

## Product Features

- Integrated Monolithic GaAs Converter Package Module
- High Reliability
- Lower Manufacturing Cost
- Higher Productivity
- Very Low Noise Figure & Low Distortion
- Very Low Phase Noise (Ceramic Resonator used)
- Pb Free / RoHS Standard

## Application

- Repeater
- Base Station



Package Type: HY-5A

## Description

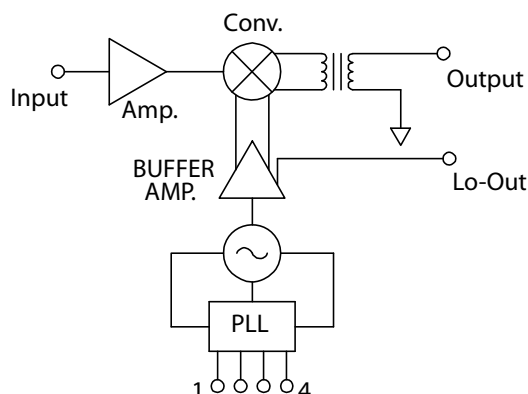
IMT2000 Converter is a very compact size due to using simple matching circuit board. Both products include PLL circuits. Customers can choose from two types of packages and can be applied to IMT2000 systems.

## Specifications

(Operating Temperature:-30°C~+80°C)

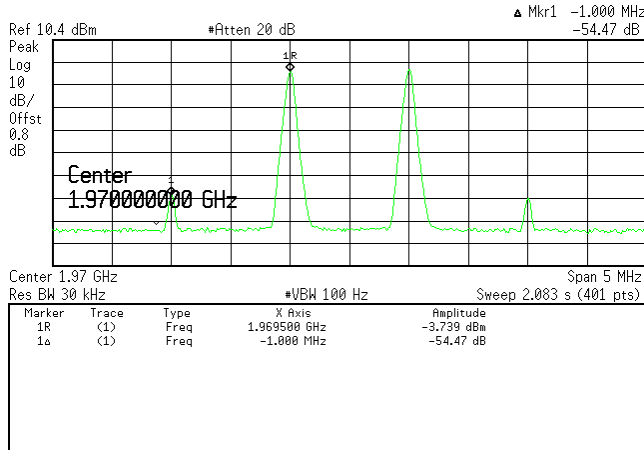
PARAMETER	RFUR20-50B (Rx UP)	RFDR20-51B (Rx Down)	RFDR20-55B (Tx Down)	RFUR20-56B (Tx UP)
Input Frequency Range (MHz)(BW:40MHz)	160 (IF)	1960~1980 (RF)	2150~2170 (RF)	160 (IF)
Output Frequency Range (MHz)	1960~1980 (RF)	160 (IF)	160 (IF)	2150~2170 (RF)
Conversion Gain (dB)	6.5±1	4.5±1	0±1	6.5±1
Gain Flatness @ 50MHz (dB) (Max.)	±0.5	±0.5	±0.5	±0.6
Noise Figure (Typ.)(dB)	6	11	12	6
OIP3 (Typ. dBm)	23	25	19	23
LO to RF Leakage (dBm)	-20	-20	-20	-20
LO to IF Leakage (dBm)	-20	-20	-20	-20
Up Converter: IF to RF Leakage (Typ.)	-20(dB)	-20(dB)	-20(dB)	-20(dB)
Down Converter: RF to IF Leakage (Typ.)				
LO Output Level	5±1	5±1	5±1	5±1
LO Phase Noise (Typ.) Step Size : 200KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz	-70dBc/Hz @1KHz -95dBc/Hz @10KHz -120dBc/Hz @100KHz
PLL Control	3 wire	3 wire	3 wire	3 wire
Vcc/Idd	5V / 170mA	5V / 170mA	5V / 170mA	5V / 170mA

