

BIPOLAR ANALOG INTEGRATED CIRCUIT

μ PC1176C

FM NOISE CANCELLER

SILICON BIPOLAR MONOLITHIC INTEGRATED CIRCUIT

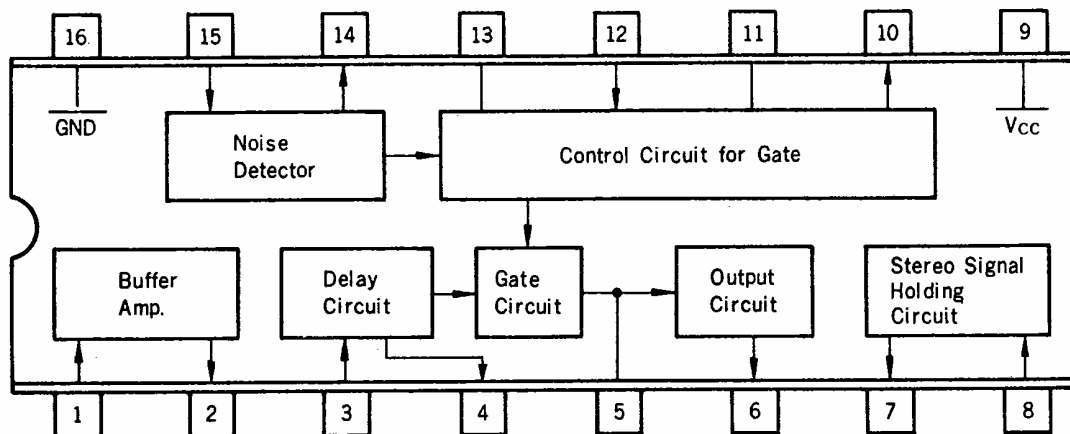
DESCRIPTION

μ 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.

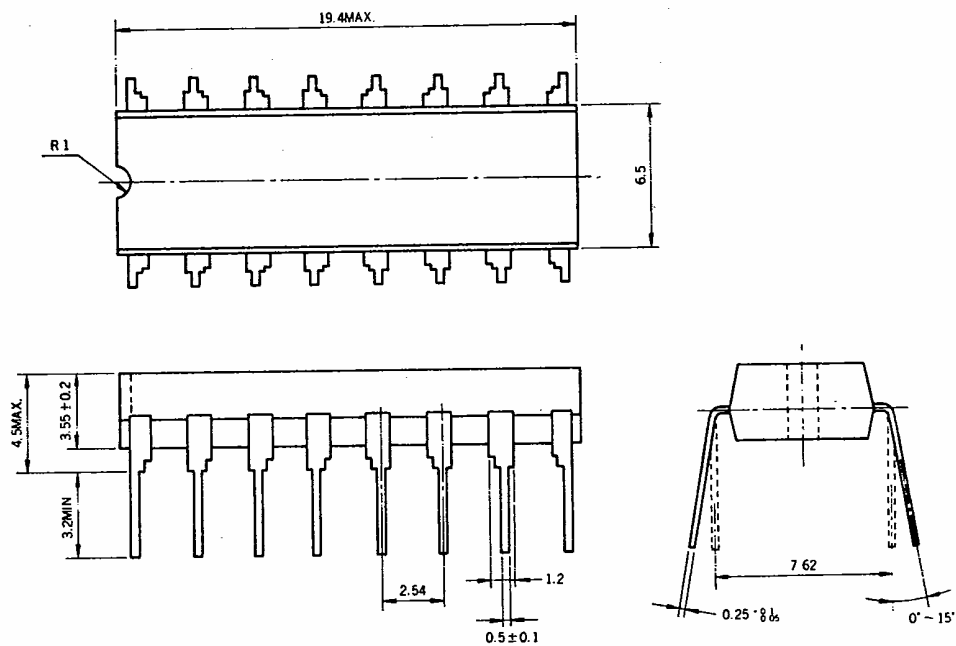
FEATURES

- 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 ($T_a = 25^{\circ}\text{C}$)

