



2 STATES ENCODER

2 态编码 IC

EN/DECODER

M1E

GENERAL DESCRIPTION 功能叙述

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.

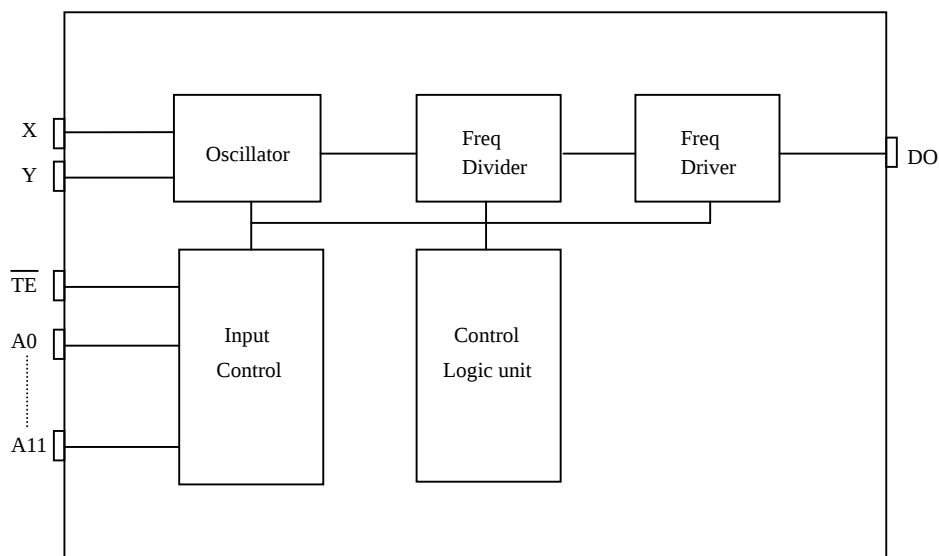
FEATURES 产品特长

- 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 产品应用

- Car/home alarm system, garage control etc..

BLOCK DIAGRAM 功能方块图



*All specs and applications shown above subject to change without prior notice.

(以上电路及规格仅供参考,本公司得径行修正)



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ABSOLUTE MAXIMUM RATING

(TA=25℃)

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

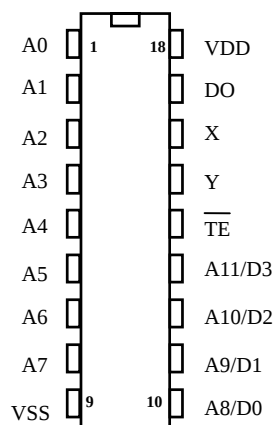
ELECTRICAL CHARACTERISTICS

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	μ A	
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	Fosc	—	76	—	KHz	External ± 30%, R _{osc} =200K Ω

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	$\overline{\text{TE}}$	Transmit enable
15	Y	Oscillator output
16	X	Oscillator input
17	DO	Data output
18	VDD	Positive power supply

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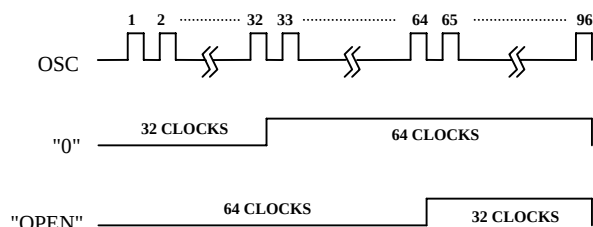
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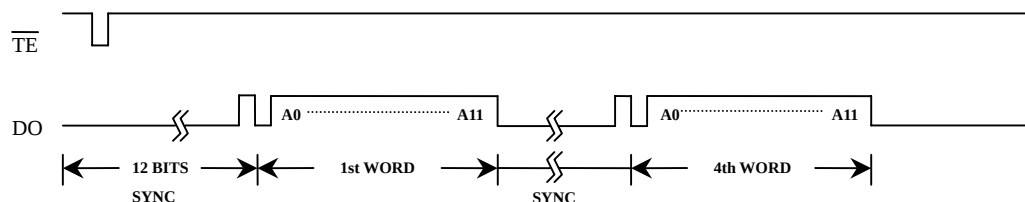
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TIMING WAVE FORM

