

# KA558/KA558B

## Quad Timer

### Features

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

### Applications

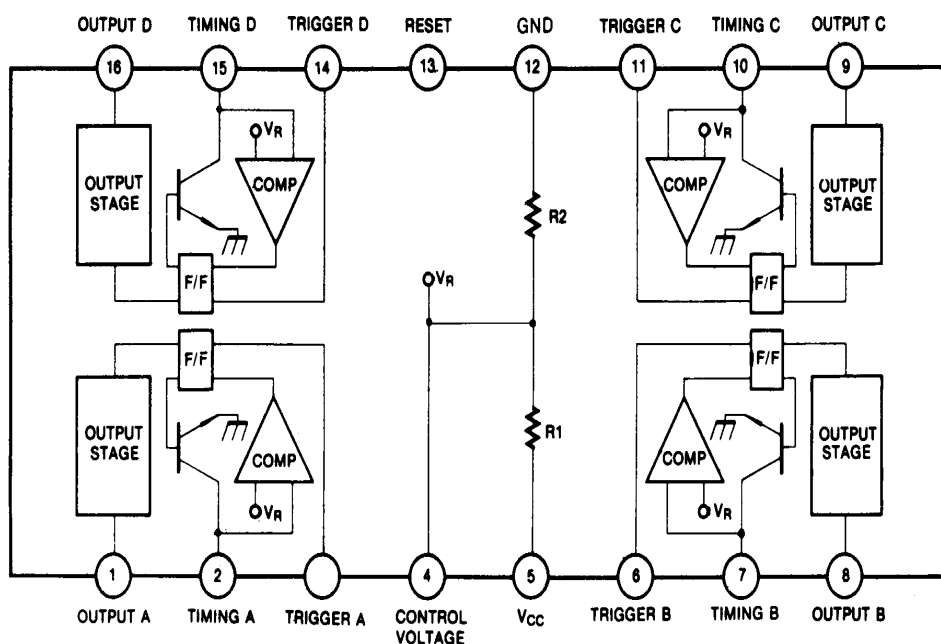
- Quad One-Shot
- Sequential Timing
- Precision Timing
- Time Delay Generation

### Description

The KA558/KA558B 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 using two of four time sections.



### Internal Block Diagram



## Absolute Maximum Ratings (TA = 25°C)

Parameter	Symbol	Value	Unit
Supply Voltage	VCC	16	V
Lead Temperature (soldering 10sec)	TLEAD	300	°C
Power Dissipation	PD	600	mW
Operating Temperature Range KA558/KA558B	TOPR	0 ~ + 70	°C
Storage Temperature Range	TSTG	-65 ~ + 150	°C

## Electrical Characteristics

(VCC = 5 ~ 15V, TA = 25°C, unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Voltage	VCC	-	4.5	-	16	V
Supply Current	ICC	VCC = 15V, reset voltage = 15V	-	16	36	mA
Timing Error (T = RC) Initial Accuracy Drift with Temperature Drift with Supply Voltage	ACCUR $\Delta t/\Delta T$ $\Delta t/\Delta V_{CC}$	R = 2K $\Omega$ to 100K $\Omega$ , C = 1 $\mu$ F	-	$\pm 2$ 30 0.1	5 150 0.9	% PPM/°C %/V
*1 Trigger Voltage	VTR	VCC = 15V	-	1.5	2.4	V
*1 Trigger Current	ITR	VTR = 0V	-	5.0	100	$\mu$ A
*2 Reset Voltage	VRST	-	0.8	1.5	2.4	V
*2 Reset Current	IRST	-	-	50	500	$\mu$ A
Threshold Voltage	VTH	-	0.8	0.63 $\times$ VCC	-	V
Threshold Current	ITH	-	-	15	-	nA
*3 Output Voltage	VO	I <sub>L</sub> = 10mA I <sub>L</sub> = 100mA	- -	0.1 1.0	0.4 2.0	V
Output Leakage Current	ILKG	-	-	10	500	nA
Propagation Delay Time	t <sub>D</sub>	-	-	1.0	-	$\mu$ S
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

