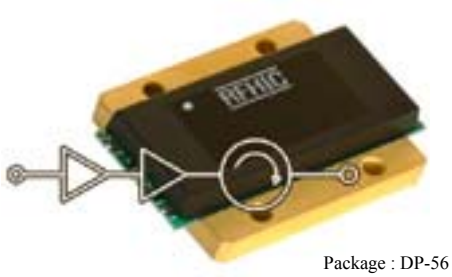
Power Amplifier RFW0836-10

Product Features

- Small size by using simple matching circuit board
- Single Supply Voltage
- Heat sink 99.9% copper, gold plated
- High Productivity
- Low Manufacturing Cost
- GaAs HFET

Application

- Cellular Repeater
- RF Sub-Systems
- Base Station



Package : DP-56

Description

The power amplifier module is designed for base stations and cell extenders and operating frequency range is from 300MHz to 2.3GHz
GaAs HFET is used and attached on a copper sub carrier. It is connected by using bias and in/out matching circuit method with gold wire bonding.
The bias and matching circuit are designed much simpler than other circuits for silicon IC's, LDMOS because GaAs HFET is operated by low supply voltage whereas others are operated by high supply voltage.
For better thermal conductivity, enhanced mode PCB was used in the 99.9% copper gold plate heat sink.
This simplicity results cost competitiveness and performance enhancement.

Specifications

PARAMETER	Min	Typ	Max
Frequency Range (MHz)	824 ~ 849		
Small Signal Gain (dB)	30		
Gain Flatness (Max.)	± 0.5dB @ 50MHz BW		
Gain Variation Over Temp		± 0.7dB	± 1.5dB
Output Return Loss	-15dB		
Output P1dB	37 dBm	38 dBm	
CDMA Power (1 FA)	32dBm @ -45dBc ACPR		
OIP3 @ tone / 27 dBm	50 dBm	51 dBm	
Noise Figure	4 dB		
Drain Voltage	10V		
Drain Current	1.5A		
Operating Temp Range	-20°C ~ +70°C		
Dimensions (W×L×H)	32.0 × 44 × 10.1 [mm]		

NOTE

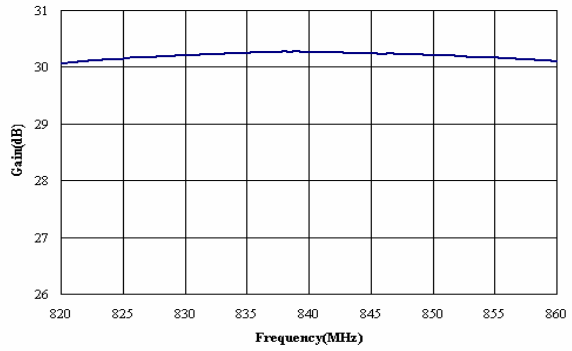
* CDMA : 1.23MHz symbol rate ; Forward Link ; 9 Channels, Multi tone Available
@ ±750KHz and ±1.98MHz offset in 30KHz resolution bandwidth

* RFW Series : Internally Matched Module

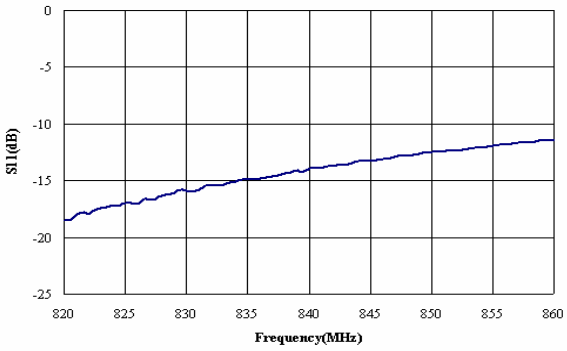
▪ Tel : 82-31-250-5011
▪ rfsales@rfhic.com

Performance Charts (V_d=10V, I_d=1.5A, T=25℃)

