

## Product Features

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

## Application

- US-Cellular 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=+27DC, 50Ω System

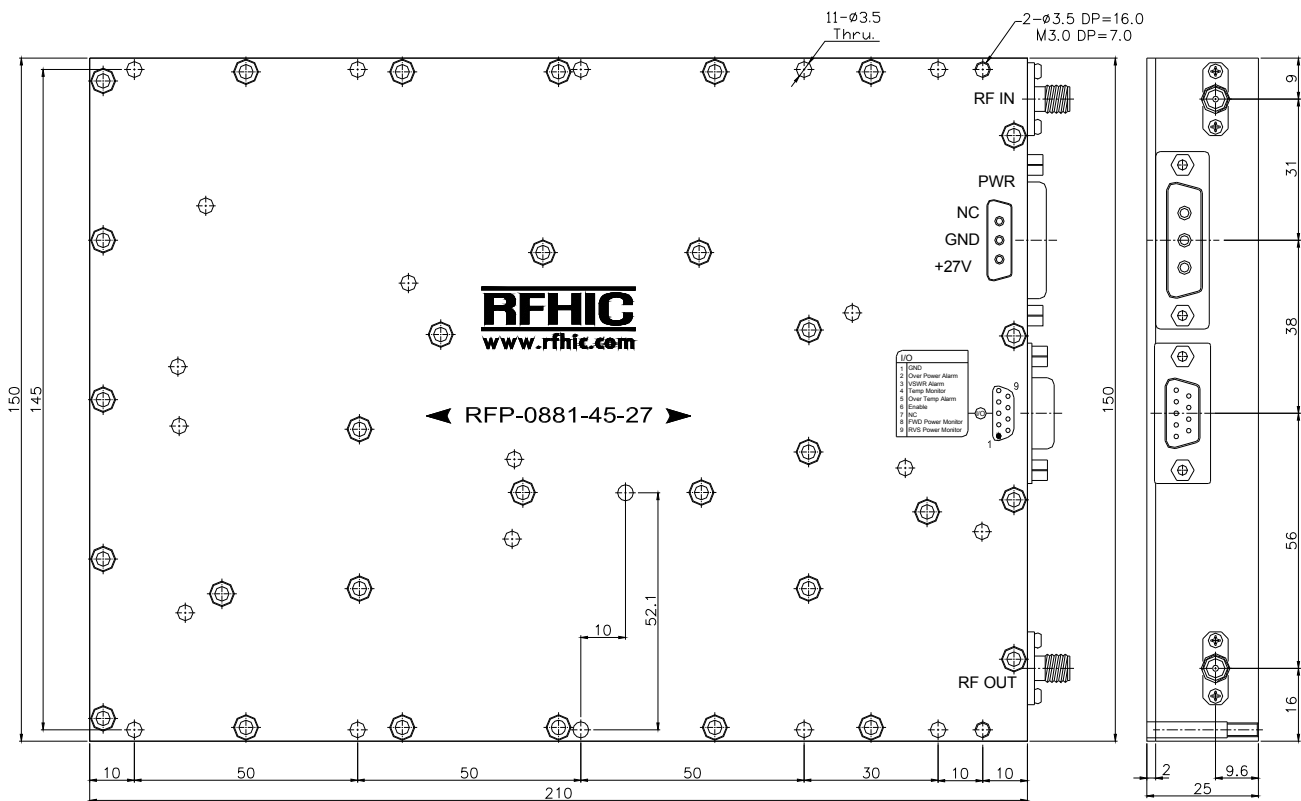
PARAMETER	Symbol	Specification	
Frequency Range	BW	869~ 894MHz	
Operating Bandwidth	OBW	25MHz	
Output Power	P	45dBm @ CDMA2K, 3FA	
Gain	G	45dB ±0.5dB (min)	
Gain Flatness	ΔG	1.0dB (peak to peak)	
Gain Variation	ΔG <sub>TEMP</sub>	±1.0dB (max)	
Spurious Emission @ CDMA 3FA, 45dBm	SE	Fc±750KHz(3FA) @ 30KHz RBW	-45dBc
		Fc±1.98MHz(3FA) @ 30KHz RBW	-50dBc
		Fc±2.25MHz(1FA) @ 1MHz RBW	≤-16dBm
Input/Output VSWR	S11/S22	1.4 :1 (max) to 50Ω	
Input Power ALC	ALC	Operating point	48.7dBm ± 0.5dB
		Operating range	10dB(min)
DC Input Voltage	VDC	26~28V	
Current Consumption	IDD	12A [Max]@Pout=45dBm	
		14 A [Max]@ALC Operating point	
Operating Temperature	To	-20 ~ +60 °C	
Storage Temperature	Ts	-40 ~ +85 °C	
Dimension		210mm X 150mm X 25mm	
RF Connector		SMA Female	

