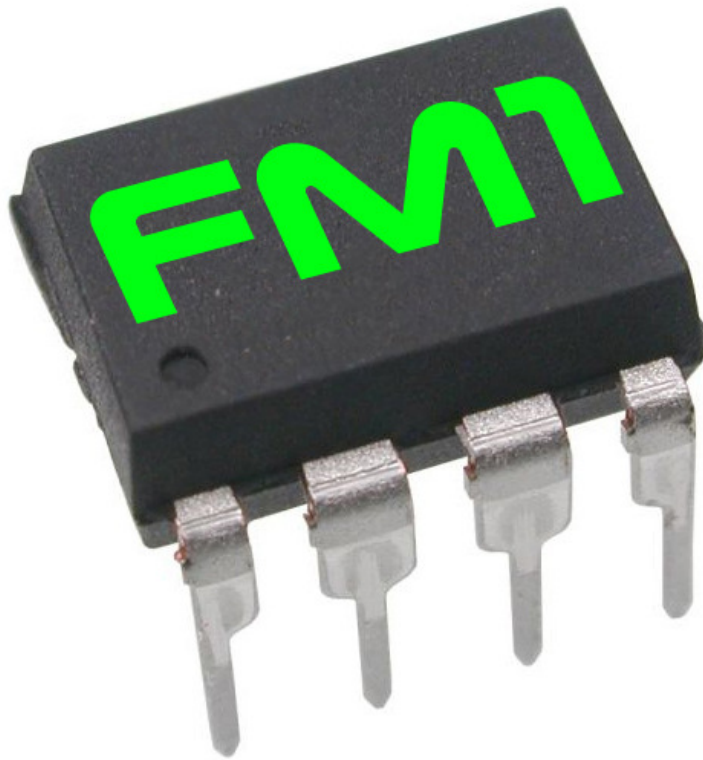


The FM1 Phase Modulation OSC Chip



Application Manual v1.0



The CZ1 Phase Distortion OSC Chip

The FM1 is a chip that contains a single 2-operator FM oscillator in a 8-pin DIP package.

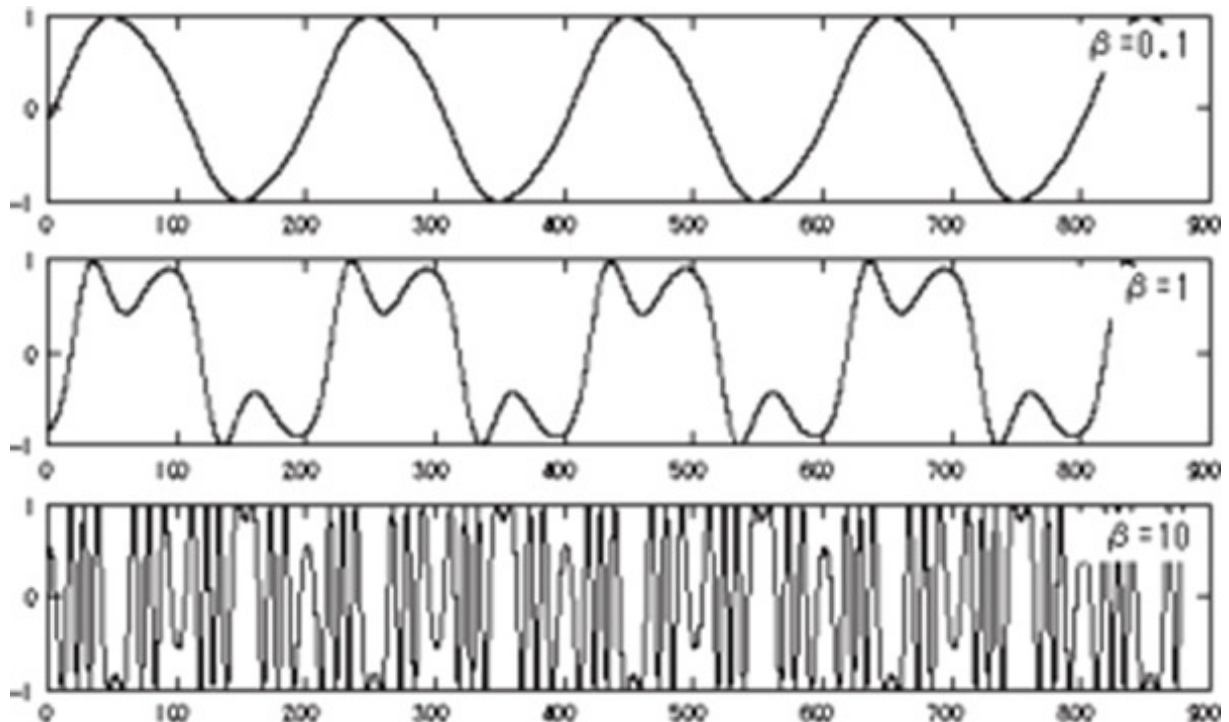
The carrier has a range of 8 – 261Hz with a CV input 1v/oct..

