



YTPA-0040-22

Features:

Frequency: DC-40GHz

Small Signal : 12dB

Noise Figure:5dB

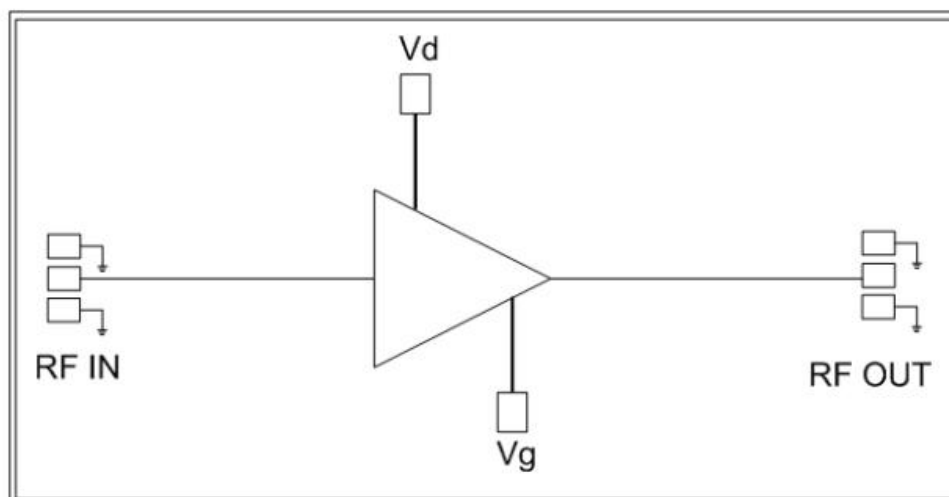
Psat: 22dBm

Supplying:+7V/160mA

PI.PO.:50Ohm

Size: 2.5 X 1.2 X 0.1mm

Functional Block:



Description:

YTPA-0040-22 is self-biased pHMET wideband Amplifier which operates between DC~40GHz with small signal 12dB and Psat



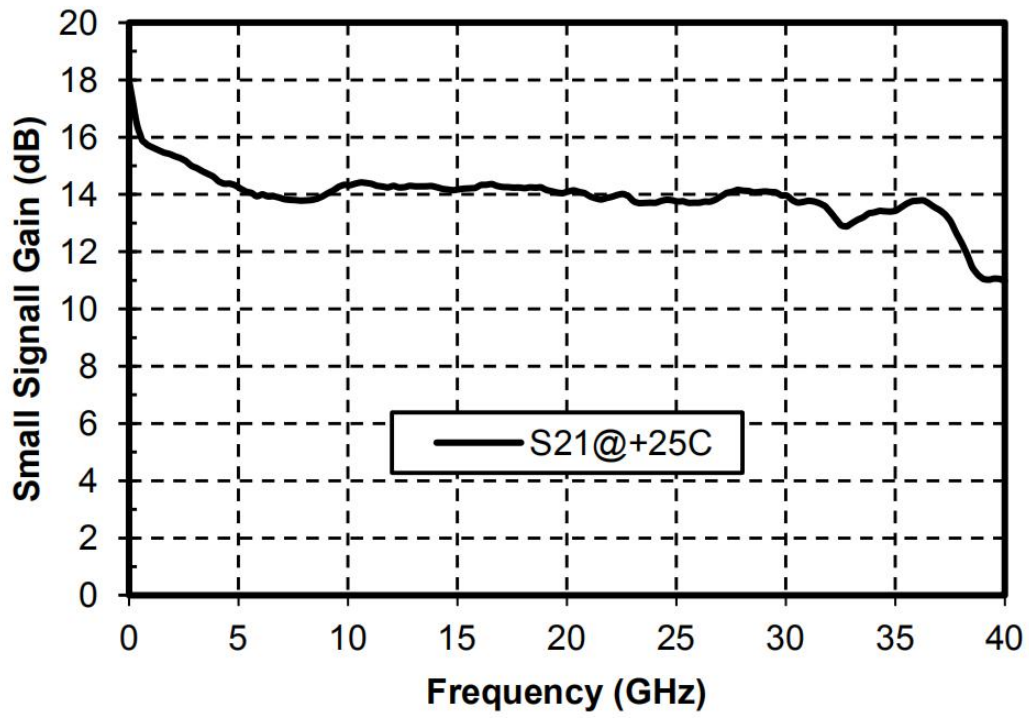
22dB! Automatic gain control can be realized by tuning the voltage of vc control terminal! The chip is back-metallized and can be die mounted with AuSn eutectic preforms or with electrically conductive epoxy. The mounting surface should be clean and flat!

