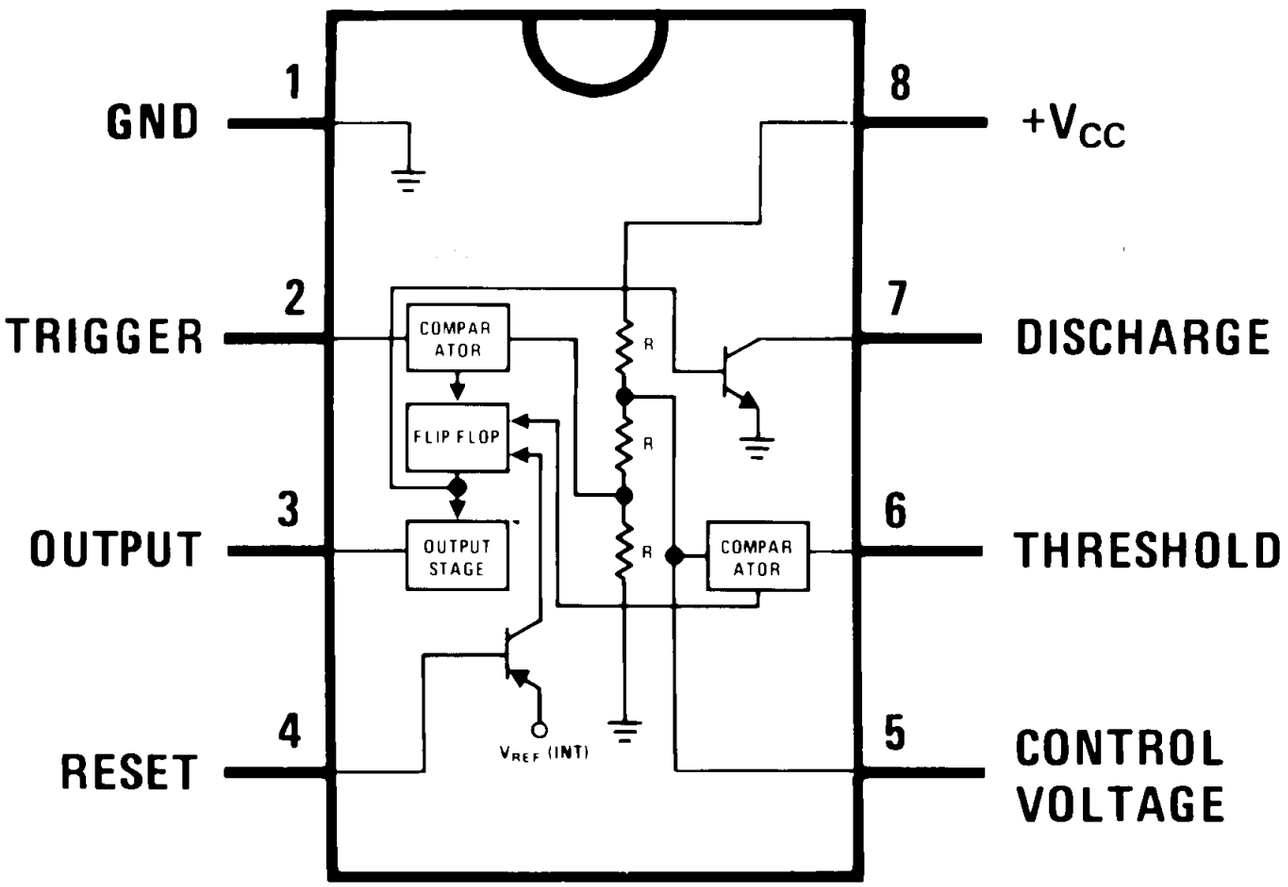
The LM555

LM555



00785103

Top View

Vcc between 4.5 and 16 volts

(TLC555 - between 2.0 and 15V)

