Features:

Frequency: DC-30GHz

Small Singal Gain: 16dB

Flatness:≤±0.2dB@DC-26GHz

Noise Figure:≤4dB

P-1dB: 26dBm

Psat:27dBm

Supplying: +8V/180mA

50Ohm Input/Output

100% In-situ Testing

Chip Size: 2.94 x 1.35 x 0.1mm

Description:

The YTPA-0030-27 is a Wide Band Low Noise Amplifier which operates betwee DC～30GHz，This model is with 16dB of small Singal gain with small signal gain 27dBm and has the best flatness with ≤± 0.4dB@DC-26GHz among the world's brand devices for !It adopts +8V of its supplying!

Limited Parameter	
Max Drain Voltage	14V
Max Gate Voltage	-3V
Max Input Power	+20dBm
Working Temperature	-55 ~ +85° C
Storage Temperature	-65 ~ +150° C

Features	Min	Typical	Max	Min	Typical	Max	Min	Typical	Max	Unite
Frequency		DC-18			18-26			26-30		GHz
Small Singal Grain	15.9	16	16.1	16	16	16.2	16	15	14.8	dB
Flatness		±0.2			±0.2			±0.9		dB
Noise Figure	2	2.5	3.9	3.1	4	5.1	5.1	6	6.1	dB
P-1dB	25.9	26	27.3	25.2	25	26.2	25.2	24	24.2	dBm
Psat	26.9	27	28.3	26	26.5	27	26	25.5	25.2	dBm
Input Return Loss		15			18			15		dB
Output Return Loss		20			16			13		dB
By tuning the vg terminal voltage-2v ~ 0 v, the terminal voltage of 180ma and vg is expected to be-0.6v.										

