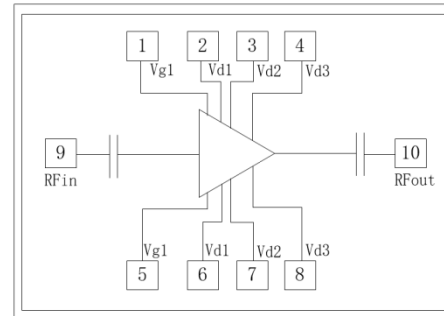




Features

- Frequency: 8-18GHz
- Small Signal Gain: 31dB Typical
- Power Gain: 18dB Typical
- Gain Flatness: ± 2.0 dB Typical
- Psat: 46dBm Typical
- Pulse: 10% Duty Cycle 500us width
- PRF (Pulse Repetition Frequency) 10KHz
- PAE: 25%
- Supply Voltage:
VD=+28V@0.16A(Pulse), VG=-1.75V
- Input/Output: 50 Ω
- Die Size: 3.6 x 5.0 x 0.1mm



Typical Applications

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

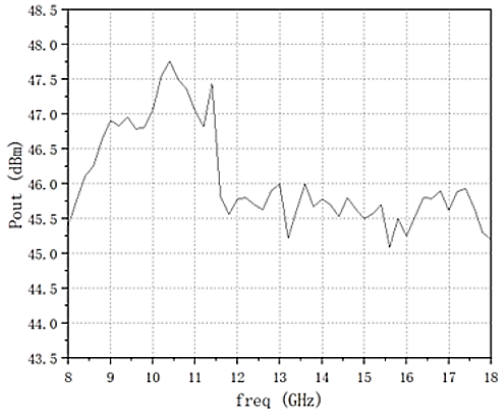
Electrical Specifications

TA = +25°C, VD=+28V, IDD =0.16A Typical, 10% Duty Cycle, 1KHz PRF 500us Pulse Width

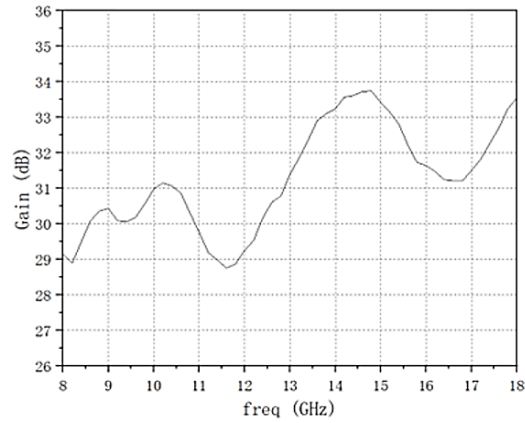
Parameters	Min.	Typ.	Max.	Units
Frequency	8		18	GHz
Small Signal Gain		31		dB
Power Gain		18		dB
Gain Flatness		± 2.0		dB
P1dB - Output 1dB Compression		/		dBm
Psat - Saturated Output Power 10KHz PRF 500us Pulse Width		46		dBm
PAE-Power Added Efficiency		25		%
Input VSWR		1.2		:1
Output VSWR		1.2		:1



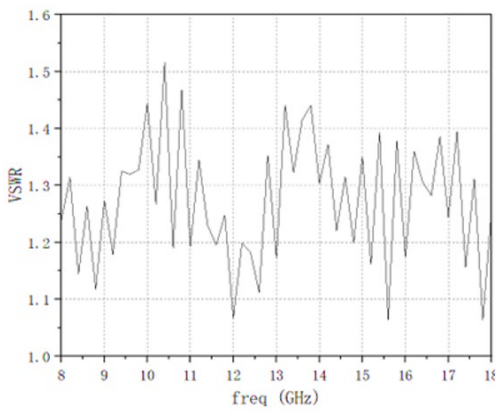
Pout vs. Frequency(Pin=28dBm)