timing from microseconds to hours

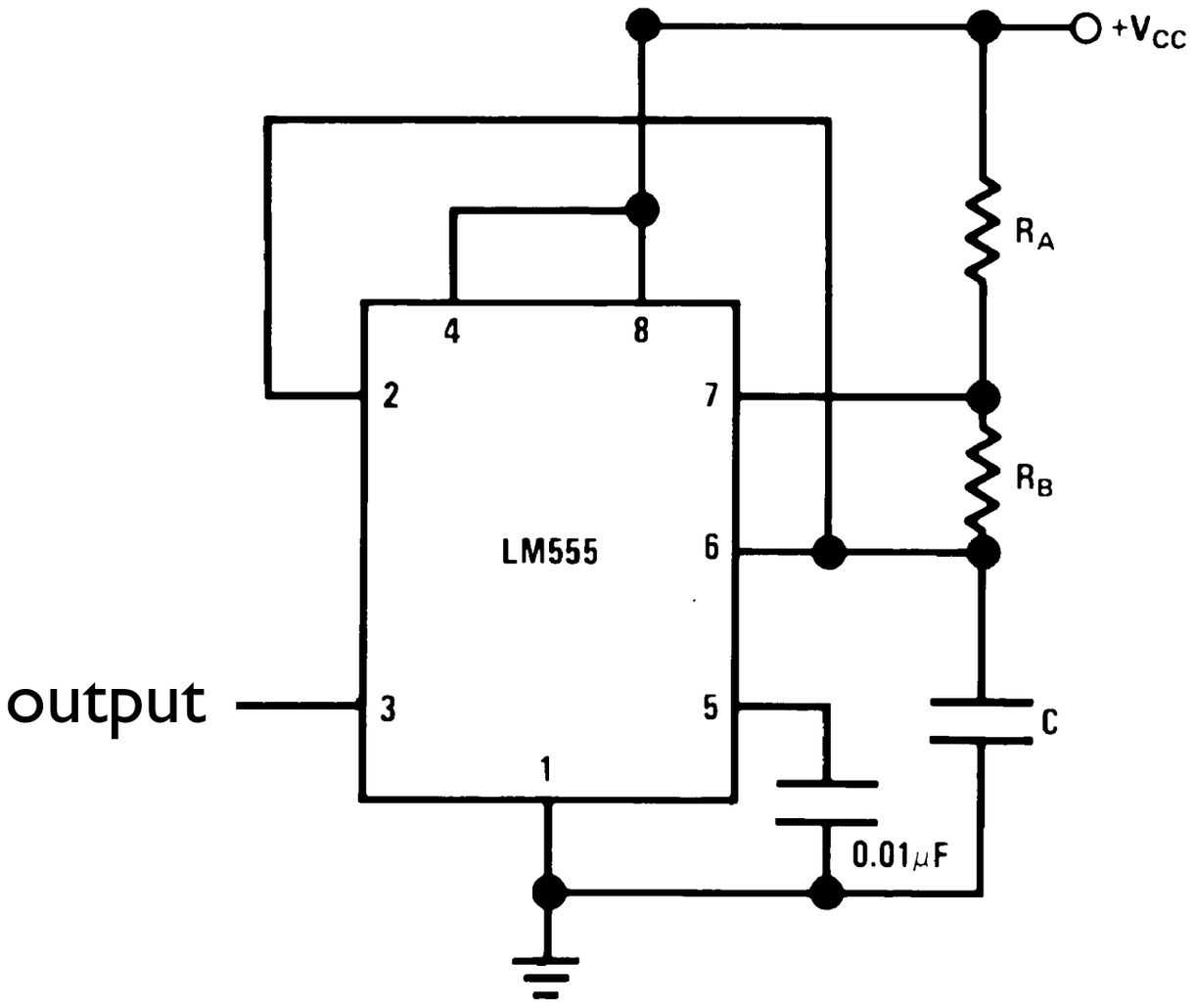
monostable (single pulse) mode

astable (pulse train) mode

use power bypass caps (.1uF ceramic

in parallel with 1uF electrolytic)