The Mod Index input CV is the modulation level of the carrier oscillator.

The Multiplier input CV is the ratio of the modulating oscillator ranging from x1 to x128.

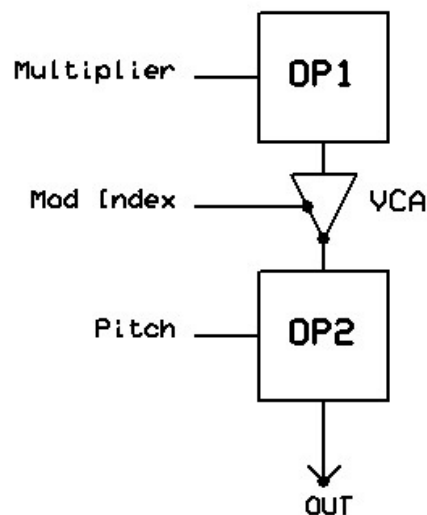
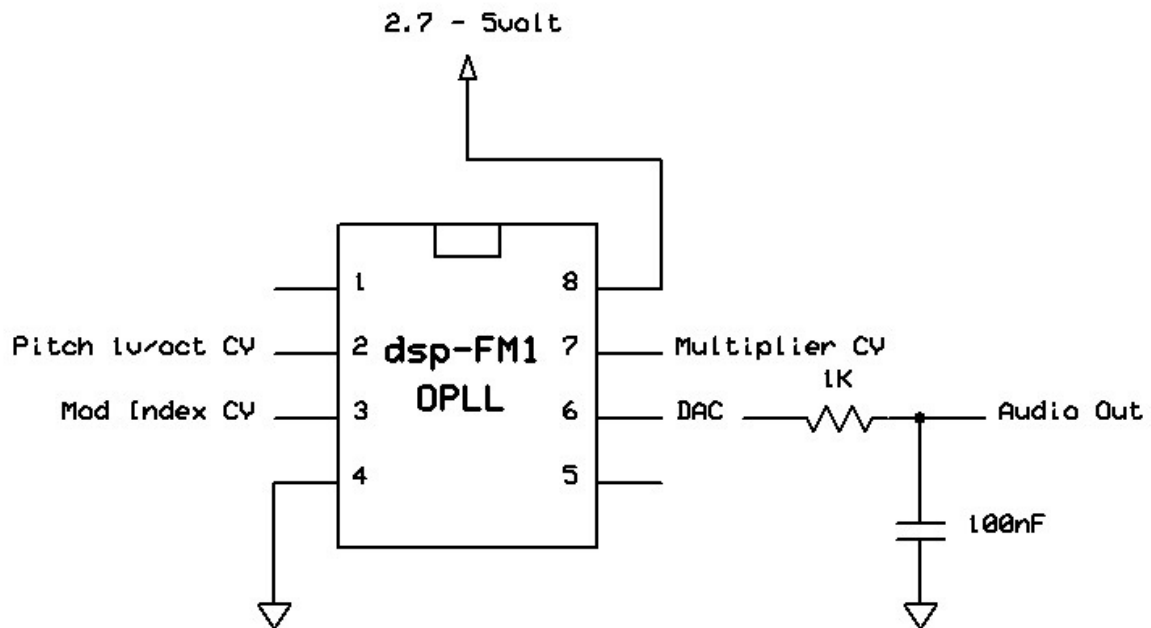
This enables the synthesis of complex waveforms without using a filter.

The output is 66.9KHz 8-bit PWM and the chip runs standalone from a 2.7-5 volt power source.



Example application circuit for the FM1 chip

This is the minimum application circuit for the chip. Input levels are allowed between Gnd and Vcc. The output is analog and swings between Gnd and Vcc.



Technical Specifications

DSP platform	AVR ATmega 20 DMIPS
Supply power	2.7 – 5 volt
Supply current	~2.9mA
Input tolerance	2.7 – 5 volt depending on Vcc
Audio output	66.9 KHz 8-bit PWM DAC, 1 channel mono audio
Synthesis method	Sine wave phase modulation synthesis
Control method	1 Analog monophonic tune CV 1v/oct 1 Analog modulation index CV input. 1 Analog multiplier ratio CV input.

Contact & Support

For support and questions please use these contact addresses:

Website: <http://www.dspsynth.eu>

Email: contact@dspsynth.eu