



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE2687 Silicon NPN Transistor Fast Switching for High Frequency Inverter TO-220 Fully Pack

Features:

- Collector–Emitter Sustaining Voltage: $V_{CEO(sus)} = 450V$ Min
- Fast Switching Speed
- Low Saturation Voltage

Applications:

- Switching Regulators
- High Frequency Inverters
- General Purpose Power Amplifiers

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

Collector–Base Voltage, V_{CBO}	600V
Collector–Emitter Voltage, V_{CEO}	450V
Collector–Emitter Voltage ($V_{EB} = 5V$), V_{CEX}	600V
Emitter–Base Voltage, V_{EBO}	7V
Collector Current, I_C	
Continuous	8A
Peak	16A
Base Current, I_B	
Continuous	4A
Peak	8A
Total Power Dissipation ($T_C = +25^\circ C$), P_T	45W
Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-55° to +150°C
Thermal Resistance, Junction–to–Case, R_{thJC}	2.77°C/W

Rev. 6-15



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 0.2\text{A}, I_B = 0\text{A}$	450	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$	-	-	1.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$	-	-	1.5	V
Collector Cutoff Current	I_{CBO}	At rated voltage	-	-	100	μA
	I_{CEO}	At rated voltage	-	-	100	μA
Emitter Cutoff Current	I_{EBO}	At rated voltage	-	-	100	μA
DC Current Gain	h_{FE}	$I_C = 4\text{A}, V_{CE} = 5\text{V}$	10	-	-	
		$I_C = 1\text{mA}, V_{CE} = 5\text{V}$	5	-	-	
Current Gain - Bandwidth Product	f_T	$I_C = 0.8\text{A}, V_{CE} = 10\text{V}$	-	20	-	MHz
Turn-On Time	t_{on}	$I_C = 4\text{A}, I_{B1} = 0.8\text{A}, I_{B2} = -1.6\text{A}, R_L = 37.5\Omega, V_{BB2} = 4\text{V}$	-	-	0.5	μs
Turn-Off Time	t_{off}		-	-	2.0	μs
Fall Time	t_f		-	-	0.2	μs

