2005-23 Upconverter, Fixed Frequency, 2.33 - 2.34 GHz

The 2005 Upconverter converts a 65 to 75 MHz IF signal to **2.33 to 2.34 GHz** in 1 KHz resolution with a low side LO (Ku) for loop-back applications. Featuring low phase noise, these units are used to loop 70 MHz modulators to **S-band** receivers in uplinks. The 65 to 75 MHz carrier input is mixed with a synthesized local oscillator (LO) signal. The LO is factory set to **2,200,000 to 2,400,000 KHz in 1 KHz resolution**. Front panel LEDs light when DC power is applied (green) and when a PLL alarm occurs (red). The mixer output is applied to the output amplifier providing a nominal gain of -10 dB. Power is provided by the LNB voltage from the receiver under test and connectors are BNC female for both the IF input and the RF output. Wall power supply option -P is for 120 VAC, 60Hz. The 2005 can be mounted on a 1 3/4" X 19" 1RU rack mount panel (option -R).

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**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance / RL: 50/75Ω / 12dB
- Frequency: 65 to 75 MHz center
- Level: -30 to -10 dBm
- 1dB Comp / 3rd Order: 0dBm / +10dBm

**Output Characteristics**
- Impedance / RL: 50/75Ω / 8dB
- Frequency: **2.33 to 2.34 GHz**
- Level: -40 to -20 dBm

**Channel Characteristics**
- Gain: -10dB ± 3dB
- Spurious Response: NA; output not filtered

**Synthesizer Characteristics**
- Frequency Accuracy: ± 100 kHz maximum
- Frequency Resolution: 1.0 KHz minimum

<table>
<thead>
<tr>
<th>Phase Noise @ Freq</th>
<th>10kHz</th>
<th>100kHz</th>
<th>1MHz</th>
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<tbody>
<tr>
<td>dBC/Hz</td>
<td>-80</td>
<td>-90</td>
<td>-100</td>
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**Indicators**
- PLL Alarm: Red LED
- DC Power: Green LED

**Other**
- RF Connectors: BNC (female)
- IF Connectors: BNC (female)
- Size, Bench Top: 4.7" wide X 1.75" high X 6.5" deep
- Size, **(option -R)**: 19 inch standard 1RU chassis, 1.75”high X 7.0” deep (optional)
- Power: +14 to +24 VDC, 180 mA from LNB on RF OUT
- Power **(option -P)**: 120 ±10% VAC, 60 Hz, 10 watts max, wall mount power supply (optional)
- Power **(option -C)**: Power Supply not included. Requires Cross 2000-01 Power Supply

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