Limited Parameter	
Max Drain Voltage	+9V
Max Gate Voltage	-2V
Max Input Power	+18dBm
Working Temperature	-55 ~ +85° C
Storage Temperature	-65 ~ +150° C

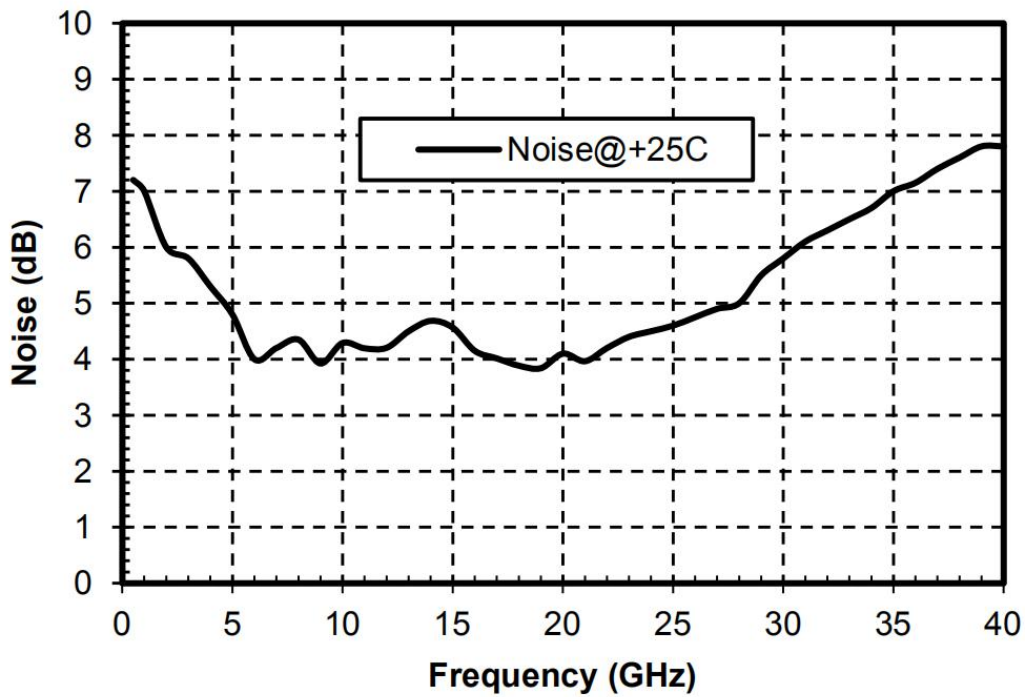
Features	Min	Typical	Max	Unit
Frequency	DC-40G			GHz
Small Signal Gain		12		dB
Noise Figure		5		dB
P-1dB		20		dBm
Psat		22		dBm
Input Return Loss		15		dB
Output Return Loss		15		dB
Static Current		160		mA

By tuning the vg terminal voltage -2v / v to 160m, the VG terminal voltage is predicted to be -0.25v / vg, which can be suspended and the suspending current is 185m

