



3 STATES ENCODER

3 态编码 IC

GENERAL DESCRIPTION 功能叙述

The M3EB is a CMOS ASIC decoder. It will en-code 12 parallel input and serially transmit them to the output when D0 ~ D3 depressed. Paired with either M3D or M3DB. These address inputs are 3 states i.e. LOW(0)、OPEN(X)、HIGH(1).

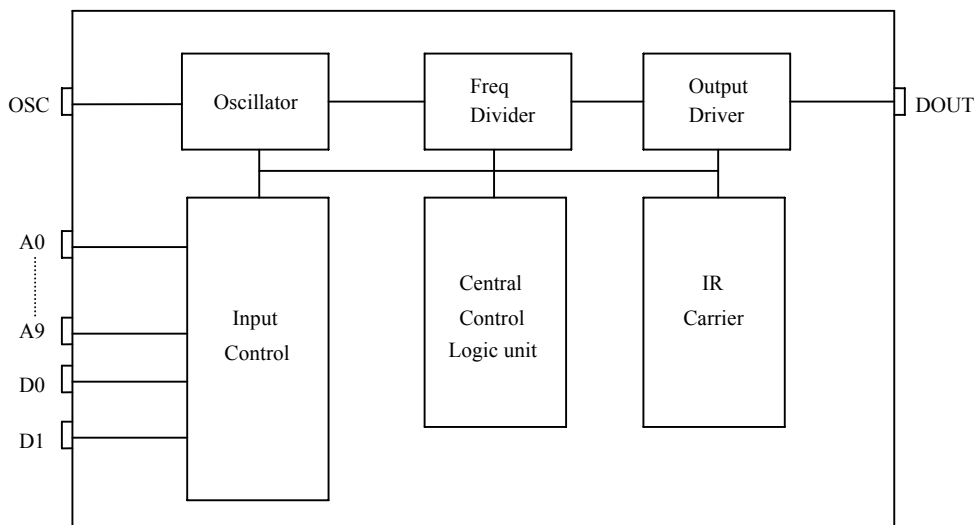
FEATURES 产品特长

- Built-in IR carrier: suffix-I.
- Up to $3^{10} = 59,049$ codes, "0"、"X"、"1" Tri-states.
- Single resistor oscillator.
- Data transmit over 30 second auto power off.
- 2 or 4 direct date transmit (internal pull-low resistor).
 - M3EB-2: 10 address, 2 data.
 - M3EB-4: 8 address, 4 data.

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
M3EB

ABSOLUTE MAXIMUM RATING

(TA=25°C)

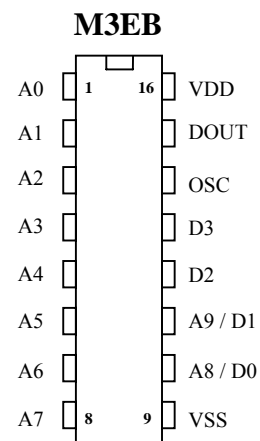
Parameter	Rating	Unit
Supply Voltage	-0.3 to 12	V
Input Voltage	-0.2~V _{DD} +0.2	V
Operating Temperature	-20 to 70	°C
Storage Temperature	-50 to 125	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Sym.	Min.	Typ.	Max.	Unit	Conditions
Operating Voltage	V _{DD}	2.4	—	12	V	
Operating Current	I _{OP}	—	0.3	1	mA	No load
Quiescent Current	I _{SB}	—	1	10	uA	
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	—	152	—	KHz	External ± 30%, R _{osc} =470K Ω

PIN DESCRIPTION

No.	M3EB	Description
1~8	A0~A7	3 states address inputs
9	VSS	Negative power supply
10~11	A8/D0, A9/D1	3 states address inputs
12~13	D2, D3	Direct data transmission enable
14	OSC	Oscillator input
15	DOUT	Data output
16	VDD	Positive power supply



