

NTE2551 (NPN) & NTE2552 (PNP) Silicon Complementary Transistors Darlington Driver, Switch

Features:

- High DC Current Gain
- Low Saturation Voltage
- High Current Capacity and Wide ASO
- Isolated TO220 Type Package

Applications:

- Motor Drivers
- Printer Hammer Drivers
- Relay Drivers
- Voltage Regulator Control

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

Collector–Base Voltage, V_{CBO}	70V
Collector–Emitter Voltage, V_{CEO}	60V
Emitter–Base Voltage, V_{EBO}	6V
Collector Current, I_C	
Continuous	10A
Peak	15A
Collector Power Dissipation, P_C	
$T_A = +25^\circ\text{C}$	2W
$T_C = +25^\circ\text{C}$	30W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	–55° to +150°C

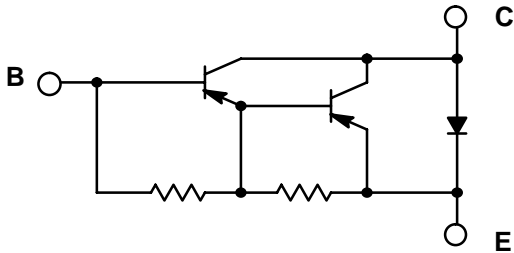
Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut–Off Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	–	–	0.1	mA
Emitter Cut–Off Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	–	–	3.0	mA
DC Current Gain	$h_{FE} (1)$	$V_{CE} = 2\text{V}, I_C = 5\text{A}$	2000	500 0	–	
Gain–Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 5\text{A}$	–	20	–	MHz
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5\text{A}, I_B = 10\text{mA}$	–	0.9	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5\text{A}, I_B = 10\text{mA}$	–	–	2.0	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5\text{mA}, I_E = 0$	70	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50\text{mA}, R_{BE} = \infty$	60	–	–	V

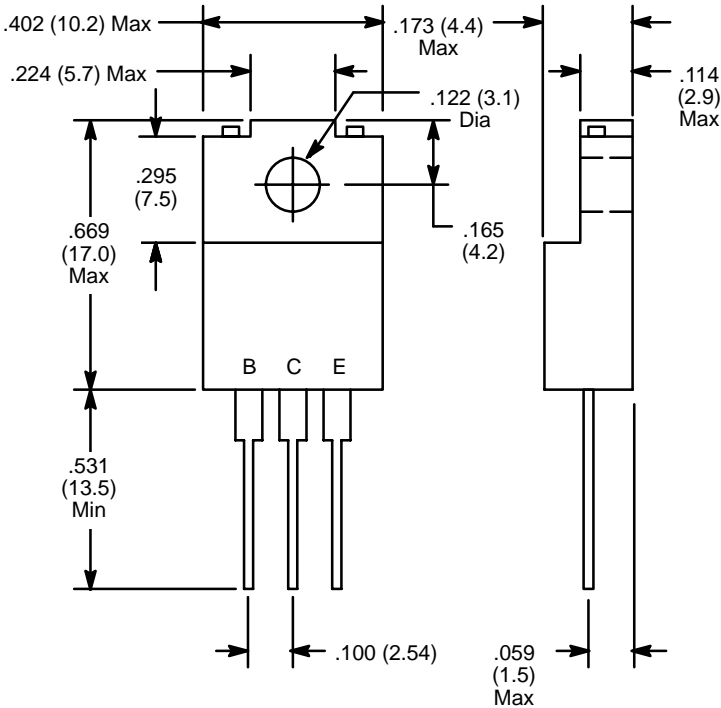
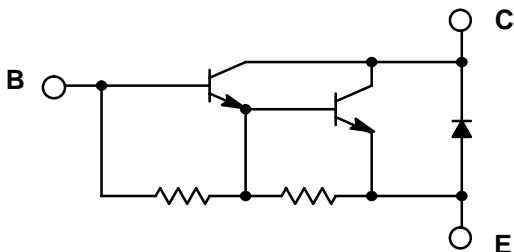
Electrical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Switching Characteristics						
Turn-On Time NTE2551	t _{on}	V _{CC} = 20V, I _C = 5A, I _{B1} = -I _{B2} = 500mA, Pulse Width = 50μs Duty Cycle ≤ 1%	—	0.6	—	μs
NTE2552			—	0.5	—	μs
Storage Time NTE2551	t _{stg}		—	3.0	—	μs
NTE2552			—	1.5	—	μs
Fall Time NTE2551	t _f		—	1.8	—	μs
NTE2552			—	1.7	—	μs

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NOTE: Tab is isolated