

# HS-C<sup>2</sup>MOS<sup>TM</sup> INTEGRATED CIRCUITS

041178

**M54HC237**  
**M74HC237**

## PRODUCT PREVIEW

### 3 TO 8 LINE DECODER LATCH

#### DESCRIPTION

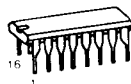
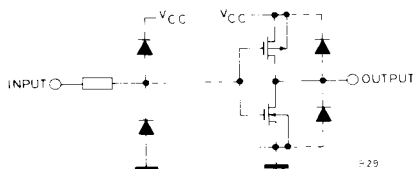
The M54/74HC237 is a high speed CMOS 3 TO 8 LINE DECODER LATCH fabricated in silicon gate C<sup>2</sup>MOS technology.

It has the same high speed performance of LSTTL combined with true CMOS low power consumption. When LE goes from low to high, the address present at the select inputs (A0, A1, A2) is stored in the latches. As long as LE remains high no address changes will be recognized. Output enable controls, CS1 and CS2 control the state of the outputs independently of the select or latch-enable inputs. All of the outputs are low unless CS1 is high and CS2 is low. The 'HC237 is ideally suited for the implementation of glitch-free decoders in stored-address applications in bus oriented systems. All inputs are equipped with protection circuits against static discharge or transient excess voltage.

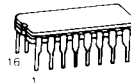
#### FEATURES

- Low Power Dissipation  
 $I_{CC} = 4 \mu A$  (Max.) at  $T_A = 25^\circ C$
- High Noise Immunity  
 $V_{NIH} = V_{NIL} = 28\% V_{CC}$  (Min.)
- Output Drive Capability  
10 LSTTL Loads
- Symmetrical Output Impedance  
 $|I_{OH}| = I_{OL} = 4 \text{ mA}$  (Min.)
- Balanced Propagation Delays  
 $t_{PLH} = t_{PHL}$
- Wide Operating Voltage Range  
 $V_{CC} (\text{opr}) = 2\text{V to } 6\text{V}$
- Pin and Function compatible with 54/74LS237

#### INPUT AND OUTPUT EQUIVALENT CIRCUIT



**B1**  
Plastic Package



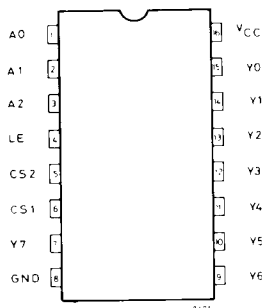
**F1**  
Ceramic Package



**C1**  
Chip Carrier

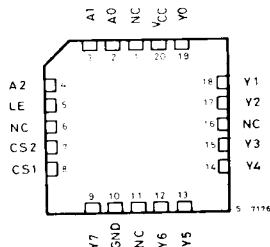
ORDERING NUMBERS: M54HC237 F1  
M74HC237 B1  
M74HC237 F1  
M74HC237 C1

#### PIN CONNECTIONS (top view)



Dual in line

#### CHIP CARRIER



NC = No Internal Connection



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**TRUTH TABLE**

INPUTS						OUTPUTS							
LE	CS <sub>1</sub>	CS <sub>2</sub>	A <sub>2</sub>	A <sub>1</sub>	A <sub>0</sub>	Y <sub>0</sub>	Y <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>	Y <sub>4</sub>	Y <sub>5</sub>	Y <sub>6</sub>	Y <sub>7</sub>
X	X	H	X	X	X	L	L	L	L	L	L	L	L
X	L	X	X	X	X	L	L	L	L	L	L	L	L
L	H	L	L	L	L	H	L	L	L	L	L	L	L
L	H	L	L	L	H	L	H	L	L	L	L	L	L
L	H	L	L	H	L	L	L	H	L	L	L	L	L
L	H	L	L	H	H	L	L	L	H	L	L	L	L
L	H	L	H	L	L	L	L	L	L	H	L	L	L
L	H	L	H	L	H	L	L	L	L	L	H	L	L
L	H	L	H	H	L	L	L	L	L	L	L	H	L
L	H	L	H	H	H	L	L	L	L	L	L	L	H
H	H	L	X	X	X	*	*	*	*	*	*	*	*

X = Don't care                      \* = Depends upon the select data previously, applied while LE was at a logic low.