

NTE2351 (NPN) & NTE2352 (PNP) Silicon Complementary Transistors Darlington Power Amp, Switch

Features:

- High DC Current Gain: $h_{FE(1)} = 2000$ Min @ $V_{CE} = 2V, I_C = 1A$
- Low Saturation Voltage: $V_{CE(sat)} = 1.5V$ Max @ $I_C = 3A$

Absolute Maximum Ratings: ($T_A = +25^\circ C$ unless otherwise specified)

Collector–Base Voltage, V_{CBO}	100V
Collector–Emitter Voltage, V_{CEO}	80V
Emitter–Base Voltage, V_{EBO}	5V
Collector Current, I_C	4A
Base Current, I_B	400mA
Collector Power Dissipation, P_C	
$T_A = +25^\circ C$	1W
$T_C = +25^\circ C$	15W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	–55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut–Off Current	I_{CBO}	$V_{CB} = 100V, I_E = 0$	–	–	20	μA
Emitter Cut–Off Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	–	–	2.5	mA
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA, I_B = 0$	80	–	–	V
DC Current Gain	$h_{FE(1)}$	$V_{CE} = 2V, I_C = 1A$	2000	–	–	
	$h_{FE(2)}$	$V_{CE} = 2V, I_C = 3A$	1000	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3A, I_B = 6mA$	–	–	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3A, I_B = 6mA$	–	–	2.0	V
Switching Characteristics						
Turn–On Time	t_{on}	$V_{CC} = 30V, I_{B1} = -I_{B2} = 6mA,$ Duty Cycle $\leq 1\%$	–	0.2	–	μs
Storage Time	t_{stg}		–	1.5	–	μs
Fall Time	t_f		–	0.6	–	μs

