



3 STATES ENCODER

3 態編碼 IC

**M45026/7/8**

**GENERAL DESCRIPTION 功能敘述**

The M45026 is a CMOS ASIC encoder. It will en-code 9 parallel inputs and serially transmit them to the output when  $\overline{TE}$  depressed. These address inputs are 3 states i.e. LOW (0) 、 OPEN (X) and HIGH (1).

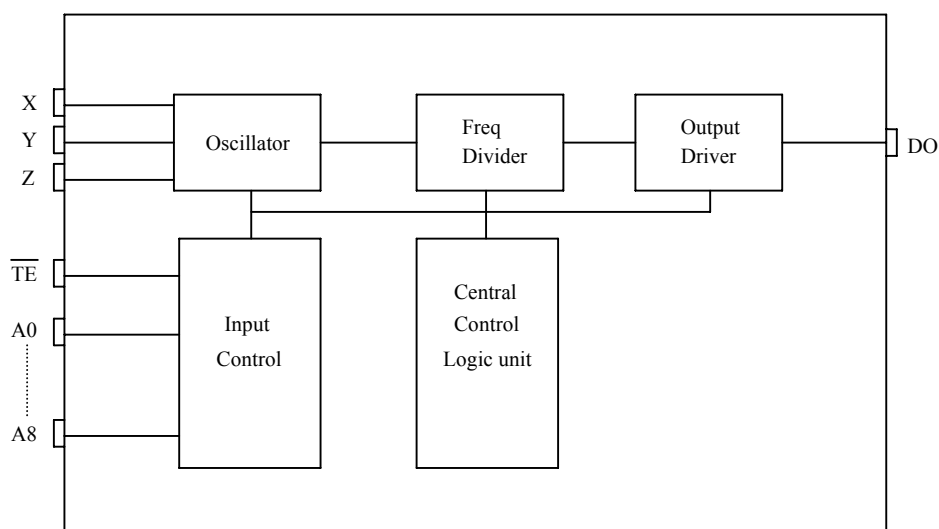
**FEATURES 產品特長**

- RC oscillator.
- $3^9 = 19,683$  codes, "0", "X", "1" Tri-states.
- Minimum two transmission words.

**APPLICATIONS 產品應用**

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

**BLOCK DIAGRAM 功能方塊圖**



\*All specs and applications shown above subject to change without prior notice.  
( 以上電路及規格僅供參考,本公司得逕行修正 )



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**ABSOLUTE MAXIMUM RATING**

(TA=25°C)

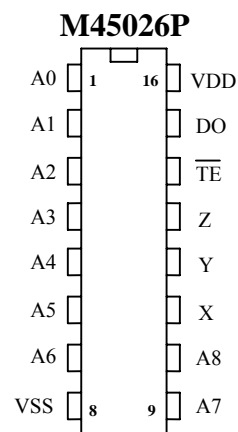
Parameter	Rating	Unit
Supply Voltage	-0.3 to 15	V
Input Voltage	-0.2~V <sub>DD</sub> +0.2	V
Operating Temperature	-20 to 75	°C
Storage Temperature	-50 to 125	°C

**ELECTRICAL CHARACTERISTICS**

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V <sub>DD</sub>	3	—	15	V	
Operating Current	I <sub>OP</sub>	—	0.1	1	mA	No load
Quiescent Current	I <sub>SB</sub>	—	0.1	0.5	μA	
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>	—	22	—	KHz	External±30%

**PIN DESCRIPTION**

No.	Name	Description
1~7	A0~A6	3 states address inputs
8	VSS	Negative power supply
9~10	A7、A8	3 states address inputs
11	X	Oscillator input
12	Y	Oscillator output
13	Z	Oscillator output
14	TE	Transmit enable
15	DO	Data output
16	VDD	Positive power supply





