NTE1674
Integrated Circuit
TV Vertical Deflection Output Circuit

Description:
The NTE1674 is an integrated circuit in a 9–Lead SIP type package designed for use as a TV vertical deflection output circuit. When used in combination with a deflection signal processing IC, this device can facilitate a vertical output circuit design.

Features:
- Low Power Consumption
- Direct Deflection Coil Driving Capability
- High Breakdown Voltage

Absolute Maximum Ratings:  \((T_A = +25°C \text{ unless otherwise specified})\)
- Supply Voltage, \(V_{CC}\)  27.6V
- Circuit Voltage, \(V_{4-1}\)  0 to 60V
- Circuit Voltage, \(V_{6-1}\)  0 to 2.5V
- Circuit Voltage, \(V_{7-1}\)  0 to 1.3V
- Supply Current, \(I_{CC}\)  250mA
- Circuit Current, \(I_2\)  –1000 to +1000mA O–P
- Circuit Current, \(I_8\)  –1000 to +1000mA O–P
- Power Dissipation, \(P_D\)  6.66W
- Operating Ambient Temperature Range, \(T_{opr}\)  –20° to +70°C
- Storage Temperature Range, \(T_{stg}\)  –55° to +150°C
- Thermal Resistance, Junction–to–Case, \(R_{thJC}\)  12°C/W

Note 1. ⊕ and ⊖ are flow–in and flow–out currents to/from the circuit respectively.

Electrical Characteristics:  \((T_A = +25°C \text{ unless otherwise specified})\)

<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>Deflection Current</td>
<td>(I_y)</td>
<td>(P–P)</td>
<td>860</td>
<td>930</td>
<td>1000</td>
<td>mA(_{P–P})</td>
</tr>
<tr>
<td>Deflection Current Linearity</td>
<td>(\Delta I_y(+))</td>
<td></td>
<td>25</td>
<td>–</td>
<td>75</td>
<td>mA(_{P–P})</td>
</tr>
<tr>
<td></td>
<td>(\Delta I_y(-))</td>
<td></td>
<td>22</td>
<td>–</td>
<td>85</td>
<td>mA(_{P–P})</td>
</tr>
<tr>
<td>Deflection Current Change with Ambient Temperature</td>
<td>(\Delta I_y/T_A)</td>
<td>(T_A = –20° \text{ to } +70°C)</td>
<td>–1.5</td>
<td>–</td>
<td>+1.5</td>
<td>%</td>
</tr>
</tbody>
</table>
### Electrical Characteristics (Cont’d): \( T_A = +25^\circ C \) unless otherwise specified

<table>
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<tr>
<th>Parameter</th>
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<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Voltage</td>
<td>( V_{MID} )</td>
<td></td>
<td>12.1</td>
<td>12.6</td>
<td>13.1</td>
<td>V</td>
</tr>
<tr>
<td>Flyback Pulse Amplitude</td>
<td>( V_{(FBP)} )</td>
<td></td>
<td>47</td>
<td>–</td>
<td>–</td>
<td>V</td>
</tr>
<tr>
<td>Static Circuit Current</td>
<td>( I_{CQ} )</td>
<td>( V_{4-1} = 24,V, V_{9-1} = 24,V, V_{7-1} = 0,V )</td>
<td>7</td>
<td>13</td>
<td>22</td>
<td>mA</td>
</tr>
<tr>
<td>Output Transistor Saturation Voltage</td>
<td>( V_{4-2} )</td>
<td>( V_{4-1} = V_{9-1} = 24,V, , \text{Pin}2 - 1 = 56,\Omega, V_{9-1} = 0.3,V, V_{7-1} = 0,V )</td>
<td>–</td>
<td>2.7</td>
<td>3.7</td>
<td>V</td>
</tr>
<tr>
<td></td>
<td></td>
<td>( V_{2-1} )</td>
<td>( V_{4-1} = V_{9-1} = 24,V, , \text{Pin}2 - 4 = 56,\Omega, V_{6-1} = 1.3,V, V_{7-1} = 0,V )</td>
<td>–</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Q21 Saturation Voltage</td>
<td>( V_{8-1} )</td>
<td>( V_{9-1} = 24,V, , \text{Pin}9 - 8 = 1.2,k\Omega, V_{7-1} = 0,V )</td>
<td>–</td>
<td>–</td>
<td>0.5</td>
<td>V</td>
</tr>
</tbody>
</table>

**Pin Connection Diagram**

(Front View)

- \( V_{CC} \)
- \( \) Pulse Amp Output
- \( \) Trigger Pulse Input
- \( \) Input
- \( \) Drive Transistor Collector
- \( \) Supply Voltage for Output
- \( \) N.C.
- \( \) Output
- \( \) GND