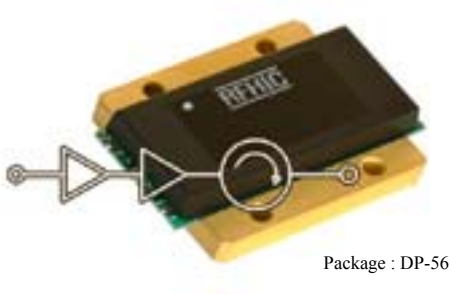
Power Amplifier RFW2140-10

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

- UMTS 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)	2110 ~ 2170		
Small Signal Gain (dB)	24.5		
Gain Flatness (Max.)	± 0.5dB @ 50MHz BW		
Gain Variation Over Temp		± 0.7dB	± 1.5dB
Output Return Loss	-15dB		
Output P1dB	35 dBm	36 dBm	
W-CDMA Power (1 FA)	29dBm @ -45dBc ACLR		
OIP3 @ tone / 27 dBm	50 dBm	51 dBm	
Noise Figure (Typ.)	4 dB		
Drain Voltage	10V		
Drain Current	1.5A		
Operating Temp Range	-20°C ~ +70°C		
Dimensions (W×L×H)	32.0 × 44.0 × 10.0 [mm]		

NOTE

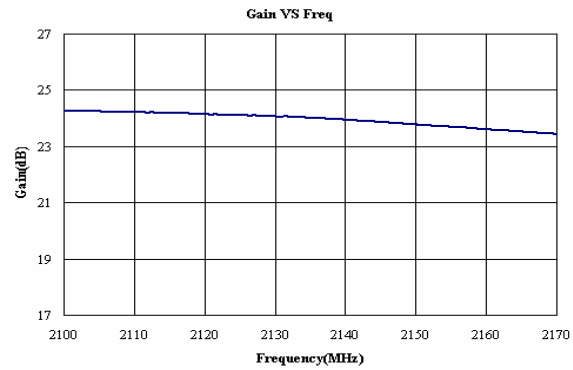
*Test condition: 2140MHz, 3GPP W-CDMA signal modulation
Test Model 1, 64DPCH, 3.84MHz BW, ±5MHz offset

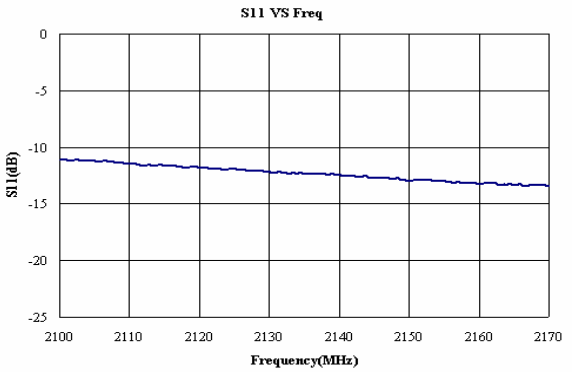
* RFW Series : Internally Matched Module

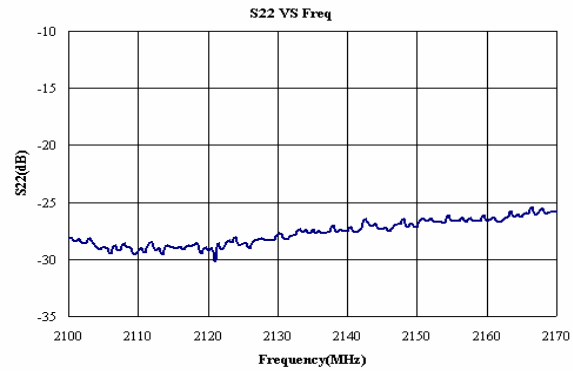
▪ Tel : 82-31-250-5011
▪ rfsales@rfhic.com

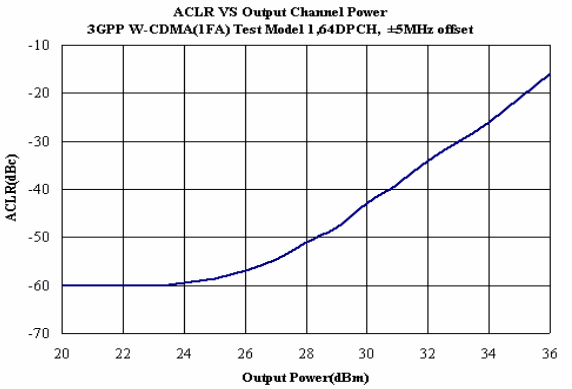
▪ All specifications may change without notice.
▪ Version 1.2

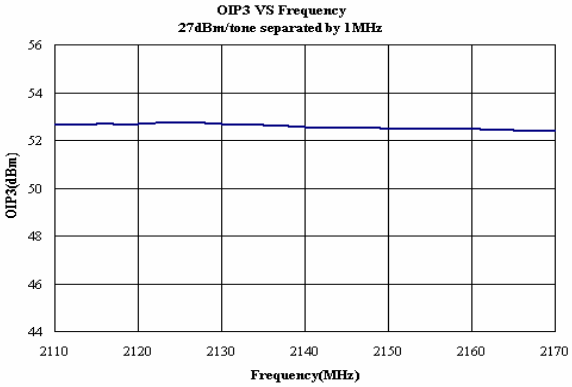
Performance Charts (V_d=10V, I_d=1.5A, T=25℃)

