The 2017-T03-400 L-band Up/Downconverter for loop-back applications, converts a 225-400 MHz block to/from the 1100-1275 MHz block with a fixed 875 MHz LO. The 2017-T03-400 is used in applications such as connecting L-band modems to signals in the 225-400 MHz band. In this application, when converting 225-400 to L-band, the modem itself contains internal filtering making it unnecessary for the 2017-T03-400 to filter out all the other products (LO; lower sideband is 30 dBC down). In the 2017-T03-400 down conversion, because the L-band modem’s transmit output is a clean signal with no image frequency, the signal can be converted to 225-400 with minimum filtering (30 dBC min image rejection). Front panel LEDs indicate DC power, PLL alarm, and remote operation. Connectors are 50 ohm BNC female for IF and RF. It is powered by a 100-240 ± 10% VAC power supply and housed in a 1.75” X 19” X 16” 1RU chassis.

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### Equipment Specifications*

#### Upconverter - Input Characteristics (IF)

- Impedance/Return Loss: 50Ω /12 dB
- Frequency: 225-400 MHz block
- Level: -40 to -10dBm

#### Upconverter - Output Characteristics (RF)

- Impedance/Return Loss: 50Ω /12 dB
- Frequency: 1100 to 1275 MHz block
- Level: -40 to -10dBm
- 1dB compression: 0 dBm

#### Channel Characteristics

- Gain: 0 ± 2 dB, fixed
- Frequency Sense: Non-inverting
- Image Rejection: 30 dBC min, 40 dBC typical

#### Downconverter - Input Characteristics (RF)

- Impedance/Return Loss: 50Ω /12 dB
- Frequency: 1100 to 1275 MHz block
- Level: -40 to -10dBm

#### Downconverter - Output Characteristics (IF)

- Impedance/Return Loss: 50Ω /12 dB
- Frequency: 225-400 MHz block
- Level: -40 to -10dBm
- 1dB compression: 0 dBm

#### Channel Characteristics

- Gain: 0 ± 2 dB, fixed
- Frequency Sense: Non-inverting
- Image Rejection: 30 dBC min, 40 dBC typical

### Controls, Indicators

- Freq/Gain Selection: None
- Power: Alarm; Green LED; Red LED;
- Remote: RS232C, 9600 baud, to monitor alarm status only

### Additional Information

- Available Options
  - E - External 10 MHz ref w/ Front Panel select
  - H - High Stability (±0.01 ppm) internal ref
- Specifications subject to change without notice

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