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NTE7085 Integrated Circuit Vertical Deflection Output Circuit w/Drive Circuit for Monitor

Description:

The NTE7085 is an integrated circuit in a 13-Lead SIP type package that contains a vertical deflection output circuit with a driver for color, B/W TV sets, monitors, and display units with a large aperture (maximum current 2.2A_{P-P}).

The NTE7085 can be used in conjunction with the NTE1863 (NTSC) to provide all the functions required for color TV signal processing.

Features:

- Low Power Dissipation due to On-Chip Pump-Up Circuit
- On-Chip 50/60Hz Vertical Size Control Circuit
- On-Chip Ramp Generator
- On-Chip Driver Circuit
- Vertical Output Circuit
- On-Chip Thermal Protection Circuit
- Minimum Number of External Parts Required

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Driver Circuit Supply Voltage, +V _{CC1} max	15V
Pump-Up Circuit Supply Voltage, +V _{CC7} max	30V
Output Circuit Supply Voltage, +V _{CC12} max	62V
Deflection Output Current, I _{DEF}	-1.5 to +1.5A _{P-O}
Allowable Power Dissipation (With Infinite Heat Sink), P _d max	8W
Operating Temperature Range, T _{opr}	-20° to +85°C
Storage Temperature Range, T _{stg}	-40° to +150°C
Thermal Resistance, Junction-to-Case, R _{thJC}	+4°C/W

Operating Supply Voltage Conditions:

Driver Circuit Supply Voltage, +V _{CC1}	8 to 14V
Pump-Up Circuit Supply Voltage, +V _{CC7}	10 to 27V

Recommended Operating Conditions:

Driver Circuit Supply Voltage, +V _{CC1}	12V
Pump-Up Circuit Supply Voltage, +V _{CC7}	24V
Maximum Deflection Output Current, I _{11P-P}	2.2A _{P-P}

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $+V_{CC1} = 12\text{V}$, $+V_{CC7} = 24\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current in Driver Power Supply	I_{CC1}		1.8	2.8	3.8	mA
Trigger Input Threshold Voltage	V_2		2.8	3.1	3.4	V
Voltage on Vertical Size Control Pin	V_3		5.9	6.1	6.3	V
Ramp Waveform Shape Start Voltage	V_{RAMP}		4.7	5.0	5.3	V
Pump-Up Charge Saturation Voltage	V_{S8-10}		–	–	1.5	V
Pump-Up Discharge Saturation Voltage	V_{S8-10}	$I = 1.1\text{A}$	–	–	3.2	V
Deflection Output Saturation Voltage Lower	V_{S11-10}	$I = 1.1\text{A}$	–	–	1.5	V
Upper	V_{S12-11}	$I = 1.1\text{A}$	–	–	3.5	V
Idling Current			16	22	32	mA
Voltage gain	G_{VO}	$f = 1\text{kHz}$	–	59	–	dB

Pin Connection Diagram
(Front View)