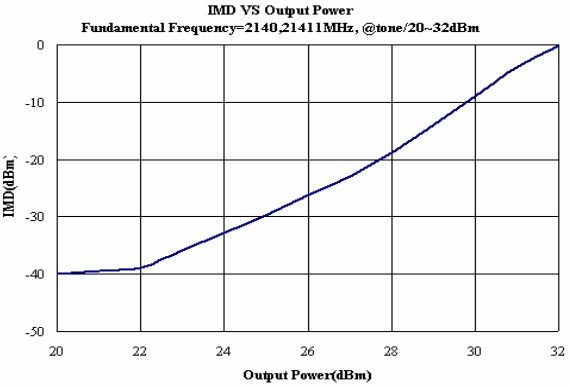


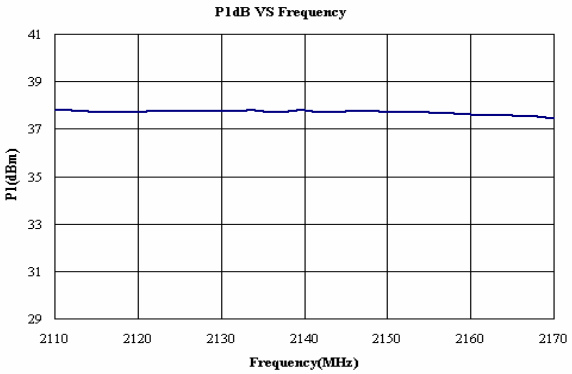


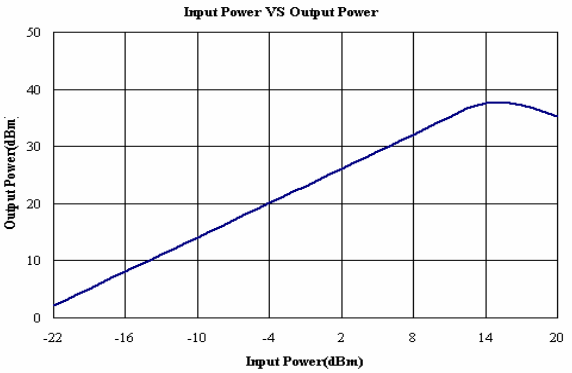




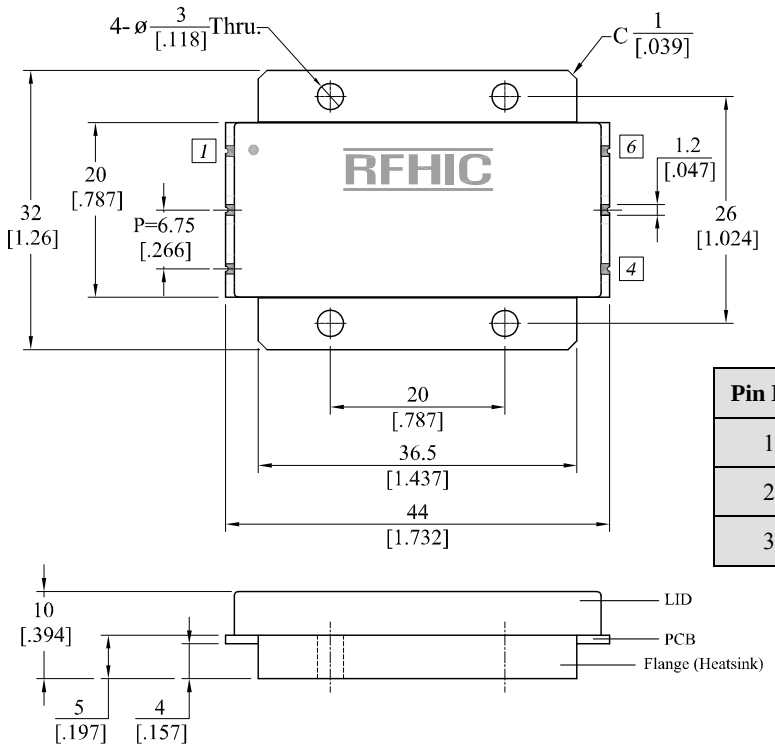








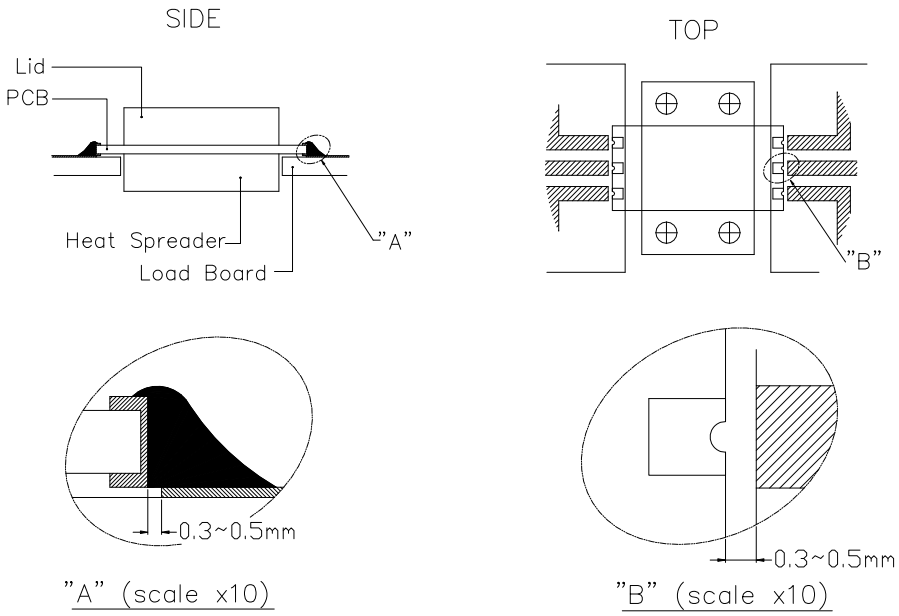
Package Dimensions (Type: DP-56)



Unit : mm [inch]	Tolerance : ± 0.2 .008

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