

Product Features

- Solid-state linear design
- Small and light weight
- Suitable for iDEN
- 50 Ohm Input/Output impedance
- High reliability and ruggedness
- Built in Output Isolator
- Built in monitoring circuit
- High efficiency

Application

- iDEN Repeater



Description

This HPA Module is a high gain, wide dynamic range amplifier module. It has superior performance comes with a modest price tag. Custom design available.

Electrical Specifications @ VDD=+27VDC, T=25°C, 50Ω System

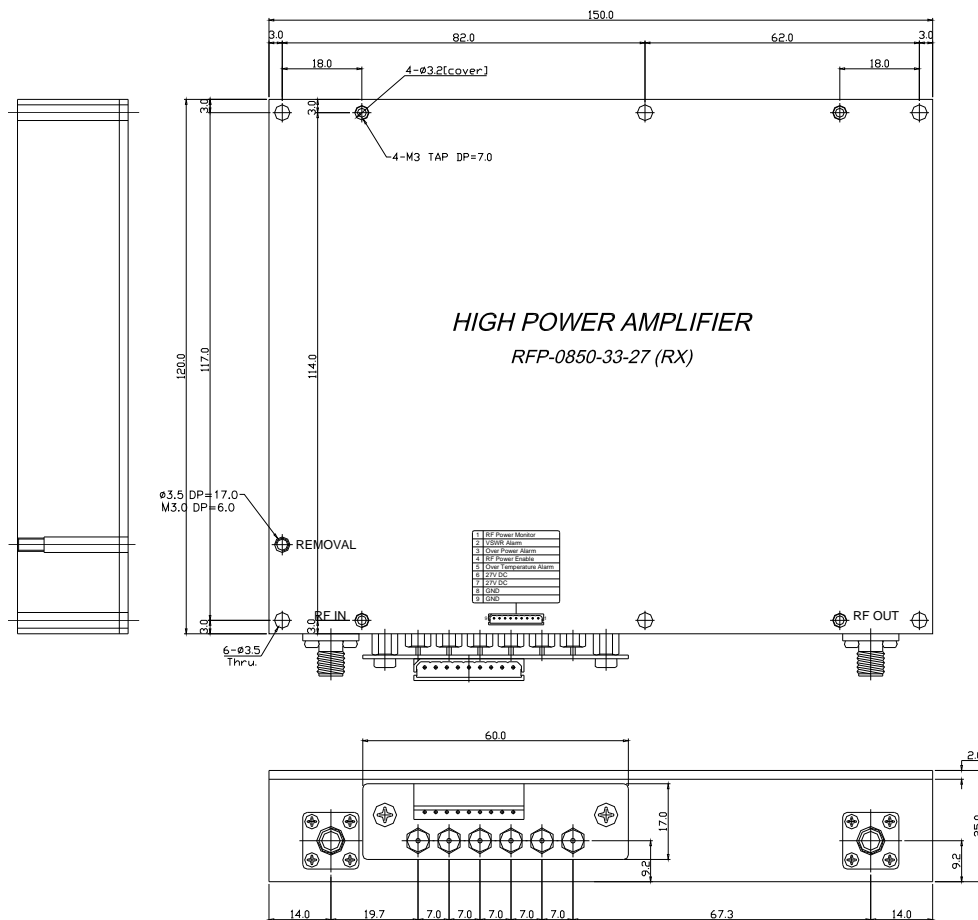
PARAMETER	Symbol	Specification	
Frequency Range	BW	806~824MHz	896 ~901MHz
Output Power	P	33dBm (30dBm/tone)	
Gain	G	39dB	
Gain Flatness	ΔG	± 1 dB @ T = 25°C	
IMD Pout= 33dBm (30dBm/tone)	IMD	≤60dBm, 30dBm(25kHz)	
		≤60dBm, 30dBm(1MHz)	
ALC	ALC	Operating point	35dBm ± 0.5dB
		Operating range	10dB (min)
Second harmonic	H	≤ -50 dBc	
Input/Output VSWR	S11/S22	1.3 :1 (max) to 50Ω	
DC Input Voltage	VDC	+27V DC	
Current Consumption	IDD	1.5A(typ)@ 27VDC, 2W	
Over Temperature Alarm & shutdown	OTS	90°C±5°C (shutdown), 70°C±5°C (auto recovery)	
Over Power Alarm & shutdown	OPS	Alarm: High @ Pout ≥ 37dBm (shutdown),	
Operating Temperature	To	-20 ~ +60°C	
Dimension Size (L × W × H)		150 x 120 x 25 (mm)	
RF Connectors		SMA Female	

