Series 2006-103 Fixed Frequency Downconverter

The Model 2006-103 Downconverter converts an L-Band to 70 or 140 MHz using an 1130 MHz local oscillator (LO) for loopback applications.

**EQUIPMENT DESCRIPTION**

The L-band signal goes to an amplifier and is then mixed to 70 or 140 MHz with an LO of 1130 MHz. The mixer output goes to an attenuator providing a gain of -5dB. A green LED indicates the presence of DC power. Power is provided by a voltage on the L-band signal input and connectors are BNC female for the IF and F, female for the L-band RF. Wall power supply option -P is for 115 VAC, 60Hz and option -P4 covers 90-260 VAC, 47-63 Hz. Specify US, EUR, AUS or UK plug for the -P4 option.

![2006-103 Test Downconverter Block Diagram and Chassis](image)

**EQUIPMENT SPECIFICATIONS**

**Input Characteristics**
- Impedance/RL: 75 Ω/12 dB
- Frequency, LO: 1130 MHz
- Frequency, High: 1200 (70M IF) or 1270 (140M IF) (non-inverting) OR
- Frequency, Low: 1060 (70M IF) or 990 (140M IF) (inverting)
- Input Level: -15 to -25 dBm
- Input 1 dB: -10 dBm

**Output Characteristics**
- Input Impedance/RL: 75 Ω/15 dB
- Frequency: 70 or 140 MHz center depending on the input signal
- Output Level: -20 to -30 dBm with -15 to -25 dBm in

**Channel Characteristics**
- Gain: -5 dB ±2 dB
- Spurious Response: output not filtered; < -40 dBC inband ± 20 MHz
- Image rejection: No image rejection. Must use a clean carrier with no signals in the image frequency band
- Frequency Response: ±0.5 dB, any 10 MHz increment, ±1.0 dB, any 40 MHz increment

**Synthesizer Characteristics**
- Frequency Accuracy: ± 25 kHz max
- Phase Noise (dBC/Hz): ≤ -80, 10 kHz; ≤ -90, 100 kHz; ≤ -100, 1 MHz
- Frequency Selection: NONE: Fixed tuned

**Controls/Indicators**
- Controls: None
- DC Power: Green LED

**Other**
- RF, IF Connectors: F, female, BNC, female
- Size (W x H x D): 3.3 x 1.2 x 4.0 (in.); 83.8 x 30.5 x 101.6 (mm)
- Power: +16 to +20VDC, 150 mA, max. on RF In
- option -P Wall PS: 115 VAC, 60Hz
- option -P4 Wall PS: 100-240 ±10% VAC, 47-63 Hz. Specify US, EUR, AUS or UK plug for the -P4 option

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*Specifications subject to change without notice*