Features：

Frequency： 1～20GHz

Small Signal ： 12dB

Flatness:≤±0.5dB@1-20GHz

P-1dB：30dBm

Psat：31dBm

PI.PO.:50Ohm

Single supply Voltage： +10V(+11V)/320mA

lSize： 2.23 X 1.35X 0.1mm

Description:

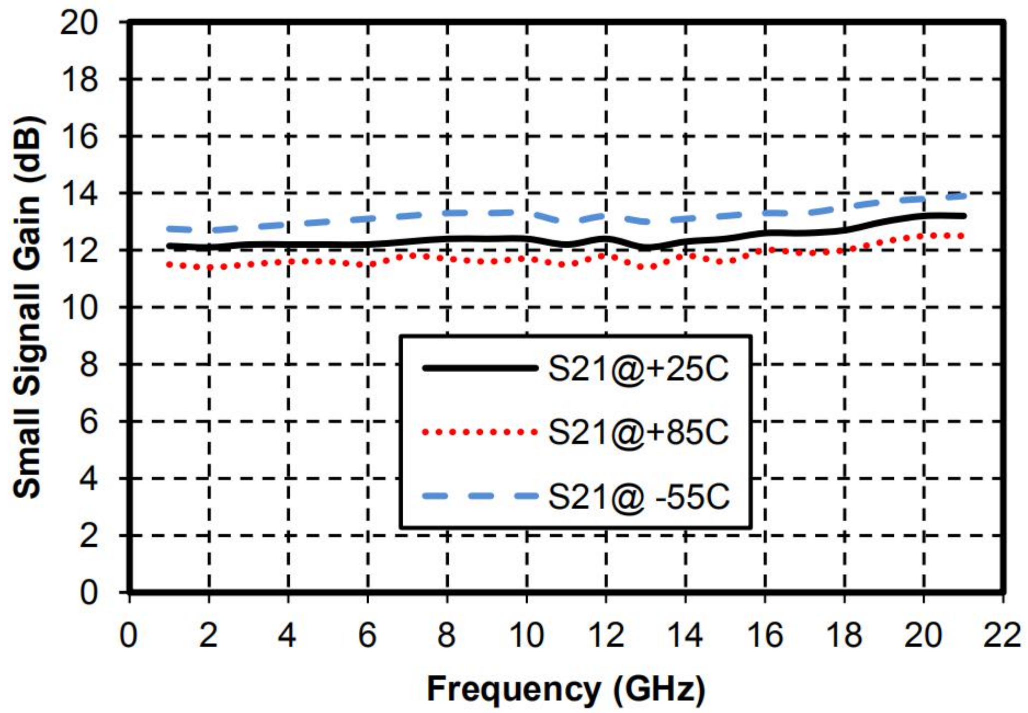
The YTPA-0120-30 is self-biased pHMET Ultra Wide distributed Amplifier which operates betwee 1～20GHz，This model is outstanding for its power which is more than 1W for the full frequency coverage of 1-20GHz yet its flatness is also excellent!The chip is back-metallized and can be die mounted with AuSn eutectic preforms or with electrically conductive epoxy.The mounting surface should be clean and flat.

Limited Parameter	
Max Drain Voltage	+14V
Max Grid Bias	-3V
Max Input Power	+23dBm
Working Temperature	-55 ~ +85° C
Storage Temperature	-65 ~ +150° C

