



2 STATES ENCODER

2 态编码 IC

**GENERAL DESCRIPTION 功能叙述**

The M1EN is a CMOS ASIC encoder. It will en-code 12 parallel inputs and serially transmit them to the output when transmits enable  $\overline{TE}$  depressed. These address inputs are 2 states i.e. LOW (0) or OPEN (1).

**FEATURES 产品特长**

Same Rosc matched to the Decoder MID/F.

$2^{12} = 4,096$  codes.

4 cycles transmission each time.

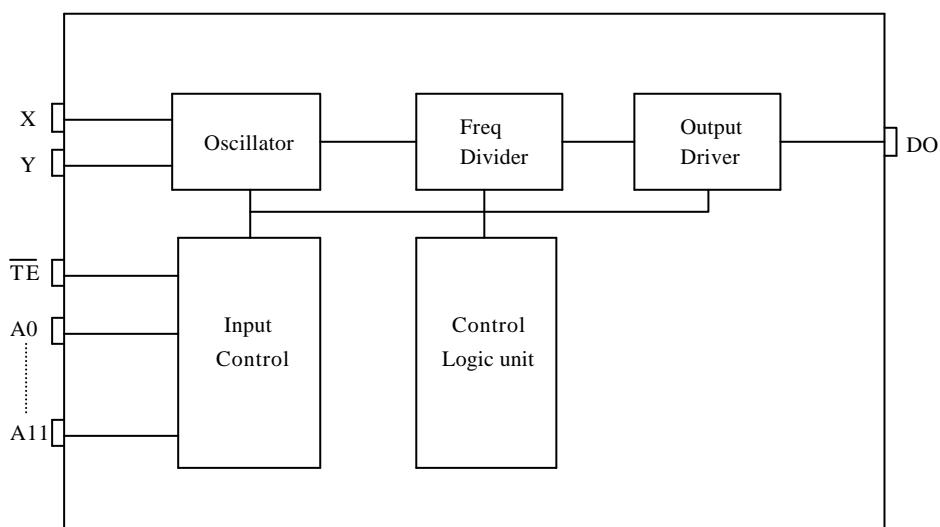
Direct data transmit type : (Eliminating  $\overline{TE}$  and diodes).

M1EN-H : Switch to VDD.

**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 )



**ABSOLUTE MAXIMUM RATINGS**

(TA=25 )

Parameter	Rating	Unit
Supply Voltage	-0.3 to 12	V
Input Voltage	-0.2~V <sub>DD</sub> +0.2	V
Operating Temperature	0 to 70	
Storage Temperature	-50 to 125	

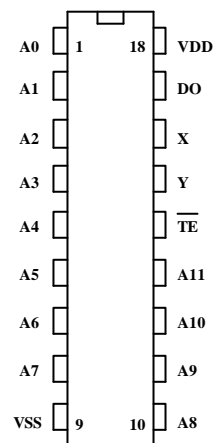
**ELECTRICAL CHARACTERISTICS**

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V <sub>DD</sub>	2.4		12	V	
Operating Current	I <sub>OP</sub>		0.1	1	mA	No load
Quiescent Current	I <sub>SB</sub>		0.1	0.5	μ A	
Output Drive Current	I <sub>O</sub>		2		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	F <sub>osc</sub>		76		KHz	External ± 30%, R <sub>osc</sub> =220K

**PIN DESCRIPTION**

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

**M1EN**



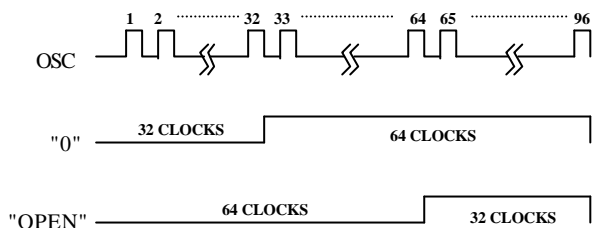


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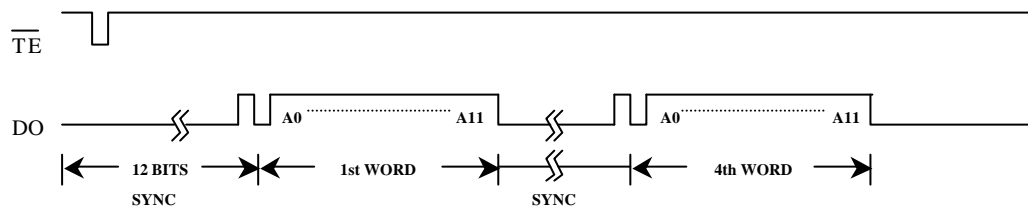
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TIMING WAVEFORM

