

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



Package Type: HY-5A

Description

Cellular Converter is a very compact size due to using simple matching circuit board including PLL circuits. Customers can apply this part to Cellular systems.

Application

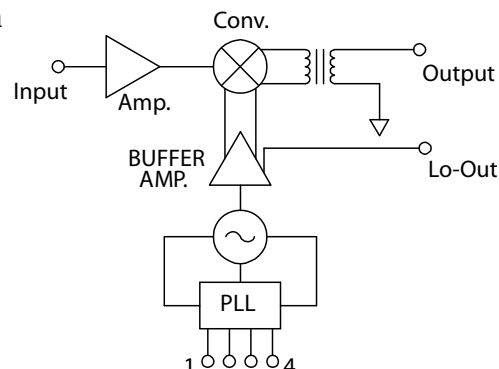
- Repeater
- Base Station

Specifications

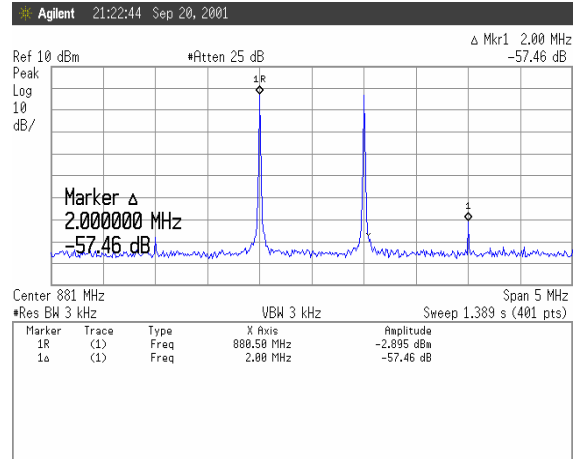
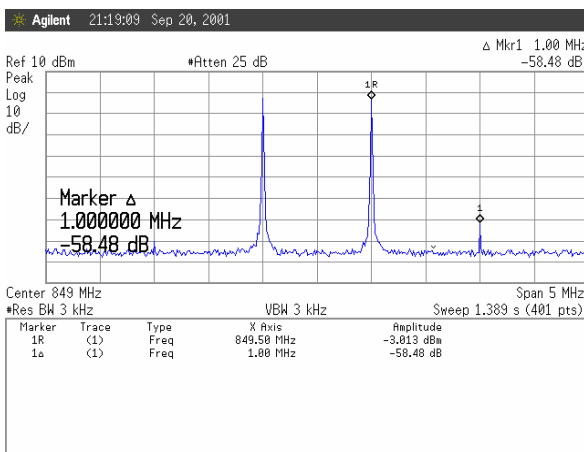
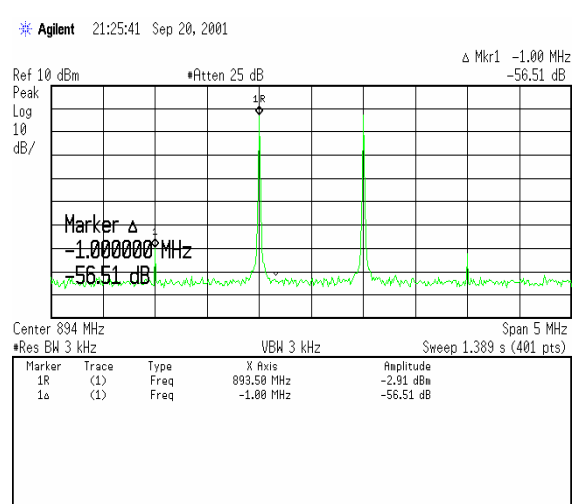
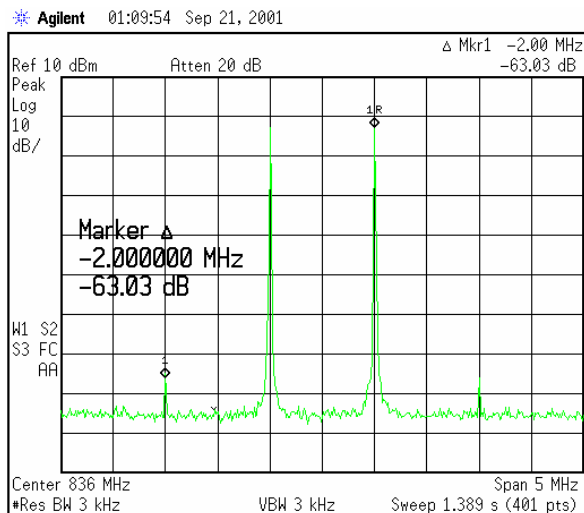
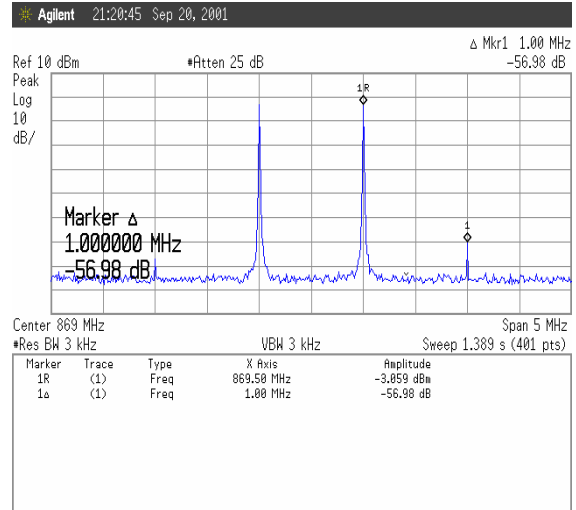
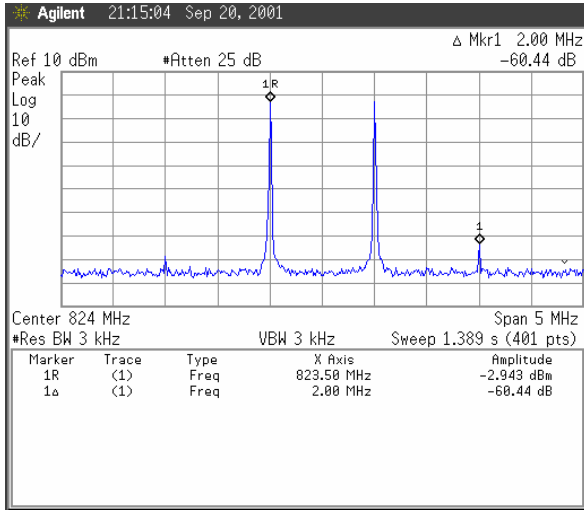
(Operating Temperature: -30°C~+80°C)