## Interface Connectors

### D-Sub, 9-Pin-Control

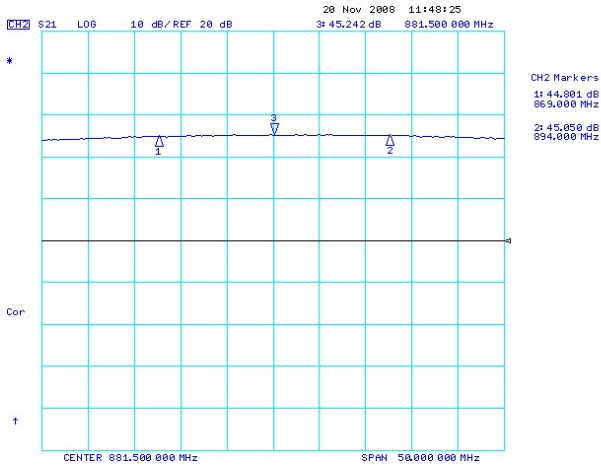
Pin #	DESCRIPTION	Specifications
1	GND	GROUND
2	NC	
3	NC	
4	Temperature Monitor	1.5V@0°C ~ 4.2V@90°C, (30mV/°C,)
5	NC	
6	RF Power Enable	Enable@ Active Low or Open or GND Disable@ TTL High
7	NC	
8	Forward Power Monitor	Forward Power Monitor 45dBm @3.5V±0.1V, (70mV/dB)
9	Reverse Power Monitor	Reverse Power Monitor 45dBm @3.5V±0.1V, (70mV/dB) @Output Port Open

