



2 STATES ENCODER
2 态编码 IC

EN/DECODER

M1EA

GENERAL DESCRIPTION 功能叙述

The M1EA is a CMOS ASIC encoder. It will en-code 12 parallel data inputs and serially transmit them to the output when transmit enable ($\overline{TE}$) depressed. These address inputs are 2 states i.e. LOW (0) or OPEN (1).

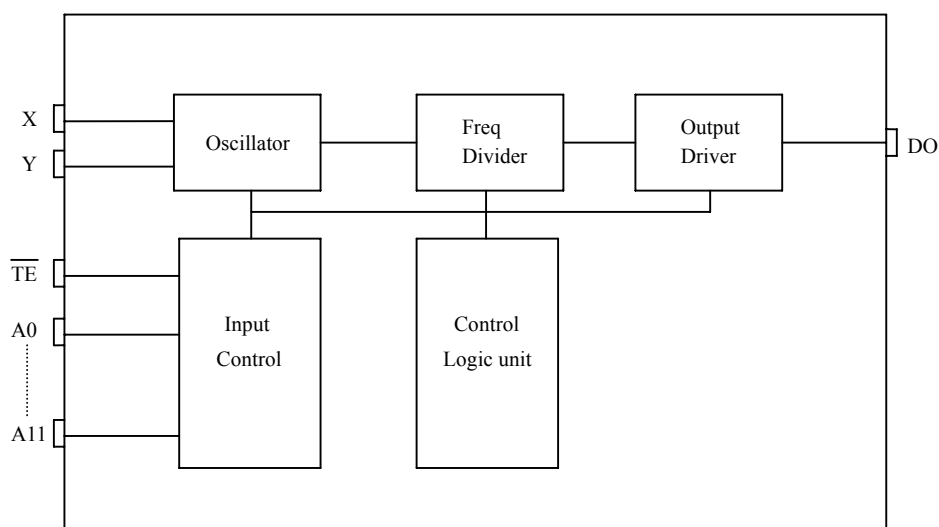
FEATURES 产品特长

- Same Rosc matched to the Decoder M1DA/FA.
- $2^{12} = 4,096$ codes.
- 4 cycles transmission each time.
- Direct data transmit type: (Eliminating $\overline{TE}$ and diodes).
- M1EA-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)



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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	℃

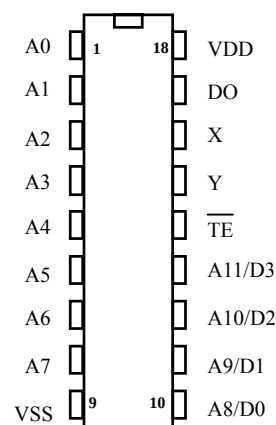
ELECTRICAL CHARACTERISTICS

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%,Rosc=270K 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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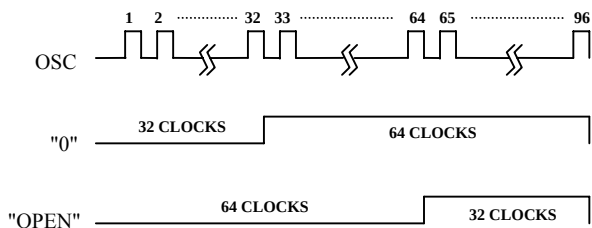
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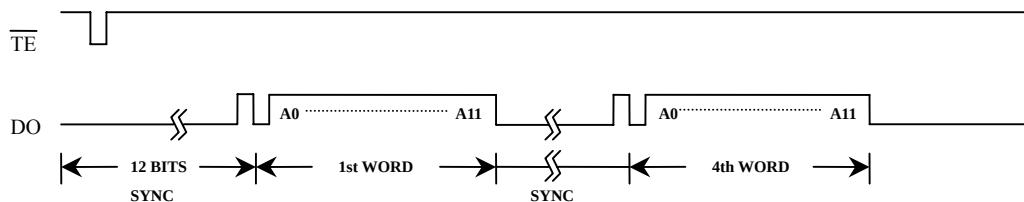
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TIMING WAVEFORM

