



GENERAL DESCRIPTION 功能敘述

The M1E is a CMOS ASIC encoder. It will en-code 12 parallel data inputs (A0~A11) and serially transmit them to the output when transmits enable (\overline{TE}) depressed. The address inputs are 2 states i.e. LOW (0) or OPEN (1). It will transmit 4 cycles each time \overline{TE} depressed.

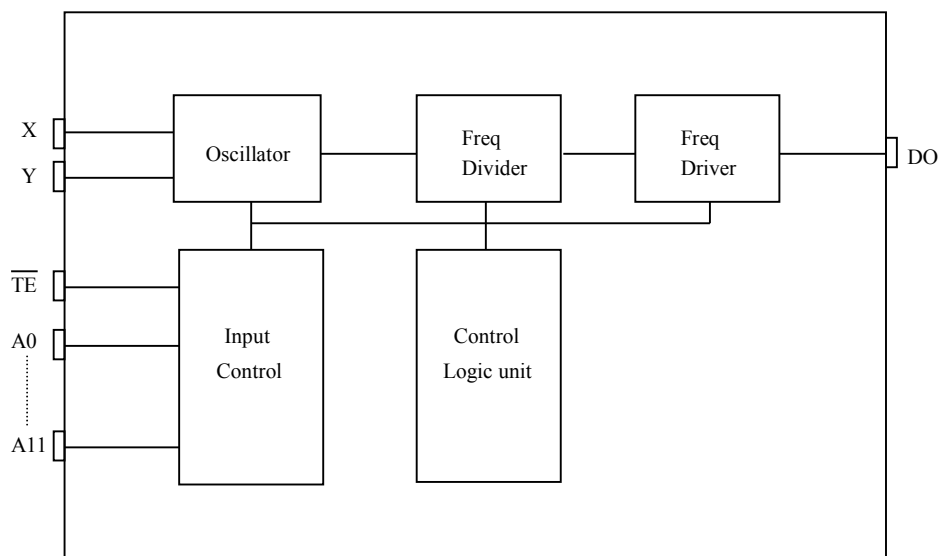
FEATURES 產品特長

- Same Rosc matched to the Decoder M1DA/FA.
- $2^{12}=4,096$ binary codes.
- 4 cycles transmission each time.
- DIP 18 or SOP or SSOP available.

APPLICATIONS 產品應用

- Car/home alarm system, garage control 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)



EN/DECODER
M1E

ABSOLUTE MAXIMUM RATING

(TA=25°C)

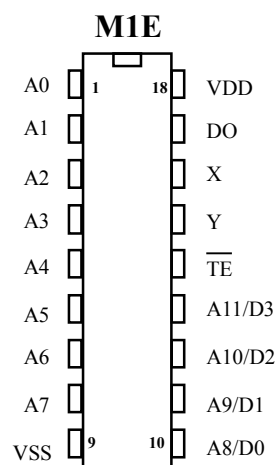
Parameter	Rating	Unit
Supply Voltage	-0.3 to 12	V
Input Voltage	-0.2~V _{DD} +0.2	V
Operating Temperature	-20 to 70	°C
Storage Temperature	-50 to 125	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V _{DD}	2.4	—	12	V	
Operating Current	I _{OP}	—	0.1	1	mA	No load
Quiescent Current	I _{SB}	—	0.1	0.5	μA	
Output Drive Current	I _O	—	2	—	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	F _{OSC}	—	76	—	KHz	External±30%, R _{osc} =200KΩ

PIN DESCRIPTION

No.	Name	Description
1~8	A0~A7	Address inputs
9	VSS	Negative power supply
10~13	A8~A11 / D0~D3	Address inputs / Data input
14	\overline{TE}	Transmit enable
15	Y	Oscillator output
16	X	Oscillator input
17	DO	Data output
18	VDD	Positive power supply



