



LB8555M

General-Purpose Timer

Overview

The LB8555M is a delay time generator IC capable of generating exact timing pulses. Both trigger pin and reset pin are provided for various uses such as monostable multivibrator, astable multivibrator. The output circuit is capable of applying 200mA sink/source current. Output is interfaceable to TTL. This IC is usable as a replacement for the 555 type.

Features

- Miniflat package enabling compactness of sets.
- Timing time settable from several μ s. to several hours.
- Monostable multivibrator consisting of R=1, C=1 ; astable multivibrator consisting of R=2, C=1.
- Adjustable duty cycle of pulse.
- 200mA sink/source current for driving external load.

Applications

- Delay time generator (monostable multivibrator).
- Sequence timer.
- Pulse generator (astable multivibrator).
- DC-DC converter.
- Pulse width modulator.

Specifications

Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|--------------|--|-------------|------|
| Maximum supply voltage | V_{CC} max | | 18 | V |
| Output current | I_{OUT} | | ± 200 | mA |
| Input voltage | | Trigger, control voltage, reset, threshold | V_{CC} | V |
| Allowable power dissipation | P_d max | | 300 | mW |
| Operating temperature | T_{opr} | | -20 to +75 | °C |
| Storage temperature | T_{stg} | | -40 to +125 | °C |

Allowable Operating Ranges at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|----------------|----------|--|-----------|------|
| Supply voltage | V_{CC} | | 4.5 to 16 | V |
| Input voltage | V_i | Trigger, control voltage, reset, threshold | V_{CC} | V |
| Output current | I_O | | ± 200 | mA |

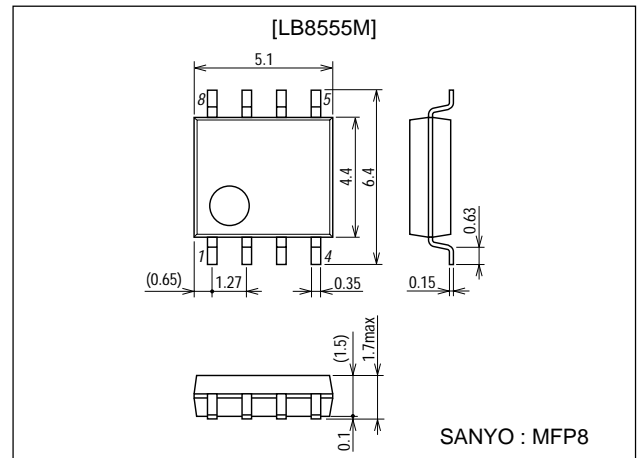
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Package Dimensions

unit:mm

3032C-MFP8

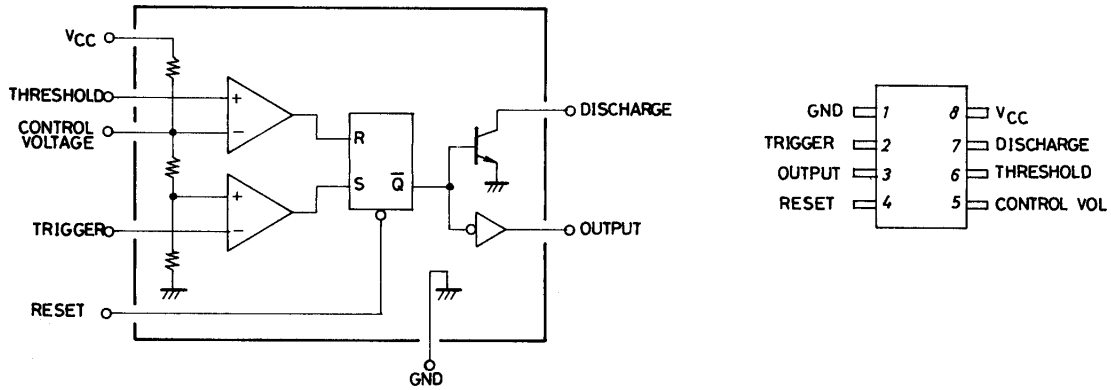


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Electrical Characteristics at $T_a = 25^\circ\text{C}$