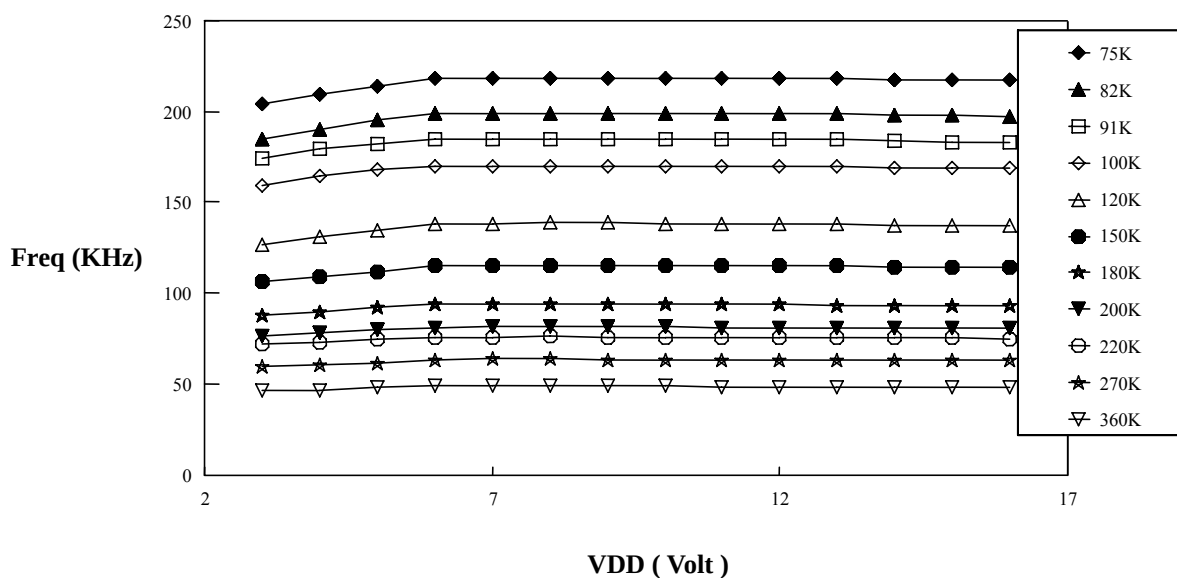
(1) BIT FORMAT



(2) TIMING DIAGRAM



M1EA F-V curve



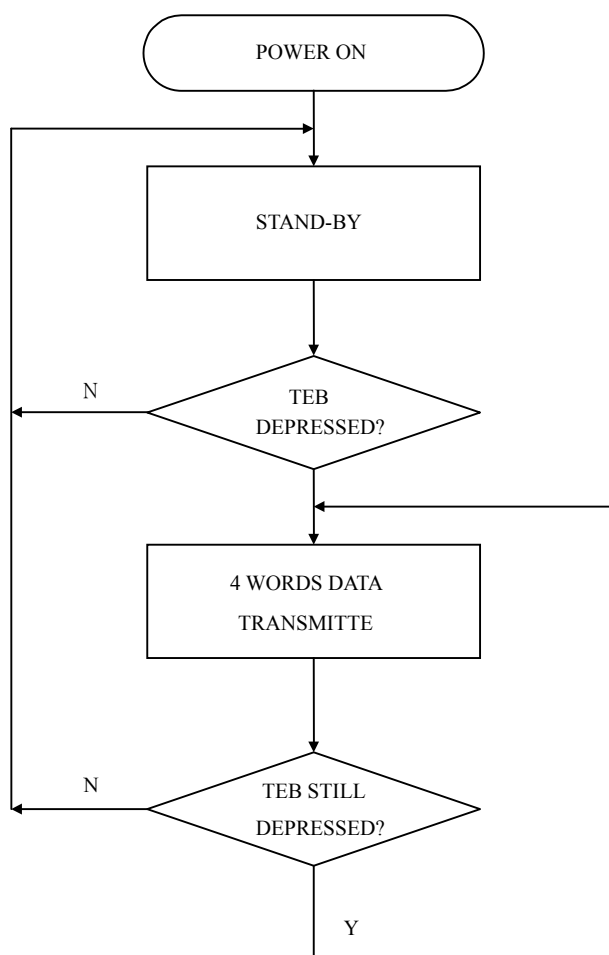


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OPERATING FLOWCHART





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RECONNENDED OSCILLATOR PARAMETERS

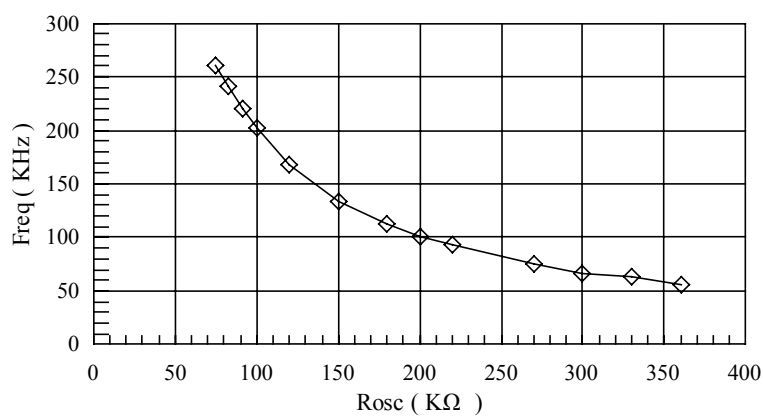
Rosc (K Ω)	M1EA (KHz)
75	261
82	241
91	220
100	203
120	168
150	133
180	113
200	101
220	94
270	75
300	67
330	63
360	56

DATA OUTPUT

M1EA (D0~D3)	M1DA/FA (D0~D3)
0 (VSS)	1 (VDD)
1 (OPEN)	0 (VSS)

Freq-Rosc Chart

(@Vdd=12V)



◇ M1EA



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APPLICATION DIAGRAM 参考电路图