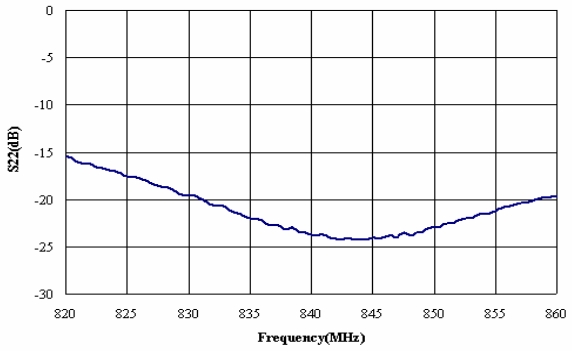
Gain vs Freq



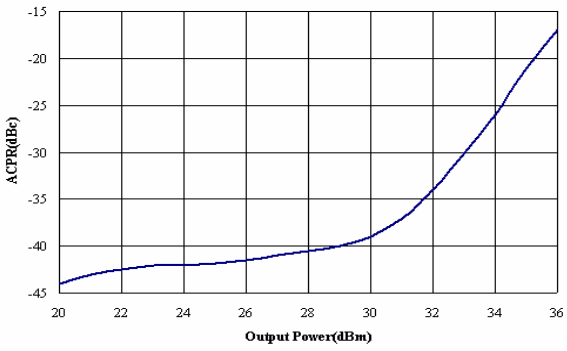
S11 vs Freq



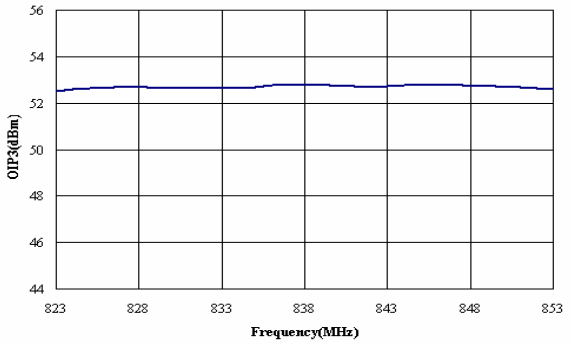
S22 vs Freq



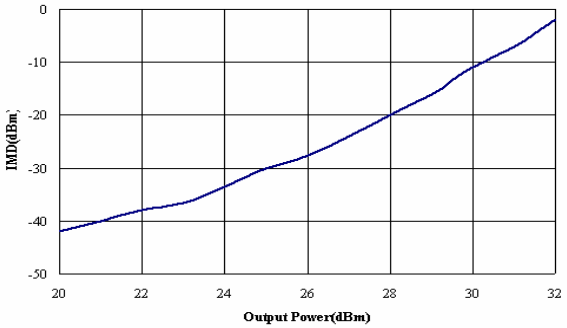
ACPR vs Output Channel Power
9ch Forward,±750kHz offset 30kHz Meas BW



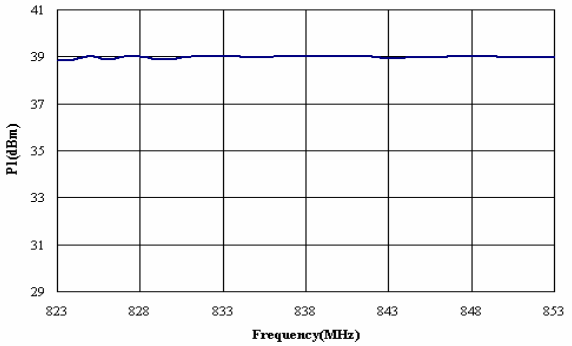
OIP3 vs Frequency
27dBm/tone separated by 1MHz



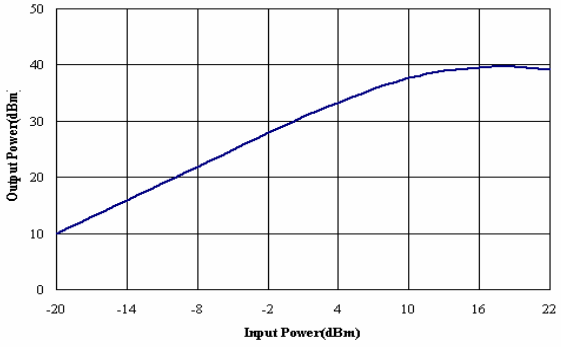
IMD vs Output Power
Fundamental Frequency=836,837MHz, @tone/20~32dBm



