



3 STATES DECODER
3 态解碼 IC

M3172

GENERAL DESCRIPTION 功能叙述

The M3172 is a CMOS ASIC decoder. It will de-code the serial data from data input. The VT signal will go high and data will be copied to the output if address are checked the same. The address input are 3 states i.e. LOW(0)、OPEN(X) and HIGH(1).

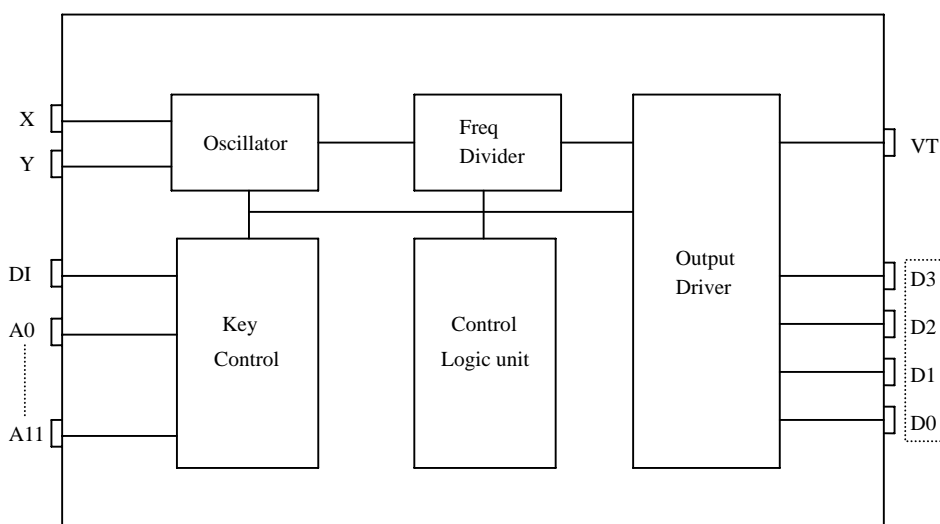
FEATURES 产品特长

- $3^{12} = 531,411$ codes, "0"、"X"、"1" Tri-states.
- 3 cycles checked each time
- S.O.Package: suffix-S.
- Address / Data types:
 - M3172-L: Latch data outputs.
 - M3172-M: Momentary data outputs.
 - M3172F: Full address type.

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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EN/DECODER

M3172

ABSOLUTE MAXIMUM RATING

(TA=25°C)

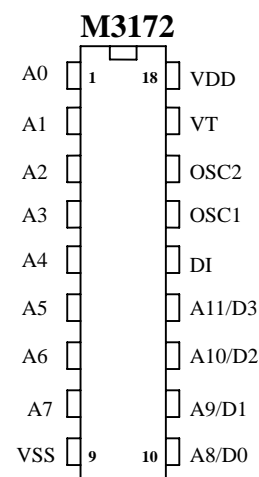
Parameter	Rating	Unit
Supply Voltage	-0.3 to 5	V
Input Voltage	-0.2~V _{DD} +0.2	V
Operating Temperature	0 to 70	°C
Storage Temperature	-50 to 125	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V _{DD}	—	3	5	V	
Operating Current	I _{OP}	—	0.3	1	mA	No load
Quiescent Current	I _{SB}	—	1	10	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	—	38	—	KHz	External ± 30%, R _{osc} =1.1M Ω

PIN DESCRIPTION

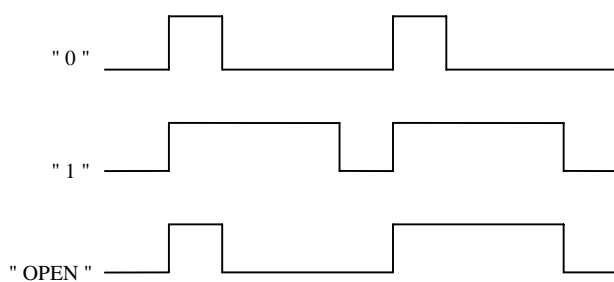
No.	M3172	M3172F	Description
1~8	A0~A7	A0~A7	3 States address inputs
9	VSS	VSS	Negative power supply
10~13	D0~D3	A8~A11	Data outputs/Address inputs
14	DI	DI	Data input
15	OSC1	OSC1	Oscillator input
16	OSC2	OSC2	Oscillator output
17	VT	VT	Valid transmit
18	VDD	VDD	Positive power supply



