GPA -0911A

GaAs MMIC Power Amplifier Chip, 9-11GHz

Performance characteristics

Frequency range: 9-11GHz
Small Signal Gain: 27 dB
Psat: 34.5d Bm
Typical additional efficiency: 4 5 %
Power supply: +8V/380mA
50Ohm input/output
100% on-chip testing
Chip size: 2.72 x 1.97 x 0.1mm

Product Introduction

GPA -0911A is a broadband high-gain, high-efficiency, high- power amplifier chip based on GaAs technology , covering a frequency range of 9 ~ 11 GHz, with a small signal gain of 27 dB and a Psat output power of 34.5 dBm when operating at +8V . The chip via metallization process ensures good grounding, and the back side is metallized, which is suitable for eutectic sintering process.

Use restriction parameter [1]	
Maximum drain voltage	+9 V
Maximum gate bias	- 3 V
Maximum input power	+25 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 = +8 V, Vg=-0.8V, Ids= 380 mA)				
index	Minimum	Typical Value	Maximum	unit
Frequency Range		9-11		GHz
Small Signal Gain	-	27	-	dB
Gain Flatness		± 0.3		dB
Psat	-	34.5	-	dBm
PAE	-	45	-	%
Input return loss	-	16	-	dB
Output return loss	-	12	-	dB
* By tuning the Vg terminal voltage from -2V to 0V , the recommended gate voltage is -0.8V .				

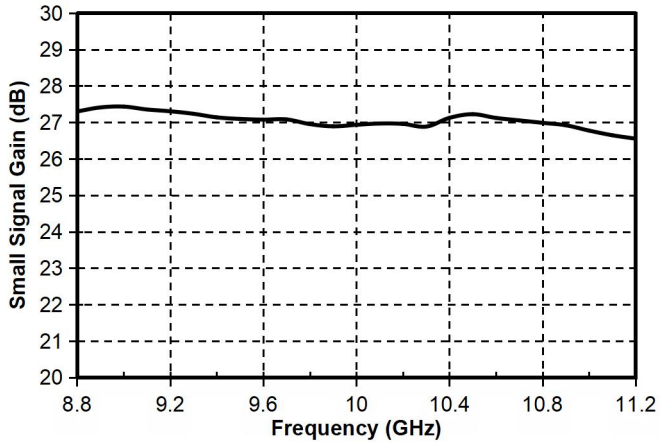
Add: 101 cecil street #14-10, tong eng building singapore 069533
Email: info@standardcircuit.com
Web: www.standardcircuit.com
Tel: +65 82613258

