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## NTE7056 Integrated Circuit Vertical Deflection Output Circuit for Color TV

**Description:**

The NTE7056 is an integrated circuit in a 9-Lead SIP type package designed for use as a vertical deflection output circuit for 9" to 21" color television sets. This device requires no voltage–boosted pulses and can therefore be connected to a chrominance–video deflection IC such as the NTE1793, deflection ICs such as the NTE1664, or similar devices. The package is designed for one–point fixing, reducing installation man–hours.

**Features:**

- Requires High Power Voltage Only During Flyback Time, Greatly Reducing Power Consumption.
- Deflection Control in the Preceding Stage can be used both by Discrete Components and ICs.

**Absolute Maximum Ratings:** ( $T_A = +25^{\circ}\text{C}$ , Note 1 unless otherwise specified)

Power Supply Voltage ( $V_7$ ), $V_{CC}$ .....	30V
Circuit Current, $I_{CC}$ .....	350mA
Deflection Circuit Voltage, $V_4$ .....	65V
Deflection Input Signal Voltage, $V_5$ .....	2.5V
Voltage Booster Output Current, $I_8$ .....	-1.1 to +1.1A <sub>peak</sub>
Voltage Booster Output Voltage, $V_8$ .....	V <sub>7</sub> V
Allowable Loss, $P_D$ .....	6W
Operating Temperature Range, $T_{opr}$ .....	-20° to +75°C
Junction temperature, $T_j$ .....	+150°C
Storage Temperature Range, $T_{stg}$ .....	-40° to +150°C
Thermal Resistance, Junction–to–Case, $R_{thJC}$ .....	6°C/W

Note 1. A positive current flows into the IC, a negative current flows out of it.

**Recommended Operating Range:** ( $T_A = +25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Voltage	$V_{CC}$		20	24	27	V
Deflection output current	$I_{DEF}$		0.8	–	1.4	A <sub>p-p</sub>

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 24\text{V}$ ,  $R_L = 9\Omega$ ,  $22\text{mH}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Current	$I_{CC}$	$I_{DEF} = 1.3\text{A Typ}$	170	190	210	mA
Deflection Voltage	$I_{DEF}$		1.2	1.3	1.4	$A_{P-P}$
Neutral Point Potential	$V_{ODC}$		10	12	14	V
Flyback Pulse Voltage	RPV		46	49	54	V
Blanking Pulse Width	RPW		850	1000	1200	$\mu\text{s}$
Idling Current	$I_Q$		8	15	24	mA
Voltage Booster Discharge Saturation Voltage	$V_{S7-8}$		-	1.4	2.0	V
Voltage Booster Charge Saturation Voltage	$V_{S8-2}$		-	1.0	1.5	V
Voltage Booster Charge Current	$I_8$		55	85	120	mA
Deflection Circuit Output Saturation Voltage	$V_{S3-2}$		-	0.8	1.8	V
	$V_{S4-3}$		-	2.0	3.0	V
Deflection Circuit Input Saturation Voltage	$V_5$		0.85	1.00	1.15	V
Voltage Gain	$A_{VO}$	$R_L = \infty$	-	55	-	dB
Input Resistance	$R_{in}$		-	22	-	$k\Omega$

**Pin Connection Diagram**  
(Front View)



