MITEQ’s WFMD-70 demodulator is designed to receive a 70 MHz FM modulated carrier in the range of -60 to 0 dBm and recover the baseband signal with high fidelity. These demodulators are equipped with five front panel selectable baseband filters and equalized IF filters, optionally expandable to seven. The system is provided with a very high-performance wideband video amplifier, with adjustable gain up to 50 dB (40 dB in 10 dB steps and 10 dB continuous adjust).

**FEATURES**

- Selectable baseband and equalized IF filters
- ±1% demodulator linearity
- Baseband amplitude ripple of ±0.25 dB
- -60 to 0 dBm IF input range

**ELECTRICAL SPECIFICATIONS**

**IF INPUT**

- Center frequency: 70 MHz
- Noise figure: 20 dB maximum
- Input level range: -60 to 0 dBm
- IF gain control: 60 dB AGC and MGC
- Input impedance: 75 ohms
- Input return loss: 18 dB minimum
- Number of IF filters: 5 bands with the following specifications (see Options)

<table>
<thead>
<tr>
<th>IF FILTER BANDWIDTH</th>
<th>GROUP DELAY (G/3 BAND)</th>
<th>AMPLITUDE RIPPLE (A BAND)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 MHz</td>
<td>3 ns maximum</td>
<td>±0.30 dB</td>
</tr>
<tr>
<td>24 MHz</td>
<td>4 ns maximum</td>
<td>±0.25 dB</td>
</tr>
<tr>
<td>16 MHz</td>
<td>6 ns maximum</td>
<td>±0.20 dB</td>
</tr>
<tr>
<td>12 MHz</td>
<td>8 ns maximum</td>
<td>±0.25 dB</td>
</tr>
<tr>
<td>8 MHz</td>
<td>12 ns maximum</td>
<td>±0.35 dB</td>
</tr>
</tbody>
</table>

Note: For group delay and amplitude ripple characteristics of the table above, refer to FEQ-70-xx series, group delay equalized IF filters. (See catalog C-33, page 24).

IF filter shape factor (3/60 dB): 3:1
Number of video filters: 5 bands
Video bandwidth: 4, 6, 8, 12 and 15 MHz
Video filter characteristics: 5-pole Bessel ±0.25 dB (see Options)
OUTPUT
Level ................................................................. 2 volts p-p into 75 ohms
Impedance ....................................................... 75 ohms
Amplitude ripple ............................................ ±0.25 dB
Video response (1 dB) ...................................... 20 Hz to selected video bandwidth
Gain control range ......................................... 0 to 50 dB minimum, 40 dB in 10 dB steps and 10 dB continuous adjust

TRANSFER CHARACTERISTICS
Receiver FM linearity ...................................... ±1% maximum

PRIMARY POWER REQUIREMENTS
Voltage .......................................................... 100/120/220/240 VAC, ±10%, rear panel selectable
Frequency ..................................................... 47 to 63 Hz
Power consumption ........................................ 75 W typical

MECHANICAL SPECIFICATIONS

PHYSICAL
Dimensions ................................................... 19” x 20” x 5.25”
Weight .......................................................... 26 pounds

CONNECTORS
IF input .......................................................... BNC female
Baseband output ............................................. BNC female
IF monitor ....................................................... SMA female
Contact closure output ................................... 9-pin male, D type
Chassis ground .............................................. 10-32 stud

OPTIONS

MBD-1xx Additional equalized IF filter bandwidths from 1.25, 2.5, 5, 7.5, 8, 10, 12, 15, 17.5, 18, 20, 22, 24, 25, 26, 27, 33, 34, 36 and 40 MHz.
MBD-2 Chebychev characteristic baseband filters (customer to specify).
MBD-3 Butterworth characteristic baseband filters (customer to specify).
MBD-4 7 dB IF chain noise figure.