



一華半導體股份有限公司
MOSDESIGN SEMICONDUCTOR CORP.

2 STATES ENCODER

2 态编码 IC

EN/DECODER

M1EN

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).

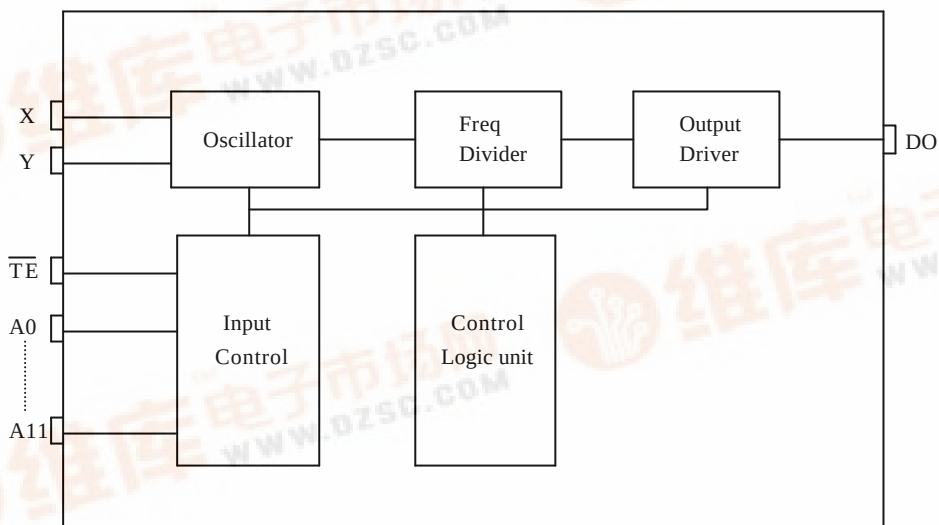
FEATURES 产品特长

- Same Rosc matched to the Decoder M1D/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





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ABSOLUTE MAXIMUM RATINGS

(TA=25°C)

Parameter	Rating	Unit
Supply Voltage	-0.3 to 12	V
Input Voltage	-0.2~V _{DD} +0.2	V
Operating Temperature	0 to 70	°C
Storage Temperature	-50 to 125	°C