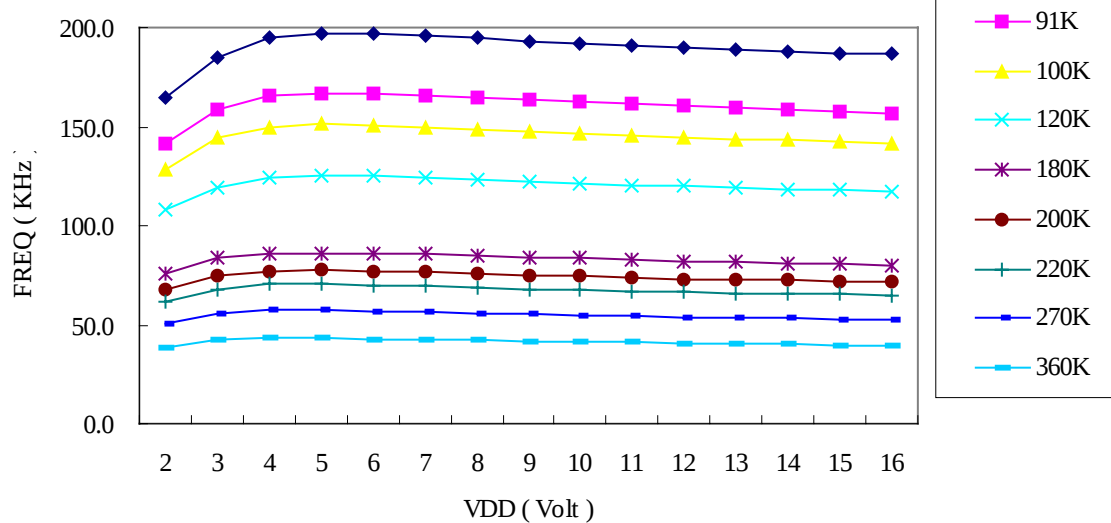
(1) BIT FORMAT



(2) TIMING DIAGRAM



M1E F-V Curve

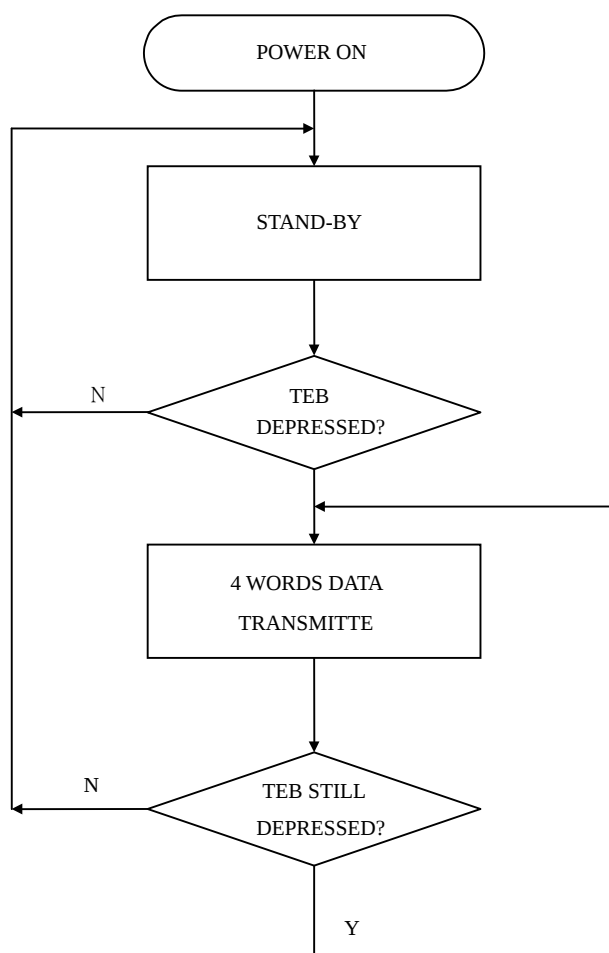




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OPERATING FLOWCHART





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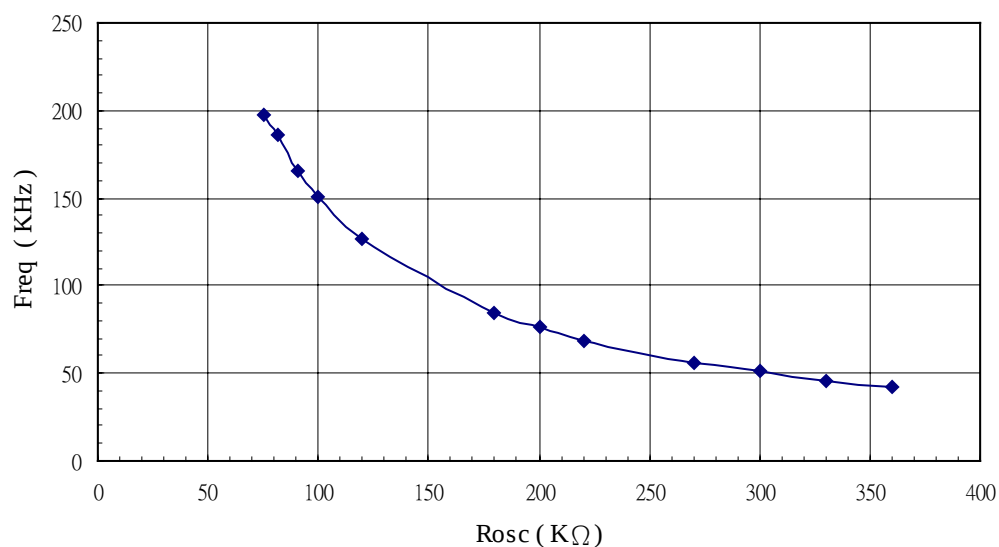
RECONNENDED OSCILLATOR PARAMETERS

