



## FEATURES

- Three Input IF's
- Four Output Frequencies
- Switch Selectable Inputs and Outputs
- Inherent Group Delay Equalization
- Compact Half-Rack Size
- TEMPEST - Option

## DESCRIPTION

The Model 383 IF to Tape Converter is a predetection converter with three input and four output center frequencies in a small package. Inherent group delay equalization of the output bandwidths is achieved without tuning by utilizing custom Microwave Integrated Circuit (MIC) devices. The standard unit provides switch-selectable input center frequencies of 21.4, 70 and 160 MHz, and output center frequencies of 1.075, 2.150, 3.225 and 4.30 MHz with corresponding delay equalized bandwidths of 2, 4, 6, and 8 MHz (nominal). A reference-on-tape signal is available which provides a 100 kHz tone, preset to -10 dBm, superimposed on the output channel. Conversion can be accomplished relative to an internal TCXO ( $1 \times 10^{-6}$ ) or a 1 MHz external reference. A unique dual-mode AGC circuit provides outstanding performance with pulse and CW signal over a dynamic range greater than 70 dB.

The Model 383 IF to Tape Converter is packaged in a compact 1-3/4 inch high half-rack chassis. A rack adapter is available to mount a single unit in a standard 19 inch rack or two units may be fastened together for side-by-side installation. Exceptional EMI/RFI integrity is provided and a TEMPEST option is available.



Rear Panel



## SPECIFICATIONS

<b>Input Center Frequency</b>	21.4, 70, and 160 MHz, switch selectable
<b>Noise Figure</b>	16 dB
<b>Input Level Range</b>	-70 dBm to 0 dBm
<b>Output Center Frequency</b>	1.075, 2.150, 3.225, and 4.300 MHz, switch selectable
<b>Output Bandwidth (3 dB)</b>	0.150-2, 0.300-4, 0.450-6, and 0.6-8 MHz
<b>Group Delay Variation (Over 85% of BW)</b>	±200ns (nominal 2 MHz BW) - Standard ±150 ns (nominal 2 MHz BW) - Optional ±100 ns (nominal 4 MHz BW) ±75 ns (nominal 6 MHz BW) ±50 ns (nominal 8 MHz BW)
<b>Impedance - All Signal Ports</b>	50 ohms
<b>VSWR (Band Center)</b>	1.5:1, maximum (14 dB minimum return loss)
<b>Total Harmonic Distortion</b>	-40 dBc
<b>Two-Tone Intermodulation Products<sup>1</sup></b>	< -40 dBc
<b>Spurious Outputs</b>	< -40 dBc (AGC)
<b>Image Rejection<sup>2</sup></b>	> 35 dB nominal
<b>Output Level</b>	13 dBm (1 Vrms) ±1.5 dB
<b>Gain Variation</b>	< ±0.5 dB (over 90% of the band)
<b>AGC</b>	CW & pulse operation
<b>Threshold</b>	-75 dBm

<sup>1</sup> Test Tones at 1.6 and 1.8 MHz, input -30 dBm, output +7 dBm maximum

<sup>2</sup> Measured in MGC Mode

Specifications are subject to change without notice.

## ORDERING INFORMATION

A Model 383 IF to Tape Converter, in a standard unit, provides comprehensive features for most IF conversion applications. When ordering, please specify:

<b>383</b>	IF to Tape Converter
<b>Option D15</b>	+/-150 ns Group Delay Equalization at 1.075 MHz CF
<b>Option T01</b>	Designed to meet TEMPEST requirements

<b>Rack Mounting</b>	Mounting a single unit requires a rack adapter. For side-by-side installation, two units can be fastened together and mounted as a full rack unit in a standard 19-inch rack. Rack Adapter for single units
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## WARRANTY

All of Reaction Instruments' equipment is warranted for one year, except for damage caused by accident or misuse, provided the equipment is returned for repair to the plant in Herndon, VA

**Adams Russell**

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