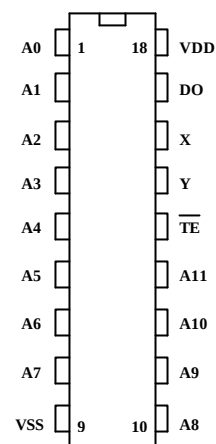
ELECTRICAL CHARACTERISTICS

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} =220KΩ

PIN DESCRIPTION

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

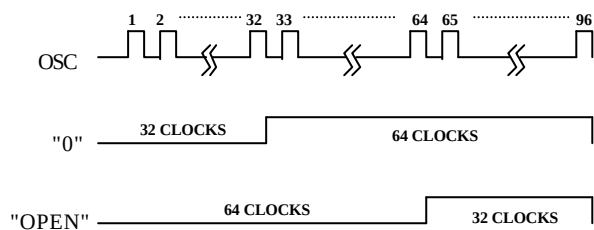
M1EN



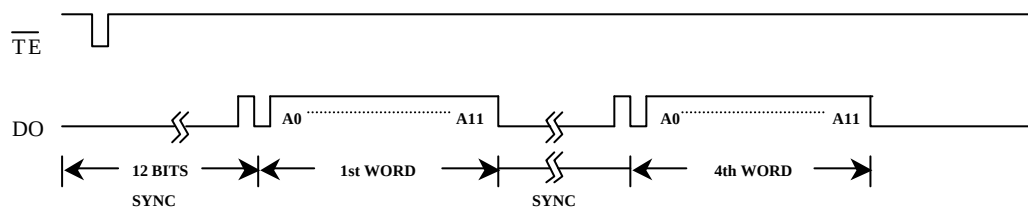


TIMING WAVEFORM

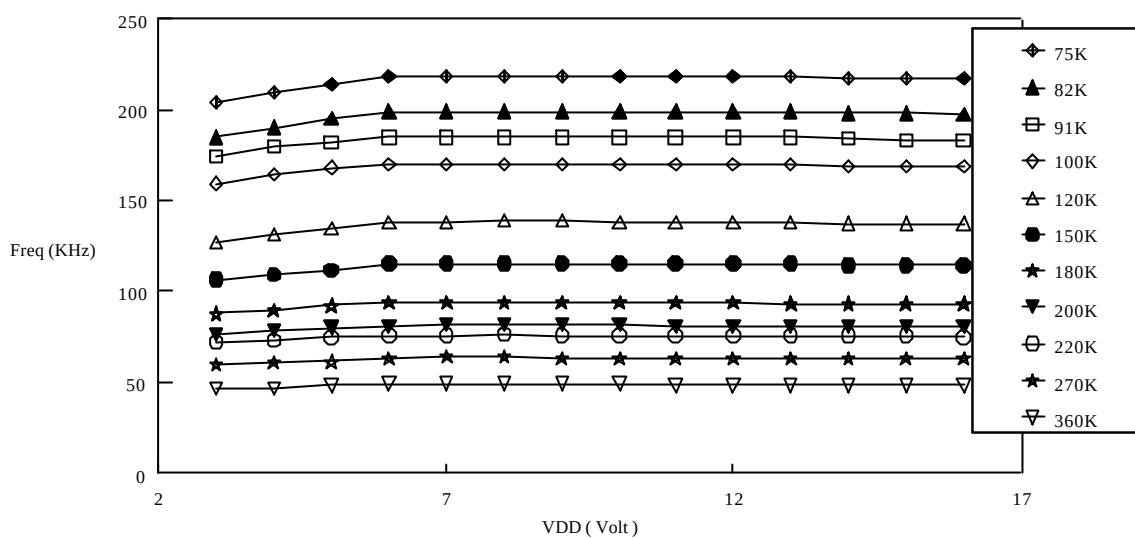
(1) BIT FORMAT



(2) TIMING DIAGRAM

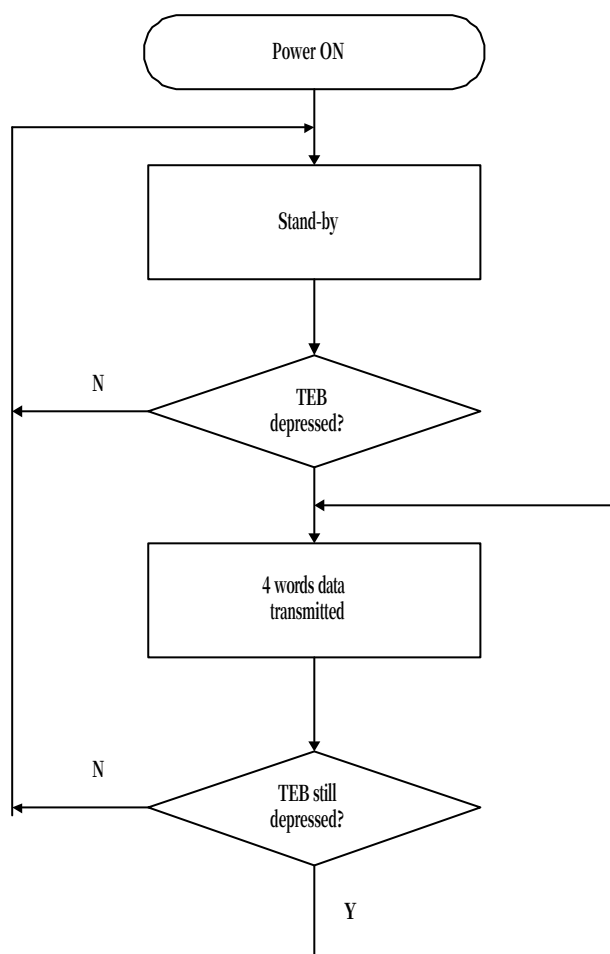


M1EN F-V curve





OPERATING FLOWCHART





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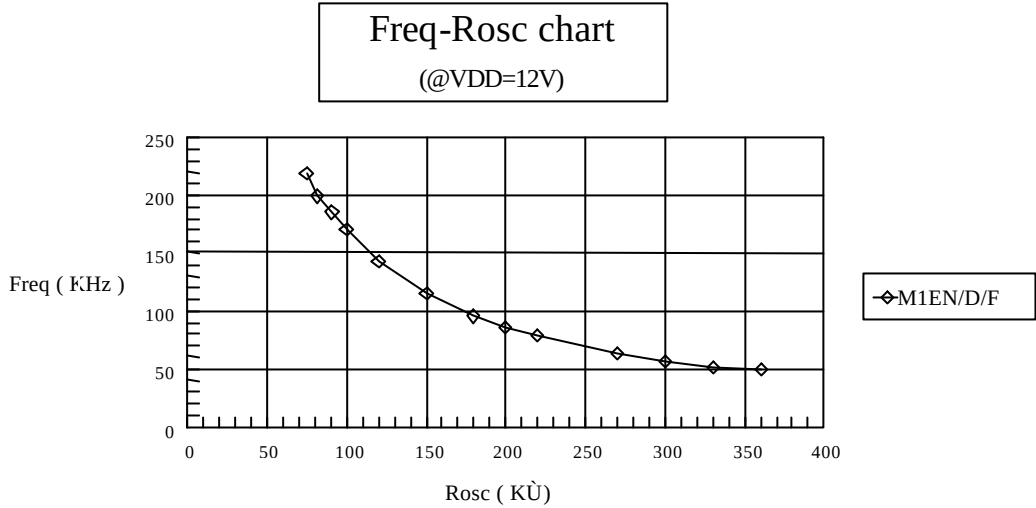
