



WIRELESS DOOR CHIME  
遙控門鈴 IC

**GENERAL DESCRIPTION 功能敘述**

The M1D-BL2 is a CMOS ASIC for wireless doorbell receiver use. It will receive the RF signal from M1E (ENCODER) and give a DING-DONG output if address are checked the same..

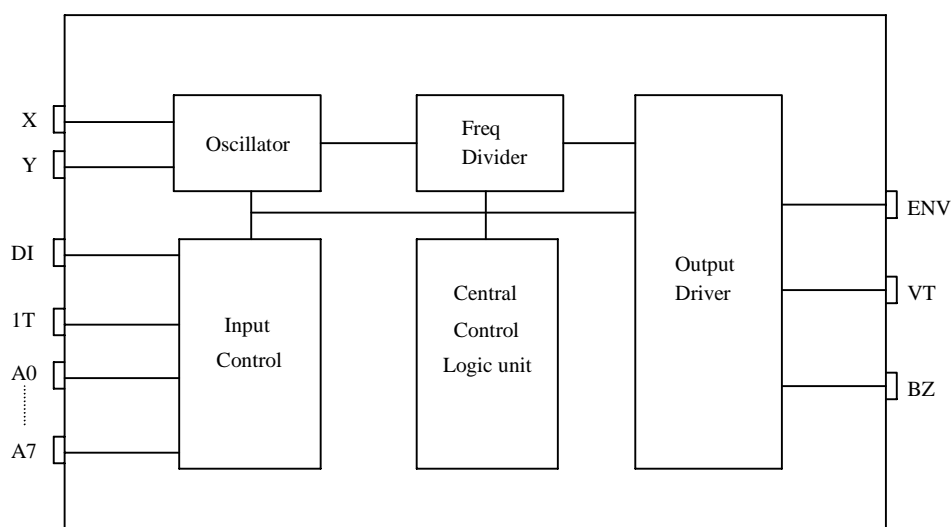
**FEATURES 產品特長**

- Same Rosc matched to the ENCODER M1E
- $2^8 = 256$  codes, "0", "1" binary
- 3 cycles checked each time
- BZ : 3 kinds of chime
- 1T : 1 time option (default 2 times)
- RC envelop

**APPLICATIONS 產品應用**

- Wireless door bell, visitor chime etc..

**BLOCK DIAGRAM 功能方塊圖**



\*All specs and applications shown above subject to change without prior notice.  
( 以上電路及規格僅供參考,本公司得逕行修正 )



WIRELESS DOOR CHIME  
遙控門鈴 IC

**M1D-BL2**

**ABSOLUTE MAXIMUM RATING**

(TA=25°C)

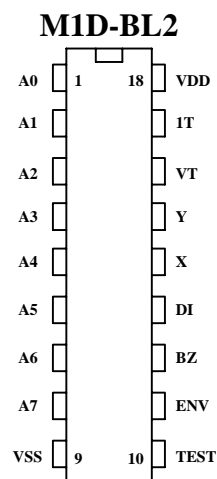
Parameter	Rating	Unit
Supply Voltage	-0.3 to 5.0	V
Input Voltage	-0.2~V <sub>DD</sub> +0.2	V
Operating Temperature	-20 to 75	°C
Storage Temperature	-50 to 125	°C

**ELECTRICAL CHARACTERISTICS**

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V <sub>DD</sub>	2.4	3	4.5	V	
Operating Current	I <sub>OP</sub>	—	1	10	μA	
Quiescent Current	I <sub>SB</sub>	—	0.3	1	mA	No load
Output Drive Current	I <sub>O</sub>	1	—	—	mA	@V <sub>DS</sub> =1.2V
Input Voltage	V <sub>IH</sub>	V <sub>DD</sub> -0.2	V <sub>DD</sub>	V <sub>DD</sub>	V	
	V <sub>IL</sub>	V <sub>SS</sub>	V <sub>SS</sub>	V <sub>SS</sub> +0.2		
Oscillator Frequency	Fosc	—	80	—	KHz	External± 30%

**PIN DESCRIPTION**

No.	Name	Description
1~8	A0~A7	2 states address inputs
9	VSS	Negative power supply
10	TEST	Testing use
11	ENV	RC envelope
12	BZ	Audio output
13	DI	Data input
14	X	Oscillator input
15	Y	Oscillator output
16	VT	Valid transmit
17	1T	OPEN : 2 times VDD : 1 time
18	VDD	Positive power supply

