EN/DECODER

M3E,

3 STATES ENCODER
3 態編碼 IC

GENERAL DESCRIPTION 功能敘述

The M3E, is a CMOS ASIC decoder. It will en-code 12 parallel input and serially transmit them to the output when $\overline{TE}$ depressed. These address inputs are 3 states i.e. LOW(0)、OPEN(X)、HIGH(1).

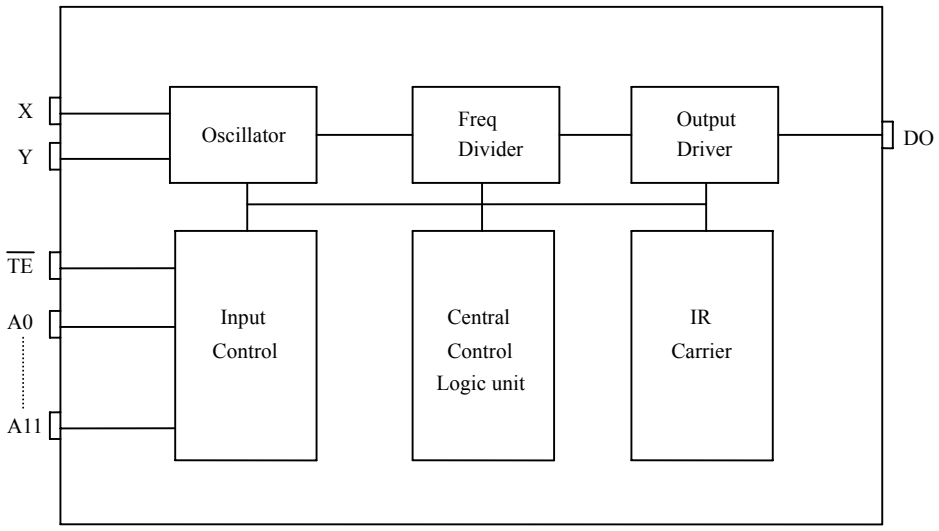
FEATURES 產品特長

- Same Rosc matched to the DECODER M3D/DA/F
- Built-in IR carrier：suffix-IR.
- 3^{12} =531,411 codes, “0”、”X”、”1” Tri-states.
- 4 cycles transmission each time.
- Direct data transmit type : (Elimination $\overline{TE}$ and diodes)
  - — M3E,-H：switch to VDD.
  - — M3E,-L：switch to VSS.

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℃)

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	℃

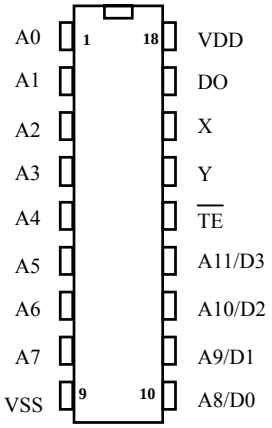
ELECTRICAL CHARACTERISTICS

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	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	Fosc	—	76	—	KHz	External±30%, Rosc=360KΩ

PIN DESCRIPTION

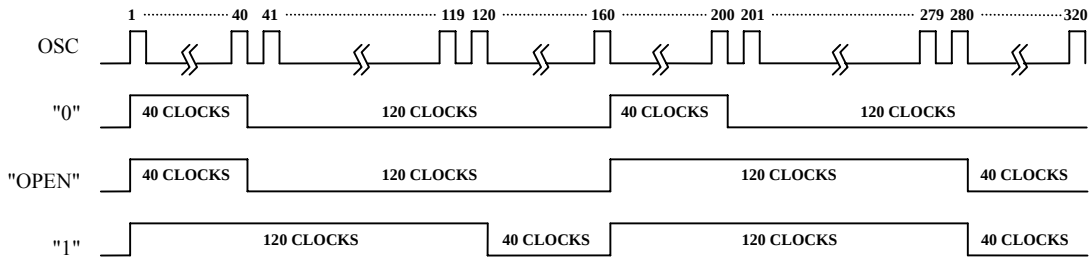
No.	M3E,	Description
1~8	A0~A7	3 states address inputs
9	VSS	Negative power supply
10~13	A8~A11 / D0~D3	3 states address inputs / Data input
14	$\overline{TE}$	Transmit enable
15	Y	Oscillator output
16	X	Oscillator input
17	DO	Data output
18	VDD	Positive power supply