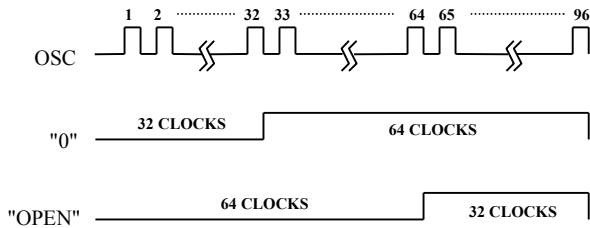


2 STATES ENCODER

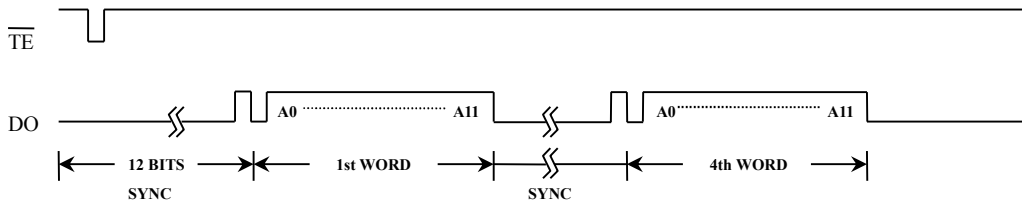
2 態編碼 IC

TIMING WAVE FORM

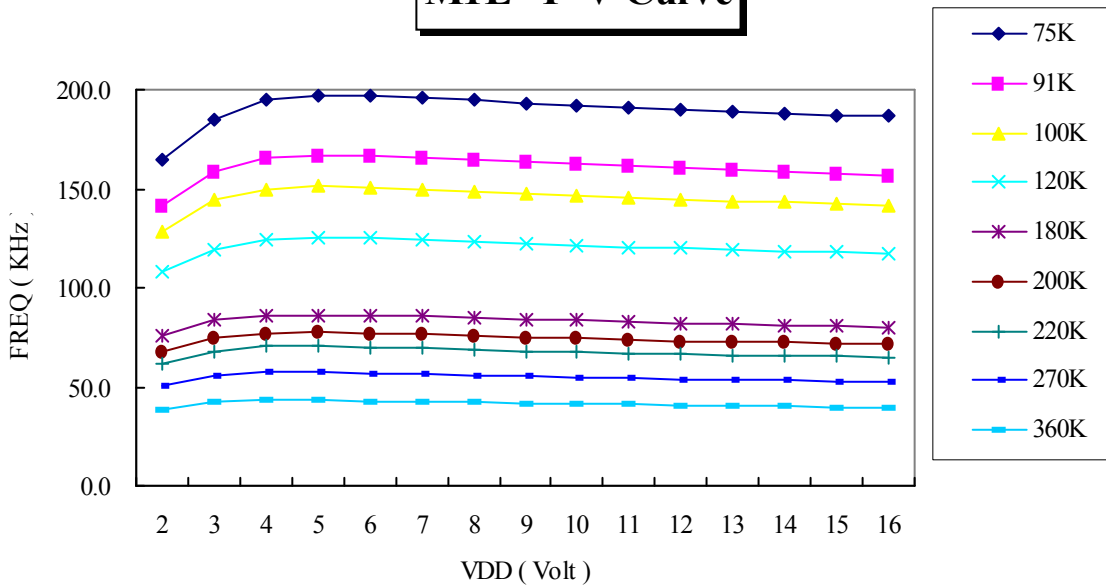
(1) BIT FORMAT



(2) TIMING DIAGRAM



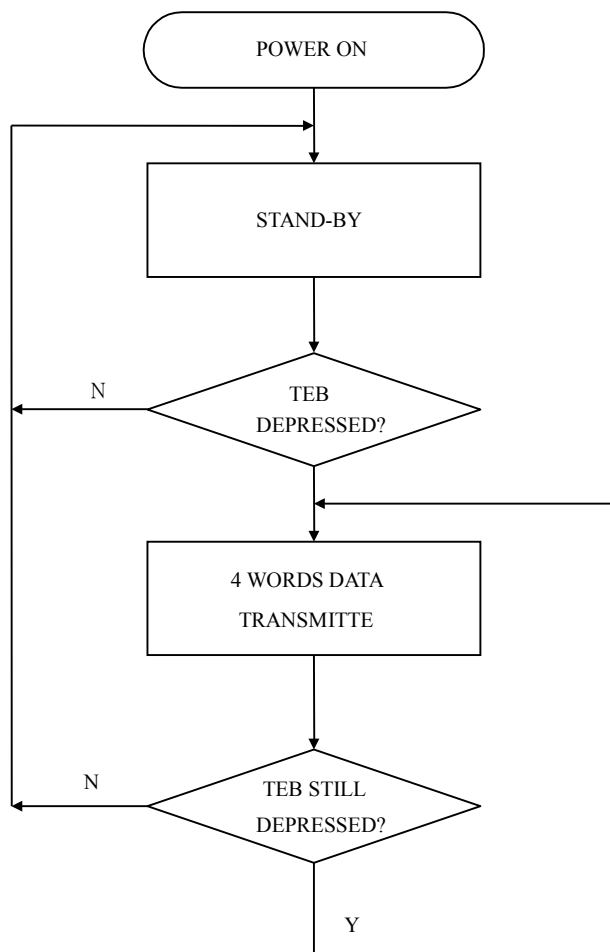
M1E F-V Curve





2 STATES ENCODER
2 態編碼 IC

OPERATING FLOWCHART





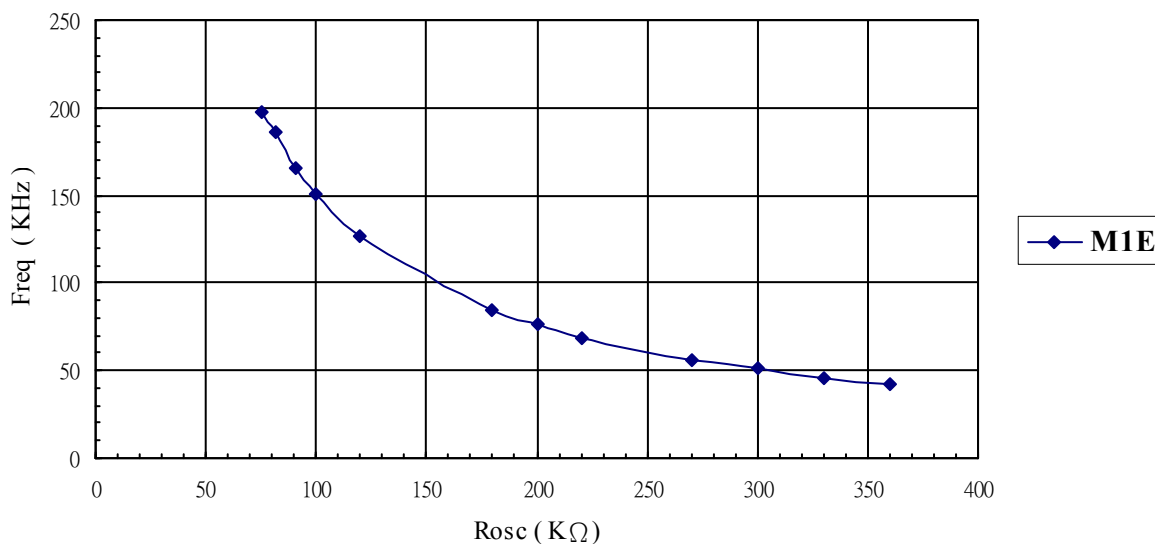