LM555 astable (multivibrator) mode

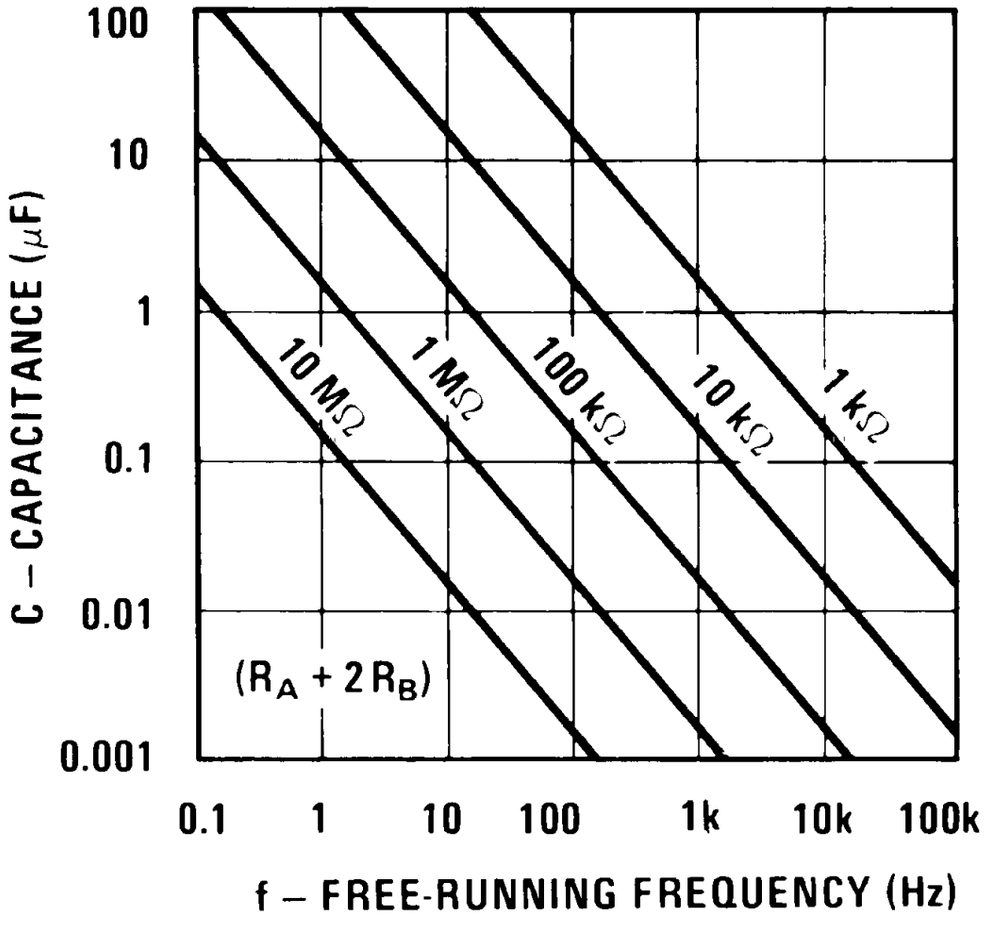


free running (self-triggering)

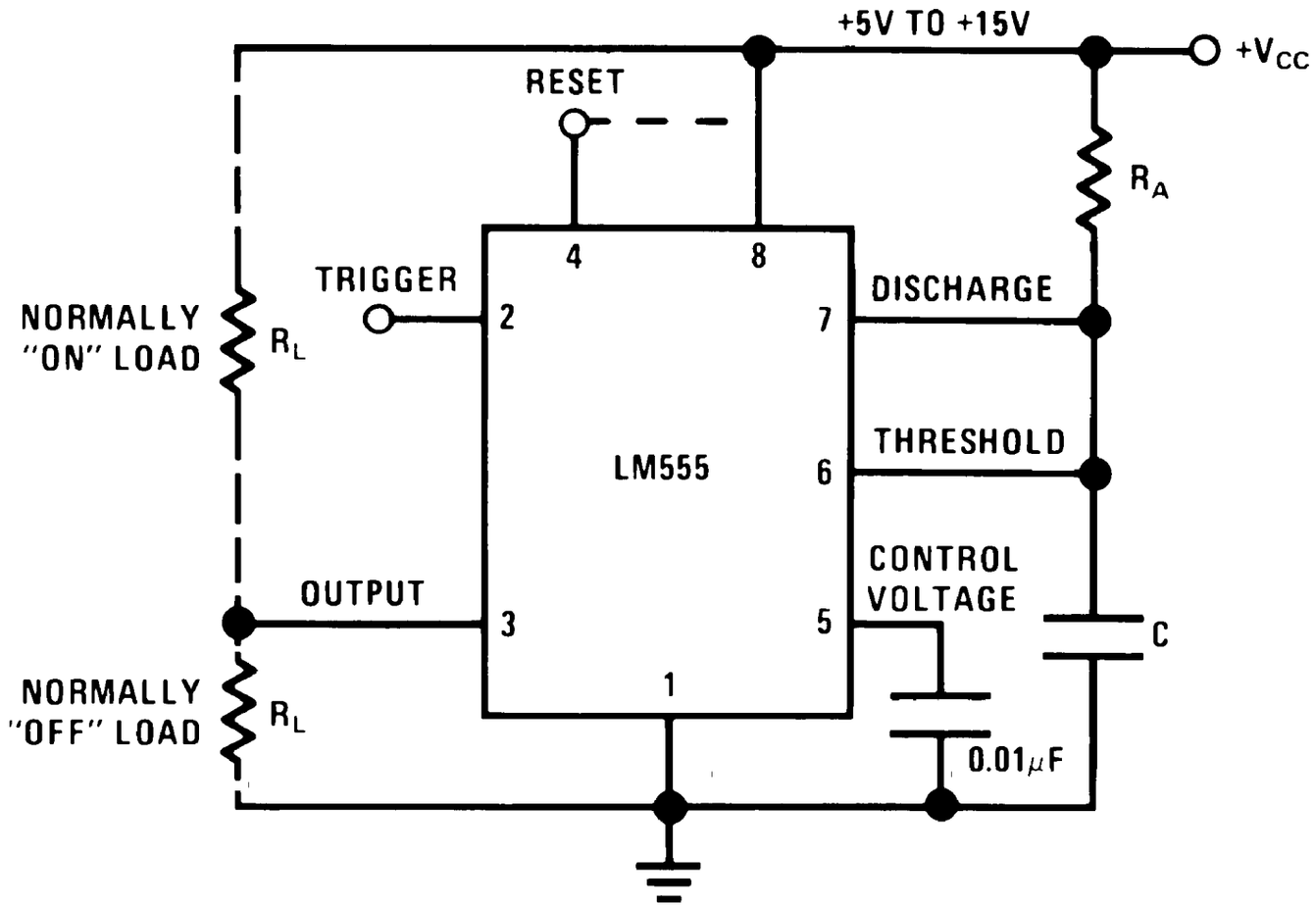
frequency and duty cycle set by external Ra, Rb, and C

