

NTE1684 Integrated Circuit TV Vertical Deflection Output Circuit

Description:

The NTE1684 is an integrated circuit in a 7-Lead SIP type package designed for use in TV vertical deflection output circuits.

Features:

- High Breakdown Voltage
- Low Power Consumption

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

Supply Voltage, V_{CC}	30V
Circuit Voltage, V_{3-1}	0 to 60V
Circuit Voltage, V_{4-1}	-1V to 6V
Circuit Voltage, V_{5-1}	-1V to 3V
Supply Current, I_{CC}	300mA
Circuit Current, I_2, I_6	-1300 to 1300mA _{O-P}
Power Dissipation, P_D	6W
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}	4°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Deflection Current	$I_{Y(P-P)}$		1280	1380	1480	mA _{P-P}
Deflection Current Linearity	$\Delta I_{Y(+)}$		46	—	140	mA _{P-P}
	$\Delta I_{Y(-)}$		42	—	126	mA _{P-P}
Deflection Current Change with Ambient Temperature	$\Delta I_Y/T_A$	$T_A = -20^\circ \text{ to } +70^\circ\text{C}$	-1.5	—	+1.5	%
Center Voltage	V_{MID}		13.2	13.8	14.4	V
Flyback Pulse Amplitude	$V_{(FBP)}$		47	—	—	V
Static Circuit Current	I_{CQ}	$V_{3-1} = 24V, V_{7-1} = 24V, V_{5-1} = 0$	8	14	24	mA

Electrical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Transistor Saturation Voltage	V_{3-2}	$V_{3-1} = V_{7-1} = 24\text{V}$, $\text{Pin}2-1 = 56\Omega$, $V_{4-1} = 0.3\text{V}$, $V_{5-1} = 0$	–	2.6	3.6	V
	V_{2-1}	$V_{3-1} = V_{7-1} = 24\text{V}$, $\text{Pin}2-3 = 56\Omega$, $V_{4-1} = 1.3\text{V}$, $V_{5-1} = 0$	–	0.4	1.0	V
Q_{21} Saturation Voltage	V_{6-1}	$V_{7-1} = 24\text{V}$, $\text{Pin}7-6 = 1.2\text{k}\Omega$, $V_{5-1} = 0$, $V_{4-1} = 2\text{V}$	–	–	0.5	V

Pin Connection Diagram
(Front View)

