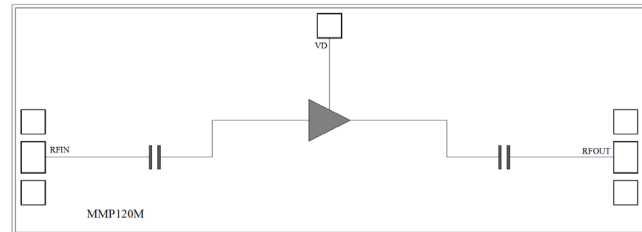


Features

- Frequency: 2-6GHz
- Small Signal Gain: 23dB Typical
- Gain Flatness: ± 0.5 dB Typical
- Psat: 26dBm Typical
- Supply Voltage: $V_D = +6V @ 210mA$
- Input/Output: 50Ω
- Die Size: 2.7 x 0.98 x 0.1mm

Functional Block Diagram



Typical Applications

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

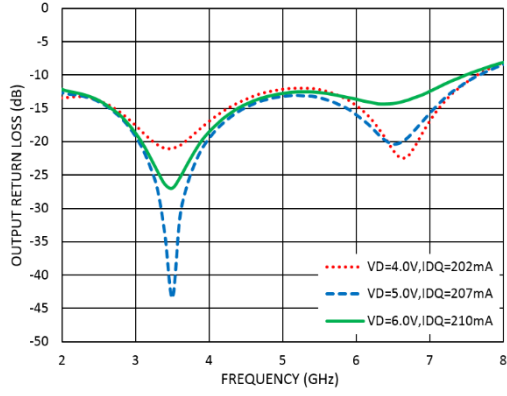
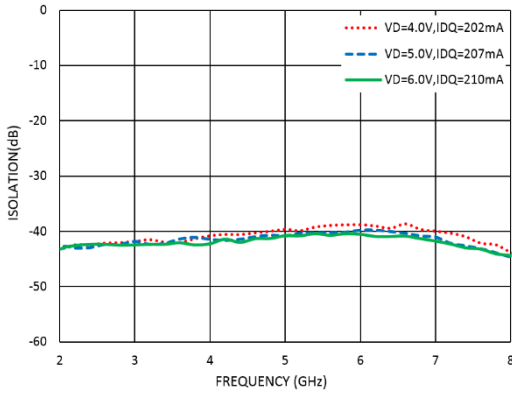
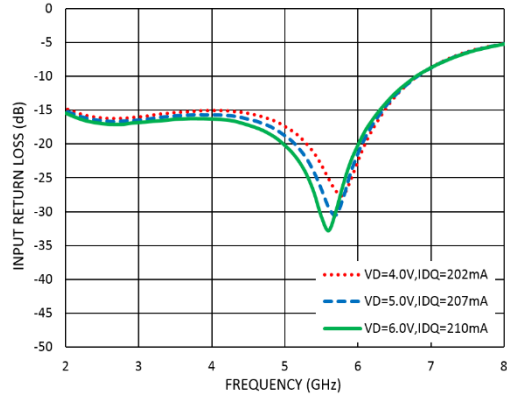
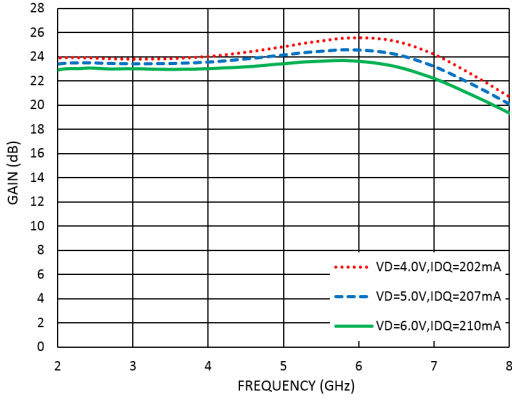
Electrical Specifications

