

UTC NE558

LINEAR INTEGRATED CIRCUIT

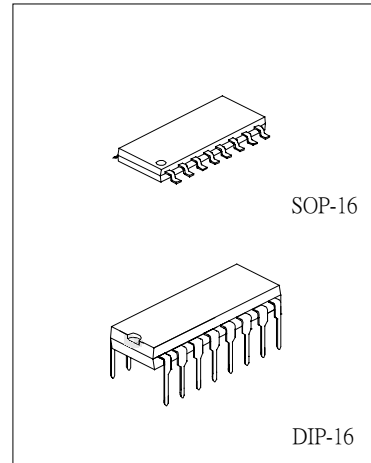
QUAD TIMER

DESCRIPTION

The UTC NE558 is a monolithic quad timer which can be used to produce four entirely independent timing functions. The highly stable, general purpose controller can be used in a monostable mode to produce accurate time delays.

FEATURES

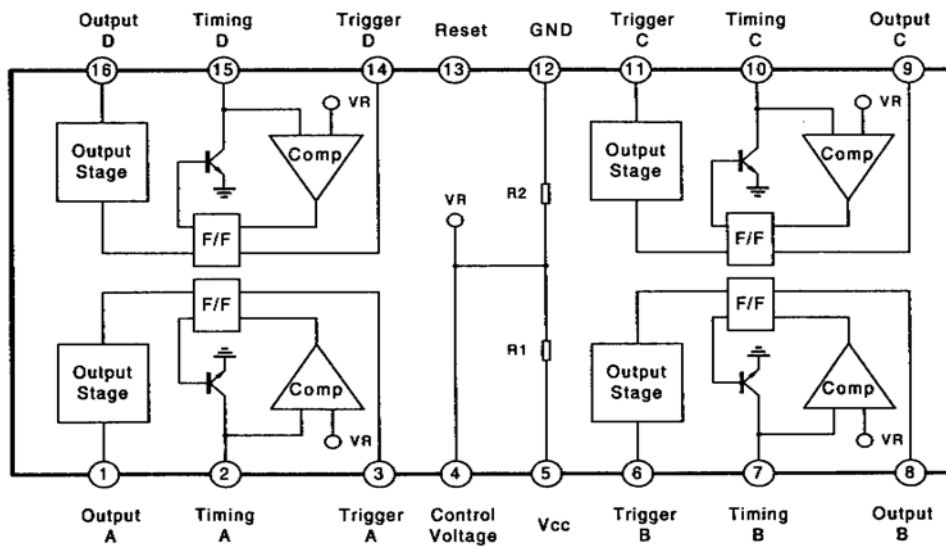
- *Wide supply voltage: $V_{cc} = 4.5V \sim 15V$
- *100mA output current per-section
- *Edge trigger without coupling capacitor
- *Time period equals RC
- *Output independent



APPLICATIONS

- *Precision timing
- *Quad one-shot
- *Timing delay generation
- *Sequential timing.

BLOCK DIAGRAM



UTC NE558 LINEAR INTEGRATED CIRCUIT

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	16	V
Power Dissipation	Pd	600	mW
Lead Temperature(soldering 10 sec.)	Tlead	300	°C
Operating Temperature	Topr	-40~85	°C
Storage Temperature	Tstg	-65~150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C ,Vcc=5 to 15V, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	Vcc		4.5		16	V
Supply Current	Icc	Vcc=15V,RL=15V		16	36	mA
Timing Error(T=RC)						
Initial Accuracy	ACCUR	RA=2KΩ to 100KΩ C=1μF		2	5	%
Drift with Temperature	Δt/ΔT			30	150	ppm/°C
Drift with Supply Voltage	Δt/ΔVcc			0.1	0.9	%/V
Threshold Voltage(Note 1)	VTH			0.63*Vcc		V
Threshold Current	ITH			15		Na
Trigger voltage	Vtr	Vcc=15V	0.8	1.5	2.4	V
Trigger Current	Itr	Vtr=0		5	100	μA
Reset Voltage(Note 2)	Vrst	Reset	0.8	1.5	2.4	V
Reset Current	Irst	Reset		5	100	μA
Output Voltage(Note 3)	VOL	IL=10mA IL=100mA		0.1 1	0.4 2	V
Rise Time of Output	tR	IL=100mA		100		nSec
Fall Time of Output	tF	IL=100mA		100	300	nSec
Discharge Leakage Current	ILKG			10	500	nA

Note 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.

Note 2: For reset below 0.8V, output s set low and trigger inhibited.

Note 3: Output structure is open collector which requires a pull up resistor to Vcc to sink current. The output is normally low sinking current.

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