

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

## Absolute Maximum Ratings:

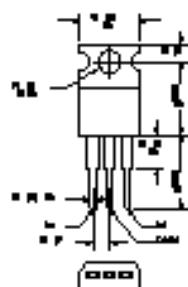
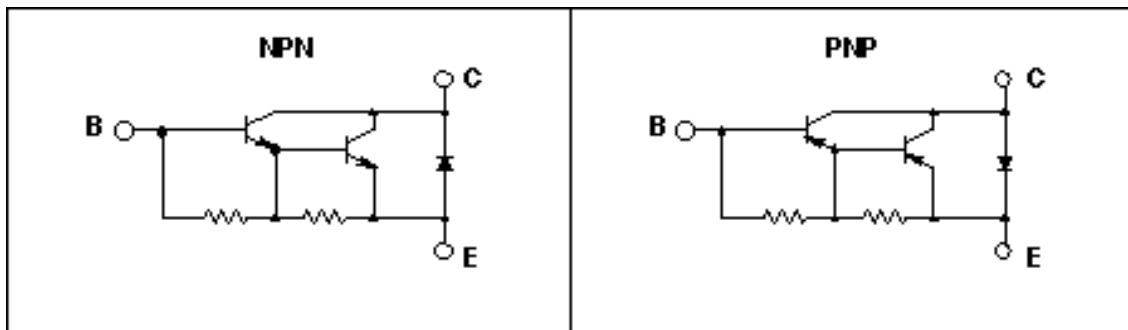
Collector-Base Voltage, V <sub>CBO</sub>	120V
Collector-Emitter Voltage, V <sub>CEO</sub>	120V
Collector Current, I <sub>C</sub>	
DC	12A
Pulse	15A
Base Current, I <sub>B</sub>	200mA
Collector Dissipation (T <sub>C</sub> = +25°C), P <sub>C</sub>	80W
Operating Junction Temperature, T <sub>J</sub>	+150°C
Storage Temperature Range, T <sub>stg</sub>	-65° to +150°C
Thermal Resistance, Junction-to-Case, R <sub>thJC</sub>	1.65°C/W

## Electrical Characteristics: (T<sub>A</sub> = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Sustaining Voltage	V <sub>CEO(sus)</sub>	I <sub>C</sub> = 100mA, I <sub>B</sub> = 0, Note 1	100	-	-	V
Collector Cutoff Current	I <sub>CBO</sub>	V <sub>CB</sub> = 100V, I <sub>E</sub> = 0	-	-	100	μA
	I <sub>CEO</sub>	V <sub>CE</sub> = 100V, I <sub>B</sub> = 0	-	-	1	mA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0	-	-	2	mA
DC Current Gain	h <sub>FE</sub>	I <sub>C</sub> = 3A, V <sub>CE</sub> = 3V	1000	-	-	
		I <sub>C</sub> = 5A, V <sub>CE</sub> = 3V	750	-	1000	
		I <sub>C</sub> = 10A, V <sub>CE</sub> = 3V	100	-	-	
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 5A, I <sub>B</sub> = 20mA, Note 1	-	-	2.0	V
		I <sub>C</sub> = 10A, I <sub>B</sub> = 100mA, Note 1	-	-	3.0	V
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 5A, I <sub>B</sub> = 20mA, Note 1	-	-	2.5	V

		$I_C = 10A, I_B = 100mA$ , Note 1	-	-	4.0	V
Parallel Diode Forward Voltage	$V_f$	$I_f = 5A$ , Note 1	-	1.3	2.0	V
		$I_f = 10A$ , 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%.



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