$T_A = +25^\circ C$, $V_D = +6V$, $I_{DD} = 210mA$ Typical

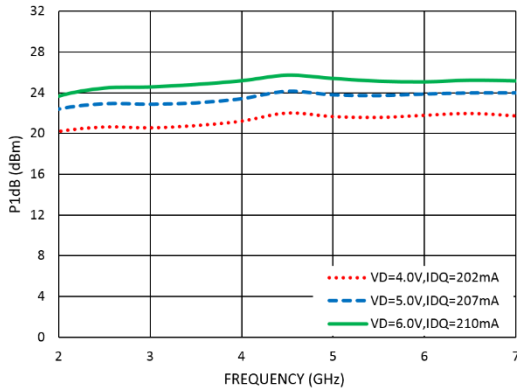
Parameters	Min.	Typ.	Max.	Units
Frequency	2		6	GHz
Small Signal Gain	22	23		dB
Gain Flatness		± 0.5		dB
P1dB - Output 1dB Compression	23	25		dBm
Psat - Saturated Output Power		26		dBm
Input Return Loss		-16		dB
Output Return Loss		-14		dB



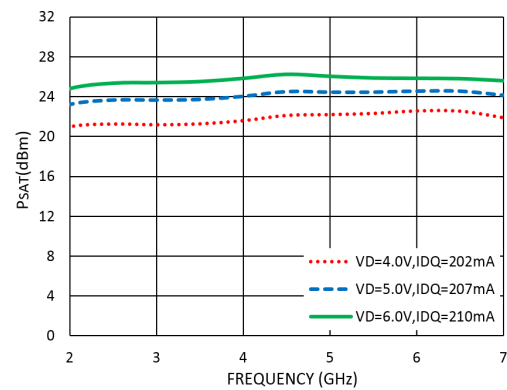
Measurement Plots: S-parameters



Measurement Plots: P1dB



Measurement Plots: PsAT



Absolute Maximum Ratings

Drain Bias Voltage (VD)	+6.5V
RF Input Power (RFIN)@(+6V)	+13dBm
Channel Temperature	175 °C
Continuous Pdiss (T = 85 °C) (derate 15.6mW/°C above 85 °C)	1.4W
Thermal Resistance (channel to die bottom)	50°C/W
Operating Temperature	-55°C to +85 °C
Storage Temperature	-65°C to +125 °C