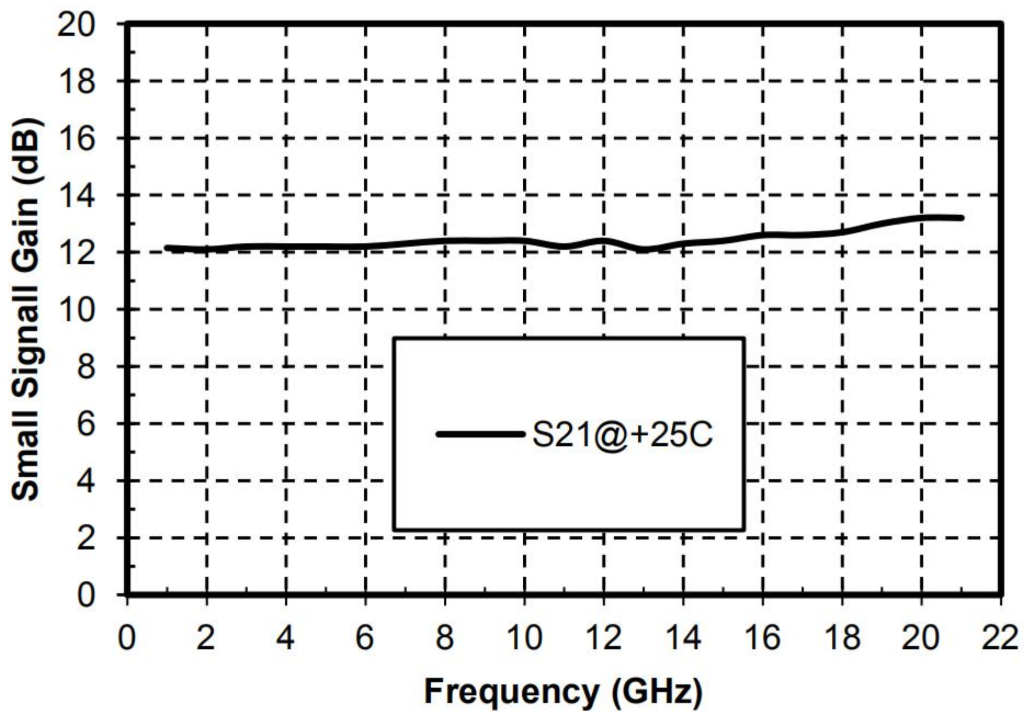
Electronic Spec.:【Ta=+25° C，Vd=+10V(+11V)， *Ids=320mA)】

Features	Min	Typical	Max	Min	Typical	Max	Unite
Frequency		1-18			18-20		GHz
Small Singal Grain		12			13		dB
Flatness		±0.3			±0.3		dB
P-1dB	29	30	30.5	28.5	29	29.5	dBm
Psat		31			30		dBm
Third-Order Intermodulation		37			36		dBm
Input Return Loss		15			13		dB
Output Return Loss		20			15		dB
By tuning the vg terminal voltage-2V-0V,Reach 329mA							

