

NTE162 Silicon NPN Transistor TV Vertical Deflection

Description:

The NTE162 is an NPN transistor in a TO3 type case designed for medium-to-high voltage inverters, converters, regulators, and switching circuits.

Features:

- High Voltage: $V_{CEX} = 400V$
- Gain Specified to 3.5A
- High Frequency Response to 2.5MHz

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEX}	400V
Collector–Base Voltage, V_{CB}	400V
Emitter–Base Voltage, V_{EBO}	5V
Continuous Collector Current, I_C	10A
Base Current, I_B	2A
Total Device Dissipation ($T_C = +25^\circ C$), P_D	125W
Derate Above $25^\circ C$	1W/ $^\circ C$
Operating Junction Temperature Range, T_J	-65° to $+150^\circ C$
Storage Temperature Range, T_{stg}	-65° to $+200^\circ C$
Thermal Resistance, Junction–to–Case, R_{thJC}	1 $^\circ C/W$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Sustaining Voltage	$V_{(BR)CEO(sus)}$	$I_C = 100mA, I_B = 0$, Note 1	325	–	–	V
Collector Cutoff Current	I_{CEX}	$V_{CE} = 400V, V_{EB(off)} = 1.5V$	–	–	2.5	mA
		$V_{CE} = 400V, V_{EB(off)} = 1.5V,$ $T_C = +125^\circ C$	–	–	1.0	mA
Emitter Cutoff Current	I_{EBO}	$V_{BE} = 5V, I_C = 0$	–	–	2.0	mA

Note 1. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
ON Characteristics (Note 1)						
DC Current Gain	h_{FE}	$I_C = 2.5\text{A}, V_{CE} = 5\text{V}$	15	–	35	
		$I_C = 3.5\text{A}, V_{CE} = 5\text{V}$	10	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2.5\text{A}, I_B = 0.5\text{A}$	–	–	0.7	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2.5\text{A}, I_B = 0.5\text{A}$	–	–	1.5	V
Dynamic Characteristics						
Current Gain–Bandwidth Product	f_T	$I_C = 200\text{mA}, V_{CE} = 10\text{V}, f = 1\text{MHz}$	2.5	–	–	MHz

Note 1. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

