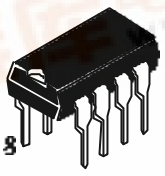
Timing Circuit

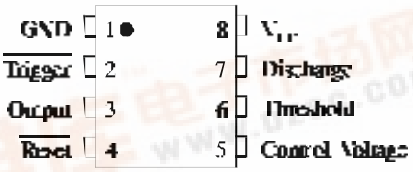
The SLC555 monolithic timing circuit is a highly stable controller capable of producing accurate time delays, or oscillation.

- 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

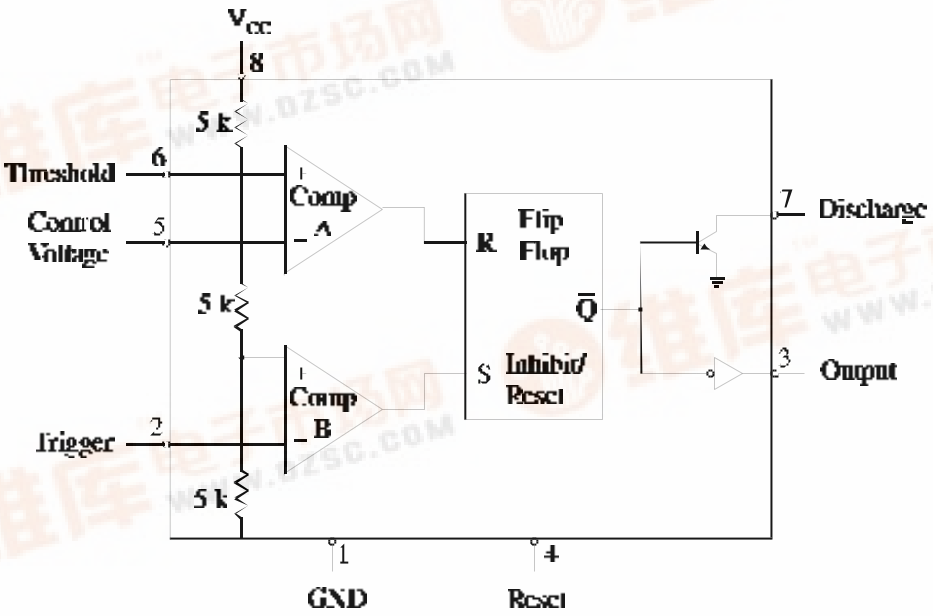


ORDERING INFORMATION
SLC555N Plastic
SLC555D SOIC
T_A = -10° to 70° C for
all packages

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		Unit
			Min	Max	
I_{CC}	Supply Current	V_{CC}=5.0 V, R_L =∞ V_{CC}=15 V, R_L=∞		6.0 15	mA
	Timing Error	R=1.0 kΩ to 100 kΩ Initial Accuracy C = 0.1 µF V_{CC}=5.0 V and V_{CC}=15 V		4	%
V_{th}	Threshold Voltage	V_{CC}=5.0 V V_{CC}=15 V	2.6 9	4.0 11	V
V_T	Trigger Voltage	V_{CC}=5.0 V V_{CC}=15 V	1.1 4.5	2.2 5.6	V
I_T	Trigger Current	V_{02}=0 V, V_{CC}=15 V V_{02}=15 V, V_{CC}=15 V		-2 0.5	µA
V_R	Reset Voltage	V_{CC}=15 V	0.4	1.0	V
I_R	Reset Current	V_{04}=0 V, V_{CC}=15 V V_{04}=15 V, V_{CC}=15 V		-0.4 0.5	mA µA
I_{th}	Threshold Current (Note 1)	V_{06}=0 V, V_{CC}=15 V V_{06}=10 V, V_{CC}=15 V		-0.5 0.25	µA
I_{dis}	Discharge Leakage Current (Pin 7)	V_{CC}=15 V, V_{07}=15 V		100	nA
V_{REF}	Control Voltage Level	V_{CC}=15 V V_{CC}=5.0 V	9.0 2.6	11 4.0	V
V_{OL}	Output Voltage Low	(V_{CC}=15 V) I_{sink}=10 mA, I_{sink}=50 mA, I_{sink}=100 mA, V_{CC}=5.0 V, I_{sink}=5.0 mA		 0.25 0.75 2.3 0.35	V
V_{OH}	Output Voltage High	I_{source}=200 mA,V_{CC}=15 V I_{source}=100 mA, V_{CC}=15 V I_{source}=100 mA, V_{CC}=5.0 V	12 12.75 2.75		V
t_{OLH}	Rise Time of Output	V_{CC}=15 V		150	ns
t_{OHL}	Fall Time of Output	V_{CC}=15 V		150	ns

Note 1. This will determine the maximum value of $R_A + R_B$ for 15 V operation.
The maximum total R=20 MΩ.