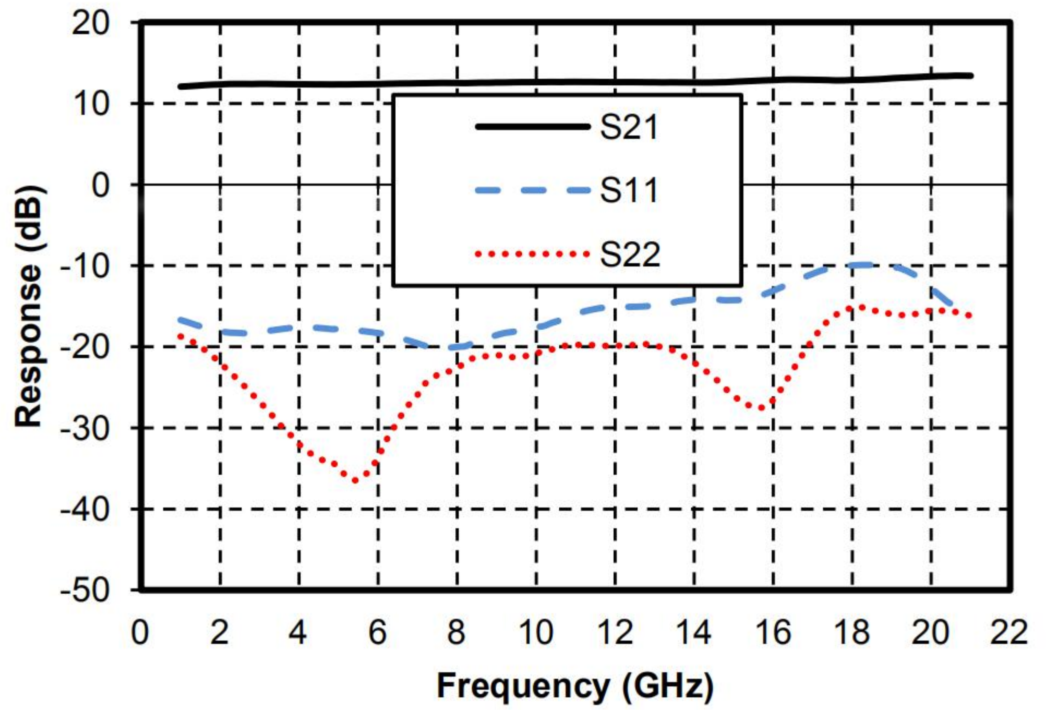
Gain VS Temperature



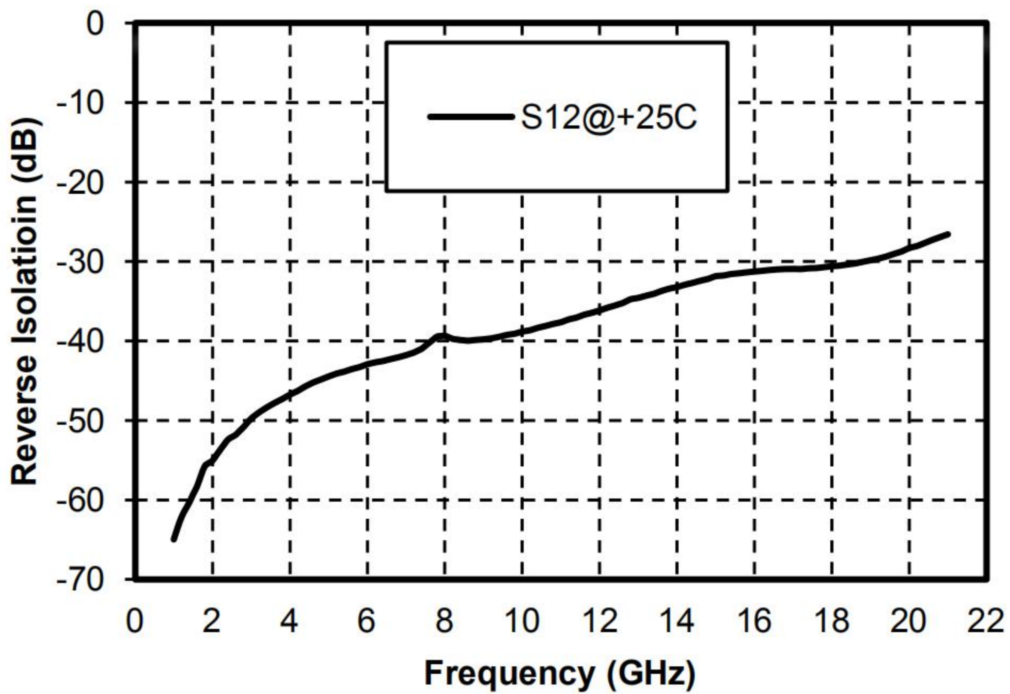