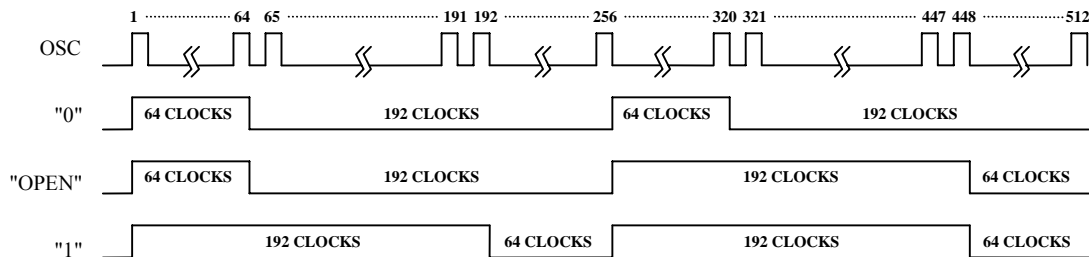


3 STATES ENCODER

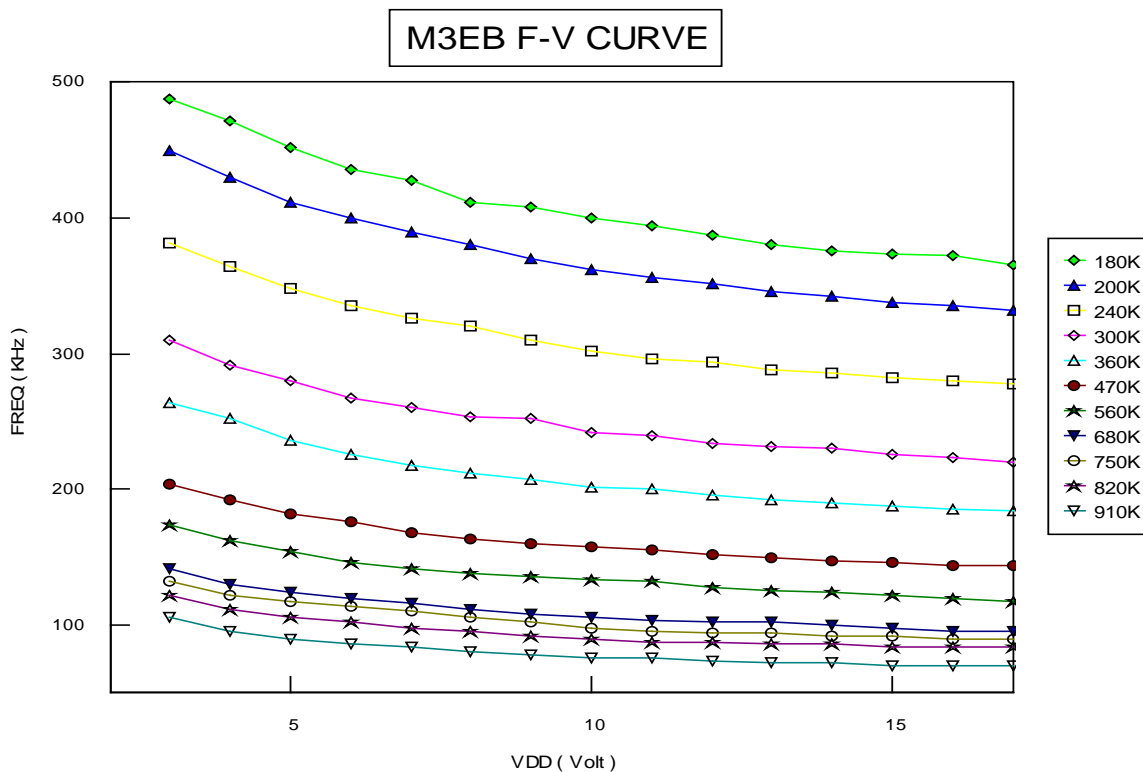
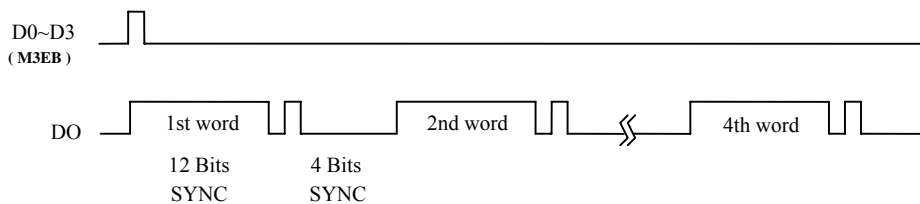
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TIMING WAVEFORM

