

# BIPOLAR ANALOG INTEGRATED CIRCUIT

# $\mu$ PC1176C

## FM NOISE CANCELLER

## SILICON BIPOLAR MONOLITHIC INTEGRATED CIRCUIT

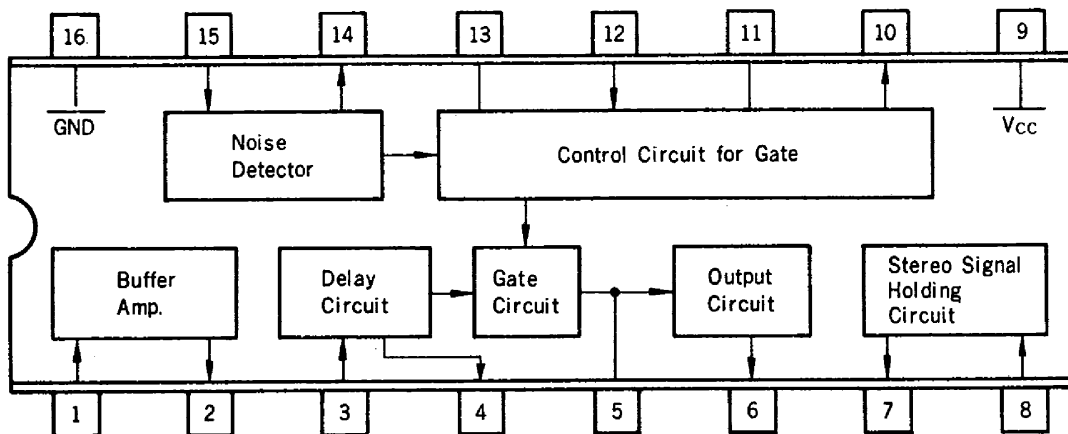
### DESCRIPTION

$\mu$ PC1176C, a monolithic integrated circuit, is an FM Noise Canceller for use in automotive radio receivers. The incoming noise such as that from car ignition can be suppressed. Internally, buffer-amplifier, delay circuit, gate circuit, noise detector, control circuit for gate and stereo signal holding circuit are included.

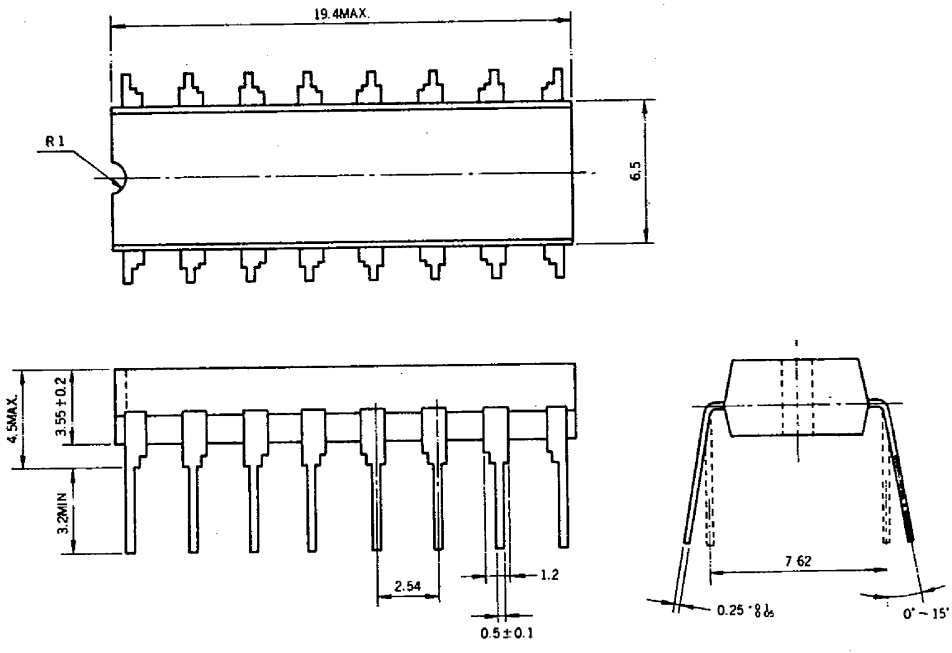
### FEATURES

- Effective pulsive noise suppression.
- Minimum distortion level due to the stereo signal holding circuit.
- Automatic change of the blanking time, according to noise intensity.
- Excellent response for highly repetitive noise.