GPA -0911A

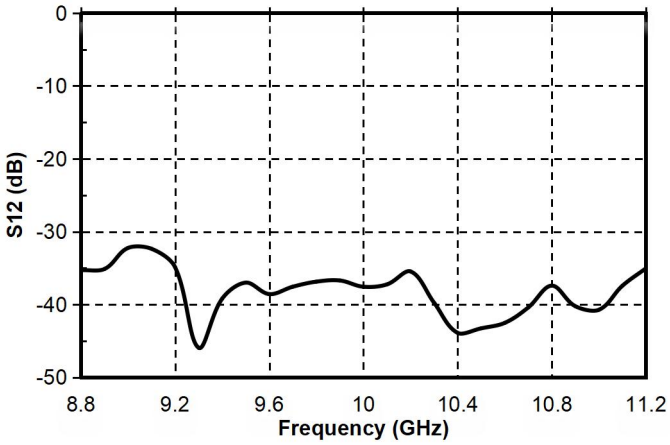
GaAs MMIC Power Amplifier Chip, 9-11GHz

Main index test curve

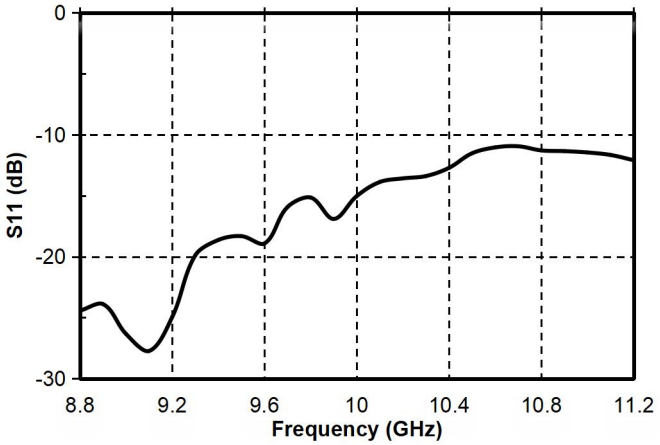
Gain vs. Frequency



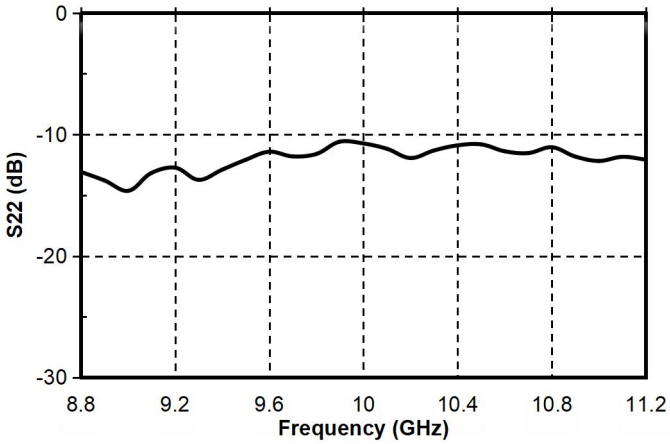
Reverse Isolation vs. Frequency



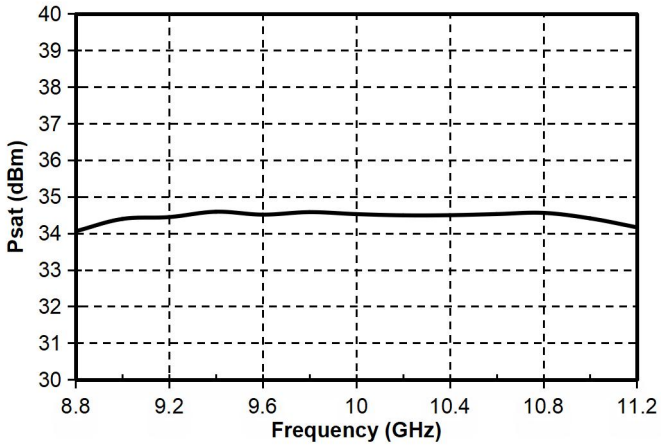
Input Return Loss vs. Frequency



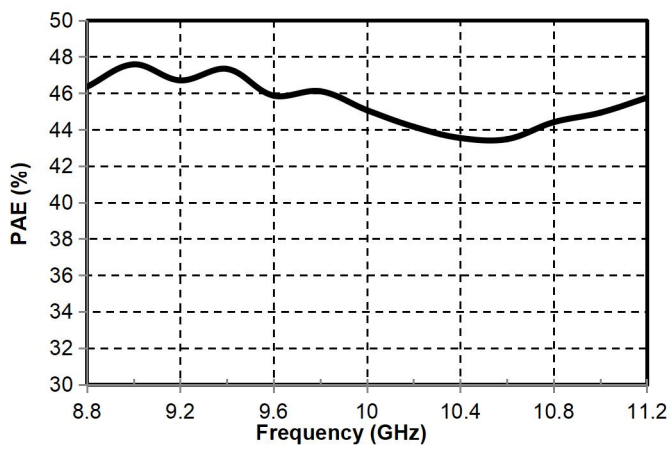
Output Return Loss vs. Frequency



P sat vs. frequency



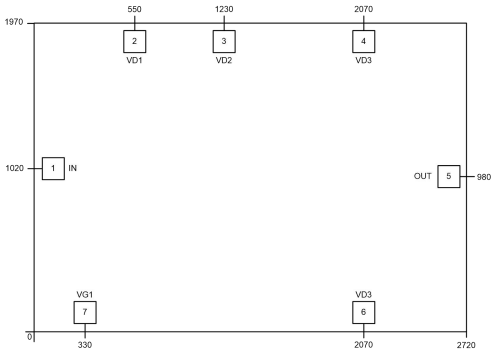
PAE vs. Frequency



Add: 101 cecil street #14-10, tong eng building singapore 069533
Email: info@standardcircuit.com
Web: www.standardcircuit.com
Tel: +65 82613258

GaAs MMIC Power Amplifier Chip, 9-11GHz

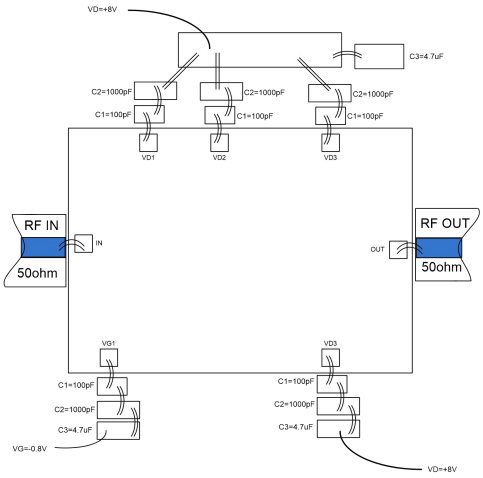
Appearance structure [2]



【2】The units in the figure are all micrometers (dimensional tolerance: ±100um.)

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
5	RF OUT	The signal output terminal is connected to a 50 ohm circuit, and no DC blocking capacitor is required
2, 3, 4, 6	V D1~VD3	Amplifier drain bias, external 100pF , 1000pF , 4.7uF bypass capacitors are required
7	VG1	Amplifier gate bias, external 100pF , 1000pF , 4.7uF bypass capacitors are required
Chip bottom	GND	needs to be in good contact with the RF and DC grounds

Recommended assembly drawing



Add: 101 cecil street #14-10, tong eng building singapore 069533
Email: info@standardcircuit.com
Web: www.standardcircuit.com
Tel: +65 82613258