(1) Bit format



(2) TIMING DIAGRAM

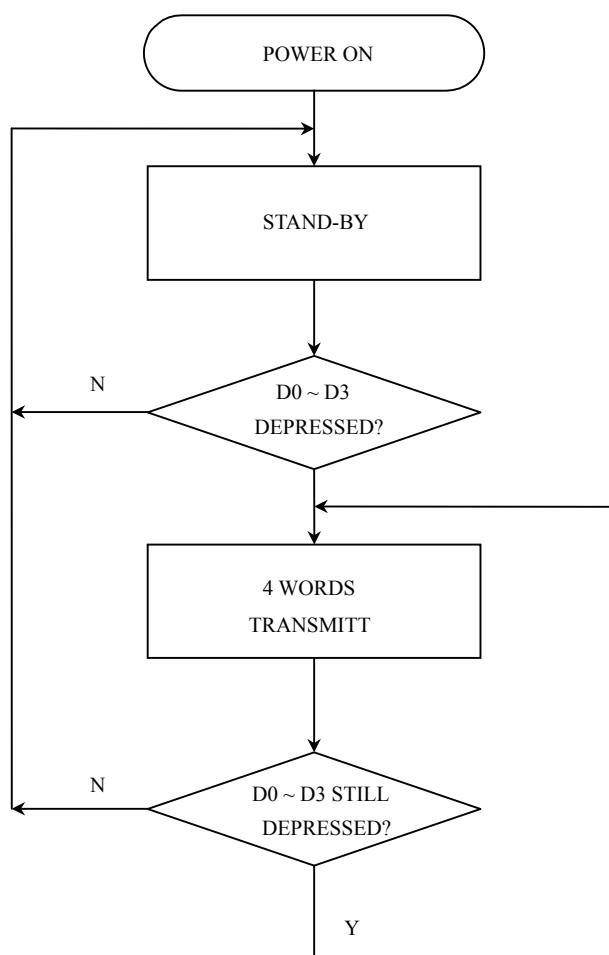




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OPERATING FLOWCHART





RECONNENDED OSCILLATOR PARAMETERS

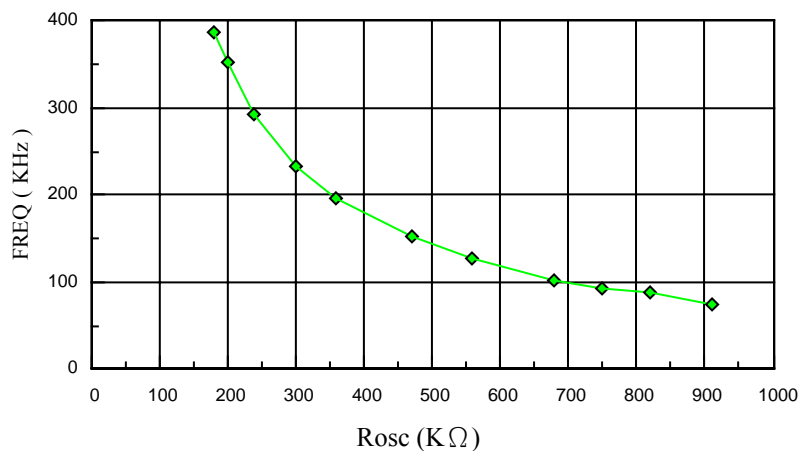
Rosc (KΩ)	M3EB (KHz)
180	388
200	352
240	294
300	234
360	196
470	152
560	128
680	102
750	94
820	88
910	74

DATA OUTPUT

M3EB (D0~D3)	M3DB (D0~D3)
X (OPEN)	0 (VSS)
1 (VDD)	1 (VDD)
POWER ON	0 (VSS)

Freq-Rosc Chart

(@Vdd = 12V)



