



GENERAL DESCRIPTION 功能敘述

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

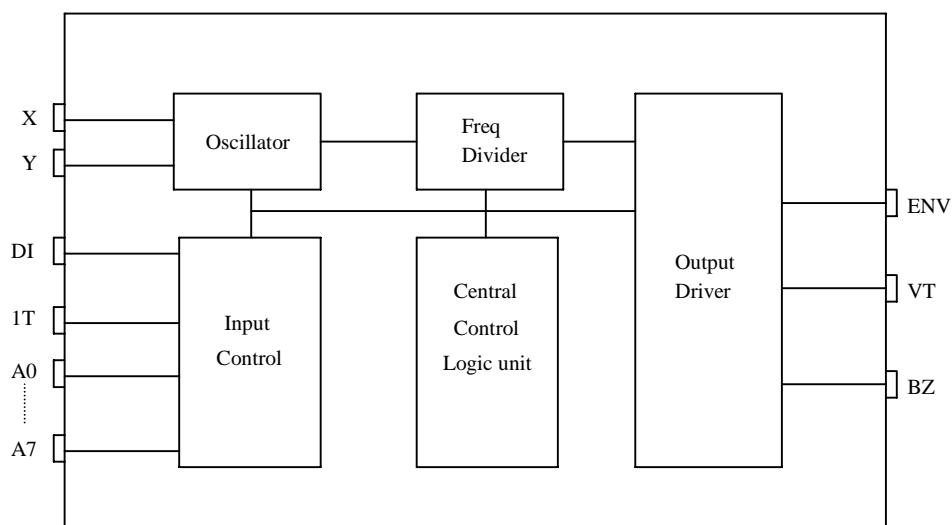
FEATURES 產品特長

- Same Rosc matched to the ENCODER M1E
- $2^8 = 256$ codes, "0", "1" binary
- 3 cycles checked each time
- BZ : DING-DONG / DING-DING sound
- 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-BL

ABSOLUTE MAXIMUM RATING

(TA=25°C)

| Parameter | Rating | Unit |
|-----------------------|---------------------------|------|
| Supply Voltage | -0.3 to 5.0 | V |
| Input Voltage | -0.2~V _{DD} +0.2 | V |
| Operating Temperature | -20 to 75 | °C |
| Storage Temperature | -50 to 125 | °C |

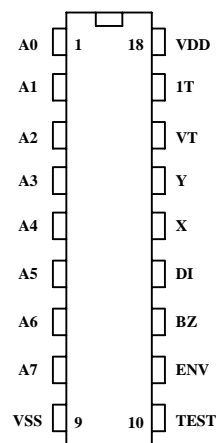
ELECTRICAL CHARACTERISTICS

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

PIN DESCRIPTION

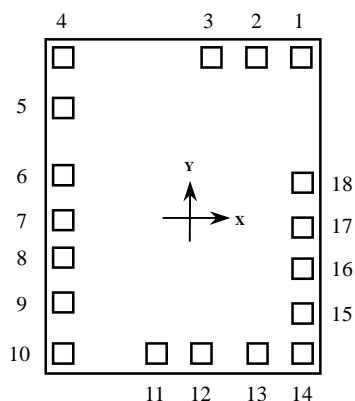
| No. | Name | Description |
|-----|-------|--------------------------------|
| 1~8 | A0~A7 | 3 states address inputs |
| 9 | VSS | Negative power supply |
| 10 | TEST | Testing use |
| 11 | ENV | RC envelop |
| 12 | BZ | Audio output |
| 13 | DI | Data input |
| 14 | X | Oscillator input |
| 15 | Y | Oscillator output |
| 16 | VT | Valid transmit |
| 17 | 1T | OPEN : 2 times VDD : 1 time |
| 18 | VDD | Positive power supply |

M1D-BL





PAD ASSIGNMENT & POSITION



UNIT : um

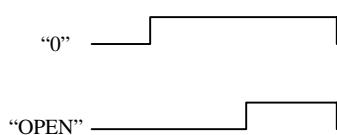
| No. | NAME | X | Y |
|-----|------|------|------|
| 1 | BZ | 635 | 812 |
| 2 | DI | 425 | 812 |
| 3 | X | 192 | 812 |
| 4 | Y | -639 | 812 |
| 5 | VT | -639 | 534 |
| 6 | 1T | -639 | 178 |
| 7 | VDD | -639 | -55 |
| 8 | A0 | -639 | -265 |
| 9 | A1 | -639 | -505 |
| 10 | A2 | -639 | -810 |
| 11 | A3 | -126 | -810 |
| 12 | A4 | 107 | -810 |
| 13 | A5 | 402 | -810 |
| 14 | A6 | 635 | -810 |
| 15 | A7 | 635 | -600 |
| 16 | VSS | 635 | -367 |
| 17 | TEST | 635 | -157 |
| 18 | ENV | 635 | 76 |

* CHIP SIZE ~ 1.58 x 2.03 mm²

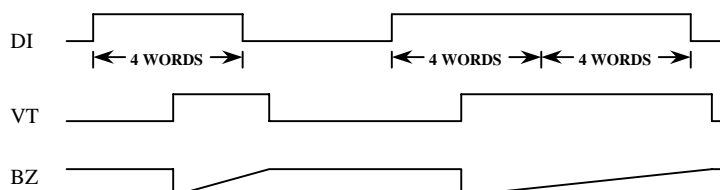
* IC substrate should be connected to VDD in PCB (PCB 上 IC 底座必須接 VDD)

TIMING WAVEFORM

(1) BIT FORMAT



(2) TIMING DIAGRAM





WIRELESS DOOR CHIME

遙控門鈴 IC

OPERATION FLOWCHART