Interface Connectors

D-Sub, 9-Pin-Control

Pin #	DESCRIPTION	Specifications
1	RF Power Monitor	5~35dBm(1V~4V). 100mV/dB
2	VSWR Alarm	Alarm: High @ Open port (Over + 20dBm)
3	Over Power Alarm & shutdown	Alarm: High @ Pout ≥ 37dBm
4	RF Power Enable	Enable: Low & GND, Disable: High & Open
5	Over Temperature Alarm & shutdown	Alarm: High @ 90°C±5°C (shutdown), 70°C±5°C (auto recovery & Alarm clear)
6	+VCC	+27V
7	+VCC	+27V
8	GND	GND
9	GND	GND

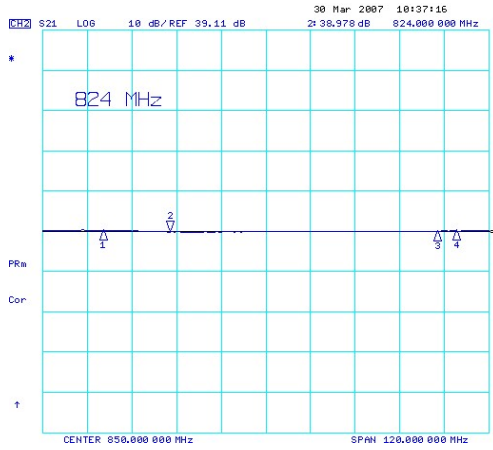
OUTLINE DRAWING



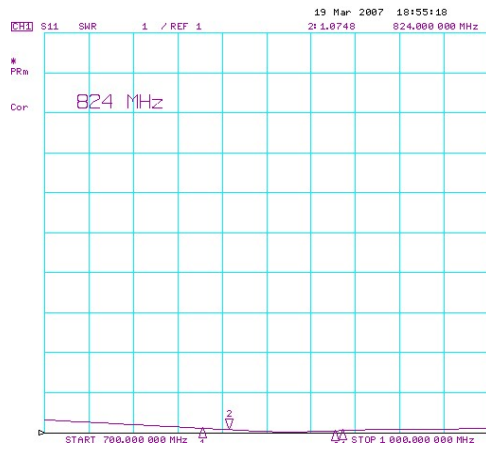
TYPICAL PERFORMANCE

GAIN & GAIN FLATNESS

S11

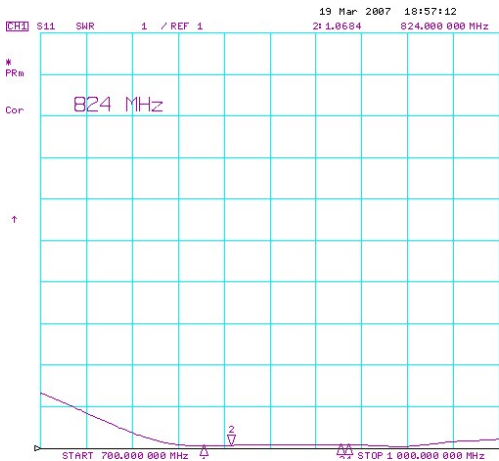


CH2 Markers
 1: 39.293 dB
 886.000 MHz
 2: 39.112 dB
 896.000 MHz
 3: 39.175 dB
 901.000 MHz
 4: 39.175 dB
 901.000 MHz



CH1 Markers
 1: 1.1101
 886.000 MHz
 2: 1.0461
 896.000 MHz
 3: 1.0515
 901.000 MHz

