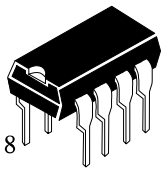
Timing Circuit

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



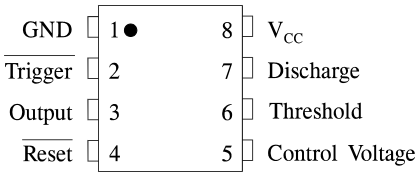
N SUFFIX
PLASTIC

D SUFFIX
SOIC

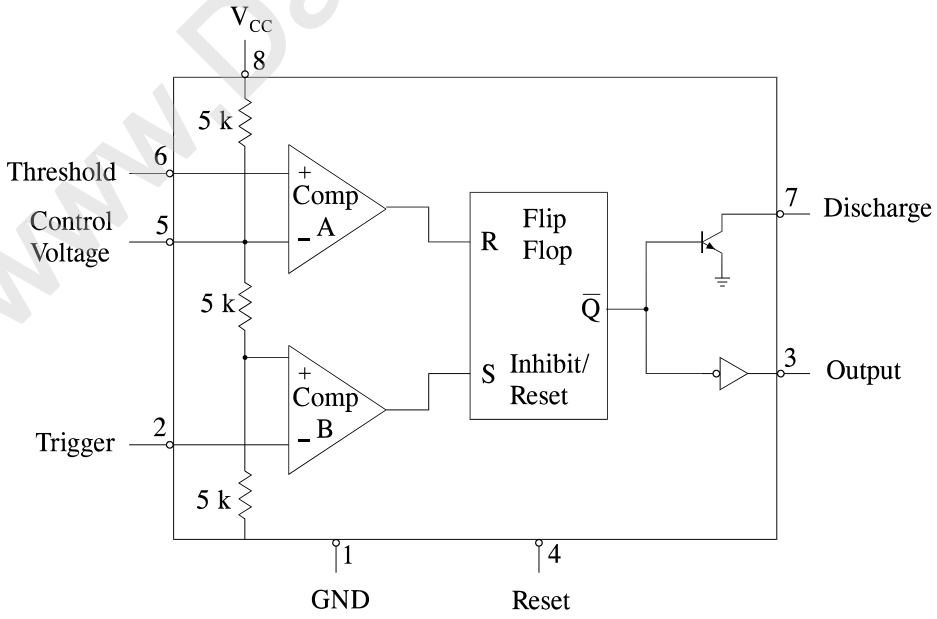
ORDERING INFORMATION

IN555N Plastic
IN555D SOIC
T_A = -10° to 70° C for all packages

PIN ASSIGNMENT



LOGIC DIAGRAM



MAXIMUM RATINGS

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

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		Tempe-rature, ˚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	µA
				0.45	-10÷+70	
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

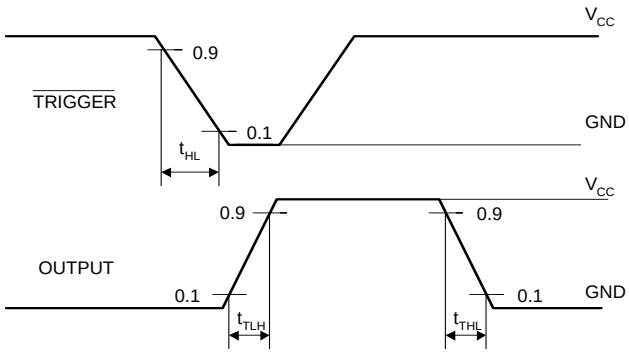
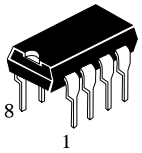
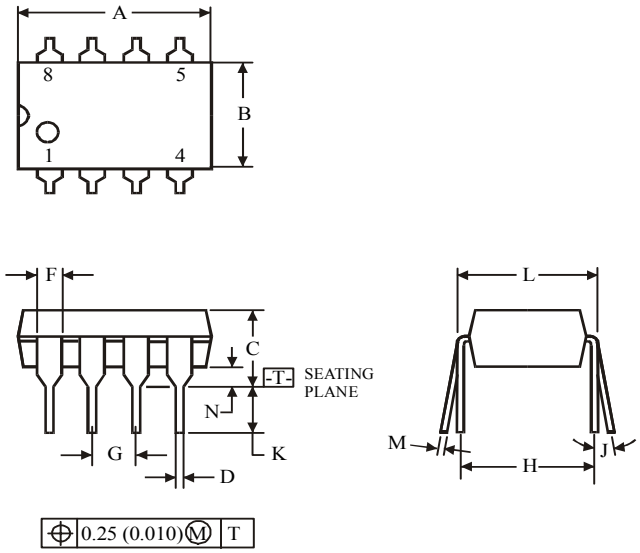


Figure 1. Switching Waveforms

N SUFFIX PLASTIC DIP
(MS – 001BA)



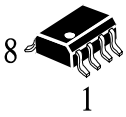


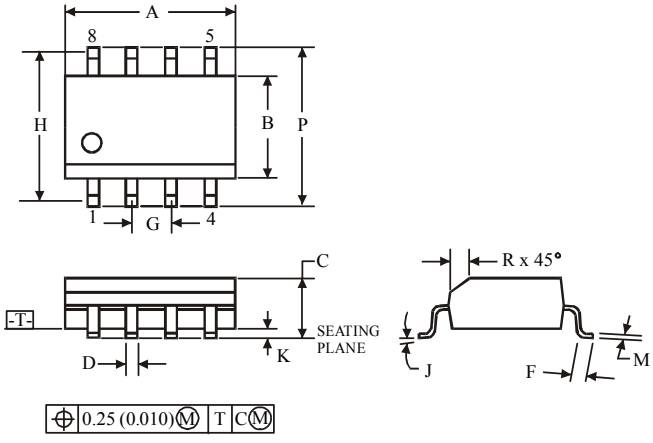
	Dimension, mm	
Symbol	**MIN**	**MAX**
A	8.51	10.16
B	6.1	7.11
C		5.33
D	0.36	0.56
F	1.14	1.78
G	2.54	
H	7.62	
J	0°	10°
K	2.92	3.81
L	7.62	8.26
M	0.2	0.36
N	0.38	

NOTES:

1. 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)





	Dimension, mm	
Symbol	**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:

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