Gain VS Temperature

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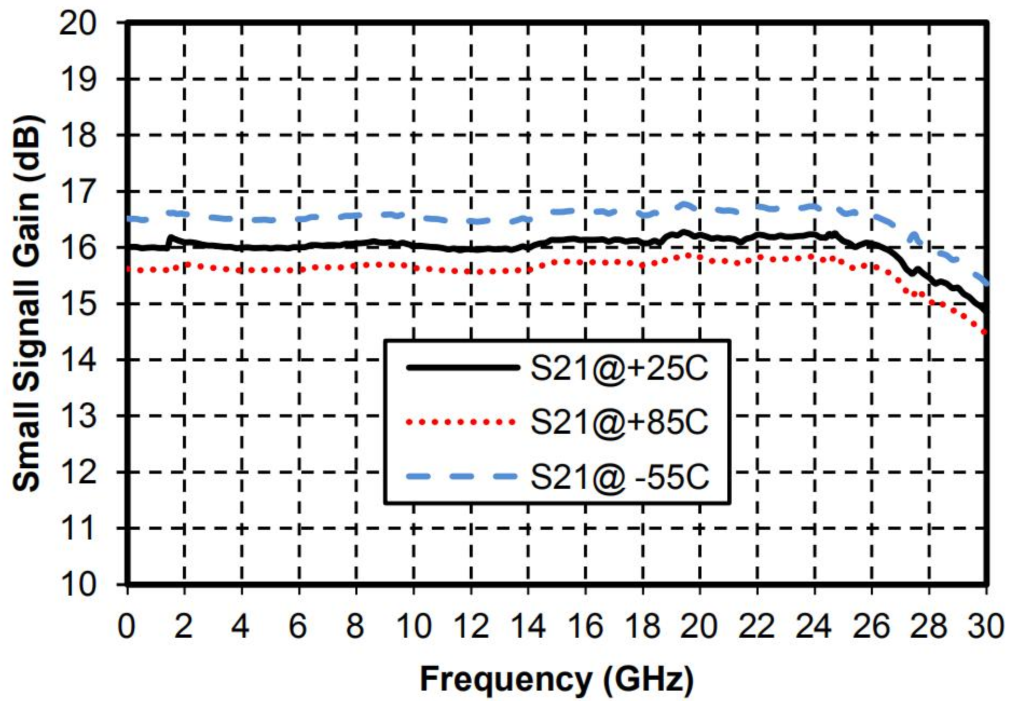
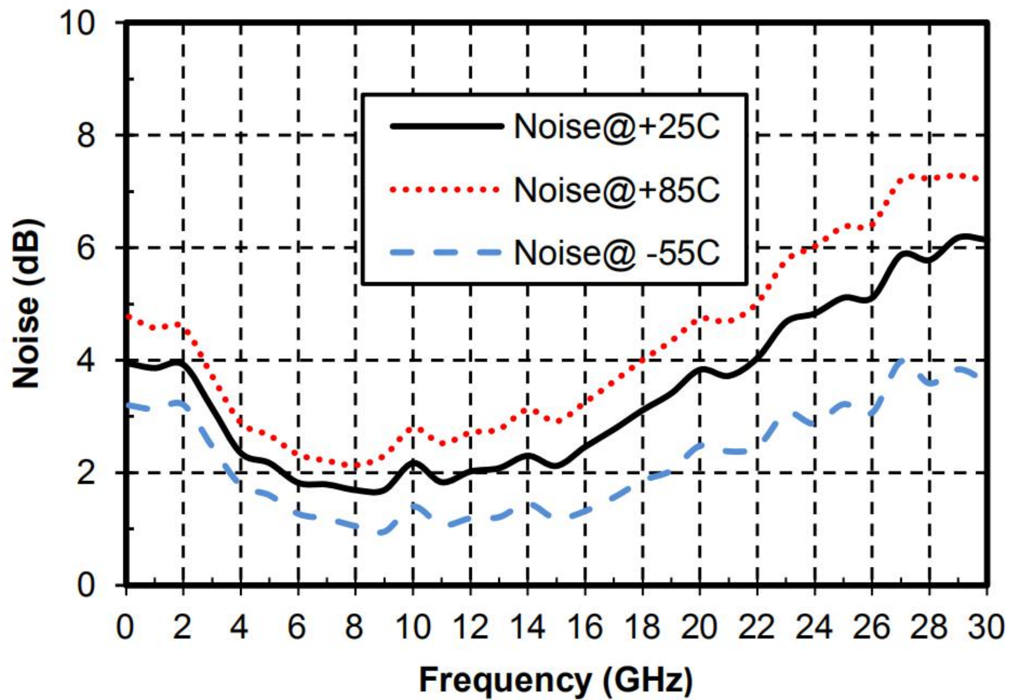
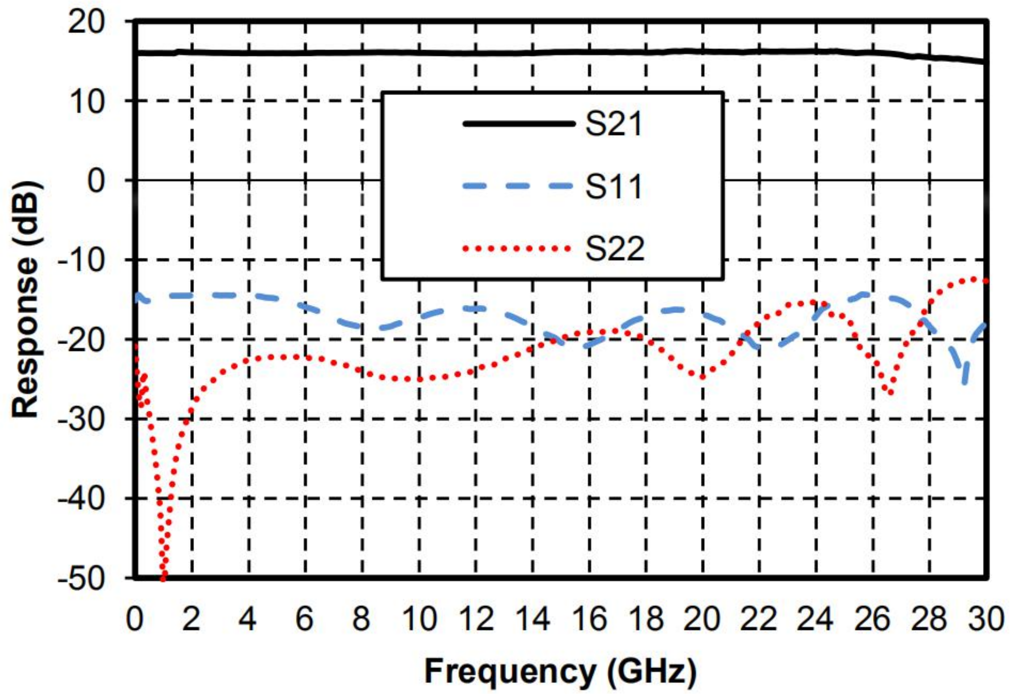


