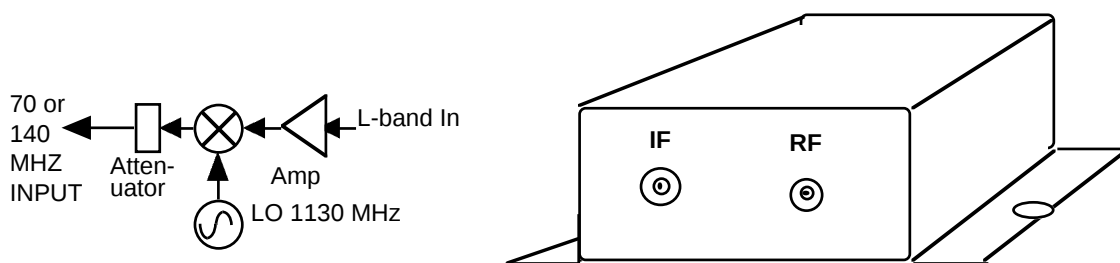


## Series 2006-103 Fixed Frequency Downconverter

The Model 2006-103 Downconverter converts an L-Band to 70 or 140 MHz using an 1130 MHz local oscillator (LO) for loop-back 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**

### EQUIPMENT SPECIFICATIONS\*

#### Input Characteristics

|                 |                                                    |
|-----------------|----------------------------------------------------|
| Impedance/RL    | 75 $\Omega$ /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 $\Omega$ /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 $\pm$ 2 dB                                                                         |
| Spurious Response  | output not filtered; < -40 dBC inband $\pm$ 20 MHz                                       |
| Image rejection    | No image rejection. Must use a clean carrier with no signals in the image frequency band |
| Frequency Response | $\pm$ 0.5 dB, any 10 MHz increment, $\pm$ 1.0 dB, any 40 MHz increment                   |

#### Synthesizer Characteristics

|                      |                                                             |
|----------------------|-------------------------------------------------------------|
| Frequency Accuracy   | $\pm$ 25 kHz max                                            |
| Phase Noise (dBC/Hz) | $\leq$ -80, 10 kHz; $\leq$ -90, 100 kHz; $\leq$ -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 $\pm$ 10% VAC, 47-63 Hz. Specify US, EUR, AUS or UK plug for the -P4 option |

\*+10 to +40 degrees C; 2000 meters max elevation; 80% max humidity; Pollution Degree 2;  
Specifications subject to change without notice