

CA3232

÷20 Prescaler

Features:

- Operation to 200 MHz
- TTL and CMOS compatible
- 5-V power supply
- Open collector output stage
- Low power dissipation

Applications:

- Digital synthesizers
- Counters
- AM/FM communication circuits

The CA3232E is a fixed-ratio divide-by-20 counter, operating at frequencies up to 200 MHz. It accepts single- or double-ended AC-coupled input signals. The output is an open-collector stage.

The CA3232 is supplied in an 8-lead dual-in-line plastic (Mini-DIP) package (E suffix).

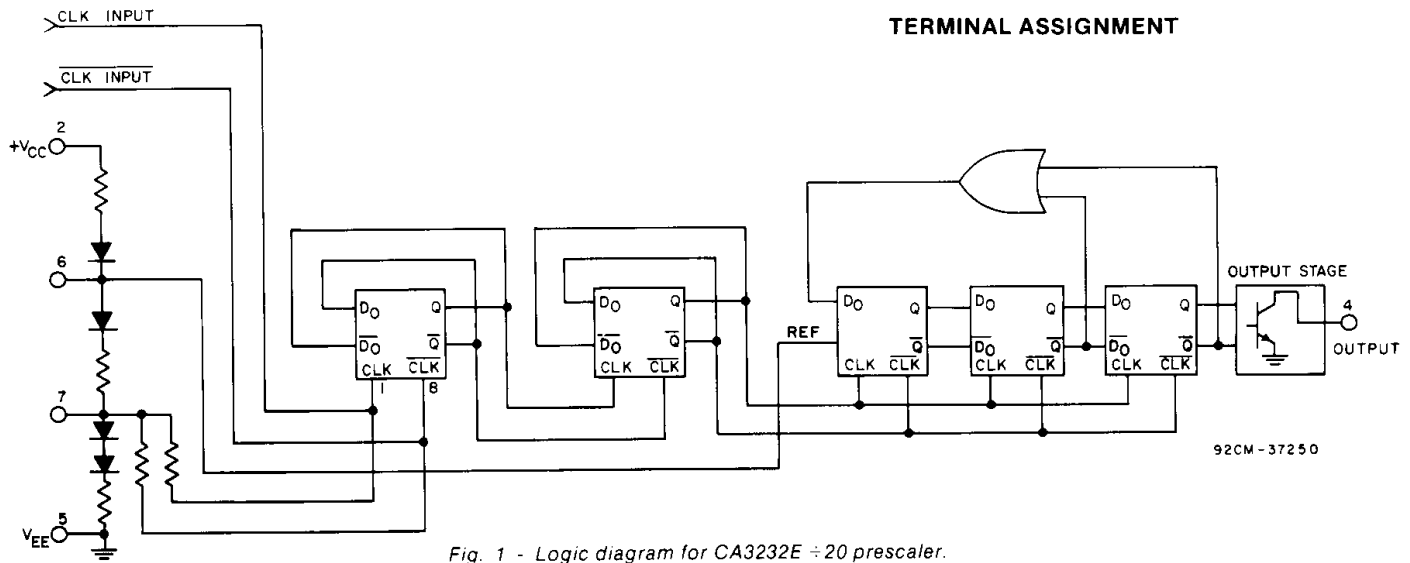
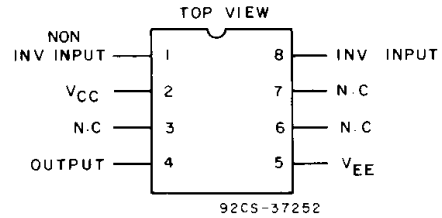


Fig. 1 - Logic diagram for CA3232E ÷20 prescaler.

MAXIMUM RATINGS, Absolute-Maximum Values:

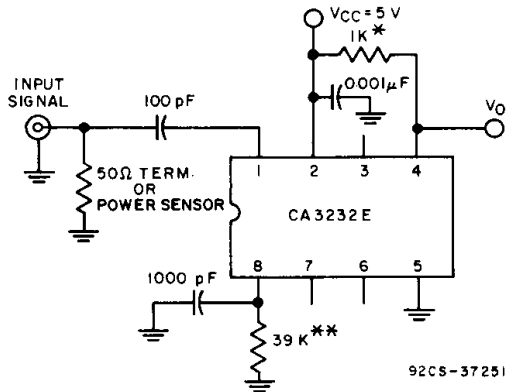
DC SUPPLY VOLTAGE	5.5 V
RMS INPUT VOLTAGE	0.5 V
DEVICE DISSIPATION:	
Up to $T_A = 70^\circ\text{C}$	630 mW
Above $T_A = 70^\circ\text{C}$	Derate linearly at 7.7 mW/ $^\circ\text{C}$
AMBIENT TEMPERATURE RANGE:	
Operating	-30 to +85 $^\circ\text{C}$
Storage	-55 to +150 $^\circ\text{C}$
LEAD TEMPERATURE (During Soldering):	
At distance 1/16 ± 1/32 in. (1.59 mm ± 0.79 mm) from case for 10 s max.	265 $^\circ\text{C}$