| PARAMETER | RFUR08-50 (Rx-Up) | RFDR08-51 (Rx-Down) | RFDR08-55 (Tx-Down) | RFUR08-56 (Tx-Up) |
|---|---|---|---|---|
| Input Frequency Range (MHz)(BW:30MHz) | 70 (IF) | 824~849 (RF) | 869~894 (RF) | 70 (IF) |
| Output Frequency Range (MHz) | 824~849 (RF) | 70 (IF) | 70 (IF) | 869~894 (RF) |
| Conversion Gain (dB) | 8±1 | 9±1 | 9±1 | 8±1 |
| LO Frequency Range (MHz) | 754~779 | 754~779 | 939~964 | 939~964 |
| Gain Flatness@50MHz (dB) (Max.) | ±1 | ±1 | ±1 | ±1 |
| Noise Figure (Typ)(dB) | 6 | 6 | 10 | 10 |
| OIP3 (Typ)(dBm) | 26 | 28 | 28 | 26 |
| LO to RF Leakage (dBm) | -10 | -20 | -20 | -10 |
| LO to IF Leakage (dBm) | -20 | -20 | -20 | -20 |
| RF to IF / IF to RF Leakage (dBm) | -20 | -20 | -20 | -20 |
| LO Output Level (dBm) | 4±1 | 4±1 | 4±1 | 4±1 |
| LO Phase Noise (Typ) Step Size : 10KHz | -65dBc/Hz @1KHz -95dBc/Hz @10KHz -115dBc/Hz @100KHz | -65dBc/Hz @1KHz -95dBc/Hz @10KHz -115dBc/Hz @100KHz | -65dBc/Hz @1KHz -95dBc/Hz @10KHz -115dBc/Hz @100KHz | -65dBc/Hz @1KHz -95dBc/Hz @10KHz -115dBc/Hz @100KHz |
| PLL Control (LMX2326) | 3 wire | 3 wire | 3 wire | 3 wire |
| Vcc / Idd | 5V / 170mA | 5V / 170mA | 5V / 170mA | 5V / 170mA |