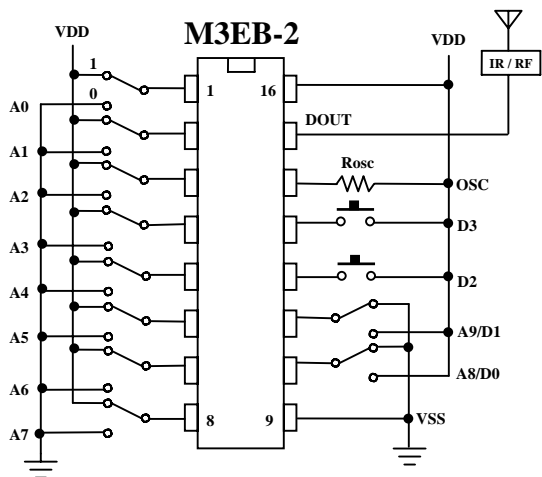
◆ M3EB



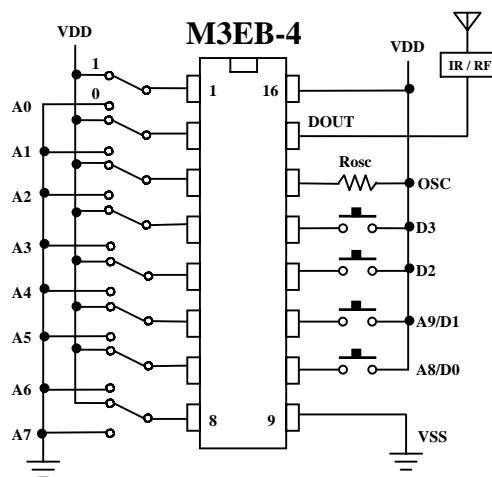
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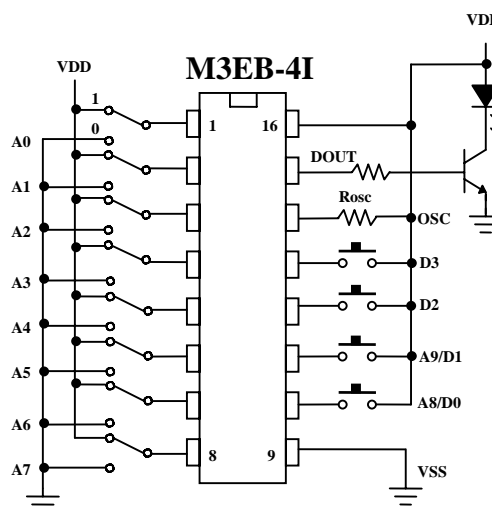
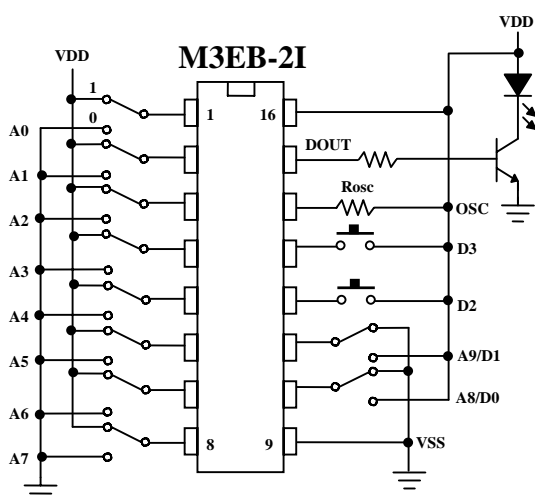
APPLICATION DIAGRAM 参考电路图



IR 内建发射



IR 内建发射

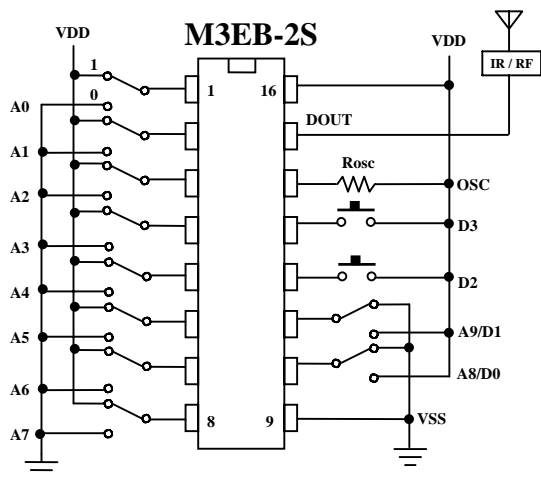




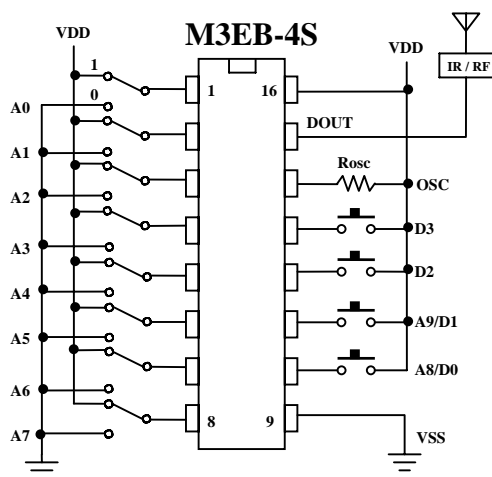
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APPLICATION DIAGRAM 参考电路图 (SOP PACKAGE)



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IR 内 建 发 射