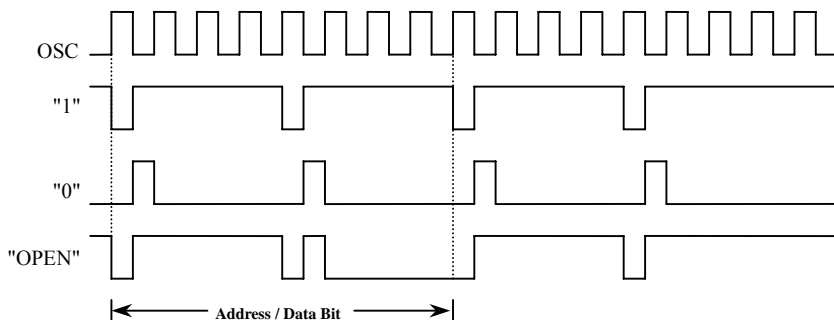
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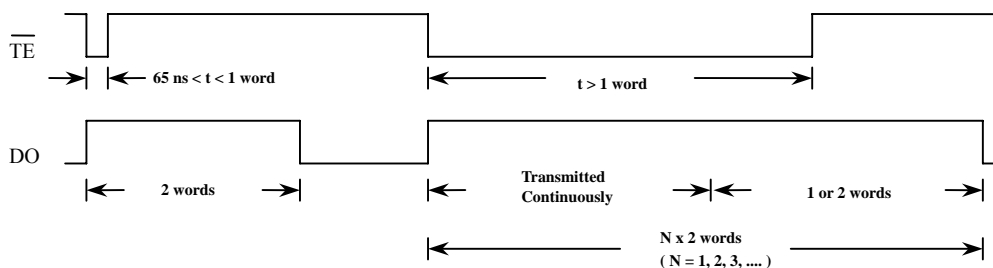
**M45026/7/8**

**TIMING WAVEFORM**

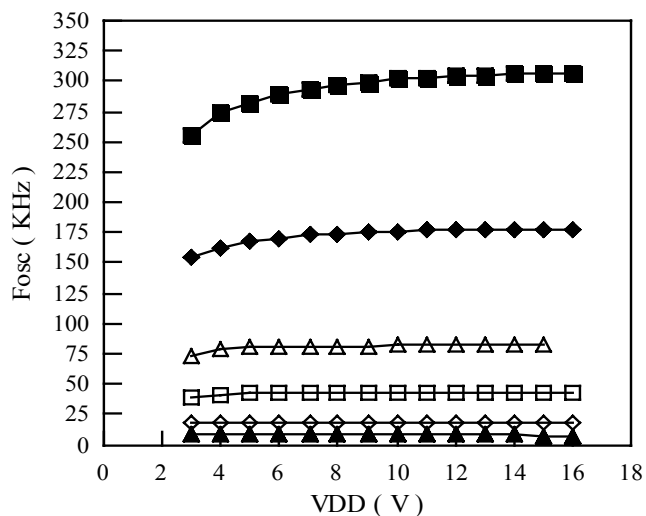
**(1) Bit format**



**(2) TIMING DIAGRAM**



**M45026 F-V Curve**



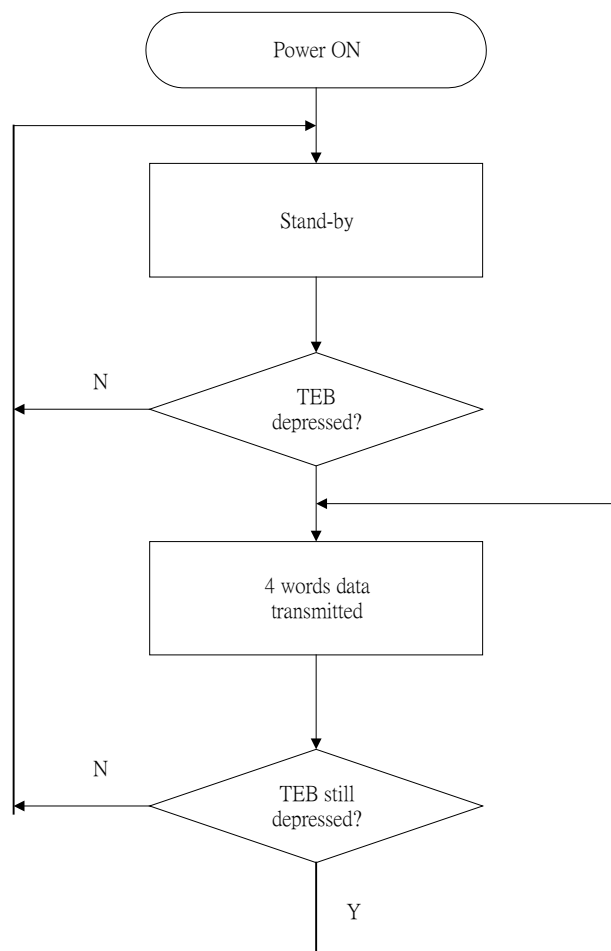
- $R_z=20\text{K}\Omega$  ,  $C_y=120\text{PF}$  ,  $R_x=10\text{K}\Omega$
- ◆  $R_z=20\text{K}\Omega$  ,  $C_y=250\text{PF}$  ,  $R_x=10\text{K}\Omega$
- △  $R_z=20\text{K}\Omega$  ,  $C_y=500\text{PF}$  ,  $R_x=10\text{K}\Omega$
- $R_z=20\text{K}\Omega$  ,  $C_y=1000\text{PF}$  ,  $R_x=10\text{K}\Omega$
- ◇  $R_z=20\text{K}\Omega$  ,  $C_y=2200\text{PF}$  ,  $R_x=10\text{K}\Omega$
- ▲  $R_z=20\text{K}\Omega$  ,  $C_y=5000\text{PF}$  ,  $R_x=10\text{K}\Omega$



