

# Press Release

## PMT8870D DTMF Receiver in SOIC-18 Package



**Tempe, Ariz., August 31, 2007** - ProTek Analog a division of ProTek Devices introduces the PMT8870D/PMT8870D-1, a complete DTMF receiver integrating both the band split filter and digital decoder functions.

The filter section uses switched capacitor techniques for high and low group filters. The decoder uses digital counting techniques to detect and decode all 16 DTMF tone-pairs into a 4-bit code.

External component count is minimized by on chip provision of a differential input amplifier, clock oscillator and latched three-state bus interface.

Separation of the low-group and high group tones is achieved by applying the DTMF signal to the inputs of two sixth-order switched capacitor bandpass filters, the bandwidths of which correspond to the low and high group frequencies.

The filter section also incorporates notches at 350 and 440 Hz for exceptional dial tone rejection (see Figure 2). Each filter output is followed by a single order switched capacitor filter section which smooths the signals prior to limiting.

Limiting is performed by high-gain comparators which are provided with hysteresis to prevent detection of unwanted low-level signals. The outputs of the comparators provide full rail logic swings at the frequencies of the incoming DTMF signals.

PMT8870D is available in a SOIC-18 package and is specified for operation over the  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  temperature range.

Sample quantities are available upon request.

### FUNCTIONAL BLOCK DIAGRAM:

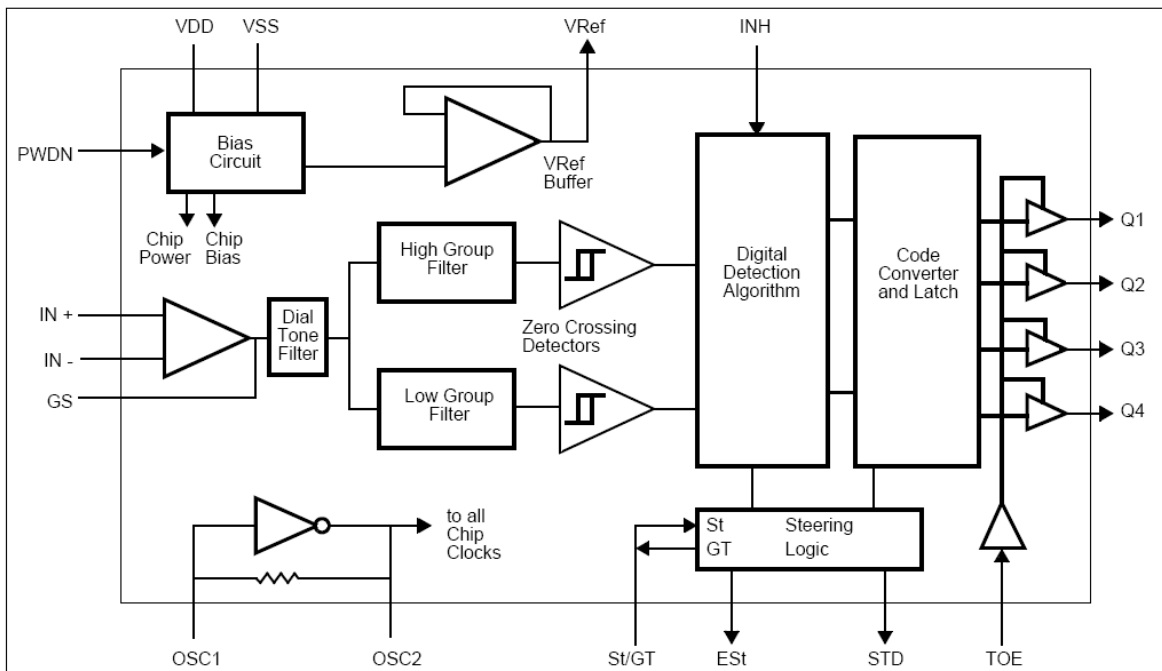
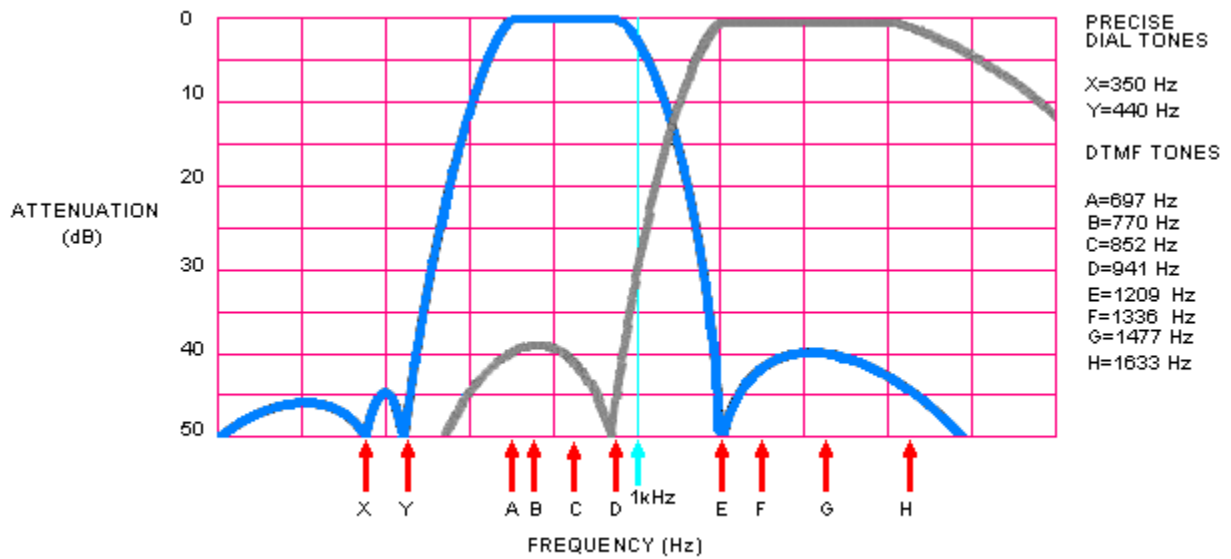