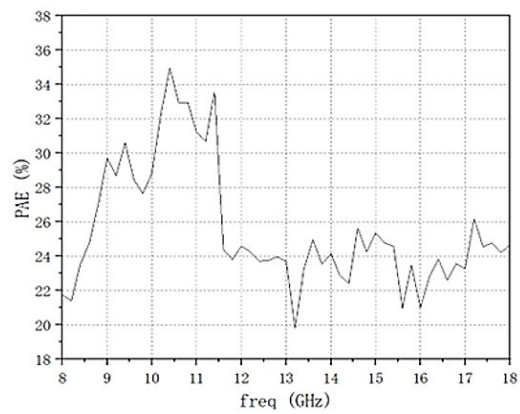
Gain vs. Frequency



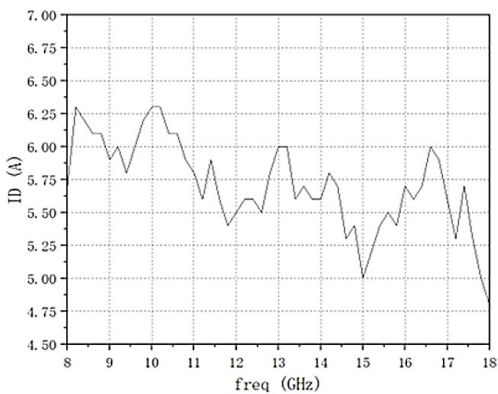
VSWR vs. Frequency



PAE vs. Frequency



Current vs. Frequency





Absolute Maximum Ratings

Drain Bias Voltage (VD)	+30V
Gate Bias Voltages(VG)	-5V
Drain Current (IDD)	5.5A
RF Input Power (RFIN)@(+28V)	+30dBm
Channel Temperature	225 °C
Junction Temperature	310 °C
Operating Temperature	-55°C to +85 °C
Storage Temperature	-55°C to +175 °C