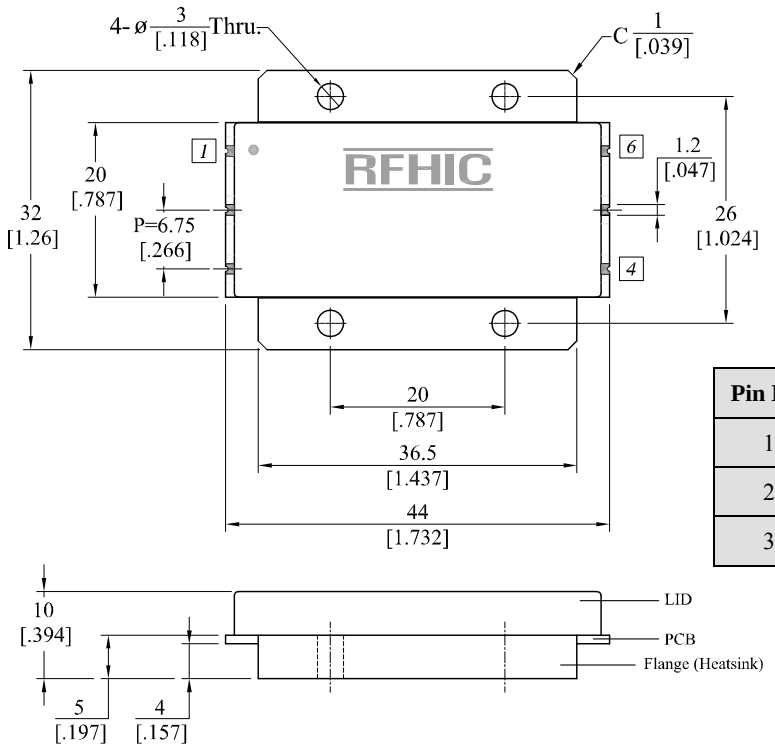
P1dB vs Frequency



Input Power vs Output Power

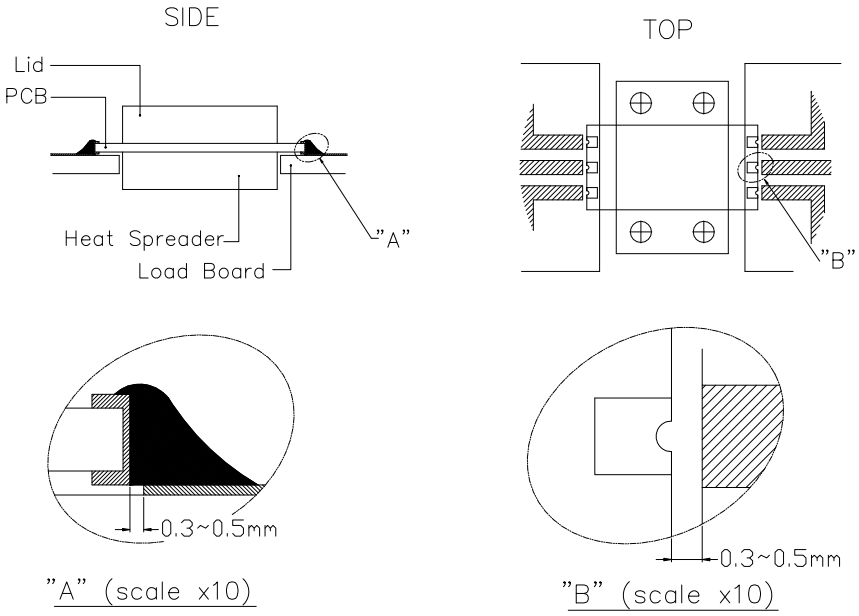


Package Dimensions (Type: DP-56)



Pin NO	Function	Pin NO	Function
1	GND	6	Vcc
2	RF IN	5	RF OUT
3	E/N	4	GND

Installation Guideline



★ It can be easily removed with solder wick and other removable material