Rosc (K Ω)	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)





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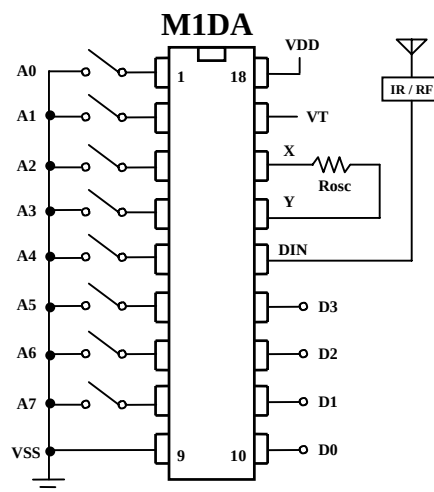
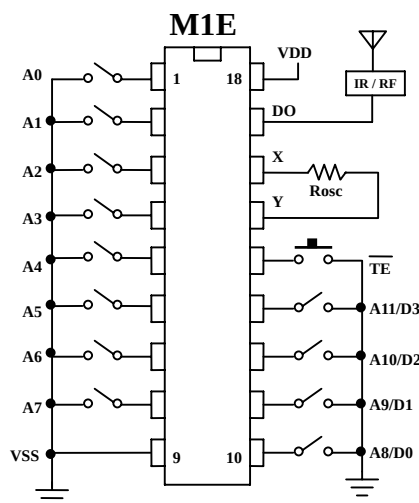
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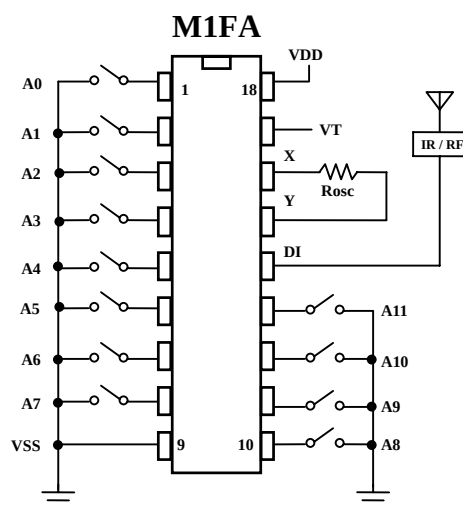
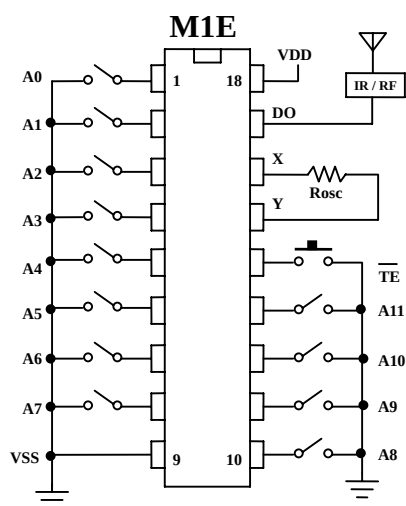
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APPLICATION DIAGRAM 参考电路图

(1) DATA TYPE



(2) FULL ADDRESS TYPE





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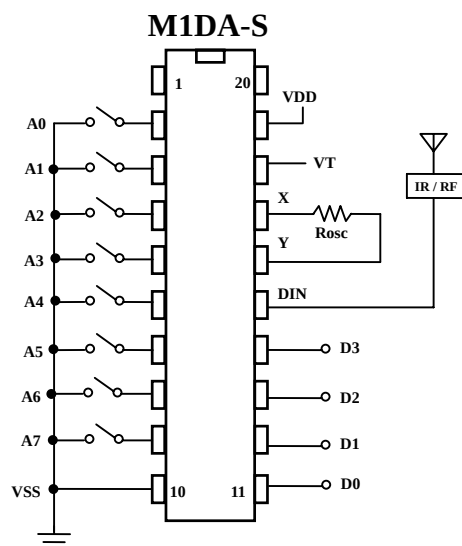
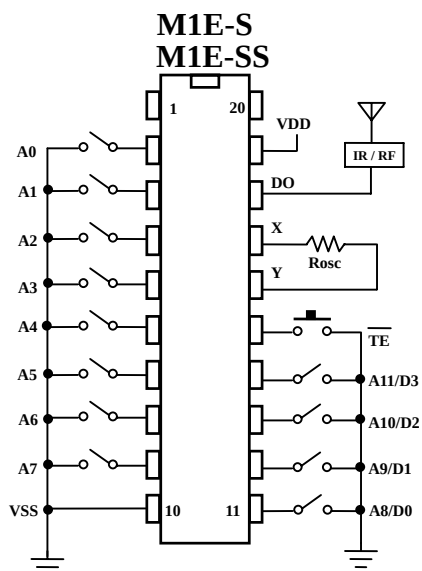
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APPLICATION DIAGRAM 参考电路图 (SOP PACKAGE)

(1) DATA TYPE



(2) FULL ADDRESS TYPE

