NTE1682
Integrated Circuit
Pre-Amplifier Circuit for Remote Control Signal Receivers

Description:
The NTE1682 is an integrated circuit in a 9-Lead SIP type package designed for use in infrared and various types of remote control signal receivers.

Features:
- High Sensitivity, High Gain, Low Noise
- Waveform Shaping Circuit
- Voltage Regulator Circuit

Absolute Maximum Ratings:  \(T_A = +25^\circ C\) unless otherwise specified
- Supply Voltage, \(V_{CC}\) .............................................................. 15.6V
- Supply Current, \(I_{CC}\) ............................................................ 25mA
- Power Dissipation, \(P_D\) .......................................................... 400mW
- Operating Ambient Temperature Range, \(T_{opr}\) .............................. \(-20^\circ\) to +75°C
- Storage Temperature Range, \(T_{stg}\) ........................................... \(-55^\circ\) to +150°C

Electrical Characteristics:  \(T_A = +25^\circ C\) unless otherwise specified

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Test Conditions</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Supply Voltage Range</td>
<td>(V_{CC})</td>
<td></td>
<td>9.6</td>
<td>12.0</td>
<td>14.4</td>
<td>V</td>
</tr>
<tr>
<td>Supply Current</td>
<td>(I_{CC})</td>
<td>(V_{CC} = 12V, Input Open)</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>mA</td>
</tr>
<tr>
<td>Bias Voltage</td>
<td>(V_{3-5})</td>
<td>(V_{CC} = 12V, Input Open)</td>
<td>1.65</td>
<td>2.4</td>
<td>3.3</td>
<td>V</td>
</tr>
<tr>
<td>Amplifier Output Voltage</td>
<td>(V_7)</td>
<td>(V_{#} = 5V_{P-P}) Sine Wave, (f_{#} = 24kHz), Att: 0db</td>
<td>2.5</td>
<td>3.2</td>
<td>–</td>
<td>(V_{P-P})</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(V_{#} = 5V_{P-P}) Sine Wave, (f_{#} = 42kHz), Att: 80db</td>
<td>0.8</td>
<td>2.3</td>
<td>–</td>
<td>(V_{P-P})</td>
</tr>
<tr>
<td>Pulse Output, High Level</td>
<td>(V_{4-5(H)})</td>
<td>(V_{CC} = 12V, V_D = 1.3V) to 4.0V</td>
<td>3.5</td>
<td>4.4</td>
<td>5.0</td>
<td>V</td>
</tr>
<tr>
<td>Pulse Output, Low Level</td>
<td>(V_{4-5(L)})</td>
<td>(V_{CC} = 12V, V_D = 0V) to 0.5V</td>
<td>–</td>
<td>0.55</td>
<td>0.8</td>
<td>V</td>
</tr>
</tbody>
</table>
Pin Connection Diagram
(Front View)

9 VREF Monitor
8 VCC
7 Amp Output
6 Pulse Input
5 GND
4 Pulse Output
3 Gain Adjust 2
2 Gain Adjust 1
1 Input

.929 (23.6)
.118 (3.0)
.236 (6.0)
.098 (2.5)
.100 (2.54)
.118 (3.0)