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OTM-4870

FREQUENCY AGILE 870MHz MODULATOR

Features / Benefits

- Frequency agile from 48.25 to 865.25MHz
- Microprocessor controlled by front panel push buttons
- LCD displays channel or test description
- >80dB out-of-band carrier to noise ratio
- +60dBmV high output level
- Video AGC selectable
- Composite IF loop for up-converer applications
- Dual high level IF loops
- Auxiliary IF for EAS compatibility
- BTSC stereo and sap compatible
- Low power consumption for reliability
- Available in NTSC or PAL formats



The **OTM-4870** has all the high end features required by the most sophisticated users of 100+ channels in cable televisions systems. Output frequencies may be selected by frequency in 12.5KHz increments or by channel designation. EIA or OLSON channel plans can be selected for standard channel, HRC or IRC assignments.

SAW Filtering and **OLSON TECHNOLOGY** system design factors insure an out-of-band C/N ratio greater than 80dB while maintaining an RF output level of +61dBmV over the entire operating frequency range of the OTM-4870.

The **OTM-4870** up converter section is a high performance tuner with excellent Phase Noise (>90dBc) and frequency response that exceeds DOCSIS and CMTS specifications.

Quality / Engineering / Innovation

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OTM-4870



RF

Frequency Range.....48.25MHz to 865.25MHz
Selectable by front panel
touchbuttons by channel or
frequency in 12.5KHz incre-
ments.
RF Output Level.....+61dBmV typical
Accuracy/Stability.....±5KHz
Spurious Output.....>60dBc (typical)
Out-of-Band C/N Ratio.....>80dB
Phase Noise.....>90dBc @ 10KHz offset
Audio/Video Ratio.....-12dB to -21dB below video
carrier level

VIDEO

Baseband Input Level......5 to 1.5 volts p-p (75 Ω)
Video Performance.....1V p-p @ 87.5% modulation
Differential Gain <3%
Differential Phase <2°
Frequency Response.....±1dB, 30Hz to 4.2Mhz
Video AGC.....On/Off front panel control
Chroma-Luma Delay.....170 ±nsec

AUDIO

Baseband Input Level..... -10 to +10dBm, 600 Ω
balanced, Hi Z unbalanced
Inter-carrier Stability.....±1KHz
Audio Performance.....2% maximum THD (1%
typical)
Frequency Response.....50Hz to 15KHz, ±1dB
Pre-Emphasis.....75 is NTSC, 50 is PAL, defeated
by internal jumper for BTSC
and SAP compatibility
Audio Subcarrier Input.....+25dBmV to +45dBmV
@75 Ω

DUAL IF LOOPS

Video IF.....+36dBmV @ 45.75MHz
(typical)
Audio IF.....Adjustable -12dB to -21dB
relative to video carrier

COMPOSITE IF LOOP

Video IF.....+18dBmV @ 45.75MHz
(typical)
Audio IF.....Adjustable -12dB to -21dB
relative to video carrier

AUX. IF INPUT

Four Modes of Control.....Loss of video to modulator, rear
panel closure screws for EAS
compatibility

EXTERNAL FEATURES

Front Panel Controls..... Video/Audio modulation levels,
Audio to Video carrier ratio, RF
output level, LCD contrast
control, Push button menu
controls
Front Panel LED's..... RF on, AUX IF in use, Synthe-
sizer unlocked, Video/Audio
over modulation
Rear Panel Connectors..... Type "F" connectors for RF
output, RF test point, AUX IF
input, Video baseband input,
Video and Audio IF inputs/
outputs. Composite IF input/
output and Audio subcarrier.
Screw terminals for contact
closure/audio baseband

GENERAL

Power Supply..... Universal 90 VAC to 240 VAC,
50 to 60Hz with IEC 320 power
connector
Physical Size..... 1.75" H x 19" W x 10" D
Weight..... 9 lbs.
Power Consumption..... 24 Watts
Operating Temperature..... 0° C to 50° C