Gain VS Temperature



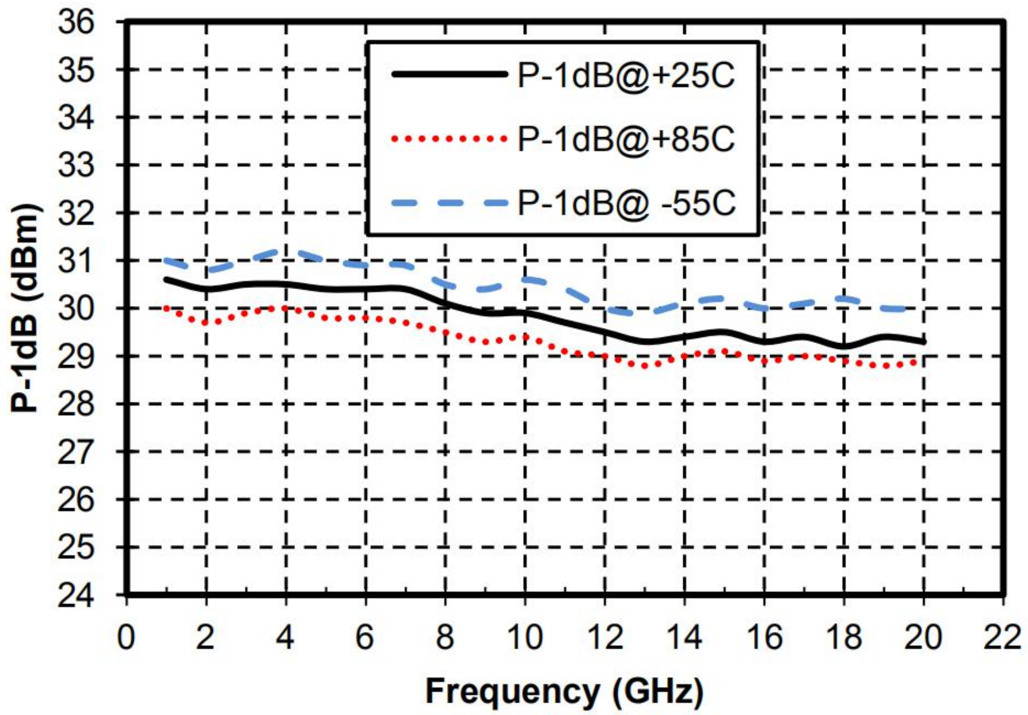
Gain/Input&output Return Loss VS Frequency



