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NTE2025 Integrated Circuit Quad HV Driver for Gas-Discharge Display

Description:

Designed for interfacing between MOS, or other low-voltage circuitry, and the anode of gas discharge display panels, these monolithic high-voltage bipolar integrated circuits dramatically reduce the number of discrete components required. The NTE2025 is used with multiplexed gas discharge display panels. The driver contains appropriate level shifting, signal amplification, output off state voltage bias, and 70mA output current sourcing for the sequential addressing of display panel anodes. The inputs include pull-down resistors for direct connection to open drain PMOS logic.

Features:

- Reliable Monolithic Construction
- High Output Breakdown Voltage
- High Output Current Capability
- Low Power
- Minimum Size

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

Supply Voltage, V_{BB}	+120V
Input-Voltage, V_{IN}	+20V
Output Current, I_{OUT}	70mA
Power Dissipation (Note 1), P_D	1.0W
Operating Ambient temperature Range, T_{opr}	0° to +70°C
Storage Temperature range, T_{stg}	-65° to +150°C
Note 1. Derating Factor above +25°C: -8mW/°C	

Electrical Characteristic: ($T_A = +25^\circ\text{C}$, $V_{BB} = +110\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output ON Voltage	V_{ON}	Test input at 4.5V. Other inputs at 0.5V, $I_{OUT} = 20\text{mA}$	105	108	-	V
Output OFF Voltage	V_{OFF}	Test input at 0.5V, One input at 4.5V, All other inputs open. Reference V_{BB}	-68	-73	-	V
Input High Current	I_{IH}	Test input at 15V. Other inputs at 0V	-	250	330	μA
Input Low Current	I_{IL}	Test input at 0V, One input at 15V, All other inputs at 0V	-	-1	-5	μA
Supply Current	I_{BB}	One input at 4.5V. Other inputs at 0.5V, All outputs open, Repeat for all inputs	-	450	750	μA
		All inputs at 0V, All outputs open	-	85	125	μA

Note *. All voltage measurements are referenced to GND terminal unless otherwise noted.

Note **. All voltage measurements are made with 10M Ω DVM or VTVM.

Note***. Recommended V_{BB} operating range: +85V to 100V