Typical Supply Current vs. VD,VG

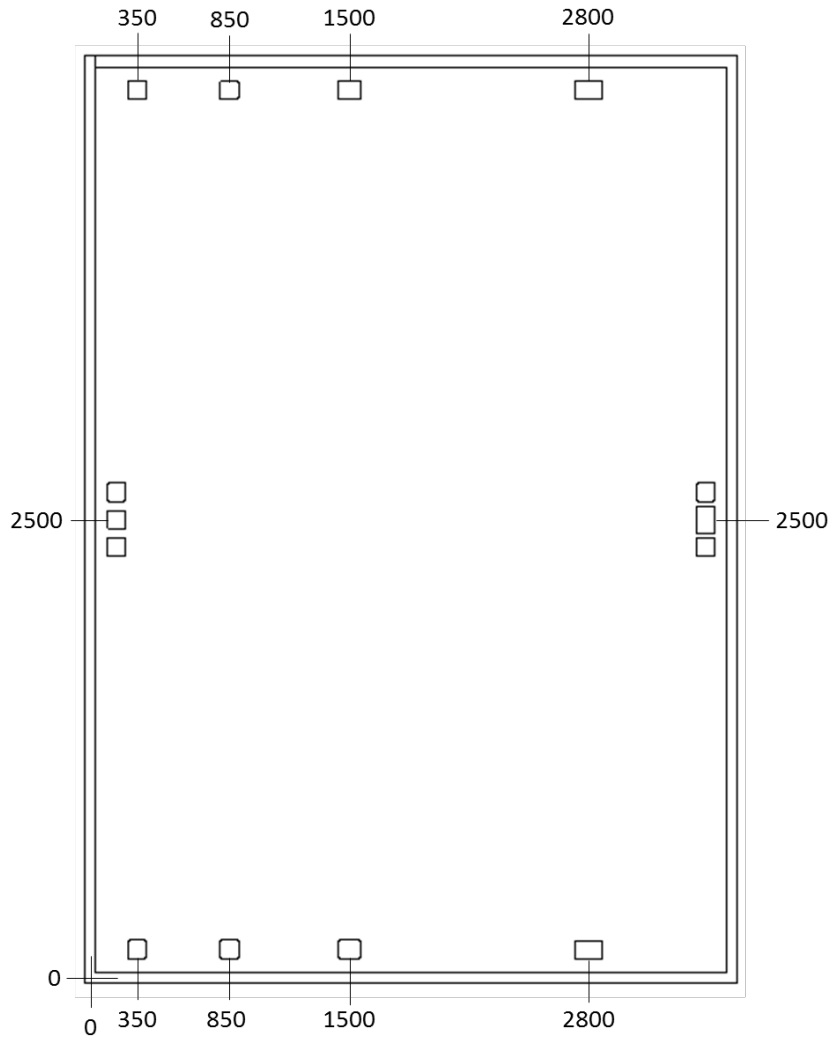
VD (V)	VG (V)	IDD (mA)
+28	-1.75	160



ELECTROSTATIC SENSITIVE DEVICE
OBSERVE HANDLING PRECAUTIONS



Outline Drawing: All Dimensions in μm

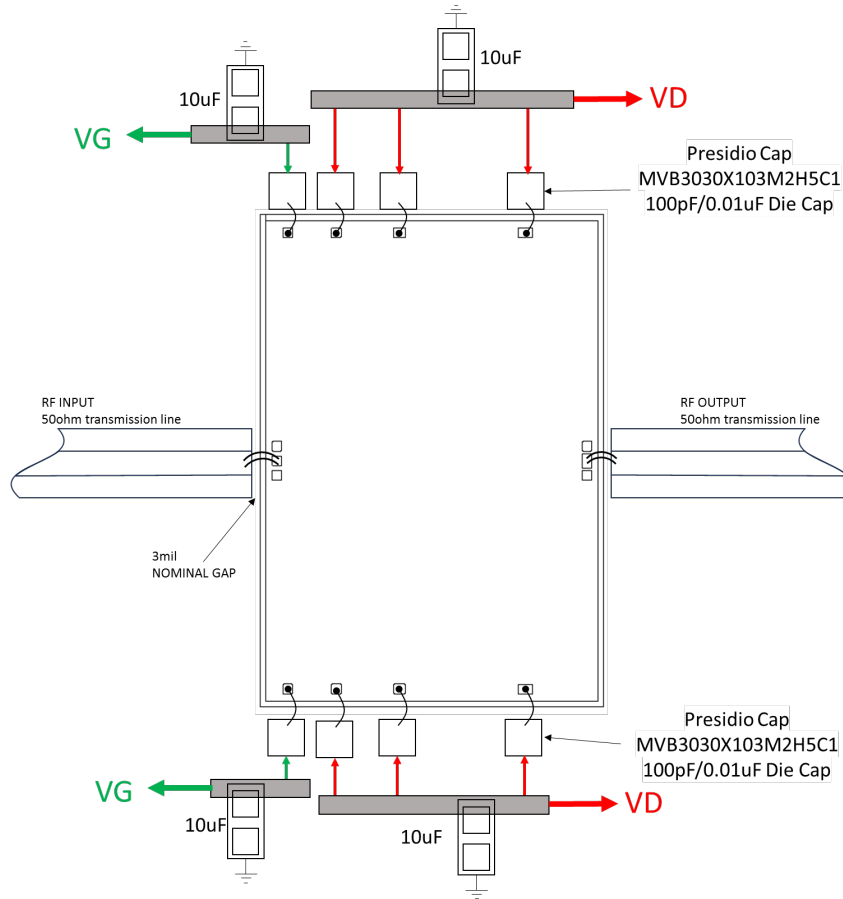


Notes:

1. Die size: 3600*5000 μm
2. Input RF Pad size : 100*100 μm
3. Output RF Pad size: 100*150 μm
4. VG1 pad size : 100*100 μm
5. VD1 pad size : 100*100 μm
6. VD2 pad size : 120*100 μm
7. VD3 pad size : 100*150 μm
8. GSG: 150 μm
9. Bond pad metalization: Gold
10. Backside metalization: Gold



Assembly Drawing



No.	Mnemonic	Description
1	RF IN	Signal input terminal, connected to 50Ω circuit.
2	RF OUT	Signal output terminal, connected to 50Ω circuit.
3	VD	Drain voltage, bias network is required; see Application Circuit on.
4	VG	Gate voltage, bias network is required; see Application Circuit on.
5	Die Bottom	Die bottom must be connected to RF and dc ground.



MILLER

MMIC

MMGP528

V1.0.0

GaN MMIC Pulse Power Amplifier
8-18GHz

MMGP528

GaN Pulse Power Amplifier MMIC 8-18GHz

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