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## NTE397 Silicon PNP Transistor Power Amplifier & High Speed Switch (Compl to NTE396)

### Absolute Maximum Ratings:

Collector–Emitter Voltage, $V_{CEO}$ .....	300V
Collector–Base Voltage, $V_{CBO}$ .....	350V
Emitter–Base Voltage, $V_{EBO}$ .....	6V
Continuous Collector Current, $I_C$ .....	1A
Base Current, $I_B$ .....	500mA
Total Device Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_D$ .....	10W
Derate Above $25^\circ\text{C}$ .....	57mW/ $^\circ\text{C}$
Operating Junction Temperature Range, $T_J$ .....	$-65^\circ$ to $+200^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-65^\circ$ to $+200^\circ\text{C}$
Thermal Resistance, Junction–to–Case, $R_{thJC}$ .....	17.5 $^\circ\text{C}/\text{W}$
Thermal Resistance, Junction–to–Ambient, $R_{thJA}$ .....	150 $^\circ\text{C}/\text{W}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>OFF Characteristics</b>						
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 50\text{mA}$ , $I_B = 0$ , Note 1	300	–	–	V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 280\text{V}$ , $I_E = 0$	–	–	50	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 6\text{V}$ , $I_C = 0$	–	–	20	$\mu\text{A}$
<b>ON Characteristics</b>						
DC Current Gain	$h_{FE}$	$I_C = 50\text{mA}$ , $V_{CE} = 10\text{V}$	30	–	120	
<b>Small–Signal Characteristics</b>						
Output Capacitance	$C_{obo}$	$V_{CB} = 10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$	–	–	15	pF
Input Capacitance	$C_{ibo}$	$V_{CB} = 5\text{V}$ , $I_C = 0$ , $f = 1\text{MHz}$	–	–	75	pF
Small–Signal Current Gain	$h_{fe}$	$I_C = 10\text{mA}$ , $V_{CE} = 10\text{V}$ , $f = 1\text{MHz}$	25	–	–	
Real Part of Input Impedance	$\text{Re}(h_{ie})$	$V_{CE} = 10\text{V}$ , $I_C = 5\text{mA}$ , $f = 1\text{MHz}$	–	–	300	$\Omega$

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

**CAUTION:** The sustaining voltage ***must not*** be measured on a curve tracer.