RECONNENDED OSCILLATOR PARAMETERS

Rosc (KΩ)	M1E (KHz)
75	198
82	186
91	165
100	151
120	127
180	85
200	77
220	69
270	56
300	51
330	46
360	42.5

DATA OUTPUT

M1E (D0~D3)	M1DA/FA (D0~D3)
0 (VSS)	1 (VDD)
1 (OPEN)	0 (VSS)

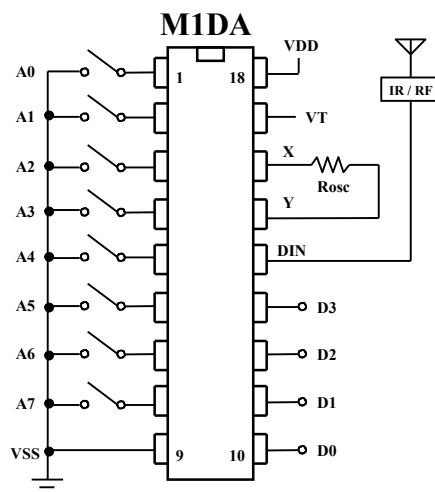
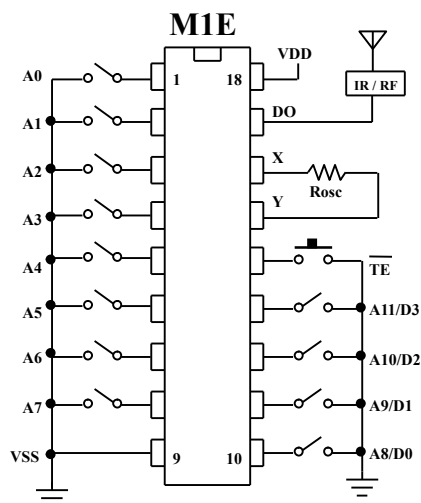
Freq-Rosc Chart
(VDD@12V)



