



3 STATES ENCODER

3 态编码 IC

**GENERAL DESCRIPTION** 功能叙述

The M6E is a CMOS ASIC encoder. It will en-code 12 parallel data inputs (A0~A11) and serially transmit them to the output when transmits enable ( $\overline{TE}$ ) depressed. The address inputs are 3 states i.e. LOW (0) or OPEN (X) and HIGH (1). It will transmit 2 cycles each time  $\overline{TE}$  depressed.

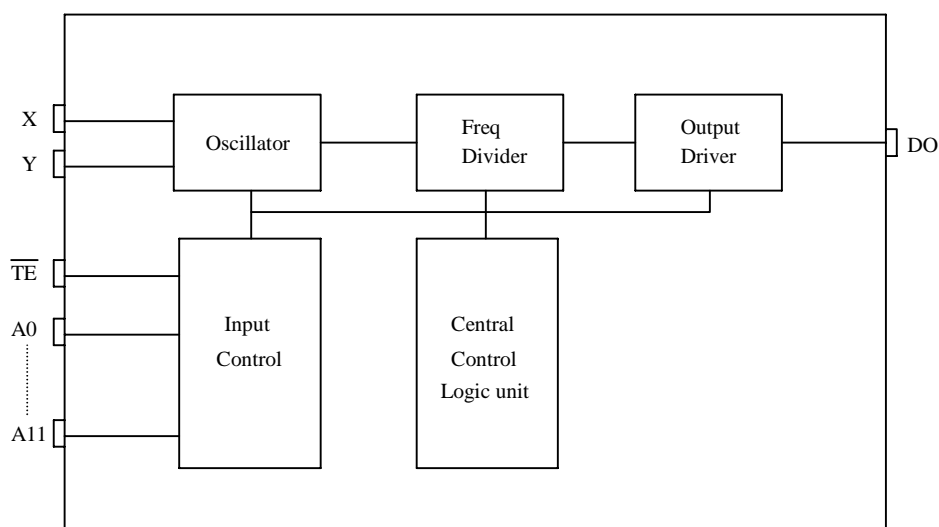
**FEATURES** 产品特长

- Same Rosc matched to the DECODER M6D/F
- $3^{12} = 531, 441$  codes, "0", "X", "1" Tri-states
- 2 cycles transmission each time
- DIP 18 or SO available

**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 )



3 STATES ENCODER

3 态编码 IC

**M6E**

**ABSOLUTE MAXIMUM RATING**

(TA=25°C)

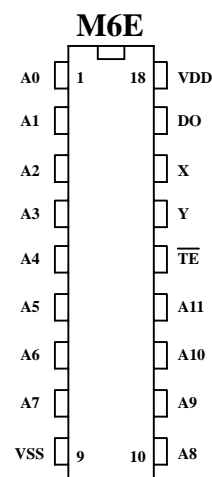
Parameter	Rating	Unit
Supply Voltage	-0.3 to 15	V
Input Voltage	-0.2~V <sub>DD</sub> +0.2	V
Operating Temperature	-20 to 75	°C
Storage Temperature	-50 to 125	°C

**ELECTRICAL CHARACTERISTICS**

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V <sub>DD</sub>	2.4	—	15	V	
Operating Current	I <sub>OP</sub>	—	0.1	1	μ A	
Quiescent Current	I <sub>SB</sub>	—	0.1	0.5	mA	No load
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	Fosc	—	48	—	KHz	External ± 30%

**PIN DESCRIPTION**

No.	Name	Description
1~8	A0~A7	3 states address inputs
9	VSS	Negative power supply
10~13	A8~A11	3 states address inputs
14	$\overline{TE}$	Transmit enable
15	Y	Oscillator output
16	X	Oscillator input
17	DO	Data output
18	VDD	Positive power supply