File Number **1506**

CA3232

ELECTRICAL CHARACTERISTICS, $T_A = 25^\circ\text{C}$, $V^+ = 5\text{ V DC}$, $V^- = 0\text{ V DC}$

CHARACTERISTIC	LIMITS			UNITS
	Min.	Typ.	Max.	
Supply Current, Circuit Fig. 2 @ 5.3 V	—	21	30	mA
Output Level, High	—	4.9	—	V dc
Output Level, Low	—	0.7	—	V dc
Input Level	100	—	400	mV rms
Maximum Input Frequency	—	200	—	MHz



* For higher peak-to-peak output, connect 1 K ohm from pin 4 to 10 V supply
 ** Optional, to suppress self-oscillation with no input signal

Fig. 2 - Test circuit.

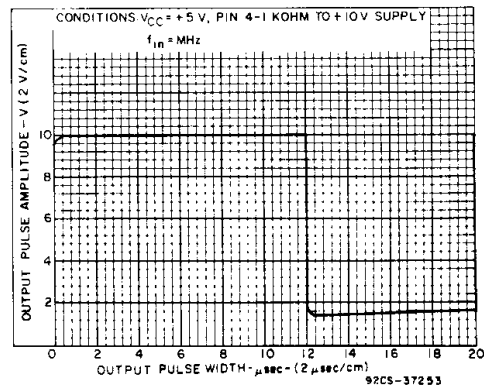


Fig. 3 - Output waveform vs. frequency, $f_{in}=1\text{ MHz}$.

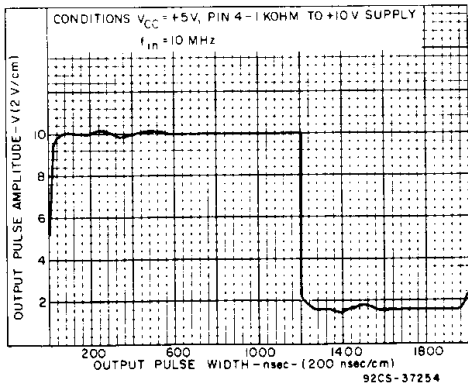


Fig. 4 - Output waveform vs. frequency, $f_{in}=10\text{ MHz}$.

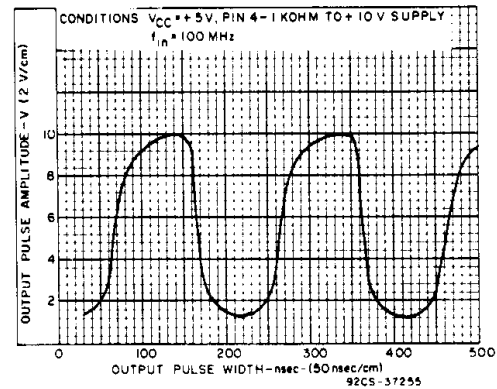


Fig. 5 - Output waveform vs. frequency, $f_{in}=100\text{ MHz}$.

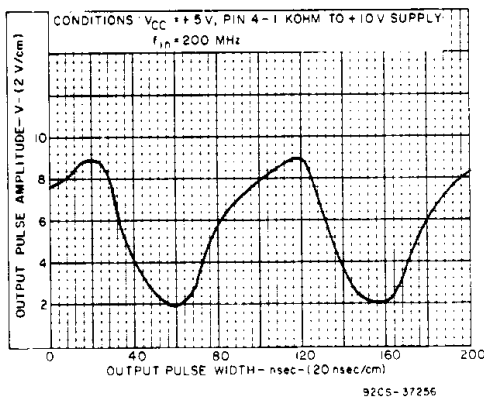


Fig. 6 - Output waveform vs. frequency, $f_{in}=200\text{ MHz}$.

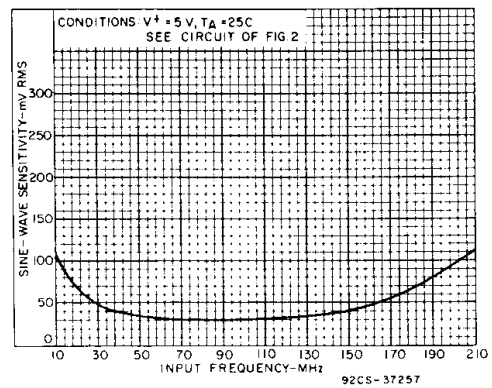


Fig. 7 - Typical sinusoidal input sensitivity.