Frequency: $$f = \frac{1.44}{(R_a + 2R_b)C}$$

Duty cycle: $$D = \frac{R_b}{R_a + 2R_b}$$



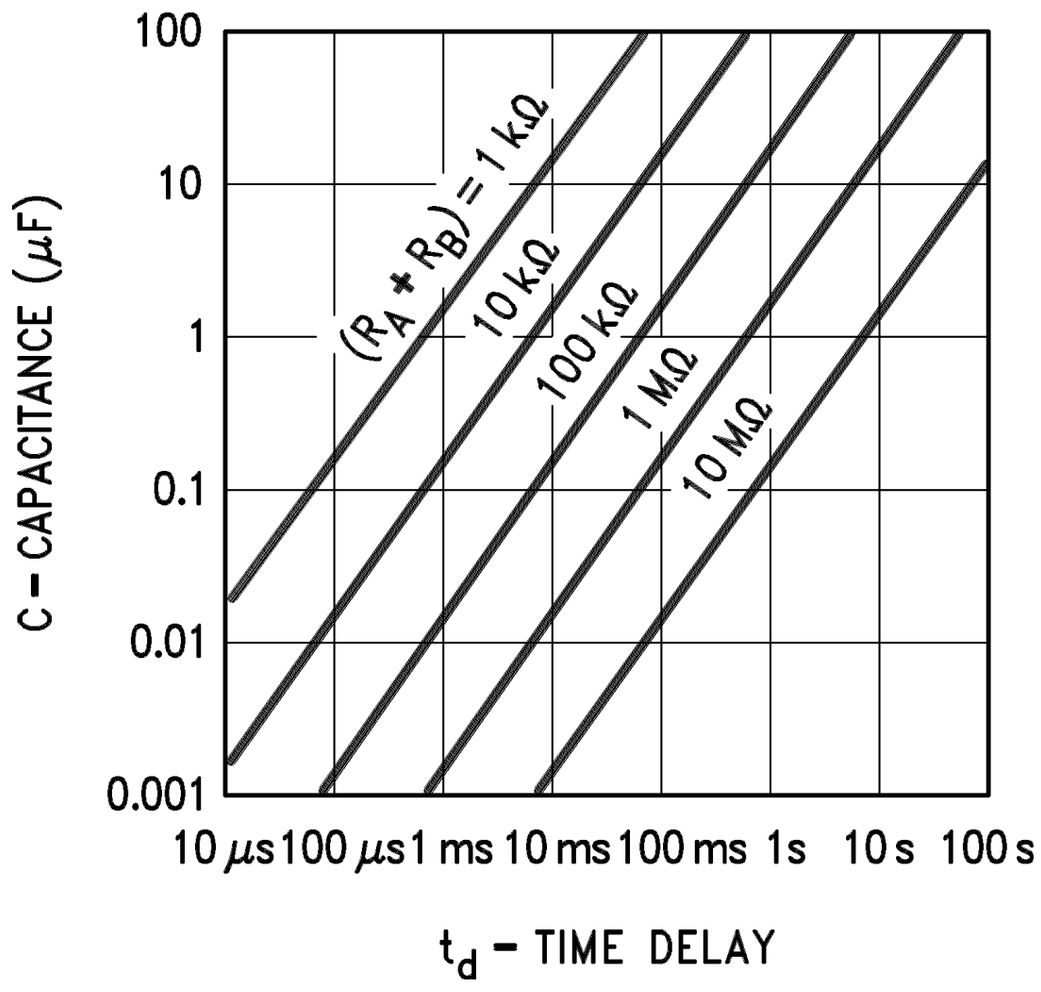
LM555 monostable mode



output is stable low

low-going trigger on 2 sends the output high

will return low based on R_A and C



note: the trigger should be returned high before the end of the timing cycle