

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

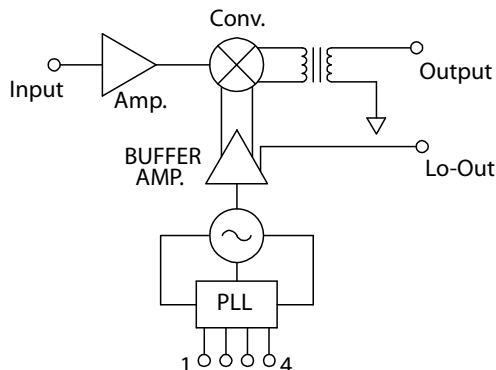
IMT2000 Converter is a compact size due to using simple matching circuit board. This converter includes PLL circuits which applies to IMT2000 systems.

Specifications

(Operating Temperature:-30°C~+80°C)

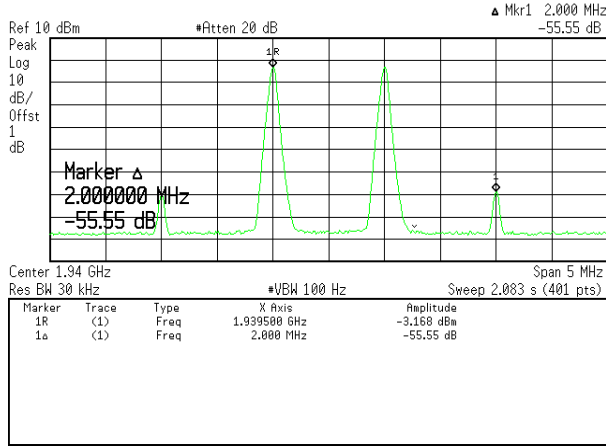
PARAMETER	RFUR20-50A (Rx UP)	RFDR20-51A (Rx Down)	RFDR20-55A (Tx Down)	RFUR20-56A (Tx UP)
Input Frequency Range (MHz)(BW:40MHz)	70 (IF)	1920~1960 (RF)	2110~2150 (RF)	70 (IF)
Output Frequency Range (MHz)	1920~1960 (RF)	70 (IF)	70 (IF)	2110~2150 (RF)
Conversion Gain (dB)	6.5±1	4.5±1	0±1	6.5±1
Gain Flatness @ 50MHz (dB) (Max.)	±0.8	±0.5	±0.7	±0.6
Noise Figure (Typ.)(dB)	7.5	11	12	6
OIP3 (Typ. dBm)	25	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 (LMX2326)	3 wire	3 wire	3 wire	3 wire
Vcc/Idd	5V / 170mA	5V / 170mA	5V / 170mA	5V / 170mA

Functional Diagram

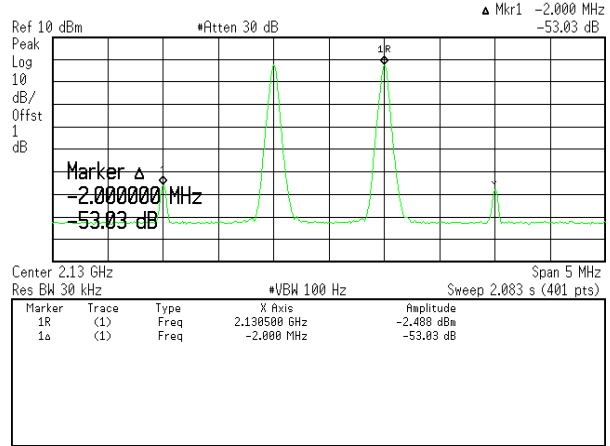


RFUR20-50A, 56A OIP3 TEST (Up Converter)