### Note :

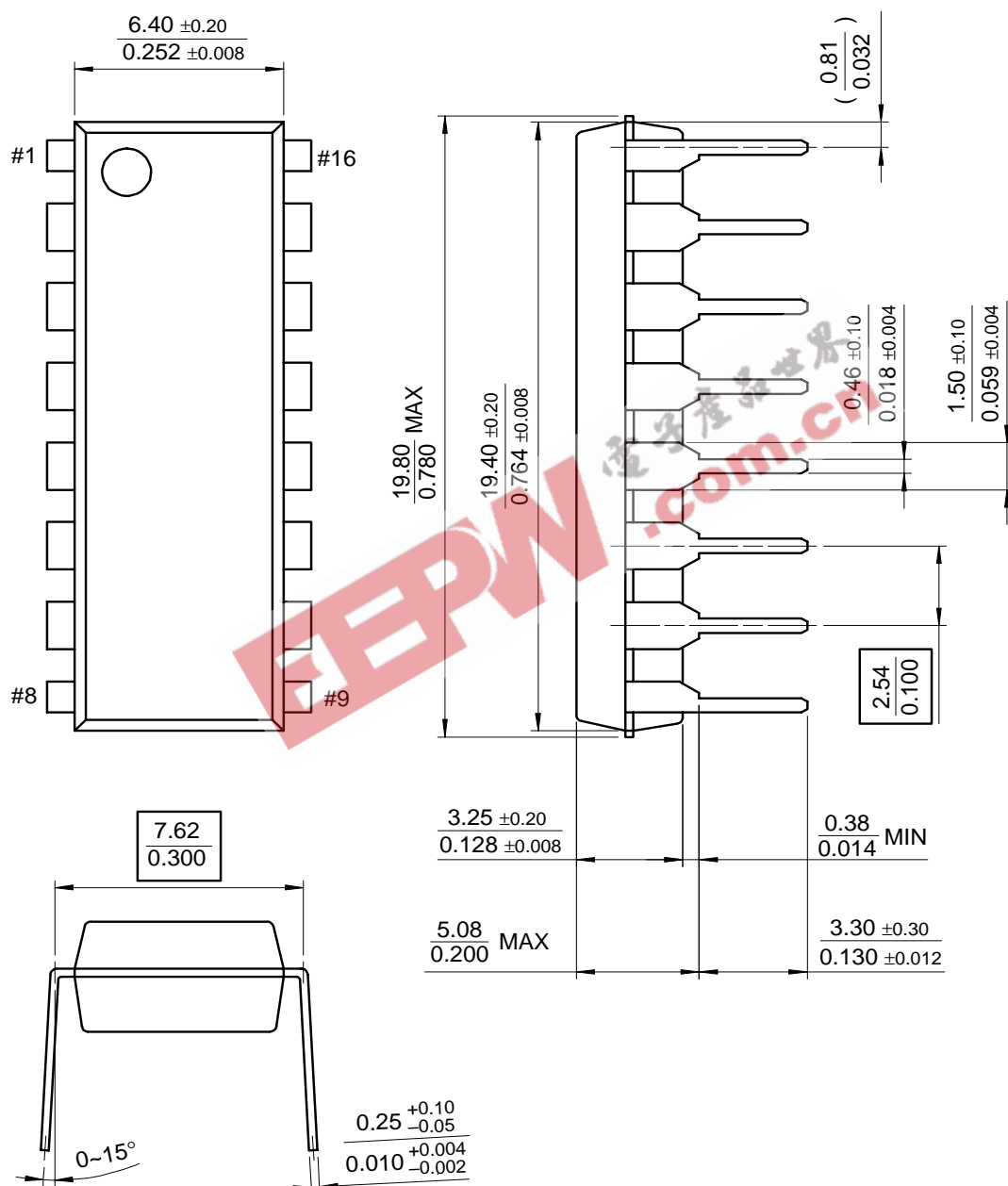
- The trigger functions only on the falling edge of the trigger pulse only after previously being high. After reset the trigger must be brought high and then low to implement triggering.
- For reset below 0.8V, outputs set low and trigger inhibited.
- Output structure is open collector which requires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

