

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}	1.65°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}	$I_C = 3\text{A}$, $V_{CE} = 3\text{V}$	1000	-	-	
		$I_C = 5\text{A}$, $V_{CE} = 3\text{V}$	750	-	1000	
		$I_C = 10\text{A}$, $V_{CE} = 3\text{V}$	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

		$I_C = 10A, I_B = 100mA, \text{Note 1}$	-	-	4.0	V
Parallel Diode Forward Voltage	V_f	$I_f = 5A, \text{Note 1}$	-	1.3	2.0	V
		$I_f = 10A, \text{Note 1}$	-	1.8	4.0	V
Small-Signal Current Gain	h_{fr}	$I_C = 1A, V_{CE} = 10V, f = 1MHz$	20	-	-	

Note 1. Pulse Test: Pulse Width = $300\mu s$, Duty Cycle = 1.5%.