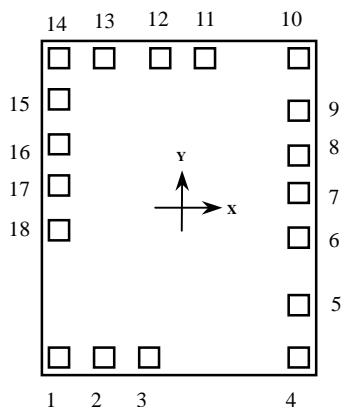




WIRELESS DOOR CHIME  
遙控門鈴 IC

M1D-BL2

PAD ASSIGNMENT & POSITION



UNIT : um

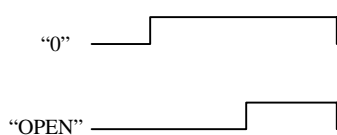
No.	NAME	X	Y
1	BZ	-626	-882
2	DI	-416	-882
3	X	-181	-882
4	Y	627	-882
5	VT	627	-604
6	1T	627	-248
7	VDD	627	-15
8	A0	627	195
9	A1	627	428
10	A2	627	882
11	A3	103	882
12	A4	-130	882
13	A5	-416	882
14	A6	-626	882
15	A7	-626	563
16	VSS	-626	274
17	TEST	-626	64
18	ENV	-626	-169

\* CHIP SIZE ~ 1.56 x 2.17 mm<sup>2</sup>

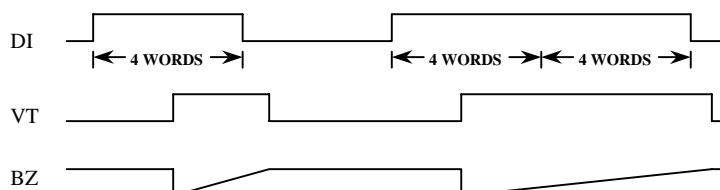
\* IC substrate should be connected to VDD in PCB(PCB 上 IC 底座必須接 VDD)

