**Integrated Circuit Systems, Inc.**

AV9107C-11

Green PC CPU Frequency Generator

General Description

The **AV9107C-11** offers a tiny footprint solution for generating a fixed system clock and a selectable CPU clock. The 16 selectable CPU frequencies provide all necessary clocks for 386, 486 and Pentium systems.

In addition, the **AV9107C-11** has one pin that, when forced low, will slow the CPU clock to 8 MHz. This feature is important in systems that have dynamic microprocessors. Dynamic microprocessors have a minimum operating speed, typically 8 MHz. In "green" PCs, the designer often wants to slow the CPU to its minimum operating speed to save power. The **AV9107C-11** will smoothly slow the CPU to 8 MHz when the SLOWCLK pin goes low.

The **AV9107C-11** is fabricated using 0.8m CMOS technology. As a result, a 45/55 duty cycle can be achieved on the CPU clock and ±250ps worst case absolute jitter.
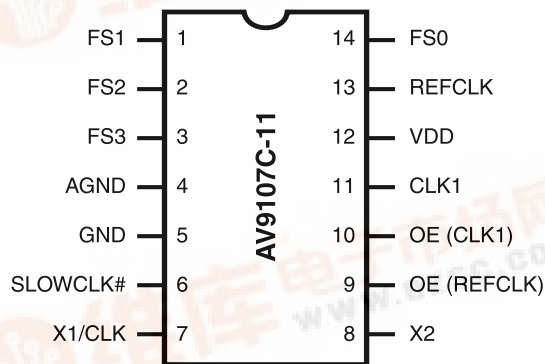
Features

- One pin slows CPU clock to 8 MHz
- Provides system clock and selectable CPU clock
- On-chip loop filter
- Runs up to 66 MHz at 3.3V
- Worst case cycle-to-cycle variation of 0.1%
- Smooth transition from one CPU frequency to another or to 8 MHz
- Lowest jitter, ±250ps absolute
- 16 internal frequencies for 386, 486 or Pentium systems
- Worst case duty cycle of 45/55 on CPU clock

Functionality

FS3	FS2	FS1	FS0	CLK1
0	0	0	0	16.00 MHz
0	0	0	1	39.99 MHz
0	0	1	0	50.11 MHz
0	0	1	1	80.01 MHz
0	1	0	0	66.58 MHz
0	1	0	1	100.23 MHz
0	1	1	0	8.02 MHz
0	1	1	1	4.01 MHz
1	0	0	0	8.02 MHz
1	0	0	1	20.00 MHz
1	0	1	0	25.06 MHz
1	0	1	1	39.99 MHz
1	1	0	0	33.25 MHz
1	1	0	1	50.11 MHz
1	1	1	0	30.00 MHz
1	1	1	1	4.01 MHz

Pinout (AV9107C-11):

Pin	Name	Pin	Name
1	FS1	14	FS0
2	FS2	13	REFCLK
3	FS3	12	VDD
4	AGND	11	CLK1
5	GND	10	OE (CLK1)
6	SLOWCLK#	9	OE (REFCLK)
7	X1/CLK	8	X2

14-Pin SOIC

Block Diagram