



ELECTRONICS, INC.

44 FARRAND STREET  
BLOOMFIELD, NJ 07003  
(973) 748-5089  
<http://www.nteinc.com>

## NTE7153 Integrated Circuit Vertical Deflection Output Circuit

### **Description:**

The NTE7153 is a vertical deflection output integrated circuit in a 7-Lead SIP type package designed for use in TV and CRT displays with excellent image quality that use a BUS control system signal processing IC. This device can drive the direct (even including a DC component) deflection yoke with the sawtooth wave output from the BUS control system signal processing IC. Because the maximum deflection current is 2.2A<sub>P-P</sub>, the NTE7153 is suitable for use in large screen sets.

### **Features:**

- Low Power Dissipation due to Built-In Pump-Up Circuit
- Vertical Output Circuit
- Thermal Protection Circuit Built-In
- Excellent Crossover Characteristics
- DC Coupling Possible

### **Absolute Maximum Ratings:** (T<sub>A</sub> = +25°C unless otherwise specified)

Maximum Supply Voltage, V <sub>CC6</sub> max	34V
Output Block Supply Voltage, V <sub>CC3</sub> max	70V
Deflection Output Current, I <sub>2</sub> max	-1.5 to +1.5A <sub>P-O</sub>
Allowable Power Dissipation (With Arbitrarily Large Heat Sink), P <sub>D</sub> max	9W
Operating Temperature Range, T <sub>opr</sub>	-20° to +85°C
Storage Temperature Range, T <sub>stgv</sub>	-40° to +150°C
Thermal Resistance, Junction-to-Case, R <sub>thJC</sub>	4°C/W

### **Recommended Operation Conditions:** (T<sub>A</sub> = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Recommended Supply Voltage	V <sub>CC6</sub>		-	24	-	V
Operating Supply Voltage Range	V <sub>CC6</sub> op		16	-	33	V
Recommended Deflection Output Current	I <sub>2P-P</sub>		-	-	2.2	A <sub>P-P</sub>

**Electrical Characteristics:** ( $V_{CC6} = 24V$ ,  $T_A = +25^\circ C$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Pump-Up Charge Saturation Voltage	$V_{S7-1}$	$I_7 = 20mA$	–	–	1.8	V
Pump-Up Discharge Saturation Voltage	$V_{S6-7}$	$I_7 = -1.1A$	–	–	3.2	V
Deflection Output Saturation Voltage (Lower)	$V_{S2-1}$	$I_2 = 1.1A$	–	–	1.5	V
Deflection Output Saturation Voltage (Upper)	$V_{S3-2}$	$I_2 = -1.1A$	–	–	3.5	V
Idling Current	$I_{DL}$		35	–	65	mA
Midpoint Voltage	$V_{MID}$		11	12	13	V

**Pin Connection Diagram**  
(Front View)