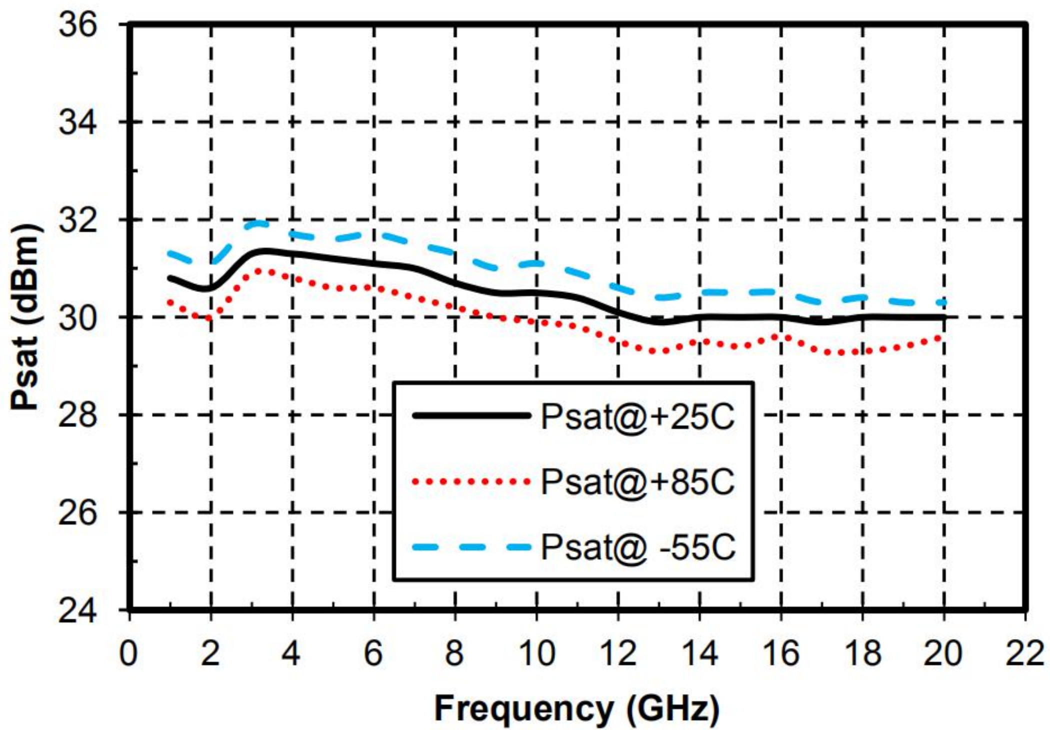
Reverse Isolation VS Frequency



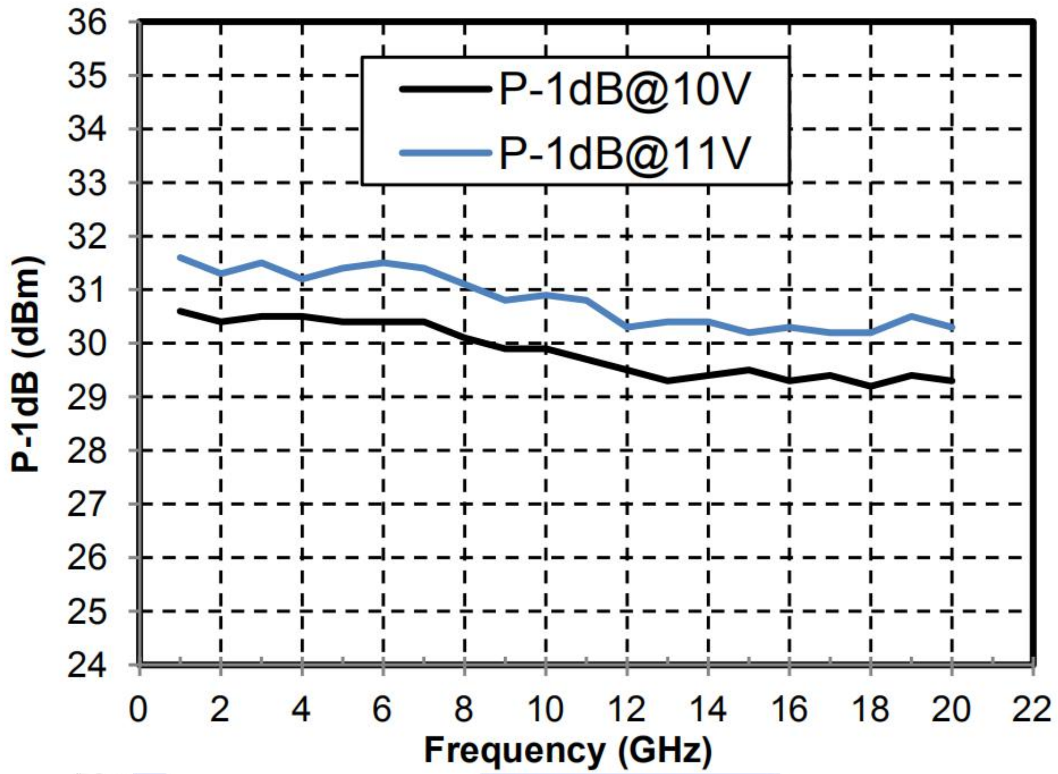
P-1dB vs. Temperature@+10V

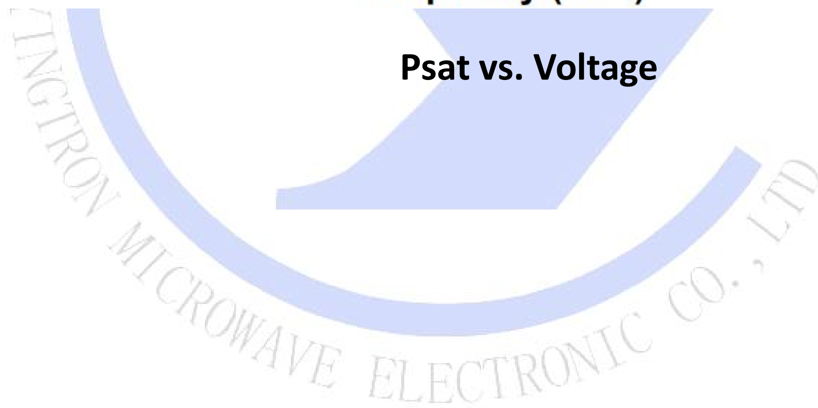


Psat vs. Temperature@+10V

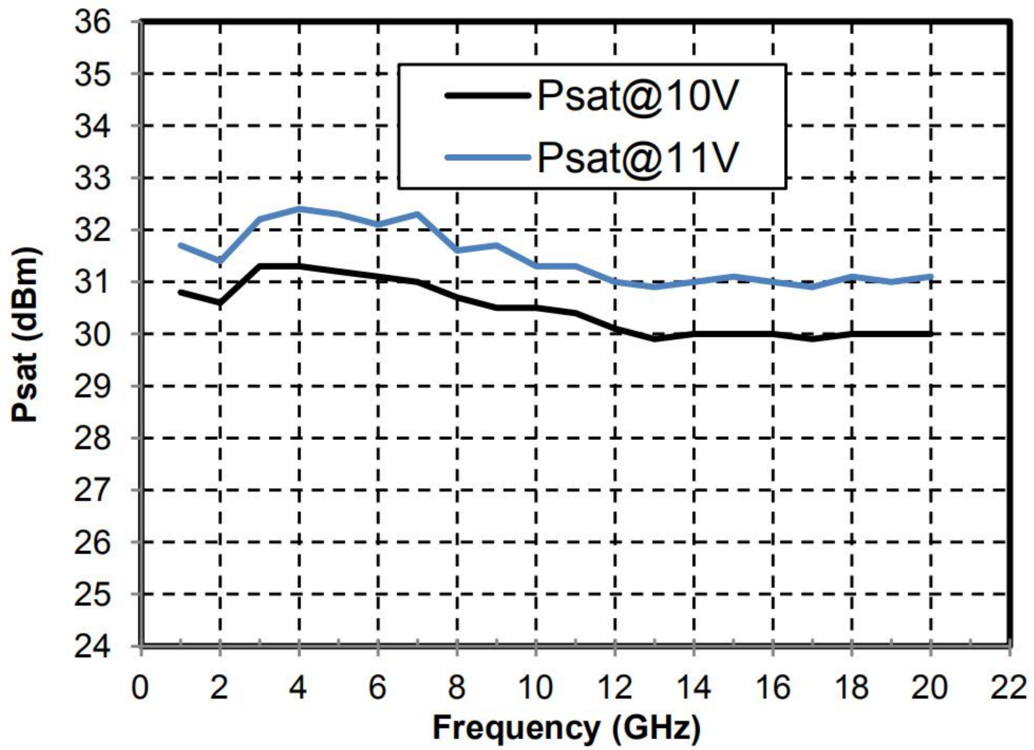


P-1dB vs. Voltage

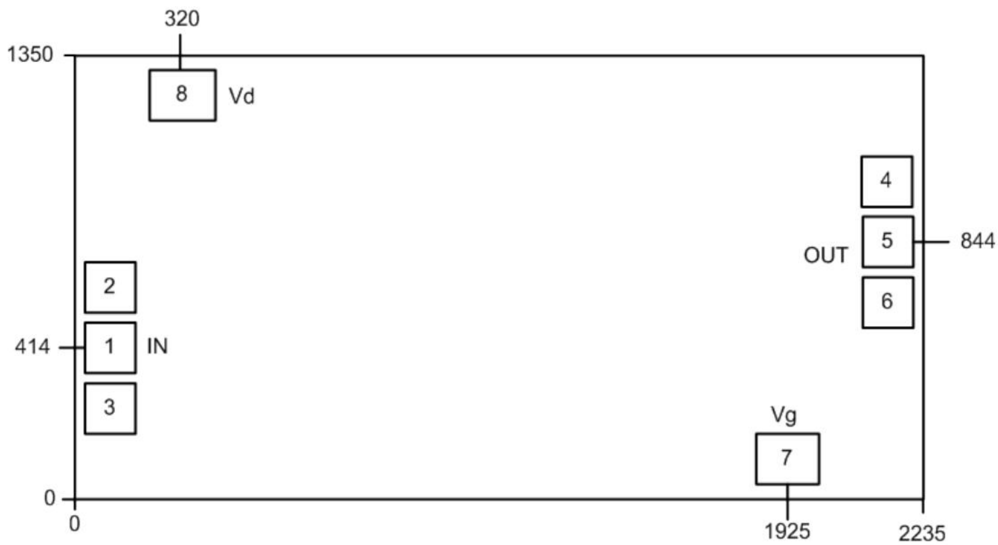




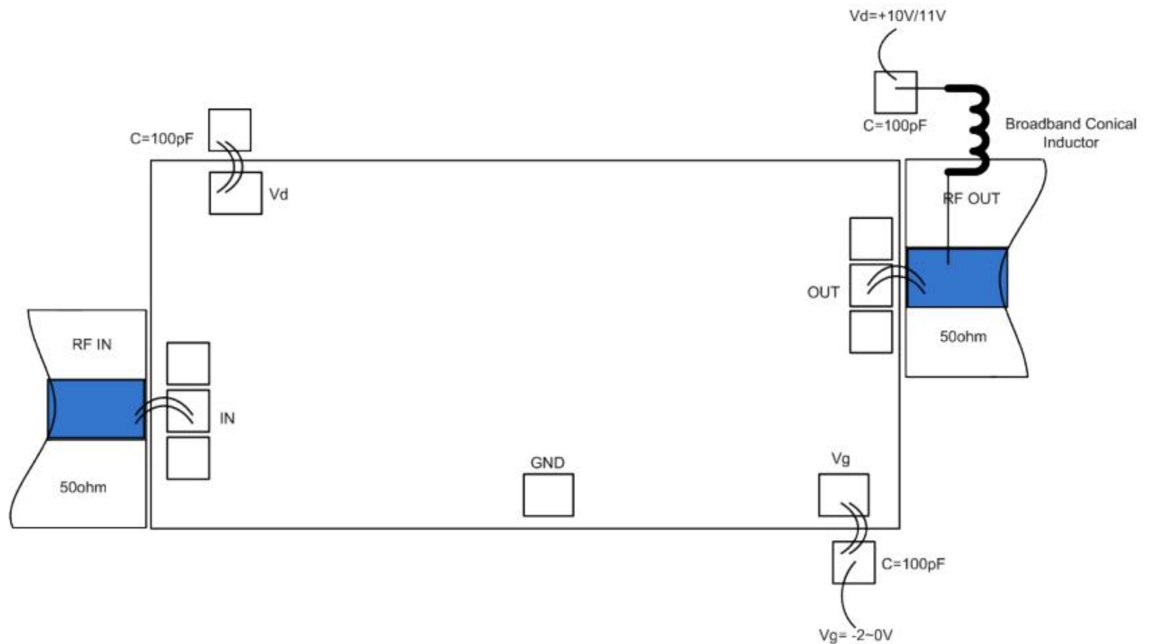
Psat vs. Voltage



Outline Drawing:(μ m)



Assembly Diagram:



Handling Precautions

1.All bare die are placed in either Waffle or Gel based ESD protective containers,all die should be stored in a dry nitrogen environment.
2.Cleanliness: Handle the chips in a clean environment. DO NOT attempt to clean the chip using liquid cleaning systems
3.Follow ESD precautions to protect against ESD strikes
Handle the chip along the edges with a vacuum collet or with a sharp pair of bent tweezers. The surface of the chip has fragile air bridges and should not be touched with vacuum collet, tweezers, or fingers
4.Eutectic Die Attach: A 80/20 gold tin preform is recommended with a work surface temperature of 255 ° C and a tool temperature of 265 ° C. When hot 90/10 nitrogen/hydrogen gas is applied, tool tip temperature should
5.Epoxy Die Attach: Apply a minimum amount of epoxy to the mounting surface so that a thin epoxy fillet is observed around the perimeter of the chip once it is placed into position. Cure epoxy per the manufacturer' s schedule
6.Ball or wedge bond with 0.025mm (1 mil) diameter pure gold wire. Thermosonic wirebonding with a nominal stage temperature of 150 ° C and a ball bonding force of 40 to 50 grams or wedge bonding force of 18 to 22 grams is recom mended. Use the minimum level of ultrasonic energy to achieve reliable wirebonds. Wirebonds should be started on the chip and terminated on the package or substrate. All bonds should be as short as possible <0.31mm (12 mils).