## Functional Diagram



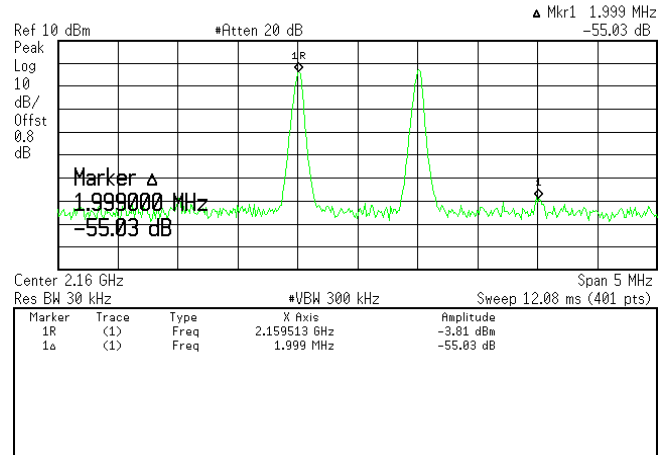
## RFUR20-50B OIP3 Test

Agilent 14:16:44 Jan 6, 2003



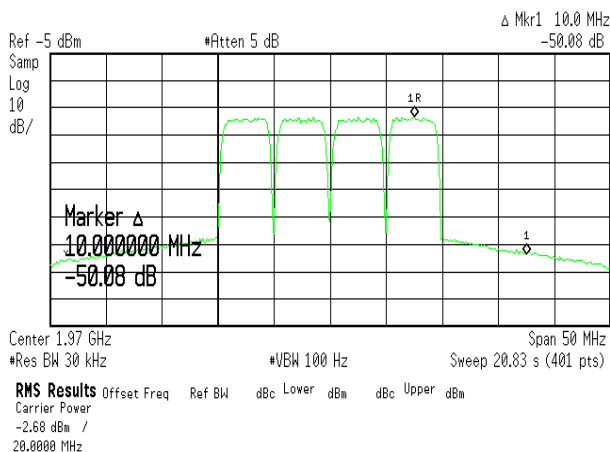
## RFUR20-56B OIP3 Test

Agilent 15:38:04 Jan 6, 2003



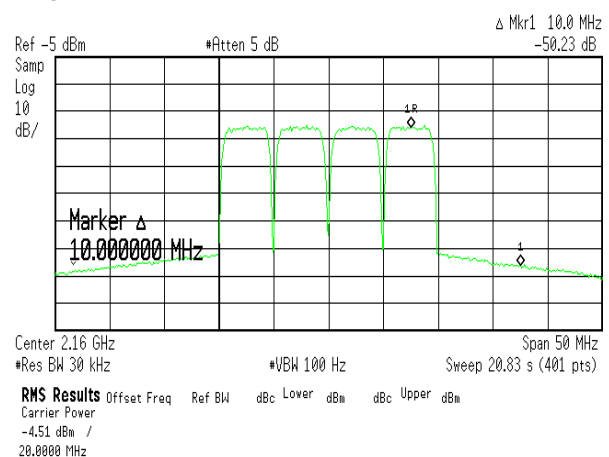
## RFUR20-50B ACLR Test

Agilent 19:01:08 Jan 7, 2003



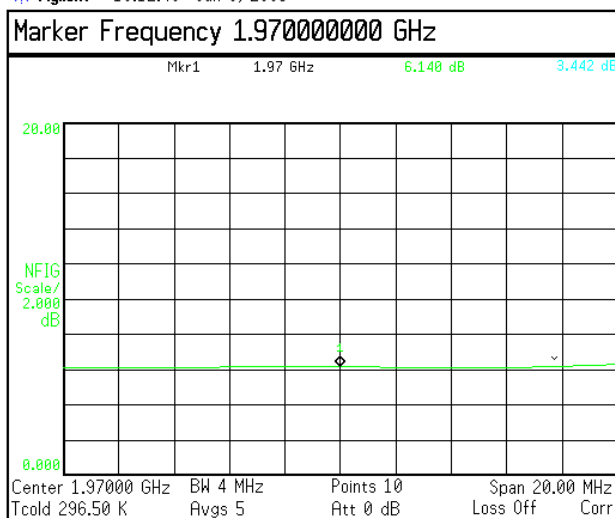
## RFUR20-50B ACLR Test

Agilent 18:53:57 Jan 7, 2003



## RFUR20-50B Noise Figure Test

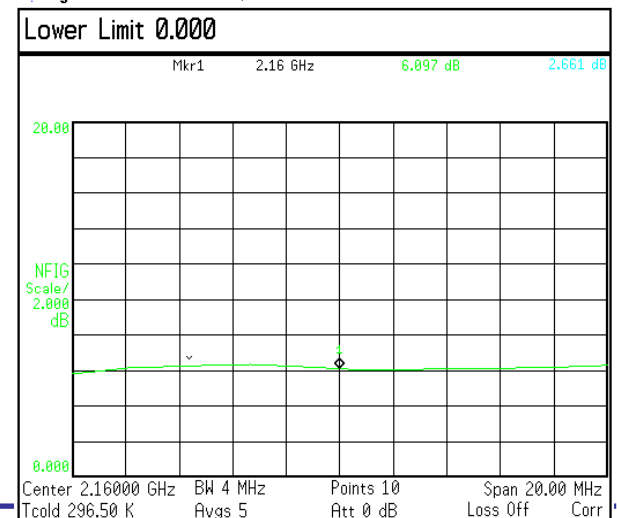
Agilent 10:12:49 Jan 8, 2003



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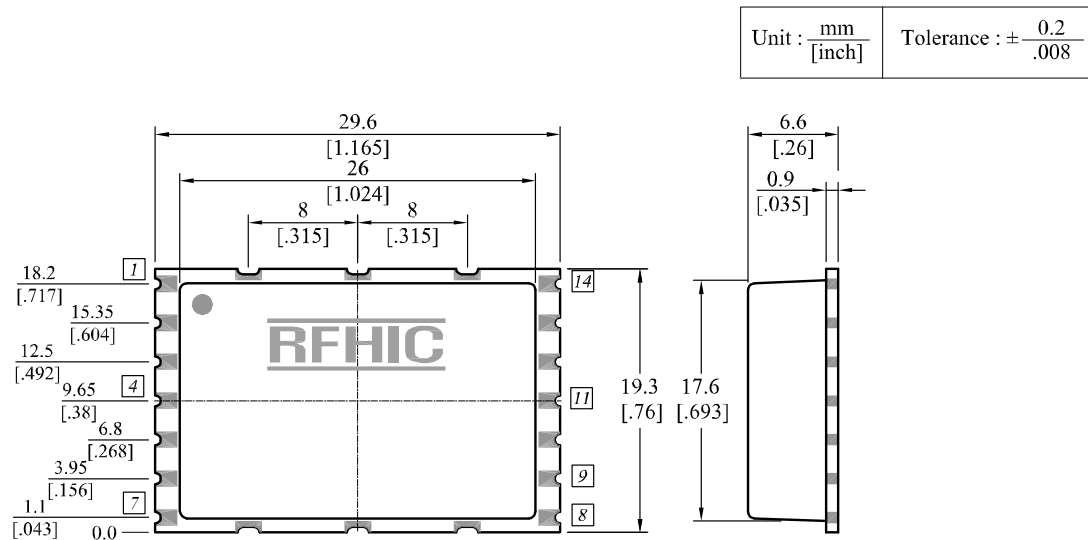
