



# PM45

## 806MHz Channelized-Agile PLL SAW-Filtered A/V Modulator



- ▶ 125-Channel Range  
54-806 MHz (CATV 2-125)
- ▶ 45dBmV adjustable output for optimum carrier-to-noise performance
- ▶ Composite audio-video IF loop provides compatibility with encoders, ghost cancellers, and video override applications
- ▶ BTSC stereo compatible pre-emphasis disable switch provides pass-through for stereo signals
- ▶ SAW filtered for superior adjacent channel performance enables drop-in channel expansion
- ▶ Digital phase-locked loop (PLL) design guarantees precise frequency locking for solid drift-free operation
- ▶ Front panel controls and test point enables easy setup and monitoring
- ▶ Audio and video over-modulation indicators for quick performance reference
- ▶ In-band carrier-to-noise ratio >60dB ensures superior picture quality
- ▶ IRC and HRC offset available for frequency settings in systems using offset channels
- ▶ Auxiliary AC outlet for convenience

# PM45

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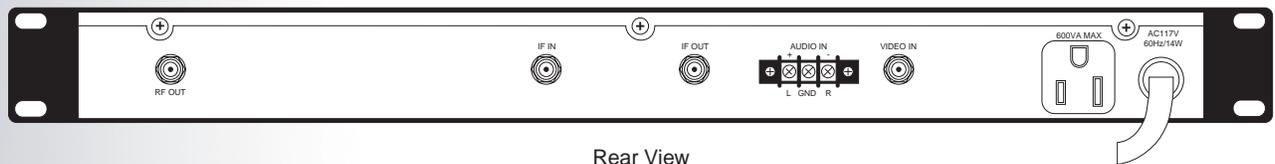
The Pico Macom PM45 is a professional grade phase-locked loop synthesized channelized-agile audio-video modulator. This modulator provides 45dBmV minimum output on CATV channels 2 to 125 (54-806 MHz) while accommodating HRC and IRC offset frequencies. The **PM45** features a composite audio-video IF loop, which provides compatibility with encoders, ghost cancellers, and video-override applications. The unit can be reconfigured to any output channel by qualified service centers. This cost effective modulator can be used to expand systems using **PCM55**, **PCM555AW** and **PLM55** modulators beyond 300MHz, where the expansion does not require modulators with higher output levels. The **PM45** provides the greater frequency stability and higher adjacent channel performance required in such expansions. The modulator is equipped with a pre-emphasis disable switch which enables pass-through of high-fidelity BTSC stereo signals where available. Its phase-locked loop frequency control, and superior SAW filtering enhances stability, minimizes adjacent channel interference and assures accurate and spurious free output. Superior out-of-band carrier-to-noise performance is achieved through band-pass filtering at the output amplifier. The **PM45** is shipped with all internal adjustments preset. FCC Docket 21006 offsets are standard. Pico Macom backs up this product with its industry leading 5-year warranty.

# PM45

806MHz Channelized-Agile PLL SAW-Filtered A/V Modulator



Front View



Rear View

## RF

<b>Channels:</b>	125 Channels (CATV 2-125)
<b>Frequency Range:</b>	54-806 MHz IRC and HRC off-sets
<b>Output Levels:</b>	45 dBmV minimum
<b>Output Adjustment Range:</b>	-15 dB
<b>Spurious Output:</b>	-60 dB below video carrier (@ A/V carrier ratio -15 dB)
<b>Frequency Stability:</b>	±5 kHz
<b>Output Return Loss:</b>	-15 dB
<b>Audio/Video Ratio:</b>	-7 dB to -25 dB
<b>IF Output, Video:</b>	+ 35 dBmV nominal
<b>IF Output, Sound:</b>	+ 20 dBmV nominal

## Audio

<b>Input Impedance:</b>	10k ohms unbalanced
<b>Input Level:</b>	0.5 V p-p for 25 kHz peak deviation
<b>Pre-emphasis:</b>	75 microsecond switchable for BTSC stereo
<b>Flatness:</b>	±1.5 dB 50 Hz to 15 kHz
<b>Composite BTSC Input Level:</b>	500 mV to 1 Volt

## Ordering Information

**PM45** –  Specify CATV or UHF

## Video

<b>Frequency Response:</b>	30 Hz to 4.2 MHz ±1 dB
<b>Input Level:</b>	1.0 V p-p min for 87.5% mod.
<b>Input Type:</b>	Clamped Video neg. sync.
<b>Visual C/N:</b>	68 dB @ 4 MHz BW
<b>Hum and Noise:</b>	-60 dB @ 87.5% modulation
<b>Differential Gain:</b>	2% (10 to 90% APL)
<b>Differential Phase:</b>	2 Deg (10 to 90% APL)
<b>Frequency Response:</b>	±0.5 dB 30 Hz to 4 MHz
<b>Group Delay:</b>	*See note

\*NOTE: Meets FCC group delay predistortion correction requirement for color transmission.

## General

<b>Power Input:</b>	108 to 125 VAC 60 Hz 14W
<b>Operating Temperature:</b>	-10° to 50° C
<b>Dimensions:</b>	19"(L) x 5"(D) x 1 <sup>3</sup> / <sub>4</sub> "(H)
<b>Weight:</b>	5.3 lbs.
<b>Fuse:</b>	0.25 Amp.