M3E,

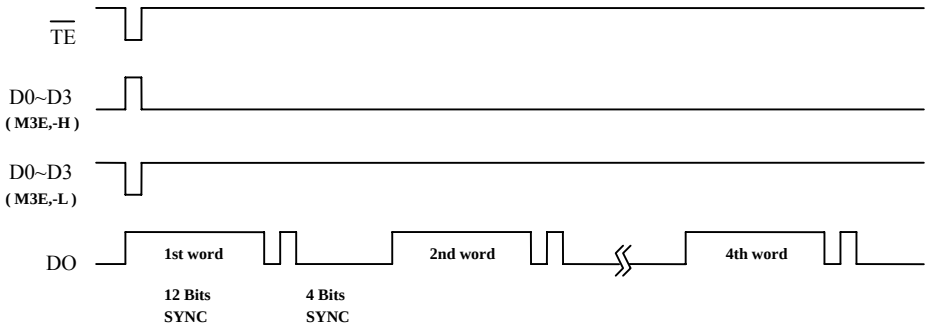


TIMING WAVEFORM

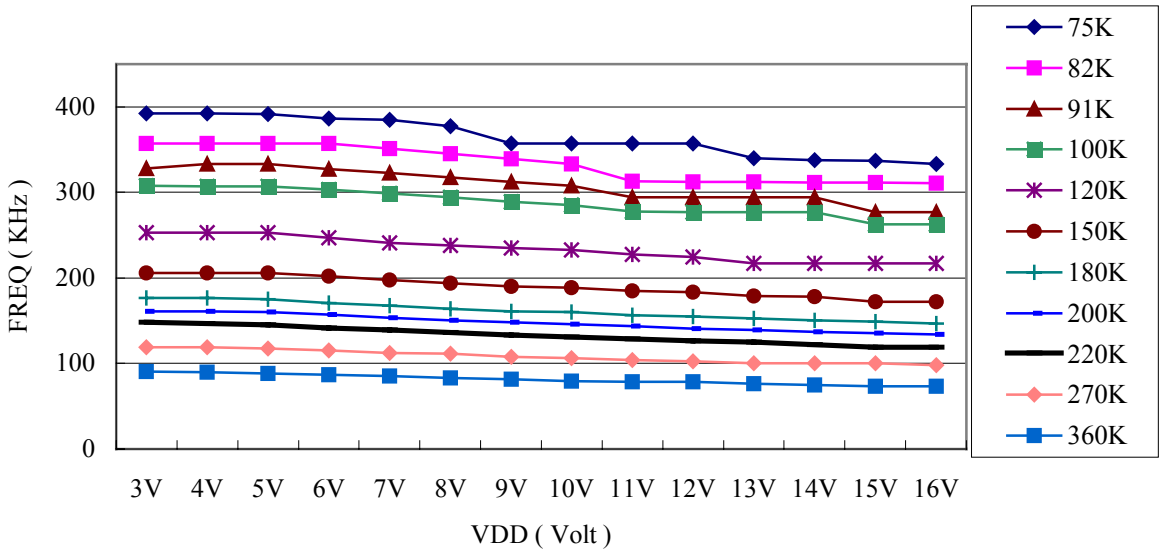
(1) Bit format



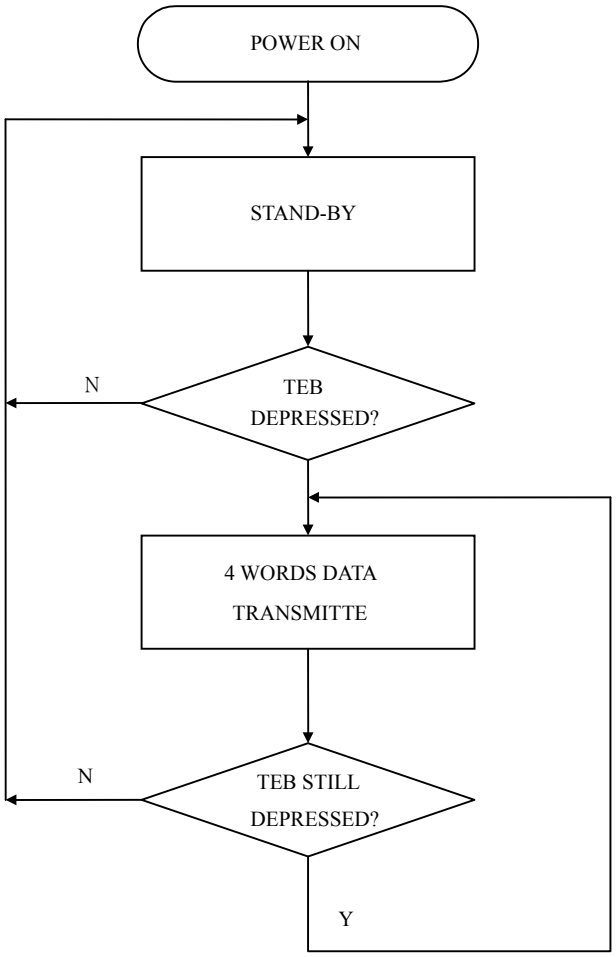
(2) TIMING DIAGRAM



M3E, F-V Curve



OPERATING FLOWCHART

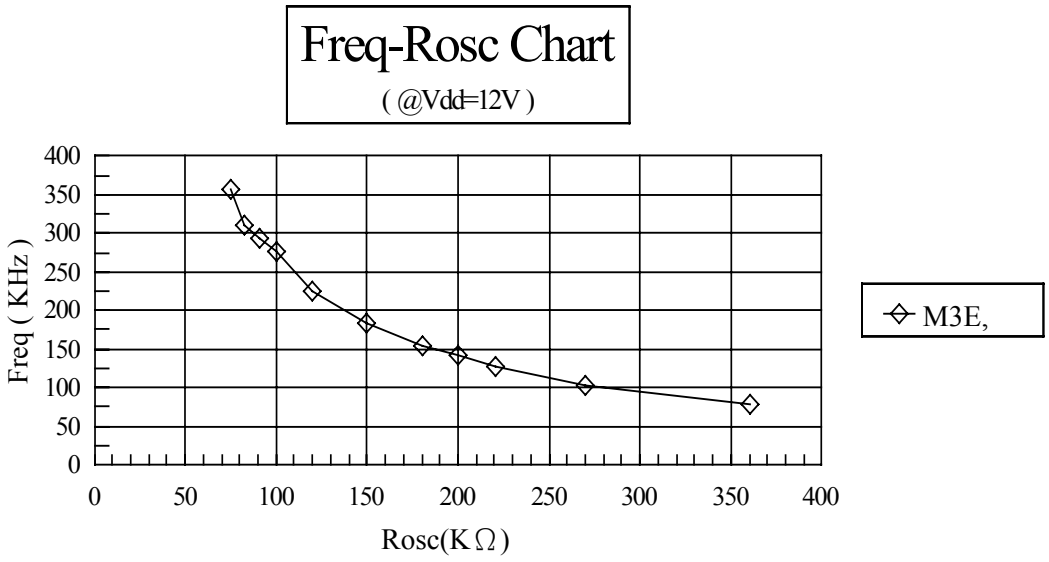


RECONNENDED OSCILLATOR PARAMETERS

Rosc (KΩ)	M3E, (KHz)
75	357
82	312
91	294
100	277
120	225
150	184
180	155
200	141
220	127
270	103
360	78

DATA OUTPUT

M3E, (D0~D3)	M3D/F (D0~D3)
0 (VSS)	0 (VSS)
X (OPEN)	1 (VDD)
1 (VDD)	1 (VDD)
POWER ON	0 (VSS)