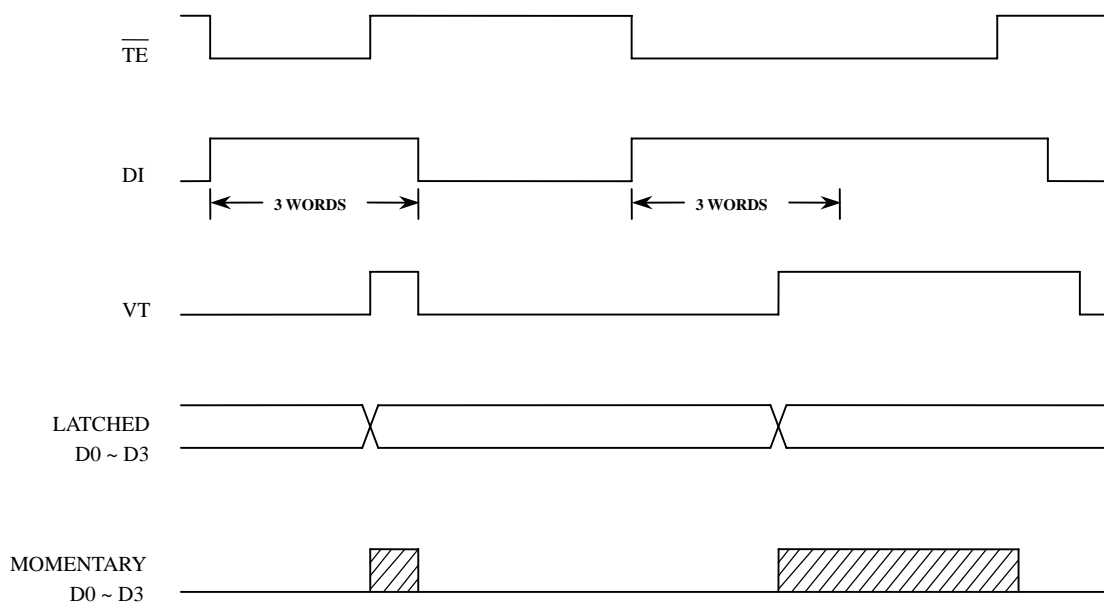


TIMING WAVEFORM

(1) Bit format



(2) TIMING DIAGRAM

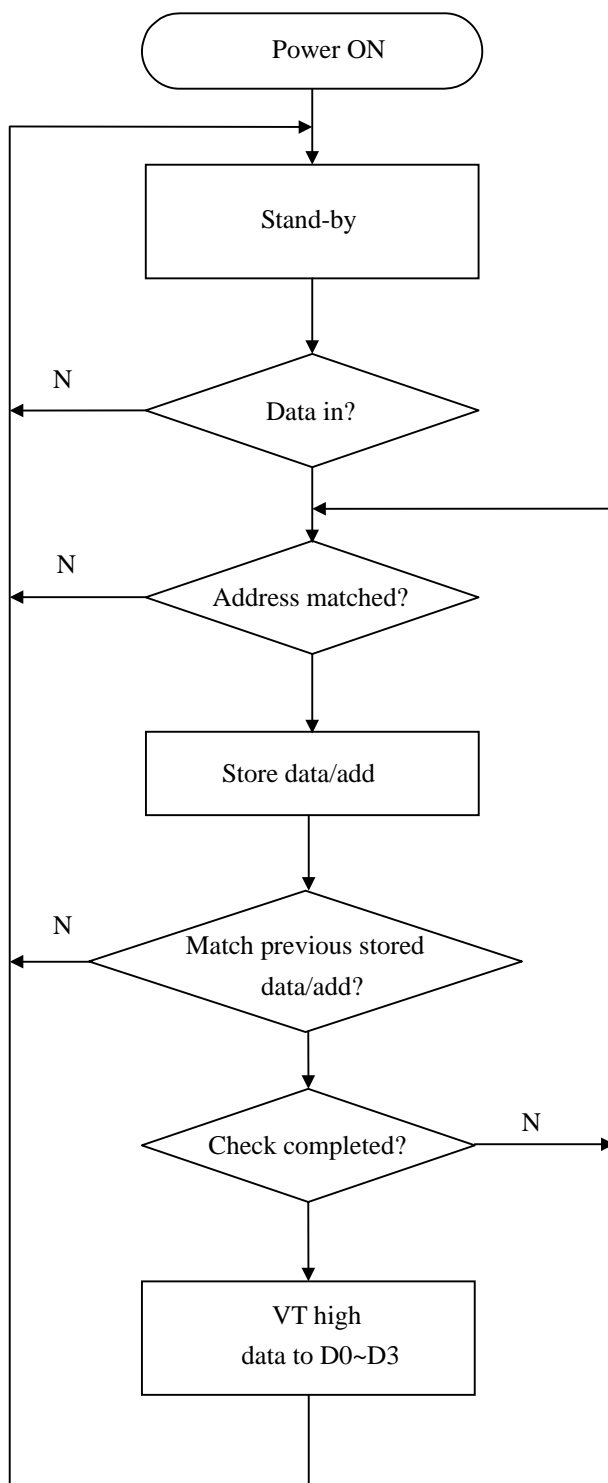




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OPERATING FLOWCHART





3 STATES DECODER

3 态 解 碼 IC

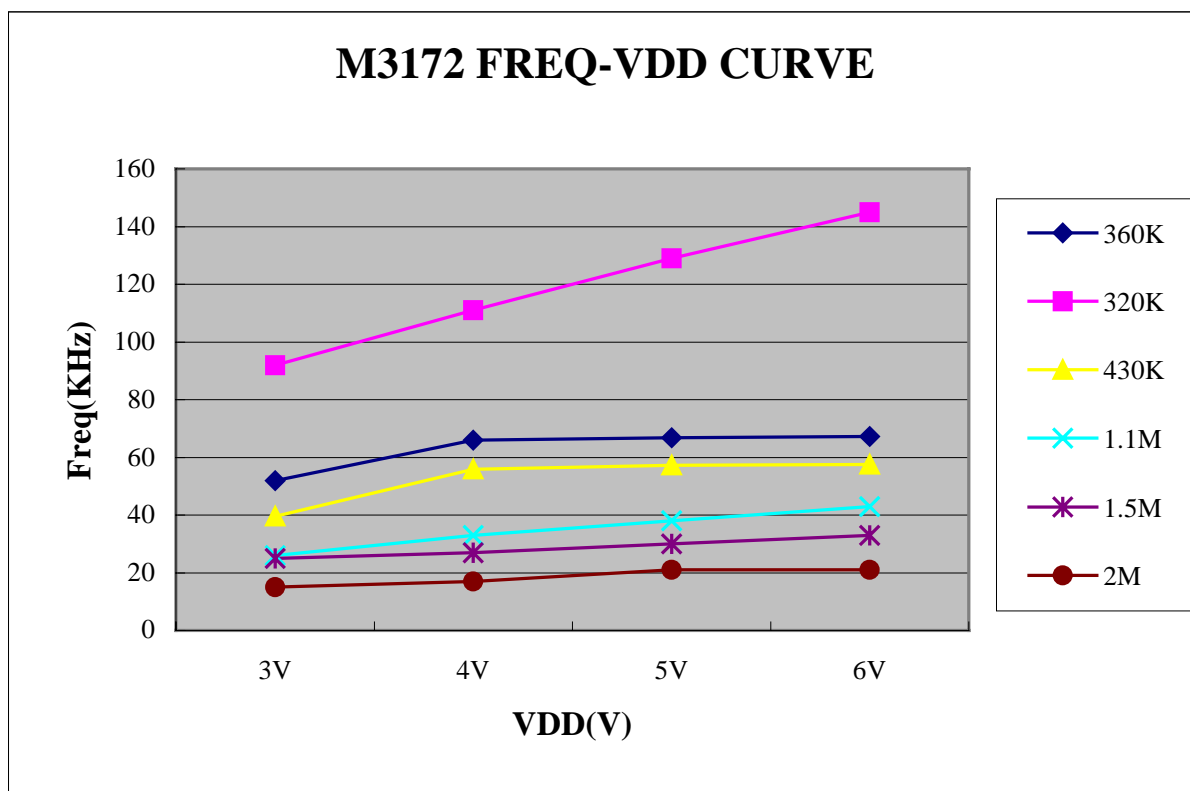
M3172

RECONNENDED OSCILLATOR PARAMETERS

Volt Rosc (KΩ)	M3172 (KHz)			
	3V	4V	5V	6V
360K	51.9	65.9	66.8	67.2
320K	92	111	129	145
430K	39.6	55.9	57.2	57.5
1.1M	26	33	38	43
1.5M	25	27	30	33
2M	15	17	21	21

DATA OUTPUT

M3162 (D0~D3)	M3172 (D0~D3)
0 (VSS)	0 (VSS)
X (OPEN)	1 (VDD)
1 (VDD)	1 (VDD)
POWER ON	0 (VSS)





