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NTE2084
Integrated Circuit
5–Stage Darlington Transistor Array

Description:

The NTE2084 is a 5–channel sink driver consisting of 10 NPN transistors connected to form five high current gain driver pairs.

Features:

- Output sustaining voltage to 25V
- High output sink current to 500mA
- PMOS compatible input
- Wide operating temperature range (T_A = −20° to +75°C)

Absolute Maximum Ratings: (T_A = −20° to +75°C unless otherwise specified)

Output Sustaining Voltage (Transistor OFF), V_{CEO} . . . . . −0.5V to +25V
Collector Current, I_C (Transistor ON) 500mA
Input Voltage, V_I 25V
Power Dissipation (T_A = +25°C), P_D 1.47W
Operating Ambient Temperature Range, T_{opr} . . . . . −20° to +75°C
Storage Temperature Range, T_{stg} . . . . . −55° to +125°C

Recommended Operational Conditions: (T_A = −20° to +75°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	V_O		0	–	25	V
Collector Current per Channel	I_C	Percent Duty Cycle Less than 10%	0	–	400	mA
		Percent Duty Cycle Less than 55%	0	–	200	mA
“H” Input Voltage	V_{IH}	I_C = 400mA	8	–	20	V
		I_C = 200mA	5	–	20	V
“L” Input Voltage	V_{IL}	$I_{O(leak)}$ = 50μA	0	–	0.5	V

Electrical Characteristics: (T_A = −20° to +75°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Sustaining Voltage	$V_{(BR)CEO}$	I_{CER} = 100μA	25	–	–	V
Output Saturation Voltage	$V_{CE(sat)}$	V_I = 8V, I_C = 400mA	–	1.15	2.2	V
		V_I = 5V, I_C = 200mA	–	0.95	1.4	V
Input Current	I_I	V_I = 17V	–	0.8	1.8	mA
DC Foward Current Gain	h_{FE}	V_{CE} = 4V, I_C = 400mA, T_A = +25°C	1000	4000	–	

Pin Connection Diagram