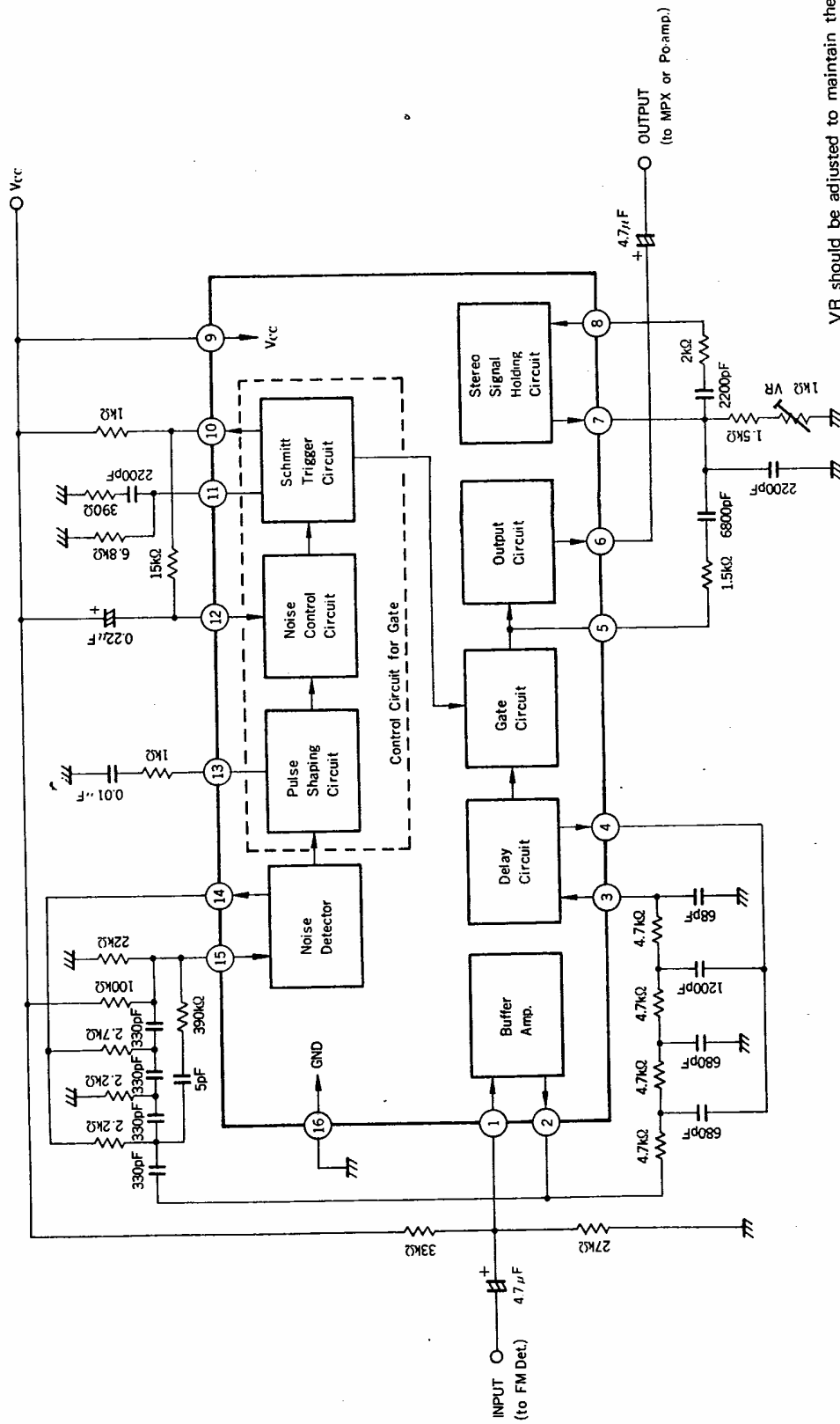
Supply Voltage	V_{CC}	15	V
Package Dissipation	PD	350*	mW
Operating Temperature	T_{opt}	-20 to +75	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-40 to +125	$^{\circ}\text{C}$

* $T_a = 75^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^{\circ}\text{C}$, $V_{CC} = 10\text{V}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Circuit Current	I_{CC}	13	16.5	23	mA	$V_i = 0$
Voltage Gain	A_v	-0.3	0.7	1.7	dB	$V_i = 500\text{mVr.m.s.}$, $f = 1\text{kHz}$
Blanking Time	T_B		30		μs	$V_i = 500\text{mVp}$, $f = 1\text{kHz}$, $t_w = 1\mu\text{s}$
Triggering Voltage	V_T		40		mVp	$f = 1\text{kHz}$, $t_w = 10\mu\text{s}$

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.

The image shows a printed circuit board (PCB) layout for an electronic circuit. The board is populated with various electronic components, including resistors, capacitors, and integrated circuits. The layout is organized into functional blocks, with components labeled with their values (e.g., 10k, 100pF, 1k, 100uF). The board has four mounting holes at the corners. The text "NEC" is visible in the top right corner.

The circuit includes an input section at the top right, a central processing section with multiple integrated circuits, and an output section at the bottom right. Power supply connections for Vcc and GND are shown at the bottom left. The output is labeled "OUTPUT" and is connected to a 100uF capacitor. The input is labeled "INPUT" and is connected to a 100pF capacitor. The circuit also includes a 10k resistor and a 100pF capacitor in the input section, and a 1k resistor and a 100pF capacitor in the output section.

