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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°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 1300$mA_{O–P}$
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°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° to +70°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°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} = 24V, Pin2–1 = 56Ω, V_{4-1} = 0.3V, V_{5-1} = 0	–	2.6	3.6	V
	V_{2-1}	V_{3-1} = V_{7-1} = 24V, Pin2–3 = 56Ω, V_{4-1} = 1.3V, V_{5-1} = 0	–	0.4	1.0	V
Q_{21} Saturation Voltage	V_{6-1}	V_{7-1} = 24V, Pin7–6 = 1.2kΩ, V_{5-1} = 0, V_{4-1} = 2V	–	–	0.5	V

Pin Connection Diagram
(Front View)