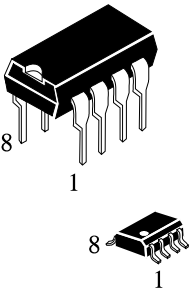


Timing Circuit

IN555

The IN555 monolithic timing circuit is a highly stable controller capable of producing accurate time delays, or oscillation.

- Direct Replacement for NE555 Timers
- Timing From Microseconds Through Hours
- Operates in Both Astable and Monostable Modes
- High Current Output Can Source or Sink 200 mA



N SUFFIX
PLASTIC

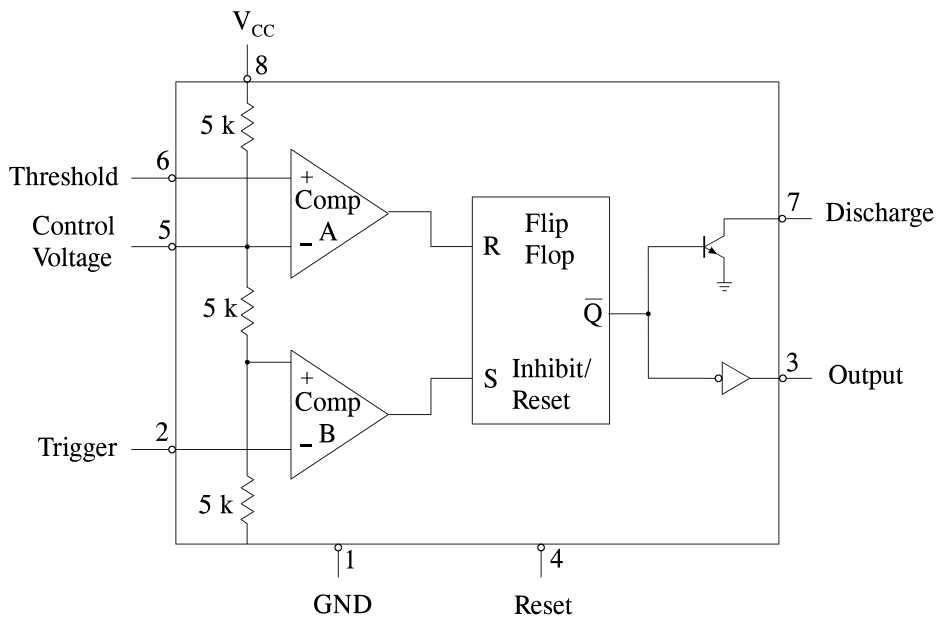
D SUFFIX
SOIC

ORDERING INFORMATION
IN555N Plastic
IN555D SOIC
 $T_A = -10^\circ$ to 70° C for all packages

PIN ASSIGNMENT

GND	1 ●	8	V_{CC}
Trigger	2	7	Discharge
Output	3	6	Threshold
Reset	4	5	Control Voltage

LOGIC DIAGRAM



MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CC}	Supply Voltage	18	V
T _{stg}	Storage Temperature	-60 to +85	°C

* Stresses beyond those listed under “absolute maximum ratings” may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated under “recommended operating conditions” is not implied.

Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability.

RECOMMENDED OPERATING CONDITIONS

Symbol	Parameter	Min	Max	Unit
V _{CC}	Supply Voltage	4.5	16	V
T _A	Operating Temperature, All Package Types	-10	+70	°C

ELECTRICAL CHARACTERISTICS(T_A =+25°C)