Agilent 11:02:46 Jan 2, 2003

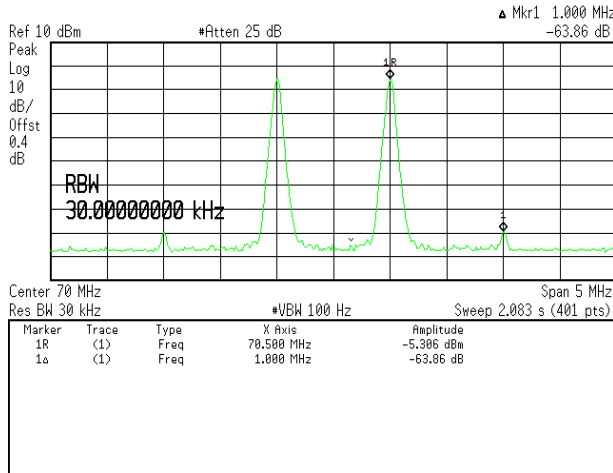


Agilent 11:12:49 Jan 2, 2003

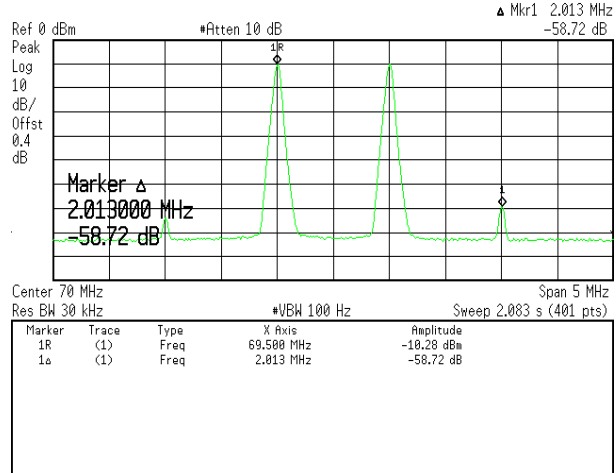


RFDR20-51A, 55A OIP3 TEST (Down Converter)

Agilent 11:41:43 Jan 2, 2003

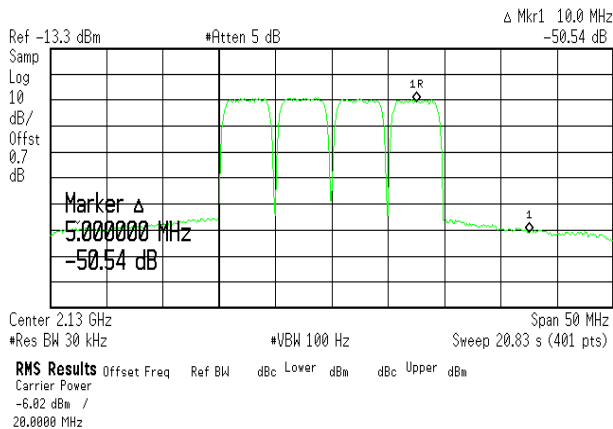


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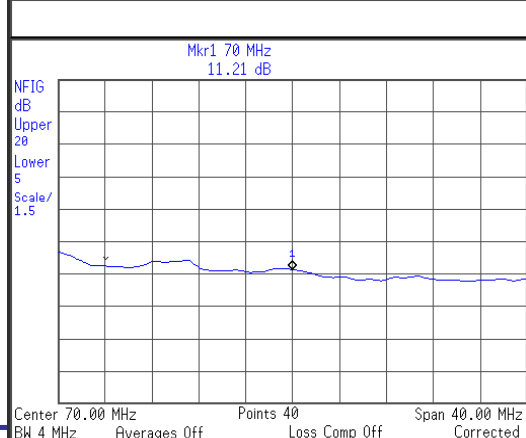
ACLR TEST

Agilent 17:31:06 Jan 2, 2003



NOISE FIGURE TEST

Agilent 14:35:56 Jan 3, 2003

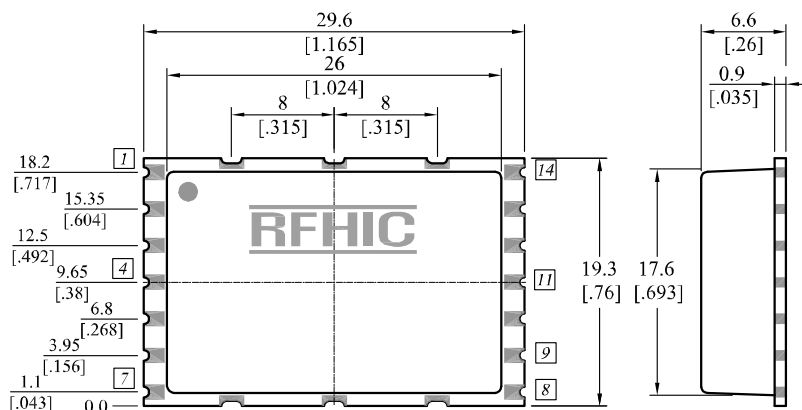


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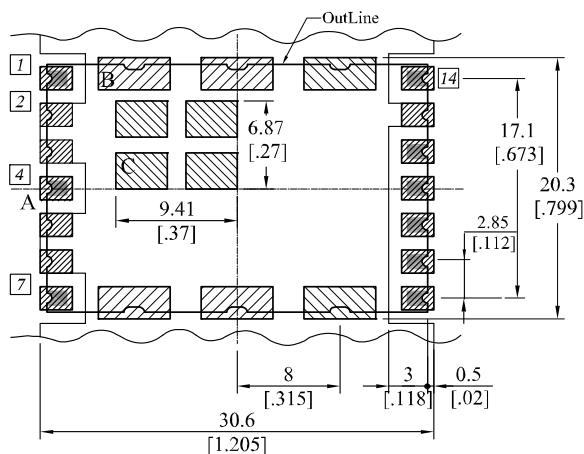
All specifications may change without notice.
Version 5.1

Package Dimensions (Type: HY-5A)

Unit : $\frac{\text{mm}}{\text{[inch]}}$	Tolerance : $\pm \frac{0.2}{.008}$
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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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