GPA -3337C

GaAs MMIC Amplifier Chip, 33-37GHz

Performance characteristics

Frequency range: 33-37GHz
Small Signal Gain: 17.5 dB
Gain flatness : ± 1.8 dB
P-1dB: 27 dBm
Psat: 28 dBm
PAE: 33%
Power supply: + 5V@300mA
50Ohm input/output
100% on-chip testing
Chip size: 2.15 x 1.28 x 0.1mm

Product Introduction

GPA -3337C is a broadband power amplifier chip based on GaAs process , covering the frequency range of 33~37GHz, small signal gain of 17.5dB, Psat output power of 28dBm. The amplifier operates with +5V. The chip through-hole metallization process ensures good grounding, and the back side is metallized for eutectic sintering process.

Use restriction parameter [1]	
Maximum drain voltage	+9 V
Maximum gate bias	- 3 V
Maximum input power	+20 dBm
Operating temperature	-55 ~ +85°C
Storage temperature	-65 ~ +150°C

【1】 Exceeding any of these maximum limits may cause permanent damage.

Electrical parameters (Ta=+25°C, Vd = +5 V, Vg=-0.9V, Ids= 300 mA)				
index	Minimum	Typical Value	Maximum	unit
Frequency Range		33-37		GHz
Small Signal Gain	-	17.5	-	dB
Gain Flatness		± 1.8		dB
P-1dB	-	27	-	dBm
Psat	-	28	-	dBm
Input return loss	-	13	-	dB
Output return loss	-	16	-	dB
* By tuning the Vg terminal voltage -2V~0V , the recommended gate voltage is -0.85V.				

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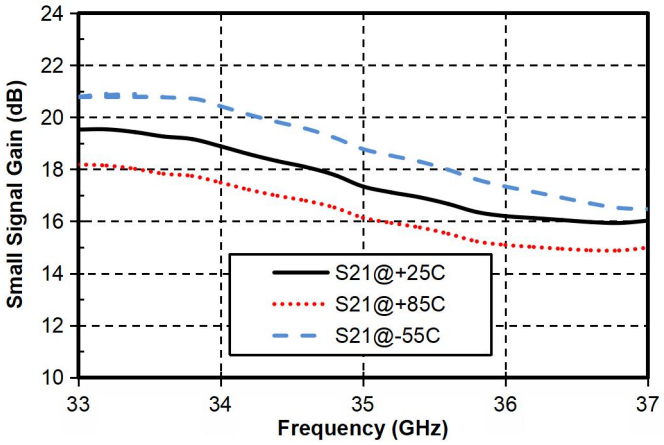
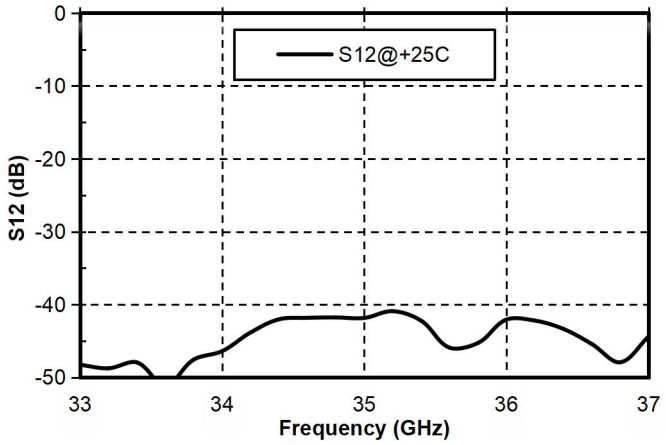
Main index test curve