OUTLINE DRAWING

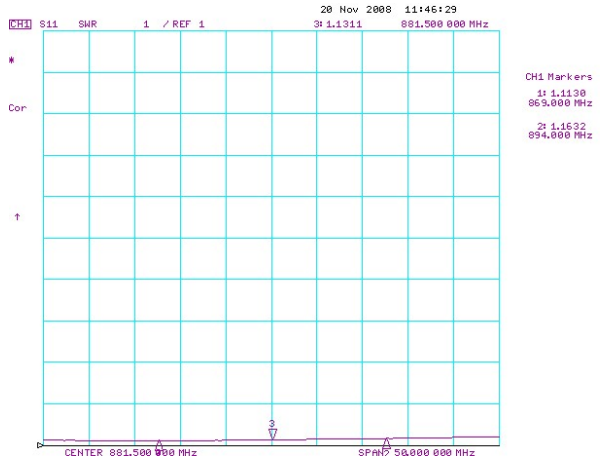


TYPICAL PERFORMANCE

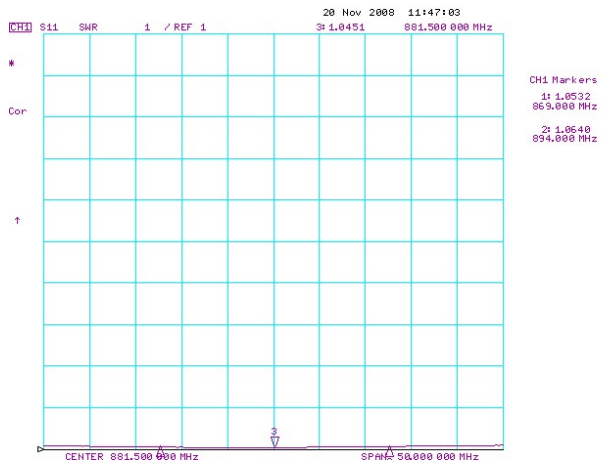
### Gain & Gain Flatness



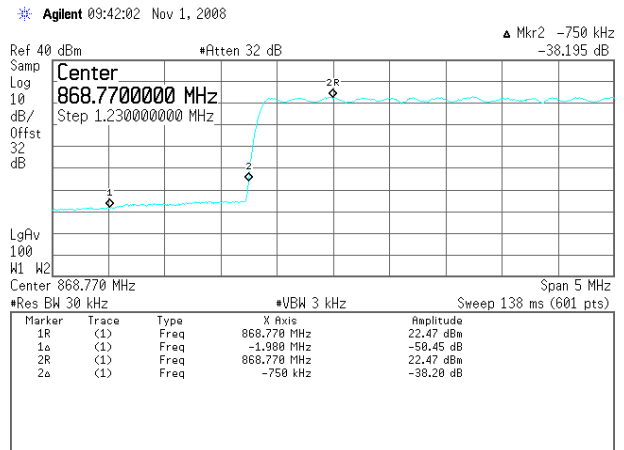
### S11



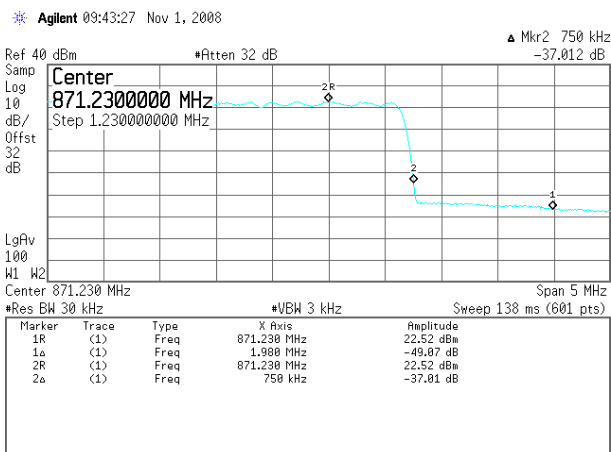
### S22



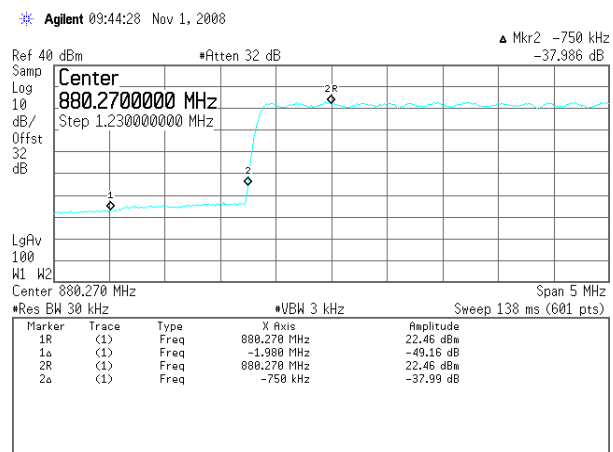
### Spurious Emission @ (Fc =870MHz -1.23MHz)



