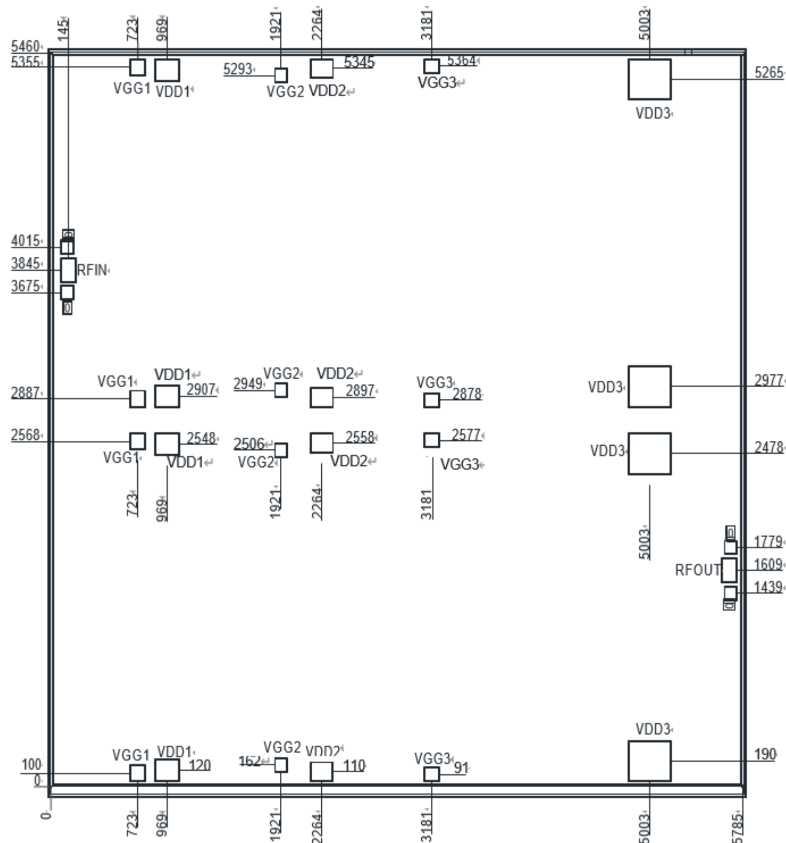


P1dB vs. Frequency



Outline Drawing:

All Dimensions in µm



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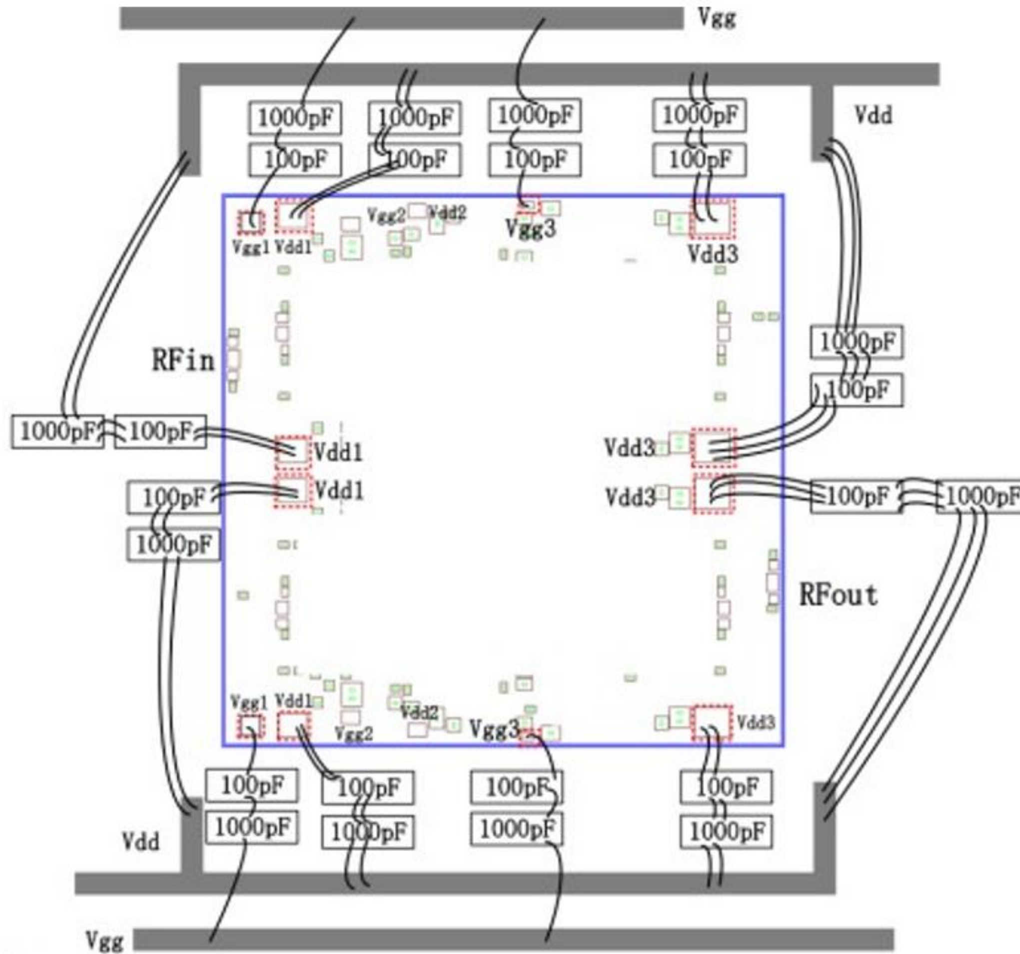
Assembly Drawing (Bond testing)



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. Supply voltage: +9V
2. RF Input power: +23dBm
3. Operating temperature: -55℃ to +85℃
4. Storage temperature: -65℃ to +150℃