Figure 1 - Functional Block Diagram

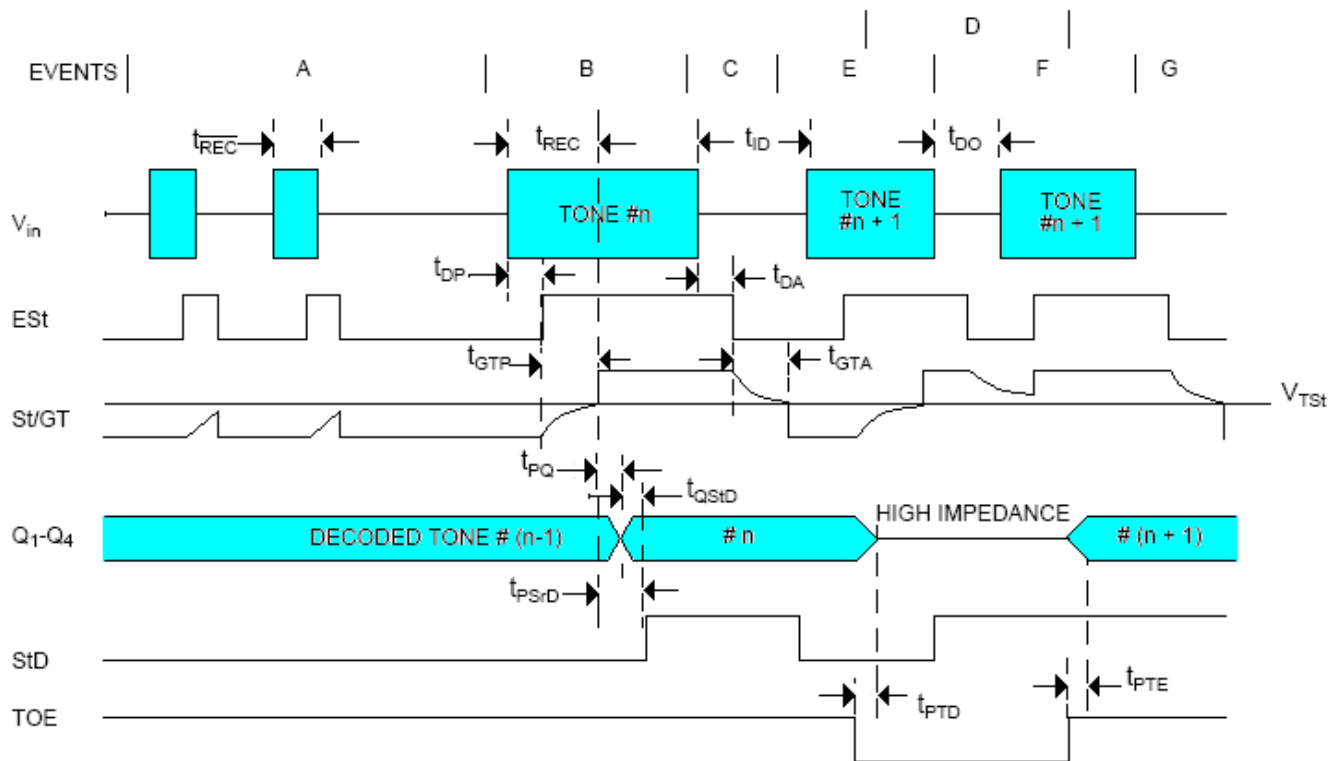
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## TYPICAL WAVEFORMS



Filter Response

Figure.2



Timing Diagram

Figure 3:

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## Features

- Complete DTMF Receiver
- Low Power Consumption
- Internal Gain Setting Amplifier
- Adjustable Guard-time
- Central Office Quality
- Power-down Mode
- Inhibit Mode

## Applications

- Receiver Systems
- Paging Systems
- Repeater Systems/mobile Radio
- Credit Card Systems
- Remote Control
- Personal Computers
- Telephone Answering Machines

## About ProTek Devices

ProTek Analog, based in Tempe, Ariz., is a division of ProTek Devices, a leading supplier of transient voltage suppression (TVS) solutions for Voice, Video and Data (V2D). ProTek Analog manufactures advanced Telecom ICs, Audio ICs, analog switches and multiplexers that work in conjunction with any host controller, EPROM, FPGA, and even Home Plug standards.

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