



A. HE82006 Introduction

HE82006 is a member of 8-bit Micro-controller series developed by King Billion Electronics Ltd. It is a power speech controller. The 7-bit current-type D/A converter and PWM device provide the complete speech output mechanism. The 208K ROM Size can be used in the storage of speech (64 seconds at 3Kbytes per second). In order to simplify IC function, this IC have not exit follow list circuit, **Slow Clock, Timer2 and Watch-dog Timer**. Please pay attention.

The instruction set of HE82006 are quite easy to learn and simple to use. Only about thirty instructions with four-type addressing mode are provided. Most of instructions take only 3 oscillator clocks (machine cycles). The processing power is enough to most of battery operation system.

B. HE82006 Features

- Operation Voltage : 2.4V – 5.5V
- System Clock : DC ~ 8MHz @ 5.0V
DC ~ 4MHz @ 2.4V
- Internal ROM : 208K Bytes(16K PROM+192K DROM(**start from 10000h**))
- Internal RAM : **128** Bytes (without Bit7 of Address, only Address[6:0])
- Clock System : Fast Clock: 32.768K ~ 8MHz
- Operation Mode : FAST、 SLEEP Mode.
- 8 bit Bi-directional I/O port. Mask Option can select PUSH-PULL or OPEN DRAIN output mode for each I/O pin.
- One 7-bit current-type DAC output.
- With PWM device. (VDD with PWM pin).
- Two external interrupts and one internal timer interrupt.
- One 16-bit timer. (Clock Source reference by Fast Clock)
- nstruction set : 32 instructions, 4 addressing mode. **7-bit DATA POINTER** for RAM and **16-bit TABLE POINTER** for ROM.

C. Application Circuit