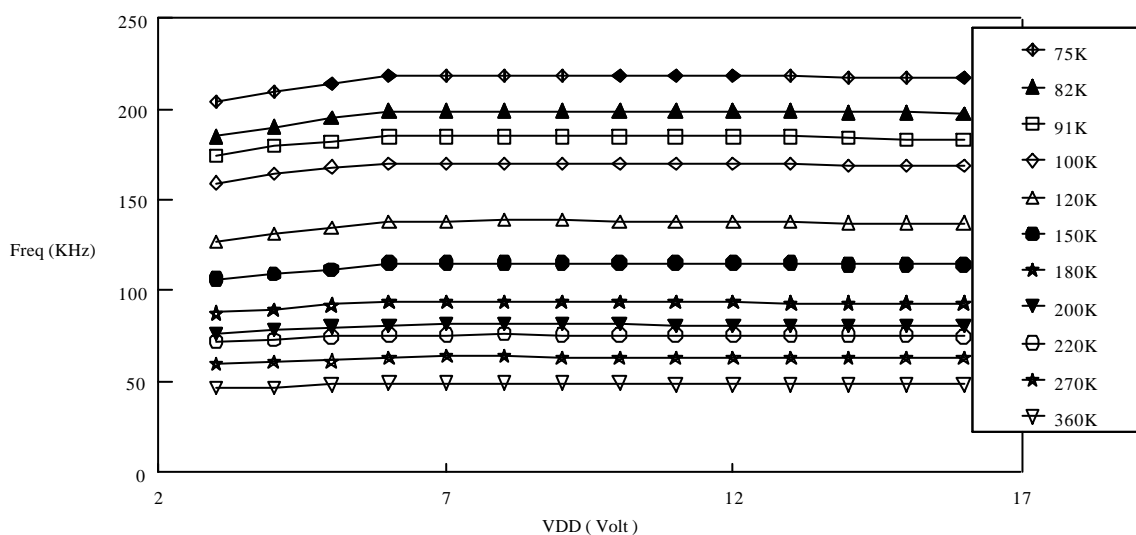
(1) BIT FORMAT



(2) TIMING DIAGRAM



M1EN F-V curve

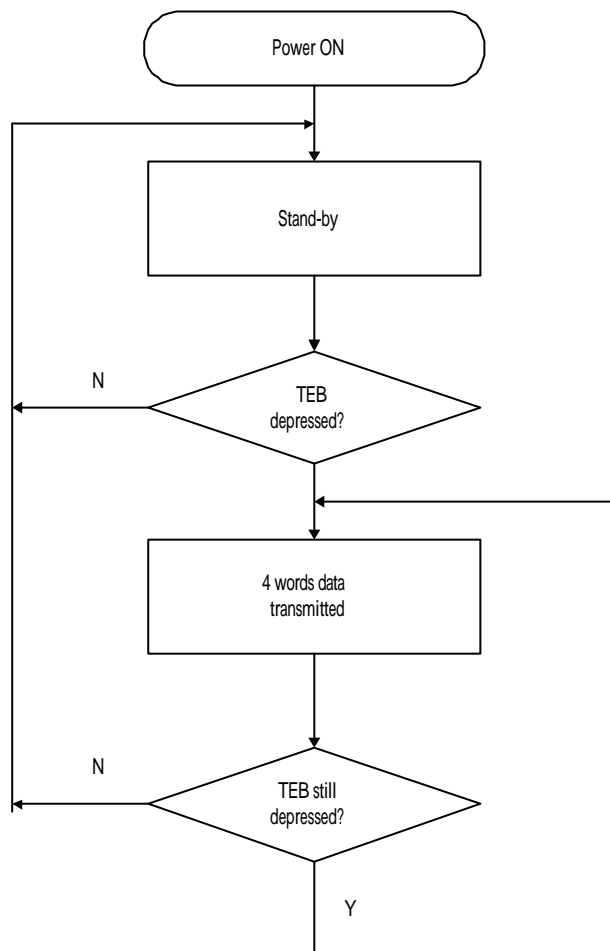




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OPERATING FLOWCHART





**RECONNENDED OSCILLATOR PARAMETERS**

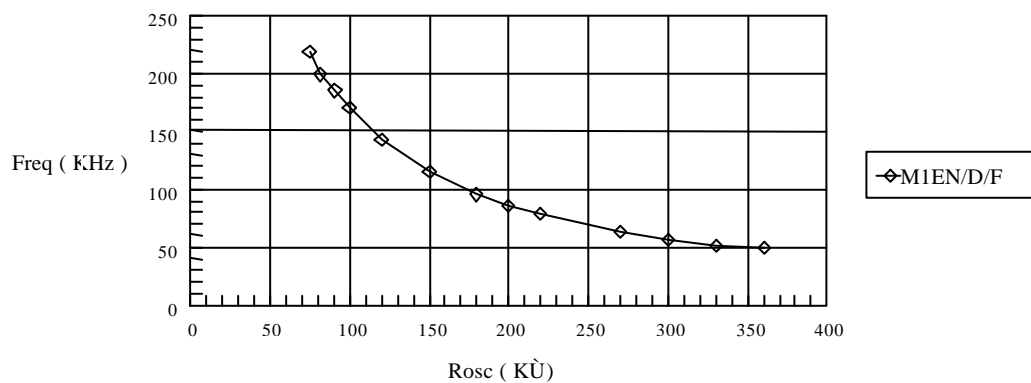
Rosc (K )	M1EN/D/F (KHz)
75	218
82	199
91	185
100	170
120	142