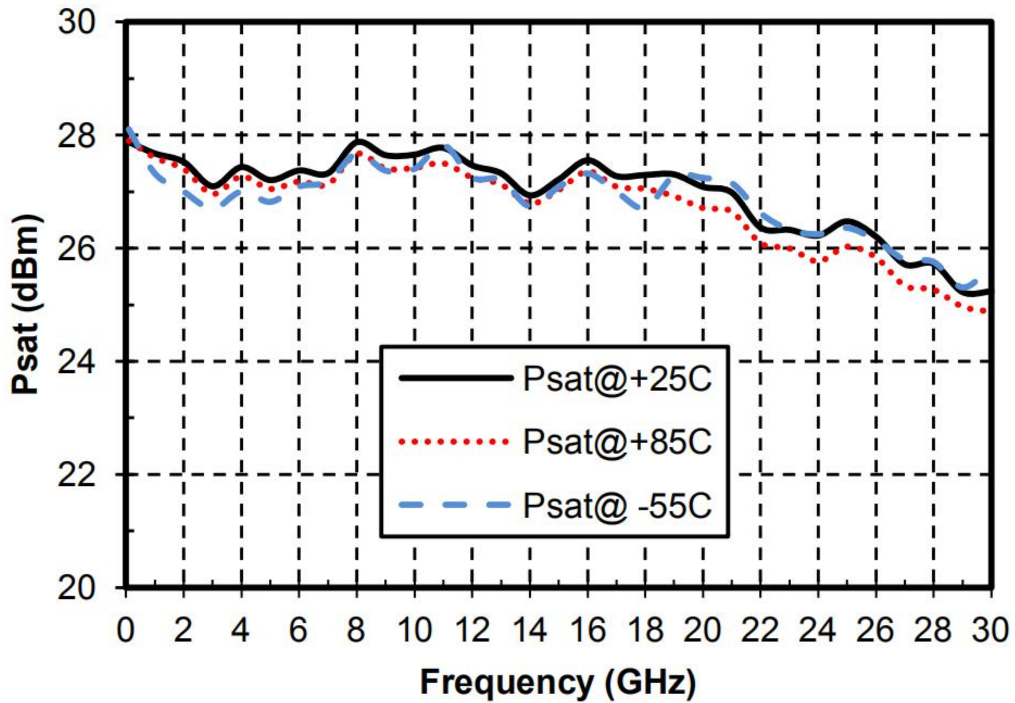
Noise Figure VS Frequency



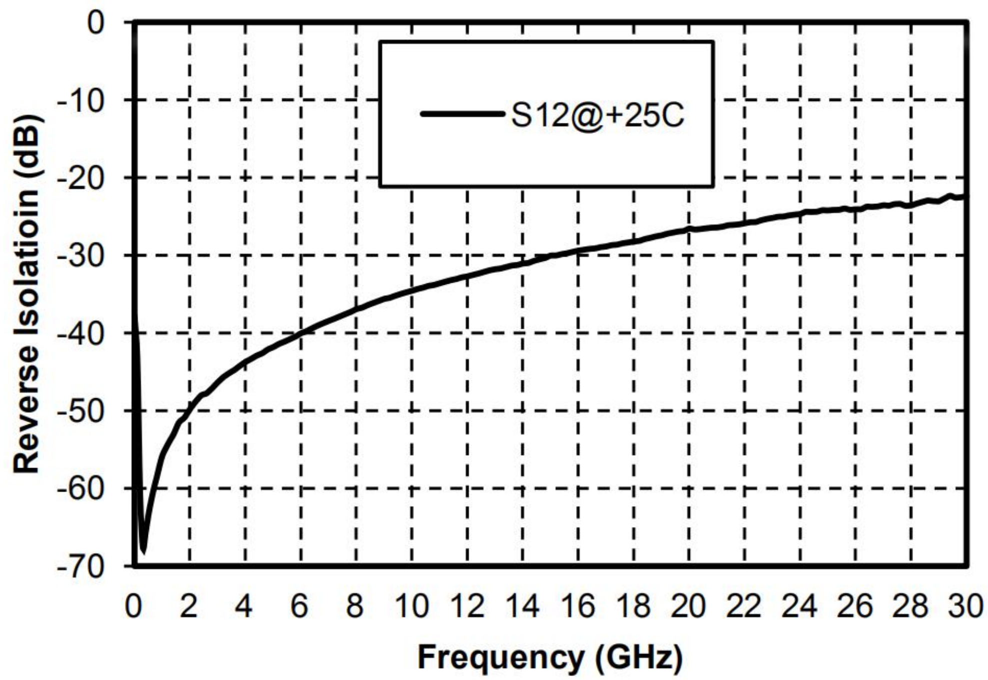
Input/Output Return Loss&Gain VS Frequency