### Spurious Emission @ (Fc =870MHz +1.23MHz)

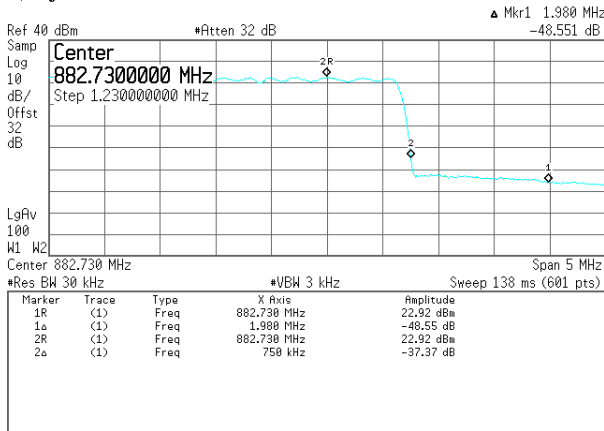


### Spurious Emission @ (Fc =881.5MHz -1.23MHz)



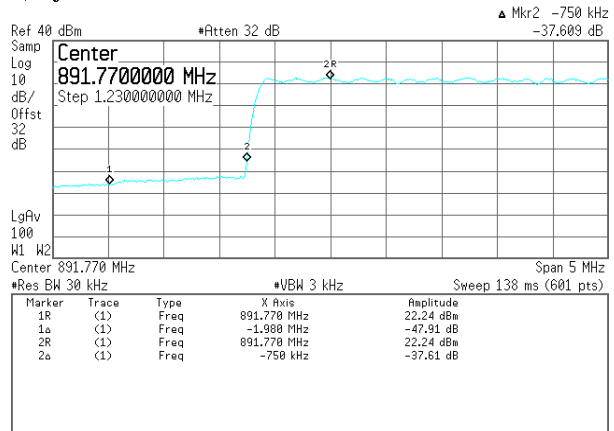
### Spurious Emission @ (Fc = 881.5MHz +1.23MHz)

\* Agilent 09:45:20 Nov 1, 2008



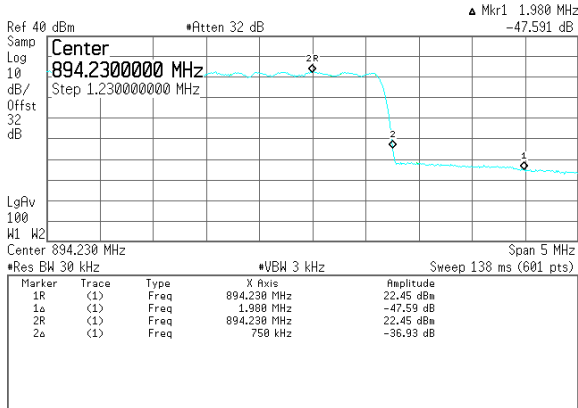
### Spurious Emission @ (Fc = 893MHz -1.23MHz)

\* Agilent 09:46:10 Nov 1, 2008



### Spurious Emission @ (Fc = 893MHz +1.23MHz)

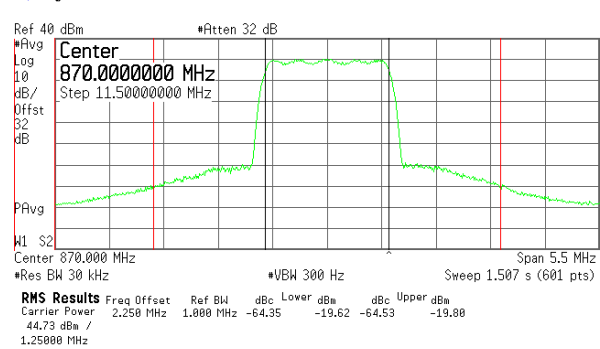
\* Agilent 09:47:00 Nov 1, 2008



### Inband Spurious Emissions (fo ± 2.25MHz (1FA)

Fc = 870MHz

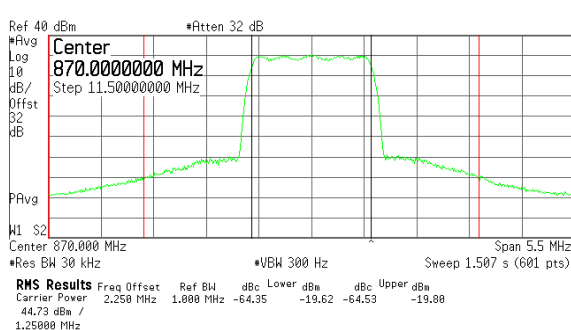
\* Agilent 09:35:34 Nov 1, 2008



### Inband Spurious Emissions (fo ± 2.25MHz (1FA)

Fc = 881.5MHz

\* Agilent 09:35:34 Nov 1, 2008



### Inband Spurious Emissions (fo ± 2.25MHz (1FA)

Fc = 893MHz

\* Agilent 09:36:57 Nov 1, 2008