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RECONNENDED OSCILLATOR PARAMETERS

Rosc (KΩ)	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)





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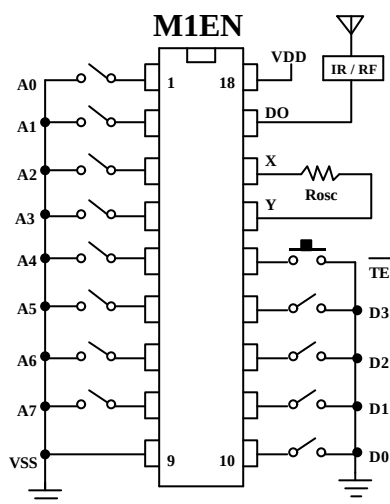
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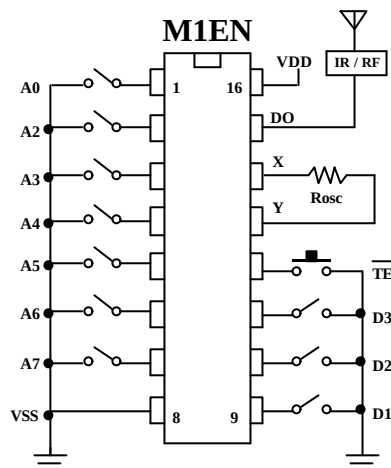
APPLICATION DIAGRAM 参考电路图

(1) 4 DATA TYPE

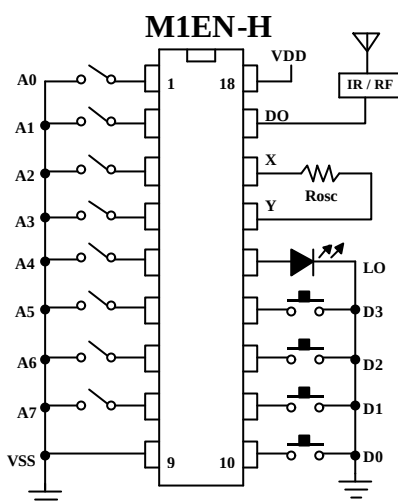
DIP 18 PIN



DIP 16 PIN



直接发射(VDD)



SOP 20 PIN