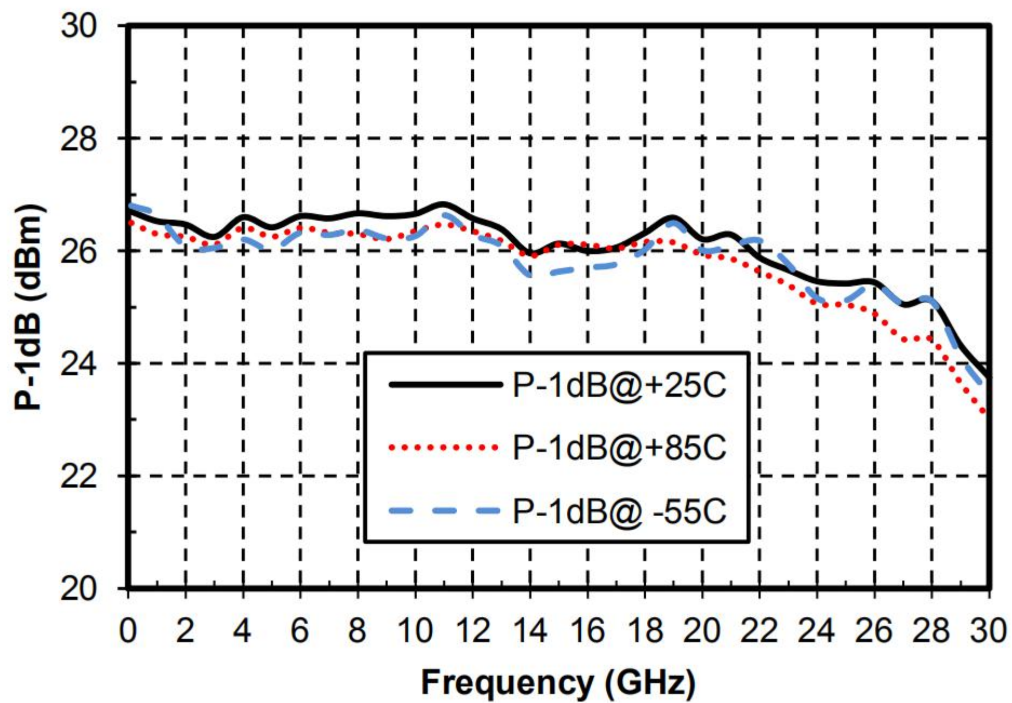
Psat VS Frequency



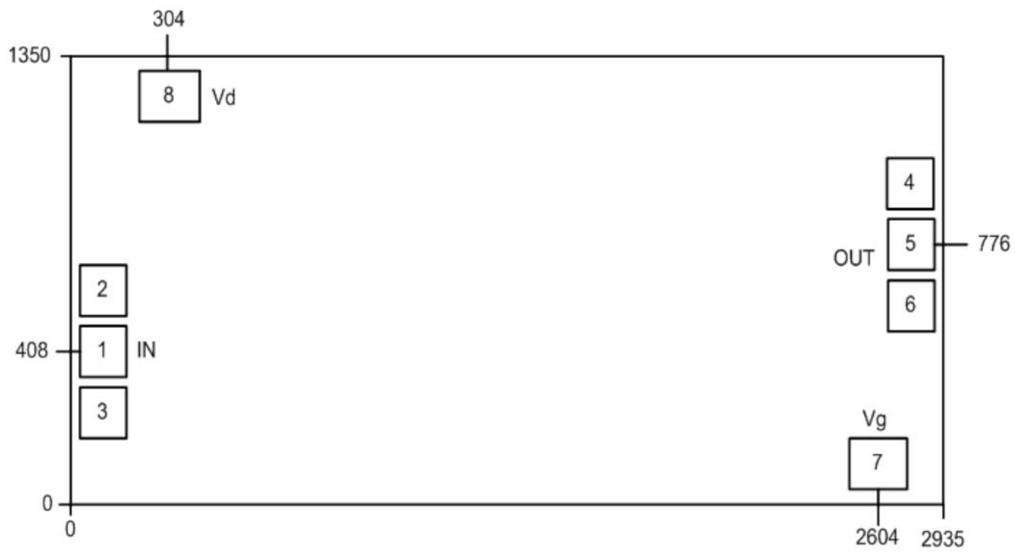
Reverse Isolation VS Frequency



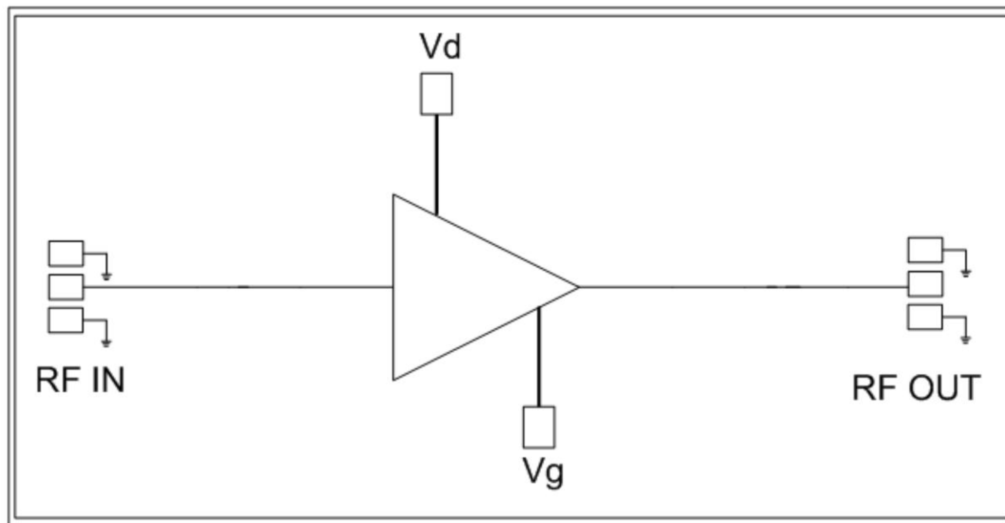
P-1dB VS Frequency



