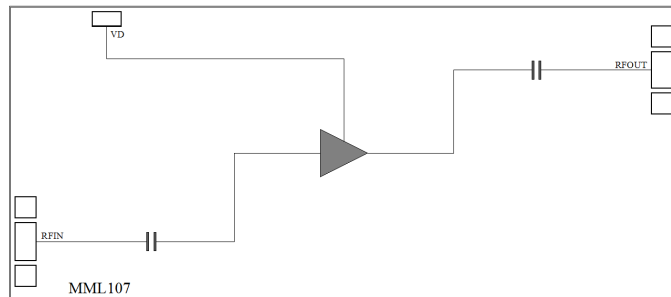


**Features**

- Single Biasing Voltage (Self Biased)
- Frequency: 2-26GHz
- Small Signal Gain: 15dB Typical
- Gain Flatness:  $\pm 0.5$ dB Typical
- Noise Figure: 2.0dB Typical
- P1dB: 15dBm Typical
- Power Supply: +6V@72mA
- Input/Output: 50 $\Omega$
- Chip Size: 3.1 x 1.36 x 0.1mm

**Functional Block Diagram**

**Typical Applications**

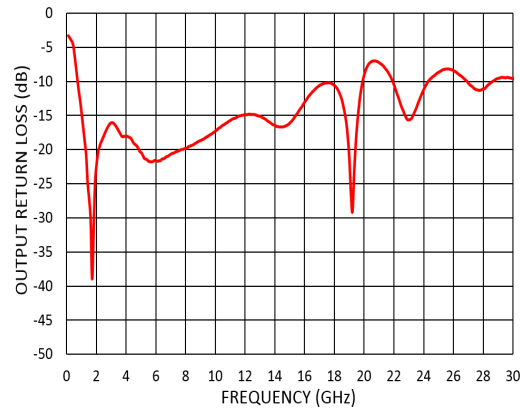
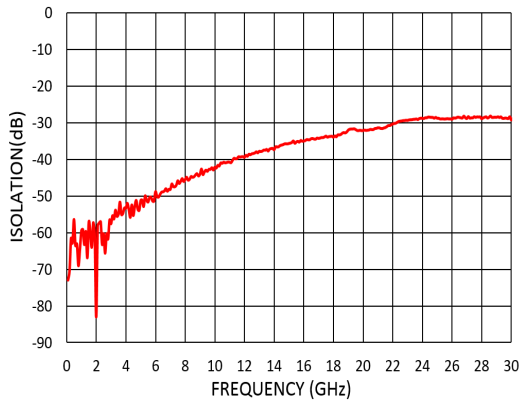
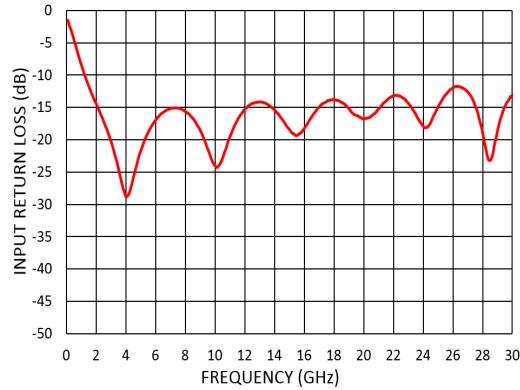
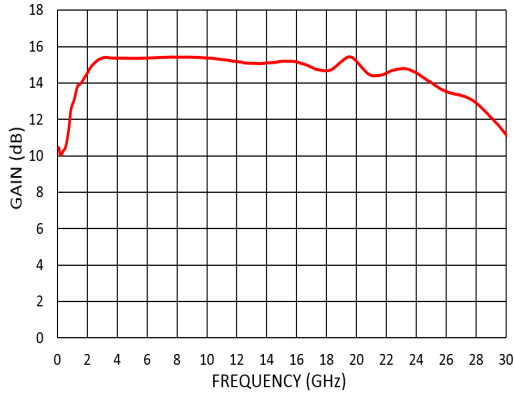
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

**Electrical Specifications**
**TA = +25°C, VD = +6V, IDD = 72mA Typical**

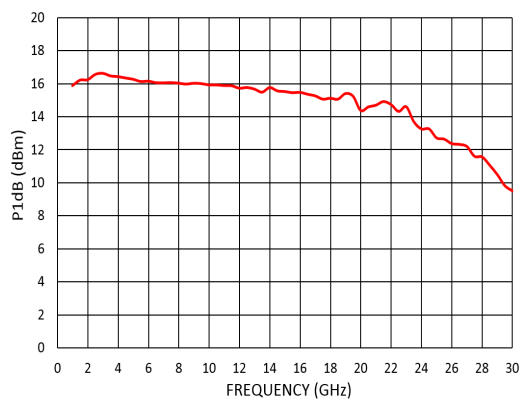
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency	2		18	18		26	GHz
Small Signal Gain	14	15		12.5	14.5		dB
Gain Flatness		$\pm 0.5$			$\pm 0.75$		dB
Noise Figure		2.0	4.0		3.0	4.5	dB
P1dB - Output 1dB Compression	14	15.5		12	14		dBm
Psat - Saturated Output Power		16.5			15		dBm
OIP3 - Output Third Order Intercept		26.5			26		dBm
Input Return Loss		-15			-13		dB
Output Return Loss		-15			-8		dB