Symbol	Parameter	Test Conditions	Guaranteed Limits		Temperature, °C	Unit
			Min	Max		
V _{OH}	Output Voltage High	V _{CC} =5.0 V, V _{IL} =1.1 V V _{IH} =2.6 V, I _{OH} =100 mA	12.75		25±10 -10÷ +70	V
		V _{CC} =15 V, V _{IL} =4.5 V V _{IH} =9.0 V, I _{OH} =100 mA	2.75			
V _{OL}	Output Voltage Low	V _{CC} =5.0 V, V _{IL} =2.2 V V _{IH} =4.0 V, I _{IL} =5.0 mA		0.35		V
		V _{CC} =15 V, V _{IL} =5.6 V V _{IH} = 11 V, I _{OL} =10 mA		0.25		
		V _{CC} =15 V, V _{IL} =0 V V _{IH} =15 V, I _{OL} =50 mA		0.75		
		V _{CC} =15 V, V _{IL} =0 V V _{IH} =15 V, I _{OL} =100 mA		2.3		
V _{REF}	Reference voltage	V _{CC} =15 V, V _{IH} =11 V V _{IL} =0 V	9.0	11.0		V
		V _{CC} =5 V, V _{IH} =4 V V _{IL} =0 V	2.6	4.0		
I _{IL}	Low Level Input Current For pin 04 For pin 02	V _{CC} =15 V, V _{IH} =11 V V _{IL} =0 V		-0.4 -0.002		mA
I _I	Input Current	V _{CC} =15 V, V _{IH} =10 V V _{IL} =0 V		0.25	25±10 -10÷+70	µA
				0.45		
I _{CC}	Supply current	V _{CC} =5.0 V, V _{IL} =0 V V _{IH} =4.0 V		6.0	25±10 -10÷ +70	mA
		V _{CC} =15 V, V _{IL} =11 V V _{IL} =0 V		15		
t _{OLH}	Rise Time of Output	V _{CC} =15 V		150		ns
t _{OHL}	Fall Time of Output	V _{CC} =15 V		150		ns

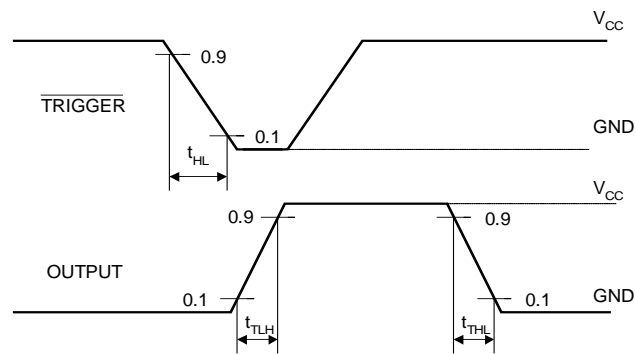
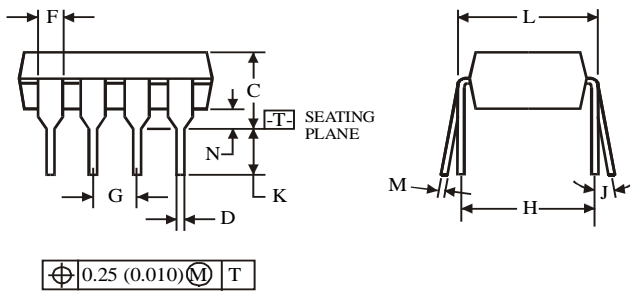
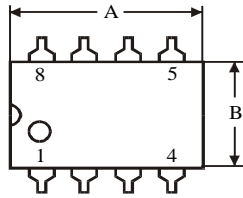
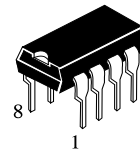


Figure 1. Switching Waveforms

**N SUFFIX PLASTIC DIP
(MS - 001BA)**

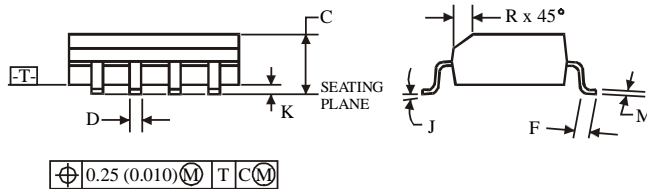
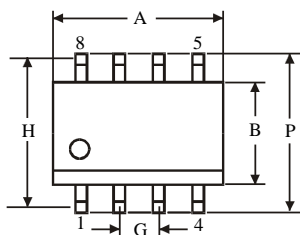
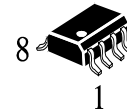


Symbol	Dimension, mm	
	MIN	MAX
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

NOTES:

- Dimensions "A", "B" do not include mold flash or protrusions.
Maximum mold flash or protrusions 0.25 mm (0.010) per side.

**D SUFFIX SOIC
(MS - 012AA)**



Symbol	Dimension, mm	
	MIN	MAX
A	4.8	5
B	3.8	4
C	1.35	1.75
D	0.33	0.51
F	0.4	1.27
G	1.27	
H	5.72	
J	0°	8°
K	0.1	0.25
M	0.19	0.25
P	5.8	6.2
R	0.25	0.5

NOTES:

- Dimensions A and B do not include mold flash or protrusion.
- Maximum mold flash or protrusion 0.15 mm (0.006) per side for A; for B - 0.25 mm (0.010) per side.