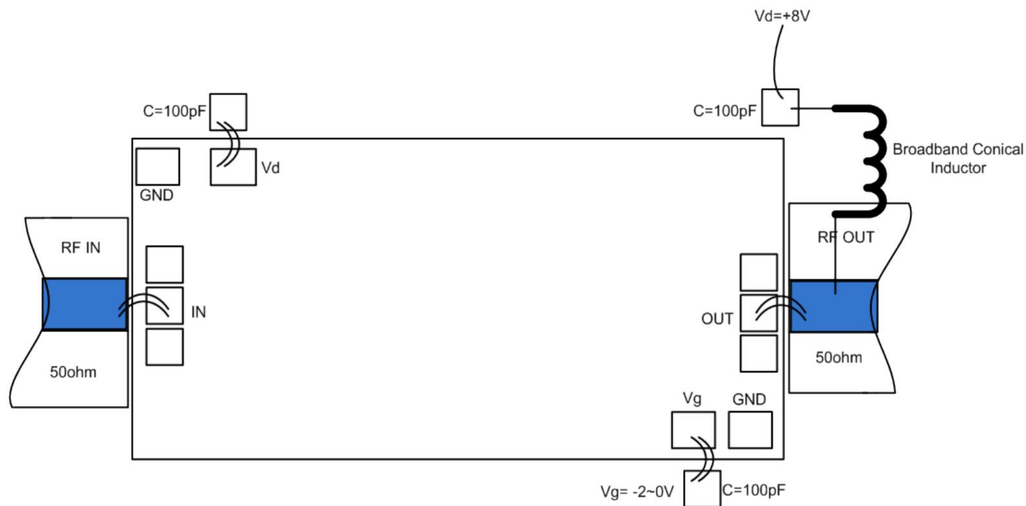
Outline Drawing:(μm)



Functional Diagram:



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 recommended. 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).