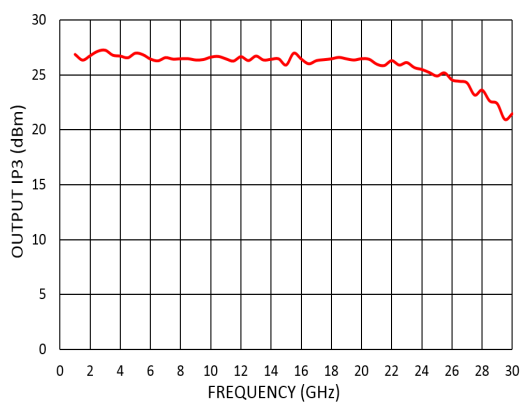
### Measurement Plots: S-parameters

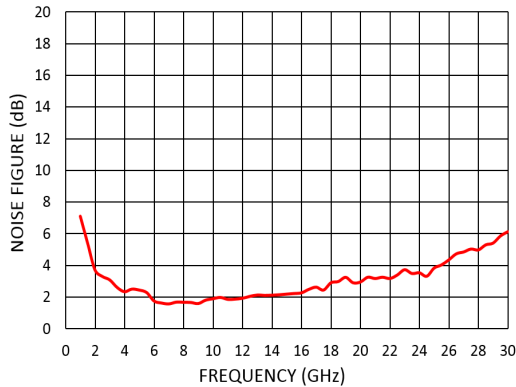


### Measurement Plots: P1dB



### Measurement Plots: OIP3



**Measurement Plots: Noise Figure**

**Absolute Maximum Ratings**

Drain Bias Voltage (VD)	<b>+9V</b>
RF Input Power (RFIN)	<b>+23dBm</b>
Channel Temperature	<b>175°C</b>
Continuous Pdiss (T = 85 °C) (derate 8.6mW/°C above 85 °C)	<b>0.77W</b>
Thermal Resistance (channel to die bottom)	<b>50°C/W</b>
Operating Temperature	<b>-55°C to +125 °C</b>
Storage Temperature	<b>-65°C to +150 °C</b>