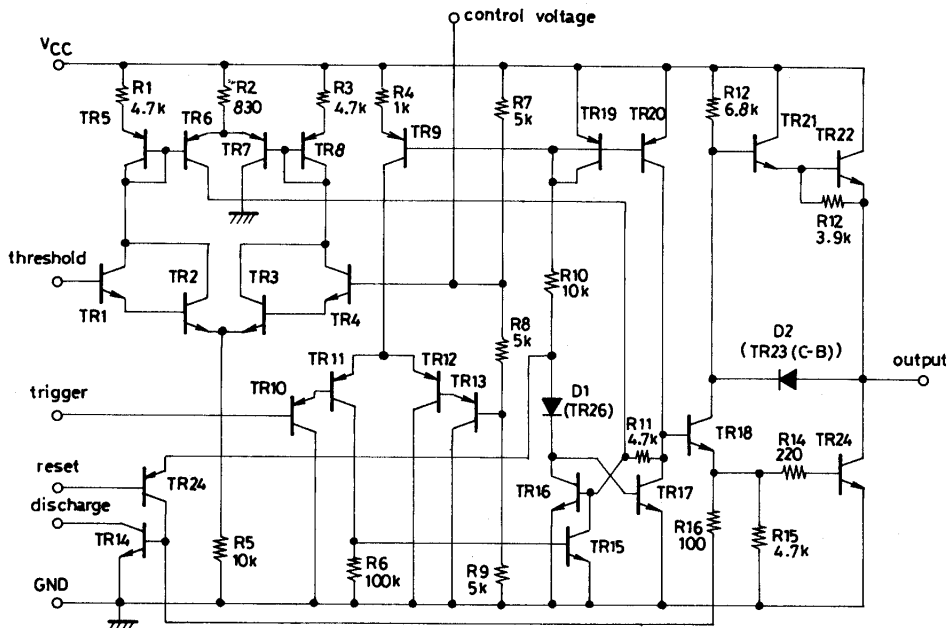
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---------------------------|------------|--|---------|-------------|------|---------------|
| | | | min | typ | max | |
| Supply current | I_{CC1} | $V_{CC}=5\text{V}, R_L=\infty$ | | 3 | | mA |
| | I_{CC2} | $V_{CC}=15\text{V}, R_L=\infty$ | | 10 | 15 | mA |
| Control voltage | V_{con1} | $V_{CC}=5\text{V}$ | 2.6 | 3.33 | 4.0 | V |
| | V_{con2} | $V_{CC}=15\text{V}$ | 9 | 10 | 11 | V |
| Threshold voltage | V_{TH} | | | $2/3V_{CC}$ | | V |
| Threshold current | I_{TH} | | | 0.1 | | μA |
| Trigger voltage | V_T | | | $1/3V_{CC}$ | | V |
| Trigger current | I_T | | | 0.5 | 1.0 | μA |
| Reset voltage | V_{rs} | | | 0.7 | 1.0 | V |
| Reset current | I_{rs} | | | 0.1 | | mA |
| Output low-level voltage | V_{OL} | $V_{CC}=5\text{V}, I_{sink}=5\text{mA}$ | | 0.25 | 0.35 | V |
| | | $V_{CC}=15\text{V}, I_{sink}=10\text{mA}$ | | 0.1 | 0.25 | V |
| | | $V_{CC}=15\text{V}, I_{sink}=100\text{mA}$ | | 2.0 | 2.5 | V |
| Output high-level voltage | V_{OH} | $V_{CC}=5\text{V}, I_{source}=100\text{mA}$ | 2.75 | 3.3 | | V |
| | | $V_{CC}=15\text{V}, I_{source}=100\text{mA}$ | 12.75 | 13.3 | | V |

Equivalent Circuit Block Diagram and Pin Assignment



Equivalent Circuit

Unit (resistance: Ω)



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