## RFUR20-50B Noise Figure Test

Agilent 10:08:40 Jan 8, 2003

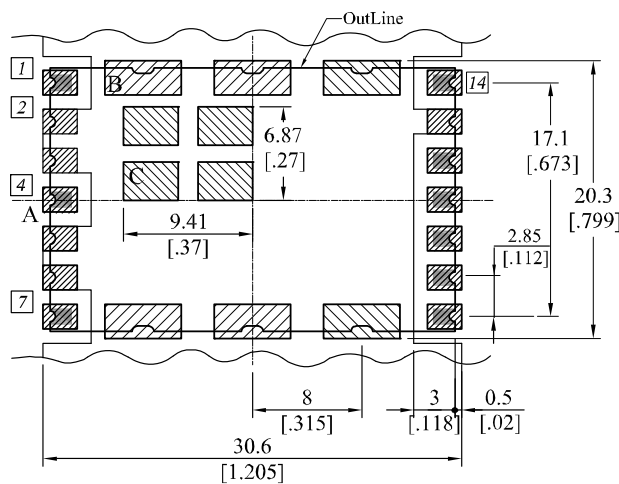


- All specifications may change without notice.
- Version 5.1

**Pacakage Dimensions (Type: HY-5A)**



**Recommended Pattern**



Pin No.	Function	Pin No.	Function
1	Input	14	Output
2	Ground	13	Ground
3	Ground	12	Lo_Out
4	Vcc+5V	11	Fo/LD
5	Ground	10	LE
6	Ground	9	Data
7	Ref in	8	Clock

Pattern Size WxL		
	mm	inch
A	2.5 x 1.8	.098 x .071
B	5.6 x 2.5	.22 x .098
C	4 x 2.8	.157 x .11

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