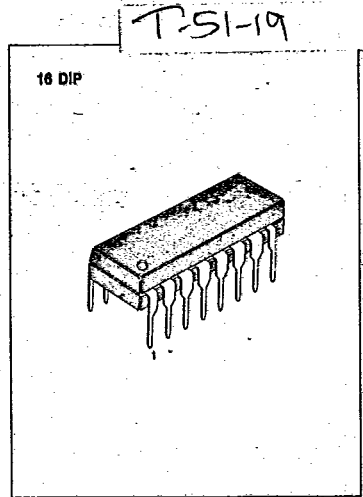


**NE558C**

**LINEAR INTEGRATED CIRCUIT**

**QUAD TIMER**

The NE558 series are monolithic Quad Timers which can be used to produce four entirely independent timing functions. These highly stable, general purpose controllers can be used in a monostable mode to produce accurate time delays, from microseconds to hours. The time is precisely controlled by one external resistor and one capacitor in the time delay mode. A stable mode can be operated by using two of four time sections.



**FEATURES**

- Wide Supply Voltage Range: 4.5V To 16V
- 100mA Output Current Per Section
- Edge Triggered Without Coupling Capacitor
- Time Period Equals RC
- Output Independent Of Trigger Conditions

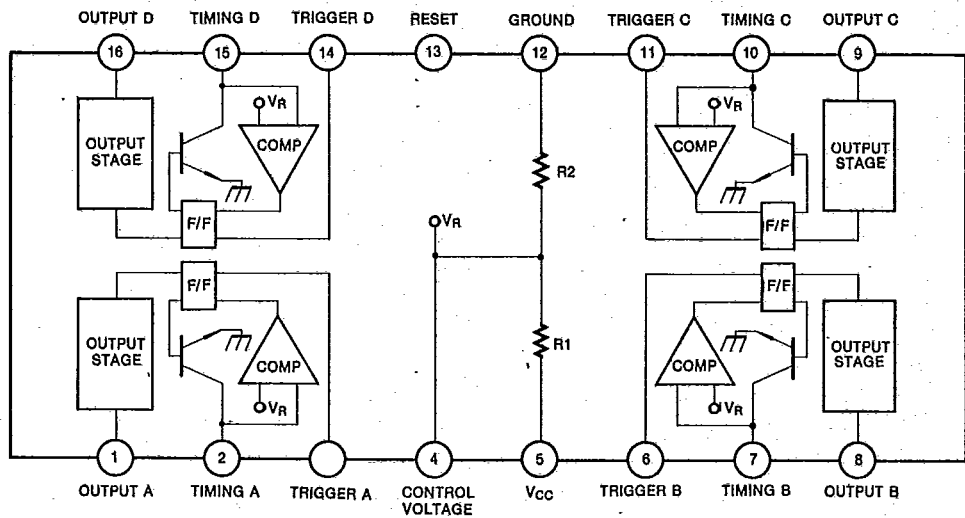
**APPLICATIONS**

- Quad One-Shot
- Sequential Timing
- Precision Timing
- Time Delay Generation

**ORDERING INFORMATION**

Device	Package	Operating Temperature
NE558CN	16 DIP	0~ +70°C

**BLOCK DIAGRAM**



## NE558C

## LINEAR INTEGRATED CIRCUIT

T-51-19

## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>CC</sub>	16	V
Lead Temperature (soldering 10 sec)	T <sub>lead</sub>	300	°C
Power Dissipation	P <sub>D</sub>	600	mW
Operating Temperature Range	T <sub>opr</sub>	0 ~ +70	°C
Storage Temperature Range	T <sub>stg</sub>	-65 ~ +150	°C

## ELECTRICAL CHARACTERISTICS

(V<sub>CC</sub> = 5 to 15V, Ta = 25°C, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V <sub>CC</sub>		4.5		16	V
Supply Current	I <sub>CC</sub>	V <sub>CC</sub> = 15V, reset voltage = 15V		16	36	mA
Timing Error (T = RC) Initial Accuracy	M <sub>T</sub>	R = 2KΩ to 100KΩ, C = 1μF		±2	5	%
Drift with Temperature				30	150	PPM/°C
Drift with Supply Voltage				0.1	0.9	%/V
<sup>1</sup> Trigger Voltage	V <sub>TR</sub>	V <sub>CC</sub> = 15V	0.8	1.5	2.4	V
<sup>1</sup> Trigger Current	I <sub>TR</sub>	Trigger voltage = 0V		5.0	100	μA
<sup>2</sup> Reset Voltage	V <sub>RE</sub>	Reset	0.8	1.5	2.4	V
<sup>2</sup> Reset Current	I <sub>RE</sub>	Reset		50	500	μA
Threshold Voltage	V <sub>TH</sub>			0.63 × V <sub>CC</sub>		V
Threshold Current	I <sub>TL</sub>			15		nA
<sup>3</sup> Output Voltage	V <sub>OUT</sub>	I <sub>L</sub> = 10mA		0.1	0.4	V
		I <sub>L</sub> = 100mA		1.0	2.0	
Output Leakage Current	I <sub>OL</sub>			10	500	nA
Propagation Delay Time	T <sub>P</sub>			1.0		μS
Rise Time	T <sub>r</sub>	I <sub>L</sub> = 100mA		100		nS
Fall Time	T <sub>f</sub>	I <sub>L</sub> = 100mA		100		nS

- NOTES: 1. The trigger functions only on the falling edge of the trigger pulse only after previously being high. After reset the trigger must be brought high and then low to implement triggering.  
 2. For reset below 0.8V, outputs set low and trigger inhibited.  
 3. Output structure is open collector which requires a pull up resistor to V<sub>CC</sub> to sink current. The output is normally low sinking current.