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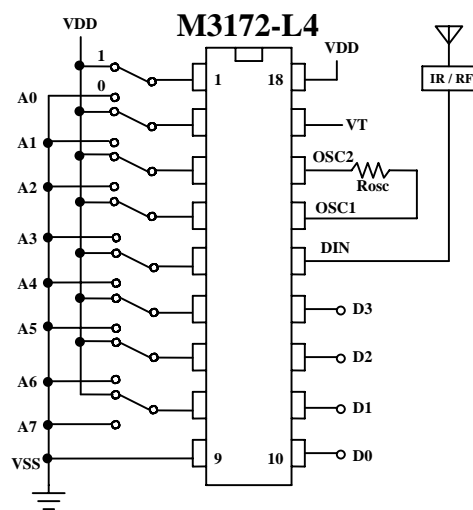
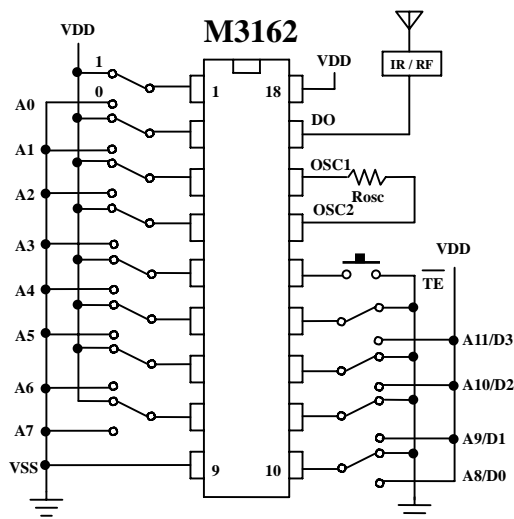
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ADDRESS PIN INFORMATION

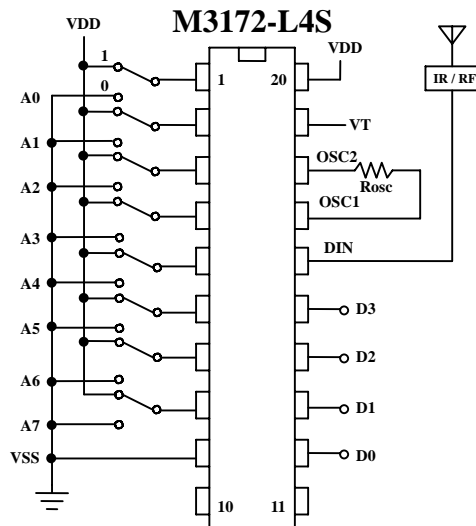
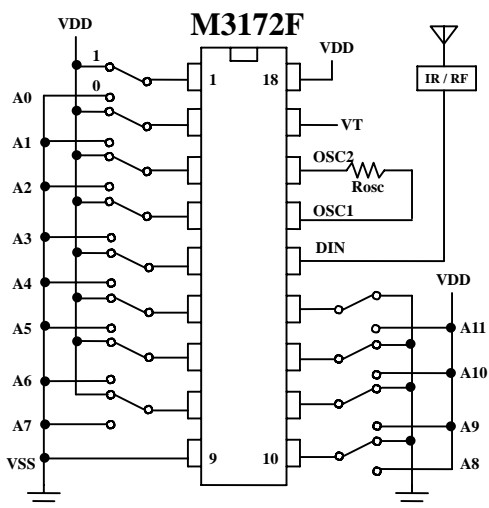
<i>P/N</i>	<i>A0</i>	<i>A1</i>	<i>A2</i>	<i>A3</i>	<i>A4</i>	<i>A5</i>	<i>A6</i>	<i>A7</i>	<i>A8</i>	<i>A9</i>	<i>A10</i>	<i>A11</i>
M3172F	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
M3172-L1	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	D0
M3172-L2	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	D0	D1
M3172-L3	A0	A1	A2	A3	A4	A5	A6	A7	A8	D0	D1	D2
M3172-L4	A0	A1	A2	A3	A4	A5	A6	A7	D0	D1	D2	D3
M3172-L5	A0	A1	A2	A3	A4	A5	A6	D0	D1	D2	D3	D5
M3172-L6	A0	A1	A2	A3	A4	A5	D0	D1	D2	D3	D5	D6
M3172-M1	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	D0
M3172-M2	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	D0	D1
M3172-M3	A0	A1	A2	A3	A4	A5	A6	A7	A8	D0	D1	D2
M3172-M4	A0	A1	A2	A3	A4	A5	A6	A7	D0	D1	D2	D3
M3172-M5	A0	A1	A2	A3	A4	A5	A6	D0	D1	D2	D3	D5
M3172-M6	A0	A1	A2	A3	A4	A5	D0	D1	D2	D3	D5	D6



APPLICATION DIAGRAM 参考电路图 (DIP, SOP)



SOP Package



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