**Typical Supply Current vs. VD**

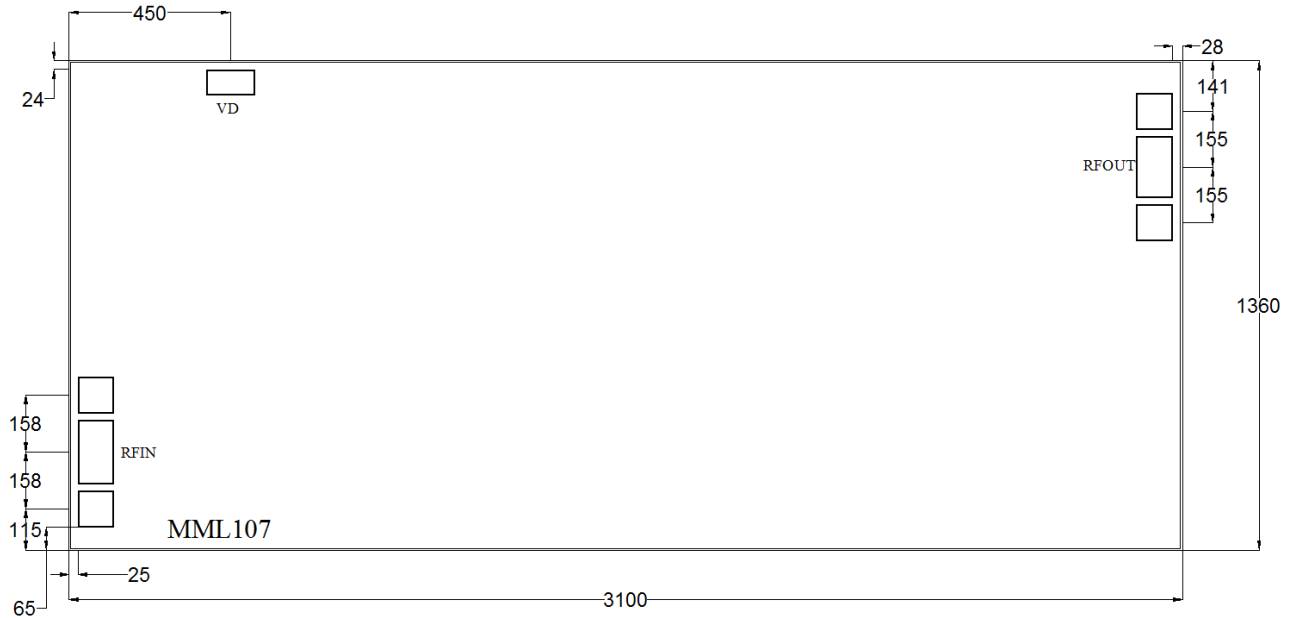
VD (V)	IDD (mA)
<b>+6</b>	<b>72</b>



**ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS**



**Outline Drawing:**  
All Dimensions in  $\mu\text{m}$

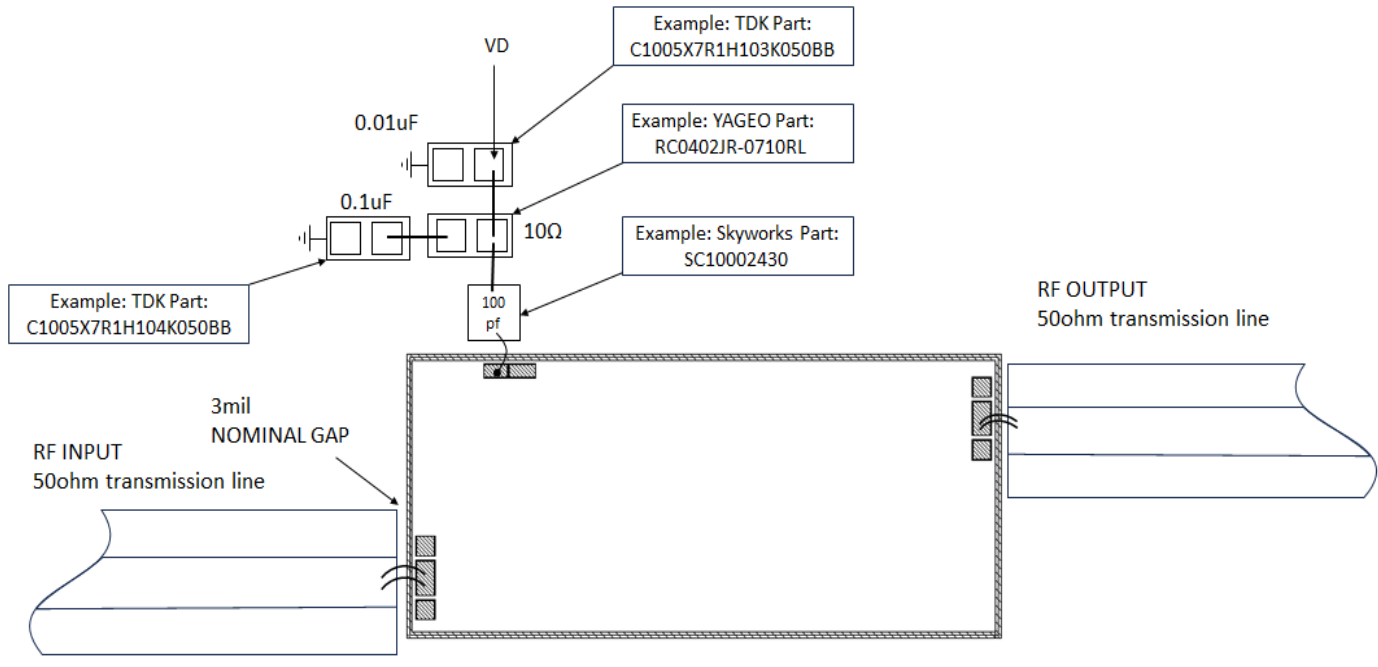


**Notes:**

1. Die thickness: 100 $\mu\text{m}$
2. DC bond pad is 100\*100 $\mu\text{m}^2$
3. RF IN/OUT bond pad is 100\*100 $\mu\text{m}^2$
4. Bond pad metalization: Gold
5. Backside metalization: Gold



### Assembly Drawing



No	Function	Description
1	RF IN	RF signal input terminal; blocking capacitor required.
2	RF OUT	RF signal output terminal; blocking capacitor required.
3	VD	Drain Biases for the Amplifier. Connect to external 100pf and 0.1uf bypass capacitors and 10Ω Resistors and 0.01uf capacitors.
4	Die Bottom	Die bottom must be connected to RF and 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 +6V .
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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