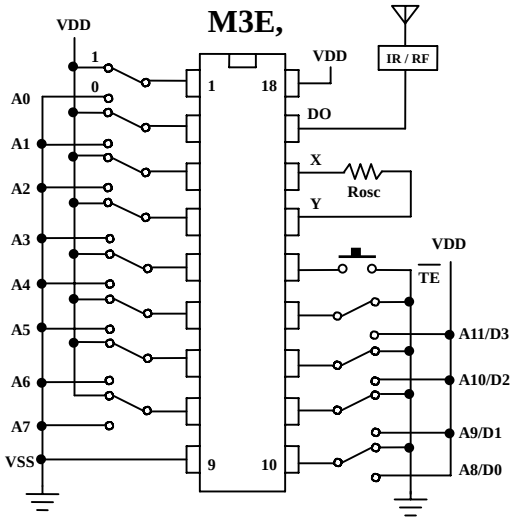


3 STATES ENCODER

3 態編碼 IC

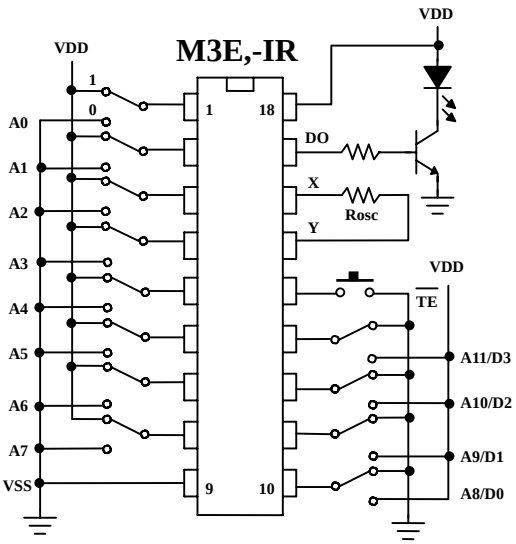
APPLICATION DIAGRAM 參考電路圖

M3E,



IR 內建發射

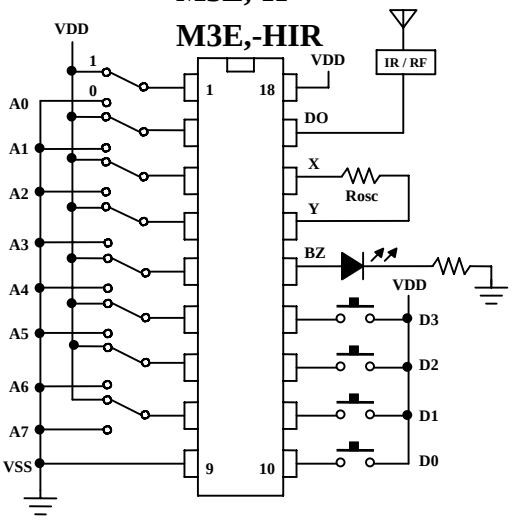
M3E,-IR



直接發射 (VDD)

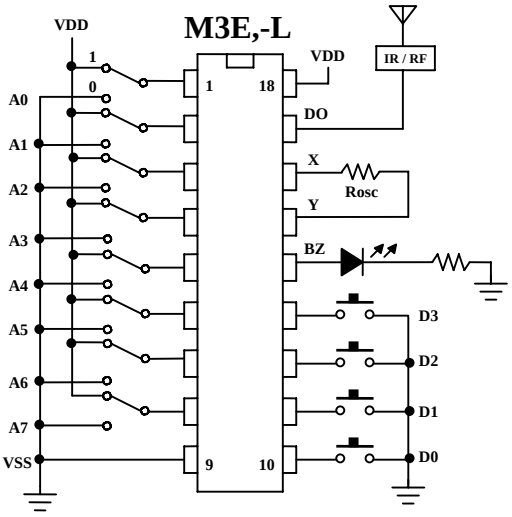
M3E,-H

M3E,-HIR



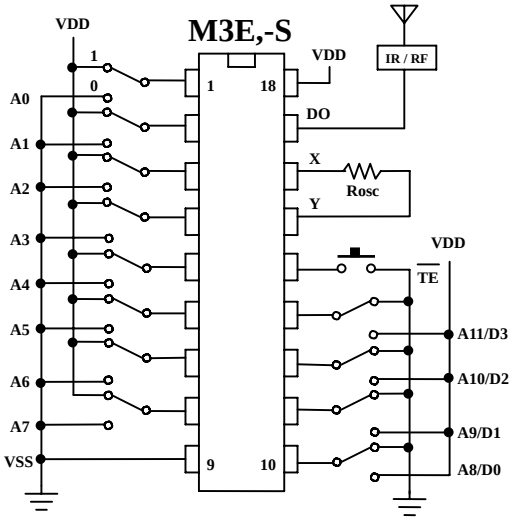
直接發射 (VSS)