Gain VS Frequency

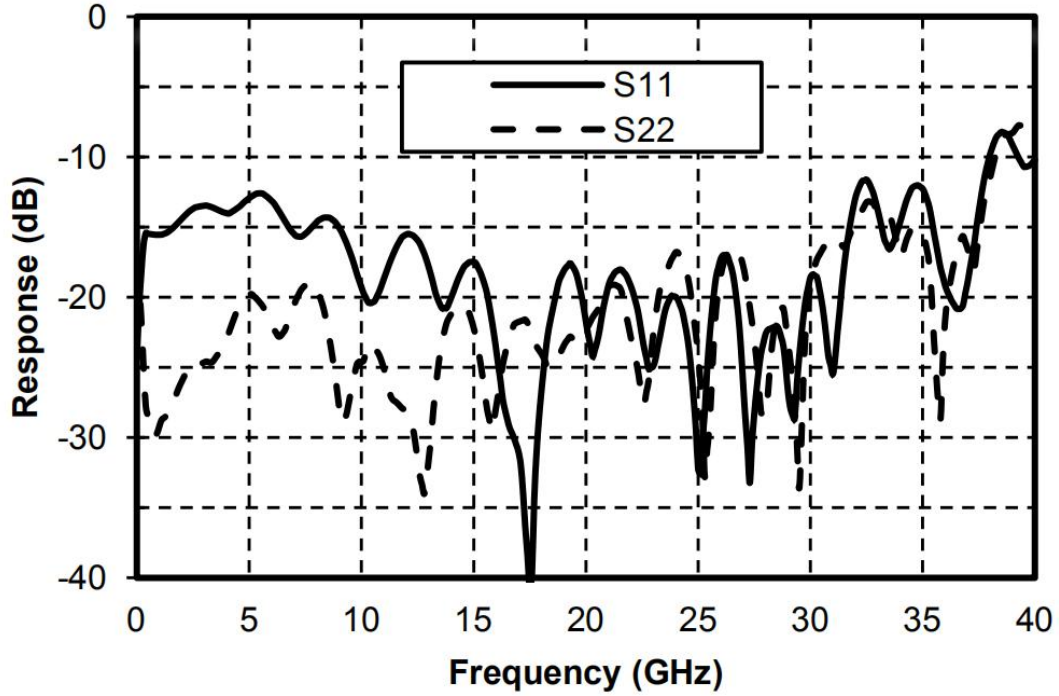


Noise Figure VS Frequency

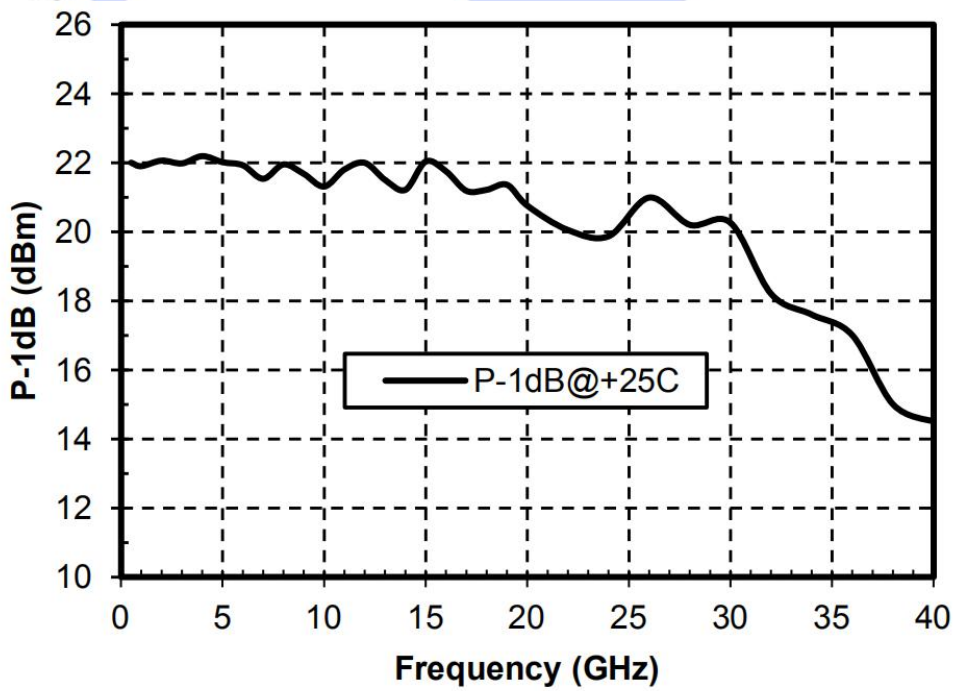




Input/Output Return Loss

