

# ACMECORP

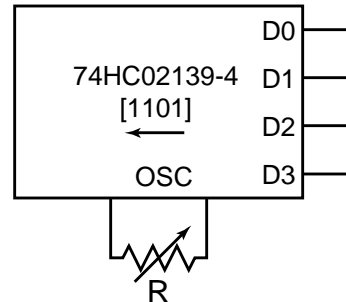
## Factory-programmed flexible-length circular shift register family

The SN74HC02139-n series is a family of factory-programmed circular shift registers, each featuring embedded 7-segment LED drivers and an internal oscillator. The -n suffix indicates the length of the shift register sequence, as set by ACMECORP using a proprietary ion implantation process. The internal oscillator is controlled with an external potentiometer, providing flexible linearly-mapped period control from 1 sec (R=1k) to 10 sec (R=10k). (For R=5k, T=5 sec.)

## SN74HC02139-n

### LOGIC SYMBOL

example: 02139-4



Vcc = PIN 8  
GND = PIN 4

### LOGIC / OUTPUT

Outputs D<0:3> are initially all zeros. Each positive edge of the internal oscillator pushes an additional bit, indicated between [brackets], into D0, and all bits are cycled towards D3. Data entering D0 flow in time as indicated by the arrow under the [bracketed] factory-burned data. Data falling off D3 cycle back to D0.

### EXAMPLE: SN74HC02139-4

As shown above, the bit sequence for n=4 is: [1101]. For an oscillator period of 1 sec (R=1k), the output sequence is as follows:

	D	D	D	D
t	0	1	2	3
0.0	0	0	0	0
1.0	1	0	0	0
2.0	0	1	0	0
3.0	1	0	1	0
4.0	1	1	0	1
5.0	1	1	1	0
6.0	0	1	1	1
7.0	1	0	1	1
8.0	1	1	0	1
9.0	1	1	1	0
etc.				