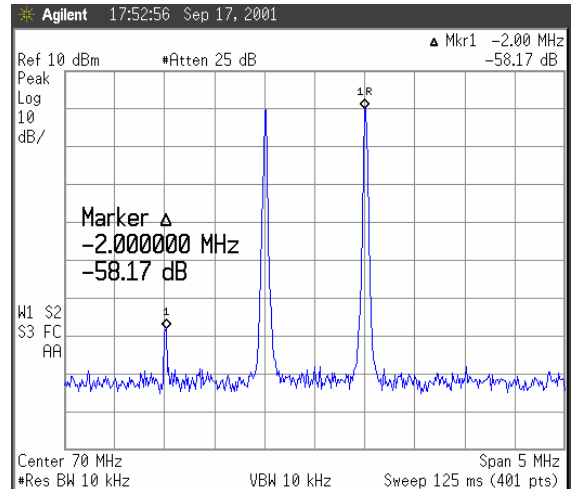
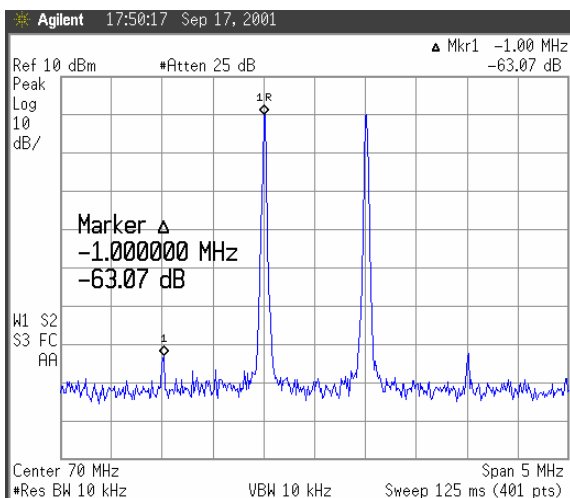
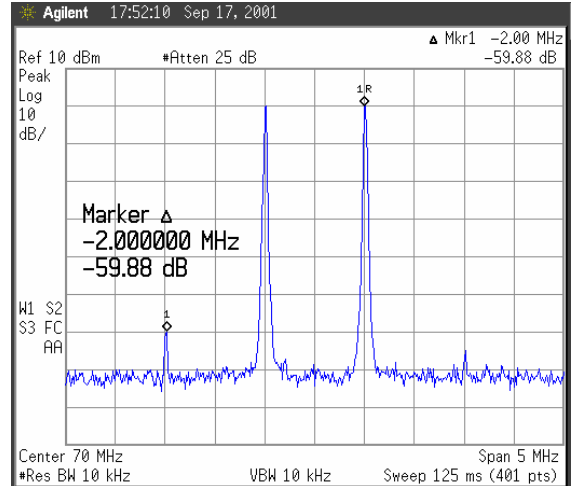
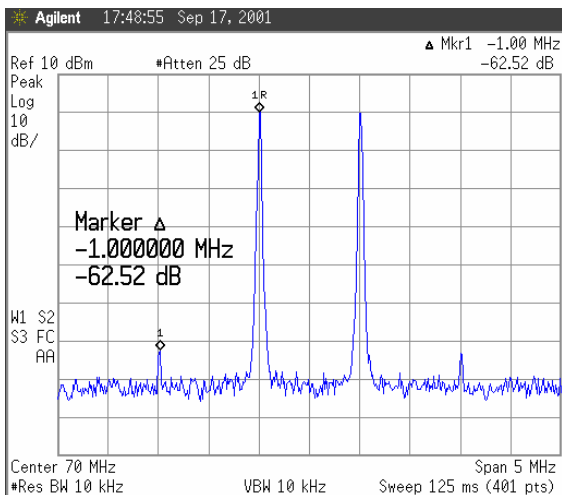
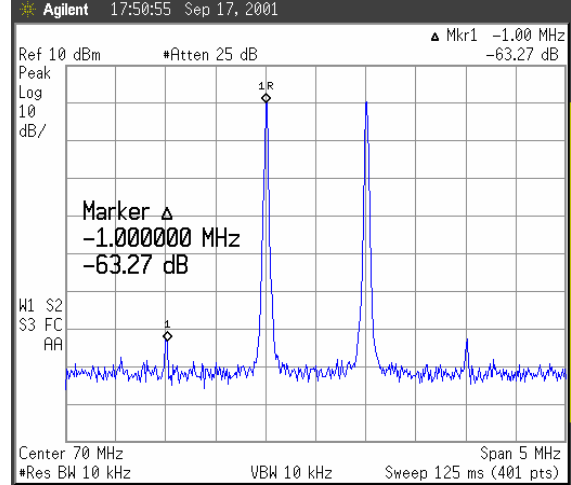
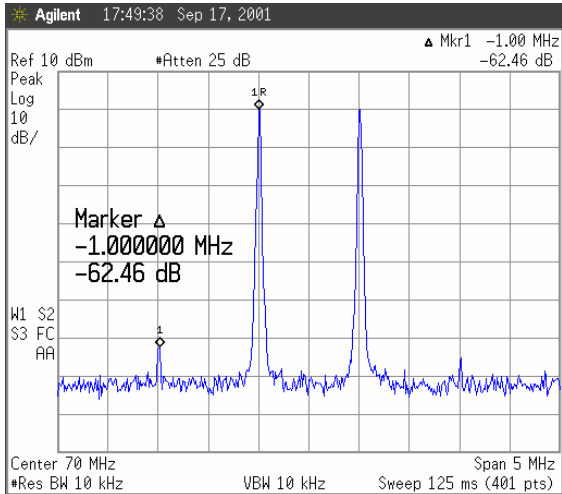
Functional Diagram