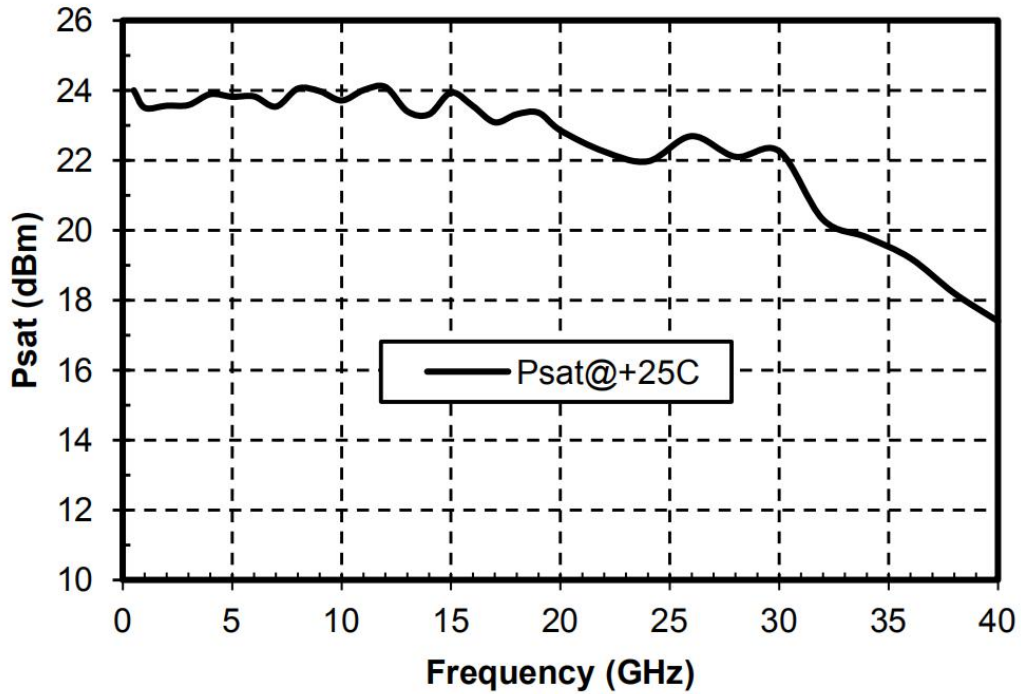


P-1dB VS Frequency

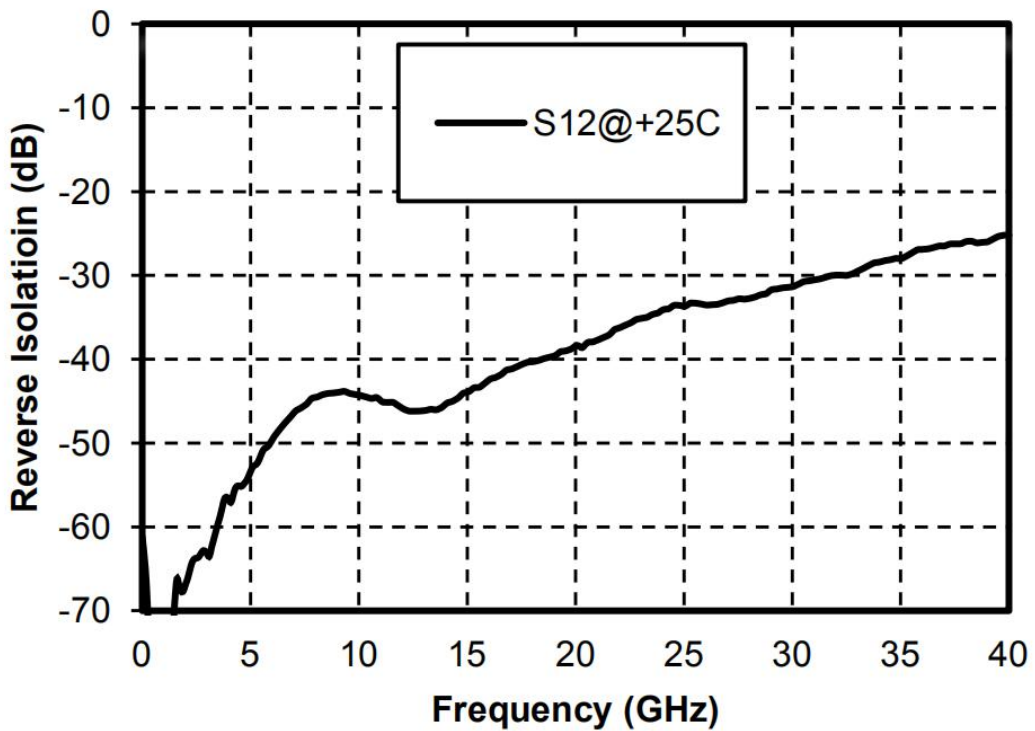




Psat VS Frequency

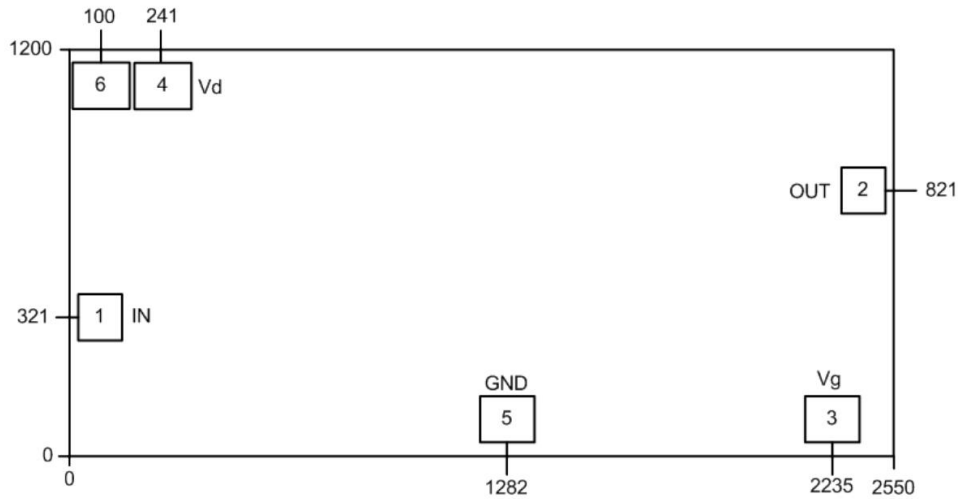