TIMING WAVEFORM

(1) BIT FORMAT



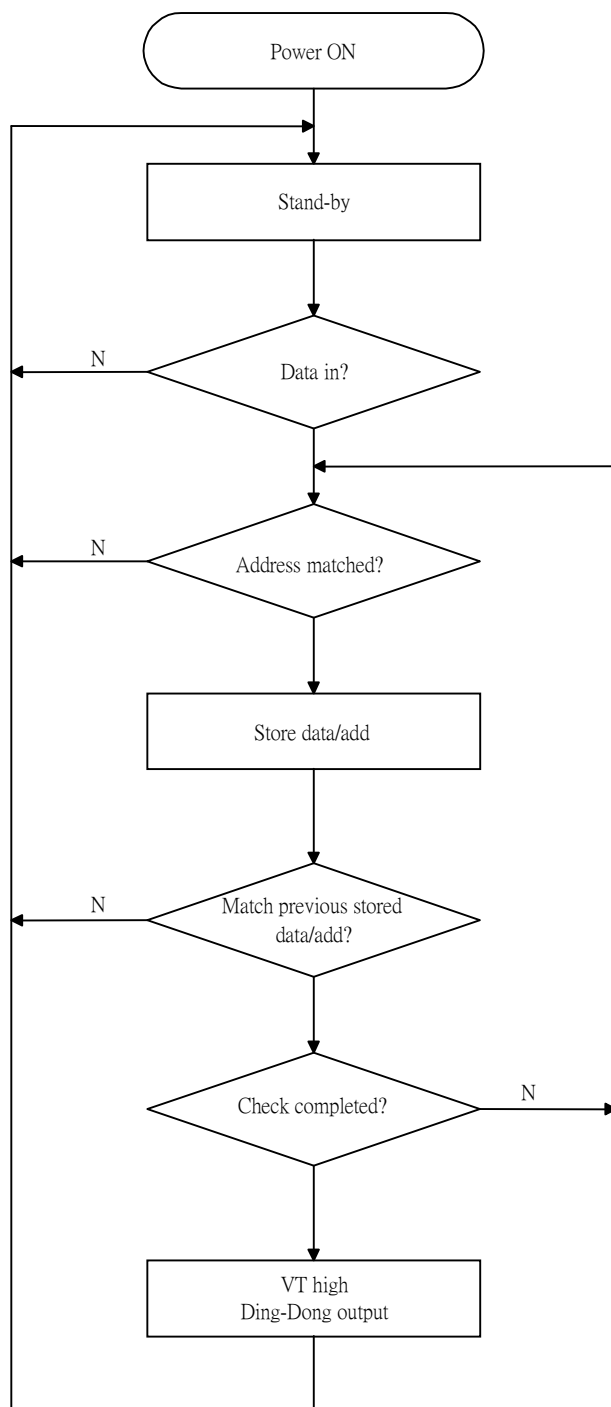
(2) TIMING DIAGRAM





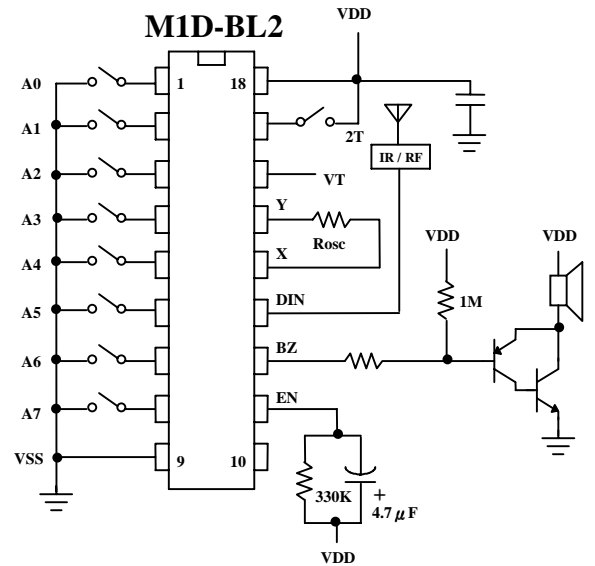
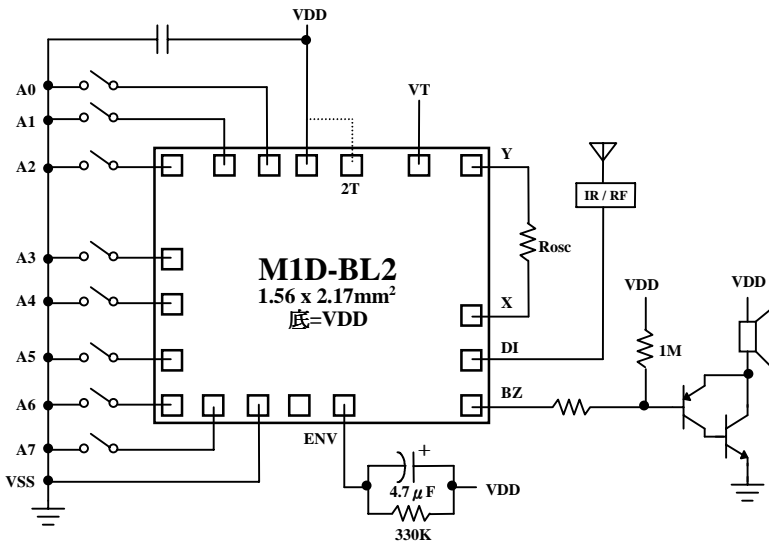
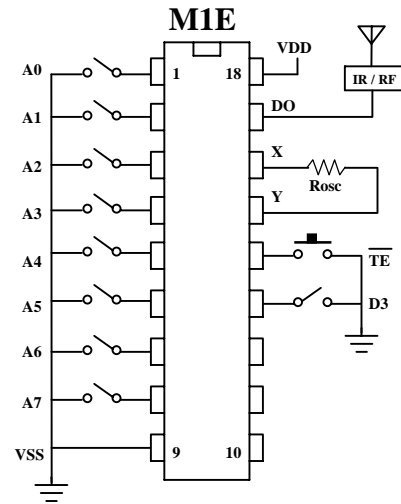
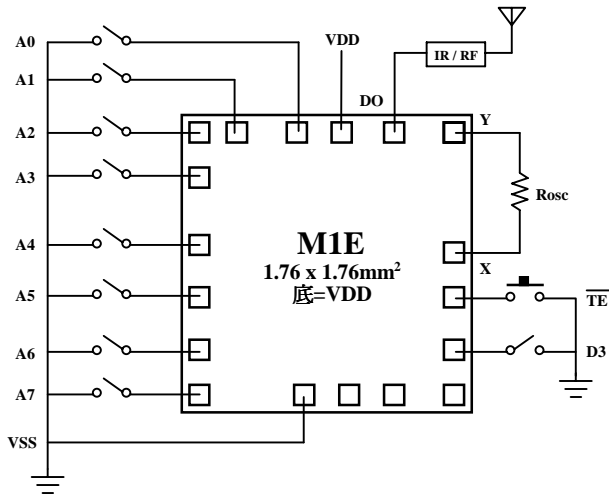
WIRELESS DOOR CHIME  
遙控門鈴 IC

OPERATION FLOWCHART





APPLICATION DIAGRAM 參考電路圖



D3	SOUND
OPEN	DING DONG
VSS	DING DING