150	115
180	95
200	86
220	78
270	63
300	57
330	51
360	49

**DATA OUTPUT**

M1EN (D0-D3)	M1D/F (D0-D3)
0 (VSS)	1 (VDD)
1 (OPEN)	0 (VSS)

Freq-Rosc chart

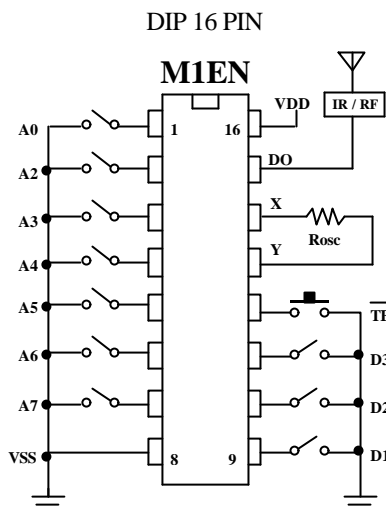
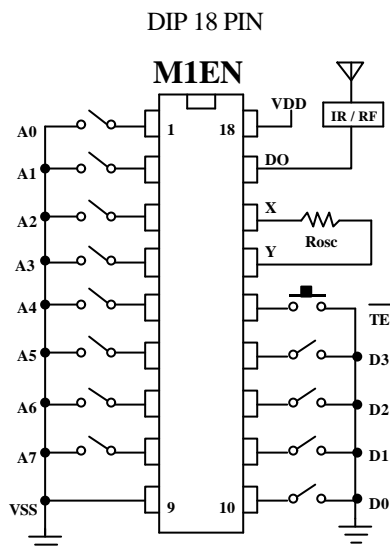
(@VDD=12V)



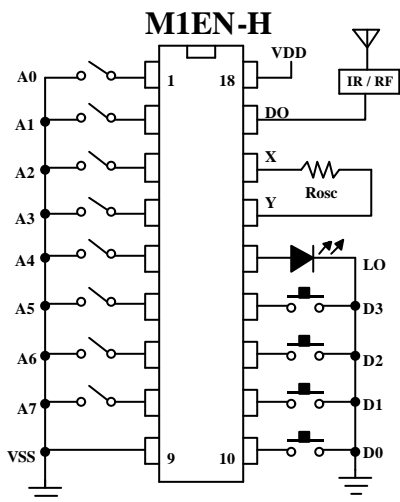


APPLICATION DIAGRAM 参考电路图

(1) 4 DATA TYPE



直接发射(VDD)



SOP 20 PIN