Reverse Isolation VS Frequency

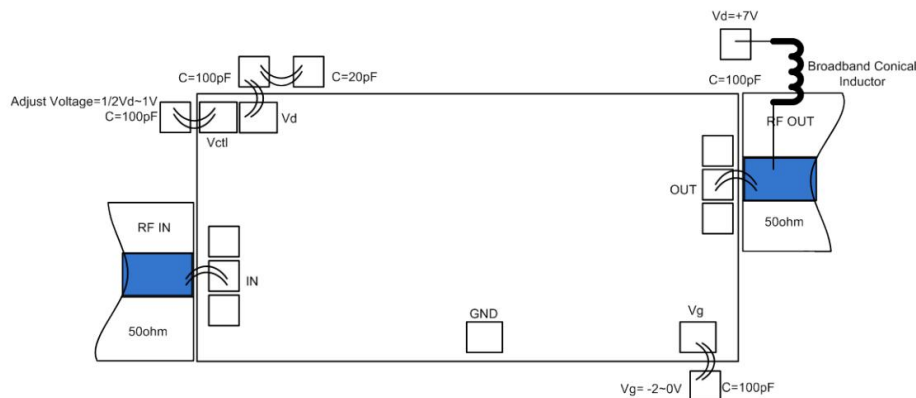




Outline Drawing:(μ m)



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