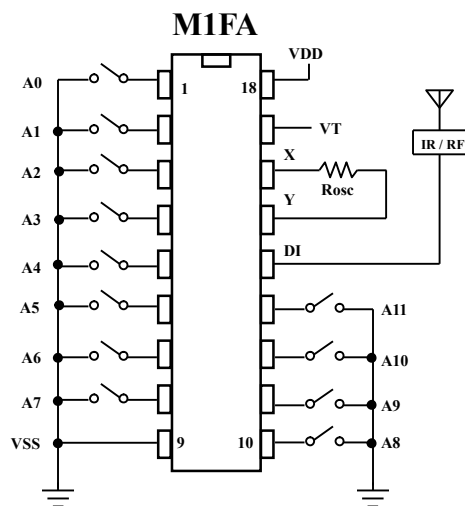
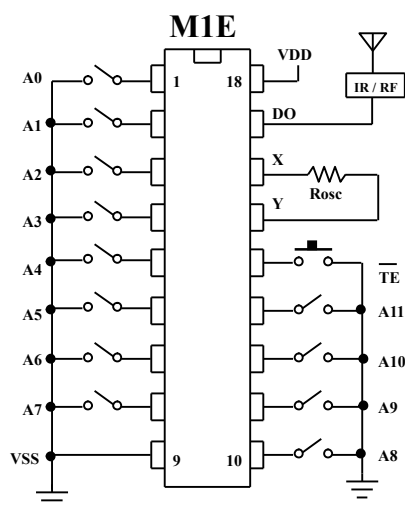


APPLICATION DIAGRAM 參考電路圖

(1) DATA TYPE



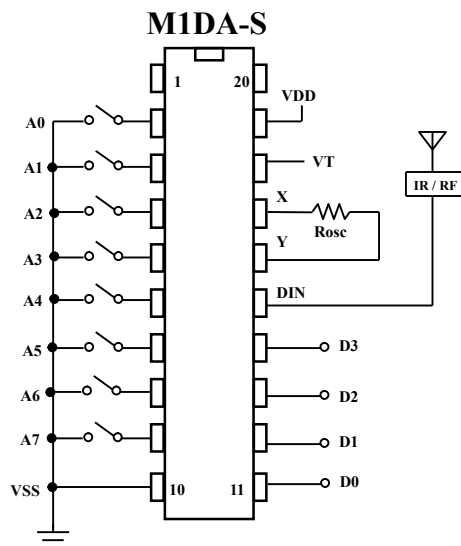
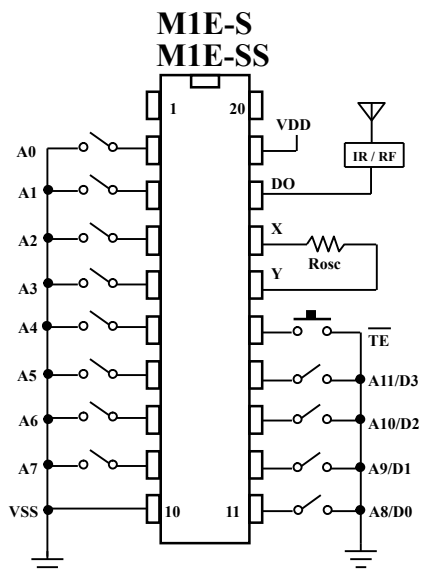
(2) FULL ADDRESS TYPE





APPLICATION DIAGRAM 參考電路圖 (SOP PACKAGE)

(1) DATA TYPE



(2) FULL ADDRESS TYPE