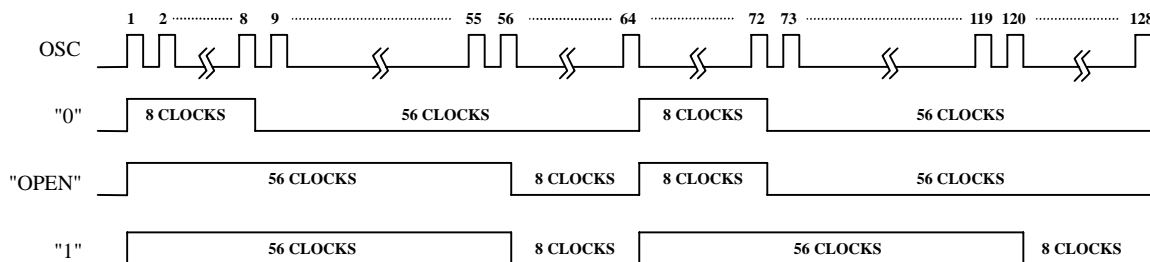
3 STATES ENCODER

3 态编码 IC

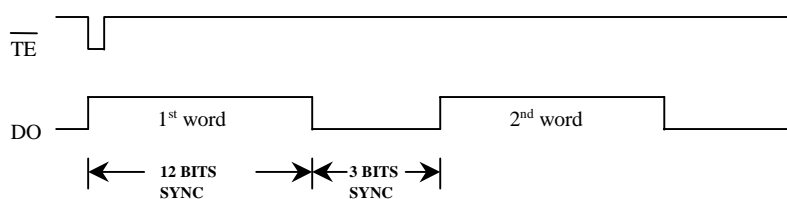
**M6E**

**TIMING WAVEFORM**

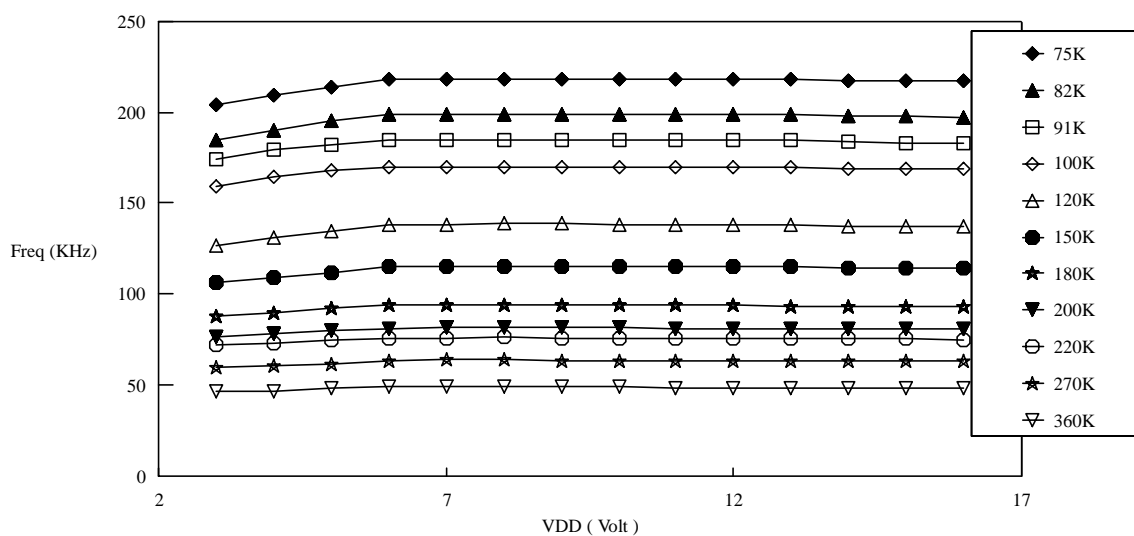
**(1) Bit format**



**(2) TIMING DIAGRAM**



M6E F-V curve

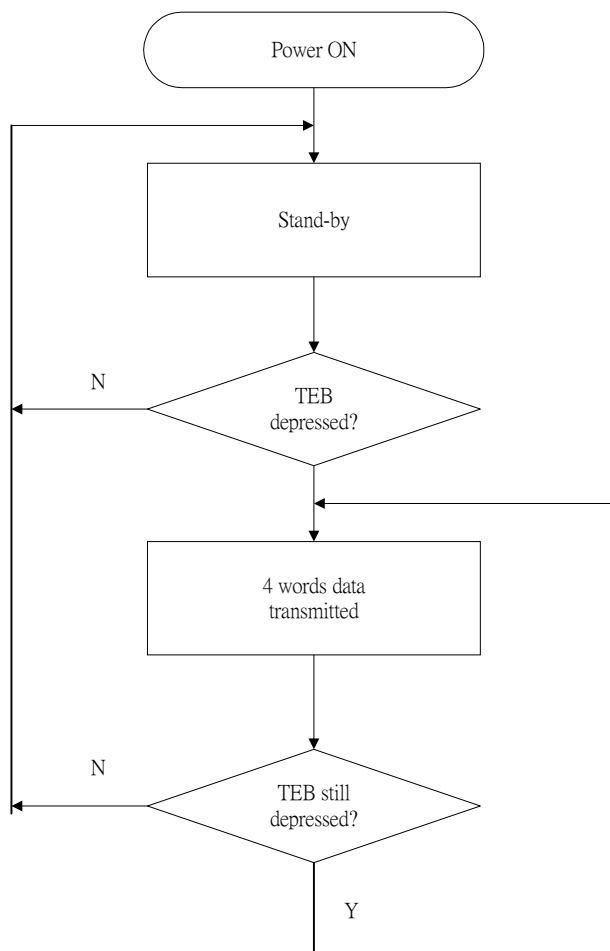




3 STATES ENCODER

3 态编码 IC

**OPERATING FLOWCHART**





**RECONNENDED OSCILLATOR PARAMETERS**

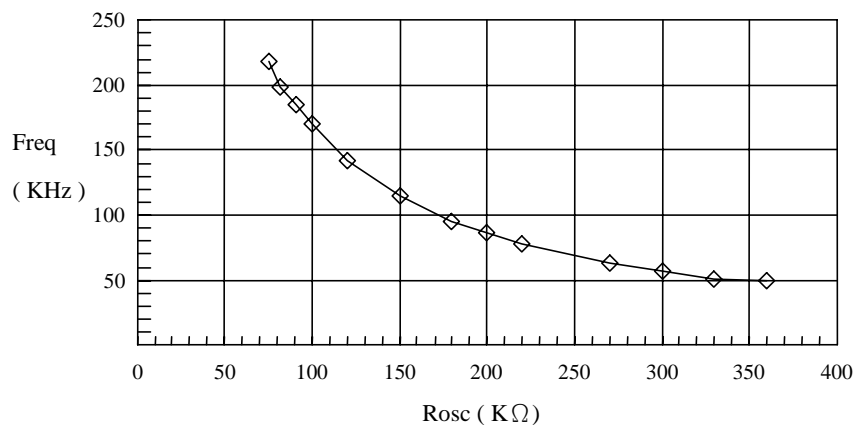
Rosc (KΩ)	M6E/D/F (KHz)
75	218
82	199
91	185
100	170
120	142
150	115
180	95
200	86
220	78
270	63
300	57
330	51
360	49

**DATA OUTPUT**

M6E (D0~D3)	M6D/F (D0~D3)
0 (VSS)	0 (VSS)
X (OPEN)	1 (VDD)
1 (VDD)	1 (VDD)
POWER ON	0 (VSS)

**Freq-Rosc Chart**

( @Vdd=12V )





3 STATES ENCODER

3 态编码 IC

APPLICATION DIAGRAM 参考电路图

SOP-20PIN

