ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

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

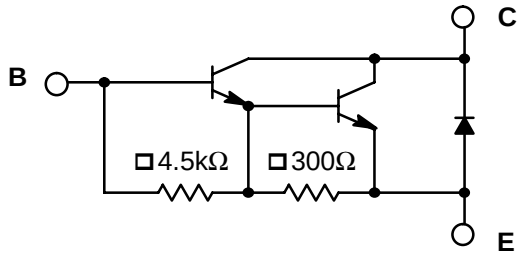
Features:
- High DC Current Gain: $h_{FE\ (1)}$ = 2000 Min @ V_{CE} = 2V, I_C = 1A
- Low Saturation Voltage: $V_{CE(sat)}$ = 1.5V Max @ I_C = 3A

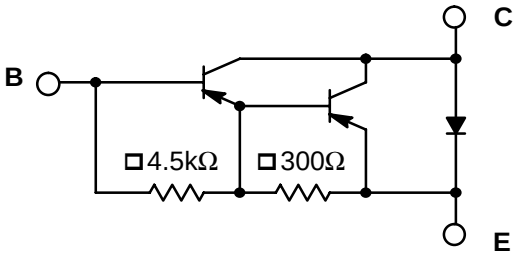
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

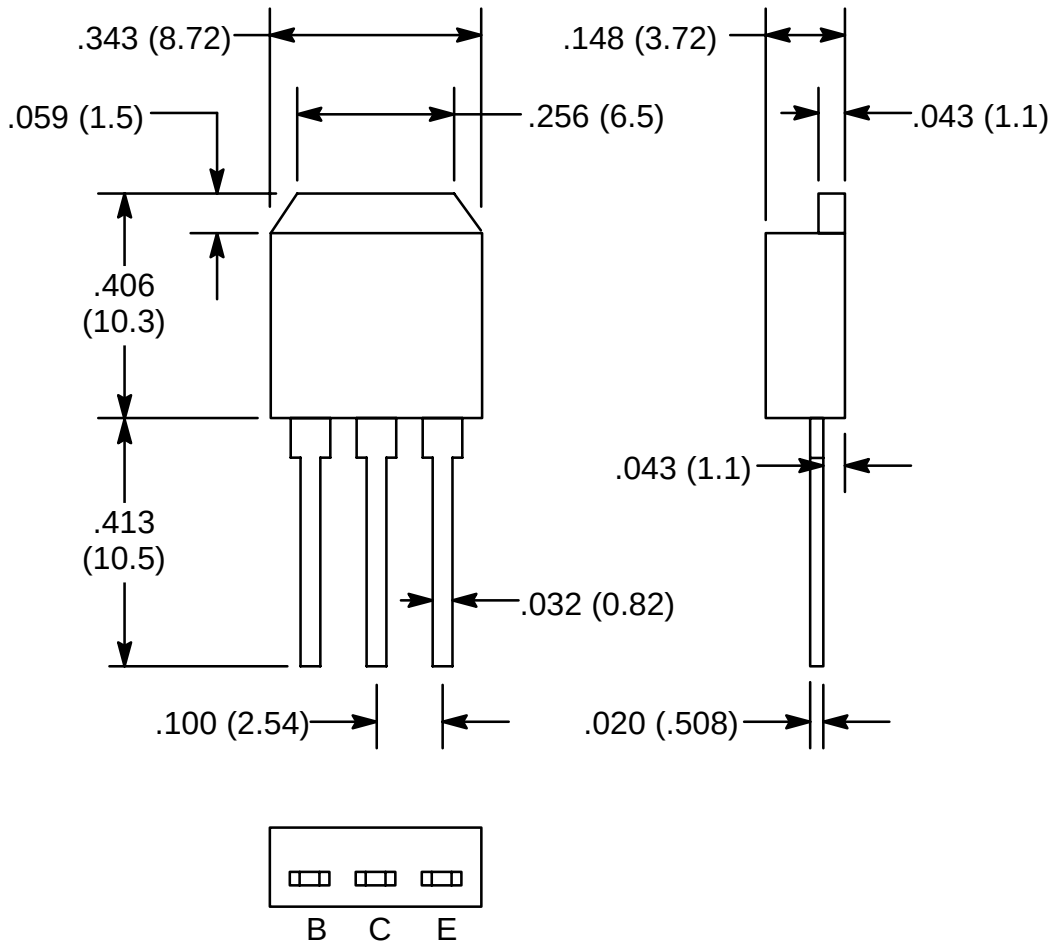
Collector–Base Voltage, V_{CBO} 100V
Collector–Emitter Voltage, V_{CEO} 80V
Emitter–Base Voltage, V_{EBO} 5V
Collector Current, I_C 4A
Base Current, I_B 400mA
Collector Power Dissipation, P_C
T_A = +25°C 1W
T_C = +25°C 15W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range,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

Electrical Characteristics: (T_A = +25°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 ≤ 1%	–	0.2	–	µs
Storage Time	t_{stg}		–	1.5	–	µs
Fall Time	t_f		–	0.6	–	µs


B
C
E
4.5kΩ
300Ω


B
C
E
4.5kΩ
300Ω


.343 (8.72)
.059 (1.5)
.256 (6.5)
.148 (3.72)
.043 (1.1)
.406
(10.3)
.413
(10.5)
.043 (1.1)
.032 (0.82)
.100 (2.54)
.020 (.508)
B C E