## Mechanical Dimensions

### Package

Dimensions in millimeters

### 16-DIP

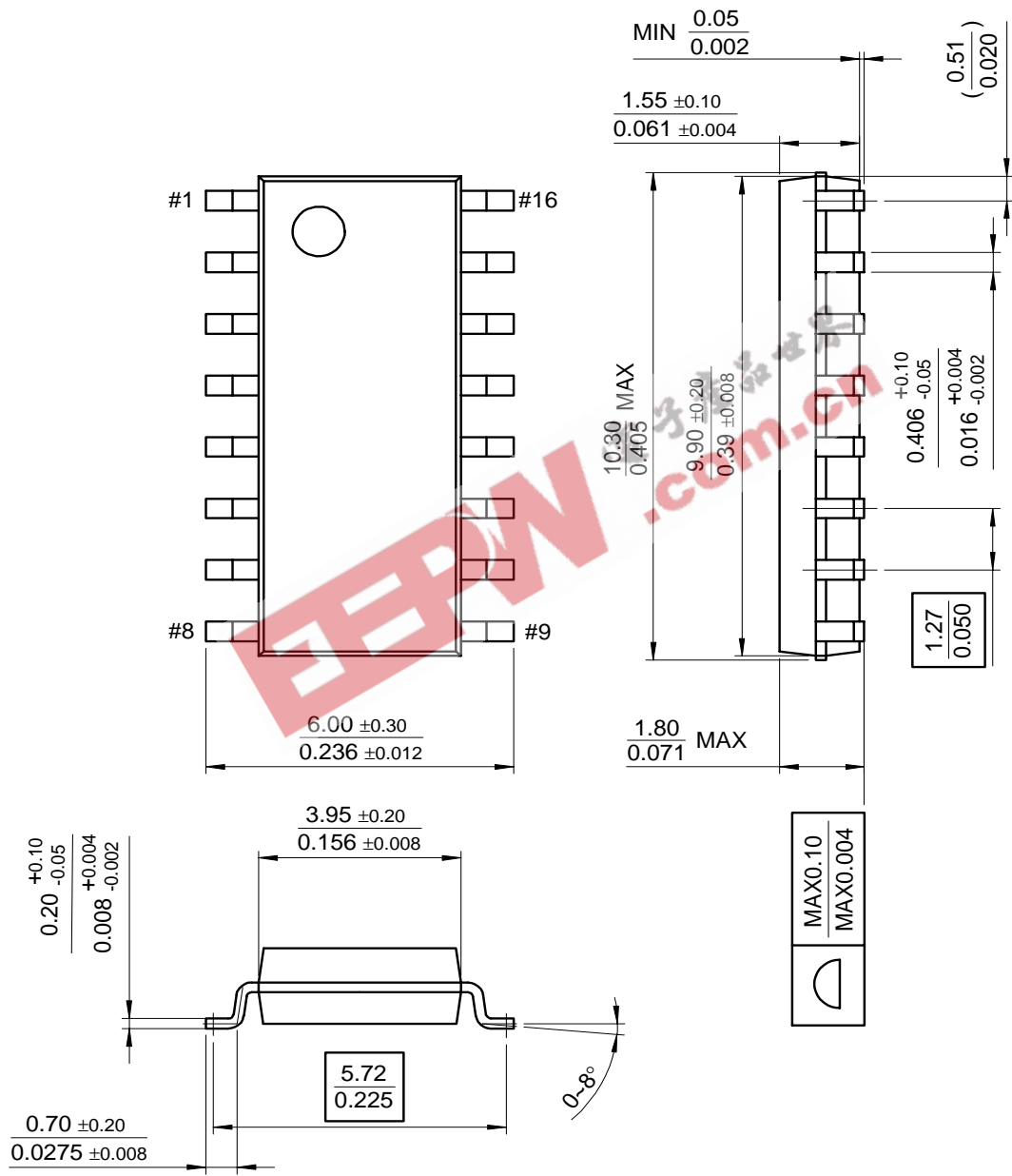


**Mechanical Dimensions** (Continued)

**Package**

Dimensions in millimeters

**16-SOP**



## Ordering Information

Product Number	Package	Operating Temperature
KA558B	16-DIP	0 ~ + 70°C
KA558BD	16-SOP	
KA558D2		

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