Typical Supply Current vs. VD

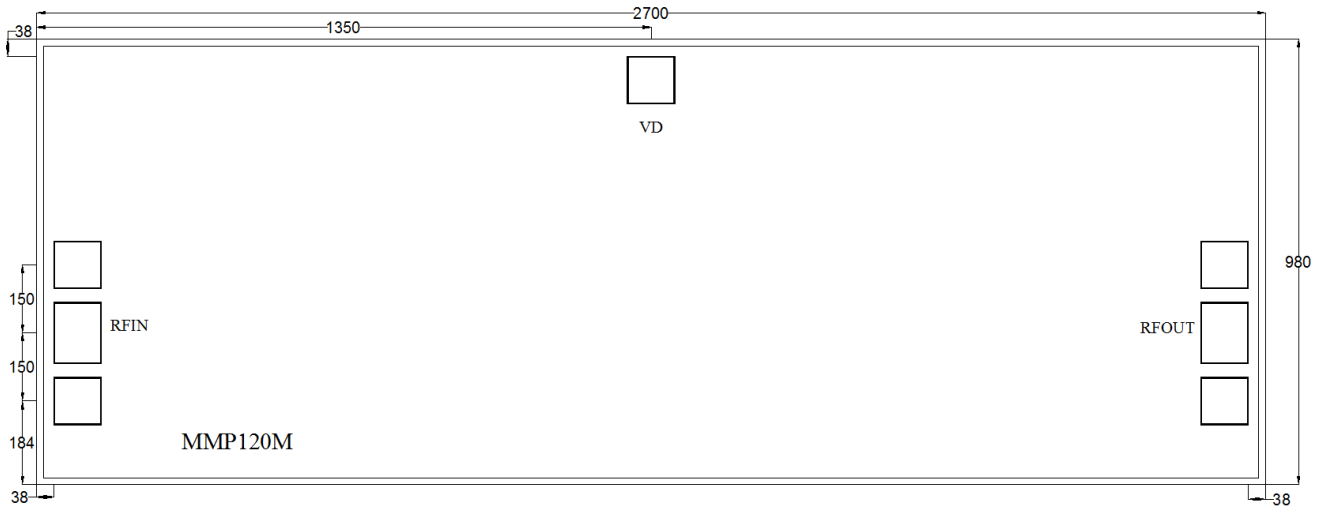
VD (V)	IDD (mA)
+4	202
+5	207
+6	210



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS



Outline Drawing: All Dimensions in μm

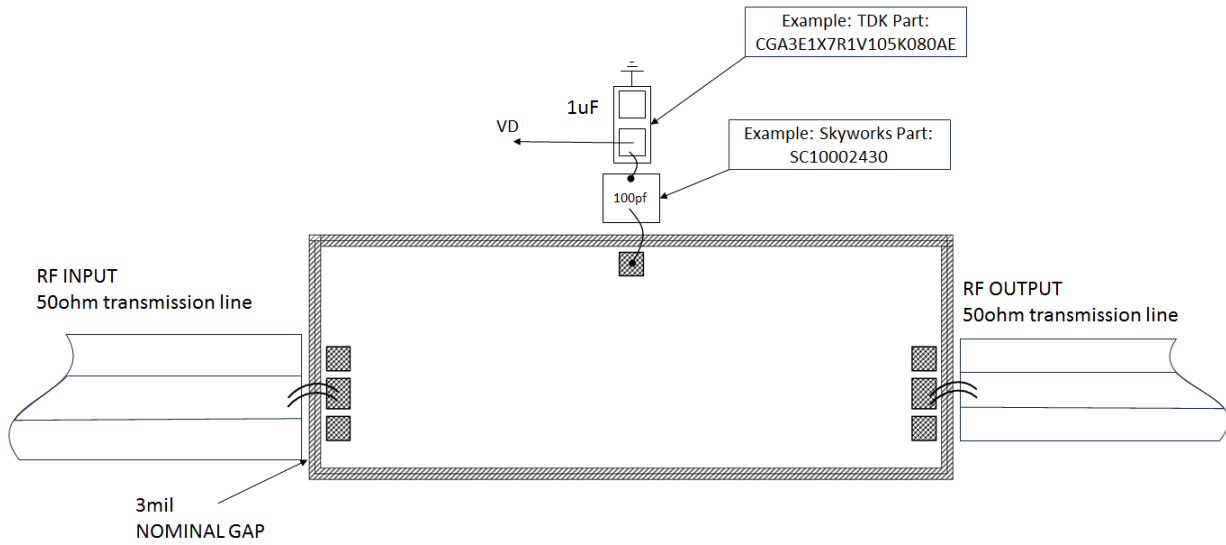


Notes:

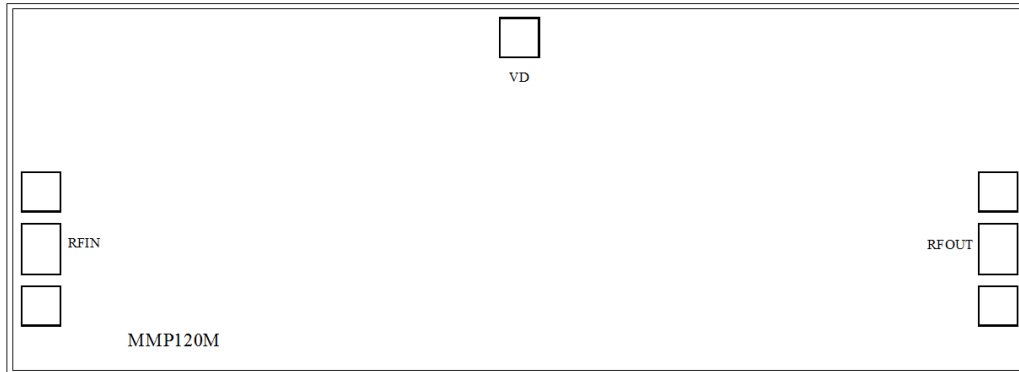
1. Die thickness: 100 μm
2. DC bond pad is 100*100 μm^2
3. RF IN/OUT bond pad is 100*100 μm^2
4. Bond pad metalization: Gold
5. Backside metalization: Gold



Assembly Drawing



No	Function	Description
1	RF IN	RF signal input terminal; no blocking capacitor required.
2	RF OUT	RF signal output terminal; no blocking capacitor required.
3	VD	Drain Biases for the Amplifier. External bypass capacitors of 1µf and 100pf are required for these pads.
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 V_D and set to +6V .
3. Apply RF signal.

Turn OFF procedure:

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

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