RFUR08-50, 56 OIP3 TEST (Up Converter)

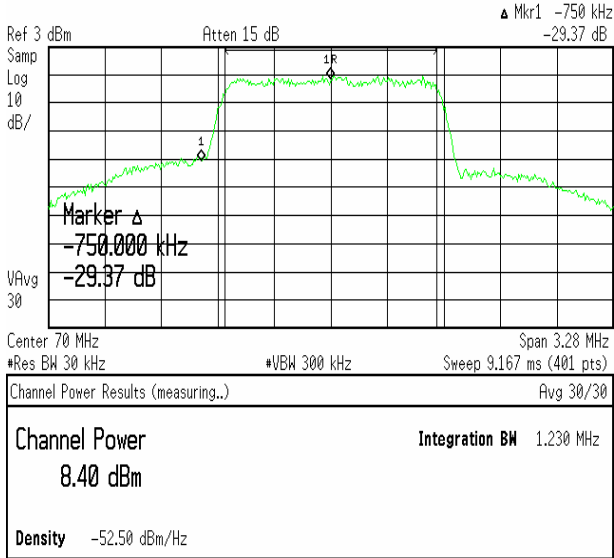


RFDR08-51, 55 OIP3 TEST (Down Converter)

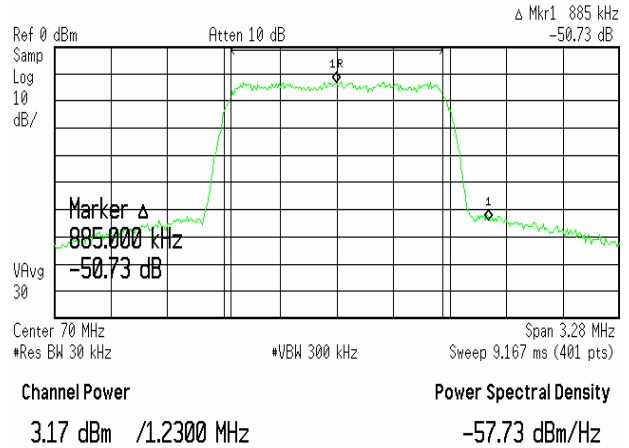


RFDR08-51, 55 CDMA POWER TEST (Down Converter)