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OPERATING FLOWCHART

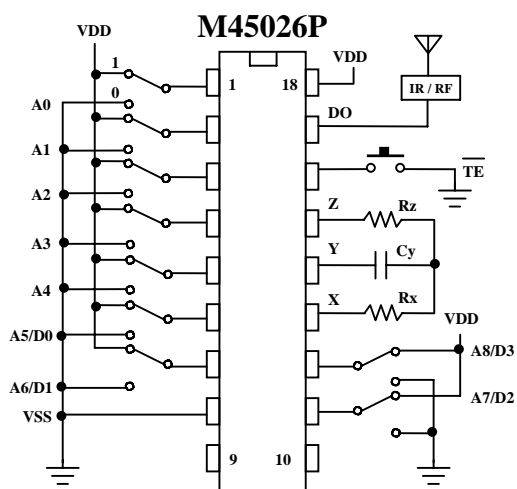
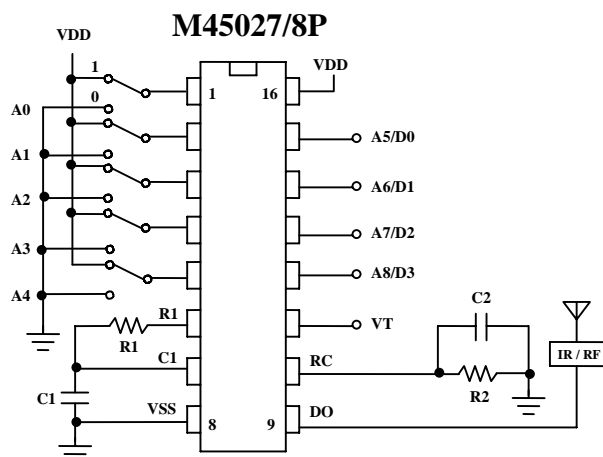
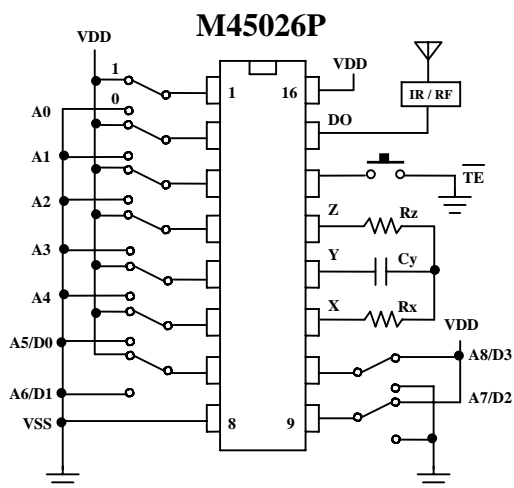




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APPLICATION DIAGRAM 參考電路圖



\* VDD@12V ~ M45026 :  $R_x=20K\Omega$ ,  $R_z=10K\Omega$ ,  $C_y=2020pF$  ;  
M45027/8 :  $R_1=10K\Omega$ ,  $C_1=8200pF$ ,  $R_2=100K\Omega$ ,  $C_2=0.015\mu F$ .

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