### BLOCK DIAGRAM (Top View)



**PACKAGE DIMENSIONS (in millimeters)**



**ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)**

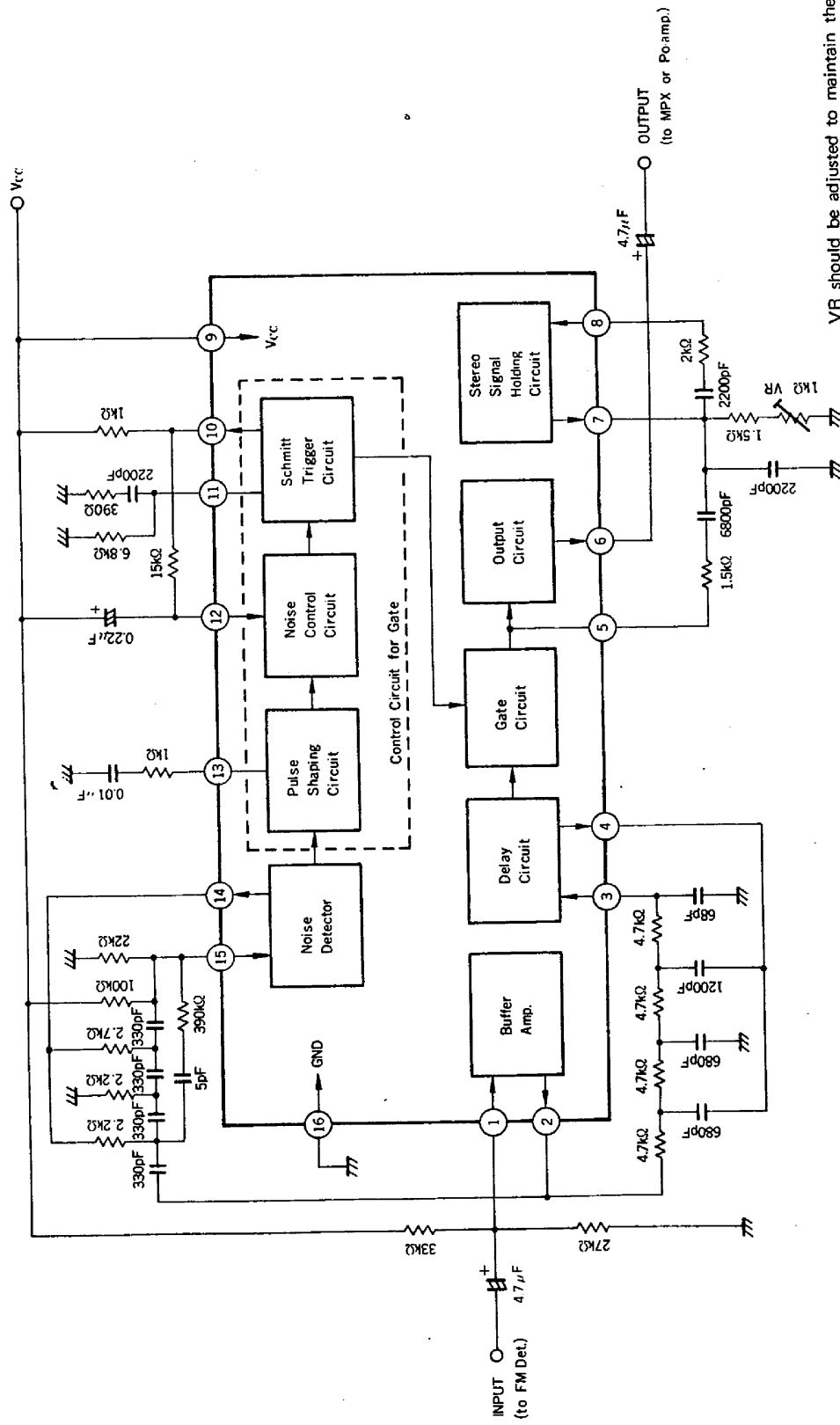
|                       |                  |             |    |
|-----------------------|------------------|-------------|----|
| Supply Voltage        | V <sub>CC</sub>  | 15          | V  |
| Package Dissipation   | PD               | 350*        | mW |
| Operating Temperature | T <sub>opt</sub> | -20 to +75  | °C |
| Storage Temperature   | T <sub>stg</sub> | -40 to +125 | °C |

\*Ta = 75°C

**ELECTRICAL CHARACTERISTICS (Ta = 25°C, V<sub>CC</sub> = 10V)**

| CHARACTERISTIC     | SYMBOL          | MIN. | TYP. | MAX. | UNIT            | TEST CONDITIONS  |
|--------------------|-----------------|------|------|------|-----------------|--|
| Circuit Current    | I <sub>CC</sub> | 13   | 16.5 | 23   | mA              | v <sub>i</sub> = 0   |
| Voltage Gain       | A <sub>v</sub>  | -0.3 | 0.7  | 1.7  | dB              | v <sub>i</sub> = 500mV <sub>r.m.s.</sub> , f = 1kHz                  |
| Blanking Time      | T <sub>B</sub>  |      | 30   |      | μs              | v <sub>i</sub> = 500mV <sub>p</sub> , f = 1kHz, t <sub>w</sub> = 1μs |
| Triggering Voltage | V <sub>T</sub>  |      | 40   |      | mV <sub>p</sub> | f = 1kHz, t <sub>w</sub> = 10μs                                      |

**TYPICAL APPLICATION CIRCUIT**



VR should be adjusted to maintain the amplitude and frequency of the 38 kHz signal when the gate circuit is turned off.