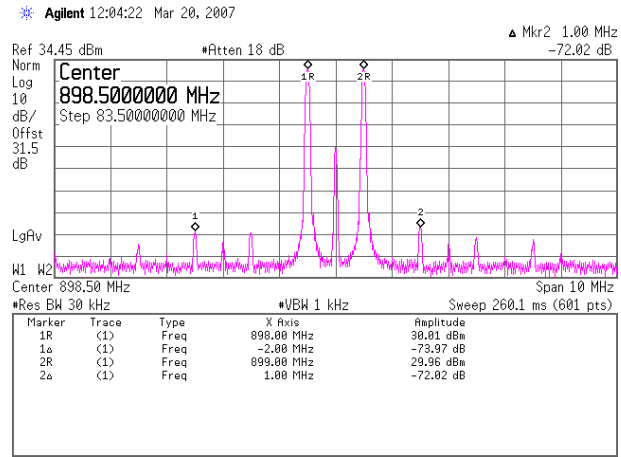
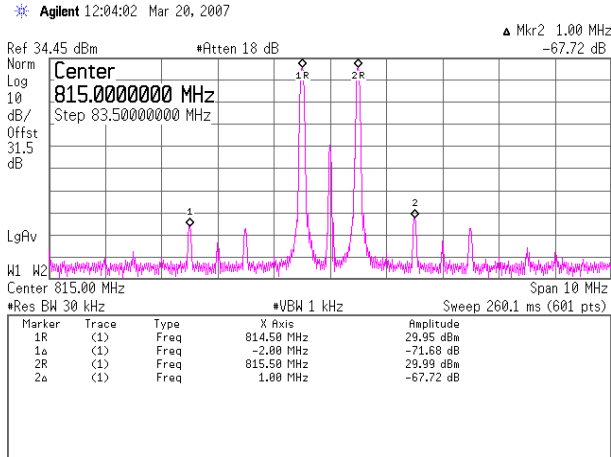
S22



CH1 Markers
 1: 1.0551
 886.000 MHz
 2: 1.0553
 896.000 MHz
 3: 1.0546
 901.000 MHz

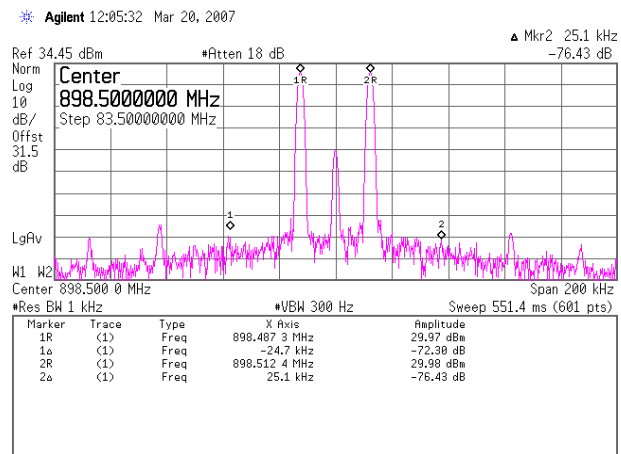
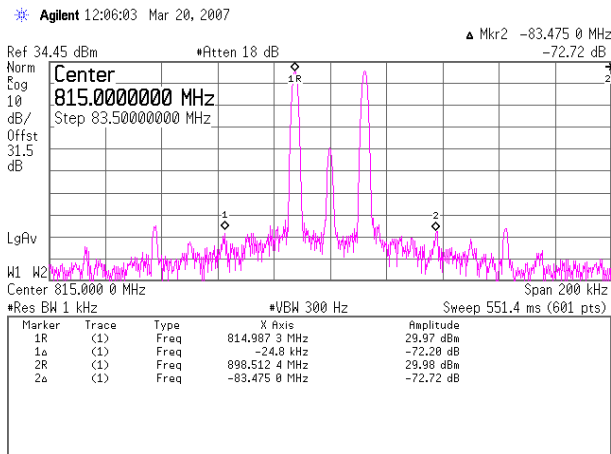
Pout=2 x 30 dBm@ 815MHz (TS=1MHz)

Pout=2 x 30 dBm@ 898.5MHz (TS=1MHz)



Pout=2 x 30 dBm@ 815MHz (TS=25KHz)

Pout=2 x 30 dBm@ 898.5MHz (TS=25KHz)



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