

NTE2343 (NPN) & NTE2344 (PNP) Silicon Complementary Transistors Darlington Power Amp, Switch

Absolute Maximum Ratings:

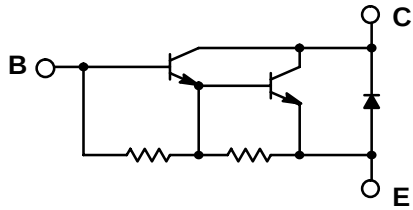
Collector–Base Voltage, V_{CBO}	120V
Collector–Emitter Voltage, V_{CEO}	120V
Collector Current, I_C	
DC	12A
Pulse	15A
Base Current, I_B	200mA
Collector Dissipation ($T_C = +25^\circ\text{C}$), P_C	80W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	–65° to +150°C
Thermal Resistance, Junction–to–Case, R_{thJC}	1.56°C/W

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100\text{mA}$, $I_B = 0$, Note 1	100	–	–	V
Collector Cutoff Current	I_{CBO}	$V_{CB} = 100\text{V}$, $I_E = 0$	–	–	100	μA
	I_{CEO}	$V_{CE} = 100\text{V}$, $I_B = 0$	–	–	1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$	–	–	2	mA
DC Current Gain	h_{FE}	$V_{CE} = 3\text{V}$, $I_C = 3\text{A}$	1000	–	–	
		$V_{CE} = 3\text{V}$, $I_C = 5\text{A}$	750	–	1000	
		$V_{CE} = 3\text{V}$, $I_C = 10\text{A}$	100	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{A}$, $I_B = 20\text{mA}$, Note 1	–	–	2.0	V
		$I_C = 10\text{A}$, $I_B = 100\text{mA}$, Note 1	–	–	3.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5\text{A}$, $I_B = 20\text{mA}$, Note 1	–	–	2.5	V
		$I_C = 10\text{A}$, $I_B = 100\text{mA}$, Note 1	–	–	4.0	V
Parallel Diode Forward Voltage	V_f	$I_f = 5\text{A}$, Note 1	–	1.3	2.0	V
		$I_f = 10\text{A}$, Note 1	–	1.8	4.0	V
Small–Signal Current Gain	h_{fe}	$I_C = 1\text{A}$, $V_{CE} = 10\text{V}$, $f = 1\text{MHz}$	20	–	–	

Note 1. Pulse Test: Pulse Width = 300 μs , Duty Cycle = 1.5%.

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