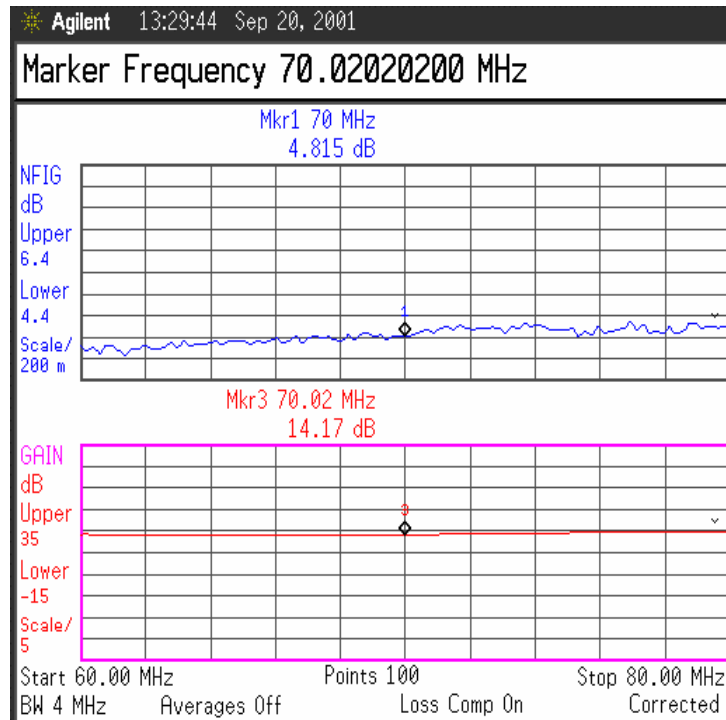
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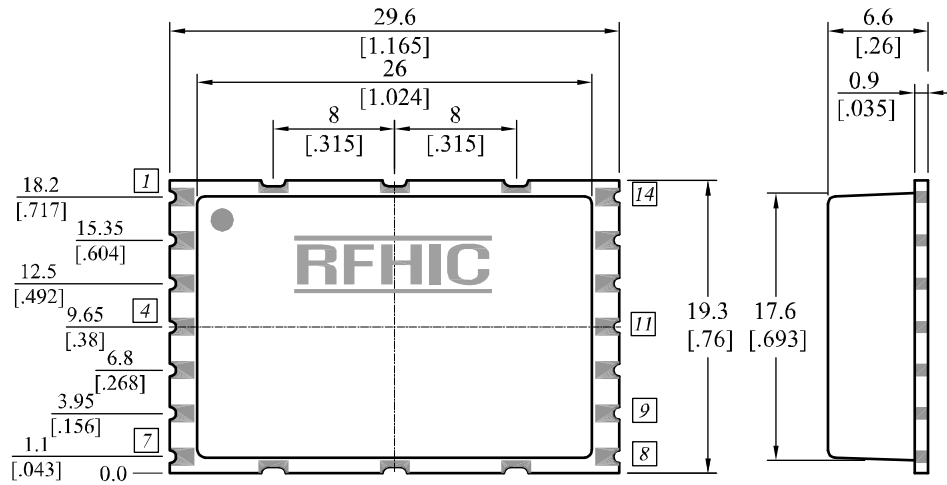
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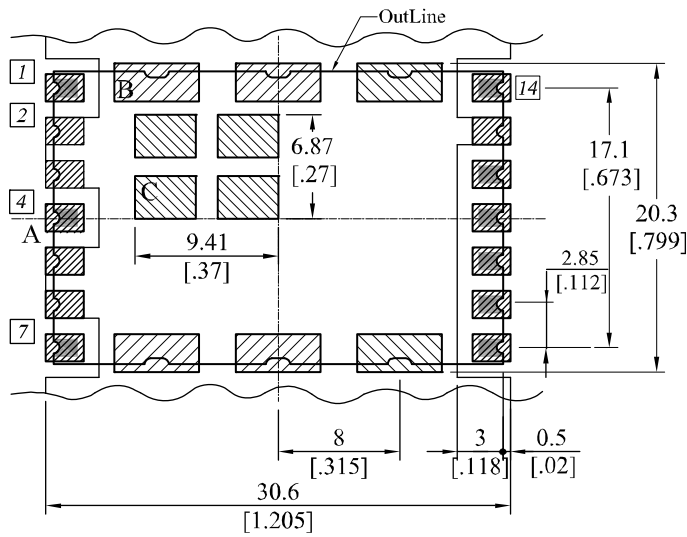
RFDR08-51, 55 Noise Figure (Down Converter)



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 | | |
|--------------|-----------|-------------|
| | 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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