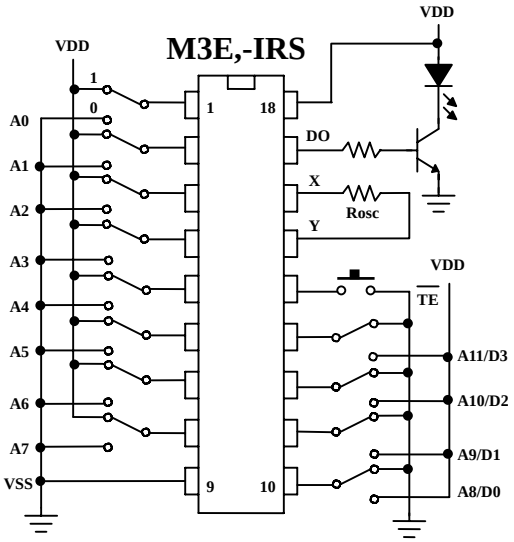
M3E,-L

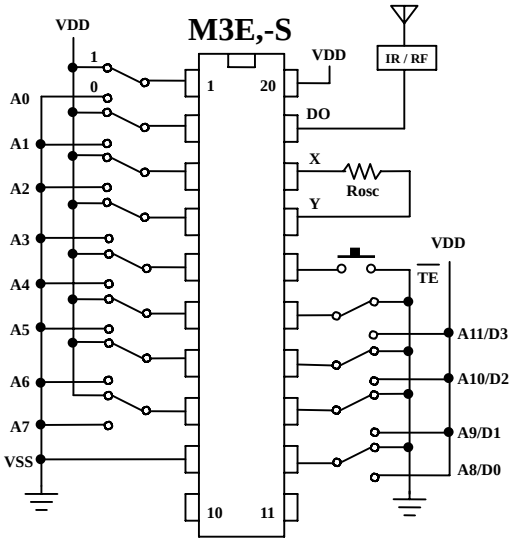


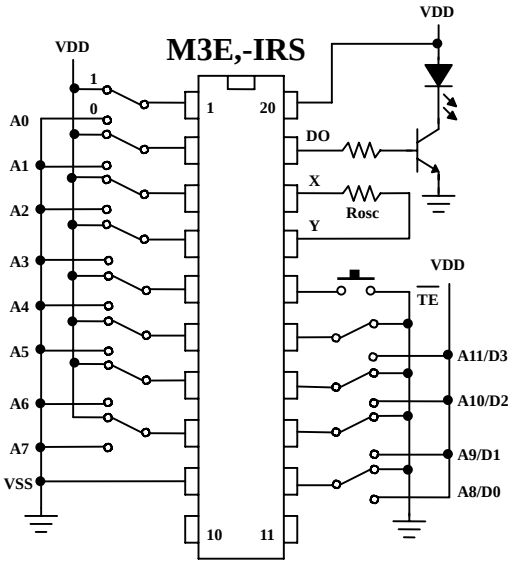
APPLICATION DIAGRAM 參考電路圖 (SOP PACKAGE)

IR 內建發射





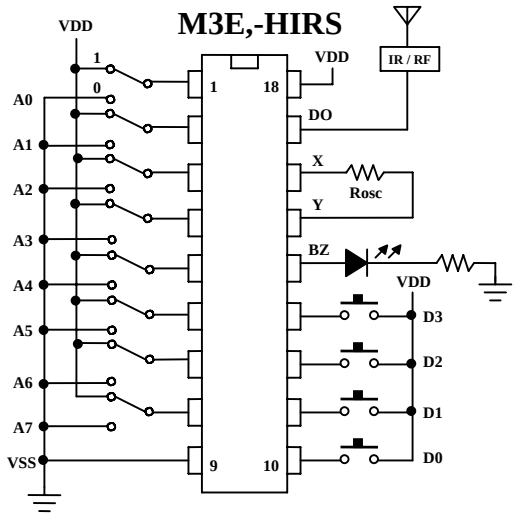




APPLICATION DIAGRAM 參考電路圖 (SOP PACKAGE)

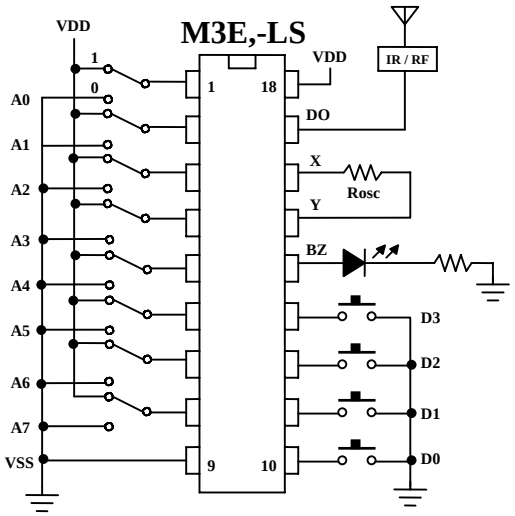
直接發射 (VDD)

M3E,-HS
M3E,-HIRS

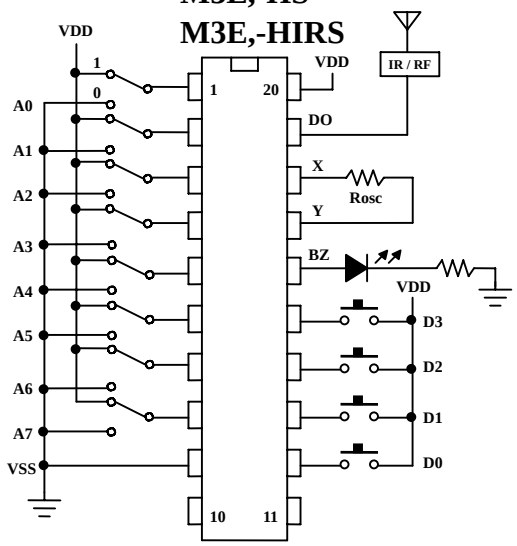


直接發射 (VSS)

M3E,-LS



M3E,-HS
M3E,-HIRS



M3E,-LS