

# MC14541B

## Programmable Timer

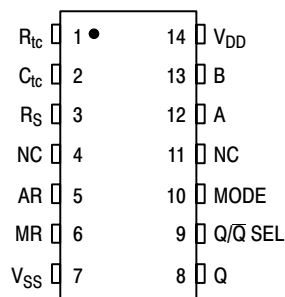
The MC14541B programmable timer consists of a 16–stage binary counter, an integrated oscillator for use with an external capacitor and two resistors, an automatic power–on reset circuit, and output control logic.

Timing is initialized by turning on power, whereupon the power–on reset is enabled and initializes the counter, within the specified  $V_{DD}$  range. With the power already on, an external reset pulse can be applied. Upon release of the initial reset command, the oscillator will oscillate with a frequency determined by the external RC network. The 16–stage counter divides the oscillator frequency ( $f_{osc}$ ) with the  $n^{th}$  stage frequency being  $f_{osc}/2^n$ .

### Features

- Available Outputs  $2^8$ ,  $2^{10}$ ,  $2^{13}$  or  $2^{16}$
- Increments on Positive Edge Clock Transitions
- Built–in Low Power RC Oscillator ( $\pm 2\%$  accuracy over temperature range and  $\pm 20\%$  supply and  $\pm 3\%$  over processing at  $< 10$  kHz)
- Oscillator May Be Bypassed if External Clock Is Available (Apply external clock to Pin 3)
- External Master Reset Totally Independent of Automatic Reset Operation
- Operates as  $2^n$  Frequency Divider or Single Transition Timer
- $Q/\bar{Q}$  Select Provides Output Logic Level Flexibility
- Reset (auto or master) Disables Oscillator During Resetting to Provide No Active Power Dissipation
- Clock Conditioning Circuit Permits Operation with Very Slow Clock Rise and Fall Times
- Automatic Reset Initializes All Counters On Power Up
- Supply Voltage Range = 3.0 Vdc to 18 Vdc with Auto Reset Disabled (Pin 5 =  $V_{DD}$ )  
= 8.5 Vdc to 18 Vdc with Auto Reset Enabled (Pin 5 =  $V_{SS}$ )
- Pb–Free Packages are Available\*

### PIN ASSIGNMENT



NC = NO CONNECTION

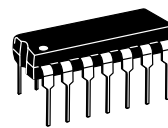
\*For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.



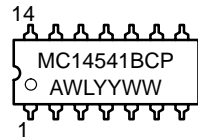
ON Semiconductor®

<http://onsemi.com>

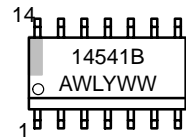
### MARKING DIAGRAMS



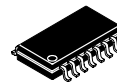
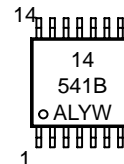
PDIP–14  
P SUFFIX  
CASE 646



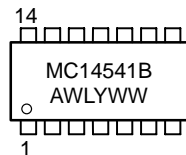
SOIC–14  
D SUFFIX  
CASE 751A



TSSOP–14  
DT SUFFIX  
CASE 948G



SOEIAJ–14  
F SUFFIX  
CASE 965



A = Assembly Location  
WL, L = Wafer Lot  
YY, Y = Year  
WW, W = Work Week

### ORDERING INFORMATION

See detailed ordering and shipping information in the package dimensions section on page 2 of this data sheet.