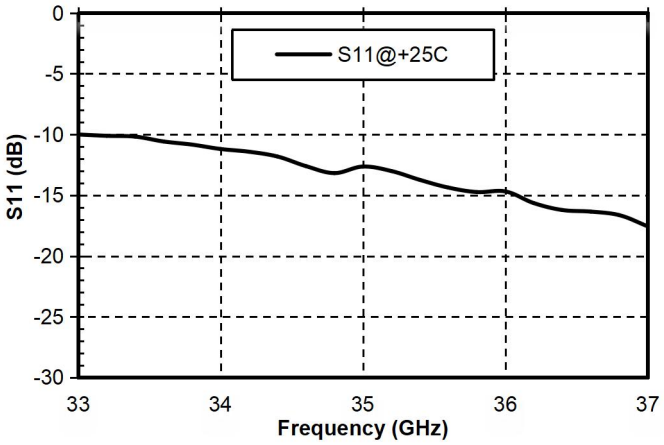
Gain vs. Frequency



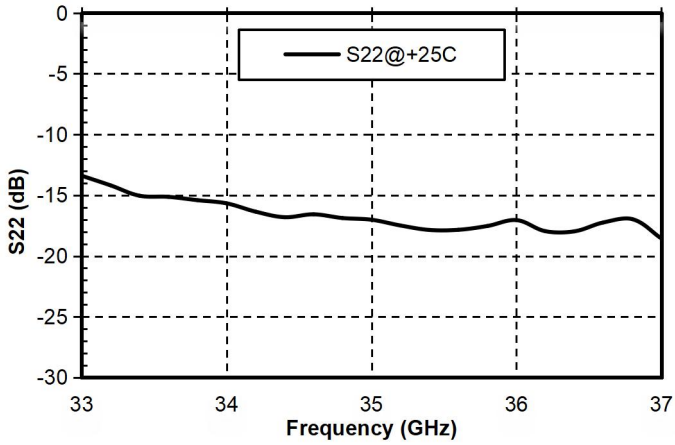
Reverse Isolation vs. Frequency



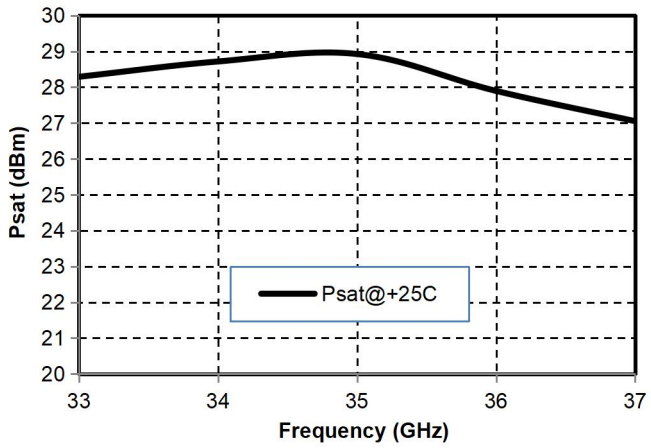
Input Return Loss vs. Frequency



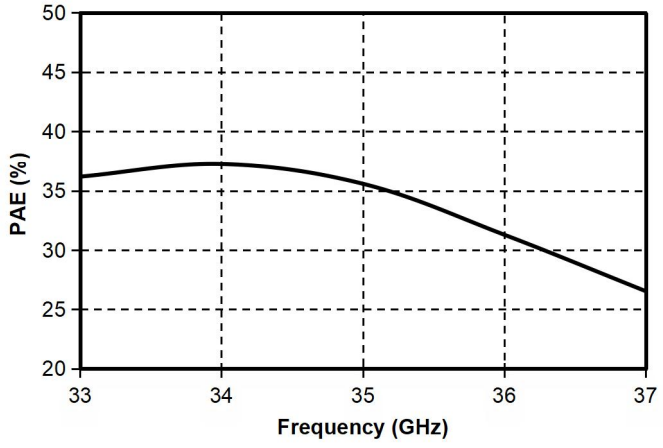
Output Return Loss vs. Frequency



P sat vs. frequency



P AE vs. Frequency



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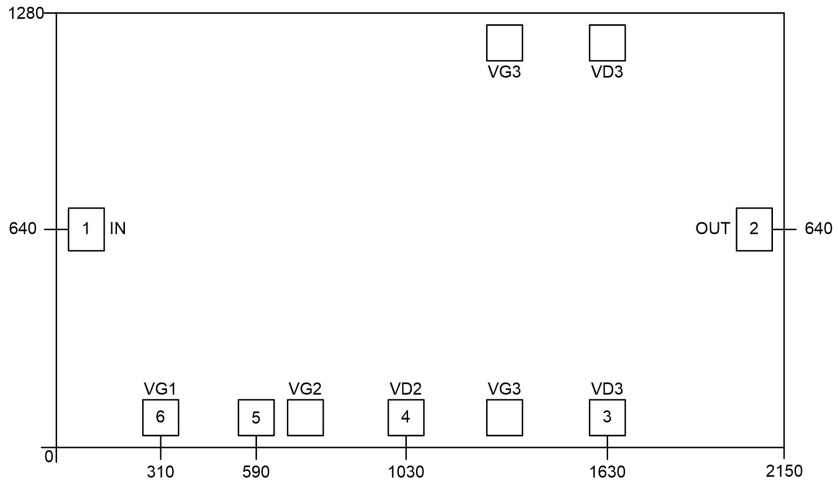
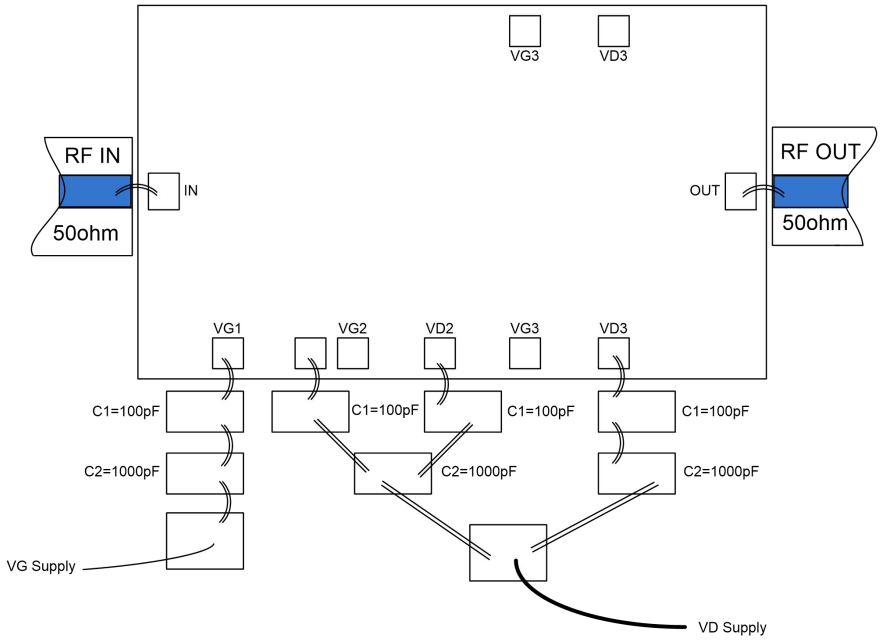
Appearance structure [2]



The unit in the figure is micrometer

Bonding point definition		
Bonding point number	Function Symbol	Functional Description
1	RF IN	The signal input terminal is connected to a 50 ohm circuit, and no DC blocking capacitor is required
2	RF OUT	The signal output terminal is connected to a 50 ohm circuit, and no DC blocking capacitor is required
3, 4, 5	V D3 VD2 VD1	Amplifier drain bias, external 100pF , 1000pF bypass capacitors are required
6	VG1	Amplifier gate bias , external 100pF , 1000pF bypass capacitors are required
Chip bottom	GND	needs to be in good contact with the RF and DC grounds

Recommended assembly diagram



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