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NTE2033
Integrated Circuit
Non–Inverting Transistor Array, Low Input Active

Description:
The NTE2033 is a non–inverting transistor array, which is comprised of four NPN darlington output stages and PNP input stages. This device is low level input active driver and is suitable for operation with TTL, 5V C–MOS and 5V Microprocessor which have sink current output drivers.

Features:
- Output Current: 1.5A Max.
- High Sustaining Voltage: 50V Min.
- Low Level Active Inputs
- TTL and C–MOS Compatible Inputs
- Standard Supply Voltage
- Two V_{CC} Terminals V_{CC1}, V_{CC2} (Separated)

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

Supply Voltage, V_{CC} . . . . . –0.5 to 10V
Output Sustaining Voltage, $V_{CE(sus)}$ . . . . . –0.5 to +50V
Output Current, I_{OUT} 1.5A
Input Current, I_{IN} . . . . . –10mA
Input Voltage, V_{IN} . . . . . –0.5 to +30V
Clamp Diode Reverse Voltage, V_R 50V
Clamp Diode Forward Current, I_F 1.5A
Common Terminal Current, I_{COM} 3.0A
GND Terminal Current, I_{GND} 5.0A
Power Dissipation, P_D 2.7W
Operating Temperature Range, T_{opr} . . . . . –40° to +85°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

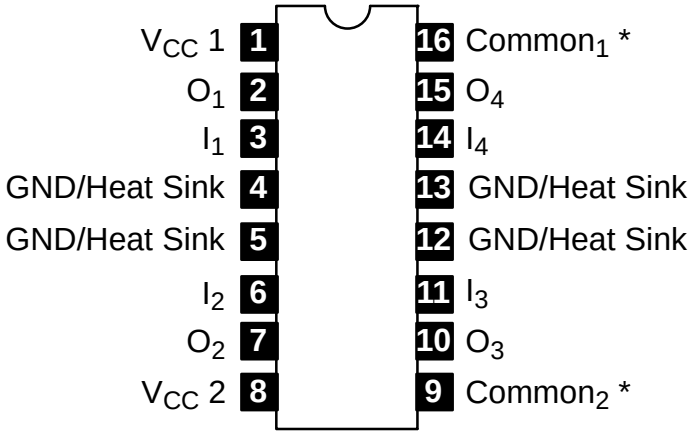
Recommended Operating Conditions: (T_A = –40° to +85°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		4.5	–	5.5	V
Output Sustaining Voltage	$V_{CE(sus)}$		0	–	50	V
Output Current	I_{OUT}		0	–	1.25	V
Input Voltage	V_{IN}		0	–	25	V
Clamp Diode Reverse Voltage	V_R		0	–	50	μA
Clamp Diode Forward Voltage	V_F		0	–	1.25	A
Power Dissipation	P_D		0	–	1.0	W

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
"H" Level Input Voltage	V_{IH}		V_{CC}–1.6	–	25	V
"C" Level Input Voltage	V_{IL}		0	–	V_{CC}–3.6	V
"H" Level Input Current	I_{IH}		–	–	10	µA
"L" Level Input Current	I_{IL}	V_{CC} = 5.5V, V_{IN} = 0.4V	–	–0.05	–0.36	mA
Output Leak Current	I_{CEX}	V_{OUT} = 50V, T_A = +85°C	–	–	100	µA
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	V_{CC} = 4.5V, I_{OUT} = 0.7A	–	1.3	1.8	V
Clamp Diode Reverse Current	I_R	V_R = 50V	–	–	50	µA
Clamp Diode Forward Voltage	V_F	I_F = 1.25A	–	1.5	–	V
Supply Current	$I_{CC(ON)}$	V_{CC} = 5.5V, V_{IN} = 0V	–	8.5	12.5	mA/Gate
	$I_{CC(OFF)}$	V_{CC} = 5.5V, V_{IN} = V_{CC}	–	–	10	µA
Turn–ON Delay	t_{ON}	V_{CC} = 5V, R_L = 43Ω	–	0.2	–	µs
Turn–OFF Delay	t_{OFF}	V_{OUT} = 50V, C_L = 15pF	–	5.0	–	µs

Pin Connection Diagram



Note: These pins are internally connected.